SCI
90
87
UDEX
IC
CIENCE

PAMPHLET BOX

Physics Abstracts

Science Abstracts Series A
July—December 1987

Subject Index (M—Z)

U.I.C.
APR 13 1988
LIBRARY

inspec
The Institution of Electrical Engineers

SIX-MONTHLY INDEXES TO PHYSICS ABSTRACTS

Twice a year as part of their subscription to Physics Abstracts, subscribers receive cumulative indexes for the periods January-June and July-December. Each index is in two parts—a Subject Index, and an Author Index which comprises personal and corporate author indexes, and indexes to conferences, book titles, and bibliographies. The List of Journals abstracted by INSPEC is also included with the July-December issue of the Author Index, while the supplement to that List is included with the January-June issue.
Cumulative indexes for earlier years are also available: for details please see the inside back cover.

Subject index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles listed under it. The majority of the subject headings fall into the following categories: property, phenomenon, substance or named objects, instrument, device, theory, method, process, application, event.

2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.

3. If you do not find the subject heading you first chose, try a more general heading.

4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal preceded by the last digit of the current year, e.g. 7-12345; i.e. Abstract number 12345 in the abstracts journal for 1987.

The language of the article, if it is not English, is also indicated, e.g. light-pulse wave form monitoring with 500ps resoln. (Japanese) 7-49850.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored, (e.g. α-brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, respectively).

There are three main Keyword lists: alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe- list e.g. Fe-Al,... Fe-Co,... Fe-Si,... Fe-Si-B,... FeCo,... FeSi and so on in this order.

Physics Abstracts, ISSN 0036-8091, is published twice monthly by the Institution of Electrical Engineers in association with the Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane, Piscataway, NJ 08855-1331. Second-Class postage paid at Piscataway, NJ. POSTMASTER: send address changes to: INSPEC/IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08855-1331. Printed by Unwin Brothers Limited, The Gresham Press, Old Woking, Surrey, UK.

Annual subscription rates:

	USA $	UK £	ROW £	JAPAN ¥
PHYSICS ABSTRACTS (PA)	1880	920	1020	336,600
2nd and subsequent copies	930	550	550	181,500

© **1988** THE INSTITUTION OF ELECTRICAL ENGINEERS. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the Institution of Electrical Engineers.

inspec
The Institution of Electrical Engineers

Physics Abstracts

Science Abstracts Series A

July – December 1987

Subject Index (M – Z)

CONTENTS

Abbreviations and Acronyms	i
Subject index (M – Z)	S 3499

SIX-MONTHLY INDEXES TO PHYSICS ABSTRACTS

Physics Abstracts

Science Abstracts Series A

July—December 1987

Subject Index (M–Z)

CONTENTS

Subject Index (M – Z)

Physics Abstracts, ISSN 0036-8091, is published twice monthly by the Institution of Electrical Engineers in association with the Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane, Piscataway, NJ 08855-1331. Second-Class postage paid at Piscataway, NJ. POSTMASTER: send address changes to: INSPEC/IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08855-1331. Printed by Unwin Brothers Limited, The Gresham Press, Old Woking, Surrey, UK.

Annual subscription rates:

	USA $	UK £	ROW £	JAPAN ¥
PHYSICS ABSTRACTS (Set)	1560	650	1020	308,600
Sets and monograph series	830	450	650	181,500

© 1988 THE INSTITUTION OF ELECTRICAL ENGINEERS. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the Institution of Electrical Engineers.

Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron and aluminium garnets appear in the formulae lists as MIG and MAG (where M is metal element, e.g. YIG and YAG); $(Pb,La)(Zr,Ti)O_3$ and $Pb(Zr,Ti)O_3$ appear as PLZT and PZT. **Organic substances** including **liquid crystals** are not given as formulae but common abbreviations are used.

1D	one-dimensional
2D	two-dimensional
3D	three-dimensional
A/D	analogue-to-digital
ABS resin	acrylonitrile-butadiene-styrene resin
AC	alternating current
ACSR	aluminium conductor steel reinforced
ACV	air cushion vehicle
ADC	analogue-to-digital conversion
ADM	adaptive delta modulation
ADP	administrative data processing
ADPCM	adaptive differential pulse code modulation
ADS	automatic depressurisation system
AE	acoustic emission
AEC	atomic electron correlation(s)
AES	Auger electron spectra(oscopy)
AF	audio frequency
AFC	automatic frequency control
AFL	abstract family of languages
AFMR	antiferromagnetic resonance
AFR	away from reactor (spent fuel storage)
AGB	asymptotic giant branch
AGC	automatic gain control
AGR	advanced gas-cooled reactor
AGS	alternating gradient synchrotron
AGV	automatic guided vehicle
AI	artificial intelligence
AKR	auroral kilometric radiation
ALARA	as low as reasonably achievable
ALU	arithmetic logic unit
AM	amplitude modulation or air mass number
ANOVA	analysis of variance
ANSI	American National Standards Institute
APACHE	Accelerator for Physics and Chemistry of Heavy Elements
APC	adaptive predictive coding
APCM	adaptive pulse code modulation
APCVD	atmospheric pressure chemical vapour deposition
APD	avalanche photodiode
APFIM	atom probe field in microscopy
APR	acoustic paramagnetic resonance
APRFR	Army Pulsed Radiation Facility Reactor
APS	appearance potential spectra(oscopy)
APW	augmented plane wave
APWR	advanced pressurised water reactor
ARMA	autoregressive moving average
ARPES	angle resolved photoemission spectra (oscopy)
ARQ	automatic repeat request
ARUPS	angular resolved ultraviolet photoelectron spectra
ASCII	American standard code for information interchange
ASIC	application specific integrated circuit
ASK	amplitude shift keying
ATC	air traffic control
ATE	automatic test equipment
ATF	Advanced Toroidal Facility
ATM	automatic teller machine or Axilrod-Teller-Moto
ATR	attenuated total reflection
ATWS	anticipated transients without scram
AVC	automatic volume control
AWGN	additive white Gaussian noise
BARITT	barrier injection transit time
BBD	bucket-brigade device
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon
BCC	body centred cubic
BCD	binary-coded decimal
BCH	Bose-Chadhuri-Hocquenghem
BCS	Bardeen-Cooper-Schrieffer
BCT	body centred tetragonal
BEBC	Big European Bubble Chamber
BEDT-TTF	bio(ethylenedithio)-tetrathiofulvalene (-inium)
BEM	boundary element method
BEPC	Beijing Electron Positron Collider
BER	bit error rate
BFL	buffered FET logic
BFO	beat-frequency oscillator
BH	buried heterostructure
BIL	buried injection logic
BIMOS	bipolar/metal-oxide-semiconductor
BIS	bremsstrahlung isochromat spectroscopy
BIST	built in self test
BPSG	borophosphosilicate glass
BPSK	binary phase shift keying
BRD	W Germany
BRET	Breeder Reprocessing Engineering Test
BSG	borosilicate glass
BTSC	Broadcast Television Systems Committee
BVP	boundary value problem
BWIP	Basalt Waste Isolation Project
BWO	backward wave oscillator
BWR	boiling water reactor
BWT	backward wave tube
C-V	capacitance-voltage
C^2	command and control
C^3	command control communications or cleaved coupled cavity

C^3I	command control communications and intelligence
C^3L	complementary constant current logic
CAAB/AM	companded single sideband amplitude modulation
CAD	computer aided design
CADAT	computer aided design and testing
CADD	computer aided draughting and design
CAE	computer aided engineering
CAI	computer assisted instruction
CAL	computer aided learning
CAM	computer aided manufacturing
CANDU	Canadian deuterium uranium
CAR	computer aided retrieval
CARS	coherent antiStokes Raman scattering (spectra)
CATT	controlled avalanche transit transistor
CATV	community antenna television or cable television
CB	citizens' band
CBI	computer based instruction
CBOOA	cyanobenzylidene octyloxyaniline
CBT	computer based training
CCBA	coupled channel Born approximation
CCCS	current controlled current source
CCFL	counter current flow limiting (LOCA phenomenon)
CCD	charge-coupled device
CCIR	International Radio Consultative Committee
CCITT	International Telephone & Telegraph Consultative Committee
CCL	capacitor-coupled logic
CCTF	Cylindrical Core Test Facility
CCTR	Culham Conceptual Tokamak Reactor
CCTV	closed circuit television
CCVS	current controlled voltage source
CD	compact disc
CD-ROM	compact disc ROM
CDFR	Commercial Demonstration Fast Reactor
CDI	collector diffusion isolation
CDLC	cellular data link control
CDM	code division multiplexing
CDMA	code division multiple access
CDW	charge-density wave
CECL	cascode-emitter coupled logic
CEGB	Central Electricity Generating Board
CEM	channel electron multiplier
CEPA	coupled electron pair approximation
CERN	European Council for Nuclear Research
CESR	conduction electron spin resonance
CFAR	constant false alarm rate
CFG	context free grammar
CFL	context free language
CFSK	coherent frequency shift keying
CGTO	contracted Gaussian-type orbital
CHF	coupled Hartree-Fock
CHP	combined heat and power
CI	configuration interaction
CID	charge injection device
CIDEP	chemically induced dynamical electron polarisation
CIDNP	chemically induced dynamical nuclear polarisation
CIEH	charge iterated extended Huckel
CIHY	configuration interaction Hylleras
CIM	computer integrated manufacturing or constituent interchange model
CMI	computer managed instruction
CML	current-mode logic
CMOS	complementary metal oxide semiconductor
CNC	computerised numerical control
CNDO	complete neglect of differential overlap
COM	computer output to microform (fiche or film)
COMFET	conductivity-modulated field effect transistor
COVA	computer code validation
CP	charge, parity
CPA	coherent potential approximation or critical path analysis
CPC	compound parabolic concentrator
CPFSK	continuous phase frequency shift keying
CPM	continuous phase modulation or critical path method
CPSK	coherent phase shift keying
CPT	charge, parity, time
CPU	central processing unit
CRBR	Clinch River Breeder Reactor project
CRDA	control rod drop accident
CRO	cathode ray oscilloscope
CRSR	coherent resonant Stokes rotation
CRT	cathode ray tube
CS	coupled states
CSM	continuous slowing down models
CSMA	carrier sense multiple access
CSMA/CD	carrier sense multiple access with collision detection
CSP	channel substrate planar
CSRS	coherent Stokes-Raman spectra(oscopy)
CSSB/AM	companded single sideband amplitude modulation
CT	computerised tomography
CTD	charge transfer device
CTL	complementary-transistor logic
CTR	controlled thermonuclear reactor
CVD	chemical vapour deposition
CVSDM	continuously variable slope delta modulation
CW	continuous wave
D/A	digital-to-analogue
DAC	digital-to-analogue conversion
DAD	digital audio disc
DAMA	demand assigned multiple access
DASD	direct access storage device
DAT	digital audio tape
DAW	dry active waste
DBMS	database management system
DBR	distributed Bragg reflector

DBS	direct broadcasting by satellite
DC	direct current
DCFL	direct-coupled FET logic
DCLC	drift cyclotron loss cone (instability)
DCT	discrete cosine transform
DCTL	direct-coupled transistor logic
DDC	direct digital control
DDL	diode-diode logic
DDR	E Germany
DECENT	distribution of exact classical energy transfer
DES	data encryption standard
DESY	Deutsches Electron Synchrotron
DF	Dirac-Fock
DFB	distributed feedback
DFE	decision feedback equaliser
DFT	discrete Fourier transform
DH	double heterostructure
DHF	Dirac-Hartree-Fock
DIL	dual-in-line
DIP	dual in-line package
DITE	Divertor in Torus Experiment
DLTS	deep level transient spectra(oscopy)
DM	delta modulation
DMA	direct memory access
DMM	digital multimeter
DMOS	double-diffused metal-oxide-semiconductor
DMSO	dimethylsulphoxide
DNA	digital network architecture or deoxyribonucleic acid
DNMR	double nuclear magnetic resonance
DOBAMBC	p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate
DoD	Department of Defense (USA)
DOPSK	differential offset phase shift keying
DORIS	Dopple-Ring-Speicher
DOS	disc operating system
DOVETT	double velocity transit time
DP	data processing
DPCM	differential pulse code modulation
DPDA	deterministic pushdown automaton
DPPH	diphenylpicrylhydrazyl
DPSK	differential phase shift keying
DQPSK	differential quadrature phase shift keying
DRAM	dynamic random access memory
DS-SSMA	direct sequence-spread spectrum multiple access
DSAM	Doppler shift attenuation method
DSB	double sideband
DSC	differential scanning calorimetry
DSI	digital speech interpolation
DSP	digital signal processor
DSS	decision support system
DTA	differential thermal analysis
DTL	diode transistor logic
DTPP	Demonstration Tokamak Power Plant
DTU	dual topological unitarisation
DV-Xα	discrete variational Xα method
DVM	digital voltmeter
DWBA	distorted wave Born approximation
DWIA	distorted wave impulse approximation
DWPF	Defence Waste Processing Facility
E1,E2	electric dipole, quadrupole
E^{2}PROM	electrically erasable programmable read-only-memory
EAROM	electrically alterable read-only-memory
EAS	extensive air shower
EAX	electronic automatic exchange
EB	exponential Born
EBBA	4-ethoxybenzylidene-4'n-butylaniline
EBIC	electron beam induced current(s)
EBR	experimental breeder reactor
EBT	Elmo Bumpy Torus
ECC	emergency core cooling
ECCM	electronic counter-counter measures
ECCS	emergency core cooling system
ECELR	Epithermal Critical Experiment Laboratory Reactor
ECG	electrocardiography (-gram)
ECL	emitter coupled logic
ECM	electronic countermeasures
ECRH	electron cyclotron resonance heating
EDA	ethylene diamine
EDAX	energy dispersive X-ray analysis
EDIF	electronic data interchange format
EDP	electronic data processing
EDTA	ethylene diamine tetra-acetic acid
EDTV	extended definition television
EDW	electron density wave
EDX	energy dispersive X-ray
EEG	electroencephalography (-gram)
EELS	electron energy loss spectra(oscopy)
EEPROM	electrically erasable programmable read-only-memory
EFG	edge-defined film fed growth
EFL	emitter-follower logic or emitter-function logic
EFM	extended Flygare method
EFT	electronic funds transfer
EHD	electrohydrodynamics
EHDTV	enhanced high definition television
EHF	extremely high frequency
EHP	electron-hole potential method
EHT	extra high tension or extended Huckel theory
EHV	extra high voltage
EIRP	equivalent isotropically radiated power
ELDOR	electron electron double resonance
ELF	extremely low frequency
EM	electromagnetic
EMC	electromagnetic compatibility or European Muon Collaboration
EMF	electromotive force
EMG	electromyography (-gram)
EMI	electromagnetic interference
EMP	electromagnetic pulse
EMS	energy management system
ENDOR	electron nuclear double resonance
ENG	electronic newsgathering
EOF	end of file
EOG	electrooculography (-gram)
EPMA	electron probe microanalysis
EPR	electron paramagnetic resonance
EPRI	Electric Power Research Institute

EPROM	erasable programmable read-only-memory
ERG	electroretinography (-gram)
ESA	European Space Agency
ESCA	electron spectroscopy for chemical analysis
ESCAR	Experimental Superconducting Accelerating Ring
ESD	electrostatic discharge or electron stimulated desorption
ESF	engineering safety features
ESP	electrostatic precipitators
ESPRIT	European Strategic Programme for Research in Information Technology
ESS	electronic switching system
EUV	extreme ultraviolet
EW	electronic warfare
EX-OR	exclusive-OR (logic)
EXAFS	extended X-ray absorption fine structure
FAMOS	floating gate avalanche metal-oxide-semiconductor
FBC	fluidised bed combustion
FBR	fast breeder reactor
FCC	face centred cubic
FCI	fuel-cladding interaction
FDM	frequency division multiplex(ing)
FDMA	frequency division multiple access
FDNC	frequency dependent negative conductance
FDNR	frequency dependent negative resistance
FEA	finite element analysis
FECL	feedback ECL
FED	Fusion Engineering Device (USA)
FEDC	Fusion Engineering Device Centre
FEL	free electron laser
FEM	field emission microscopy or finite element method
FER	Fusion Experimental Reactor (Japan)
FET	field effect transistor
FFHR	fusion-fission hybrid reactor
FFT	fast Fourier transform
FFTF	Fast Flux Test Facility
FGD	flue gas desulphurisation
FHNC	Fermi hypernetted chain
FIFO	first in first out
FIM	field ion microscopy
FIMOS	floating gate ionisation injection metal-oxide-semiconductor
FIR	far infrared or finite impulse response
FLIR	forward looking infra-red
FLOPS	floating point operation per second
FM	frequency modulation
FMIT	Fusion Materials Irradiation Test Facility
FMR	ferromagnetic resonance
FMS	flexible manufacturing systems
FMSR	Fast Mixed Spectrum Reactor
FPC	fusion power core
FPLA	field programmable logic array
FPT	finite perturbation theory
FRMR	field reversed mirror reactor
FSDE	fission suppressed direct enrichment (breeder blanket)
FSK	frequency-shift keying
FSGO	floating spherical Gaussian orbitals
FTR	Fast Test Reactor
FWHM	full width half maximum
GAMBIT	gate modulated bipolar transistor
GANIL	Grand Accelerateur National a Ions Lourds
GCFR	gas-cooled fast breeder reactor
GCHWR	gas cooled heavy water moderated reactor
GCM	generator coordinate method
GDR	giant dipole resonance
GETR	General Electric Test Reactor
GHF-NO-CI	generalised Hartree-Fock/natural orbital/configuration interactions
GIAO	gauge-invariant atomic orbitals
GIS	gas insulated switchgear (or system)
GKS	Graphical Kernel System
GMDH	group method of data handling
GMR	giant monopole resonance
GMSK	Gaussian filtered minimum shift keying
GO	Gaussian orbitals
GPED	gas phase electron diffraction
GPIB	general purpose interface bus
GPM	ground potential model
GPS	Global Positioning System
GQR	giant quadrupole resonance
GRIN	graded (gradient) refractive index
GSPC	gas scintillation proportional chamber (or counter)
GTHTGR	gas turbine HTGR
GTO	gate turn-off or Gaussian-type orbitals
GUT	grand unified theory
GVB	generalised valence bond
HAM	hydrogenic atoms in molecules
HBT	heterojunction bipolar transistor or N-(p-hexyloxybenzylidene)-p-toluidene
HCDA	hypothetical core disruptive accident
HCMOS	high speed complementary metal oxide semiconductor
HCP	hexagonal close packed
HDLC	high level data link control
HDTV	high definition television
HEED	high energy electron diffraction
HEMP	high altitude electromagnetic pulse
HEMT	high electron mobility transistor
HEU	highly enriched uranium (93% U235)
HEU/Th	highly enriched U/Th fuel
HEXFET	hexagonal MOSFET
HF	high frequency or Hartree-Fock
HFB	Hartree-Fock-Bogoliubov
HFEF	Hot Fuel Examination Facility
HFET	heterojunction field effect transistor
HFIR	high flux isotope reactor
HFITR	High Field Ignition Test Reactor
HFO	Hartree-Fock-Overhauser
HFS	Hartree-Fock-Slater or hyperfine structure

HGMS	high gradient magnetic separation
HIXE	heavy ion induced X-ray emission
HJBT	heterojunction bipolar transistor
HJFET	heterojunction field effect transistor
HLL	high level language
HLLW	high level liquid waste
HLW	high level waste
HMO	Huckel molecular orbitals
HMOS	high-performance metal-oxide-semiconductor
HMTSeF	hexamethylenetetraselenafulvalene (-inium)
HMTTF	hexamethyltetrathiofulvalene (-inium)
HOAB	heptyloxyazoxybenzene
HOMO	highest occupied molecular orbitals
HPCS	high-pressure core sprays
HREELS	high resolution electron energy loss spectra(oscopy)
HREM	high resolution electron microscopy
HSLA	high strength low alloy (steel)
HT	high tension
HTGR	high temperature gas-cooled reactor
HTGR SC/C	HTGR steam cycle cogeneration
HV	high voltage
HVAC	heating, ventilation and air conditioning
HVDC	high voltage direct current
HVEM	high voltage electron microscopy
HVIC	high voltage integrated circuit
HWLWR	heavy water moderated light water cooled reactor
HWR	heavy water reactor
HZP	Hot Zero Power
I-V	current-voltage
I/O	input/output
I^2L	integrated injection logic
I^3L	isoplanar I^2L
IAEA	International Atomic Energy Agency
IAR	isobaric analogue resonance
IAS	isobaric analogue state
IBA	interacting boson approximation
IBFA	interacting boson-fermion approximation
IBM	interacting boson model
IBPBAC	isobutyl-4-(4'-phenylbenzylidene-amino) cinnamate
IC	integrated circuit
ICDF	intermediate coupling Dirac-Fock
ICF	inertial confinement fusion
ICP	inductively coupled plasma
ICPP	Idaho Chemical Processing Plant
ICRF	ion cyclotron range of frequencies
ICRH	ion cyclotron resonance heating
IDT	interdigital transducer
IEPA	independent electron pair approximation
IETS	inelastic electron tunnelling spectra-(oscopy)
IF	intermediate frequency
IFA	ionisation front accelerator
IFE	intelligent front end
IGES	initial graphics exchange specification
IGFET	insulated gate field effect transistor
IGT	insulated gate transistor
IHEP	Institute of High Energy Physics
IIR	infinite impulse response
IKBS	intelligent knowledge-based system
IKO	Institute v. Kernph Ouder Amsterdam
ILS	instrument landing system
ILW	intermediate level (radioactive) waste
IMPATT	impact avalanche transit time
INDO	intermediate neglect of differential overlap
INDOR	internuclear double resonance
INEPT	insensitive nuclei enhanced by polarisation transfer
ING	intense neutron generator
INO	iterative natural orbital
INS	Information Network System or inertial navigation system
INTELSAT	international telecommunications satellite consortium
INTOR	International Tokamak Reactor
IOC-ω	inclusion of the overlap charges in the omega
IPSE	integrated programming support environment or project support environment
IPSS	international PSS
IR	infrared
IRDO	intermediate retention of differential overlap
IREB	intense relativistic electron beam
IRED	infrared emitting diode
IRS	information retrieval system
ISABELLE	intersecting storage and acceleration
ISDN	integrated services digital network
ISFET	ion-sensitive field effect transistor
ISI	intersymbol interference
ISL	integrated Schottky logic
ISO	International Standards Organization
ISR	intersecting storage ring
ISS	ion scattering spectroscopy
ISX	impurity study experiment
IT	information technology
ITC	ionic themocurrents
ITEP	Institute of Theoretical and Experimental Physics
ITO	indium tin oxide
ITR	Ignition Test Reactor
IU	Indiana University
IVO	improved virtual orbitals
IVP	initial value problem
JAERI	Japan Atomic Energy Research Institute
JCL	job control language
JET	Joint European Torus
JFET	junction field effect transistor
JINR	Joint Institute for Nuclear Research
JIT	just-in-time
JT-60	Japanese Tokamak-60
KBS	knowledge based system
KdV	Korteweg-de Vries

KEK	Japan National Laboratory for High Energy Physics
KKR	Korringa-Kohn-Rostoker
LAMPF	Los Alamos Meson Physics Facility
LAN	local area network
LC	inductance-capacitance
LCAO	linear combination of atomic orbitals
LCBO	linear combinations of (semi-localised) band orbitals
LCD	liquid crystal display/device
LCGO	linear combination of Gaussian orbitals
LCP	Large Coil Program
LCRO	linear combination of Rydberg orbitals
LCTF	Large Coil Test Facility
LD	laser diode
LDD	lightly doped drain
LDPE	low density polyethylene
LEAR	Low Energy Antiproton Ring
LEC	liquid encapsulated Czochralski
LED	light emitting diode
LEED	low energy electron diffraction
LEFD	Large Experimental Fusion Device
LEP	Large Electron Positron (CERN)
LET	linear energy transfer
LEU	low enrichment uranium (10% U235)
LEU/Th	low enrichment U/Th fuel
LF	low frequency
LHRH	lower hybrid resonance heating
LIFO	last in first out
LIM	linear induction motor
LIME	laser induced magnetically enhanced
LLTR	Large Leak Test Rig
LLW	low level (radioactive) waste
LMC	Large Magellanic Cloud
LMFBR	liquid metal fast breeder reactor
LMIS	liquid metal ion source
LMS	least mean square
LMTO	linear combination of muffin tin orbitals
LNG	liquified natural gas
LOCA	loss of coolant accident
LOCE	loss of coolant experiment
LOCOS	local oxidation of silicon
LOF	loss of flow
LOFT	Loss of Flow Test Facility
LOFW	loss of feed water
LOG	linear quadratic Gaussian
LONA	low noise amplifier
LOOSP	loss of onsite power
LP	linear programming
LPC	linear predictive coding
LPCS	low pressure core spray
LPCVD	low pressure chemical vapour deposition
LPE	liquid phase epitaxy
LPFL	low pinchoff-voltage FET logic
LPI	low probability of intercept
LQG	linear quadratic Gaussian
LSA	limited space charge accumulation
LSD	local spin density or loop shut-down
LSI	large-scale integration
LSPB	Large Scale Prototype Breeder
LSSD	level sensitive scan design
LSTF	Large Scale Test Facility
LTE	local thermodynamic equilibrium
LUMO	lowest unoccupied molecular orbitals
LV	low voltage
LWBR	light water breeder reactor
LWHCR	light water high convertor reactor
LWR	light water reactor
M1,M2	magnetic dipole, quadrupole
MAC	multiplexed analogue component
MADO	Mulliken approximation for differential overlap
MAGFET	magnetic field sensitive field effect transistor
MAN	metropolitan area network
MAP	manufacturing automation protocol
MARS	Mirror Advanced Reactor Study
MBBA	4-methoxybenzylidene-4'-n-butylaniline
MBE	molecular beam epitaxy
MBPT	many body perturbation theory
MCD	magnetic circular dichroism
MCFR	magnetic confinement fusion reactor
MCP	microchannel plate
MCPESCF	multiconfiguration paired excitation SCF
MCSCF	multiconfiguration self-consistent field
MCVD	modified chemical vapour deposition
MCXα	multiconfiguration Xα
MCZDO	multi-centre zero differential overlap
MEC	molecular electron correlation(s)
MEDO	multipole expansion of diatomic overlap
MEG	magnetoencephalography (-gram)
MESFET	metal-semiconductor field effect transistor
MEU	Medium Enrichment Uranium (20% U235)
MEU/Th	Medium Enrichment U/Th fuel
MF	medium frequency
MFP	mean free path
MFR	mirror fusion reactor
MFSK	multiple frequency shift keying
MFTF	Mirror Fusion Test Facility
MHD	magnetohydrodynamics
MIC	microwave integrated circuit
MID	magnetically insulated diode
MIDP	microwave induced delayed phosphorescence
MIEHM	modified iterative extended Huckel method
MIM	metal-insulator-metal
MIMD	multiple input multiple data
MIMO	multiple input multiple output
MIND	mass impregnated non-draining
MINDO	modified incomplete neglect of differential overlap
MIPS	million instructions per second
MIS	metal-insulator-semiconductor or management information system

MISFET	metal-insulator-semiconductor field effect transistor
MIT	Massachusetts Institute of Technology
MITATT	mixed tunnelling avalanche transit time
MLB	multilayer board
MLC	multilayer ceramic
MLE	maximum likelihood estimation
MLS	microwave landing system
MLW	medium level (radioactive) waste
MM	millimetre
MMF	magnetomotive force
MMI	man machine interface
MMIC	monolithic microwave integrated circuit
MNOS	metal-nitride-oxide-semiconductor
MO	molecular orbitals
MOCIC	molecular orbital constraint of interaction coordinates
MOCVD	metal-organic chemical vapour deposition
MODFET	modulation doped field effect transistor
MODPOT	modulator potential
MOS	metal-oxide-semiconductor
MOSFET	metal-oxide-semiconductor field effect transistor
MOST	metal-oxide-semiconductor transistor
MOV	metal oxide varistor
MOVPE	metal-organic vapour phase epitaxy
MOX	mixed oxide fuel
MPH	moving plasmoid heater
MPSK	multiple phase shift keying
MPU	microprocessing unit
MQORC	modified quadrature overlapped raised cosine
MQW	multiple quantum well
MRAC	model reference adaptive control
MRD	multiple-reference double excitation
MRINDO	modified Rydberg INDO
MRP	materials requirements planning
MRP II	manufacturing resources planning
MS	management science
MSI	medium scale integration
MSK	minimum shift keying
MSR	molten salt reactor
MSSW	magnetostatic surface wave
MSU	Michigan State University
MSW	magnetostatic waves
MSXα	multiple scattering X alpha
MTBF	mean-time between failures
MTF	modulation transfer function
MTI	moving target indicator
MTL	merged-transistor logic
MTTF	mean time to failure
MTXα	muffin-tin Xα
MUF	material unaccounted for or maximum usable frequency
MWPC	multiwire proportional chamber
NAL	National Accelerator Laboratory
NAND	not-and(logic)
NBETF	Neutral Beam Engineering Test Facility
NBI	neutral beam injection
NBPS	neutral beam power systems
NBS	National Bureau of Standards
NC	numerical control
NCBR	nitrine cooled breeder reactor
NCMET	non-closed shell many electron theory
NDDO	neglect of diatomic differential overlap
NDE	nondestructive evaluation
NDRO	nondestructive readout
NDT	nondestructive testing
NEA	negative electron affinity
NEMO	non-empirical molecular orbitals
NET	Next European Tokamak
NEVE	non-empirical valence-electron
NHS	National Health Service
NIC	negative impedance convertor
NLP	natural language processing
NMOS	N-channel metal-oxide-semiconductor
NMR	nuclear magnetic resonance
NMR-ON	NMR on oriented nuclei
NNNDO	neglect of non-neighbour differential overlap
NOR	not-or(logic)
NPL	National Physical Laboratory
NQR	nuclear quadrupole resonance
NRC	Nuclear Regulatory Committee
NRM	natural remanent magnetisation
NRZ	non-return to zero
NSRR	Nuclear Safety Research Reactor
NSSS	nuclear steam supply system
NTL	nonthreshold logic
NTO	natural transition orbitals
NTSC	National TV Standards Committee
NWPA	Nuclear Waste Policy Act
OA	office automation
OCR	optical character recognition
ODE	ordinary differential equation
ODMR	optical detection of magnetic resonance
OEIC	optoelectronic integrated circuit
OEM	original equipment manufacture
OER	oxygen enhancement ratio
OH	ohmic heating
OHTE	Ohmically Heated Toroidal Experiment
OPHF	orbital polarised Hartree-Fock
OPW	orthogonal plane wave
OQPSK	offset quadrature phase shift keying
OR	operations research
ORELA	Oak Ridge Electron Linear Accelerator
ORNL	Oak Ridge National Laboratory
OS	operating system
OSI	open systems interconnection
OTDR	optical time domain reflectometry
OTEC	ocean thermal energy conversion
OTF	optical transfer function
OTS	Orbital Test Satellite

OTSG	once-through steam generator
OZI	Okubo-Zweig-Iizuha (quark model)
PAA	paraazoxyanisole
PABX	private automatic branch exchange
PAC	perturbed angular correlation
PAHR	post accident heat removal
PAL	phase alternate line or programmable array logic
PAM	pulse amplitude modulation
PAP	paraazoxyphenetole
PBF	power bursts facility
PBFA	Particle Beam Fusion Accelerator
PBL	planetary boundary layer
PBR	pebble bed reactor
PBT	permeable base transistor
PBX	private branch exchange
PC	printed circuit or personal computer or programmable controller
PCAC	partially conserved axial currents
PCB	polychlorinated biphenol or printed circuit boards
PCES	phase change energy storage
PCI	pellet-cladding interaction
PCILOCC	perturbative configuration interaction using localised orbitals for crystal calculation
PCM	pulse code modulation
PCRV	prestressed concrete reactor vessel
PCV	primary containment vessel
PCX	plasma confinement experiment
PD	partial discharge
PDE	partial differential equation
PDF	probability density function
PDX	Poloidal Divertor Experiment
PEC	photoelectrochemical cell
PEM	photoelectromagnetic
PEP	Positron Electron Photon (Stanford)
PES	photoelectron spectra (spectroscopy)
PET	polyethylene terephthalate or positron emission tomography
PETRA	Positron Electron Tandem Ringbeschleuniger Anlage
PF	poloidal field or power factor
PFM	pulse frequency modulation
PFR	Prototype Fast Reactor
PHWR	pressurised heavy water reactor
PID(PI,PD)	proportional+integral+differential (derivative)
PIPECO	photoion photoelectron coincidence
PIUS	process inherent ultimately safe
PIXE	photon induced X-ray emission
PLA	phase locked arrays or programmable logic array
PLBR	Prototype Large Breeder Reactor
PLC	programmable logic control
PLCC	plastic leadless chip carrier
PLD	programmable logic device
PLL	phase locked loops
PLT	Princeton Large Torus
PM	pulse modulation or phase modulation
PMMA	polymethylmethacrylate
PMDR	phosphorescence microwave double resonance
PMOS	P-channel metal-oxide-semiconductor
PMR	proton magnetic resonance
PMS	pre-main-sequence
PN	planetary nebula(e)
PNDO	partial neglect of differential overlap
PNO-CI	pair natural orbital configuration interaction
PNS	Pulsed Neutron Source
POL	pair orthogonalised Lowdin
POPAE	protons on protons and electrons
POPOP	phenyl-oxazolyl-phenyl-oxazolyl-phenyl
PORV	power operated relief valve
POS	point of sale
PPB	parts per billion
PPDP/S	Pariser-Parr-Del Bene-Pople/Segal calculations
PPI	plan position indicator
PPM	pulse position modulation or parts per million
PPP	Pariser-Parr-Pople
PRA	probabilistic risk assessment
PRDDO	partial retention of diatomic differential overlap
PREPP	Process Experimental Pilot Plant
PRF	pulse recurrence (repetition) frequency
PROM	programmable read-only-memory or Pockels readout optical modulator
PS	proton synchrotron (CERN)
PSD	power shut-down or power spectral density
PSDN	packet switched data network
PSG	phosphosilicate glass
PSK	phase shift keying
PSS	packet switching service or Packet SwitchStream
PSTN	public switched telephone network
PSU	power supply unit
PTFE	polytetrafluoroethylene
PTH	plated through hole
PTM	pulse time modulation
PV	photovoltaic
PVC	polyvinyl chloride
PVD	physical vapour deposition
PWA	partial wave analysis
PWB	printed wiring board
PWBA	plane wave Born approximation
PWIA	plane wave impulse approximation
PWM	pulse width modulation
PWR	pressurised water reactor
QA	quality assurance
QAM	quadrature amplitude modulation
QASK	quadrature amplitude shift keying
QC	quality control
QCD	quantum chromodynamics
QDMBPT	quasi-degenerate many-body perturbation theory
QED	quantum electrodynamics
QFSK	quadrature frequency shift keying

QORC	quadrature overlapped raised cosine
QOSRC	quadrature overlapped squared raised cosine
QPM	quark-parton model
QPR	quadrature partial response
QPSK	quaternary phase shift keying
R & D	research and development
RAD	ribbon-against-drop
RAM	random access memory
RBE	relative biological effectiveness
RBMK	light water cooled, graphite moderated reactor
RBS	Rutherford backscattering
RC	resistance-capacitance
RCIC	reactor core isolation cooling
RCNDO	Rydberg CNDO
RCS	rapid cycling synchrotron or reactor coolant systems
RCTL	resistor-capacitor-transistor logic
RDBMS	relational database management system
REA	rod ejection accident
RF	radio frequency
RFI	radio frequency interference
RFPR	reversed field pinch reactor
RFX	Reversed Field (Pinch) Experiment
RG	renormalisation group
RGB	red green blue
RHEED	reflection high energy electron diffraction
RHF	restricted Hartree-Fock
RIA	reactivity initiated accident
RIE	reactive ion etching
RINDO	Rydberg INDO
RISC	reduced instruction set computer
RKKY	Rudermann-Kittel-Kasuya-Yosida
RLC	resistance-inductance-capacitance
RMS	root-mean-square
RNA	ribonucleic acid
RNS	residue number system
ROM	read-only memory
RPA	random phase approximation
RPAE	random phase approximation with exchange
RPM	relaxation potential model or revolutions per minute
RPV	reactor pressure vessel
RTA	rapid thermal annealing
RTG	radioisotope thermoelectric generators
RTL	resistor-transistor logic
RTP	rapid thermal processing
RTTY	radio teletypewriter
S/N	signal-to-noise
SACCI	symmetry adapted cluster configuration interaction
SAINT	self-aligned implantation for N^+-layer technology
SAMO	simulated ab initio molecular orbitals
SAMOS	stacked gate avalanche injection metal-oxide-semiconductor
SAN	small area network
SAR	synthetic aperture radar
SARSAT	search and rescue satellite aided tracking
SAW	surface acoustic waves
SAXS	small-angle X-ray scattering
SC	switched capacitor
SCADA	supervisory control and data acquisition
SCC	stress corrosion cracking
SCF	self-consistent field
SCFL	source-coupled FET logic
SCH	separate confinement heterostructure
SCL	space charge limited
SCPC	single channel per carrier
SCPT	self-consistent perturbation theory
SCR	silicon controlled rectifier
SCSI	small computer system interface
SCTF	Slab Core Test Facility
SDFL	Schottky-diode FET logic
SDI	selective dissemination of information or Strategic Defense Initiative
SDLC	synchronous data link control
SDM	space division multiplexing
SDMA	space division multiple access
SDO	shielded diatomic orbitals
SED	stochastic electrodynamics
SEHF	spin extended Hartree-Fock
SEM	scanning electron microscopy
SERS	surface enhanced Raman scattering
SEXAFS	surface extended X-ray absorption fine structure
SFE	solar-flare effect
SFL	substrate fed logic
SGEMP	system generated electromagnetic pulse
SGHWR	steam generating heavy water reactor
SHF	superhigh frequency
SHG	second harmonic generation
SICOS	sidewall base contact structure
SIL	single-in-line
SIMD	single instruction multiple data
SIMOS	stacked-gate injection metal-oxide-semiconductor
SIMOX	separation by implantation of oxygen
SIMS	secondary ion mass spectra(oscopy)
SIN	Swiss Institute of Nuclear Research
SINDO	scaled INDO
SIPOS	semi-insulating polycrystalline silicon
SIS	semiconductor-insulator-semiconductor
SISAM	spectrometer with interference selective amplitude modulation
SISO	single input single output
SIT	static induction transistor
SLC	Stanford Linear Collider
SLIC	subscriber line interface circuit
SLSF	Sodium Loop Safety Facility
SMA	surface mount(ed) assembly
SMATV	satellite master antenna television
SMC	Small Magellanic Cloud or surface mount(ed) component
SMD	surface mount(ed) device
SMES	superconductive magnetic energy storage

SMPS	switched mode power supply
SMQORC	staggered modified quadrature overlapped raised cosine
SMT	surface mount(ed) technology
SN	supernova(e)
SNA	Systems Network Architecture
SNM	special nuclear material
SNR	signal to noise ratio or supernova remnant
SNS	superconducting normal superconducting or Spallation Neutron Source
SOG	strongly orthogonal geminal
SOI	silicon on insulator
SOS	silicon on sapphire
SPA	separated pair approximation
SPC	stored program control
SPCP	single parity check product (code)
SPEAR	Stanford Positron Electron Asymmetric Ring
SPECT	single photon emission computerised tomography
SPHF	spin polarised Hartree-Fock
SPLEED	spin polarised low energy electron diffraction
SPS	Super Proton Synchrotron (CERN)
SQAM	superposed quadrature amplitude modulation
SQL	standard query language
SQPR	staggered quadrature partial response
SQPSK	staggered quadrature phase shift keying
SQUID	superconducting quantum interference device
SRAM	static random access memory
SREMP	source region electromagnetic pulse
SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations
SRV	safety release valve
SS-TDMA	satellite switched time division multiple access
SSB	single sideband
SSBW	surface skimming bulk wave
SSC	sudden storm commencement or Superconducting Super Collider
SSCR	spectrum shift controlled reactor
SSFL	Schottky-barrier coupled Schottky-barrier gate FET logic
SSI	small scale integration
SSMA	spread spectrum multiple access
SST	sea surface temperature or supersonic transport
STD	salinity-temperature-depth or subscriber trunk dialling
STEC	solar thermal energy conversion
STEM	scanning transmission electron microscopy
STI	scientific and technical information
STL	Schottky transistor logic
STM	scanning tunnelling microscopy
STO	Slater-type orbitals
STOL	short take-off and landing
STP	Slater-transfer Preuss
SURMAC	surface magnetic confinement
SUSY GUT	supersymmetric grand unified theory
SVC	static VAr compensator
SW	short wave
SWEPP	Stored Waste Examination Pilot Plant
SWR	sodium water reactor or standing wave ratio
SXAPS	soft X-ray appearance potential spectra(oscopy)
TAB	tape automated bonding
TASI	time assignment speech interpolation
TAT	transatlantic telephone cable
TBBA	terephthal-butylaniline
TCNE	tetracyanoethylene
TCNQ	tetracyanoquinodimethane
TCR	temperature coefficient of resistance
TCXO	temperature compensated crystal oscillator
TDHF	time-dependent Hartree-Fock
TDF	Technology Demonstration Facility or transborder data flow
TDM	time division multiplex(ing)
TDMA	time division multiple access
TDMF	time dependent mean field theory
TDPAC	time differential perturbed angular correlation
TDS	thermal desorption spectra(oscopy)
TE	transverse electric
TEA	transversely excited atmosphere
TED	transferred electron device
TEGFET	two-dimensional electron gas field effect transistor
TEM	transverse electromagnetic or transmission electron microscopy
TEXT	Texas Experimental Tokamak
TF	toroidal field
TFCX	Toroidal Fusion Core Experiment
TFT	thin film transistor
TFTR	Tokamak Fusion Test Reactor
TGA	thermogravimetric analysis
TGFB	triglycine fluoroberyllate
TGS	triglycine sulphate
TGSe	triglycine selenate
THF	tremendously high frequency
THORS	Thermal-Hydraulic Out-of-Reactor Safety Facility
THTF	Thermal Hydraulic Test Facility
TIL	two interdigitation level
TJS	transverse junction stripe
TLD	thermoluminescent dosimeter(-ry)
TM	transverse magnetic
TMC	Test Module Coil
TMHR	tandem mirror hybrid reactor
TMI	Three Mile Island
TMMC	tetramethylammonium manganese chloride
TMR	tandem mirror reactor
TMTSeF	tetramethyltetraselenafulvalene (-inium)
TMTTF	tetramethyltetrathiofulvalene(-inium)
TMX-U	Tandem Mirror Experiment-Upgrade
TNS	The Next Step
TOF	time-of-flight

TOP	technical office protocol or transient overpower accident
TPC	time projection chamber
TPD	temperature programmed desorption
TPTF	Two Phase Flow Test Facility
TRAPATT	trapped plasma avalanche triggered transit
TREAT	Transient Reactor Test Facility
TRM	thermoremanent magnetisation
TRRR(TR_3)	time resolved resonant Raman (spectra (-oscopy))
TRU	transuranic (waste)
TSC	thermally stimulated currents
TSD	thermally stimulated desorption
TSEE	thermally stimulated exo-electron emission
TSIC	thermally stimulated ionic currents
TSeF	tetraselenafulvalene(-inium)
TSeT	tetraselenatetracene
TSTA	Tritium Systems Test Facility
TTL	transistor transistor logic
TTMP	transit time magnetic pumping
TTT	tetrathiotetracene
TTY	teletype terminal
TUCA	transient undercooling accident
TUCOP	transient undercooled overpower accident
TV	television
TVRO	TV receive only
TW	travelling wave
TWT	travelling wave tube
UART	universal asynchronous receiver transmitter
UCHF	uncoupled Hartree-Fock
UCN	ultra cold neutrons
UHF	ultra high frequency or unrestricted Hartree-Fock
UHPS	underground hydroelectric pumped storage
UHV	ultra high voltage
UJT	unijunction transistor
UKAEA	United Kingdom Atomic Energy Authority
ULA	Uncommitted logic array
ULF	ultra low frequency
ULSI	ultra-large scale integration
UMD	unitised microwave devices
UPS	ultraviolet photoelectron spectra(oscopy) or uninterruptible power supply
US	ultrasonic
USART	universal synchronous/asynchronous receiver transmitter
UUT	unit under test
UV	ultraviolet
VAD	vapour phase axial deposition
VAN(S)	value added network (services)
VB	valence bond
VCCS	voltage controlled current source
VCO	voltage controlled oscillator
VCR	video cassette recorder
VCVS	voltage controlled voltage source
VDM	vector dominance model
VDT	visual display terminal
VDU	visual display unit
VDW	van der Waals
VFO	variable frequency oscillator
VHF	very high frequency
VHPIC	very high performance integrated circuit
VHSIC	very high speed integrated circuit
VHV	very high voltage
VJFET	vertical junction field effect transistor
VLBI	very long base line interferometry
VLF	very low frequency
VLSI	very large scale integration
VM	virtual machine
VMOS	vertical channel metal-oxide-semiconductor
VOR	VHF omnidirectional range
VPE	vapour phase epitaxy
VRC	visual record computer
VRDDO	variable retention of diatomic differential
VS	virtual storage
VSAT	very small antenna terminals
VSB	vestigial sideband
VSEPR	valence shell electron pair repulsion
VSWR	voltage standing wave ratio
VTOL	vertical take-off and landing
VTR	voltage transformation ratio or video tape recorder
VUV	vacuum ultraviolet
VVER	water moderated water cooled reactors
VVVF	variable voltage variable frequency
WAN	wide area network
WARC	World Administrative Radio Conference
WAXS	wide-angle X-ray scattering
WDF	wave digital filter
WDM	wavelength division multiplex(ing)
WIPP	Waste Isolation Pilot Plant
WKB	Wentzel-Kramers-Brillouin
WORM	write once read many times
WP	word processing
WR	Wolf-Rayet
WSI	wafer scale integration
WWER	water moderated water cooled reactors
XANES	X-ray absorption near edge structure
XLPE	cross-linked polyethylene
XOR	exclusive-OR
XPD	cross-polarisation discrimination
XPS	X-ray photoelectron spectra
XUV	X-ray-ultraviolet
ZEBRA	Zero Energy Breeder Reactor Assembly
ZGS	zero gradient synchrotron
ZPPR	zero power plutonium reactor
ZTP	Z toroidal pinch

Subject Index

M-centre lasers *see colour centre lasers*

M-centres
- CaO, phosphoresc., F_2^{2+} defect, optically detected stimulated spin echoes 7−85432
- LiF crystal, with F_2^+ colour centres, for passive shutter for ruby laser 7−117245
- LiF crystal laser with F_2^+ colour centres, flashlamp pumping 7−82574
- LiF crystals, F_2^- colour centres lasing behaviour, optical props. and form. conditions 7−68648
- LiF F_2^- colour centre laser, continuously tunable subpicosecond radiation generation 7−90620
- LiF, F_2^+ centres, production by electron irradiation, fluoresc. emission *(Chinese)* 7−117924
- LiF, F_2^+-centres, stabilisation by OH^- *(Chinese)* 7−111551
- LiF stressed crysts., F_2^+ centres, γ-ray irrad. and compression effects 7−131147
- LiF:F_2^- colour centre Q-switch, use with Nd:YAG laser 7−117207
- LiF:O^{2-} (OH^-), F_2 centres, thermal stability, appl. to lasers 7−124265
- MgF_2 irrad. crysts., X-ray luminescence studies 7−132322
- NaF:Ca^{2+}(Mg^{2+})(Mn^{2+}) crystals containing F_2^+-like centres, lasing features, absorpt. and luminesc. bands 7−97020
- NaF:Mg, excited F_2^+− and M−centres, lifetime studies 7−106257

M-regions *see solar corona*

M-type tubes *see microwave tubes*

Mach number
see also acoustic wave velocity; shock waves
- 3D excrescences in turbulent boundary layers, drag meas. 7−97502
- blast wave impinging on circular cylinder, Euler eqn. soln. 7−104305
- boat-tailed heat shield, supersonic flow simulation 7−97473
- compressible gas flow through subsonic and supersonic nozzles, Mach number distrib. equalisation 7−111014
- compressible low-speed flow with heat addition, perturbation expansion 7−142328
- electrically conducting compressible fluid in transverse magnetic field, boundary layer flow 7−75698
- electron hole Mach number limit in bounded-beam plasma, Poisson eqn. soln. 7−75836
- hypersonic flow over multistage cones, heat transfer study 7−97565
- hypersonic wind tunnel nozzles, simplified Navier-Stokes eqns. anal. 7−142350
- ideal gas, 3D supersonic flow past revolving bodies, flow pattern investig. 7−117625
- jets, supersonic submerged isobaric, mixing intensity, Mach number depend., vortices struct. model 7−142348
- magnetosonic shock wave plasma heating through resonant ion acceleration 7−97746
- nozzles, supersonic concentric, center plug shapes study 7−83297
- perfect gas, transonic flow, velocity pot. eqn. soln. 7−97562
- plasma heating and particle refl. by a laminar magnetosonic shock wave 7−75842
- shock wave reflection, triple point thermal nature 7−111029
- shock-wave-boundary-layer interactions, surface static press. and shear stress distrib. meas. 7−142336
- supersonic streamline flow past deformed shells, num. soln. *(Russian)* 7−136925
- transient inviscid gas flow in shock tube, Euler eqn. soln. 7−83270
- GaAs, films, growth in continuous gas-epitaxy reactors, gas-flow regimes, num. study 7−118323

Mach principle *see cosmology; space-time configurations*

machine bearings
- cavitated squeeze-film bearings, closed form model 7−106637
- elastic bodies, comparison of modeling algorithms 7−110876
- failure, application and fitting effects 7−83121
- gyroscopes with gas lubricated bearings, equipment manufacture *(Rumanian)* 7−89214
- lubricant flow in bearing curved gap, pseudo-plastic variable consistency effects *(German)* 7−142342
- MoS_2 lubricated bearings for cryogenic space instrument 7−67330

machine insulation
- DC machine commutator micanite insulation, stress relaxation during molding 7−98334

machine testing
- shrouded wind unit testing for connection to Romanian national grid *(Romanian)* 7−114070

machine tools
- air-bearing turn-tables for micromachining of aspherical and Fresnel mirrors 7−90848
- aspherical micromachining, prediction and minimisation working zone migration on ND-tools 7−90847
- aspherical optics, conf., Orlando, FL, USA (April 1986) 7−88737
- diamond, surface coating with Mo_2C by electrolysis of ionic melts, tool life improvement 7−78296
- diamond tools, verifying quality using plunge cuts and microinterferometer 7−90846
- grinding attachment for lathe for lens mold fabrication 7−117359
- precision machining vibration, undulation effects on micromachined optical surfaces 7−90845
- ultra-hard materials 7−113461
- US machining effectiveness of ceramics, influence of abrasive material props. 7−78295

machine translation *see language translation*

machine vision *see computer vision*

machine windings
see also rotors; stators
- superconducting armature, three-phase, windings and cryostat design and construct. 7−73359

machines, electric *see electric machines*

machining
see also cutting; electrolytic machining; electrolytic polishing; electron beam machining; grinding; laser beam machining; spark machining
- automated machining of large optical components with small tool, test 7−110614
- cemented carbides for cutting tools, current development trends 7−78455
- ceramic, US machining effectiveness, abrasive material props. influence 7−78295
- graphite electrode production for electrodischarge machines, by ultrasonic machining 7−90912
- lenses, aspherical, fabrication, flexible manufacturing system 7−117364
- micro-mechanical components, by ion beams *(German)* 7−128550
- micromechanical structures, ion beam machining 7−126275
- optical components, diamond machining as production tool 7−117362
- optical surfaces, using single-diamond tools *(German)* 7−130399
- planar surface fabrication, using calibrating tool *(Czech)* 7−104057
- steel, turned, residual stresses 7−113853
- steel machinability, effect of hard Ti alloy inclusions *(Spanish)* 7−86344
- synchrotron radiation mirror super high-precision machining to give high quality images *(Japanese)* 7−117356
- synchrotron radiation mirror super-high accuracy profile meas. for machining *(Japanese)* 7−117357
- ultra-hard materials 7−113461
- Cu-Sn-Pb-Zn, bearing bronze, annealed, surface integrity in machining 7−78373
- SiC, REFEL self-bonded, mech. props., effect of microstruct. features 7−126249
- SiC single crystals, surface struct., effect of machining 7−71359

macroeconomics *see economic cybernetics*

macromolecular configurations
- acrylic acid-methacrylic acid copolymers, aq. soln., conform. behaviour 7−97891
- actin, crosslinking, network connectivity and crit. gel point, probabilistic theory 7−114186
- actin muscle filament, spacing and Donnan pot. relationship, electrochemical meas. 7−78728
- albumin, struct and activity, hydration effects, integrated optics and IR Raman spectra study 7−68496
- aromatic polyimides, chain conform. and rigidity investig. *(Russian)* 7−83790
- bacteriophage φ29 DNA, requirement of small virus RNA for in vitro packaging 7−119715
- bacteriorhodopsin, FTIR obs. of water induced conform. changes 7−93638
- bacteriorhodopsin, glucose-embedded and frozen-hydrated purple membrane, difference Fourier anal. 7−144957
- bacteriorhodopsin, mol. averaging of 3 cryst. forms 7−133201
- bacteriorhodopsin, pS conformational intermediates during photocycle, vibr. Raman spectra study 7−68485
- biological macromolecular structure, classification and 3D reconstruction from electron micrographs 7−100804
- bisphenol A polycarbonate, in solvent mixture, conform. transitions 7−91420
- bovine serum albumin, α-helix coil content, heat denaturation, Fourier transform IR spectra 7−141727
- bungarotoxin, struct., multistep modeling using crystal coords. and X-ray diffr. data 7−78735
- calmodulin-binding peptides, fluoresc. props. rel. to α-helical periodicity 7−126720
- carbonic anhydrase B, microcalorimetric study of heat of denaturing 7−144972
- cellular level phenomena, spectroscopic nuclear spin resonance 7−114223
- cellulose triacetate, acetic acid solns., macromol. conform. changes, temp. effects *(Russian)* 7−82410
- chain geometry, renormalisation group method investig. 7−82400
- chromatin superstructure and condensation mechanism, X-ray soln. scatt. and hydrodynamic obs. 7−133202
- chymotrypsin, enzyme activity and conform., pH and pressure effects, Raman spectra study 7−68498
- chymotrypsinogen, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7−133200
- clustered proteins, fractal structures, laser scatt. study *(Korean)* 7−144956
- collagen of marine invertebrates, X-ray diffr. obs. 7−126704
- comb-like polymers, solns., temp.-conc. diagram of state *(Russian)* 7−137198
- computer graphic modelling using algebraic topology 7−144958
- conference, Marineland, FL, USA (Mar. 1986) 7−72693
- crystal structures, least squares refinement program 7−139187
- α-crystallin proteins, colloidal dispersion struct., small angle X-ray scatt. study 7−114175
- crystallographic *R* factor refinement by molecular dynamics, crambin appl. 7−86906
- cycloalkanes, chain folding and mesomorphic states DSC anal. 7−117105
- cytochrome c in surfactant inverted micelles, conform., redox props. 7−126691
- deformation, mol. mechs., quadratic approx. 7−117100
- diblock copolymer molecules, conform. props. 7−110152
- DNA, B-type conformations in oligomer and salmon sperm 7−71672

macromolecular configurations continued
DNA, conformations, sequence dependent modulation, Raman spectrosc. obs. 7−71691
DNA, internucleosome regions, length rel. to chromatin fibrils conformation 7−139194
DNA, simulation of double-stranded branch point migration 7−93617
DNA, struct. state for chromatin with a short linker 7−139195
DNA base pairs, stacking interactions, config. specificity 7−119709
DNA bases, ethanol-induced conform, changes, Raman spectrosc., base stacking energies 7−71673
DNA bend direction determ. by phase sensitive detect. 7−119713
DNA bending at lambda replication origin, direct evidence 7−133213
DNA folding in the nucleosome, evidence for kinks 7−126709
DNA-9-aminoacridine complexes, γ-irradiated, variation of binding constants 7−78742
enzymes, NMR studies review 7−100814
epidermal growth factor, human, soln. struct. obs. 7−114179
epoxies, amine-crosslinked, H-bonding, IR spectra 7−117103
erythrocyte membrane skeleton, inherited abnormalities effect on viscoelastic props. 7−78793
anti-7-ethylbicyclo[2.2.1]hept-2-ene ring-opened polymer form., mechanism and microstruct. 7−122755
F-actin filaments of normal and athyreotic heart myocardium, structural parameters 7−106960
fibre diffr., isomorphous replacement using limited numbers of heavy atom derivatives 7−78725
filamentous bacteriophage fd, interactions between DNA and coat protein in struct. and assembly 7−100795
filamentous bacteriophage Pf1, struct. responsiveness: comparison of virion struct. in fibres and soln. 7−126707
flax cellulose nitrate, mol. conform., diffusion-sedimentation anal. and viscometric obs. *(Russian)* 7−82409
flexible macromolecules, dil. soln., config., nonequilibr. statistics 7−90458
flow birefringence, appropriate apparatus *(French)* 7−122760
furanose ring, alternative conform. probabilities, statistical stereochemical model 7−114171
glycine, peptide plane and side chains orientation, ^{13}C-^{15}N dipole-dipole couplings, NMR meas. 7−126719
grafted chain coil, average dimensions and density *(Russian)* 7−136112
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7−78759
heavy atom positions, determ. using difference Patterson function 7−75929
heparin, struct. ROESY spectra with relay artifacts 7−82221
horseradish peroxidase, electronic and mol. struct., PMR and NOE study 7−68478
immunoglobulin G in monomol. layers, heat denaturing obs. 7−144973
isotactic polystyrene, persistence-length enhancement caused by physical gelation, neutron scatt. evidence 7−83785
kinky DNA, conform. anal., role in minor groove binding of netropsin 7−78736
Lac repressor headpiece structure, NMR, restrained molecular dynamics calcs 7−133191
Lac repressor-lac operator complexes, soln. X-ray scatt. and electrophoretic obs. 7−93627
β-lactamase from Staphylococcus aureus PC1 at 2.5 Å resolution 7−119716
lipid bilayer membrane, gel state, vertical motion and steric effects, analytical and Monte Carlo calcs. 7−78794
lipid bilayer membrane, permeability during phase transition, intermolecular Ca bridges 7−126773
α-loctalbumin, tyrosine doublet intensity ratio, pH and Co^{2+} conc. effects, IR Raman spectra anal. 7−68491
long-range cooperative site binding at linear lattice, model development 7−93631
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7−68492
lysozyme, struct.-activity relationship, iodination effect, IR Raman spectra anal. 7−68495
lysozyme, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7−133200
macromolecules, fluorescence energy transfer, donor-to-acceptor distance distrib., freq.-domain fluoresc. spectra 7−139204
membrane protein, struct. derived from rot. diffusion study 7−78731
membrane proteins, native, conformational dynamics, Mossbauer spectroscopy study 7−144993
Mengo virus, atomic struct. at 3.0 Å 7−126710
N-meta-methoxybenzoyl-N′,N′,N″,N″-diethylenetriamide of phosphoric acid, cryst. and mol. struct. 7−104714
monellin, intensely sweet protein from African berries, cryst. struct. at 3 Å resolution 7−133209
myelin membranes, vibr. spectra and struct. 7−119742
myoglobin, binding to Xe, free energy, mol. dynamics simulation 7−133195
myoglobin, ligand bonding geometry, distal histidine role, XANES method meas. 7−78747
myoglobin, mol. dynamics anal., rel. to multiple conformational states of proteins 7−86904
myoglobin structural transitions, degrees of freedom, algorithmic methods, reaction paths 7−138956
myosin muscle filament, spacing and Donnan pot. relationship, electrochemical meas. 7−78728
oligomeric proteins, accessible surface area and stability 7−133210
overall anisotropy in diffr. from macromolecular crystals 7−78726
pancreatic trypsin inhibitor, bovine, mutants lacking cysteines 14 and 38, proper folding 7−114183
peptide chain structure parameters, bond angles and conformational angles from the Cambridge Structural Database 7−86895
PET films, high-energy in implantation 7−83782
phenyl glycidylether+imidazoles, epoxide cure kinetics study, radiochemical anal. 7−113919
phospholipid bilayer membrane, synthesis and polymerisation *(Japanese)* 7−126756
photographic layers, gelatin conformation role *(Hungarian)* 7−140771
PMMA, aq. soln., compact coil→random coil conformational transition investig. 7−117098
PMMA-poly(styrene-acrylonitrile) blend, chain entanglement and melt viscosity meas. 7−117104
poliovirus, struct. 7−114181
poly(2-hydroxyethyl methacrylate) in mixed water-alcohol solvents, conformational props. 7−74795
macromolecular configurations continued
poly(2-hydroxyethyl methacrylate) microparticles, crosslinked struct. determ. 7−117831
poly(4-vinylpyridine), conformational anal. and IR spectra 7−68481
poly(γ-benzyl-L-glutamate), lyotropic, mol. motion, PMR obs. 7−92539
poly(dA).poly(dT), obs. indicating B-type double helix with narrow minor groove 7−71668
poly(ethylene oxide), grafted on silica, effect of grafting ratio on chain conformation *(French)* 7−110154
poly(ethylene oxide) semidilute solns., decoration with sodium dodecyl sulphate surfactant micelles, neutron scatt. study 7−83636
poly(isopropyl methacrylate) with methacrylic or acrylic acid, dielectric and IR meas. 7−131056
poly(L-glutamates) with n-alkyl side chains, ^{13}C CP/MAS spectra, conformation and mol. packing 7−117101
poly(p-phenylene), struct., study of biphenyl components 7−103387
poly(styrene-g-ethylene oxide) copolymer, anionic synthesis, mol. wt., composition and struct. charactn. 7−117108
poly(vinyl acetate-co-N-vinyl 2-pyrrolidone)-poly2-ethylhexyl acrylate-co-acrylic acid blend, compatibility and microstruct., IR spectra 7−117107
poly 3-alkylthienylene. solns., thermochromism and solvatochromism, chain conform. 7−85611
poly L-lysine hydrobromide in aq. methanol, elec. birefr. helix-coil transition region 7−85600
trans-1,4-poly-1,3-pentadiene, cryst., isotactic, stress-induced conform. transitions 7−91472
poly-L-ornithine, dye binding, conform. transition and induced circular dichroism 7−103699
poly-N-5-n-alkyloxycarbonyl-n-pentyl maleimides, γ-transition, functional group effects 7−90461
poly-p-methacryloyloxy-p-azobenzenes, liq. cryst., IR spectrosc. *(Russian)* 7−83643
poly-p-phenylene, vibr. spectra rel. to stereochemical struct. 7−68482
polyacenaphthylene, soln., unperturbed dimensions and chain conform. obs. 7−97890
trans-polyacetylene, IR, Raman and neutron spectra, vibr. state density 7−110155
polyacrylamide, hydrodynamic effectiveness and stability, macromolecules conformation effect 7−83275
polyamines, synthesis and struct. 7−71487
polyaniline, aniline black, molecular conformations 7−110157
polyaniline, molecular conformation and optical spectra, CNDO/S3 calcs. 7−99887
polyaniline, Raman and IR spectra determ. of struct. 7−70797
polyaniline, redox chemistry 7−71489
polyaniline and substituted derivatives, electronic struct. 7−68483
polyanilines, photoelectron spectroscopy relevant to chemical and electronic struct. 7−70984
polybutylmethacrylate solns., ultrahigh mol. wt. conformational characts. 7−83639
polydiacetylenes, substituted, electronic struct., role of conformational disorder 7−84654
polydiethylsiloxane, cryst. and mol. struct., models *(Russian)* 7−83792
polydipropylsiloxane, cryst. and mol. struct., models *(Russian)* 7−83792
polyethylene, disordered chain mols., Raman spectra 7−90464
polyethylene, fluorinated, XPS, ab initio study using model systems 7−122327
polyethylene, linear, crosslinked in melts, morphology 7−91476
polyethylene, perfectly ordered and oriented, theoretical strength, weak-link chain defects influence 7−83787
polyethylene, single crysts., IR defect modes 7−92670
polyethylene chains containing defects, longit. acoustic mode freqs. 7−84170
polyethylenes, linear, low density, branch content and distrib., crystallinity 7−91477
polyglutamic acid, conform., X-ray, IR and ^{13}C CP/MAS NMR obs. 7−92524
polyimide, macromol, rigidity and cryst. lattice elasticity *(Russian)* 7−82411
polyimide, photoconduction anisotropy rel. to mol. orientation 7−99117
polymer, branched mols., Monte Carlo simulation 7−129910
polymer blends, supermolecular structure, vibr. spectra obs. 7−74796
polymer chain, configurational statistics in external field 7−103701
polymer chain folding, phys. mechanisms 7−76035
polymer chain geometry near theta-point, regularisation 7−82399
polymer chain per dimensions, intermol. overlaps, conc. depend. 7−117099
polymer chain segments, density distrib. near nonadsorbing wall 7−82401
polymer chains, atomic mean square separation, Flory exponent in Gaussian approx. 7−136106
polymer chains, ensemble of primary structures, statistics 7−122757
polymer fibre, entropic elasticity problem 7−76265
polymer films, planar macromolecular orientation, transmission IR band shapes 7−113208
polymer soln. dynamics, effect of topological constraints 7−69582
polymer solutions, solvent interactions, RISM integral eqn. soln. 7−96568
polymer surface, wetting hysteresis, rel. to polar nature of substrate *(French)* 7−112012
polymers, helical S chains torsional pot., ab initio cryst. orbital calcs. 7−96506
polymers, semiflexible and branched, conformation, Flory approx. anal. 7−117799
polymers, theta point props., residual interactions effects, higher moments, three-parameter model 7−136107
polymers, weakly-bound, permutation groups, character tables computation 7−96899
polymetacyclophane, polyconjugated system, synthesis, struct. and elec. props. 7−86624
polyorganosiloxanes, cyclolinear, macromol. flexibility and conform. *(Russian)* 7−136111
polyoxyethylene, conform., IR spectra calc. normal-mode anal. 7−74794
polyoxyethylene methyl-n-alkyl ethers, morphology, X-ray and Raman scatt. 7−111422
polyoxymethylene ^{13}C NMR spectra, chemical shift, electronic structure, solid state, tight-binding calcs. conformation 7−143317
polyparaphenylene films, electropolymerised, optical props. 7−70841
polypeptide chains, short natural, in water solns., α-helical conformation, review 7−114173
polypeptides, conformational anal., rel. to protein folding, mol. recognition and mol. design 7−133203

macromolecular configurations continued
polypeptides, helix-coil transition, lattice approx. of microscopic theory 7—139193
polyphenylenesulphide film, doped, cond. mechanism, electronic struct., XPS, IR spectra, NMR, CNDO calc. 7—70983
trans-polypiperylene, solns., struct., optical and hydrodynamic obs. *(Russian)* 7—97905
polypropylene, isotactic, proton beam modification 7—117984
polypropylene, isotactic, structurization near solid surface *(Russian)* 7—91487
polystyrene, high-filled, thermodynamics of interphase interactions *(Russian)* 7—84325
polystyrene, linear chains, Monte Carlo calcs. and neutron scatt. obs. 7—90462
polystyrene ionomers soln., conform. relax. in extensional flow field, solvent quality, conc. depend. 7—124073
polytripeptide, collagen like, trihelical struct. stability rel. to bound water 7—126703
polyurethane acetals, mol. struct., hydrolytic stability *(Russian)* 7—113913
polyurethanes, struct., props., flexible segments comp. effects *(Russian)* 7—137272
PROTEAN knowledge-based system for deriving protein struct. from constraints 7—74797
protein, microchondrial actin like, tryptophan fluoresc. spectra 7—126712
protein and nucleic acid sequence database searching: a suitable case for parallel processing 7—141729
protein assemblages, intrinsic defect states 7—144961
protein conform. secondary struct., reference intensity profiles method, Amide I and III bands, IR Raman spectra anal. 7—68493
protein crystal structure, soln. with model obtained from NMR interproton distance restraints 7—114182
protein engineering rel. to 3D struct. *(Japanese)* 7—133207
protein engineering rel. to X-ray struct. anal. *(Japanese)* 7—133206
protein globule, conformational relax. after rapid local perturbation 7—144950
proteins, atom coordinates calculation from incomplete and incorrect distance data 7—78741
proteins, conformational anal., rel. to protein folding, mol. recognition and mol. design 7—133203
proteins, conformational energy function hessian calc. algorithm 7—119710
proteins, globular, antiparallel β structure, spatial motifs 7—93625
proteins, mol. stability rel. to struct. *(Japanese)* 7—133205
proteins, ring-current shifts interpretation 7—90460
proteins, secondary struct. Raman reference intensity profiles 7—129911
proteins, structure and interactions, sequential NMR assignments and isotope labelling 7—93639
reaction centre protein of purple bacteria Rhodopseudomonas spheroides, secondary struct. 7—106959
reciprocal space method with Wang algorithm for mol. envelope calc. 7—78727
regular comb polymers, conformational props. 7—82403
renin inhibitor-aspartic proteinase complexes, high resolution X-ray anals. 7—114191
rhodopsin structure, review 7—119714
rhodopsin transduction mechanism, FTIR studies, review 7—119728
ribonuclease, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7—133200
ribonuclease A, disulphide linkage, circular dichroism, CNDO/S and INDO/S calcs. *(German)* 7—90463
ribonuclease T_1, native and mutant, artificial enzyme-struct.-function relationship and protein engng. *(Japanese)* 7—133208
ribosome, large subunit, tunnel revealed by 3D image construction 7—114184
ribulose-1,5-bisphosphate carboxylase-oxygenase, small-angle X-ray scatt. obs. of quaternary struct. 7—86898
ricin B chain, struct. and evolution 7—86901
RNA fragment, conform., NMR study 7—119725
rubber, natural, chlorination products, struct. determ. *(Russian)* 7—113916
rubber, natural, microstructure and hydrobromination, NMR spectra 7—116994
serum albumin, bovine, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7—133200
shape in soln., modelling method, biological appl. 7—93626
small angle neutron scatt., three-isotopic-substitutions method 7—83588
structure predicting, BASIC program 7—106961
styrene-hydrogenated butadiene-styrene triblock copolymer, chain conform., small angle neutron scatt. 7—69614
1,3,12,14- tetraaza-6,9,17,20-tetraoxadocosa-1,2,12,13-tetraene, cryst. and mol. struct. 7—104712
thermolysin-inhibitor complexes, structs. of 2 complexes that differ by a single H_2 bond 7—78739
tobacco mosaic virus, H bonding study, ^{129}I Mossbauer spectra anal. 7—78749
tropomyosin and troponin co-crysts., X-ray struct. at 17 Å resolution 7—71669
tryptophan residue proteins, fluoresc. lifetime distribs. rel. to conform. interconversion 7—93633
vinylidene cyanide-methyl methacrylate copolymer, microstruct., ^{13}C NMR spectra 7—116993

macromolecular dynamics
acrylamide-N,N[1]-methylene-bis-acrylamide in aqs. soln., crosslinking polymerisation at 22°C 7—126451
acrylic acid, polymerisation on Ag colloids surfaces, SERS spectra anal. 7—74798
ACTH, dynamics, fluoresc. anisotropies and lifetimes determ. 7—129767
agarose gels, molecular dynamics, NMR, Rayleigh scatt., Mossbauer radiation 7—126698
aromatic polysulphones, mech. relax. electron beam irrad. 7—69764
bacteriophage, fd, coat protein, backbone dynamics, solid-state and soln. ^{15}N NMR spectra 7—71687
bacteriorhodopsin, pS conformational intermediates during photocycle, vibr. Raman spectra study 7—68485
bovine pancreatic trypsin inhibitor, sidechain rotational isomerisation, solvent effect, dynamic simulation 7—93618
brain microtubules, flow orientation obs, by linear dichroism 7—86932
carbonic anhydrase B, bovine, fluoresc. correl. spectroscopy, rot. diffusion 7—119722
conference, Marineland, FL, USA (Mar. 1986) 7—72693

macromolecular dynamics continued
α-crystallin proteins, colloidal dispersion dynamics, photon correl. spectroscopy study 7—114167
crystallographic *R* factor refinement by molecular dynamics, crambin appl. 7—86906
cycloalkanes, chain folding and mesomorphic states DSC anal. 7—117105
cytochrome P-450 metabolism, organometallic aspects 7—93620
discrete Gaussian chains, Huggins coeff., dynamical multiple scatt. theory 7—110150
discrete Gaussian chains, Huggins coeff., dynamical multiple scatt. theory 7—110151
DNA, simulation of double-stranded branch point migration 7—93617
DNA, structural transformations 7—144959
DNA polymer, melting nucleation defect, H bond vibr. fluctuations anal. 7—71671
donor-acceptor systems, fluoresc. energy transfer, diffusion limit criteria 7—90456
dye sensitised fluoresc. label in triplet state, dynamic contacts of macromols. study appl. 7—144963
elastin, model chains, thermoelastic props. 7—87066
enzymes, NMR studies review 7—100814
flavoprotein intermediates, reson. Raman spectra study 7—68487
flexible macromolecules in dil. soln., Brownian dynamics, nonequilibr. statistics 7—90459
fluorescence anisotropy decay, resolution enhancement, anisotropic rots. and protein dynamics appl. 7—93635
furylacrylolyl chromophore, active site environment, UV reson. and IR difference Raman spectra anal. 7—68490
glucagon, dynamics, fluoresc. anisotropies and lifetimes determ. 7—129767
grafted chain coil, average dimensions and density *(Russian)* 7—136112
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7—78759
linear macromolecules, solid, heat capacities calcs. using skeletal vibrs. 7—143031
lipid bilayer membrane, gel state, vertical motion and steric effects, analytical and Monte Carlo calcs. 7—78794
lipid bilayer polypeptide interactions, mol. dynamics simulation 7—119741
lysozyme, aq. solns., H bonding, low freq. Raman spectra study 7—68319
lysozyme, classical Raman tensor, four channel divided cell technique, Raman spectra anal. 7—68494
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7—68492
macromolecular chain with thermal oscillations, exciton parameter temp. depend. eval., quantum theory *(Russian)* 7—68484
macromolecules, deformation, mol. mechs., quadratic approx. 7—117100
membrane protein, struct. derived from rot. diffusion study 7—78731
membrane proteins, native, conformational dynamics, Mossbauer spectroscopy study 7—144993
Mooney-Rivlin C_2 constant, correl. with no. of chain atoms between entanglements 7—82404
myoglobin, mol. dynamics anal., rel. to multiple conformational states of proteins 7—86904
myosin ATPase, activity in aq. sucrose solns., viscosity effect 7—126690
4-nitrocatechol-enzyme complexes, reson. Raman spectra study 7—68486
pancratic elastase, porcine, and acetyl-alanine-proline-alanine complex, mol. dynamics simulation 7—144946
PMMA, aq. soln., compact coil→random coil conformational transition investig. 7—117098
PMMA, molecular motions studied by spin-probe and spin-label techniques 7—82231
PMMA, side group rot. motion, mol. mechanics obs. 7—82406
PMMA-poly(styrene-acrylonitrile) blend, chain entanglement and melt viscosity meas. 7—117104
poly(2,2-propane-bis(4-phenylthiocarbonate)), soln. props. and chain flexibility 7—124066
poly(isopropyl methacrylate) with methacrylic or acrylic acid, dielectric and IR meas. 7—131056
poly-n-hexyl isocyanate, semirigid, in 1-chloronaphthalene, mesophase form. 7—91442
polyacetylene chains, analytical energy gradients, PPP Hamiltonian 7—129912
polydimethylsiloxanes, filled, molecular motions obs. *(Russian)* 7—110159
polyimide, macromol, rigidity and cryst. lattice elasticity *(Russian)* 7—82411
polymer blends, mutual diffusion, fast macromol. control 7—118141
polymer chain dynamics, struct. and chem. transformations effects *(Russian)* 7—82408
polymer chain per dimensions, intermol. overlaps, conc. depend. 7—117099
polymer chains, dil. solns., hierarchy of models 7—136109
polymer chains, dynamical intrinsic viscosity, bead-spring model 7—90457
polymer chains, dynamics using neutron spin-echo 7—90454
polymer chains, inhomogeneous, statistical weights for primary structs. 7—122754
polymer chains, rot. isomeric state, excluded vol. effects 7—82405
polymer dynamics, theory, book 7—115705
polymer macromolecule diffusion, automatic diffusometer for study 7—68480
polymer melts, dense cubic lattice multichain systems, long time dynamic props., Monte Carlo study 7—117796
polymer soln. dynamics, effect of topological constraints 7—69582
polymer solutions, rigid, Kerr effect, mol. mass depend. *(Russian)* 7—113105
polymer solutions, solvent interactions, RISM integral eqn. soln. 7—96568
polymeric fractals, in solns., swollen and condensed states 7—131010
polymers, flexible, conjugated, absorpt. spectra in weak-disorder limit 7—136104
polymers, liq. cryst., thermotropic, with quasi-rigid chains, chain flexibility 7—91441
polymers glasses, stress-strain relationship 7—84097
polyorganosiloxanes, cyclolinear, macromol. flexibility and conform. *(Russian)* 7—136111
polyoxyethylene n-hexadecyl ethers, longit. acoustic modes, perturbed elastic rod model appls. 7—110153
polyoxyethylenes, longit. acoustic modes, perturbed elastic rod model appls. 7—110153
polyoxymethylene, hexagonal cryst., struct. modification, IR and X-ray obs. 7—69620
polyphenylmethylsiloxanes, linear and cyclic, neutron scatt. obs. 7—69617
2,2-propane diyl-bis(4-hydroxyphenyl) polyformal, spin relax. and local motion, temp. and conc. depend. 7—117102

macromolecular dynamics continued
protein conform. secondary struct., reference intensity profiles method, Amide I and III bands, IR Raman spectra anal. 7—68493
protein folding model, appl. of simulated annealing technique of combinatorial optimisation 7—133198
proteins, ring-current shifts interpretation 7—90460
proteins, secondary struct. Raman reference intensity profiles 7—129911
proteins, tryptophan and tyrosine side chains, vibr. modes, IR Raman spectra, normal coordinate calcs. 7—68497
pulse field electrophoresis dynamics, DNA molecule in gel, kink formation 7—139186
reorientational motion determ. by fluoresc. anisotropy decay, interpret. complexities 7—114166
reptation, effect on diffusional attenuation of stimulated spin-echo signal *(Russian)* 7—82412
ring polymer, Brownian dynamics simulation, error anal. 7—136108
simulation, random constraint cage 7—103700
sodium oleate-potassium oleate micellar solns., photon correlation spectroscopy 7—71541
solvation of macromolecules, computer calc. of free energies 7—119706
star polymers, collective relaxation, neutron spin-echo study 7—111343
teichoic acids, model cpds., conform. transitions anal. 7—96896
trapping in polymers, Pauli master equation soln. via Lanczos algorithm 7—110149
tryptophan residue proteins, fluoresc. lifetime distribs. rel. to conform. interconversion 7—93633
Viton GF fluoroelastomer vulcanizates, stress relax. studies 7—126452
water-N-methyl-2-pyrrolidone-polyethersulphone, membrane form., component mobility anal. 7—118140
H-bonded like chains, collective nonlinear dynamics 7—122761

macromolecular energy levels
fluorescein dye molecules, excited state quenching by external heavy atoms 7—90012
macromolecular chain with thermal oscillations, exciton parameter temp. depend. eval., quantum theory *(Russian)* 7—68484
polyacetylenes, electronic struct., INDO/S framework, ^{13}C NMR chem. shift 7—110158
polyaniline and substituted derivatives, electronic struct. 7—68483
polymers, helical S chains torsional pot., ab initio cryst. orbital calcs. 7—96506
Rhodopseudomonas virdis, reaction centre chromophores, singlet spectra, CNDO/S calcs. 7—119718

macromolecular spectra
see also spectra of organic molecules and substances
acrylic acid, polymerisation on Ag colloids surfaces, SERS spectra anal. 7—74798
alkyd resins, adsorpt. on organic pigments, IR spectra determ. 7—70074
amino acid assignments, millimolar solutes, inhomogeneous part elimination of PMR spectra 7—71941
apolipoprotein A-1-dimyristoylphosphatidylcholine recombinants, boundary lipids, Raman obs. 7—71694
bacteriophage, fd, coat protein, backbone dynamics, solid-state and soln. ^{15}N NMR spectra 7—71687
bacteriorhodopsin, FTIR obs. of water induced conform. changes 7—93638
bacteriorhodopsin, kinetic studies, reson. Raman spectra 7—78777
biochemical applications of Fourier transform infrared spectroscopy 7—71675
bovine serum albumin, α-helix coil content, heat denaturation, Fourier transform IR spectra 7—141727
BPDE-DNA adduct on Ag-coated cellulose substrate, SERS study 7—133217
1,3-butadiyne in deoxycholic acid and apocholic acid canals, inclusion polymerisation, struct., elec. and optical props. 7—86623
carbonic anhydrase B, bovine, fluoresc. correl. spectroscopy, rot. diffusion 7—119722
carbonmonoxy haemoglobin, photolysed, local haeme environment, dehydration effects, reson. Raman spectra 7—78774
cellular level phenomena, spectroscopic nuclear spin resonance 7—114223
chymotrypsin, enzyme activity and conform., pH and pressure effects, Raman spectra study 7—68498
collagen peptides, high resolution ^{13}C NMR spectra 7—139202
cyanomethaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7—78779
cycloalkanes, chain folding and mesomorphic states DSC anal. 7—117105
cytochrome c, lineshape anal., reson. Raman spectra 7—78762
cytochrome c, tunnelling disorder mode, reson. Raman spectra 7—78775
cytochrome c oxidase, catalytic intermediates, reson. Raman spectra 7—78761
cytochrome complexes, stretching vibrs. correl., Raman spectra 7—78767
cytochrome $P450_{cam}$, bound dioxygen, reson. Raman detect. 7—78769
dimethyl phosphonomethyl methylsiloxane dimethylsiloxane copolymers, preparation and props. 7—122759
dissolved DNA, resonant microwave absorpt. obs., hydration relax. and struct., comment 7—139209
DNA, conformations, sequence dependent modulation, Raman spectrosc. obs. 7—71691
donor-acceptor systems, fluoresc. energy transfer, diffusion limit criteria 7—90456
enzymes, NMR studies review 7—100814
epoxies, amine-crosslinked, H-bonding, IR spectra 7—117103
erythrocyte superoxide dismutase, bovine, anion binding, nucl. relax., ^1H NMR 7—119724
anti-7-ethylbicyclo[2.2.1]hept-2-ene ring-opened polymer form., mechanism and microstruct. 7—122755
ethylene-propylene copolymers, thermal oxidation, chemiluminesc. and IR spectra 7—96897
flavoprotein intermediates, reson. Raman spectra study 7—68487
furylacrylolyl chromophore, active site environment, UV reson. and IR difference Raman spectra anal. 7—68490
gelatin, grafting of ethylene oxide, ^{13}C NMR spectra study 7—113922
glycine, peptide plane and side chains orientation, ^{13}C-^{15}N dipole-dipole couplings, NMR meas. 7—126719
haeme proteins, Ni-reconstituted, axial coordination, Raman difference and transient spectra 7—78766
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7—78759
haemoglobin Glycera, ligand dissoc. rates correl., reson. Raman spectra 7—78768
haemoglobins, monomeric, stretching vibrs., reson. Raman spectra 7—78765
haemoglobins, oxygenation and deoxygenation, reson. Raman study 7—78724
homogeneous molecular profiles, in optical waveguides, quantitative Raman spectrosc. meas. 7—86691
horseradish peroxidase, catalytic intermediates, reson. Raman spectra 7—78761
horseradish peroxidase, electronic and mol. struct., PMR and NOE study 7—68478
horseradish peroxidase, stretching vibrs. correl., Raman spectra 7—78767
horseradish peroxidase intermediates, time-resolved Raman spectra 7—78763
hydroxypropyl cellulose, pyrene labelled, aq. soln. excimer form. 7—136110
α-loctalbumin, tyrosine doublet intensity ratio, pH and Co^{2+} conc. effects, IR Raman spectra anal. 7—68491
lysozyme, aq. solns., H bonding, low freq. Raman spectra study 7—68319
lysozyme, classical Raman tensor, four channel divided cell technique, Raman spectra anal. 7—68494
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7—68492
lysozyme, hen egg white, 2D heteronuclear chem. shift correl. 7—68479
lysozyme, struct.-activity relationship, iodination effect, IR Raman spectra anal. 7—68495
macromolecular solutions, photon correlation date anal. 7—74793
macromolecules, fluorescence energy transfer, donor-to-acceptor distance distrib., freq.-domain fluoresc. spectra 7—139204
myelin membranes, vibr. spectra and struct. 7—119742
myoglobin, lineshape anal., reson. Raman spectra 7—78762
myoglobin, photodissoc., reson. Raman spectra 7—78764
natural abundance ^{13}C spin exchange study 7—70663
nitridomanganese protoporphyrin, form., triple bond detect., reson. Raman spectra 7—78770
4-nitrocatechol-enzyme complexes, reson. Raman spectra study 7—68486
nitrosyl manganese(II) piperidine protoporphyrin dimethyl ester, isotope substitution, reson. Raman spectra 7—78771
nitrosyl manganese haemoglobin, isotope substitution, reson. Raman spectra 7—78771
nitrosyl manganese myoglobin, isotope substitution, reson. Raman spectra 7—78771
oxyhaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7—78779
papain, enzyme-substrate complex intermediates, UV Raman reson. spectra study 7—68489
pigment-protein complex of photosystem 1, cyanobacteria Spirulina platensis, photo-induced spectra of circular dichroism 7—106971
PMMA, laser ablation, ps UV laser ionisation TOF mass spectra study 7—71503
poly(2-hydroxyethyl methacrylate) in mixed water-alcohol solvents, conformational props. 7—74795
poly(4-vinylpyridine), adsorption on Ag electrode, SERS monitoring study 7—77577
poly(4-vinylpyridine), conformational anal. and IR spectra 7—68481
poly(ethylenimine) containing nucleic acid pendants, NMR and UV spectra 7—122758
poly(L-glutamates) with n-alkyl side chains, ^{13}C CP/MAS spectra, conformation and mol. packing 7—117101
poly(vinyl acetate-co-N-vinyl 2-pyrrolidone)-poly2-ethylhexyl acrylate-co-acrylic acid blend, compatibility and microstruct., IR spectra 7—117107
poly 3-alkylthienylene. solns., thermochromism and solvatochromism, chain conform. 7—85611
poly-p-phenylene, vibr. spectra rel. to stereochemical struct. 7—68482
trans-polyacetylene, IR, Raman and neutron spectra, vibr. state density 7—110155
polyacetylenes, electronic struct., INDO/S framework, ^{13}C NMR chem. shift 7—110158
polyaniline, Raman and IR spectra determ. of struct. 7—70797
polyaniline and substituted derivatives, electronic struct. 7—68483
polyanilines, photoelectron spectroscopy relevant to chemical and electronic struct. 7—70984
polydiacetylene, chemically modified soluble, absorption spectra 7—82407
polyethylene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7—70673
polyethylene, disordered chain mols., Raman spectra 7—90464
polyethylene, fluorinated, XPS, ab initio study using model systems 7—122327
polyethylene, linear, natural abundance ^{13}C spin exchange study 7—70663
polyethylene, thermal oxidation, chemiluminesc. and IR spectra 7—96897
polyethylene films, ion-implanted, with Ag island film substrate, SERS spectra anal. 7—77581
polyglutamic acid, conform., X-ray, IR and ^{13}C CP/MAS NMR obs. 7—92524
polymer blends, supermolecular structure, vibr. spectra obs. 7—74796
polymers, flexible, conjugated, absorpt. spectra in weak-disorder limit 7—136104
polymetacyclophane, polyconjugated system, synthesis, struct. and elec. props. 7—86624
polymyxin B, double-quantum filtered COSY expts., decoupling, excitation, NMR 7—67357
polyoxyethylene, conform., IR spectra calc. normal-mode anal. 7—74794
polyphosphates, open-chain linear, ^{31}P NMR spectra anal. chemical shifts, effect of pH and protonation 7—68353
polypropylene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7—70673
polypropylene, thermal oxidation, chemiluminesc. and IR spectra 7—96897
polystyrene, adsorption on Ag electrode, SERS monitoring study 7—77577
polystyrene, laser ablation, ps UV laser ionisation TOF mass spectra study 7—71503
polystyrene/polymethyl methacrylate, deuterated, intermol. polarisation transfer, CPMAS NMR spectroscopy 7—111428
polystyrene/polyvinyl methyl ether, deuterated, intermol. polarisation transfer, CPMAS NMR spectroscopy 7—111428
polytripeptide, collagen like, trihelical struct. stability rel. to bound water 7—126703
protein conform. secondary struct., reference intensity profiles method, Amide I and III bands, IR Raman spectra anal. 7—68493
proteins, g-factor tensor anisotropy, ESR spectra 7—103702
proteins, NMR fingerprinting in H_2O soln., 2-dimens. longit. 2-spin-order technique 7—74792
proteins, ring-current shifts interpretation 7—90460

macromolecular spectra continued
proteins, secondary struct. Raman reference intensity profiles 7—129911
proteins, structure and interactions, sequential NMR assignments and isotope labelling 7—93639
proteins, tryptophan and tyrosine side chains, vibr. modes, IR Raman spectra, normal coordinate calcs. 7—68497
proteins, water soluble, adsorbed on Ag electrodes and hydrosols, enhanced combination scatter spectra 7—126711
reorientational motion determ. by fluoresc. anisotropy decay, interpret. complexities 7—114166
Rhodopseudomonas virdis, reaction centre chromophores, singlet spectra, CNDO/S calcs. 7—119718
rhodopsin transduction mechanism, FTIR studies, review 7—119728
rhodopsins, retinal chromophore struct. determ., reson. Raman spectra 7—78776
RNA fragment, conform., NMR study 7—119725
RNA polymer, double stranded poly(rA).poly(rU), imino protons, spin-lattice relax. study, NMR spectra anal. 7—74672
rubber, natural, microstructure and hydrobromination, NMR spectra 7—116994
spectrochemical analysis using the near-IR, appl. to polymers 7—108112
styrene-acrylonitrile copolymer, IR spectra, temp. depend. 7—141726
synthetic polymers in soln. excimer form., time-resolved fluoresc. 7—90455
tobacco mosaic virus, H bonding study, ^{129}I Mossbauer spectra anal. 7—78749
tryptophan-2,3-dioxygenase, stretching vibrs. correl., Raman spectra 7—78767
vinylidene cyanide-methyl methacrylate copolymer, microstruct., ^{13}C NMR spectra 7—116993
Cu(II)-DNA complexes, change in UV spectra with soln. ionic strength 7—139200
Fe-S proteins, isotopic species, reson. Raman spectra study 7—68488
Hg-protein-ligand complexes, ^{81}Br NMR spectra study 7—141728

macromolecules
see also DNA; macromolecular configurations; macromolecular dynamics; macromolecular energy levels; macromolecular spectra; polymers; proteins
albumin, struct and activity, hydration effects, integrated optics and IR Raman spectra study 7—68496
bacteriochlorophyll, bacterial photosynthetic reaction centers, electron transfer mechanism study 7—71710
bacteriorhodopsin, pS conformational intermediates during photocycle, vibr. Raman spectra study 7—68485
biological molecules, functional size determ. by radiation target theory meas. 7—71670
biosensors, design and appl. *(Japanese)* 7—145305
cellulous diacetate, adsorbed on Ag, vibrational modes *(Chinese)* 7—98668
charged rod-like macrocells in soln., pair-distrib. fn., light scatt. intensity calcs. 7—137188
chromatographic separation of linear and ring macromolecules *(Russian)* 7—114054
chymotrypsin, enzyme activity and conform., pH and pressure effects, Raman spectra study 7—68498
flavoprotein intermediates, reson. Raman spectra study 7—68487
furylacrylolyl chromophore, active site environment, UV reson. and IR difference Raman spectra anal. 7—68490
heparin, struct. ROESY spectra with relay artifacts 7—82221
linear, solid, heat capacities calcs. using skeletal vibrs. 7—143031
α-loctalbumin, tyrosine doublet intensity ratio, pH and Co^{2+} conc. effects, IR Raman spectra anal. 7—68491
lysozyme, aq. solns., H bonding, low freq. Raman spectra study 7—68319
lysozyme, classical Raman tensor, four channel divided cell technique, Raman spectra anal. 7—68494
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7—68492
lysozyme, struct.-activity relationship, iodination effect, IR Raman spectra anal. 7—68495
nematic polymer melts of macromolecules, theoretical studies with different flexibility mechanisms 7—137561
4-nitrocatechol-enzyme complexes, reson. Raman spectra study 7—68486
nonideal macromolecular solutes, osmotic flow across membranes 7—113997
nucleic acid bases, electrostatic pots., dipole pot. mapping approach 7—129908
nucleic acid hybridisations, object identification and meas. from images 7—127063
nucleic acids/nucleotides, hydration in aqueous ethanolic solns., US meas. 7—91726
papain, enzyme-substrate complex intermediates, UV Raman reson. spectra study 7—68489
polymers, theta point props., residual interactions effects, higher moments, three-parameter model 7—136107
polynucleotides, mechanisms of radiation-induced strand break form. 7—145144
protein and nucleic acid sequence database searching: a suitable case for parallel processing 7—141729
protein conform. secondary struct., reference intensity profiles method, Amide I and III bands, IR Raman spectra anal. 7—68493
proteins, NMR fingerprinting in H_2O soln., 2-dimens. longit. 2-spin-order technique 7—74792
proteins, tryptophan and tyrosine side chains, vibr. modes, IR Raman spectra, normal coordinate calcs. 7—68497
reagents of flotation, hydrodynamic mechanism 7—136963
RNA fragment, conform., NMR study 7—119725
RNA synthesis, replication-mutation systems struct. and dynamics 7—78720
ultrafiltration, membrane osmotic polarisation, macromolecule curve characterization *(French)* 7—142369
Fe-S proteins, isotopic species, reson. Raman spectra study 7—68488

Madelung constant *see lattice energy*

magamps *see magnetic amplifiers*

Magellanic Clouds
see also Large Magellanic Cloud; Small Magellanic Cloud
2.3 GHz radio continuum map 7—107729
bridge region, H I profiles 7—115602
distance moduli, determ. from luminosities and masses of intermediate-age core He burning stars 7—88609
grains composition in Magellanic Clouds, 8 to 13 μm spectra of LMC N44A and SMC N88A 7—134293
intermediate-age star clusters, evolutionary sequences for red clump stars 7—101779
O-type stars, wind models 7—72410
photometric zero-point stars in Magellanic Cloud clusters, photoelectric UBV obs. 7—94966
planetary nebulae, masses determ. using [O II] doublet ratio electron densities 7—107941
planetary nebulae, new evolutionary relationships 7—120560
type II Cepheids, spectra and JHK photometry 7—120438
H II regions, VBLUW photometry 7—80065

Maggi-Righi-Leduc effect *see thermomagnetic effects*

magnesium
see also nuclei with .....
atom, $^1P_1$ resonances photoionisation cross sections 7—135896
atom, excited states, collisional processes, multiphoton ionisation and reson. fluoresc. investig. 7—90032
atom, ionis. pot., ab initio effective core pots.-quantum Monte Carlo calcs. 7—116830
atom, oscillator strengths, CI calcs. 7—122377
atom, picosecond laser pulses, photoelectron emission 7—74538
atom, resonant electron scatt., shape reson. anal. using complex rotated approach 7—74760
atom, solar IR emission lines, Edlens polarisation formula 7—115344
atom, structural energies, pot. calc. 7—98794
atom, three-photon ionisation using XeCl excimer laser 7—74543
atoms, ionisation energy, g-Hartree ab initio calcs. 7—103386
atoms, three-photon ionisation using XeCl excimer laser 7—141535
AB Aur, Herbig pre-main sequence star, wind rot. modulation, C IV and Mg II obs. 7—127855
bound-bound transitions oscillator strengths, 8-state close coupling approx. 7—109837
α CMa, atmospheric models and Mg II reson. lines 7—72411
dipoles of basal dislocations 7—98154
electron irrad., point defect-dislocation interaction, low temp. anelasticity 7—113588
electron momentum distribution, renormalized-free-atom model 7—138535
intercalation in V_2O_5, X-ray diffr. studies 7—137346
ion induced Auger electron spectra, energy thresholds 7—138571
isotope abundance ratios, meas. in metal-poor and metal-rich stars 7—115361
K_α X-ray satellite spectrum following photon excitation 7—74532
liquid, freezing, cryst. phase stability, density functional theory 7—91773
metal-glass thin film interlayers, electric field assisted bonding below 200°C, XPS study 7—71459
Mg XII, 8.42 Å doublet obs. 7—134215
MGC 4881, elliptical galaxy in Coma Cluster, dimensionless Mg index gradient determ. 7—107953
microclusters, evolution of electronic and struct. props. 7—122769
Murchison meteorite, ^{26}Mg excess in hibonite grain 7—107783
nearly free electron metals, photoemission spectra 7—138607
photoionisation cross sections 7—109843
pionic atoms, strong interaction effects from coincidence meas., X-ray spectra 7—117097
pionic atoms, X-ray spectra study of level widths and shifts 7—110146
plasma columns, isotope separation in a vacuum arc centrifuge 7—96887
Rydberg atom, dielectronic recomb. and ionis. 7—90049
single crystal, Hf implanted, annealing and internal oxidation 7—78076
soft X-ray emission, threshold exponent α 7—70944
sunspot umbrae, mag. field and temp. characts. determ. from Mg I 457.1 nm line Stokes profiles 7—140013
thin films, microwave-enhanced phase relaxation in weak localisation expts. 7—138077
ultrafine particles, mag. susceptibility, paramagnetic enhancement 7—118769
vacancies and small vacancy clusters, computer simulation studies 7—98133
Valladolid, Spain, atmospheric particulate material, behavior and seasonal variation *(Spanish)* 7—144927
AlGaAs-GaAs:Mg quantum well heterostructs., doping effects, thermal annealing and photolum. meas. 7—143573
$Al_xGa_{1-x}As$:Mg LPE films grown at 700°C, electronic props. *(Chinese)* 7—76655
Al_2O_3:Mg,Y TLD phosphor, dosimetric characts. 7—93953
Al_2O_3 fibre reinforced Mg composites, tensile props. rel. top processing parameters 7—86284
Ar-Mg collisions, rotational coupling vacancy transfer probabilities, coupled state calcs. 7—96860
Ar^++Mg, L and K vacancy prod., multiple collision anal. 7—92804
$CuFeO_2$:Mg, photoconductivity, band edge positions, optical transitions 7—84990
Fe/Mg sub-monolayered superlattice, mag. props. 7—112867
GaAs:Mg, dopant activation by post-implant rapid thermal annealing 7—86212
GaAs:Mg, epitaxial CVD films, acceptor impurities, Hall effect and photolum. studies 7—98856
GaAs:Mg, high activation transient annealing, improved graphite heater 7—106553
GaAs:Mg, p-type dopant, ion implanted, annealing behaviour 7—132648
GaAs:Mg LPE films grown at 700°C, electronic props. *(Chinese)* 7—76655
GaAs:Mg/GaAlAs, dopant activation by post-implant rapid thermal annealing 7—86212
GaAs:Mg^+,As^+, dual implant activation by capless rapid thermal annealing 7—71210
GaAs:Te-GaAs:Mg-$Al_xGa_{1-x}As$ 7—119659
GaAs-GaAlAs heterostructures for HBTs, Mg-implanted, high doping level by rapid thermal annealing 7—85060
GaInAs:Mg, grown by organometallic VPE, detection of defects 7—132496
$Ga_{0.47}In_{0.53}As$:Mg, photolum. studies 7—85827
H_2O-Mg, van der Waals complex, multireference CI calcs. 7—89974
He+Mg^+(Be^+), level specific excitation 7—96841
InP:Mg, grown by organometallic VPE, detection of defects 7—132496
InP:Mg, MOVPE grown, photolum, data 7—99910
LiF: Mg, thermoluminescence peak anal. 7—125812
LiF:Mg, Cu, P TLD materials, props 7—93951
LiF:Mg, Ti TLD chips, annealing effects 7—107257
LiF:Mg, Ti thermoluminesc. efficiencies at high laser heating rates 7—93940

magnesium continued
LiF:Mg, Ti-TLD, automatic method for evaluating elapsed time between irrad. and readout 7−87210
LiF:Mg,Cu,P, TLD chips, dosimetric charact. 7−87229
LiF:Mg,Ti, alpha particle thermolum. dose response, microdosimetric track interaction model 7−87239
LiF:Mg,Ti, defect complexes, annealing effects, thermolum. study 7−119057
LiF:Mg,Ti, thermostimulated luminescence, activation energy and freq. factor 7−132349
LiF:Mg,Ti,O, thermostimulated luminescence and photoluminescence 7−132351
LiF:Mg,Ti hot-pressed thin layer detectors for integrating dosimeters, dosimetric props. 7−93952
LiF:Mg,Ti TLD, computerised glow curve deconvolution technique 7−93946
LiF:Mg,Ti TLD materials, props 7−93951
LiF:Mg,Ti TLD phosphor, dosimetric charact. 7−93953
LiF:Mg^{2+}, thermoluminescence, Mg^{2+}-V^- dipoles 7−85854
LiF:U, Mg^{2+} related centres, selective excitation and emission 7−144111
LiF-LiF:Mg layer crystals, plastic props. 7−131213
$LiNbO_3$:H,Mg laser damage resistant cryst., elec. and optical characterisation 7−131172
$LiNbO_3$:Mg, anisotropic self-diffraction 7−113109
$LiNbO_3$:Mg, doped and undoped, fundamental absorpt. edge, spectral depend., superlattice model 7−92636
$LiNbO_3$:MgO single crystals, growth for optical applications 7−104038
Mg II, EUV emission lines in the atmospheres of cool stars 7−88420
Mg II 279.8 nm intensity in Type II supernova, relation to late-time H I ionisation *(Russian)* 7−146011
Mg XI, electron impact excitation, collision strengths 7−74774
Mg^+, dielectronic recombination cross sections, field effect meas. 7−122706
Mg-air flames, anomalous brightness 7−106800
Mg-Al_2O_3 metal matrix-ceramic fibre composites, Auger analysis 7−78548
Mg-TiO_2 admixtures, hydriding and dehydriding kinetics 7−71528
Mg+Bi, energy transfer and pooling, emissions anal. 7−90390
Mg+H_2(HD), rot. state distribs. on model pot. surfaces, lack of leaving-atom isotope effects 7−132911
Mg+H_2(HD)(D_2), product rot. quantum state distrib. determ. 7−113859
Mg+HF, ground and excited reactivity, ab initio SCF CI calcs. 7−86601
Mg+I^+, double electron capture cross section meas. 7−110103
Mg^++He(Ar), orientation and alignment of Mg^+ states 7−90387
Mg_2^{2+}, doubly charged dimers, electronic struct. diabatic calcs. 7−74429
^{24}Mg atomic frequency standard, advances 7−80723
NaCl:Mg, doped crystals, ionic conductivity 7−84379
NaF:Mg, excited F_2^+− and M−centres, lifetime studies 7−106257
NaF:Mg^{2+} crystals containing F_2^+-like centres, lasing features, absorpt. and luminesc. bands 7−97020
O desorption, ion-induced 7−70070
Rb_2CrCl_4:Mg^{2+}, ionic ferromagnet, neutron diffr. and visible spectra 7−112755
WSe_2:Mg, thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
$YCrO_3$:Mg, elec. cond., Seebeck coeff. 7−70342
Zn_3P_2/Mg Schottky barriers, vacuum-deposited, gap states, admittance spectroscopy 7−112434
ZnSe:Mg_1 growth, structural and optical props. 7−77789

magnesium alloys
see also magnesium compounds
corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7−144588
dynamic recrystallisation, hardening and plasticity *(Russian)* 7−100244
graphite fibre reinforced Mg-Al-Zn matrix composites, corrosion in aq. NaCl solns. 7−86407
impact fracture toughness *(Japanese)* 7−100349
Magnox A180 alloy, galvanic and crevice corrosion effects 7−119402
stainless steel wire reinforced Al-Mg-Si composite, interfacial shear strength rel. to annealing temp. 7−132673
Ag-Cu-Mg, metallic glasses, electron transport props. and related electronic struct. 7−98792
Ag-Mg, intermetallic β' phase, yield stress, temp. and comp. depend. 7−126192
Ag-Mg long period superlattice, commensuration process, in situ TEM obs. 7−76391
Ag-Mg-M (M=Zn, Au, Cu, Al, Sn), out-of-step distance, substitutional element effects 7−142708
AgMg β-electron cpds., lattice disorder and defects study 7−104729
Ag_3Mg, long period superstructs. 7−76078
AgMgSi, proton irrad., microstructure, mech. props. 7−69780
Al-Be-Mg, eutectic, struct. parameters correl. with mech. props. 7−126199
Al-Be-Mg, two-phase, with plastic matrix, struct. parameters of strength 7−126200
Al-Cu-Li-Mg-Zr, superplastic forming, cavitation 7−86277
Al-Cu-Mg, 2024, fatigue crack growth retardation following single overload, environmental depend. 7−100327
Al-Cu-Mg, 2024, high temp. flow behaviour, charactn. and modelling 7−78122
Al-Cu-Mg, AE monitoring in interrupted tensile tests at room temp. 7−100297
Al-Cu-Mg, age hardening, effect of US vib. 7−132632
Al-Cu-Mg, ageing S′-phase precipitate crystallography and morphology, TEM study 7−86191
Al-Cu-Mg, combined mode fracture under plane stress conditions 7−113656
Al-Cu-Mg, creep, relax., theoretical calc. for polycrystals 7−106575
Al-Cu-Mg, fatigue crack initiation and growth under mixed mode loading *(Japanese)* 7−144526
Al-Cu-Mg, fatigue crack propag., hysteretic energy dissipation 7−132749
Al-Cu-Mg, precip. strengthening, Bauschinger effect 7−86280
Al-Cu-Mg, rapidly solidified, quench sensitivity 7−132528
Al-Cu-Mg sheet, plastic instability under uniaxial tension *(Korean)* 7−132672
Al-Cu-Mg-Ag, precipitates nucleation and growth 7−144413
Al-Cu-Mg-Mn, notched specimens, fatigue life estimation under random loading 7−71290
Al-Cu-Mg-Si, thermodynamics, unidirectional solidification 7−77979
Al-Li-Cu-Mg, corrosion rel. to comp. and microstruct. 7−126292
magnesium alloys continued
Al-Li-Cu-Mg, quenched in vacancies, annealing, elec. resist. obs. 7−119298
Al-Li-Cu-Mg, soln, treated, quenched, grain boundary solute segregation, Auger spectra 7−100234
Al-Li-Cu-Mg, superplasticity 7−126167
Al-Li-Cu-Mg-Zr, high strength, Na-induced cleavage fracture 7−100372
Al-Li-Cu-Mg-Zr, thermal oxidation behaviour 7−100432
Al-Li-Cu-Mg-Zr alloy powders, rapidly solidified, gas-atomised solidification microstructs. 7−86150
Al-Mg, air heating, internal oxidation, spinel phase precip. 7−106516
Al-Mg, cavitation at migrating boundaries during high temp. fatigue 7−119359
Al-Mg, creep resistance change under effect of vibrs. 7−100367
Al-Mg, high temp. ageing, DSC study 7−138768
Al-Mg, melt spun, metastable phase, TEM and DSC obs. 7−113523
Al-Mg, melt-spun, rel. between solidification morphology and texture 7−92985
Al-Mg, rapidly quenched, excess vacancies 7−92995
Al-Mg, solid soln. alloys, creep ductility, influence of dynamic strain ageing 7−113631
Al-Mg (3 wt.%), rolled single crysts., microstruct., shear band form. 7−113606
Al-Mg (4.2 wt.%), high temp. oxidation 7−86480
Al-Mg (5.8 at.%), strain rate change technique 7−86252
Al-Mg alloy, thermal evaporation, time depend. regular solution model 7−119149
Al-Mg alloys, intergranular SCC, Mg grain boundary segregation 7−86398
Al-Mg alloys, mag. suscept. temp. depend. meas. and two-band approx. calcs. *(Russian)* 7−77245
Al-Mg powder, sintering charact., effects of oxidation 7−144339
Al-Mg sheet, thermal and strain rate softening during necking and shear band form. 7−126193
Al-Mg sheet samples, microcrack accumulation due to uniaxial stretching *(Russian)* 7−100332
Al-Mg shells with laminated polymer composites, energy dissipation in bending oscillations 7−110834
Al-Mg system, new metastable phase 7−77953
Al-Mg-Fe, 6061-T6 tensile specimens, thermal-mech. damage 7−93096
Al-Mg-Fe, material damping 7−144450
Al-Mg-Li alloys, corrosion resist., effect of alloying additions 7−93191
Al-Mg-M (M=Ti, V, Cr), ternary phases, struct. investigation 7−117864
Al-Mg-Mn, hot rolling deform., recrystallisation textures 7−100252
Al-Mg-Mn alloy powder, rapidly solidified, partitionless struct. obs. 7−71164
Al-Mg-Mn alloy powders, rapidly solidified, microstruct. charactn. 7−86156
Al-Mg-Sc (2, 0.4 at.%), surface layer after irrad. with 2 MeV electrons, X-ray electron spectroscopy 7−84029
Al-Mg-Si, age hardened, tensile props. and anisotropy, double ligament test method 7−132851
Al-Mg-Si, compact specimens, plastic zone determ. 7−138794
Al-Mg-Si, soln. treated, cyclic strain induced precip. 7−144402
Al-Mg-Si-Fe, corrosion, influence of Li-containing solns. 7−119440
Al-Mg-Zr (10, 0.1 wt.%), warm rolling, superplastic flow, microstruct. 7−144481
Al-Mn-Mg, adhesive wear, metallography 7−78411
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Mn-Mg (1,1 wt.%), hot tensile ductility rel. to Pb impurities 7−86268
Al-Ni-Mg, eutectic, mech. props. rel. to Mg addition 7−71242
Al-Zn-Mg, 7075, discontinuous deform. *(Japanese)* 7−126174
Al-Zn-Mg, 7075, hardness and yield strength as function of retrogression time 7−78202
Al-Zn-Mg, 7075-T6, fatigue crack tip strains 7−113655
Al-Zn-Mg, 7475, superplastic, solid-state bonding 7−93246
Al-Zn-Mg, age hardened, fracture, deform., H enhanced dislocation mobility 7−132661
Al-Zn-Mg, age hardened, tensile props. and anisotropy, double ligament test method 7−132851
Al-Zn-Mg, age hardening, effect of US vib. 7−132632
Al-Zn-Mg, cladsheets, diffusion bonded joints, peel strengths 7−113855
Al-Zn-Mg, crack growth predictions, effects of load spectrum 7−113664
Al-Zn-Mg, crevice corrosion in NaCl solns., pH obs. 7−93145
Al-Zn-Mg, fatigue crack closure in vacuum, crack-surface roughness effects *(French)* 7−100369
Al-Zn-Mg, fatigue crack initiation and growth under mixed mode loading *(Japanese)* 7−144526
Al-Zn-Mg, fatigue life, effect of cold working by hole expansion 7−126246
Al-Zn-Mg, friction and fretting wear, O_2 and water vapour effects 7−132763
Al-Zn-Mg, Guinier-Preston zones stability, Mg conc. depend. 7−78078
Al-Zn-Mg, Guinier-Preston zones and onset strain of serrated flow 7−144487
Al-Zn-Mg, high-purity 7075, H embrittlement, microstruct. effects 7−144506
Al-Zn-Mg, isothermal resist. meas. curves, anal. using Johnson-Mehl-Avrami eqn. 7−124959
Al-Zn-Mg, powder metallurgy, pitting corrosion, secondary phase precip., microstruct. 7−126282
Al-Zn-Mg, quenched-in dislocation loops 7−100268
Al-Zn-Mg, SCC and corrosion fatigue in NaCl soln. 7−119442
Al-Zn-Mg, SCC crack growth under dynamic mixed mode loading conditions *(Japanese)* 7−119415
Al-Zn-Mg, SCC in aq. NaCl solns., organic adsorbants effect 7−86406
Al-Zn-Mg, with and without SiC reinforcement, high strength, powder metallurgy, superplasticity 7−100303
Al-Zn-Mg alloy, dil., stable trajectories during decomposition 7−137570
Al-Zn-Mg clad sheet, Ag coated, diffusion bonded overlap joints, shear strength 7−113614
Al-Zn-Mg plates, weld toe cracking, stress field effect 7−78233
Al-Zn-Mg system, phase equilib. in Al corner 7−132573
Al-Zn-Mg-Cu, high strength, Na-induced cleavage fracture 7−100372
Al-Zn-Mg-Cu, microstruct. and props., effect of retrogression and re-ageing *(Chinese)* 7−132663
Al-Zn-Mg-Cu, SCC, grain boundary precip. *(German)* 7−119458
Al-Zn-Mg-Cu, superplastic deform., photoemission electron microscopy 7−113823
Al-Zn-Mg-Cu-Mn powder alloys, supersaturated solid soln. decomp. kinetics 7−126128

magnesium alloys continued
Al-Zn-Mg(-Fe), fatigue behaviour, effect of Fe content 7−119358
AlCuMg rapidly solidified powder prodn. by optimised gas atomisation, microstruct. study 7−92930
$Al_{52.4}Cu_{12.6}Mg_{35}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
Al_6CuMg_4, endothermic quasicrystalline-crystalline transition, electron microscopic and DSC studies 7−111868
Al_6CuMg_4, endothermic quasicryst.-cryst. phase transition 7−131301
AlMg, proton irrad., microstructure, mech. props. 7−69780
AlMgSi alloy, heat treatment, influence on atomic and electronic struct., X-ray emission study 7−132380
AlMgSiP alloy, fracture surface, XPS, Auger electron and ion scatt. spectroscopy study 7−138591
AlMgV, low activation alloy development for R-tokamak project 7−74061
Al_2O_3 fibre reinforced Al-Mg-Si, weldability, interface struct., tensile strength 7−113854
AlZnMg alloys, surface degradation in NaCl solns. under appl. pot. 7−126289
AlZnMg, behaviour of Young's modulus during homogeneous decomp. 7−106560
$Al_{20.2}Zn_{40.3}Mg_{39.5}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
Au-Mg system, metastable, formed by Au ion implantation 7−106484
Ca-Mg, metallic glasses, electron transport props. and related electronic struct. 7−98792
Ca-Mg-Al metallic glasses, electronic struct. and electron transport 7−76746
CeMg, electrical and mag. props., pressure depend. 7−84810
CeMg, Kondo cpd., elec. resist. meas. under high press., Neel temp. 7−76919
$CeMg_3$, Kondo cpds., neutron scatt. calc. 7−77235
Cu-Mg (3.5 wt.%), ageing, decomp., equilib. phase form., TEM obs. 7−113559
Cu-Mg-Al(Zn), liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
$EuMg_{5.2}$, cryst. struct., polynuclear units, structural refinements and relationships, X-ray diffr. study 7−111449
$Ga_{16}Mg_{32}Zn_{52}$, new quasicryst., form. and struct. 7−83858
K_xMg, small clusters, stability and magic numbers 7−141731
$La_{1-x}Ca_xMg_{12}$, hydrogen storage, absorption-desorption characteristics 7−93548
$La_{2-x}Ca_xMg_{16}Ni$, hydrogen storage capacity, Mg_2NiH_4 formation 7−93546
LaMg, electrical and mag. props., pressure depend. 7−84810
$LaMg_{12}$, hydrogen storage, absorption-desorption characteristics 7−93548
$LaMg_{12}$, pure and Ca-substituted H storage 7−133131
$LaMg_3$, solid and liq., low-energy recoil atom slowing down, nuclear resonance fluorescence studies 7−85503
$Li_{0.9}Mg_{0.1}$, martensitic transform. temp., press. depend. study 7−84128
MG-Ho alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
Mg alloy-Al_2O_3 metal matrix-ceramic fibre composites, Auger analysis 7−78548
Mg-Ag-In-Cd system, solubility of element in Mg 7−100182
Mg-Ag-Sn(In) powders, local X-ray spectral anal. 7−126507
Mg-Al, corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7−144588
Mg-Al, ML8, fatigue in bending with rot., effect of surface hardening and casting method 7−126235
Mg-Al-Zn, icosahedral alloy, resist., mag. suscept., comp. depend. 7−131608
Mg-Al-Zn, mold-cast, corrosion behaviour, effect of Mn addition 7−138881
Mg-Al-Zn alloys, quasicrystals, comparative electron microscopic study with Al-Mn-Si alloys 7−137316
Mg-Al-rare earth alloys, H interaction, electron microscopy and X-ray study 7−106514
Mg-Al(-Si), rapidly solidified, microstruct. and props. 7−78125
Mg-Ba molten alloys, complex form., glass form. 7−83731
Mg-base alloys, rapid solidification, current status 7−126090
Mg-based corrosion resistant alloys, high performance, light wt., prep. by rapid solidification processing 7−119203
Mg-based metallic glasses, electron transport props. and related electronic struct. 7−98792
Mg-Bi alloys, mag. susceptibility 7−85257
Mg-Ca molten alloys, complex form., glass form. 7−83731
Mg-Co, mechanical alloying, for hydrogen storage 7−93542
Mg-Er solid soln., precipitation, elec. and mech. meas. *(Russian)* 7−71190
Mg-Fe, dil. alloy, Kondo impurities, low temp. behavior, Fermi liquid model 7−99042
Mg-Fe, mechanical alloying, for hydrogen storage 7−93542
Mg-Ga-Al, metallic glasses, electron transport props. and related electronic struct. 7−98792
Mg-Mn alloy sputtered films, spin glass transition obs., mag. suscept. meas. 7−118814
Mg-Nb, mechanical alloying, for hydrogen storage 7−93542
Mg-Ni, mechanical alloying, for hydrogen storage 7−93542
Mg-Si, activity calc. from phase diagram involving intermediate cpd. using entropy of form. 7−76453
Mg-Si alloys, hypereutectic, rapidly solidified microstruct. 7−126098
Mg-Sr molten alloys, complex form., glass form. 7−83731
Mg-Ta implanted system, elec. field gradients, TDPAC studies 7−113009
Mg-Tb alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
Mg-Ti, mechanical alloying, for hydrogen storage 7−93542
Mg-Y-Gd, corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7−144588
Mg-Y-Zn-Cd, corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7−144588
Mg-Zn, corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7−144588
Mg-Zn, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
$Mg_{32}Al_{49}$, rapidly solidified pot. quasicrystal farming alloys, struct. investigations 7−142705
$Mg_{64}Al_{18}Ga_{18}$ metallic glass, thermoelec. power, electron-phonon interactions 7−70293
$Mg_{32}(Al_{1-x}Zn_x)_{49}$ icosahedral alloy, elec. resist. temp. and mag. field depend. meas. 7−84815

magnesium alloys continued
Mg_xCd_{1-x}, disordered, electric field gradients, phenomenological approach 7−112259
Mg_4CuAl_6, rapidly solidified pot. quasicrystal farming alloys, struct. investigations 7−142705
$Mg(Cu_{1-y}Zn_y)_2$ ternary Friauf-Laves alloys, long period structs. and phase transitions, comment and reply 7−137300
Mg_4Eu, mixed layer cpds., electron diffr. effects 7−142761
MgFe and MgFeAl disordered alloys, H_2 absorption and storage 7−106936
Mg_2Ni, dehydriding kinetics, heat flow effect removal 7−71475
Mg_2Ni, H storage alloys, absorptive behaviour 7−126660
Mg_2Ni hydriding kinetics near isothermal condition for H_2 storage 7−106937
Mg_2Ni-H, hydrogenation characts., effect of thermal cycling 7−119511
Mg_2NiH_x, phase transition, heat conduction calorimetry 7−118080
MgZn metallic glass, low temp. magnetoconductivity 7−98991
$Mg_{70}Zn_{30}$ metallic glass, passivation and passive film breakdown, electrochem. study 7−113795
Mg_xZn_{100-x} molten alloy, struct., X-ray diffr. study 7−97908
$Mg_3Zn_3Al_2$, icosahedral supercond., sp. ht. meas. 7−112663
Pb-Mg-Bi system, Pb-rich corner, crystn. studies 7−77944
PdMg-TiN-PdMg-Ag metallisation system for contacts to GaAs, solid-phase reactions 7−105157
SiC particle reinforced Al-Mg-Fe, internal stress/strain, X-ray diffr. study 7−86197
SiC particle reinforced Al-Zn-Mg composite, thermal cycling induced internal stresses, plastic deform. 7−132687
SiC whisker reinforced Al-Cu-Mg, creep behaviour 7−71252
SiC whisker reinforced Al-Cu-Mg matrix composite, microstruct., STEM obs. 7−113478
$SnMg_2$, ^{119}Sn Mossbauer isomer shifts 7−85498
$(Sr_{0.67}Eu_{0.33})_3Mg_{13}$, cryst. struct., polynuclear units, structural refinements and relationships, X-ray diffr. study 7−111449
Ti-Mg pseudoalloys, H capacity and sorption kinetics 7−78362
Zn-Al-Cu-Mg, cast in metal moulds, solidification structs. and mech. props. 7−144389
Zn-Al-Mg textured sheet, flow stress, influence of grain size and loading direction *(German)* 7−126204

magnesium compounds
see also magnesium alloys
asbestos-like silicates, crystn. from forsterite, in NaOH medium 7−106394
double sulphates, langbeinite structure, electronic spectra 7−113227
feldspar melts with additives, wetting, viscosity, behaviour during heat treatment 7−98536
forsterite, crystallisation of asbestos-like silicates, in NaOH medium 7−106394
limestone double-alkali flue gas desulphurisation process pilot plant tests 7−133162
metal-tetrabenzoporphyrin-halomethane systems, donor-acceptor electron transfer, spectral hole burning 7−130270
MgO (100) surfaces, high resolution CTEM studies *(Japanese)* 7−124653
$MgSiO_3$ perovskite type, high press., cryst. struct. and elastic moduli 7−131126
montmorillonite, Mossbauer spectra, influence of cation substitutions on hyperfine parameters *(Chinese)* 7−132175
montmorillonites, ion exchanged, ESR spectra 7−138319
$NaMg[Cr(Oxalate)_3].9\ H_2O$, single cryst., paramagnetic anisotropy 7−125305
orthopyroxenes, spin-spin relax. of Fe(II) ions, Mossbauer spectra 7−92555
salts, glassy and liq., Raman spectra studies 7−106162
staurolite, struct. determ. by Mossbauer spectroscopy 7−125566
staurolite, thermal oxidation, Mossbauer effect anal. 7−126428
$Al_{2(1-x)}Mg_xTi_{1+x}O_5$ solid solns., synthesis, thermal stability 7−71191
Al_2O_3:MgO,ZrO_2, with bimodal grain size distrib., cavity development 7−93057
Al_2O_3-MgO, triphasic xerogels, densification using isostructural seeding 7−113491
Au-MgO cermet thin films, optical dielec. function derivation near percolation, phenomenological approach 7−125676
$Ba_{1-x}Eu_xMgF_4$, Eu^{2+} lumin. study 7−85806
$Ba_{1-x}M_xTi_{1-x}Mg_xO_{3-3x}F_{3x}$, M=Na, K, solid soln. ceramics, dielec. and pyroelec. props. study *(French)* 7−125598
$BaMg_2Al_{16}O_{27}:Eu^{2+}$, narrow-band phosphor 7−106400
$BaMgF_4:Ce^{3+},(Eu^{2+})$, lumin. under X-ray excitation 7−144110
$BaMgF_4$-Eu^{2+}, Eu^{2+} line emission, conc. and temp. depend. 7−144109
$Ca_3Mg(CO_3)_4$, carbonate systems, binary rhombohedral, theoretical anal. of cation ordering 7−124441
$Ca_{1-x}Mg_xFe_2O_4$, cryst. struct., substitutional local chem. press. effects study *(French)* 7−124220
$CaMgSi_2O_6$-$NaFeSi_2O_6$-$NaFeGe_2O_6$-$CaMgGe_2O_6$ systems, phase equilibria studies 7−100194
CaO-MgO-Al_2O_3-Fe_2O_3-Cr_2O_3-SiO_2 glass ceramics, mech. props. 7−86307
CaO-MgO-Al_2O_3-SiO_2, aluminosilicate glass, O_2-effervescent 7−91455
CaO-MgO-Fe_2O_3-Al_2O_3-Cr_2O_3-SiO_2 system, phase comp. and compatibility 7−77959
$CeMgAl_{11}O_{19}$, mixed hexa-aluminate, low-temp. synthesis and charactn. 7−144346
$Ce_2Mg_3(NO_3)_{12}$-^3He, Kapitza and spin-lattice resist. temp. depend. meas. 7−143130
$Ce_2Mg_3(NO_3)_2.24H_2O$, spin-Raman scatt. to record ESR spectra, resonant phonon heating 7−138348
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
$CsMn_xMg_{1-x}Br_3$ crysts., Mn^{2+} cluster mag. excitations, inelastic neutron scatt. study 7−85251
$Cs_2R_2(MoO_4)_3$, (R=Ni,Co,Mg,Mn,Cd), struct. investig. 7−142740
$Cu_xMg_{1-x}Al_2O_4$ spinels, Cu^{2+} ion distrib. among octahedral and tetrahedral sites 7−124213
CuO-MgO system, thermodynamic activities using solid-state galvanic cell 7−111912
CuO−CaO−MgO−SiO_2−GeO_2 system, cryst. chemistry 7−104705
CuZnMg ferrites, powder preparation conditions effect on elec., mag., microstruct. props. *(Korean)* 7−86077
(Fe,Mg)-pyroxenes, thermodynamic props. determ. at 1000 K by EMF method 7−143036
$Fe_{0.4}Mg_{0.6}Cl_2$, Ising spin glass, transverse fluctuations 7−105943

magnesium compounds continued
$Fe_{0.7}Mg_{0.3}Cl_2$ random field Ising system, magnetisation metastability and critical behaviour 7−118816
$Fe_{1-x}Mg_xCl_2$ spin glass-dilute antiferromag. system, spin wave props., inelastic neutron scatt. study 7−125395
$Fe_{0.87}Mg_{0.13}SiO_3$, hyperfine parameters, Mossbauer spectra 7−132176
$Fe_xMn_{1-x}Cl_2$ spin glass, Mossbauer spectra studies 7−118927
$FeO-P_2O_5-MgO$ glasses, polaronic hopping conduction, AC mechanism 7−84889
$Fe_2SiO_4-Mg_2SiO_4$ olivine, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
$FeTi_2O_5-MgTi_2O_5$, mutual solubility studies at 1300°C 7−124518
HgMgTe, laser annealing, effects on mercury loss and surface damage 7−131542
$KMgF_3$:Ni, X-ray irrad., tetragonal impurity ions, EPR study 7−70634
$K_2Mg_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7−138523
$K_2Mg(SO_4)_2.6H_2O$, IR and polarized Raman spectra 7−77547
$LaMgAl_{11}O_9$, laser and phosphor host, cryst. struct., thermal expansion determ. 7−84327
$LiAlO_2$:MgO, out of pile tritium release expts. 7−122186
$LiFeSi_2O_6-CaMgSi_2O_6$ glass system, pyroxene solid soln. crystallisation 7−76003
$Li_xMgYb_2S_4(Se_4)$ lithiated spinels, elec. and mag. meas 7−143422
$LiNbO_3$:MgO,Nd miniature CW and active internally Q-switched lasers 7−68683
$LiNbO_3$:Ti, MgO TE-TM mode convertors 7−117353
$LiNbO_3$:Ti:MgO waveguides, bend loss reduction through double diffusion 7−117351
$Li_2O-CaO-MgO-Al_2O_3-SiO_2$ glasses, thermal conductivity study, crystalline products 7−137637
$(Mg,Cu)_3(PO_4)_2$, solid solution and mag. props. 7−112764
$(Mg,Fe)_2SiO_4$, olivine, creep, press, depend. 7−84101
$(Mg,Fe)_2SiO_4$, olivine, planar OH-bearing defects and mantle flow 7−119983
(Mg,Ni)O, internal reduction, effect of NiO conc. gradient 7−76421
Mg-Cl boracite, improper ferroelectric phase transition, Raman scatt. strength 7−125631
Mg-montmorillonite-V_2O_5 cathode interface, Mg^{2+} migration 7−69974
Mg-Ni-H system. H diffusion, phase characteristics, PMR study 7−85444
Mg-SiO smokes, amorphous, kinetic study of hydrous alteration rel. to cometary particles and chondrite matrix 7−101737
Mg-Zn spinel ferrites, longit. mode magnetoacoustic reson. 7−105999
$MgAl_{2-x}Fe_xO_4$, spinel ferrite, O self-diffusion rel. to Debye temp., Mossbauer spectra 7−111952
$MgAl_2O_4$, ceramics, fusion appls., review 7−129381
$MgAl_2O_4$ spinel, stoichiometric single cryst., Knoop microhardness anisotropy 7−98327
$MgAl_2O_4$:H(d), stoichiometric and nonstoichiometric samples, IR spectra and diffusion studies 7−69985
$Mg_2Al_4Si_5O_{18}$, cordierite glass and glass ceramic, binodal static fatigue failure, crack size 7−78182
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., charact. 7−132546
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., sintering, struct., mech. props. 7−132547
MgB_4O_7 TLDs, performances 7−93955
MgB_4O_7:Dy, UV response, γ-ray dose estimation using phototransferred thermoluminescence technique 7−92749
MgB_4O_7:Dy TLD phosphor, dosimetric charcts. 7−93953
$MgBr_2.6H_2O$, ^{25}Mg NQR spectra study 7−68352
$MgBr_2.6H_2O$:Pb^{2+}(Pb^{2+},Mn^{2+}), photoluminescence 7−85830
$MgCO_3$, adsorpt. of $CO(CO_2)(O_2)$, transient characterisation 7−70078
$MgCO_3$ mol. calcite crysts., lattice dynamics 7−104932
$MgCO_3$, of $CO(CO_2)(O_2)$, transient characterisation 7−70078
$Mg_xCd_{1-x}Se$, recomb. processes under conditions of maximum charge transfer between local centres 7−84916
$Mg_{0.2}Cd_{0.8}Te$ solid solns., laser irradiation, effect on electrophysical props. 7−99114
MgCl, 4730 Å band, rot. anal., molecular constants and isotopic shifts 7−141590
$MgCl_2$, aq. soln., props. and dynamics 7−83638
$MgCl_2$, conc. aq. solns., Raman active vibr. 7−92683
$MgCl_2$ electrolytes, apparent ionic diffusion coeffs. across polycarbonate microporous membranes 7−106829
$MgCl_2$ solns., dielectric spectroscopy, evidence of ion complexes 7−92589
β-$MgCl_2$, stacking faults, powder X-ray diffr. meas. 7−76146
$MgCl_2$-18-crown-6 complex, struct. and conformation 7−137352
$Mg(ClO_4)_2$, aq. soln., ion-pairing and hydration, Raman spectra 7−92682
$Mg(ClO_4)_2$, organic solns., Raman spectra 7−92684
$Mg(ClO_4)_2$-NaSCN, organic solns., Raman spectra 7−92684
$Mg(ClO_4)_2.6H_2O$, phase transitions attributable to disorder in waters of hydration 7−118082
$MgCl_2.6H_2O$, ^{25}Mg NQR spectra study 7−68352
Mg_2CoH_5, electronic struct. and densities of states, X-ray emission and absorpt. spectra 7−84671
Mg_2CoH_5, prep. struct. and props. 7−83893
$MgCr_2O_4-ZrO_2$ composites, fracture surface energy rel. to ZrO_2 inclusions 7−132728
MgF_2, ^{25}Mg NQR spectra study 7−68352
MgF_2 Bridgman crystals, novel inclusion in laser crystals *(Chinese)* 7−104602
MgF_2 coated VUV high reflectance mirrors 7−141966
MgF_2, colour centres, electronic struct. and spectroscopic props. 7−70644
MgF_2, dielec. surfaces and thin films, surface charging in laser damage 7−69753
MgF_2, effects of various ambient-aging processes in chopped and non-chopped optical films 7−85881
MgF_2, electron irradiated, defect clusters, ordered arrays *(Japanese)* 7−111670
MgF_2 films, optical props., influence of ion assistance 7−85868
MgF_2, fluorine depth analysis using Rutherford backscattering 7−93423
MgF_2, grain growth enhancement of bend strength on hot pressing 7−113624
MgF_2, IR spectra, temp. depend. *(French)* 7−85630
MgF_2 irrad. crysts., X-ray luminescence studies 7−132322
MgF_2 irradiated crystals, luminesc. on synchrotron excitation 7−132331
MgF_2, microanalysis of fluorine using the $^{19}F(p,\alpha_0)^{16}O$ reaction 7−93425
MgF_2, optical crystals, dielectric props. at submillimeter wavelengths 7−132215
MgF_2 optical strength at 248 and 193 nm 7−69756
magnesium compounds continued
MgF_2 protective coatings, solar concentrator materials development 7−71580
MgF_2, thermal expansion meas. standards 7−121064
MgF_2:Co^{2+}, Ni^{2+}, Mn^{2+} crystals, absorption and luminescence spectra 7−106255
MgF_2:Cr^{3+}, optical props., absorpt. and emission spectra 7−92723
MgF_2:LiF, NaF, colour centre activation 7−124264
MgF_2-Ag replicated coating aspheric mirrors for far UV, quality control and ageing tests 7−103928
MgF_2-ScF_3 system, high press. phases 7−91789
MgF_2-TiO_2 antireflection coatings, optical monitoring strategies rel. to reproducibility of completed layer systems 7−104066
Mg_2FeH_6, bonding, quantum chem. description 7−83837
Mg_2FeH_6 electronic struct., X-ray absorpt. spectra, APW calcs. 7−85894
$MgFe_2O_4$ ferrite, ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
$MgFe_2O_4-ZnFe_2O_4$, mutual diffusion of cations 7−105107
$MgGeF_6.CH_2O$:Mn^{2+}, ferroelastic with incommensurate phase, ESR study 7−132125
$MgGeP_2$, possible nonexistence, rel. to prep. X-ray diffraction and SEM study 7−131122
MgH_2 single crystals and whiskers, electron beam induced decomposition 7−111676
$Mg^{2+}(H_2O)_n$, (n=1 to 4 and 6), interaction energies, pairwise additivity investig. 7−109698
$Mg(HSO_4)_2$, cryst. struct. determ. *(Chinese)* 7−131124
MgHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
$MgIn_2S_4$ spinel, structural props., ab initio total energy approach calcs. 7−117907
$MgMn_{2-x}V_xO_4$, structural and dielectric props. 7−92570
Mg_3N_2-Mg (0001), nitride layers formed by ion implantation of Mg surface 7−105158
$MgNO_3.6H_2O$, ^{25}Mg NQR spectra study 7−68352
Mg_2Ni-H, phase transition, low and high temp. modifications 7−98429
Mg_2NiD_4, low temp. struct., X-ray and neutron diffr. studies 7−83892
Mg_2NiH_4, bonding, quantum chem. description, electron microscopy obs. 7−83837
Mg_2NiH_4 electric conductivity temp. dependence 7−105556
Mg_2NiH_4, formation during hydrogen storage in $La_{2-x}Ca_xMg_{16}Ni$ 7−93546
Mg_2NiH_4, X-ray crystallographic and thermal props., low and high temp. phases 7−142975
$Mg_xNi_{1-x}O$ and NiO, H_2 reduction on spherical C particles 7−106828
MgO (001), adsorption of Ar and methane, pot. energy calcs. 7−118231
MgO (001), CO adsorption, ab initio Hartree-Fock calcs. 7−118270
MgO (100), Fe-covered, reaction of CO and H_2, UPS, EELS, SEELFS studies 7−86677
MgO (100) with adsorbed methane, diffusivity of 2D lattice fluid 7−84524
MgO (200), laser-induced phonon-polariton coupling with X-rays, Bragg case 7−98821
MgO (200), laser-induced phonon-polariton coupling with X-rays, Laue case 7−98822
MgO (periclase), bulk modulus at high-pressure 7−94209
MgO, adsorbed methanol, IR studies 7−118230
MgO, adsorpt. of $CO(CO_2)(O_2)$, transient characterisation 7−70078
MgO, adsorpt. of methane on (100) face 7−112080
MgO, adsorption transition energies in F-type centers 7−99896
MgO, $B^1\Sigma^+$ and $X^1\Sigma^+$ states, electric dipole moments, Stark quantum-beat spectra 7−68379
MgO compacts, creep-sintering, microstruct. 7−113482
MgO, core-exciton-induced desorption 7−118246
MgO crystal, colour centres, luminesc., irrad. by high energy particles *(Russian)* 7−142776
MgO crystal, direct obs. by high resolution SEM 7−84455
MgO crystal grain, contour fringes, double exposure in electron holography *(Chinese)* 7−130988
MgO, dielectric target, role of image force in EELS spectrum, calc. 7−85913
MgO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
MgO films, nondestructive depth profiling by spectroscopic ellipsometry 7−130298
MgO, fracture, crack formation, EPR colour centre anal. 7−92502
MgO, fracture, electron and photon emission 7−138618
MgO, Hartree-Fock total energy, correlation correction 7−124901
MgO, ion induced Auger electron spectra, energy thresholds 7−138571
MgO, ionic crystals, self consistent field studies of core level shifts 7−137832
MgO, obtained from sea water, sintering, effects of additives 7−138714
MgO, online mass separator targets, beam heating calcs. 7−96443
MgO, Pd particles form., refl. electron microscopy obs. 7−143140
MgO, polycrystalline, creep, constitutive eqns. 7−86255
MgO powder, comminution, dissolution in HCl rel. to dislocation density 7−111898
MgO powders, sintering, green density, surface area 7−71122
MgO, refractive index, thermal effects caused by the electron-phonon interaction 7−70736
MgO refractory materials sublimation investigation by gravimetric and mass spectrometric methods *(Russian)* 7−86521
MgO single crystal, aspect ratio effect on compression 7−131216
MgO single crysts., cyclic deform., recovery process, TEM obs. 7−86207
MgO, sintering, pores surface area and vol. 7−100159
MgO smoke particles, electron interference and electron holography 7−90493
MgO, sputtering, damage and nucleation 7−138575
MgO, stored energy from irrad. and mechanical deformation 7−141283
MgO, structural transforms, in $Mg(OH)_2$ and $MgCO_3$ decomposition, TEM obs. 7−100227
MgO surface, CO and H_2 adsorpt., UV-visible reflectance investig. 7−91978
MgO surface, CO thermal desorption, Monte Carlo simulations 7−143224
MgO surface, time of flight spectroscopy of positronium emission 7−99988
MgO, surface dynamics of relaxed (001) slabs 7−91956
MgO, surface struct., electron microscopy studies 7−124047
MgO surface struct., in situ deposition of Cu and Pd particles, scanning reflection electron microscopy study 7−105219
MgO, target material study for ISOLDE on-line mass separator 7−96442

magnesium compounds continued
MgO, theory of F-centres 7−92115
MgO, thermochemically reduced, electron trapping, luminescence studies 7−92197
MgO:Al crystals, spinel precipitates positron lifetime and analytical electron microscopy studies 7−118103
MgO:Be, electron irrad., detect. of F_A^+(Be) centres, photoluminescence spectra 7−70237
MgO:Ce(Eu), temp. depend. of luminescence emission 7−77652
MgO:Co^{2+}, elastic const., Debye temp., US pulse-echo-overlap meas. 7−84083
MgO:Co^{2+}, single cryst., dielec. props. 7−85517
MgO:Cr^{3+}, press.-induced blue and red shifts of spectra 7−85591
MgO:Cr^{3+}(Ni^{2+}), g-factors, high press. effects 7−112170
MgO:Fe and undoped single crysts., high temp. cond., 0.5-30 kHz a.c. 7−118482
MgO:Fe^{3+}, impurity precipitation, electron irradiation 7−69767
MgO:Li, impurity effects on deuteron diffusion and photolum. 7−105136
MgO:Mn^{2+}, polycryst., ESR spectrum, powder pattern effects 7−132127
MgO:Mn^{2+}, single cryst., dielec. props. 7−85517
MgO:Mn^{2+}, zero-field splitting, uniaxial stress effects 7−112271
MgO:Na, ion beam mixing-induced phase modification 7−76236
MgO:Ni, heat-treated, photolum. 7−132333
MgO:Ni crystals, heat treated, TEM obs. 7−76409
MgO:Ni crystals, plastically deformed, metallic colloids formation 7−113236
MgO:Ni(Co)(Cr)(Pr), laser-excited luminesc. and absorpt. spectra studies 7−125764
MgO:X (X=Al, Be), colour centres, luminesc., irrad. by high energy particles *(Russian)* 7−142776
MgO/Si ultrathin substrate, NbN epitaxial growth, Schottky diode characts. 7−143256
MgO-Al interface, high resolution electron microscopy and nanometer diffr. studies 7−105300
MgO-Al_2O_3-SiO_2, cordierite, lattice thermal expansion, neutron diffr. obs. 7−98521
MgO-Al_2O_3-SiO_2 glass, dissolved Si_3N_4 influence on phys. and mech. props., Si_3N_4 processing role 7−71142
MgO-Al_2O_3-SiO_2-Si_3N_4-based glass-ceramics, prep. in Mg-sialon system 7−77932
MgO-Au cermets, optical props., mean field theory and scaling laws 7−85573
MgO-graphite, two-phase powder system, thermal cond. 7−69996
MgO-$MgAl_2O_4$ system, production of eutectic alloy with directional structure by induction melting 7−92972
MgO-$MgCl_2$ (1 wt.%), sintering, grain cuboidization, Kr adsorpt. isotherms 7−100157
MgO-Na_2O-B_2O_3 glass, far-IR investig. 7−76011
MgO-Na_2O-B_2O_3 glasses, mid-IR and Raman investig. 7−77540
MgO-Si_3N_4, hot-pressed ceramics, elec. characts. 7−112332
MgO-Ta_2O_5-Li_2O ferroelec. ceramic, Mg cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
MgO-type crystals, surface electronic struct., variable pot. method 7−112415
MgO-ZrO_2 partially stabilised zirconia, microstruct. changes during aging 7−100267
MgO(Al_2O_3)$_n$:Fe, crystallographic environments, absorpt. and photoluminesc. spectra 7−113225
MgO(110) surface, diffusion of ^{57}Co, influence of ionic charge 7−98463
$Mg(PO_3)_2$, thermal dissociation, mass spectrometric study 7−106821
$Mg_2P_2O_7$, thermal dissociation, mass spectrometric study 7−106821
$Mg_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Mg_2P_2Se_6$, Raman spectra assignments *(German)* 7−99873
$Mg(ReO_4)_2$, magnesia-supported perrhenates, Raman and optical spectra 7−118995
MgS:Ce,Sm dosimeters using optically stimulated luminescence 7−93945
MgS:Eu,Sm phosphors for TLD 7−93957
$MgSO_4$, (110) face, crystal growth kinetics of the two-step model 7−85982
Mg_2Si layer formation, elastic recoil spectrometry, quantitative, mass and energy dispersive, resolution 7−116024
Mg_2Si transform, during TEM foil prep. 7−138923
$MgSiO_3$, enstatite, polymorphism, review 7−113543
$MgSiO_3$, ilmenite, heat capacity calc. 7−76435
$MgSiO_3$, ilmenite and perovskite phases, struct. and elastic props., computational model 7−76097
$MgSiO_3$, perovskite-type, single-crystal X-ray diffr. study 7−124186
$MgSiO_4$, forsterite, phonon dispersion relations, inelastic neutron scatt. studies 7−137491
Mg_2SiO_4, β- and γ-forms, Raman spectra 7−125714
Mg_2SiO_4 coatings on Si wafers, laser evaporation, morphology 7−71027
Mg_2SiO_4, forsterite, deform. props. 7−84090
Mg_2SiO_4 ground layer on silicon steel, effect on mag. props. 7−77353
$Mg_2Si_2O_6$, enstatite, neutron diffr. refinement of cryst. struct. 7−104702
$Mg_3Si_2O_5(OH)_4$, chrysotile asbestos, thermal transform., structural changes 7−124469
Mg_2SiO_4(forsterite mineral), phonon density of states and specific heat at Earth mantle conditions 7−133670
$Mg_8SiW_9O_{37}.24.5H_2O$ trigonal struct., topotactic relations and thermal dehydration 7−142723
$MgSo_4 7H_2O$, epsomite, cryst. growth kinetics from soln. 7−144253
$MgTiF_6.6H_2O$:Mn^{2+} single crysts., ESR at phase transition 7−99559
MgV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
MgV_2O_6 polymorphism, X-ray and DTA studies 7−142683
$MgWO_4.2H_2O$, luminesc. study 7−113271
$MgZr_4(PO_4)_6$ solid electrolyte, Mg ion conduction study 7−84389
Mn complexes of 3-phenyl-4-acetyl-5-isoxazolone, synthesis, struct., IR and PMR spectra 7−99859
$Mn_{1-x}Mg_xFe_2O_4$ mixed ferrite, fat IR spectra studies 7−106183
$NaCaMg_2V_3O_{12}$:Cu^+ laser hosts, spectroscopic and laser props. 7−74939
$Na_{1+x}Mg_xAl_{11-x}O_{17}$:$Nd^{3+}$, optical pair interactions, four wave mixing spectrum 7−136456
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}$, β″-alumina, laser material, single crystal growth 7−86010
$NaMgCl_3$, flux cryst. growth and thermolum. glow curves 7−132354
$NaMgF_3$ crystals, thermoluminescence, kinetics and trapping parameters 7−106277
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}$:$Cr^{3+}$($Rh^{2+}$), beta″-alumina, optical spectroscopy 7−92725
Na_2O-MgO-CaO-SiO_2 glass, dissoln. in aq. HF soln. 7−100408

magnesium compounds continued
Na_2O-MgO-P_2O_5 glass, N dissolution in melts, thermal expansion, refractive index 7−93013
$Na_{1+x}Zr_2Si_xP_{3-x}O_{12}$:MgO NASICON superionic ceramics, chem. comp. and phase homogeneity, sintering conditions effects 7−119191
NbN-MgO-NbN, tunnel junction fabrication 7−131912
NbN-MgO-NbN sputter deposited superconductor-insulator junctions, insulator interface effects 7−125268
NbN-MgO-NbN tunnel junctions, characts. 7−131913
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
Ni-Mg olivine solid soln., thermodynamics 7−143043
Ni-MgF_2 cermet, solar absorber coatings, accelerated aging tests 7−144914
Ni-MgF_2 interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7−70946
$(Ni_xMg_{1-x})_{10}Ge_3O_{16}$, crystal structure 7−104666
$Pb(Mg_{1/3}Nb_{2/3})O_3$-based perovskites, microwave sintering, capacitor appls. 7−138702
$Rb_2Co_{0.7}Mg_{0.3}F_4$ 2D antiferromag., critical scatt. studies 7−125425
$RbMn_xMg_{1-x}F_3$, nonradiative energy transfer without lifetime quenching 7−85818
SiC whisker reinforced MgO composite ceramics, hot pressing, fracture energy *(Japanese)* 7−71279
Si_3N_4-MgO, thermal expansion coeff., effects of CaF_2 conc. 7−105084
Si_3N_4-SiC-MgO reaction-sintered, oxidation in presence of salts, effect on strength 7−119392
Ti-MgO composite films, electron microscopy 7−70139
TiO-MgO sintered mixtures, elec. props. *(Japanese)* 7−76928
TiO_2-Fe_2O_3-MgO solubility in mullite 7−132617
TiO_2-MgO-M_2O, M=Li, K, Rb, phases in region of hollandite crystn., cryst. chem., elec. cond. meas. 7−98388
V_2O_5-MgO oxidative dehydrogenation catalysts, synthesis methods 7−113462
$Zn_xMg_{1-x}Fe_2O_4$, lattice parameter, cation distrib., bond length and Curie temp. studies 7−142712
ZrO_2, (MgO, Y_2O_3) partially stabilised, tetragonal ZrO_2 precip. morphology 7−93014
ZrO_2, MgO partially stabilised, eutectoid decomp. 7−132586
ZrO_2-MgO partially stabilised zirconia, coherent precipitates, HREM studies 7−100237

magnetic aftereffect
ferrite, automatic disaccommodation measuring system 7−128600
ferromagnetic amorphous materials, mag. permeability aftereffect, struct. distortions 7−85382
metallic glasses, domain wall stabilisation, permeability disaccommodation, struct. relax. 7−132088
metallic glasses, magnetic aftereffects and struct. relax. 7−143862
Co, electron irradiated, mag. disaccommodation phenomena 7−105970
$Co_{43}Fe_5Ni_{30}Si_{8.8}B_{13.2}$ ferromag. amorphous alloy, struct. relax. obs. 7−83776
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloys, mag. after effect, influence of heat treatment 7−132086
α-Fe alloys, irradiated, exptl. criteria for two-interstitial annealing mechanism 7−106549
α-Fe, electron irrad. defect-induced mag. relax. and recovery, two-interstitial model 7−98248
α-Fe, electron irradiated, low temp., annealing behaviour of 110 K mag. relax. 7−111671
Fe-Co-Mn-B-Si amorphous ribbons, mag. aftereffect studies 7−92470
Fe-Si-B-based amorphous alloys, mag. permeability and thermal stability 7−85361
Fe-Ti spinels, mag. suscept. aftereffect and cation diffusion studies 7−118831
$Fe_3AlH_xD_y$ ordered alloys, low temp. interstitial H and D relax. processes, mag. aftereffect meas. 7−124256
$Fe_{82}B_{18-x}C_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{80}B_{20}H_x$, amorphous ferromagnets, H diffusion, mag. after effect 7−105972
$Fe_{80}B_{14}Si_6$ amorphous alloy low temp. mag. props., annealing effects study 7−100400
$Fe_{82}B_{18-x}Si_x$, metallic glasses, disaccommodation phenomenon 7−138280
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, magnetic stability, reversible disaccommodation w.r.t. demagnetization 7−92471
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
$Fe_{91}Zr_9H_x$, amorphous ferromagnets, H diffusion, mag. after effect 7−105972
MnZn ferrites, mag. spectra, mag. state, influence of external field, mag. aftereffect 7−143861
NdFeB magnets. magnetic viscosity meas. 7−125447
$NiZnFe_2O_4$:GeO_2, SnO_2 ferrites, disaccommodation spectra 7−105971
Si-Fe annealed ribbons, change of permeability 7−132087

magnetic amplifiers
No entries

magnetic anisotropy
see also induced anisotropy (magnetic)
1D alternating spin 1/2 Heisenberg antiferromagnet, numerical analysis 7−85342
1D XY model, continuous-symmetry ferromagnets with random anisotropy 7−125289
actinide pseudobinary monochalcogenide and monopnictide single crystals, magnetism 7−105894
alloys, local spin and orbital moments, local mag. anisotropy calcs. 7−92423
amorphous magnets, strong random anisotropy, phase transitions, long range interactions and correls. 7−99441
amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7−112895
antiferromagnet, magnetisation, nonlinear oscills., onset of chaos 7−85317
cerium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
chloroform-d_1, oriented in liq. crysts., NMR spectra 7−92510
Curie temp., spin reorientation, anisotropy and magnetisation 7−70544
dilute spin glass critical behaviour, Dzyaloshinsky-Moriya interaction effects 7−125401
$(DIMET)_2SbF_6$, antiferromagnetic properties 7−85280
disordered magnets, competing anisotropy, nuclear spin waves *(Russian)* 7−125343
disordered solids, ferromag. long range order, dipolar coupling effects 7−143831

magnetic anisotropy continued
disperse magnetic films, effective magnetic anisotropy, statistical block model calcs. *(Japanese)* 7−118833
dysprosium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
easy plane ferromagnet, excitation spectrum in magnetic field 7−138223
EBBA mag. suscept. temp. depend. and nematic-isotropic transition studies 7−111385
ferrites, characteristics and selection for particular appl. *(Italian)* 7−138273
ferrites, polycrystalline, microwave permeability in demagnetized state 7−125459
ferrofluid, Mossbauer study of superparamag. amorphous alloy particles 7−118923
ferrofluid instabilities, anisotropy effects 7−92424
ferromagnetic film, nonlocal mag. suscept. tensor and spin-wave reson., Green's function method calcs. 7−112898
ferromagnetic films, resonance props., mag. anisotropy amplitude dispersion effects *(Russian)* 7−70601
ferromagnetic monolayers, spin anisotropy calcs. 7−112784
ferromagnetic system with competing Ising and XY anisotropies, phase diagram calcs. 7−132044
ferromagnetic thin films, amorphous and monocrystalline, FMR, replaceability of surface anisotropy with effective volume anisotropy 7−112891
ferromagnetic-antiferromag. rough interfaces, random field model of exchange anisotropy 7−70584
ferromagnets, crystalline and amorphous, intrinsic mag. props., DTMG and DTA studies 7−143785
field-annealed magnetoelastic amorphous metal magnetometers, directional characts. 7−102463
film on ferromagnetic substrate, magnetic polaritons 7−125511
films, high-coercivity, magnetisation reversal mechanism *(Russian)* 7−70602
garnet films, (100) and (110), H_2^+ implanted, mag. anisotropy 7−112880
garnet films, ferromagnetic, with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7−99521
Gd-Tb-Co-Fe amorphous films; biaxial oblique mag. anisotropy, Hall characts. 7−143868
heavy elements, virial theorem and eqn. of state, relativistic effects 7−76739
Heisenberg ferromagnets and antiferromagnets, 2D, spin correlation functions *(Russian)* 7−70580
Heisenberg quantum spin chains, generalised, phase behaviour 7−125432
hysteresis loops modeled from coercivity, anisotropy, and microstructure parameters 7−125452
icosohedral structs., mag. moments, Curie temp., anisotropy and domain walls 7−131996
Ising ferromagnet, magnetisation and Curie temp., pair model approx. calcs. 7−77327
Ising spin glass, unidirectional anisotropy empty site-antiferromagnetic bond 7−138249
Landau-Ginzburg-Wilson model, n-component, with cubic anisotropy and random impurities, critical behaviour 7−85340
Landau-Lifshitz equation, hidden symm., dual eqn. for asymm. chiral field 7−138182
mag. and magneto-optical props. 7−113150
magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
magnetic films for perpendicular recording, texture formation, influence on props. 7−76700
magnetic fluids, parametric resonance 7−138289
magnetic props., composition depend. study 7−125390
magnetic thin films, domain wall velocity, giant unidirectional anisotropy 7−143884
metallic glass ribbons, mag. anisotropy, oriented surface roughness effects 7−105914
metallic glasses, current annealing 7−138221
metallic glasses, hysteresis loop props., aging effects 7−143862
metallic glasses, local magnetic environment probe using magnetoresist. 7−84830
metallic glasses, low-magnetostrictive ribbons, anisotropy and magnetostriction, indirect meas. 7−70620
metallic glasses, magnetostriction and short-range order 7−85402
metamorphic minerals, anisotropy of magnetic susceptibility 7−145447
micromagnetics, surface anisotropy 7−125473
$NaMg[Cr(Oxalate)_3].9\ H_2O$, single cryst., paramagnetic anisotropy 7−125305
nematic liq. crystal mixtures of opposite diamag. anisotropies, switching transition, mol. field theory 7−137233
nonlinear dynamics of highly anisotropic spin-1 magnetic materials 7−132079
one-dimensional easy-plane magnets, classical sine-Gordon and quantum models 7−138244
one-dimensional spin=1/2 alternating antiferromagnetic Heisenberg-XY model, correl. function calc. 7−85230
orthorhombic antiferromagnets, spin-flop phase transition, mean-field theory calcs. 7−105919
particular media, magnetisation processes, effect of interaction and anisotropy const. distrib. 7−85377
permalloy thin films, ferromag. reson., ang. dispersion of mag. anisotropy 7−132137
quasi-low-dimensional easy-axis ferromagnets, two-magnon bound state calcs. *(Russian)* 7−112775
random anisotropy axes, critical lines 7−77274
random axis magnet with infinite anisotropy, ferromagnetic, spin glass and disordered phase calcs. 7−85310
random Heisenberg antiferromagnets, spin waves, Anderson localisation 7−85269
$(rare\ earth)_2Fe_{14}B$ polycryst. alloys, spin reorientations simulation w.r.t. permanent magnet and recording appls. 7−125351
rare earth alloys, $R_2Fe_{14}B$, polycrystalline, computer simulation of spin reorientations 7−99465
rare earth alloys, R_2Fe_{17}, cryst. field and easy axis direction 7−137866
rare earth alloys, RCo_5, magnetisation anisotropy 7−138215
rare earth orthochromites, $RCr_{1-x}Mn_xO_3$, mag. props., Mn^{3+} impurity ion effects 7−138196
rare earth-Cu-Si alloys, RCu_2Si_2, (R=Tb-Tm), mag. interactions 7−132007
scaling stiffness energy in anisotropic spin systems 7−77337
semi-infinite cryst., high perpendicular anisotropy, domain wall motion, numerical model calcs. 7−118821
semi-infinite mixed Ising alloys, surface phase diagram calcs. 7−132042
single domain with uniaxial anisotropy, theoretical torque curve anal. *(Spanish)* 7−143848
site-bond diluted Ising ferromagnet on anisotropic square lattice, thermodynamic props. calcs. 7−70571
soft amorphous magnets, anisotropy and magnetostriction, pair model calcs. 7−99542
spin glass alloys, classical RKKY model, anisotropy-induced phase transition, Monte Carlo simulation 7−125413
spin glasses, review 7−77314
superparamagnetic particles, magnetic hyperfine splitting 7−138288
surface spin wave excitations, softening, in thin ferromagnetic film, unaxial anisotropy 7−138202
terbium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
thin film media, anisotropy and mag. recording props. 7−125500
thin films, magnetic anisotropies in oblique and continuously varied incidence films, 3D anal. 7−118842
torque magnetometer using high field superconducting magnets for anisotropy meas. 7−95625
transition metal-rare earth amorphous alloy films for magneto-optic recording 7−132366
triangular lattice Heisenberg antiferromagnet, spin wave reson. calcs. 7−106030
two dimensional ferromagnets, spin-wave spectrum fluctuation-dissipation corrections 7−118790
two-sphere agglomerate, magnetisation loops with nonvanishing mag. anisotropy 7−70592
ultrathin film and surface ferromagnetic phase transition, Heisenberg model calcs. 7−112893
uniaxial cylindrical mag. domain film, asymptotic solns. 7−70611
uniaxial ferromagnet, inhomogeneous state, spin orientational phase transition, spatial inhomogeneity of anisotropy 7−132016
uniaxial spin glasses, spin wave spectrum calcs., Sherrington-Kirkpatrick model 7−85309
uniform anisotropic ferromagnets, irreversibility lines 7−112826
vector spin glasses, anisotropy-induced crossover exponent calcs. 7−118813
ZnMn uniaxially anisotropic spin glasses, zero-field muon spin relax. temp. depend. meas. 7−85318
$BaFe_{12-x}Co_xO_{19}$ mag. and magneto-optical props. comp. depend. study, recording appls. 7−106145
$BaFe_{12-2x}Co_xTi_xO_{19}$ fine particles, coprecipitation tempered, mag. props. 7−125481
$BaFe_{12-x-y}Co_xTi_yO_{19}$ sputtered films, mag. props. for magneto-optical memory appls. 7−112912
$BaFe_{12}O_{19}$, ferrite particles, mag. anisotropy effect on squareness of perpendicular recording media 7−125375
$BaFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$BaFe_{12}O_{19}$, hexagonal ferrite single crystals, flux growth and mag. props. 7−125942
$BaFe_{12}O_{19}$ permanent magnet, intrinsic coercivity, ang. depend. meas. 7−105957
$BaFe_{12}O_{19}$ uniaxial ferromagnet, reversible transverse susceptibility singularities study 7−118777
$BaO.2ZnO.8Fe_2O_3$, anisotropic ferrite magnets, mag. props., Al_2O_3 substitution effects *(Japanese)* 7−125377
Bi, monocrystalline, μ^+ Knight shift ang. depend. and diamagnetic props. 7−113054
Bi-Mn, dil. alloy directional solidification, mag. props. 7−105960
$(BiDySmLu)_3(FeAl)_5O_{12}$ and $(BiDySmLuGd)_3(FeGa)_5O_{12}$ bubble films, LPE growth in $PbO-Bi_2O_3-MoO_3$ melt 7−113452
$(BiSmGdLu)_3(FeAlSc)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
$(BiSmLu)_3(FeSc)_5O_{12}$ 0.3-μm bubble material, LPE growth 7−125516
$CaFe_xSi_2O_8(OH)$ ilvaite mixed valence single cryst., electron delocalisation and magnetic props. 7−76853
Ce-La-Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413
Ce-Sn alloys, struct. and mag. props. correls., comp. depend. 7−76083
CeAs, order-parameter conserving antiferromagnets, conserved staggered magnetisation in FCC lattice 7−138208
Ce_4Bi_3, heavy fermion ferromag. system, sp. ht. meas. 7−77296
$Ce_3Co_{20}B$, crystallographic and mag. characts. 7−104642
$Ce_{26}Cu_{74}$, low temp. specific heat, local random mag. anisotropy 7−77295
$CeFe_2$, magnetic transitions, high resolution transport prop. meas. 7−77307
$CeNi_{0.8}Pt_{0.2}$, dense Kondo ferromagnet, mag. props. 7−77249
$CeZn_5$ Kondo lattice, mag. props. 7−99404
Co alloy, perp. magnetised films prep. by electroless plating, undercoating layer effect *(Japanese)* 7−92898
Co obliquely evaporated films, partially oxidised, exchange interactions, mag, anisotropy 7−112878
Co thin epitaxial FCC films on Cu, ferromagnetism obs. by spin-polarised photoemission 7−77385
Co-Au amorphous thin films, prep. and mag. props. 7−85393
Co-CoO compositionally modulated films, mag. props. 7−112869
Co-CoO layered films, bias modulated reactively sputtered, magnetisation props. 7−70605
Co-Cr film, magnetisation models for computer simulation of perp. mag. recording 7−92479
Co-Cr multilayer film mag. props., magnetisation and FMR meas. 7−112896
Co-Cr perpendicular media, mag. and recording props. 7−92474
Co-Cr sputtered film, struct. and mag. props., additive gases effects studies 7−105974
Co-Cr thin films, artificial superlattice struct., magnetism, struct. 7−76667
Co-Cr thin films, mag. props. depend. on sputtering parameters 7−92472
Co-Cr-Ta(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Cu multilayer electrodeposit structs., mag. props. study 7−125508
Co-Er, metastable phases, icosahedral symmetry and magnetism 7−131037
Co-F films, mag. and magneto-optical props. 7−113150
Co-Fe-Nb amorphous films, magnetisation and FMR studies 7−132102
Co-γ-Fe_2O_3 epitaxial layer on $Zn_{0.2}Fe_{2.8}O_4$, particles, coercivity meas. 7−125486

magnetic anisotropy continued
Co-Ni thin film mag. and structural recording props., deposition incidence angle depend., recording appl. 7—105976
Co-Ni-Cr(W) sputtered films, mag. and recording props. for high-density appls. 7—92473
Co-Ti amorphous thin films, mag. anisotropy, domain struct. 7—112914
CoB base alloys, V and Nb substitution effect on induced mag. anisotropy *(Chinese)* 7—99436
$CoBr_2.6H_2O$, spin reorientation direction at the spin-flop transition 7—99466
$CoCl_2.6H_2O$, spin reorientation direction at the spin-flop transition 7—99466
CoCr sputtered films, coercivity and struct. characterisation 7—125496
CoCr sputtered films, wall energy and exchange stiffness 7—99534
CoCr thin film recording media, mag. anisotropy and struct. 7—125490
CoCr thin films, mag. props. and anisotropy 7—125495
CoCr/Ti film/sublayer system, struct. and mag. props. 7—112905
$CoFe_2O_4$ ultrafine ferrite particles, mag. props. 7—77373
$Co_{75-x}Fe_xSi_{15}B_{10}$ amorphous alloy, mag. anisotropy, stress annealing 7—85283
CoNi oblique-deposited thin films, struct. and mag. props. study, recording appls. 7—105313
$Co_{86}Ti_{14}$, soft ferromag. amorphous thin films, with induced uniaxial anisotropy, nucl. signal enhancement 7—92549
Co_xZn_{2-x} W-type hexaferrite, mag. props., 78-700 K 7—125371
CoZr and CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7—112885
$Co_{94}Zr_6$ amorphous thin films, mag. and galvanomag. props. 7—112884
$CsCoCl_3$:^{57}Fe, 1D antiferromagnet, Mossbauer spectra 7—85494
$CsMnBr_3$ triangular antiferromagnet, spin wave props., inelastic neutron scatt. meas. 7—85250
$CsMnBr_3$ triangular antiferromagnet, spin waves, neutron scatt. study 7—125348
Cu sputtered films, struct. and mag. props. studies 7—112899
Cu-Ni [100] oriented superlattices, mag. props. study 7—125334
$CuCl_2.2H_2O$, antiferromag. resonance, quenching at low freq., critical angle, phase transition 7—70647
$CuCl_2.2H_2O$, spin reorientation direction at the spin-flop transition 7—99466
$CuCl_2$.tetramethyl sulphoxide ferromag. chain cpd., magnetic interactions, magnetisation, FMR and AFMR meas. 7—99435
$Cu_{0.45}Co_{0.55}Cr_2S_{4-y}Se_y$ ferrimagnetic spinel props. 7—99503
$CuCr_2Te_4$ films, synthesis, texture, mag. props. 7—98731
$Cu_xFe_{1-x}Cr_2S_4$ films, mag. props. 7—105987
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7—125396
CuO_2 planes in high T_c supercond., antiferromag., localisation, pairing 7—118687
$Dy(BrO_3)_3.9H_2O$, mag. behavior and cryst. field 7—92416
$DyAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7—99398
Dy_3Al_2 single cryst., domain wall energy 7—132048
$DyFe_4B_4$, effective mag. fields, ^{57}Mossbauer spectra studies 7—92561
$Dy_2Fe_{14}BH_x$, mag. props., effects of hydrogen 7—92460
$Dy_2Fe_{14-x}Co_xB$ ferrimagnetic system, struct. and mag. props., comp. depend. study 7—70589
$Dy_xGd_{1-x}Ni$, amorphous alloys, random anisotropy series, complex susceptibility, low temp. 7—105895
DyNdFeCoB aligned magnets, permanent magnet props. 7—125465
$ErAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7—99398
$ErCo_2Fe_2B$, cryst. struct. and mag. props. 7—137310
$Er_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7—125468
$Er_2Fe_{14}B$ thin film mag. props. study 7—112894
$Er_2Fe_{14}BH_x$, mag. props., effects of hydrogen 7—92460
$Er_2Fe_{14-x}Co_xB$ ferrimagnetic system, struct. and mag. props., comp. depend. study 7—70589
$(Er_{1-x}Gd_x)_2Fe_{14}B$, spin-reorientation phenomena, ^{57}Fe Mossbauer spectra study 7—92434
$(EuBi)_3Fe_5O_{12}$ (110) films, LPE growth, orthorhombic mag. anisotropy 7—112883
EuS (111) on Si (111), isotropic Heisenberg ferromag., surface magnetisation, critical behaviour 7—105984
Fe epitaxial (110) film near MnF_2 interface, magnetic surface anomalies persistence obs. 7—132100
Fe epitaxial film on Ag (001), mag. and electronic props., spin-polarised photoemission study 7—112913
Fe, epitaxial films on GaAs (100), growth by ion beam sputtering 7—125489
Fe epitaxial layers on W, spin-resolved photoemission obs. 7—112889
Fe ferrimagnetic oxide formed on heating nontronite, magnetisation, Mossbauer spectra and structure studies 7—77354
Fe, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7—105384
Fe fine particles, prep. mag. props. 7—125477
Fe imperfect whisker, pinning effect on domain struct. 7—132055
Fe MBE films on ZnSe epilayers, mag. props. 7—118838
Fe monolayers on Ag, direct DC magnetisation temp. and field. depend. meas. 7—112888
Fe sputtered films, struct. and mag. props. studies 7—112899
Fe ultrathin layers on W(110), Damon-Eshbach surface spin wave mode freq., surface anisotropy effects 7—132099
Fe/Cu multilayered sputtered films, struct. and mag. props. studies 7—112899
Fe/Mg sub-monolayered superlattice, mag. props. 7—112867
Fe/SiO_2, compositionally modulated films, mag. props. 7—99524
Fe-Al-Si sputtered films, mag. props. 7—112876
Fe-B ultrathin amorphous films, magnetisation and surface anisotropy determ. 7—112892
Fe-Co ion-beam sputtered thin films, mag. props. 7—112879
Fe-Cr-P-C amorphous ribbons, magnetic texture, curvature and structural relax. during annealing 7—70582
Fe-Cu multilayered films, magnetron sputtered, mag. props. 7—99516
Fe-Cu multilayered films deposited by facing targets sputtering, mag. props. 7—112904
Fe-F films, mag. and magneto-optical props. 7—113150
Fe-Nd multilayer films, mag. props. 7—112903
Fe-Ni films electroplated on nonmagnetic wire, mag. props. 7—132093
Fe-R-B melt spun alloys (R=Pr,Nd,Y,Gd), hard mag. props. study, comp. depend. 7—99508

magnetic anisotropy continued
Fe-Si sputtered films, mag. props. 7—112875
Fe-Si-Al Sendust alloy single crysts., mag. anisotropy and magnetostriction, comp. depend. 7—70541
$Fe\text{-}SiO_2$ granular solids, mag. props. 7—125476
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7—112902
$Fe_{80}B_{20}$ amorphous ultrafine metallic particles, sputtering deposition and mag. props. 7—85381
$FeBO_3$:Ho crystals, mag. resonance, photoinduced change 7—77445
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7—132101
$(FeCoNi)_{78}Si_{10}B_{12}$ amorphous alloys, magnetic anisotropy studies 7—99442
$Fe_{3-x}Co_xSi$, Mossbauer effect and mag. props. 7—132174
$Fe_{77}Cr_2B_{16}Si_5$ amorphous ribbons, magneto-elastic wave amplitude variation *(Japanese)* 7—106009
$Fe_{78}Cr_2B_{12}Si_8$, amorphous, quenched, annealed, ferromag. reson. 7—112962
FeDy amorphous thin films with perpendicular mag. anisotropy, heating, magneto-optical method *(Russian)* 7—92483
$Fe(H_2O)_6(NH_4)_2(SO_4)_2$, Mossbauer and other expts. on ferrous ion, ligand field model 7—105498
$Fe_{40}Ni_{40}B_{20}$ amorphous alloys, aging, Mossbauer and mag. study 7—132167
$Fe_{40}Ni_{40}B_{20}$, stress annealed amorphous alloy, mag, surface anisotropy, ferromag. resonance 7—106031
$\alpha\text{-}Fe_2O_3$, magnetic single-ion anisotropy in hematite, Morin transition 7—143786
$\gamma\text{-}Fe_2O_3$:Co film, H_c enhancement 7—125505
$\gamma\text{-}Fe_2O_3$:Co^{2+},Zn^{2+} acicular particles, mag. props. modification 7—85371
$\gamma\text{-}Fe_2O_3\text{-}Fe_3O_4$ films, pyrolysis prep., Mossbauer and Faraday rot. study 7—85387
Fe_3O_4 magnetite, thermal and dielectric props. near Verwey transition 7—132027
Fe_3O_4 small ferromag. particles, correlation spectroscopy study 7—70599
Fe_3O_4, ultrafine ferrite particles, mag. props. 7—77373
Fe_xO_{1-x}-based perpendicular thin films, mag. recording appls. 7—125494
Fe_xO_y, RF sputtered thin films, coercivity study *(Chinese)* 7—118832
FeSi grain orientated sheets, stray field profile 7—105962
$Fe_{100-2x-y}Tb_xLa_xB_y$ amorphous alloys, domain struct. and anisotropy studies 7—99494
Gd-Co amorphous films, alloyed, mag. props. *(Russian)* 7—125519
Gd-Co amorphous films, comp. modulated, by bias sputtering 7—86025
Gd-Co-(Fe) amorphous sputtered films, struct. and mag. props. 7—132096
Gd-Tb-Co amorphous films, mag. and magnetooptical characts., influence of sputtering conditions 7—132098
Gd-Tb-Fe magneto-optical disc film, mag. anisotropy distrib. meas. using Hall method 7—143787
Gd-Tb-Fe-Co amorphous films, mag. props. control for magneto-optical recording 7—92481
$(GdBi)_3(FeGa)_5O_{12}$ garnet film bubble memory material, mag. anisotropy props. study 7—105994
GdCo amorphous films, DC diode getter sputtered, with perp. anisotropy, anomalous aging characts. 7—125497
GdCoMo amorphous thin films, surface mag. anisotropy, X-band microwave spectra study 7—99522
GdTbCo films, RF diode sputtered, prep. conditions effect on mag. props. and ageing behaviour 7—125498
$Gd_{65-x}Tb_xCo_{35}$, anisotropic spin glass, mag. transitions 7—112810
$GdTbFe:ONH_2O$ sputtered film mag. props., impurity effects study 7—112887
$Gd_{27}Tb_{10}Fe_{63}$ amorphous film, mag. anisotropy and thermal stability, effect of annealing 7—70604
^{3}He, HCP, ferromag., anisotropy energy 7—112004
$HgCr_2Se_4$:Ag single crysts., FMR lineshape and anisotropy meas. 7—85443
Ho-Co, amorphous thin films, mag. anisotropy and magneto-optic Kerr spectra 7—125376
Ho-Er-Co-Ni, spin reorientation, magnetocryst. anisotropy studies 7—138235
Ho_4Co_3 bulk amorphous alloy, rapid quenching and mag. props. 7—85298
$HoCo_4B$, cryst. struct. and mag. props. 7—137310
$Ho_2Fe_{14}B$, magnetic anisotropy, easy cone 7—85281
$K_2MnCl_4.2H_2O$, mag. transitions 7—99451
La_2CuO_4 single cryst., mag. susceptibility and anisotropy 7—138200
Mn-Al magnets, texture, neutron TOF diffraction 7—106529
MnBi, film, angular dispersion of mag. anisotropy, three-dimensional study 7—70600
$(MnFe)_{100-x}Bi_x$ evaporated films, microscopic struct. and mag. props. 7—112871
$MnFe_2O_4$, ultrafine ferrite particles, mag. props. 7—77373
MnP itinerant-electron ferromagnet, paramag. neutron scatt. cross section meas. 7—112776
MnSb single crysts., spin reorientation, FMR study 7—118865
$Mn_xZn_{1-x}F_2$, random anisotropy and exchange in antiferromagnets, ground state props., excitations 7—138212
$Mn_{1-x}Zn_xFe_2O_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7—77912
Mo/Ni superlattices, magnetisation and anisotropy, torque meas. 7—112785
Mo-Mo triple bonds in cpds., diamagnetic anisotropy 7—129628
Mo-Ni magnetic-superlattices, interfacial anisotropy 7—118795
Na-Fe-B magnet, anisotropy consts. meas., temp. and field depend. determ. 7—125373
Nd-Co compositionally modulated thin films, mag. props. 7—99513
Nd-Dy-Fe-B sintered magnets, coercivity, depend. on anisotropy field 7—112859
Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7—92413
Nd-Fe-Co sputtered films, mag. and magneto-optical props. 7—143869
Nd-Fe-Co-B sintered magnets, coercivity, depend. on anisotropy field 7—112859
Nd-Fe-Co-B-Mo alloy, coercivity anisotropy field and thermomag. props. study 7—125445
Nd-Fe-CoB permanent mag. alloys, anisotropy, coercivity and hysteresis meas. 7—125446
$NdCo_5$, uniaxial permanent magnet, magnetostriction 7—138304
$Nd_2F_{14}B$ thin film mag. props. study 7—112894
$Nd_{15}Fe_{17}B$, magnetisation, effect of H_2 absorption 7—92459

magnetic anisotropy continued
$Nd_{15}Fe_{77}B_8$ permanent magnet, mag. anisotropy and rotational hysteresis energy 7−138220
$Nd_2Fe_{14}B$, anisotropy energy and approx. d band calcs. 7−125372
$Nd_2Fe_{14}B$ cpds. mag. anisotropy, effect of Ni and Mn substitution 7−132010
$Nd_2Fe_{14}B$, crystal field and exchange interactions 7−112782
$Nd_2Fe_{14}B$, magnetic anisotropy, easy cone 7−85281
$Nd_2Fe_{14}B$, magnetic anisotropy, cryst. elec. field model calcs. 7−125374
$Nd_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Nd_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Nd_2Fe_{14}B$ single cryst. first-order field-induced magnetisation transitions 7−125385
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
$Nd_2Fe_{14-x-y}Co_xAl_yB$, mag. props. substitution effects 7−138217
$Nd_2(Fe_{1-x}Co_x)_{14}B$ single crystals, magnetisation, mag. anisotropy 7−112760
$Nd_2Fe_{14-x}Co_xB$ cryst. struct., mag. anisotropy and Curie temp., Co substitution effects study 7−105913
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$, M=Sc-Mn, Co, Ni, permanent magnet cpds., mag. props. study 7−92422
$Nd_2(Fe_{1-x}Ru_x)_{14}B$, low temp. mag. behaviour, spin reorientation phenomena 7−125369
$Nd_2Fe_{14-x}Si_xB$, substituted system, mag. props. 7−105963
NdH_{2+x}, x=0-0.75, mag. props. 7−99417
$Nd_{2-x}M_xFe_{14}$ B-based system, (M=Ti,Hf), magnetisation, Curie temp. and anisotropy 7−138218
$Nd_{1.9}M_{0.1}Fe_{12}Co_2B$ (M=Ti, Hf), mag. props., material for permanent magnets 7−118830
$(Nd_{1-x}Pr_x)_2Fe_{14}B$, first-order mag. transition 7−99448
$Nd_{2-x}Tb_xFe_{14}B$, magnetocrystalline anisotropy 7−99438
Ni, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Ni thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
Ni-C multilayer sputtered films, mag. props. study 7−125509
Ni-Cr multilayered thin films, mag. props., dimensional effects study 7−125507
Ni-Zn-Co, polycrystalline ferrite, complex mag. initial permeability, temp. spectra local splitting 7−143847
$Ni_{80}Fe_{20}$ ferromag. double layers, spin wave modes in parallel and antiparallel magnetised states, light scatt. study 7−85270
$Ni_{0.28}Zn_{0.72}Fe_2O_4$, mag. transformations, thermal expansion 7−77277
OsF_6-graphite intercalation cpd., ESR props., anisotropy, 2D effects 7−85408
$(PbO\text{-}Fe_2O_3)_{100-x}$ $(La_2O_3)_x$ magnets, mag. and phys. props. 7−105966
Pd, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Pd/Co multilayers, mag. interface anisotropy 7−99520
Pd/Fe multilayers, mag. interface anisotropy 7−99520
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
PdNi, exchange splitting and spontaneous resistive anisotropy 7−131617
$Pr_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Pr_2Fe_{14}B$, magnetic anisotropy, cryst. elec. field model calcs. 7−125374
$Pr_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Pr_2Fe_{14-x-y}Co_xAl_yB$, mag. props. and cryst. struct. 7−138216
$Pr_2(Fe_{1-x}Co_x)_{14}B$, mag. anisotropy study 7−99439
$Pr_2Fe_{12-x}Mn_xCo_2B$, mag. props. Mn substitution effects 7−138219
PuSb correlated actinide system, mag. props., cryst. field splitting and resonant f-band scatt. calcs. 7−112254
$R_2Co_{14}B$ (R=La, Nd, Gd), single crystals, magnetisation, mag. anisotropy 7−112760
(rare earth)$_2Fe_{14}B$ magnetic props., 3d magnetism 7−70530
ScDy, anisotropic spin glasses, sp. ht. meas. 7−138240
ScEr, anisotropic spin glasses, sp. ht. meas. 7−138240
Sm-Co sputtered polycryst. films, mag. props. 7−112877
$SmCo_{5-x}Ni_x$ melt-spin and as-cast alloys mg. props. studies 7−125449
$SmFe_4B_4$, effective mag. fields, ^{57}Mossbauer spectra studies 7−92561
$SmNi_5$ single cryst., magnetisation and mag. anisotropy 7−138268
$SmRh_4B_4$ single crystals, anisotropic magnetic properties 7−125337
$SrFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$SrFe_{12}O_{19}$ permanent magnet, intrinsic coercivity, ang. depend. meas. 7−105957
$SrMn_2Fe_{16}O_{27}$ hexaferrite, mag. props., phase formation 7−138231
$Sr_2Zn_2Fe_{28}O_{46}$, hexagonal ferrite, mag. and Mossbauer study 7−112853
Tb-Co(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Tb-Fe-Co sputtered films, mag. and struct. props., influence of H_2 partial press. 7−132097
$TbAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
TbCo amorphous films, prep. mag. anisotropy, effects of sputtering conditions 7−132095
TbCo sputtered films, mag. and struct. characts., effects of Ar press. and substrate bias 7−132094
$Tb_{0.27}Dy_{0.73}Fe_{1.95}$ single cryst., anisotropic magnetostriction study 7−106001
TbFe amorphous sputtered films, remanence 7−143873
TbFe, evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
TbFeCo evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
$Tb_2Fe_{14-x}Co_xB$, magnetism 7−131998
$Tb_xNd_y(FeCo)_{1-x-y}$ anisotropy and magnetooptical props. for storage appls. 7−113155
$(TbY)_3(FeAl)_5O_{12}$ ferrimag. epilayers, Neel line kinks, optical microscopy obs. 7−70613
$Tm_{2-x}Dy_xFe_{14}B$, effect of Dy substitution on spin-reorientation temp. 7−143802
$Tm_2Fe_{14-x}Co_xB$, effect of Co substitution on spin-reorientation temp. 7−143802
UAsS single crysts. elec. resist. anisotropy temp. depend. meas 7−84895
UGaM (M=Co,Ir,Ni,Pt,Rh,Ru) mag. behaviour studies 7−77298
UP(As), elec. resist., mag. field effects, transitions and anisotropy 7−70336

magnetic anisotropy continued
UPt_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, cryst. elec. field effects, mag. props. 7−85260
U_3Sb_4 single crysts., Hall effect and high field magnetisation studies, microscopic spin model anal. 7−118514
$U_xTh_{1-x}Zn_{8.5}$ system, mag. anisotropy 7−112736
W-W triple bonds in cpds., diamagnetic anisotropy 7−129628
$(Y,Ca)_3(Fe,Ge)_5O_{12}$ thin garnet films, magnetostatic spin waves, cubic and uniaxial anisotropy 7−138203
Y-Gd-Fe amorphous sputtered films, mag. props. 7−143865
$(YBiEu)_3(FeGa)_5O_{12}$ magnetic bubble films with orthorhombic anisotropy, LPE growth 7−112911
$Y_{2.0}Ca_{1.0}Ge_{0.9}Fe_{4.1}O_{12.0}$ reduced garnet film, FMR spectra study 7−112890
YCo_3, electron spin resonance and magnetocrystalline anisotropy 7−99565
$Y_{1-x}Co_x$ amorphous films, Co local anisotropy, mag. suscept. meas. 7−99523
$Y_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Y_{1.8}Er_{0.2}Fe_{14}B$ anisotropy free energy, high field torque magnetometry meas. 7−132009
$Y_{3-x}Eu_xFe_{5-y}Ga_yO_{12}$ garnet thin films, growth-induced anisotropy 7−138296
Y_2Fe_{17}, Fe hyperfine field and magnetisation anisotropy, Mossbauer studies 7−138222
$Y_2Fe_{14}B$, anisotropy energy and approx. d band calcs. 7−125372
$Y_2Fe_{14-x}Co_xB$ cryst. struct., mag. anisotropy and Curie temp., Co substitution effects study 7−105913
$Y_2Fe_{14-x}Co(Ni)(Mn)(Cr)_xB$, 3d magnetic props., substitution effects study 7−85262
$Y_2(Fe_{1-x}T_x)_{14}B$, T=Al, Ti, Cr, Mn, Ni, alloys, magnetic and crystallographic props., comp. depend. study 7−125448
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
$(Y_{0.97}Hf_{0.03})Fe_2$, hyperfine interactions, influence of hydrogenation 7−99626
YIG bubble garnets, heavily ion-implanted, growth-induced anisotropy field 7−77389
YIG epitaxial ferrite film, inclined anisotropy axis, critical parameters in normal field 7−70609
YIG film, surface magnetostatic waves scatt. by anisotropy-induced acoustic waves 7−118792
YIG film, surface spin waves, cubic anisotropy effects 7−132092
YIG films with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7−99521
YIG: H_2^+ thin film, surface spin-wave modes photoinduced mag. anisotropy effect relax., FMR obs. 7−112897
YIG:Fe(Mn)(Ar), anisotropy effects of implanted ions, FMR 7−125370
YIG:Mn, cryst. growth from PbO/B_2O_3 based melts, mag. anisotropy, Mn^{3+} contrib. 7−144260
YIG:Si(Ge) magnetoanisotropic impurity centres study *(Russian)* 7−84768
$(YLuSmGd)_3$ $(FeGa)_5O_{12}$, bubble garnets, heavily ion-implanted, growth-induced anisotropy field 7−77389
$Y_{3-x}Sm_xFe_{5-y}Ga_yO_{12}$ garnet thin films, growth-induced anisotropy 7−138296
$(YSmTmCa)_3(FeGa)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
YTb_3, XY spin glass, rotation of anisotropy direction 7−112813
$Zn_2BaFe_{16}O_{27}$ hexaferrite, magnetostriction consts. and anisotropy energy temp. depend. study *(Russian)* 7−125525
$ZnFe_{12}O_{19}$, hexagonal ferrite single crystals, flux growth and mag. props. 7−125942
Zr-Fe/Tb-Fe compositionally modulated multilayered films, sputtered, mag. props. 7−99518

magnetic annealing
see also induced anisotropy (magnetic)
amorphous alloys, induced anisotropy, effect of rotating mag. field annealing *(Chinese)* 7−143784
ferrite powders, long-term memory, mag. field, temp. and annealing effects 7−112921
field annealed amorphous ribbons, magnetoelastic props., static and dynamic bifurcations study 7−106004
field-annealed magnetoelastic amorphous metal magnetometers, directional characts. 7−102463
galvinoxyl radical mixed crystals and hydrogalvinoxyl cpd., diamag.-paramag. phase transition, thermodynamic props. 7−138239
Ising model, order parameters, first and second neighbour magnetic interactions, structural interactions 7−138248
magnetoelastic strain gauge, ultrasensitive amorphous ribbons, operational characts. 7−102397
metallic glass, nonmagnetostrictive type, relax. kinetics, Cr influence 7−99475
metallic glass magnetostrictive transducers, prep. and props., fibre optic magnetic sensors appl. 7−106002
metallic glasses, induced anisotropy, rotating mag. field annealing effects 7−85282
Co amorphous alloys, magnetic props, effect of magneto-thermal treatment, magnetic field appl. *(French)* 7−99505
Co-Nb amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Si-B amorphous alloy ribbons, magnetostriction, induced anisotropy and annealing effects, comp. depend. 7−70540
Co-Ti amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Zr amorphous films, induced anisotropy, static field annealing effects 7−99528
CoCr thin film recording media, mag. anisotropy and struct. 7−125490
$(Co_{0.94-x}Fe_{0.06}Nb_x)_{78}Si_4B_{18}$ amorphous alloys, mag. props., influence of Nb content and heat treatment *(Korean)* 7−138856
Fe-Co-B amorphous alloy ribbons, magnetostriction, induced anisotropy and annealing effects, comp. depend. 7−70540
$Fe_{82}B_{18-x}C_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{80}B_{20-x}Si_x$ amorphous alloys, mag. props. and mag. annealing, effect of different Si contents *(Korean)* 7−132089
$Fe_{82}B_{18-x}Si_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{78}B_{16}Si_5C$, composite amorphous powder cores, prep. and mag. props. 7−132081
FeCoNi-based metallic glasses, induced anisotropy and magnetostriction temp. depend. 7−105912

magnetic annealing continued
$(Fe_{1-x}Nb_x)_{80}B_{16}Si_4$, amorphous alloy ribbons, mag. domain props. rel. to annealing and Nb content *(Korean)* 7−132070
$Fe_{40}Ni_{40}B_{20}$ amorphous thin films, coercive field, thermomagnetic annealing influence 7−138292
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7−132081
$Fe_{78}Si_{10}B_{12}$ glass, mag. annealing influence on shear modulus and internal friction, piezomag. props. 7−70622
$Fe_{78}Si_9B_{13}$ amorphous alloys, calorimetric, mag. and mech. props., influence of P 7−117829
FeTaCoB amorphous alloys, mag. props., thermal stability, wear and corrosion resist. meas. 7−92466
InSb-NiSb, anisotropic amorphous ribbon, eutectic composition, melt spinning technique 7−144359
Nd-Fe-B, sintered magnets, coercivity, thermal ageing effects 7−132083

magnetic bays *see geomagnetic variations*

magnetic birefringence *see magneto-optical effects*

magnetic bottles
see also magnetic mirrors
laser cooling and trapping atoms 7−110137

magnetic breakdown
conduction electrons, spin dynamics under mag. breakthrough conditions 7−143320

magnetic bubble memories
cylindrical films, domain boundary creep reduction 7−77388
Gd-Co amorphous films, alloyed, mag. props. *(Russian)* 7−125519
$(GdBi)_3(FeGa)_5O_{12}$ garnet film bubble memory material, mag. anisotropy props. study 7−105994

magnetic bubbles
ferrimagnetic garnet epilayers, stress-strain distrib. around implantation boundaries, elastic models, continuum approx. calcs. 7−124379
ferrite-garnet epitaxial films, Ne ion implanted, annealing, struct., mag. props. *(Russian)* 7−143883
garnet 7−132106
garnet films, ion implantation 7−92034
garnet LPE films, coercivity, domain structure and domain wall energy 7−132111
magnetostatic energy and demagnetising energy 7−112909
orthorhombic bubble films, domain wall dynamics, peak velocities 7−99532
Permalloy patterns propag. of mag. bubble, mag. field anal. *(Polish)* 7−70610
stripe domain stabilisation by parallel grooves 7−70616
stripe domain struct., effect of mag. field on phase transitions near Curie point 7−112908
uniaxial cylindrical mag. domain film, asymptotic solns. 7−70611
$(BiDySmLu)_3(FeAl)_5O_{12}$ and $(BiDySmLuGd)_3(FeGa)_5O_{12}$ bubble films, LPE growth in PbO-Bi_2O_3-MoO_3 melt 7−113452
$(BiSmLu)_3(FeSc)_5O_{12}$ 0.3-μm bubble material, LPE growth 7−125516
$(BiTm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
Fe garnet films, mag. bubbles, combined anisotropy, domain walls dynamical characts. 7−118844
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7−85304
$(YBiEu)_3(FeGa)_5O_{12}$ magnetic bubble films with orthorhombic anisotropy, LPE growth 7−112911
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
YIG bubble garnets, heavily ion-implanted, growth-induced anisotropy field 7−77389
$(YLuSmGd)_3$ $(FeGa)_5O_{12}$, bubble garnets, heavily ion-implanted, growth-induced anisotropy field 7−77389
$(YSm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble layers, magnetisation, plasma exposure effects 7−112881
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble films, plasma exposure effect on mag. props. 7−112882

magnetic circuits
pulse betatrons, losses in electromagnets of pulse magnetic field shapers *(Russian)* 7−96405

magnetic circular dichroism
benzene, electron transmission, EELS and MCD spectra 7−68385
benz[a]anthracene, dichroism spectra, fluorescence polarisation spectroscopy, transitions, NDO calcs., LCAO calcs., moment directions 7−141611
1,6:7,12-bismethano[14]annulene, excited states, UV-visible absorpt., fluoresc. and MCD spectra 7−82270
t-butyl iodide, A band region, MCD investig. 7−109970
chiral-achiral mol. coupling, induced circular dichroism in chiral partner 7−92644
diphthalocyanines of rare earths, substituted, magneto-optical study *(Chinese)* 7−129761
fluorobenzenes, electron transmission, EELS and MCD spectra 7−68385
intracavity spectroscopy and magneto-optic phenomena research 7−130187
iodoethane, A band region, MCD investig. 7−109970
local centres, spatial distrib. study by mag. circular dichroism 7−131574
methanethiol, IR vibr. spectra, MCD study 7−96759
methanol, IR vibr. spectra, MCD study 7−96759
porphyrins, free-base carbonyl, conform. effects, MCD, visible obs. 7−68384
quinones, MCD, PPP wave fns. and CNDO calcs. 7−90237
trifluoroiodoethene, A band region, MCD investig. 7−109970
uranyl compounds, magneto-optical props., condensed phase internal fields effects 7−113163
vibrational circular dichroism, velocity-depend. property surfaces 7−68383
Al, matrix isolated, MCD spectrosc. and magnetisation obs. 7−90035
$(BiSmGdLu)_3(FeAlSc)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
Cr complex, tris-(μ-hydroxo)-bis-[(1,4,7-trimethyl-1,4,7-triazacyclononane) Cr(III)] triperchlorate, exchange interactions, optical spectra, EHT calcs. 7−96548
Cr, matrix-enhanced forbidden transitions, moment anal. 7−103413
Cr, P_{in}−S transitions, matrix isolated absorpt. and MCD spectra, moment anal. 7−103421
InP, P_{in} antisite struct., determ. by optically detected ENDOR 7−125558

magnetic circular dichroism continued
Mo, polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
OCS, $^1\Sigma^+ \rightarrow {}^1\Delta$ transition, MCD spectra 7−129760
Sc, matrix isolated, electronic and mag. circular dichroism spectra 7−90036
Sc_2, matrix isolated, electronic and mag. circular dichroism spectra 7−90036
W, polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
$(YSmTmCa)_3(FeGa)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
ZnSe, Zn vacancy, ODMR-magnetic circular dichroism studies 7−98143

magnetic cooling
Ericsson-cycle mag. refrigerator, rot., thermodynamic simulation 7−134745
forced flow cooling with superfluid ^4He, investig. 7−67315
magnetic fluids, temperature sensitive, automatic cooling device 7−73358
nuclear demagnetisation, ^3He-^4He dilution refrigerator appl. 7−73354
Fe_3O_4 magnetite, elec. props., mag. field cooling effects 7−143464

magnetic cores
see also powder cores
eddy current flaw detector with rot. core in superimposed transducer 7−71448
SSC superferric magnets, critical props. meas. monitoring 7−129472
$Fe_{80.5}(B,Si,C)_{19.5}$ amorphous ribbon, effect of laser irradiation on 50 Hz core loss 7−85347
FeSi grain orientated sheets, stray field profile 7−105962

magnetic devices
see also ferrite devices; magnetic amplifiers; magnetic lenses; magnetic thin film devices; magnetostrictive devices
dental prostheses appl. 7−114562
field-annealed magnetoelastic amorphous metal magnetometers, directional characts. 7−102463
ISOLDE-type isotope separator, resolution improvement 7−134817
LLORIS isotope separator, 126° design, construction status report 7−134816
magnetic pulse compressor drivers using ferromagnetic metallic glasses for induction linac 7−81764
magnetoelastic strain gauge, ultrasensitive amorphous ribbons, operational characts. 7−102397
orientation system on satellites, motion of satellite with permanent magnet relative to centre of mass 7−120244
push-button controlled high-vacuum baffle valve, design and performance 7−80809
soft magnetic materials characts. investigation using magnetising devices 7−95623
suspension system, appl. to Earth mass determ. 7−127070

magnetic dipoles *see magnetic moments*

magnetic disaccommodation *see magnetic aftereffect*

magnetic disc storage
recording media, conf., Parma, Italy (Sept. 1986) 7−80148

magnetic domain walls
1D spin systems, non-universal crit. dynamical behavior 7−143828
amorphous ferromag. alloys, mag. permeability relax., dissipative type 7−118824
amorphous ribbons, domain wall size model 7−132053
antiferromagnetic semiconductor nonuniform structure, boundary states, chiral anomaly 7−125109
antiferromagnets, field-induced transitions, random field effects 7−77326
antiferromagnets, relativistic domain walls *(Russian)* 7−118822
antiferromagnets, spin waves localised at domain walls 7−77267
Bloch lines, dynamics, ferromagnet 7−132056
Bloch lines, enhancement of NMR 7−143914
Bloch lines, motion, self-similar solns. of Slonczewski eqns. *(Russian)* 7−105948
Bloch lines in a oscillating mag. field, drift *(German)* 7−132057
Bloch lines in ferromagnets, radiative damping of oscillations, excitation of magnons 7−143840
Bloch vertical line pair motion in stripe domain wall, num. simulation 7−138264
Bloch vertical lines, motion due to mag. bias field with coercivity present 7−85397
Bloch walls, motion in uniaxial materials, nonlinear dynamics and strange attractors 7−143837
collinear antiferromagnets, forced motion of domain boundaries *(Russian)* 7−99489
cylindrical films, domain boundary creep reduction 7−77388
domain boundaries in antiferromagnets, damping of flexural oscillations, calc. *(Russian)* 7−99488
ferrites, Bloch line domain wall mag. symm. classes 7−99493
ferromagnet, mag. domain wall eqn. of motion, magnetoelastic internal friction *(Chinese)* 7−99486
ferromagnet, weak, spin wave emission from domain wall 7−138153
ferromagnetic thin films, 2D symmetrical Bloch-type boundaries 7−105998
ferromagnetic-antiferromag. rough interfaces, random field model of exchange anisotropy 7−70584
ferromagnets, Bloch line domain wall mag. symm. classes 7−99493
film, 1D charged domain wall struct. 7−112910
garnet LPE films, coercivity, domain structure and domain wall energy 7−132111
hard domain boundary mobility, exchange relax. effects calcs. in ferromagnets and rare earth orthoferrites *(Russian)* 7−85349
helical magnets, domain wall motion 7−125440
icosohedral structs., mag. moments, Curie temp., anisotropy and domain walls 7−131996
imaging, TEM using Fresnel and Focault techniques 7−108707
Incoloy 904, magneto-acoustic and Barkhausen emission from domain-wall interactions with precipitates 7−112920
irreversible Barkhausen jump losses of 180° domain walls 7−92457
Ising model, 1D, disordered, critical dynamics 7−85328
Ising single spin-flip model, domain wall depinning, Monte Carlo simulation studies 7−143841
Jahn-Teller crystals, domain walls with competing magnetic structural ordering 7−118446
magnetic films perpendicular mag. recording conditions, wall-displacement model anal. 7−105996
magnetic fine structure anals., simultaneous obs. of domains and walls 7−125437

magnetic domain walls continued
magnetic thin films, domain wall velocity, giant unidirectional anisotropy 7−143884
metallic glasses, domain wall stabilisation, permeability disaccommodation, struct. relax. 7−132088
multipolar 180° Bloch walls, periodicity and surface flux closure estimation 7−125441
narrow wall width meas. using Fresnel mode Lorentz microscopy 7−95683
nonlinear dynamics of highly anisotropic spin-1 magnetic materials 7−132079
one dimensional, phase transitions, temp. depend., energy calcs. 7−143842
Permalloy films, Bloch lines, cross ties and taffy, Kerr effect studies 7−132108
polycrystalline ceramics, magnetisation processes, perpendicular stress effects study 7−106006
polytwin crystals, mag. domain struct. rel. to stack thickness *(Russian)* 7−112846
rare earth alloys, R-Fe-B, mag. domain struct., Lorentz microscopy 7−99490
roughening process of domain walls subject to quenched impurities 7−112847
semi-infinite cryst., high perpendicular anisotropy, domain wall motion, numerical model calcs. 7−118821
semiconductors, two-band, supersymmetric inhomogeneous structures, and nature of parity anomaly in (2+1) electrodynamics 7−92267
Sendust bulk ferromagnets, magnetisation-reversal waves in surface region, Kerr effect study 7−125463
soft magnetic materials, domain wall chaotic motion 7−132052
spin waves, transmission through domain walls 7−112778
steel, rolled, low-C, Barkhausen jumps, annealing temp. and magnetising freq. effects 7−105956
stripe domain stabilisation by parallel grooves 7−70616
translational magnetoelastic oscillations of a solitary domain wall 7−132119
vertical Bloch line dynamics, nonuniform elec. field effects calcs. *(Russian)* 7−99492
X-Y model, fully frustrated, domain wall induced X-Y disorder 7−92435
$(YEu)_3(FeGd)_5O_{12}$ ferrite-garnet epitaxial films, mobile domain boundaries, FMR study *(Russian)* 7−99535
$BaFe_{12}O_{19}$ anisotropic ferrite, rotational hysteresis and torque curve meas. 7−125461
Bi-Ga garnet films, domain wall oscills., magneto-optical anal. 7−132110
$(BiTm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
$CdCr_2Se_4$ ferromag. semicond., mag. heterogeneity, NMR spin echo studies 7−112754
$CdCr_2Se_4$, pure and In doped spinel, NMR of innerdomain ^{53}Cr nuclei *(Russian)* 7−138342
Co-Cr sputtered film perpendicular recording media, magnetisation reversal mechanisms 7−105993
Co-P films, amorphous, stabilisation of stripe domain struct. *(Russian)* 7−105989
CoCr sputtered films, wall energy and exchange stiffness 7−99534
$(Co_{93}Fe_7)_{75-x}Mo_xB_{25}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Co_xNb_yTi_z$-SiO_2 double layered mag. films, domain wall structs. 7−99529
CoNi mag. thin film, hysteretic phenomena 7−99504
Dy_2Al_3 single crysts., low temp. domain struct. meas. and wall energy calcs. 7−70581
Dy_3Al_2 single cryst., domain wall energy 7−132048
$Dy_2Fe_{14}B$, domain wall determ., powder pattern method 7−138262
$DyFeO_3$, interphase domain walls, dynamic props., field depend. 7−143838
$EuLiH_3$, paramag. and ferromag. states, PMR spectra 7−99585
Fe garnet epitaxial film, domain-wall oscills. in low-amplitude mag. fields 7−85396
Fe garnet films, mag. bubbles, combined anisotropy, domain walls dynamical characts. 7−118844
Fe garnet films, magnetostatic rigidity of domain walls and coercive force 7−143879
Fe imperfect whisker, pinning effect on domain struct. 7−132055
Fe whiskers, Neel regions in 180° Bloch walls 7−138267
Fe-Nd-B permanent magnets, mag. domains, high volt. Lorentz electron microscopy obs. 7−132082
Fe-Ni and Fe-Ni-Gd thin films, Lorentz microscopy study, mag. props. 7−105997
Fe-Si (3 wt.%) alloy, (110) surface deviation from [001] direction influence on thickness depend. of domain widths 7−99491
$Fe_{80-x}B_x$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{81}B_{13.5}Si_{3.5}C$ amorphous ferromag. ribbons, mag. domains, dynamical obs. 7−125515
$Fe_5Co_{70}Si_{15}B_{10}$ amorphous films, pulse magnetisation properties *(Russian)* 7−143864
$Fe_{40}Ni_{38}MNo_4B_{18}$ Metglas, domain walls, wall mobility, coercivity and initial permeability 7−132049
$Fe_{80-x}Ni(Mo)_xB_{20}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
FeNiPB metallic glass ribbons, domain wall surface energy, complex impedance meas. 7−118820
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, domain wall motion reproducibility 7−132054
$(Fe_xNi_{1-x})_{80}(P_yB_{1-y})_{20}$, ferromag. glassy ribbons, small angle neutron scatt., domain wall struct. 7−99414
$Fe_{100-2x-y}Tb_xLa_xB_y$ amorphous alloys, domain struct. and anisotropy studies 7−99494
GdFe amorphous thin films for perp. recording, magnetooptic study 7−92477
^3He, u.u.d.d. phase, magnetic domain wall structure and spin wave scattering 7−70026
$MnFe_2O_4$, domain walls, subharmonic nuclear spin echo 7−132162
Nd-Fe-B sintered magnets, mag. viscosity 7−131997
NdDyFeBNb sintered magnets, microstruct., precipitation and coercivity, electron microscopy studies 7−69912
NdFeB sintered and melt-spun magnets, coercive field studies 7−118826
$Nd_2Fe_{14}B$ single cryst., domain width, cryst. thickness depend. 7−138263
Ni, conducting ferromagnet, magnetisation reversal, neutron depolarisation study 7−99496
Ni, magnetic props., dislocation effects 7−125438

magnetic domain walls continued
Ni-Zn-Co, polycrystalline ferrite, complex mag. initial permeability, temp. spectra local splitting 7−143847
NiCoP single layer, flat lozenge-type domain dynamics 7−132051
$Pr_2Fe_{12-x}Mn_xCo_2B$, mag. props. Mn substitution effects 7−138219
$R_2Fe_{14}B$ (R=Pr, Nd, Gd, Dy) domain struct., domain wall energy 7−118818
Si-Fe single cryst., domain struct., uniaxial stretching effects 7−138266
$SmCo_{5-x}Ni_x$ melt-spin and as-cast alloys mg. props. studies 7−125449
$SrFe_{12}O_{19}$ 7−125461
$Tb_{0.27}Dy_{0.73}Fe_{1.95}$ single cryst., anisotropic magnetostriction study 7−106001
TbFe amorphous thin films for perp. recording, magnetooptic study 7−92477
$(TbY)_3(FeAl)_5O_{12}$ ferrimag. epilayers, Neel line kinks, optical microscopy obs. 7−70613
UBe_{13}, heavy fermion superconductivity and magnetic props. 7−70472
Y garnet ferrite wafers, elementary excitations in Bloch wall 7−143844
Y-Fe-B, mag. domain struct., Lorentz microscopy 7−99490
$(YBiEu)_3(FeGa)_5O_{12}$ magnetic bubble films with orthorhombic anisotropy, LPE growth 7−112911
$Y_2Fe_{14}B$ single crysts., domain struct., Kerr magnetooptic study 7−132047
YIG, acoustic emission, domain walls and hysteresis 7−70583
YIG, domain struct., photoinduced mag. inhomogeneities 7−112848
YIG domain walls, NMR relax., defect influence 7−112988
YIG, dynamic domain struct. under AC fields 7−92456
YIG films, flexural domain wall modes, field depend. 7−132109
YIG slab, domain wall generation in high-amplitude AD field, self-oscill. regime 7−118823
$(YSm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113

magnetic domains
see also magnetic bubbles; magnetic domain walls
antiferromagnets, intermediate state, magnetoelastic interaction effect 7−99538
Bloch vertical lines, motion due to mag. bias field with coercivity present 7−85397
cylindrical magnetic domains dynamics, using rotary gradient magnetic field 7−134818
dynamics, optical imaging using laser magneto-optic microscope 7−108655
ferromagnet, surface domain struct. meas. using relativistic electrons emission spectra 7−85350
ferromagnetic thin films, composite domain structs., self-consistent theory 7−143881
ferromagnetic thin films, domain struct., self-consistent theory anal. 7−132107
ferromagnets, domains of rheological fields 7−77343
garnet layers, mag. domains, irreversible topology evolution 7−132106
grating for light switches, spatial filter techniques 7−136488
imaging, electron holography appl. 7−108705
imaging using SEM with electron spin polarisation anal. 7−108706
magnetic fine structure anals., simultaneous obs. of domains and walls 7−125437
magneto-optical Kerr effect imaging 7−108657
metallic glass, magnetostrictive props., fibre optic magnetometer appl., bonding agent effects 7−106000
mixed spin glass Ising systems, phase diagrams and domains 7−132041
orthoferrites, ground state and domain struct. near smooth spin reorientation 7−132050
Permalloy soft ferromagnetic films, irreversible magnetisation transforms 7−105992
polytwin crystals, mag. domain struct. rel. to stack thickness *(Russian)* 7−112846
polytwin ferromag. particles, single-domain struct. *(Russian)* 7−143839
rare earth alloys, R-Fe-B, mag. domain struct., Lorentz microscopy 7−99490
rare earth-transition metal amorphous alloys, thermomagnetic switching parameters, time and radial depend. calcs. 7−118801
single domain with uniaxial anisotropy, theoretical torque curve anal. *(Spanish)* 7−143848
single-domain triaxial particle magnetisation analysis *(Russian)* 7−143851
soft magnetic materials, meas. and anal. techniques *(German)* 7−73379
stripe domain struct., effect of mag. field on phase transitions near Curie point 7−112908
stripe mag. domains, analogy to lyotropic liq. cryst. 7−143882
$(BiTm)_3(FeGa)_5O_{12}$ film, stripe domain struct. resonance vibrations obs. 7−143880
$CdCr_2Se_4$ ferromag. semicond., mag. heterogeneity, NMR spin echo studies 7−112754
$CdCr_2Se_4$ mag. semicond., impurity absorption spectra 7−106229
Co, ferromagnet, fine mag. struct., spectral diffusion *(Russian)* 7−105951
Co-Cr films, mag. domains, neutron depolarisation study 7−85395
Co-Cr films, reversed domain generation 7−99531
Co-Cr sputtered films, surface and vol. mag. hysteresis 7−92478
Co-Cr sputtered layers, domain struct. and mag. reversals 7−105991
Co-Er, metastable phases, icosahedral symmetry and magnetism 7−131037
Co-Si sputtered alloy film, struct. and mag. props., Si content depend. 7−112916
Co-Ti amorphous thin films, mag. anisotropy, domain struct. 7−112914
CoNi thin film hysteresis loops and domain structs., 3D calcs. 7−105995
CoPt polytwin systems, $L1_0$ type ordering, mag. domain structs., Kerr effect study *(Russian)* 7−105949
$Co_{86}Ti_{14}$, soft ferromag. amorphous thin films, with induced uniaxial anisotropy, nucl. signal enhancement 7−92549
$Dy_2Fe_{14}B$, domain wall determ., powder pattern method 7−138262
Fe:Co(Mn)(Cu), ferromagnet, fine mag. struct., spectral diffusion *(Russian)* 7−105951
Fe-Cr-P-C amorphous ribbons, magnetic texture, curvature and structural relax. during annealing 7−70582
Fe-Nd-B permanent magnets, mag. domains, high volt. Lorentz electron microscopy obs. 7−132082
Fe-Pd, mag. domain struct. rel. to FCT martensite variants 7−85348
Fe-Si, domain struct. and mag. props., thermomechanomagnetic treatment effects *(Russian)* 7−138265
Fe-Si (3 wt.%) alloy, (110) surface deviation from [001] direction influence on thickness depend. of domain widths 7−99491
Fe-Si (3 wt.%) alloy, domain struct., cryst. orientation effect 7−143843

magnetic domains continued
Fe-Si (3 wt.%) electrical steel, electromag. losses, influence of multilayer nature of domain struct. *(Russian)* 7—105950
Fe-Si crystals, domain struct. and EM losses, thickness effects *(Russian)* 7—77344
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props. 7—99530
Fe-SiO_2 granular solids, mag. props. 7—125476
$Fe_{80.5}(B,Si,C)_{19.5}$ amorphous ribbon, effect of laser irradiation on 50 Hz core loss 7—85347
$Fe_{80}B_{20}$ amorphous ultrafine metallic particles, sputtering deposition and mag. props. 7—85381
$Fe_{77.5}B_{13}Si_{9.5}$, amorphous, for choke and inductor applications, microstructure and mag. props. 7—86234
$(Fe_{1-x}Co_x)$-Si, B amorphous wires, Barkhausen discontinuities 7—125460
$(Fe_{1-x}Nb_x)_{80}B_{16}Si_4$, amorphous alloy ribbons, mag. domain props. rel. to annealing and Nb content *(Korean)* 7—132070
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous ribbon, ferromag., domain struct., neutron depolarisation studies 7—118819
FePt polytwin crysts., mag. domain struct. and magnetisation reversal *(Russian)* 7—99487
FePt polytwin systems, $L1_0$ type ordering, mag. domain structs., Kerr effect study *(Russian)* 7—105949
^{3}He superfluid, two-domain precessing magnetic struct. studies 7—105172
K, longitudinal magnetoresist., domain struct. effects calcs. 7—124967
Mn-Ga thin films, amorphous, crystn. of selected areas, domain image 7—83755
MnBi films, preparation, magnetic and magneto-optic props. 7—99533
MnZn ferrite, mag. spectra, temp. depend. of mag. permeability *(Russian)* 7—112857
NdFeB magnet, domain struct. and magnetisation temp. depend. meas. 7—125439
$Nd_{15}Fe_{77}B_8$:Dy_2O_3 magnets, mag. surface hardening, microstructural evidence 7—125467
$Nd_2Fe_{14}B$ single cryst., domain width, cryst. thickness depend. 7—138263
Ni thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7—112915
Ni-Co-Fe alloys, films, motion of tips of domains *(Russian)* 7—105990
NiCoP single layer, flat lozenge-type domain dynamics 7—132051
$NiFe_2O_4$ polycryst., ultrasound mag. birefringence and dichroism obs. 7—99547
Si-Fe single cryst., domain struct., uniaxial stretching effects 7—138266
$Tb_{0.27}Dy_{0.73}Fe_2$ polycryst., domain struct. in region of optimum magnetoelastic props. 7—105952
TbFe amorphous films, laser-written mag. domains, Lorentz microscopy obs. 7—125517
TbFe, amorphous films, magnetisation reversal rel. to microstruct. 7—132114
USe single domain ferromagnet, spin-wave polarisation, inelastic neutron scatt. study 7—125349
Y-Fe-B, mag. domain struct., Lorentz microscopy 7—99490
$Y_3Ca_3Fe_5Ge_5O_{12}$ garnet films, magneto-optical model conversion 7—138432
$(YGdBi)_3(FeGdAl)_5O_{12}$ garnet film, band domain struct., laser radiation diffr. 7—132112
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7—70612
YIG, domain struct., photoinduced mag. inhomogeneities 7—112848
YIG, dynamic domain struct. under AC fields 7—92456
$Y_{2.6}Sm_{0.4}Fe_{3.9}Ga_{1.1}O_{12}$ epitaxial films, submicron domain struct. obs. by optical microscopy 7—70615

magnetic double refraction *see magneto-optical effects*

magnetic double resonance
see also CIDEP; double nuclear magnetic resonance; dynamic nuclear polarisation; ELDOR; ENDOR; microwave-optical double resonance; nuclear polarisation
1-chloro-2-butyne, barrier to internal rotation, microwave spectrum 7—122509
1,2-dichloro-2-fluoroethanone, enantiomers and racemic mixture, IR-RF double reson. spectra 7—90230
methane-d_4, centrifugal distortion const., rot. IR-RF double reson. 7—90229
microwave Fourier transform technique using double resonance modulation 7—90232
semiconductors, optically induced nuclear magnetic resonance 7—99613
KOH, nucl. quadrupole struct., RF-microwave double reson., Stark modulated 7—135979
Na atomic beams, Autler-Townes effect in optical pumping expt. 7—103433

magnetic drum storage *see magnetic storage*

magnetic epitaxial layers
anisotropic film on ferromagnetic substrate, magnetic polaritons 7—125511
engineering magnetic materials on the atomic scale 7—118294
ferrimagnetic garnet epilayers, stress-strain distrib. around implantation boundaries, elastic models, continuum approx. calcs. 7—124379
ferrite-garnet epitaxial films, Ne ion implanted, annealing, struct., mag. props. *(Russian)* 7—143883
garnet buried magneto-optic channel waveguides, LPE growth 7—138693
garnet films, (100) and (110), H_2^+ implanted, mag. anisotropy 7—112880
garnet LPE films, coercivity, domain structure and domain wall energy 7—132111
ultra thin film interface probing on mag. substrate using FMR at 73.55 GHz 7—77407
$(YEu)_3(FeGd)_5O_{12}$ ferrite-garnet epitaxial films, mobile domain boundaries, FMR study *(Russian)* 7—99535
Ag(111)-Fe(110) epitaxial superlattices, growth and examination 7—113032
$(BiDy)_3Fe_5O_{12}$ garnet epitaxial films, Faraday rotation temp. depend. study 7—105975
$(BiDySmLu)_3(FeAl)_5O_{12}$ and $(BiDySmLuGd)_3(FeGa)_5O_{12}$ bubble films, LPE growth in PbO-Bi_2O_3-MoO_3 melt 7—113452
$(BiGdCa)_3(FeAlGa)O_{12}$ films, absorpt. loss, reducing treatment effects study 7—106284
$(BiGd)_3(FeAlGa)_5O_{12}$, pure and Ca doped epitaxial garnet film as 0.8 micron range optical isolator 7—103937
$(BiGd)_3Fe_5O_{12}$ epitaxial film, magneto-optical props., comp. depend. study 7—106144
$(BiLuGd)_3Fe_5O_{12}$, thick-film LPE growth, magneto-optical props., optical isolator appls. 7—86061
$(BiSmLu)_3(FeSc)_5O_{12}$ 0.3-μm bubble material, LPE growth 7—125516

magnetic epitaxial layers continued
Co, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7—99526
Co thin epitaxial FCC films on Cu, ferromagnetism obs. by spin-polarised photoemission 7—77385
Co-γ-Fe_2O_3 epitaxial layer on $Zn_{0.2}Fe_{2.8}O_4$, particles, coercivity meas. 7—125486
$CoFe_2O_4$ ferrite epitaxial layer on $Zn_{0.2}Fe_{2.8}O_4$ particles, mag. props. 7—125482
Dy-Y multilayers, occurrence of long-range helical spin ordering 7—125320
Dy-Y superlattices, long-range helimagnetic order 7—125321
Dy-Y superlattices, mag. and struct. charact. 7—125506
Dy-Y superlattices, mag. struct., neutron diffr. study 7—99409
$(EuBi)_3Fe_5O_{12}$ (110) films, LPE growth, orthorhombic mag. anisotropy 7—112883
$(EuLu)_3(FeGa)_5O_{12}$:Ca films, induced mag. anisotropy 7—85383
EuS (111) on Si (111), isotropic Heisenberg ferromag., surface magnetisation, critical behaviour 7—105984
Fe epitaxial (110) film near MnF_2 interface, magnetic surface anomalies persistence obs. 7—132100
Fe epitaxial FCC film on Cu (001), magnetism, spin polarised photoelectron emission 7—105985
Fe epitaxial films, mag. props. 7—118834
Fe, epitaxial films, spin-wave resonance 7—125543
Fe, epitaxial films on GaAs (100), growth by ion beam sputtering 7—125489
α-Fe ferromagnetic films, MBE growth on ZnSe (001), (110) 7—76686
Fe, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7—99526
Fe film across Cr interlayers, evidence for antiferromag. coupling 7—118839
Fe garnet epitaxial film, domain-wall oscills. in low-amplitude mag. fields 7—85396
Fe garnet epitaxial films integration on GGG substrate by laser etching 7—106641
Fe MBE films on ZnSe epilayers, mag. props. 7—118838
Fe on Ag (001), mag. and electronic props., spin-polarised photoemission study 7—112913
Fe on W, spin-resolved photoemission obs. 7—112889
Fe, single-crystal films, MBE growth on GaAs(100) 7—113393
Fe ultrathin layers on W(110), Damon-Eshbach surface spin wave mode freq., surface anisotropy effects 7—132099
$Gd_xY_{1-x}N$ dilute system, mag., elec. and optical behaviour 7—125503
$Lu_{3-x}Bi_xFe_{5-y-z}Mg_yPt_zO_{12-z}$ films, optical absorpt. reduction by annealing 7—106283
$MnFe_2O_4$ films, MOCVD, saturation magnetisation, coercive force *(Japanese)* 7—113421
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7—76681
Ni-Mo magnetic superlattice prep. and structural props. study 7—124726
$(TbY)_3(FeAl)_5O_{12}$ ferrimag. epilayers, Neel line kinks, optical microscopy obs. 7—70613
$(TbY)_3Fe_5O_{12}$ LPE films for optical mag. field sensors 7—80823
$(YBiEu)_3(FeGa)_5O_{12}$ magnetic bubble films with orthorhombic anisotropy, LPE growth 7—112911
$Y_3Fe_{5-x}Mn_xO_5$ films, X-ray microanal., Monte Carlo modelling *(Czech)* 7—98728
$(YGdBi)_3(FeGa)_5O_{12}$ garnet LPE film growth and elemental distrib. study 7—105331
YIG epilayers, magnetostatic soliton propag. at microwave freq., power response meas. 7—138299
YIG epitaxial ferrite film, inclined anisotropy axis, critical parameters in normal field 7—70609
YIG films, LPE growth, ionic approach 7—70142
YIG films, optimisation of flux composition in LPE growth 7—138691
YIG, ion-implanted periodic arrays, magnetostatic forward volume waves, reflection 7—143776
YIG LPE film, magnetostatic forward volume waves, optical probe meas. 7—143852
YIG multilayers, LPE, single mode magneto-optical waveguide props. 7—110562
YIG thin film, ferromag. reson. linewidth, ESR spectrometer meas. study 7—118863
YIG:Bi epitaxial films, growth and mag. props. rel. to V_2O_5 flux addition 7—100130
$(YNd)_3(CoGeFe)_5O_{12}$ epitaxial magnetic films, optical props. comp. depend. study 7—106285
$Y_{2.6}Sm_{0.4}Fe_{3.9}Ga_{1.1}O_{12}$ epitaxial films, submicron domain struct. obs. by optical microscopy 7—70615

magnetic field effects
see also biomagnetism; galvanomagnetic effects; magnetic levitation; magnetic properties of substances; magnetic separation; magneto-optical effects; magnetoacoustic effects; magnetocaloric effects; magnetoelectric effects; magnetohydrodynamics; magnetomechanical effects; particle optics; Scott effect; Senftleben-Beenakker effect; thermal magnetoresistance; thermomagnetic treatment
alkali metal atoms, Rydberg spectra in perpendicular elec. and mag. fields 7—122391
alkali metal dimers, photodissoc., mag. field effects, at. mag. sublevel population 7—122630
animal skin temp., influence of thermal convection of air under mag. fields 7—78785
arcs, helical mag. instability, linear time depend. perturbation theory 7—124018
arcs, helical mag. instability study 7—124019
atomic Rydberg electrons, saddle-point trapping in crossed elec. and mag. fields 7—96575
atoms, relax. characts. in reson. radiation field, mag. field effect 7—122669
Bacillus subtilis, low-level mag.-field-induced growth modification 7—126901
bacteria, agglutination rel. to cosmic ray neutrons, cosmo-helio-geophysical factors 7—107004
blood trace element content, changes under the influence of a constant mag. field 7—78955
bone, linear and radial growth rel. to mag. field exposure, rat obs. 7—78953
cellular ion transport, effects of low-amplitude pulsed mag. fields 7—93796

magnetic field effects continued
chargeless spinning particle in periodic mag. field, quantum mechanics 7−95143
composites reworking automation using permanent mag. field 7−144323
crystal growth, applied mag. and elec. field effects 7−100049
cyclohexane-benzene mixtures, radioluminesc., mag. field effect 7−90248
cylindrical astronomical maser models, polarisation due to mag. fields 7−127706
cylindrical shock waves propag., in self-gravitating gas, effect of azimuthal mag. field 7−127694
Czochralski and magnetic Czochralski growth, effective distrib. coeff., crucible rotation influence 7−98013
Czochralski bulk flow under mag. field, simulation 7−138630
Czochralski crystal puller with axial mag. field, melt motion study 7−144264
trans-3,3-dimethyl-1-(2-naphthyl)-1-butene, photoisomerisation in presence of electron acceptors, mag. field effects 7−93265
α-(4-dimethylaminophenyl)-ω-(9-phenanthryl) alkanes, exciplex fluoresc., mag. field effects 7−90245
diphenyl sulphide-paraterphenyl radical ion pair recomb. fluoresc. kinetics, quantum beats induction 7−100521
dislocation dynamics in isotropic paramagnetic electrically conducting solid in large magnetic field 7−91582
disordered metals, magnetic field induced metal-insulator transition 7−143351
disordered system, noninteracting electron diffusion, weak magnetic field effects, soft modes 7−137861
electric arc motion through number of materials in transverse mag. field 7−124033
electron beam instability in longit. mag. field *(German)* 7−135699
electron beam propag. in plasma filled waveguide 7−83499
electron gas, 2D, density of states in perpendicular mag. field 7−131519
electron gas, two-dimensional, density of states between Landau levels 7−131566
electron solids, 2D, ground state energy in high mag. fields 7−131509
emulsion, magnetic field effect on maximum shear stress 7−86682
exciton-impurity states splitting in weak mag. field *(Russian)* 7−84693
FEL based on stimulated Raman scatt., axial magnetic field effect *(Chinese)* 7−130131
FEL in Compton regime, XUV harmonic enhancement by magnetic fields 7−130138
Fermi liquids in DC magnetic fields, field-transverse spin response 7−111994
ferromagnetic thermoseed materials for tumor hyperthermia 7−107189
fluidised beds, biological, characts. in mag. fields 7−107318
fluidised beds, thermal behaviour, mag. stabilisation effect 7−123739
fusion reaction rates, mag. field effects 7−122073
fusion reaction rates, mag. field effects 7−122074
geodetic levelling, empirical calibration of Zeiss Ni-1 level instruments for mag. errors 7−94060
hereditary bodies, electrically conducting, cyclic action in mag. field, mechanicothermoelectromagnetic processes 7−100264
ion lasing intensity fluctuations in magnetic field due to dynamic mode competition 7−141842
ion-acoustic solitons, propag. into weak localised transverse mag. field 7−123886
ion-acoustic solitons, propag. into weak localized longit. mag. field 7−123887
ketones, cyclic aliphatic, photolysis, biradical reactions, CIDNP field depend. 7−68343
Lamb's problem in viscoelastic solid, effects of gravity, thermal and mag. fields 7−110813
laser harmonics, external field, generation by electron beam in multicomponent undulator with axial magnetic field *(German)* 7−130256
lipid tubules, orientation by a mag. field 7−126902
lysozyme, deuterated matrix, 1 H clusters, dynamic nuclear polarisation, NMR anal. 7−79152
magnetotail lobe (200 to 238 Re) characts. during quiet solar wind conditions 7−88042
methane, Knudsen flow, mag. field effects 7−104309
molecular rotation alignment parameters, laser-induced fluoresc., saturation effects 7−96761
morphine-induced analgesia in mice, attenuation by exposure to NMR imaging 7−87086
multinuclear radical pairs, CIDNP effects in low mag. fields, semiclassical approx. 7−90194
nematic liquid crystal systems with positive and negative mag. susceptibility anisotropies, zero-field NMR 7−91428
neutral bound excitons in a high magnetic field, 7−137805
N-(w-(p-nitrophenoxy)alkyl)anilines, photochemistry, mag. field effects, hyperfine coupling 7−78517
pendulums, orbit precessions due to mag. interactions 7−108080
phenacyl phenyl sulphone in micellar soln., photodecomposition, mag. field effects 7−113958
plasma deposition and etching in mag. fields 7−100118
positive ions in strong mag. field, Thomas-Fermi eqn. soln. 7−103394
proton beam, edge radiation due to edge fields of synchrotron dipole magnets 7−68536
pulsed vacuum arc, multi-cathode-spot, peak temp. and energy flux distrib. 7−69525
pyrimidine, supersonic jet, mag. field effects on fluoresc. polarisation 7−90243
quasi 1D conductors, magnetic field-induced phase transitions 7−84708
radical pair recombination in viscous liqs., CIDEP amplitude, mag. field and viscosity effects study 7−68365
relativistic particle beams, curvature instability in strong mag. field 7−136186
semiconductors, high magnetic field investigations *(German)* 7−125119
semiconductors, Wigner condensation, mag. field induced *(German)* 7−124891
SIS finite layered structures, interface excitations, appl. mag. field effect 7−99220
sodium salicylate, luminesc., VUV, X-ray and β particle excited, time depend. 7−113262
steel, austenitic, heating induced martensitic transform. under mag. field *(Russian)* 7−113550
suspension, dipolar axisymmetric Brownian particles, Newtonian solvent, rheology, external field effects 7−114010
paraterphenyl in squalane solns., ion recombination luminesc. excited by 15 to 150 eV 7−77615

magnetic field effects continued
thymidine kinase in mouse bone marrow cells, in vivo enzyme control by a mag. field 7−133359
$(TMTSF)_2ClO_4$, mag. field induced SDW transitions, DTA study 7−92069
transcriptional patterns in X chromosome of Sciara coprophila following exposure to mag. fields 7−78947
(2,4,6-trimethylbenzoyl)diphenylphosphine oxide, micellar soln., photodecomp. in mag. field 7−129814
triplet intermediates, spin-orbit coupling, mag. field effects 7−109951
vacuum arc subject to axial magnetic field, current distrib. and mag. press. profile 7−69527
vacuum polarisation by Coulomb field and strong mag. field, Uehling's correction 7−96513
vacuum polarization by Coulomb centre and magnetic field, Coulomb's law modification 7−121801
α-(xanthene-2-carbonyloxy)-ω-(xanthene-2-carbonyloxy)alkanes, intramol. H abstraction, mag. field effects 7−113878
Al alloys, controlled solidification, effect of magnetically damped convection 7−77787
Al-Cu (2 wt.%), static mag. field, influence on cast structs., dendritic cell parameter *(Russian)* 7−105352
CO, Knudsen flow, mag. field effects 7−104309
CS_2, V^1B_2 state, fluoresc., mag. field effects 7−96766
CdS single crystal, deformed, photomagnetodielectric effect, loss angle meas. 7−85533
Cs_2, optically excited levels, mag. field effects, reson. fluoresc. study 7−129772
Fe-base alloys, martensitic transformation in a mag. field, onset temp. *(Russian)* 7−138743
GaAs, conduction electrons at high magnetic fields *(German)* 7−124863
GaAs, domain instability, effect of transverse mag. field 7−112342
GaAs, LEC crystal growth, magnetic field effect on residual impurity concentration 7−138641
GaAs-AlAs MQW, Landau-level broadening, hole-phonon interactions calcs. 7−125096
$Ga_{1-x}In_xAs$ semi-insulating single crysts., mag. field applied LEC growth and props. 7−125959
H, ground state, dipole polarisabilities in mag. fields 7−135876
H, magnetised, highly excited, quantum dynamics 7−141481
H, periodic orbits, Liapunov exponent calculation 7−141442
H, resonant states in mag. field, R-matrix method study 7−135863
H_2^+, ground state, vibr. and rot. props. in strong mag. field. 7−129684
H_2^+, in arbitrary mag. field, pot. energies of first few electronic states, wave functions anal. 7−122390
$He^{2+}+H$, asymmetric charge exchange in a strong static magnetic field 7−82338
^3He, superfluid A-phase, vortex states obs. by use of negative ions 7−76526
Hg arc plasma, triplet lines, intensity current and mag. field depend., visible spectra 7−137126
$In_{1-x}Ga_xAs_yP_{1-y}$, electronic heat capacity, oscillatory mag. field depend. 7−143804
K plasma, magnetic field effect on heat transfer, expt. study *(Russian)* 7−97708
NaCl, dislocation motion in static mag. fields 7−137627
Ne, positive column, ionisation waves, mode transition in nonuniform mag. field 7−75898
Ne, time depend. positron behaviour simulation 7−96881
Ni, fatigue fracture induced by ultrasound *(Russian)* 7−126224
PFO_3^{2-}, ^{19}F and ^{31}P NMR, transverse nucl. spin relax. 7−109945
Pb-Sn alloys, static mag. field, influence on cast structs., dendritic cell parameter *(Russian)* 7−105352
$Pb_{1-x-y}Mn_xSn_ySe$, semiconductor laser diodes, g-factor, compositional depend. 7−70172
Pd-Cr-Os/Cu-Fe thermocouple, magnetic field effect on thermo EMF 7−134737
Si, mag. Czochralski growth, O transport 7−86004
Si melt, flow asymm. and temp. distrib., 3D simulation of Czochralski bulk flow in mag. field 7−98012
SiH_4-Ar glow discharge, SiH radical profile control 7−97822
Sn alloys, controlled solidification, effect of magnetically damped convection 7−77787
$Tb_xGd_{1-x}VO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
$TmPO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
UPt_3, supercond., transverse sound in mag. field 7−99335
Xe, Rydberg atoms, time domain effects, UV spectrosc. 7−141538
Zn films, electrodeposition, dendrite growth inhibition by mag. field. 7−71096

magnetic field measurement
see also field plotting; fluxmeters; magnetometers
amorphous metal DC magnetometer, magnetoelastic, stress-relieved 7−67351
biomedical applications, EM field meas. 7−107186
circular current loop, mag. field meas. 7−80254
digital teslameter, battery powered 7−67352
direction of magnetic lines of force meas. instrument 7−121164
Earth's magnetic field meas., use of electronic integrator 7−80267
fibre optic, magnetic probe, RF, phase-sensitive using laser diode 7−123226
fibre optic magnetic field sensors, ultra sensitive 7−123272
fibre-optic magnetic sensor utilising metal-coated fibre 7−136546
flux-gate sensors and magnetometers, metrological props. *(Polish)* 7−108587
Giotto magnetometer expt. 7−139883
heart and brain, magnetic field meas. and anal. 7−100934
HF field, tripole antenna received, meas. and anal. 7−107636
inductive detector for cosmic magnetic monopoles, using RF SQUID sensors 7−134142
low frequency field cycling experiment for relaxation dispersion measurements 7−112986
magnetic orientation of respirable asbestos fibres 7−114157
magnetometers, sensor capture band during excitation of free nucl. precession by Hahn's method *(Russian)* 7−79628
magnetometers using amorphous wire cores, appl. to mechanocardiographs 7−80832
magnetoresistive thin film sensor, dual-coupled self-biased, micromag. anal. 7−102462

magnetic field measurement continued
Maryland spheromak diagnostics, broadband calibration for magnetic probes 7—123990
metal, normal, thermally fluctuating mag. field meas. at low temp. using SQUID magnetometer 7—73383
Mobley magnet, field meas., beam pulse compression and uniformity improvement *(Chinese)* 7—89855
multi-probe magnetic field measuring system with high precision *(Chinese)* 7—121160
NMR, B_1 field precision mapping, nutation rate, rot. frame expt., spin echo imaging 7—108584
NMR spectroscopic imaging, field-gradient modulation shapes meas. 7—80837
nuclear precession magnetometers, sensor EM system anal. *(Russian)* 7—79627
plasma, laser produced, mag. field meas., fully automated anal., phase-amplitude imaging 7—104447
proton magnetometers, errors and reaction contour calc. *(Russian)* 7—79629
proton precision and optical magnetometers, gaussmeters, nuclear resonance and Hall probes, field meas. *(German)* 7—80822
pseudo-stereo techniques to detect stray magnetic fields in SEM 7—140778
reversed field pinch plasma diagnostics, beam probing system 7—83546
RF EM fields, environmental monitoring for human safety, ANSI standards compliance 7—93963
RF EM fields, environmental monitoring for human safety, radiation probe configs. 7—93964
RF magnetic field meas. system, amplitude and phase sensitivity, LD and optical fibre 7—102468
SAW magnetic sensors based on garnet films 7—82980
SEM, zz 7—128717
SSC dipoles, mag. field measurements 7—129464
superconducting magnets for particle accelerators, design, magnetic field meas. 7—81810
superconducting solenoids constant determ., by nuclear induction 7—134821
techniques *(Japanese)* 7—140717
TEM, by moire method 7—108712
Tore-Supra tokamak, plasma position and shape control, magnetic field meas. and control loop 7—137120
torus magnetic field meas., by rapid-frequency-scan laser spectroscopy 7—142507
tuned fluxgate sensor noise characts. 7—108585
Viking satellite equipment and auroral data processing *(Swedish)* 7—127629
white frequency-spectrum method for the measurement of the dynamic response of magnetic bodies in the linear regime 7—80824
$Cd_xHg_{1-x}Te$ Hall probes, for magnetic studies of Nb_3Sn superconductors 7—73377
$(Fe_{100-x}Mn_x)_{75}P_{15}C_{10}$ amorphous cpd., mag. field sensor, cryogenic appls., Hall signal probe 7—89231
Si integrated magnetic-field sensors, review 7—73381
$(TbY)_3Fe_5O_{12}$ LPE films for optical mag. field sensors 7—80823
$(Tb_xY_{1-x})_3Fe_5O_{12}$, sensitivity consts., appl. for mag. field sensors 7—108583

magnetic field variations, Earth *see geomagnetic variations*

magnetic fields
see also electromagnetic fields; interplanetary magnetic fields; interstellar magnetic fields; magnetic field effects; magnetic field measurement; superconducting critical field
3D magnetic field computation, vector finite elements 7—122775
Abell 2319, galaxy cluster, mag. field excess determ. from rot. measures and X-ray emission 7—80114
achromatic magnet, field variation calc. 7—80831
angular momentum in static elec. and mag. fields 7—128224
anisotropic scatterers, 3D, numerical anal. 7—136146
astrophysical, finite Larmor radius effects on Rayleigh-Taylor instability of dusty magnetised plasma 7—94644
astrophysical, numerical investigation of oscillatory α^2-dynamo 7—107702
astrophysical, oscillatory 7—107703
astrophysical rotators, ecology (interaction with environment, and evolution) 7—94643
astrophysical shock waves, mag. field direction rel. to max. energy of charged particles 7—115184
attenuation of gravity waves in the presence of a magnetic field in a turbulent conducting fluid 7—83301
averaging of magnetic interaction between spheres 7—129933
axisymmetric field problems, use of smoothness criterion in refining meshes 7—122776
axisymmetric magnetic multipole, field line equations 7—94066
BEM for anal. *(Japanese)* 7—117122
boundary conditions in magnetic field problems 7—129926
boundary determination of plasma pinch from mag. meas. data 7—111292
bounded current sources, magnetic flux integration method 7—103711
C-shaped magnetic system, unlaminated core, mag. field distrib., finite element anal. 7—122784
charged particle unlimited acceleration by EM wave with purely transverse elec. field 7—122806
conducting infinite slab, electromag. field and loss due to nearly DC carrying wire 7—74810
cosmological Szekeres class II models inc. dust, isotropic radiation, and EM field 7—128147
cosmology, polarisation of cosmic background radiation in magnetic Bianchi type II cosmologies 7—115632
CP stars, photometric variability 7—140077
curl B=kB, solutions as representations of real mag. fields 7—67044
current distributions and scalar potential 7—110188
cyclic nonlinear magnetic fields in 3D, soln. 7—122783
cyclotron radiation, conservation laws and correction to synchrotron loss formula 7—101671
cyclotron radiation in strong magnetic fields 7—88097
electromagnetomechanical interactions in deformable solids and structs., conf., Tokyo, Japan (Oct. 1986) 7—115692
EM wave self-excitation in static electric and mag. fields 7—141753
extragalactic magnetic fields 7—80109
extragalactic radio sources, magnetic field and particle energies 7—95036
fast dynamo action in a steady flow 7—137024
ferromagnetic materials, mag. field emission during fracture 7—132121

magnetic fields continued
flow-rate meter, sensitivity limits of EM meter, magnetic field of transducer *(Russian)* 7—75725
force on charge due to current-carrying wire, relativistic study 7—102047
force-free magnetic fields, magneto-frictional method 7—88098
free electron laser, circularly polarised, with guide magnetic field, coherent radiation gain analysis 7—90627
Galerkin method with singular shape functions, magnetostatic field calcs. appl. *(German)* 7—141744
hearing aids, audiofrequency signal reception from magnetic field *(Polish)* 7—101144
helical wiggler, with guide field, hamiltonian struct. of particle motion 7—82447
line equations, Hamiltonian formulation, orthogonal curvilinear coord. systems 7—142442
magnetic imaging, force microscopy with 1000 Å resolution 7—108581
magnetosphere, distant plasmasheet, mag. field fluctuations and plasma dynamics 7—88043
magnetosphere, magnetic boundary signature within flux transfer events 7—145788
magnetosphere, substorm expansive phase onset precursors, magnetic signatures 7—107671
magnetotail, stationary reconnection region 7—115169
magnetotail observations during a substorm 7—79786
MASSA experiment, ionospheric effects correlated to geomag. var. 7—79759
MHD plate moving in conducting liq., optimal internal source calc. 7—122785
mildly relativistic shocks, mag. fields and synchrotron radiation 7—137082
modelling open field problems, transfinite element method 7—122774
modulating width multipole permanent magnets, field distrib. studies *(Chinese)* 7—121159
multivalued mag. scalar pot. calc. in exterior regions 7—129934
NGC 4874, Coma cluster elliptical galaxy, radio polarisation and mag. field struct. 7—140251
noncoplanarity within fast collisionless shocks 7—94579
particles trapped by electrostatic wave in transverse mag. field, dynamics and radiation emission 7—68534
Permalloy patterns propag. of mag. bubble, mag. field anal. *(Polish)* 7—70610
plane plate and long circular cylinder, eddy current dispersion of complex permeability *(German)* 7—74809
plasma, quasisteady mag. field generation, density profile deform. effect 7—83485
production in arbitrary simply connected regions 7—129937
programmable magnetic-field modulator for microwave EPR spectrometer 7—67362
pulsed field generation, state of the art *(German)* 7—121168
pulsed magnetic field produced by CO_2 laser 7—140718
rectangular conductor in harmonic transverse mag. field, position change rel. to power loss 7—129936
relativistic electron flows, hollow and circular, in magnetic field, irrotational states 7—110226
relativistic magnetised plasma quasistatic mag. field generation by EM radiation 7—83486
reversed field config. formation using toroidal magnetic fields *(Korean)* 7—137118
reversed-field pinch, mag. topology of helical Ohmic steady states 7—91354
RFX magnetic field configuration, field errors 7—135587
rotary gradient magnetic field, cylindrical magnetic domains dynamics exam. 7—134818
rotation, unipolar induction effect 7—69332
Saturn, flyby magnetic field meas. of magnetosphere 7—107746
slot inductance calc., dual energy approach 7—110200
solenoid, coaxial, magnetic field distrib. with coaxial superconducting shield 7—102464
source, modeling by dipole distribution on disk 7—117121
spatial current-carrying network magnetic field analysis *(Russian)* 7—141746
superconducting composites, EM losses, influence of overheating 7—131883
vector differential eqn. transform. props. 7—117123
weak natural vertical VLF magnetic field, charact. determ. by statistical modelling 7—101638
Fe shims, correction of solenoidal mag. lower order field errors calcs. 7—74808

magnetic films *see magnetic thin films*

magnetic fluids
bowlic liquid crystals, struct., optical and elec. props. 7—124089
coded seal, thermodynamic process modelling 7—97671
colloidal ink and microwave appls. 7—77380
conducting mag. fluids with internal rotation, kinematical balance eqns., thermodynamical method 7—77361
conference, Tokyo, Japan (July-Aug. 1986) 7—80152
Couette flow, viscous stresses, heating and stability 7—137028
damper application for vibration isolating table 7—73326
dilute colloid, mag. diffusion, convective stability 7—123438
displacement processes through porous media, instabilities 7—75690
drop, equilibrium, cone form. and elongation 7—75687
drops, stability in uniform mag. field *(Romanian)* 7—137026
drops equilibrium forms, mag. field disturbances 7—75691
drops with free surface, stability of bounded volumes 7—77371
elastic props. at high press. 7—91690
ESR spectra, spin glass formation 7—77395
ferrocolloids, mag. props., interparticle interactions 7—77377
ferrofluid, hypernetted chain approx., 3D Monte Carlo model 7—77360
ferrofluid, Mossbauer study of superparamag. amorphous alloy particles 7—118923
ferrofluid, water-based, fractionation 7—77376
ferrofluid composite, props. at MM wave freqs., mag. absorpt. 7—125864
ferrofluid composites containing nonmag. metallic particles, microwave absorpt. 7—77699
ferrofluid instabilities, anisotropy effects 7—92424
ferrofluid lubrication, Reynolds eqn. anal. 7—78253
ferrofluid pools, normal field instability and patterns 7—75686
ferrofluids, complex susceptibility, rotational Brownian motion 7—77378
ferrofluids, magnetodielectric anisotropy, pair orientation model 7—77362
ferrofluids with Co particles, thermal conductivity meas. 7—76506
ferrofluids with Fe particles, thermal conductivity meas. 7—76506

magnetic fluids continued
ferrohydrodynamics of colloidal magnetic fluids, book contrib. 7−99485
ferromagnetic, rectangular channel flow with travelling mag. fields 7−75675
ferromagnetic colloids, magnetostatic interaction and structuring 7−91248
ferromagnetic fluid, rot. layer, convective instability 7−83233
ferromagnetic fluids, surface waves studied using ray method or geometrical optics 7−104290
ferromagnetic particle suspension, torque and rot. hysteresis 7−91251
ferronematic liquid crystals, chiral molecule doped, magnetic field-induced birefringence 7−113161
ferronematic suspension, orientational struct. and mag. props. 7−105969
ferrosuspension, magnetisation, Fokker-Planck eqn. soln. 7−125488
field-induced wavevector-selection by magnetic Bernard-convection 7−75568
flat mag. system, mag. field calc., periodically distributed magnetisation 7−77369
heavy oil residues, mag. field effects at high temp. 7−137023
HF mag. susceptibility and relax. time 7−92468
hydro-magnetic grinding using mag. fluid-abrasive grain system 7−78289
hydrodynamics, sedimentation, US propag. and pipe flow 7−75685
infinite channel viscous fluid flow, resistance reduction 7−75676
interfacial layer, surface hydrodynamics 7−91253
ionic ferrofluid, optical props. 7−77505
isothermic, free convection caused by magnetophoretic particle transport 7−75692
lacquers, rheogram meas. with couette apparatus 7−91049
liquid, diffusion, MHD phenomenon, numerical model 7−124571
liquid, wave propag. MHD approx., short-wavelength eqn. 7−123771
magnetic liq. drop, dynamics in mag. fields 7−136983
magnetic liquid sloshing, mag. fluid surface responses 7−77367
magnetisable and polarisable liqs., noncanonical Hamiltonian eqns. of motion 7−137027
magnetisation, effective viscosity, behaviour under strong mag. field in rotating seal 7−77368
magnetised mag. fluid, interaction forces between nonmagnetic particles 7−77366
magnetoacoustic oscillations in weakly conducting fluid magnetothermoacoustic treatment 7−125061
magnetorheological suspension, turbulent flow and heat transfer study 7−123719
magnetotactic bacteria, zoned migration 7−133337
monodisperse particles, ferrofluids, fruit-fly model system 7−77364
nonlinear focussing study 7−83362
nonlinear internal resonance, Rayleigh-Taylor flows 7−75693
parametric resonance 7−138289
particles suspended in Newtonian fluid, orientation dynamics 7−125484
phase diagram, equilib. props. 7−77363
physical props. 7−77372
plane surface instability under ultrasound action 7−91249
rheological characteristics, viscometric meas. 7−132980
seals, design problems and appls. 7−73373
solid bodies suspended in mag. liq. in homogeneous mag. field *(Romanian)* 7−137029
spheroidal mag. particles, dilute polydispersive suspension, mechanical description 7−75683
spin glass-like behaviour in mag. fluids 7−138236
stabilisation, mag. field gradient effects 7−75684
superparamagnetic particles, magnetic hyperfine splitting 7−138288
surface nonlinear waves and fluid instability 7−75688
suspended solids in mag. fluid, interactions, uniform mag. field 7−77379
temperature sensitive, automatic cooling device 7−73358
two-dimensional flow between parallel plates 7−75689
ultrasonic NDT applications 7−78442
ultrasonic velocity and attenuation, mag. effects 7−77370
ultrasonic velocity anisotropy 7−77365
unmagnetized ferroliq., polarized neutron small angle scatt. 7−105892
viscoplastic body motion in mag. liq. flow, generalised rheological law 7−91250
water-based, pipe flow characts. 7−75674
weakly clustered, viscosity meas., centrifugation depend. study 7−124580
Co, colloidal ferromag. metals, prep., mag. props. 7−77375
Fe colloidal ferromag. metals, prep., mag. props. 7−77375
Fe-Ni mag. fluids, prep. and props. 7−77374
Fe_3O_4 dilute ferrofluid, Faraday rotation determ. 7−77517
Fe_3O_4, magnetite, mag. fluids, thermal conductivity 7−76505
Fe_3O_4 particles in ferrofluid, initial suscept. meas., 80-300 K 7−125474
Hg-Fe ferrofluid, Mossbauer spectra studies 7−77435
Ni colloidal ferromag. metals, prep., mag. props. 7−77375

magnetic flux
see also flux creep; flux flow; flux-line lattice; flux pinning; fluxmeters; skin effect
integration method for bounded current sources 7−103711
Josephson transmission line, direct obs. of fluxon reflection 7−99348
metal powders, porous, explosive-driven mag. flux cumulation by shock-wave propagation 7−115979
ribbon superconductors, magnetic flux discontinuities meas apparatus 7−134819
vacuum arc subject to axial magnetic field, current distrib. and mag. press. profile 7−69527
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. screening and flux distrib. 7−118741
NbN nanobridge in DC-SQUID, effective mag. flux 7−70483
Y-Ba-Cu-O high T_c supercond., trapped mag. flux spatial distrib. study 7−125283
$Y_{1.2}Ba_{0.8}CuO_4$, high-T_c supercond., flux quantisation 7−92384

magnetic flux jumping *see Meissner effect*

magnetic glasses *see spin glasses*

magnetic hardness *see ferromagnetic properties of substances*

magnetic heads
diffraction problem, singular integral equations method 7−141765
dimension meas. using automated optical microscopy 7−121067
Permalloy, ion implanted, mag. recording material, struct. changes *(Chinese)* 7−131402
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
$Co_{70}Fe_5Si_{15}B_{10}$ amorphous ribbons, surface quality and thickness effects, recording head appls. 7−77888
CoZr and CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7−112885

magnetic heads continued
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props., appl. for mag. heads 7−99530
$Mn_{1-x}Zn_xFe_2O_4$, single cryst. wear resist. anisotropy rel. to surface brittleness anisotropy 7−78263
Ni-Zn ferrites with additives, for magnetic heads use 7−132538
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. characts., saturation Kerr rot. meas. 7−125499

magnetic hysteresis
ferrites, characteristics and selection for particular appl. *(Italian)* 7−138273
ferromagnet, magnetic accommodation during uniaxial planar mag. reversal *(Russian)* 7−112850
ferromagnet, uniaxial planar magnetic reversal, permeability model *(Russian)* 7−143850
ferromagnetic, hysteresis, Preisach function 7−125457
ferromagnetic ball in axisymmetric magnetic suspension field, hysteresis forces and moments *(Russian)* 7−110197
ferromagnetic cores, magnetisation and secondary EMF harmonics in alternating fields including hysteresis 7−105953
ferromagnetic hysteresis, remanent and peak magnetisation, tensile and compressive stress effects model calcs. 7−106003
ferromagnetic-antiferromag. rough interfaces, random field model of exchange anisotropy 7−70584
ferromagnets, hysteresis loops stability 7−92461
graphite-$CoCl_2$ first stage intercalation cpd., high field mag. behaviour 7−85263
Ising model, random-field diagrammatic expansion and metastability, lower crit. dimens. 7−125424
Ising spin glass, unidirectional anisotropy empty site-antiferromagnetic bond 7−138249
isotropic vector Preisach model of hysteresis 7−125458
Kerr effect based plotter, using microcomputer *(Slovak)* 7−115978
longitudinal particulate medium, hysteretic props. ang. depend. 7−125485
measurement of ferromagnetic materials DC and AC characterisation 7−128602
metallic glasses, hysteresis loop props., aging effects 7−143862
modelling hysteresis loops from coercivity, anisotropy and microstruct. parameters 7−125452
particular media, magnetisation processes, effect of interaction and anisotropy const. distrib. 7−85377
Permalloy soft ferromagnetic films, irreversible magnetisation transforms 7−105992
Preisach diagrams incl. reversible magnetization 7−132061
Preisach model and hysteretic energy losses 7−125455
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
ruby crystals, hypersound self-focusing, APR hysteresis study *(Russian)* 7−91737
single domain particles, mag. props., defect effects 7−125471
soft magnetic materials, mag. props. 17 years after electron irrad. 7−125451
soft magnetic materials, meas. and anal. techniques *(German)* 7−73379
steel, Mn, irreversible magnetisation processes 7−105955
steel plates, EM field, influence of magnetic charact. *(French, English)* 7−92458
two-layer ferromag. films, static and dynamic props. *(Russian)* 7−143863
$BaFe_{12}O_{19}$ anisotropic ferrite, rotational hysteresis and torque curve meas. 7−125461
$BdBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
Co-CoO compositionally modulated films, mag. props. 7−112869
Co-Cr film, magnetisation models for computer simulation of perp. mag. recording 7−92479
Co-Cr perpendicular recording media, magnetisation reversal mechanism, hysteresis loss meas. 7−85388
Co-Cr sputtered film perpendicular recording media, magnetisation reversal mechanisms 7−105993
Co-Cr sputtered films, surface and vol. mag. hysteresis 7−92478
Co-Cr sputtered layers, domain struct. and mag. reversals 7−105991
Co-Cr thin films, artificial superlattice struct., magnetism, struct. 7−76667
Co-Cr-Ta(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Ni-Cr(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-W electrodeposited thin films, mag. props. study 7−143871
CoCr film, mag. and structural props. for recording appls., polycryst. sublayer effects 7−105981
CoCr sputtered films, coercivity and struct. characterisation 7−125496
CoCr thin films, spin wave reson. spectra study 7−105977
CoCr/Ti film/sublayer system, struct. and mag. props. 7−112905
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
$(Co_{93}Fe_7)_{75-x}Mo_xB_{25}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Co_{2-x}Ge_{1-x}Fe_{2x}O_4$, oxidic spinel, X-ray, electrical conductivity, magnetic and IR studies 7−111510
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
CoNi HCP thin films, magnetisation curves and hysteresis loops, film texture and orientation depend. 7−105979
CoNi mag. thin film, hysteretic phenomena 7−99504
CoNi thin film hysteresis loops and domain structs., 3D calcs. 7−105995
CrO_2:Fe powders, thermal stabilisation, effect on mag. and struct. props. 7−85373
$DyBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
DyNdFeCoB aligned magnets, permanent magnet props. 7−125465
$Dy(OH)_3$, mag. susceptibility dynamic instability 7−118780
$ErBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
$EuBa_2Cu_3O_{6+y}$, high T_c supercond., flux pinning, critical current density 7−131948
$EuNi_5P_3$, mag. phase transitions magnetisation steps with field 7−112793
Fe epitaxial FCC film on Cu (001), magnetism, spin polarised photoelectron emission 7−105985
Fe/Mg sub-monolayered superlattice, mag. props. 7−112867
Fe-Co-Mo-Cr, damping capacity, mech. and mag. props., corrosion resist. *(Japanese)* 7−106556
Fe-Cr-Co permanent magnets, low Co, mag. rotational hysteresis energy 7−138271
Fe-Cu multilayered films deposited by facing targets sputtering, mag. props. 7−112904

magnetic hysteresis continued
Fe-Ni films electroplated on nonmagnetic wire, mag. props. 7−132093
Fe-R-B melt spun alloys (R=Pr,Nd,Y,Gd), hard mag. props. study, comp. depend. 7−99508
Fe-Si crystals, domain struct. and EM losses, thickness effects *(Russian)* 7−77344
Fe-Zr metallic glasses, mag. props. study 7−118827
$Fe_{80-x}B_x$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{80}B_{20}$ amorphous alloys, neutron irradiation, effect on mag. props. 7−70593
$Fe_{81}B_{13.5}C_2$, amorphous films, FMR and fiber optic interferometric studies 7−125541
$Fe_{79}B_{16}Si_5$, amorphous alloy, shock consolidated powder, mag. props. rel. to compression rate 7−112855
$Fe_{80}B_{14}Si_6$ amorphous alloy low temp. mag. props., annealing effects study 7−100400
$Fe_{80}B_{8.74}Si_{11.26}$ metallic glass, magnetisation studies 7−143856
$Fe_3F_8(H_2O)_2$, 'frustrated' cpd., mag. props. 7−105888
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
$Fe_{80-x}Ni(Mo)_xB_{20}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$(Fe_{1-x}Ni_x)_{77}Si_{10}B_{13}$, amorphous alloy, mag. contribution of Fe and Ni *(Korean)* 7−85353
$Fe_{25}Ni_{55}Si_{10}B_{10}$ metallic glass, mag. elec. and elastic props. 7−85362
Fe_2O_3, hematite, magnetisation, thermal hysteresis near Morin transition temp. 7−99495
γ-Fe_2O_3:Os sputtered films for mag. recording appl., grain growth, impurity effects 7−105315
γ-Fe_2O_4 sputtered thin films, magneto-optic Kerr effect hysteresis loop meas. 7−106147
Fe_3O_4 sputtered thin films, magneto-optic Kerr effect hysteresis loop meas. 7−106147
FePt polytwin crysts., mag. domain struct. and magnetisation reversal *(Russian)* 7−99487
$Ga_{0.4}Fe_{0.6}NiCr_{1-y}Al_yO_4$ mixed spinel ferrite, cation distrib. and entropic disordering, Mossbauer study 7−112740
$Ga_{0.8}Fe_{0.2}NiCrO_4$, mixed spinel ferrite, pinned and entropic disordering 7−92462
Gd-Co amorphous films, comp. modulated, by bias sputtering 7−86025
GdFe amorphous thin films for perp. recording, magnetooptic study 7−92477
$Gd_xY_{1-x}N$ dilute system, mag., elec. and optical behaviour 7−125503
$GeCo_2O_4$ antiferromagnet, first order mag. transition obs. 7−70545
$La_{1.8}Sr_{0.2}CuO_4$ superconductors, critical currents and fields 7−92394
$La_{1.85}Sr_{0.15}CuO_4$, magnetic hysteresis 7−125239
$Lu(Co_{1-x}Al_x)_2$, pseudobinary laves phase cpds., metamagnetic transition 7−99455
Mn-Zn-Ti ferrite single crysts., Barkhausen jumps study 7−138284
Nd-Fe-B sintered magnet, coercivity of surface grains 7−138287
Nd-Fe-CoB permanent mag. alloys, anisotropy, coercivity and hysteresis meas. 7−125446
NdFeB sintered and melt-spun magnets, coercive field studies 7−118826
$Nd_{15}Fe_{77}B_8$ permanent magnet, mag. anisotropy and rotational hysteresis energy 7−138220
$Nd_{15}Fe_{77}B_8$ powder, prep. by mechanical alloying and solid-state reaction, mag. props. 7−113466
$Nd_2(Fe_{1-x}Ru_x)_{14}B$, low temp. mag. behaviour, spin reorientation phenomena 7−125369
Ni, magnetic props., dislocation effects 7−125438
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
$Ni_{1-x}Mn_xH_y$ disordered alloy hydrides, magnetoresist. and mag. suscept. meas. 7−84937
$Ni_{0.65}Zn_{0.35}Fe_{2-x}Mn_xO_4$, spinel ferrite, mag. and dielec. props. 7−125454
$(PbO\text{-}Fe_2O_3)_{100-x}$ $(La_2O_3)_x$ magnets, mag. and phys. props. 7−105966
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
Sm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
$Sm(Co_{0.67}Fe_{0.21}Cu_{0.08}Ni_{0.02}Zr_{0.02})_{7.6}$ magnets, ageing, coercive force, hysteresis loop squareness *(Japanese)* 7−99497
$SmCo_{5-x}Ni_x$ melt-spin and as-cast alloys mg. props. studies 7−125449
$SrFe_{12}O_{19}$ 7−125461
TbFe, amorphous films, magnetisation reversal rel. to microstruct. 7−132114
TbFe, amorphous films, sputter deposition, magneto-optical and mag. props 7−132105
TbFe amorphous sputtered films, effective comp., thickness depend. 7−143248
TbFe amorphous thin films for perp. recording, magnetooptic study 7−92477
TbFe, evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
TbFe films, amorphous, magnetic surface props. 7−138294
$TbFe_2$ polycrystalline films, magnetisation reversal characts. *(Russian)* 7−70603
TbFeCo evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
α-$TlMnCl_3$, weak ferromagnet, reorientation of mag. moment 7−143794
Tm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
UGaM (M=Co,Ir,Ni,Pt,Rh,Ru) mag. behaviour studies 7−77298
Y-Ba-Cu-O high T_c supercond., complex suscept. loss meas. near T_c 7−118708
Y-Ba-Cu-O high T_c supercond., lower critical fields, complex susceptibility meas. 7−125275
Y-Ba-Cu-O system, high supercond. transition temp., elec. resist., mag. meas., heat treatment effects 7−99257
$YBa_2Cu_3O_{6+y}$, high T_c supercond., flux pinning, critical current density 7−131948
$YBa_2Cu_3O_{9-y}$, high T_c supercond., mag. hysteresis phenomena 7−131876
$Y_1Ba_2Cu_3O_{7-\delta}$, high T_c composite cpd, mag. behaviour 7−138125

magnetic hysteresis continued
YIG, acoustic emission, domain walls and hysteresis 7−70583
Yb-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804

magnetic impurity interactions
alloys, resistivity, magnetic impurity pairs 7−124954
Anderson model, strongly correlated electron ground-state energy approx. 7−124809
diamagnetic crystal with paramag. impurity, saturation of optical transitions, polarisation of nuclei 7−131983
electron Fermi liquid with paramag. impurities, elementary excitations 7−98834
ferromagnetic thin films, impurity layer localised spin wave modes, surface midplane co-action 7−138290
Landau-Ginzburg-Wilson model, n-component, with cubic anisotropy and random impurities, critical behaviour 7−85340
linear magnetic chain, thermally correlated frozen-in disorder 7−85337
metal hydrides, mag. studies 7−99415
metal-H systems, phys. props., at. and electronic struct. 7−98956
metals, localised impurity moments magnetic interaction, Monte Carlo simulation 7−85241
metals, two mag. impurities, Monte Carlo study of the Alexander-Anderson model 7−118796
noncollinear ferromagnet with optically excited (impurity) ion, spin deform. radius *(Russian)* 7−125378
rare earth hydrides, $RFeAlH_x$, R=Sm,Gd,Dy-Tm, breakdown of Fe sublattice long-range mag. order 7−99447
rare earth orthochromites, $RCr_{1-x}Mn_xO_3$, mag. props., Mn^{3+} impurity ion effects 7−138196
rare earth oxides, R-Ba-Cu-O, high T_c supercond., mag. and nonmag. impurity effects 7−112637
rare earths and actinides, anomalous, conf., Grenoble, France, (July 1986) 7−72697
roughening process of domain walls subject to quenched impurities 7−112847
semiinfinite magnetically ordered crystal, impurity electron-magnon states *(Russian)* 7−99443
sine-Gordon solitons, energy emission, quasi-classical quantization and stochastic decay 7−115807
type II superconductors, spin kinetics and EPR 7−77156
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
Cr-Fe-Mn(V), dilute, resonance impurity scatt. 7−70297
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7−118797
$ErFe_2H_x$, local, macroscopic structural and mag. props., rhombohedral distortion effect 7−99446
$Eu_xSr_{1-x}Te$, dil. antiferromagnet, spin glass behaviour, mag. meas. 7−112827
Fe-Zr, amorphous, hydrogenation induced changes in mag. props., Mossbauer spectra, magnetisation meas. 7−99444
α-Fe-Zr impurity system, spin density perturbation *(Russian)* 7−77275
$FeBO_3$:Ni, easy phase magnet, photoinduced superstructure 7−143772
$FeBO_3$:Ni, photoinduced modulated state, temp. behaviour 7−143771
$Fe_{90}Zr_{10}$ magnetic glass, hydrogenation study by Raman spectra 7−85716
Gd, ferromagnetic, local magnetisation of noble and s-p impurities 7−70542
$GdTbFe:ONH_2O$ sputtered film mag. props., impurity effects study 7−112887
$La_yU_{1-y}O_{2+x}$, mag. meas., dilution effect 7−112786
Ni, 3d and 4d impurity hyperfine fields and electronic struct. calcs. 7−70245
$Ni_{0.985}Fe_{0.015}Cr_2S_4$, mag. hyperfine, quadrupole interaction, Mossbauer, X-ray diffraction 7−132173
$Ni_3FeW(Mo)(Cr)(Mn)$, structural and mag. ordering, impurity effects 7−85284
Rb_2CrCl_4:$Mg^{2+}(V^{2+})(Fe^{2+})$, ionic ferromagnet, neutron diffr. and visible spectra 7−112755
$TbFe_2H_x$, local, macroscopic structural and mag. props., rhombohedral distortion effect 7−99446
$TbRh_{2-x}Ir_xSi$, cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
$U_xY_{1-x}Se$, ferromagnetic transition, effect of Y substitution 7−77292
$Y_2(Co_{1-y}Ni_y)_7H_x$, mag. props., effect of H substitution 7−99445
$YFeAlH_x$, breakdown of Fe sublattice long-range mag. order 7−99447
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., Gd substitution effect 7−132011
YIG:Fe(Mn)(Ar), anisotropy effects of implanted ions, FMR 7−125370
$(Y_{1-y}La_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445

magnetic inks *see magnetic fluids*

magnetic leakage
ferromagnet, magnetic accommodation during uniaxial planar mag. reversal *(Russian)* 7−112850
ferromagnetism ball in axisymmetric magnetic suspension field, hysteresis forces and moments *(Russian)* 7−110197
induction-probe magnetometric instrument for temp. investig. during heat treatment 7−78430
steel components, heat treatment quality inspection using remagnetisation losses 7−71449
surface EM losses meas. in superconductors, using calorimeter 7−134820
Co amorphous alloys, magnetic props, effect of magneto-thermal treatment, magnetic field appl. *(French)* 7−99505
Co obliquely evaporated films, partially oxidised, exchange interactions, mag, anisotropy 7−112878
Co-Cr perpendicular recording media, magnetisation reversal mechanism, hysteresis loss meas. 7−85388
$Co_{70.5}Fe_{4.5}Si_{10}B_{15}$, Cr_2O_3 and ZrO_2 particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
Fe-Si (3 wt.%) electrical steel, electromag. losses, influence of multilayer nature of domain struct. *(Russian)* 7−105950
Fe-Si steel, highly permeable, forsterite ground layer effect on mag. props. 7−77353
Fe-Si-B alloys, amorphous and cryst., magnetic losses, thermomag. treatment effects *(Russian)* 7−99437
$Fe_{76}Mo_3(SiB)_{21}$, metallic glass, low losses at high freqs., low remanence, effect of heat treatment 7−112863
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, irreversible mag. permeability decay 7−92463
FeSi grain orientated sheets, stray field profile 7−105962

magnetic leakage continued
$Fe_{78}Si_{10}B_{12}$, WC particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
Nb_3Sn composite superconductor with very fine filaments, development and power freq. appls. 7−138173
NbTi superconductors, ultra-fine filament, AC losses 7−131967
NbTi ultrafine filamentary supercond. wires, AC losses calc. 7−131946

magnetic lenses
see also aberrations
electron lens computation, FEM 7−68541
electron lenses in electron microscopes 7−67439
magnetic particle beams, focusing by transaxial mag. fields *(Japanese)* 7−129951
RM-100 accelerator electron injector, magnetic lens parameters 7−95679
scanning electron-optical systems, mag. objectives synthesis for aberration minimum 7−129958

magnetic levitation
aerospace simulation facilities instrumentation, Conf., Williamsburg, VA, USA (June 1987) 7−120708
ferromagnetic ball in axisymmetric magnetic suspension field, hysteresis forces and moments *(Russian)* 7−110197
finite-element analysis of three-dimensional eddy currents in attractive electromagnetic levitation 7−129930
liquid metals, free boundary problem in EM levitation *(French)* 7−74812
passive levitation of small particles in vacuum: possible applications to vacuum gauging 7−134794

magnetic lines of force *see magnetic flux*

magnetic liquids *see magnetic fluids*

magnetic losses *see eddy current losses*

magnetic materials
see also ferrites; garnets; magnetic fluids; magnetic thin films; permalloy; permanent magnets
conference, Baltimore, MD, USA (Nov. 1986) 7−120690
magneto-optic alloys, duplex coatings for oxidation and corrosion protection 7−144582
MBE, conf., York, England (Sept. 1986) 7−66816

magnetic materials, amorphous *see magnetic properties of amorphous substances*

magnetic memories *see magnetic storage*

magnetic mirrors
2XIIB magnetic mirror, particle gyration, gyrofrequency shift 7−123849
advanced fuel tandem mirror operation, high efficiency 7−68004
axisymmetric, diamagnetic wells 7−130911
axisymmetric mirror with an internal hoop, MHD stability 7−91351
axisymmetric plasma column, stabilisation of MHD modes 7−75776
axisymmetric single-cell mirror, interchange stabilisation using RF elec. field 7−130912
ECR microwave plasma stream, low-energy ion extraction 7−111254
explosive instabilities in mirrors, density dependent flute mode 7−123958
field-reversed mirrors, linear stability anal., particle simulation 7−142460
fusion production reactor, mechanical design concepts 7−89716
fusion production reactor for Pu and T breeding, design and anal. 7−89717
GAMMA 10 tandem mirror, electron temp. meas. by electron cyclotron emission 7−111258
gas fuelling and mag. field configuration in Tara central cell 7−74068
high beta mirror plasma partially enclosed by conducting wall, MHD stabilization 7−69325
ion confinement in a mirror system with a small mirror ratio, plasma lifetime, analytic expression 7−117748
LISA, rF heating by cylindrical plasma waveguide modes 7−137099
magnetic fusion materials production reactor, fusion technology for tokamak and mirror drivers 7−89712
magnetic fusion materials production reactor, T and Pu prod., economic anal. 7−89713
magnetosonic shock wave plasma heating through resonant ion acceleration 7−97746
MARS, radiological hazards, effects of structural breeder/coolant material changes 7−74042
minimum-B mirror plasma, hot-electron equilibrium 7−104443
muon catalysed fusion-fission reactor driven by a recirculating beam 7−96326
particle confinement and adiabatic invariance, mirror mag. trap 7−137077
Phaedrus tandem mirror, end cells, neutral density effects 7−104442
plasma heating and particle refl. by a laminar magnetosonic shock wave 7−75842
RFC-XX-M, plasma potential measurement using Wien filter type heavy ion beam probe system 7−97800
tandem mirror, central cell density, electrostatic end plugging 7−142487
tandem mirror, hot electron buildup in thermal barrier region, Fokker-Planck calc. 7−83517
tandem mirror, quadrupole MHD stabiliser, stability margin *(German)* 7−137108
tandem mirror central cell, rot., drift modes 7−69426
tandem mirror KUTAM-I, development *(Korean)* 7−83516
tandem mirror reactor with octopole and wall stabilization 7−89719
tandem mirrors, hot-electron stabilised, MHD stability 7−123964
tandem mirrors, trapped particle mode anchor stabilisation 7−69427
Tara control, monitoring, data acquisition and analysis system 7−122181
TMX-U tandem mirror, edge plasma ICRH effects 7−69405
TMX-U tandem mirror expt., central cell fueling, low-energy beams development 7−142479
trapping rates in thermal barriers of tandem mirrors 7−75772
wall probes current-voltage characts., study in TEXTOR tokamak, secondary electron emission effects 7−75803

magnetic moments
see also atomic magnetic moment; elementary particle magnetic moment; local moments in dilute systems; molecular moments; nuclear magnetic moment
4f systems, antiferromagnetically ordered, valence instability, mag. transitions 7−77302
actinide pseudobinary monochalcogenide and monopnictide single crystals, magnetism 7−105894
actinide-transition metal alloys, magnetism, electron-electron interactions, hybridisation effects 7−77243
alloys, amorphous, mag. props., amorphisation effects, review 7−85264
alloys, local spin and orbital moments, local mag. anisotropy calcs. 7−92423
alloys, magnetic moment var. models 7−85261
antiferromagnet, magnetisation, nonlinear oscills., onset of chaos 7−85317
Bloch electrons, mag. suscept. in presence of localised mag. moments 7−85219
coupled spins, oppositely signed mag. moments, nucl. mag. relax. 7−109939
exciton-impurity states splitting in weak mag. field *(Russian)* 7−84693
ferrosuspension, magnetisation, Fokker-Planck eqn. soln. 7−125488
heavy fermion systems, BCS theory, no p-wave superconductivity 7−70458
heavy fermions, effective mag. moments and Kondo lattice Wilson ratio 7−112737
heavy fermions, effective mag. moments and Kondo lattice Wilson ratio 7−112739
heavy-electron cpds., nuclear and electronic mag. moments relax. calcs. 7−92536
heterotic string, mag. moment calcs. at tree level 7−108902
icosohedral structs., mag. moments, Curie temp., anisotropy and domain walls 7−131996
localised moments, indirect mag. coupling, band hybridisation effects 7−77198
magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
magnetic fluids, parametric resonance 7−138289
manganese oxalate dihydrate linear chain system, cryst. and magnetic struct., neutron diffr. study 7−99407
metal hydrides, mag. studies 7−99415
mixed valence exchange cluster crystals, charge ordering 7−112283
phenolic-Fe phthalimide mixed ligand complexes, hyperfine interactions 7−124942
point dipoles, equilib. configurations, simulated annealing *(Russian)* 7−112758
$(rare\ earth)_2Zn_{17}$ alloys, mag. suscept. and elec. resist. meas. 7−70531
rare earth alloys, $RFeAl_x$, mag. struct., Fe atom and moment location 7−131988
rare earth compounds, mixed electronic states, mag. moments, XANES study 7−144180
rare earth mixed crystals, $RR'F_3$-type, inhomogeneous mag. dipole broadening of spectral lines 7−99806
rare earth orthochromites, $RCr_{1-x}Mn_xO_3$, mag. props., Mn^{3+} impurity ion effects 7−138196
rare earth-Ba-Cu-O system, $RBa_2Cu_3O_{6+y}$, high T_c supercond., mag. characts. 7−118705
rare earth-$Co_{12}B_6$ mag. props. studies 7−99418
rare earth-Co alloys, RCo_5 and R_2Co_{17}, f band spin polarisation 7−125319
rare earth-Mn alloy, R_6Mn_{23}, f band spin polarisation 7−125319
rare earth-Ni_2P_2, R=Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Sm, Ce, Yb, La, mag. props. temp. depend. study 7−118767
rare-earth metal, semi-infinite, RKKY interaction near surface 7−138214
relativistic spin polarised densities, scatt. theory formulation, appl. to electronic struct. of Pu 7−105371
rotating astrophysical objects, mag. moments as consequence of general relativity 7−120883
semiconductors, two-band, supersymmetric inhomogeneous structures, and nature of parity anomaly in (2+1) electrodynamics 7−92267
statistical dynamics of molecular field systems 7−118805
Wigner oscillators, diamagnetism, mag. moment, mag. susceptibility 7−131985
$Y_2(Fe,Co)_{14}B$, mag. moments and electronic struct. 7−125331
YbPd, mag. and nonmag. charge states, ^{170}Yb Mossbauer meas. 7−76852
Al-Mn quasicrystals, mag. moment and spin glass behaviour 7−77304
$Al_yFe_{x-y}V_2O_5$, nonequilib. magnetic suscept., isolated and coupled moments 7−138194
Am^{3+} ion, mag. behaviour, review 7−105882
$Au_{1-x}Fe_x$, reentrant ferromagnet, Mossbauer detection of magnetic clusters 7−77301
$BaCeO_3$:Dy, synthesis, impurity oxidation state, Mossbauer spectra 7−92553
$Ba_2Cu_3O_{7-\delta}$-based high T_c superconds., electronic and sp. ht. props. 7−118652
γ-Ce, mag. moments, fully relativistic spin-polarised Dirac theory 7−76732
Ce-Co-Si cpds., electronic struct., X-ray emission spectra study *(Russian)* 7−125862
$Ce_3Co_{20}B$, crystallographic and mag. characts. 7−104642
$CeCu_6$, heavy fermion cpd., mag. correlations 7−70516
$Ce_{26}Cu_{74}$, low temp. specific heat, local random mag. anisotropy 7−77295
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$Ce_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$CeNi_{0.8}Pt_{0.2}$, dense Kondo ferromagnet, mag. props. 7−77249
$CeRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$Ce(Rh_{1-x}Ru_x)_2Si_2$ solid solns., mag. props. 7−77246
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$CeRu_2Si_2$, J=5/2 rare earth ion states, low field mag. props., tetragonal cryst. fields 7−138179
$CeSi_x$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
CeZn, neutron diffr. and mag. studies 7−77248
$CeZn_5$ Kondo lattice, mag. props. 7−99404
$CfCl_3$, mag. suscept. meas., cryst. struct. depend. 7−92410
Cm^{4+} ion, mag. behaviour, review 7−105882
Co particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Co thin film, magnetisation, effect of Ag and Cu overlayers 7−118836
Co-Al(Ga), point defects, ab initio electronic struct. calcs. 7−84749
Co-Er, metastable phases, icosahedral symmetry and magnetism 7−131037
Co-Sm(Nd)(Pr), amorphous mag. props. 7−132000
CoH electronic props., self-consistent spin-polarised LMTO calcs. 7−84670
$Co_xNi_{5/3-x}FeSb_{1/3}O_4$, ferrite, ^{57}Fe, ^{61}Ni and ^{121}Sb Mossbauer study 7−113001
Cr (100), adsorbed O layer effects on surface magnetism 7−99424
CrO_2 fine particles, mag. moment 7−85369
Cu-Cr films, magnetoresistance, mag. scatt. time, electron localisation 7−76895
$Cu_{0.45}Co_{0.55}Cr_2S_{4-y}Se_y$ ferrimagnetic spinel props. 7−99503

magnetic moments continued
Cu_2Te-Cr_2Te_3 solid soln., mag. props. and metallic cond. 7−125380
$DyBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$Dy(Fe_{0.9}M_{0.1})_2$ (M=B, Al, Ga), cubic Laves phases, mag. investig. 7−138230
$DyRu_2Ge_2$, ^{161}Dy Mossbauer spectra 7−70686
$ErBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$ErCo_2Fe_2B$, cryst. struct. and mag. props. 7−137310
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7−118797
$Er_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$Er_2Fe_{14-x}Mn_xB$, moment canting, magnetisation effects 7−112852
$ErGa_3$, crystalline electric field and magnetic structure 7−98942
$Er_{1-x}Ho_xRh_4B_4$ compounds, ordered mag. moments, absolute meas. using powder neutron diffr. 7−85259
Eu, Mossbauer study under high press. 7−113030
$EuBa_2Cu_3O_{7-x}$, high T_c supercond., mag. props. 7−131886
$EuLiH_3$, paramag. and ferromag. states, PMR spectra 7−99585
$EuNi_5P_3$ synthesis and cryst. struct. study 7−83915
$Eu_pSr_{1-p}S_s$ insulating, specific heat, mag. transitions 7−125433
Eu(oxydiacetate)$_3$, mag. dipole transition moments, rotatory strengths, dynamic ligand polarisation 7−70255
Fe (001), O chemisorption, first principles determ. of mag. struct. 7−84508
Fe colloidal fine particles, mag. moment, hyperfine field 7−112865
Fe complexes, N-substituted hydrazine carboxylic acids, spectral and synthetic study 7−70756
Fe epitaxial film on Ag (001), mag. and electronic props., spin-polarised photoemission study 7−112913
Fe, FCC, electronic struct., KKR-CPA calc. 7−118353
Fe film, magnetisation, effect of Al overlayers 7−132072
Fe monolayers on Ag, direct DC magnetisation temp. and field. depend. meas. 7−112888
Fe particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Fe, pure and alloyed, amorphous, high mag. moment and magnetisation 7−85357
Fe-Co-Al high mag. moment sputtered films, mag. props. 7−125504
Fe-Co-Si-B amorphous alloy comp. optimisation for saturation induction, crystn. temp. and thermal stability 7−99428
Fe-Ho-B metallic glasses, Curie temp., mag. moments and magnetisation 7−85297
Fe-Mn alloys, FCC, electronic struct., spin-density meas. 7−105386
Fe-Ni alloys, itinerant-electron spin glasses, local environment effect 7−70557
Fe-Ni films, magnetisation, effect of Al overlayers 7−132072
Fe-Ni Invar, metastable modulated state, supermoment dynamics, Mossbauer spectrum study, review 7−70529
Fe-Ni multilayers, Fe ferromagnetism 7−99519
Fe-Ni-Si-B amorphous alloys, Ni magnetism, Mossbauer studies 7−113044
Fe-Ti amorphous and crystalline alloys, elec. and mag. props. 7−84820
Fe-V(Cr)(Mn)-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
$Fe_{1-x}B_x$ metallic glasses, rapidly quenched mag. and structural props. 7−105900
Fe_3B, metastable alloy, electronic struct. calc. 7−98796
$Fe_3B_{1-x}C_x$, orthorhombic, Mossbauer studies 7−112966
$FeBO_3$:Ni, photoinduced modulated state, temp. behaviour 7−143771
$Fe_{78}B_{13}Si_9$ amorphous ribbons, mag. moment distrib., Mossbauer study 7−113027
$Fe_{1-x}Co_xSi$ solid soln., band magnetism, mag. susceptibility and sp. ht. studies 7−99463
$Fe_{3-x}Co_xSi$, Mossbauer effect and mag. props. 7−132174
$FeNi_3$, spin-polarised bands via the recursion method 7−125302
$Fe_{1-c}Ni_c$, electronic struct., first principles calcs. of moments 7−118354
$(Fe_{1-x}Ni_x)_{77}Si_{10}B_{13}$, amorphous alloy, mag. contribution of Fe and Ni *(Korean)* 7−85353
FeNiZr glassy and crystallized alloys, Mossbauer and mag. studies 7−85507
Fe_xRh_{1-x} ferromag. and antiferromag. alloys, electronic struct. and local mag. moment calcs. 7−70179
FeSi, temperature-induced magnetism, neutron scatt. meas. 7−118781
$Fe_{100-x}V_x$ alloys, local mag. characts. 7−131995
$Gd_1Ba_2Cu_3O_z$, high T_c supercond., magnetisation and susceptibility, 1.5 to 270 K 7−112652
$Gd(T_{1-x}Co_x)_2$, T=Mn,Fe,Ni,Al, hyperfine props., NMR study 7−132141
$Gd_{1-x}Tb_xAl_2$, noncollinear rotation of Gd^{3+} and Tb^{3+} mag. moments 7−125353
Hf_2FeH_x, mag. and electronic props., XPS 7−100008
$HoBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$HoCo_4B$, cryst. struct. and mag. props. 7−137310
$HoFe_{0.95}Al_{0.05}O_3$, orthoferrite single crystals, spin reorientation and mag. moments 7−143790
$Ho_6Fe_{23}D_x$, x=1,5, 8.2, 12.1, 15.7, struct. and magnetism 7−83851
$HoFeO_3$, orthoferrite single crystals, spin reorientation and mag. moments 7−143790
$HoRu_2Ge_2$, squared modulated mag. struct., antiferromag. order, neutron diffr. study 7−118774
La-M-Cu-O layered perovskite system, (M=La, Ba, Sr, Pb), high T_c supercond., transition temp. 7−99304
$(La_{0.9}Ba_{0.1})_2CuO_{4-y}$, high T_c supercond., mag. and thermal meas. 7−112665
La_2CuO_4 antiferromag. ordering, neutron diffr. obs. 7−99408
La_2CuO_4:Ba superconductive glass state, flux-trapping, mag. moment and diamag. suscept. meas. 7−77150
La_2CuO_{4-y} antiferromag. ordering, neutron polarisation anal. 7−112751
La_2CuO_{4-y}, antiferromag. obs. by powder neutron diffraction 7−112753
La_2CuO_{4-y}, antiferromag. state, muon-spin rot. meas. 7−143947
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., mag. props. 7−112731
$La_{1-x}Th_xCoO_3$, prep., mag. props. 7−77207
$La_yU_{1-y}O_{2+x}$, mag. meas., dilution effect 7−112786
Li-Ti-Zn spinel ferrites, mag. and cryst. struct., polarised neutron diffr. study 7−138193
$Lu(Co_{1-x}Al_x)_2$, pseudobinary laves phase cpds., metamagnetic transition 7−99455
Mn adlayers on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7−113307

magnetic moments continued
Mn, BCC, prediction of ferromagnetism 7−143773
MnBi, film, angular dispersion of mag. anisotropy, three-dimensional study 7−70600
MnNi single cryst., mag. struct., compressive loading *(Russian)* 7−105886
$Mn_{1-x}Ni_xCO_3$, competing antisymmetric exchange and weak ferrimagnetism 7−70537
$Mn_{1-x}Zn_xF_2$ dilute antiferromagnets, mag. mom. and suscept. temp. and freq. depend 7−105901
NbZn single filament superconducting wire stability, real transition characteristic effects 7−143730
$Nd_2Fe_{14}B$ intermetallic cpd., Mossbauer effect study, temp. depend and spin reorientation 7−118926
$Nd_2Fe_{14}B$-based alloys, substituent effects, cryst. field model anal. 7−70550
$(Nd_2Fe_{1-x}Co_x)_{14}B$, mag. hyperfine fields between 100 and 780 K 7−98943
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer spectra study, 100-700 K 7−77434
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033
$Nd_{2-x}M_xFe_{14}$ B-based system, (M=Ti,Hf), magnetisation, Curie temp. and anisotropy 7−138218
NdZn, neutron diffr. and mag. studies 7−77248
Ni (100), electronic structures and surface magnetism at finite temps. 7−77024
Ni complex, $Ni(S_2C_2(CF_3)_2)_2$, prep., struct., elec. and mag. props. 7−99034
Ni complexes, bis(maleonitriledithiolate)-nickel (III), exchange coupled dimers, mag. props. 7−112771
Ni, ferromagnetic, electronic struct., effect of electron correlations and finite temps. 7−105436
Ni film, quench condensed, mag. behaviour, Si, SiO, Al, Pd interface effect 7−118837
Ni II complexes, μ_3-methoxophenolates, ferromagnetic exchange interaction 7−77273
Ni thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
NiFe-DyCo films, ferromag.-ferrimag. exchange interaction, quasistatic magnetisation reversal *(Russian)* 7−105954
$Ni_{80-x}Fe_xB_{16}S_4$ glassy alloy, short range order and mag. props. 7−85324
$(NiFe)_5Sm$ and $(NiFe)_4SmR$, permanent magnets, Ni substitution by Fe 7−112862
NiH_x electronic struct., ab initio band struct. calcs., generalised Slater-Koster fit 7−84655
NiMn, reentrant spin glass state, NMR study 7−132155
NiO, mixed electronic states, mag. moments, XANES study 7−144180
$NiSb_2O_4$, struct. evolution under press., anisotropic compressibilities, magnetic order *(French)* 7−85248
Ni_3V cryst. struct., phase stability and magnetic props. calcs. 7−98044
NiX_2, X=F,Cl,Br,I, mixed electronic states, mag. moments, XANES study 7−144180
$Ni_{0.65}Zn_{0.35}Fe_{2-x}Mn_xO_4$, spinel ferrite, mag. and dielec. props. 7−125454
NpAs high press. mag. props., Mossbauer studies 7−77262
NpAs, hyperfine interactions, Mossbauer spectra, high press. study 7−77437
Np_3As_4 magnetic behaviour, Mossbauer spectrum interpretation with cryst. field model 7−70679
O_2, two dimensional, physisorbed on granite, Monte Carlo study 7−143234
Pd_2DySn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
Pd_3FeH, electronic structure and mag. props. 7−124845
Pd_2HoSn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
Pr polycrystals, high-field magnetisation meas., cryst. field effect calcs. 7−118829
$Pr_2Fe_{12-x}Mn_xCo_2B$, mag. props. Mn substitution effects 7−138219
$PrNi_5$ polycryst. high-field magnetisation meas., cryst. field effect calcs. 7−118828
PtNi, system of interacting Kondo moments, mag. props. 7−105885
Pu, FCC cryst., mag. moments, fully relativistic spin-polarised Dirac theory 7−76732
$PuSb_{1-x}Te_x$, X=0-0.4, hyperfine field, mag. props., ^{121}Sb Mossbauer spectra 7−77436
$RCu_3Mn_4O_{12}$ perovskites, polarisation of mag. moments of R^{3+} ions 7−132060
(rare earth)$_2Fe_{14}B$ magnetic props., 3d magnetism 7−70530
Rb, magnetic-dipole and electric-quadrupole interaction constants 7−141516
Re monomers and dimers adsorbed on W (110), possible magnetism 7−82020
Sm, mag. struct., mol. field approx. 7−92403
SmI_2 mag. suscept. and fluoresc. spectrum in THF solvent meas. 7−143768
$SrMn_2Fe_{16}O_{27}$ hexaferrite, mag. props., phase formation 7−138231
$Tb_2Fe_{14-x}Co_xB$, magnetism 7−131998
$Tb_{1-x}Ho_xCo_2$, mag. props. and cryst. struct. *(Russian)* 7−138275
$TbRh_{2-x}Ir_xSi$, cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
Ti_xMn_{1-x} alloys, magnetic transition, elec. resist. and independent electron subsystem states, conc. depend. meas. 7−70549
α-$TlMnCl_3$, weak ferromagnet, reorientation of mag. moment 7−143794
$TmGa_3$, crystalline electric field and magnetic structure 7−98942
$Tm_{1-x}Lu_xCu_2Si_2$, mag. props. and sp. ht. studies 7−118778
U equiatomic ternary cpds., mag. and elec. props. 7−132031
UFe_2 (Co_2) (Mn_2), Laves phase, electronic struct., LMTO calcs. 7−76761
$U(Fe_{1-x}Co_x)_2$ alloys, ordering temp., mag. moments and hyperfine field, ^{57}Fe Mossbauer study 7−113018
UGaM (M=Co,Ir,Ni,Pt,Rh,Ru) mag. behaviour studies 7−77298
$U(In,Sn)_3$, heavy fermion behaviour, mag. and mixed valence props. 7−92426
UIr, mag. struct. neutron diffr. and magnetisation meas. 7−131990
$(U_xLa_{1-x})_2Zn_{17}$, conc. Kondo system, magnetism and electronic transport 7−85243
UPt_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, cryst. elec. field effects, mag. props. 7−85260
US, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
USe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250

magnetic moments continued
UTe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
V adlayers on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7−113307
$V_{1-c}Fe_c$, electronic struct., first principles calcs. of moments 7−118354
Y-Ba-Cu-O, with transition metal impurities, effects on supercond. props. 7−105789
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$, 90 K superconductor, switching phenomena 7−85190
$Y_2(Co_{1-y}Ni_y)_7H_x$, mag. props., effect of H substitution 7−99445
$Y_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$Y_1(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033
$Y_2(Fe_{1-x}Co_x)_{14}B$, neutron diffr. study 7−112746
$Y_3Fe_{5-x}Sc_xO_{12}$, amorphous, mag. props. study 7−143765
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., Gd substitution effect 7−132011
$(Y_{1-y}La_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
$YbCo_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$YbFe_2$ mag. props., neutron diffr. study 7−77225
$YbFe_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
Zn, de Haas-van Alphen effect, specific Fermi surface section, determ. *(Russian)* 7−98780

magnetic monopoles
axion domain walls, topological mass terms, interactions with photons, electrons and monopoles 7−102655
charge-monopole system, phase factor, Green function 7−73502
cosmic-ray monopole detection using superconducting induction detectors 7−134140
cosmology, mag. monopole abundance from first-order GUT phase transition of early Universe 7−107986
DeWitt monopole particle detectors for thermal states in static space-times 7−89376
Dirac dyon electric charge, CP violating quantum radiative corrections 7−81077
Dirac dyons, charge quantization condition, gauge theoretical fibre bundle anal. 7−128749
Dirac magnetic monopole, explanation for nonexistence 7−116082
Dirac monopole mass scale, Born-Infeld electromag. theory 7−116080
Dirac quantisation rule, mass and dual mass, gravitational magnetic monopoles 7−140574
dyonium, Paschen-Back effect 7−121399
Euclidean supersymmetrization of instantons and self-dual monopoles 7−95782
fermion-monopole interaction, baryon number violation 7−135116
fermion-monopole system, gauge invariant fermion fields 7−67499
fermion-monopole system, Levinson's theorem 7−128928
fundamental particle physics without accelerators 7−73110
geometry and charge-monopole systems, canonical formulation problems 7−80996
gravitomagnetic poles and the quantisation of frequency 7−107994
't Hooft-Polyakov magnetic monopoles from superstring models 7−95810
inflationary universe, monopole problem and primordial black hole problem 7−88700
Kahler-Clifford algebras for magnetic monopoles without strings 7−95771
Kaluza-Klein monopole mass, 5D Einstein eqn. solns. 7−108347
Kaluza-Klein theory, cosmological monopole solns. 7−73111
Kaluza-Klein theory, mag. monopole stability in Euclidean background metric 7−95423
lattice field theory, soliton quantisation, magnetic monopoles in U(1) QED model 7−134912
loop monopoles, topologically nontrivial, algebraic-topology method anal. 7−108799
massless spinning particles in all dimensions and novel magnetic monopoles 7−116047
monopole-antimonopole pair solution of the classical SU(3) Yang-Mills theory 7−102616
monopole-fermion dynamics, temperature Green's functions, using finite temperature field theory 7−116063
Parker limit for flux of multiply charged monopoles 7−95808
planetary heat flow limits on monopole and axion fluxes 7−72342
projective inertial structure and (n-1) force, determ. by monopole eqn. of motion, fifth force existence 7−108338
quantum system with induced gauge fields, monopole fields, spin degrees of freedom 7−81020
self-dual Taub-NUT metric, monopole scatt. and hidden symm. 7−81075
Skyrmion, quantisation, Wess-Zumino term, Berry phases and magnetic monopoles 7−89315
SO_3 gauge field interaction with isovector Higgs field, magnetic monopole structure 7−73521
space-time topological modifications leading to spinor struct., gravit. mag. monopoles 7−115856
Stanford octagonal magnetic monopole detector 7−135736
strong interactions, dual field theory 7−135065
SU(2) Georgi-Glashow model, monopole-fermion interaction including core excitations 7−134921
SU (2) and SU (3) lattice gauge theory, phase transitions, Wilson action, rel. to continuum confinement 7−108789
superheavy grand unified magnetic monopoles in cosmic rays 7−80562
supermassive charged particle detection, extremely slow proton electronic excitation 7−129534
temporal gauge, dyon solutions, non-Abelian gauge field tensor, Higg's-triplet field 7−121371
tepid inflation, entropy prod., GUT monopole dilution below obs. limit 7−88712
Toda molecule equations, finite energy monopole solutions 7−67547
topological invariants in a Chern-Weil framework 7−73501
topological quantization of mass in extended gauge theories with a monopole 7−89361
transition radiation theory, quantum corrections, electron or monopole crossing metal surface *(Chinese)* 7−121416
Yang-Mills fields, classical solutions, flat space instanton chains with monopole limits 7−73496
He proportional tubes, mag. monopole search 7−81877

magnetic permeability
amorphous ferromag. alloys, mag. permeability relax., dissipative type 7−118824
binary magnetic mixtures, permeability eqn. calcs. 7−99500

magnetic permeability continued
cluster paramagnets with chaotic anisotropy, nonlinear permeability *(Russian)* 7−92439
cubic ferromagnetic material, arbitrarily magnetised film, magnetostatic waves 7−85391
ferrites, polycrystalline, microwave permeability in demagnetized state 7−125459
ferromagnet, uniaxial planar magnetic reversal, permeability model *(Russian)* 7−143850
ferromagnetic amorphous materials, mag. permeability aftereffect, struct. distortions 7−85382
flaw detection, EM, permeability and cond. rel. to depth in monitored layer of ferromag. cylinder 7−132876
liquid, wave propag. MHD approx., short-wavelength eqn. 7−123771
magnetic spectra of amorphous ferromagnets 7−77347
Maxwell eqn. general solution for excitation by slotted aperture source in conducting cylinder with concentric layering 7−68512
metallic glasses, domain wall stabilisation, permeability disaccommodation, struct. relax. 7−132088
molecular absorption and dielectric permeability of atmospheric admixture gases in the millimeter range 7−139736
rare earth boride phases, magnetic props., model-statistical prognostication method *(Russian)* 7−85356
steel, austenitic, stainless, type 316, plasma disruption induced mag. phase 7−141282
steel, nonmagnetic, nitriding temp. and gas mixture comp. effect on struct., comp. and props. 7−126307
Co amorphous alloys, magnetic props, effect of magneto-thermal treatment, magnetic field appl. *(French)* 7−99505
Co-Fe amorphous ferromag. alloys, isothermal annealing, permeability aftereffect 7−105965
Co-Fe-Si-B amorphous alloys, magnetostriction and mag. permeability 7−85406
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural props. 7−92482
$Co_{70.3}F_{4.7}Si_{15}B_{10}$ amorphous alloy powders, mag. props. and dynamic compaction, cavitation method 7−92933
$Co_{67.8}Fe_{4.2}CrB_{12}Si_{15}$, glassy metal alloys, perminvar charcts. 7−112918
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
$(Co_{93}Fe_7)_{75-x}Mo_xB_{25}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Co_{70}Fe_5Si_{15}B_{10}$ amorphous ribbons, surface quality and thickness effects, recording head appls. 7−77888
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloys, mag. after effect, influence of heat treatment 7−132086
$Eu_{1-x}La_xS$ solid solns., ferromag. phase transitions studies 7−70546
Fe ion beam sputtered film, induced uniaxial mag. anisotropy meas. 7−105982
Fe-C films, dual ion beam sputtered, mag. props. 7−125976
Fe-Co-Mn-B-Si amorphous ribbons, mag. aftereffect studies 7−92470
Fe-Si, melt-spun ribbons, magnetic and mechanical props. 7−85364
Fe-Si alloy, thermal demagnetisation below Curie pt. influence on mag. permeability 7−143857
Fe-Si-B-based amorphous alloys, mag. permeability and thermal stability 7−85361
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props. 7−99530
FeAlSiN sputtered thin films, hardness, struct., elec. resist. and mag. props., SEM study 7−105983
$Fe_{80-x}B_x$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{82}B_{18-x}C_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{77.5}B_{13}Si_{9.5}$, amorphous, for choke and inductor applications, microstructure and mag. props. 7−86234
$Fe_{78}B_{13}Si_9$ glassy metal powder cores, mag. props. 7−85365
$Fe_{79}B_{16}Si_5$, amorphous alloy, shock consolidated powder, mag. props. rel. to compression rate 7−112855
$Fe_{80}B_{14}Si_6$ amorphous alloy low temp. mag. props., annealing effects study 7−100400
$Fe_{82}B_{18-x}Si_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{78}B_{16}Si_5C$, composite amorphous powder cores, prep. and mag. props. 7−132081
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloys, permeability and coercive field, heat treatment, freq. and field depend. 7−105961
$(Fe_{1-x}Co_x)_{70}(Si_{0.4}B_{0.6})_{30}$ amorphous ribbons, permeability temp. depend. and magnetostriction 7−85354
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, irreversible mag. permeability decay 7−92463
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, magnetic stability, reversible disaccommodation w.r.t. demagnetization 7−92471
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
$Fe_{40}Ni_{38}MNo_4B_{18}$ Metglas, domain walls, wall mobility, coercivity and initial permeability 7−132049
$Fe_{80-x}Ni(Mo)_xB_{20}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7−132081
FeTaCoB amorphous alloys, mag. props., thermal stability, wear and corrosion resist. meas. 7−92466
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
MnZn ferrite, mag. spectra, temp. depend. of mag. permeability *(Russian)* 7−112857
MnZn ferrites, mag. spectra, mag. state, influence of external field, mag. aftereffect 7−143861
Nb, critical field, field depend. of mag. permeability in flux flow state 7−92391
Ni-Zn-Co, polycrystalline ferrite, complex mag. initial permeability, temp. spectra local splitting 7−143847
$Ni_{1+t-x}Zn_xTi_xFe_{2-2t}O_4$, mag. props. rel. to Ti content 7−112854
Si-Fe annealed ribbons, change of permeability 7−132087
Tb-Fe-Co-Bi amorphous films, mag. and magneto-optical props. 7−144040
$(YbPr)_3(FeGa)_5O_{12}$, dielec. and mag. tensors, permeability, at optical freq. 7−85355

magnetic permeability measurement
complex permeability meas. at radio frequencies 7−80829

magnetic permeability measurement continued
Fe-Si, silicon steel strip, meas. of mag. props. by transient recording method *(Korean)* 7−134815
white frequency-spectrum method for the measurement of the dynamic response of magnetic bodies in the linear regime 7−80824
magnetic phase diagrams *see magnetic transitions*
magnetic pinch *see pinch effect*
magnetic polarons *see polarons*
magnetic properties of amorphous substances
alloys, amorphous, mag. props., amorphisation effects, review 7−85264
amorphous alloys, app. to magnetic sensors and transducers 7−89211
amorphous ferrimagnetic insulators with fractional effective dimensionality, effective-field theory correl. calcs. 7−118776
amorphous ferromag. alloys, mag. microstruct. study using SEM with polarisation anal. 7−112741
amorphous ferromag. alloys, mag. permeability relax., dissipative type 7−118824
amorphous ferromagnets, use of scaling plots in phase transition studies 7−70561
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
amorphous solids, activation energy spectra for structural polarization 7−104561
amorphous systems, ferromag. regime, correlated molecular field theory 7−112830
composition stratification processes, influence on mag. props. of amorphous alloys *(Russian)* 7−104549
ferrimagnetic metallic films, elec. cond., structural disorder effect 7−112300
ferrite-polymer composite, Mossbauer and mag. studies 7−125443
ferromagnetic amorphous materials, mag. permeability aftereffect, struct. distortions 7−85382
ferromagnetic thin films, FMR, replaceability of surface anisotropy with effective volume anisotropy 7−112891
field annealed amorphous ribbons, magnetoelastic props., static and dynamic bifurcations study 7−106004
field-annealed magnetoelastic amorphous metal magnetometers, directional characts. 7−102463
films, saturation magnetostriction meas. by small angle magnetisation oscillations 7−85401
Gd-Tb-Co-Fe amorphous films; biaxial oblique mag. anisotropy, Hall characts. 7−143868
glass formation by mech. alloying 7−113472
glasses, defect-related processes and mag. props. 7−137249
Heisenberg amorphous ferromagnets, mean field theory 7−85234
Heisenberg ferromagnets, spin waves 7−125358
induced anisotropy, effect of rotating mag. field annealing *(Chinese)* 7−143784
magnetic spectra of amorphous ferromagnets 7−77347
magnetoelastic strain gauge, ultrasensitive amorphous ribbons, operational characts. 7−102397
magnetostrictive amorphous metal ribbon, low freq. mag. field detection 7−140715
metallic glass, comminution mechanisms of amorphous alloys, effects on mag. characts. 7−77873
metallic glass, magnetostrictive props., fibre optic magnetometer appl., bonding agent effects 7−106000
metallic glass, nonmagnetostrictive type, relax. kinetics, Cr influence 7−99475
metallic glass magnetostrictive transducers, prep. and props., fibre optic magnetic sensors appl. 7−106002
metallic glass ribbons, mag. anisotropy, oriented surface roughness effects 7−105914
metallic glasses, domain wall stabilisation, permeability disaccommodation, struct. relax. 7−132088
metallic glasses, induced anisotropy, rotating mag. field annealing effects 7−85282
metallic glasses, local magnetic environment probe using magnetoresist. 7−84830
metallic glasses, low-magnetostrictive ribbons, anisotropy and magnetostriction, indirect meas. 7−70620
metallic glasses, magnetic aftereffects and struct. relaxation, atomic double well model 7−143862
metallic glasses, magnetic anisotropy, induction by current annealing 7−138221
metallic glasses, magnetic static behaviour near critical conc. 7−143855
metallic glasses, magnetomechanical appls. 7−143891
metallic glasses, magnetostriction and short-range order 7−85402
metallic glasses, reversible relax. kinetics, mag. anisotropy, anelasticity 7−105916
metals, amorphous ferromagnetic, elec. resist., Faber-Ziman model *(Russian)* 7−137887
metals, disordered, superconductivity, magnetism and surface reconstruction 7−84472
NiP-NiCoP, amorphous film, pulse current electrodeposition, meg. props. 7−143874
m-polydiphenylcarbene, ferromag. props., periodic Kondo-Hubbard model calcs. 7−77201
m-polydiphenylcarbene quasi-1D ferromagnet, periodic Kondo-Hubbard model calcs. 7−77200
polymorphism of amorphous, pure Fe, mag. hyperfine field study 7−113023
rapidly solidified alloys, conf., Boston, MA, USA (Dec. 1986) 7−108040
rare earth-Co_4B, R=Pr, Nd, Sm, Gd, Tb, Dy, Er, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
rare earth-Fe_4B, R=Pr, Nd, Sm, Gd, Tb, Dy, Er, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
rare earth-transition metal alloy thin films, amorphous, coercive force, thermomagnetic recording, magnetisation reversal model 7−125444
rare earth-transition metal amorphous alloys, ion mixing form., mag. props. 7−76234
rare earth-transition metal amorphous alloys, thermomagnetic switching parameters, time and radial depend. calcs. 7−118801
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
ribbons, coercivity changes over ribbon length 7−85359
ribbons, domain wall size model 7−132053
semiconductors, amorphous, diamagnetic susceptibility 7−143756
soft amorphous magnets, anisotropy and magnetostriction, pair model calcs. 7−99542
soft magnetic materials, mag. and struct. props. 7−85255

magnetic properties of amorphous substances continued
strong random anisotropy, phase transitions, long range interactions and correls. 7−99441
thin films, magnetoelastic dynamic suscept. calcs. 7−99540
transition metal alloys, $Fe_{80-x}M_xB_{20}$, M=Cr,Mn,Co,Ni, metallic glasses, hyperfine mag. field, comp. and temp. depend., Mossbauer spectra meas. 7−77441
transition metal-metalloid based metallic glasses, physical props. rel. to processing conditions 7−113534
transition metal-rare earth alloy films for magneto-optical recording 7−132366
$BaO\text{-}Fe_2O_3\text{-}B_2O_3$ system, crystallisation of W-type hexagonal ferrites in oxide glass 7−131048
CO-Nb-B glasses, magnetostriction, anomalous temp. depend. 7−85404
$CO_{70}Fe_5Si_{10}B_{15}$ amorphous alloy, regions of reverse magnetisation 7−70587
$CO_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, stress relax. low mag. field props. 7−132117
$CO_{75}Si_5B_{20}$, metallic glass, exoelectron emission 7−132418
C0-V thin films, RF sputter deposition, mag. props. 7−125974
$CdCr_2Se_4$ amorphous film, mag. and elec. props. 7−112339
$Ce_{26}Cu_{74}$, low temp. specific heat, local random mag. anisotropy 7−77295
Co amorphous alloys, magnetic props, effect of magneto-thermal treatment, magnetic field appl. *(French)* 7−99505
Co base thin film alloys, sputtering, amorphous forming range, mag. props. *(Korean)* 7−132454
Co-Au amorphous thin films, prep. and mag. props. 7−85393
Co-B layer deposition from heterogeneous oxidoreduction 7−100140
Co-B-Si glasses, thermal expansion, sp. ht. 7−118804
Co-based metallic glasses, saturation magnetostriction, stress depend. 7−132116
Co-F films, mag. and magneto-optical props. 7−113150
Co-Fe amorphous ferromag. alloys, isothermal annealing, permeability aftereffect 7−105965
Co-Fe-Nb amorphous films, magnetisation and FMR studies 7−132102
Co-Fe-Si-B, amorphous, stress annealing induced mag. anisotropy 7−99440
Co-Fe-Si-B, current pulse annealing, effects on mag. props. 7−142641
Co-Fe-Si-B amorphous alloys, magnetostriction and mag. permeability 7−85406
Co-Gd-Mo, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Co-Nb amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-P, Co-Ni-P amorphous films, electrodeposition, chem. comp. and mag. props. 7−99527
Co-P films, amorphous, stabilisation of stripe domain struct. *(Russian)* 7−105989
Co-Si-B amorphous alloy ribbons, magnetostriction, induced anisotropy and annealing effects, comp. depend. 7−70540
Co-Si-B rapidly melt quenched metallic glasses, magnetomechanical coupling meas. 7−99548
Co-Si-B-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
Co-Sm(Nd)(Pr), amorphous mag. props. 7−132000
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural props. 7−92482
Co-Ti amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Zr amorphous films, induced anisotropy, static field annealing effects 7−99528
CoB base alloys, V and Nb substitution effect on induced mag. anisotropy *(Chinese)* 7−99436
$(CoCr)_{90}Zr_{10}$, amorphous alloys, Curie temp., press. effects meas. 7−118799
$Co_{77}Cr_{12}Zr_{11}$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
$Co_{70.3}F_{4.7}Si_{15}B_{10}$ amorphous alloy powders, mag. props. and dynamic compaction, cavitation method 7−92933
$Co_{80-x}Fe_xB_{20}$ amorphous alloys, ^{59}Co NMR study 7−132138
$Co_{67.8}Fe_{4.2}CrB_{12}Si_{15}$, glassy metal alloys, perminvar characts. 7−112918
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
$(Co_{93}Fe_7)_{75-x}Mo_xB_{25}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Co_{66}Fe_4(MoSiB)_{30}$ amorphous ferromag. alloy, influence of Ni ion plating, FMR and AFMR studies 7−70649
$(Co_{0.94-x}Fe_{0.06}Nb_x)_{78}Si_4B_{18}$ amorphous alloys, mag. props., influence of Nb content and heat treatment *(Korean)* 7−138856
$(Co_{1-x}(Fe_{0.5}Ni_{0.5})_x)_{75}Si_{15}B_{10}$ metallic glasses, electrical resistivity, temp. depend. 7−76877
$Co_{43}Fe_3Ni_{30}Si_{8.8}B_{13.2}$ ferromag. amorphous alloy, struct. relax. obs. 7−83776
$(Co_{0.94}Fe_{0.06})_{75}Si_{15}B_{10}$ metallic glasses, magnetostriction const. meas., temp., stress, structural relax. depend. 7−85400
$Co_{70}Fe_5Si_{15}B_{10}$ amorphous ribbons, surface quality and thickness effects, recording head appls. 7−77888
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloys, mag. after effect, influence of heat treatment 7−132086
$Co_{70.5}Fe_{4.5}Si_{10}B_{15}$, Cr_2O_3 and ZrO_2 particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
$Co_{75-x}Fe_xSi_{15}B_{10}$ amorphous alloy, mag. anisotropy, stress annealing 7−85283
CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118
$(CoMo)_{90}Zr_{10}$ amorphous alloys, Curie temp., press. effects meas. 7−118799
$Co_{81}Mo_{10}Zr_9$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
$Co_{80-x}Nb_xB_{16}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
$Co_{80}Nb_8B_{12}$, rapidly quenched alloy, magnetostriction, depend, on quenching rate, struct. relax. and temp. 7−112917
$Co_{58}Ni_{10}Fe_5Si_{11}B_{16}$ metallic glass, relax. phenomena, crossover effects 7−85363
$Co_{70}Si_xB_{30-y}$ metallic glasses, struct. changes 7−131040
Co_2SnTe_4, amorphous, mag. props. 7−132024
$Co_{86}Ti_{14}$, soft ferromag. amorphous thin films, with induced uniaxial anisotropy, nucl. signal enhancement 7−92549
$Co_{94}Zr_6$ amorphous thin films, mag. and galvanomag. props. 7−112884
Cr_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832

magnetic properties of amorphous substances continued
Cu_2MnAl amorphous spin glass film, orientation depend. relax. obs. 7−125397
$Cu_{59}Zr_{41}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
$Cu_{50}Zr_{50-x}Al_x$ metallic glass, electronic struct.-sensitive electron transport 7−98963
$Dy_xGd_{1-x}Ni$, amorphous alloys, random anisotropy series, complex susceptibility, low temp. 7−105895
DyIG, citrate gel synthesis, charactn. 7−77905
Fe, amorphous, pure, mag. props. and state nonuniqueness, Mossbauer studies 7−113045
Fe, pure and alloyed, amorphous, high mag. moment and magnetisation 7−85357
Fe-B amorphous alloys, crystallisation, NMR and X-ray diffr. study 7−112992
Fe-B ultrathin amorphous films, magnetisation and surface anisotropy determ. 7−112892
Fe-B-Si amorphous films, magnetic ripple, Lorentz microscopy studies 7−70607
Fe-B-Si-C-H metallic glasses, magnetoelastic effect 7−85403
Fe-based amorphous and cryst. materials, produced by spark erosion, microstruct. and props., effect of quench rate 7−119202
Fe-C getter sputtered films, struct. and mag. props. 7−112873
Fe-C-Si amorphous alloys, prep. by melt quenching 7−97957
Fe-Co-B amorphous alloy ribbons, magnetostriction, induced anisotropy and annealing effects, comp. depend. 7−70540
Fe-Co-B-Ni(Cr), metallic glass, relaxation kinetics and Curie temp. 7−104579
Fe-Co-Mn-B-Si amorphous ribbons, mag. aftereffect studies 7−92470
Fe-Co-Si-B amorphous alloy comp. optimisation for saturation induction, crystn. temp. and thermal stability 7−99428
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7−83746
Fe-Cr-P-C amorphous ribbons, magnetic texture, curvature and structural relax. during annealing 7−70582
Fe-Dy(Gd)(Tb) amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7−112895
Fe-F films, mag. and magneto-optical props. 7−113150
Fe-Gd, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Fe-Hf amorphous alloys, Curie temp. shift under hydrostatic press. 7−85299
Fe-Ho-B metallic glasses, Curie temp., mag. moments and magnetisation 7−85297
Fe-Nd multilayer films, mag. props. 7−112903
Fe-Ni-B metallic glasses, ferromag., spin polarisation of secondary electrons 7−138559
Fe-Ni-B sputtered amorphous films, stress sources, mag. meas. 7−84609
Fe-Ni-P, amorphous magnet, crystallisation kinetics 7−111393
Fe-Ni-Si-B, current pulse annealing, effects on mag. props. 7−142641
Fe-Ni-Si-B amorphous alloys, Ni magnetism, Mossbauer studies 7−113044
Fe-Ni-Zr amorphous alloys, effective susceptibility exponent, temp. depend. 7−143766
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
Fe-P-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
Fe-Si-Al Sendust alloy ribbons, mag. props., heat treatment effects 7−100399
Fe-Si-B alloys, amorphous and cryst., magnetic losses, thermomag. treatment effects *(Russian)* 7−99437
Fe-Si-B amorphous alloy mag. props. temp. depend. meas. 7−99506
Fe-Si-B amorphous ferromagnets, spin dynamics, neutron scatt. obs. 7−85322
Fe-Si-B-based amorphous alloys, mag. permeability and thermal stability 7−85361
Fe-Tb amorphous alloys, co-sputtered, direction of easy-axis 7−112886
Fe-Ti amorphous and crystalline alloys, elec. and mag. props. 7−84820
Fe-V(Cr)(Mn)-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
Fe-Y compositionally modulated films, thermal anal. 7−99512
Fe-Zr, amorphous, hydrogenation induced changes in mag. props., Mossbauer spectra, magnetisation meas. 7−99444
Fe-Zr, amorphous, sputtered and solid-state-reacted films, phase separation 7−98744
Fe-Zr, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Fe-Zr amorphous alloys, ion beam mixed, mag. and elec. transport props. 7−113024
Fe-Zr metallic glasses, mag. props. study 7−118827
$Fe_x Hf_{1-x}$ glasses, mag. props. 7−118922
$Fe_{60}Al_{28}B_{12}$, melt spun alloy, Mossbauer study 7−113028
$Fe_{80.5}(B,Si,C)_{19.5}$ amorphous ribbon, effect of laser irradiation on 50 Hz core loss 7−85347
$Fe_{0.8}B_{0.2}$ sputtered amorphous films, crystallization, mag. props., influence of surface layer 7−131026
$Fe_{1-x}B_x$ metallic glasses, rapidly quenched mag. and structural props. 7−105900
$Fe_{100-x}B_x$, amorphous alloys, crystallisation, Curie temp., mag. props., Mossbauer spectra *(Japanese)* 7−92425
$Fe_{60}B_{40}$ sputtered amorphous alloys, in-plane mag. texture, Mossbauer spectra studies 7−70614
$Fe_{70}B_{30}$-Ag compositionally modulated amorphous sputtered films, magnetisation temp. depend. study 7−112900
$Fe_{80-x}B_x$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{80}B_{20}$ amorphous alloys, neutron irradiation, effect on mag. props. 7−70593
$Fe_{80}B_{20}$ amorphous ultrafine metallic particles, sputtering deposition and mag. props. 7−85381
$Fe_{80}B_{20}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
$Fe_{84}B_{16}$, amorphous, mag. props. 7−105906
$Fe_{80}B_{13}C_7$, amorphous alloy, mag. props., crystallisation and embrittlement 7−132013
$Fe_{81}B_{13.5}C_2$, amorphous films, FMR and fiber optic interferometric studies 7−125541
$Fe_{82}B_{18-x}C_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{82}B_{18-x}Ge_x$ amorphous alloys, elec. resistivity, coherent electron-magnon scatt. contribution 7−112289

magnetic properties of amorphous substances continued
$Fe_{80}B_{20}H_x$, amorphous ferromagnets, H diffusion, mag. after effect 7−105972
$Fe_{75}B_{25-x}Nd_x$ rapidly quenched alloys, mag. props. 7−77357
$Fe_{77.5}B_{13}Si_{9.5}$, amorphous, for choke and inductor applications, microstructure and mag. props. 7−86234
$Fe_{78}B_{13}Si_9$ amorphous ribbons, mag. moment distrib., Mossbauer study 7−113027
$Fe_{78}B_{13}Si_9$ glassy metal powder cores, mag. props. 7−85365
$Fe_{78}B_{13}Si_9$ metallic glass, magnetomechanical coupling 7−132115
$Fe_{78}B_{22-x}Si_x$, metallic glasses, crystn. and thermal stability 7−83745
$Fe_{79}B_{16}Si_5$, amorphous alloy, shock consolidated powder, mag. props. rel. to compression rate 7−112855
$Fe_{79}B_{16}Si_5$, amorphous alloy, phys. props. and struct., effect of cold rolling 7−144437
$Fe_{80}B_{13}Si_7$, amorphous alloy, mag. props., crystallisation and embrittlement 7−132013
$Fe_{80}B_{14}Si_6$ amorphous alloy low temp. mag. props., annealing effects study 7−100400
$Fe_{80}B_{20-x}Si_x$ amorphous alloys, mag. props. and mag. annealing, effect of different Si contents *(Korean)* 7−132089
$Fe_{80}B_{8.74}Si_{11.26}$ metallic glass, magnetisation studies 7−143856
$Fe_{82}B_{12}Si_6$, metallic glass, ferromag., spin polarisation of secondary electrons 7−138559
$Fe_{82}B_{18-x}Si_x$ amorphous alloys, magnetoelastic behaviour, localised moment model explanation 7−99549
$Fe_{82}B_{18-x}Si_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{81}B_{13.5}Si_{3.5}C$ amorphous ferromag. ribbons, mag. domains, dynamical obs. 7−125515
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloys, permeability and coercive field, heat treatment, freq. and field depend. 7−105961
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloy, mag. props., stress depend. 7−143890
$Fe_{81.5}B_{13.5}Si_4C$, amorphous ribbons, annealing, struct., Mossbauer spectra, X-ray diffr. 7−106554
FeBSiCrC, ferromag. amorphous alloys, internal friction, structural evolution, 20-550°C 7−119305
$Fe_{80.5}Bi_{12}Si_{4.5}C_3$ amorphous alloy ribbon, mag. props., substrate temp. effects 7−100401
$(Fe_{1-x}Co_x)$-Si, B amorphous wires, Barkhausen discontinuities 7−125460
$Fe_{67}Co_{18}B_{14}Si$, amorphous mag. material, isothermal nucleation and growth studies 7−117818
FeCoNi-based metallic glasses, induced anisotropy and magnetostriction temp. depend. 7−105912
$(FeCoNi)_{78}Si_{10}B_{12}$ amorphous alloys, magnetic anisotropy studies 7−99442
$(Fe_{1-x}Co_x)_{70}(Si_{0.4}B_{0.6})_{30}$ amorphous ribbons, permeability temp. depend. and magnetostriction 7−85354
$(Fe_{1-x}Co_x)_{75}Si_{15}B_{10}$, metallic glasses, thermoelec. and calorimetric studies 7−137904
$(Fe_{1-x}Co_x)_{77}Si_{10}B_{13}$, amorphous alloy, magnetostriction meas. *(Korean)* 7−92487
$Fe_5Co_{70}Si_{15}B_{10}$ amorphous films, pulse magnetisation properties *(Russian)* 7−143864
$Fe_{72}Co_3Si_{15}B_{10}$, glassy alloy, Mossauer, elec. and mag. studies 7−99632
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ metallic glass, magnetisation and magnetostriction obs. 7−106008
$Fe_{70}Cr_{10}B_{20}$, amorphous, intrinsic mag. props., DTMG and DTA studies 7−143785
$Fe_{80}Cr_5B_{15}$, amorphous ferromagnet, paramag. neutron scatt. 7−138192
$(Fe_{1-x}Cr_x)_{80}B_{12}Si_8$ amorphous alloys, mag. props., effect of Cr additions *(Korean)* 7−131045
$Fe_{77}Cr_2B_{16}Si_5$ amorphous ribbons, magneto-elastic wave amplitude variation *(Japanese)* 7−106009
$Fe_{78}Cr_2B_{12}Si_8$, amorphous, quenched, annealed, ferromag. reson. 7−112962
$Fe_{80-x}Cr_xB_{14}Si_6$, amorphous, Mossbauer spectra, effects of Cr content and temp. 7−99623
FeCrCPSi metallic glass, Curie temp. determ., quench rate effects on structural state, DSC study *(French)* 7−99458
$Fe_{80-x}Cr_x(PC)_{20}$, low temp. resist. and thermoelec. power 7−137894
$(Fe_xCr_{1-x})_{75}P_{15}C_{10}$, amorphous, reentrant spin glass props. 7−112811
$Fe_{74.7}Cr_{3.8}P_{8.7}C_{10.7}Si_{1.9}$, melt spun amorphous ribbons, mag. props. 7−132076
$FeF_3.xHF$, amorphous, Mossbauer spectra, mag. suscept. meas. 7−125583
$(Fe_{1-x}M_x)_{80}B_{20}$, (M=W,Cr), amorphous alloy, conc. depend. of resist. and magnetoresist. 7−98975
$Fe_{8-x}M_xB_{20}$ (M=Cr, Co, Ni), amorphous foils, temp. depend. of mag. props. 7−132166
$Fe_{80-x}M_xB_{20}$ (M=Ti, Cr, Mn, Co, Ni) amorphous alloys, Curie and crystallization temps. 7−132012
$Fe_{80}M_3B_{17}$ (m=transition metals), amorphous alloys, influence of transition metal additives on transport props. 7−137892
$Fe_{82-x}M_xB_{18}$ amorphous ribbons, mag. props. and atomic struct. studies 7−99507
$Fe_xM_{70-x}Ti_{30}$, (M=Co, Ni, Cu) amorphous alloys, enhanced magnetism on Fe substitution 7−112851
FeMnB metallic glasses, near linear temp. depend. of thermopower 7−84832
$Fe_{71.5}Mn_8B_{9.5}Si_{11}$, amorphous, Curie temp., influence of struct. relax. 7−97977
$(Fe_{100-x}Mn_x)_{75}P_{15}C_{10}$ amorphous cpd., mag. field sensor, cryogenic appls., Hall signal probe 7−89231
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
$Fe_{1-x}Mo_x$, metastable BCC and amorphous, produced by vapour quenching, mag. props. 7−77255
$Fe_{76}Mo_3(SiB)_{21}$, metallic glass, low losses at high freqs., low remanence, effect of heat treatment 7−112863
$(Fe_{1-x}Nb_x)_{80}B_{16}Si_4$, amorphous alloy ribbons, mag. domain props. rel. to annealing and Nb content *(Korean)* 7−132070
$Fe_{80-x}Nb_xSi_5B_{15}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
$(Fe_{1-x}Ni_x)_{80}B_{20}$, amorphous alloy, magnetostriction meas. *(Korean)* 7−92487
$Fe_{40}Ni_{40}B_{20}$ amorphous thin films, crossover effect for uniaxial anisotropy 7−132008
$Fe_{40}Ni_{40}B_{20}$ amorphous alloys, aging, Mossbauer and mag. study 7−132167
$Fe_{40}Ni_{40}B_{20}$ amorphous thin films, coercive field, thermomagnetic annealing influence 7−138292

magnetic properties of amorphous substances continued
$Fe_{40}Ni_{40}B_{20}$, stress annealed amorphous alloy, mag, surface anisotropy, ferromag. resonance 7−106031
$Fe_{41}Ni_{41}B_{18}$, amorphous, self-diffusion of radioactive ^{59}Fe tracer atoms 7−91884
$Fe_xNi_{80-x}B_{20}$ glassy alloys, magnetisation and elec. resist. meas. 7−85360
$Fe_xNi_{80-x}B_{20}$, relax. processes, magnetoelastic meas. 7−85405
FeNiBAl amorphous alloys near critical comp., low field reversible DC magnetisation meas. 7−70591
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$Fe_{16}Ni_{64}B_{19}Si$ amorphous ferromag., effective susceptibility exponent 7−143770
$Fe_{40}Ni_{40}B_{13}Si_7$ glassy ribbons, process parameters and props. 7−77889
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromag., phase transition, AC susceptibility meas. 7−85294
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromagnets, Curie point anomalies in elec. resist. 7−99461
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, critical exponent, mag. susceptibility meas. 7−85321
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, mag. transition, inhomogeneity effects 7−92427
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, irreversible mag. permeability decay 7−92463
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, magnetic stability, reversible disaccommodation w.r.t. demagnetization 7−92471
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
$Fe_{40-x}Ni_{40}Cr_xB_{20}$ ribbons, elec. resist. minimum 7−98974
$Fe_{40}Ni_{38}MN_{04}B_{18}$ Metglas, domain walls, wall mobility, coercivity and initial permeability 7−132049
$Fe_{80-x}Ni(Mo)_xB_{20}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{50}Ni_{40}P_{10}$, pulsed laser annealing, study using *(Russian)* 7−91462
FeNiPB metallic glass ribbons, domain wall surface energy, complex impedance meas. 7−118820
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, spin waves at 77 K, inelastic neutron scatt. study 7−92419
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous, dissolved H mobility, induced mag. anisotropy 7−104589
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous ferromagnet, spin dynamics, neutron scattering 7−105903
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous ribbon, ferromag., domain struct., neutron depolarisation studies 7−118819
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, domain wall motion reproducibility 7−132054
$(Fe_xNi_{1-x})_{80}(P_yB_{1-y})_{20}$, ferromag. glassy ribbons, small angle neutron scatt., domain wall struct. 7−99414
$(Fe_{0.16}Ni_{0.84})_{75}P_{16}B_6Al_3$, conc. spin glass, spin relax. 7−112932
$(Fe_xNi_{1-x})_{75}P_{16}B_6Al_3$, x=0.06, 0.1, thermal magnetic fluctuations in metallic spin glasses 7−105931
$(Fe_{1-x}Ni_x)_{77}Si_{10}B_{13}$, amorphous alloy, mag. contribution of Fe and Ni *(Korean)* 7−85353
$Fe_{25}Ni_{55}Si_{10}B_{10}$ metallic glass, mag. elec. and elastic props. 7−85362
$Fe_{40}Ni_{40}Si_{13}B_7$ amorphous ferromagnet, temp. depend. of mag. props. 7−132165
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
FeNiZr glassy and crystallized alloys, Mossbauer and mag. studies 7−85507
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, Curie temp. press. effect 7−132118
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$Fe_{90-x}Ni_xZr_{10}$ amorphous alloys, spin dynamics, inelastic neutron scatt. study 7−125347
Fe_xO_{1-x}-based perpendicular thin films, mag. recording appls. 7−125494
$Fe_{72}Si_{18}B_{10}$ amorphous alloy, second order mag. phase transition 7−85295
$Fe_{78}Si_{10}B_{12}$ glass, mag. annealing influence on shear modulus and internal friction, piezomag. props. 7−70622
$Fe_{78}Si_{10}B_{12}$, WC particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
$Fe_{78}Si_9B_{13}$ amorphous alloys, calorimetric, mag. and mech. props., influence of P 7−117829
$Fe_{90-x}Si_xB_{10}$, amorphous, Mossbauer spectra, quadrupole splitting distrib. 7−85506
$Fe_{90-x}Si_xB_{10}$ amorphous alloys, heat treatment, change D/T_c ratio 7−113734
$Fe_{80}Si_6B_xP_{14-x}$, amorphous alloys, magnetostriction, soft mag. props. *(Korean)* 7−138279
Fe_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7−85304
FeTaCoB amorphous alloys, mag. props., thermal stability, wear and corrosion resist. meas. 7−92466
$Fe_{100-2x-y}Tb_xLa_xB_y$ amorphous alloys, domain struct. and anisotropy studies 7−99494
$Fe_{73}Ti_{27}H_x$ amorphous alloys, mag. props., Mossbauer studies 7−143942
$Fe_{84-x}Y_xB_{16}$ amorphous alloys, crystallisation 7−131027
$Fe_{95-x}W_xB_x$ amorphous alloys, thermomagnetic and crystallisation behaviour 7−77258
FeZr amorphous films, resistivity 7−98970
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
$Fe_{90}Zr_{10}$ magnetic glass, hydrogenation study by Raman spectra 7−85716
FeZrBiSiB amorphous alloy, relax. phenomena mag. props. 7−111408
$Fe_{91}Zr_9H_x$, amorphous ferromagnets, H diffusion, mag. after effect 7−105972
Gd_xAg_{1-x}, amorphous, magnetostriction, thermal expansion meas. 7−99544
Gd-Al, amorphous spin glass, mag. correlations 7−112817
Gd-Co amorphous films, alloyed, mag. props. *(Russian)* 7−125519
Gd-Co amorphous films, comp. modulated, by bias sputtering 7−86025
Gd-Co-(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Gd-Eu-Co amorphous films, FMR study 7−143912
Gd-Eu-Co sputtered films, Kerr rot. angle and Hall effect 7−144039
Gd-Fe amorphous film, surface layer mag. props., oxidation effect 7−92485
Gd-Fe-Co amorphous films, magneto-optical props. rel. to sublattice magnetisation 7−144037
Gd-Sm-Fe amorphous films, mag. and magneto-optical charact. 7−143866
Gd-Tb-Co amorphous films, mag. and magnetooptical charact., influence of sputtering conditions 7−132098

magnetic properties of amorphous substances continued
Gd-Tb-Co-Fe amorphous thin films, mag. charact. rel. to magneto-optical recording appls. 7−143867
Gd-Tb-Fe magneto-optical disc film, mag. anisotropy distrib. meas. using Hall method 7−143787
Gd-Tb-Fe-Co amorphous films, mag. props. control for magneto-optical recording 7−92481
GdCo amorphous films, DC diode getter sputtered, with perp. anisotropy, anomalous aging charact. 7−125497
GdCoMo amorphous thin films, surface mag. anisotropy, X-band microwave spectra study 7−99522
GdFe amorphous thin films for perp. recording, magnetooptic study 7−92477
$Gd_{27}Tb_{10}Fe_{63}$ amorphous film, mag. anisotropy and thermal stability, effect of annealing 7−70604
Ho-Co, amorphous thin films, mag. anisotropy and magneto-optic Kerr spectra 7−125376
Ho_4Co_3 bulk amorphous alloy, rapid quenching and mag. props. 7−85298
InSb-NiSb, anisotropic amorphous ribbon, eutectic composition, melt spinning technique 7−144359
Mg-Al-Zn, icosahedral alloy, resist., mag. suscept., comp. depend. 7−131608
Mn-B amorphous alloys, magnetism, elec. transport 7−112761
Mn-Ga thin films, amorphous, crystn. of selected areas, domain image 7−83755
Mn-Y amorphous alloys, spin glass charact., AC suscept. study 7−105929
Mn_xB_{100-x} amorphous system, magnetism studies 7−112816
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7−112742
Mn_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Nd-Co amorphous alloy films, magneto-optical props. study 7−113156
Nd-Fe amorphous alloy films, magneto-optical props. study 7−113156
Nd-Fe-Co sputtered films, mag. and magneto-optical props. 7−143869
Ni base amorphous alloys, glass form., thermal stability, mag. props. 7−83729
Ni-F films, mag. and magneto-optical props. 7−113150
Ni-Fe-P oxide system amorphous thin films, struct. and mag. props. 7−112872
Ni-Nb amorphous alloys, electronic transport and magnetisation meas. 7−98969
Ni-P layer deposition from heterogeneous oxidoreduction 7−100140
Ni-Zr metallic composites, form. of bulk amorphous metals from solid state reaction 7−113477
Ni_xAg_{1-x}, amorphous thin films, elec. and mag. props. 7−143430
$Ni_{81.6}B_{18.4}$ metallic glass, FMR linewidth and resonance field meas. 7−143913
$Ni_xFe_{0.8-x}B_{0.2}$, amorphous, optically thermally stimulated exoelectron emission, kinetics 7−132419
$Ni_{80-x}Fe_xB_{16}S_4$ glassy alloy, short range order and mag. props. 7−85324
NiFeSiB amorphous alloys, high field susceptibility peak 7−132075
$Ni_{80-x}Fe_xSi_8B_{12}$ amorphous magnet, reentrant transition studies 7−143797
$Ni_{77}M_2B_{20}$ (M=transition metals), amorphous alloys, influence of transition metal additives on transport props. 7−137892
NiP-NiCoP amorphous magnetic film, compositionally modulated, prep. and magnetic props. 7−138291
$Ni_{81.5}P_xB_{18.5-x}$ amorphous and liq. alloys, mag. props. study 7−118768
Ni_2SnTe_4, amorphous, mag. props. 7−132024
R-Co (Fe) amorphous alloys, magnetism in disordered materials, model 7−112804
$Ru_xFe_{80-x}B_{20}$ amorphous alloys, high field magnetisation and ^{57}Fe hyperfine field studies 7−112849
$Ru_xFe_{80-x}B_{20}$, amorphous, electrical resistivity 7−137893
Si/FeC compositionally modulated amorphous alloys, mag. and diffusional props. 7−85358
Si-Fe annealed ribbons, change of permeability 7−132087
SmIG, citrate gel synthesis, charactn. 7−77905
Tb-Co and Tb-Fe-Co magneto-optical disc prep. by RF sputtering 7−144036
Tb-Co(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Tb-Fe amorphous alloys, spin ordering, small angle neutron scatt. studies 7−125323
Tb-Fe amorphous films, stability of mag. props. 7−92480
Tb-Fe-Co amorphous films, magnetic and magneto-optical props. 7−113159
Tb-Fe-Co amorphous films, mag. and magneto-optical props., recording appls. 7−144038
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. charact., saturation Kerr rot. meas. 7−125499
Tb-Fe-Co sputtered films, mag. and struct. props., influence of H_2 partial press. 7−132097
Tb-Fe-Co-Bi amorphous films, mag. and magneto-optical props. 7−144040
TbCo amorphous films, density and magnetooptical props., effect of sputtering conditions 7−132243
TbCo amorphous films, prep. mag. anisotropy, effects of sputtering conditions 7−132095
TbCo sputtered films, mag. and struct. charact., effects of Ar press. and substrate bias 7−132094
$Tb_{0.22}Cu_{0.78}$ amorphous alloy, short and medium range mag. order, neutron scatt. obs. 7−85323
TbFe amorphous films, laser-written mag. domains, Lorentz microscopy obs. 7−125517
TbFe, amorphous films, magnetisation reversal rel. to microstruct. 7−132114
TbFe, amorphous films, sputter deposition, magneto-optical and mag. props 7−132105
TbFe amorphous sputtered films, effective comp., thickness depend. 7−143248
TbFe amorphous sputtered films, remanence 7−143873
TbFe amorphous thin films for perp. recording, magnetooptic study 7−92477
TbFe films, magnetic surface props. 7−138294
Y-Gd-Fe amorphous sputtered films, mag. props. 7−143865
$Y_{1-x}Co_x$ amorphous films, Co local anisotropy, mag. suscept. meas. 7−99523
$Y_3Fe_{5-x}Sc_xO_{12}$, amorphous, mag. props. study 7−143765
$Yb_{80}X_{20}$ (X=Cu, Ag, Au), amorphous alloys, transport props., mag. susceptibility, sp. ht. 7−98968
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564

magnetic properties of amorphous substances continued
$(Zr_{0.5}Ni_{0.5})_{100-x}P_x$ metallic glasses, magnetisation, ^{31}P NMR study 7−112762
$Zr_{67}Ni_{33}$-based metallic glasses, mag. susceptibility and superconductivity 7−85265
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564

magnetic properties of dilute alloys *see magnetic properties of dilute systems*

magnetic properties of dilute systems
see also local moments in dilute systems; magnetic impurity interactions
2D bond-diluted O(n) model, phase transitions 7−143811
conductivity in weakly localised regime, Kondo effect 7−84865
diamagnetic crystal with paramag. impurity, saturation of optical transitions, polarisation of nuclei 7−131983
diluted ferromag. alloy, mag. props., reaction field approx. approach 7−132058
disordered systems, electron and mag. behaviour, review 7−70567
spheroidal mag. particles, dilute polydispersive suspension, mechanical description 7−75683
superconductors containing transition-metal impurities, strong-coupling theory 7−85182
Bi-Mn, dil. alloy directional solidification, mag. props. 7−105960
$Cd_{1-x}Mn_xTe$ diluted mag. semicond., zero field muon spin relax. studies 7−92564
$Ce_xLa_{1-x}Al_2$, Kondo effect, Fermi liquid description of thermodynamics 7−92402
Co-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
Cr-Fe-Mn(V), dilute, resonance impurity scatt. 7−70297
Fe, paramagnetic, dilute impurities, surface segregation and electronic struct. 7−84301
$K_2Cu_xZn_{1-x}F_4$, dilute 2D Heisenberg ferromagnet, linear optical birefringence 7−144010
$K_2Mn_xZn_{1-x}F_4$, dil. antiferromagnet, break-up of long range order, zero mag. field 7−112749
$Li_yMgYb_2S_4(Se_4)$ lithiated spinels, elec. and mag. meas 7−143422
Mn_xTe_{1-x}, dilute alloys, mag. susceptibility 7−99421
$Mn_xZn_{1-x}F_2$ cpds., NMR of F, line profile, 4.2 to 300 K *(German)* 7−132157
Ni-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
PdAuFe, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
PdAuMn, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
PdGd, magnetoresist. and ferromag. ordering 7−131613
ScDy spin glass, AC suscept., freq. depend. 7−105927
ScEr spin glass, AC suscept., freq. depend. 7−105927
ScGd spin glass, AC suscept., freq. depend. 7−105927

magnetic properties of fine particles
see also superparamagnetism
colloid superparamagnetic particles, anomalous susceptibility, in alternating mag. field 7−112866
CrO_2 tape particles, switching field distrib., rel. to time depend. magnetisation 7−85376
ferromagnetic particles, growth from cation reduction by borohydride ions 7−105967
ferromagnetic particles, movement in nonuniform field of mag. dipole 7−90488
ferronematic layer with needle-like ferrite particles, mag. behaviour in external mag. field 7−77359
ferrosuspension, magnetisation, Fokker-Planck eqn. soln. 7−125488
longitudinal particulate medium, hysteretic props. ang. depend. 7−125485
magnetisation processes, effect of interaction and anisotropy const. distrib. 7−85377
metallic glass, comminution mechanisms of amorphous alloys, effects on mag. characts. 7−77873
micromagnetics, surface anisotropy 7−125473
monodisperse particles, ferrofluids, fruit-fly model system 7−77364
particles suspended in Newtonian fluid, orientation dynamics 7−125484
permanent magnet alloys and particulate recording media, mag. viscosity meas. 7−132066
polytwin ferromag. particles, single-domain struct. *(Russian)* 7−143839
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
single domain particles, mag. props., defect effects 7−125471
small metallic particles, magnetism theory 7−70597
small particles, structural tension and mag. props. 7−125469
small particles and thin metallic films, conf., Sumy, USSR (Sept. 1985) 7−120687
spheroidal mag. particles, dilute polydispersive suspension, mechanical description 7−75683
spin-cluster theory of mag. materials, spin glasses appl. 7−92436
Stoner-Wohlfarth particles, noninteracting, isothermal remanent magnetisation 7−85379
superparamagnetic particles, hyperfine struct. of anomalous Mossbauer spectra 7−106060
two-sphere agglomerate, magnetisation loops with nonvanishing mag. anisotropy 7−70592
$BaFe_{12-2x}Co_xM_xO_{19}$, M=Ti, Mo, ferrite particles, synthesis, characterisation 7−125466
$BaFe_{12-2x}Co_xTi_xO_{19}$ fine particles, coprecipitation tempered, mag. props. 7−125481
$BaFe_{12}O_{19}$, ferrite particles, mag. anisotropy effect on squareness of perpendicular recording media 7−125375
$BaFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$BaFe_{12}O_{19}$ particles prep. by glass crystn. method 7−86104
Bi-Mn, dil. alloy directional solidification, mag. props. 7−105960
Co particles, isothermal remanent magnetisation 7−85379
Co particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Co-FeO pigments for mag. recording, reversible coercivity vs. temp. losses 7−85370
Co-γ-Fe_2O_3 epitaxial layer on $Zn_{0.2}Fe_{2.8}O_4$, particles, coercivity meas. 7−125486
$CoFe_2O_4$ ferrite epitaxial layer on $Zn_{0.2}Fe_{2.8}O_4$ particles, mag. props. 7−125482
$CoFe_2O_4$ ultrafine ferrite particles, mag. props. 7−77373

magnetic properties of fine particles continued
CoO-Fe_2O_3 particle series, mag. and struct. props., effect of annealing in N_2 7−85367
$Co_{1-x}Zn_xFe_2O_4$ magnetic pigments, particle size distrib. meas. by TEM 7−85378
$CrFe_2O_4$, colloidal ferrites, preparation and mag. props. 7−77358
CrO_2 fine particles, mag. moment 7−85369
CrO_2 magnetic pigments, particle size distrib. meas. by TEM 7−85378
CrO_2 particles for magnetic recording, improved prep. method 7−86105
CrO_2:Fe powders, thermal stabilisation, effect on mag. and struct. props. 7−85373
CrO_2:Ir particles, mag. props. 7−85380
Cu, small particles in mag. field, size effect 7−125549
Cu-Ni-Fe single-domain particles, superparamag.-ferromag. transition 7−125470
Er, nanocrystalline, prep., mag. transitions, suscept. meas. 7−125478
Fe acicular ultrafine particles by reduction of α-Fe_2O_3 7−85372
Fe colloidal fine particles, mag. moment, hyperfine field 7−112865
Fe, fine particles, morphology, porous texture, mag. props., haematite reduction prep. 7−77868
Fe fine particles, prep. mag. props. 7−125477
Fe particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Fe, ultrafine particles, prepared by reduction of uniform Fe_2O_3 particles, mag. characts. 7−125480
Fe ultrafine particles in Fe-SiO_2 granular solids, spontaneous magnetisation, temp. depend. 7−125475
Fe-Ni-Cr, austenitic, ageing, low temp. mag. props. rel. to precipitated γ' phase particles *(Japanese)* 7−105958
Fe-SiO_2 granular solids, mag. props. 7−125476
$Fe_{80}B_{20}$ amorphous ultrafine metallic particles, sputtering deposition and mag. props. 7−85381
$Fe_{78}B_{16}Si_5C$, composite amorphous powder cores, prep. and mag. props. 7−132081
Fe_3C dispersed C, synthesis from ferrocene, vinylferrocene and divinylbenzene systems, mag. props. 7−77853
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ devitrified metallic glass, fine particle superparamagnetic props. 7−143860
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7−132081
α-Fe_2O_3 annealed submicronic monodispersed particles, Morin temp. particle size depend. meas. 7−85290
γ-Fe_2O_3 magnetic pigments, particle size distrib. meas. by TEM 7−85378
γ-Fe_2O_3 powders, particle perfection influence on mag. props. 7−85374
γ-Fe_2O_3 powders for mag. recording, surface props. 7−84482
γ-Fe_2O_3 recording particles, high-field magnetism 7−85368
γ-Fe_2O_3:Co particles, stability of mag. props. 7−92469
γ-Fe_2O_3:Co^{2+},Zn^{2+} acicular particles, mag. props. modification 7−85371
γ-Fe_2O_3-Fe_3O_4 films, pyrolysis prep., Mossbauer and Faraday rot. study 7−85387
Fe_2O_3-Fe_3O_4 iron oxide powder, increasing coercivity with aging 7−125483
Fe_3O_4, disperse particles, mag. suscept. 7−125487
Fe_3O_4, magnetite ultrafine particles, water/oil microemulsion preparation and mag. props. 7−99510
Fe_3O_4 particle dispersed polymer film, precip. prep., mag. recording appl. 7−126031
Fe_3O_4 particles in ferrofluid, initial suscept. meas., 80-300 K 7−125474
Fe_3O_4 small ferromag. particles, correlation spectroscopy study 7−70599
Fe_3O_4, ultrafine ferrite particles, mag. props. 7−77373
Fe_3O_4 uniform spherical magnetite particles, prepared from gel, mag. props. 7−105968
$FeOHSO_4$ fine particles, ESR linewidth temp. depend. anal. 7−85409
Mg ultrafine particles, mag. susceptibility, paramagnetic enhancement 7−118769
$MnFe_2O_4$, ultrafine ferrite particles, mag. props. 7−77373
$Nd_2Fe_{14}B$ particles, mag. props. and stability 7−85375
Ni ultradisperse powders, mag. props. and struct. 7−125472
Ni-Al_2O_3 metal-ceramic composites, magnetic and TEM studies 7−77924
$SmCo_5$ powder magnet, mag. struct. and texture state influence 7−77381
$SrFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$Y_2Fe_{14}B$ particles, mag. props. and stability 7−85375

magnetic properties of substances
see also antiferromagnetic properties of substances; demagnetisation; diamagnetic properties of substances; ferrimagnetic properties of substances; ferromagnetic properties of substances; magnetic permeability; magnetic properties of amorphous substances; magnetic properties of dilute systems; magnetic properties of fine particles; magnetic structure; magnetic surface phenomena; magnetic susceptibility; magnetic transitions; magnetisation; magnetocaloric effects; paramagnetic properties of substances
actinide intermetallic cpds., electronic struct., magnetism 7−105381
actinide systems, orbitally driven magnetism 7−105893
actinide tetravalent ions and cpds., optical and mag. props. 7−106106
alkali metals, liquid electron-electron and electron-ion interactions 7−84730
Anderson model, periodic, variational ground states, valence fluctuations 7−76844
conference, Baltimore, MD, USA (Nov. 1986) 7−120690
conference Szczyrk-Bila, Poland (Sept. 1986) 7−134334
para-Fermi gas, interacting in mag. field, thermodynamic and mag. props. 7−102297
low temp. props., conference, Moscow, USSR (May 1986) 7−102010
metal hydrides, mag. studies 7−99415
metals, electron-hole symm. of shells of equivalent electrons, effects on spectral and mag. props. *(Russian)* 7−112156
metals and alloys, elec. resist., mag. correlations, book 7−102033
random magnetic materials, neutron depolarisation during transmission, density matrix calcs. 7−92405
rare earth magnetism, history and foundations 7−66884
rare earths and actinides, anomalous, conf., Grenoble, France, (July 1986) 7−72697
semiconducting ferroelectrics and ferroelectric mag. materials, interband electron excitations, elec., mag. and toroidal oscills., optical props. 7−99732
sensors and instruments based on new materials 7−121091
transition metal dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728

magnetic properties of substances continued
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7−77387
H, spin polarised atomic, interatomic interactions, thermodynamic and mag. props., book contrib. 7−84446
H, spin polarised gas, giant opalescence and magnetokinetic effects calcs. 7−83408
^{3}He, spin polarised gas, giant opalescence and magnetokinetic effects calcs. 7−83408
Rb, spin polarised gas, giant opalescence and magnetokinetic effects calcs. 7−83408

magnetic read/write heads *see magnetic heads*

magnetic recording
see also tape recorders; thermomagnetic recording
conference, Parma, Italy (Sept. 1986) 7−80148
drum recording of seismic signals in waiting mode 7−120179
longitudinal particulate medium, hysteretic props. ang. depend. 7−125485
magnetic films for perpendicular recording, texture formation, influence on props. 7−76700
magnetic films perpendicular mag. recording conditions, wall-displacement model anal. 7−105996
magneto-optic coeff., spin-orbit interaction and exchange splitting effects calcs. 7−113157
Permalloy, ion implanted, mag. recording material, struct. changes *(Chinese)* 7−131402
permanent magnet alloys and particulate recording media, mag. viscosity meas. 7−132066
(rare earth)$_2$Fe$_{14}$B polycryst. alloys, spin reorientations simulation w.r.t. permanent magnet and recording appls. 7−125351
seismic station on seafloor, amplifier for data magnetic recording 7−72194
SEM, zz 7−128717
spectral recording process 7−90878
thin film media, anisotropy and mag. recording props. 7−125500
transition metal-rare earth amorphous alloy films for magneto-optic recording 7−132366
$BaFe_{12-x}Co_xO_{19}$ mag. and magneto-optical props. comp. depend. study, recording appls. 7−106145
$BaFe_{12}O_{19}$, ferrite particles, mag. anisotropy effect on squareness of perpendicular recording media 7−125375
$BaFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$BaFe_{12}O_{19}$ thin films for high density recording, microtexture and crystallographic charact., effect of sputtering gas press. 7−85384
Co-based alloy 7−99537
Co-Cr film, magnetisation models for computer simulation of perp. mag. recording 7−92479
Co-Cr films, perpendicular mag. recording, grain boundary segregation and coercivity 7−143876
Co-Cr perpendicular media, mag. and recording props. 7−92474
Co-Cr perpendicular recording media, magnetisation reversal mechanism, hysteresis loss meas. 7−85388
Co-Cr sputtered film, segregated microstruct. revealed by wet etching, appl. for mag. recording 7−76666
Co-Cr sputtered film perpendicular recording media, magnetisation reversal mechanisms 7−105993
Co-Cr thin film microstruct., TEM study, mag. recording appl. 7−105314
Co-Cr-M (M=Fe,Ta,Zr) alloy films for mag. recording, magnetostriction 7−99537
Co-Cr-Ta(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Cr(Pt) alloy films for mag. recording, magnetostriction 7−99537
Co-FeO pigments for mag. recording, reversible coercivity vs. temp. losses 7−85370
Co-Ni thin film mag. and structural recording props., deposition incidence angle depend., recording appl. 7−105976
Co-Ni-Cr(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Ni-Re-P electroless thin films for mag. recording appls., perp. coercivity, thickness depend. 7−112870
CoCr film, mag. and structural props. for recording appls., polycryst. sublayer effects 7−105981
CoCr thin film, c-axis orientation, perpendicular and longitudinal mag. props. 7−125491
CoCr thin film recording media, mag. anisotropy and struct. 7−125490
CoCr thin films, DC magnetron sputtering 7−125493
CoNi thin films for mag. recording, corrosion resist. improvement by surface passivation 7−106667
CoZr and CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7−112885
CrO_2 particles for magnetic recording, improved prep. method 7−86105
Fe sputtered film for soft mag. layer in perp. recording media 7−92476
γ-Fe_2O_3 powders for mag. recording, surface props. 7−84482
γ-Fe_2O_3 recording particles, high-field magnetism 7−85368
γ-Fe_2O_3:Os sputtered films for mag. recording appl., grain growth, impurity effects 7−105315
Fe_3O_4 particle dispersed polymer film, precip. prep., mag. recording appl. 7−126031
Fe_xO_{1-x}-based perpendicular thin films, mag. recording appls. 7−125494
GdFe amorphous thin films for perp. recording, magnetooptic study 7−92477
Ni-P underlayer for mag. recording, M-H curve slope-intercept anal., heat treatment effects 7−105980
$SrFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
Tb-Fe-Co amorphous films, magnetic and magneto-optical props. 7−113159
TbFe amorphous thin films for perp. recording, magnetooptic study 7−92477

magnetic relaxation
see also ferromagnetic relaxation; magnetic resonance; spin-lattice relaxation; spin-spin relaxation
autocorrelation NMR, Fourier transformed signal, free induction decay 7−140720
coupled spins, oppositely signed mag. moments, nucl. mag. relax. 7−109939
heavy-fermion systems, local moment relaxation 7−77208
Ising spin glass, infinite range, remanence, metastable states, relaxation processes 7−143825

magnetic relaxation continued
low field resonance and relaxation, time-convolution and relaxation, time-convolution equation formalism 7−112925
nuclear spin waves, effect on NMR saturation 7−132151
ordered and disordered substances, kinetic phenomena 7−132036
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
semimagnetic semiconds., dynamic spin suscept., Ising model cluster calcs. 7−125429
spin glass dynamics from mag. noise, relax. and susceptibility 7−118802
superparamagnetic particles, hyperfine struct. of anomalous Mossbauer spectra 7−106060
Ba-La-Cu-O high T_c supercond., low-field mag. relaxation 7−143702
$CdIn_{0.3}Cr_{1.7}S_4$ spin glass, thermoremanent magnetisation, aging and relax., field effects 7−125400
$CeCu_6$, heavy-fermion system, magnetic response, momentum dependence 7−143761
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
α-Fe, electron irrad. defect-induced mag. relax. and recovery, two-interstitial model 7−98248
α-Fe, electron irradiated, low temp., annealing behaviour of 110 K mag. relax. 7−111671
$Fe_{82}B_{18-x}C_x$, metallic glasses, disaccommodation phenomenon 7−138280
$Fe_{82}B_{18-x}Si_x$, metallic glasses, disaccommodation phenomenon 7−138280
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, irreversible mag. permeability decay and relaxation effects 7−92463
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., low-field mag. relaxation 7−143702
$Mn_xFe_{3-x}O_4$, electronic magnetic relaxation 7−125330
MnSi, ^{55}Mn nucl. spin relax. critical divergence, muon-nucl.-spin double relax. 7−125584
MnZn ferrites, mag. spectra, mag. state, influence of external field, mag. aftereffect 7−143861
$Mn_{1-x}Zn_xF_2$ dilute antiferromagnets, mag. mom. and suscept. temp. and freq. depend 7−105901

magnetic resonance
see also acoustic magnetic resonance; antiferromagnetic resonance; atomic beam magnetic resonance; ferrimagnetic resonance; ferromagnetic resonance; laser magnetic resonance; magnetic double resonance; magnetic relaxation; molecular beam magnetic resonance; nuclear magnetic resonance; paramagnetic resonance
absorption line half-width, Bloch eqns. in memory-function formalism 7−70623
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
electron-positron state, resonant, in central field 7−74501
long-time spin relaxation in zero-field 7−85407
low field resonance and relaxation, time-convolution and relaxation, time-convolution equation formalism 7−112925
magic angle setting using ^{13}C NMR spectra of oriented chloroform 7−135971
multiquantum resonances, theory 7−138308
nonlinear parametrically driven systems, resonance phenomena 7−99551
nonlinearity in condensed matter physics, mag. resonance probes 7−138309
quasiadiabatic transit for multispin resonances 7−138307
reentrant ferromagnets near percolation conc., coordination no. determ. using mag. reson. 7−112833
rubrene ditertbutyl, substituted, triplet excitons, mag. reson., fluoresc. 7−70893
S-state ions, mag. reson. spin Hamiltonian, odd-order terms admission 7−77190
Schumann resonances, magnetic elliptical polarisation 7−134063
B, magnetic susceptibility and magnetic resonance 7−70517
BC, magnetic susceptibility and magnetic resonance 7−70517
$FeBO_3$:Ho crystals, mag. resonance, photoinduced change 7−77445
GaAs, space-charge layers, magnetic excitons 7−112956
He optical pumping and magnetic resonance signal recording 7−122991
He+N_2, state alignment, decay rate const. determ. 7−129840
NO, self-alignment by laser beam irrad. 7−68399

magnetic resonance spectrometers
computer controlled spin echo spectrometer for the study of ferromagnetic materials 7−115981
EPR, microsecond time resolution using 200 kHz magnetic field modulation 7−95630
EPR spectrometer with Gunn oscillators 7−121178
EPR spectrometers with AFC, power supply of klystron oscillator 7−121179
Eurocom 2 microcomputer and interface system for an ESR spectrometer 7−128608
microscopic regime potential of NMR imaging 7−114585
multinuclear transceiver/digitizer for high-resolution NMR spectrometer 7−95631
NMR spectrometers, microcomputer controlled mag. field parameters *(Czech)* 7−134822
NQR absorption spectrometers, construction and appl. to high technology materials *(Japanese)* 7−73384
NQR spectrometer, wideband transmitter 7−108604
pulsed EPR spectrometer, relaxation times of dilute solutions obs. 7−140722
solid state NMR spectrometer component developments 7−128604
solid-state, development trends 7−102469
superheterodyne channel of microwave EPR spectrometer 7−121177

magnetic resonance spectroscopy
see also nuclear magnetic resonance spectroscopy
^{12}C I, fine-struct. intervals determ. in ^{3}P ground state by far-IR laser mag. reson. 7−88094
biaxial goniometer for electron paramagnetic resonance measurements 7−102481
coherence transfer under isotropic mixing 7−67353
COSY spectra, complete suppression of diagonal peaks 7−73397
DIGGER technique for spatial selective excitation 7−108594
ESR, signal power calc. 7−128615
ESR dating using valency or ligands of transition metals 7−108602
ESR imaging, review 7−108603
ESR microscopic imaging with microfabricated field gradient coils 7−121176

magnetic resonance spectroscopy continued
geochronology, ESR dating method for sediments containing fossil teeth 7−127483
localised radical pair, RYDMR signal, lineshape study 7−100810
photosynthetic bacteria, reaction yield detected mag. reson. spectra 7−78803
stationary magnetic field source using electromagnetic coil rotative-symmetric arrangement *(Czech)* 7−128607
X-band ESR spectrometer for electronic spin-lattice relaxation time measurements 7−95629
^{13}C I, fine-struct. intervals determ. in ^3P ground state by far-IR laser mag. reson. 7−88094
^4He resonance magnetometers, optically pumped 7−102483

magnetic screening *see magnetic shielding*

magnetic semiconductor materials *see magnetic semiconductors*

magnetic semiconductors
see also semimagnetic semiconductors
antiferromagnetic, carrier energy fluctuation shifts 7−70184
antiferromagnetic, conduction electron spectrum, optical absorpt. edge shifts, Hubbard operator diagram technique calcs. 7−76730
antiferromagnetic 4f systems, many-body effects 7−85235
antiferromagnetic semiconductor nonuniform structure, boundary states, chiral anomaly 7−125109
antiferromagnetic semiconductors, electron spectrum temp. depend. 7−84665
electron spin wave amplification by laser interband absorption 7−105907
ferrimagnetic semiconductors, electron spectrum temp. depend. 7−84665
ferrite-semiconductor layered struct., excitation of magnetostatic waves by a scanning current 7−138209
ferroelectric mag. materials, interband electron excitations, elec., mag. and toroidal oscills., optical props. 7−99732
ferromagnet, heating of spin system by strong laser field 7−85272
ferromagnetic, electron spectrum and indirect exchange 7−138213
ferromagnetic semiconductor, magnetostatic wave excitation by scanning current 7−125360
magnons, photostimulated amplification 7−143780
negative magnetoresistance determ., mag. semiconductors with narrow degenerate conduction bands 7−143481
$Al_xV_2O_5$, low temp. AC and DC susceptibility 7−92418
$CdCr_2Se_4$ amorphous film, mag. and elec. props. 7−112339
$CdCr_2Se_4$ ferromag. semicond., mag. heterogeneity, NMR spin echo studies 7−112754
$CdCr_2Se_4$, ferromag. semiconductors, picosecond conductivity 7−143509
$CdCr_2Se_4$, mag. semicond., energy band struct. charcts. 7−84663
$CdCr_2Se_4$ mag. semicond., impurity absorption spectra 7−106229
$CdCr_2Se_4$, mag. semiconductors with narrow degenerate conduction bands, negative magnetoresistance determ. 7−143481
p-$CdCr_2Se_4$, photoelectrochemical behaviour studies 7−118540
$CdCr_2Se_4$, photoferromagnetic effect, nonstoichiometry effects 7−92406
$CdCr_2Se_4$, pure and In doped spinel, NMR of innerdomain ^{53}Cr nuclei *(Russian)* 7−138342
$CdCr_2Se_4$, thermal stability, stoichiometric and doping effects 7−78386
$CdCr_2Se_4$ ferromag. semicond., carrier relax. via mag. interactions, photogenerated carrier recomb. time 7−112368
$CdCr_2X_4$(X=S, Se), magnetosensitive absorpt., polarisation props. 7−144035
$Cd_{1-x}Mn_xCr_{2-y}V_ySe_4$, combined cation substitution, solid solutions *(Russian)* 7−124195
$CoCr_2S_4$, production by hot pressing, props. 7−77855
$Co_{0.1}Fe_{0.9}Cr_2S_4$, mag. semicond., crystallographic and mag. props. 7−69666
$Co_{2-x}Ge_{1-x}Fe_{2x}O_4$, oxidic spinel, X-ray, electrical conductivity, magnetic and IR studies 7−111510
$Cu_{0.45}Co_{0.55}Cr_2S_{4-y}Se_y$ ferrimagnetic spinel props. 7−99503
$CuCr_2Te_4$ films, synthesis, texture, mag. props. 7−98731
$Eu(As_xP_{1-x})_3$ systems, mag. phase diagrams, hydrostatic press. effects 7−77286
$Eu_{0.8}Ba_{0.2}S$, vibrational anharmonicity and interatomic repulsive interactions 7−118049
$EuLiH_3$, paramag. and ferromag. states, PMR spectra 7−99585
EuO, ferromag. semiconductors, picosecond conductivity 7−143509
EuO, mag. semicond., elec. resist., press. depend. 7−112338
EuO quasiparticle electronic spectrum. density functions theory, dynamical corrections 7−98804
EuO quasiparticle electronic spectrum, density functional theory, temp. depend. and dynamical corrections 7−98805
EuO semiconductor, ferromagnetism and valence mixing studies, high press. effects 7−112278
EuO thin films, O vacancy diffusion and elec. cond. 7−118156
EuO(S)(Se)(Te) (100), EELS spectra 7−113325
EuTe, degenerate magnetic semiconductors, crystallisation of dense magnetic polarons 7−125367
$Fe_{1-x}Cu_xCr_2S_4$ mag. semicond., plasmon-phonon spectra 7−124414
$Fe_xV_2O_5$, low temp. AC and DC susceptibility 7−92418
$Gd_{3-x}S_4$, degenerate magnetic semiconductors, crystallisation of dense magnetic polarons 7−125367
Ge, diamagnetic enhancement in amorphous semiconductors 7−92400
$HgCr_2Se_4$, ferromagnetic semiconductor, transport, magnetic and optical props. 7−99094
n-$Hg_{1-x}Cd_xTe$, Shubnikov-de Haas oscillation *(Chinese)* 7−99536
$HgCr_2Se_4$, carrier drag by magnetostatic waves, external mag. field and freq. depend. meas. 7−70332
$HgCr_2Se_4$, ferromag. semicond., density of states, absorpt. spectrum 7−131512
$HgCr_2Se_4$, ferromag. semiconductors, picosecond conductivity 7−143509
$HgCr_2Se_4$, ferromagnetic semiconductor, spin wave damping 7−85267
$HgCr_2Se_4$, mag. semicond., magnetostatic and spin wave intensification 7−85273
p-$HgCr_2Se_4$, mag. semicond., elec. field effect on elec. cond. 7−99078
$HgCr_2Se_4$:Ag single crysts., FMR lineshape and anisotropy meas. 7−85443
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
$(Ni_{1-x}Fe_x)_{1-x}S$ mag. semicond., neutron and X-ray diffr. studies 7−85245
Si, diamagnetic enhancement in amorphous semiconductors 7−92400
$TmSe_{0.45}Te_{0.55}$, under high pressure, magnetic structure determ., neutron scatt., AC susceptibility, resistivity meas. 7−138191

magnetic semiconductors continued
Y-Ba-Cu-O high T_c supercond., metamorphic phase characterisation 7−111828
YIG, elec. cond., thermoelec. power meas., small polaron model 7−99051

magnetic separation
magnetite, disperse particles, mag. suscept. 7−125487
particle diffusion under mag. force, appl. of nonequilib. conc. profiles 7−110184
superconducting magnetic separator cryogenic system 7−67338
Sm-Co quadrupole magnet spin separation of metal clusters 7−80827

magnetic shielding
NMR, coil structures, multishield active magnetic screening 7−89234
permanent magnet for Mossbauer spectrometer 7−108727
superconducting magnetic shielding network with superconducting wires 7−131877
CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118
Fe shield for superconducting magnet for whole-body NMR imaging 7−133497
MnZn ferrite power, molten salt synthesis, EM shielding appls. 7−77900
NbTi film for mag. shield, thickness depend. of screened mag. fields 7−77147
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., diamag. shielding and Meissner effect 7−92366

magnetic shielding, nuclear *see nuclear screening*

magnetic stars
Am stars, Ca abundances for sample of 57 stars 7−94905
Am stars, effects of flux excess at 478.5 nm on Stromgren colours 7−107862
Am- and Ap-type stars, properties and peculiarities 7−101787
Ap and He-weak stars in clusters and associations, photometric variability 7−120421
Ap Si stars, anal. of Si absorpt. in UV spectra 7−134239
Ap stars, appl. of significance tests to mag. field meas. by photographic technique 7−134146
Ap-type stars in Sco-Cen association, mag. obs. rel. to mag. fields evolution 7−115459
Ap/Bp stars, model atm. and decay-induced Lorentz force 7−72466
Ap/Bp stars, possible secondaries upper mass limit determ., spectral obs. *(Russian)* 7−88465
32 Aqr, Am star, abundances, spectral and model atm. anal. 7−140078
AR Aur, spectral peculiarities of eclipsing Am-star 7−88461
κ CnC (HD 78316), Mn star, abundance anal. using line-blanketed model atmosphere 7−101794
cool CP stars, lanthanide abundances 7−88431
CP2 light wave analysis, surface inhomogeneity 7−134242
CP stars, mag. flux distribs. from fossil mag. field evolution 7−94903
CP stars, progress in detection and classification 7−127890
CP-2 stars in Pleiades and Coma Berenices open clusters, Δa-photometry 7−101793
α^2 CVn, Ap star, radiation distrib. and nonspherically symm. model 7−127881
δ Del, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
HD 166473, cool mag. Ap star, oscills. of 8.8 and 9.1 minutes period, photometric obs. 7−94901
HD 43819, element identification in sharp-lined Si star 7−140113
HD 60435, p-mode spectrum of rapidly oscillating Ap star 7−101800
HD 6532, Rapidly Oscillating Ap star, freq. soln. to light vars. rel. to l=1 oblique dipole oscill. 7−134248
HD 6532, rapidly oscillating Ap star, rot. period determ. from mean light vars. 7−134249
HD 8441, CP2 light curve analysis, surface inhomogeneity 7−134242
HD 92664, Bp-Si star, no evidence for short-time-scale photometric vars. 7−140081
ϕ Her, line identification using extended wavelength coincidence statistics 7−139936
52 Her, surface magnetic field strength and Fe, abundance in atmosphere *(Russian)* 7−140110
HR 1063 (V396 Per), He-weak star, B-band photometry (1984 to 1985) 7−72453
IRAS sources, search for CP stars with IR photometry available 7−127875
36 Lyn, α Scl He-weak star, spectral line charcts. 7−146000
36 Lyn, He-weak Bp star, search for Hα emission rel. to extended atmosphere 7−79999
43 Peg, hot Am star, model atmosphere anal. 7−127905
polarisation of continuum and line radiation 7−120261
rapidly oscillating Ap stars, computed spectral line vars. for oblique non-radial pulsators 7−72436
rapidly oscillating Ap stars, oscills. of composite stellar model with weak mag. field 7−127839
rapidly oscillating Ap stars, use as test of stellar chromospheric heating mechanisms 7−134240
α Scl, He-weak star, possible rot. period determ. from mean light vars. 7−134249
sn stars, jet-like mass loss and mag. fields, IUE obs. 7−145967
time-dependent models, mag. fields evolution for perpendicular rot. and mag. axes 7−94902
CQ UMa, SrCrEu Ap star, rot. period determ., photometric anal. 7−101811
He-peculiar stars, radiatively driven mass loss interaction with mag. fields 7−145966
He-weak stars in clusters and associations, photometric variability 7−120421
Hg-Mn stars, Fe II lines 7−127851
Hg-Mn stars, UV spectral study *(Japanese)* 7−140082
Hg-Mn stars in open cluster NGC 2287, obs. 7−72548

magnetic storage
see also magnetic bubble memories; magnetic disc storage; magnetic tape storage
$Tb_xNd_y(FeCo)_{1-x-y}$ anisotropy and magnetooptical props. for storage appls. 7−113155

magnetic storage devices *see magnetic storage*
magnetic storage systems *see magnetic storage*
magnetic stores *see magnetic storage*
magnetic storms
see also micropulsations
1970 February 24 substorm, assoc. F-region critical frequencies and height var. 7−88005
1979 July 5 substorm, assoc. field-aligned currents at synchronous orbit 7−94588
1979 March 22, thermospheric dynamics, model simulations 7−115125
1979 November 14-15, Pc 5 storm time wave, magnetic field aligned structure 7−107672
1982 November-December solar-geophysical activity 7−88355
1986 February 6 storm and assoc. solar flares, charact. 7−127653
auroral substorm processes, studied by following UV aurora 7−107603
daytime bay magnetic variations and Pi 2, case study 7−120221
Birkeland current loop 3D effects 7−79778
case study of 23 June 1979 substorm 7−134082
comet tail disturbances and magnetic disturbances 7−94784
compound streams, magnetic clouds, and major geomagnetic storms 7−107686
Dst variation, effect of interplanetary, parameters as function of geomag. latit. 7−101639
electric current phenomena during substorm growth and onset 7−134084
electric field behaviour of 6.6 Earth radii during substorm 7−134075
expansive phase of substorm, development studied by UV aurora imaging 7−107644
F_2-layer storm, charact. of positive and negative phases 7−87999
F-region ionospheric disturbances, diurnal and seasonal patterns 7−139841
ion composition at high energy during 2-3 May 1986 magnetic storm 7−107650
magnetosphere convective elec. field penetration into ionosphere during substorm 7−145760
magnetotail, impulsive processes during substorm expansion 7−72222
magnetotail instability mechanism and substorm explosive onset 7−139860
magnetotail observations during a substorm 7−79786
magnetotail plasma relaxation following substorms, model 7−107661
negative H-perturbation in early evening sector, assoc. elec. fields and electron precip. 7−134090
onset of substorm, explained by magnetotail turbulent mechanism 7−107643
Pi1B used as monitor for substorm development 7−139858
plasma sheet, ion composition at various geomagnetic and solar activity 7−139863
plasma sheet structure influenced by plasma flow, model and substorm application 7−94613
plasmasphere, effect of geomag. activity on drift wave instability 7−127642
relativistic electron flux vars. at orbit of geostationary satellite, relation to geomag. activity *(German)* 7−134093
response to interplanetary mag. clouds 7−88045
ring current, energetic neutral atom image 7−127640
ring current evolution, AMPTE/CCE MEPA meas. 7−139864
ring current evolution during substorms 7−134083
solar cosmic rays in magnetosphere, dynamics during mag. disturbances use for ring current dynamics investigation 7−79777
strong loop heating by fast reconnection in closed system 7−88038
substorm expansive phase onset precursors, magnetic signatures 7−107671
substorm mechanism, gyroviscous model 7−115177
substorm of 1979 July 27, charact. determ. from obs. at Sanae 7−94591
substorm of 3 May 1986, studied using UV Viking obs. 7−107645
substorm onset, mag. signatures and DMSP auroral images comparison 7−94590
substorms, assoc. field-aligned currents near synchronous orbit 7−94589
substorms of 1979 March 31 and April 1, assoc. magnetotail plasma distrib. 7−94585
sudden storm commencements, simultaneous obs. of P_{SC} 5 pulsations in geostationary orbit 7−88029
VLF chorus occurrence region in upper ionosphere, correl. with plasmapause position 7−101640
Westward-travelling surge, time evolution on ionospheric time scale 7−79768
magnetic structure
see also canted spin arrangements
2D easy-plane ferromagnets, vortex signatures in dynamic struct. factors 7−118763
actinide compounds, magnetic response functions, neutron inelastic scatt. 7−77240
actinide cpds., mag. props., neutron scatt. meas. 7−77244
actinide pseudobinary monochalcogenide and monopnictide single crystals, magnetism 7−105894
actinide systems, magnetic structure, neutron diffr. meas. 7−138190
amorphous ferromag. alloys, mag. microstruct. study using SEM with polarisation anal. 7−112741
crystallomagnetic defects, topological theory *(Russian)* 7−76122
FCC vector antiferromagnets, ground-state selection, ordering by disorder 7−125318
ferrite-garnet epitaxial films, Ne ion implanted, annealing, struct., mag. props. *(Russian)* 7−143883
helical magnets, domain wall motion 7−125440
imaging using SEM with electron spin polarisation anal. 7−108706
Invar, Fe_xNi_{1-x}, low temp. mag. state *(Russian)* 7−92415
localised moments, indirect mag. coupling, band hybridisation effects 7−77198
mag. props., Mn^{3+} impurity ion effects 7−138196
magnetic fine structure anals., simultaneous obs. of domains and walls 7−125437
magnetic materials, short-range spin order, core-level photoelectron diffr., single scatt. cluster model 7−125922
manganese oxalate dihydrate linear chain system, cryst. and magnetic struct., neutron diffr. study 7−99407
metallic glass ribbons, magnetic texture Mossbauer spectra studies 7−85253
noncollinear ferromagnet with optically excited (impurity) ion, spin deform. radius *(Russian)* 7−125378
oriented nuclei studies, book contrib. 7−99413
pseudoproper toroidal ordering in antiferromagnets 7−131992
magnetic structure continued
quantum anisotropic mag. materials with competing interactions, inhomogeneous states 7−131987
rare earth alloys, RCo_5, incommensurate phase, hybridisation and mag. form. factor 7−138189
rare earth alloys, $RFeAl_x$, mag. struct., Fe atom and moment location 7−131988
rare earth compounds, anomalous, mag. props., neutron scatt. studies 7−77226
short-range spin order, core-level photoelectron diffr., single scatt. cluster model 7−125922
ternary and multinary cpds., conf., Snowmass, CO, USA (Sept. 1986) 7−120711
toroidal current ordering and spin magnetism near the crystal surface 7−77241
$Au_{0.81}Fe_{0.19}$, reentrant single crystals, mag. struct. obs. in applied field 7−99412
(α-)$KCrF_4$ magnetic struct., ordered frustration, powder neutron diffr. obs. 7−70526
$Ba_2Ni_3F_{10}$, magnetic struct., order frustration, powder neutron diff. obs. 7−70525
$CdCr_2Se_4$ ferromag. semicond., mag. heterogeneity, NMR spin echo studies 7−112754
Ce, mag. struct., vel. to mag. struct. of $Ce_{0.75}Y_{0.25}$ 7−105890
$CeAl_2$, mag. excitation spectrum, neutron scatt. study 7−77231
$CeGa_2$, Kondo lattice, mag. props. 7−77209
$CePb_3$, crystal field excitations, inelastic mag. neutron scatt. 7−77227
$CeRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
CeSb antiferromagnet, unusual magnetic behaviour, hybridisation-mediated interionic interaction effects calcs. 7−112744
CeSb, mag. ordering, high press. neutron and magnetisation study 7−77228
$Ce_{0.75}Y_{0.25}$, DHCP, mag. struct., neutron powder diffr. study 7−105890
$CeZn_5$ Kondo lattice, mag. props. 7−99404
Co, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7−99526
$CoCl_2$-graphite intercalation compound, mag. ordering, nonlinear slow fluctuation 7−125405
$CoCr_2O_4$, magnetic structure, 2D neutron diffraction 7−125324
$Co_{0.1}Fe_{0.9}Cr_2S_4$, mag. semicond., crystallographic and mag. props. 7−69666
$CoFe_2O_4$ ferrite epitaxial layer on $Zn_{0.2}Fe_{2.8}O_4$ particles, mag. props. 7−125482
$Co_xNi_{5/3-x}FeSb_{1/3}O_4$, ferrite, ^{57}Fe, ^{61}Ni and ^{121}Sb Mossbauer study 7−113001
CoO-NiO superlattices, mag. structure, neutron diffr. studies 7−125312
Cr, antiferromagnetic, μ^+ diffusivity, SDW and CDW interactions, μSR study 7−113056
$CsFeCl_3$, anomalous magnetisation appearing at appl. mag. fields exceeding 33 T 7−125338
Cu(II)Ni(II)Cu(II), heteropolymetallic systems, spin state structs. investig. 7−112756
Dy-Y multilayers, occurrence of long-range helical spin ordering 7−125320
Dy-Y superlattices, long-range helimagnetic order 7−125321
Dy-Y superlattices, mag. struct., neutron diffr. study 7−99409
$Dy_2Fe_{14}BH_3$, mag. props., effects of hydrogen 7−92460
Er-Ce, single crystal neutron diffraction studies of mag. struct. 7−85244
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7−118797
$Er_2Fe_{14}BH_3$, mag. props., effects of hydrogen 7−92460
$Er(Fe_{1-x}Ni_x)_3$, atomic and mag. struct. neutron diffr. studies 7−131989
$ErGa_3$, crystalline electric field and magnetic structure 7−98942
$ErPd_2Sn$ cubic Heusler superconducting alloy, antiferromag. struct., neutron scatt. meas. 7−112743
$EuAs_3$, field-induced mag. phase struct., neutron diffr. study 7−99405
EuO, isotropic Heisenberg ferromagnet, crit. mag. scatt., inelastic neutron study, comparison with renormalisation group theory 7−112750
Fe (001), O chemisorption, first principles determ. of mag. struct. 7−84508
Fe complex, $Fe(py)_3Cl_3.py$, 1D single crystal, mag. susceptibility and helical mag. struct. 7−143764
Fe, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7−99526
Fe-Cr-P-C amorphous ribbons, magnetic texture, curvature and structural relax. during annealing 7−70582
Fe-Mn alloys, FCC, electronic struct., spin-density meas. 7−105386
Fe-V(Cr)(Mn)-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
Fe-Zr metallic glasses, mag. props. study 7−118827
$Fe_{60}B_{40}$ sputtered amorphous alloys, in-plane mag. texture, Mossbauer spectra studies 7−70614
α-$FeC_2O_4.2D_2O$ quasi-1D antiferromag., magnetic struct. and transitions neutron diffr. study 7−125316
$(Fe_xCr_{1-x})_2Ca_3(GeO_4)_3$, mixed garnet, mag. frustration, phase diagram, neutron diffr. 7−105889
FeF_3, pyrochlore form, crystal and mag. structs., mag. frustration 7−105891
FeF_3, pyrochlore form, magnetic struct., Mossbauer study 7−143941
$Fe_3F_8(H_2O)_2$, 'frustrated' cpd., mag. props. 7−105888
$FeF_3.3H_2O$, mag. ordering of dimorphic phases, Mossbauer studies 7−113037
FeGe, hexagonal, symmetry analysis of antiferromagnetic phase transitions 7−85289
$FeGe_2$, mag. phase transitions and mag. struct., neutron scatt. studies *(Russian)* 7−138228
FeMnP, hyperfine interaction, mag. struct. 7−118438
$(Fe_xNi_{1-x})_{80}(P_yB_{1-y})_{20}$, ferromag. glassy ribbons, small angle neutron scatt., domain wall struct. 7−99414
α-FeOOH, Al-substituted geothites, mag. ordering, effect of crystallinity 7−118798
Fe_3Pt Invar, high to low spin state transition 7−99457
$Ga_{0.8}Fe_{0.2}NiCrO_4$, mixed spinel ferrite, pinned and entropic disordering 7−92462
Gd-Y, initial ordering regime, neutron diffr. study 7−143762
Gd-Y synthetic superlattices, polarised neutron diffr. studies 7−125322
$Gd(Cu_{1-x}M_x)_2$ (M=Ni, Co, Al), mag. struct. changes and thermal expansion, anomalies *(Russian)* 7−99402
Ho, spin slips and lattice modulations, magnetic X-ray scatt. study 7−85252

magnetic structure continued
$HoRu_2Ge_2$, squared modulated mag. struct., antiferromag. order, neutron diffr. study 7−118774
$Ho_{90}Tb_{10}$ single crysts., commensurable helical struct., magnetic excitations, inelastic neutron scatt. 7−125327
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., competition with magnetic order, NQR study, comp. depend. 7−138134
La_2CuO_4, ^{139}La nuclear quadrupole moment, low temp. antiferromag. order 7−143927
La_2CuO_4 mag ordering obs. by muon spin rotation 7−143946
La_2CuO_4, mag. scatt., Neel temp. 7−125326
$La_2CuO_{4-\delta}$ single cryst., antiferromagnetism and O deficiency, neutron diffr. study 7−112752
La_2CuO_{4-y}, antiferromag. obs. by powder neutron diffraction 7−112753
Li-Ti-Zn spinel ferrites, mag. and cryst. struct., polarised neutron diffr. study 7−138193
$MnFeF_5(H_2O)_2$, inverse weberites, frustrated magnetic and crystal structures, powder neutron diffr. 7−77237
Mn(II)Cu(II)Mn(II), heteropolymetallic systems, spin state structs. investig. 7−112756
MnNi single cryst., mag. struct., compressive loading *(Russian)* 7−105886
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7−112742
MnOOH, isomorphic compounds, modulating magnetic structures *(Russian)* 7−125313
MnP, mag. struct. as probed by ^{57}Fe, Mossbauer spectra meas. 7−99410
$MnSe_2$ mag. struct. and transitions, neutron diffr. studies 7−125315
$MnSe_2$ polycryst., magnetic ordering, neutron diffr. study 7−112794
Nd-Fe-B magnets, graduated demagnetisation curves, soft phase, oxidation and spin reorientation effects 7−99499
$Nd_2Fe_{14}B$ intermetallic cpd., Mossbauer effect study, temp. depend and spin reorientation 7−118926
$Nd_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
$NdRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
Ni-P underlayer for mag. recording, M-H curve slope-intercept anal., heat treatment effects 7−105980
Ni_3Fe, ordered, electronic and mag. struct. studied by Mossbauer spectroscopy 7−106065
Ni_cFe_{1-c} alloys, Ni-rich, mag. and compositional order interaction 7−118773
$Ni_{0.81}Mn_{0.19}$, reentrant single crystals, mag. struct, obs. in applied field 7−99412
NiMnSn alloys, crystallographic and mag. struct., neutron diffr. studies 7−69651
NpAs, mag. phase diagram, neutron scatt. study 7−77283
O, adsorbed on graphite, δ-phase, possibility of spiral spin ordering 7−124694
Pd_2DySn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
PdGd, magnetoresist. and ferromag. ordering 7−131613
Pd_2HoSn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
$Pr_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
PuBi, mag. ordering, phase diagram, neutron diffr. study 7−77282
$PuSb_{1-x}Te_x$, X=0-0.4, hyperfine field, mag. props., ^{121}Sb Mossbauer spectra 7−77436
RM_2X_2 (M=nd transition metal, X=Si, Ge), mag. interactions, mag. structures 7−77234
Rb_2MnF_4, layered magnet, staircases of mag. struct. 7−131991
$Ru_xFe_{80-x}B_{20}$ amorphous alloys, high field magnetisation and ^{57}Fe hyperfine field studies 7−112849
Sm, mag. struct., mol. field approx. 7−92403
$SmCo_5$ powder magnet, mag. struct. and texture state influence 7−77381
$TbAsO_4$ orthorhombic, exchange-relativistic modulated mag. structs. 7−99403
$Tb_{0.22}Cu_{0.78}$ amorphous alloy, short and medium range mag. order, neutron scatt. obs. 7−85323
Ti-Si, solid solns., itinerant antiferromagnetism, mag. susceptibility meas. 7−138198
$Tm_2Fe_{14}B$, ^{169}Tm Mossbauer spectroscopy, hyperfine fields and quadrupole splittings 7−138361
$TmGa_3$, antiferroquadrupolar and antiferromag. structs., neutron diffr. studies 7−118775
$TmGa_3$, crystalline electric field and magnetic structure 7−98942
$TmGa_3$, paramag. phase, magnetoelasticity and quadrupolar interactions study 7−99541
$TmSe_{0.45}Te_{0.55}$, under high pressure, magnetic structure determ., neutron scatt., AC susceptibility, resistivity meas. 7−138191
UIr, mag. struct. neutron diffr. and magnetisation meas. 7−131990
UO_2, 3-K mag. struct. anal., magnetoelastic and quadrupolar interactions 7−99406
UP(As), elec. resist., mag. field effects, transitions and anisotropy 7−70336
$UP_{1-x}S_x$, x=0.2, 0.25, mag. phase diagram, neutron diffr. study 7−77284
UPt_3, neutron scattering studies of heavy fermion systems 7−112747
URu_2Si_2 7−112747
URu_2Si_2 heavy-electron supercond., magnetic excitations and ordering 7−85271
U_2Zn_{17}, neutron scattering studies of heavy fermion systems 7−112747
Y/Dy multilayers, long-range incommensurate mag. order, neutron diffr. studies 7−70524
$Y_{1.8}Er_{0.2}Fe_{14}B$, Mossbauer study of spin reorientation 7−113026
YFe_2O_4, magnetic structure, 2D neutron diffraction 7−125324
$Y_{1-x}Gd_x$ dilute alloys, low temp. helical mag. struct., comment 7−77239
$Y_{1-x}Gd_x$ single cryst. dilute alloys, mag. struct. and filed-induced transition, neutron diffr. study 7−125314
YbPd and Yb_3Pd_4, intermediate valent cpds., mag. response, inelastic neutron scatt. study 7−70527
$ZnFeF_5(H_2O)_2$, inverse weberites, frustrated magnetic and crystal structures, powder neutron diffr. 7−77237
$Zn_{0.45}Mn_{0.55}Se$, dilute mag. semicond., mag. ordering, neutron diffr. studies 7−125317
ZrV_2, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
$ZrZn_2$, self-consistent electronic structures studies of magnetism and superconductivity 7−112586

magnetic superconductors
antiferromagnetic exchange interactions, superconductivity 7−125230
antiferromagnetic superconductors, AFMR, effect of indirect exchange interaction 7−99580
antiferromagnetism, 2D Hubbard model, scaling theory 7−125222
copper oxides, superconducting, antiferromagnetism and crystal field effects *(French)* 7−131834
critical curve in an antiferromagnetic superconductor with nonmagnetic impurities 7−105759
electronic heat capacity, effect of spin scatt. and mag. order 7−85191
ferromagnetic Kondo-type supercond., Anderson-BCS anal. *(Chinese)* 7−99314
heavy fermion cpds., Fermi level virtual bound states coherence, normal impurity effects calcs. 7−112163
instability in large-U limit of 2D Hubbard model 7−143714
overview of magnetic superconductivity 7−118614
rare earth borides, $RRuB_4$, R=Gd-Tm, Lu, mag. suscept., elec. resist. meas., low temp. mag. order 7−92408
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth oxides, $RBa_2Cu_3O_{9-\delta}$, R=La-Lu except Pm, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
rare earth ternary systems, superconductivity and ferromagnetism coexistence, review 7−77138
rare earth-Ba-Cu-O cpds., $RBa_2Cu_3O_x$ (R=Gd, Er, Dy), high T_c supercond., mag. and supercond. properties 7−131888
spin wave spectra, helicoidal ordering of localised mag. moments *(Russian)* 7−77265
triplet bipolaronic system, ferromagnetism and supercond. coexistence *(Chinese)* 7−98825
weak ferromagnetic superconductors, phenomenological theory 7−99307
Al, granular, quasireentrant superconductivity near metal-insulator transition 7−143676
$BaPb_{1-x}Bi_xO_3$ ceramic Josephson medium, coherence props. and current transport 7−70492
Co-Si-B-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
CuO_2 planes in high T_c supercond., antiferromag., localisation, pairing 7−118687
$DyBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$ErBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$ErPd_2Sn$ cubic Heusler superconducting alloy, antiferromag. struct., neutron scatt. meas. 7−112743
$ErPd_2Sn$, hyperfine field, low temp. Mossbauer study 7−138362
$ErRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
$Er_xY_{1-x}Rh_4B_4$, low temp. heat capacity, mag. and supercond. phase diagrams 7−92372
Fe-P-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
$GdBa_2Cu_3O_{6+\delta}$, high T_c supercond., calorimetric evidence of antiferromagnetism 7−112834
$GdBa_2Cu_3O_{7-x}$, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
$GdBa_2Cu_3O_{7-x}$, supercond. and normal samples, pres. and field depend. of mag. transition 7−132021
$Gd_1Ba_2Cu_3O_7$, high T_c supercond., magnetisation and susceptibility, 1.5 to 270 K 7−112652
$HoBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$La_{0.95}Gd_{0.05}Ru_3Si_2$, coexistence of superconductivity and spin glass freezing 7−77128
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., competition with magnetic order, NQR study, comp. depend. 7−138134
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., magnetic ordering, NQR study 7−138135
La_2CuO_4 based compounds, supercond., phase transitions, resonating valence bond theory 7−112582
$LuRh_{1.2}Sn_4$, supercond. props. and magnetism 7−92325
$NdRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_{c2} meas. 7−112647
$Ni_{2-x}Cu_xMo_6S_8$, elec. cond. behaviour, electronic instability 7−131723
$SmRh_4B_4$ antiferromag. supercond., reentrant behaviour, microscopic mechanisms, Ginzburg-Landau approach 7−105816
$SmRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_{c2} meas. 7−112647
$SmRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
UPt_3, heavy fermions supercond., mass renormalisations 7−118688
UPt_3, neutron scattering studies of heavy fermion systems 7−112747
$U(Pt_{1-x}Pd_x)_3$ heavy-fermion alloys, superconductivity and antiferromagnetism, phase diagram determ. 7−112790
URu_2Si_2 7−112747
URu_2Si_2 heavy-electron supercond., magnetic excitations and ordering 7−85271
URu_2Si_2, mag. and thermal props., crystal field effect calcs. 7−112253
U_2Zn_{17}, neutron scattering studies of heavy fermion systems 7−112747
$YBa_2Cu_3O_{9-\delta}$, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
Y_9Co_7, mag. supercond., struct. studies 7−131094

magnetic surface phenomena
adsorbates, mag. phase transitions, heat flow sensor studies 7−121109
compositionally modulated mag. films, influence of surface layers on Curie temp., anal. 7−105988
diamond, (111)-(2×1) surface, antiferromag. spin ordering, AES study 7−131993
electrolyte solutions, mag. surface phenomena 7−91857
enhanced 2D mag. props. of surfaces, interfaces and overlayers, total energy local spin density calcs. 7−112757
FCC Ising ferromagnets, surface first-order magnetic transitions, cluster variation calcs. 7−77324
ferrite films, surface magnetostatic waves excitation by point current element *(Japanese)* 7−132103
ferromagnetic film, nonlocal mag. suscept. tensor and spin-wave reson., Green's function method calcs. 7−112898
ferromagnetic fluids, surface waves studied using ray method or geometrical optics 7−104290
ferromagnetic insulators, spin wave excitations near interface, Bethe lattice approx. 7−77264

magnetic surface phenomena continued
ferromagnetic thin films, amorphous and monocrystalline, FMR, replaceability of surface anisotropy with effective volume anisotropy 7—112891
ferromagnetic thin films, impurity layer localised spin wave modes, surface midplane co-action 7—138290
films, refraction of surface magnetostatic waves 7—85274
garnet films, ferromagnetic, with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7—99521
Heisenberg ferromagnets, semi-infinite, surface ferromagnetic phase 7—125436
Ising models, three-dimensional, surface effects study 7—118817
Ising single spin-flip model, domain wall depinning, Monte Carlo simulation studies 7—143841
magnetostatic waves, noncollinear inelastic scattering by SAWs 7—143779
magnetostatic waves spectrum in planar structure with ferromagnetic components with dielectric layers 7—132003
micromagnetics, surface anisotropy 7—125473
nonreciprocal surface waves in magnetic systems, review 7—118789
optical second harmonic generation as surface magnetization probe 7—125442
Permalloy films, surface magnons, Brillouin light scattering 7—125510
Potts model, conformal invariance, Monte-Carlo finite-size scaling, surface magnetic exponent 7—128476
rare-earth metal, semi-infinite, RKKY interaction near surface 7—138214
semi-infinite cryst., high perpendicular anisotropy, domain wall motion, numerical model calcs. 7—118821
semi-infinite ferromagnetic n-vector Kac-Baker models, surface critical behaviour 7—125421
semi-infinite mixed Ising alloys, surface phase diagram calcs. 7—132042
semiinfinite magnetically ordered crystal, impurity electron-magnon states *(Russian)* 7—99443
Sendust bulk ferromagnets, magnetisation-reversal waves in surface region, Kerr effect study 7—125463
singlet-triplet ferromagnets, two-magnon light absorpt. by surface collective excitations 7—92420
spin wave excitations on surfaces, softening 7—138202
spin waves, surface, in magnet electron fluid 7—112780
spin-resolved X-ray spectroscopy by means of X-ray resonance magnetic scattering *(Japanese)* 7—106305
steel plates, EM field, influence of magnetic charact. *(French, English)* 7—92458
toroidal current ordering and spin magnetism near the crystal surface 7—77241
transition metals, surfaces and interfaces, magnetism and electronic struct. *(Japanese)* 7—77199
ultrathin film and surface ferromagnetic phase transition, Heisenberg model calcs. 7—112893
$CO_{70}Fe_5Si_{10}B_{15}$ amorphous alloy, regions of reverse magnetisation 7—70587
Co-CoO compositionally modulated films, mag. props. 7—112869
Co-Cr perpendicular media, mag. and recording props. 7—92474
Co-Cr sputtered films, surface and vol. mag. hysteresis 7—92478
Cr (100), adsorbed O layer effects on surface magnetism 7—99424
Cr surface ferromagnetism, electron spectrum asymm., surface toroidal current ordering 7—77241
Cu-Ni [100] oriented superlattices, mag. props. study 7—125334
EuS (111) on Si (111), isotropic Heisenberg ferromag., surface magnetisation, critical behaviour 7—105984
Fe (001), O chemisorption, first principles determ. of mag. struct. 7—84508
Fe epitaxial (110) film near MnF_2 interface, magnetic surface anomalies persistence obs. 7—132100
Fe epitaxial films, mag. props. 7—118834
Fe film across Cr interlayers, evidence for antiferromag. coupling 7—118839
Fe fine particles, prep. mag. props. 7—125477
Fe on Cu (100), closely-lying energy states, magneto-optic and photoemission meas. 7—143875
Fe ultrafine particles in Fe-SiO_2 granular solids, spontaneous magnetisation, temp. depend. 7—125475
Fe ultrathin layers on W(110), Damon-Eshbach surface spin wave mode freq., surface anisotropy effects 7—132099
Fe-Ni multilayers, Fe ferromagnetism 7—99519
$Fe_{40}Ni_{40}B_{20}$, stress annealed amorphous alloy, mag, surface anisotropy, ferromag. resonance 7—106031
Fe_2O_3, hematite, surface magnetoelastic waves, conc. dynamics 7—77390
Fe_3O_4 film, sputtered with Ar^+, surface magnetism changes, photoelectron meas., 7—138295
Fe_3O_4, film, surface magnetisation 7—112868
Fe_3O_4, magnetite ultrafine particles, water/oil microemulsion preparation and mag. props. 7—99510
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7—85304
Gd, surface magnetisation at the bulk Curie temp. 7—112858
Gd-Fe, thin Gd films on Fe in applied mag. field, surface spin reorientation 7—70560
GdCoMo amorphous thin films, surface mag. anisotropy, X-band microwave spectra study 7—99522
Mn adlayers on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7—113307
$NaHg_4$, supercond., surface magnetisation 7—125240
Nd-Fe-B sintered magnet, coercivity of surface grains 7—138287
$Nd_{15}Fe_{77}B_8$:Dy_2O_3 magnets, mag. surface hardening, microstructural evidence 7—125467
Ni (100), electronic structures and surface magnetism at finite temps. 7—77024
Ni (110)c(2×2) ferromag., with chemisorbed S, spin resolved photoemission 7—132411
Ni-Cr multilayered thin films, mag. props., dimensional effects study 7—125507
Pd/Co multilayers, mag. interface anisotropy 7—99520
Pd/Fe multilayers, mag. interface anisotropy 7—99520
$Pd_{100-x}Fe_x$-Cu ferromagnetic-paramagnetic bilayer interface, magnetisation transport, FMR, EPR studies 7—85254
TbFe films, amorphous, magnetic surface props. 7—138294
V adlayers on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7—113307
V surface ferromagnetic order, electron capture spectra study 7—143872
$(Y,Ca)_3(Fe,Ge)_5O_{12}$ thin garnet films, magnetostatic spin waves, cubic and uniaxial anisotropy 7—138203

magnetic surface phenomena continued
YIG film, surface magnetostatic waves scatt. by anisotropy-induced acoustic waves 7—118792
YIG film, surface spin waves, cubic anisotropy effects 7—132092
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7—118840
YIG films, surface magnetostatic wave freq. conversion 7—138293
YIG films, surface spin waves, attenuation and nonlinearity threshold 7—77384
YIG films, surface spin wave propag., obs. at frequencies above the dipole spectrum limit 7—85275
YIG films with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7—99521
YIG: H_2^+ thin film, surface spin-wave modes photoinduced mag. anisotropy effect relax., FMR obs. 7—112897
YIG:Fe(Mn)(Ar), anisotropy effects of implanted ions, FMR 7—125370
YIG:H_2^+ thin films, ion implanted, surface spin wave modes, photoinduced effect 7—112959

magnetic susceptibility
see also molecular magnetic susceptibility; photomagnetic effect
1D antiferromagnets, universality classes, critical props. 7—125392
3d transition metal intercalation cpds., M_xTiSi_2 (M=V, Cr, Mn, Fe, Co, Ni), mag. props. 7—118825
AC meas. of magnetic susceptibility, using bridge 7—121166
actinide-transition metal alloys, magnetism, electron-electron interactions, hybridisation effects 7—77243
alkoxyphenyl trans-4-alkyl cyclohexane carboxylates, solid, nematic and isotropic phases, mag. susceptibility meas. 7—137231
aluminium polyfluorophthalocyanine, conducting polymer, chem. doping with $IF_5(MoF_6)(WF_6)$ *(French)* 7—112310
amorphous magnets, strong random anisotropy, phase transitions, long range interactions and correls. 7—99441
amorphous thin films, magnetoelastic dynamic suscept. calcs. 7—99540
Anderson lattice, effective hybridised-band Hamiltonian, absence of ferromag. instability 7—77253
anisotropic Ising antiferromagnet on square lattice, susceptibility, comment 7—92417
antiferromagnetic Ising spin glass, reentrant phase transition 7—92450
Bechgaard salts, field induced spin density waves, spin susceptibility 7—125356
$(BEDT\text{-}TTF)_2Au(CN)_2$, synthesis, structure and elec. props. 7—99011
β-$(BEDT\text{-}TTF)_2AuBr_2$, mag. and high press. cond. meas. 7—85172
β-$(BEDT\text{-}TTF)_2AuI_2$, mag. and high press. cond. meas. 7—85172
$(BEDT\text{-}TTF)_2I_3$, α- and β-phases, static mag. suscept. meas., press. depend. 7—85239
β-$(BEDT\text{-}TTF)_2I_3$, high-and low-T_c superconducting phases study 7—77141
α_t-$(BEDT\text{-}TTF)_2I_3$, stable superconducting state at 8 K 7—125217
β-$(BEDT\text{-}TTF)_2I_3$ quasi-2D metal, spin susceptibility and ESR line profile *(Russian)* 7—143894
$(BEDT\text{-}TTF)_2IBr_2$, elec. cond., static mag. susceptibility meas., phase transitions 7—84901
$(BEDT\text{-}TTF)_2IBrCl$, elec. cond., static mag. susceptibility meas., phase transitions 7—84901
$(BEDT\text{-}TTF)_2ICl_2$, elec. cond., static mag. susceptibility meas., phase transitions 7—84901
(N-benzylpiperazinium)$_2$ copper tetrachloride, mag. props., EPR linewidth meas. 7—125362
Bethe Ansatz soln., mixed valent impurity, two mag. configurations, charge fluctuations, thermodynamic props. 7—76837
Bloch electrons, mag. suscept. in presence of localised mag. moments 7—85219
cerium trifluoromethanesulphonate nonahydrate, mag. props. 7—125382
chelate: Cr^{3+} crystal, asymmetric spin-phonon coupling, low temp. behaviour of dipole subsystem 7—132134
chloroform-d_1, oriented in liq. crysts., NMR spectra 7—92510
CoBa fluorophosphate spin-glass, acoustic suscept. calcs. 7—112923
cobalt oxydiacetate trihydrate, mag. props. and mol. struct. determ. 7—112769
colloid superparamagnetic particles, anomalous susceptibility, in alternating mag. field 7—112866
copper heptachloride N-methylphenethyl ammonium, anomalous mag. props. 7—125328
copper hexachloride (cyanomethane), anomalous mag. props. 7—125328
p-cyanophenyl trans-4-pentyl cyclohexane carboxylate, solid, nematic and isotropic phases, mag. susceptibility meas. 7—137231
cyclohexylammonium trichlorocuprate (II), mag. susceptibility, bound magnon contribs. 7—112768
decamethylene-N,N′-diaminium-iron(II) tetrachloride, mag. susceptibility 7—112759
N,N′-decamethylenediammonium iron tetrachloride, mag susceptibility meas. 7—131999
decamethylferrocenium tetracyanoethenide, ferromag. ground state obs. 7—112767
diamagnetic susceptibilities of cryst. ions, modified Thomas-Fermi model 7—99395
dilute classical spin chains, thermodynamics, mag. field effects 7—143824
diluted ferromag. alloy, mag. props., reaction field approx. approach 7—132058
disordered ferromagnets and spin glasses, competing interactions, scaling corrections, mean-field effective-field, model calcs. 7—118807
dysprosium trifluoromethanesulphonate nonahydrate, mag. props. 7—125382
EBBA mag. suscept. temp. depend. and nematic-isotropic transition studies 7—111385
Edwards Anderson spin glass, equivalence of random and competing non-random bonds 7—85338
electron Fermi liquid with paramag. impurities, elementary excitations 7—98834
(ethanolammonium)$_2$ copper tetrachloride, mag. props., EPR linewidth meas. 7—125362
(ethanolammonium)$_2$ copper tribromide, antiferromag. coupling, magnetostructural correlations, mag. suscept. meas. 7—125361
P-(ethoxyphenyl azophenyl) derivatives, isotropic-nematic transition, mag. susceptibility studies 7—111886
exchange coupled systems, EPR and mag. susceptibility meas. 7—112931
FCC Ising ferromagnets, surface first-order magnetic transitions, cluster variation calcs. 7—77324
ferrimagnets, ordered and disordered, phase transitions, correl. mol. field theory, Monte Carlo simulations 7—105944

magnetic susceptibility continued
ferrocolloids, mag. props., interparticle interactions 7−77377
ferrofluids, complex susceptibility, rotational Brownian motion 7−77378
ferromagnetic 4f-systems, intermediate valence and Curie temp. calcs. 7−77285
ferromagnetic film, nonlocal mag. suscept. tensor and spin-wave reson., Green's function method calcs. 7−112898
ferromagnetic Ising model on 2D and 3D lattices, transfer matrix and finite size scaling 7−77329
ferromagnetic solids, magnetomechanical damping, internal stress effects calcs. *(Russian)* 7−138306
ferromagnetic-paramagnetic transitions recording at pressures to 30 GPa 7−121163
ferronematic suspension, orientational struct. and mag. props. 7−105969
four-site clusters, periodic Anderson model calcs. 7−84618
graphite intercalated with metal fluorides, cryst. chemistry and conductivity behaviour 7−83930
graphite intercalation compounds, 2D XY Kosterlitz-Thouless transition 7−143795
graphite-$CoCl_2$ first stage intercalation cpd., high field mag. behaviour 7−85263
Griffiths phase, spin autocorrelation function 7−138243
heavy fermion cpds., itinerant antiferromag. state, SDW phase diagram anal. 7−125411
heavy fermion systems, Kondo lattice props. 7−92164
heavy fermion systems, universal low-temp. props., microscopic derivation 7−124808
heavy fermions, effective mag. moments and Kondo lattice Wilson ratio 7−112737
Heisenberg ferromagnets, spin wave theory in 1D and 2D at low temp. 7−77341
Heisenberg model, anisotropic, transverse field Green's function theory anal. 7−125299
high T_c supercond., annealing conditions effects study, mag. suscept. and X-ray diffr. meas. 7−143671
high T_c supercond., two-phase struct., X-ray diffr., mag. suscept. and electroresist. temp. depend. study *(Russian)* 7−111469
high temperature superconductivity, superexchange mechanism, mean-field model, EHT calcs. 7−112623
Hubbard model, appl. to small clusters, ground state and thermodynamic props. 7−98767
Hubbard model in strong-coupling limit, mag. susceptibility 7−138242
intermediate valence systems, spectroscopic properties, many-body theory 7−76840
iron (III) tetraphenylporphyrin complex mag. susceptibility, Mossbauer study 7−99617
Ising and Blume-Capel models, initial perpendicular isothermal susceptibility 7−77260
Ising model, 3D, high temperature susceptibility and spin-spin correlation function, critical points 7−105898
Ising model, spin=1, effective field theory 7−85224
Ising model spin glasses, critical exponents, high-temp series anal. 7−125419
Ising spin glasses, high temp. series expansion 7−125427
Ising-type system, nonasymptotic critical behaviour, ordered-phase case 7−70573
isotropic antiferromagnet, correl. functions struct. calcs. *(Russian)* 7−125339
isotropic ferromagnetic Heisenberg chain, arbitrary spin, critical behaviour 7−125434
isotropic Heisenberg chain, suscept. and sp. ht., cluster transfer matrix method calcs. 7−85346
itinerant antiferromag. spin structures, SDW systems, spin wave modes 7−99431
kagome Ising models, perpendicular susceptibility, exact soln. 7−118761
Kondo effect, Schotte resonance model with anisotropy 7−77216
Kondo lattices, Wilson ratio and mag. susceptibility 7−112738
Lee-Yang ferromagnets, Gaussian magnetization fluctuations at zero external field 7−112729
liquids, mag. orientation of diamagnetic molecules, molecular interaction *(Japanese)* 7−118766
lithium phthalocyanine radical, spin exchange narrowing 7−125368
magnetic liq., HF mag. susceptibility and relax. time 7−92468
magnetic particles in eel and carp bone, mag. suscept. and remanence meas. 7−71768
magnetically isotropic samples, magnetisation distrib., magnetostatic problem *(Russian)* 7−138274
magnetically ordered metals, quantising mag. field, low temp. static SDW *(Russian)* 7−99429
manganese oxalate dihydrate linear chain system, cryst. and magnetic struct., neutron diffr. study 7−99407
measurement, using oscillator with low dissipation 7−80800
melaminium copper hexachloride, antiferromag. coupling, magnetostructural correlations, mag. suscept. meas. 7−125361
metal phthalocyanine sheet polymers, mag. susceptibility, electrical cond., X-ray diffr. 7−76949
metallic glass ribbons, mag. anisotropy, oriented surface roughness effects 7−105914
metallic glasses, hysteresis loop props., aging effects 7−143862
metallic glasses, magnetic static behaviour near critical conc. 7−143855
metals, dirty, spin dephasing time due to weak scatt. processes 7−105932
metals, localised impurity moments magnetic interaction, Monte Carlo simulation 7−85241
metals, mode pseudopot. calcs., binding energy, resistivity and paramag. suscept. determ. 7−76724
metals, narrow band and heavy fermion systems, electronic heat capacity and mag. susceptibility 7−91834
metals and alloys, solid and liq., high temp., meas. method and apparatus 7−73382
metamorphic minerals, anisotropy of magnetic susceptibility 7−145447
3-methyl-2-aminopyridinium copper octachloride, anomalous mag. props. 7−125328
N-methylpiperazinium copper octachloride, anomalous mag. props. 7−125328
mixed valence substances, mag. suscept., electron ordering effect, calc. using periodic Anderson Hamiltonian and Green's functions *(Russian)* 7−112276
motor driven vibrating sample magnetometer for mag. susceptibility meas. 7−102467
mutual inductance bridge for the measurement of superconducting transition temperatures and magnetic susceptibility 7−140704

magnetic susceptibility continued
$NaMg[Cr(Oxalate)_3].9\ H_2O$, single cryst., paramagnetic anisotropy 7−125305
nematic liq. crystals, phase behaviour in presence of electric and mag. fields 7−137556
nematic liquid crystal systems with positive and negative mag. susceptibility anisotropies, zero-field NMR 7−91428
nickel, ethanediamine nitrite chlorate, $Ni(C_2H_8N_2)_2NO_2ClO_4$, quasi 1D Heisenberg antiferromagnet, quantum energy gap 7−85256
one dimensional, domain wall, phase transitions, temp. depend., energy calcs 7−143842
one-dimensional two-band Anderson model, mag. suscept. calc. 7−92399
ordered and disordered substances, kinetic phenomena 7−132036
organic quasi-1D conductors, cascade of field-induced SDW phases 7−99460
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
parametrically excited spin wave nonlinear damping coeff. study *(Russian)* 7−77272
permalloy thin films, ferromag. reson., ang. dispersion of mag. anisotropy 7−132137
phenolic-Fe phthalimide mixed ligand complexes, hyperfine interactions 7−124942
piperdinium copper tribromide, antiferromag. coupling, magnetostructural correlations, mag. suscept. meas. 7−125361
poly-1,4-dithianaphthalene, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polyacetylene, heavily-doped, transition to a gapless Peierls insulator 7−70367
polyacetylene, segmented, transport and mag. props. 7−70273
cis-polyacetylene films, doping with metal hexafluorides, conductivity, ESR and ENDOR studies 7−131625
trans-polyacetylene films, mag. props. at low temps. 7−143754
polyaniline, emeraldine base form, insulator to metal transition on protonation 7−70193
polyaniline, insulator-to-metal transition 7−112184
polymer system, symmetry, phase transition, n=0 limit 7−112829
polymers, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polyphenylenesulphide, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polythiophene: BF_4^-, Pauli and Curie susceptibility, ESR/WMR meas. 7−77203
purple acid phosphatase, optical, EPR, Mossbauer and reson. Raman spectra, and mag. suscept. meas. 7−116995
quantum spin glass, RKKY interaction, real space renormalisation study 7−112824
random axis magnet with infinite anisotropy, ferromagnetic, spin glass and disordered phase calcs. 7−85310
$(rare\ earth)_2Zn_{17}$ alloys, mag. suscept. and elec. resist. meas. 7−70531
$(rare\ earth)_3Co_2Sn_7$, cryst. struct., mag. suscept., elec. resist. and thermopower meas. *(Russian)* 7−98048
rare earth boride phases, magnetic props., model-statistical prognostication method *(Russian)* 7−85356
rare earth borides, $RRuB_4$, R=Gd-Tm, Lu, mag. suscept., elec. resist. meas., low temp. mag. order 7−92408
rare earth bromates, AC mag. susceptibility between 1 and 4.2 K 7−105897
rare earth cpds., $RBa_2Cu_3O_{7-x}$, R=Y, La-Lu, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
rare earth doped O-defect perovskites, $La_{2-x-y}R_ySr_xCuO_{4-z}$, R=Pr, Nd, Sm, Eu, Gd, supercond., structural, mag. props. 7−112596
rare earth hydrides, $RFeAlH_x$, R=Sm,Gd,Dy-Tm, breakdown of Fe sublattice long-range mag. order 7−99447
rare earth impurity systems, thermodynamic props., f-d Coulomb repulsion effects 7−76448
rare earth orthovanadates, mag. susceptibility and cryst. field effects 7−77204
rare earth oxides, $RBa_2Cu_3O_{9-\delta}$, R=La-Lu except Pm, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
rare earth-Ba-Cu-O cpds., $RBa_2Cu_3O_x$ (R=Gd, Er, Dy), high T_c supercond., mag. and supercond. properties 7−131888
rare earth-Ba-Cu-O system, $RBa_2Cu_3O_{6+y}$, high T_c supercond., mag. characts. 7−118705
rare earth-Ni_2P_2, R=Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Sm, Ce, Yb, La, mag. props. temp. depend. study 7−118767
rocks, Kalman filter approach to susceptibility mapping 7−114705
rocks, magnetite content versus strain rel. to anisotropy of magnetic susceptibility 7−145448
rocks anisotropy of mag. susceptibility, appl. and review 7−139592
scaling functions for 3d critical wetting 7−105192
Se-Te liq. mixtures, heat capacity temp. depend., cond. and bonding rearrangement 7−76426
semiconductors, amorphous, diamagnetic susceptibility 7−143756
semiconductors, dilute magnetic, magnetic properties, review 7−125391
semiconductors, disordered, spin dephasing time due to weak scatt. processes 7−105932
semimagnetic semiconds., dynamic spin suscept., Ising model cluster calcs. 7−125429
semimagnetic semiconductors, spin-glass phase props. from susceptibility meas. 7−77293
single domain particles, mag. props., defect effects 7−125471
sinusoidal phase, wave vector dependent suscept., Landau theory 7−118757
site-bond diluted Ising ferromagnet on anisotropic square lattice, thermodynamic props. calcs. 7−70571
spin glass dynamics from mag. noise, relax. and susceptibility 7−118802
spin glass low-temp. AC suscept., temp. and freq. depend., thermally activated hopping diffusion model 7−118812
spin glass three-dimensional systems, phase transitions 7−132040
spin glasses, dilute, short-range order and high-temp. susceptibility *(Russian)* 7−70548
spin-cluster theory of mag. materials, spin glasses appl. 7−92436
statistical dynamics of molecular field systems 7−118805
trans-stilbene-TCNQ complex, physical props. 7−84902
superconductivity onset and mag. susceptibility 7−131864
TCNQ salts, TEA-$(TCNQ)_2$, magnetic susceptibility anomaly 7−85306
terbium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
ternary and multinary cpds., conf., Snowmass, CO, USA (Sept. 1986) 7−120711

magnetic susceptibility continued
tetramethyl ammonium nickel tribromide, metamagnetic phase diagram, AC mag. suscept. meas. 7−85291
tetramethylammonium metal trihalides, 1D magnetism investig. 7−112772
tetraselenotetracene iodomercurate, quasi-1D conductor, mag. props., ESR study *(German)* 7−132156
titanomagnetite, selection rules for bulk piezomagnetic coeffs. of isotropic dispersions 7−127197
TMDBF-$BF_4(ClO_4)(AsF_6)(PF_6)$, cation radical salts, elec. and mag. props. 7−112313
$(TMTSF)_2ClO_4$, static mag. suscept. meas., press. depend. 7−85239
$(TMTSF)_2PF_6$, static mag. suscept. meas., press. depend. 7−85239
$(TMTSF)_2ReO_4$, static mag. suscept. meas., press. depend. 7−85239
TNCQ conductors, phonons, inelastic neutron scatt. studies 7−84159
transition metal alloys, M-Te, (M=Co, Ni, Fe, Ti, V, Cr), liq., electrical conductivity 7−84808
transition metal layered dichalcogenides, elec. resist. and spin susceptibility 7−98959
triangular antiferromagnet, spin=1/2, with random exchange interaction, low temp. props. 7−85218
triethylenetetraammonium copper hexachloride, quasi-2D metamagnet, mag. and structural props. 7−125329
$(TTM\text{-}TTF)(I_3)_{0.823}$, organic conductor, mag. props. 7−99557
two-impurity Anderson model, Kondo limit, perturbative results 7−77219
two-impurity Anderson model electron gas, mag. props., Kondo effect and indirect exchange, Monte Carlo simulation 7−84722
two-layer ferromag. films, static and dynamic props. *(Russian)* 7−143863
U-based systems, heavy electron materials, chem. trends rel. to their formation 7−105066
vector spin glasses, anisotropy-induced crossover exponent calcs. 7−118813
weak itinerant antiferromagnetism, spin fluctuations, self-consistent renormalisation theory 7−131982
Wigner oscillators, diamagnetism, mag. moment, mag. susceptibility 7−131985
X-Y model, thermodynamic quantities, decoupled cell Monte Carlo method 7−77340
XXZ Heisenberg model with arbitrary spin, thermodynamics 7−85339 - *(Russian)* 7−92401
AgI-AgBr system, diamag. susceptibility 7−125306
AgIn(Ga)Te_2, semimag. semicond., mag. props. 7−125341
AgMn dilute RKKY spin glass. nonlinear suscept. meas. 7−125402
Al-Mg alloys, mag. suscept. temp. depend. meas. and two-band approx. calcs. *(Russian)* 7−77245
Al-Mn icosahedral and hexagonal Al_4Mn alloys, NMR lines obs., magnetism 7−112968
Al-Mn quasicrystals, mag. moment and spin glass behaviour 7−77304
Al-Mn-Si icosahedral alloys, NMR lines obs., magnetism 7−112968
$Al_yFe_{x-y}V_2O_5$, nonequilib. magnetic suscept., isolated and coupled moments 7−138194
$Al_{78}Mn_{22}$ quasicrystalline decagonal alloys, low temp. sp. heat and magnetic meas. 7−77310
$Al_{86}Mn_{14}$ quasicrystalline alloy, EPR study, spherical harmonics, icosahedral crystal field 7−143903
$Al_xV_2O_5$, low temp. AC and DC susceptibility 7−92418
AuFe, dynamic magnetic susceptibility, reverse ferromagnetic-spin glass transition 7−131994
B, magnetic susceptibility and magnetic resonance 7−70517
BC, magnetic susceptibility and magnetic resonance 7−70517
Ba-La-Cu oxide, high T_0 supercond., mag. props. 7−99328
Ba-La-Cu-O mixed valence high T_c superconductors, struct., mag. suscept., and critical field studies *(French)* 7−112707
Ba-Y-Cu-O, high T_c supercond., crit. current density, diamag. suscept., charactn. by X-ray diffr. 7−99381
Ba-Y-Cu-O high T_c supercond., prep. and struct. determ. by lattice imaging 7−104701
$Ba_2Eu_{0.9}Y_{0.1}Cu_3O_x$, superconducting cuprate perovskites 7−105794
BaF_2:Dy, g-tensor of paramag. centre, determ. 7−143906
$BaFe_{12}O_{19}$ uniaxial ferromagnet, reversible transverse susceptibility singularities study 7−118777
$Ba_{0.5}La_{0.5}Fe_{1-x}Cu_xO_{2.75-(x/2)+\delta}$, struct., oxidation states, elec. props., chem. anal., X-ray diffr., electron diffr., Mossbauer spectra, mag. suscept. meas. 7−84891
$Ba_2RCu_3O_{7-x}$ (R=lanthanide), superconducting and mag. props. 7−125215
$Ba_{1-x}Y_xCuO_{3-z}$ high T_c supercond., transition temp. 7−92339
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond., bulk and thin film studies 7−143711
$Ba_2YCu_3O_{7-x}$, high T_c supercond., processing-property relations 7−119213
$Ba_2YCu_3O_{9-\delta}$ high T_c supercond., ceramic processing methods 7−119205
$Ba_xY_{1-x}CuO_{3-y}$ high T_c supercond., magnetisation and Meissner effect 7−92367
$BdBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
Bi, monocrystalline, μ^+ Knight shift ang. depend. and diamagnetic props. 7−113054
Bi-Ga garnet films, domain wall oscills., magneto-optical anal. 7−132110
Bi-Se, liq., electronic props., diamagnetism 7−92148
$Ca_2Fe_{2-x}Mn_xO_5$, mag. props., struct. effects 7−105902
$CaFe_xSi_2O_8(OH)$ ilvaite mixed valence single cryst., electron delocalisation and magnetic props. 7−76853
$CaNi_2P_2$, Pauli paramagnetism, mag. suscept. temp. depend. study 7−118767
$CdCr_{2x}In_{2(1-x)}S$, insulating spin glass, crit. behaviour 7−105926
$CdCr_2Se_4$ amorphous film, mag. and elec. props. 7−112339
$CdCr_2Se_4$ mag. semicond., impurity absorption spectra 7−106229
$Cd_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$(CdMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semiconductor, preparation, structure and mag. props. 7−70532
$Cd_{0.9}Mn_{0.1}Se$, large negative magnetoresist., Hall coeff., magnetisation meas. 7−84940
CdMnTe, spin glass, dynamic mag. susceptibility, Faraday rotation meas. 7−77294
$Cd_{1-x}Mn_xTe$, spin glass freezing, universal scaling, mag. suscept. meas. 7−99472
CdS, optical polarisability and diamag. susceptibility 7−85560
Ce Kondo impurities, neutron scatt. linewidth 7−76814
Ce-La-Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413

magnetic susceptibility continued
$CeAl_3$, Kondo effect, Fermi liquid description of thermodynamics 7−92402
α-Ce_3Al, Kondo cpd., mag. and transport props. 7−77213
$CeCu_6$, electron-phonon coupling, elastic const. temp. dependence, magnetoelastic effects, single-ion magnetic susceptibility 7−70617
$CeCu_6$, heavy-fermion system, magnetic response, momentum dependence 7−143761
$CeCu_6$, thermodynamic and transport props. 7−137584
$CeCuAl_3$, Kondo lattice, elec., mag., and thermal props. 7−138201
$CeCu_3Al_3$, heavy fermion behaviour at low temp. 7−118464
$CeCu_{2-x}Co_xSi_2$, mixed valence to heavy fermion transition characts. studies 7−124950
$CeCu_2Ge_2$, Kondo lattice, mag. order., susceptibility, sp. ht., elec. resist. meas. 7−77278
$Ce(Cu_{1-x}Ni_x)_5$, conc. Kondo system state-mixed valence state transition 7−112277
$CeCu_{2-x}Ni_xSi_2$ alloys, heavy fermion to mixed valence transition, sp. ht. behaviour studies 7−124548
$CeCu_{1.54}Si_{1.46}$, heavy electron Kondo lattice, mag., sp. ht., elec. resist. meas. 7−77279
$CeCu_2Si_2$, mag. and superconducting props., composition depend. 7−70555
CeD_{2+x} magnetic ordering, site occupancy and comp. depend., neutron diffr. study 7−85246
$Ce(Fe_{1-x}Al_x)$, instability of ferromag., Al substitution effects 7−143813
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$Ce_{1-x}Gd_xAl_3$, heavy fermion, Kondo, spin glass-like and antiferromagnetic behaviour 7−70554
$Ce_{1-x}Gd_xAl_3$ spin glass-like heavy fermion system, percolation behaviour, low field suscept. meas. 7−125403
$CeInAg_{2-x}Cu_x$ Heusler phases, crystallographic, mag., elec. resist. meas. 7−77281
$CeInAg_{2-x}Cu_x$, Heusler phase, Konda lattice, mag., elec., specific heat props. 7−138188
CeInAu, sp. ht., mag. susceptibility, transport props. 7−77247
$CeInAu_2$, sp. ht., mag. susceptibility, transport props. 7−77247
$CeInCu_2$ Heusler phase, crystallographic, mag., elec. resist. meas. 7−77281
$Ce_xLa_{1-x}Al_2$, Kondo effect, Fermi liquid description of thermodynamics 7−92402
$Ce_xLa_{1-x}Cu_6$, heavy fermion system, electrical and mag. props. 7−70278
$Ce_xLa_{1-x}Mo_6S_8$ Chevrel cpd., superconducting and mag. props., resist. and mag. suscept. meas. 7−77222
$Ce_{1-x}La_xPb_3$, heavy-fermion behavior and the single-ion Kondo model 7−99401
$Ce_{1-x}La(Y)_xRh$ alloy, struct., mag. props. and valence behaviour, substitution and surrounding effects 7−76847
CeMg, electrical and mag. props., pressure depend. 7−84810
$CeMo_6S_8$, cryst. struct. and phys. props. 7−77211
$CeNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$Ce(Pb_{1-x}Sn_x)_3$, heavy fermion to mixed valence system, resistivity, susceptibility, sp. ht. 7−112822
$CePd_3$, paramag. response, thermal evolution, scattered neutron polarisation anal. 7−77236
$CePd_{3-x}Pt_x$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$CePd_2Si_2$, mag. susceptibility, heat capacity 7−118779
CePtSi, heavy fermion cpd., meg. and elec. props. 7−98982
$CePt_2Si_2$, Kondo lattice cpd., specific heat and high pressure effects 7−70553
$CeRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$CeRu_2Si_2$, J=5/2 rare earth ion states, low field mag. props., tetragonal cryst. fields 7−138179
$CeRu_2Si_2$, polarised heavy fermion system, high-pressure magnetoresistance and susceptibility meas. 7−70287
$CeSi_x$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
$CeSi_{2-x}Ge_x$, crossover from ferromagnetic to Fermi liq. behaviour 7−77280
Ce_2Sn_5, mag. susceptibility, sp. ht. meas. 7−70533
Ce_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$Ce_{0.7}Th_{0.3}$, Kondo vol. collapse and α-γ transition, XPS and BIS studies 7−77760
$Ce_{0.74}Th_{0.26}$, mixed valence alloy, γ-α valence transition, paramag. response, neutron scatt. study 7−70263
$Ce_{1-x}Th_x$ mixed valent alloy, dynamic susceptibility, neutron scatt. studies 7−124948
$Ce_{2/3+x}TiO_{3\pm y}$, elec. props., 77 to 450 K 7−105880
$Ce_{1-x}Y_xPd_3$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$CfCl_3$, mag. suscept. meas., cryst. struct. depend. 7−92410
Cf_2O_3, enthalpy of formation and mag. susceptibility 7−93361
Co-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
Co-Sm(Nd)(Pr), amorphous mag. props. 7−132000
Co(AlMn) alloys, struct. and mag. props. 7−132069
$CoCl_2$-graphite intercalation compound, mag. ordering, nonlinear slow fluctuation 7−125405
CoCr-NiFe double layers, FMR and mag. props. 7−92475
$Co_{0.005}Fe_{0.995}S$, mag. study of superlattice transition 7−70528
$CoIn_2S_4$, struct. and mag. props. 7−125417
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
Co_2SnO_4, AC mag. suscept. meas. 7−92438
Co_2SnO_4, mag. behaviour, AC susceptibility meas. 7−112845
Co_2SnTe_4, amorphous, mag. props. 7−132024
Co_2TiO_4, disordered spinel ferrite, spin glass behaviour, AC mag. suscept. meas. 7−92438
Co_xTiS_2, mag. phase diagram 7−85307
$Co_{12}Zn_{0.8}TiO_4$, AC mag. suscept. meas. 7−92438
$Co_{2-x}Zn_xTiO_4$, mag. behaviour, AC susceptibility meas. 7−112845
$Cr_xGa_{2.67-x}S_4$, layered cpds., 2D mag. behaviour 7−77256
$Cr_{1-t}Mn_tAs$, paramag.-helimagnetic transition, struct. and mag. characts 7−132020
Cr_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832

magnetic susceptibility continued
$CsDy(MoO_4)_2$, low freq. mag. props., mag. and struct. phase transitions 7−132014
$CsMnF_3$ antiferromagnetic, parametrically excited spin wave periodic density redistrib. obs. 7−105908
$CsNiCl_3$ triangular lattice antiferromag., phase transitions, neutron scatt. studies 7−77291
Cu complexes, copper tetrabenzotetraazacyclohexadecine$(TCNQ)_n$, semicond. props., spectroscopic anal. 7−70298
Cu, nuclear magnetic ordering, susceptibility and entropy meas. 7−77261
Cu superconducting oxides, mixed valence, high T_c, bidimensional electronic model calcs. *(French)* 7−124849
Cu-3d element alloys, Kondo and spin glass effects correl. *(Russian)* 7−76918
Cu-Nb(NbTi) interface, proximity-effect-induced superconductivity at millikelvin temperatures 7−77166
$Cu_{99.2}Fe_{0.8}$ rapidly quenched alloys, change of mag. props. with heat treatment 7−71329
Cu(II) complex, tetrakis(aqua(pyridinyl)(pyrazinyl) triazolato)copper(II) tetranitrate, mag. susceptibility and EPR 7−112937
Cu(II) complexes, bis[(oxotrifluorpropylidenyl)tetramethylimidazolinoxyl] copper(II), cryst., mol. struct. and mag. props. 7−111517
Cu(II) complexes, copper(II) methoxonitrophenolate dimers, structs., mag. parameters and ESR spectra 7−112942
Cu(II) complexes, stereochem., struct. phase transition 7−105010
CuIn(Ga)Te_2, semimag. semicond., mag. props. 7−125341
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
$Cu_xMo_6S_8$, NMR and mag. susceptibility meas. *(Russian)* 7−99597
$Cu_{1.8}Mo_6S_{8-x}O_x$, Chevrel cpd., superconducting props., O doping effects 7−125180
$Cu_{1.8-x}Ni_xMo_6S_8$, supercond. props. and normal state resist. *(Russian)* 7−70443
Cu_xRh_{1-x} alloy, mag. and electronic props. 7−105387
Cu_2Te-Cr_2Te_3 solid soln., mag. props. and metallic cond. 7−125380
$Cu_{50}Zr_{50-x}Al_x$ metallic glass, electronic struct.-sensitive electron transport 7−98963
Dy $(BrO_3)_3.9H_2O$, mag. behavior and cryst. field 7−92416
Dy-Ba-Cu-O, high T_c supercond., transition temp., diamagnetism, mag. suscept. meas. 7−112595
Dy-Ba-Cu-O high T_c supercond., zero resist. temp. and cryst. struct. 7−125210
Dy-Y superlattices, mag. and struct. charact. 7−125506
$DyAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
$DyBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$DyBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
$Dy_xGd_{1-x}Ni$, amorphous alloys, random anisotropy series, complex susceptibility, low temp. 7−105895
$Dy(OH)_3$, mag. susceptibility dynamic instability 7−118780
$Dy(P_{1-x}V_x)O_4$ random anisotropy system, AC susceptibility, freq. depend. 7−125336
Er, nanocrystalline, prep., mag. transitions, suscept. meas. 7−125478
Er-BA-Cu-O, high T_c superconductivity 7−99277
Er-Ba-Cu-O high T_c supercond., zero resist. above 90 K 7−125209
$ErAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
$ErBa_2Cu_3O_{6+x}$ high T_c supercond., complex mag. suscept. study 7−125241
$ErBa_2Cu_3O_{6+x}$ high T_c bulk superconductivity, mag. suscept. meas. 7−143697
$ErBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., resistivity, magnetisation, critical current density 7−143699
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$ErBa_2Cu_3O_{7-\delta}$, sharp supercond. transition at 94 K, resist., mag. suscept. meas. 7−99296
$ErBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$ErBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$ErBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
$ErCo_4B$ mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
$EuBa_2(Cu_{1-7}M_7)_3O_{9-x}$, M=Gr, Mn, Fe, Co, Ni, Zn, high T_c supercond., EPR, magnetisation studies 7−138320
$EuBa_2Cu_3O_{7-x}$, high T_c supercond., mag. props. 7−131886
$EuBa_2Cu_3O_x$, high T_c supercond., electronic and mag. props. 7−143705
$EuIr_2Si_2$, mixed valent cpd., Mossbauer studies 7−138366
$Eu_{1-x}La_xS$ solid solns., ferromag. phase transitions studies 7−70546
$Eu_{0.08}MoO_3$, mag. props., Mossbauer spectra, sp. ht. meas. 7−92430
$Eu_x(NH_3)_yTiS_2$, mixed valence intercalation cpds., synthesis, characterisation, mag. props. 7−85352
$EuPd_2Si_2$, mixed valence cpd., dynamic mag. susceptibility, neutron scatt., magnetisation, Mossbauer effect meas. 7−70264
EuS_ySe_{1-y}, mag. phase transitions close to bicritical concentration 7−99456
$Eu_{0.4}Sr_{0.6}S$, spin glass, evidence for phase transition from dynamic susceptibility meas. 7−118800
$Eu_xSr_{1-x}Te$, dil. antiferromagnet, spin glass behaviour, mag. meas. 7−112827
$EuTlS_2$, physical props. *(French)* 7−77206
Fe complex, charge transfer salt, struct., mag. susceptibility, ferromag. interaction 7−142714
Fe complex, $Fe(C_5Me_5)_2$ (TCNE), ferromag. props. 7−99426
Fe complex, $Fe(py)_3Cl_3.py$, 1D single crystal, mag. susceptibility meas., 2-300 K 7−143764
Fe complex exhibiting two-step spin conversion, Mossbauer spectroscopy, mag. susceptibility, X-ray diffr. 7−112796
Fe ultrafine particles in Fe-SiO_2 granular solids, spontaneous magnetisation, temp. depend. 7−125475
Fe-Al (38 to 52 at.%), high temp. mag. meas. *(German)* 7−77263
Fe-B, melts, high temp. mag. suscept. 7−143759
Fe-Cr disordered alloys, finite-temp. magnetism, local environment effects calcs. 7−85242
Fe-Cr-Ni, FCC alloy, low temp. mag. suscept. rel. to Mn content and interstitial C and N 7−112765
magnetic susceptibility continued
γ-Fe-Mn-Al(Cr), antiferromag., resist., temp. depend. *(Chinese)* 7−143788
Fe-Mo(W)(Nb)(Ta), liquid alloys, impurity effects 7−143758
Fe-Ni Invar alloys, mag. ground state 7−85499
Fe-Ni-C, tensile tests, martensitic transform., AE, mag. suscept. 7−144665
Fe-Ni-Cr(Mn) spin glasses, mag. props. 7−105936
Fe-Ni-Zr amorphous alloys, effective susceptibility exponent, temp. depend. 7−143766
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7−112902
Fe-Ti spinels, mag. suscept. aftereffect and cation diffusion studies 7−118831
$Fe_{84}B_{16}$, amorphous, mag. props. 7−105906
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloy, mag. props., stress depend. 7−143890
$Fe_{1-x}Co_xSi$ solid soln., band magnetism, mag. susceptibility and sp. ht. studies 7−99463
$Fe_3F_8(H_2O)_2$, 'frustrated' cpd., mag. props. 7−105888
$FeF_3.3H_2O$, mag. ordering of dimorphic phases, Mossbauer studies 7−113037
$FeF_3.xHF$, amorphous, Mossbauer spectra, mag. suscept. meas. 7−125583
$Fe^{3+}_{2-x}Fe^{2+}_xV_{4-x}Mo_xO_{13}$ phase type, mag. props. 7−112763
$Fe_{0.4}Mg_{0.6}Cl_2$, Ising spin glass, transverse fluctuations 7−105943
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
$Fe_xMn_{1-x}WO_4$, wolframite, Mossbauer hyperfine interactions 7−125570
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
FeNiBAl amorphous alloys near critical comp., low field reversible DC magnetisation meas. 7−70591
$Fe_{16}Ni_{64}B_{19}Si$ amorphous ferromag., effective susceptibility exponent 7−143770
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromag., phase transition, AC susceptibility meas. 7−85294
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, critical exponent, mag. susceptibility meas. 7−85321
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, mag. transition, inhomogeneity effects 7−92427
$Fe_7Ni_{73}P_{14}B_6$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
$Fe_{12}Ni_{63}P_{16}B_6Al_3$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
Fe_3O_4, disperse particles, mag. suscept. 7−125487
Fe_3O_4 particles in ferrofluid, initial suscept. meas., 80-300 K 7−125474
FeSi, anomaly in meg. susceptibility 7−85237
FeSi, temperature-induced magnetism, neutron scatt. meas. 7−118781
$FeSiF_6.6H_2O$, mag. susceptibility, energy spectrum, low temp. and high press. study 7−138276
Fe_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
$Fe_{2.9}Ti_{0.1}O_4$ (TM10), mag. mineral, suscept. var. with temp. 7−79372
Fe_xTiS_2, intercalation cpd., linear and nonlinear AC mag. suscept. 7−138199
Fe_xTiSe_2 electronic characts. and cryst. dimensionality, Mossbauer, mag. suscept. and X-ray diffr. meas. 7−142725
$Fe_xV_2O_5$, low temp. AC and DC susceptibility 7−92418
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
GaAs, low temperature anomalous magnetisation and susceptibility 7−125304
$Ga_{0.6}Fe_{0.4}NiCrO_4$, anomalous Mossbauer lineshapes and AC susceptibility 7−99425
$Ga_xFe_{1-x}NiCrO_4$ mixed spinel, magnetic behaviour and site occupation studies 7−99419
GaSe, pure and intercalated with Pr, layer struct., mag. suscept. meas. 7−112733
Gd-Al, amorphous spin glass, mag. correlations 7−112817
$GdBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$GdBa_2Cu_3O_{7-x}$, normal and superconducting states, mag. props. 7−125244
$Gd_1Ba_2Cu_3O_z$, high T_c supercond., magnetisation and susceptibility, 1.5 to 270 K 7−112652
$Gd_xBa_{1-x}CuO_{3-y}$, high T_c supercond. above 92 K 7−112594
$GdCo_4B$ mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
$GdFe_{4+x}Al_{8-x}$, Fe atom site occupancy, magnetic phases 7−132026
$Gd_3Ga_{5-x}Al_xO_{12}$, low temp. magnetism *(Chinese)* 7−92407
$Gd_{72-x}M_xGa_{18}B_{10}$, (M=Al, Fe, Co, Mo, Pd, Th), spin glass system, double transition behaviour, effect of alloying elements 7−112809
$Gd_xY_{1-x}Ba_2Cu_3O_{7-\delta}$ high T_c supercond. props., comp. depend. effects 7−125191
Ge single crysts. diamag. suscept. meas., plastic deform effects study 7−112735
$GeCo_2O_4$ antiferromagnet, first order mag. transition obs. 7−70545
^{3}He, liq., thermodynamic props., press. depend., Gutzwiller-Hubbard lattice gas model 7−98609
^{3}He, normal, superfluid B- and 2D-phases, static spin suscept. at nonzeroth mag. field 7−137646
^{3}He, solid, mag. polarons 7−70025
Hf_2FeH_x, mag. and electronic props., XPS 7−100008
$HfV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175
$Hg_{3-\delta}AsF_6$, sp. ht. and diamag. susceptibility above supercond. transition temp. 7−99397
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
Ho-Ba-Cu oxide, high T_c superconductor, mag. and struct. props. 7−92363
$HoBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$HoBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$HoBa_2Cu_3O_{7-\delta}$, sharp supercond. transition at 94 K, resist., mag. suscept. meas. 7−99296
$HoBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$HoBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654

magnetic susceptibility continued
$HoRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
In-AgInTe$_2$ liquid system, electronic props. 7−137972
InSe, pure and intercalated with Gd, layer struct., mag. suscept. meas. 7−112733
$K_2MnCl_4.2H_2O$, mag. transitions 7−99451
$(La,Ba)_2CuO_{4-y}$, high T_c supercond., mag. susceptibility and resist. meas. 7−70448
$(La,M)_2CuO_4$ (M=Ba,Sr), 2D superconductivity, high critical temps. 7−70450
La-Ba-Cu-O, high T_c superconductivity 7−70447
La-Sr-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7−111470
$LaBa_2Cu_3O_7$ high T_c supercond. props. and struct. study 7−125193
$La_{1+x}Ba_{2-x}Cu_3O_y$, high T_c supercond., charge carriers, doping 7−143661
$La_{1.85}Ba_{0.15}CuO_{4-y}$ system, metastable mag. phase detection, high T_c supercond. 7−125404
$La_{2-x}Ba_xCuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_{2-x}Ba_xCuO_4$, lattice instability, high T_c supercond., elec. resist., mag. susceptibility meas. 7−77131
$La_{2-x}Ca_xCuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
$LaCoO_3$-$LaFeO_3$ solid soln. system, spin state of Co^{3+}, mag. suscept., Mossbauer spectra 7−125582
$LaCrO_3$, Cr at. interactions, mag. susceptibility obs. *(Russian)* 7−112774
La_2CuO_4 high T_c supercond., antiferromag. transition, suscept. and elec. resist. meas. 7−125335
La_2CuO_4, semicond., elec. and mag. props. 7−92179
La_2CuO_4 single cryst., mag. susceptibility and anisotropy 7−138200
La_2CuO_4, superconductivity below 40 K, exptl. study *(French)* 7−99361
La_2CuO_4, superconductivity 7−112581
La_2CuO_4:Ba superconductive glass state, flux-trapping, mag. moment and diamag. suscept. meas. 7−77150
La_2CuO_{4-y}:Ca(Ba)(Sr), superconducting, high T_c cpds., prep. and characterisation 7−112563
La_2CuO_{4-y}, antiferromag. obs. by powder neutron diffraction 7−112753
La_2CuO_{4-y}, physical props., O defect effects 7−142756
$(La_{1-x}M_x)CuO_4$ (M=Sr, Ba) high T_c supercond., mag. susceptibility studies 7−92365
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., sp. ht., resist. and diamag. susceptibility 7−99331
$(La_{1-x}M_x)_yCuO_4$ (M=Sr, Ba, Ca) high T_c thin films, sputter prep. and transition temp. studies 7−92868
LaMg, electrical and mag. props., pressure depend. 7−84810
$LaNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$LaRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$La_{2-x}Sr_x(Ba_x)CuO_4$, quasi-2D supercond., Fermi surface, van Hove saddle point singularity 7−92052
$LaSrCo_xAl_{1-x}O_4$, solid solns., synthesis, mag. susceptibility *(Russian)* 7−112773
LaSrCrO$_4$, Cr at. interactions, mag. susceptibility obs. *(Russian)* 7−112774
$La_{1.8}Sr_{0.2}Cu_{1-x}Ag_xO_4$, supercond. transition temp. 7−112549
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., complete Meissner effect AC mag. suscept. meas. 7−99322
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., complex susceptibility and transition temp. 7−112558
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., mag. props. 7−112731
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., galvanomag. effects studies *(Russian)* 7−131671
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., bulk and thin film studies 7−143711
$(La_{1-x}Sr_x)_zCuO_4$ high T_c supercond., ceramic processing methods 7−119205
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., oxidation state study 7−118715
$La_{1.8}Sr_{0.2}CuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
$La_{1.8}Sr_{0.2}CuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. props. 7−105833
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. susceptibility, hydrostatic press. 7−138126
$La_{1.85}Sr_{0.15}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high T_c supercond., O role in prep. 7−132539
$La_{1.85}Sr_{0.5}CuO_4$ bulk superconductivity meas., susceptibility and lattice distortion 7−118645
$La_{2-x}Sr_xCuO_4$ (x=0 to 0.2), high T_c supercond., electron-electron correlations 7−112656
$La_{2-x}Sr_xCuO_4$, high temp. superconductor, temp. depend. of AC and DC susceptibility 7−85189
$La_{2-x}Sr_xCuO_4$ thin films, supercond. props., diamag. transition 7−118613
$La_{2-x}Sr_xCuO_{4-y}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$La_{2-x}Sr_xCuO_{4-y}$, superconducting props. at 40 K 7−112587
$La_{2-x}Sr_xCuO_{4-y}$ Z *(French)* 7−112707
La_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$La_{1-x}Th_xCoO_3$, prep., mag. props. 7−77207
$La_{1-x}Tm_xSe$ mixed valence single crysts., Kondo-type resist., mag. suscept. and magnetoresist. meas. 7−76921
$La_yU_{1-y}O_{2+x}$, mag. meas., dilution effect 7−112786
$LiEu_2DyO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiEu_2GdO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiEu_2YO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiMS(Se)_2$ (M=La, Ce, Nd, Sm, Gd, Tb, Dy, Ho, Er, Y), synthesis, order-disorder transition, mag. props. 7−111862
$Li_yMgYb_2S_4(Se_4)$ lithiated spinels, elec. and mag. meas 7−143422
$Li_{1+x}Ti_{2-x}O_4$:V, paramag. suscept. meas. 7−131986
$Li_xZn_{1-x}V_2O_4$, mag. susceptibility meas. 80-300 K 7−77205
$Lu_5Ir_4Si_{10}$ supercond., electronic phase transition suppression by hydrostatic press. 7−125220
MCo_6Ge_6 (M=Hf, Zr) magnetic suscept. temp. depend. and elec. resist. meas. *(Russian)* 7−92401

magnetic susceptibility continued
$(Mg,Cu)_3(PO_4)_2$, solid solution and mag. props. 7−112764
Mg ultrafine particles, mag. susceptibility, paramagnetic enhancement 7−118769
Mg-Al-Zn, icosahedral alloy, resist., mag. suscept., comp. depend. 7−131608
Mg-Bi alloys, mag. susceptibility 7−85257
Mg-Mn alloy sputtered films, spin glass transition obs., mag. suscept. meas. 7−118814
Mn, BCC, prediction of ferromagnetism 7−143773
Mn-B amorphous alloys, magnetism, elec. transport 7−112761
Mn-Y amorphous alloys, spin glass characts., AC suscept. study 7−105929
Mn-Y(Zr)(Nb) amorphous alloys, mag. and elec. props. 7−76876
$Mn_xFe_{3-x}O_4$, electronic magnetic relaxation 7−125330
$MnO-Al_2O_3-SiO_2$ spin glass system, calorimetric and susceptibility studies 7−112819
$MnSe_2$ mag. struct. and transitions, neutron diffr. studies 7−125315
Mn_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Mn_xTe_{1-x}, dilute alloys, mag. susceptibility 7−99421
$Mn_{1-x}Zn_xF_2$ dilute antiferromagnets, mag. mom. and suscept. temp. and freq. depend 7−105901
$Mn_{1-x}Zn_xO$, spin glass transition, susceptibility studies 7−143814
Mo-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
NO dimer, in micropores, mag. suscept. meas. 7−110168
$Na_xMo_6S_{8-y}I_y$ ($Se_{8-y}I_y$), Chevrel phases, electrochemical, structural and physical props. 7−76090
Nb-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
NbC, heat treatment, effect on defect formation and props. 7−100247
Nb_3Te_4, CDW phase transition, elec. resist., mag. susceptibility and X-ray studies 7−98840
NbTi-Cu multifilamentary superconductor, electrical and magnetic props. below T_c 7−77143
Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413
Nd-Fe-B, sintered magnets, coercivity, thermal ageing effects 7−132083
Nd-Fe-B sintered magnets, mag. viscosity 7−131997
NdB_6, cryst. electric field level scheme, Raman spectra obs. 7−92678
$NdCo_4B$ mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
NdFeB magnets. magnetic viscosity meas. 7−125447
$NdRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$Nd_{2/3+x}TiO_{3\pm y}$, elec. props., 77 to 450 K 7−105880
Ni complex, $Ni(S_2C_2(CN)_2)_2$, prep., struct., elec. and mag. props. 7−99033
Ni complex, $Ni(S_2C_2(CF_3)_2)_2$, prep., struct., elec. and mag. props. 7−99034
Ni complexes, bis(maleonitriledithiolate)-nickel (III), exchange coupled dimers, mag. props. 7−112771
Ni-Cu alloy, near monel composition, rapidly solidified, initial susceptibility studies 7−125333
Ni-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
$(Ni_{1-y}Fe_y)_{1-x}S$ mag. semicond., neutron and X-ray diffr. studies 7−85245
NiFeSiB amorphous alloys, high field susceptibility peak 7−132075
$Ni_{1-x}Mn_xH_y$ disordered alloy hydrides, magnetoresist. and mag. suscept. meas. 7−84937
$Ni_{81.5}P_xB_{18.5-x}$ amorphous and liq. alloys, mag. props. study 7−118768
NiZr amorphous alloy, superconducting transition temp. determ. by AC susceptibility meas. 7−85160
O_2 physisorbed layer on graphite, solidification, susceptibility studies 7−124696
OsF_6-graphite intercalation cpd., ESR props., anisotropy, 2D effects 7−85408
$Pb_{1-x}Mn_xSe$, magnetisation and susceptibility 7−138285
$Pb_{0.92}Mo_6S_{7.5}$ Chevrel phase superconductor, ^{207}Pb electron environment, mag. props., NMR study *(Russian)* 7−143921
(PbSnMn)Te, ferromagnetism under high pressure 7−99449
Pd-Gd system, AC susceptibility meas. 7−77257
Pd-$H_2(D_2)$, hysteresis effects in desorption and absorption, p(n) isotherms 7−105249
Pd-Se system, phase relations, superconductivity 7−113519
$Pd_{1-y}Cu_yH_x$, T_c enhancement on addition of Cu *(Russian)* 7−99247
Pd_2DySn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
Pd_2HoSn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
$PrCo_4B$ mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
$PrCu_6$, freq. depend. complex susceptibility, nuclear mag. ordering transition 7−85302
$PrNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
PtCo, dil. alloy, mag. environment model of ferromagnetism 7−125332
PtNi, system of interacting Kondo moments, mag. props. 7−105885
$RBa_2Cu_3O_{7-y}$, (R=Y,Gd), high T_c supercond., normal state props., electron correlations 7−143441
R_2O_3-SiO_2 (R=Pr, Dy, Er) silicate glasses, sol-gel prep. 7−132977
RuFeSi melt-spun cluster spin glass, spin dynamics, Mossbauer studies 7−112802
Sb-Se, liq., electronic props., diamagnetism 7−92148
ScDy spin glass, AC suscept., freq. depend. 7−105927
ScEr spin glass, AC suscept., freq. depend. 7−105927
ScGd spin glass, AC suscept., freq. depend. 7−105927
Si 7−118887
Si, magnetic properties of donors and acceptors 7−143757
Si shallow donor diamagnetic susceptibility pressure dependence calculations 7−76824
Si single crysts. diamag. suscept. meas., plastic deform effects study 7−112735
Si:P, spin localization, ^{31}P NMR studies 7−137864
Sm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
$Sm_xBa_{1-x}CuO_{3-y}$, high T_c superconductivity 7−138106
SmI_2 mag. suscept. and fluoresc. spectrum in THF solvent meas. 7−143768
$SmMn_2Ge_2$, P-T mag. phase diagram 7−132018

magnetic susceptibility continued
$SmRh_4B_4$ single crystals, anisotropic magnetic properties 7−125337
$Sm_{0.55}Tb_{0.45}FeO_3$ orthoferrite, susceptibility anisotropy 7−143849
$SnMo_6S_8$, normal and superconducting, NMR studies 7−106054
$(SnTe)_{1-x}(EuTe)_x$, mag. susceptibility, effect of Eu doping on physical props. 7−105881
$Sr_{0.2}La_{1.8}CuO_4$ high T_c superconductor, diamag. shielding and Meissner effect meas. 7−92370
$Sr_xLa_{2-x}CuO_{4-\delta}$, high T_c superconductor, mag. studies 7−105829
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., diamag. shielding and Meissner effect 7−92366
$Sr_xY_{1-x}CuO_{3-y}$, high T_c supercond. props., AC mag. suscept., elec. resist. meas. 7−112600
TaC, heat treatment, effect on defect formation and props. 7−100247
$TbAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
$Tb_{1-x}Ho_xCo_2$, mag. props. and cryst. struct. *(Russian)* 7−138275
$Tb_2Ni_{17-x}Al_x$, mag. behaviour in the ferrimagnetic and paramagnetic regions 7−99498
$TbRh_{2-x}Ir_xSi$, cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
$Th_{5-x}Ba_xM_{2-0.5x}Cu_5O_{13+y}$(M=Pb,Zr), high-$Tc$ superconductivity 7−105763
ThM_4Al_8 (M=Mn,Cr), mag. props. 7−77252
$Th_{1-x}Tb_x$ dilute alloys, 4f-instability, sp.ht., mag. suscept., and resist. meas. 7−76848
Ti-Si, solid solns., itinerant antiferromagnetism, mag. susceptibility meas. 7−138198
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
TiCo, electronic struct., mag. props. *(Russian)* 7−98793
$Ti_4Co_7Ge_6$ cryst. struct., magnetic suscept. temp. depend. and elec. resist. meas. *(Russian)* 7−92401
$TiCoH_x$, struct., electronic props., comparison with $TiFeH_x$, X-ray diffr., PMR meas. 7−98772
$TiFeH_x$, struct., electronic props., comparison with $TiCoH_x$, X-ray diffr., PMR meas. 7−98772
TiZr alloy mag. props., Fermi level shift, mag. suscept. meas. 7−99420
α-$TlMnCl_3$, weak ferromagnet, reorientation of mag. moment 7−143794
Tm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
$Tm_{1-x}Lu_xCu_2Si_2$, mag. props. and sp. ht. studies 7−118778
$TmSe_{0.45}Te_{0.55}$, under high pressure, magnetic structure determ., neutron scatt., AC susceptibility, resistivity meas. 7−138191
$(U,Y)O_{2+x}$ solid solutions, magnetic studies 7−77259
U-based systems, heavy electron materials, phys. props., supercond., electron itineracy 7−105758
U-based systems, hybridisation effects, evolution from nonmagnetic to mag. behaviour 7−105917
U-Cu-Pd system, mag. and electrical props. 7−77215
UBe_{13} heavy fermion supercond., NMR study 7−118875
$(U_xCe_{1-x})_2Zn_{17}$ alloys, magnetotransport 7−112301
α-UF_5, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
U_2F_9, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
$U(Ga_{1-x}Ge_x)_3$ hybridised f-electron system, magnetic to nonmagnetic transition studies 7−112789
UIrGe heavy fermion cpd., low temp. susceptibility and sp. ht. 7−125389
$(U_xLa_{1-x})_2Zn_{17}$, conc. Kondo system, magnetism and electronic transport 7−85243
UM_4Al_8 (M=Mn,Cr), mag. props. 7−77252
UM_2Ge_2 (M=Rh, Ir), struct., mag. and elec. props. 7−117878
$U_4M_7Ge_6$ (M=Ru, Os), struct., mag. and elec. props. 7−117878
UO_2 complexes with N-thiosemicarbazide, struct., composition, force consts., spectral and thermal study 7−138442
UPt_3, anisotropic supercond., AC susceptibility studies 7−77173
UPt_3, heavy fermion superconductivity and magnetic props. 7−70472
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7−69927
$U(Pt_{1-x}Pd_x)_3$ pseudobinary heavy fermion systems, sp. ht., resist. and mag. suscept. meas. 7−69929
UPt_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URh_3B, mag. susceptibility, elec. resist. meas., hybridisation weakening 7−77251
URu_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, mag. and thermal props., crystal field effect calcs. 7−112253
US, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
US_3, electronic excitations, phonons, mag. ordering, Raman scatt. 7−92660
USe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
USe_3, electronic excitations, phonons, mag. ordering, Raman scatt. 7−92660
$U(Sn_{1-x}Pb_x)_3$, Mossbauer study of mag. state 7−113040
UTe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
U_2Zn_{17}, antiferromag. heavy-fermion system, spin fluctuations 7−77238
V-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
$V_{1-x}Mn_xO_{2-2x}F_{2x}$, metal-insulator transition, structural, magnetic and electrical props. *(French)* 7−105402
VO_2, sp. ht. and mag. susceptibility, determ., metal-insulator transition 7−137797
$VOSeO_3$, cryst. struct., mag. props. 7−111504
$VOSe_2O_5$, cryst. struct., mag. props. 7−111504
$V_{1-x}Ti_xH_2$ electronic struct., NMR spin-lattice relax., Knight shift and mag. suscept. meas. 7−84666
W (110), Gd adsorption, monolayers and thin films, ferromagnetic order, critical exponent, ESR studies 7−132091
Y-Ba-Cu oxide, high T_c superconductor, vibrating sample magnetometry study 7−99325
Y-Ba-Cu-O, high T_c superconductivity 7−99277
Y-Ba-Cu-O, high T_c supercond., AC susceptibility, freq. and field depend., microstruct. 7−118707
Y-Ba-Cu-O, superconductivity onset at 100 K, mag. and resist. meas. 7−92347
Y-Ba-Cu-O, superconducting transition temperatures 7−99265
Y-Ba-Cu-O, with transition metal impurities, effects on supercond. props. 7−105789
magnetic susceptibility continued
Y-Ba-Cu-O ceramics, high T_c supercond., processing study 7−119211
Y-Ba-Cu-O high T_c, supercond., multiphase mixtures and transition temp. 7−118631
Y-Ba-Cu-O high T_c supercond., phase identification, X-ray meas. 7−98392
Y-Ba-Cu-O high T_c supercond. obs. and cryst. struct. determ. 7−99269
Y-Ba-Cu-O high T_c supercond., zero resist. at 91.5 K, mag. suscept. meas. 7−105751
Y-Ba-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7−111470
Y-Ba-Cu-O high T_c supercond., metamorphic phase characterisation 7−111828
Y-Ba-Cu-O high T_c supercond., electromagnetic response in 90 K range 7−112668
Y-Ba-Cu-O high T_c supercond., ESR and mag. susceptibility studies 7−112939
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7−117873
Y-Ba-Cu-O high T_c supercond., O content-transition temp. relations 7−118635
Y-Ba-Cu-O high T_c supercond., elec. and mag. props. meas. 7−118702
Y-Ba-Cu-O high T_c supercond., complex suscept. loss meas. near T_c 7−118708
Y-Ba-Cu-O high T_c supercond. system, 950°C subsolidus phase diagram 7−119246
Y-Ba-Cu-O high T_c supercond., lower critical fields, complex susceptibility meas. 7−125275
Y-Ba-Cu-O high T_c supercond., mag. props. 7−143704
Y-Ba-Cu-O system, high supercond. transition temp., elec. resist., mag. meas., heat treatment effects 7−99257
Y-Ba-Cu-O system, superconductivity at 91 K 7−112551
Y-Er-H, dissociative pressure, thermodynamic and physical props. 7−105043
Y-H, dissociative pressure, thermodynamic and physical props. 7−105043
$YBa_2Cu_3O_{6\delta}$, high T_c supercond., electromag. effects 7−138131
$YBa_2Cu_3O_7$, high T_c supercond., AC and DC susceptibility study 7−112645
$YBa_2Cu_3O_{7-\delta}$, ^{18}O isotope effect in high T_c supercond. 7−105797
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., thermal and mag. props. 7−138127
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$YBa_2Cu_3O_{7-\delta}$, high temp. supercond., interrelation of struct., dimensionality and superconductivity 7−131837
$YBa_2Cu_3O_{7-\delta}$, superconductivity, stoichiometry and normal-state props. 7−138099
$YBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$YBa_2Cu_3O_{8-y}$, supercond. props., effects of comp. var. and annealing in O_2 7−105788
$YBa_2Cu_3O_{9-\delta}$, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
$YBa_2Cu_3O_{9-y}$ single phase cpd., high T_c superconductor at 95 K 7−118661
$YBa_2Cu_3O_x$, high T_c supercond., struct., transport and mag. props. 7−99373
$YBa_2Cu_3O_x$, supercond., weak field magnetisation rel. to microstructure 7−105831
$YBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$Y_{1-x}Ba_xCuO_y$, single-phase, superconductivity at 91 K 7−105766
$(Y_{1-x}Ba_x)_2CuO_4$, high temp. supercond. 7−105761
$(Y_{1-x}Ba_x)_3Cu_3O_{7-y}$, supercond., structural, electronic and mag. props., comp. depend. 7−99295
$Y_1Ba_2Cu_3O_{7-\delta}$, high T_c composite cpd, mag. behaviour 7−138125
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., resistivity, Hall effect, mag. susceptibility, temp. depend. *(Russian)* 7−125176
$Y_{1.2}Ba_{0.8}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$Y_{1.2}Ba_{0.8}CuO_{4-y}$, high T_c supercond., O role in prep. 7−132539
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ high T_c supercond. ceramics, substitution effects study 7−118626
$YBa_{2-x}Sr_xCu_3O_y$ high T_c superconductor props., comp. depend. studies 7−118658
$Y_{1-x}Co_x$ amorphous films, Co local anisotropy, mag. suscept. meas. 7−99523
$Y(Co_{1-x}Al_x)_2$, weakly itinerant ferromagnet, NMR and magnetisation 7−85470
YCo_4B mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
$Y(Fe\text{-}Co)_2$, mag. props., rigid band model 7−99390
$YFeAlH_x$, breakdown of Fe sublattice long-range mag. order 7−99447
$Y_3Fe_{5-x}Sc_xO_{12}$, amorphous, mag. props. study 7−143765
YMn_2, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{0.9}Al_{0.1})_2$, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{1-x}Al_x)_2$, characteristic spin fluctuations, thermal expansion and susceptibility meas. 7−132034
Y_2O_3-Fe_2O_3, hyperfine interactions, Mossbauer effect 7−125565
$YRuB_4$, mag. suscept., supercond. transition temp. meas. 7−92408
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
Yb-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Yb-Ba-Cu-O high T_c supercond., zero resist. above 90 K 7−125209
Yb-Tl system, phase diagram and mag. props. 7−144368
Yb_4As_3 mixed valence system, temp.-induced structural transition, mag. suscept. and resist. meas. 7−76384
$Yb_3Ga_5O_{12}$, single crystal, Faraday rotation 7−113153
$Yb_{0.4}In_{0.6}Cu_2$, valence phase transition, rare earth substitution effects, mag. suscept. meas. 7−76851
$Yb_{1-x}In_xCu_2$ valence phase transition studies 7−98948
$YbPd_3$, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
$YbPd_2Si_{2-x}Ge_x$, spin fluctuation changes 7−77300
$YbPt_3$ and Yb_3Pt_5, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
$Yb_{0.9}Tm_{0.1}S_{0.8}Se_{0.2}$, valence state of Tm 7−84797
$Yb_{1-x}Tm_xSe_{1-y}S_y$ chalcogenides, Tm valence systematics, lattice parameter, mag. suscept. and resist. meas. 7−76849

magnetic susceptibility continued
$Yb_{80}X_{20}$ (X=Cu, Ag, Au), amorphous alloys, transport props., mag. susceptibility, sp. ht. 7−98968
$YbXCu_4$, X=Al, Ag, Ga, X depend. of struct. and Yb valence state, mag. suscept. meas. 7−98042
$Zn_xCd_{1-x}Cr_2S(Se)$, struct. and mag. props. 7−125342
$ZnCrFeO_4$ spinel, mixed oxide catalyst, synthesis, struct., and catalytic activity 7−100051
$(ZnMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
ZnMnX (X=Se, Te), dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$Zn(P_xAs_{1-x})_2$, solid solutions, diamagnetic and paramagnetic components 7−99396
Zr_2PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
ZrC, heat treatment, effect on defect formation and props. 7−100247
$Zr(Fe_{1-x}Co_x)_2$, mag. props., rigid band model 7−99391
$(Zr_{0.5}Nb_{0.5})C_{0.9}$, solid solution, heat treatment, effect on defect formation and props. 7−100247
$(Zr_{0.5}Ni_{0.5})_{100-x}P_x$ metallic glasses, magnetisation, ^{31}P NMR study 7−112762
$Zr_{67}Ni_{33}$-based metallic glasses, mag. susceptibility and superconductivity 7−85265
ZrO_2-Cr_2O_3 system, prep., mag. props. rel. to struct. and comp. 7−113497
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
$ZrV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175

magnetic suspensions *see magnetic fluids*

magnetic switching
rare earth-transition metal amorphous alloys, thermomagnetic switching parameters, time and radial depend. calcs. 7−118801
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118

magnetic tape recorders *see tape recorders*

magnetic tape storage
190 Mb oceanographic data acquisition and storage system 7−79611

magnetic tape stores *see magnetic tape storage*

magnetic tapes
see also magnetic tape storage
CrO_2 tape particles, switching field distrib., rel. to time depend. magnetisation 7−85376
hypersonic vehicles, surface press. distrib. meas. using mag. tape 7−83377
longitudinal particulate medium, hysteretic props. ang. depend. 7−125485
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
Co-FeO pigments for mag. recording, reversible coercivity vs. temp. losses 7−85370
CoO-Fe_2O_3 particle series, mag. and struct. props., effect of annealing in N_2 7−85367

magnetic thin film devices
ferrite thin film deposition and props. for microwave and MM-wave ICs 7−125966
magnetoresistive sensor, dual-coupled self-biased, micromag. anal. 7−102462
multilayer end-on magnetoresistive transducers, signal-noise performance 7−128559
optical discs, readout power dependence on thin-film magneto-optic media properties 7−103767
$(Tm,Bi)_3(Fe,Ga)_5O_{12}$ garnet epitaxial film, magneto-optical laser beam convertor appl. *(Czech)* 7−123005

magnetic thin films
see also magnetic epitaxial layers
1D charged domain wall struct. 7−112910
amorphous, magnetoelastic dynamic suscept. calcs. 7−99540
amorphous ferrimagnetic metallic films, elec. cond., structural disorder effect 7−112300
amorphous films, saturation magnetostriction meas. by small angle magnetisation oscillations 7−85401
anisotropy and mag. recording props. 7−125500
Bloch vertical lines, motion due to mag. bias field with coercivity present 7−85397
compositionally modulated mag. films, influence of surface layers on Curie temp., anal. 7−105988
coupling between ferromag. films supported by nonmag. interlayer 7−132090
crystal growth, conf. Calcutta, India (Jan. 1986) 7−134342
cubic ferromagnetic material, arbitrarily magnetised film, magnetostatic waves 7−85391
cylindrical films, domain boundary creep reduction 7−77388
disperse, effective magnetic anisotropy, statistical block model calcs. *(Japanese)* 7−118833
domain wall velocity, giant unidirectional anisotropy 7−143884
electron tunneling spectroscopy in magnetic materials *(Polish)* 7−131737
engineering magnetic materials on the atomic scale 7−118294
evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
Fe film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
ferric stearate Langmuir-Blodgett films, deposition method 7−70149
ferrite film, forward magnetostatic bulk wave excitation by point current element 7−70608
ferrite films, surface magnetostatic waves excitation by point current element *(Japanese)* 7−132103
ferrite plating by means of thin film of reaction soln. 7−113451
ferromagnetic, amorphous and monocrystalline, FMR, replaceability of surface anisotropy with effective volume anisotropy 7−112891
ferromagnetic, nonlocal mag. suscept. tensor and spin-wave reson., Green's function method calcs. 7−112898
ferromagnetic, resonance props., mag. anisotropy amplitude dispersion effects *(Russian)* 7−70601
ferromagnetic periodic multilayers, statics and dynamics 7−92484
ferromagnetic superlattice, compositionally modulated, mean field theory 7−70606
ferromagnetic thin film, magnetoelastic waves, piezomagnetic anal. 7−125523
ferromagnetic thin films, 2D symmetrical Bloch-type boundaries 7−105998

magnetic thin films continued
ferromagnetic thin films, composite domain structs., self-consistent theory 7−143881
ferromagnetic thin films, domain struct., self-consistent theory anal. 7−132107
ferromagnetic thin films, impurity layer localised spin wave modes, surface midplane co-action 7−138290
ferromagnetic uniaxial films, spin model anal. 7−138297
ferromagnets, high rate sputtering using U-type target 7−113384
garnet, ferrimag. reson.-induced dynamical optical modes conversion study 7−123090
garnet films, ferromagnetic, with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7−99521
garnet films, ion implantation 7−92034
garnet films, SAW propagation, magnetoelastic gain 7−125512
garnet magneto-optic film non-reciprocal waveguides, isolator appls., 7−103992
Gd-Tb-Co-Fe amorphous films; biaxial oblique mag. anisotropy, Hall characts. 7−143868
high-coercivity, magnetisation reversal mechanism *(Russian)* 7−70602
insulating magnetic films, spin wave spectra, exact calcs. 7−99430
Invar films, magneto-optical and mag. props. 7−113147
Ising approximation, diluted thin ferromagnetic film, magnetic props. diff. operator method 7−138250
Ising model, identities, effective field approx., compositionally modulated mag. film appls. 7−143747
large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
magnetic anisotropies in oblique and continuously varied incidence films, 3D anal. 7−118842
magnetoelastic measuring transducer using a thin ferromagnetic film 7−102395
NiP-NiCoP, amorphous film, pulse current electrodeposition, meg. props. 7−143874
Permalloy, multilayer metal films, composition and thickness determ., fundamental parameters X-ray fluoresc. approach 7−114028
Permalloy films, Bloch lines, cross ties and taffy, Kerr effect studies 7−132108
Permalloy films, surface magnons, Brillouin light scattering 7−125510
Permalloy soft ferromagnetic films, irreversible magnetisation transforms 7−105992
permalloy thin films, ferromag. reson., ang. dispersion of mag. anisotropy 7−132137
perpendicular mag. recording conditions, wall-displacement model anal. 7−105996
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
rare earth-transition metal alloy thin films, amorphous, coercive force, thermomagnetic recording, magnetisation reversal model 7−125444
rare earth-transition metal amorphous alloys, ion mixing form., mag. props. 7−76234
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
refraction of surface magnetostatic waves 7−85274
stripe domain stabilisation by parallel grooves 7−70616
stripe domain struct., effect of mag. field on phase transitions near Curie point 7−112908
stripe mag. domains, analogy to lyotropic liq. cryst. 7−143882
surface spin wave excitations, softening, in thin ferromagnetic film, unaxial anisotropy 7−138202
texture formation, influence on props. for perpendicular recording 7−76700
transition metal-rare earth amorphous alloy films for magneto-optic recording 7−132366
two-layer ferromag. films, static and dynamic props. *(Russian)* 7−143863
ultrathin film and surface ferromagnetic phase transition, Heisenberg model calcs. 7−112893
uniaxial cylindrical mag. domain film, asymptotic solns. 7−70611
$BaFe_{12-x-y}Co_xTi_yO_{19}$ sputtered films, mag. props. for magneto-optical memory appls. 7−112912
$BaFe_{12}O_{19}$ thin films for high density recording, microtexture and crystallographic characts., effect of sputtering gas press. 7−85384
Bi-containing ferrigarnet films, composition determ. from Faraday rotation 7−113148
Bi-Ga garnet films, domain wall oscills., magneto-optical anal. 7−132110
$(BiGd)_3(FeAlGa)_5O_{12}$ thick garnet film growth and charactn. 7−105310
$(BiSmGdLu)_3(FeAlSc)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
$(BiTm)_3(FeGa)_5O_{12}$ film on $Gd_3Ga_5O_{12}$ substrate, mag.-moment flip wave during magnetisation reversal 7−132080
$(BiTm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
$(BiTm)_3(FeGa)_5O_{12}$ film, stripe domain struct. resonance vibrations obs. 7−143880
$(BiY)_3Fe_5O_{12}$ ion beam sputtered garnet thin films prep. 7−106405
BiYIG films, LPE growth from MoO_3 containing fluxes 7−137743
C0-V thin films, RF sputter deposition, mag. props. 7−125974
Co alloy, perp. magnetised films prep. by electroless plating, undercoating layer effect *(Japanese)* 7−92898
Co base thin film alloys, sputtering, amorphous forming range, mag. props. *(Korean)* 7−132454
Co, nuclear spin-lattice relax. meas. *(Russian)* 7−125555
Co obliquely evaporated films, partially oxidised, exchange interactions, mag. anisotropy 7−112878
Co plated films, crystallographic orientation and mag. props., effect of pH 7−84563
Co thin film, magnetisation, effect of Ag and Cu overlayers 7−118836
Co/Mn compositionally modulated film struct. and FMR freq. depend. study 7−99579
Co-Au amorphous thin films, prep. and mag. props. 7−85393
Co-based alloy 7−99537
Co-CoO compositionally modulated films, mag. props. 7−112869
Co-CoO layered films, bias modulated reactively sputtered, magnetisation props. 7−70605
Co-Cr, perpendicular mag. recording media, magnetisation, Bitter and electron holography studies 7−125518
Co-Cr columnar films, perp. coercivity rel. to inhomogeneous Cr conc. 7−85385
Co-Cr ferromagnetic alloy film, magnetron sputtering prep. and charactn. 7−106404
Co-Cr film, magnetisation models for computer simulation of perp. mag. recording 7−92479

magnetic thin films continued
Co-Cr film deposition using compressed mag. field magnetron sputtering with mag. target 7−92864
Co-Cr films, mag. domains, neutron depolarisation study 7−85395
Co-Cr films, perpendicular mag. recording, grain boundary segregation and coercivity 7−143876
Co-Cr films, reversed domain generation 7−99531
Co-Cr multilayer film mag. props., magnetisation and FMR meas. 7−112896
Co-Cr perpendicular mag. film magnetisation, Potter-Beardsley model 7−85390
Co-Cr perpendicular media, mag. and recording props. 7−92474
Co-Cr perpendicular recording media, magnetisation reversal mechanism, hysteresis loss meas. 7−85388
Co-Cr sputtered film, struct. and mag. props., additive gases effects studies 7−105974
Co-Cr sputtered films, coercive force control 7−85386
Co-Cr sputtered films, mag. props., microstruct. 7−85392
Co-Cr sputtered films, surface and vol. mag. hysteresis 7−92478
Co-Cr sputtered layers, domain struct. and mag. reversals 7−105991
Co-Cr thick targets, magnetron sputtering deposition 7−92865
Co-Cr thin film microstruct., TEM study, mag. recording appl. 7−105314
Co-Cr thin films, artificial superlattice struct., magnetism, struct. 7−76667
Co-Cr thin films, mag. props. depend. on sputtering parameters 7−92472
Co-Cr thin films, sputter deposition on rotating disc substrates 7−106408
Co-Cr-M (M=Fe,Ta,Zr) alloy films for mag. recording, magnetostriction 7−99537
Co-Cr-Ta(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Cr(Pt) alloy films for mag. recording, magnetostriction 7−99537
Co-Cu compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Co-Cu multilayer electrodeposit structs., mag. props. study 7−125508
Co-F films, mag. and magneto-optical props. 7−113150
Co-Fe, nuclear spin-lattice relax. meas. *(Russian)* 7−125555
Co-Fe thin films, anisotropic magnetoresist. 7−143640
Co-Fe-Nb amorphous films, magnetisation and FMR studies 7−132102
Co-Gd-Mo, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Co-N films, RF sputtered, mag. props. rel. to comp. 7−132455
Co-Nb amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Ni thin film mag. and structural recording props., deposition incidence angle depend., recording appl. 7−105976
Co-Ni-Cr(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Ni-Re-P electroless thin films for mag. recording appls., perp. coercivity, thickness depend. 7−112870
Co-P, Co-Ni-P amorphous films, electrodeposition, chem. comp. and mag. props. 7−99527
Co-P films, amorphous, stabilisation of stripe domain struct. *(Russian)* 7−105989
Co-Si sputtered alloy film, struct. and mag. props., Si content depend. 7−112916
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural props. 7−92482
Co-Ti amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Ti amorphous thin films, mag. anisotropy, domain struct. 7−112914
Co-W electrodeposited thin films, mag. props. study 7−143871
Co-Zr amorphous films, induced anisotropy, static field annealing effects 7−99528
$Co_{50}Al_{50}$ alloy films, ordered and disordered, optical props. and ferromagnetism *(Russian)* 7−77669
CoCr film, mag. and structural props. for recording appls., polycryst. sublayer effects 7−105981
CoCr sputtered films, coercivity and struct. characterisation 7−125496
CoCr sputtered films, thermomag. anal., annealing and Cr distrib. 7−125492
CoCr sputtered films, wall energy and exchange stiffness 7−99534
CoCr sputtered thin films, struct. and mag. props., TEM and SEM studies 7−105973
CoCr sputtered thin films, c-axis orientation, film growth condition effects 7−125973
CoCr thin film, c-axis orientation, perpendicular and longitudinal mag. props. 7−125491
CoCr thin film magnetisation orientation determ., Hall effect meas. 7−105978
CoCr thin film recording media, mag. anisotropy and struct. 7−125490
CoCr thin films, DC magnetron sputtering 7−125493
CoCr thin films, mag. props. and anisotropy 7−125495
CoCr thin films, spin wave reson. spectra study 7−105977
CoCr/Ti film/sublayer system, struct. and mag. props. 7−112905
CoCr-NiFe double layers, FMR and mag. props. 7−92475
$Co_xFe_{3-x}O_4$ high quality ferrite films, high speed deposition from aqueous solns. at low temps. 7−113381
$Co_xNb_yTi_z$-SiO_2 double layered mag. films, domain wall structs. 7−99529
CoNi HCP thin films, magnetisation curves and hysteresis loops, film texture and orientation depend. 7−105979
CoNi mag. thin film, hysteretic phenomena 7−99504
CoNi oblique-deposited thin films, struct. and mag. props. study, recording appls. 7−105313
CoNi thin film hysteresis loops and domain structs., 3D calcs. 7−105995
CoNi thin films for mag. recording, corrosion resist. improvement by surface passivation 7−106667
$Co_{86}Ti_{14}$, soft ferromag. amorphous thin films, with induced uniaxial anisotropy, nucl. signal enhancement 7−92549
CoZr and CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7−112885
$Co_{94}Zr_6$ amorphous thin films, mag. and galvanomag. props. 7−112884
Cr, polycrystalline films, Neel temperature, stress effects 7−143877
Cr thin films, elec. resist. temp. depend. and Neel temp anomalies study 7−112514
Cu sputtered films, struct. and mag. props. studies 7−112899
Cu-Ni [100] oriented superlattices, mag. props. study 7−125334
Cu-Ni compositionally modulated films, electrodeposited, mag. props. 7−118843
$CuCr_2Te_4$ films, synthesis, texture, mag. props. 7−98731
$Cu_xFe_{1-x}Cr_2S_4$ films, mag. props. 7−105987
magnetic thin films continued
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
Cu_2MnAl amorphous spin glass film, orientation depend. relax. obs. 7−125397
Dy, thin film, Neel temp. thickness depend., electrical resistivity temp. depend. 7−138226
$(DyBi)_3Fe_5O_{12}$ film, temp. coeffs. of Faraday rot. *(Japanese)* 7−70753
$Er_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Er_2Fe_{14}B$ thin film mag. props. study 7−112894
Fe and Fe alloys, magnetic multilayers, FMR calcs. 7−125542
Fe film, magnetisation, effect of Al overlayers 7−132072
Fe film, strongly coupled FMR 7−118864
Fe garnet films, magnetostatic rigidity of domain walls and coercive force 7−143879
Fe ion beam sputtered film, induced uniaxial mag. anisotropy meas. 7−105982
Fe, magnetic films, spin-polarised neutron reflectivity studies 7−105986
Fe monolayers on Ag, direct DC magnetisation temp. and field. depend. meas. 7−112888
Fe on Cu (100), closely-lying energy states, magneto-optic and photoemission meas. 7−143875
Fe, pure, soft mag. thin film, gas addition by dual ion beam sputtering 7−132104
Fe sputtered film for soft mag. layer in perp. recording media 7−92476
Fe sputtered films, struct. and mag. props. studies 7−112899
Fe thin films, spin autocorrel. time calcs. 7−77386
Fe/Cu multilayered sputtered films, struct. and mag. props. studies 7−112899
Fe/Mg sub-monolayered superlattice, mag. props. 7−112867
Fe/SiO_2, compositionally modulated films, mag. props. 7−99524
Fe-Al-Ge, crystalline soft magnetic alloy films, high saturation magnetisation 7−125501
Fe-Al-Si sputtered films, mag. props. 7−112876
Fe-B ultrathin amorphous films, magnetisation and surface anisotropy determ. 7−112892
Fe-B-F films, magneto-optical props. 7−113149
Fe-B-Si amorphous films, magnetic ripple, Lorentz microscopy studies 7−70607
Fe-C films, dual ion beam sputtered, mag. props. 7−125976
Fe-C magnetic films, getter sputtering on high temp. substrates 7−71010
Fe-Co ion-beam sputtered thin films, mag. props. 7−112879
Fe-Co-Al high mag. moment sputtered films, mag. props. 7−125504
Fe-Cu, compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Fe-Cu compositionally modulated multilayer films, magneto-optical Kerr effect 7−113158
Fe-Cu multilayered films, magnetron sputtered, mag. props. 7−99516
Fe-Cu multilayered films deposited by facing targets sputtering, mag. props. 7−112904
Fe-Dy(Gd)(Tb) amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7−112895
Fe-F films, mag. and magneto-optical props. 7−113150
Fe-Ga-Si crystalline soft magnetic alloy films, high saturation magnetisation 7−125501
Fe-Gd, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Fe-He implanted thin foils, spin precession meas. in transient mag. fields 7−77440
Fe-Nd multilayer films, mag. props. 7−112903
Fe-Ni and Fe-Ni-Gd thin films, Lorentz microscopy study, mag. props. 7−105997
Fe-Ni films, magnetisation, effect of Al overlayers 7−132072
Fe-Ni films electroplated on nonmagnetic wire, mag. props. 7−132093
Fe-Ni multilayers, Fe ferromagnetism 7−99519
Fe-Ni-B sputtered amorphous films, stress sources, mag. meas. 7−84609
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
Fe-Si sputtered films, mag. props. 7−112875
$Fe-Si-Ru/Fe-Ni/SiO_2$ multilayered films, mag. props. 7−99530
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7−112902
Fe-Tb amorphous alloys, co-sputtered, direction of easy-axis 7−112886
Fe-Tb multilayers, magnetic properties and structural charactn. 7−112907
Fe-Y compositionally modulated thin films, magnetisation, depend. on layer thickness 7−99511
Fe-Y compositionally modulated films, thermal anal. 7−99512
Fe-Zr, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
$Fe_{60}Al_{40}$ magnetic thin films, prep. and mag. props 7−143878
$Fe_{1-x}B_x$ films, mag. props. during crystallisation 7−85394
$Fe_{60}B_{40}$ sputtered amorphous alloys, in-plane mag. texture, Mossbauer spectra studies 7−70614
$Fe_{70}B_{30}$-Ag compositionally modulated amorphous sputtered films, magnetisation temp. depend. study 7−112900
$Fe_{81}B_{13.5}Si_{3.5}C$ amorphous ferromag. ribbons, mag. domains, dynamical obs. 7−125515
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7−132101
$Fe_5Co_{70}Si_{15}B_{10}$ amorphous films, pulse magnetisation properties *(Russian)* 7−143864
FeDy amorphous thin films with perpendicular mag. anisotropy, heating, magneto-optical method *(Russian)* 7−92483
$Fe_{40}Ni_{40}B_{20}$ amorphous thin films, crossover effect for uniaxial anisotropy 7−132008
$Fe_{40}Ni_{40}B_{20}$ amorphous thin films, coercive field, thermomagnetic annealing influence 7−138292
Fe_2O_3 thin mag. films. magnetocaloric effect 7−132028
γ-Fe_2O_3:Co film, H_c enhancement 7−125505
γ-Fe_2O_3:Os sputtered films for mag. recording appl., grain growth, impurity effects 7−105315
γ-Fe_2O_4 sputtered thin films, magneto-optic Kerr effect hysteresis loop meas. 7−106147
Fe_3O_4, film, surface magnetisation 7−112868
Fe_3O_4 sputtered thin films, magneto-optic Kerr effect hysteresis loop meas. 7−106147
Fe_3O_4, sputtered with Ar^+, surface magnetism changes, photoelectron meas., 7−138295
Fe_xO_{1-x}-based perpendicular thin films, mag. recording appls. 7−125494
Fe_xO_y, RF sputtered thin films, coercivity study *(Chinese)* 7−118832

magnetic thin films continued
$Fe_{73}Ti_{27}H_x$ amorphous alloys, mag. props., Mossbauer studies 7−143942
Gd thin films, spin autocorrel. time calcs. 7−77386
Gd-Co amorphous films, comp. modulated, by bias sputtering 7−86025
Gd-Co amorphous sputtered films with anisotropic modulated superstructure 7−99514
Gd-Co-(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Gd-Eu-Co alloy thin films, FMR study 7−70648
Gd-Eu-Co amorphous films, FMR study 7−143912
Gd-Eu-Co sputtered films, Kerr rot. angle and Hall effect 7−144039
Gd-Fe amorphous film, surface layer mag. props., oxidation effect 7−92485
Gd-Fe-Co amorphous films, magneto-optical props. rel. to sublattice magnetisation 7−144037
Gd-Sm-Fe amorphous films, mag. and magneto-optical characts. 7−143866
Gd-Tb-Co amorphous films, mag. and magnetooptical characts., influence of sputtering conditions 7−132098
Gd-Tb-Co-Fe amorphous thin films, mag. characts. rel. to magneto-optical recording appls. 7−143867
Gd-Tb-Fe magneto-optical disc film, mag. anisotropy distrib. meas. using Hall method 7−143787
Gd-Tb-Fe-Co amorphous films, mag. props. control for magneto-optical recording 7−92481
Gd-Y superlattices, synthetic, modulated mag. props. 7−99525
$(GdBi)_3(FeGa)_5O_{12}$ garnet film bubble memory material, mag. anisotropy props. study 7−105994
GdCo amorphous films, DC diode getter sputtered, with perp. anisotropy, anomalous aging characts. 7−125497
GdCoMo amorphous thin films, surface mag. anisotropy, X-band microwave spectra study 7−99522
GdFe amorphous thin films for perp. recording, magnetooptic study 7−92477
GdTbCo films, RF diode sputtered, prep. conditions effect on mag. props. and ageing behaviour 7−125498
GdTbFe:ONH_2O sputtered film mag. props., impurity effects study 7−112887
$Gd_{27}Tb_{10}Fe_{63}$ amorphous film, mag. anisotropy and thermal stability, effect of annealing 7−70604
Ho-Co, amorphous thin films, mag. anisotropy and magneto-optic Kerr spectra 7−125376
InSb-NiSb, anisotropic amorphous ribbon, eutectic composition, melt spinning technique 7−144359
Mg-Mn alloy sputtered films, spin glass transition obs., mag. suscept. meas. 7−118814
Mn-Al sputter deposited film, ferromag. τ phase charactn. 7−113385
Mn-B amorphous alloys, magnetism, elec. transport 7−112761
Mn-Bi films, prep. by multilayering, write-in characts. 7−143870
Mn-Sb multilayered films, mag. props. 7−99515
MnBi, angular dispersion of mag. anisotropy, three-dimensional study 7−70600
MnBi films, preparation, magnetic and magneto-optic props. 7−99533
$Mn_{0.73}Fe_{2.27}O_4$ ferrospinel film, propagation of magnetostatic waves, obs. 7−85277
MnZn ferrite thin film with soft mag. props., sputter prep. 7−85389
Mo-Ni magnetic-superlattices, interfacial anisotropy 7−118795
Nd-Co amorphous alloy films, magneto-optical props. study 7−113156
Nd-Co compositionally modulated thin films, mag. props. 7−99513
Nd-Fe amorphous alloy films, magneto-optical props. study 7−113156
Nd-Fe-Co sputtered films, mag. and magneto-optical props. 7−143869
$Nd_2F_{14}B$ thin film mag. props. study 7−112894
$Nd_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
Ni film, quench condensed, mag. behaviour, Si, SiO, Al, Pd interface effect 7−118837
Ni thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
Ni thin films, spin autocorrel. time calcs. 7−77386
Ni thin films, surface magnetoplasmons, long-range, props 7−138298
Ni thin mag. films. magnetocaloric effect 7−132028
Ni-C multilayer sputtered films, mag. props. study 7−125509
Ni-Co alloy thin films, spin wave reson. obs. 7−106033
Ni-Co-Fe alloys, films, motion of tips of domains *(Russian)* 7−105990
Ni-Cr multilayered thin films, mag. props., dimensional effects study 7−125507
Ni-Cu, compositionally modulated films, magnetisation meas. 7−143845
Ni-F films, mag. and magneto-optical props. 7−113150
Ni-Fe thick targets, magnetron sputtering deposition 7−92865
Ni-Fe-P oxide system amorphous thin films, struct. and mag. props. 7−112872
Ni-P underlayer for mag. recording, M-H curve slope-intercept anal., heat treatment effects 7−105980
Ni_xAg_{1-x}, amorphous thin films, elec. and mag. props. 7−143430
NiFe films, dual ion-beam sputtering, mag. and struct. props. 7−125502
$Ni_{0.8}Fe_{0.2}$ film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
$Ni_{80}Fe_{20}$ ferromag. double layers, spin wave modes in parallel and antiparallel magnetised states, light scatt. study 7−85270
Ni_xFe_{1-x} evaporated thin films, structural and mag. props. studies 7−98736
NiP-NiCoP amorphous magnetic film, compositionally modulated, prep. and magnetic props. 7−138291
O_2, two dimensional, physisorbed on granite, Monte Carlo study 7−143234
Pd/Co multilayers, mag. interface anisotropy 7−99520
Pd/Fe multilayers, mag. interface anisotropy 7−99520
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
$Pd_{100-x}Fe_x$-Cu ferromagnetic-paramagnetic bilayer interface, magnetisation transport, FMR, EPR studies 7−85254
PtMnSb thin films, RF sputtered, optical, mag. props., Kerr magneto-optical effect meas. 7−118841
PtMnSb/NiMnSb multilayer films, preparation and magneto-optical Kerr effect 7−138431
Sm-Co sputtered polycryst. films, mag. props. 7−112877
Tb-Co and Tb-Fe-Co magneto-optical disc prep. by RF sputtering 7−144036
Tb-Co sputtered films, mag. and magneto-optical props., stability in air 7−144043
magnetic thin films continued
Tb-Co(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Tb-Co(Fe) sputtered films, saturation magnetisation and comp., Ar press. depend. *(Japanese)* 7−112906
Tb-Fe amorphous films, stability of mag. props. 7−92480
Tb-$Fe_{95}Co_5$ multilayer thin films, struct. and ferromag. resonance 7−112961
Tb-Fe-Co amorphous films, magnetic and magneto-optical props. 7−113159
Tb-Fe-Co amorphous films, mag. and magneto-optical props., recording appls. 7−144038
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. characts., saturation Kerr rot. meas. 7−125499
Tb-Fe-Co sputtered films, mag. and struct. props., influence of H_2 partial press. 7−132097
Tb-Fe-Co-Bi amorphous films, mag. and magneto-optical props. 7−144040
TbCo amorphous films, density and magnetooptical props., effect of sputtering conditions 7−132243
TbCo amorphous films, prep. mag. anisotropy, effects of sputtering conditions 7−132095
TbCo sputtered films, mag. and struct. characts., effects of Ar press. and substrate bias 7−132094
TbFe, amorphous, magnetic surface props. 7−138294
TbFe amorphous films, laser-written mag. domains, Lorentz microscopy obs. 7−125517
TbFe, amorphous films, magnetisation reversal rel. to microstruct. 7−132114
TbFe, amorphous films, sputter deposition, magneto-optical and mag. props 7−132105
TbFe amorphous sputtered films, effective comp., thickness depend. 7−143248
TbFe amorphous sputtered films, remanence 7−143873
TbFe amorphous thin films for perp. recording, magnetooptic study 7−92477
TbFe, amorphous thin films, sputter deposited, overcoated, dielec. tensor, magneto-optical props. 7−132199
TbFe, evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
TbFe thin film magnetisation orientation determ., Hall effect meas. 7−105978
$TbFe_2$ polycrystalline films, magnetisation reversal characts. *(Russian)* 7−70603
TbFeIn amorphous films, highly stable, appl. for magneto-optic memory 7−113752
$(Tb_xY_{1-x})_3Fe_5O_{12}$, sensitivity consts., appl. for mag. field sensors 7−108583
V surface ferromagnetic order, electron capture spectra study 7−143872
W (110), Gd adsorption, monolayers and thin films, ferromagnetic order, critical exponent, ESR studies 7−132091
$(Y,Ca)_3(Fe,Ge)_5O_{12}$ thin garnet films, magnetostatic spin waves, cubic and uniaxial anisotropy 7−138203
Y-Gd-Fe amorphous sputtered films, mag. props. 7−143865
$(YBi)_3Fe_{5-x}Al_x(Ga_x)O_{12}$ films, growth-induced birefringence, Bi content and distrib. depend. 7−106282
$(YBi)_3Fe_5O_{12}$ film, temp. coeffs. of Faraday rot. *(Japanese)* 7−70753
$Y_{2.0}Ca_{1.0}Ge_{0.9}Fe_{4.1}O_{12.0}$ reduced garnet film, FMR spectra study 7−112890
$Y_{1-x}Co_x$ amorphous films, Co local anisotropy, mag. suscept. meas. 7−99523
$Y_{3-x}Eu_xFe_{5-y}Ga_yO_{12}$ garnet thin films, growth-induced anisotropy 7−138296
$(YGdBi)_3(FeGdAl)_5O_{12}$ garnet film, band domain struct., laser radiation diffr. 7−132112
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
YIG film, bulk spin wave-light waveguide interaction obs. *(Polish)* 7−138301
YIG film, inhomogeneously magnetised, nondispersive MSFVW propag. 7−125513
YIG film, surface magnetostatic waves scatt. by anisotropy-induced acoustic waves 7−118792
YIG film, surface spin waves, cubic anisotropy effects 7−132092
YIG film, unusual RF behaviour study 7−113317
YIG film-ferroelectric plate composite medium, reson. interaction of magnetostatic and slow EM waves 7−85276
YIG films, flexural domain wall modes, field depend. 7−132109
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7−118840
YIG films, normally magnetised, nonlinear magnetostatic wave propag. study 7−77383
YIG films, surface magnetostatic wave freq. conversion 7−138293
YIG films, surface spin waves, attenuation and nonlinearity threshold 7−77384
YIG films, surface spin wave propag., obs. at frequencies above the dipole spectrum limit 7−85275
YIG films with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7−99521
YIG: H_2^+ thin film, surface spin-wave modes photoinduced mag. anisotropy effect relax., FMR obs. 7−112897
YIG:Fe(Mn)(Ar), anisotropy effects of implanted ions, FMR 7−125370
YIG:H_2^+ thin films, ion implanted, surface spin wave modes, photoinduced effect 7−112959
$(YLuBi)_3(FeGa)_5O_{12}$ films, magnetic fine structure anals., simultaneous obs. of domains and walls 7−125437
$(YSm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
$Y_{3-x}Sm_xFe_{5-y}Ga_yO_{12}$ garnet thin films, growth-induced anisotropy 7−138296
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble layers, magnetisation, plasma exposure effects 7−112881
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble films, plasma exposure effect on mag. props. 7−112882
$(YSmTmCa)_3(FeGa)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
$Y_{2.4-x}Tm_xBi_{0.6}Fe_{5-y}Ga_yO_{12}$, substituted garnet epitaxial films, Faraday rotation 7−113152
$(Yb,Tb,Bi)_3Fe_5O_{12}$, Bi-substituted epitaxial garnet films, magneto-optical props. 7−113151
Zr-Fe/Tb-Fe compositionally modulated multilayered films, sputtered, mag. props. 7−99518

magnetic transition temperature
see also Curie temperature; Morin temperature; Neel temperature
ferromagnetic periodic multilayers, statics and dynamics 7−92484
Ising, ferromagnet with S=1 magnetisation curve calcs. 7−131979
Ising antiferromagnet, magnetisation with applied transverse field 7−112842
Ising approximation, diluted thin ferromagnetic film, magnetic props. diff. operator method 7−138250
metal hydrides, mag. studies 7−99415
polymer system, symmetry, phase transition, n=0 limit 7−112829
(rare earth)$_2$Fe$_{14}$B polycryst. alloys, spin reorientations simulation w.r.t. permanent magnet and recording appls. 7−125351
rare earth cpds., $R_2Mo_2O_7$, R=Nd, Sm, Gd, elec. resist. meas., 4.2-300 K 7−112287
rare earth-Co$_4$B, R=Pr, Nd, Sm, Gd, Tb, Dy, Er, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
rare earth-Cu-Si alloys, RCu_2Si_2, (R=Tb-Tm), mag. interactions 7−132007
rare earth-Fe$_4$B, R=Pr, Nd, Sm, Gd, Tb, Dy, Er, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
rare earth-Fe-B alloys, $R_2Fe_{14}B$, exchange and crystal elec. field interactions 7−125365
TANOL organic free radical, magnetic interaction and phase transitions 7−77290
TMTSF Bechgaard salts, field induced SDW states, thermodynamics 7−112828
AgIn(Ga)Te$_2$, semimag. semicond., mag. props. 7−125341
AgMn dilute RKKY spin glass. nonlinear suscept. meas. 7−125402
$Al_xV_2O_5$, low temp. AC and DC susceptibility 7−92418
$CdCr_{2x}In_{2(1-x)}S$, insulating spin glass, crit. behaviour 7−105926
$Cd_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Ce_{1-x}Gd_xAl_3$ spin glass-like heavy fermion system, percolation behaviour, low field suscept. meas. 7−125403
$Ce(Rh_{1-x}Ru_x)_2Si_2$ solid solns., mag. props. 7−77246
$CeSi_x$ alloy, Kondo effect and exchange interactions competition, comp. depend. elec. resist. study 7−118469
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
Co_2SnTe_4, amorphous, mag. props. 7−132024
Cr (100), adsorbed O layer effects on surface magnetism 7−99424
Cr, dislocations, dynamic behaviour at mag. transitions, internal friction meas. 7−111570
$Cr_{75}Fe_{25}$, reentrant spin-glass transition temp., Mossbauer studies 7−125408
Cr_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
CuIn(Ga)Te$_2$, semimag. semicond., mag. props. 7−125341
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
Cu_2MnAl amorphous spin glass film, orientation depend. relax. obs. 7−125397
Er, magnetic phases, low temp. sp. ht. meas. 7−105928
α-ErH_x, magnetic phases, low temp. sp. ht. meas. 7−105928
$Eu(Au_xPd_{1-x})_2Si_2$ alloy, ferromagnetism and valence mixing studies, high press. effects 7−112278
EuO, mag. semicond., elec. resist., press. depend. 7−112338
EuO semiconductor, ferromagnetism and valence mixing studies, high press. effects 7−112278
Fe-Ni-Cr, γ' strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7−105959
Fe-Zr metallic glasses, mag. props. study 7−118827
$Fe_{1-x}Cu_xCr_2S_4$ mag. semicond., plasmon-phonon spectra 7−124414
$Fe_{2.1-x}Mn_xAs$, (x=1.30,1.35), mag. transition temp., pressure derivative 7−143798
$Fe_{59}Ni_{21}Cr_{20}$, spin glass transition temp., sound damping 7−105930
Fe_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7−85304
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
$Gd_1Ba_2Cu_3O_z$, high T_c supercond., magnetisation and susceptibility, 1.5 to 270 K 7−112652
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Li_xZn_{1-x}V_2O_4$, mag. susceptibility meas. 80-300 K 7−77205
Mn-Y amorphous alloys, spin glass charcts., AC suscept. study 7−105929
Mn_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Nd-Fe-CoB permanent mag. alloys, anisotropy, coercivity and hysteresis meas. 7−125446
$Nd_2Fe_{14}B$ polycryst., Curie and spin reorientation temps., press. effects study 7−99452
O_2, solid α- and β-, mag. coupling and dynamics, mag. field effects 7−85287
PtCo, dil. alloy, mag. environment model of ferromagnetism 7−125332
Ru_xFeGa cluster spin glass, ^{57}Fe Mossbauer and bulk magnetisation studies 7−112799
ScDy spin glass, AC suscept., freq. depend. 7−105927
ScEr spin glass, AC suscept., freq. depend. 7−105927
ScGd spin glass, AC suscept., freq. depend. 7−105927
$Tb_2Mo_2O_7$, elec. resist. meas., 4.2-300 K 7−112287
$Th_2Fe_{14}B$, exchange and crystal elec. field interactions 7−125365
$U(Fe_{1-x}Co_x)_2$ alloys, ordering temp., mag. moments and hyperfine field, ^{57}Fe Mossbauer study 7−113018
$(U_xLa_{1-x})_2Zn_{17}$, conc. Kondo system, magnetism and electronic transport 7−85243
US, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
USe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
UTe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
$Y_3Fe_{5-x}Sc_xO_{12}$, amorphous, mag. props. study 7−143765
$Yo_2Mo_2O_7$, elec. resist. meas., 4.2-300 K 7−112287

magnetic transitions
see also critical fluctuations; ferromagnetic-antiferromagnetic transitions; ferromagnetic-paramagnetic transitions; magnetic transition temperature; paramagnetic-antiferromagnetic transitions
1D antiferromagnets, universality classes, critical props. 7−125392

magnetic transitions continued
1D spin systems, non-universal crit. dynamical behavior 7−143828
2D bond-diluted O(n) model 7−143811
3D Ising model, dynamical critical exponent 7−125418
3d transition metal intercalation cpds., M_xTiSi_2 (M=V, Cr, Mn, Fe, Co, Ni), mag. props. 7−118825
4f systems, antiferromagnetically ordered, valence instability, mag. transitions 7−77302
±J Ising model, phase diagram and critical exponents, Monte Carlo renormalisation group calcs. 7−105940
adsorbates phase transition obs., using heat flow sensor 7−121109
alloys, mag. suscept. and elec. resist. meas. 7−70531
alloys, peaks in electron state density, effect on structural and mag. stability 7−143309
amorphous ferromagnets, use of scaling plots in phase transition studies 7−70561
amorphous magnets, strong random anisotropy, phase transitions, long range interactions and correls. 7−99441
anisotropic spin systems, scaling stiffness energy 7−77337
annealed Ising model, order parameters, first and second neighbour magnetic interactions, structural interactions 7−138248
antiferromagnet, magnetisation, nonlinear oscills., onset of chaos 7−85317
antiferromagnetic Ising spin glass, reentrant phase transition 7−92450
antiferromagnetic Ising system on triangular lattice, statics and dynamics 7−85332
antiferromagnetic quantum XY model on triangular lattice, renormalisation group approach 7−99483
antiferromagnets, dilution, random fields and tricritical point 7−118760
antiferromagnets, field-induced transitions, random field effects 7−77326
antiferromagnets, intermediate state, magnetoelastic interaction effect 7−99538
antiferromagnets, random mixture with magnetic easy plane, role of mixed couplings 7−77335
axial next-nearest neighbor Ising model, phase diagram, mean-field calcs. 7−138254
BEDT-TTF$_1$Ta$_2$F$_{11}$, optically enhanced phase transition, ESR studies 7−99558
(BEDT-TTF)$_2$ICl$_2$, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
β'-(BEDT-TTF)$_2$ICl$_2$, EPR meas., 15 to 300 K 7−85410
binary alloys, phase diagrams in the generalized Ising model 7−85335
ceramic high T_c supercond., Fermi liquid theory 7−125226
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
copper chloride tetramethyl sulphoxide, ferromag. linear chain, mag. birefringence 7−113154
critical phenomena and phase transitions, book 7−95111
Curie temp., spin reorientation, anisotropy and magnetisation 7−70544
diluted 2D Ising models with competitive interactions, reentrant ferromagnetism 7−92451
diluted antiferromagnet, replica symmetry breaking in random-field systems 7−99469
dipolar ferromagnets, critical dynamics 7−132035
disordered magnets, competing anisotropy, nuclear spin waves *(Russian)* 7−125343
easy-axis ferromagnet, third acoustic harmonic excitation near orientational phase transition 7−84139
electron Fermi liquid with paramag. impurities, elementary excitations 7−98834
FCC Ising ferromagnets, surface first-order magnetic transitions, cluster variation calcs. 7−77324
ferrimagnets, ordered and disordered, phase transitions, correl. mol. field theory, Monte Carlo simulations 7−105944
ferromagnet with three-spin interaction, mag. behaviour 7−85314
ferromagnetic metals, electrical resistivity meas. 7−66879
ferromagnetic system with competing Ising and XY anisotropies, phase diagram calcs. 7−132044
first-order phase transitions, coarse-graining approach, two ground state spin system 7−125422
frustrated Heisenberg antiferromagnet on 3D layered triangular lattice, crit. behaviour 7−77338
frustrated metamagnets, phase transitions and phase diagrams 7−138227
frustration in spontaneous metamagnets, ferro- and antiferromagnetic interactions, binary Ising model 7−138225
galvinoxyl radical mixed crystals and hydrogalvinoxyl cpd., diamag.-paramag. phase transition, thermodynamic props. 7−138239
graphite intercalation compounds, 2D XY Kosterlitz-Thouless transition 7−143795
Griffiths phase, spin autocorrelation function 7−138243
heavy fermion cpds., itinerant antiferromag. state, SDW phase diagram anal. 7−125411
Heisenberg antiferromagnets, phase transitions, triangular and layered-triangular lattices 7−112844
Heisenberg ferromagnet, magnon and phonon spectra around the critical point 7−138259
Heisenberg frustrated spin system, elementary excitations and phase transition 7−143832
Heisenberg quantum spin chains, generalised, phase behaviour 7−125432
high-sensitivity US interferometry detection 7−123362
Hubbard model in strong-coupling limit, mag. susceptibility 7−138242
Ising antiferromagnets, resonant modes at critical mag. field 7−112838
Ising ferromagnet, dilute and random models, asymptotic form of phase boundary 7−77317
Ising lattice, two-dimensional, antiferromagnetic, phase transitions, cluster approx. 7−92453
Ising model, 3D kinetic, renormalisation, self similarity and order-parameter struct. relax. 7−99477
Ising model, ferromagnetic, translation invariant, sharp phase transition 7−112837
Ising model, HCP, multiphase point with competing interactions, low temp. expansion 7−105941
Ising model, random-field diagrammatic expansion and metastability, lower crit. dimens. 7−125424
Ising model, semi-infinite with edge, critical behaviour 7−70574
Ising model, two-dimensional, random-bond, critical behaviour 7−112841
Ising models, compressible, effective spin Hamiltonians 7−105938
ising spin glass in 3D, dynamical phase transitions, time evolution and temp. regimes 7−138251
Ising spin glasses, high temp series expansion 7−125428
Ising spin glasses, replica symm. solns. in the tree approx. 7−138255

magnetic transitions continued
itinerant ferromagnets, localisation and correl. effects, generalized N-orbital model 7−99392
itinerant multiple SDW systems, spin waves 7−99432
±J model, correlation fn. on finite square and simple cubic lattices 7−108474
Landau-Ginzburg-Wilson model, n-component, with cubic anisotropy and random impurities, critical behaviour 7−85340
magnetic fluids, dipole glasses, spin glass-like behaviour 7−138236
magnetic fluids, phase diagram, equilib. props. 7−77363
metallic elements, magnetic ordering and supercond. at microkelvin temps. *(German)* 7−112567
metallic glasses, local magnetic environment probe using magnetoresist. 7−84830
metallic glasses, magnetic static behaviour near critical conc. 7−143855
metals, magnetic, elastic constants, dynamical and total-energy approaches 7−124376
mixed spin glass Ising systems, phase diagrams and domains 7−132041
Monte Carlo renormalisation group, appl. to mag. critical phenomena 7−112807
nearest neighbour frustrated random bond model in d=2 7−125296
noninteracting spin waves, critical behaviour, free-spin-wave theory of Heisenberg ferromagnet 7−138206
one dimensional, domain wall, phase transitions, temp. depend., energy calcs 7−143842
one-dimensional random-field Ising model, transitions and scaling relations 7−95500
Onyszkiewicz metamagnetic model, possibility of temp. induced order-order transitions 7−77323
organic quasi-1D conductors, cascade of field-induced SDW phases 7−99460
orthoferrites, ground state and domain struct. near smooth spin reorientation 7−132050
orthoferrites, magnetic phase diagram, orientational phase transition critical field calcs. 7−85285
orthorhombic antiferromagnets, spin-flop phase transition, mean-field theory calcs. 7−105919
phase diagrams of Ising spin glasses, straight phase boundaries 7−138252
phthalocyaninato-copper(II)iodide, mag. transitions and embedded local moments 7−99459
planar spin systems, 2D uniformly frustrated, transitions 7−143822
polymer solns., correlation functions and spurious singularities in n=0 field theory 7−83641
polymer system, symmetry, phase transition, n=0 limit 7−112829
Potts ferromagnet, dilute and random models, asymptotic form of phase boundary 7−77317
Potts model, ferromagnetic, phase transition and percolation 7−92444
Potts model, q-state, crit. dynamics in 2D 7−143820
Potts models, antiferromagnetic, phase transitions 7−77332
q-state Potts model on Bethe lattices, phase diagrams 7−77328
quantum Ising model, pure and dil., position space studies, 2D and 3D calcs. at T=0 7−89144
quasi 1D conductors, magnetic field-induced phase transitions 7−84708
quasi 2D Heisenberg ferromagnets within single-ion anisotropy, thermodynamics 7−99481
random axis magnet with infinite anisotropy, ferromagnetic, spin glass and disordered phase calcs. 7−85310
random field Ising models, second order phase transitions and tricritical points 7−70576
random-bond Ising models, freq. depend. spectra, dynamic high temp. series expansions 7−125430
rare earth compounds, anomalous, mag. props., neutron scatt. studies 7−77226
rare earth orthochromites, $RCr_{1-x}Mn_xO_3$, mag. props., Mn^{3+} impurity ion effects 7−138196
reentrant ferromagnets near percolation conc., coordination no. determ. using mag. reson. 7−112833
semi-infinite ferromagnetic n-vector Kac-Baker models, surface critical behaviour 7−125421
semi-infinite Ising model, thermodynamic fns. and phase diagram 7−92445
semi-infinite mixed Ising alloys, surface phase diagram calcs. 7−132042
Sherrington-Kirkpatrick spin glass model, configuration averaging of thermodynamic variables 7−105945
simple quadratic Ising model with crossing bonds, ferromagnetic critical line 7−85334
simple square lattices, dγ-symmetry Cooper pairs, effect of mag. frustrations 7−112636
space technological experiments performed with superconducting and mag. alloys 7−71457
spherical model with competing interactions, phase transition 7−70563
spin glass alloys, classical RKKY model, anisotropy-induced phase transition, Monte Carlo simulation 7−125413
spin glass ordering, hyperfine interaction techniques, data review 7−112797
spin glass three-dimensional systems, phase transitions 7−132040
spin glasses, dynamical mean field theory, phase transitions in AC external fields 7−77309
spin glasses, random Ising model 7−77333
spin glasses, review 7−77314
spin glasses and disordered magnets, infinite range models, fluctuations and phase transitions 7−105934
spin Hamiltonians, anisotropic, order-order transition sequences 7−143745
spin reorientation of ferromagnets, sp. ht. 7−132030
spin van der Waals Hamiltonians with quartic exchange interactions, static props. 7−70570
spin-1 chain with uniaxial anisotropy, phase diagram 7−85231
spin-1 system with competing interactions and reentrant mag. behaviour, props. 7−99470
spin-Peierls transition theory for quasi-1D antiferromagnet, Heisenberg model calcs. 7−77342
structural transitions, defects effects, rel. to mag. systems 7−118085
surface structures, phase transitions, book contrib. 7−137683
TCNQ metallic salts, elec. cond. and mag. props., solvent inclusion effects 7−84862
terbium ethyl sulphate, quasi-1D paramagnet, ferromag. phase transition 7−132029
tetramethyl ammonium nickel tribromide, metamagnetic phase diagram, AC mag. suscept. meas. 7−85291
tetrathiafulvalene-Au-bis-dithiolene, spin-Peierls system, high field phase, ESR study 7−118856

magnetic transitions continued
three-dimensional Blume-Emery-Griffiths model, phase diagrams 7−143796
three-state chiral clock model, Bethe approx. 7−85227
$(TMTSF)_2AsF_6$, far-IR reflectivity through the spin density wave transition 7−118980
$(TMTSF)_2ClO_4$ Bechgaard salt, field-induced SDW Green's function calcs. 7−77312
$(TMTSF)_2ClO_4$, low temp. metallic phase, rapid mag. quantum oscills. obs. 7−143440
$(TMTSF)_2PF_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
$(TMTSF)_2X$ Bechgaard salts, longit. nesting mechanism in antiferromag. transition 7−85292
$(TMTTF)_2AsF_6(PF_6)(Br)$ salts, spin-Peierls transition evolution under press., renormalisation group anal. 7−77313
transverse Ising spin-glass model, zero temp. transition, mean field approx. 7−125431
triangular ising ferrimagnetic 2D model, transfer matrix and phenomenological renormalisation methods 7−92452
triethylenetetraammonium copper hexachloride, quasi-2D metamagnet, mag. and structural props. 7−125329
two-layer ferromag. films, static and dynamic props. *(Russian)* 7−143863
ultrathin film and surface ferromagnetic phase transition, Heisenberg model calcs. 7−112893
uniaxial ferromagnet, inhomogeneous state, spin orientational phase transition, spatial inhomogeneity of anisotropy 7−132016
valence fluctuating heavy electron systems, in applied and molecular fields, degenerate Anderson model 7−84617
vector spin glasses, anisotropy-induced crossover exponent calcs. 7−118813
X-Y model, fully frustrated, domain wall induced X-Y disorder 7−92435
XY chain, classical, integrability 7−70577
ZnMn uniaxially anisotropic spin glasses, zero-field muon spin relax. temp. depend. meas. 7−85318
AgMnSb dilute metallic spin glass, d'Almeida-Thouless transition, thermoremenance time decay meas. 7−125399
AuFe alloys, reentrant magnetic behaviour, hyperfine field, temp. and conc. depend., PAC study 7−112798
AuFe, dynamic magnetic susceptibility, reverse ferromagnetic-spin glass transition 7−131994
$Au_{1-x}Fe_x$, evidence against reentrant mag. behaviour, PAC spectra 7−70681
$Au_{1-x}Fe_x$, reentrant ferromagnet, Mossbauer detection of magnetic clusters 7−77301
$BaFe_{12}O_{19}$ anisotropic ferrite, rotational hysteresis and torque curve meas. 7−125461
$Ca_2Fe_{2(1-x)}Al_{2x}O_5$, magnetic properties, molecular field approximation analysis 7−132015
$Ca_3Mn_2Ge_3O_{12}$ garnet, antiferromag., obs., of new mag. phase, magnetisation curves meas. 7−125381
$(CdMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$Cd_{1-x}Mn_xTe$, spin glass freezing, universal scaling, mag. suscept. meas. 7−99472
CdS:Cl, press. quenched, elec. and anomalous mag. transitions 7−112732
Ce monopnictides, LF mag. excitations 7−77268
$CeAg_{1-x}In_x$, anomalous magnetostriction 7−125522
$CeAl_2$, high field magnetoresistance and Hall effect at low temps. 7−76891
$CeAl_3$, frustration of magnetic order, ESR studies 7−132023
CeAs, order-parameter-conserving antiferromagnet, critical behaviour 7−143817
CeB_6, dense Kondo system, neutron scatt. study of antiferroquadrupolar ordering 7−77230
Ce_4Bi_3, heavy fermion ferromag. system, sp. ht. meas. 7−77296
$Ce_{26}Cu_{74}$, low temp. specific heat, local random mag. anisotropy 7−77295
CeD_{2+x} magnetic ordering, site occupancy and comp. depend., neutron diffr. study 7−85246
CeD_x single crysts., magnetic order and structural transformations studies 7−112745
$CeFe_2$, magnetic transitions, high resolution transport prop. meas. 7−77307
$Ce_{1-x}Gd_xAl_3$, heavy fermion, Kondo, spin glass-like and antiferromagnetic behaviour 7−70554
CeInAu, sp. ht., mag. susceptibility, transport props. 7−77247
$CeInAu_2$, sp. ht., mag. susceptibility, transport props. 7−77247
$Ce_{0.75}La_{0.25}B_6$, dense Kondo system, neutron scatt. study of antiferroquadrupolar ordering 7−77230
$CeMo_6S_8$, cryst. struct. and phys. props. 7−77211
$CePb_3$, heavy fermion system, elastic and magnetoacoustic effects 7−99543
$CeRu_{2-x}Os_xSi_2$, magnetism changes 7−70552
$CeRu_2Si_2$ heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
$CeRu_2Si_2$, metamagnetic-like transition 7−105918
$CeRu_2Si_{2-x}Ge_x$, magnetism changes 7−70552
CeSb antiferromagnet, unusual magnetic behaviour, hybridisation-mediated interionic interaction effects calcs. 7−112744
Ce_2Sn_5, mag. susceptibility, sp. ht. meas. 7−70533
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural props. 7−92482
$CoCl_2$-graphite intercalation compound, mag. ordering, nonlinear slow fluctuation 7−125405
$CoCr_2S_4$, production by hot pressing, props. 7−77855
Co_2SnO_4, mag. behaviour, AC susceptibility meas. 7−112845
Co_xTiS_2, mag. phase diagram 7−85307
Co_xZn_{2-x} W-type hexaferrite, mag. props., 78-700 K 7−125371
$Co_{2-x}Zn_xTiO_4$, mag. behaviour, AC susceptibility meas. 7−112845
Cr-Fe-Mn(V), dilute, resonance impurity scatt. 7−70297
Cr-Ge dil. alloys, elastic constants and thermal expansion 7−77392
Cr-Mn alloys, mag. phase diagram near triple point 7−77287
$Cr_{1-x}Mn_xAs$, paramag.-helimagnetic transition, struct. and mag. charcts 7−132020
Cr_2O_3, antiferromag., light polarisation plane nonreciprocal rotation 7−85606
$CsDy(MoO_4)_2$, low freq. mag. props., mag. and struct. phase transitions 7−132014
$CsFeCl_3$, anomalous magnetisation appearing at appl. mag. fields exceeding 33 T 7−125338

magnetic transitions continued
$Cs_3FeCl_5.H_2O$, crystallographic phase transition, Mossbauer investigation 7−142990
$CsMnBr_3$ triangular antiferromagnet, spin waves, neutron scatt. study 7−125348
$CsNiCl_3$ triangular lattice antiferromag., phase transitions, neutron scatt. studies 7−77291
Cu, nuclear magnetic ordering, susceptibility and entropy meas. 7−77261
Cu-Mn, mag. phase diagram, EPR study *(Russian)* 7−112788
Cu-Ni-Fe single-domain particles, superparamag.-ferromag. transition 7−125470
$CuCl_2.2H_2O$, antiferromag. resonance, quenching at low freq., critical angle, phase transition 7−70647
$CuCl_2H_2O$, high freq. absorpt. at spin flop transition, AFMR line broadening *(Russian)* 7−92506
$Cu_{99.2}Fe_{0.8}$ rapidly quenched alloys, change of mag. props. with heat treatment 7−71329
$Cu_{59}Zr_{41}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
Dy, paramagnetic and antiferromag. states, muon probe studies 7−70520
Dy-Y superlattices, mag. struct., neutron diffr. study 7−99409
$DyBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$DyKMo_2O_8$, cooperative Jahn-Teller system, antiferrodistortive structural phase transition, mag. field depend. 7−118445
$Dy(P_{1-x}V_x)O_4$ random anisotropy system, AC susceptibility, freq. depend. 7−125336
Er, nanocrystalline, prep., mag. transitions, suscept. meas. 7−125478
Er-Ce, single crystal neutron diffraction studies of mag. struct. 7−85244
$ErBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$ErFeO_3$, metamag. phase transition 7−70543
$ErPd_2Sn$ cubic Heusler superconducting alloy, antiferromag. struct., neutron scatt. meas. 7−112743
Er_3Se_4, magnetisation and antiferromag. phase transition 7−138272
$Er_xY_{1-x}Rh_{1.1}Sn_{3.6}$ system, superconductivity and mag. ordering 7−125205
$Eu(As_xP_{1-x})_3$ systems, mag. phase diagrams, hydrostatic press. effects 7−77286
$Eu_{1-x}La_xS$ solid solns., ferromag. phase transitions studies 7−70546
$EuNi_5P_3$, mag. phase transitions magnetisation steps with field 7−112793
EuO, Heisenberg ferromag., critical spin dynamics 7−143836
EuS_ySe_{1-y}, mag. phase transitions close to bicritical concentration 7−99456
$Eu_{0.4}Sr_{0.6}S$, spin glass, evidence for phase transition from dynamic susceptibility meas. 7−118800
$Eu_pSr_{1-p}S_a$ insulating, specific heat, mag. transitions 7−125433
$Eu_xSr_{1-x}Te$, dil. antiferromagnet, spin glass behaviour, mag. meas. 7−112827
Fe complex exhibiting two-step spin conversion, Mossbauer spectroscopy, mag. susceptibility, X-ray diffr. 7−112796
Fe, monolayer, (110), on W (110), ferromagnetic order, Mossbauer study 7−138300
Fe-Al BCC alloy, phase diagrams in the generalized Ising model 7−85335
Fe-Co-2Mn alloy, mag. props. stability, annealing temp. effect 7−77276
Fe-Cr disordered alloys, finite-temp. magnetism, local environment effects calcs. 7−85242
Fe-Nd multilayer films, mag. props. 7−112903
Fe-Ni-Cr alloys, mag. states, low temp. phase diagrams 7−85286
Fe-Ni-Cr(Mn) spin glasses, mag. props. 7−105936
Fe-Si BCC alloy, phase diagrams in the generalized Ising model 7−85335
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7−112902
Fe-Zr amorphous alloys, ion beam mixed, mag. and elec. transport props. 7−113024
Fe-Zr metallic glasses, mag. props. study 7−118827
Fe_xHf_{1-x} glasses, mag. props. 7−118922
$Fe_{1-x}Al_x$ concentrated spin glass alloy, magnetic phase diagram, atomic short-range order influence 7−138237
$Fe_{1-x}Al_x$, spin glass, mag. phase diagram 7−85313
$Fe_{70}B_{30}$-Ag compositionally modulated amorphous sputtered films, magnetisation temp. depend. study 7−112900
$Fe_{80}B_{20}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
α-$FeC_2O_4.2D_2O$ quasi-1D antiferromag., magnetic struct. and transitions neutron diffr. study 7−125316
$Fe_{1-x}Co_xSi$ solid soln., band magnetism, mag. susceptibility and sp. ht. studies 7−99463
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$(Fe_xCr_{1-x})_2Ca_3(GeO_4)_3$, mixed garnet, mag. frustration, phase diagram, neutron diffr. 7−105889
$(Fe_xCr_{1-x})_{75}P_{15}C_{10}$, amorphous, reentrant spin glass props. 7−112811
FeF_2 single crystal, 3D anisotropic Ising ferromagnet, neutron scatt. and critical behaviour 7−85249
FeGe, hexagonal, symmetry analysis of antiferromagnetic phase transitions 7−85289
$FeGe_2$, mag. phase transitions and mag. struct., neutron scatt. studies *(Russian)* 7−138228
Fe(II) complex, $[Fe_xM_{1-x}(2\text{-pic})_3]Cl_2.MeOH$ (M=Co,Zn), high spin⇌low spin transition 7−99453
$Fe_{82-x}M_xB_{18}$ amorphous ribbons, mag. props. and atomic struct. studies 7−99507
$Fe_xM_{70-x}Ti_{30}$, (M=Co, Ni, Cu) amorphous alloys, enhanced magnetism on Fe substitution 7−112851
$Fe_{0.7}Mg_{0.3}Cl_2$ random field Ising system, magnetisation metastability and critical behaviour 7−118816
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
FeNiBAl amorphous alloys near critical comp., low field reversible DC magnetisation meas. 7−70591
$Fe_xNi_{80-x}Cr_{20}$, concentrated spin glasses in mag. field, freezing temp. *(German)* 7−132038
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
Fe_2O_3, hematite, magnetisation, thermal hysteresis near Morin transition temp. 7−99495
$FeOHSO_4$ fine particles, ESR linewidth temp. depend. anal. 7−85409
Fe_3Pt Invar, high to low spin state transition 7−99457
$Fe_{3-x}Pt_{1+x}$ ordered alloys comp. and temp. depend. elec. resist. study 7−105528
magnetic transitions continued
$Fe_{1.4}Ru_{1.6}Si$ reentrant spin glass, magnetisation and Mossbauer studies 7−112801
$Fe_{72}Si_{18}B_{10}$ amorphous alloy, second order mag. phase transition 7−85295
$Fe_{0.875}V_{0.125}$ disordered alloys, hyperfine field and T_c suppression, Mossbauer study 7−113020
$GaMoX_8$ (X=S, Se), mag. field-induced transitions, heavy fermion behaviour 7−143800
Gd, nonlinear acoustic parameters, lattice dynamics near mag. transitions *(Russian)* 7−98351
Gd-Fe, thin Gd films on Fe in applied mag. field, surface spin reorientation 7−70560
$GdAl_3$, frustration of magnetic order, ESR studies 7−132023
$GdBa_2(Cu_{0.94}Fe_{0.06})_3O_{9-\delta}$, mag. ordering below supercond. transition temp. 7−143799
$GdBa_2Cu_3O_{6+\delta}$, high T_c supercond., calorimetric evidence of antiferromagnetism 7−112834
Gd_3Co, crystallisation under microgravity, influence on mag. props. *(Russian)* 7−106753
$Gd(Cu_{1-x}M_x)_2$ (M=Ni, Co, Al), mag. struct. changes and thermal expansion, anomalies *(Russian)* 7−99402
$GdFe_{4+x}Al_{8-x}$, Fe atom site occupancy, magnetic phases 7−132026
$Gd_{72-x}M_xGa_{18}B_{10}$, (M=Al, Fe, Co, Mo, Pd, Th), spin glass system, double transition behaviour, effect of alloying elements 7−112809
$GdMn_2Si_2$, mag. ordering, X-ray, magnetisation and Mossbauer studies 7−138224
$(Gd_{0.2}Tb_{0.8})_3Co$, crystallisation under microgravity, influence on mag. props. *(Russian)* 7−106753
$Gd_{65-x}Tb_xCo_{35}$, anisotropic spin glass, mag. transitions 7−112810
$GeCo_2O_4$ antiferromagnet, first order mag. transition obs. 7−70545
^3He, solid, magnetism in classical approx. 7−76532
^3He, solid, thermostatistical theory of spin structure 7−76540
^3He, superfluid, paramagnetic instability phenomenon in strong mag. field 7−137647
Ho, Neel transition splitting obs. in appl. mag. field 7−125388
Ho, spin slips and lattice modulations, magnetic X-ray scatt. study 7−85252
$HoBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
Ho_2Co_{17}, mag. transitions, high field magnetisation meas. 7−92412
Ho_4Co_3 bulk amorphous alloy, rapid quenching and mag. props. 7−85298
$HoFe_{0.95}Al_{0.05}O_3$, orthoferrite single crystals, spin reorientation and mag. moments 7−143790
$HoFeO_3$, orthoferrite single crystals, spin reorientation and mag. moments 7−143790
$HoRh_2Si_2$ thermodynamic and mag. props. studies using cryst. field model 7−70558
$KCoF_3$, orbitally unquenched mag. system, correlated effective field theory 7−118806
$K_2MnCl_4.2H_2O$, mag. transitions 7−99451
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., magnetic ordering, NQR study 7−138135
$La_{1.85}Ba_{0.15}CuO_{4-y}$ system, metastable mag. phase detection, high T_c supercond. 7−125404
$La_{1-x}Ce_xB_6$, single-ion Kondo effect, thermal expansion coeff. 7−77212
LaCuO, DC elec. cond. and mag. phase transitions 7−124994
La_2CuO_4 high T_c supercond., antiferromag. transition, suscept. and elec. resist. meas. 7−125335
$La_{2-x}Sr_xCuO_4$ thin films, supercond. props., diamag. transition 7−118613
LiH, ordered spins, phase diagrams at positive temp. 7−105887
$Lu(Co_{1-x}Al_x)_2$, band paramag., ferromagnetism onset with increasing x 7−143801
Mg-Mn alloy sputtered films, spin glass transition obs., mag. suscept. meas. 7−118814
Mn-Al-B melt-spun alloys, mag. props. *(Japanese)* 7−125464
Mn-B amorphous alloys, magnetism, elec. transport 7−112761
$MnAs_{1-x}P_x$, sp. ht., low-high spin anomaly 7−118811
Mn_xB_{100-x} amorphous system, magnetism studies 7−112816
$Mn_{1-t}Cr_tAs$, helimag. states transitions, phase diagram and strong mag. field effects studies 7−118809
MnOOH, isomorphic compounds, modulating magnetic structures *(Russian)* 7−125313
MnP, mag. struct. as probed by ^{57}Fe, Mossbauer spectra meas. 7−99410
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
$MnSe_2$ mag. struct. and transitions, neutron diffr. studies 7−125315
$MnSe_2$ polycryst., magnetic ordering, neutron diffr. study 7−112794
Mn_xTe_{1-x}, dilute alloys, mag. susceptibility 7−99421
$Mn_{0.5}Te_{0.5-x}Sb_x$, mag. phase transition studies 7−125383
$Mn_xZn_{1-x}F_2$, phase transitions, metastable states, random fields 7−77325
$Mn_xZn_{1-x}F_2$, phase transitions and metastable states in the presence of random fields 7−85336
$Mn_{1-x}Zn_xO$, spin glass transition, susceptibility studies 7−143814
NH_4CoF_3, heat capacity, 1st order phase transitions and mag. transitions 7−105065
NH_4MnF_3, heat capacity, 1st order phase transitions and mag. transitions 7−105065
NdB_6, cryst. electric field level scheme, Raman spectra obs. 7−92678
$Nd_2Fe_{14}B$ intermetallic cpd., Mossbauer effect study, temp. depend and spin reorientation 7−118926
$Nd_2Fe_{14}B$ single cryst. first-order field-induced magnetisation transitions 7−125385
$Nd_2Fe_{14}B$-based alloys, substituent effects, cryst. field model anal. 7−70550
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
$Nd_2(Fe_{1-x}Ru_x)_{14}B$, low temp. mag. behaviour, spin reorientation phenomena 7−125369
NdH_{2+x}, x=0-0.75, mag. props. 7−99417
$NdIn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$(Nd_{1-x}Pr_x)_2Fe_{14}B$, first-order mag. transition 7−99448
$NdSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
Ni, sputtering, by single crystal, mag. phase transition effects 7−77745
$NiFe_2O_4$, high spin-low spin transition under press. 7−138232
$Ni_{0.01}Fe_{0.99}S$, crystallographic and spin-flip transitions, impurity temp. hysteresis effects, Mossbauer study 7−125578
$Ni_{1+2x}Fe_{2-3x}Sb_xO_4$, spinel ferrite, sp. ht., thermal conductivity and thermal diffusivity 7−92433
$Ni_{80-x}Fe_xSi_8B_{12}$ amorphous magnet, reentrant transition studies 7−143797
$Ni(NO_3)_2.2H_2O$, pressure induced metamagnetic transition 7−99450

magnetic transitions continued
$Ni_{0.28}Zn_{0.72}Fe_2O_4$, mag. transformations, thermal expansion 7−77277
NpAs high press. mag. props., Mossbauer studies 7−77262
NpAs, mag. phase diagram, neutron scatt. study 7−77283
Pd-Co dilute alloys, ferromagnetic transition, deform. effects study 7−125387
Pd-Y (8 at.%), H solubility, elec. resist. anomalies, phase transition 7−98467
PdFe dilute alloy, spin glass transition, relax., Mossbauer studies 7−112831
$(Pd_xPt_{1-x})_3Fe$ reentrant spin glass, magnetisation and Mossbauer studies 7−112800
$PrCu_6$, freq. depend. complex susceptibility, nuclear mag. ordering transition 7−85302
PrD_{2+x} magnetic ordering, site occupancy and comp. depend., neutron diffr. study 7−85246
PuBi, mag. ordering, phase diagram, neutron diffr. study 7−77282
ScDy, anisotropic spin glasses, sp. ht. meas. 7−138240
ScEr, anisotropic spin glasses, sp. ht. meas. 7−138240
$Sm_{0.8}Er_{0.2}FeO_3$, orthoferrite single crystals, $\Gamma_2 \rightarrow \Gamma_4$ reorientation phase transition, low field study 7−143791
$SmFeO_3$, orthoferrite single crystals, $\Gamma_2 \rightarrow \Gamma_4$ reorientation phase transition, low field study 7−143791
$SmIn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$SmMn_2Ge_2$, P-T mag. phase diagram 7−132018
$SmSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$SrFe_{12}O_{19}$ 7−125461
Tb-Dy alloy, mag. phase transition, press. effects *(Russian)* 7−143792
$Tb_2Fe_{14-x}Co_xB$, magnetism 7−131998
$Tb_2Ni_{17-x}Al_x$, mag. behaviour in the ferrimagnetic and paramagnetic regions 7−99498
α-Ti, attempted mag. transition obs., sound rel. and elec. resist. temp. depend. meas. 7−118808
Ti-Al alloys, attempted mag. transition obs., sound rel. and elec. resist. temp. depend. meas. 7−118808
Ti_xMn_{1-x} alloys, magnetic transition, elec. resist. and independent electron subsystem states, conc. depend. meas. 7−70549
TiZr alloy mag. props., Fermi level shift, mag. suscept. meas. 7−99420
$Tm_{2-x}Dy_xFe_{14}B$, effect of Dy substitution on spin-reorientation temp. 7−143802
$Tm_2Fe_{14-x}Co_xB$, effect of Co substitution on spin-reorientation temp. 7−143802
$TmGa_3$, antiferroquadrupolar and antiferromag. structs., neutron diffr. studies 7−118775
U-Cu-Pd system, mag. and electrical props. 7−77215
$UAs_{1-x}Sb_x$, f-electron band, electronic transition, mag. ordering, sp.ht. study 7−105935
$UAs_{1-x}Se_x$, elec. resist. meas., deduction of mag. phase diagram 7−76867
UM_2Ge_2 (M=Rh, Ir), struct., mag. and elec. props. 7−117878
$U_4M_7Ge_6$ (M=Ru, Os), struct., mag. and elec. props. 7−117878
UP(As), elec. resist., mag. field effects, transitions and anisotropy 7−70336
$UP_{0.8}S_{0.2}$ single crysts., neutron diffr., magnetisation, incommensurate and ferrimag. phases 7−112748
$UP_{1-x}S_x$, x=0.2, 0.25, mag. phase diagram, neutron diffr. study 7−77284
UPt_3 heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
U_3Sb_4 single crysts., Hall effect and high field magnetisation studies, microscopic spin model anal. 7−118514
$U_xY_{1-x}B_4$, spin-glass-like behaviour, obs. 7−77297
U_2Zn_{17}, antiferromag. heavy-fermion system, spin fluctuations 7−77238
V_4O_7, specific heat meas., 0.4-50 K, λ-type transition obs., entropy meas. 7−143805
Y-Ba-Cu-O high T_c supercond., mag. props. study 7−112655
Y-Ba-Cu-O high T_c supercond., magnetic props., positive muon studies 7−112791
$Y_{1-x}Gd_x$ single cryst. dilute alloys, mag. struct. and filed-induced transition, neutron diffr. study 7−125314
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
$Y_{3-x}Tb_xFe_5O_{12}$, elastic and magnetoelastic props. in spin reorientation region 7−143887
YbP, Mossbauer evidence for mag. ordering 7−77438
YbPd and Yb_3Pd_4, intermediate valent cpds., mag. response, inelastic neutron scatt. study 7−70527
$Zn_xCd_{1-x}Cr_2S(Se)$, struct. and mag. props. 7−125342
$(ZnMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$Zn_{1-x}Mn_xSe(Te)$, spin glass behaviour below percolation limit 7−70547
ZnMnX (X=Se, Te), dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806

magnetic traps
see also magnetic bottles
Atoll confinement system, electrostatically plugged ring cusp. dicotron instability *(German)* 7−137109
catalysed-D tandem mirror reactor, central cell plasma performance calcs. 7−67985
currentless high-β plasmas in Heliotron E, density fluctuations 7−123949
EBT, local power loss, convective contribs. 7−142488
finite press. plasma in ripply toroidal magnetic traps, Mercia modes stability *(Russian)* 7−111221
finite-press. plasma in closed mag. confinement system, nonlocal quasiflute modes, MHD stability 7−83445
high voltage applied-B ion diodes design and simulation for inertial confinement fusion 7−104441
hot plasma confinement in stellarator type toroidal traps 7−75844
magnetic cusp systems, nonadiabatic confinement, ion and electron temp. 7−83511
multipole confinement and magnetic filter for high proton yield plasma source 7−130890
neutral atoms, magnetostatic trapping fields 7−73434
plasma, magnetic quadrupole, intermediate-frequency flute modes 7−137070
plasma traps, radiation dynamics questions 7−123934
toroidal magnetic traps, hot plasma physics and CTR problem 7−75845
Be plasma, CO_2 laser production in double-cusp magnetic container 7−75857

magnetic variables control
NMR spectrometers, microcomputer controlled mag. field parameters *(Czech)* 7−134822

magnetic variables measurement
see also fluxmeters; magnetic field measurement; magnetic permeability measurement; magnetometers
AC meas. of magnetic susceptibility, using bridge 7−121166
automated torque magnetometer for use in a 13 T superconducting solenoid 7−80826
automatic disaccommodation measuring system 7−128600
calibrating magnets, manufacture and use for magnetic meas. *(German)* 7−140716
coating nondestructive inspection methods and development trends 7−100483
cylindrical magnetic domains dynamics, using rotary gradient magnetic field 7−134818
depth profiles, using polarised neutron reflectometer 7−80828
ferromagnetic-paramagnetic transitions recording at pressures to 30 GPa 7−121163
ferromagnetics magnetic characts. obs. on oscilloscope display 7−121162
flaw detection, EM, permeability and cond. rel. to depth in monitored layer of ferromag. cylinder 7−132876
hysteresis loops meas. of ferromagnetic materials DC and AC characterisation 7−128602
hysteresis-plotter based on Kerr effect, using microcomputer *(Slovak)* 7−115978
magnetisation meas., development of an automated vibrating sample magnetometer 7−108582
magnetostriction in ribbon samples, using fibre-optic dilatometer 7−95624
multiloop SQUID for magnetic induction measurement 7−121161
mutual inductance bridge for the measurement of superconducting transition temperatures and magnetic susceptibility 7−140704
ribbon superconductors, magnetic flux discontinuities meas apparatus 7−134819
soft magnetic materials, meas. and anal. techniques *(German)* 7−73379
soft magnetic materials characts. investigation using magnetising devices 7−95623
strict environmental conditions, magnetic sensors for magnetic phenomenon meas. *(Japanese)* 7−140687
surface EM losses meas. in superconductors, using calorimeter 7−134820
susceptibility, using oscillator with low dissipation 7−80800
susceptibility of solid and liq. metals and alloys at high temp., method and apparatus 7−73382
thin ribbons thermal expansion and magnetostriction meas. 7−140666
transient recording method, mag. props. of Si steel strip *(Korean)* 7−134815
transitions, high-sensitivity US interferometry detection 7−123362
weak-signal integrator 7−108531
wires magnetic characts. and core loss meas. 7−121167

magnetic wells *see magnetic traps*

magnetisation
see also Barkhausen effect; coercive force; demagnetisation; magnetic aftereffect; magnetic anisotropy; magnetic domains; magnetic hysteresis; magnetisation reversal; magnetostatic waves; remanence; spontaneous magnetisation
3d transition metal intercalation cpds., M_xTiSi_2 (M=V, Cr, Mn, Fe, Co, Ni), mag. props. 7−118825
actinide-transition metal alloys, magnetism, electron-electron interactions, hybridisation effects 7−77243
amorphous alloys, composition-induced valence change 7−76842
amorphous films, saturation magnetostriction meas. by small angle magnetisation oscillations 7−85401
amorphous Heisenberg ferromagnets, spin waves 7−125358
amorphous ribbons, domain wall size model 7−132053
amorphous systems, ferromag. regime, correlated molecular field theory 7−112830
amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7−112895
anisotropic film on ferromagnetic substrate, magnetic polaritons 7−125511
antiferromagnet, magnetisation, nonlinear oscills., onset of chaos 7−85317
antiferromagnetic Ising spin glass, reentrant phase transition 7−92450
antiferromagnetic Ising system on triangular lattice, statics and dynamics 7−85332
averaging of magnetic interaction between spheres 7−129933
CHAB, ferromag. chain system, linear and nonlinear excitations 7−125352
colloid superparamagnetic particles, anomalous susceptibility, in alternating mag. field 7−112866
coupled Ising chains with general spin S 7−132043
crack detection using combined AC field magnetisation, state-of-the-art 7−71437
Curie temp., spin reorientation, anisotropy and magnetisation 7−70544
dilute classical spin chains, thermodynamics, mag. field effects 7−143824
dilute spin glass critical behaviour, Dzyaloshinsky-Moriya interaction effects 7−125401
diluted ferromag. alloy, mag. props., reaction field approx. approach 7−132058
disordered ferromagnets and spin glasses, competing interactions, scaling corrections, mean-field effective-field, model calcs. 7−118807
electron gas, two-dimensional, density of states in high mag. fields 7−105365
electron spectrum and indirect exchange 7−138213
β-$(ET)_2IBr_2(AuI_2)$, vol. superconductivity, DC low field magnetisation meas. 7−77152
FCC Ising ferromagnets, surface first-order magnetic transitions, cluster variation calcs. 7−77324
ferrofluid, water-based, fractionation 7−77376
ferromagnet with three-spin interaction, mag. behaviour 7−85314
ferromagnetic alloy, two-component solid soln., high temp. mag. props. *(Russian)* 7−93116
ferromagnetic film, nonlocal mag. suscept. tensor and spin-wave reson., Green's function method calcs. 7−112898
ferromagnetic films, resonance props., mag. anisotropy amplitude dispersion effects *(Russian)* 7−70601
ferromagnetic hysteresis, remanent and peak magnetisation, tensile and compressive stress effects model calcs. 7−106003
ferromagnetic particles, growth from cation reduction by borohydride ions 7−105967
ferromagnetic periodic multilayers, statics and dynamics 7−92484

magnetisation continued
ferromagnetic thin films, composite domain structs., self-consistent theory 7−143881
ferromagnetic uniaxial films, spin model anal. 7−138297
ferromagnets, crystalline and amorphous, intrinsic mag. props., DTMG and DTA studies 7−143785
ferromagnets, nuclear magnetisation, high temp. behaviour 7−132059
ferromagnets, nuclear magnetisation and NMR with internal mag. field offset 7−99427
ferromagnets and antiferromagnets, two-dimensional small-radius solitons 7−105937
ferronematic suspension, orientational struct. and mag. props. 7−105969
ferrosuspension, magnetisation, Fokker-Planck eqn. soln. 7−125488
film, 1D charged domain wall struct. 7−112910
flat mag. system, mag. field calc., periodically distributed magnetisation 7−77369
graphite-$CoCl_2$ first stage intercalation cpd., high field mag. behaviour 7−85263
Heisenberg model, antiferromagnetic, quantum Monte Carlo simulation on triangular lattice 7−85232
imaging, TEM using Fresnel and Focault techniques 7−108707
imaging using SEM with electron spin polarisation anal. 7−108706
insulating magnetic films, spin wave spectra, exact calcs. 7−99430
iron(III)porphyrins, low temp. high field magnetisation investig. 7−112770
Ising, ferromagnet with S=1 magnetisation curve calcs. 7−131979
Ising antiferromagnet, magnetisation with applied transverse field 7−112842
Ising antiferromagnet, many-neighboured, ground-state props. 7−143749
Ising approximation, diluted thin ferromagnetic film, magnetic props. diff. operator method 7−138250
Ising ferromagnet, magnetisation and Curie temp., pair model approx. calcs. 7−77327
Ising model, 2D, magnetisation calcs. using multispin random number generator algorithm 7−134698
Ising model, 3D kinetic, renormalisation, self similarity and order-parameter struct. relax. 7−99477
Ising models, 2D and 3D, fractal configurations at the critical point 7−128493
Ising models, critical behaviour, Monte Carlo simulations 7−70575
Ising models, three-dimensional, surface effects study 7−118817
Ising-type system, nonasymptotic critical behaviour, ordered-phase case 7−70573
itinerant multiple SDW systems, spin waves 7−99432
Kondo model, exactly solvable, with quadratic band energy 7−105883
Landau-Lifshitz equation, hidden symm., dual eqn. for asymm. chiral field 7−138182
Lee-Yang ferromagnets, Gaussian magnetization fluctuations at zero external field 7−112729
mag. props., Mn^{3+} impurity ion effects 7−138196
magnetic fluid, interaction forces between nonmagnetic particles 7−77366
magnetic fluids, behaviour under strong mag. field in rotating seal 7−77368
magnetic fluids, isothermic, free convection caused by magnetophoretic particle transport 7−75692
magnetic fluids, physical props. 7−77372
magnetic liquid drop, equilibrium, cone form. and elongation 7−75687
magnetic props., composition depend. study 7−125390
magnetically isotropic samples, magnetisation distrib., magnetostatic problem *(Russian)* 7−138274
manganese(II), porphyrins, low temp. high field magnetisation investig. 7−112770
massive specimen, magnetisation by rod electromagnet, induction distrib. 7−129929
metal superlattices, collective electronic phenomena *(Russian)* 7−137836
metallic glasses, local magnetic environment probe using magnetoresist. 7−84830
metallic glasses, magnetic static behaviour near critical conc. 7−143855
micromagnetics, surface anisotropy 7−125473
mixed valence Cu oxides, high T_c superconductors, double exchange processes effects *(French)* 7−125166
motor driven vibrating sample magnetometer for magnetization meas. in high mag. fields 7−102467
NMR pulse symmetry 7−128609
nonlinear and linear decay of magnetization, Monte Carlo comparisons 7−132074
nonlinear dynamics of highly anisotropic spin-1 magnetic materials 7−132079
nontrivial superconductivity, phys. props., defect contribution 7−105832
one dimensional, domain wall, phase transitions, temp. depend., energy calcs 7−143842
optical second harmonic generation as surface magnetization probe 7−125442
ordered and disordered substances, kinetic phenomena 7−132036
orientational relaxation in systems with continuous symmetry 7−137510
Permalloy films, Bloch lines, cross ties and taffy, Kerr effect studies 7−132108
Permalloy soft ferromagnetic films, irreversible magnetisation transforms 7−105992
permanent magnet alloys and particulate recording media, mag. viscosity meas. 7−132066
planar dipolar system on honeycomb lattice, ground state energy 7−143808
trans-polyacetylene films, mag. props. at low temps. 7−143754
polycrystalline ceramics, magnetisation processes, perpendicular stress effects study 7−106006
polycrystalline soft mag. materials, magnetisation curves 7−132067
polymer solns., correlation functions and spurious singularities in n=0 field theory 7−83641
polymer system, symmetry, phase transition, n=0 limit 7−112829
polytwin ferromag. particles, single-domain struct. *(Russian)* 7−143839
polyvinylidene fluoride film, mag. polaris., press. effects 7−105947
Potts model, q-state, crit. dynamics in 2D 7−143820
Potts model, three-state, magnetization, finite size-corrections to matrix elements 7−128471
Preisach diagrams incl. reversible magnetization 7−132061
quenched random bond transverse Ising model, magnetisation 7−125462
random anisotropy axes, critical lines 7−77274
(rare earth)$_2$$Co_{14}B$, room temp. polar Kerr effect meas., 3d sublattice magnetisation effects 7−70751
magnetisation continued
(rare earth)$_2$$Fe_{14}B$, room temp. polar Kerr effect meas., 3d sublattice magnetisation effects 7−70751
(rare earth)$_2$$Fe_{14}B$ polycryst. alloys, spin reorientations simulation w.r.t. permanent magnet and recording appls. 7−125351
rare earth alloys, $R_2Fe_{14}B$, polycrystalline, computer simulation of spin reorientations 7−99465
rare earth alloys, R_2Fe_{17}, cryst. field and easy axis direction 7−137866
rare earth alloys, RCo_5, magnetisation anisotropy 7−138215
rare earth alloys, $RFeAl_x$, mag. struct., Fe atom and moment location 7−131988
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth oxides, R-Ba-Cu-O, high T_c supercond., anomalous magnetism, temp. depend. 7−112648
rare earth oxides, $RBa_2Cu_3O_{6+x}$, superconductivity above 90 K, magnetisation meas. 7−118653
rare earth-$Co_{12}B_6$ mag. props. studies 7−99418
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
scaling functions for 3d critical wetting 7−105192
SEM, zz 7−128717
semi-infinite ferromagnetic n-vector Kac-Baker models, surface critical behaviour 7−125421
semiconductors, light induced magnetisation, spin polarisation 7−105964
semiconductors, solid-state physics, book 7−102027
semimagnetic semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
semimagnetic semiconductors, magnetisation, direct calcs. 7−70586
single domain with uniaxial anisotropy, theoretical torque curve anal. *(Spanish)* 7−143848
site-bond diluted Ising ferromagnet on anisotropic square lattice, thermodynamic props. calcs. 7−70571
soft magnetic materials, domain wall chaotic motion 7−132052
soft magnetic materials, mag. props. 17 years after electron irrad. 7−125451
soft magnetic materials, meas. and anal. techniques *(German)* 7−73379
spin Hamiltonians, anisotropic, order-order transition sequences 7−143745
spin system low temp. excitation by variable field, quantum effects *(Russian)* 7−77346
steel, decarburized mag. props. rel. to grain size and C content 7−132062
steel, mild, stress meas., Barkhausen noise and magnetisation rotation methods comparison 7−78412
steel, Mn, irreversible magnetisation processes 7−105955
steel, rolled, low-C, Barkhausen jumps, annealing temp. and magnetising freq. effects 7−105956
steel components, heat treatment quality inspection using remagnetisation losses 7−71449
steel plates, EM field, influence of magnetic charact. *(French, English)* 7−92458
stripe domain struct., effect of mag. field on phase transitions near Curie point 7−112908
superconducting network, mixed state 7−112708
superconductor phase transition, magnetic field effect, demonstration expt. 7−115713
TMTSF salts, 2D open orbit edge states, quantum oscillation 7−137784
toroidal ferromagnetic probes, theory and expt. *(Czech)* 7−95626
triethylenetetraammonium copper hexachloride, quasi-2D metamagnet, mag. and structural props. 7−125329
two-sphere agglomerate, magnetisation loops with nonvanishing mag. anisotropy 7−70592
type II superconductors, amorphous, very low vortex conc., anomalous behaviour 7−143738
type II superconductors, EPR spectra, inhomogeneously broadened and hyperfine split, theory 7−77157
type II superconductors, vortex structure and magnetisation curves, microscopic calculations 7−131929
valence fluctuating heavy electron systems, in applied and molecular fields, degenerate Anderson model 7−84617
weak itinerant antiferromagnetism, spin fluctuations, self-consistent renormalisation theory 7−131982
XY antiferromagnet, triangular lattice, quantum spin models, zero-temp. props. 7−92432
Al/rare earth oxide interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
$Al_{78}Mn_{22}$ quasicrystalline decagonal alloys, low temp. sp. heat and magnetic meas. 7−77310
Ba-La-Cu-O high T_c supercond., low-field mag. relaxation 7−143702
Ba-R-Cu-O system (R=Y,Nd,Sm,Dy,Er,Yb) high T_c supercond., Meissner state 7−118706
Ba-Y-Cu-O, sintered high T_c supercond., crit. current densities 7−143741
$BaFe_{12-2x}Co_xM_xO_{19}$, M=Ti, Mo, ferrite particles, synthesis, characterisation 7−125466
$BaFe_{12-2x}Co_xTi_xO_{19}$ fine particles, coprecipitation tempered, mag. props. 7−125481
$BaFe_{12}O_{19}$ anisotropic ferrite, rotational hysteresis and torque curve meas. 7−125461
$BaFe_{12}O_{19}$, hexagonal ferrite single crystals, flux growth and mag. props. 7−125942
$BaO-Fe_2O_3-B_2O_3$ system, crystallisation of W-type hexagonal ferrites in oxide glass 7−131048
$Ba_{1-x}Y_xCuO_{3-y}$, prep. by sintering, supercond. props. 7−99286
$Ba_{1-x}Y_xCuO_{3-y}$, supercond. props. 7−112530
$Ba_xY_{1-x}CuO_{3-y}$ high T_c supercond., magnetisation and Meissner effect 7−92367
$BdBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
$(BiDySmLu)_3(FeAl)_5O_{12}$ and $(BiDySmLuGd)_3(FeGa)_5O_{12}$ bubble films, LPE growth in $PbO-Bi_2O_3-MoO_3$ melt 7−113452
$Ca_2Fe_{2(1-x)}Al_{2x}O_5$, magnetic properties, molecular field approximation analysis 7−132015
$Ca_3Mn_2Ge_3O_{12}$ garnet, antiferromag., obs., of new mag. phase, magnetisation curves meas. 7−125381
$CdCr_{2x}In_{2(1-x)}S$, insulating spin glass, crit. behaviour 7−105926
$CdCr_2Se_4$ amorphous film, mag. and elec. props. 7−112339
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semiconductor, preparation, structure and mag. props. 7−70532
$(Cd_{1-x}Mn_x)_3As_2$, magnetisation meas. 7−70585
$Cd_{1-x}Mn_xS(Te)$, high-field magnetisation steps and nearest-neighbour exchange const. meas. 7−99502
$Cd_{0.9}Mn_{0.1}Se$, large negative magnetoresist., Hall coeff., magnetisation meas. 7−84940

magnetisation continued
CdMnTe magnetically mixed semiconds., optical bistability mechanism 7−75038
$Cd_{0.8}Mn_{0.2}Te$ dilute mag. semicond., integrated mag. spectroscopy obs. 7−125450
Ce_2-La-Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413
$CeAg_{1-x}In_x$, anomalous magnetostriction 7−125522
α-Ce_3Al, Kondo cpd., mag. and transport props. 7−77213
Ce_4Bi_3, heavy fermion ferromag. system, sp. ht. meas. 7−77296
$CeBi_{1-x}Te_x$, mag. props. under press. 7−77349
$CeCu_6$, induced mag. form factor, polarised neutron scatt. obs. 7−125308
$CeCu_6$, thermodynamic and transport props. 7−137584
$CeCuAl_3$, Kondo lattice, elec., mag., and thermal props. 7−138201
$CeCu_3Al_3$, heavy fermion behaviour at low temp. 7−118464
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$Ce_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$Ce_{1-y}La_yNi_{1-x}Pt_x$ dense Kondo ferromagnet, magnetisation and elec. resist., substitution effects 7−70522
CeMg, electrical and mag. props., pressure depend. 7−84810
$CeMo_6S_8$, cryst. struct. and phys. props. 7−77211
$CePb_3$, high field magnetisation, magnetoresistance and Hall effect at very low temp. and high press. 7−76890
$CePd_{3-x}Pt_x$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$CeRu_2Si_2$, metamagnetic-like transition 7−105918
CeSb, mag. ordering, high press. neutron and magnetisation study 7−77228
$CeSi_x$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
$Ce_{1-x}Y_xPd_3$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
CeZn, neutron diffr. and mag. studies 7−77248
$CeZn_5$ Kondo lattice, mag. props. 7−99404
Co, colloidal ferromag. metals, prep., mag. props. 7−77375
Co thin film, magnetisation, effect of Ag and Cu overlayers 7−118836
Co/Mn compositionally modulated film struct. and FMR freq. depend. study 7−99579
Co-Au amorphous thin films, prep. and mag. props. 7−85393
Co-CoO layered films, bias modulated reactively sputtered, magnetisation props. 7−70605
Co-Cr, perpendicular mag. recording media, magnetisation, Bitter and electron holography studies 7−125518
Co-Cr film, magnetisation models for computer simulation of perp. mag. recording 7−92479
Co-Cr multilayer film mag. props., magnetisation and FMR meas. 7−112896
Co-Cr perpendicular mag. film magnetisation, Potter-Beardsley model 7−85390
Co-Cr sputtered films, mag. props., microstruct. 7−85392
Co-Cu multilayer electrodeposit structs., mag. props. study 7−125508
Co-Fe thin films, anisotropic magnetoresist. 7−143640
Co-Fe-Nb amorphous films, magnetisation and FMR studies 7−132102
Co-Ni thin film mag. and structural recording props., deposition incidence angle depend., recording appl. 7−105976
Co-P, Co-Ni-P amorphous films, electrodeposition, chem. comp. and mag. props. 7−99527
Co-P films, amorphous, stabilisation of stripe domain struct. *(Russian)* 7−105989
Co-Si-B-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
Co-Sm(Nd)(Pr), amorphous mag. props. 7−132000
Co-Ti amorphous thin films, mag. anisotropy, domain struct. 7−112914
Co-W electrodeposited thin films, mag. props. study 7−143871
Co(AlMn) alloys, struct. and mag. props. 7−132069
$CoBr_2.6H_2O$, spin reorientation direction at the spin-flop transition 7−99466
$CoCl_2.6H_2O$, spin reorientation direction at the spin-flop transition 7−99466
CoCr film, mag. and structural props. for recording appls., polycryst. sublayer effects 7−105981
CoCr sputtered films, thermomag. anal., annealing and Cr distrib. 7−125492
CoCr sputtered films, wall energy and exchange stiffness 7−99534
CoCr thin film magnetisation orientation determ., Hall effect meas. 7−105978
CoCr/Ti film/sublayer system, struct. and mag. props. 7−112905
$CoCr_2S_4$, production by hot pressing, props. 7−77855
$(CoCr)_{90}Zr_{10}$, amorphous alloys, Curie temp., press. effects meas. 7−118799
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
$(CoMo)_{90}Zr_{10}$ amorphous alloys, Curie temp., press. effects meas. 7−118799
$Co_{80-x}Nb_xB_{16}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
CoNi HCP thin films, magnetisation curves and hysteresis loops, film texture and orientation depend. 7−105979
Co_xTiS_2, mag. phase diagram 7−85307
Co_xZn_{2-x} W-type hexaferrite, mag. props., 78-700 K 7−125371
CoZr and CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7−112885
$Co_{94}Zr_6$ amorphous thin films, mag. and galvanomag. props. 7−112884
CrB-FeB, phase diagram, magnetovolume effect 7−85399
$CsCoCl_3.2H_2O$, 1D Ising antiferromagnet, high field magnetisation 7−143767
$CsFeCl_3$, anomalous magnetisation appearing at appl. mag. fields exceeding 33 T 7−125338
$CsMnBr_3$ triangular antiferromagnet, spin waves, neutron scatt. study 7−125348
$CsNiCl_3$ triangular lattice antiferromag., phase transitions, neutron scatt. studies 7−77291
Cu cylindrical metal bars, contactless method for magnetoresistivity measurements 7−131610
$CuCl_2.2H_2O$, spin reorientation direction at the spin-flop transition 7−99466
$CuCl_2$.tetramethyl sulphoxide ferromag. chain cpd., magnetic interactions, magnetisation, FMR and AFMR meas. 7−99435
$Cu_{0.45}Co_{0.55}Cr_2S_{4-y}Se_y$ ferrimagnetic spinel props. 7−99503
magnetisation continued
$CuCr_2Te_4$ films, synthesis, texture, mag. props. 7−98731
$Cu_{99.2}Fe_{0.8}$ rapidly quenched alloys, change of mag. props. with heat treatment 7−71329
$Cu_xFe_{1-x}Cr_2S_4$ films, mag. props. 7−105987
CuFe(Ni)(Zn) composites, elec. and mag. props. after thermal annealing 7−124961
CuMn spin glass, torque relax. meas. 7−143816
Dy-Tb-Fe, microstruct., mag. props. and precipitates 7−71221
Dy-Y superlattices, mag. and struct. charact. 7−125506
Dy-Y superlattices, mag. struct., neutron diffr. study 7−99409
$DyBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
$DyFe_4B_4$, effective mag. fields, ^{57}Mossbauer spectra studies 7−92561
$Dy_2Fe_{14}BH_x$, mag. props., effects of hydrogen 7−92460
$Dy_2Fe_{14-x}Co_xB$ ferrimagnetic system, struct. and mag. props., comp. depend. study 7−70589
$Dy(Fe_{0.9}M_{0.1})_2$ (M=B, Al, Ga), cubic Laves phases, mag. investig. 7−138230
DyIG, citrate gel synthesis, charactn. 7−77905
Er, magnetisation meas. near Neel temp. 7−132071
$ErBa_2Cu_3O_7$, high T_c supercond., mixed phase behaviour study 7−118610
$ErBa_2Cu_3O_7$, high T_c supercond., mag. fluctuations, 2D ordering 7−131884
$ErBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., resistivity, magnetisation, critical current density 7−143699
$ErBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
$ErCo_2Fe_2B$, cryst. struct. and mag. props. 7−137310
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7−118797
$Er_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Er_2Fe_{14}B$ thin film mag. props. study 7−112894
$Er_2Fe_{14}BH_x$, mag. props., effects of hydrogen 7−92460
$Er_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$Er_2Fe_{14-x}Co_xB$ ferrimagnetic system, struct. and mag. props., comp. depend. study 7−70589
$ErFe_2H_x$, local, macroscopic structural and mag. props., rhombohedral distortion effect 7−99446
$Er_2Fe_{14-x}Mn_xB$, moment canting, magnetisation effects 7−112852
$Er_2Fe_{14-x}Si_xB$ compounds, struct. and mag. props. 7−138278
ErH_x monocrystals, magnetisation meas. near Neel temp. 7−132071
$ErPd_2Sn$ cubic Heusler superconducting alloy, antiferromag. struct., neutron scatt. meas. 7−112743
Er_3Se_4, magnetisation and antiferromag. phase transition 7−138272
Eu, antiferromagnetic ordering and intermediate valency, Mossbauer study 7−112766
$Eu(As_xP_{1-x})_3$ systems, mag. phase diagrams, hydrostatic press. effects 7−77286
$EuBa_2Cu_3O_x$, high T_c supercond., electronic and mag. props. 7−143705
$Eu_x(NH_3)_yTiS_2$, mixed valence intercalation cpds., synthesis, characterisation, mag. props. 7−85352
$EuNi_5P_3$, mag. phase transitions magnetisation steps with field 7−112793
EuO quasiparticle electronic spectrum, density functional theory, temp. depend. and dynamical corrections 7−98805
$EuPd_2Si_2$, mixed valence cpd., dynamic mag. susceptibility, neutron scatt., magnetisation, Mossbauer effect meas. 7−70264
EuS (111) on Si (111), isotropic Heisenberg ferromag., surface magnetisation, critical behaviour 7−105984
EuS_ySe_{1-y}, mag. phase transitions close to bicritical concentration 7−99456
$Eu_xSr_{1-x}Te$, dil. antiferromagnet, spin glass behaviour, mag. meas. 7−112827
Eu_xYb_{1-x} alloy, elec. and mag. props. studies w.r.t. comp. 7−132073
Fe colloidal ferromag. metals, prep., mag. props. 7−77375
Fe colloidal fine particles, mag. moment, hyperfine field 7−112865
Fe epitaxial FCC film on Cu (001), magnetism, spin polarised photoelectron emission 7−105985
Fe film, magnetisation, effect of Al overlayers 7−132072
Fe film across Cr interlayers, evidence for antiferromag. coupling 7−118839
Fe garnet films, magnetostatic rigidity of domain walls and coercive force 7−143879
Fe ion beam sputtered film, induced uniaxial mag. anisotropy meas. 7−105982
Fe monolayers on Ag, direct DC magnetisation temp. and field. depend. meas. 7−112888
Fe, Mossbauer study, saturation magnetization and hyperfine field *(Chinese)* 7−99616
Fe, pure and alloyed, amorphous, high mag. moment and magnetisation 7−85357
Fe, single-crystal films, MBE growth on GaAs(100) 7−113393
Fe sputtered film for soft mag. layer in perp. recording media 7−92476
Fe/Mg sub-monolayered superlattice, mag. props. 7−112867
Fe/Pd multilayers, collective magnetostatic spin wave excitation obs. 7−112777
Fe/SiO_2, compositionally modulated films, mag. props. 7−99524
Fe/W multilayers, collective magnetostatic spin wave excitation obs. 7−112777
Fe-Al-Ge, crystalline soft magnetic alloy films, high saturation magnetisation 7−125501
Fe-B ultrathin amorphous films, magnetisation and surface anisotropy determ. 7−112892
Fe-B-F films, magneto-optical props. 7−113149
Fe-B-Si amorphous films, magnetic ripple, Lorentz microscopy studies 7−70607
Fe-C getter sputtered films, struct. and mag. props. 7−112873
Fe-Co ion-beam sputtered thin films, mag. props. 7−112879
Fe-Co-Al high mag. moment sputtered films, mag. props. 7−125504
Fe-Co-B-Ni(Cr), metallic glass, relaxation kinetics and Curie temp. 7−104579
Fe-Cr disordered alloys, finite-temp. magnetism, local environment effects calcs. 7−85242
Fe-Cr-Co permanent magnets, low Co, mag. rotational hysteresis energy 7−138271
Fe-Ga-Si crystalline soft magnetic alloy films, high saturation magnetisation 7−125501
Fe-Ho-B metallic glasses, Curie temp., mag. moments and magnetisation 7−85297
Fe-Nd multilayer films, mag. props. 7−112903

magnetisation continued
Fe-Ni and Fe-Ni-Gd thin films, Lorentz microscopy study, mag. props. 7−105997
Fe-Ni films, magnetisation, effect of Al overlayers 7−132072
Fe-Ni Invar, metastable modulated state, supermoment dynamics, Mossbauer spectrum study, review 7−70529
Fe-Ni mag. fluids, prep. and props. 7−77374
Fe-Ni multilayers, Fe ferromagnetism 7−99519
Fe-Ni-B sputtered amorphous films, stress sources, mag. meas. 7−84609
Fe-Ni-Cr, γ' strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7−105959
Fe-Ni-Cr spin glasses, mag. field-temp. diagram 7−138238
Fe-Ni-Cr(Mn) spin glasses, mag. props. 7−105936
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
Fe-P-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
Fe-Si steel, highly permeable, forsterite ground layer effect on mag. props. 7−77353
Fe-Si-B alloys, amorphous and cryst., magnetic losses, thermomag. treatment effects *(Russian)* 7−99437
Fe-Si-B amorphous alloy mag. props. temp. depend. meas. 7−99506
Fe-Si-B-based amorphous alloys, mag. permeability and thermal stability 7−85361
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7−112902
Fe-Tb amorphous alloys, co-sputtered, direction of easy-axis 7−112886
Fe-Y compositionally modulated thin films, magnetisation, depend. on layer thickness 7−99511
Fe-Zr, amorphous, hydrogenation induced changes in mag. props., Mossbauer spectra, magnetisation meas. 7−99444
Fe-Zr, amorphous, sputtered and solid-state-reacted films, phase separation 7−98744
Fe-Zr metallic glasses, mag. props. study 7−118827
$Fe_x Hf_{1-x}$ glasses, mag. props. 7−118922
$Fe_{60}Al_{40}$ alloy, Al^{2+} implanted, FMR studies 7−85442
$Fe_{70}Al_{30-x}M_x$, (M=Cr,Mn,Co), mag. studies 7−125394
$Fe_{1-x}B_x$ films, mag. props. during crystallisation 7−85394
$Fe_{80}B_{20}$ amorphous alloys, neutron irradiation, effect on mag. props. 7−70593
$Fe_{80}B_{20}$ amorphous ultrafine metallic particles, sputtering deposition and mag. props. 7−85381
$Fe_{84}B_{16}$, amorphous, mag. props. 7−105906
$Fe_{78}B_{13}Si_9$ glassy metal powder cores, mag. props. 7−85365
$Fe_{80}B_{8.74}Si_{11.26}$ metallic glass, magnetisation studies 7−143856
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloy, mag. props., stress depend. 7−143890
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7−132101
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ metallic glass, magnetisation and magnetostriction obs. 7−106008
$(Fe_xCr_{1-x})_2Ca_3(GeO_4)_3$, mixed garnet, mag. frustration, phase diagram, neutron diffr. 7−105889
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ devitrified metallic glass, fine particle superparamagnetic props. 7−143860
$Fe_{74.7}Cr_{3.8}P_{8.7}C_{10.7}Si_{1.9}$, melt spun amorphous ribbons, mag. props. 7−132076
FeDy amorphous thin films with perpendicular mag. anisotropy, heating, magneto-optical method *(Russian)* 7−92483
$Fe_{82-x}M_xB_{18}$ amorphous ribbons, mag. props. and atomic struct. studies 7−99507
$Fe_xM_{70-x}Ti_{30}$, (M=Co, Ni, Cu) amorphous alloys, enhanced magnetism on Fe substitution 7−112851
$Fe_{0.7}Mg_{0.3}Cl_2$ random field Ising system, magnetisation metastability and critical behaviour 7−118816
$(Fe_{100-x}Mn_x)_{75}P_{15}C_{10}$ amorphous cpd., mag. field sensor, cryogenic appls., Hall signal probe 7−89231
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
$Fe_{1-x}Mo_x$, metastable BCC and amorphous, produced by vapour quenching, mag. props. 7−77255
$Fe_{80-x}Nb_xSi_5B_{15}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
$Fe_xNi_{80-x}B_{20}$ glassy alloys, magnetisation and elec. resist. meas. 7−85360
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$Fe_{16}Ni_{64}B_{19}Si$ amorphous ferromag., effective susceptibility exponent 7−143770
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, domain wall motion reproducibility 7−132054
$Fe_7Ni_{73}P_{14}B_6$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
$Fe_{12}Ni_{63}P_{16}B_6Al_3$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
$(Fe_{1-x}Ni_x)_{77}Si_{10}B_{13}$, amorphous alloy, mag. contribution of Fe and Ni *(Korean)* 7−85353
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
FeNiZr glassy and crystallized alloys, Mossbauer and mag. studies 7−85507
γ-Fe_2O_3:Co^{2+},Zn^{2+} acicular particles, mag. props. modification 7−85371
γ-Fe_2O_3:Os sputtered films for mag. recording appl., grain growth, impurity effects 7−105315
γ-Fe_2O_3-Fe_3O_4 films, pyrolysis prep., Mossbauer and Faraday rot. study 7−85387
Fe_3O_4, film, surface magnetisation 7−112868
Fe_3O_4, high press. Mossbauer study 7−113039
Fe_3O_4, magnetite, rapid electron exchange by cationic vacancies *(French)* 7−76947
Fe_3O_4, magnetite ultrafine particles, water/oil microemulsion preparation and mag. props. 7−99510
Fe_3O_4 small ferromag. particles, correlation spectroscopy study 7−70599
Fe_xO_{1-x}-based perpendicular thin films, mag. recording appls. 7−125494
$Fe_{1.4}Ru_{1.6}Si$ reentrant spin glass, magnetisation and Mossbauer studies 7−112801
FeSi grain orientated sheets, stray field profile 7−105962
FeSi, transformer steel, heat loss mag. macrostruct. 7−113611
Fe_3Si, spin wave study at low temp. *(Chinese)* 7−118782
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7−85304
Fe_xTiS_2, intercalation cpd., linear and nonlinear AC mag. suscept. 7−138199

magnetisation continued
GaAs, low temperature anomalous magnetisation and susceptibility 7−125304
GaAs-GaAlAs multilayers, 2D electrons, Landau level density of state studies 7−137826
$Ga_xFe_{1-x}NiCrO_4$ mixed spinel, magnetic behaviour and site occupation studies 7−99419
Gd, ferromagnetic, local magnetisation of noble and s-p impurities 7−70542
Gd, surface magnetisation at the bulk Curie temp. 7−112858
Gd-Al, amorphous spin glass, mag. correlations 7−112817
Gd-Ce, temp. depend. of hyperfine field of Ce impurities, local magnetisation 7−125310
Gd-Co-(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Gd-Eu-Co alloy thin films, FMR study 7−70648
Gd-Fe-Co amorphous films, magneto-optical props. rel. to sublattice magnetisation 7−144037
Gd-Tb-Co-Fe amorphous thin films, mag. characts. rel. to magneto-optical recording appls. 7−143867
Gd-Y superlattices, synthetic, modulated mag. props. 7−99525
Gd-Y synthetic superlattices, polarised neutron diffr. studies 7−125322
$GdBa_2Cu_3O_{6+\delta}$, high T_c supercond., calorimetric evidence of antiferromagnetism 7−112834
$GdBa_2Cu_3O_{7-x}$, supercond. and normal samples, pres. and field depend. of mag. transition 7−132021
$Gd_1Ba_2Cu_3O_y$, high T_c supercond., magnetisation and susceptibility, 1.5 to 270 K 7−112652
Gd_3Co, crystallisation under microgravity, influence on mag. props. *(Russian)* 7−106753
$GdCo_2H_y$, mag. props. 7−143854
$Gd(Cu_{1-x}M_x)_2$ (M=Ni, Co, Al), mag. struct. changes and thermal expansion, anomalies *(Russian)* 7−99402
$Gd_3Fe_5O_{12}$ microwave garnets, CAD, three sublattice modification of molecular field coeffs. 7−143846
$Gd_3Ga_{5-x}Al_xO_{12}$, low temp. magnetism *(Chinese)* 7−92407
$GdMn_2Si_2$, mag. ordering, X-ray, magnetisation and Mossbauer studies 7−138224
$(Gd_{0.2}Tb_{0.8})_3Co$, crystallisation under microgravity, influence on mag. props. *(Russian)* 7−106753
GdTbFe:ONH_2O sputtered film mag. props., impurity effects study 7−112887
^{3}He, liq., magnetisation by dynamic nuclear polarisation 7−76527
^{3}He, solid, magnetisation, 0.2 to 11 T 7−112005
Hf_2FeD_x, x=3-5, localisation of H(D), structural and mag. props., powder neutron diffr. study 7−83850
$Hg_{3-\delta}SbF_6$, supercond. transitions, magnetisation meas. 7−70473
Ho-Er-Co-Ni, spin reorientation, magnetocryst. anisotropy studies 7−138235
$HoBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$HoBa_2Cu_3O_{8-\delta}$, superconductivity 7−131847
$HoCo_2$, NMR study of magnetisation direction change 7−125546
Ho_2Co_{17}, mag. transitions, high field magnetisation meas. 7−92412
$HoCo_4B$, cryst. struct. and mag. props. 7−137310
$HoRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$HoRh_2Si_2$ thermodynamic and mag. props. studies using cryst. field model 7−70558
$(La_{1-x}Ce_x)B_6$, thermodynamics, Coqblin-Schrieffer model 7−77299
La_2CuO_{4-y}, antiferromag. state, muon-spin rot. meas. 7−143947
$(La_{1-x}M_x)CuO_4$ (M=Sr, Ba) high T_c supercond., mag. susceptibility studies 7−92365
$La_{2-x}M_xCuO_4$, (M=Ba, Sr, Ca), high T_c superconductors, magnetisation studies 7−99327
LaMg, electrical and mag. props., pressure depend. 7−84810
$LaNi_{5-x}Fe_xH_y(D_y)$,thermodynamic, structural and mag. props. 7−98468
$LaRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., low-field mag. relaxation 7−143702
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., granular nature of bulk superconductivity 7−105866
$La_{1.8}Sr_{0.2}CuO_4$, weak flux pinning, 230 to 40 K 7−92393
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. props. 7−105833
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. screening and flux distrib. 7−118741
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., supercond. props. and microstructures 7−118756
$La_{1.85}Sr_{0.15}CuO_4$, hot-pressed and sintered, superconducting props. 7−99259
$La_{1.85}Sr_{0.15}CuO_4$ single cryst., high T_c superconductor, prep. and props. 7−92364
$La_{1.85}Sr_{0.15}CuO_4$, superconducting, magnetisation 5 to 300 K 7−99321
$La_{2-x}Sr_xCuO_4$, microstructural and electromagnetic characterisation 7−112644
Li-Ti-Zn spinel ferrites, mag. and cryst. struct., polarised neutron diffr. study 7−138193
$Li_{1.125}Ti_{1.25}Fe_{0.625}O_4$ spinel ferrite, transverse spin component, relax. 7−85351
$LiEu_2DyO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiEu_2GdO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiEu_2YO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
LiF:Ni crysts., microhardness, dislocations, magnetic treatment and annealing effects 7−142894
LiZnTi spinel ferrite, high magnetisation limit 7−125453
Lu-Ba-Cu-O, superconductivity near 90 K 7−105793
$Lu(Co_{1-x}Al_x)_2$, pseudobinary laves phase cpds., metamagnetic transition 7−99455
Mn-Al sputter deposited film, ferromag. τ phase charactn. 7−113385
Mn-Bi films, prep. by multilayering, write-in characts. 7−143870
Mn-Ge-Zr(Nb), antiferromag., elastic props. and thermal expansion 7−144455
Mn-Ge-misch metal alloys, Invar characts., machinability *(Japanese)* 7−76460
Mn_xB_{100-x} amorphous system, magnetism studies 7−112816
MnBi films, preparation, magnetic and magneto-optic props. 7−99533
Mo/Ni superlattices, magnetisation and anisotropy, torque meas. 7−112785
Mo-Ni magnetic-superlattices, interfacial anisotropy 7−118795
Na-Fe-B magnet, anisotropy consts. meas., temp. and field depend. determ. 7−125373

magnetisation continued
Nb-Ti fine filament superconductors in Cu-Ni matrix, AC losses 7−138165
Nb_3Al multifilamentary wires, AC losses measured by magnetisation 7−77153
NbTi fine filament superconductors, anomalous low field magnetization 7−131882
NbTi superconductors, ultra-fine filament, AC losses 7−131967
Nd-Co compositionally modulated thin films, mag. props. 7−99513
Nd-Dy-Fe-B sintered magnets, coercivity, depend. on anisotropy field 7−112859
Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413
Nd-Fe-B based isotropic permanent magnet, high performance 7−112861
Nd-Fe-B permanent magnets, sintered, initial magnetisation curves 7−138269
Nd-Fe-Co-B sintered magnets, coercivity, depend. on anisotropy field 7−112859
NdFeB magnet, domain struct. and magnetisation temp. depend. meas. 7−125439
NdFeB magnets. magnetic viscosity meas. 7−125447
$Nd_{15}Fe_{77}B$, magnetisation, effect of H_2 absorption 7−92459
$Nd_2Fe_{14}B$ cpds. mag. anisotropy, effect of Ni and Mn substitution 7−132010
$Nd_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Nd_2Fe_{14}B$ single cryst. anomalous magnetisation behaviour 7−77352
$Nd_2Fe_{14}B$ single cryst. first-order field-induced magnetisation transitions 7−125385
$Nd_2Fe_{14}B$ single crystals, easy growth axis determ. for anal. of texture in Nd-Fe-B magnets 7−132078
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
$Nd_2Fe_{14-x-y}Co_xAl_yB$, mag. props. substitution effects 7−138217
$Nd_2(Fe_{1-x}Co_x)_{14}B$ single crystals, magnetisation, mag. anisotropy 7−112760
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$ (M=Co, Ni, Ru) spin reorientation, low temp. mag. meas. 7−77348
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$, M=Sc-Mn, Co, Ni, permanent magnet cpds., mag. props. study 7−92422
$Nd_2(Fe_{1-x}Ru_x)_{14}B$, low temp. mag. behaviour, spin reorientation phenomena 7−125369
$Nd_2Fe_{14-x}Si_xB$ compounds, struct. and mag. props. 7−138278
$Nd_2Fe_{14-x}Si_xB$, substituted system, mag. props. 7−105963
NdH_{2+x}, x=0-0.75, mag. props. 7−99417
$Nd_{2-x}M_xFe_{14}$ B-based system, (M=Ti,Hf), magnetisation, Curie temp. and anisotropy 7−138218
$Nd_{1.9}M_{0.1}Fe_{12}Co_2B$ (M=Ti, Hf), mag. props., material for permanent magnets 7−118830
$NdMn_2Si_2$, metamagnetic phase transition, magnetocaloric effect 7−132017
$(Nd_{1-x}Pr_x)_2Fe_{14}B$, first-order mag. transition 7−99448
NdZn, neutron diffr. and mag. studies 7−77248
Ni colloidal ferromag. metals, prep., mag. props. 7−77375
Ni dilute alloys, impurity charge and magnetisation perturbation calcs. 7−99400
Ni-C multilayer sputtered films, mag. props. study 7−125509
Ni-Co-Fe alloys, films, motion of tips of domains *(Russian)* 7−105990
Ni-Cr multilayered thin films, mag. props., dimensional effects study 7−125507
Ni-Cu, compositionally modulated films, magnetisation meas. 7−143845
Ni-Cu sandwiches, finite temp. magnetism, itinerant electron theory 7−85236
Ni-Fe-P oxide system amorphous thin films, struct. and mag. props. 7−112872
Ni-Nb amorphous alloys, electronic transport and magnetisation meas. 7−98969
Ni-P underlayer for mag. recording, M-H curve slope-intercept anal., heat treatment effects 7−105980
Ni-Zn ferrites, Cu-substituted and non-substituted, elec. cond. 7−112330
Ni_xFe_{1-x} evaporated thin films, structural and mag. props. studies 7−98736
$Ni_3FeMn(Cr)$, magnetic and atomic ordering, temperature and order parameters *(Russian)* 7−143793
$NiFe_2O_4$ polycryst., ultrasound mag. birefringence and dichroism obs. 7−99547
$NiFe_{2-x}Sc_xO_4$ spinels, magnetisation and magnetostriction 7−92488
$Ni_3FeW(Mo)(Cr)(Mn)$, structural and mag. ordering, impurity effects 7−85284
$Ni_{75}Mn_{25}$ spin glass alloy, magnetisation vector meas. 7−112812
$Ni_{81.5}P_xB_{18.5-x}$ amorphous and liq. alloys, mag. props. study 7−118768
$Ni_{0.65}Zn_{0.35}Fe_{2-x}Mn_xO_4$, spinel ferrite, mag. and dielec. props. 7−125454
$Ni_{0.5}Zn_{0.5}Fe_2O_4$, ferrite, sintering, added AlN and Al_2O_3, formation of ferrospinel oxonitride 7−100149
$Ni_{1+t-x}Zn_xTi_tFe_{2-2t}O_4$, mag. props. rel. to Ti content 7−112854
$Pb_{1-x}Mn_xSe$, magnetisation and susceptibility 7−138285
$(PbO\text{-}Fe_2O_3)_{100-x}$ $(La_2O_3)_x$ magnets, mag. and phys. props. 7−105966
Pd-Co dilute alloys, ferromagnetic transition, deform. effects study 7−125387
Pd-Co dilute alloys, ferromag. transition obs. 7−132019
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe dilute alloys, ferromag. transition obs. 7−132019
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
$Pd_{100-x}Fe_x$-Cu ferromagnetic-paramagnetic bilayer interface, magnetisation transport, FMR, EPR studies 7−85254
$Pd_{1-x}(FeNi)_x$, magnetic excitations, saturation magnetisation meas. *(Russian)* 7−143774
$(Pd_xPt_{1-x})_3Fe$ reentrant spin glass, magnetisation and Mossbauer studies 7−112800
Pr polycrystals, high-field magnetisation meas., cryst. field effect calcs. 7−118829
$Pr_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Pr_2Fe_{14-x-y}Co_xAl_yB$, mag. props. and cryst. struct. 7−138216
$Pr_2(Fe_{1-x}Co_x)_{14}B$, mag. anisotropy study 7−99439
$Pr_2Fe_{12-x}Mn_xCo_2B$, mag. props. Mn substitution effects 7−138219
$Pr_2Fe_{14-x}Si_xB$ compounds, struct. and mag. props. 7−138278
$PrNi_5$ polycryst. high-field magnetisation meas., cryst. field effect calcs. 7−118828
PtCo, dil. alloy, mag. environment model of ferromagnetism 7−125332
PtCo order-disorder system, anomalous mag. effects 7−132068
magnetisation continued
PtMnSb thin films, RF sputtered, optical, mag. props., Kerr magneto-optical effect meas. 7−118841
PtNi, system of interacting Kondo moments, mag. props. 7−105885
$R_2Co_{14}B$ (R=La, Nd, Gd), single crystals, magnetisation, mag. anisotropy 7−112760
$RCu_3Mn_4O_{12}$ perovskites, polarisation of mag. moments of R^{3+} ions 7−132060
$R_2Fe_{14}BH_x$, (R=Dy, Ho, Y), spin rotation, Mossbauer study 7−113025
$Rb_{1-x}(NH_4)_xH_2AsO_4$, proton pseudo-spin-glass, stretched-exponential nucl. magnetisation recovery 7−99601
$Ru_xFe_{80-x}B_{20}$ amorphous alloys, high field magnetisation and ^{57}Fe hyperfine field studies 7−112849
Ru_xFeGa cluster spin glass, ^{57}Fe Mossbauer and bulk magnetisation studies 7−112799
Sc, matrix isolated, electronic and mag. circular dichroism spectra 7−90036
Sc_2, matrix isolated, electronic and mag. circular dichroism spectra 7−90036
Si 7−118887
Si, magnetic properties of donors and acceptors 7−143757
Si/FeC compositionally modulated amorphous alloys, mag. and diffusional props. 7−85358
$SmCo_5$ powder magnet, mag. struct. and texture state influence 7−77381
SmCoFeCuZr permanent magnets, thermal remagnetisation study 7−138283
$SmFe_4B_4$, effective mag. fields, ^{57}Mossbauer spectra studies 7−92561
SmIG, citrate gel synthesis, charactn. 7−77905
$SmNi_5$ single cryst., magnetisation and mag. anisotropy 7−138268
$Sm_{0.55}Tb_{0.45}FeO_3$ orthoferrite, susceptibility anisotropy 7−143849
$SrFe_{12}O_{19}$ 7−125461
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., diamag. shielding and Meissner effect 7−92366
$SrMn_2Fe_{16}O_{27}$ hexaferrite, mag. props., phase formation 7−138231
$Sr_2Zn_2Fe_{28}O_{46}$, hexagonal ferrite, mag. and Mossbauer study 7−112853
Tb-Co sputtered films, mag. and magneto-optical props., stability in air 7−144043
Tb-Co(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Tb-Co(Fe) sputtered films, saturation magnetisation and comp., Ar press. depend. *(Japanese)* 7−112906
Tb-Dy alloy, mag. phase transition, press. effects *(Russian)* 7−143792
Tb-Fe amorphous films, stability of mag. props. 7−92480
Tb-Fe-Co amorphous films, magnetic and magneto-optical props. 7−113159
Tb-Fe-Co amorphous films, mag. and magneto-optical props., recording appls. 7−144038
Tb-Fe-Co sputtered films, mag. and struct. props., influence of H_2 partial press. 7−132097
Tb-Fe-Co-Bi amorphous films, mag. and magneto-optical props. 7−144040
TbCo sputtered films, mag. and struct. charact., effects of Ar press. and substrate bias 7−132094
$TbCu_2$, sublattice magnetisation, temp. depend. 7−138281
$Tb_{0.22}Cu_{0.78}$ amorphous alloy, short and medium range mag. order, neutron scatt. obs. 7−85323
$Tb_{0.27}Dy_{0.73}Fe_{1.95}$ single cryst., anisotropic magnetostriction study 7−106001
TbFe amorphous sputtered films, effective comp., thickness depend. 7−143248
TbFe thin film magnetisation orientation determ., Hall effect meas. 7−105978
$Tb_2Fe_{14-x}Co_xB$, magnetism 7−131998
$TbFe_2H_x$, local, macroscopic structural and mag. props., rhombohedral distortion effect 7−99446
$Tb_{1-x}Ho_xCo_2$, mag. props. and cryst. struct. *(Russian)* 7−138275
$Tb_2Ni_{17-x}Al_x$, mag. behaviour in the ferrimagnetic and paramagnetic regions 7−99498
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
$TmBa_2Cu_3O_{9-x}$, high T_c supercond., magnetisation and lower crit. field 7−125183
$TmGa_3$, antiferroquadrupolar and antiferromag. structs., neutron diffr. studies 7−118775
$Tm_{1-x}Lu_xCu_2Si_2$, mag. props. and sp. ht. studies 7−118778
$Tm_xY_{3-x}Fe_5O_{12}$, magnetisation study 7−138277
U equiatomic ternary cpds., mag. and elec. props. 7−132031
UBe_{13}, heavy fermion superconductivity and magnetic props. 7−70472
UIr, mag. struct. neutron diffr. and magnetisation meas. 7−131990
$U_{1-x}La_xTe$, x=0.1, 0.2, Kondo effect, mag. meas., press. effects 7−77214
$(U_xLa_{1-x})_2Zn_{17}$, conc. Kondo system, magnetism and electronic transport 7−85243
$U_4M_7Ge_6$ (M=Ru, Os), struct., mag. and elec. props. 7−117878
$UP_{0.8}S_{0.2}$ single crysts., neutron diffr., magnetisation, incommensurate and ferrimag. phases 7−112748
UPt_3, heavy fermion system, high press. magnetisation studies 7−77355
$U(Pt_{0.95}Pd_{0.05})_3$, mag. order 7−77350
UPt_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, heavy fermion system, high press. magnetisation studies 7−77355
U_3Sb_4 single crysts., Hall effect and high field magnetisation studies, microscopic spin model anal. 7−118514
USi_x, elec. resist., temp. variation 7−92153
$U_{1-x}Th_xCu_2Si_2$, effect of Th substitution on magnetism 7−125456
Y-Ba-Cu-O, with transition metal impurities, effects on supercond. props. 7−105789
Y-Ba-Cu-O high T_c supercond., mag. props. study 7−112655
Y-Ba-Cu-O high T_c supercond., electromagnetic response in 90 K range 7−112668
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond., prep. and physical props. 7−126058
Y-Ba-Cu-O high T_c supercond., large anisotropic critical magnetisation currents 7−143703
Y-Ba-Cu-O high T_c supercond., aligned crystalline grain prep. 7−143742
Y-Ba-Cu-O system, high T_c superconductor, magnetisation meas. 7−99324
Y-Ba-Cu-O system, high T_c superconductivity 7−118606
Y-Ba-Cu-O systems, high T_c supercond., elec. and mag. props. 7−118622
Y-Gd-Fe amorphous sputtered films, mag. props. 7−143865
$YBa_2Cu_3O_7$, extreme type II supercond., magnetisation meas. 7−138124

magnetisation continued
$YBa_2Cu_3O_7$, high T_c superconductor, 94 K, press. depend. of transition temp. 7−105785
$YBa_2Cu_3O_7$, high T_c supercond., connective nature of superconductivity 7−118662
$YBa_2Cu_3O_7$, single crystals, growth and high T_c superconductivity 7−118639
$YBa_2Cu_3O_7$, single phase high T_c supercond., thin superconducting shells 7−118664
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., anomalous temp. depend. of H_{c1} 7−143698
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., critical current density determ. 7−143740
$YBa_2Cu_3O_{7-x}$, high T_c supercond., microstructural effects on magnetisation 7−118701
$YBa_2Cu_3O_{9-x}$, high T_c supercond., mag. props. 7−138123
$YBa_2Cu_3O_x$, high T_c supercond., supercond. props. and microstructures 7−118756
$YBa_2Cu_3O_x$, supercond., weak field magnetisation rel. to microstructure 7−105831
$Y_1Ba_2Cu_3O_{7-\delta}$, high T_c composite cpd, mag. behaviour 7−138125
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$, 90 K superconductor, switching phenomena 7−85190
$YBaCuO_3O_{7-x}$ plates, sintered, supercond. sub-struct., magnetisation meas. 7−143696
YCo_3, electron spin resonance and magnetocrystalline anisotropy 7−99565
$Y(Co_{1-x}Al_x)_2$, weakly itinerant ferromagnet, NMR and magnetisation 7−85470
$Y_2(Co_{1-y}Ni_y)_7H_x$, mag. props., effect of H substitution 7−99445
$Y_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Y(Fe\text{-}Co)_2$, mag. props., rigid band model 7−99390
$Y_2(Fe_{1-x}Al_x)_{14}B$, struct. and mag. props., Mossbauer study 7−113036
$Y_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$Y_2Fe_{14-x}Co(Ni)(Mn)(Cr)_xB$, 3d magnetic props., substitution effects study 7−85262
$Y_2(Fe_{1-x}T_x)_{14}B$, T=Al, Ti, Cr, Mn, Ni, alloys, magnetic and crystallographic props., comp. depend. study 7−125448
$Y_{0.1}Gd_{0.9}Ba_2Cu_3O_{8-\delta}$, superconductivity 7−131847
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., Gd substitution effect 7−132011
$(Y_{0.97}Hf_{0.03})Fe_2$, hyperfine interactions, influence of hydrogenation 7−99626
YIG film, unusual RF behaviour study 7−113317
YIG LPE film, magnetostatic forward volume waves, optical probe meas. 7−143852
YIG microcrystal crystallisation in a borate glass, EPR and magnetisation meas. 7−97931
YIG:Fe(Mn)(Ar), anisotropy effects of implanted ions, FMR 7−125370
YIG:Si(Ge) magnetoanisotropic impurity centres study *(Russian)* 7−84768
$(Y_{1-y}La_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
YMn_2H_x, mag., crystallographic and H absorpt. props. 7−98466
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble layers, magnetisation, plasma exposure effects 7−112881
$YbFe_2$ mag. props., neutron diffr. study 7−77225
Yb_xPd_{1-x} amorphous alloys, composition-induced valence change 7−76842
$ZnFe_{12}O_{19}$, hexagonal ferrite single crystals, flux growth and mag. props. 7−125942
$Zn_{1-x}Mn_xSe$, high-field magnetisation steps and nearest-neighbour exchange const. meas. 7−99502
$Zn_{0.95}Mn_{0.05}Te$, magnetisation meas. in mag. fields up to 42 T 7−99423
$Zn_{1-x}Mn_xTe$, low temp. high field magnetisation step obs. 7−92464
Zr-Fe/Tb-Fe compositionally modulated multilayered films, sputtered, mag. props. 7−99518
$Zr(Fe_{1-x}Co_x)_2$, mag. props., rigid band model 7−99391
$ZrMn_2H_x$, mag., crystallographic and H absorpt. props. 7−98466
$(Zr_{0.5}Ni_{0.5})_{100-x}$ P_x metallic glasses, magnetisation, ^{31}P NMR study 7−112762

magnetisation reversal
disordered solids, ferromag. long range order, dipolar coupling effects 7−143831
ferromagnet, uniaxial planar magnetic reversal, permeability model *(Russian)* 7−143850
films, high-coercivity, magnetisation reversal mechanism *(Russian)* 7−70602
magnetic films perpendicular mag. recording conditions, wall-displacement model anal. 7−105996
particles, curling, atomic layer model calcs. 7−138282
rare earth-transition metal alloy thin films, amorphous, coercive force, thermomagnetic recording, magnetisation reversal model 7−125444
Sendust bulk ferromagnets, magnetisation-reversal waves in surface region, Kerr effect study 7−125463
steel, Mn, irreversible magnetisation processes 7−105955
$(BiTm)_3(FeGa)_5O_{12}$ film on $Gd_3Ga_5O_{12}$ substrate, mag.-moment flip wave during magnetisation reversal 7−132080
$CO_{70}Fe_5Si_{10}B_{15}$ amorphous alloy, regions of reverse magnetisation 7−70587
Co, ferromagnet, fine mag. struct., spectral diffusion *(Russian)* 7−105951
Co-Cr columnar films, perp. coercivity rel. to inhomogeneous Cr conc. 7−85385
Co-Cr perpendicular recording media, magnetisation reversal mechanism, hysteresis loss meas. 7−85388
Co-Cr sputtered film perpendicular recording media, magnetisation reversal mechanisms 7−105993
Co-Cr sputtered layers, domain struct. and mag. reversals 7−105991
CoCr sputtered films, coercivity and struct. characterisation 7−125496
CrO_2:Ir particles, mag. props. 7−85380
Fe fine particles, prep. mag. props. 7−125477
Fe:Co(Mn)(Cu), ferromagnet, fine mag. struct., spectral diffusion *(Russian)* 7−105951
Fe-Si (3 wt.%) electrical steel, electromag. losses, influence of multilayer nature of domain struct. *(Russian)* 7−105950
Fe-Si crystals, domain struct. and EM losses, thickness effects *(Russian)* 7−77344
$Fe_5Co_{70}Si_{15}B_{10}$ amorphous films, pulse magnetisation properties *(Russian)* 7−143864
FeNiBAl amorphous alloys near critical comp., low field reversible DC magnetisation meas. 7−70591
FePt polytwin crysts., mag. domain struct. and magnetisation reversal *(Russian)* 7−99487

magnetisation reversal continued
Nd-Fe-B permanent magnet, magnetisation reversal by use of Hall-effect microprobe 7−132063
NdFeB magnets microstruct., hot-pressed and die-upset, TEM study 7−143027
$Nd_{15}Fe_{77}B_8$ permanent magnet, mag. anisotropy and rotational hysteresis energy 7−138220
Ni, conducting ferromagnet, magnetisation reversal, neutron depolarisation study 7−99496
NiFe-DyCo films, ferromag.-ferrimag. exchange interaction, quasistatic magnetisation reversal *(Russian)* 7−105954
TbFe, amorphous films, magnetisation reversal rel. to microstruct. 7−132114
TbFe amorphous sputtered films, remanence 7−143873
TbFe, amorphous thin films, sputter deposited, overcoated, dielec. tensor, magneto-optical props. 7−132199
$TbFe_2$ polycrystalline films, magnetisation reversal characts. *(Russian)* 7−70603
YIG:Si single crysts., photoinduced magnetisation reversal mechanism and threshold studies *(Russian)* 7−99550

magnetism
see also antiferrimagnetism; antiferromagnetism; band model of magnetism; diamagnetism; electromagnetism; ferrimagnetism; ferromagnetism, geomagnetism; Heisenberg model; Ising model; magnetic moments; magnetic monopoles; metamagnetism; paramagnetism; planetary magnetism, rock magnetism; stellar magnetism; superparamagnetism; weak ferromagnetism; X-Y model
marine chronometer, time gain or loss rate, magnetic influence 7−115721
metals, magnetism, spin fluctuation theory *(Japanese)* 7−77311
rare earths and actinides, anomalous, conf., Grenoble, France, (July 1986) 7−72697
solid state science, book contrib. 7−102035
soluble models, historical review 7−138178
synchrotron X-ray scatt., appl. to magnetism *(Japanese)* 7−118851
teaching approach, quality and organisation of knowledge 7−95129
Co(II) complex, syntheses, charact., X-ray struct. and magnetism 7−111509
Ni(II) complex, syntheses, charact., X-ray struct. and magnetism 7−111509

magneto-optical devices
acrylic plate Faraday rotator, laser light modulator for educational use 7−102061
birefringence errors in magnetooptical high-current converters 7−102448
cascaded optical isolator with high-isolation characts. over wide temp. and wavelength range 7−130300
compact-size optical head for magneto-optical disk drive 7−82502
disc storage, amorphous C dielectric coatings 7−110288
disc storage, antireflection thin films 7−110290
disc storage, S/N ratio anal. using polarisation simulator 7−103770
disc storage using polycarbonate substrates 7−110287
electric current sensor, plasma current measurements by Faraday rotation in a single-mode fiber 7−111268
Faraday effect in a magneto-optical filter 7−145827
Faraday multipass rotator for use in high accuracy polarimetric or ellipsometric devices 7−128628
Faraday optical isolator, design and limiting factors 7−82756
fibre optic current sensor, vibration-insensitive 7−123207
fibre optics current sensor, vibration insensitive 7−75153
fibre-optic magnetometer, closed loop, AC current measurement using Faraday effect 7−75151
garnet buried magneto-optic channel waveguides, LPE growth 7−138693
garnet magneto-optic film non-reciprocal waveguides, isolator appls. 7−103992
grating for light switches, spatial filter techniques 7−136488
hysteresis-plotter based on Kerr effect, using microcomputer *(Slovak)* 7−115978
isolator, acoustooptic and Faraday effect based 7−123166
laser magneto-optic microscope for optical imaging of magnetic domain dynamics 7−108655
logic gate based on magneto-optical spatial light modulator 7−130002
multichannel optical correlator/convolver utilizing the magnetooptic spatial light modulator 7−110248
optical disc storage, retardation effects in magneto-optic readout 7−82505
optical pattern recognition system, automatic, real-time 7−75109
polycarbonate substrate for magneto-optical disc, optical anisotropy effect on CNR 7−77507
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
slot electrooptical magnetooptical phase modulator, electrodynamic characts. calc., singular integral equations method 7−68825
storage, effect of incident angle on readout 7−103768
substrate birefringence, magneto-optical compensator 7−103769
turbine flowmeter pick up, non-invasive fibre optic 7−75159
AlN/GdTbFe/AlN/Al magneto-optical disc 7−74882
Fe-Tb multilayers, magnetic properties and structural charactn. 7−112907
Gd-Tb-Fe magneto-optical disc film, mag. anisotropy distrib. meas. using Hall method 7−143787
He-Ne magnetically modulated laser *(Chinese)* 7−130055
^4He resonance magnetometers, optically pumped 7−102483
Tb-Co and Tb-Fe-Co magneto-optical disc prep. by RF sputtering 7−144036
TbFeIn amorphous films, highly stable, appl. for magneto-optic memory 7−113752
$(Tm,Bi)_3(Fe,Ga)_5O_{12}$ garnet epitaxial film, magneto-optical laser beam convertor appl. *(Czech)* 7−123005
YIG multilayers, LPE, single mode magneto-optical waveguide props. 7−110562

magneto-optical effects
see also Faraday effect; Kerr magneto-optical effect; magnetic circular dichroism; magnetoabsorption; magnetoreflectance; optical constants; Zeeman effect
trans-anethole-9-cyanophenanthrene, exciplex luminescence, magnetic field effect, polar solvents, dielectric constant 7−141618
anthracene, semiconductors, high magnetic field investigations *(German)* 7−125119
atomic medium with degenerate transition's, self-induced transparency in presence of strong mag. field 7−123128
benzenes, substituted, magneto-optic rotatory dispersion, dispersion relation 7−109968
coherent forward scattering spectrometer, noise characts. 7−121237

magneto-optical effects continued
conductors with magnetic impurity electron states, light inelastic scatt. 7−113146
cooled armored electromagnet for optical studies 7−121165
copper chloride tetramethyl sulphoxide, ferromag. linear chain, mag. birefringence 7−113154
Cotton-Mouton effect, light polarisation 3D projection operators 7−117133
dispersion relation: rel.-to optical rot. dispersion, magnetooptic rot. dispersion and mol. polarisation 7−110013
ferrite-garnet sample, optical plane wave, phase parameter determ. 7−132244
ferrofluid composite, props. at MM wave freqs., mag. absorpt. 7−125864
ferromagnetic films supported by nonmag. interlayer, mag. positive coupling 7−132090
ferronematic liquid crystals, chiral molecule doped, magnetic field-induced birefringence 7−113161
garnet magnetic mirror, linearly polarised light reflection, nonreciprocal effects 7−125703
hollow cathode discharge in a quadrupole magnetic field *(Japanese)* 7−110334
hydrocarbons, radiolysis singlet and triplet yields, mag. field effects in fluoresc. 7−71508
III-VI semiconductor quantum wells, magnetoexcitons theory 7−125106
intracavity spectroscopy and magneto-optic phenomena research 7−130187
liquid cryst. binary mixtures, bend elastic const. of nematic-smectic *A*-smectic *C* multicritical point, Freedericksz deform. meas. 7−111887
magnetic fluids, physical props. 7−77372
magnetic resonance in solids, optical detection, conf., Kiev, USSR (May 1985) 7−134343
molecular crystals, excited states, decay channels, autoionization, fluorescence studies 7−105412
narrow band gap semicond., interband magneto-optical transitions 7−92646
narrow gap semiconductors, interband magneto-optics 7−125711
nematic liquid crystals, light scattering in the mag. field, threshold reorientation 7−92645
nematic liquid crystals, twist deformed, surface coupling, optical detection, computer simulation 7−111369
optical activity, magnetic and natural, symmetry properties analysis *(Spanish)* 7−122820
optical discs, readout power dependence on thin-film magneto-optic media properties 7−103767
$Pb_3GeO_{11}:Eu^{3+}$ one-domain crysts., magnetopolarisation pseudogyration 7−144006
Permalloy soft ferromagnetic films, irreversible magnetisation transforms 7−105992
pyrene-dimethylaniline, exciplex luminescence, magnetic field effects, polar solvents, dielectric constant 7−141618
Raman spectroscopy, magneto-optical effect 7−68377
rare earth mixed crystals, $RR'F_3$-type, inhomogeneous mag. dipole broadening of spectral lines 7−99806
resonance shape variation induced by mag. field transverse component 7−122440
resonant Raman-cyclotron scatt. in very strong mag. fields, transition probabilities and cross sections 7−139901
semiconductor, electronic interband Raman scatt. in static mag. field, nonlocal effects 7−113201
semiconductor quasi-2D systems with anisotropic and tilted valleys, magnetooptical transitions 7−77516
semiconductor-insulator superlattice, classical magnetoactive, reson. and absorpt. based 7−106313
semiconductors, high magnetic field effects, conf., Wurzburg, Germany (Aug. 1986) 7−128198
semiconductors, narrow gap, two-photon magnetospectroscopy in high mag. fields *(German)* 7−125709
semimagnetic semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
surface optical polarons, mag. field effects 7−137814
suspensions, particle shape determ. using magneto-optical method 7−71540
A-TCNB single crystal, T-T annihilation, fluoresc. detected low field reson. 7−144120
transition metal alloys, amorphous, magnetooptical phenomena 7−92647
uranyl compounds, magneto-optical props., condensed phase internal fields effects 7−113163
AgBr, time resolved luminescence spectra at high density excitations 7−125779
AlGaAs-AlAs, semiconductors, high magnetic field investigations *(German)* 7−125119
AlGaAs-GaAs laterally microstructured heterojunctions, far IR transmission reson. in mag. field 7−138059
n-$Al_xGa_{1-x}As$/GaAs MQW heterostructs., interband magneto-photolum. spectra study 7−138435
AsSeBr, glass formation, preparation, microhardness studies 7−144358
Bi-Ga garnet films, domain wall oscills., magneto-optical anal. 7−132110
$(BiGd)_3(FeAlGa)_5O_{12}$ thick garnet film growth and charactn. 7−105310
BiI_3, semiconductors, high magnetic field investigations *(German)* 7−125119
BiSeI, glass formation, preparation, microhardness studies 7−144358
(Cd,Mn)Se; Raman scattering at low temp. and high magnetic fields 7−140759
Cd_3As_2, magneto-optical props., circularly polarised radiation, interband transitions 7−106142
$CdCr_2Se_4$ mag. semicond., impurity absorption spectra 7−106229
CdMnTe magnetically mixed semiconds., optical bistability mechanism 7−75038
CdMnTe, synthesis by implantation of Mn into CdTe 7−91611
$Cd_{1-x}Mn_xTe$ films, epitaxial growth by ionized-cluster beams and magneto-optical props. 7−113442
CdTe, exciton oscillator strength, mag. field induced enhancement 7−143356
CdTe-HgTe, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
Co island films, magneto-optical method anal. 7−125823
Cr_2O_3, antiferromag., light polarisation plane nonreciprocal rotation 7−85606
$CsCoCl_3.2H_2O$, 1D antiferromag., magnon sideband under mag. field 7−70752
magneto-optical effects continued
Cu_2O:Cd cryst., bound-exciton luminesc. and absorpt. spectra meas. 7−70860
D_2, gas, mag. birefringence meas. 7−111156
$DyKMo_2O_8$, cooperative Jahn-Teller system, antiferrodistortive structural phase transition, mag. field depend. 7−118445
$EuCl_3$ in soln., magnetic circularly polarised lumin. spectra 7−70886
$Eu(NO_3)_3$ in soln., magnetic circularly polarised lumin. spectra 7−70886
Fe on Cu (100), closely-lying energy states, magneto-optic and photoemission meas. 7−143875
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7−77387
FeDy amorphous thin films with perpendicular mag. anisotropy, heating, magneto-optical method *(Russian)* 7−92483
FeNi thin films, magneto-optical effects, waveguide appls. 7−123197
GaAs, donor identification in bulk and epitaxial samples, photoluminesc. studies in high mag. fields 7−98917
GaAs, exciton oscillator strength, mag. field induced enhancement 7−143356
GaAs, MBE grown, very high purity, free exciton photoluminesc. and magnetophotoluminescence spectra 7−144115
GaAs quantum wells, optical transitions in mag. field, band mixing, hole subbands 7−85610
GaAs, very high purity MBE layer, free exciton dominated photoluminesc., magnetophotoluminescence spectra 7−106260
GaAs/AlGaAs MQW structs., confined shallow impurity states, far IR magnetospectroscopy studies 7−137859
GaAs/AlGaAs superlattices, magneto-photolum. spectra studies 7−138436
GaAs-$Al_xGa_{1-x}As$, multi-quantum-well struct., magneto-optical studies 7−144045
GaAs-$Al_xGa_{1-x}As$ MQW, photoluminescence in high mag. fields 7−70898
GaAs-$Al_xGa_{1-x}As$ MQW structs., magneto-optical studies 7−106148
GaAs-$Al_xGa_{1-x}As$ superlattices, confined and interface phonons, mag. field enhanced Raman scatt. 7−70780
GaAs-AlGaAs heterostructs., 2D systems, inelastic light scatt. in high mag. fields 7−138438
GaAs-GaAlAs modulation doped quantum wells, Landau levels, magnetolumin. 7−85835
GaAs-GaAlAs multilayers, 2D electrons, Landau level density of state studies 7−137826
GaAs-GaAlAs quantum wells, interband photocond., magneto-optics study 7−138437
GaAs-InGaAs single strained quantum well structs., hole transport, charge transfer 7−105699
GaInAs-AlInAs, quantum wells, magneto-optics and strain effects 7−85609
GaInAs-InP, quantum wells, magneto-optics and strain effects 7−85609
GaSb-InAs, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
Gd-Tb-Co amorphous films, mag. and magnetooptical characts., influence of sputtering conditions 7−132098
$(Gd_{20}Co_{80})As$ amorphous thin films, ion mixing form. 7−84070
H_2, gas, mag. birefringence meas. 7−111156
He-Ne/methane ring laser, competition between counterpropagating waves, axial mag. field effect *(Russian)* 7−82669
$Hg_{0.8}Cd_{0.2}Te$, far IR magnetotransmission of accumulation layers 7−138433
HgMnTe, exchange splitting of shallow acceptor, photocond. and transmission meas. 7−76803
HgTe-CdTe superlattices, electronic props. 7−118580
InAs-GaSb superlattices, optical props. hydrostatic press. 7−138434
$InAs_{1-x}P_x$, far IR magneto-optic props. under hydrostatic press. 7−118990
$InAs_xSb_{1-x}$, narrow gap semicond., optical, magneto-optical and transport studies 7−138088
InGaAs-GaAs single strained quantum wells, magnetoluminescence meas. 7−106271
InP cubic semicond., excitons and polaritons, reflectivity spectrum study, stress, press., and mag. field effects 7−112187
InP:R, resonant laser photoelectric magnetospectroscopy of shallow donors 7−138428
InSb, effective g-factor of donor bound electrons, spin reson. obs., FIR magnetotransmission spectra 7−118853
InSb, photoionisation of shallow magnetodonors 7−92102
InSb, population inversion, anomalous Voigt effect *(German)* 7−125710
KBr:Sn crystal, A_T emission of $Sn^{2+}v_c^-$ centres, effect of mag. field *(Russian)* 7−142775
Li Rydberg atoms, spectra in parallel mag. and elec. fields 7−109835
MnBi, film, angular dispersion of mag. anisotropy, three-dimensional study 7−70600
MnSb thin films, magneto-optical effects, waveguide appls. 7−123197
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth, photolum. in mag. field 7−76681
Na, degenerate atomic level splitting in external fields *(Russian)* 7−122441
Nb, flux-pinning effect of ferromagnetic overlayers, magneto-optical obs. 7−143737
$NiFe_2O_4$ polycryst., ultrasound mag. birefringence and dichroism obs. 7−99547
O_2, liquid, magneto-volume and field induced transparency effects *(Japanese)* 7−99545
$Pb_{1-x}Mn_xTe$, band struct. in high mag. fields, magneto-optical methods 7−132246
PbTe, band struct. in high mag. fields, magneto-optical methods 7−132246
PbTe doping superlattices, photoconductive response 7−118526
PbTe nipi structs., electronic subbands, obs. 7−138047
PbTe-$Pb_{1-x}Sn_xTe$, superlattices, electronic properties, magneto-optical studies *(Polish)* 7−131770
Ru complexes, $Ru(bipyridyl)_3^{2+}$ derivatives, absorpt., luminesc., charge localisation 7−113183
SbSI, glass formation, preparation, microhardness studies 7−144358
Si surface, 2D electron-hole system, optical studies on mag. phenomena 7−138426
Tb-Fe-Co amorphous films, magnetic and magneto-optical props. 7−113159

magneto-optical effects continued
TbCo amorphous films, density and magnetooptical props., effect of sputtering conditions 7−132243
TbF_3, fluoresc. dynamics, effect of ferromag. order 7−113276
TbFe amorphous films, laser-written mag. domains, Lorentz microscopy obs. 7−125517
TbFe, amorphous films, sputter deposition, magneto-optical and mag. props 7−132105
$Y_3Ca_3Fe_5Ge_5O_{12}$ garnet films, magneto-optical model conversion 7−138432
$(YGdBi)_3(FeGdAl)_5O_{12}$ garnet film, band domain struct., laser radiation diffr. 7−132112
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
YIG films, flexural domain wall modes, field depend. 7−132109
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7−118840
YIG gyroanisotropic planar waveguide, magnetooptical mode conversion 7−123196
YIG LPE film, magnetostatic forward volume waves, optical probe meas. 7−143852
YIG:Gd, Ga thin films, magneto-optical effects, waveguide appls. 7−123197
$Zn_{1-x}Mn_xSe$, magnetospectroscopy studies *(German)* 7−125028

magnetoabsorption
anthracene single crystals, Davydov splitting of excitons, magnetoabsorption studies *(German)* 7−125712
high freq. oscillations, magnetoabsorption of a bichromatic optical wave in semiconductors 7−132242
measurements using hybrid magnet, spectra in high magnetic fields 7−106149
semiconductors, magnetoabsorption of strong bichromatic light wave 7−106143
$(BiGd)_3Fe_5O_{12}$ epitaxial film, magneto-optical props., comp. depend. study 7−106144
BiI_3, cationic stacking fault magnetoabsorpt. spectra study 7−112194
$CdCr_2X_4(X=S, Se)$, magnetosensitive absorpt., polarisation props. 7−144035
GaAs conduction band nonparabolicity, interband magnetoabsorpt. LO phonon resonant Raman scatt. 7−125707
$Hg_{1-x}Cd_xTe$-CdTe heterostruct., charge transfer, magnetoabsorption studies 7−138031
InP, high purity, electron mobility, compensation ratios, FIR magnetoabsorption spectrum 7−118480
InSb, oscillations in optical and transport coeffs., optical methods combined with mag. resonance 7−138429
InSb, photoexcited, spin depend. props., far-IR magneto-optical studies 7−113160

magnetoacoustic effects
see also magnetoacoustic resonance
2-phonon acoustic self-induced transparency in solid paramagnets 7−85013
CoBa fluorophosphate spin-glass, acoustic suscept. calcs. 7−112923
cubic ferromagnets, transverse acoustic waves, nonlinear magnetoelastic excitation, elastic moduli freq. depend. calcs. 7−70618
electron systems, 2D and 3D, nonequilibrium phonon drag effect study 7−104941
ferrite powders, long-term memory, mag. field, temp. and annealing effects 7−112921
gases, acoustic wave interactions with mag. and internal modes 7−111006
Incoloy 904, magneto-acoustic and Barkhausen emission from domain-wall interactions with precipitates 7−112920
magnetomechanical acoustic emission, stress and sample shape effects 7−132120
metal, modified Bragg refl. force implications for US propag. 7−69836
MHD wave diffraction on plane-parallel layer *(Russian)* 7−69277
nonlinear electron-sound interaction in mag. fields, commensurability effects 7−105630
oscillations in weakly conducting fluid magnetothermoacoustic treatment 7−125061
phase conjugation of acoustic beams in an alternating magnetic field 7−85012
ruby:Cr, inertial self-focusing of hypersound 7−111780
semiconductors, noncrystalline, nonlinear absorption of ultrasound under hopping conduction conditions 7−84137
semiconductors, single valley, anisotropic planar acoustomagnetoelec. effects 7−112404
steel, decarburized mag. props. rel. to grain size and C content 7−132062
$Bi_{1-x}Sb_x$ dilute alloys, electron-hole recombination time 7−76974
$CeCu_6$, electron-phonon coupling, magnetoacoustic effect 7−70617
$CePb_3$, heavy fermion system, elastic and magnetoacoustic effects 7−99543
$CeRu_2Si_2$ heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
Fe, magneto-acoustic and Barkhausen emission, dislocation effects 7−112919
Fe, US attenuation in microwave mag. field 7−125060
$Fe_{59}Ni_{21}Cr_{20}$, spin glass transition temp., sound damping 7−105930
InSb, compensated, US absorpt., impurity breakdown effect, mag. field depend. 7−99133
K single cryst., direct EM ultrasound generation, mag. field and polarisation depend. meas. 7−124404
Ni, US attenuation in microwave mag. field 7−125060
UPt_3 heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
UPt_3, longitudinal sound meas. in a mag. field 7−112672
YIG, acoustic emission, domain walls and hysteresis 7−70583
YIG film, surface magnetostatic waves scatt. by anisotropy-induced acoustic waves 7−118792

magnetoacoustic resonance
see also ferroacoustic resonance
amorphous thin films, magnetoelastic dynamic suscept. calcs. 7−99540
ferrites, sound vel. and effective nonlinearity calcs. 7−131719
ferrites, ultrasonic attenuation and magnetoacoustic echo props. 7−131242
Mg-Zn spinel ferrites, longit. mode magnetoacoustic reson. 7−105999

magnetoacoustics *see magnetoacoustic effects*
magnetocaloric effects
see also magnetic cooling; thermomagnetic recording; thermomagnetic treatment
magnetoacoustic oscillations in weakly conducting fluid magnetothermoacoustic treatment 7−125061
spin-cluster theory of mag. materials, spin glasses appl. 7−92436
thermoremanent magnetisation, spin-system cluster model calcs. 7−99462
type II superconductors, nonlinear thermomagnetic waves 7−70496
Co amorphous alloys, magnetic props, effect of magneto-thermal treatment, magnetic field appl. *(French)* 7−99505
CoCr sputtered films, thermomag. anal., annealing and Cr distrib. 7−125492
$Dy(Fe_{0.9}M_{0.1})_2$ (M=B, Al, Ga), cubic Laves phases, mag. investig. 7−138230
Fe_2O_3 thin mag. films, magnetocaloric effect 7−132028
Fe_3O_4 magnetite, thermal and dielectric props. near Verwey transition 7−132027
Ho Curie temperature calorimetric and dilatometric studies 7−112792
MnAlC(Ni) aligned mag., magnetoelastic props. 7−138302
$NdMn_2Si_2$, metamagnetic phase transition, magnetocaloric effect 7−132017
Ni thin mag. films, magnetocaloric effect 7−132028
Tb-Dy alloy, mag. phase transition, press. effects *(Russian)* 7−143792
Tb-Dy magnetocaloric effect in antiferro. to ferromagnetic transition, magnetoelastic contrib. 7−92431
UIrGe heavy fermion cpd., low temp. susceptibility and sp. ht. 7−125389
Y_2Ni_7 thermal spontaneous ferromagnetism, band model 7−99454

magnetocardiography *see biomagnetism; cardiology*
magnetocrystalline anisotropy *see magnetic anisotropy*
magnetoelastic effects
amorphous thin films, magnetoelastic dynamic suscept. calcs. 7−99540
antiferromagnets, intermediate state, magnetoelastic interaction effect 7−99538
easy-axis ferromagnet, third acoustic harmonic excitation near orientational phase transition 7−84139
ferromagnet, mag. domain wall eqn. of motion, magnetoelastic internal friction *(Chinese)* 7−99486
field annealed amorphous ribbons, magnetoelastic props., static and dynamic bifurcations study 7−106004
field-annealed magnetoelastic amorphous metal magnetometers, directional characts. 7−102463
garnet films, SAW propagation, magnetoelastic gain 7−125512
initial stress, Biot theory, Maxwell eqns. and 2D appl. 7−108240
metallic glasses, low-magnetostrictive ribbons, anisotropy and magnetostriction, indirect meas. 7−70620
rotationally invariant linear magnetoelastic theory 7−106005
semiconductor, deformable, extrinsic, heat and charge carrier flux, coupled evolution eqns., EIT theory 7−70299
shell, cylindrical, transversely isotropic, magnetoelastic interaction on torsional vibrations 7−69027
soft amorphous magnets, anisotropy and magnetostriction, pair model calcs. 7−99542
sphere, conducting, deformation and motion, insertion in a magnetic field 7−136706
strain gauge, ultrasensitive amorphous ribbons, operational characts. 7−102397
strip, magnetostrictive, longitudinally polarized, elastic vibrations by external magnetic field 7−97397
translational magnetoelastic oscillations of a solitary domain wall 7−132119
$CeCu_6$, electron-phonon coupling, elastic const. temp. dependence, magnetoelastic and Gruneisen parameter effects 7−70617
$CeCu_6$, Gruneisen parameter coupling and crystal field effects 7−69850
$CeCu_6$, Kondo cpd., elastic props. 7−69801
$Ce_{1-x}La_xB_6$, single cryst., magnetoelastic studies 7−77391
$CePb_3$ heavy fermion system, high field elastic const. meas. 7−69802
Co-Au amorphous thin films, prep. and mag. props. 7−85393
CoCr thin film recording media, mag. anisotropy and struct. 7−125490
$CoNiZnFe_2O_4$, polycrystalline ferrite, magnetoelastic props. 7−143885
Cr magnetoelastic props. and Neel temp. 7−118850
Cr-Ge dil. alloys, elastic constants and thermal expansion 7−77392
Fe-B-Si-C-H metallic glasses, magnetoelastic effect 7−85403
Fe-Pd, mag. domain struct. rel. to FCT martensite variants 7−85348
$FeBO_3$, nucl. magnetoelastic reson. obs. 7−70654
$Fe_{82}B_{18-x}Si_x$ amorphous alloys, magnetoelastic behaviour, localised moment model explanation 7−99549
$Fe_{78}Si_{10}B_{12}$ glass, mag. annealing influence on shear modulus and internal friction, piezomag. props. 7−70622
$Gd_{1-x}Tb_xAl_2$, noncollinear rotation of Gd^{3+} and Tb^{3+} mag. moments 7−125353
$NdCo_5$, uniaxial permanent magnet, magnetostriction 7−138304
Ni thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
$NiFe_2O_4$ polycryst., ultrasound mag. birefringence and dichroism obs. 7−99547
Si-Fe single cryst., domain struct., uniaxial stretching effects 7−138266
Tb-Dy magnetocaloric effect in antiferro. to ferromagnetic transition, magnetoelastic contrib. 7−92431
$Tb_{0.27}Dy_{0.73}Fe_2$ polycryst., domain struct. in region of optimum magnetoelastic props. 7−105952
$TmGa_3$, paramag. phase, magnetoelasticity and quadrupolar interactions study 7−99541
UO_2, 3-K mag. struct. anal., magnetoelastic and quadrupolar interactions 7−99406
YIG films, surface magnetostatic wave freq. conversion 7−138293
$Y_{3-x}Tb_xFe_5O_{12}$, elastic and magnetoelastic props. in spin reorientation region 7−143887

magnetoelastic waves
cubic ferromagnets, transverse acoustic waves, nonlinear magnetoelastic excitation, elastic moduli freq. depend. calcs. 7−70618
cylinder, circular, magnetothermoelastic stress waves 7−91001
cylinder, hollow magnetoelastic, in liq. medium, dynamic reaction during impulsive excitation 7−123513
cylinder, initially stressed, propagation of magnetoelastic surface waves 7−112922
electromagnetomechanical interactions in deformable solids and structs., conf., Tokyo, Japan (Oct. 1986) 7−115692
ferromagnetic thin film, magnetoelastic waves, piezomagnetic anal. 7−125523

magnetoelastic waves continued
nonreciprocal surface waves in magnetic systems, review 7−118789
stressed conducting medium, elastic, magnetoelastic Rayleigh waves 7−75403
viscoelastic medium, wave propagation 7−79381
viscoelastic solid medium, magnetoelastic wave propagation 7−77394
$FeBO_3$:Ni, easy phase magnet, photoinduced superstructure 7−143772
$Fe_{77}Cr_2B_{16}Si_5$ amorphous ribbons, magneto-elastic wave amplitude variation *(Japanese)* 7−106009
Fe_2O_3, hematite, surface magnetoelastic waves, conc. dynamics 7−77390
Mg-Zn spinel ferrites, longit. mode magnetoacoustic reson. 7−105999
$Y_3Al_xGa_yFe_{5-x-y}O_{12}$, magnetoelastic and magnetostatic waves, dislocation accumulation 7−132002

magnetoelectric effects
atoms, magnetoelectric susceptibilities 7−103451
carnauba wax, electret formation, mag. field effects 7−138377
ferroelectrics, vibronic, magnetically induced spontaneous inhomogeneous currents 7−99771
ferromagnet, magnetoelectric waves 7−125524
metallic glasses, magnetic anisotropy, induction by current annealing 7−138221
seignette-magnetism, material science aspects 7−125520
vertical Bloch line dynamics, nonuniform elec. field effects calcs. *(Russian)* 7−99492
Co-Fe-Si-B, amorphous, stress annealing induced mag. anisotropy 7−99440
Cr_2O_3, antiferromagnet, linear magnetoelectric effect 7−70619
$Mn_{0.8}Zn_{0.2}Fe_2O_4$, ferrite, nuclear gamma resonance spectra, influence of electric field 7−132168
YIG, phase transition, magnetoelectric effect meas. 7−76387

magnetofluidynamics *see magnetohydrodynamics*

magnetogasdynamics *see magnetohydrodynamics*

magnetohydrodynamic conversion
liquid metal MHD power conversion expts. in Israel 7−93514

magnetohydrodynamic convertors
see also magnetohydrodynamic power plants
AC generation using superheating plasma instability 7−137136
air gap in C-shaped mag. system, transient field distrib. 7−91376
ceramic electrodes in MHD generator, temp. distrib. and current-voltage characts. 7−124006
channel, boundary layer arc 7−139121
closed cycle, output power fluctuations, ionisation instabilities 7−86810
combustion chamber effectiveness as plasma generator combined with steam turbine 7−126638
diagonal type MHD generators, electrical nonuniformities simulation 7−119667
disc MHD generator design and test results 7−86809
duct, boundary-layer region, fluid flow, heat transfer, numerical soln. 7−75889
electron density measurement of MHD combustion plasmas with a far-infrared laser 7−137050
Faraday generator, acoustic and entropy wave input-output relationships 7−144894
Faraday generator, applied mag. field strength and freq. effects 7−144895
frame generators with rectangular cross section, electrode surface orientation effects 7−119665
generator and open-cycle system research, national and international *(Dutch)* 7−119666
generator channel, stabilised current sheet, phase diagram 7−130944
Hall effect influence on AC generation *(Romanian)* 7−139122
induction machines, EM field distrib. recursive method 7−91375
nonstationary phenomena in MHD-channel inverter substation system, modeling 7−124005
nonuniform flow, mag. field orientation *(Romanian)* 7−139123
plasma, direct electricity generation from thermal energy, self-organization process 7−139119
T-layer formation and stabilisation conditions, magnetogasdynamic eqns., MHD generator appl. 7−137061
U-25 MHD plant, decomposition of oxides of nitrogen 7−124004
K and Cs seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628
Zn vapour, MHD generator 7−139120

magnetohydrodynamic generators *see magnetohydrodynamic convertors*

magnetohydrodynamic power plants
combustion chamber effectiveness as plasma generator combined with steam turbine 7−126638
disc MHD generator design and test results 7−86809
fossil fuel fired MHD-steam commercial scale power plants, math. model for performance comparison 7−93515

magnetohydrodynamic waves
2D time-depend. MHD eqns. soln. by method of characts. 7−104387
$\alpha\omega$ dynamo with α-effect due to magnetostrophic waves, solar appl. 7−79904
Alfven internal gravity waves, effect of density discontinuity on stability characts. 7−94646
Alfven wave heating, study of scrape-off layer in TCA tokamak 7−75832
Alfven wave propagation and dissipation in interstellar clouds, dust effects 7−107922
Alfven waves, coherent mode damping in stochastic astrophysical fluids 7−88095
Alfven waves, high-phase rel. compressional, heating and current drive 7−123920
Alfven waves, nonlinear, in ionosphere, assoc. with auroral particles precip. 7−88010
P/Comet Giacobini-Zinner (1985 XIII), ICE magnetosonic wave obs. 7−94815
P/Comet Halley (1982i), ICE detection of MHD waves 7−94814
diffraction on plane-parallel layer *(Russian)* 7−69277
Earth bow shock, nonlinear MHD waves generation by reflected H^+ 7−115183
field-aligned currents in MHD waves, effect of finite Larmor radius, appl. to magnetosphere-ionosphere coupling 7−91308
gases, acoustic wave interactions with mag. and internal modes 7−111006
generation and skew magnetic fieldline reconnection 7−127692
global Alfven modes excitation by trapped α particles 7−104403
incompressible MHD surface waves, nonlinear characts., appl. to solar atm. 7−127708

magnetohydrodynamic waves continued
inhomogeneous plasma, condensation of Alfven waves into vortices 7−69347
intermediate shocks 7−123768
internal Alfven-gravity waves in shear flow, critical level behaviour 7−79820
interstellar MHD shocks, chemical test for ambipolar diffusion 7−134294
interstellar molecular shocks, form. of molecules containing 2 or 3 C atoms 7−128030
ionosphere, excitation and propag. of MHD waves generated by acoustic perturbation 7−139467
kinetic Alfven waves, nonlinearly driven tearing instabilities 7−137072
local Alfven reson., plasma rot. effect meas. *(Russian)* 7−111230
magnetic liquid, wave propag. MHD approx., short-wavelength eqn. 7−123771
magnetogasdynamic waves, sawtooth profile decay, progressive waves approach anal. 7−97641
magnetosphere, motion of small-scale Alfven waves packet in mid-latit. plasmasphere 7−120216
neutron stars, MHD waves generation by electron cyclotron resonance instability of magnetised photosphere 7−94938
nonlinear Alfven waves in the magnetosphere 7−115170
nonlinear surface Alfven waves propag. along tangential MHD discontinuity in incompressible fluid 7−142392
P_{SC} 5 pulsations, identification with fundamental harmonic of standing Alfven wave 7−88029
plasma electron-cyclotron heating, MHD activity increase 7−83475
plasma waves generation by turbulent motion in stratified medium, solar appl. 7−104388
poloidal mode coupling for poloidal mag. fields, solar appl. 7−145825
Poynting vectors, GEOS-2 double probe expt. 7−79774
radiative MHD media, weak waves, thermal effects 7−137019
resonant Alfven waves on auroral field lines 7−91309
reversed field pinch, high valve pinch parameter discharges, MHD activity anal. 7−97783
ring-stabilised devices, α particle dynamics effects 7−104406
solar atmosphere, mode classification and wave propag. in magnetically-structured medium 7−140031
solar corona, Alfven waves model for soft X-ray pulsations 7−134204
solar corona, heating by resonant absorption of Alfven waves 7−127796
solar corona, MHD tube waves propag. rel. to high-speed solar wind streams 7−115355
solar corona, MHD wave absorption 7−88364
solar wind, MHD waves assoc. with pick-up ions 7−120266
solar wind, origin of low-freq. Alfven waves 7−88061
solar wind model with power spectrum of Alfvenic fluctuations 7−127677
stellar chromospheres, test for Alfvenic heating using rapidly oscillating Ap stars 7−134240
Sun, atm. resonance oscillations and wave transform. 7−127693
surface waves reson. absorpt., solar appl. 7−72279
Tokamak Alfven waves, α-particle driven instabilities 7−97730
tokamak plasma, α particle interactions with regular and irregular structures 7−104402
tokamak plasma, tearing mode interactions, reduced MHD modelling 7−142459
tokamaks and mirrors, kinetic instabilities, α particle transport effects 7−104404
toroidal systems continuous spectrum, ballooning and Alfven mode calcs. 7−130862

magnetohydrodynamics
see also magnetohydrodynamic conversion; magnetohydrodynamic convertors; magnetohydrodynamic waves; plasma magnetohydrodynamics
2D, modelling using cellular automation scheme 7−72992
2D MHD turbulence, sensitivity to Alfven waves and correls. 7−130798
2D turbulence, stability to 3D perturbations 7−91243
air gap in C-shaped mag. system, transient field distrib. 7−91376
anisotropic Turbulent medium, mean field MHD 7−91246
astrophysical, nonlinear radiative condensation in sheared mag. field 7−139909
astrophysical, swirling MHD jets prod. in viscous accretion flows 7−72276
astrophysical jets, collimation by turbulence viscosity 7−101932
astrophysical rotators, ecology (interaction with environment, and evolution) 7−94643
asymmetric flow past semi-infinite moving plate 7−91239
attenuation of gravity waves in the presence of a magnetic field in a turbulent conducting fluid 7−83301
axisymmetric MHD flows, theory for accretion disks 7−115227
bipolar flows, astrophysical, obs. of NGC 2261/R Mon systems rel. to mag. accel. model 7−107932
boundary layer flow with suction or injection along a flat plate, MHD stability 7−69278
boundary layer on moving continuous flat surface, boundary value problem soln. 7−137022
bubble boundary layer on electrode of conduction MHD channel 7−123720
buoyancy effect on MHD flow past a permeable bed 7−111121
cellular automation model 7−104354
centrifugal conduction pump, turbulence characts. *(Romanian)* 7−137031
chaotic behaviour in sheared mag. field 7−91240
circulation preserving MFD flows with steady streamlines 7−83361
colloid, dilute mag., mag. diffusion, convective stability 7−123438
P/Comet Halley (1982i), hydromagnetic fluctuations in magnetosphere, Giotto obs. 7−94785
P/Comet Halley (1982i), MHD model 7−79885
conducting liq., flow twisting in longit. mag. field 7−91245
conducting liq. stationary flow in MHD channel *(Romanian)* 7−137033
conducting liq. turbulent flow, vel. profile, cross correl. function *(Romanian)* 7−136818
conducting liquid, nonlin. surface waves in MHD, modulational instability 7−83177
conference, Tokyo, Japan (July-Aug. 1986) 7−80152
conservative locally barotropic difference schemes 7−111122
continuous fluid, generalised Hamiltonians, functional integration and statistics 7−111170
convection in a vertical wavy channel with temp. depend. heat source 7−111123
converter duct, boundary-layer region, fluid flow, heat transfer, numerical soln. 7−75889

magnetohydrodynamics continued
cosmic ray acceleration, effect of mag. field direction on max. energy in shock accel. 7−115184
cosmic ray acceleration at shock fronts, nonlinear self-regulation 7−88047
Couette MHD flow between two plates, with tooth pulses appl. to one plate 7−137018
current-driven magnetohydrodynamic thermal instabilities in sheared fields, solar atm. appl. 7−88088
cylindrical shock waves propag., in self-gravitating gas, effect of azimuthal mag. field 7−127694
Czochralski's method, hydrodynamic phenomena in rot. mag. field 7−92857
demonstration model for showing physics principles 7−88804
discharge laser, coaxial, magnetically stabilized, gas flow, numerical simulation 7−90574
dry magnetic powder, shear flow in externally mag. field, appl. to xerography 7−123778
duct flow investig. 7−123769
Ekman-Hartmann layer on a free surface 7−104352
electric arcs, gas stream stabilised, math. modelling and MHD eqn. derivation *(Russian)* 7−142523
electrically conducting compressible fluid in transverse magnetic field, boundary layer flow 7−75698
electrically conducting fluid, MHD, Hall effect *(Italian)* 7−97637
electrically conducting liq. flow in mag. field 7−91244
electrorotational flow with external mag. field, heat and mass transfer study 7−123774
electrovortical flow in a spheroidal container 7−136875
EM jets, self-collimated, from magnetised accretion disks, accretion power transport 7−107710
explosive chromospheric evaporation in solar flares 7−127795
Falkner-Skan and heat transfer equations, asymptotic behaviours 7−137021
fast dynamo action in a steady flow 7−137024
ferrofluid pools, normal field instability and patterns 7−75686
ferrohydrodynamics of colloidal magnetic fluids, book contrib. 7−99485
ferromagnetic colloids, magnetostatic interaction and structuring 7−91248
ferromagnetic fiber, suspended in Newtonian fluid, rot. by mag. field 7−142394
ferromagnetic fiber suspended in Newtonian fluid, rot. by mag. field, expt. study 7−142395
ferromagnetic fluid, rectangular channel flow with travelling mag. fields 7−75675
ferromagnetic particle suspension, torque and rot. hysteresis 7−91251
field-induced wavevector-selection by magnetic Bernard-convection 7−75568
flow through porous medium at rear stagnation point 7−97639
flow with mixed boundary conditions calcs. 7−123777
fluid dynamics, annual review, book 7−95112
fluidised bed, mag. fluidisation, energy dissipation study 7−123746
fluidised beds, biological, charact. in mag. fields 7−107318
force-free magnetic fields, magneto-frictional method 7−88098
free convective flow in rotating fluid, Hall effects study 7−142391
fully-conservative difference systems, construction using projection method *(Russian)* 7−88948
general relativistic flows in Schwarzschild geometry, axisymmetric flow theory 7−94649
general relativistic MHD, Cartan curvature-torsion tensor and energy tensor 7−128387
gravitating configurations with mag. field, Dirichlet problem, astrophysical appl. 7−72267
Hamiltonian dynamics and stability analysis of neutral electromagnetic fluids with induction 7−75697
heat transfer in hydromagnetic flow in rotating straight pipe 7−137005
heavy oil residues, mag. field effects at high temp. 7−137023
helicity conservation laws for fluids and plasmas, theory 7−139906
hydromagnetic dynamo in random stream, mathematical theory *(Russian)* 7−102172
hydromagnetic flow and heat transfer over a continuous, moving, porous, flat surface 7−69272
ideal gas, plane and cylindrical shocks in MHD 7−104351
incompressible inviscid flow, conformal mappings, 2D eqns. 7−137060
induction channel furnace, metal movement 7−137030
induction pump, 3D flow in spiral channel 7−91256
inductive MHD pump, ID turbulent flow model *(Romanian)* 7−137032
intergalactic cooling flows evolution, self-similar cluster flows theory 7−128054
interstellar clouds, effect of poloidal mag. field on stability of rot. self-gravitating disk 7−120525
interstellar medium, supercloud form. by non-axisymmetric gravit. instabilities in sheared mag. galaxy disks 7−72566
interstellar MHD shocks, rotationally inelastic collisions between H_2 mols. 7−94993
interstellar molecular cloud cores, effect of ambipolar diffusion on mag. braking 7−88578
kinematic fluid and MHD eqns., stability and accuracy of EPIC algorithms 7−97474
kinematic mean-field dynamos, oscillatory behaviour 7−107703
laminar boundary layer flow past flat plate 7−91238
laminar flow in spiral channels model 7−123772
laminarization by a strong magnetic field 7−130797
lightning discharges seen at IVY-MIKE nuclear explosion, effect of MHD instability on brightness evolution 7−114921
linear homogeneous differential eqns., coupled system, appl. to hydrodynamics 7−91081
linear scattering problem in MHD medium, transmission reson. for mag. slab 7−123767
liquid metal flow in rectangular duct with nonuniform mag. field 7−75694
liquid metal jet, shape control in nonuniform mag. field 7−97640
liquid metal jets with currents, stability study 7−136951
liquid metals, free boundary problem in EM levitation *(French)* 7−74812
liquid metals, MHD flows and power losses in rectangular channel 7−117679
liquid-metal two-phase flows, transverse magnetic field effects on phase distrib. 7−103031
local models of magnetohydrodynamics 7−123780
magnetic fluid, displacement processes through porous media, instabilities 7−75690
magnetic fluid, infinite channel viscous fluid flow, resistance reduction 7−75676
magnetohydrodynamics continued
magnetic fluid, stabilisation, mag. field gradient effects 7−75684
magnetic fluid drops, equilibrium forms, mag. field disturbances 7−7569
magnetic fluids, hydrodynamics, sedimentation, US propag. and pipe flo 7−75685
magnetic fluids, isothermic, free convection caused by magnetophoret particle transport 7−75692
magnetic fluids, nonlinear focussing study 7−83362
magnetic fluids, nonlinear internal resonance, Rayleigh-Taylor flo 7−75693
magnetic fluids, surface nonlinear waves and fluid instability 7−75688
magnetic fluids, two-dimensional flow between parallel plates 7−75689
magnetic fluids, water-based, pipe flow charact. 7−75674
magnetic liq., Couette flow, viscous stresses, heating and stabili 7−137028
magnetic liq., HF mag. susceptibility and relax. time 7−92468
magnetic liq. drop, dynamics in mag. fields 7−136983
magnetic liquid, diffusion, MHD phenomenon, numerical mod 7−124571
magnetic liquid, wave propag. MHD approx., short-wavelength eq 7−123771
magnetic liquid drop, equilibrium, cone form. and elongation 7−75687
magnetic liquid drops stability in uniform mag. field *(Romania* 7−137026
magnetic liquid interfacial layer, surface hydrodynamics 7−91253
magnetically fluidised systems, dissipative heat prod. 7−91247
magnetically soft particle in hydrodynamic flow with external rot. ma field 7−123773
magnetisable and polarisable liqs., noncanonical Hamiltonian eqns. motion 7−137027
magnetisable media interphase layers, hydrodynamics study 7−91252
magnetised particle rot. in elec. cond. viscous medium *(Romania* 7−136873
magnetofluid plane surface instability under ultrasound action 7−91249
magnetogasdynamic waves, sawtooth profile decay, progressive wav approach anal. 7−97641
magnetogasdynamics, self similar flow with radiative heat transfer, sho effects 7−69280
magnetorheological suspension, turbulent flow and heat transfer stu 7−123719
magnetosphere, finite β, theory and obs. of Alfven solitons 7−139865
magnetosphere, reconnection-associated nonstationary phenomena in ma netopause tail region *(German)* 7−134092
magnetothermohaline convection problem of Stern type, energy relatio ship 7−142390
Marangoni convection in elec. cond. liq. in mag. field 7−117582
Martian core, thermal evolution model rel. to mag. dynamo and Marti mag. field 7−88161
metal MHD flow in duct with changing cross section 7−91242
nematic liquid crystals, thermal convective, pattern form. in mag. fiel 7−124090
NGC 1265, narrow-angle tail radio galaxy, mag. field struct. from multi req. VLA obs. 7−120596
nonadiabatic gravitational collapse, Reissner-Nordstrom Vaidya metric f radiation from system 7−72277
nonequilibrium MHD flow, cylindrical shock wave form. 7−123779
nonlinear surface Alfven waves propag. along tangential MHD discon nuity in incompressible fluid 7−142392
oscillatory α^2-dynamo, numerical investigation 7−107702
physical props. 7−77372
pipe flow of incompressible viscous electrically conducting fluid, Greer function methods 7−75680
planar induction pump, two-dimens. flow, numerical model 7−123775
planar liquid layer, instability in alternating longit. mag. field 7−83359
planetary nebulae, importance of mag. fields for proto-nebula *(Frenc* 7−120548
plate moving in conducting liq., optimal internal source calc. 7−122785
pulsation regimes in unsteady flow with elec. cond. switching off 7−976
radiative MHD media, weak waves, thermal effects 7−137019
radio source beam models, magnetised jets evol. in power-law po 7−101674
Rayleigh-Taylor instability of rotating fluid in the presence of a vertic magnetic field 7−136802
reflected plane shock wave motion 7−136886
relativistic astrophysical jets, spatial stability anal. and appl. to quas (3C 345) 7−127705
Rivlin-Ericksen fluid, dusty, MHD flow through confocal elliptical duc 7−69274
second moment growth in mirror symmetric flow 7−91258
second-order MHD flow between two parallel plates, unsteady motic 7−111120
shock waves in viscous, thermally conducting fluid, phenomenologic model 7−83360
solar corona, mag. heating theory 7−134203
solar coronal arcades, sheared equilibrium fields, MHD stability 7−8835
solar coronal X-ray bright points, MHD modelling 7−145912
solar electron corona, MHD loop model for radial var. of differential ro 7−107800
solar flares, stabilising effect of transverse mag. field in current shee *(Russian)* 7−145917
solar photosphere, supergranular diffusion and poleward flow models f polar mag. fields evolution 7−107798
solar wind flow over Venus, effects of hot O ions flux *(Germa* 7−134161
solid bodies suspended in mag. liq. in homogeneous mag. field *(Romania* 7−137029
space-periodic Beltrami flows, linear stability 7−137025
spatially periodic electrovortex flows in a planar layer *(Romania* 7−136874
spectral methods in fluid dynamics, book contrib. 7−97509
spheroidal mag. particles, dilute polydispersive suspension, mechanic description 7−75683
stability codes, flux anal., appl. of Fourier harmonic technique 7−11593
steady plane MHD flows of viscous incompressible fluid, solns. ar geometries 7−142389
stellar atmosphere, thermal-convective instability of MHD-composi plasma with finite Larmor radius 7−127841
stochastic astrophysical fluids, Alfven mode damping 7−88095
stratified shear flow stability of conducting fluid in mag. field 7−13701
Sun, atmosphere, MHD wave transition 7−134220

magnetohydrodynamics continued
superconducting magnet DC pump system, magnetohydrodynamic aspects 7−117678
supersonic flow, two-dimensional, over concave corner, shock formation distance in radiative magnetogasdynamics 7−75708
synchrotron-maser emission theory of type II solar radio bursts 7−88350
T-layer formation and stabilisation conditions, magnetogasdynamic eqns., MHD generator appl. 7−137061
toroidal Couette flow, mag. dynamo problem 7−91071
transient free-convection currents of laminar boundary layer, radiation absorpt. effects 7−94645
transient MHD flow through a rectangular channel 7−142393
turbulent MHD transport coeffs., self-consistent calc. 7−75535
two dimensional boundary layer flow, similarity solns. in transverse mag. field 7−75696
two-dimensional turbulence expt. and num. simulation 7−91257
two-phase flow conductivity in magnetic field *(French)* 7−123770
type I superlattice, dynamic cond. magnetoplasma reson., memory function MHD anal. 7−138061
uniformly accelerated body, magnetohydrodynamic heat transfer, boundary layer, laminar nonsteady flow *(French)* 7−123781
unsteady incompressible 3D asymmetric stagnation point boundary layers 7−117680
unsteady MHD flow near asymm. 3D stagnation point 7−104353
viscoplastic body motion in mag. liq. flow, generalised rheological law 7−91250
viscous incompressible rot. MHD flow, hodograph transform. 7−75682
vorticity measurement using probes based on MHD principle 7−142396
water masses, lateral mixing in mag. field and porous medium 7−120033
white dwarfs interiors, mag. field evolution 7−88391
Li, liquid, natural convection heat transfer under transverse and parallel mag. fields, temp. fluctuation 7−116704
Si melts, hydromagnetic Czochralski flow, cryst. elec. cond. effects 7−113373
Si, molten, mag. and gravitational natural convection, 2D heat transfer rate calcs. 7−130701

magnetomechanical effects
see also gyromagnetic effect; magnetoelastic effects; magnetoelastic waves; magnetostriction
cubic ionic cryst. lattice vibrs., magnetic field effects in the long-wave limit, continuous approx. calcs. 7−104928
electromagnetomechanical interactions in deformable solids and structs., conf., Tokyo, Japan (Oct. 1986) 7−115692
ferroelectrics, vibronic structural phase transitions, mag. field-induced effects 7−104950
ferromagnetic hysteresis, remanent and peak magnetisation, tensile and compressive stress effects model calcs. 7−106003
ferromagnetic materials, mag. field emission during fracture 7−132121
ferromagnetic solids, magnetomechanical damping, internal stress effects calcs. *(Russian)* 7−138306
Laves phase intermetallic cpds., AT_2, (A=rare earth or transition metal, T=Ni,Co,Fe,Mn), magnetism, review *(Japanese)* 7−85319
magnetic fluids, physical props. 7−77372
metal, deform. mechanisms, pulsed mag. field effect at low temps., induced eddy currents 7−77393
metallic glasses, magnetomechanical appls. 7−143891
polycrystalline ceramics, magnetisation processes, perpendicular stress effects study 7−106006
shallow donor diamagnetic susceptibility pressure dependence calculations 7−76824
steel, ferritic, fusion reactor material, magnetomechanical behaviour 7−109475
steel, low C, magnetomechanical damping, internal stress and ageing effects studies *(Russian)* 7−99546
steel, mild, fusion reactor material, magnetomechanical behaviour 7−109475
titanomagnetite, selection rules for bulk piezomagnetic coeffs. of isotropic dispersions 7−127197
$CO_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, stress relax. low mag. field props. 7−132117
$CeBi_{1-x}Te_x$, mag. props. under press. 7−77349
$CePb_3$, high field magnetisation, magnetoresistance and Hall effect at very low temp. and high press. 7−76890
CeSb, mag. ordering, high press. neutron and magnetisation study 7−77228
Co-Si-B rapidly melt quenched metallic glasses, magnetomechanical coupling meas. 7−99548
Cr-Mn alloys, mag. phase diagram near triple point 7−77287
CrB-FeB, phase diagram, magnetovolume effect 7−85399
CrB_2 itinerant-electron antiferromagnet, magneto-vol. effects 7−106007
$DyVO_4$ cryst., thermal expansion in external mag. field, Jahn-Teller domains influence 7−85398
Fe, single crystals, plastically deformed, mag. props. 7−112856
Fe-Cr-P-C amorphous ribbons, magnetic texture, curvature and structural relax. during annealing 7−70582
Fe-Ni, plastic deformation, magnetically induced Invar hardening 7−76275
Fe-Ni films electroplated on nonmagnetic wire, mag. props. 7−132093
Fe-Ni Invar, metastable modulated state, supermoment dynamics, Mossbauer spectrum study, review 7−70529
Fe-Si steel, highly permeable, forsterite ground layer effect on mag. props. 7−77353
$Fe_{84}B_{16}$, amorphous, mag. props. 7−105906
$Fe_{78}B_{13}Si_9$ metallic glass, magnetomechanical coupling 7−132115
$Fe_{2.1-x}Mn_xAs$, (x=1.30,1.35), mag. transition temp., pressure derivative 7−143798
$Fe_{80-x}Ni_xCr_{20}$, magnetovol. effects, thermal expansion meas. 7−138305
$Fe_{65}(Ni_{1-x}Mn_x)_{35}$, plastic deformation, magnetically induced Invar hardening 7−76275
$Fe_{78}Si_{10}B_{12}$ glass, mag. annealing influence on shear modulus and internal friction, piezomag. props. 7−70622
$GdBa_2Cu_3O_{7-x}$, supercond. and normal samples, pres. and field depend. of mag. transition 7−132021
Ge single crysts. diamag. suscept. meas., plastic deform effects study 7−112735
$La(Fe_{0.86}Al_{0.14})_{13}$, ferromag. state stability under high press. 7−112795
MnAs, magnetovolume 7−143892
MnNi single cryst., mag. struct., compressive loading *(Russian)* 7−105886
$Ni_{75}Al_{25-c}Mn_c$ solid solns., mag. props., plastic deform. effects 7−70621

magnetomechanical effects continued
O_2, liquid, magneto-volume and field induced transparency effects *(Japanese)* 7−99545
Pd-Co dilute alloys, ferromagnetic transition, deform. effects study 7−125387
(rare earth)$_2Fe_{14}B$ magnetic props., 3d magnetism 7−70530
Si single crysts. diamag. suscept. meas., plastic deform effects study 7−112735
Ti-Al alloy, α-phase, deform. and failure in strong mag. fields, 293 to 4.2 K range 7−93052

magnetometers
see also magnetic field measurement
alkali-He magnetometers using Rb atoms optical orientation *(Russian)* 7−79625
amorphous metal DC magnetometer, magnetoelastic, stress-relieved 7−67351
automated torque magnetometer for use in a 13 T superconducting solenoid 7−80826
biomedical superconducting magnetometer system for detecting lung contaminants 7−139322
DC SQUID, integrated magnetometer 7−108586
digital teslameter, battery powered 7−67352
electrochemical corrosion, SQUID magnetometry 7−132801
Faraday, auxiliary coils for generating magnetic field gradients 7−80825
ferromagnetic probe magnetometer, data spectral anal. algorithm and noise characts. *(Russian)* 7−79626
fibre optic magnetic field sensors, ultra sensitive 7−123272
fibre optic magnetometer appl., metallic glass magnetostrictive props. study bonding agent effects 7−106000
fibre optics polarimetry techniques and appls. 7−75154
fibre-optic magnetometer, closed loop, AC current measurement using Faraday effect 7−75151
field-annealed magnetoelastic amorphous metal magnetometers, directional characts. 7−102463
flux-gate sensors and magnetometers, metrological props. *(Polish)* 7−108587
fluxgate sensor theory, gating function stability study 7−79657
geophysical borehole magnetometer, for Au bearing magnetite deposit prospecting 7−133951
Giotto magnetometer expt. 7−139883
gradiometer, 7-channel DC-SQUID, for brain research, design 7−78916
high field nuclear magnetometer 7−80830
induction-probe magnetometric instrument for temp. investig. during heat treatment 7−78430
LF submicrogauss fibre-optic magnetometer 7−134814
magnetisation meas., development of an automated vibrating sample magnetometer 7−108582
magnetostrictive amorphous metal ribbon, low freq. mag. field detection 7−140715
MCP-2, borehole proton magnetometer characts. *(Russian)* 7−79630
metallic glass magnetostrictive transducers, prep. and props., fibre optic magnetic sensors appl. 7−106002
motor driven vibrating sample magnetometer for magnetization meas. in high mag. fields 7−102467
NMR magnetometer with low-noise limited oscillator 7−95627
nuclear precession magnetometers, sensor EM system anal. *(Russian)* 7−79627
photomagnetometer, PEM effect in semiconductors 7−131706
proton magnetometers, errors and reaction contour calc. *(Russian)* 7−79629
proton precision and optical magnetometers, gaussmeters, nuclear resonance and Hall probes, field meas. *(German)* 7−80822
quick response magnetometers using amorphous wire cores, appl. to mechanocardiographs 7−80832
recording media, conf., Parma, Italy (Sept. 1986) 7−80148
rock magnetism, equipment for rapid determ. of rotational remanent magnetization 7−120139
rock magnetism laboratory equipment, flux-gate spinner magnetometer interfacing to microcomputer 7−101512
rock magnetisms magnetometer vibrating-sample type and Preisach diagram 7−101543
ROCOMA (rotating coil magnetometer) for multicomponent rock magnetization analysis 7−145719
rotating coil, misalignments, relation to meas. accuracy *(Chinese)* 7−102461
sensor capture band during excitation of free nucl. precession by Hahn's method *(Russian)* 7−79628
SQUID, RF, for biomag. field detection, digital control unit 7−79122
SQUID, use for thermally fluctuating mag. field meas. of normal metals at low temp. 7−73383
SQUID galvanometer for quantum Hall resistance meas. 7−108572
SQUID gradiometers evaluation, using spatial Fourier transform 7−128603
SQUID magnetometers, uses in medicine 7−87130
SQUID magnetometric apparatus for dynamic mapping of heart 7−87297
SQUID sensors, DC, integrated thin film, design and appl. 7−128599
SQUID-based planar gradiometer for non-destructive testing of ferromagnetic plates 7−132894
SQUID-based rock magnetometer with open-ended horizontal room-temperature access 7−139787
SQUID-magnetoencephalography system, mech. performance of GFRP dewar with spherical bottom 7−79123
Stanford octagonal magnetic monopole detector 7−135736
superconducting gradiometer for magnetic fluctuations measurement from seismic waves 7−133955
thin-film, for electronic compass *(Dutch)* 7−73378
toroidal ferromagnetic probes, theory and expt. *(Czech)* 7−95626
torque magnetometer using high field superconducting magnets for anisotropy meas. 7−95625
^{4}He resonance magnetometers, optically pumped 7−102483
Si integrated magnetic-field sensors, review 7−73381
$Y_{1.2}Ba_{0.8}CuO_4$, ceramic high-temp. superconductor, RF SQUID construction 7−105847

magnetooptics *see magneto-optical effects*
magnetophotoconductivity *see photoelectromagnetic effects*
magnetoplasma *see plasma*
magnetoplasmadynamics *see plasma magnetohydrodynamics*
magnetoreflectance
HgTe, band warping, far-IR magneto-reflection studies 7−77518
Ni thin films, surface magnetoplasmons, long-range, props 7−138298

magnetoresistance
see also Corbino effect
alloys, amorphous, low temperature elec. resist., quantum corrections 7−98964
amorphous ferrimagnetic metallic films, elec. cond., structural disorder effect 7−112300
Bechgaard salts, field-induced spin density waves, magnetotransport studies 7−84938
Bechgaard salts, oscillatory magnetoresist., electron scatt. between open-orbit states 7−76896
$(BEDT\text{-}TTF)_2I_3$, α- and β-phases, intermolecular contact directions rel. to magneto-effects 7−85197
β-$(BEDT\text{-}TTF)_2I_3$ organic supercond., resist. and magnetoresist. 7−99312
disordered metals, electron quantum interference, oscillatory magnetoresist. obs. 7−105540
disordered systems, 2D, cond. in strong mag. field 7−131677
electron gas, 2D, quantum Hall effect, scatt. approach 7−131679
electron gas, 2D, quantum mechanical Hall effect 7−131680
electron gas, magnetoresist. divergences due to Landau quantisation, non-linear elimination 7−84826
electron gas, synergism in crossed fields, nonequilibrium statistical mech. framework 7−143381
graphite fibres, intercalated pitch based, anticorrelation of Shubnikov-de Haas amplitudes and negative magnetoresistance magnitudes 7−76886
graphite intercalation compounds with $NiCl_2(CoCl_2)(CuCl_2)$, second-stage, magnetoresistance 7−112304
gyrotropic percolation in strong mag. fields 7−76859
hopping magnetoresistance, AC, amorphous semiconductors, defects with positive correlation energy 7−118509
inhomogeneous media in strong mag. fields, conductivity 7−76858
Kondo systems, low temp. magnetoresist. 7−84825
magnetic semiconductors with narrow degenerate conduction bands, negative magnetoresistance determ. 7−143481
metallic glasses, local magnetic environment probe using magnetoresist. 7−84830
metallic rings in mag. field, quantum interf. 7−112303
metals, soft-helicon problem soln. 7−76991
metals with Ce impurities, resistivity and magnetoresist., exchange interactions, Kondo. effects 7−76894
multiply connected conductors, mag. flux effects, review 7−138138
nondegenerate 2D electron gas, localisation, magnetoresistance meas. 7−105648
nonequilibrium conducting medium, instability due to magnetically induced currents 7−70270
normal metal arrays, quantum interferences 7−77137
normal-metal networks, quasi-1D disordered, magnetoresist. oscills. 7−118462
organic semiconductors, doped, cond., quasi-1D percolation model 7−76933
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
point contact, oscillations in transverse magnetoresistance 7−143559
polyoxadiazole, pyrolytic, elec. props. 7−84804
quantum Hall effect, resistance plateaus and magnetoresist. minima 7−131682
quantum Hall systems, frequency and temp.-depend. cond. 7−131681
rare earth alloys, RCu_6, (R=La,Pr,Nd,Sm), de Haas-van Alphen effects and transport props. 7−70162
rare earth hexaborides, antiferromag. with localised moments, magnetoresistance 7−143482
semiconductors, high magnetic field effects, conf., Wurzburg, Germany (Aug. 1986) 7−128198
semiconductors, nonequilibrium phonons, thermal size galvanomag. effects 7−76979
semiconductors, optical detection of mag. resonance, conf., Kiev, USSR (May 1985) 7−134343
semiconductors, planar Hall effect, magnetoresistance, determ. by probe methods, anal. 7−118511
semiconductors, transverse magneto-Seebeck coeff. magnetophonon oscills. 7−99099
semimagnetic semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
semimagnetic semiconductors, magneto-optical studies, Warsaw 7−132247
semimetals, high temp. magnetoresist. quantum oscills. mechanism, electron relax. level broadening *(Russian)* 7−112374
Shubnikov-de Haas oscills. and Fermi surfaces 7−131527
thin film sensor, dual-coupled self-biased, micromag. anal. 7−102462
thin metal films, Hall coefficient and magnetoresist., surface roughness and transverse mag. field depend. 7−143438
thin metal wires, longitudinal magnetoresist., simple anal. 7−118461
thin wires, longitudinal magnetoresistance 7−105536
$(TMTSF)_2ClO_4$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2ClO_4$, low temp. metallic phase, rapid mag. quantum oscills. obs. 7−143440
$(TMTSF)_2ClO_4(PF_6)$ conductors, high field magnetoresistance studies *(German)* 7−124968
$(TMTSF)_2PF_6$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2PF_6$, SDW transitions in mag. field, comparison with $(TMTSF)_2CLO_4$, magnetotransport behaviour 7−84854
$(TMTSF)_2X$, Bechgaard salts, small period oscillation of magnetoresistance 7−84823
$(TMTSF)_2X$ salts, intermolecular contact directions rel. to magneto-effects 7−85197
TMTSF salts, 2D open orbit edge states, quantum oscillation 7−137784
two-dimensional electron system, DC, cond. and lowest Landau level 7−131564
two-dimensional systems, magnetoconductance, multichannel quantum scatt. theory calcs. 7−112286
type I superlattice, dynamic cond. magnetoplasma reson., memory function MHD anal. 7−138061
Ag cylindrical films, Aharonov-Bohm effect, weak localisation, magnetoresist. meas. 7−118595
Al, influence of low temp. plastic deformation *(Russian)* 7−105532
Al, Sierpinski gasket fractal wire networks, magnetoresist. meas. 7−84824
Al single crysts., magnetoresistivity magnetic breakdown oscills. meas. 7−131619
Al, strained at 4.2 K, energy loss, anisotropy, magnetoresistance and recovery 7−137901

magnetoresistance continued
Al-oxide-Al tunnel junctions, tunneling resistance and magnetoresistan 7−143636
AlAs-$Al_xGa_{1-x}As$ quantum wells, two-dimensional magnetotranspo 7−125018
$Al_{52.4}Cu_{12.6}Mg_{35}$, quasicrystalline and cryst. phases, transport and supe cond. props. 7−70456
AlGaAs-GaAs heterojunction, energy relax. of 2D electrons 7−70405
AlGaAs-GaAs heterostructure, magnetophonon resonance of 2-dime electron gas 7−92279
AlGaAs-GaAs heterostruct., quantum 'zero-point oscillations' in structu with a 2D electron gas 7−125110
$Al_{20.2}Zn_{40.3}Mg_{39.5}$, quasicrystalline and cryst. phases, transport and supe cond. props. 7−70456
As_xSb_{1-x}, energy spectra and transport effects in quantising mag. fie *(Russian)* 7−70285
Au mesoscopic devices, nonlocal electrical props., magnetoconductan 7−92155
AuFe spin glass, transport props. near the percolation limit 7−137902
AuPd pseudo-one-dimensional wires, inelastic electron scatt. 7−92145
Bi bicrystals, galvanomagnetic effects in quantising mag. fields 7−84936
Bi, film, polycrystalline, elec. transport props. 7−70434
Bi, negative differential resistance, strong mag. field 7−98984
Bi, thin wires, magnetoresist., quantum dimensional oscills. *(Russia* 7−76980
Bi-Cu point contacts, magnetoresist. meas., elastic scatt. length estimati *(Russian)* 7−112440
Bi-Cu point contacts magnetoresist., Shubnikov-de Haas effect obs. *(Ru sian)* 7−112439
Bi-Sb, transport props., effect of homogenisation 7−78279
$Bi_{1-x}Sb_x$ semimetallic alloys, hole Fermi surface, Shubnikov-de Ha oscills. study *(Turkish)* 7−112168
$Bi_{96.6}Sb_{3.4}$, magnetoresist., Shubnikov-de Haas oscills., I-V characts., high elec. and mag. fields *(Russian)* 7−92206
C fibres, 2D localisation of carriers, magnetoresistance study 7−143436
C fibres, methane grown, electrical resistivity, temp. depend. 7−143477
$CdCr_2Se_4$, mag. semiconductors with narrow degenerate conduction ban negative magnetoresistance determ. 7−143481
$(Cd_{0.917}Mn_{0.083})_3As_2$, exchange interaction, effect on quantum transpo 7−70328
$Cd_{0.9}Mn_{0.1}Se$, large negative magnetoresist., Hall coeff., magnetisati meas. 7−84940
n-$Cd_{0.95}Mn_{0.05}Se$, semimagnetic semiconductors, magnetic field driv insulator-metal transition *(German)* 7−124869
CdSb negative magnetoresist. anal., quantum corrections calcs. 7−70331
$CeAl_2$, high field magnetoresistance and Hall effect at low tem 7−76891
$CeAl_3$, Kondo lattice, magnetoresistance 7−70289
$CeCu_6$, growth and purification, electrical characterisation 7−71002
$CeCu_6$, growth of coherent state, magnetoresist. study 7−98986
$CeCu_6$, low temp. transport props. 7−70279
$CeCu_6$, thermodynamic and transport props. 7−137584
$CeCu_2Si_2$, Kondo lattice, magnetoresistance 7−70289
$Ce_xLa_{1-x}Cu_6$, heavy fermion system, electrical and mag. props. 7−7027
$Ce_xLa_{1-x}Mo_6S_8$ Chevrel cpd., superconducting and mag. props., resi and mag. suscept. meas. 7−77222
$CePb_3$, heavy fermion system, press. depend. magnetoresistivity 7−76889
$CePb_3$, high field magnetisation, magnetoresistance and Hall effect at ve low temp. and high press. 7−76890
$CeRu_2Si_2$, metamagnetic-like transition 7−105918
$CeRu_2Si_2$, polarised heavy fermion system, high-pressure magnetores tance and susceptibility meas. 7−70287
Co-Fe thin films, anisotropic magnetoresist. 7−143640
Co-Fe-Si-B, amorphous, stress annealing induced mag. anisotro 7−99440
$Co_{75-x}Fe_xSi_{15}B_{10}$ amorphous alloy, mag. anisotropy, stress anneali 7−85283
Cu thin films, weak localisation, resistance and magnetoconductan meas., 1.5-40 K 7−143638
Cu-Cr film, dil. alloy, resonant Kondo scattering of weakly localized ele trons 7−112317
Cu-Cr films, magnetoresistance, mag. scatt. time, electron localisati 7−76895
Cu-La (Ce), thin films, weak localisation, resistance and magnetocondu tance meas., 1.5-40 K 7−143638
$EuBa_2Cu_3O_x$, high T_c supercond., electronic and mag. props. 7−143705
Eu_xYb_{1-x} alloy, elec. and mag. props. studies w.r.t. comp. 7−132073
Eu_xYb_{1-x}, magnetoresist. and magnetostriction meas. 7−131620
$FeCl_3$-graphite intercalation cpd., low dimensional mag. system, H effect, magnetoresistance 7−112302
$(Fe_{1-x}M_x)_{80}B_{20}$, (M=W,Cr), amorphous alloy, conc. depend. of resi and magnetoresist. 7−98975
$Fe_xNi_{80-x}B_{20}$, amorphous alloys, magnetic contribution to electrical res tivity 7−137903
$Fe_{40-x}Ni_{40}Cr_xB_{20}$ ribbons, elec. resist. minimum 7−98974
Fe_7S_8, pyrrhotite, transverse magnetoresistance meas. 7−76982
FeZr amorphous alloys, magnetoresist. and superconductivity 7−98966
GaAlAs:Sn, highly doped, resonant DX centres under hydrostatic press. mag. field 7−112245
GaAs, magnetoresistance, elec. field effect 7−112373
n-GaAs microwave devices, charge carrier conc. in active layer, magn toresistance meas. *(Romanian)* 7−143491
GaAs narrow wires, magnetoconductance fluctuations, sample size depe 7−143490
n^+-GaAs narrow wires, quantum interf. effect, aperiodic magnetocon study 7−125160
GaAs, submicron wires, aperiodic quantum magnetoresistance oscillatio 7−131689
n-GaAs:Si,Sn,Dx centre, mobility, free electron density 7−131578
GaAs/$Al_xGa_{1-x}As$ heterostructures, illuminated, conduction props., theo 7−112461
GaAs/AlGaAs heterojunctions and $n^+n^-n^+$ sandwich structs., tunnelli and hopping cond. 7−143599
GaAs/AlGaAs heterostruct., Aharonov-Bohm effect obs. 7−112375
GaAs/AlGaAs heterostruct., 2D electron gas density of states determ. fractional filling factors 7−137825
p-GaAs/AlGaAs heterostructs., low temp. fractional quantum Hall effe 7−137967
GaAs/AlGaAs heterostruct., edge currents in integral quantum Hall effe 7−143595

magnetoresistance continued
GaAs/AlGaAs modulation doped heterostructure interface, neutron irradiation effects on electron transport 7−143562
GaAs-$Al_xGa_{1-x}As$ 2D heterostruct., Shubnikov-de Haas oscill. asymmetry 7−85068
GaAs-$Al_xGa_{1-x}As$ MQW, photoluminescence in high mag. fields 7−70898
GaAs-AlGaAs heterostructs., 1D wires, high mobility, quantum transport, mag. field and temp. depend. 7−125021
GaAs-AlGaAs multiple quantum wells, 2D and 3D magnetoluminescence meas. 7−106231
GaAs-$Ga_{0.77}Al_{0.23}As$ heterojunction, field-periodic magnetoconductance oscills., supercond. transition 7−112669
GaAs-GaAlAs, energy relax. phenomena, elec. and optical studies 7−131772
GaAs-GaAlAs heterojunction two-dimensional conductor system transverse magnetoresist. quantum effect 7−131683
GaAs-GaAlAs heterostruct., transverse magnetoresist. quantum effects 7−131684
GaInAs-AlInAs pseudomorphic MODFET heterostructs., MBE growth and charactn. 7−143585
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
GaSb-InAs-GaSb double heterostructures, pressure-induced elimination of the hole gas 7−70404
Ge, deep impurities, magnetic magnetoresistance 7−125023
n-Ge, magnetoresistive electromotive force in strong elec. microwave fields 7−99095
Ge:Ga,As, heavily doped, strongly compensated heteroepitaxial films, elec. props. 7−131814
Ge:Sb, magnetoresistance, influence of thermal annealing and γ-ray irradiation 7−105592
Ge:Sb, metallic, inelastic scatt. time of electrons, negative magnetoresistance 7−143492
n-Ge:Sb, transverse magneto-resistance meas. 7−92204
Ge-As. heavily doped, elec. cond. and magnetoresist. *(Chinese)* 7−76930
Ge-Sn(Pb)(In), rapidly quenched, unusual elec. resist charcts. 7−70335
$Ge_{0.2}Si_{0.8}$-Si (001) heterostructure, coherently strained, piezoelec. effect 7−143579
^{4}He liq. surface, 2D Wigner cryst., ripplonic polaron DC magnetocond. calcs. 7−76518
p-HgCdMnTe bicrystals, quantum Hall effect and magnetoresistance under hydrostatic press. 7−76977
p-$Hg_{0.75}Cd_{0.23}Mn_{0.02}Te$ bicrystals, quantum Hall effect 7−131686
$Hg_{1-x-y}Cd_xMn_yTe$, magnetoresistance, quantum limit regime 7−112376
$Hg_{1-x-y}Cd_xMn_yTe$, spin modulated energy state, Shubnikov-de Haas analysis *(German)* 7−125311
n-HgCdTe, magnetic field induced electron condensation *(German)* 7−125029
n-$Hg_{1-x}Cd_xTe$, magnetophonon reson. trapping, multiphonon emission and magneto-Auger recomb. oscills. 7−84926
$Hg_{1-x}Cd_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
$Hg_{1-x}Cd_xTe$, magnetoresist., Hall effect and phase differences between quantum oscills. 7−143485
$Hg_{1-x}Cd_xTe$, nonradiative carrier recombination, determ. by mag. quantum oscillations 7−112355
n-$Hg_{1-x}Cd_xTe$, Shubnikov-de Haas oscillation *(Chinese)* 7−99536
HgMnTe, acceptor binding energy, photoconductivity and magnetoconductivity meas. *(German)* 7−124927
p-$Hg_{0.915}Mn_{0.085}Te$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
$Hg_{1-x}Mn_xTe$, acceptor ionisation energy in high mag. fields 7−76804
$Hg_{1-x}Mn_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
$Hg_{1-x}Mn_xTe$, magnetoresist., Hall effect and phase differences between quantum oscills. 7−143485
$Hg_{1-x}Se$, transverse magnetoresist., Shubnikov-de Haas oscills. 7−84935
HgTe-CdTe superlattices and heterojunctions, spin-orbit scatt. time and carrier depending time 7−92268
In-In_xO_y thin film supercond., influence of mag. field on 2D phase transition 7−143739
InAs n-inversion layers, spin-orbit interaction in 2D systems 7−98941
InAs-Ga(Al)Sb(As) quantum wells, carrier densities, galvanomag. meas. 7−143588
$InAs_xSb_{1-x}$, narrow gap semicond., optical, magneto-optical and transport studies 7−138088
$In_{0.53}Ga_{0.47}As$-InP epitaxial single quantum wells, electronic props. 7−77057
n-InP, hopping conduction in a mag. field *(German)* 7−125031
InP, metal-insulator transition, variable range hopping 7−143467
n-InP, shallow donor-like impurity states in a mag. field 7−70249
InP, shallow donorlike impurity states, influence of mag. field and hydrostatic press. 7−84754
InP/$In_{0.53}Ga_{0.47}As$, modulation-doped multiquantum wells, APCVD grown, transport props., Shubnikov-de Haas effect 7−125083
InSB, free electron density, determ. by ultrasonic absorpt. 7−112324
n-InSb, doped, magnetoresistance overstructure study *(French)* 7−131668
p-InSb, low temp. magnetocond., ultrasonic vel. study 7−76984
InSb, oscillations in optical and transport coeffs., optical methods combined with mag. resonance 7−138429
InSb thin films, application and properties for highly sensitive magnetoresistance elements *(Japanese)* 7−125158
InSb-CdTe interface prepared by MBE, quasi-2D electron gas, Shubnikov-de Haas obs. 7−77072
InSe, 2D defects, effect on transport and phototransport props. 7−105593
$In_{1-x}Ti_xTe$ alloys, energy spectrum, cond. in a mag. field, press. depend. 7−131672
$In_{1-x}Tl_xTe$ solid solns., transport effects, percolation 7−70333
K, helicon wave studies, Hall effect and magnetoresist. meas. 7−76992
LaB_6:Ce, Kondo system, low temp. magnetoresist. 7−84825
$LaCeAl_2$, Kondo system, low temp. magnetoresist. 7−84825
$LaIn_3$, magnetoresistance and Fermi surface 7−105534
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical field, high field meas. 7−92390
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., normal and supercond. state props. 7−99303
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
$La_{1-x}Tm_xSe$ mixed valence single crysts., Kondo-type resist., mag. suscept. and magnetoresist. meas. 7−76921
magnetoresistance continued
Li quasi-1 D quench condensed microstructures, localisation effects 7−143531
$Li_{0.9}Mo_6O_{17}$, localisation and superconductivity 7−76903
$LuRh_{1.2}Sn_4$, supercond. props. and magnetism 7−92325
Mg thin films, microwave-enhanced phase relaxation in weak localisation expts. 7−138077
Mg-Fe, dil. alloy, Kondo impurities, low temp. behavior, Fermi liquid model 7−99042
$Mg_{32}(Al_{1-x}Zn_x)_{49}$ icosahedral alloy, elec. resist. temp. and mag. field depend. meas. 7−84815
MgZn metallic glass, low temp. magnetoconductivity 7−98991
Mn-B amorphous alloys, magnetism, elec. transport 7−112761
Nb_3Ir, A15 superconductor, radiation damaged, weak localisation 7−105783
$NbSe_3$ CDW conductors; magnetotransport studies 7−98989
$NbSe_3$, magnetoresistance and Hall effect, oscillatory behaviour 7−84822
$NbSe_3$, nonlinear magnetoresist. and CDW depinning 7−105549
Ni thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
$Ni_{1-x}Mn_xH_y$ disordered alloy hydrides, magnetoresist. and mag. suscept. meas. 7−84937
PbS, n-type, magnetoresist. meas. 7−99092
PbS-PbSe superlattice, magnetotransport and photoconductivity, mag. fields to 8 Tesla 7−131776
$Pb_{0.875}Sn_{0.125}Se$, electron irradiated, metal-insulator transition, press. induced 7−143347
PbTe films, γ-irrad., elec. props., dose depend. 7−112520
PbTe:Tl whisker crystals, thermoelectric power, magnetoresistance 7−105600
$PbTe_{1-x}Se$, Fermi surface symmetry change induced by order-disorder transitions 7−143321
PdAuFe, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
PdAuMn, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
PdGd, magnetoresist. and ferromag. ordering 7−131613
PdNi, exchange splitting and spontaneous resistive anisotropy 7−131617
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
PtSi thin films and wires, weak localisation, magnetoresistance 7−84828
PtSi thin wires, localisation and electron-electron interaction effects 7−125152
Re-Ta-H, amorphous films, elec. resistance, superconducting transition in mag. field 7−112585
Si inversion layer, scatt. mechanisms, weak localisation expts. 7−105718
Si inversion layers, magnetoconductance due to parallel mag. fields 7−70424
Si inversion layers, nonlocal potential measurements of quantum conductors 7−118516
Si MIS structs., Coulomb energy spectrum gaps under fractional quantum Hall effect 7−138016
n-Si, magnetoresistive electromotive force in strong elec. microwave fields 7−99095
n-Si thin film, negative magnetoresist., spectrum anisotropy effects 7−70435
$Si_{1-x}Ge_x$:Ga, neutron-transmutation doped, galvanomag. props., inhomogeneities 7−105591
Si_3N_4 MNOS structures, electrophysical props. at low temp. 7−99054
Si_3N_4 negative hopping magnetoresist. in strong elec. field, carrier localisation obs. *(Russian)* 7−76962
$Sn_{33}Pb_{67}$ disperse system, mag. field, influence on superconductivity 7−70471
$Sn_{33}Pb_{67}$, fine-dispersed system, superconductivity, mag. field effect 7−125242
Tm-Ba-Cu-O high T_c supercond., supercond. critical field anisotropy 7−125281
U equiatomic ternary cpds., mag. and elec. props. 7−132031
UBe_{13}, Hall effect, magnetoresist. and supercond. critical temp. 7−76893
UBe_{13}, heavy fermion superconductivity and magnetic props. 7−70472
UBe_{13}, magnetoresist. and upper critical mag. field under press. 7−77172
UBe_{13}, magnetoresistance, specimen quality effects 7−105539
$(U_xCe_{1-x})_2Zn_{17}$ alloys, magnetotransport 7−112301
UCu_5, heavy electron cpd., Hall effect, magnetoresistance, meas. at ambient press. and 1 GPa 7−76892
$(U_xLa_{1-x})_2Zn_{17}$, conc. Kondo system, magnetism and electronic transport 7−85243
UP(As), elec. resist., mag. field effects, transitions and anisotropy 7−70336
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7−69927
UPt_3, resistivity T^2 term mag. field depend. study 7−70281
$V_{1-x}Si_x$, high field magnetoresistance studies *(German)* 7−124968
$V_{1-x}Si_x$ supercond. amorphous alloys crit. mag. field, evidence for weak localisation effects 7−99367
W, thin plates, conduction electron surface scatt., influence on impedance oscillations in mag. field *(Russian)* 7−98951
Y-Ba-Cu-O high T_c supercond., upper critical field and transition temp., mag. field effects 7−112560
Y-Ba-Cu-O high T_c supercond., upper critical field, elec. resist. meas. 7−112709
Y-Ba-Cu-O high T_c supercond., longitudinal and transverse magnetoresist. 7−143693
$Yb_{80}X_{20}$ (X=Cu, Ag, Au), amorphous alloys, transport props., mag. susceptibility, sp. ht. 7−98968
$Zn_{1-x}Mn_xSe$, magnetospectroscopy studies *(German)* 7−125028
ZnSe, magnetoresistance, hopping conduction over localised states in Coulomb gap 7−84944
$Zr_{100-x}Ni_x$ amorphous superconducting alloys, critical mag. fields, spin-orbit interaction 7−125276
Zr_2NiH_x metallic glass, magnetoresist., H effects 7−84827
$ZrTe_5$, Shubnikov-de Haas oscills. and Fermi surfaces 7−131527

magnetoresistance, thermal *see thermal magnetoresistance*

magnetoresistivity *see magnetoresistance*

magnetoresistors *see magnetoresistance; resistors*

magnetosphere
see also magnetospheric electromagnetic wave propagation; radiation belts
3D structure of plasmoids 7−127639

magnetosphere continued
1979 July 5 substorm, assoc. field-aligned currents at synchronous orbit 7−94588
AE activity of high-intensity and long duration, due to interplanetary Alfven waves 7−94607
AKR, minimum bandwidths indicating radio lasing 7−88039
AKR coupled to auroral radio noise, by wave-particle resonance interaction 7−115181
Alfven waves, nonlinear, assoc. with auroral particles precip. 7−88010
Alfven waves, simulation of amplitude-modulated circularly modified waves 7−134079
Alfven waves excited by ionospheric acoustic waves of surface explosion origin 7−79760
Alfven waves of kinetic type, macroscale particle simulation 7−142448
Alfven waves propagation, motion of small-scale wave packet in mid-latit. plasmasphere 7−120216
AMPTE experiment, plasma dynamics 7−94626
AMPTE ion release expt., southward ion cloud motion explanation 7−94612
AMPTE magnetotail Ba releases, obs. and theory 7−107666
analytic magnetic field model, mag. topology with two-component field 7−94578
APL Magnetic Field Expt., Viking satellite program, preliminary results 7−88041
auroral circuit models, transport and double layers 7−117737
auroral double layers, particle simulation 7−117736
auroral electron spectra, origin of power-law component 7−107616
auroral field line plasma heating and particle acceleration, 5000 to 13500 km altitude 7−107615
auroral kilometric radiation, hollowness in direction of source mag. field 7−79784
auroral kilometric radiation, Viking obs. from plasmasphere to night auroral oval source regions 7−120213
auroral kilometric radiation (AKR) induced electron precipitation 7−145765
auroral oval location and thermosphere mid-latitude nighttime temp. 7−79731
auroral plasma processes, elec. fields, waves and particles simulation 7−88025
auroral radio emission 7−79856
auroral red arc formation, role of ring current O^+ ions 7−134050
auroral region research, review 7−127631
ballistic plasma wave processes, satellite expts. 7−145790
Birkeland current loop 3D effects 7−79778
Birkeland currents observed by Viking satellite 7−107646
boundary layer of magnetosphere, interpretation of flow and ion species observations 7−94600
bow shock, angular depend. of high Mach number plasma interactions 7−94597
bow shock, backstreaming ion beams formed at oblique shocks 7−115165
bow shock, mag. field noncoplanarity within fast collisionless shocks 7−94579
bow shock, obs. and modelling of diffusive shock accel. 7−139859
bow shock, reflection of ions in front of subcritical shocks 7−107660
bow shock, solar wind plasma interaction 7−120232
bow shock, upstream backstreaming electron distrib. function 7−94580
bow shock and magnetopause, review 7−127645
bow shock and shock drift acceleration at low energies 7−72224
broadband electrostatic noise generation in plasma sheet 7−107668
burst precipitation in nighttime slot region 7−107627
cavities, non-thermal continuum radiation prod. 7−115178
cavity fundamental freqs. of magnetospheric cavity, Pc I records 7−145789
charge-neutral beams injection into space plasmas, ambient plasma environment response 7−134123
charged particle motion in dipole and uniform magnetic fields 7−145774
circulating cyclotron maser and pulsed VLF emissions 7−79776
collisionless plasma, quasiperpendicular shock wave interaction 7−137083
compressional waves studied by eigenmode analysis 7−145784
core plasma, review 7−127650
corotating magnetospheric plasma, theory 7−101632
cosmic rays asymptotic directions and cut-off rigidities in evolving geomag. field 7−94594
cosmic rays propagation, Salyut-6 meas. of intermediate energy fluxes of heavy nuclei *(German)* 7−134097
coupling with ionosphere, double layer effects 7−120218
current sheet-driven plasma processes rel. to auroral plasma 7−72221
day-time ELF emissions, model, effect of deformed magnetosphere 7−79785
dayside magnetosphere, Pc 4 and 5 after flux transfer events 7−107669
distant (200-238 R_e) magnetotail lobe characteristics during quiet solar wind conditions 7−88042
distant plasmasheet, mag. field fluctuations and plasma dynamics 7−88043
double layer form. in magnetically confined plasma in magnetosphere 7−117733
double layers in plasmas, conf., Huntsville, AL, USA (Mar. 1986) 7−115677
downward moving double layers in presence of negative ions on auroral field lines 7−123872
drift wave instability in plasmasphere, ion acoustic wave growth rate 7−127642
Earth bow shock, nonlinear MHD waves generation by reflected H^+ 7−115183
electric current phenomena during substorm growth and onset 7−134084
electric currents connecting ionosphere to magnetosphere, influence of ionospheric nonuniformities 7−145759
electric currents in dawn sector, at high-latitude, satellite obs. 7−107614
electric field behaviour of 6.6 Earth radii during substorm 7−134075
electric field observations by Viking satellite, first results 7−107649
electric field spatial distrib. at high-latitude, empirical models 7−107659
electric fields and currents, review 7−127648
electric longitudinal currents above strip of enhanced elec. conductivity 7−145777
electron acceleration in Earth's radiation belts 7−101635
electron acoustic instability for electron beam system of polar cusp boundary layer 7−134088
electron beam injection and propagation in plasmas, space charge effects 7−115159
electron beam injection into space plasmas, ambient plasma environment response 7−134122
magnetosphere continued
electron bursts precipitated by lightning, spectral struct. 7−94545
electron concentration determination by VLF diagnostics 7−88032
electron cyclotron harmonic emissions associated with field-aligned ele tron beams 7−134086
electron energy deposition to mesosphere and thermosphere 7−115152
electron foreshock, Langmuir waves theory 7−94581
electron precipitation due to AKR generation process 7−145765
electron-positron component, meas. with Mariya spectrometer 7−101647
electrostatic cyclotron harmonic waves and Z mode EM waves, 3D r tracing 7−134094
electrostatic H cyclotron waves decay to ion acoustic modes on auro field lines 7−94592
electrostatic noise (broadband) in magnetotail, numerical study 7−7978
electrostatic upper hybrid emissions, conversion to EM O- and X-mo waves 7−79775
electrostatic waves (impulsive) and field-aligned currents in entry lay 7−107648
electrostatic waves at electron gyrofrequency 7−145787
weak electrostatic waves near upper hybrid freq., theory and ex 7−94603
ELF and ULF radiowave emissions, wave characts. observed by satell 7−134051
ELF and VLF emissions at cusp latitudes in post-noon sector rel. optical aurora 7−94577
ELF emissions (narrow banded) over southern polar region 7−120209
ELF emissions observed at geomagnetic conjugate stations, seasonal a diurnal variations 7−115175
EM ion cyclotron instability in geosynchronous region, effect of H temp. and thermal anisotropy 7−134089
EM wave propag., approx. theory 7−111240
eruptive processes in magnetospheric and solar physics 7−145819
field-aligned current generation in MHD plasma 7−145771
field-aligned currents assoc. with substorms near synchronous or 7−94589
field-aligned currents in auroral zone, ground-based observatio 7−115017
field-aligned currents in MHD waves, effect of finite Larmor radius, ap to magnetosphere-ionosphere coupling 7−91308
field-aligned currents near magnetosphere cusp regions, ground-based a ionospheric response 7−134059
field-aligned ion flow in topside and mid-latitude plasmasphere 7−1201
finite β, theory and obs. of Alfven solitons 7−139865
flux transfer events, field and flow perturbations outside reconnected fi line region 7−79787
flux transfer events of two-regime type, ISEE spacecraft observatio 7−120219
foreshock region, compressional wave excitation and shocklets 7−10765
geomagnetic activity forecasting method based on astronomical radiosc tillation 7−94507
geomagnetic activity index (Ap) between AD 1947 and 1978, rel to so wind struct. 7−79216
geomagnetic annual variations at Earth's surface, due to magnetosph currents 7−139442
global convection elec. field and current 7−115155
high-latitude electron fluxes distrib. 7−72226
IMF sector effect on geomagnetic field observations at mid and low la tudes *(Chinese)* 7−139856
IMF sector structure controlling precipitation at mid-latitudes 7−13983
impulsive struct. of substorm, spatial and temporal characts. 7−72223
intense electrostatic hiss bands obs. from source regions of AK 7−120214
interplanetary mag. field, sectoral structure, geomagnetic effect, geophy cal and biomedical evaluation 7−79797
interplanetary medium influence on magnetospheric unrest 7−88034
ion cyclotron harmonic waves, Viking satellite obs. 7−107651
ion precipitation from magnetopause current sheet 7−115174
ion solitary waves in magnetized plasma, obliquely propagating *(Chine* 7−115196
ion waves and upward ion beams on auroral field lines, Viking satell obs. 7−107652
ion-distrib. model for 2D reconnection field geometry 7−88037
ionosphere as adequate plasma source 7−115149
ionosphere ion outflow to magnetosphere, F-region non-thermal plas model 7−107612
ionosphere-magnetosphere coupling responsible for discrete auroral a 7−139851
ionospheric interactions and near-Earth plasma 7−72215
ions of ionospheric origin, trajectories 7−115173
Kelvin-Helmholtz instability at magnetosphere boundary, 2D simulati 7−94599
lightning discharges triggered by whistlers 7−114972
longitudinal electric current stratification due to plasma heati 7−134074
longitudinal electric field on auroral lines of force 7−79779
low frequency ion modes, finite Larmor radius effects 7−94576
low-frequency wave observations by Viking satellite 7−139834
magnetic activity, Hurbanovo Geomagnetic Observatory, Czechoslovak observations for 1985 and since 1893 AD 7−71964
magnetic activity, quasi-two-year cycle 7−145914
magnetic activity in AD 1780 to 1979 period, from auroral observatio 7−115135
magnetic boundary signature within flux transfer events 7−145788
magnetic cavities near the magnetopause, AMPTE-IRM observatio 7−101634
static magnetic field model for inner magnetosphere, consistent w nearly isotropic plasma pressure 7−145782
magnetic storms, effect of interplanetary parameters as function of g mag. latit. 7−101639
magnetopause, appl. of unsteady Petschek reconnection 7−94605
magnetopause, nonthermal continuum radiation source study 7−101637
magnetopause, reconnection-associated nonstationary phenomena in t region *(German)* 7−134092
magnetopause and related phenomena, review 7−88040
magnetopause at polar cusp, longitudinal elec. currents rel. to IM orientation 7−145778
magnetopause low-latitude boundary layer, on dawn and dusk flan 7−134077
magnetopause response to Kelvin-Helmholtz instability 7−94599
magnetosheath lion roars generation, effects of electron dynamics ass with mirror waves 7−94582

magnetosphere continued
magnetosheath quasi-trapped distribs. and ion flows associated with reconnection 7−79781
magnetotail, 2D model stability analysis 7−107667
magnetotail, current sheet stress balance 7−94610
magnetotail, equatorial magnetic field within 8.8 Earth radii 7−134081
magnetotail, impulsive processes during substorm expansion 7−72222
magnetotail, plasma distrib. 1979 March 31 and April 1 during substorms 7−94585
magnetotail, review of recent research 7−127647
magnetotail, stationary reconnection region 7−115169
magnetotail, topology of mag. field lines and current lines 7−72220
magnetotail, transient elec. field inside plasma sheet, from particle obs. 7−139866
magnetotail current layer, substorm mechanism, gyroviscous model 7−115177
magnetotail electron and proton bursts, numerical model 7−94602
magnetotail instability mechanism and substorm explosive onset 7−139860
magnetotail lobes, filamentary structures 7−94583
magnetotail observations during a substorm 7−79786
magnetotail open boundary, by MHD model 7−134078
magnetotail plasma ions, investig. using energy-angular-mass spectrometer 7−115168
magnetotail plasma relaxation following substorms, model 7−107661
magnetotail plasma sheet boundary, slow mode shock electron dynamics 7−94596
magnetotail resistive tearing instability, affected by equatorial mag. field feature 7−107663
magnetotail substorms and time-depend. model of reconnection process 7−94609
magnetotail theory 7−115180
MHD intermediate shocks 7−123768
modelling of magnetosphere configuration and behaviour, review 7−127646
nonlinear Alfven waves in the magnetosphere 7−115170
northward interplanetary mag. field-assoc. field aligned currents, global characts. 7−94587
numerical modeling of ionosphere and thermosphere; using imaginary source method 7−145754
P_{SC} 5 pulsations, obs. in geostationary orbit 7−88029
Pc 5 storm time wave, magnetic field aligned structure 7−107672
penetration of convective elec. field into ionosphere during substorm 7−145760
plasma characts. role of mag. field *(German)* 7−115160
plasma double layer form. conditions 7−120217
plasma drift wave low-freq. instability effect on Hall conductivity 7−145812
plasma layer, internal gravity waves propag. 7−88028
plasma mass density var. effect. on Pc 3 eigenfrequencies 7−94593
plasma numerical simulation, review 7−127652
plasma observations (from Dynamics Explorer 1) 7−94586
plasma organisation, comparison with other planetary magnetospheres 7−88154
plasma probing by active wave expts. on Viking satellite 7−139857
plasma sheet, ion composition at various geomagnetic and solar activity 7−139863
plasma sheet structure influenced by plasma flow, model and substorm application 7−94613
plasma-maser effects and radio emissions 7−115232
plasmapause, equatorial electron density step from temporal characts. of ionosphere VLF chorus 7−101641
plasmapause position, connection with upper ionospheric region of VLF chorus occurrence 7−101640
plasmasheet boundary layer, broadband turbulence convective growth 7−94595
inner plasmasphere, by numerical model 7−145754
plasmasphere, minor ion populations calcs. 7−115148
plasmasphere depletion and refilling due to mag. storm *(Chinese)* 7−101631
polar cap longitudinal elec. currents for S Hemisphere, rel. to IMF orientation 7−145779
polar cusp region, longitudinal elec. currents rel. to IMF orientation 7−145778
polar ionosphere, MHD slow shock model and polar wind 7−101623
polar ionosphere-magnetosphere current system interactions 7−72219
polar wind ion outflow influenced by thermosphere, numerical model 7−107634
polar wind outflow, by numerical model 7−120208
polar wind stability (3000 km to 10 Earth radii) 7−94606
precipitation of electrons and ions in auroral region, equatorward cutoff 7−134054
Project MASSA, lower atm.-ionosphere-magnetosphere relationships during seismoacoustic events 7−79607
radioemissions from auroral zone, significance to cyclotron maser instability 7−79783
radiowave emissions, auroral hiss and AKR observed by Viking satellite 7−107619
reconnected flux tube detailed structure 7−120222
reconnection and plasma acceleration 7−145786
reconnection in collision-free plasma, simple time-depend. model 7−94609
reconnection process and small-scale plasmoid formation 7−94601
relativistic electron flux in outer radiation belt, intensity vars. at orbit of geostationary satellite *(German)* 7−134093
resonant Alfven waves on auroral field lines 7−91309
response to IMF southward turning 7−94584
ring current and radiation belts, review 7−127649
ring current decay parameter estimation method 7−88035
ring current during mag. storms 7−139864
ring current dynamics anal. 7−79777
ring current evolution during substorms 7−134083
ring current geomagnetic effect modeling 7−88036
secondary cosmic rays distrib. outside radiation belts 7−72225
shock waves, research aspects 7−83248
shock waves of subcritical quasi-perpendicular type, plasma heating due to instabilities 7−107654
slot instability of inner boundary of plasma layer 7−145780
solar corona transients and influences on solar wind, magnetosphere and ionosphere 7−139876
solar cosmic ray flux spatial distribution in magnetosphere, implications for magnetosphere struct. 7−72226

magnetosphere continued
solar cosmic rays in magnetosphere, dynamics during mag. disturbances use for ring current dynamics investigation 7−79777
solar flare compact triplets, influence on geomagnetic activity 7−145794
solar wind and energetic particles effects (book) 7−88751
solar wind flow, shock geometry for supersonic and hypersonic flow 7−107673
solar wind interaction, geomag. quiet days in fluctuating activity rel. to solar wind flow in ecliptic plane 7−134073
solar wind MHD flow near the stagnation point 7−145776
solar wind-magnetosphere coupling, conf., Pasadena, USA (Feb. 1985) 7−95105
solar wind-magnetosphere interaction, geomagnetic disturbances (for minima of solar cycles 13 to 20) 7−94614
solar wind-magnetosphere-ionosphere system, current-voltage relationships 7−145783
source-surface model for planetary magnetospheres 7−101633
storm-time ring current, energetic neutral atom image 7−127640
substorm event, elec. fields and electron precip. during negative H-perturbation in early evening sector 7−134090
substorm expansive phase onset precursors, magnetic signatures 7−107671
tail modeling in stretched magnetosphere, methods and transformations 7−107656
tearing mode theory for magnetospheric plasma, influence of electrostatic effects 7−127644
terrestrial myriametric radiation, beamed emission obs. rel to upper hybrid waves conversion model 7−139861
thermal plasma physics, conf., Toulouse, France (June-July 1986) 7−72690
theta aurora plasma source regions and Birkeland current charge carriers 7−134085
transverse electric currents in auroral magnetosphere, role of plasma inhomogeneity and plasma turbulence *(German)* 7−134091
trapping conditions particles incident on magnetopause 7−94611
turbulence generated by accelerated auroral ions 7−94604
turbulence spectrum, fund. harmonics, anomalous particle fluxes effects 7−101636
upflowing ion beams of terrestrial origin, characts. showing solar cycle variation 7−107665
upstream electron foreshock, nonlinear plasma wave decay 7−107688
upstream region, fast shocks at edges of hot diamagnetic cavities 7−94598
upstream region, ion beams and ion-ion acoustic instability 7−107662
upstream solar wind, AMPTE-IRM plasma wave expt. 7−107687
upstream waves observed by ISEE and UKS spacecraft 7−127643
Viking artificial satellite program to study ionospheric and magnetospheric plasma 7−107653
Viking satellite project to study aurora, ionosphere and magnetosphere 7−107514
VLF and ELF intensities in outer ionosphere 7−115182
VLF and MF atmospherics, detect. via small loop antenna system with series-transformer network 7−134033
VLF attenuating quasi-periodic radiation, mode struct. 7−88033
VLF chorus source, implications of correl. between upper ionospheric chorus occurrence region and plasmapause position 7−101640
VLF emissions of half-gyrofrequency, wave normal directions and propagation 7−134087
VLF hiss emissions, geomagnetic conjugacy of L=6.1 ratio observations 7−115176
VLF transmitter signal causing precipitation from slot region 7−107628
waves and instabilities, review 7−127651
waves assoc. with flux transfer events, AMPTE IRM obs. 7−107670
whistler propagation in axisymmetric magnetic tubes 7−115171
whistler-mode instabilities of oblique type, quasilinear models 7−120220
whistlers, oblique mode waves guided along magnetic field lines 7−145775
X-ray background from trapped electrons, HEAO-A obs. 7−88617
O, ionospheric, acceleration to magnetosphere, cyclotron reson. with broad-band EM turbulence modelling 7−120207
O^+, O^{2+}, O^{6+}, C^{6+} energetic ions of ionospheric or solar wind origin 7−107658

magnetospheric electromagnetic wave propagation
cavities, radio wave polarization, theory 7−115179
interhemispheric VLF radiosignal propagation, mid-latitude conjugate obs. 7−139867
nonlinear Alfven waves in the magnetosphere 7−115170
radio windows in planetary magnetospheres, theory 7−115178
relativistic plasma EM wave propag., approx. theory 7−111240
terrestrial myriametric radiation, beamed emission obs. rel to upper hybrid waves conversion model 7−139861
VLF chorus propag., latit. vars. of temporal characts. rel. to plasmapause electron density step 7−101641
VLF chorus propagation, implications of correl. between upper ionospheric chorus occurrence region and plasmapause position 7−101640
VLF emissions of half-gyrofrequency, wave normal directions and propagation 7−134087
whistler capture by ducts in magnetosphere, angular estimate 7−88030
whistler propagation from Hawaii to New Zealand, ray tracing study 7−94542
whistler propagation in axisymmetric magnetic tubes 7−115171
whistlers, oblique mode waves guided along magnetic field lines 7−145775
whistlers at very low latitude, observations of man-made signals 7−94541
Z mode EM waves, by 3D ray tracing 7−134094

magnetostatic fields *see magnetic fields*

magnetostatic wave devices
magnetostatic wave propag. and excitations, Brillouin light scatt. studies 7−125355
surface magnetostatic waves spectrum in planar structure with ferromagnetic components with dielectric layers 7−132003
$BaFe_{12}O_{19}$, magnetostatic waves excitation at 20 to 80 GHz 7−118791
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7−118840

magnetostatic waves
cubic ferromagnetic material, arbitrarily magnetised film, magnetostatic waves 7−85391
damping of magnetostatic spin waves in substrates 7−125345
excitations in device structs., Brillouin light scatt. studies 7−125355
ferrite film, forward magnetostatic bulk wave excitation by point current element 7−70608

magnetostatic waves continued
ferrite films, surface magnetostatic waves excitation by point current element *(Japanese)* 7−132103
ferrite-garnet sample, optical plane wave, phase parameter determ. 7−132244
ferrite-semiconductor layered struct., excitation of magnetostatic waves by a scanning current 7−138209
ferromagnetic semiconductor, magnetostatic wave excitation by scanning current 7−125360
ferromagnetic slab, EM modes 7−129928
magnetic films, refraction of surface magnetostatic waves 7−85274
nonreciprocal surface waves in magnetic systems, review 7−118789
Permalloy films, surface magnons, Brillouin light scattering 7−125510
surface magnetostatic waves, noncollinear inelastic scattering by SAWs 7−143779
surface magnetostatic waves spectrum in planar structure with ferromagnetic components with dielectric layers 7−132003
$BaFe_{12}O_{19}$, magnetostatic waves excitation at 20 to 80 GHz 7−118791
Fe/Pd multilayers, collective magnetostatic spin wave excitation obs. 7−112777
Fe/W multilayers, collective magnetostatic spin wave excitation obs. 7−112777
^3H, solid, high polarised, magneto-static modes 7−118193
$HgCr_2Se_4$, carrier drag by magnetostatic waves, external mag. field and freq. depend. meas. 7−70332
$HgCr_2Se_4$, mag. semicond., magnetostatic and spin wave intensification 7−85273
$Mn_{0.73}Fe_{2.27}O_4$ ferrospinel film, propagation of magnetostatic waves, obs. 7−85277
$(Y,Ca)_3(Fe,Ge)_5O_{12}$ thin garnet films, magnetostatic spin waves, cubic and uniaxial anisotropy 7−138203
$Y_3Al_xGa_yFe_{5-x-y}O_{12}$, magnetoelastic and magnetostatic waves, dislocation accumulation 7−132002
YIG epilayers, magnetostatic soliton propag. at microwave freq., power response meas. 7−138299
YIG film, inhomogeneously magnetised, nondispersive MSFVW propag. 7−125513
YIG film, surface magnetostatic waves scatt. by anisotropy-induced acoustic waves 7−118792
YIG film-ferroelectric plate composite medium, reson. interaction of magnetostatic and slow EM waves 7−85276
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7−118840
YIG films, normally magnetised, nonlinear magnetostatic wave propag. study 7−77383
YIG films, surface magnetostatic wave freq. conversion 7−138293
YIG, ion-implanted periodic arrays, magnetostatic forward volume waves, reflection 7−143776
YIG LPE film, magnetostatic forward volume waves, optical probe meas. 7−143852
YIG:He^{3+}, magnetostatic waves, Bragg scatt. 7−132004

magnetostatics
3D elliptic BVPs, boundary integral approach 7−140450
3D magnetic field computation, vector finite elements 7−122775
3D nonlinear, solutions by integral equation method 7−129927
algorithms and problems for solutions of some physics problems 7−115699
Ampere force law in its line current element form, longit. forces 7−68504
Biot-Savart and Ampere force laws, equivalence 7−110194
boundary conditions in magnetic field problems 7−129926
educational tools, personal computers appl. 7−108121
electrophysical devices, algorithms and codes for magnetostatic field calcs. *(Russian)* 7−116745
field calcs., Galerkin method with singular shape functions *(German)* 7−141744
field synthesis and inverse boundary problem 7−136126
force on charge due to current-carrying wire, relativistic study 7−102047
inhomogeneous anisotropic plasma layer, EMP propagation with Gaussian envelope 7−134065
magnetic bubbles, magnetostatic energy and demagnetising energy 7−112909
magnetically isotropic samples, magnetisation distrib., magnetostatic problem *(Russian)* 7−138274
magnetostatic equilibria, 2D, plasma MHD, energy principle, stability 7−130854
multivalued mag. scalar pot. calc. in exterior regions 7−129934
neutral atoms, magnetostatic trapping fields 7−73434
SCIN synchrotron, superconducting magnets, magnetostatic field calcs., algorithms *(Russian)* 7−116745
switching contacts, magnetostatic current fields calc. 7−136124
uniaxial cylindrical mag. domain film, asymptotic solns. 7−70611
vector potential visualization 7−96924

magnetostriction
amorphous alloys, stress depend. of saturation magnetostriction 7−118848
amorphous films, saturation magnetostriction meas. by small angle magnetisation oscillations 7−85401
amorphous ribbons, coercivity changes over ribbon length 7−85359
antiferromagnets, intermediate state, magnetoelastic interaction effect 7−99538
C14 and C15 cpds., Laves structs., electronic struct., magnetism 7−84631
$CaFe_2Ge_3O_{12}$ garnet, static magnetostriction determ. 7−99539
eddy current losses, calcs. 7−118845
ferrites, characteristics and selection for particular appl. *(Italian)* 7−138273
fibre-optic dilatometer for measuring magnetostriction in ribbon samples 7−95624
garnet films, (100) and (110), H_2^+ implanted, mag. anisotropy 7−112880
Invar films, magneto-optical and mag. props. 7−113147
magnetomechanical acoustic emission, stress and sample shape effects 7−132120
metallic glass, magnetostrictive props., fibre optic magnetometer appl., bonding agent effects 7−106000
metallic glass magnetostrictive transducers, prep. and props., fibre optic magnetic sensors appl. 7−106002
metallic glasses, low-magnetostrictive ribbons, anisotropy and magnetostriction, indirect meas. 7−70620
metallic glasses, magnetostriction and short-range order 7−85402
polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521

magnetostriction continued
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 198 7−72736
rare earth alloys, $R_2Fe_{14}B$, spontaneous volume magnetostricti 7−143889
soft amorphous magnets, anisotropy and magnetostriction, pair moc calcs. 7−99542
strip, magnetostrictive, longitudinally polarized, elastic vibrations by exte nal magnetic field 7−97397
thin ribbons thermal expansion and magnetostriction meas. 7−140666
Au Fermi surface necks, uniaxial stress and strain derivatives 7−92486
CO-Nb-B glasses, magnetostriction, anomalous temp. depend. 7−85404
$CeAg_{1-x}In_x$, anomalous magnetostriction 7−125522
$Ce_xLa_{1-x}Al_2$ alloys, magnetostriction, temp. and mag. field depend. mea 7−118849
$Ce_{1-x}La_xB_6$, single cryst., magnetoelastic studies 7−77391
Co-based alloy 7−99537
Co-based metallic glasses, saturation magnetostriction, stress deper 7−132116
Co-Cr-M (M=Fe,Ta,Zr) alloy films for mag. recording, magnetostricti 7−99537
Co-Cr(Pt) alloy films for mag. recording, magnetostriction 7−99537
Co-Fe-Si-B, amorphous, stress annealing induced mag. anisotro 7−99440
Co-Fe-Si-B amorphous alloys, magnetostriction and mag. permeabil 7−85406
Co-FeO pigments for mag. recording, reversible coercivity vs. temp. loss 7−85370
Co-Si-B amorphous alloy ribbons, magnetostriction, induced anisotro and annealing effects, comp. depend. 7−70540
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural pro 7−92482
$(CoCr)_{90}Zr_{10}$, amorphous alloys, Curie temp., press. effects mea 7−118799
$Co_{67.8}Fe_{4.2}CrB_{12}Si_{15}$, glassy metal alloys, perminvar characts. 7−112918
$(Co_{0.94}Fe_{0.06})_{75}Si_{15}B_{10}$ metallic glasses, magnetostriction const. mea temp., stress, structural relax. depend. 7−85400
$Co_{75-x}Fe_xSi_{15}B_{10}$ amorphous alloy, mag. anisotropy, stress anneali 7−85283
$(CoMo)_{90}Zr_{10}$ amorphous alloys, Curie temp., press. effects mea 7−118799
$Co_{80-x}Nb_xB_{16}$, rapidly quenched alloys, magnetostriction, mag. pro 7−118846
$Co_{80}Nb_8B_{12}$, rapidly quenched alloy, magnetostriction, depend, on quenc ing rate, struct. relax. and temp. 7−112917
$Co_{94}Zr_6$ amorphous thin films, mag. and galvanomag. props. 7−112884
Cu sputtered films, struct. and mag. props. studies 7−112899
CuFe(Ni)(Zn) composites, elec. and mag. props. after thermal anneali 7−124961
Cu_2MnAl, Curie temp. meas., press. depend. *(Russian)* 7−138229
Dy-Y superlattices, mag. struct., neutron diffr. study 7−99409
$Dy_2(Fe,M)_{17}$(M=Co,Al), spontaneous magnetostriction, temp. deper 7−138303
$Dy_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and th mal expansion studies 7−125521
$ErFe_2H_x$ phase diagram, structural and magnetic props., neutron dif study *(French)* 7−83902
Eu_xYb_{1-x}, magnetoresist. and magnetostriction meas. 7−131620
Fe MBE films on ZnSe epilayers, mag. props. 7−118838
Fe sputtered films, struct. and mag. props. studies 7−112899
Fe/Cu multilayered sputtered films, struct. and mag. props. stud 7−112899
Fe-Al-Si sputtered films, mag. props. 7−112876
Fe-C films, dual ion beam sputtered, mag. props. 7−125976
Fe-Co-B amorphous alloy ribbons, magnetostriction, induced anisotro and annealing effects, comp. depend. 7−70540
Fe-Pd, mag. domain struct. rel. to FCT martensite variants 7−85348
Fe-Si sputtered films, mag. props. 7−112875
Fe-Si-Al Sendust alloy single crysts., mag. anisotropy and magnetostr tion, comp. depend. 7−70541
Fe-Si-B amorphous alloy mag. props. temp. depend. meas. 7−99506
Fe-Si-B-based amorphous alloys, mag. permeability and thermal stabil 7−85361
$Fe_{81}B_{13.5}C_2$, amorphous films, FMR and fiber optic interferometric stud 7−125541
$Fe_{82}B_{18-x}Si_x$ amorphous alloys, magnetoelastic behaviour, localis moment model explanation 7−99549
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloy, mag. props., stress depend. 7−143890
$(Fe_{1-x}Co_x)$-Si, B amorphous wires, Barkhausen discontinuities 7−12546
FeCoNi-based metallic glasses, induced anisotropy and magnetostricti temp. depend. 7−105912
$(Fe_{1-x}Co_x)_{70}(Si_{0.4}B_{0.6})_{30}$ amorphous ribbons, permeability temp. deper and magnetostriction 7−85354
$(Fe_{1-x}Co_x)_{77}Si_{10}B_{13}$, amorphous alloy, magnetostriction meas. *(Kore* 7−92487
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ metallic glass, magnetisation and magnetostriction o 7−106008
$(Fe_{1-x}Cr_x)_{80}B_{12}Si_8$ amorphous alloys, mag. props., effect of Cr additio *(Korean)* 7−131045
$(Fe_{1-x}Nb_x)_{80}B_{16}Si_4$, amorphous alloy ribbons, mag. domain props. rel. annealing and Nb content *(Korean)* 7−132070
$Fe_{80-x}Nb_xSi_5B_{15}$, rapidly quenched alloys, magnetostriction, mag. pro 7−118846
$(Fe_{1-x}Ni_x)_{80}B_{20}$, amorphous alloy, magnetostriction meas. *(Kore* 7−92487
$Fe_xNi_{80-x}B_{20}$, relax. processes, magnetoelastic meas. 7−85405
FeNiBSi-based metallic glasses props., process parameters deper 7−144565
$Fe_{25}Ni_{55}Si_{10}B_{10}$ metallic glass, mag. elec. and elastic props. 7−85362
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, Curie temp. press. effect 7−132118
Fe_3O_4 magnetostriction and thermal expansion near Verwey transiti temp. 7−143886
$Fe_{78}Si_{10}B_{12}$, RF sputtered thin films, SAW attenuation *(Japane* 7−124671
$Fe_{80}Si_6B_xP_{14-x}$, amorphous alloys, magnetostriction, soft mag. pro *(Korean)* 7−138279
Fe_xTiSe_2 electronic characts. and cryst. dimensionality, Mossbauer, ma suscept. and X-ray diffr. meas. 7−142725
G d_xAg_{1-x}, amorphous, magnetostriction, thermal expansion me 7−99544

magnetostriction continued
$Gd_{1-x}Tb_xAl_2$, noncollinear rotation of Gd^{3+} and Tb^{3+} mag. moments 7−125353
$Ho_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
Mg-Zn spinel ferrites, longit. mode magnetoacoustic reson. 7−105999
MnAlC(Ni) aligned mag., magnetoelastic props. 7−138302
MnAs, magnetovolume effects 7−143888
$NdCo_5$, uniaxial permanent magnet 7−138304
$Nd_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
Ni-Fe permalloy plate, kinetic magnetostriction phenomena obs. using fast scanning tunnelling microscope 7−124050
$Ni_{0.65}Zn_{0.35}Fe_{2-x}Mn_xO_4$, spinel ferrite, mag. and dielec. props. 7−125454
Tb-Dy alloy, mag. phase transition, press. effects *(Russian)* 7−143792
Tb-Dy magnetocaloric effect in antiferro. to ferromagnetic transition, magnetoelastic contrib. 7−92431
$Tb_{0.27}Dy_{0.73}Fe_{1.95}$ single cryst., anisotropic magnetostriction study 7−106001
$Tb_{0.27}Dy_{0.73}Fe_2$, single cubic Laves phase cpd., magnetostriction 7−118847
$TbFe_2H_x$ phase diagram, structural and magnetic props., neutron diffr. study *(French)* 7−83902
$Tb_xGd_{1-x}VO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
$TmPO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
$TmVO_4$, Jahn-Teller cryst., mag. field, influence on struct. phase transition *(German)* 7−132122
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7−69927
YIG photoinduced change in magnetostriction 7−143893
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble films, plasma exposure effect on mag. props. 7−112882
$Zn_2BaFe_{16}O_{27}$ hexaferrite, magnetostriction consts. and anisotropy energy temp. depend. study *(Russian)* 7−125525

magnetostrictive devices
amorphous metal DC magnetometer, magnetoelastic, stress-relieved 7−67351
amorphous metal ribbon, low freq. mag. field detection 7−140715
fibre optic magnetometer appl., metallic glass magnetostrictive props. study bonding agent effects 7−106000
giant, appls. for moment excitation 7−130611
metallic glass magnetostrictive transducers, prep. and props., fibre optic magnetic sensors appl. 7−106002
US magnetostrictive transducer output stage *(Russian)* 7−110741

magnetostrictive microphones *see microphones*

magnetostrictive transducers *see magnetostrictive devices; transducers*

magnetothermal effects *see magnetocaloric effects*

magnetovolume effects *see magnetomechanical effects*

magnetron sputter deposition *see sputter deposition*

magnetron sputtered coatings *see sputtered coatings*

magnetron sputtering *see sputtering*

magnetrons
balanced states of electron streams in a magnetron gun 7−129956
electron beam velocity modulation, water bag model anal. 7−108085
high-voltage discharge, anode sheath rot. instability 7−83558
magnetically insulated diode, electron diffusion, leakage currents, Fokker-Planck eqn. soln. 7−97815
planar magnetron sputtering cathodes, design, performance 7−134811
planar magnetron sputtering source 7−132456
H^- Fermilab magnetron source operation 7−141348

magnets
see also electromagnets; permanent magnets; superconducting magnets
achromatic, field variation calc. 7−80831
calibrating magnets, manufacture and use for magnetic meas. *(German)* 7−140716
fusion high field magnets, poloidal and toroidal currents, integrated system 7−74025

magnon-phonon interactions *see phonon-magnon interactions*

magnons
see also phonon-magnon interactions; spin waves
antiferromagnet, nuclear magnon slow relax. rate calcs. *(Russian)* 7−112985
antiferromagnetic Heisenberg-Ising ring, magnons and solitons 7−143777
antiferromagnetic paramagnon pairing mechanism, Fermi surface nesting, 2D model 7−118793
bis-methylammonium copper tetrachloride, strange attractor of chaotic magnons 7−77271
Bloch lines in ferromagnets, radiative damping of oscillations, excitation of magnons 7−143840
CHAB, ferromag. chain system, linear and nonlinear excitations 7−125352
cyclohexylammonium trichlorocuprate (II), mag. susceptibility, bound magnon contribs. 7−112768
diluted antiferromagnets, magnons and fractons 7−118785
disordered conducting antiferromagnets, spin wave damping, electron-magnon interaction 7−143775
ferromagnet, heating of spin system by strong laser field 7−85272
ferromagnetic insulators, spin wave excitations near interface, Bethe lattice approx. 7−77264
ferromagnetic metal, spin flip inelastic scatt. in EELS, model 7−106326
ferromagnetic periodic multilayers, statics and dynamics 7−92484
ferromagnets, stationary magnon packet, relaxation product accumulation 7−70536
ferromagnets and antiferromagnets, two-dimensional small-radius solitons 7−105937
Heisenberg ferromagnet, magnon and phonon spectra around the critical point 7−138259
incommensurate magnetic structs., Raman light scatt. tensor *(Russian)* 7−70761
magnetic reststrahlen-bands caused by magnon-polaritons in uniaxial ferrites 7−112212
magnetic semicond., electron spin wave amplification by laser interband absorption 7−105907
magnetic semiconductors, magnons, photostimulated amplification 7−143780
magnetoexciton interaction in two-dimens. structures 7−118371

magnons continued
metallic superlattices, model systems, struct., elec., and mag. phenomena 7−105349
metals, disordered fermion system, inelastic electron-electron scatt. time 7−105431
nonreciprocal surface waves in magnetic systems, review 7−118789
one-dimensional antiferromagnets, soliton dynamics 7−138211
paramagnons, effects in proximity sandwich 7−70488
Permalloy films, surface magnons, Brillouin light scattering 7−125510
m-polydiphenylcarbene, ferromag. props., periodic Kondo-Hubbard model calcs. 7−77201
quantum 1D ferromagnetic chains, two-magnon bound states spectrum study 7−143835
quasi-low-dimensional easy-axis ferromagnets, two-magnon bound state calcs. *(Russian)* 7−112775
quasi-one-dimensional magnetic chains, soliton dynamics 7−138210
semiconductors, dilute magnetic, magnetic properties, review 7−125391
semiinfinite magnetically ordered crystal, impurity electron-magnon states *(Russian)* 7−99443
singlet-triplet ferromagnets, two-magnon light absorpt. by surface collective excitations 7−92420
TMMC, soliton-magnon interference, obs. by AFMR 7−106029
$Bi_{3-2x}Ca_{2x}Fe_{5-x}V_xO_{12}$, magnon spectra, Brillouin scatt. study *(Chinese)* 7−118783
$Bi_xY_{3-x}Fe_5O_{12}$, magnons, Brillouin scatt. study *(Chinese)* 7−118784
$Cd_{1-x}Mn_xF_2$ mixed cryst., two-magnon and phonon Raman scatt. study 7−85717
Ce-based Kondo lattices, specific heat of heavy fermions 7−70556
$CeAl_2$, magnons, inelastic neutron scatt. meas., rel. to sp. ht. coeff. 7−77269
$CsCoCl_3.2H_2O$, 1D antiferromag., magnon sideband under mag. field 7−70752
$CsMnF_3$ antiferromagnetic, parametrically excited spin wave periodic density redistrib. obs. 7−105908
$CsNiF_3$ 1D easy-plane ferromagnetic magnons and solitons, nuclear spin-lattice relax. meas. 7−105909
$Fe_{82}B_{18-x}Ge_x$ amorphous alloys, elec. resistivity, coherent electron-magnon scatt. contribution 7−112289
$Fe_xNi_{80-x}B_{20}$, amorphous alloys, magnetic contribution to electrical resistivity 7−137903
$Fe_{90-x}Ni_xZr_{10}$ amorphous alloys, spin dynamics, inelastic neutron scatt. study 7−125347
$Mn_xZn_{1-x}F_2$, dil. antiferromag., spin dynamics 7−118786
NiO, electron tunnelling spectroscopy, magnons obs. *(Polish)* 7−131737
O_2, solid, mag. and dynamic props. in external mag. fields *(Japanese)* 7−131255
O_2, solid α- and β-, mag. coupling and dynamics, ab initio calcs. 7−85220
Pt_3Mn 3D metallic ferromagnet, forbidden magnons, polarised neutron studies 7−125350
Rb_2CrCl_4, planar ferromag., magnon and phonon Raman scatt. 7−106158
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7−118840
YIG films, normally magnetised, nonlinear magnetostatic wave propag. study 7−77383
YIG films, surface magnetostatic wave freq. conversion 7−138293
YbPd and Yb_3Pd_4, intermediate valent cpds., mag. response, inelastic neutron scatt. study 7−70527

Magnus effect *see fluid dynamics*

mainframes
personal computing in mainframe environment, SLAC installation 7−135804

maintenance *see maintenance engineering*

maintenance engineering
automated clearance system for safety system status, computer appls. at EdF 7−135531
BWR, 4-divisional design, reliability and maintainability *(German)* 7−109270
BWR 540 MW power plant pipe replacement project 7−122026
CAD/CAE systems for French nuclear power plants 7−96242
Clinton nuclear power station, reliability-centred maintenance program 7−135513
conference on nuclear power plant operation, Chicago, USA, Aug. 1987 7−134357
ECG diagnostic functionality assessment in Helsinki hospitals 7−114530
Electricite de France transmission network, tower maintenance and protection against corrosion 7−86486
electrostatic precipitator design, operation and maintenance guidelines 7−133161
EPRI operations and maintenance source book, strategic programme element 24 7−89635
FEMO-technique for remote operation and maintenance of nuclear fuel reprocessing modules 7−89624
French PWRs, maintenance and backfitting experience 7−96278
fusion reactors, CAD supported remote handling systems 7−74056
fusion reactors, remote handling and maintenance, design solns. 7−141306
interactive videodisc in maintenance operations on nuclear reactors *(French)* 7−135511
JET, robotics equipment and special purpose tools 7−122091
JET remote maintenance during active operation 7−74035
motorised valve packing, performance and maintainability improvements 7−122053
Muhleberg BWR, recirculation pipework replacement 7−141241
NET, maintenance of in-vessel components 7−122097
Norwegian hydroelectric power development 7−126545
nuclear plant maintenance, European practice 7−122035
nuclear plants, AI applications to safety and maintenance 7−116686
nuclear power plant component decontamination by ice-blasting *(Japanese)* 7−129446
nuclear power plant life extension through maintenance practices 7−135515
nuclear power plant life extension through operating and maintenance strategies 7−135473
nuclear power plant maintenance practices, performances and improvement requirements 7−81578
nuclear power plant out-of-core radiation reduction 7−89786
nuclear power plants, optimization of preventive maintenance 7−135514
nuclear power plants, technical and engineering services 7−109271

maintenance engineering continued
nuclear power station outage time for fuel reloading, maintenance and inspection *(Czech)* 7−73890
nuclear steam generator tube repair, stabilizer development, vibration anal. 7−141199
PWR core enclosure bolts, replacement procedure *(German)* 7−129378
railway equipment acoustic diagnosis 7−97240
reactor core holder bolts, exchange procedure *(German)* 7−129377
San Onofre Unit 2 nuclear power station, reliability-centred maintenance, appl. to auxiliary feedwater system 7−135512
Tennessee Valley Authority hydroelectric power system growth and dam safety improvements 7−126549
Majorana forces *see nuclear forces*
majority algebra *see algebra*
Malter effect *see secondary electron emission*
mammography *see diagnostic radiography*
man machine interfaces *see user interfaces*
man-machine systems
see also ergonomics; user interfaces
nuclear power station error prevention and reliability improvement by operating personnel, man-machine system *(Russian)* 7−89644
upper limb kinematics, exptl. approach and data treatment, ERGODATA system movements catalogue 7−114589
management
see also DP management; research and development management
nuclear power stations, advanced installation planning, model appl. *(German)* 7−133055
surface-groundwater systems, optimal cropping patterns determination using multilevel optimisation techniques 7−114848
management information systems
see also database management systems
River Bend Station Unit-1, nucl. construction project, planning and scheduling 7−129158
Mandelstam-Brillouin scattering *see Brillouin spectra*
Mandelstam representation
No entries
manganese
see also nuclei with .....
adlayers on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7−113307
alkaline cell impedance correl. with high-rate pulse discharge capacity 7−86776
alkaline cell impedance correl. with short-circuit current behaviour 7−86775
alkaline cell impedance spectrum interpretation 7−86774
atmospheric aerosols containing Zn, Cd, Pb and Mn *(Japanese)* 7−145646
atom, adsorpt. on stepped W surface, work function meas. *(Russian)* 7−112090
atom, ionised and excited, 3p-subshell absorpt., reson. struct. 7−90024
atom, K-electron capture, X-ray intensity ratio 7−129642
BCC, prediction of ferromagnetism 7−143773
biological reference materials, Mn, low level determ. by neutron activation anal. 7−133528
crystal binding and struct., electron correls. anal. 7−98031
determination in water, interference-free graphite furnace at absorpt. spectrophotometric method. 7−100649
dopant in dicalcium barium propionate, phase transitions under high press., EPR study 7−138315
evaporation kinetics, in vacuum arc steel melting 7−86146
films, optical props, 190-900 nm, annealing effect 7−106287
high temp. sulphide corrosion, scale growth and morphology 7−86438
layers on Ru (001), adsorption of O_2, H_2 and CO simple molecules 7−143207
β-Mn:C, dilute soln. thermodynamics 7−105080
oxidation states in solids, determ. by EELS 7−132391
Salamanca, Spain, meteorological effects on elemental concentration of atmospheric aerosols *(Spanish)* 7−144928
thermodynamic props., review 7−80196
valence-band photoemission, absence of two-electron resonances 7−125911
AlGaAs:Mn layers and AlGaAs/GaAs:Mn quantum wells, luminescence 7−70904
AlGaAs/GaAs:Mn quantum wells and AlGaAs:Mn layers, luminescence 7−70904
As_2Se_3:Mn glass, AC cond. freq. and temp. depend. meas. 7−105563
$BaTiO_3$:Mn, grain boundary resist., PTC effect 7−99069
$Bi_{12}SiO_{20}$:Al,Mn single crystals, transient electrooptical effects due to deep impurity states *(Japanese)* 7−132240
$Bi_{12}SiO_{20}$:Mn, absorption and circular dichroism spectra 7−144090
CaF_2:Gd,Mn, thermostimulated luminescence, sensitised mechanism 7−132350
CaF_2:MN, rare earth impurities, thermoluminesc. and optical absorpt. 7−138520
CaF_2:Mn TLD phosphor, dosimetric characts. 7−93953
CaF_2:Mn(Mn,Ce), dosimetry phosphor, optical absorpt., thermolum. 7−87235
CaF_2-AlF_3:Mn^{2+}, cathode and X-ray luminescence, long afterglow phosphors *(Japanese)* 7−125771
$Ca_5(PO_4)_3F$:Mn^{2+}, zero field splitting and impurity d-d transitions on Ca sites 7−92130
CaS:Mn, activated phosphor, electroluminesc. 7−119054
CaS:Mn^{2+}, ESR and fluoresc. emission studies 7−106018
$CdCl_2$:Mn^{2+}, zero-field splitting, temp. depend. 7−143420
CdF_2:Mn single cryst., characteris., lattice consts., dislocation density, microhardness, X-ray spectra 7−124310
$Cd(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
CdO:Mn^{2+} treated in CS_2 at 700°C, $Mn^{2+}Cd_m$ formation 7−84791
CdTe-Mn Schottky barriers and interface reactions 7−131735
Co/Mn compositionally modulated film struct. and FMR freq. depend. study 7−99579
$Co(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
Fe-Mn, ferromagnet, fine mag. struct., spectral diffusion *(Russian)* 7−105951
FeF_2:Mn, free electron laser far IR study 7−144074
GaAs:Mn, extrinsic p-type, Mn diffusion 7−69977
GaAs:Mn, Ni, Co, Cu films, MBE grown, effect of impurities on electrical props. 7−77110
GaAs:Mn^0, Mn acceptor electronic struct. 7−124915
GaAs/GaAlAs:Mn superlattices, impurity luminesc. studies 7−113274
manganese continued
$GaAs_{1-x}P_x$:Mn, transition metal photoluminescence 7−106247
$Ga_{1-y}In_yAs$:Mn, transition metal photoluminescence 7−106247
GaP:Mn^{2+}, EPR spectra, uniaxial compression effect 7−77398
InP:Mn, implant profiles and anomalous dopant diffusion, SIMS study 7−76192
KCl:Mn^{2+} crysts., impurity ESR obs. in regular environment 7−70632
KCl:Pb,Mn^{2+}, Mn^{2+} orange emission, fluoresc. intensity meas. 7−77639
$LaAlO_3$:Mn, solid aluminates, lumin. of Mn^{3+} ion 7−113270
$LiRbSO_4$:Mn^{2+}, optical absorpt. spectra 7−113235
$MgBr_2.6H_2O$:Pb^{2+},Mn^{2+}, photoluminescence 7−85830
MgF_2:Co^{2+}, Ni^{2+}, Mn^{2+} crystals, absorption and luminescence spectra 7−106255
$MgGeF_6.CH_2O$:Mn^{2+}, ferroelastic with incommensurate phase, ESR study 7−132125
MgO:Mn^{2+}, polycryst., ESR spectrum, powder pattern effects 7−132127
MgO:Mn^{2+}, single cryst., dielec. props. 7−85517
$MgTiF_6.6H_2O$:Mn^{2+} single crysts., ESR at phase transition 7−99559
Mn (II) doped Zn complex, EPR study 7−112934
Mn^+ excitation temp. meas. in Ar inductively coupled plasma using atomic emission spectra 7−133012
Mn^{2+} impurity systems, zero-field splitting, uniaxial stress effects 7−112271
Mn/SiO composite thin films, spectral selectivity meas. 7−138528
Mn-$MnCl_2$ vapour laser, 534.1 line structure 7−68623
Mn-Sb multilayered films, mag. props. 7−99515
MnI sextet relative oscillator strengths meas. 7−74514
NH_4ClO_4:Mn^{2+}, electronic absorpt. spectrum 7−92708
NaCl:Mn^{2+}, mag. transition, Suzuki phase, sp. ht. meas. 7−112823
NaCl:Pb,Mn^{2+}, Mn^{2+} orange emission, fluoresc. intensity meas. 7−77639
NaF:Mn^{2+} crystals containing F_2^+-like centres, lasing features, absorpt and luminesc. bands 7−97020
Na_2SO_4-$ZnSO_4$:Mn glasses, ESR and optical absorpt. of Mn^{2+} ions 7−132128
$Ni(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
a-Si:Mn, localised states spectrum of Mn impurity, Coulomb gap collapse 7−84773
SrF_2:Mn, local phase transitions with S state impurities 7−137538
YIG:Mn, anisotropy effects of implanted ions, FMR 7−125370
YIG:Mn, cryst. growth from PbO/B_2O_3 based melts, mag. anisotropy, Mn^{3+} contrib. 7−144260
YIG:Mn, top-seeded growth from high temp. soln., modification 7−85984
$ZnAl_2O_4$:Mn, solid aluminates, lumin. of Mn^{3+} ion 7−113270
ZnS:Mn on Y_2O_3 (quartz), thin films, electrolum. characts. and struct 7−138516
ZnS:Mn phosphor, photo and cathodoluminescence spectra *(Korean)* 7−85813
ZnS:Mn^{2+}, materials for electroluminescent thin films 7−77657
ZnS:Mn^{2+}, orbit-lattice coupling coeff., ligand field theory 7−124936
ZnS:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7−124935
ZnS:Mn^{2+} thin CVD films, EPR obs. 7−77401
ZnSe:Mn^{2+}, orbit-lattice coupling coeff., ligand field theory 7−124936
ZnSe:Mn^{2+}, spin-lattice coupling coeffs. 7−84787
ZnSe:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7−124935
$ZnSiF_6.6H_2O$:Mn^{2+}, temp. depend. of EPR zero-field splitting 7−92497
$ZnSiO_4$:Mn,Ga phosphorescence, quantum efficiency and photolum. fatiguing studies 7−85820
Zn_2SiO_4:Mn, phosphor, degradation under cathode ray excitation 7−92727
Zn_2SiO_4:Mn^{2+}, UV induced luminesc., temp. depend. *(German)* 7−92742
ZrF_6-BaF_2-LaF_3-AlF_3:Ni^{2+}, Co^{2+}, Mn^{2+} glass, absorption and luminescence spectra 7−106255

manganese alloys
see also Elinvar; Invar; manganese compounds
-: 7−137307
Cr-Fe-Mn, dilute, resonance impurity scatt. 7−70297
rare earth alloys, AMn_2, Laves phase cpd., magnetism, review *(Japanese)* 7−85319
rare earth alloys, RFe_{23} (Mn_{23}), dehydrogenation, thermodynamic study 7−105250
rare earth-Mn alloy, R_6Mn_{23}, f band spin polarisation 7−125319
steel, Cr-Ni-Mn-Mo, tensile and fracture data 7−78144
steel, high Mn, fused on layer, Young's modulus reduction 7−93047
transition metal alloys, AMn_2, Laves phase cpd., magnetism, review *(Japanese)* 7−85319
ZnMn uniaxially anisotropic spin glasses, zero-field muon spin relax. temp. depend. meas. 7−85318
AL-Si-Mn, melt spun, icosahedral and glassy phases, form., struct., X-ray scatt., TEM studies 7−97958
Ag-Mn, chemically induced grain boundary migration 7−76145
Ag-Mn, spin-glass dynamics from mag. noise, relax. and susceptibility 7−118802
Ag-Mn spin glasses, electronic structure, angle resolved UPS studies 7−77766
AgMn dilute RKKY spin glass. nonlinear suscept. meas. 7−125402
$Ag_{1-x}Mn_x$ dil. alloys, UPS study of Mn local moment 7−70976
Ag_5MnAl, Silmanal, vibr. damping capacity, heat treatment effects *(Russian)* 7−138763
AgMnSb dilute metallic spin glass, d'Almeida-Thouless transition, thermoremenance time decay meas. 7−125399
Al-based icosahedral phases, contrast variation effects on neutron diffraction patterns 7−83846
Al-Cu-Mg-Mn, notched specimens, fatigue life estimation under random loading 7−71290
Al-Cu-Mn, as-extruded and soln.-soaked structs., effect of thermomech process 7−100261
Al-Cu-Mn (4.5, 2 wt.%), directional solidification, dispersed intermetallic phase coarsening 7−132624
Al-Fe-Mn, nature of $FeAl_3$-liquid-(FeMn)Al_6 reaction 7−86135
Al-Ge-Mn, quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al-Li-Mn, elastic modulus, effect of ageing 7−113593
Al-Mg sheet, thermal and strain rate softening during necking and shear band form. 7−126193
Al-Mg-Mn, hot rolling deform., recrystallisation textures 7−100252
Al-Mg-Mn alloy powder, rapidly solidified, partitionless struct. obs 7−71164

manganese alloys continued
Al-Mg-Mn alloy powders, rapidly solidified, microstruct. charactn. 7−86156
Al-Mn, Al-Mn-Cu and Al-Zn-Mg-Cu-Mn powder alloys, supersaturated solid soln. decomp. kinetics 7−126128
Al-Mn, icosahedral and crystalline phases, extended energy loss study using parallel recording 7−131099
Al-Mn, icosahedral and related phases, form. by ion beam mixing 7−84064
Al-Mn, icosahedral phase, structural relationship with quasicrystalline phases 7−142591
Al-Mn, icosahedral phase form. by ion beam mixing and interdiffusion in interdigitated layers 7−104861
Al-Mn, icosahedral quasicrystals, peak shape obs. 7−124171
Al-Mn, melt spinning, electron beam surface melting, icosahedral and decagonal phase form. 7−77972
Al-Mn, oriented icosahedral, phason strain field, X-ray diffraction study 7−104639
Al-Mn, pentagonal dodecahedron formation by quasicrystal micrograins 7−91530
Al-Mn, quasicrystalline phases, melting temps. 7−111835
Al-Mn, quasicrystalline-amorphous structural transition, temp. and radiation dose depend. calcs. 7−124100
Al-Mn, rapidly solidified spray deposits, struct. 7−86071
Al-Mn, thermodynamics props., reviews 7−80197
Al-Mn (14 at.%), rapidly solidified droplets, icosahedral quasicrystals and glass form. 7−131052
Al-Mn (15 wt.%), melt spun ribbons, icosahedral phase crystallisation rel. to annealing rate 7−83696
Al-Mn (27 wt.%) ribbons, rapid solidification, microstruct., crystallisation 7−77969
Al-Mn alloy, icosahedral particles electron microscopy obs. 7−98043
Al-Mn alloy, icosahedral quasicrystal morphology, electron microscopic investigation 7−142706
Al-Mn alloy, quasicrystalline state study 7−137311
Al-Mn alloys, quasicrystal formation and thermal stability, I-phase, T-phase transform. 7−143028
Al-Mn icosahedral and hexagonal Al_4Mn alloys, NMR lines obs., magnetism 7−112968
Al-Mn icosahedral films, vapour deposition and struct. 7−118313
Al-Mn metallic glasses, electronic structure, soft X-ray appearance pot. study 7−144182
Al-Mn metastable crystalline, quasicrystalline and amorphous thin films, vapour deposition synthesis 7−143286
Al-Mn quasicrystal, single-phase, enhanced electronic Hall coefficient 7−143433
Al-Mn quasicrystal with 5-fold symmetry *(Japanese)* 7−76063
Al-Mn quasicrystalline alloy, neutron diffractometry, contrast variation technique, icosahedral phase 7−142588
Al-Mn quasicrystalline alloy studies, by STEM 7−142707
Al-Mn quasicrystals, electron microscopy, image contrast calc. 7−76085
Al-Mn quasicrystals, mag. moment and spin glass behaviour 7−77304
Al-Mn quasicrystals, struct., computer simulation studies 7−83699
Al-Mn rapidly quenched alloy, X-ray diffraction study of icosahedral phase 7−142698
Al-Mn system, phase equilib., stable and metastable 7−86134
Al-Mn-C (30, 0.8 wt.%), hot deformability, influence of microstruct. 7−113642
Al-Mn-Cr, ternary alloys, rapid solidification 7−92998
Al-Mn-Fe, noncrystallographic alloy phases, Fe and Mn sites, EXAFS study 7−85897
Al-Mn-Fe alloy, quasicrystalline phase ageing, phase natural struct. 7−144443
Al-Mn-Fe-Si, noncrystallographic alloy phases, Fe and Mn sites, EXAFS study 7−85897
Al-Mn-Mg, adhesive wear, metallography 7−78411
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Mn-Mg (1,1 wt.%), hot tensile ductility rel. to Pb impurities 7−86268
Al-Mn-Si, facet formation, grain shapes and spatial disorder 7−137245
Al-Mn-Si (10, 2.5 wt.%), dispersion hardened, powder metallurgy, yield stress, fatigue props. 7−138804
Al-Mn-Si alloys, cryst., quasicryst. and amorphous, positron annihilation study 7−77682
Al-Mn-Si alloys, quasicrystals, comparative electron microscopic study with Mg-Al-Zn alloys 7−137316
Al-Mn-Si icosahedral alloys, NMR lines obs., magnetism 7−112968
Al-Mn-Si icosahedral quasicrystal, dislocations, HREM studies 7−69704
Al-Mn(-Si), icosahedral, sputter deposition 7−100066
Al-Mn(-Si) quasicrystals, convergent-beam electron diffraction *(Japanese)* 7−98047
Al-Si-Mn, quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
$Al_{50}Ge_{40}Mn_{10}$, amorphous, comp. short-range order development on annealing 7−117825
AlMn solid solns., ^{59}Fe diffusion coeff. meas. 7−91900
Al_4Mn, sp. ht. meas. 7−105064
Al_6Mn, Al_4Mn, and $Al_{12}Mn$ polycrystals, NMR powder patterns, rel. to quasiperiodic materials 7−85457
Al_6Mn, pseudocrystal with five-fold symmetry, props. 7−91517
$Al_{78}Mn_{22}$ quasicrystalline decagonal alloys, low temp. sp. heat and magnetic meas. 7−77310
$Al_{79.5}Mn_{20.5}$, decagonal metastable phase, struct. as Penrose-type lattice, electron and X-ray diffr. 7−83852
$Al_{84}Mn_{16}$, icosahedral, sp. ht., comparison with related crystalline phases 7−105064
$Al_{86}Mn_{14}$ alloy, quasicrystalline phases 7−98040
$Al_{86}Mn_{14}$, quasicryst. and cryst., EELS of microscopic regions 7−77712
$Al_{86}Mn_{14}$, quasicrystal or cubic crystal structure 7−111454
$Al_{86}Mn_{14}$ quasicrystalline alloy, EPR study, spherical harmonics, icosahedral crystal field 7−143903
$Al_{86}Mn_{14}$ quasicrystals, struct. and crystallisation, DSC obs. 7−97937
$Al_{91}Mn_5B_5$, rapid solidification, quasi-crystalline precipitates with icosahedral morphology 7−78031
$Al_7(Mn_{1-x}Fe_x)_2$, decagonal, X-ray diffr. and Mossbauer spectroscopy 7−69658
AlMnFeCrUSi, pentagonal symmetry *(Dutch)* 7−91516
AlMnSi quasicrystals, disorder, X-ray diffr. and TEM studies 7−142709
$Al_{50}Mn_{12}Si_7$, sp. ht. meas. 7−105064
$Al_{72}Mn_{22}Si_6$ rapidly quenched quasicrystalline alloy, fracture process obs. 7−142902

manganese alloys continued
$Al_{85}Si_1Mn_{14}$ quasicrysts., thermal transform. to conventional crysts., two-step mechanism 7−105002
Au-Mn alloys, arrangement of Mn atoms in re-entrant spin glass 7−131098
Bi-Mn, dil. alloy directional solidification, mag. props. 7−105960
CdMn dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
Co-Mn, oxidation, 1273-1473 K, scale struct. 7−106695
Co-Mn, positron-defect interactions arising during multilayer struct. form. *(Russian)* 7−124289
Co-Mn-B amorphous alloys, elec. resist. 7−98976
Co-Ni-Mn-Re-P film, perp. magnetised, prep. by electroless plating, undercoating layer effect *(Japanese)* 7−92898
Co(AlMn) alloys, struct. and mag. props. 7−132069
$CoAl_{1-x}Mn_x$, structural study 7−69647
$(Co_{1-x}Cu_x)_2MnAl$ alloys, hyperfine fields in ^{27}Al nuclei 7−92135
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
$Co_2MnAl_{1-x}Si_x$ Heusler alloys, hyperfine fields, NMR spin echo studies *(Russian)* 7−70670
CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118
Cr-Mn alloys, mag. phase diagram near triple point 7−77287
Cr-Mn-Os-Ru, elec. resist. anomaly and Neel temp. *(Russian)* 7−76880
Cu-Al-Mn martensite, positron annihilation study 7−126118
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7−78009
Cu-Mn, FCC solid solns., anomalous dislocation densities, TEM study 7−76133
Cu-Mn, mag. phase diagram, EPR study *(Russian)* 7−112788
Cu-Mn (13 at.%), electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
Cu-Mn (20 at.%), ordering and solute segregation to dislocations 7−86184
Cu-Mn dil. spin glass alloys, sp. ht. below 30 K 7−138241
Cu-Mn nonmag. alloys, kinetics of martensitic transformation, Neel point *(Russian)* 7−104984
Cu-Mn spin glass, coexisting aging states 7−92441
Cu-Mn-Al, high temp. coeff. of elec. resist., comp. effect *(Japanese)* 7−98979
CuMn spin glass, torque relax. meas. 7−143816
CuMn, spin glass, ultrasonic velocity meas. 7−76303
CuMn spin-glass materials for high-pressure sensors 7−95573
CuMn, stacking fault energy, dislocation struct., transmission electron microscopy study 7−142788
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
Cu_2MnAl amorphous spin glass film, orientation depend. relax. obs. 7−125397
Cu_2MnAl, Curie temp. meas., press. depend. *(Russian)* 7−138229
$Cu_{0.9}Pd_{0.1}MnSb$, magnetic structure 7−125325
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7−118797
$Er(Fe_{1-x}Mn_x)_2$ quasibinary intermetallide, local at. distribs. 7−76087
$Er_2Fe_{14-x}Mn_xB$, moment canting, magnetisation effects 7−112852
$Er_2Fe_{14-x}Mn_xB$, site occupancy study 7−117862
$(Fe,Mn)_{80}P_{20}$, amorphous alloy, crystallisation, time-resolved neutron thermodiffractometry 7−142630
Fe, cast, high-Mn austenitic, wear resist., hardness and toughness 7−78259
Fe-Al-Mn, low temp. mech. props. rel. to phase struct. *(Korean)* 7−138785
Fe-Al-Mn-C, oxidation, high temp. investig. 7−138905
Fe-Al-Mn-C (8.7, 29.7, 1.04 wt.%), austenitic fatigue, dislocation microstruct., TEM obs. 7−113697
Fe-Al-Mn-Cr, high temp. corrosion in aggressive atmospheres 7−86430
Fe-Al-Mn-Cr, morphology of A12 α-Mn precip. 7−144420
Fe-CR-Mn-C, laser clad alloys, microstruct. and wear props. 7−78256
Fe-Co-Mn-B-Si amorphous ribbons, mag. aftereffect studies 7−92470
Fe-Co-2Mn alloy, mag. props. stability, annealing temp. effect 7−77276
Fe-Cr-Mn, indentation microhardness of γ and ε phases 7−113678
Fe-Cr-Mn-C alloy laser clad, evolution of microstructure 7−86482
Fe-Cr-Mn-N, microstruct.-comp. relationships and M_s temps. 7−100263
Fe-Mn, Fe-Cr-Mn, neutron irrad., void swelling, phase stability 7−86132
Fe-Mn, martensitic transformations *(Japanese)* 7−113552
Fe-Mn, toughness rel. to microstruct. 7−132739
Fe-Mn alloys, FCC, electronic struct., charge-density meas. 7−105385
Fe-Mn alloys, FCC, electronic struct., spin-density meas. 7−105386
Fe-Mn alloys *(Japanese)* 7−113552
Fe-Mn containing ε-martensite, friction and wear, struct. transformations *(Russian)* 7−77995
Fe-Mn system, thermochem. and phase equilib. data 7−131333
Fe-Mn-Al, mag. struct. investig. 7−86373
γ-Fe-Mn-Al(Cr), antiferromag., resist., temp. depend. *(Chinese)* 7−143788
Fe-Mn-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
Fe-Mn-C, martensitic transform., thermodynamic calcs. of M_s and driving force *(Chinese)* 7−132611
Fe-Mn-C (12, 0.8 wt.%), pearlite-austenite growth interface 7−77991
Fe-Mn-C (12, 0.8 wt.%), pearlite growth mechanism 7−77992
Fe-Mn-C alloy, FCC, C distrib. among interstitial sites, neutron diffr. obs. 7−98214
Fe-Mn-Ni-Si alloys, oxidation-induced transformations, kinetics 7−106670
Fe-Mn-P, Fe-Mn, intergranular embrittlement, P segregation 7−78197
Fe-Mn-Si, martensitic transformations *(Japanese)* 7−113552
Fe-Ni-Mn, superplasticity due to isothermal martensitic transform., phenomenological anal. *(Japanese)* 7−100294
Fe-Ni-Mn alloy, α' to γ transform., secondary austenite form. 7−144397
Fe-Ni-Mn spin glasses, mag. props. 7−105936
Fe-Ni-Mn-C alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7−142871
Fe-Si-Mn, high Si steel, erosion behaviour with austempering 7−71322
$Fe_{70}Al_{30-x}Mn_x$, mag. props. 7−125394
FeMnB metallic glasses, near linear temp. depend. of thermopower 7−84832
$(Fe_{100-x}Mn_x)_{0.83}B_{17}$, metallic glasses, mechanical props. 7−86360
$Fe_{80-x}Mn_xB_{20}$, amorphous alloys, Curie and crystallization temps. 7−132012
$Fe_{80-x}Mn_xB_{20}$ metallic glasses, hyperfine mag. field, comp. and temp. depend., Mossbauer spectra meas. 7−77441

manganese alloys continued
$Fe_{81.8}Mn_{1.6}B_{16.6}$ glassy alloys, low temperature resist. and thermoelec. power *(Russian)* 7−137888
$Fe_{71.5}Mn_8B_{9.5}Si_{11}$ amorphous, Curie temp., influence of struct. relax. 7−97977
$Fe_{80-x}Mn_xB_{14}Si_6$, amorphous and crystallised, elec. resist., 300-1200 K 7−98972
FeMnC, FCC, atom interaction and distribution 7−98035
FeMnP, hyperfine interaction, mag. struct. 7−118438
$(Fe_{100-x}Mn_x)_{75}P_{15}C_{10}$ amorphous cpd., mag. field sensor, cryogenic appls., Hall signal probe 7−89231
$Fe_{0.9}Mn_{0.1}Ti$, H storage alloys, absorptive behaviour 7−126660
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
$Fe_{65}(Ni_{1-x}Mn_x)_{35}$, plastic deformation, magnetically induced Invar hardening 7−76275
$Gd(Mn_{1-x}Co_x)_2$, hyperfine props., NMR study 7−132141
$GdMn_2Si_2$, mag. ordering, X-ray, magnetisation and Mossbauer studies 7−138224
$LaNi_3Mn_2$, surface props., H_2 storage material 7−98645
Mg-Mn alloy sputtered films, spin glass transition obs., mag. suscept. meas. 7−118814
Mn-^{111}Cd system, hyperfine interactions, PAC studies 7−113017
Mn-Al magnets, texture, neutron TOF diffraction 7−106529
Mn-Al sputter deposited film, ferromag. τ phase charactn. 7−113385
Mn-Al-B melt-spun alloys, mag. props. *(Japanese)* 7−125464
Mn-B amorphous alloys, magnetism, elec. transport 7−112761
Mn-Bi films, prep. by multilayering, write-in charcts. 7−143870
Mn-Cu-Ni-Fe-Al, struct. transform. in specimens alloyed with Ni, Fe and Al 7−100221
Mn-Ga thin films, amorphous, crystn. of selected areas, domain image 7−83755
Mn-Ge-Zr(Nb), antiferromag., elastic props. and thermal expansion 7−144455
Mn-Ge-misch metal alloys, Invar charcts., machinability *(Japanese)* 7−76460
Mn-Nb, high temp. sulphide corrosion, scale growth and morphology 7−86438
Mn-Nb amorphous alloys, mag. and elec. props. 7−76876
Mn-Te, liq., electrical conductivity 7−84808
Mn-Ti, mechanically alloyed, glass form. 7−142643
Mn-Y amorphous alloys, mag. and elec. props. 7−76876
Mn-Y amorphous alloys, spin glass charcts., AC suscept. study 7−105929
Mn-Zr amorphous alloys, mag. and elec. props. 7−76876
MnAlC(Ni) aligned mag., magnetoelastic props. 7−138302
MnAuCu(Ag) dilute spin glass critical behaviour, Dzyaloshinsky-Moriya interaction effects 7−125401
Mn_xB_{100-x} amorphous system, magnetism studies 7−112816
MnBi, film, angular dispersion of mag. anisotropy, three-dimensional study 7−70600
MnBi films, preparation, magnetic and magneto-optic props. 7−99533
$Mn_{0.67}Cu_{0.33}$, phase separation kinetics 7−137572
MnCuZn, rare earth metal additions, effects on structural, mechanical and corrosion resistance props. *(Chinese)* 7−132807
$(MnFe)_{100-x}Bi_x$ evaporated films, microscopic struct. and mag. props. 7−112871
$Mn_xFe_{1-x}Pt_3$, Hall effect, mag. fields up to 15 T, mag. transition *(Russian)* 7−105533
MnNi single cryst., mag. struct., compressive loading *(Russian)* 7−105886
$Mn_{0.7}Ni_{0.3}$ FCC alloy, anomalous elastic props. 7−119302
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7−112742
MnP itinerant-electron ferromagnet, paramag. neutron scatt. cross section meas. 7−112776
Mn_3Si, pure and Fe-doped, itinerant antiferromag., mag. excitations 7−138207
$Nd_2Fe_{14-x}Mn_xB$, mag. anisotropy 7−132010
$NdMn_2Si_2$, metamagnetic phase transition, magnetocaloric effect 7−132017
Ni-Mn (2 wt.%) polycrystals, plastic deform., annealing, island grains form. 7−78043
Ni-Si-Mn-Fe, high temp. corrosion in SO_2-O_2 gas mixtures 7−86433
Ni_3Al-Ni_3Mn, $L1_2$-type intermetallic cpd., high-temp. strength and ductility 7−113622
$Ni_{75}Al_{25-c}Mn_c$ solid solns., mag. props., plastic deform. effects 7−70621
$Ni_{80}Fe_{20}$-FeMn(α-Fe_2O_3)(TbCo), exchange coupled alloys, temp. stability 7−125514
NiFeCuCrMn mu-metal ferromagnetic overlayer, Nb flux-pinning effect, magneto-optical obs. 7−143737
Ni_3FeMn, magnetic and atomic ordering, temperature and order parameters *(Russian)* 7−143793
Ni_3FeMn, structural and mag. ordering, impurity effects 7−85284
NiMn, low conc. alloys, satellite hyperfine fields 7−118436
NiMn, mixed layer cpds., electron diffr. effects 7−142761
NiMn, reentrant spin glass state, NMR study 7−132155
$Ni_{0.81}Mn_{0.19}$, reentrant single crystals, mag. struct. obs. in applied field 7−99412
$Ni_{75+x}Mn_{25-x}$, x=1,4, hyperfine interaction 7−118437
$Ni_{75}Mn_{25}$ spin glass alloy, magnetisation vector meas. 7−112812
Ni_2MnGa, Heusler alloys, hyperfine mag. field meas. 7−118431
NiMnSn alloys, crystallographic and mag. struct., neutron diffr. studies 7−69651
PdAuMn, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
Pd_3Mn, disorder-order system, elec. resist. anomalies, H solubilities 7−76883
Pd_3Mn-H system, reversible transitions between ordered structs. 7−132610
Pd_2MnSn, Heusler alloys, hyperfine mag. field meas. 7−118431
$Pr_2Fe_{12-x}Mn_xCo_2B$, mag. props. Mn substitution effects 7−138219
Pt-Mn-Sb RF sputtered films, magneto-optical props. 7−144042
Pt_3Mn 3D metallic ferromagnet, forbidden magnons, polarised neutron studies 7−125350
PtMnSb thin films, RF sputtered, optical, mag. props., Kerr magneto-optical effect meas. 7−118841
PtMnSb/NiMnSb multilayer films, preparation and magneto-optical Kerr effect 7−138431
$SmMn_2Ge_2$, P-T mag. phase diagram 7−132018
$ThMN_4Al_8$, mag. props. 7−77252

manganese alloys continued
Ti-Mn, fracture surfaces during tensile separation, investig. of unusual features caused by adiabatic shear 7−144551
Ti-Mn, two-ductile phase alloys, stress-strain behaviour 7−78121
$TiMn_2$, Laves phase, electron density and struct. determ. 7−124172
Ti_xMn_{1-x} alloys, magnetic transition, elec. resist. and independent electron subsystem states, conc. depend. meas. 7−70549
UMn_2, cubic-orthorhombic transformation, rhombohedral precursor 7−98431
UMn_2, Laves phase, electronic struct., LMTO calcs. 7−76761
U_6Mn, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
UMn_4Al_8, mag. props. 7−77252
$Y_2(Fe_{1-x}Mn_x)_{14}B$ alloys, magnetic and crystallographic props., comp. depend. study 7−125448
YMn_2, itinerant electron magnet, paramag. neutron scatt. study 7−85240
YMn_2, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{0.9}Al_{0.1})_2$, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{1-x}Al_x)_2$, characteristic spin fluctuations, thermal expansion and susceptibility meas. 7−132034
YMn_2H_x, mag., crystallographic and H absorpt. props. 7−98466
Zn-Mn electroplated coatings on steel, corrosion resist. *(Japanese)* 7−119429
ZnMn dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
$Zr_{1-x}Al_xMn_2$, Friauf-Laves phases 7−117863
$ZrMn_2H_x$, mag., crystallographic and H absorpt. props. 7−98466
$Zr_{1-x}Si_xMn_2$, Friauf-Laves phases 7−117863
$Zr_{1-x}Ti_xMn_2$, Friauf-Laves phases 7−117863

manganese compounds
see also manganese alloys
ferrite, ferrimag., mag. electron Compton profiles 7−138537
ionic solutions, local order at Mn site, XANES studies 7−83646
manganese tris-acetylacetonates, radiation decomposition 7−106811
$Mn_{1-x}Zn_xFe_2O_4$ ferrites, single crystal growth, segregation, Scheil eqn. 7−106396
oxalate dihydrate linear chain system, cryst. and magnetic struct., neutron diffr. study 7−99407
oxides, Mn oxidation states in solids, determ. by EELS 7−132391
$Ba(Mn,Ti)_xFe_{12-x}O_{19}$, cryst. growth from soln., struct., Curie temp., chem. anal. 7−83818
$BaMnF_4$ antiferroelec. short range order, microstructural modification and phase transitions 7−85543
$BaMnF_4$, incommensurate dielectric, linear cryst. acoustics, piezoelectricity 7−98357
$Ca_2Fe_{2-x}Mn_xO_5$, mag. props., struct. effects 7−105902
$CaMnF_5$, Mn(III) fluoride, Jahn-Teller effect *(German)* 7−104697
$Ca_{1-x}Mn_xFe_2O_4$, cryst. struct., substitutional local chem. press. effects study *(French)* 7−124220
$Ca_3Mn_2Ge_3O_{12}$ garnet, antiferromag., obs., of new mag. phase, magnetisation curves meas. 7−125381
(Cd,Mn)Se; Raman scattering at low temp. and high magnetic fields 7−140759
$Cd_{1-x}Hg_xSe$, semimag. semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
CdMn Te, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$(CdMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$(Cd_{0.917}Mn_{0.083})_3As_2$, exchange interaction, effect on quantum transport 7−70328
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semiconductor, preparation, structure and mag. props. 7−70532
$(Cd_{1-x}Mn_x)_3As_2$, magnetisation meas. 7−70585
$Cd_{1-x}Mn_xCr_{2-y}V_ySe_4$, combined cation substitution, solid solutions *(Russian)* 7−124195
$Cd_{1-x}Mn_xF_2$ crystals, electronic structure, photoemission studies 7−105401
$Cd_{1-x}Mn_xF_2$ mixed cryst., two-magnon and phonon Raman scatt. study 7−85717
$Cd_{1-x}Mn_xS$ magnetically mixed crysts., p-d exchange interaction anomalies 7−84789
$Cd_{1-x}Mn_xS$, Raman scatt. from antiferromagnetically coupled Mn^{2+} ion pairs 7−92421
$Cd_{1-x}Mn_xS(Se)(Te)$, semimagnetic semicond., electronic props., photoemission survey 7−138599
$Cd_{1-x}Mn_xS(Te)$, high-field magnetisation steps and nearest-neighbour exchange const. meas. 7−99502
$Cd_{0.9}Mn_{0.1}Se$, large negative magnetoresist., Hall coeff., magnetisation meas. 7−84940
n-$Cd_{0.95}Mn_{0.05}Se$, semimag. semicond., nonmetal-metal transition study 7−76775
n-$Cd_{0.95}Mn_{0.05}Se$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
$Cd_{1-x}Mn_xSe$, magnetically mixed semiconductor, spin optical orientation 7−138490
$Cd_{1-x}Mn_xSe$ powders, random internal fields distrib., EPR lineshape study 7−92489
$Cd_{1-x}Mn_xSe$, Raman scatt. from antiferromagnetically coupled Mn^{2+} ion pairs 7−92421
$Cd_{1-x}Mn_xSe$ solid solns., variation of optical energy gap with composition 7−70735
$Cd_{1-x}Mn_xSe(Te)$, magnetic polaron form. dynamics, picosec. photolum, study 7−99433
CdMnTe, energy gap, influence of mag. fluctuations 7−76763
CdMnTe magnetically mixed semiconds., optical bistability mechanism 7−75038
CdMnTe, reflectivity spectra modified by Mn density of states 7−113223
CdMnTe, spin glass, dynamic mag. susceptibility, Faraday rotation meas. 7−77294
CdMnTe, synthesis by implantation of Mn into CdTe 7−91611
CdMnTe-CdTe:In doped superlattices, growth by photoassisted MBE, physical props. 7−77803
$Cd_{0.55}Mn_{0.45}Te$, Faraday effect, wavelength and temp. depend. 7−85607
$Cd_{0.8}Mn_{0.2}Te$ dilute mag. semicond., integrated mag. spectroscopy obs. 7−125450
$Cd_{0.96}Mn_{0.04}Te$, high energy electron and ion ejection during pulsed laser evaporation 7−85902
$Cd_{1-x}Mn_xTe$ films, epitaxial growth by ionized-cluster beams and magneto-optical props. 7−113442

manganese compounds continued
$Cd_{1-x}Mn_xTe$, fundamental reflectivity spectra, influence of 3d Mn electrons 7−70832
p-$Cd_{1-x}Mn_xTe$, deep electron traps 7−76805
$Cd_{1-x}Mn_xTe$ diluted mag. semicond., zero field muon spin relax. studies 7−92564
$Cd_{1-x}Mn_xTe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Cd_{1-x}Mn_xTe$ epitaxial films, hot-wall evaporation 7−126000
$Cd_{1-x}Mn_xTe$, excitons, energy struct., dynamics, refl. spectra 7−98812
$Cd_{1-x}Mn_xTe$, high press. phase transition, Raman scatt. study 7−119006
$Cd_{1-x}Mn_xTe$, mixed crystal amalgamation bands, mobility edge luminescence 7−125778
$Cd_{1-x}Mn_xTe$, Mn 3d states in photoelectron spectra, electronic struct., parametrised tight-binding model 7−92833
$Cd_{1-x}Mn_xTe$, Mn-derived partial density of states 7−70159
$Cd_{1-x}Mn_xTe$, phase transition, high-press. Raman scatt. obs. 7−85687
$Cd_{1-x}Mn_xTe$, photoluminescence, temp., pressure depend. 7−144116
$Cd_{1-x}Mn_xTe$, press. induced B3-B1 phase transition, EDX diffr., elec. resist. meas. 7−98436
$Cd_{1-x}Mn_xTe$ semimag. semicond., band struct. and phase stability 7−124860
$Cd_{1-x}Mn_xTe$ semimagnetic semicond. and binary constituents, total-energy and band-struct. calcs. 7−70230
$Cd_{1-x}Mn_xTe$, semimagnetic semiconductor, transient luminescence, automatic picosecond single-photon-counting spectroscopy *(Japanese)* 7−108670
$Cd_{1-x}Mn_xTe$, shallow energy surface states 7−70371
$Cd_{1-x}Mn_xTe$, spin glass freezing, universal scaling, mag. suscept. meas. 7−99472
$Cd_{1-x}Mn_xTe$, temp. depend. photocond., photolum. and UPS studies 7−85794
$Cd_{1-x}Mn_xTe$ thin films, diffusive vapour transport, growth kinetics 7−84553
$Cd_{1-x}Mn_xTe$:P,As, elec. and optical props. studies 7−131658
$Cd_{1-x}Mn_xTe$-CdTe, superlattice, photoassisted MBE, substitutional doping 7−132472
$Cd_{1-x}Mn_xTe$-CdTe superlattices, UV excited photolum., Raman scatt. 7−85787
$Cd_{1-x}Mn_xTe_x$, polycrystalline powder, stress effect of grinding 7−106458
$Cd_{1-x}Mn_xTe_{1-y}Se_y$, energy gap, valence band struct. 7−76771
$Cd_{1-x}Mn_xZ(Z=S, Se, Te)$ 3d partial density of states, p-d hybridisation, photoemission study 7−92834
$Cd_xZn_yMn_zTe_{1-w}Se_w$ semimag. semiconds., EPR linewidth temp. depend. anal. 7−70626
$Cr_{1-t}Mn_tAs$, paramag.-helimagnetic transition, struct. and mag. charcts 7−132020
$CsMnBr_3$ triangular antiferromagnet, spin wave props., inelastic neutron scatt. meas. 7−85250
$CsMnBr_3$ triangular antiferromagnet, spin waves, neutron scatt. study 7−125348
$CsMnF_3$ antiferromagnetic, parametrically excited spin wave periodic density redistrib. obs. 7−105908
$CsMnF_3$ antiferromagnetic bound electron-nucleus mag. system, solitons 7−112779
$CsMn_xMg_{1-x}Br_3$ crysts., Mn^{2+} cluster mag. excitations, inelastic neutron scatt. study 7−85251
$Cs_2R_2(MoO_4)_3$, (R=Ni,Co,Mg,Mn,Cd), struct. investig. 7−142740
Cu/MnO interface, photoemission 7−138581
$(CuInTe_2)_{1-x}(MnTe)_x$ diluted mag. system, phase relationships 7−124451
(Fe, Mn)WO_4, wolframite, spherical agglomeration of particles from dispersion 7−93468
$Fe_{2.1-x}Mn_xAs$, (x=1.30,1.35), mag. transition temp., pressure derivative 7−143798
$Fe_{1-x}Mn_xO$, high temp. elec. props., defect struct., comp. depend. and semicond.-metal transition obs. 7−118491
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
$Fe_xMn_{1-x}WO_4$, wolframite, Mossbauer hyperfine interactions 7−125570
p-HgCdMnTe bicrystals, quantum Hall effect and magnetoresistance under hydrostatic press. 7−76977
$Hg_{1-x-y}Cd_xMn_yTe$, magnetoresistance, quantum limit regime 7−112376
$Hg_{1-x-y}Cd_xMn_yTe$, spin modulated energy state, Shubnikov-de Haas analysis *(German)* 7−125311
$Hg_{1-x}Mn_xSe(Te)$, semimagnetic semicond., electronic props., photoemission survey 7−138599
HgMnTe, acceptor binding energy, photoconductivity and magnetoconductivity meas. *(German)* 7−124927
HgMnTe, exchange splitting of shallow acceptor, photocond. and transmission meas. 7−76803
p-$Hg_{0.915}Mn_{0.085}Te$, semimag. semicond., nonmetal-metal transition study 7−76775
p-$Hg_{0.915}Mn_{0.085}Te$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
$Hg_{1-x}Mn_xTe$ (Se), diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Hg_{1-x}Mn_xTe$, acceptor ionisation energy in high mag. fields 7−76804
$Hg_{1-x}Mn_xTe$, MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Mn_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
$Hg_{1-x}Mn_xTe$, magnetoresist., Hall effect and phase differences between quantum oscills. 7−143485
$Hg_{1-x}Mn_xTe$ narrow gap semiconductors, magnetophonon effect in high elec. fields *(German)* 7−125030
$Hg_{1-x}Mn_xTe$ p-n junctions, charcts. 7−77055
$Hg_{1-x}Mn_xTe$, zero-gap semimagnetic semicond., anomalous magnetoresist. anisotropy 7−84934
$Hg_{1-x}Mn_xTe$-CdTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
$Hg_{1-x}Mn_xTe$-CdTe superlattices, MBE grown, characterisation 7−77056
$Hg_{1-x}Mn_xTe$-CdTe superlattices, type III-type I transition 7−131754
$Hg_{1-x}Mn_xTe$-HgTe superlattices, MBE growth 7−132463
KBr:MnO_4^-, matrix isolated vibr. spectra, IR and Raman selection rules anal. 7−108108
KBr:MnO_4^- cryst., resonant Raman scatt. excitation spectra 7−85659
$KMgF_3$:Cr^+, equilib. Cr^+-F^+ distance determ. 7−84746
$K_2MnCl_4.2H_2O$, mag. transitions 7−99451
$KMnF_3$, superexchange interaction, Madelung correction effect calcs. 7−143782
manganese compounds continued
$K_2Mn_xZn_{1-x}F_4$, dil. antiferromagnet, break-up of long range order, zero mag. field 7−112749
$kMnF_3$, tetragonal phase, domain volume distrib. 7−76424
La_2O_3-MnO-Nb_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
La_2O_3-MnO-Ta_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
Li-MnO_2 cells, impedance anal. 7−126584
Li-MnO_2-CF_x hybrid cathode jellyroll cells, performance charcts. 7−93487
$Li_xMn_2O_4$ spinel phases, struct. refinement, neutron diffr. study 7−83910
$Li_xMn_3O_4$ and $LiMn_2O_4$ spinel electrodes for Li batteries, review 7−139097
Mn (III) fluorides, chain compounds, mag. behaviour *(French)* 7−105910
Mn As (Sb) structural transforms., microscopic theory, electron-lattice interaction matrix element calcs. 7−76389
Mn-Fe-O spinels, Mn cation, deficient, reduction-reoxidation behavior, TGA, elec. cond. meas. 7−113903
Mn-$MnCl_2$ vapour laser, 534.1 line structure 7−68623
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
Mn-Zn ferrite, single cryst., dielec. spectrum *(Japanese)* 7−132183
Mn-Zn ferrite single crysts., haematite second phase form., SEM and TEM obs. 7−113561
Mn-Zn ferrites, spinels, NMR spin echo study 7−138346
Mn-Zn-Ti ferrite single crysts., Barkhausen jumps study 7−138284
MnAs, magnetovolume effects 7−143888
MnAs, magnetovolume effects 7−143892
$MnAs_{1-x}P_x$, sp. ht., low-high spin anomaly 7−118811
$Mn_{1-x}Cd_xF_2$ mixed crystals, mag. props., EPR study 7−85413
$Mn_xCd_{1-x}Se_4$ crystal growth from vapour phase by chem. transport, EPR 7−100025
$Mn_xCd_{1-x}Te$ single crystals, props. for photovoltaic appls. 7−131707
$MnCl(Br)(I)_2$ photolum. and absorpt. spectra temp. depend. study 7−85823
$MnCl_2.4H_2O$, ^{54}Mn pulsed NMR of oriented nuclei 7−132152
$Mn_{1-t}Cr_tAs$, helimag. states transitions, phase diagram and strong mag. field effects studies 7−118809
$MnCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
MnF_2, bending-rot. Hamiltonian, semirigid model 7−141563
MnF_2, Gibbs free energy meas., using composite dispersed solid electrolyte 7−144736
MnF_2 interface with Fe (110) epitaxial layer, magnetic surface anomalies persistence obs. 7−132100
MnF_2, single crystal time of flight neutron diffr., comparison with monochromatic techniques 7−83589
MnF_2:Er^{3+} 7−85818
$Mn_xFe_{1-x}Cl_2.4H_2O$, heat capacity, thermodynamic fns. 7−84314
$MnFeF_5(H_2O)_2$, inverse weberites, frustrated magnetic and crystal structures, powder neutron diffr. 7−77237
$MnFe_2O_4$, domain walls, subharmonic nuclear spin echo 7−132162
$MnFe_2O_4$, electrical properties at the Neel temp. 7−125032
$MnFe_2O_4$ ferrite, ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
$MnFe_2O_4$ films, MOCVD, saturation magnetisation, coercive force *(Japanese)* 7−113421
$MnFe_2O_4$, ultrafine ferrite particles, mag. props. 7−77373
$Mn_{0.73}Fe_{2.27}O_4$ ferrospinel film, propagation of magnetostatic waves, obs. 7−85277
$Mn_{0.863}Fe_{2.137}O_4$ ferrite, elec. cond., thermoelec. power, cation distrib. 7−118479
$Mn_xFe_{3-x}O_4$, electronic magnetic relaxation 7−125330
$Mn_xFe_{3-x}O_4$ ferrite, anomalous elec. props. 7−143496
Mn_3Ge_5, high press. synthesis, cryst. struct., elec. resist., thermoelec. power meas. 7−112334
$MnGeO_3$, pyroxene, diamond anvil cell synthesised, Raman microprobe obs. 7−70820
MnH_x, binding energy, energy bands and paramagnetism 7−69642
$Mn_xHg_{1-x}Te$, thermo-EMF meas., mag. field effects study *(Russian)* 7−125033
Mn(II)Cu(II)Mn(II), heteropolymetallic systems, spin state structs. investig. 7−112756
$MnIn_2S_4$, lattice parameter and thermal expansion coeff. variation at elevated temp. 7−84329
$Mn_{1-x}Mg_xFe_2O_4$ mixed ferrite, fat IR spectra studies 7−106183
$MnMoO_4$, vibr. spectrum, Raman and IR obs. 7−85741
$MnNaSi_2O_6$, cryst. struct. refinement, X-ray diffr. study 7−104644
$Mn_{1-x}Ni_xCO_3$, competing antisymmetric exchange and weak ferrimagnetism 7−70537
MnO, high defect content, elec. cond., defect interactions 7−70319
MnO, high temp. deform. 7−78093
MnO, Mn^{2+}, zero-field splitting, uniaxial stress effects 7−112271
MnO, preferential sputtering and surface composition 7−119104
MnO-Al_2O_3-SiO_2 spin glass system, calorimetric and susceptibility studies 7−112819
MnO_2 based K-cathodes for Li primary cells 7−100703
MnO_2, soft fluorescent X-ray emission spectra, energy sites and relative intensities 7−109926
MnO_2:Rb, polymorphs, hydrothermal synthesis and IR spectra 7−113363
MnO_2-Zn Polapulse battery for Polaroid camera 7−144810
Mn_2O_7, force consts. and thermodynamic fns. calc. *(German)* 7−74561
$Mn_2O_7^{2-}$+ninhydrin, chem. oscillator, in continuously stirred tank reactor 7−126423
Mn_3O_4, effect on kinetics of growth of $CaSiO_3$ from melt 7−106397
MnOOH, isomorphic compounds, modulating magnetic structures *(Russian)* 7−125313
MnO(100), thermally induced surface reconstruction 7−105217
MnP, mag. struct. as probed by ^{57}Fe, Mossbauer spectra meas. 7−99410
$Mn_2P_4O_{12}$, vibr., IR and Raman spectra 7−85619
$Mn_7(PO_3(OH))_4(PO_4)_2$, cryst. struct., X-ray diffr. study *(French)* 7−98054
MnSb single crysts., spin reorientation, FMR study 7−118865
MnSb thin films, magneto-optical effects, waveguide appls. 7−123197
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
$MnSe_2$ mag. struct. and transitions, neutron diffr. studies 7−125315
$MnSe_2$ polycryst., magnetic ordering, neutron diffr. study 7−112794

manganese compounds continued
MnSi, ^{55}Mn nucl. spin relax. critical divergence, muon-nucl.-spin double relax. 7−125584
Mn_3Si:Fe, magnetic excitations, inelastic neutron scatt. study 7−125346
Mn_2SnTe_4, amorphous cpd., chemical control of electronic props. 7−112335
Mn_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
$MnSo_4$, soft fluorescent X-ray emission spectra, energy sites and relative intensities 7−109926
$Mn_{1-x}Te_x$ liqs., elec. cond., thermopower and electronic struct. studies 7−105562
Mn_xTe_{1-x}, dilute alloys, mag. susceptibility 7−99421
$Mn_{0.5}Te_{0.5-x}Sb_x$, mag. phase transition studies 7−125383
$MnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
$MnTiS_2$, intercalation cpd., press. depend. of electrical resistivity 7−76957
Mn_xTiS_2 intercalation cpds., photoemission studies 7−125905
MnV_2O_6 polymorphism, X-ray and DTA studies 7−142683
MnZn ferrite, mag. spectra, temp. depend. of mag. permeability *(Russian)* 7−112857
MnZn Ferrite formation, Mossbauer study 7−138360
MnZn ferrite power, molten salt synthesis, EM shielding appls. 7−77900
MnZn ferrite thin film with soft mag. props., sputter prep. 7−85389
MnZn ferrites, mag. spectra, mag. state, influence of external field, mag. aftereffect 7−143861
$Mn_{1-x}Zn_xF_2$ dilute antiferromagnets, mag. mom. and suscept. temp. and freq. depend 7−105901
$Mn_xZn_{1-x}F_2$ cpds., NMR of F, line profile, 4.2 to 300 K *(German)* 7−132157
$Mn_xZn_{1-x}F_2$, dil. antiferromag., spin dynamics 7−118786
$Mn_xZn_{1-x}F_2$, phase transitions, metastable states, random fields 7−77325
$Mn_xZn_{1-x}F_2$, phase transitions and metastable states in the presence of random fields 7−85336
$Mn_xZn_{1-x}F_2$, random anisotropy and exchange in antiferromagnets, ground state props., excitations 7−138212
$MnZnFe_2O_4$, intrinsic mag. props., DTMG and DTA studies 7−143785
$Mn_{0.8}Zn_{0.2}Fe_2O_4$, ferrite, nuclear gamma resonance spectra, influence of electric field 7−132168
$Mn_{1-x}Zn_xFe_2O_4$ ferrites, IR absorpt. spectra study 7−138460
$Mn_{1-x}Zn_xFe_2O_4$ magnetic heads, single cryst. wear resist. anisotropy rel. to surface brittleness anisotropy 7−78263
$Mn_{1-x}Zn_xFe_xO_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7−77912
$Mn_{1-x}Zn_xO$, spin glass transition, susceptibility studies 7−143814
NH_4MnCl_3, lattice and NH_4 modes, Raman spectra above and below cryst. phase transition 7−99854
$Na_{0.7}MnO_2$ bronze, defect struct. w.r.t. electrochem. cathode pot., elec. cond., thermoelec. and thermogravimetric meas. 7−119536
Ni-Mn-O thermistors, form. and elec. props., X-ray diffr., SEM and AES studies 7−92176
$Ni_{1-x}Mn_xH_y$ disordered alloy hydrides, magnetoresist. and mag. suscept. meas. 7−84937
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7−144350
NiO-Mn_3O_4 mixture, resist. and I-V meas. of Mn_3O_4 and nickel manganite depend. on Mn_3O_4 content, thermistor use 7−143465
$Ni_{0.65}Zn_{0.35}Fe_{2-x}Mn_xO_4$, spinel ferrite, mag. and dielec. props. 7−125454
PbF_2-MnF_2-$Pb(PO_3)_2$ glassy system, ion conduction and cond. maxima 7−137620
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$-MnO relaxor ferroelec. ceramics, dielec. ageing effects 7−99740
$Pb_{1-x}Mn_xSe$, magnetisation and susceptibility 7−138285
$Pb_{1-x-y}Mn_xSn_ySe$, semiconductor laser diodes, g-factor, compositional depend. 7−70172
$Pb_{1-x}Mn_xTe$, band struct. in high mag. fields, magneto-optical methods 7−132246
(PbSnMn)Te, ferromagnetism under high pressure 7−99449
Pb(Ti,Mn)O_3 and (Pb,Ba)(Ti,Mn)O_3 PTC and NTC effects 7−131649
RbCl-$MnCl_2$-H_2O salts, isodimorphism 7−76093
$RbMnCl_3$, ferroelastic, surface sound waves near phase transitions 7−131411
$RbMnF_3$:Nd^{3+}, nonradiative energy transfer without lifetime quenching 7−85818
Rb_2MnF_4, layered magnet, staircases of mag. struct. 7−131991
$RbMn_xMg_{1-x}F_3$, nonradiative energy transfer without lifetime quenching 7−85818
SiO_2-Mn_2O_3, coating flat glass by dipping into metal-organic solns., semi-empirical model 7−86064
$SrMn_2Fe_{16}O_{27}$ hexaferrite, mag. props., phase formation 7−138231
ThF$_4$-ZnF$_2$-YF$_3$-BaF$_2$-ZrF$_4$-NaF-LiF-MnF$_2$, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
α-$TlMnCl_3$, weak ferromagnet, reorientation of mag. moment 7−143794
$V_{1-x}Mn_xO_{2-2x}F_{2x}$, metal-insulator transition, structural, magnetic and electrical props. *(French)* 7−105402
$Y_3Fe_{5-x}Mn_xO_5$ films, X-ray microanal., Monte Carlo modelling *(Czech)* 7−98728
$(ZnMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$Zn_{1-x}Mn_xS$, low energy emission bands, time resolved spectroscopy study 7−138504
$Zn_{1-x}Mn_xS(Se)(Te)$ dilute mag. semicond., Mn-Mn exchange interaction 7−125363
ZnMnSe, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$Zn_{0.45}Mn_{0.55}Se$, dilute mag. semicond., mag. ordering, neutron diffr. studies 7−125317
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
$Zn_{1-x}Mn_xSe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Zn_{1-x}Mn_xSe$, high-field magnetisation steps and nearest-neighbour exchange const. meas. 7−99502
$Zn_{1-x}Mn_xSe$, magnetospectroscopy studies *(German)* 7−125028
$Zn_{1-x}Mn_xSe$, semimagnetic semicond., electronic props., photoemission survey 7−138599
$Zn_{1-x}Mn_xSe(Te)$, spin glass behaviour below percolation limit 7−70547
$Zn_{0.95}Mn_{0.05}Te$, magnetisation meas. in mag. fields up to 42 T 7−99423
$Zn_{1-x}Mn_xTe$, localised excitations, press. and temp. depend. 7−85826
$Zn_{1-x}Mn_xTe$, low temp. high field magnetisation step obs. 7−92464
ZnMnX (X=Se, Te), dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
manganese compounds continued
ZnSe-(ZnMn)Se superlattices, exciton lumin., electric field induced shift 7−138481
ZnSe-MnSe-ZnSe heterojunctions, valence band discontinuities, UP meas. 7−112445
ZrF_4-BaF_2-LaF_3-AlF_3-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
manipulators *see industrial robots*
manometers
see also pressure measurement
interference nanometer for pressure to 120 kPa, using Hg meniscus an He-Ne laser 7−110433
precision differential capacitance manometer 7−67344
twin-wire resistance-probe water manometer charact. 7−95542
manufacture
see also electron device manufacture; electronic equipment manufacture steel manufacture
ultra-hard materials 7−113461
manufacturing computer control
see also computerised numerical control; flexible manufacturing system process computer control
optical fibre for shop floor links 7−110581
manufacturing processes
see also cold working; cutting; drawing (mechanical); extrusion; forging forming processes; hot pressing; hot working; joining processes; machining; manufacture; rolling; sintering
ceramics, manufacturing costs 7−71128
composites reworking automation using permanent mag. field 7−144323
ion implantation for component wear charact. improvement 7−71375
laminated and reinforced metal composite manufacture and properties *(Spanish)* 7−86094
metallic glass production and mechanical properties *(Spanish)* 7−86122
press working industry, use of online ultrasonic inspection syster 7−123411
Tore Supra toroidal field coils, dimensional manufacturing accuracie 7−135652
toroidal coils, internal connections, manufacturing process *(French* 7−135642
manufacturing resources planning *see operations research; production contro*
many-body problems
see also BCS theory; quantum statistical mechanics; renormalisation
alkali metal atoms, second-order energies, third-order matrix element 7−96523
atomic configurations with several open shells, many-body problem 7−103379
atomic electronic excitation, effective local pots., many-body theor 7−74728
atomic many-electron problem, g-Hartree mean-field, QED ana 7−122387
atomic photoionisation cross sections, many-body calcs. 7−122480
atoms, Dirac eqn. soln., variational approx., appl. to H- and Be-lik systems 7−122384
atoms, relativistic many-electron Hamiltonians study 7−141453
Bell-type inequality to distinguish between 2-body and 3-body nonsepar ability 7−115842
bound state problems, statistical features of effective Hamiltonia 7−140596
charged particle interactions in few-body systems, quantum mechanica scatt. theory, review 7−128368
coherence, chaos, and broken symmetry in classical, many-body dynamica systems 7−95484
conference on few body physics models and methods, Lisbon, Portuga (Oct. 1986) 7−128197
constrained N-particle systems, Hamiltonians 7−89107
Coster-Kronig satellite spectrum, many-body theory 7−90077
Coulomb systems, Fluctuation-Dissipation theorems 7−128428
Coulomb systems, monotonicity and concavity, eigenvalues, excitons an biexcitons 7−95386
Coulombic interaction, Rayleigh-Schrodinger perturbation theory, diag rammatic method 7−96818
cyclopropene analogues, ionisation energies, Green's function ab initi study 7−81950
dense fluid, equilibrium/non-equilibrium Lyapunov spectra 7−128432
dense noble gases, mean field model for many-body forces 7−80580
density functional theory, exchange-correlation potential, discontinuit 7−131506
dilation analytic methods and complex scaling 7−128369
dynamical many-polaron systems, 1D, field-theoretical approac 7−118381
dynamics of four particles in hyerspherical coordinates classical quantur Hamiltonians 7−89013
Efimov effect in a four-body system 7−140491
electron solids, 2D, ground state energy in high mag. fields 7−131509
electron tunnelling, image potential, many-body self-energy formalisr 7−118547
electronic excitations, effective local pots., many-body theory 7−76722
energy theorems for many-particle systems 7−67258
fermion many-body theory, unitary group formulation 7−109707
few body bound state, harmonic oscillator basis, variational method 7−128366
few body scattering and bound state problems in momentum spac 7−128362
few body systems with realistic interaction, ATMS method 7−128973
few-body systems, semiclassical methods, scatt. theory appl. 7−128374
fluid, vibr. relax., many-body scatt. formalism 7−74739
formaldehyde, dissoc. reaction energies, coupled cluster and MBPT calcs 7−93266
four-body equations in momentum space, multichannel quantum scatt theory 7−128365
freeon single unitary group formulation 7−109706
harmonic polynomials, hyperspherical expansion method in many-bod theory 7−128367
intermediate valence systems, spectroscopic properties, many-body theor 7−76840
many-electron atoms, radiative transition matrix elements, field theor approach 7−122352
many-electron systems, correlation and relativistic effects, Dirac-Coulom eqn., double perturbation theory 7−122385
many-particle effects in nearly integrable systems 7−67039
molecular crystals, high press. effects, ab initio SCF approach 7−131236

many-body problems continued
molecular relativistic many body problem, CI calcs. 7−122380
multimode systems, reson. Raman scatt., temp. depend., many-body approach 7−91748
N-body quantum system, spinless, nonrelativistic, time evolution operator anal. 7−140511
N-body Schrodinger operator, absence of high energy resonances, dilated Hamiltonian eigenvalues 7−102215
nonrelativistic many body theory, charges and symm. breaking without locality, review 7−128741
nonrelativistic Schrodinger eqn., bound state and Faddeev problems, spline expansion technique 7−128364
nuclear many-body problem theories, variational and Green fn. Monte Carlo methods 7−109053
numerical methods for quantum many body theory 7−115845
one-body and many-body Coulomb scatt., charged particle emission and detection sources 7−67052
particle-number-dependent theory of few- and many-body systems 7−95387
phase organization 7−95402
photogravitational three-body problem, nonstationary solns. 7−73175
point group symmetry adaptation in Clifford algebra unitary group approach 7−108281
quantum mechanics, new approaches to selected topics, book 7−95770
quasidegenerate many-body perturbation theory, unitary transformations on model space 7−89898
relativistic atomic many-body problem 7−108394
restricted 3-body problem, topology of Jacobi levels with no zero velocity curves 7−73233
scattering amplitudes at low energies, existence and analyticity 7−80594
semiconductor superlattices, integral Landau level filling, magnetoplasma modes 7−124898
semiconductors, doped, bulk and low-dimensional, optical spectra, many-body aspects 7−106113
semiconductors, ultrafast relax. phenomena, nonequilib. statistical operator method appl. 7−119044
simple liquid, vel. autocorrelation function, high freq. asymptotic behaviour 7−75953
single impurity Anderson model, many body phenomena simulations 7−124910
stellar plasma, partially ionized, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
strange sets, scaling struct. and thermodynamics 7−128488
three-body problem, modification of hyperspherical coordinates 7−95388
three-body problem, separable expansion techniques 7−128972
three-body problems, scatt. and bound states, continued fractions methods 7−128363
three-body systems, modes of internal motion 7−95456
three-body t-matrix, separable expansion methods 7−128372
toroidal coordinates for a three-body problem 7−140519
transition metal alloys, interatomic interaction problem, pseudopotential method 7−105442
unitary group in quantum chem., book 7−66855
variational and Green's fn. Monte Carlo methods 7−128254
Wigner transform, 1D model for nuclear many-body systems 7−109054
(π,X), many-body absorption processes in Δ isobar region 7−109240
B_2H_6 dissociation to BH_3, enthalpy, vibr. spectra, coupled-cluster and MBPT theory 7−135846
Be, multiconfiguration Hartree-Fock and MBPT calcs. 7−141449
C, ground state, fine struct. isotope shift, ab initio calc. 7−74470
Ca, partial photoionis. cross sections and reson. struct. determ. 7−141541
Eu, reson. photoemission, open-shell and solid state effects 7−144231
Fe, BCC, photoemission, inverse photoemission, fluctuations, exactly soluble many-body cluster model 7−100013
H_3, pot. surfaces and nonadiabatic coupling, double many-body expansion 7−103357
H_3^+, van der Waals long-range interactions, wave fn. calcs. 7−82313
H_2F_2 potential, many-body expansion, long-range electrostatic contributions 7−96817
HO_2 potential, many-body expansion, long-range electrostatic contributions 7−96817
$(H_2S)_2$, ionisation energies, MBPT calcs. 7−74403
N, ground state, fine struct. isotope shift, ab initio calc. 7−74470
S_2, effective valence shell Hamiltonian, electronic struct. and bond length depend. 7−81929
YbP, 4f XPS spectrum, Anderson model calc., spin-orbit splitting 7−77756

many-particle systems *see statistical mechanics*

many-valley semiconductor materials *see many-valley semiconductors*

many-valley semiconductors
deep electronic impurity states 7−112242
disordered, spin dephasing time due to weak scatt. processes 7−105932
effective mass, nonstationary transport, modelling 7−76742
electronic levels, intervalley scatt., shallow-deep instabilities 7−137847
high magnetic field superconductivity 7−85183
impact ionisation, lucky drift theory, test by Monte Carlo simulation 7−112351
inelastic intervalley scatt., relax. times, freq. dispersion of conductivity, weak heating conditions 7−112320
Landau level splitting by dislocations, cyclotron resonance 7−70650
photopinning of interlayer domain walls, many-valley semiconductors under multivalued anisotropy conditions 7−131704
quasi-2D systems with anisotropic and tilted valleys, magnetooptical transitions 7−77516
two-valley semiconductor, hot-electron noise, analytic model 7−137993
$Al_xGa_{1-x}As$, variband cryst., hot electron noise, mag. field effect 7−99079
GaAs, intervalley transitions, passive near-cathode space 7−84908
Ge, exciton complexes 7−84695
$In_{0.8}Ga_{0.2}P$ solid solutions in strong elec. fields, intervalley scattering 7−76963
InP, intervalley transitions, passive near-cathode space 7−84908
PbS-PbSe superlattice, magnetotransport and photoconductivity, mag. fields to 8 Tesla 7−131776
PbTe-$Pb_{1-x}Sn_xTe$ superlattices, envelope fn., electronic struct. and symm. props. 7−143597
Si, exciton complexes 7−84695
Si shallow donor diamagnetic susceptibility pressure dependence calculations 7−76824

many-valued logics
see also logic circuits
optical logic gates, multiple-valued, complement and literals 7−136220

manybody problems *see many-body problems*

map drawing *see cartography*

maraging steel *see alloy steel*

marine systems
see also ships
EAVE-East, autonomous unmanned submersible, appl. to microscale photographic undersea survey 7−94512
ocean hydrothermal ore deposits, submarine robot for exploration *(Japanese)* 7−101551
sonar methods used in offshore oil industry 7−134010
sonars for submersible vehicles, for obstacle avoidance and obstacle searching 7−134011
STAR-VUE, tactical ice navigation workstation, design criteria and system description 7−115118
towed vehicle for dye dispensing at depth, design and dispensing methods 7−94513
unmanned submersible for underwater exploration, dynamics and control 7−117687

Markarian galaxies
see also Seyfert galaxies
emission-line galaxies, spectral classification method 7−95018
Markarian 116 (=I Zw 18), narrow-band imaging of galactic nucleus 7−80105
Markarian 190 (NGC 3928), bulge-dominated compact spiral galaxy 7−80095
Markarian 206, IR and radio emission from blue dwarf galaxy 7−88623
Markarian 231, 273, Seyfert galaxies, high-vel. wings obs. in OH megamaser emission 7−95026
Markarian 231, Seyfert 1.5 galaxy, high resolution U-band surface photometry 7−134312
Markarian 297, precise positions and BR photometry of bright knots 7−140253
Markarian 297 and 325, clumpy irregular galaxies, high-dispersion spectroscopy 7−128044
Markarian 315, jetlike feature assoc. with Seyfert I galaxy 7−88618
Markarian 348 (=NGC 262), optical and radio obs. of tidally disrupted galaxy 7−115606
Markarian 421, BL Lac object, optical variability obs. (1980 to 1986) 7−72593
Markarian 421, BL Lac object, simultaneous multifreq. obs. (December 1984 to January 1985) 7−128059
Markarian 421, optical var. and nucleus characts. 7−115605
Markarian 421, photometry of BL Lac object, underlying galaxy 7−140303
Markarian 421, simultaneous multifreq. obs. of BL Lac object 7−101930
Markarian 509, EXOSAT X-ray spectrum 7−128066
Markarian 52, starburst-nucleus galaxy, obs. of blueward-asymmetric emission-line profiles 7−140282
Markarian 533, Seyfert 2 galaxy, nucleus bright emission-lines nature 7−72581
Markarian 845, Seyfert 1 galaxy in Bootes void, optical spectrum and redshift 7−128069
Markarian 90, corrected position rel. to obs. of SN 1987C 7−80017
Markarian 90, March 1987 supernova discovery 7−88471
Markarian 90, spectroscopic obs., precise position and V-magnitude of SN 1987C 7−88485
Mkn 876 (PG 1613+65), low-redshift quasar, assoc. galaxy cluster detect. and interacting galaxy model 7−146102
Mrk 205, quasar, assoc. with NGC 4319 disturbed spiral galaxy 7−140279
Mrk 205, quasar, evidence for link with NGC 4319 spiral galaxy 7−140280
Mrk 90, SN 1987C, spectral identification as Type II object 7−94915
near-IR CCD imaging system, Markarian 171 interacting galaxies obs. 7−80880
nuclei, spectral energy distribs. between 0.1 and 100 microns 7−88614
optical and IR lumin., comparison with normal galaxies 7−140290
Seyfert galaxies, far-IR fluxes rel. to star form. 7−72610
SN 1987C in Markarian 90, March 1987 supernova discovery 7−88471
starburst galaxies, far-IR luminosities for individual galaxies 7−101940
starburst galaxies, H I 21-cm emission survey 7−80088
starburst galaxies, IRAS obs. 7−120601
X-ray selected active galaxies, radio obs. 7−146093

marketing
OTEC marketing and funding of develop., recent and future progress 7−86815
solar thermal and biogas systems, medium term market perspectives, Italy 7−119625

Markov chains *see Markov processes*

Markov processes
age distributions in physical systems 7−134654
atmospheric particle dispersion, stochastic model 7−145577
Bernoulli shift, Prigogine-Misra-Courbage processes 7−108406
Brownian motion, quantum and nonMarkovian effects study 7−102300
cardiac R-R interval patterns during sleep: a Markov chain approach 7−86879
degenerate diffusions, unique ergodicity 7−95524
diatomic molecule adsorbed on metal surface, IR-laser excitation of internal vibr. mode 7−84475
dichotomous-noise-driven oscillators 7−95477
Dicke maser model, quantum version of balance equation 7−134643
disordered solids, dispersive transport, mean field theory 7−99047
DNA, one-dimensional strings, dynamics and complexity 7−93614
dynamical systems, dimens. spectrum, large-deviation theory, Markov maps, Hausdorff dimens. 7−120944
explosive reactions, intrinsic fluctuations, probability distrib. 7−100574
external dichotomous noise, driving nonequilibrium transitions, stationary probability density, Stratonovich model 7−120947
fatigue crack growth models, probability density fn. of Markov process 7−84117
fatigue crack growth with retardation under stationary stochastic loading 7−110843
fatigue life prediction under Gaussian load processes, rain flow cycle distrib. 7−138815
finite approximations in Markov-like chain 7−140604
finite Markov chain, dual bounds on equilib. distrib. 7−134458

Markov processes continued
finite Markov chain, stationary distrib., aggregation/disaggregation methods 7−140617
global Markov property, extremality, Euclidean fields on lattice 7−67198
harmonic functions, stochastic approach to quasi-everywhere boundary convergence 7−80608
inertial quantum counter, noise immunity as time interval meter 7−130028
insolation data for Algiers, first-order Markov process modelling 7−101452
Levy flights, fractal and nonfractal behaviour, Markovian random walk 7−73241
Lie-group-valued Euclidean Markov fields in 4D 7−95738
Markovian evolution in phase space of particles distrib. 7−120956
multiplicative stochastic processes involving the time derivative of a Markov process 7−67197
multistable systems, Markovian jump process, transition rate determ. 7−80633
nonlinear stochastically excited systems, linearisation methods applicability *(German)* 7−102319
nonstationary, convergence, aggregation *(Russian)* 7−120937
nuclear reactor protection, supervisory systems, active-inactive times determ., system availability maximisation 7−122054
Onsager regression variables, time evolution, microscopic theory 7−128513
probability flow in multistep reactions 7−140621
projection operator formulation for second order response 7−67202
quantum mechanics and Markovian description, consistency 7−80497
random-field Ising model, 1D, discrete stochastic mappings, fractal dimens., invariant measure 7−125294
renewal model for rainfall occurrences 7−120063
rumor spreading, Markov anal. 7−89133
scaling spectra and return times of dynamical systems 7−95470
semi-Markov walk, with two delaying barriers, ergodic theorem *(Russian)* 7−120936
semigroups and diffusion 7−102303
serial rank statistics, weak convergence, time series and Markov processes appl. *(French)* 7−108399
speech recognition under stress and noise conditions, hidden Markov model techniques 7−110684
supersymmetric quantum mechanics in flat space, stochastic representation of arbitrary fermion sectors 7−73039
suspended particles, coagulation, Monte Carlo simulation 7−114016
underwater tracking, adaptive state estimation 7−123310
unsteady turbulence, dispersion in free-convective conditions, stochastic models of particle trajectories 7−136812

Mars
1984 opposition, obs. of surface features, cloud phenomena and polar regions 7−101716
Alba Patera, volcanic flows, sequence, rheological props. and effusion rates 7−101717
atmosphere, Hadley circulation predictions from viscous model compared with obs. 7−134164
balloons, use for exploration 7−134106
crater ejecta morphology, elevation and ridged plains thickness effects 7−101718
dust, silicate component characts., reflectance spectra anal. 7−120296
gamma-ray spectroscopy method from orbiting spacecraft, for Martian surface composition 7−145859
geomorphology and subsurface volatiles, conference Houston, Texas (March 1986) 7−134369
ice caps at poles, basal melting due to heat from planet interior 7−145858
internal structure evolution, models with water-saturated mantle solidus 7−88161
IR imaging spectrometer for investig. of Mars 7−88117
juvenile water release, estimated amounts and timing assoc. with volcanism 7−127758
layered deposits in Valles Marineris, origin and evolution 7−134163
magnetosphere plasma flow and influence on neutral atmos. evolution 7−107735
mass fractionation in hydrodynamic escape 7−120289
mean seasonal daily insolation at surface during global dust storms, oblateness effect 7−127756
meteorites of martian origin (SNCs), ejection craters and cosmic ray exposure histories 7−139997
meteorology analysis 7−107734
microbial trace fossils formation, implications of biogenous weathering in Antarctic cold desert 7−120020
morphological features and role of water 7−72344
Olympus cloud during 1982, optical thickness 7−139951
Ptolemy's planetary orbit elements and equant, ancient heliocentrist origin 7−66886
regolith Ca/Si ratio, evidence for carbonates and early climate 7−120295
satellites, surface comp. determ. via gamma-ray spectrometry 7−120283
surface, review 7−115277
surface colouring, role of Fe^{3+} sulphates 7−101719
Tharsis region, ancient dorsa-related stresses 7−127757
thermal properties of the Elysium and Aeolis quadrangles, geological evaluation 7−101721
topography and geoid spectra, fractal interpretation rel. to other planets 7−101177
Viking landing sites, exposed rocks and soils spectral refl. props. 7−101720
volatile inventory, review 7−115268
volcanism in Valles Marineris rift system, of recent origin 7−79859
volcano-ground ice interactions, meltwater discharge rates and morphological effects 7−134162
water, amount lost in history of planet 7−72345

martensitic-austenitic transformations *see reverse martensitic transformations*

martensitic steel
bainite and martensite struct., viscous-brittle transition *(Russian)* 7−100331
butterfly morphology, form. 7−138729
corrosion-resisting, effect of laser rad. 7−86411
first wall material for NET, tritium inventory, permeation and release calcs. 7−122187
fracture investigations by notch impact testing *(German)* 7−129201
irradiation effect on tensile and impact parameters 7−141280

martensitic steel continued
laser cladding of Co-base powder on stainless and construction ste 7−86483
low C, ferrite-martensite struct., crack resist. *(Russian)* 7−100330
low C, martensitic, weldable, mech. props. 7−132714
maraging, W-bearing, Co-free, low cycle fatigue behaviour 7−86335
neutron irrad., appl. for use in NET 7−69480
Ni-Ti(-Mn), martensite ageing, hardened, redistribs. of alloying eleme during rapid heating, effect of Mn *(Russian)* 7−93029
stainless, erosion-corrosion susceptibility, vibratory cavitation in corros media 7−132769
stainless, fusion reactor grade, additions effect on mech. props. and stru 7−71225
stainless, HT-9, microstruct.-mech. prop. relations 7−78187
stainless, neutron irrad., effect on mech. props. 7−71257
stainless, phase transformations during long-term ageing *(Russi* 7−100254
stainless, SCC in conc. $MgCl_2$ solns. rel to tempering 7−86405
stainless, strain induced austenite transform. 7−132612
steel, stainless, martensitic, SUS 403, 410Jl, TAF, ferromag. pro 7−99416
surface plastic deformation effect on Barkhausen effect parameters, n destructive inspection method 7−132878
Cr-Mo-V, martensitic, superheater tube corrosion and embrittlement *(G man)* 7−138892
Fe-Cr, radiation enhanced phase transition, influence of vacanc 7−104745
Fe-Cr-Mo, ferritic steel, solute-precipitate interactions, energy dispers X-ray spectra study 7−106520
Mo, stainless, fatigue crack propag. 7−106608
Ni-Cr-Mo, microstruct., effect of intercritical heat treatment *(Chine* 7−144507
Ni-Cr-Mo, microstruct. and tensile props., effect of quench rate 7−712
Si-Mn, phase changes during inter-critical normalising and weld 7−106536

martensitic structure
9R type martensites, fault density, comparison between expt. and cal lated results 7−78001
$_{50}Ni_{10}Au_{40}$, martensitic transformations, shape memory effect 7−13874
HSLA, crack resist. in corrosive media after hydrogen impregnation, temp. influence 7−144589
low alloy, ultra high strength, martensite-austenite and bainite stru *(Chinese)* 7−78002
microstruct. and hardness, heating temp. and cooling rate influe *(Serbian)* 7−71208
pseudoelastic single crysts., elastic interactions between martensite varia 7−100277
steel, armour, microstruct. transform. induced by adiabatic shear 7−86247
steel, austenitic stainless, strain induced austenite transform., temp. hist effect 7−119271
steel, ball bearing, fatigue and dimens. stability, effect of isotherm martensite 7−138831
steel, C-Mn, gas pipeline, H embrittlement, effect of microstr 7−106604
steel, Cr, with pearlitic, bainitic and martensitic structs., fracture morph ogy, influence of P content *(Chinese)* 7−144510
steel, Cr-Mn-N, struct., corrosion and wear resist, mech. props. 7−100
steel, dual phase, fatigue and crack closure behaviour, effect of ph continuity 7−144545
steel, dual-phase, fatigue behaviour, influence of martensite cont 7−113691
steel, dual-phase, mech. props., effect of H *(Korean)* 7−132726
steel, high C, martensitic substruct. and transform. cracking *(Chine* 7−71200
steel, low C, quenching, austenitisation, struct., props. 7−144439
steel, maraging, $\alpha \rightarrow \gamma$ transform., effect of deform. 7−106506
steel, maraging, Ni, ageing struct. anal. *(Chinese)* 7−78036
steel, martensitic, intercryst. fracture form. 7−126220
steel, martensitic stainless, SCC in conc. $MgCl_2$ solns. rel to temper 7−86405
steel, micro alloyed, low C, intercrit. heat affected zone, struct.-prop. re tionship 7−144538
steel, microalloyed, ferritic-martensitic, struct. and mech. props., effect heat treatment 7−126181
steel, Mn-Cr-Si, dual-phase, tensile stress-strain anal. 7−126190
steel, Mn-Mo-Nb, bainitic transform., microphase struct. 7−77999
steel, Mo-Cr, tensile fracture in lamellar dual-phase struct. SEM 7−100380
steel, Ni-Cr-Mo, arc weldments, struct.-prop. correl. 7−132736
steel, Ni-Cr-Mo, microstruct. and tensile props., effect of quench r 7−71253
steel, Ni-Cr-Mo, ultrahigh strength, improved low temp. fracture tou ness through modified heat treatment 7−138829
steel, Ni-Cr-W, case-hardened layer, phase comp. and contact fati strength 7−106598
steel, nitrided parts, partial cooling and repeated heating in harden effect on struct. and props. 7−126306
steel, stainless, fracture toughness at 76 K, effect of prior defo 7−119372
steel, tool, high speed, electron beam rapid solidification and transi tempering 7−119267
steel, tool, high-speed, integrated rapid solidification and heat treatm using computerised electron beam processing 7−119261
steels, industrial, butterfly morphology, form. 7−138729
$Ti_{50}Au_{50}$, martensitic transformations, shape memory effect 7−138744
Co-Si(Ge)(Sn) alloys, α-martensite 2H-struct, 1D disorder, dimension tor effect *(Russian)* 7−91531
Cu-Al-Mn martensite, positron annihilation study 7−126118
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7−78009
Cu-Zn-Al, Cu-Zn, martensite and equilib. phases stability and transfo 7−78008
β-Cu-Zn-Al, surface orientation, modulated microstructure 7−78049
Cu-Zn(-Al), 9R type martensites, fault density, comparison between e and calculated results 7−78001
Cu-Zu-Al, shape memory alloys, ordered struct., thermal cycling ef 7−71185
CuZnAl martensitic alloy, high damping capacity, study and optimisa 7−86173
Fe alloys, martensitic microstruct. fractal geometry 7−100223

martensitic structure continued
Fe, cast, high-Cr, metal base effect on wear resist. 7—78258
Fe-Al-C, martensite cryst. lattice alignment rel. to comp. and cooling temp. *(Russian)* 7—144445
Fe-Al-C alloys, struct. of athermal and isothermal martensites in low temp. tempering 7—106542
Fe-C compacts, struct. changes during sintering *(Korean)* 7—77866
Fe-Mn, toughness rel. to microstruct. 7—132739
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7—138784
Fe-Ni-C (24, 0.5 wt.%), melt spun ribbons, austenite decomp., metallography 7—100233
Fe-Pd, mag. domain struct. rel. to FCT martensite variants 7—85348
Ni-Ti, phase transform., in situ TEM obs. 7—77997
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7—126110
Ti, commercial quenched at high cooling rates, effect of plastic deform. on strength 7—100285
Ti-Al-V solution-treated alloy, microstruct. charact. 7—138747
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7—100307

martensitic transformations
see also shape memory effects
9R type martensites, fault density, comparison between expt. and calculated results 7—78001
$Al_{1-x}Ni_x$, martensitic alloys, structural transformations and phonon anomalies 7—144400
allotropy, martensitic $\alpha \rightarrow \epsilon$ transform. energetics investig. 7—142981
alloys, shape memory effect, macroscopic model *(French)* 7—69807
dislocation theory, review 7—76352
dislocations, book 7—72738
new view on martensitic transforms. 7—144399
phase equilibrium, metastable, general description *(Russian)* 7—124450
pseudoelastic single crysts., elastic interactions between martensite variants 7—100277
shape memory alloys, driven domain walls 7—106511
shape-memory alloys, domain walls and transverse shock waves 7—124396
steel, austenitic, heating induced martensitic transform. under mag. field *(Russian)* 7—113550
steel, austenitic stainless, H-induced cracking, related phase changes 7—144502
steel, austenitic stainless, ion implantation, martensitic transformations, Mossbauer and TEM studies 7—78007
steel, austenitic stainless, martensitic transform. rel. to H charging 7—126111
steel, austenitic stainless, N implanted, friction and wear 7—78260
steel, austenitic stainless, strain induced austenite transform., temp. history effect 7—119271
steel, austenitic stainless, strain induced martensite form., surface struct., Mossbauer spectra 7—86174
steel, C-Mn, continuous cooling transform. 7—86175
steel, carbonitriding gear, with retained austenite, contact fatigue strength improvement *(Chinese)* 7—78145
steel, Cr, laser processed, wear induced hardening 7—100392
steel, Cr-Mn-Si, cold brittleness, unstable austenitic struct., Si content effect 7—78203
steel, Cr-Ni-W, contact fatigue resist., effect of retained austenite *(Chinese)* 7—132698
steel, dual-phase, martensite hardenability of austenite, effect of C content and microalloying 7—93028
steel, duplex stainless, cast, H embrittlement study *(Korean)* 7—126211
steel, eutectoid cylinder, cooling, internal stresses, transform. plasticity 7—132603
steel, Fe-Ni-Mn, structure and mech. props., carbide intermetallic strengthening *(Russian)* 7—78103
steel, high C, martensitic substruct. and transform. cracking *(Chinese)* 7—71200
steel, HSLA, intercritically annealed, austenite retention 7—78072
steel, HSLA, intercritically annealed, martensitic transform. of retained austenite, AE study 7—113548
steel, low alloy, ultra high strength, martensite-austenite and bainite struct. *(Chinese)* 7—78002
steel, low alloy dual phase, intercritical annealing, retained austenite mech. stability rel. to microstruct. 7—71183
steel, martensitic transform., thermodynamics *(Russian)* 7—113549
steel, metastable Cr-Mn austenite, slow fracture and martensitic transform. obs. *(Japanese)* 7—119334
steel, Mn, metastable austenite, friction induced martensitic transform., abrasive wear resist. 7—78277
steel, Mn-Mo-Nb, intermediate transform. during continuous cooling 7—132602
steel, Ni, induced martensitic transform. in metastable austenite matrix 7—126112
steel, Ni-Cr-Mo, carburised-quenched, transform. plasticity, simulation method *(Japanese)* 7—78114
steel, quenched plates, stress-strain generation, effect of surface condition 7—100299
steel, stainless, cavitation-corrosion resistance, preliminary cold deform. effect 7—78352
steel, stainless, dual phase, corrosion resist., phase transform., microstruct. 7—78343
steel, stainless martensitic, phase transformations during long-term ageing *(Russian)* 7—100254
steel hardening by martempering 7—138764
$Ti_{50}Ni_{10}Au_{40}$, martensitic transformations, shape memory effect 7—138744
transformation toughening, mechanics 7—113547
twin boundaries, dynamics, coherent twinning array, tetragonal-to-orthorhombic displacive transition 7—137372
Al-Ag, phase transform. mechanism, surface relief obs. 7—132608
Al_2O_3-ZrO_2, Y_2O_3 stabilised, layered composites, strengthening by transform. induced stresses 7—100240
Ce, γ-α transformation kinetics, dilatometric meas. *(Russian)* 7—71181
Ce, isostructural γ-α reversible transition nucleation features 7—138742
Ce-Gd, shape change during $\gamma \rightleftarrows \alpha$ and $\gamma \rightleftarrows \beta$ transforms. *(Russian)* 7—126105
Ce-Se, shape change during $\gamma \rightleftarrows \alpha$ and $\gamma \rightleftarrows \beta$ transforms. *(Russian)* 7—126105
$CeInAu_2$, sp. ht., mag. susceptibility, transport props. 7—77247
Co ultrafine particles, cryst. struct., electron microscopy obs. 7—117860

martensitic transformations continued
Co-C, martensitic transform., X-ray diffr. 7—144398
Co-Ni, melt-spun alloys, martensitic transform. 7—93012
Co-Ni alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7—142871
$Co_{80}Nb_{14}B_6$, $Co_{84}Nb_{10}B_6$ metallic glasses, martensite transform., plasticity, internal friction 7—106574
Cu based shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7—126109
Cu-Al-Mn martensite, positron annihilation study 7—126118
Cu-Al-Ni, reverse martensitic and intermartensitic transformations, thermal effects *(Russian)* 7—113551
Cu-Al-Ni, single cryst., stress-induced martensitic transform. and assoc. pseudoelasticity, effect of heat treatment 7—93011
Cu-Al-Ni (13.99, 3.5 wt.%), shape memory alloy, two-stage martensitic transform. 7—100222
Cu-Al-Ni alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7—142871
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7—78009
Cu-base alloys, martensitic transform., dislocation form. 7—126117
Cu-Ge, thermally induced FCC to HCP martensitic transform., TEM obs. 7—78005
Cu-Mn nonmag. alloys, kinetics of martensitic transformation, Neel point *(Russian)* 7—104984
βCu-Zn alloy, double martensitic transforms., acoustic emission meas. 7—111865
β Cu-Zn alloy, martensitic transform., acoustic emission meas. 7—78004
Cu-Zn-Al, Cu-Zn, martensite and equilib. phases stability and transforms 7—78008
Cu-Zn-Al, isothermal martensite transform. and shape memory 7—86176
Cu-Zn-Al, shape memory effects, effect of martensite ordering 7—144486
Cu-Zn-Al alloy, acoustic emission during Martensitic transformation of small microplates 7—93010
Cu-Zn-Al alloys, acoustic emission, local changes, martensitic transformation 7—91794
Cu-Zn-Al fatigued shape-memory alloys, dislocation struct., TEM study 7—91593
β-Cu-Zn-Al shape memory alloys, martensitic transform. cycles, effect of plastic deform. 7—113554
Cu-Zn-Al-B shape memory alloys, mech. props., martensitic temps. rel. to B addition and aging 7—119323
Cu-Zn(-Al), 9R type martensites, fault density, comparison between expt. and calculated results 7—78001
Cu-Zu-Al, shape memory alloys, ordered struct., thermal cycling effect 7—71185
CuAlNi, shape memory alloys, thermoelastic martensitic transform. 7—78006
CuZnAl, coil spring reversible shape memory actuators, biased reversion and cycling induced degradation 7—100311
CuZnAl martensitic alloy, high damping capacity, study and optimisation 7—86173
CuZnAl, reversible shape memory alloys, thermally cycled, transient degradation phenomena 7—119270
Fe alloys, martensitic microstruct. fractal geometry 7—100223
Fe, cast, austenitising under pulsed laser rad. action 7—106543
Fe-Al-C system, high-C alloys, atomic ordering influence on phase and struct. changes *(Chinese)* 7—126114
Fe-base alloys, martensitic transformation in a mag. field, onset temp. *(Russian)* 7—138743
Fe-C alloys, martensitic points, composition depend. *(Russian)* 7—100220
Fe-Cr-Mn-N, microstruct.-comp. relationships and M_s temps. 7—100263
Fe-Mn alloys *(Japanese)* 7—113552
Fe-Mn-C, martensitic transform., thermodynamic calcs. of M_s and driving force *(Chinese)* 7—132611
Fe-Mn-Si alloys *(Japanese)* 7—113552
Fe-Ni, austenite form., hydrostatic press. effects *(Russian)* 7—144396
Fe-Ni, Invar, X-ray emission spectra, temp. depend. *(Russian)* 7—70943
Fe-Ni alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7—142871
Fe-Ni alloys, martensitic transform., effect of austenite ordering *(Chinese)* 7—71178
Fe-Ni-Al alloy, prior plastic deform. influence on thermal-martensitic-transform. 7—86171
Fe-Ni-C, martensitic transform., effect of solution strengthening of austenite *(Chinese)* 7—144395
Fe-Ni-C, tensile tests, martensitic transform., AE, mag. suscept. 7—144665
Fe-Ni-C (24, 0.5 wt.%), melt spun ribbons, austenite decomp., metallography 7—100233
Fe-Ni-Cr, superplasticity due to isothermal martensitic transform., phenomenological anal. *(Japanese)* 7—100294
Fe-Ni-Mn alloy, α' to γ transform., secondary austenite form. 7—144397
Fe-Ni-Mn-C alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7—142871
Fe-Pd, mag. domain struct. rel. to FCT martensite variants 7—85348
$Fe_{3-x}Pt_{1+x}$ ordered alloys comp. and temp. depend. elec. resist. study 7—105528
$KAlF_4$ premartensitic phase, neutron and X-ray scatt. 7—142983
$KaAlF_4$, martensitic transform., monochromatic Laue X-ray scatt. obs. 7—84234
Li single crystal, martensitic transition from BCC to 9R related struct. 7—98438
$Li_{0.9}Mg_{0.1}$, martensitic transform. temp., press. depend. study 7—84128
$MgCr_2O_4$-ZrO_2 composites, fracture surface energy rel. to ZrO_2 inclusions 7—132728
Mn-Cu-Ni-Fe-Al, struct. transform. in specimens alloyed with Ni, Fe and Al 7—100221
Nb-Ti alloys, superconductivity and structural instability study 7—105008
Ni-Al coating, β-phase instability, scale resist. of surface layer 7—78344
Ni-Cu-Al (14.5, 3.15 wt.%), elastic const. close to martensite point, effect of compression along one axis *(Russian)* 7—91696
Ni-Ti, shape memory effect, stepwise phase transform. *(German)* 7—100224
Ni-Ti, thermal cycling, precip., martensitic transform. 7—113560
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7—113553
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7—126110
NiTi alloy, two-stage yielding 7—78134
NiTi, superplastic, stress-induced transform. *(Chinese)* 7—78003

martensitic transformations continued
Pt-Al(Ga) phase diagrams with emphasis an polymorphism of Pt_3Al and Pt_3Ga 7−126085
Ti alloys, martensitic transformations, computer simulation *(Chinese)* 7−71180
Ti alloys, martensitic transformation induced by plastic deformation, multistage, nature *(Russian)* 7−104982
Ti-Nb alloys, cold deform. mechanisms 7−86256
Ti-Ni, temp. spectra of internal friction and shear modulus, effect of pre-annealings 7−100278
Ti-Ni single crystals, martensitic transform., crystallography 7−119269
$Ti_{50}Au_{50}$, shape memory effects 7−138744
TiH_2 ultrafine particles, H_2 gas evaporation, martensitic transformation 7−70995
TiNi alloy, cold working, heat treatment, phase transform., DSC obs. 7−71184
TiNi, alloyed, shape memory effect and martensitic transform. *(Chinese)* 7−126115
TiNi alloys, elastic energy dissipation and acoustic emission 7−118039
TiNi, electronic struct. close to martensitic transform. point *(Russian)* 7−126113
TiNi, martensitic transformations, computer simulation *(Chinese)* 7−71179
TiNi, powdered, inert additions effect on superelastic behavior 7−119196
$Ti_{49.5}Ni_{48}Cr_{2.5}$, phase transform., TEM study 7−126116
$Ti_{0.5}Ni_{0.5-x}Cu_x$, martensitic transformations, sound emission studies *(Russian)* 7−100219
TiNiFe, martensitic alloys, structural transformations and phonon anomalies 7−144400
V-Os system, electronic and supercond. props. 7−112605
V-Ru system, electronic and supercond. props. 7−112605
ZrO_2, MgO partially stabilised, gel-derived, phase transforms. 7−77996
ZrO_2, MgO partially stabilised ceramics, mech. behaviour at elevated temps. 7−78185
ZrO_2, pure and CaO stabilised, liq. mix synthesis, phase analysis 7−119216
ZrO_2, Y_2O_3 doped tetragonal polycrysts., control of tetragonal to monoclinic phase transform. by annealing in water 7−86220
ZrO_2:CeO_2, phase transformations, Raman microprobe obs. 7−70811
ZrO_2:Y_2O_3 polycrystals, Al_2O_3 and SiC particle dispersed, thermal stability, mech. props. 7−78183
ZrO_2-containing ceramics, transformation toughened, R-curve behaviour and mech. props. 7−71301
ZrO_2-Li_2O-B_2O_3-SiO_2 glass ceramic, phase transform. depth profiles, synchrotron radiation X-ray diffr. 7−93009
ZrO_2-Na_2O-SiO_2 glass ceramic, phase transform. depth profiles, synchrotron radiation X-ray diffr. 7−93009
ZrO_2-SiO_2 system, sol-gel prep., precip. ZrO_2 transform., fracture toughness *(Japanese)* 7−132614
ZrO_2-Y_2O_3, phase transform., low temp. annealing, humidity control, fracture strength, surface struct. *(Japanese)* 7−71182
ZrO_2-Y_2O_3, rapidly quenched, cubic to tetragonal transform., effect of external stress 7−86170
ZrO_2-Y_2O_3 polycrystals, low temp. ageing, tetragonal symmetry rel. to grain size 7−144442
ZrO_2-Y_2O_3 system, crystallography of cubic to tetragonal phase transform. 7−132613

martensitic transformations, reverse *see reverse martensitic transformations*

maser clocks *see atomic clocks*

masers
Cherenkov cyclotron autoresonance maser as HF microwave source, operational characts. 7−90567
Cherenkov free electron laser operation from 375 to 1000 μm 7−130174
circulating cyclotron maser and magnetospheric pulsed VLF emissions 7−79776
clock stability for general relativity expts., use of H masers 7−73151
cyclotron autoresonance masers, gain and efficiency enhancement, transverse magnetic wiggler 7−136251
cyclotron reson. masers, frequency multiplication, electron beam nonlinearity study 7−82527
electron-cyclotron maser, induced reson., small-signal anal. 7−117167
electrostatic electron cyclotron resonance maser instability 7−90566
FEL experiments with pulse power beam at ILE, Osaka 7−130135
FEL program at Naval Research Laboratory, mm-cm wavelength 7−130132
FEL ubitron amplifier cold test results at Naval Research Laboratory 7−130172
frequency standards for measurement of time and of frequency *(French)* 7−73313
induced resonance electron cyclotron maser, operation at higher harmonics 7−130037
ion-cyclotron maser instability, magnetic drift induced 7−90563
IRAS 18385−0512, associated very bright H_2O maser 7−120645
microscopic and macroscopic theory 7−122901
noise adding radiometer for radioastronomy 7−115239
Orbitron, MM wave generation interpretation as stimulated emission of bremsstrahlung 7−103789
orbitron maser study 7−68609
plasma-maser effects in space plasma 7−115232
Raman FEL, power and sideband studies 7−130133
RF emission in solid electron spin-spin interactions 7−122902
rotating relativistic electron beam stability in waveguide near cyclotron reson. 7−90565
ruby maser oscillator, superconducting cavity stabilized, performance 7−130036
semiconductor masers using cyclotron resonance 7−122900
single-atom, QED test 7−117168
single-atom maser, Rydberg states transitions and cavity resonator 7−90568
single-harmonic oscillator, repeated quantum meas., photon statistics 7−141829
travelling wave, paramagnetic, instant amplification band limits 7−122899
travelling wave masers, 3 mm, use of andalusite as active material 7−110315
Al_2OSiO_4-Fe^{3+} complex, maser characts. investig. 7−130038
H maser, spin-exchange freq. shifts, hyperfine contrib. 7−90564

masking (acoustic) *see hearing; speech intelligibility*

masks
see also semiconductor device manufacture
polyimide high resolution ion implantation masks, thin film surface morphology and dielec. props. study 7−69723
X-ray lithographic mask alignment using moire signals in refl. 7−116038
$In_{0.53}Ga_{0.47}As$ selective electroepitaxial growth on (100) InP:Fe 7−100141
SiNx film mask for Zn diffusion in GaAs 7−143100

masonry dams *see dams*

mass
see also atomic mass; elementary particle mass; molecular weight; nuclear mass
A999, A1016, linear galaxy clusters, redshifts meas. and virial masses estimation 7−146098
air mass calc. for basketball, contrib to moment of inertia 7−66875
comets, mass distrib. index from magnitude distrib. index determ. 7−94708
ESO 217-G09, peculiar galaxy, rot. curve rel. to mass and mass-luminosity ratio 7−140255
galaxies, mass determ. using gravit. lens effect 7−95004
Galaxy, mass distrib. model for stellar orbit computations 7−115604
galaxy clusters, mass-to-light profiles and dynamical mass estimates for massive-halo galaxies 7−120626
galaxy groups in CfA redshift survey, implications of cold dark matter universe models 7−88653
Jupiter, influence of 3D gas flow in stellar nebula on present Jovian mass 7−134153
meteor streams, mass distrib. rel. to stream dynamics and evolution 7−139987
polytropic configurations, physical characts. of N-dimensional radially-symmetric polytropes 7−127695
sphere, layered, from finite set of materials, optimisation of mass 7−68988
spiral galaxies, disk mass/luminosity ratio rel. to halo parameters 7−115578

mass analyzers *see mass spectrometer components and accessories*

mass differences
see also baryon mass; lepton mass; mass formulae; meson mass
exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
gauged chiral SU(2) action, skyrmion-baryon phenomenology 7−108755
hadron ground-state multiplets, mass splittings, QCD potential model anal. 7−89486
heavy baryon isospin multiplets, mass splittings in chiral bag model 7−102682
Skyrme model, electromagnetic n-p mass difference calcs. 7−95906
standard six-quark model, $|\epsilon'/\epsilon|$ implications, K_L-K_S mass difference, CP-nonconservation 7−67538
$B \rightarrow D^*\pi(D^*\pi\pi)$, mass differences and branching fractions 7−135109
$B \rightarrow D\pi(D\pi\pi)$, mass differences and branching fractions 7−135109
B_d^0-$\bar{B}_d^0$ mixing, CP violation searches, top quark mass, bound on KM angles 7−140865
np interaction, charge symmetry breaking effects, consistent eval., one-boson-exchange pot. 7−135147
$\pi^- p \rightarrow \pi^0 n$, precision meas. of $\pi^- - \pi^0$ mass difference 7−95939
ρ-ω, lattice gauge theory calcs. 7−116042
N-Δ mass splittings, soft-pion Skyrme model anal. *(Chinese)* 7−102742

mass filters *see mass spectrometer components and accessories*

mass formulae
see also baryon mass; lepton mass; mass differences; meson mass
baryon spectrum, composite particle representation for quark-diquark system 7−116153
charmed mesons in a simple two-step potential model, mass spectra and decay widths investig. 7−73634
dynamic mass generation, gauge boson mass, fermion mass, Abelian vector, quarks, perturbation calcs. 7−140916
Euler invariant-type higher derivative gravity, mass spectrum of $M_4 \times S^D$ soln. 7−80568
fermion mass matrix, permutation symmetry S_4, Kobayashi-Maskawa matrix elements 7−108823
fermion masses, universal seesaw mechanism 7−121411
full QCD hadron mass spectrum on a lattice, Langevin simulation 7−128872
hadron ground-state multiplets, mass splittings, QCD potential model anal. 7−89486
Higgs-boson mass bound in E_6-based supersymmetric theories 7−89420
intermediate mass scales, radiative generation in superstring-inspired models 7−89402
lattice field theory, hadron spectroscopy with dynamical Kogut-Susskind fermions 7−102608
lattice gauge theories, confinement and bound states, stat. mech. methods 7−80983
lattice QCD with dynamical staggered quark loops, hadron mass calcs. 7−67581
meson mass spectra, relativistic effects in field theory 7−128873
particle physics concepts, QED, QCD, unification, hadronic spectroscopy, book 7−108062
QCD, hadron mass calculations using Susskind fermions 7−73592
QCD, hadron mass spectrum, Monte Carlo simulations, review 7−67584
QCD spectrum, quark propagators on a lattice, chiral props., hadron masses 7−121439
SU(2) quenched lattice QCD with staggered fermions, meson spectrum and flavour symm. restoration 7−67574
supersymmetric SU(4)×SU(2)×SU(2) partial unification group, mass spectra calcs., mass level degeneracy 7−108834
vector and pseudoscalar mesons, mass formula in constituent quark model 7−81130
vector mesons, Gell-Mann-Okubo mass formula 7−89443
$D \rightarrow \eta\pi\pi$, meson spectrum, $s\bar{s}$-dominant quark composition 7−135111
$D \rightarrow K\bar{K}\pi$, meson spectrum, $s\bar{s}$-dominant quark composition 7−135111
$E \rightarrow K\bar{K}\pi$, meson spectrum, $s\bar{s}$-dominant quark composition 7−135111
$e^-e^+ \rightarrow \eta\rho$, mass spectrum interference effects 7−81166
η' mass formula, glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
$\gamma p \rightarrow \eta p$, diffractive photoproduction, mass spectrum interference effects 7−81166
Λ_b, Σ_b and Σ_b^* beautiful baryons, mass range from pot. models 7−73635
π current algebra mass formula, lattice gauge theory calcs. 7−116042
$p\gamma \rightarrow b_1\pi p$, diffractive photoproduction and mass spectrum of hybrid states 7−81202

mass measurement
see also weighing
Earth, mass determ. using magnetic suspension system meas. 7−127070
fissile material mass meas. in input accountability tank of ITREC reprocessing plant, tracer technique 7−109322
nuclear material solutions, material mass determ. using pressure meas., safeguards appl. *(French)* 7−109320
organic seven component mixtures, negative chem. ionis. and mass meas., GC/FTIR/FTMS investig. 7−86741
polyethylene terephthalate foil, slowing dynamics in Xe, mass determ. *(Polish)* 7−136928
quartz crystal microbalance, absolute laser photodeposition rate meas. 7−119160
round billet mass meter in automated system for control of tube-rolling mills *(Russian)* 7−80749
X-ray tomography for mass fraction profiling, appl. to porous silica boules 7−121074

mass spectra
see also mass spectrometers; mass spectroscopic chemical analysis; mass spectroscopy; secondary ion mass spectra; time of flight mass spectra
^{139}La, detection in presence of ^{138}Ba, reson. multiphoton ionisation mass spectra 7−93461
actinides, laser induced photoionis., photoelectron spectroscopy 7−90076
alkylamine clusters, H-bonded, photoionis. mass spectrosc. 7−136115
alkylbenzenes, vibr. excited triplet lifetimes, 2-colour photoionis. obs. 7−117011
alloys, phase transformations, mass spectra studies 7−105001
amines, electron impact ionis., crossed beams expt. 7−103676
anticodonic nucleotides, interaction with cognate amino acid, fast atom bombard. mass spectroscopy study 7−86887
atomic resonance ionisation mass spectrometry review 7−93456
atoms, isotope analysis, reson. ionisation mass spectrometry and laser-induced fluoresc. 7−93460
carbon tetrachloride cluster, electron attachment, mass spectroscopy 7−82334
carbon tetrahalide ions, stability, electron impact investig. 7−82376
cosmomycins, anthracycline antibiotics, field desorption mass spectrometric obs. 7−103685
N-cyanomethanimine, isomer charactn., collision activation mass spectra 7−110132
cyclopropylbenzene, mol. ions, Fourier transform ion cyclotron reson. mass spectra 7−122727
di-n-propyl sulphide, mol. ions, Fourier transform ion cyclotron reson. mass spectra 7−122727
1,2,5,6-dibenzanthracene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
dichlorodifluoromethane, interaction with solid surface, thermal desorpt. mass spectrosc. 7−124680
dimethyl fumarate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7−90437
dimethyl maleate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7−90437
gasdynamic separator flow field, nonequilib. processes study 7−130761
graphite, hydrocarbon production yield on H^+ ion bombardment 7−119091
graphite effusion source, Br and Br_2 diffusion and desorption, molecular-beam mass spectrometry 7−111963
graphite surface, H content following bakeout, effect of atm. exposure on D uptake 7−74044
heteronuclear transition metal dimer ions, photodissoc. 7−129807
Higgs particles, influence of mixing angles on testing, mass spectrum, production, decay rates 7−116104
high-mass ion fragmentation, time- and mass-resolved 7−134871
hydrocarbons, photolytically induced reactions, molecular beam mass spectroscopy observations 7−144687
2-hydroxy-benzolhydrazones of acetylpyridines, electrochemical and metallochromic props., UV, visible, IR and mass spectra 7−82126
iminacetonitrile, isomer charactn., collision activation mass spectra 7−110132
inert gases in meteorites, reson. ionisation mass spectroscopy 7−93451
isolated ions, internal energy distributions, activation methods, mass spectra 7−90438
isomers, REMPI mass spectra 7−74717
JICST mass spectral database *(Japanese)* 7−120715
lanthanides, laser induced photoionis., photoelectron spectroscopy 7−90076
liquid metal ion source, alloy fabrication and mass spectroscopy anal., test bed system 7−134889
metal carboxylates, gaseous phase, electron impact mass spectrometry 7−74778
methyl cyanide cluster, electron attachment, mass spectroscopy 7−82334
methylbenzyl alcohol, isomers, REMPI mass spectra 7−74717
molecular clusters, ionisation by high-Rydberg rare gas atom collisions 7−82382
molecular clusters, photoionisation mass spectrometry using synchrotron radiation, review 7−90474
nonmetal clusters, ionised defects, mass spectra 7−141735
2-norbornyl cation, gas phase charactn. 7−100600
pentacene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
2,2,4,4,6-pentacyanocyclohexenamine, cryst. struct. and vibr., spectrosc. obs. 7−98102
3-pentanone, translational energy release determ., mass spectra 7−90436
perdeuterochrysene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
phenetole, surface-induced dissoc., mass spectra 7−125878
PMMA-PTFE thin film sandwich struct., depth profile meas., dynamic fast atom bombard. mass spectra 7−70089
poly(L-glutamates) with n-alkyl side chains, ^{13}C CP/MAS spectra, conformation and mol. packing 7−117101
E-propene-1-thiol, NMR and mass spectra, vibr. and rot. anal., mol. conformation 7−116991
pyrazine, surface-induced dissoc., mass spectra 7−125878
pyrene, surface-induced dissoc., mass spectra 7−125878
statistical model of extended hadrons, phase transitions critical behaviour, exponential growing mass spectrum 7−116139
Teflon, FAB-MS spectra, peak pattern development with increasing bombarding dose 7−119594
1,1,3,3,-tetracyanopropane, cryst. struct. and vibr., spectrosc. obs. 7−98102

mass spectra continued
tetraethylsilane, surface-induced dissoc., mass spectra 7−125878
5,6,11,12-tetraphenyltetracene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
trichlorofluoromethane, interaction with solid surface, thermal desorpt. mass spectrosc. 7−124680
tropone, decarbonylation, time depend. mass spectra, breakdown graphs 7−93273
unimolecular ion decay kinetics, reson.-enhanced multiphoton ionisation mass spectra anal. 7−90300
$\bar{q}q$ mesons, systematization using QCD and Bethe-Salpeter eqn. 7−108804
Ar clusters, triply charged, prod. and stability, mass spectrum 7−110160
Ar enrichment in vapour growth diamonds, mass spectrometry, implications for solar nebula 7−120343
Ar metastable cluster ions, unimol. dissoc., mass spectra, magic no. 7−68499
Ar_{300}^+ clusters, mass-resolved spectra 7−117110
Ar_n^{2+} clusters, mass spectra 7−90473
$Ar^+(Ar,Ar)Ar^+$, charge transfer, absolute cross-section meas., mass spectra 7−141685
Au_n^+ (n=1 to 6) clusters form. by direct laser vaporisation 7−110165
AuO^+ and AuO_2^+ gaseous ion form. during the sputter deposition, glow discharge mass spectrometry study 7−119084
Ba, isotope relative abundance, double-reson. ionisation mass spectra 7−93458
Ba neutral atoms, ionisation obs. in TOF mass spectrometer, double Rydberg spectra 7−109830
Ba, resonance ionisation mass spectra lineshapes, optical pumping effect 7−90059
Bi_n^{p+} ions formed in liq. metal ion sources, mass spectra 7−82415
$Bi_x^+Sb_y^+$, Fourier transform mass spectra 7−74801
C_n^+, (n=40-180), Fourier transform mass spectra 7−74801
$C_3H_3^+$+acetylene (diacetylene), gas-phase reactions, FT ICR mass spectrosc. obs. 7−138986
$CO_2+Br^-(Cl^-)(F^-)(I^-)$, clustering reaction, thermodynamic data 7−138981
CX^{2+}, X=F, Cl, charge separation reactions, mass-analysed ion kinetic energy spectra 7−144684
$Ca_3Ga_2Ge_3O_{12}$, mass spectra of volatile components, vapour pressure 7−104974
$Ca^+(H_2O)_n$ cluster, (n=1 to 10), Monte Carlo calcs. and mass spectra 7−122766
Cd halides, thermodynamics of sublimation, mass spectrometric obs. 7−143046
Cs polyatomic ion field desorption from W tip, mass spectra studies 7−112085
$EuNbO_2$, thermochemistry, mass spectrometric obs. 7−126471
$EuNbO_3$, thermochemistry, mass spectrometric obs. 7−126471
$EuNb_2O_6$ thermochemistry, mass spectrometric obs. 7−126471
Fe-Te alloys, phase transformations, mass spectra studies 7−105001
FeNi complexes, prep. and struct. anal. 7−98092
$Ga_xIn_{1-x}P$, thermochemical props., calorimetric and Knudsen effusion obs. 7−111896
Gd, quasi-reson. ionis. mass spectra 7−90073
Ge_n^+ clusters, mean size, gas aggregation technique 7−136114
H_2CN^++HCN clustering reaction rate consts., appl. to plasmas and atm. of Titan 7−138976
$H_3O^+.20H_2O$, struct., energy minimisation study 7−82417
I_2, rotationally and vibr. cooled, multiphoton ionisation mass spectroscopy 7−110022
In liquid-metal ion source, capillary type, mass and energy spectra meas. 7−121294
Ir (111), H chemisorpt., desorption mass spectra, LEED and contact pot. study 7−137701
K clusters, photoionisation, neutral and ionic cluster stabilities 7−129916
K-Rb mixture, Hornbeck-Molnar ionis. 7−141651
Li_xNa_{n-x}, photoionis. mass spectra 7−68501
$Mg(PO_3)_2$, thermal dissociation, mass spectrometric study 7−106821
$Mg_2P_2O_7$, thermal dissociation, mass spectrometric study 7−106821
N_2^+ photofragments in laser photodissoc. of N_2O, kinetic energy spectra in visible region 7−100597
$N_2+NH_4^+$ $(_3O^+(H_2O)n$, n=1-3), assoc. reactions, thermodynamic study 7−126437
NH_3, monomers and clusters, supersonic jets, Raman spectra 7−135946
$NaAlCl_4$, gaseous, mass spectrometry and standard enthalpy of form. 7−113972
$Na_2Al_2Cl_8$, gaseous, mass spectrometry and standard enthalpy of form. 7−113972
$(NaCl)_x(NaBr)_{1-x}$, thermodynamic props., 840 K, mass spectrometric obs. 7−105075
$NaI-SnI_2$, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
NbO, thermochemistry, mass spectrometric obs. 7−126471
NbO_2, thermochemistry, mass spectrometric obs. 7−126471
Nd_2S_3, vaporisation, mass spectroscopic investig. *(Japanese)* 7−124467
Ne_n cluster (up to n=90), prod. and stability, electron impact ionis. mass spectra 7−110163
Ni carbonyl cluster ions, bonding, synthetic chem. in mol. beam 7−90471
Ni-Te system, vaporisation kinetics, β_2 phase form., Knudsen effusion mass spectra 7−118074
$O^-+N_2(NO)$, N^- formation, mass spectra study 7−138971
OPF, form. struct., mass spectra, IR spectra, ab initio calcs. 7−68296
Os, isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
Pb clusters, laser vaporisation photoionisation dynamics, abundance patterns 7−141730
Rb+K, Penning ionis., exchange and direct mechanisms 7−141665
Re, isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
RuC, electronic states, bonding, all-electron ab initio HF CI calcs., mass spectra 7−109804
SO_2 clusters, ion series mass spectra, attachment cross sections, resonance 7−136117
ScI_3-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
SeO_3 vapour, matrix isolation, mass spectrometric and IR obs. 7−82112
Si clusters, photoionisation mass spectrum, ionising laser intensity depend. 7−110170
Si etching reaction with XeF_2, SiF_4 desorpt., TOF spectra 7−137696
Si, plasma etching, parametric studies 7−113809

mass spectra continued
Si_{39}^+ surface, reactivity of NH_3, Fourier transform-ion cyclotron reson. spectra 7−139037
$Si_n^+ + XeF_2$ (n=1 to 7), 7−113889
Sm, chemical and isotopic anal., resolution limits inductively coupled plasma-mass spectrometry study 7−78563
Sn clusters, laser vaporisation photoionisation dynamics, abundance patterns 7−141730
^{128}Te, double beta decay, RIMS detect. 7−89563
TlBr-TlI, ion intensity ratio meas., mass spectra, mathematical representation 7−122738
TlCl-TlBr, ion intensity ratio meas., mass spectra, mathematical representation 7−122738
$(TlCl)_x(TlI)_{1-x}$, mass spectrometry and thermodynamics 7−76439
UO_2^+ complexes, IR laser-induced decomp., mol. beam depletions anal. 7−68450
V-Si system, vaporization thermo-dynamics in V-rich region, high temp. Knudsen cell mass spectrometry 7−111845
$VOCl_3$, resonance-enhanced multiphoton ionis., mass spectrometric detect. 7−103586
Xe, mass spectra meas., resolution study of isotope separator 7−134817
Xe^{q+} + inert gas atoms, electron capture, mass spectra anal. 7−136052
$ZnCl_2$, sublimation thermodynamics, mass spectra 7−76375

mass spectrometer applications
see also isotope separation; mass spectroscopic chemical analysis
conf. on electromagnetic isotope separators, Los Alamos, USA 7−140362
diamonds, synthetic, heat stability, mass spectroscopic measurements 7−89224
GSI medium-current mass separator, design 7−134881
IAE electromagnetic isotope separators, status 7−134880
m/e ratio monitoring in magnetically scanned mass spectrometer, using two Hall probes 7−108600
mirror analyser/quadrupole mass spectrometer for plasma processes 7−137128
phosphonates, photolysis products, mass-spectrometry 7−126470
photon stimulated desorption in vacuum duct, angular distrib. obs. using unidirectional detector 7−135693
stable isotope enrichment techniques and ORNL separation status 7−136085
He leak detector using quadrupole mass spectrometer 7−115970

mass spectrometer components and accessories
see also ion sources
acid spray for protonated mol. intensity enhancement in secondary ion mass spectrometry 7−134879
capacitance bridge detector and signal lock for ion cyclotron resonance spectrometry 7−128710
Chalk River helium-jet ion source 7−122282
electroionisation experiment, low cost automation system 7−67415
electron multiplier ion detection system of Finnigan-Mat model 261 mass spectrometer 7−67416
fast-atom sputtering attachment 7−67418
field desorption meas., automatic recording of ions energy distrib. 7−134885
high-speed recorder and interface 7−102560
ion-optical design for an on-line mass separator at LAMPF 7−122285
LAMPF He jet activity transport system optimisation 7−121280
magnet, superconducting, for Fourier transform ICR mass spectrometer 7−134878
mass analysers, review 7−116023
multichannel electrooptical detection system, appl. to anal. of large mols. 7−134872
plasma source mass spectrometry, electrothermal vaporiser design and optimisation 7−126499
quadrupole mass spectrometer with online signal processing 7−134876
RAMA He-jet coupled on-line mass separator, improvements 7−122283
reduction of ion discrimination in the MI-1201 mass spectrometer 7−108701
ribbon ion source for accuracy and speed improvement of isotopic analysis by mass spectroscopy isotopic analysis 7−126522
thermal experiment data scanning and recording automation 7−108695
Wiley-McLaren time of flight analysers, modification for laser desorption 7−116020
He jet connection to SARA on-line separator medium current source 7−122281

mass spectrometers
see also ion optics; mass spectra; mass spectroscopy
achromatic mass spectrometer, modification for transverse focusing 7−128703
beam compression and beam multiplexing in a time-of-flight mass spectrometer 7−95673
charged particle optics, conference. Albuquerque, NM, USA (May 1986) 7−128177
P/Comet Halley (1982i), plasma characts. meas. by Giotto 7−139884
compact double-focusing mass spectrometer, use of einzel lens 7−128704
detector system, highly sensitive 7−116022
dodecapole magnet for ion optics 7−128708
double-focusing toroidal mass spectrograph, expt. results 7−128701
double-focusing toroidal mass spectrograph, first order theory 7−128700
Finnigan MAT 90 automated magnetic sector mass spectrometer 7−67414
Fourier transform ICR mass spectrometer using supercond. magnet, construction 7−134878
gas chromatograph mass spectrometer, quadrupole-type library search system *(Japanese)* 7−67420
Giotto heavy ion analyser PICCA 7−139887
Giotto implanted ion spectrometer characts. 7−139924
Giotto ion mass spectrometer 7−139886
high abundance sensitivity mass spectrometer with double-directional focus 7−121283
INS gas-filled recoil isotope separator 7−121278
JOSEF improvements, new setup for fission-product spectroscopy 7−121277
laterally and longitudinally dispersive recoil mass separators 7−121271
LISE spectrometer at GANIL 7−121272
multipassage magnetic mass spectrometers, electrostatic systems 7−128707
Munich high-frequency recoil spectrometer 7−121276
NBS triple quadrupole tandem mass spectrometer 7−140773
quadrupole, He leak detectors design methods and appls. *(German)* 7−102430

mass spectrometers continued
quadrupole, metrological characts. obs., long-term behaviour 7−134877
quadrupole mass spectrometer and Bayard-Alpert gauge for H_2 isotope measurements 7−102435
quadrupole mass spectrometer with a distorted analyzing field for nuclear fuel anal. 7−102558
quadrupole mass spectrometers, transportable, uranium isotopic ratio meas., safeguards appl. 7−122218
rare earths mass separation in high temp. thermal ion source-He jet system 7−121279
SIMS for highly sensitive H, C, and O anal. *(Japanese)* 7−93403
single and double focusing spectrometers, resolution and sensitivity 7−128702
TASCC facility direct mass meas. 7−121281
thermal quadrupole mass spectrometer for safeguards verification, tests 7−116025
time of flight systems, development 7−116016
time-of-flight, size distrib. determ. of Sb clusters 7−108694
TOF mass spectrometer, ion optics 7−128705
TOFI, isochronous TOF mass spectrometer 7−128706
TOFI spectrometer, exotic light nuclei direct mass meas. 7−121274
TOFI spectrometer reaction-product transport line 7−121273
trace element anal., laser reson. ionisation spectrometer 7−93457
velocity compaction ion focusing for time of flight mass spectrometers 7−116017
velocity filter SHIP, expt. results and plans 7−121275
^{41}Ca, abundance ratio using RCNP AVF cyclotrons 7−122320
^{252}Cf plasma desorption time of flight mass spectrometer for high mass studies 7−116018
T permeation studies, exptl. apparatus 7−129419

mass spectrometry *see mass spectroscopy*

mass spectroscopic chemical analysis
see also atom probe field ion microscopy; ion microanalysis; ion microprobe analysis; isotope separation; mass spectra; secondary ion mass spectra; secondary ion mass spectroscopy
^{139}La, detection in presence of ^{138}Ba, reson. multiphoton ionisation mass spectra 7−93461
accelerator mass spectrometry of ^{36}Cl, ^{129}I and ^{187}Os 7−93422
acetonitrile abundance determ. in stratosphere, passive chem. ionization mass spectrometry method 7−120162
acetylene ions, neutralisation−reionisation study using hybrid mass spectrometer 7−119496
acetylene-O_2-Ar diffusion flame, mass spectrometry anal. *(French)* 7−119601
aspartic acid, side reactions in peptide synthesis, mass spectrometric obs. 7−144704
atomic resonance ionisation mass spectrometry review 7−93456
atoms, isotope analysis, reson. ionisation mass spectrometry and laser-induced fluoresc. 7−93460
blood gas measurement of O_2, CO_2, inert and anaesthetic gases, review 7−93986
brass, impurities, rel. ionis. yields in laser mass spectrometry 7−126495
caffeine, supercritical fluid chromatography/Fourier transform mass spectrometry 7−100641
capacitance bridge detector and signal lock for ion cyclotron resonance spectrometry 7−128710
coal fly ash particle characterisation by micro-surface analytic techniques 7−78591
combustible radioactive solutions, mass spectra meas., automatic method 7−126532
conference, Garmisch-Partenkirchen, Germany (Sept. 1985) 7−95090
conference, Swansea, Wales (Sept. 1986) 7−88744
cyanoacetylene, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
detector system, highly sensitive 7−116022
diacetylene, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
diffusion coefficients of metal-H systems, high-vac. setup with mass spectrometric attachment 7−73463
dimethylether, protonated, fragmentation studied in tandem quadrupole mass spectrometer 7−71552
dioxane, determ. in water and soil by GC/MS or charcoal tube enrichment GC 7−139059
dynorphins, FAB mass spectrometric fragmentation behaviour 7−71676
element anal. by mass spectrometry 7−93444
environmentally important radioactive nuclides, resonant ionis. mass spectroscopy detect. 7−93611
ethylene, on Pt (111), laser-driven thermal reactions, mass spectral investig. 7−113979
ethylidyne, on Pt (111), laser-driven thermal reactions, mass spectral investig. 7−113979
food quality control and studies on human nutrition by mass spectrometric and nuclear magnetic resonance isotope ratio determination 7−86734
gas chromatograph mass spectrometer, quadrupole-type library search system *(Japanese)* 7−67420
geological materials, specimen isolation filtering techniques, SIMS anal. 7−93406
glow discharge and sputtered neutral mass spectrometry for materials characterisation 7−119605
graphite, fission product retention capabilities, mass spectroscopy, evaporation and sorption tests *(German)* 7−109464
ICP-mass spectrometry, concomitant element effect on nonspectroscopic interferences 7−121292
inert gases in meteorites, reson. ionisation mass spectroscopy 7−93451
ion microscopy, high sensitivity, material science research 7−95674
ion-surface impact, desorbed material, multiphoton reson. ionisation-TOF mass spectra anal. 7−92820
large molecules, fast atom bombardment mass spectrometry with optical detect. 7−134872
laser microprobe mass spectrometry, nonresonant multiphoton ionisation process 7−100651
long-lived isotope determination by accelerator mass spectrometry 7−120167
mass spectral peak interpretation using PROLOG program 7−93435
maternal-foetal blood gases, continuous skin-surface and intravascular mass spectroscopic anal. 7−79102
medical biological objects, correlation between neutron binding energy and anomalous fractionation of isotopes 7−114027
methane, accelerator based mass spectrometry 7−93421

mass spectroscopic chemical analysis continued
methane-O_2 flame, alkali metal dopants, ion density and temp., equilib. consts., mass spectra anal. 7−86629
microfocussed ion beams for surface and thin film anal. 7−134888
molecular beam system for real-time reactive scattering from solid surface obs. 7−106351
nitroaromatic anions, collision-induced dissocs., mass analysed ion kinetic energy spectra 7−119497
nitrobenzene cation, IR multiphoton dissoc. 7−119545
nonRutherford proton scatt. in RBS spectra 7−93424
on-line mass spectrometry for process analysis 7−100638
organic seven component mixtures, negative chem. ionis. and mass meas., GC/FTIR/FTMS investig. 7−86741
quadrupole mass spectrometers, transportable, uranium isotopic ratio meas., safeguards appl. 7−122218
quantitative analysis of gases, reproducibility improvement 7−106870
quantitative microanalysis by time-of-flight laser probe mass spectrometry 7−100666
residual gas analysers and their use in high vacuum systems 7−134753
resonance ionisation spectroscopy, medical and biological appls. 7−94042
RIMS, resonant ionisation mass spectroscopy, ultra-sensitive atomic level anal. 7−86694
SIMS apparatus installation on side of ion beam mixing machine *(Japanese)* 7−134886
SIMS for highly sensitive H, C, and O anal. *(Japanese)* 7−93403
solid sample analysis, laser ablation ICP-MS 7−93464
spent fuel solution, Pu assay, comparison of isotope dilution methods using α-, mass spectrometry *(Russian)* 7−119618
spent nuclear fuel solutions, anal. using isotope dilution mass spectrometry, quality assurance and IAEA implications 7−119613
steel, impurities, rel. ionis. yields in laser mass spectrometry 7−126495
steel, simultaneous multielement analysis, glow discharge mass spectrometer performance 7−132986
steel, stainless, Type 316, surface segregated, activity, mass spectrometry and Auger electron spectrosc. 7−139064
surface analysis, laser desorption and reson. ionisation mass spectrometry study 7−92787
surface chemical analysis, desorpt.-nonreson. multiphoton ionisation mass spectra 7−93462
Teflon, FAB-MS spectra, peak pattern development with increasing bombarding dose 7−119594
TEXTOR, films deposited by wall carbonisation, characterisation 7−75813
thin film anal. by sputtered neutral mass spectrometry *(German)* 7−71565
thin-layer chromatography plate, thermal micro-region ionization by laser beam 7−100659
trace element anal., laser reson. ionisation spectrometer 7−93457
transition metal ion complexes, generation in gas phase by fast atom bombardment 7−119499
trimethyloxonium ion, fragmentation studied in tandem quadrupole mass spectrometer 7−71552
variable energy cyclotron, quadrupole residual gas analyser appl. 7−126498
Am, mass spectroscopic anal., sensitivity enhancement techniques 7−126518
Ba, isotope relative abundance, double-reson. ionisation mass spectra 7−93458
$C^{2+}+H_2(D_2)$, reaction rate coeffs. meas. 7−71469
CH_5, radical, ionisation energy determ. using mass spectrometer 7−71554
C_2N_2, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
CO_2, doubly charged cluster ions, metastable dissoc. 7−110124
CS_2, electron impact, photodissoc., laser-ion beam study 7−68468
$^{12}C/^{13}C$ bilayers, recombination reactions and geometry effects, laser microprobe mass anal. 7−71551
CaF_2, fluorine depth analysis using Rutherford backscattering 7−93423
Cd, plasma source mass spectrometry, electrothermal vaporiser design and optimisation 7−126499
Cu, plasma source mass spectrometry, electrothermal vaporiser design and optimisation 7−126499
F containing gases, mass spectrometry in reactive ion beam etching 7−93215
F_2+NF_3+Si, SiF and SiF_2 radical prod., multiphoton ionisation mass spectrometric detection 7−78463
Fe, plasma source mass spectrometry, electrothermal vaporiser design and optimisation 7−126499
Fe_3O_4 surface, dissociation reactions of CO gas 7−86667
GaAs high-sensitivity microanalysis of impurities using multielement doped GaAs standard samples 7−100646
GaAs-AlGaAs, etch and etch stop reactions in dichlorodifluoromethane plasma 7−119463
$GaAs_{1-x}P_x$:N VPE layers, N conc. determ., SIMS, absorpt. spectra, cathodoluminesc. meas. 7−106227
H^+, neutralisation−reionisation study using hybrid mass spectrometer 7−119496
H_2-Si-SiH_4, glow discharge, dominant reaction channel and SiH_4 decomp. mechanism 7−106802
H_2-$SiCl_4$, inductively coupled plasma, reaction mechanism studied by mass spectrometry 7−106869
H_5^+, H_7^+ and H_9^+, metastable clusters, fragmentation dynamics 7−110169
InAs (100) SIMS analysis of surface prep. 7−86491
KCl sample, K isotopic ratio, use of pencil thermoemission ion source, mass spectra anal. 7−86695
Kr atom counting, reson. ionisation-TOF mass spectra anal. 7−93453
Kr, laser isotope anal. technique using ion storage ring 7−93455
^{81}Kr, separation technique from water, appl. to reson. ionisation spectroscopy chem. anal. 7−93454
MgF_2, fluorine depth analysis using Rutherford backscattering 7−93423
MgO refractory materials sublimation investigation by gravimetric and mass spectrometric methods *(Russian)* 7−86521
N_2, molecular beam, electron ionisation, optical model 7−68467
NH_3 dissociation on O_2 covered Pd studied with H_2 sensitive Pd-MOS device and mass spectrometry 7−106830
NbC films, prepared by reactive laser sputtering, supercond. props., X-ray and chem. anal. 7−99250
Ne^++Ne, charge transfer, reaction cross sections meas. using triple-quadrupole tandem mass spectrometer 7−68452
Ni, plasma source mass spectrometry, electrothermal vaporiser design and optimisation 7−126499

mass spectroscopic chemical analysis continued
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7−144350
^{237}Np, anal. using surface ionisation-diffusion type ionisation source 7−71553
$(O_2)_n^-$ and $(O_2)_nO^-$, electron attachment at low energies 7−71470
OCS, atmospheric determ., isotope dilution gas chromatography/mass spectrometry 7−100769
Os, isotope abundance, reson. ionisation mass spectroscopy study 7−86697
Os, isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
Pb, plasma source mass spectrometry, electrothermal vaporiser design and optimisation 7−126499
Pu assay in spent fuel soln., isotope dilution α, mass spectrometric determ. 7−119617
Pu assay using thermal quadrupole mass spectrometer 7−116025
Pu, mass spectroscopic anal., sensitivity enhancement techniques 7−126518
^{A}Pu, A=239,240, fallout in marine samples, mass spectrometric determ. 7−144926
Re, isotope abundance, reson. ionisation mass spectroscopy study 7−86697
Re, isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
Se desorption from graphite surface, mass spectral and atomic absorpt. study 7−143219
Sm, chemical and isotopic anal., resolution limits inductively coupled plasma-mass spectrometry study 7−78563
Sn, isotopic fractionation, thermal ionisation mass spectrometry meas. 7−86696
SnO, Kr-bombardment induced secondary ion emission spectra study 7−85915
Ti gettered surface, H_2O, O_2 interactions in UHV conditions 7−139072
U assay using thermal quadrupole mass spectrometer 7−116025
U, human urine analysis by isotope dilution thermal ionisation mass spectrometry 7−87255
U isotopic analysis, ribbon ion source for accuracy and speed improvement 7−126522
W CVD, selectivity loss mechanisms 7−113428
WO_3 films, optical props., stoichiometry influence, XPS and LIMA anal. 7−138533
Xe, trace amounts detect., reson. ionisation-TOF mass spectra anal. 7−93452
Zr separation from spent WWER fuel, mass spectra meas. 7−96229

mass spectroscopy
see also atom probe field ion microscopy; mass spectra; mass spectrometers; secondary ion mass spectroscopy
2D Fourier transform ion cyclotron reson. mass spectrometry 7−115980
accelerator mass spectrometry, graphite target preparation for radiocarbon dating 7−134884
accelerator mass spectrometry at Toronto 7−89297
acetaldehyde, oxidation in shock waves, mass spectrometric obs. 7−139001
aliphatic-aromatic polysulphides, thermal decomp., mass spectrometric obs. 7−86607
apodisation of Fourier transform-ion cyclotron reson. spectra 7−134874
capacitance bridge detector and signal lock for ion cyclotron resonance spectrometry 7−128710
charged particle optics, conference. Albuquerque, NM, USA (May 1986) 7−128177
collective ion acceleration, ion beam probe diagnostics and time-resolved mass spectrosc. 7−129460
collinear fast ion-laser beam spectroscopy, sensitivity, optical pumping 7−121234
collinear laser ion-beam spectroscopy at mass separators, stabilization system 7−121288
collinear laser spectroscopy of ion beams from EM isotope separators 7−121287
P/Comet Halley (1982i), dust mass spectrometric anal. *(German)* 7−115311
conf. on electromagnetic isotope separators, Los Alamos, USA 7−140362
Danish research *(Danish)* 7−89295
diffusion coefficients of metal-H systems, high-vac. setup with mass spectrometric attachment 7−73463
dodecapole magnet for ion optics 7−128708
double-focusing toroidal mass spectrograph, expt. results 7−128701
double-focusing toroidal mass spectrograph, first order theory 7−128700
elastic recoil spectrometry, quantitative, mass and energy dispersive, resolution, review 7−116024
electron multiplier ion detection system of Finnigan-Mat model 261 mass spectrometer 7−67416
electron-ion coincidence method for ultrasensitive detection of atoms 7−122740
emission and mass spectrometry with ICP 7−93441
fast atom bombardment (FAB) mass spectrometry of biological components *(Japanese)* 7−71563
flame structure, mass spectrometric investig., flame-probe heat transfer 7−78502
high-mass ion fragmentation, time- and mass-resolved 7−134871
ICP mass spectroscopy, computerised reference manual for spectral data and interferences 7−102557
ICP-mass spectrometry, concomitant element effect on nonspectroscopic interferences 7−121292
ICR spectrometry, ejection of low-mass charged particles study 7−80925
impurity transport in the mass separator *(Czech)* 7−80927
ion guide method for on-line isotope separation 7−122288
ion transmission through laser microprobe mass analyser, study using ray-tracing computer programs 7−67419
ion-guide isotope separator on-line at INS 7−122290
ion-guide isotope separator on-line at the Tohoku University Cyclotron 7−122291
ionisation techniques for mass spectroscopy with high mass 7−95675
ISOTRACE high resolution accelerator based mass spectroscopy 7−121282
large molecule electronic sputtering by plasma desorption and heavy-ion bombardment 7−125894
laser material diagnostics, conf., Albuquerque, NM, USA (Feb. 1987) 7−102022
laser micromass spectrometry, surface layer anal. 7−126508
LIGISOL, Leuven Ion Guide Isotope Separator On-Line 7−122289

mass spectroscopy continued
m/e ratio monitoring in magnetically scanned mass spectrometer, using two Hall probes 7−108600
metals, corrosion and oxidation anal. using spectroscopic techniques 7−93207
methyl isothiocyanide, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
methyl thiocyanide, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
mirror analyser/quadrupole mass spectrometer for plasma processes 7−137128
molecular structure meas. apparatus for valence-unsaturated compounds 7−103687
octanone, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
optical spectroscopy using mass separator beams 7−121285
plasma desorption mass spectrometry, isotopic broadening effect, biomol. appl. 7−121291
polymers, surface analysis using mass spectrometry 7−93443
scan laws for tandem mass spectrometry using a floated gas collision cell 7−89296
secondary neutral mass spectroscopy, laser based, yield, sensitivity 7−121290
separation of fission products by the ion guide FED isotope separator, IGISOL 7−121284
spent fuel solution, Pu assay, comparison of isotope dilution methods using α-, mass spectrometry *(Russian)* 7−119618
surface anal., nonresonant multiphoton ionisation of desorbed species 7−137674
tetraalkylammonium salts, sampling behaviour charactn., electrohydrodynamic mass spectrometry 7−102559
time of flight mass spectrometry, historical overview 7−115720
toroidal electrostatic analyser for space research, expt. tests 7−88077
transuranic elements, environmental distrib. determ. by thermal ionization mass spectrometry 7−103297
triple quadrupole mass spectrometry, knowledge based system appl. 7−73464
two-photon excitation in resonance ionisation mass spectrometry 7−108692
UV-multiphoton fragmentation, mass and photoelectron studies 7−122650
Ce, isotope ratios, surface ionis. mass spectrometer determ. 7−136083
^{252}Cf plasma desorption mass spectrometry using Mamyrin reflection 7−121270
^{252}Cf plasma desorption mass spectrometry, advances and appls. 7−116019
Cu-Sb-S, liq. alloy, thermodynamics, mass spectrometry, Knudsen method 7−71150
D-T fusion, T anal. and meas. using mass spectrometry, ionization gauge and secondary electron multiplier 7−130941
^{3}He/^{4}He ratio determ. using accelerator mass spectrometry *(Chinese)* 7−108693
La, isotope ratios, surface ionis. mass spectrometer determ. 7−136083
MH^{+} ion intensity enhancement by acid spray in secondary ion mass spectrometry 7−134879
Ni-He, quantitative He anal., sputtered neutral mass spectrometry 7−138570
Os, isotope abundance, reson. ionisation mass spectroscopy study 7−86697
Re, isotope abundance, reson. ionisation mass spectroscopy study 7−86697
Ru (001), preadsorbed H, acetylene adsorpt. EELS and thermal desorption mass spectrometry 7−71524
Si-He, quantitative He anal., sputtered neutral mass spectrometry 7−138570
Sm, chemical and isotopic anal., resolution limits inductively coupled plasma-mass spectrometry study 7−78563
^{A}Tl, A=189-194,201,203,205, hyperfine props. collinear laser spectroscopy 7−121286

mass standards *see measurement standards*

mass transfer
3A 0729+103, intermediate polar, X-ray emission from white dwarf mag. pole 7−72465
accretion flow onto compact object fed by stellar wind in close binary 7−107810
accretion of charged matter by collapsing objects 7−146022
accretion onto collapsed star, bimetric general relativity theory 7−72474
adiabatic axisymmetric accretion flow, new mechanism for jets form. 7−107711
aerated agitated water tank, relation between mass transfer and sound spectra 7−142356
alternating flow model for mass and heat dispersion in packed beds 7−110945
V1343 Aql (SS 433), photometric search for mass transfer for rate modulation period 7−120444
R Aqr, symbiotic star, accretion model for linear polarization vars. 7−72473
atomizer, enclosed type, travelling wave anal., modelling 7−71566
ϵ Aur, eclipsing binary, mass transfer and UV continuum from accretion disk 7−107899
axisymmetric accretion flows between thin Keplerian disc and a non-rotating star 7−107712
binary mixtures, evap. and condensation, mass transfer resistances influence 7−118070
binary stars, evolution of intermediate mass Case B close binaries 7−115501
binary stars, evolution of massive close binaries in and after mode Br mass-transfer phase 7−127959
binary stars, stability of triangular libration points in photogravit. three-body problem *(Russian)* 7−107700
black hole accretion, stabilisation of nonaxisymmetric instabilities in rotating flow 7−127714
body with rot. nose section at hypersonic flow vel., heat and mass transfer 7−136919
bulge X-ray sources, neutron star accretion from disk inner edge 7−94945
CANDU PHWR, stagnation feeder breaks, initial discharge rate calcs. 7−96299
capillary flow in circulatory system, wall permeability investig. 7−114312
HT Cas, eclipsing dwarf nova, accretion rate-radius relation from photometric obs. 7−94879
cataclysmic binaries, mass transfer rates rel. to classical nova and dwarf nova stages 7−145978

mass transfer continued
cataclysmic binaries, stream-accretion disk collision region modelling 7−115441
cataclysmic binary stars, influence of binary system parameters on hibernation model 7−145977
cataclysmic binary stars, period gap, dynamic instability model 7−140097
cataclysmic variable stars, absolute magnitudes rel. to mass transfer rates 7−107860
catalyst grain, porous, filtrational transport, heat and mass transfer coeffs. 7−136989
Cen X-4, soft X-ray transient source, accretion model for X-ray emission during quiescence 7−140151
Z Cha, dwarf nova, gravit. radiation losses rel. to mass transfer rate 7−115448
chemically nonequilibrium turbulent pipe flow, heat and mass transfer, eigenvalue problem *(Russian)* 7−104357
circular ducts, momentum, energy and mass transfer 7−117671
circular pipe flow, time variation of inlet concentration, mass transfer equation 7−75677
classical nova model, evolution through full accretion-outburst-accretion cycle 7−120429
classical symbiotic stars, components nature and outburst charact. 7−145972
close binary stars, mass loss and shell masses 7−127950
close binary stars, thresholds for rapid mass transfer in polytropic models 7−146038
coaxial cylinders, with stepwise changes in diameter, mass transfer 7−67257
coefficient definition 7−95507
cold vapour direct contact hygroscopic-condensation, heat and mass transfer 7−97613
concurrent liquid-liquid flow, film- and continuous phase mass transfer 7−97484
condensation of mixed vapours of immiscible liquids, simultaneous heat and mass transfer *(Turkish)* 7−110946
conjugate, from droplet, diffusivities ratio effect 7−128498
consolidated materials, heat and mass transfer study *(French)* 7−75258
contact gas-liquid heat exchangers, heat and mass transfer 7−136835
convection, natural, from fin in saturated porous medium, lateral surface mass transfer effects 7−75573
SS Cyg, accretion disk struct. and flow charact. 7−115438
Cyg X-3, neutron star accretion and rot. as power source 7−88534
cylindrical cavity in floor of flat duct, mass transfer at base 7−67256
di-2-ethylhexyl phthalate-dibutyl phthalate (di-2-ethylhexyl sebacate), binary mixture vaporisation 7−111844
dilute solute mass transfer with chemical reaction on nonuniform surface 7−132966
AG Dra, Population II symbiotic star, rapidly accreting white dwarf model 7−115389
AG Dra, symbiotic star, transfer charact. and outbursts 7−145959
droplet collisions with solid spherical particle, mass transfer 7−102352
drops, forming, mass transfer, circulation rate effect 7−121012
dwarf novae, mass accretion rates rel. to two types of outbursts 7−115446
dwarf novae, mass transfer instability models 7−115431
E 1405−451, AM Her star, mag. fields and accretion column absorpt. features, spectropolarimetric obs. 7−140164
electric arc, pressure effects on displacement by stationary transverse electric field *(Spanish)* 7−111293
electrodeposition, mass transfer and current distribution in circular through-hole, impinging fluid jet effect 7−106450
electroplating, selective, high speed, impinging 2D slot jet flow 7−71090
electrorotational flow with external mag. field, heat and mass transfer study 7−123774
EF Eri, AM Her star, simultaneous five-colour (UBVRI) polarimetry rel. to mag. field and accretion geometry 7−115506
EF Eri (2A 0311-227), AM Her star, Einstein obs. rel. to accretion model 7−127963
evaporation conjugate problem, heat and mass transfer 7−142357
EXO 0748−676, transient X-ray burst source, burst behaviour and neutron star accretion rate depend. changes 7−88513
film absorpt., interdiffusion falling film 7−69945
floating zone crystal growth, numerical simulation of flow, heat and mass transfer 7−113378
flow regime and heat and mass transfer within fluidised beds composed of gases and solids *(German)* 7−111090
fluid percolation transport through inhomogeneous composite medium 7−136992
fluid phases, description based on mol. interactions *(German)* 7−121019
fluidised beds heat and mass transfer study 7−75662
fluidized beds, magnetically stabilized, mass transfer modelling 7−136990
free convective heat and mass transfer at vertical plate, fog form. influence *(German)* 7−69179
free molecular gas flow in channel, heat and mass transfer 7−136935
free-convection mass transfer obs. using micromosaic electrode 7−69148
free-surface flows, eddy diffusion coeff., 1D mass transfer model 7−111129
fully convective main-sequence star, rapid mass accretion effects on evol. and struct. 7−127838
galaxies, interacting, interstellar gas clouds compression by press. of hot intergalactic medium 7−128038
gas mixture, filtrated, steady wall combustion, heat and mass transfer 7−139009
gas turbine blades surface, film-cooled recovery region, mass transfer and effectiveness meas. 7−97524
gas-liquid bubbly flow, water hammering anal., transient press. profiles 7−75647
gas-liquid-solid fluidised bed, mass transfer charact. 7−83325
gaseous mass transport in porous media through a stagnant gas 7−91212
generalised boundary conditions 7−68974
glacier-ocean interactions and dynamics, heat and mass transfer models 7−139659
greenhouses, heat and mass transfer, math. model 7−100750
GX 301−2, slow X-ray pulsar, wind accretion model from obs. through two binary cycles 7−107897
heat and mass transfer in unsaturated porous materials with heat source 7−97521
AM Her, general props. *(French)* 7−107900
AM Her stars, effect of soft X-ray excess on deduced mass transfer rates 7−107905
heterogeneous systems, recrystallisation, continuum theory 7−124141

mass transfer continued
high Schmidt number mass transfer at solid boundaries, mixing length eqn. 7−91102
horizontal annular two-phase flow modelling developments 7−91196
HTGR graphite cylinder, chemical reactions and diffusion with massive air ingress 7−109373
RW Hya, symbiotic star, mass accretion rate by hot component 7−127894
hydromagnetic free convection and mass transform flow past an accelerated vertical plate through a porous medium 7−83207
VW Hyi, X-ray SU UMa star, X-ray emission and accretion characts. 7−72464
hypercritical spherical accretion onto compact objects, flow struct. 7−88093
RS Ind, eclipsing binary, mass transfer model from UBV light curves and period study 7−88499
inert gases, porous injection into liq., mass transfer 7−97619
interacting He star-white dwarf pairs, mass transfer rates rel. to Type I supernova 7−120468
intermediate polars, accretion rate vars. from white dwarf spin-up and spin-down rates 7−140107
interzonal heat and mass transfer through doorway by convection 7−100699
ion-molecule collisions, 2D Fourier transform ion cyclotron reson. mass spectrometry 7−115980
ionic mass transfer at circular and elliptical cylinders in cross-flow in fluidized beds 7−75661
ionic mass transfer at circular cylinders in cross flow of homogeneous fluid 7−83383
jet, rotating, in cylindrical channel 7−104320
liquid and gas, opposing film flows, combined heat and mass transfer 7−83312
liquid film, gravity-driven, diffusion from vertical wall 7−98633
liquid film, wavy, diffusion, num. soln. 7−98632
liquid metals, surface reaction, mass transfer determ. 7−113982
liquid rapid decompression, mass transfer-controlled bubble growth 7−97602
liquid surface, convective struct. form. under laser radiation, holographic interferometry 7−130684
liquid thin film, Marangoni effect determ. 7−69133
liquid-liquid-solid fluidised beds, dispersed phase hydrodynamic characts., mass transfer 7−97617
liquid-solids fluidised beds, mass transfer, statistical anal. 7−91214
LMC low mass X-ray binaries, evidence for mass flow onto black holes 7−127952
LMC X-2, H depletion in accreting gas 7−127885
LWR films, chemical decontamination, mass transfer model 7−129452
Marangoni convection and mass transfer from liquid to gas phase under microgravity 7−117584
Marangoni light-induced effect for recording dynamic diffraction lattices 7−124644
mass accommodation coefficients from penetration measurements in laminar tube flow 7−97626
mass exchange processes in porous media at low Peclet number 7−75665
matter flow on to crystal surface under turbulent natural convection 7−106391
maximum turbulent heat transfer coefficient in reattachment flow region, correl. 7−130648
membrane operation, mass transfer under turbulent cross flow 7−86674
merging white dwarfs, rapid accretion model for off-centre ignition of nuclear burning 7−107822
metal deposition, mass transfer coefficients, electrochemical tracer studies 7−100132
metallic solid solutions, chem. comp. and reactivity of interfaces 7−86670
microgravity convection, effect on mass transfer 7−97532
moving boundary region, unsteady heat and mass transfer 7−97278
multidrop gravity spray, trace gas absorpt., mass transfer anal. 7−78541
multiphase systems, one-dimensional, heat and mass transfer *(German)* 7−69252
multivalued mappings, measurable selectors and the mass transfer problem *(Russian)* 7−72837
multizone vapour transport, thermal and solutal convection, numerical model 7−117588
naphthalene, dissolving in supercrit. CO_2, mass transfer resistance meas. 7−118099
natural convection heat and mass transfer, shape effect 7−83205
natural convection heat and mass transfer in fluids and porous media 7−83209
natural convection heat and mass transfer in vertical porous medium-filled slot 7−136851
neutron stars, spin evolution in wide low-mass X-ray binaries, accretion effects 7−72506
Newtonian fluid, bubble columns, volumetric mass transfer coeff. calcs. 7−142341
non-Newtonian fluid, bubble columns, volumetric mass transfer coeff. calcs. 7−142341
nonlinear mass transport equation, property of classical soln. 7−73283
novae, variable mass transfer rate scenario for classical nova outbursts 7−120428
nozzle, submerged, gas injection, absorption, interfacial areas calcs. 7−104321
nuclear waste packages, radionuclide release, sorption and decay effects 7−103229
oceanic heat and freshwater fluxes at 30°S 7−94287
old neutron stars, accretion from dense interstellar clouds rel. to radiation signatures 7−88492
old white dwarfs, accretion-induced gravit. collapse to neutron stars 7−127857
RS Oph, recurrent nova, episodic accretion model for outbursts 7−88434
particle clusters and bubbles in fluidised bed, mass transfer at low Reynolds numbers 7−111097
peculiar interacting binary stars, evolutionary sequence for rapid mass outflow stage 7−88527
plane shear layer, mass transfer, numerical anal. 7−130626
pre-main-sequence stars, evolutionary track of mass-accreting polytropic model 7−140045
quasars, mass outflows around BAL QSOs and line profile formation 7−95039
randomly inhomogeneous medium, filtration, mass transfer 7−111094
recurrent novae, accretion events model for outbursts of T CrB and RS Oph 7−115445
mass transfer continued
recurrent novae, accretion events model for T CrB and RS Oph 7−115456
red giant stars in open clusters, mass loss 7−101777
rotating cylinder, free end, mass transfer coeffs. meas. 7−97540
U Sco, recurrent nova, H depletion in accreting gas 7−127885
V701 Sco, W UMa star, temporary equilib. evolutionary state after Case A mass transfer 7−107903
semi-detached binary systems, simulation of accretion disk form. due to viscosity 7−120375
RW Sex, UX UMa star, mass exchange characts. 7−115417
WZ Sge, mass transfer and line profiles 7−115414
silica gel packed beds, moisture transport, exptl. obs. 7−128497
silica gel packed beds, moisture transport, theory 7−128496
small bore ducts, fluid motion accompanied by heat and mass transfer with sedimentation 7−123752
SMC X-1, X-ray emission and mass transfer characts. 7−80047
soil, freezing, heat and moisture transfer, self-simulating problem 7−145531
solar energy storage in protected ground, heat exchange in combined production/drying unit 7−78680
solar kilns, box-type collector, performance determ. methods 7−106929
solid electrode, diffusion and selective mass exchange with electrolyte 7−113945
solid particle reaction with multicomponent gas mixture, mass transfer, macrokinetic model 7−78469
solid slab, melting in hot liquid pool, free convection heat and mass transfer 7−130515
solids dissolving in supercritical CO_2, mass transfer, resistance of boundary layers 7−98455
sphere, mass transfer around, numerical anal. using alternative direction implicit method *(French)* 7−75593
spray drop condensation, hydrodynamics, heat and mass transfer study 7−111075
static bed, solvent recirculation and longit. mixing, solvent extraction 7−130775
steel, unalloyed, erosion-corrosion rate estimation in alkalised boiler feedwater 7−113787
styrene, polymerisation in laminar flow tubular reactor, heat and mass transfer 7−119527
sublimation of semi-infinite porous medium, convection effects study 7−98422
Sun, comparison between mass-losing and standard solar models 7−145910
swelling agent for solid-gas mass transfer meas. 7−75261
swirled wall jet, turbulent heat transfer, integral energy eqn. soln. 7−97591
symbiotic stars, increased mass loss model for outbursts 7−140075
Taylor bubbles in laminar and turbulent flows, mass transfer study 7−97600
ternary system, intraparticle ion-exchange mass transfer 7−126429
tetraalkylammonium salts, sampling behaviour charactn., electrohydrodynamic mass spectrometry 7−102559
thermal plasma jet reactors and multiparticle injection, simulation calcs. 7−69448
thermohaline systems, gradient zone erosion, physical model 7−130689
three-phase fixed and fluidised beds, solid-liq. mass transfer 7−104337
three-phase fluidised bed, mass transfer between solid particles and liq. 7−111067
tube banks with oval shaped tubes, momentum and heat transport *(German)* 7−69269
turbulence promoter, 3D, net type, local mass transfer rates 7−130647
turbulent Couette-Taylor flow, mass transport 7−130650
turbulent dissociating gas flow in heat-releasing rod bundles, heat and mass transfer calcs. *(Russian)* 7−104275
turbulent flow, wall vel. gradient fluctuations 7−142345
turbulent forced convection duct flow, evaporative mass transfer 7−75549
twisted tubes in heat exchanger, vortex structure of flow 7−83221
two-dimens., finite difference method study 7−100569
two-phase flow, mass transfer, boundary conditions 7−69249
4U/MXB 1636−53, relation between amount of accreted fuel and strength of X-ray burst 7−146040
AN UMa, AM Her star, accretion rate and mass loss 7−88504
unsteady laminar incompressible second-order boundary-layer flow at a three-dimensional stagnation point, num. investig. 7−117558
vapour-gas mixture, turbulent, heat and mass transfer in film condensation 7−104252
Vel X-1, light curve modelling involving accretion disk and mass transfer to neutron star 7−127947
vertical cylindrical fin in saturated porous medium, natural convection study 7−97266
vertical enclosure, natural convection, combined heat and mass transfer 7−110977
vitamin B12, sorption from aq. soln. 7−105241
wall heat transfer coeff. determ. in pebble beds *(German)* 7−75581
wall to liquid mass transfer and hydrodynamics of two-phase Couette-Taylor-Poiseuille flow *(French)* 7−111068
water droplets, charged, evaporating, change and mass flux in elec. field 7−83322
wavy channels, oscillatory flow, mass transfer and flow characts. study 7−111107
white dwarf, spin-up and mixing due to accretion, implications for novae 7−140085
X-ray binaries in hierarchical triple system., binary separation vars. rel. to mass transfer bursts 7−120501
X-ray binary, asymmetric beam emission from neutron star, role of mass transfer from accretion disk 7−115527
X-ray binary stars, high-luminosity accretion in wind-driven objects 7−127962
X-ray binary stars, IR emission in accretion flow near neutron star *(Russian)* 7−72539
X-ray clusters of galaxies, cooling flows, star form. during accretion onto galaxies 7−140308
X-ray clusters of galaxies, star form. rates in cooling flows during accretion onto galaxies 7−140309
X-ray clusters of galaxies, star formation numerical modelling in cooling flows accreting onto galaxies 7−140310
X-ray pulsars in Population I binaries, intermittent stellar wind accretion and long-term activity 7−88517
I_2, gaseous absorpt. by water droplets, LWR spray system appl. 7−129302

mass transfer continued
NaCl mass transport in tetramethoxysilane gel, conc. and diffusion coeff. meas. 7−144257
Ni-Cd cells, discharged and shorted, open-circuit voltage recovery transient 7−119637
$Pu(NO_3)_4$, mass transfer rate coeffs. meas., reprocessing appl. 7−73871
Ti plate, self-sustaining exothermic reaction, multipulse light initiation 7−106813
$UO_2(NO_3)_2$, mass transfer rate coeffs. meas., reprocessing appl. 7−73871
Zn electrodeposition, vertical flow channel, mass transfer under combined natural/forced convection 7−142375
Zn redox battery flow cell, mass transfer 7−86779

master equation
age distributions in physical systems 7−134654
antiferromagnetic Ising system on triangular lattice, statics and dynamics 7−85332
atomic systems, superradiance and subradiance study 7−68271
bubbling fluidised beds, generalised master eqn. appl. to bubble population 7−123735
charge transfer interaction, electronegativity and chem. hardness 7−122701
collisional energy relax. process, imbedding diffusion 7−86581
damped nonlinear oscillator, master eqn., classical statistical mechanics anal. 7−108305
diatomic molecule gas, vibrational relaxation, harmonic oscillator approx. 7−141659
dimers, temperature programmed desorption from surfaces 7−143221
disordered solids, dispersive transport, mean field theory 7−99047
disordered systems, random energy model, power law relaxation, master eqn. soln. 7−98376
dynamical metastability, master eqn., exact soln. 7−128512
electron-phonon interacting systems, electronic relaxation, non-Markovian theory 7−112201
escape rate from strange sets, eigenvalue calcs. 7−128453
exciton model for slow particle emission in nuclear reactions 7−116370
ferromagnetic Ising model, master eqn. derivation from path probability method 7−85225
free electron laser linewidth, master Fokker-Planck eqn. 7−117214
gaseous system in contact with heat bath, master eqn. transform. 7−129839
general relativity, newtonian limit, universal master equation for the gravitational violation of quantum mechanics 7−73068
heavy-ion deep inelastic collisions, open quantum system of two coupled harmonic oscillators 7−109207
homologous reaction series, isoequilib. relationship, master eqn. theory investig. 7−113858
hopping conduction, relaxation mode theory using reduced one-body master eqn. 7−131642
hopping conductivity in lattice systems, Green's function methods 7−76865
information gain minimum approx., time depend solns. 7−134640
molecular crystal, exciton quenching by an impurity, quantum mechanical calcs. 7−112196
neutron counting statistics in nuclear assemblies, stochastic transport theory 7−73822
nonMarkovian collision processes, master eqn. generalization and asymptotic props. 7−115900
nuclear precompound angular distrib. model 7−116371
occupation number fluctuations influence on Frohlich model of nonthermal excitation 7−115896
one-dimensional systems, carrier drift and trapping, master eqn. approach, exact, scaling and CPA calcs. 7−105553
optical amplifiers and attenuators, rigged-reservoir response, general theory 7−122890
optical bistability in bad cavity limit, master equation solutions 7−110441
optical bistability with small numbers of atoms, bad cavity limit, master eqn. soln. 7−68741
Potts model in several dimensionalities, critical dynamics 7−67247
quantum, soln. for particle trajectories 7−120858
stochastic potential, non-analytic, for local codimension-two bifurcation 7−80622
trapping in polymers, Pauli master equation soln. via Lanczos algorithm 7−110149
truncated Kramers-Moyal expansions, continuum approx. to Poisson process 7−80592
two-mode laser, nonreson., with coupled transitions, quantum theory 7−122906
$^{209}Bi(^{136}Xe,X)$, 940 and 1130 MeV, memory effect, nonMarkovian transport eqn. 7−135371
H_2+Ar, nonequilib. dissoc. rate coeff., Monte Carlo trajectory and master eqn. simulation 7−93290
$^{144}Sm(^{84}Kr,X)$, 720 MeV, memory effect, nonMarkovian transport eqn. 7−135371

matched filters
broadband source at hydrophone array, combined detection and source motion estimation, thresholds 7−104089
composite matched filter output partitioning for pattern recognition 7−117298
multimode fibres, mode excitation and modal power distrib. meas. using computer-generated holograms 7−130355
quasiphase-only matched filtering 7−110538
real-time polychromatic signal detection using colour liquid crystal television 7−110268
sonar, range resolution, optimal sequences for detection using a matched filter binary integrator 7−104091

materials
see also individual materials, e.g. ceramics
advanced materials technology, conf., Anaheim, USA (Apr. 1987) 7−134368
bitumens/bituminous compound for radioactive waste treatment, thermal stability 7−144717
IEICE National Convention, Keio, Japan (March 1987) 7−108028
science, X-ray microscopy appls. 7−86539
science and engineering, future trends and policy requirements 7−85969
science under microgravity conditions, conf., Bordeaux, France (Dec. 1986) 7−108043
space, conf., Seattle, USA (Oct. 1986) 7−66837
surface engineering, conf., Brighton, England (June 85) 7−72724
teaching, case study approach 7−108091
teaching of materials to engineers, curriculum development 7−108073

materials continued
training and research programmes, for materials science in France *(French)* 7−108072
zeolite ZSM-5, synthesis, struct., Raman spectrosc. obs. 7−138449
$NiFe_2O_4$ synthesis from polynuclear coord. cpds. 7−132543

materials handling
see also computerised materials handling; crushing; fission reactor fuel preparation and reprocessing; fluidised beds; grinding; transportation; winding (process)
ANL computer controlled target storage system, status report 7−109577
Breeder Spent Fuel Handling and Transportation Program of US DOE 7−74149
CANDU irradiated fuel, behaviour under dry conditions 7−96199
CANDU irradiated fuel, design considerations for water pool storage 7−96200
CLAB, spent fuel intermediate storage facility, remote-handling experience 7−129423
concrete cask for storage, transportation and disposal, design, tests 7−96357
concrete storage and transport cask for spent pebble bed reactor fuel 7−74144
conference on CANDU fuel, Chalk River, Canada (Oct. 1986) 7−95094
drugs in biological fluids, automated anal. system 7−127030
fusion reactors, CAD supported remote handling systems 7−74056
immobilized radioactive waste transportation, safety regulations 7−74146
irradiated steel reactor components, in hot cell, robot for ultrasonic inspection 7−129177
lenses, aspherical, fabrication, flexible manufacturing system 7−117364
LWR MOX fuel fabrication, remote handling device implementation, radiological aspects 7−116617
Mostram systems for collection, transportation and storage of radwaste 7−74143
nuclear targets conference, Chalk River, Ont., Canada (Sept. 1986) 7−108020
particulate technology, conf., Manchester, England, (April 1987) 7−88727
Pickering operations fuel performance review 7−96193
radioactive waste cask handling system, use of robotics 7−74183
six-link manipulator with mechanical offset, algebraic approach for joint solution 7−88760
in space, conf., Toulouse, France, 30 June-11 July 1986 7−115669
spent fuel cask reception and dry unloading at La Hague reprocessing plants 7−103015
spent LWR fuel shipment, cask performance and interface specifications 7−74150
vitrified high level radwaste, transport and storage cask development 7−74142
$^3H_2$, safe handling and storage 7−109525
T handling technology development in the R-project 7−74064

materials preparation
see also crystal growth; hot pressing; melt spinning; powder metallurgy; powder technology; sintering; vulcanisation
A15 multifilamentary supercond. form., solid state reaction and transform. kinetics 7−106466
advanced materials technology, conf., Anaheim, USA (Apr. 1987) 7−134368
alkoxyphenyl 4-alkoxybenzoate-based ferroelec. liq. crysts., synthesis and props. 7−125701
alkyl cyclohexyl benzotrifluorides, synthesis and liq. crystal behaviour 7−78477
4-alkylphenyl 4-(4-nitrobenzoyloxy) benzoate liq. cryst., facile synthesis 7−126441
amorphous and liquid materials, conference, Passo della Mandola, Italy (Aug.-Sept. 1985) 7−80176
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
cellular glass, prep. from quartz-porphyrite sands 7−113511
ceramic fibres, synthesis from organometallic polymers, mech. props. 7−77901
ceramic powders, morphology 7−92906
ceramic superconducting powder prep. by freeze-drying 7−119184
ceramic superconductors, powder processing for microstructural control 7−119183
ceramic synthesis from intercalation cpds. by carbothermal reduction 7−77895
ceramics, chemically bonded, new strong cement materials 7−113502
ceramics, fabrication reliability, control of flaw populations 7−71134
ceramics, fractured piezoelectric elements for broadband US composite transducers 7−126075
ceramics, manufacturing costs 7−71128
ceramics, special, conf. London, England (Dec. 1985) 7−72691
ceramics and ceramic composites, research areas 7−71127
conjugated sulphide polymers, synthesis and electroconductivities 7−100175
copper phthalocyanine polymer film, form. by double source evaporation 7−100174
cyaninatometal compounds, phthalo- and naphthalo-based, synthesis and semicond. props. 7−100146
cyanocobalt(III)phthalocyanine, cryst. struct. and elec. cond. 7−98958
diamond formation from natural graphite, pretreatment and solvent-catalyst 7−84126
disperse phase formation by nonstationary condensation in turbulent medium 7−69109
epoxy-polyethylene oxide-salt complexes, ionic conducting interpenetrating networks, synthesis, mech. props. 7−86125
fibre reinforced glasses and glass-ceramics, development and props. 7−78143
fibres, synthesis by growth packing mechanism 7−86124
film and powder synthesis, Mossbauer and IR spectra charactn. 7−118999
glass-molten salt ternary ionic system, computer simulation of uphill diffusion by ion exchange *(Japanese)* 7−92951
heterocyclic polymer composite conducting films, prep. and elec. props. 7−76909
high temperature superconductors, conf., Anaheim, CA, USA (April 1987) 7−108049
high-temperature superconductors, recent Dutch laboratory results 7−131874
HMTTeF radical salts, electric conduction and electrochemical prep. 7−84857

materials preparation continued
ice, dielectric props., plastic straining and sample prep. effects 7−99667
infrared materials, characterisation, X-ray diffraction techniques 7−130982
inorganic precipitates, morphology, gel growth, homogeneous soln. precip. 7−113369
IR materials for IR detectors and sources, conf., Boston, USA (Dec. 1986) 7−128194
KAuS(Se), material prep. and cryst. struct. *(German)* 7−69668
laminates, off-axis, prep. by folding technique, charactn. 7−144321
magadiite-polyacrylonitrile intercalation compound, prep. and conversion to SiC 7−119228
magnetic forming, energetic aspects *(French)* 7−92904
magnetic materials prepared by rapid solidification, review 7−86093
mechanical tempering of optical fibres 7−138728
metal matrix composites, fabrication by squeeze infiltration process 7−138709
metal oxides, powders and films, synthesis of metallo-organic compounds 7−71106
metallic glasses, formation, methods and techniques 7−143011
metallic glasses, formation and growth processes by solid state diffusion reactions 7−104587
metallic glasses, production, structures and structural defects 7−100172
metallic glasses, rapid quenching form. 7−100171
metastable material prep. by laser irrad. 7−76205
methacrylate resins, urethane modified, fracture toughness 7−138834
microgravity conditions, conf., Bordeaux, France (Dec. 1986) 7−108043
microplastics hardening process, rheokinetic investig. 7−144360
microwave heating, sintering, design principles 7−71108
NASICON ionic cond., microstruct. and water reactivity, comp. and processing parameters depend. 7−118154
nonmetallic materials, defect properties and processing, conf., Boston (USA), Dec. 1985 7−66833
nuclear microfilters, preparation using fission fragments from U(Th) photofission 7−141409
organic ferromagnets, synthesis 7−126041
oxide films, high T_c supercond., prep. on ceramic substrates 7−113501
perylene-metal-bis(1,1-dithio 2,2-dicyanoethylene)-based conductor, elec. cond. 7−84856
photopolymer compositions, camera-speed, development chemistry and materials preparation 7−139023
phthalocyanatonickel salts, prep., struct. and elec. props. 7−98111
phthalocyaninato stacked bridged metal complexes, synthesis and elec. cond. 7−99026
poly(p-phenylene vinylene), synthesis, doping and elec. cond. 7−99000
polyacenic materials, pristine and heavily doped, ESR studies 7−112930
polyacetylene, synthesis, precursor polymer struct. 7−97987
polyacrylonitrile fibrous canvas-polyethylene gauze system, thermal math. model of filter materials prep. 7−71147
polyaniline, struct. and synthesis 7−69630
polyarenemethines, synthesis, doping, struct., conductivity meas. 7−71146
polycarbonate phenoxy blends, physical behaviour, interchange reactions in melt-processing conditions 7−77936
polycarbonate-phenoxy blends, mech. behaviour, influence of level of interchange reactions 7−113513
polyenes, synthesis with electron donor and electron acceptor groups 7−71145
polyethylene, thermal stabilisation with lignosulphate, rheological props. 7−92954
polyethylene fibres, gel-spun, morphology and ultimate props. 7−92955
polyethylene fibres, high performance, die-free spinning prod. method 7−119235
polyethylene structures, swell drawing mfg. 7−119236
polymer blends, laminar morphology, structure and props. 7−137269
polymer blends with liquid crystalline copolyester, morphology and rheology 7−137196
polymer matrices and composites, thermal sonic anal. 7−100177
polypropylene, transcrystalline layers, struct., mech. props. 7−119234
polysulphone, synthesis, NMR and rheological study 7−119530
polythiophene: $FeCl_4$ films, synthesis and elec. props. 7−76907
polythiophene electroconducting polymers, synthesis method 7−78490
polythiophenes, electrochemical polymerisation, optical props. 7−78492
polyurethane reinforced reaction injection moulding, rheology of glass-filled polyol slurries and polymeric isocyanates 7−92956
polyvinylidene chloride films with trans-polyacetylene conjugated segments, optical props. 7−92761
processing using excimer lasers 7−141915
rapidly solidified materials, review 7−86092
rare earth cpds., R-Ba-Cu-O, supercond. ceramics, prep. using yttria concentrate *(Japanese)* 7−126074
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth-Ba-Cu-O high T_c supercond. powder fabrication and critical temp. determ. 7−118624
refractory metal carbide prod. using laser-plasma synthesis 7−100142
refractory metal nitrides, combustion synthesis theoretical analysis 7−71115
resin matrix composites processing using high intensity ultrasound 7−126080
rice husk ash filled-polyester resin composites, development, tensile and impact props., 7−113681
rubber, modified bulk and surface SKN-26, C filled, antifriction props., 7−93113
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7−92953
semiconductors, amorphous, conference, Balatonszeplak, Hungary (Sept. 1986) 7−80153
sialon-metal glasses, multianion, prep. and charactn. 7−126079
sialons, materials development study 7−138717
α'-sialons, Y, prep. and charactn. 7−126076
soft mag. amorphous materials prepared by rapid solidification, review 7−86093
in space, conf., Toulouse, France, 30 June-11 July 1986 7−115669
space materials, conf., Seattle, USA (Oct. 1986) 7−66837
steel, melt extracted fibres and particulate, prod., props., and appls. 7−92934
steel, structural, spalling failure, dynamic yield point and specific work meas. 7−100329
superhard materials, explosive form. by liner impact, shock wave front press. calcs. 7−89191
$TlCu_3Te_2$, prep. and cryst. struct. *(German)* 7−69648
materials preparation continued
TLD, background control in production 7−87230
transition metal nitrides, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7−71120
ultra-hard materials 7−113461
whisker reinforced ceramics, processing methods 7−77921
wood fibre reinforced cement, prep. and mech. performance 7−144322
$[Al_2Li(OH)_6]_2CO_3.nH_2O$, precip., hydrothermal treatment, textural props. 7−86227
Ag_2HgI_4, elec. cond., α-β transition, prep. technique effect 7−105114
Al-based alloys, high performance, light wt., prep. by rapid solidification processing 7−119203
Al-Cr-Zr rapidly solidified alloys prod. and processing 7−92931
AlN powders, prep. by N plasma-molten Al reaction *(Japanese)* 7−113507
AlN, synthesis by nitridation of floating Al particles in N_2 gas *(Japanese)* 7−126072
Al_2O_3 aerogels, unusually high pore vol. synthesis variables 7−113488
Al_2O_3 fibre reinforced AgCl composites, ionic cond., plastic deform. 7−69969
Al_2O_3, hydrated, synthesis by homogeneous precip. method *(Japanese)* 7−132551
Al_2O_3:Cr ultrafine particles, metal alkoxide synthesis, optical props. 7−99936
Al_2O_3-ZrO_2 composite ceramic, prep. by polymer soln. precip. 7−86113
Al_2O_3-ZrO_2 powder, charcts. rel. to synthesis chemistry 7−106474
Al_2TiO_5, synthesis, 1000-1600°C 7−77908
Al_2TiO_5-Al_2O_3-SiO_2 mullite composite, synthesis, thermal shock resist. 7−86120
ArF_4, high purity powders, CVD synthesis *(Japanese)* 7−113509
B and B/B_4C(SiC) fibre reinforced Al, brittle phases form. at. fibre/molten Al interphase boundary 7−77892
BN, B_4C, form. by pyrolysis of condensation prod. of boric acid and ethanolamines 7−119230
BN, synthesis from triammoniadecaborane and NH_3 *(Japanese)* 7−119224
B_2O, with diamond-like struct., high-press. synthesis 7−113495
Ba ferrite-polymer composite, Mossbauer and mag. studies 7−125443
Ba-Y-Cu-O high T_c supercond. perovskite phase synthesis, O partial press. depend. *(Japanese)* 7−132553
$BaFe_{12-x}Co_xO_{19}$, synthesis by organometallic compounds hydrolysis, magnetisation props. *(Japanese)* 7−132549
$BaFe_{12}O_{19}$, ferrite, prep. by liq. mix technique, charactn. 7−86111
$BaFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$BaFe_{12}O_{19}$ particles prep. by glass crystn. method 7−86104
$BaMg_2Al_{16}O_{27}:Eu^{2+}$, narrow-band phosphor 7−106400
$Ba(Na_{2/5}S_{3/5})O_3$, cubic perovskites, prep. 7−100162
BaO-V_2O_5-CuO semiconducting glasses, prep. and elec. props. 7−84888
$Ba_{0.65}Sr_{0.35}TiO_3$ ceramics, prep. from citrate precursors, dielec. and microstruct. props. 7−99648
$BaTb_2Mn_2O_7$, synthesis, cryst. struct., orthorhombic to tetragonal phase transition 7−69896
$BaTiO_3$ ceramics, synthesis by alkoxide method, comparison of $Ba(OH)_2$, BaO and Ba as starting materials 7−100163
$BaTiO_3$, powder, prep. by decomposition of metallo-organic compounds 7−71106
$BaTiO_3$, prep. via citrate, ion ratio control 7−92937
$BaTiO_3$, synthesis at low temp. 7−113498
$Ba_2YCu_3O_{8-y}$, prep., high T_c supercond. props. 7−99288
$Bi_{12}TiO_{20}$, solid-state synthesis, DTA and X-ray diffr. studies *(Japanese)* 7−126039
$Bi_4Ti_3O_{12}$ ceramics, grain-oriented fabrication and dielec. props. 7−99699
C deposition behaviour on Fe at high temps. and high C pot. in methane-H_2 mixtures *(Japanese)* 7−92903
C fibre reinforced C/TiC matrix composites, prep, compression props. 7−78101
C fibre reinforced glassy C composites, thermal consts., temp. depend. *(Japanese)* 7−131381
C foams, microcellular, low density, prep. 7−100144
C microfibre, gas-phase growth on Fe group metals 7−119182
C-C composites, elastic anisotropy during fabrication process 7−126166
C-quartz wool/reticulated vitreous C, low density composites 7−77917
CSe_2, polymeric, metallic cond. and synthesis 7−76910
$CaB_2U_2O_{10}$, synthesis and monoclinic cryst. struct. *(French)* 7−124184
$Ca_2Pt_3O_8$ hydrothermal synthesis and structural charactn., X-ray and neutron diffr. 7−83909
$CdCr_2(Se_{4-x}Te_x)$, solid solutions, prep. and mag. props. 7−105896
CdO, pore structure, preparation method effects *(Russian)* 7−124536
CdSn(Pb)P_{14} diamagnetic semicond. prep., struct. and bandgap studies 7−83905
$CeMgAl_{11}O_{19}$, mixed hexa-aluminate, low-temp. synthesis and charactn. 7−144346
Ce_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
CoO, pore structure, preparation method effects *(Russian)* 7−124536
Co_2O_3, Al_2O_3 coated composite powders, synthesis by homogeneous precip. method *(Japanese)* 7−132551
Cu chain compounds, 1D, commensurate Peierls struct., elec. cond. studies 7−99035
Cu-O based high T_c superconductors, practical preparation methods 7−143729
Cu-O-based high T_c supercond., prep. by coprecipitation method 7−113499
Cu-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7−118325
$DyBa_2Cu_3O_{7-x}$ high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
DyIG, citrate gel synthesis, charactn. 7−77905
Er, nanocrystalline, prep., mag. transitions, suscept. meas. 7−125478
$EuNi_5P_3$ synthesis and cryst. struct. study 7−83915
Fe fine particles, prep. mag. props. 7−125477
Fe, ultrafine particles, prepared by reduction of uniform Fe_2O_3 particles, mag. charcts. 7−125480
Fe-Nd-B, prepared by rapid solidification, review 7−86093
Fe-Si (6.5 wt.%) prepared by rapid solidification, review 7−86093
Fe-Si-B amorphous materials prod., new method to produce melts 7−77871
Fe_2O_3-Y_2O_3 system, alkoxy derived oxide phases 7−77904

materials preparation continued
Fe_3O_4 particle dispersed polymer film, precip. prep., mag. recording appl. 7−126031
Ge-Si, composite powders, mechanical alloying; SEM and X-ray obs. 7−77882
$HgSn(Pb)P_{14}$ diamagnetic semicond. prep., struct. and bandgap studies 7−83905
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
K_2O-FE_2O_3 ferrite, powder prep., ionic cond. 7−138710
$K_2O.6TiO_2$ whisker reinforced Al, prep. and characteris., strength improvement 7−71113
$Kr_2Pb_4Nb_{10}O_{30}$, formation reactions, thermogravimetric and X-ray diffr. studies 7−126432
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond. prep. 7−144354
$La_{1-x}Ca_xCr_yCo_{1-y}O_3$ solid soln., prep. and elec. props. *(Japanese)* 7−124983
$La_{0.85}M_{0.15}CoO_3$ (M=Ca,Ba,Ce), porous struct. rel. to prep. method 7−71123
$LaMo_3$ (M=Fe,Co,Ni,Cr), porous struct. rel. to prep. method 7−71123
$LaNi_5$-Ni eutectic alloys, unidirectional solidification, hydriding props. *(Japanese)* 7−77865
La_2O_3-NiO, formation of binary oxide $La_{12}Ni_8O_{27}$, temp. depend. of elec. resistivity 7−105632
La_2O_3-NiO-ZrO_2 system, phase relations, materials prep. and elec. props. *(Russian)* 7−124447
$La_2Sn_2O_7$ powder, synthesis from amorphous complex colloid 7−132545
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ high T_c supercond. prep., residual water effects on superconductivity 7−99272
$La_{1.8}Sr_{0.2}CuO_4$, high T_c superconductor, prep. 7−100165
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond. ceramics, prep. and props. 7−118671
$La_{1.8}Sr_{0.2}CuO_4$, prep., supercond. props. 7−118668
$La_{2-x}Sr_xCuO_4$ high T_c superconds., fabrication, mech. props., sp. ht. and O diffusion studies 7−119209
La_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7−100160
$LiNbO_3$, transparent amorphous films, prep. by ultrafast quenching 7−106457
MFe_2O_4 ferrites (M=Mg, Mn, Fe, Co, Ni, Zn), ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
MO-TiC, highly dispersed composite material, plasmochemical prep., thermodynamic analysis 7−132531
Mg-based corrosion resistant alloys, high performance, light wt., prep. by rapid solidification processing 7−119203
Mg-Co, mechanical alloying, for hydrogen storage 7−93542
Mg-Fe, mechanical alloying, for hydrogen storage 7−93542
Mg-Nb, mechanical alloying, for hydrogen storage 7−93542
Mg-Ni, mechanical alloying, for hydrogen storage 7−93542
Mg-Ti, mechanical alloying, for hydrogen storage 7−93542
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., charact. 7−132546
MgO, structural transforms, in $Mg(OH)_2$ and $MgCO_3$ decomposition, TEM obs. 7−100227
MgO-Al_2O_3-SiO_2-Si_3N_4-based glass-ceramics, prep. in Mg-sialon system 7−77932
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
MnZn ferrite power, molten salt synthesis, EM shielding appls. 7−77900
Mo, unalloyed, prod. by electron beam melting, microstruct. and ductility 7−132524
$MoSi_2$/Si layer system mech. stability and form. by rapid thermal annealing 7−105298
$NH_4Mo_5O_{15}OH.2H_2O$ cryst. struct. and prep. studies 7−83917
Na^+ ionic conducting glasses for batteries and wave-guide devices 7−106479
Na-P-O-N glasses, prep., N dissolution kinetics, softening temp., thermal expansion, refractive index, microhardness 7−93016
$NaCu_2ZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
$Na_2La_{1-x}Fe_xZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
Na_2O-CaO-SiO_2 glass, ion exchange strengthening, stress buildup and relax. 7−71139
$Nb_3Al_{1-x}Ge_x$ supercond. tape prep. by electron beam annealing, high-field props. study, magnet appl. 7−132518
$Nb_3Al_{1-x}Ge_x(Si_x)$ supercond. tape prep. by continuous liquid quenching method 7−132517
Nb_3Si, A15 phase, high T_c material, high press. synthesis 7−77121
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7−131973
Nb_3Sn powder, prep., supercond. critical temp. 7−106462
Nb_3Sn-Ti composite supercond. wires, new fabrication process, and props. 7−132519
Nd-Fe-B permanent magnets, mag. props. and prep., review 7−112864
$Nd_2Fe_{14}B$, permanent magnet production, hydrogen decrepitation process 7−92914
Ni complex, $Ni(S_2C_2(CN)_2)_2$, prep., struct., elec. and mag. props. 7−99033
Ni complex, $Ni(S_2C_2(CF_3)_2)_2$, prep., struct., elec. and mag. props. 7−99034
Ni complex, polydecker sandwich, synthesis and elec. cond. 7−99025
Ni powder, prep. from basic salt precursors 7−106463
Ni-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
NiO, pore structure, preparation method effects *(Russian)* 7−124536
$Ni(OH)_2$-$Fe(OH)_3$, coprecipitation, during thermal dehydration 7−100150
NiZr amorphous wires, formation by mechanical deformation and solid state reaction 7−86091
PbF_2-BiO_xF_{3-2x} system, crystal synthesis of fluorite type solid solns. by hydrothermal reactions *(Japanese)* 7−132550
$Pb(Fe_{1/2}Nb_{1/2})O_3$, thin films, sol-gel prep. and dielec. props. 7−126054
$PbMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
$PbNb_2O_6$ modified piezoceramics, coprecipitation prep., electromech. props. 7−99704
$PbNb_2O_6$ piezoceramics for US transducer design, prep. and charactn. 7−99709
PbO-TiO_2 system, sol-gel processing, pH and temp. effects 7−71114
$PbTiO_3$ modified piezoceramics, coprecipitation prep., electromech. props. 7−99704
materials preparation continued
$PbTiO_3$ piezoceramics for US transducer design, prep. and charactn. 7−99709
$PbTiO_3$ powder, coprecipitated, piezoelec. composite prep. 7−92936
$PbTiO_3$, prep. by decomposition of metallo-organic compounds 7−71106
$PbTiO_3$, sol-gel derived, struct. control of monolithic gels 7−113489
$PbZn_{0.33}Nb_{0.67}O_3$-$PbTiO_3$ solid solns., sol-gel processing 7−100168
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$ system, ceramic prep., phase relations, dielec. props. 7−92599
$Pb(Zn_{1/3}Nb_{2/3})O_3$-based ceramics, perovskite phase stability 7−98440
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ ceramics, synthesis and piezoelec. props. 7−99708
$PbZrO_3TiO_3$-polymer, fired 0-3 composites, prep. and piezoelectric props. 7−126077
$PdPt(C_2S_2O_2)_2$ bimetallic 1D polymer, synthesis and physical props. 7−99038
Pt chain compounds, 1D, commensurate Peierls struct., elec. cond. studies 7−99035
Pt, small particles, synthesis and characterisation, chemical reduction of H_2PtCl_6, chloroplatinic acid 7−86082
$Pt_6(NH_3)_{14}Cl_{10}X_4$ (X=ClO_4, BF_4, PF_6) synthesis and elec. cond. 7−99036
Si-O-N fibres, prep. and mech. props. *(Japanese)* 7−126070
SiC fibre reinforced Ti-Al-V alloy, TiC and TiN interlayers effect on reaction zone *(German)* 7−92935
SiC powder, form. by laser heated vapour phase reactions 7−113506
SiC, prep. from magadiite-polyacrylonitrile intercalation cpd. 7−119228
SiC wettability to Al and alloys 7−91925
SiC whisker reinforced Si_3N_4, fabrication and mech. props. 7−78149
SiC-C fibres, synthesis of precursors by co-pyrolysis of polysilane and pitch *(Japanese)* 7−119225
SiC-Si_3N_4 system, composite particles prep. by vapour reaction method *(Japanese)* 7−113504
Si_3N_4 fibres, synthesis by polycarbosilane nitridation, tensile strength 7−132537
Si_3N_4, form. by carbothermic reduction of magadiite-polyacrylonitrile intercalation compound 7−119229
Si_3N_4 powders, prep. from SiO_2, effects of NH_3 and NaF *(Japanese)* 7−126073
Si_3N_4 powders, prep. methods 7−77913
Si_3N_4, prep. from precipitated colloidal SiO_2 from geothermal discharge waters 7−113486
Si_3N_4, reaction bonded, processing 7−71129
Si_3N_4-C amorphous composite, prep. by CVD, high temp. evaporation 7−142970
SiO_2 rich particles release from rice husk by microbial fermentation 7−119181
SiO_2-TiO_2 fibre prep. from polytitanosiloxanes 7−92947
SiO_2-TiO_2 glass planar optical waveguides, fabrication by soot deposition process 7−97129
SiO_xN_y fibres, synthesis by polycarbosilane nitridation, tensile strength 7−132537
$Sm_2(Co, Fe, Cu, Zr)_{17}$, permanent magnet production, hydrogen decrepitation process 7−92914
$SmCo_5$, permanent magnet production, hydrogen decrepitation process 7−92914
SmIG, citrate gel synthesis, charactn. 7−77905
$SnMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
Sr-La-Cu-O system, prep. by coprecipitation, supercond. props. 7−99292
$SrFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$Sr(Li_{2/5}W_{3/5})O_3$, cubic perovskites, prep. 7−100162
$Sr(Na_{2/5}W_{3/5})O_3$, cubic perovskites, prep. 7−100162
TaN, cubic, form. with plasma jet *(Japanese)* 7−119223
Te-Er_2O_3, prod. of ultrafine rare earth oxides by rapid solidification 7−92926
Ti-B system, simultaneous synthesis and forming by self-propagating reaction *(Japanese)* 7−126067
TiCN, form. kinetics at high temps. 7−86103
TiN fibres, nitridation of TiO_2 prep. by sol-gel method 7−77903
TiNi, synthesis, struct. and mech. props. 7−111903
TiO_2 ceramics, synthesis from isopropoxide, laser-driven pyrolysis 7−100164
TiO_2 fibres, prep. by sol-gel method, nitridation to give TiN 7−77903
TiO_2 powder form. by hydrothermal oxidation 7−126061
U, production using plasma torch 7−96228
$^{233}U/^{235}U/^{238}U$ 1/1/1 isotopic reference material, preparation 7−126050
V_2O_5-MgO oxidative dehydrogenation catalysts, synthesis methods 7−113462
W powder, particle size rel. to oxide phase precursor 7−132523
W-Cu, infiltration of liq. in sintered W 7−92921
WC-Ni/Fe-Cr-C, infiltrated alloys, wear resist. 7−132555
WO_3-R_2O_3, transparent amorphous films, prep. by ultrafast quenching 7−106457
Y-Ba-Cu-O, structural, electronic props., thermal expansion meas., prep. effect 7−118672
Y-Ba-Cu-O high T_c supercond., orthorhombic struct., prep. and props. 7−105771
Y-Ba-Cu-O high T_c supercond., optimum prep. conditions determ., thermal and X-ray analyses 7−106475
Y-Ba-Cu-O high T_c supercond., transition temp., conc. ratio and prep. effects 7−112559
Y-Ba-Cu-O high T_c supercond., coprecipitation and solid diffusion method prep. 7−113500
Y-Ba-Cu-O high T_c supercond., zero resistance temp. and AC Josephson effect 7−118633
Y-Ba-Cu-O high T_c supercond., manufacture and testing 7−119206
Y-Ba-Cu-O high T_c supercond. ceramic wire prod., powder-in-tube process and props. 7−119208
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond., colloidal method prep. and transition temp. 7−119218
Y-Ba-Cu-O high T_c supercond. tape, surface diffusion method prep. 7−119219
Y-Ba-Cu-O high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
Y-Ba-Cu-O high T_c supercond. prep. by oxidation of alloy foil, T_c and J_c studies 7−126055
Y-Ba-Cu-O high T_c supercond., prep. and physical props. 7−126058

materials preparation continued
Y-Ba-Cu-O high T_c supercond., single cryst. prep. from CuO melts 7−132436
Y-Ba-Cu-O high T_c supercond., aligned crystalline grain prep. 7−143742
Y-Ba-Cu-O high T_c superconducting filament prep. by suspension spinning method 7−144353
Y-Ba-Cu-O multi-phase samples, superconductivity above 100 K 7−92354
YAG, poly- and monocrystals, synthesis, X-ray quantitative determ. of phases in batch 7−126053
$YBa_2(Ag_xCu_{1-x})_3O_{9-y}$, high T_c supercond., comp. depend. of T_c 7−99290
$YBa_2Cu_3O_x$, high T_c supercond., synthesis under O_2 press. and superconductivity 7−143664
$YBa_2Cu_3O_{6.5}$, prep., supercond. props. 7−118668
$YBa_2Cu_3O_7$, high T_c supercond. ceramics, prep. and props. 7−118671
$YBa_2Cu_3O_{7-\delta}$ and substituted systems, high T_c supercond. prep. 7−144354
$YBa_2Cu_3O_{7-\delta}$, rapidly solidified supercond., preparation, crystallisation and props. 7−143663
$YBa_2Cu_3O_{7-x}$ high T_c supercond. film prep. by RF magnetron sputtering 7−144352
Y_2O_3-SiO_2 glasses, prep. by sol-gel process, IR and Raman spectra 7−85623
$Y(PO_3)_3$, solid phase synthesis and cryst. struct. 7−126040
$YbBr_2$-YCl_2 solid soln. synthesis and X-ray diffr. structural study 7−83908
YbH_x trihydride, prep. without H overpressure, X-ray diffr. studies 7−69860
Zn purification by vacuum distillation, efficiency monitoring using radiotracer technique 7−119195
$Zn_xCd_{1-x}In_2S_4$ synthesis and charactn. 7−143021
ZnO powder form. by hydrothermal oxidation 7−126061
$ZnSiP_2$, electrochemically assisted synthesis 7−86072
$ZnSn(Pb)P_{14}$ diamagnetic semicond. prep., struct. and bandgap studies 7−83905
$ZnTiO_3$, form. and transform. 7−98427
Zr and alloys for nuclear industry, extractive metallurgy, processing and properties 7−77881
ZrO_2 powders, monodisperse fine particles, processing, thermal analysis 7−132536
ZrO_2, prep. from Zr citrate, structural transformation 7−77854
ZrO_2, pure and CaO stabilised, liq. mix synthesis, phase analysis 7−119216
ZrO_2, Y_2O_3 stabilised ultrafine powders, crystallinity, surface texture rel. to prep. and thermal treatment 7−76564
ZrO_2-Cr_2O_3 system, prep., mag. props. rel. to struct. and comp. 7−113497
ZrO_2-SiO_2 system, sol-gel prep., precip. ZrO_2 transform., fracture toughness *(Japanese)* 7−132614
ZrO_2-$Zr(SO_4)_2$, synthesis of fine plate-like crysts., thermal changes *(Japanese)* 7−138716

materials properties
this heading is restricted to those properties which are not covered by other specific headings
see also dielectric properties of substances; electrical properties of substances; magnetic properties of substances; mechanical properties of substances; optical properties of substances; thermal properties of substances; thermodynamic properties
advanced materials technology, conf., Anaheim, USA (Apr. 1987) 7−134368
database system, computer network, MIST Project overview 7−132421
electronic theory for materials science 7−113357
microgravity conditions, conf., Bordeaux, France (Dec. 1986) 7−108043
selection and roles of materials information systems 7−113852
space materials, conf., Seattle, USA (Oct. 1986) 7−66837
surface analysis, AES appls. 7−132384
teaching, in A-level physics course 7−72749

materials requirements planning *see operations research; production control*

materials testing
see also acoustic applications; corrosion testing; creep testing; dynamic testing; electron beam applications; fatigue testing; fracture toughness testing; hardness testing; impact testing; insulation testing; mechanical testing; nondestructive testing; notch testing; tensile testing; ultrasonic materials testing; wear testing
20 MN multiaxial loading rig for nuclear structure integrity testing 7−93225
AE of graphite with stress concentration *(Japanese)* 7−113847
Bauschinger, Johann, pioneer of modern materials testing 7−120748
biocompatibility testing of materials and devices for cardiovascular use 7−79142
coal characterisation and ranking for gasifier slurry concentration potential 7−133027
composite, surface interaction with resistance-type strain gauge, opt. obs. 7−71428
concrete cask for storage, transportation and disposal, design, tests 7−96357
decomposing composites dilatometry, force and thermal loading effects obs. 7−140667
deep level spectrometer, modern, and characterisation application of semiconductor materials and structures *(Hungarian)* 7−95614
electronics and microelectronics appls. of photoelectron spectroscopy 7−121307
energy conversion systems and batteries, materials testing packages 7−126569
fibre failure strain, new testing method 7−78393
fibre reinforced composites, interlaminar shear strength, improved quality acceptance procedure 7−132840
hydraulic bulge test on linear strain-rate-hardening material, anal. *(Japanese)* 7−113815
incremental testing technique evaluation, large strain 7−126363
induction-probe magnetometric instrument for temp. investig. during heat treatment 7−78430
Iosipescu shear test method, current status 7−144648
Iosipescu shear test method, further development 7−123554
laboratory spectrum crack growth testing, direct method 7−71432
metallic materials, compression testing standard method, inelastic buckling 7−119480
metallurgical testing, information management system 7−138918
nuclear fuel component inspection and test plan format 7−73866
nuclear safeguards verifications, destructive analysis, eval. of meas. performance 7−116603
optical coatings, non-optical characterisation techniques 7−123161
organic photoreceptor materials for electronic photography *(Japanese)* 7−99110
pastes, extrusion yield meas. using cone penetrometer 7−93227
polymer, reverser design for complex tests 7−78439
polymer, thermal ageing tests, end-point transformations *(German)* 7−93234
polymers, shock absorbing characteris. *(Japanese)* 7−113816
polystyrene recovery voltage in capacitor dielec. absorpt. and equiv. cct. 7−99654
proof test loading factor optimisation, Bayesian analysis, reliability utility function *(Japanese)* 7−78406
PVC-S under fluctuating load, mech. behaviour *(German)* 7−86300
PWR structural integrity assessment and materials technology in the UK, advances 7−122007
refractories, crack resistance and crack sensitivities of different structures *(Russian)* 7−86385
rubber-to-rubber joints, peel test 7−132856
scanning optical microscopy and its applications in materials science 7−132852
shape memory alloy charact. meas., microprocessor based apparatus 7−126364
smooth test bars, scattering of strength and probability to failure *(German)* 7−93235
soft magnetic materials charact. investigation using magnetising devices 7−95623
solar absorber surfaces, exposure testing 7−126370
solar energy conversion and lighting technology, materials and optics conf., San Diego, CA, USA (Aug. 1986) 7−120700
solids study by radiation physics, apparatus for comprehensive meas. 7−108732
SSC superferric magnets, critical props. meas. monitoring 7−129472
steel, alloy, impact energy during notched bar bending tests, influence of thrust-bearing friction. *(German)* 7−132855
steel, phase superplasticity, investig. apparatus 7−78436
Structural Integrity Centre, Risley, role and development 7−103072
structural testing on-line monitoring system for multipoint strains, development *(Japanese)* 7−75483
subbituminous coal screening tests for two-stage liquefaction 7−133028
surface analysis techniques and their application to materials and device characterization 7−125904
surface engineering, conf., Brighton, England (June 85) 7−72724
thermal reactor fuel, post irradiation examination work at WNPDL 7−135423
thermal spray powders, retesting schemes 7−77800
Tsuruga BWR fuel, post-irradiation exam. at JAERI, creep and swelling tests *(Japanese)* 7−96180
Zircaloy-4 PWR fuel cladding material, out-of-file test for yielding behaviour 7−132848
Al_2O_3, compression test for high strength ceramics 7−71425
Cu layers, electroplated, mechanical props. rel. to annealing and ageing *(Polish)* 7−113827
GaAlAs solar cells for space appls., materials testing 7−126629
PZT-epoxy composites, interfacial adhesion determ., surface treatments and mechanical testing 7−100504
Si solar cells for space appls., materials testing 7−126629
Zn-Al eutectic alloy superplastic, circular-die hydraulic bulge deformation *(Japanese)* 7−110802

mathematical analysis
see also approximation theory; Bessel functions; calculus; catastrophe theory; differential equations; eigenvalues and eigenfunctions; Fourier analysis; integral equations; numerical analysis; series (mathematics); spectral analysis; transforms
analytic disc construction and appls. *(French)* 7−102089
compact spaces associated with C(K) subspaces *(French)* 7−66985
gamma-ray spectra, mathematical processing 7−141014
geophysics, mathematics applications (book) 7−128205
Gribov's reggeon theory, nonself adjoint operators, diagonalisation 7−72766
passive source sound localisation with intersecting spherical surfaces 7−136647
Sobolev-Liouville spaces with quasihomogeneous norm 7−88874
tumour regression due to microwave hyperthermia and chemotherapy *(Spanish)* 7−144980

mathematical logic *see formal logic*

mathematical programming
see also dynamic programming; geometric programming; linear programming; nonlinear programming
boundary-value problems, 3D, semiiterative multigrid method and programming *(Russian)* 7−120782
CANDU reactor, optimization of in-core devices and fuel management, numerical anal. 7−96225

mathematics
see also algebra; combinatorial mathematics; convergence; duality (mathematics); equations; formal logic; functions; geometry; mathematical analysis; number theory; probability; statistics; topology
area, exploration using LOGO 7−88768
computer literacy content of introductory college mathematics course 7−108116
education and technology 7−108114
geodetic appls *(Hungarian)* 7−94051
HiMAP, high school mathematics and its application project 7−88762
mathematics and physics since 1800 7−80280
publication output and citation anal., 1978-80 7−140401

mathematics computing
acoustic wave propagation, modified eqn. approach to 4th-order method construction 7−90864
CANONIK and LEVI programs for Lie algebra Levi decomposition and canonical basis 7−140415
chocolate chip cookie, statistical investigation, educational 7−88769
circle fitting, fast programs 7−115777
curve fitting using constrained nonlinear least squares method and CNFIT program 7−140440
Durbin-Watson correlation test, probability calc. 7−115769
Fokker-Planck equation, relativistic, num. soln. using TWODEPEP finite element library 7−142492

mathematics computing continued
higher-order phase integrals, evaluation using optimized quadrature scheme 7−115776
inner multiplicity of unitary groups, IMUG1 computer program 7−95222
Lie algebra, POLRANGE program for enveloping algebra calcs. 7−95180
LNIDIF program for numerical interpolation with 1st and 2nd order differentiation 7−140427
MuMATH computer algebra system for 1st order kinetic eqns. 7−132909
Navier-Stokes code, parallelisation for ICL DAP 7−69084
Poisson's eqn. in multiregion bodies, implicit boundary-integral method 7−108477
quark propagator calcs. on large lattices, algorithms 7−88949
random surfaces and walks, Monte Carlo simul. on sequential and parallel computer 7−128442
single-variate probability distribs., algorithms for random sampling 7−140443

matrices *see matrix algebra*

matrix algebra
see also S-matrix theory
(A_1) property in space of 3×3 matrices 7−115740
acoustic wave propagation problems, BEM dynamic analysis 7−130447
asymptotic equipartition of energy, anal. of 2×2 operator matrices acting on Hilbert space 7−88826
Bartels-Golub and Fletcher-Matthews algorithms for updating matrix factorisations, error growth 7−95203
beam optics solution by matrix algebra *(Slovak)* 7−129949
beams, flexurally superconvergent four-node quadrilaterals 7−90968
beams, tapered, geometrically nonlinear FEM 7−90932
BEM domain stiffness matrix, alternative procedures 7−88969
bistatic power scattering matrix props. for stable object in characteristic orthogonal polarisation basis 7−141768
block H-matrices, incomplete blockwise factorisations 7−95214
ceramic-epoxy composites, acoustic wave propag., Bloch theory, numerical anal. 7−98358
circulant matrices for certain periodic spline and histospline projections 7−80285
compact matrix pseudogroups, Haar measures for the twisted SU(2) group 7−134965
complex matrix, normality conditions 7−80304
complex quantum systems, random-matrix theory 7−128360
complex shift and invert strategies for real matrices 7−95202
conjugate gradient method, convergence on some eigenvectors *(Chinese)* 7−72777
Coulomb plus linear potential bound-state problem, Hill determinant anal. 7−80482
cylinder coupled with thermal and mag. fields, longit. vibr., eigenvalue expansion method 7−108238
Darboux matrices of Backlund transformations for AKNS systems 7−115725
direct solutions using block-three diagonal matrix 7−88823
discrete spectra variation, symmetric matrix eigenvalues under perturbation, selfadjoint operator 7−120759
domain decomposition, analysis of preconditioners 7−88911
dual polarisation scattering matrix radar rain backscatter meas. eval. in X and Q bands 7−94410
Eckart-Young-Mirsky matrix approx. theorem generalisation 7−95193
eigenstructure of a regular matrix polynomial, computing algorithm for zeros 7−115739
eigenvalue interlacing for matrix classes with real principal minors 7−95196
eigenvalues and eigenfunctions, condition and accuracy estimations 7−95205
eigenvectors and high resolution 7−97227
Einstein field equations, linear 2×2 matrix problem 7−89064
elastic body, graph model, config. and parameters 7−72958
elastic body in mixed variables, graph model 7−108236
EM fields, boundary shape synthesis 7−136130
Euclidean space rotation groups and special functions of matrix indices *(Russian)* 7−66914
existence problem for matrix with prescribed invariant polynomials 7−80301
exponent set of symmetric primitive matrices 7−88831
extended periodic structures, algorithms and anal. results *(Russian)* 7−90483
finite Abelian groups, duality, Jordan normal form of integer matrices 7−95213
finite-rank potentials, form factors in phenomenological calcs. Fredholm matrix, rank-two interactions 7−128945
FK spaces and Kuttner's theorem, inclusions 7−72787
form recognition using moment invariants for 3D perspective transformations 7−110278
fractional parentage matrix inversion for nuclear and atomic struct. calcs. 7−102813
fractional two-level experiment, planning matrix, factor ordering 7−67294
Fréchet derivative of matrix functions 7−115731
friction problem, boundary integral 'eqn.' methods 7−110879
Fueter mappings and their Jacobians, characterisation 7−72849
fused point perturbation theory, coupled nonlinear equations, Rayleigh-Schrodinger theory, Pade potentials 7−140488
fuzzy partitioned matrices, theorem 7−95186
Gaussian Schell-model beams, propagation, matrix method 7−110524
generalised CP transformations, standard form, unitary matrices, weak eigenstates 7−140835
generalized Householder transformation and sparse matrices 7−95218
graded Lie admissibility of 2×2 matrix algebra 7−80290
hermitian matrices with constant rank, simultaneous congruence of convex compact sets 7−80299
hermitian matrix eigenproblem, Ruhe's convergent splitting method 7−80292
heteronuclear diatomic alkali molecules, long range states, lowest asymptotes, spin-orbit effects, dissoc., perturbative model, matrix methods, wavefunctions 7−144685
Holder-type norm inequalities for Schur products of matrices 7−115726
Hopf-type bifurcation in the presence of multiple critical eigenvalues 7−102117
hydrogenic quasirelativistic and Dirac wavefunctions, r^q matrix elements 7−134563
induction coefficient of induced representation theory, algebra and analytic expression 7−72782

matrix algebra continued
infinite distance-regular graphs, spectrum and divisors 7−115733
inhomogeneous eigenvalue problems, Liapunov eqns. 7−95200
inhomogeneous media, light transmission and reflection calc. 7−123247
interval M-matrix, iterative methods based on strong splittings 7−72792
inverse eigenvalue problems, anal. of numerical methods 7−108208
inverse M-matrices, closure, nilpotent matrices on boundary 7−115730
Ising model, sparse matrix factorizations of transfer matrices 7−89140
isotropic nonlinear viscoelastic bodies, bitensorial functions expansion in terms of directly reducible matrix groups 7−83057
Jordan form of a binomial coefficient matrix over Z_p 7−95210
Lagrange interpolation process with respect to Chebyshev matrix, uniform convergence criteria 7−88825
Laguerre polynomials of a matrix argument *(French)* 7−66912
Lame equation, finite-gap potentials and Nahm equations 7−128249
Lanczos algorithms and field of value rotations for symmetric matrix pencils 7−95206
Lanczos polynomials, explicit formula in terms of matrix eigenvalues 7−95189
large rectangular random matrices 7−140607
Lie superalgebras and extended Dynkin diagrams, regular subalgebras 7−67518
limit cycles of vector fields of the form $X(v)=Av+f(v)\ Bv$ 7−66898
linear algebraic equations, regularisation, rel. to Hurwitz, matrices *(Russian)* 7−120762
linear complementarity problem and fully semimonotone matrices 7−80305
linear matrix eqns., singular value and generalised singular value decompositions, solns. 7−95188
linear operators and invariance of decomposable numerical radius 7−80302
linear systems, k-part stationary iterative solns. 7−72937
linear systems of eqns. with indefinite or non-Hermitian matrices, orthogonal polynomials, iterative soln. 7−95195
linear systems theory, wild quiver 7−115736
linear systems with weakly cyclic Jacobi matrices of index p, over- and underrelaxation 7−115727
Lorentz invariant wave equations, generalised gamma-matrices 7−80438
LU factorisation of a general sparse matrix 7−95192
Lyapunov scaling factors, uniqueness 7−115728
M-matrices, convergence of parallel multisplitting iterative methods 7−95201
M-matrices, graph compatible splittings 7−115737
M-matrix minors, sign determinancy undirected graphs 7−115735
M-matrix properties 7−80303
Maxwell eqn. general solution for excitation by slotted aperture source in conducting cylinder with concentric layering 7−68512
mechanical systems, matrix function, statistical anal. 7−80406
molecular predissociation, matrix Schrodinger operators and resonances, mathematical theory 7−141635
Mueller matrices and depolarization criteria 7−103734
multilayer stacks, calc. technique based on R matrix propag. algorithms 7−129964
multiple Kronecker products, generating relations for reducing matrices 7−134431
multiple stochastic integrals with dependent integrators 7−66904
multiplication, lower bounds on the computational efficiency of optical computing systems 7−122842
n^{th} order matrix, maximum eigenvalue calc. 7−144944
near-spherical dielectric scatterers, T-matrix method, sparse matrix soln. 7−82444
non-negative reducible matrices, stochastic powers 7−95209
nonlinear dynamical systems, gradient algorithm for integrability criteria formulation 7−67031
nonlinear equations, solutions using singular Jacobian matrices 7−72868
nonnegative matrix, iterative methods for subdominant modulus approx. 7−80300
nonself-adjoint general matrix eigenvalue problem 7−80467
nonsymmetric matrices, conjugate gradient method and orthogonal error algorithms 7−72790
normal ΔH-matrices with connection to some Jacobi-like methods 7−115738
optical computing, electrooptical processing of signal transforms 7−68566
optical fibres, hybrid birefringent, polarisation parameters of plane waves 7−130366
optical implementation of iterative algorithm for matrix inversion 7−110251
optical system characteristic matrix anal. method 7−103920
optical system containing decentered surfaces 7−130295
optical system for matrix multiplication with 2D light source array 7−82469
optical systems with arbitrary quadratic phase-amplitude correctors 7−141961
optical waveguides planar, GRIN, numerical anal. using matrix method 7−110563
pencil of matrices with complex entries, characteristic polynomials and curves 7−72794
permanents of d-dimensional matrices 7−95215
piezoelectric structure anal., three-dimensional finite elements formulation 7−125615
pipe flow, matrix methods *(Spanish)* 7−97634
plates, transient analysis by finite element-transfer matrix method 7−117502
polarisation states, geometric description, Hopf fibration, stokes parameters 7−141784
polynomial convolution algorithm for matrix multiplication with application for optical computing 7−136206
positive semidefinite matrices, properties of the cone 7−95212
prolate functions calc. for optical analysis, stable and unstable laser resonators 7−117233
pseudo-consimilarity and semi-consimilarity of complex matrices 7−95211
r-Toeplitz matrices, displacement rank and quasitriangular decomposition 7−95194
random Jacobi matrices, inverse spectral theory 7−95471
random products of matrices, Liapounoff exponents, algebraic subgroup *(French)* 7−72768
rank deficient linear least squares problem, soln. by successive overrelaxation methods 7−95291
real square root computation for a real matrix 7−95197
real symmetric random matrix, correlation props., numerical calc. 7−140619

matrix algebra continued
rectangular matrix Riccati eqns., superposition formulae 7−72872
relativistic charged bosons in magnetic field, wave fns. and matrix elements 7−140801
remote sensing images, representation via symmetrical components using matrix decomposition 7−107575
renography, deconvolution analysis program 7−93898
sample covariance matrix and canonical correlation matrix, functions of eigenvalues and multivariate time series 7−95184
scattering problems, $\mathcal{L}^2$ methods convergence appl. 7−89022
Schubert functors, characters of the action group *(French)* 7−72827
self-adjoint operators, interlacing theorem for eigenvalues 7−95190
selfadjoint Hankel matrix, unitary group 7−72774
sensor array, wavenumber estimation using asymptotic statistics 7−110640
shell, cylindrical, multilayer, matrix method of solving contact problems 7−69073
shell, nine node element, mixed formulation technique based on Hellinger-Reissner principle 7−75283
simulation, real-time, conservation eqn. appl. 7−123729
slab waveguides, almost-periodic distributed feedback, anal. via fundamental matrices 7−136504
SO(3) rotation matrices, representation of SO(2l+1) 6-j symbols 7−80481
SO(6) representations, symmetric, SU(2)×SU(2)×U(1) basis, generator matrix elements 7−81043
sparse matrices, inverses, asymmetric implicit hierarchical forms 7−80286
spectral fluctuations, random matrix theory anal. 7−128359
spectral radius of adjacency matrix of graphs with e edges 7−80306
stable eigendecompositions of matrix pencils 7−95191
Stokes matrix construction for linear differential eqn. *(Russian)* 7−72773
strong and weak discrete maximum principles for matrices associated with elliptic problems 7−95198
submatrix, rank lowering by perturbation and constrained total least squares problems 7−72791
substochastic matrices, generalised inverses, construction methods 7−115732
symmetry, matrix approach 7−91509
tensor bosons, symmetric and antisymmetric Heisenberg-Weyl algebras 7−140832
term-rank, permanent, and rook-polynomial preservers 7−95207
three-dimensional EM fields calc., involving laminar eddy currents 7−129931
Toeplitz matrices, fast but unstable orthogonal triangularisation technique 7−95199
totally positive matrices 7−95217
transfer matrix approach to the three-dimensional Ising model 7−108442
transfer matrix method for multiregion cylindrical induction devices, 2D current excitation 7−103712
two-parametric matrix eigenvalue problems *(German)* 7−72795
vertex transitive graphs, construction, generators 7−140417
vibration coupling loss factor det. using matrix fitting 7−142201
water-distribution flow networks, finite-element anal. 7−91060
Yang-Baxter eqn., non-symmetric eight-vertex constant solns., spin Hamiltonians 7−105876
zeros of arbitrary polynomials as eigenvalues of simple matrices 7−120761
$K^0 \rightarrow \bar{K}^0$, matrix element calculation, chiral quark-loop model, B-factor, K^+ decay amplitude 7−116167
Ne I Stark effect splittings, energy matrix, wave functions, group theory, radial and spin-orbit effects 7−135878

matrix isolation spectra
see also Shpolskii spectra
acetonitrile, dil. spin I=3/2 powder, rot. isomerism, Zeeman and dipolar coherences, PMR spectra 7−68357
2-acetylanthracene, electronic spectra 7−74567
acrylic acid, matrix isolated rot. isomerism, IR spectra 7−82106
acrylic acid, rot. isomerism, HF 4-21 basis set calcs. 7−81934
alcohols, strongly sterically hindered, dielec. relax. and IR spectra in polystyrene matrix 7−68299
alkali metal atom-NH_3 complexes, IR spectra in solid Ar matrix 7−74582
alkali nitrites, matrix isolated, struct., isotope effects, IR spectra 7−82091
alkane radical cations, in hydrocarbon matrices, γ-irrad., ESR and electronic spectra 7−109959
alkenes, matrix isolated, contact-charge-transfer bands and photochem. reactions, UV-vis. absorpt. spectra 7−82208
alkyl radicals, Ar and O_2 matrices, IR spectra 7−74595
alkylperoxy radicals, Ar and O_2 matrices, IR spectra 7−74595
alkynes, oxygen bases, H bonding, IR spectroscopy 7−129703
9,10-anthiaquinone, IR and UV linear dichroism in stretched polyethylene matrix 7−108668
9,10-anthraquinone aligned in stretched polyethylene, IR spectra, vibr., symmetry assignments 7−82124
aromatic π-electron system-$H_2O(D_2O)$(HDO) interaction, matrix isolation IR obs. 7−96674
aromatic molecules, heavy atom perturbers in rigid solns., kinetics of excited states 7−96775
atomic spectrochemical analysis, structural effects, evaporation characts. study *(German)* 7−133008
azanaphthalenes, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
3−azidopropyne, structure, IR and Raman spectra, electron diffr. 7−122341
bacterial pigments, mol. vibr., matrix isolation fluoresc. spectra anal. *(Russian)* 7−133216
1,2-benzanthracene, IR and UV linear dichroism, fluoresc., transition moments 7−96655
o-benzyne, N_2 matrix isolated, vibr., IR spectra 7−82116
benz[a]anthracene, dichroism spectra, fluorescence polarisation spectroscopy, transitions, NDO calcs., LCAO calcs., moment directions 7−141611
1,10-bis(1-pyrenyl)decane, confinement and fluoresc. in microporous amorphous superlattices 7−122609
2-bromoethanol, in Ar matrix, IR photolysis, quantum yield distrib. 7−86648
bromoform, in Ar matrix, IR spectra 7−96696
1,3-butadience, s-cis and gauche conformers, planarity, matrix isolation IR obs. 7−90114
n-butane radical cation, rot. isomers, ESR charactn. 7−109957

matrix isolation spectra continued
chlorin, matrix isolated, stark effect, spectral hole burning 7−96757
chloromethylformate, conformers and rotamerisation, matrix isolated IR spectra and ab initio calcs. 7−109894
(2-chlorophenyl)carbene, matrix isolated, oxidation, chemiluminesc. 7−100578
chlorophyll a and photochlorophyll in frozen solns., fluoresc.-detected triplet kinetics study 7−100812
cyclic hydrocarbon-HX complexes, X=Cl,F,Br, matrix isolation studies 7−82107
cyclohexene radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
cyclopropane-Lewis acid interaction, matrix isolation, IR spectra 7−82108
dialkyl peroxides, gas phase thermolysis, trapped radicals, ESR study 7−74709
diatomic mols., electronic energy levels matrix isolation and gas phase spectra 7−82074
dibenz[a,h]anthracene, linear dichroism spectra in stretched polyethylene matrix 7−108668
dichloromethane, in Ar matrix, IR spectra 7−96696
2,3-dichloroquinoxaline, in calcinated Vycor glass emission and excitation spectra, surface-adsorbate interaction, phosphorescence lifetimes, Bronsted acid sites 7−141626
dihydrophenazine, doped in mol. cryst., excited states characterisation 7−96571
3,4-dimethylenefuran biradical, matrix isolated, ^{13}C NMR 7−96736
dimethylsulphite-$d_0(d_8)$, low temp. matrix isolated, vibr., IR spectra 7−82111
1-ethoxy-4-chlorobenzene dissolved in nematic liquid crystal, conformation and orientational order 7−122570
ethyl isocyanate, vibr. spectrum, normal coord. anal., conform. stability and ab initio calcs. 7−90093
ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7−135920
ethynyl radical, Ar matrix isolated, Fourier transform IR spectra 7−82097
fluorescein, in glassy media, fluoresc. spectrosc. 7−122596
fluorescein-mercury acetate, in glassy media, fluoresc. spectrosc. 7−122596
α-glycine, powder, vibr. modes, far-IR Raman Fourier transform spectra anal. 7−68320
guanine, and related mols., Ar matrix isolated, IR spectra 7−96671
guanines, matrix isolated, tautomeric equilibria and and vibr. spectrosc. 7−68306
hexafluorobenzene cation, vibr. freqs., perturbation by Ne matrix 7−96640
HF−NO/NO_2 complexes, IR spectra anal., ab initio UHF SCF calcs. 7−103355
2-hydroxy-4,5-benzotropone, in inert gas matrices and ethanol solns., H^+ transfer 7−71478
2−hydroxy-4, 5-benzotropone, proton transfer dynamics, matrix isolation spectra 7−133001
3−hydroxychromone, proton transfer dynamics, matrix isolation spectra 7−133001
3-hydroxyflavone, in Ar matrix, intramol. H^+ transfer, fluoresc. 7−136000
3−hydroxyflavone, proton transfer dynamics, matrix isolation spectra 7−133001
hypoxanthine, and related mols., Ar matrix isolated, IR spectra 7−96671
impurity intermediate radius at. excitations in inert matrices, energy splitting mechanisms *(Russian)* 7−74489
indoles, substituted, in polyethylene films, UV absorpt. spectra 7−96728
interstellar problems, matrix isolation technique 7−88102
merocyanine dye in polyvinyl alcohol matrix, large edge excitation fluoresc. red shift 7−68396
methoxydifluorophosphinoxide-$d_0(d_3)$, liq. gas, solid vibr., conform., IR and Raman spectra 7−96687
methyl iodide in nematic mesophase, NMR linewidth anal., ^1H and ^{13}C NMR spectra 7−74664
3-methylpentanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975
molecules, electronic transitions, polaris. determ. method 7−141622
molecules with long flexible substituents, orientation in polymer matrix 7−103481
naphthalene, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
octaethylporphine, in Ne matrix, nondestructive photoorientation, IR and visible obs. 7−68297
9,10-octalin, radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
ores, Ru content, atomic fluoresc. anal. with vacuum electrothermal atomisation *(Russian)* 7−132984
organic compounds, matrix isolation Fourier transform IR spectra study 7−141569
pentacene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
phenylacetylene-HF complexes, Ar and N_2 matrix isolated, Fourier transform IR spectra 7−82110
phenylchlorocarbene, matrix isolated, oxidation, chemiluminesc. 7−100578
phenylpropyne-HF complexes, Ar and N_2 matrix isolated, Fourier transform IR spectra 7−82110
photodiode array detection with Shpolskii and fluoresc. line-narrowing spectroscopy 7−128664
polycyclic aromatics, in polymer films, transition moments, absorpt. anisotropy 7−103531
polyenes, in polymer films, transition moments, absorpt. anisotropy 7−103531
porphyrin, in ethanol, electron state dephasing, spectral diffusion, photochemical gap burnout 7−141629
porphyrins in ethanol glass, hole burning in absorpt. spectrum 7−90673
pyrene, polarised fluoresc. spectrum in stretched polyethylene matrix 7−108668
pyrido(2,3-b)pyrazine, $^3n\pi^*$ triplet state optical and mag. props. 7−90257
RBY, excited-state absorption 7−122562
resorufin, in ethanol glass, linewidths, photon echo and hole-burning results 7−110479
resorufin in ethanol glass, linewidths, phases, relaxation processes 7−136451
RSSH radical anions, props., matrix isolation EPR obs. 7−109958
tetracene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
tetracene and its van der Waals complexes with inert gas atoms, rot. resolved laser spectroscopy 7−129733

matrix isolation spectra continued
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7−106212
tetramethyl tin, isolated in Ar matrix, rotational tunnelling 7−141643
1,1,2-trichlorotrifluoroethane, matrix isolation vibr., conform., IR spectra 7−82109
trifluoroacetic acid-diethylether (acetone) complexes, matrix isolated, IR spectra 7−96688
trifluoroethylidynesulphur trifluoride, gas phase struct., nonlinear coord. 7−141571
zinc tetrabenzoporphin, substituted, matrix isolated, stark effect, spectral hole burning 7−96757
Ag, Zeeman furnace AAS, matrix effects study 7−133007
Ag_7 cluster, form. in Ne matrix, EPR study 7−122763
AlH^+ and AlD^+ cation radicals, in Ar matrices, ESR, generation by reactive laser sputtering 7−90222
AlO, Ar matrix isolated, vibr. relax., IR-optical double reson. 7−82235
B_2, matrix isolated, ESR and ab initio CI calcs. 7−129751
B_2H_6, oxidation, matrix isolation study, IR spectra 7−116970
Bi_2, A→X fluoresc. system, Franck-Condon principle study 7−108101
Br_2 matrix isolated, time resolved fluoresc. spectra 7−82245
Br_2O, matrix isolated, IR spectra 7−82105
CCl in carbon tetrachloride-Ar(Kr) discharges, dissoc. excitation 7−82198
CH_2 isolated in solid Ar, IR spectra, $\tilde{A}^2\Pi$-$\tilde{X}^2\Sigma^+$ transition 7−90119
C_2N_2, $a^3\Sigma_u^+ \rightarrow X^1\Sigma_g^+$ chemiluminesc. in matrices 7−86633
CO, trapped in rare gas cryst., triplet states, vibr. progressions obs. 7−106240
$CO+H_2$, photochemical reaction rates, matrix isolated spectra 7−100596
CO_2, D_2 matrix isolated, impurity effects in IR spectra 7−96684
Ca_2, matrix isolation Raman and fluoresc. spectra 7−96906
Cl_2-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125
ClF-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125
CoC_2, Ar matrix isolated, ESR spectra 7−82230
Cr, matrix-enhanced forbidden transitions, moment anal. 7−103413
Cr, P←S transitions, matrix isolated absorpt. and MCD spectra, moment anal. 7−103421
Cr(V) complex, Cr 2,3-dioxynaphthalene, in liq. cryst., ESR obs. 7−109962
Cu complexes, hindered internal conversion in rigid matrix, emission investig. 7−74698
Cu_3 in N_2 matrix, EPR spectra 7−110001
D_2, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
Fe_3 clusters, trapped in Ar matrices, electronic and far IR spectra 7−90021
^{57}Fe ionisation states in rare gas matrices, Mossbauer studies 7−122422
$GeH_4+H \rightarrow H_2+GeH_3$, free radical ESR investig. in Xe matrix 7−90224
H halide-cyclopropyl derivates, H bonded complexes, matrix isolation spectra 7−109734
H+phenylacetylene, addition, matrix absorpt. spectra 7−86600
H_2, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
HD, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
HF-$GeH_4(SiH_4)$(methane), matrix isolated, vibr. stretches, IR spectra 7−90116
HF-$H_2(O_2)$, H bonded complexes, matrix isolated, IR spectra 7−90117
H_2O, trimer struct., isotopomers, matrix isolation IR spectra 7−90122
IF, low-lying electronic states, matrix isolated, fluoresc. study 7−141616
Li+CO, activation study, IR spectra in cryogenic matrices 7−82114
LiCO, cryogenic matrix isolated, IR spectra 7−82114
LiC_2O_2, cryogenic matrix isolated, IR spectra 7−82114
$Li_2C_2O_2$, cryogenic matrix isolated, IR spectra 7−82114
$LiNO_3$ in DMSO soln., IR and Raman spectra, ion pairing and solvation depend. on soln. temp. 7−82095
LiOC, cryogenic matrix isolated, IR spectra 7−82114
3-methylhexanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975
Mo_2, matrix isolation Raman and fluoresc. spectra 7−96906
N_2 mols., isolated in solid Ar matrix, mol. rot. motion, calorimetric studies *(Russian)* 7−90096
N_4^+ reaction products in Ne matrix EPR study 7−126434
NH_4BF_4, cryst., NH_3D^+ ion vibrs. at low temp. 7−135940
NO, in inert gas matrix, emission, diffusion-controlled quenching 7−135984
NaF:Cu^+, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
Ni, vaporisation, rare gas matrix isolation spectra 7−82028
Ni_3 clusters, trapped in Ar matrices, electronic and far IR spectra 7−90021
OPF, form. struct., mass spectra, IR spectra, ab initio calcs. 7−68296
Pb_2, matrix isolation Raman and fluoresc. spectra 7−96906
PbO, matrix isolation Raman and fluoresc. spectra 7−96906
Ru complexes, $Ru(bipyridyl)_3^{2+}$ derivatives, absorpt., luminesc., charge localisation 7−113183
SO_3-soft Lewis base interactions, IR matrix isolation spectra 7−68301
ScC_2, Ar matrix isolated, ESR spectra 7−82230
SeO_3 vapour, matrix isolation, mass spectrometric and IR obs. 7−82112
SeS mols. in Ar matrix, fluoresc. excitation spectra *(Russian)* 7−68332
SiO, matrix isolated in Ar, valence states, fluoresc. emission spectra 7−82275
Sn:Co, atomic fluoresc. anal. with vacuum electrothermal atomisation *(Russian)* 7−132984
Tm, Ne matrix isolated, spectral and temporal characts. 7−68245
VC_{2t} Ar matrix isolated, ESR spectra 7−82230
$Xe_2^+Cl^-$, in Xe matrix, UV emission spectra 7−90184

matrix isolation spectroscopy
organometallic intermediates, IR spectroscopy analytical techniques 7−86738
polarised optical spectroscopy wing stretched polyethylene solvent 7−108668

Matteucci effect
No entries

Mattheissen's rule *see electrical conductivity of crystalline metals and alloys*

maximum principle
see also dynamic programming
perturbed non-vibrating systems with one degree of freedom, approx. synthesis 7−67002

Maxwell-Boltzmann distribution *see statistical mechanics*

Maxwell effect *see flow birefringence*

Maxwell equations *see electromagnetism*

MBE *see molecular beam epitaxial growth*

MCD *see magnetic circular dichroism*

M^2CMOS *see CMOS integrated circuits*

Mealy Moore machines *see finite automata*

mean free path, carrier *see carrier mean free path*

measurement
see also specific measurements, e.g. frequency measurement
see also instruments; testing; units (measurement)
conference, Wroclaw, Poland, Sept. (1986) *(Polish)* 7−72707
principles, metrology role, units, standards and calibration, review *(Italian)* 7−80720
progress, conf., Gaithersburg, MD, USA (Oct. 1986) 7−80173

measurement by laser beam
see also laser velocimeters; laser velocimetry; plasma diagnostics by laser beam
absolute distance meas. by wavelength shift interferometry with laser diode, systematic error sources 7−102382
absolute distance meas. to 25 m by multiwavelength CO_2 laser interferometry 7−102383
AM laser system for distance and displacement meas. 7−75007
angle metrology using ring laser *(Czech)* 7−67280
archaeological mineral samples, optical dating using an Ar ion laser 7−87960
automatic counter for particles suspended in a liquid 7−123793
calorimetric spectroscopy on flows 7−130803
CAMAC-compatible automation of microwave relaxometer using IZOT TsLANP-0270 computer system 7−128592
capillary waves, laser light scattering measurements 7−75601
coherent optical spectroscopy, laser hyperbolic secant π pulse appl. 7−90662
color laser microscope for inspection of semiconductors 7−121221
combustion diagnostics, CARS appls. 7−86631
computer aided laser measurement techniques *(German)* 7−130227
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
contact-free laser high-temperature dilatometer, for up to 2300 K 7−140662
corneal parameters meas. and diagnosis using real-time analysis keratometer 7−145170
cross-correlation spectrometer with Kh6-4 correlator 7−121236
deflection measurement by laser optical line of sight system 7−73322
detection of spectrally narrow light emission by laser intra-cavity spectroscopy 7−108676
diameter meas. using lasers and CCDs 7−140671
diffraction method of meas. small linear dimensions, mode composition effects on errors 7−102385
digital flowfield imaging technology, review 7−142408
dilatometer, use to meas. temp. induced dimensional changes 7−108518
diode laser, appl. in an ESPI system 7−67384
displacement measurement, laser interferometer system 7−121055
displacement meter, laser-Doppler principle 7−134718
Doppler tissue flowmeters, in vivo evaluation of signal processors, cat obs. 7−71944
dye laser spectrometer, ultra-high resolution using non-tunable reference resonator 7−102528
dynamic measurement of watch mechanism by means of laser Doppler effect 7−110369
electric current meas. using Faraday effect for He-Ne laser beam 7−128594
emissivity of hot cathode determ. during arc discharge, by laser reflectometry 7−121202
end bar measuring instrument, design 7−89190
femtosecond laser flashed frame imaging utilizing a femtosecond streak camera 7−95561
fibre optic temp. sensor using fluorescent decay of laser pumped alexandrite crystal 7−123218
fibre preform refractive index meas. model 7−90816
fibre-based chirped freq. interferometric distance sensor with AlGaAs laser 7−130388
flame propagation studies using simultaneous laser diagnostics probing 7−86632
flow meas., density fluctuation detector using differential interferometer 7−83374
fluorescence spectroscopy, instantaneous line-profile meas., rapid-frequency-scan laser 7−96596
frequency modulated fiber optic interferometric sensors *(Portuguese)* 7−130389
gain-switched pulse-compressed DFB laser diodes for optical waveform sampling 7−68729
gear circumferential vibr. meas. using double aperture method 7−136766
graded index fibre diameter measurement using diffr. pattern 7−82819
groundwater contaminants monitoring using laser fluorescence and fibre optics techniques 7−114136
gyroscope with optimised resonator geometry 7−80752
high power pulse lasers for fiber optic measurements 7−136576
high speed photography, videography and photonics, conf., San Diego, CA, USA (Aug. 1986) 7−95086
hydrophone absolute calibration using laser interferometer, freq. range up to 15 MHz 7−68971
in-plane translation meas. by speckle calculation, using linear image sensor 7−80863
injection lasers for rise-time meas. of photodiodes 7−102526
interference nanometer for pressure to 120 kPa, using Hg meniscus and He-Ne laser 7−110433
interferometer, double twin path, for automatic film thickness meas. 7−116002
interferometric sensors, sideband noise of large phase carrier 7−136550
interferometry, electrooptical phase shift control, metrologic appls. 7−102509
intracavity laser spectroscopy, sensitivity, influence of emission spectra kinetics of multimode lasers *(German)* 7−130039
intracellular mobility of green algae studied by laser beam 7−139414
jet, turbulent gas, 3D conc. determination by scanning laser method 7−130812
laser diffraction spectrometry, Fraunhofer diffraction and Mie scatt. 7−108519

measurement by laser beam continued
laser diffractometer for small dimensions errors introduced by Fourier processor 7−103748
laser interferometer for measuring displacement and distance 7−102503
laser ranging in turbulent atmosphere, meas. errors *(Polish)* 7−68735
length and mechanical standards 7−134830
light scattering material, photothermal detection by light interferometry 7−95640
manufacturing applications, conf., Los Angeles, USA, (Jan. 86) 7−80159
mass comparator, kilogram prototype, automatic reading system *(Korean)* 7−80745
material diagnostics, conf., Albuquerque, NM, USA (Feb. 1987) 7−102022
meter standard realisation, using He-Ne laser comparator 7−108513
Michelson laser interferometer using a dual interference method, stabilised system design, displacement meas. appl. 7−102500
microdimensional measurement by laser *(Japanese)* 7−110370
microscopy, laser beam formation for intracavity processing of objects 7−67387
Mini Laser Rangefinder, review 7−75024
motion monitoring, using light as tool 7−140674
Nd:YAG laser rangefinder/designator 7−75019
ocean currents laser-Doppler anemometry role of light scatt. by microparticles *(Russian)* 7−101520
ocean-optical studies, design, testing and calibration of semiconductor laser-based instrumentation 7−139811
optical dynamic holography technique, ultrasonic vibrations amplitude meas. 7−117221
optical meas. of acoustic and photoacoustic effects 7−123373
optical testing and metrology, conf., Quebec City, Canada (June 1986) 7−115684
optical time domain reflectometry *(Japanese)* 7−140731
opto-electronic system for displacement and vibration measurements 7−140672
optoacoustic gas analyzer for NO, NO_2, NH_3, C_2H_4, and saturated hydrocarbon pollutants 7−114159
phase-detector and counter for fine displacement meas. 7−134723
photodisplacement imaging using single laser for excitation and imaging 7−95641
photolysis studies of photolabile samples, using optical multichannel analyser, noise reduction 7−106815
photon-limited laser pulses, arrival time estimate in presence of shot and speckle noise 7−103864
plasma density fluctuations determ., using CO_2 laser 7−142506
plastic film thickness measurement using angle-scanning laser interferometer 7−80868
profilometry and roughness meas. *(German)* 7−128537
pulsatile arterial diameter in vitro meas. using He-Ne laser 7−107194
pulsed laser shadow photography appl. to ballistic investigations 7−95669
Rayleigh scattering, signal analysis developments 7−108529
rectilinearity monitoring by laser beam, baseline reproduction error analysis 7−123053
refraction elimination at high-accuracy, meas. using lasers *(German)* 7−80839
refractive-index change due to thermo-optic effect, meas. technique 7−121198
relaxometry of crystallisation process, picture processing techniques for interpreting experimental data 7−140680
respiration diagnostics, tunable diode laser based spectroscopic system 7−107291
RF magnetic field meas. system, amplitude and phase sensitivity, LD and optical fibre 7−102468
ring laser with random frequency base, error, asymptotic estimate 7−130205
rotation measurement by laser beam polarisation modulation 7−73321
scanning lidar bathymeter for water depth measurement 7−79368
secondary length standard using He-Ne laser *(Romanian)* 7−95545
seismometers based on automated laser interferometers 7−145706
sinusoidal vibration amplitude, multiple-reflection laser interferometer *(Korean)* 7−134842
soot particulate, agglomerated, particle size, Rayleigh scatt. 7−100625
spectrometer with telescopic resonator, link between diffraction losses and light beam cross section 7−141910
strain meas. using optical fibre interferometer-based technique during electrodeposition 7−67383
surface analysis with ion and laser beams 7−100667
surface roughness meas. using He-Ne laser 7−134717
suspended glass spheres motion meas. in electrodynamic balance, electrode design effects 7−123796
test pattern for fluorescence microscopy 7−80873
thickness measurement using scanned ATR technique 7−80852
thin film absorption meas. by laser calorimetry 7−121127
tissue blood flow meas. by laser-Doppler flowmetry, evaluation 7−71939
torus magnetic field meas., by rapid-frequency-scan laser spectroscopy 7−142507
transient plasma analysis, by fast, laser deflection system 7−142508
tunable-diode-laser spectroscopy, advances 7−108678
two-photon spectroscopy, absorption, Doppler-free with frequency-modulated dye laser 7−140753
ultra-low thermal expansion meas. using push-rod dilatometers, dial gauge and laser speckle appl. 7−128530
US, disc transducer, radiation field, laser probe investig. with tomographic scanning 7−132879
US field meas. by light diffraction tomography 7−117413
vacuum arcs, high current, particle and vapour density meas. by laser techniques 7−69528
vacuum pressure measurement by laser ionisation method 7−95604
wavelength unit for pulsed laser, working standard 7−141909
wind tunnels, US laser method for flow field meas. 7−123816
Zeeman laser, stabilised transverse, applics, to polarisation meas. *(Chinese)* 7−75013
CO_2 laser, far distance emissivity meas. 7−97058
CO_2 two-mode laser, metrological characts. 7−103792
He-Ne double-wave laser interferometer for thin-film optical constants *(Chinese)* 7−115998
He-Ne/I_2 laser, metrological characts. 7−123054
N_2 laser, refractive fringe diagnostic, of ruby laser produced plasma 7−83537
N_2 laser flash photolysis using dye fluorescence as a monitoring source 7−128668
NH_3 leakage, remote laser gas analyser monitor 7−114158

measurement by laser beam continued
PLZT diffr. grating, electrically controllable, piezoelec. strain meas. by He-Ne laser 7−143968
PZT ceramics, polarisation and space charge spatial distribs. determ. by laser intensity modulation method 7−99741
$Pb_{1-x}Sn_xZrO_3TiO_3$, spatial distrib. of polarisation and space charge, meas. by laser intensity modulation method 7−125600

measurement errors
absolute distance meas. by wavelength shift interferometry with laser diode, systematic error sources 7−102382
absolute distance meas. to 25 m by multiwavelength CO_2 laser interferometry 7−102383
accelerometers, vibration-related error meas. *(Russian)* 7−115952
accuracy of instrument adjustment in the presence of noise 7−140654
adaptive algorithm for unification of measurement results 7−140652
alkali fluoride melts, viscosity meas. *(Japanese)* 7−91867
amino acid geochronology and palaeothermometry, precision estimates 7−120163
aspheric surface ultrahigh accuracy 3-D profilometer using laser heterodyne interferometer 7−103917
astronomical photometry, accuracy of high time resolution multichannel multicolour photometer 7−79840
atmospheric random field velocity meas., correlation extremal system, mean error 7−139772
autocompensation as structural method of instrument accuracy meas. 7−128516
birefringence errors in magnetooptical high-current converters 7−102448
blood flow measurements, Doppler ultrasound, with uncertain attenuation and beam profile, error bounds 7−101020
blood pressure, direct meas., significance of reference 7−93974
bone mineral measurements by quantitative CT, systematic errors 7−71857
calibration of phase meters with linear response characteristic 7−121155
Canadian U mine, errors in meas. of unattached fractions of Rn and Tn progeny using wire screen methods 7−145255
cerebral blood flow determ. by Xe-enhanced CT, effect of CT noise and tissue heterogeneity 7−133441
cerebral blood flow determ. by Xe-enhanced CT, errors due to estimation of arterial Xe concs. 7−133433
cloud particles counting, corrections of Forward Scattering Spectrometer Probe for coincidence and dead-time losses 7−127566
collimator, differential zero position grating type, accuracy considerations *(Chinese)* 7−75102
colorimetry, error determ. 7−128623
colorimetry, optimum sampling interval determ. 7−121186
colour comparators testing, colour specimens certification 7−121185
cometary images meas., observational bias 7−94794
confidence intervals correctness for variance of meas. errors 7−134714
curved surfaces, glossiness meas. using CCD line sensor 7−108523
data convertors error distrib. analysis 7−108528
differential Doppler velocity meter with fiber waveguides 7−123786
diffraction method of meas. small linear dimensions, mode composition effects on errors 7−102385
digital elevation models, quality control of photogrammetrically sampled models 7−101179
dilatometry, high-temp., specimen mark effects on accuracy 7−140664
directed-graph reflectometer error analysis *(Russian)* 7−73310
EELS quantification, background extrapolation, practical factors influence 7−144773
ellipsometric error analysis FORTRAN program 7−67273
ellipsometry of optical materials 7−128629
emission spectrum, determination of characterising parameters, by photon correlation and multichannel analyser 7−121235
experimental data analysis, 'metrological statistics' approach using biased estimators 7−89184
field focusing NMR-CT for noninvasive thermometry, temp. resolution study 7−101032
flame in cylindrical tube, double-exposure holographic interferometry temp. meas. 7−103773
forecasting error distributions for means of measurement 7−102372
galaxy redshifts, accuracy of radial velocities in clusters of galaxies 7−72594
gamma-ray dilatometry, physical and metrological principles 7−121061
General Photoelectric Astrolabe Catalogue of China, declination system compared with five modern meridian catalogues 7−72324
geodetic levelling, empirical calibration of Zeiss Ni-1 level instruments for mag. errors 7−94060
geodetic VLBI, errors in Earth rot. parameters and baseline lengths 7−79694
geoelectric sounding, resistivity error due to finite-length contained vertical conductor 7−127084
glass fibre reinforced plastic, cylindrical shells, buckling, meas. errors 7−97354
GPS position fix using single frequency reception, ionospheric propagation delay *(Japanese)* 7−101622
hot-wire probe calibration facilities, blockage correction effects 7−130805
hydrophones calibration, using internal cavity, sensitivity evaluations accuracy determ. 7−123360
ice ages dating, errors of 0 to 300-kyr chronostratigraphy based on orbital tuning concept 7−72150
Image Photon Counting System, performance anal. and quest for high accuracy 7−94662
increments and small consts. meas. errors decrease *(Polish)* 7−67269
industrial sensors, nonlinearity correction cct. *(Dutch)* 7−89208
inertial geodesy simulation of gravity-induced effects 7−94059
integrating sphere measurement of hemispherical reflectance, error correction 7−80851
interference-type dilatometer, meas. errors calc. 7−121062
interferometric testing, optimal removal of mislocation effects 7−121217
IR radiometer for background noise investigations *(Russian)* 7−80877
isotope dilution, sub- and super-equivalence method, anal. errors 7−119604
JILAG-3 transportable absolute gravity meter, precision and accuracy of absolute gravity determ. 7−139774
Landsat-4 multispectral scanner and thematic mapper data classification accuracy, expts. 7−79713
laser anemometer, alignment and operating difficulties 7−123795
laser diffractometer for small dimensions errors introduced by Fourier processor 7−103748

measurement errors continued
laser radiation power meas., wide-aperture meas. facility, sensitivity study 7−103855
laser ranging in turbulent atmosphere, meas. errors *(Polish)* 7−68735
medical NMR, reproducibility of spin-lattice relax. time meas. 7−71836
microinterferometer, double-refracting, with variable interfringe spacing across image plane 7−140735
multicomponent force sensor with cross sensitivity, calibration error effects *(Japanese)* 7−83145
multiple-Doppler radar meas. accuracy for vertical vels. in convective storms 7−114871
nearly geostationary satellites, diurnal error bound in predicted ranges 7−79802
neutron dose estimation following criticality accidents, quick sort techniques uncertainties 7−71871
notched bar impact bend test, support friction effect *(German)* 7−93230
ocean current profiling techniques, receiver and analogue homodyning effects on incoherent Doppler vel. estimates 7−127567
optical density of cells, accuracy of meas. at low resolution 7−139409
optical fibres, chromatic dispersion measurement by phase shift method, influence of LP_{11} mode cutoff length depend. 7−82830
optical fibres, single mode, chromatic dispersion meas. using phase shift method, precision anal. 7−82829
optical particle counters, count variance evaluation *(Japanese)* 7−89314
optical single-mode fibre spectral attenuation precision meas. 7−82811
optoelectronic devices, impulse and transfer charact., error of expt. estimates 7−102374
parallax bar heighting in photogrammetry, accuracy anal. via numerical simulation 7−101178
photographic astrometry of visual binary stars, search for systematic errors 7−88500
photometer, NDIR, nondispersive error model, for difference meas. of CO_2 in air *(German)* 7−67370
pressure sensor long-term accuracy, stress relaxation charact. expt. *(Japanese)* 7−128568
processing, automated system 7−67382
proton spin-lattice relaxation time measurement, instrumentation problems in MRI *(French)* 7−93864
radiance temp., meas. methods and instrumentation 7−95588
radiation meas. procedures for noncontact temp. and emission props. determ. *(German)* 7−102410
radiometric ellipsometry method of surface layer thickness and dielec. props. meas., error calc. 7−132873
radiometric NDT devices, nonlinear conversion of pulses of spectrometric flaw detector 7−71438
radiosonde humidity and temp. errors anal. 7−127551
rectilinearity monitoring by laser beam, baseline reproduction error analysis 7−123053
refractive index meas. of plane-parallel transparent materials, method based on Lau's interf. principle 7−67376
refractive index meas. using Fabry-Perot interferometer 7−102495
refractometric measurements, autocompensating, total internal reflection, limiting props. 7−67377
resistance sensor self-heating and self-cooling effects on temp. meas. *(Polish)* 7−140701
resonator dielectric meas., inductance effects 7−95618
ring laser with random frequency base, error, asymptotic estimate 7−130205
rivers, EM flow meas., interference sources *(Polish)* 7−139810
Santiago declination catalogue of 412 FK4 stars, mean square error of single observation 7−72325
Savonius rotor-type current meter, influence of support rods on rot. speed 7−115063
scattering chamber for cyclotron expts., angular characteristics, systematic errors 7−81844
second-order measuring transducers, scope *(Russian)* 7−121103
SEM, quantitative, at low magnifications, simple method 7−145292
semiconductor thermistor thermometer 7−108552
side-looking radar for remote sensing, imaging geometry and errors 7−133947
sieving of test samples, error reduction 7−128533
simulation modeling for estimation of the characteristics of measurement errors 7−108546
soil moisture, effect of meas. error and confusion from vegetation on passive microwave estimates 7−107454
solar cell spectral response mismatch error analysis and correction 7−144889
solar spectra, quality anal. of Moore, Minnaert and Houtgast equivalent widths 7−107797
specific heat meas., errors and disrepancies determ. due to temp. scales 7−121105
spectral corrections to optical-density measurements 7−102487
spectrophotometric instruments, maximum admissible error in colour coordinate meas. determ. 7−128624
speech signals, time-domain pitch determ. using laryngograph 7−75219
spherometer error calc. 7−128522
stellar photometry, measurement accuracy for photoelectric UBV sequence (in SA 184) 7−72543
stellar positions, mean internal errors of Tokyo PMC catalogue 85 positions 7−134150
stellar radial velocities, systematic differences between 'classical' meas. 7−101759
stellar trigonometric parallaxes, systematic and external errors 7−140037
stratospheric aerosol meas. by laser radar, calibration and error analysis *(Japanese)* 7−79692
surface texture analysers, error sources *(Polish)* 7−134720
systematic error of a measurement channel containing pulse-frequency and secondary data converters 7−128518
systematic errors, processing method for physical data *(Chinese)* 7−80721
thermal energy meter errors, causes and performance improvement 7−102413
thermoelectric convertors, sodium-steel, for sodium temperature meas., sources of error 7−73884
thermorefractometric gas analyzer, accuracy charact. 7−100650
time and frequency standards, efficiency determ. of meas. information processing algorithms 7−140673
time comparisons via Global Positioning System, error anal. *(Japanese)* 7−79186
time interval meas. by difference-period quantisation 7−102390
time lag, experimental errors, estimation 7−95551
transducer, static errors correction, synthetic methods *(Chinese)* 7−73327
transient response settling time meas., dynamic charact. meas. of DAS channel 7−140653
triangulation ranging, time delay meas. errors modelling by conditional beta density functions 7−123341
turbulence measurement upstream of axisymmetric body, errors anal. 7−127564
Twomey-type cloud condensation nucleus counter, theoretical vindication of performance 7−115062
uncorrelated noise in turbulence measurements, error variance, atm. appl. 7−127360
validation of data by balancing equilibrium *(French)* 7−95535
vector rotation in inertial space, meas., random error 7−95552
vertical wind velocity at Boulder Atmospheric Observatory, meas. errors 7−127366
wind measurement, appl. of errors in sodar-estimated second moments to field meas. 7−115067
wind measurement, errors in second moments estimated from monostatic Doppler sodar winds 7−115066
X-ray intensity data, relative scales, error estimation 7−67272
O_2 consumption algorithms, propag. of meas. errors 7−119886
Pd-Cr-Os/Cu-Fe thermocouple, magnetic field effect on thermo EMF 7−134737
Si solar cell spectral response meas. for space qualification 7−144884
UO_2, surface energy meas., errors, critical review 7−84483

measurement standards
see also atomic clocks; temperature scales
10 GHz band power standard, dry type calorimeter *(Japanese)* 7−67345
absolute calibration of small gas amounts 7−134788
antifriction powder materials, tribotechnical props. determ., standard method 7−106732
atomic oscillators, review and comparison with quartz cryst. oscillators 7−115949
beam-reversal phase-shift meas., cavity phase difference behaviour in NBS-6 7−108574
calibrator specifications, managerial confidence and traceability criteria 7−128519
calorimeter, tray type, for 15-300 K temp. range 7−80794
calorimetric transducers certification, time marker for a printer 7−102376
candela standard in USSR, based on radiometer/black body combination 7−140656
colorimetry standards, recommendations, report 7−80849
colour comparators testing, colour specimens certification 7−121185
computer-controlled standards laboratory meas., using universal meas. machine 7−121051
contact profile meters, sensor tips control, gauge marks fabrication *(Slovak)* 7−121065
continuum measurement scales 7−121048
coordinated Universal Time *(Japanese)* 7−108507
cryogenic electrical metrology, NPL progress 7−95616
density meas., H_2O density change due to aeration 7−89201
density measurements, high accuracy, and density standards *(Japanese)* 7−102388
dilatometers checking by using standard measures 7−128526
dilatometry, metrological support in Soviet Union 7−121060
dispersion distortion removal from pulsar radio signals 7−88124
electron storage ring as standard of spectral photon flux *(German)* 7−73315
ethanol-water, excess enthalpy of mixing, appl. to reference mixture use 7−91814
extremity dose, definition, standards, regulatory limits, radiobiological significance 7−133454
far ultraviolet detector standards 7−116008
Fizeau interferometer certification, working wavelength standard for pulsed lasers 7−128638
flowmeters and pipeline components in water, standard methods for calibration 7−75731
force comparator/load cell apparatus for force measurement standard, design 7−89189
frequency standards for measurement of time and of frequency *(French)* 7−73313
fundamental physical constants and standards development 7−102377
geophysical surveys based on time and frequency service means 7−145689
gloss, evaluation of appearance attribute 7−121043
GPS user equipment, relativity correction 7−73317
heterochromatic brightness matching, models 7−121044
high pressure gauge, secondary standard, using AuCr spin-glass alloy 7−121143
high vacuum pumps, pumping speed measurement, recommended procedure 7−134766
inductance standard development for frequencies up to 20 kHz *(Czech)* 7−108580
international fluence-rate intercomparison for 144 and 565 keV neutrons 7−109603
international round robin in primary-accelerometer calibration 7−121079
ionising radiation meas. and standards, health and safety aspects 7−101095
IUE SWP and LWR cameras in low dispersion mode, recalibration 7−94658
Japanese sound power meas. standards *(Japanese)* 7−67275
Josephson voltage standard at NPL 7−105857
large-area solar cell calibration, absolute indoor differential spectra responsivity method 7−144885
laser radiation power meas., working standard for 0.48 and 10.6 μm 7−123044
Leeds & Northrup Maxical instrument for calibration *(Spanish)* 7−95538
length, He-Ne laser comparator appl. 7−108513
light modulator for motion picture camera, field standard facilities and requirements *(Czech)* 7−130316
light source colorimetry, Japanese Industrial Standard Z8724 revision (1986) *(Japanese)* 7−75092
linear expansion coeff. meas., Soviet state primary standard 7−121059
linear expansion coeff. meas. at 90-1800 K, metrological support 7−121058
linear expansion coeff. standard, KLR-1.1 glass 7−121063
material, standard reference, film thickness and refractive index, calibrated by ellipsometry and profilometry 7−121047
metallic materials, compression testing standard method, inelastic buckling 7−119480

measurement standards continued
methylsilsesquioxane, reference material for magic angle ^{13}C NMR spectroscopy 7—102470
metrological charact. of standard specimens 7—128520
metrology, law and industrial meas. standards in Spain *(Spanish)* 7—95539
microwave reflectometer, six-port calibration method using four standards 7—121156
moisture meas., analytical correlation evolution, military appl. 7—95602
NBS scale of spectral radiance 7—140729
ocean chemical monitoring, use of standard reference materials 7—79706
operational comparability techniques for determ. of meteorological meas. realtime acceptability 7—127524
optical component flaws, specification and measurement 7—75174
optical scale manufacture, process engineering aspects 7—136629
photoacoustic spectroscopy, C black equivalents 7—95657
physical standard redefinition, theory and expt. *(Swedish)* 7—121045
polymers vitrification temp. determ., using dilatometer 7—143008
portable microprocessor-based thermocouple and RTD simulator 7—102409
portable standards, time standards accuracy, unit definitions 7—73311
pressure and vacuum meas., calibration and performance 7—121049
pressure meas., standard instruments 7—140658
pressure standard up to 500 MPa, using strain gauge 7—95570
pressure standards up to 500 MPa using pressure transducers 7—89226
progress, conf., Gaithersburg, MD, USA (Oct. 1986) 7—80173
quantity manifestation comparison procedure by deterministic and stochastic methods *(Polish)* 7—108506
quantum Hall effect, high precision measurements at national institutes 7—131687
quantum Hall effect explanation and impact on electrical metrology 7—67350
quantum-mechanical frequency standards, adaptive methods appl. 7—140709
radiation detectors certifying source 7—102492
radiometric standard sources for vacuum UV and soft X-ray range 7—89248
review *(Italian)* 7—80720
single mode fibre measurements and standardization 7—130354
spectral reflectance meas. of high reflectance coatings 7—121204
spinning-rotor gauge, low pressure standards, calibration, report 7—80725
stellar photometry, obs. of photoelectric UBV sequence (in SA 184) 7—72543
stellar photometry, photoelectric meas. of UBVR sequences in M31 and M33 fields 7—134279
stellar photometry, photoelectric UBV obs. of zero-point stars in Magellanic Cloud clusters 7—94966
stellar photometry, photoelectric UBVRI sequences in region of Galactic globular clusters 7—120522
stellar photometry, sequence of photometric near-IR standard stars observed at San Pedro Martir 7—115528
surface roughness meas. methods *(Spanish)* 7—89196
thermal expansion meas. standards, materials exam. 7—121064
thermal-conductivity standards (organic liquids) 7—102403
time and frequency, efficiency determ. of meas. information processing algorithms 7—140673
time-scale service in the vicinity of the Earth 7—102389
vacuum and leak standards, low-range flowmeters 7—115975
vacuum gauges long-term stability, German calibration service 7—134795
vacuum meas. by spinning rotor gauge technique, international comparison 7—134789
visible red light, speed, redefinition of meter 7—95537
voltage and impedance standard upgrading *(Swedish)* 7—121046
voltage primary standard, using solid state references 7—121050
voltage standards improvement based on Josephson effect 7—102447
wavelength unit for pulsed laser, working standard 7—141909
CO_2 pulsed laser-emission at 10.6 μm, operating energy meas. standard 7—130217
CO_2-in-air reference gases use for calibration of nondispersive IR CO_2 analysers 7—127525
Cd standard cells, temp. charact. of cells normalised at 0°C *(Japanese)* 7—67274
He-Ne laser, I_2 stabilised, international intercomparison involving ten laboratories 7—110429
He-Ne laser, transportable optical frequency standard and results of its metrological tests 7—141840
He-Ne:I_2 laser, freq. reproducibility, ^{127}I absorpt. spectra 7—122916
He-Ne/methane laser, portable optical freq. standard meas. 7—123051
Ho_2O_3 wavelength standard, determ. 7—80724
^{125}I standardization, activity meas., photon-photon coincidence counting and efficiency extrapolation 7—135775
^{24}Mg atomic frequency standard, advances 7—80723
$NaNO_3$ cryst. standard for Raman spectroscopy meas. 7—132266
NbN-NbO_x-Pb Josephson junctions, AC props. 7—132448
^{A}Ne, A=20, 22, transition isotope shift, wavelength standards 7—96586
O_3 conc. determ. by UV absorpt. spectra method 7—139805
Si photodiode, quantum efficiency and spectral responsivity self-calibration 7—121192
Si photodiode radiometry compared with Australian radiometric scale 7—108617
^{127}Xe, activity meas. using 4π-γ detector 7—135776

measurement systems
see also meters
AM laser system for distance and displacement meas. 7—75007
conference, Wroclaw, Poland, Sept. (1986) *(Polish)* 7—72707
explosion-proof pressurized housings *(Polish)* 7—67299
fuel reprocessing, isotope dilution anal. of input samples, automatic system, design, safeguards appl. 7—122022
holographic, correlation props. 7—90549
Netherlands lightning detection and characteristics meas. system *(Dutch)* 7—115031

measurement theory
additive noise suppression, frequency characteristic synthesis 7—67270
confidence intervals correctness for variance of meas. errors 7—134714
continuous tracking of number of quanta, test oscillator sensitivity 7—73057
convergence of measurement *(Polish)* 7—73309
correlation and regression in analysis of qualitative phenomena in the light of measurement theory *(Polish)* 7—95536

measurement theory continued
dynamic flow meas., observations statistical props. for proving meters 7—91271
empirical reality, empirical causality, and the measurement problem 7—115820
forecasting error distributions for means of measurement 7—102372
increments and small consts. meas. errors decrease *(Polish)* 7—67269
inverse problems in measurement 7—140655
locality violations, in correlation meas. with beam splitter 7—102206
metrological charact. of standard specimens 7—128520
nonlinear discrete-time signal processing in devices 7—102373
physics experiments, design, optimal data reduction 7—73316
preparation-measurement physical expts. and computation 7—95392
principles, metrology role, units, standards and calibration, review *(Italian)* 7—80720
quantity manifestation comparison procedure by deterministic and stochastic methods *(Polish)* 7—108506
quantum mechanics measurement process interpretation *(German)* 7—89046
quantum theory of continuous meas. 7—120845
series of measurements, precision and reliability 7—89185
stochastic response of sound and vibration level meters *(Japanese)* 7—67271
test intervals for means of meas. optimisation 7—128517
transient response settling time meas., dynamic charact. meas. of DAS channel 7—140653
validation of data by balancing equilibrium *(French)* 7—95535

mechanical birefringence
see also photoelasticity
acoustoelastic birefringence meas. using acoustic polarimetry *(French)* 7—104126
bisphenol-A polycarbonate, anelastic response, birefringence obs. 7—86240
ferroelastic transitions, high resolution X-ray powder diffr. studies 7—111863
light induced drift effect *(Dutch)* 7—90501
liquid crystal copolymers containing pleochroic dyes, transformation on heating 7—83662
optical disc substrate, moulding compounds, minimal birefringence 7—77506
optical fibre, bent birefringent, retardation characteristics, fibre-optic sensing appl. 7—123241
optical waveguides produced in glass by K^+-Na^+ ion exchange *(German)* 7—136536
pin-joined metal-composite, contact interaction problem 7—69074
silicate glass, colour centres, change in volume 7—97950
stress-induced birefringence fibres with lossy stress-applying sections, single-polarisation single-mode guidance 7—82801
Na_2O-CaO-SiO_2 glass, stress-induced index change for Na^+-K^+ ion exchange 7—123136
Si:O, enhanced O diffusion, stress-induced dichroism studies 7—98581

mechanical contact
see also abrasion; friction; lubrication; wear
adhesion-bonded joints, linear theory 7—75476
beam-mass-beam systems, pseudo-force approximation applied to nonlinear dynamic contacts and viscoelastic damping 7—110878
bi-material elastic media with sliding interface, nuclei of strain 7—97457
bodies, elastic, iterative method for solving interaction problem 7—136763
bodies with complex rheology, axisymm. contact problems, 2D integral eqns. 7—75480
body impact contact problems, virtual work principle, penalty function 7—75470
boundary equations of Hammerstein-type, contact problems of elasticity theory 7—75477
composite foundations, axisymm. contact problems, more-accurate eqns. of thin coatings 7—75479
crack formation beneath sliding spherical punch 7—75456
cylinder, transient thermoelastic contact problem 7—90955
cylinder-rough plate contact width and compliance asperity deform. 7—69077
cylinders, fretting fatigue test mechs. 7—117528
deformation and adhesion meas. of smooth mica in contact 7—110881
die supersonic motion over elastic half-space 7—75267
disc, anisotropic, pressing into curved hole of isotropic plate, contact stresses 7—91039
dynamic contact problems with nonlinear normal and friction interface laws, uniqueness, existence 7—83131
elastic, discretized problems, soln. using linear programming 7—83128
elastic bodies, comparison of modeling algorithms 7—110876
elastic cylinders, rolling contact, microslip effect rel. to modulus difference 7—69076
elastic layer under tension, bonded contact problem 7—110875
elastic materials, separation, contact-slip zone 7—97455
FEM and RBSM combination method, application to contact problem *(Japanese)* 7—136762
flange joints with elastic nut and bolt, FEA of contact zone and pressure distrib. 7—81592
flash temperature at contact spots between sliding solids 7—142238
flash temperature at plastic contact points 7—142239
friction and wear kinetics, study by radiospectroscopy methods 7—137465
friction coefficient, influence of variable-speed friction transmission primary contact geometry 7—137464
friction pair element, temp. meas. in near-surface layer by microthermocouples 7—137466
frictional contact problems, finite element solution method 7—75473
generalised displacements, principle of superposition, linear integral or integro-differential eqns. 7—97453
half-plane, elastic, dynamic contact problem with HF oscills. 7—75481
half-space with variable Poisson ratio, contact problem 7—75475
hard-body surface asperities, 2D model, contracting process 7—91952
hardened layers in rims, subjected to repeated rolling contacts, elastic-plastic anal. 7—97458
Hertz deform. parameter, contact area ellipticity 7—83130
indentor, rigid axisymmetric, impact on viscoelastic half-space, integral eqn., num. soln. 7—69070
initial cracking tip anal. in rolling/sliding contacts *(Chinese)* 7—110883
isoparametric quadratic boundary elements in 2-D, axisymmetric and 3-D stress analysis problems 7—69069
layer, transversely isotropic, contact with rigid indenter *(Polish)* 7—123549
line contact, rolling and sliding, cumulative plastic flow 7—117486

mechanical contact continued
nonsymmetric dynamic contact, cylindrical solids, failure anal. 7−104223
pair of annular stamp and rough half-space, axisymm. contact problem of wear 7−75478
pin-joined metal-composite, contact interaction problem 7−69074
plane with ellipsoidal crack, contact problem of thermoelasticity 7−83108
plate, orthotropic, pin-loaded, stresses, effect of pin elasticity, clearance and friction 7−97456
plate, thin circular under temp,. loading in adhesive contact with elastic half-space 7−90956
plate, uniaxially loaded with interference-fit disk, partial contact problems, elastic anal. 7−75293
plates, anisotropic laminar, with defects on interfaces, breaking resist. 7−75452
plates, curved, laminated, subjected to low vel. impact, dynamic response 7−75482
plates, mixed computational algorithm for plane elastic contact problems 7−117547
plates, pin-loaded, mixed computational algorithm for plane elastic contact problems 7−117548
plates, transverse impact, contact force determ. 7−110880
plates and plane elastic solids, shape design sensitivity anal. 7−123465
plates with round hole, generalised contact problem 7−83129
polyolefin-steel adhesion-bonded joints, localisation of cohesion failure front 7−78454
polyphenylene sulphide and C fibre composite, friction and wear in unlubricated conditions 7−126262
polyphenylene sulphide and C fibre composite, friction and wear with water lubrication 7−126263
powder flow, discrete particle-wall interactions 7−91036
punch, flat inclined on elastic half-space, elastic contact problems 7−83123
rectangular orthotropic region under three-point bending, contact problem 7−83126
rigid wheel on a transversely elastic rail, rolling motion stability *(German)* 7−104226
rocks, rough surfaces under normal stress, contact area growth 7−120011
rolling contact fatigue process, crack growth rate 7−71297
rolling contact problem, dynamic effects for elastic-plastic material 7−97459
rolling contact problems, algorithms and strategies, review 7−97460
rolling friction processes rel. to struct. factor, statistical charact., 7−91043
rough surface elastoplastic contact, thermal conductance 7−91044
rough surface in vacuum, thermal cond. of elastic contact 7−70002
rough surface microasperity, plastic deform. study 7−136764
rough surface-smooth surface contact, average height of rough surface asperities and contact spot density 7−69821
rough surfaces contacting through a polymer layer 7−71306
semibounded elastic solid in contact with elastic inertial element, dynamic props. 7−97370
shear, antiplane, generalized superposition method in contact problem 7−136761
shell, cylindrical, multilayer, matrix method of solving contact problems 7−69073
sliding contact stresses in 2D layered elastic half-space 7−104224
soft contacts, numerical soln. of elastohydrodynamic problem 7−110884
spheres, dissimilar, contact, stress field anal. 7−117550
steel, carbonitriding gear, with retained austenite, contact fatigue strength improvement *(Chinese)* 7−78145
steel, Cr-Ni-W, contact fatigue resist., effect of retained austenite *(Chinese)* 7−132698
steel, high-strength, abrasive wear under different contact interaction conditions 7−132752
steel, Ni-Cr-W, case-hardened layer, phase comp. and contact fatigue strength 7−106598
steel ball and optical flat in contact, deformation study *(Japanese)* 7−90978
strip stamp on elastic half-space, high-freq. shear oscills. 7−75397
surface depressions on conformal and nonconformal contact press. distrib. 7−83134
surface roughness, statistical anal. 7−104225
surface roughness and elastic hysteresis, influence on rolling friction charcts. 7−132757
thermodynamical model of contact, friction and wear, constitutive eqns. for materials and linearized theories 7−98519
thermodynamical model of contact, friction and wear, constitutive eqns. for friction, wear and frictional heat 7−98520
thermodynamical model. of contact, friction and wear, governing eqns. 7−98518
thermoelastic plane contact problem with consideration of heat liberation 7−142237
virtual work and its dual 7−75472
viscoelastic media interface, semi-infinite crack propag. 7−117482
viscoelastic steady-state plane normal contact problem 7−90972
wear, mechanical viewpoint of problems, review 7−130607
wear caused by local melting, contact problem 7−75471
Al_2O_3 fibre reinforced Al-Li, 2D and 3D, friction and wear behaviour 7−106631
Cu-Al in contact, creep upon breaking contact 7−100281
Cu-steel friction pair, features of struct. alloyed with O *(Russian)* 7−93104
Ni-steel friction pair, O-doped struct. in contact friction zone *(Russian)* 7−93105
Pd coatings on stainless steel, appl. in weak current sliding contacts 7−71313
Pt coatings on stainless steel 7−71313
SiC thick films, vacuum deposited, friction and frictional tracks 7−113728

mechanical engineering
American Power Conference 48th Annual Meeting, Chicago, IL, USA (April 1986) 7−115687
beam, composite with history-dependent damage, predicted dynamic response 7−117503
beam-mass-beam systems, pseudo-force approximation applied to nonlinear dynamic contacts and viscoelastic damping 7−110878
beams, 3D, displacement fields and large deformation analysis FEM 7−117491
composite plates/shells, nine-node assumed-strain finite element 7−110799

mechanical engineering continued
creep analysis of 2D-structures, endochronic viscoelastic 7−110798
dictionary of mechanical engineering 7−102029
elasticity, orthotropic half-plane problems, boundary element solutio 7−110785
elastostatics, 3D, collocation method 7−115788
fatigue tests, variable amplitude, software for high freq. control 7−78394
fracture mechanics, principles 7−69059
frames, elastic, nonlinear finite element analysis 7−117457
plasticity computations in finite element analysis 7−123476
plasticity equations for singular yield functions, integration 7−123479
plate, symmetrically laminated, finite element, static, dynamic and buck ling formulation for microcomputer 7−136724
plate bending analysis using modified Razzaque-Irons triangle, higher order 7−117480
plate bending by a boundary point method 7−117456
plate bending element, shear-flexible 7−90967
plates, C^0 quadrilateral elements, transverse shear representatio 7−130552
plates, laminated rectangular, nonlinear finite element 7−117478
plates, mixed computational algorithm for plane elastic contact problem 7−117547
plates, nine-node degenerated elements, covariant shear strains interpola tion 7−123477
plates, pin-loaded, mixed computational algorithm for plane elastic contac problems 7−117548
plates, thin, large deflection analysis using spline finite strip metho 7−123478
plates, transient analysis by finite element-transfer matrix metho 7−117502
shell, hyperbolic paraboloidal sectorial with cantilevered free edge; mem brane stresses 7−117453
shell and spatial structures, computational aspects, conf., Leuven, Belgiun (July 1986) 7−115689
shell element, quadrilateral, linear elastic analysis 7−123458
shells, cylindrical, free vibration analysis using FEM 7−123499
shells, elastic thin shallow, direct integration of governing equations an lower order method 7−117467
Shells, optimal positive Gaussian curvature, combined axial and pressur buckling 7−110816
shells, thin, large displacement analysis using FEM 7−117452
shells, translational, dynamic analysis 7−117525
shells, variational and numerical approach to shakedown and limit analysi 7−117490
Swedish micromechanical engineering developments *(Swedish)* 7−127019
trajectory planning in continuous-path applications, differential-geometr relations 7−120785
viscous incompressible material, void growth analysis using FEM 7−123475

mechanical engineering computing
see also computerised control
9-node element, spurious mode stabilization, mixed variational principle 7−123495
ADINA and nonlinear FEA, conf. Cambridge, MA, USA, (June 1987 7−101995
angle-ply laminates, edge effects, nonlinear anal. 7−83031
automobile interior noise level calc. 7−97216
beam elements undergoing forced vibrations, performance improvemen 7−123500
beam structures, thin-walled, warping restraint analysis 7−117479
beams, vibration analysis with MACSYMA 7−69025
bending, hexahedral elements formulation, FORTRAN 77 listin 7−110800
boundary element analysis methods, recent advances 7−120788
boundary value problems, nonlinear fourth-order, numerical soln. usin sixth-order extrapolation method 7−120770
car noise and vibration, CAE studies 7−110677
ceramic, advanced, photon CT scanning applic. for flaw, crack and densit gradients exam. 7−144679
contact, elastic, discretized problems, soln. using linear programmin 7−83128
crack propagation in linear elastic solids, moving finite elements appl 7−83099
cylinder, steel, behaviour under local load in elastic and elasto-plasti area, FEM 7−117469
dictionary of mechanical engineering 7−102029
dynamic vibration testing, microprocessor appls. 7−83140
elastoplasticity finite element formulation 7−69005
feedback FEM with a posteriori error estimation 7−67017
fibre reinforced composite articles, transversely reinforced, monolithic inte grity, design algorithm 7−142232
flow, parity simulation 7−69082
fracture mechanics, elastic-plastic nonlinearities 7−91018
heat conduction, nonlinear transient problems, boundary element anal 7−123431
hinged column, stability under intermediate load with one end restraine to move axially 7−83081
holonomic mechanical systems, constraint forces 7−123444
Hypercube machine, appl. to structural mechanics problems 7−83025
laminated anisotropic elastoplastic material, finite element anal. 7−83060
metallurgical testing, information management system 7−138918
Mindlin plate, rectangular, elastic buckling, mixed boundary condition 7−83082
Navier-Stokes eqns., Reynolds averaged, soln. in general curvilinear coor dinates, appl. to vehicular dynamics 7−97483
plastic zone formation in steel 7−71423
plate, annular, minimax deflection, optimal design 7−110815
plate and shell dynamics, nonlinear problems soln. method 7−110832
plate bending analysis, efficient quadrilateral element, symbolic manipula tion package MACSYMA 7−97316
plates, bimodulus thick circular and annular, axisymmetric free vibratio 7−83088
plates, rectangular orthotropic, efficient large deflection analysis by direc energy minimisation 7−123459
plates, thin annular equi-strength, design using small deflection theor 7−110814
plates, yield line analysis 7−117477
Prager's kinematic hardening model, numerical implementation fo elasto-plastic analysis 7−120804
quadrilateral plate bending, spline FEA *(Chinese)* 7−90983

mechanical engineering computing continued
refrigeration units, neutral gas absorption, BASIC-2 listing to compute enthalpy/mass fraction diagram of NH_3/H_2 gas mixture 7−97683
shell, circular cylindrical, free vibr. anal. 7−83087
shell, curved 3D finite elements for heat conduction 7−82996
shell structures, nonlinear anal. by flat triangular shell element 7−80401
shells, linear thin, FEM methods 7−117451
shells, unconventional class of elements for nonlinear analysis 7−117489
simulation, real-time, conservation eqn. appl. 7−123729
solid of revolution with cutouts breaching axial symmetry, stress and strain state analysis 7−110793
stress integration with finite rotations, accurate numerical algorithm 7−120807
structural analysis, computer programs 7−130533
tablet compaction, computer-aided anal. and design 7−92907
thermal/structural modelling, transfinite element methodology 7−83019
thermo-mechanical analysis of dry sliding systems 7−110877
underwater acoustic sound ship mechanical features detection 7−110663

mechanical impact *see impact (mechanical)*

mechanical instability *see mechanical stability*

mechanical interfaces *see mechanical contact*

mechanical organs *see artificial organs*

mechanical permeability *see permeability*

mechanical properties of liquids
see also elasticity of liquids
water, tensile strength, static and dynamic measurements 7−131200

mechanical properties of solids *see mechanical properties of substances*

mechanical properties of substances
see also anelasticity; bending; brittleness; creep; deformation; elastic aftereffect; elastic moduli; elasticity; fracture; hardness; internal stresses; mechanical properties of liquids; mechanical strength; photoelasticity; photoplasticity; plasticity; slip; stress relaxation; stress-strain relations; tribology; viscoelasticity
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
austenitic alloys, irradiation induced microstructural evolution rel. to mech. props., survey 7−69770
ceramics for heat engines, development, QA procedures 7−104888
chalcogenide glasses, photoinduced changes in struct., optical and mech. props. 7−142823
composite materials, mechanical properties, applications *(French)* 7−91692
disordered systems of cylinders, mechanical behavior 7−73243
ice, physics and chemistry, conf., Grenoble, France (Sept. 1986) 7−95079
metallic glass production and mechanical properties *(Spanish)* 7−86122
microstructure rel. to mech. props. under fusion irrad. conditions, workshop, Ebeltoft, Denmark (June-July 1985) 7−66823
polyethylene-based irrad. reticulated material for electrotechnical industry *(Romanian)* 7−111421
polymers, mechanical behaviour nonlinearities, types and mechanisms *(Russian)* 7−98330
polyurethanes, dynamical mechanical, thermal and electrical props. 7−69795
porous media physics and chemistry, conf., Ridgefield, CT, USA (Oct. 1986) 7−108008
power transformer Cu winding strength improvement by cold working 7−100250
rubber vulcanizates, mechanical props., $CuSO_4.H_2O$ effect 7−76261
steel machinability, effect of hard Ti alloy inclusions *(Spanish)* 7−86344
superalloy applications, chemical analyses and mechanical properties *(Spanish)* 7−86085
Al, microstructure var. caused by He generation rate and other irrad. parameters 7−69771
Al-Si alloys, directional solidification, mechanical properties, eutectic struct. *(Turkish)* 7−113562
C fibres, properties and applications, conf., Salford, England (Sept. 1986) 7−80154
C fibres and their appls., review 7−85968
HgCdTe, phys. props., handbook of datareviews 7−134373
KCl, radiation damage dynamics, external field effect, computer simulations 7−104857
$La_{2-x}Sr_xCuO_4$ high T_c superconds., fabrication, mech. props., sp. ht. and O diffusion studies 7−119209
MnCuZn, rare earth metal additions, effects on structural, mechanical and corrosion resistance props. *(Chinese)* 7−132807
Ni-Mo-Cr-B rapidly solidified alloys, wear and corrosion resist and mech. props., microstruct. effects 7−91719
Si as mechanical material, device appls., review 7−124369
SiC, Nicalon, fibres, mech. props., free C content, ESR obs. 7−92494
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
Zr and alloys for nuclear industry, extractive metallurgy, processing and properties 7−77881

mechanical relaxation *see anelastic relaxation*

mechanical stability
9-node element, spurious mode stabilization, mixed variational principles 7−123495
beams, monosymm., with initial curvature, lateral instability 7−117498
beams, nonlinear materials, elastic bending and stability 7−123489
beams, orthotropic cantilever, lateral stability analysis using FEM 7−110817
beams, thin-walled, differential equations of equilibrium for stability 7−117499
bifurcation and post-bifurcation analysis in plasticity and brittle fracture 7−110804
coatings, critical dimensions of defects, heat cond., thermal elasticity 7−132709
composite rods for beam structures, load-bearing capacity, minimal weight design 7−68987
continuous systems, viscoelastic, under time-depend. loadings, dynamic stability *(Polish)* 7−83083
creep stability, variant of theory and expt. 7−97335
drooping portion of diagram, realizability of states of material 7−97357
electromagnetomechanical interactions in deformable solids and structs., conf., Tokyo, Japan (Oct. 1986) 7−115692
FBR, thin hemispherical shells fluid coupled with concentric rigid vessel, dynamic buckling and stability 7−102952
fibre reinforced Al, failure in compression 7−71247
fibre stability near free surface 7−110780

mechanical stability continued
generalised thermoelasticity, uniqueness and stability study 7−83047
gyrostat, stability of uniform rotation round vertical axis on horizontal smooth plane 7−95317
gyrostat in circular orbit in Newtonian force field, orientation stabilisation 7−97296
heavy rigid body with one fixed point, stability of pendulum-like oscills. 7−72950
hereditary body, deform. stability, pseudobifurcation approach 7−136725
hinged column, stability under intermediate load with one end restrained to move axially 7−83081
homogeneous elastic material, deform., infinitesimal elastic stability 7−83039
impact systems, stability 7−128260
incompressible elastic body under dead-load surface tractions, stability of homogeneous deform. 7−97358
laminated structures with elastic strains, fracture, stability 7−91031
metals, shear instability model of sliding wear 7−132770
non-holonomic system with non-retaining constraint, eqns. of motion 7−67001
nonconservative mechanical systems, stability of stationary motions 7−95313
nonconservative system stability 7−72952
optical fibres, drawing process, temp. regime effect on stability 7−77933
perturbed systems, stability theorem 7−95314
plate, infinite, thermo-plastic stability 7−83076
plates, buckling analysis under nonproportional planar loading 7−75361
plates, circular, ageing viscoelastic material, stability 7−136726
plates, rectangular, uniaxial compression with unloaded edges clamped, stability in elastoplastic range 7−117497
plates, stability on a nonuniformly aging viscoelastic foundation 7−97337
plates, thick rectangular, dynamic stability 7−117494
rigid body with a gyroscope and moving mass, dynamics 7−95305
ring, satellite, stability of rotation 7−136681
rubber half-space, stability of surface waves 7−75363
shell, expanding viscoelastic subject to aging, stability 7−75368
shell theory relevant for large displacements 7−90945
shells, cylindrical, buckling under nonuniform external pressure 7−75360
shells, cylindrical, reinforced, stability under torsion 7−110821
shells, spherical with ring loads, deflection stability study 7−75365
shells, structurally orthotropic cylindrical, constitutive eqns. 7−75325
shells, thin-walled, stability, thickness effects 7−142192
shells of revolution, axial impact, stability and post-critical state 7−117495
solid with ideal non-retaining constraint, motion 7−67000
space, elastic, planar crack, shear stress intensity factors 7−83122
stellar systems, variational principle for determining oscillations and stability 7−101933
thin plate, elastic stability anal. by BEM 7−142191
thin walled open section members, mech. instability, buckling, second order displacement theory *(Japanese)* 7−97359
unsteady motions, stability theorems 7−95315
viscoelastic, solid, hydrostatic compression in fluid oscillatory instability 7−69006
$MoSi_2/Si$ layer system mech. stability and form. by rapid thermal annealing 7−105298

mechanical strength
for fatigue strength, see fatigue; for creep strength see creep fracture
see also bending strength; compressive strength; fracture toughness; impact strength; notch strength; shear strength; tensile strength; yield strength
alloys, amorphous, theoretical strength, cohesive energy, effect of topological disorder 7−69815
alloys, rapidly solidified, mechanical props. and potential applications 7−86302
bone, pseudo 3D mapping by X-ray CT 7−114483
C fibre bundles dispersed in glass fibre epoxy resin matrix, failure modes 7−86330
ceramics, green body strength theory 7−86308
coatings, carbide, on metals and alloys, strength evaluation using failure criteria 7−100469
combined static and cyclic loading, strength calc. methods analysis *(German)* 7−130561
concrete strength and elasticity, modified classical theory *(German)* 7−75284
crystals with high Peierls barrier, nonconservative dislocation motion in brittle fracture zone 7−131151
D_2 pellets, 6 mm mechanical props., acceleration testing 7−122163
developed by powder metallurgy, high temp. strength and corrosion resist. props., review 7−92927
epitactic layers, compressive, mech. durability and strength 7−143298
fibre reinforced composites, hybrid, unidirectional, strength probability 7−117539
fibre reinforced resin composites, fatigue and residual strength losses, effect of moisture 7−93080
graphite, irradiation, annealing, struct., physical props. 7−142821
graphite fibre reinforced epoxy laminates, stiffness reduction, modelling 7−104891
hereditary bodies, electrically conducting, cyclic action in mag. field, mechanicothermoelectromagnetic processes 7−100264
HTGR graphite cylinder, chemical reactions and diffusion with massive air ingress 7−109373
ice, high press crystalline phases II, III and V, inelastic props., deform experiments 7−111741
inclusion containing materials, strength criteria 7−75330
intermetallic compounds, melting temp., density, strength, cryst. struct., stiffness 7−111833
metallic crystals, elastic-ductile-brittle transitions, role of surface and environment 7−78211
metals, adhesive joint strength estimation method 7−138917
metals, creep and longterm strength, kinetic eqns. 7−76283
piezoelectric composite ceramic, effective props. theory 7−77470
polycrystals, mech. props., importance of grain size effects 7−69713
polyimide films, mech. relax., prehistories effects *(Russian)* 7−98338
polymer matrix composites, neutron irrad. at 5 K and room temp., mech. prop. degradation 7−76215
polymer modeled by two coupled anharmonic chains of atoms, time dependence of strength 7−84107
polyphenyl quinoxaline films, mech. relax., prehistories effects *(Russian)* 7−98338

mechanical strength continued
polystyrene, crit. struct. defect size and shape *(Russian)* 7−86199
potassium aluminate+natural clays, sintered mixtures, mechanical strength 7−93075
pressure vessel, multilaminate, design innovation and strength 7−126131
quartz-micaschist in maritime Antarctic, physical props. rel. to freeze-thaw weathering studies 7−87612
rubber-reinforced polymer, crit. struct. defect size and shape *(Russian)* 7−86199
short fibre composites, fibre-dominated, strength, probabilistic aspects 7−111760
short fibre composites, fibre-dominated, strength, probabilistic aspects 7−111761
short fibre composites, strength and fracture, statistical analysis 7−71277
steel, alloy, dendritic precipitate morphology *(Russian)* 7−78017
steel, alloy Ni-Cr, ageing kinetics, strong plastic deform. effects *(Russian)* 7−78104
steel, austenitic, crystal structure changes during ageing *(Russian)* 7−76079
steel, Fe-Ni-Mn, structure and mech. props., carbide intermetallic strengthening *(Russian)* 7−78103
steel, maraging austenitic, Elinvar and mech. props. *(Russian)* 7−78059
steel, Mn, Hadfield, thermomech. treatment, deform temp., wear resist. *(German)* 7−119299
steel, stainless, high Mn, Mn, high strength nonmagnetic, strength increment by warm working 7−144448
trans-4,4′-stilbenedicarboxylic acid-1,3-propanediol copolyester, thermal and mechanical props. 7−75975
strong solids, book 7−102028
superalloys, industrial appls. 7−144338
welded joint with thin yielding inclusion, strength evaluation 7−98300
Al, adhesive joining, surface prep., bond form. 7−144612
Al alloys, cladsheets, diffusion bonded joints, peel strengths 7−113855
Al materials, wear resistance improvement *(German)* 7−126264
Al-Cr-Zr rapidly solidified alloys prod. and processing 7−92931
C fibres, mechanical properties, evaluation 7−86272
CoPt, struct., mag. and mech. props., deformation and annealing effects *(Russian)* 7−144466
Cu/Cr multilayer composites, struct. and strength relationship *(Russian)* 7−100283
Cu-Nb composite wires, microstruct. anal. mechanical strength 7−104502
Ni, electroplated coatings, high strength, prod. using pulsating current 7−100123
Si:N float zone wafers, mechanical props. and CCD device performance, N conc. and state depend. 7−69809
SiC, REFEL self-bonded, mech. props., effect of microstruct. features 7−126249
Si_3N_4 matrix based ceramics, strength, fracture toughness 7−78157
Si_3N_4, reaction bonded, processing 7−71129
Si_3N_4-Al-Invar joints, interface strength and reaction 7−106754
SiO_2 glass, crystallized fused, strength improvement by etching 7−100403
TiAl alloy, electronic struct. and atomic ordering, LMTO and CPA calcs. *(Russian)* 7−76750
TiNi, synthesis, struct. and mech. props. 7−111903
$YBa_2Cu_3O_x$, high T_c supercond., elec., mech. and US props. 7−118709
ZrO_2 fibers, high strength, prep. 7−144347
ZrO_2, tetragonal polycrysts., microstruct.-prop. relationships 7−86304

mechanical testing
see also creep testing; dynamic testing; fatigue testing; fracture toughness testing; hardness testing; impact testing; materials testing; mechanical variables measurement; notch testing; tensile testing; wear testing
20 MN multiaxial loading rig for nuclear structure integrity testing 7−93225
composite, surface interaction with resistance-type strain gauge, opt. obs. 7−71428
dual beam irradiations under stress 7−69779
frequency response functions estimation, comparison of new methods 7−100480
optical disc bow measurement with optical head 7−136767
oriented polymer films, thickness compliance determ. method 7−83139
polymers, water treeing rel. to morphology and microstruct. 7−99675
prosthetic heart valves, in vitro testing methods 7−87380
prosthetic heart valves, pulse duplicator model for testing 7−87381
rocks, post-failure behaviour, effects of stiffened testing machine on meas. 7−114706
wear studies, using rotary pin-on-disk device in scanning Auger microscope 7−83143
Si bifacial solar array alternative module configuration for low Earth orbit 7−144844

mechanical variables control
this heading is restricted to those variables which are not covered by other specific headings. See also, for example, force control; thickness control; velocity control; vibration control
damped flexible structures, energy equipartition and fluctuation-dissipation theorems 7−134483

mechanical variables measurement
see also elastic moduli measurement; force measurement; pressure measurement; shock measurement; strain measurement; stress measurement; torque measurement; vibration measurement
adhered layers separation work, automated instrument *(Slovak)* 7−123564
conference, Wroclaw, Poland, Sept. (1986) *(Polish)* 7−72707
glass fibre, internal friction and dynamic elastic modulus under longit. deforms., meas. installation 7−78424
optical metrology in length and mechanical standards 7−134830
polymeric systems, rheological characteristics measurement, vibr. rheometer 7−75729

mechanical waves *see elastic waves*

mechanics
see also bending; biomechanics; celestial mechanics; classical mechanics; damping; density; dynamics; fluid mechanics; intermolecular mechanics; kinematics; mechanical stability; momentum; relativistic mechanics; statics; statistical mechanics; wave mechanics
modeling instruction, pedagogical expt. anal. 7−102042
skiing turns, mechanism, expt. study 7−123567
student understanding, population survey 7−128209

mechanics of fluids *see fluid mechanics*

mechanoception
amyotrophic lateral sclerosis, somatosensory evoked pot. 7−145098
angular stabilization of man in space, semicircular canals and otolith organ interaction model 7−107263

mechanoception continued
arterial baroreceptors rel. to forearm and calf blood flow 7−78923
baroreflex regulation of haemodynamics, math. model 7−78938
cortical somatosensory evoked pot. in rat, stimulus rate effect 7−145101
crayfish stretch receptor organs, action potential discharges, excitatory interaction model testing 7−133329
event-related pots., human auditory and somatosensory: effects of response condition and age 7−100917
evoked potentials, automated monitoring, brainstem auditory and somatosensory pots. appl. 7−107276
finger and hand movements in shape recognition, estimation by EMG time series processing 7−145105
fish lateral line, dynamic behavior of cupula, laser interferometric obs. 7−133333
foetal primary afferents, spontaneous and evoked activity in vivo, rats obs. 7−87033
inspiratory effort sensation, effect of thoracoabdominal breathing patterns 7−126882
joint, human, systems for prod. of precise movements for tests of a static-posn. sense 7−114579
knee joint receptors of cat, dynamic anal. 7−100932
lateral line, fish, appl. of incident light polarisation microscopy for study 7−139418
lateral line receptors in antarctic fish, sensory tuning to movements of planktonic prey 7−126852
loaded breathing, effort perception: effect of inspiratory muscle fatigue 7−114298
lumbar spinal cord and cortical somatosensory evoked pots. in pre-term newborns 7−87030
lung volume change perception by high-level quadriplegics 7−107100
median nerve somatosensory evoked pot. latencies, rel. to age and growth parameters in young children 7−133330
Millipore DOPH membrane, mechanoreceptor model 7−139226
nose, role in resistive load detect. 7−71765
position and velocity finding, using sensor array and linear-period-modulated signal *(Japanese)* 7−142134
primary afferent neurons, peripheral modulation of mechano-sensitivity 7−87035
prosthesis, microcomputer-controlled, position proprioception 7−107313
psychophysical studies relevant to the design of a digital electrotactile speech processor 7−126851
pulmonary mechanoreceptors, rapidly adapting activity in dogs, inverse relation to lung compliance 7−71766
receptor cells, stimulant meas. mechanism model 7−107002
respiratory volume perception through nose and mouth, noninvasive obs. 7−71764
somatosensory central conduction time, infancy to childhood 7−145100
somatosensory cortex, electrophysiological evidence for serial processing, monkey obs. 7−133335
somatosensory cortex, human, elec. sources: identification by combined mag. and pot. recordings 7−93783
somatosensory evoked mag. responses to stimulation of ulnar and median nerves 7−100935
somatosensory evoked pot. components, enhancement and dynamic time warping, multiple sclerosis appl. 7−114297
somatosensory evoked potentials from the thalamic sensory relay nucleus in humans 7−133331
somatosensory evoked potentials in alcoholics and patients occupationally exposed to solvents and lead 7−145099
somatosensory evoked pots., intersession stability 7−100930
somatosensory evoked pots., posterior tibial, in Duchenne-type progressive muscular dystrophy 7−78914
somatosensory evoked pots., short-latency, in brain-dead patients 7−87032
somatosensory evoked pots. and auditory brainstem responses in congenital hypothyroidism 7−78913
somatosensory potentials, selectivity of attenuation during voluntary movement in humans 7−133332
somatosensory potentials evoked by median nerve simulation in cats, topography and cortical generators 7−100931
somatosensory responses rel. to bit-mapped colour imaging of human evoked pots. 7−87262
spinal somatosensory evoked pots., surface recorded, charactn. and processing 7−87031
synapses for motion interpretation 7−107046
tactile spatiotemporal sensitivity meas. 7−133334
tactile stimulation, early experience rel. to somatic sensory cortex organisation 7−87034
tactile transducer based speech sound level monitor 7−79134
vascular endothelial cells, stretch-activated ion channels as mechanotransducers 7−71719
vestibulo-ocular reflex, progress toward a multiple input model 7−100933
vestibulo-ocular reflex with no head movement in elasmobranch 7−93737
vibrissae, rat, movement in a 60 Hz elec. field, effect of relative humidity 7−78949
vibrotactile sensation for the blind *(Japanese)* 7−145280
vibrotactile skin stimulation based wearable multi-channel auditory prosthesis *(German, English)* 7−87363
vibrotactile stimulation of human fingertips, information capacity 7−71763
withdrawal reflex in Aplysia, long-term sensitisation in tail sensory neurons 7−114299
word and feature identification by profoundly deaf teenagers using the Queen's University tactile vocoder 7−78912

mechanoluminescence *see triboluminescence*

medical aids for handicapped *see handicapped aids*

medical care *see patient care*

medical computing
see also medical diagnostic computing
2D gel electrophoresis images comparison, algorithm design and implementation 7−71945
3D Fourier description for reconstruction of human body from X-sections 7−114432
3D image using EKG-gated MRI images 7−107208
3D imaging applications to surgical and radiation therapy planning 7−114482
3D reconstruction of left ventricle of the heart from echocardiogram 7−87106
acoustic stimulation system, automatic, for nonstress foetal state evaluation 7−71830
acquisition of gamma camera and physiological data 7−93906

medical computing continued
antiarrhythmia surgery, interactive cardiac mapping system 7−107299
aortic flow velocity, Doppler US obs. on dogs, computer anal. system 7−87126
arterial circulation system, human microcomputer simulation 7−100964
auditory brainstem responses, computer monitoring 7−139400
biocompatibility testing of materials and devices for cardiovascular use 7−79142
biomedical engineering conf., Fort Worth, TX, USA (Nov. 1986) 7−80184
blood flow, O_2 transport, short-term autoregulation anal. 7−114308
blood flow and physiological data collection, microcomputer base system 7−139298
body surface potentials, 3D mapping 7−119889
brachytherapy planning, spreadsheet program 7−145205
burns, artificial thermoregulation using microcomputer device 7−100817
cardiac applications of 3-D display and analysis 7−107270
cardio-respiratory systems of children, functional parameter factor anal. 7−79119
cardiovascular interactions−a simulation package to help learning 7−126865
cardiovascular parameters, computer analysis 7−87388
cerebral blood flow, 3D analysis and display 7−107146
cerebral blood vessels, 3D represent. using photogrammetry and computer graphics 7−114479
chronotopocardiography: a new method for presentation of orthogonal electrocardiograms and vectorcardiograms 7−114526
cochlear preprocessing computer model 7−86992
cochlear prosthesis, multi-channel, computer-assisted fitting 7−133512
cortical EEG, rabbit, correlation dimension 7−114240
craniofacial surgery planning, pseudoforamina reduction in images 7−107295
craniofacial surgical planning system 7−107296
CT, 3D internal structures modelling, appl. using CAD technique 7−114480
data processing system of personnel exposure with personal computer *(Japanese)* 7−139376
Doppler blood flow signal spectral analysis, autoregressive modelling applic. 7−119812
Doppler ultrasound spectra processing with TMS320 signal processor 7−101028
dose distribution display techniques in radiation therapy 7−107260
ECG, automatic cardiac pot. mapping with SATAPEC 7−93980
ECG, data compression algorithm for computerised signals 7−87275
ECG, foetal signal anal. 7−107281
ECG, surface, dual channel P-wave detect. via LMS algorithm 7−86959
education, interactive video used in heart auscultation 7−95151
educational tools, medical research models 7−95164
EEG, automated sleep scoring: a comparative reliability study of two algorithms 7−101101
EEG, on-line analysis 7−93977
EEG assessment of drugs with convulsant and anticonvulsant props., Apple II+ microcomputer based method 7−79125
EEG feature extraction and clustering during surgical anaesthesia 7−119895
EEG-sinus arrhythmia relation in man, computer spotted 7−100878
electrosurgical electrodes, paediatric dispersive, standard for thermal performance eval. 7−93846
esophageal manometric recordings, computer anal. 7−127047
exercise ECGs, data processing 7−71910
eye movement, electronystagmography test analysis system 7−107040
fetal QRS detection, weighted periodgram method 7−107292
field laser hazard calculations 7−71895
gait cycle, spatial and temporal parameters meas. method 7−78929
haemodialysis, optical, therapeutic parameter and computer control 7−101132
haemofiltration, continuous arterio-venous, computer managed 7−101133
hearing aids, automated system for individual selection 7−87367
heart, left ventricle volume, model for accurate calc. based on radiographic images 7−126688
heart rate control rel. to respiratory sinus arrhythmia, math. modelling and computer simulation 7−100848
hospital automation, radiology appls. *(Italian)* 7−133496
human motion anal., microcomputer appl. 7−133351
image processing 7−145262
impedance cardiography, real-time elimination of respiratory artifact 7−87274
instrumentation, artificial intelligence techniques appl. 7−79173
integrated disk archive for digital radiographic images, software and hardware subsystem 7−87327
intelligent MRI systems, signal processing design language 7−107101
intraoperative cardiac activation mapping, integrated system 7−114547
intraoperative cardiac mapping, 128 lead online computer system 7−107300
IR capnometer, sampling, microcomputer-controlled 7−71918
joint replacement design, computer-aided draughting system 7−145277
joint surface congruency and loading investigated 'in vivo' via quantified, interactive, 3-D imaging 7−107147
laser surgery, CO_2 beam modelling and integrated computer-based control problem soln. 7−71840
learned volitive heartbeat control, computer averaging techniques appl. 7−114236
left ventricular end diastolic volume evaluation in equilibrium gated radionuclide cardiography 7−114463
left-ventricular pump design, computer simulation 7−87371
lymphocyte proliferation, mitogen-stimulated, effect 7−114212
medical technology in the 21st century 7−127036
Monte Carlo electron-transport calculations for clinical beams using energy grouping 7−101052
motor nerve cond. vel. distribs. in man: results of a computer-based collision technique 7−100839
muscle therapy, quadricep contraction conversion into digital signal for microcomputer system 7−87353
neonatal EEG recordings, spectral detect. and elimination test algorithms of ECG and EOG artefacts 7−71914
neonatal phototherapy for hyperbilirubinemia treatment, effective methods and computer model 7−107210
nerve and muscle signals, Smart Trigger for real-time spike classification 7−87415
neuromuscular anatomy and abnormalities, function oriented identification 7−107025
medical computing continued
neurone 3D morphological and elec. parameters reconstruct. from 2D sections 7−114592
NMR imaging, pulse programming assistant 7−107102
nystagmus, slow and fast phases, sampling freq. effect on velocity 7−114258
orthogonal ECG, derivation from limb and chest electrodes of conventional 12-lead system 7−71916
pacemaker's coil design using numerical model 7−107317
placental lobule, isolated perfused human, viability parameters calc. 7−126867
prosthesis, microcomputer-controlled, position proprioception 7−107313
radiation therapy, automation and computer control of accelerators 7−114492
radiation therapy virtual simulator 7−93897
radiation treatment, intersection of shaped radiation beams with arbitrary image sections 7−107228
radiotherapy, computerised clinical electron beam dosimetry model 7−133469
radiotherapy, display of organs and isodoses as shaded 3D objects for 3D planning 7−107233
radiotherapy films, automatic digital contrast enhancement 7−145206
radiotherapy planning systems, implementation of random positioning error as a result of fractionation 7−71862
renography, deconvolution analysis program 7−93898
rosette-forming cells, computer classification from microscope images 7−119891
SAMBA microscopic anal. system with automatic sweep *(French)* 7−73414
sensory evoked potentials, automated interpretation 7−107032
SIVA volume analysis system for medical images 7−114543
slow vertex response electric response audiometry, medical consulting system 7−107033
speech, computerised quantitative profile 7−126989
spirometry, mathematical model 7−114306
stereotactic brain implants, planning algorithm 7−145204
ultrasound parameters meas. in clinical practice, electronic analogue digital pulse analyser 7−101019
upper limb electrostimulation: programmed hand function 7−101126
vehicle driving, falling cerebrum activity 7−107188
Wilmer fundus camera stimulator, use of computer graphics 7−93854

medical diagnosis *see patient diagnosis*

medical diagnostic computing
see also computerised signal processing
2-D electrophoresis images, segmentation and cluster anal. 7−94001
3-D digital filtering of biomedical images from computerised axial tomography 7−93924
3-D images of cell nuclei, anal. 7−94007
3D98, turnkey system for CT data display and anal. 7−145220
3D images, automatic segmentation and fast display 7−139360
3D imaging, high speed, of beating heart using temporal estimation 7−139357
3D NMR imaging/processing for detection of diseases 7−87336
3D reconstruction with cone beam geometry applied to nucl. medicine imaging 7−114478
ambulatory ECG recording, silent ischemia profile, quantitative method for ST segment change analysis 7−101112
ambulatory EEG signal computer database 7−114524
anatomical surface structures rendering using fractal interpolation 7−114484
angiograms, X-ray, automatic blood vessels detection 7−133499
angiography, digital image motion correction by spatial warp methods 7−71856
arrhythmia analyser, clinical appl. in intensive care unit 7−114528
arterial thrombi images recorded by light transmission digital image processing 7−93881
automated detection of left ventricular boundaries from 35 mm contrast cineangiograms 7−94005
automated microscopy in blood-cell analysis 7−87144
biomedical NMR image understanding, approx. reasoning and knowledge 7−87150
biostereometrics, transform. of irregularly sampled data points into regular grid, surface interpolation, smoothing 7−114536
bladder cancer diagnosis by optical microscopy, automated image anal. 7−139332
bone morphology, radiographic image analysis, computer-based system 7−101053
bone strength, pseudo 3D mapping by X-ray CT 7−114483
Brain Function Diagnostic Unit, EEG anal. producing Dynamic Brain Maps 7−133493
brain study by computerised regional rheoencephalography 7−94009
cardiac arrhythmia simulator, using CMOS 8-bit microprocessor 7−127031
cardiac imaging system, four-dimens. 7−93917
cardiac left ventricular abnormality diagnosis based on radionuclide ventriculographic image anal. 7−87337
cardiac potentials, adaptive sampling with fan method 7−107288
cardiac US B-scans, 2D, image processing and cardiac motion anal. 7−79019
cardio-vascular images, computerised processing using expert systems *(Italian)* 7−114525
cell populations in a continuous-motion imaging cell scanner, automated densitometry 7−139328
chemical imaging with X-ray scatter system, iterative reconstruction scheme 7−145218
contrast enhancement, algorithms for adaptive histogram equalisation 7−145271
coronary arteries, densitometric anal. 7−94004
coronary arteries, X-ray boundaries and intercepted areas estimation 7−87332
coronary arteries images in cineangiograms, fast skeleton finder 7−87333
coronary arteriograms, image processing for clinical assessment of vascular muscle tone 7−79064
cross-sectional tomographic images, system for 3D display prod., mag. resonance imaging appl. 7−119818
CT, 3D represent. of anatomic structures, algorithm 7−114481
CT, curved-surface digital image reformations 7−93918
CT, limited-angle three-dimens. density reconstruct. by gradient method 7−145216
CT image reconstruction, three-dimens., from line integrals 7−145214

medical diagnostic computing continued
CT maximum entropy reconstruction with constraints, reduction using duality principles 7−145212
CT three-dimensional images, manipulation and display for surgical planning 7−93919
cytogenetics, automated, multiprocessing interval processor 7−139394
cytological screening system for uterine cancer, automated 7−139327
cytometry, optical memory discs in image database management 7−139329
cytometry, optical memory discs in image database management 7−139330
digital processing of diagnostic images 7−107290
digital radiography, image feature anal. and computer-aided diagnosis, blood vessel size determ. 7−133440
digital X-ray enhancement through local difference equalization 7−93921
dual-frequency applied potential tomography technique: computer simulations 7−87290
ECG, FFT algorithm for PVC detect. using the IBM PC 7−87341
ECG, P-wave recognition by adaptive cancellation of QRS-T complex 7−87344
ECG, signal averaging using shape classification 7−93997
echocardiograms, 2D, computer anal. of heart motion 7−93842
echocardiographic image anal., microcomputer system 7−87127
echocardiography, 2D: adaptive motion detect. algorithm 7−87128
echocardiography, orthogonal 2-D, plan-based boundary extraction and 3-D reconstruction 7−87115
EEG for diagnosis of epilepsy, transient detection and classification 7−101119
EEG spike detection, automatic, computer analysis 7−87343
electrocochleographic signal filtering, adaptive method 7−93998
electron microscopy, quantitative, computer-assisted data management procedures 7−93991
electrophoretic images, two-dimens., computerised analysis 7−94038
EMG, IBM-PC-based myoelec. signal processing device for human back pain evaluation 7−127033
EMG, statistical modelling for computer-aided diagnosis 7−101120
EMG gait pattern, clustering with temporal feature 7−101121
expert system for fluid dynamics model of pulmonary circulation 7−114374
fast algorithm for Kalman filtering of kinematic quantities 7−94002
foetal ECG enhancement from maternal abdominal lead through digital filtering and averaging 7−107293
force vectorballistocardiograph, computer-based, design and eval. 7−119879
fractures, 3D imaging based on CT data 7−107294
fundus image processing system for early detection of glaucoma 7−79056
gated blood pool studies, image sequence processing 7−87330
hearing testing, IBM PC appl. *(German)* 7−133495
heart magnetic field, dynamic mapping, magnetometric apparatus 7−87297
heart rate variability parametric spectral anal., knowledge-based model appl. 7−93999
hip CT, 3D imaging by volumetric rendering 7−145236
histological diagnosis, flexible image processing system for automated mapping of residual tumor lesions 7−93880
histological specimens anal. through contextual karyometry, PC-based system 7−139325
human heart rate dynamic characts., meas. using pseudorandom binary sequence work load 7−94000
ICON: a computer-based approach to differential diagnosis in radiology 7−127003
image processing, conf., Cannes, France (Dec. 85) 7−88736
image processing, visual perception role 7−93990
image reconstruction system for three-dimens. microstruct. in histology and histopathology 7−145265
integrated stereotaxic imaging with CT, MR imaging, and digital subtraction angiography 7−79081
interactive workstation for real-time display and manipulation of three-dimens. imaging data 7−145272
isotope diagnostics, computer aided 7−87172
keratometer, real-time analysis, for diagnosis and meas. of corneal parameters 7−145170
knee bones measurements using close-range photogrammetry 7−114590
left ventricular cineangiogram analyser, microprocessor-based 7−71854
left ventriculogram, anal. by computerised image processing 7−87178
lung cancer, optical microscopy of sputum cells, computerised image anal. 7−139333
magnetic resonance image analysis for tissue characteris., pattern recognition methods use 7−93883
magnetic resonance image multivariate data, principal component analysis 7−101045
magnetic resonance imaging, faster data acquisition methods 7−93878
magnetic resonance imaging signal analysis with imaging system at 0.35 T *(French)* 7−93865
magnetic resonance imaging signal/noise ratio and acquisition parameters *(French)* 7−93866
mammographic microcalcifications automated detect., image feature anal. and computer-aided diagnosis in digital radiography 7−133439
mammography, computer aids to diagnosis 7−139353
medical technology in the 21st century 7−127036
motor performance quantification equipment, microprocessor-controlled 7−107289
multidimensional imaging and processing, conf., Newport Beach, USA (Apr. 86) 7−140364
multiple channel data acquisition system−an application in cardiology 7−89206
muscle striations image processing below microscope resolution limit, digital deconvolution 7−93882
neuromagnetic imaging, noninvasive modality for functional brain imaging, reconstruction results 7−145166
neuronal activity extraction from noise, signal processing technique 7−87319
neuropathology, computer-aided morphometric data collection, mapping and anal. 7−139335
neurophysiological data processing for graphic display 7−114542
neutral spike train sampling device with built-in memory 7−87320
NMR image reconstruction using interpolating FFT 7−101049
NMR image sequences, multispectral processing 7−93994
NMR image understanding, rule-base approach 7−79063
non-cephalic referential EEG recording method, ECG artifact elimination from EEG records 7−114513
medical diagnostic computing continued
ocular fundus, contour photography, automated image processing algorithm eval. 7−114448
oesophageal manometry, computer-aided: prospects and problems 7−114529
ophthalmology, CCD device multispectral analysis eval. 7−93884
ophthalmology, computerised image processing techniques 7−145260
optical microscopic cell image sequences, motion vectors determ. 7−94037
optical microscopic imaging systems, three-dimens. object represent. 7−89257
PACS system, interactive surface display system of three-dimens. object 7−145273
pathology workstation, high performance, using an automated multispectral microscope 7−139326
phonocardiogram, 3-channel microcomputer system for segmentation and charactn. 7−114433
pneumoconiosis opacities in chest X-rays, computer recognition method 7−87331
portable diagnostic radiometer, microwave, battery-operated with on-board microprocessor and LCD display 7−87149
portable microprocessor-based cardiac monitor with RAM for QRS complex storage 7−101118
positron emission tomograph simulation, high spatial resolution, based on multiwire proportional chambers, imaging capabilities 7−145213
postural sway, computer anal. and appl. to equilib. dysfunction diagnosis 7−114545
radionuclide angiocardiography, multigated interface for real time data acquisition *(Chinese)* 7−93987
RADPLANET−a functional radiology PACS and much much more 7−114544
rapid angiographic technique to measure relative coronary blood flow 7−93794
real-time analysis of intracardiac electrograms, automatic arrhythmia diagnosis and electrical stimulation therapy 7−145268
real-time blood flow imaging system using Doppler ultrasound *(Japanese)* 7−145138
real-time multitasking multiuser nuclear system for clinical applics. 7−114467
respiratory phase detection and delay determination for breath-by-breath analysis 7−107286
rheoencephalography diagnostic system, automated, for cerebrovascular function eval. 7−87323
schistosome egg screening by optical microscopy and digital image processing 7−139334
single photon emission CT, attenuation correction, automatic contour detect. 7−119836
sinogram Fourier decomposition props., emission CT appl. 7−140679
somatosensory responses rel. to bit-mapped colour imaging of human evoked pots. 7−87262
sounding thermometer, identification by Prony's method 7−93996
SQUID magnetometer, RF, for biomag. field detection, digital control unit 7−79122
stereotactic neurosurgery, microcomputer based system, integrated stereoscopic view of CT data and angiograms 7−93920
stroke patients, microcomputer-based assessment and treatment-planning 7−133504
structural anal. in medical imaging 7−101114
surface EMG signal adaptive modelling and classification 7−87335
surface EMG with appl. to fatigue, autoregressive modelling 7−93709
three-dimensional arrays of num. data, processing and display using OCTREE encoding 7−93992
three-dimensional reconstruction algorithm for diverging X-ray beams 7−114476
ultrasonics, digital diagnostic workstation development 7−94006
US B-scan images, processing method for cardiac motion anal. 7−71828
US blood flow signals, spectrally analysed Doppler-shifted, computerised processing method 7−126952
US image reconstruction method, exact inversion of scatt. data 7−145163
US images, noise reduction by digital filtering 7−87105
US imaging, sector scan algorithm, uniform-ladder space 7−145164
US inverse scattering solutions from transmission and refl. data, quantitative image reconstruction 7−145165
vascular beds three-dimensional reconstruction from digital angiographic projections 7−145215
vascular images reconstruction, iterative three-dimens., from few projections 7−145211
vector cardiogram based cardiopathy computer system 7−94008
visual functions evaluation, computer aided system 7−101122
white blood cells kinetics monitoring 7−127032
X-ray CT, vel. velocity modulated scanning technique for ring artifacts elimination 7−145217
X-ray images, left ventricular function analyser and its appl. 7−93901
O_2 consumption algorithms, propag. of meas. errors 7−119886
^{201}Tl, developments towards quantitative anal. 7−94003
medical effects of radiation *see biological effects of radiation*
medical electronics *see biomedical electronics*
medical engineering *see biomedical engineering*
medical equipment *see biomedical equipment*
medical information processing *see medical computing*
medical laser applications *see laser applications in medicine*
medical measurement *see biomedical measurement*
medical monitoring *see patient monitoring*
medical NMR *see biomedical NMR*
medical physics *see medicine*
medical radiography *see diagnostic radiography*
medical sciences *see medicine*
medical treatment *see patient treatment*
medical ultrasonics *see biomedical ultrasonics*
medicine
see also biomedical engineering; cardiology; health hazards; patient diagnosis; patient monitoring; patient treatment; physiology
audiological medicine, symposium, Visby, Gotland, Sweden (Aug. 1985) 7−72718
bedsore mechanics rel. to posture and blood press. 7−119797
conference, engineering in medicine and biology, Baltimore, MD, USA (Sept. 1986) 7−72728
glucose tolerance of human body, physical models study 7−108087

medicine continued
immune response, interaction of energy synthesis/consumption processes 7−71713
myopia, Houston Myopia Control Study, randomised clinical trial 7−133267
nuclear medicine clinical engng. in a rapidly developing country (Kuwait) 7−114490
nuclear medicine in the eyes of the clinical engineer 7−114488
positron-emitting radionuclides for nuclear medicine, photonuclear reaction prod. 7−133451
radiation safety in the nuclear medicine department: impact of the UK Ionising Radiations Regulations 7−139355
technology in medicine, a challenge for physicians 7−80282
$^{81}Kr^{m}$ generators, production using ZrP, medical diagnostic appl. 7−133449
^{81}Rb generators, production using ZrP, medical diagnostic appl. 7−133449

Meissner effect
ceramic superconducting powder prep. by freeze-drying 7−119184
β-$(ET)_2IBr_2(AuI_2)$, vol. superconductivity, DC low field magnetisation meas. 7−77152
rare earth cpds., $RBa_2Cu_3O_{7-x}$, R=Y, La-Lu, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth doped O-defect perovskites, $La_{2-x-y}R_ySr_xCuO_{4-z}$, R=Pr, Nd, Sm, Eu, Gd, supercond., structural, mag. props. 7−112596
$(TMTSF)_2X$ salts, intermolecular contact directions rel. to magneto-effects 7−85197
Ba-R-Cu-O system (R=Y,Nd,Sm,Dy,Er,Yb) high T_c supercond., Meissner state 7−118706
$Ba_2Eu_{0.9}Y_{0.1}Cu_3O_x$, superconducting cuprate perovskites 7−105794
$BaPb_{1-x}Bi_xO_3$-La_2O_3 system, superconductive oxide, synthesis by sintering 7−70453
$Ba_2YCu_{2.89}O_{6.8}$, small single crystals, Meissner effect meas., struct., X-ray diffr. method 7−99326
$Ba_2YCu_3O_{9-\delta}$, single phase perovskite, 91 K bulk supercond. 7−85165
$Ba_xY_{1-x}CuO_{3-y}$ high T_c supercond., magnetisation and Meissner effect 7−92367
Cu-Nb(NbTi) interface, proximity-effect-induced superconductivity at millikelvin temperatures 7−77166
$ErBa_2Cu_3O_{6+x}$ high T_c supercond., complex mag. suscept. study 7−125241
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., resistivity, magnetisation, critical current density 7−143699
$ErBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$GdBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$Hg_{3-\delta}AsF_6$, 1D BCS Hamiltonian, electron-phonon interactions 7−99316
$Hg_{3-\delta}AsF_6$, bulk superconductivity, Meissner effect 7−99329
$Hg_{3-\delta}AsF_6$, superconductivity, effect of annealing and anisotropy 7−138110
$Hg_{3-\delta}SbF_6$, supercond. transitions, magnetisation meas. 7−70473
Ho-Ba-Cu oxide, high T_c superconductor, mag. and struct. props. 7−92363
$HoBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
La-Ba-Cu-O system, superconductivity 7−85171
La-Ca-Cu-O system, superconductivity 7−85171
La-Sr-Cu-O system, superconductivity 7−85171
La-Sr-Cu-O thin films, supercond., props. 7−105791
$La_{2-x}Ca_xCuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
La_2CuO_4, superconductivity below 40 K, exptl. study *(French)* 7−99361
$(La_{1-x}M_x)_yCuO_4$ (M=Sr, Ba, Ca) high T_c thin films, sputter prep. and transition temp. studies 7−92868
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., complete Meissner effect AC mag. suscept. meas. 7−99322
$La_{1.8}Sr_{0.2}CuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, energy gap 7−92352
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. props. 7−105833
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. screening and flux distrib. 7−118741
$La_{1.85}Sr_{0.15}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high temp. supercond., evidence against bulk superconductivity 7−125199
$La_{2-x}Sr_xCuO_4$, high temp. superconductor, 60% Meissner effect obs. 7−85189
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic props. 7−99369
$La_{2-x}Sr_xCuO_{4-\delta}$, high T_c supercond., composition-depend. superconductivity 7−99302
$La_{2-x}Sr_xCuO_{4-y}$, superconducting props. at 40 K 7−112587
R-Ba-Cu-O system (R=Y, Ho, Er), high T_c supercond., superconducting props. 7−138107
$RBa_2Cu_3O_{7-y}$, (R=Y,Gd), high T_c supercond., normal state props., electron correlations 7−143441
$Sr_{0.2}La_{1.8}CuO_4$ high T_c superconductor, diamag. shielding and Meissner effect meas. 7−92370
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., diamag. shielding and Meissner effect 7−92366
Y-Ba-Cu oxide superconductors, identification of phase responsible for high T_c superconductivity 7−92344
Y-Ba-Cu oxides, superconductivity, high T_c, Meissner effect 7−92362
Y-Ba-Cu-O, high T_c superconductor, superconductivity and magnetism 7−85217
Y-Ba-Cu-O, high T_c supercond. shells, microstruct. effects 7−112653
Y-Ba-Cu-O, high T_c supercond., normal and supercond. phases, microwave absorpt., ESR studies 7−132129
Y-Ba-Cu-O, high temp. superconductor, Meissner effect, X-ray diffr. 7−112646
Y-Ba-Cu-O high T_c supercond. obs. and cryst. struct. determ. 7−99269
Y-Ba-Cu-O high T_c supercond. thin films, 89 K T_c and Meissner effect obs. 7−105750
Y-Ba-Cu-O high T_c supercond. thin films, Meissner effect obs. 7−118704
Y-Ba-Cu-O high T_c supercond. critical current density and temp. in highly oxidised cpds. 7−118749

Meissner effect continued
Y-Ba-Cu-O high T_c supercond., EPR spectrum, zero-field effects 7−118855
Y-Ba-Cu-O high T_c supercond., max. elec. resist., Meissner effect studies 7−125243
Y-Ba-Cu-O high T_c supercond., mag. props. 7−143704
Y-Ba-Cu-O system, high T_c superconductor, Meissner effect, resistivity 7−99323
Y-Ba-Cu-O systems, high T_c supercond., elec. and mag. props. 7−118622
Y-Ba-Cu-O thin films, supercond., props. 7−105791
$YBa_2Cu_{3(1-y)}Fe_{3y}O_7$, high T_c supercond., effect of substitution of Cu by Fe 7−143672
YBaCuO, grain boundary superconductivity 7−118679
$YBa_2Cu_3O_7$, high T_c supercond., Meissner flux expulsion study 7−112645
$YBa_2Cu_3O_7$, high temperature superconductor, preparation and characterisation 7−105746
$YBa_2Cu_3O_7$, single phase high T_c supercond., thin superconducting shells 7−118664
$YBa_2Cu_3O_{7-x}$, high-temperature superconductor, laboratory synthesis 7−112649
$YBa_2Cu_3O_{9-x}$, high T_c supercond., mag. props. 7−138123
$YBa_2Cu_3O_x$, high T_c supercond., struct., transport and mag. props. 7−99373
$YBa_2Cu_3O_x$, high T_c supercond., variation of T_c with O content 7−125182
$YBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$Y_{1.2}Ba_{0.8}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$ high T_c supercond. characts., annealing conditions depend. study 7−143667
$Y_{2-x}Ba_xCuO_{4-y}$, multiphase oxide, superconductivity at 90 K 7−112570
$Y_{3-x}Ba_{3+x}Cu_6O_{14}$, perovskite oxide, high-T_c superconductivity 7−105781
$YBa_2Cu_3O_{7-x}S_x$, high T_c supercond., effect of substitution of O by S 7−143672
$YBa_{2-x}Sr_xCu_3O_7$ high T_c supercond., struct., resist. and Meissner effect studies 7−112532
$Y_{0.75}R_{0.25}Ba_2Cu_3O_7$ (R=La, Lu), high-temperature superconductivity 7−138100
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
$Yba_2Cu_3F_2O_y$, 155 K supercond., flux trapping, Meissner effect 7−125201

Meissner-Ochsenfeld effect *see Meissner effect*

melt spinning
alloy wires prod. by in-rotating-water-spinning process. props. 7−77891
alloys, rapidly quenched, phase struct. and microstruct. 7−92979
amorphous alloys, melt spinning, crystallisation, theoretical analysis 7−83733
amorphous ribbons, casting conditions 7−75255
amorphous trips, prod., temp. calc 7−132525
amorphous-metal materials production using concentrated solar energy 7−86081
cooling rate, influence of process parameters 7−77886
metallic glass, comminution mechanisms of amorphous alloys, effects on mag. characts. 7−77873
metallic glasses, He solubility, method of determ. in solid and melts 7−91828
nylon 6 fibres, spin oriented, macromolecular order, WAXS 7−69612
PEEK thin films, melt-spun, plastic deform. 7−76712
PET-p-oxybenzoate copolyester, fibre spinning from nematic melt, effect of thermal history 7−86123
poly(ethylene terephthalate-co-p-oxybenzoate), nematic, fibre form. 7−77935
polystyrene, viscoelastic, fibre spinning 7−119233
ribbons, multiple layer, production by single roller melt spinning 7−77890
steel, austenitic, Mn, containing Ms, microstruct. modification and props. 7−92987
steel, tool, high speed, rapidly solidified, struct. 7−92990
steel Fe-Ni(Mn)-Cr-Al wires, melt spun into rotating water, mech. strengths and corrosion resist. meas. 7−91707
transition metal-metalloid based metallic glasses, physical props. rel. to processing conditions 7−113534
viscoelastic, fibre spinning 7−119233
visualisation of alloy streams in centrifuge melt spinning by stroboscopic photography 7−132596
Al alloys, solidification morphology, effect of process conditions during melt spinning 7−92984
Al and alloys, melt-spun, rel. between solidification morphology and texture 7−92985
Al-Co (26 wt.%), melt spun, decagonal phase, TEM obs. 7−83856
Al-Cr-Si quasicrystals, with high Si conc., formed by rapid quenching, thermal and elec. props. 7−100200
Al-Cu (5.23 wt.%), melt spinning, heat flow model 7−126092
Al-Fe melt spun alloys, rel. between microstruct. and processing 7−92983
Al-Mg, melt spun, metastable phase, TEM and DSC obs. 7−113523
Al-Mn, melt spinning, electron beam surface melting, icosahedral and decagonal phase form. 7−77972
Al-Mn (15 wt.%), melt spun ribbons, icosahedral phase crystallisation rel. to annealing rate 7−83696
Al-Mn (27 wt.%) ribbons, rapid solidification, microstruct., crystallisation 7−77969
Al-Mn-Cr, ternary alloys, rapid solidification 7−92998
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Si, rapidly quenched, struct., elec. and mech. props. 7−93002
Al-Ti-B, rapidly quenched, microstruct. 7−119263
Al-transition metal alloys, rapid solidification, microstruct. characts. 7−113537
Al-Zr-V, rapidly solidified, coarsening of $L1_2$ structured $Al_3(Zr_xV_{1-x})$ precipitates 7−126130
$Al_{50}Ge_{40}Mn_{10}$, amorphous, comp. short-range order development on annealing 7−117825
$Al_{60}Si_{20}Cr_{20}$, new quasicryst., form. and struct. 7−83858
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. wire fabrication by molten oxide processing 7−138711
Co-B glass, melt spun ribbons, surface crystallisation 7−131053
Co-Ni, melt-spun alloys, martensitic transform. 7−93012
Co-Zr, amorphisation by ion beam mixing and other techniques 7−75998
$Co_{70}Fe_5Si_{15}B_{10}$ amorphous ribbons, surface quality and thickness effects, recording head appls. 7−77888

melt spinning continued
$Co_{70.5}Fe_{4.5}Si_{10}B_{15}$, Cr_2O_3 and ZrO_2 particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
Co_xGd_{1-x}, amorphous alloys, crystn. kinetics and mechanism 7−83753
Cu-Cr, rapidly solidified, microstruct. and mech. props. 7−144379
Cu-Ti system, melt spun ribbon, glass forming ability 7−83737
Cu-Ti-Zr, Cu-Ti alloys, glass form., competing cryst. structures 7−83738
Cu-Zr(Fe)(Ni), rapidly solidified, microstruct. and mech. props. 7−92993
Cu_xY_{1-x}, amorphous metallic glasses, form., crystn. 7−77867
Cu(Zr), melt-spun, ribbon form. mechanism 7−77887
$ErBa_2Cu_3O_y$ high T_c ribbon, melt-spinning, struct. and supercond. props. study 7−126056
Fe-Al (40 at.%), rapidly quenched by melt spinning, brittle low temp. fracture 7−100376
Fe-C-Si amorphous alloys, prep. by melt quenching 7−97957
Fe-Cr-Al, melt-quenched, application as strain gauge sensor 7−84821
Fe-Cr-Ni (25, 20 wt.%) melt-spun and sputtered alloys, as-quenched microstruct. 7−92988
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7−83746
Fe-Cr-Si, melt-quenched, application as strain gauge sensor 7−84821
Fe-Ni-Al-C alloys, rapidly solidified, lattice modulation and form. of lamellar duplex ferrite/carbide microstruct. 7−100206
Fe-Ni-C (24, 0.5 wt.%), melt spun ribbons, austenite decomp., metallography 7−100233
Fe-R-B alloys (R=rare earth), melt spun and plasma sprayed, mag. props. microstruct. 7−132085
Fe-Si, melt-spun ribbons, magnetic and mechanical props. 7−85364
Fe-Si(C), melt-spun ribbons, rapidly solidified, solidification parameters and microstruct. 7−100211
Fe-Zr, amorphisation by ion beam mixing and other techniques 7−75998
$Fe_{80}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ crystallised glasses, grain size and superplasticity studies 7−91706
$Fe_{74.7}Cr_{3.8}P_{8.7}C_{10.7}Si_{1.9}$, melt spun amorphous ribbons, mag. props. 7−132076
FeNdB, melt-spun ribbons, atom probe FIM study 7−78281
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{40}Ni_{40}B_{20-x}Al_x$ metallic glasses, crystn., influence of Al 7−76029
$Fe_{78}Si_{10}B_{12}$, WC particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
$Ga_{16}Mg_{32}Zn_{52}$, new quasicryst., form. and struct. 7−83858
InSb-NiSb, anisotropic amorphous ribbon, eutectic composition, melt spinning technique 7−144359
Mn-Al-B melt-spun alloys, mag. props. *(Japanese)* 7−125464
Nb-Si, rapid solidification, microstruct., phase analysis 7−86153
Nd-Fe-B, melt spun permanent magnet alloy, isotropic remanence 7−132084
Nd-Fe-B magnets, texture, anal. on basis of easy growth axis determ. of $Nd_2Fe_{14}B$ single crystals 7−132078
Ni base amorphous alloys, corrosion in hot conc. H_3PO_4 7−138873
Ni-B glass, melt spun ribbons, surface crystallisation 7−131053
Ni-base melt-spun alloys, cellular solidification 7−92982
Ni-Cu, melt spun, oxidation, diffusion induced grain boundary migration 7−98583
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-Mo, rapidly quenched, faulted structs. 7−76113
Ni-P-B, amorphous wires, melt spinning, bending strength, thermal stability rel. to alloy additions 7−93065
Ni-Si-B, amorphous wires, melt spinning, bending strength, thermal stability rel. to alloy additions 7−93065
Ni-Si-B alloy, amorphous ribbon and powder compaction, densification and bonding 7−92932
Ni-Zr metallic glasses, props. rel. to melt temp. and quench rate 7−83766
NiCrNb, metallic glass, formation, crystallisation behaviour 7−142627
Pb-Sb thin metallic ribbon, prep. and cold forming effects on corrosion rate 7−92918
SiC-C fibres, synthesis of precursors by co-pyrolysis of polysilane and pitch *(Japanese)* 7−119225
$Sm(Co_{0.70-x}Fe_{0.20}Cu_{0.10}Zr_x)_{7.5}$, melt spin ribbons, mag. props., struct. rel. to Zr content *(Japanese)* 7−77356
Ti alloys, arc melt spinning, heat flow analysis 7−86088
Ti-Ni (5.5 wt.%), rapidly solidified microstruct. and precip. 7−93001
Ti-Zr-B ternary amorphous alloys, preparation by single-roller melt-spinning 7−119194
Zr based metallic glasses, H solubility and embrittlement 7−106521
Zr-Fe-Sn (Nb)(Mo)(Ni)(Cu), ternary amorphous alloys, production, stability rel. to comp. 7−131029

melting
see also melting point; zone melting
2-chloro-6-(trichloromethyl)pyridine, heat capacity and thermodynamic props. 7−98515
$A^{III}B^{V}$-Bi systems, reactions in melt, segregation, Bi vapour press., epitaxial growth of $A^{III}B^{V}$ cpds. 7−111894
acetonitrile-halocarbons, solid-liquid phase equilibr., phase diagrams, heat of fusion 7−76360
alloys, two-phase zone and the transition to non-selective melting 7−144384
benzophenone melting transition, opto-thermal transient emission radiometry 7−91854
CANDU fuel bundle heated under severe accident conditions, metallographic exam. 7−89660
chloromethylsilane-pyridazine (pyrazine) phase diagrams, thermodynamic functions *(German)* 7−91776
colloquium on Nuclear Safety Project, Karlsruhe, Germany (June 1986) 7−128176
Coulomb gas, periodic, 2D, optical modes, delocalisation and melting 7−137818
crystal with inclusions, temp. gradient melting *(Chinese)* 7−131274
crystal-melt interface, mol. theory, Ising model of melting, statistical mechanical study 7−76346
cylinder, axisymmetric melting due to infinite flux 7−83016
N,N′-dialkanoyldiaminomesitylenes, liq. cryst. phases 7−75981
diamantane, second-phase decoration of dislocations, melting and polymorphic transformations 7−117927
N,N-dimethylacetamide-tetrachloromethane, solid-liquid phase equilibria 7−76359
diphenyl, surface melting light scatt., surface liq. cryst. phase formation 7−124459
melting continued
discotic liquid crystals, melting, defect model 7−104544
DNA polymer, melting nucleation defect, H bond vibr. fluctuations anal. 7−71671
n-eicosane paraffin, melting in rot. vertical tube study 7−98397
embedded flat plate in porous medium in steady natural convection presence 7−83230
fatty acids, premelting, IR and Raman spectra 7−99828
fusion reactor first wall subjected to plasma disruption, thermomechanical behaviour 7−109473
fusion reactor materials, thermal shock evaluation, simulated disruption test *(German)* 7−109485
gas-particle system, shock wave propag., particle fusion 7−75617
glycerophospholipids, membrane struct. and phase transitions, regulation mechanism 7−93666
graphite-HNO_3, intercalation cpd., critical behaviour of diffusion constant for 2D melting 7−84367
heavy metal fluoride glasses, melting, DSC studies 7−104965
honeycomb lattice gas, p(2×2) ordered phase, order-disorder transition, struct. factor, Monte Carlo calcs. 7−98382
hyperbolic heat transfer problem with phase changes 7−136669
I-III-VI semiconductors and their solid solns., microhardness and Debye temp. 7−131225
ice, nucleation in porous silica, neutron diffr. studies 7−131294
ice, unfixed, melting in isothermal horizontal cylinder 7−83370
ice, vertical slab formation and melting in enclosure 7−83212
ice layer, melting by temp. and conc. effect of aqua-solvents 7−98408
ice sheet, melting by induced convection 7−72081
icosahedral polytope, melting and vibrs. 7−131271
interface perturbations, during phase transitions, effects of intense monochromatic radiation 7−76364
intramolecular motions, effects on melting 7−84186
ionic crysts., contact melting, conc. distrib. 7−142962
laser radiation absorption, melt surface instability in thermomechanical treatment 7−111660
lead stearate monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7−112083
Lennard-Jones particle systems, melting, computer simulation 7−137525
lignoceric acid monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7−112083
lipid bilayer chain-melting phase transitions calcs. 7−93665
lipid monolayer chain-melting phase transitions calcs. 7−93665
local structures in melts, mutual distinction 7−142964
low-molecular cpds., in micropores of oriented polymer matrices, melting thermodynamics *(Russian)* 7−137595
LWR core meltdown, chemical reactions between reactor materials 7−129294
melt layer form., quasisteady flow and heat transfer study 7−137529
metallic and composite structure response, intense thermal heating, thermomechanical effects 7−136663
metallic composites, melting and solidification in space 7−118061
metals, simple liq., structure factors, pair pot. trends 7−104529
microinclusions closed packed in elastic matrix, melting 7−137524
molecular dynamics calculations of fluctuations and correlations in melting zone 7−84211
nematic-smectic A phase transition, orientational order of mol. fragments 7−105025
nonprimitive crystals, quantum field theory of lattice dynamics and melting 7−111783
n-octadecane, close-contact melting 7−69874
one-dimensional chain, rupture and melting, quasiharmonic approx. 7−98395
peridotite melting at uppermost lower-mantle conditions 7−127152
phase change model, melting and solidification with internal heat generation 7−136855
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
photoacoustic signal from material melting under laser irrad. 7−111665
pipe, buried, approx. 3D soln. for melting or freezing 7−69875
plasmid pBR 322, melting rel. to DNA mutation 7−126723
plastic crystals, melting and random fields 7−124436
polyethylenes, irradiation- and peroxide-crosslinked, struct. and tensile behaviour 7−78398
polymeric film, laser marking, pit form., thermal expansion and flow model, optical disc appl. 7−124123
polypropylene, isotactic, highly oriented, melting, rel. to stretching multiplicity *(Russian)* 7−91775
β-polypropylene, premelting and recrystallisation behaviour 7−118068
polythiophene derivatives, conducting polymers, fusibility 7−131273
polyvinylidenefluoride, melting, electron irrad., DSC obs. 7−69872
pseudobinary solid soln., liquidus surface props. 7−84216
quantum crystal growth dynamics, interface mobility, energy dissipation and temp. depend. kinetics 7−118194
rare earth metal chlorides, melting, liq. molar vols. 7−124461
reactor fuel cladding films, molten, thermocapillary-induced breakup 7−129179
rock melting on fault plane, artificial pseudotachylyte generation using friction welding apparatus 7−72024
screened Coulomb system colloidal suspension, two-stage melting 7−98407
sea ice, bottom ablation and heat transfer coeffs. from Marginal Ice Zone Experiments (1983) 7−133714
semiconductor surface, regular relief form. under millisec. laser pulse irrad. *(Russian)* 7−137682
semiconductors, melting under ns and ps laser pulses, review 7−84208
semiconductors, transient melting regime and recrystallisation, two-pulse laser radiation 7−98394
slab, phase-change, heat transfer problem 7−110774
snow melting on roof using solar energy collection and aquifer seasonal storage 7−71650
sodium cellulose sulphate-water system, phase transform., calorimetry 7−118097
solid, maximum defect conc. before dissociation 7−91757
solid-liquid phase boundary struct., Stefan problem with surface energy 7−104955
solid-liquid transition, freezing point expts., interface props., melting rules 7−142965
solids, melting rate under effect of variable power heat flows 7−69864
spherical metal powder production by rotating electrode process 7−126046
spiro(3.3)heptane ring containing liquid crystals, thermal props. 7−91435

melting continued
steel, surface phase transforms. under pulsed effect of high-press. plasma 7—71361
steel, vacuum arc melting, Mn evaporation kinetics 7—86146
trans-4,4'-stilbenedicarboxylic acid-1,3-propanediol copolyester, thermal and mechanical props. 7—75975
subsea saline permafrost melting, thermal simulation 7—79363
superalloys, gas turbine engine disc materials development 7—144336
tetramethyl-p-silphenylenesiloxane-dimethylsiloxane block and graft copolymers, selective permeable membranes 7—69622
thallium n-tetradecanoate, heat capacity and thermodynamic functions 7—84312
three-state chiral clock model, struct. factor scaling, (3×1) ordered phase melting phenomena simulation 7—80671
tricyclo(4.4.0.0^{3,8})-decane (twistane) containing liquid crystals, thermal props. 7—91435
two-dimensional solid, melting transition, edge pinning effects, mol. dynamics simulation 7—118065
wear caused by local melting, contact problem 7—75471
WWER-440, 7.4% blowdown, melting zone processes in MARCH-2 program *(Hungarian)* 7—96284
Al (100), surface phase transitions, ARPES study 7—144239
Al amorphous island films, close-range order during crystallisation and melting *(Russian)* 7—124756
Al-In alloy, HVEM in-situ obs. of melting of In particles 7—118064
Ar adsorbed on exfoliated graphite, melting 7—70069
Ar_{13} clusters, melting and freezing, microcanonical simulations 7—104959
Au clusters, motion in electron microscope 7—103703
$BaMoO_4$-$Ce_2(MoO_4)_3$ system, synthesis, physicochemical props. 7—98006
Bi/Se multilayer thin films, optical recording 7—74880
Bi_2Fe_3, electrophysical props. 7—99098
Bi_2Se_3, electrophysical props. 7—99098
CO_2 laser beam fused powder cladding of alloy substrate 7—113791
$CsHSeO_3.2H_2SeO_3$, cryst. struct., thermal behavior, IR absorpt. spectrum 7—111485
Cu thin films, laser-induced morphology changes 7—111657
Cu-In system, solid-liq. equilib. on Cu-rich side of phase diagram, DTA obs. *(German)* 7—100193
Cu-Kr (3 at.%), solid Kr bubbles positron annihilation study, 80-940 K 7—85889
F_2, high pressure study, phase diagram, Raman spectra 7—137540
Fe, cast, grey, laser surface melting, cavitation erosion in distilled and salt water 7—132767
Fe, cast, sliding wear process in laser surface melted and as-cast forms 7—71320
Fe, grey, subject to laser melting treatment, surface quality *(Chinese)* 7—106658
Fe, melting curve to 250 GPa and constraint on temp. at Earth's centre 7—114670
Fe, melting curve under press. 7—124458
GaAs, molten, viscosity meas. by oscillating cup method, temp. depend. 7—91864
GaAs/Au-Ge-Ni contacts, melting temperatures, X-ray diffr. study 7—70101
Ge liquid, optical props., meas. by nanosecond time resolved ellipsometry 7—125659
GeTe-Bi_2Te_3, physicochem. examination *(German)* 7—69904
H, isotopes, single representation of melting curves in reduced coordinates *(Russian)* 7—74784
H_2O-oligo(ethylene oxide) eutectic system, light microscopy investig. 7—76376
^{3}He, polarised solid, rapid melting, temp. change calcs. 7—105176
^{4}He, liq. and solid, three-body correlations 7—84422
^{4}He, superfluid fraction from 1.5 K to T_λ(P) and from vapour press. to melting curve 7—76515
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7—119247
HgI_2, phase transitions in nucl. reactor radiation field 7—69873
In-Bi, solidified from highly undercooled liq. at atm. press., high press. phase form. 7—77986
In-Pb alloys, solid and liquid states, surface segregation 7—84471
InP, laser irrad., melting dynamics, light reflection abs. 7—104968
InP, laser irrad., melting and crystallisation, light reflection anal. 7—106131
K, equation of state anomaly in the 500 kbar regime 7—84180
KNO_3-$NaNO_3$ system, contact fusion in centrifugal force field 7—98399
K_2O-Al_2O_3-B_2O_3:Fe_2O_3(CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7—104830
K_2O-B_2O_3:Fe_2O_3 (CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7—104830
Kr surface, premelting, mol. dynamics studies 7—142963
$MgFe_2O_4$-$ZnFe_2O_4$, mutual diffusion of cations 7—105107
Mn thermodynamic props., review 7—80196
Mo, thermodynamic props., review 7—80196
N_2, melting curves at high temps. and pressures 7—124456
Ni, laser surface melted, defects, PAC studies 7—137364
$NiFe_2O_4$-$ZnFe_2O_4$, mutual diffusion of cations 7—105107
$NiSi_2$-Si interface, melting dynamics under pulsed laser irrad. 7—84219
O_2, phase transformations, melting and solid-solid, 120-650 K 7—113184
P, black, melting curve 7—131275
Pb (100), surface phase transitions, ARPES study 7—144239
Pb, shock Hugoniot calcs. and melting 7—142945
PdT, solid-fluid transition of ^{3}He bubbles, NMR evidence 7—138340
Pt, laser surface melted, defects, PAC studies 7—137364
Sb_2Te_3, electrophysical props. 7—99098
ScI_3, high-purity, calorimetric meas. 7—76443
Se-Te system, structural phase transitions in the liq. state and the melting enthalpy 7—76377
Si, interfacial overheating during melting 7—69867
Si, laser-irradiated melt morphology, order-disorder transitions, comment 7—142966
Si liquid, optical props., meas. by nanosecond time resolved ellipsometry 7—125659
Si, picosecond laser pulse-generated high-density plasma kinetics simulation 7—105605
Si, pulsed laser melting, mol. dynamics calcs. 7—138555
Si, radiative melting, surface roughness and SiO_2 effects 7—104961
Si, single crystal, amorphisation, millisecond pulsed laser irradiation 7—76206
Si, thin layers on glass substrates, laser melting, phase boundary stability 7—118062

melting continued
Si:B shallow p^+ junction fabrication using laser-induced melting doping technique 7—124299
SiC, laser heated surface temp. distribs., expt. determ. 7—111652
Sn, EXAFS study through the solid-liq. transition 7—77692
Te thin films, laser induced phase transformations, transient cond. studies 7—117969
UCl_4, struct. transitions anticipating melting 7—84229
UO_2-Zircaloy LWR fuel rod, behaviour during severe accidents 7—129293
V_2O_5, high-temp. relative enthalpies meas. 7—76458

melting point
alkali halides, melting temp. prediction theory 7—131276
alkaline earth oxides, melting temp. prediction theory 7—131276
anharmonic crystals and their surfaces, stochastic forces, phonon excitations 7—112054
atomic diffusion rates, Auger depth profiling, relax. and deformation effects 7—143103
eutectic mixture screening, latent heat thermal energy storage materials, 200-1500°C *(Japanese)* 7—144918
FCC metals, self-diffusion, monovacancy and divacancy contributions 7—76478
glass, nucleation, isothermal and adiabatic theories 7—83713
grain boundary wetting, Z(N) model 7—83972
ice, Z 7—104964
ice surface structure just below melting point, ellipsometric study 7—118203
inorganic compounds, thermal expansion coefficients and melting points, relationships 7—91850
intermetallic compounds, melting temp., density, strength, cryst. struct., stiffness 7—111833
law at high press., determ. 7—69869
liquid crystals, guest-host systems with high conc. of pleochroic dyes, melting and clearing point 7—137226
metals, thermal cond., rel. to characteristic temps. 7—131377
4-methylpyridine, phase transitions, mol. mechanism 7—143002
molecular dynamics study of temp. depend. of local struct. in transition from liq. to glass 7—98453
PET, fatigue decohesion, struct. aspects *(Polish)* 7—138808
polybutylene terephthalate-liq. cryst. polyester blend, phase transitions, crystn., DSC obs. 7—124501
polyethylene, extended chain crystals, thermoluminesc. 7—132357
polymer miscible blends, prep. from two cryst. polymers, thermodynamic polymer-polymer interaction determ. 7—84289
polypropylene fibres, struct. and props., high-mol. polyethylene oxide effects *(Russian)* 7—97994
rare gas solids, Lindemann law of melting 7—84215
solid-liquid interfacial tension of BCC elements, Ginzburg-Landau theory 7—131392
transition metal nitrides, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7—71120
N,N',N''-trialkyl-1,3,5-benzenetricarboxamides, liq. cryst. phases 7—75982
two-dimensional Lennard-Jones system melting line, thermodynamic integration calcs. 7—98383
Al crystal, growth from melt, real time X-ray topography study 7—131068
Al-Mn, quasicrystalline phases, melting temps. 7—111835
$BaTiO_3$, ferroelec. transitions, isotope effects 7—113102
$Ba_2YCu_3O_x$, high temp. supercond., charact. rel to O_2 partial press., thermoanal. meas. 7—118057
Bi-In-Pb-Sn system, thermal props. 7—132575
$CdAs_2$, temperature and enthalpy of melting, DSC studies 7—91769
$CsBiS_2$, $CsBiSe_2$, $CsBi_3S_5$, electrophysical and photoelectric props. 7—99052
F_2, high pressure study, phase diagram, Raman spectra 7—137540
F_x, diatomic melting curves to very high pressure 7—98405
Fe-Cr-C, cementite, melting point rel. to Cr content 7—77962
GaAs:Si single crystals, critical resolved shear stress meas. 7—104764
K-Cs, viscosity and density 7—143074
$KBiS_2$, $KBiSe_2$, KBi_3S_5, electrophysical and photoelectric props. 7—99052
KF-B_2O_3-K_2MoO_4 system, liquidus surface, melting point meas. 7—111832
KF-B_2O_3-Li_2MoO_4 system, liquidus surface, melting point meas. 7—111832
KF-B_2O_3-Na_2MoO_4 system, liquidus surface, melting point meas. 7—111832
KPO_3-$Sm(PO_3)_3$, polymorphs, formation of $KSm(PO_3)_4$ *(French)* 7—131298
Kf-B_2O_3-MoO_3 system, liquidus surface melting point meas. 7—111832
$Kr_2Pb_4Nb_{10}O_{30}$, formation reactions, thermogravimetric and X-ray diffr. studies 7—126432
La, solid and liq., low-energy recoil atom slowing down, nuclear resonance fluorescence studies 7—85503
$La_{1-x}Ca_xCr_yCo_{1-y}O_3$ solid soln., prep. and elec. props. *(Japanese)* 7—124983
$LaMg_3$, solid and liq., low-energy recoil atom slowing down, nuclear resonance fluorescence studies 7—85503
La_2O_3, solid and liq., low-energy recoil atom slowing down, nuclear resonance fluorescence studies 7—85503
$LiBiS_2$, $LiBiSe_2$, $LiBi_3S_5$, electrophysical and photoelectric props. 7—99052
N_2, diatomic melting curves to very high pressure 7—98405
Na-K-Cs, viscosity and density 7—143074
$NaBiS_2$, $NaBiSe_2$, $NaBi_3S_5$, electrophysical and photoelectric props. 7—99052
$NaClO_3$-$NaBrO_3$ mixed crystals, melting temps. 7—124453
Ni-P and Ni-P-C systems, phase form., melting point, eutectics and peritectics, polymorphic transform. temp. 7—119244
O_2, diatomic melting curves to very high pressure 7—98405
Pd-Cu-Si metallic glass, solid-undercooled liq. interfacial energy 7—76558
Pd-Ru-In system, struct. and props. 7—132574
Pt-Pd, mutual diffusion coeffs., comp. depend., X-ray microanalysis *(Russian)* 7—111940
Rb, liq., struct., self-diffusion, at 315 K, pseudopotential effect 7—117805
$RbBiS_2$, $RbBiSe_2$, $RbBi_3S_5$, electrophysical and photoelectric props. 7—99052
Si, crystalline, amorphous and liq., phase diagram studies 7—118059
Si, rapid solidification dynamics 7—113540
Th-Ag system, phase diagram 7—144365

melting point continued
V_2O_5, disordering mechanism near melting point 7−98401
YbI_2-RbI system, phase diagrams and struct. investig. 7−91765

membranes
see also biomembranes; lipid bilayers; osmosis
acetonitrile-water mixtures, hyperfiltration 7−113995
adiabatic invariants, for membranes of slowly-varying dimensions 7−134484
adiabatic invariants, for membranes subjected to slowly varying tension 7−134492
annular membrane, nonlinear boundary value problems, uniqueness of positive solns. 7−95338
artificial lung membranes, composites prep. by plasma deposition 7−114561
binary gas mixture flow in channel, separation using semipermeable membranes, diffusion effect 7−137007
carboxylate ion exchanger, hydraulic permeability meas. *(French)* 7−144745
cation exchange membrane, Li electromigration, isotope separation 7−126483
cellulose acetate membranes, retention of polyethylene glycols, protein effects 7−93375
cellulose acetate membranes, reverse osmosis separation appls. 7−126480
cellulose acetates, membrane, absorpt, of N-alkylpyridinium chlorides from solns. 7−112076
chloroform, membranes for selective separation of alkali metal cations 7−113991
cholesterol-generated liquid membranes, electrokinetic energy conversion 7−119567
cobalt dicarbollide anions, translocation across lipid bilayer membrane, soln. resist. effect 7−114000
compensation convertor from small pressure differences meas. *(German)* 7−73331
constrained by elastic obstacle, discretization method calcs. 7−72970
crossflow microfiltration, membrane fouling prevention using electric fields 7−91211
crumpling transition in polymerized membranes 7−111429
crystalline or hexatic order, thermal fluctuations and elasticity 7−114203
curvature elastic modulus determ. by optical microscopy 7−106997
dipalmitoylthiophosphatidylcholine, chiral, thermotropic props., config. effect 7−71706
effective potential stability in membrane models with bending rigidity 7−95329
effective rigidity of membranes, role of thermal fluctuations 7−86924
elastic and fluid, renormalisation of curvature elastic constants 7−67018
elastic incompressible, subjected to dead-load tractions 7−83035
electrochemical potential gradient in transport through porous membranes, digital simulation study 7−144721
epoxide membranes, ionic, separation of acid and salt by dialysis 7−119566
filtration, flux enhancement, solution destabilisation effects 7−113994
gel phase form. induction in model lipid and biological membranes by uranyl acetate 7−139224
heliostat design using stretched steel or Al membranes 7−133035
inextensible networks, infinitesimal plane wrinkling 7−83068
ion chromatography, ion exchange hollow fibre membrane systems as suppressors 7−119570
ion exchange membrane, hydraulic permeability determ. *(French)* 7−78539
ion exchange membranes, facilitated transport of CO_2 7−113976
ion transport in oscillating elec. field, frequency-dependent ion concentration changes 7−106827
ion-neutral carrier transport in open and closed systems 7−95514
laminar boundary layer flow over compliant membrane, stabilization study 7−91075
liquid, H^+ coupled transport of alkali metal cations by crown macrocycle 7−100608
liquid, supported, lifetime, interfacial, chemical and water transport effects 7−119564
liquid, supported, Zn transport using mobile carrier 7−119568
liquid-filled membrane, deform. by viscous shear flow 7−123822
mass transfer under turbulent cross flow 7−86674
1-methylnaphthalene, separation from dodecane using liq. membrane, surfactant effects 7−113988
microporous, conductance, absolute reaction rate theory appls. 7−100612
microporous, for plasma separation, characterisation 7−114578
molecular adsorption and diffusion in resonant laser beam, selective heterogeneous processes 7−137659
monensin, liquid membrane, reverse transport, membrane pot. and ion flux 7−119563
Nafion-Ag microcomposite membrane; O_2-N_2 separation 7−119569
Nafion-coated membranes, with incorporated tetramethyltetraselenafulvalene, electrochem. behaviour 7−113950
nonideal macromolecular solutes, osmotic flow across membranes 7−113997
nuclear microfilters, preparation using fission fragments from U(Th) photofission 7−141409
permeation and recycling of H_2, adsorbed molecules effects 7−93382
photoelectrochemical cells, sintered glass membrane type 7−84974
photosensitive monolayers, bilayer membranes and polymers 7−106809
photosynthesis membrane, photon, exciton, electron, elec. field and H^+ cooperation 7−106808
plane nonlinear hyperelastic, indentation with rigid paraboloid 7−136759
PMMA stereocomplex membranes, charged, salt permeability maxima 7−113992
polyamides, acid dissolution, membrane form., characts. 7−119572
polycarbonate microporous membranes, apparent ionic diffusion coeffs. of LiCl and $MgCl_2$ electrolytes 7−106829
polyelectrolyte chain, adsorpt. on charged planar membrane 7−118235
polyethylene films, absorpt. of hydrocarbon vapours, thermodynamics 7−118239
polymer film, sorption, oscillatory, buoyancy correction method 7−118240
polymer membranes, liquid permeability investig. *(Russian)* 7−100616
polymer semipermeable membranes, casting in microgravity 7−119232
polypyrrole-polyelectrolyte composite membrane, charge-controllable 7−100592
polytetrafluoroethylene membranes, pore characts., Monte Carlo method 7−142365
polyvinyl alcohol membrane, swollen with aq. solns. of nonvolatile cpds., $O_2(N_2)$ permeability 7−119565

membranes continued
potential energy, elasticity theory 7−75323
rubber, separation of organic vapours from air 7−119701
silacrown ionophores, metal ion transport efficiency 7−113993
solvent extraction membranes, electrodialytic ion transport 7−113946
square membrane under large deforms., nonlinear shell theory 7−75301
sulfocationite membranes, perfluorinated, mol. mobility of H_2O, H^+ mag. relax 7−135972
surface waves on wedge-shaped boundary, sound field generation 7−90863
surfactant bilayer membranes, thermal transition, elasticity, rigidity, cohesion and colloidal interactions 7−139039
synthetic bilayer membranes, rel. to photochem. energy conversion 7−106918
tetramethyl-p-silphenylenesiloxane-dimethylsiloxane block and graft copolymers, selective permeable membranes 7−69622
thermoforming, free and constrained inflation of elastic membrane, axisymm. problems 7−97340
toluene-n-heptane, separation by oil-water-oil liq. membrane 7−113990
toluene-n-heptane separation by oil-water-oil liq. membrane 7−113989
tri-n-octylamine xylene based transport membranes Cr VI ion separation appls. 7−119574
ultrafiltration, membrane osmotic polarisation, piezoimpulsional meas. *(French)* 7−142369
ultrafiltration membranes, pore size determ. by solute sieving 7−119571
C_8 aromatic isomer mixtures, separation by pervaporation through polymer films 7−78544
$CaCl_2$, dilute solutions, membrane pot. and bi-ionic pot. meas. *(Spanish)* 7−144722
H_2 enrichment of synthesis gas for once-through methanol production 7−106879
H_2 gas separation membranes using a plasma polymerization method 7−86676
KCl-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999
K_2SO_4-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999
LiCl, dilute solutions, membrane pot. and bi-ionic pot. meas. *(Spanish)* 7−144722
O_2-enriched air production using passive liquid membranes 7−100609
O_2-enriched air production using facilitated transport membranes 7−100610
O_2-enriched air production using membranes, process design and economics 7−100611
O_3, permeability meas. in silicone polycarbonate copolymers 7−142428
Rb isotope separation by electromigration in cation-exchange membrane 7−103682
Si thin membranes, channelling transmission of protons 7−69790
Si V-groove structure geometry obs. by SEM, sensors appl. 7−130992

memory (physiological) *see brain; brain models; neural nets; neurophysiology*

mendelevium
see also nuclei with .....
No entries

mendelevium compounds
No entries

menus *see user interfaces*

mercury (metal)
see also nuclei with .....
6s6p state, in Xe, spectrosc. and kinetics 7−89907
arc at high press. in presence of metal halides, axial impurity separation 7−124029
arc discharge, self-reversed emission lines, lifetime and broadening, diagnostics appls. *(German)* 7−130939
arc plasma, current and electron density under transverse mag. field 7−69493
arc plasma, triplet lines, intensity current and mag. field depend., visible spectra 7−137126
atom, $^3P_1$-$^1S_0$ fluoresc. quenching, rel. to photoacoustic amplitude 7−68247
atom, autoionis. region, spin-polarisation meas., UPS 7−82058
atom, electron impact excitation at intermediate energies 7−82363
atom, electron impact ionisation channel spin symmetry meas. with position sensitive detector 7−67435
atom, higher excited states meas. using Frank-Hertz expt. 7−80261
atom, low-lying states, model pot. CI calcs. 7−68229
atom, metastable state, electron impact excitation fn. meas. 7−68463
atom, nuclear isomer separation using reson. multiphoton ionisation technique 7−90070
atom, photoionisation cross section calcs. 7−122466
atom, polarised electrons, inelastic scatt. 7−82364
atom, third order susceptibility and excited-state oscill. strengths 7−122454
atom, three-photon sequential excitation path, excimer laser excitation 7−141641
atomic electric dipole moment, HF approx. calcs. 7−122382
atomic excited state pots. and oscillator strengths determ. 7−109838
atomic vapour laser isotope separation, atomic parameters study 7−90068
atoms, photoelectron spectra, ang. distrib. parameter 7−74535
W Bay of Bengal, Hg distrib. in estuarine and nearshore sediments 7−100767
α-brass/Hg, liquid metal embrittlement, dissolution-precipitation-mechanism 7−93093
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
critical point data using Hoch-Arpshofen method 7−67266
dimer, H, I and J states, laser-induced fluoresc., relative intensities meas. 7−103570
dimer, vibr. band, laser induced fluoresc. 7−103565
discharge, high pressure, NaI and ScI_3 additives, energy balance 7−130951
discharges, low press., novel laser diagnostics 7−91364
electrical conductivity and density determ., high-pressure and temp. meas. cell 7−108576
electrode, organic surfactant adsorpt., surface accumulation obs. 7−112062
electrodes, Br^- adsorpt., virial isotherms and electric double-layer models anal. 7−112065
fibre optic temperature sensor using Hg cladded fibres 7−130365
in vivo measurement in kidney by neutron activation anal. by mobile reactor 7−78575

mercury (metal) continued
interference nanometer for pressure to 120 kPa, using Hg meniscus and He-Ne laser 7−110433
liquid, electronic and thermodynamic props., high temp. and press. 7−105513
low pressure discharges, pulsed optical pumping, radiative lifetimes and optogalvanic effect 7−129671
low-pressure discharge lamps *(German)* 7−130973
ore deposits at New Idria Mining District, California, USA, chemical and isotope studies 7−127142
pentafluorobenzene, vibrational energy transfer, Hg tracer UV absorpt. spectra anal. 7−135956
Rayleigh-Benard convection, quasiperiodicity 7−97534
Rayleigh-Benard convection at low Prandtl number 7−130683
soft modes and body centred tetragonal-HCP transition, frozen photon calc. 7−104995
solubility in normal alkanes 7−91807
temp.-depend. props. 7−83149
transport and distribution in geothermal reservoir fluids, model and estimation methodology 7−106883
two-photon-resonant frequency conversion, amplified spontaneous emission effects 7−141939
vapor, homogeneous nucleation 7−98378
$Ga_{0.47}In_{0.53}As$:Hg, photolum. studies 7−85827
Hg^+, electron impact ionis., absolute cross-section meas. 7−129880
Hg^+, laser cooled trapped ion, optical absorpt., Doppler sidebands 7−116900
Hg^{2+}, fluoresc. quenching of acridinium and 6-methoxyquinolinium 7−82276
Hg-Fe ferrofluid, Mossbauer spectra studies 7−77435
Hg-H_2SO_4 electrolysis, axisymm. surface-tension driven flow study 7−100582
Hg-water interface, adsorpt. of D-(+)-xylose 7−112087
Hg+CO_2, vibr. product state distribs., diode laser probing 7−90356
Hg+$H_2(D_2)$(HD), prod. rot. and vibr. distribs., isotope effects 7−132921
Hg+H_2(HD), rot. state distribs. on model pot. surfaces, lack of leaving-atom isotope effects 7−132911
Hg+N_2, Hg 6s6p($^3P_0$ to $^3P_1$) transition, temp. depend. 7−96826
Hg_2^{2+}, doubly charged dimers, electronic struct. diabatic calcs. 7−74429
^{198}Hg I 577-0 nm, intrinsic line width rel. to instrumental response function of Mount Stromlo coude echelle spectrograph 7−134137
InP:Ti,Hg(Cr,Hg), growth and characte. 7−125950
KH_2PO_4:Hg^+, superhyperfine interactions, EPR study 7−99570
$ND_4D_2PO_4$:Hg^+, superhyperfine interactions, EPR study 7−99570
$NH_4H_2PO_4$:Hg^+, superhyperfine interactions, EPR study 7−99570

Mercury (planet)
magnetic field described by dynamo model 7−88155
perihelion precession, general rel. props. from special rel. calc. 7−79816
perihelion precession rate, implications of dynamical quadrupole moment gravitational of Sun 7−79943
perihelion procession, special relativity 7−128225
protoplanet in solar nebula, vaporization model for Fe-silicate fractionation 7−88156
secular motions of node and perihelion 7−120292
solar wind-magnetosphere interactions leading to VLF emissions and surface heating 7−107732

mercury alloys
see also mercury compounds
amalgams, liquid metal systems, atomic arrangement and electronic struct. 7−83652
Ag amalgams, thermodynamic props., calorimetric obs. *(French)* 7−115965
CdHg, soft modes and body centred tetragonal-HCP transition, frozen photon calc. 7−104995
CdHgTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
(CdHg)Te, semicond. film vap. deposition, chem. reaction model 7−119169
$Cd_xHg_{1-x}Te$, molecular beam epitaxial growth, thermodynamic modelling 7−98748
CdTe-HgTe superlattice, defect observations, transmission electron microscopy study *(French)* 7−98164
Hg-Bi dilute system, elec. field gradient, temp. depend., TDPAD studies 7−113011
Hg-Tl binary alloy systems at high press. 7−100183
HgTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
In-Hg, liquid alloys, atomic dynamics with attractive A-B interactions 7−83656
$NaHg_4$, supercond., surface magnetisation 7−125240

mercury compounds
see also mercury alloys
Cs_3HgBr_4, incommensurate phases, elec. field gradients NQR freqs. temp. depend. meas. and model calcs. 7−132161
halides, photodissociation, spectroscopy, kinetics and laser effects 7−141839
halides, three-photon sequential excitation path, excimer laser excitation 7−141641
MBE growth, Hg source 7−106419
Ag_2HgI_4, elec. cond., α-β transition, prep. technique effect 7−105114
$(Ag_2S)_{0.3}(AgI)_{0.55}(HgI_2)_{0.15}$, cationic superionic conductor, transport props. 7−76488
$(Ag_2Se)_{0.452}(AgI)_{0.258}(HgI_2)_{0.290}$ superionic cond., thermoelec. props. study 7−137615
C $Hg_{0.8}Cd_{0.2}Te$, mag. field induced metal-insulator transition, Hall resistivity meas. 7−118517
(Cd, Hg)Te, photoelectromagnetic detectors for middle and far IR 7−89262
$Cd_{1-x}Hg_xS$ surfaces, electronic struct., CPA calc. *(Chinese)* 7−112412
$Cd_xHg_{1-x}Se_yTe_{1-y}$ solid solutions, reflectivity spectra 7−92700
CdHgTe crystals, growth by solid state recrystallisation, elec. and struct. evaluation 7−138647
CdHgTe, disorder-induced Raman spectra, Green's function theory 7−85686
CdHgTe, elec. cond. versus mag. field at 77 K 7−92212
CdHgTe epitaxial layers, growth using interdiffused multilayer process 7−77840
CdHgTe layers, epitaxial growth 7−84554
CdHgTe, narrow-gap semiconductors, optical nonlinearities 7−130243

mercury compounds continued
(CdHg)Te photoelectromag. detectors, lin. operation range, thermal and photon effects 7−102519
CdHgTe photovoltaic IR detector, efficient coupling to CCD devices 7−80879
CdHgTe surface and interface defect prodn., AES and XPS studies 7−111541
(CdHg)Te thin film solar cells fabrication, laboratory safety procedures for material processing 7−86800
$Cd_{0.2}Hg_{0.8}Te$, Auger recomb., effect of background radiation on its measurement 7−112367
$Cd_{0.2}Hg_{0.8}Te$, Raman light scatt. near resonance in E_1 energy slot 7−113197
$Cd_{0.27}Hg_{0.73}Te$, B^+ ion implantation, surface radiation damage 7−91619
$Cd_{0.66}Hg_{0.34}Te$, plasticity, TEM obs. of dislocations 7−98161
$Cd_{1-x}Hg_xTe$, inverted contact and linear zero-mass spectrum 7−85097
$Cd_{1-x}Hg_xTe$ solid solns., Raman scatt. near energy gap 7−70762
$Cd_xHg_{0.5-x}Te_{0.5}$, preparation in H_2 environment, thermodynamic analysis 7−100023
$Cd_xHg_{1-x}Te$ Hall probes, for magnetic studies of Nb_3Sn superconductors 7−73377
$Cd_xHg_{1-x}Te$, crystal growth of IR material by travelling heater method 7−77785
$Cd_xHg_{1-x}Te$ crystals, growth using accelerated crucible rotation, quenching obs. 7−113375
$Cd_xHg_{1-x}Te$ crysts., gamma irrad. effects study *(Russian)* 7−111669
$Cd_xHg_{1-x}Te$ crysts., thermoactivated dislocation migration, stoichiometry and interaction effects *(Russian)* 7−111645
$Cd_xHg_{1-x}Te$, interaction of point defects caused by irradiation 7−84012
$Cd_xHg_{1-x}Te$ layers, open tube isothermal VPE, comp. and thickness control 7−113445
$Cd_xHg_{1-x}Te$, MOCVD growth and elec. props. 7−77843
$Cd_xHg_{1-x}Te$, MOVPE growth, temp. var. 7−86045
$Cd_xHg_{1-x}Te$ p-n junctions, transport mech. 7−77052
$Cd_xHg_{1-x}Te$, photo-assisted epitaxy, UV laser source 7−132497
$Cd_xHg_{1-x}Te$, photoconductivity, energy band parameters, influence of surface treatment 7−112395
$Cd_xHg_{1-x}Te$ photoelec. props., local surface deform. effects study *(Russian)* 7−99130
$Cd_xHg_{1-x}Te$ solid soln., heavy hole effective mass and density studies 7−137786
$Cd_xHg_{1-x}Te$, sub-grain boundary struct. 7−132647
$Cd_xHg_{1-x}Te$:In single crysts., impurity props. study 7−137841
$Cd_xHg_{1-x}Te$-metal contacts, electrophysical props. 7−99197
CdTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe-$Cd_xHg_{1-x}Te$ heterostructures, electrical and photoconducting props. 7−85000
CdTe-HgTe, valence-band offsets, role of d orbitals 7−118574
CdTe-HgTe ultrathin semicond. superlattice structs., thermodynamic instability, total energy pseudopot. calcs. 7−76644
$H_gCr_2Se_4$, ferromagnetic semiconductor, transport, magnetic and optical props. 7−99094
Hg $(CN)_2$, micro-Raman spectra, diamond anvil cell-micro Raman spectrometer system 7−144048
Hg $(PH_3)_3$ complexes, Hg-P coupling consts. 7−90216
Hg based II-VI compounds, developments and trends in MBE 7−77819
Hg complex, octakis (N,N-diethyldithiocarbamato)penta Hg(II)$(ClO_4)_2$, cryst. and mol. struct. 7−92513
Hg-Ga-S system, liquidus surface, crystallisation fields and precipitation *(Russian)* 7−124444
Hg-methane(-ethane)(-N_2)(-CO) complexes, jet-cooled complexes, electronic spectra and intramultiplet relax. 7−90357
Hg-protein-ligand complexes, ^{81}Br NMR spectra study 7−141728
$Hg_{3-\delta}AsF_6$, 1D BCS Hamiltonian, electron-phonon interactions 7−99316
$Hg_{3-\delta}AsF_6$, bulk superconductivity, Meissner effect 7−99329
$Hg_{3-\delta}AsF_6$, electronic struct., de Haas-van Alphen effect studies 7−131536
$Hg_{3-\delta}AsF_6$, sp. ht. and diamag. susceptibility above supercond. transition temp. 7−99397
$Hg_{3-\delta}AsF_6$, superconductivity, effect of annealing and anisotropy 7−138110
$Hg_{3-\delta}As(Sb)F_6$, long range order development, neutron diffr. study and model calcs. 7−117904
HgBr, blue-green photodissociation molecular laser 7−141848
HgBr laser chemical control, long-life operation 7−68682
HgBr lasers, discharge pumped, adding SF_6 to improve performance 7−122936
HgBr+He(Ne)(Ar)(Xe)(N_2), V-T relax., fluoresc. obs. 7−103629
Hg$(CN)_2$, high-pressure microRaman spectroscopy 7−89284
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
p-HgCdMnTe bicrystals, quantum Hall effect and magnetoresistance under hydrostatic press. 7−76977
p-$Hg_{0.75}Cd_{0.23}Mn_{0.02}Te$ bicrystals, quantum Hall effect 7−131686
$Hg_{1-x-y}Cd_xMn_yTe$, magnetoresistance, quantum limit regime 7−112376
$Hg_{1-x-y}Cd_xMn_yTe$, spin modulated energy state, Shubnikov-de Haas analysis *(German)* 7−125311
HgCdTe, developments and trends in MBE 7−77819
HgCdTe, electronic props., vacancy formation energy, rel. to HgZnTe 7−131541
HgCdTe, electroreflectance at low temps. 7−144014
HgCdTe epilayers with predesigned comp. profiles, laser MBE growth 7−132464
HgCdTe films, ion beam sputter deposition and epitaxy 7−138655
HgCdTe, growth for long wavelength IR imagers, historical review 7−132441
HgCdTe, Hall resistivity study 7−118518
HgCdTe, heterojunction devices, model for composition and doping profiles 7−131766
HgCdTe high temperature detectors for CO_2 laser beam control and heterodyne detection 7−73426
HgCdTe IR optical waveguides 7−103995
HgCdTe intermediate temperature detector for 10.6 micron heterodyne rangefinder 7−75028
HgCdTe, inversion layers, subband levels broadening by interband tunnelling 7−77094
HgCdTe, ion implanted, Hf diffusion, role in junction formation, elec. profile 7−125084
HgCdTe, isothermal LPE growth 7−132506
HgCdTe, isothermal VPE, thermodynamic and kinetic model 7−100079

mercury compounds continued
HgCdTe LPE layers, ion-implanted p-n junctions on CdTe substrates 7−98190
HgCdTe, laser annealing, effects on mercury loss and surface damage 7−131542
HgCdTe layers, MBE, spectroscopic ellipsometry 7−71021
HgCdTe, MBE, X-ray diffraction characterisation 7−130982
HgCdTe, MBE on GaAs substrate, high resolution TEM 7−132473
HgCdTe MW photovoltaic detectors, thermoelectrically cooled, for Halogen Occultation Expt. 7−87957
n-HgCdTe, magnetic field induced electron condensation *(German)* 7−125029
HgCdTe materials and detectors, IR science and technology, conf., Wuxi, Jiangsu, China (Nov. 1986) *(Chinese)* 7−95073
HgCdTe oxide films, composition determ. by NAA 7−93429
HgCdTe photoconductive detectors, CO_2 laser applications 7−110394
HgCdTe photoconductors, 1/f noise at 0.1 eV 7−84975
HgCdTe photodiodes for heterodyne appls. 7−73425
HgCdTe, phys. props., handbook of datareviews 7−134373
HgCdTe surface formed by fracture in solution, anodic oxidation 7−71408
HgCdTe/CdTe/GaAs/Si epitaxial struct., growth and characterisation 7−84550
HgCdTe-Ti interfacial reactions, $TiTe_x$ form., Hg and Cd depletion, photoelectron spectra study 7−118279
$Hg_{0.4}Cd_{0.6}Te$, 1.5 μm avalanche photodiode, noise anal. *(French)* 7−92227
$Hg_{0.78}Cd_{0.22}Te$, laser microprobe mass spectrometry, nonresonant multiphoton ionisation process 7−100651
$Hg_{0.795}Cd_{0.205}Te$, optical dispersion parameters temp. depend. anal. 7−118974
$Hg_{0.8}Cd_{0.2}Te$, Burstein-Moss shift, determ. 7−76767
$Hg_{0.8}Cd_{0.2}Te$, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
$Hg_{0.8}Cd_{0.2}Te$, far IR magnetotransmission of accumulation layers 7−138433
$Hg_{0.8}Cd_{0.2}Te$ hot electron energy relax. under low temp. magnetic quantisation, hot phonon effects 7−118495
$Hg_{0.8}Cd_{0.2}Te$, p-type, low temp. behaviour of transport coeffs. 7−131669
$Hg_{0.8}Cd_{0.2}Te$, subband physics in electric quantum limit 7−138001
$Hg_{0.8}Cd_{0.2}Te$, surface oxide chemistry 7−106725
n-$Hg_{0.8}Cd_{0.2}Te$-anodic oxide film, resonant 2D magnetopolarons in accumulation layers 7−131803
$Hg_{0.83}Cd_{0.17}Te$, phonon spectra, Raman spectra obs., 10-250 K 7−85689
$Hg_{1-x}CdTe$, near surface characterisation, computer-aided Rutherford backscattering spectrometry 7−132402
$Hg_{1-x}Cd_xTe$ (100) surface states, surface enhanced alloy effects, site depend. CPA calc. 7−85029
$Hg_{1-x}Cd_xTe$ and oxides, noble gas ion sputtering, preferential chemical reactions 7−125883
$Hg_{1-x}Cd_xTe$, B implantation through photochemically deposited SiO_2 films, MWIR detector appl. 7−84006
$Hg_{1-x}Cd_xTe$ based anodic oxide layers, chemical anal. using photometric method 7−114026
$Hg_{1-x}Cd_xTe$, bulk crystal growth, for avalanche photodiodes 7−132432
$Hg_{1-x}Cd_xTe$, cryst. struct., Hall effect, vacancy conc. *(Korean)* 7−91549
$Hg_{1-x}Cd_xTe$, crystal growth by travelling heat method, Hall effect, comp. distrib. *(Korean)* 7−138629
$Hg_{1-x}Cd_xTe$ crystals, H^+ irradiated, electrophysical props. 7−70330
$Hg_{1-x}Cd_xTe$, doping and composition profiling, graded capacitance-voltage method 7−143622
$Hg_{1-x}Cd_xTe$, elec. props., electronic struct. under hydrostatic press. *(Chinese)* 7−124979
$Hg_{1-x}Cd_xTe$ films, LPE, substrate holder for dipping method 7−100125
$Hg_{1-x}Cd_xTe$, free-carrier absorpt., photon-ionised impurity-plasmon processes 7−132275
$Hg_{1-x}Cd_xTe$ LPE layers, anomalous Hall effect props. studies 7−143484
$Hg_{1-x}Cd_xTe$, MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Cd_xTe$ MOS struct., gate capacitance under mag. quantisation 7−92298
n-$Hg_{1-x}Cd_xTe$, magnetophonon reson. trapping, multiphonon emission and magneto-Auger recomb. oscills. 7−84926
$Hg_{1-x}Cd_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
$Hg_{1-x}Cd_xTe$, magnetoresist., Hall effect and phase differences between quantum oscills. 7−143485
$Hg_{1-x}Cd_xTe$, magnetotransport props. in high mag. fields 7−76985
$Hg_{1-x}Cd_xTe$, metal-insulator-metal transition induced by uniaxial strain 7−99140
$Hg_{1-x}Cd_xTe$, modulated optical and electrical props., electrolyte electroreflectance study 7−84874
$Hg_{1-x}Cd_xTe$, multi-ion screening and scatt., carrier mobilities 7−124977
$Hg_{1-x}Cd_xTe$ n-channel inversion layer magnetogate capacitance calcs. 7−143541
$Hg_{1-x}Cd_xTe$, narrow gap semiconductors, magnetophonon effect in high elec. fields *(German)* 7−125030
$Hg_{1-x}Cd_xTe$, nonradiative carrier recombination, determ. by mag. quantum oscillations 7−112355
$Hg_{1-x}Cd_xTe$ pseudo-binary semiconductors, atomic bonding and thermodynamic props. 7−111445
$Hg_{1-x}Cd_xTe$, refractive index dispersion 7−106129
$Hg_{1-x}Cd_xTe$ semiconductor alloy, structural ordering, ^{125}Te NMR chemical shifts 7−118877
n-$Hg_{1-x}Cd_xTe$, Shubnikov-de Haas oscillation *(Chinese)* 7−99536
$Hg_{1-x}Cd_xTe$, voltage depend. plasticity 7−69811
$Hg_{1-x}Cd_xTe:{}^{11}B^+$, implantation and post implant anneal studies 7−104784
$Hg_{1-x}Cd_xTe$:In, Burstein-Moss effect 7−106128
$Hg_{1-x}Cd_xTe$:In(Zn), native defects and complex form., doping and alloying effects 7−98202
$Hg_{1-x}Cd_xTe$:P,As,Sb,Bi LPE films, impurity incorporation, elec. activity and distrib. coeff., Hall meas. 7−70128
$Hg_{1-x}Cd_xTe$-CdTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
$Hg_{1-x}Cd_xTe$-CdTe heterostruct., charge transfer, magnetoabsorption studies 7−138031
$Hg_{1-x}Cd_xTe$-CdTe superlattices, type III-type I transition 7−131754
$Hg_{1-x}Cd_xTe$ photodiodes, emission and detection props., 1 to 3 μm 7−73423
HgCl lasers, discharge pumped, adding SF_6 to improve performance 7−122936
$HgCl_2$, interaction between radiation and Cd or Hg during organogenesis in mouse embryos 7−114395
Hg_2Cl_2 crystals, vapour transport growth, defect struct. 7−132423
Hg_2Cl_2 ferroelastic, soft acoustic mode anisotropy 7−124422
Hg_2Cl_2 single crystals, surface layers 7−112034
Hg_2Cl_2 vapour-phase-grown crystals, acousto-optic tunable filters and optical signal processing 7−97123
$Hg(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$HgCr_2Se_4$, carrier drag by magnetostatic waves, external mag. field and freq. depend. meas. 7−70332
$HgCr_2Se_4$, ferromag. semicond., density of states, absorpt. spectrum 7−131512
$HgCr_2Se_4$, ferromag. semiconductors, picosecond conductivity 7−143509
$HgCr_2Se_4$, ferromagnetic semiconductor, spin wave damping 7−85267
$HgCr_2Se_4$, mag. semicond., magnetostatic and spin wave intensification 7−85273
p-$HgCr_2Se_4$, mag. semicond., elec. field effect on elec. cond. 7−99078
$HgCr_2Se_4$:Ag single crysts., FMR lineshape and anisotropy meas. 7−85443
$Hg_{1-x}Fe_xSe$ dilute mag. semicond., charge-centre scatt. rate reduction 7−99061
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., electronic props., photoemission survey 7−138599
HgH_2, pot. energy surfaces calcs. 7−74485
α-HgI_2 cryst., photoluminescence spectra obs. 7−138488
HgI_2 crystal growth and its properties of photoluminescence *(Korean)* 7−85811
HgI_2 crystals, growth and characterisation 7−138626
HgI_2 detectors, transient charge technique evaluation 7−74353
HgI_2 detectors for thermal n studies 7−96474
HgI_2, dielectric and electrical props., effect of visible light intensity 7−99637
HgI_2, elec. and dielec. props., high field effects 7−105576
HgI_2, hyper-Raman and multiphoton scatt. involving biexciton states 7−85618
HgI_2, illuminated, dielec. behaviour, temp. dependence 7−99636
HgI_2, layered semicond. colloids, size quantization 7−85766
HgI_2, phase transitions in nucl. reactor radiation field 7−69873
HgI_2, photoelectronic props. 7−112396
α-HgI_2 platelets, growth 7−113361
HgI_2 platelets, two-stage process growth in polymer presence 7−113358
HgI_2, polariton nonequilibrium Bose condensation, resonance laser radiation induced *(Russian)* 7−112199
HgI_2, red modification layer crysts., nonlinear anisotropic exciton-phonon interactions, absorpt. band study *(Russian)* 7−84694
HgI_2:SbI_3 single crysts., dark current transients meas. 7−92174
$HgI_2+Ag_2MoO_4$, solid-state ionic reaction, kinetics and mechanism 7−105111
$HgIn_2Te_4$, linear and nonlinear properties in mid infrared 7−123111
$HgMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
HgMgTe, laser annealing, effects on mercury loss and surface damage 7−131542
$Hg_{1-x}Mn_xSe$, semimagnetic semicond., electronic props., photoemission survey 7−138599
HgMnTe, acceptor binding energy, photoconductivity and magnetoconductivity meas. *(German)* 7−124927
HgMnTe, exchange splitting of shallow acceptor, photocond. and transmission meas. 7−76803
p-$Hg_{0.915}Mn_{0.085}Te$, semimag. semicond., nonmetal-metal transition study 7−76775
p-$Hg_{0.915}Mn_{0.085}Te$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
$Hg_{1-x}Mn_xTe$ (Se), diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Hg_{1-x}Mn_xTe$, acceptor ionisation energy in high mag. fields 7−76804
$Hg_{1-x}Mn_xTe$, MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Mn_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
$Hg_{1-x}Mn_xTe$, magnetoresist., Hall effect and phase differences between quantum oscills. 7−143485
$Hg_{1-x}Mn_xTe$ narrow gap semiconductors, magnetophonon effect in high elec. fields *(German)* 7−125030
$Hg_{1-x}Mn_xTe$ p-n junctions, characts. 7−77055
$Hg_{1-x}Mn_xTe$, semimagnetic semicond., electronic props., photoemission survey 7−138599
$Hg_{1-x}Mn_xTe$, zero-gap semimagnetic semicond., anomalous magnetoresist. anisotropy 7−84934
$Hg_{1-x}Mn_xTe$-CdTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
$Hg_{1-x}Mn_xTe$-CdTe superlattices, MBE grown, characterisation 7−77056
$Hg_{1-x}Mn_xTe$-CdTe superlattices, type III-type I transition 7−131754
$Hg_{1-x}Mn_xTe$-HgTe superlattices, MBE growth 7−132463
HgNe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
$Hg_2P_2Se_6$, vibr. assignments, far-IR spectra. *(German)* 7−99874
$Hg_kPb_{1-k}Se_lTe_{(1-l)}$, quasiternary system, thermodynamic props. 7−91844
$Hg_{3-\delta}SbF_6$, supercond. transitions, magnetisation meas. 7−70473
$Hg_{1-x_2}Se$, transverse magnetoresist., Shubnikov-de Haas oscills. 7−84935
$HgSe_xTe_{1-x}$ pseudo-binary semiconductors, atomic bonding and thermodynamic props. 7−111445
$HgSn(Pb)P_{14}$ diamagnetic semicond. prep., struct. and bandgap studies 7−83905
HgTe, band warping, far-IR magneto-reflection studies 7−77518
HgTe cyclotron resonance, hysteretic, three-photon 7−143911
HgTe, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
HgTe, epitaxial layers, chem. composition, effects of surface treatment 7−84460
HgTe, epitaxial photochemical deposition 7−138679
HgTe films, metal-organic CVD 7−77840
HgTe, MBE on GaAs substrate, high resolution TEM 7−132473
HgTe, metal-insulator-semiconductor structure, express-method of volt-capacity characts. processing. *(Russian)* 7−125130
HgTe narrow gap semiconductors, magnetophonon effect in high elec. fields *(German)* 7−125030
HgTe, optical nonlinearity 7−110436
HgTe, photo-assisted epitaxy, 200°C 7−132497

mercury compounds continued
HgTe surface formed by fracture in solution, anodic oxidation 7−71408
HgTe transverse magneto-Seebeck coeff. magnetophonon oscills. 7−99099
HgTe, vacancy formation energies 7−131541
HgTe, valence band offset in HgTe−CdTe struct. 7−125105
HgTe/CdHgTe superlattices, anomalous confinement effects, pseudopot. calcs. 7−105688
HgTe/CdTe multilayers, low temp. MOCVD, TEM and SEM studies 7−119159
HgTe-Bi system, constitution diagram 7−92968
HgTe-CdTe, heterojunction, valence band offsets 7−131767
HgTe-CdTe, multilayer structures, on $Cd_{1-x}Zn_xTe$, TEM study 7−131462
HgTe-CdTe, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
HgTe-CdTe, superlattices, optical properties, review *(Polish)* 7−132219
HgTe-CdTe heterojunctions, valence band discontinuity, face orientation depend. 7−85072
HgTe-CdTe heterojunction valence-band discontinuities, tight-binding calcs. 7−125094
HgTe-CdTe junctions, interdiffusion behaviour 7−91902
HgTe-CdTe MBE grown superlattices, optical props. 7−92650
HgTe-CdTe superlattices and heterojunctions, spin-orbit scatt. time and carrier depending time 7−92268
HgTe-CdTe superlattices, optical props., quantitative theory 7−92629
HgTe-CdTe superlattices, electronic props. 7−118580
HgTe-CdTe superlattices, band struct. determ. 7−138049
HgTe-CdTe superlattices, photoluminesc. 7−138492
HgTe-ZnTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
HgX, X=0, S, Se, helical structure, Landau theory, even and odd distortion modes 7−142696
Hg_2X_2 (X=Cl, Br), IR spectra, phase transition effects 7−132259
HgZnTe, electronic props., vacancy formation energy, rel. to HgCdTe 7−131541
HgZnTe, laser annealing, effects on mercury loss and surface damage 7−131542
$Hg_{1-x}Zn_xTe$, MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Zn_xTe$-CdTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
$Hg_{1-x}Zn_xTe$-CdTe superlattices, type III-type I transition 7−131754
In-$Cd_{0.2}Hg_{0.8}Te$, deterioration of contacts 7−105706
$Mn_xHg_{1-x}Te$, thermo-EMF meas., mag. field effects study *(Russian)* 7−125033
NH_4Cl:$HgCl_2$, opt. peaks of Hg centres before and after X-ray irrad. 7−113234
$Pb_{1-x}Hg_xTe$, composition depend. of optical and elec. characts. 7−76997
ZnHgTe surface and interface defect prodn., AES and XPS studies 7−111541
ZnTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078

mercury lamps *see mercury vapour lamps*

mercury vapour lamps
afterglow maintained by RF field in Hg arc, persistence 7−124014
arc lamp, secondary light source of ellipsoidal concave mirror in precision illumination system 7−123148
fluorescent lamps, light sources overview 7−124027

merging
SIMBAD and Guide Star Catalogue data merging for Tycho Input Catalogue prod. 7−127745

MESFET *see Schottky gate field effect transistors*

mesic atoms
electron scattering, threshold behaviour *(Russian)* 7−82396
kaonic atoms, wave equation 7−122753
pionic atoms, search using 50 MeV $^{14}C(\pi^+,\pi^-)$ reaction 7−109241
pionic atoms, X-ray spectra study of level widths and shifts 7−110146
pionic atoms of unstable nuclei 7−122751
quadrupole moment with total spin j=1/2, hyperfine struct., exotic atoms 7−82394
$(K\pi)$ atom, energy levels, lifetime, wave function, meson chiral interaction parameters 7−68477
(π^-,γ), light nuclei, capture from mesic atoms, current algebra model 7−121954
$\pi^+\Omega^-\rightarrow\Delta^0K^-\pi^+$, Coulomb disintegration cross section, decay rate calcs. *(Chinese)* 7−102785
$(\pi\pi)$ atom, energy levels, lifetime, wave function, meson chiral interaction parameters 7−68477
$(\pi^+\pi^-)$ atom, binding energy, wave function and lifetime from virton-quark model 7−68476
^{27}Al pionic atoms, strong interaction effects from coincidence meas., X-ray spectra 7−117097
B_4C, Coulomb pion capture, chem.-bond depend. 7−103693
B_2O_3, Coulomb pion capture, chem.-bond depend. 7−103693
^{209}Bi, pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096
D, pionic, 1 s level shifts, rel. to πN scatt. lengths 7−96893
H, pionic, 1 s level shifts, rel. to πN scatt. lengths 7−96893
Mg pionic atoms, strong interaction effects from coincidence meas., X-ray spectra 7−117097
^{58}Ni, pionic atom anomalies study in $^{58}Ni(\pi,\pi)$ scatt. 7−102921
^{237}Np, pionic, X-ray spectrum meas. 7−110144
^{237}Np, pionic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
Re pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096
^{181}Ta pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096

mesic molecules
formation cross section theory of meso-mol. inside normal mol. 7−122741
transition metal borides, pions, atomic Coulomb capture ratios, chemical bond depend. 7−74790
Zel'dovich effect in quantum mechanics, hadronic atom and mesomolecule appls. 7−89028

mesomorphic state *see liquid crystals*

meson absorption
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701

meson absorption continued
$^{12}C(\pi^+,3p)X$, E=355,375,405 MeV/c, $\Delta(1232)$ region, proton spectra, quasi-free scatt. broad structure 7−135375
$^2H(p,p)$, 1 GeV, cumulative processes, isobar role, kinematically forbidden region, intranuclear cascade method 7−121820
^3He, π absorption on 3 nucleons, doorway model with πNN intermediate resonance 7−116521
$^3He(\pi^\pm, X)$, 3-nucleon absorption 7−121962
$^3He(\pi^\pm, X)$, >65 MeV, quasi-free π absorption, reaction mechs. 7−121961

meson-baryon interactions
see also kaon-baryon interactions; meson-baryon scattering; pion-baryon interactions
KN, total cross-sections, law of growth, sea constituents, valence quarks 7−116192
πN, total cross-sections, law of growth, sea constituents, valence quarks 7−116192

meson-baryon scattering
see also kaon-baryon scattering; meson-baryon interactions; pion-baryon scattering
No entries

meson capture
see also mesic atoms; mesic molecules; radioactivity
B_4C, Coulomb pion capture, chem.-bond depend. 7−103693
B_2O_3, Coulomb pion capture, chem.-bond depend. 7−103693
$^{12}C(\pi^+,3p)X$, E=355,375,405 MeV/c, $\Delta(1232)$ region, proton spectra, quasi-free scatt. broad structure 7−135375

meson decay
see also kaon decay; meson hadronic decay; meson leptonic decay; pion decay
beauty mesons, weak decay studies at ARGUS 7−102762
charm mesons, weak decay studies at ARGUS 7−102762
charmed mesons in a simple two-step potential model, mass spectra and decay widths investig. 7−73634
charmed particles, decay 7−67585
charmonium→$\gamma\gamma$, direct obs. in $\bar{p}p$, partial width meas. for η_c and χ regions 7−81196
heavy mesons, spectroscopy and decay 7−102685
light mesons, review of radiative decays 7−95910
quark mass matrices, special forms, phenomenological constraints 7−95859
quarkonium physics, new leptons and quarks, exotic particles form LEP 200 expts. 7−140952
radiative decays, vector dominance model, coupling constants and effective lagrangians 7−67610
rare decays in N=1 supergravity 7−80577
scalar meson decay amplitudes in QCD 7−89443
technipionium bound state formation and decays into W^+W^-, $\gamma\gamma$, $Z\gamma$ 7−73576
$B\rightarrow D_sX$, inclusive production, branching ratios 7−81175
B decay, CP nonconservation, quaternionic quantum mechanics anal. 7−108915
B decays, four-generation effects and quark mixing parametrization 7−135104
$B\rightarrow De\bar{\nu}$, weak mixing angles from semileptonic decays in quark model, comment 7−81171
$B\rightarrow K^+(K^-, K^0/\bar{K}^0)X$, branching ratios 7−89500
$B\rightarrow Kl^+l^-(K\nu\bar{\nu})$ implications for heavy t quark and fourth generation 7−81172
$B\rightarrow K\mu^+\mu^-$, branching ratio and light Higgs, three- and four-generation models 7−140927
$B\rightarrow l^+l^-X$, flavour changing neutral current decay, branching fraction 7−102732
B meson lifetime studies at PETRA 7−102686
$B\rightarrow u\bar{l}\nu(c\bar{l}\nu)$, branching ratio, end point lepton momentum spectrum 7−121494
B^0 decays, prospects for CP violation observations 7−140857
B^0 decays, ultra-heavy quarks in rare decays 7−102731
$B_s^0\rightarrow l^\pm\nu_lX$, mixing ratio calcs., $\bar{p}p\rightarrow$ heavy flavours study 7−140961
$\chi\rightarrow H^0X$, Higgs boson production in hadronic decays of *C*-even quarkonia 7−81174
$\chi\rightarrow H^0gg$, Higgs production, total decay widths 7−73679
$\chi_Q\rightarrow\psi\gamma$ (2γ) ($e^+e^-\gamma$), gluonic power corrections to QCD sum rules 7−73654
D decay, CP nonconservation, quaternionic quantum mechanics anal. 7−108915
D meson lifetime studies at PETRA 7−102686
$D\rightarrow\phi\gamma$, relative probability and partial width 7−140943
$D^\pm\rightarrow\bar{K}^{*0}e^\pm\nu$, lifetime and cross section meas. 7−108912
$e^+e^-\rightarrow 1^{++}(1^{--})X$, cross-section for production, $\gamma\gamma^*$ decay rate 7−102758
$e^+e^-\rightarrow b\bar{b}$, 29 GeV, lifetime of hadrons containing b-quark 7−140949
$e^+e^-\rightarrow\mu^+\mu^-$, extra Z's from E_6, exotic physics in heavy quarkonium decays 7−128818
$\eta\rightarrow H^0X$, Higgs boson production in hadronic decays of *C*-even quarkonia 7−81174
η'', mass and Em decay 7−128896
$F^\pm$ meson lifetime studies at PETRA 7−102686
γ decay, strong coupling constant meas. and QCD tests 7−102703
γ decays, momentum dependent effects 7−135098
ι meson, prod., decay and mixing models, quark-glue coupling 7−135043
J/Ψ radiative decays, production of pseudoscalar glueballs 7−81195
Υ, mass spectrum, decay-widths, anal. using local equivalent Schrodinger eqn. with relativistic kinematics 7−67615
$\Upsilon\rightarrow\gamma X$, branching ratio meas. 7−102734
$\Upsilon\rightarrow\gamma X$, Crystal Ball expts. 7−102747

meson detection and measurement
NaI detectors, use in $pion^0$ electromag. form factor meas. 7−74373
Si microstrip counter with VLSI readout for DELPHI microvertex detector 7−74370
U calorimeter with proportional chamber readout, Monte Carlo simulation study 7−74374

meson-deuteron interactions
see also meson-deuteron scattering
πd interactions, mesonic and dibaryonic excitations in πNN systems 7−67654
$\pi^-d\rightarrow X$, K_s^0, Λ^0, $\bar{\Lambda}^0$ production, cross-sections and charge multiplicity 7−95946
$\pi^-d\rightarrow nn\gamma$, scatt. length meas. in complete kinematics 7−102768
$\pi^+d\rightarrow pp$, iT_{11} analysing power meas. 7−95923

meson-deuteron interactions continued
$\pi^+d\rightarrow\pi^+pn$, iT_{11} meas. below $\Delta(3,3)$ resonance 7−95926
$\pi^+d\rightarrow\pi^+pn$, triple differential cross-section, final state interaction investigation 7−95925

meson-deuteron scattering
see also meson-deuteron interactions
$\pi d\rightarrow\pi d$, high energy, electromagnetic form factors, Chou-Yang model predictions 7−108938
$\pi d\rightarrow\pi d$, low energy scatt. in K-matrix model 7−108931
$\pi d\rightarrow\pi d$, T_{22} tensor analysing power meas. 7−95924
$\pi d\rightarrow\pi d$, tensor analyzing power meas. 7−102767
$\pi^-d\rightarrow\pi^-d$, 1.75-3.1 GeV/c, backward scatt., differential cross section 7−96114

meson effects
Cu, ⟨100⟩ channel, pion site occupation, time and temp. depend., time-differential channelling study 7−111718

meson electric moment
No entries

meson field theory
see also nuclear forces
axial charge transitions in relativistic nuclear models and nonrelativistic meson exchange currents, A=16 nuclei 7−116298
bag model of hadron struct., chiral symm. inclusion using pion field, review 7−128862
baryon resonances, interpretation as bound three-quark states coupled to meson field 7−95764
chiral σ-model with quarks, B=2 configs. 7−108756
chiral soliton quark models, non-hedgehog ansatz and ω-meson role 7−140898
extended Skyrmion model from quark flavour dynamics, effective chiral meson Lagrangian 7−121458
finite temperature metastable matter 7−73725
glueball condensate vacuum, dynamical pions and kaons, time independent/dependent fields, massive quarks 7−128836
Landau-parameters and isoscalar nuclear excitations in a relativistic mean-field theory 7−109084
low-energy QCD, quantum hadrodynamics, relativistic coupled nucleon-meson field theory 7−81119
nuclear electromagnetic currents, role of σ- and ω-meson fields 7−73704
nuclear forces, Skyrme model in QCD large N_C limit 7−67738
nuclear magnetic moments and isoscalar currents, one-boson exchange model 7−73700
pseudoscalar Yukawa model, infrared asymptotic freedom at the critical point 7−89316
relativistic optical potential, microscopic calcs., nucleon matter saturation props. 7−116323
Skyrme model anal. of baryon resonances, inclusion of vector mesons in Lagrangian, phase shifts 7−102593
strongly coupled quarks in standard model, Yukawa couplings, linear σ model 7−135003
three-body one-pion-exchange potential, relativistic Fadeev anal. 7−116293
viscous fluid universe interacting with scalar field, solns. 7−89067
Walecka model, exotic isoscalar dipole resonances 7−140980
Z_2 lattice Abelian Higgs model, cluster expansion techniques 7−121330
$A_1\rightarrow\rho\pi$, mass and width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
ep→Dx, E_6 scalar leptoquark prod., E_6 superstring models, Yukawa interactions 7−140863
Λ hypernuclei, single-particle spectra, enhanced interaction radii of multi-strange nuclei 7−121695
N electric form factor, core motion effects, bag model anal. 7−108922
NN interaction, Bonn meson-exchange model 7−73665
NN interaction, relativistic field theoretical model with meson theory 7−67744
NN isovector meson exchange currents, radial depend. anal. 7−81300
$\omega\rightarrow3\pi$, QCD bosonization, meson effective action, phenomenology, parameters, global colour symmetry model 7−128847
$\pi+\rho$ model, Landau-Migdal parameter calcs., for nucleon ph, nucleon and Δph 7−67741
$\rho\rightarrow2\pi$, width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
$^2H(\gamma,pn)$, above π threshold, coupled channel anal. with Δ degrees of freedom 7−102858
$^{206}Hg(0^+)\rightarrow{}^{206}Tl(0^-)$, renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839
$^{206}Tl(0^-)\rightarrow{}^{206}Pb(0^+)$, renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839

meson hadronic decay
see also kaon hadronic decay
$\Delta I=1/2$ rule, scalar diquarks contrib., colour triplet particles, operator product expansion 7−134994
$|\Delta I|=1/2$ rule, consequences for ϵ'/ϵ and B and D decays 7−128883
charmed and beautiful hadrons, lifetime hierarchy 7−116168
D hadronic decays, interplay between QCD coeffs. and annihilation terms 7−121497
flux tube and the flux tube breaking amplitude in the harmonic approximation 7−102690
heavy quarkonium, phenomenological pot. and decay props. 7−81132
hybrid mesons, decay modes and Primakoff prod. 7−81180
neutral tensor mesons, f, f′, θ, quark and gluon content, EM and hadronic decays 7−73606
tensor glueball decay, flavour independence hypothesis 7−73642
vector meson radiative decays, v^2/c^2 corrections to widths 7−135132
weak hadronic charmed meson decay, D and F mesons, QCD sum rules, decay partial widths 7−128887
$0^{++}(1750)\rightarrow\eta\eta$, obs in π^-p 38 GeV/c interaction 7−81238
$A^-_2(1320)\rightarrow\eta\pi^-$ ($\eta\rightarrow\gamma\gamma$), exptl. search, π^-p,0.5-3.5 GeV/c study 7−140929
$A_1\rightarrow\rho\pi$, mass and width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
$a_2\rightarrow\pi^+\pi^-\pi^-$, mass resolution, decay modes 7−81234
b→5γ, four-generation model, QCD corrections, branching ratios, top-quark mass, B→K*γ appl. 7−135131
B→D*π(D*$\pi\pi$), mass differences and branching fractions 7−135109
B→Dπ(D$\pi\pi$), mass differences and branching fractions 7−135109
B→Higgs+hadrons, Sudakov suppression form factor 7−81201
B→K$^+$(K$^-$, K^0/$\bar{K}^0$)X, branching ratios 7−89500
B→K*γ, prediction as standard model test 7−121515

meson hadronic decay continued
B→K*γ, squark and gluino mass constraints, spontaneously broken minimal supergravity 7−135103
B nonleptonic and semileptonic decays, b→u and b→c transitions, comparisons of exclusive decay rates 7−116161
B→pseudoscalar mesons, SU(4) relations in the standard model 7−121496
B→sγ, QCD enhancement 7−121514
B-meson decay, charmed baryon prod. 7−116165
$B^0\rightarrow D^{0*}\gamma$, probe for short-distance QCD corrections 7−128895
$B^0\rightarrow\pi^+\pi^-$, valence quark model, effective QCD coefficients 7−81178
B^0-$\bar{B}^0$ nonleptonic decay, CP nonconservation effects 7−135007
$B_s\rightarrow F^\pm K^\mp$, CP violation in B_s-$\bar{B}_s$ system 7−140827
b′b′→qq̄, l^+l^-, $\nu\bar{\nu}$ (b′≡fourth generation quark), weak interaction decay rates 7−89499
$C(1480)\rightarrow\phi\pi^0$, mass and width determ., $\pi^-p\rightarrow Cn$, 32.5 GeV meas. 7−89498
$\chi_b\rightarrow\gamma Y$, χ_b spin states meas., $e^+e^-\rightarrow\Upsilon(2S)\rightarrow\gamma\chi_b$ cascade study 7−73662
χ_c decay product angular distributions, gluon polarization calcs. 7−135114
D→$\eta\pi\pi$, meson spectrum, s$\bar{s}$-dominant quark composition 7−135111
D→K$\bar{K}\pi$, meson spectrum, s$\bar{s}$-dominant quark composition 7−135111
D meson, lifetime determination and model-independent anal. 7−81179
D→mesons, analysis based on SU(3) symmetry and final-state interactions 7−102735
D→$\phi\pi$, cross section meas. at Mark III expt. 7−102736
$D^0\rightarrow K^-\pi^+$, lifetime meas. at $\sqrt{s}$ = 10.58 GeV 7−121498
$D^0\rightarrow\bar{K}^0\phi$, valence quark model, effective QCD coefficients 7−81178
$D^{+,0}$ two-body decays, quark diagram scheme anal. 7−116162
$D^+\rightarrow K^-\pi^+\pi^+$, lifetime meas. at $\sqrt{s}$ = 10.58 GeV 7−121498
$D^{\pm,0}$ lifetime measurements 7−121499
$D^\pm\rightarrow K^\phi K^\pm$, cross section meas. at Mark III expt. 7−102736
$D_5\rightarrow\rho\pi$, valence quark model, effective QCD coefficients 7−81178
$D_s{}^\pm$, fragmentation props. 7−67635
$D^0\rightarrow K^0\bar{K}^0$, weak decay mechanism, hadronic final-state interactions, branching ratio quark diagrams 7−135106
$D_s\rightarrow\phi\pi^\pm$, $\phi\rightarrow K^+K^-$, D_s lifetime meas. 7−140931
$D_s{}^+\rightarrow0\pi^+$, lifetime meas. at $\sqrt{s}$ = 10.58 GeV 7−121498
$D_s{}^+\rightarrow\phi\pi^+(K^{*0}K^+)$, lifetime meas. 7−89501
$D_s{}^+\rightarrow\rho^0\pi^+$, decay search, evidence for quark annihilation 7−135108
D*→Dγ, cross section meas. at Mark III expt. 7−102736
$D^{0,\pm,*\pm}$, fragmentation props. 7−67635
DD̄→qq̄, l$\bar{l}$, $\nu\bar{\nu}$ (D=E_6 quark), weak interaction decay rates 7−89499
E→K$\bar{K}\pi$, meson spectrum, s$\bar{s}$-dominant quark composition 7−135111
$\eta\rightarrow3\pi^0$, isospin nonconserving processes, light quark mass ratios 7−108913
$\eta(\eta')\rightarrow\pi^+\pi^-\gamma$, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$\eta'(958)\rightarrow\eta\pi^0\pi^0$, linear matrix element, Dalitz variable dependence, IHEP accelerator *(German)* 7−128885
$\eta'\rightarrow\eta$H, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
f(1270)→$\pi^+\pi^-$, branching ratio meas., polarization structure 7−89508
F^+ two-body decays, quark diagram scheme anal. 7−116162
f′(1525)→K^+K^-, branching ratio meas., polarization structure 7−89508
G(1440) meson, hadronic decay and J^P assignment, mass and width 7−67616
G(1590) scalar resonance, exotic nature, hadronic decays, mass spectra in π^-p and K$^-$p 7−116166
G→$\eta\eta(\eta\eta')(\eta'\eta')(K^+K^-)$, glueball decays, anti-selection rule 7−140933
Gh′→$\eta2\pi$, Chiral lagrangians, predictive power; renormalisation effects, quark and baryon loop duality 7−134976
$N-\Delta$ transition form factor and anomalous Ψ-decays into octet-decuplet baryon-antibaryon pairs 7−73653
$\omega\rightarrow3\pi$, QCD bosonization, meson effective action, phenomenology, parameters, global colour symmetry model 7−128847
$\Omega^-\rightarrow{}^0K^-$, relative decay rate calcs, w.r.t. $\pi^+\Omega^-\rightarrow\Lambda^0K^-\pi^-$ band state decay *(Chinese)* 7−102785
$\bar{p}(\bar{q}qg)\rightarrow\rho\pi,K^*K,\pi\gamma,\eta\pi,\eta'\pi$, QCD sum rule anal. 7−95855
$\bar{p}p\rightarrow\chi_{1,2}\rightarrow\gamma\psi\rightarrow\gamma e^+e^-$, angular distribs., χ radiative transitions 7−135107
$\bar{p}p\rightarrow\psi X$, ψ-hadroproduction, signals for B→ψX and $\chi\rightarrow\psi\gamma$ 7−73671
$\phi\rightarrow K_SK_L$, CP and CPT violation in the K^0-$\bar{K}^0$ system 7−89393
$\phi\rightarrow\pi^+\pi^-$, decay probability, interference phase 7−81177
$\psi\rightarrow B\bar{B}$, quark mass effects for baryon-antibaryon system 7−89497
$\psi\rightarrow$baryons, SU(2) and SU(3) violation 7−135102
ψ decays, glueball candidate status, Mark III results 7−102737
$\psi\rightarrow\gamma K^+K^-$, branching ratio meas. 7−89508
$\psi\rightarrow\gamma\omega\omega$, pseudoscalar $\omega\omega$ prod. at threshold, bump in mass distrib. 7−116159
$\psi\rightarrow\gamma\pi^+\pi^-$, branching ratio meas. 7−89508
$\Psi\rightarrow\gamma\theta(1690)$, glueballs and helicity amplitudes, $(TM1)^2$ and $(TE1)^2$ perturbative calcs. 7−135100
$\psi\rightarrow KK\pi\omega(\phi)$, ang. distrib., J^P assignments 7−121500
$\psi\rightarrow\omega\pi^+\pi^-$, theoretical approach to enhancement at low $\pi\pi$ masses 7−95899
$\psi\rightarrow p\bar{p}(\Lambda\bar{\Lambda})(\Sigma^0\bar{\Sigma}^0)$, ang. distribs. and branching ratios 7−135101
$\psi(\psi')\rightarrow\rho\pi$, $K^*\bar{K}$, exclusive charmonium decays 7−135112
$\psi\rightarrow\xi X$, $\xi(2230)$ status, Mark III results 7−102737
$\Psi'\rightarrow\Psi\pi^0$, isospin nonconserving processes, light quark mass ratios 7−108913
$\rho\rightarrow2\pi$, width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
t 7−81176
$\theta(1270)\rightarrow K^+K^-$, branching ratio meas. 7−89508
$\theta(1720)\rightarrow\pi^+\pi^-$, branching ratio meas., $\theta(1720)$ spin determ., polarization structure 7−89508
$\Upsilon(2S)\rightarrow\Upsilon(1S)\pi^+\pi^-(\mu^+\mu^-)(\eta)$, branching ratio meas. 7−140930
$\Upsilon(2S)\rightarrow\gamma\chi_{b1},\chi_b$ states spin meas., $e^+e^-\rightarrow\Upsilon$ cascade study 7−73662
$\Upsilon(4S)\rightarrow B^0\bar{B}^0$, observation of B^0-$\bar{B}^0$ mixing 7−116160
$\Upsilon\rightarrow\gamma X$, search for light gluinos 7−73643
$\Upsilon\rightarrow H+$hadrons, light Higgs boson in supersymmetric models 7−73644
$\Upsilon'\rightarrow\Psi H$, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
$\Upsilon''\rightarrow\Upsilon H$, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
B nonleptonic rate exclusive decays without charm particles, CP noninvariance 7−135113
$\eta'\rightarrow\eta$H, gluonic mechanisms in Higgs-light hadron interactions 7−81173
$\Psi\rightarrow\omega K\bar{K}\pi$, X(1420) exotic quark-gluon hybrid obs. 7−81265

meson interactions *see meson-baryon interactions; meson-deuteron interactions; meson-meson interactions; meson-nucleus reactions*

meson leptonic decay
see also kaon leptonic decay
heavy quarkonium, phenomenological pot. and decay props. 7−81132
relativistic quarkonium model, gluonic correction to lepton pair decays 7−89496
toponium, spectroscopy, energy levels, decay widths and E1 transition rates 7−73598
$b'\bar{b}' \rightarrow q\bar{q}$, l^+l^-, $\nu\bar{\nu}$ (b'≡fourth generation quark), weak interaction decay rates 7−89499
$D^0 \rightarrow e^{\pm}\mu^{\mp}$, cross-section times branching ratio 7−81170
$D^0 \rightarrow e^{\mp}\mu^{\pm}$, branching ratio upper limit 7−95891
$D^0 \rightarrow \mu e$, lepton family number decay search, branching fraction upper limit 7−121492
$D^{\pm,0}$ lifetime measurements 7−121499
$D\bar{D} \rightarrow q\bar{q}$, $l\bar{l}$, $\nu\bar{\nu}$ (D=E_6 quark), weak interaction decay rates 7−89499
$p\bar{p} \rightarrow \chi_{1,2} \rightarrow \gamma\psi \rightarrow \gamma e^+e^-$, angular distribs., χ radiative transitions 7−135107
$\pi^+ \rightarrow \nu e^+$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
ψ, spectroscopy, energy levels, decay widths and E1 transition rates 7−73598
Υ(1S) decay, baryon decay rate enhancements 7−67636
Υ(1S)$\rightarrow e^+e^-(\mu^+\mu^-)$, branching ratio meas. 7−140930
Υ$\rightarrow \mu^+\mu^-(e^+e^-)$, χ_b spin states meas., $e^+e^- \rightarrow$Υ(2S)$\rightarrow\gamma\chi_b$ ($\chi_b \rightarrow \gamma$Υ) cascade study 7−73662
Υ$\rightarrow\mu\mu$, branching ratio meas. 7−102734
Υ″$\rightarrow\mu\mu$, branching ratio meas. 7−108911
$\pi^0 \rightarrow \lambda,\bar{\lambda},\gamma$, branching fraction for missing energy 7−102733
($\bar{Q}Q$) leptonic decay rates, wave function divergence cancellation, QED version 7−128880
$\bar{Q}Q$ potential model from QCD and data anal., c̄c, b̄b and t̄t masses and decays *(Chinese)* 7−121441
Υ, spectroscopy, energy levels, decay widths and E1 transition rates 7−73598

meson magnetic moment
No entries

meson mass
σ-model, chirally gauged, spin 0, spin 1 meson anal. 7−108807
axial charmed meson in QCD sum rules 7−73605
charmed mesons in a simple two-step potential model, mass spectra and decay widths investig. 7−73634
chiral SU(6)⊗SU(6) symmetry breaking and the pseudoscalar meson masses 7−81059
exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
glueball, scalar, lightest, mass and wave fn., SU(3) lattice gauge anal. 7−116075
glueball mass estimate, gluon bound state waved fns., Bethe-Salpeter eqns., QCD sum rules method 7−135038
glueball mass in SU(2) Yang Mills theory 7−95844
glueball masses as a test of the $1/N$ expansion 7−89440
glueball masses in QCD in the presence of dynamical fermions in a small periodic box 7−95837
hermaphrodite mesons, light, spectra and couplings, QCD sum rule anal. 7−95855
I=0 mesons, predictions from Paschen-Back effect anal. of dyonium 7−121399
lattice gauge theories, confinement and bound states, stat. mech. methods 7−80983
lattice QCD, glueball masses and string tension 7−116124
lattice QCD, topological excitation, U(1) problem, quark and meson propagators, Atiyah-Singer index 7−121444
light meson masses in the quarkonium model 7−89445
light meson systems, QCD and quark condensate values 7−89443
linear plus Coulomb pot., meson masses and classification schemes, QCD calcs. 7−89446
pure SU(2) gauge theory, low lying energies up to 5 glueball masses 7−121396
QCD, dynamical symmetry breaking, quark masses, decay const., renormalisation group corrections, meson masses 7−135039
QCD sum rules and vector-meson masses and widths 7−89451
spectra, relativistic effects in field theory 7−128873
spin-orbit coupling in the string model, meson spectrum 7−67609
standard six-quark model, $|\epsilon'/\epsilon|$ implications, K_L-K_S mass difference, CP-nonconservation 7−67538
$SU(2)_L \times U(1)_Y \times SU(n)_{family}$, Cabibbo angle and meson masses, charge-commutation-rel. approach 7−128819
SU (2) lattice gauge theory, coupling <1, glueball mass, Monte Carlo variational study 7−140817
toponium properties and current-constituent quark transition, quark-interaction potential anal. 7−135022
vector and pseudoscalar meson nonet masses, quark loop model framework 7−95860
vector and pseudoscalar mesons, mass formula in constituent quark model 7−81130
$0^{++}(1750) \rightarrow \eta\eta$, obs in π^-p 38 GeV/c interaction 7−81238
A_1, mass and cross section parameters from $\tau \rightarrow \pi^+\pi^+\pi^-\upsilon$ 7−108920
$A_1 \rightarrow \rho\pi$, mass and width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
$a_2 \rightarrow \pi^+\pi^-$, mass resolution, decay modes 7−81234
$B \rightarrow D^*\pi(D^*\pi\pi)$, mass differences and branching fractions 7−135109
$B \rightarrow D\pi(D\pi\pi)$, mass differences and branching fractions 7−135109
$\eta_c(2980)$ existence in SU(4) symmetry 7−67528
η' mass, glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
η'', mass and Em decay 7−128896
G(1440) meson, hadronic decay and J^P assignment, mass and width 7−67616
G(1590) scalar resonance, exotic nature, hadronic decays, mass spectra in π^-p and K^-p 7−116166
g(1729), production in π^+p, 16 GeV/c, cross section, mass, width determ. 7−67664
Λ P-wave spin-orbit mass splitting, quark potential model, meson spectroscopy 7−109048
$\bar{q}q$ bound states, full and reduced Salpeter eqn. 7−135050
$\bar{Q}^2Q^2$ (1480) evidence in p̄n and γγ studies 7−102765
σ-scalar meson, high density behavior, nuclear matter, QCD calcs. 7−135047

meson mass continued
Υ, mass spectrum, decay-widths, anal. using local equivalent Schrodinger eqn. with relativistic kinematics 7−67615
Υ(1^1P_1), mass and QCD scale parameter, asymptotic behaviour 7−135044
X(1110), quasinuclear NN̄ bound state, mass and width 7−73666
$e^+e^- \rightarrow D_s^{\pm}D_s^{*\mp}$, $\sqrt{s}$=4.14 GeV mass and mass differences 7−95919
$\bar{p}p \rightarrow J/\psi$, mass meas. 7−81223
$\bar{Q}Q$ potential model from QCD and data anal., c̄c, b̄b and t̄t masses and decays *(Chinese)* 7−121441
$qq\bar{q}\bar{q}$ states, masses in Beth-Salpeter model 7−95723

meson-meson interactions
see also meson-meson scattering; pion-pion interactions
flip-flop model for quark confinement 7−128844

meson-meson scattering
see also meson-meson interactions; pion-pion scattering
No entries

meson-nucleus reactions
for inelastic meson-nucleus scattering, see "meson-nucleus scattering"
see also kaon-nucleus reactions; meson-baryon interactions; meson capture; pion-nucleus reactions
QCD, diffractive dissociation on nuclei, leading log approx., wave fn. penetration, dissociation cross section 7−128856

meson-nucleus scattering
see also kaon-nucleus scattering; meson-baryon scattering; pion-nucleus scattering
No entries

meson photoproduction
large p_T π photoproduction processes, higher-twist contrib. extraction 7−128903
LUCIFER program for high p_T photoprod., QED and QCD Compton processes, meson prod. 7−140889
αN, 90 GeV, ψ and ψ′ photoprod., inelastic cross section 7−73657
$\gamma\gamma \rightarrow \pi^+\pi^-$, pion pair production and yield near threshold at DCI collider 7−128929
$\gamma\gamma \rightarrow \pi\pi$, low energy cross section, QED Born amplitude comparison 7−89536
$\gamma\gamma \rightarrow \pi\pi$, low energy cross section and QED Born amplitude 7−116208
$\gamma N \rightarrow \pi N$, spin-$^3/_2$ particle propagator contribs. 7−128901
$\gamma N \rightarrow \psi X$, gluon struct. fn., small-x behaviour 7−102753
$\gamma p \rightarrow \bar{c}c + X$, charm photoproduction momentum distributions, lattice contributions using Hamiltonian QCD 7−116186
$\gamma p \rightarrow K^+\Lambda^0$, pseudovector versus pseudoscalar theory, diagrammatic techniques, coupling constants 7−116185
γγ physics at LEP 200, resonance excitation, meson period., structure functions 7−140971
$^2H(\gamma,\pi^0)^2H$, 500-800 MeV, differential cross section, double scattering, dibaryon resonance contribution 7−141040
$^{16}O(\gamma,\pi^{\pm})$, 200-350 MeV, π spectra and cross section determ. 7−129016
π photoproduction from a baryon unitary theory in chiral bag model 7−121520
π photoproduction in Δ-channel, dynamical model 7−128900

meson production
see also kaon production; meson photoproduction; pion production
deeply inelastic diagram asymptotics calcs. with vector mesons in exchange channel 7−89522
double-meson inclusive interaction in baryon fragmentation region, anal. 7−140957
hybrid mesons, decay modes and Primakoff prod. 7−81180
quarkonium physics, new leptons and quarks, exotic particles form LEP 200 expts. 7−140952
TWISTER program for QCD high p_T scatt. processes 7−140888
$A_1 \rightarrow \rho\pi$, mass and width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
B factory, e^+e^- linear collider 7−122253
B̄B factory, e^+e^- linear collider 7−122252
$D \rightarrow \phi\pi$, cross section meas. at Mark III expt. 7−102736
$e^-e^+ \rightarrow \eta\rho$, mass spectrum interference effects 7−81166
$e^+e^- \rightarrow$ heavy mesons, perturbative QCD predictions 7−102756
$e^+e^- \rightarrow D^0, D^{\pm}, D^{*\pm}, F^{\pm}, \Lambda_c^{\pm}$, $\sqrt{s}$=10 GeV, continuum production and fragmentation props. 7−67635
$e^+e^- \rightarrow D\bar{D}^*$, cross section meas. at Mark III expt. 7−102736
$e^+e^- \rightarrow e^+e^-\eta'$, η' formation in photon-photon collisions, spin anal., γγ-width 7−81219
$e^+e^- \rightarrow \omega \rightarrow \pi^+\pi^-\pi^0$, ω-meson total width meas 7−89512
$e^+e^- \rightarrow \pi^+\pi^-$, ρ′(1250), ρ″(1600) anal. using pion form factor model 7−67634
$e^+e^- \rightarrow$ Υ(2S)$\rightarrow\gamma\chi_b$, χ_b states spin meas. 7−73662
$\gamma^*p \rightarrow \rho p$, exclusive ρ prod. in deep inelastic scatt., pomeron approach 7−73656
$\gamma\gamma \rightarrow VX$, V=$\rho^0$, ω, φ, possibility of expt. investigation of QCD pomeron 7−67678
γγ→vector mesons, possibility of expt. investigation of QCD pomeron 7−67678
γN→charm, total cross-sections, photon-gluon fusion model 7−81205
$\gamma N \rightarrow D^0, D^+, F^+$, analysis of initial data 7−67627
$\gamma p \rightarrow \eta\omega p$, 25-50 GeV, ηω mass spectrum anal., obs. of peak 7−95915
$\gamma p \rightarrow \eta\rho$, diffractive photoproduction, mass spectrum interference effects 7−81166
$\gamma\rho \rightarrow A_1^+ n$, mass and width determ. 7−81211
ι meson, prod., decay and mixing models, quark-glue coupling 7−135043
K^-p interactions, branching ratios, strange and strangeonium meson prod. 7−102770
lN→ψX, gluon struct. fn., small-x behaviour 7−102753
$^{20}Ne(\bar{\nu}_\mu, \mu^+\rho^-)$, cross section meas., CVC hypothesis, vector meson dominance comparisons 7−141043
$\nu(\bar{\nu})$N charged current interactions in Ne, spin alignment of ρ^0 produced 7−81168
$\nu_\mu N \rightarrow \mu^- DX$, reaction rate calcs., $\nu_\mu N \rightarrow \mu^- e^+ X$ study 7−140926
pN→charmed particles, detection of decays in emulsion 7−81257
$pN \rightarrow D_s\bar{D}_s X$, 400 GeV, tau-neutrino interactions, BEBC beam dump expt., kinematic method, charged currents 7−135095
$\bar{p}n \rightarrow \rho^- X(1110)$, quasinuclear NN̄ bound state, mass and width 7−73666
pp, 400 GeV/c, inclusive D and D̄ prod., differential cross sections 7−95949
$\bar{p}p \rightarrow b\bar{b}$, cross section calcs. 7−67663
pp collisions, E=24.3 GeV, π^0 and η inclusive production cross sections 7−128917
$pp \rightarrow \eta' X$, high p_T prompt prod., higher twist mechanism and parton scatt. 7−135158

meson production continued
$\bar{p}p \rightarrow fX$, 32 GeV/c, topological and differential cross section meas. 7−95951
$\bar{p}p \rightarrow K^+K^-$, $\xi(2.2)$ formation search 7−95932
pp→mesons+baryons, 360 GeV/c, quark-diquark fragmentation mechanism, parton model comparisons 7−81255
$\bar{p}p(pp) \rightarrow$ vector mesons, fusion recombination model anal. 7−135167
$\bar{p}p \rightarrow$pseudoscalar mesons, protonium annihilation, threshold helicity amplitude anal. 7−74789
$\bar{p}p \rightarrow \psi X$, ψ-hadroproduction, signals for $B \rightarrow \psi X$ and $\chi \rightarrow \psi\gamma$ 7−73671
$\bar{p}p \rightarrow \rho^0 X$, 32 GeV/c, topological and differential cross section meas. 7−95951
$\bar{p}p \rightarrow S^*X$, 32 GeV/c, topological and differential cross section meas. 7−95951
$\pi N \rightarrow \eta N$, chiral SU(3) cloudy bag model anal., quark structure identification with N(1535), N(1650), N(1440) 7−95938
$\pi N \rightarrow \rho^- X$, 200 GeV, ρ^- radiative width meas. 7−116177
$\pi^- N \rightarrow B\bar{B}X$, cross-section, χ_F distrib. 7−81250
π^-N in emulsion, 350 GeV/c, double associated prod. of charmed particles 7−81248
$\pi^- p \rightarrow a_2 N$, production enhancement 7−81234
$\pi^- p \rightarrow C(1480)n$, $C \rightarrow \phi\pi^0$, 32.5 GeV, cross section, mass and width determ. 7−89498
$\pi^- p \rightarrow D^0 X$, inclusive cross section meas. 7−95953
$\pi^- \bar{p} \rightarrow \eta n$, polarization parameter meas. at 40 GeV/c 7−108939
$\pi^+ p \rightarrow g(1729)X$, 16 GeV/c, cross section, mass, width determ. 7−67664
ψ momentum distrib. and formation in presence of quark-gluon plasma 7−121684
S*, structure from nuclear production expts. 7−128919
$\tau \rightarrow \nu_\tau \eta\pi$, second-class currents or isospin symmetry breaking effects, anal. 7−95903
$\tau \rightarrow \nu_\tau \eta\pi(2\pi)$, decays involving η-meson in standard model 7−102740
$\tau^+ \rightarrow \pi^+ \eta \bar{\nu}_{\tau\eta}$ branching ratio meas. 7−95904
$e^+e^- \rightarrow D_s^{\pm} D_s^{*\mp}$, $\sqrt{s}$=4.14 GeV mass and mass differences 7−95919
ep→mesons, Thomson energy correlation 7−81208
$^3He(\pi^-,\eta)^3H$, 680 MeV/c, η-meson prod. cross section 7−89583
$\bar{p}p \rightarrow J/\psi$, mass meas. 7−81223

meson resonances
see also D mesons; eta meson resonances; omega mesons; phi mesons; psi mesons; rho mesons; Upsilon meson resonances
$|\Delta I| = {}^1/_2$ rule, consequences for ϵ'/ϵ and B and D decays 7−128883
axial charmed meson in QCD sum rules 7−73605
charmed and beautiful hadrons, lifetime hierarchy 7−116168
charmonium→$\gamma\gamma\gamma$, direct obs. in $\bar{p}p$, partial width meas. for η_c and χ regions 7−81196
charmonium radiative decays, relativistic treatment and heavy-quark approximation 7−116178
chiral SU(6)⊗SU(6) symmetry breaking and the pseudoscalar meson masses 7−81059
deeply inelastic diagram asymptotics calcs. with vector mesons in exchange channel 7−89522
exotic hadronic matter in cavity mode QCD 7−121437
finite temperature changes of π and σ characters in QCD 7−73603
four-quark condensates, contribs. to QCD sum rules for ρ and A_1 7−116097
glueball, 0^{++}, asymptotic scaling of mass and lattice QCD β-fn. 7−95856
glueball, scalar, lightest, mass and wave fn., SU(3) lattice gauge anal. 7−116075
glueball and torelon masses from lattice gauge theory 7−121331
glueball condensate vacuum, dynamical pions and kaons, time independent/dependent fields, massive quarks 7−128836
glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
glueball correlation, finite size effects and twisted boundary conditions 7−89436
glueball mass estimate, gluon bound state waved fns., Bethe-Salpeter eqns., QCD sum rules method 7−135038
glueball mass in SU(2) Yang Mills theory 7−95844
glueball masses as a test of the $1/N$ expansion 7−89440
glueball masses in QCD in the presence of dynamical fermions in a small periodic box 7−95837
glueballs, structure study and search *(German)* 7−121425
glueballs, velocity of sound, confined and deconfined phases, thermodynamical description 7−135056
gluon confinement model using colour super current, glueball state calcs. 7−140886
gluon fields, second quantisation in harmonic current confinement, glueball candidates 7−121435
heavy mesons, spectroscopy and decay 7−102685
heavy quark systems, lattice QCD calc. of spin-depend. pots. 7−135046
heavy quarkonia, binding energy levels *(Chinese)* 7−102698
heavy quarkonia, prod. from gluons, helicity amplitudes in perturbative QCD 7−135028
heavy quarkonium, phenomenological pot. and decay props. 7−81132
hybrid mesons, coupled QCD sum rules 7−67532
light meson masses in the quarkonium model 7−89445
massive pseudoscalar mesons, quark spectrum asymm. and effective Lagrangian 7−135035
neutral pseudo-scalar mesons, CP noninvariance, EPR paradox 7−128342
neutral tensor mesons, f, f', θ, quark and gluon content, EM and hadronic decays 7−73606
o^{++} trigluonium sum rules 7−128845
pseudoscalar glueball production in J/Ψ radiative decays 7−81195
pseudoscalar meson form factors, SU(3) breaking mechanism, constituent quark model 7−135121
pure SU(2) gauge theory, low lying energies up to 5 glueball masses 7−121396
quarkonia systems, spin-independent and spin-dependent interactions, confining interactions 7−135032
quarkonium, reduced wave function at the origin, asymptotic expansion 7−67593
quarkonium physics, new leptons and quarks, exotic particles form LEP 200 expts. 7−140952
quasiboson approximation for an interacting many-gluon system 7−128832
relativistic quarkonium model, gluonic correction to lepton pair decays 7−89496
spontaneously broken quintet baryon model for strong interactions 7−95720

meson resonances continued
standard model re-examination in the light of B_d^0-$\bar{B}_d^0$ and B_s^0-$\bar{B}_s^0$ mixing 7−116107
SU (2) lattice gauge theory, coupling <1, glueball mass, Monte Carlo variational study 7−140817
superheavy quarkonium production and decays, Higgs-boson signal 7−102679
tensor glueball decay, flavour independence hypothesis 7−73642
toponium, spectroscopy, energy levels, decay widths and E1 transition rates 7−73598
toponium properties and current-constituent quark transition, quark-interaction potential anal. 7−135022
toponium-stoponium mixing 7−95786
unequal mass quarkonium spectra in a consistent quark model 7−89452
weak hadronic charmed meson decay, D and F mesons, QCD sum rules, decay partial widths 7−128887
0^{+-} exotic scalar meson from QCD sum rules 7−73604
$0^{++}(1750) \rightarrow \eta\eta$, obs in π^-p 38 GeV/c interaction 7−81238
$A^-_2(1320) \rightarrow \eta\pi^-$ ($\eta \rightarrow \gamma\gamma$), exptl. search, π^-p,0.5-3.5 GeV/c study 7−140929
A_1, mass and cross section parameters from $\tau \rightarrow \pi^{\mp}\pi^+\pi^-\nu$ 7−108920
$A_1 \rightarrow \rho\pi$, mass and width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
$a_2 \rightarrow \pi^+\pi^-\pi^-$, mass resolution, decay modes 7−81234
$B \rightarrow D_s X$, inclusive production, branching ratios 7−81175
$B \rightarrow D^*\pi(D^*\pi\pi)$, mass differences and branching fractions 7−135109
B decays, four-generation effects and quark mixing parametrization 7−135104
$B \rightarrow De\bar{\nu}$, weak mixing angles from semileptonic decays in quark model, comment 7−81171
$B \rightarrow D\pi(D\pi\pi)$, mass differences and branching fractions 7−135109
B→Higgs+hadrons, Sudakov suppression form factor 7−81201
$B \rightarrow K^+(K^-, K^0/\bar{K}^0)X$, branching ratios 7−89500
$B \rightarrow K^*\gamma$, prediction as standard model test 7−121515
$B \rightarrow K^*\gamma$, squark and gluino mass constraints, spontaneously broken minimal supergravity 7−135103
$B \rightarrow Kl^+l^-(K\nu\bar{\nu})$ implications for heavy t quark and fourth generation 7−81172
$B \rightarrow K\mu^+\mu^-$, branching ratio and light Higgs, three- and four-generation models 7−140927
$B \rightarrow l^+l^-X$, flavour changing neutral current decay, branching fraction 7−102732
B meson lifetime studies at PETRA 7−102686
B→pseudoscalar mesons, SU(4) relations in the standard model 7−121496
$B \rightarrow s\gamma$, QCD enhancement 7−121514
$B \rightarrow u l\nu(cl\nu)$, branching ratio, end point lepton momentum spectrum 7−121494
B-meson decay, charmed baryon prod. 7−116165
$B^0 \rightarrow D^{0*}\gamma$, probe for short-distance QCD corrections 7−128895
B^0 decays, prospects for CP violation observations 7−140857
$B^0 \rightarrow \pi^+\pi^-$, valence quark model, effective QCD coefficients 7−81178
B^0-$\bar{B}^0$ mixing, CP violation in supersymmetric models, squark and gluino masses 7−128807
B^0-$\bar{B}^0$ mixing, Cabibbo-Kobayashi-Maskawa matrix elements 7−95801
B^0-$\bar{B}^0$ mixing, standard three family model 7−140894
B^0-$\bar{B}^0$ oscillations, CERN collider search 7−81263
B_d-$\bar{B}_d$ mixing data and standard model, t quark mass bound inference 7−140857
B_{d_0}-$\bar{B}_{d^0}$ mixing, ARGUS meas., implications 7−135007
B_d^0-$\bar{B}_d^0$ mixing, CP violation searches, top quark mass, bound on KM angles 7−140865
B_d^0-$\bar{B}_d^0$ oscillations and t quark mass, ARGUS data and standard theoretical anal. 7−140858
B^O decays, ultra-heavy quarks in rare decays 7−102731
$B_s \rightarrow F^{\pm}K^{\mp}$, CP violation in B_s-$\bar{B}_s$ system 7−140827
$b'\bar{b}' \rightarrow q\bar{q}$, l^+l^-, $\nu\bar{\nu}$ (b'≡fourth generation quark), weak interaction decay rates 7−89499
(bb), non-null probability of quark tunnelling 7−128831
$C(1480) \rightarrow \phi\pi^0$, mass and width determ., $\pi^-p \rightarrow Cn$, 32.5 GeV meas. 7−89498
(cc), non-null probability of quark tunnelling 7−128831
$\chi \rightarrow H^0X$, Higgs boson production in hadronic decays of *C*-even quarkonia 7−81174
$\chi \rightarrow H^0gg$, Higgs production, total decay widths 7−73679
$\chi_0 \rightarrow \psi\gamma$ (2γ) ($e^+e^-\gamma$), gluonic power corrections to QCD sum rules 7−73654
$\chi_b \rightarrow \gamma Y$, χ_b spin states meas., $e^+e^- \rightarrow \Upsilon(2S) \rightarrow \gamma\chi_b$ cascade study 7−73662
χ_b states, spin analysis from $e^+e^- \rightarrow \Upsilon(2S)$ cascade 7−73662
χ_c charmonium, ang. distrib. and gluon polarization study 7−81136
χ_c decay product angular distributions, gluon polarization calcs. 7−135114
χ'_b fine splittings, preliminary results from CUSB-II 7−68159
$D\bar{D} \rightarrow q\bar{q}$, $l\bar{l}$, $\nu\bar{\nu}$ (D=E_6 quark), weak interaction decay rates 7−89499
$E \rightarrow KK\pi$, meson spectrum, $s\bar{s}$-dominant quark composition 7−135111
$e^+e^- \rightarrow l^{++}(l^{-+})X$, cross-section for production, $\gamma\gamma^*$ decay rate 7−102758
$e^+e^- \rightarrow b\bar{b}$, 29 GeV, lifetime of hadrons containing b-quark 7−140949
$e^+e^- \rightarrow C(1480)$, VEPP-2M storage ring search 7−121527
$f(1270) \rightarrow \pi^+\pi^-$, branching ratio meas., polarization structure 7−89508
$F^{\pm}$ meson lifetime studies at PETRA 7−102686
$f'(1525) \rightarrow K^+K^-$, branching ratio meas., polarization structure 7−89508
G(1440) meson, hadronic decay and J^P assignment, mass and width 7−67616
G(1590) scalar resonance, exotic nature, hadronic decays, mass spectra in π^-p and K^-p 7−116166
g(1729), production in π^+p, 16 GeV/c, cross section, mass, width determ. 7−67664
$G \rightarrow \eta\eta(\eta\eta')(\eta'\eta')(K^+K^-)$, glueball decays, anti-selection rule 7−140933
$\gamma\gamma \rightarrow$ resonances, glueball spectroscopy at PEP 7−102648
$\gamma p \rightarrow \eta\omega p$, 25-50 GeV, $\eta\omega$ mass spectrum anal., obs. of peak 7−95915
$\gamma\rho \rightarrow A_1^+n$, mass and width determ. 7−81211
$\iota(1460)$ glueball candidate, mixing study in chiral symm. breaking framework 7−81131
ι meson, prod., decay and mixing models, quark-glue coupling 7−135043
$K^-p \rightarrow K^0\pi^+\pi^-n$, strange meson resonances obs. 7−135153
$\bar{p}p \rightarrow fX$, 32 GeV/c, topological and differential cross section meas. 7−95951
$\bar{p}p \rightarrow K^+K^-$, 1.3-1.5 GeV/c, $\xi(2230)$ narrow resonance search, invariant masses 7−140954
$\bar{p}p \rightarrow K^+K^-$, $\xi(2.2)$ formation search 7−95932

meson resonances continued
$\bar{p}p \rightarrow S^*X$, 32 GeV/c, topological and differential cross section meas. 7−95951
π-ρ-ω-A_1 system, baryons as solitons, hedgehog mass, baryon phenomenology 7−73529
ψ decays, glueball candidate status, Mark III results 7−102737
$\Psi \rightarrow \gamma\theta(1690)$, glueballs and helicity amplitudes, $(TM1)^2$ and $(TE1)^2$ perturbative calcs. 7−135100
$\bar{q}q$, energy level shift due to gluon condensate, QCD potential and sum rule anal. 7−108863
$\bar{q}q$, relativistic model Hamiltonian in two-particle Dirac eqn. 7−135033
$\bar{q}q$ bound state, variational calcs., integral eqn. comparison 7−128366
$\bar{q}q$ bound states, full and reduced Salpeter eqn. 7−135050
$\bar{Q}Q$ dielectric confinement, dielectric vacuum model, energy spin dependence 7−128837
$\bar{q}q$ mesons, systematization using QCD and Bethe-Salpeter eqn. 7−108804
$\bar{q}q$ potential and spin-spin interaction 7−121426
$\bar{q}q$ spectra momentum space integral eqns., soln. with confining potentials, eigenstate calcs. 7−89439
$\bar{q}q$ spectroscopy and asymptotic freedom, linear plus Coulomb potential anal. 7−116117
$Q^2\bar{Q}^2$ (1480) evidence in $\bar{p}n$ and $\gamma\gamma$ studies 7−102765
$qq\bar{q}\bar{q}$ candidate states, empirical basis 7−81110
S^*, structure from nuclear production expts. 7−128919
σ-scalar meson, high density behavior, nuclear matter, QCD calcs. 7−135047
t 7−81176
$\bar{t}t$ bound state, spectroscopy, decay modes and quark struct. determ. 7−128840
$\bar{t}t$-Z^0 mixing effects 7−102667
$\theta(1270) \rightarrow K^+K^-$, branching ratio meas. 7−89508
$\theta(1720) \rightarrow \pi^+\pi^-$, branching ratio meas., $\theta(1720)$ spin determ., polarization structure 7−89508
$\Upsilon(4S) \rightarrow B^0\bar{B}^0$, observation of B^0-$\bar{B}^0$ mixing 7−116160
X(1110), quasinuclear $N\bar{N}$ bound state, mass and width 7−73666
$\xi(2230)$, test of transverse magneticity 7−102701
B nonleptonic rate exclusive decays without charm particles, CP noninvariance 7−135113
$\iota(1440)$, radial excitation mixing 7−108861
$p\gamma \rightarrow b_1\pi p$, diffractive photoproduction and mass spectrum of hybrid states 7−81202
$\bar{Q}Q$ potential model from QCD and data anal., $\bar{c}c$, $\bar{b}b$ and $\bar{t}t$ masses and decays *(Chinese)* 7−121441
$qq\bar{q}\bar{q}$ states, masses in Beth-Salpeter model 7−95723
X(1420), exotic quark-gluon hybrid obs. in $\gamma\gamma$ scatt. and Ψ decay 7−81265

meson scattering *see meson-baryon scattering; meson-deuteron scattering; meson-meson scattering; meson-nucleus scattering*

meson spin and parity
pure SU(2) gauge theory, low lying energies up to 5 glueball masses 7−121396
$0^{++}(1750) \rightarrow \eta\eta$, obs in π^-p 38 GeV/c interaction 7−81238
χ_b states, spin analysis from $e^+e^- \rightarrow \Upsilon(2S)$ cascade 7−73662
G(1440) meson, hadronic decay and J^P assignment, mass and width 7−67616
$Q^2\bar{Q}^2$ (1480) evidence in $\bar{p}n$ and $\gamma\gamma$ studies 7−102765
$\theta(1720) \rightarrow \pi^+\pi^-$, branching ratio meas., $\theta(1720)$ spin determ., polarization structure 7−89508

mesonic atoms *see mesic atoms*

mesonic molecules *see mesic molecules*

mesons
for μ mesons see muons
see also cosmic ray mesons; eta mesons; kaons; meson resonances; pions
energy correlations, empirical approach 7−81141
form factor, perturbative QCD correction to hard-scatt. amplitude 7−108921
L=1 mesons and the four quark condensate in QCD sum rules 7−67580
mass quantization with micrononcausal structures 7−73522
particle physics concepts, basic theories, book 7−108061
pseudoscalar mesons, quark mass lower bounds from struct. characts. 7−81128
quantum field theory, bound state equations, radiation quanta, nonperturbative approx., QCD gauge invariant states 7−108744
scalar meson mixing in potential model 7−102725
SU(2) quenched lattice QCD with staggered fermions, meson spectrum and flavour symm. restoration 7−67574
vector and pseudoscalar mesons, mass formula in constituent quark model 7−81130
$D_5^{\pm}$, fragmentation props. 7−67635

mesosphere
3D circulation model including regional gravity wave activity 7−115120
dynamics, determ. from obs. of Na reson. fluoresc. line with tunable Nd:YAG lasers 7−72210
dynamics of middle atmosphere, review 7−120193
electrical conductivities in middle atmosphere over India, rocket-borne and balloon-borne meas. 7−127339
electrodynamic modification by electron precipitation of S Atlantic anomaly 7−94527
electron energy deposition from magnetosphere 7−115152
equatorial dynamics and tracer distribs., 2D model 7−127444
equatorial temp. response to solar activity (1971-82) 7−145645
gravity wave forcing in middle atmosphere, 3D hydrostatic model 7−114904
gravity wave momentum fluxes and mean flow accelerations at Adelaide, Australia 7−107593
gravity wave resonant parametric interactions 7−139821
gravity wave-tidal model to explain momentum flux observations 7−115123
gravity waves, lidar studies of Na layer over Urbana, Illinois 7−107599
gravity waves in middle atmosphere 7−145733
gravity waves propag. in equatorial atmosphere, ray paths anal. 7−127343
internal gravity wave excitation and propagation in GCM model 7−94526
internal gravity waves in mesosphere, from non-stationary troposphere sources *(Russian)* 7−94524
internal gravity waves model and influence on mean flow 7−139820
ion densities and mobilities in middle atmosphere over India, rocket-borne and balloon-borne meas. 7−127339
ionization and O_2 $^1\Delta_g$ state depletion during solar proton events 7−139827

mesosphere continued
Joule heating during 13 July 1982 solar proton event 7−115127
large scale struct. and circulation of N Hemisphere, MAP-WINE campaign 7−145594
laser-generated artificial guide star in Na layer 7−120186
lunar tides in middle and upper atmos., at Saskatoon 7−94532
MAP/WINE (Winter in N Europe), project overview 7−145665
medium frequency interferometry study 7−101614
mesopause, summer, background winds and waves struct., bistatic radar obs. 7−139809
mesopause region gravity waves over Adelaide, Australia, MF radar meas. 7−127625
middle atmosphere drag, effect on quasi-geostrophic simulations of stratosphere sudden warming 7−101443
minor constituent vertical distrib. in tropical middle atmos., review 7−87990
minor constituents in mesosphere and upper stratosphere, review 7−120192
noctilucent clouds, characts. and observability from the British Isles 7−134044
polar mesopause gravity wave activity in Na and OH nightglow 7−94533
pressure, detect. of 11 yr solar cycle 7−115121
radar incoherent scattering method for mesospheric parameters 7−120202
radar technique for turbulence measurement in mesosphere 7−101518
radiative heating and cooling rates climatologies, implications for diabatically diagnosed net circulation fields 7−114915
radiative heating-cooling and energetics of stratosphere and mesosphere, review 7−120128
radiative transfer scheme for 3D dynamical model 7−127472
radiowave scattering from meteor trails, spectral broadening of monochromatic waves 7−145726
solar constant changes and influences on Earth's atmos., conf., USA (1985) 7−72696
solar UV changes, influences on middle atmos. at low-latitude 7−79510
solar UV induced variations 7−79509
Stokes drift due to vertically propagating internal gravity waves in a compressible atmosphere 7−79728
stratospheric warmings effects, interannual variability 7−101613
temperature, altitude profile for aerospace vehicles design and operation 7−120183
temperature and OH layer height observations 7−145741
temperature fluctuations of mesosphere and stratosphere, large scale coherence 7−145729
temperature of upper stratosphere and mesosphere over Aberystwyth at nighttime 7−87992
temperature solar cycle and longer period variations above Volgograd 7−94525
temperature trends in Northern Hemisphere stratosphere and lower mesosphere, meas. (1969 to 1978) 7−134034
temperature variations during winter above N Scandinavia 7−145730
temperature zonal mean state of equatorial mesosphere 7−101612
thermal regime and circulation, average characts. 7−115131
tidal wind observations by radar and rockets 7−145732
tidal winds in mesosphere Na layer, daytime lidar observations 7−145742
tides, calc. of background wind effect on diurnal tide 7−134039
turbulence and small scale struct. at high latitude in winter 7−145736
turbulence field generated by linear gravity waves 7−115122
turbulence regime at D-region altitudes, for 1983-4 winter 7−145725
turbulence structures horizontal propagation, radar obs. 7−145735
turbulent energy dissipation rates and eddy diffusion, in situ obs. 7−145737
vertical movements detected by radar obs. of metal foil cloud 7−145734
vertical transport for O_3, H_2O and CO 7−139824
VHF radar observations of cat's-eye-like structures at mesospheric heights 7−94531
wave processes rel. to F-region 7−87998
wind fluctuations attributable to internal gravity waves 7−94528
wind measurement by Doppler radar, methods for fluctuating components 7−107595
winds in mesopause region, long-period changes and possible solar cycle influence 7−87991
winds in winter middle atmos. over N Scandinavia 7−145731
H atom concentration, 73 to 93 km altitude over White Sands Missile Range, USA 7−120184
HNO_3 and NO_2 in atmosphere, distrib. from model using LIMS and SAMS data 7−79516
H_2O measurements, implications for transport props. 7−139823
H_2O vapour and O_3 concentrations during MAP-WINE Campaign 7−145738
H_2O vapour content during 1983 to 1985 period 7−72212
K chemistry, seasonal behaviour anal. and comparison with Na 7−115129
NO_2 and HNO_3 in atmosphere, distrib. from model using LIMS and SAMS data 7−79516
$NaHCO_3$ as reservoir species for Na in mesosphere 7−138959
$NaO+H_2(D_2)(H_2O)(D_2O)$, gas phase reactions, rate consts. study 7−126435
O, O_2, O_3 and OH composition of mesosphere and upper atmos. 7−145740
O_2, photodissociation in stratosphere and mesosphere, O production and isotope effects 7−120101
O_3 and O in 70 to 178 km altitude range, concs. on 10 Feb. 1984 AD 7−145739
O_3 concentrations, annual vars. 7−134043
O_3 diurnal variability, effects of tidal influences on vertical diffusion 7−115128
O_3 in stratosphere and mesosphere above Switzerland, microwave radiometry obs. 7−107473
O_3 photochemistry, SME obs. anal. 7−94529
OH airglow and vibrationally excited states vertical profile 7−139830
OH in polar mesopause and temp., from airglow observations 7−107598
OH nightglow, kinetic parameters related to sources and sinks of vibrationally excited OH 7−134046
OH nightglow at polar mesopause, effects of atmospheric disturbances 7−134047

metal castings *see castings*

metal clusters
alkali metal clusters and the jellium model 7−74800
crystal, element-cluster binding energies, virial statistical calcs. 7−143325
electronic structure of metals and alloys, conf., Johnsbach, Germany (Apr. 86) 7−128195

metal clusters continued
free and supported, core-electron binding energies 7−70375
gas-evaporated metal particles, optical props., fractal struct. effects, effective medium theory calcs. 7−118967
infinite size, distortions, corner dilemma 7−142691
large cluster formation by surface nucleation 7−143251
liquid metal ion source cluster beam constituents rel. to deposited film props. 7−76689
metal atom clusters 7−141734
mixed-valence, electron migration 7−137878
negative ions, mass-selected, photodissoc., photodetachment, and small mol. desorpt. rate 7−132957
oxide, quantum levels, optical signature for oxidation 7−110172
pentlandite, cryst., polyhedral clusters, electronic struct. 7−143336
physics, review 7−110177
size distribution and cluster generation in atomic beams 7−74802
small particle aggregates, optical absorpt. calcs. in quasistatic limit 7−99785
spontaneous fragmentation of multiply charged metal clusters 7−96914
transition metal clusters, photoionisation threshold, H_2 chemisorpt. effect 7−96900
transition metal clusters, struct. props. from empirical interatomic pot. scheme, size depend. 7−110173
vaporised, form. mechanism 7−98377
Ag aggregates, on Ag halides and coated electrodes, SERS obs. 7−77584
Ag clusters in AgX (X=Cl, Br), resonant light scatt. at localised electronic states 7−85758
Ag_7 cluster, form. in Ne matrix, EPR study 7−122763
Al clusters, 1s core-level binding energy shifts, Xα calcs. 7−74799
Al_n clusters, geometry, basis set and correl. effect 7−129919
Al_n clusters, n=2-6, 13, struct. and binding, wave fns. and extended basis sets investig. 7−129920
Al_n^+ clusters, chemisorbed O, collision induced dissoc. 7−122765
Au clusters, motion in electron microscope 7−103703
$Au_{18}Ag_{20}$, colloidal, plasmon freq. obs., UV-vis spectra 7−113221
Be clusters, electronic states and geometries, ab initio calcs. 7−116819
Bi/Sb free intermetallic compound clusters, stability 7−110174
Cs clusters in zeolite X, conduction electron spin resonance studies 7−138329
Cu surface, (100), adsorbed CO, size depend. of surface cluster models 7−137716
Cu_3 cluster, internal dynamics, review 7−129924
Cu_3 trimer, stability, variational and perturbational configuration interaction theory 7−96566
Cu_n (n=2 to 8), anion structs. and HMO electron affinities calc. 7−122363
Fe clusters, hydrogenated, composition determ. 7−110175
Fe-B, melts, high temp. mag. suscept. 7−143759
Fe_n(methanol)y, metal cluster-adduct, IR multiple photon dissoc. spectra 7−129817
Ga_n^+ ion cluster emission from liq. metal ion source 7−77770
In cluster in NaA zeolite, photocond. and luminescence studies 7−125772
K, orbital energies, shell structs., ionis. pots., HMO calcs. 7−81986
k_n^m (n=2 to 9, m=0 or +), metal clusters, geometry and stability, HMO calcs. 7−81985
K_xMg, small clusters, stability and magic numbers 7−141731
Li clusters, bonding, generalised valence bond studies 7−110171
Li-Na clusters, atomic distrib., SCF calcs. *(French)* 7−83844
Li_n^m (n=2 to 9, m=0 or +), metal clusters, geometry and stability, HMO calcs. 7−81985
Li_xNa_{n-x}, photoionis. mass spectra 7−68501
Na_3 cluster, internal dynamics, review 7−129924
Na_n^m (n=2 to 9, m=0 or +), metal clusters, geometry and stability, HMO calcs. 7−81985
Nb_x (x=1-15) clusters, reactivity with benzene, photoionis. TOF mass spectra detect. 7−132971
Ni atomic cluster, topologically disordered system, electronic density of states, recursive scattered-wave approach 7−76727
Ni clusters, hydrogenated, composition determ. 7−110175
Nn, orbital energies, shell structs., ionis. pots., HMO calcs. 7−81986
$Os_5C(CO)_{15}$, cluster struct. determ. IR spectra 7−113181
Pb clusters, laser vaporisation photoionisation dynamics, abundance patterns 7−141730
Pb/Sb free intermetallic compound clusters, stability 7−110174
Pb-Sb alloys, vaporisation and photoionis., cluster ions form. 7−69877
Pd, particles formation on MgO, refl. electron microscopy obs. 7−143140
Pd_n+CO, electronic struct, pseudopot. CI calcs., relationship between surface and organometallic chemistry 7−113901
Pt particles, CO, H_2 and NO temperature programmed desorpt., particle size depend. study 7−143203
Pt-Au cluster, H chemisorption, EHT calcs. 7−110162
$(Pt_3(CO)_6)_n^{2-}$, visible spectra, press. shifts 7−96711
$Ru_5C(CO)_{15}$, cluster struct. determ. IR spectra 7−113181
Sn clusters, laser vaporisation photoionisation dynamics, abundance patterns 7−141730
Sn-Bi alloys, vaporisation and photoionis., cluster ions form. 7−69877

metal corrosion *see corrosion*

metal-glass seals *see glass-metal seals*

metal-insulator boundaries
see also metal-insulator-metal structures
corrugated, dispersion anomalies of surface plasmons 7−85027
electron screening phenomena, self-consistent anal. in density functional formalism 7−118586
electron tunnelling, image potential, many-body self-energy formalism 7−118547
electronic cond. in insulating films, book contrib. 7−105743
electrons, interaction with polarisation modes, anal. 7−112215
films evaporated on Si and SiO_2, ion modification of props. 7−91673
Macor glass ceramic vacuum surface flashover voltage meas., electrode geometry effects study 7−104471
metal film adhesion to oxides, vacancy effects 7−111546
metal-electrolyte interface double layer, microscopic quantum theory including solvent struct. 7−125077
metal/polymer interface system, surface modification appls. *(French)* 7−113761
Schottky diodes, photocurrent polariton peak, optical const. effects 7−105659
superlattices, effective medium description, nonlocal effects 7−85129
surface electromagnetic waves phenomena from electron collisions with metal-dielectric interface *(Japanese)* 7−131785

metal-insulator boundaries continued
Teflon vacuum surface flashover voltage meas., electrode geometry effects study 7−104471
ultrasonic wave refl., ellipticity and polarisation plane rot., mag. field depend. calcs. *(Russian)* 7−111779
Ag-Na_3AlF_6, positron annihilation study 7−144163
Ag-SiO ultrathin superlattices, DC elec. cond. switching 7−92294
Al superconducting thin film/magnetic insulator contact, density of states, Zeeman splitting, spin polarised tunnelling studies 7−131915
Al/Al_2O_3 multilayer system, annihilation photon angular correlation 7−92777
Al/rare earth oxide interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
Bi_2O_3-Au-Bi_2O_3 heat mirrors, transmission characts., effects of layer thickness var. and annealing 7−106288
CaF_2/$CoSi_2$/Si (111) epitaxial insulator-metal-semiconductor structures, rapid thermal annealing 7−84549
CaF_2-MSi_2-Si (111) structs. (M=Co, Ni), MBE growth 7−144285
Fe/$La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form., reaction and disruption 7−143242
Fe/$La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form. and reaction, XPS study 7−143243
Fe/SiO_2 system, Ar^+ irradiated, ion beam mixing effects 7−117983
LaSrCuO/Al contact, I-V characts. meas. 7−105662
LiF/Al interface, photon produced secondary electrons, dosimeter cavity theory, Monte Carlo calcs. 7−87234
LiF/Pb interface, photon produced secondary electrons, dosimeter cavity theory, Monte Carlo calcs. 7−87234
Nb/Al_2O_3 metal-ceramic interface, struct., chemistry and diffusion bonding 7−98723
Pd/ice interface, proton exchange processes 7−99199
Pt-Al_2O_3 interface, XPS study, deposited Pt particles on α-Al_2O_3 7−100015
SiO_2-WSi_2-Si structure, dopant redistrib. modelling 7−91628
Ti/SiC(Si_3N_4) systems, high-energy ion beam mixing, TEM and RBS studies 7−98269

metal-insulator-metal devices
surface plasmon dispersion anal., visible, UV and near IR emission 7−131567

metal-insulator-metal structures
electroformed, discontinuous films, I-V characts., obs. in high vacuum 7−112511
electroformed insulating film, polyfilamentary conduction 7−99219
ionizing particles, surface discharge in amorphic samples *(Polish)* 7−141393
Landauer conductance formula generalization in conductor-insulator-conductor structures 7−70427
metal-dielectric-metal system, current-voltage depend., carrier generation and injection mech. effects 7−143632
metal-dielectric-metal system, current-voltage depend., carrier recombination and injection mech. effects 7−143633
metal-insulator and MIM structs., book contrib. 7−105743
MIMS mode selective detection of optical waves 7−117354
polymeric materials with Al-PET-Cu structure, short-circuit current in high temp. region *(Korean)* 7−138071
small tunnel junction, voltage-charge relations calcs. 7−143634
surface electromagnetic waves phenomena from electron collisions with metal-dielectric interface *(Japanese)* 7−131785
transient injection currents, AC resist. calc. 7−105724
trapping processes, steady state anal. *(Polish)* 7−70426
tunnel diode, surface plasmon dispersion anal., visible, UV and near IR emission 7−131567
Ag/Ag_3AsS_3/Ag complex resist. freq. and temp. depend. study *(Russian)* 7−92307
Ag-HfO_2/SiO_2-Ag struct., metal film boundary influence on luminesc. intensity 7−85840
Al/Al_2O_3/Au tunnel junction, Ag particulate, surface plasmon mode obs. 7−84725
Al/Al_2O_3-based trilayer systems, optical props., ellipsometry studies 7−144005
Al/AlO_3/Al layered film system, tunnelling probe studies 7−112512
Al/insulator/Au light-emitting tunnel junction, two-mode radiation studies 7−143635
Al/SnO_x trilayer systems, optical props., ellipsometry studies 7−144005
Al-Al_2O_3-Ag, switching effects and negative resistance 7−131807
Al-Al_2O_3-Ag tunnel junctions, surface plasmons, optical detection 7−105725
Al-Al_2O_3-Al(Ag), planar tunnel junction photodetectors, electromag. resonance enhanced photoabsorption 7−73417
Al-Al_2O_3-Au sandwich structures, forming process 7−125142
Al-GeO-Al, switching effects and negative resistance 7−131807
Al-oxide-Al tunnel junctions, tunneling resistance and magnetoresistance 7−143636
Al-V_2O_5-Al, thin film devices, negative capacitance 7−131806
Au/AlO_x/Al semicontinuous tunnel junctions, conductance oscills. 7−105726
Dy_2O_3 oxide film MIM struct. dielec. props. 7−118948
$GaTe_3$ chalcogenide glass switching structs., microwave noise and switching characts. 7−85022
$NaYF_4$ thin film MIM structs., dielec. props. temp., freq. and film thickness depend. 7−138384
Nb-Al-AlO_x-Nb Josephson junction characts., fabrication process and conditions effects 7−105844
Nb-oxide-Pb 7−131805
PbAuIn-SiO-PbBi Josephson junction, RF plasma oxidised, annealing and aging phenomena 7−118722
V_2O_5-P_2O_5-based MIM structs., high temp. TSC peak study *(Russian)* 7−77107
Yb_2O_3 oxide film MIM struct. dielec. props. 7−118948

metal-insulator-semiconductor devices
see also charge-coupled devices
2D electron gas, theory of magnetocond., self-consistent screening model 7−70422
devices, past and current research, review 7−138069
diamond-like C film on Si MIS structure, ESCA compositional profiles and elec. props. 7−125129
inversion layer solar cells, higher efficiency and lower production costs *(German)* 7−114101
MINP solar cells, surface recomb. vel. 7−106910

metal-insulator-semiconductor devices continued
MOS capacitor, const. peak field distrib./voltage dropping in oxide layer during charge-temp. aging 7−112497
MOS capacitor interface states meas. by DLTS system using wideband lock-in amplifier *(Korean)* 7−84741
MOS diode gas sensor with partially automated meas. system *(German)* 7−126529
MOS photodetector, position sensitive, using lateral photovoltaic effect 7−67389
solar cell, charge storage effect in LPCVD Si_3N_4 for improved conversion efficiency 7−86805
Al, oxidised thin films, photovoltaic appls. 7−126628
Al/SiO_2/Si tunnel diode, localised state interactions and low freq. resist. fluctuations study 7−112505
Al-SiO_x-p-Si MIS minority carrier grating type solar cells, temp. depend of I-V characts 7−78639
Al-SiO-Si, MIS solar cells, I-V characts., 100-450 K 7−119661
H_2 detection using Pd MIS diode sensor 7−134728
InP MIS devices, with thin native oxide double layer insulator films, prep. and elec. props. 7−125134
Pd/SiO_2/semicond. diode H_2 sensor, ultrahigh vacuum studies 7−124689
Pd-SiO_2-Si MOSCAP sensors, admittance studies of H_2-induced states 7−80775
Pt/oxide/n-Si electrolyte-MIS photoelectrochem. Cells, non-native oxide deposition 7−71624
Si MIS diodes, AC conductance, contribs. of bulk and interface states 7−118587
Si solar cells, direct meas. of junction ideality factor 7−133104
SiO_2 films, on Si, paramag. point defects, generation by electron injection and ionising radiation 7−111555
ZnS(Se) MIS device technology using MOCVD growth 7−86043
ZnSe/Langmuir-Blodgett film MIS diodes, blue electrolum. 7−70912

metal-insulator-semiconductor integrated circuits *see field effect integrated circuits*

metal-insulator-semiconductor structures
Au/Pb_2CrO_5/SnO_2 struct., contact barriers, photoconducting characts. and band struct. studies 7−92299
boundary pot. anomalies under Hall quantisation conditions 7−85121
breakdown investigations 7−85112
cadmium stearate Langmuir-Blodgett films, charge injection into organic polymers 7−112494
charge transfer kinetics modelling *(Japanese)* 7−131789
diamond thin film MIS structures, SCL current 7−112523
diamond-like C film on Si MIS structure, ESCA compositional profiles and elec. props. 7−125129
diodes, AC cond., contribs. of recomb. and tunnelling at interface states 7−85128
dynamical image forces in three-layer systems and field emission 7−125936
electron concentration, quantum effects *(German)* 7−105721
field enhanced generation mechanisms 7−105590
inversion layer, 2D-electron gas localisation, transverse cond., low freq. effects *(Chinese)* 7−92297
ion beam modification of props. 7−91673
metal-insulator and MIM structs., book contrib. 7−105743
minority carrier generation lifetimes, determ. by DLTS 7−118589
MIS structs., 2D nonlinear electron system, filamentation of Hall current, quantising mag. field *(German)* 7−131798
MIS-liquid crystal structure, Fourier spectra polarisation, freq. distrib. anisotropy 7−132234
MISIS structure, elec. characts. and C-V depend. *(Chinese)* 7−77098
MNOS struct., numerical simulation of bipolar injection and recomb. 7−85113
MNOS structures, injection and charge transfer *(Japanese)* 7−131790
MOS and MNOS structures in strong fields, math. modelling of electron transport processes in dielecs. 7−70418
MOS capacitor, const. peak field distrib./voltage dropping in oxide layer during charge-temp. aging 7−112497
MOS capacitor, linear approx. doping profile 7−77106
MOS conductance meas. for extraction of interface state attributes 7−85127
MOS emitter with tunneling-thin oxide, injection capacity at high current densities 7−125135
MOS structs., oxide trapping under spatially variable oxide electric field 7−131788
MOS structure, Pt diffused, elec. props. 7−112495
MOS structure, thin oxide electrical characts., effect of postoxidation anneal 7−112499
MOS structures, carrier lifetime meas., photo-accelerated C-t transient method 7−131796
MOS structures, elec. props., C-V curve, book contrib. 7−105722
MOS structures with Pt gates, NH_3 sensitive 7−121098
n-type inversion layers with periodic microstructure, electron states, mean field approx., self-consistent calc. 7−125069
nonequilibrium high frequency C-V characteristics 7−143630
optoelectronic storage medium, characts. 7−136222
oxide thin layers, breakdown due to DC and dynamic stressing 7−92596
oxides, ultrathin, breakdown depend. on thickness and hole current 7−92595
quantized Hall resistance, effect of current in channel on charge *(German)* 7−131797
quantum effects on LF and HF capacitance 7−77081
radiation ordering, surface enhanced in semicond. structures 7−104809
relaxation spectroscopy of boundary states, tunnel transitions of carriers 7−131791
resonant tunnelling in thin structures, mag. field depend. 7−85119
RF capacitance stabilisation, using Q-meter 7−102454
semiconductor surface barrier structures, getter mechanism of defects 7−125115
n-Si-SiO_2 MOS structures, density of states for Na^+ impurity bands 7−77101
silicon phthalocyanine Langmuir-Blodgett film Schottky barriers and MIS structures, photoelec. props. 7−99162
surface pot., screening of fluctuations 7−105710
surface states in structures with a bulk distrib. of the oxide charge, fluctuation theory 7−85114
Pt/SiO_2/n-Si photoelectrodes in I and Br aq. solns., elec. props. and thermal oxide growth 7−100585
AlN/GaAs, low temp. CVD, surface state density, ICTS and C-V characts. 7−126024

metal-insulator-semiconductor structures continued
Al/SiO_2/Si struct., interface states characts. meas., optical MOS admittance technique 7−105714
Al/SiON/GaAs MIS systems, C-V characteristics 7−105716
Al-$(Ba_{0.9}Sr_{0.1})TiO_3$-Si, I-V characteristics, polarisation hysteresis 7−92304
Al-Al_2O_3-Si capacitor, high-field electron injection and trapping obs. *(Korean)* 7−85130
Al-Al_2O_3-Te thin film struct., I-V characts., effect of top electrode, test needle *(French)* 7−105720
Al-$BaTiO_3$-Si metal-ferroelectric-semiconductor structs., nonvolatile memory behaviour 7−99217
Al-Si_3N_4-Si, photocapacitance images of metal-dielectric-semiconductor structures in a scanning optical microscope 7−108711
Al-SiN:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7−138089
Al-SiO_2-Si capacitors, const. current avalanche hole injection, feedback voltage anal. 7−143623
Al-SiO_2-Si structs., defect spectrum responsible for breakdown 7−143626
Al-SiO_2-Si structs., local electrophys. props. of elec. active defects 7−143627
Al-SiO_2-Si structures, switching thin-oxide Si MOS 7−70419
Al-SiO_2-Si:Rh, MIS struct., influence of Rh 7−143618
Al-SiO_2-nSi, peaked Schottky barrier investig. 7−85124
Al-SiON:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7−138089
Al-$Sn_2P_2S_6$-Si structs., voltage-capacitance characts. 7−131799
AlN/InP, low temp. CVD, surface state density studies 7−126024
BaF_2/(Ga,In)(As,Sb) structures, MBE growth 7−77826
$Bi_{12}SiO_{20}$ signal modulator operating on longit. transverse electrooptical effect 7−123186
CaF_2/Si(111) epitaxial interface, elec. props., MIS characterisation 7−118591
CdTe, express-method of volt-capacity characts. processing *(Russian)* 7−125130
Cu-GeO-CdS-$LiNbO_3$, MIS-piezoelectric struct., SAW convolver, efficiency 7−137990
GaAs, compensated p-type, in metal-insulator-semiconductor struct., long-lived Coulomb gap 7−138035
GaAs MIS barrier structures, gamma-ray irrad. induced modification of deep levels, DLTS study 7−112413
GaAs-AlAs solid solution MIS struct., space charge modulation, transistor characts. 7−77100
GaSb MOS structures, interface states, ICTS studies 7−85117
$Ga_{0.47}In_{0.53}As$ MIS diodes, effect of photochemical etching on interface state density 7−143617
Ge, native insulators, elec. charactn. *(French)* 7−125141
Ge-GeO_2-Si_3N_4 MIS structures, mechanical and electrical props. 7−143629
$Hg_{1-x}Cd_xTe$, doping and composition profiling, graded capacitance-voltage method 7−143622
$Hg_{1-x}Cd_xTe$ MOS struct., gate capacitance under mag. quantisation 7−92298
HgTe, express-method of volt-capacity characts. processing *(Russian)* 7−125130
InAs MIS structs., field-induced ion drift 7−70421
InAs MIS systems, inversion layers, electronic subband struct. calc. 7−105650
InAs MOS struct. fabrication by electrochem. oxidation, effect of F^- ions in electrolyte 7−112504
n-InAs, MOS structure, surface states, deep level transient spectroscopy 7−92302
InAs-SiO_2, transverse conduction mechanism, at low temps. 7−85122
In_2O_3:Sn-SiO_2-Si MOS structs., optically activated interface states, expt. study 7−70415
In_2O_3-InP surface barrier structs., photoelectric props. 7−92226
InP MIS capacitors, RF conductance of native oxide 7−125138
InP MIS devices, with thin native oxide double layer insulator films, prep. and elec. props. 7−125134
InP MIS struct. with double insulators *(Chinese)* 7−77099
n-InP MIS structures using double-layer oxides as insulators *(French)* 7−131793
InP MIS structures with anodic double layers *(French)* 7−131794
InP MIS systems, inversion layers, electronic subband struct. calc. 7−105650
InP surface, passivation with group V elements, electrical props., MIS structs. 7−100461
InP-SiO_2 MIS struct., slow insulator state conc. reduction using plasma-enhanced CVD 7−143625
InSb based MOS devices, intersubband resonance in quasi one-dimensional inversion channels 7−125104
InSb, capacitance-voltage characteristics, deep bulk level effects, computer simulation 7−143631
InSb, inversion electron spectroscopy in MOS struct. in tilted mag. fields 7−77095
InSb MAOS structure, fabrication by anodisation and sputtering 7−125131
InSb MIS structs., generation-recombination centres 7−112503
InSb MOS struct. fabrication by electrochem. oxidation, effect of F^- ions in electrolyte 7−112504
InSb/oxide/metal structs., inversion layer cyclotron reson. in crossed elec. and mag. fields 7−138070
InSb/SiO_2/poly-Si MOS structures, elec. props. 7−105711
InSb/SiO_2/poly-Si structures, InSb surface conductivity 7−105712
InSb-anodised oxide structure, generation processes investig. using two-pulse method 7−77105
InSb-SiO_2 MIS diodes, photoCVD deposition 7−138067
NbN/MgO/Si Schottky diode growth and characts. 7−143256
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
Ni/SiO_2/Si multilayers, ion mixing, isotropic and anisotropic transport 7−76235
$Pb_{0.8}Sn_{0.2}Te$ epitaxial thin film MIS structs., field effect studies 7−143621
$Pb_{0.8}Sn_{0.2}Te$ thin films in MIS structs., elec. props., effect of laser irrad. 7−99237
Pb0-B_2O_3-SiO_2:Na^+, metal-glass-semiconductor capacitors; surface charge studies 7−70416
Pd/Al_2O_3/SiO_2/Si struct., appl. as H sensor 7−71053
Pd-SnO_x MIS capacitor as O_2 gas sensor 7−80765

metal-insulator-semiconductor structures continued
SbSI-Si junctions, effective polarisation charges and interface states from HF C-V hysteresis meas. 7−99218
P-Si (100) inversion layer, grating coupler-induced intersubband reson. calcs. 7−85120
Si epitaxial layers on buried Si_3N_4 produced by ion implantation, props. 7−85131
Si MIS capacitors, polish damage, gate oxide integrity, minority carrier lifetime 7−138066
Si MIS diodes, AC conductance, contribs. of bulk and interface states 7−118587
Si MIS photovoltaic junctions, defects due to low voltage sputter deposition, charact. 7−84595
Si MIS structs., Coulomb energy spectrum gaps under fractional quantum Hall effect 7−138016
Si MIS structs., γ-irradiated, electrophysical props., electric field in insulator 7−112496
Si MIS structure, flow of current between adjacent inversion layers in a quantizing magnetic field 7−70425
Si MOS capacitors, dopant conc. profile, acceptor hydrogenation, high-freq. C-V curves 7−125128
Si MOS inversion layer, 2D electron gas, Fermi energy, many body effects, statistical calcs. 7−92301
Si MOS struct., electron density, Fermi energy, quantum oscills. at an inversion layer in a mag. field 7−99213
Si MOS structs., fractional quantum Hall effect study 7−137964
Si MOS structures, quantum effects on LF and HF capacitance 7−77081
p-Si MOS structures, radiative recombination spectra, of 2D electrons 7−131802
Si surface barrier modification by low-energy N ion implantation 7−142807
a-Si:H MIS structures, field effect study 7−85115
$Si/SiO_2/Si_xN_yO_z$/Al struct., varying-gap dielec., current transport and charge storage charact. *(Russian)* 7−112506
Si/SiO_x/Mo MOS VLSI, oxide form. at Mo/Si interface, contact resist. *(Japanese)* 7−78388
$Si-SiO_2$, MOS struct., photoinjection, potential barrier height 7−92303
$Si-SiO_2$ interface microstructure, observation and electronic props. 7−131461
$Si-SiO_2$ MIS, gate currents and space charge under electron beam irrad. 7−70420
$Si-SiO_2$ MOS structures, degradation by Fowler-Nordheim tunnelling 7−99214
$Si-SiO_2$ metal structs., radiation damaged, interface trap peaks 7−125127
$Si-SiO_2$-Al, mobile charge, effects of doping Al with Cu, Zn or Si 7−85123
$Si-SiO_2-Si_3N_4$-metal structs., optically-induced hot-hole injection probability meas. and anal. 7−105713
$Si-SiO_2$-metal structs., optically-induced hot-hole injection probability meas. and anal. 7−105713
$Si-SiO_2$-metal structs., interface states capture time const. determ. 7−112500
$Si-SiO_x$ MOS, structs., RF-annealing, impurity activation and trap annealing, TSC meas. *(Russian)* 7−138068
$Si-SiO_x$ photodeposited interface, elec. charactn. 7−85125
a-Si_xC_{1-x}:H films, field effect under illumination *(Chinese)* 7−112386
Si_3N_4 MNOS structures, electrophysical props. at low temp. 7−99054
SiO_2 films, microwave O_2 plasma growth, MOS props. 7−93223
SiO_2 films in MOS capacitor structs., trapping charact., effects of thermal nitridation 7−131821
SiO_2 thin films, gate insulators, high temp. thermal nitridation, low temp. electron beam enhanced nitridation 7−93134
SiO_2-InSb MIS structs., characterisation of interface electrical props., prep. by plasma enhanced CVD 7−105719
SiO_xN_y-Si, rapid thermal annealing prep., elec. charact. 7−131792
SnTe MOS diodes, current-voltage spectra, expt. 7−99215
SnTe MOS diodes, current-voltage spectra, analysis 7−99216
Ta_2O_5 CVD films, growth and elec. props., appl. to MIS capacitors 7−92323
Ta_2O_5 MIS capacitors, dielec. charact., effect of SiO_2 at Ta_2O_5-Si interface 7−118934
Ti-p-Si MIS diodes, Mott-Schottky characteristics, temp. dependence 7−112498
Ti-SiO_2-Si system, silicide form. under thermal and laser annealing *(Chinese)* 7−105153
Zn_3P_2 junctions and interfaces, electronic struct. and electrical props. meas. 7−92290
ZnS-Si, effect of ZnS deposition process on thin film interface 7−138652
ZnSe MOS structures, electroluminescent, electron-phonon coupling anal., derivative light output-voltage charact. 7−77104

metal-insulator transition
see also electrical conductivity transitions; minimum metallic conductivity
adsorbed monolayers, insulator-conductor transition, effect of particle diffusion 7−124718
alkali metals, liquid electron-electron and electron-ion interactions 7−84730
Anderson model, appl. of dense point spectra of Schrodinger and Dirac operators 7−73047
Anderson transition, induced by strong mag. fields 7−131544
Anderson transition, nonlinear σ-model treatment using interacting matrices 7−70156
α-(BEDT-TTF)$_2I_3$, pure and I doped, microwave cond., freq. depend. 7−84964
(BEDT-TTF)$_3Cl_2 2H_2O$, superconductivity under press. 7−143679
(BEDT-TTF)I_3 trichloroethane, organic conductor, cryst. struct., X-ray diffr. study 7−104719
(BPTTF)$_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
chalcogenide melts, relation between metallisation and vitrification 7−111392
disordered conductors, hopping conduction near metal-insulator transition, review 7−138138
disordered electronic systems near Anderson transition, energy diffusion 7−137798
disordered interacting electron system near metal-insulator transition, thermal conductivity and diffusion calcs. 7−136678
disordered metals, magnetic field induced metal-insulator transition 7−143351
metal-insulator transition continued
disordered semiconductors, critical phenomena near the metal-insulator transition, review 7−143349
disordered semiconductors, metal-insulator transition at milliKelvin temperatures 7−143350
disordered system, carrier mobility, quantum mechanical theory 7−76861
(DMET)$_2AuBr_2$, superconductivity, semiconductor to metal transition 7−125186
Fermi systems, two-component, pair correlation function, Mott transition 7−84715
granular metals, pot. disorder, cond. theoretical anal. 7−143353
graphite fibre reinforced polymers, anisotropic elec. cond., insulator-conductor transition 7−70366
ground state props. of spinless Falicov-Kimball model 7−105405
high T_c superconductivity and the metal-semiconductor transition 7−118611
high T_c superconductors, soft plasmon theory 7−138114
high temperature supercond., crit. temp. enhancement by metal-semicond. transition 7−92348
impure metals, conference, Braunschweig, Germany (Aug. 1984) 7−66829
interacting disordered systems, metal-insulator transition, scaling theory 7−118366
liquid semiconductors, semiconductor-metal transition, review 7−84679
localisation and interaction in disordered metals and doped semiconductors, Summer School, St. Andrews, Scotland (July-Aug. 1986) 7−108004
localization, quantum interference, and the metal-insulator transition 7−70194
metals, liquid, vapour-liquid and metal-nonmetal transitions 7−98421
non-crystalline materials, conduction, book 7−102036
normal metals and semiconductors, resistance oscills. in localisation regime *(Russian)* 7−77014
one-dimensional two-band Anderson model, mag. suscept. calc. 7−92399
organic metals, A[M(dmit)$_2$] (Az DBTTF, BEDT-TTF, HMTTeF, BPDT-TTF; M=Ni; Pd) electrical and structural properties 7−99014
paramagnetic semiconductors, metal-insulator transition, influence of s-d exchange interaction 7−76776
(PEDTTTF)$_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
PET film, elec. cond., press. effect 7−85014
polyacetylene:Li(Na), semicond.-metal transition, ESR studies 7−98810
polyacetylene, heavily-doped, transition to a gapless Peierls insulator 7−70367
polyaniline, emeraldine base form, insulator to metal transition on protonation 7−70193
polyaniline, insulator-to-metal transition 7−112184
polymers, quasi-one-dimensional conductors, bipolaron lattice theory 7−98998
polythiophene:I_2 conducting polymer, radiation induced effect 7−91654
pyropolymers, semiconducting, hopping conduction, metal-insulator transition 7−112183
quasi-1D conductors, magnetic field induced metal-SDW transition, sp. ht. jump 7−105925
rare gases, intermolecular forces under high pressure *(Japanese)* 7−131091
semiconductors, doped, mag. props. and metal-insulator transition 7−105946
semiconductors, high magnetic field effects, conf., Wurzburg, Germany (Aug. 1986) 7−128198
semiconductors, strongly disordered, LF cond. anomalies 7−143530
semimagnetic semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
superconductivity theory, development since 1957 *(French)* 7−92385
TCNQ salt, MPht(TCNQ)$_2$, phase transitions, IR absorpt. spectra 7−138439
tetrathiafulvalene salt of $CuCl_2$, ESR study and metal-semicond. transition 7−138310
(TMTSF)$_2ClO_4$, mag. field induced SDW transitions, DTA study 7−92069
(TMTSF)$_2ReO_4$, elec. cond., temp. depend. model 7−84842
(TMTSF)$_2ReO_4$, electronic props., ^{13}C NMR meas. 7−85477
(TMTSF)$_2ReO_4$, metal-semiconductor transition, ^{13}C NMR study 7−106049
transition metal dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728
transparent surface, laser action mechanism, impurity redistribution 7−76207
(TTF)$_6CuBr_4$ and (TTF)$_2CuCl_2$, proton magnetic relaxation studies 7−106051
(TTM-TTF)$(I_3)_{0.823}$, organic conductor, mag. props. 7−99557
valley fluctuations in degenerately doped semiconductors 7−124867
Al, granular, absence of supercond. 7−131860
Al, granular, quasireentrant superconductivity near metal-insulator transition 7−143676
Al:Au(Pd), superconducting films, metal-insulator transition 7−125185
$Al_{0.3}Ga_{0.7}As$, metal-insulator transition, fine-tuning, persistent photocond. 7−124865
Ba-Y-Cu-O systems, resist., anomalous temp. depend. 7−99285
$BaBi_{1-x}Pb_xO_3$ semicond.-metal transition using spatially inhomogeneous order-parameter approx. 7−98809
$BaPb_{1-x}Bi_xO_3$, metal-semiconductor transition, dimerisation model, Raman study 7−70192
$Ba_2YCu_3O_x$ high T_c supercond., high temp. resistivity meas., O content depend. 7−137919
Bi thick disordered films, inelastic electron scatt. time and metal-insulator transition critical exponent 7−76777
C black-copper phthalocyanine mixtures, elec. cond., grain size 7−112333
C $Hg_{0.8}Cd_{0.2}Te$, mag. field induced metal-insulator transition, Hall resistivity meas. 7−118517
n-$Cd_{0.95}Mn_{0.05}Se$, semimag. semicond., nonmetal-metal transition study 7−76775
n-$Cd_{0.95}Mn_{0.05}Se$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
CeH_x low temp. sp. ht. and photoelectron spectra meas. 7−84313
CeH_x, phase relationships and transitions in homogeneity range 7−84201
Co particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
$Co_xFe_{3-x}O_4$, Verwey transition, multistage character, loss tangent meas. 7−70191

etal-insulator transition continued
Cs, overlayer, on Si (111), interfacial structural transitions *(Japanese)* 7−76642
EuTe, degenerate magnetic semiconductors, crystallisation of dense magnetic polarons 7−125367
Fe particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
$Fe_{1-x}Mn_xO$, high temp. elec. props., defect struct., comp. depend. and semicond.-metal transition obs. 7−118491
FeO_x thin films, RF sputtered, elec. resist. studies 7−143652
$Fe_{1-x}O$ monocrysts., thermoelec. power temp. and O press. depend. anal. 7−118520
Fe_3O_4 magnetite, elec. props., mag. field cooling effects 7−143464
Fe_3O_4, magnetite, rapid electron exchange by cationic vacancies *(French)* 7−76947
Fe_3O_4 magnetite, thermal and dielectric props. near Verwey transition 7−132027
Fe_3O_4 magnetostriction and thermal expansion near Verwey transition temp. 7−143886
Fe_3O_4, phonon modes, Verwey transition, IR reflectivity and Raman spectra 7−85653
$Fe_3O_{4-x}F_{2x}$, substituted magnetite, Verwey transition, conc. depend. 7−124864
GaAs-AlGaAs modulation doped MQWs, high press. photolum. props. 7−138511
GaAs-$Ga_xAl_{1-x}As$ heterojunction, 2D electron gas, high press. transport props. 7−138055
GaAs-GaAlAs heterostructure, with spacer, mag. field-induced metal-nonmetal transition 7−131780
GaSb, semiconductor-metal transition, elastic props. under high press. 7−111781
$Gd_{3-x}S_4$, degenerate magnetic semiconductors, crystallisation of dense magnetic polarons 7−125367
Ge, disordered, defect and impurity band elec. cond. near metal-insulator transition 7−105566
Ge, electrical conductivity, low temp., defects, metal-insulator transition 7−118477
Ge, macrostresses created by metal-semiconductor transitions, metastable phases 7−142978
Ge:As, magnetic field induced metal-insulator transition 7−143351
Ge:Sb(As), uniaxially deformed, Hall effect near metal-semiconductor transition 7−118510
$Ge_{1-x}Cu_x$ amorphous films, hopping conduction, electric field effects 7−131633
$Ge_xFe_{1-x}O_4$, substituted magnetite, Verwey transition, conc. depend. 7−124864
GeTe, amorphous, press.-induced superconductivity and metal-insulator transition *(Russian)* 7−112542
$H_gCr_2Se_4$, ferromagnetic semiconductor, transport, magnetic and optical props. 7−99094
H_2O ice, elec. conductivity at ultrahigh press. 7−112408
H_xWO_3 bronze thin films, optical props., nonmetal-metal transition 7−99963
Hg, liquid, electronic and thermodynamic props., high temp. and press. 7−105513
$Hg_{1-x}Cd_xTe$, metal-insulator-metal transition induced by uniaxial strain 7−99140
$HgCr_2Se_4$, ferromag. semicond., density of states, absorpt. spectrum 7−131512
p-$Hg_{0.915}Mn_{0.085}Te$, semimag. semicond., nonmetal-metal transition study 7−76775
p-$Hg_{0.915}Mn_{0.085}Te$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
n-InP, hopping conduction in a mag. field *(German)* 7−125031
InP, metal-insulator transition, variable range hopping 7−143467
n-InP, shallow donor-like impurity states in a mag. field 7−70249
InP, shallow donorlike impurity states, influence of mag. field and hydrostatic press. 7−84754
n-InSb, magnetic field-induced metal-insulator transition, electron transport 7−131545
$In_{1-x}Ti_xTe$ alloys, energy spectrum, cond. in a mag. field, press. depend. 7−131672
K, overlayer, on Cu (001), interfacial structural transitions *(Japanese)* 7−76642
$K_{0.3}MoO_3$, Peierls insulating state, low freq. struct. excitations, neutron studies 7−98366
La_2CuO_4, high temp. superconductor and resonating valence bond state 7−131872
LaH_x, electrical conductivity, hybridization and metal-semiconductor transition, anal. 7−137940
Li quasi-1 D quench condensed microstructures, localisation effects 7−143531
$Li_xZn_{1-x}V_2O_4$, mag. susceptibility meas. 80-300 K 7−77205
$Mn_{0.5}Te_{0.5-x}Sb_x$, mag. phase transition studies 7−125383
n-Te, liq., Schottky-type excess specific heat and metal-nonmetal transition 7−84308
NH_4I structure and metallisation, high press. X-ray diffr. and optical absorpt. studies 7−83924
$NbSe_3$, CDW changes by introduction of Cu atoms into cryst. 7−118365
$Ni_{2-x}Cu_xMo_6S_8$, elec. cond. behaviour, electronic instability 7−131723
$PbMo_6S_8$ thin films, metal-semiconductor transition, ion irradiation and annealing, effect on elec. props. 7−105406
$Pb_{0.875}Sn_{0.125}Se$, electron irradiated, metal-insulator transition, press. induced 7−143347
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7−105548
Se, liquid, electronic and thermodynamic props., high temp. and press. 7−105513
Se-Te, liq., liq., Schottky-type excess specific heat and metal-nonmetal transition 7−84308
Se-Te, semiconductor glasses, XANES and EXAFS study, high pressure transition 7−143324
Se-Te glasses, XANES study at Se K-absorpt. edge, metal-semiconductor transition 7−144175
Se-Te system, structural phase transitions in the liq. state and the melting enthalpy 7−76377
Si, compensated, metal-insulator transition, DC elec. transport props. 7−143528
Si, doped MBE layers, elec. props. 7−77109
Si electron-hole plasma, second condensed phase 7−112384
n-Si, high field behaviour, localisation 7−131543

metal-insulator transition continued
Si, macrostresses created by metal-semiconductor transitions, metastable phases 7−142978
Si, magnetic properties of donors and acceptors near crit. conc. for metal-nonmetal transition 7−143757
Si, n-type, AC cond. below metal-insulator transition 7−143529
Si:P, compensation tuning study of metal-insulator transition 7−143352
Si:P, mag. susceptibility across the metal-insulator transition 7−112734
Si:P, spin dynamics across the metal-insulator transition 7−112944
Si:P, spin localization, ^{31}P NMR studies 7−137864
Si:P,As double donor system, metal-insulator transition, Mott-Hubbard picture 7−137799
Si:P,As(Sb), double donors, metal-nonmetal transition 7−105403
Si:Sb, metal-nonmetal transition, I-V characteristics 7−99136
Si_xTe_{100-x} chalcogenide glasses, critical comp. study, elec. resist. meas. 7−105565
$Ta_{1-x}Fe_xS_3$, 1D, CDW, Mossbauer studies 7−125577
TaS_3 orthorhombic, Peierls transition, cryst. defect effects 7−98811
Te, supercooled liquid, local order and semiconductor-metal transition, neutron scatt. study 7−137182
Te-Ge, semiconductor glasses, XANES and EXAFS study, high pressure transition 7−143324
$TmSe_{0.45}Te_{0.55}$, under high pressure, magnetic structure determ., neutron scatt., AC susceptibility, resistivity meas. 7−138191
$TmSe_{1-x}Te_x$, semicond. to metal valence transition, high press. low temp. resist. meas. 7−76850
$(V_{1-x}Cr_x)_2O_3$, electron localisation in correlated band, metal-insulator transition and heavy Fermi liq. behaviour, thermodynamic theory 7−124868
$V_{1-x}Mn_xO_{2-2x}F_{2x}$, metal-insulator transition, structural, magnetic and electrical props. *(French)* 7−105402
VO_2 films, metal-insulator phase transition, film thickness and substrate effects 7−105404
VO_2 films, metallic phase conductivity meas., growth technique and structure effects 7−118367
VO_2, sp. ht. and mag. susceptibility, determ., metal-insulator transition 7−137797
VO_2 thin films, optical contrast at semiconductor-metal transition 7−70927
VO_x, metal-semiconductor transition, optical props. 7−84680
$V_{1-x}Si_x$, high field magnetoresistance studies *(German)* 7−124968
Y-Ba-Cu-O high T_c supercond., high temp. elec. props. study 7−124866
$YBa_{2-x}Sr_xCu_3O_y$ high T_c superconductor props., comp. depend. studies 7−118658
$Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$, high T_c supercond., electronic effects on superconductivity 7−118640
ZnSe, magnetoresistance, hopping conduction over localised states in Coulomb gap 7−84944

metal-oxide-semiconductor devices *see metal-insulator-semiconductor devices*

metal-oxide-semiconductor field effect transistors *see insulated gate field effect transistors*

metal-oxide semiconductor structures *see metal-insulator-semiconductor structures*

metal-semiconductor boundaries *see semiconductor-metal boundaries*

metal semiconductor field effect transistors *see Schottky gate field effect transistors*

metal-semiconductor-metal structures
cooling thermoelements, influence of size effects 7−133110
LB films of *N*-(4-*n*-dodecyloxyphenyl) and *N*-(1-pyrenyl) carbamates of 2-bromo-5-(2′-hydroxyethoxy)-TCNQ, towards organic rectifiers 7−112513
Ag-Zn_3P_2-Ag cells, I-V characts., Ag electromigration 7−105737
Al-Si-Al, switching effects and negative resistance 7−131807
Au-Sb_2S_3-Au, space-charge limited cond., dark cond. temp. depend., trap density 7−131817
Ge_xTe_{1-x} based sandwich struct., fast switching 7−105727
Zn-ZnO-Pb, inelastic electron tunnelling spectroscopy, effect of doped oxide layer 7−70428

metal theory
see also band structure of crystalline metals and alloys; electron gas; lattice dynamics of metallic crystals
amorphous, hard spheres binary mixtures, dense random packing, numerical simulation 7−117821
amorphous and liq., electronic struct., effective medium theories 7−105377
charged small metal particles, energetics, model 7−118342
Curie temp. of electron liq. under const. press. *(Russian)* 7−112787
diffusion of randomly distributed particles *(Japanese)* 7−76475
electron gas, density response function calcs. 7−105430
electron gas, interatomic interactions, total energy calc., effective medium theory 7−118398
electron liquids, third-frequency-moment sum rule, correlation effects 7−70226
electron-hole symm. of shells of equivalent electrons, effects on spectral and mag. props. *(Russian)* 7−112156
electronic fluctuation and cohesion in metals 7−118399
electronic structure and plasma excitations at the surface of small voids in jellium 7−124817
electronic structure of metals and alloys, conf., Johnsbach, Germany (Apr. 86) 7−128195
ferromagnetic metals, magnetic props., thermal expansion effects 7−125414
lattice relaxation at a metal surface in the tight-binding approximation 7−105638
localisation and interaction in disordered metals and doped semiconductors, Summer School, St. Andrews, Scotland (July-Aug. 1986) 7−108004
magnetism, spin fluctuation theory *(Japanese)* 7−77311
multicomponent metallic solns., interaction parameters, theoretical eqn. *(Japanese)* 7−76415
non-adiabatic effect for heavy particles in metals 7−98764
phonon drag magnetothermal EMF in open Fermi surface *(Russian)* 7−76897
plasmon dispersion coeff., electron effective mass evaluation 7−105439
plasmon oscills., analytical expression for total number of participating electrons 7−70229
positron annihilation at a vacancy, analytical models 7−119065
quantum mechanical electron theory of metals, development, 1928-33 7−66888

metal theory continued
surface, self-consistent electron densities in strong static elec. fields 7−105642
surfaces, electronic screening props. 7−77028
surfaces, SHG, density functional approach 7−117270
temperature and pressure conditions effects on metal-nonmetal states 7−92043
transition metals, surfaces and interfaces, magnetism and electronic struct. *(Japanese)* 7−77199
US propagation, modified Bragg refl. force implications 7−69836
Al, metallic, form factors from an atom-in-jellium-vacancy model 7−105356
Au, nonequilibrium electron heating by femtosec. laser pulses 7−84837
Ni (100), electronic structures and surface magnetism at finite temps. 7−77024

metal vapour lamps
see also mercury vapour lamps
pupillary size differences under incandescent and high pressure sodium lamps 7−114248
Na high-pressure lamp, emission spectrum, influence of NaNa, NaHg, and NaXe mols. 7−135870
Na high-pressure lamp HF operating characteristics *(Korean)* 7−91383

metal working *see metalworking*

metallic epitaxial layers
epitaxial growth, hot wall technique, effect of subst. temp. 7−124747
growth on Si, conf., Palo Alto, CA, USA (April 1986) 7−80174
ionised cluster beam technique and appl. to thin film deposition and epitaxy *(Japanese)* 7−71083
silicide films and double heterostructures on Si, template growth technique in UHV 7−86021
transition metal silicide films on Si, epitaxial growth, props. and applications, review 7−86022
Al (111)/Si (111) interface, ionised cluster beam deposited, structure, channelling study 7−92005
Au, monocrystalline thin films, hole size and shape 7−124789
Co epitaxy, overlayer growth and surface segregation on GaAs, electron diffr. and photoemission meas. 7−70144
Co, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7−99526
$CoSi_2$ and $CoSi_2$/Si heterostructures, growth on Si(111) 7−143294
$CoSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
$CoSi_2$ films, pinhole form. control using solid-phase epitaxy 7−143277
$CoSi_2$, ultrathin epitaxial films, low temp. transport props. 7−125143
$CoSi_2$-Si MBE layers, strain relax. 7−143276
Cr, epitaxial coatings on Mo (111), X-ray diffr. study 7−112142
Cr, VPE grown on hot Cu substrates, orientation and morphology of deposits, TEM electron diffr. studies 7−70148
Cu adsorbed on Ru (001), CO molecular probe, Fourier transform IR vibr. spectra 7−137695
Cu, epitaxial coatings on Mo (111), X-ray diffr. study 7−112142
Cu epitaxial overlayers on Ni, backscattered electron diffr. obs. 7−70953
Cu-Al (111), growth mode and electronic struct. of Cu films 7−98754
CuNi sandwich struct., X-ray photoelectron spectroscopy, Auger electron diffraction, multiple scattering 7−138606
Eu, on Re surfaces, BCC and FCC forms 7−143265
Fe, BCC on Cu (100), surface electronic behaviour 7−144238
Fe epitaxial growth on GaAs (110), electronic struct. and interface formation 7−70146
α-Fe ferromagnetic films, MBE growth on ZnSe (001), (110) 7−76686
Fe, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7−99526
Fe-Si (111) surfaces, angle resolved UV photoelectron spectroscopy study 7−138598
Mo-Cu multilayered film, RHEED intensity oscill. during MBE growth 7−84596
Nb films grown in UHV MBE system, epitaxial relations and supercond. props. 7−76687
Nb-Ta superlattices, cryst. direction depend. of interfacial mixing 7−105156
Nb-Ta superlattices, hydrogenated, elec., struct. and supercond. props. 7−112577
Ni/Cu/Ni(100) sandwich struct., resonant electron transmission 7−131742
$NiSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
$NiSi_2$ epitaxial film, surface struct., low energy ion scatt. studies 7−118219
$NiSi_2$ layers grown on Si (111) by MBE and SPE 7−76679
$NiSi_2$/Si high quality epitaxial films grown by MBE, Schottky contact props. 7−76680
$NiSi_2$-Si, thin epitaxial layers, cond. and mobility 7−138076
Pb monolayer valence band, photoemission study 7−125914
Pd, adsorption on sapphire, wetting and adhesion of Pd-Al_2O_3 interface *(French)* 7−112106
PtSi epitaxial growth on Si (111), electron microscopy 7−76643
α-Rh_2As/GaAs, metal/semiconductor epitaxial structures *(French)* 7−131498
Ru film (0001), Cu room temp. adsorption, AES, LEED and work function meas. 7−143227
Ru_2Si_3 epitaxial films on Si (111), structural identification 7−76692
α-Sn, cubic, dipping LPE on InSb substrate 7−138694
Ti single crystal, TiC epitaxial layer formation, LEED and AES studies 7−124785
Zn, epitaxial growth, hot wall technique, effect of subst. temp. 7−124747

metallic glasses
alloys, crystal nucleation, review 7−142625
alloys, rapid solidification, interface morphology 7−92981
amorphous alloy ribbons, single roller casting process, small hump form. mechanism *(Japanese)* 7−106504
amorphous alloys, binary, comp. range, atomic size effects 7−111419
amorphous alloys, consolidated, strengthening mechanisms 7−113644
amorphous metal alloy powders, chemically produced precursors 7−113473
amorphous metal DC magnetometer, magnetoelastic, stress-relieved 7−67351
amorphous metals, conc. binary, chem. short-range order 7−97968
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
amorphous ribbons, casting conditions 7−75255
amorphous ribbons, coercivity changes over ribbon length 7−85359

metallic glasses continued
amorphous ribbons, mag. anisotropy, oriented surface roughness effect 7−105914
atomic diffusion coefficients 7−98544
atomic short range order, glass form. 7−83728
bond-orientational anisotropy obs. by X-ray diffr. 7−69607
bulk and surface electronic struct. 7−98790
characteristics and appls. *(Spanish)* 7−117826
comminution mechanisms of amorphous metallic alloys, effects on mag characts. 7−77873
complex cation struct. model 7−142614
corrosion, ^{57}Fe Mossbauer spectra studies 7−144607
corrosion resistance studies, review 7−144608
crossover effects 7−97978
crystallisation, non-isothermal kinetics 7−111404
crystallisation kinetics 7−83739
crystallisation kinetics 7−142624
density, meas. by Archimedes method 7−142603
diffusive viscous flow 7−131348
domain wall stabilisation, permeability disaccommodation, struct. relax 7−132088
electrical transport theory, localisation, s-d hybridisation 7−143428
electron transport Hall coeff., thermoelectric power 7−143439
electron transport props., systematic studies 7−92149
electron transport theory, influence of incoherent atomic motion 7−92152
electronic states 7−92053
electronic states and conductivity 7−92151
enthalpy relaxation kinetics 7−98454
$(Fe_{1-x}Ni_x)_{80}B_{20}$, crystallisation behaviour *(Korean)* 7−137256
field annealed amorphous ribbons, magnetoelastic props., static an dynamic bifurcations study 7−106004
field-annealed magnetoelastic amorphous metal magnetometers, directiona characts. 7−102463
formability criteria, pattern recognition method 7−83735
formation, methods and techniques 7−143011
formation and growth processes by solid state diffusion reaction 7−104587
formation kinetics and thermodynamics 7−84270
formation thermodynamics, glass transition universality, undercooled liq state 7−142623
glass formation by mech. alloying 7−113472
glass forming ability rel. to metallurgical parameters 7−83730
glass transition temp., estimation 7−98449
heavy and light ion bombardment, near-surface and bulk props 7−142851
hollow sphere form., solidification characts., melt jet instability techniqu 7−86089
induced anisotropy, rotating mag. field annealing effects 7−85282
inelastic deform. mechanisms w.r.t. struct. 7−98318
interatomic pair potentials 7−137258
ion mixing formation 7−137253
ion-beam-induced amorphization 7−104865
kinetics of struct. relax., resistivity, isothermal annealing 7−104582
level systems and kinetic processes in amorphous solids 7−97947
local atomic coordinations, EXAFS, XANES 7−83762
local magnetic environment probe using magnetoresist. 7−84830
local struct., medium range order 7−83705
low temperature resist. and thermoelec. power *(Russian)* 7−137888
low-magnetostrictive ribbons, anisotropy and magnetostriction, indirec meas. 7−70620
magnetic aftereffects and struct. relaxation, atomic double well mode 7−143862
magnetic anisotropy, induction by current annealing 7−138221
magnetic pulse compressor drivers using ferromagnetic metallic glasses fo induction linac 7−81764
magnetic static behaviour near critical conc. 7−143855
magnetoelastic strain gauge, ultrasensitive amorphous ribbons, operationa characts. 7−102397
magnetomechanical appls. 7−143891
magnetostriction and short-range order 7−85402
magnetostrictive props., fibre optic magnetometer appl., bonding agen effects 7−106000
magnetostrictive transducers, prep. and props., fibre optic magnetic sensor appl. 7−106002
meas. in relaxed and crystallized specimens, RBS technique 7−143104
metal-metalloid, crystn. statistics 7−76014
metal-metalloid, internal friction during crystn., influence of cold rollin 7−76017
metastable material prep. by laser irrad. 7−76205
metastable metallic crystals, spontaneous vitrification 7−111406
Metglas 2605S-2, struct. relaxation, short range order parameter, Moss bauer hyperfine field distrib. 7−142619
microstructural control, art and science 7−113514
microstructure, ultrafast cooling form. *(Russian)* 7−77964
Mossbauer spectra anal. 7−125575
nanometer scale structure fabrication with the scanning tunneling micro scope 7−124045
non-magnetic, low-temp. anomalous props. 7−105517
nonmagnetostrictive type, relax. kinetics, Cr influence 7−99475
order and disorder, atomic struct. calc., review 7−83761
plastic deformation, microscopic mechanism 7−144478
plasticity at high temp. rel. to crystn. stability *(Russian)* 7−142888
point defects and atomic diffusion, review 7−98558
production, structures and structural defects 7−100172
production and mechanical properties *(Spanish)* 7−86122
production of amorphous strips, temp. calc. 7−132525
radiation-induced growth 7−91678
rapid quenching form. 7−100171
rapid solidification technology, development scope and trends 7−77862
rapidly heated, crystn. 7−76015
rapidly solidified alloys, conf., Boston, MA, USA (Dec. 1986) 7−108040
rapidly solidified materials, review 7−86092
reversible relax. kinetics, mag. anisotropy, anelasticity 7−105916
ribbon casting, amorphous and crystalline, solidification mechanism 7−77990
ribbons, domain wall size model 7−132053
ribbons, fracture, effect of relax. state and temp. 7−86358
ribbons, magnetic texture Mossbauer spectra studies 7−85253
self-diffusion and impurity diffusion 7−105103
shape formation, structural relaxation 7−142604

etallic glasses continued
short-range ordering kinetics, anal. of crossover effect 7−97979
single component, high density, nucleation, growth and transform. of crysts. 7−76013
sound absorption, two-level systems relaxation 7−118040
strong dynamic disorder, resistivity and the Ioffe-Regal criterion 7−105519
structural relaxation, activation energy spectrum model 7−142621
structural relaxation, kinetics and distributed fictive temps. 7−97971
structural relaxation, reversible and irreversible changes in two-level systems model 7−104570
structural relaxation kinetics, activation energy model 7−142618
surfaces, CO interactions, XPS and UPS studies 7−144754
tapes, continuous casting, thermal history calcs. 7−75585
thermal stability, glass form. and mech. props. 7−76020
thermally embrittled, restoration of ductility under neutron irrad. 7−78092
thermoelectric power, electron-phonon interactions, appl. to $Mg_{64}Al_{18}Ga_{18}$ 7−70293
(Ti,Hf,Zr)Be ternary alloys, glass forming range prediction 7−83734
transition metal alloys, $Fe_{80-x}M_xB_{20}$, M=Cr,Mn,Co,Ni, metallic glasses, hyperfine mag. field, comp. and temp. depend., Mossbauer spectra meas. 7−77441
transition metal glasses, containing Hf or Y, electronic struct. 7−92054
transition metal-metalloid amorphous alloys, short range order in relaxed and unrelaxed models 7−97944
transition metal-metalloid based metallic glasses, physical props. rel. to processing conditions 7−113534
transition metal-metalloid glasses, local and medium range structure 7−142607
transition metal-metalloid glasses, XANES and EXAFS study 7−77697
transition metal-metalloid metallic glasses, wear mechanism 7−113725
AL-Si-Mn, melt spun, icosahedral and glassy phases, form., struct., X-ray scatt., TEM studies 7−97958
Ag-Sn, amorphous alloys, density of states of Fermi energy, struct.-induced min., influence of noble-metal content 7−92058
Al alloys, structurally disordered, RMS displacements 7−142610
Al based metallic glasses, comp. choice, chemical twinning model 7−83736
Al-Cu, structurally disordered, RMS displacements 7−142610
Al-Fe melt spun alloys, rel. between microstruct. and processing 7−92983
Al-Fe-Ni rapidly solidified alloys, microstruct. and mechanical props. at elevated temps. 7−86194
Al-Mn (14 at.%), rapidly solidified droplets, icosahedral quasicrystals and glass form. 7−131052
Al-Mn metallic glasses, electronic structure, soft X-ray appearance pot. study 7−144182
$Al_{97}Fe_3$, rapidly solidified alloy with dispersoids, fatigue props. 7−86532
$Al_{50}Ge_{40}Mn_{10}$, amorphous, comp. short-range order development on annealing 7−117825
$Al_{23}Te_{77}$, metallic glasses, double glass transition phenomena and fractional crystn. 7−84271
Ar-Ni, amorphous tape, electro beam heating, growth of large Zr_2Ni crystals 7−142605
$Be_{37.5}Ti_{62.5}$ metallic glass, struct., X-ray and neutron diffr. 7−97962
CO-Nb-B glasses, magnetostriction, anomalous temp. depend. 7−85404
$CO_{75}Si_5B_{20}$, metallic glass, exoelectron emission 7−132418
Ca-Mg-Al metallic glasses, electronic struct. and electron transport 7−76746
$Ca_{60}Al_{40}$, glass structure, X-ray diffr. and computer simulation studies 7−142601
Cd-Cu, rapidly quenched, icosahedral, new cryst. and glassy phases, TEM obs. 7−83859
Co amorphous alloys, magnetic props, effect of magneto-thermal treatment, magnetic field appl. *(French)* 7−99505
Co-B glass, melt spun ribbons, surface crystallisation 7−131053
Co-B-Si glasses, thermal expansion, sp. ht. 7−118804
Co-base, induced anisotropy, effect of rotating mag. field annealing *(Chinese)* 7−143784
Co-based metallic glasses, saturation magnetostriction, stress depend. 7−132116
Co-Fe-Si-B, current pulse annealing, effects on mag. props. 7−142641
Co-Fe-Si-B amorphous alloys, magnetostriction and mag. permeability 7−85406
Co-Fe-Si-B metallic glass, current pulse heating, crystallisation, elec. resist. 7−83722
Co-Mn-B amorphous alloys, elec. resist. 7−98976
Co-Si-B rapidly melt quenched metallic glasses, magnetomechanical coupling meas. 7−99548
Co-Zr metallic glasses, short-range order and density 7−91465
$Co_{75}B_{25}$, metallic glasses, diffusion of Si and B 7−91885
$Co_{80}B_{20}$ glassy alloys, corrosion rel. to crystn. 7−126278
$Co_{77}Cr_{12}Zr_{11}$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
$Co_{74}Fe_6B_{20}$ amorphous alloy, plastic deform., acoustic emission anal. 7−106584
$Co_{74}Fe_6B_{20}$ metallic glasses, acoustic emission studies 7−78451
$Co_{80-x}Fe_xB_{20}$ amorphous alloys, ^{59}Co NMR study 7−132138
$Co_{69}Fe_{4.5}Cr_2Si_{2.5}B_{22}$ long-time tunnelling at He temps. 7−76463
$(Co_{93}Fe_7)_{75-x}Mo_xB_{25}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$(Co_{0.94-x}Fe_{0.06}Nb_x)_{78}Si_4B_{18}$ amorphous alloys, mag. props., influence of Nb content and heat treatment *(Korean)* 7−138856
$(Co_{1-x}(Fe_{0.5}Ni_{0.5})_x)_{75}Si_{15}B_{10}$ metallic glasses, electrical resistivity, temp. depend. 7−76877
$Co_{43}Fe_5Ni_{30}Si_{8.8}B_{13.2}$ ferromag. amorphous alloy, struct. relax. obs. 7−83776
$(Co_{0.94}Fe_{0.06})_{75}Si_{15}B_{10}$ metallic glasses, magnetostriction const. meas., temp., stress, structural relax. depend. 7−85400
$(Co_{1-x}Fe_x)_{0.75}Si_{10}B_{15}$ metallic glasses, reversible resistivity changes during struct. relax. 7−92147
$Co_{70}Fe_5Si_{15}B_{10}$ amorphous ribbons, surface quality and thickness effects, recording head appls. 7−77888
$Co_{70}Fe_5Si_{15}B_{20}$ metallic glasses, acoustic emission studies 7−78451
$Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloys, mag. after effect, influence of heat treatment 7−132086
$Co_{75-x}Fe_xSi_{15}B_{10}$ amorphous alloy, mag. anisotropy, stress annealing 7−85283
$Co_{75}Fe_5Si_{15}B_{10}$ amorphous alloy, plastically deformed, stress relax. and microhardness *(Russian)* 7−126159
Co_xGd_{1-x}, amorphous alloys, crystn. kinetics and mechanism 7−83753

metallic glasses continued
$Co_{81}Mo_{10}Zr_9$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
$Co_{80-x}Nb_xB_{16}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
$Co_{80}Nb_{14}B_6$, $Co_{84}Nb_{10}B_6$ metallic glasses, martensite transform., plasticity, internal friction 7−106574
$Co_{80}Nb_8B_{12}$, rapidly quenched alloy, magnetostriction, depend, on quenching rate, struct. relax. and temp. 7−112917
$Co_{84}Nb_{10}B_6$ metallic glass, fully-crystallised, elastic moduli, yield stress and ductility 7−71227
$Co_{58}Ni_{10}Fe_5Si_{11}B_{16}$ metallic glass, relax. phenomena, crossover effects 7−85363
$Co_{83}P_{17}$, amorphous alloys, electrodeposited in mag. field, struct. 7−104565
$Co_{70}Si_xB_{30-y}$ metallic glasses, struct. changes 7−131040
$Co_{75}Si_{15}B_{10}$, amorphous alloy, anisotropy of tensile props. 7−86233
$Co_{40}Sn_{60}$, mechanically alloyed, ultrasonic velocity changes 7−69832
Cr-C amorphous alloys sputtered, form. and crystn. 7−83754
$Cr_{40}Ti_{60}$ spontaneous vitrification during low temp. furnace annealing 7−117824
Cu-Nb-Sn, amorphous alloy prep. by mech. alloying of elemental powders 7−144331
Cu-simple metal binary amorphous alloys, universal behaviour and description as new Hume-Rothery phase 7−91469
Cu-Sn, amorphous alloys, density of states of Fermi energy, struct.-induced min., influence of noble-metal content 7−92058
Cu-Sn liquid rapidly quenched alloys, shape memory effects 7−86301
Cu-Ti, amorphous alloys, crystn. 7−83747
Cu-Ti metallic glass electrode system, thermodynamic fn. evaluation 7−143050
Cu-Ti system, melt spun ribbon, glass forming ability 7−83737
Cu-Ti-Zr, Cu-Ti alloys, glass form., competing cryst. structures 7−83738
Cu-Y amorphous alloys, sputtered, electronic struct. as deduced by optical and electron spectroscopy 7−92057
Cu-Zr, amorphous, elec. resist., temp. depend. 7−105521
Cu-Zr, atomic arrangements, XANES study 7−142611
Cu-Zr amorphous alloys, liq. quenched and sputtered, struct. relax and glass transition, comparison 7−97981
Cu-Zr metallic glass electrode system, thermodynamic fn. evaluation 7−143050
Cu-Zr-Al, non-magnetic metallic glass, electron transport props. 7−143427
Cu-Zr-M metallic glasses, M=Hf, Ti, Cr, Mn, V, Ni, Fe, Ge or Si, thermal stability as function of average atomisation enthalpy 7−83748
Cu-Zr-P rapidly quenched glassy alloys, corrosion resistance, effect of P 7−86489
$Cu_{35}Ti_{65}$ metallic glasses, crystalline particles, deform.-induced amorphisation 7−111417
$Cu_{50}Ti_{50}$ amorphous alloy, XPS study 7−85962
$Cu_{67}Ti_{33}$ metallic glass, struct. relax., crystallisation, elastic modulus, internal friction 7−106568
$CuTiH_x$ metallic glasses, struct., neutron diffr. studies 7−142642
$Cu_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
Cu_xY_{1-x}, amorphous metallic glasses, form., crystn. 7−77867
$Cu_{59}Zr_{41}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
$Cu_{60}Zr_{40}$ metallic glass, processed by high vel. injection, struct. and mech props. 7−113475
$Cu_{60}Zr_{40}$ metallic glasses, creep behaviour *(Chinese)* 7−132664
$Cu_{50}Zr_{50-x}Al_x$ metallic glass, electronic struct.-sensitive electron transport 7−98963
$Cu_{60}Zr_{40-x}Ni_x$ glasses, ideal soln. behaviour rel. to Ni addition 7−83768
$(Fe,Mn)_{80}P_{20}$, amorphous alloy, crystallisation, time-resolved neutron thermodiffractometry 7−142630
Fe-B, amorphous alloys, interaction between electrochem. parameter and comp. 7−106661
Fe-B amorphous alloys, atomic and electronic struct. during crystallisation 7−111390
Fe-B amorphous alloys, liq.-quenched, struct. study by Mossbauer spectroscopy and high resoln. electron microscopy 7−76022
Fe-B amorphous ribbons, linear thermal expansion anomaly *(Russian)* 7−69941
Fe-B based metallic glasses, glass transition and crystn. temp., effect of quenching rate 7−76016
Fe-B metallic glass, crystn. kinetics study by X-ray diffr. and Mossbauer spectroscopy 7−76025
Fe-B metallic glasses, corrosion characts. in NaCl soln. 7−132809
Fe-B metallic glasses, Mossbauer spectra, hyperfine parameters correls. 7−99630
Fe-B metallic glasses, reversible struct. relax. 7−69602
Fe-B-C, metallic glasses, crystn., enthalpic and struct. anal. 7−83742
Fe-B-R metallic glasses, R=La, Ce, Pr, Ho or Er, in situ crystn. obs. 7−76031
Fe-B-Si system, powders prepared by water atomisation, comp. effect on glass-forming regions 7−132527
Fe-B-Si-C, metallic glasses, crystn., enthalpic and struct. anal. 7−83742
Fe-B-Si-C-H metallic glasses, magnetoelastic effect 7−85403
Fe-base, induced anisotropy, effect of rotating mag. field annealing *(Chinese)* 7−143784
Fe-base amorphous alloys, struct., effect of prod. conditions 7−131042
Fe-base amorphous and crystallised alloys, oxidation, initial stages, effect of temp. and kinetics *(Russian)* 7−93192
Fe-based, struct. transform., photostimulated exoelectron emission 7−76019
Fe-based amorphous alloys, H embrittlement 7−119327
Fe-based metallic glasses, initial stage crystn. struct. and morphologies 7−83743
Fe-based metallic glasses, short range order changes, topological order 7−142609
Fe-based metallic glasses, H implantation damage, precipitation 7−142850
Fe-based metallic glasses, oxidation and electronic struct., UV, X-ray and electron spectra 7−144610
Fe-C-Si amorphous alloys, prep. by melt quenching 7−97957
Fe-CR-C-B amorphous alloys, crystn. rel. to comp., DSC, X-ray diffr. *(Korean)* 7−137250
Fe-Co-B glasses, short range order, comp. depend. props. 7−97966
Fe-Co-B-Ni(Cr), metallic glass, relaxation kinetics and Curie temp. 7−104579

metallic glasses continued
Fe-Co-Mn-B-Si amorphous ribbons, mag. aftereffect studies 7−92470
Fe-Co-Si-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Fe-Cr-Mo-P-C alloys, vitrification by laser surface melting treatment 7−86487
Fe-Cr-Ni-B, crystallised glassy alloy, superplasticity 7−126171
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7−83746
Fe-Cr-P-C amorphous alloys, interaction between electrochem. parameter and comp. 7−106661
Fe-Cr-Si-B, passivity-maintaining current density cooling-condition depend. 7−144605
Fe-Cr-Si-B amorphous alloy, oxidation behaviour, influence of Cr addition 7−93198
Fe-Ho-B metallic glasses, Curie temp., mag. moments and magnetisation 7−85297
Fe-Ni-B, amorphous alloys, relax. behaviour 7−98339
Fe-Ni-B, metallic glasses, struct. relax., microcalorimetric investig. 7−97974
Fe-Ni-B metallic glasses, ferromag., spin polarisation of secondary electrons 7−138559
Fe-Ni-B system, amorphous state structs. 7−97973
Fe-Ni-B-Si metallic glasses, reversible structural relax., DSC and X-ray diffr. 7−131054
Fe-Ni-P, amorphous magnet, crystallisation kinetics 7−111393
Fe-Ni-P-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Fe-Ni-Si-B, current pulse annealing, effects on mag. props. 7−142641
Fe-Ni-Si-B amorphous alloys, Ni magnetism, Mossbauer studies 7−113044
Fe-Ni-Zr amorphous alloys, effective susceptibility exponent, temp. depend. 7−143766
Fe-P-C system, powders prepared by water atomisation, comp. effect on glass-forming regions 7−132527
Fe-Si-Al Sendust alloy ribbons, mag. props., heat treatment effects 7−100399
Fe-Si-B, amorphous alloys, produced by spark erosion, microstruct. and props., effect of quench rate 7−119202
Fe-Si-B, density meas., heat treatment influence 7−71199
Fe-Si-B, rapidly solidified, microstruct. and phase comp. 7−131041
Fe-Si-B amorphous alloy, oxidation behaviour, influence of Cr addition 7−93198
Fe-Si-B metallic glasses, density determ. 7−131201
Fe-Si-B-based amorphous alloys, mag. permeability and thermal stability 7−85361
Fe-Ti films, amorphous, compositionally modulated, struct. relax. and interdiffusion 7−111934
Fe-Ti-P rapidly quenched glassy alloys, corrosion resistance, effect of P 7−86489
Fe-Zr glasses, mechanically alloyed, Mossbauer effect 7−132172
Fe-Zr metallic glasses, mag. props. study 7−118827
Fe-Zr-B metallic glasses, thermal stability 7−83752
$Fe_x Hf_{1-x}$ glasses, mag. props. 7−118922
$Fe_{60}Al_{28}B_{12}$, melt spun alloy, Mossbauer study 7−113028
$Fe_{80}Al_3B_{17}$ metallic glass, crystallisation, elec. resist. and heat evolution studies *(Russian)* 7−69600
$Fe_{80.5}(B,Si,C)_{19.5}$ amorphous ribbon, effect of laser irradiation on 50 Hz core loss 7−85347
FeB amorphous sputtered film temp. sensor 7−89212
FeB annealed glasses, fracture strength 7−86359
$Fe_{1-x}B_x$ metallic glasses, rapidly quenched mag. and structural props. 7−105900
$Fe_{100-x}B_x$, amorphous, surface crystn., Mossbauer studies 7−76018
$Fe_{100-x}B_x$ metallic glasses, mechanical props. 7−86360
$Fe_{100-x}B_x$ metallic glasses, elec. resistance pressure depend. *(Chinese)* 7−98961
$Fe_{75}B_{25}$, metallic glasses, diffusion of Si and B 7−91885
$Fe_{80-x}B_x$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{80}B_{20}$ amorphous alloy, electrochem. investig., active dissolution in acid solns. 7−100430
$Fe_{80}B_{20}$, amorphous alloy, quench disordered, struct. relaxation under isothermal annealing 7−142620
$Fe_{80}B_{20}$ amorphous alloys, neutron irradiation, effect on mag. props. 7−70593
$Fe_{80}B_{20}$, crystn. location by conversion electron Mossbauer spectroscopy 7−76023
$Fe_{80}B_{20}$ glassy alloys, corrosion rel. to crystn. 7−126278
$Fe_{80}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{80}B_{20}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
$Fe_{80}B_{20}$, surface damage by Ar ion bombardment 7−76224
$Fe_{80}B_{20}$, surface extended energy loss-fine struct. study 7−143153
$Fe_{80}B_{20}$, thermodynamics and kinetics of amorphisation of metallic melts *(Russian)* 7−124114
$Fe_{81}B_{19}$ metallic glass, struct., neutron diffr., quasi-crystalline model 7−97961
$Fe_{82}B_{18}$ rapidly quenched amorphous ribbon, surface struct. and catalytic activity 7−84453
$Fe_{85}B_{15}$, metallic glasses, relax., thermophys. investig. 7−97980
$Fe_{86}B_{14}$ metallic glass, crystn. kinetics and mechanism 7−76024
$Fe_{80}B_{13}C_7$, amorphous alloy, mag. props., crystallisation and embrittlement 7−132013
$Fe_{81}B_{13.5}C_2$, amorphous films, FMR and fiber optic interferometric studies 7−125541
$Fe_{82}B_{(18-x)}C_x$, disaccommodation phenomena 7−138280
$Fe_{82}B_{18-x}Ge_x$ amorphous alloys, elec. resistivity, coherent electron-magnon scatt. contribution 7−112289
$Fe_{75}B_{25-x}Nd_x$ rapidly quenched alloys, mag. props. 7−77357
$Fe_{77.5}B_{13}Si_{9.5}$, amorphous, for choke and inductor applications, microstructure and mag. props. 7−86234
$Fe_{78}B_{13}Si_9$ amorphous alloy, viscous flow meas. near T_g under continuous heating 7−98321
$Fe_{78}B_{13}Si_9$ amorphous ribbons, mag. moment distrib., Mossbauer study 7−113027
$Fe_{78}B_{13}Si_9$, amorphous to crystalline transformation 7−142636
$Fe_{78}B_{13}Si_9$ glassy metal powder cores, mag. props. 7−85365
$Fe_{78}B_{13}Si_9$, metallic glass, surface oxidation, annealing, AES obs. 7−106709
$Fe_{78}B_{13}Si_9$ metallic glass, magnetomechanical coupling 7−132115

metallic glasses continued
$Fe_{78}B_{22-x}Si_x$, metallic glasses, crystn. and thermal stability 7−83745
$Fe_{79}B_{16}Si_5$, amorphous, structural relax., crystallisation, Mossbauer spectra, elec. resist., X-ray diffr. *(Japanese)* 7−76004
$Fe_{79}B_{16}Si_5$, amorphous alloy, shock consolidated powder, mag. props. r to compression rate 7−112855
$Fe_{79}B_{16}Si_5$, amorphous alloy. phys. props. and struct., effect of cold rolli 7−144437
$Fe_{79.5}B_{12}Si_{8.5}$ amorphous alloy, temper embrittlement, composition depend. 7−86357
$Fe_{80}B_{13}Si_7$, amorphous alloy, mag. props., crystallisation and embrittl ment 7−132013
$Fe_{80}B_{14}Si_6$ long-time tunnelling at He temps. 7−76463
$Fe_{80}B_{20-x}Si_x$ amorphous alloys, mag. props. and mag. annealing, effect different Si contents *(Korean)* 7−132089
$Fe_{80}B_{8.74}Si_{11.26}$ metallic glass, magnetisation studies 7−143856
$Fe_{82}B_{12}Si_6$, amorphous to crystalline transformation 7−142636
$Fe_{82}B_{12}Si_6$, metallic glass, ferromag., spin polarisation of secondary ele trons 7−138559
$Fe_{82}B_{18-x}Si_x$, disaccommodation phenomena 7−138280
$Fe_xB_{13}Si_{87-x}$, metallic glasses, annealing embrittlement, effect of microadditions 7−113724
$Fe_{78}B_{11}Si_9C_2$, amorphous to crystalline transformation, isothermal kineti 7−142640
$Fe_{80}B_{16}Si_2C_2$ metallic glass, crystn. and embrittlement, SAXS stu 7−97959
$Fe_{80}B_{16}Si_2C_2$ metallic glass, annealing embrittlement, AES stu 7−98331
$Fe_{81}B_{13.5}Si_{3.5}C$ amorphous ferromag. ribbons, mag. domains, dynamic obs. 7−125515
$Fe_{81}B_{13.5}Si_{3.5}C$ metallic glass, dry sliding wear 7−86372
$Fe_{81}B_{13.5}Si_{3.5}C_2$, amorphous alloy, crystallisation kinetics, DSC, X-r diffr. 7−76006
$Fe_{81}B_{13.5}Si_{3.5}C_2$, amorphous alloys, density and microhardness, influence annealing 7−93102
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbau spectra 7−106711
$Fe_{81}B_{13.5}Si_{3.5}C_2$, Metglas 2605 SC, radial distrib. function an 7−142608
$Fe_{81.5}B_{13.5}Si_4C$, amorphous ribbons, annealing, struct., Mossbauer spectr X-ray diffr. 7−106554
$Fe_{83}B_{14}Si_{1.5}C_{1.5}$ metallic glass, struct. evolution during crystn. 7−83744
$Fe_{81}B_{13.5}Si_{3.5}C_2$, Metglas 2605 SC, crystallisation kinetics 7−142634
$Fe_{80.5}Bi_{12}Si_{4.5}C_3$ amorphous alloy ribbon, mag. props., substrate tem effects 7−100401
$Fe_{81}Bi_{3.5}Si_{3.5}C_2$, structural changes, effects of annealing, hydrogen a vacuum 7−142638
$Fe_{100-x}C_x$ amorphous alloys, sputtered, crystn. 7−76021
$(Fe_{1-x}Co_x)$-Si, B amorphous wires, Barkhausen discontinuities 7−12546
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glass, surface oxide layers, AES and XPS studi 7−143161
$Fe_{67}Co_{18}B_{14}Si$, amorphous mag. material, isothermal nucleation a growth studies 7−117818
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, struct., Mossbauer spectra, electrochemic props. 7−100450
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, hyperfine fields and phase separation, Mos bauer study 7−111893
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbau spectra 7−106711
$Fe_{67}Co_{18}B_4Si_1$, structural changes, effects of annealing, hydrogen a vacuum 7−142638
$Fe_{74}Co_{10-y}Cr_yB_{16}$, influence of Cr content on elec. resist, and thermoel power 7−137891
$Fe_{74}Co_5Cr_5B_{16}$, $Fe_{74}Co_{10}B_{16}$ metallic glasses, structural relax. and embr tlement rel. to comp. 7−106607
FeCoNi-based metallic glasses, induced anisotropy and magnetostricti temp. depend. 7−105912
$Fe_{4.7}Co_{65.6}Ni_{3.4}Cr_{1.1}Nb_{2.5}B_{13.8}$ $Si_{9.1}$, metallic glass, internal frictio struct. relax, microhardness 7−106566
$(Fe_{1-x}Co_x)_{70}(Si_{0.4}B_{0.6})_{30}$ amorphous ribbons, permeability temp. depen and magnetostriction 7−85354
$(Fe_{1-x}Co_x)_{75}Si_{15}B_{10}$, crystallisation, elec. resistivity meas., effects of additions 7−142635
$(Fe_{1-x}Co_x)_{75}Si_{15}B_{10}$, thermoelec. and calorimetric studies 7−137904
$Fe_{67}Co_{18}SiB_{14}$ metallic glasses, nucleation and crystal growth 7−137241
$Fe_{72}Co_3Si_{15}B_{10}$, glassy alloy, Mossauer, elec. and mag. studies 7−99632
$Fe_{78-y}Co_ySi_9B_{13}$ metallic glasses, change in Young's modulus duri struct. relax. 7−132659
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ metallic glass, magnetisation and magnetostriction ol 7−106008
$Fe_{80}Cr_5B_{15}$, amorphous ferromagnet, paramag. neutron scatt. 7−138192
$Fe_{85-x}Cr_xB_{15}$ metallic glasses, mag. hyperfine field distrib., Mossbau spectra 7−99631
$(Fe_{1-x}Cr_x)_{80}B_{12}Si_8$ amorphous alloys, mag. props., effect of Cr additio *(Korean)* 7−131045
$Fe_{75-x}Cr_xB_{15}Si_{10}$, amorphous wires, corrosion fatigue 7−113796
$Fe_{77}Cr_2B_{16}Si_5$ amorphous ribbons, magneto-elastic wave amplitude vari tion *(Japanese)* 7−106009
$Fe_{78}Cr_2B_{12}Si_8$, amorphous, quenched, annealed, ferromag. resc 7−112962
$Fe_{80-x}Cr_xB_{12}Si_8$, amorphous alloy, electrical transport studies 7−137890
$Fe_{80-x}Cr_xB_{14}Si_6$, amorphous, Mossbauer spectra, effects of Cr content a temp. 7−99623
FeCrCPSi, Curie temp. determ., quench rate effects on structural sta DSC study *(French)* 7−99458
$Fe_{30}Cr_{10}Ni_{40}B_{20}$ metallic glass ribbons, US stressing, fracture toughne 7−113672
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ crystallised glasses, grain size and superplasticity studi 7−91706
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ devitrified metallic glass, fine particle superparamagnet props. 7−143860
$Fe_{72}Cr_8P_{14}C_6$ metallic glasses, acoustic emission studies 7−78451
$Fe_{72.5}Cr_{6.5}P_{13.2}C_{7.8}$, amorphous metallic ribbon, struct. relax. duri annealing 7−117828
$Fe_{80-x}Cr_x(PC)_{20}$, low temp. resist. and thermoelec. power 7−137894
$Fe_{74.7}Cr_{3.8}P_{8.7}C_{10.7}Si_{1.9}$, melt spun amorphous ribbons, mag. prop 7−132076
$(Fe_{100-x}M_x)_{0.83}B_{17}$ (M=Ni, Co, Mn, Cr, Mo, W) metallic glasse mechanical props. 7−86360

etallic glasses continued
$Fe_{8-x}M_xB_{20}$ (M=Cr, Co, Ni), amorphous foils, temp. depend. of mag. props. 7−132166
$Fe_{80-x}M_xB_{20}$ (M=Ti, Cr, Mn, Co, Ni) amorphous alloys, Curie and crystallization temps. 7−132012
$Fe_{80}M_3B_{17}$ (m=transition metals), amorphous alloys, influence of transition metal additives on transport props. 7−137892
$Fe_{82-x}M_xB_{18}$ amorphous ribbons, mag. props. and atomic struct. studies 7−99507
FeMnB metallic glasses, near linear temp. depend. of thermopower 7−84832
$Fe_{71.5}Mn_8B_{9.5}Si_{11}$, amorphous, Curie temp., influence of struct. relax. 7−97977
$(Fe_{100-x}Mn_x)_{75}P_{15}C_{10}$ amorphous cpd., mag. field sensor, cryogenic appls., Hall signal probe 7−89231
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
$Fe_{76}Mo_3(SiB)_{21}$, metallic glass, low losses at high freqs., low remanence, effect of heat treatment 7−112863
$Fe_{80-x}Nb_xSi_8B_{15}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
$Fe_{40}Ni_{40}B_{20}$, amorphous, quenched, annealed, struct., neutron diffr. 7−83770
$Fe_{40}Ni_{40}B_{20}$, amorphous, diffusion of ^{59}Fe and ^{32}P 7−91883
$Fe_{40}Ni_{40}B_{20}$ amorphous ribbons, thickness, influence on mechanical props., neutron irradiation, annealing 7−86232
$Fe_{40}Ni_{40}B_{20}$ and $Fe_{39}Ni_{39}Mo_2(SiB)_{20}$, mag. metallic glasses, corrosion resist. in acidic and neutral aqueous solns. 7−93172
$Fe_{40}Ni_{40}B_{20}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{40}Ni_{40}B_{20}$, effect of H^+ irradiation, on surface morphology 7−124343
$Fe_{40}Ni_{40}B_{20}$, $Fe_{40}Ni_{40}P_{20}$, metallic glasses, struct. relax. kinetics, calorimetric and resistometric studies 7−97976
$Fe_{40}Ni_{40}B_{20}$, metal-metalloid glasses, internal friction during crystn., influence of cold rolling 7−76017
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, corrosion behaviour, role of B and Ni 7−86490
$Fe_{40}Ni_{40}B_{20}$ metallic glass, near neighbour distrib., FIM obs. 7−97963
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, isothermal reversible relax., calorimetric investig. 7−97975
$Fe_{40}Ni_{40}B_{20}$ metallic glass, homogeneous deform., stress relax. meas. 7−98319
$Fe_{40}Ni_{40}B_{20}$ metallic glass, thermal stability, corrosion 7−104586
$Fe_{40}Ni_{40}B_{20}$ metallic glass ribbons, US stressing, fracture toughness 7−113672
$Fe_{40}Ni_{40}B_{20}$, metallic glass, struct. study using X-ray diffraction 7−142615
$Fe_{40}Ni_{40}B_{20}$, metallic glass, crystallisation, influence of Mo and Si 7−142628
$Fe_{40}Ni_{40}B_{20}$ metallic glass, corrosion characts. in Na salt solns., anion effects 7−144609
$Fe_{40}Ni_{40}B_{20}$, neutron irrad. and annealed, Mossbauer spectroscopy studies 7−91661
$Fe_{40}Ni_{40}B_{20}$, surface damage by Ar ion bombardment 7−76224
$Fe_{40}Ni_{40}B_{20}/Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous ribbon AC two-core transducer, displacement meas. 7−140686
$Fe_{41}Ni_{41}B_{18}$, amorphous, self-diffusion of radioactive ^{59}Fe tracer atoms 7−91884
$Fe_{41}Ni_{41}B_{18}$, amorphous and semicrystalline structure, fatigue and fracture 7−86362
$Fe_{60}Ni_{20}B_{20}$, amorphous alloy, struct. and props., effect of shock loading 7−83708
$Fe_xNi_{80-x}B_{20}$, amorphous alloys, magnetic contribution to electrical resistivity 7−137903
$Fe_xNi_{80-x}B_{20}$ glassy alloys, magnetisation and elec. resist. meas. 7−85360
$Fe_xNi_{80-x}B_{20}$, relax. processes, magnetoelastic meas. 7−85405
$Fe_{40}Ni_{40}B_{20-x}Al_x$ metallic glasses, crystn., influence of Al 7−76029
$Fe_{40}Ni_{40}B_{20-x}P_x$, amorphous struct., X-ray RDF 7−83764
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$Fe_{40}Ni_{40}B_{13}Si_7$ glassy ribbons, process parameters and props. 7−77889
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromag., phase transition, AC susceptibility meas. 7−85294
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous alloy, Hall effect meas., influence of contact prep. and cooling rate 7−98992
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromagnets, Curie point anomalies in elec. resist. 7−99461
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, critical exponent, mag. susceptibility meas. 7−85321
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, mag. transition, inhomogeneity effects 7−92427
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, irreversible mag. permeability decay 7−92463
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, magnetic stability, reversible disaccommodation w.r.t. demagnetization 7−92471
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
$Fe_{40-x}Ni_{40}Cr_xB_{20}$ metallic glasses, thermal stability, exoelectron study, crystallisation 7−131024
$Fe_{40-x}Ni_{40}Cr_xB_{20}$ ribbons, elec. resist. minimum 7−98974
FeNiCrMoSiB, amorphous, electronic transport studies 7−137895
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ amorphous ribbon alloy, laser radiation enhancement of corrosion resistance 7−71369
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metal-metalloid glasses, internal friction during crystn., influence of cold rolling 7−76017
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, Metglas 2826A, thermal stability assessment, isothermal long-term annealings 7−76026
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, internal friction, creep, annealing effect *(Japanese)* 7−93059
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, cold rolling, struct. relax., Young's modulus, internal friction 7−106569
$Fe_3Ni_{82.24}Cr_7Si_{4.5}B_{3.2}C_{0.06}$, amorphous struct., X-ray diffraction study 7−131047
$Fe_{40}Ni_{38}MNo_4B_{18}$ Metglas, domain walls, wall mobility, coercivity and initial permeability 7−132049
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, chemical short range order, isochronal resist. meas. 7−104583
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous ribbon/steel system, impact weldability domain 7−113851
$Fe_{40}Ni_{38}Mo_4B_{18}$, H_2 blistering and bubble form. 7−76223

metallic glasses continued
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystallisation and struct. relaxation study 7−83707
$Fe_{40}Ni_{38}Mo_4B_{18}$, surface damage by Ar ion bombardment 7−76224
$Fe_{80-x}Ni(Mo)_xB_{20}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{39}Ni_{39}Mo_4Si_6B_{12}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{50}Ni_{40}P_{10}$, pulsed laser annealing, study using *(Russian)* 7−91462
FeNiPB metallic glass ribbons, domain wall surface energy, complex impedance meas. 7−118820
$(Fe_{1-x}Ni_x)_{80}P_{14}B_6$, amorphous alloys, crystn. free energy changes 7−76028
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, fracture mechanics for embrittlement 7−86356
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, struct. regularities of deformation and fracture 7−86363
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, annealed, struct. study 7−91463
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloys crystn. product, interlamellar spacing var. 7−97960
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous, dissolved H mobility, induced mag. anisotropy 7−104589
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous ferromagnet, spin dynamics, neutron scattering 7−105903
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous ribbon, ferromag., domain struct., neutron depolarisation studies 7−118819
$Fe_{40}Ni_{40}P_{14}B_6$, elec. resistance, effect of pressure to 120 kbar 7−143429
$Fe_{40}Ni_{40}P_{14}B_6$, H_2 blistering and bubble form. 7−76223
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, crystn. kinetics under isothermal and nonisothermal conditions 7−76027
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass ribbons, laser beam and conventional annealing, Mossbauer studies 7−86231
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass, initial oxidation, Auger electron spectra and ion sputtering studies 7−86484
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, domain wall motion reproducibility 7−132054
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, thermal stability assessment, isothermal long-term annealings 7−76026
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, creep, structural relax., wear, plastic flow model 7−86295
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, interlamellar spacing variation 7−142631
$Fe_{40}Ni_{40}P_{14}B_6$, surface damage by Ar ion bombardment 7−76224
$(Fe_xNi_{1-x})_{80}(P_yB_{1-y})_{20}$, ferromag. glassy ribbons, small angle neutron scatt., domain wall struct. 7−99414
$(Fe_{1-x}Ni_x)_{77}Si_{10}B_{13}$, amorphous alloy, mag. contribution of Fe and Ni *(Korean)* 7−85353
$Fe_{25}Ni_{55}Si_{10}B_{10}$ metallic glass, mag. elec. and elastic props. 7−85362
$Fe_{40}Ni_{40}Si_{13}B_7$ amorphous ferromagnet, temp. depend. of mag. props. 7−132165
$Fe_{50}Ni_{30}Si_{10}B_{10}$ amorphous alloy, crystn. and relax. during pulse heating 7−71228
$Fe_{50}Ni_{30}Si_{20}B_{10}$, rapidly heated, crystn. 7−76015
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
FeNiZr glassy and crystallized alloys, Mossbauer and mag. studies 7−85507
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$Fe_{100-x}P_x$, amorphous, surface crystn., Mossbauer studies 7−76018
$Fe_{72}Si_{18}B_{10}$ amorphous alloy, second order mag. phase transition 7−85295
$Fe_{78}Si_{10}B_{12}$ amorphous alloy, crystallisation activation energy 7−97955
$Fe_{78}Si_{10}B_{12}$, mag. annealing influence on shear modulus and internal friction, piezomag. props. 7−70622
$Fe_{7.5}Si_{10}B_{15}$ metallic glass wire, struct., X-ray diffr. 7−83763
$Fe_{81}Si_xB_{19-x}$, metallic glasses, transform. behaviour study by SAXS 7−83740
$Fe_{83}Si_5B_{12}$, amorphous alloy, crystn., activation energy 7−83741
$Fe_{90-x}Si_xB_{10}$, amorphous, Mossbauer spectra, quadrupole splitting distrib. 7−85506
$Fe_{90-x}Si_xB_{10}$ amorphous alloys, heat treatment, change D/T_c ratio 7−113734
$Fe_{78}Si_9B_{11}C_2$, metallic glasses, structural defects, Mossbauer study 7−118904
$Fe_{80}Si_6B_xP_{14-x}$, amorphous alloys, magnetostriction, soft mag. props. *(Korean)* 7−138279
$Fe_{80}Si_xP_{20-x}$ amorphous alloys, crystn. *(Korean)* 7−131046
$Fe_{80}V_3B_{17}$ metallic glass, crystallisation, elec. resist. and heat evolution studies *(Russian)* 7−69600
$Fe_{95-x}W_5B_x$ amorphous alloys, thermomagnetic and crystallisation behaviour 7−77258
$Fe_{20}Zr_{80}$ superconducting metallic glass, sp. ht. and elec. resist. meas. 7−137889
$Fe_{90}Zr_{10}$ magnetic glass, hydrogenation study by Raman spectra 7−85716
FeZrBiSiB amorphous alloy, relax. phenomena mag. props. 7−111408
$Gd_{63.2}Co_{36.8}$, glass-forming eutectic, thermodynamic props. 7−118135
Ge-As(Se,Te), liq., Knight shift, anomalous behaviour 7−118878
$Ge_{20}Te_{80}$, metallic glasses, double glass transition phenomena and fractional crystn. 7−84271
He solubility, method of determ. in solid and melts 7−91828
Ho_4Co_3 bulk amorphous alloy, rapid quenching and mag. props. 7−85298
K-Cs, viscosity and density 7−143074
KCs, glassification temps. 7−143009
Mg-based metallic glasses, electron transport props. and related electronic struct. 7−98792
Mg-Zn, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
MgZn metallic glass, low temp. magnetoconductivity 7−98991
$Mg_{70}Zn_{30}$ metallic glass, passivation and passive film breakdown, electrochem. study 7−113795
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7−112742
MoRhB amorphous alloys, NMR studies and superconductivity 7−99313
MoRhP amorphous alloys, NMR studies and superconductivity 7−99313
Na-K-Cs, viscosity and density 7−143074
NaKCs, glassification temps. 7−143009
$Nd_{0.04}Fe_{0.94}B_{0.02}$ amorphous films, thermoelec, power 7−92308
$Nd_{0.06}Fe_{0.94}$ amorphous films, thermoelec, power 7−92308
Ni-B glass, melt spun ribbons, surface crystallisation 7−131053
Ni-based, struct. transform., photostimulated exoelectron emission 7−76019
Ni-based amorphous alloys, H embrittlement 7−119327
Ni-based metallic glasses, initial stage crystn. struct. and morphologies 7−83743

metallic glasses continued
Ni-Fe-B, metallic glass, short range struct., neutron diffr. 7−83771
Ni-Nb amorphous alloys, electronic transport 7−98969
Ni-Nb metallic glasses, creep, free vol. annihilation and relax., isothermal dilatometry meas. 7−98324
Ni-P, amorphous, electrodeposited, elastic props., struct. relax. 7−106567
Ni-P, amorphous alloy, electrodeposition of homogeneous flat foils 7−144316
Ni-P, electronic structure 7−92056
Ni-P, microcrystalline and amorphous, thermal expansion and structural relax. 7−84331
Ni-P glass, Avrami exponent for crystn. 7−142645
Ni-P-B metallic glasses, melt quenched, crystallisation, elec. transport props 7−83758
Ni-Pd based glassy alloy, crystallisation, particle size 7−83759
Ni-Pd-P amorphous particles, prep. by melt ejection into stirred water, hardness and thermal stability 7−86086
Ni-rich metal-metalloid glasses, relax. behaviour 7−97972
Ni-Si-B alloy, amorphous ribbon and powder compaction, densification and bonding 7−92932
Ni-Si-B metallic glass system, thermomechanical behaviour, liquid metal corrosion 7−86361
Ni-Si-B metallic glasses, thermal stability, temp. coeff. of resist. 7−105516
Ni-Ti, amorphous phase crystallisation by ion-implantation 7−91616
Ni-Ti mechanically alloyed amorphous powder, thin foil prep. and TEM obs. of amorphisation 7−144332
Ni-Ti-B glassy alloys, crystn. kinetics and mechanism rel. to eutectic comp. 7−131038
Ni-Zr amorphous ribbons, melt-spun, impurity diffusion 7−69982
Ni-Zr metallic composites, form. of bulk amorphous metals from solid state reaction 7−113477
Ni-Zr metallic glasses, props. rel. to melt temp. and quench rate 7−83766
Ni-Zr metallic glasses, thermal stability, struct. relax. 7−104585
Ni-Zr thin films, amorphous, compositionally modulated, interdiffusion 7−111933
$(Ni_{0.75}Al_{0.25})_{100-x}B_x$, rapid solidification, microstruct. 7−86161
$Ni_{1-x}B_x$ glass, short range struct., comp. variation, neutron scatt. 7−83774
$Ni_{64}B_{36}$ metallic glass, time-of-flight neutron scatt., resolution effects 7−69549
$Ni_{80}B_{20}$, metallic glasses, structural model, chemical twinning 7−97967
$Ni_{81.6}B_{18.4}$ metallic glass, FMR linewidth and resonance field meas. 7−143913
$Ni_{77.5}B_{14.6}Si_{7.9}$ amorphous alloy, Auger obs. of metalloid redistrib. 7−117823
$Ni_{78}B_{14}Si_8$, amorphous alloy crystn. 7−83756
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$, metallic glass, thermal stability, internal friction, TEM, DTA 7−69598
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$ metallic glass, non-isothermal crystn., activation energy determ. using internal friction method *(Polish)* 7−137248
NiCrNb, formation, crystallisation behaviour 7−142627
$Ni_{55}Cr_5Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
$Ni_{55}Cr_5Nb_{40}$ metallic glass, thermal and mech. stability, Cr effects 7−144479
$Ni_{55}Cr_5Nb_{40}$ metallic glasses, H embrittlement susceptibility 7−144530
$Ni_{78-x}Cr_xSi_{10}B_{12}$ metallic glasses, positron annihilation, crystalline embryos model of struct. 7−132368
$(Ni_{65}Fe_{35})_{77}B_{23}$ metallic glass, struct., neutron diffr., quasi-crystalline model 7−97961
$Ni_{80-x}Fe_xB_{16}S_4$ glassy alloy, short range order and mag. props. 7−85324
$Ni_{44}Fe_{32}Cr_{11}P_8B_5$ sputter deposited on stainless steel, electrochem. and XPS study 7−113797
NiFeSiB amorphous alloys, high field susceptibility peak 7−132075
$(Ni_{1-x}Fe_x)_{77}Si_{10}B_{13}$, valence bands, XPS obs., many-electron effects 7−119107
$Ni_{60}Hf_{40}$ amorphous alloys, crystn. behaviour 7−83751
$Ni_{77}M_3B_{20}$ (M=transition metals), amorphous alloys, influence of transition metal additives on transport props. 7−137892
$Ni_{73}M_5Si_{10}B_{12}$ metallic glasses, M=Ti, V, Cr, Mn, Fe, Co, Ni or Cu, thermal stability effect of transition metal admixture 7−83757
$Ni_{60}Nb_{40}$, atomic diffusion rates, Auger depth profiling, relax. and deformation effects 7−143103
$Ni_{60}Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
$Ni_{60}Nb_{40}$ metallic glasses, H embrittlement susceptibility 7−144530
$Ni_{60}Nb_{40-x}Al_x$ amorphous alloys, H embrittlement 7−113792
$Ni_{60}Nb_{40-x}Al_x$ metallic glasses, annealing effects 7−126149
$Ni_{60}Nb_{40-x}Cr_x$, amorphous, crystallisation, DSC, X-ray diffr. 7−69603
$Ni_{60}Nb_{40-x}Cr_x$ glasses, isothermal crystn. kinetics 7−111412
$Ni_{60}Nb_{40-x}Cr_x$, influence of Cr content on elec. resist. and thermoelec. power 7−137891
$Ni_{80}P_{20}$, amorphous alloys, electrodeposited in mag. field, struct. 7−104565
$Ni_{80}P_{20}$, metallic glass, atomic struct., isotropic substitution neutron diffr. technique 7−83769
$Ni_{80}P_{20}$ metallic glasses, interatomic pair potentials 7−137258
$Ni_{81.5}P_xB_{18.5-x}$ amorphous and liq. alloys, mag. props. study 7−118768
$Ni_{81}P_{19}C$ metallic glass, crystallisation characterisation 7−111397
$Ni_{75}Si_8B_{17}$, amorphous alloy, spheroidisation process 7−144357
$Ni_{75}Si_8B_{20}$, amorphous alloy, anisotropy of tensile props. 7−86233
$Ni_{77.5}Si_{7.9}B_{14.6}$, crystallisation process, FIM, atom probe techniques *(Korean)* 7−137257
$Ni_{78}Si_{10}B_{12}$ metallic glass, dispersed with μm sized WC particles, yield stress 7−113607
$Ni_{78}Si_8B_{14}$, metal-metalloid glasses, internal friction during crystn., influence of cold rolling 7−76017
$Ni_{78}Si_8B_{14}$, metallic glasses, corrosion behaviour, role of B and Ni 7−86490
$Ni_{78}Si_xB_{22-x}$ metallic glasses, thermal stability, crystallisation, exoelectron emission study 7−131025
$Ni_{80}Si_{10}B_{10}$, $Ni_{80}Si_5B_{15}$, metallic glass ribbons, US stressing, fracture toughness 7−113672
NiTa metallic alloy glasses, X-ray and neutron diffr. meas. 7−76012
$Ni_{35}Ti_{65}$ metallic glass, short range and stress-induced directional ordering phenomena 7−98441
$Ni_{33}Ti_{67-x}V_x$ alloys, amorphous, stability and elec. transport props. 7−104571
$Ni_{73}V_8Si_{10}B_{12}$, metallic glass, crystallisation kinetics, exoelectron emission, effect of hydrogenation 7−132420

metallic glasses continued
$Ni_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray d 7−97964
NiZr amorphous alloy, press. depend. of resistivity 7−98977
NiZr glass, partial structure factors, isotope substitution neutron d 7−83773
$Ni_{24}Zr_{76}$, metallic glass, dynamic struct. factor, neutron inelastic sc 7−83772
$Ni_{24}Zr_{76}$ metallic glass, H diffusion and HF vibrational modes, neut scatt. obs. 7−105144
$Ni_{36}Zr_{64}$, amorphous alloy, struct., isotope substitution neutron d 7−83775
$Ni_{64}Zr_{36}$, glassy, CO adsorpt., UV photoelectron spectra 7−105286
$Ni_{64}Zr_{36}$, surface damage by Ar ion bombardment 7−76224
Pb-Sb thin metallic ribbon, prep. and cold forming effects on corro rate 7−92918
Pd based alloys, splat cooling, glass forming ability, struct. 7−83732
Pd-(Fe,Co,Ni)-Si metallic glasses, crystallisation kinetics, resist. 7−83760
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
Pd-Cu-Si metallic glass, solid-undercooled liq. interfacial energy 7−76
Pd-Ni-P, electronic structure 7−92056
Pd-Si, glassy, crystallisation, H absorption, internal friction, elec. re 7−104588
Pd-Si, glassy alloys, two-site model of H solubility 7−106522
Pd-Si, rapidly quenched, comparison with form. by mech. allo 7−113476
Pd-Si metallic glass struct. determ. using scanning tunnelling microsc 7−142540
Pd-Si metallic glasses, stabilisation by irrad. with picosecond laser pu 7−117973
Pd-Si metallic glasses, surface-induced crystn., DSC study 7−111405
Pd-Si metallic glasses, viscous flow behaviour thermal expansion crystn. 7−98320
Pd-U-Si glassy alloys, electronic struct., photoelectron spectra 7−9879
Pd-U-Si glassy alloys, low temp. thermal cond. meas. 7−70276
$Pd_{77.5}Cu_6Si_{16.5}$, amorphous, relax., internal friction 7−106565
$Pd_{77.5}Cu_6Si_{16.5}$ metallic glass, internal friction near the glass transi temp. and crystallisation temp. 7−76295
$Pd_{77.5}Cu_6Si_{16.5}$, metallic glass, internal friction, creep, annealing ef *(Japanese)* 7−93059
$Pd_{77.5}Cu_6Si_{16.5}$, metallic glasses, mech. relax., glass transition, inte friction 7−106564
$Pd_{40}Ni_{40}P_{20}$ metallic glass, glass transition temp., determ. by low f internal friction meas. 7−137562
$Pd_{48}Ni_{32}P_{20}$, metallic glasses, mech. relax., glass transition, internal f tion 7−106564
PdSi-base amorphous alloys, thermal expansion and vol. effect on tr form. *(Chinese)* 7−143054
$Pd_{77}Si_{23}$, amorphous ribbons, crystallisation; effect of Cr and Si coa 7−142626
$Pd_{77}Si_{23}$ metallic glasses, crystn. kinetics, effect of surface 7−117830
$Pd_{80}Si_{20}$, amorphous, thermal stability, effect of surface oxida *(Chinese)* 7−144581
$Pd_{80}Si_{20}$ metallic glasses, creep behaviour *(Chinese)* 7−132664
$Pd_{82}Si_{18}$, metallic glasses, relax., thermophys. investig. 7−97980
Pt-Si, glassy alloys, dielec. functions and optical conductivity 7−99791
$Pt_{58.4}Ni_{14.6}P_{27}$, metallic glasses, mech. relax., glass transition, internal f tion 7−106564
Rh-Zr metallic glass struct. determ. using scanning tunnelling microsc 7−142540
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
Si-Fe annealed ribbons, change of permeability 7−132087
$Tb_{72}Fe_{28}$, amorphous alloys, struct. and local anisotropy 7−97970
Ti-based, struct. changes 7−91467
Ti-Pd, rapidly quenched, comparison with form. by mech. allo 7−113476
Ti-transition metal alloys, mechanically alloyed, glass form. 7−142643
Ti-Zr-B ternary amorphous alloys, preparation by single-roller m spinning 7−119194
Ti-Zr-Be metallic glasses, amorphous phase separation, re-evalua 7−91466
$Ti_{50}Be_{40}Zr_{10}$, amorphous, phase separation and loss of ductility 7−918
$Ti_{62}Cu_{33}P_5$, metallic glass, corrosion in HCl, surface comp., XPS *(R sian)* 7−144615
$Ti_{60}Ni_{36}P_4$, metallic glass, corrosion in HCl, surface comp., XPS *(Russ* 7−144615
$Ti_{70}Ni_{25}Si_5$, metallic glass, electron phenomena before and after crys lisation 7−125847
$Ti_{75}Ni_{20}Si_5$ alloys, amorphous and crystalline, acid corrosion 7−10044
Y-Al glasses, crystn., new intermetallic cpd., Y_3Al_5 7−131097
Y-based metallic glasses, crystallisation, differential scanning calorime neutron diffraction 7−142600
$Y_{100-x}Fe_x$ metallic glass ribbons, H absorption 7−84302
Zr based metallic glasses, H solubility and embrittlement 7−106521
Zr-based metallic glasses, amorphous hydrides, comparison of ther stabilities 7−111418
Zr-Cu, sputtered, struct. relax., low temp. thermal cond., X-ray s 7−105346
Zr-Fe, glass forming ability, crystallisation 7−142632
Zr-Ni alloys, glass forming ability and amorphous to cryst. transi 7−83750
Zr-Ni amorphous alloys, crystn. enthalpies, expt. and theoretical st 7−83749
Zr-Ni-H glass system, electronic struct., soft X-ray emission spe 7−105380
$Zr_{100-x}Fe_x$ metallic glasses, struct., X-ray diffr. 7−83765
$Zr_{76}Fe_{24}$, amorphous ribbon, crystallisation process 7−142629
$(Zr_{100-y}Hf_y)_{76}Fe_{24}$, metallic glasses, struct., X-ray diffr. 7−83765
ZrM (M=Ni,Mo,W) amorphous alloys, supercond. and struct. p 7−85176
ZrNi, amorphous H storage, struct. X-ray study *(Chinese)* 7−91445
$(Zr_{0.5}Ni_{0.5})_{100-x}P_x$ metallic glasses, magnetisation, ^{31}P NMR s 7−112762
$Zr_{61}Ni_{39}$, Au diffusion, meas. in relaxed and crystallized specimens, technique 7−143104
$Zr_{67}Ni_{33}$, crystallisation characteristics *(Korean)* 7−142644
$Zr_{67}Ni_{33}$ metallic glasses, nucleation and crystal growth 7−137241
$Zr_{67}Ni_{33}$-based metallic glasses, mag. susceptibility and superconduct 7−85265
Zr_2NiH_x metallic glass, magnetoresist., H effects 7−84827

metallic glasses continued
Zr−Ni, amorphous, supercond., structural relax., crystallisation 7−104584
$Zr_{66.5}Ni_{33.5}$:H metallic glass, flow and crystallisation rel. to H doping, dilatometry 7−104590

metallic thin films
see also discontinuous metallic thin films; electronic conduction in metallic thin films; metallic epitaxial layers; metallisation
acoustic pulse generation using laser pulses, detect. by transient piezoreflectance meas. 7−111776
adhesion stability on $TlBr_{1-x}I_x$ 7−112153
adhesion to oxides, vacancy effects 7−111546
Ag-Pd films, pyridine adsorbed layer, SERS spectra, electromag. quenching and enhancement study 7−77575
alkali metal overlayers, interfacial structural transitions *(Japanese)* 7−76642
amorphous ferrimagnetic metallic films, elec. cond., structural disorder effect 7−112300
characterisation using X-ray Buerger precession camera 7−97857
corrosion in thin film devices, approaches for investigating 7−125153
Cu-Ag films, pyridine adsorbed layer, SERS spectra, electromag. quenching and enhancement study 7−77575
CVD, thermodynamic model 7−106426
electron states broadening in a thin film with a rough surface in an external longitudinal magnetic field 7−85138
evaporated on Si and SiO_2, ion modification of props. 7−91673
evaporation, 3D model, quantitative anal. 7−84222
Fe-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
frequency depend. current density 7−105731
galvanomagnetic size effects *(Russian)* 7−143434
granular with rough surfaces, transport props. 7−131813
Hall coefficient and magnetoresist., surface roughness and transverse mag. field depend. 7−143438
ionised cluster beam technique and appl. to thin film deposition and epitaxy *(Japanese)* 7−71083
large metal cluster formation by surface nucleation 7−143251
laser-induced deposition of thin films study 7−71068
morphological parameters, transmission electron microscopic investig. 7−92016
multilayer films, mechanical property modification by ion-beam mixing 7−106693
multilayer thin films, thickness determ., variable exit angle ultrasoft X-ray fluoresc. spectrometry 7−134722
multilayers, temp. stability at high temps. 7−98746
Ni thin films, quenching effects in pulsed heat treatment 7−71215
nitridation by ion implantation, structural transformations 7−71388
noble metal like films, optical props. 7−106293
optical constants determ. by surface polariton excitation using attenuated total reflection *(German)* 7−113306
optical emission from coupled surface plasmons 7−106252
passive alloy films, pitting attack initiation, distrib. function 7−93166
Permalloy, ultradispersed film, structural kinetics, laser diffractometry 7−84580
proton induced K-shell X-ray cross sections 7−144183
quantum size effects in Fermi energy and electronic density of states, free-electron finite square well model 7−85036
refractory metal sputtered films, diffusion barrier props. 7−118175
resistive films, current noise, thermal coupling effects 7−118545
steel, Cr, Ti diffusion profile determ., appl. of X-ray chem. anal. technique 7−119608
strong skin effect, calc. of ohmic losses due to longitudinal edge currents 7−70346
submicron metal films, positron annihilation γ-rays distrib. 7−144167
superlattices, collective electronic phenomena *(Russian)* 7−137836
surface plasma waves with damping, optical effects 7−118393
surface plasmons, range extension by dielectric layers 7−105437
surface scattering, Fermi surface geometry effects 7−138080
transition metal aluminides, thin film reaction couples, interconnect fabrication 7−118318
transition metals, 3d, valence-band photoemission, absence of two-electron resonances 7−125911
Vf noise in thin metal films, role of temp. in sample-to-sample comparisons 7−105636
wedge-shaped, quantum-size effect 7−85137
whisker growth during electromigration 7−118341
Ag cylindrical films, Aharonov-Bohm effect, weak localisation, magnetoresist. meas. 7−118595
Ag film, obliquely evaporated, SERS studies 7−138450
Ag film with WO_3 dielec. grid patterns, examination using surface plasmon microscopy 7−140743
Ag films, pyridine adsorbed layer, SERS, cavity model discussion 7−77573
Ag layer on slab optical waveguide, phase-matched SHG of surface polariton 7−123084
Ag layers, hot hollow cathode deposition, bonding to austenitic stainless steel 7−70131
Ag, monolayer growth on polycrystalline (111) Al surfaces 7−98737
Ag monolayers, lattice contraction, LEED study 7−143295
Ag, optical constants, interferometric determ. 7−70920
Ag particle array, optical absorbance 7−113300
Ag plasma, thin film capacitive discharge, early time spectral features study 7−142483
Ag superimposed films, elec. cond. 7−131812
Ag, thin film, ionisation cross section *(Chinese)* 7−92763
Ag thin film/insulator struct. for gas sensing, filament model anal. 7−108539
Ag thin films with organic overlayers, SERS, short-ranged EM fields 7−125756
Ag thin sputtered films, spectrally selective coatings, influence of deposition parameters 7−144276
Ag ultrathin films, cryst. modification, LEED studies 7−112140
Ag-HfO_2/SiO_2-Ag struct., metal film boundary influence on luminesc. intensity 7−85840
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, self-organisation obs. 7−70112
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, structure and phase composition obs. 7−71152
Ag-SiO_2 interface, preferred orientations 7−124793

metallic thin films continued
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7−124775
Ag-Zn films, electrodeposition, annealing, corrosion in H_2S atmosphere, surface layer charactn. *(Japanese)* 7−78316
Al anodic films, composition, growth mechanism and space charge 7−113169
Al, black, optical props., annealing effects 7−70925
Al black films, vacuum deposition, struct. and optical props. 7−132470
Al films, electrical noise associated with dislocations and plastic flow, review 7−77017
Al films, electron backscatt. and transmission coeffs., Monte Carlo calcs. 7−106321
Al films, reactive ion etching charact., O impurity effects 7−106671
Al films, vacuum evaporation on PET substrates, texture anal. 7−113398
Al films by ionised cluster beam deposition 7−106438
Al films for VLSI applications, low pressure CVD 7−71052
Al foils, 2D grain structures, correlation laws *(Russian)* 7−137579
Al, oxidised thin films, photovoltaic appls. 7−126628
Al, polycrystalline, thickness depend. of elec. resistivity 7−70431
Al polycrystalline film, optical props., complex dielec. function meas., effective-medium approx. 7−77674
Al RF bias sputtered films for metallisation appls., charactn. 7−124803
Al surfaces, optical constants, ellipsometric studies 7−113115
Al, thickness meas. using double twin path laser interferometer 7−116002
Al thin coating, destruction by light pulses, optical transmission 7−85880
Al thin film, coherent double-plasmon excitation study 7−125037
Al thin films, energy states, electron scattering studies 7−99222
Al/AlO_3/Al layered film system, tunnelling probe studies 7−112512
Al-Cr thin films, Al electromigration lifetime, comp. depend., TEM study 7−69993
Al-Cu film adhesion on polyimide, electromagnetic tensile test 7−71462
Al-Cu films, reactive ion etching 7−126327
Al-Fe multilayered films, ion beam mixing, icosahedral quasicrystal phase form, electron diffr. 7−84566
Al-Fe multilayered thin films, ion beam mixing 7−91674
Al-Ge, sputtered thin films, laser irrad., metastable phase form. 7−113387
Al-Mn icosahedral films, vapour deposition and struct. 7−118313
Al-Mn icosahedral phase form. by ion beam mixing and interdiffusion in interdigitated layers 7−104861
Al-Mn metastable crystalline, quasicrystalline and amorphous thin films, vapour deposition synthesis 7−143286
Al-Pt, void formation in Al films, cpd. formation 7−131467
Al-Ru icosahedral phase form. by ion beam mixing and interdiffusion in interdigitated layers 7−104861
Al-V thin films, Al electromigration lifetime, comp. depend., TEM study 7−69993
Al-Zr vapour deposited coatings, metastable phases, TEM, electron diffr. obs. 7−70147
AlH_x films, implanted, in situ TEM study 7−98197
Au 7−92312
Au (111), structure and thermal stability, STM study 7−105198
Au, amorphous, proton scattering, computer simulation 7−92814
Au, black, optical props., annealing effects 7−70925
Au, deposition, on GaAs, thermal evaporation 7−106416
Au electroplating and corrosion on graphite surface in salt water, scanning tunnelling microscopy 7−93337
Au film on Si substrate, struct. and comp., Auger spectra anal. 7−118287
Au films, deposited in substrate laser-irradiated zone, structure and morphology 7−112141
Au films, electron backscatt. and transmission coeffs., Monte Carlo calcs. 7−106321
Au films, nucleation and growth on NaCl surfaces 7−118319
Au films, nucleation and growth on NaCl surfaces 7−118320
Au films, nucleation on NaCl substrates, model 7−112146
Au, on Cu, Xe^{2+} ion beam mixing 7−124347
Au polycrystalline films, electromigration, 1/f noise, effect of H 7−111980
Au, resistivity, grain diameter and temp. depend. 7−143643
Au, surface structure, scanning tunnelling microscopy obs. 7−73482
Au thin film, low-angle and twin boundaries, HREM obs. 7−98177
Au thin film/fluid interface, surface plasmon-polariton studies 7−138532
Au thin films, correlation between 1/f noise and grain boundaries 7−92241
Au thin films, ultrashort laser pulse duration depend. free carrier absorption 7−125827
Au/In composite films, grain boundaries, thermal grooving 7−112143
Au/Ni bilayers on Cu substrates, diffusion behaviour 7−105151
Au-Nb ultrathin films on Si, resistance decrease and diamagnetism increase above 77 K 7−70432
Au-Ti(Zr)(V)(Nb) thin film interactions, RBS and X-ray diffr. studies 7−69991
B/Fe multilayered films, ion-mixing induced amorphous surface alloys 7−98277
B/Ni multilayered films, ion-mixing induced amorphous surface alloys 7−98277
Be film on Pt substrate, secondary electron spectra K-shell ionisation lines intensity, elastic scatt. effects *(Russian)* 7−70950
Bi thin wires and films, resistance fluctuations 7−99224
Cd, thin film, ionisation cross section *(Chinese)* 7−92763
Cd-Zn eutectic electrodeposited coatings, superplastic behaviour *(Russian)* 7−78105
Ce overlayer on Si (111), chemical bonding 7−125915
Co-C multilayers, temp. stability at high temps. 7−98746
Co-Cr films, sputter deposition, c-axis orientation rel. to process conditions 7−132459
$Co_{50}Al_{50}$ alloy films, ordered and disordered, optical props. and ferromagnetism *(Russian)* 7−77669
$Co_{1-x}Cr_x$ films, optical reflectance meas. 7−113299
$Co_{50}Ga_{50}$, amorphous and finely crystallised films, optical props., struct. *(Russian)* 7−144143
Cr, AC method for measuring low-frequency resistance fluctuation spectra 7−102455
Cr, amorphous films, electrodeposition from chromic acid solns. 7−106443
Cr films, vacuum sputtering prep. in elec. field, struct. and composition 7−125972
Cr thin films, elec. resist. temp. depend. and Neel temp anomalies study 7−112514

metallic thin films continued
Cr/Ni sandwich on Si(Al), Ar^+ induced X-ray and optical emissions 7−119094
Cr/Ni thin film multilayer struct., depth resolution, substrate roughness effects 7−131500
Cr-C multilayers, temp. stability at high temps. 7−98746
Cr-Ni-Cu, laser mixed Cr-Ni films on Cu, microstruct. studies 7−70039
Cr_3Si films, elec. resist., Hall coeff. meas. 7−99223
Cr_5Si_3 films, elec. resist., Hall coeff. meas. 7−99223
Cs, overlayer, on Si (111), interfacial structural transitions *(Japanese)* 7−76642
Cu (100), Nd adsorption and growth modes, LEED studies 7−118220
Cu electroless coating, charactn. by XPS and SEM 7−98752
Cu film, electron-phonon relaxation, time resolved obs. 7−98368
Cu film on Al_2O_3 substrates, ion beam induced modification of adhesion energy 7−91671
Cu film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152
Cu films, ion-plated, structure 7−113448
Cu films on sapphire, adhesion induced by substrate surface presputtering 7−92010
Cu monolayer and film, with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
Cu polycrystalline thin films on Cu and pyrex substrates, growth, work fn., elec. conductivity 7−124804
Cu thin films, elec. resist. during isochronal annealing, thickness depend. *(Russian)* 7−99221
Cu thin films, electronic density of states, phonon effects 7−112204
Cu thin films, laser-induced morphology changes 7−111657
Cu thin films, optical transmittance in visible region, depend. on deposition parameters 7−70924
Cu thin films, weak localisation, resistance and magnetoconductance meas., 1.5-40 K 7−143638
Cu, vapour deposited films, structure and growth morphology, O effects 7−118321
Cu/Sn thin films, intermetallic cpds., formation kinetics *(French)* 7−84594
Cu/Sn thin films, surface morphology, whisker and hillock formation *(French)* 7−124790
Cu-Ag thin films, MeV $^4He^+$ ion irradiated, stopping powers 7−98289
Cu-Al, growth of Cu thin films on Al, PES study 7−125929
Cu-Al alloy thin films, vapour deposited, intrinsic stress and struct. study 7−137756
Cu-Cd layers, electrolytic deposition, struct. rel. to substrate orientation 7−126035
Cu-Cr film, dil. alloy, resonant Kondo scattering of weakly localized electrons 7−112317
Cu-La (Ce), thin films, weak localisation, resistance and magnetoconductance meas., 1.5-40 K 7−143638
Cu-Ni, compositionally modulated films, optical anisotropy, spectroscopic ellipsometry 7−99952
Cu-Ni, thin films, on steel, thickness meas. by X-ray fluorescence spectrometry 7−76702
Cu-Ni compositionally modulated superlattice films, enhanced modulus effect, continuum elasticity anal. 7−84608
Cu-Pb layers, electrolytic deposition, struct. rel. to substrate orientation 7−126035
Cu-Sn, thin film, surface diffusion, 90-180 °C 7−70107
Cu-Ti amorphous alloys, Hall effect and resistivity 7−131810
Cu-Zn films, defects and elec. props. 7−92035
Dy thin films, ion alloyed, corrosion, adsorption, surface topography 7−78361
Eu, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
Fe electron beam deposited films, catalytic growth rate enhancement 7−86027
Fe film, glass form. by N^+ implantation, elec. resist. meas. 7−143013
Fe films, columnar struct. and texture, prep. at varied evaporation rates 7−84592
Fe films, sputter-deposition in high press. atmosphere 7−125978
Fe films, XPS studies 7−125908
Fe, interference neutron effects, tunnelling 7−76216
Fe thermally evaporated layer on muscovite, struct. and quadrupole splitting, Mossbauer study 7−112268
Fe/V superlattices, atomic configuration near interface, substrate temp. depend. 7−112102
Fe-Al multiple layers, quasicryst. phase formed by ion mixing, grain size and struct. study 7−117820
Fe-Al thin films, low temp. phase form. by ion beam mixing, amorphisation and chem. disorder effects 7−84057
Fe-C multilayer films, struct., X-ray and electron microscopy study 7−112101
Fe-Cr-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
Fe-Mo mixed multilayers, ion induced, metastable phases, conversion electron Mossbauer spectra study 7−70683
Fe-Ni multilayers, Fe ferromagnetism 7−99519
Fe-Ta thin film multilayers on Si, sputter depth profiling with LEIS and LENRS 7−84559
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7−77387
Fe-Te films, sputtered, struct., Mossbauer spectra 7−112134
Fe-Ti films, hydrogenated multilayer, ion beam mixing, Rutherford backscatt. obs. 7−104862
α-Fe-Zr impurity system, spin density perturbation *(Russian)* 7−77275
FeNi thin films, magneto-optical effects, waveguide appls. 7−123197
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
Ga amorphous film, UHV deposition system 7−125997
Gd, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
Gd-Fe amorphous film, surface layer mag. props., oxidation effect 7−92485
$GdAl_2$ thin film, tunnelling to spin glass, zero bias anomaly, density of states 7−138072
Hf films on Si, structure 7−92023
In film, ion-enhanced deposition using low energy In ion source 7−86033
In, heat transfer mechanism 7−70430
In thin films, resistivity, post-deposition aging effects 7−138079
In-borosilicate glass interface, adhesion, SIMS depth profiling 7−76713
InP:Si-AuGe/Ni/Au rapid thermal alloyed ohmic contact, elec., structural and metallurgical props. 7−138006

metallic thin films continued
K, overlayer, on Cu (001), interfacial structural transitions *(Japanese)* 7−76642
La films on Ir, concentration profiles meas. by neutron activation analysis 7−139068
Li, thin film, preparation of ^6Li nuclear targets 7−109570
Mn films, optical props, 190-900 nm, annealing effect 7−106287
Mo film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
Mo films, CVD from MoF_6 7−113439
Mo films, plasma-enhanced CVD 7−71078
Mo, thin film, ionisation cross section *(Chinese)* 7−92763
Mo thin films, cone form. following Ar^+ ion bombard. 7−85931
Mo vacuum condensates, struct., elec., and optical props. *(Russian)* 7−70109
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
$MoSi_2$, electronic transport props. 7−143644
Nb film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
Nb, thin film, ionisation cross section *(Chinese)* 7−92763
$Nd_{0.04}Fe_{0.94}B_{0.02}$ amorphous films, thermoelec, power 7−92308
$Nd_{0.06}Fe_{0.94}$ amorphous films, thermoelec, power 7−92308
Ni coating on C fibres, scanning Auger microscopy 7−76647
Ni electroless coating, charactn. by XPS and SEM 7−98752
Ni, electroless coatings, struct. and wear 7−76693
Ni film, glass form. by N^+ implantation, elec. resist. meas. 7−143013
Ni film on Si (100), ion beam mixing, Rutherford backscattering and Auger depth-profile anal. 7−91663
Ni films, electroplating, UV-irradiation effects 7−126032
Ni films, ion plated on steel, struct., fatigue 7−118338
Ni polycrystalline thin films, ion irradiation induced grain growth, TEM study 7−84056
Ni single crystal film, low temp. elec. cond. *(Russian)* 7−143639
Ni sputtered films, struct., neutron diffr. study 7−104557
Ni thin films, electronic density of states, phonon effects 7−112204
Ni thin films, vacancy redistrib. on quenching 7−98116
Ni thin films less than 1 μm, hardness testing 7−100478
Ni, vacuum deposited, fracture characteristics 7−78212
Ni:He films; ion implantation, porosity, dislocation struct. 7−142803
Ni-Al ion beam mixed surface films on Ni, effect on slip band distribution and morphology 7−76274
Ni-Al thin films, low temp. phase form. by ion beam mixing, amorphisation and chem. disorder effects 7−84057
Ni-B thin films less than 1 μm, hardness testing 7−100478
Ni-Co alloy thin films, spin wave reson. obs. 7−106033
Ni-Cr films on Si, pulsed ion beam irradiation, silicide formation 7−104860
Ni-Cr multilayered structures, microtopography induced during sputter depth profiling 7−70102
Ni-Cr thin films, X-ray diffr. characterisation 7−98756
Ni-Cr-Si-B coatings, plasma sprayed, adhesion, struct., comp, microhardness rel. to laser treatment 7−144269
Ni-Cu, compositionally modulated films, magnetisation meas. 7−143845
Ni-Cu sandwiches, finite temp. magnetism, itinerant electron theory 7−85236
Ni-Fe alloy films, XPS studies 7−125908
Ni-Mo films, ion irrad., dendritic pattern obs. 7−92018
Ni-S amorphous alloy film, electroplating, struct. 7−86070
Ni-Ti films, hydrogenated multilayer, ion beam mixing, Rutherford backscatt. obs. 7−104862
Ni-Zr thin film multilayers, solid state amorphisation, differential scanning calorimetry study 7−75992
NiAl films, low temp. amorphisation by intracascade processes 7−104872
$NiAl_3$ thin film, critical amorphisation dose temp. depend. under electron and ion irrad. 7−83690
$Ni_{1-x}B_x$ amorphous films, ion irrad., radiation damage, comp. depend. resist., annealing 7−111694
NiCr thin films, elec. props., substrate surface roughness effect 7−118596
NiCr:Si stable thin film resistors, structural and elec. props. studies 7−138075
$Ni_{80}Fe_{20}$ ferromag. double layers, spin wave modes in parallel and antiparallel magnetised states, light scatt. study 7−85270
NiH films, highly dispersed, microstruct. and elec. cond. 7−124764
$Ni_{0.95}Tb_{0.05}$ amorphous sputtered films, struct., neutron diffr. study 7−104557
Pb, polycrystalline, elec. props. study 7−138078
Pb polycrystalline films, effect of grain boundary scatt. on electrical resistivity 7−92310
Pb thin film deposition, target for ^{210}Pb nuclear spectroscopy 7−109571
Pd, absorption-desorption of H, pressure-composition isotherms 7−105041
Pd electronic struct., photoelectron spectra, hydride form. appls. 7−85940
Pd polycrystalline thin films, ion irradiation induced grain growth 7−118301
Pd, thin film, ionisation cross section *(Chinese)* 7−92763
Pd-Xe thin films, texture studies using synchrotron radiation and energy dispersive diffr. 7−92014
$Pd_{100-x}Fe_x$-Cu ferromagnetic-paramagnetic bilayer interface, magnetisation transport, FMR, EPR studies 7−85254
Pt-Al system, thin film, phase formation and dissociation 7−131370
Pt-Re (111) thin films, adsorbed Xe photoemission, AES, XPS and work function studies 7−137760
PtSi thin films and wires, weak localisation, magnetoresistance 7−84828
Pt_2Si and PtSi on Si and Si:As, growth kinetics and microstructure 7−76698
Rh-Fe thin films, temp. coeffs. of resistivity, cryogenic thermometer appl 7−125146
Sb, optical constants, interferometric determ. 7−70920
Sb-Se-Bi film, erasable optical disc media 7−75089
Sc thin films, optical props. 7−99958
Sc thin films, struct. and elec. props. study *(Russian)* 7−98757
Si solar cell welds, Ag foil interconnector low-cycle fatigue test 7−144845
Si/Ni thin films, stacking faults and F bubbles, dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
Sm mixed valence overlayers on Si (111) and GaAs (110), semiconductor oxidation enhancement 7−71420
Sm, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
Sn polycrystalline films, effect of grain boundary scatt. on electrical resistivity 7−92310
Sn, thin film, ionisation cross section *(Chinese)* 7−92763

metallic thin films continued
Sn-Co, heterojunction formed by diffusion, corrosion protection 7−76497
Ta, on Cu, Xe^{2+} ion beam mixing 7−124347
Ta thin film, oxidation, grain boundary particle effects 7−119451
Ta-Ti, sandwich film, H_2 depth profiles, by $^1H(^{15}N,\alpha\gamma)^{12}C$ reaction 7−98218
Ta_xCu_{1-x} amorphous alloy films, diffusion barriers for Au/GaAs system 7−105307
Te-Ge-Sn-Au phase change recording film for optical disk 7−76706
Ti film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152
Ti films on nonwetted sapphire, laser produced bond percolators, surface free energy 7−98667
Ti, thin films, struct. and optical props. meas. 7−144136
Ti/Si thin layer system, ion implantation and struct. 7−137419
Ti-V amorphous alloy films, UHV deposition system 7−125997
TiFe amorphous alloy thin films, heat treatment effects 7−95693
TiNi compositionally modulated film, sputtering press., effect on structure and solid state reaction 7−100063
TiNi films, ion mixing on glass substrates 7−69781
$TiSi_2$ amorphous thin films on Si and SiO_2 substrates, phase transformations, X-ray diffr., elec. resist., TEM 7−70114
Ti_xW_{1-x} films, diffusion barriers against Al-Si interdiffusion 7−118337
VO_2 films, metallic phase conductivity meas., growth technique and structure effects 7−118367
W and refractory metals, VLSI appls., conf., Palo Alto, CA, USA (Nov. 1986) 7−108045
W CVD films, adhesion to SiO_2 7−112151
W CVD films, interaction with metal underlayers 7−112150
W films, abnormal-glow-discharge deposition 7−92879
W films, CVD, reaction kinetics of H_2 reduction of WF_6 7−113430
W films, excimer laser initiated CVD growth on SiO_2 and Si substrates, phys. props. 7−118297
W films for VLSI applications, low pressure CVD 7−71052
W LPCVD blanket deposition using TiN and Al as glue layers 7−113437
W, on Cu, Xe^{2+} ion beam mixing 7−124347
W, selective CVD eval. using surface temp. meas. 7−113429
W, selective deposition by hot-wall LPCVD, importance of HF partial press. 7−119168
W, selective deposition on $CoSi_2$ by LPCVD 7−113431
W thin film, resistance oscillations and nonstationary effects 7−105734
W-C multilayers, temp. stability at high temps. 7−98746
WAg/W, microstructure, elec. props., interaction with GaAs 7−143615
WRe-C multilayers, temp. stability at high temps. 7−98746
WSi_2, electronic transport props. 7−143644
WSi_x films, CVD from $WF_6+Si_2H_6$ 7−106430
Zr electronic struct., photoelectron spectra, hydride form. appls. 7−85940
Zr-Co multilayers, interdiffusion and amorphisation, metastable phase equilib. 7−98384
Zr-Pd alloys, electronic struct., photoelectron spectra, hydride form. appl. 7−85940
ZrCo amorphous films, formation by solid state reaction 7−86036

metallisation
see also electrodeposition
ceramics, non-oxide, metallising 7−86554
corrosion in thin film devices, approaches for investigating 7−125153
diamond, metallised using Mo_4C electrodeposition from ionic melts 7−78296
foil adhesion to substrate, failure detection using EM US generation *(Japanese)* 7−126400
IC interconnects, wafer-level isothermal Joule-heated electromigration test 7−98588
ICs, corrosion failure during accelerated tests 7−71366
metal-semiconductor ohmic contacts, specific contact resist. determ., effects of non-zero metal resist. and metallisation *(Chinese)* 7−125125
PTFE substrates, metallisation by ion plating of Cu 7−106654
refractory carbide powders, plasma metallising 7−126043
refractory metal sputtered films, diffusion barrier props. 7−118175
refractory metals and silicides, sputtering targets develop. 7−119145
sputtered films, contact step coverage, 2D and 3D simulations 7−118310
stability, microscopic control 7−133022
thin films, whisker growth during electromigration 7−118341
thin-film interconnects, electromigration kinetics 7−111981
transition metal aluminides, thin film reaction couples, interconnect fabrication 7−118318
transition metal silicides, anodic oxidation, low temp. form. of insulating layers 7−132784
VLSI double-level metal systems, electromigration study using polymer dielectrics 7−98590
Al films, excess noise, rel. to electromigration activation energies 7−125065
Al films by ionised cluster beam deposition 7−106438
Al RF bias sputtered films for metallisation appls., charactn. 7−124803
Al-Cu films, reactive ion etching 7−126327
Al-Si, thin film metallisations, mech. props. and microstructure 7−124786
Al-Si films, excess noise, rel. to electromigration activation energies 7−125065
Al-Si/$MoSi_2$ contacts on p-n shallow junctions 7−85107
Au-GaAs ohmic contacts, improved morphology using CVD SiO_2 cap layer 7−85104
Au-Si mixture films, oxidation behaviour, appl. for integrated circuits 7−113735
AuGe-Ni metallisation, ohmic contact form. to GaAs by scanned electron beam alloying 7−105708
AuZn/InP system, ion implanted, contamination layer and ohmic contacts 7−84539
Cu, electroless plating baths estimation, by mixed potential recording *(Polish)* 7−77852
n-GaAs, Au-Ge-Ni ohmic contact metallisations 7−125126
GaAs MESFET, self-aligned, WAg/W refractory metal gate 7−143615
GaAs, metallisation, phase equilibria, thermodynamic anal. 7−111822
n-GaAs, process induced microdefects rel. to metallisation and degradation 7−112492
GaAs solar cell mfg. facility and processing methods 7−144840
GaAs solar cells, conversion efficiency improvement using multilayer top contacts 7−100730
GaAs/AlGaAs laser diodes on monolithic GaAs/Si substrates, prep. and characterisation 7−82570
GaAs-In-Pd, ohmic contact formation by metallisation 7−125122

metallisation continued
GaAs-metal contacts with TiN diffusion barrier, solid-phase reactions 7−105157
$HfSi_2$ films, partial epitaxial growth on Si 7−118298
Mo films, CVD from MoF_6 7−113439
Ni/Au metallisation layers, porosity 7−118311
NiGa on GaAs, epitaxial thermodynamically stabilised metal/III-V semiconductor interface 7−138063
$Ni_{0.60}Nb_{0.40}$, amorphous diffusion barriers, AES studies 7−124604
Ni_2P sputtered film as ohmic contact and diffusion barrier 7−105705
$NiSi_2$, silicide formation by deposit anneal etch anneal method 7−143291
RuO_2 films, reactively sputtered, VLSI metallisation appl. 7−113383
RuO_2, reactively sputtered diffusion barriers in Si-RuO_2-Al structs., thermal stability 7−112118
p-RuS_2-aqueous electrolyte interface, impedance and photoelectrochem. props., effect of metal deposition 7−118583
Si (111) metallisation effect of K adsorption 7−112082
Si solar cell contact/interconnector system Intercontact 7−144842
Si solar cells fabrication using glow-discharge implantation, thermal annealing and oxide passivation 7−71603
Si, surface alloying by laser aluminothermy 7−113805
Si wafer, adhesion of electroless Ni. plating rel. to etching *(Japanese)* 7−77851
Si wafers, thin film chem. growth processes, integrated system 7−138678
a-Si:H solar cells and modules, long term stability 7−133095
$TaSi_2$, selective CVD for submicron IC structs. 7−113432
$TaSi_2$:As(B)(P), ion implanted, dopant diffusion into Si, SIMS anal. and elec. charactn. 7−143113
Ti-$W_{60}N_{40}$ bilayer, thermal stability and N redistrib. 7−118174
TiN reactively sputtered films, deposition, contact, and electromigration props. 7−118331
$TiSi_2$ formation by ion beam mixing, effect of implant and rapid thermal annealing temps. *(French)* 7−124353
$TiSi_2$ formation on Si process control using rapid thermal processing 7−105326
Ti_xW_{1-x} films, diffusion barriers against Al-Si interdiffusion 7−118337
Ti_xW_{1-x}/Si contacts, barrier height and contact resistance 7−118585
W and refractory metals, VLSI appls., conf., Palo Alto, CA, USA (Nov. 1986) 7−108045
W CVD films, chem. comp. and interfacial props. 7−124802
W CVD films produced by Si reduction of WF_6, microstructs. 7−112149
W films, excimer laser initiated CVD growth on SiO_2 and Si substrates, phys. props. 7−118297
W LPCVD blanket deposition using TiN and Al as glue layers 7−113437
W photochemical deposition on InP, (Ga,In)As and GaAs for ohmic contacts 7−92883
W, plasma-enhanced CVD on Si substrate 7−126005
W, selective and blanket deposition by atm. press. CVD 7−113434
W, selective CVD, flow config. effect on deposition props. 7−113433
W, selective CVD on Al for multilevel interconnect appls. 7−126025
W, selective deposition by hot-wall LPCVD, importance of HF partial press. 7−119168
W, selective deposition in batch cold wall CVD system 7−113435
W, selective deposition in Varian/Torrex 5101 cold wall CVD reactor 7−113436
W, selective deposition on $CoSi_2$ by LPCVD 7−113431
W-WSi_x-Si contact structs., charactn. under thermal annealing 7−124737
WN_x reactively sputtered films, elec. and phys. props. 7−118333
WSi_2, selective and blanket deposition by atm. press. CVD 7−113434
WSi_x films, Si-rich, effects of annealing 7−113391
WSi_x, multilayer-derived, microstruct., elec. and surface props. studies 7−137581
Zn photodeposition rates from diethylzinc 7−71515

metallising *see metallisation*

metallo-organic compounds *see organometallic compounds*

metallocenes *see organometallic compounds*

metallography
see also electron diffraction examination of materials; electron microscopy; optical microscopy
automatic description of microstructures, phase particle classification using shape descriptors 7−78404
automatic description of microstructures, region classification using texture descriptors 7−78403
automatic description of microstructures, segmentation techniques for localisation of microstruct. regions 7−78402
brass, special, wear, alloying effects, metallography 7−113732
CANDU fuel bundle heated under severe accident conditions, metallographic exam. 7−89660
circular defects, automatic recognition, object perimeter calc. method 7−138948
computational techniques for grain-orientation determinations using surface traces of crystal planes of any indices 7−113818
computer uses in metal science *(Chinese)* 7−125937
cylindrical sections production for metallography, optical microscopy and electron microprobe analysis *(German, English)* 7−71429
edge length properties of random Voronoi polygons 7−113825
electron microprobe analysis, surface topography influence on X-ray intensity 7−126524
fine structure parameters determ. by harmonic analysis of X-ray diffr. lines 7−78427
image analysis applications in quantitative metallography 7−86531
interference layer systems, optical microscopy, optimum contrasts for microstructural constituents 7−138926
Leitz METALLUX 3 microscope for metallographic structure investig. 7−102517
polycrystalline metals, plastically deformed, surface glide traces, probability anal. 7−86509
SEM, microprobe image anal., metallurgical appl. *(French)* 7−119478
steel, Al (low conc.), metallographic anal. by optical emission spectrometry *(Japanese)* 7−71562
steel, austenitic stainless, BWR piping, stress corrosion cracking study 7−89668
steel, austenitic stainless, notched, plastic zone form., digital image processing 7−71423
steel, Cr-Mo-V, ferritic, creep cavitation, austenite grain boundaries, optical and SEM metallography *(German, English)* 7−132684
steel, Cr-Mo-V, warm rolled, spheroidize annealed, microporosity, insoluble carbides, metallographic polishing 7−78410
steel, dual-phase, isolated retained austenite, etching contrast, optical identification 7−100217

metallography continued
steel, ferritic stainless, creep, microstructural changes 7−100317
steel, high speed, quantitative metallography by SEM 7−78416
steel, HSLA, combined TEM and opt. metallographic study of microstruct. after welding 7−86516
steel, maraging, Ni, microscopic determ. of austenite 7−138924
steel, retained austenite, X-ray determ., interlaboratory test evaluation 7−86517
steel, surface inclusions, organic film extraction method, EDX and SEM obs. 7−106731
steel pipes, centrifugal casting, recirculating flows effect study 7−106501
thermal spray powders, retesting schemes 7−77800
thermally sprayed coatings *(German, English)* 7−132860
X-ray diffraction method of phase transitions exam. in Ti alloy single crysts. 7−132862
Al alloy, eutectic binary, automatic description of microstruct. 7−78402
Al alloy, eutectic binary, automatic description of microstruct. 7−78403
Al alloy, eutectic binary, automatic description of microstruct. 7−78404
Al alloys, adhesive wear, metallography 7−78411
Al alloys, formability, microstructural effects, strain localisation, fracture 7−78118
Al powder particles, thinning for TEM obs. 7−78409
Al-Si, eutectic spheroidization metallography *(German, English)* 7−113585
Al-Si, hypereutectic, deep etching reagents for SEM microstruct. 7−113824
Al-Ti-B, grain refining wires, metallographic prep. *(German, English)* 7−86529
Ba-Ag, phase diagram, cryst. struct., thermal anal., metallography, X-ray diffr. 7−77940
Co-Ni-Ti-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Cu, patina formed in a atmosphere, metallography 7−113762
Cu, pure, cold rolled, nucleation of recrystallisation, TEM obs. 7−86217
Cu, soft alloys, metallographic prep. of structural defects, pores, crack form. during heat treatment *(German, English)* 7−71430
Cu-Ni-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Fe, cast, lower bainitic nodular, austempered foils, polishing, TEM obs. 7−78071
Fe, cast, nodular, four point bending fatigue testing in SEM, apparatus design 7−113822
Fe, pure, nitrocarburizing, compound layer form. and growth, microstructural evolution kinetics 7−138900
Fe-Cu (8 wt.%) powders, sponge cementation, sintering, microstruct., SEM obs. 7−132529
Fe-Mn containing ε-martensite, friction and wear, struct. transformations *(Russian)* 7−77995
Fe-Ni-C (24, 0.5 wt.%), melt spun ribbons, austenite decomp., metallography 7−100233
Mg alloy, dynamic recrystallisation, hardening and plasticity *(Russian)* 7−100244
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
Nd-Zn, alloying behaviour, phase diagrams 7−77941
Ni-Al coatings, plasma sprayed, bend testing, AE obs. 7−78227
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7−77799
Ni-Ti, phase transform., in situ TEM obs. 7−77997
Pd powder, synchrotron X-ray diffraction, line broadening anal. 7−111307
Ti alloy, phase transitions exam. in single crysts. using X-ray diffr. method 7−132862
TiN layers, PVD, metallography, SEM obs. *(German, English)* 7−132447
W, powders and filings, fine struct. parameters determ. by harmonic analysis of X-ray diffr. lines 7−78427
Yb-Tl system, phase diagram and mag. props. 7−144368
Zr, electrolytic polishing and etching method for metallographic surfaces 7−113781

metallurgical industries
see also forging
plasma torch for industrial implementation *(French)* 7−130948
thermoelectric NDT instruments *(Polish)* 7−138952

metallurgy
see also ageing; alloys; crystal microstructure; deformation; electrical properties of substances; hardening; heat treatment; magnetic properties of substances; materials testing; mechanical properties of substances; metallography; metallurgical industries; metals; metalworking; phase diagrams; phase transformations; physical chemistry; powder metallurgy; precipitation; recrystallisation; surface treatment; zone refining
ALADIN, alloy design system, integration of multiple knowledge sources 7−77884
charge melting using plasma heating, appl. in metal and alloy prod. *(German)* 7−138704
computer uses in metal science *(Chinese)* 7−125937
metallic glass production and mechanical properties *(Spanish)* 7−86122
PWR structural integrity assessment and materials technology in the UK, advances 7−122007
solid state science, book contrib. 7−102035
testing, information management system 7−138918
Zr and alloys for nuclear industry, extractive metallurgy, processing and properties 7−77881

metalorganic chemical vapour deposition *see chemical vapour deposition*

metalorganic compounds *see organometallic compounds*

metals
see also actinides; alkali metals; alkaline earth metals; aluminium; bimetals; cadmium; gallium; indium; lattice dynamics of metallic crystals; lead; mercury (metal); metallic thin films; rare earth metals; thallium; thermoelectric effects in metals and alloys; tin; transition metals; zinc
abrasive wear resistance, effects of ploughing and removal of ploughed material 7−98333
absorptivity, integral hemispherical, electrical resistivity meas. 7−130518
acoustic emission theory of plastic deform. 7−111745
adhesive joint strength estimation method 7−138917
adhesivity and friction, correl. with electron struct. 7−138846
adsorbed diatomic molecule, IR-laser excitation of internal vibr. mode 7−84475
AE, 3D source location, microcrack nucleation, inclusion breaking 7−132899
amorphous, atomic stress parameters *(Russian)* 7−137240

metals continued
amorphous, elec. cond., high pressure, composition and temp depen 7−98965
amorphous, medium range order theory 7−97969
amorphous, simulation of multi-level systems 7−104553
amorphous, struct. from depth of radial distrib. function first minimu 7−97934
amorphous and liquid, electronic struct. and transport 7−84648
amorphous and liquid, electronically driven structural effects, short ran order 7−83700
amorphous metallic materials, structural classes 7−97945
anisotropic, surface plasmon frequency 7−124899
anomalous Hall effect in hopping transport 7−70286
antiferromagnetic superconductors, AFMR, effect of indirect exchan interaction 7−99580
atom probe FIM, material science appl. review 7−132853
atoms, in gas phase, absorpt. line shifts 7−74516
Bauschinger effect, unusual aspects 7−126184
BCC, dislocation-point defect interactions and phase form. *(Russia* 7−69736
BCC, effect of dislocations on microplasticity *(Russian)* 7−69710
BCC, radiation damage, point defect models 7−91642
BCC, scanning electron fractography 7−71288
BCC and HCP, interstitial clusters, computer simulation studies 7−9813
BCC metals with n-body interatomic potentials, point-defect and stacki fault props. 7−76117
BCC VII B, anomalous self-diffusion and mode softening 7−98557
bulk amorphisation by solid state reaction 7−97940
cascade collapse to vacancy loops 7−104813
casting development for nuclear fuel disposal containers 7−141312
chemical props. of rapidly solidified metals, amorphous and crystallin corrosion, catalytic and electrocatalytic behaviour 7−86488
circular defects, automatic recognition, object perimeter calc. meth 7−138948
close-packed, structural transitions and phase stability, review 7−76380
combustion system surfaces, reaction monitoring using Raman sca 7−113936
complex surface geometry objects, local X-ray spectral anal. 7−126506
composites, polymer and metal matrix, thermal effects 7−138795
computer uses in metal science *(Chinese)* 7−125937
conduction electron-localised phonon interaction 7−111797
conference, Braunschweig, Germany (Aug. 1984) 7−66829
constructional, kinetic model of viscoelastic deform. component 7−98322
corrosion, flow-dependent, mechanisms, damage and control 7−113754
corrosion, fundamental concepts 7−93144
corrosion, pitting and crevice, theoretical modelling, review 7−93143
corrosion and oxidation anal. using spectroscopic techniques 7−93207
corrosion scale growth, instability and bistability 7−86419
corrosion science, appl. of ion beam technology *(Chinese)* 7−132818
corrugated surface, anomalously high absorptivity and anomalously fa laser heating 7−124326
corrugated surfaces, image states, photoemission and STM app 7−99148
creep, primary, kinetic eqns. with account of softening, model 7−113637
creep and longterm strength, kinetic eqns. 7−76283
creep mechanisms and dislocation distribs. 7−126177
creep resistance change under effect of vibrs. 7−100367
crystalline and non-crystalline, H absorption props. 7−105287
crystals, atomic jump processes, randomisation theory calcs. 7−98550
crystals, self-diffusion, anharmonicity effects, stochastic rate theory cal 7−98552
crystals, twinning plane superconductivity, (H,T) phase diagram mea 7−105800
crystals atomic defect jumps, interstitial diffusion, anharmonicity effec stochastic rate theory calcs. 7−98552
cubic, formation and evolution of dislocation structures during irradiati 7−76201
cubic, self-interstitial defect migration w.r.t. Debye temp. 7−98124
cubic 5d, phonon electrical resist., relativistic calcs. 7−137912
cubic metals EFG due to vacancies and interstitials 7−118450
cyclic deform., dislocation free zones at grain boundaries and free surfac 7−83966
defect structs., perturbed angular correlation studies 7−138367
defects, positron annihilation studies 7−137363
density-dependent pair potentials and the compressibility proble 7−76273
deposition on low-*Z* samples during ECR and glow discharge cleaning TEXTOR 7−75812
deposition on to limiter and liner of tokamaks distrib. after long-ter operation 7−75815
dirty, spin dephasing time due to weak scatt. processes 7−105932
dislocated, struct. factor and elec. resist. 7−131612
dislocations, book 7−72738
disordered, conductivity sensitivity to defect motion, w.r.t. 1/f noise, co ment and reply 7−143536
disordered, electron quantum interference oscillatory magnetoresist. o 7−105540
disordered, electron transport theory, influence of incoherent atom motions 7−92152
disordered, strongly scattering, electronic transport 7−92150
disordered, superconductivity, magnetism and surface reconstructi 7−84472
disordered fermion system, inelastic electron-electron scatt. tir 7−105431
disordered metals in 1D, spatial dispersion of conductivity, temp. and fr depend., review 7−98997
dressed-atom approach to embedding and physisorption 7−84499
droplets, atomised, solidification, nucleation catalysed by spherical- shaped oxide particles 7−119262
dry corrosion, pattern formation 7−119460
ductile, spall strength, anal. by spherical cavity expansion 7−144537
ductile metallic surfaces, treatment with polisher with embedded abrasi relationships governing wear 7−86413
ductility, assessment as function of stress state using optimum extrapo tion method 7−132670
dynamic deformation, elastic precursor propag., shortwave method an 7−98304
dynamic penetration resist. to conical indenter 7−100363
dynamic recrystallisation, high temp. mech. behaviour, study using tors testing 7−93036
dynamic tensile testing technique using low inertia extensometer 7−932

metals continued
elastic-ductile-brittle transitions, role of surface and environment 7−78211
elastoplastic creep behaviour, constitutive eqns. 7−69813
electric field gradients in metals 7−118453
electrical conductivity for inhomogeneous electric fields by the Liouville operator method 7−112299
electrical noise associated with dislocations and plastic flow, review 7−77017
electrical resistivity-temperature var., Bloch-Gruneisen integral polynomial expression 7−76922
electrolyte layer covered, corrosion test method 7−132841
electron density, model parametrised functionals *(Russian)* 7−69646
electron density model functional, elastic props. *(Russian)* 7−76262
electron irrad., defects, PAC-recorded isochronal recovery, rate theory simulations 7−91655
electron irrad., vacancy-impurity interactions, positron annihilation studies 7−91567
electron scatt. by kinks on dislocation line 7−70283
electron-hole pairs, bulk production in simple metals 7−124874
electronic structure, angle resolved UPS studies 7−77766
electronic structure, conf., Johnsbach, Germany (Apr. 86) 7−128195
explosive electron emission during gas detonation 7−124023
faced metal using differing hardening principles, wear resist. subject to impact-abrasive action 7−100447
fast electrons, interaction with metal surfaces, plasmon excitation 7−76798
fatigue behaviour, gaseous environment effects 7−144516
fatigue failure model with account of anomalous surface props. 7−113708
fatigue life prediction, AE obs., felicity effect 7−144667
fatigue strength, distrib. characts. of endurance by anal. of data in JSMS database *(Japanese)* 7−106612
fatigued FCC, deform. stages in stabilised loading cycle 7−98302
FCC, deformed, point defect trapping obs. by PAC technique 7−104733
FCC, interaction mechanisms between dislocations and point defects 7−104801
FCC, ion implanted, impurity-vacancy cluster form. 7−91631
FCC, plane strain deform., texture softening and strain instability 7−144427
FCC, sputtering induced surface topography 7−106334
FCC crystals, work hardening, deform. band form. 7−76280
ferromagnetic metal, spin flip inelastic scatt. in EELS, model 7−106326
ferromagnetic-nonferromagnetic metal interface boundary resist., current conversion effects calcs. 7−112441
field emission spectra due to order-disorder type transitions in adsorbed layers 7−100022
fine metallic particulate, production by chill block casting techniques 7−113468
flow in induction channel furnace 7−137030
foil adhesion to substrate, failure detection using EM US generation *(Japanese)* 7−126400
foils, randomly perforated, elastic consts. near percolation threshold 7−137438
fracture due to microsecond laser pulses, rel. to at. spectrochem. anal. 7−119373
gamma-ray scattering NDE 7−126381
geometric criteria for low interfacial energy 7−131414
glass transition temp., estimation 7−98449
glassy system, single component, high density, nucleation, growth and transform. of crysts. 7−76013
grain diameter, and normalised Euler indices, equivalence principle *(Chinese)* 7−132558
granular metals, pot. disorder, cond. theoretical anal. 7−143353
ground-states of light impurities in metals 7−118405
Group VI B metals, phonon dispersion curves 7−124415
H conc. with atomic and mol. flux impact, surface depend. 7−77720
hardness measurement using cylindrical indentor 7−78421
HCP, brittle-plastic transition, plastic deform. anal., grain size effect *(Russian)* 7−76289
HCP, vacancies and small vacancy clusters, computer simulation studies 7−98133
heavy elements, virial theorem and eqn. of state, relativistic effects 7−76739
heavy fermion, induced-interaction model, review 7−92040
heavy fermion, US attenuation, temp. depend. 7−104917
heavy fermion systems, conductivity calcs. from model transport eqn. 7−143458
high power ion beam modified, struct. anal. methods 7−117985
high-purity, phase transform. features *(Chinese)* 7−126081
hollow sphere form., solidification characts., melt jet instability technique 7−86089
hot corrosion, chemistry and electrochemistry 7−86403
hot corrosion chemistry and electrochemistry 7−78332
hot electron effects, transport eqn. solution 7−118472
image force and stopping power of a fast moving ion near a metal surface 7−105649
impact testing, high-speed, with penetration, comparative tests, review 7−78420
impurity and defect clusters, hyperfine field interaction studies 7−118439
indirect exchange interaction, realistic calc. 7−118794
indirect nuclear spin interactions and nuclear ordering 7−77187
interaction between interstitial subsystems *(Russian)* 7−76115
ion implantation and ion assisted coating 7−71391
ion implantation-induced mixing and amorphisation 7−98276
ion implanted with non-soluble elements, lattice site occupation 7−76155
ion induced amorphisation mechanism, statistical model calcs. 7−84055
ion trapping and cluster growth 7−69729
ion-beam-induced amorphization 7−104865
ion-implanted, aq. corrosion 7−106687
irradiated, 1/f noise due to 1D-migrating defects 7−98125
irradiated, new phase nuclei, point defect instability *(Russian)* 7−98458
irradiation in stressed state, point defect conc. in void vicinity 7−142764
isotope effect for anomalous fast diffusion 7−84399
isotropic solids, anharmonic props. calcs., dislocation effects 7−76336
junctions, nonlinear conductance in the mesoscopic regime 7−105669
lamellar grating, highly conducting, power losses 7−103952
laser irrad., small scale surface relief, polariton mechanisms 7−105211
laser irradiation, intermittent, melt expulsion 7−142825
laser microprocessing fundamentals, review 7−78360
laser radiation heating of targets in oxidising medium 7−137395
laser-induced breakdown spectroscopy analysis 7−114045
metals continued
lightly doped, plasmon damping, local and resonance impurity electron state effects 7−143382
local excitations, photoemission spectra 7−131531
localised impurity moments magnetic interaction, Monte Carlo simulation 7−85241
low temp. acoustic waves damping calcs. 7−142919
low temp. EM wave generation of ultrasound 7−104920
low temperature neutron irrad., defects, diffuse X-ray scatt. studies 7−98260
low-temp. electrochemically-driven oxidation kinetics, oxide props. effects 7−119435
M71, globular cluster, abundances of metals, C, N, and O in five stars 7−72415
magnetic, elastic constants, dynamical and total-energy approaches 7−124376
magnetic, hyperfine interactions, book contrib. 7−98944
magnetic impurities, Monte Carlo study of the Alexander-Anderson model 7−118796
magnetic ordering and supercond. at microkelvin temps. *(German)* 7−112567
magnetic susceptibility, high temp., meas. method and apparatus 7−73382
magnetically ordered metals, quantising mag. field, low temp. static SDW *(Russian)* 7−99429
magnetoimpurity wave dispersion relations and damping 7−84760
MBE, conf., York, England (Sept. 1986) 7−66816
melt under pulsed laser surface fusion, convective mixing mechanisms 7−142302
metal-electrolyte interface, self-affine fractal model 7−99202
metal-electrolyte interface double layer, microscopic quantum theory including solvent struct. 7−125077
metal-H_2 system, vol. fraction of solid H_2 in metal pores, internal friction *(Russian)* 7−76531
metal-H system, H recycling at first wall in CTR *(Japanese)* 7−74053
metal-H systems, diffusion and solubility coeffs., high-vac. setup with mass spectrometric attachment 7−73463
metal-H systems, neutron powder diffraction, ATALANTA multicomponent pulsed diffr. anal. code 7−69547
metal-Langmuir Blodgett film interfaces, photoelectrical studies 7−99204
metal-metal contacts, mesoscopic fluctuations of current-voltage characts. *(German)* 7−131743
metal-polymer interface, model systems *(French)* 7−105292
metal-polymer plates, two-layer, stress-strain state under cyclical loading 7−78109
metal/ceramic layered composites, stress states, struct., Vickers hardness obs. *(German, English)* 7−132747
metal/polymer interface system, surface modification appls. *(French)* 7−113761
metallic materials, compression testing standard method, inelastic buckling 7−119480
metastable surfaces, O_2 adsorption, dimensional effects 7−124687
microasperity deformation, surface, film damage during predisplacement, using contact electr. resist. meas. 7−131220
Migdal theorem violation for strongly coupled electron-phonon system 7−143373
molecular bonding and decomposition of adsorbates at metal surfaces 7−126484
molten salt enhanced corrosion, electrochemistry 7−78335
multi-element analysis, optical atomic emission spectra 7−86736
multilayered samples, ion beam mixing 7−76230
multiple layers, amorphisation induced by ion mixing 7−76232
nanocrystalline, struct., positron annihilation studies 7−98034
narrow band and heavy fermion systems, electronic heat capacity and mag. susceptibility 7−91834
neutron irrad., defect struct. development, cascade energy overlapping 7−104851
neutron irrad. cascade damage point defect processes 7−104849
new materials, state of the art *(Spanish)* 7−119117
NMR of oriented nuclei, continuous wave methods, book contrib. 7−99592
nonlinear EM excitation of ultrasound 7−70362
nonlinear I-V characteristic, thin metal plate with nondiffusely scattering faces *(Russian)* 7−105506
nonmagnetic, electric quadrupole interaction nuclear orientation, book contrib. 7−98945
nonmagnetic, nuclear orientation, book contrib. 7−99610
nontransition, heavily-compressed, electron-phonon interaction parameters *(Russian)* 7−92343
normal and superconducting, electron scatt. by quantum defects, infrared divergences study *(Russian)* 7−112615
normal-metal networks, quasi-1D disordered, magnetoresist. oscills. 7−118462
nuclear relaxation and nuclear orientation, book contrib. 7−99603
one-dimensional univalent, collective state electrons, phonon spectrum renormalisation *(Russian)* 7−70209
optical constants, Kramers-Kronig method determ. *(Japanese)* 7−132231
optical consts. evaluation from emissivity 7−125679
optical spectra, electron-hole interactions 7−118373
optics near the plasma freq., book 7−80188
orientation of solid rare gas bubbles, role of interface 7−142654
oxidation, nonstationary, heterogeneous, model 7−139042
oxidation kinetics, parabolic reaction rate calcs. 7−119431
oxide growth stress model, creep props. 7−132678
oxide scale growth, tracer isotope distrib. 7−119390
particle-plane interaction, van der Waals repulsion, jellium model calcs. 7−143377
particles, ideally polarisable, hydrodynamic interaction in DC field 7−75695
physical sputtering of elemental metals and semiconductors 7−70962
plasma deposition, layer structure, from low temp. pulsed plasma 7−76704
plasma oscillation-dislocation interactions *(Russian)* 7−98846
plasmon loss function, relaxation time 7−124900
plastic deformation mechanisms, pulsed mag. field effect at low temps., induced eddy currents 7−77393
plastic flow during rolling, limitations of kinematic models 7−106540
plasticity and brittle fracture, bifurcation and post-bifurcation analysis 7−110804
plasticity rel. to limit formability 7−132665
point contacts, flicker noise and electron-phonon interaction calcs. *(Russian)* 7−112437

metals continued
point defects, conf., Berlin, Germany (Sept. 1986) 7−88731
point defects, perturbed angular correlation and Mossbauer studies 7−91564
point-contact spectroscopy for study of elementary excitations 7−77047
pollutants in air and water, ring-oven technique abs. 7−106945
polycrystalline metals, mean free path concept 7−84836
porous systems, microstruct. form. rel. to pressing and sintering conditions 7−71112
post field ionisation and evaporation, ion energy distrib., FWHM anal., reply to comment 7−106386
powders, dry cohesionless, rapid shearing flow study 7−75733
production by charge melting using plasma heating *(German)* 7−138704
protective coatings on metals, electrical characteristics 7−125162
pure, grain radius attainable by grain growth, simulation 7−77939
pure, oxidation behaviour, role of point defects in oxide scales, review 7−86457
pure, plastic deform. to high strains, simple phenomenological expressions 7−98310
radiation damage, primary, caused by high-energy particles, struct. 7−84016
radiative capture of slow electrons by a metal surface 7−70929
recovery theory and its application to stress relaxation tests 7−119285
refractory BCC metals, atomic-defect mechanisms for diffusion 7−105098
refractory metal atom multiphoton ionisation, laser-evaporated pulsed atomic beams *(Chinese)* 7−103441
refractory metals, activated sintering using Pt group metal activators 7−132522
relation between XPS and Auger electron spectroscopy, relax. energy shifts 7−90053
residual resistivity of defects 7−84816
resistance oscills. in localisation regime *(Russian)* 7−77014
resistivity, determ. by eddy current decay method, hollow circular cylindrical geometry 7−105522
resistivity and magnetoresist., exchange interactions, Kondo. effects, Ce impurity effect 7−76894
restructuring procedure, Monte Carlo model 7−124657
rough surfaces, geometrical props., effective resistance and wall losses *(Spanish)* 7−112027
rubber-metal pair with water lubrication, boundary friction with account for hydrostatic press. 7−93111
rubber/metal adhesive bonds, durability in seawater, electrochemical pot. effects 7−138863
screw dislocation inclined pileup at crack tip 7−117926
secondary ion emission, energy distrib. 7−132400
segregation, thermodynamics, rel. to grain boundary orientation 7−113557
self-ion irrad., displacement cascade damage, computer simulation *(Japanese)* 7−131192
shear instability model of sliding wear 7−132770
sheet, crystallographic texture, anisotropic yield surfaces and forming limits 7−113572
sheet, drawing, yield locus curve determ. 7−93051
Sicilian Channel, surface sediments and heavy metals 7−101274
single crystals, He desorption of defects 7−76614
small metal particles, XPS relaxation and AES cross-relaxation energies 7−125932
small metallic particles, magnetism theory 7−70597
small particles, EM props., quantum mechanical approach 7−124893
small samples, cond. and energy level repulsion 7−70284
soft-helicon problem soln. 7−76991
solidification, finite element modelling, nuclear waste disposal appl. 7−132599
solidification kinetics 7−77963
spectrochemical anal. using laser-induced breakdown spectroscopy 7−132991
spectrometric analysis with spark discharges in Ar, burn spot phenomenon study *(German)* 7−133009
speed of deformation effects on stress *(German)* 7−104186
sputtering, composition of sputtered flux 7−70965
stacking fault interaction with nonspherical Fermi surface *(Russian)* 7−98179
static elec. fields and excess charge, accumulation layers, thermodynamic anal. 7−137995
strain sensitivity coeff. of resist., theory 7−124962
strained HCP, anisotropic point-defect diffusion, continuum eqn. calcs. 7−84402
strained metallic overlayers, struct. energetics, determ. 7−98699
strong solids, book 7−102028
strongly charged surfaces, optical response, nonlocal effects, time depend. local-density-functional theory 7−143993
structural materials, fatigue strength, freq. depend., microplastic deform. role 7−78216
structurally inhomogeneous, microplastic to macroplastic deformation transition 7−113636
substrate with an impurity, change in density of states due to chemisorption 7−105652
subsurface stress detection using ultrasound and time-varying temp. gradients 7−123375
superlattice, electronic transport, interface roughness and boundary scatt. model calcs. 7−85054
superlattices, EELS, electron scatt. by folded longitudinal plasmons, jellium model calcs. 7−144193
superlattices, optical props., plasma wave effects calcs. 7−144004
superplastic deformation mechanisms, role of struct. transformations *(Russian)* 7−137445
supported metal particle surface plasmon excitation with external electron beam, EELS 7−132392
supported metal particles, generation of surface plasmon excitation by external electron beam 7−132393
surface, adsorbate vibrational lineshapes, review 7−112055
surface, chemisorption, lattice-gas model, review 7−124716
surface, face-specific effects for atom adsorption 7−124697
surface, neutralisation of multiply charged ions 7−132395
surface, physisorbed mols., screened van der Waals interaction calcs. 7−112420
surface, pitting under effect of IR laser pulse 7−84023
surface, plasma prod. by intense short pulse from Nd laser 7−97768
surface, rare gas physisorbed layer, electron stimulated desorption kinetic energy distrib. calcs. 7−125876
surface analysis techniques and their application to materials and device characterization 7−125904

metals continued
surface hardening with laser beams *(German)* 7−106655
surface image pot., density functional theory calcs. 7−143545
surface layer, effect of structure and props. on fatigue resistance 7−86352
surface modification by ion beams, conf., Kingston, Ontario, Canada (Jul. 1986) 7−102001
surface oxidation, nucleation control, model 7−119448
surface properties and endurance limit, props. nonuniformity on surface 7−113707
surface structure, scanning tunnelling microscope and transverse electron focusing studies 7−76570
surface treatment with powerful laser rad., exam. of energy losses due to reflection 7−126295
surface-atom van der Walls interaction, quadrupolar contribs., density functional calcs. 7−124885
surfaces, corrosion fatigue crack growth, electrochemical reaction kinetics meas. technique 7−126357
surfaces, H_2 interactions, backscattering and chemisorption 7−77736
surfaces, H and D atom sticking and inelastic scatt., electron-hole pair excitations, quantum effects 7−85923
surfaces, heat of molecular chemisorption, within bond order conservation framework, efficiency of Morse potentials 7−86665
surfaces, laser irrad., SAW and EM wave combined excitation 7−131412
surfaces, laser irradiated, periodic structures 7−111654
surfaces, liq. wetting, heat of adsorpt., lubrication 7−142904
surfaces, oxidation and O penetration barriers 7−124594
surfaces, stretching and bending damage and defect charactn. using polarised light scatt. 7−106200
surfaces, Thomas-Fermi-von Weizsacker approach, self-consistent soln. 7−143550
surfaces, vibr. resons., pseudoband gaps and geometric struct. 7−124675
thermal conductivity, rel. to characteristic temps. 7−131377
thermal desorption of alkali atoms from metal surfaces 7−124720
thermal mechanism of unstable plastic deform. *(Russian)* 7−111738
thermally fluctuating magnetic field meas. of normal metals at low temp. using SQUID magnetometer 7−73383
thermodynamics of plastic deformation 7−118022
thermoelastic stress analysis for testing and development of automotive components *(German)* 7−113598
thermoelastic-plastic transition and dislocation dynamics by deform. calorimetry 7−118021
thermomagnetoelectric discrete and continuous metallic interfaces, transport props., nonequilib. thermodynamics anal. 7−84831
thick targets, backscatt. electrons, mean energies, Monte Carlo simulations 7−138554
thin wires, longitudinal magnetoresist. simple anal. 7−118461
Thomas-Fermi-Dirac theory of impurity screening, nonlocal density approx. 7−105441
tip-metal surface system with chemisorbed mols., inelastic electron tunnelling 7−118557
transplutonium metals, β-form, atomic vol. studies 7−76075
two-dimensional self-interstitial diffusion in void lattice form. 7−98559
US propagation, modified Bragg refl. force implications 7−69836
vacancies and self-interstitials, thermal He desorption studies 7−91983
vacancy and divacancy migration, positron effects 7−91876
vacancy-solute binding energies, rel. to bulk props. 7−76197
vapour, arcs, current conducting channel near cathode, diffusion dominated phenomenon 7−75900
vapour, breakdown kinetics by laser beam in at. gas 7−69299
vapour, dense, electrical cond. connected with form. of negative ions 7−123838
vapour, vacuum arcs, cathode plasma, electric cond. 7−75901
vapours, resonance atomic media, holographic pattern recognition applications 7−68594
vickers hardness and depth hardness under load *(German)* 7−113821
viscoplastic flow during flat rolling 7−106539
void lattices, two-interstitial model theory 7−98134
void positron annihilation lifetime spectrum, density functional formalism *(Chinese)* 7−85888
weld zone residual stresses relaxation in field of elastic vibrs. 7−126164
H and D distrib. around trapping centres, statistical phenomenological model, inelastic relax. spectra anal. 7−84001
H interstitials, US absorption 7−137478
H permeability of metals, study using colouring of amorphous WO_3 7−118168
H permeation, surface effects *(Japanese)* 7−76491
He embrittlement mechanism 7−126238
Ne ion implanted, induced X-ray emission 7−104778
O_2 chemisorption on metals and III-V semiconductors, excited molecular ion emission on Ar^+ bombardment 7−70959

metalworking
see also bending; cold working; forging; hot working
adiabatic heat lines 7−119309

metamagnetism
decamethylferrocene+TCNQ, reaction products, structs., mag. props., Mossbauer spectra 7−143940
exchange material, antiferromagnetic resonance 7−77406
frustrated metamagnets, phase transitions and phase diagrams 7−138227
frustration in spontaneous metamagnets, ferro- and antiferromagnetic interactions, binary Ising model 7−138225
kinematic soft mode in absence of transitions 7−125359
Onyszkiewicz metamagnetic model, possibility of temp. induced order-order transitions 7−77323
tetramethyl ammonium nickel tribromide, metamagnetic phase diagram, AC mag. suscept. meas. 7−85291
triethylenetetraammonium copper hexachloride, quasi-2D metamagnet, mag. and structural props. 7−125329
$CeRu_2Si_2$, metamagnetic-like transition 7−105918
$CsFeCl_3$, anomalous magnetisation appearing at appl. mag. fields exceeding 33 T 7−125338
DyAG, mag. transitions, high-sensitivity US interferometry detection 7−123362
$ErFeO_3$, metamag. phase transition 7−70543
^3He, liquid, partially spin-polarised, phase transitions and phase diagrams 7−137650
$LuCo_2$, intermetallic compounds, metamagnetic transition 7−132022
$Lu(Co_{1-x}Al_x)_2$, pseudobinary laves phase cpds., metamagnetic transition 7−99455
$Ni(NO_3)_2.2H_2O$, pressure induced metamagnetic transition 7−99450
$ScCo_2$, intermetallic compounds, metamagnetic transition 7−132022

metamagnetism continued
$Y_2(Co_{1-y}Ni_y)_7H_x$, mag. props., effect of H substitution 7−99445
$(Y_{1-y}La_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
meteor burst communications *see radio links; radiocommunication*
meteor trails *see meteors*
meteorite craters
30 Myr cyclicity in terrestrial record, relation to episodic comet showers 7−127777
Ariel, geological terrain and crater freq. 7−101729
N Atlantic continental shelf SE of Nova Scotia, extraterrestrial impact crater identification 7−107383
Charlevoix (Quebec), evidence for aligned saturated cracks in Earth crust from seismic travel-time drop 7−139504
cometary craters on Earth and planets, impact probabilities and cratering rates 7−120291
configurations and minerals form. *(Russian)* 7−79402
Earth, periodicity problem in cratering rate 7−87645
Earth, present rate of crater formation, compared to Moon 7−101708
Florida Everglades as buried pseudoatoll around astrobleme 7−101306
formation rate due to extra-solar Oort cloud encounters 7−88529
Ganymede, craters distrib. and morphology 7−145866
impact cratering and flood basalt volcanism, effects of crustal fracturing 7−107411
impact-induced faults, longevity as preferred sites for later-tectonic activity 7−101242
Loganchin astrobleme, Siberia shock metamorphism of basic rocks 7−145470
Lonar Crater, India, tektite-like bodies geochemistry and implications for tektites origin 7−101309
Lonar crater (India), coesite and stishovite obs. in impactites 7−133674
Mars, crater ejecta morphology, elevation and ridged plains thickness effects 7−101718
Mars, crater morphology and subsurface volatiles, conference Houston, Texas (March 1986) 7−134369
Moon, magnetic field of enhanced strength antipodal to impact basins 7−145844
Moon, present rate of crater formation 7−101708
non-Newtonian relaxation, finite element models 7−101726
planets, low-temp. ice laboratory impact expts. 7−120267
point source assumption and coupling parameter theory 7−120023
Ries impact in Czechoslovakia, moldavite origin, chem. study 7−127216
Rochechouart, France, petrology, comp. and origin of pseudatachylite 7−101294
solar system cratering record, Voyager 2 results at Uranus and implications for origin of impacting objects 7−134179
Tunguska phenomena in Siberia, due to ejected solar plasma blob 7−87649
Uranus, satellite system, occurrence of central peak craters 7−127765
Venus, lithospheric heat transport modes, constraints from obs. of impact crater densities 7−120293
Wolf Creek Crater, W Australia, gravity anomaly of meteorite crater 7−72031
meteorites
see also meteors; micrometeorites
Allende, actinide chemistry in Ca-Al rich inclusions 7−94831
Allende, alteration of Al-rich inclusions inside amoeboid olivine aggregates 7−127785
Allende, C content determ. in dark inclusion 7−139989
Allende, chondrules, matrix and rims, precursor components 7−145900
Allende, Cr isotopic anomalies anal. 7−88184
Allende, diamond discovered as fine dust component, of pre-solar origin 7−79902
Allende, forsterite bearing Ca-Al-rich inclusions, form., trace element and petrology anal. 7−107779
Allende, trace element analysis using nuclear microprobe 7−94833
Allende carbonaceous chondrite, solar nebula origin of chondrule olivine ferrous zoning 7−127783
Allende Ru isotope compositions of Carbonaceous chondrites 7−115330
Antarctic meteorites, natural thermoluminesc. meas. rel. to ^{26}Al content 7−101746
Antarctica meteorites, terrestrial ages from ^{26}Al content study 7−88333
N Atlantic continental shelf SE of Nova Scotia, crater identification and meteorite characts. 7−107383
basaltic achondrite parent bodies, volatile degassing 7−79899
Bayard (Nebraska), L5 chondrite find, mineralogy, petrology, and comp. 7−139993
Bernardino Rivadavia meteorite collection 7−145903
Bo Xian chondrite, Anhui, chemical composition study *(Chinese)* 7−115327
Bouvante eucrite, chemistry, petrology, mineralogy *(French)* 7−134199
carbonaceous chondrites, ^{13}C NMR or organic cpds. 7−79900
carbonaceous chondrites, chem. composition of hibonite grains 7−79901
carbonaceous chondrites, organic material 7−115331
carbonaceous chondrites, plagioclase-rich inclusions of melt droplet origin 7−79898
carbonaceous chondrites, trace element analysis using PIXE 7−94832
carbonaceous chondrites matrix, implications of kinetic study of hydrous alteration of Mg-SiO smokes 7−101737
carbonaceous chondrites organic matter (book) 7−108052
carbonaceous material, relation to interstellar poly cyclic aromatic hydrocarbons 7−145822
Chinese ancient meteorites, name transcriptions 7−139995
chondrites from Roosevelt County, New Mexico, classification 7−139996
chondritic meteorites, cooling rates rel. to original structs., fragmentation, and reassembly of asteroids 7−88163
comet break-up hypothesis, evidence from cosmic dust in polar ice and Tunguska impact 7−88205
composition, evidence for active early Sun 7−79897
cosmogenic nuclides production by primary protons, contrib. of galactic and solar cosmic rays 7−101652
diamond discovered in primitive meteorites as fine dust component, of pre-solar origin 7−79902
enstatite chondrites, CaS trace element chemistry rel. to origin 7−139988
enstatite chondrites, detect. of ubiquitous high-FeO silicates 7−101745
enstatite chondrites, expts. on sulfidation of Mg-rich olivine and niningerite stability 7−127784
fireball obs. in Meridional Alps, Dec. 1984, seismological records contrib. *(French)* 7−72376
Guangrao, cosmic-ray exposure history, isotope chemistry study 7−115329
H chondrites, mobile trace elements and gas retention 7−107781
H chondrites, weathering effects, chem. anal. 7−107782
high-temperature material enrichment, relation to protoplanetary disk form. processes 7−88136
impact phenomena, implications for terrestrial mag. field *(Russian)* 7−79402
impact-generated lower crustal faults, observability 7−145683
inert gases in meteorites, reson. ionisation mass spectroscopy 7−93451
Innisfree chondrite orbit, obs. of second fall from same orbit 7−120340
IR diffuse reflectances (2.5-25 μm) 7−120342
isotopic anomalies, effects of neutron capture nucleosynthesis during core He burning in massive stars 7−107805
Leedey L6 chondrite, shock effects and Ar loss 7−145901
Leoville, Ru isotope compositions of Carbonaceous chondrites 7−115330
Lunan, cosmic-ray exposure history, isotope chemistry study 7−115329
lunar meteorites, review 7−115265
lunar origin meteorites, comp. rel. to regolith breccias 7−101711
mass-density relations 7−145842
mass-independent isotopic fractionation 7−103597
minerals, fission track annealing and closure temps., crystal composition effects 7−94226
minerals, nucleation and grain growth in astrophysical environments 7−134129
Monticello, glass-rich howardite, petrography and comp. rel. to origin 7−139991
Moon, Apollo 16 noritic impact melt breccias, meteoritic component, comp. anal. 7−101709
Murchison, amino and carboxylic acid extracts, stable isotope ratios 7−88334
Murchison, C isotopes of oxide grains of carbonaceous chondrite 7−134200
Murchison carbonaceous chondrite, ^{26}Mg excess in hibonite grain 7−107783
Murchison carbonaceous chondrite, refractory inclusions ^{50}Ti anomalies, implications for solar nebula collapse 7−88332
Nan Yang Pao, cosmic-ray exposure history, isotope chemistry study 7−115329
noble gas components in primitive chondrites, presolar origin of 'normal planetary' component 7−101747
Nuevo Laredo Trend eucrites, comp. and origin 7−107780
Olivenza, mag. props. of LL5 chondrite and inferred solar nebula mag. field 7−134201
orbits from fragment scattering patterns 7−72377
ordinary chondrite falls from China, petrological classification 7−139992
ordinary chondrites, mineralogy and comp. of barred olivine chondrules 7−101744
ordinary chondrites from Texas, classification 7−139990
Pre cambrian-Cambrian boundary impacts, Ir anomalies and stratigraphic position 7−87636
reflectance spectra of terrestrial, lunar and meteoritic powders and frosts, 92 to 1800 nm 7−87615
Semarkona, smectite in ordinary chondrite 7−145899
shergottite parent body, core form. and comparison with Earth 7−101740
shergottite phosphates and residues, rare earth patterns 7−101741
shock-induced effects in ordered alloy $Fe_{50}Ni_{50}$, Mossbauer study 7−145902
SNC meteorites and Mars regolith comparison 7−120295
SNC meteorites of martian origin, ejection craters and cosmic ray exposure histories 7−139997
type 3 ordinary chondrites, comp., form. and metamorphism 7−94834
unequilibrated chondrites, H isotope abundances 7−145897
Vaca Muerta mesosiderite, study of diverse eucritic pebbles 7−115328
Verkhne Dnieprovsk Fe meteorite specimens identification 7−139994
Yamato diogenite Y-74013, mineralogy and thermal and redox history 7−127787
Zhaodong, cosmic-ray exposure history, isotope chemistry study 7−115329
D/H ratio in ordinary chondrites 7−145898
Fe meteorites, Ru, Re, Os, Pt, Au contents of 41 meteorites 7−127786
Pu Sm partitioning, exptl. geochemistry and thermodynamics of trace element partitioning 7−94139
meteoroids
see also meteorites; meteors
antimatter meteoroids, vel.-height relation in Earth's atmosphere 7−94828
atmosphere sonic shock-wave generation, manifestation in seismic data 7−127782
Comet Bennett (1970 II), total meteoroids mass ejection and contrib. to zodiacal dust cloud 7−145875
P/Comet Halley meteoroids, particle flux and masses 7−88330
contribution of short-period comets 7−115326
cosmogenic nuclides production by primary protons, contrib. of galactic and solar cosmic rays 7−101652
evolution of small solar system bodies, conference, Varenna, Italy (August 1985) 7−140373
Geminid meteoroid stream, dispersal by radiative effects 7−94829
Geminid showers, spatial shape and orbital characts. 7−127781
ϵ Geminids, evidence for assoc. with Comet Nishikawa-Takamizawa-Tago (1987c) 7−120326
impact effects on orbiting spacecraft orientation 7−88073
Innisfree chondrite orbit, obs. of second fall from same orbit 7−120340
lunar impacts, distinct meteoroid families identified on seismograms 7−101739
mass distributions in five meteor streams, implications for stream dynamics and evolution 7−139987
Quadrantid showers, spatial shape and orbital characts. 7−127781
Saturn, rings age and micrometeorite erosion model 7−120341
Taurid meteoroid complex, assoc. with asteroid 5025 P-L and Comet Rudnicki (1967 II) 7−134198
meteorological instruments
see also anemometers; barometers; hygrometers
advances in meteorological instrumentation, review 7−120164
Aitken nucleus counter instrument, improved design for airborne use 7−127589
automatic weather station instrumentation in operation in Scotland 7−127619
CLASS radiosonde system, appl. of adaptive polynomials for real-time data editing 7−115064
compact automatic measuring system for meteorological parameters with one-board micro-computer *(Japanese)* 7−79680

meteorological instruments continued
dew detector for use with astronomical telescopes, design and appl 7−134139
electrolytical dew point sensors, long-term comparison *(German)* 7−139813
Forward Scattering Spectrometer Probe, corrections for coincidence and dead-time losses 7−127566
Multimet meteorological system for research appls. 7−101603
multiwavelength scanning radiometer, appl. to airborne meas. of scattered radiation within clouds 7−115065
precipitation gauge siting for central Rocky Mountains orographic cloud seeding demonstration project 7−94496
rain gauge, high-resolution, improved design 7−115068
raingage integration time, influence on measured rainfall-intensity distrib. functions 7−133814
tower for meteorological research and instrumentation, at Julich, W Germany *(German)* 7−87972
turbulence measurement instrument, design of micro-flowmeter *(French)* 7−107545
turbulence measurement with hot wire and cold wire instruments, response functions 7−127590
Twomey-type cloud condensation nucleus counter, theoretical vindication of performance 7−115062
wet-only passive sequential fraction rain collector 7−94449
wind sensors, icing of cup type and propeller type sensors, effect on efficiency 7−127594

meteorology
see also weather forecasting
40 to 50 day atmos. oscillation in the tropics 7−101395
500 mbar heights, modified time-longit. diagram along 50° north and south 7−79557
1979 Asiatic summer monsoon, planetary scale changes 7−101410
1979 summer monsoon, large-scale features 7−101409
1986 International Geoscience and Remote Sensing Symposium, conf., Zurich, Switzerland (1986 September) 7−95093
equatorial and S Africa, rainfall variability rel. to sea surface temps. along SW African coast 7−145626
AGU fall meeting, conf., San Francisco, USA (Dec. 1985) 7−108010
airborne cloud-physics projects, 1974 through 1984, review 7−79492
albedo of Earth-atmos. system, deconvolution of Nimbus 7 shortwave measurements 7−101530
Algiers, insolation data, first-order Markov process modelling 7−101452
ALPEX low-level flow predictability 7−87815
Alpine valley atmospheric heating 7−87831
Alps region, boundary layer study and elevated heat source effects 7−87816
Alps-Pyrenees mountain complex influence on atmospheric flow 7−87824
Antarctica, surface wind field over ice sheets 7−114973
Appalachian 1980 January 13-14 ice storm, United States, 24 hr numerical simulation 7−133869
Arctic tropopause folds, jetstreams and frontal zones 7−114960
Arizona monsoon precipitation freqs., diurnal vars. 7−101441
E Asia coastal cyclogenesis, numerical case study 7−114963
Asian Monsoon region, summer 1979 regional energy budget *(Chinese)* 7−133803
Athens, obs. of sea-breeze fronts near shoreline 7−101380
N Atlantic, atmosphere characts. influencing infrared remote sensing 7−127345
equatorial Atlantic Ocean, in situ wind meas. and ocean response 7−114910
Equatorial Atlantic Ocean, surface wind stress rel. to sea surface dynamic height (1982 to 1984) 7−114730
Atlantic-European blocking and 27 kHz atmospherics spring enhancement 7−101463
atmosphere boundary layer, testing of Simple Biosphere model using point micrometeorological and biophysical data 7−145630
atmosphere pressure measurements, resolution improvement method 7−127570
atmosphere response to action of horizontally extensive heat source, press. and vel. disturbances anal. 7−139705
atmospheric turbulence anal., influence of spectrum functions and filters on crossing freq. determ. 7−127365
Australasia, low latitude, ocean-atmosphere interactions 7−139636
Australia, dust storms (1957-84) 7−145582
Australia, intense monsoon depressions 7−114956
SE Australia, subsynoptic scale environment of mesoscale convective weather systems 7−139676
Australian summertime cold fronts, stably stratified internal boundary layer with offshore flow 7−101379
automatic quality control of meteorological parameters derived from Meteosat imagery 7−145656
Bangalore, weekly rainfall vars. (1897-1984) 7−101419
baroclinic energy conversions in wavenumber domain 7−114966
baroclinic instability problem, role of friction and convective condensational heating *(Chinese)* 7−133795
unstable baroclinic waves, model of wave-wave interactions 7−114905
Bay of Bengal, monsoon revival depression during break period 7−114929
Belgium, natural radioactivity vars. in boundary layer, meteorological effects *(Flemish)* 7−127435
Benard convective eqns. in 2D, high-dimensional truncated model *(Chinese)* 7−133900
bioclimatology, temp.-humidity index for uncomfortable summer weather 7−133911
bioclimatology mapping using remote sensing data 7−101479
blocking and persistence over N Atlantic and Australia-New Zealand, anal. of 500-mbar geopotential height data 7−79558
blocking of circulation and meteorological phenomena due to mountains 7−127410
blocking of general circulation and equivalent modons in simple shear 7−101396
BMRC Australian Monsoon Experiment (AMEX), background, objectives and operations 7−79491
Bowen ratio observations at forested and logged areas of Canada 7−133983
Boyden Observatory, South Africa, meteorological conditions (1980 to 1985) 7−87840
NE Brazil, intraseasonal vars. of rainfall and atmospheric energetics during 1979 rainy season 7−79560
British Isles, appl. of Satellite imagery to nowcasting and very short range forecasting 7−114951

meteorology continued
Canadian Atlantic Storms Program, meteorological field project 7−115015
chaotic behaviour in low-order unforced inviscid barotropic model, analytic solns. 7−101444
China, abnormal weather due to Mt. St. Helens eruption *(Chinese)* 7−87748
cirrus cloud experiment, intensive field obs. planned for First ISCCP Regional Expt. (FIRE) 7−101489
cirrus clouds, recording via lidar soundings *(German)* 7−79539
CISK in polar oceanic air masses, theory 7−101455
climate classification with BASIC computer program 7−128230
climatic fields identification and analysis, appl. of dot-density shading 7−115070
cloud drops growth, laboratory study in continuous flow diffusion cloud chamber 7−87764
cloud fields spatial power spectra, problems in interpretation 7−114912
cloud imagery from polar orbiting satellites 7−94635
cloud seeding, microphysical and radar obs. of seeded and nonseeded continental cumulus clouds 7−145628
clouds, liq. water vertical profiles, down-coming microwave radiation meas. *(Russian)* 7−114983
clouds, liquid water and precipitable water vapour determ. by ground-based microwave radiometers 7−127335
cold air outbreak, USA air flow over Atlantic, lidar obs. and boundary-layer model 7−107457
conference, Strasbourg, France (April 1987) 7−95088
continental temperature and precip. records, detect. of El Nino-Southern Oscillation signal 7−107503
convection in polytropic atmos., numerical study of 2D compressible convection 7−130704
cumulus parameterization for use at mid-latitudes, incorporating cloudtop entrainment 7−127430
cumulus parameterization scheme for use during summer monsoon 7−139678
cyclogenesis in frontal zones, stability study 7−114894
cyclogenesis in lee of Rocky Mts., diagnostic study 7−87823
cyclogenesis near mountain complexes, unified theory 7−87819
cyclone in Gulf of Genoa, stratospheric intrusion observations 7−87822
cyclone in Mediterranean region, quasi-Lagrangian diagnostics study 7−87821
cyclones and depressions over India (1985) 7−114927
cyclones motion, nested grid scheme for isolated vortex movement prediction in barotropic model in barotropic model of atmosphere 7−133856
cyclonic cloud vortices characts. of N Hemisphere rel. to climate 7−127447
Darwin, Australia, surface press. time series rel. to existence of strange attractor for Southern Oscillation 7−87886
data display, animated 3D 7−94454
data system for receipt and data processing from meteorological satellites 7−145701
database service, microcomputer-based *(Japanese)* 7−139806
DDR, fog frequency var. (1963-78) *(German)* 7−139734
DDR coastal area precipitation analysis *(German)* 7−139731
deep convective rotational solitary waves and mesoscale convective complexes 7−145617
departure point position in two-time level semi-Lagrangian and semi-implicit scheme 7−127424
differential absorption lidar (DIAL) measurements, mathematical limits to accuracy set by resolution limits 7−115006
diffuse radiation prediction from sunshine duration 7−87882
diffusion of catalytic agent released by aircraft *(Chinese)* 7−87750
dispersion by Gaussian models, error bounds for max. conc. estimates 7−145571
Doppler radar for snowfall obs. *(Japanese)* 7−114925
dynamics of atmosphere, work done by Americans in AD 1983 to 1986 period, review 7−120103
Earth rotation rate changes, due to 40 and 50 day atmos. oscillations 7−139438
Earth-Observation Preparatory Programme of ESA 7−145664
East Indies, weather prospects for total solar eclipse (1988 March 18) 7−120253
El Nino events rel. to Earth rotation speed decreases *(Chinese)* 7−87746
El Nino time, surface temperature forecast model *(Chinese)* 7−87747
El Nino-Southern Oscill., study of global outgoing long wave radiation 7−101531
El Nino-Southern Oscillation, obs. of wind and ocean thermal and flow vars. (1982 to 1983) 7−127258
El Nino-Southern Oscillation, ocean upwelling events detect. via Cd meas. in corals 7−133777
El Nino/Southern Oscillation, quadratic temp. iteration 7−87660
England, precipitation var. (1976-85) 7−120083
England-Wales, 1986 November 20-21, Meteosat and radar rainfall imagery interpretation 7−79524
Europe, significant weather events for 1000 to 1800 AD period *(German)* 7−115003
extraoptical cyclones, computer pattern analysis method for satellite images 7−115093
extratropical cyclone over E China Sea and W Pacific, mid February 1975 AD 7−127428
FGGE level III-a data archives on magnetic tape 7−72155
Finkenbach valley, West Germany, effect of deforestation on nocturnal drainage flow and local climate 7−101377
FIRE (First ISCCP Regional Expt.), objectives and methodology 7−101488
fire weather network design, least-squares criterion for optimum networks 7−114865
First ISCCP Regional Experiment (FIRE), participation by Meteorological Office 7−127476
freezing of drops when coming into contact with cold substrate 7−84213
frontogenesis, effect of along-front temperature variation in 2D model 7−114903
frost protection by application of helicopter downdraft, USSR expts. 7−114950
general circulation, geostrophic model of convective flow in rotating annuli *(Russian)* 7−127352
general circulation, persistent anomalous circulation and blocking 7−87839
general circulation interannual variability, from Earth rotation data since 1860 AD 7−94365

meteorology continued
general circulation patterns of N Hemisphere, including rarely occurring circulations 7—127427
general circulation research, role of radiation budget remote sensing data 7—101529
geopotential and temperature diagnosis using various divergence eqn. forms 7—114961
geostrophic adjustment of press. and wind fields, effects of horizontally inhomogeneous heat release *(Russian)* 7—127353
geostrophic approximation validity in winter stratosphere and troposphere 7—114897
geostrophic scatter diagrams and potential vorticity dynamics 7—101400
global fields reconstruction algorithm for sigma surfaces 7—133863
global radiation for Indian stations, correl. with daily and hourly diffuse radiation 7—87877
global seasonal features (1985 December-1986 February) 7—101438
global seasonal features (1986 March-May) 7—101439
global solar radiation estimation from sunshine hours, geographical and meteorological parameters 7—87878
global tropical divergent wind fields in summer *(Chinese)* 7—133806
global weather events, seasonal summary (1985 Sept.-Nov.) 7—87862
gravity waves and convection over Colorado, USA, July 1983 observations 7—145621
E Greenland Sea, effect of observed ice conditions on drag coeff. in summer marginal ice zone 7—133710
Greenland Sea, effect of storm on dynamics and thermodynamics of ice-upper ocean system 7—133715
Greenland Sea, mesoscale var. in surface stress, heat fluxes and drag coeffs. in marginal ice zone 7—133708
Greenland Sea, wind stress meas. over rough ice during 1984 Marginal Ice Zone Experiment 7—133709
Guyana, rainfall regimes in coastal region 7—120084
hail prevention by cloud seeding, expts. in Moldavia, Romania 7—120096
humid tropics, total irradiation and sunshine duration relationship 7—94399
image processing in Institute for Atmospheric Physics 7—87885
images, digital filtering from NOAA series satellites 7—145670
central India, rainfall during break monsoon conditions 7—114938
Indian monsoon trough zone, heat and moisture during 1979 monsoon 7—101416
Indian summer monsoon winds, effects of orographic forcing 7—87766
insolation determination for spherical body, derivation from pyranometer meas. *(German)* 7—79537
integral time scale estimation, appl. of time series autocorrelations calc. *(German)* 7—79536
internal gravity wave propagation, in rotating fluid with shear flow 7—107471
intraseasonal tropical oscillations, phase propagation 7—101389
IR meteorological satellite image analysis using fractal dimension and lower-order statistics 7—139741
iso-radiation map for Arab region 7—87879
Israel, sand and dust storms, review 7—101467
Ivory Coast, surface energy flux and evaporation, COPT 81 expt. *(French)* 7—94333
Japan, extreme wind speeds for various return periods during rainfall 7—107478
Jebel Ali Sailing Club, United Arab Emirates, March 1986 tornadic waterspout, conditions of occurrence 7—101420
Kanto area, Japan, analytical study of northeasterly wind 7—79498
Karanja catchment, India, hydrometeorology of rainstorms 7—114824
central Kenya, spatial patterns of daily rainfall (1971-9) 7—120046
Kiel Bay, Germany, energy balance at sea surface 7—120037
lee cyclogenesis, two different analytical models 7—114896
lee cyclogenesis theory, topography effects on nongeostrophic baroclinic instability 7—145616
lightning flashes in E United States, cloud-to-ground flash characts. (June 1984 through May 1985) 7—114916
long-range forecasting appls. of Meteorological Office Historical Sea Surface Temperature Data Set 7—133756
low-visibility episodes at Sprakensehl, West Germany, obs. (1983 to 1985) 7—87898
M- and S-matrix weather-radar meas., anal. and appl. 7—94418
Mallamma Lake, Andhra Pradesh, India, atmospheric point discharge current meas. 7—127342
marine wind speeds, number of visually estimated and instrumentally measured wind obs. 7—133865
W Mediterranean, MODEM contribution to MEDALPEX 7—79605
W Mediterranean area, orographically induced cyclones during ALPEX 7—87820
Meiyu frontal system over Yangtze valley, China, heavy rain and echo struct. of mesoscale systems *(Chinese)* 7—133800
mesoscale and severe storm meteorology, review 7—120104
mesoscale datasets, merger to common Cartesian format 7—127372
mesoscale eddy mapping method, involving radar obs. of sea surface 7—134016
mesoscale meteorology, horizontal finite differences calc. in terrain-following coordinate systems with variable vertical mesh sizes *(German)* 7—79538
mesoscale phenomena meas. using limited surface networks 7—101539
mesoscale phenomena studied using regional models 7—114856
Meteorological Office (of the UK), activities and future programme 7—87838
METEOSAT solar array electrical design and qualification test programme 7—144878
midlatitude troposphere and stratosphere, effects of IMF sector struct. on geopotential heights and temps. 7—101453
monsoon annual weather cycle, introduction 7—133909
monsoon circulation variability over last 150000 years 7—139699
SE Montana, mesoscale phenomena meas. using limited surface networks 7—101539
Montana thunderstorm, 1981 July 19, numerical modelling study of nonelectrical aspects 7—114917
Montana thunderstorm, 1981 July 19, numerical modelling study and obs. of electrical aspects 7—114918
monthly average hourly global, diffuse and direct radiation estimation 7—87881
MORECS climatological data set, water-balance variables over Great Britain (1961 to 1986) 7—127296
Narmada catchment, India, relation between precipitable water vapour and rainfall 7—114862
meteorology continued
Nauru, Pacific Ocean, precip. time series rel. to strange attractor for Southern Oscillation 7—87886
near-ground temperature profile, meas. by two laser beams 7—115071
network expansion using information decay concept 7—127369
North America, meteorological modelling rel. to fate of US and Canadian combustion N emissions 7—139165
Northern Hemisphere, mean air temp. vasa. (1841 to 1985) 7—139707
numerical variational methods for data filtering and interpolation 7—127561
numerical weather prediction, parametrization of land-surface radiative and turbulent processes 7—133864
objective weather analysis scheme 7—127411
observation series in irregular sequence, statistical analysis 7—87832
ocean-atmosphere moisture exchange, mathematical model 7—114943
Oklahoma-Kansas Preliminary Regional Experiment for STORM-Central, results 7—79493
orographic influence on the barotropic flow, numerical study *(Chinese)* 7—133899
E Pacific, 1981 November 13 explosive cyclogenesis case study 7—87842
E Pacific, easterly waves and deep convection in northern summer 7—114891
equatorial Pacific Ocean, trade winds vars. rel. to sea level trends (1974-75 to 1981) 7—114742
Pakistani multiservice domestic telecommunication and weather satellite project 7—127684
particle dispersion in turbulent air-flow, random-walk model for heavy particles 7—107464
S Pennines, England, wind speed and direction at high-altitude site (1975 to 1984) 7—79523
planetary scale wave amplitudes, for AD 1964 to 1980 period 7—101402
planetary scale wave nonlinear forcing by amplifying baroclinic eddies 7—101401
planetary wave 2 in preconditioned zonal flow 7—101393
planetary wave activity in troposphere and stratosphere in northern winter 7—101398
planetary wave latitude localization by stratospheric jets, model *(Russian)* 7—94343
planetary wave of nonlinear optical type, nondispersion soln. *(Chinese)* 7—133797
Pleistocene epoch, ice age climate and atmos. circulation models 7—120119
polar lows, conference, Sundvolden, Oslo, Norway (May 1986) 7—140371
pollution, dispersal, critical dividing streamline hypothesis to mesoscale 2D terrain 7—145569
potential vorticity applications in meteorology, review *(Russian)* 7—145589
potential vorticity transport and its parameterization by zonally averaged fields *(German)* 7—114985
precipitation, fluctuations over Northern Hemisphere land areas since mid-19th century 7—145651
precipitation analysis, construction of precip. intensity distrib. functions 7—133790
precipitation augmentation, appl. of radar data for planning and evaluation of effectiveness of expt. 7—139706
precipitation quantities, influence on relationships between conc. and deposition of nitrate and sulphate 7—133157
precipitation regime in Moscow, long-term statistical characts. (1881 to 1980) 7—139708
Pripyat River area of USSR, forest evaporation changes rel. to groundwater regime 7—127295
Purdue Regional Objective Analysis of the Mesoscale, error features 7—127370
pure katabatic flows, time-dependent 2-D model study 7—79561
quasi-biennial oscill. of equatorial stratosphere, theory 7—114858
quasi-stable weather and circulation states at mid-latitude 7—87875
quasigeostrophic flow forced by orography and diabatic heating *(Chinese)* 7—87744
radar reflectivity images, spatial and temporal anal. 7—114987
radiation parameterization for atmos. circulation models 7—79517
radio wave propagation parameters prediction, comprehensive meteorologically oriented methodology, appls. beyond 10 GHz 7—114976
rain, functional box-counting and multiple elliptical dimensions in radar data anal. 7—114979
rain cells, horizontal structure, data and theory for new model for propagation appls. 7—114977
rain intensity measurement, improved design for high-resolution rain gauge 7—115068
rainfall intensity and type determ. from GOES imagery, anal. of visible and IR data 7—79546
rapid surface anticyclogenesis: synoptic climatology and attendant large-scale circulation changes 7—133870
regional models for synoptic meteorology 7—114856
remote sensing, digital satellite imagery acquisition and processing 7—101572
remote sensing of parameters, radio scintillation meas. method 7—94415
Rocky Mts., Colorado, USA, surface energy budgets 7—101406
Rossby wave (nonlinear) and solitary wave influenced by heat source, theory *(Chinese)* 7—133901
Rossby wave in a channel, finite amplitude stability 7—101456
nonlinear Rossby wave solns., constraints on the barotropic waves 7—114859
Sahelian rainfall, prediction from sea surface temps. in Gulf of Guinea 7—79559
Salamanca, Spain, meteorological effects on elemental concentration of atmospheric aerosols *(Spanish)* 7—144928
satellite image reception and anal. facility, image preprocessing techniques 7—94444
satellite meteorology in Cuba *(Spanish)* 7—101541
satellite remote sensing, Defense Meteorology Satellite Program of USA 7—107515
satellite-Earth links, attenuation prediction in European region 7—139679
sea level and water circulation forecasting, appl. of real-time data systems 7—94298
seasonal energy regime in free atmosphere 7—127409
snow covered urban and rural land surfaces, multispectral remote sensing of temperature and snow cover 7—127616
solar activity increase in 21st century, and terrestrial consequences 7—115357
solar eclipses, March 1988 and July 1991, eclipse tracks and meteorological prospects *(French)* 7—120252

meteorology continued
solar energy reaching Earth's atm., computational anal. 7−87883
solar insolation monitoring method in remote regions 7−94398
solar radiation and sunshine correl. 7−87880
solar radiation maps for Pakistan 7−87884
solar radiation modelling for United Kingdom, irradiation meas. on sloped surfaces 7−79576
Southern Oscillation, N Hemisphere winter stratosphere anomalies and quasi-biennial oscill. 7−114954
Southern Oscillation, possible existence of strange attractor 7−87886
Southern Oscillation, simulated in general circulation model 7−139716
Southern Oscillation, study of S Hemisphere atmos. press. and sea temperature fields 7−114955
spectral methods in fluid dynamics, book contrib. 7−97509
stability of simple baroclinic flow to perturbations 7−114907
stability parameters and wind-stress coeffs. for marine surface layer, formulae 7−127373
stationary eddies in upper troposphere, linear and nonlinear diagnostic models 7−101388
storm wave heights prediction, research and appls. involving directional wave spectra 7−94299
stratosphere electrical measurements, implications for global cct. variability 7−114920
stratosphere natural and anthropogenic perturbations, review 7−120109
subjectivity in computer-assisted synoptic climatology classifications 7−114995
subsynoptic vertical heat fluxes from high-resolution synoptic budgets 7−87814
subtropical quasi-stationary vortices in N summer upper troposphere *(Chinese)* 7−133798
Sudan, AD 1986 wet season rainfall and agricultural production 7−133910
summer thunderstorms in Japan, energy distrib,. of lightning discharges 7−94405
Sun-weather relationships, new theory 7−72130
supercomputing and graphics in the Earth and planetary sciences 7−133954
surface anticyclone forecast errors using NMC models 7−87844
surface synoptic meteorological data, subrefraction statistics estimation 7−139681
surface synoptic meteorological data of subrefractive fading model of microwave paths 7−139680
surface weather data, appl. to tropospheric delay estimation for microwaves 7−114975
teleconnections analysis using canonical correlation, and Southern Oscillation example 7−114957
temperature trends in Northern Hemisphere stratosphere and lower mesosphere, meas. (1969 to 1978) 7−134034
thermal inversions in planetary boundary layer acoustic sounding in plains of India 7−107592
thunderstorms, global foci location from meas. of regular noise background in VLF radiation 7−87772
thunderstorms, lightning location rel. to storm struct. in supercell storm and multicell storm 7−114922
thunderstorms, lightning statistics for frontal and air-mass storms 7−133858
time between effectively independent samples, sampling distrib. 7−127425
Trafalgar storm, 1805 October 22 to 29, synoptic anal. 7−127412
transient eddies and seasonal mean rotational flow 7−114890
transient eddy transport and long atmospheric waves *(German)* 7−114984
trend analysis method for periodically-correlated time series *(Russian)* 7−94345
tropical and extratropical forcing of large-scale circulation 7−114958
tropical atmosphere dynamic response to daily convection changes and seasonal heating changes 7−114899
tropical atmosphere dynamical response to localized episodic heating 7−114898
tropical cyclones, contrib. of outward flow of ang. momentum to winds strengthening 7−133857
tropical cyclones during 1986, verification of global model forecasts 7−127413
tropical depression to tropical storm transition, black body temp. and wind field vars. 7−79499
tropical easterly jet on a sphere, linear barotropic instability study 7−114893
tropical meteorology, integrations of numerical weather prediction models during FGGE 7−94404
tropical meteorology, linear wave theory in low-latit. atmosphere 7−139704
tropical meteorology, teleconnections of rainfall anomalies and Southern Oscillation, and seasonal depend. 7−94403
turbid layer vertical development, for case of solar radiation absorpt. 7−120097
E United States, 1985 air stagnation days 7−101440
E United States, evolution of 1971 March cyclone 7−87850
NE United States, meso-meteorological features assoc. with high O_3 conditions 7−126675
United States cloudiness, time variability and relation to El Nino 7−145627
upstream advection scheme (forward-in-time), extension to higher orders 7−114967
urban atmosphere simulation, by 2D numerical model *(German)* 7−127414
USA Great Plains, evapotranspiration model, soil moisture, runoff 7−127298
central USA Great Plains, soil moisture, evapotranspiration and runoff model 7−127297
Valladolid, Spain, atmospheric particulate material, behavior and seasonal variation *(Spanish)* 7−144927
vertical air movements prediction, comparison of results from two methods *(Swedish)* 7−139709
vertical atmospheric motion deduction from aircraft meas., empirical and derived eqns. 7−127572
vertical wind velocity at Boulder Atmospheric Observatory, meas. errors 7−127366
volcanic eruption (plinian) ejecta dispersal, down- and cross-wind ranges 7−101252
Wales, precipitation var. (1976-85) 7−120083
Warnemunde coast of Baltic Sea, steam fog (1946-70) *(German)* 7−139733
water vapour budgets in unstable boundary layer over rugged terrain, meas. in Pre-Alpine Switzerland 7−145629
wave packet disturbance evolution and influence on mean flow *(Chinese)* 7−133895
weather analysis scheme for ALPEX data set, variational method 7−87813
West Germany, PUKK front characts. 7−79531
westerly wind maintenance in S Hemisphere winter, role of eddies 7−145618
wind energy anal. to supply power to observatory in Korek site 7−144784
wind energy resources estimation methodology, appl. to eastern and central spain 7−78596
wind measurement, appl. of errors in sodar-estimated second moments to field meas. 7−115067
wind measurement, errors in second moments estimated from monostatic Doppler sodar winds 7−115066
wind measurements in E equatorial Pacific, meas. from spar and toroidal buoy (Feb. to March 1981) 7−127391
wind remote sensing, on-ground verification and in-orbit performance prediction of ERS-1 wind scatterometer 7−101661
wind shear measurements, results from laser remote sensing 7−120717
wind velocity fluctuations, prediction from upstream data 7−104361
winter orographic clouds, microphysical numerical model of cloud struct. and precip. 7−133854
zonal-mean flow, study of speed and horizontal and vertical shear 7−145620
zonally averaged transport characts. of GFDL general circulation-transport model 7−114889
CO_2 in atmos. of N. Canada, conc. rel. to seasonal trajectories over Arctic 7−145570
O_3, transport by middle atmosphere flows 7−79568

meteors
see also meteorites; meteoroids
1986 September 19 meteor over Yellowknife Canada, assoc. sonic shock-wave-generated seismic signals 7−127782
ancient meteor shower observations, identifications of assoc. comets 7−139967
antimatter meteors, vel.-height relation 7−94828
η Aquarids, particle populations characts. and radar obs. 7−107777
eta Aquarids, structure of P/Comet Halley meteor streams 7−88329
atmospheric entry ballistics, radiation meas. equipment and methods, review 7−108624
automatic meteor track radar system and station design *(Russian)* 7−79687
BMS Radiant Catalogue (4th edition) (book) 7−72742
P/Comet Halley meteor streams, structure 7−88329
fireball obs. in Meridional Alps, Dec. 1984, seismological records contrib. *(French)* 7−72376
fireball processions obs. 7−120339
ϵ Geminid meteor shower, from Comet Nishikawa-Takamizawa-Tago 7−139970
Geminid shower, observed characts. origin 7−94829
Geminid showers, spatial shape and orbital characts. 7−127781
ϵ Geminids, evidence for assoc. with Comet Nishikawa-Takamizawa-Tago (1987c) 7−120326
ϵ Geminids, possible association with Comet Nishikawa-Takamizawa-Tago (1987c) and obs. prospects 7−139986
ϵ Geminids and Comet Nishikawa-Takamizawa-Tago (1987c), 1987 October storm possibility 7−145894
Giacobinid stream activity (October 1985), radar obs. 7−107778
Giacobinids, 1985 October 8 max., Onsala radar obs. 7−88328
Giacobinids, 1985 shower obs. from Japan 7−120338
historical activity rel. to comet cloud models 7−94743
historical records and ancient comets, search for associations 7−107776
ionised meteor track, anisotropy of parameters assoc. with mol. processes in atmosphere 7−87989
Lyrids, radar observations of shower activity 7−79896
mass distributions in five meteor streams, implications for stream dynamics and evolution 7−139987
observation system using SIT TV camera *(Japanese)* 7−79843
optical flash background rates, determ. from two-telescope study 7−72641
Orionid meteor shower, meteors parameters determ. from single-station obs. 7−134197
Orionids, particle populations characts. and radar obs. 7−107777
Orionids, structure of P/Comet Halley meteor streams 7−88329
Orionids from P/Comet Halley, spectra (1958-68) 7−88331
Perseids, Ondrejov radar hourly rates and stream cross-section 7−79895
precipitation, rel. to meteor showers, Bowen's hypothesis *(Italian)* 7−79496
σ Puppids assoc. with P/Comet Grigg-Skellerup 7−94830
Quadrantid showers, spatial shape and orbital characts. 7−127781
radar observation of meteor trails, radio scattering study *(Russian)* 7−88327
radar observations, detect. rates at different freq. 7−115250
radio meteor height distrib., 2 MHz observations 7−88326
shower meteors, parameters determ. from single-station obs. 7−134197
TA reports (1986 December-1987 April) 7−120337
TA reports (1986 September-1987 February) 7−79894
TA reports (1987 April-August) 7−145896
TA reports (1987 January-February) 7−88325
TA reports (1987 January-June) 7−145895
TA reports (1987 January-March) 7−120336
TA reports (1987 March-May) 7−139985
Taurid meteor streams, theoretical shower radiants for 5025 P-L and Comet Rudnicki (1967 II) 7−134198

meters
see also indiviudal types of meters
relative humidity meas. *(Spanish)* 7−80808
rock thermal conductivity meters, programmed digital design 7−101536

Metglas *see metallic glasses*

metrology *see measurement*

metrosils *see varistors*

MHD *see magnetohydrodynamics*

MHD convertors *see magnetohydrodynamic convertors*

MHD power plants *see magnetohydrodynamic power plants*

mica
biotite, oxidation of Fe II, Mossbauer effect 7−86582

mica continued
dysprosium tartrate hydrate, gel grown, characteris. and thermal behaviour 7−111525
fillers concentration and orientation determ. in reinforced plastics 7−92671
humid, transient dielec. response, surface cond. meas. 7−85039
surfaces in aq. KNO_3 soln., interaction meas. 7−112428
trioctahedral review of Mossbauer data 7−118894
micelle systems *see colloids*
microbridges, superconducting *see superconducting junction devices*
microcalorimeters *see calorimeters*
microchannel plates *see image intensifiers*
microchemical analysis *see chemical analysis*
microcircuits *see integrated circuits*
microcomputer boards *see microcomputers*
microcomputer chips *see microprocessor chips*
microcomputers
for applications see microcomputer applications and under relevant application headings
see also microprocessor chips
conformal coating of PC boards for enhancement of environmental resistance 7−113736
high energy physics, integration of personal computers 7−135802
high energy physics computing, conference, Asilomar, CA, USA (Feb. 1987) 7−134338
remote sensing, acquisition and anal. of NOAA HRPT data by FRS-68010 system 7−101571
simultaneous monochromatic and variable period pulsations, 4 Feb. 1983 observations 7−107657
microcontrollers *see microprocessor chips*
microcopying *see microphotography*
microdosimetry *see dosimetry*
microelectrodes
amplifier, isolated, for meas. on papillary muscle subjected to rapid temp. step 7−107324
glass microelectrode tip, modelling 7−101163
multimicroelectrode for neural impulse meas., fabricated by Si dry etching 7−114569
semiconductor microprobes, recording/biocompatibility props., cortical neurons extracellular recording appl. 7−114598
stepper motor-driven microelectrode positioner, neuroscience appl. 7−114582
third-generation implanted pacemaker design *(Polish)* 7−145286
microelectronics *see integrated circuits*
microfarad meters *see capacitance measurement*
microfiche *see microforms*
microfilm *see microforms*
microfilming *see microphotography*
microforms
image stability of microfilms, residual thiosulphate ion effect 7−78521
microfilm densitometers, appl. and survey of equipment 7−108680
microgravity experiments *see zero gravity experiments*
microhardness *see hardness*
micromanometers *see manometers*
micrometeorites
cosmic spherules containing Pt, marine sediment incrustations in French Polynesia *(French)* 7−120022
geostationary satellite solar array differential charging process and countermeasures 7−144860
Greenland ice cap, micrometeorites in dust accumulations 7−134202
magnetic deep sea cosmic spherules, Pt metals distrib. and microstruct. 7−101742
precipitation, rel. to meteor showers, Bowen's hypothesis *(Italian)* 7−79496
Saturn, rings age and micrometeorite erosion model 7−120341
solar array micrometeorite impact damage simulation using plasma accelerator 7−144858
solar panel micrometeorite impact damage simulation 7−144857
spheres from melt zone of Greenland ice cap, trace element anals. using synchrotron X-ray fluoresc. 7−101743
micrometeoroids *see meteoroids*
micrometers *see micrometry*
micrometry
see also interferometry; strain gauges
digital sonomicrometer system for in situ meas. of small vascular diameters 7−119814
laser micro gauge *(Japanese)* 7−89199
microdimensional measurement by laser *(Japanese)* 7−110370
micropositioning equipment for optical laboratories *(Czech)* 7−121088
microscopic deformations meas., speckle interferometry appl. *(German)* 7−95642
piezoelectric devices and micrometric positioning *(Italian)* 7−128524
scanning tunnelling microscope with micrometer coarse approach and thermal compensation 7−128722
microphones
acoustical distance meas. between intensity probe microphones 7−75224
adjustable notch filter for acoustic feedback reduction *(German)* 7−130501
condenser microphone, electronic noise calcs. 7−117429
condenser microphone detection of I_2 predissoc. in supersonic beam 7−103594
diver voice communications, adaptive noise cancelling appl. 7−110683
engineering principles and basic contributions over a century 7−110743
fibre optic acoustic sensors, physical principles 7−136583
free-field reciprocity calibration 7−117418
highly directional microphones, off-axis comb-filter effects reduction 7−130505
interferometric microphone for optoacoustic spectroscopy 7−95658
octave bandwidth constant beamwidth acoustical end-fire line array 7−142140
pressure microphones for intensity measurements with significantly improved phase properties 7−75223
sensitivity to wind and popping noise *(German)* 7−130498
studio and stage microphones, general survey *(German)* 7−97250
thermal noise limits 7−130507
wideband direction estimation algorithm for acoustic arrays, eval. 7−110700
microphones continued
wind and turbulence noise meas. in different transducer configurations 7−75225
$Si\text{-}SiO_2\text{-}Si_3N_4$ acoustic sensor design and fabrication 7−97246
microphonics *see microphones*
microphotography
see also microforms
image stability of microfilms, residual thiosulphate ion effect 7−78521
microfilm densitometers, appl. and survey of equipment 7−108680
oil-water dispersion, particle size distrib. meas. using image processing 7−126489
microphotometers *see densitometry; photometers*
microprobe analysis, electron *see electron probe analysis*
microprobe analysis, ion *see ion microprobe analysis*
microprocessor chips
D0 detector, 100 MBS, 8 bit data acquisition and zero suppression system 7−68183
portable multichannel analyser, single chip microcontroller based 7−109660
microprocessor systems *see microcomputers*
micropulsations
Alfven waves of kinetic type, macroscale particle simulation 7−142448
Alfven waves propagation in mid-latit. plasmasphere, motion of small-scale wave packet 7−120216
Antarctic observations of Pc 1 to 4 and Pi 2 by Chinese at Great Wall Station *(Chinese)* 7−79773
dayside magnetosphere, Pc 4 and 5 after flux transfer events 7−107669
discrete emissions with increasing frequency 7−79780
diurnal characts. of field line resonances at College, Alaska 7−145785
double and triple Pc 1 pulsations and magnetospheric cavity reson. freq. 7−88031
field line resonance effects in local meridional struct. of mid-latitude pulsations 7−115166
hydromagnetic wave coupling of magnetopause perturbation, numerical model 7−107664
hydromagnetic waves, two-fluid approach to finite larmor radius effects 7−94576
impulsive struct. of substorm, spatial and temporal characts. 7−72223
ionosphere influence on micropulsation propagation 7−134052
ionosphere TEC pulsations at Pc 3 and 4 freqs. 7−88020
IPDP type wave events in evening and morning sectors 7−120223
magnetotail, impulsive processes during substorm expansion 7−72222
measurement equipment, using DCM-1 digital observation system *(Chinese)* 7−87910
P_{SC} 5 pulsations, obs. in geostationary orbit 7−88029
PC 1, oscillatory generation model 7−134076
Pc 1 amplitude variation due to modulation by Pc 4 pulsations 7−145781
Pc 1 fingerprint structure, Showa-Husafell data 7−127641
Pc 3, eigenfrequencies, longitudinal effects 7−94593
Pc 3 correlation with solar wind speed 7−115172
Pc 4 pulsations, relation to internal gravity waves propag. in magnetosphere plasma layer 7−88028
Pc 4/5, hydromagnetic wave Poynting vectors, GEOS-2 double probe expt. 7−79774
Pc 5, polarization characts. in dusk hemisphere 7−94608
Pc 5 and eigenmode analysis of compressional instabilities 7−145784
Pc 5 generation due to flux transfer events 7−94548
Pc 5 of compressional type, model for wave harmonic 7−107642
Pc 5 storm time wave, magnetic field aligned structure 7−107672
Pc I, fundamental freqs. of magnetospheric cavity 7−145789
period and amplitudes of hydromagnetic wave activity, early 1979 observations 7−134080
Pi1B used as monitor for substorm development 7−139858
Pi 1B pulsations, simultaneously observed at high and mid-latitudes 7−120215
Pi 2, correl. with ionospheric HF sounding phase shifts 7−107624
Pi 2 and daytime bay magnetic variations, case study 7−120221
Pi 2 associated with 1979 July 27 substorm 7−94591
Pilc type pulsations in dayside sector of auroral oval 7−139862
serpentine emission at Davis, Antarctica 7−88044
substorm monitoring method utilising Pi1B pulsations 7−139858
ULF pulsation resonance harmonics, March 1986 observations 7−107647
Pi 2 assoc. with substorm onset 7−94590
microrecording *see microphotography*
microreduction *see microphotography*
microscopes
see also acoustic microscopes; electron microscopes; ion microscopes; optical microscopes
neutron-mirror microscope with magnetic compensation of gravitational distortions 7−116041
wear studies, using rotary pin-on-disk device in scanning Auger microscope 7−83143
X-ray microscope develop., oblique-incident type *(Japanese)* 7−116035
microscopy
see also acoustic microscopy; electron microscopy; ion microscopy; optical microscopy
atomic force microscopy, surface profiling, sub 100 Å resolution 7−116006
atomic force microscopy of liquid covered surfaces, atomic resolution images. 7−143137
epoxidised natural rubber-PVC blends, compatibility investig. 7−84296
image recording in meas. by microscopy *(German)* 7−128649
magnetic imaging, force microscopy with 1000 Å resolution 7−108581
neutron microscope, image detection 7−67456
phase contrast microscopy, appl. to determine height of organ of Corti in whole-mount preparations 7−114277
photothermal radiometric microscopy for characterising thermal struct. of materials 7−121115
polymer latex particles in suspensions, colloid crysts., 2D Fourier anal. 7−106834
soft X-ray contact microscopy of biological specimens using plasma source produced with lab. sized laser 7−79165
thermal microscopy, high resolution, temp. mapping and surface profiling appl. 7−121114
X-ray microradiography and microanalysis techniques without focusing adjustments, review *(French)* 7−67444
X-ray microscopy with synchrotron radiation, state of the art, appl. to biological specimens 7−139423
X-ray microscopy with synchrotron radiation 7−67446

microscopy continued
X-ray scanning microscopy, computerised microtomography 7−102514
$LiNbO_3$ crystals, ion-exchange processes study during optical waveguide struct. form. 7−71484

microstrip antennas
EM propag. in layered lossy media, Green's function, appl. to microstrip antennas 7−82445
hyperthermic applicators, angled dual compact array 7−114441
microstrip-microslot applicator, modelling 7−139210
variable delay lines for microstrip phased array antennas 7−104123

microstrip lines *see strip lines*

microstructure, crystal *see crystal microstructure*

microtext *see microforms*

microtomes *see laboratory apparatus and techniques*

microtrons
classical, phase motion near nonlinear resons. 7−74296
CW racetrack microtron, disk and washer accelerating struct., RF props., thermal conditions 7−81777
electron CW linacs for microtrons and pulse stretchers 7−68068
fabrication and tuning techniques for side-coupled electron accelerator structures 7−74299
free electron laser appls. 7−136354
free electron lasers, microtron driven, proposal 7−136341
Mainz Microtron MAMI-B, RF section fabrication and testing 7−68098
side-coupled electron accelerator structs., brazing techniques 7−89816
split microtron, startup of high current device at Lebedev Physics Institute 7−81780
variable-energy microtron for high-voltage electron diffraction studies, design 7−137166
X-ray lithography applications 7−89815

microwave acoustic devices *see acoustic microwave devices*

microwave amplifiers
see also masers; microwave parametric amplifiers
free-electron laser amplifier for intense microwave generation 7−90649

microwave antenna arrays
electronically steered thinned array radiometer (ESTAR) 7−101587

microwave antennas
see also lens antennas; waveguide antennas
FIRST antenna, misalignment and thermal distortion effects anal. 7−88121
frequency selective surfaces, scattering of arbitrarily polarised incident plane waves 7−136136
hyperthermia treatment of cancer, comparison of microwave interstitial antennas 7−107215
medical helical interstitial antenna for local hyperthermia, performance characts. 7−101035
microwave phased array system for deep hyperthermia through layered tissue 7−94014
quasi optical subsystem for a satellite radiometer 7−94521
rain scatter, interference prediction 7−94416

microwave conductivity *see high-frequency effects*

microwave detectors
dual-channel radiometer for atmospheric water vapour and cloud meas. 7−115083
dual-polarization radiometer, for thermal radiation 7−72171
electronically steered thinned array radiometer (ESTAR) 7−101587
radioastronomical microwave detector (210-230 GHz), cooled low-noise receiver *(French)* 7−72314
SAR radar data, knowledge based processing system 7−79710
superheterodyne channel of microwave EPR spectrometer 7−121177

microwave devices
see also acoustic microwave devices; Gunn devices; masers; microwave parametric devices; solid-state microwave devices; waveguides
cavity applicators, single-mode or controlled multimode design 7−128581
electron bun for accelerator and free electron laser appls., analysis 7−96454
high peak power, X-band gyroklystron for linear accelerators 7−74325
IEICE National Convention, Keio, Japan (March 1987) 7−108028
subMM technology, quasi-optical components 7−82754
e^-e^+ supercolliders, microwave sources 7−74291
$BaPb_{1-x}Bi_xO_3$ superconducting polycrystalline thin film, quick microwave switch appl. 7−131846

microwave filters
ceramics, dielectric characts. and HF appls. 7−92573

microwave generation
see also microwave oscillators; relativistic electron beam tubes
Cherenkov cyclotron autoresonance maser as HF microwave source, operational characts. 7−90567
electron-cyclotron maser, induced reson., small-signal anal. 7−117167
free-electron laser amplifier for intense microwave generation 7−90649
numerical modeling of physical processes in a microwave plasma generator 7−83416
relativistic sheet electron beam propag. over sinusoidal grating, 2D radiation 7−110221
virtual cathode form in intense electron beam, microwave generation study 7−68543

microwave heaters *see radiofrequency heating*

microwave heating *see radiofrequency heating*

microwave holography
real time recording of microwave fields, laboratory prototype 7−103777

microwave imaging
see also microwave holography
biomedical applications of microwave radiometry 7−107223
medical imaging physics and engineering, conf., Maratea, Italy (Sept.-Oct. 1984) 7−108032
ocean surface, two-step algorithm for microwave radiometry 7−115111
perfectly conducting cylinders, polarisation effects in EM inverse scattering 7−136172
projection imaging for internal struct. determ. 7−71451
quasi optical subsystem for a satellite radiometer 7−94521
resolution and contrast of microwave images using a complete first-order iterative algorithm 7−71924
tomographic imaging technique based on backscattering, in reduced angular extent exploration 7−78452
tomography: algorithm for cylindrical geometries 7−101111
tomography, imaging performance results 7−101044

microwave induced delayed phosphorescence *see MIDP*

microwave-infrared double resonance *see microwave-optical double resonance*

microwave integrated circuits
see also hybrid integrated circuits
ferrite thin film deposition and props. for microwave and MM-wave ICs 7−125966

microwave landing systems *see aerospace instrumentation; aircraft instrumentation; ground support systems*

microwave links
atmospheric attenuation measurements at 19.4 and 22.235 GHz 7−94422
atmospherics influence on radiocommunication, VHF to mm wave freqs 7−87779
CM-waves, rain attenuation characts. 7−87812
degraded microwave propagation, observed atmospheric structure in Great Lakes area 7−72146
dust storm modelling for the calculation of attenuation and probability of fading in microwave systems 7−139738
fibre optic links for microwave signal transmission 7−90812
HF laser package for microwave optical communications 7−90832
impedance matched fibre optic transceivers for microwave signal transmission 7−90831
IR and MM wave propagation in arid climate, expt. studies 7−94440
Italy rainfall intensity meas., correlation props. assessment 7−94419
mm-waves propagating through rain, distortion calcs. 7−139740
molecular absorption and dielectric permeability of atmospheric admixture gases in the millimeter range 7−139736
propagation in 13 GHz band, fadings, rain and hail effects *(Czech)* 7−114980
rain attenuation, radiometeorological data logging and processing system for freq. over 10 GHz *(Polish)* 7−72200
rain scatter, interference prediction 7−94416
rain-rate statistical modelling 7−72129
rainfall rate duration and intensity, statistical anal. 7−107502
route diversity systems, rain outage performance anal. 7−133893
slanted microwave paths, influence of rain props. 7−139739
subrefraction statistics estimation using surface synoptic meteorological data 7−139681
subrefractive fading model using surface synoptic meteorological data 7−139680
transhorizon anomalous propagation conditions, modelling 7−94420
troposphere, refractivity gradient calcs. 7−139737
tropospheric dispersion *(Spanish)* 7−145649
tropospheric multipath microwave propagation, angle of arrival and amplitude of rays determ. 7−87775
GaAs monolithic receiver and laser driver for GHz transmission rates 7−90830

microwave measurement
see also microwave imaging; microwave reflectometry
10 GHz band power standard, dry type calorimeter *(Japanese)* 7−67345
19 GHz precipitation scatter expt. 7−107500
airport humped runways, power density estimation, wedge diffraction theory appl. 7−110209
atmospheric attenuation at 11 and 18 GHz obtained by dual freq. Sun tracker meas., anal. 7−120111
biological sample, plane, power density entering, meas. method 7−79148
biological substances, dielectric props., meas. using open-ended coaxial line resonator method 7−145306
biomedical, temperature measurement by microwaves *(Japanese)* 7−119827
CAMAC-compatible automation of microwave relaxometer using IZOT TsLANP-0270 computer system 7−128592
clouds, liq. water vertical profiles, down-coming microwave radiation meas. *(Russian)* 7−114983
clouds, liquid water and precipitable water vapour determ. by ground-based microwave radiometers 7−127335
clouds liquid water distribution determ., appl. of coplanar scanning radiometers meas. 7−114864
complex permittivity tensor meas., rectangular waveguide standing-wave method 7−115976
coronary arteriosclerosis examination using microwaves 7−139350
cryogenic motorized waveguide switch 7−95598
Debye dielectric, computer-based permitt. meas. and microwave power absorpt. anal. 7−80811
dielectric constant evaluation of insulating materials: an accurate, practical measurement system 7−134812
dielectric constant meas. of lossy fibres and rods, at microwave freq 7−95617
dielectric loss measurement method using H-plane loading techniques 7−121147
dielectric measurements with open-ended coaxial probe 7−121145
dielectric props. meas., use of coaxial probes, expt. eval. 7−140713
dielectric waveguide, sensor for nondestructive inspection of sheet dielectrics by freq. props. analysis 7−132874
electric vector measurement, amplitude and phase meas., using compound modulated scatterer system 7−121146
EM hyperthermia, temp. meas. technique using refl. method 7−107211
fiber optic microwave power probe 7−67349
fibre optic microwave power sensor using GRIN multimode silica fibre 7−123223
geopotential height fluctuations, microwave radiometry 7−114988
heart rate estimation using microwave cardiograms, constrained adaptive filtering 7−93890
intracavitary hyperthermia, control by microwave thermometry *(Russian)* 7−79038
Italy rainfall intensity meas., correlation props. assessment 7−94419
laminated media, UHF introscopy, radiopulse envelope synthesis 7−71444
method for determining dielectric properties of solids from measurements of pulverized materials 7−134813
microbiological objects, dielectric properties meas. in microwave band using increased resolution bridge method *(Slovak)* 7−114570
non-planar dielec. samples, complex permittivity meas. technique using open resonator 7−140714
nondestructive resistivity meas. of III-V semiconductors, using four-point probe meter 7−121154
noninvasive microwave dielectric sensors, biological and aqueous system meas. 7−101158
ocean remote sensing, development status of ERS-1 payload instrument 7−101660
ocean wave directional spectra, aircraft remote sensing 7−133996

microwave measurement continued
ocean waves, two-scale Bragg scatt. model for microwave backscatter from wind-generated waves 7−101332
ocean waves sensing, first-order spectral component of microwave backscatter 7−133773
oil spill detection and analysis, results from radar and microwave radiometry 7−114806
permittivity, automatic material characterising instrument 7−121157
permittivity meas. of lossy liquids and biological tissues, at 35 GHz 7−128591
permittivity measurement, microwave county perturbation method 7−67346
photoconductivity of Ag halide grains, high sensitivity apparatus *(Japanese)* 7−128686
polymer coating on metallic components, contactless inspection of thickness in prod. line 7−71445
real time recording of microwave fields, holographic, laboratory prototype 7−103777
satellite microwave radiometry, appl. to classification of forest and surface types 7−107582
satellite microwave radiometry, appls. in Finland and Baltic Sea 7−79623
sea ice, microwave backscatter coeffs. of artificially-grown first-year ice 7−101330
sheet materials, basis weight and moisture content, microwave cavity measurements 7−121134
singular system anal., microwave radiometric data inversion for temperature retrieval 7−139349
site diversity measurements with radiometers at 20 and 30 GHz 7−107499
soil hydraulic properties, discrimination by combined thermal IR and microwave remote sensing 7−107453
soil moisture, effect of meas. error and confusion from vegetation on passive microwave estimates 7−107454
soil moisture sensing, effects of salinity on microwave emission 7−107452
soil moisture sensing, parameterisation of effect of surface roughness on microwave emission 7−127218
spectrum analyser for use with mm-wave radiometer 7−108571
spin-wave instability threshold meas. in microwave ferrites 7−80818
thermal dosimetry based on radiometry in multilayered media during microwave hyperthermia treatment 7−107213
Nb sheet and sputter coated cavity meas. comparison 7−131893
Nb superconducting cavities, microwave surface resistance rel. to oxide layers 7−131892

microwave-optical double resonance
see also PMDR
2,2′-bipyridine, phosphoresc. and ODMR meas. 7−82250
α-chloroanthraquinones, lowest excited triplet states, EPR ODMR and phosphoresc. spectra study 7−106010
dibenzofuran, single crysts., doped, triplet energy transport and excitation density 7−70675
diphenylchlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
formaldehyde-d_2, ground state Stark shift, laser microwave double reson. 7−122580
heteronuclear molecules, electronic struct., double reson. investig. *(German)* 7−129757
hexamethylbenzene-tetracyanobenzene (tetrachlorophthalic anhydride), charge transfer crystals, ESR and ODMR meas. 7−138353
magnetic resonance in solids, optical detection, conf., Kiev, USSR (May 1985) 7−134343
naphthalene, triplet excitation zero-field ODMR 7−90233
organic systems, mag. resonance from short lived particle pairs in spin-depend. processes 7−138350
pentafluorobenzenes, substituted, radical anions, HFS, optical detection of ESR 7−82236
phenanthrene-tetrachlorophthalic anhydride charge-transfer cryst., struct., luminesc. 7−106262
phenyldichlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
photosynthesis mechanisms, mag. resonance from short lived particle pairs in spin-depend. processes 7−138350
polymeric semiconductors, mag. resonance from short lived particle pairs in spin-depend. processes 7−138350
polythiophene, photoexcitation spectroscopy, ODMR 7−70897
polythiophene, photoluminescence and optically detected mag. resonance studies 7−77653
semiconductors, point defect charactn. using optically detected mag. reson. methods, review 7−112999
spin system energy struct. detection, nonresonant optical methods 7−138349
sym-tetrachloropyrazine, distorted lowest excited triplet state, phosphoresc., ODMR and ODNQR investig. 7−135981
tetrafluorobenzenes, substituted, radical anions, HFS, optical detection of ESR 7−82236
triphenylcarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
$AgBr_xCl_{1-x}$, trapped excitons, ODMR study 7−106058
$AlGa_{1-x}As$, MBE grown, ODMR study 7−143933
As_2Se_3, crystalline and amorphous, triplet excited states 7−70899
CaO, phosphoresc., F_2^{2+} defect, optically detected stimulated spin echoes 7−85432
$Ce_2Mg_3(NO_3)_2.24H_2O$, spin-Raman scatt. to record ESR spectra, resonant phonon heating 7−138348
Cl, fine struct. transitions, IR-microwave double reson. 7−122430
GaAs, energy levels and photo-quenching props. of As anti-site 7−105464
GaP: Li, Cu, donor-acceptor pair recomb. involving complexes, ODMR study 7−85490
GaP:Li,Cu(Zn), IR photoluminesc., ODMR study 7−113000
a-Ge:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
He, magnetic fine structure meas. by microwave-optical reson. techniques 7−103427
$In_{0.53}Ga_{0.47}As$-InP, conduction electron g-value, meas. by optically detected mag. resonance 7−125561
InP, semi-insulating behaviour after annealing in P, photoluminesc., ODMR studies 7−99139
InP, undoped, P antisites, triplet spin ODMR study 7−99614
InP:Yb^{3+}, excited state, optically detected mag. resonance studies 7−106059
InP-Zn, electron irrad., annealing, EPR, ODMR 7−125535

microwave-optical double resonance continued
KCl:Ge, ODMR studies 7−138351
NH_3, ground state, dipole moment, microwave-optical double reson. 7−122585
NH_3-He gas mixtures, four level microwave-microwave double reson., pot. surfaces 7−117000
NaCl:Ge, ODMR studies 7−138351
Rh complex, $[Rh(2,2'\text{-bipyridine})_3]Cl_3$, triplet state, optically detected spin coherent transients 7−138352
Rh^{3+} complex, rhodium(III) tris(bipyridine), phosphoresc. and ODMR meas. 7−82250
a-Si:H, dangling bonds and metastability, expts. and models, review *(French)* 7−131592
a-Si:H, level of dangling bond centres 7−76827
a-Si:H, light induced metastable defects, ODMR meas. at 2 K 7−143934
a-Si:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
a-Si:H, triplet exciton recombination, ODMR 7−84681
a-Si:H/a-$Si_{1-x}N_x$:H superlattices and a-$Si_{1-x}N_x$:H films, electron-hole recombination processes 7−70905
SiC:Ga(Al), ODMR studies 7−138351
a-$Si_{1-x}C_x$:H, triplet exciton recombination, ODMR 7−84681
a-$Si_{1-x}N_x$:H, triplet exciton recombination, ODMR 7−84681
a-$Si_{1-x}N_x$:H films and a-Si:H/a-$Si_{1-x}N_x$:H superlattices, electron-hole recombination processes 7−70905
^{173}Yb II, ground-state hyperfine splitting, laser-microwave double reson. study 7−103426
ZnS MOCVD epitaxial layers on GaAs, vacancy centres, ODMR study 7−132164
ZnS:Al, ODMR studies 7−138351
ZnSe, electron irrad., close Frenkel pairs, ODMR obs. 7−98142
ZnSe, electron irrad., isolated interstitials, optically detected mag. resonance studies 7−85489
ZnSe, Zn vacancy, ODMR-magnetic circular dichroism studies 7−98143
ZnSe:Au, deep levels, optically detected mag. resonance studies 7−105473
ZnSe:Au, deep recombination centres, ODMR study 7−143932

microwave oscillators
see also Gunn oscillators; microwave parametric oscillators; parametric oscillators; tunnel diode oscillators
BWOs for subMM spectroscopy 7−73430
confocal Fabry-Perot microwave resonator at 48 GHz for high-resolution spectroscopy 7−80816
EPR spectrometers with AFC, power supply of klystron oscillator 7−121179
mm-wave instrumentation for radioastronomy, advances 7−139925
relativistic backward ware oscillators at low currents, starting conditions 7−83554

microwave parametric amplifiers
Josephson junction parametric amplifiers, nonlinear effects of noise 7−138148

microwave parametric devices
see also microwave parametric amplifiers; microwave parametric oscillators
No entries

microwave parametric oscillators
No entries

microwave-radiofrequency double resonance *see magnetic double resonance*

microwave reflectometry
see also swept-frequency reflectometry; time-domain reflectometry
extraordinary mode microwave reflectometry, Petula-B Tokamak electron density profile determ. 7−83547
multifrequency method of parameters determ. of dielectrics, data processing effectiveness 7−132875
plasma density profile meas. on JET 7−83539
radiometric ellipsometry method of surface layer thickness and dielec. props. meas., error calc. 7−132873
six-port calibration method using four standards 7−121156

microwave region *see microwaves*

microwave spectra
see also molecular rotation; molecular vibration; radiofrequency and microwave spectra of diatomic inorganic molecules; radiofrequency and microwave spectra of organic molecules and substances; radiofrequency and microwave spectra of polyatomic inorganic molecules
Corning Macor glass ceramic, submm and mm reflectance characts. 7−125863
deep level characterisation using microwave absorpt. spectroscopy 7−113318
Fe film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
ferrofluid composite, props. at MM wave freqs., mag. absorpt. 7−125864
glasses, spectral diffusion at low temp., burned out hole phenomena 7−124407
linear parent molecules in comets, synthetic rot. and vibr. spectra 7−72270
plasma diagnostics, TFTR edge turbulence meas. 7−75830
semiconductor-insulator superlattice, classical magnetoactive, reson. and absorpt. based 7−106313
Au, optical props. at subMM wavelengths 7−70731
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond., bulk and thin film studies 7−143711
GdCoMo amorphous thin films, surface mag. anisotropy, X-band microwave spectra study 7−99522
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., bulk and thin film studies 7−143711
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., microwave study 7−144185
Ni, optical props. at subMM wavelengths 7−70731
Ni-Co alloy thin films, spin wave reson. obs. 7−106033
$Ni_{0.8}Fe_{0.2}$ film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
Pb, optical props. at subMM wavelengths 7−70731
TaS_2, 1T polytype, 2D conductor, submillimeter spectra of dynamic conductivity 7−144184

microwave spectrometers
see also magnetic resonance spectrometers
75 GHz spectrometer for microwave-induced optical nuclear polarisation 7−108599
EPR spectrometer with Gunn oscillators 7−121178
EPR spectrometers with AFC, power supply of klystron oscillator 7−121179

microwave spectrometers continued
high-temperature Stark and radiofrequency-microwave double-resonance microwave spectrometer 7−103688
programmable magnetic-field modulator for microwave EPR spectrometer 7−67362
review of develop. during 1970's *(Russian)* 7−128661
superheterodyne channel of microwave EPR spectrometer 7−121177
microwave spectroscopy
see also magnetic resonance spectroscopy; microwave spectrometers; paramagnetic resonance
confocal Fabry-Perot microwave resonator at 48 GHz for high-resolution spectroscopy 7−80816
microcapacitor electrodes for microwave rotational spectroscopy 7−103683
NMR sensitivity increase, using autodyne with precision calibrator 7−102480
review of develop. during 1970's *(Russian)* 7−128661
subMM spectroscopy using BWOs 7−73430
toroidal plasma devices, glow discharge cleaning, microwave spectroscopy monitor 7−69423
X-band ESR spectrometer for electronic spin-lattice relaxation time measurements 7−95629
microwave thermography *see microwave imaging*
microwave tubes
see also electron-wave tubes; relativistic electron beam tubes
DITE/COMPASS tokamaks, microwave power transmission system 7−135594
electron beam velocity modulation, water bag model anal. 7−108085
gyrotron plasma heating in Tokamak T-15, supercond. magnet systems investig. 7−74079
gyrotrons for ECRH of fusion plasmas 7−122081
linacs, high frequency, microwave sources and parameter scaling 7−81756
TFR, 600 kW ECRH installation, two years operating experience 7−122135
TFR tokamak, ECRH transmission system 7−135598
microwaves
DNA aqueous solns., microwave absorpt. obs. 7−119727
gas discharges and plasma heating in microwave fields *(German)* 7−91381
RF EM fields, environmental monitoring for human safety, ANSI standards compliance 7−93963
RF EM fields, environmental monitoring for human safety, radiation probe configs. 7−93964
scattering on simple water waves, backscattering spectra study 7−133773
soil scatter and emission props. rel. to dielectric and surface parameters 7−101304
temperature runaway of microwave irradiated material 7−130522
mictomagnetism
see also spin glasses
$Fe_{70}Al_{30-x}M_x$, (M=Cr,Mn,Co), mag. studies 7−125394
Fe_xTiS_2, intercalation cpd., linear and nonlinear AC mag. suscept. 7−138199
MIDP
No entries
Mie theory *see electromagnetic wave scattering*
mild steel *see carbon steel*
military administrative data processing *see military computing*
military ADP *see military computing*
military computing
see also command and control systems
anti-vignetting technique for super wide field of view mosaicked images used in pilot training 7−68572
digital map displays, concept developed under human factors aspects 7−79190
Strategic Defense Initiative, computer-based expert system for space tracking expt. 7−72245
military equipment
see also aircraft; military systems; ships
NMR gyroscope, review 7−140721
Nd:YAG eye-safe laser rangefinder, Raman wavelength shifting 7−82615
Nd:YAG laser rangefinder/designator 7−75019
PLZT large-aperture shutter with enhanced operational/environment capabilities 7−90761
military systems
see also military equipment
Australian maritime defence, appls. of underwater acoustics 7−110650
chemical lasers 7−110403
defense Meteorological Satellite Program 7−107515
lasers, flashlamp technology 7−74950
LPI techniques in the underwater acoustic channel 7−75200
Mini Laser Rangefinder, review 7−75024
moisture meas. standard, analytical correlation evolution 7−95602
speech recognition under stress and noise conditions, hidden Markov model techniques 7−110684
Milky Way *see Galaxy*
milliammeters *see ammeters*
MIM devices *see metal-insulator-metal devices*
MIM structures *see metal-insulator-metal structures*
MIMD computers *see parallel processing*
MINDO calculations
allyl anions, phenyl and cyclopropyl substituted, MINDO-forces calc. 7−74449
allyl cations, phenyl and cyclopropyl substituted, MINDO-forces calc. 7−74449
allyl cations and anions, 2-substituted, MINDO calcs. 7−122362
bond dipole moments, direct quantum calcs. 7−141466
carbamates, thermal stability, struct. effects, quantum-chem. MINDO/3 calcs. 7−109776
cubane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
cycloalkanones, H^+ affinity, ring size effect, MINDO/3 calc. 7−81983
cyclobutane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
cyclohexene radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
cyclopentadienyl cations, N and B substitution, mol. struct., ab initio MINDO/3, MNDO, STO calcs. 7−96547
cyclopropane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
MINDO calculations continued
2,6-diaminopyridine, structure and electronic props. calc. *(Japanese)* 7−81978
1,4-dioxadiene, MINDO/3 vibr. obs., canonic quadratic force field calcs. 7−103460
diphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
divicine, favism-inducing cpds., MINDO/3 calcs. 7−141462
ethyl azidoformate, conformational anal., MINDO/3 quantum-chem. calcs. and IR spectra 7−109775
histamine and derivatives, tautomerism, ab initio MNDO and MINDO/3 calcs. 7−116855
isouramil, favism-inducing cpds., MINDO/3 calcs. 7−141462
methyl formate anion + OH^-, pot. surfaces, MINDO/3 method 7−86613
methyl oxalate anion + OH^-, pot. surfaces, MINDO/3 method 7−86613
9,10-octalin, radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
oxides formation, coordination of AlO_3 structural elements 7−76047
polyatomic molecules, normal vibr. freqs., MINDO/3 calcs. 7−109867
propellanes, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
4H-pyran-4-one, vibr., force fields, CNDO/2 and MINDO/3 calcs. 7−109767
α-quartz, E_1 centre and O vacancy charge states, MINDO calcs. in cluster simulation 7−105478
reconstructed (111) surface, periodic MINDO/3 study 7−105218
SiO_2, vitreous peroxy linkage, semi-empirical calc. 7−137246
triphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
unsaturated hydrocarbon radicals, MINDO/3 calcs. *(German)* 7−68219
$C_4H_9^+$, energy hypersurface, isomerisation MINDO calcs. 7−81980
CH_3O_4H, conform. role in peroxide radical recombination, MINDO/3 calcs. 7−74448
FeSi, electronic struct. determ., density of states 7−124826
H_2O_4, conform. role in peroxide radical recombination, MINDO/3 calcs. 7−74448
mineral oil industry *see petroleum industry*
mineralogy *see minerals*
minerals
see also lunar rocks and minerals
acid rain effects on stone monuments 7−108102
alkalic carbonatite lava from Oldoinyo Lengai, Tanzania, alteration chemistry rel. to calcite carbonatite lavas 7−145409
Allende, forsterite bearing Ca-Al-rich inclusions, form., trace element and petrology anal. 7−107779
almandine, electrical conductivity at high-temp. for extended time periods 7−79379
alpha-decay fracturing and crystalline-metamict state transitions 7−124352
alunite, water containing, optical, thermal and X-ray characterisation 7−69663
amang samples, radioactive equilib. determ. 7−89880
amethyst, Brazil twins, X-ray study 7−124286
anisotropy of mag. susceptibility, appl. 7−139592
apatite, optical dating of archaeological mineral samples using an Ar ion laser 7−87960
aragonite, photoelastic consts. determ. from Raman intensity anal. of calcite 7−70741
Armenian granitoids, elastic behaviour, effects of coloured minerals 7−114693
asbestos, mag. orientation of respirable fibres 7−114157
asbestos-like silicates, crystallisation from forsterite, in NaOH medium 7−106394
asteroids, IR diffuse reflectances (2.5-25 μm) and mineral characts. 7−120342
asteroids, surface spatially resolved reflectance meas., temp. var. effects 7−120298
authigenic magnetite formation in suboxic marine sediments 7−87606
barred olivine chondrules in ordinary chondrites, mineralogy and comp. 7−101744
Bayard (Nebraska) meteorite, L5 chondrite find, mineralogy, petrology, and comp. 7−139993
beryl, $Be_3Al_2(SiO_3)_6$, Knoop microhardness determ. of slip systems 7−131218
betalomonosovite cryst. struct., X-ray diffr. meas. and refinement 7−124205
Bushveld Complex, geochemical and mineralogical effects of hydrothermal activity 7−145449
calcite, mid-IR spectra, weak bands used for remote sensing 7−72014
calcite speleothems, routine ESR technique for dating, equiv. dose meas. 7−87962
cancrinite, synthetic, $Na_8(Al_6Ge_6O_{24})Ge(OH)_6.2H_2O$, cryst. struct., X-ray diffr. study 7−104678
carbonate minerals (anhydrous), reflectance spectra in visible and near IR 7−79373
carbonatites in Lemitar Mountains, New Mexico, mineralogy and regional implications 7−101292
Lower Carboniferous rocks of SE Tunguska syncline, stratigraphic age and mineralogy 7−145453
cathode-luminescence and X-ray spectral anal., high resolution spectrometer 7−121232
chalcocite (Cu_2S), ferroelectric properties 7−87613
chemical fossils in early minerals (book) 7−108052
chiral structures study, optical isomers interaction energy and discrimination 7−98056
clay minerals buried diagenesis, case study from Calabar Flank of Niger Delta 7−87633
clay minerals form. in Amazon basin, weathering chemistry and limits to dissolved inputs 7−127292
cobaltite (CoAsS), anomalous magnetic props. 7−101283
coesite, discovery in impactites of Lonar meteorite crater (India) 7−133674
collagen-apatite composite bone system, elastic consts., density resist., dielec. props., US vel. obs. 7−71803
conductors in W Kenya greenstone belt, detection 7−114613
conference Fredericton, New Brunswick, Canada (May 1985) 7−95072
corundum, heat capacity calc. 7−76435
crack growth in minerals and rocks, theory and expts. 7−87624

minerals continued
deep-sea hydrothermal deposits, anomalous $^{234}U/^{238}U$ ratios 7—72004
Delaware Basin, USA, radiometric dating of ochoan evaporites, radwaste disposal 7—103278
dentin crystal size increase in intertubular matrix due to caries 7—79175
diagenetic clay minerals, isotopic dating, evid. for thermal events during Lower Lias in NW Europe *(French)* 7—94135
diopside-liquid system, Pu Sm partitioning meas. rel to thermodynamics of trace element partitioning 7—94139
DSDP Leg 82 gabbros, metamorphic crystallisations, fluid phase effects 7—127194
Earth surface material remote sensing, aircraft and space programme of imaging spectrometry 7—101567
S Eastern Desert, Egypt, cooling history of Silurian-Cretaceous alkaline ring complexes, fission track anal. 7—127170
elastic parameters and density through crust 7—114695
electrical conductivity of minerals at high-temp., laboratory expts. 7—79379
electrotelluric geophysical prospecting instrumentation for mineralogy 7—127514
emerald laser, tuned from 720 to 842 nm spectroscopic parameters meas. 7—122988
epsomite, $MgSO_4.7H_2O$, cryst. growth kinetics from soln. 7—144253
ethanol-zeolite 13X system, cooling, kinetics *(French)* 7—119672
feldspar-radionuclide interactions, surface chemistry 7—100617
feldspars, (010)[001] dislocation fine struct., TEM, planar defect structural models 7—83960
feldspars, glasses and crysts., tetrahedra vibrational interactions calcs. 7—76329
fission track annealing and closure temps., crystal composition effects 7—94226
fluid inclusion, Raman spectroscopy computerised system *(French)* 7—132995
formation due to meteorite impacts *(Russian)* 7—79402
forsterite, crystallisation of asbestos-like silicates, in NaOH medium 7—106394
forsterite (Mg_2SiO_4), phonon density of states and specific heat at Earth mantle conditions 7—133670
gallosilicate zeolites, dehydrated, synthetic, time-of-flight neutron diffr. 7—69671
geological materials, specimen isolation filtering techniques, SIMS anal. 7—93406
geothites, Al-substituted, mag. ordering, effect of crystallinity 7—118798
gmelinite, Ba-substituted, $Ba_4(Al_8Si_{16}O_{48}).nH_2O$, cryst. struct., X-ray diffr. study 7—104679
goethite, carbonate sorption capacity during groundwater flow 7—101356
goethite, palaeotemperature determ., using goethite O and H isotopes 7—79624
granites and pegmatites geochem. and mineralogy, conf., Stanford, USA (July 1986) 7—101999
gypsum crystal surface, adsorption of additives, determ. of surface coverage required for growth inhibition 7—86672
gypsum crystal surface, adsorption of additives, interfacial bond energy determ. 7—86671
haematite, synthesized, chemical remanent magnetisation acquisition appl. in palaeomagnetism 7—107390
high-FeO silicates in enstatite chondrites, mineralogy and origin 7—101745
hollandites, synthetic, comp., constitution, stability 7—83919
hydrothermal mineralization in Pan-African basement of Central Eastern Desert, Egypt 7—94216
ilmenite, heat capacity calc. 7—76435
Kanam-Kanjera area, Kenya, geochemistry of rocks and spring waters rel. to elements mobility and uptake 7—87557
kaolin, aq. slurry containing NaOH, laminar falling film absorpt. of CO_2 7—91962
kaolinite, water intercalated pressure effects, X-ray diffr. studies 7—137345
kaolinite-carbamide intercalates, conc. suspensions, rheological props. 7—75510
keivite, $Yb_2(Si_2O_7)$, cryst. struct. 7—137334
Kirgiziya, USSR, schist-gneiss complexes eclogites mineralogical features 7—87631
lava-forming minerals of Mont-Dore (Massif Central), origin of manganiferous mineralisation *(French)* 7—101232
lithosite, $K_3(HAl_2Si_4O_{13})$, cryst. struct., X-ray diffr. studies 7—137335
loess-like silt in N Yakutia, USSR, mineralogy and origin 7—139646
magnetic content in rocks, contrib. to anisotropy of magnetic susceptibility 7—145448
magnetic mineralogy, evolution of rocks mag. props. during minerals, transform. *(French)* 7—72010
magnetic minerals in lacustrine and ocean sediments, simple model for mag. records interpretation 7—87628
magnetic minerals in sedimentary rocks of Akchagil Basin, USSR, authigenic mineralisation rel. to partial remagnetisation 7—145445
magnetic prospecting 7—139463
magnetic susceptibility anisotropy of metamorphic minerals 7—145447
magnetite, crystallization and chemical remanent magnetization 7—107394
magnetite, hydrothermally recrystallized, magnetic hysteresis props. 7—127205
magnetite, mag. hysteresis temperature dependence and domain struct. 7—107400
magnetite, nonstoichiometric, oxidation to maghemite, Mossbauer study 7—86392
magnetite chemical remanent magnetization, during oxidation of magnetite 7—107393
magnetite ore, high-temperature remanent magnetic memory 7—139589
magnetite TRM acquisition in multidomain magnetite 7—107392
majorite partition behaviour and upper mantle petrogenesis 7—119972
malachite, $Cu_2CO_3(OH)_2$, thermal deformation and pseudolayering 7—91849
marble attenuation characteristics for diagnostic X rays 7—87243
Mars, dust, silicate component characts., reflectance spectra anal. 7—120296
Mars surface colouring, role of Fe^{3+} sulphates 7—101719
melilites, glasses and crysts., tetrahedra vibrational interactions calcs. 7—76329
metamict minerals, natural annealing of alpha-recoil damage 7—103265
meteorites, IR diffuse reflectances (2.5-25 μm) and mineral characts. 7—120342
minerals continued
meteorites, mineralogy and comp. of ordinary chondrite falls from China 7—139992
mica mineral fracture, generation of X-ray spectra w.r.t. vacuum sparks 7—125842
Mid-Atlantic Ridge, basalts mineralogy and petrography 7—107367
mineral abundances determ. from bidirectional reflectance meas. 7—101700
modal analysis, electron raster microscopy and X-ray spectral microanal. 7—126511
molybdenite (MoS_2), dislocation motion and etch pits 7—69705
monazite compositional stability during crustal anatexis 7—94155
monazite sands, Fe minerals, hyperfine interaction charactn. 7—127198
montmorillonite, microporous sorbents, prep., adsorpt. props. 7—76611
montmorillonite, Mossbauer spectra, influence of cation substitutions on hyperfine parameters *(Chinese)* 7—132175
montmorillonites, ion exchanged, ESR spectra 7—138319
mordenite, high temp-phase transition *(Chinese)* 7—98423
N Mozambique, ore body detection in Monapo area 7—101301
mullites, Fe-substituted, Mossbauer spectra and lattice parameters 7—70680
muscovite, electrical conductivity at high-temp. for extended time periods 7—79379
Navan base-metal deposit, Ireland, origin, stratigraphic Pb isotope study 7—101243
nucleation and grain growth in astrophysical environments 7—134129
ocean hydrothermal ore deposits, submarine robot for exploration *(Japanese)* 7—101551
Okinawa Trough, Pacific Ocean, pumice mineralogical characts. and distrib., implications for magnetism *(Chinese)* 7—79367
oldhamite in enstatite chondrites, CaS trace element chemistry rel. to origin 7—139988
olivine, solubility of C, implications for upper mantle evolution 7—139520
olivine, solubility of C in olivine mineral 7—94207
olivines, synthetic, minor element site occupancies, channelling-enhanced X-ray emission studies 7—131127
optical reflectivity meas. method for polished absorbing grains 7—133946
ordinary chondrites, type 3, mineralogy and petrology rel. to metamorphism 7—94834
ore bodies prospecting, reduction to equator, reduction to pole, and orthogonal reduction of mag. profiles 7—120134
ore deposits, metallogeny rel. to tectonic segregation of lithosphere 7—79330
ores, Ru content, atomic fluoresc. anal. with vacuum electrothermal atomisation *(Russian)* 7—132984
orthoclase, electrical conductivity at high-temp. for extended time periods 7—79379
orthopyroxenes, spin-spin relax. of Fe(II) ions, Mossbauer spectra 7—92555
Pacific Basin, lower lithosphere mineralogical model and seismic anal. 7—114652
palygorskite, modified by $Cu^+(NH_3)$, adsorpt. of acidic gases 7—76609
periclase and wustite, bulk modulus at high-pressure 7—94209
peridotite melting at uppermost lower-mantle conditions 7—127152
perovskites, $A(B'B'')O_3$, B-site ordering, Raman scatt. obs. 7—106153
placer deposits off Vijaydurg Bay, Maharashtra, W India, results from geophysical investigations 7—139585
plagioclase, electrical conductivity at high-temp. for extended time periods 7—79379
Pleistocene travertine from Bad-Cannstatt, Stuttgart, South West Germany: thermoluminesc. dating 7—87963
polytypes and polytypism, struct. variations in minerals, ceramics and alloys 7—104703
prospecting methods for heavy minerals 7—133956
prospecting using PIXE and complementary techniques 7—94498
proustite, noncodimensional phases, defect-induced ferroelastic and ferroelec. props. 7—125626
pyrochlores radwaste form, X-ray absorption spectroscopy, α-recoil damage 7—103266
pyrolite composition at Earth mantle conditions, pyroxene-garnet transformation 7—94210
pyroxenes, glasses and crysts., tetrahedra vibrational interactions calcs. 7—76329
pyrrhotite, thermal expansion meas. 7—84332
quantum mechanical studies of Si—O and Si—F bonds 7—131085
quartz, increased solubility in water due to complexing by organic compounds 7—87622
quartz, mid-IR spectra, weak bands used for remote sensing 7—72014
quartz, piezoelectric textures of quartz bearing rocks, rel. to stress state 7—133664
quartz petrofabric analysis, correction and verification of spherical electron channelling pattern map 7—79378
Que River (Tasmania) ore body, TEM case study 7—119936
Ray-Iz Massif, USSR, tectonic features, rock and mineral anal. 7—145425
reflectance spectra of terrestrial, lunar and meteoritic powders and frosts, 92 to 1800 nm 7—87615
refractive index determ., point-dipole model calcs., chem. substitution effects 7—77500
regional metamorphism, assoc. PT parameters and tectonic regimes 7—120009
Robert Victor eclogites, O isotopes in minerals, implications for petrogenesis and mantle metasomatism 7—127137
rock salt, moisture movement simulation for deep bore radwaste repository design *(German)* 7—129442
rock salt, texture anal., neutron diffraction methods 7—86508
rock-forming minerals, review 7—139605
salt deposits in Owens Lake, California, mineral, chemical and isotopic evidence for soln. and crystn. processes 7—94321
shergottite phosphates and residues, rare earth patterns 7—101741
shocked quartz in Cretaceous-Tertiary boundary clays, evidence for global distrib. 7—120021
silica polymorphs, bond, pot. functions, struct. and elastic props., ab initio quantum mechanical calcs. 7—76072
silica polymorphs, glasses and crysts., tetrahedra vibrational interactions calcs. 7—76329
silicate minerals, amorphous, mid-IR extinction coeffs. determ. 7—128007
silicates, bond, pot. functions, struct. and elastic props., ab initio quantum mechanical calcs. 7—76072
silicates, high press. phase transitions, review 7—105011
silicates, phase characts. and mantle transport 7—145420

minerals continued
silicates in P/Comet Halley (1982i), Vega 1 mass spectrometry 7−88317
Singatse Range, Nevada, airborne MSS data and field spectra of clay minerals 7−101300
smectite in ordinary chondrite, Semarkona 7−145899
soda deposits of Torei Basin (Chita Oblast, USSR), evidence from soda mineral springs 7−133673
spectra of Fe alteration minerals, visible and IR region 7−79374
spectroscopic identification, appl. of knowledge-based software environment for anal. of spectroradiometer data 7−101568
sphene, spontaneous fission track density variations using three etchants 7−94227
Spitsbergen, Permo. Carboniferous sediments, mag-minerals nature 7−145444
Sri Lanka, vein-type mineral deposits tectonic environment 7−79352
staurolite, struct. determ. by Mossbauer spectroscopy 7−125566
staurolite, thermal oxidation, Mossbauer effect anal. 7−126428
stibnite, reflectivity and optical consts. at 546 nm 7−133946
stishovite, discovery in impactites of Lonar meteorite crater (India) 7−133674
stishovite, Raman and IR spectra 7−138463
struverite, γ activity meas. 7−87258
sulphide ore deposits, dissolved and suspended forms of Cu, Pb and Zn migration in dispersal water flows 7−145456
sulphides, calibration of micro-PIXE analysis 7−94500
Tel-el-Amarna, Egypt, sherds archaeomagnetism, effects of mineral alteration at high temp. 7−79213
thermal decomposition reactions oscillating traveling waves 7−93261
thermodynamics of minerals and rock melts, review 7−139593
thermoluminescence glow curves of sphere and epidote, radiation damage studies 7−87629
titanite ($CaTiSiO_5$), leaching studies using secondary ion mass spectrometry 7−94221
titanomaghemite, mag. props. changes due to heating and cooling 7−101281
titanomaghemite (synthetic), magnetic Curie temp. and cell parameters 7−101280
titanomagnetite, cracking accompanying oxidation at seafloor conditions 7−101296
titanomagnetite, electrical conductivity at high-temp. for extended time periods 7−79379
titanomagnetite, selection rules for bulk piezomagnetic coeffs. of isotropic dispersions 7−127197
titanomagnetite (Ti-rich), cryst. internal stress and mag. domain struct. 7−101284
titanomagnetite particles dispersion, specimen preparation method for rock magnetism studies 7−101544
tourmaline, elastic consts., lattice parameters and elastic wave vel., variation w.r.t. chem. comp. 7−76266
tourmaline, electrical conductivity at high-temp. for extended time periods 7−79379
tourmaline, Fe^{2+}-Fe^{3+} intervalence charge transfer interactions, intense absorpt. band obs. 7−76854
tourmaline crysts., elastic consts., thermal neutron irrad. effects study 7−117979
tridymite single crystals, reconstructive high temp. transformation to cristobalite 7−69903
Troodos ophiolite, Cyprus, dikes vertical distrib. and alteration 7−87561
ultrabasic minerals formation, macroelements and microelements behaviour, in geochemical models 7−145387
witlochite-liquid system, Pu Sm partitioning meas. rel to thermodynamics of trace element partitioning 7−94139
wustite and periclase, bulk modulus at high-pressure 7−94209
X-ray phase analysis methods in systems with high microabsorpt. effects 7−111305
X-ray spectral microanal., quantometric method 7−126504
zeolite Ca-A, thermally treated, framework defects, NMR spectra study 7−70661
zeolites, adsorption centres, thermal treatment, structural changes, IR spectra anal. *(Russian)* 7−132251
zeolites, form., Raman spectrosc. obs 7−70801
zerolites, bridging OH group vibr. freqs., struct. and chem. effects 7−111789
zircon, natural, radiation induced lattice defects obs. at atomic resolution 7−76118
zircon, optical dating of archaeological mineral samples using an Ar ion laser 7−87960
zircon inclusions in pottery, auto-regenerative thermoluminesc. dating, dose obs. 7−87961
zircons, ion microprobe U-Th-Pb dating of lower crust 7−145378
zircons, radiogenic, nucleogenic and fissiogenic noble gases characts. 7−145374
zircons from Barberton Greenstone Belt, southern Africa, U-Pb ages rel. to Early Archaean crustal evolution 7−107408
$AlPO_4$, berlinite, crystal growth and investigation *(Chinese)* 7−132431
Al_2SiO_5, kyanite, monochromatic thermoluminescence glow curve, glow peak study 7−138521
Au in unoxidized Carlin-type ore samples, synchrotron X-ray fluorescence analysis 7−94225
Au prospecting, review 7−127487
$BeAl_2O_4$:Cr^{3+}, alexandrite, tunable lasing, 20 to 200°C 7−117208
Ca-Al rich inclusions in Allende meteorite, mineralogy rel. to actinide chemistry 7−94831
$CaFe_2Si_2O_8(OH)$ ilvaite mixed valence single cryst., electron delocalisation and magnetic props. 7−76853
(Fe,Mg)-pyroxenes, thermodynamic props. determ. at 1000 K by EMF method 7−143036
Fe ferrimagnetic oxide formed on heating nontronite, magnetisation, Mossbauer spectra and structure studies 7−77354
Fe oxides and silicates, charge transfer transitions 7−131604
Fe oxides and silicates, mixed valence, charge transfer and electron delocalisation 7−131603
Fe partitioning in Earth mantle silicate perovskite 7−101238
Fe sediments from Goru form., Jaisalmer India, Mossbauer spectroscopy study 7−139602
$Fe_xMn_{1-x}WO_4$, wolframite, Mossbauer hyperfine interactions 7−125570
Fe_3O_4-$CoFe_2O_4$ ferrospinel, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
Fe_3O_4-$FeAl_2O_4$ ferrospinel, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
minerals continued
Fe_2SiO_4, olivine-spinel phase transition at Earth mantle conditions 7−120014
Fe_2SiO_4-Mg_2SiO_4 olivine, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
$Fe_{2.9}Ti_{0.1}O_4$ (TM10), mag. mineral, suscept. var. with temp. 7−79372
$KAlSi_3O_8$, microcline, feldspar, kinetics and emission spectra of thermoluminescence 7−106278
K_2O-Al_2O_3-SiO_2, feldspar, growth twinning mechanisms 7−104762
$(Mg,Fe)SiO_3$ perovskite, synthesis and eqn. of state to over 100 GPa 7−114708
$(Mg,Fe)_2SiO_4$, olivine, planar OH-bearing defects and mantle flow 7−119983
$MgSiO_3$, ilmenite and perovskite phases, struct. and elastic props., computational model 7−76097
Mo ore deposits anal. by X-ray radiometry *(Russian)* 7−79634
Mo ore deposits prospecting, X-ray logging method in large diameter boreholes *(Russian)* 7−79635
$NaAl_3(PO_4)_2(OH)_4$, brasilianite, hole centres, GPR 7−106025
$NaAlSi_3O_8$, albite, feldspar, kinetics and emission spectra of thermoluminescence 7−106278
Pt minerals, composition, X-ray spectral microanal. 7−126510
S isotopic composition in mineral deposits studied using SHRIMP ion microprobe 7−119599
SiO_2, α-quartz, stishovite and β-cristobalite crystalline forms, electron struct., CNDO SCF quantum. chemical calcs. 7−70185
SiO_2, coesite, struct., electron density distrib. and bonding from X-ray diffr. data 7−111481
SiO_2 stishovite, struct. and bonding, X-ray diffr. meas., Fourier and pseudoatom refinements 7−76098
Si_2O_5-Na, vermiculite, Raman spectra study 7−85700
Si_2O_5-Sr, vermiculite, Raman spectra study 7−85700
Ti in minerals, XANES, effects of Ti bonding distances, Ti valence, and site geometry 7−119068
U,Th silicates in Witwatersrand Reefs 7−79401
W skarn deposits discovery using Landsat imagery and surficial geochemistry 7−101303
$Y_4Al(SiO_4)_2(OH)_2F_5$, silicate kuliokite, cryst. struct. 7−104655

mines (coal) *see mining*

mines (mineral) *see mining*

minimisation
see also minimisation of switching nets
CLEAN algorithm and objective functions minimisation 7−127736
elastoplastic bodies obeying Hencky's law, shape optimisation 7−88966
friction problem, boundary integral 'eqn.' methods 7−110879
global optimisation of real-valued function on R^n using diffusion and simulated annealing 7−102358
plates, rectangular orthotropic, efficient large deflection analysis by direct energy minimisation 7−123459
radioactive waste container stack filling, simulation 7−122209
semiconductor thermistor thermometer 7−108552
sphere, layered, from finite set of materials, optimisation of mass 7−68988
thermoelastic solids, material and load optimisation, numerical results 7−88972

minimisation of switching nets
No entries

minimum metallic conductivity
rare earth cpds., $R_2Mo_2O_7$, R=Nd, Sm, Gd, elec. resist. meas., 4.2-300 K 7−112287

minimum principle
linear uncoupled thermo-elastodynamics, minimum principles *(Chinese)* 7−90939

mining
aerosol meas. by PIXE, time series analysis by ARIMA 7−86868
Africa, central and western, U exploration and mining operations 7−87986
Australian attitudes to U mining and export 7−86770
coal mine in Australia, coal seam discontinuity mapping by seismology 7−133576
coal mines in Poland, mining tremors at Nowa Ruda mine 7−79229
digital dilatometer *(Polish)* 7−72199
inductive mining prospecting, Neumann's problem soln. appl. 7−119940
rockburst in coal mines, possible mechanism 7−87497
rockbursts in Czechoslovakia, inversion of local network first-motion amplitudes 7−79228
RRK-103 X-ray well logger for mining geology *(Russian)* 7−79637
salt deposit prospecting and mining, ultra short wave radar application *(German)* 7−115094
small seismic events during mining, mechanisms 7−114639
West Wallsend No.2 Colliery, NSW, Australia, in-seam seismic mapping obs. 7−133576
U mill tailings, environmental benefits from regulatory compliance 7−89753
U mill tailings, management of wastes in vicinity of mill 7−89754
U mill tailings piles, criteria for remedial work 7−89755
U mine and mill waste management systems, licensing process 7−89752
U, mining and development of the Cigar Lake deposits 7−87985
U mining and enrichment activities in Spain 7−81544
U mining and exploration, conf., London, England, Sept. 1986 7−80181
U mining by in situ leach, technology and potential 7−87987
U, mining experience and radiological protection 7−81750
U mining experience in Canada, radiation protection standards 7−87249
U mining in Saskatchewan, environmental regulation 7−89757

minor planets *see asteroids*

minority carrier conduction *see minority carriers*

minority carriers
deep centre coherent recomb. and enhanced defect reactions 7−112360
DLTS, minority carrier defects, detection in Schottky barrier diodes 7−112229
III-V semiconductors, optical and electrical properties 7−131586
IR laser light modulator of ridge-type optical waveguide struct. using free carrier absorpt. effect *(Japanese)* 7−68831
lifetime meas. apparatus, based on point contact conductivity modulation 7−134806
narrow gap semiconductors, electron and hole recombination 7−84930
p-n junction diodes, minority carrier lifetime determ. from open-circuit voltage decay including junction capacitance effects 7−80820

minority carriers continued
p-n junction space-charge region, minority carrier accumulation at base edge under short-circuit conditions 7—126631
p-n junction with high temp. gradient, EMF kinetics 7—85062
p-n junctions, current parameters, meas. by optical beam excitation, scan vel. effect 7—118562
polycrystalline semiconductors, minority carrier lifetime, 1D nonequilibrium steady state anal. 7—125008
Schottky barrier diode metal-semicond. interface state spectrum distortion due to nonequilib. occupancy 7—92291
Schottky barrier structures, quantum efficiency of photocurrent 7—77042
semiconductor, minority carrier lifetime, diffusion length and diffusion const., simultaneous determ. using modulated light beam 7—99089
semiconductor devices carrier lifetime meas., using reverse recovery method *(Czech)* 7—99085
semiconductor electrodes, charge transfer kinetics 7—99190
semiconductor wafer with differing surface recomb. vels., minority carrier continuity eqn. *(Chinese)* 7—125009
semiconductor-electrolyte interface, transient and periodic illumination, minority carrier concentrations 7—143607
semiconductors, n-type, effect of dopants conc. on resolution and rate of light photoetching, model 7—138914
semiconductors, optical beam induced current images, scan speed dependence 7—77002
solar cells, minority carrier lifetime, transient measurements 7—106906
solar cells, minority carrier lifetime determ. from open-circuit voltage decay including junction capacitance effects 7—80820
step p-n heterojunctions, minority-carrier leakage 7—77080
Al/Zn/p-p^+ Si diodes, elec. characteristics 7—125807
Al-SiO_2-Si structs., local electrophys. props. of elec. active defects 7—143627
Al-SiO_x-p-Si MIS minority carrier grating type solar cells, temp. depend of I-V characts 7—78639
AlAs-GaAs structures, minority carrier retention 7—143580
CdSe films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7—105641
n-CdSe films, traps and minority-carrier diffusion length 7—131818
CdSe thin films, photoconducting props., annealing effects 7—118599
CdTe, EBIC contrast of defects 7—111566
$Ga_{1-x}Al_xAs$:Si variable gap p-n structures, expansion of spectral photosensitivity by reradiation 7—137987
GaAs, heavily doped, minority carrier lifetime model 7—125013
GaAs, layers on Si, elec. and structural props. 7—143252
n-GaAs, minority carrier diffusion lengths 7—118504
GaAs quantum wells, picosecond carrier transport, high field effects 7—92284
GaAs, trap centre charactn. by EBIC technique 7—105459
GaAs, vacuum chemical epitaxial growth for multi-band-gap solar cells 7—132468
GaAs:Te-GaAs:C(Mg)-$Al_xGa_{1-x}As$ 7—119659
GaAs/Au Schottky diode, semicond. surface minority-carrier trap levels, DLTS study 7—112489
GaAsP, vacuum chemical epitaxial growth for multi-band-gap solar cells 7—132468
$GaAs_{1-x}P_xCu_{2-y}S$ heterojunction solar cells, photoelectric characts. 7—114104
GaAsSb, vacuum chemical epitaxial growth for multi-band-gap solar cells 7—132468
Ge surface pot. and photo-memory, dopant effects *(Russian)* 7—77035
HgCdTe, heterojunction devices, model for composition and doping profiles 7—131766
HgCdTe photoconductors, 1/f noise at 0.1 eV 7—84975
$Hg_{1-x}Cd_xTe$, multi-ion screening and scatt., carrier mobilities 7—124977
InGaAsP, heavily doped, minority carrier lifetime model 7—125013
InSb MIS structs., generation-recombination centres 7—112503
Si bicrystals, carrier recombination, SEM/EBIC studies 7—92199
Si epitaxial layers on buried Si_3N_4 produced by ion implantation, props. 7—85131
Si, grain boundary states, trapped charge relax 7—76825
Si, minority carrier transport, TOF meas. 7—92187
Si, n^+-p diodes, generation lifetime 7—143480
Si, polycrystalline, barrier height and minority carrier capture cross-sections, plasma annealing effect 7—125007
Si, polycrystalline, extended crystallographic defects, passivation 7—124290
Si solar cells, high-efficiency, n^+-p-p^+ back-surface-field, optimisation 7—100727
Si, thermally treated, recomb. nonuniformity, role of swirl defects *(Russian)* 7—76975
Si wafer, anal. of laser pulse interaction, bulk lifetime and surface recomb. vel. determ. 7—118536
Si, X-irradiated, ionisation enhanced effects 7—104826
Si:Al(B)(Ga)(In), material considerations for high efficiency solar cells 7—133098
Si:Au(Pt) radiation resistant diode detectors, minority carrier lifetime 7—81884
Si:B, heavily doped, electron lifetime, electron mobility, and band-gap narrowing 7—92202
Si:C, impurity induced deep traps,. DLTS study 7—105460
a-Si:H, sub-bandgap optical absorpt. and light-induced defects 7—144086
Si:H amorphous thin-film solar cell production by CVD 7—113424
a-Si:H films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7—105641
a-Si:H-Pt, Schottky diode, photoelectric characteristics 7—85048
Si:O/Al system, electron diffusion length improvement by gettering 7—125012
Si:P, transmutation doped, minority carrier lifetime, annealing effects 7—84923
Si-SiO_2 structs., local electrophys. props. of elec. active defects 7—143627
a-SiGe:H,F films, minority carrier diffusion length after light or proton irrad. 7—143476
$TiSi_2$/p^+n Si junctions, elec. props., post-silicidation annealing effects 7—143610

mirages *see atmospheric optics; light refraction*

mirrors
7.5 m thin meniscus mirror, gravit. deform. and support 7—90737
adaptive mirrors, local deform. monitoring using holographic interferometer 7—130290
air-bearing turn-tables for micromachining of aspherical and Fresnel mirrors 7—90848

mirrors continued
aplanatic flow spherical mirror system, aberration anal. *(Korean)* 7—90738
aplanatic two-surface systems, design 7—123146
aspherical mirror testing with an area detector array and interferometer 7—97112
beam combiner in HIPPARCOS astrometric telescope 7—115243
coatings and characts., for high-power CW Ar lasers 7—130143
conical mirrors, use in laser devices 7—68714
convex aspheric secondary mirrors testing methods *(Chinese)* 7—97111
decentered reflecting optical systems for high-speed cameras, meridianal aberrations computation and compensation 7—97119
dielectric multilayer mirrors, combined phase parameter, appl. to interferometers 7—68811
diode laser arrays, coupling with photorefractive passive phase conjugate mirrors 7—110414
directional coupler resonators as guided-wave optical components 7—117309
discrete mirror solar concentrators, optical performance anal. 7—119624
distance measurement between lens and reflecting surface, differential confocal optical ranging 7—108511
distributed Bragg mirrors, asymmetric 7—82745
double phase conjugate, optical information processing appls. 7—110264
double-mirror concentric systems, overall-dimension calc. *(Russian)* 7—110498
double-pass amplifier with wave-front-inverting mirror, spatially inhomogeneous radiation propagation 7—123004
dual beam laser diode scanning system for ultrahigh speed laser beam printers using a spot control method 7—117251
dye laser grazing incidence using intracavity lens and spherical end mirror 7—82638
dye lasers, pulsed, linewidth narrowing, power enhancement, resonator components *(Korean)* 7—141899
efficiencies meas. of filter and mirror, using vacuum reflectometer in UV, VUV 7—103947
electrostatic electron spectrometer with a cylindrical mirror analyzer *(Japanese)* 7—95687
electrostatic transaxial mirror objective, geometric aberration coeffs. calcs. 7—68537
ellipsoidal concave mirror, secondary light source in precision illumination system 7—123148
energy analyser, off-axis sources, instrument fn. calc. 7—117292
Extreme Ultraviolet Explorer mirror optical tests and results 7—97183
Fabry-Perot cavities, metal mirrored containing thermo-optic materials, optical bistability 7—75044
far UV spectroscopic explorer (FUSE) telescope, optical surface anal. code (OSAC) anal. 7—101687
field-aberration compensator for double-mirror objective *(Russian)* 7—123141
flexible mirror adaptive system for wavefront dynamic distortion compensation 7—130292
flux density formulas, exact lens and mirror eqns. and caustic surfaces 7—123155
four-wave wavefront-reversing mirror, imaging props. angular selectivity 7—130264
Fourier spectrometer scanning mirror displacement meas. device 7—128531
free electron laser cavity alignment and mirror damage 7—136370
garnet magnetic mirror, linearly polarised light reflection, nonreciprocal effects 7—125703
gelatin, dichromated, holographic mirrors, optical characts. 7—117160
glancing incidence scatt. meas. interpretation, X-ray and UV mirror testing appls. 7—97117
glass, solar terrestrial mirror design for space appl. 7—126554
glow discharge cleaning of C contamination 7—75172
graded reflectivity, design and characterisation 7—123153
grazing incidence metal mirrors for Extreme UV Explorer satellite 7—97115
grazing incidence mirror free abrasive grinding simulation with vertical honing and flexible blades 7—97180
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986) 7—95085
grazing-incidence optics surface characterisation for use in extreme UV and X-ray regions 7—95704
heliostat design using stretched steel or Al membranes 7—133035
High Precision Optical Surface Sensor for diamond-turned metal mirror surface roughness *(Japanese)* 7—82873
HIPPARCOS telescope beam combiner, design, manufacture and testing 7—110537
holographic mirror recording in spatially incoherent light 7—90541
holographic solar concentrators fabrication, mirror of dichromate gelatin 7—144791
illusions with plane mirrors, demonstration 7—88792
incandescent light source with transparent heat mirror, design, construction and performance 7—141956
James Clerk Maxwell telescope, 15 m submillimeter, chopping secondary mirror 7—139916
Kirkpatrick-Baez grazing incidence X-ray mirrors, automated figure formation 7—95709
large, low mass, for space telescopes, design 7—115244
laser beam shaping device for max. uniformity and min. loss 7—117249
laser induced damage in optical materials, conf., Boulder, CO, USA (Oct. 1984) 7—95102
laser mirror design for high power CO_2 laser 7—117223
laser mirror using stimulated Brillouin scattering in tetrachloromethane 7—130168
laser mirrors, ion beam characterisation 7—110499
laser scanning system, rotating polygon mirror and drive systems 7—75017
layered synthetic microstructures, optimisation for broadband refl. at soft X-ray, EUV wavelengths 7—121310
leucosapphire optical strength at 248 and 193 nm 7—69756
light scattering from spheres conducting plane, models 7—129962
line focus geometry for X-ray laser research 7—103916
Linnik microinterferometer, fringe contrast, effect of reference mirror adjustment errors 7—108648
liquid mirror as flatness standard for interferometer 7—128644
matching with hollow dielectric waveguide 7—90787
metallic mirrors, roughness parameters, ellipsometric meas. 7—123140
metallic mirrors, temp. depend. of absorpt. coeff. 7—130291

mirrors continued
misaligned laser resonator with inhomogeneous optical components, eigenmodes, calc. 7−130188
multibeam interferometer, mirror irregularities, diffraction effects 7−121209
multilayer X-ray mirrors for the wavelength interval 25-44 Å 7−103927
multilayers, interface roughness cross-correlation laws deduced from scattering meas., effect of material grainsize 7−123159
multilayers, synthetic, and mirrors, high-resolution angle-resolved X-ray scatt. 7−97118
multiple mirror telescope, four-barrel, design, performance, aligning and phasing method 7−115242
open cavity equations, eigenfunction series expansions *(German)* 7−130293
optical coating form. kinetics, charact. props. 7−123160
optical system, segmented, dynamical behaviour analytical approx. 7−75099
parabolic mirrors, off-axis, fabrication and testing 7−68810
perfect and perturbed optical surfaces, polarised light scatt. matrix elements 7−110234
phase conjugate, interference pattern prod. on reflection, expt. 7−123115
phase conjugate, interference pattern prod. on reflection, theory 7−123114
phase conjugate mirrors as thresholding elements for optical associative memories 7−90724
phase conjugate resonator, transverse dynamics 7−97093
phase conjugation, photorefractive, new appls. 7−110475
phase function of spatial coherence from multiple intensity correlations 7−110503
phase retrieval algorithm, optical implementation using photorefractive phase conjugate mirror 7−90519
phase-conjugate, semi-self-pumped 7−136447
phase-conjugate resonator with mirror of fast Kerr medium, transverse dynamics 7−110473
phased array system, technique for aligning and phasing of multiple apertures 7−110505
phased array systems, diffr. limited multiple aperture, alignment constraints 7−110506
phased array systems, polarisation-related coherence losses 7−110504
photoresist Bragg gratings as beam splitters and beam reflectors for integrated optical systems 7−90837
polishing machine, microcomputer controlled, for very smooth and deep aspherical surfaces 7−110610
polymer mirrors, specular reflectance props. 7−125678
protection using transparent lacquers 7−75100
quartz, optical strength at 248 and 193 nm 7−69756
radiation reflected from phase-conjugate mirror, cloudy medium illumination channel, propagation charact. 7−127464
real image form. by converging lens or concave mirror, student understanding investig. 7−80222
reflaxicon, dimension optimisation *(Russian)* 7−82744
reflective surfaces and dielectrics, surface contamination caused by space and terrestrial effects 7−103919
resonators with Gaussian reflectivity mirrors, hard aperture effects on mode props. 7−68807
rhodamine 6G CW laser with spherical cavity, incoherently pumped 7−96993
SBS amplifier and four-wave hypersonic phase-conjugating mirror, limiting sensitivity 7−123089
scatterometer appl. to documentation of damage to smooth mirrors 7−141963
side reflector resonator soln. by means of waveguide modes *(Chinese)* 7−103918
silvered polymer reflectors for solar energy concentrators 7−144789
soft X-ray scattering from rough surfaces 7−122788
solar cell coverglass and second surface mirror coating improvements 7−144870
solar concentrator collector, silver-polymer film development, specular reflectance properties 7−144790
solar thermal research status conf., Golden, CO, USA (Feb. 1986) 7−140353
spectral diffuse-reflection coeff. meas., reflectometer with mirror cylindrical concentrating system 7−108628
spherical mirrors, measuring radii of curvature by holographic interferometry *(Russian)* 7−82743
steel ball, convex spherical reflector as laser beam expander, diverging wavefront aberrations 7−68809
stimulated Brillouin scattering lasers, self-pumped, field structure 7−82642
stimulated Brillouin scattering mirrors made of capillary waveguides 7−136443
stretchable concave mirrors 7−117287
surface metrology, statistical and signal processing concepts 7−90856
surface shape inspection with photoelectric interferometer 7−128643
synchrotron radiation mirror design, thermal loading considerations 7−95707
synchrotron radiation mirror super high-precision machining to give high quality images *(Japanese)* 7−117356
synchrotron radiation mirror super-high accuracy profile meas. for machining *(Japanese)* 7−117357
synchrotron radiation multilayer mirrors for soft X-rays, design, manufacture and eval. *(Japanese)* 7−116036
synchrotron radiation optics, surface roughness property survey 7−95705
synthetic aperture concepts for future space telescopes 7−115241
synthetic aperture imaging systems, partially-filled, review of exptl. work 7−110510
synthetic aperture telescope configurations for coherent imaging applics., parametric study 7−110511
Technology Mirror Assembly (TMA), mirror quality requirements and achievements 7−95703
Technology Mirror Assembly project assembly and alignment techniques 7−95708
TEM tomography, varifocal mirror for three-dimens. display 7−133527
three mirror optical path length corrector *(Russian)* 7−136478
transfer optics system to throughput match Fourier transform spectrometer; first-order design 7−108669
two-beam optical head with dichroic mirrors and achromatic objective lens 7−82501
two-stage systems design for diffuse reflectance meas. 7−110507
wavefront-distortion correcting mirror, deformation control *(Russian)* 7−110496
mirrors continued
wavefront-reversing, in interferometer, charact. 7−140736
wide-field three-mirror telescope, atm. dispersion compensator 7−72312
X-ray conical imaging mirror design and development 7−97116
X-ray mirror, grazing incidence, manufacture 7−90852
X-ray mirror, spherical, soft X-ray beam deflection 7−140781
X-ray mirror, Wolter type-I, imaging characteristics for laser plasma diagnostics 7−108718
X-ray mirror replication 7−88114
X-ray multilayer mirrors, sputter deposited, performance 7−121315
X-ray multilayered mirrors, fabrication *(French)* 7−67445
X-ray optics, lacquer coating technique 7−97181
XUV multilayer optics theory 7−136481
Ag and Ag on Cu mirrors, glancing incidence absorptance meas. 7−110495
Ag mirror, optical SHG at 1.064 μm 7−136430
(Al,Ga)As/$(Ca,Sr)F_2$ multilayer structures, MBE growth as broad-band high-reflectivity mirror 7−77825
Al-MgF_2 replicated coating aspheric mirrors for far UV, quality control and ageing tests 7−103928
AlGaAs-GaAs high power single quantum well lasers, chemically assisted ion beam etched mirrors 7−117228
Ar_2 excimer laser, electron beam pumping using backscattering reflector 7−117229
$BaTiO_3$ phase conjugate mirror master-oscillator power amplifier using AlGaAs semiconductor diode laser 7−75070
Bi_2O_3-Au-Bi_2O_3 heat mirrors, transmission charact., effects of layer thickness var. and annealing 7−106288
CO_2 laser mirrors for high power material processing appls. 7−82635
CO_2 laser radars, optical resonator design 7−75027
CO_2 waveguide laser with quartz capillary and separated diffr. grating 7−130186
CaF_2, optical strength at 248 and 193 nm 7−69756
Cu mirrors, diamond turned, glancing incidence characteristics 7−68805
Cu mirrors, ion beam smoothing 7−117949
Fe-Ag neutron-polarising supermirrors 7−74827
GaAs, focused ion beam etching of deep grooves and laser-mirror facets 7−110379
GaAs, integrated optical bent waveguide with 45° mirror, selective LPE growth 7−123195
GaAs/AlGaAs multilayer high-reflectivity mirrors, sensitivity anal. w.r.t. epitaxial growth parameters 7−123143
GaAs-AlGaAs, chlorine ion-beam assisted etching, for deflecting mirrors, laser cavity mirrors 7−144644
GaInAsP-InP diode laser cavities, cylindrical mirror facets, reduced beam divergence 7−90635
H_xWO_3, electrochromic mirrors with variable reflectance 7−144028
InGaAsP-InP waveguide mirrors, self-aligned low-loss totally reflecting *(German)* 7−136534
InP-InGaAsP, surface emitting laser diode, slant edge mirrors, multilayer reflectors 7−141891
MgF_2 coated VUV high reflectance mirrors 7−141966
MgF_2 optical strength at 248 and 193 nm 7−69756
Mo mirrors, ion beam smoothing 7−117949
Nd laser spectrum narrowing with plasma mirror 7−141874
Nd:glass laser, active mirror system for TW output powers 7−82628
Nd:glass laser with composite active element and stimulated Brillouin scattering mirror 7−82643
Ni-C multilayer X-ray mirror, spectral charact. meas. using Be recombining laser plasma emission spectra 7−125843
Rb vapour, injection laser with external selective mirror 7−123025
SiC substrate with Ge overlayer increase in SiC reflectance, appl. for laser mirrors 7−106281
SiO_2-Si_3N_4-SiO_2 rib waveguides, low loss Bragg reflectors 7−117348
$Sr_{0.75}Ba_{0.25}Nb_2O_6$:Ce self-pumped phase conjugate mirror, time response 7−103901
$Sr_xBa_{1-x}Nb_2O_6$:Ce as broadband self-pumped phase conjugate mirror 7−90726
TiO_2/SiO_2 dielectric multilayer reflector for GaAs surface-emitting laser 7−110380
TiO_2/SiO_2 multilayer Bragg reflector for GaAlAs/GaAs surface emitting laser 7−68684
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7−125834
MIS devices *see metal-insulator-semiconductor devices*
MIS integrated circuits *see field effect integrated circuits*
MIS structures *see metal-insulator-semiconductor structures*
miscibility *see solubility*
MISFET *see insulated gate field effect transistors*
missiles
EM simulation of missile exhaust plumes 7−117722
high-temperature chemistry of materials 7−86384
intercontinental ballistic missile range semi-Keplerian soln. 7−102050
plasma armature in electromag. launcher, mag. flux contrib. 7−97818
railgun firings involving mag. flux probes, expt. results 7−97808
mixed conductivity
Nafion-conducting polymer hybrids, anisotropic electronic conduction 7−92239
p-n and p-i-n junctions, voltage-controlled struct. 7−92269
polyaniline, NMR and transport props., water vapour pressure dependence 7−70656
polymeric osmium-polypyridine complex, films, ion mobility and electron transport 7−92237
solid electrolytes, electronic component of electrical conductivity 7−143524
$Ba_{1-x}Ho_xF_{2+x}$, elec. cond., ion hopping freq., temp. depend. 7−69964
$Ba_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes with disordered structures 7−91890
$Ba_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes, defect structure and conductivity 7−91891
Bi molybdates, synthesis, electrophysical props. 7−99135
$BiO_{1.5}YO_{1.5}$−BaO system, mixed ionic-electronic conductivity *(Japanese)* 7−125062
C, glassy, thermoelectric power 7−77015
$CdWO_4$, high-temperature electrotransport 7−92236
Co complex, $Co_3(Co(CN)_6)_2$, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
Cu complex, $Cu_2Fe(CN)_6$, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
$Cu_{2-\delta}Se$, state below superionic transition temp. 7−69922

ixed conductivity continued
Fe complex, $Fe_3(Cr(CN_6))_2$, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
Fe complex, methylene blue-Fe diathiolate adduct, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
$Fe_{1-y}O$ monocrysts., thermoelec. power temp. and O press. depend. anal. 7−118520
Fe_2O_3-TiO_2-Na_2O, X-ray fluorescent Fe Kβ_5 spectra 7−106311
GaAs:Cr semi-insulating, mixed conductivity, pot. fluctuations 7−85020
Ge, mixed conduction region, press. effects 7−70363
HfO_2-R_2O_3 (R=Sc, Y, rare earth), single crystal solid solutions, elec. props. 7−105631
InSb films, metastable metal phase, supercond. transition, conductivity mechanism 7−138105
K_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
$LaAsO_4$, dielec. and thermal props. 7−131722
LaN-Ca_3N_2 solid solns., electrochem. props., cond. meas. 7−98955
$Li_{1-x}Ga_{1-x}Si_{2+x}O_6$, silicates, conductivity 7−98572
Li_2O-P_2O_5-VO_2, noncrystalline, elec. props. and mag. resonance *(Chinese)* 7−112406
Li_5TlO_4, structural and electrical props. 7−143092
Li_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
Na complex, cryptand [2.2.2], electronic props. 7−85019
Na_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
Nd chromites, electrode materials 7−131720
PLZT ceramics, dielec. and elec. props. 7−99134
$Pb_{1-x}La_{(2x/3)-y}Li_{3y}Nb_5(Ta_5)O_6$ electrophys. props., superionic cond. characts. obs. 7−84368
$Pb(Mg_{1/3}Nb_{2/3})O_3$-based perovskites, microwave sintering, capacitor appls. 7−138702
$PbMoO_4$ single cryst., electrophys. and optical props., point defect interaction effects 7−84013
$PbTiO_3$, perovskite, microwave sintering, capacitor appls. 7−138702
Sm chromites, electrode materials 7−131720
$Sr_4Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes with disordered structures 7−91890
$Sr_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes, defect structure and conductivity 7−91891
YAG:Ni luminescent crysts., elec. cond. and defect struct. props. correl. 7−131721
ZrO_2-Er_2O_3 system, elec. cond. meas. 7−85018

ixed state
see also flux creep; flux flow; flux-line lattice; flux pinning
anomalous behavior of superconducting samples with a fixed number of vortices 7−143738
correlation length in type II superconductors, computer simulation in chaotic approach 7−131943
elementary pinning force for an isolated vortex in Josephson junction 7−138164
heavy fermion superconductors, vortices with half mag. flux quanta 7−112711
hollow current-carrying type II superconductors, mag. induction distribution 7−99375
Josephson transmission lines, anal. solns. for bunched two-fluxon states 7−112696
superconducting network, mixed state 7−112708
thermodynamic behaviour of type II superconductors at low induction for arbitrary temperature and impurity content 7−131942
thermodynamic cross effects in type-II superconductors 7−131930
type II superconductors, vortex state, microscopic calcs. 7−143731
vortex structure and magnetisation curves, microscopic calculations 7−131929
vortex structure in type II superconductors, mech. of change in orientation 7−138158
In-In_xO_y thin film supercond., influence of mag. field on 2D phase transition 7−143739
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. screening and flux distrib. 7−118741
Nb nonequilibrium supercond., crystallographic and mag. field effects 7−112712
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
UBe_{13}, low temp. ^9Be spin-lattice relax. rate meas. in heavy fermion superconductor 7−70477
V, superconducting, phonon scatt. by Abrikosov vortex filaments 7−70503
$YBa_2Cu_3O_{9-\delta}$, normal and supercond., NMR of ^{89}Y 7−118717
$YBa_3Cu_3O_{7-x}S_x$ T_c supercond., magnetism and critical fields 7−143736

ixed valence compounds
actinide metals and semimetallic cpds., ion core model for delocalisation phenomena 7−104625
alloys, amorphous, mag. props., amorphisation effects, review 7−85264
alloys, electron-polaron effects in compounds with an unstable *f*-shell 7−143374
amorphous alloys, composition-induced valence change 7−76842
Anderson lattice ground state, diagrammatic anal., valence fluctuations 7−76839
Anderson model, periodic, variational ground states, valence fluctuations 7−76844
approximation treatments 7−76838
band calculations using local density method, overview 7−92139
BCS superconductor, mixed-valence impurities, reduced transition temp. and sp. ht. jump, Brillouin-Wigner perturbation calcs. 7−85185
Bethe Ansatz soln., mixed valent impurity, two mag. configurations, charge fluctuations, thermodynamic props. 7−76837
biferrocenium trihalide compounds, mixed valence complexes, electronic delocalisation, intermol. interactions effect 7−70261
$CeIn_3$, press.-vol. depend., absence of discontinuity 7−104893
Creutz-Taube ion, electronic struct. calcs. 7−89930
Creutz-Taube ion, optical absorpt. spectrum model 7−90115
doped superconducting semiconductors, excitonic theory 7−118694
EXAFS spectroscopy, method and applications 7−85900
exchange cluster crystals, charge ordering 7−112283
f-electron systems, valence fluctuating states, Kondo effect 7−92137
ferromagnetic 4f-systems, intermediate valence and Curie temp. calcs. 7−77285
four-site clusters, periodic Anderson model calcs. 7−84618
ground state props. of spinless Falicov-Kimball model 7−105405
group theoretical selection rules for f-c hybridization 7−76737

mixed valence compounds continued
heavy electron systems in applied and molecular fields, degenerate Anderson model 7−84617
heavy fermion mixed valent systems, Hall effect theory 7−76983
heterophase Hubbard model, critical temperature 7−125303
HMTTeF radical salts, electric conduction and electrochemical prep. 7−84857
impurity systems, spectroscopy, energetics and Hall effect 7−76843
interband pairing in mixed valence and heavy fermion systems 7−105505
intermediate valency, couplings, Hamiltonian, elec. resistivity 7−105504
Langmuir-Blodgett films from glycerol subphase, elec. and optical props. 7−124766
magnetic suscept., electron ordering effect, calc. using periodic Anderson Hamiltonian and Green's functions *(Russian)* 7−112276
metal clusters, mixed-valence, electron migration 7−137878
metalloporphyrin polymers of Fe, Ru and O_5 octaethylporphyrin, electrochemical, optical and cond. studies 7−143421
nonlinear f-electron hopping-induced valence fluctuations model calcs. 7−76846
oxides, high T_c supercond., structure-property relations 7−98483
phase transitions 7−118454
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
phthalocyanatonickel salts, prep., struct. and elec. props. 7−98111
point-contact spectroscopy for study of elementary excitations 7−77047
polaronic effects in mixed valence 7−84795
polymeric osmium-polypyridine complex, films, ion mobility and electron transport 7−92237
rare earth cpds., localized electronic excitations, Raman scatt. spectra 7−85704
rare earth mixed-valence cpds., electronic struct., giant resonances, PES study 7−143334
rare earth systems, 4f photoemission, f-d Coulomb interaction and Abrikosov-Suhl resonance 7−77755
rare earth systems, conference, Hamilton, Ont., Canada (June 1986) 7−66817
rare earth systems, XPS and XAS core level spectra, Anderson impurity model anal. 7−77686
rare earth-Ni_2P_2, R=Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Sm, Ce, Yb, La, mag. props. temp. depend. study 7−118767
rare earths and actinides, anomalous, conf., Grenoble, France, (July 1986) 7−72697
semiconductor:rare earth, bistable mixed-valence impurity states 7−70259
single impurity Anderson model, many body phenomena simulations 7−124910
spectroscopic properties, many-body theory 7−76840
strong electron-phonon interactions 7−124947
strong-coupling props. of mixed valence as an almost broken symmetry 7−84798
superconducting intermediate valence systems, longitudinal ultrasound attenuation, periodic Anderson model calcs. 7−70476
tourmaline, Fe^{2+}-Fe^{3+} intervalence charge transfer interactions, intense absorpt. band obs. 7−76854
trimeric mixed valence clusters, Heisenberg and double exchange interaction 7−70539
variable-valence semiconductors, defect form., excitons and light absorption 7−143369
X-ray absorption spectra theory 7−77687
X-ray spectra doublet structure 7−125854
YbPd, mag. and nonmag. charge states, ^{170}Yb Mossbauer meas. 7−76852
$[Pt(NH_3)_4][PtX_2(NH_3)_4](HSO_4)_4$, X=Br,Cl, valence fluctuations and negative thermal expansion 7−84334
Ba-La-Cu-O mixed valence high T_c superconductors, struct., mag. suscept., and critical field studies *(French)* 7−112707
$Ba_xY_{1-x}CuO_{3-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Ba_xY_{1-x}CuO_{3-y}$, high T_c superconductor, valence and coordination of Cu ions 7−99973
$CaFe_xSi_2O_8(OH)$ ilvaite mixed valence single cryst., electron delocalisation and magnetic props. 7−76853
Ce alloys, valence fluctuations, cryst. struct. stability and alloying effects 7−92138
Ce, α- and β-phases, thermopower and resistivity temp. depend. meas. 7−76898
Ce, α-γ transition, simplified band model calcs. 7−76383
Ce compounds, electronic spin fluctuations, NMR study 7−77418
Ce mixed valence cpds., thermodynamic and PES parameters, Anderson model study 7−143333
Ce, solid, valence fluctuation stabilisation, time-dependent collision approach 7−84799
Ce-Sn alloys, struct. and mag. props. correls., comp. depend. 7−76083
Ce-transition metal alloys, CeM_2Si_2, M=Fe-Cu, Ce core level XPS spectra 7−132412
$CeAl_2$, press.-vol. depend., absence of discontinuity 7−104893
$CeAl_2$, valence instability, isostructural electronic phase transition 7−131605
$CeAl_3$ heavy fermion mixed valence systems, energy scales, high press. effects 7−70262
$CeCu_6$ heavy fermion mixed valence systems, energy scales, high press. effects 7−70262
$CeCu_{2-x}Co_xSi_2$, mixed valence to heavy fermion transition characts. studies 7−124950
$Ce(Cu_{1-x}Ni_x)_5$, conc. Kondo system state-mixed valence state transition 7−112277
$CeCu_{2-x}Ni_xSi_2$ alloys, heavy fermion to mixed valence transition, sp. ht. behaviour studies 7−124548
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$Ce(Ga_xNi_{1-y})_5$, thermoelectric power, influence of unstable valence state 7−143443
$CeInCu_2$ Heusler phase, crystallographic, mag., elec. resist. meas. 7−77281
CeLa intermediate valent systems, temp. depend. of hyperfine fields 7−77432
$(Ce_{1-x}La_x)$-Ni(In) dilute Kondo-type systems, thermoelec. power meas. 7−76900
$Ce_xLa_{1-x}Al_2$ alloys, magnetostriction, temp. and mag. field depend. meas. 7−118849
$(Ce_{1-x}La_x)Ni$ single crysts., elec. resist., lattice consts., and thermopower temp. depend. meas. 7−76901
$Ce_{1-x}La(Y)_xRh$ alloy, struct., mag. props. and valence behaviour, substitution and surrounding effects 7−76847

mixed valence compounds continued
CeLu intermediate valent systems, temp. depend. of hyperfine fields 7−77432
CeM_2Ge_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
CeM_2Si_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
CeM_2Si_2 (M=transition metal), reentrant Kondo-mixed valent-Kondo regime behaviour 7−124974
CeNi, Gruneisen parameter coupling 7−69850
$CeNi_2$ cubic Laves phase, vacancy-induced anomalies in lattice spacing, hardness and thermal expansion 7−76116
$CeNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$Ce(Ni_xCo_{1-x})_2$, thermoelectric power, influence of unstable valence state 7−143443
CeO_2 localised and extended f states in 3d X-ray absorpt. spectra 7−144176
CeO_2, mixed valence system, photoemission, photoabsorption and inverse photoemission studies 7−106372
CeO_2, specific valence, X-ray absorption spectra studies 7−76841
$Ce(Pb_{1-x}Sn_x)_3$, heavy fermion to mixed valence system, resistivity, susceptibility, sp. ht. 7−112822
$CePd_{3-x}Pt_x$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$Ce(Rh, Pd(Ru))_3B_x$, resistivity and Ce L_3 valence state, temp. depend. 7−124960
$CeRh_3$, mixed valence system, photoemission, photoabsorption and inverse photoemission studies 7−106372
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$CeRu_{2-x}Os_xSi_2$, magnetism changes 7−70552
$CeRu_2Si_{2-x}Ge_x$, magnetism changes 7−70552
$CeSi_x$, nonmag. Kondo lattice, Hall effect 7−143435
$CeSi_x$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
$CeSn_3$, acoustic de Haas-van Alphen effect study 7−76741
$Ce_{0.74}Th_{0.26}$, γ-α valence transition, paramag. response, neutron scatt. study 7−70263
$Ce_{1-x}Th_x$, mixed valence phase, determ. 7−98946
$Ce_{1-x}Th_x$ mixed valent alloy, dynamic susceptibility, neutron scatt. studies 7−124948
$Ce_{1-x}Y_xPd_3$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$Ce_{1-x}Y_xPd_3$, unstable valence state and conduction electron hybridisation, thermoelec. power meas. 7−76899
Co complex, $Co_3(Co(CN)_6)$, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
Co_3O_4 pure and Ni doped mixed valence spinel films, charge transfer processes and optical absorpt. spectrum assignment 7−119026
Cu complex, $Cu_2Fe(CN)_6$, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
Cu oxide high temp superconds., mixed valency, phenomenological model *(French)* 7−124946
Cu oxides, high T_c superconductors, double exchange processes effects *(French)* 7−125166
Cu oxides, mixed-valent, high temp. supercond. rel. to Cu^{3+}/Cu^{2+} ratio 7−118648
Cu superconducting oxides, mixed valence, high T_c, bidimensional electronic model calcs. *(French)* 7−124849
Cu TCNQ salt. elec. switching, spectra and struct. 7−137991
Eu, antiferromagnetic ordering and intermediate valency, Mossbauer study 7−112766
Eu, mixed valent state under high press. 7−76855
Eu-Ni-Si nonstoichiometric intermetallic cpds., Eu electronic state study *(Russian)* 7−70265
$Eu(Au_xPd_{1-x})_2Si_2$ alloy, ferromagnetism and valence mixing studies, high press. effects 7−112278
$EuCu_2(Si_xGe_{1-x})_2$, Kondo-lattice type state 7−84794
$EuIr_2Si_2$, mixed valent cpd., Mossbauer studies 7−138366
$Eu_x(NH_3)_yTiS_2$, mixed valence intercalation cpds., synthesis, characterisation, mag. props. 7−85352
EuO semiconductor, ferromagnetism and valence mixing studies, high press. effects 7−112278
$Eu(Pd_{1-x}Au_x)_2Si_2$, valence transition, Mossbauer effect, X-ray diffr. meas. 7−92142
$EuPd_2Si_2$, dynamic mag. susceptibility, neutron scatt., magnetisation, Mossbauer effect meas. 7−70264
$EuPd_2Si_2$ intermediate valence impurity state relax. rate model calcs. 7−76845
Fe complex, $Fe_3(Cr(CN_6))_2$, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
Fe complex, methylene blue-Fe diathiolate adduct, electron transfer rates, DC cond., Cole-Cole plots study 7−70364
Fe complex, mixed valence, lattice dynamics, ^{2}H NMR 7−92511
Fe complex, oxo centered acetate, mixed-valence, solvation, micromodulation 7−92136
Fe oxides and silicates, mixed valence, charge transfer and electron delocalisation 7−131603
$Fe_3F_8(H_2O)_2$, 'frustrated' cpd., mag. props. 7−105888
FeNi mixed complexes, vibr., IR and Raman spectra 7−99862
$FeW_{1-x}Nb_xO_4$, Fe valence fluctuation, XANES study 7−98950
Gd-Ce, temp. depend. of hyperfine field of Ce impurities, local magnetisation 7−125310
$LaBa_2Cu_3O_{8-x}$, superconductivity, crystal structure *(French)* 7−99241
$La_{2-x}Ba_xCuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_3Ba_3Cu_6O_{14+x}$, $LaSrCu_2O_{6+x}$ and $La_{2-x}Sr_xCuO_{4-x/2+y}$, mixed-valence capacitor electrodes, co-sintering with $BaTiO_3$ and dielec. props. 7−99773
$La_{2-x}(BaSr)_xCuO_4$, high T_c supercond. 7−105752
La_2CuO_4 doped high T_c supercond., local struct. distortion 7−124227
$(La_{1-x}Ln_x)_{2-y}(SrBa)_yCuO_4$, Ln=Pr,Nd,Y, high T_c supercond. behaviour systematics 7−118646
$(La_{1-x}M_x)_2CuO_4$ (M=Sr, Ba) high T_c supercond., valence determ., XANES studies 7−98949
$LaNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$La_{2-x}Sr_{x-y}(BaCa)_yCuO_4$ high T_c supercond. behaviour systematics 7−118646
$La_{1.8}Sr_{0.2}CuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_{2-x}Sr_xCuO_4$, high T_c supercond., ab initio electronic band structure 7−112284
mixed valence compounds continued
$La_{2-x}Sr_xCuO_{4-y}$ Z *(French)* 7−112707
$La_{1-x}Tm_xSe$ mixed valence single crysts., Kondo-type resist., mag. suscept. and magnetoresist. meas. 7−76921
$Li_{0.5}Cr_xFe_{2.5-x}O_4$, Fe^{2+} to Fe^{3+} electronic transfer composition depend., Mossbauer reson. spectra anal. *(Russian)* 7−76857
$Li_yMgYb_2S_4(Se_4)$ lithiated spinels, elec. and mag. meas 7−143422
γ-LiV_2O_5 mixed conductor, transferred hyperfine intersection, NMR study 7−112263
$Ln_{2-x}(BaSr)_xCuO_4$, Ln=Pr,Nd,Y, high T_c supercond. behaviour systematics 7−118646
PbTe:In(Tl), impurity mixed-valence behaviour on superconductivity mechanism 7−92143
Pd complex, $(Pd(cyclohexanediamine)_2Br)Br_2$, mixed valence, reson. Raman spectra 7−85740
$PrNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
PrO_2, localised and extended f states in 3d X-ray absorpt. spectra 7−144176
PrO_2, specific valence, X-ray absorption spectra studies 7−76841
PrO_x, mixed valent, X-ray absorption spectra studies 7−92140
Pt complex, $Pt(en)_2$ $Pt(en)_2I_2$ $(ClO_4)_4$, halogen bridged, photocond. studies 7−99129
Pt complex, resonance Raman study, ν_1 band struct. 7−85616
Pt complexes, $Pt(en)_2$ $Pt(en)_2X_2$ $(ClO_4)_4$ (X=Br and Cl), charge transfer excitons 7−98817
Pt^{II}-Pt^{IV} mixed valence complex, quasi-one-dimens. soliton-to-band optical absorption 7−106205
$Pt_6(NH_3)_{14}Cl_{10}X_4$ (X=ClO_4, BF_4, PF_6) synthesis and elec. cond. 7−99036
Sm mixed valence overlayers on Si (111) and GaAs (110), semiconductor oxidation enhancement 7−71420
Sm-based, ground state props. 7−76836
Sm_4As_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
SmB_6 $4d^94f^{m+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
SmB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
SmB_6:Er^{3+}, valency mixing, paramagnetic resonance and Jahn-Teller effect 7−137879
Sm_4Bi_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Sm_4Bi_3, valence transition critical point, thermoelec. power meas. 7−137880
SmS semiconducting single crysts., resist. and thermoelec. power meas. 7−76939
SmS single crysts., mixed valence state, thermoelec. power meas. under press. 7−84950
SmSe, high press. electronic Raman scatt., $4f^6$ config. excitation meas. 7−77538
$Sm_{0.75}Y_{0.25}S$, mixed-valence cpd., phonon dispersion curves 7−118046
$Sm_{0.75}Y_{0.25}S$, phonon frequencies and line widths at valence fluctuations, vibronic model 7−111792
$Sm_{1-x}Y_xS$, intermediate-valence, phonon dispersion relations, breathing-shell alloy model 7−137484
SnTe:In(Tl), impurity mixed-valence behaviour on superconductivity mechanism 7−92143
$SrFeO_{3-y}$, first order transition, Fe mixed valence, Mossbauer spectra study 7−92560
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., Cu valence, O deficiency 7−99293
TbO_2 localised and extended f states in 3d X-ray absorpt. spectra 7−144176
TbO_2, specific valence, X-ray absorption spectra studies 7−76841
$Th_{1-x}Tb_x$ dilute alloys, 4f-instability, sp.ht., mag. suscept., and resist. meas. 7−76848
Tl_2Cl_6, mixed valence, cond. and positron annihilation lifetime meas., effect of crushing crysts. 7−112280
Tm dilute mixed valence system, perturbative theory calcs. 7−76856
TmS(Se)(Te), intermediate valence cpds., L_{III} X-ray absorption spectra 7−92781
TmSe mixed valence cpd., light absorpt. and refl., optical density of states calcs. 7−143997
TmSe, nonstoichiometric and stoichiometric samples, anomalous thermal expansion 7−98523
$TmSe_{1-x}Te_x$, semicond. to metal valence transition, high press. low temp. resist. meas. 7−76850
U intermetallics, valence and core states, XPS studies 7−77758
U ion in metal, large j.j coupling, ground state 7−112282
U_3As_4, highly correlated electron systems, UV photoemission spectra meas. 7−138608
UBe_{13} heavy fermion mixed valence systems, energy scales, high press. effects 7−70262
UCu_5 heavy fermion mixed valence systems, energy scales, high press. effects 7−70262
$U(In,Sn)_3$, heavy fermion behaviour, mag. and mixed valence props. 7−92426
$UIr_3(Pt_3)(Au_3)$, XPS spectra, single site approx. calcs. 7−77757
U_3P_4, highly correlated electron systems, UV photoemission spectra meas. 7−138608
USb (Se) single crystal, elastic props. 7−76269
V_3O_5, cryst. struct. and high press. phase transitions 7−98063
Y-Ba-Cu-O high T_c supercond., Cu valence and O deficiency, sintering atmosphere effects 7−118628
Y-Ba-Cu-O high T_c supercond., local struct. distortion 7−124227
Y-Ba-Cu-O high T_c supercond., atomic local coordination and multivalent states 7−137336
$YBa_2Cu_{2.9}O_{9-x}$, high T_c supercond., valence fluctuations and O dimerisation from XPS 7−144245
$YBa_2Cu_3O_{7+\delta}$, high T_c supercond., structure-property relations 7−98483
$YBa_2Cu_3O_{8-y}$, mixed valence copper perovskite with O defect, high temp. superconductor at 91 K *(French)* 7−99240
$Y_{0.98}Ce_{0.02}Ni_2$, valence instability, resistivity and lattice constant meas. 7−70266
$Y_{0.98}La_{0.02}Ni_2$, valence instability, resistivity and lattice constant meas. 7−70266
Yb compounds, electronic spin fluctuations, NMR study 7−77418
Yb-Rh-Sn, superconducting, Yb valence fluctuations, X-ray absorption studies 7−77688
Yb_4As_3 mixed valence system, temp.-induced structural transition, mag. suscept. and resist. meas. 7−76384

mixed valence compounds continued
Yb_4Bi_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Yb_4Bi_3, valence fluctuation, UPS study 7−92141
$YbCu_2$, valence fluctuation, Anderson model calcs., XPS and UPS meas. 7−124949
YbCuAl, ^{27}Al quadrupole splitting, temp. depend. NMR studies 7−125545
$Yb_{0.4}In_{0.6}Cu_2$, valence phase transition, rare earth substitution effects, mag. suscept. meas. 7−76851
$Yb_{1-x}In_xCu_z$ valence phase transition studies 7−98948
YbM_2Ge_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
YbM_2Si_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
YbP, 4f XPS spectrum, Anderson model calc., spin-orbit splitting 7−77756
YbPd and Yb_3Pd_4, intermediate valent cpds., mag. response, inelastic neutron scatt. study 7−70527
$YbPd_3$, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
Yb_xPd_{1-x} amorphous alloys, composition-induced valence change 7−76842
$YbPd_2Si_{2-x}Ge_x$, spin fluctuation changes 7−77300
$YbPt_2$ and Yb_3Pt_5, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
Yb_4Sb_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Yb_4Sb_3, valence fluctuation, UPS study 7−92141
Yb_xSi_y, photoemission studies of mixed valence 7−85954
$Yb_{0.9}Tm_{0.1}S_{0.8}Se_{0.2}$, valence state of Tm 7−84797
$Yb_{1-x}Tm_xSe_{1-y}S_y$ chalcogenides, Tm valence systematics, lattice parameter, mag. suscept. and resist. meas. 7−76849
$YbXCu_4$, X=Al, Ag, Ga, X depend. of struct. and Yb valence state, mag. suscept. meas. 7−98042

mixers (circuits)
see also frequency convertors; radio receivers
Josephson triode for MM-wave heterodyne detect., anal. 7−125261
superconductor-insulator-superconductor heterodyne receiver at 230 GHz, low-noise design for radioastronomical appls. 7−134132
superconductor-insulator-superconductor receiver, low noise 230 GHz, astronomical appl. 7−127723
W-Ni point contact diode, far infrared harmonic generation and mixing 7−82703

mixes *see mixtures*

mixing
see also dissolving; heat of mixing; mixtures; solubility; solutions
2D flow dispersion problem, model verification and parameter estimation 7−69290
Antarctic Bottom Water in N Atlantic, ratio of mixing coeffs. of heat and salt 7−94274
axisymmetric turbulent jet mixing layer, orthogonal decomp., azimuthal depend. 7−130762
binary mixtures of smectic A, creation of nematic phases 7−111884
binary molten alloys, SRO, conc. fluctuations 7−105031
binary solid-liquid beds, mixing and segregation 7−91208
bisphenol-A polycarbonate-PMMA blends, miscibility, DSC obs. 7−132622
cadmium and selenium diethyldithiocarbamates, simultaneously heated, behaviour, IR spectra 7−113173
chloromethylsilane-pyridazine (pyrazine) phase diagrams, thermodynamic functions *(German)* 7−91776
coherent velocity oscillations in detached flows and planar turbulent mixing layers 7−75537
combustion engines, fuel spray model for mixing, free jet 7−136952
concentrations and mixing times, time-resolved Raman spectroscopy obs. 7−102546
convective mechanisms under microgravity conditions 7−117579
crystal growth from soln. or melt, LF vibrational stirring method 7−100033
curved jet, 2D along circular arc, vel. profiles and turbulence meas. 7−69247
density dependent mixing rules for fluid phase equilibria calcs. 7−124434
diffusion to premixed flames transition in conserved system 7−104356
dimethylformamide-cyclohexane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
disperse phase formation by nonstationary condensation in turbulent medium 7−69109
emulsion phase, in fluidised beds, gas bubble hold-up and axial dispersion coeff. 7−123733
epoxy-polyethersulfone, dual phase blend, fracture toughness, miscibility 7−86332
externally excited turbulent free shear flow, coherent motion 7−83193
gas-agitated liq. reactor, buoyancy-induced flow simulation 7−111070
gas-stirred metallurgical reactor, bubble driven flow, K-E turbulence model calcs. 7−104328
glass fibre reinforced polyamide, mixing rule for fatigue tests and calcs. *(German)* 7−138824
glass formation by mech. alloying 7−113472
hard spheres, binary mixture, entropy of mixing study 7−137565
heat transfer of rapidly moving droplets interacting with a wall 7−104268
n-hexane and n-heptane mixtures with dichloromethane and dichloroethane, sound vel. and molar compressibility, 304.15 K 7−98348
high Schmidt number mass transfer at solid boundaries, mixing length eqn. 7−91102
hydrodynamic model for the convective mixing of electrostatic charge 7−75699
incompressible plane mixing layer, temporal and spectral anal. 7−130663
interphase surface effect in problems on mixing displacement of multicomponent systems, num. modeling 7−111076
Kelvin-Helmholtz billows form., instability, mixing, gravity currents 7−91089
laminar flow fields, 2D, vel. and press., finite difference method calcs. *(Japanese)* 7−142260
liquid jet incident on vessel, additive mixing effect 7−69115
liquid metal mixing during costing, solidification and liq. alloy form. study 7−106500
liquid systems with compound-forming tendencies and miscibility gap, appl. of Hoch-Arpshofen model 7−137564
magma mixing, hyperbolic curves calc. for geochem. data, BASIC program 7−145680
membrane, bioreactors, mixing, minimizing dilution effects 7−93670

mixing continued
metal melt under pulsed laser surface fusion, convective mixing mechanisms 7−142302
metallic alloys, mixing and separation *(German)* 7−98478
methane-air flames, index of refraction, beam-deflection optical tomography 7−69291
N-methylcaprolactam-n-octane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
3-methylpyridine-H_2O-D_2O mixture, reentrant phase transition, critical line shape 7−137536
N-methylpyrolidone-n-hexane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
micromixing in tee mixers 7−126533
miscible fluid displacement through porous columns, stability study *(German)* 7−104247
mixing-settling extractor, calculation of settling zone 7−126486
nitromethane-butan-l-ol, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
nonsteady jets, turbulent mixing 7−69239
nuclear bulk solids analysers, continuous, for cement plant raw mix preparation systems 7−119612
numerical simulation in 2D channel flows 7−117557
ocean, available potential energy of overturn as indicator of mixing in seasonal thermocline 7−114752
ocean, boundary-induced entrainment in two-layer stratified flow 7−114757
ocean, effects of fossil turbulence and intermittency in sampling of mixing processes 7−114755
ocean surface layers, obs. of bubble clouds and temp. anomalies in upper ocean 7−114791
ocean thermocline, contrib. of advection and diapycnal mixing to seasonal cycle 7−114753
oceans, mesoscale mixing rel. to thermobaricity, cabbeling and water-mass conversion 7−114760
oceans, mixing efficiency is stably stratified grown turbulence 7−114762
one-component system, crit. phenomena, appl. of Hoch-Arpshofen model 7−67265
oxide solid solution, modelling of transient and steady-state demixing in O chem. pot. gradient 7−124525
passive scalars in homogeneous turbulence, vel. based mixing model 7−123614
PERSEPHONE 3D model for electric arc heater turbulent jet mixing with blast furnace air supply *(French)* 7−111048
phenol, oxidation in aq. media in jet-shear mixer two-phase reactor 7−91260
plane 2D mixing layer, unsteady Navier-Stokes eqn. soln. 7−83176
PMMA-polyethylene oxide blends in soln., compatibility, mol. wt., laser light scatt., viscometry 7−69914
polyethylene blends, mixing, morphology, rheology, mech. props. 7−126197
polymer miscible blends, prep. from two cryst. polymers, thermodynamic polymer-polymer interaction determ. 7−84289
polymers, compatibility of coils and rods bearing flexible side chains 7−84290
polypropylene with ethylene-propylene copolymer blends, melt compatibility 7−75967
polystyrene, mica filled, viscoelastic melt, void content, reduction during mixing 7−76422
polystyrene blends, complex moduli evaluation 7−69580
powder mixing rate instrumentation system *(Japanese)* 7−113465
prechamber flame ignition; products residence time effects study 7−100572
premixed flame front, variable heat loss intensities effects 7−104355
propane, turbulent diffusion flame, chemical reactions and mixing process effects 7−100565
PVC-polyurethane blends, phase separation, amorphous struct. 7−113558
reciprocating plate columns, axial mixing and scale-up 7−123750
solar pond wind-induced waves and liquid mixing 7−100753
solid particle-gas suspension, non-Newtonian flow, eddy viscosity and mixing length distrib. 7−69226
solid slab, melting in hot liquid pool, free convection heat and mass transfer 7−130515
solids mixing in fluidised beds, dynamics, cinematic modeling 7−91806
soot from premixed flat flame, radiation props. 7−104370
static bed, solvent recirculation and longit. mixing, solvent extraction 7−130775
stratified fluids, conf., Margaret River, WA, Australia (August 1985) 7−108016
stratified fluids, mixing and flow characts., appl. to lakes and reservoirs 7−117643
subsonic compressible axisymmetric jets, Kelvin-Helmholtz instability, numerical simulation 7−69237
supersonic jet, turbulent mixing layer, quasiparticle detection and size determ. 7−83293
ternary, quaternary and larger systems, appl. of Hoch-Arpshofen model 7−137517
thermodynamics and irreversibility 7−128214
three-component liquid systems, Monte Carlo simulation 7−124052
transition metal alloys, multicomponent, energy of form. 7−105033
turbulent confined mixing layer, large-scale vortices, visualisation study 7−91263
turbulent mixing layer, large eddy simulation calcs. *(Japanese)* 7−142282
turbulent mixing layer, time-developing, eddy simulation 7−130625
turbulent mixing layers, visualisation and velocimetry meas. 7−123609
turbulent shear duct flow, eddy viscosity models 7−91101
unequal size molecule mixtures, local composition models, van der Waals partition function 7−123825
unmixed feed stream plug flow reactors, coalescence-redispersion model, matched asymptotic solns. 7−123783
water masses, lateral mixing in mag. field and porous medium 7−120033
Ag-In-Sb(Sn), liq. state, ternary systems, enthalpy of mixing *(German)* 7−98479
Ag-Sn-Sb, liq. state, ternary systems, enthalpy of mixing *(German)* 7−98479
Al-Pb, liquid dispersions, coarsening 7−84272
Al-Zn, phase separation kinetics, SAXS and TEM study 7−113515
AlGaInP, miscibility gaps in phase diagrams 7−131317
CO_2 gas dynamic laser mixing and relax. characts. 7−141835
Cd-Pb-Zn system, calc. of liq. miscibility gap 7−132563
$ClO_2^-+I^-$, stationary states and dynamical behaviour, mixing effects 7−132920

mixing continued
Cu-Fe-Ni, liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-Mg-Al(Zn), liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-NI system, thermodynamic evaluation 7−126086
Cu-Ni-Sn, liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
$Cu_{59}Zr_{41}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
Fe-B-(N), oxidation inhibition by deposited and ion-implanted B 7−106685
Fe-Cr system, long term annealed, miscibility gap, Mossbauer spectra 7−138751
Fe-Cr system, thermodynamic description and phase relationships 7−113516
Fe-Cr-Co(-Mo)(-W)(-Nb), stratification process, thermodynamic study *(Russian)* 7−125386
Fe-Cu (8 wt.%) powders, sponge cementation, sintering, microstruct., SEM obs. 7−132529
Fe-Si system, thermodynamic anal. and formulation of A2/B2/DO3 atomic ordering energy 7−138733
$Fe_{80}B_{20}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
$Fe_{14}R_2B_xC_{1-x}$, high intrinsic coercivities 7−112860
$Fe_{81}Si_xB_{19-x}$, metallic glasses, transform. behaviour study by SAXS 7−83740
He-N_2 variable density mixing layer, second-order modelling 7−136824
^{3}He-^{4}He solid solutions, phases and structures, X-ray diffr. meas. 7−124632
In-Pb-Sb, liq. state, ternary systems, enthalpy of mixing *(German)* 7−98479
InPAsSb, miscibility gaps in phase diagrams 7−131317
KH_2PO_4-type mixed crystals, phys. props., review 7−111892
$NaNO_3$-Na_2SO_4, aq. soln., mixing processes, time resolved Raman spectra 7−92689
Na_2O-B_2O_3-SiO_2 glass, phase separation, chemical durability 7−113737
Na_2O-B_2O_3-SiO_2 glasses, phase separation, elec. cond., TEM obs. *(Japanese)* 7−132629
Na_2O-B_2O_3-SiO_2 glass, phase separation, effect of MoO_3 addition *(Japanese)* 7−138749
Nb-Ge (25 at.%), mechanical alloying, microstruct. evolution 7−132530
Ni-Al system, mixing energy, calc. by method of model electron density functional 7−143017
$Ni_{61}Nb_{39}$, amorphous, phase separation and loss of ductility 7−91827
Pb-Al system, thermodynamics and solubilities 7−124557
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed crystals, phys. props., review 7−111892
Ti-Zr-Be metallic glasses, amorphous phase separation, re-evaluation 7−91466
$Ti_{50}Be_{40}Zr_{10}$, amorphous, phase separation and loss of ductility 7−91827
V_2O_5-MgO oxidative dehydrogenation catalysts, synthesis methods 7−113462
W-B system, form. of borides by solid state reaction between W and B powders 7−144349
W-Re alloys prep. by powder metallurgy, Re distrib. 7−86177
Zn-In system, liq. immiscibility and associated monotectic reaction 7−124524
ZrO_2, Y_2O_3 stabilised, diffusional creep, kinetic demixing 7−144469

mixing, heat of *see heat of mixing*

mixing circuits *see mixers (circuits)*

mixtures
see also critical mixtures; mixing; solutions
1-butanol-water mixtures, electron reactivity, solvent struct. 7−86662
acetamide-NaCNS eutectic mixture, dielec., relax. spectrosc. 7−99663
acetonitrile mixtures, local struct. influence on chem. shift *(German)* 7−99594
acetonitrile-halocarbons, solid-liquid phase equilibr., phase diagrams, heat of fusion 7−76360
acetonitrile-water mixtures, hyperfiltration 7−113995
acetylene+O_2 jets, multifront detonation, critical diameter and propag. study 7−97568
air-H_2 (methane) mixtures, turbulent combustion, kinetic calcs. 7−75706
air-water mixture, laminar pipe flow, coupled heat transfer calcs., statistical narrow-band model 7−75562
air-water system, tomographic reconstruction of the density distribution using direct fan-beam algorithms 7−111081
alcohol-water mixtures, positron annihilation and compressibility studies 7−92776
alcohol-water systems containing dissolved salt, vap.-liq. equilib. 7−142967
alkali halides solutions, in water-acetamide mixture, ion-solvent interactions 7−91422
alkanes, binary mixtures, diffusion coeffs., <573 K, <3.5 MPa 7−131342
alkoxyethanol+di-n-butylether mixtures, excess molar enthalpies, mole fraction depend. 7−118105
n-alkoxyethanol-di-n-butylether mixtures, excess props. 7−143041
n-alkyl formate-n-alkanol, excess molar enthalpies 7−76445
anthraquinone dye mixtures in a nematic host, solubilities of the components 7−76420
aromatic-aliphatic epoxy mixtures, crosslinked, struct.-props. rels. 7−91483
azo dye-anthraquinone dye mixtures in nematic host, solubilities of the components 7−76420
BALANCE−a computer program for the handling and supervision of analytical standards 7−121082
benzene-ethyl acetate, excess volumes, calcs. and meas. 7−86658
benzene-ethyl acetate-cyclohexane multicomponent liq. adsorpt. equilibr. on activated C 7−112057
bidisperse fluidised layer, spherical inhomogeneity evolution 7−142359
bile salt-lecithin mixtures, dinaphthylpropane fluoresc. probe investig. 7−86886
binary, convection, Galerkin model 7−91118
binary, liquid-liquid equilibria calcs. 7−69886
binary anisotropic grain struct., cond. eqn. 7−76862
binary fluid mixture, Soret separation disturbed by convective motion, numerical simulation 7−117587
binary gas mixture, diffusion-slip velocity 7−83396
binary gas mixture flow in channel, separation using semipermeable membranes, diffusion effect 7−137007

mixtures continued
binary gas mixtures, convection effect on light ray propag. 7−69140
binary liq. mixtures, excess free length evaluation 7−84129
binary liq. mixtures, polarity investig. *(German)* 7−69920
binary liquid mixtures, mixture constant eval. from thermal conductivity, multi-component mixture extension *(Japanese)* 7−118178
binary liquid mixtures, optimised RHNC eqn. extension 7−131007
binary liquid mixtures, thermal cond. prediction 7−111982
binary liquid mixtures, thermal conductivity prediction eqn. *(Japanese)* 7−118177
binary liquid mixtures, time correl. functions 7−131009
binary magnetic mixtures, permeability eqn. calcs. 7−99500
binary metallic alloys, vacancy formation energies, vacancy-solute interaction 7−137304
binary mixture, self-diffusion coeffs., molecular dynamics simulation comparison 7−120925
binary mixture, solidification in axisymm. enclosures, approx. calcs. 7−104969
binary mixture near critical point, turbulent, light scatt. study 7−70828
binary mixtures, convection expts. 7−117610
binary mixtures, evap. and condensation, mass transfer resistances influence 7−118070
binary mixtures, phase separation and critical phenomena 7−142969
binary mixtures, thermodiffusion, nonlinear convective motion 7−69136
binary mixtures of polar and nonpolar compounds, reentrant liq. cryst. phases, mean field theory 7−76401
binary vapours, kinetic description of condensation, droplet development 7−111840
binary Yukawa mixtures, num. mean spherical approx. soln. 7−83624
biphenylcyclohexanes, substituted species, nematic phase struct., X-ray diffr. exam. 7−97921
bromochlorodifluoromethane-HI, laser induced multiphoton dissoc. 7−129805
butan-2-one-benzene(toluene)(chlorobenzene), speeds of sound, excess molar vols., compressibilities 7−76258
butan-2-one-heptane(cyclohexane)(methyl-cyclohexane), speeds of sound, molar vols., compressibilities 7−76257
1-butanol-acetone, liq., mol. interactions, ultrasonic velocity meas. 7−75229
1-butanol-benzene, liq., mol. interactions, ultrasonic velocity meas. 7−75229
butanol-solvent interactions, dielectric const. meas. 7−99644
1-butanol-tetrachloromethane, liq., mol. interactions, ultrasonic velocity meas. 7−75229
2-butoxyethanol. liq. mixtures, US vels. apparent molar vols., compressibilities 7−104913
t-butyl alcohol-water mixtures, small-angle X-ray scatt. investig. 7−117800
carbon tetrachloride-NH_3 RF pulsed discharges, radical formation/reaction kinetics 7−119531
carbon tetrachloride-water mixtures Lennard-Jones pot., mol. dynamics simulation 7−91412
chemically reactive fluids, solvent effects, statistical mech. study 7−100542
chiral-nonchiral liq. cryst. mixture, blue phases, phase diagram determ. 7−91803
chlorobenzene-benzene (1-propanol) mixtures, $^{37}Cl(n,\gamma)^{38}Cl$ effects 7−93355
1-chlorohexane-hexane isomers mixtures, excess vols. 7−84319
cholesterol-cholesteryl oleate binary mixtures, X-ray diffr. study 7−75987
cholesteryl oleyl carbonate-chloride mixtures, liq. cryst. transition, US study 7−105021
chromobacterial mixture, single cells, reson. Raman microprobe, detect. 7−86925
classical molecular fluid mixtures, α-exp-6 pot. interactions, excess thermodynamic eqn. of state 7−111327
coal-water mixtures, rheological props., electrolyte effect 7−75490
complex formation, electrostatic interaction 7−122777
compositions and molar vols. of three or more equilib. phases at elevated press. 7−91763
convecting binary mixture, secondary instability, time depend. onset 7−91117
critical binary mixtures, phase-separating fluids, viscosity enhancement 7−105092
cumene-ethanol(1-propanol) mixtures, speeds of sound, densities and viscosities 7−98347
4-cyano-4′-(2″-methylbutyl)-biphenyl mixtures, blue phase, elec. field induced phase diagrams 7−118095
cyclohexane-benzene mixtures, radioluminesc., mag. field effect 7−90248
cyclohexane-ethyl acetate, excess volumes, calcs. and meas. 7−86658
cyclohexane-methanol, fluid interface struct. near critical point, optical reflectivity anal. 7−137662
cyclohexane-xylene mixtures, US vel. eval. at 25 to 50°C 7−69828
cyclohexane-xylenes, energy of vaporisation eval. 7−69882
diatomic liquids, and mixtures, isothermal isobaric mol. dynamics simulation 7−91411
1,2-dibromoethane-ketone mixtures, US vel. and isentropic compressibilities at 303.15 K 7−69829
dichlorodifluoromethane-HI laser induced multiphoton dissoc. 7−129805
dilute gas mixtures, ang. momentum relax. 7−90324
dilute supercritical mixtures, appl. of Kirkwood-Buff theory 7−124514
dimethyl sulphoxide/water binary liquid system, ultrasonic studies 7−124399
1,4-dioxane in benzene and cyclohexane, intermol. interactions, ultrasonic velocity meas. 7−137470
dioxane/D(+) tartaric acid aqueous mixtures, US studies 7−84133
dryout point fluctuations, mean period 7−69880
dye mixture saturable absorbers in passive switch for laser mode locking 7−141948
ethane-H_2 binary mixtures, temp. depend. of H_2 component fugacities 7−130822
ethane-n-heptadecane (n-octadecane), tricrit. phenomena determ. 7−84183
ethane-propane mixtures, excess enthalpies meas. 7−76441
ethanol-H_2O, convection onset, lin-stability problem soln. 7−97273
ethanol-H_2O mixtures, convection; travelling waves and spatial variation 7−130516
ethanol-H_2O mixtures, convection onset, confined travelling-wave patterns 7−130731
ethanol-water-$CaCl_2$, vapour-liq. equilib. at 25°C 7−111846
ethene-Xe, liq., excess enthalpies, at 162.9 K 7−76440
ethyl ether-chloroform, excess volumes, calcs. and meas. 7−86658

mixtures continued
ethylbenzene-alkanol mixture, excess volumes 7—143044
ethylene-methyacrylate mixtures, phase behaviour under high press. 7—100550
ethylene-polyethylene mixtures, phase equilibria, calc. methods comparison *(German)* 7—111819
ferroelectric liquid crystal mixtures with fast switching *(Japanese)* 7—106096
ferroelectric smectic C fast-switching low-temperature liquid crystal mixtures 7—124092
flow-through porous media, modified mixture theory 7—117666
fluid phase equilibria at high press., density depend. mixing rules for calc. 7—98387
fluid-filled porous materials, modified mixture theory 7—117667
gas mixture, filtrated, steady wall combustion, heat and mass transfer 7—139009
gas mixtures, binary, two-fluid Chapman-Enskog theory 7—123830
gas mixtures, external kinetic theory, number densities calc. 7—111145
gas mixtures, ion mobility and diffusion, approx. formulae 7—123829
gas mixtures, structural phase transitions in a laser radiation field 7—75737
gas properties simulation using Benedict-Webb-Rubin equation, Applesoft program 7—75746
gas-solid mixtures, flow stability, continuum-discrete model 7—75657
gasdynamic separator flow field, nonequilib. processes study 7—130761
gaseous mixtures, gasdynamic separation, statistical mechanics study *(Japanese)* 7—130765
gaseous mixtures, heat cond. in flame combustion 7—97684
gaseous mixtures flowing through metal capillaries, laser radiation influence 7—75744
gases, second virial coeffs., Morse pot. parameters calcs. 7—97678
gases, thermodynamic capacity 7—126473
glycerol-water mixture surface, splash form. processes on impact of steel/glass sphere/cylinder 7—130753
granular flow, binary mixtures of spherical particles, kinetic theory 7—91182
hard sphere mixtures, freezing, density functional theory 7—104960
hept-1-ene-benzene(cyclohexane)(n-hexane) 7—84280
4,4′-di-n-heptylazoxybenzene, nematic and smectic A phases, solvent-solute interactions 7—111359
heptyloxypentylphenylthiolbenzoate-octyloxycyanobiphenyl, nematic-smectic-C heat capacity investig. 7—69908
heterogeneous media, detonation wave, stationary zone and relax, instability 7—75705
heterogeneous solid electrolytes, defect chemistry, ionic conductivity 7—143083
heterophase mixtures, procedure of quasi-averaging 7—80678
hex-1-yne-benzene (cyclohexane)(n-hexane), excess molar enthalpies and vols. meas. 7—84280
hexafluorobenzene-benzene-n-tetradecane mixtures, vapour press. and excess vols. calcs. 7—105077
hexafluorobenzene-n-tetradecane mixtures, vapour press. and excess vols. calcs. 7—105077
n-hexane and n-heptane mixtures with dichloromethane and dichloroethane, sound vel. and molar compressibility, 304.15 K 7—98348
n-hexane-toluene mixture, excess molar enthalpies, isothermal flow calorimeter meas. 7—118106
highly polar complex mixtures, phase equilib. calcs. using Peng-Robinson eqn. of state and van der Waals mixing rules 7—69853
hole lattice model, thermodynamic props., eqns. of state 7—124069
hydrocarbon fuel combustion products mixture in air, boundary layer characts. at cooled surface 7—138961
ice mixture films, erosion by ion irradiation 7—92798
ice-solids mixtures, ablation in turbulent axisymm. water jets 7—123696
inert gas mixtures, mass disparity shock wave struct. 7—123679
inert gas mixtures, third harmonic generation, optical consts., multiphoton ionisation meas. 7—122648
inorganic mixtures, quantitative XPS anal., first principles model 7—138593
ionic mixture in dipolar solvent, mean spherical approx., anal. soln. 7—111326
ionic mixture in dipolar solvent, pair correlation fns., thermodynamics, mean spherical approx. 7—137171
isobutyric acid-water, quenched-liq. interface, instability 7—84448
isopropanol-H_2O-CO_2 mixtures, three- and four-phase equilibria at elevated press., comp., molar vol. and critical points 7—76365
N-isopropylacrylamide gels in mixed solvents, reentrant vol.-phase transition 7—69885
kaolin powder-paraffin oil mixture, wall slip rel. determ. by three gap method 7—69091
liquid cryst., bend elastic const. of nematic-smectic *A*-smectic *C* multicritical point, Freedericksz deform. meas. 7—111887
liquid cryst., phase diagram, intermediate phase form., dipole-dipole correl. and geometric factors 7—84261
liquid crystal binary mixtures of smectics A:120CB and compound n-DBT homologous series, phase diagrams 7—137557
liquid crystals, ferroelec. mixtures and pure compounds, correl. between mol. struct. and spontaneous polarisation 7—137227
liquid mixture in inclined cavity, free convection effects on thermodiffusion 7—136830
mesitylene binary mixtures, ultrasonic study 7—118036
mesogenic-nonmesogenic molecule mixtures, optical behaviour, refractive index and birefringence 7—144002
metals, amorphous, hard spheres binary mixtures, dense random packing, numerical simulation 7—117821
methane=n-pentane mixtures, vapour-liq. equilib. meas. at high press. and temps. 7—98417
$(methane)_{1-x}Kr_x$, solid mixture, orientational disorder and rot. excitation, neutron scatt. meas. 7—74782
methane-2,2-dimethylbutane-2,3-dimethylbutane, tricrit. phenomena meas. 7—84184
methane-air mixtures, near threshold, ignition by spark discharge 7—75903
methane-air mixtures, turbulent combustion. combustion products and water vapour addition 7—75702
methane-alkane mixture, vapour-liq. equilib., temp. depend. interaction parameter, Soave eqn. of state 7—98414
methane-ethane, separation factors on zeolites, NMR gas phase meas. 7—92003
methane-O_2 flame, alkali metal dopants, ion density and temp., equilib. consts., mass spectra anal. 7—86629
mixtures continued
methane-O_2 systems, lean detonation limit, decrease mechanism 7—93331
methanol-carbon tetrachloride, liq. mixture, eqn. of state, lattice model 7—111847
methanol-cyclohexane mixtures, positron annihilation in vicinity of critical soln. point 7—113309
methanol-ethanol-$CaCl_2$, vapour-liq. equilib. at 25°C 7—111846
methanol-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7—124465
methanol-methane $(H_2)(N_2)(CO)(CO_2)$ mixtures, isothermal phase equilibr. 7—84225
methanol-triethylamine(diethylamine), excess molar vols., Gibbs energies press. depend. 7—76446
methanol-water mixture, viscosity B coeff., dielectric friction effect 7—98537
methanol-water mixtures, excess molar enthalpies and thermodynamic props. 7—98504
N-methylpyrrolidinone-tetrahydrofuran, mixtures, density, viscosity and thermodynamics 7—98496
mineral abundances determ. from bidirectional reflectance meas. 7—101700
mixed solvent electrolyte solns., activity coefficients 7—98499
molecular fluid mixtures, equilib. props. in semiclassical limit 7—124061
molecular gas mixtures, diffusion and viscosity coeffs. calc. 7—142426
multicomponent gas mixtures, spectral anal., nonlinear correl. 7—119610
multicomponent mixtures, orthogonal spectra appl. to component spectra estimation 7—86690
multicomponent systems, simplified phase equilibrium eqns. 7—98386
nematic liq. cryst., switching transition in external mag. field, mol. field theory calcs. 7—91802
nematic liq. crystal mixtures of opposite diamag. anisotropies, switching transition, mol. field theory 7—137233
nematic mixtures, near-UV photostability 7—77488
n.heptane+methanol, binary liquid system near critical temp., dielectric const. 7—85524
nitrobenzene-xylene(toluene), liq. mixture, dielectric const. 7—70690
nitrobenzene/n-heptane binary mixtures, ultrasonic attenuation studies 7—111773
n-nonadecane-n-heneicosane, solid state, Raman spectra 7—144058
nonlinear dielectric effect in the vicinity of the critical point of binary and doped critical solutions 7—70727
nonpolar gas mixtures, aq. solns., density meas. 7—84080
n-octane-hexane isomer mixtures, US vel. and isentropic compressibilities meas. 7—98343
n octanol binary liq. mixtures, US studies 7—124401
oil-water-surfactant mixtures, micro-emulsions, Ising lattice gas model 7—106837
optical bistability chemically active medium 7—90679
organic crystal mixtures, nonlinear line-narrowing spectroscopy 7—138441
organic free radicals solns., paramag. species relative concs., EPR spectra least-squares anal. 7—116999
organic liquid mixtures, dynamic viscosity eqn. 7—143073
organic seven component mixtures, negative chem. ionis. and mass meas., GC/FTIR/FTMS investig. 7—86741
paraffin wax, P-116, natural convection, latent heat delay 7—69172
partial enthalpies and related quantities, computer simulation 7—91838
partially miscible liquid system equilibrium, computation by total Gibbs energy minimisation *(Chinese)* 7—98514
Peng-Robinson equation of state with fluid-specific parameters 7—124426
pentachlorophenol-acetonitrile complex, H-bonded, IR dispersion 7—125718
pentaglycerine/neopentylglycol mixtures, solid solid transitions, energy exchange, time and temp. dependence 7—126653
pentan-2-one-benzene, speeds of sound, excess molar vols., compressibilities 7—76258
pentan-2-one-heptane(cyclohexane), speeds of sound, molar vols., compressibilities 7—76257
n-pentane-ethanol., vapour-liquid equilib. 7—98416
perfluoromethylcyclohexane-methylcyclohexane, anomalous thermal cond. near upper critical soln. point 7—111983
phenol-ethylacetate mixtures, US studies 7—84132
polar-nonpolar liq. crystal mixture, phase transitions, microscopic description 7—76402
poly(di-poly(propylene glycol) itaconate)-salt mixtures, ionic conductivity 7—98534
polydisperse fluids, flash calculations, variational approach 7—124463
polymer mixture, Flory-Huggins lattice model, crit. props. 7—108432
polymeric solutions, threshold type shear thickening 7—69579
powders, contact surface area, rel. to interaction of mixtures 7—86074
propylene carbonate-acetonitrile, mixtures, density, viscosity and thermodynamics 7—98496
quasi-binary mixtures, tricritical phenomena, extended classical treatment 7—91758
quinoline-hydrocarbon mixtures, vapour pressures and excess Gibbs energies 7—76369
Rochelle salt-ammonium Rochelle salt mixtures, Raman spectra, phase transition mechanisms 7—106172
Se-Te liq. mixtures, heat capacity temp. depend., cond. and bonding rearrangement 7—76426
solvent/nonsolvent mixtures, PMMA film dissolution and swelling behaviour, in situ ellipsometric charactn. 7—124520
steam-air mixtures, condensation in shell and tube exchanger at atmospheric and reduced press. 7—83009
steam-air mixtures, dropwise condensation, air traces determ. 7—97601
steam-water coolant circulation loop, pressure loss, coolant props. charge study 7—97599
stress, body force, and momentum balance in mixture theory 7—83022
succinonitrile-neopentyl alcohol, eutectic mixture, solidification 7—117847
superconductor-insulator mixtures, conductivity exponent 7—85187
suspension, solid particles, three-phase sparged reactors, physical props. effects 7—98620
swallow-tailed liquid crystalline mixtures, dipole-dipole interactions 7—106077
1,1,2,2-tetrachloroehtane-n-hexane, excess molar enthalpies, molar vols. and vapour pressures 7—98505
tetrafluoromethane-Ar gas mixture, Rayleigh and Raman spectra 7—103514
TGS-L-α-alanine cryst. mixture, dielec. props., effect of L-α-alanine conc. 7—138390
thermodiffusional separation of gas mixtures in the field of a sound wave 7—97680

mixtures continued
thermodynamic properties, conc. fluctuations method calc. 7−124551
three-phase porous materials, thermal diffusivity meas. 7−84409
toluene-n-heptane, separation by oil-water-oil liq. membrane 7−113990
toluene-n-heptane separation by oil-water-oil liq. membrane 7−113989
4-(trans-4-alkylcyclohexyl)-1-(2-cyanoethenyl)-benzene, binary mixture with 60CB, nematic reentrant phase, elec. props. 7−124499
transport phenomena in multivelocity, multitemperature gas mixtures 7−95520
trichloromethane-triethylamine(acetone)(diethylether), excess molar vols., Gibbs energies press. depend. 7−76446
trichloromethylene-benzene(toluene)(p-xylene)(chloroform)(carbon tetrachloride), internal press. and molar refraction meas. *(German)* 7−69830
trifluoromethyl hypofluorite-H_2 mixture, multiphoton dissoc., IR fluoresc. 7−141640
Triton X-114-H_2O, lamellar phase to isotropic liq. transition, phase diagram determ., DSC anal. 7−111871
trypaflavine-rhodamine B mixture, acceptor luminesc. enhancement by donor luminesc. reabsorpt. 7−117015
two-phase mixture unsteady flow in heated duct, appl. to reactor coolant 7−109338
two-phase multicomponent fluids, thermodynamic sound velocity calcs. 7−97688
unequal size molecule mixtures, local composition models, van der Waals partition function 7−123825
vapour mixture, monolayer form., surface energy, adsorbent surface area meas. 7−105244
vapour-gas mixture, turbulent, heat and mass transfer in film condensation 7−104252
viscoelastic thermodiffusion, eqns., rel. to theory of mixtures *(Polish)* 7−130682
water-ethylene(ethane) mixtures, excess molar enthalpies at high temps. and pressures 7−75747
water-fluoroalkanol mixtures, excess molar enthalpies meas. 7−98507
water-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7−124465
water-granule mixture, parallel gravity free surface and channel flows 7−91186
water-methanol mixture, chaotic advection by modulated traveling waves 7−130732
water-phenol mixtures, surface props. 7−70032
wax-solids mixtures, ablation in turbulent axisymm. water jets 7−123696
yellow dyes for guest-host applications, optical order parameters 7−124087
^{3} He-^{4}He, convection onset, lin-stability problem soln. 7−97273
AgBr-CsBr(KBr)(NaBr)(RbBr), molten mixtures, densities and molar excess vols. 7−91691
Ag_2HgI_4, elec. cond., α-β transition, prep. technique effect 7−105114
AgI-CsI(KI)(NaI), molten mixtures, densities and molar excess vols. 7−91691
AgI−KI mixture, convection in cylindrical thermal diffusion cell, 3D numerical study 7−130703
$AlCl_3$-NaCl molten mixture molecular dynamics, computer simulation *(Japanese)* 7−130999
Al_2O_3-Si_2O-X_2O mixture (X=Li, Na, Rb, K), F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
Ar-air gaseous mixture, unipolar breakdown, propag. velocity meas. 7−117697
Ar-CO_2 mixtures, self-quenching streamer discharge 7−111302
Ar-ethene gas mixtures, Monte Carlo calcs. of electron transport 7−109618
Ar-F_2 mixtures, electron beam irrad., electron density, time-resolved interferometry 7−103656
Ar-H_2, ion yield generation by electrons 7−91281
Ar-He gas mixtures, Grimm-type glow discharge plasma, emission spectrosc. 7−91368
Ar-Kr, liq., cross thermodiffusion, nonequilib. mol. dynamics 7−105090
Ar-Kr binary liquid mixtures, time correl. functions 7−131009
Ar-Kr mixture, equilib. mol. dynamics using Lennard Jones pot., thermal cond. 7−83627
Ar-Kr(Ne) mixtures, far IR absorpt. spectra 7−132263
Ar-O_2 mixture, atom-atom excitation in shock waves 7−96825
Ar-O_2(methane), binary liq. mixtures, vibr. relax time as function of conc. 7−68441
C black-copper phthalocyanine mixtures, elec. cond., grain size 7−112333
C/SiO_2-gel powder mixtures, elec. and. meas., time depend. DC resistance 7−70368
C/SiO_2-gel powder mixtures, elec. conduction meas., press. depend. 7−70369
C_8 aromatic isomer mixtures, separation by pervaporation through polymer films 7−78544
C_2N_2-O_2 mixtures, photodissociated, chemiluminesc. reactions 7−68417
CO, dilute gas mixtures, ang. momentum relax. 7−90324
CO-Ar mixtures, temp. meas. behind shock waves, line broadening 7−111030
CO-methane mixtures, excess enthalpies meas. 7−76441
CO-N_2 mixture, non self-sustained discharge study 7−137145
CO+CO_2 thermodynamic capacity 7−126473
CO_2 gaseous mixtures, dilute-gas props., SSR-MPA pot. model calcs. 7−83386
CO_2-CO(N_2), intermolecular pots., vibr., IR absorpt. spectra 7−82120
CO_2-cyclohexane mixtures, excess enthalpies meas. 7−76442
CO_2-H_2O-NaCl, phase behaviour meas. 7−111821
CO_2-He(N_2), gas mixtures, surface desublimation study 7−137534
CO_2-N_2-He gas mixtures, volume-self-sustained-discharge 7−123839
CO_2-N_2-He mixture, volume to spark discharge transition, electrooptic meas. 7−137146
CO_2-SF_6, diffusional separation by sinusoidal oscills. 7−83393
CO_2-SO_2-H_2O, phase behaviour meas. 7−111821
CO_2-toluene mixtures, excess molar enthalpies and volumes meas. 7−143045
Cs-Xe, for using diffuse struct., half collision anal. 7−141565
D-T alloy, formation rate of muonic molecules 7−122742
Eu-Sr vapour mixture, laser-induced collisional energy transfer, far-wing obs. 7−129859
H^+-He^{++} mixtures, frequency sum rules and charge fluctuation spectra 7−70227
H_2-He mixture, swarm expt., H_2 vibration excitation study 7−110118
H_2-Ne(Ar)(Kr)(Xe), mixtures, diffusion coeffs. and thermal diffusion factors meas. 7−84337
H_2+CO_2, thermodynamic capacity 7−126473
H_2+H_2O, thermodynamic capacity 7−126473
H_2+H_2S, partial dissociation, thermodynamic capacity 7−126473
HCl-HBr mixture, rotation line shift 7−122617
HCl-Ne-Xe laser mixture ionisation by radioisotope preioniser 7−123026
HF-H_2O mixtures, FT IR spectra *(French)* 7−103484
HF-HBr mixture, rotation line shift 7−122617
HF-HCl mixture, rotation line shift 7−122617
He-CO_2, diffusional separation by sinusoidal oscills. 7−83393
He-Li^+, mobility of Li^+ at high E/N values 7−111150
He-N_2, gas mixture, thermal cond., effective collision cross-sections determ. 7−83400
He-Xe mixtures, Rayleigh Brillouin spectra, hydrodynamic description 7−77601
He-Xe-HCl self-sustaining volume discharges, XeCl exciplex form. *(Polish)* 7−137142
K-Cs, viscosity and density 7−143074
KBr-LiCl, excess internal press. and intermol. interactions eval. 7−110062
$KC_2H_3O_2$-acetic acid-water mixtures, ultrasonic studies 7−111772
KCl-$BiCl_3$ mixtures, molar enthalpy of mixing, high-temp. calorimetry determ. 7−118104
KCl-LiBr, excess internal press. and intermol. interactions eval. 7−110062
KCl-NaI, excess internal press. and intermol. interactions eval. 7−110062
KCl-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999
KNO_3-$LiNO_3$, molten system, internal cation mobility 7−124575
KOH-H_2O mixtures, chem. equilib. *(French)* 7−119555
K_2SO_4-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999
$LaCl_3$-KCl mixture, molten, molar vol., surface tension 7−124645
LiF-BeF_2-ThF_4-UF_4 mixtures, density and surface tension 7−142867
LiI-PEO mixture polymer electrolyte film, ionic cond., comp. and temp. depend. studies 7−84386
$MoSi_2$/B_2O_3-BaO-SiO_2 finely dispersed metal+glass mixture, electrical conductivity of vitreous component 7−92242
N_2-Ar Lorentzian mixture, diffusion coeffs. temp. depend. meas. 7−83395
N_2-Ar mixture, spontaneous polarised vibr. Raman scatt. study 7−96700
N_2-CO mixture, comp. depend., inversion, temp. depend. 7−123833
N_2-CO mixtures, excess molar enthalpies determ. 7−98506
N_2-He Lorentzian mixtures, mutual diffusion coeffs. temp. depend. meas. 7−83394
N_2-Kr Lorentzian mixture, diffusion coeffs. temp. depend. meas. 7−83395
N_2-Ne Lorentzian mixtures, mutual diffusion coeffs. temp. depend. meas. 7−83394
N_2-Xe Lorentzian mixture, diffusion coeffs. temp. depend. meas. 7−83395
NH_3-He gas mixtures, four level microwave-microwave double reson., pot. surfaces 7−117000
Na-Ar(Ne)(Xe) mixtures, radiation trapping, line broadening, fluoresc. obs. 7−82034
Na-inert gas mixture, light-induced drift velocities 7−109841
Na-K-Cs, viscosity and density 7−143074
Na_3AlF_6-MgF_2 mixture, effects of various ambient-aging processes in chopped and non-chopped optical films 7−85881
$NaC_2H_3O_2$-acetic acid-water mixtures, ultrasonic studies 7−111772
NaCl-$CaCl_2$, aq. electrolyte mixture, activity coeffs., mean spherical approx. 7−71519
NaCl-H_2O, critical behaviour at 380°C 7−76344
NaCl-HCl, aq. electrolyte mixture, activity coeffs., mean spherical approx. 7−71519
NaCl-KBr mixtures, aq., densities and apparent molar vols. calcs. 7−104883
$NaNO_3$-$TlNO_3$, molten mixture, internal mobilities, density and elec. cond. meas. 7−91863
NaOH-H_2O mixtures, chem. equilib. *(French)* 7−119555
Na_2O−P_2O_5−B_2O_3 system liq. mixtures, enthalpy of mixing, calorimetry meas. 7−98480
O_2-Ar, electron attachment and ion mobility investig. 7−122702
O_2-Ar(N_2), binary liq. mixtures, vibr. relax time as function of conc. 7−68441
O_2-N_2-I mixture laser active medium 7−130080
Rb-He vapour mixture, two-photon excitation, stimulated processes 7−123102
S-I_2 mixture, sound velocity meas., fixed-path pulse-echo method 7−136658
SF_6-Ar(He)(Xe), mixture, vibr. relax. rate, time-resolved IR multiphoton absorpt. spectra anal. 7−74599
SF_6-He gaseous mixture dynamics, Rayleigh-Brillouin spectra anal. 7−122552
SF_6-N_2 mixtures, electron-ion pair formation by α-particle, energy requirement 7−117061
SF_6−Ar(He)(D_2)(N_2)(propane), vibr.-translational relax. times anal. 7−103633
SO_2-H_2O, phase behaviour meas. 7−111821
SO_2+SO_3, partial dissociation, thermodynamic capacity 7−126473
SiO−CeO_2 thin films, admixtures, ESR study 7−132135
$TaH_{0.58}$-graphite, electrical explosion in water, phase composition of products 7−93330
$^{99}Tc^m$(Sn)MDP reaction mixture, effect of Sn(IV) on mean size of $^{99}Tc^m$-containing constituents, neutral pH 7−93926
U/Pu mixed solutions, assay using gamma-ray densitometer 7−114061
W-Mo: In, trace anal. line selectivity in inductively coupled plasma-AES 7−133011
Xe-CO_2 7−109618
Xe-Cs mixtures, stimulated emission of UV radiation efficiency 7−136277
Xe-ethane gas mixtures, Monte Carlo calcs. of electron transport 7−109618
Xe-methane 7−109618
$ZnCl_2$/LiI aqueous complexes, acoustic and volumetric investigations 7−111769
ZrO_2, polymorphic mixtures, X-ray diffr. 7−111473
mm waves *see microwaves*
MMIC *see microwave integrated circuits; monolithic integrated circuits*
MNOS integrated circuits *see field effect integrated circuits*
MNOS structures *see metal-insulator semiconductor structures*
MNOS transistors *see insulated gate field effect transistors*
MO calculations *see molecular orbitals calculations*
mobile antennas
VLF/MF band loop antenna system, design with series transformer-coupled network 7−134033

mobility, carrier *see carrier mobility*
MOCVD *see chemical vapour deposition*
mode softening *see soft modes*
model reference adaptive control systems
respiratory control system using volterra series based MRAC *(Japanese)* 7−87069
modelling
see also brain models; catastrophe theory; identification; physiological models; semiconductor device models; simulation
arm-powered mobility vehicles, optimal biomed. design/development 7−119904
binary alloy melt, dendritic solidification model 7−113532
capacitance RF hyperthermia, model for impedance determ. and power deposition charactn. 7−71835
capacitive RF hyperthermia, model for impedance determ. and power deposition charactn. 7−71834
cementitious particulate composite, impact pressure molded, fracture toughness prediction model 7−130599
chemical vapour transport, thermodynamic model 7−85973
cloud field morphology analysis using time series models 7−120152
coherent lightwave communications, receiver modelling 7−90833
contaminant transport in groundwater, review 7−114137
corrosion, pitting and crevice, theoretical modelling, review 7−93143
cross-flow heat exchangers, mathematical modelling 7−142374
daily rainfall occurrences, statistical modelling 7−120064
dielectric, sintering in microwave field, model 7−119188
diffusion and precipitation of gas-in-solid 7−84394
discrete-continual model of multilayered shallow shells and plates 7−104153
disordered solids, cell model and elastic moduli, low temp. limit 7−111732
Doppler blood flow signal spectral analysis, autoregressive modelling applic. 7−119812
dosimetry, heterogeneity model for photon beams incorporating electron transport 7−133461
energy planning, role of mathematical models *(Slovenian)* 7−106875
environmental issue development, Lawless and Molitor models validated 7−93552
fallout sheltering feasibility model for USA 7−87242
fibre reinforced composite material, compacting process modelling 7−132644
fibre reinforced composites, damage mechanisms, AE meas. correl. model *(German)* 7−86544
fission reactor accidents, atmospheric modelling, non-stochastic biological damage estimates *(German)* 7−114506
fuel rod damage modelling, NIELS expt. facility, overview *(German)* 7−109452
geochemical C cycle studies, modelling spectrum 7−94163
geophysical models evaluation 7−145686
German nuclear power station risk study, phase B, radiation protection modelling and preventive measures *(German)* 7−109457
holographic NDT on pipes, predicted fringe patterns 7−119484
hydrological precipitation analysis, modelling, and prediction 7−114843
intergranular cavity growth modelling, coupled diffusion, power law creep 7−142891
Kevlar aramid fibres, tensile strength variability, modified weakest link model 7−86262
Klaipeda city air pollution reduction programme *(Russian)* 7−144936
materials, model of response to nonlinear viscoelasticity *(French)* 7−71234
mathematical model of volumetric flow rate generators for liquids with stepped plunger drive 7−142404
metals, oxide growth stress model, creep props. 7−132678
metals, shear instability model of sliding wear 7−132770
metals and alloys, solidification, finite element modelling, nuclear waste disposal appl. 7−132599
molecular crystal, model of crack opening 7−76285
oceanography, numerical modelling on midlatitude mesoscale and gyre-scale, review 7−114799
orthopaedic appliance design, reference shape modelling 7−127042
plate, single edge notched, modelling HRR-singularity with Akin and conventional singular elements 7−97428
polyacrylonitrile fibrous canvas-polyethylene gauze system, thermal math. model of filter materials prep. 7−71147
polymer, dispersively filled, nonideal adhesive bond effect on elastic props. 7−71232
polymer film, chord intercepts in the two-dimensional cell model 7−111426
polymer system of oriented fibrils, SAXS modelling 7−124124
porous material thermal conduction model accounting for inclusion shape and orientation 7−75243
powder compacts, unequal sized particles, hot isostatic pressing, densification mechanism maps 7−71105
powered upper extremity prostheses, model of research and development program 7−127041
primary creep, microstructural model 7−84102
radiation exposure dose limits, lifetime cancer risk, models comparison 7−133455
radioscintigraphy, effect of object motion on image degradation, surrogate modelling 7−114461
radiotherapy, computerised clinical electron beam dosimetry model 7−133469
regenerative catalytic reactor dynamics modelling 7−93381
rotating flexible beam, model emphasising rotation-bending coupling 7−72962
SEM image interpretation, model for secondary and backscatt. electron yields calc. 7−140775
shear band form. during plane strain extension, geometric models of internal shape change 7−91700
short fibre and particulate filled polymers, elastic props., finite difference computer model 7−113591
simulation modeling for estimation of the characteristics of measurement errors 7−108546
Sphere-Pac fuel, thermal performance modelling with SPHERE code 7−103003
steel, austenitic stainless, pitting potential, correl. model with bleach process variables 7−78307
steel, C, uniaxial tensile test, heat generation model 7−132679
steel, cathodically protected, corrosion fatigue in marine environments, modelling of crack tip and electrochem. processes 7−144626
steel, micromechanical model for cleavage-crack reinitiation 7−132737
modelling continued
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7−86187
streamflow, maximum likelihood estimators for multisite lag-one model 7−127312
structural elements intercommunication, crack extension model 7−75455
structural materials, corrosion resist. in liq. Li and Na containing nonmetallic impurities, thermodynamic model 7−132799
thermoluminescence, localised transition model of anomalous fading 7−85864
thermoluminescence, model of trap creation and filling during irrad. 7−85863
thin film growth mode models 7−137744
two-body abrasive wear model, plastic deform. localisation 7−136765
unsaturated flow and transport modelling, review 7−114839
US Army fallout prediction model evaluation 7−133154
US testing, computer based modelling of test arrangements *(German)* 7−86542
worldwide medical radiation use, analytical modelling: X-ray, nuclear medicine and radiotherapy appl. 7−71850
WWER-type fuel rods, inclusion of central hole effects, SSYST code modelling 7−129167
Al based metallic glasses, comp. choice, chemical twinning model 7−83736
Al-Cu (5.23 wt.%), melt spinning, heat flow model 7−126092
Cu, polycrystalline, deform. texture development, model predictions 7−138793
Cu, textured tubing, small strain biaxial yield, cryst. slip modelling 7−86282
Cu-Ti system, laser irrad., nucleation temp. modelling 7−86160
CuZnAl, coil spring reversible shape memory actuators, shape strain degradation model 7−100310
Fe-W-C system, thermodynamic evaluation 7−86133
Ga-As soln., electrotransport model for liq. phase electroepitaxial growth 7−100129
$KAl(SO_4)_2.12H_2O$, (111) face, crystal growth kinetics of the two-step model 7−85982
$LiAl/FeS_2$ high temp. cells, mathematical modelling 7−144812
$LiNbO_3$ based electro-optical devices, modelling and BPM calcs. 7−104045
$Li(Si)/FeS_2$, high temp. cells, mathematical modelling 7−144812
$MgSO_4$, (110) face, crystal growth kinetics of the two-step model 7−85982
MoO_3-P_2O_5 glass, US vel., temp. depend., 4-600 K, anelastic and elastic effects 7−76304
Ni base superalloys, creep-corrosion interactions modelling 7−119422
Ni-W-C system, thermodynamic evaluation, sublattice model 7−77951
$Ni_{80}B_{20}$, metallic glasses, structural model, chemical twinning 7−97967
Pd-Si, glassy alloys, two-site model of H solubility 7−106522
^{222}Rn emanation coeff. for coal fly ash grains, release model 7−87251
modelling, computer *see computer-aided analysis*
models *see modelling*
moderation (neutron) *see neutron moderation*
moderators
see also beryllium; graphite; heavy water
AGR core, graphite brick integrity during earthquake 7−141261
AGR core, graphite bricks, mathematical modelling of seismic response 7−141139
CAGR graphite moderator bricks, structural integrity study 7−141159
catalytic isotope exchange, D_2O prod. using wetproof catalyst 7−132970
cold neutron sources, neutron scattering dynamics in liquid hydrogen and deuterium 7−129491
conference on graphite reactor component structural design and integrity, Tokai, Japan (Sept. 1986) 7−140378
core graphite, tensile strengths, statistical characterization 7−141161
graphite, fission product retention capabilities, HTR core study *(German)* 7−109464
graphite, neutron irradiated, in ditolylmethane organic coolant, changes in physicomechanical props. 7−141144
graphite, porous struct., changes during neutron irrad. 7−84037
graphite dust emission from AVR, cold gas fitter tests *(German)* 7−109300
graphite HTGR core and support structures, fracture criteria under multiaxial stresses 7−144547
graphite IG-11, neutron irradiated, degradation of thermal shock resistance and fracture toughness 7−138821
graphite slab, fast neutron transport, vectorized Monte Carlo calc. 7−135393
high conversion PWRs, nuclear design, parametric studies 7−129136
HTGR fuel assembly, graphite sleeve and block, in-pile fission product release 7−96183
HTGR graphite, fine-grained isotropic, oxidation effects on fatigue strength *(Japanese)* 7−135426
HTGR graphite components, mechanical design philosophy 7−141136
HTGR spherical fuel elements, matrix graphite props. 7−141177
IG-110 graphite for VHTR appl., high temp. Young's modulus study 7−141167
Ontario Hydro tritiated heavy water transportation package 7−74250
pebble bed HTR, graphite development and testing in Germany 7−141166
Plexiglass, thermal neutron diffusion 7−131191
pulsed neutron source, reflector effects on thermal neutron intensity, macroscopic total cross section 7−135701
PWR, moderator temp. coeff. of reactivity monitoring using noise anal. technique, LOFT appl. 7−67938
VHTR, reactor core and graphite support components, structural design 7−141137
VHTR graphite subjected to internal heat generation and surface heating, 3D transient thermal stresses 7−81594
$^{12}C(n,n')$, above 14 MeV, cross sections, errors in ENDF/B-V evaluation, kerma-factor calcs. 7−121836
$^{7}Li(n, n)$, thermal n, differential elastic scatt. cross sections 7−73755
modes, laser *see laser modes*
modes, lattice vibrations *see lattice dynamics*
modes, vibration *see vibrations*
MODFET *see high electron mobility transistors*

MODOR *see microwave-optical double resonance*
modular circuits *see modules*
modulation
see also amplitude modulation; demodulation; modulation spectroscopy; modulators; optical modulation; Schwarz-Hora effect
AC field of arbitrary form, current density modulation 7−122812
evolution equations, wave modulation anal. 7−108251
incoherent scatter meas., modulation principle 7−134024
modulated plasma arc shock wave generation 7−124003
polarisation-maintaining fibres, alignment using nondestructive temp. modulation technique 7−104005
position and velocity finding, using sensor array and linear-period-modulated signal *(Japanese)* 7−142134
sound signals, signal processing *(German)* 7−130474
surface waves excitation, modulated electron beam, plasma boundary incident 7−130876
modulation doped field effect transistors *see high electron mobility transistors*
modulation doped structures *see semiconductor superlattices*
modulation factor *see modulation*
modulation index *see modulation*
modulation spectroscopy
see also appearance potential spectroscopy; electroabsorption; electroreflectance; magnetoabsorption; magnetoreflectance; piezoreflectance; thermoreflectance
artifacts, in natural Raman optical activity, Stokes-Mueller treatment 7−80887
benzophenone oxide, self-reaction, optical modulation spectrosc. 7−68290
brain microtubules, flow orientation obs, by linear dichroism 7−86932
chlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
α-(4-dimethylaminophenyl)-ω-(9-phenanthryl) alkanes, exciplex fluoresc., mag. field effects 7−90245
EPR, double modulation spectra, T_1 depend. 7−143897
frequency-modulation spectroscopy, squeezed-state-enhanced 7−73433
inelastic electron tunnelling spectra, signal-to-noise ratios, modulation source props. 7−74757
normalisation procedure using servomechanism driven variable neutral density filter 7−128677
octaethylchlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
polarisation modulated two-photon spectroscopy 7−134851
resonance Raman scattering and luminesc., freq. modulation, finite correl. time 7−140756
sulphonyl radicals, optical absorpt. spectra, meas. and calcs. 7−135953
transient IR absorpt., high sensitivity detect. using tunable diode lasers 7−119592
two-tone optical heterodyne spectroscopy with dye lasers, line shapes 7−82284
wavelength modulation spectroscopy, modification method 7−67399
H_2O, adsorbed on Au, in $HClO_4$, electrochem. modulated IR spectrosc. obs. 7−82093
H_3O^+, ν_4 perpendicular bending mode, IR laser spectroscopy 7−141572
NCS^-, bending and stretching hot bands, vel. modulation laser spectra 7−141573
a-Si:H Schottky diodes, midgap injection-induced optical absorption, modulation spectra 7−118989
modulation transfer function *see optical transfer function*
modulators
see also modulation
differentiating spatial light modulator based on nematic liquid crystal, for optical preprocessing and pattern recognition 7−130317
light modulator for motion picture camera, field standard facilities and requirements *(Czech)* 7−130316
photoelastic modulator for mid-IR range down to 33 μm 7−140727
resonant charging of modulators in linear accelerator 7−129461
sHF waveguide semiconductor modulator for space radiometric systems 7−101656
SLAC linear collider, modulator system and power supply 7−81762
superconducting modulator for extremely sensitive voltage meas. across multifilamentary supercond. wires 7−134803
surface wave electro-optic modulator 7−90770
TFTR neutral ion beam source, power supply arc modulator for system protection 7−81841
$LiNbO_3$:Ti travelling wave interferometer modulator for instrument appls. 7−90769
Na beams optical pumping, efficient electro-optic modulator design 7−82773
modules
see also CAMAC
biomedical, design methodology *(German)* 7−127020
data acquisition and control of physical expt., modular system 7−128546
decentered reflecting optical systems for high-speed cameras, meridianal aberrations computation and compensation 7−97119
electromagnetic actions on the windings of tokamaks 7−137134
laser diode modules, SPICE simulation 7−82550
low Earth orbit plasma anomalous interaction with solar array modules 7−144859
photovoltaic generators in space, 5th European Symposium, The Hague/Scheveningen, Netherlands (Sept.-Oct. 1986) 7−140377
SEM, tilt module and double-sided stub 7−95690
Siemens IR detector module, review *(German)* 7−89260
Wavescan buoy data acquisition module 7−101605
Si bifacial solar array alternative module configuration for low Earth orbit 7−144844
modulus, Young's *see Young's modulus*
moire fringes
automated contour ordering in moire topograms 7−121213
automatic fringe anal., appl. in fracture mechanics 7−104229
biostereometrics, automated contour ordering in moire topograms 7−101036
biostereometrics, conf., Cannes, France (Dec. 1985) 7−95084
composites, metal matrix, deform., moire interferometry investig. 7−123558
computer aided laser measurement techniques *(German)* 7−130227
computer-aided system for automatic fringe analysis 7−73412
computer-based fringe patterns differentiation, microcomputer appl. 7−108642
cross grating moire measurements, phase shift method 7−110549
moire fringes continued
dense moire fringe fields, strain distribs., micro-meas. and multiplied moire fringes *(Chinese)* 7−89250
dental restoration wear meas., difference moire contour-mapping system 7−101043
diamond surface (111), microscopic planar defects, TEM obs. 7−118209
differential interferometer using double aperture imaging applied to phase object study 7−102505
digital moire-effect processing of holographic interferograms 7−128542
double-layer interferometer appl. to group-velocity dispersion meas. 7−102504
ESPI and moire methods for deform. meas. at very high temps. 7−117553
evaluation method 7−80858
evaporation of drops, pure and binary liqs., surface phase mechanism, holographic interferometry meas. 7−76544
glass fabric reinforced epoxy laminates, residual stresses and warpage meas., projection moire technique 7−100467
keratometer, real-time analysis, for diagnosis and meas. of corneal parameters 7−145170
magnetic fields meas. in transmission electron microscope 7−108712
modulation depth, influence of grating sensor parameters *(Chinese)* 7−122818
nonparaxial lenses, focal length determ. by moire deflectometry 7−117282
phase shifted noise interferometry, parallel architecture computer adaptation 7−89254
photometric ordering of ordinary moire fringes 7−116001
plates, pin-loaded, mixed computational algorithm for plane elastic contact problems, combination with moire interferometry 7−117548
real-time optical differentiation for moire interferometry, in-plane displacement fields 7−95638
skewed radial grating moire patterns 7−68824
steel, austenitic stainless, dynamic testing of large specimens, Moire interferometry technique 7−126195
steel wire reinforced epoxy resin matrix, edge effect zone, holographic moire method 7−138805
strain and curvature determ. by phase shift principle *(German)* 7−128535
suppression in half-tone images 7−90526
surface microextensometry, moire interferometry using scanning electron microscope 7−121308
surface relief grating, SEM study, moire fringes appl. 7−83601
two-dimensional stress analysis combining high-frequency moire measurements with finite-element modeling 7−110890
X-ray lithographic mask alignment using moire signals in refl. 7−116038
Al plate, cleavage-fracture studies, moire method 7−119332
Al-Zn-Mg, 7075-T6, fatigue crack tip strains 7−113655
B fibre reinforced Al alloy, deform. of tensile coupon with central slot 7−119310
Si sheet, residual stress meas. by shadow moire interferometry 7−83138
moistening *see wetting*
moisture
see also humidity
coal characterisation and ranking for gasifier slurry concentration potential 7−133027
frost heave model, role of coupled heat and moisture transport *(Japanese)* 7−107445
frost heaving, segregation pot. concept *(Japanese)* 7−107446
lysimeters with monolithic soil column, low-press. principle *(German)* 7−101552
microwave scattering properties of heterogeneous two-component mixtures, appl. to soil and snow water inclusions 7−96932
organoplastic, unidirectional, moisture absorpt. and desorpt. under steady temp.-humidity conditions, Fick's model 7−86391
in quartz-micaschist in maritime antarctic, moisture content rel. to freeze-thaw weathering studies 7−87612
silica gel packed beds, moisture transport, exptl. obs. 7−128497
silica gel packed beds, moisture transport, theory 7−128496
softwood, stable-state creep limit, mechano-sorptive creep 7−71337
soil, drainage for soil underlain by impermeable layer 7−145532
soil, freezing, heat and moisture transfer, self-simulating problem 7−145531
soil, thermal diffusivity, water content effect 7−114134
soil moisture, effect of meas. error and confusion from vegetation on passive microwave estimates 7−107454
soil moisture, effects of salinity on microwave emission 7−107452
soil moisture, effects on classification of Nigerian savanna soils 7−79404
soil moisture, influence on ratio of horizontally to vertically polarised components of atmospherics 7−127338
soil moisture, irregular surface model for microwave remote sensing 7−101563
soil moisture, water content of Uzbekistan loess 7−139648
soil moisture and surface heat flux 7−87739
soil moisture deficits in Great Britain, 1961-86, appl. of MORECS climatological data set 7−127296
soil moisture estimation from diurnal surface temp. obs. 7−107455
soil moisture in Sacramento Basin, water balance model development for climate impact assessment 7−145566
soil moisture sensing, parameterisation of effect of surface roughness on microwave emission 7−127218
soil moisture transport interaction with atm. boundary layer devel. 7−101376
soil wetness changes induced by atmospheric CO_2 increase 7−133783
stratified soils, transient unsaturated flow, moisture content 7−72120
subsurface-irrigation systems in greenhouse, moisture and heat transfer, physical-mathematical model 7−100749
surface soil moisture, temporal obs. using passive microwave sensor 7−101352
underground channels in thawing soil, nonsteady state heat exchange 7−87736
underground pipes, freezing over dynamics 7−145530
^{222}Rn emanation from soil, moisture content effect 7−133485
U mine-tailings disposal area, effect of surface moisture on wind-generated suspension of particulate matter 7−101378
ZrO_2-Y_2O_3 stabilised, H_2O effects under hydrothermal conditions, degradation mechanism 7−86382
moisture content *see moisture*
moisture measurement
see also humidity measurement
cosmic ray neutron attenuation meas. for snow and soil moisture determ. 7−87740

moisture measurement continued
electrical metrology applied to biological and aqueous systems 7−101158
geopotential height fluctuations, microwave radiometry 7−114988
MM wave moisture sounding, effect of clouds 7−114974
nuclear bulk solids analysers, continuous, for cement plant raw mix preparation systems 7−119612
nuclear wet steam turbine expansion curve determ. by radioactive tracer meas. *(Croatian)* 7−67943
radiation leak detection by dew-point meas. in ventilation systems, thermodynamic principles *(German)* 7−129375
sheet materials, basis weight and moisture content, microwave cavity measurements 7−121134
soil moisture estimation using GOES-VISSR data 7−133987
standards development, analytical correlation evolution military appl. 7−95602
unsaturated fly ash landfill moisture content and pressure potential instrument evaluation 7−114160
molar volume *see density*
molecular alignment *see molecular orientation*
molecular beam electric resonance
$ArCO_2$, van der Waals mol., spectrosc. props. and empirical pot. energy surfaces 7−68424
HF, equilib. configuration, mol. beam electric reson., Stark, Zeeman and hyperfine props. 7−82242
molecular beam epitaxial growth
amorphous film, MBE deposited, solid phase crystal growth 7−143262
artificially layered struct., automatic process control 7−138663
artificially structured thin-film materials and interfaces 7−113397
conference, Cambridge, MA, USA (Oct. 1986) 7−128174
conference, York, England (Sept. 1986) 7−66816
film deposition from vapour phase, low-energy ion bombard. effects on microstruct. and microchem. 7−100056
film formation, surface kinetics and dynamics, molecular beam epitaxy 7−143297
film nonuniformity, evaluation formulae 7−77833
fluoride buffer layers for heteroepitaxy of Pb chalcogenides and CdTe 7−92874
fluoride graded IIa buffer layers for heteroepitaxy of Pb chalcogenides and CdTe on Si 7−77824
focused ion beam implantation, alignment mark deformation by MBE overgrowth 7−98200
GaAs-AlAs-Si structure, high mobility, MBE growth 7−77804
heterojunction mobilities determ. using mag. field depend. Hall technique 7−70390
high resolution RBS anal. 7−138621
III-V semicond. cpds., focused ion beam implantation and MBE technology appls. 7−76175
III-V semiconductor layers, MBE grown, charact. by SIMS 7−84008
III-V semiconductors, electron beam source MBE 7−144283
III-V semiconductors, MBE, computer simulation, lattice matched interfaces 7−143263
III-V semiconductors, MBE, computer simulation, lattice matched interfaces 7−143264
III-V semiconductors, MBE, step reactions, computer simulation 7−100078
III-V semiconductors, MBE growth, RHEED oscillations *(French)* 7−132467
infrared materials, characterisation, X-ray diffraction techniques 7−130982
IV/IV semiconductor heterostructures, growth, initial stages of interface formation 7−84552
layered semiconductor structures, research 7−105682
linearly graded comp. or doping profiles 7−144282
MBE, low temp. 7−76653
MBE grown, highly resistive layer at growth interrupted interface 7−76669
MBE grown doping structs., carrier profiles, spreading resistance anal., model calcs. 7−85024
MBE using RHEED intensity oscillations *(Japanese)* 7−125996
molecular beam flux from liquid source 7−125989
pure source for molecular-beam epitaxy 7−106390
quality optimisation by supercomputer simulations 7−124741
quantum well structures, electric field dependence of optical props. 7−144032
rarefied fluid dynamics cylindrical vessel, Monte Carlo direct simulation *(Japanese)* 7−142330
semiconductor lasers, single element fundamental mode, recent developments 7−110393
semiconductor MBE growth, RHEED intensity oscills., computational modelling 7−112139
semiconductors, band-gap engineering, device appls. 7−125998
strained layer semiconductors, growth and defects 7−138019
surface (111), surface topography changes during MBE growth, microprobe RHEED study 7−98636
surface growth, RHEED intensity oscill. technique 7−70116
surfaces, kinetics of fast steps 7−143160
thermodynamic modeling, appl. to II-VI semiconductors 7−98748
transition metal silicide films on Si, epitaxial growth, props. and applications, review 7−86022
(Al,Ga)As/$(Ca,Sr)F_2$ multilayer structures, MBE growth as broad-band high-reflectivity mirror 7−77825
(Al,Ga)As-GaAs heterostructures grown by MBE with growth interruption, photolum. 7−70869
AlAs/GaAs heterostructures, low temp. growth by modulated MBE 7−125990
$(AlAs)_m(GaAs)_m$ superlattices, ultrathin-layer, MBE growth 7−100074
AlGaAs, high quality, quantum wells, low temp. MBE growth, mobility and photolum. obs. 7−71022
AlGaAs, MBE grown layers, elec. props., Hall meas. 7−70315
AlGaAs, MBE growth, C impurity conc., photoluminesc. spectra 7−112115
AlGaAs, MBE growth, photoluminesc. spectra 7−143280
AlGaAs MBE growth on lenticular GaAs substrates, surface morphology and photolum. props. 7−124797
AlGaAs, MBE growth instabilities and roughening rates on misoriented substrates, RHEED study 7−131490
AlGaAs:Si, electrical properties, effect of coincident Pb flux during MBE growth 7−77112
AlGaAs/GaAs structures, MBE growth, compositional gradient control, RHEED oscills. 7−71014
molecular beam epitaxial growth continued
AlGaAs-GaAs heterostructure on GaAs (110), MBE growth and props. 7−71026
AlGaAs-GaAs heterostructures, MBE growth with interruption at interfaces, optical props. 7−143272
AlGaAs-GaAs laser diode, inner stripe type, single-step MBE fabrication 7−68675
AlGaAs-GaAs lasers, single element fundamental mode, recent developments 7−110393
AlGaAs-GaAs MQW lasers on Si substrates, MBE grown, low threshold operation 7−122948
AlGaAs-GaAs ridge waveguide DFB laser, MBE fabricated, low-threshold current 7−68681
AlGaAs-GaAs single quantum wells, MBE, photolum. 7−70868
AlGaAs-InGaAs resonant tunnelling structs., MBE growth 7−144286
$AlGa_{1-x}As$, MBE grown, ODMR study 7−143933
$Al_{0.3}Ga_{0.7}As$ MBE growth, parameter effects, high energy electron diffr. study 7−92025
$Al_{0.3}Ga_{0.7}As$, MBE growth on GaAs (100), RHEED specular beam intensity 7−113392
$Al_xGa_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Al_xGa_{1-x}As$ epitaxial thin crystals, long range order, depend. on growth parameters 7−105347
$Al_xGa_{1-x}As$, MBE growth, phased locked RHEED oscills. 7−71013
$Al_xGa_{1-x}As$, surface segregation, growth interface roughening 7−85952
$Al_xGa_{1-x}As$:Si MBE films on GaAs(511) substrates, low temp. photoluminesc. 7−125782
$Al_xGa_{1-x}As$-GaAs quantum well heterostructure, continuous photopumped laser operation 7−110348
$Al_xGa_{1-x}As$-GaAs quantum well heterostructs. grown on Si, stable room temp. CW laser operation 7−136295
$Al_xGa_{1-x}As$-GaAs quantum wells, MBE growth on GaAs (331) substrate 7−143279
$Al_xGa_{1-x}As$-GaAs selectively doped heterostruct., MBE, GaAs oval defect elimination by substrate prep. 7−71023
AlGaInAs/GaInAs, double HJBT, MBE growth, characts. 7−77814
$Al_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
As_2 source for MBE, high efficiency catalytic cracking oven 7−137734
BaF_2/(Ga,In)(As,Sb) structures, MBE growth 7−77826
$(Ca,Sr)F_2$-GaAs SIS structures, MBE grown, high resolution TEM study 7−118280
CaF_2-MSi_2-Si (111) structs. (M=Co, Ni), MBE growth 7−144285
CdHgTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
$Cd_xHg_{1-x}Te$, molecular beam epitaxial growth, thermodynamic modelling 7−98748
CdMnTe, photoassisted MBE 7−132472
CdMnTe-CdTe:In doped superlattices, growth by photoassisted MBE, physical props. 7−77803
CdTe layers on semiconductor substrates, MBE growth, relax. of stresses 7−92015
CdTe, MBE grown, mismatch strain meas., free exciton absorpt. and refl. 7−76683
CdTe, MBE growth on GaAs (100), RHEED study 7−131485
CdTe, MBE on GaAs substrate, high resolution TEM 7−132473
CdTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
CdTe photoassisted MBE films, controlled substitutional doping 7−131164
CdTe:Al on GaAs, MBE growth and Al doping, struct. optical and elec. props. 7−77820
CdTe:In(Sb), thin films, photoassisted MBE, substitutional doping 7−132472
CdTe-InSb multilayers, MBE growth and interdiffusion 7−77821
$Cd_{1-x}Zn_xTe$, MBE grown, phase separation 7−131487
$CoSi_2$-Si MBE layers, strain relax. 7−143276
$CuInSe_2$, semicond. film vap. deposition, chem. reaction model 7−119169
$DyBa_2Cu_3O_{7-x}$ high T_c supercond. film, MBE growth and props. 7−143245
α-Fe ferromagnetic films, MBE growth on ZnSe (001), (110) 7−76686
Fe MBE films on ZnSe epilayers, mag. props. 7−118838
Fe, single-crystal films, MBE growth on GaAs(100) 7−113393
Ga-Al-In-As ternary and quaternary alloy compositions, MBE growth and device appl. 7−77810
$Ga_xAl_yIn_{1-x-y}As$-InP multilayer heterostructs., MBE growth, appl. to p-i-n APD 7−144287
GaAs (001), MBE and stepped surfaces, RHEED studies 7−143165
GaAs (001), surface disorder-induced Kikuchi features in RHEED 7−143142
GaAs (001) substrates, in situ chem. etching by gaseous HCl prior to MBE growth 7−143274
GaAs defect struct. generated during MBE, growth temp. depend., TEM study 7−112138
GaAs, doping in metalorganic MBE using gaseous sources 7−76152
GaAs, electrical properties, effect of coincident Pb flux during MBE growth 7−77112
GaAs epitaxial layers on Si, misfit dislocations, atomic resolution electron microscopy 7−84548
GaAs epitaxial layers on Si, growth, props. and applications to FETs and LEDs 7−86034
GaAs, films, growth in continuous gas-epitaxy reactors, gas-flow regimes, num. study 7−118323
GaAs films, initial stages of MBE growth on Si (100) 7−84600
GaAs films, MBE growth on Si, dislocation density and carrier mobility 7−84598
GaAs films, MBE on Si, structural and optical props. 7−84599
GaAs films grown by MOMBE, defects 7−76673
GaAs, gas source MBE, doping enhancement by excimer laser irradiation 7−71035
n-GaAs, gas source MBE grown, electron traps, DLTS study 7−98863
GaAs grown on $(Ca,Sr)F_2$ by MBE, elec. resist. and Hall effect meas. 7−77114
GaAs layer, MBE on (100)-oriented Si substrate, preheating effect, charactn. 7−113394
GaAs layers, MBE on Si, structural evolution 7−84602
GaAs, MBE, acceptor conc., Hall mobility, photolum. 7−77113
GaAs, MBE, growth surface, RHEED oscill. obs. 7−70117
GaAs, MBE, low dimensional systems, quantum wires and boxes 7−70121

molecular beam epitaxial growth continued
GaAs MBE, optical meas. of Ga beam flux 7−71024
GaAs, MBE, secondary electron emission oscills., RHEED obs. 7−71018
GaAs, MBE, substrate temp. and growth rate meas. by IR spectroscopy 7−71015
GaAs MBE, surface defects anal. 7−76659
GaAs, MBE, surface diffusion, RHEED 7−70118
GaAs, MBE, surface phase diagrams, appls. 7−71017
GaAs MBE film grown on Si (001) RHEED studies and interface anal. 7−76670
GaAs, MBE grown, δ-doping, device appl. 7−77811
GaAs, MBE grown, very high purity, free exciton photoluminesc. and magnetophotoluminescence spectra 7−144115
GaAs, MBE grown crystals, dopant incorporation, kinetic and thermodynamic aspects 7−137381
GaAs, MBE grown layers, elec. props., Hall meas. 7−70315
GaAs MBE grown surface, Sb used for passivation 7−71402
GaAs, MBE growth, asymm. interface roughness, computer simulation 7−143159
GaAs, MBE growth, focused ion beam doping 7−76154
GaAs, MBE growth, oval defects due to Ga_2O_3 and particulates 7−143273
GaAs MBE growth, parameter effects, high energy electron diffr. study 7−92025
GaAs, MBE growth, phased locked RHEED oscills. 7−71013
GaAs MBE growth, RHEED intensity oscillation study 7−92872
GaAs, MBE growth from triethylgallium and AsH_3 7−71032
GaAs MBE growth on Ge (100), antiphase domain suppression, RHEED obs. 7−70127
GaAs MBE growth on high temp. H annealed (100) Si substrates, expt. study 7−144279
GaAs MBE growth on Si, charactn. 7−70126
GaAs MBE growth on Si(100), initial stages and domain struct. 7−70137
GaAs, MBE growth on Si 7−84597
GaAs, MBE growth on Si(100), dislocation accommodation 7−100084
GaAs, MBE growth on Si(100), antiphase boundaries, self-annihilation 7−124769
GaAs MBE growth on Si using thermally strained buffer layers 7−124796
GaAs, MBE growth on Si substrate, elec. and optical props. 7−144289
GaAs, MBE growth using triethylgallium and As_4 7−71029
GaAs MBE layer growth on InP substrate, AES study 7−77806
GaAs MBE layers, oval defects 7−98739
GaAs MBE layers on misoriented Si substrates, cryst. orientations and defect structs. 7−143282
GaAs, MBE on Si, rapid thermal annealing, APD fabrication 7−143283
GaAs, MBE on Si substrate, IC appls. 7−138662
GaAs MBE on SiO_x and photolum. props. study 7−131479
GaAs monomolecular layer epitaxy, deposition mechanism study 7−100081
GaAs, nucleation, MBE growth stages on Si(100), 3D critical transition 7−111814
GaAs, nucleation on vicerial Si, multilayer step formation after As adsorption 7−105309
GaAs on Si substrates, polar-on-nonpolar epitaxy 7−70125
GaAs p-n junctions, MBE growth on AlGaAs buffer layers 7−138017
GaAs, single domain MBE films, growth on double domain Si(001) substrates 7−71034
GaAs substrates, in situ deoxidation by HCl gas, MBE appl. 7−71414
GaAs substrates, radiationally heated, behaviour and charcts. 7−143275
GaAs, very high purity MBE layer, free exciton dominated photoluminesc., magnetophotoluminescence spectra 7−106260
GaAs:Be/AlAs multilayered structure, compositional disorderings, MBE growth temp. dependence 7−125987
GaAs:In, low temp. MBE growth, elec. props. studies 7−124798
GaAs:In, MBE, photolum. 7−77813
GaAs:In, substrate for thin film appls., growth of MBE GaAs layers 7−91937
GaAs:In MBE layers, elec. props. 7−77111
GaAs:Si, AlGaAs and GaAs-AlGaAs heterostruct., MBE growth of highly uniform epitaxial layers over multiple substrates 7−71025
GaAs:Si, doping from disilane in gas source MBE 7−77808
GaAs:Si, δ-doping layer, magnetotransport props. 7−131688
GaAs:Si, gas source MBE growth, Si doping 7−125986
GaAs:Si, MBE grown, doping efficiency and thermal stability of electron conc. 7−142810
GaAs:Si, MBE growth on (311) substrates, elec. and optical props. 7−125988
GaAs:Si (100), MBE grown, high resolution EELS, As desorption, plasmon and phonon modes 7−125877
GaAs:Si MBE layers, valence band structs., UPS study 7−132406
GaAs:Sn MBE grown in hydrogen presence, DLTS and photolum. 7−70239
GaAs/(Ca,Sr)F_2 heteroepitaxial layers, MBE grown, crystalline defects 7−112127
GaAs/$Al_xGa_{1-x}As$(100) quantum well structs., MBE, RHEED, photolum., computer simulation 7−70093
GaAs/AlGaAs GRIN SCH quantum well lasers, MBE growth on misoriented (111)B substrates 7−97011
GaAs/AlGaAs heterostructs., MBE growth and transport props. 7−105696
GaAs/AlGaAs interfaces, MBE grown, O accumulation, SIMS profiling 7−105289
GaAs/AlGaAs laser diodes on monolithic GaAs/Si substrates, prep. and characterisation 7−82570
GaAs-$Al_{0.33}Ga_{0.67}As$ single quantum well interfaces, MBE grown, photoluminesc., RHEED dynamics studies 7−112093
GaAs-$Al_{0.3}Ga_{0.7}As$, modulation doped quantum well structs., MBE, anisotropic low field electron transport 7−70388
GaAs-$Al_{0.3}Ga_{0.7}As$ modulation doped quantum well structures, anisotropic electron transport 7−118561
GaAs-$Al_xGa_{1-x}As$ multilayer structures 7−105684
GaAs-$Al_xGa_{1-x}As$ quantum wells grown by interrupted, uninterrupted MBE, interface struct. atomistic models 7−70124
GaAs-$Al_xGa_{1-x}As$ quantum-well structures, MBE grown, Be acceptor Raman scatt. 7−70765
GaAs-$Al_xGa_{1-x}As$ quantum wells, MBE, RHEED, disorder, interfacial step distrib., lumin. studies 7−138513
GaAs-AlAs quasiperiodic heterostructures, MBE growth, struct., electronic and vibr. props. 7−70122
GaAs-AlAs superlattice, MBE grown, structure anal. 7−70098

molecular beam epitaxial growth continued
GaAs-AlAs superlattices grown by MBE, struct. props., TEM and X-ray diffr. obs. 7−70123
GaAs-AlGaAs, distributed feedback transverse junction stripe laser, 867 nm, MBE grown 7−117226
GaAs-AlGaAs 2D-EG structs. with high carrier mobility, MBE growth 7−143583
GaAs-AlGaAs lateral DH DFB surface-emitting laser diode 7−110383
GaAs-AlGaAs superlattices, MBE growth 7−137755
GaAs-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
GaAs-$Ga_{1-x}Al_xAs$:Si superlattices, MBE, plasmons, Raman scatt. obs. 7−70764
GaAs-GaAlAs, growth and interface characterisation 7−98747
GaAs-GaAlAs, quantum well wires and boxes, quantum size effects 7−85084
GaAs-GaAlAs superlattice including sub-monolayer grown by MBE, SIMS anal. 7−84547
GaAs-InAs, heteroepitaxy of MBE InAs films, inhomogeneous lattice distortion 7−137733
GaAs-on-Si, MBE grown, ion implantation and annealing props. 7−143284
GaAs-Si, MBE grown, photolum. microscopy 7−137735
GaAs-Si, MBE grown GaAs layers, dislocations effect of annealing 7−84535
$GaAs_{0.5}Sb_{0.5}$-InP, MBE growth, low temp. optical characterisation 7−105303
GaAs; MBE growth on GaAs (331) substrate 7−143279
GaInAs-AlInAs pseudomorphic MODFET heterostructs., MBE growth and charactn. 7−143585
GaInAs-AlInAs quantum well TEGFET structs., MBE growth and charactn. 7−143586
GaInAs-AlInAs single quantum wells, MBE growth, photoluminesc. charactn. 7−112124
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
$Ga_{0.47}In_{0.53}As$-InP, quantum well photodiode, photocurrent step-like struct. 7−143603
$Ga_{1-x}In_xAs$, MBE growth on Si substrate, characterisation 7−71033
$Ga_{1-x}In_yAs$ and $Ga_{1-x}Al_xAs$, MBE growth, minimum As pressure *(French)* 7−132466
$Ga_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
GaInAs(P), gas source MBE, single quantum wells, superlattice p-i-ns and bipolar transistors 7−77807
GaP films on Si substrates *(Japanese)* 7−119651
GaP, gas source MBE using PH_3 decomposed by electron impact 7−71057
GaSb, MBE grown, spectroscopic studies of shallow defects 7−77631
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
Ge, MBE, high quality heteroepitaxy on (100) Si 7−76678
Ge, MBE growth on Si(100), crystalline quality, thermal annealing effects 7−100085
Ge-Si (111), dislocation struct., transmission electron microscopy 7−84542
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
Ge_xSi_{1-x}/Si (001) heteroepitaxial system, MBE growth, RHEED oscillations 7−100083
Hg based II-VI compounds, developments and trends in MBE 7−77819
Hg-based materials, MBE growth, Hg source 7−106419
HgCdTe, developments and trends in MBE 7−77819
HgCdTe epilayers with predesigned comp. profiles, laser MBE growth 7−132464
HgCdTe layers, MBE, spectroscopic ellipsometry 7−71021
HgCdTe, MBE on GaAs substrate, high resolution TEM 7−132473
HgCdTe, X-ray diffraction characterisation 7−130982
HgCdTe/CdTe/GaAs/Si epitaxial struct., growth and characterisation 7−84550
$Hg_{1-x}M_xTe$ (M=Cd, Mn, Zn), MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Mn_xTe$-CdTe superlattices, MBE grown, characterisation 7−77056
$Hg_{1-x}Mn_xTe$-HgTe superlattices, MBE growth 7−132463
HgTe, growth on GaAs substrate, high resolution TEM 7−132473
HgTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
HgTe-CdTe, multilayer structures, on $Cd_{1-x}Zn_xTe$ 7−131462
HgTe-CdTe MBE grown superlattices, optical props. 7−92650
InAlAs/InGaAs resonant tunneling barrier structures, MBE grown, negative differential resistance 7−70395
$In_{0.52}Al_{0.48}As$ electro-optic directional coupler grown on InP by MBE 7−136498
$In_{0.52}Al_{0.48}As$ MBE growth, parameter effects, high energy electron diffr. study 7−92025
$In_{0.52}Al_{0.48}As$, MBE growth and charactn. 7−143281
n-$In_{0.52}Al_{0.48}As$ MBE layers, deep level capacitance transient anal. 7−143397
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ resonant tunnelling barriers, MBE grown, negative differential resistance 7−70397
$In_{0.52}Al_{0.48}As$-InP, MBE grown, nonrandom alloying 7−76651
InAs heteroepitaxy on GaAs, lattice relax. study 7−76672
InAs, MBE, selective epitaxial growth on GaAs 7−125991
InAs, MBE, surface phase diagrams, appls. 7−71017
InAs, MBE on (001) GaAs, monolayer stage, island form., TEM obs. 7−70120
InAs/$Sr_{1-x}Ba_xF_2$/InAs structures, MBE growth 7−100088
InAs-GaAs quantum well TEGFET structs., MBE growth and charactn. 7−143586
InAs-GaAs strained-layer superlattices, HRTEM, X-ray diffr. and photolum. meas. 7−70095
InAs-GaAs structures, MBE growth, in situ contact form. 7−143582
$InAs_{1-x}Sb_x$-InAs, MBE growth, optical props., 8 to 12 μm range 7−92651
InGaAlAs-InP monolithic integrated ridge waveguide photodiodes, MBE grown, 1.55 μm operation 7−104036
InGaAlAs-InP ridge optical waveguide grown by MBE, low loss 7−136531

molecular beam epitaxial growth continued
$In_{0.53}(Ga_xAl_{1-x})_{0.47}As$ layers, MBE growth, photoluminesc. charactn., optointegrated device appls. 7−144288
$In_{1-x-y}Ga_xAl_yAs$, MBE growth and charactn. 7−143281
InGaAs strained layer superlattices, MBE grown, 1.6-2 μm photoluminesc. efficiency 7−77834
InGaAs/GaAs n-n^+ heterojunctions, discrete interface traps 7−143569
InGaAs/GaAs stained layer superlattice, MBE, photolum. 7−77813
InGaAs/InAlAs modulation doped heterostructures, high-field transport 7−112454
InGaAs/InAlAs quantum wells, MBE, photolum. 7−77813
InGaAs/InP and InAlAs/InP heterostructures, chemical etching 7−132827
InGaAs-InGaAlAs, heterostructures, MBE growth, high speed device appls. 7−76675
InGaAs-InP quantum well structs., thermal stability, growth by gas source MBE 7−86219
$In_{0.53}Ga_{0.47}As$ MBE growth, parameter effects, high energy electron diffr. study 7−92025
$In_xGa_{1-x}As$-GaAs n-n heterojunction epilayers, MBE growth and charactn. 7−143587
$In_xGa_{1-x}As$-$In_xAl_{1-x}As$ MQWs and GaAs, MBE growth, lumin. 7−124739
InGaAsP-InP lasers, single element fundamental mode, recent developments 7−110393
InGaAsP-InP material, waveguide struct. by epitaxial techniques 7−136532
InGaAsP-InP quantum well modulators, MBE grown 7−110552
InGaAs(P)-InP superlattices, MBE grown, high resolution X-ray diffr. study 7−131478
InGaAsSb-AlGaAsSb DH laser, MBE growth 7−141884
$In_xGa_{1-x}As_ySb_{1-y}$ MBE on GaSb (100), room temp. IR photolum. study 7−70129
n-$In_{0.53}Ga_{0.47}As$ MBE layers, deep level capacitance transient anal. 7−143397
InP (001) substrates, in situ chem. etching by gaseous HCl prior to MBE growth 7−143274
InP epitaxial growth on Si using MIBE technique 7−77805
InP, MBE grown crystals, dopant incorporation, kinetic and thermodynamic aspects 7−137381
InP, MBE using low-energy P^+ ion beam, elec. and optical props. 7−77812
InP, materials aspects, conf., Harwichport, MA, USA (Sept. 1986) 7−120691
InP:S, MBE grown, S incorporation and desorption 7−76674
InP-GaInAs quantum wells and selectively doped heterostructures, growth and charact., solid source MBE 7−77809
InSb-CdTe heterojunctions, interface characterisation and MBE growth *(Polish)* 7−132475
InSb-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
InSb-CdTe interface prepared by MBE, quasi-2D electron gas, Shubnikov-de Haas obs. 7−77072
KCl (100) surfaces, growth spirals, step vel. meas., molecular beam method 7−83815
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
Mo-Cu multilayered film, RHEED intensity oscill. during MBE growth 7−84596
Mo-GaAs, oriented growth of metal films, microstruct. 7−118303
Nb films grown in UHV MBE system, epitaxial relations and supercond. props. 7−76687
Nb-GaAs, oriented growth of metal films, microstruct. 7−118303
NiGa on GaAs, epitaxial thermodynamically stabilised metal/III-V semiconductor interface 7−138063
$NiSi_2$ layers grown on Si (111) by MBE and SPE 7−76679
$NiSi_2$/Si high quality epitaxial films grown by MBE, Schottky contact props. 7−76680
$Pb_{1-x}Ba_xTe$, MBE growth, diode laser appls. 7−131486
$Pb_{1-x}Cd_xS_{1-y}Se_y$/PbS/$Pb_{1-x}Cd_xS_{1-y}Se_y$, DH lasers, MBE, pulsed operation 7−74960
$Pb_{1-x}Eu_xSe$, MBE, elec. characts., optical props., diode laser and IR appl. 7−77815
PbSnSe/PbSSe/PbS heterostruct. laser, separate electron and optical confinement 7−141864
$Pb_{1-x}Sn_xTe$ epitaxial films, MBE deposited, study 7−144281
$Pb_{1-x}Sn_xTe$, on Ge, Si, GaAs, InSb and BaF_2 substrates 7−77830
$Pb_{1-x}Sr_xTe$, MBE growth, diode laser appls. 7−131486
PbTe, MBE growth on GaAs (100), RHEED study 7−131485
PbTe(Se) and (Pb,Sn)Se IR detectors on Si, heteroepitaxial growth 7−73424
Si (001), RHEED intensity calcs. for stepped surfaces for interpretation of oscills. during MBE growth 7−84464
Si crystal defects formation, depend. on cryst. orientation 7−71028
Si, epitaxial growth, book 7−102034
Si film, MBE, substrate cleaning, layer nucleation, in situ light scatt. 7−77817
Si, MBE, developments review 1984-86 7−77816
Si, MBE, growth on single domain surface, RHEED oscills. 7−71019
Si, MBE, nucleation and annealing, LEED, spot profile analysis 7−76676
Si MBE, particulate behaviour 7−143278
Si MBE, use of alloy source for group V 7−144284
Si, MBE grown, influence of substrate misorientation and temp. 7−76671
Si, MBE growth, delta-function doping layer 7−91623
Si MBE layers, impurity and defect study 7−76812
Si MBE on GaP and GaAs 7−105685
Si monolayer films, epitaxial growth, optical SHG study 7−131489
Si:As, MBE growth, doping by low-energy implantation using microion source 7−142808
Si:B, heavy doping in MBE using HBO_2 source, knudsen cell 7−91605
Si:B(P), ion implantation during MBE growth 7−142809
Si:In MBE growth, accelerated-ion beam doping using low energy In ion source 7−86033
Si/$CoSi_2$ epitaxial structures, MBE, Si overgrowth, permeable base transistor appl. 7−77818
Si/$Si_{1-x}Ge_x$ heterojunctions, MBE, elec. characts., cond. band discontinuity 7−77071
Si/SiGe strained layer superlattices, MBE, band offsets, vertical transport meas. 7−77070
Si-$CoSi_2$, MBE of $CoSi_2$, in situ TEM study 7−137731

molecular beam epitaxial growth continued
3C-SiC/6H-SiC MBE growth, elec. props. of p-n junction 7−77823
SrO-Si interfaces, MBE heteroepitaxial growth 7−118299
Zn_3As_2, MBE growth on InP or GaAs 7−77822
$Zn_{1-x}Fe_xSe$ dilute mag. semiconductor, MBE growth, characterisation 7−112117
$ZnGeAs_2$ MBE growth on GaAs 7−77822
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
ZnS, MBE growth on Si substrates 7−138668
ZnS, MBE on oriented (100) Si substrates, crystallographic quality, morphology 7−71020
ZnS(Se), metalorganic MBE growth 7−131476
ZnSe, epitaxial growth on Ge(100) by MBE 7−143255
ZnSe, film quality in MBE growth, beam pressure ratio effect, optical and elec. props. 7−76684
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe, MBE growth on GaAs (001), RHEED intensity oscillations 7−71031
ZnSe MBE layers, surface phase diagram, RHEED study 7−137749
ZnSe, MBE single cryst. growth, vapour species conc. obs. 7−137763
ZnSe-GaAs (100), plastic deformation in MBE grown ZnSe layers 7−76668
ZnSe-ZnTe strained-layer superlattice, growth and charactn., photolum. and TEM obs. 7−76682
ZnSe−ZnS strained-layer superlattices, metallorganic MBE growth 7−132465

molecular beam magnetic resonance
No entries

molecular beams
see also molecular beam electric resonance; molecular beam magnetic resonance; molecule-surface impact; particle velocity analysis
acetylene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
alkanes, dissoc. adsorpt. on Ir (110), dynamics study 7−106825
alkylamine clusters, H-bonded, photoionis. mass spectrosc. 7−136115
amines, electron impact ionis., crossed beams expt. 7−103676
angular distribution of flux at the exit of cylindrical tubes 7−137012
anthracene, supersonic beam, intramolecular dephasing and vibr. redistrib., fluoresc. 7−129773
atom-surface interaction potentials, mol. beam expts. 7−144226
2-bromo-1,1,1,3,3,3-hexafluoro-2-(trifluoromethyl)propane, nonlinear IR absorption 7−116973
chloroacetylene, C-H stretching, hyperfine props., RF spectra 7−129696
chloromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7−90246
conference, Edinburgh, Scotland, July 1987 7−140374
diagnostic by CAMAC time-of-flight analyser 7−103689
elementary chemical processes, mol. beam studies 7−110138
ethene, mol. beams, terminal rot. distrib. meas. 7−141672
ethene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
ethyne, mol. beams, terminal rot. distrib. meas. 7−141672
flow through two tubes with different diameter, transmission probabilities computing 7−137013
fluoromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7−90246
high energy molecular beam scattering, vibr. rainbow effect 7−90451
hydrocarbons, photolytically induced reactions, molecular beam mass spectroscopy observations 7−144687
inert gas excimer radiation from a free jet expansion 7−96730
methanal beam, rot. transitions in pulsed strong field 7−129680
methane+Ar(Ne)(Kr)(Xe) scatt., absolute integral cross sections meas. 7−90322
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7−90269
methyl nitrite, mol. beam photodissoc., translational spectra 7−74721
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
molecular beam laser saturation spectroscopy, sub-Doppler technique 7−96788
multiple-photon excitation and dissoc. book 7−88755
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
organised amphiphilic monolayers, NO scattering 7−143231
photofragment rotational distributions, parent internal motion, semiclassical calculation 7−136024
propyne, mol. beams, terminal rot. distrib. meas. 7−141672
propyne, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
pulsed system for real-time reactive scattering from solid surface obs. 7−106351
pure source for molecular-beam epitaxy 7−106390
self-maintained reed chopper for beam modulation in UHV 7−82392
slit pulsed valve for generation of long-path-length supersonic expansions 7−97567
surface process probe, molecular beams 7−144758
tetramethyltin, photodissoc. at 193 nm 7−110049
time-of-flight signal meas., photoelectronic method 7−74785
Al+O_2(SO_2), reactive scatt. using pulsed crossed supersonic mol. beams 7−144707
Ar molecular beam scatt. from Ir (110) clean and CO covered surfaces 7−106352
Ar, study using triband ring selector 7−136094
CO molecular beam scatt. from Ir (110) clean and CO covered surfaces 7−106352
CO oxidation, on pt, molecular beam/infrared emission spectroscopy 7−144759
CO_2 negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
CS_2, singlet and triplet channels, photofragment spectroscopy 7−141637
Ca^*+SF_6, reaction dynamics, excitation functions 7−144712
D+H_2→HD+H, molecular beam scattering 7−144711
F+iodoethane(pentafluoroethane)(iodopropene), crossed beam laser-induced fluoresc. investig. 7−90388
Ga mol. beam flux for GaAs MBE, optical reson. fluoresc. meas. 7−71024
H_2, fast beam, Rydberg state, hyperfine and fine struct., UV obs. 7−74656
H_2+glyoxal, rot. and vibr. energy transfer, crossed beam study 7−136045
HD, triplet 3s,3d complex, laser photofragment spectroscopy 7−141588
H_2O, evaporation from liq. jet surface, mol. beam investig. 7−141671

molecular beams continued
H_2O negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
I_2 predissociation in supersonic beam condenser microphone detector 7−103594
N_2, molecular beam, electron ionisation, optical model 7−68467
NH_3, mol. beams, terminal rot. distrib. meas. 7−141672
NH_3, monomers and clusters, supersonic jets, Raman spectra 7−135946
NH_3, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
$NH_3(ND_3)$, rot. consts., multiphoton ionisation spectra 7−117031
NO seeded mol. beam, IR diode laser absorpt. spectroscopy 7−109884
NO, self-alignment by laser beam irrad. 7−68399
N_2O negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
Ni carbonyl cluster ions, bonding, synthetic chem. in mol. beam 7−90471
$O+H_2 \rightarrow OH+H$, reactive collision, crossed beam expt. 7−144710
O_2^+, impact on Ag (111), harpooning transitions 7−125901
OCS, supersonic mol. beam, Fourier transform microwave spectra 7−129699
OCS-Ar(Kr)(Ne), supersonic mol. beam, Fourier transform microwave spectra 7−129699
SF_4^+, $\tilde{D}^2A_1$-$\tilde{C}^2T_2$ emission band, John-Teller distortion 7−68337
SF_6 molecules, free jet expansion 7−110135
SO_2, mol. beams, photodissoc., translational energy and angular distrib. meas. 7−136022
$SO_2(SO_2^+)$, geometry, dynamics, supersonic molecular beam photoelectron spectra 7−136003
TIF, time reversal invariance limits from hyperfine struct. 7−136092
UO_2^+ complexes, IR laser-induced decomp., mol. beam depletions anal. 7−68450

molecular biophysics
see also biomembrane transport; biomolecular effects of radiation; DNA; lipid bilayers; proteins
(1,2-) diradylphosphatidylethanolamines, cryst. packing, lamellar electron diffr. study 7−91556
acetylcholine chloride positron annihilation angular correls., temp. dependence of narrow component intensity 7−139199
N-acetylproline amide, γ turn, ab initio calcs. 7−129556
ACTH, dynamics, fluoresc. anisotropies and lifetimes determ. 7−129767
actin, crosslinking, network connectivity and crit. gel point, probabilistic theory 7−114186
actin/α-actinin gels, mech. props. rel. to deform. rate 7−71809
acyl carrier protein, valine and leucine side-chain proton reson. assignment, 2D RELAY 7−126718
adenine, aq. soln., self-assoc., UV spectra 7−78474
adenine compounds, mol. interactions, Raman and IR spectra studies 7−86604
adenosine, ^2H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
adenosine, aq. soln., self-assoc., UV spectra 7−78474
agarose gels, molecular dynamics, NMR, Rayleigh scatt., Mossbauer radiation 7−126698
alanine dipeptide in water, integral eqn. methods for evaluation of correlations 7−114164
alanines, interactions with positrons from ^{22}Na decay rel. to chirality 7−121727
albumin, secondary struct., FT IR spectrometric obs. 7−86908
albumin, struct and activity, hydration effects, integrated optics and IR Raman spectra study 7−68496
alkaline phosphatase, phosphoresc. quenching by O_2 and NO, rel. to protein struct. inflexibility 7−133218
alpha-helices stabilisation, tests of helix dipole model 7−86888
alpha-helix, solitons, anal. 7−78719
amino acid assignments, millimolar solutes, inhomogeneous part elimination of PMR spectra 7−71941
amino acid sequences in proteins, multivariate statistical anal. 7−114178
α-amino acid surfactant monolayer on water, elucidation of 2D struct. using synchrotron X-ray diffr. 7−114180
amino acids, low frequency Raman scatt. spectra, laser light effects 7−113195
amino acids, UV reson. Raman excitation profiles study 7−68323
amino acids in solution, recognition, hydrophobic forces role 7−86884
γ-aminobutyric acid and inhibitors of restricted conform., electrostatic pot. maps, biological activity, CNDO STO calcs. 7−78732
p-aminophenol group, electronic struct., biological activity, UV PES anal. 7−78751
5′-AMP, aq. soln., self-assoc., UV spectra 7−78474
anthracyclines, aglycone moieties, redox props., electrochemical expts., ab initio MO calcs. 7−100796
anthracyclines, imino derivatives, electronic props., relative stabilities 7−133214
antibody-protein binding mechanisms 7−133197
anticodonic nucleotides, interaction with cognate amino acid, fast atom bombard. mass spectroscopy study 7−86887
apolipoprotein A-1-dimyristoylphosphatidylcholine recombinants, boundary lipids, Raman obs. 7−71694
arginine, aq, soln., UV reson. Raman spectra study 7−70800
aridicin aglycon, primary struct., long-range J valves, COSY and COLOC NMR spectra 7−139198
aromatic amino acids adsorbed on Ag particles, SERS studies 7−106962
aspartic acid, side reactions in peptide synthesis, mass spectrometric obs. 7−144704
atomic spectroscopic anal. of biological material review 7−101162
ATP compartmentation in skeletal and cardiac muscles, anal. using ^{31}P NMR saturation transfer 7−100791
8-azapurine nucleoside analogs, interaction energy during transcription 7−106957
3′-azido-2′, 3′-dideoxythymidine reverse transcriptase inhibitor, spatial struct. 7−139196
bacteria, live, primary fluoresc., steady-state and decay characts. 7−86909
bacterial chlorophyll, solid solution, vibronically selected spectra *(Russian)* 7−86914
bacterial motility meas., multichannel dynamic light-scattering system 7−126700
bacterial peptidoglycan, conform. struct., N-acetyl group role, PCILO calcs. 7−114185
bacterial pigments, mol. vibr., matrix isolation fluoresc. spectra anal. *(Russian)* 7−133216
bacterial reaction centres, special pair triplet states, localisation and charge transfer character 7−114209

molecular biophysics continued
bacteriochlorophyll, frozen solns., site-selection fluoresc. spectra 7−138493
bacteriochlorophyll α, pheophytin substitute fluoresc. spectra, critical energy transfer distances calc. 7−106983
bacteriochlorophylls, photosynthetic reaction centres, ground-state interactions, reson. Raman spectra 7−78760
bacteriophage, fd, coat protein, backbone dynamics, solid-state and soln. ^{15}N NMR spectra 7−71687
bacteriophage λ tail length, determ. by protein ruler 7−93628
bacteriophage φ29 DNA, requirement of small virus RNA for in vitro packaging 7−119715
bacteriophage Pf1 coat flexibility, struct. temp. depend., dynamic light scatt. study 7−78746
bacteriophage Q-beta culture, using cellstat with bubble wall-growth scraper 7−107328
bacteriorhodopsin, charge conduction, collective H^+ motion 7−106979
bacteriorhodopsin, FTIR obs. of water induced conform. changes 7−93638
bacteriorhodopsin, glucose-embedded and frozen-hydrated purple membrane, difference Fourier anal. 7−144957
bacteriorhodopsin, kinetic studies, reson. Raman spectra 7−78777
bacteriorhodopsin, light- and dark-adapted, femtosecond absorpt. spectra 7−109914
bacteriorhodopsin, mol. averaging of 3 cryst. forms 7−133201
bacteriorhodopsin, photochemical cycle, ps time-resolved reson, Raman spectra anal. 7−86915
bacteriorhodopsin, pS conformational intermediates during photocycle, vibr. Raman spectra study 7−68485
bacteriorhodopsin, solvation dynamics, mol. fluoresc. and near reson. Raman yields probe 7−103562
bacteriorhodopsin aggregation state in lipid vesicles, rel. to large scale nonproton ion release 7−133245
base pairs, optimal environment props. for inducing tautomerisation 7−86612
benzo(a)pyrene, antibody-based fibre optics biosensor, fluoresc. anal. 7−145287
benzyl alcohol in phospholipid bilayers, orientational ordering, dipole-spin interaction meas. 7−139225
bicuculline, counterion effects on NMR chem. shifts 7−68360
bile salt-lecithin mixtures, dinaphthylpropane fluoresc. probe investig. 7−86886
biochemical applications of Fourier transform infrared spectroscopy 7−71675
biological molecules, conf., Marineland, FL, USA (Mar. 1986) 7−72693
biological molecules, design and computer simulation 7−133193
biological molecules, functional size determ. by radiation target theory meas. 7−71670
biological systems, quantum chemistry, statistical mechanics, fluid dynamics, supercomputer calcs. 7−133189
biological systems, solid, magic angle spinning NMR, spectral linewidths origin 7−78752
biomolecules, mol. dynamics, review 7−133188
biomolecules, reson. 2-photon ionis. using laser desorpt., mass spectrometry 7−106970
bis(guanine), intrastrand chelation of d(CpGpG) to cis-Pt, X-ray investig. 7−78716
blood plasma of patients with Down's syndrome, computer modelling of ESR spectra 7−126713
blood plasma protein water protons, NMR relax. in animals in expt. carcinogenesis 7−144966
blood serum, high density lipoproteins, crystn. effects 7−139181
bovine pancreatic trypsin inhibitor, sidechain rotational isomerisation, solvent effect, dynamic simulation 7−93618
BPDE-DNA adduct on Ag-coated cellulose substrate, SERS study 7−133217
brain, cat, in vivo PMR spectra, depth-pulse spectral editing 7−71684
brain microtubules, flow orientation obs, by linear dichroism 7−86932
p-bromophenacyl ester of 15-fluoro-15-desoxy-11-epi-prostaglandin $F_{2\alpha}$, cryst. and mol. struct. determ. 7−124236
Brownian dynamics simulation of restricted diffusion 7−126694
bufadienolides, cardiac glycosides, ^{13}C NMR 7−66852
bungarotoxin, struct., multistep modeling using crystal coords. and X-ray diffr. data 7−78735
calcium oxalate trihydrate and epitaxy in weddellite-whewellite system 7−100801
calmodulin-binding peptides, fluoresc. props. rel. to α-helical periodicity 7−126720
carbonic anhydrase B, bovine, fluoresc. correl. spectroscopy, rot. diffusion 7−119722
carbonic anhydrase B, microcalorimetric study of heat of denaturing 7−144972
carbonmonoxy haemoglobin, photolysed, local haeme environment, dehydration effects, reson. Raman spectra 7−78774
cardenolides, cardiac glycosides, ^{13}C NMR 7−66852
cardiolipin, lipid bilayer, FTIR spectra 7−90112
β-carotene in liposomes, pot. dependent changes in mol. conformation, combination scatt. spectroscopy obs. 7−126705
carotenoids, contained in photosynthetic bacteria, Raman and IR spectra study 7−68317
casein hydration, TSDC studies 7−139184
cataract form. in Emory mouse, Raman spectra study 7−133264
CCD-based X-ray detector for protein crystallography 7−79156
cellobiose, aq. solns., NMR meas. 7−71688
cellulose, mol. orientational order, NMR anal. 7−119717
cerebroside sulphate-cholesterol, interaction forces meas. 7−93668
ceruloplasmin, trigonal cryst. struct., rot. function, X-ray diffr. study with 6 Å resolution 7−106967
chemical analysis, reson. ionisation spectroscopy, medical and biological appls. 7−94042
chemical chiral systems, sensitivity to weak asymmetric factors 7−68473
chiral particles, light scatt., optical activity, coupled dipole method 7−139205
chiral protein-nonpolar solvent interaction, thermodynamic behaviour 7−110010
chiral purity decisive role, origination of biosphere and its possible destruction 7−86882
chlorophyll, aggregation in solns., Raman excitation profile anal. 7−82191
chlorophyll, fluoresc. decay kinetics rel. to P starvation of chlorella cells 7−107001
chlorophyll, isomers, metal-substitution, Raman and IR spectra study 7−68317

molecular biophysics continued
chlorophyll a aggregates, electronic origins, Raman excitation profiles, resonant two-photon spectra 7−93641
chlorophyll a and chlorophyll a dihydrate dimers in water/acetone mixtures, dipole-dipole transfer 7−114211
chlorophyll a and photochlorophyll in frozen solns., fluoresc.-detected triplet kinetics study 7−100812
chlorophyll frozen solns. spectra, zero-phonon lines studies, review *(Russian)* 7−106972
chlorophyll model cpds., normal modes, reson. Raman spectra 7−116975
chlorophyllide in apomyoglobin, nonphotochemical hole burning in protein matrix 7−71677
cholestane spin probe in phospholipid multilayers, saturation transfer ESR 7−74688
cholesterol-water interface, Monte Carlo simulation 7−114206
chromatin superstructure and condensation mechanism, X-ray soln. scatt. and hydrodynamic obs. 7−133202
chymotrypsin, enzyme activity and conform., pH and pressure effects, Raman spectra study 7−68498
chymotrypsin cryst., enzyme interaction with substrate, Raman microscopy study 7−92688
chymotrypsinogen, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7−133200
clustered proteins, fractal structures, laser scatt. study *(Korean)* 7−144956
coenzyme B_{12}, base-off form, soln. behaviour, 2-dimens. NMR 7−74671
collagen, inelastic neutron scatt. study of LF vibr. modes 7−126717
collagen of marine invertebrates, X-ray diffr. obs. 7−126704
collagen peptides, high resolution ^{13}C NMR spectra 7−139202
computer graphic modelling using algebraic topology 7−144958
condensed matter physics conference, Stockholm, Sweden (March 1986) 7−72705
conference, Garmisch-Partenkirchen, Germany (Sept. 1985) 7−95090
cryptosin monohydrate, new cardioactive glycoside, cryst. struct. determ. 7−139191
α-crystallin proteins, colloidal dispersion dynamics, photon correl. spectroscopy study 7−114167
α-crystallin proteins, colloidal dispersion struct., small angle X-ray scatt. study 7−114175
crystallographic *R* factor refinement by molecular dynamics, crambin appl. 7−86906
cyanomethaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7−78779
cyclic cpds., ambergris type odour origin, CNDO calcs. 7−74447
cyclophosphazenes, struct., ^{31}P NMR 7−114189
cytochrome b_5 electron transfer, role of heme vinyl groups 7−71664
cytochrome c, horse and tuna, ferric forms, proton hyperfine resonance assignments using the nuclear Overhauser effect 7−133219
cytochrome c, lineshape anal., reson. Raman spectra 7−78762
cytochrome C, protein, directional deposition, reductive and physiological activity *(Japanese)* 7−78737
cytochrome C, spin and REDOX equilib. at Ag electrode/electrolyte interface, SERS spectra anal. 7−78778
cytochrome c, tunnelling disorder mode, reson. Raman spectra 7−78775
cytochrome c in surfactant inverted micelles, conform., redox props. 7−126691
cytochrome c oxidase, catalytic intermediates, reson. Raman spectra 7−78761
cytochrome C oxidase, crystalline membranous struct., electron density profile, electron microscopy and X-ray diffr. study 7−78744
cytochrome complexes, stretching vibrs. correl., Raman spectra 7−78767
cytochrome $P450_{cam}$, bound dioxygen, reson. Raman detect. 7−78769
cytochrome P-450, spin-lattice relax., dimensionality crossover 7−114176
cytochrome P-450 metabolism, organometallic aspects 7−93620
cytochrome-c, quasi-elastic light scatt., reson. enhancement 7−78773
n-decylammonium chloride, chain dynamics, IR and Raman spectrosc. obs. 7−71699
deoxy-2-aminopurine, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
deoxyheme, parity-forbidden transitions 7−86913
deoxyhemoglobin soln., sp. ht. temp. depend. meas. 7−144947
deoxyribonucleic acid, specific heat below 5 K 7−126699
2′-deoxythymidine and 2′-deoxyadenosine, coordinate anal. 7−144954
desheptapeptide (B24-30) insulin, new crystal form, structure anal. 7−100799
(±)-1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)ethane, chem. resolution 7−110011
dilaurylphosphatidylcholine, interaction forces meas. 7−93668
dimyristoyl phosphatidylcholine, lipid membranes, Raman spectra and head group hydration 7−71696
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7−78730
dioleylphosphatidyl-choline, hexagonal phases, deform. energy meas. 7−90971
dioleylphosphatidyl-ethanolamine, hexagonal phases, deform. energy meas. 7−90971
dipalmitoyl phosphatidic acid lipid bilayer, phase transition, H bonds, cond., pH effect 7−106993
dipalmitoylphosphatidylglycerol, vib. freq. shift, Raman spectroscopy 7−90175
dipalmitoylthiophosphatidylcholine, chiral, thermotropic props., config. effect 7−71706
dispersion relation: rel.-to optical rot. dispersion, magnetooptic rot. dispersion and mol. polarisation 7−110013
dispersive media, interaction between molecular complexes 7−126697
dissolved DNA, resonant microwave absorpt. obs., hydration relax. and struct., comment 7−139209
divicine, favism-inducing cpds., MINDO/3 calcs. 7−141462
Dizatrifone, analytic activity, conform. and electronic struct., SCF-LCAO-MO calcs., CNDO/2 approx. 7−100803
DNA, B-type conformations in oligomer and salmon sperm 7−71672
DNA, collective sugar puckering, harmonic oscillator model, kinks and breathers 7−93630
DNA, conformations, sequence dependent modulation, Raman spectrosc. obs. 7−71691
DNA, degradation, belomycin mediated, ^{18}O incorporation into glycolic acid 7−106976
DNA, interaction with radioprotectors cysteamine and WR-1065, Kerr effect 7−139180
DNA, internucleosome regions, length rel. to chromatin fibrils conformation 7−139194

molecular biophysics continued
DNA, liquid crystalline phases, isotropic to cholesteric transition, solid-state ^{31}P NMR studies 7−143004
DNA, low mol. wt. mols. in aqueous-saline polyethylene glycol solns., liq. cryst. microphases form. 7−86883
DNA, low-temperature heat capacity 7−144981
DNA, one-dimensional strings, dynamics and complexity 7−93614
DNA, optical Kerr effects, rel. to orientation 7−93646
DNA, polynucleotide films far-IR vibr. modes meas., lattice dynamical model anal. 7−93647
DNA, precholesteric liq. crystalline states 7−119712
DNA, self-trapping and dispersion, gel electrophoresis 7−114170
DNA, simulation of double-stranded branch point migration 7−93617
DNA, struct. state for chromatin with a short linker 7−139195
DNA, structural transformations 7−144959
DNA, structural transition, B→Z phase, solitary excitations 7−144960
DNA, structures and interactions with proteins, UV reson. Raman spectrosc. 7−71692
DNA−Na, Ni^{2+} binding is aq. soln., ^{23}Na and ^{31}P NMR study 7−133221
DNA base pairs, stacking interactions, config. specificity 7−119709
DNA base-pair opening rel. to imino proton exchange 7−114169
DNA bases, ethanol-induced conform, changes, Raman spectrosc., base stacking energies 7−71673
DNA bend direction determ. by phase sensitive detect. 7−119713
DNA bending at lambda replication origin, direct evidence 7−133213
DNA double helices, mol. dynamics simulations 7−133204
DNA double helices, soliton excitation, influence of longit. vibr. 7−126687
DNA dynamics, soliton-like excitations, relative disorder and statistical mechanics 7−119704
DNA folding in the nucleosome, evidence for kinks 7−126709
DNA octamer, single stranded, three-dimens. J-resolved NMR spectroscopy 7−114576
DNA polymer, melting nucleation defect, H bond vibr. fluctuations anal. 7−71671
DNA solution, equilib. Coulomb pot. and charge distrib., Monte Carlo and SCF calcs. *(Russian)* 7−111346
DOPH Millipore model membrane, conform. change and oscill. process of elec. resist. *(Japanese)* 7−78797
dyes intercalated in DNA, steady-state fluoresc. polaris. anisotropy meas. 7−93645
dynamic contacts of macromols. study by dye sensitised fluoresc. label in triplet state 7−144963
dynorphins, FAB mass spectrometric fragmentation behaviour 7−71676
egg lecithin multilayers, fluoresc. probe diffusion, depend. on mag. field 7−144985
egg-lecithin multibilayers hydration, 1,6-diphenyl-1,3,5-hexatriene probe fluoresc. depolarisation expts. 7−119740
egg-lecithin-H_2O system, phospholipid bilayer, interbilayer force calc. 7−93667
elastin, model chains, thermoelastic props. 7−87066
electrobioluminescence of living animals, electrochem. investig. 7−114193
electron density, maximum entropy calc. with native and single isomorphous replacement data 7−139190
electron microscopic struct. anal., ang. reconstitution methodology 7−71949
electron transfer, friction effect two reaction coordinate case 7−93284
electrostatic interaction modelling in globular protein function 7−78721
electrostatic pot., multipole expansion technique, STO calcs. 7−74405
β-endorphin, spatial organisation of N-terminal tridecapeptide 7−144949
enkephalin analogs, rigidity imparted to backbone conformation by D-amino acid residues, ^1H NMR obs. 7−78729
enniatin B, conformation, effects of cryst. packing and hydration 7−86891
enzymatic reactions, computer simulation 7−133194
enzyme, diffusion of substrate to active site, computer simulations 7−126701
enzyme induction with regulated diffusion, chaotic dynamics 7−114162
enzyme inhibitor, evaluation of intrinsic binding energy from a H_2 bonding group 7−78722
enzymes, NMR studies review 7−100814
enzymic cofactors, and photochem.-induced transients, UV reson. Raman spectrosc. 7−133223
epidermal growth factor, human, soln. struct. obs. 7−114179
erythrocyte membrane skeleton, inherited abnormalities effect on viscoelastic props. 7−78793
erythrocyte superoxide dismutase, bovine, anion binding, nucl. relax., ^1H NMR 7−119724
erythrocytes, human, ^7Li NMR 7−78753
ethchlorvynol, ^1H NMR spectral simplification using lanthanide shift reagents 7−74683
ether lipids from archaebacteria, monolayers, surface behaviour study 7−78715
ethidium bromide, DNA intercalated, laser flash photolysis, methylviologen effects 7−133225
F_1-ATPase complex and ATP synthesis on illum. with visible light, EPR obs. 7−139201
F-actin and microtubule suspensions as indeterminate fluids 7−114341
F-actin filaments of normal and athyreotic heart myocardium, structural parameters 7−106960
F-actin solutions, nonideality of vol. flows and phase transitions in response to osmotic stress 7−93619
ferredoxin II from Desulfovibrio gigas containing Fe_3S_4 cluster, Mossbauer spectra 7−144971
ferricytochrome c interactions with model phospholipid bilayers, Raman obs. 7−71695
ferrocytochrome c, ^{57}Fe NMR chem. shift anisotropy meas. 7−109936
fibre diffr., isomorphous replacement using limited numbers of heavy atom derivatives 7−78725
fibre diffraction, difference Fourier syntheses 7−139189
filamentous bacteriophage fd, interactions between DNA and coat protein in struct. and assembly 7−100795
filamentous bacteriophage Pf1, struct. responsiveness: comparison of virion struct. in fibres and soln. 7−126707
flat lipid membranes, phys.-chem. characts. during a phase transition 7−144986
flavins, closed shell, molecular orbital studies 7−144952
flavoprotein intermediates, reson. Raman spectra study 7−68487
flavoproteins on Ag colloid, SERS 7−99821

molecular biophysics continued
fluorescence anisotropy decay, resolution enhancement, anisotropic rots. and protein dynamics appl. 7−93635
fluorescence correlation spectroscopy, charactn. of mol. aggregation by high order autocorrel. 7−126715
fluorescence detection, conf., Los Angeles, CA, USA (Jan. 1987) 7−140367
fluorescence lifetime distribs. resolvability using phase fluorometry 7−93632
fluorescence transport through highly scattering media; corrections to quantum yields determ. 7−126716
N-formylproline amide, γ turn, ab initio calcs. 7−129556
frozen solns., site-selection fluoresc. spectra 7−138493
furanose ring, alternative conform. probabilities, statistical stereochemical model 7−114171
furylacrylolyl chromophore, active site environment, UV reson. and IR difference Raman spectra anal. 7−68490
galactosemic cataracts, Raman spectroscopic study on rats 7−74627
gelatin gel, surface layers struct., electron microscopy obs. 7−144951
general density function corresponding to X-ray diffr. with anomalous scatt. included 7−75940
genetic engineering for protein engng. *(Japanese)* 7−133523
α-globulin, secondary struct., FT IR spectrometric obs. 7−86908
glucagon, dynamics, fluoresc. anisotropies and lifetimes determ. 7−129767
α-D-glucose, conformational studies, mol. dynamics simulations, pot. energy surfaces 7−68193
glutathione, interaction with antimicrotubular agents, Raman spectra 7−68329
glycerol, biosynthetic probe, triple-quantum two-dimens. INADEQUATE study 7−94030
glycerol mono-oleate bilayer interactions, interferometric investig. 7−93669
glycerophospholipids, membrane struct. and phase transitions, regulation mechanism 7−93666
glycine, peptide plane and side chains orientation, ^{13}C-^{15}N dipole-dipole couplings, NMR meas. 7−126719
glycine zwitterion, aq. soln., Auger spectra, Green's function method calcs. 7−103356
glycogen phosphorylase b, ms X-ray diffr. and electron density map from Laue photographs 7−139208
N^6-(N-glycylcarbonyl) adenine, nucleic acid base, conform. preferences 7−89962
Gramicidin A, cryst. and membrane bound, vibr. spectrosc. obs. 7−71697
guanine, and related mols., Ar matrix isolated, IR spectra 7−96671
guanine, free state and thin films, geometries, UV spectra 7−103525
guanine cation, decay product, struct., X-ray irrad., ESR and ENDOR anal. 7−93640
guanine derivatives, resonance Raman studies 7−106963
guanine series, adsorbed on Ag sol, SERS 7−132265
guanosine dihydrate, ^2H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
haematoporphyrin and derivatives, laser fluorescence spectra and singlet oxygen quantum yields *(Chinese)* 7−86912
haeme proteins, Ni-reconstituted, axial coordination, Raman difference and transient spectra 7−78766
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7−78759
haemoglobin Glycera, ligand dissoc. rates correl., reson. Raman spectra 7−78768
haemoglobins, monomeric, stretching vibrs., reson. Raman spectra 7−78765
haemoglobins, oxygenation and deoxygenation, reson. Raman study 7−78724
haemotoporphyrin photosensitiser bonding to normal and malignant cells, intracellular fluoresc. 7−90264
Hartmann-Hahn transfer, water suppression, lock and return expt. 7−71683
heavy atom positions, determ. using difference Patterson function 7−75929
histamine H_2 receptor agonists and antagonists, quantum mech. calcs. *(French)* 7−141428
horseradish peroxidase, catalytic intermediates, reson. Raman spectra 7−78761
horseradish peroxidase, stretching vibrs. correl., Raman spectra 7−78767
horseradish peroxidase intermediates, time-resolved Raman spectra 7−78763
human rhinovirus 14, common cold virus, structure determ. 7−93624
hybridomas formation by electroporation, DNA introduction into cultured cells *(Japanese)* 7−144997
hydrated cation transport through narrow transmembrane channels, voltage-driven, simulation 7−100822
hydrocarbons, polycyclic aromatic, peri effect in carcinogenesis, empirical force field calcs. 7−100798
hydrodynamic type macromols., distant interactions and movements in a membrane and liq. 7−139214
hydrogen diformiate complex, active site model for aspartyl proteinases, ab initio calcs. 7−81960
N-hydroxy-2-alkenals, conform. and struct. analyses 7−86899
hyperfine properties of biomols., Coulomb corrections, self consistent Huckel calcs. 7−126696
hypoxanthine, and related mols., Ar matrix isolated, IR spectra 7−96671
hypoxanthine, IR spectra obs. by low temp. matrix isolation in Ar, vibr. spectra calc. 7−144962
I-102, conform. and electrostatic props., ab initio PCILO calcs. 7−78733
ID ionic solutions in biological transmembrane channels, struct. and dynamics 7−100821
immunoglobulin G in monomol. layers, heat denaturing obs. 7−144973
immunoglobulins, aggregation kinetics, light scatt. obs. 7−78718
3-indolylacetic acid, struct. refinement, X-ray anal. 7−71666
infrared spectrometry for biological studies 7−93653
inosine, ^2H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
insect cuticle, aromatic cross-links: detect. by solid-state ^{13}C and ^{15}N NMR 7−133211
insulin-secreting pancreatic islet cells, K channel dynamics, mol. model 7−100837
intracellular Na detection, dog red blood cells, coherence-transfer ^{23}Na NMR 7−71686
intraneuronal information processing system, electromechanical and reaction-diffusion analogue 7−126782
iodothyronine, ^{60}Co-gamma irradiation, IR and UV spectra 7−92699
iodotyrosines, ^{60}Co-gamma irradiation, IR and UV spectra 7−92699
molecular biophysics continued
iron porphyrins, CO photodissoc., ps time-resolved IR spectra 7−119719
isouramil, favism-inducing cpds., MINDO/3 calcs. 7−141462
keto-enol tautomerism of guanine and isocytosine molecules 7−139192
3-keto-steroids, aq. soln., protein binding, mol. fluoresc. study 7−78748
kinky DNA, conform. anal., role in minor groove binding of netropsin 7−78736
Lac repressor headpiece structure, NMR, restrained mol. dynamics calcs 7−133191
Lac repressor-lac operator complexes, soln. X-ray scatt. and electrophoretic obs. 7−93627
α-lactalbumin, bovine, tyrosine group behaviour, Raman effect 7−144953
β-lactam inhibitor complex with elastase, crystallographic study at 1.84 Å resolution 7−93629
β-lactamase from Staphylococcus aureus PC1 at 2.5 Å resolution 7−119716
lactate, living tissue metabolism, DANTE pulse for PMR 7−71682
L-lactate oxidase-old yellow enzyme interaction, reson. inverse Raman study 7−133226
β-lactoglobin, solns., ultrafiltration protein assoc. effects 7−119705
lecithin-water systems, hydrophobic mols., form. of reversed hexagonal phases 7−126706
lenses, human, protein charact., in vivo studies by laser light scatt. spectroscopy *(Japanese)* 7−78841
ligand-enzyme binding electrostatic effects 7−114168
light harvesting chlorophyll complex, picosec. dynamics, detergent effects 7−71681
lignin, mol. orientational order, NMR anal. 7−119717
lipid bilayer and saturated hydrocarbons, entropy jumps in phase transitions, lattice model calcs. 7−126754
lipid bilayer chain-melting phase transitions calcs. 7−93665
lipid bilayer membrane, gel state, vertical motion and steric effects, analytical and Monte Carlo calcs. 7−78794
lipid bilayer membrane, permeability during phase transition, intermolecular Ca bridges 7−126773
lipid bilayer membranes of egg lecithin, structural transitions and cond. 7−106992
lipid bilayer polypeptide interactions, mol. dynamics simulation 7−119741
lipid bilayers, amphotericin permeability rel. to glycerol induced structural rearrangements 7−106995
lipid bilayers, dynamics of 1D domain struct. at phase separation 7−106994
lipid bilayers, phase transitions, Raman and calorimetric obs. 7−71674
lipid bilayers, thermotropic behaviour studied using Raman spectroscopy, two-state model 7−119744
lipid fluorophores of the crystalline lens with cataract 7−144967
lipid layers, photoelectron spectra, surface adsorption 7−93637
lipid membranes, hydratation interaction and nonlocal polarisability 7−119745
lipid monolayer chain-melting phase transitions calcs. 7−93665
lipid multilamellar aqueous suspensions, phase transitions and chain packing 7−114177
lipid-proteolipid, artificial flat membranes, contact region struct. and cond. 7−106996
lipids, Raman active bands, motion and conform. effects 7−109911
lipoproteins, high-density, struct. in arterial and venous blood in myocardial infarct 7−87298
localised radical pair, RYDMR signal, lineshape study 7−100810
α-loctalbumin, tyrosine doublet intensity ratio, pH and Co^{2+} conc. effects, IR Raman spectra anal. 7−68491
long-range cooperative site binding at linear lattice, model development 7−93631
lung tissue, NMR simulation study, diamagnetic line broadening effects 7−114575
lysozyme, aq. solns., H bonding, low freq. Raman spectra study 7−68319
lysozyme, classical Raman tensor, four channel divided cell technique, Raman spectra anal. 7−68494
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7−68492
lysozyme, deuterated matrix, 1 H clusters, dynamic nuclear polarisation, NMR anal. 7−79152
lysozyme, hen egg white, 2D heteronuclear chem. shift correl. 7−68479
lysozyme, interaction with linear polyelectrolyte in soln., polarised luminesc. obs. *(Russian)* 7−85839
lysozyme, struct.-activity relationship, iodination effect, IR Raman spectra anal. 7−68495
lysozyme, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7−133200
lysozyme in buffer solns., thermal inactivation 7−126689
macromolecular crystals, overall anisotropy in diffr. 7−78726
macromolecular shape in soln., modelling method 7−93626
macromolecular solvation, computer calc. of free energies 7−119706
macromolecular structure, classification and 3D reconstruction from electron micrographs 7−100804
macromolecular structures, least squares refinement program 7−139187
macromolecule mol. wt. or chain length meas. using computer-controlled digitising tablet and gel electrophoresis of proteins or nucleic acids 7−133520
macromolecules, deformation, mol. mechs., quadratic approx. 7−117100
macromolecules, fluorescence energy transfer, donor-to-acceptor distance distrib., freq.-domain fluoresc. spectra 7−139204
melanoprotein granules in pigmented epithelium of the eye, Fe^{2+} ions binding, γ-resonance spectroscopy obs. 7−126692
melittin-phosphatidylcholine complexes, model for lipid-protein interactions 7−71665
membrane lateral diffusion coeff. estimation from steady-state fluoresc. quenching 7−93662
membrane protein, struct. derived from rot. diffusion study 7−78731
membrane proteins, lateral interactions, implications for gap junctions organisation 7−139221
membrane proteins, lateral interactions, valid estimates based on freeze-fracture electron microscopy 7−139220
membrane proteins, native, conformational dynamics, Mossbauer spectroscopy study 7−144993
membranes, model lipid and biological, gel phase form. induction by uranyl acetate 7−139224
Mengo virus, atomic struct. at 3.0 Å 7−126710
merocyanine dyes, orientation in nematic liq. crystal matrix, absorpt. spectra study 7−78757
metallochlorin complexes, reson. Raman and IR spectral charactn. 7−78772

molecular biophysics continued
metalloproteins, g-strain effect, EPR spectra simulation 7−106977
metalloproteins, mol. mechanics calcs., empirical pot. function 7−78717
2,4-methanproline, in peptides, conformational energy computations, NMR 7−144969
methyl 2-deoxy-3,5-di-O-P-nitrobenzoyl-β-D- ribofuranoside, cryst. struct. 7−86896
N-methylacetamide, liq., H bonding, low freq. Raman spectra study 7−68319
micro-size polyacrylamide gel electrophoresis system 7−145301
microwave absorption in aq. solns. of DNA 7−119727
mitomycin C-DNA covalent cross-link adduct, isolation and struct. 7−133212
molecular dynamics, biophysical applications 7−106954
monellin, intensely sweet protein from African berries, cryst. struct. at 3 Å resolution 7−133209
mononucleotides, interaction coeffs., ^{31}P NMR *(French)* 7−119726
multilayer films and monolayers, fast heavy ion-induced biomolecule desorption 7−86902
muricin aglycone and related pregnene derivatives, ^{13}C and ^{1}H NMR study 7−90192
muscle, contracting, striated, use of laser-stimulated luminesc. to meas. X-ray diffr. 7−145303
muscle, frog, single-skinned fibres, lattice swelling with selective digestion of elastic components 7−133199
muscle, striated, myofilament lattice spacing, osmotic compression, electrochemical meas., Donnan pot. theory 7−78728
Myelin, interaction forces meas. 7−93668
myelin membranes, vibr. spectra and struct. 7−119742
myeloperoxidase, human leucocyte, oxidation state, pH depend., Raman difference spectroscopy 7−93616
myoglobin, Aplysia limacina, tryptophans, fluoresc. decay, energy transfer 7−93634
myoglobin, ligand bonding geometry, distal histidine role, XANES method meas. 7−78747
myoglobin, lineshape anal., reson. Raman spectra 7−78762
myoglobin, mol. dynamics anal., rel. to multiple conformational states of proteins 7−86904
myoglobin, photodissoc., reson. Raman spectra 7−78764
myoglobin, secondary struct., FT IR spectrometric obs. 7−86908
myohaemerythrun, location of FE and S atoms from anomalous scatt. meas. 7−86894
myosin and myosin rod, threads, struct. study of gels 7−100797
myosin ATPase, activity in aq. sucrose solns., viscosity effect 7−126690
myosin filaments, 1-headed, sliding movement of single actin filaments 7−86889
myosin heads in oriented synthetic filaments, diffuse X-ray scatt. obs. 7−100808
NADH models, synthesis and reactivity, NMR study *(French)* 7−93621
nerve fibres, information transmission, thermodynamical stability 7−100841
neutron binding energy, correl. with anomalous fractionation of isotopes in medical biological objects 7−114027
nickel porphyrins, axial coordination, Raman difference and transient spectra 7−78766
nitridomanganese protoporphyrin, form., triple bond detect., reson. Raman spectra 7−78770
4-nitrocatechol-enzyme complexes, reson. Raman spectra study 7−68486
nitrogenase MoFe protein, struct., X-ray diff. studies 7−139197
N-nitrosamines, form. and metabolism transition structs., ab initio RHF calcs. 7−89940
nitrosyl manganese(II) piperidine protoporphyrin dimethyl ester, isotope substitution, reson. Raman spectra 7−78771
nitrosyl manganese haemoglobin, isotope substitution, reson. Raman spectra 7−78771
nitrosyl manganese myoglobin, isotope substitution, reson. Raman spectra 7−78771
nitroxide spin labels, ESR spectra, linewidths, conc. and temp. depend. 7−93642
NMR, amplitude- and frequency-modulated pulses to achieve 90° plane rotations with inhomogeneous B_1 fields 7−71943
nuclei acid bases, out-of-plane vibr. modes 7−119721
nucleic acid bases, electrostatic pots., dipole pot. mapping approach 7−129908
nucleic acid bases, out-of-plane vibr. modes 7−119720
nucleic acid bases, tautomers geometrical struct., AM1 method calcs. 7−100802
nucleic acids, 1H NMR spectra; chemical exchange rates and Overhauser effects calc. 7−106978
nucleic acids, in viruses, struct. determ. by Raman spectrosc. 7−71690
nucleic acids, vibr. modes, normal coord. anal. 7−68285
nucleosides, ^{13}C NMR spectra, isotopic multiplets, H bonding effects 7−74668
nucleotide-acetamide complexes, laser Raman spectroscopic obs. 7−68326
Nystatin antibiotic in phospholipid bilayer membranes, fluoresc. props. 7−100809
octanoyl-acyl carrier protein, leucine spin system, RELAY expt., strong coupling effects 7−82223
n-octylammonium chloride, chain dynamics, IR and Raman spectrosc. obs. 7−71699
N-ocyl-homooligoglycines, N-deuterated derivatives, conform. anal., IR Raman spectra study 7−70799
oligomeric proteins, accessible surface area and stability 7−133210
organic molecules λ, aq. soln., ^{31}P NMR spectra, Prony-Burg method anal. 7−107322
organic phosphates, aq. soln., ^{31}P NMR chem. shift *(French)* 7−100811
oxyhaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7−78779
oxyhaemoglobin, adsorbed on colloidal Ag, surface enhanced reson. Raman obs. 7−93644
pancratic elastase, porcine, and acetyl-alanine-proline-alanine complex, mol. dynamics simulation 7−144946
pancreatic elastase, porcine, mol. dynamics calcs., inhibitor design 7−119711
pancreatic ribonuclease A, bovine, radiation damage in X-ray diffr. 7−86911
pancreatic trypsin inhibitor, bovine, mutants lacking cysteines 14 and 38, proper folding 7−114183
papain, enzyme-substrate complex intermediates, UV Raman reson. spectra study 7−68489
papain enzyme-substrate intermediate, UV Raman spectra obs. 7−106964
molecular biophysics continued
peptide β-turn conform., Pro-Asp and -Asn dipeptides study, IR, ^{1}H NMR and X-ray diffr. spectra 7−78750
peptide chain structure parameters, bond angles and conformational angles from the Cambridge Structural Database 7−86895
peptides, α-helical, electrostatic interactions role in stabilisation, spin-spin coupling studies 7−86897
peptides, conform. anal., normal coordinate calcs., IR Raman spectra study 7−68321
phenoxyphosphoryl xylofuranose derivative, radiolysis form. of P-centered radicals, ESR spectra anal. 7−68370
phenylethylamine drugs, UV absorpt. spectra, INDO calcs. 7−96541
pheophytine-accessory monomer, charge separation and recomb. in bacterial reaction centers 7−119707
phonons and solitary waves in α-helical proteins 7−93636
phosphatidylcholine, lipid bilayer, FTIR spectra 7−90112
phosphatidylcholine bilayers, aq. dispersions, barotropic behaviour, ether and ester links effect, IR spectra anal. 7−78743
phosphatidylcholine liposomes, IR spectroscopic investigation of trivalent Fe binding 7−139213
phosphatidylcholine membranes, dynamic props. of haptenic site of lipid haptens 7−126693
phosphatidylethanolamine, lipid bilayer, FTIR spectra 7−90112
phosphatidylglycerophosphate, lipid bilayer, FTIR spectra 7−90112
phospholipid, paracryst. struct., direct imaging in electron microscope 7−101155
phospholipid bilayer, gramicidin-induced H_{II} phase, acyl chain study, ^{2}H and ^{31}P NMR meas. 7−74660
phospholipid bilayer, structural transitions, thickness, density 7−106991
phospholipid bilayer membrane, synthesis and polymerisation *(Japanese)* 7−126756
phospholipid monolayer, density distrib. at air-water interface, X-ray reflectivity study 7−139183
phospholipid monolayer ordering, synchrotron X-ray diffr. and fluoresc. microscopy studies 7−114205
phospholipid monolayers, acyl chain ordering and crystallisation 7−100823
phospholipid monolayers, at air-water interfaces, phase transitions 7−114174
phospholipid translocation in lipid bilayers, press. effect 7−144992
phospholipid/water multilayers, pretransitional phenomena, ^{2}H NMR obs. 7−139218
phospholipids, defects in ripple structure, anal. 7−114204
phospholipids in membranes, ESR spectra, linewidths, conc. and temp. depend. 7−93642
photosynthesis, bacterial, primary events 7−71678
photosynthesis mechanisms, mag. resonance from short lived particle pairs in spin-depend. processes 7−138350
photosynthetic bacterial reaction centres, effects of nuclear spin polarisation on reaction dynamics 7−100792
phytochrome, absorpt. spectra and phototransformation quantum yield, temp. depend. study 7−78756
picosecond active Raman-scattering spectroscopy of biological objects 7−145289
pigment-protein complex of photosystem 1, cyanobacteria Spirulina platensis, photo-induced spectra of circular dichroism 7−106971
plasma desorption mass spectrometry, isotopic broadening effect, biomol. appl. 7−121291
plasmid DNA, obs. indicating that resonant-like dielec. absorpt. does not occur 7−139310
plasmid DNA molecules, electron microscopy study 7−86903
plasmid pBR 322, melting rel. to DNA mutation 7−126723
poliovirus, struct. 7−114181
poly(dA).poly(dT), obs. indicating B-type double helix with narrow minor groove 7−71668
poly(ethylene glycols), 5-fluorouracil-capped, synthesis and antitumor activities 7−144715
poly(ethylenimine) containing nucleic acid pendants, NMR and UV spectra 7−122758
poly(ribonucleic acids), vibr. circular dichroism meas. 7−109966
polymer solutions, solvent interactions, RISM integral eqn. soln. 7−96568
polypeptide, β-form-random coil transition in solution 7−71667
polypeptide, conform., energy minimisation, ellipsoid algorithm 7−119708
polypeptide chains, short natural, in water solns., α-helical conformation, review 7−114173
polypeptides, conformational anal., rel. to protein folding, mol. recognition and mol. design 7−133203
polypeptides, helix-coil transition, lattice approx. of microscopic theory 7−139193
polypeptides, struct., mol. force field appl., Raman spectra anal. 7−68318
polypeptides, struct. organisation at the air-water interface 7−144948
polyproline, cis-trans isomerism, UV reson. Raman spectra 7−106974
polytripeptide, collagen like, trihelical struct. stability rel. to bound water 7−126703
porphyrin-quinone, electron transfer, friction effect two reaction coordinate case 7−93284
porphyrin-quinone mols. as photosynthesis model, fluoresc. lifetimes rel. to effects of exothermicity on electron transfer rate 7−106980
porphyrins, synthetic, light-harvesting complex 7−114165
PPDPC-DPPC Langmuir-Blodgett film, excimer form., UV fluoresc. spectra anal. 7−100824
probe molecules in lipid multibilayers, mol. reorientational dynamics and orientational order correl. 7−90249
proline, ^{15}N chemical shift tensor for alanyl-prolyl peptide bond 7−139206
proline, γ turn, ab initio calcs. 7−129556
proline, peptide linkage, UV reson. Raman excitation spectra study 7−68324
protein, microchondrial actin like, tryptophan fluoresc. spectra 7−126712
protein and nucleic acid sequence database searching: a suitable case for parallel processing 7−141729
protein and solvent environments incorporation into reson. Raman calcs. 7−93623
protein assemblages, intrinsic defect states 7−144961
protein conform. secondary struct., reference intensity profiles method, Amide I and III bands, IR Raman spectra anal. 7−68493
protein crystal structure, soln. with model obtained from NMR interproton distance restraints 7−114182
protein design by methods of digital signal analysis 7−100805
protein diffusion, conc. dependence, free vol. diffusion theory 7−133184

molecular biophysics continued
protein electron tunnelling paths, quantum path integral Monte Carlo method 7−126702
protein engineering rel. to 3D struct. *(Japanese)* 7−133207
protein engineering rel. to X-ray struct. anal. *(Japanese)* 7−133206
protein fluorescence decay, interpretation using continuous lifetime distribs. 7−100807
protein globule, conformational relax. after rapid local perturbation 7−144950
protein masses, possible existence of a system of specific values 7−139182
protein phosphorescence at room temp., prevalence 7−119729
protein structure predicting, BASIC program 7−106961
protein-DNA interactions, ^{15}N-labelled P22 c2 repressor for NMR studies 7−133187
protein-inhibitor complex, binding free energy relative change calc. 7−78723
protein-solvent system, electrostatic pot., numerical calcs., self consistent boundary method 7−106958
proteins, aq. solns., fluctuations in intensity of light scatt. 7−144965
proteins, atom coordinates calculation from incomplete and incorrect distance data 7−78741
proteins, conformational anal., rel. to protein folding, mol. recognition and mol. design 7−133203
proteins, conformational energy function hessian calc. algorithm 7−119710
proteins, electron tunneling through covalent and noncovalent pathways 7−86885
proteins, glass-like properties 7−86907
proteins, globular, antiparallel β structure, spatial motifs 7−93625
proteins, globular, Raman spectra, automated recording system 7−78758
proteins, long-range couplings, double quantum spectrosc. detect. 7−78754
proteins, mol. stability rel. to struct. *(Japanese)* 7−133205
proteins, NMR fingerprinting in H_2O soln., 2-dimens. longit. 2-spin-order technique 7−74792
proteins, secondary struct. Raman reference intensity profiles 7−129911
proteins, small-angle X-ray diffraction, uses of polychromatic synchrotron radiation 7−104486
proteins, structure and interactions, sequential NMR assignments and isotope labelling 7−93639
proteins, tryptophan and tyrosine side chains, vibr. modes, IR Raman spectra, normal coordinate calcs. 7−68497
proteins, water soluble, adsorbed on Ag electrodes and hydrosols, enhanced combination scatter spectra 7−126711
proteins, X-ray diffr. data collection and online integration system 7−101154
proteins and amino acids, dipolar dielec. relax., thermally stimulated depolarisation studies 7−99665
proton relaxation times in vitro, temp. dependence 7−139338
pulse field electrophoresis dynamics, DNA molecule in gel, kink formation 7−139186
purines, out-of-plane vibr. modes 7−119721
purple acid phosphatase, optical, EPR, Mossbauer and reson. Raman spectra, and mag. suscept. meas. 7−116995
pyrene, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrene methyl cholesterol adduct, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrimidines, out-of-plane vibr. modes 7−119720
quartz, surface, virus particle adsorption, spatial distrib. and long-range interactions 7−139185
Raman spectroscopy, biomedical appls. to mol. and cellular systems 7−107329
Raman spectroscopy, conference, Eugene, OR, USA (Sept. 1986) 7−72726
reaction centre protein of purple bacteria Rhodopseudomonas spheroides, secondary struct. 7−106959
recA-DNA, bare and shadowed, scanning tunnelling microscopy studies 7−78740
reciprocal space method with Wang algorithm for mol. envelope calc. 7−78727
renin inhibitor-aspartic proteinase complexes, high resolution X-ray anals. 7−114191
reorientational motion determ. by fluoresc. anisotropy decay, interpret. complexities 7−114166
research at Cavendish Laboratory, Cambridge, 1936-1987 7−102071
research at Cavendish Laboratory, Cambridge, 1951-1987 7−102072
retinal, trans-cis isomerisation and ion translocation mechanism in halorhodopsin 7−86933
all-trans and 9-cis-retinal, triplet state, configuration relax., picosecond time-resolved absorpt. spectra 7−74650
retinal Schiff base, protonated, isomerisation barrier heights, MNDO calcs. 7−93278
retinol, electronic states investig., Raman excitation profile 7−82189
Rhodopseudomonas virdis, reaction centre chromophores, singlet spectra, CNDO/S calcs. 7−119718
rhodopsin, retinal rod outer segment suspension absorpt. spectra, sieve effect role 7−78855
rhodopsin structure, review 7−119714
rhodopsin transduction mechanism, FTIR studies, review 7−119728
rhodopsins, retinal chromophore struct. determ., reson. Raman spectra 7−78776
α-ribazole-3′-phosphate, detached cobalamins nucleotide, ^{13}C NMR study 7−119723
ribonuclease, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7−133200
ribonuclease A, cis-trans isomerism, UV reson. Raman spectra 7−106974
ribonuclease T1, pH time-resolved fluoresc., pH and substrate analogue binding study 7−100806
ribonuclease T_1, freq. domain obs. of fluoresc. lifetime 7−139203
ribonuclease T_1, native and mutant, artificial enzyme-struct.-function relationship and protein engng. *(Japanese)* 7−133208
ribosomal protein IF-2, substrate-triggered intermol. interactions, neutron diffr. evidence 7−133185
ribosome, large subunit, tunnel revealed by 3D image construction 7−114184
ribulose-1,5-bisphosphate carboxylase-oxygenase, small-angle X-ray scatt. obs. of quaternary struct. 7−86898
ricin B chain, struct. and evolution 7−86901
RNA fragment, conform., NMR study 7−119725
molecular biophysics continued
RNA polymer, double stranded poly(rA).poly(rU), imino protons, spin-lattice relax. study, NMR spectra anal. 7−74672
RNA synthesis, replication-mutation systems struct. and dynamics 7−78720
Schiff bases, conjugated, protonation, quantum chem. study 7−132930
secondary ion emission from biomolecules in liq. matrices, primary ion beam parameters effects 7−139057
sedimentation equilibrium banding, bouyant density and molecular weight calc. in Apple II 7−107320
semiquinones, flash photolysis and pulse radiolysis, rel. to cancer induction and therapy 7−71507
serum albumin, bovine, thermal denaturation, Fourier transform-IR studies of amide III spectral region 7−133200
serum albumin, monolayers, 2D press. equilib. and dynamic isotherms 7−70072
silk, struct. and thermal props. *(Japanese)* 7−100800
skeletal muscle, Ca channels of transverse tubules, alkali and organic monovalents conductance study 7−78812
sodium borohydride treated reaction centres from Rhodobacter sphaeroides R26, optical spectra, exciton theory appl. 7−114210
Somatotropin, conform. anal., Raman spectra study 7−68322
spectroscopic nuclear spin resonance of cellular level phenomena 7−114223
spin-labelled cotton fibre, EPR study in the 2 mm range 7−126714
spinach ribulose bisphosphate carboxylase, cryst. struct., 1D disorder 7−139188
spinach superoxide dismutase cryst., distinction between Cu^{2+} and Zn^{2+} ions using anomalous dispersion and tunable synchrotron radiation 7−114187
striated muscle, rat, water phases as determined by T_2 proton NMR relax. times 7−139207
teicoplanin A_2, structural anal., two-dimens. PMR and NOE spectra 7−71685
tetraphenylporphyrin-polypeptide complexes, model photosynthetic system, fluoresc. props. 7−129766
thermitase, X-ray structural investigation at 2.5 Å resolution 7−106966
thermolysin-inhibitor complexes, structs. of 2 complexes that differ by a single H_2 bond 7−78739
thiourea 1:1 complex with parabanic acid, cryst. struct. and charge density at 298 K 7−86893
thymidylate synthase, atomic struct.: target for rational drug design 7−86905
thymine-d3, elec. field gradient, ^{2}H NMR 7−118872
tissue burns, effect on dermal microcirculation, investigation using computerised image anal. 7−139212
tobacco mosaic virus, H bonding study, ^{129}I Mossbauer spectra anal. 7−78749
TpT3, struct. and biological significance, rel. to DNA and Dewar pyrimidinones 7−106975
transferrin hydration obs. using Mossbauer spectroscopy 7−133222
transition metal chromophore as sensitive tag for proteins 7−144970
tropomyosin and troponin co-crysts., X-ray struct. at 17 Å resolution 7−71669
tryptophan in apocytochrome c, fluoresc. quenching dynamics, rot. isomerism study 7−78745
tryptophan residue, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
tryptophan residue proteins, fluoresc. lifetime distribs. rel. to conform. interconversion 7−93633
tryptophan-2,3-dioxygenase, stretching vibrs. correl., Raman spectra 7−78767
two-dimensional homonuclear multiple-quantum spectroscopy, ω_1-scaling pulse sequences 7−121169
Urea inclusion cpds., diffuse scatt. and disorder 7−86892
uridine, Fourier transform IR and laser Raman microprobe spectra 7−132271
uridines, 5-substituted, conform. anal. and biological activity, PCILO calcs. 7−78734
vinyl chloride, isomerisation equilib. rel. to carcinogenicity 7−93277
virus and molecular assemblies structs., rel. to complex system function 7−106968
viruses, spherical, structural analyses, viral coat proteins 7−78738
vitamin A acid, retinoic acid, elec. conduction, substituent group effects 7−100794
vitamin B_{12}, active centre quantum chem. simulation 7−106969
vitamin B_{12} coenzyme, cryst. and mol. struct., neutron and X-ray refinement 7−114172
vitamin B_1, fluorescent derivatives, photophys. and photochem. props. 7−100813
X-ray crystallography, appl. of computer graphics *(Japanese)* 7−133524
yeast alcohol dehydrogenase, Raman and Fourier transform IR study 7−86900
yeast flavocytochrome b_2, interactions between haeme and flavin, EPR and spin-lattice relax. time obs. 7−133186
ATP, adsorbed on Ag electrode, SERS, protonation effects 7−114188
Ag complex, β-alanine-$AgNO_3$, single crystal, vibr. modes, IR Raman spectra anal. 7−71689
Ca^{2+} channel, voltage-sensitive, mol. organisation of ion-transporting pathways 7−100884
Co complex, cytochrome P450 active site analogue, synthesis, struct., spectrosc. 7−114192
Co^{2+} reconstituted horse liver alcohol dehydrogenase, single cryst., spectra 7−144968
Cu complex, 3-ethoxy-2-oxobutyraldehyde bis(N^4, N^4-dimethylthiosemicarbazonato)copper (II) orientation and mobility in lipid bilayer 7−68368
Cu complex, β-alanine-$CuNO_3$, single crystal, vibr. modes, IR Raman spectra anal. 7−71689
Cu metalloproteins, Raman spectra 7−71700
Cu mononucleotides, Raman spectra 7−71700
Cu polynucleotides, Raman spectra 7−71700
Cu(II), binding to mononucleotides, Raman spectrosc. obs. 7−68327
Cu(II)-DNA complexes, change in UV spectra with soln. ionic strength 7−139200
Fe-S proteins, isotopic species, reson. Raman spectra study 7−68488
H_2O molecules bound between lipid bilayers, magic numbers 7−78798
H_2O-amino acid interaction, NMR relax. investig. 7−90219
H_2O-protein interaction, NMR relax. investig. 7−90219
$(H_2OHOH_2)^+$, proton transfer pot., external ions and dipoles effect, ab initio calcs. 7−74406

molecular biophysics continued
^1H and ^{31}P NMR, simultaneous in vivo meas. using balanced-matched double-tuned probe 7−71942
^1H NMR, spectral shifting technique for ^{12}C-^1H and ^{13}C-^1H metabolite relax. rates 7−114577
^{181}Hf labelled rat serum transferrin, metal-binding configuration, temp. depend. 7−126708
^{181}Hf-labelled transferrin, human and rat serum comparison, TDPAC study 7−126695
Na-DNA, lowest optic modes, softening 7−71693
Pd complex with glycerine, electronic struct., X-ray spectra and quantum-chem. calcs. 7−109928
Zn complex, Zn octaethylchlorin, deuterated species, unstable anionic forms, reson. Raman scatt. spectra study 7−103515

molecular bonds *see bonds (chemical)*

molecular clouds *see interstellar matter; nebulae*

molecular clusters
alkali metal halides spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
alkaline earth oxides, cryst. cluster SCF-X_α-RW method calcs. 7−143344
alkylamine clusters, H-bonded, photoionis. mass spectrosc. 7−136115
aromatic molecules, microsolvation, spectroscopic investig. 7−129823
benzene, van der Waals cluster, vibronic struct. 7−96911
benzene-Ar clusters, Penning ionisation, UV spectra line shapes 7−82331
benzene-F^-, clusters, stability, struct., enthalpy, ab initio MO calcs. 7−93356
benzene-methane(-methane-d_4)(carbon tetrachloride), clusters, van der Waals modes 7−103472
carbon tetrachloride cluster, electron attachment, mass spectroscopy 7−82334
characterisation, by vibrational spectroscopy 7−141739
chemical dynamics, laser appls., conf., Los Angeles, CA, USA (Jan. 1987) 7−128182
comet nuclei-solar wind interaction, laboratory modelling of ion-mol. cluster prod. 7−107759
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
ethylene clusters, IR predissoc. spectra 7−122518
evaporating clusters, temp. 7−98420
glycine, metastable supersaturated solns., diffusion coeffs. 7−111924
hexafluorobenzene-F^- clusters, stability, struct., enthalpy, ab initio MO calcs. 7−93356
homogeneous systems, evaporative vector appl. 7−141737
ion-surface impact, desorbed material, multiphoton reson. ionisation-TOF mass spectra anal. 7−92820
ion-water clusters, free energy changes calc. using nonadditive pots. and Monte Carlo method 7−118130
ionisation by high-Rydberg rare gas atom collisions 7−82382
irreversible kinetic coagulations in presence of source, Smoluchowski eqn., power-law distribs. 7−144761
isoquinoline van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
metals, isolated molecules, hyperfine field interaction studies 7−118439
methane clusters, ion-molecule reactions initiated by photoionisation 7−113897
methanol clusters, multiphoton ionis., reaction channels var. 7−110051
methyl chloride, microclusters and their internal ang. modes, rot. anal. 7−90134
methyl cyanide, vibrational spectroscopy, characterisation of mol. clusters 7−141739
methyl cyanide cluster, electron attachment, mass spectroscopy 7−82334
methyl halides, ionised clusters, intramolecular ion-molecule reactions 7−141733
$(methylamine)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
N-(methylformamide)$_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
$(methyliodide)_n^+$, cluster formation photodissociation, ultraviolet spectra 7−135922
molecular interactions, geometry optimisation, simulated annealing approach 7−100522
nonmetal clusters, ionised defects, mass spectra 7−141735
nonpolar molecular clusters, icosahedral struct. 7−110176
organic radical clusters, intermol. effective exchange interaction, MO calcs., appl. to organic conducting magnet design 7−74805
organometallic clusters, structure and electron counting 7−110178
paraxylene clusters, reson. enhanced multiphoton ionisation study 7−90292
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
phenylacetylene, clusters, reson. enhanced multiphoton ionisation study 7−90292
photoionisation mass spectrometry using synchrotron radiation, review 7−90474
pyridazine van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
radical clusters, intramol. effective exchange integrals, ab initio GMO calcs., appl. to magnetic polymer design 7−74804
sorbic acid adsorbed on graphite, vibr. spectra, scanning tunnelling microscopy study 7−105245
structural classification for AB_3 and A_2B_2 polyatomic molecules 7−110180
transition metal clusters, bonding strength, EHMO calcs. 7−109781
van der Waals clusters, supersonic expansion, photoionisation spectroscopy 7−110166
water oligomer populations, gas-phase, press. enhancement, RRHO MCY-B/EPEN computation study 7−74806
$[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF $X\alpha$SW calcs. 7−109763
$[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF $X\alpha$SW calcs. 7−109763
AS_2S_3 covalent clusters in zeolites, electronic and vibr. spectra 7−125723
Al_n^++Xe, collision-induced dissoc., fragmentation patterns, bond energies and structs. 7−129917
ArD_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
ArH_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
ArHF, clusters, struct. and dynamics, IR absorp. spectra 7−129923
Br^-, assoc. with NH_3, thermochem. props. 7−82414
CO_2 clusters, struct. and internal mobility, Fourier transform IR spectra 7−103492

molecular clusters continued
CO_2, crystn. and icosahedral mol. clusters, struct. model 7−96902
CO_2, doubly charged cluster ions, metastable dissoc. 7−110124
CO_2 negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
$(CO_2)_n^+$ clusters, evaporative lifetime, kinetic energy, binding energy determ. 7−122764
$CO_3^-(H_2O)_n$, negative ion clusters, photodissoc. dynamics 7−122642
$CO_2.O_2^+$ cluster ions, photodissoc. dynamics investig. 7−129809
$(CO_2)_nX$, X=Cl^-, Br^-, I^-, F^-, stability, struct., ab initio MO calcs. 7−138981
Ca_2, matrix isolation Raman and fluoresc. spectra 7−96906
$Ca^+(H_2O)_n$ cluster, (n=1 to 10), Monte Carlo calcs. and mass spectra 7−122766
CdS, small clusters, electron diffr. anomalies 7−83816
Cl^-, assoc. with NH_3, thermochem. props. 7−82414
$(HCN)_n$, linear and cyclic oligomers, ab initio calcs. 7−90465
HCN clusters, free jet spectrosc. by coherent Raman spectrosc. 7−82420
HCN, vibrational spectroscopy, characterisation of mol. clusters 7−141739
H_2CN^++HCN clustering reaction rate consts., appl. to plasmas and atm. of Titan 7−138976
$HFCO_2$, clusters, struct. and dynamics, IR absorp. spectra 7−129923
$(H_2O)_n^-$, electron attachment under collision-free conditions 7−113899
H_2O clusters, excess electrons, attachment to surface states 7−129922
H_2O clusters, mol.-beam study, electron-impact ionisation meas. 7−82418
H_2O, clusters, seeded supersonic jets, CARS spectra anal. 7−90141
H_2O, dimer, struct. and vibr. spectroscopy. quantum simulation 7−96909
H_2O negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
H_2O, spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
$(H_2O)_2^-$ clustered with inert gas, electron field-detachment 7−122768
$(H_2O)_5$ clusters, struct., stability, mol. dynamics method 7−103708
$(H_2O)_n$ clusters, geometries, energies, electrostatic props. 7−103706
$(H_2O)_n$, effective Hamiltonian calcs. 7−110167
$(H_2O)_n$, neutral clusters, ionis. by surface collision 7−129915
$(H_2O)_m(Ar)_n$, H-bonded, photoionis. and fragmentation 7−122624
$(H_2O)_nH^+$+$Ne^+(Ar^+)(Kr^+)$, ion-induced desorption, mass distrib. meas. 7−76600
$H_2O.H_3O^+$ cluster, dissoc., statistical phase space theory 7−86593
$H_3O^+.20H_2O$, struct., energy minimisation study 7−82417
$H_2Os_{10}C(CO)_{24}$ cluster, EPR and quantum-size effects 7−103549
$H_6Si_2O_7$, clusters, electronic struct., SCF $X\alpha$-scattered wave calcs. 7−103392
I^-, assoc. with NH_3, thermochem. props. 7−82414
I_2He, vibr. predissoc., num. investig. 7−129811
I_2M (M=H_2, N_2, O_2) clusters, photodissoc., solvent caging, fluoresc. spectra 7−136021
I_2M(M=Ne, Ar, Kr, Xe), van der Waals clusters, photodissoc., product vibr. state distribs. 7−96802
LiI, clusters, solvation 7−96910
Mo_2, matrix isolation Raman and fluoresc. spectra 7−96906
N_2, microclusters, nucleation and thermodynamic props. 7−96907
N_2, nucleation and condensation investig. 7−96908
NH_3, clusters, IR dissoc. spectra 7−110031
NH_3, monomers and clusters, supersonic jets, Raman spectra 7−135946
$(NH_3)_n$ polar clusters, electron affinity 7−110179
NO dimer, in micropores, mag. suscept. meas. 7−110168
NO_2^-:$Li^+(H_2O)$, ion-pair hydrate clusters, Monte Carlo simulations 7−90470
N_2O negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
NaCl clusters, multiphoton stimulated desorption, magic numbers anal. 7−119559
Na_4Cl_4, neutral and negative cluster, electron attachment induced cluster isomerization 7−129921
Ni carbonyl cluster ions, bonding, synthetic chem. in mol. beam 7−90471
$O_2^-(H_2O)_n$, gas phase, electron transfer, ab initio MO calcs. 7−68500
$Os_n(CO)_m$ clusters, electronic struct. calcs. 7−90467
Pb_2, matrix isolation Raman and fluoresc. spectra 7−96906
PbO, matrix isolation Raman and fluoresc. spectra 7−96906
SF_6, cluster size, temp. and struct., electron diffr. investig. 7−141736
$(SO_2)_2^-$, negative ion clusters, photodissoc. dynamics 7−122642
SO_2 clusters, ion series mass spectra, attachment cross sections, resonance 7−136117
SO_2, van der Waals clusters, electron attachment investig. 7−90468
$SO_2.O_2^+$, weakly bound clusters photodissoc. dynamics 7−93344
SiO_2 clusters, electronic struct., props., MNDO calcs. 7−122772
Si_2O_4, electronic struct., CNDO/SW calcs. 7−110182
$Si_2O_7^{6-}$, clusters, electronic struct., SCF $X\alpha$-scattered wave calcs. 7−103392
$Te_2O_7H_6$ mol. cluster model of V_o centre, RHF-SCF electronic struct. calcs. 7−117113
ZrO_2 clusters, electronic struct., discrete-var. method calcs. 7−110183

molecular collision processes *see elastic scattering of atoms and molecules; molecular inelastic collisions*

molecular configuration interactions *see molecular electron correlations*

molecular configurations
see also bond angles; bond lengths; inorganic molecule configurations; isomerism; macromolecular configurations; molecular orbitals calculations; organic molecule configurations; X-ray diffraction examination of molecular structure
aggregated molecules, Raman bands, excitation wavelength depend. 7−96701
bioctahedral complexes, metal-metal bonded, edge-sharing, structs. 7−89950
CAL infrared spectroscopy, microcomputer appl. of PROLOG 7−88805
Cartesian internal coordinates, stationary paints, translation, rotation, Hessian, algorithms, potential energy surfaces 7−141551
chemical chiral systems, sensitivity to weak asymmetric factors 7−68473
chirality forces 7−110056
column chromatography, chiral stationary phase 7−141711
correlation energy calcs., second-order connected moments expansion 7−135844
crystallographic symmetry point group notation flow chart, rel. to mol. struct. 7−95155
diabatic energy surfaces and wave fns., permutation operation 7−90014
dynamic orbital forces and molecular geometry in the density-functional formalism 7−96526

molecular configurations continued
excited states with full separation of charges 7−109814
fast ion beam 3D imaging studies 7−96845
geometry optimisation without anal. gradients, algorithm 7−116837
graphics, appls. *(French)* 7−141714
graphs as topological objects in space 7−116811
isomer enumeration, inverse problem 7−116810
isomerisation, two-dimensional NMR exchange spectroscopy study 7−122573
Kekule structure, innate degree of freedom of a graph 7−141431
LISP-based intelligent tutorial for microcomputers 7−88806
Molecular Editor, 3D shape manipulation package for Apple Macintosh 7−136090
molecular graph similarity, linear notation 7−129537
molecular interactions, geometry optimisation, simulated annealing approach 7−100522
molecular mechanics energy surfaces, stochastic exploration 7−109710
molecular pairs, correl. energy eval., semiempirical quantum-chem. CNDO-CMP SCF calc. 7−109812
molecular properties, ab initio determ., book 7−134384
nonpolar molecular clusters, icosahedral struct. 7−110176
polyatomic molecules, geometry, electron diffr., kinetic anharmonicity 7−141706
polyatomic molecules, normal vibr. freqs., MINDO/3 calcs. 7−109867
polyatomic mols., adiabatic pot., dynamic instability, virial theorem 7−74439
prolate pentagons, Kekule struct. enumeration 7−129538
quasi-relativistic CNDO/1 calcs. 7−96542
ring containing symmetry elements, geometric closure algorithm 7−141423
small polyatomic molecules, angular geometry, ab initio STO-3G bond orbital calcs. 7−96502
small-molecule chains, on polymeric templates, struct. calc. method 7−96576
space-filling model program, SPACFIL, speed enhancements 7−122732
stimulated Raman spectroscopy, high resolution, mol. structs. and collision effects on line shapes investig. 7−80901
structure visualisation using IMAGE interactive computer program 7−97849
subroutine package for calculating molecular structures by the paramagnetic-additive method 7−68211
T-shaped an der Waals complexes, spectrosc. props. and empirical pot. energy surfaces 7−68424
T-shaped van der Waals complexes, spectrosc. props., pot. energy surfaces 7−68423
transition metal cpds., P-containing, struct, reactivity, ^{31}P NMR, review 7−93308
transition states, vibrational frequencies, energy path potentials 7−138969
transition structures, standard geometries 7−109718
triatomic molecules, bending-rot. Hamiltonian, semirigid model 7−141562
valence-unsaturated compounds meas. apparatus 7−103687
P compounds, tricoordinated, electronic and stereochem. struct., $\delta^{31}P$ chem. shift 7−103541

molecular conformations *see molecular configurations*

molecular dissociation
see also heat of dissociation; molecular dissociation energies; molecular electron impact dissociation; molecular photodissociation; molecular predissociation
ABA-type molecules, local and hyperspherical vibr. resons., lifetimes determ. 7−90088
acetic acid, unimolecular pyrolysis mechanisms, ab initio quantum chem. calcs. 7−126426
acetonitrile, hydrolysis, ab initio calcs. 7−113902
acetonitrile+Ar, dissociative excitation reaction cross sections, TOF spectra 7−138977
N-acetyl-1-pyrenylalanine methyl ester, intermol. excimer, dissoc., chiral discrimination 7−110015
acetylene, adsorbed on Ni (100), chemisorption, thermal decomp. 7−137707
alkanes, dissoc. adsorpt. on Ir (110), dynamics study 7−106825
alkylammonium nitrate salts, thermal decomp. site shifting by backbone substitution 7−119517
benzoyl peroxide, in glassy polymer films, decomp. kinetics, ionol effects 7−138997
2-bromo-1,1,1,3,3,3-hexafluoro-2-(trifluoromethyl)propane, nonlinear IR absorption 7−116973
chemically reactive liquids, kinetics 7−86567
coolant dissociation, decontamination of power plant process blowoffs *(Russian)* 7−103010
crystals, dissociation under press. Raman and X-ray studies *(Japanese)* 7−132933
cyano compounds, fragmentation under nonlinear UV excitation, delayed CN $B^2\Sigma^+$ chemiluminesc. ion-mol. collisions 7−78475
cyclopropenium ion in interstellar clouds, dissociative recomb. rel. to cyclopropenylidene synthesis 7−128024
cylindrically blunted wedges, low-density hypersonic flow, direct simulation 7−136782
dialkyl peroxides, gas phase thermolysis, trapped radicals, ESR study 7−74709
diatom+atom collisions, diatom dissoc. and recomb. rate consts., collinear classical trajectory study 7−100513
diatomic molecule form. in electrothermal atomisers, interferences and analytic possibilities 7−93315
diatomic molecule-atom collisions, vibr. excitation, Morse osc.-exponential repulsion model calcs. 7−90351
dication fragmentations, unusually late transition structures, ab initio MO calcs. 7−96500
difluoroethanes, semiempirical pot. energy surface for reactions 7−113865
dimethyl methylphosphonate, adsorbed on oxidised Fe surface, effect of coadsorbed water, TPD, AES studies 7−71522
dimethylether, protonated, fragmentation studied in tandem quadrupole mass spectrometer 7−71552
DNA, degradation, belomycin mediated, ^{18}O incorporation into glycolic acid 7−106976
dodecafluorocyclohexane, excited above dissoc. threshold, IR spectroscopy and intramol. vibr. relax. 7−109883
ethylamino ion, fragmentation and isomerisation, MNDO calcs. 7−68216
ethylene, adsorbed on Ni (100), chemisorption, thermal decomp. 7−137707
ethynyldiazonium ion, dissociation, ab initio study 7−129562

molecular dissociation continued
formaldehyde, dissoc. rates and reson., quantum mech. calcs., comparison with RRKM and exact models 7−71468
formaldehyde, dissoc. reaction energies, coupled cluster and MBPT calcs. 7−93266
gas phase reactions induced by vibr. multiple-photon IR laser excitation kinetics 7−93263
haemoglobin Glycera, ligand dissoc. rates correl., reson. Raman spectra 7−78768
haloalkoxy radicals, H and Cl extrusion reactions, MNDO CI calcs. 7−141470
heteronuclear diatomic alkali molecules, long range states, lowest asymptotes, spin-orbit effects, dissoc., perturbative model, matrix methods, wavefunctions 7−144685
hydrocarbons on O_2 film, ion-mol. surface reactions induced by slow electrons 7−119575
2-hydroxy-benzolhydrazones of acetylpyridines, electrochemical and metallochromic props., UV, visible, IR and mass spectra 7−82126
intermolecular forces under high pressure *(Japanese)* 7−131091
isokinetic relationship, unimolecular reaction systems, steady state solutions, vibrational spectra, liquid and gas phase reaction sites 7−144682
linear polymers, thermal depolymerisation, model 7−144702
metal surfaces, molecular bonding and decomposition of adsorbates 7−126484
methane, dissociative adsorpt. on Ni, kinetics for (111), (110) and (100) surfaces 7−137661
methane, solid deuterated, delayed emission of H_2 from ion bombardment 7−93350
$(methane)^+ + N_2(He)$, collision-induced dissoc. press. depend., collisional energy deposition probability anal. 7−86585
methane dications, dissoc., state-to-state study, photoion-photoion coincidence technique 7−86596
methane films, molecular decomposition and fragment emission under MeV ion bombardment 7−111687
methane on Ni(111) surface, dissoc. chemisorpt. induced by Ar atoms 7−119562
methanol, on Ru (001), decomposition, laser induced thermal desorption study 7−132967
methyl, recombination reaction, rate consts., Monte Carlo integration 7−144692
methyl acetate, radical cation, isomerisation, dissoc., ab initio MO study 7−100531
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7−103520
methyl carbamate, acid hydrolysis, MNDO method 7−144697
methyl isopropyl ether, gas phase dissociations 7−119498
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
methylnitrite ions, unimolecular decomposition, rate consts. and kinetics study 7−126425
monomer-excimer kinetics, transient effects, num. anal. 7−129774
nitroaromatic anions, collision-induced dissocs., mass analysed ion kinetic energy spectra 7−119497
nitrobenzene, decomposition pathway, ab initio MRD-CI calcs. 7−116873
nitrocompounds, condensed, thermal decomp. kinetics, automated data acquisition appls. 7−138999
nitrosamine metabolites, SCF calcs. polarisation functions and electron correlation effects, decomp. 7−109708
O_2, plasma, electrical cond., electron temp. and ionis. degree depend. 7−91282
PEPIPICO triple coincidence technique, for 3-body dissoc. dynamics obs. 7−134896
PET fibres, aminolytic product characterisation 7−71560
phenetole, surface-induced dissoc., mass spectra 7−125878
picric acid, dissoc., solvent effects, -10 to +80°C 7−106765
polyatomic molecules, dissoc. attachment and radiation chem. stability 7−93348
polyatomic molecules, surface-induced dissoc., TOF mass spectra 7−126430
polydimethacrylates, cross-linked, depolymerisation kinetics 7−139000
polyisoprene, oxidative-degradative processes, mech. stress effects *(Russian)* 7−113915
polyurethane acetals, mol. struct., hydrolytic stability *(Russian)* 7−113913
pot. energy surfaces 7−122413
protonic acids, in water-organic media, dissoc. thermodynamics 7−119508
pyrazine, surface-induced dissoc., mass spectra 7−125878
pyrene, surface-induced dissoc., mass spectra 7−125878
α-ribazole-3′-phosphate, detached cobalamins nucleotide, ^{13}C NMR study 7−119723
small molecules and radicals, heats of form. and atomisation, SCF HF calcs. 7−96532
surface, methane dissociative and molecular adsorption 7−143225
tetracyanobenzene-methylated benzene exciplexes, time-resolved mol. luminesc. 7−109975
tetraethylorthosilicate, hydrolyses, condensation, multinuclear NMR study 7−126440
tetraethylsilane, surface-induced dissoc., mass spectra 7−125878
tetranitramines, bicyclo and spiro forms, thermal decomp. 7−71481
trimethyloxonium ion, fragmentation studied in tandem quadrupole mass spectrometer 7−71552
tropone, decarbonylation, time depend. mass spectra, breakdown graphs 7−93273
U^{6+} hydrolysis in $NaNO_3$ soln. 7−106867
unimolecular dissoc. rates, semiclassical anal. of quantum reson. lifetimes 7−71467
unimolecular dissoc./free radical recombination, rate consts. 7−144692
water adsorption on Ge, AES and photoelectron spectra studies 7−143228
ylides, gas phase struct., ab initio MO calcs. 7−116863
ylidions, gas phase struct., ab initio MO calcs. 7−116863
Al (100), coadsorption and decomposition of CO with Na or K, temp. depend. study 7−91975
Al_n^+ clusters, chemisorbed O, collision induced dissoc. 7−122765
Al_n^+ collision induced dissociation cross sections and branching ratios 7−90472
$Al_n^+ + Xe$, collision-induced dissoc., fragmentation patterns, bond energies and structs. 7−129917
Ar inductively coupled plasma, impurities spatial distribs. study 7−130834
Ar metastable cluster ions, unimol. dissoc., mass spectra, magic nos. 7−68499

molecular dissociation continued
Ar^{13+}+simple molecules, impact ionisation and fragmentation, TOF mass spectra 7−122679
B_2H_6 dissociation to BH_3, enthalpy, vibr. spectra, coupled-cluster and MBPT theory 7−135846
Br_2, high-temperature dissoc. and vibr. relax. study 7−100526
CCl in carbon tetrachloride-Ar(Kr) discharges, dissoc. excitation 7−82198
CF^++He(Ne)(Ar), dissoc. and electron capture cross sections 7−74750
CO, dissoc. adsorpt. on Ni (111) with preadsorbed K, IR reflection absorpt. spectra 7−106826
CO dissociation reactions on Fe and Fe_3O_4, Raman-ellipsometry spectroscopy obs. 7−86667
CO interactions with metallic glasses, XPS and UPS studies 7−144754
CO_2 low lying states, pot. energy curves, dipole moments, multiconfig. SCF calcs. 7−116866
CO^++He(Ne)(Ar), dissoc. and electron capture cross sections 7−74750
CO_2, doubly charged cluster ions, metastable dissoc. 7−110124
CO_2 lasers, Pt/SnO_2 catalysts, dissociation products recombination 7−74983
CO_2 TEA laser discharge plasma, mol. decomposition and contaminants 7−139010
CX^{2+}, X=F, Cl, charge separation reactions, mass-analysed ion kinetic energy spectra 7−144684
Cl_2 layer on Pt substrate, Cl^- dissociative attachment in electron stimulated desorpt. 7−138557
$(Cl_2)n$+K(Rb), charge transfer collisions, cluster product collision energy depend. 7−82336
Cr complex, metal-ligand bond homolytic fission rates, press. depend. 7−86570
D_2O, excited state, laser-induced dissoc., dynamics 7−78476
F_2, Hartree-Fock dissoc. 7−93314
Fe (110), ethylene and acetylene adsorption, Auger spectra studies 7−118271
$Fe(CO)_2$(ethylene)$_3$, dissociative substitution, transient IR spectrosc. 7−90113
GaAs (111), chemisorption of water or its dissociation products, difference densities of states 7−137998
H+H_2, collision-induced dissoc. classical dynamics threshold 7−126438
H^++H_2, dissociative ionis., energy spectra and angular distribs. meas. 7−122664
H^++$O_2(CO)(CO_2)$, differential cross section meas. 7−74735
H_2 chemisorption on Ni catalysts obs., using DC conductivity sensor 7−131436
H_2, hydrogen storage in metal hydrides, contribution of cathodic charging 7−93544
H_2, plasma, electrical cond., electron temp. and ionis. degree depend. 7−91282
H_2, solid, dissociation below 1 K 7−71476
H_2^+ + inert gas atom collisions, dissociative capture and translational energy loss of H^+ fragments 7−129841
H_2^+, bond weakening 7−86608
H_2+Ar, nonequilib. dissoc. rate coeff., Monte Carlo trajectory and master eqn. simulation 7−93290
H_2+He; p-H_2 thermal dissoc. rate consts., appl. to interstellar processes 7−136034
H_2^++Ne, excitation and dissoc., Lyman α radiation 7−74745
H_5^+, H_7^+ and H_9^+, metastable clusters, fragmentation dynamics 7−110169
HD^+, molecular dissoc. states, hyperspherical adiabatic framework, translation factors bypass 7−89948
HF chemical laser development utilizing hydrogen fluorination chain reaction with thermal branching mechanism 7−122940
$HLiH^-$ ion, in $X^1\Sigma_g^+$ state, 3D pot. energy and electric dipole moment surfaces, ab initio calcs. 7−116821
H_2O, dissoc., hyperspherical reson. lifetimes eval. 7−90276
H_2O, excited state, laser-induced dissoc., dynamics 7−78476
H_2O, on clean and O-predosed Al(111) surfaces, adsorpt. and thermal decomp. 7−113984
H_2O, singlet states, linear asymmetric dissoc., MRD CI calcs. 7−116861
H_2O vapour, conditions for dissoc. and recomb. in fluid flow in crust 7−87537
H_2O^{2+}, dissoc., singlet and triplet state pot. energy surfaces calc. 7−122366
$H_2O.H_3O^+$ cluster, dissoc., statistical phase space theory 7−86593
HOOH→OH+OH, bond fission, rate consts. and product state distribs. calcs. 7−106759
H_2S, dissoc. in capacitive RF discharge 7−69512
HX, X=Br,I, ionised species, ground state, relativistic and correlation effects, valence SCF-CI calcs. 7−116870
H_2*, radiatively dissociating level, vibr. wave function 7−109863
He+H_2^+, cross sections, vibr. state depend., threshold photoelectron/photoion coincidence study 7−100514
He_2^+, excited state, electron-stimulated desorption from electrode grids 7−70952
HeI_2, van der Waals fragmentation, periodically forced oscillator model 7−132922
I_2, high-temperature dissoc. and vibr. relax. study 7−100526
ICN, dissociation, transition states, real-time fs probing spectroscopy 7−135960
$KrCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
Li_2, dissociative electron attachment, cross sections, negative ion prod. rate 7−141698
Li_2, dissociative electron attachment, negative ion form. mechanism 7−141699
Li_2, optically pumped, dissociative electron attachment, ion source appls. 7−141355
LiHe, electric discharge plasma, excited states form., pot. energy curves, MCSCF calcs. 7−89943
N_2, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
N_2 adsorption on Fe (111), direct precursor mediated processes 7−132964
N_2, shock-compressed liq., dissoc. 7−106785
N_2+O^-, N^- formation, mass spectra study 7−138971
N_2+XeF_2, energy transfer reactions rate consts., laser appls. 7−138983
NCl_3, decomposition flame, kinetic spectrosc. 7−135923
NCl_3, thermal decomposition in presence of H_2, kinetics, stoichiometry 7−138998
NH_3, dissociation, pot. energy surface, ab initio MCSCF calcs. 7−103359
NH_3 dissociation on O_2 covered Pd studied with H_2 sensitive Pd-MOS device and mass spectrometry 7−106830
$(NH_4^+)_{0.24}(NH_3)_{0.23}TiS_2^{0.24-}$, deintercalation and reintercalation energies 7−86605
molecular dissociation continued
NO, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
NO molecular and dissociative adsorpt. on W (110) and (100), UPS study 7−143202
NO+O^-, N^- formation, mass spectra study 7−138971
N_2O, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
N_2O_4→NO coolant irreversible decomposition *(Russian)* 7−81538
Na_x^+ clusters, ionisation induced unimol. dissoc., photoionisation 7−90475
NaI-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
$NeCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
Ni (100) H_2 and O_2 chemisorption and dissoc., one-electron effective core pot. 7−86668
O_2, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
O_2 chemisorbed on Ni (001), interaction energy 7−70068
O_2^+ dissociative recombination, O ^1S state production rate in upper atmosphere 7−113933
O_3 dissociation process, energetics, MC SCF, CI, MBPT calcs. 7−129607
PH, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
P_4H^{2+} compounds, decomposition pot. hypersurface, MNDO calcs. 7−109769
S_8, chemically reactive liquids, kinetics 7−86567
SH_5^+, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
ScI_3-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
SiF systems bond energies, generalised VB and CI calcs. appl. to Si etching 7−122365
SiH_5^-, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
$Si_mO_n^{m-}$, methanolic soln., tetramethylammonium ions effect 7−100535
TiO_2 (110) surfaces, interaction with SO_2, UPS, XPS and LEED studies 7−91986
UF_6^-+Ar, ionic fragmentation, internal excitation depend. 7−110066
UO_2^+ complexes, IR laser-induced decomp., double reson. results 7−68373
UO_2^+ complexes, IR laser-induced decomp., mol. beam depletions anal. 7−68450
$XeCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
XeF ground state kinetics analysis rel. to laser performance 7−117182
ZnO films, cond. press. and temp. depend., influence of decomposition and O chemisorption 7−85140

molecular dissociation energies
alkali metal diatomic molecules, ground state reduced pot. curves and dissoc. energy estimation 7−109821
anharmonic at. chain, interatomic bond breaking, mol. dynamic method 7−68426
aromatic molecules, microsolvation, spectroscopic investig. 7−129823
benzene dimer, and dimer cation, dissoc. energies, ionics. pot. 7−110136
bond dissociation energies, case histories 7−110131
chlorodifluoronitrosylmethane, photodissociation, photofragment fluoresc. spectra anal. 7−96801
cresol isomers and complexes, supersonic free jets, fluoresc. excitation spectra 7−90238
first-row atoms, hydrides and dimers, correl. energy density functionals appl. 7−109755
ice:HCl, point defects, elec. characteristics 7−98118
methane, general props. eval., approximate double substitution coupled-cluster method 7−109699
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7−103520
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
transition metal complexes, stability consts., extended CNDO/2 method calcs. 7−103396
transition metal hydrides positive ions, spectroscopic parameters and dissoc. energies, CI calcs. 7−116869
Al_n^+ collision induced dissociation cross sections and branching ratios 7−90472
Al_n^++Xe, collision-induced dissoc., fragmentation patterns, bond energies and structs. 7−129917
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
Ar inductively coupled plasma, impurities spatial distribs. study 7−130834
B_2H_6 dissociation to BH_3, enthalpy, vibr. spectra, coupled-cluster and MBPT theory 7−135846
BaO, vapour phase, UV photoelectron spectra, orbital calcs., dissoc. energies, chemielectron spectra 7−141625
Be salicylate complexes, electronic struct., polar substituent effects, CNDO/2 calcs. 7−141467
Be_4 and Be_{13}, struct. and dissoc. energies, electron correl. and basis set effects 7−74458
C_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
CNe^{n+} (n=1 to 4), pot. curves, extended MCSCF calcs. 7−96516
$(CO_2)_3^+$, config. ab initio calcs. 7−116845
CO_2 dimer, config. ab initio calcs. 7−116845
F_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
F_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
H_3^-, electronic struct. and stability, perturbation theory and CI calcs. 7−135850
H_5^+, pot. energy hypersurface, ab initio SCF CI calcs. 7−89996
HCN, dissoc. energy, Moller-Plesset perturbation theory 7−122328
HF-acetonitrile(propynenitrile), H-bonded dimers, dissoc. energies, rot. spectroscopy 7−82066
$HF-d_0(d_1)$, general props. eval., approximate double substitution coupled-cluster method 7−109699
H_2O, general props. eval., approximate double substitution coupled-cluster method 7−109699
H_2O, singlet states, linear asymmetric dissoc., MRD CI calcs. 7−116861
H_2O-HF, zero-point and equilib. dissoc. energies 7−96635
K_2, rovibrational transitions, Doppler-free polarisation spectroscopy, visible spectra anal. 7−109916
LiH, general props. eval., approximate double substitution coupled-cluster method 7−109699
N_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
N_2, excited states, bond fns., MRD-CI calcs. 7−109791
N_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
O_2, dissoc. energies, extended valence MC SCF calcs. 7−129606

molecular dissociation energies continued
O_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
O_3 dissociation process, energetics, MC SCF, CI, MBPT calcs. 7−129607
PbI_2, dissoc. thermodynamics, PbI(A-X) laser-induced fluoresc. 7−135998
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
SrO, vapour phase UV photoelectron spectra, orbital calcs., dissociation energies, chemielectron spectra 7−141625
UBr_n (n=1 to 5), gaseous equilibria, bond dissoc. energies and form. enthalpies determ. 7−86661
Xe_2, photoelectron spectra obtained by resonantly enhanced multiphoton ionisation 7−110000

molecular dynamics method
1D molecular lattice with mass variation, coherent excitations 7−140634
2D Penrose pattern, stability, mol. dynamics study 7−104611
2D systems, intermol. forces and spatial struct., teaching approach 7−140399
acetone, hydration free energy, finite difference thermodynamic integration 7−106784
acetonitrile liq., intermol. dipole-dipole NMR relax. rate, mol. dynamics calc. 7−90209
adamantane, high temp. phase, mol. rotational processes 7−142668
adiabatic thermal explosion, stochastic anal./molecular dynamics simulation comparisons 7−139012
agarose gels, molecular dynamics, NMR, Rayleigh scatt., Mossbauer radiation 7−126698
alcohols and alkanes solvation props., mol. dynamics method, thermodynamic-cycle perturbation theory 7−138978
alkali metals, liq., mol. dynamics calcs. near melting points 7−69584
anharmonic at. chain, interatomic bond breaking, mol. dynamic method 7−68426
anharmonic atom chain, fluctuation rupture, collective effects influence 7−98326
anisotropic systems, structural phase transitions, soft modes 7−142942
atomic particles collisions in two-phase medium, molecular dynamics calc. 7−142470
benzenes, liq. and solid, vibr. props., mol. dynamics simulation 7−91740
binary mixture, self-diffusion coeffs., molecular dynamics simulation comparison 7−120925
biological molecules, design and computer simulation 7−133193
biomolecules, mol. dynamics, review 7−133188
biophysical applications 7−106954
p-bromo-p-n-hexyloxybenzylidene aniline, smectic B phase, mol. dynamics, PMR relax. meas. 7−137228
n-butane, condensed phase, mol. dynamics simulation, plastic transition 7−137179
n-butane, condensed phases, mol. dynamics simulation 7−137178
n-butane, liq., rheology, nonequilib. mol. dynamics simulation 7−83146
n-butane, shear viscosity, equilib. and nonequilib. mol. dynamics calcs. 7−98540
carbon tetrachloride in liq. state at 296 K, T_d-symmetry mol., diffusion, dynamical cross correl. function 7−97887
carbon tetrachloride-water mixtures Lennard-Jones pot., mol. dynamics simulation 7−91412
chemical physics, parallel program struct. using supercomputers 7−108209
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
confined rotator model, harmonic potential, correlation functions, molecular dynamics 7−141553
constant vol. fluctuations, mol. dynamics simulation, partial molar props. 7−102364
Coulomb gas, 2D, dynamic characterization of dielectric-plasma transition 7−84727
Coulomb gas, periodic, 2D, optical modes, delocalisation and melting 7−137818
coupled rotators 2D system, phase transform., Lyapunov charact. exponents 7−121031
n-decane, liq., rheology, nonequilib. mol. dynamics simulation 7−83146
dense fluids, factorization of triplet direct correlation function 7−104511
dense fluids, van der Waals model Helmholtz free energy, temp., density depend. 7−131004
dense fluids, viscoelastic props., 2D viscosities 7−118144
diatomic mol., dielectric friction in liqs., mol. dynamics study 7−105088
dimethylamine, hydration free energy, finite difference thermodynamic integration 7−106784
DNA double helices, mol. dynamics simulations 7−133204
electrolyte solution, dielectric constant and conductivity, finite wavelength and freq. 7−111926
electron plasma in strong mag. field, many-particle adiabatic invariant 7−142496
energetic displacement cascades and radiation effects 7−104811
ethylene oxide hydrate, struct. I, thermal expansion obs. 7−143058
exothermic isomerisation reaction, nucleation and growth process, mol. dynamics method 7−86602
explicit dissipative structures, class of 1D Hamiltonian systems of chaotic type 7−120920
FCC (110) surface under stress, structural and thermodynamical behaviour, molecular dynamics simulation 7−76582
flow birefringence in simple fluids, non-equilib. mol. dynamics simulation, radial pair distrib. fn. 7−144009
fluid, 2D, microcomputer simulation expts., to study effects of repulsive and attractive forces 7−88779
formamide, liq., mol. dynamics simulations, test particle model pot. 7−91417
gases, rheology, nonequilib. mol. dynamics 7−69079
glass two component systems, anisotropic relax. correlations 7−111331
α-D-glucose, conformational studies, mol. dynamics simulations, pot. energy surfaces 7−68193
grain boundary structure ab initio determination by simulated quenching 7−117936
growth, role of incident kinetic energy of adatoms, molecular dynamics simulations 7−98753
hard sphere crystals, elastic constants, density functional and molecular dynamics calcs. 7−137443
hard spheres, thermodynamic props., mol. dynamics investig. 7−83623
hard spheres in spherical cavity, mol. dynamics 7−124427
high temp. mechanism 7−143109
ice, pressure induced phase transformations 7−84246
ice-water interface, density and orientation profiles, diffusion consts., TIP4P model 7−137281
incommensurate phase, 2D model phase diagram, mol. dynamics simulation 7−118055
ion beam induced VPE growth, molecular dynamics simulation 7−105330
ion-surface impact, desorbed material, multiphoton reson. ionisation-TOF mass spectra anal. 7−92820
isotropic-nematic transition, dynamic precursors 7−98447
Lac repressor headpiece structure, NMR, restrained mol. dynamics calcs 7−133191
Lennard-Jones fluid, dense, friction coeff. of Brownian particle, molecular dynamics anal. 7−111144
Lennard-Jones fluid, small wave vectors, transverse current autocorrelation function 7−69569
Lennard-Jones fluid, stochastic boundary conditions, transport coeffs., mol. dynamics calcs. 7−91410
Lennard-Jones gas, velocity distrib. fn., shear-flow-induced distortion, mol. dynamics simulation 7−110913
Lennard-Jones liq., thermal cond. determ. by mol. dynamics calcs. 7−118176
Lennard-Jones particle system, coding, computer simulation 7−137526
Lennard-Jones particle systems, melting, computer simulation 7−137525
lipid bilayer polypeptide interactions, mol. dynamics simulation 7−119741
liquid crystalline polymers containing polychloroacrylate and polyacrylate, mol. dynamics, permittivity meas. 7−137225
liquid solutions, effective pair pots. at McMillan-Mayer level 7−104504
liquid-vapour interface, orthobaric densities, spinodal decomposition 7−98622
liquids, molecular trajectories, mol. dynamics simulation study 7−75957
liquids, supercooled two component systems, anisotropic relax. correlations 7−111331
macromolecular dynamics simulations, interpretation of expts. 7−133190
melting zone, fluctuations and correlations, mol. dynamics calcs. 7−84211
metallic alloys, radiation amorphisation, point defect introduction and migration, mol. dynamics simulation 7−104816
methane-perfluoromethane, stability and struct., mol. dynamics model 7−105014
methanol, liq., mol. dynamics calcs., flexible three-site model 7−137191
methyl chloride + Cl^-, combined ab initio quantum mechanical and mol. mechanical method appl. 7−74423
microclusters, fragmentation, molecular dynamics study 7−82416
molecular cross correlation functions in inertial and noninertial frames of reference 7−129683
molecular crystal, two-dimensional rotator phase, mol. dynamics computation 7−142667
molecular crystals, intermolecular potentials, computer simulation studies 7−142695
molecular crystals, phase transitions, computer simulation 7−143003
molecular liquids, mol. mass distrib. effect on mass and momentum transport 7−105087
natrolite, fibrous zeolite, mol. dynamics simulation 7−144079
nondipolar liquids, mol. Kerr relax. theory in reorienting pulse fields 7−144015
nonequilibrium molecular dynamics, subtraction technique study 7−67196
nonlocal pseudopotentials in molecular dynamical density functional theory 7−137835
2-norbornyl cation, stabilisation energies, solvent models role 7−139003
nucleic acids, macromol, dynamics simulations, interpretation of expts. 7−133190
ODIC phase, correlation functions, molecular dynamics simulation 7−104599
oxazolidines, conform. anal., ^1H NMR spectra, mol. mechanics and PCILO calcs. 7−68215
pancratic elastase, porcine, and acetyl-alanine-proline-alanine complex, mol. dynamics simulation 7−144946
pancreatic elastase, porcine, mol. dynamics calcs., inhibitor design 7−119711
plate obstruction, flow simulation 7−104239
point defect migration rates by mol. dynamics simulation 7−104754
polar fluids, liq.-vapour interface, computer simulation 7−76548
polyethers, gas phase protonation, combined ab initio quantum mechanical and mol. mechanical method appl. 7−74423
polymer modeled by two coupled anharmonic chains of atoms, time dependence of strength 7−84107
protein and solvent environments incorporation into reson. Raman calcs. 7−93623
proteins, macromol. dynamics simulations, interpretation of expts. 7−133190
simple fluids, excess electron transport, mol. dynamics simulation 7−97888
soft-sphere and Lennard Jones fluid, equilib. and nonequilib. mol. dynamics calcs. 7−69954
soft-sphere supercooled liqs., density correl. function, nonexponential decay and dynamic slowing down 7−131001
solid-fluid interfaces, mol. dynamics simulation of wetting and drying 7−118199
solid-liquid transition, Nose-Hoover method, isothermal-isobaric algorithm validity test *(Spanish)* 7−142956
solid-liquid transitions, isothermal-isobaric Nose-Hoover method, correlation length, defect form. *(Spanish)* 7−142957
solids, high temp. defect-based diffusion mechanism, mol. dynamics computer simulation 7−98553
solids, transformations, computer simulation techniques 7−111861
sphere assemblies, inelastic in shear flow, stress calcs. 7−91184
statistical mechanical systems, mol. dynamics simulation, Summer School, Varenna, Italy, (July-Aug. 1985) 7−66805
Stockmayer mols. between Lennard-Jones plate, mol. dynamics study 7−69567
strained-layer superlattices, molecular dynamics simulation of growth 7−124783
strongly coupled model rotational-translational system dynamics, power spectra calcs. 7−117843
structure II clathrate cryst., thermal expansion, const. press. mol. dynamics 7−105085
supercooled liq., soft-sphere model, mol. dynamics study 7−75954
surface diffusion on rigid substrate, numerical simulation 7−91870
thin films, ion cluster-beam deposition, mol. dynamics simulation 7−113444
thin films, sputter deposited, stress and microstruct., molecular dynamics simulations 7−143261

molecular dynamics method continued
transition metals, body-centred cubic, improved N-body semi-empirical pot. model calcs. 7−137504
transport coefficients, mol. dynamics calcs. 7−95518
two-dimensional perfect crystals, nucleation of fracture, computer modelling 7−111754
two-dimensional solid, melting transition, edge pinning effects, mol. dynamics simulation 7−118065
unified approach to density functional and molecular dynamics in real space 7−92044
Verlet, Beeman and leapfrog algorithms, time integration schemes 7−97878
water, elec. field induced translational anisotropy, mol. dynamics study 7−117803
water, liq., rot. flow induced by laser field, mol. dynamics simulation 7−117611
water, liq. H bonds, ring distrib. random network model 7−97894
Ag vacancy diffusion, Monte Carlo studies 7−91875
Ag_2S, superionic conductor, ion dynamics, inelastic neutron scatt., anal. 7−131357
Al (110), struct., LEED and mol. dynamics studies 7−143144
$AlCl_3$-NaCl molten mixture molecular dynamics, computer simulation *(Japanese)* 7−130999
Ar clusters, solid-liq. transition, stability, mol. dynamics method simulation 7−117794
Ar, liq., Couette flow, self-diffusion, correl. functions, mol. dynamics study 7−124574
Ar liq. LJ pot., mol dynamics. calcs. 7−131003
Ar liquid, dynamic props., mol. dynamics calc. 7−131002
Ar, liquid in cylindrical C-pore, mol. dynamics and Born-Green-Yvon results 7−97889
Ar, solid, vacancy diffusion, Monte Carlo studies 7−91875
Ar-H_2 Lorentz gas, dynamical props., Lennard-Jones pot., mol.-dynamics method calcs. 7−123832
Ar-Kr, liq., cross thermodiffusion, nonequilib. mol. dynamics 7−105090
Ar-Kr mixture, equilib. mol. dynamics using Lennard Jones pot., thermal cond. 7−83627
Ar_{13} clusters, melting and freezing, microcanonical simulations 7−104959
Au, small particles, change in lattice constant in near-surface region 7−76578
CO_2, dense fluid, Raman scatt., MDM calc. 7−82175
CS_2, dense fluid, Raman scatt., MDM calc. 7−82175
CS_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
CoO_x, anion vacancies, mol. dynamics and static simulations 7−142767
Cu, vacancy diffusion, Monte Carlo studies 7−91875
Fe-H system, amorphous, H distrib. function, mol. dynamics studies 7−76188
Fe_3Al, focused collisions, study 7−118002
Ge (100), ab initio molecular dynamics 7−98652
H^+-He^{++} mixtures, frequency sum rules and charge fluctuation spectra 7−70227
H_2O clusters, excess electrons, attachment to surface states 7−129922
H_2O, liq., dielectric props., mol. dynamics simulation 7−125594
H_2O, liq., OH stretch vibr., computer mol. dynamics study 7−92679
H_2O, liq. mol. dynamics simulation and submillimeter spectra 7−97898
H_2O, self-diffusion, quasielastic neutron scatt. data, mol.-dynamics study 7−124573
$(H_2O)_5$ clusters, struct., stability, mol. dynamics method 7−103708
$H_2O^+Fe^{2+}(Fe^{3+})$ ions, ab initio pair pots., molecular dynamics calcs. 7−71474
KCl, aq. soln., mol. dynamics study 7−75968
KCl, radiation damage dynamics, external field effect, computer simulations 7−104857
Kr surface, premelting, mol. dynamics studies 7−142963
Li-Pb liquid alloys, struct., computer simulation studies 7−83699
$LiKSO_4$, translational and rotational dynamics, computer simulation 7−124132
Li_2MgCl_4, superionic Li^+ conductor, molecular dynamics study of ion transport 7−137616
LiO_2-SiO_2 melt and glass, structural simulation, molecular dynamics calc. *(Japanese)* 7−76005
N_2, liq., perturbation theory for studying thermodynamic props. 7−124554
$NaClO_4$, aq. soln., mol. dynamics simulation 7−69568
O_2, dense fluid, Raman scatt., MDM calc. 7−82175
O_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
Rb, liq., struct., self-diffusion, at 315 K, pseudopotential effect 7−117805
Rb, liquid, shear viscosity, nonequilib. mol. dynamics calc. 7−76470
Rh, liq., shear viscosity and transverse current correl. fn., computer simulation 7−98541
S_8, chemically reactive liquids, kinetics 7−86567
Se_n clusters, (n=3 to 8), equilib. geometries calc., density functional method, mol. dynamics and simulated annealing 7−136113
Si beam deposition, atomistic simulation 7−124781
Si, crystalline, amorphous and liq., phase diagram studies 7−118059
Si, epitaxial growth, molecular dynamics simulation 7−124782
Si, pulsed laser melting, mol. dynamics calcs. 7−138555
Si, self-interstitials, mol. dynamics study 7−137362
Si, surface, self-diffusion, simulation using Stillinger-Weber pot. 7−76481
SiO_2 glass, surface, struct. anal., mol. dynamics computer simulation 7−91935
SiO_2, nonlocal pseudopotentials in molecular dynamical density functional theory 7−137835
Xe, binding to myoglobin, free energy, mol. dynamics simulation 7−133195
Xe physisorbed on Pt (111), less than monolayer coverage, molecular dynamics study 7−91998
$ZnCl_2$-KBr glass, estimation of IR absorpt. by molecular dynamics 7−138445

molecular electron correlations
acetone, electronic excitation, SCF-CI calcs., substituent effects 7−122371
acetylene, torsional barrier, ab initio calcs. 7−74456
acetylene radical cation, IR spectra, SCF, MCSCF and CI methods 7−89989
alkanes, radical and carbocation form., SCF-CI calcs., substituent effects 7−122371
alternant systems, selection rules 7−89897
amines, protonation, SCF-CI calcs., substituent effects 7−122371
14-annulene, struct., aromaticity, SINDO1 SCF and CI calcs. 7−116854
atoms in molecules, correl. energy, spin density functional calcs. 7−141472
Be compounds, struct. and stability, ab initio closed-shell SCF calcs., electron correlations effects 7−109810
benzene, π bonds, ab initio electron correl. calcs. 7−109805
benzene, excited states, exponentially generated wave functions, SAC-CI study 7−129613
benzene, optimized virtual orbital space for high-level correlated calculations 7−116864
bicyclo[1.1.0]but-1(3)-ene, vibr. spectrum, ab initio calcs. 7−89928
butadiene, photoisomerisation, ab initio CI calcs. 7−93296
CCSDT model for electron correl. 7−74459
configuration space basis, symmetry- and spin-adapted antisymmetrised orbital products 7−89981
correlation and exchange energy 7−74457
correlation energy calcs., second-order connected moments expansion 7−135844
cyanate radical, $B^2\Pi$ state, CI calculations 7−122405
cyclobutene and its syn- and anti-dimers, UV-photoelectron spectra, ab initio CI calcs. 7−109802
cyclopentadienyl cations, excited states, polarisability, CI and PPP calcs. *(French)* 7−116872
density functional methods and electron correlation 7−74464
diatomic molecules, single and double excitation coupled cluster and CI calcs. 7−135847
diatomic quasimolecules, diabatic mol. orbital correl. 7−103370
3,4-dimethylenefuran, and rel. diradicals, singlet-triplet energy separation ab initio calcs. 7−68192
1,2-dimethylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
effective core pot. parameters, SCF, CASSCF and CI calcs. 7−74461
electron pair correlation in atoms and mols. review 7−89979
ethyl dication, open or bridged struct., ab initio MO CI calcs. 7−116862
ethylene, correl. wavefunction, canonical and localised orbital basis 7−109788
ethylene, photoisomerisation, ab initio CI calcs. 7−93296
formic acid, unimol. pyrolysis mechanisms, ab initio calcs. 7−93281
formyl anion, electron affinity, ab initio SAC CI calcs. 7−135848
formyl radical, electron affinity, ab initio SAC CI calcs. 7−135848
glyoxal, trans-cis energy difference, electron correlation effects 7−96549
haloalkoxy radicals, H and Cl extrusion reactions, MNDO CI calcs. 7−141470
haloethenes, valence shell photoelectron spectra, electron correl. effects 7−117019
Heisenberg Hamiltonians, approximate solns. 7−96510
hexatriene, photoisomerisation, ab initio CI calcs. 7−93296
hydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
integral processing study of CI and MCSCF calcs. 7−89920
ions, pot. energy surfaces calcs. 7−68227
isobacteriochlorins, dual fluoresc., rel. to tautomerism 7−109989
large CI matrices, iterative calcs., singular systems of linear eqns. 7−89984
large CI matrices, iterative calcs., using excited eigenvalues 7−89983
leuco compounds, electronic struct., absorpt. spectra 7−103480
many-electron system partitioning, Clifford algebra unitary-group approach 7−96564
many-electron systems, CI problems, unitary group approach 7−116865
many-electron systems, correlation and relativistic effects, Dirac-Coulomb eqn., double perturbation theory 7−122385
metal-metal multiple bonds, calcs., electron correls. 7−89951
metal-metal quadruple bonds, δ-δ^* transition energies and intensities 7−90099
methane, one electron scatt. props., ab initio SCF CI calcs. 7−103404
methane, protonated, struct., vibr., ab initio MO calcs. 7−96558
methane-$O_2(CO_2)(N_2)(CO)$, interaction force, ab initio calcs. 7−129831
methyl radical, full CI calcs. 7−109798
methylene, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
methylene, optimized virtual orbital space for high-level correlated calculations 7−116864
methylene, triplet ν_2 and ν_3 ab initio calcs. and vibrationless singlet-triplet splitting determ. 7−129609
methylene and cation, ions. pot. and excitation energies, FCI wave fns. calc. 7−81993
methylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
methylstannane, VUV and UPS ab initio CI calcs. 7−129787
molecular pairs, correl. energy eval., semiempirical quantum-chem. CNDO-CMP SCF calc. 7−109812
molecular properties, ab initio determ., book 7−134384
molecules, electric field gradients, ab initio SCF CI(SD) CPF calcs. 7−109801
monothioformic acids, internal rot. barriers, struct., HF calcs. 7−109808
multireference direct CI program based on symmetric group graphical approach 7−129612
nitrobenzene, decomposition pathway, ab initio MRD-CI calcs. 7−116873
nitrosamine metabolites, SCF calcs. polarisation functions and electron correlation effects, decomp. 7−109708
octahedral molecules, central atom L X-ray absorpt. spectra, multiplet struct. 7−141600
one-electron props., HF limit basis sets 7−89988
organic molecules, semiempirical transition states, correl. effects 7−68217
1,3-pentadiene, 1,5-sigmatropic H shift, correlated transition struct. 7−109794
phenoxasiline molecule, electronic states, intramolecular interactions, luminescence 7−122389
phenyl radical, vac. UV photoelectron spectra and ab initio CI calcs. 7−117020
polyatomic cpds., dipole moments of bonds, MO-LCAO-CI calcs. 7−103389
polyene chains, bond-length alternation electron correl., PPP model 7−74451
propane-$d_0(d_7)(d_8)$, harmonic force field, ab initio HF theory 7−141471
propellane, [1.1.1]- and [2.2.2]; bridgehead carbon interaction, ab initio studies 7−129557
relativistic many body problem, CI calcs. 7−122380

molecular electron correlations continued
ribonuclease A, disulphide linkage, circular dichroism, CNDO/S and INDO/S calcs. *(German)* 7−90463
small N-containing molecules, electric field gradients, ab initio quantum chem. calc. 7−103400
symmetry-adapted cluster calcs., integral depend. spin couplings 7−96552
tetrafluoromethane-$O_2(CO_2)(N_2)(CO)$, interaction force, ab initio calcs. 7−129831
s-tetrazine, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
trans-1, 3-butadiene, superexcited states transitions, ab initio CI calcs. 7−135843
transition metal hydrides positive ions, spectroscopic parameters and dissoc. energies, CI calcs. 7−116869
transition metal monoxides, ground state spectroscopic consts., ab initio pseudopot., SCF and CI calcs. 7−74460
troponoid spiro compounds, absolute stereostruct., CD spectra calcs. 7−90235
two-electron systems, singlet excited states, SCF calcs. 7−141482
verdazyl cations, electronic struct., absorpt. spectra 7−103480
verdazyl radicals, electronic struct., absorpt. spectra 7−103480
wave functions, cluster expansion, SAC and SAC-CI results 7−129544
ylides, gas phase struct., ab initio MO calcs. 7−116863
ylidions, gas phase struct., ab initio MO calcs. 7−116863
Ag_2, electron correls., SCF, extended basis set 7−89995
AgH, electron correls., SCF, extended basis set 7−89995
AgH, potential energy curves, bond lengths, relativistic ab initio CI calcs. 7−122379
AgO, electron correls., SCF, extended basis set 7−89995
AgO_2, geometrical isomers, SCF, CI and pseudopot. calcs. 7−68226
Al_2, $a^3\Pi_u$ ground state, ab initio CI calcs. 7−103402
Al_n clusters, geometry, basis set and correl. effect 7−129919
$Al_2H_3^-$, stability and struct., nonempirical CI calcs. 7−141475
$Al_2H_3^+$, stability and struct., nonempirical CI calcs. 7−141475
AsH, low-lying states pot. energy curves, radiative transitions, multireference CI calcs. *(French)* 7−89973
B_2, matrix isolated, ESR and ab initio CI calcs. 7−129751
BH_3, dimerisation energy, ab initio quantum chem. electron correl. calcs. 7−103403
$B_2H_3^-$, stability and struct., nonempirical CI calcs. 7−141475
$B_2H_3^+$, stability and struct., nonempirical CI calcs. 7−141475
B_2H_6 dissociation to BH_3, enthalpy, vibr. spectra, coupled-cluster and MBPT theory 7−135846
B_2H_6, optimized virtual orbital space for high-level correlated calculations 7−116864
BO, low-lying electronic states, CI calcs. 7−81996
BO^+, low-lying valence states, config. interaction calcs. 7−122374
Be ethylene, exciplexes, triplet state, reaction hypersurfaces 7−68236
Be_4 and Be_{13}, struct. and dissoc. energies, electron correl. and basis set effects 7−74458
$Be(H_2O)_n^{2+}$, struct., hydration energy, bonding, vibr. freqs., SCF calcs., electron correlations 7−141469
BrH-NH_3 (methylamine), H-bonded complexes, pot. surface, H^+ transfer, ab initio SCF calcs. 7−89976
C_2, $A^1\Pi_u$ state lifetime, dipole transition moment, CI calcs. 7−81988
C_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
C_2, electronic states, second-order CI calcs. 7−89975
C_{60} mol., geometrical struct. and UV spectrum, PPP CI MO calcs. 7−109780
CN, radical, photodissoc. probability, SCF-CI calcs. 7−129812
C_2N_2, ionisation pots., valence shell correl. effects 7−81989
CO, correl. wavefunction, canonical and localised orbital basis 7−109788
CO, low lying states, pot. energy curves, dipole moments, multiconfig. SCF calcs. 7−116866
CO, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
CO_2, hydration, ab initio calcs. 7−86615
$(CO_2)_2^-$, struct. and stability, ab initio electron correl. calcs. 7−82002
CO_3, ground state, E′ distortion, ab initio calcs. 7−129611
CS_2, valence satellites, double ionisation continua, photoelectron spectra 7−136004
CdHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
Cl_2, valence shell orbital momentum distribs. and binding energies, (e,2e) spectrosc. 7−89905
Cl_2^-, ionisation pots. and hyperfine splitting const., ab initio calcs. 7−109793
Co_2, correl. wavefunction, canonical and localised orbital basis 7−109788
CrH_2^+, electronic and geometric structure, bond energies, CI calcs., VB calcs. 7−141473
Cu_3 trimer, stability, variational and perturbational configuration interaction theory 7−96566
Cu_2Be, bonding, Gaussian basis sets, CI calcs. 7−96557
CuCO complexes, interactions, MO CI calcs. 7−122372
$CuCO^+$ complexes, interactions, MO CI calcs. 7−122372
$Cu(CO_2)$, coordination modes, ab initio HF and electron correl. calcs. 7−82003
CuX_n (X=Li, Na, K, Be, Al, n=1, 2), bonding, Gaussian basis sets, CI calcs. 7−96557
DCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
D_2O, valence orbitals, electron momentum spectrosc. obs. 7−89906
$F+H_2$, pot. energy surface in saddle point vicinity, higher order correl. effects estimation 7−68429
F_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
F_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
F_2^n (n=+ or 0), Rydberg states, pot. energy curves, CI calcs. 7−109790
FCl^-, ionisation pots. and hyperfine splitting const., ab initio calcs. 7−109793
FOOF mol. struct. and vibr. CI calcs. with single and double excitations 7−89978
FeCO, molecular props., ab initio molecular orbital calcs. 7−74404
GaAs, electronic states, ionisation pot., MCSCF and CI calcs. 7−89987
$GaAs^+$, electronic states, ionisation pot., MCSCF and CI calcs. 7−89987
Ge_2, complete active space MCSCF and CI calcs., spectroscopic props. 7−96559
H_2, $^3\Sigma_u^+$ states, pot. energy curves, CI calcs. 7−89992
H_2, bond functions versus polarisation function, CI calcs. 7−89990
H_2, double photoionisation, electronic correl. model test 7−122628
H_2, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
H_2, two-photon absorptivities, CI expansion technique calc. 7−74722

molecular electron correlations continued
H_2^+, electron dissoc. recombination, CI calcs. 7−103672
$(H_2)_2$ van der Waals complex, multireference CI calcs. 7−89982
H_3^-, electronic struct. and stability, perturbation theory and CI calcs. 7−135850
H_5^+, pot. energy hypersurface, ab initio SCF CI calcs. 7−89996
H_n Hund's rule breakdown, CI calcs. 7−89985
H_2B_2, low-lying states, π double bonds, ab initio CI calcs. 7−89977
HB_2NH_2, low-lying states, π double bonds, ab initio CI calcs, 7−89977
HCCN, bent and linear conform., multiconfig. SCF calcs. 7−103364
HCN-NH_3(HCN), H bonded complexes, electronic props., ab initio SCF CI calcs. 7−129605
HCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
HCl complexes, electron correlation and anharmonicity 7−89999
HCl^{2+}, pot. curves, CASSCF-CI method 7−68228
HF complexes, electron correlation and anharmonicity 7−89999
HF-$ClF(Cl_2)$ dimers, H and anti-H bonded isomers, ab initio electronic struct. calcs. 7−116871
$H^+(HCl)_2$ dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7−109809
$H^+(H_2S)_2$, dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7−109809
H_2N_2, ionisation pots., valence shell correl. effects 7−81989
$H_2NB_2NH_2$, low-lying states, π double bonds, ab initio CI calcs. 7−89977
H_2O, $A^1B_1$0-X^1A_1 transition, oscillator strengths, ab initio MRD CI calcs. 7−103399
H_2O, electron and X-ray scatt. cross sections, CI calcs. 7−68224
H_2O, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
H_2O, electron correl., extended geminal model 7−96556
H_2O, excitation energies, ionisation pots., open-shell coupled-cluster method., correlation effects calcs. 7−116868
H_2O, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
H_2O, singlet states, linear asymmetric dissoc., MRD CI calcs. 7−116861
H_2O, valence orbitals, electron momentum spectrosc. obs. 7−89906
H_2O-Mg, van der Waals complex, multireference CI calcs. 7−89974
H_2O_2, optimized virtual orbital space for high-level correlated calculations 7−116864
H_3O^+, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
$H_5O_2^+$, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
$H^+(PH_3)_2$, dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7−109809
HSOH, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
HX, X=Br,I, ionised species, ground state, relativistic and correlation effects, valence SCF-CI calcs. 7−116870
H^*_4 cluster, stability, pot. energy surfaces, MRD-CI method and basis set calcs. 7−74467
He_2 adiabatic potential curve, excitations, van der Waals wells, vibrational energy levels 7−136029
He_2^+, $^2\Sigma_g^+$ excited states, pot. energy curves, adiabatic calcs. 7−109787
HgH_2, pot. energy surfaces calcs. 7−74485
$HgNe_n$ pot. energies, pseudopot. SCF/CI calcs. 7−81999
$KrHe^+$, electronic states props. and pot. energy curves, relativistic CI calcs. 7−116860
Li small clusters, electronic struct and geometry 7−136116
Li^+ salts and ion-mol. complexes, isomerism, nonempirical CI calcs. 7−141474
Li_2, 1s core electron ionisation, hole localisation and broken symmetry, SCF, CI and CEPA calcs. 7−89980
Li_3^+, breath mode. vibr., Raman spectrum, ab initio model 7−96709
Li_6 clusters, stability, coupled cluster method, HF and correlation energy calcs. 7−116867
LiH, electron correl., extended geminal model 7−96556
$MgHe_n$ pot. energies, pseudopot. SCF/CI calcs. 7−81999
MoH_2^+, electronic and geometric structure, bond energies, CI calcs., VB calcs. 7−141473
N_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
N_2, elastic electron scatt., cross sections calc. using multiconfiguration SCF CI wavefunctions 7−122709
N_2, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
N_2, excited states, bond fns., MRD-CI calcs. 7−109791
N_2, ionisation pots., valence shell correl. effects 7−81989
N_2, multiple bonds description, CASSCF/MRCI calcs. 7−109797
N_2, STF HF wave fns. calc. 7−81995
N_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
N_2-HF(HCl), H bonded complexes, electronic props., ab initio SCF CI calcs. 7−129605
$N_2+O \rightarrow NO+N$, pot. surfaces, CASSCF/CI calcs. 7−106783
NH, $X^3\Sigma^-$ state, CAS SCF/MRSD CI calcs. 7−81990
NH_3, electron and X-ray scatt. cross sections, CI calcs. 7−68224
$(NH_3)_2H^+$ dimer, geometry and energetics, electron correlation effects calc. 7−135853
NO, multiple bonds description, CASSCF/MRCI calcs. 7−109797
NaF, CI pot. fn. calc. 7−74465
Ni_3, low-lying states, pot. surface SCF-contracted CI calcs. 7−89997
$O+H_2$ reaction, extended active space CASSCF/MRSD CI calcs. 7−100533
O_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
O_2, multiple bonds description, CASSCF/MRCI calcs. 7−109797
O_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
$O_2+N \rightarrow NO+O$, pot. surfaces, CASSCF/CI calcs. 7−106783
O_3 dissociation process, energetics, MC SCF, CI, MBPT calcs. 7−129607
O_3, nonbending, eigenvalues determ. Moller-Plesset perturbation calc. 7−96561
OH, two-photon absorptivities, CI expansion technique calc. 7−74722
OH, $X^2\Pi$ state, dipole moment, SCF CI calcs. 7−103401
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
P_2, STF HF wave fns. calc. 7−81995
Pd_n+CO, electronic struct, pseudopot. CI calcs., relationship between surface and organometallic chemistry 7−113901
Rh complex, dirhodium(II) dihydrate tetraformate, ground state config., ab initio SCF CI calcs. 7−96554

molecular electron correlations continued
RuC, electronic states, bonding, all-electron ab initio HF CI calcs., mass spectra 7−109804
SO_2^{2+}, electronic states, SCF CI calcs. 7−135851
ScH_2, electronic states and pot. energy surfaces, CAS SCF and second-order CI calcs. 7−96551
SeH^n (n=0 or +), electronic states, MC SCF (CAS SCF) and CI calcs. 7−135852
Si_2, electronic states, second-order CI calcs. 7−89975
Si_4 and Si_4^+, CAS SCF and CI calculations 7−96550
SiF systems bond energies, generalised VB and CI calcs. appl. to Si etching 7−122365
SiF^+ (SiF), electronic states, CI calcs. 7−74462
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
SiH, π^2 mol., struct., pot. energy curve, ab initio HFR-MO-LCAO-SCF-CI method 7−103390
SiH_2, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
SiH_2, ions. pot. and excitation energies, FCI wave fns. calc. 7−81993
$Si_2H_4^n$ (n=0 or +), ground state surfaces, SCF and CI calcs. 7−109811
Si_6H_6, mol struct., ab initio MO and electron correl. calcs. 7−81922
SnH_4^+, spin-orbit coupling, ab initio CI calcs. 7−103398
TeH, electron states, relativistic CI calcs. 7−89991
TiO, electronic states, configs., ab initio CI calcs. 7−109789
TlX, X=H, H^+, H_3, props. , relativistic and correlation effects, pseudo-pot. calcs. 7−122383

molecular electron impact dissociation
acetylene, electron impact excitation, cross section meas. 7−90439
alkanes, halogen substituted, thermal attachment cross sections and rate consts. 7−103674
carbon tetrahalide ions, stability, electron impact investig. 7−82376
dimethyl fumarate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7−90437
dimethyl maleate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7−90437
ions, dissociative recomb. and electron impact dissoc., comparative efficiency 7−82374
methane, electron impact dissoc., H* ang. difference Doppler profiles 7−90434
methane, electron impact excitation, cross section meas. 7−90439
tetrachloroethene, thermal attachment cross sections and rate consts. 7−103674
tetrafluoromethane, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
CCl in carbon tetrachloride-Ar(Kr) discharges, dissoc. excitation 7−82198
C_2N_2, dissoc. electron attachment spectroscopy 7−90435
CS_2^+, electron impact, photodissoc., laser-ion beam study 7−68468
H_2, electron impact dissoc., atomic Doppler profile angular depend. 7−136072
H_2, vibr. excitation, dissoc. attachment, nonlocal complex pot. 7−141700
H_2^+, dissociative recomb. and electron impact dissoc., comparative efficiency 7−82374
H_2^+, electron dissoc. recombination, CI calcs. 7−103672
HCl, collision dynamics with nonlocal complex potentials 7−141700
H_2O, electron impact direct and dissoc. ionisation cross sections 7−103673
H_2O, electron impact dissoc., OH rot. and translational energies 7−110119
H_2S, electron impact direct and dissoc. ionisation cross sections 7−103673
I_2, dissociative electron ionisation, giant resonance obs. 7−141704
N_2 dissociative excitation cross sections, N I spectral lines 7−82383
N_2, electron impact dissoc., N emission spectra 7−135938
NF_3, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
NH_3, electron impact direct and dissoc. ionisation cross sections 7−103673
NH_3, electron impact dissoc., NH* fragment form. 7−122725
NH_3, electron impact double ionisation and dissoc. 7−122726
O_2, condensed on Pt, dissociative attachment in electron-stimulated desorption 7−136076
O_2, electron impact dissoc. excitation O IR emission 7−141701
O_2^{2+}, direct dissociative recomb., cross section windows, Morse pot. curves 7−78461
SF_6, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
SF_6, electron impact dissoc. metastable fragment prod. 7−117086
SO_2, electron impact, UV and visible fluoresc. 7−129885
SO_2, electron impact dissoc. excitation, fluoresc. 7−110121

molecular electron impact excitation
see also electron spectra
$\tilde{A}^2\Sigma^+ \rightarrow \tilde{X}^2\Pi_i$ emission spectra, vibronic anal. 7−68338
acetylene, electron impact excitation, cross section meas. 7−90439
acetylene, electron impact spectrum investig. 7−136075
collision dynamics with nonlocal complex potentials 7−141700
cyanomethane, electron impact, reson. vibr. excitation obs. 7−82379
1,4-di(2-(5-phenyloxazolyl)benzene), electron impact excitation, fluoresc. 7−68470
diatomic gases, reson. effect on moderation of slow electrons 7−90442
diphenyl sulphide-paraterphenyl radical ion pair recomb. fluoresc. kinetics, quantum beats induction 7−100521
gasdynamic separator flow field, nonequilib. processes study 7−130761
intermediate energy, R-matrix theory 7−74758
methane, electron impact excitation, cross section meas. 7−90439
methane, electron impact ionisation cross-sections 7−141703
methane, positron scatt. cross sections, complex optical pot. calcs. 7−103675
methyl cyanide, collisional excitation in interstellar clouds 7−88587
molecule-electron interactions, study using Rydberg atoms 7−96866
optically enhanced electron attachment 7−117087
polyatomic cations, spectrosc. characterisation 7−68286
polyatomic molecules, geometry, electron diffr., kinetic anharmonicity 7−141706
relativistic electron beam excitation of gases and meal vapours 7−102564
relativistic electron scatt. from excited quantum system, bremsstrahlung 7−68465
resonances in nuclear, atomic and mol. physics 7−102853
RF discharge, electron impact excitation, fluid model simulation 7−130952
shape resonances, S matrix poles, multiple scatt. Xα calcs. 7−103391
triatomic molecules, bending-rot. Hamiltonian, semirigid model 7−141562

molecular electron impact excitation continued
CCl in carbon tetrachloride-Ar(Kr) discharges, dissoc. excitation 7−82198
CO, electron impact ionisation cross-sections 7−141703
CO_2, electron impact ionisation cross-sections 7−141703
CS_2, elastic scatt. cross sections, energy and angular depends. 7−129889
H_2, ($G^1\Sigma_g^+$) state rot. levels, electron impact excitations, relative probabilities 7−74779
H_2, $B^1\Sigma_u^+$ state, electron impact excitation, Schwinger multichannel calcs. 7−141705
H_2, $b^3\Sigma_u^+$ state, electron-impact excitation cross sections 7−82384
H_2, electron impact excitation of $C\ ^1\Pi_u$ state, circular polarisation correl. 7−68469
H_2, electron impact excitation near rotation and vibration threshold 7−110117
H_2, rotational excitation angular dependences meas. 7−110123
H_2, vibr. excitation, dissoc. attachment, nonlocal complex pot. 7−141700
H_2-He mixture, swarm expt., H_2 vibration excitation study 7−110118
HBr, threshold electron impact excitation 7−117085
HCP^+, $\tilde{A}^2\Sigma^+ \rightarrow \tilde{X}^2\Pi_i$ emission spectra, vibronic anal. 7−68338
HCl, collision dynamics with nonlocal complex potentials 7−141700
HCl, rovibrational threshold structs., electron scatt. 7−136074
HF, rovibrational threshold structs., electron scatt. 7−136074
H_2O, amorphous solid, core excited resonances, decay channels, electron scatt. 7−136077
H_2O, electron and X-ray scatt. cross sections, CI calcs. 7−68224
H_2O, electron impact dissoc., OH rot. and translational energies 7−110119
H_2O, electron impact ionisation cross-sections 7−141703
H_2O, positron and electron collisions, total cross sections 7−129890
H_2O vapour, electron scatt. cross sections meas. 7−96883
InI_3, unsaturated superheated vapour, comp., struct., electron diffr. investig. 7−141707
Li_2, resonant vibrational excitation, simple model 7−129891
N_2, $a^1\Pi_g$ state, electron impact excitation cross-section 7−141702
N_2 dissociative excitation cross sections, N I spectral lines 7−82383
N_2, Lyman-Birge-Hopfield band, oscillator strength determ. 7−74777
N_2, N core level excitation, oscills, strengths 7−82380
N_2, resonant vibrational excitation, simple model 7−129891
N_2, rot., vibr. and electronic excitation in ICP 7−122675
N_2, total positron scatt. cross section 7−117072
NH_3, electron and X-ray scatt. cross sections, CI calcs. 7−68224
NH_3, positron and electron collisions, total cross sections 7−129890
NO, N core level excitation, oscills, strengths 7−82380
N_2O, N core level excitation, oscills, strengths 7−82380
Na_2, electron scatt., rot. transitions, differential cross sections calc. 7−129887
Na_2, rotational rainbows in electron-molecule scattering 7−110125
O_2, electron impact dissoc. excitation O IR emission 7−141701
O_2, electron impact electronic excitation, multichannel effective range theory 7−129888
OCS, elastic scatt. cross sections, energy and angular depends. 7−129889
SO_2, electron impact dissoc. excitation, fluoresc. 7−110121
SO_2, electron-impact excitation, mol. emission determ. 7−82377
SO_2, high-energy electron impact, inner shell excitation, EELS 7−129886
SiD_4, electron input, low energy, cross-section calcs. 7−110122
SiH_4, electron input, low energy, cross-section calcs. 7−110122
Xe_2^* electron impact excitation, luminesc., inert gas additive effects 7−111158

molecular electron impact ionisation
see also electron spectra
alkanes, halogen substituted, thermal attachment cross sections and rate consts. 7−103674
amines, electron impact ionis., crossed beams expt. 7−103676
cyclopropylbenzene, mol. ions, Fourier transform ion cyclotron reson. mass spectra 7−122727
di-n-propyl sulphide, mol. ions, Fourier transform ion cyclotron reson. mass spectra 7−122727
differential cross section, adiabatic approx. 7−82385
electron momentum spectroscopy interpretation using spin-coupled theory 7−90441
electron pair threshold escape 7−74527
ethane, inner valence shell Rydberg transitions, electron impact ionisation 7−122728
ethylene, electron impact ionisation and fragmentation, electron spectra anal. 7−90428
internal energy distributions, activation methods, mass spectra 7−90438
metal carboxylates, gaseous phase, electron impact mass spectrometry 7−74778
molecular clusters, ionisation by high-Rydberg rare gas atom collisions 7−82382
molecule-electron interactions, study using Rydberg atoms 7−96866
3-pentanone, translational energy release determ., mass spectra 7−90436
polyatomic molecules, surface-induced dissoc., TOF mass spectra 7−126430
positron reson. annihilation on mols., mechanism investig. 7−82375
tetrachloroethene, thermal attachment cross sections and rate consts. 7−103674
thiophenol, electron impact ionis., relax., photodissoc. 7−136073
triethylamine, electron photoelectron spectra, ionisation potentials, excited states, transitions, SCF calculations, binding energies 7−141688
Bi/Sb free intermetallic compound clusters, stability 7−110174
CO_2, doubly charged cluster ions, metastable dissoc. 7−110124
Cl_2, valence shell orbital momentum distribs. and binding energies, (e,2e) spectrosc. 7−89905
$Cr(CO)_6$, excited states, EELS anal. 7−103670
D_2O, valence orbitals, electron momentum spectrosc. obs. 7−89906
H_2, momentum densities, bonding, electronic struct. calcs. 7−129546
H_2, positron annihilation and positronium form., density depend. 7−82381
H_2^+, electron impact prod., photodissoc., rot. distrib. determ. 7−116929
HCl-Ne-Xe laser mixture ionisation by radioisotope preioniser 7−123026
H_2O clusters, mol.-beam study, electron-impact ionisation meas. 7−82418
H_2O, electron impact direct and dissoc. ionisation cross sections 7−103673
H_2O, valence orbitals, electron momentum spectrosc. obs. 7−89906
H_2S, electron impact direct and dissoc. ionisation cross sections 7−103673
I_2, dissociative electron ionisation, giant resonance obs. 7−141704
$Mo(CO)_6$, excited states, EELS anal. 7−103670
N_2, molecular beam, electron ionisation, optical model 7−68467
N_2, nonequilibrium ionization involving superelastic electronic collisions 7−110120

molecular electron impact ionisation continued
NH_3, electron impact direct and dissoc. ionisation cross sections 7−103673
NH_3, electron impact double ionisation and dissoc. 7−122726
O_2, position energy loss spectra meas. using TOF method 7−82378
Pb/Sb free intermetallic compound clusters, stability 7−110174
$W(CO)_6$, excited states, EELS anal. 7−103670
Xe clusters, electron impact, multiphoton ionisation studies 7−96901

molecular electron scattering *see elastic scattering of electrons by atoms and molecules; molecular electron impact dissociation; molecular electron impact excitation; molecular electron impact ionisation*

molecular electronic states
see also charge transfer states; molecular metastable states; triplet state
α-angelicalactone, internal rotation, microwave spectroscopy 7−122512
9,9′-bianthryl, excited state dipole moments, fluoresc. study 7−135996
aceanthrenones, isomeric, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
9-acetylanthracene, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
acetylene, electron impact spectrum investig. 7−136075
acetylene, photolysis, CCH radical ν_3 band, IR spectra study 7−109885
acetylene, ungerade excited states, vibr., photoelectron spectra 7−122611
N-acetyloxypyridinium halides, ion pairs, molecular structure, interionic vibrations 7−122660
alkyl phenyl ketones, vibronic coupling contrib. to overtone intensities, UV spectra 7−96725
alkylbenzenes, substituted, radiationless decay, photophysical properties, excited states, exciplex formation 7−135990
4-amino-4′-nitrodiphenyl, ethanol soln., dipole moment, visible fluoresc. spectra, edge-excitation red shift 7−135950
p-aminophenol group, electronic struct., biological activity, UV PES anal. 7−78751
2-aminopyridine, van der Waals and H-bonded systems, structs., excited state dynamics 7−136031
anilines, ground and excited electronic states, H bonding, electronic spectra 7−96645
anthracene, first excited state, vibronic coupling, mol. fluoresc. and Raman spectra anal. 7−82180
9, 10-anthraquinone, fine struct., Dushinsky effect, phosphoresc. spectrum 7−129776
anthraquinone, laser photolysis, photoreduction, time-resolved spectra, charge transfer, polarisation, hydrogen transfer, solvents 7−141608
9,10-anthraqunone, sulphonated derivatives, photophysics, photochemistry, emission and absorption spectra, photolysis, kinetics, transient species, states 7−144729
p-(9-anthryl)-N,N-dimethylaniline derivatives, complex excited state relax., fluoresc. lifetime distribs. 7−117013
aromatic hydrocarbons, excited state quenching, Xe heavy atom effect 7−68237
aromatic molecules, excited, stereospecific quenching by electron acceptors 7−122606
aromatic molecules, gaseous, S_1-S_0 internal conversion, IVR enhancement 7−109973
aromatic molecules, heavy atom perturbers in rigid solns., kinetics of excited states 7−96775
atomic and molecular excited states, conf., Fuji-Yoshida, Japan (Aug. 1986) 7−140351
azanaphthalenes, triplet state reson. Raman spectroscopy 7−82132
azulene, S_2 state, intramol. vibr. redistrib., picosecond dynamics 7−96770
azulene, S_2-S_0 transition, vibronic effects, QCFF/PI calcs. 7−89961
bacterial pigments, mol. vibr., matrix isolation fluoresc. spectra anal. *(Russian)* 7−133216
basketanes, geometric and electronic struct., iterative maximum overlap calcs. 7−96528
1,2-benzanthracene, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
benzene, double core vacancies binding energies, algebraic diagrammatic construction scheme calcs. 7−74419
benzene, excited states, exponentially generated wave functions, SAC-CI study 7−129613
benzene, ground state, a_{2g} mode, two-photon fluoresc. spectra 7−122599
benzene, radiationless decay rate consts., excess-energy depend. 7−129762
benzene, Rydberg states 7−122404
benzene, valence and Rydberg excitations and ionis., wave fns., cluster expansion 7−122335
benzene derivative mol. electronic struct. anisotropic medium effects calc. 7−116829
benzene derivatives, electronic transitions, UV reson. Raman spectra anal. 7−82186
N-benzoylindoles, charge transfer fluoresc., solvent effects 7−96760
benzo[a]pyrene, fluoresc., decay lifetime meas. 7−68393
9,9′-bianthyl, alcohol soln., picosec. excited state solvation dynamics 7−119516
biological molecules, conf., Marineland, FL, USA (Mar. 1986) 7−72693
biphenyl crysts., superradiance of guest pyrene molecules, effect of struct. transitions *(Russian)* 7−99888
2,5-bis(2-benzothiazolyl)hydroquinone, jet cooled, excited state intramol. H^+transfer 7−86599
bis(ethylenedithio)-TTF, spatial and electronic struct., SCF-MO-LCAO MNDO RHF calcs. 7−74446
1,6:7,12-bismethano[14]annulene, excited states, UV-visible absorpt., fluoresc. and MCD spectra 7−82270
bridge mechanism, intermediate unit, electron transfer theory 7−122700
butadiene, 2^1Ag state, UV reson. Raman spectra anal. 7−82184
1,3-butadiene, ab initio calcs., isomers, excited states 7−141444
butadiene, photoisomerisation, ab initio CI calcs. 7−93296
butenes, isomers, electronic struct., reson. Raman spectra anal. 7−82188
calcium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
chemical bond formation, core and valence atomic orbitals 7−122733
chlorin, matrix isolated, stark effect, spectral hole burning 7−96757
1-chloro-2-butyne, barrier to internal rotation, microwave spectrum 7−122509
chloroanilines, ground and excited electronic states, H bonding, electronic spectra 7−96645
chlorobenzenes, isomers, bond orders, valence indices, oxidation numbers, ab initio calcs. 7−96527
chloroethylenes, excited state struct. reson. Raman spectra anal. 7−82187

molecular electronic states continued
chloromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7−89908
chlorophyll a aggregates, electronic origins, Raman excitation profiles, resonant two-photon spectra 7−93641
chrysene, electronic states struct., reson. Raman spectra anal. 7−82194
conference, Swansea, Wales (Sept. 1986) 7−88744
configuration space basis, symmetry- and spin-adapted antisymmetrised orbital products 7−89981
conical intersections, Jahn-Teller crossing, topology, application to standard model 7−141476
conjugated hydrocarbons, topological spin Hamiltonian, graph theoretical approach 7−81917
coupled cluster model 7−103363
coupled excited electronic states, reson. Raman scatt. cross sections, time depend. 7−90157
trans-crotyl alcohol, high resolution microwave spectrum, torsional pot. energy surfaces 7−122514
crystal violet, Au surface, resulting complex Raman spectra study 7−74628
cyanate radical, $B^2\Pi$ state, CI calculations 7−122405
cyano compounds, fragmentation under nonlinear UV excitation, delayed CN $B^2\Sigma^+$ chemiluminesc. ion-mol. collisions 7−78475
p-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
cyanogen-HF binary complex, ν, vibr. fundamental investig. 7−135932
cyclic cpds., ambergris type odour origin, CNDO calcs. 7−74447
1,2-cyclobutanedione, gas phase, visible absorpt. spectrum 7−82197
cyclopentadienyl cations, N and B substitution, mol. struct., ab initio MINDO/3, MNDO, STO calcs. 7−96547
cyclopentadienylcobalt, $^1A_1$ state, electronic struct., ab initio LCAO-MO SCF calcs. 7−68208
cyclopropane, electronic and mol. struct., ab initio SCF MO calcs 7−81964
cytochrome C oxidase, crystalline membranous struct., electron density profile, electron microscopy and X-ray diffr. study 7−78744
cytosine, photoexcited states, electronic struct., CNDO/S3 calcs. 7−68218
degenerate electronic states, spectroscopic ramifications due to cancellation effects 7−116966
deoxyheme, parity-forbidden transitions 7−86913
diabatic energy surfaces and wave fns., permutation operation 7−90014
diarylphosphonyl radical, ESR spectrum, ^{17}O isotropic hyperfine coupling const. 7−90273
diatomic molecules, electronic energy, upper bounds 7−122346
diatomic molecules and ions, two centre fns., universal basis 7−122323
diatomic mols., electronic energy levels matrix isolation and gas phase spectra 7−82074
diatomic mols. polarisation modulated two-photon spectroscopy 7−134851
2,3-dichloroquinoxaline, in calcinated Vycor glass emission and excitation spectra, surface-adsorbate interaction, phosphorescence lifetimes, Bronsted acid sites 7−141626
1,1-dicyanoethylene, substituted, electronic struct., conform. mobility, NMR and PMR 7−74684
3,3′- diethyl-6,6′-diphenyl-9-enthyloxacarbocyanine iodine, time-resolved fluoresc. spectra, solvent depend. 7−82252
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7−109876
dihydrophenazine, doped in mol. cryst., excited states characterisation 7−96571
diketone compounds, excited states, EELS anal. 7−103671
dimethyl mercury, valence and Hg 5d levels, photoelectron spectra 7−122610
4-(N,N-dimethylamino)benzoate, twisted intramol. charge transfer phenomenon, press. effects 7−90241
4-(N,N-dimethylamino)benzonitrile, visible spectra, solvent effects 7−74652
N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
2,4-dimethylbenzonitriles, near ultraviolet absorpt. spectra 7−122502
dimethylenepolycyclobutadienes, non-Kekule alternant hydrocarbon structs 7−89929
dimethylnitramine, CH stretching modes, vibr. relax. 7−90087
p-N-N-dimethylnitroaniline in ethanol, excitation depend. fluoresc. to phosphoresc. ratio 7−74699
dimolybdenum tetraacetate, metal-metal distortions for metal-metal orbital electronic ionisations and excitations 7−68406
diphenyldecapentaene, in n-decane, single crystal, polycrystalline solutions fluorescence decay rates, high resolution spectroscopy 7−135993
diphenyldodecahexaene in n-dodecane, single crystal, polycrystalline solutions, fluorescence decay rates, high resolution spectroscopy 7−135993
2,5-diphenyloxazole, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
diphenylpolyene solns., fluoresc. amplification and light quenching 7−129778
diphenylpolyenes, picosecond photophysics, excited-state conformational changes 7−96717
Dirac equation, variational solns. 7−122351
disilene, electronic structure, ab initio studies 7−129617
disordered system, density expansion, steady state four-wave mixing spectrum 7−136091
1,3-dithiane derivatives, orbital interactions, UV photoelectron spectra, MNDO calcs. 7−122359
Dizatrifone, analytic activity, conform. and electronic struct., SCF-LCAO-MO calcs., CNDO/2 approx. 7−100803
DODCI, first excited singlet state, photosensitised electron transfer reaction 7−116888
dodecafluorocyclohexane, excited above dissoc. threshold, IR spectroscopy and intramol. vibr. relax. 7−109883
duroquinone, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7−82192
dye mols. in amorphous solids, spectral holes, elec. field effects 7−123123
electron density, one-body pot., Schrodinger eqn. soln. 7−73021
electron energy-loss spectroscopy, atomic and mol. struct. teaching appl 7−108099
emeraldine, and related mols., electronic struct., CNDO/S3 calcs 7−89964
ethanethiol radical, laser-induced fluoresc., visible spectra anal. 7−96712
ethenonyl radical, rot. spectra in submillimeter-wave region 7−82079
ethylene, photoisomerisation, ab initio CI calcs. 7−93296
ethylene oxide-H_2O complexes, electronic struct., CNDO/BW calcs 7−109774

molecular electronic states continued
ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7—135920
excimer laser photolysis, decay times, emission spectra, ultraviolet spectra 7—139017
excited levels, two-step excitation by short broadline pulses 7—141529
excited states, electron scatt., intermediate energy, R-matrix theory 7—74758
excited states with full separation of charges 7—109814
flavins, one-electron oxidation, flush photolysis and pulse radiolysis obs. 7—71480
fluorescence, decay kinetics, excited states quasi-continuum approach 7—96769
fluoroform-d_1, IR multiphoton excitation dynamics study 7—74597
fluoromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7—89908
formaldehyde, rovib. states, Hartree theory calcs. 7—135916
formaldehyde-$d_0(d_2)$, Rydberg states, multiphoton ionis. 7—90286
formaldehyde-d_2, ground state Stark shift, laser microwave double reson. 7—122580
formaldehyde-HCN(DNC) dimer, angular geometry, hydrogen bond effects, rotational spectra 7—135927
formaldehyde-HF, mm wave spectrum rot., structural, ab initio and semirigid bender anal. 7—96650
formamide, core excited electronic states, oscillator strengths, EELS 7—122704
formic acid, core excited electronic states, oscillator strengths, EELS 7—122704
formic acid-d_1, ν_3 fundamental band, laser Stark and Fourier transform spectroscopy 7—122588
formyl fluoride, core excited electronic states, oscillator strengths, EELS 7—122704
Gaussian approximation for temp. depend. of continuous electronic spectra 7—136010
germinate radical pairs, spin-inverted electron transfer, energy gap depend. 7—135837
cis-glyoxal, selective pumping, isomerisation vibronic levels, IR fluoresc. spectra anal. 7—103489
H_3PO, ground state pot. energy surface 7—90016
halogens and interhalogens, excited states, nuc. quadrupole coupling, SCF-MS-Xα study 7—81974
harmonic polyatomic Franck-Condon factors evaluation 7—122616
2-heteroanyloxazoles, excited state ^1H transfer with acetic acid in ethanol fluoresc. spectra 7—141587
heteronuclear molecules, electronic struct., double reson. investig. *(German)* 7—129757
hexatriene, photoisomerisation, ab initio CI calcs. 7—93296
1,3,5-hexatriyne radical, mol. struct. ab initio SCF calcs., astron. appl. 7—103381
horseradish peroxidase, electronic and mol. struct., PMR and NOE study 7—68478
hydrocarbon molecule, Hosoya index bounds, C-atom skeleton depend. 7—96537
hydrocarbon systems, polarisability and hyperpolarisabilities, MNDO calcs. 7—109768
hydrocarbons, aromatic, excited singlet state, absorpt. cross sections 7—129622
I-102, conform. and electrostatic props., ab initio PCILO calcs. 7—78733
indigoid dyes, adsorbed on Ag colloids, reson. Raman and three-photon scatt. 7—122551
indole, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7—103524
indoles, ^1L_a state, fluoresc. and electronic spectra 7—82269
inert gas hydride excimers, binding energies, bound-free UV fluoresc. spectra anal. 7—96723
inert gas quasimolecules, heteronuclear, excited state terms 7—90316
inorganic compounds, expanded octets, Lewis struct. from mol. formula study 7—108096
Δ-iron (bipyridyl)$_3^{2+}$, circular dichroism of subnanosecond state 7—68378
isocyanomethane, electronic and mol. struct., ab initio SCF MO calcs. 7—81964
isocynocyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7—81964
isoquinoline van der Waals clusters, chromophore electronic struct., TOF mass spectra 7—103705
K_2ReF_6, $\Gamma_7(^2T_{2g})$-$\Gamma_8(^4A_{2g})$ absorpt. and luminesc. spectra, vibr. dispersion 7—122595
3-keto-steroids, aq. soln., protein binding, mol. fluoresc. study 7—78748
lanthanide halides, electronic struct., INDO calcs. 7—89966
maser pump mechanisms identification, use of population transfer route anal. 7—127691
metallobacteriochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7—89938
metallochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7—89938
metalloporphin, excitation energies, oscillator strengths, screened pot. MO calcs. 7—89938
methane, F_1 state, double reson. obs., vibr.-rot. lines 7—82234
methane-d_4, IR multiphoton excitation dynamics study 7—74597
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7—90269
2-methoxyethylamine, low-lying torsionally excited states, vibr., microwave spectrum 7—82087
methyl bromide, molecular resonances, autoionisation, photoelectron spectra study 7—141633
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7—103520
methyl chloride-Ar, rot. spectra using pulsed nozzle Fourier transform microwave spectrometer, internal rot. 7—90102
methyl cyanide, rot. spectra and vibr. states in freq. range 17 to 56 GHz, quadrupole struct. 7—90103
methyl iodide, molecular resonances, autoionisation, photoelectron spectra study 7—141633
methyl nitrite photodissoc. in second UV absorpt. band, photofragment TOF spectra 7—116984
3-methyl-4-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7—129598
methylene anion, excited states, photodetachment, radiative decay lifetimes ab initio calcs. 7—90285
methylene cation, $^2A_1$ electronic state, nonadiabatic transition probabilities, avoided crossings 7—103584

molecular electronic states continued
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7—82185
methylene phosphoranes, semipolar P—O and P—C bonds 7—129559
methylenecyclopropene, electronic charact., microwave spectrum, struct., dipole moment 7—68294
methylfluorosilanes NO exciplexes, relative energies, MO calcs. 7—89904
methylindoles, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7—103524
$(methyliodide)_n$, cluster formation photodissociation, ultraviolet spectra 7—135922
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7—141638
molecular beams, laser spectroscopy with sub-Doppler resolution study 7—96646
molecular luminescence and photophysics, conf., Torun, Poland (2-5 Sept. 1986) 7—108006
muffin-tin pot. and electron density, Xα-scatt. wave calcs. 7—109764
multiphoton processes, coupled eqns. approach 7—129820
N_2 active, yellow glow, temperature dependence, Thrush mechanism, vibrational levels, emission, empirical equations 7—141619
naphthalene:pentacene impurities, electronic, excitation-phonon coupling, Raman 7—135945
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7—141638
α-naphthylphenyloxazole, excited singlet states in soln., quantum yields, fluoresc. spectra 7—122605
nickel porphyrins, noncoordinating solvents, excited state dynamics, reson. Raman spectra anal. 7—82196
nitrobenzene cation, IR multiphoton dissoc. 7—119545
nitromethane, laser-induced photolysis, photofragments fluoresc. spectra anal. 7—129727
nonafluoro-tert-butyl iodide, vibrational overexcitation above dissociation limit in IR multiphoton field 7—103605
nonlinear absorption and emission spectroscopy, appls. to excited states 7—108667
4-n-octyloxy-4′-cyanobiphenyl, liq. cryst. phase transitions, conform. and electronic struct. changes 7—69909
organic compounds, internal conversion, deuteration inverse effect 7—129775
organic molecules, semiempirical transition states, correl. effects 7—68217
organic molecules in solution, Jablonski diagram and electronic energy relax. 7—109974
ozone, IR multiphoton excitation dynamics study 7—74597
parathion, electronic isodensity surface plots with gradient color encoding, INDO calcs. 7—74444
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7—96762
phenmedipham, fluoresc. and phosphoresc., quantum yields *(French)* 7—82277
phenoxasiline molecule, electronic states, intramolecular interactions, luminescence 7—122389
2-phenyl-2-dehydrosparteine and its diprotonated salts, IR spectra, synthesis, struct., props. 7—109889
phenylethynyldisilanes, photochemical and photophysical props., intramol. charge transfer emission 7—93346
phosphaalkenes intramolecular electronic effects, quantum-chemical study 7—122360
phosphocreatine, electronic isodensity surface plots with gradient color encoding, INDO calcs. 7—74444
photoabsorption, photodissoc. and fluoresc. 7—90299
photoinduced electron transfer, excited electronic state interactions 7—110097
phytochrome, absorpt. spectra and phototransformation quantum yield, temp. depend. study 7—78756
polyacetylenes, electronic struct., INDO/S framework, ^{13}C NMR chem. shift 7—110158
polyaromatic hydrocarbons, π-electron props., HMO calcs. 7—116858
polyatomic molecular motion study using generator orbital approach 7—108098
polyatomic molecules, highly vibr. excited, IR absorpt. spectrosc. 7—74579
polyatomic molecules, highly vibr. excited Raman spectrosc. obs. 7—82158
polyatomic mols., adiabatic pot., dynamic instability, virial theorem 7—74439
polydiacetylene oligomer, electronic struct., mol. fluoresc. and UV spectra anal. 7—90185
polyoxymethylene ^{13}C NMR spectra, chemical shift, electronic structure, solid state, tight-binding calcs. conformation 7—143317
porphyrin, in ethanol, electron state dephasing, spectral diffusion, photochemical gap burnout 7—141629
pot. energy surfaces 7—122413
PRODAN, intramolecular reaction, time resolved spectroscopy 7—122594
propadienone, microwave spectra, rot.-vibr. anal., double-minimum v_{12} pot. function, semirigid bender anal. 7—96649
propargyl radical, ground and excited states, vibrational frequencies, SCF calculations, molecular geometries, electronic structures 7—141458
propyltoluenes, supersonic jet, dispersed emission and TOFMS 7—129771
Ps_2 molecule, s state four body (or quasi-four-body) molecule existence, quantum mechanical treatment 7—135839
pteridine, N-heterobicyclic π system, inter-ring coupling effects anal. 7—89916
pyrazine, $^1B_{3u}$ state, high resolution lifetime meas. of perturbed $J^1=0$ levels 7—82254
pyrazine, radiationless decay rate consts., excess-energy depend. 7—129762
pyrazine highly excited Rydberg states, autoionis. 7—96570
pyrene, excited singlet states in soln., quantum yields, fluoresc. spectra 7—122605
pyridazine van der Waals clusters, chromophore electronic struct., TOF mass spectra 7—103705
pyridine, Auger spectra, localisation effects 7—82288
pyrimidine, 3s Rydberg state, multiphoton ionis. spectra 7—82307
quadruply bonded dimers, mol., electronic and cryst. structs., ligand perturbations 7—74409
quinoxaline, electronic states investig., Raman excitation profile 7—82189
Raman excitation profiles, totally symmetric modes, vibronic coupling effects study 7—96703
RBY, excited-state absorption 7—122562
retinal, two-photon absorpt. spectra and polaris. *(Japanese)* 7—129694
retinol, electronic states investig., Raman excitation profile 7—82189

molecular electronic states continued
retinyl acetate, two-photon absorpt. spectra and polaris. *(Japanese)* 7−129694
retinyl Schiff bases, 2-photon, ^{13}C and 2D ^{1}H NMR 7−90199
rhodamine 6G, struct. rearrangements, reson. stimulated Raman scatt. *(German)* 7−129725
rhodamine 6G solns., energy accumulation, luminesc. study 7−129777
solute eigenvalues and eigenfunctions, solvaton model, INDO parameterised MO calcs. 7−109766
solvent mixture of different polarities, dielectric enrichment, exciplexes, mol. fluoresc. anal. 7−68389
squeezed states, chaotic tunnelling in double-well pot., fractal anal. 7−74483
α,α'-trans-stilbene-^{13}C, ground and excited states struct., Raman spectra anal. 7−82193
strontium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
p-terphenyl, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
12,4,5-tetrafluorobenzene, S_1 state Q_{11} butterfly motion, vibronic coupling 7−135912
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7−106212
tetramethylsilane, Si L edges resonances, gas phase UV photoabsorpt. spectra 7−116982
tetranitromethane, electronically excited, transient species and product form. 7−68234
thioacetaldehyde, isotopic species, torsional vibrs., internal rot. barriers, visible spectra anal. 7−109917
thioindigo, electronic spectra and isomerisation pot. investig. 7−82201
thioketene, excited-state struct., UV-visible spectrum 7−82209
through bond coupling, ligand length dependence, Schrodinger equation, electron transfer, tight binding approximation 7−141673
toluene, supersonic jet, dispersed emission and TOFMS 7−129770
o-toluidine, electronically excited state, methyl group internal rotation 7−109993
toluidine, ground and excited electronic states, H bonding, electronic spectra 7−96645
trans-1, 3-butadiene, superexcited states transitions, ab initio CI calcs. 7−135843
transition metal carbonyls, temporary anion states studied by electron transmission spectroscopy and Xalpha calcs. 7−141459
transition metal hydrides positive ions, spectroscopic parameters and dissoc. energies, CI calcs. 7−116869
trialkylsilylakanethiols, electronic struct., UV absorpt. spectra 7−68340
tricarbocyanine dyes, triplet state yield and photosensitisation of singlet O_2 *(French)* 7−117027
trichlorofluoromethane, microwave and mm-wave spectra, rot., centrifugal distortion and quadrupole parameters 7−96651
trifluorohalomethanes $+N_2$, visible spectra, collisional quenching rate consts. 7−96713
trimethylamine, excited state, ionis. and internal conversion, photoelectron spectra 7−74710
triptycene, electronic states, two-photon UV excitation spectra, polarisation depend. 7−68335
tryptophan and its derivatives in soln., nonexponential fluoresc. decay, conformational states, lifetimes 7−90259
two-electron systems, singlet excited states, SCF calcs. 7−141482
two-photon photoacoustic spectrometer for nonradiative relaxation detection 7−102538
unimolecular reactions, coherent radiative control, 3D calcs. 7−126427
γ-valerolactone, ground and vibrationally excited states, microwave spectrum 7−82082
van der Waals clusters, supersonic expansion, photoionisation spectroscopy 7−110166
vibronic coupling, absorption and emission spectra interpretation 7−135994
vitamin B_1, fluorescent derivatives, photophys. and photochem. props. 7−100813
xylenes, supersonic jet, dispersed emission and TOFMS 7−129770
xylenols, fluorescence quenching of excited states due to H bonding with triethylamine 7−82266
zinc tetrabenzoporphin, substituted, matrix isolated, stark effect, spectral hole burning 7−96757
$[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF $X\alpha$SW calcs. 7−109763
$[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF $X\alpha$SW calcs. 7−109763
$[Fe(2,6\text{-bis(pyrazol-3-yl)pyridine})_2][BF_4]_2$, spin transition, hysteresis, transition temperatures, activation energies, states 7−138180
Ag^{n+} clusters, electronic struct., hyperfine interactions, Dirac scattered-wave method calcs. 7−103369
AgH, potential energy curves, bond lengths, relativistic ab initio CI calcs. 7−122379
AgO_2, geometrical isomers, SCF, CI and pseudopot. calcs. 7−68226
Al clusters, electronic struct., perturbed electron droplet model 7−103707
Al_2, $a^3\Pi_u$ ground state, ab initio CI calcs. 7−103402
AlH^+ and AlD^+ cation radicals, in Ar matrices, ESR, generation by reactive laser sputtering 7−90222
AsH, low-lying states pot. energy curves, radiative transitions, multireference CI calcs. *(French)* 7−89973
AsH_3, submillimeter wave and IR spectra, vibr. states. spectroscopic consts. 7−116947
Au complex, β-bis(ethylenedithio)TTF $AuCl_2$, intermol. interactions, electronic and elec. props. 7−92063
B_2, matrix isolated, ESR and ab initio CI calcs. 7−129751
BBr_3, reactions in He afterglow, BBr^+ visible spectra anal. 7−116978
B_2H_n ions, nuclear and electronic struct., ab initio HF calcs. 7−96531
$B_3N_3H_6$, Auger spectra, localisation effects 7−82288
BO, band systems, electronic transition moment variation 7−135827
BO_2 low-lying electronic states, CI calcs. 7−81996
BO^+, low-lying valence states, config. interaction calcs. 7−122374
Be clusters, electronic states and geometries, ab initio calcs. 7−116819
Be_{51} and Be_{57} clusters, electronic states; ab initio SCF calcs., binding energy 7−74401
Br_2, $1g(^3P_2)$ ion-pair state, pump-probe excitation science, optical-optical double resonance technique 7−135978
Br_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
Br_2 matrix isolated, time resolved fluoresc. spectra 7−82245
Br_2 resonant multiphoton ionisation photoelectron spectra study 7−117030
molecular electronic states continued
C_2, electronic states, pot. energy curves, SCF calcs. 7−103361
C_2, electronic states, second-order CI calcs. 7−89975
C_2, energy states population distrib., reson. fluoresc. theory anal. 7−122325
C_2 radical, generation in collisionless IR multiple-photon dissoc. of ethylene 7−71510
C_2^-, electronic states, pot. energy curves, SCF calcs. 7−103361
C_6, lowest $^3\Sigma$ state, electron spin reson. anal. 7−90225
C_{60}, follene-60, electronic struct., spectra, CNDO/S calcs. 7−129913
CH, $A^2\Delta$ state, collisionally induced rot. energy transfer 7−96829
CH^+, isotopic species, vibr.-rot. transition probabilities, electric dipole moment fn. calcs. 7−96504
C_3H_n ions, nuclear and electronic struct., ab initio HF calcs. 7−96531
CN, ($B\ ^2\Sigma^+$-$X\ ^2\Sigma^+$) tail band system, vibr. assignment 7−135908
CN, $X^2\Sigma$ state, from BrCn photolysis, quantum state distrib. 7−113960
CNe^{n+} (n=1 to 4), pot. curves, extended MCSCF calcs. 7−96516
CO, core electron excitations, VUV photoelectron and TOF mass spectra 7−122614
CO, low lying states, pot. energy curves, dipole moments, multiconfig. SCF calcs. 7−116866
CO, photoemission and Auger decay, autoionisation transition intensities 7−74708
CO, Rydberg states, photoabsorpt. and photodissoc. cross sections 7−103592
CO, supersonic jet, multiphoton absorpt. laser-induced fluoresc. 7−117006
CO_2, absorpt. spectrum, nf Rydberg series and 1st ionis. pot. 7−122406
CO_2, ground state, pot. energy functions 7−96816
CO_2 laser, effect of spectral line overlap on pulse shape 7−103796
CO_2, vibr. transitions, Einstein coeffs. calcs. 7−122492
CO_2, XUV laser Rydberg state ionis. 7−140763
CS_2, ground state, pot. energy functions 7−96816
CS_2, V^1B_2 state, fluoresc. and Zeeman quantum beat spectra 7−90240
CS_2, V^1B_2 state, fluoresc., mag. field effects 7−96766
CS_2^+, electron impact, photodissoc., laser-ion beam study 7−68468
CdO semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
$Ce(NO_3)_6^{2-}$, electronic struct., INDO calcs. 7−89966
CeO, low-lying electronic states, cryst. field and spin-orbit interactions calcs. 7−92127
Cl compounds, Kα X-ray spectra, chemical effects study 7−129739
Cl compounds, $K\alpha$ X-ray emission spectra chemical effects, SCC-DV-$X\alpha$ MO calcs. 7−129593
Cl_2, $D' \rightarrow A'$ transition, UV emission spectra 7−82205
Cl_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
ClF_k, geometrical and electronic struct., ab initio calcs. 7−81957
CoH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
CoO, $a^4\Delta_i$ ground state, red system, laser-induced fluoresc. 7−96774
Cr complex, tris-(μ-hydroxo)-bis-[(1,4,7-trimethyl-1,4,7-triazacyclononane) Cr(III)] triperchlorate, exchange interactions, optical spectra, EHT calcs. 7−96548
$Cr(CO)_6$, excited states, EELS anal. 7−103670
CrH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
Cr(III) complexes, octahedral, cis and trans disubstituted, electronic spectra study 7−108110
Cs-Xe, for using diffuse struct., half collision anal. 7−141565
Cu complex, Cu ferrocyanides, valency effects, IR and Mossbauer spectra 7−135982
Cu complexes, hindered internal conversion in rigid matrix, emission investig. 7−74698
CuBr, excited states, lifetime meas., identification 7−136011
CuI, excited states, lifetime meas., identification 7−136011
DCN-DF, vibr. predissoc. fundamentals, rovibr. anal. 7−82299
D_2O, excited state, laser-induced dissoc., dynamics 7−78476
F_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
F_2^n (n=+ or 0), Rydberg states, pot. energy curves, CI calcs. 7−109790
Fe complexes, $[Fe(MoS_4)Cl_2]^{2-}$, electronic struct.-SCF-$X\alpha$ scatt. wave calcs. 7−129594
FeCO, molecular props., ab initio molecular orbital calcs. 7−74404
GaAs, electronic states, ionisation pot., MCSCF and CI calcs. 7−89987
$GaAs^+$, electronic states, ionisation pot., MCSCF and CI calcs. 7−89987
Ge_2, complete active space MCSCF and CI calcs., spectroscopic props. 7−96559
GeH_3, geometry and electronic struct., UHF and SW $X\alpha$ calcs. 7−81972
H, ground state, dipole polarisabilities in mag. fields 7−135876
H_2, $^3\Sigma_u^+$ states, pot. energy curves, CI calcs. 7−89992
H_2, ($G^1\Sigma_g^+$) state rot. levels, electron impact excitations, relative probabilities 7−74779
H_2, $B^1\Sigma_u^+$ state, electron impact excitation, Schwinger multichannel calcs. 7−141705
H_2 complex, H_2 phthalocyanine, Ag surface, resulting complex Raman spectra study 7−74628
H_2, electron impact excitation of C $^1\Pi_u$ state, circular polarisation correl. 7−68469
H_2, fast beam, Rydberg state, hyperfine and fine struct., UV obs. 7−74656
H_2, four body (or quasi four body) molecule existence, quantum mechanical treatment 7−135839
H_2, Franck-Condon regions, double-reson. multiphoton ionisation 7−90231
H_2, high singlet np Rydberg states, multiphoton excitation 7−74723
H_2 in NGC 2023 refl. nebula, level populations and rot. and vibr. temps. 7−140242
H_2, Rydberg states, photoionisation, photoelectron spectra 7−122612
H_2, selectively excited rot.-vibrs. states, fluoresc. dissoc. 7−116939
H_2^+, Dirac eqn., third order variational perturbation calcs. 7−122397
H_2^+, ground and excited states, single-center expansion 7−122338
H_2^+, in arbitrary mag. field, pot. energies of first few electronic states, wave functions anal. 7−122390
H_2^+ molecule, electronic struct., classical model 7−129576
H_3, ground and lowest excited state pot. energy surface, Sorbie-Murrell calcs. 7−90018
H_3^-, electronic struct. and stability, perturbation theory and CI calcs. 7−135850
H_4, stability in C_{3v} symm. 7−109714
H_5^+, pot. energy hypersurface, ab initio SCF CI calcs. 7−89996
H_2B_2, low-lying states, π double bonds, ab initio CI calcs. 7−89977

molecular electronic states continued
HB_2NH_2, low-lying states, π double bonds, ab initio CI calcs. 7−89977
HBr, threshold electron impact excitation 7−117085
HCN→H+CN($X^2\Sigma$), photodissoc., energy disposal 7−90296
HCO radical, ground and excited states, laser induced fluoresc. and multiphoton ionis. spectra 7−129781
HCl, ion-pair and Rydberg states, multiphoton ionis. laser spectrum 7−90302
HD^+, molecular dissoc. states, hyperspherical adiabatic framework, translation factors bypass 7−89948
HF chains, transfer and Green matrix methods 7−81962
HF, electronic struct. calcs. using connected moments expansion 7−81918
HF, møller-Plesset calculations taking care of the correlation cusp 7−74400
HF-ClF(Cl_2) dimers, H and anti-H bonded isomers, ab initio electronic struct. calcs. 7−116871
H_3GeD, Fourier transform IR spectrum, perturbed fundamental ν_2, rovibr. anal. 7−116963
$HLiH^-$ ion, in $X^1\Sigma_g^+$ state, 3D pot. energy and electric dipole moment surfaces, ab initio calcs. 7−116821
$H_2NB_2NH_2$, low-lying states, π double bonds, ab initio CI calcs. 7−89977
HNCl-X system band origin and vibr. freqs., ab initio calcs. 7−135849
H_2O (D_2O), excited state, ionic geometries, Franck-Condon analysis 7−110008
H_2O chains, transfer and Green matrix methods 7−81962
H_2O, electronic energy, fragment anal. 7−81928
H_2O, electronic struct. calcs. using connected moments expansion 7−81918
H_2O, excitation energies, ionisation pots., open-shell coupled-cluster method., correlation effects calcs. 7−116868
H_2O, excited state, laser-induced dissoc., dynamics 7−78476
H_2O, møller-Plesset calculations taking care of the correlation cusp 7−74400
H_2O, singlet states, linear asymmetric dissoc., MRD CI calcs. 7−116861
H_2O, vibr.-rot. energy levels, force consts. and mol. geometry calc. 7−90089
H_3PO, semipolar P−O and P−C bonds 7−129559
HS, photofragments, rot. population distribs., kinematic constraints on final state interaction 7−74719
H_2S, electronic energy, fragment anal. 7−81928
H_2S, excited state, ionic geometries, Franck-Condon analysis 7−110008
$H_6Si_2O_7$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
HX, X=Br,I, molecular resonances, autoionisation, photoelectron spectra study 7−141633
H^*_4 cluster, stability, pot. energy surfaces, MRD-CI method and basis set calcs. 7−74467
He_2^+, $^2\Sigma_g^+$ excited states, pot. energy curves, adiabatic calcs. 7−109787
He_2^+, excited state, electron-stimulated desorption from electrode grids 7−70952
HeC^{2+}, low-lying electronic states, MC CAS SCF calcs. 7−135829
HeH^+, second excited Σ^+ state calcs., contrib. to ^3T β-spectrum 7−116885
Hg-methane(-ethane)(-N_2)(-CO) complexes, jet-cooled complexes, electronic spectra and intramultiplet relax. 7−90357
Hg_2^{2+}, doubly charged dimers, electronic struct. diabatic calcs. 7−74429
(hydroxyphenyl)benzotriazoles, internally H bonded, spectrosc. and kinetic investig. 7−82202
I-diethylether (diethylsulphide) complexes, UPS, electron states 7−96791
I_2, D(0_u^+) ion pair state, optical-optical double reson. obs. 7−109965
I_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
I_2, ion-pair states, VUV fluoresc. spectra anal. 7−135963
I_2, n-hexane soln., polarisation dispersion curves for reson. Raman scatt. 7−82182
I_2, Ω doubling in 1_g state, electronic transition moments 7−96522
I_2, R0_u^+ state, rot.-resolved Rydberg transition 7−68419
ICN, dissociation, transition states, real-time fs probing spectroscopy 7−135960
ICl, laser photolysis, 530 nm, time-resolved LMR obs. 7−122576
IF excited to $B^3\Pi_{0+}$ by collisions with N_2 metastables 7−96831
IF, low-lying electronic states, matrix isolated, fluoresc. study 7−141616
InCl, C^1Pi state, pot. curve calcs. 7−135868
K_2, rovibrational transitions, Doppler-free polarisation spectroscopy, visible spectra anal. 7−109916
$KrHe^+$, electronic states props. and pot. energy curves, relativistic CI calcs. 7−116860
Li chains, transfer and Green matrix methods 7−81962
Li small clusters, electronic struct and geometry 7−136116
Li_2, lowest-lying states, electronic transition dipole moment fns. calc. 7−81931
Li_2, resonant vibrational excitation, simple model 7−129891
Li_2 Rydberg states, polarisation labelling spectroscopy, quantum defect 7−74469
LiF, IR multiphoton excitation dynamics study 7−74597
LiH chains, transfer and Green matrix methods 7−81962
LiH, electronic states, polarisation propagator calcs. 7−68202
LiHe, electric discharge plasma, excited states form., pot. energy curves, MCSCF calcs. 7−89943
Mg_2^{2+}, doubly charged dimers, electronic struct. diabatic calcs. 7−74429
MgO, $B^1\Sigma^+$ and $X^1\Sigma^+$ states, electric dipole moments, Stark quantum-beat spectra 7−68379
$Mo(CO)_6$, excited states, EELS anal. 7−103670
N_2, $a^1\Pi_g$ state, electron impact excitation cross-section 7−141702
N_2, excited states, bond fns., MRD-CI calcs. 7−109791
N_2 isoelectronic series, struct. anal., ab initio VB calcs. 7−89971
N_2, nonequilib. flow, non-Maxwell energy distrib. 7−69329
N_2, photoelectron spectra, vibr. branching ratios, photoionisation cross section 7−82279
N_2, quenching rate const. by H 7−117005
N_2, resonant vibrational excitation, simple model 7−129891
N_2, two-colour double resonant multiphoton ionis., and laser-induced fluoresc. 7−110023
N_2+He^+, luminescence in thermal-energy charge transfer reaction 7−119526
NF, ($b^1\Sigma^+$) quenching rate consts. meas. in flowing afterglows 7−135997
NF_2 radicals, UV photodissoc. quantum yield study 7−126464
NH, vibr. excited, rot. and hyperfine consts., IR spectra 7−74593
NH, $X^3\Sigma^-$ state, CAS SCF/MRSD CI calcs. 7−81990
NH_2 radical, valence states, VB diatomics in mols. calcs. 7−109783

molecular electronic states continued
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
NH_3, dissociation, pot. energy surface, ab initio MCSCF calcs. 7−103359
NH_3, electronic energy, fragment anal. 7−81928
NH_3, jet cooled, UV absorpt. spectra, isotope shifts 7−103529
NH_3, Rydberg states, spectroscopy and photophysics 7−74476
$NH_4(NH_3)_n$, Rydberg radicals, structs., correl. diagrams 7−90008
NO, collisional quenching rate consts., fluoresc. anal. 7−96771
NO, in inert gas matrix, emission, diffusion-controlled quenching 7−135984
NO, Rydberg series, double reson. multiphoton ionisation, quantum defect anal. 7−68375
NO^{2+}, $^2\Sigma^+$ and 2Π states, ab initio calcs. 7−129548
NO_2, excited electronic states, perturbed visible system, rot. transitions, hyperfine struct. 7−116980
NO_2, laser excitation, polarisation inversion effect 7−129797
NO_2, laser-excitation, polarisation inversion study 7−103585
N_2O, excited states, ionic geometries, Franck-Condon anal. 7−110007
N_2^*+N, deactivation, classical trajectory calcs. on LEPS surface 7−68446
Na+Na(3p), assoc. ionis., $^2\Sigma_u^+$ and $^1\Sigma_g^+$ adiabatic mol. states effects 7−96848
Na_2, perturbation facilitated optical-optical double reson. spectroscopy, hyperfine splittings, struct. 7−96753
Na_2+Na(Kr), collision-induced radiationless transitions, fluoresc. spectra anal. 7−103637
NaF:Cu^+, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
Ni octaethylporphyrine, vibr. struct., picosec. CARS, excited states dynamics 7−122553
NiH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
O+H_2→OH+H, reactive collision, crossed beam expt. 7−144710
O_2, electron impact electronic excitation, multichannel effective range theory 7−129888
O_2, excited singlet state, collisional relax., temp. depend. 7−122672
O_2, low lying singlet states, collisional energy transfer kinetics 7−136048
O_2 phosphorescence quantum yield in benzene solvent, IR spectra 7−116954
O_2, singlet photosensitisation and triplet state yield from tricarbocyanine dyes *(French)* 7−117027
O_2, UV photoabsorpt. cross-section, pot. curves 7−129735
O_2, visible photodissociation dynamics 7−135947
O_{2+}, XUV laser Rydberg state ionis. 7−140763
O_2^+, autoionising Rydberg states, polarised fluoresc. spectroscopy 7−141615
O_2^+, direct dissociative recomb., cross section windows, Morse pot. curves 7−78461
O_3, electronic states, pot. energy surfaces, UV continuum, ab initio calcs. 7−96515
OCS, ground state, pot. energy functions 7−96816
OH radical, nucl. hyperfine parameter determ., far-IR laser mag. reson. spectrum 7−82229
OH, $X^2\Pi$ state, dipole moment, SCF CI calcs. 7−103401
$Os_n(CO)_m$ clusters, electronic struct. calcs. 7−90467
P compounds, tricoordinated, electronic and stereochem. struct., δ^{31}P chem. shift 7−103541
P radical cations, form. by radiation chemistry, electronic struct., ESR spectra anal. 7−68369
PH, radical, ground $X^3\Sigma^-$ state, FTIR vibr.-rot. spectrum 7−82098
PH_3, electronic energy, fragment anal. 7−81928
PH_3O, structure and electronic structure, basis set effects 7−141432
PN radical, VUV spectra 7−141598
Pd complex with glycerine, electronic struct., X-ray spectra and quantum-chem. calcs. 7−109928
Pd_n+CO, electronic struct, pseudopot. CI calcs., relationship between surface and organometallic chemistry 7−113901
Rb_2, $2^1\Sigma_g^+$ electronic state, laser-induced fluoresc. Fourier transform IR spectrosc. 7−96782
RbH, $X^1\Sigma^+$ and $A^1\Sigma^+$ states, potential energy curves, probability density distributions 7−122418
Re monomers and dimers adsorbed on W (110), possible magnetism 7−82020
$Re_2Cl_8^{2-}$, $\delta\delta^*$ excited electronic state, time-resolved reson. Raman spectra 7−82143
Rh complex, dirhodium(II) dihydrate tetraformate, ground state config., ab initio SCF CI calcs. 7−96554
RuC, electronic states, bonding, all-electron ab initio HF CI calcs., mass spectra 7−109804
$(Ru(bpy)_3)^{2+}$, time-resolved photoselection and exciton hopping in excited state 7−103477
S_2, effective valence shell Hamiltonian, electronic struct. and bond length depend. 7−81929
SF_6, IR multiphoton excitation dynamics study 7−74597
SH_3^+ in hollow cathode discharge, IR spectrum, mol. consts., rot. transition freq. 7−74578
SO_2, electron impact dissoc. excitation, fluoresc. 7−110121
SO_2^{2+}, electronic states, SCF CI calcs. 7−135851
$SO_2(SO_2^+)$, geometry, dynamics, supersonic molecular beam photoelectron spectra 7−136003
ScH_2, electronic states and pot. energy surfaces, CAS SCF and second-order CI calcs. 7−96551
SeH^n (n=0 or +), electronic states, MC SCF (CAS SCF) and CI calcs. 7−135852
SeS mols. in Ar matrix, fluoresc. excitation spectra *(Russian)* 7−68332
Si_2, electronic states, second-order CI calcs. 7−89975
SiCl, rotational structure, isotope shifts, UV fluoresc. spectra anal. 7−96720
$SiCl_4$, Si L edges resonances, gas phase UV photoabsorpt. spectra 7−116982
SiF systems bond energies, generalised VB and CI calcs. appl. to Si etching 7−122365
SiF^+ (SiF), electronic states, CI calcs. 7−74462
SiF_4, ground state, second-order Stark effect, IR spectrosc. 7−122529
SiH_3, electronic struct., UHF and SW Xα calcs. 7−81972
SiO_2 clusters, electronic struct., props., MNDO calcs. 7−122772
SiO_2, electron states pop. numbers, SCF HF-Slater pots. calc. *(Russian)* 7−122355
SiO_2 high temp. vapour, IR absorptivity, Elzasser model calcs. 7−103503
Si_2O_4, electronic struct., CNDO/SW calcs. 7−110182

molecular electronic states continued
$Si_2O_7^{6-}$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
TeH, electron states, relativistic CI calcs. 7−89991
TiO, electronic states, configs., ab initio CI calcs. 7−109789
UMn_2, electronic struct., reson. photoemission meas. 7−96790
UO_2 complexes with N-thiosemicarbazide, struct., composition, force consts., spectral and thermal study 7−138442
$W(CO)_6$, excited states, EELS anal. 7−103670
Xe_nCl electronic states, semiempirical calcs. 7−116833
XeF ground state kinetics analysis rel. to laser performance 7−117182
$YO,X^2\Sigma^+$ state, fine and hyperfine struct., visible spectra 7−74651
Zn complex, Zn octaethylchlorin, deuterated species, unstable anionic forms, reson. Raman scatt. spectra study 7−103515
Zn complex, $Zn(imidazole)^{2+}$, tautomerism, effect of cation binding and methyl substitution 7−89918
ZrO, singlet systems and energy levels, stellar appl. 7−103517
ZrO_2 clusters, electronic struct., discrete-var. method calcs. 7−110183

molecular electronic structure *see molecular electronic states*

molecular energy level calculations
see also molecular electron correlations; molecular orbitals calculations; molecular rotation calculations; molecular rotation-vibration calculations; molecular vibration calculations; VB calculations
π-energy levels and characteristic polynomial calcs. using graph theory 7−95154
ab initio quantum mech. model testing 7−116816
acetylene, intruder-state problems in effective Hamiltonian theory 7−122347
adiabatic molecular energy curves with correct united-atom and separated-atom limits 7−89954
alternant systems, properties 7−129554
alternant systems, selection rules 7−89897
aminonitrene+ethylene, addition, nonempirical gradient quantum chem. calcs. 7−103384
asymmetric molecules, charge distrib. shapes, group theory 7−141415
atoms and mols., ground state Schrodinger eqn., diffusion Monte Carlo simulations 7−129570
bacterial peptidoglycan, conform. struct., N-acetyl group role, PCILO calcs. 7−114185
benzenetricarbonylchromium, electron deform. density determ. 7−74411
benzenoid hydrocarbons, chem. graphs, Randic mol. connectivity index 7−129547
benzenoid hydrocarbons, enumeration and classification 7−103366
benzenoid hydrocarbons, Kekule structs. enumeration study 7−122353
benzenoid hydrocarbons, nonKekulean struct., topological props. 7−81956
benzenoid hydrocarbons, stability, unified theory 7−89921
bromo and thio cpds., zero-point energies, Schulman-Disch empirical formula 7−96507
chemical bond formation, core and valence atomic orbitals 7−122733
chemical structures, discrimination and ordering by no. of walks 7−74399
closed-shell Hartree-Fock solutions, in geminal approach, instability 7−103348
closed-shell mols., chem. bonds, localised geminals appl. 7−129571
Creutz-Taube ion, electronic struct. calcs. 7−89930
diamine chelate rings, 5-membered, conform. interconversion, strain energy calcs. 7−116839
diatomic hydrides, main group, electronic structs 7−141430
diatomic molecule, excited rigid polar molecule, Stark effect, Rayleigh-Schrodinger perturbation theory *(Russian)* 7−109969
diatomic molecules, electronic energy, upper bounds 7−122346
diatomic molecules, multigrid approach for Hartree-Fock calculations 7−116812
diatomic molecules, selection rules, autoionisation, electron attachment 7−136017
diatomic molecules, vibr.-rot. spectrosc., computer algebra calcs. 7−122342
diatomic molecules and ions, two centre fns., universal basis 7−122323
effective local pot., density amplitude 7−129567
electron density distribution analysis 7−141417
electronic struct., coupled cluster model 7−103363
energy gradients, parallel computation on loosely coupled array of processors 7−129543
energy well connection graph, for dimens. reduction in graph representation 7−89901
ethane-bisporphyrins, covalently linked, electronic excitation energy transfer 7−141455
exchange energy formulas, Hartree-Fock, LDA and 10/9 LDA 7−81914
exchange perturbation theories 7−129539
formation constants calculations, computer-oriented method 7−116892
Gaussian basis functions, elec. and mag. props. calcs. *(French)* 7−141414
geometry optimisation without anal. gradients, algorithm 7−116837
graphs as topological objects in space 7−116811
ground state energy, steepest descent perturbation theory calcs. 7−74413
Hamiltonian study 7−122324
Heisenberg Hamiltonians, approximate solns. 7−96510
histamine H_2 receptor agonists and antagonists, quantum mech. calcs. *(French)* 7−141428
Hosoya's topological index, approx. calcs. 7−74396
hydrocarbons, conjugated, MMP2 calc. method appls. 7−116838
hydrocarbons, group props., additivity, strain energy 7−89924
hydrocarbons, valence space only calcs. for prototype mols. 7−141429
intramolecular dynamics problem, probability amplitudes, LF expansion 7−103613
intramolecular transitions, polaris. anal. using liq. cryst. matrix *(Japanese)* 7−129592
ion-dipole capture force field; rel. to electron transfer reactivity 7−116844
ions, singly and doubly charged, relax., Jablonski diagrams 7−109971
isomer enumeration, inverse problem 7−116810
kinetic energy density, charactn. for central fields by total and s-state Slater sums 7−103346
leuco compounds, electronic struct., absorpt. spectra 7−103480
light molecules, kinetic energy at equilib., lowest-order density gradient correction 7−96525
local density functional calculations *(French)* 7−141413
many-electron system, electron density, variational determ. 7−141424
many-electron systems, singly excited config., vector pot. variation 7−74440
metal cluster oxide, quantum levels, optical signature for oxidation 7−110172

molecular energy level calculations continued
methionyl homopeptides, intramol. three-electron bond formation 7−68207
N-methyl-3-phenyl-3-(o-methoxyphenoxy) propylamine, energy well connection graph appls. 7−89901
molecular distance matrix, algorithm construction 7−116808
molecular graph similarity, linear notation 7−129537
muonic molecule levels, nuclear shift and broadening calcs. 7−122752
muonic molecules, binding energies, Uehling pot. matrix elements 7−103691
nonplanar conjugated organic molecules, rehybridisation and π-orbital overlap 7−89969
nuclear motion in atoms and molecules, quasi-relativistic treatment 7−141478
one-electron diatomic mol., electronic energy curve, analytic bounds 7−103374
open-shell coupled-cluster theory for general model spaces, connectivity criteria 7−141411
optimal population analysis 7−89899
orbital localisation, optimisation, direct search 7−122322
organometallic clusters, structure and electron counting 7−110178
Pauling bond order concept 7−89895
polyatomic molecules, semiclassical quantisation, review 7−135823
polyatomic system, oscillating near collinear reaction surface, isomorphic hamiltonian 7−74402
porphine, D_{2h} configuration, C_{2v} configuration, normal mode frequencies, QCFF/PI calculations, dynamic instability 7−135905
prolate pentagons, Kekule struct. enumeration 7−129538
quantal inertia tensor, classical limit 7−122321
quantum chemical software package for molecular properties calcs. 7−141419
quasidegenerate many-body perturbation theory, unitary transformations on model space 7−89898
second-order molecular props., analytical geometrical derivatives from perturbation theory 7−96496
structural tensor surface harmonic bonding theory 7−135826
sums of quantum states for nonseparable degrees of freedom: multidimensional Monte Carlo integration 7−135824
symmetric top mol. calc., appl. to atomic triply excited state calc. 7−122410
symmetry-adapted cluster calcs., integral depend. spin couplings 7−96552
tetrahedral hydrides, SCF proton densities HF calcs. 7−103371
theoretical chemistry, conf., Lyon-Villeurbanne, France (July 1986) 7−140355
time-dependent pseudopotential, Epstein variation principle 7−89893
topological indices for modelling of chem. phenomena 7−141416
transition metal multidecker sandwich complexes, electronic complexes 7−74454
m-trifluoromethyl-N-ethyl-amphetamine, energy well connection graph appls. 7−89901
two level systems, time depend. Magnus expansion convergence 7−96518
verdazyl cations, electronic struct., absorpt. spectra 7−103480
verdazyl radicals, electronic struct., absorpt. spectra 7−103480
vinyl cation, rot. and internal rot. energy level calcs. 7−81932
dtμ molecule, J=0 levels, nuclear shift and broadening calcs. 7−122752
$Cr(acetylacetonate)_3$, tris-bidentate, trigonal level splittings, π-bonding network effects 7−89953
$Cr(oxalate)_3$, tris-bidentate, trigonal level splittings, π-bonding network effects 7−89953
D atom, spin polarized, ground state energy calcs. using LOCV method 7−96493
D_2, ground-state energy calcs., LOCV method 7−96492
H atom, spin polarized, ground state energy calcs. using LOCV method 7−96493
H_2, ground-state energy calcs., LOCV method 7−96492
H_2^+, energy level calcs., quantum harmonic oscillator, adiabatic and related approximations 7−73023
HD^+, symm. breaking effects calcs. 7−122344
HF, electronic struct. calcs. using connected moments expansion 7−81918
H_2O, electronic struct. calcs. using connected moments expansion 7−81918
H_2O, geometry, analytical energy gradient, Moller-Plesset perturbation theory 7−116815
H_2O_2, geometry, analytical energy gradient, Moller-Plesset perturbation theory 7−116815
He_2, interaction energy components, basis set extension effects, decomposition scheme 7−129826
HeH^+, second excited Σ^+ state calcs., contrib. to ^3T β-spectrum 7−116885
Li_2, generalised Tamm-Dancoff approx. and random phase approx. calcs. 7−81915
Li_2, intruder-state problems in effective Hamiltonian theory 7−122347
LiH, generalised Tamm-Dancoff approx. and random phase approx. calcs. 7−81915
$PdCl_2$, electronic struct., XPS and quantum chem. investig. 7−103382
S_2N_2, Hartree-Fock instabilities 7−116842
T atom, spin polarized, ground state energy calcs. using LOCV method 7−96493

molecular energy levels
see also macromolecular energy levels; molecular electronic states; molecular energy level calculations; molecular fine structure; molecular hyperfine structure; molecular libration; molecular polarisability; molecular reorientation; molecular resonant states; molecular rotation; molecular rotation-vibration; molecular vibration; molecular vibronic states; nuclear screening
acetylene, dynamic screening effect, local field description 7−129804
aerodynamic acceleration obs. using ceramic nozzle 7−141717
2-aminophenyl phenylsulphone, luminescence, temperature dependence, emission and absorption spectra, excited states, solvent effects, charge transfer 7−141620
4-(9-anthryl)-N,N-dimethylaniline, time residual spectra, solvent dependence, charge transfer, reorientation, relaxation, laser spectroscopy 7−141480
bimethylpyrichrominium ion, protonated, adiabatic proton transfer, reaction kinetics, electronic excitation, fluorescent state, population inversion 7−144694
duroquinone, Raman spectra, triplet state, semi-reduced form, laser pumping, transient species 7−141582
enzymatic site model, valence orbitary bond orbital description, ab initio calculations 7−141434

molecular energy levels continued
excited state spectroscopy, measurement techniques 7−129899
hexathiopentacene, energy struct., absorption spectra *(Russian)* 7−122503
isokinetic relationship, unimolecular reaction systems, steady state solutions, vibrational spectra, liquid and gas phase reaction sites 7−144682
isopropylthio radicals, photodissociation, fluorescence, radiative lifetime, vibrational levels, stretching modes 7−135988
linear mol. chain, soliton states, thermal fluctuations effects, quantum theory *(Russian)* 7−82015
methanethiol, photoexcitation, photofragment fluorescence, excitation spectra, Rydberg series, bands 7−144731
methyl formate, c-type transitions 7−135924
optically enhanced electron attachment 7−117087
partition functions for diatomic molecules, calc. methods and results for H_2 and CO 7−134120
phenoxasiline molecule, electronic states, intramolecular interactions, luminescence 7−122389
propargyl radical, ground and excited states, vibrational frequencies, SCF calculations, molecular geometries, electronic structures 7−141458
Rydberg states, multiple scatt. calcs. in quantum defect theory *(Chinese)* 7−90007
statistical properties, spectral analysis, quantum statistics coupled oscillators 7−141555
symmetric top molecules, excited vibr. states, effective rotational Hamiltonians 7−129620
N,N,N′,N′-tetramethylphenylene diamine, electron transfer, phosphorescence emission decay, reacting distance, excited states 7−135989
tetrathiotetracene, energy struct., absorption spectra *(Russian)* 7−122503
triethylamine, electron photoelectron spectra, ionisation potentials, excited states, transitions, SCF calculations, binding energies 7−141688
3,5,7-trimethoxyflavone, absorpt. and fluoresc. spectra, acidity depend. 7−82243
CO, refined partition functions determ. 7−134120
H_2, doubly excited states, LCTCO calc. 7−74478
H_2, muonic, energy levels, variational calcs. 7−103697
H_2, refined partition functions determ. 7−134120
H_2, Rydberg states, field ionisation threshold study 7−136019
H_2, Rydberg states, multiple scatt. calcs. in quantum defect theory *(Chinese)* 7−90007
H_2^+, molecular description of two-electron atoms 7−96578
H_2^*, radiatively dissociating level, vibr. wave function 7−109863
He_2 adiabatic potential curve, excitations, van der Waals wells, vibrational energy levels 7−136029
Ho^{3+} in $HoCl_6^{3-}$, absorption spectra, crystal-field splittings, luminescence transitions, decay measurements 7−141593
I_2 predissociation in supersonic beam condenser microphone detector 7−103594
Kr+Xe, energetic collisions, continuous electron spectra, collisional broadening 7−129858
Li_2, ion pair formation mechanism, high-lying Rydberg states 7−141699
$N+O_2(O_3)$ reaction kinetics, chemiluminescence, rate constants, excitation mechanisms, discharge flow technique 7−144693
NO, Rydberg states, multiple scatt. calcs. in quantum defect theory *(Chinese)* 7−90007
NbO, photoelectron spectra, bands, ionisation energies, HES calcs. 7−141624
TaO, photoelectron spectra, bands, ionisation energies, HES calcs. 7−141624

molecular excitation *see beam-foil spectra; chemical reactions; Davydov splitting; discharges (electric); molecular fluorescence; optical pumping; photoionisation; radiation quenching*

molecular fine structure
alkali metal-He pairs, nonresonant excitation, fluoresc. ratios 7−141621
9, 10-anthraquinone, fine struct., Dushinsky effect, phosphoresc. spectrum 7−129776
1,2-benzanthracene, geometry, fine struct. fluoresc. and phosphoresc. *(German)* 7−90267
n-chlorodifluoromethanimine, isotopic species, struct. quadrupole coupling consts., microwave spectra 7−122513
conjugated carbonyl acetylene compounds, He(I) photoelectron spectra 7−90271
1,2,5,6-dibenzanthracene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
diphenylpicrylhydrazyl radical, spectra-spatial two-dimensional EPR imaging 7−90227
ethylene clusters, IR predissoc. spectra 7−122518
galvinoxyl radical, spectra-spatial two-dimensional EPR imaging 7−90227
gases, Rayleigh spectrum fine struct., review 7−141586
1,3,5-hexatriyne radical, fine and hyperfine struct., astron. study, EHF obs. 7−120538
metallochlorins, fine struct. fluoresc, spectra 7−117018
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7−90269
nitroxyl radical in soln., exchange and hyperfine contrib. to EPR line shifts 7−68372
pentacene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
perchlorodiphenylnitroxide radical, spectra-spatial two-dimensional EPR imaging 7−90227
perdeuterochrysene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
photofragments, light emission, classical model, quantum results interpretation 7−129780
porphycene, photoexcited triplet state, time-resolved EPR spectroscopy 7−103548
quantum Hall effect explanation and impact on electrical metrology 7−67350
tempone radical, spectra-spatial two-dimensional EPR imaging 7−90227
5,6,11,12-tetraphenyltetracene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
van der Waals molecules, fine-struct. electronic predissoc. quantum-mechanical model 7−110039
$[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
$[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
Cn $X^2\Sigma^+$ fine struct. population, from ICN photodissoc. 7−122634
H_2, fast beam, Rydberg state, hyperfine and fine struct., UV obs. 7−74656

molecular fine structure continued
H_2^+, relativistic energy correction, Dirac and Schrodinger eqns., variational solns. 7−122396
H_2+O in shocked interstellar clouds 7−128020
NH, A $^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
N_2O, excited states, ionic geometries, Franck-Condon anal. 7−110007
NSe radical, vibr.-rot. and fine struct., laser mag. reson. 7−122577
NaF:Cu^+, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
$OH+H_2$, inelastic scatt. cross section rot. and fine struct. *(German)* 7−74737
PuF_6, vibronic band fine struct. high resol. visible spectra 7−122557
SiCl, rotational structure, isotope shifts, UV fluoresc. spectra anal. 7−96720
YO,$X^2\Sigma^+$ state, fine and hyperfine struct., visible spectra 7−74651
Zn octaethylchlorine-d_0(−d_2), fine struct. fluoresc. *(Japanese)* 7−129786

molecular fluorescence
1-cyanonaphthalene-triethylamine van der Waals complex, exciplex form., fluoresc. study 7−82264
9,9′-bianthryl, excited state dipole moments, fluoresc. study 7−135996
N-acetyl-1-pyrenylalanine methyl ester, intermol. excimer, dissoc., chiral discrimination 7−110015
acridinium, fluorescence quenching by Pb^{2+}, Hg^{2+}, Cu^{2+}, Ag^+ and H_2S, fluorescence quenching 7−82276
ACTH, dynamics, fluoresc. anisotropies and lifetimes determ. 7−129767
alkali metal-He pairs, nonresonant excitation, fluoresc. ratios 7−141621
alkyl iodide and substituted alkyl iodides, photodissoc., two-photon VUV laser induced fluoresc. detection 7−90242
alkylbenzenes, substituted, radiationless decay, photophysical properties, excited states, exciplex formation 7−135990
4(5)-amino-2-aryl-1,3-indandiones, fluoresc. meas. 7−74704
4(5)-amino-2-aryl-2-carboxylmethyl-1,3-indandiones, fluoresc. meas. 7−74704
4-amino-4′-nitrodiphenyl, ethanol soln., dipole moment, visible fluoresc. spectra, edge-excitation red shift 7−135950
9-aminoacridine, multi-wavelength frequency domain fluorometry and global anal., rot. diffusion 7−96764
1-aminoalkyl-2-naphthols, excited state H^+ transfer, fluoresc. study 7−90256
aminoanthraquinones, intramolecular orientation, transition moment, fluoresc. 7−82273
2-aminopyridine, van der Waals and H-bonded systems, structs., excited state dynamics 7−136031
aniline and derivatives, soln., rot. dynamics, picosecond fluoresc. anisotropies 7−90255
anisotropy decay, resolution enhancement, anisotropic rots. and protein dynamics appl. 7−93635
anthracene, first excited state, vibronic coupling, mol. fluoresc. and Raman spectra anal. 7−82180
anthracene, fluoresc. quenching in alcohols and water-alcohol mixtures 7−117016
anthracene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
anthracene, supersonic beam, intramolecular dephasing and vibr. redistrib., fluoresc. 7−129773
anthracene-alkane complexes, fluoresc. excitation spectra 7−96763
9-anthracenecarboxylic acid, assoc. with TiO_2, triplet-triplet energy transfer 7−93368
anthracenes, substituted, S_1 torsional pot., vibr. struct., laser induced fluoresc. 7−68388
p-(9-anthryl)-N,N-dimethylaniline derivatives, complex excited state relax., fluoresc. lifetime distribs. 7−117013
aromatic hydrocarbons, excited state quenching, Xe heavy atom effect 7−68237
aromatic hydrocarbons, triplet states quenching by tertiary amines 7−68392
aromatic molecules, excited, stereospecific quenching by electron acceptors 7−122606
aromatic molecules, heavy atom perturbers in rigid solns., kinetics of excited states 7−96775
aromatic molecules, microsolvation, spectroscopic investig. 7−129823
aromatics in solution, microscopic solvation dynamics, time-resolved spectroscopic meas. 7−93288
8-(arylazo)-7-hydroxy-4-methylcoumarins, UV excitation and fluoresc. spectra 7−96787
azomethane, excimer laser photolysis product yields and mechanism 7−71509
azulene, S_2 state, intramol. vibr. redistrib., picosecond dynamics 7−96770
background in Raman spectroscopy, solvent effects 7−103506
bacteria, live, primary fluoresc., steady-state and decay characts. 7−86909
bacterial chlorophyll, solid solution, vibronically selected spectra *(Russian)* 7−86914
bacterial pigments, mol. vibr., matrix isolation fluoresc. spectra anal. *(Russian)* 7−133216
bacteriochlorophyll α, pheophytin substitute fluoresc. spectra, critical energy transfer distances calc. 7−106983
bacteriorhodopsin, solvation dynamics, mol. fluoresc. and near reson. Raman yields probe 7−103562
1,2-benzanthracene, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
1,2-benzanthracene, geometry, fine struct. fluoresc. and phosphoresc. *(German)* 7−90267
1,2-benzanthracene, IR and UV linear dichroism, fluoresc., transition moments 7−96655
1,2-benzanthracene + carbon tetrabromide, fluoresc., collisional quenching studied by freq. domain fluorometry 7−96765
benzenamine-4-(9-anthryl)-N,N-dimethyl related cpds., synthesis, spectroscopic props. 7−90265
benzene, $^1B_{2u}$ level, vibr. ang. momentum fluoresc. lifetimes study 7−82263
benzene, ground state, a_{2g} mode, two-photon fluoresc. spectra 7−122599
benzene, rovibronic states, intramol. relax., Doppler-free two-photon excitation spectra 7−96724
benzo(a)pyrene, antibody-based fibre optics biosensor, fluoresc. anal. 7−145287
benzoic acid, H bonded dimers, delocalised states obs., fluoresc. line-narrowing expts. 7−109977
N-benzoylindoles, charge transfer fluoresc., solvent effects 7−96760
benzo[a]pyrene, fluoresc., decay lifetime meas. 7−68393

molecular fluorescence continued
3-benzylidene-isobenzofuranone, luminophore, photophys. props. *(German)* 7−103560
benz[a]anthracene, dichroism spectra, fluorescence polarisation spectroscopy, transitions, NDO calcs., LCAO calcs., moment directions 7−141611
bimethylpyrichrominium ion, protonated, adiabatic proton transfer, reaction kinetics, electronic excitation, fluorescent state, population inversion 7−144694
biomolecule reorientational motion determ. by fluoresc. anisotropy decay, interpret. complexities 7−114166
biphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
1,10-bis(1-pyrenyl)decane, confinement and fluoresc. in microporous amorphous superlattices 7−122609
2,5-bis(2-benzothiazolyl)hydroquinone, jet cooled, excited state intramol. H^+transfer 7−86599
1,3-bis(2-naphthyl)propane, in alkane solns., excimer form., press. effects 7−135999
9,10-bis(phenylethynyl)anthracenes, excimer form., fluoresc. quenching 7−82274
1,6:7,12-bismethano[14]annulene, excited states, UV-visible absorpt., fluoresc. and MCD spectra 7−82270
t-butyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
caffeine in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7−85831
calcium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
calmodulin-binding peptides, fluoresc. props. rel. to α-helical periodicity 7−126720
carbazole-anthracene, Langmuir-Blodgett monolayer films, excitation energy transfer 7−74701
carbonic anhydrase B, bovine, fluoresc. correl. spectroscopy, rot. diffusion 7−119722
β-carotene, reson. Raman scatt. and luminesc., excitation profiles, nonmotional narrowing effect 7−90146
CCN free radical laser-induced fluoresc., Fourier transform detection, rot. consts. 7−90252
chalcone ketyl radical anions, fluoresc. spectra and lifetimes 7−135987
chlorofluoromethylene, photoabsorpt. and fluoresc. cross sections meas. 7−90239
chloromethanes, photodissociative excitation, fluoresc. yields 7−110030
chloromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7−90246
chlorophyll, aggregation in solns., Raman excitation profile anal. 7−82191
chlorophyll, fluoresc. decay kinetics rel. to P starvation of chlorella cells 7−107001
chlorophyll a and chlorophyll a dihydrate dimers in water/acetone mixtures, dipole-dipole transfer 7−114211
chlorophyll a and photochlorophyll in frozen solns., fluoresc.-detected triplet kinetics study 7−100812
chloroplasts, lettuce, photosynthesis, time-resolved fluoresc. obs. 7−71680
chromophores, in adhesive on PET base film, fluoresc. depolaris. 7−96773
chrysene fluorescence quenching by KI in methanol-ethanol solns. 7−122600
colloids, amphiphilic, aq. solns., dynamic struct. and cooperative transfer of excitation energy 7−126487
colloids, self-diffusion, fluoresc. photobleaching expts. 7−71531
comets, electronic spectra and relaxation of molecular cations 7−88289
complex molecules, delayed luminesc. in gas phase 7−109972
complex molecules in liquids, fluoresc. decay and orientational relaxation, simultaneous determ. 7−110140
concentration dependent fluorescence quenching with ionic reactants, calc. 7−82265
coronene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
coumarin, picosecond solvation dynamics investig. 7−106777
cresol isomers and complexes, supersonic free jets, fluoresc. excitation spectra 7−90238
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
crystal violet, nonradiative decay dynamics, absorpt. and fluoresc. spectra meas., temp. and wavelength depend. 7−90254
crystal violet, solns., nonradiative torsional dynamics meas., viscosity and press. depend. 7−103563
crystal violet adsorbed layer, Ag colloids, reason. SERS and fluoresc. spectra coverage depend. 7−74629
p-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
p-cyano-N,N-dimethylaniline, intramolecular excited state charge transfer, fluoresc. 7−135995
9-cyanoanthracene, fluoresc. quenching 7−68394
cyanoanthracene-2,5-dimethyl-2,4-hexadiene, fluoresc. excitation spectra 7−103557
cyanogen photolysis, Ar-cyanogen flow, CN UV fluoresc. spectra anal. 7−96718
β-cyclodextrin-indole inclusion complex, absorpt. and fluoresc. spectra 7−103569
cyclohexane-benzene mixtures, radioluminesc., mag. field effect 7−90248
decay kinetics, excited states quasi-continuum approach 7−96769
deoxy-2-aminopurine, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
depolarisation and dynamics of anisotropic rot. diffusion 7−109979
1,4-di(2-(5-phenyloxazolyl)benzene), electron impact excitation, fluoresc. 7−68470
2,4-di(2-pyrenyl)pentane, diastereoisomers, conformer anal., excimer form., PMR obs. 7−129750
1-(p-(N,N-diamethylamino)phenyl)-4-(p-nitrophenyl)-1,3-butadiene, laser and gain spectra 7−109983
4,4′− diaminophenyl sulphone, intramol. charge transfer state, time-resolved fluoresc. spectra 7−129783
trans-diaminostilbene, fluoresc. rel. to cure characterisation of epoxy network 7−90262
diatomic molecule form. in electrothermal atomisers, interferences and analytic possibilities 7−93315
diatomic mols. polarisation modulated two-photon spectroscopy 7−134851
diazabenzenes, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7−82256
1,4-diazabicyclo[2.2.2]octane, Rydberg state, fluoresc. obs. 7−96778
molecular fluorescence continued
dielectric and metal film interfaces, fluoresc., fixed power dipole theory 7−99915
3,3′- diethyl-6,6′-diphenyl-9-enthyloxacarbocyanine iodine, time-resolved fluoresc. spectra, solvent depend. 7−82252
p-difluorobenzene, vibr. levels, lifetimes, SEP-SVLF spectra 7−74702
p-difluorobenzene+Ar, vibr. relax., stimulated emission pumping-single vibronic level fluoresc. investig. 7−74741
p-difluorobenzene vapour, fluoresc., quantum yield, intramol. vibr. redistrib., rot. effect 7−90260
difluorodichloromethane, vibr. energy relax., IR fluoresc. spectra anal. 7−74602
difluoromethylene, photoabsorpt. and fluoresc. cross sections meas. 7−90239
1,8-dihydroxyanthraquinone, cryst. ground state vibrs. assignment, Raman excitation profiles anal. 7−85747
4-2′-(dimethylamino)-6′-naphthoylcyclohexanecarboxylic acid, dynamic fluoresc. study 7−117009
4-(N,N-dimethylamino)benzoate, twisted intramol. charge transfer phenomenon, press. effects 7−90241
4-N,N-dimethylaminobenzonitrile, dual luminesc., quenching by H_2O 7−103558
4-N-N-dimethylaminobenzonitrile, jet-cooled, dispersed fluoresc. spectra and lifetimes 7−109980
α-(4-dimethylaminophenyl)-ω-(9-phenanthryl) alkanes, exciplex fluoresc., mag. field effects 7−90245
N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
p-N-N-dimethylnitroaniline in ethanol, excitation depend. fluoresc. to phosphoresc. ratio 7−74699
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7−78730
dinaphthylpropane, fluoresc. probe of bile salt-lecithin mixtures 7−86886
dinitrophenylpolyenes, polar fragments, selective orientational solvation effects on spectra 7−144705
diphenyl sulphide-paraterphenyl radical ion pair recomb. fluoresc. kinetics, quantum beats induction 7−100521
diphenyldecapentaene, in n-decane, single crystal, polycrystalline solutions, fluorescence decay rates, high resolution spectroscopy 7−135993
diphenyldodecahexaene in n-dodecane, single crystal, polycrystalline solutions, fluorescence decay rates, high resolution spectroscopy 7−135993
2,5-diphenylfuran molecules, gaseous phase, photophysical parameters 7−82272
2,5-diphenylfuran-alkane complexes and related cpds., fluoresc. excitation spectra 7−82247
2,5-diphenyloxazole, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
diphenylpolyene solns., fluoresc. amplification and light quenching 7−129778
diphenylpolyenes, dual fluoresc. in solns. 7−90258
dipyridotetraazapentalene, photooxidation, fluoresc. and phosphoresc. spectra 7−82268
donor-acceptor compounds, intramol. charge transfer, dielectric relax. effect 7−117064
donor-acceptor systems, electron transfer through intramol. bridges 7−74695
donor-acceptor systems, fluoresc. energy transfer, diffusion limit criteria 7−90456
dye IR lasers, synchronously pumped, pulse parameter anal. 7−130088
dye molecules, adsorbed on vesicle surface, excitation energy transfer 7−118242
dye molecules, isolated, adsorbed on organic single crysts., site-dependent fluoresc. lifetimes 7−82271
dye mols. in amorphous solids, spectral holes, elec. field effects 7−123123
dye sensitised fluoresc. label in triplet state, dynamic contacts of macromols. study appl. 7−144963
dye solution, fluoresc. profiles calc. 7−90253
dyes intercalated in DNA, steady-state fluoresc. polaris. anisotropy meas. 7−93645
effect of dephasing collisions on Raman polarisation 7−82170
egg lecithin multilayers, fluoresc. probe diffusion, depend. on mag. field 7−144985
egg-lecithin multibilayers hydration, 1,6-diphenyl-1,3,5-hexatriene probe fluoresc. depolarisation expts. 7−119740
eosin Y, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
erythrosine, adsorbed on semiconductor-molecular film insulator system, charged defects effects on mol. fluoresc. 7−77654
ethanethiol radical, laser-induced fluoresc., visible spectra anal. 7−96712
ethidium bromide, DNA intercalated, laser flash photolysis, methylviologen effects 7−133225
fatty acid fluorinated monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
fluorescein, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
fluorescein, in glassy media, fluoresc. spectrosc. 7−122596
fluorescein-mercury acetate, in glassy media, fluoresc. spectrosc. 7−122596
fluoromethane, intra- and intermol. vibr. energy flow, nonlinear vibr. relax 7−110090
fluoromethane, vibr. relax. mechanism, IR fluoresc, spectra anal. 7−74598
fluoromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7−90246
formaldehyde+H_2, rot. transitions, differential cross sections meas. 7−129851
glucagon, dynamics, fluoresc. anisotropies and lifetimes determ. 7−129767
glyoxal, long-lived fluoresc. decay components 7−109985
cis-glyoxal, selective pumping, isomerisation vibronic levels, IR fluoresc. spectra anal. 7−103489
haematoporphyrin and derivatives, laser fluorescence spectra and singlet oxygen quantum yields *(Chinese)* 7−86912
haemotoporphyrin photosensitiser bonding to normal and malignant cells, intracellular fluoresc. 7−90264
2-heteroanyloxazoles, excited state ^1H transfer with acetic acid in ethanol fluoresc. spectra 7−141587
all-trans-2,4,6,8,10,12,14-hexadecaheptaene, vibronic coupling, fluoresc. spectra 7−141617
high order autocorrelation in fluoresc. correl. spectroscopy and mol. aggregation charactn. 7−126715

molecular fluorescence continued
highly scattering media, fluoresc. transport, corrections to quantum yields determ. 7−126716
hole-burning reactions, rate const. determ., fluoresc. 7−78518
homotryptophan derivatives, fluoresc. lifetime distribs. 7−117007
hydrocarbons, radiolysis singlet and triplet yields, mag. field effects in fluoresc. 7−71508
3-hydroxyflavone, in Ar matrix, intramol. H^+ transfer, fluoresc. 7−136000
2-(2′-hydroxyphenyl)benzothiazole, nitro-derivatives, photophys., photochem., solvent effects 7−117012
hydroxypropyl cellulose, pyrene labelled, aq. soln. excimer form. 7−136110
indole, fluoresc. quenching, transient effects, freq. domain fluorometric meas. 7−109992
indole, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7−103524
indoles, ^1L_a state, fluoresc. and electronic spectra 7−82269
indolinospironaphthoxazine derivatives, photochromic effect, time-resolved spectra 7−129784
inert gas hydride excimers, binding energies, bound-free UV fluoresc. spectra anal. 7−96723
instantaneous line-profile meas. in fluorescence spectroscopy, using rapid-frequency-scan laser 7−96596
intramolecular mixed excimer form., time depend. fluoresc., kinetic and thermodynamic studies 7−122601
iodotrifluoromethane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
isobacteriochlorins, dual fluoresc., rel. to tautomerism 7−109989
isopropylthio radicals, photodissociation, fluorescence, radiative lifetime, vibrational levels, stretching modes 7−135988
3-keto-steroids, aq. soln., protein binding, mol. fluoresc. study 7−78748
large molecules, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82259
lifetime distribs. resolvability using phase fluorometry 7−93632
light harvesting chlorophyll complex, picosec. dynamics, detergent effects 7−71681
lipid fluorophores of the crystalline lens with cataract 7−144967
liquid fluorescence, rotational diffusion effects *(Russian)* 7−122607
liquids, fluoresc. quenching, conc. gradient model 7−82248
macromolecules, fluorescence energy transfer, donor-to-acceptor distance distrib., freq.-domain fluoresc. spectra 7−139204
membrane lateral diffusion coeff. estimation from steady-state fluoresc. quenching 7−93662
merocyanine dye in polyvinyl alcohol matrix, large edge excitation fluoresc. red shift 7−68396
metallochlorins, fine struct. fluoresc, spectra 7−117018
metastable atom reactions, product rotational alignment 7−141489
methane, in nonpremixed flames, Raman meas., fluoresc. interference 7−96772
methane, nonpremixed flames, spontaneous Raman scatt. study 7−86627
methanethiol, photoexcitation, photofragment fluorescence, excitation spectra, Rydberg series, bands 7−144731
methanol+N_2(Kr)(Xe)(Ar), electronic-to-electronic energy transfer 7−119504
methoxy radical+CO reaction rate const., temp. depend., fluoresc. spectra meas. 7−138966
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7−103520
methyl groups, vibr. deactivation, laser photolysis and IR fluoresc. 7−110089
1-methyl indole, in polar and nonpolar solvents, fluoresc. decays 7−117010
methyl trifluorosilane, VUV and fluoresc. excitation spectra 7−109912
3-methyl-4-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
9−methyladenine, aq. soln., excimers, time-resolved fluoresc. 7−129765
methylamine+N_2(Kr)(Xe)(Ar), electronic-to-electronic energy transfer 7−119504
9-methylanthracene, fluoresc. quenching by cyclooctatetraene in aq. micellar solvent 7−90261
methylindoles, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7−103524
methylthio radical, laser-induced fluoresc., vibr. relax. and electronic quenching 7−68391
molecular beam laser saturation spectroscopy, sub-Doppler technique 7−96788
molecular rotation alignment parameters, laser-induced fluoresc., saturation effects 7−96761
molecular transition, four-wave light scatt., non-perturbative theory 7−117035
monomer-excimer kinetics, transient effects, num. anal. 7−129774
multiatomic molecules, vibr. states calcs. using integral intensities 7−90094
multiplexed single-photon instrument for routine measurement of time-resolved fluorescence anisotropy 7−82393
myoglobin, Aplysia limacina, tryptophans, fluoresc. decay, energy transfer 7−93634
N_2 active, yellow glow, temperature dependence, Thrush mechanism, vibrational levels, emission, empirical equations 7−141619
naphthalene-benzophenone system, nonradiative triplet-doublet energy transfer meas. 7−109913
naphthalenes, substituted, radiationless processes, vibronic level fluoresc. lifetimes 7−129769
α-naphthylphenyloxazole, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
nitromethane, laser-induced photolysis, photofragments fluoresc. spectra anal. 7−129727
1-nitropyrene, fluoresc. background in Raman spectroscopy, solvent effects 7−103506
nonafluoro-4-iodobutane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
Nystatin antibiotic in phospholipid bilayer membranes, fluoresc. props. 7−100809
optical Ramsey fringes, pulse train single-photon induced 7−122437
organic dyes, energy transfer in methanol, fluoresc. quenching 7−96785
organic molecules, vectorial excitation energy transfer involving inhomogeneously broadened electronic levels 7−116944
organic molecules in solution, Jablonski diagram and electronic energy relax. 7−109974
molecular fluorescence continued
oxazine 17, fluoresc. in H^+ donor and aprotic solvents, steady-state and picosec. excitation 7−117017
oxazine 1 perchlorate, absolute fluoresc. quantum yield meas. with photoacoustic spectroscopy *(Chinese)* 7−103559
para-terphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
pentacene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7−96762
perylene-d_{12}, jet-cooled, fluoresc. excitation and dispersed emission spectra 7−103556
phenanthrene fluorescence quenching by KI in methanol-ethanol solns. 7−122600
phenanthrene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
phenmedipham, fluoresc. and phosphoresc., quantum yields *(French)* 7−82277
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
phospholipid monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
photofragments, light emission, classical model, quantum results interpretation 7−129780
phthalimides, intramolecular orientation, transition moment, fluoresc. 7−82273
picosecond phase shifted laser multiple-pulse sequences, spectroscopic demonstration 7−90728
pinacyanol, solns., intramolecular and orientational motion, fluoresc. study 7−74697
PMMA, intramol. charge transfer fluoresc. as mobility probe 7−90263
polar mol., solvation dynamics, fluoresc. line shapes probe 7−82251
poly(2-hydroxyethyl methacrylate) in mixed water-alcohol solvents, conformational props. 7−74795
polyatomic molecule in laser field, IR fluoresc. and intramolecular dynamics 7−135992
polydiacetylene oligomer, electronic struct., mol. fluoresc. and UV spectra anal. 7−90185
polyethylene, stretched, solvent for polarised optical spectrosc. 7−108668
cis-1,4-polyisoprene, deformed networks, orientation of dissolved rigid rods 7−91478
polymethine dyes, S_1-state deactivation, time resolved fluoresc. and absorpt. investig. 7−103572
polymethine dyes, struct. parameters, fluoresc. lifetimes and quantum yields 7−90266
polystyrene-polymaleic anhydride copolymer, coil-globule transition, self-quenching rates 7−96895
porphyrin-quinone mols. as photosynthesis model, fluoresc. lifetimes rel. to effects of exothermicity on electron transfer rate 7−106980
porphyrins, pyromellitimide-bridged, photoinduced electron transfer, fluorescence techniques, charge separation, inverted regions, dielectric relaxation recombination rates 7−141674
positron reson. annihilation on mols., mechanism investig. 7−82375
PPDPC-DPPC Langmuir-Blodgett film, excimer form., UV fluoresc. spectra anal. 7−100824
probe molecules in lipid multibilayers, mol. reorientational dynamics and orientational order correl. 7−90249
PRODAN, intramolecular reaction, time resolved spectroscopy 7−122594
propyltoluenes, supersonic jet, dispersed emission and TOFMS 7−129771
protein, microchondrial actin like, tryptophan fluoresc. spectra 7−126712
protein fluorescence decay, interpretation using continuous lifetime distribs. 7−100807
pyrazine, $^1B_{3u}$ state, fluoresc. quantum yield 7−90251
pyrazine, jet-cooled, dual fluoresc., rot. effects 7−109994
pyrazine, jet-cooled, two-colour fluoresc., multiphoton ionisation spectra 7−90244
pyrene, dimeric adsorbed on SiO_2 gel, fluoresc. spectra obs. 7−109984
pyrene, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
pyrene, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrene, polarised fluoresc. spectrum in stretched polyethylene matrix 7−108668
pyrene, submonolayer on Si(111) electronic energy transfer, fluoresc. 7−105247
pyrene+cyclodextrins assoc. consts. meas., vibronic states, UV fluoresc. spectra anal. 7−96721
pyrene complexes, complexation shift in $S_0 \rightarrow S_1$ spectrum, fluoresc. spectra 7−82246
pyrene methyl cholesterol adduct, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrene-N,N-dimethylaniline exciplex, fluoresc. spectra, thermochromic shifts 7−136012
pyrene-pyromellitic anhydride solns., charge recomb. dynamics, picosec laser spectrosc. obs. 7−68291
pyrenes, 4, 9−disubstituted, liq. cryst. hosts, fluoresc. polarisation 7−129763
ω-(1-pyrenyl)-α-N,N-dimethylaminoalkanes, intramol. exciplex form. photophys. 7−74480
pyridinium cations, N-naphthyl, struct. relax. effect on fluoresc. 7−138494
pyrimidine, supersonic jet, mag. field effects on fluoresc. polarisation 7−90243
pyrimidonecarbocyanine dye, absorpt. and emission behaviour, conc. depend. 7−109978
quantum beats obs. 7−135991
Raman background nature *(German)* 7−68316
Raman measurements, fluorescence effects 7−103507
reaction products, laser induced fluoresc. detect., coherent saturation effects 7−96783
relativistic electron scatt. from excited quantum system, bremsstrahlung 7−68465
rhodamine 6G, ethanol solution, dynamic Stokes shift, fluoresc. spectrum, stochastic behaviour 7−82249
rhodamine 6G, glycerol soln., fluoresc. lifetime and polaris. charact., relax. effects 7−74706
rhodamine 6G adsorbed layer, Ag colloids, reason. SERS and fluoresc. spectra coverage depend. 7−74629
rhodamine 6G solns., energy accumulation, luminesc. study 7−129777
rhodamine 6G solns., sub-ns fluoresc. lifetimes eval. by phase plane method *(Chinese)* 7−141627

molecular fluorescence continued
rhodamine B and rhodamine 6G, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
riboflavin-indole complexes, mol. associations, spectroscopic study 7−86609
ribonuclease T1, pH time-resolved fluoresc., pH and substrate analogue binding study 7−100806
ribonuclease T_1, freq. domain obs. of fluoresc. lifetime 7−139203
salicylideneaniline, nitro-derivatives, photophys., photochem., solvent effects 7−117012
saturation, laser power fluctuations influence 7−103571
Scheibe-aggregates of pseudoisocyanine in soln. and molecular monolayers, fluoresc. lifetimes 7−117004
selenoformaldehyde, electronic transitions, vibr. anal. 7−109853
self-quenching by statistical traps, Monte Carlo simulations 7−82258
solvent mixture of different polarities, dielectric enrichment, exciplexes, mol. fluoresc. anal. 7−68389
spectral redistrib., light-induced, spontaneous emission 7−74707
t-stilbene, intramol. vibr. redistrib., time-resolved fluoresc. spectra, photochem. timing meas. 7−117055
trans-stilbene, jet-cooled, vibr., isotope shift, fluoresc. excitation 7−129764
trans-stilbene, low-freq. modes assignment, fluoresc. spectra 7−96779
t-stilbene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
strontium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
synthetic polymers in soln. excimer form., time-resolved fluoresc. 7−90455
p-terphenyl, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
tetra-n-butylammonium $UO_2(NO_3)_3$, in PMMA, site-selected fluoresc. 7−103566
tetracene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
tetracene and its van der Waals complexes with inert gas atoms, rot. resolved laser spectroscopy 7−129733
tetradesmethyl-β-carotene, reson. Raman and fluoresc. lineshapes, vibr. relax., solvation dynamics 7−74615
tetraphenylporphyrin-polypeptide complexes, model photosynthetic system, fluoresc. props. 7−129766
tetrazine-Ar complex, supersonic free jet, reson. and dispersed fluoresc. 7−82262
s-tetrazine-HCl complexes, fluoresc. and Vis-UV spectra, struct. determ. 7−96777
theophylline in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7−85831
thermometers, fluorescence using intramolecular exciplexes 7−115957
thiophenes, polycyclic aromatic, mol. struct., phosphoresc. study 7−122608
thymine, aq. soln., polarised fluoresc. excitation spectra 7−103568
toluene, supersonic jet, dispersed emission and TOFMS 7−129770
o-toluidine, electronically excited state, methyl group internal rotation 7−109993
triatomic molecules, autoionis. resons. 7−90288
trifluoromethyl hypofluorite-H_2 mixture, multiphoton dissoc., IR fluoresc. 7−141640
trifluoronitrosomethane, jet-cooled, fluoresc. excitation spectrum, visible transition 7−96768
3,5,7-trimethoxyflavone, absorpt. and fluoresc. spectra, acidity depend. 7−82243
3,5,7-trimethoxyflavone, fluoresc. quenching by halide and pseudohalide ions 7−122592
tris(tetrabutyl ammonium) europium hexathiocyanate, IR, Raman and fluoresc. spectra 7−116969
tryptophan and its derivatives in soln., nonexponential fluoresc. decay, conformational states, lifetimes 7−90259
tryptophan in apocytochrome c, fluoresc. quenching dynamics, rot. isomerism study 7−78745
tryptophan residue, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
tryptophan residue proteins, fluoresc. lifetime distribs. rel. to conform. interconversion 7−93633
unimolecular excitation, coherent, bistability, hysteresis and transitions to chaos 7−136415
vibronic coupling, absorption and emission spectra interpretation 7−135994
vitamin B_1, fluorescent derivatives, photophys. and photochem. props. 7−100813
xanthene dyes, photochem., anionic micelle characterisation 7−119544
xanthione-d_0(-d_4)(-d_6)(-d_8), radiationless decay, D isotope effect 7−135986
xanthylium salt, broadband tuned CW dye laser emission, fluoresc. and absorpt. spectra 7−90599
xylenes, supersonic jet, dispersed emission and TOFMS 7−129770
xylenols, fluorescence quenching of excited states due to H bonding with triethylamine 7−82266
AlCl, $A'\pi$ state, radiative lifetime determ. 7−109981
BaH, H $^2\Delta$ state, Fourier transform fluoresc. spectra 7−103567
Bi_2, A→X fluoresc. system, Franck-Condon principle study 7−108101
Br_2, laser-excited, collision-induced dissoc., rate const. meas. 7−103598
Br_2 matrix isolated, time resolved fluoresc. spectra 7−82245
BrNO+Br 7−90345
C_2, energy states population distrib., reson. fluoresc. theory anal. 7−122325
CH, $A^2\Delta$ state, collisionally induced rot. energy transfer 7−96829
CH, collisional quenching cross sections meas. at 1300 K, meas. using pyrolysis/laser fluoresc. technique 7−74694
CH radical, Ar+methane reaction prod., vibr. energy, fluoresc. spectra anal. 7−138967
CH radical, $C^2\Sigma^+-X^2\Pi$ system, transition probabilities, laser induced fluoresc. 7−96781
CO imaging in combustion gases by laser induced fluoresc. 7−139007
CO, supersonic jet, multiphoton absorpt. laser-induced fluoresc. 7−117006
CO_2, collisional vibr. relax. rates 7−90350
CS_2, autoionisation, fluoresc. polarisation study 7−82293
CS_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
CS_2, V^1B_2 state, fluoresc. and Zeeman quantum beat spectra 7−90240
CS_2, V^1B_2 state, fluoresc., mag. field effects 7−96766
CS_2, vibrational level relax., UV fluoresc. spectra anal. 7−96722
Ca_2, matrix isolation Raman and fluoresc. spectra 7−96906
CdI_2, photodissoc. 7−110048
Co far-UV fluorescence in α Boo atm. 7−88397
CoO, $a^4\Delta_i$ ground state, red system, laser-induced fluoresc. 7−96774
Cs+H_2, laser excitation and laser-induced fluoresc. detection 7−86580
Cs_2, optically excited levels, mag. field effects, reson. fluoresc. study 7−129772
Cu, corrosion, inhibiting action of benzotriazole in deaerated H_2So_4 containing ferric ions 7−93151
Eu^{3+}, fluoresc. quenching in alcohols and water-alcohol mixtures 7−117016
EuF, absorption, emission, lases fluorescence spectra 7−129726
F+I_2, product state distribution 7−144708
F+I_2 reactive collisions, laser induced IF fluoresc. 7−93274
$Fe(CO)_5$, photolysis, mol. beam study 7−68439
Ga mol. beam flux for GaAs MBE, optical reson. fluoresc. meas. 7−71024
GdO, absorption, emission, lases fluorescence spectra 7−129726
GeF_4, VUV and fluoresc. excitation spectra 7−109912
H_2 photoabsorption, photodissoc. and fluoresc. 7−90299
H^++hydrocarbons (CO) (CO_2), C K-shell and Auger electron prod. cross sections 7−110096
H_2 fluorescence in NGC 2023 refl. nebula 7−140242
H_2, fluorescent emission from NGC 2023 refl. nebula 7−140241
H_2, interstellar, contrib. to UV continuum of Herbig-Haro objects (HH1 and HH2) 7−128013
H_2, selectively excited rot.-vibrs. states, fluoresc. dissoc. 7−116939
H_2 sensitive detection by two-photon excited laser-induced fluoresc. 7−103684
HCO radical, ground and excited states, laser induced fluoresc. and multiphoton ionis. spectra 7−129781
HCl, ion-pair and Rydberg states, multiphoton ionis. laser spectrum 7−90302
HD+O, tunneling, intramol. kinetic isotope effect, laser-induced fluoresc. meas. 7−86575
HF+H(D), exchange and translational-vibr. energy transfer reaction, IR fluoresc. spectra anal. 7−103498
H_2O, photodissoc., photofragment laser-induced fluoresc. study 7−68334
H_2O^+, fluoresc. efficiency factors rel. to H_2O^+ abundance in Comet Kohoutek (1973 XII) 7−120264
H_2O_2, photodissociation, ps photofragment spectroscopy study 7−113966
H_2O_2 photolysis, OH radicals rot. distrib., laser-induced fluoresc. study 7−68333
H_2O_2+N_2(Kr)(Xe)(Ar), electronic-to-electronic energy transfer 7−119504
H_2S and D_2S, photoabsorpt. and fluoresc. spectroscopy 7−82253
Hg-methane(-ethane)(-N_2)(-CO) complexes, jet-cooled complexes, electronic spectra and intramultiplet relax. 7−90357
Hg-protein-ligand complexes, ^{81}Br NMR spectra study 7−141728
Hg_2, H, I and J states, laser-induced fluoresc., relative intensities meas. 7−103570
Hg_2, vibr. band, laser induced fluoresc. 7−103565
HgBr+He(Ne)(Ar)(Xe)(N_2), V-T relax., fluoresc. obs. 7−103629
I_2, fluoresc. intensities, lifetimes, electronic transition moments 7−96784
I_2, ion-pair states, VUV fluoresc. spectra anal. 7−135963
ICN, dissociation, transition states, real-time fs probing spectroscopy 7−135960
ICN, photodissoc., laser-induced fluoresc. probed 7−110043
ICN, photodissoc. prod. of CN, rot. distrib. and fluoresc. polarisation 7−129806
IF, low-lying electronic states, matrix isolated, fluoresc. study 7−141616
IF, reaction product, vibr. and rot. excitation spectra 7−90388
I_2M (M=H_2, N_2, O_2, I_2) clusters, photodissoc., solvent caging, fluoresc. spectra 7−136021
I_2M(M=Ne, Ar, Kr, Xe), van der Waals clusters, photodissoc., product vibr. state distribs. 7−96802
InBr, mol. vibr. struct., absorpt. and emission spectra 7−68339
K_2, excited, fluoresc. spectra obs. 7−109988
K_2+K+inert gas atoms, deactivation total cross section determ. 7−82328
KH, Franck-Condon factors, laser-induced fluoresc. intensity 7−96786
Kr_2F excimer, photoabsorption cross-section at 248 nm 7−109921
Kr_2F^* trimer, excimer laser, absorpt. at 248 nm 7−110323
LiF, IR multiphoton excitation dynamics study 7−74597
LiH, isotopic species, vibr. levels lifetimes, UV fluoresc. spectra 7−141591
methyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
Mo_2, matrix isolation Raman and fluoresc. spectra 7−96906
N_2, quenching rate const. by H 7−117005
N_2, two-colour double resonant multiphoton ionis., and laser-induced fluoresc. 7−110023
N_2+methanol(methylamine)(H_2O_2)(N_2H_4), electronic-to-electronic energy transfer 7−119504
NCNO, jet-cooled, radiative and nonradiative processes 7−135985
NH, A $^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
NH, prod. by NH_3 photodissociative excitation, fluoresc. yield meas. 7−109987
NH_3, reson. hyper-Raman scatt. spectra 7−109906
N_2H_4+N_2(Kr)(Ar)(Xe), electronic-to-electronic energy transfer 7−119504
NO, $B^2\Pi$ and $C^2\Pi$ states, rot. levels, fluoresc. lifetimes 7−109982
NO, chemisorbed on Ni (100), UV laser-stimulated reson. desorpt., fluoresc. 7−91965
NO, collisional quenching rate consts., fluoresc. anal. 7−96771
NO, self-alignment by laser beam irrad. 7−68399
NO_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
NS+He(H_2)(N_2)(O_2)(SF_6)(N_2O)(CO_2)(NH_3)(methane), $B^2\Pi$ state, collisional quenching and energy transfer rate const. meas. 7−103630
Na+Na→Na_2, laser-induced photoassoc. theory 7−110081
Na_2+Na(Kr), collision-induced radiationless transitions, fluoresc. spectra anal. 7−103637
NaK, $C(3)^1\Sigma^+$ state, laser-induced fluoresc. and two-photon ionis. spectroscopy 7−129801
Nd^{3+} complexes, acetate complexes, excited state lifetimes, fluoresc. study 7−68386
$NeCl_2$, van der Waals mol., laser-induced fluoresc. excitation spectra 7−96776
$Ni(CO)_4$, photolytic reaction, linear combination of GTO-Xα method 7−93354
O+H_2→OH+H, reactive collision, crossed beam expt. 7−144710
O_2 concentration meas. using fluoresc. quenching, biomedical sensor appl. 7−78579
O_2, in flames, vibr. excited, laser induced fluoresc. 7−82261

molecular fluorescence continued
O_2 liquid, vibrationally and electronically excited, nonlinear and luminesc. spectroscopy 7−141580
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
O_2, nightglow triplet emissions, vibr. levels attitude distribution 7−79732
O_2, singlet, triplet-sensitized form., time-resolved luminesc. meas. 7−109986
O_2^+, autoionising Rydberg states, polarised fluoresc. spectroscopy 7−141615
O_2+NO charge transfer reaction $O_2(b^1\Sigma_g^+)$ vibr. distrib., role in aurora and nightglow 7−79735
OCS^+, rot. distrib. meas. 7−113879
OD radicals, photodissoc. product, laser induced fluoresc. 7−132956
OH fragment, rot. and translational energies, laser-induced fluoresc. 7−110119
OH in atmosphere, press. depend. of O_3 interference in laser fluoresc. meas. 7−115004
OH radical, prod. by nitroalkane UV photolysis, fluoresc. detect. 7−86576
OH radicals, in flames, A^2Z^+-$X^2\Pi_i$ transition probabilities, laser-induced fluoresc. 7−122597
OH reaction product, laser-induced fluoresc. 7−93289
OH+H_2, inelastic scatt. cross section rot. and fine struct. *(German)* 7−74737
OH+methyl mercaptan-d_0(-d_3), reaction kinetics 7−119519
Pb_2, matrix isolation Raman and fluoresc. spectra 7−96906
PbI, (A-X), laser-induced fluoresc., PbI_2 dissoc. thermodynamics 7−135998
PbO, matrix isolation Raman and fluoresc. spectra 7−96906
PbS, B1-$X^1\Sigma^+$ transition, laser excitation spectroscopy, fluoresc. obs., hyperfine splitting 7−122603
phenanthrene in low temp. alcohol glasses, quenching of fluorescence and phosphorescence 7−99912
Rb_2, $2^1\Sigma_g^+$ electronic state, laser-induced fluoresc. Fourier transform IR spectrosc. 7−96782
SO_2, electron impact, UV and visible fluoresc. 7−129885
SO_2, electron impact dissoc. excitation, fluoresc. 7−110121
SO_2, electron-impact excitation, mol. emission determ. 7−82377
SO_2, fluoresc. from vac. UV dissoc. excitation of SO_3 7−109991
SO_3, absorpt. and fluoresc. spectra, vac. UV dissoc. excitation 7−109991
SeS mols. in Ar matrix, fluoresc. excitation spectra *(Russian)* 7−68332
SiCl, rotational structure, isotope shifts, UV fluoresc. spectra anal. 7−96720
SiH_2, rovibronic levels, lifetimes, visible fluoresc. spectra anal. 7−103519
SiH_2, rovibronic levels, quantal fluctuations in fluoresc. lifetimes 7−103564
SiO, matrix isolated in Ar, valence states, fluoresc. emission spectra 7−82275
^{130}Te, spectral intensities of laser-induced fluoresc. 7−122604
UO, absorption, emission, lases fluorescence spectra 7−129726
UO_2^+ complexes, IR laser-induced decomp., double reson. results 7−68373
XeCl*, spontaneous luminesc. spectrum 300 to 311 nm 7−122928
Xe_2* excimer fluorescence from charged particle excitation, sensitivity anal. 7−69306
Zn octaethylchlorine-d_0(−d_2), fine struct. fluoresc. *(Japanese)* 7−129786

molecular force constants
see also Coriolis force
acetaldehydes, nonbonded pots., mol. mechanics calcs. 7−68425
acetic acid-d_0(d_1)(d_3)(d_4), force consts., vibr., normal coordinate anal. 7−141557
acetones, nonbonded pots., mol. mechanics calcs. 7−68425
acrylic acid, rot. isomerism, HF 4-21 basis set calcs. 7−81934
alkanethiols, conform. anal., mol. mech. force field appl. 7−109862
anisoles, in-plane vibrs., valence force field, normal coordinate anal., pot. energy distrib. 7−109857
2-azabutadiene, IR spectrum, force consts., ab initio MO calcs. 7−116961
bacteriorhodopsin, reson. Raman spectra, vibr. anal. 7−109907
benzoyl fluoride, barrier to internal rotation, force field calculations, thermodynamic functions, vibrational spectra 7−122736
biological molecules, conf., Marineland, FL, USA (Mar. 1986) 7−72693
bromobutenes, conformational struct., torsional force consts. calcs. 7−122489
N-bromodifluoromethylenimine, stretching valence force consts. and coord. anal., GF and CNDO/2 calcs. 7−109771
bromopropenes, conformational struct., torsional force consts. calcs. 7−122489
butatriene, force field study by kinetic consts. method 7−68278
butenes, conformational energies and structs., mol. mech. calcs. 7−110059
chain molecules, pressure equation 7−110058
3-chlorocyclopropene and its deuterated modifications, IR and Raman spectra, vibr. anal. 7−96682
N-chlorodifluoromethylenimine, stretching valence force consts. and coord. anal., GF and CNDO/2 calcs. 7−109771
chloroethylenes, π excited state struct. reson. Raman spectra anal. 7−82187
cubane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
cyclobutane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
cyclohexane−d_0(d_{12}), harmonic force field Raman scatt. intensity 7−122547
cyclopropane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
cyclopropenes, conformational energies and structs., mol. mech. calcs. 7−110059
cyclopropylamine, IR spectra, conformation, force const. 7−82127
cyclopropylisothiocyanate, gas phase electron diffr., mol. struct., ab initio HF calcs. 7−82356
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7−125725
diatomic centrifugal distortion consts., direct computation 7−81933
diazirine, isotope effects, mol. consts., vibr. anal. 7−68273
diazirine molecule, quadratic force field calc. for vibrs. 7−81947
dicyanoacetylene, vibr. IR and Raman spectra 7−82128
diethylene glycol dimethyl ether-d_{14}, liq. and solid states, Raman spectra 7−68313
9,10-dihydroanthracenes, conformational anal., mol. mechanics calcs. and ^{13}C NMR 7−68347
N,N-dimethylformamide, internal rot. barriers, dynamic NMR and ab initio SCF MO method comparison 7−109722
molecular force constants continued
dimethylnitramine, CH stretching modes, vibr. relax. 7−90087
4,5-dimethylphenanthrene, mol. geometry and conform. stability, buttressing effect 7−90450
dinitrobenzenes, (o−, m− and p−), vibr. spectra and normal coord. anal. 7−74642
1,4-dioxadiene, MINDO/3 vibr. obs., canonic quadratic force field calcs. 7−103460
ethane, CH stretch-bend force consts., isotope shifts, Raman spectra anal. 7−103508
ethyldifluorophosphine-BH_3(BD_3) 7−68312
ethylene glycol dimethyl ether-d_{10}, liq. and solid states, Raman spectra 7−68313
3-fluorocyclopropene-d_0(-d_3), vibr. spectra 7−96690
fluoroform-d_0(d_1), mol. consts., normal coordinate anal. 7−68274
fluoromethane-d_2(-d_3) isolated CH chromophore, spectra calcs. 7−135919
formaldehyde-d_2, spectroscopic consts. determ., FTIR spectra 7−82102
formamide monomer- and dimer- do(d_1)(d_2)(d_4), mol. force consts., Fermi reson., intra-intermol. coupling ab initio SCF calcs. 7−74407
formic acid dimer- do(d_1)(d_2)(d_4), mol. force consts., Fermi reson., intra-intermol. coupling, ab initio SCF calcs. 7−74407
fractional bonds: relations among their lengths, strengths, and stretching force constants 7−109687
fragmentary method determ. 7−74563
glucose, force constant calculations, CNDO/force program 7−141463
guanine, and related mols., Ar matrix isolated, IR spectra 7−96671
halogen substituted acetaldehydes, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogen substituted ketones, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogenocyanoacetylene, pot. and mol. consts. eval., vibr. anal. 7−103463
harmonic potential fn., isotopic centrifugal distortion consts. based calcs. 7−117038
harmonic vibrations, force consts. calcs., rectilinear internal valence coords. 7−122490
hexabenzocoronenes, mol. vibr., force field approx. 7−74560
1,3,5-hexatriene, scaled quantum mechanical force field, vibr. anal., ab initio HF calcs. 7−96534
hydrocarbons, polycyclic aromatic, peri effect in carcinogenesis, empirical force field calcs. 7−100798
hydrocarbons, strained, vibr. force fields, ab initio calcs. 7−81961
hypoxanthine, and related mols., Ar matrix isolated, IR spectra 7−96671
imidazoline-2-one, Raman and IR spectra, vibr. anal., force consts. 7−96707
imidazoline-2-thione, Raman and IR spectra, vibr. anal., force consts. 7−96707
imines, model cpd. for force field pot. energy function optimisation 7−103615
isotopic molecules, vibr. Raman optical activity, freq.-weighted sum rule 7−135944
lattice dynamics of molecular crystals 7−84146
$M(XY)_6$ complexes, vibr. anal. and mean bond displacements 7−103467
methane, protonated, struct., vibr., ab initio MO calcs. 7−96558
methyl chloride-Ar, rot. spectra using pulsed nozzle Fourier transform microwave spectrometer, internal rot. 7−90102
methyl cyanide, centrifugal distortion consts. 7−68187
methyl fluoride, equilibr. struct. rot. struct., electron diffr. study 7−68456
methyl isocyanide, centrifugal distortion consts. 7−68187
methylamine cpds., IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
methylene chloride, harmonic force field, struct., rot. consts. 7−109861
molecular properties, ab initio determ., book 7−134384
molecular system MOL_5^{2-} where M=Re, Tc and L=Cl, Br, modified Urey-Bradley and valence force fields 7−109887
nuclei acid bases, out-of-plane vibr. modes 7−119721
nucleic acid bases, out-of-plane vibr. modes 7−119720
octahedral molecules, constrained force consts. 7−81946
organic azides, mol. struct., conform., vibr., ab initio HF SCF calcs. 7−81967
oximes, model cpd. for force field pot. energy function optimisation 7−103615
polyatomic molecules, normal vibr. freqs., MINDO/3 calcs. 7−109867
polyatomic mols., XYZ_2 type, force fields, electro-optical parameters 7−68376
polyatomic mols. rot.-vibr. coupling parametric method 7−68276
polyenes, methylated, vibr. freqs., a priori calcs. 7−74565
polypeptides, struct., mol. force field appl., Raman spectra anal. 7−68318
propane-d_0(d_7)(d_8), harmonic force field, ab initio HF theory 7−141471
propellanes, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
propyne, vibr. anal., normal coord. anal. 7−82062
proteins, tryptophan and tyrosine side chains, vibr. modes, IR Raman spectra, normal coordinate calcs. 7−68497
purines, out-of-plane vibr. modes 7−119721
4H-pyran-4-one, vibr., force fields, CNDO/2 and MINDO/3 calcs. 7−109767
pyridine, gas phase, mol. struct., electron diffr., IR and microwave spectra 7−68457
pyrimidines, out-of-plane vibr. modes 7−119720
selenophene, out-of-plane motions, force field calcs. 7−116931
trans-stilbene, vibr. freqs., transferable valence force field calcs. 7−74564
tellurophene, out-of-plane motions, force field calcs. 7−116931
1,1,2,2-tetrachloroethyl alkyl ethers, vibr. spectra and confirmations 7−74568
tetrahaloethylenes, force consts., mean amplitude of vibr., Coriolis coupling and centrifugal distortion consts. eval. 7−103465
3,4,5,6-tetramethylphenanthrene, mol. geometry and conform. stability, buttressing effect 7−90450
s-tetrazine molecule, out-of-plane vibrations, general quadratic force field 7−122734
thioethers, conform. anal., mol. mech. force field appl. 7−109862
thioformaldehyde, vibrs., Green's fn. anal. 7−74551
tolane, vibr. freqs., transferable valence force field calcs. 7−74564
triatomic mols., kinetic anharmonicity electron diffr. and spectroscopy anal. 7−103661
trifluoroethylidynesulphur trifluoride, gas phase struct., nonlinear coord. 7−141571
trifluorotrifluoromethylsilane bond lengths, fluorination effects 7−103660
XY_3 mol., force fields, parametric representation 7−109856
XY_5 trigonal-bipyramid mols. force consts., effective nucl. charge model 7−96820

molecular force constants continued
Ar_2-HCl trimer, struct., rot., Fourier transform microwave spectra 7−96647
AsD_3, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
AsH_3, potential constant calcs., parametric representation method 7−109864
AsHD, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
AsH_2D, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
BrH-NH_3 IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
CO_2, molecular crystals, Fermi resonance interaction, temp., press. and matrix material influence 7−82064
CS_2, molecular crystals, Fermi resonance interaction, temp., press. and matrix material influence 7−82064
C−N bonds, force consts. and bond lengths 7−96579
$CaCl_2$, force consts. determ. 7−68283
CaI_2, force consts. determ. 7−68283
ClH-NH_3, IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
ClF_k, geometrical and electronic struct., ab initio calcs. 7−81957
D_2SO_3, mol. const. vibr. anal. 7−68277
Fe complexes, N-substituted hydrazine carboxylic acids, spectral and synthetic study 7−70756
$GeH_3CN(GeD_3CN)$, centrifugal distortion consts. 7−68187
HCN-BM_3, M=F, Cl, C−N bond stretch force consts., MNDO calcs. 7−96546
HN_3, equilib. geometry, ab initio calcs. 7−116835
H_2O, HF eqn. soln. by pseudospectral method 7−81925
H_2O, vibr.-rot. energy levels, force consts. and mol. geometry calc. 7−90089
H_2SO_3, mol. const. vibr. anal. 7−68277
$H_2Sb_4O_{11}.3H_2O$, motions, 4-163 K, wide-line PMR spectra 7−112979
$KY(MoO_4)_2$, IR and Raman spectra, normal coordinate anal., pot. energy distrib. 7−109890
Li_6 clusters, stability, coupled cluster method, HF and correlation energy calcs. 7−116867
Mn_2O_7, force consts. and thermodynamic fns. calc. *(German)* 7−74561
N_2F_2, mol. consts. calc. by force field study 7−103464
$(NH_3)_2$ vibr. force field, IR intensities ab initio SCF calcs. 7−81959
NH_4^+, stretching pot. and equilib. geometry, ab initio calcs. 7−116835
N_2H_2, ground state pot. energy surface, MC SCF wave fn. calc. 7−109819
N_2H_2-$H_0(d_2)$, mol. consts. calc. by force field study 7−103464
$N_2O_2^{2-}$, mol. consts. calc. by force field study 7−103464
$^{14,15}N_2O_4$, mol. consts. determ., normal coord. anal. 7−103466
$Ni(PCl_3)_4$, force const. calcs. 7−122488
OCS-HCN dimer, microwave spectra, geometry and intermol. force const. 7−109880
P_2Cl_4, kinetic, pot., Coriolis coupling and centrifugal distortion consts. 7−68186
PH_3, potential constant calcs., parametric representation method 7−109864
P_2I_4, kinetic, pot., Coriolis coupling and centrifugal distortion consts. 7−68186
Pb halides, struct. and vibr. props. determ. by pseudo-pot. HF method 7−116843
SF_5Br, gas phase mol. struct., electron diffr.-microwave study 7−129697
SO_3, vibr. assignment, force const. calc. 7−116935
SbH_3, potential constant calcs., parametric representation method 7−109864
SeO_3, vibr. assignment, force const. calc. 7−116935
$SrCl_2$, force consts. determ. 7−68283
SrI_2, force consts. determ. 7−68283
TlX, X=H, H^+, H_3, props. , relativistic and correlation effects, pseudo-pot. calcs. 7−122383
UO_2 complexes with N-thiosemicarbazide, struct., composition, force consts., spectral and thermal study 7−138442
ZrH_2-$d_0(d_1)$, freq. spectra and force consts. determ. 7−96885

molecular force fields *see molecular force constants*

molecular hyperfine structure
azanaphthalenes, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
benzyl radicals, captodative substituent effects, stabilisation, spin delocalisation 7−109960
bicyclooctene, plastic phase, muon probe investig. 7−85508
bis(phenylmethylenyl)[2.2]paracyclophanes, isomeric, spin states 7−103544
3-carbamoyl-2,2,5,5-tetramethylpyrroline-1-oxyl, radicals, ESR spectra 7−74687
chloroacetonitrile, isotopic species, microwave rot. spectra, N hyperfine struct. 7−96653
chloroacetylene, C-H stretching, hyperfine props., RF spectra 7−129696
dialkyl peroxides, gas phase thermolysis, trapped radicals, ESR study 7−74709
diarylphosphonyl radical, ESR spectrum, ^{17}O isotropic hyperfine coupling const. 7−90273
3,4-dimethylenefuran, and rel. diradicals, singlet-triplet energy separation ab initio calcs. 7−68192
1,2-dimethylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
electronic and spin props., orbital relax. effects, ab initio coupled cluster method calcs. 7−116825
ethyl radical, muonated, level-crossing resonance, residual isotope effect 7−136095
ethyl radicals, fluorinated, struct., conform. anal., ab initio SCF MO study 7−81952
ethyl radicals, hyperfine coupling constant, angular dependence, rotational angle, ab initio calculations 7−135906
ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7−135920
glyoxal-d_1, conformers rot. and quadrupole coupling const. microwave Fourier transform spectroscopy 7−96648
heteronuclear molecules, electronic struct., double reson. investig. *(German)* 7−129757
1,3,5-hexatriyne, mol. consts. determ. 7−80075
1,3,5-hexatriyne radical, fine and hyperfine struct., astron. study, EHF obs. 7−120538

molecular hyperfine structure continued
hydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
4-hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl, radicals, ESR spectra 7−74687
iodomethane-d_3, rot. levels, hyperfine interactions, RF-microwave spectra 7−122515
metal-metal quadruple bonds, δ-δ^* transition energies and intensities 7−90099
methylbenzoate radical anion derivatives, planarity, ESR 7−96751
methylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
multinuclear radical pairs, CIDNP effects in low mag. fields, semiclassical approx. 7−90194
muonated organic free radicals, internal dynamics and reactions, μSR study 7−110148
naphthalene, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
N-(w-(p-nitrophenoxy)alkyl)anilines, photochemistry, mag. field effects, hyperfine coupling 7−78517
nitroxide spin labels, ESR spectra, linewidths, conc. and temp. depend. 7−93642
norbornene, plastic phase, muon probe investig. 7−85508
organic free radicals, muonium-substituted, muon level-crossing spectra study 7−68475
pentafluorobenzenes, substituted, radical anions, HFS, optical detection of ESR 7−82236
phenylbenzenes, triplet states, zero field splitting parameters 7−135977
phospholipids in membranes, ESR spectra, linewidths, conc. and temp. depend. 7−93642
selenoformaldehyde- ^{77}Se, rot. spectrum, spin-rotation hyperfine struct. 7−135918
semiquinone radicals, methoxyl-substituted, ^1H hyperfine coupling consts., ab initio UHF calcs. 7−109744
tetrafluorobenzenes, substituted, radical anions, HFS, optical detection of ESR 7−82236
2,2,6,6-tetramethylpiperidine radical, solvation of Li^+, complex form., ^7Li NMR study 7−93264
TMPO free radical, H donor solvents, assoc. consts., ESR spectra study 7−103546
Ag^{n+} clusters, electronic struct., hyperfine interactions, Dirac scattered-wave method calcs. 7−103369
AlH^+ and AlD^+ cation radicals, in Ar matrices, ESR, generation by reactive laser sputtering 7−90222
Ar_2-HCl trimer, struct., rot., Fourier transform microwave spectra 7−96647
AsD_3, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
$AsHD_2$, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
AsH_2D, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
B_2, matrix isolated, ESR and ab initio CI calcs. 7−129751
$C_2^{17}O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
Cl_2^-, ionisation pots. and hyperfine splitting const., ab initio calcs. 7−109793
CoC_2, Ar matrix isolated, ESR spectra 7−82230
CoO, $a^4\Delta_i$ ground state, red system, laser-induced fluoresc. 7−96774
Cu_3 in N_2 matrix, EPR spectra 7−110001
CuO, microwave pure rot. transitions, detection using microwave optical double reson. 7−90104
F_2^- radical anion, ionis. pot. and hyperfine splitting const., ab initio calcs. 7−89941
FCl^-, ionisation pots. and hyperfine splitting const., ab initio calcs. 7−109793
FeCO, molecular props., ab initio molecular orbital calcs. 7−74404
H bonded complexes, nucl. quadrupole coupling consts., ab initio calcs. 7−129740
H_2, electron impact excitation of C $^1\Pi_u$ state, circular polarisation correl. 7−68469
H_2, fast beam, Rydberg state, hyperfine and fine struct., UV obs. 7−74656
HCN dimers, isotopic species, rot. spectra, torsional and charge redistrib. effects 7−135904
HF, equilib. configuration, mol. beam electric reson., Stark, Zeeman and hyperfine props. 7−82242
I_2, vel. distrib., picosecond transient grating expts., spectroscopy 7−96580
Mo(V) complexes, multifrequency ESR spectra 7−103543
N_4^+ reaction products in Ne matrix EPR study 7−126434
NBH_2, high excited vibr. state, laser mag. reson. 7−122583
NH, vibr. excited, rot. and hyperfine consts., IR spectra 7−74593
NH^-, IR rotation-vibr. spectrum, hyperfine struct. meas. 7−90002
NO_2, excited electronic states, perturbed visible system, rot. transitions, hyperfine struct. 7−116980
Na_2, perturbation facilitated optical-optical double reson. spectroscopy, hyperfine splittings, struct. 7−96753
NaBr, hyperfine spectrum investig. 7−74554
$Ni^{2+}(H_2O)_6$, paramag. ^1H NMR 7−103540
OCS, supersonic mol. beam, Fourier transform microwave spectra 7−129699
OCS-Ar(Kr)(Ne), supersonic mol. beam, Fourier transform microwave spectra 7−129699
OD, Lamb dip spectra obs. in mol. beam 7−135858
P radical cations, form. by radiation chemistry, electronic struct., ESR spectra anal. 7−68369
PH_2 radical, microwave spectrum 7−122507
PO, rot. transitions hyperfine components, appl. for interstellar studies 7−128003
PbS, B1-$X^1\Sigma^+$ transition, laser excitation spectroscopy, fluoresc. obs., hyperfine splitting 7−122603
ScC_2, Ar matrix isolated, ESR spectra 7−82230
$SiC^{17}O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
SiCl, Lamb dip spectra obs. in mol. beam 7−135858
$^{29}Si_2O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
VC_2, Ar matrix isolated, ESR spectra 7−82230
W(V) complexes, multifrequency ESR spectra 7−103543
YO, $X^2\Sigma^+$ state, fine and hyperfine struct., visible spectra 7−74651

molecular inelastic collisions
see also atom-molecule collisions; atom-molecule reactions; ion-molecule collisions; ionisation of molecules; molecular electron impact dissocia-

molecular inelastic collisions continued
tion; molecular electron impact excitation; molecular electron impact ionisation; molecular neutron scattering; molecular rotational-vibrational energy transfer; molecule-molecule reactions
aromatic hydrocarbons, solns., triplet-triplet annihilation *(Japanese)* 7−129624
asymmetric top complexes, reactive scatt., precessional motion 7−126444
1,2-benzanthracene + carbon tetrabromide, fluoresc., collisional quenching studied by freq. domain fluorometry 7−96765
collision-induced far-IR absorpt. spectra, line shape 7−82285
complex susceptibility for collisional broadening 7−96794
concentration self-quenching by statistical traps, Forster rate orientation factor 7−82255
diatom-diatom collisions, DIDIEX code for energy transfer rate constant calcs. 7−96827
formaldehyde, foreign-gas broadening parameters and line strengths, 9 to 11 μm, tunable diode laser meas. 7−103581
formaldehyde+H_2, rot. transitions, differential cross sections meas. 7−129851
gaseous system in contact with heat bath, master eqn. transform. 7−129839
laser induced collisional processes, excitation and charge transfer 7−110080
methane-d_1, self-, N_2- and H_2-broadened linewidths in ν_6 fundamental, diode laser meas. 7−68410
methoxy radical, (A^2A_1) state, collisional quenching 7−109990
nitroaromatic anions, collision-induced dissocs., mass analysed ion kinetic energy spectra 7−119497
nonadiabatic collisions, potential structure, curve crossing theory 7−129842
nonadiabatic molecular collision, phenomenological damping terms, meas. interpretation 7−110054
nonpolar molecular pairs, FIR absorpt., collision induced spectra 7−116957
post-desorption gas-phase collisions, Monte Carlo simulations 7−112067
quasistatic wing behavior of collisional-radiative line profiles 7−110079
radiative transitions induced by short laser pulses 7−122622
recoupled states approximation, for mol. scatt. theory 7−110055
stimulated Raman spectroscopy, high resolution, mol. structs. and collision effects on line shapes investig. 7−80901
target fragmentation in low energy collisions, Jost matrices method anal. 7−82319
transition metal borides, pions, atomic Coulomb capture ratios, chemical bond depend. 7−74790
vinyl chloride+$N_2(CO_2)$, energy transfer meas. in collisional deactivation 7−90338
XY_2+XY_2, collinear collisions, vibr. energy transfer, quantum calcs. 7−110086
CH, collisional quenching cross sections meas. at 1300 K, meas. using pyrolysis/laser fluoresc. technique 7−74694
CO_2 collision induced spectra, difference frequency source for very low optical freq. spectroscopy 7−103488
D_2+$CO(N_2)$, spectral broadening, temp. depend. 7−82156
D_2+D_2, Q-branch Roman spectra line broadening meas. and rate law anal. 7−117024
D_2+H_2, Q-branch Roman spectra line broadening meas. and rate law anal. 7−117024
D_2+methane, Q-branch Roman spectra line broadening meas. and rate law anal. 7−117024
H_2+$Ar(CO)(He)(N_2)$, spectral broadening, temp. depend. 7−82156
H_2+CO, diffuse scatt. cross section 7−144218
H_2+H_2, theory of faint features in $S_0(0)$ line in Jovian atmosphere 7−134173
HD immersed in He and H_2 gas, line shape cross sections calc. using electronic pot. energy surfaces 7−129790
HF+HF, energy transfer, pot. energy hypersurface 7−122663
H_2O+$N_2(O_2)$, rot.-vibr. lines, collisional self-broadening, semiclassical theory 7−129791
$(H_2O)_5$ clusters, struct., stability, mol. dynamics method 7−103708
KH, Franck-Condon factors, laser-induced fluoresc. intensity 7−96786
N_2, excited singlet state, quenching rate const. 7−122619
N_2, gas, rototranslational far-IR absorpt. spectra 7−90111
N_2, high resolution inverse Raman spectra, line widths, collisional contrib. 7−74621
N_2+HgBr, V-T relax., fluoresc. obs. 7−103629
N_2+N_2(HCl), spectral broadening, temp. depend. 7−82156
NH+O_2 collision induced intersystems crossing 7−136035
O_2, depolarised Rayleigh scatt., expt. and mol. dynamics study 7−122546
O_2, dimer form., Herzberg photoabsorpt. continuum, press. depend. 7−136036
O_2, low lying singlet states, collisional energy transfer kinetics 7−136048
O_2+methane, absolute integral cross section meas. 7−141657
OCS+O_2, IR spectra, ν_1 band, diode-laser meas., press. broadening parameters 7−96663

molecular internal conversion *see nonradiative transitions*

molecular internal mechanics *see molecular vibration*

molecular internal rotation *see rotational isomerism*

molecular intersystem crossing *see nonradiative transitions*

molecular libration
see also macromolecular dynamics
N-acetyl N'-methyl serine amide, struct., ab initio geometry refinement 7−129584
acetylene clathrate hydrates, IR spectra 7−70768
acetylene-acetone clathrate hydrates, IR spectra 7−70768
benzene ring, ^2H quadrupole echo NMR spectra, lineshape calcs. for multiaxis rot. 7−68355
biphenyl, inter-ring rot. pot., ab initio SCF MO calcs. 7−103387
bisphenol-A polycarbonate glass, ^1H and ^{13}C spin-lattice relax., chemical shift anisotropy line shape collapse 7−106044
bromobutenes, conformational struct., torsional force consts. calcs. 7−122489
bromopropenes, conformational struct., torsional force consts. calcs. 7−122489
butadiene, 2^1Ag state, UV reson. Raman spectra anal. 7−82184
butenes, isomers, electronic struct., reson. Raman spectra anal. 7−82188
confined rotator model, harmonic potential, correlation functions, molecular dynamics 7−141553
dimethylformamide, solns., depolarised Rayleigh wing and Raman splitting 7−90154

molecular libration continued
ethylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
harmonic torsional oscillator libration, NQR freqs., temp. depend. 7−129746
hydroquinone clathrates, single crysts., Raman spectra 7−106192
lithium acetate, press. depend. of tunnelling and librational modes of coupled methyl groups 7−69635
methane, protonated, struct., vibr., ab initio MO calcs. 7−96558
methane, solid, partially ordered phase II, IR spectra 7−132262
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7−90269
2-methoxyethylamine, low-lying torsionally excited states, vibr., microwave spectrum 7−82087
methyl chloride, microclusters and their internal ang. modes, rot. anal. 7−90134
methyl cyanide-HF, FTIR spectra 7−96676
methyl silane, torsional band studied using tunable diode laser spectrometer 7−96662
methylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
methylhalides, polycryst., methyl rot., inelastic incoherent neutron scatt. 7−83795
organic free radicals, muonium-substituted, muon level-crossing spectra study 7−68475
phenylphosphine, conformation, internal rot. and struct. studied by microwave spectroscopy 7−116948
n-propylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
sodium propionate, isotopic species, low-temp. IR spectra, isotope shifts anal. 7−96698
α,α'-trans-stilbene-^{13}C, ground and excited states struct., Raman spectra anal. 7−82193
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
thioacetaldehyde, isotopic species, torsional vibrs., internal rot. barriers, visible spectra anal. 7−109917
$CsHSO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
$CsHSeO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
D_2O, liq., H-bond cooperativity, temp.-depend. pot. barriers of hindered rot. 7−109854
D_2O, liq., Raman spectra in translational and librational regions, depolaris. ratio 7−125740
F_2, diatomic melting curves to very high pressure 7−98405
HCN dimers, isotopic species, rot. spectra, torsional and charge redistrib. effects 7−135904
H_2O, harmonic stretching and bending modes coupling, adiabatic method calcs. 7−74552
H_2O, liq., H-bond cooperativity, temp.-depend. pot. barriers of hindered rot. 7−109854
H_2O, liq., Raman spectra in translational and librational regions, depolaris. ratio 7−125740
H_2O, liq., rot. dynamics, isotropic induced Raman scatt. spectra 7−90156
H_2S, harmonic stretching and bending modes coupling, adiabatic method calcs. 7−74552
H_2Se, harmonic stretching and bending modes coupling, adiabatic method calcs. 7−74552
KCl, aq. soln., mol. dynamics study 7−75968
N_2, diatomic melting curves to very high pressure 7−98405
NH_4^+ cpds., rotational pot. function derivation 7−91493
NH_4^+, rot. pot. functions in cryst. fields 7−91492
NH_4BF_4, cryst., NH_3D^+ ion vibrs. at low temp. 7−135940
O_2, diatomic melting curves to very high pressure 7−98405

molecular librational states *see molecular libration*

molecular magnetic susceptibility
Mobius annulenes, mag. susceptibilities, HMO calcs. 7−74450
buckminsterfullarene, π-electron-ring-current suscept. 7−68203
carbocations, mag. props., calcs. from localised quantities 7−89926
ethylene glycol, polymerisation effect on mol. polarizability and diamagnetic suscept., refractive index method 7−113926
fluorides, mag. susceptibility and NMR chemical shift tensors 7−116988
Gaussian basis functions, elec. and mag. props. calcs. *(French)* 7−141414
halomethanes, magnetic susceptibility tensors, angular correlation factors, NMR determination 7−129643
hydrides, mag. susceptibility and NMR chemical shift tensors 7−116988
trimethylphosphine, second-order mag. parameters and mag. isoscreening lines 7−103409
van der Waals complexes, diamagnetic susceptibilities, second moments, promolecule model 7−81951
CO, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
Fe (III) complex, low-spin metalloporphyrin, mol. struct. 7−90221
H_2, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
HF, equilib. configuration, mol. beam electric reson., Stark, Zeeman and hyperfine props. 7−82242
H_2O, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
H_2O_2, nucl. mag. isoscreening lines, 2nd order mag. parameters 7−103408
P molecules, mag. susceptibility and NMR chemical shift tensors 7−116988
PH_3, second-order mag. parameters and mag. isoscreening lines 7−103409
Si molecules, mag. susceptibility and NMR chemical shift tensors 7−116988
UO_2 complexes with N-thiosemicarbazide, struct., composition, force consts., spectral and thermal study 7−138442

molecular mass *see molecular weight*

molecular metastable states
aniline, multiphoton dissociation, reaction rate const., TOF spectra 7−139032
cyanogen photolysis, Ar-cyanogen flow, CN UV fluoresc. spectra anal. 7−96718
d^0 transition metal tetroxo anions, metastable triplet states, Jablonski diagram 7−113243
dimethyl fumarate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7−90437

molecular metastable states continued
dimethyl maleate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7−90437
ethylamino ion, fragmentation and isomerisation, MNDO calcs. 7−68216
$[Fe(2,6\text{-bis(pyrazol-3-yl)pyridine})_2][BF_4]_2$, spin transition, hysteresis, transition temperatures, activation energies, states 7−138180
Ar metastable cluster ions, unimol. dissoc., mass spectra, magic no. 7−68499
Ar, time-resolved multichannel scaling, microcomputer interface board 7−129902
C_2, metastable state, high-press. bands investig. 7−82017
CO, a $^3\Pi$ metastable state, IR spectra study 7−96656
CO_2, doubly charged cluster ions, metastable dissoc. 7−110124
D_2F^++Na, fast charge transfer reactions, metastable states prod. 7−136053
D_3O^++Na fast charge transfer reactions, metastable states prod. 7−136053
He_2^- autodetachment spectroscopy of metastable negative ions 7−96573
HeC^{2+}, low-lying electronic states, MC CAS SCF calcs. 7−135829
N_2, $a^1\Pi_g$ state, electron impact excitation cross-section 7−141702
N_2, excited singlet state, quenching rate const. 7−122619
N_2, microwave discharge generated, ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7−135920
N_2, nonequilibrium ionization involving superelastic electronic collisions 7−110120
SF_6, electron impact dissoc. metastable fragment prod. 7−117086

molecular moments
α-angelicalactone, internal rotation, microwave spectroscopy 7−122512
9,9′-bianthryl, excited state dipole moments, fluoresc. study 7−135996
acetamide, microwave spectrum, internal axis method anal. 7−82085
acetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
acetonitrile, bonding, wave fn. characts. 7−129563
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
alkanes, dipole moments, theoretical investig. 7−116831
4-n-alkyl-4′-cyanobiphenyls liquid crystals, C−H dipolar coupling consts., pot. of mean torque calcs. 7−137208
N-alkyl-N,N-dimethylamilinium benzenesulphonate ion pairs, IR spectra, electric dipole moments and interionic struct. 7−90126
4-amino-4′-nitrodiphenyl, ethanol soln., dipole moment, visible fluoresc. spectra, edge-excitation red shift 7−135950
aminoanthraquinones, intramolecular orientation, transition moment, fluoresc. 7−82273
atomic charges derived from electrostatic potentials 7−141437
benzenamine-4-(9-anthryl)-N,N-dimethyl related cpds., synthesis, spectroscopic props. 7−90265
benzenes, monosubstituted, dipole moments, ab initio MO calcs. 7−109739
bloch-Siegert shift in giant-dipole molecules 7−129825
bond dipole moments, direct quantum calcs. 7−141466
butadiene, photoisomerisation, ab initio CI calcs. 7−93296
carbon tetrabromide soln., dipole moments, far-IR spectra 7−141574
carbon tetrachloride, soln., dipole moments, far-IR spectra 7−141574
chiral molecules, permanent moments effect, differential multiphoton absorpt. 7−103606
chiral particles, light scatt., optical activity, coupled dipole method 7−139205
chlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
chlorin, matrix isolated, stark effect, spectral hole burning 7−96757
CNDO/2 approx., charge iteration algorithm 7−129602
complex molecules, electrooptical parameters, quantum chem. calcs. 7−103418
correlated molecular and cumulative atomic multipole moments 7−116827
correlation energy calcs., second-order connected moments expansion 7−135844
trans-crotyl alcohol, high resolution microwave spectrum, torsional pot. energy surfaces 7−122514
cyanocyclobutane, microwave spectrum, ab initio structure, dipole moment 7−116950
cyclopropenylidene (C_3H_2), elec. dipole moment meas. from Stark effect in microwave spectrum 7−120272
cytosine, photoexcited states, electronic struct., CNDO/S3 calcs. 7−68218
1-(p-(N,N-diamethylamino)phenyl)-4-(p-nitrophenyl)-1,3-butadiene, laser and gain spectra 7−109983
diamines, dipole moment from dielectric const. 7−118936
diatomic hydrides, main group, electronic structs 7−141430
diatomic mol., dielectric friction in liqs., mol. dynamics study 7−105088
diatomic molecular layer adsorbed on metal-semicond. superlattice, IR adsorpt. study 7−99849
difluoromethane-d_2 ν_5 and ν_6 laser lines, IR-IR double reson. 7−122582
1,3-difluoropropanone, IR spectra and dipole moment, stabilities calc. by PCILO method and Onsager formalism *(French)* 7−116857
5, 6-dihydro-2H-pyran-2-one, microwave spectrum, dipole moment and conform. investig. 7−109882
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7−109876
1,4-dihydroxyanthraquinone, $S_1 \leftarrow S_0$ transition, Stark effect 7−90236
p-dimethylaminobenzonitrile, soln., photoisomerisation dynamics, polarity depend. barriers 7−93268
N,N-dimethylformamide, internal rot. barriers, dynamic NMR and ab initio SCF MO method comparison 7−109722
1,2-dimethylhydrazine, mol. struct. and conform., GPED and microwave spectra 7−74574
dipole moment of bonds, ab initio and semiempirical methods 7−103388
dipole polarisabilities, Unsold approx., LCAO MO SCF calcs. 7−96539
dithioacetic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
dithioformic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
dye mols. in amorphous solids, spectral holes, elec. field effects 7−123123
electro-optical method sensitive only to constant dipole moment 7−141715
electronic and spin props., orbital relax. effects, ab initio coupled cluster method calcs. 7−116825
electronic mechanical momentum conservation, intramolecular perturbations 7−122653
electrostatic pot., multipole expansion technique, STO calcs. 7−74405
ethene dimers, IR predissoc. spectra 7−116972
ethylene, photoisomerisation, ab initio CI calcs. 7−93296
ethylisobutyrate-phenol(4-chlorophenol) complexes, dipole moment meas. 7−99645

molecular moments continued
excitation energy transfer and electron transfer between mols., fundamental theory *(Japanese)* 7−96830
fatty acid fluorinated monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
fluoropropanone, IR spectra and dipole moment, stabilities calc. by PCILO method and Onsager formalism *(French)* 7−116857
formaldehyde, second-order Moller-Plesset dipole moment derivatives 7−109693
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342
formaldehyde-d_2, ground state Stark shift, laser microwave double reson. 7−122580
formic acid-d_1, ν_3 fundamental band, laser Stark and Fourier transform spectroscopy 7−122588
Freon-12, ν_6 band integral intensity, diode laser spectroscopy 7−122520
gaseous solute solubility in polymers; solute-polymer interactions anal. 7−111899
glyoxal-d_1, conformers rot. and quadrupole coupling const. microwave Fourier transform spectroscopy 7−96648
halogens and interhalogens, excited states, nuc. quadrupole coupling, SCF-MS-Xα study 7−81974
heterocyclic molecules, polyatomic, PNDO method, spectroscopic parametrization 7−122358
hexatriene, photoisomerisation, ab initio CI calcs. 7−93296
1,3,5-hexatriyne radical, mol. struct. ab initio SCF calcs., astron. appl. 7−103381
iminopyruvonitrile centrifugal distortion, Stark splittings, microwave spectra, rotation, vibration 7−135925
methane, CH bond dipole moment, SCF wave fn. estimate 7−122339
methane, electromag., nuclear shielding tensors, second order props. relations 7−116879
methane, general props. eval., approximate double substitution coupled-cluster method 7−109699
methane, ground state struct., split-valence bond-orbital calcs. 7−109786
methanol, dipole moments, Stark spectra 7−122589
methyl dithioformate, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
methyl fluoride, IR vibr. intensities, ab initio MO calcs. 7−103360
methyl fluoride, liq., ν_3 band, noncoincidence effect, Raman and IR spectra 7−106156
methyl formate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl formate, methanol soln., NMR longit. two-spin order study 7−135965
methyl methacrylate in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7−138380
methyl thiolformate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl thionoformate, conformer stability, ab initio SCF-MO calcs. 7−81968
3-methylcyclopent-3-enone, internal rot. barrier, microwave spectrum 7−109881
methylenecyclopropene, electronic charact., microwave spectrum, struct., dipole moment 7−68294
methyleneimine, dipole moment orientation determination, infrared spectroscopy 7−122523
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
methylmercury chloride, gas phase, electric dipole moment and quadrupole coupling determ., microwave spectrum 7−135926
methylsilylsulfide, internal rot., struct., dipole moment and microwave spectra meas. 7−74569
molecular fluid mixtures, equilib. props. in semiclassical limit 7−124061
molecular properties, ab initio determ., book 7−134384
$(NH_4)_2$ N_2H_6 $(ClO_4)_4$, ^1H relax. times, temp. and freq. depend. study 7−103536
nucleic acid bases, electrostatic pots., dipole pot. mapping approach 7−129908
nucleic acid bases, tautomers geometrical struct., AM1 method calcs. 7−100802
octaethylchlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
organic H-bonded complexes, interaction-induced effects in IR spectra 7−141570
1,2,3-pentatriene, internal rotation barrier, dipole moment, microwave spectra 7−135928
n-phenyl moleimide in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7−138380
phenylethylamine drugs, UV absorpt. spectra, INDO calcs. 7−96541
phospholipid monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
phthalimides, intramolecular orientation, transition moment, fluoresc. 7−82273
poly-N-vinyloxycarbonyl carbazole, dipole moment associated with side group, dielectric meas. 7−70698
polyatomic cpds., dipole moments of bonds, MO-LCAO-CI calcs. 7−103389
polycyclic hydrocarbons, moments, Huckel calcs. 7−74453
polymers, theta point props., residual interactions effects, higher moments, three-parameter model 7−136107
primary aliphatic amines, dipole moment from dielectric const. 7−118936
pyrene-N,N-dimethylaniline exciplex, fluoresc. spectra, thermochromic shifts 7−136012
RNA polymer, double stranded poly(rA).poly(rU), imino protons, spin-lattice relax. study, NMR spectra anal. 7−74672
second row transition metals, inorganic and organometallic compound props., mol. orbital theory 7−141436
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
1,1,2,2-tetrafluorocyclopropane, microwave spectra, elec. dipole moments and mol. struct. 7−90101
third-row diatomics, total and orbital energies and multipole moments, LCAO HF STO calcs. 7−81919
transition metal hydrides positive ions, spectroscopic parameters and dissoc. energies, CI calcs. 7−116869
trichloroacetonitrile, liq., permittivity meas. 7−92587
triethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
trimethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550

molecular moments continued
γ-valerolactone, ground and vibrationally excited states, microwave spectrum 7−82082
van der Waals complexes, diamagnetic susceptibilities, second moments, promolecule model 7−81951
vapour-liquid critical point, site-site Ornstein-Zernike eqn., hypernetted chain approx. 7−97877
vibrational circular dichroism, velocity-depend. property surfaces 7−68383
vibrational magnetic dipole transition moments and rot. strengths 7−90092
zinc tetrabenzoporphin, substituted, matrix isolated, stark effect, spectral hole burning 7−96757
Ag^++(CO)(NH_3)(ND_3)(methane)(methyl halides) association, complex form., rate consts. 7−93282
AlO, Ar matrix isolated, vibr. relax., IR-optical double reson. 7−82235
Ar-HF, H bonded complexes, vibr. freq. shifts, dipole moments 7−90083
ArD^+ mol. ion, elec. dipole moment, rot. Zeeman effect, tunable FIR laser spectra 7−74692
ArH^+ mol. ion, elec. dipole moment, rot. Zeeman effect, tunable FIR laser spectra 7−74692
AsD_3, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
$AsHD_2$, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
AsH_2D, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
BF, charge density and dipole moment, variational cellular method calcs. 7−116850
BF_3-Ar(CO)(N_2), van der Waals complexes, induced dipole moments 7−68199
B_2H_6-HF complex, struct., SCF calcs., IR spectra, rot. consts. and dipole moment 7−96495
Be_{51} and Be_{57} clusters, electronic states; ab initio SCF calcs., binding energy 7−74401
CH^+, isotopic species, vibr.-rot. transition probabilities, electric dipole moment fn. calcs. 7−96504
CO, charge density and dipole moment, variational cellular method calcs. 7−116850
CO, low lying states, pot. energy curves, dipole moments, multiconfig. SCF calcs. 7−116866
CO_2, dense fluid, Raman scatt., MDM calc. 7−82175
CO_2 fluid, S_1 Raman band, pot, and polarisability model study 7−82167
CS_2, charge density and dipole moment, variational cellular method calcs. 7−116850
CS_2, dense fluid, Raman scatt., MDM calc. 7−82175
CS_2, V^1B_2 state, fluoresc. and Zeeman quantum beat spectra 7−90240
Cu^++CO(NH_3)(ND_3)(methane)(methylhalides) association, complex form., rate consts. 7−93282
CuCN, bonding, wave fn. characts. 7−129563
CuNC, bonding, wave fn. characts. 7−129563
D_2, collision-induced polarised and depolarised Raman scatt. 7−82179
FH_2^+, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
Fe complex, trans-$MFe(CO)_3$ substituted phosphine 7−129619
H_2, collision-induced polarised and depolarised Raman scatt. 7−82179
H_2, depolarized Raman scatt. at low temps. study 7−82178
H_2, electronic transition, spectral moments, quasiclassical 7−68292
H_2+H_2, induced dipole moment rel. to faint features in $S_0(0)$ line in Jovian atmosphere 7−134173
H_3^+ predissociation excitation spectra, H^+-H_2 complex model anal. 7−96806
HCN, second-order Moller-Plesset dipole moment derivatives 7−109693
HCl, IR transitions, vibr.-rot. matrix elements 7−135913
HCl+N_2, fundamental vibr.-rot. lines broadening and shifting calcs. 7−117056
HD, solid, rot. $R_0(0)$ transition, interf. effects 7−98000
HF, charge density and dipole moment, variational cellular method calcs. 7−116850
HF, equilib. configuration, mol. beam electric reson., Stark, Zeeman and hyperfine props. 7−82242
HF, ground state struct., split-valence bond-orbital calcs. 7−109786
HF-ClF(Cl_2) dimers, H and anti-H bonded isomers, ab initio electronic struct. calcs. 7−116871
HF-$d_0(d_1)$, general props. eval., approximate double substitution coupled-cluster method 7−109699
HF-N_2O(formaldehyde), van der Waals complexes, induced dipole moments 7−68199
H_2O, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
H_2O, general props. eval., approximate double substitution coupled-cluster method 7−109699
H_2O, geometry, analytical energy gradient, Moller-Plesset perturbation theory 7−116815
H_2O, ground state struct., split-valence bond-orbital calcs. 7−109786
H_2O, liq., OH stretch vibr., computer mol. dynamics study 7−92679
H_2O, polarisation, electron density distrib. changes, anal. 7−68200
H_2O, second hexad, IR absorpt. bands, transformed dipole moment parameters 7−101486
H_2O, second-order Moller-Plesset dipole moment derivatives 7−109693
$(H_2O)_n$ clusters, geometries, energies, electrostatic props. 7−103706
$(H_2OHOH_2)^+$, proton transfer pot., external ions and dipoles effect, ab initio calcs. 7−74406
HeH, dipole transition moments 7−116942
Li^++N_2, vibr. relax., modified Landau-Teller model 7−136039
Li_2, lowest-lying states, electronic transition dipole moment fns. calc. 7−81931
LiH, general props. eval., approximate double substitution coupled-cluster method 7−109699
MgO, $B^1\Sigma^+$ and $X^1\Sigma^+$ states, electric dipole moments, Stark quantum-beat spectra 7−68379
MoF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
N_2, elastic electron scatt., cross sections calc. using multiconfiguration SCF CI wavefunctions 7−122709
NH_2^-, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
NH_3, avoided crossing, microwave Stark meas. 7−82080
NH_3 dimer, tunnelling-rot. energy levels classification in mol. symm. group 7−109878
NH_3, dissociation, pot. energy surface, ab initio MCSCF calcs. 7−103359
NH_3, ground state, dipole moment, microwave-optical double reson. 7−122585
molecular moments continued
NH_3, ground state struct., split-valence bond-orbital calcs. 7−109786
NH_3, potential energy surfaces and IR spectra, CASSCF and CEPA calcs. 7−103358
$(NH_3)_2$ vibr. force field, IR intensities ab initio SCF calcs. 7−81959
NHO_3, ν_2 fundamental band, IR laser Stark spectrum 7−122587
N_2O, dipole moment fn., num. diagonalisation 7−74553
Na_2, absorption spectrum from 350 to 1075 nm 7−122559
O_2, dense fluid, Raman scatt., MDM calc. 7−82175
OC-HF complex, ν_1 state predissoc. lifetime, vibrs. state mixing, IR spectra anal. 7−103496
OCS, dipole moments, laser stark spectra 7−122590
OH, $X^2\Pi$ state, dipole moment, SCF CI calcs. 7−103401
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
PH_3, dipole moment, Coriolis interaction, laser Stark spectra 7−122586
Re monomers and dimers adsorbed on W (110), possible magnetism 7−82020
SF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
SiF^+ (SiF), electronic states, CI calcs. 7−74462
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
TiO, electronic states, configs., ab initio CI calcs. 7−109789
TlX, X=H, H^+, H_3, props. , relativistic and correlation effects, pseudo-pot. calcs. 7−122383
UF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
WF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739

molecular neutron diffraction *see molecular neutron scattering*

molecular neutron scattering
n-alkanes, torsional and CCC bend frequencies, crystal analyzer spectrosc. 7−136079
bicyclooctene, plastic phase, muon probe investig. 7−85508
collagen, inelastic neutron scatt. study of LF vibr. modes 7−126717
colloids, scattering behaviour, intra particle form factor, radius of gyration 7−141708
HCl, aq. solns., neutron scatt. phonon spectra meas. 7−96884
lens cytoplasm, calf, cataract models comparison 7−145139
$(methane)_{1-x}Kr_x$, solid mixture, orientational disorder and rot. excitation, neutron scatt. meas. 7−74782
neutron small angle scatt. data anal., computer programme 7−74783
norbornene, plastic phase, muon probe investig. 7−85508
polymer chains, dynamics using neutron spin-echo 7−90454
ribosomal protein IF-2, substrate-triggered intermol. interactions, neutron diffr. evidence 7−133185
Ar, fluids, depolarised light scatt. and neutron scatt. spectra 7−110127
HCl, aq., fast H^+ motion absence investig., neutron scatt. 7−82386
$Na_8[AlSiO_4]_6$ $(OH)_2$, H dynamics, inelastic and quasielastic neutron scatt. 7−136078
ZrH_2-$d_0(d_1)$, freq. spectra and force consts. determ. 7−96885

molecular nuclear coupling
adamantane, solid, cross polarisation, sample spinning effect 7−90207
1-^{13}Caldoses, ^{13}C NMR, chemical shifts and ^{13}C-^{13}C spin couplings 7−129741
2′,5′-anhydroarabinosylcytosine, struct. and conform., X-ray, ^1H and ^{13}C NMR anal. 7−98103
benzene, ^1H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
benzothiazole-2-one, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
biphenyl derivatives, long-term ^{13}C,^{19}F and ^{19}F,^{19}F coupling consts., mechanisms 7−82213
1,2-bis(methylseleno)ethene, Se coupling consts., IPPP-INDO and PCILO-CNDO calcs. 7−103395
broadband decoupling, three-spin effects 7−73392
cadmium formate dihydrate-$d_0(d_2)$, solid, cross polarisation, sample spinning effect 7−90207
N-chlorodifluoromethylenimine, struct., harmonic force field and microwave spectrum meas. 7−74570
chloroiodomethane, quadrupole coupling constant tensor, microwave spectroscopy 7−122510
1,3-cyclodisiloxanes, bonding, ^{29}Si NMR coupling consts. obs. 7−141604
cyclopropane, r_α-struct., vibr.-rot. correl., NMR study 7−68361
2,4-di(2-pyrenyl)pentane, diastereoisomers, conformer anal., excimer form., PMR obs. 7−129750
di-tert-butyl ethanal, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7−129744
dichloromethane, ^1H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
diglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
9,10-dihydroanthracenes, conformational anal., mol. mechanics calcs. and ^{13}C NMR 7−68347
1,2-dimethylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
disilenes, bonding, ^{29}Si NMR coupling consts. obs. 7−141604
fluorene, derivatives, long-term ^{13}C,^{19}F and ^{19}F,^{19}F coupling consts., mechanisms 7−82213
glucose, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
glycine, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
glycine, NQR, ^{14}N quadrupole coupling const. 7−90202
glycine, peptide plane and side chains orientation, ^{13}C-^{15}N dipole-dipole couplings, NMR meas. 7−126719
glycolaldehyde, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7−129744
glyoxal-d_1, conformers rot. and quadrupole coupling const. microwave Fourier transform spectroscopy 7−96648
halogens and interhalogens, excited states, nuc. quadrupole coupling, SCF-MS-Xα study 7−81974
hexane, partially oriented, conformational probabilities, dipolar couplings assignment, 2D NMR 7−109930
histidinium chloride, nucl. quadrupole coupling, ab initio calcs. 7−116987
homonuclear coupling const., pure phase NMR subspectra 7−67354
hydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
imidazolium hydrogen maleate, nucl. quadrupole coupling, ab initio calcs. 7−116987
1-iodopropane, microwave spectra, conform. and quadrupole coupling consts. determ. 7−74571

molecular nuclear coupling continued
isatin, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
metalloporphyrin π-cation radicals, spin coupling 7−103535
methylene chloride-d_1, C−H and C−D interbond coupling, photoacoustic spectrosc. 7−122572
methylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
methylmercury chloride, gas phase, electric dipole moment and quadrupole coupling determ., microwave spectrum 7−135926
molecules, electric field gradients, ab initio SCF CI(SD) CPF calcs. 7−109801
monohetero cyclopropanes and cyclopropenes, nuclear spin-spin coupling consts., ab initio equations of motion calcs. 7−74426
nortricyclyl-norbornenyl cation, deuterated, reversible skeletal rearrangement, NMR spectra 7−119600
peptides, α-helical, electrostatic interactions role in stabilisation, spin-spin coupling studies 7−86897
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7−90191
phenylacetylene, one-bond C−H spin coupling consts. and ^{13}C differential line broadening 7−68348
E-N-phenylformamide, homonuclear multiple-quantum NMR relax. rates 7−99602
polyethylene, solid, cross polarisation, sample spinning effect 7−90207
proteins, long-range couplings, double quantum spectrosc. detect. 7−78754
purine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
purines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
2-pyridinone, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
pyrimidine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
pyrimidines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
quadrupole coupling constants, reaction fields and solvent depend. 7−109946
quadrupole coupling consts., ab initio SCF calcs. 7−122354
small N-containing molecules, electric field gradients, ab initio quantum chem. calc. 7−103400
sodium acetate, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
tetraethylstiboniummetaperiodate, NMR quadrupole coupling consts. temp. depend. 7−74685
tetraglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
third-row diatomics, total and orbital energies and multipole moments, LCAO HF STO calcs. 7−81919
trichlorofluoromethane, microwave and mm-wave spectra, rot., centrifugal distortion and quadrupole parameters 7−96651
triglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
urocanic acid, nucl. quadrupole coupling, ab initio calcs. 7−116987
BH_3 coordination complexes form. CNDO/2 calcs., NMR coupling const. *(French)* 7−132931
BH_2NH_2, microwave spectrum, mol. struct., rot., centrifugal distortion and nuclear quadrupole const. 7−116945
CO, nucl. spin-spin coupling consts. calc. 7−129743
Co complexes, NQR, H-bonding, quadrupole coupling const. 7−96741
Cu^{2+}-poly(riboadenylic acid) interaction, NMR investig. 7−90211
Fe complex, trans-$MFe(CO)_3$ substituted phosphine 7−129619
H bonded complexes, nucl. quadrupole coupling consts., ab initio calcs. 7−129740
HBF^+, rot. and centrifugal distortion const., microwave spectrum 7−82081
HBO, detection and equilib. mol. struct. by microwave spectroscopy, rot. consts. 7−82078
Hg $(PH_3)_3$ complexes, Hg-P coupling consts. 7−90216
KHF_2, zero field NQR and low-field NMR 7−90203
$K(NH_3)_{4.3}C_{24}$, ^1H NMR, ^{14}N quadrupolar coupling, ^1H chemical shift, mol. orientation 7−92526
KOH, nucl. quadrupole struct., RF-microwave double reson., Stark modulated 7−135979
$MSiO_3$ (M=Mg, Ca, Ba, Sr), NMR chem. shift determ. 7−77414
N_2, nucl. spin-spin coupling consts. calc. 7−129743
^{14}N nuclear quadrupole coupling constants, ab initio calcs. 7−122345
$NaHF_2(d_1)$ zero field NQR and low-field NMR 7−90203
P_4, NMR shielding consts., ab initio coupled HF calcs. 7−74677
Si containing cpds., NMR shielding consts., quadrupole coupling, ab initio calcs. 7−68342

molecular orbitals *see molecular energy levels*

molecular orbitals calculations
includes calculations of electronic and geometric molecular structure see also APW calculations; EHT calculations; GO calculations; GTO calculations; HMO calculations; KKR calculations; LCAO calculations; NDO calculations; OPW calculations; PNO calculations; PPP calculations; STO calculations
acetylene+α-pyrone cycloaddition reaction mechanism, F substitution, ab initio SCF MO calcs. 7−96530
acetylene-vinylidene rearrangement, metal atom catalysed, mechanism 7−119518
1-acetylpyridinium halides, ion pairs, interionic vibrs. and mol. struct. calcs. 7−74427
adsorbate structs. with glide symmetry, electron spectroscopy 7−91981
aldono-1,4-lactones, PWR and NMR, ab initio MO calcs., conformational studies 7−141426
amides, rotational transition structs., ab initio MO calcs. 7−103471
anisole, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
anthracene, graph theory adjacency matrices, eigenvectors, topological anal. 7−109701
anthracyclines, aglycone moieties, redox props., electrochemical expts., ab initio MO calcs. 7−100796
aromaticity, perturbation MO calcs. 7−96519
atom superposition and electron delocalisation MO theory 7−135825
atom-ion collisions, unified at.- and mol.-orbital matching method study 7−109704
atoms, valency and softness in molecules, bond index statistical interpretation 7−116814
2-azabutadiene, IR spectrum, force consts., ab initio MO calcs. 7−116961

molecular orbitals calculations continued
azetidine, pyramidal inversion barrier, PMR and ab initio MO calcs. 7−109713
1-azetine, IR spectra, ab initio MO calcs. 7−116960
azine, struct., protonation, isomers, ab initio MO calcs. 7−81955
basketanes, geometric and electronic struct., iterative maximum overlap calcs. 7−96528
benzaldehyde, geometry, barrier height, STO calcs. 7−129582
benzene, dicationic states, Green's fn. calcs., Auger spectra anal. 7−74420
benzene-F^-, clusters, stability, struct., enthalpy, ab initio MO calcs. 7−93356
benzenes, monosubstituted, dipole moments, ab initio MO calcs. 7−109739
benzenethiol adsorbed on Cu (110), angle resolved polarisation dependent photoemission spectra 7−90272
1,5-benzodioxepins, 3-halogenated, gauche conform. effect, mechanism, NMR investig. 7−103534
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
bicyclo[2.2.1]heptanes, and derivatives, struct., ab initio HF MO calcs. 7−129583
biological molecules, conf., Marineland, FL, USA (Mar. 1986) 7−72693
biphenyl, inter-ring rot. pot., ab initio SCF MO calcs. 7−103387
biphenyl derivatives, dihedral angle, theoretical calcs., IR and electro-optic meas. 7−109721
biphenyl derivatives, long-term $^{13}C,^{19}F$ and $^{19}F,^{19}F$ coupling consts., mechanisms 7−82213
bonds, relativistic changes, Hellmann-Feynman force method calcs. 7−122350
bungarotoxin, struct., multistep modeling using crystal coords. and X-ray diffr. data 7−78735
carbocations, α-substituted, substituent, stabilisation energies, ab initio MO calcs. 7−109748
carbocations, cyclic and β-substituted, struct. and stability, ab initio MO calcs. 7−109749
carbocations, mag. props., calcs. from localised quantities 7−89926
chemisorption and electrochemisorption, cluster approach, review 7−93371
2-chloro-2-methylpropane, overtone spectra, local mode anal. 7−135910
chlorotrimethylsilane, overtone spectra, local mode anal. 7−135910
conical intersections for Born-Oppenheimer electronic wave fns. 7−74418
conjugated carbonyl acetylene compounds, He(I) photoelectron spectra 7−90271
correlated molecular and cumulative atomic multipole moments 7−116827
coupled-cluster theory, mol. symmetry appl. 7−109715
3-cyanocyclopropene, mol. struct., microwave spectra and ab initio MO calcs. 7−109877
cyclopentadienyl cobalt complex, planar conform., triplet state, ab initio MO-SCF calcs. 7−116818
cyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
cyclopropenylidene, ab initio mol. orbital studies of low-energy metastable isomers 7−88590
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7−125725
deprotonation enthalpies and proton affinities, AM1 semiempirical MO calcs. 7−68191
diacetylene, IR intensity parameters, acidity of acetylenic hydrogens, MNDO calcs. 7−82125
diatomic molecules orbitals, relativistic Dirac-Fock-Slater calcs., basis set errors anal. 7−141452
diatomic quasimolecules, diabatic mol. orbital correl. 7−103370
diazomethane, electronic struct., spin-coupled descriptions 7−122326
dication fragmentations, unusually late transition structures, ab initio MO calcs. 7−96500
1,2-difluoroethane, conformational energies, ab initio MO calcs. 7−129573
dimetal tetraformates, metal-metal multiple bonds, Xα-SW MO calcs. 7−89957
2,2-dimethoxypropane, conform., anomeric effect, MO calcs. 7−96543
N,N-dimethylformamide, internal rot. barriers, dynamic NMR and ab initio SCF MO method comparison 7−109722
dioxirane, O−O bond props., SCF MO calcs. 7−109732
Dirac equation, variational solns. 7−122351
1,5-dithiacyclooctane, cation radical and dication, Raman spectra and structs. 7−74644
dithioacetic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
dithioformic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
ethyl dication, open or bridged struct., ab initio MO CI calcs. 7−116862
ethyl radicals, fluorinated, struct., conform. anal., ab initio SCF MO study 7−81952
ethylbenzene, struct. and internal rot. in solns., PMR and MO investig. 7−103532
ethylene, correl. wavefunction, canonical and localised orbital basis 7−109788
ethylene dication, gas phase isomers stability study, ab initio MO calcs. 7−96501
ethylene oxide, ionis., ab initio MO calcs. 7−81920
exponential-type orbitals, mol. overlap integrals 7−135820
fluorene, derivatives, long-term $^{13}C,^{19}F$ and $^{19}F,^{19}F$ coupling consts., mechanisms 7−82213
2-fluorophenol, H-bonding, rot. isomerism, mol. orbital study 7−109747
fluoropyridine, geometries MO calcs. 7−129581
forbiddenness in MOVB theory 7−109692
$(formaldehyde.H.NH_3)^+$ complexes, covalent and H-bonded assoc., pot. energy profile, ab initio MO calcs. 7−81921
formamide bond fragments, electrostatic fields 7−96511
formamide-NH_3 complex, H_2O effect on H bonding, ab initio SCF MO calcs. 7−96498
$(formamide.H.OH_2)^+$ complexes, covalent and H-bonded assoc., pot. energy profile, ab initio MO calcs. 7−81921
heavy atom chemical shift in NMR, relativistic contrib. 7−96740
heteroatomic molecular graphs, eigenvalues, characteristic polynomial calcs. 7−103347
heteronuclear molecules, ground state energy, density matrix calc. 7−141445
hexafluorobenzene-F^- clusters, stability, struct., enthalpy, ab initio MO calcs. 7−93356
hydrocarbon molecule, Hosoya index bounds, C-atom skeleton depend. 7−96537

molecular orbitals calculations continued
hydrocarbons, bonds, structs., charge concs. and charge relax. 7—89923
hydrocarbons, conjugated, mol. orbital based mol. mechanics calcs. 7—141425
intermolecular interactions, SCF calcs., basis set superposition error correction 7—96819
intermolecular potentials, ab initio MO calcs. 7—74725
isocyanomethane, electronic and mol. struct., ab initio SCF MO calcs. 7—81964
isocynocyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7—81964
linear polyatomic molecules, potential function, Morse-like model 7—122652
localised orbitals, Linnett's H's double quartet theory 7—129587
metal-metal multiple bonds, calcs., electron correls. 7—89951
metallobacteriochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7—89938
metallochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7—89938
metalloporphin, excitation energies, oscillator strengths, screened pot. MO calcs. 7—89938
methane, ground state struct., split-valence bond-orbital calcs. 7—109786
methane, protonated, struct., vibr., ab initio MO calcs. 7—96558
methyl acetate, radical cation, isomerisation, dissoc., ab initio MO study 7—100531
methyl dithioformate, conformational struct. and energies, ab initio SCF-MO calcs. 7—109751
methyl fluoride, IR vibr. intensities, ab initio MO calcs. 7—103360
methyl formate, conformer stability, ab initio SCF-MO calcs. 7—81968
methyl thiolformate, conformer stability, ab initio SCF-MO calcs. 7—81968
methyl thionoformate, conformer stability, ab initio SCF-MO calcs. 7—81968
methyldiazohydroxide, interconversion mechanism, ab initio MO SCF calcs. 7—109756
methylene dications, substituted, bond lengths, isomeric structs., ab initio MO calcs. 7—109711
methylene phosphoranes, semipolar P—O and P—C bonds 7—129559
3-methylene-1,4-pentadiene, mol. mechs., ab initio MO calcs. 7—81982
methylfluorosilanes NO exciplexes, relative energies, MO calcs. 7—89904
N-methylketenimine, IR spectrum, normal coordinate anal., ab initio MO calcs. 7—116967
microclusters, evolution of electronic and struct. props. 7—122769
molecular geometry and dynamic orbital forces, density functional theory calcs. 7—96526
monomethylnitrosamine, interconversion mechanism, ab initio MO SCF calcs. 7—109756
multiply charged ion-atom/molecule collisions, electron transfer, ab initio calcs. 7—89946
naphthalene, graph theory adjacency matrices, eigenvectors, topological anal. 7—109701
nitroacetylene derivatives, electrostatic potentials and rel. bond strengths 7—129829
nitrone, electronic struct., spin-coupled descriptions 7—122326
nitrosoacetylene, derivatives, electrostatic potentials and rel. bond strengths 7—129829
organic cpds., bonding between S and O, ab initio SCF-MO study 7—116817
organic molecules, conformational struct., transition energies, thermochemical parameters, all valence electron approx. calcs. 7—109759
organic radical clusters, intermol. effective exchange interaction, MO calcs., appl. to organic conducting magnet design 7—74805
organometallic cpds., bond energies, HFS MO calcs. 7—96540
oxadiazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7—82203
peroxytrifluoroacetic acid, O—O bond props., SCF MO calcs. 7—109732
phenol, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7—109753
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7—90191
pnictogen fluorides, tricoordinate, inversion barriers, periodic trends 7—74408
pnictogen hydrides, tricoordinate, inversion barriers, periodic trends 7—74408
point groups, σ, π and δ representations 7—74398
polymers, electronic props., MO-based and valence effective Hamiltonian study 7—118352
polymers, superexchange interaction, mag. props. 7—85278
polymethines, intramolecularly coupled, topological effect on MO energies 7—109740
polyphenylene vinylene films, doped, metallic cond., polarised IR spectra, dichroic ratio meas. 7—70274
propenal, Hc(I) photoelectron spectra and MO calcs. 7—103573
propenoyl halides, He(I) photoelectron spectra and MO calcs. 7—103573
n-propylamine, vibrational and conformational analysis, ab initio MO calcs, infrared spectroscopy 7—122539
pyramidalisation, geometrical interpretation of π-orbital axis vector in 3D 7—135836
pyrene, graph theory adjacency matrices, eigenvectors, topological anal. 7—109701
radical clusters, intramol. effective exchange integrals, ab initio GMO calcs., appl. to magnetic polymer design 7—74804
SCF wavefunctions, at. orbital populations and charges calcs. 7—141456
small polyatomic molecules, angular geometry, ab initio STO-3G bond orbital calcs. 7—96502
split-valence bond-orbital calculations of intermolecular and intramolecular interactions 7—129585
tetracyanoethylene with meta-disubstituted benzenes, EDA complexes, charge transfer spectra 7—122393
tetrafluoromethane, edge inversion process, spectrosc. props. 7—109870
tetrahydroazepines, conformational struct. and energies, QCFF/PI method calcs. 7—109752
thiadiazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7—82203
thioamides, rotational transition structs., ab initio MO calcs. 7—103471
thymine-d3, elec. field gradient, ^2H NMR 7—118872
$(TMTSF)_2ClO_4$, MO calcs. for $(TMTSF)^+$ and $(TMTSF)_2^+$ cations 7—81948
toluene, supersonic jet, dispersed emission and TOFMS 7—129770
transition metal complexes, bond energies, HFS MO calcs. 7—96540
molecular orbitals calculations continued
transition metal oxides, diatomic, atom superposition and electron delocalisation MO theory 7—135825
transition metal oxides, first series, bonding in bulk and diatomics 7—137302
transition metal sulphide, first series, bonding in bulk and diatomics 7—137302
transition struct., diabatic surface formalism, VB and SCF calcs. 7—132908
transition structures, standard geometries 7—109718
triazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7—82203
triethylamine, electron photoelectron spectra, ionisation potentials, excited states, transitions, SCF calculations, binding energies 7—141688
trifluoroethyl cation, structs., stabilities, ab initio MO calcs. 7—89903
trimethylamine, lone pair electrons, electron momentum spectroscopy 7—129867
tris(substituted amino) sulphonium ions, cryst. and mol. struct. 7—74410
troponoid spiro compounds, absolute stereostruct., CD spectra calcs. 7—90235
uracil and analogs, core-electron binding energies, semiempirical HAM/3 study 7—81965
vibrational spectroscopy, ab initio MO calcs. *(Japanese)* 7—74557
vinyl cation, structs. and energies obtained using ab initio MO theory 7—109697
vinyl chloride, isomerisation equilib. rel. to carcinogenicity 7—93277
xylenes, supersonic jet, dispersed emission and TOFMS 7—129770
ylides, gas phase struct., ab initio MO calcs. 7—116863
ylidions, gas phase struct., ab initio MO calcs. 7—116863
$AgBr_{0.15}Cl_{0.85}:Ag^{2+}$, anomalous quasi-isotropic g-tensor, strong covalency 7—91521
α-Al_2O_3/Pt interface, bonding, MO theory 7—105299
Au_{13} icosahedral clusters, SCF Dirac scatt. wave calcs. 7—96912
BaO, vapour phase, UV photoelectron spectra, orbital calcs., dissoc. energies, chemielectron spectra 7—141625
Be ethylene, exciplexes, triplet state, reaction hypersurfaces 7—68236
CH^+, isotopic species, vibr.-rot. transition probabilities, electric dipole moment fn. calcs. 7—96504
$C_2H_4O^+$, struct., ab initio MO calcs. 7—109742
C_2N_2, dissoc. electron attachment spectroscopy 7—90435
C_2N_2, ionisation pots., valence shell correl. effects 7—81989
CO, adsorpt. on Pt:TiO(FeO)(ZnO)(Fe), MO calcs. 7—76607
CO, correl. wavefunction, canonical and localised orbital basis 7—109788
$(CO_2)_nX$, X=Cl^-, Br^-, I^-, F^-, stability, struct., ab initio MO calcs. 7—138981
$CdBr_2:Ag^{2+}$, anomalous quasi-isotropic g-tensor, strong covalency 7—91521
Cl compounds, $K\alpha$ X-ray emission spectra chemical effects, SCC-DV-Xα MO calcs. 7—129593
Cl_2, valence shell orbital momentum distribs. and binding energies, (e,2e) spectrosc. 7—89905
Co_2, correl. wavefunction, canonical and localised orbital basis 7—109788
CrF_6^{3-} ion, spin density, SCF calcs. 7—109717
CrH_2^+, electronic and geometric structure, bond energies, CI calcs., VB calcs. 7—141473
Cu (II) complexes, ionic radii and d orbitals mixing coeffs. 7—68197
Cu complexes, delocalised metal-ligand bonds, ESR spectra 7—103552
Cu oxide high T_c superconds., Cu^{2+} effective exchange integrals, ab initio MO calcs. 7—125229
CuCO complexes, interactions, MO CI calcs. 7—122372
$CuCO^+$ complexes, interactions, MO CI calcs. 7—122372
$Cu^{1+}Fe^{3+}S_2^{2-}$, X-ray absorption spectroscopic studies 7—138547
D_2O, valence orbitals, electron momentum spectrosc. obs. 7—89906
Fe complex, trans-$MFe(CO)_3$ substituted phosphine 7—129619
FeCO, molecular props., ab initio molecular orbital calcs. 7—74404
GeH_4, edge inversion process, spectrosc. props. 7—109870
GeH_4, total energy calcs., scaling of H basis 7—109737
H_2^+, in arbitrary mag. field, pot. energies of first few electronic states, wave functions anal. 7—122390
H_n Hund's rule breakdown, CI calcs. 7—89985
HBr, acidity scale, ab initio MO calcs. 7—135832
H_2CN^+, low-lying triplet and singlet states, ab initio SCF and MP MOC calcs. 7—109703
HCl, acidity scale, ab initio MO calcs. 7—135832
$HCo(CO)_3$, mol. geometry and electronic struct. calcs. 7—89922
$HCo(CO)_4$, mol. geometry and electronic struct. calcs. 7—89922
HD^+, molecular dissoc. states, hyperspherical adiabatic framework, translation factors bypass 7—89948
HF, ground state struct., split-valence bond-orbital calcs. 7—109786
H_2N_2, ionisation pots., valence shell correl. effects 7—81989
HNO_2, geometry, stability, system comparison, ab initio studies 7—129558
HNS_2, geometry, stability, system comparison, ab initio studies 7—129558
H_2O, ground state struct., split-valence bond-orbital calcs. 7—109786
H_2O, valence orbitals, electron momentum spectrosc. obs. 7—89906
H_2O^{2+}, low-lying electronic states, singlet-triplet splitting, HF calcs. 7—135828
H_2O_2, O—O bond props., SCF MO calcs. 7—109732
$H_2O^{2+}Fe^{2+}(Fe^{3+})$ ions, ab initio pair pots., molecular dynamics calcs. 7—71474
HONO, torsional pot., ab initio SCF MO calcs. 7—110060
H_3PO, semipolar P—O and P—C bonds 7—129559
$H_6Si_2O_7$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7—103392
He, reionisation, at solid surfaces threshold energy *(Japanese)* 7—77735
La-Ba-Cu-O high T_c superconductor, electronic struct. 7—118344
$Li^+ClO_3^-$, ion pairs, struct., ab initio MO calcs. 7—109695
MoH_2^+, electronic and geometric structure, bond energies, CI calcs., VB calcs. 7—141473
N_2, ionisation pots., valence shell correl. effects 7—81989
NF_3, lone pair electrons, electron momentum spectroscopy 7—129867
NF_3^+, inversion barrier, ab initio UHF calcs. 7—96505
NH_3, ground state struct., split-valence bond-orbital calcs. 7—109786
NH_3, lone pair electrons, electron momentum spectroscopy 7—129867
NH_3, valence ionisation, photoelectron branching ratios 7—110016
Na_2, perturbation facilitated optical-optical double reson. spectroscopy, hyperfine splittings, struct. 7—96753
$Na^+ClO_3^-$, ion pairs, struct., ab initio MO calcs. 7—109695
$NaHe^+$ quasimolecule, $^1\Sigma$ and $^3\Sigma$ states, energies and radial couplings 7—81966

molecular orbitals calculations continued
$Nb_2(C,N)_xH_y$, electronic struct., interatomic interactions, by cluster MO method 7−70186
Ni complexes, superconducting, molecular designing analysis 7−84638
O^{6+}+He, electron capture, travelling MO method calcs. 7−82342
OH+acetylene (ethylene), radical reactions, barrier heights, perturbation theory 7−132918
$O_2^-(H_2O)_n$, gas phase, electron transfer, ab initio MO calcs. 7−68500
$Os_n(CO)_m$ clusters, electronic struct. calcs. 7−90467
P oxyacids, conjugate bases and neutral radicals, ab initio calcs. 7−109733
PH_3O, structure and electronic structure, basis set effects 7−141432
RuO_n, binding to Ru (001), struct., stability, diffusion barriers, molecular orbital study 7−84530
SCN^-, interaction with H_2O mols., calcs. and NMR 7−89944
Si compounds, nucleophilic substitution reactions, MO calcs. 7−93280
Si compounds, tetracoordinated, nucleophilic substitution pathways, MO calcs. 7−93279
SiC polytypes, structures and bonding, ab initio MO calcs. 7−98076
SiH_4, edge inversion process, spectrosc. props. 7−109870
Si_6H_6, mol struct., ab initio MO and electron correl. calcs. 7−81922
$Si_2O_7^{6-}$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
SnH_4, edge inversion process, spectrosc. props. 7−109870
SrO, vapour phase UV photoelectron spectra, orbital calcs., dissociation energies, chemielectron spectra 7−141625
TiO_xH_y, electronic and crystallochem, characts., quantum chem. modelling 7−143345
V $(C,N)_xH_y$, electronic struct., interatomic interactions, by cluster MO method 7−70186
VO_xHy, electronic and crystallochem, characts., quantum chem. modelling 7−143345
WF_6, ionisation energies, UPS study 7−136006
Y-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
$ZnS:Mn^{2+}$, orbit-lattice coupling coeff., ligand field theory 7−124936
$ZnSe:Mn^{2+}$, orbit-lattice coupling coeff., ligand field theory 7−124936

molecular orientation
acetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
acetone, nematic phase, ^1H NMR spectra, two-dimens. correl. technique 7−70651
acetonitrile, hydrolysis, ab initio calcs. 7−113902
acetonitrile, mols. in liq. phase, vibr. and orientational relax. 7−103516
acridine-fluorene mixed cryst. photochemical H-transfer, cryst. constraints 7−106806
aligned anisotropic fluids, rotational contribution to the vibrational band-shape of ordered systems 7−132250
alkoxyphenyl 4-alkoxybenzoate-based ferroelec. liq. crysts., synthesis and props. 7−125701
alkoxyphenyl trans-4-alkyl cyclohexane carboxylates, solid, nematic and isotropic phases, mag. susceptibility meas. 7−137231
alkyl chain liq. cryst., orientational order, D NMR studies 7−75977
alkylammonium derivatives, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
4,4′-di-n-alkylazoxybenzene, nematic and smectic A phases, orientation order, NMR studies 7−111358
aminoanthraquinones, intramolecular orientation, transition moment, fluoresc. 7−82273
amphiphile, bilayer-forming, adsorbed monolayers, polarised UV reson. Raman and absorpt. spectra 7−71698
aniline and derivatives, soln., rot. dynamics, picosecond fluoresc. anisotropies 7−90255
anthracene-TCNB charge transfer crystals, phase transition, lattice dynamical approach 7−111806
benzal chloride, dichloromethyl group orientation, conform., overtone spectra investig. 7−68300
benzene, nematic phase, ^1H NMR spectra, two-dimens. correl. technique 7−70651
benzoic acid, adsorbed on Ag colloids, SERS spectra study 7−74631
benzoic acid, chemisorbed on Ag sol, SERS 7−96708
benzol bromide, dibromomethyl group orientation, conform., overtone spectra investig. 7−68300
benzyl alcohol in phospholipid bilayers, orientational ordering, dipole-spin interaction meas. 7−139225
benzylideneaniline, intermolecular energy calcs. 7−137222
p-bromo-p-n-hexyloxybenzylidene aniline, smectic B phase, mol. dynamics, PMR relax. meas. 7−137228
n-butane, condensed phase, mol. dynamics simulation, plastic transition 7−137179
n-butane, condensed phases, mol. dynamics simulation 7−137178
cellulose, mol. orientational order, NMR anal. 7−119717
chlorobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
chloroform-d_1, oriented in liq. crysts., NMR spectra 7−92510
chloromethylstannanes, soln. struct. and preferred orientation in liq. crysts. 7−68362
complex molecules, in soln., Brownian rot. effect on light-induced anisotropy 7−82688
cooperative phenomena in monolayer organisation *(German)* 7−131449
cyanophenyl heptylcinnamate, nematic, unstable mol. orientations and polarisability 7−142578
p-cyanophenyl trans-4-pentyl cyclohexane carboxylate, solid, nematic and isotropic phases, mag. susceptibility meas. 7−137231
4-(4-(N,N-dimethylamino)phenylazo)azobenzene, liq. cryst. solns. orientational order, NMR 7−82220
2,3-dimethylanthracene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
2,3-dimethylnaphthalene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7−78730
dinitrophenylpolyenes, polar fragments, selective orientational solvation effects on spectra 7−144705
DNA, optical Kerr effects, rel. to orientation 7−93646
DOBAMBC helicoidal ferroelec. smectic C* liq. cryst., spontaneous polarisation 7−113065
ethane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
ethene adsorbate orientation on Pt (111) and (110), polar angle X-ray photoelectron diffr. study 7−143209
molecular orientation continued
1-ethoxy-4-chlorobenzene dissolved in nematic liquid crystal, conformation and orientational order 7−122570
ethyne adsorbate orientation on Pt (111) and (110), polar angle X-ray photoelectron diffr. study 7−143209
ferroelectric liquid crystals, uniform layer-tilted state, electro-optical effects 7−118986
ferronematic suspension, orientational struct. and mag. props. 7−105969
fluoride-bearing liquid crystal MB80.5 (F), structure and phase transitions *(Chinese)* 7−97911
glass fibres, surface molecular orientation layer, IR spectrosc. obs. 7−85613
4,4′-di-n-heptylazobenzene, nematic and smectic A phases, orientation order, NMR studies 7−111358
4,4′-di-n-heptylazoxybenzene, nematic and smectic A phases, solvent-solute interactions 7−111359
hexadecylpyridiniumsalicylate, aq. soln., rod-like micelles alignment, nearest neighbor order 7−111341
high spontaneous polarisation, electro-optical props. 7−125627
ice, partially ordered, config. entropy 7−105073
ice-water interface, density and orientation profiles, diffusion consts., TIP4P model 7−137281
intercalation cpd., 2D, variable temp. Mossbauer obs. 7−113047
intramolecular transitions, polaris. anal. using liq. cryst. matrix *(Japanese)* 7−129592
isotropic samples, Raman microspectroscopy polarisation meas. 7−132268
Langmuir-Blodgett films, disclinations obs. 7−124744
lignin, mol. orientational order, NMR anal. 7−119717
liquid cryst. nematic-to-smectic A transition and elastic consts. determ., optical response method *(Turkish)* 7−111872
liquid crystal, opt. induced mol. reorientation, common path interferometer arrangement 7−115999
liquid crystal alignment and surface struct. of obliquely deposited layers 7−124079
liquid crystal alignment by plasma-polymerised films 7−69586
liquid crystal polymers, comb-shaped, dielec. relax. and mol. motion 7−92590
liquid crystalline elastomers, orientation, stress effects 7−75986
liquid crystals, IR markers for order parameter determ. 7−137206
liquid crystals, stochastic molecular orientational fluctuations, incoherent cold neutron scatt. studies 7−91431
liquid crystals mixtures and pure compounds, correl. between mol. struct. and spontaneous polarisation 7−137227
liquids, rotational dynamics, time-resolved CARS obs. 7−122543
long chain esters, Langmuir-Blodgett method *(Japanese)* 7−76696
main-chain liquid crystal polymer, solidification, elec. fields, surfaces and mesophase ageing effects 7−91480
merocyanine dyes, orientation in nematic liq. crystal matrix, absorpt. spectra study 7−78757
methane: Kr, rot. excitation, orientational order, neutron scatt. study 7−104598
$(methane)_{1-x}Kr_x$, solid mixture, orientational disorder and rot. excitation, neutron scatt. meas. 7−74782
methane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
methyl chloride, microclusters and their internal ang. modes, rot. anal. 7−90134
methyl groups, correlation, multiple-quantum NMR study 7−90218
methylhalides, polycryst., methyl rot., inelastic incoherent neutron scatt. 7−83795
MMBA, intermolecular energy calcs. 7−137222
MMSA, intermolecular energy calcs. 7−137222
molecules with long flexible substituents, orientation in polymer matrix 7−103481
monodomain liq. cryst., orientational order parameter determ. from X-ray diffr. pattern anal. 7−91440
multilayer thin films, mol. orientation, Raman spectrosc. obs. using integrated optics 7−77591
multipolar fluid, mol. orientational ordering in elec. field near interface 7−75966
nematic liq, cryst. mixtures, switching transition in external mag. field, mol. field theory calcs. 7−91802
nematic liq. cryst., electric field induced deformation, determ. 7−137215
nematic liq. crystals, phase behaviour in presence of electric and mag. fields 7−137556
nematic liquid cryst., anchoring props., attenuated total reflection studies, volt. depend. 7−113140
nematic liquid cryst., spontaneous Freedericksz effect, surface instability description 7−111361
nematic liquid crystal polymers, flow and mol. orientation, computer simulation 7−75963
nematic normally oriented layer, domain struct. under low freq. shear 7−117813
nematic twisted thin film, temporal behaviour of molecules 7−75978
nematic-smectic A phase transition, orientational order of mol. fragments 7−105025
nematic-smectic C transition, influence of boundary conditions 7−124498
neopentane-d, plastic cryst., orientational disorder, neutron elastic scatt. obs. 7−83796
nitrobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
4-n-nonoxybenzylidene-t′-butylaniline, smectic-F phase, orientational flow, D NMR obs. 7−99589
octaethylporphine, in Ne matrix, nondestructive photoorientation, IR and visible obs. 7−68297
ordered system, mol. orientation and reorientation, probability distrib. function 7−104533
organic mols. and mol. chains bonded to surfaces, NEXAFS studies, review 7−144173
4-pentyl-4′-cyanobiphenyl liquid crystal film with embedded azo dye, guest-host effect 7−75984
phenol-cinnamic acid interface, second-order susceptibility tensors 7−82686
phospholipid monolayers, acyl chain ordering and crystallisation 7−100823
photosemiconductor-nematic liq. crystal system, intrinsic optical bistability study 7−118541
phthalimides, intramolecular orientation, transition moment, fluoresc. 7−82273
phthalocyanine-$AlCl_n$ thin films, Raman spectra, Davydov splitting 7−74635

molecular orientation continued
pinacyanol, solns., intramolecular and orientational motion, fluoresc. study 7−74697
PMMA, oriented, yield and thermoelastic props. 7−69810
polar fluids, liq.-vapour interface, computer simulation 7−76548
polar fluids liquid-vapour interface, struct. and surface tension, integro-diff. eqn. and perturbation theory 7−76547
poly(p-phenylene vinylene), films, highly drawn, molecular orientation and conductivity 7−111432
poly-4-BCMU monolayer film, third harmonic generation study 7−137262
poly-N-vinyloxycarbonyl carbazole, dipole moment associated with side group, dielectric meas. 7−70698
trans-polyacetylene, fully oriented, polarised reson. Raman scatt. 7−85736
polyaniline, ab initio HF energy band struct. calcs. 7−116820
cis-1,4-polyisoprene, deformed networks, orientation of dissolved rigid rods 7−91478
polymer films, planar macromolecular orientation, transmission IR band shapes 7−113208
polymeric liquid crystals, rheology 7−69591
polypropylene fibres, struct. and props., high-mol. polyethylene oxide effects *(Russian)* 7−97994
polypropylene films, contoured, orientational stretching *(Russian)* 7−138799
probe molecules in lipid multibilayers, mol. reorientational dynamics and orientational order correl. 7−90249
pyridine, orientation in nematic liq. cryst., nucl. relax., ^{1}H NMR study 7−90193
reaction anisotropy, reagent translational and rot. motion averaging 7−138996
rod- and disk-like solutes in nematic liq. crystal 5CB, orientational order, PMR and DNMR 7−74665
rod-like systems, elongational flow effect on isotropic-nematic phase transform. 7−105016
salicylideneaniline, intermolecular energy calcs. 7−137222
Schiff's base liquid crystal, oriented, X-ray diffr. and optical studies 7−91432
self-focusing with orientation aberration, polarisation effects 7−69592
sodium laurate, oriented multilayers, ATR IR spectra 7−82089
spheroidal surface, fixed or freely rotating, nucl. spin relax., lateral diffusion 7−125553
TCNQ-N-docosylpyridinium charge transfer salts, Langmuir-Blodgett films, struct. props. 7−70115
tetracyanobenzene mixed stack mol. cryst. orientational instabilities 7−131080
22-tricosenoic acid, monolayer on water, annealing disclination 7−137715
22-tricosenoic acid, thin Langmuir-Blodgett films, surface plasmon-polaritons study 7−84590
22-tricosenoic acid Langmuir-Blodgett multilayers, surface press. effects 7−143229
triethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
trifluoromethane, desorption and scatt. from Ag (111), orientation 7−137721
trimethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
twisted nematic cell, transient behaviour 7−131021
vinylidene fluoride-tetrafluoroethylene copolymer films, uniaxial stretching, acoustic obs. *(Russian)* 7−138798
water, adsorbed, orientation and elastic electron scatt. differential cross section 7−118262
X-ray diffr. study 7−117814
CO adsorbate orientation on Pt (111) and (110), polar angle X-ray photoelectron diffr. study 7−143209
CO, in solns., orientational relax., IR absorpt. band shape 7−82119
CdTe-nematic liq. cryst., light-induced orientational effects study 7−85006
CrO_4^{2-}, in liq. crysts., linear dichroism study 7−82237
$CuCl_2.2(H,D)_2O$, IR and Raman spectra, vibr. modes, assignment and coupling of water librations 7−82141
$Fe(CN)_6^{3-}$, in liq. crysts., linear dichroism study 7−82237
H_2 in a-Si:H, mol. relax. versus orientational ordering 7−137359
H_2, solid, orientational order parameters, density matrix approach 7−76535
IU+F, reactive scatt. using supersonic at. beam 7−126443
Ir (III) conducting surface with absorbed CsBr molecules, molecular orientation, photodissociation study 7−82304
$K_2CuCl.2(H,D)_2O$, IR and Raman spectra, vibr. modes, assignment and coupling of water librations 7−82141
$K(NH_3)_{4.3}C_{24}$, ^{1}H NMR, ^{14}N quadrupolar coupling, ^{1}H chemical shift, mol. orientation 7−92526
$Mo(CO)_6$, in liq. crysts., linear dichroism study 7−82237
NH_4ReO_4, cooperative ordering, pseudospin model 7−111435
O_2 chemisorbed on Ag(110) and Pt(111), bond length and orientation, near-edge EXAFS study 7−112081
O_2+Na(Rb), intermultiplet collision transfer cross sections 7−129856
Pt (111), H_2O and K adsorption, work function changes, molecular orientation 7−105260

molecular photodissociation
acetone, fragmentation by excitation in O K edge region 7−82298
alkali metal dimers, photodissoc., mag. field effects, at. mag. sublevel population 7−122630
alkyl iodide and substituted alkyl iodides, photodissoc., two-photon VUV laser induced fluoresc. detection 7−90242
aniline, multiphoton dissociation, reaction rate const., TOF spectra 7−139032
arene molybdenum tricarbonyls, multiphoton dissoc./ionis., intramol. vibr. relax. effect 7−129822
azoalkane, gas-phase, sequential bond cleavage, time-resolved CARS obs. 7−68309
benzaldehyde, protonated, photodissoc. in ion trap mass spectrometer 7−103593
benzene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
benzene-HCl van der Waals complex, dissociative photoionis. 7−96799
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7−116977
bromobenzene cations, photoexcited, collisional relax. meas. 7−110036
bromochlorodifluoromethane-HI, laser induced multiphoton dissoc. 7−129805

molecular photodissociation continued
t-butyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
butylbenzene-$d_0(d_3)(d_9)$, photodissoc., isotope effects 7−103595
chlorobenzene ion, time-resolved photodissoc. 7−96804
chlorodifluoromethane, IR multiphoton dissociation, C_2^+ radical formation *(Chinese)* 7−110029
chlorodifluoromethane, isotope selective dissoc. using q-switched CO_2 laser 7−78530
chlorodifluoromethane decomposition kinetics, laser freq. effect 7−136026
chlorodifluoromethane-d_1, IR multiphoton dissoc., laser radiation parameters and sample press. effects 7−96808
chlorodifluoronitrosylmethane, photodissociation, photofragment fluoresc. spectra anal. 7−96801
chloromethanes, photodissociative excitation, fluoresc. yields 7−110030
chlorotrifluoromethane, IR multiphoton vib. excitation and dissoc. 7−103604
conference, Liblice, Czechoslovakia (Oct. 1986) 7−72719
9-cyanoanthracene-dimer crysts. solid-state photoreactions, ESR and visible-UV spectra 7−144733
decafluorocyclohexene, Retro-Diels-Alder reaction, IR multiphoton excitation, UV spectra anal. 7−74658
diagnostics by CAMAC time-of-flight analyser 7−103689
dichlorodifluoromethane-HI laser induced multiphoton dissoc. 7−129805
diiodomethane, adsorbed molecules, photodissociation and desorption 7−143188
1,4-dioxane ions, photodissoc., 7−119538
2,5-diphenylfuran molecules, gaseous phase, photophysical parameters 7−82272
ethylbenzene $Cr(CO)_3$, multiphoton dissoc./ionis., collisional effects 7−96811
ethylbenzene-$d_0(d_2)(d_7)(d_{10})$, photodissoc., isotope effects 7−103595
ethylene, collisionless IR multiple-photon dissoc., radical generation 7−71510
ethylsilane, IR multiphoton dissoc., reaction channels study, ab initio and MNDO calcs. 7−74438
excited states, nonradiatively coupled, photodissoc., time-domain formulation 7−103600
fragmentation of a vibrationally excited molecule in electronic transitions and selective bond rupture 7−136023
Freon 113, disassociation V-V energy transfer in intense IR low field *(Chinese)* 7−96800
fumaronitrile, C_2 Swan band emission by multiphoton photodissociation at 193 nm 7−141636
heptafluoroiodopropane, photodissoc., spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
heptafluoropropane, IR multiphoton dissoc. 7−136025
heteronuclear transition metal dimer ions, photodissoc. 7−129807
2,4-hexadiyne, laser multiphoton ionis. dissoc. mechanism 7−110024
hexafluoro-2-(trifluoromethyl)-propane-$t_0(t_2)$, CO_2 laser induced multiphoton dissoc., T isotope separation study 7−68415
hexafluoropropene cation radical, photodissoc. in ion trap mass spectrometer 7−103593
hydrogen isocyanate, photodissoc., CO internal state distrib. 7−126465
hydrogen isocyanate, photodissoc., NH rot. state distrib. 7−126466
interstellar medium, role of far-IR radiation field in line excitation and cooling of photodissoc. regions 7−146076
iodobenzene ions, IR radiative relax. obs. using photodissoc. 7−96805
iodoethane, photofragmentation dynamics spectroscopy 7−68418
iodomethane, photodissoc., multiphoton ionis. detect. 7−117034
iodotrifluoromethane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
iron porphyrins, CO photodissoc., ps time-resolved IR spectra 7−119719
isopropylthio radicals, photodissociation, fluorescence, radiative lifetime, vibrational levels, stretching modes 7−135988
ketene, photodissoc., pot. energy surfaces 7−122413
methanation catalytic reaction, photodissociation, high solar flux effects 7−144732
methanethiol, photoexcitation, photofragment fluorescence, excitation spectra, Rydberg series, bands 7−144731
methyl bromide, adsorpt. on LiF, photodissoc., photoreaction and photodesorpt. 7−124684
methyl bromide, molecular resonances, autoionisation, photoelectron spectra study 7−141633
methyl iodide, molecular resonances, autoionisation, photoelectron spectra study 7−141633
methyl iodide, photodissoc., spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
methyl nitrite, mol. beam photodissoc., translational spectra 7−74721
methyl nitrite photodissoc. in second UV absorpt. band, photofragment TOF spectra 7−116984
$(methylamine)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
N-$(methylformamide)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
$(methyliodide)_n$, cluster formation photodissociation, ultraviolet spectra 7−135922
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
multiple-photon excitation and dissoc. book 7−88755
myoglobin, photodissoc., reson. Raman spectra 7−78764
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
nitrobenzene cation, IR multiphoton dissoc. 7−119545
nitromethane, fragmentation dynamics, quantum mechanical close coupling calcs. 7−82301
nitrosyl chloride molecules, photolysis, I quantum yields 7−129815
nonafluoro-4-iodobutane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
nonafluoro-tert-butyl iodide, vibrational overexcitation above dissociation limit in IR multiphoton field 7−103605
nonlinear photoprocesses in diatomic molecules, review 7−136027
perfluoroalkyl iodides, photofragmentation, IR, multiphoton, absolute rate parameters determ. 7−122639
phenacyl phenyl sulphone in micellar soln., photodecomposition, mag. field effects 7−113958
phenetole ions, laser-induced dissoc., appearance energies determ. 7−110032
photofragment alignment, (1+1) circular dichroism in photoelectron ang. distrib. obs. 7−110041
photofragment dynamics, product correls 7−122631

molecular photodissociation continued
photofragmentation, IR, multiphoton, absolute rate parameters determ. 7−122639
photofragmentation, pot. surfaces, exit-channel dynamics 7−122637
photofragments, nanosec. time-resolved CARS spectrosc. 7−82155
polyatomic ions, IR photodissoc. obs. 7−96803
polymers, laser induced ablation, thermal nature 7−106794
i-propyl iodide, photofragmentation dynamics 7−122646
resonantly enhanced multiphoton ionisation-PES, photoionisation and photodissoc. study 7−74716
tetramethyltin, photodissoc. at 193 nm 7−110049
s-tetrazine, photodissoc., ab initio calcs., pot. energy hypersurfaces, radiationless transitions 7−68416
thiophenol, electron impact ionis., relax., photodissoc. 7−136073
toluene-$d_0(d_3)(d_5)(d_8)$, photodissoc., isotope effects 7−103595
triatomic molecule, photodissoc. dynamics, rot. reflection dynamics 7−122636
trifluoroethylene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
trifluoroiodoethane, photofragmentation dynamics spectroscopy 7−68418
trifluoromethyl hypofluorite-H_2 mixture, multiphoton dissoc., IR fluoresc. 7−141640
(2,4,6-trimethylbenzoyl)diphenylphosphine oxide, micellar soln., photodecomp. in mag. field 7−129814
trimethylgallium, photon enhancement of decomposition, appl. to GaAs photo-CVD 7−71514
1,3,5-trioxane, multiphoton dissoc., collision effects, IR spectra anal. 7−74601
unimolecular ion decay kinetics, reson.-enhanced multiphoton ionisation mass spectra anal. 7−90300
unimolecular multiphoton dissociation with UV absorpt., quantum statistics 7−110046
unimolecular reactions, coherent radiative control, 3D calcs. 7−126427
UR multiphoton dissociation processes, Arrhenius-type relation applicability 7−103591
UV-multiphoton fragmentation, mass and photoelectron studies 7−122650
van der Waals complexes, photofragmentation, statistical and quantum dynamical theory 7−122654
van der Waals mols. vibr. predissoc. and prereaction, collinear quantal study 7−122645
vinylchloride, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
AsH_3, photon enhancement of decomposition, appl. to GaAs photo-CVD 7−71514
a-As_2S_3, temp. depend. of photodissociation 7−103602
BCl_3, multiphoton dissociation in two-frequency IR laser field, B isotope separation 7−82303
Br_2, laser-excited, collision-induced dissoc., rate const. meas. 7−103598
Br_2, photodissoc., continuum absorpt. coeff. and quantum yields meas. 7−129730
Br_2, photodissoc., spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
C_n^+ cluster, photodissoc., fluence depend. meas. 7−90297
CH^+, laser photofragment spectrosc. 7−122498
CH^+, photodissoc. to open-shell atoms, nonadiabatic effects 7−122633
CN, radical, photodissoc. probability, SCF-CI calcs. 7−129812
C_2N_2, predissoc., photofragment vibr. distribs., ab initio MCHF pot. energy surface calc. 7−90344
C_2N_2-O_2 mixtures, photodissociated, chemiluminesc. reactions 7−68417
CO, Rydberg states, photoabsorpt. and photodissoc. cross sections 7−103592
$(CO)_2^+$, photodissoc., ground ^2B_u and excited ^2B_g pot. energy surfaces calc. 7−110045
$CO_2.O_2^+$ cluster ions, photodissoc. dynamics investig. 7−129809
CS_2, multiphoton spectra, fragmentation, photodissociation, photoionisation photolysis 7−141639
CS_2, photodissoc., photofragment IR laser kinetic spectra 7−93343
CS_2, singlet and triplet channels, photofragment spectroscopy 7−141637
CS_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
CS_2^+, electron impact, photodissoc., laser-ion beam study 7−68468
CS_2+Ar, photodissoc. and Penning ionis., steric depend. 7−90389
Ca_2 molecular photodissociation, quantum interference effect 7−103603
CdI_2, photodissoc. 7−110048
Co_2, photodissoc., Wigner method test 7−103601
$Cr(CO)_6$, UV multiple photon dissoc. 7−74720
D_2, photodissociation branching ratio, interference effects 7−96807
D_2O_2, photodissoc., rot. anisotropy, product state distrib. 7−132956
$Fe(CO_5)$, adsorbed on Ag (110), UV-induced photochem. 7−119560
Fe_n(methanol)y, metal cluster-adduct, IR multiple photon dissoc. spectra 7−129817
H, photoabsorption, photodissoc. and fluoresc. 7−90299
H^+ production, benzene resonant multiphoton ionisation in visible 7−129803
H_2 photodissociation branching ratio, interference effects 7−96807
H_2, photofragment, rovibr. energies and populations, photodissoc. meas. 7−103599
H_2 photoionisation dynamics, vibr. and rot. branching ratios 7−141631
H_2, plasma generation for beat wave expts., multiphoton ionisation, electron density anal. 7−104432
H_2, selectively excited rot.-vibrs. states, fluoresc. dissoc. 7−116939
H_2^+, electron impact prod., photodissoc., rot. distrib. determ. 7−116929
H_2^+, photofragment, rovibr. energies and populations, photodissoc. meas. 7−103599
HBr, photodissoc. kinetic and internal energy distribs. determ. 7−122644
HCN→H+CN($X^2\Sigma$), photodissoc., energy disposal 7−90296
HCO radical, ground and excited states, laser induced fluoresc. and multiphoton ionis. spectra 7−129781
HI, multiphoton multiple ionisation, laser 7−141547
H_2O, photodissoc., photofragment laser-induced fluoresc. study 7−68334
H_2O, photodissoc., Wigner method test 7−103601
H_2O, photodissoc. dynamics in $\tilde{B}$-$\tilde{X}$ absorpt. band 7−122635
H_2O_2, photodissoc. dynamics, 248 nm, photofragment quantum state distribs., vector correls. 7−122632
H_2O_2, photodissociation, ps photofragment spectroscopy study 7−113966
$(H_2O)_m(Ar)_n$, H-bonded, photoionis. and fragmentation 7−122624
$H_2O(D_2O)$, sensitive quantum state selective detection by (2+1) reson. enhanced multiphoton ionisation 7−117032
HS, photofragments, rot. population distribs., kinematic constraints on final state interaction 7−74719
H_2S, photodissoc. kinetic and internal energy distribs. determ. 7−122644
molecular photodissociation continued
HX, X=Br,I, molecular resonances, autoionisation, photoelectron spectra study 7−141633
^3H laser isotope separation, IR laser-induced multiphoton dissoc. technique 7−106817
Hg halides, photodissociation, spectroscopy, kinetics and laser effects 7−141839
Hg halides, three-photon sequential excitation path, excimer laser excitation 7−141641
I_2, dissoc., saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750
I_2 predissociation in supersonic beam condenser microphone detector 7−103594
IBr, photodissoc., spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
ICN, A state, I* quantum yields, laser gain-vs.-absorpt. spectra 7−93342
ICN, photodissoc., CN fragment rot. distrib. 7−129813
ICN, photodissoc., laser-induced fluoresc. probed 7−110043
ICN, photodissoc., spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
ICN, photodissoc. dynamics, CN $X^2\Sigma^+$ fine struct. population 7−122634
ICN, photodissoc. prod. of CN, rot. distrib. and fluoresc. polarisation 7−129806
ICN, rot. alignment, photodissoc. 7−110038
I_2M (M=H_2, N_2, O_2, I_2) clusters, photodissoc., solvent caging, fluoresc. spectra 7−136021
I_2M clusters, photodissoc. nonadiabatic transitions 7−93353
I_2M(M=Ne, Ar, Kr, Xe), van der Waals clusters, photodissoc., product vibr. state distribs. 7−96802
Ir (III) conducting surface with absorbed CsBr molecules, molecular orientation, photodissociation study 7−82304
K_2, rovibrational transitions, Doppler-free polarisation spectroscopy, visible spectra anal. 7−109916
$LaCH_2$, gas phase photodissoc., bond energies determ. 7−129808
LiF, photodissoc., photoreaction and photodesorpt. 7−124684
methyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
N_2, multielectron dissociative ionis., femtosecond dynamics 7−110027
N_2^+ photofragments in laser photodissoc. of N_2O, kinetic energy spectra in visible region 7−100597
NCNO, photodissociation, microcanonical state-to-state rates, ps photofragment spectroscopy 7−113965
NF_2 radicals, UV photodissoc. quantum yield study 7−126464
NH radical, photodissociation lifetimes in comets 7−101731
NH_3, clusters, IR dissoc. spectra 7−110031
NH_3, jet cooled, UV absorpt. spectra, isotope shifts 7−103529
NH_3, photodissoc., product energy distrib. 7−132951
NH_3, photodissociative excitation, NH prod., fluorescence quantum yields meas. 7−109987
NH_3, rot.-vibr. dynamics, reson. Raman scatt. spectra 7−90158
NO_2 in atm., photodissociation rate coeff. determ., use of UV radiometers 7−94447
NO_2, multiphoton dissoc. investig. 7−110040
NO_2 photodissoc., photofragments, ang. distribs. 7−86654
NO_2, photodissoc., predissoc. mechanism, rot. prop. distribs. eval. 7−110034
NO_2, photodissociation, primary quantum yields, role of rot. and vibr. energy 7−138984
NO_2 photodissociation. photofragments angular distrib. meas., multiphoton ionisation technique *(Japanese)* 7−119546
NO_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
NO_2, two-photon photodissoc. dynamics 7−110044
N_2O^+, photodissoc. rot. and angular distribs. calc. 7−110037
$NbCH_2^+$, gas phase photodissoc., bond energies determ. 7−129808
O_2, photodissociation in stratosphere and mesosphere, O production and isotope effects 7−120101
O_2, visible photodissociation dynamics 7−135947
O_3, Hartley band photodissoc., O_2 photofragment CARS spectra anal. 7−103511
O_3, mass-independent isotopic fractionation in nonadiabatic molecular collisions 7−103597
O_3, photodissoc., CARS spectra 7−129816
O_3, photofragment rotational distributions, parent internal motion, semiclassical calculation 7−136024
OsO_4 molecules, UV laser fragmentation, atomic Os^+ ions generation 7−82302
$RhCH_2^+$, gas phase photodissoc., bond energies determ. 7−129808
SF_6, isotope selective dissoc. using q-switched CO_2 laser 7−78530
SF_6, isotope separation by IR multiphoton dissoc. 7−68414
SO_2, mol. beams, photodissoc., translational energy and angular distrib. meas. 7−136022
SO_2-O_2^+, weakly bound clusters photodissoc. dynamics 7−93344
SO_3, absorpt. and fluoresc. spectra, vac. UV dissoc. excitation 7−109991
SiH^+, laser photofragment spectrosc. 7−122498
SiH_3 radical, reactions on a-Si:H surface 7−71041
T, laser isotope separation by multiphoton dissociation of organic cpds. *(Romanian)* 7−144734
T separation from fusion waste water by IR multiple-photon dissociation 7−129896
$XeCl_2$ in solid Xe, stimulated radiative dissoc. and gain meas. 7−74932

molecular polarisability
see also molecular moments
A_2H_n, mol. multipole polarisabilities and hyperpolarisabilities derivative Hartree-Fock calcs. 7−89942
acetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
adsorbed molecular pair polarisability, QED 7−76612
AH_n, mol. multipole polarisabilities and hyperpolarisabilities derivative Hartree-Fock calcs. 7−89942
alkanes, cubic hyperpolarisabilities, meas. by third harmonic generation 7−123095
biphenyl derivatives, second-order nonlinear polarisability determ. by SHG 7−110456
calculations of polarisabilities and hyperpolarisabilities 7−96497
carbon tetraioide, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
charge-transfer crystals, polaris. changes and partially ionic states 7−76835
chemical reactivity and density polarisation, LCAO MO calcs. 7−96538
chloroacetylene, C-H stretching, hyperfine props., RF spectra 7−129696

molecular polarisability continued
conjugated molecule, dipole polarisability, spin-Hamiltonian method calcs. 7−103383
conjugated organic polymers, nonlin. susceptibilities, tight-binding calcs. 7−103373
crystal violet, Au surface, resulting complex Raman spectra study 7−74628
cyanophenyl heptylcinnamate, nematic, unstable mol. orientations and polarisability 7−142578
cyclopentadienyl cations, excited states, polarisability, CI and PPP calcs. *(French)* 7−116872
cytosine, photoexcited states, electronic struct., CNDO/S3 calcs. 7−68218
dipole polarisabilities, Unsold approx., LCAO MO SCF calcs. 7−96539
dispersion relation: rel.-to optical rot. dispersion, magnetooptic rot. dispersion and mol. polarisation 7−110013
dye coverages, SHG efficiency 7−110458
electronic and spin props., orbital relax. effects, ab initio coupled cluster method calcs. 7−116825
electronic mechanical momentum conservation, intramolecular perturbations 7−122653
ethene, mean polarisabilities, temp. depend. meas. *(German)* 7−68472
ethylene glycol, polymerisation effect on mol. polarizability and diamagnetic suscept., refractive index method 7−113926
ferrocene, polarisability, second hyperpolarisability, CHF-PT-EB-CNDO calcs. 7−122361
fluid, depolarised interaction induced light scatt., ab initio calcs. 7−81970
gaseous solute solubility in polymers; solute-polymer interactions anal. 7−111899
all-trans-2,4,6,8,10,12,14-hexadecaheptaene, vibronic coupling, fluoresc. spectra 7−141617
hydrocarbon systems, polarisability and hyperpolarisabilities, MNDO calcs. 7−109768
hydrocarbons, solvent and free radical effects, ^{13}C NMR spectra 7−96734
INDO wavefn. calc. within RPA 7−135841
liquid crystals, nonlinear molecular polarisabilities 7−104541
liquid equation of state, dispersion interactions and thermodynamically dependent mol. polarisability, semiempirical method 7−84178
many-electron systems, singly excited config., vector pot. variation 7−74440
methane, collision-induced light scatt. spectra study 7−82166
methane, electromag., nuclear shielding tensors, second order props. relations 7−116879
methane+Ar(Ne)(Kr)(Xe) scatt., absolute integral cross sections meas. 7−90322
molecular properties, ab initio determ., book 7−134384
N-(4-nitrophenyl)-L-prolinol, quadratic nonlinear props. 7−123059
N-(4-nitrophenyl)-N-methylaminoacetonitrile, quadratic nonlinear props. 7−123059
naphthalene-d_8, elec. polarisability tensor, NMR study 7−82224
nonlinear molecular hyperpolarisabilities, first-order and second-order, calcs. using perturbation method 7−74425
octatetraene, isoelectronic cpds., struct., longit. electric polarisability, ab initio STO calcs. 7−116847
optical props. of linear polarisation sheets 7−117131
organic molecules, large, resonant third-order hyperpolarisabilities 7−123061
orientationally ordered materials, second-order nonlinear-optical processes 7−123058
polyacene crysts., electronic polarisation energies eval. 7−116813
polyatomic molecules, bond and mol. polarisabilities 7−82016
polyatomic molecules, highly vibr. excited Raman spectrosc. obs. 7−82158
polycumulenes, equilibrium geometry and electric polarisability, ab initio calc. 7−122357
polyenes, dipole polarisability, spin-Hamiltonian method calcs. 7−103383
radical pair recombination in viscous liqs., CIDEP amplitude, mag. field and viscosity effects study 7−68365
Raman background nature *(German)* 7−68316
Raman optical activity, bond polarisability and vibronic coupling 7−141628
static and dynamic elec., hyperpolarisabilities, vibr. components 7−96637
temperature dependence of mean dipole polaris., translational motion effects 7−122415
tetrafluoromethane, second hyperpolarisability, vibr. contrib., SHG 7−130277
tetraiodoethylene, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
TMPD in methylcyclohexane, photocond. kinetics with pulsed laser ionisation 7−92224
triethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
trimethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
triphenylene-d_{12}, elec. polarisability tensor, NMR study 7−82224
Ag^++(CO)(NH_3)(ND_3)(methane)(methyl halides) association, complex form., rate consts. 7−93282
BF_3-Ar(CO)(N_2), van der Waals complexes, induced dipole moments 7−68199
CO_2, dense fluid, Raman scatt., MDM calc. 7−82175
CO_2 fluid, S_1 Raman band, pot, and polarisability model study 7−82167
CS_2, dense fluid, Raman scatt., MDM calc. 7−82175
CS_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
carbon tetrafluoride, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
Cu^++CO(NH_3)(ND_3)(methane)(methylhalides) association, complex form., rate consts. 7−93282
D_2, collision-induced polarised and depolarised Raman scatt. 7−82179
D_2, gas, mag. birefringence meas. 7−111156
FH_2^+, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
H_2, collision-induced polarised and depolarised Raman scatt. 7−82179
H_2 complex, H_2 phthalocyanine, Ag surface, resulting complex Raman spectra study 7−74628
H_2, depolarized Raman scatt. at low temps. study 7−82178
H_2, gas, mag. birefringence meas. 7−111156
H_2, static polarisabilities, vibr. contribs. 7−74550
H_2, three-body correlation spectral moments, depolarised interaction-induced light scatt. spectra 7−135931
H_2, vibr. overtone cross sections, ab initio calcs., Raman spectra anal. 7−81969
molecular polarisability continued
H_2^+, static polarisabilities, vibr. contribs. 7−74550
HCl (DCl), polarisability tensor, vibr. absorpt. intensities 7−129686
HF-N_2O(formaldehyde), van der Waals complexes, induced dipole moments 7−68199
H_2O, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
H_2O, liq., OH stretch vibr., computer mol. dynamics study 7−92679
H_2S, gaseous and liq., rot. Raman scatt. study 7−82168
He_2 adiabatic potential curve, excitations, van der Waals wells, vibrational energy levels 7−136029
He_2 interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
He_3, interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
I_2, n-hexane soln., polarisation dispersion curves for reson. Raman scatt. 7−82182
methane, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
N_2, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
N_2, mean polarisabilities, temp. depend. meas. *(German)* 7−68472
N_2, static polarisabilities, vibr. contribs. 7−74550
N_2, vibr. overtone cross sections, ab initio calcs., Raman spectra anal. 7−81969
NH_2^-, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
NH_3, avoided crossing, microwave Stark meas. 7−82080
NO_2, laser excitation, polarisation inversion effect 7−129797
Ne_2, interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
O_2, dense fluid, Raman scatt., MDM calc. 7−82175
O_2, depolarised Rayleigh scatt., expt. and mol. dynamics study 7−122546
O_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
O_2 O-O stretch, adsorbate-induced resonance, vibrational polarisability, electron-phonon coupling 7−135933

molecular positron scattering *see elastic scattering of electrons by atoms and molecules; molecular electron impact dissociation; molecular electron impact excitation; molecular electron impact ionisation*

molecular potentials *see potential energy functions*

molecular predissociation
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
alkali metal dimers, photodissoc., mag. field effects, at. mag. sublevel population 7−122630
2-aminopyridine, van der Waals and H-bonded systems, structs., excited state dynamics 7−136031
benzene-He van der Waals mol., intramolecular vibr. energy relax. 7−90298
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
ethanethiol radical, laser-induced fluoresc., visible spectra anal. 7−96712
ethene dimers, IR predissoc. spectra 7−116972
ethylene clusters, IR predissoc. spectra 7−122518
ethylene dimer, vibr. predissoc. 7−122643
indoles, ^1L_a state, fluoresc. and electronic spectra 7−82269
matrix Schrodinger operators and resonances, mathematical theory 7−141635
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7−103520
nonadiabatic intramolecular processes, wave packet dynamics, statistical approxs. 7−122647
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
resonances in nuclear, atomic and mol. physics 7−102853
resonantly enhanced multiphoton ionisation-PES, photoionisation and photodissoc. study 7−74716
van der Waals molecule predissoc., reson. energies and widths, $\mathcal{L}^2$ golden rule method calc. 7−103596
van der Waals molecules, fine-struct. electronic predissoc. quantum-mechanical model 7−110039
van der Waals mols. vibr. predissoc. and prereaction, collinear quantal study 7−122645
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
Ar-HD, van der Waals mol., IR predissoc. calcs. 7−122640
Br_2, laser-excited, collision-induced dissoc., rate const. meas. 7−103598
C_2N_2, predissoc., photofragment vibr. distribs., ab initio MCHF pot. energy surface calc. 7−90344
Cs_2, optically excited levels, mag. field effects, reson. fluoresc. study 7−129772
D_2, photodissociation branching ratio, interference effects 7−96807
D_2O^+, $\tilde{B}^2B_2$ states, photoelectron and photoion coincidence spectra 7−82300
H, photoabsorption, photodissoc. and fluoresc. 7−90299
H_2, high singlet np Rydberg states, multiphoton excitation 7−74723
H_2 photodissociation branching ratio, interference effects 7−96807
H_3^+ predissociation excitation spectra, H^+-H_2 complex model anal. 7−96806
H_4, stability in C_{3v} symm. 7−109714
HCl^{2+}, pot. curves, CASSCF-CI method 7−68228
H_2O^+, $\tilde{B}^2B_2$ states, photoelectron and photoion coincidence spectra 7−82300
He-CO, van der Waals complex, rot. predissoc. investig. 7−117033
He-CO, van der Waals complex, rot. predissoc. 7−122649
He-N_2, van der Waals complex, rot. predissoc. investig. 7−117033
He-O_2, van der Waals complex, rot. predissoc. investig. 7−117033
HeI_2, van der Waals fragmentation, periodically forced oscillator model 7−132922
Hg-methane(-ethane)(-N_2)(-CO) complexes, jet-cooled complexes, electronic spectra and intramultiplet relax. 7−90357
I_2, predissoc. and geminate recomb. times meas. 7−129810
I_2 predissociation in supersonic beam condenser microphone detector 7−103594
I_2He, vibr. predissoc., num. investig. 7−129811
I_2M clusters, photodissoc. nonadiabatic transitions 7−93353
InCl, $C^1\Pi$ state, pot. curve calcs. 7−135868
NH, A $^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
$(NO)_2$, vibr. predissoc., energy distrib., time depend. 7−122641

molecular predissociation continued
NO, $B^2\Pi$ and $C^2\Pi$ states, rot. levels, fluoresc. lifetimes 7−109982
NO, in supersonic jets, Fourier transform emission spectroscopy 7−122533
NO_2, photodissoc., predissoc. mechanism, rot. prop. distribs. eval. 7−110034
$NeBr_2$, ground electronic state, vibr. predissoc. lifetime meas. 7−110035
$NeCl_2$, van der Waals mol., laser-induced fluoresc. excitation spectra 7−96776
O_2^+, $c^4\Sigma_u^-$ state, predissoc., isotope effect 7−110047
OC-HF complex, ν_1 state predissoc. lifetime, vibrs. state mixing, IR spectra anal. 7−103496
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
OH^{2+}, collisions with atoms, pot. energy curves 7−117043
OH^{3+}, collisions with atoms, pot. energy curves 7−117043
SO_2, mol. beams, photodissoc., translational energy and angular distrib. meas. 7−136022
SO_2-O_2^+, weakly bound clusters photodissoc. dynamics 7−93344
SiH_2, rovibronic levels, lifetimes, visible fluoresc. spectra anal. 7−103519

molecular quadrupole moments *see molecular moments*

molecular relaxation *see chemical reactions; molecular fluorescence; molecular inelastic collisions; molecular spectra; time resolved spectra*

molecular reorientation
see also macromolecular dynamics
acetonitrile, mols. in liq. phase, vibr. and orientational relax. 7−103516
alkali halides: PO_2^- centres, photostimulated reorientations 7−137275
alkali metal aq. soln., microstruct., NMR relax. obs. 7−106052
alkali metal hydroxides, aq. soln., microstruct., NMR relax. obs. 7−106052
z-alkanones, glass matrices, dielectric absorption, relaxation processes 7−99659
alkylenediammonium manganese tetrachloride, rotational motions and phase transitions *(Japanese)* 7−131063
1-aminoalkanes, glass matrices, dielectric absorption, relaxation processes 7−99659
anisotropic aligned fluids, Raman band shape anal. and mol. inertial motion 7−68328
anisotropic ordered fluids, vibrational bandshape analysis and inertial-stochastic molecular motion 7−75970
4-(9-anthryl)-N,N-dimethylaniline, time residual spectra, solvent dependence, charge transfer, reorientation, relaxation, laser spectroscopy 7−141480
asymmetric top molecule, rot. Brownian motion, Fokker-Planck-Langevin model 7−69943
β-(BEDT-TTF)$_2I_3$, organic supercond., nuclear mag. relax. 7−70475
benzene, rotational dynamics, interaction with zeolitic framework, quasielastic neutron scattering 7−142661
benzoic acid, crystalline, field effect on proton transfer 7−142662
bicyclooctene, plastic phase, muon probe investig. 7−85508
biomolecule reorientational motion determ. by fluoresc. anisotropy decay, interpret. complexities 7−114166
biphenyl incommensurate phase II, stripe-like modulation calcs. 7−142950
bis(trimethylsilyl)acetylene, liq. state dynamics, Raman scatt. obs. 7−92662
BOH8-MPOOBC, ferroelec. liq. cryst., thin cell dielec. response 7−97917
Brownian rotational reorientation, zero-field NMR and NQR line shapes 7−70668
N-(1- butyl)pyridinium-$AlCl_3$, spin-lattice relax. time meas. 7−74680
t-butyl compounds, ^2H NMR, methyl vs. whole group motions 7−142658
t-butyl cyanide, disordered phase, cooperative dynamics 7−142940
carbon tetrachloride in liq. state at 296 K, T_d-symmetry mol., diffusion, dynamical cross correl. function 7−97887
cholestane spin probe in phospholipid multilayers, saturation transfer ESR 7−74688
complex molecules, luminesc. rot. depolarisation in presence of dielectric relax. of environment 7−70892
coupled XH_3-type torsional oscillators in cryst. field, energy spectrum and eigenfunctions 7−124133
1-cyano-adamantane, glassy and plastic phases, reorientations, local order 7−142659
decyl sodium sulphate-decanol-water-Na_2SO_4 lyotropic nematic system, viscoelastic props. 7−76255
deuteromethane-Kr solid solns., thermal expansion anomaly, X-ray diffr. study *(Russian)* 7−76459
di(tetramethylammonium) tetraiodo cadmate, mol. dynamics, PMR study 7−92538
di-isopropyl ether, tunnelling rotation, of methyl groups 7−142664
diatomic mol., dielectric friction in liqs., mol. dynamics study 7−105088
dichloromethane, spin-lattice relax. times, nucl. Overhauser enhancements and mol. reorientation 7−129747
dimethyl ether, tunnelling rotation, of methyl groups 7−142664
dimethyl sulphide, tunnelling rotation, of methyl groups 7−142664
egg-lecithin multibilayers hydration, 1,6-diphenyl-1,3,5-hexatriene probe fluoresc. depolarisation expts. 7−119740
ethane, solid, proton spin relax. at high press., reorientational models 7−70665
ferroelectric liquid crystal, helical winding, unwinding and switching 7−85547
ferroelectric liquid crystals, surface stabilised, switching processes 7−69587
ferroelectric liquid crystals, transient light scatt., voltage reversal 7−111378
ferronematic liquid crystals, chiral molecule doped, magnetic field-induced birefringence 7−113161
fluoroadamantane, mol. motion, NMR relaxation times 7−142660
gases and liquids, molecular reorientation, interpolation model 7−83631
glass-forming liquids, high resolution Raman Scatt. 7−70824
glucofuranoimidazolidine crystals, mol. packing anal. 7−83835
heterocyclic molecular crystal, quantum tunnelling, methyl group motion, NMR studies 7−143923
hexyloxycyanobiphenyl, 60CB-d_{21}, reentrant nematic, DMR studies 7−99600
high torque organic mol. liq. dynamics, reorientational correlation fn., Raman scatt. study 7−82173
p-hydroxybenzoic acid, solid, intramol. motion, PMR investig. 7−74667
ionic crystals, orientationally disordered, two-dimensional dynamics 7−91495
ketones, homologous series, potential barriers hindering reorientation of methyl groups 7−142657
molecular reorientation continued
liquid crystals, EM field interactions with homogeneous and inhomogeneous surfaces 7−97913
liquid crystals, molecular dynamics and spectral density determ. 7−75983
liquid crystals, optical properties, conf., Naples Italy (July 1986) 7−102002
lithium acetate, press. depend. of tunnelling and librational modes of coupled methyl groups 7−69635
lithium acetate dihydrate, coupled methyl groups, proton spin conversion 7−91496
lyotropic liquid crystal, periodic deformation, dynamics 7−111372
methane, disorder effects, rotational excitations 7−142663
methane crystals, dynamical props., rotation-translation coupling effects 7−83799
methane-Kr, solid solution, disorder effects, rotational excitations 7−142663
methyl group rotations, NMR and neutron scatt. studies 7−137276
4-methyl-pyridine-d_0 ($-d_7$), cryst., phase transitions, mol. dynamics 7−85729
methylbenzene, α-substituted, liq., mol. reorientation, Raman spectra 7−92681
4-methylpyridine, phase transitions, mol. mechanism 7−143002
molecular and liq. crysts., proton magnetic relax. investig. 7−106048
molecular crystal, orientationally disordered phases, large amplitude motions 7−142666
molecular liquids, mol. mass distrib. effect on mass and momentum transport 7−105087
$Na_x(NH_3)_y(MoS_2)$, layered intercalation cpds., ^1H NMR obs. 7−112976
nematic liq. crysts., laser-induced molecule collective rotation 7−104540
nematic liquid crystal, nonlinear optical processes in ns regime, optically-induced mol. reorientation 7−68745
nematic liquid crystal, surface director reorientation 7−91425
nematic liquid crystal-dielec. interface, electrooptic characts. *(Russian)* 7−77514
nematic liquid crystals, fluctuations and light scatt. at phase transitions in external fields *(Japanese)* 7−131023
nematic liquid crystals, light scattering in the mag. field, threshold reorientation 7−92645
$(NH_4)_2$ N_2H_6 $(ClO_4)_4$, ^1H relax. times, temp. and freq. depend. study 7−103536
nitromethane, methyl group rotational potential 7−142665
norbornene, plastic phase, muon probe investig. 7−85508
ordered system, mol. orientation and reorientation, probability distrib. function 7−104533
organic glasses, aromatic mol. photoexcited triplet state zero field electron spin-lattice relax. meas. 7−85429
pentylenediammonium cadmium tetrachloride, Imma-Pnma phase transition, X-ray diffr. study 7−104618
perylene, nonphotochem. laser hole burning *(Japanese)* 7−130272
PMMA, and related polymers, β-relax. origins, mol. mechanics calcs. 7−84123
PMMA, intramol. charge transfer fluoresc. as mobility probe 7−90263
poly(vinyl acetate) spin probes rot. diffusion, ESR 7−92504
polydimethylsiloxanes, filled, molecular motions obs. *(Russian)* 7−110159
probe molecules in lipid multibilayers, mol. reorientational dynamics and orientational order correl. 7−90249
ring deuterated smectic liq. cryst., D NMR spin-lattice relax. studies 7−77420
rotational dynamics, interaction with zeolitic framework, quasielastic neutron scattering 7−142661
rotor molecule in atomic cryomatrix, renormalised cryst. field calc. *(Russian)* 7−137867
slow molecular motion, nuclear magnetic relax. studies 7−106053
smectic C* phase liquid cryst., ferroelectric, electrooptical props 7−106139
smectic C phases, planar oriented, Freedericksz transition 7−91430
stilbene, in alkane and alcohol solns., rot. diffusion 7−69947
stilbite crystals, slow mol. motions and solid echo 7−92550
strongly coupled model rotational-translational system dynamics, power spectra calcs. 7−117843
tetrabutylammonium iodide, polycryst., mol. reorientation, spin-lattice relax. times meas. 7−76049
tetracene in alcohol glass, tunnelling dynamics, photophysical hole burning system anal. 7−97098
tetramethylammonium cobalt tetrachloride, single cryst., phase transitions, laser Raman study 7−144059
tetramethylammonium copper bromide, phase transitions, EPR studies 7−131302
trichloroacetonitrile, liq., permittivity meas. 7−92587
trimethyl ammonium cadmium trichloride, dielec. dispersion, mol. reorientation of trimethyl ammonium ions 7−106074
tris(trimethylammonium)nonachlordiantimonate (III), mol. dynamics, PMR studies 7−85473
trisarcosine calcium chloride crysts., H bond structural changes at ferroelec. transition, ^2D NMR study 7−77409
tryptophan, excited, solvation, in polar glasses *(Japanese)* 7−132932
uniaxial jump model with nonequivalent equilibrium positions 7−137274
Ar:NO(CO) cryocrysts., substitutional mol. impurity rotation, crystalline pot. calcs. *(Russian)* 7−76044
Ar-O_2, solid HCP and FCC solns., thermal expansion determ. *(Russian)* 7−91848
$Ba(NO_3)_2$ single cryst., orientational disorder and mol. reorientation, Raman spectra study 7−142655
CS_2, liq., vibr. and reorientational relax. 7−90354
Ca $(NH_3)_6$, molecular glass, disorder effects, rotational excitations 7−142663
$CaWO_4$, reorientation of hole centres, optical absorption and EPR studies 7−137854
Cr complex, tris(acetylacetonato)chromium(III), dilute chloroform solns., ^1H spin relax. anal. 7−116990
CsCl(Br)(I):CN,K(Rb), crysts., impurity defect complex IR absorpt. spectra study 7−99848
$CsHSO_4$ superionic conductor, phase transition and proton cond. mechanisms, Raman scatt. study 7−125739
$Cs(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
D_2, solid and liq., IR and Raman spectra 7−125747
HD, solid, rot. $R_0(0)$ transition, interf. effects 7−98000
H_2O, mol. in $MgCl_2$ soln., props. and dynamics 7−83638
H_2O, mol. in pure liquid, props. and dynamics 7−83638
$(H_3O)Zr_2(PO_4)_3$, cation reorientation, ^{31}P and ^2H NMR spectra 7−143916

molecular reorientation continued
$KBr:NH_3D^+$, rotational levels and tunnelling levels 7−76046
$KBr:NH_4^+$, impurity ion rot. states, neutron scatt. intensities calcs. 7−83797
KH_2PO_4, paraelectric phase, orientationally disordered anion sublattice, vibr. spectra 7−111785
$K(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
KSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
Kr:NO(CO) cryocrysts., substitutional mol. impurity rotation, crystalline pot. calcs. *(Russian)* 7−76044
$LiKSO_4$, translational and rotational dynamics, computer simulation 7−124132
$Li_x(NH_3)_yMoS_2$, layered intercalation cpds., ^1H NMR obs. 7−112976
$LiNaSO_4$, lattice dynamics above room temp. studied by IR spectroscopy 7−118043
LiSCN, aq., soln., vibr. and rot., Raman spectra 7−85646
N_2, reorientation and rot. energy transfer cross sections, nucl. spin-lattice relax. time meas. 7−103538
$(ND_4)_2SnCl_6$ single cryst., ammonium ion rotational tunnelling and reorientation, NMR studies 7−91497
NH_4^+ cpds., rotational pot. function derivation 7−91493
NH_4^+, rot. pot. functions in cryst. fields 7−91492
$(NH_4)_2(Co(H_2O)_6)(SO_4)_2$, IR struct. holeburning and orientation tunnelling of NH_3D^+ ions 7−138975
$(NH_4)_2SO_4$, ferroelec. phase, NH_4^+ reorientations, neutron scatt. studies 7−104600
$(NH_4)_2SO_4$, protonic motion and weak first order transition, EPR study 7−99762
$(NH_4)Zr_2(PO_4)_3$, cation reorientation, ^{31}P and ^2H NMR spectra 7−143916
$Na_2(FeCN_5)NO.2H_2O$, H_2O mol. flipping motions, PMR spin-lattice relax. time meas. 7−85472
NaSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
$Na_8[AlSiO_4]_6(OH)_2$, H dynamics, inelastic and quasielastic neutron scatt. 7−136078
$Nb(OH)_x$, dilute metal-H system. quantum nature 7−84165
RbH_2AsO_4-$NH_4H_2AsO_4$ and RbD_2AsO_4-$ND_4D_2AsO_4$ proton glasses, mol. motion, EPR study 7−99571
$Rb(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
$Rb_{1-x}(NH_4)_xH_2PO_4$ proton glass phase, isotope effects 7−117844
SbF_5-graphite intercalation cpds., ^{19}F NMR obs. 7−112978
UCl_4, struct. transitions anticipating melting 7−84229
XeCl, stimulated emission, quantum beats obs. 7−110014

molecular reorientational states *see molecular reorientation*

molecular resonant states
see also Fermi resonance; molecular vibronic states
ABA-type molecules, local and hyperspherical vibr. resons., lifetimes determ. 7−90088
cyanomethane, electron impact, reson. vibr. excitation obs. 7−82379
diatomic molecules, shape resonances, giant atomic resonances comparison study 7−141634
duroquinone, Raman spectra, triplet state, semi-reduced form, laser pumping, transient species 7−141582
eigenvalues, least-squares stabilisation method 7−129621
electron scattering, shape reson., S matrix poles, multiple scatt. $X\alpha$ calcs. 7−103391
Feshbach resonant energies and widths, pseudopot. approach 7−135862
hydrocarbons, large conjugated, reson. energies by statistical method 7−109690
isoprene, excited state struct. and dynamics, reson. Raman intensities 7−90145
magnetooptical resonance shape variation induced by mag. field transverse component 7−122440
methane, ultrahigh-resolution laser spectroscopy with cold particles 7−141487
organic compounds, resonance Raman scatt., CARS, vibronic interaction, polarisation obs. *(Japanese)* 7−129712
positron reson. annihilation on mols., mechanism investig. 7−82375
quasicontinuum photoexcitation, rates and recurrences 7−122403
resonances and photoionisation cross sections, complex coord. method, matrix element extrapolation 7−103412
scattering equations and matrix diagonalisation, soln. methods 7−116809
CH^+, photodissoc. to open-shell atoms, nonadiabatic effects 7−122633
CO jet, two-photon resonant third-order nonlinear susceptibility, third harmonic generation 7−97075
CeO_2, giant resonances, X-ray spectra, line resolution study 7−141601
H_2-$d_0(d_1)$ scatt. from Ag (111) surface, close coupling wave packet method appl. 7−106331
HCl mass resolved resonantly enhanced multiphoton ionis. spectra 7−110050
H_2O, core electron ionis., const. reson. width approx. calcs. 7−135867
N_2O, photoionisation, photoelectron asymmetry parameters, shape reson. 7−129800
O_2, condensed on Pt, dissociative attachment in electron-stimulated desorption 7−136076
PrO_2, giant resonances, X-ray spectra, line resolution study 7−141601
TbO_2, giant resonances, X-ray spectra, line resolution study 7−141601

molecular rotation
see also macromolecular dynamics; molecular force constants; molecular reorientation; molecular rotation calculations; molecular rotational-vibrational energy transfer; molecular spectra; rotational isomerism
α-angelicalactone, internal rotation, microwave spectroscopy 7−122512
acetonitrile+He, rot. excitation cross section, modified sudden approx. calc. 7−68431
acetylene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
adamantanamine hydrochloride, solid, phase transition and mol. rot. investig. 7−77543
adiabatic- and sudden-perturbation limits for the non-adiabatic transitions between two quasistationary states 7−122620
adsorbed molecules on graphite, struct. and dynamics 7−143233
alcohols, structural and conformational properties, ab initio calcs, internal rotation 7−141457
alignment parameters, laser-induced fluoresc., saturation effects 7−96761
amides, rotational transition structs., ab initio MO calcs. 7−103471
9-aminoacridine, multi-wavelength frequency domain fluorometry and global anal., rot. diffusion 7−96764
aniline and derivatives, soln., rot. dynamics, picosecond fluoresc. anisotropies 7−90255

molecular rotation continued
anthracene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
aromatic molecules, mono- and di-substituted, ^{13}C NMR correl. times 7−90212
asymmetric top, optical activity, semiclassical theory 7−82289
atom-molecule kinematically constrained reactions, dynamics model 7−93286
benzene, high resolution zero kinetic energy photoelectron spectroscopy and ionisation pot. 7−90270
benzene, rovibronic intramol. vibr. energy redistrib., linewidth distribs. 7−129681
benzene, rovibronic states, intramol. relax., Doppler-free two-photon excitation spectra 7−96724
benzene ring, ^2H quadrupole echo NMR spectra, lineshape calcs. for multiaxis rot. 7−68355
biphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
butadiynyl (C_4H), rot. and distortion consts. from mm-wave obs. in C star (IRC+10216) 7−134234
ϵ-caprolactone, rot. transitions, microwave spectrosc. 7−135929
carbon tetrafluoride, vibr. energy distrib., collisional energy transfer rates, IR absorpt. spectra anal. 7−74600
carbonic anhydrase B, bovine, fluoresc. correl. spectroscopy, rot. diffusion 7−119722
carbonyl fluoride, IR and microwave spectra, ν_6 band, vibr.-rot. anal. 7−116959
CARS spectra, generation using multiple 3 colour scheme 7−80908
1-chloro-2-butyne, barrier to internal rotation, microwave spectrum 7−122509
chloroacetonitrile, isotopic species, microwave rot. spectra, N hyperfine struct. 7−96653
N-chlorodifluoromethylenimine, struct., harmonic force field and microwave spectrum meas. 7−74570
chlorodifluoronitrosylmethane, photodissociation, photofragment fluoresc. spectra anal. 7−96801
colloids, scattering behaviour, intra particle form factor, radius of gyration 7−141708
cyanate anion, ν_3 bending and stretching modes, IR spectra anal. 7−103495
1,2-cyclobutanedione, gas phase, visible absorpt. spectrum 7−82197
cyclopropenylidene, ab initio mol. orbital studies of low-energy metastable isomers 7−88590
cyclopropenylidene, isotopomers, mol. struct., millimeter wave spectra 7−82083
cyclopropenylidene (C_3H_2), first interstellar organic ring, rot. consts. from laboratory spectroscopy 7−115552
diatomic molecules, $^2\Sigma$−$^4\Sigma$ transitions, rot. intensity factors 7−82071
1,2-dichloro-2-fluoroethanone, enantiomers and racemic mixture, IR-RF double reson. spectra 7−90230
p-difluorobenzene vapour, fluoresc., quantum yield, intramol. vibr. redistrib., rot. effect 7−90260
5, 6-dihydro-2H-pyran-2-one, microwave spectrum, dipole moment and conform. investig. 7−109882
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7−109876
1,2-dimethylhydrazine, mol. struct. and conform., GPED and microwave spectra 7−74574
1, 2-dithiete, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
dithioglyoxal, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
effect of dephasing collisions on Raman polarisation 7−82170
ethane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
ethene, mol. beams, terminal rot. distrib. meas. 7−141672
ethene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
ethenonyl radical, rot. spectra in submillimeter-wave region 7−82079
ethylene clusters, IR predissoc. spectra 7−122518
ethylene glycol, vibration circular dichroism, ab initio calcs. 7−74689
ethyne, mol. beams, terminal rot. distrib. meas. 7−141672
ethynyl (-d_1) radical, colour centre laser spectroscopy, IR spectra, vibronic state 7−116968
fluorescence correlation spectroscopy, separation of nonorientational and rotational contributions 7−73435
fluorobenzene-d_5 liquid, rot. Fokker-Planck-Langevin model, mag. relax. data anal. 7−106012
fluoroform, far IR spectrum, microwave and mm wave data, rot. and centrifugal distortion const. 7−96665
formaldehyde+H_2, rot. transitions, differential cross sections meas. 7−129851
formaldehyde-HCN(DNC) dimer, angular geometry, hydrogen bond effects, rotational spectra 7−135927
formaldehyde-HF, mm wave spectrum rot., structural, ab initio and semirigid bender anal. 7−96650
formyl ion, vibrationally excited, pure rot. spectrum meas. by far-IR laser sideband spectroscopy 7−128022
glucofuranoimidazolidine crystals, mol. packing anal. 7−83835
glyoxal-d_1, conformers rot. and quadrupole coupling const. microwave Fourier transform spectroscopy 7−96648
heavy radical (hexatriynyl?) in IRC+10216 (CW Leo), effective rot. const. 7−79969
heteronuclear molecules, electronic struct., double reson. investig. *(German)* 7−129757
1,3,5-hexatriyne, mol. consts. determ. 7−80075
1,3,5-hexatriyne radical, $^2\Pi_{1/2}$ state rot. transitions detect. (in IRC+10216) 7−107867
1,3,5-hexatriyne radical, $^2\Pi$ state rot. const. 7−103381
1,3,5-hexatriyne radical, rot and distortion consts., astron. study 7−120538
hydroxylamine, diode laser spectroscopy, rot. and distortion consts. 7−116964
iodomethane-d_3, rot. levels, hyperfine interactions, RF-microwave spectra 7−122515
1-iodopropane, microwave spectra, conform. and quadrupole coupling consts. determ. 7−74571
ketene, sub-millimetre wave rotational transitions 7−109875
ketene-d_2, IR spectrum, ν_9, ν_6 and ν_5 7−122531
large molecules, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82259
linear parent molecules in comets, synthetic rot. and vibr. spectra 7−72270

molecular rotation continued
liquid fluorescence, rotational diffusion effects *(Russian)* 7−122607
methanal beam, rot. transitions in pulsed strong field 7−129680
methane, collision-induced light scatt. spectra study 7−82166
$(methane)_{1-x}Kr_x$, solid mixture, orientational disorder and rot. excitation, neutron scatt. meas. 7−74782
methane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
methane complexes, collision-induced rototranslation absorpt. spectra 7−116962
methane pairs, 50 to 300 K collision-induced rototranslational absorpt. spectra, astron. appl. 7−135930
methane-d_4, centrifugal distortion const., rot. IR-RF double reson. 7−90229
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7−90269
methanol, rot.-torsion energy levels, FTIR spectra 7−82101
methyl alcohol, $^{12}CH_3OH$ and $^{13}CH_3OH$, FIR laser line meas. and assignment 7−130061
methyl chloride, microclusters and their internal ang. modes, rot. anal. 7−90134
methyl chloride-Ar, rot. spectra using pulsed nozzle Fourier transform microwave spectrometer, internal rot. 7−90102
methyl cyanide, rot. spectra and vibr. states in freq. range 17 to 56 GHz, quadrupole struct. 7−90103
methyl cyanide-HCN, H bonded dimer, rot. spectrum and props. 7−109879
methyl fluoride, equilibr. struct. rot. struct., electron diffr. study 7−68456
methyl fluoride, IR laser sideband and submillimeter wave spectroscopy, vibr. state, rot. transitions 7−96666
methyl iodide, rotational constants, microwave spectroscopy 7−122506
methyl methacrylate in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7−138380
methyl nitrite photodissoc. in second UV absorpt. band, photofragment TOF spectra 7−116984
3-methylcyclohexanone, conform. and microwave spectrum 7−82086
methylene chloride, harmonic force field, struct., rot. consts. 7−109861
N-methylethylenediamine, conform. and H-bonding, microwave spectrum 7−74573
methylhalides, polycryst., methyl rot., inelastic incoherent neutron scatt. 7−83795
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
methylsilylsulfide, internal rot., struct., dipole moment and microwave spectra meas. 7−74569
microcapacitor electrodes for microwave rotational spectroscopy 7−103683
molecular beams, laser spectroscopy with sub-Doppler resolution study 7−96646
molecular cross correlation functions in inertial and noninertial frames of reference 7−129683
molecular motion, ELDOR investig. method 7−122584
neodymium diphthalocyanine, mol. and cryst. struct., X-ray diffr. study 7−104717
para-terphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
n-phenyl moleimide in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7−138380
poly-N-vinyloxycarbonyl carbazole, dipole moment associated with side group, dielectric meas. 7−70698
polyatomic molecular motion study using generator orbital approach 7−108098
E-propene-1-thiol, NMR and mass spectra, vibr. and rot. anal., mol. conformation 7−116991
propyne, mol. beams, terminal rot. distrib. meas. 7−141672
propyne, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
pyrazine, jet-cooled, dual fluoresc., rot. effects 7−109994
pyrazine, rot. Raman spectrum 7−109908
reaction anisotropy, reagent translational and rot. motion averaging 7−138996
rigid asymmetric rotor, semiclassical wave packet treatment 7−116933
selenoformaldehyde- ^{77}Se, rot. spectrum, spin-rotation hyperfine struct. 7−135918
semibullvalene, vibr., IR and Raman obs. *(French)* 7−129715
silyl acetylene, $4\nu_{10}$ state, microwave spectroscopy 7−122511
stilbene, in alkane and alcohol solns., rot. diffusion 7−69947
t-stilbene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
symmetric top mol. calc., appl. to atomic triply excited state calc. 7−122410
symmetry and critical phenomena in the rotational spectra of isolated microsystems 7−95965
tetracene and its van der Waals complexes with inert gas atoms, rot. resolved laser spectroscopy 7−129733
tetramethyl tin, isolated in Ar matrix, rotational tunnelling 7−141643
s-tetrazine-H_2O complex, struct. and electronic spectrum 7−96638
s-tetrazine-HCl complexes, fluoresc. and Vis-UV spectra, struct. determ. 7−96777
thioamides, rotational transition structs., ab initio MO calcs. 7−103471
thiols, structural and conformational properties, ab initio calcs, internal rotation 7−141457
time resolved CARS and CSRS, response function theory 7−90137
toluene, supersonic jet, dispersed emission and TOFMS 7−129770
triatomic molecule, photodissoc. dynamics, rot. reflection dynamics 7−122636
trichlorofluoromethane, microwave and mm-wave spectra, rot., centrifugal distortion and quadrupole parameters 7−96651
vibrational magnetic dipole transition moments and rot. strengths 7−90092
vinyl cation, rot. and internal rot. energy level calcs. 7−81932
water vapour, IR spectra, rot. bands, press. broadening second virial coeff. 7−129705
xylenes, supersonic jet, dispersed emission and TOFMS 7−129770
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
Ar_2-HCl trimer, struct., rot., Fourier transform microwave spectra 7−96647
ArD^+ mol. ion, elec. dipole moment, rot. Zeeman effect, tunable FIR laser spectra 7−74692
ArD_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
molecular rotation continued
ArH^+ mol. ion, elec. dipole moment, rot. Zeeman effect, tunable FIR laser spectra 7−74692
ArH_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
B_2H_6-HF complex, struct., SCF calcs., IR spectra, rot. consts. and dipole moment 7−96495
BH_2NH_2, microwave spectrum, mol. struct., rot., centrifugal distortion and nuclear quadrupole const. 7−116945
CN, rot. distrib. of fragment from ICN photodissoc. 7−129813
CO, a $^3\Pi$ metastable state, IR spectra study 7−96656
CO, photofragment from HNCO, internal state distrib. 7−126465
CO^+, $B^2\Sigma^+ - A^2\Pi_i$, system, rot., mol. consts., UV spectra 7−90182
CO_2, Q-branch of ν_1 band, CARS study *(French)* 7−122545
CO_2+D, hot atom collisional excitation, isotope effects, laser-excited rot. spectra 7−136043
CS_2, singlet and triplet channels, photofragment spectroscopy 7−141637
C_3S, new interstellar C-chain molecule, mol. consts. determ. from laboratory spectra 7−140240
ClO_2 liquid solns., rot. Fokker-Planck-Langevin model, mag. relax. data anal. 7−106012
$Co(NH_3)_6(PF_6)_2$, solid state free rot. levels, neutron scatt. spectra 7−103468
CoO, $a^4\Delta_i$ ground state, red system, laser-induced fluoresc. 7−96774
CuO, microwave pure rot. transitions, detection using microwave optical double reson. 7−90104
DCN-DF, vibr. predissoc. fundamentals, rovibr. anal. 7−82299
DF+H(D), exchange and translational-vibr. energy transfer reactions, quasiclassical trajectory calcs. 7−106780
$F^-+H^+(H_2^+)$, HF excited states distrib., UV chemiluminesc. spectra anal. 7−96719
FBO^-, mol. struct., IR and microwave spectra 7−129698
FeO^-, rot. autodetachment study 7−122629
GaD, $a^3\Pi$-$X^1\Sigma^+$ bands, rot. anal. 7−82069
GeO, NO impact, rot. and vibr. energy transfer study 7−113335
H+NO, inelastic scatt., rot. vibr. energy transfer, classical trajectory study 7−90343
H_2, $(G^1\Sigma_g^+)$ state rot. levels, electron impact excitations, relative probabilities 7−74779
H_2 in NGC 2023 refl. nebula, level populations and rot. and vibr. temps. 7−140242
H_2, Lyman and Werner band systems, rot. coupling effect on emission probabilities 7−129737
H_2 photoionisation dynamics, vibr. and rot. branching ratios 7−141631
H_2, vibrational and rot. initial yields from subexcitational electrons 7−103459
H_2^+, electron impact prod., photodissoc., rot. distrib. determ. 7−116929
H_2+H, cross section estimation, quantum distorted wave Born calcs. 7−74732
H_2+H_2, rotationally inelastic collisions in interstellar MHD shocks 7−94993
H_2+O, thermal reaction rate consts., rot., vibr. and fine struct. population effects, interstellar appl. 7−126416
H_2+O in shocked interstellar clouds 7−128020
H_3^+, ν_2 fundamental, rot. lines investig. 7−82100
HBF^+, rot. and centrifugal distortion const., microwave spectrum 7−82081
HBF_2, 2_0^1 band, IR spectra 7−74590
HBO, detection and equilib. mol. struct. by microwave spectroscopy, rot. consts. 7−82078
HCN dimers, isotopic species, rot. spectra, torsional and charge redistrib. effects 7−135904
$HCNH^+$, IR ν_5 band, rot. consts. 7−96668
HCl-HBr mixture, rotation line shift 7−122617
HCl+O, cross sections, reagent rot. effect 7−71466
HD, liq., rot. and fundamental bands, interference effects in IR spectra 7−90109
$(HF)_2$, $(DF)_2$, HFDF, DFHF, H-bonded complexes, microwave spectra, tunneling-rot. bands 7−116949
HF, rot. consts., FTIR spectra 7−82103
HF-acetonitrile(propynenitrile), H-bonded dimers, dissoc. energies, rot. spectroscopy 7−82066
HF-HBr mixture, rotation line shift 7−122617
HF-HCl mixture, rotation line shift 7−122617
HF+H(D), exchange and translational-vibr. energy transfer reactions, quasiclassical trajectory calcs. 7−106780
H_3N-HBr dimer, isotopic species, ground-state rot. distrib., Fourier-transform microwave spectra 7−103482
H_2O, collisional broadening of 380 GHz line, temp. depend. 7−116937
H_2O, liq., rot. dynamics, isotropic induced Raman scatt. spectra 7−90156
H_2O, nearly free rotation in soln., weak interaction with solvent 7−82070
H_2O, normal and local mode dynamics, anal. based on periodic orbits 7−116828
H_2O, photodissoc., photofragment laser-induced fluoresc. study 7−68334
H_2O vapour, absorption, 8 to 14 μm, laser photoacoustic spectroscopy 7−87900
H_2O-HF, zero-point and equilib. dissoc. energies 7−96635
H_2O_2 photolysis, OH radicals rot. distrib., laser-induced fluoresc. study 7−68333
H_2O_2, rot. transitions, millimeter and submillimeter wave detect. 7−135914
H_3O^+, ν_4 perpendicular bending mode, IR laser spectroscopy 7−141572
H_2S, gaseous and liq., rot. Raman scatt. study 7−82168
H_2S, spectrum in 1.6 μm region 7−96678
He-CO, van der Waals complex, rot. predissoc. investig. 7−117033
He-CO, van der Waals complex, rot. predissoc. 7−122649
He-N_2, van der Waals complex, rot. predissoc. investig. 7−117033
He-O_2, van der Waals complex, rot. predissoc. investig. 7−117033
He+H_2, collision-induced rototranslational spectra, anisotropic interaction effects 7−110078
Hg-methane(-ethane)(-N_2)(-CO) complexes, jet-cooled complexes, electronic spectra and intramultiplet relax. 7−90357
I_2, $D(0_u^+)$ ion pair state, optical-optical double reson. obs. 7−109965
I_2, $R0_u^+$ state, rot.-resolved Rydberg transition 7−68419
ICN, photodissoc. prod. of CN, rot. distrib. and fluoresc. polarisation 7−129806
ICN, rot. alignment, photodissoc. 7−110038
InBr, rot. struct. calcs. 7−141554
InI, *B* 1 state, rot. and vibr. consts., microwave spectra 7−74572
KH, Franck-Condon factors, laser-induced fluoresc. intensity 7−96786
KSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
LiSCN, aq., soln., vibr. and rot., Raman spectra 7−85646

molecular rotation continued
MgCl, 4730 Å band, rot. anal., molecular constants and isotopic shifts 7−141590
N_2 CARS, three-laser, rotational and vibrational spectra 7−103512
N_2, collisionally-narrowed isotropic Raman spectra, strong collision model calcs. 7−82177
N_2, gas, rot. levels, inverted distrib. form. probability calc. 7−68411
N_2 ICP rot. spectrosc. temp. determ. 7−121117
N_2 in atmosphere, rotational Raman gain coeffs. model 7−133917
N_2, molecule, new emission bands in 85 to 107.8 nm range 7−74659
N_2 mols., isolated in solid Ar matrix, mol. rot. motion, calorimetric studies *(Russian)* 7−90096
N_2, photoionisation, photoelectron ang. distrib. meas. 7−136005
N_2, press. broadening coeff., depend. on rot. quantum number, Raman obs. 7−82157
N_2, rot. relax. fitting laws, SRS Q-branch calc. 7−109905
N_2, spatially resolved rot. and vibr. temps. in ICP 7−121122
N_2^+ ICP rot. spectrosc. temp. determ. 7−121117
N_2-Ar free jet, rot. relax. rate consts. and pop. levels study 7−136047
NCO radicals $\tilde{B}^2\Pi_i(00^00)$ state, optical double-reson. 7−68374
NCS^-, bending and stretching hot bands, vel. modulation laser spectra 7−141573
NH, $A\ ^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
NH photofragment from HNCO, rot. state distrib. 7−126466
NH_3, free jets, condensation, IR diode laser adsorpt. spectra probe 7−141578
NH_3, mol. beams, terminal rot. distrib. meas. 7−141672
NH_3, nearly free rotation in soln., weak interaction with solvent 7−82070
NH_3, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
NH_4^+, ν_3 band transitions, isotope shifts, IR spectra anal. 7−103490
N_2HF in slit supersonic jets, IR laser spectroscopy 7−90120
$NH_3(ND_3)$, rot. consts., multiphoton ionisation spectra 7−117031
NNO, absorpt. line shape and rot. temp., IR spectra 7−74609
$(NO)_2$, vibr. predissoc., energy distrib., time depend. 7−122641
NO, $\tilde{B}^2\Pi$ and $C^2\Pi$ states, rot. levels, fluoresc. lifetimes 7−109982
NO, chemisorbed on Ni (100), UV laser-stimulated reson. desorpt., fluoresc. 7−91965
NO, $D^2\sigma^+$ state, rot. branching, resonant enhanced photoionisation 7−129799
NO, resonance enhanced multiphoton ionisation, rot. transitions, PES anal. 7−90291
NO seeded mol. beam, IR diode laser absorpt. spectroscopy, rot. temp. 7−109884
NO_2, $2\nu_1+\nu_3$ and $3\nu_3$ bands, Fourier transform spectra 7−82073
NO_2, high resol. UV spectra 7−96726
NO_2 photodissoc., photofragments, ang. distribs. 7−86654
NO_2, photodissociation, primary quantum yields, role of rot. and vibr. energy 7−138984
Na_2, electron scatt., rot. transitions, differential cross sections calc. 7−129887
Na_2+He(Ne)(Ar), supernumerary rot. rainbows 7−90326
Na_2+Ne(Ar), interaction pot. anisotropy, energy depend. 7−90325
NaH, $^1\Sigma$ ground state, Dunham coeffs. determ., far-IR spectrum 7−74591
NaSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
$NeCl_2$, van der Waals mol., laser-induced fluoresc. excitation spectra 7−96776
NiD, rot. anal. UV and visible spectra 7−74653
O_2 molecules, isotope effects 7−96567
O_2, rot. transition, Fourier transform coherent Raman spectra 7−82130
O_3, electronic states, pot. energy surfaces, UV continuum, ab initio calcs. 7−96515
O_3, Hartley band photodissoc., O_2 photofragment CARS spectra anal. 7−103511
$^{16}O_3$, ν_1 and ν_3 bands, line positions and intensities 7−122499
OCS, absorpt. line shape and rot. temp., IR spectra 7−74609
OCS, IR spectra, vibr. and rot. consts. 7−96661
OCS, isotopic species, CO_2 laser sat. Stark spectra and global rovibr. anal. 7−96758
OCS^+, rot. distrib. meas. 7−113879
OCS-HCN dimer, microwave spectra, geometry and intermol. force const. 7−109880
OD, Lamb dip spectra obs. in mol. beam 7−135858
OH fragment, rot. and translational energies, laser-induced fluoresc. 7−110119
OH radical, 306.4 nm emission in reduced pressure ICPs 7−122561
OH+H_2, inelastic scatt. cross section rot. and fine struct. *(German)* 7−74737
OH+p-H_2, rot. excitation, rate coeffs. calc., astrophys. appl. 7−90359
O_2.Rayleigh scatt. cooperative rot. motion and collision-induced term study 7−82174
PH_2 radical, microwave spectrum 7−122507
PN radical, VUV spectra 7−141598
PO, rot. transitions hyperfine components, appl. for interstellar studies 7−128003
PtN^-, autodetachment dynamics and spectrosc. 7−122500
PuF_6, vibronic band fine struct. high resol. visible spectra 7−122557
SF_5Br, gas phase mol. struct., electron diffr.-microwave study 7−129697
SH_3^+ in hollow cathode discharge, IR spectrum, mol. consts., rot. transition freq. 7−74578
SO molecules, isotope effects 7−96567
SeH^-, rot. photodetachment spectroscopy 7−82295
SiCl, Lamb dip spectra obs. in mol. beam 7−135858
SiCl, rotational structure, isotope shifts, UV fluoresc. spectra anal. 7−96720
SiF_4, ground state, second-order Stark effect, IR spectrosc. 7−122529
ThO, visible and UV bands, rot. anal. 7−82200
TlF, rot. spectra, mol. consts. and break-down of Born-Oppenheimer approx. 7−90106

molecular rotation calculations
2-acetamido-2-deoxy-D-glucopyranoses, circular dichroism, rotations strength, solvent dependence, anomeric effects 7−141614
asymmetrical top mols., isolated, rot. spectra, crit. phenomena 7−103462
Cartesian internal coordinates, stationary paints, translation, rotation, Hessian, algorithms, potential energy surfaces 7−141551
chaotic effects in molecular rot. motion, spinor calcs. 7−141564
ethyl radicals, hyperfine coupling constant, angular dependence, rotational angle, ab initio calculations 7−135906
hydrocarbon dications, stability, spectroscopic constants and thermodynamic functions 7−96520

molecular rotation calculations continued
methyl groups, correlation, multiple-quantum NMR study 7−90218
time-correlation functions of several variables, calc. approach 7−122491
CS_2, coherent rot. states, creation and time evolution 7−103473
H_2, electron impact excitation near rotation and vibration threshold 7−110117
H_3^+, loosely bound complex, chaos trajectories 7−116930
HNCl-X system band origin and vibr. freqs., ab initio calcs. 7−135849
H_2O, rot. transition halfwidth, temp. effect 7−129685
NiBr emission spectra at 3800 to 5500 Å 7−122560
PN, $A^1\Pi$-$X^1\Sigma^+$ bands, rot. anal., perturbation studies 7−141560
SF_6, rotational states collisional broadening, Anderson-Tsao-Curnutte theory calcs. 7−116938

molecular rotation in solids *see molecular reorientation; nuclear magnetic resonance; plastic crystals*

molecular rotation-vibration
see also macromolecular dynamics; molecular force constants; molecular rotation-vibration calculations
acetylene, protonated, rot. and vibr. spectrum, H migration tunneling effects 7−96642
acetylene trimer, IR vibr.-rot. spectrum 7−82092
acetylide ion, CC stretching vibr., diode laser velocity modulation vibr.-rot. spectra 7−116934
aniline, resonance Raman depolarization ratios as a probe of excited state dephasing times 7−129714
aromatic molecules, gaseous, S_1-S_0 internal conversion, IVR enhancement 7−109973
aromatic molecules, microsolvation, spectroscopic investig. 7−129823
benzene, rovibronic states, intramol. relax., Doppler-free two-photon excitation spectra 7−96724
carbonyl fluoride, IR and microwave spectra, ν_6 band, vibr.-rot. anal. 7−116959
chlorotrifluoromethane, ν_4 and ν_1 bands, FTIR spectrum 7−129702
complexes, H-bonded, LF vibr., vibr.-rot. absorpt. band 7−68279
cyclopropane, $\nu_9+\nu_{10}$ combination FTIR spectral band, l-type resons. effects 7−109895
cyclopropane, r_s-struct., vibr.-rot. correl., NMR study 7−68361
deuteromethyl bromide, IR band, high-resolution investig. 7−74584
diatomic molecule sputtering, rovibr. excitation, quantum mechanical description 7−132396
diatomic molecules, centrifugal distortion constants, Prufer phase function 7−122414
diatomic systems, vibr.-rot. spectra, Dunham anal. 7−116932
dibromodifluoromethane, IR spectrum, vibr. study 7−82129
excimer laser photolysis, decay times, emission spectra, ultraviolet spectra 7−139017
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342
formamide, conformation, microwave spectrum 7−122505
Freon-12, ν_6 band integral intensity, diode laser spectroscopy 7−122520
gases, high-resolution nonlinear rot.-vibr. Raman spectrosc. obs. 7−80903
ketenes, isotopic, A_1 species fundamentals, IR rovibr. spectra 7−74587
Lennard-Jones potential, vibrational and rovibrational energies 7−116936
liquids, rotational dynamics, time-resolved CARS obs. 7−122543
methane, F_1 state, double reson. obs., vibr.-rot. lines 7−82234
methane, rot. and rovibr. transitions, millimeter-wave spectrum 7−82084
methyl fluoride, equilibr. struct. rot. struct., electron diffr. study 7−68456
methylene, triplet ν_1 and ν_3 ab initio calcs. and vibrationless singlet-triplet splitting determ. 7−129609
methylidyne, $X^2\Pi$ state, vibr.-rot. emission spectrum 7−90090
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
photofragment rotational distributions, parent internal motion, semiclassical calculation 7−136024
polyatomic molecules, geometry, electron diffr., kinetic anharmonicity 7−141706
pyrimidine, supersonic jet, mag. field effects on fluoresc. polarisation 7−90243
rotation-vibration Hamiltonian, kinetic energy contrib. to pot. energy 7−82068
strongly coupled model rotational-translational system dynamics, power spectra calcs. 7−117843
symmetric top mol., Coriolis coupling effect on time-resolved two-photon ionisation 7−141632
symmetric top mols., free internal rot., selection rules, vibr.-rot. spectra 7−109865
trichlorofluoromethane, microwave and mm-wave spectra, rot., centrifugal distortion and quadrupole parameters 7−96651
Ar_2, rovibronic spectra, rot.-electronic motion coupling 7−74566
ArH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
BaH, $H\ ^2\Delta$ state, Fourier transform fluoresc. spectra 7−103567
CH radical, Ar+methane reaction prod., vibr. energy, fluoresc. spectra anal. 7−138967
CH^+, rot. and vibr. distribs. from He^++acetylene charge transfer 7−126439
CO, Dunham coeffs. calc., recurrence relations 7−129830
CO, IR rot.-vibr. spectrum meas. 7−74610
CO lasers, pulsed electron-beam-controlled, radiation divergence 7−130066
CO oxidation, on pt, molecular beam/infrared emission spectroscopy 7−144759
CO, thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
CO_2, distrib. between vibr.-rot. levels in glow discharge, pulsed diode laser spectroscopy 7−141575
CO_2 laser bands, self-broadened linewidths, pressure and temp. depend. 7−117174
CO_2 lasers, pulsed electron-beam-controlled, radiation divergence 7−130066
CO_2 line broadening meas. in 10.4 μm laser transition at low temp. 7−103580
CO_2, thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
CS photofragment IR laser kinetic spectra 7−93343
CS_2, V^1B_2 state, fluoresc. and Zeeman quantum beat spectra 7−90240
Cl^-+H_2, angular and energy distrib. meas. 7−113872
ClO radical, infrared measurements, Fourier transform spectroscopy 7−122525
D_2, Raman linewidths, high-resolution CARS measurement 7−122549

molecular rotation-vibration continued
D_2+Ar(He)(D_2)(H_2)(methane), Q-branch Roman spectra line broadening meas. and rate law anal. 7−117024
DCN-DF, vibr. predissoc. fundamentals, rovibr. anal. 7−82299
DCl, resonantly-enhanced UV two-photon spectra 7−96810
DOCl, equilib. struct., vibr.-rot. spectra 7−82104
F+I_2, product state distribution 7−144708
F^-+H_2 angular and energy distrib. meas. 7−113872
F^-+H^+(H_2^+), HF excited states distrib., UV chemiluminesc. spectra anal. 7−96719
FBO, mol. struct., IR and microwave spectra 7−129698
H_2, dissociative chemisorpt. on Ni, incident angles and rovibr. states depend. 7−118237
H_2, double minimum EF state tunnelling resonances, isotopic species, ab initio pots. calcs. 7−122336
H_2, photofragment, rovibr. energies and populations, photodissoc. meas. 7−103599
H_2, photoionisation, photoelectron spectra angular distrib. asymmetry parameter 7−109997
H_2, rovib. population in H^- ion source, CARS time-resolved meas. 7−82161
H_2, selectively excited rot.-vibrs. states, fluoresc. dissoc. 7−116939
H_2, vibr.-rot. level population and abundance, appl. in NGC 2023 nebula 7−140243
H_2^+, ground state, vibr. and rot. props. in strong mag. field. 7−129684
H_2^+, photofragment, rovibr. energies and populations, photodissoc. meas. 7−103599
H_2+Ar, nonequilib. dissoc. rate coeff., Monte Carlo trajectory and master eqn. simulation 7−93290
HBr, Dunham coeffs. calc., recurrence relations 7−129830
HBr+He, Penning ionis., product nascent rovibr. distribs. investig. 7−132927
HCO radical, ground and excited states, laser induced fluoresc. and multiphoton ionis. spectra 7−129781
H_2CO, vibrationally excited, collisional energy transfer, stimulated emission pumping-transient absorpt. spectra 7−136044
HCl, Dunham coeffs. calc., recurrence relations 7−129830
HCl, IR transitions, vibr.-rot. matrix elements 7−135913
HCl, resonantly-enhanced UV two-photon spectra 7−96810
HCl, rovibrational threshold structs., electron scatt. 7−136074
HCl+Ar, IR fundamental band, Dicke narrowing and press. broadening 7−74585
HCl+He, Penning ionis., product nascent rovibr. distribs. investig. 7−132927
HF, rovibrational threshold structs., electron scatt. 7−136074
H_3GeD, Fourier transform IR spectrum, perturbed fundamental ν_2, rovibr. anal. 7−116963
$HLiH^-$ ion, in $X^1\Sigma_g^+$ state, 3D pot. energy and electric dipole moment surfaces, ab initio calcs. 7−116821
HNO_3, ν_3 band, line strengths and positions, IR spectra 7−129708
H_2O excitation in comets, model 7−120321
H_2O in comets, excitation model of IR obs. 7−94751
H_2O, vibr.-rot. energy levels, force consts. and mole geometry calc. 7−90089
H_2O^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
H_2O+N_2(O_2)(Ar), rot.-vibr. lines, collisional self-broadening, semiclassical theory 7−129791
H_3O^+, ν_4 perpendicular bending mode, IR laser spectroscopy 7−141572
$HOCS^+$, IR identification using difference freq. laser spectroscopy 7−122532
He+I_2, vibr.-rot. infinite-order sudden approx. appl. 7−96824
^4HeD, excited states, rot. struct., perturbation anal. 7−135907
HeH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
I^-+H_2, angular and energy distrib. meas. 7−113872
ICN, photodissoc., laser-induced fluoresc. probed 7−110043
K_2, rovibrational transitions, Doppler-free polarisation spectroscopy, visible spectra anal. 7−109916
LiCl, fundamental band, high-resolution infrared spectroscopy 7−122524
N_2-Ar mixture, spontaneous polarised vibr. Raman scatt. study 7−96700
NCNO, photodissociation, microcanonical state-to-state rates, ps photofragment spectroscopy 7−113965
NCS^-, bending and stretching hot bands, vel. modulation laser spectra 7−141573
NH, vibr. excited, rot. and hyperfine consts., IR spectra 7−74593
NH_2 radical, ν_2 band, IR absorpt. spectrum 7−68303
NH_3, dissociation, pot. energy surface, ab initio MCSCF calcs. 7−103359
NH_3, jet cooled, UV absorpt. spectra, isotope shifts 7−103529
NH_3, monomers and clusters, supersonic jets, Raman spectra 7−135946
NH_3, potential energy surfaces and IR spectra, CASSCF and CEPA calcs. 7−103358
NH_3, rot.-vibr. dynamics, reson. Raman scatt. spectra 7−90158
NO, collisional quenching rate consts., fluoresc. anal. 7−96771
NO, thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
NO_3, radicals, ν_2 and ν_3 bands, line strength meas., FTIR spectra 7−103499
N_2O, dipole moment fn., num. diagonalisation 7−74553
N_2O, IR spectra, heterodyne freq. meas. 7−116965
NSe radical, vibr.-rot. and fine struct., laser mag. reson. 7−122577
Na_2, $B^1\Pi_u$ state, pot. energy barrier, rot.-vibr. energies 7−90311
NaBr, hyperfine spectrum investig. 7−74554
NeH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
O_2, pot. energy curve and spectroscopic consts., CARS photofragment spectra 7−82134
O_2, visible photodissociation dynamics 7−135947
O_3, electronic states, pot. energy surfaces, UV continuum, ab initio calcs. 7−96515
O_3, ν_1 and ν_3 bands, line positions and intensities, Fourier transform spectra 7−74555
O_3, strong laser field absorpt., vibr.-rot. transitions, IR spectra study 7−74605
OC-HF complex, ν_1 state predissoc. lifetime, vibrs. state mixing, IR spectra anal. 7−103496
OCS, isotopic species, CO_2 laser sat. Stark spectra and global rovibr. anal. 7−96758
OH^-, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
OH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
ONCl, IR spectra, V_1+ν_3 vibr. band, 435 A type rovibr. line 7−96680

molecular rotation-vibration continued
PF radical, $X^3\Sigma^-$ state, IR absorpt. spectrum 7−90118
PH, radical, ground $X^3\Sigma^-$ state, FTIR vibr.-rot. spectrum 7−82098
PH_3, dipole moment, Coriolis interaction, laser Stark spectra 7−122586
SiH_2, rovibronic levels, lifetimes, visible fluoresc. spectra anal. 7−103519
SiH_2, rovibronic levels, quantal fluctuations in fluoresc. lifetimes 7−103564
XeCl amplifier, ps UV pulse amplification rel. to vibr.-rot. struct. 7−122927
XeF improved laser performance mechanisms at elevated temp., rot.-vibr. population shifts 7−117183
XeH^+, in hollow cathode discharge, IR spectra, vibr.-rot. bands 7−129704
Zn+H_2(HD)(D_2), product rot. and vibr. quantum-state distribs. determ. 7−132925

molecular rotation-vibration calculations
acetylene, protonated, Gaussian basis sets, bridged structure, proton affinity, rotational constant, stretching frequency 7−135840
asymmetrical top mols., isolated, rot. spectra, crit. phenomena 7−103462
diatomic molecule, vibration-rotation eigenvalue problem, anal. using DIRIGE program 7−141552
diatomic molecules, vibr.-rot. spectrosc., computer algebra calcs. 7−122342
diatomic mols., rot.-vibr. interaction effect on Franck-Condon factors 7−74558
formaldehyde, rovib. states, Hartree theory calcs. 7−135916
Hartree theory calcs. 7−135916
iminopyruvonitrile centrifugal distortion, Stark splittings, microwave spectra, rotation, vibration 7−135925
methane, degenerate vibr. state, rot. struct. study 7−122493
myoglobin structural transitions, degrees of freedom, algorithmic methods, reaction paths 7−138956
polyatomic mols. rot.-vibr. coupling parametric method 7−68276
soft body, diatomic molecules, infrared spectroscopy 7−122527
triatomic molecules, bending-rot. Hamiltonian, semirigid model 7−141562
vibration-rotation kinetic energy operators, derivation in internal coordinates 7−96639
vibrational state, rot. struct. study 7−122493
XY_3 mol., force fields, parametric representation 7−109856
CH^+, isotopic species, vibr.-rot. transition probabilities, electric dipole moment fn. calcs. 7−96504
CoF_2, bending-rot. Hamiltonian, semirigid model 7−141563
FeF_2, bending-rot. Hamiltonian, semirigid model 7−141563
HCl+N_2, fundamental vibr.-rot. lines broadening and shifting calcs. 7−117056
MnF_2, bending-rot. Hamiltonian, semirigid model 7−141563
N_2, two-colour double resonant multiphoton ionis., and laser-induced fluoresc. 7−110023
N_2O vibration-rotation parameters derived from IR spectra 7−96890
N_2O^+, photodissoc. rot. and angular distribs. calc. 7−110037
NiF_2, bending-rot. Hamiltonian, semirigid model 7−141563
O_3 absorpt. of high power IR radiation as result of weakly forbidden transitions 7−135915
SiO_2 absorpt. of high power IR radiation as result of weakly forbidden transitions 7−135915

molecular rotational energy transfer *see molecular rotational-vibrational energy transfer*

molecular rotational states *see molecular rotation*

molecular rotational-vibrational coupling *see molecular rotation-vibration*

molecular rotational-vibrational energy transfer
see also atom-molecule collisions; atom-molecule reactions; molecule-molecule reactions
acetonitrile, liquid, A_1 modes vibr. dephasing, computer simulation 7−97882
acetonitrile, mols. in liq. phase, vibr. and orientational relax. 7−103516
N-acetylproline methylamide, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
2-alkyl radicals, sequential intramol. vibr. energy relax. 7−136046
alkylbenzenes, vibr. excited triplet lifetimes, 2-colour photoionis. obs. 7−117011
anharmonic molecules, VT-relax. anal. 7−68444
aniline and derivatives, soln., rot. dynamics, picosecond fluoresc. anisotropies 7−90255
anthracene, energy resolved emission, rot. effects 7−74740
arene molybdenum tricarbonyls, multiphoton dissoc./ionis., intramol. vibr. relax. effect 7−129822
atom+diatom, reactivity, reactant rot. effect 7−86598
atom+diatomic molecule collisions, calc. of vibrationally inelastic collisional cross sections using EDWAVE code 7−141658
atomic and molecular processes in gases, book 7−95122
azoaromatic compounds, electron-excited, $n\pi^*$ triplet state deactivation 7−110091
benzene, anharmonic effects in radiationless vibronic energy relaxation 7−109852
benzene, rovibronic states, intramol. relax., Doppler-free two-photon excitation spectra 7−96724
benzene-d_0(d_6), CH and CD overtones, intramol. vibr. energy redistrib. 7−103631
benzene-d_0 (d_6), liq., isotopic dilution anal., vibr. Raman spectrum 7−90155
t-butyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
butylbenzene-d_0(d_3)(d_9), photodissoc., isotope effects 7−103595
carbazole-anthracene, Langmuir-Blodgett monolayer films, excitation energy transfer 7−74701
carbon tetrafluoride, vibr. energy distrib., collisional energy transfer rates, IR absorpt. spectra anal. 7−74600
chlorotrifluoromethane, IR multiphoton vib. excitation and dissoc. 7−103604
collisional energy relax. process, imbedding diffusion 7−86581
complex molecules, in soln., Brownian rot. effect on light-induced anisotropy 7−82688
conference, Liblice, Czechoslovakia (Oct. 1986) 7−72719
cyanomethane, electron impact, reson. vibr. excitation obs. 7−82379
diatom-diatom collisions, DIDIEX code for energy transfer rate constant calcs. 7−96827
diatomic+diatomic, VV energy transfer, rate const. comparison 7−68435
diatomic molecule gas, vibrational relaxation, harmonic oscillator approx. 7−141659

molecular rotational-vibrational energy transfer continued
diatomic molecule-atom collisions, vibr. excitation, Morse osc.-exponential repulsion model calcs. 7−90351
p-difluorobenzene, vibr. levels, lifetimes, SEP-SVLF spectra 7−74702
p-difluorobenzene+Ar, vibr. relax., stimulated emission pumping-single vibronic level fluoresc. investig. 7−74741
difluorodichloromethane, vibr. energy relax., IR fluoresc. spectra anal. 7−74602
1,4-dioxane, liq., vibr. dephasing and relax. 7−96828
dodecafluorocyclohexane, excited above dissoc. threshold, IR spectroscopy and intramol. vibr. relax. 7−109883
embedded molecules, enhanced energy transfer investig. 7−129848
ethylbenzene-$d_0(d_2)(d_7)(d_{10})$, photodissoc., isotope effects 7−103595
ethylcycloheptatriene, vibrationally excited, collisional deactivation, energy depend. 7−100509
ethyne, ultracold gas, FTIR spectra 7−129711
excitation energy transfer and electron transfer between mols., fundamental theory *(Japanese)* 7−96830
fluid, vibr. relax., many-body scatt. formalism 7−74739
fluoromethane, intra- and intermol. vibr. energy flow, nonlinear vibr. relax 7−110090
fluoromethane collision with quartz surface rovibrationally extracted, surface light induced drift 7−122674
formaldehyde + $CO_2(N_2)(O_2)(H_2)$, rot. inelastic scatt. cross-sections 7−82324
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342
gas mixture, shock wave vibr. relax. times, laser schlieren technique meas. 7−90352
gas phase reactions induced by vibr. multiple-photon IR laser excitation kinetics 7−93263
glycylproline, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
hexafluorobenzene, vibr. excited, collisional deactivation, UV absorpt. spectra 7−109919
intramolecular energy redistribution and stochasticity, conf., Orsay, France (June-July, 1986) 7−134365
iodotrifluoromethane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
methane, collision-induced light scatt. spectra study 7−82166
methyl cyanide, collisional interactions, rot. relax. rate consts. 7−122673
methyl groups, vibr. deactivation, laser photolysis and IR fluoresc. 7−110089
methylthio radical, laser-induced fluoresc., vibr. relax. and electronic quenching 7−68391
nonadiabatically coupled electronic quantum states, energy redistrib. dynamics 7−90319
nonafluoro-4-iodobutane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
organic liquids, generation of excited vibrational states during stimulated Raman scattering 7−90707
pentafluorobenzene, vibrational energy transfer, Hg tracer UV absorpt. spectra anal. 7−135956
polar molecules, solvation dynamics and vibr. relax., hole-burning spectroscopy 7−82326
polyatomic molecule, intramolecular vibrational energy redistribution, anal. 7−103625
polyatomic molecules, highly vibr. excited, IR absorpt. spectrosc. 7−74579
polyatomic molecules, IR multiphoton excitation, intramol. vibr. redistrib. 7−103608
polyatomics, vibr. excited, IR absorpt. spectra and intramol. vibr. redistrib. 7−136042
polyatomics vibr. excited, intramol. vibr. relax. and IR absorpt. spectra 7−136041
porphyrins, synthetic, light-harvesting complex 7−114165
prolylglycine, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
prop-1-yne, ultracold gas, FTIR spectra 7−129711
resonant energy transfer, initial conditions role 7−90340
rotational rainbow at large scatt. angles, anal. model 7−141660
self-quenching of luminesc. by statistical traps 7−82257
trans-stilbene, internal rot., phosphoresc. excitation and stimulated emission spectroscopy 7−68440
t-stilbene, intramol. vibr. redistrib., time-resolved fluoresc. spectra, photochem. timing meas. 7−117055
trans stilbene. liq., effect of dephasing collisions on Raman polarisation 7−82170
symmetric top molecules, excited vibr. states, effective rotational Hamiltonians 7−129620
toluene-$d_0(d_3)(d_5)(d_8)$, photodissoc., isotope effects 7−103595
1,3,5-trioxane, multiphoton dissoc., collision effects, IR spectra anal. 7−74601
tris(trifluoromethyl)iodomethane, IR absorption spectra, vibr.-relaxation time 7−82121
unimolecular reactions in condensed phases, nonMarkovian theory 7−93291
vinyl chloride+$He(Ar)(N_2)(CO_2)$, energy transfer meas. in collisional deactivation 7−90338
XY_2+XY_2, collinear collisions, vibr. energy transfer, quantum calcs. 7−110086
AlO, Ar matrix isolated, vibr. relax., IR-optical double reson. 7−82235
Ar-O_2(methane), binary liq. mixtures, vibr. relax time as function of conc. 7−68441
$Ar+N_2$, excitation transfer reaction, rot. and vibr. distrib. energy depend. 7−110083
Br_2, high-temperature dissoc. and vibr. relax. study 7−100526
Br_2, laser-excited, collision-induced dissoc., rate const. meas. 7−103598
BrNO+Br 7−90345
CH, $A^2\Delta$ state, collisionally induced rot. energy transfer 7−96829
C_2N_2, predissoc., photofragment vibr. distribs., ab initio MCHF pot. energy surface calc. 7−90344
CO, in solns., orientational relax., IR absorpt. band shape 7−82119
CO, non-resonant VV transfer, rate consts. determ. 7−110085
CO, thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
CO, ultracold gas, FTIR spectra 7−129711
CO-Ar mixtures, temp. meas. behind shock waves, line broadening 7−111030
CO_2, collisional vibr. relax. rates 7−90350
molecular rotational-vibrational energy transfer continued
CO_2, coupled modes, VV exchange and VT relax. kinetics, num. calcs. 7−68443
CO_2 line broadening meas. in 10.4 μm laser transition at low temp. 7−103580
CO_2, thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
CO_2 vibr. relaxation at BaF_2 crystal surface 7−74738
CO_2+Ar(He), vibr. excitation, distorted wave calc. 7−103626
CO_2+D, hot atom collisional excitation, isotope effects, laser-excited rot. spectra 7−136043
CO_2+He(Ne)(Ar), collinear energy transfer. resons. effect 7−117054
CO_2+SiF_4 (SF_6), near reson,. V-V energy transfer blow 300 K 7−90349
CS+N_2, excitation-transfer, rate consts. investig. 7−93276
CS_2, liq., vibr. and reorientational relax. 7−90354
CS_2, symm. and bending modes, energy exchange rate const. 7−136653
CS_2, vibrational level relax., UV fluoresc. spectra anal. 7−96722
D_2, collision-induced polarised and depolarised Raman scatt. 7−82179
$F+NH_2(NHG_3)\rightarrow HF+NH(NH_2)$, vibr. energy distribs., chemiluminesc. determ. 7−113866
$F+NH_3(ND_3)(N_2H_4)(CH_3ND_2)$, reactions, vibr. energy disposal 7−86592
$Fe(CO)_5$, photolysis, mol. beam study 7−68439
$H+CO_2$, rot. rainbow study 7−90346
$H+H_2$, reactivity, reactant rot. effect 7−86598
$H+H+H\rightarrow H_2+H$, nascent vibr.-rot. distrib. calc. 7−113891
H+NO, inelastic scatt., rot. vibr. energy transfer, classical trajectory study 7−90343
$H^+ + CO_2(N_2O)$, inelastic and charge transfer collisions, vibr. excitation, mode conservation 7−129847
H_2, collision-induced polarised and depolarised Raman scatt. 7−82179
H_2, depolarized Raman scatt. at low temps. study 7−82178
H_2, vibrational relaxation, many-body scatt. formalism calcs. 7−103632
H_2-He mixture, swarm expt., H_2 vibration excitation study 7−110118
H_2+glyoxal, rot. and vibr. energy transfer, crossed beam study 7−136045
H_2+H_2, rotationally inelastic collisions in interstellar MHD shocks 7−94993
H_2CO, vibrationally excited, collisional energy transfer, stimulated emission pumping-transient absorpt. spectra 7−136044
HCl-CO, gas and liq. soln., vibr. energy transfer 7−90341
HCl+Ar, collisional energy transfer dynamics investig. 7−117053
HCl+N_2, fundamental vibr.-rot. lines broadening and shifting calcs. 7−117056
HF laser model based on optical resonance energy transfer 7−90597
HF, vibr. excited, form., IR chemiluminesc. obs. using SISAM 7−68288
HF+HF, collision on realistic pot. energy surface, rot. energy transfer calcs. 7−117052
HF+HF, rot. energy transfer, large-scale close coupling calcs. 7−129852
HF+HF, rot.-vibr. transition cross section calc. initial state effect 7−68436
HF+Li, rot. energy transfer, kinematic effects 7−90337
$H^+He(CO_2)$, rot. energy transfer 7−141661
He+I_2, harmonic and Morse oscill. models, vibr.-rot. infinite order sudden approx. 7−82327
He+IF collisions, state to state rotational transfer 7−90353
He+N_2, rot. energy transfer cross sections, quasiclassical trajectories 7−122676
$^2He^+$, vibrational kinetics, effects on He discharge afterglow 7−126458
$Hg+H_2(D_2)(HD)$, prod. rot. and vibr. distribs., isotope effects 7−132921
HgBr+He(Ne)(Ar)(Xe)(N_2), V-T relax., fluoresc. obs. 7−103629
I_2, high-temperature dissoc. and vibr. relax. study 7−100526
I_2, vel. distrib., picosecond transient grating expts., spectroscopy 7−96580
I_2, vibrational excitation in surface collisions, pot. energy surface anal. 7−92795
I_2 visible spectra, saturation, cross-relaxation effects 7−109918
I_2+He, vibr. energy transfer investig. 7−110088
IF, reaction product, vibr. and rot. excitation spectra 7−90388
IU+F, reactive scatt. using supersonic at. beam 7−126443
K_2+K+inert gas atoms, deactivation total cross section determ. 7−82328
Kr excimer, form. and atomic excitation transfer process rates, quasiclassical theory 7−90348
Kr excimer, form. and decay, photon counting investig. 7−90347
$Li^+ + N_2$, vibr. relax., modified Landau-Teller model 7−136039
Li_2^* + inert gas, rot. energy transfer moments, scaling behaviour 7−90339
methyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
N_2, collisionally-narrowed isotropic Raman spectra, strong collision model calcs. 7−82177
N_2, light parametric freq. conversion in short wavelength region 7−103886
N_2, non-resonant VV transfer, rate consts. determ. 7−110085
N_2, reorientation and rot. energy transfer cross sections, nucl. spin-lattice relax. time meas. 7−103538
N_2, rot., vibr. and electronic excitation in ICP 7−122675
N_2, rotationally inelastic collision models, Q-branch Raman spectra anal. 7−68308
N_2-Ar free jet, rot. relax. rate consts. and pop. levels study 7−136047
N_2+CO, rovibronic energy transfer, laser REMPI spectroscopy investig. 7−129850
N_2+CO vibrational energy transfer rate consts. meas. 7−117051
N_2+H_2O, vibr. relax., laser schlieren study 7−103627
N_2+He(Ar)(Xe), rot. energy transfer cross sections, close-coupled quantum scatt. calcs. 7−136040
N_2^++He, rot. and vibr. relax. rate consts. determ. 7−82323
NH^-, IR rotation-vibr. spectrum, hyperfine struct. meas. 7−90002
NH_3 laser, two-frequency excitation under fast rotational relaxation conditions 7−130070
NH_3+H_2, rot. excitation, ab initio pot. energy surface calc. 7−68438
NH_3+H_2(He), rot. energy transfer, IT spectra anal. 7−96657
$NH_3+NH_3(N_2)$, vibr. relax. rate and lifetimes meas. 7−110087
$NH_3^+ + D_2$, abstraction and exchange reactions, vibr. and translational energy effects 7−93293
NO, collisional quenching rate consts., fluoresc. anal. 7−96771
NO, thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
NO+Ar(He), rot. energy transfer cross sections determ. 7−103628
NO_2, photodissoc., predissoc. mechanism, rot. prop. distribs. eval. 7−110034
N_2O, liq., $\nu_3\nu_3$ vibr., time correl. fns. and vibr. energy transfer, IR spectra meas. 7−129849

molecular rotational-vibrational energy transfer continued
NS+He(H_2)(N_2)(O_2)(SF_6)(N_2O)(CO_2)(NH_3)(methane), $B^2\Pi$ state, collisional quenching and energy transfer rate const. meas. 7−103630
O+trichloromethane (trifluoromethane), dynamics and microscopic kinetics, time-resolved Fourier transform spectroscopy 7−132919
O_2, excited singlet state, collisional relax., temp. depend. 7−122672
O_2, light parametric freq. conversion in short wavelength region 7−103886
O_2, nightglow triplet emissions, vibr. levels attitude distribution 7−79732
O_2-Ar(N_2), binary liq. mixtures, vibr. relax time as function of conc. 7−68441
O_2+Ar, collisional energy transfer dynamics investig. 7−117053
O_2+O_2, vibr. excitation and relax. 7−68442
O_3, strong laser field absorpt., vibr.-rot. transitions, IR spectra study 7−74605
O_3, vibr. excitation effects in Earth's upper atmosphere 7−94530
OH, collisional quenching and energy transfer meas. 7−129782
OH, vibr. excited, form., IR chemiluminesc. obs. using SISAM 7−68287
O_2.Rayleigh scatt. cooperative rot. motion and collision-induced term study 7−82174
S+N_2 excitation-transfer, rate consts. investig. 7−93276
S_2, sputtered mol., vibr. and rotational energy distrib. 7−144213
SF_6, vibr. relax. rate consts. meas. 7−110084
SF_6, vibrationally highly excited, nonlinear relaxation processes studied by interferometry 7−82325
SF_6-Ar(He)(Xe), mixture, vibr. relax. rate, time-resolved IR multiphoton absorpt. spectra anal. 7−74599
SF_6−Ar(He)(D_2)(N_2)(propane), vibr.-translational relax. times anal. 7−103633
SiH_4+He^+, thermal energy charge-transfer reaction, optical spectroscopic study 7−93262

molecular rotational-vibrational states *see molecular rotation-vibration*

molecular rotorsional states *see molecular libration*

molecular spectra
see also macromolecular spectra; molecular fluorescence; molecular rotation; molecular spectral line breadth; molecular vibration; multiphoton spectra; optical double resonance; radiative corrections; spectra of inorganic molecules; spectra of organic molecules and substances
acetylene, electron impact spectrum investig. 7−136075
acetylide ion, CC stretching vibr., diode laser velocity modulation vibr.-rot. spectra 7−116934
asymmetric top, optical activity, semiclassical theory 7−82289
asymmetrical top mols., isolated, rot. spectra, crit. phenomena 7−103462
CAL infrared spectroscopy, microcomputer appl. of PROLOG 7−88805
characteristic features, synchrotron radiation investig. *(German)* 7−132972
chemical dynamics, laser appls., conf., Los Angeles, CA, USA (Jan. 1987) 7−128182
comets, electronic spectra and relaxation of molecular cations 7−88289
complex molecules, electronic transitions four photon spectroscopy, stationary methods theory 7−82308
concentration-modulated absorption spectroscopy, CW lasers appl. 7−103478
conference, Garmisch-Partenkirchen, Germany (Sept. 1985) 7−95090
degenerate electronic states, spectroscopic ramifications due to cancellation effects 7−116966
diatomic mols., electronic energy levels matrix isolation and gas phase spectra 7−82074
gases, Rayleigh spectrum fine struct., review 7−141586
high resolution spectroscopy, 51st physics conference, Berlin, Germany (March 1987) *(German)* 7−128179
high-symmetry molecules, two-photon spectrosc. 7−109869
intensity fluctuations, quantum measure algebra 7−140548
interaction between a Rydberg series and a shape or giant resonance 7−74491
IUPAC commission 1.5, overview of activities 7−89277
linear parent molecules in comets, synthetic rot. and vibr. spectra 7−72270
metal-metal quadruple bonds, δ-δ^* transition energies and intensities 7−90099
microcapacitor electrodes for microwave rotational spectroscopy 7−103683
molecular beams, laser spectroscopy with sub-Doppler resolution study 7−96646
molecular collisions, radiative transitions induced by short laser pulses 7−122622
molecular ions, IR absorpt. spectrosc. using tunable lasers 7−68298
molecules, electronic transitions, polaris. determ. method 7−141622
nonpolar molecular pairs, FIR absorpt., collision induced spectra 7−116957
polyatomic cations, spectrosc. characterisation 7−68286
polyatomic mols., XYZ_2 type, force fields, electro-optical parameters 7−68376
spectrostructural information calc. 7−68282
statistical properties, spectral analysis, quantum statistics coupled oscillators 7−141555
symmetry in bonding and spectroscopy, book 7−72744
T-shaped an der Waals complexes, spectrosc. props. and empirical pot. energy surfaces 7−68424
T-shaped van der Waals complexes, spectrosc. props., pot. energy surfaces 7−68423
time-correlation functions of several variables, calc. approach 7−122491
2,4,6-triisopropylbenzophenones, lowest triplet states, rot. relax., picosecond laser spectroscopy investig. 7−129690
H-bonded systems, spectroscopic equilibrium constant determ. 7−74562
I_2, laser optogalvanic spectrum, DC voltage effect 7−116979
I_2, vap., gas dynamics, picosecond transient grating expts. 7−129630

molecular spectral line breadth
acetanilide unconventional amide I band 7−90128
acetic acid, aq. soln., Raman spectroscopy, factor anal. and band contour resolution 7−68315
acetonitrile, liquid, A_1 modes vibr. dephasing, computer simulation 7−97882
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
adsorbed species, on solid catalysts, IR spectra, band shape anal. 7−76594
tert-alcohol-diethyl ether complexes, vibr. dephasing, IR bandshapes 7−96691
alkali metal-He pairs, nonresonant excitation, fluoresc. ratios 7−141621

molecular spectral line breadth continued
1-aminoalkyl-2-naphthols, excited state H^+ transfer, fluoresc. study 7−90256
anisotropic aligned fluids, Raman band shape anal. and mol. inertial motion 7−68328
anthracene, supersonic beam, intramolecular dephasing and vibr. redistrib., fluoresc. 7−129773
anthracene-tetracyanobenzene cryst., triplets annihilation, reaction yield detected mag. reson. line shape study 7−92075
aromatic π-electron system-$H_2O(D_2O)$(HDO) interaction, matrix isolation IR obs. 7−96674
asymmetric Fano profile distortions above metallic grating surface 7−74712
azanaphthalenes, triplet state reson. Raman spectroscopy 7−82132
azulene, solvent effects, Raman excitation profiles, line broadening stochastic model calcs. 7−82190
bacteriorhodopsin, solvation dynamics, mol. fluoresc. and near reson. Raman yields probe 7−103562
benzene, local modes, highly resolved vibrational spectra 7−141558
benzene, rovibronic intramol. vibr. energy redistrib., linewidth distribs. 7−129681
benzene derivatives, electronic transitions, UV reson. Raman spectra anal. 7−82186
benzene in supercritical N_2, spectroscopic studies 7−90179
benzene-Ar clusters, Penning ionisation, UV spectra line shapes 7−82331
benzoic acid, H bonded dimers, delocalised states obs., fluoresc. line-narrowing expts. 7−109977
n-butyl bromide, liquid phase, IR spectra molar absorptivities, temp. depend. 7−144046
3-carbamoyl-2,2,5,5-tetramethylpyrroline-1-oxyl, radicals, ESR spectra 7−74687
chlorin, in amorphous SiO_2, hole-burning spectroscopy 7−123119
chlorophyll, aggregation in solns., Raman excitation profile anal. 7−82191
chlorophyll frozen solns. spectra, zero-phonon lines studies, review *(Russian)* 7−106972
CO, interstellar, spectral lines form. in turbulent vel. field with finite correl. length 7−101874
collision-induced far-IR absorpt. spectra, line shape 7−82285
collisionally broadened transitions, complex susceptibility 7−96794
combustion diagnostics using high-resolution CARS 7−80906
concentration-modulated absorption spectroscopy, linewidths effect 7−103582
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
Creutz-Taube ion, optical absorpt. spectrum model 7−90115
cytochrome c, lineshape anal., reson. Raman spectra 7−78762
diatomic mols. polarisation modulated two-photon spectroscopy 7−134851
1,2-dichloro-2-fluoroethanone, enantiomers and racemic mixture, IR-RF double reson. spectra 7−90230
2,6-dichlorophenol, vibr. dephasing, IR bandshapes 7−96685
difluoroethene laser, 889 μm, optically pumped frequency pulling 7−122923
2,3-dimethylanthracene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
2,3-dimethylnaphthalene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
2, 6-dimethylpyridine, ^{13}C-^{15}N scalar splittings in ^{13}C NMR spectra 7−68350
dipalmitoylphosphatidylglycerol, vib. freq. shift, Raman spectroscopy 7−90175
dodecafluorocyclohexane, intramol. vibr. relax., IR-IR reson. spectra anal. 7−74604
doxyl labelled alkyl chains, EPR spectra, inhomogeneous line broadening 7−90228
dye laser linewidth, effect of intracavity lens focal length 7−90653
dye laser oscillator, diffr. limited single longit. mode multiple prism flashlamp pumped, linewidth anal. 7−117224
dye molecules, associated, absorpt. band shape approximation 7−90278
ethene dimers, IR predissoc. spectra 7−116972
ethyne, ultracold gas, FTIR spectra 7−129711
ethynyl (-d_1) radical, colour centre laser spectroscopy, IR spectra, vibronic state 7−116968
excimer lasers, small long-pulse, narrow band tuning 7−110341
far-off-resonant scattering power-dependent dispersion effects 7−90698
five-membered saturated rings, intramol. dynamics in condensed phase 7−90143
fluid, depolarised interaction induced light scatt., ab initio calcs. 7−81970
fluoromethane-d_0(d_3), laser lines, asymmetry and line shape effects, IR-IR double reson. 7−122581
formaldehyde, foreign-gas broadening parameters and line strengths, 9 to 11 μm, tunable diode laser meas. 7−103581
formaldoxime, asymmetry and line shape effects, IR-IR double reson. 7−122581
formic acid-d_2, asymmetry and line shape effects, IR-IR double reson. 7−122581
Gaussian approximation for temp. depend. of continuous electronic spectra 7−136010
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7−78759
4-hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl, radicals, ESR spectra 7−74687
2-hydroxy-4,5-benzotropone, in inert gas matrices and ethanol solns., H^+ transfer 7−71478
hydroxylamine, diode laser spectroscopy, rot. and distortion consts. 7−116964
imidazoline-2-one, Raman and IR spectra, vibr. anal., force consts. 7−96707
imidazoline-2-thione, Raman and IR spectra, vibr. anal., force consts. 7−96707
ketene-d_2, IR spectrum, ν_9, ν_6 and ν_5 7−122531
liquids, Raman spectra, interaction-induced and local fields effects study 7−82169
liquids, Raman spectra bandshape, H-bond strength and soln. viscosity depend. 7−82172
methane, collision-induced light scatt. spectra study 7−82166
methane, spectroscopic diffusion coeff. at 3.39 μm, laser study 7−74713
methane, ultrahigh-resolution laser spectroscopy with cold particles 7−141487
methane-d_1, ν_6 band, halfwidths and intensities, diode-laser meas. 7−74714
methane-d_1, self-, N_2- and H_2-broadened linewidths in ν_6 fundamental, diode laser meas. 7−68410

molecular spectral line breadth continued
methanol, asymmetry and line shape effects, IR-IR double reson. 7−122581
methanol, liquid, Raman spectra, isotropic bandwidths and freq. shifts of CH and CO modes 7−92658
methanol laser at 119 μm, gain line shape, buffer gas press. depend. 7−122925
methyl fluoride, IR laser sideband and submillimeter wave spectroscopy, vibr. state, rot. transitions 7−96666
methyl fluoride, liq., ν_3 band, noncoincidence effect, Raman and IR spectra 7−106156
methyl silane, torsional band studied using tunable diode laser spectrometer 7−96662
methyl thiourea, Fermi reson. lineshapes, IR spectra 7−109900
methylbenzene, α-substituted, liq., mol. reorientation, Raman spectra 7−92681
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
modified Boltzmann kinetic equation for line shape functions 7−122618
molecular beam laser saturation spectroscopy, sub-Doppler technique 7−96788
molecular beams, laser spectroscopy with sub-Doppler resolution study 7−96646
myelin membranes, vibr. spectra and struct. 7−119742
myoglobin, lineshape anal., reson. Raman spectra 7−78762
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
1,4-naphthoquinone, Raman spectrum, transferable valence force fields anal. 7−74647
near reson. Raman scatt., oscill. detection 7−68307
nitrobenzene, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
optical Ramsey fringes, pulse train single-photon induced 7−122437
oxazine-4-perchlorate, in amorphous SiO_2, hole-burning spectroscopy 7−123119
pentafluorobenzene, vibrational energy transfer, Hg tracer UV absorpt. spectra anal. 7−135956
pentafluorochloroethane, vibrational excitation, IR absorpt. spectra, ps pulse duration depend. study 7−109886
plasmas, local thermal equilib., molecular spectral intensities and line broadening 7−129793
polar mol., solvation dynamics, fluoresc. line shapes probe 7−82251
polyatomic molecules, highly vibr. excited, IR absorpt. spectrosc. 7−74579
polyatomic mols., coherent Raman spectra reson. background 7−141585
polyphosphazene, fluorinated, solid, abundant spins, MAS NMR investig. 7−85456
pressure broadening and shift of spectral lines, unified theories, Van der Waals interaction 7−74511
prop-1-yne, ultracold gas, FTIR spectra 7−129711
pyrene+cyclodextrins assoc. consts. meas., vibronic states, UV fluoresc. spectra anal. 7−96721
pyridene, ^{13}C-^{15}N scalar splittings in ^{13}C NMR spectra 7−68350
radicals, CIDEP study 7−82232
Raman excitation profiles, totally symmetric modes, vibronic coupling effects study 7−96703
Raman measurements, fluorescence effects 7−103507
resorufin, in ethanol glass, linewidths, photon echo and hole-burning results 7−110479
resorufin, in glycerol glass, photon echo and hole burning, temp. depend. 7−129796
rhodamine 590 dye laser, 200 ns narrow-linewidth flashlamp pumped, efficient operation 7−110402
rhodamine 6 G, associated, absorpt. band shape approximation 7−90278
rhodamine 6G, ethanol solution, dynamic Stokes shift, fluoresc. spectrum, stochastic behaviour 7−82249
rhodamine 6G, glycerol soln., fluoresc. lifetime and polaris. characts., relax. effects 7−74706
sodium propionate, isotopic species, low-temp. IR spectra, isotope shifts anal. 7−96698
stimulated Raman spectroscopy, high resolution, mol. structs. and collision effects on line shapes investig. 7−80901
tetradecanes, spin labelled, line broadening correction, EPR spectra 7−82228
tetradesmethyl-β-carotene, reson. Raman and fluoresc. lineshapes, vibr. relax., solvation dynamics 7−74615
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7−106212
tetrazine-Ar complex, supersonic free jet, reson. and dispersed fluoresc. 7−82262
thioacetamide, Fermi reson. lineshapes, IR spectra 7−109900
trichlorobenzenes and higher chlorinated benzenes, in gas phase and in n-hexane soln., UV absorpt. spectra 7−116981
tryptophan in apocytochrome c, fluoresc. quenching dynamics, rot. isomerism study 7−78745
turbulent gas, spectral line profile 7−103579
two-level system, vibronic transition, stochastic description *(Chinese)* 7−129687
two-tone optical heterodyne spectroscopy with dye lasers, line shapes 7−82284
xylenols, fluorescence quenching of excited states due to H bonding with triethylamine 7−82266
Ar-HD, van der Waals mol., IR predissoc. calcs. 7−122640
CN, intrinsic line widths determ. from interstellar absorpt. lines obs. 7−88689
CO 2.3 μm profiles rel. to galactic centre stellar kinematics 7−120574
CO, Auger and autoionisation spectra, interference effects calc. 7−90187
CO, IR rot.-vibr. spectrum meas. 7−74610
CO, in solns., orientational relax., IR absorpt. band shape 7−82119
CO, line width estimation, self-absorpt. meas., FTIR spectra 7−90127
CO, ultracold gas, FTIR spectra 7−129711
CO-Ar mixtures, temp. meas. behind shock waves, line broadening 7−111030
CO_2 large-scale lasers, multiple-prism grating techniques for linewidth narrowing 7−110401
CO_2 laser, effect of spectral line overlap on pulse shape 7−103796
CO_2 laser bands, self-broadened linewidths, pressure and temp. depend. 7−117174
CO_2 line broadening meas. in 10.4 μm laser transition at low temp. 7−103580
CO_2, Q branch N_2 broadening, line mixing in IR spectra 7−96659
molecular spectral line breadth continued
CO_2HF complexes, stretch and bend vibr., IR laser absorpt. spectra 7−96658
CS photofragment IR laser kinetic spectra 7−93343
CS_2, autoionisation, fluoresc. polarisation study 7−82293
CS_2, liq., vibr. and reorientational relax. 7−90354
$^{12}C^{13}C$ features in comets, profile study 7−94749
Ca-inert gas mol. bands, laser absorpt. profiles 7−109872
β-carotene, ground state reson. Raman spectra, saturation and line broadening study 7−103510
CeO_2, giant resonances, X-ray spectra, line resolution study 7−141601
Cl compounds, Kα X-ray spectra, chemical effects study 7−129739
Cl compounds, Kα X-ray emission spectra chemical effects, SCC-DV-Xα MO calcs. 7−129593
D_2, collision-induced polarised and depolarised Raman scatt. 7−82179
D_2, Q branch lineshapes, Raman spectra study 7−82165
D_2, Q-branch lineshapes, pressure depend., Raman spectra anal. 7−82163
D_2, Raman linewidths, high-resolution CARS measurement 7−122549
D_2+Ar(He)(D_2)(H_2)(methane), Q-branch Roman spectra line broadening meas. and rate law anal. 7−117024
D_2+CO(N_2), spectral broadening, temp. depend. 7−82156
D_2O, liq., Raman spectra in translational and librational regions, depolaris. ratio 7−125740
$Eu_2P_2S_6$, crystal, vibr. assignments, IR spectra *(German)* 7−99871
$FNCl_2$, flash photolysis, absorpt. band systems 7−96683
$Fe(CO)_5$, CO stretching ν_6 fundamental, free jet IR absorption spectrosc. 7−122534
H_2, collision-induced polarised and depolarised Raman scatt. 7−82179
H_2, fast beam, Rydberg state, hyperfine and fine struct., UV obs. 7−74656
H_2, theory of faint features in $S_0(0)$ line observed in Jovian atmosphere 7−134173
H_2+Ar(CO)(He)(N_2), spectral broadening, temp. depend. 7−82156
$HCNH^+$, IR ν_5 band, rot. consts. 7−96668
HCl, fundamental IR bands, N_2 and air broadening effects 7−74586
HCl+Ar, IR fundamental band, Dicke narrowing and press. broadening 7−74585
HCl+N_2, fundamental vibr.-rot. lines broadening and shifting calcs. 7−117056
HD immersed in He and H_2 gas, line shape cross sections calc. using electronic pot. energy surfaces 7−129790
HF, fundamental IR bands, N_2 and air broadening effects 7−74586
HNO_3, ν_3 band, line strengths and positions, IR spectra 7−129708
H_2O, atmosphere, ν_2 absorpt. band, IR spectra, tunable diode laser spectrometry 7−103504
H_2O, liq., Raman spectra in translational and librational regions, depolaris. ratio 7−125740
H_2O, nearly free rotation in soln., weak interaction with solvent 7−82070
H_2O, rot. transition halfwidth, temp. effect 7−129685
H_2O, second hexad, IR absorpt. bands, transformed dipole moment parameters 7−101486
H_2O+N_2(O_2)(Ar), rot.-vibr. lines, collisional self-broadening, semiclassical theory 7−129791
H_2O_2 photolysis, OH radicals rot. distrib., laser-induced fluoresc. study 7−68333
HOD, stretching vibr., wavenumber shifts interpretation 7−68281
$H_2O(D_2O)$:HDO, stretching fundamentals satellite bands, IR spectra anal. 7−113176
I_2, n-hexane soln., vibr. struct., reson. Raman excitation profile 7−82183
I_2, secondary emission time behaviour, Raman scatt. and luminesc. study 7−82181
I_2-organic complexes, Raman spectra motional narrowing 7−90151
InCl, $C^1\Pi$ state, pot. curve calcs. 7−135868
KBr, F centres, soft X ray irradiated, UV-visible meas. of optical absorpt. band 7−80248
KSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
LiSCN, aq., soln., vibr. and rot., Raman spectra 7−85646
Mo(V) complexes, multifrequency ESR spectra 7−103543
N_2, collisionally-narrowed isotropic Raman spectra, strong collision model calcs. 7−82177
N_2, gas, rototranslational far-IR absorpt. spectra 7−90111
N_2, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
N_2, high resolution inverse Raman spectra, line widths, collisional contrib. 7−74621
N_2, Lyman-Birge-Hopfield band, oscillator strength determ. 7−74777
N_2, press. broadening coeff., depend. on rot. quantum number, Raman obs. 7−82157
N_2, rot. relax. fitting laws, SRS Q-branch calc. 7−109905
N_2, rotationally inelastic collision models, Q-branch Raman spectra anal. 7−68308
N_2+N_2(HCl), spectral broadening, temp. depend. 7−82156
NH_3, jet cooled, UV absorpt. spectra, isotope shifts 7−103529
NH_3, nearly free rotation in soln., weak interaction with solvent 7−82070
NH_3, reson. hyper-Raman scatt. spectra 7−109906
NH_3+H_2(He), rot. energy transfer, IT spectra anal. 7−96657
N_2HF in slit supersonic jets, IR laser spectroscopy 7−90120
NNO, absorpt. line shape and rot. temp., IR spectra 7−74609
NO, core-excited, vibr. interference in decay, Auger spectrum 7−74718
$^{14}N^{16}O$-N_2, pressure broadening coefficients, infrared spectroscopy 7−122528
NO_3, radicals, ν_2 and ν_3 bands, line strength meas., FTIR spectra 7−103499
Na_2, $B^1\Pi_u$ state, pot. energy barrier, rot.-vibr. energies 7−90311
Na_2, UV spectra, diffuse bands 7−122563
NaSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
O_3, strong laser field absorpt., vibr.-rot. transitions, IR spectra study 7−74605
OC-HF complex, ν_1 state predissoc. lifetime, vibrs. state mixing, IR spectra anal. 7−103496
OCS, absorpt. line shape and rot. temp., IR spectra 7−74609
OCS, IR spectra, vibr. and rot. consts. 7−96661
OCS, isotopic species, CO_2 laser sat. Stark spectra and global rovibr. anal. 7−96758
OCS, J=2→3 line half-width and shift parameters *(French)* 7−129695
OCS+O_2, IR spectra, ν_1 band, diode-laser meas., press. broadening parameters 7−96663
OH rotational lines in far IR, atmospheric collisional broadening 7−133920
O_2.Rayleigh scatt. cooperative rot. motion and collision-induced term study 7−82174

molecular spectral line breadth continued
PFO_3^{2-}, ^{19}F and ^{31}P NMR, transverse nucl. spin relax. 7−109945
PrO_2, giant resonances, X-ray spectra, line resolution study 7−141601
PtN^-, autodetachment dynamics and spectrosc. 7−122500
SF_6, isotope separation by IR multiphoton dissoc. 7−68414
SF_6, rotational states collisional broadening, Anderson-Tsao-Curnutte theory calcs. 7−116938
SF_6, vibrational excitation, IR absorpt. spectra, ps pulse duration depend. study 7−109886
SiH_2, rovibronic levels, lifetimes, visible fluoresc. spectra anal. 7−103519
TbO_2, giant resonances, X-ray spectra, line resolution study 7−141601
W-Mo: In, trace anal. line selectivity in inductively coupled plasma-AES 7−133011
W(V) complexes, multifrequency ESR spectra 7−103543

molecular structure (electronic) *see molecular electronic states*

molecular structure (geometrical) *see molecular configurations*

molecular torsion *see molecular libration*

molecular vibration
see also Fermi resonance; macromolecular dynamics; molecular force constants; molecular rotational-vibrational energy transfer; molecular spectra; molecular vibration calculations; molecular vibration in solids; potential energy curves and surfaces of molecules; potential energy functions
1-cyanonaphthalene-triethylamine van der Waals complex, exciplex form., fluoresc. study 7−82264
ABA-type molecules, local and hyperspherical vibr. resons., lifetimes determ. 7−90088
acetic acid, aq. soln., Raman spectroscopy, factor anal. and band contour resolution 7−68315
acetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
acetic acid-$d_0(d_1)(d_3)(d_4)$, force consts., vibr., normal coordinate anal. 7−141557
acetone UV reson. Raman enhancement cross section meas. 7−74625
acetonitrile, liquid, A_1 modes vibr. dephasing, computer simulation 7−97882
acetonitrile, solns., vibr., Raman spectra 7−85617
acetonitrile, UV reson. Raman enhancement cross section meas. 7−74625
acetophenone, aryl and methyl local modes, CH overtones 7−135939
acetophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
acetylene, gas phase X-ray emission spectra, SCF and restricted HF calcs. anal. 7−141599
acetylene, photolysis, CCH radical ν_3 band, IR spectra study 7−109885
acetylene, ungerade excited states, vibr., photoelectron spectra 7−122611
acetylene ion, ν_3 band, IR spectra anal. 7−90121
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
N-acetyloxypyridinium halides, ion pairs, molecular structure, interionic vibrations 7−122660
acrylamide, adsorbed on Ag colloids, polymerisation, SERS 7−144056
acrylic acid, matrix isolated rot. isomerism, IR spectra 7−82106
adsorbed, atom, influence of laser irradiation on surface chemistry 7−78547
tert-alcohol-diethyl ether complexes, vibr. dephasing, IR bandshapes 7−96691
alkali nitrites, matrix isolated, struct., isotope effects, IR spectra 7−82091
alkanes, cyclic, C_{24}-C_{288}, vibr. spectrosc., chain folding and packing, conforms. 7−90130
alkanes, linear, C_{24}-C_{288}, vibr. spectrosc., chain folding and packing, conforms. 7−90130
alkanes, Raman active bands, motion and conform. effects 7−109911
n-alkanes, torsional and CCC bend frequencies, crystal analyzer spectrosc. 7−136079
alkanethiols, conform. anal., mol. mech. force field appl. 7−109862
alkyl phenyl ketones, vibronic coupling contrib. to overtone intensities, UV spectra 7−96725
alkyl xanthates, Raman spectra, vibr. anal., rot. isomerism 7−82137
amines, aromatic and aliphatic, correl. of $N-H_2$ IR freqs. 7−96689
amino acids, UV reson. Raman excitation profiles study 7−68323
2-amino-4H-pyran derivatives, Raman and IR spectra 7−74645
anharmonic Morse oscillators, coupled, energy transfer, reson. model 7−102184
aniline, two-color photoionis. spectra 7−110018
aniline radical cation, vibr., time resolved reson. Raman spectra 7−90139
anilino radical, vibr., time resolved reson. Raman spectra 7−90139
anisoles, in-plane vibrs., valence force field, normal coordinate anal., pot. energy distrib. 7−109857
anthracene, supersonic beam, intramolecular dephasing and vibr. redistrib., fluoresc. 7−129773
anthracenes, substituted, S_1 torsional pot., vibr. struct., laser induced fluoresc. 7−68388
9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7−68400
9, 10-anthraquinone, fine struct., Dushinsky effect, phosphoresc. spectrum 7−129776
9,10-anthraquinone aligned in stretched polyethylene, IR spectra, vibr., symmetry assignments 7−82124
anthraquinone anion radical, vibr. bands, isotopic shift, IR spectra 7−74606
anthraquinone-2, 6-disulphonate, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7−82192
arginine, aq. soln., UV reson. Raman spectra study 7−70800
aromatic molecules, radiative singlet-triplet transitions, nonadiabatic channel study 7−117023
atom-molecule kinematically constrained reactions, dynamics model 7−93286
2-azallyl radical, struct. and electron affinities 7−74432
azanaphthalenes, triplet state reson. Raman spectroscopy 7−82132
3−azidopropyne, structure, IR and Raman spectra, electron diffr. 7−122341
bacterial pigments, mol. vibr., matrix isolation fluoresc. spectra anal. *(Russian)* 7−133216
bacteriorhodopsin, pS conformational intermediates during photocycle, vibr. Raman spectra study 7−68485
bacteriorhodopsin, reson. Raman spectra, vibr. anal. 7−109907
Be compounds, struct. and stability, ab initio closed-shell SCF calcs., electron correlations effects 7−109810
benzal chloride, dichloromethyl group orientation, conform., overtone spectra investig. 7−68300
benzaldehyde, aryl and methyl local modes, CH overtones 7−135939
molecular vibration continued
1,2-benzanthracene, geometry, fine struct. fluoresc. and phosphoresc. *(German)* 7−90267
benzene, $^1B_{2u}$ level, vibr. ang. momentum fluoresc. lifetimes study 7−82263
benzene, CH stretch overtones, intramol. vibr. relax. 7−82065
benzene, ground state, a_{2g} mode, two-photon fluoresc. spectra 7−122599
benzene, liq., polaritons, stimulated Raman scatt. induced anti-Stokes Raman scatt. 7−70773
benzene, local modes, highly resolved vibrational spectra 7−141558
benzene, nonradiative transitions, influence of out-of-plane mode anharmonicities on rates 7−74705
benzene, radiationless decay rate consts., excess-energy depend. 7−129762
benzene, van der Waals cluster, vibronic struct. 7−96911
benzene ($-d_6$), time-resolved stimulated Raman scattering in a diamond anvil cell 7−68310
benzene derivatives, electronic transitions, UV reson. Raman spectra anal. 7−82186
benzene-He van der Waals mol., intramolecular vibr. energy relax. 7−90298
benzenes, liq. and solid, vibr. props., mol. dynamics simulation 7−91740
benzoates, metal influence, IR absorpt spectra 7−122516
benzoic acid, adsorbed on Ag colloids, SERS spectra study 7−74631
benzoic acid, chemisorbed on Ag sol, SERS 7−96708
benzoic acid, dil. soln., dimerisation, IR spectra 7−90131
benzol bromide, dibromomethyl group orientation, conform., overtone spectra investig. 7−68300
benzophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
o-benzyne, N_2 matrix isolated, vibr., IR spectra 7−82116
bicyclo (n,1,0) alkanes with trimethylsilyl groups and alpha-chlorosilicon compounds, IR and Raman spectra *(French)* 7−96681
bicyclo[1.1.0]but-1(3)-ene, vibr. spectrum, ab initio calcs. 7−89928
2,5-bis(2-benzothiazolyl)hydroquinone, jet cooled, excited state intramol. H^+transfer 7−86599
bis(ethylenedithio)tetrathiafulvalene($-d_8$), IR and Raman spectra, vibrs. assignment 7−82123
borinine, struct., vibr., ab initio MNDO STO calcs. 7−89967
bridge mechanism, intermediate unit, electron transfer theory 7−122700
2-bromo-1,1,1,3,3,3-hexafluoro-2-(trifluoromethyl)propane, nonlinear IR absorption 7−116973
bromo-aliphatic acid esters, rot. isomerism, Raman and IR spectroscopic investig. 7−103486
bromochloromethane, liq. vibr., IR obs. 7−74607
N-bromodifluoromethylenimine, stretching valence force consts. and coord. anal., GF and CNDO/2 calcs. 7−109771
2-bromoethanol, in Ar matrix, IR photolysis, quantum yield distrib. 7−86648
2-bromoethyl methyl ether, IR spectra, absorpt. curves calcs. 7−74612
butadiene, 2^1Ag state, UV reson. Raman spectra anal. 7−82184
butadiynyl (C_4H), detect. of vibrationally-excited mm-wave doublets in C star (IRC+10216) 7−134234
1-butanethiol, chemisorption on Ag sol, SERS 7−96704
+−butanol, aq. soln., hydrophobic hydration, Raman spectra 7−132255
2-butanone, local mode analysis, near IR spectrum 7−122537
butenes, isomers, electronic struct., reson. Raman spectra anal. 7−82188
n-butyl bromide, liquid phase, IR spectra molar absorptivities, temp. depend. 7−144046
butyronitrile, IR and Raman spectra, conformational and vibr. anal. 7−109892
calcium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
ε-caprolactone, rot. transitions, microwave spectrosc. 7−135929
carbon tetrafluoride, vibr. energy distrib., collisional energy transfer rates, IR absorpt. spectra anal. 7−74600
β-carotene, reson. Raman scatt. and luminesc., excitation profiles, nonmotional narrowing effect 7−90146
β-carotene, reson. Raman scatt. cross sections 7−129723
cellulous diacetate, adsorbed on Ag, vibrational modes *(Chinese)* 7−98668
chloroacetylene, C-H stretching, hyperfine props., RF spectra 7−129696
3-chlorocyclopropene and its deuterated modifications, IR and Raman spectra, vibr. anal. 7−96682
N-chlorodifluoromethylenimine, stretching valence force consts. and coord. anal., GF and CNDO/2 calcs. 7−109771
2-chloroethyl methyl ether, IR spectra, absorpt. curves calcs. 7−74612
chloromethanes, photodissociative excitation, fluoresc. yields 7−110030
chloromethylformate, conformers and rotamerisation, matrix isolated IR spectra and ab initio calcs. 7−109894
chlorophyll model cpds., normal modes, reson. Raman spectra 7−116975
chrysene, electronic states struct., reson. Raman spectra anal. 7−82194
circular dichroism, velocity-depend. property surfaces 7−68383
cometary diatomic molecules, spectral features and calcs. 7−122556
complex molecules, vibronic spectra and intensities in Raman spectra, review 7−141561
complexes, H bonded in soln., dynamics effect on bond shapes 7−125729
complexes, H-bonded, LF vibr., vibr.-rot. absorpt. band 7−68279
conference, Liblice, Czechoslovakia (Oct. 1986) 7−72719
conjugated carbonyl acetylene compounds, He(I) photoelectron spectra 7−90271
copper octaethylporphyrins, solns., nondegenerate CARS spectra 7−90168
cresol isomers and complexes, supersonic free jets, fluoresc. excitation spectra 7−90238
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
cyanate anion, ν_3 bending and stretching modes, IR spectra anal. 7−103495
cyanate radical, struct. and electron affinities 7−74432
cyanogen-HF binary complex, ν, vibr. fundamental investig. 7−135932
cyclic hydrocarbon-HX complexes, X=Cl,F,Br, matrix isolation studies 7−82107
cyclobutane-$d_0(d_8)$, struct. and puckering pot., gas electron diffr. and IR spectra 7−103493
1,2-cyclobutanedione, gas phase, visible absorpt. spectrum 7−82197
cyclobuten-3,4-diones, halogenated, vibr. anal. 7−96694
cyclobutyl acetate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclohexane−$d_0(d_{12})$, harmonic force field Raman scatt. intensity 7−122547
cyclopropane, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclopropene-1,3-d_2, vibr. spectra 7−90017

molecular vibration continued
cyclopropenylidene, ab initio mol. orbital studies of low-energy metastable isomers 7—88590
cyclopropyl-1,1-carboxamidoacetate, Raman and IR spectra 7—90149
cyclopropyl-1-cyanocarboxamide, Raman and IR spectra 7—90149
l-cystine, stretching vibr., UV reson. Raman excitation 7—129721
cytochrome C, spin and REDOX equilib. at Ag electrode/electrolyte interface, SERS spectra anal. 7—78778
cytochrome complexes, stretching vibrs. correl., Raman spectra 7—78767
decafluorocyclohexene, Retro-Diels-Alder reaction, IR multiphoton excitation, UV spectra anal. 7—74658
diatomic molecule adsorbed on metal surface, IR-laser excitation of internal vibr. mode 7—84475
diatomic mols., electronic energy levels matrix isolation and gas phase spectra 7—82074
diazirine molecule, quadratic force field calc. for vibrs. 7—81947
dibenzo-18-crown-6, conformations, Raman spectra 7—74637
dibenzo[f,h]quinoxaline, phosphoresc., external heavy-atom effect 7—117003
dibromodifluoromethane, IR spectrum, vibr. study 7—82129
1,2-dichloro-2-fluoroethanone, enantiomers and racemic mixture, IR-RF double reson. spectra 7—90230
dichlorodifluoromethane, Freon-12, IR absorpt. spectrum 7—68302
2,6-dichlorophenol, vibr. dephasing, IR bandshapes 7—96685
dicyanoacetylene, vibr. IR and Raman spectra 7—82128
dicyclohexyl-18-crown-6, conformations, Raman spectra 7—74637
diethylene glycol dimethyl ether-d_{14}, liq. and solid states, Raman spectra 7—68313
3,3′-diethylthiacarbocyanine bromide, vibr. modes, CARS, transform theory appl. 7—141584
p-difluorobenzene vapour, fluoresc., quantum yield, intramol. vibr. redistrib., rot. effect 7—90260
difluorodichloromethane, vibr. energy relax., IR fluoresc. spectra anal. 7—74602
difluoromethane-d_2 ν_5 and ν_6 laser lines, IR-IR double reson. 7—122582
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7—109876
dimethyl sulphoxide, vibr. spectra in different media, IR and Raman obs. 7—103505
dimethylcyclohexane, conformer populations, press. and temp. depend., Raman intensity meas. 7—74639
dimethylformamide, carbonyl band frequency, solvent polarity and acidity properties influence 7—122735
N,N-dimethylhydroxylamine, normal vibr., IR spectra *(German)* 7—90132
dimethylnitramine, CH stretching modes, vibr. relax. 7—90087
dimethylsulphite-$d_0(d_8)$, low temp. matrix isolated, vibr., IR spectra 7—82111
dimethyltelluride-$d_0(-d_6)$, vibr. spectra and normal coord. calcs. 7—96695
dimolybdenum tetraacetate, vibr. assignments, ligand deuteration method, Raman spectra 7—82153
dinitrobenzenes, (o—, m— and p—), vibr. spectra and normal coord. anal. 7—74642
dipalmitoylphosphatidylglycerol, vib. freq. shift, Raman spectroscopy 7—90175
diphenylacetylene, acetylenic bridge vibrs., Raman meas. 7—74638
diphenyldecapentaene, in n-decane, single crystal, polycrystalline solutions, fluorescence decay rates, high resolution spectroscopy 7—135993
diphenyldiacetylene, acetylenic bridge vibrs., Raman meas. 7—74638
diphenyldodecahexaene in n-dodecane, single crystal, polycrystalline solutions, fluorescence decay rates, high resolution spectroscopy 7—135993
1,5-dithiacyclooctane, cation radical and dication, Raman spectra and structs. 7—74644
1, 2-dithiete, energies, geometries, vibr., ionisation pot., ab initio calcs. 7—129569
dithioglyoxal, energies, geometries, vibr., ionisation pot., ab initio calcs. 7—129569
dodecafluorocyclohexane, intramol. vibr. relax., IR-IR reson. spectra anal. 7—74604
4-dodecyloxy-4′-cyano biphenyl thermotropic liq. cryst., vibr. IR and Raman study 7—137554
dodecyltrimethylammonium chloride, liq. cryst., chain interactions, Raman spectrosc. obs. 7—70803
drug vials, sealed, rapid headspace anal. using multichannel Raman spectroscopy. 7—74626
duroquinone, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7—82192
electronic-vibrational transition in reson. light field 7—122494
environmental effects on spectroscopy 7—98679
ethane, CH stretch-bend force consts., isotope shifts, Raman spectra anal. 7—103508
ethane, inner valence shell Rydberg transitions, electron impact ionisation 7—122728
ethanethiol radical, laser-induced fluoresc., visible spectra anal. 7—96712
ethanol, aq. soln., hydrophobic hydration, Raman spectra 7—132255
ethanol, behaviour in various binary solns., C-H stretching vibrs., difference Raman spectroscopy 7—74622
ethene, overtone and combination stretching vibr. bands 7—90086
ethyl 3-cyclohexene-1-carboxylate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7—78526
o-ethyl phenol, fundamental freqs., Raman and IR spectra 7—90136
ethyl radicals, fluorinated, vibr. freq., UHF/3-21G model 7—81953
ethyl radicals, matrix IR spectra and UV photolysis 7—116971
ethyldifluorophosphine, IR and Raman spectra, conformational stability normal coord. anal. 7—96677
ethyldifluorophosphine-BH_3(BD_3) 7—68312
ethylene dimer, vibr. predissoc. 7—122643
ethylene glycol dimethyl ether-d_{10}, liq. and solid states, Raman spectra 7—68313
ethylisobutyrate-phenol(4-chlorophenol) complexes, dipole moment meas. 7—99645
ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7—135920
ethylperoxy, radicals, matrix IR spectra and UV photolysis 7—116971
ethyne, intramol. dynamics investig. 7—90314
ethynyl radical, Ar matrix isolated, Fourier transform IR spectra 7—82097
2-ethynyl-1,3-butadiene, conform. vibr., IR and Raman obs. 7—96669
exciplex form. in gas phase, pot. curve crossing 7—106767
ferricytochrome c interactions with model phospholipid bilayers, Raman obs. 7—71695
first row transition metals, inorganic and organometallic compound props. mol. orbital theory 7—141435

molecular vibration continued
five-membered saturated rings, intramol. dynamics in condensed phase 7—90143
fluoro vinyl radical isomers, vibr. anal., ab initio calcs. *(French)* 7—96533
2-fluoro-5-chlorotoluene, laser Raman spectra 7—74618
3-fluoro-6-chlorotoluene, laser Raman spectra 7—74618
fluoroform, far IR spectrum, microwave and mm wave data, rot. and centrifugal distortion const. 7—96665
fluoroform-d_1, IR multiphoton excitation dynamics study 7—74597
fluoromethane, vibr. relax. mechanism, IR fluoresc. spectra anal. 7—74598
fluorotoluenes, He I and He II photoelectron spectra, vibr. anal. 7—117022
formaldehyde, vibr., IR intensities, MC SCF wave functions 7—89909
formaldehyde, vibr. excited ground state, dissoc., pot. energy surfaces 7—122413
formaldehyde-HF, mm wave spectrum rot., structural, ab initio and semirigid bender anal. 7—96650
formamide monomer- and dimer- $do(d_1)(d_2)(d_4)$, mol. force consts., Fermi reson., intra-intermol. coupling ab initio SCF calcs. 7—74407
formic acid dimer- $do(d_1)(d_2)(d_4)$, mol. force consts., Fermi reson., intra-intermol. coupling, ab initio SCF calcs. 7—74407
formic acid-d_1, ν_3 fundamental band, laser Stark and Fourier transform spectroscopy 7—122588
formic and dimer, C=O stretch mode splitting, electrostatic model 7—109724
fragmentation of a vibrationally excited molecule in electronic transitions and selective bond rupture 7—136023
gas mixture, shock wave vibr. relax. times, laser schlieren technique meas. 7—90352
gases, acoustic wave interactions with mag. and internal modes 7—111006
glyoxal, intramol. vibr. state mixing, stimulated emission pumping spectra meas. 7—136015
guanine series, adsorbed on Ag sol, SERS 7—132265
guanines, matrix isolated, tautomeric equilibria and and vibr. spectrosc. 7—68306
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7—78759
haemoglobins, monomeric, stretching vibrs., reson. Raman spectra 7—78765
halogenocyanoacetylene, pot. and mol. consts. eval., vibr. anal. 7—103463
halogenocyanophosphazenes, laser Raman spectra 7—90150
haloidmethylmethylsulphones, IR and Raman spectra, vibr. anal., conformations 7—82122
halomercuriomethanes, Raman spectra 7—82150
harmonic polyatomic Franck-Condon factors evaluation 7—122616
harmonic torsional oscillator libration, NQR freqs., temp. depend. 7—129746
harmonic vibrations, force consts. calcs., rectilinear internal valence coords. 7—122490
heteronuclear molecules, electronic struct., double reson. investig. *(German)* 7—129757
all-trans-2,4,6,8,10,12,14-hexadecaheptaene, vibronic coupling, fluoresc. spectra 7—141617
hexafluorobenzene, vibr. excited, collisional deactivation, UV absorpt. spectra 7—109919
hexafluorobenzene cation, vibr. freqs., perturbation by Ne matrix 7—96640
hexamethylcyclotrisilazane derivatives, structs. and vibr. spectra 7—109868
1,3,5-hexatriene, scaled quantum mechanical force field, vibr. anal., ab initio HF calcs. 7—96534
horseradish peroxidase, stretching vibrs. correl., Raman spectra 7—78767
horseradish peroxidase intermediates, time-resolved Raman spectra 7—78763
hydrides, gas-phase IR intensities, bond polar parameter model 7—82115
hypoxanthine, IR spectra obs. by low temp. matrix isolation in Ar, vibr. spectra calc. 7—144962
imidazoline-2-one, Raman and IR spectra, vibr. anal., force consts. 7—96707
imidazoline-2-thione, Raman and IR spectra, vibr. anal., force consts. 7—96707
impulsive stimulated scatt., time-resolved study 7—103509
intramolecular motion, pot. surface, functional sensitivity anal. 7—90317
2-isocyanato-1,3,2-dioxaphospholane, mol. struct. GPED 7—103662
isopropanol, aq. soln., hydrophobic hydration, Raman spectra 7—132255
isotopic molecules, vibr. Raman optical activity, freq.-weighted sum rule 7—135944
K_2ReF_6, $\Gamma_7(^2\Gamma_{2g})$-$\Gamma_8(^4A_{2g})$ absorpt. and luminesc. spectra, vibr. dispersion 7—122595
ketene-d_2, IR spectrum, ν_9, ν_6 and ν_5 7—122531
lead carboxylate, confirm. order determ. from optical and acoustic Raman modes 7—70814
Lennard-Jones potential, vibrational and rovibrational energies 7—116936
linear parent molecules in comets, synthetic rot. and vibr. spectra 7—72270
lipids, Raman active bands, motion and conform. effects 7—109911
liquid crystals, IR markers for order parameter determ. 7—137206
liquids, Raman spectra bandshape, H-bond strength and soln. viscosity depend. 7—82172
lithium oxalate, solid, isotopic product rule investig. 7—68232
melittin-phosphatidylcholine complexes, model for lipid-protein interactions 7—71665
metal ions, divalent, aq. soln. Raman ν_1 band 7—132267
metallochlorins, fine struct. fluoresc, spectra 7—117018
metallophthalocyanines, stretching band, IR absorpt. spectra 7—96686
methane, gas-phase IR intensities, bond polar parameter model 7—82115
methane, general props. eval., approximate double substitution coupled-cluster method 7—109699
methane, protonated, struct., vibr., ab initio MO calcs. 7—96558
methane, UV radiation stimulated Raman scatt. 7—129724
methane-d_4, IR multiphoton excitation dynamics study 7—74597
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7—90269
methanesulphonate esters, mol. conforms., Raman spectrosc. obs. 7—74643
methanethiol, IR vibr. spectra, MCD study 7—96759
methanimine radical, struct. and electron affinities 7—74432
methanol, H bonded complexes in cryogenic solns., IR spectra 7—82090
methanol, IR vibr. spectra, MCD study 7—96759
2-methoxy ethylamine, conform., vibr., microwave spectrum 7—96652

molecular vibration continued
2-methoxy-9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7−68400
methoxydifluorophosphinoxide-$d_0(d_3)$, liq. gas, solid vibr., conform., IR and Raman spectra 7−96687
2-methoxyethylamine, low-lying torsionally excited states, vibr., microwave spectrum 7−82087
N-methyl acetamide, UV reson. Raman enhancement cross section meas. 7−74625
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7−103520
methyl cyanide, rot. spectra and vibr. states in freq. range 17 to 56 GHz, quadrupole struct. 7−90103
methyl ethyl sulphone-d_0 $(-d_1)(-d_3)$, vibr. spectra, rot. isomerism 7−96692
methyl fluoride, IR laser sideband and submillimeter wave spectroscopy, vibr. state, rot. transitions 7−96666
methyl fluoride, IR vibr. intensities, ab initio MO calcs. 7−103360
methyl fluoride, liq., ν_3 band, noncoincidence effect, Raman and IR spectra 7−106156
methyl radicals, fluorinated, vibr. freq., UHF/3-21G model 7−81953
2-methyl-3-chloroaniline, vicinally trisubstituted, IR and Raman spectra 7−103500
2-methyl-6-chloroaniline, vicinally trisubstituted, IR and Raman spectra 7−103500
N-methylacetamide, liq., H bonding, low freq. Raman spectra study 7−68319
methylene anion, excited states, photodetachment, radiative decay lifetimes ab initio calcs. 7−90285
methylene chloride-d_1, C−H and C−D interbond coupling, photoacoustic spectrosc. 7−122572
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7−82185
$(methyliodide)_n$, cluster formation photodissociation, ultraviolet spectra 7−135922
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
methylmercury chloride, gas phase, electric dipole moment and quadrupole coupling determ., microwave spectrum 7−135926
mixing devices for time-resolved Raman spectroscopy 7−89272
molecule-surface collisions, selectivity of elementary mol. processes 7−110099
morpholine, conformational equilib., IR spectra 7−109904
myelin membranes, vibr. spectra and struct. 7−119742
N_2 active, yellow glow, temperature dependence, Thrush mechanism, vibrational levels, emission, empirical equations 7−141619
N-containing molecules, ab initio calcs. using 3-21G(N*) basis set 7−89917
naphthalene, supercrit. solns. in CO_2 intermol. interactions, Raman obs. 7−74614
naphthalenes, substituted, radiationless processes, vibronic level fluoresc. lifetimes 7−129769
nickel II dihydroporphyrins, normal modes, reson. Raman spectra, model for chlorophyll 7−116975
nickel octaethylporphyrins, solns., nondegenerate CARS spectra 7−90168
nitrobenzene cation, IR multiphoton dissoc. 7−119545
nonafluoro-tert-butyl iodide, vibrational overexcitation above dissociation limit in IR multiphoton field 7−103605
nonanes, branched, Raman and IR spectra meas., normal coord. anal. 7−90147
nucleophilic substitution S_N2 reaction, pot. surface, nonempirical calcs. 7−78480
octahedral molecules, constrained force consts. 7−81946
organic azides, mol. struct., conform., vibr., ab initio HF SCF calcs. 7−81967
organic compounds, matrix isolation Fourier transform IR spectra study 7−141569
organic H-bonded complexes, interaction-induced effects in IR spectra 7−141570
organonitriles, correlation between C-N stretching vibr. and ^{13}C NMR chemical shift spectra 7−141602
oscillating electric dipole, reaction field, solvent chem. shift 7−109941
oxirane, vibrational circular dichroism, C-H and C-D stretching modes 7−141612
μoxo-(iron phthalocyanine)$_2$, stretching band, IR absorpt. spectra 7−96686
pentachlorobenzene, normal modes, IR and Raman spectra 7−90135
pentachlorophenol-acetonitrile complex, H-bonded, IR dispersion 7−125718
pentafluorochloroethane, vibrational excitation, IR absorpt. spectra, ps pulse duration depend. study 7−109886
4-n-pentyl-4′-methoxytolane, liq. cryst., dephasing, vibr. freq. correl. function 7−77597
peptides, conform. anal., normal coordinate calcs., IR Raman spectra study 7−68321
perfluoro-tert-butanol, H bonded complexes in cryogenic solns., IR spectra 7−82090
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7−96762
perylene-d_{12}, jet-cooled, fluoresc. excitation and dispersed emission spectra 7−103556
phenazine, triplet-triplet absorpt. and polarisation spectra 7−96716
phenetole, two-color photoionis. spectra 7−110018
phenol, two-color photoionis. spectra 7−110018
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
N-phenyl phthalimides, substituted, electronic interactions, IR and NMR spectrosc. obs. *(Russian)* 7−135942
phenyl radical, vac. UV photoelectron spectra and ab initio CI calcs. 7−117020
2-phenyl-2-dehydrosparteine and its diprotonated salts, IR spectra, synthesis, struct., props. 7−109889
phenylacetylene, acetylenic bridge vibrs., Raman meas. 7−74638
trans-2-phenylcyclopropanecarboxylic acid derivatives, vibr. circular dichroism 7−117001
phenylphosphine, conformation, internal rot. and struct. studied by microwave spectroscopy 7−116948
phosphatidylcholine bilayers, aq. dispersions, barotropic behaviour, ether and ester links effect, IR spectra anal. 7−78743
poly(4-vinylpyridine), conformational anal. and IR spectra 7−68481
trans-polyacetylene, IR, Raman and neutron spectra, vibr. state density 7−110155
molecular vibration continued
polyacetylenes, soluble, reson. Raman spectra, depolarisation ratio dispersion 7−85737
polyatomic cations, spectrosc. characterisation 7−68286
polyatomic ions, gaseous, standard thermodynamic functions 7−80195
polyatomic molecular motion study using generator orbital approac 7−108098
polyatomic molecule in laser field, IR fluoresc. and intramolecular dynam ics 7−135992
polyatomic molecules, geometry, electron diffr., kinetic anharmonicit 7−141706
polyatomic molecules, highly vibr. excited Raman spectrosc. obs. 7−8215
polyatomic molecules, vibrational quasicontinuum structs. in intense I field *(Japanese)* 7−116956
polycyclic aromatic hydrocarbons, vibr. excited, anharmonicity effects an interstellar IR emission 7−120559
polyethylene, disordered chain mols., Raman spectra 7−90464
polyimides, aromatic, model cpd. electronic interactions, IR and NMI spectrosc. obs. *(Russian)* 7−135942
polymer blends, supermolecular structure, vibr. spectra obs. 7−74796
polyoxyethylene, conform., IR spectra calc. normal-mode anal. 7−74794
polypeptides, struct., mol. force field appl., Raman spectra anal. 7−6831
polypyromellitimides, electronic interactions, IR and NMR spectrosc. ob *(Russian)* 7−135942
positron reson. annihilation on mols., mechanism investig. 7−82375
potassium 4-pentenoate, conformational change on micellisation, vib spectra 7−82067
potassium 5-hexenoate, conformational change on micellisation, vibr. spec tra 7−82067
potassium lanthanide tungstates, polarised IR and Raman spectr 7−85665
propadiene, overtone and combination stretching vibr. bands 7−90086
propadienone, microwave spectra, rot.-vibr. anal., double-minimum v_{12} po function, semirigid bender anal. 7−96649
propane-$d_0(d_7)(d_8)$, Raman trace scatt. intensity parameters 7−141581
propargyl alcohol, overtone excitations, classical and quantum dynamic 7−109871
propargyl radical, ground and excited states, vibrational frequencies, SC calculations, molecular geometries, electronic structures 7−141458
E-propene-1-thiol, NMR and mass spectra, vibr. and rot. anal., mol. cor formation 7−116991
n-propylamine, vibrational and conformational analysis, ab initio M calcs, infrared spectroscopy 7−122539
propyne, vibr. anal., normal coord. anal. 7−82062
propynyliumylidene, intramol. dynamics investig. 7−90314
proteins, secondary struct. Raman reference intensity profiles 7−129911
4H-pyran-4-one, vibr., force fields, CNDO/2 and MINDO/3 calc 7−109767
pyrazine, radiationless decay rate consts., excess-energy depen 7−129762
pyridazine adsorbed on Ag electrode, vibr. freq. shifts, SERS 7−74620
pyridine carboxylic acids, isomeric species, mol. vibr., IR and Rama spectra anal. 7−135935
N-(2-pyridyl)thioacetamide, PMR, Raman and IR spectra mea 7−74676
N-(2-pyridyl)thioformamide, PMR, Raman and IR spectra mea 7−74676
pyrimidine, 3*s* Rydberg state, multiphoton ionis. spectra 7−82307
quinoxaline, electronic states investig., Raman excitation profile 7−82189
Raman optical activity, bond polarisability and vibronic couplin 7−141628
13-cis-retinal chromophore, vibr. anal., reson. Raman spectra 7−74623
retinol, electronic states investig., Raman excitation profile 7−82189
rhodopsins, retinal chromophore struct. determ., reson. Raman spectr 7−78776
rigid asymmetric rotor, semiclassical wave packet treatment 7−116933
second row transition metals, inorganic and organometallic compoun props., mol. orbital theory 7−141436
selenoformaldehyde, electronic transitions, vibr. anal. 7−109853
selenophene, out-of-plane motions, force field calcs. 7−116931
semibullvalene, vibr., IR and Raman obs. *(French)* 7−129715
sodium laurate, oriented multilayers, ATR IR spectra 7−82089
sodium propionate, isotopic species, low-temp. IR spectra, isotope shif anal. 7−96698
spectra, low resolution study of chaotic regions in quasicontinuu 7−103475
trans-stilbene, jet-cooled, vibr., isotope shift, fluoresc. excitation 7−12976
trans-stilbene, low-freq. modes assignment, fluoresc. spectra 7−96779
stilbene, vibr. spectra anal. 7−109866
α,α'-trans-stilbene-^{13}C, ground and excited states struct., Raman spectr anal. 7−82193
strontium acetylide, free radicals, vibr. and electronic struct., fluores 7−90247
sulphones, organic, liq. solutions and crystal, IR and Raman spectra, vib spectra and conformations 7−96679
symmetry in bonding and spectroscopy, book 7−72744
tellurophene, out-of-plane motions, force field calcs. 7−116931
terephthalate-$d_0(-d_4)$ ions, vibr. anal., IR and Raman spectra 7−103458
p-terphenyl, conform. anal., FTIR and Raman spectra 7−109893
1,1,2,2-tetrachloroethyl alkyl ethers, vibr. spectra and confirmatio 7−74568
1,1,2,2-tetrafluorocyclopropane, microwave spectra, elec. dipole momen and mol. struct. 7−90101
tetrafluoromethane, second hyperpolarisability, vibr. contrib., SH 7−130277
tetrahaloethylenes, force consts., mean amplitude of vibr., Coriolis coup ing and centrifugal distortion consts. eval. 7−103465
1,1,3,3-tetramethylbutyl group, hydrophobic moiety of Triton X surfa tants, Raman spectra 7−96705
s-tetrazine molecule, out-of-plane vibrations, general quadratic force fie 7−122734
tetrazine-Ar complex, supersonic free jet, reson. and dispersed fluores 7−82262
thiocyanate radical, struct. and electron affinities 7−74432
thiocyclopentanone, visible absorpt. spectra, vibr. anal. 7−82199
thioethers, conform. anal., mol. mech. force field appl. 7−109862
thioformaldehyde, vibrs., Green's fn. anal. 7−74551
thiosemicarbizide, complex form. and struct. on Ag and Cu surface SERS spectra anal. 7−74630
transition metal carbonyl complexes, vibrational energy lifetimes meas picosecond-IR sat.-recovery expts. 7−74577

molecular vibration continued
transition states, vibrational frequencies, energy path potentials 7−138969
tri-N-butylamine, Raman spectrum and gauche interactions, temp. depend. 7−96699
tribromoacetonitrile, isotope shifts, vibr. Raman spectra *(French)* 7−129718
1,1,2-trichlorotrifluoroethane, matrix isolation vibr., conform., IR spectra 7−82109
triethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
trifluoroethanol, H bonded complexes in cryogenic solns., IR spectra 7−82090
trifluoroethyl cation, structs., stabilities, ab initio MO calcs. 7−89903
2,2,2- trifluoroethyl methyl ether, conformation stability and vibr. assignment, microwave, IR and Raman spectra 7−82133
1,1,1-trifluoroisopropanol, conform. stability and low freq. vibr assignment, Raman obs. 7−74641
trimethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
trimethylamine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
trimethylarsine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
trimethylphosphine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
tryptophan-2,3-dioxygenase, stretching vibrs. correl., Raman spectra 7−78767
unimolecular ion decay kinetics, reson.-enhanced multiphoton ionisation mass spectra anal. 7−90300
γ-valerolactone, ground and vibrationally excited states, microwave spectrum 7−82082
van der Waals mols. vibr. predissoc. and prereaction, collinear quantal study 7−122645
vibrational circular dichroism theory 7−74690
vibrational potential energy surfaces, determ. by Raman and IR spectra 7−74487
vibrational spectrum. intensity distrib. calcs. 7−109855
vibronic coupling, absorption and emission spectra interpretation 7−135994
viologen cpds., reduced, IR spectra and dimer struct. 7−129706
water, liq., small-amplitude, H^+ motion, coupling to density and temp. 7−85631
water, liquid, Raman spectra, derivative anal., H-bonds 7−109909
zinc octaethylporphyrins, solns., nondegenerate CARS spectra 7−90168
$AlCl_3$, conc. aq. solns., Raman active vibr. 7−92683
$AlCl_3$, struct. and vibr. freqs., gas-phase diffr. 7−68284
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
Ar-HF, H bonded complexes, vibr. freq. shifts, dipole moments 7−90083
$Ar+N_2O(SCO)(SeCO)(SCNH)$, chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
Ar^++N_2, charge transfer cross sections calc. 7−103641
ArHCl, potential surface secondary min., lowest Σ bending vibr., microwave spectra 7−90105
AsD_3, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
AsH_3, submillimeter wave and IR spectra, vibr. states. spectroscopic consts. 7−116947
AsHD, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
AsH_2D, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
BBr_3, reactions in He afterglow, BBr^+ visible spectra anal. 7−116978
BCl_3+H_2S isotope selective reactions, CO_2 laser induced vibr. excitation effects 7−78529
B_2H_6 dissociation to BH_3, enthalpy, vibr. spectra, coupled-cluster and MBPT theory 7−135846
Bi_2, A→X fluoresc. system, Franck-Condon principle study 7−108101
BiX_3-GaX_3 complex, X=Cl, Br, struct. investig., vibr. Raman spectra study 7−82142
Br_2, high-temperature dissoc. and vibr. relax. study 7−100526
Br_2, ion-pair state investigated by state-selective spectroscopy using sequential two-photon transitions 7−96714
Br_2 matrix isolated, time resolved fluoresc. spectra 7−82245
Br_2 resonant multiphoton ionisation photoelectron spectra study 7−117030
C_2, $A^1\Pi_u$ state lifetime, dipole transition moment, CI calcs. 7−81988
C_2, energy states population distrib., reson. fluoresc. theory anal. 7−122325
C_{60}, vibr. motions investig. 7−110164
CH radical, Ar+methane reaction prod., vibr. energy, fluoresc. spectra anal. 7−138967
CH^+, isotopic species, vibr.-rot. transition probabilities, electric dipole moment fn. calcs. 7−96504
CH_3 isolated in solid Ar, IR spectra, $\tilde{A}^2\Pi$-$\tilde{x}^2\Sigma^+$ transition 7−90119
CN, ($B\ ^2\Sigma^+$-$X\ ^2\Sigma^+$) tail band system, vibr. assignment 7−135908
CN, rot. state population, even-odd alternation quenching, optical double reson. 7−129753
CO, a $^3\Pi$ metastable state, IR spectra study 7−96656
CO adsorbed on Cu surface, IR laser excitation of internal vibr. mode 7−84475
CO, adsorbed on Cu/Ru (001), vibr., Fourier transform IR spectra 7−91972
CO, in solns., orientational relax., IR absorpt. band shape 7−82119
CO, supersonic nozzle, overtone band, IR emission spectra 7−74608
CO^+, $X\ ^2\Sigma^+$ and $A\ ^2\Pi$, photoionis. cross sections meas., vibr. motion effects 7−117029
CO-Ar mixtures, temp. meas. behind shock waves, line broadening 7−111030
CO_2 clusters, struct. and internal mobility, Fourier transform IR spectra 7−103492
CO_2, D_2 matrix isolated, impurity effects in IR spectra 7−96684
CO_2, dil. soln., Fermi dyad, intermolecular interaction-induced IR spectra 7−122535
CO_2, IR spectra, struct., vibr. anal. 7−82094
CO_2 laser, effect of spectral line overlap on pulse shape 7−103796
CO_2, supracritical fluid, three-body-like Raman spectra 7−129722
CO_2 trimer, van der Waals species sub-Doppler IR spectra 7−122519
CO_2, vibr. transitions, Einstein coeffs. calcs. 7−122492
CO_2-$CO(N_2)$, intermolecular pots., vibr., IR absorpt. spectra 7−82120
CO_3, ground state, E′ distortion, ab initio calcs. 7−129611

molecular vibration continued
CO_2HF complexes, stretch and bend vibr., IR laser absorpt. spectra 7−96658
CS_2, elastic scatt. cross sections, energy and angular depends. 7−129889
CS_2, singlet and triplet channels, photofragment spectroscopy 7−141637
CS_2, vibrational level relax., UV fluoresc. spectra anal. 7−96722
β-carotene, ground state reson. Raman spectra, saturation and line broadening study 7−103510
Cl_2-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125
ClF-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125
ClF_k, geometrical and electronic struct., ab initio calcs. 7−81957
ClO_4, UV reson. Raman enhancement cross section meas. 7−74625
Co (III) complexes, tris(amino acidato) cobalt (III), ring currents and conforms., vibr. circular dichroism 7−96755
Co, adsorbed on Pt(111), C=O stretch vibration, IR emission study 7−106187
$Co(CO)_3No$, vibr. spectra, anharmonicity and local mode effects 7−135917
CoH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
CoO, $a^4\Delta_i$ ground state, red system, laser-induced fluoresc. 7−96774
CrH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
Cu (II) complexes, bis(amino acidato) copper (II), ring currents and conforms., vibr. circular dichroism 7−96755
$CuCl_2.2(H,D)_2O$, IR and Raman spectra, vibr. modes, assignment and coupling of water librations 7−82141
Cu(II) peroxide model complex of oxyhemocyanin, vibr., electronic and reson. Raman spectra 7−103528
D_2, photoionisation, vibr. resolved, cross sections, Franck-Condon factors 7−122627
D_2, Q branch lineshapes, Raman spectra study 7−82165
D_2, vibrational states, spontaneous Raman spectra anal. 7−82164
D_3^+, ν_2 fundamental band, IR spectra 7−90110
DCN-DF, vibr. predissoc. fundamentals, rovibr. anal. 7−82299
DCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
DF+H(D), exchange and translational-vibr. energy transfer reactions, quasiclassical trajectory calcs. 7−106780
D_2O, IR spectra, vibr. anal. 7−96664
F/BiI_3 flames, role of I atoms in IF prod. 7−93328
FOOF mol. struct. and vibr. CI calcs. with single and double excitations 7−89978
FeCO, side-on bonding model systems calcs. 7−129682
$Fe(CO)_5$, CO stretching ν_6 fundamental, free jet IR absorption spectrosc. 7−122534
FeN_2, side-on bonding model systems calcs. 7−129682
Fe_2N_2, side-on bonding model systems calcs. 7−129682
Ga_xCl_y, vibr. freq., Raman spectra *(French)* 7−129716
Ga_xCl_y, vibr. modes Raman spectroscopy quantitative anal. *(French)* 7−129717
GaF_3, struct. and vibr. freqs., gas-phase diffr. 7−68284
H+NO, inelastic scatt., rot. vibr. energy transfer, classical trajectory study 7−90343
H_2, adsorpt. in zeolite matrices, induced overtones, IR spectra 7−122517
H_2, far UV reson. Raman spectroscopy 7−90174
H_2, Franck-Condon regions, double-reson. multiphoton ionisation 7−90231
H_2 in NGC 2023 refl. nebula, level populations and rot. and vibr. temps. 7−140242
H_2, isotopic species, vibrational states, spontaneous Raman spectra anal. 7−82164
H_2, photoionisation, vibr. resolved, cross sections, Franck-Condon factors 7−122627
H_2 photoionisation dynamics, vibr. and rot. branching ratios 7−141631
H_2, static polarisabilities, vibr. contribs. 7−74550
H_2, vibr. overtone cross sections, ab initio calcs., Raman spectra anal. 7−81969
H_2, vibrational and rot. initial yields from subexcitational electrons 7−103459
H_2^+, static polarisabilities, vibr. contribs. 7−74550
H_2-He mixture, swarm expt., H_2 vibration excitation study 7−110118
H_2+H^+, vibrationally resolved charge transfer obs., doubly differential cross sections meas. 7−132926
H_2+O, thermal reaction rate consts., rot., vibr. and fine struct. population effects, interstellar appl. 7−126416
H_2+O in shocked interstellar clouds 7−128020
H_3^+ predissociation excitation spectra, H^+-H_2 complex model anal. 7−96806
H_4^+, pot. energy hypersurface, ab initio SCF CI calcs. 7−89996
HBO, detection and equilib. mol. struct. by microwave spectroscopy, rot. consts. 7−82078
HBr, photodissoc. kinetic and internal energy distribs. determ. 7−122644
HCN-BM_3, M=F, Cl, C−N bond stretch force consts., MNDO calcs. 7−96546
HCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
HCl (DCl), polarisability tensor, vibr. absorpt. intensities 7−129686
HD, liq., rot. and fundamental bands, interference effects in IR spectra 7−90109
HD, vibr. state in state-resolved reactive differential cross sections meas. 7−119506
HDO dissolved in ketones and ethers solvents, IR spectra study 7−122530
HF and dimer in soln., mol. vibr., continuum approx. 7−103461
HF-$d_0(d_1)$, general props. eval., approximate double substitution coupled-cluster method 7−109699
HF-$GeH_4(SiH_4)$(methane), matrix isolated, vibr. stretches, IR spectra 7−90116
HF+H(D), exchange and translational-vibr. energy transfer reaction, IR fluoresc. spectra anal. 7−103498
HF+H(D), exchange and translational-vibr. energy transfer reactions, quasiclassical trajectory calcs. 7−106780
$HLiH^-$ ion, in $X^1\Sigma_g^+$ state, 3D pot. energy and electric dipole moment surfaces, ab initio calcs. 7−116821
HNC-HCN, isomerisation, intramol. energy transfer, quasiclassical calcs. 7−86591
HNNH, intramol. dynamics investig. 7−90314
H_2O (D_2O), excited state, ionic geometries, Franck-Condon analysis 7−110008

molecular vibration continued
H_2O, adsorbed on Au, in $HClO_4$, electrochem. modulated IR spectrosc. obs. 7−82093
H_2O, dimer, struct. and vibr. spectroscopy. quantum simulation 7−96909
H_2O, dissoc., hyperspherical reson. lifetimes eval. 7−90276
H_2O, general props. eval., approximate double substitution coupled-cluster method 7−109699
H_2O, HF eqn. soln. by pseudospectral method 7−81925
H_2O, liq., OH stretch vibr., computer mol. dynamics study 7−92679
H_2O, nearly free rotation in soln., weak interaction with solvent 7−82070
H_2O, photodissoc., photofragment laser-induced fluoresc. study 7−68334
H_2O, UV reson. Raman enhancement cross section meas. 7−74625
H_2O, vibr. effect on second virial coeffs. 7−136030
H_2O, vibr.-rot. energy levels, force consts. and mol. geometry calc. 7−90089
H_2O^{2+}, low-lying electronic states, singlet-triplet splitting, HF calcs. 7−135828
H_2O_2, intramol. dynamics investig. 7−90314
H_2O_2, overtone and combination stretching vibr. bands 7−90086
H_2O_2, photodissociation, ps photofragment spectroscopy study 7−113966
H_3O^+ ions on hydrated single crystals, attenuated total reflection Fourier transform IR spectroscopy 7−116953
H_3O^+, ν_4 perpendicular bending mode, IR laser spectroscopy 7−141572
HOD, stretching vibr., wavenumber shifts interpretation 7−68281
H_3PO and H_2POH, isomeric forms, vibr., IR spectral intensities, ab initio SCF calcs. 7−81935
H_2S, excited state, ionic geometries, Franck-Condon analysis 7−110008
H_2S, gaseous and liq., rot. Raman scatt. study 7−82168
H_2S, harmonic stretching and bending modes coupling, adiabatic method calcs. 7−74552
H_2S, photodissoc. kinetic and internal energy distribs. determ. 7−122644
H_2S, spectrum in 1.6 μm region 7−96678
H_2^*, radiatively dissociating level, vibr. wave function 7−109863
H2, compressed gas, UV radiation stimulated Raman scatt. 7−129724
$He+H_2^+$, cross sections, vibr. state depend., threshold photoelectron/photoion coincidence study 7−100514
$^2He^+$, vibrational kinetics, effects on He discharge afterglow 7−126458
Hg halides, photodissociation, spectroscopy, kinetics and laser effects 7−141839
$Hg+CO_2$, vibr. product state distribs., diode laser probing 7−90356
Hg_2, vibr. band, laser induced fluoresc. 7−103565
I_2, $D(0_u^+)$ ion pair state, optical-optical double reson. obs. 7−109965
I_2, high-temperature dissoc. and vibr. relax. study 7−100526
I_2 lasers using electron transitions and vibrational depopulation in excited state, quantum efficiency 7−68620
I_2, n-hexane soln., vibr. struct., reson. Raman excitation profile 7−82183
I_2, vibrational spectrum, single- and two-photon absorpt., laser photoacoustic spectroscopy 7−141589
I_2-organic complexes, Raman spectra motional narrowing 7−90151
IBr, complexing reaction with benzene, far IR spectra anal. 7−103497
IF, low-lying electronic states, matrix isolated, fluoresc. study 7−141616
I_2He, vibr. predissoc., num. investig. 7−129811
I_2M (M=H_2, N_2, O_2, I_2) clusters, photodissoc., solvent caging, fluoresc. spectra 7−136021
I_2M(M=Ne, Ar, Kr, Xe), van der Waals clusters, photodissoc., product vibr. state distribs. 7−96802
$I^-.SO_2$, solvated ion, prereson. Raman effect 7−82149
InBr, mol. vibr. struct., absorpt. and emission spectra 7−68339
InI, *B* 1 state, rot. and vibr. consts., microwave spectra 7−74572
KBr:MnO_4^-, matrix isolated vibr. spectra, IR and Raman selection rules anal. 7−108108
$K_2CuCl.2(H,D)_2O$, IR and Raman spectra, vibr. modes, assignment and coupling of water librations 7−82141
KH, Franck-Condon factors, laser-induced fluoresc. intensity 7−96786
KOH, high-temperature Stark and radiofrequency-microwave double-resonance microwave spectrometer 7−103688
KPO_2F_2, IR spectrum and normal coord. treatment 7−74580
KSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
$KY(MoO_4)_2$, IR and Raman spectra, normal coordinate anal., pot. energy distrib. 7−109890
$Kr+N_2O(SCO)(SeCO)(SCNH)$, chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
Kr_2, gerade states, reson. enhanced multiphoton ionisation 7−141630
Li+FH, product vibr. state distrib., nonlinear surprisal anal. 7−100546
Li_2, dissociative electron attachment, cross sections, negative ion prod. rate 7−141698
Li_2, $E^1\Sigma_g^+$ shelf, optical double reson. 7−122579
Li_2, resonant vibrational excitation, simple model 7−129891
Li_3^+, breath mode. vibr., Raman spectrum, ab initio model 7−96709
LiCl, aq. soln., cation-anion pair, hydration number determ., Raman obs. 7−77526
LiCl, diode laser spectroscopy at elevated temp., vibr. parameters 7−96710
LiH, general props. eval., approximate double substitution coupled-cluster method 7−109699
LiH, isotopic species, vibr. levels lifetimes, UV fluoresc. spectra 7−141591
LiSCN, aq., soln., vibr. and rot., Raman spectra 7−85646
$MgCl_2$, conc. aq. solns., Raman active vibr. 7−92683
Mn_2O_7, force consts. and thermodynamic fns. calc. *(German)* 7−74561
N_2, adsorpt. in zeolite matrices, induced overtones, IR spectra 7−122517
N_2, dense molecular fluids, vibr. freq. shifts and bond length calcs. 7−82063
N_2 gas, vibrationally excited, steady pipe flow, kinetic theory 7−136931
N_2, photoelectron spectra, vibr. branching ratios, photoionisation cross section 7−82279
N_2, photoionisation, photoelectron ang. distrib. meas. 7−136005
N_2, RF discharge, vibr. anal., spectroscopic charactn. 7−83556
N_2, resonant vibrational excitation, simple model 7−129891
N_2, spatially resolved rot. and vibr. temps. in ICP 7−121122
N_2, static polarisabilities, vibr. contribs. 7−74550
N_2, vibr. overtone cross sections, ab initio calcs., Raman spectra anal. 7−81969
N_2-Ar mixture, spontaneous polarised vibr. Raman scatt. study 7−96700
N_2-CO, post discharge, vibr. anal., spectroscopic charactn. 7−83556
N_3^-, ν_3 band, velocity modulation laser spectroscopy 7−109858
NBH_2, high excited vibr. state, laser mag. reson. 7−122583
NCS^-, bending and stretching hot bands, vel. modulation laser spectra 7−141573
ND_3, excited state, inversion-rot. doublets 7−122496
N_2F_2, mol. consts. calc. by force field study 7−103464

molecular vibration continued
NH_3, ab initio calcs. using 3-21G(N*) basis set 7−89917
NH_3, ground state, dipole moment, microwave-optical double reso 7−122585
NH_3, Jahn-Teller effect, vibr. struct., PES 7−103578
NH_3, jet cooled, UV absorpt. spectra, isotope shifts 7−103529
NH_3, nearly free rotation in soln., weak interaction with solvent 7−8207
NH_3-$d_0(d_3)$, vibr. transitions, reson. Raman spectra 7−90159
NH_3-HF complexes, H-bonded, vibr. freqs. and intensities, ab initio calc 7−129564
$(NH_3)_2$ vibr. force field, IR intensities ab initio SCF calcs. 7−81959
NH_4^+, ν_3 band transitions, isotope shifts, IR spectra anal. 7−103490
N_2H_2-$H_0(d_2)$, mol. consts. calc. by force field study 7−103464
N_2HF in slit supersonic jets, IR laser spectroscopy 7−90120
NHO_3, ν_2 fundamental band, IR laser Stark spectrum 7−122587
$(NO)_2$, vibr. predissoc., energy distrib., time depend. 7−122641
NO, chemisorbed on Ni (100), UV laser-stimulated reson. desorpt., flu oresc. 7−91965
NO, core-excited, vibr. interference in decay, Auger spectrum 7−74718
NO^-+N_2 (O_2) (CO) (CO_2), rate consts. determ., vibr.-level excitatio effects 7−126447
NO_2, $2\nu_1+\nu_3$ and $3\nu_3$ bands, Fourier transform spectra 7−82073
NO_2, photodissociation, primary quantum yields, role of rot. and vib energy 7−138984
NO_3, UV reson. Raman enhancement cross section meas. 7−74625
N_2O, excited states, ionic geometries, Franck-Condon anal. 7−110007
N_2O, IR spectra, hot bands and isotopic transitions, heterodyne mea 7−90133
N_2O, photoionisation, photoelectron asymmetry parameters, shape reso 7−129800
$N_2O_2^{2-}$, mol. consts. calc. by force field study 7−103464
$^{14,15}N_2O_4$, mol. consts. determ., normal coord. anal. 7−103466
N_2^*+N, deactivation, classical trajectory calcs., on LEPS surfac 7−68446
Na_2, vibr. levels studied by polarisation spectroscopy, deperturbed mo consts. 7−96667
Na_3, vibr. ground-state level, two-photon ionisation spectrum 7−110052
NaSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
$Na_8[AlSiO_4]_6$ $(OH)_2$, H dynamics, inelastic and quasielastic neutron scat 7−136078
$NeBr_2$, ground electronic state, vibr. predissoc. lifetime meas. 7−110035
$Ni(CO)_4$, vibr. spectra, anharmonicity and local mode effects 7−135917
NiH^-, electronic struct., photodetachment, photoelectron spectr 7−122613
$Ni(PCl_3)_4$, force const. calcs. 7−122488
$O+H_2 \rightarrow OH+H$, reactive collision, crossed beam expt. 7−144710
O_2, adsorbed on ZnO optical waveguide, CARS 7−76606
O_2, adsorpt. in zeolite matrices, induced overtones, IR spectra 7−122517
O_2, atom recomb., homogeneous and heterogeneous, $a^1\Delta g$ state, reactio rate const. meas., appl. to nightglow 7−78460
O_2, in flames, vibr. excited, laser induced fluoresc. 7−82261
O_2 liquid, vibrationally and electronically excited, nonlinear and lumines spectroscopy 7−141580
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−7973
O_2, nightglow triplet emissions, vibr. levels attitude distribution 7−79732
O_{2+}, phase transformations, melting and solid-solid, 120-650 K 7−113184
O_2^+, $c^4\Sigma_u^-$ state, predissoc., isotope effect 7−110047
O_2^+, direct dissociative recomb., cross section windows, Morse pot. curv 7−78461
O_2+NO charge transfer reaction $O_2(b^1\Sigma_g^+)$ vibr. distrib., role in auro and nightglow 7−79735
O_3, electronic states, pot. energy surfaces, UV continuum, ab initio calc 7−96515
O_3, Hartley absorpt. band, reson. Raman spectra, time depend. ana 7−122548
O_3, Hartley band photodissoc., O_2 photofragment CARS spectra ana 7−103511
O_3, nonbending, eigenvalues determ. Moller-Plesset perturbation cal 7−96561
OC-HF complex, ν_1 state predissoc. lifetime, vibrs. state mixing, IR spe tra anal. 7−103496
OCS, dipole moments, laser stark spectra 7−122590
OCS, elastic scatt. cross sections, energy and angular depends. 7−12988
OCS, IR spectra, vibr. and rot. consts. 7−96661
OCS, isotopic species, CO_2 laser sat. Stark spectra and global rovibr. ana 7−96758
$OCS+O_2$, IR spectra, ν_1 band, diode-laser meas., press. broadenin parameters 7−96663
OCSe, infrared spectrum. Fourier transform spectroscopy 7−122521
OH in mesosphere, kinetic parameters related to sources and sinks vibrationally excited OH in nightglow 7−134046
OH radicals, in flames, A^2Z^+-$X^2\Pi_i$ transition probabilities, laser-induce fluoresc. 7−122597
OH^{2+}, collisions with atoms, pot. energy curves 7−117043
OH^{3+}, collisions with atoms, pot. energy curves 7−117043
OH+acetylene (ethylene), radical reactions, barrier heights, perturbatio theory 7−132918
ONCl, IR spectra, $V_1+\nu_3$ vibr. band, 435 A type rovibr. line 7−96680
PH_3-HF complexes, H-bonded, vibr. freqs. and intensities, ab initio calc 7−129564
POF_3 mol. IR absorpt. spectra, ν_4 band anal. *(French)* 7−109896
Pb halides, struct. and vibr. props. determ. by pseudo-pot. HF metho 7−116843
PbS, B1-$X^1\Sigma^+$ transition, laser excitation spectroscopy, fluoresc. obs hyperfine splitting 7−122603
Pd(II) complexes, planar monosubstituted oxamides, vibrational spectr 7−122536
Rb_2, $2^1\Sigma_g^+$ electronic state, laser-induced fluoresc. Fourier transform I spectrosc. 7−96782
RbH, $X^1\Sigma^+$ and $A^1\Sigma^+$ states, potential energy curves, probability densi distributions 7−122418
$SCN^-.SO_2$, solvated ion, prereson. Raman effect 7−82149
SF_6, IR multiphoton excitation dynamics study 7−74597
SF_6, vibrational excitation, IR absorpt. spectra, ps pulse duration depen study 7−109886
SF_6-Ar(He)(Xe), mixture, vibr. relax. rate, time-resolved IR multiphot absorpt. spectra anal. 7−74599
SO_2, mol. beams, photodissoc., translational energy and angular distri meas. 7−136022
SO_3, vibr. assignment, force const. calc. 7−116935
SO_3-soft Lewis base interactions, IR matrix isolation spectra 7−68301

molecular vibration continued
SO_4, UV reson. Raman enhancement cross section meas. 7−74625
SO_4^{2-}, adsorbed on Pt electrode, mol. vibr., IR spectra 7−98679
$SO_2(SO_2^+)$, geometry, dynamics, supersonic molecular beam photoelectron spectra 7−136003
$SbBr_3$-$AlBr_3$ complex, struct. investig., vibr. Raman spectra study 7−82142
SbX_3-GaX_3 complex, X=Cl, Br, struct. investig., vibr. Raman spectra study 7−82142
$(SeO_3)_4$, solid and vapour phases, vibr. Raman spectra 7−85667
SeO_3 vapour, matrix isolation, mass spectrometric and IR obs. 7−82112
SeO_3, vibr. assignment, force const. calc. 7−116935
SiH_2, low-lying states, pot. energy surfaces and dynamical props., 2D MCSCF/6-31G** calcs. 7−116893
$Si_2H_4^n$ (n=0 or +), ground state surfaces, SCF and CI calcs. 7−109811
SiO_2 high temp. vapour, IR absorptivity, Elzasser model calcs. 7−103503
SnF_3 ion, IR spectra, normal coordinate anal. 7−68295
T_2, vibrational states, spontaneous Raman spectra anal. 7−82164
Xe+N_2O(SCO)(SeCO)(SCNH), chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
XeF laser molecule, vibrational relaxation 7−130069

molecular vibration calculations
anharmonic mols., Raman excitation profiles, semiclassical dynamics 7−90140
anharmonic vibrational behaviour, chaotic effects 7−141564
benzene-methane(-methane-d_4)(carbon tetrachloride), clusters, van der Waals modes 7−103472
butatriene, force field study by kinetic consts. method 7−68278
2-chloro-2-methylpropane, overtone spectra, local mode anal. 7−135910
chlorobenzene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7−116940
chlorotrimethylsilane, overtone spectra, local mode anal. 7−135910
conf. on quantum chaos and statistical nuclear physics, Cuernavaca, Mexico, Jan, 1986 7−128188
Creutz-Taube ion, optical absorpt. spectrum model 7−90115
cycloalkanes, phases, vibrs. of kinks and folds 7−77586
diatomic oxides, vibr. const. depend. on electronegativity and valence electrons 7−68275
diazirine, isotope effects, mol. consts., vibr. anal. 7−68273
2,3-dilithiopropene, ab initio calcs. 7−89932
N,N-dimethyl formamide, vibr. spectra, force field and isotopic shifts 7−96641
1,4-dioxadiene, MINDO/3 vibr. obs., canonic quadratic force field calcs. 7−103460
1,4-dioxane, liq., vibr. dephasing and relax. 7−96828
ethyl isocyanate, vibr. spectrum, normal coord. anal., conform. stability and ab initio calcs. 7−90093
explosive absorption in molecules 7−136016
fluorobenzene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7−116940
fluorocarbonylsulfenyl chloride, vibr. anal. IR and Raman spectra 7−135943
fluoroform-$d_0(d_1)$, mol. consts., normal coordinate anal. 7−68274
force constants, fragmentary method determ. 7−74563
β-D-glucose dinitrates, vibr. spectra calcs., site localisation and substitution effects study 7−103474
hexabenzocoronenes, mol. vibr., force field approx. 7−74560
cis-1,3,5-hexatriene, ground state vibr. assignments 7−68280
hydrocarbons, strained, vibr. force fields, ab initio calcs. 7−81961
imines, model cpd. for force field pot. energy function optimisation 7−103615
intramolecular transitions, polaris. anal. using liq. cryst. matrix *(Japanese)* 7−129592
isokinetic relationship, unimolecular reaction systems, steady state solutions, vibrational spectra, liquid and gas phase reaction sites 7−144682
isopropylthio radicals, photodissociation, fluorescence, radiative lifetime, vibrational levels, stretching modes 7−135988
$M(XY)_6$ complexes, vibr. anal. and mean bond displacements 7−103467
methyl fluoride-$d_0(d_2)$, vibr. energy levels, ab initio pot. function 7−90091
methylamine cpds., IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
molecules, generalised pot. surface nucl. motion inclusion 7−129627
multiatomic molecules, vibr. states calcs. using integral intensities 7−90094
nuclei acid bases, out-of-plane vibr. modes 7−119721
nucleic acid bases, out-of-plane vibr. modes 7−119720
nucleic acids, vibr. modes, normal coord. anal. 7−68285
organic compounds, resonance Raman scatt., CARS, vibronic interaction, polarisation obs. *(Japanese)* 7−129712
oxetane, ring-puckering pot., perturbation calcs. 7−135911
oximes, model cpd. for force field pot. energy function optimisation 7−103615
phenylacetylene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7−116940
point groups, σ, π and δ representations 7−74398
polyatomic molecules, local mode excitation by freq.-modulated lasers 7−103470
polyatomic molecules, normal vibr. freqs., MINDO/3 calcs. 7−109867
polyatomic molecules, vibrational energy levels correlation props., FT anal. 7−129688
polyatomic molecules, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7−116940
polyenes, methylated, vibr. freqs., a priori calcs. 7−74565
porphine, D_{2h} configuration, C_{2v} configuration, normal mode frequencies, QCFF/PI calculations, dynamic instability 7−135905
propane-$d_0(d_7)(d_8)$, harmonic force field, ab initio HF theory 7−141471
purines, out-of-plane vibr. modes 7−119721
pyrimidines, out-of-plane vibr. modes 7−119720
quadruply bonded dimers, mol., electronic and cryst. structs., ligand perturbations 7−74409
short chain molecules, IR spectral intensities, foreign group position effects 7−74611
static and dynamic elec., hyperpolarisabilities, vibr. components 7−96637
trans-stilbene, vibr. freqs., transferable valence force field calcs. 7−74564
strong IR radiation absorpt. by polyatomic mols. with saturated vibr. transitions 7−103502
tolane, vibr. freqs., transferable valence force field calcs. 7−74564
triatomic molecules, vibr. energy levels, eigenvalue calcs. 7−96636
triatomic mols., kinetic anharmonicity electron diffr. and spectroscopy anal. 7−103661

molecular vibration calculations continued
trifluorotrifluoromethylsilane bond lengths, fluorination effects 7−103660
trihalomethanes, CH stretch-bend coupling, kinetic anharmonic coupling calcs. 7−103469
two strongly coupled modes, adiabatic and SCF method calcs. 7−74417
vibrational magnetic dipole transition moments and rot. strengths 7−90092
vibrational spectroscopy, ab initio MO calcs. *(Japanese)* 7−74557
$Be(H_2O)_n^{2+}$, struct., hydration energy, bonding, vibr. freqs., SCF calcs., electron correlations 7−141469
BrH-NH_3 IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
CO_2, coupled modes, vibr. kinetics, numerical anal. 7−90095
CO_2 fluid, S_1 Raman band, pot, and polarisability model study 7−82167
ClH-NH_3, IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
CrO_2Br_2, mean amplitudes of vibr. *(German)* 7−122497
D_2SO_3, mol. const. vibr. anal. 7−68277
H_2, electron impact excitation near rotation and vibration threshold 7−110117
H_3^+, loosely bound complex, chaos trajectories 7−116930
H_3^+, vibr. levels, distributed Gaussian basis calcs. 7−109860
$(HCN)_n$, linear and cyclic oligomers, ab initio calcs. 7−90465
HCN/HNC, accurate localised and delocalised vibrs. states, quantum calc. 7−90085
HCl complexes, electron correlation and anharmonicity 7−89999
HF complexes, electron correlation and anharmonicity 7−89999
HNCl-X system band origin and vibr. freqs., ab initio calcs. 7−135849
H_2O, geometry, analytical energy gradient, Moller-Plesset perturbation theory 7−116815
H_2O, harmonic stretching and bending modes coupling, adiabatic method calcs. 7−74552
H_2SO_3, mol. const. vibr. anal. 7−68277
H_2Se, harmonic stretching and bending modes coupling, adiabatic method calcs. 7−74552
He_2 adiabatic potential curve, excitations, van der Waals wells, vibrational energy levels 7−136029
$^2He^+$, vibrational kinetics, effects on He discharge afterglow 7−126458
K_2FPO_3, vibrational spectra and normal coordinate anal. 7−129709
NCO^- anion Fermi doublet, vibr. spectra in aqueous solns. *(Russian)* 7−122495
NiBr emission spectra at 3800 to 5500 Å 7−122560
O_2 O-O stretch, adsorbate-induced resonance, vibrational polarisability, electron-phonon coupling 7−135933
SiH, π^2 mol., struct., pot. energy curve, ab initio HFR-MO-LCAO-SCF-CI method 7−103390
UO_2^{2+} ion-neutral base complexes, vibr. freqs. anal. 7−116941
Zn octaethylchlorine-$d_0(-d_2)$, fine struct. fluoresc. *(Japanese)* 7−129786

molecular vibration in solids
acetanilide unconventional amide I band 7−90128
acetic acid, OH stretching band shape anal., proton dynamics 7−144078
adsorbate-surface interactions, local models 7−131417
adsorbed layers, IETS, freq. shifts 7−143558
alkali halide crystals, electron-phonon interactions and impurity mol. low temp. optical spectra zero-phonon lines *(Russian)* 7−106222
alkane-urea clathrates, cryst., Raman linewidths 7−85730
n-alkanes, odd-numbered C_{11}-C_{23}, high temp. Raman studies 7−106164
n-alkyloligo(oxyethylene)s, solid-state mol. conform., Raman spectrosc. obs. 7−85731
anthracene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
anthracene-trinitrobenzene complex, lattice vibr., polarised Raman spectra 7−70769
aromatic amino acids adsorbed on Ag particles, SERS studies 7−106962
3−azidopropyne, structure, IR and Raman spectra, electron diffr. 7−122341
bacteriochlorophyll, frozen solns., site-selection fluoresc. spectra 7−138493
bacteriopheophytin frozen solns., site-selection fluoresc. spectra 7−138493
Bechgaard salts, dimerisation, vibronic structs. and optical gaps 7−98362
$(BEDT\text{-}TTF)_2I_3$, mol. vibrs., Raman spectra study 7−85675
α-$(BEDT\text{-}TTF)_2I_3$ 2D conductor, vibronic props., IR polarised refl. spectra 7−77565
β-$(BEDT\text{-}TTF)_2IAuI$, superconductor, reson. Raman spectra 7−106190
$(BEDT\text{-}TTF)_2IBr_2$, mol. vibrs., Raman spectra study 7−85675
benzene, C-H motions, picosecond quasi-CW CARS experiments *(Japanese)* 7−132288
benzenes, liq. and solid, vibr. props., mol. dynamics simulation 7−91740
biphenyl incommensurate phase II, stripe-like modulation calcs. 7−142950
tert-butylammonium chloride, cryst. struct., X-ray diffr. study at 115 K 7−104709
catalyst systems, Fourier transform IR spectroscopy 7−128605
α-chloroanthraquinones, lowest excited triplet states, EPR ODMR and phosphoresc. spectra study 7−106010
2-p-chlorophenyl-4-hydroxy-6-oxo-1, 3-thiazine, crystal struct., X-ray, UV, IR and PMR spectra 7−111527
chlorophyll frozen solns. spectra, zero-phonon lines studies, review *(Russian)* 7−106972
coproporphyrin, in amorphous ethanol matrices, dephasing and vibronic relax. luminesc. and hole burning investig. 7−92720
cryst., H bonded, OH stretching band shape anal., H^+ dynamics 7−70826
crystals, mixed regular stack, Raman spectra, VB calcs. 7−125731
cycloalkanes, phases, vibrs. of kinks and folds 7−77586
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7−125725
di-n-butylamine, Raman bands, temp. depend. intensities 7−85639
N,N-dihydro-4,4′-bipyridinium radical cation and parent dication, reson. Raman spectra 7−144060
1,8-dihydroxyanthraquinone, cryst. ground state vibrs. assignment, Raman excitation profiles anal. 7−85747
1,1′-dimethylferrocenium-TCNQ, 1:2 cpd., optical props. 7−119027
ditetrabutylammonium dirhenium octachloride, single cryst., lumines. 7−132309
DNA, polynucleotide films far-IR vibr. modes meas., lattice dynamical model anal. 7−93647
durene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
electron-hole-pair dephasing of adsorbate vibrations 7−112053
ethylphosphonothioic dichloride-$d_0(d_3)$, solid and liq., IR and Raman spectra 7−144057

molecular vibration in solids continued
2-ethynyl-1,3-butadiene, conform. vibr., IR and Raman obs. 7−96669
formic acid, OH stretching band shape anal., proton dynamics 7−144078
α-glycine, powder, vibr. modes, far-IR Raman Fourier transform spectra anal. 7−68320
Gramicidin A, cryst. and membrane bound, vibr. spectrosc. obs. 7−71697
graphite substrate with adsorbed sorbic acid, vibr. spectra, scanning tunnelling microscopy study 7−105245
hydroquinone clathrates, single crysts., Raman spectra 7−106192
IETS, vibrational mode energy, bias voltage polarity depend. 7−143557
intramolecular motions, effects on melting 7−84186
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7−125752
local displacive phase transitions temp. depend., mol. vibr. anharmonic interactions and thermal electron excitation mechanisms 7−76338
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7−68492
macromolecules, solid, unbranched, heat capacities calc. 7−118128
MBBA amorphous solid states, struct. and dynamics 7−124103
metal tip-metal surface system with chemisorbed mols., inelastic electron tunnelling 7−118557
metal-ethene complexes, 7−99861
metalloporphyrin polymers of Fe, Ru and O_5 octaethylporphyrin, electrochemical, optical and cond. studies 7−143421
methane, solid, partially ordered phase II, IR spectra 7−132262
methanol, crysts., vibr. band dynamic splitting in IR spectra 7−125742
methanol, lattice vibrs., Raman spectrosc. obs. 7−85727
L-methionine, crystalline, conform. phase transition, IR and Raman spectra, MNDO calcs. 7−124413
methylammonium nitrate, N-deuterated, single cryst., Raman spectra 7−132273
methylene iodide, normal and deuterated cryst., Raman and far-IR spectra 7−106168
methylene iodide-d_0 (-d_2), cryst., Raman and far IR spectra 7−85728
mode mixing and non-Condon coupling, temp.-depend. reson. Raman scatt., non-perturbative theory 7−92685
molecular crystals, distortion induced IR and Raman activity, vibr. dynamics 7−104926
multimode systems, reson. Raman scatt., temp. depend., many-body approach 7−91748
naphthalene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
neutron inelastic scatt., vibrational analysis of molecular modes 7−69843
n-nonadecane-n-heneicosane, solid state, Raman spectra 7−144058
organic charge transfer crystals, struct. phase transition, IR reflection spectra studies 7−85678
organic charge-transfer crystals, mixed-stack, dimerisation model 7−138980
organic mixed stack charge transfer crysts., phase diagrams and optical props. 7−84206
organic superconductivity, electron pairing mechanism, vibronic coupling control calcs. 7−77145
2,2,4,4,6-pentacyanocyclohexenamine, cryst. struct. and vibr., spectrosc. obs. 7−98102
perchlorobiphenyl, heat capacities and intramol. twisting vibrs. 7−76431
perfluorobiphenyl, heat capacities and intramol. twisting vibrs. 7−76431
phenothiazine, single cryst., ferroelastic phase transition and Raman spectra 7−111851
poly(vinylidine fluoride) films, β-phase, Raman intensities and mode assignments *(French)* 7−85638
poly-3-methylthiophene, resonance Raman scatt., vibr. freqs. 7−77561
polyacetylene, ordered and disordered 1D crysts., mol. dynamics 7−142934
polyacetylenes, I-doped substituted, Raman and far-IR vibr. spectra 7−144047
polyesters, linear, aliphatic, heat capacities 7−91836
polyethylene, oriented, acoustic mode struct. 7−82135
polyethylene, single crysts., IR defect modes 7−92670
polyimide films, surface characterisation, high resolution EELS studies 7−143141
potassium hydrogen 3,4-furandicarboxylate, intramol. H bond, vibr. spectra 7−99866
potassium hydrogen cyclobutane 1,1-dicarboxylate, vibr. spectra and H bonding 7−99865
pyridine-ICl(IBr) charge transfer complexes, far-IR spectra 7−99863
quadruply bonded dimers, mol., electronic and cryst. structs., ligand perturbations 7−74409
quartz, incommensurate phase, low freq. modes, Raman and Brillouin obs. 7−70819
α-quartz, isotopic species, IR and Raman obs. 7−119000
quinoline-ICl(IBr), charge transfer complexes, far-IR spectra 7−99863
small crystals, lattice disorder from thermal fluctuations 7−124412
sodium formate, crystalline and powdery thin solid films, IR and Raman spectra, intensity transfer 7−85663
α,α′-trans-stilbene-^{13}C, ground and excited states struct., Raman spectra anal. 7−82193
strongly coupled model rotational-translational system dynamics, power spectra calcs. 7−117843
superconductivity, hidden vibronically-induced interelectron attractive force mechanism 7−77146
TCNQ salt, MPht(TCNQ)$_2$, phase transitions, IR absorpt. spectra 7−138439
TCNQ salts, MEM(TCNQ)$_2$, far IR absorpt. spectra 7−77534
TCNQ salts, quasi-1D dimerised, IR spectral props., temp. depend. 7−85626
TCNQ salts, TEA(TCNQ)$_2$ and MNEB(TCNQ)$_2$, lattice dynamics, inelastic neutron scatt. 7−91743
$TCNQF_4$ charge transfer complexes, vibrational and vibronic studies 7−84147
1,1,3,3,-tetracyanopropane, cryst. struct. and vibr., spectrosc. obs. 7−98102
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7−106212
tetralkylammonium chlorobromo ruthenate, vibr. and electronic reson. Raman spectra *(German)* 7−106189
time-domain vibrational spectroscopy 7−92687
(TMTSF)$_2$X, superconductivity mechanism 7−70459
(TMTSF)$_2$X salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
(TMTTF)$_2$X salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677

molecular vibration in solids continued
tricyclophosphates $KM^{II}P_3O_9$ where M^{II}=Mg, Ca, Co, Mn, Zn, Cd), Raman and IR spectra 7−85664
tris(hydroxymethyl)aminomethane, H bonding, vibr. study 7−144076
TTF-analogs, superconductivity mechanism 7−70459
ultrafast time-resolved spectroscopy of struct. phase transitions, vibrating crystals and vibrating mols. 7−110469
urea, cryst., N-H stretching modes, Raman and IR spectra 7−85726
uridine, Fourier transform IR and laser Raman microprobe spectra 7−132271
zerolites, bridging OH group vibr. freqs., struct. and chem. effects 7−111789
AS_2S_3 covalent clusters in zeolites, electronic and vibr. spectra 7−125723
Ag complex, β-alanine-$AgNO_3$, single crystal, vibr. modes, IR Raman spectra anal. 7−71689
Ag halides, interionic pots. based on charge-transfer model, cohesive energy, mol. consts. and ionicity calcs. 7−76071
Ar:NO(CO) cryocrysts., substitutional mol. impurity rotation, crystalline pot. calcs. *(Russian)* 7−76044
$Ba_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Ba_3(PS_4)_2$, Raman spectra assignments *(German)* 7−99872
$Ba_2P_2Se_6$, Raman spectra assignments *(German)* 7−99873
$BaWO_4$, crystal lattice and anion internal vibrs. calcs. 7−104929
CO adsorbed on NaCl film, IR spectra and thermodynamic meas. 7−105278
CO, trapped in rare gas cryst., triplet states, vibr. progressions obs. 7−106240
CO_2 solid films, amorphous and crystalline, IR Fourier transform spectra anal. 7−77523
$Ca(OH)_2{:}O_2^-$, Raman electron spin-lattice relax. rate calcs 7−143908
$Ca(OH)_2{:}O_2^-$, Raman electron spin-lattice relax. rate meas. 7−143909
$Ca_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Ca_3(PS_4)_2$, Raman spectra assignments *(German)* 7−99872
$Ca_2P_2Se_6$, Raman spectra assignments *(German)* 7−99873
CaV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
$CaWO_4$, crystal lattice and anion internal vibrs. calcs. 7−104929
$Cd(BrO_3)_2.2H_2O$, cryst., BrO_3^- ion dynamics, Raman spectrosc. obs. 7−70818
$CdGa_2(S_xSe_{1-x})_4$, reson. Raman scatt. 7−70806
CdV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
$CoMoO_4$, vibr. spectrum, Raman and IR obs. 7−85741
Cr complex, tris-(μ-hydroxo)-bis-[(1,4,7-trimethyl-1,4,7-triazacyclononane) Cr(III)] triperchlorate, exchange interactions, optical spectra, EHT calcs. 7−96548
$CsClO_4$, Raman data, latent space group symmetry in vibr. spectra 7−92657
CsH_2PO_4, cryst., H bonded, OH stretching band shape anal., H^+ dynamics 7−70826
$CsHSO_4$, normal and deuterated, IR and Raman vibr. spectra obs. 7−106165
$CsHSeO_3.2H_2SeO_3$, cryst. struct., thermal behavior, IR absorpt. spectrum 7−111485
$Cs_2NaHo_{0.99}Er_{0.01}Cl_6$, energy transfer, luminesc. and UV absorpt. study 7−92724
Cu (II) complexes with oxamic hydrazide, IR, Raman, UV and visible spectra, thermal anal. 7−99860
Cu (100), adsorbed S, surface phonon dispersion, inelastic electron scatt. obs. 7−143175
Cu complex, β-alanine-$CuNO_3$, single crystal, vibr. modes, IR Raman spectra anal. 7−71689
Cu halides, interionic pots. based on charge-transfer model, cohesive energy, mol. consts. and ionicity calcs. 7−76071
CuV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
$Eu_2P_2S_6$, crystal, vibr. assignments, IR spectra *(German)* 7−99871
F_2, high pressure study, phase diagram, Raman spectra 7−137540
FeNi mixed complexes, vibr., IR and Raman spectra 7−99862
$Fe_{90}Zr_{10}$ magnetic glass, hydrogenation study by Raman spectra 7−85716
$GeBr_4$, mol. fund. and lattice vibr. modes, Raman spectra study 7−85708
H_2, adsorbed on porous Vycor glass, vibr. spectroscopy, bilayer struct. study 7−138458
H_2 solid, localised electrons, interference effects in IR spectra 7−92656
HDO in H_2O ice, stretching vibr., Raman spectra 7−99823
HF(Cl)(Br), solid, electronic and dynamic props. under press. 7−124490
$H_2O(D_2O)$:HDO, stretching fundamentals satellite bands, IR spectra anal. 7−113176
$Hg_2P_2Se_6$, vibr. assignments, far-IR spectra. *(German)* 7−99874
InP:MH (M= transition metals), optical absorpt., P-H bond vibrational mode, chemical shift 7−125732
$InPS_4$ cryst., vibr., pseudotensor of gyration, Raman scatt. 7−125741
$KClO_4$, Raman data, latent space group symmetry in vibr. spectra 7−92657
KD_2PO_4, single domain state, lattice dynamics, Raman spectra 7−99817
KH_2PO_4, paraelectric phase, orientationally disordered anion sublattice, vibr. spectra 7−111785
KH_2PO_4, single domain state, lattice dynamics, Raman spectra 7−99817
$KHSO_4.KH_2PO_4$ single crystal., struct., Raman spectra study 7−138443
$K_2Mg(SO_4)_2.6H_2O$, IR and polarized Raman spectra 7−77547
$K_3PCr_4O_{16}$, IR and Raman spectra, vibr. bands 7−113171
$K_2S_2O_8$ single cryst., $S_2O_8^{2-}$ ion internal modes, Raman spectra studies 7−85640
KVO_3, polycryst. fundamentals and external mode, Raman obs. 7−132264
Kr:NO(CO) cryocrysts., substitutional mol. impurity rotation, crystalline pot. calcs. *(Russian)* 7−76044
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., absence of struct. transition, X-ray studies 7−99975
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR spectra and vibr. props. 7−92668
$LiKSO_4$, translational and rotational dynamics, computer simulation 7−124132
$LiN(H_xD_{1-x})_4SO_4$, lattice vibrs., Raman spectra, 77-143 K 7−106171
$LiNH_4SO_4$, phase transition mechanism, doping effect, ionic cond., dielec. meas. 7−106100
Li_2SO_4, monoclinic, Li modes, low temp. behaviour 7−70804
Mg salts, glassy and liq., Raman spectra studies 7−106162
Mg-porphyrin, in amorphous ethanol matrices, dephasing and vibronic relax. luminesc. and hole burning investig. 7−92720
$MgO-Na_2O-B_2O_3$ glass, far-IR investig. 7−76011
$MgO-Na_2O-B_2O_3$ glasses, mid-IR and Raman investig. 7−77540
$Mg_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Mg_2P_2Se_6$, Raman spectra assignments *(German)* 7−99873

molecular vibration in solids continued
MgV_2O_6, brannerite-type sample, vibr., Raman spectra 7—144055
$MnGeO_3$, pyroxene, diamond anvil cell synthesised, Raman microprobe obs. 7—70820
$MnMoO_4$, vibr. spectrum, Raman and IR obs. 7—85741
$Mn_2P_4O_{12}$, vibr., IR and Raman spectra 7—85619
N_2, crystal, intermol. pots., high pressure Raman spectra anal. 7—85746
N_2, melting curves at high temps. and pressures 7—124456
N_2, solid, intermol. pots., internal modes and p-V curve *(Japanese)* 7—131248
NH_3, solid, internal and external modes, Raman Scatt. studies at high press. *(Japanese)* 7—131250
NH_4CdCl_3, phase transitions, laser Raman studies 7—106175
$(NH_4)_2(Co(H_2O)_6)(SO_4)_2$, IR struct. holeburning and orientation tunnelling of NH_3D^+ ions 7—138975
$(NH_4)_3H(SO_4)_2$, phase transitions, vibr. study 7—143001
NH_4I, vibr. mode, variable temp. Raman obs. 7—70808
NH_4MnCl_3, lattice and NH_4 modes, Raman spectra above and below cryst. phase transition 7—99854
$(NH_4)_3PCr_4O_{16}$, IR and Raman spectra, vibr. bands 7—113171
$(NH_4)_4P_2S_6$, vibr., Raman spectra *(German)* 7—106188
$NH_4UO_2PO_4.3H_2O$, cation identity, IR and inelastic neutron scatt. spectra 7—125735
Ni (II) complexes with oxamic hydrazide, IR, Raman, UV and visible spectra, thermal anal. 7—99860
Ni complex, Ni(II)-octaethylporphyrin, out-of-plane deform. modes in reson. Raman spectra 7—85742
O_2, ε phase, extended interactions, isotope effects, IR and Raman spectra 7—99822
O_2, phase transformations, melting and solid-solid, 120-650 K 7—113184
O_2, solid α- and β-, mag. coupling and dynamics, ab initio calcs. 7—85220
$PbWO_4$, crystal lattice and anion internal vibrs. calcs. 7—104929
Pt (111), ethylidyne form., IR spectra studies 7—144756
Pt complex, resonance Raman study, ν_1 band struct. 7—85616
Pt-ethene complex, IR and Raman spectra, valence force field force constants 7—99861
$RbClO_4$, Raman data, latent space group symmetry in vibr. spectra 7—92657
RbD_2PO_4, single cryst., vibr., IR and Raman spectra 7—144061
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed cryst., PO_4 tetrahedron ν_1 mode 7—76318
Ru (001), coadsorption of O and K, K—O cpds., form. study 7—124690
$Ru_3(CO)_{12}$, vibr., Fourier transform IR, photoacoustic and Raman spectra 7—132272
Se covalent clusters in zeolites, electronic and vibr. spectra 7—125723
$(SeO_3)_4$, solid and vapour phases, vibr. Raman spectra 7—85667
Si:H, electron irrad., mol. vibrs., IR studies 7—106173
$SiBr_4$, mol. fund. and lattice vibr. modes, Raman spectra study 7—85708
SiO_2 glass, IR absorpt. edge due to multiphonon absorpt., polariton theory 7—99775
SiO_2 thin films, photo-induced CVD growth using D lamps, annealing effects 7—113415
SiO_2, vitreous, O—O vibrs., Raman obs. 7—70825
$Sm_{0.75}Y_{0.25}S$, phonon frequencies and line widths at valence fluctuations, vibronic model 7—111792
$SnBr_4$, crystn., IR and Raman spectra 7—132269
$Sr(BrO_3)_2.H_2O$, cryst., BrO_3^- ion dynamics, Raman spectrosc. obs. 7—70818
$Sr_2P_2S_6$, vibr., Raman spectra *(German)* 7—106188
$SrTiO_3$:H, impurity position, high resolution IR spectra 7—85652
$SrWO_4$, crystal lattice and anion internal vibrs. calcs. 7—104929
Te covalent clusters in zeolites, electronic and vibr. spectra 7—125723
TeO_2-$ZnCl_2$ vitreous system, struct. and US props. 7—104556
$Te(OH)_6$-Na_2SO_4, vibr. IR and Raman spectra 7—113172
$Te(OH)_6$-Tl_2SO_4, vibr. IR and Raman spectra 7—113172
$Te(OH)_6.2NH_2CH_2COOH.H_2O$, thermal and vibr. props. 7—69840
Tl halides, interionic pots. based on charge-transfer model, cohesive energy, mol. consts. and ionicity calcs. 7—76071
UO_2 complexes with N-thiosemicarbazide, struct., composition, force consts., spectral and thermal study 7—138442
W(100), chemisorbed H(D) IR spectra studies 7—131416
Y-Ba-Cu-O high T_c supercond., space groups, convergent beam electron diffr. studies 7—117900
Y-Ba-Cu-O high T_c supercond., local struct. and Cu valence, O vacancy effects 7—117901
YVO_4, press.-induced transition from zircon-type to scheelite-type struct., Raman study 7—142984
ZnS:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7—124935
ZnSe:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7—124935
$ZnTiF_6.6H_2O$:Cu^{2+}, Jahn-Teller effect, EPR spectra temp. depend. anal. 7—106015

molecular vibrational energy transfer *see molecular rotational-vibrational energy transfer*

molecular vibrational relaxation *see molecular rotational-vibrational energy transfer*

molecular vibrational states *see molecular vibration*

molecular vibronic states
$A^2\Sigma^+ \rightarrow X^2\Pi_i$ emission spectra, vibronic anal. 7—68338
alkyl phenyl ketones, vibronic coupling contrib. to overtone intensities, UV spectra 7—96725
allyl radicals, gas phase, vibronic spectrum, multiphoton ionis. 7—135909
amino acids, UV reson. Raman excitation profiles study 7—68323
aniline radical cation, vibr., time resolved reson. Raman spectra 7—90139
anilino radical, vibr., time resolved reson. Raman spectra 7—90139
anthracene, first excited state, vibronic coupling, mol. fluoresc. and Raman spectra anal. 7—82180
anthracenes, substituted, S_1 torsional pot., vibr. struct., laser induced fluoresc. 7—68388
9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7—68400
atomic and molecular excited states, conf., Fuji-Yoshida, Japan (Aug. 1986) 7—140351
azulene, S_2-S_0 transition, vibronic effects, QCFF/PI calcs. 7—89961
bacterial chlorophyll, solid solution, vibronically selected spectra *(Russian)* 7—86914
benzene, $^1B_{2u}$ level, vibr. ang. momentum fluoresc. lifetimes study 7—82263
molecular vibronic states continued
benzene, anharmonic effects in radiationless vibronic energy relaxation 7—109852
benzene, cryogenic solvents, spectroscopic studies 7—135921
benzene, ground state, harmonic force field 7—136028
benzene, high resolution zero kinetic energy photoelectron spectroscopy and ionisation pot. 7—90270
benzene, rovibronic intramol. vibr. energy redistrib., linewidth distribs. 7—129681
benzene derivatives, electronic transitions, UV reson. Raman spectra anal. 7—82186
benzenes, monosubstituted, two-photon thermal lensing spectrosc. 7—68289
biferrocenium trihalide compounds, mixed valence complexes, electronic delocalisation, intermol. interactions effect 7—70261
2,5-bis(2-benzothiazolyl)hydroquinone, jet cooled, excited state intramol. H^+transfer 7—86599
Born-Oppenheimer approximation, systematic corrections 7—109702
bridge mechanism, intermediate unit, electron transfer theory 7—122700
CCN free radical laser-induced fluoresc., Fourier transform detection, rot. consts. 7—90252
chlorobenzene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7—116940
chloromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7—90246
complex molecules, vibronic spectra and intensities in Raman spectra, review 7—141561
Creutz-Taube ion, optical absorpt. spectrum model 7—90115
diatomic mols., electronic-vibr. interactions, electron transition moments calcs. 7—74559
diazabenzenes, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7—82256
p-difluorobenzene vapour, fluoresc., quantum yield, intramol. vibr. redistrib., rot. effect 7—90260
2,6-difluoropyridine, vap., electronic absorpt. spectra, vibronic anal. 7—103527
dimolybdenum tetraacetate, metal-metal distortions for metal-metal orbital electronic ionisations and excitations 7—68406
diphenylpolyene solns., fluoresc. amplification and light quenching 7—129778
electronic-vibrational transition in reson. light field 7—122494
ethynyl ($\tilde{X}d_1$) radical, colour centre laser spectroscopy, IR spectra, vibronic state 7—116968
ethynyl radical, Ar matrix isolated, Fourier transform IR spectra 7—82097
fluorobenzene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7—116940
fluoromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7—90246
formaldehyde, $n \rightarrow \pi^*$ forbidden transition intensity, effect of electronic-vibrational interaction 7—90186
cis-glyoxal, selective pumping, isomerisation vibronic levels, IR fluoresc. spectra anal. 7—103489
guanine, free state and thin films, geometries, UV spectra 7—103525
harmonic polyatomic Franck-Condon factors evaluation 7—122616
all-trans-2,4,6,8,10,12,14-hexadecaheptaene, vibronic coupling, fluoresc. spectra 7—141617
3-hydroxyflavone, intramol. excited state proton transfer, picosecond transient absorpt. study 7—74655
indoles, substituted, in polyethylene films, UV absorpt. spectra 7—96728
isoquinoline van der Waals clusters, chromophore electronic struct., TOF mass spectra 7—103705
K_2ReF_6, $\Gamma_7(^2\Gamma_{2g})$-$\Gamma_8(^4A_{2g})$ absorpt. and luminesc. spectra, vibr. dispersion 7—122595
methane-NO, van der Waals mols., multiphoton ionisation spectroscopy 7—90301
2-methoxy-9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7—68400
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7—82185
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7—141638
molecules, generalised pot. surface nucl. motion inclusion 7—129627
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7—141638
naphthalenes, substituted, radiationless processes, vibronic level fluoresc. lifetimes 7—129769
oxirane, vibrational circular dichroism, C-H and C-D stretching modes 7—141612
phenylacetylene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7—116940
polyatomic molecules, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7—116940
polyatomic mols., coherent Raman spectra reson. background 7—141585
pyrazine, $^1B_{3u}$ state, fluoresc. quantum yield 7—90251
pyrazine, jet-cooled, dual fluoresc., rot. effects 7—109994
pyrene+cyclodextrins assoc. consts. meas., vibronic states, UV fluoresc. spectra anal. 7—96721
pyridazine van der Waals clusters, chromophore electronic struct., TOF mass spectra 7—103705
pyrimidine, supersonic jet, mag. field effects on fluoresc. polarisation 7—90243
quinoxaline, electronic states investig., Raman excitation profile 7—82189
Raman excitation profiles, totally symmetric modes, vibronic coupling effects study 7—96703
Raman optical activity, bond polarisability and vibronic coupling 7—141628
retinol, electronic states investig., Raman excitation profile 7—82189
rhodamine dyes, absorpt. spectra, homogeneous relax. component, temp. depend. 7—141567
t-stilbene, intramol. vibr. redistrib., time-resolved fluoresc. spectra, photochem. timing meas. 7—117055
tetracene and its van der Waals complexes with inert gas atoms, rot. resolved laser spectroscopy 7—129733
sym-tetrachloropyrazine, distorted lowest excited triplet state, phosphoresc., ODMR and ODNQR investig. 7—135981
1,2,4,5-tetrafluorobenzene, S_1 state Q_{11} butterfly motion, vibronic coupling 7—135912
tetrazine-Ar complex, supersonic free jet, reson. and dispersed fluoresc. 7—82262

molecular vibronic states continued
trimeric system, vibronic coupling model, appl. to UV spectrum of triptycene 7−135954
tris(tetrabutyl ammonium) europium hexathiocyanate, IR, Raman and fluoresc. spectra 7−116969
two-level system, vibronic transition, stochastic description *(Chinese)* 7−129687
two-state coupling problem, numerical algorithm for band matrix eigenvalue problem 7−81930
Ar_2, rovibronic spectra, rot.-electronic motion coupling 7−74566
BrCN, vibronic mixing, photoelectron spectra 7−136009
H^+ transfer in lasers and spectroscopy 7−113867
H_2, double minimum states, quantum defect theory 7−141559
H_4, stability in C_{3v} symm. 7−109714
HCP^+, $A^2\Sigma^+ \rightarrow \tilde{X}^2\Pi_i$ emission spectra, vibronic anal. 7−68338
H_2O^+, produced in $D^+ + H_2O$ charger transfer scatt., vibronic energy distrib. 7−119507
H_2Se, photoionis. photoelectron spectra meas. 7−90268
H^*_4 cluster, stability, pot. energy surfaces, MRD-CI method and basis set calcs. 7−74467
ICN, vibronic mixing, photoelectron spectra 7−136009
KrNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
N_2 CARS, broadband, pump-induced population changes 7−123105
NCO radicals $\tilde{B}^2\Pi_i(00^00)$ state, optical double-reson. 7−68374
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
NH_3, Jahn-Teller effect, vibr. struct., PES 7−103578
NH_3, potential energy surfaces and IR spectra, CASSCF and CEPA calcs. 7−103358
NH_3, reson. hyper-Raman scatt. spectra 7−109906
NO_2, excited electronic states, perturbed visible system, rot. transitions, hyperfine struct. 7−116980
NaF:Cu^+, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
Ni octaethylporphyrine, vibr. struct., picosec. CARS, excited states dynamics 7−122553
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
PuF_6, vibronic band fine struct. high resol. visible spectra 7−122557
SnH_4^+, spin-orbit coupling, ab initio CI calcs. 7−103398
Xe_2, photoelectron spectra obtained by resonantly enhanced multiphoton ionisation 7−110000
XeNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301

molecular weight
see also mass spectra; molecular weight determination
biological molecules, functional size determ. by radiation target theory meas. 7−71670
copolyimides, crosslinkable, struct. props. correl. 7−76034
dimethyl phosphonomethyl methylsiloxane dimethylsiloxane copolymers, preparation and props. 7−122759
formaldehyde, linear oligomers, in mixed solvents, mol. mass distrib., NMR meas. *(Russian)* 7−82226
macromolecule mol. wt. or chain length meas. using computer-controlled digitising tablet and gel electrophoresis of proteins or nucleic acids 7−133520
methyl cellulose-sodium dodecyl sulphate complex, aq. soln., viscometric obs. 7−69952
nonterminated, using polyfunctional initiators, mol. mass characts. calcs. *(Russian)* 7−100558
oligomeric proteins, accessible surface area and stability 7−133210
phospholipid bilayer membrane, synthesis and polymerisation *(Japanese)* 7−126756
PMMA, water sorption, crosslinks effects 7−70085
PMMA, water sorption, mol. wt. effects 7−70084
PMMA copolymers, irrad.-induced degradation and sensitivity, resist appls. 7−142835
PMMA-polycarbonate blends, morphology and props. 7−124117
PMMA-polyethylene oxide blends in soln., compatibility, mol. wt., laser light scatt., viscometry 7−69914
poly(dimethyl siloxanes), lin., sedimentation coeffs., intrinsic viscosities and mol. wt. meas. 7−117106
poly(dimethyldiallylammonium chloride), soln. props. determ. 7−96898
poly(propylene glycol), low mol. wt., hypersonic props., mol. wt. depend. 7−104520
poly(styrene-g-ethylene oxide) copolymer, anionic synthesis, mol. wt., composition and struct. charactn. 7−117108
polyacetylene, cis- and trans-, transport props., mol. wt. depend. 7−99039
polyalkylstyrene, soln., intrinsic viscosity, temp. depend. *(Russian)* 7−98543
polyamic acid derivatives of poly(4-aminophthalic) anhydride, synthesis 7−126449
polyamide 12, dielectric relaxations, TSC investig. 7−118938
polyamide acid, rheological props. and mol. mass, thermal imidization effects *(Russian)* 7−91052
polybutadiene, mol. mass. correl. with microstruct. *(Russian)* 7−83791
polyethylene, high density, abrasive wear resist. depend. on mol. characts. 7−100397
polyethylene, low density, deform. re. to mol. wt. distrib. 7−113627
polyethylene, perfectly ordered and oriented, theoretical strength, weak-link chain defects influence 7−83787
polyethylene, radiation crosslinking, mol. weight distrib. effect 7−122762
polyethylene, sheets, mech. props., radiation cross-linking effects 7−91484
polyethylene, tubular flow-induced crystn., mol. wt. fractionation 7−83783
polyethylene copolymers, cross-fractionation according to copolymer comp. and mol. wt. 7−83781
polyethylene terephthalate, mol. wt. distrib., gelpermeation chromatography 7−122756
polyethylenes, highly drawn, tensile strength rel. to mol. wt., Flory model 7−144475
polyethylenes, mech. props., struct. and morphological factors 7−71244
polyimidesulfone adhesive, fracture evaluation 7−78175
polymer solutions, microisotropic structure, mol. mass and backbone rigidity *(Russian)* 7−83642
polymer solutions, rigid, Kerr effect, mol. mass depend. *(Russian)* 7−113105
polyoxypropylene-spaced liquid crystal polyesters, layer order obs. *(Russian)* 7−83644
polypropylene monofilaments, highly drawn, creep and recovery 7−86265
polystyrene, soln., intrinsic viscosity, temp. depend. *(Russian)* 7−98543

molecular weight continued
polystyrene in cyclopentane, dil. soln. props., viscosity, mol. wt., light scatt., virial coeff. 7−69573
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93320
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93321
polyurethane acetals, mol. struct., hydrolytic stability *(Russian)* 7−113913
random copolyether, thermotropic props., mol. weight influence 7−124500
styrene-polybutadiene copolymerisation, phase struct. form., regularities *(Russian)* 7−93326

molecular weight determination
see also mass spectra
bipartite percolation, gelation, partial generating function, weight-average molecular weight, critical behaviour. 7−128477
PMMA, chain entanglements, fracture behaviour investig. 7−118026
polystyrene, particle size limit on Kratky camera 7−74847
sedimentation equilibrium banding, bouyant density and molecular weight calc. in Apple II 7−107320

molecule-atom collisions *see atom-molecule collisions*

molecule-atom reactions *see atom-molecule reactions*

molecule-electron collisions *see elastic scattering of electrons by atoms and molecules; molecular electron impact dissociation; molecular electron impact excitation; molecular electron impact ionisation*

molecule-ion collisions *see ion-molecule collisions*

molecule-ion reactions *see ion-molecule reactions*

molecule-molecule reactions
see also molecular rotational-vibrational energy transfer
acetylene+α-pyrone cycloaddition reaction mechanism, F substitution, ab initio SCF MO calcs. 7−96530
adiabatic thermal explosion, stochastic anal./molecular dynamics simulation comparisons 7−139012
aminonitrene+ethylene, addition, nonempirical gradient quantum chem. calcs. 7−103384
azurin+metalloporphyrin electron transfer reactions 7−119522
benzophenone oxide, self-reaction, optical modulation spectrosc. 7−68290
bimolecular association reaction dynamics calcs. 7−113895
bimolecular systems, isokinetic relationship investig. 7−113873
(2-chlorophenyl)carbene, matrix isolated, oxidation, chemiluminesc. 7−100578
cyclopropane-Lewis acid interaction, matrix isolation, IR spectra 7−82108
cyclopropylidene ion contrib. to synthesis of cyclopropenylidene in interstellar clouds 7−128024
difluoromethylene+$Br_2(Cl_2)(H_2)$, reaction rate consts., IR diode laser spectroscopy 7−78466
interstellar chemistry, radiative assoc. rate coeffs. rel. to complex O-containing mols. prod. 7−115550
kinetics in condensed media with irradiation, statistical theory 7−100512
$(methane)^+ + N_2$, collision-induced dissoc. press. depend., collisional energy deposition probability anal. 7−86585
methyl fluoride+HCl, complex-forming reactions in neutral noble gas clusters 7−119503
molecular interactions, geometry optimisation, simulated annealing approach 7−100522
on fine wire electrode in corona discharge *(French)* 7−97832
phenylchlorocarbene, matrix isolated, oxidation, chemiluminesc. 7−100578
2-propynylidene, ion, molecular reactions, isomers anal., appl. to 2-propynylidene ion+H_2 reaction 7−138972
radical pair recombination in viscous liqs., CIDEP amplitude, mag. field and viscosity effects study 7−68365
target fragmentation in low energy collisions, Jost matrices method anal. 7−82319
trifluorohalomethanes +N_2, visible spectra, collisional quenching rate consts. 7−96713
Al_2O_3-Si_2O-X_2O mixture (X=Li, Na, Rb, K), F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
BCl_3+H_2S isotope selective reactions, CO_2 laser induced vibr. excitation effects 7−78529
Br_2, high-temperature dissoc. and vibr. relax. study 7−100526
BrO+ClO in atmosphere, reaction kinetics and implications for stratosphere O_3 depletion 7−139712
CH+propane (isobutane)(neopentane), reaction rate consts. meas. 7−86574
CO_2 + methyldiethanolamine, reaction kinetics in aqs. solns. 7−126420
CO_2+NaOH, rate coeffs., appl. to upper atmosphere 7−138959
$ClNO_3+H_2O$, chem. reaction on H_2SO_4 surfaces 7−87774
F_2+NF_3+Si, SiF and SiF_2 radical prod., multiphoton ionisation mass spectrometric detection 7−78463
H_2CN^++HCN clustering reaction rate consts., appl. to plasmas and atm. of Titan 7−138976
$(HCl)_2$ + ethylene, addition, ab initio SCF calcs. 7−144696
$(HF)_2$ + ethylene, addition, ab initio SCF calcs. 7−144696
I_2, high-temperature dissoc. and vibr. relax. study 7−100526
$I_2+O_3+H_2O \rightarrow HIO_3$, Raman spectra 7−122542
IF excited to $B^3\Pi_{0+}$ by collisions with N_2 metastables 7−96831
$Mu+H_2(D_2)$ thermal reaction rate const. meas. 7−113890
N_2+CS, excitation-transfer, rate consts. investig. 7−93276
N_2+methanol(methylamine)$(H_2O_2)(N_2H_4)$, electronic-to-electronic energy transfer 7−119504
N_2+XeF_2, energy transfer reactions rate consts., laser appls. 7−138983
NH_2+NO, rate const., semiclassical trajectory calcs. 7−100517
NH_2+NO, reaction, branching ratio 7−119523
NH_4NO_3 production, feedforward control of prilling 7−106772
NO+CH(CD), chemiluminesc. reaction, kinetic isotope effect, internal energy disposal 7−71494
NO_2+H_2O, reaction kinetics for NO_2 disappearance 7−127318
$N_2O_5+OH(HO_2)(Cl)(ClO)$, rate constants at 293 K 7−120090
$NaO+H_2(D_2)(H_2O)(D_2O)$, gas phase reactions, rate consts. study 7−126435
$OD+DNO_3$, rate const. determ., press. depend. and kinetic isotope effect 7−86559
OH+COS, reaction kinetics and tropospheric chemistry 7−86595
OH+cyclohexane(ethane), absolute rate const. meas. 7−93247
$OH+H_2$, inelastic scatt. cross section rot. and fine struct. *(German)* 7−74737
$OH+H_2$, nonequilibr. reaction, OH rot. effect 7−138982
OH+HONO, gas-phase reaction kinetics 7−132915
S(IV) oxidation by H_2O_2, methylhydroperoxide, peroxyacetic acid, kinetics study 7−120086

molecule-molecule reactions continued
$SiCl_2+O_2$, UV absorpt. spectra, rate const. meas. 7−100515
$SiH_2+D_2(H_2)$, insertion reactions study 7−93295
molecule-neutron interactions *see molecular neutron scattering*
molecule-surface impact
see also sputtering
adsorbed organic monolayers of long-chain amphiphiles, translational energy transfer 7−100000
conference, Edinburgh, Scotland, July 1987 7−140374
decay rates of mols. at metallic surfaces, limit of classical image theory 7−119088
excitation, dissociation, diffraction, dynamics 7−125886
fast molecular ions interactions with surfaces 7−125892
fluoromethane collision with quartz surface rovibrationally extracted, surface light induced drift 7−122674
glycine, thermal decomposition on solid surfaces, mol. beam studies 7−100613
graphite, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
graphite surface, inelastic scatt. of NO, ang. distrib., Monte Carlo trajectory calcs. 7−113332
harpooning reactions 7−144224
inelastic molecule-surface scattering dynamics, approx. tests 7−92794
intramolecular dynamics, excitation of internal vibr. modes 7−117042
n-iodopropane, scatt. from diamond (111), kinetic energy induced surface dissociative ionis. 7−77719
mechanical collisions, theoretical problem 7−119097
metal, H conc. with atomic and mol. flux impact, surface depend. 7−77720
metal surfaces, H_2 interactions, backscattering and chemisorption 7−77736
normal and glancing incidences, hydrogen-wall relaxation, recombination processes 7−144225
organised amphiphilic monolayers, NO scattering 7−143231
particle and photon surface interactions, conf., Argonne, IL, USA, (Aug. 1986) 7−120696
polyatomic sputtered molecules, energy, angular distrib. 7−144212
pulsed system for real-time reactive scattering from solid surface obs. 7−106351
scattering, dissociative adsorption and vibrational excitation 7−144207
scattering, dynamical processes, potential energy surfaces 7−144206
selectivity of elementary molecular processes in molecule-surface collisions 7−110099
semiconductor surface, vibrationally excited molecule interactions 7−119083
surface process probe, molecular beams 7−144758
trifluoromethane, desorption and scatt. from Ag (111), orientation 7−137721
Ag (111), O_2^+ impact, harpooning transitions 7−125901
Ag (111), O_2(Ar) molecular-beam scattering 7−144227
Ar molecular beam scatt. from Ir (110) clean and CO covered surfaces 7−106352
CO molecular beam scatt. from Ir (110) clean and CO covered surfaces 7−106352
Cu sputtering by $SiCl_4$ molecules 7−119105
GeO, NO impact, rot. and vibr. energy transfer study 7−113335
H_2-$d_0(d_1)$ scatt. from Ag (111) surface, close coupling wave packet method appl. 7−106331
$(H_2O)_n$, neutral clusters, ionis. by surface collision 7−129915
I_2, vibrational excitation in surface collisions, pot. energy surface anal. 7−92795
N_2, rot.-diffr. scatt. of model corrugated surface, calcs. using close coupling wave packet method 7−68437
O_2+C, crit. irradiation dose determ. appl. to impurity flux in fusion machine meas. 7−74052
Pt (111), adsorbed CO, He and H_2 diffuse scatt. studies 7−144218
Pt (111), CO adsorption/desorption, molecular beam study using pulse shape anal. 7−84520
Pt (111) surface, CO scatt., electron-hole pair and phonon excitation study 7−144202
Ru (001), Cu adsorbed layer, CO molecular probe, Fourier transform IR vibr. spectra 7−137695
Si etching reaction with XeF_2, SiF_4 desorpt., TOF spectra 7−137696
Si(100), O_2 adsorption and SiO desorption studies 7−118266
W, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
molecules
see also excimers; hydrogen neutral molecules; interstellar molecules; macromolecules; mesic molecules; molecular biophysics; molecular energy levels; muonic molecules; quasimolecules
No entries
Mollier diagrams *see thermodynamic properties*
molten metals *see liquid metals*
molten polymers *see polymer melts*
molybdenum
see also nuclei with .....
atoms, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
BCC, point-defect and stacking fault props. 7−76117
body forces, elastic consts., phonon dispersion 7−69844
cascade collapse to vacancy loops 7−104813
cold worked single crystal, He trapping, TEM study 7−78048
contact coatings, deposited from vacuum arc discharge plasma, cryst. struct. and mech. erosion 7−86060
deposition on JIPP T-IIU tokamak limiter wall by sputtering, investig. 7−67988
determination, by graphite furnace AAS, SO_4^{2-} interference prevention 7−114021
dimer, matrix isolation Raman and fluoresc. spectra 7−96906
dissolution in neutral and acid solns. 7−138871
divertor armour material for NET, tritium inventory, permeation and release calcs. 7−122187
elastic scattering of ^{152}Eu and ^{154}Eu γ-rays 7−74520
electrochemical passivation of alloys with S impurities, Mo effects *(French)* 7−144746
electrodeposition from KF-$K_2B_4O_7$-K_2MoO_4 fused salt melts 7−119177
electron irrad., vacancy-impurity interactions, positron annihilation studies 7−91567
electronic excitations, EELS 7−70954
element, K_β/K_α X-ray intensity ratios, chem. effects 7−126521
emissivity, hemispherical from 300 to 1000 K 7−98526
molybdenum continued
film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
films, CVD from MoF_6 7−113439
films, plasma-enhanced CVD 7−71078
first ionisation potential meas. by double-resonance field-ionisation spectroscopy 7−109845
graphite:Mo, radiation enhanced self-diffusion, influence of Mo impurities 7−91871
interatomic potential calcs. using maximum entropy principle 7−137303
internal friction on microplastic deform. in brittle-plastic transition range 7−106555
interstitial-dislocation interactions, pinning processes *(Russian)* 7−137392
ion bombard. with He, irradiation hardening, microstructure depth profiles 7−71287
ion bombardment, emission spectra of Mo_2 and MoO complexes 7−92813
ion implanted in low alloy steel, effect on corrosion resistance *(Chinese)* 7−132821
ion induced Auger electron spectra, energy thresholds 7−138571
ion induced X-ray emission 7−119095
irradiated, He-saturated, form. and growth of gas-filled pores during annealing *(Russian)* 7−111537
isopolymolybdate ions, aq. acidic soln., Raman spectra, factor anal. 7−90020
local magnetic 4d moment in alkali metals, spin dynamics 7−138187
low energy self ion-irrad., defects, TEM studies 7−104869
LPCVD film deposition, kinetics and reaction mechanisms 7−113438
LPCVD films, microstruct. charactn. 7−118330
MATS-III ion source at RTNS-II 7−89837
metal shadowing, high melting point, for high resolution freeze replica 7−87395
microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
mirrors, ion beam smoothing 7−117949
modified Finnis-Sinclair pots., defect energetics and cohesive energy calcs. 7−124161
ore deposits anal. by X-ray radiometry *(Russian)* 7−79634
ore deposits prospecting, X-ray logging method in large diameter boreholes *(Russian)* 7−79635
overlayers on stainless steel and Ni-Fe substrates, surface alloying by pulsed laser irradiation, RBS/channelling studies 7−113769
oxygen-exposed, sputter-erosion, yield and ang. distrib. meas. 7−77723
phonon dispersion curves 7−124415
phonon dispersion curves using modified general tensor force model 7−84158
plate, siliconising, $MoSi_2$ layer deposition, corrosion and abrasion resist. 7−78320
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
positron diffusion, epithermal positron effects and implantation profile 7−105137
powder filled polyethylene, cubic strain and acoustic props. 7−76308
pseudoblistering, D_2^+ ion irradiation, surface cleanness 7−84073
radiation damage by protons and α-particles, TEM obs. 7−142845
shock Hugoniot calcs. and shock vel.-particle vel. relations 7−104910
single crystals, low temp. fracture, orientational depend. of cleavage plane *(Russian)* 7−104632
single crystals, low temp. fracture, quenching effect 7−113723
single crysts., electron beam welded, tensile props. *(Japanese)* 7−100291
single crysts., electron irrad., vacancy defects, positron studies 7−98137
slow neutron interactions, scatt. lengths and cross sections 7−67845
smooth electrodeposits from KF-$Li_2B_4O_7$-Li_2MoO_4 fused salt melts 7−100134
stage II-recovery reactions in BCC transition metals 7−104732
stress relaxation, high temp., in single crysts. 7−126163
surface, $^3He^+$ irradiated, computer studies of reemission and depth profiles 7−137420
surface, (100), adsorbed H, reconstructive phase transitions and adsorbate-adsorbate interactions 7−105259
surface, (100), photofield emission from surface states 7−106366
surface, (110), Ag monolayer growth, AES, ELS, TDS, ADT and work fn. meas. *(German)* 7−131452
surface, (110), Cu monolayer growth, TDS and ADT meas. *(German)* 7−131453
surface, (110), defect interactions with positrons 7−113311
surface, (111), Co(Cr) epitaxial coatings, X-ray diffr. study 7−112142
surface, sputtering of chemisorbed N from single-crystal planes 7−70957
surface (011) with adsorbed Ag layers, phase transition, condensate-2D gas 7−84528
surface (011) with adsorbed layers of Cu, phase transition, condensate-2D gas 7−84528
surface (100), interaction of B, surface chemistry, XPS and UPS study 7−144237
surface (110), adsorption of Sm, struct. and electronic struct. 7−131438
surface (111), chemisorbed thiophene, decomposition, vibr. characterisation 7−100614
surface (111), ethylene adsorption, evidence for subsurface C 7−118256
surface oxide form. by O ion implantation 7−138887
surfaces, high energy α-bombardment, SEM obs. 7−104864
thermal and electrical conductivity meas., pulsed laser heating method 7−137899
thermal expansion meas. standards 7−121064
thermodynamic props., review 7−80196
thick samples, K_β/K_α ratios in elemental anal. 7−78571
thin coated foils, soft X-ray amplification, obs. exploding foil plasma 7−104437
thin films, cone form. following Ar^+ ion bombard. 7−85931
thin films evaporated on Si and SiO_2, ion modification of props. 7−91673
unalloyed, prod. by electron beam melting, microstruct. and ductility 7−132524
vacancies and self-interstitials, thermal He desorption studies 7−91983
vacancy formation, positron lifetime meas. 7−91573
vacuum condensates, struct., elec., and optical props. *(Russian)* 7−70109
vapour form. by electron beam irradiation energy deposition, electron microprobe anal. 7−76212
vapour phase siliconizing, corrosion stability 7−78319
void-lattice form., swelling, temp. depend. 7−83949
work function determ. by Fowler's method 7−70376
X-ray laser research at the Lawrence Livermore National Laboratory Nova laser facility 7−90586
CdTe-Mo, CVD films, structural and electrophysical props. 7−84562
D desorption and diffusion, C and B additions effect 7−111972

molybdenum continued
Mo IV spectrum, CI calcs. 7−109806
Mo XV, Ni-like 4s-4p transitions and energy levels 7−103522
Mo^{+}, electron impact ionisation cross section meas. 7−74768
Mo^{32+}, electron impact excitation cross sections, relativistic distorted-wave calcs. 7−140388
Mo^{33+}, dielectronic recombination rate coeff. 7−78479
Mo^{34+}, plasma, dielectronic recombination rate coeffs. 7−97695
Mo^{9+}, q=30-32, L-shell excitation dielectronic recombination 7−122705
$Mo:B^{+}$ ion implantation-induced amorphisation strain, implant conc. depend., X-ray diffr. study 7−83689
Mo/fused SiO_2 interface, thermocompression, SIMS study 7−105290
Mo/Ni superlattices, magnetisation and anisotropy, torque meas. 7−112785
Mo/Si interface, $MoSi_2$ form. by ion beam mixing 7−76239
Mo/Ta superlattice elastic consts., Brillouin scatt. study 7−112048
Mo-Ag boundary, atom mixing processes under Ar ion bombard. 7−84068
Mo-Al multilayers, RF sputter deposited, elec. resist. meas. 7−84596
Mo-Au-Si, thin film reactions, selectively enhanced silicide formation 7−137629
Mo-C fibers, heat treatment 77 to 1170 K, effect on state of Mo 7−106545
Mo-Cu multilayered film, RHEED intensity oscill. during MBE growth 7−84596
Mo-GaAs, oriented growth of metal films, microstruct. 7−118303
Mo-GaAs interface, structural change after 500°C annealing, high resolution TEM, electron diffr. studies 7−76631
Mo-GaAs Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
Mo-H system, H in vacancies, positron lifetime meas. 7−104799
Mo-Mo triple bonds in cpds., diamagnetic anisotropy 7−129628
Mo-Ni magnetic-superlattices, interfacial anisotropy 7−118795
Mo-Si multilayer monochromator for the extreme UV 7−110543
Mo-Ta interface, sputter deposited, sticking coeff., struct., RBS, X-ray diffr. studies 7−105296
^{99}Mo, leakage tests in liq. waste containment system 7−74167
^{99}Mo recovery from uranium fission products 7−103220
Nb-Mo-H system, hydride precip., X-ray diffr. study 7−84284
Ni-Mo magnetic superlattice prep. and structural props. study 7−124726
Si-Mo, surface alloying by laser aluminothermy 7−113805
TiC coated Mo, fusion limiter material exposed to high heat flux, surface anal., SEM, AES, EPMA 7−137684
UN-Li-Mo_2 fuel-coolant-cladding of SP-100 reactor, compatibility studies 7−67919
V/Mo superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
VO_2:Mo, thermochromic materials research for optical switching 7−125979
W/Mo epitaxial superlattices, strain relax. by ion beam mixing 7−76231
$Y_2(Al_{2-x}Sc_x)Al_3O_{12}:Mo^{3+}$, ESR of Mo^{3+} ions 7−138321

molybdenum alloys
see also molybdenum compounds
fibre textured, microstruct. and strength anisotropy 7−78228
Hastelloy C4, corrosion in hot conc. salt brines *(German)* 7−93202
Hastelloys and Inconels, weld metal, solidification microstruct., PHACOMP calcs. 7−77971
Inconel 625, marine crevice corrosion resist., effect of Nb content 7−113755
Inconel 625, serrated flow, strain ageing, ladders bands, solute migration to mobile dislocations 7−78138
Inconel 625 superalloy, transient oxides formed on aluminide coating, TEM obs. 7−100443
ion irrad. ordered alloys, self-interstitial uncorrel. long range migration, FIM obs. 7−98128
Nimocast 713, hot corrosion in molten salt mixture 7−119423
particle strengthening, deform. mechanisms 7−71240
powder metallurgically produced, high-temperature creep 7−93053
steel, Cr-Mo-V, crack resistance, microstructure, MO conc. effect *(Russian)* 7−113661
steel, Cr-Mo-V alloy, extrapolation procedure of creep data 7−106623
steel, Cr-Ni-Mn-Mo, tensile and fracture data 7−78144
steel, grain boundary segregation of P 7−138748
steel, Ni-Cr-Mo-V, stress corrosion cracking in A471 turbine disc steel, dissolved O_2 and CO_2 effects 7−144627
steel, Ni-Mo, SA533 Grade B for nuclear pressure vessels, fracture toughness using Charpy specimens 7−132727
Supermalloy soft magnetic materials, mag. props. 17 years after electron irrad. 7−125451
Unimag soft magnetic materials, mag. props. 17 years after electron irrad. 7−125451
Al-Fe-Mo-Si, rapidly solidified and heat treated, precipitate identification 7−132628
Co-Cr-Mo, Stellite 21 coatings on steel, damage kinetic in thermal fatigue *(French)* 7−119427
Co-Gd-Mo, amorphous mag. films, anomalous Hall effect, critical exponent 7−131615
Co-Hf-Mo-Nb system, phase equilib., glass form. *(German)* 7−137260
Co-Mo sputtered thin films *(Korean)* 7−132453
Co-Ni-Cr-Mo, austenitic, strain hardening *(Russian)* 7−113566
$(Co_{93}Fe_7)_{75-x}Mo_xB_{25}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Co_{66}Fe_4(MoSiB)_{30}$ amorphous ferromag. alloy, influence of Ni ion plating, FMR and AFMR studies 7−70649
CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118
$(CoMo)_{90}Zr_{10}$ amorphous alloys, Curie temp., press. effects meas. 7−118799
$Co_{81}Mo_{10}Zr_9$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
Cr-Mo-Ni alloy steel, ductile fracture micromechanisms 7−71294
Cr-Ni-Mo steel metallurgy for VVER-1000 reactor manufacture 7−135424
Cr_2O_3-Mo eutectics, fibrous microstruct. 7−132594
Cu-Mo-Al_2O_3 system, solidification, microgravity expt., dispersion hardening 7−77978
Fe-Al-Mo-Ti-Si, DO_3 superlattice transition temp. rel. to comp. 7−113546
Fe-Co-Mo-Cr, damping capacity, mech. and mag. props., corrosion resist. *(Japanese)* 7−106556

molybdenum alloys continued
Fe-Cr-Co-Mo, high coercivity, phase equilib. charact. *(Russian)* 7−142953
Fe-Cr-Mo, neutron irrad., dislocation struct. rel. to irrad. softening 7−69774
Fe-Cr-Mo (100), O-induced Fe surface segregation, AES studies 7−144409
Fe-Cr-Mo-P-C alloys, vitrification by laser surface melting treatment 7−86487
Fe-Cr-Ti-Mo, ferritic, creep, precip., strengthening intermetallic phase, high temp. appls 7−138803
Fe-Mo, electron irradiation, dislocation loop kinetics 7−98155
Fe-Mo, grain boundary segregation of P 7−138748
Fe-Mo (3 at.%), trapping of interstitials and vacancies, ion-channelling/lattice-location studies 7−104731
α-Fe-Mo alloys, electron irrad.-induced spinodal decomp. study 7−104843
Fe-Mo binary system, development of ultra high strength steels based on spinodal decomp. 7−86229
Fe-Mo mixed multilayers, ion induced, metastable phases, conversion electron Mossbauer spectra study 7−70683
Fe-Mo-B, sintering and mech. props. 7−92919
Fe-Mo-C, sintered, secondary porosity and its effect on product quality and consistency 7−144340
FeCrCoMo two-phase alloy, hyperfine field distrib., Mossbauer spectra study 7−137877
$Fe_{1-x}Mo_x$, metastable BCC and amorphous, produced by vapour quenching, mag. props. 7−77255
$(Fe_{100-x}Mo_x)_{0.83}B_{17}$, metallic glasses, mechanical props. 7−86360
$Fe_{80-x}Mo_xB_{20}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{76}Mo_3(SiB)_{21}$, metallic glass, low losses at high freqs., low remanence, effect of heat treatment 7−112863
$Fe_{40}N_{38}Mo_4B_{18}$, metallic glass, crystallisation, effect of Mo 7−142628
FeNiCrMoSiB, amorphous, electronic transport studies 7−137895
$Fe_{40}Ni_{38}MNo_4B_{18}$ Metglas, domain walls, wall mobility, coercivity and initial permeability 7−132049
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, chemical short range order, isochronal resist. meas. 7−104583
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, H_2 blistering and bubble form. 7−76223
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystallisation and struct. relaxation study 7−83707
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7−132081
$Fe_{82-x-y}Ni_xMo_yB_{16}Si_2$ amorphous alloys, hyperfine interactions, Mo effects, Mossbauer study 7−112266
$Fe_{39}Ni_{39}Mo_2(SiB)_{20}$ mag. metallic glasses, corrosion resist. in acidic and neutral aqueous solns. 7−93172
$Fe_{39}Ni_{39}Mo_4Si_6B_{12}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{39}Ni_{39}Mo_4Si_6Bi_{12}$, metallic glass, crystallisation, effect of Mo and Si 7−142628
GdCoMo amorphous thin films, surface mag. anisotropy, X-band microwave spectra study 7−99522
$Gd_{72-x}Mo_xGa_{18}B_{10}$, spin glass system, double transition behaviour, effect of alloying elements 7−112809
$Hf_{90}Mo_{10}$, weak localisation effects on upper critical field 7−99371
MO-TiC, highly dispersed composite material, plasmochemical prep., thermodynamic analysis 7−132531
Mo alloys, deformed by upsetting, texture 7−106534
Mo-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
Mo-Nb (3 wt.%), single crysts., high temp. stress relax. 7−126163
Mo-Ni, discontinuous precip., crit. test for coherency strain as driving force 7−119274
Mo-Ni, heat treatment, grain boundary migration, diffusional coherency strain induced curvature effect 7−131368
Mo-Ni, liq. phase sintering, liq-grain mixture flow and isolated pore elimination during early stages *(Korean)* 7−138705
Mo-Ni alloys, chemically-induced liq. film migration, coherency strain effect 7−71109
Mo-Ni alloys, highly porous, thermophysical characteristics and heat transfer *(German)* 7−131606
Mo-Ni alloys, instability of solid-liq. interface induced by diffusional coherency strain 7−113471
Mo-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
Mo-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
Mo-Ta-Fe-C, deformed by upsetting, struct. and dislocation substruct. 7−86257
Mo-TiC eutectic composite, lamellar struct. stability under low vacuum at high temps. 7−144621
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
Mo-V-W phase diagrams, ternary, calc. with binary data 7−132562
Mo-Zr-W, surface, ion implantation of N, C, P phase composition determ. 7−78301
MoCo dilute alloy, interstitial config, and dynamics under irrad., Mossbauer study 7−98123
Mo_3Ga, $MoGa_5$, space technological experiments performed with superconducting and mag. alloys 7−71457
Mo_xNi_{1-x}, amorphous, crystn. temp. and activation energy, DTA 7−75995
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
MoRhB amorphous alloys, NMR studies and superconductivity 7−99313
MoRhP amorphous alloys, NMR studies and superconductivity 7−99313
$MoSi_2$, thin films, electronic transport props. 7−143644
$MoSi_2/B_2O_3$-BaO-SiO_2 finely dispersed metal+glass mixture, electrical conductivity of vitreous component 7−92242
Mo_3Si, neutron-induced disordering and amorphisation *(Russian)* 7−97925
Nb-Mo, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Mo, thermal expansion, elastic props. 7−98522
$Nb_{50}Mo_{50}$, Fermi surface parameters, positron annihilation study 7−98782
Nd-Fe-Co-B-Mo alloy, coercivity anisotropy field and thermomag. props. study 7−125445
Ni base superalloys, high temp. corrosion in nuclear process heat He, η′ carbide form. 7−86444
Ni-Al-Mo system, phase diagram, 1300 to 2000°C 7−100179

molybdenum alloys continued
Ni-Al-Mo system, phase equilib. for Ni-NiAl-Mo comp. range 7−106482
Ni-based superalloys, localised corrosion in chlorine environments 7−93208
Ni-Cr-Al-Mo system, intermetallic cpd. precip. 7−144411
Ni-Cr-Co-Mo high-temp. alloy, creep rupture behaviour of weldments, local deform. behaviour *(German)* 7−100387
Ni-Cr-Mo, HLW canister appl., corrosion resist. 7−103205
Ni-Cr-Mo-Fe, corrosion resist. rel-to heat treatment 7−86427
Ni-Cr-Mo-Fe-W, precipitated phase formation, effect of precipitates on corrosion resistance *(Chinese)* 7−132621
Ni-Fe-Cr-Mo superalloy, strain hardening and softening, discrete memory description 7−78052
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-Mo, eutectic alloys, microstruct. rel. to undercooling 7−92975
Ni-Mo, rapidly quenched, faulted structs. 7−76113
Ni-Mo films, ion irrad., dendritic pattern obs. 7−92018
Ni-Mo hardenable electrodeposits, X-ray anal. of structural props. 7−131497
Ni-Mo-Al (33, 5.7 wt.%), directionally solidified, fracture, microstruct., heat treatment effect 7−86326
Ni-Mo-Cr-B rapidly solidified alloys, wear and corrosion resist and mech. props., microstruct. effects 7−91719
Ni-Mo-Cr-Fe, corrosion in molten salts, electrochemical monitoring 7−86404
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7−77799
Ni-Mo-P amorphous alloys, corrosion in hot conc. H_3PO_4 7−138873
Ni_3Al-Cu-Mo, fracture resist., depend. on crack length 7−132717
Ni_3FeMo, structural and mag. ordering, impurity effects 7−85284
NiMo alloy, electrochemical polarisation in H_2SO_4 soln. 7−78514
NiMo, S adsorption, Mo effects on electrochemical passivation *(French)* 7−144746
Ni_4Mo, antiphase boundary fine struct. *(Russian)* 7−69714
Ni_4Mo, ion irrad. damage profiles, atomic resolution field ion microscopy studies 7−104868
Ni_4Mo, irrad. induced metastable phase form. 7−84021
Pt-Mo thermocouple for VHTR in-core temp. meas., high-temp. characteristics 7−135456
SiC whisker reinforced $MoSi_2$, crack deflection as toughening mechanism 7−100341
Ti-Al-Cr-Mo, complex iron boride coatings, improved wear resist. 7−78347
Ti-Al-Cr-Mo, Ti-Al-Mo-Cr-V and Ti-Al-Mo-Zr, wrought, annealing temp. effect on resist. to low levels of plastic deform. 7−126152
Ti-Al-Cr-Mo, VT3-1, yield stress dependence on surface layer thickness 7−78370
Ti-Al-Cr-Mo VT3-1 alloy, surface props. and endurance limit 7−113707
Ti-Al-Cr-Mo VT3-1 alloy, fatigue failure model with account of anomalous surface props. 7−113708
Ti-Al-Cr-Mo VT3-1 alloy, lamellar struct. parameters effect on mech. props. *(Chinese)* 7−126225
Ti-Al-Mo, $\alpha+\beta$, substruct. changes during hot working 7−78067
Ti-Al-Mo-Cr two-phase alloy, struct. after deformation and annealing *(Russian)* 7−71235
Ti-Al-Mo-Zr, superplastic deform., stress induced H diffusion 7−132686
Ti-Al-Nb-Ta-Mo, fractal charactn. of fractured surfaces 7−113648
Ti-Al-V-Mo, hot rolled, annealing induced texture, softening *(Russian)* 7−113565
Ti-Al-Zr-Mo-Si, low cycle fatigue rel. to silicide precip. 7−100371
Ti-Al-Zr-Mo-Si-based alloys, α_2 phase precipitation and embrittlement *(Russian)* 7−144405
Ti-Mo, anodic dissolution in H_2SO_4, ageing, ω-phase form. effect 7−126283
Ti-Mo, dislocation velocity-stress exponents, effect of H *(Chinese)* 7−132657
Ti-Mo, electrospark alloying for improved corrosion resist. of Ti 7−144597
Ti-Mo, internal friction spectrum in β-phase caused by impurities, effect of nitrogenation 7−100271
Ti-Mo (30 wt.%), plastic deform. in BCC alloys induced by H conc. gradients 7−113632
Ti-Mo alloy, as-quenched omega-phase, structure, HREM studies 7−124169
Ti-Mo alloy wire, outgassing evaluation using quadrupole mass spectrometer 7−134751
Ti-Mo-Cr, rolled sheets, texture and struct., β to α transform. 7−144432
Ti-Ni-Mo system, phase equilib. investig. at 1200°C 7−86130
TiC-NiMo cermet, wear surface, ion mixing modified, Auger electron spectroscopy 7−112033
W-Mo dilute alloys, excess resistivity and thermopower, temp. depend. 7−105545
W-Mo powder compacts, green strength of interface, Re addition effect 7−78108
Y-Fe-Mo system, phase equilibria 7−100185
Zr-Fe-Mo, ternary amorphous alloy, production, stability rel. to comp. 7−131029
ZrMo amorphous alloys, supercond. and struct. props. 7−85176

molybdenum compounds
see also molybdenum alloys
carbides, electronic props., theory and expt., review 7−112181
$(Me_4N)_3\ Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
naphthalocyanine-based electrodes, alkaline electrolysis of water *(French)* 7−119534
nitrides, electronic props., theory and expt., review 7−112181
oxides, electronic props., theory and expt., review 7−112181
$PbMo_6S_8$ superconducting wires, thermally induced pre-stress and critical current density 7−131968
polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
rare earth cpds., $R_2Mo_2O_7$, R=Nd, Sm, Gd, elec. resist. meas., 4.2-300 K 7−112287
rare earth cpds., R_3MoO_7, R=La, Pr, Nd, Sm, Eu-Ho, prep., cryst. chem. props., phase equilib. 7−91503
rare earth cpds., RMo_6S_8 (R=La, Gd, Yb, Ho), Chevrel phase, microstructures, positron lifetimes 7−144166
silicides, CTR for cryst. growth 7−138619
tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
$AgMo_6S_8$ superconducting thin films, reactive sputtering 7−118619
$AgMo_6S_8$ superconducting thin films, critical current densities and critical fields 7−131970
$AgMo_6Te_6$, one-dimensional compound, crystal structure *(French)* 7−104668
Al-Si/$MoSi_2$ contacts on p-n shallow junctions 7−85107
$BaFe_{12-2x}Co_xM_xO_{19}$, M=Ti, Mo, ferrite particles, synthesis, characterisation 7−125466
Bi_2O_3-MoO_3 hot pressed ceramic, fabrication and elec. props. *(Korean)* 7−86078
Bi_2O_3-MoO_3 system, melt quenched films, thermal stability 7−84567
$CeMo_6S_8$, cryst. struct. and phys. props. 7−77211
Cr-Mo steel, tempering to reduce liquid metal embrittlement in fusion reactor materials 7−67979
$Cs_3Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
$Cs_3Mo_2I_9$, effects of cation change on complex anion geometry 7−131120
$Cs_2Mo_4P_6O_{26}$ crysts., layer and tunnel structs. studies 7−142726
$Cu_{1.8}Mo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$Cu_{1.8}Mo_6S_8$, high press. elec. resist., supercond. transition temp. 7−105560
$Cu_2Mo_6S_8$ Chevrel phase supercond., laser-induced shock damage and disorder effects on T_c 7−104824
$Cu_2Mo_6S_8$, shock press.-disordered, supercond. transition temp. meas. 7−143673
$Cu_{3+\delta}Mo_6S_{7.9}$, appl. in Li secondary cells 7−133074
$Cu_xMo_6S_8$, NMR and mag. susceptibility meas. *(Russian)* 7−99597
$Cu_{1.8}Mo_6S_{8-x}O_x$, Chevrel cpd., superconducting props., O doping effects 7−125180
$Cu_{1.8}Mo_6S_{8-y}Te_y(Se_y)$, Chevrel cpds., electron-phonon interaction and thermopower nonlinearities 7−84952
$Cu_xMo_6Se_{7.6}$, Chevrel phase, microstructures, positron lifetimes 7−144166
$D_{0.99}MoO_3$ intercalation cpd., struct. determ. by neutron diffr. 7−111493
$Eu_{0.08}MoO_3$, mag. props., Mossbauer spectra, sp. ht. meas. 7−92430
$GaMoX_8$ (X=S, Se), mag. field-induced transitions, heavy fermion behaviour 7−143800
KH_2PO_4:MoO_4^{2-} single cryst., elec. cond. and dielec. loss obs., proton defect mechanism 7−70714
KH_2PO_4:MoO_4^{3-} single crysts., ferroelec. transitions, EPR study 7−106028
$K_3Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
$K_{0.3}MoO_3$ blue bronzes, distortion wave vector, X-ray scatt. meas. 7−111511
$K_{0.3}MoO_3$, metastable CDW state, superlattice peak width, X-ray diffr. study 7−143449
K_xMoO_3, catalytic reaction of propylene 7−132969
$La_xMo_6S_y$, superconductivity and nonstoichiometry 7−105773
$Li_xCu_{2.5}Mo_6S_8$ based secondary cell using Cu chevrel phase thin film, characts. *(Japanese)* 7−86777
Li_xMoO_2, struct., phase diagram and electrochemistry, in situ X-ray diffr. and electrochemical studies 7−83927
$Li_xRu_yMo_{6-x}Se_8$, ionic and electronic contributions to Li chemical pot. 7−98806
$M_4Mo_8P_{12}O_{52}$, M=Cs,K,Rb,Tl, crysts., layer and tunnel structs. studies 7−142726
Mo complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
Mo-P-O vitreous system, IR absorpt. spectra, composition depend 7−92659
Mo-Si layers, sputtering from composite targets 7−100068
Mo_2 complex, quadruply bonded, optical activity 7−90282
MoB_2, single cryst. prep. from Al flux, props. 7−132429
Mo_2B-glass, oxidation, high temp. annealing 7−100405
Mo_2B_5-glass, oxidation, high temp. annealing 7−100405
Mo_2C, formation in D_2^+ ion irradiation of Mo, pseudoblistering 7−84073
Mo_4C electrodeposition on diamond surfaces from ionic melts 7−78296
$Mo(CO)_5$ complexes, $^1A_1$-^1E transition rel. to π acceptor ability 7−90097
$Mo(CO)_6$, adsorbed on Si (111), laser interaction mechanisms, HREELS, TDS and AES investig. 7−91974
$Mo(CO)_6$, excited states, EELS anal. 7−103670
$Mo(CO)_6$, in liq. crysts., linear dichroism study 7−82237
$Mo(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
Mo_2Cl_8, reson. Raman spectra, simulation 7−82144
MoF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
MoF_6-graphite intercalation cpds., charge transfer, optical reflection obs. 7−106127
MoH_2^+, electronic and geometric structure, bond energies, CI calcs., VB calcs. 7−141473
Mo(IV) complexes, syntheses and cryst. struct. 7−111474
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
MoN films, synthesis by active N sputtering, expt. study 7−132452
δ-MoN, high-press., high-temp. expts. 7−104620
MoN sheet, superconducting transition temp. 7−85161
MoN, supercond. props. *(Japanese)* 7−99309
MoN thin films, hexagonal struct., formation, supercond. props. and ion irradiation effects study 7−131844
MoN_x films, formation by ion beam and vapour deposition method 7−92875
MoN_x, supercond., prep. by isostatic direct nitriding at high press. and high temp. 7−105765
MoO_2-$LiCoO_2$, Li intercalation cells without metallic Li 7−114087
MoO_3 amorphous thin films, short range and medium range struct. 7−84572
MoO_3 catalyst, supported, pyridine adsorpt., Raman and X-ray diffr. study 7−98685
MoO_3 single cryst., efficient growth conditions under O_2 atmosphere 7−70999
β'-MoO_3, struct. determ. by neutron diffr. 7−111493
MoO_3-B_2O_3-KF system, liquidus surface, melting point meas. 7−111832
MoO_3-Cu-Ni black films, solar selective, charactn. 7−106451
MoO_3-P_2O_5 glass, US vel., temp. depend., 4-600 K, anelastic and elastic effects 7−76304
Mo_nO_{3n-1}, CDW and resistivity, X-ray and neutron studies 7−99032
$(MoO_3)_x(P_2O_5)_{1-x}$ phosphate glasses, elastic behaviour and vibr. anharmonicity 7−104945
MoS_2 (001), current image diffr. patterns 7−98657
MoS_2, angle resolved photoemission and electronic band structure 7−138609
MoS_2 catalyst for H_2S decomp. to H_2 and S 7−86583
MoS_2 coatings, HF sputtering, struct., tribotechnical props 7−71308

molybdenum compounds continued
MoS_2, consolidation by hot isostatic pressing 7−113493
MoS_2, enhanced field emission 7−70990
MoS_2 filled PTFE with low degree of filling, struct. and mech. props. 7−78255
MoS_2, lithographically textured, edge surfaces 7−124663
MoS_2 lubricated bearings for cryogenic space instrument 7−67330
MoS_2, natural molybdenite single crysts., etch pits, dislocation motion 7−69705
MoS_2 sputtered films, props. and prep. 7−100070
MoS_2 surface, thiophene adsorption and hydrodesulphurisation, electronic factors 7−144748
MoS_2, thin layers, struct. and tribotechnical props., effect of substrate temp. 7−84581
MoS_2-metal interface, Schottky barrier formation without Fermi-level pinning 7−138064
MoS_3, amorphous, optical determ. of fundamental energy gap 7−143346
a-MoS_3 thin films, fundamental energy gap, optical studies 7−99955
a-MoS_x electrodes for nonaqueous secondary cells 7−100711
MoS_x films, sputtered on steel by ion beam mixing, enhanced endurance life 7−106634
$Mo_{21}S_8$, formation by H_2 reduction of MoS_2 Chevrel phase synthesis 7−104673
$MoSe_2$, enthalpy of form., combustion calorimetric obs. 7−78533
$MoSe_6$, enthalpy of form., combustion calorimetric obs. 7−78533
$MoSe_xTe_{2-x}$ electrodes for photoelectrochem. solar cells, valence and conduction bands 7−85101
$MoSi_2$, ellipsometry and struct. studies 7−138404
$MoSi_2$, Fermi surface, de Haas-van Alphen effect 7−105375
$MoSi_2$, hexagonal, growth kinetics at Mo-Si(001) interface, cross-sectional TEM study 7−112104
$MoSi_2$, silicide, spectroscopic ellipsometry and reflectometry studies 7−92635
$MoSi_2$ thin films, sputter deposited, substrate temp. effects 7−112145
$MoSi_2$/Si layer system mech. stability and form. by rapid thermal annealing 7−105298
$MoSi_2$-polysil-oxide-Si struct. for VLSI appl., structural and elec. props. 7−100269
$Mo_{0.5}Ta_{0.5}S_2$, 3s-type, preparation 7−142715
Mo(V) complexes, multifrequency ESR spectra 7− 103543
Mo(VI) polyoxoanions, charge transfer absorpt. spectra 7−90098
MoV_2O_8, chemical insertion of Li investig. 7−132928
$Mo_{0.1}V_{1.8}O_{4.8}$, chemical insertion of Li investig. 7−132928
MoX_2 (X=Se,S), electronic struct., band struct. calcs., photoelectron spectra 7−84675
MoX_2 (X=Se,S), electronic struct., nature of optical band gaps 7−84676
$NH_4H_2PO_4$:MoO_4^{2-} single cryst. elec. cond. and dielec. loss, charge compensated proton vacancies 7−131356
$(NH_4)_3Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
$NH_4Mo_5O_{15}OH.2H_2O$ cryst. struct. and prep. studies 7−83917
$Na_{0.9}Mo_6O_{17}$, purple bronze, struct. determ., rel. to two-dimensional cond. 7−131116
$Na_xMo_6S_{8-y}I_y$ ($Se_{8-y}I_y$), Chevrel phases, electrochemical, structural and physical props. 7−76090
Ni-Mo-Al_2O_3 hydrogenation catalysts, Raman spectra 7−113206
$Ni_{2-x}Cu_xMo_6S_8$, elec. cond. behaviour, electronic instability 7−131723
$PbMoO_4$ single cryst., electrophys. and optical props., point defect interaction effects 7−84013
$PbMo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$PbMo_6S_8$ Chevrel phase wires, supercond. props. 7−131972
$PbMo_6S_8$ cold powder metallurgy processed superconducting wires with Nb sheaths 7−113467
$PbMo_6S_8$, supercond., Chevrel phase cpds., anharmonicity of cation modes, upper limit 7−124416
$PbMo_6S_8$, supercond. ribbons, prepared using vapor transport techniques, high field props. 7−131971
$PbMo_6S_8$ supercond. thin films, defect struct., high resolution electron microscopy 7−112123
$PbMo_6S_8$ superconductors, chevrel phase, critical current density, depend. on grain size, expt. study 7−131958
$PbMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
$PbMo_6S_8$, thermal expansion studies by X-ray diffr., temp 10 to 200 K 7−111919
$PbMo_6S_8$ thin films, metal-semiconductor transition, ion irradiation and annealing, effect on elec. props. 7−105406
$Pb_{0.92}Mo_6S_{7.5}$ Chevrel phase superconductor, ^{207}Pb electron environment, mag. props., NMR study *(Russian)* 7−143921
$Pb_xMo_6S_{8-y}$ Chevrel phase, supercond. props., stoichiometry effects studies 7−85170
$Rb_3Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
$SnMo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$SnMo_6S_8$, Chevrel phase, electronic struct., vacancies effect 7−117923
$SnMo_6S_8$, normal and superconducting, NMR studies 7−106054
$SnMo_6S_8$, supercond., Chevrel phase cpds., anharmonicity of cation modes, upper limit 7−124416
$SnMo_6S_8$, supercond. ribbons, prepared using vapor transport techniques, high field props. 7−131971
$SnMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
$SnMo_6S_6O_2$, Chevrel phase, O substitution, stoichiometry 7−137577
$Tb_2Mo_2O_7$, elec. resist. meas., 4.2-300 K 7−112287
W-Mo: In, trace anal. line selectivity in inductively coupled plasma-AES 7−133011
Y_3MoO_7, prep., cryst. chem. props., phase equilib. 7−91503
$Yo_2Mo_2O_7$, elec. resist. meas., 4.2-300 K 7−112287

moments (electric) *see electric moments*

moments (magnetic) *see magnetic moments*

moments (molecules) *see molecular moments*

momentum
see also angular momentum
angular distribution of momenta difference for identical pions, source region shape 7−116138
cosmic ray particles, momentum distrib. from steady-state shock acceleration 7−72229
drops momentum and kinetic energy meas., by piezoelectric probe 7−123807

momentum continued
energy, expression in terms of force and time 7−66995
vertical collisions, velocity amplification demonstration 7−80245

Monel *see copper alloys; nickel alloys*

monitoring
see also computerised monitoring; patient monitoring; radiation monitoring
acid rain monitor with solenoid-operated drainage valve 7−93607
air pollution monitoring network, optimum design for exposure assessments 7−133170
groundwater contaminants monitoring using laser fluorescence and fibre optics techniques 7−114136
image fibre, 250000 pixel capacity, development and fabrication, hazardous environments monitoring appl. 7−82845
m/e ratio monitoring in magnetically scanned mass spectrometer, using two Hall probes 7−108600
nuclear plants, on-line diagnostic system for pump failure warnings 7−116687
optical thickness monitoring, sensitivity improvement using graphical methods 7−67363
sea ice monitoring, microwave backscatter coeffs. of artificially-grown first-year ice 7−101330
sea ice monitoring, operational SAR data collection and dissemination plans for ERS-1 data in Canada 7−101331
soil water, satellite system for monitoring temporal and spatial behaviour 7−107451
solar insolation monitoring method in remote regions 7−94398
thin layer activation, material loss monitoring technique during high temp. surface degradation processes 7−93243
TLD, personnel monitoring appl. in India 7−87189
tracking array calibration underwater, remote monitoring 7−123308
water quality monitoring, statistical methodology for water quality criteria 7−86846
He, liquid, level monitor, low power, for continuous operation 7−108567
He recovery gas, monitoring method 7−80797

monitoring, computerised *see computerised monitoring*

monitors *see monitoring*

monitors (displays) *see cathode-ray tube displays; display devices*

monochromators
see also X-ray monochromators
astigmatism elimination using cross-dispersion in monochromators based on Wadsworth binary system *(Russian)* 7−110544
Czerny-Turner spectrograph, automatic design by nonlinear optimisation method 7−121233
double focusing neutron monochromator consisting of facets 7−83592
Ebert monochromator, parabolized, aberrations, spatial filtering anal. 7−136484
Ebert spectrograph, spectral line tilt effect 7−134850
fibre optic sensor readout, wavelength division multiplexer appl. 7−130334
focal monochromator with holographic composite lens *(Spanish)* 7−68821
high power, design and fabrication 7−97124
holographic gratings, concave, used as monochromators, aberration correction 7−117301
holographic solar concentrators fabrication, mirror of dichromate gelatin 7−144791
IR lamp housing for spectroscopy 7−128680
light pulse shaping and compression 7−68820
near-VUV Doppler monochromator using a multi-anode microchannel plate detector 7−110545
neutron monochromators using multilayered interferential structures 7−121318
resonance monochromator for at. absorpt. and at. fluoresc. spectrometry 7−73437
SpectrAA-20 automated atomic absorpt. spectrophotometer with new optical design 7−67366
vacuum UV monochromator, calibration using branching ratio method *(Spanish)* 7−141971
Mo-Si multilayer monochromator for the extreme UV 7−110543

monolayers
see also adsorbed layers
adsorbate structure, pulsed laser optoacoustic spectrosc. 7−116011
adsorbed organic monolayers of long-chain amphiphiles, translational energy transfer 7−100000
adsorbent surface area, from surface energy of vapour mixture, monolayer form. 7−105244
adsorption of diatomic molecules on crystalline solids, orientational effects 7−105283
alkali metal, interfacial structural transitions *(Japanese)* 7−76642
n-alkyl thiols, monolayers on Au, ellipsometric, spectrosc. and ellipsometric obs. 7−131426
amphiphile, bilayer-forming, adsorbed monolayers, polarised UV reson. Raman and absorpt. spectra 7−71698
amphiphile monolayers adsorbed on water, 2D phase transitions, fluorescence microscopy study 7−84227
7-(2-anthryl)-1-heptanoic acid, Langmuir-Blodgett films, UV spectra, Davydov splitting 7−98678
arachidate chains on Langmuir-Blodgett monolayers on Si (111), orientation 7−143216
benzene-hexa-n-alkanoate discotic mol. Langmuir monolayers, expanded liq.-condensed liq. phase transition obs. 7−111850
binary gas monolayers on homogeneous solid surface, Monte Carlo study 7−84487
biphenyl derivatives, second-order nonlinear polarisability determ. by SHG 7−110456
1,2-butanethiol, chemisorption on aq. Ag sol surface, SERS study 7−125734
cadmium arachidate, order disorder transition, trace water effects 7−104617
cadmium stearate, Langmuir-Blodgett mono- and multilayers, order, multichannel Raman spectrosc. 7−77592
cadmium stearate, Langmuir-Blodgett monolayers, order charactn., Raman spectra 7−112061
carbazole-anthracene, Langmuir-Blodgett monolayer films, excitation energy transfer 7−74701
cetyltrimethylammonium bromide, monolayers, adsorpt. thermodynamic fns. investig. 7−70075
chlorophyll-carotenoid complexes, Photosystem I photosynthesis model 7−71679
cholesterol-water interface, Monte Carlo simulation 7−114206

monolayers continued
cooperative phenomena in monolayer organisation *(German)* 7−131449
coumarin 504 adsorbed on quartz, vibrational spectroscopy by infrared-visible sum frequency generation 7−70785
crystalline surfaces, gas adsorpt., thermodynamic and distrib. fns. 7−112091
diatomic molecular layer adsorbed on metal-semicond. superlattice, IR adsorpt. study 7−99849
dimethyl-bis-(hexacosan-2,4-diinoyl)oxaethyl ammonium bromide monolayer, crystn. domain growth 7−124118
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7−78730
dye coverages, SHG efficiency 7−110458
environmental vibrations in Langmuir films meas. 7−95541
ethane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
ether lipids from archaebacteria, monolayers, surface behaviour study 7−78715
fatty acid fluorinated monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
ferric stearate Langmuir-Blodgett films, deposition method 7−70149
ferromagnetic, spin anisotropy calcs. 7−112784
film-covered surfaces, electron transfer coherent potential approx. calc. 7−112279
glycerol monooleate monolayers on liq. surfaces, light scatt. study of thermotropic transitions 7−76553
hard dumb-bells adsorpt. on flat surface, RAM-type perturbational theory 7−98681
hemicyanine-fatty acid Langmuir-Blodgett monolayers, SHG 7−110457
high Rydberg atoms, probes of surface electric fields in submonolayers 7−141483
inert gas atoms, two-dimensional Lennard-Jones system 7−91989
insulator-conductor transition, effect of particle diffusion 7−124718
Langmuir monolayers, polar molecules, phase transitions study 7−91970
lead stearate monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7−112083
lignoceric acid monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7−112083
lipid, chain-melting phase transitions calcs. 7−93665
lipid layers, photoelectron spectra, surface adsorption 7−93637
liquid phase controlled gas-liquid transport process, effect of mechanically generated turbulence and interface films 7−78549
long chain esters, Langmuir-Blodgett method *(Japanese)* 7−76696
methane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
methane-d0(d_2)(d_4), adsorbed on NaCl, struct, props., IR spectra 7−82113
molecular materials, power reflection spectroscopy 7−99780
molecular organizate donor-acceptor systems, with strong electron-deformation interaction, switch waves, trigger props. 7−112526
molecular organizates, trigger props., tunnel transport in donor-acceptor systems with strong electron-deformation interaction 7−103651
multilayer films and monolayers, fast heavy ion-induced biomolecule desorption 7−86902
4-n-octadecylphenol, Langmuir-Blodgett monolayers, packing of molecules, calcs., experimental confirmation 7−98742
optically nonlinear Langmuir-Blodgett monolayers, linear electro-optic props. 7−123057
organic, struct., phase transitions *(Japanese)* 7−76697
organic dye molecules, monolayers, luminescence and excitation energy transfer 7−144107
organic dye molecules, monolayers, luminescence and excitation energy transfer 7−144108
organic dye monolayer on sapphire, laser irrad. heat deposition, fluoresc. yields meas., photoacoustic spectra 7−116012
organic films, multilayer thermodesorption spectra 7−118263
organised amphiphilic monolayers, NO scattering 7−143231
paradibromobenzene on β-paradichlorobenzene, surface phonons 7−76589
n-pentadecanoic acid, monolayers, liq.-vap. transformations 7−84224
peripheral roughening in a monolayer 7−124701
phospholipid monolayer, density distrib. at air-water interface, X-ray reflectivity study 7−139183
phospholipid monolayer ordering, synchrotron X-ray diffr. and fluoresc. microscopy studies 7−114205
phospholipid monolayers, acyl chain ordering and crystallisation 7−100823
phospholipid monolayers, at air-water interfaces, phase transitions 7−114174
phospholipid monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
phospholipid monolayers, crystalline domains, diffusion limited growth 7−84490
phospholipid monolayers between fluid and solid states 7−139216
photosensitive monolayers, bilayer membranes and polymers 7−106809
polarisation sheets, optical props. 7−117131
poly-4-BCMU monolayer film, third harmonic generation study 7−137262
α-poly-γ-methyl-l-glutamate, interaction with 5- and 16-doxylstearic acids 7−84495
polyethyleneglycol, monolayers on water/air interface, kinetic study *(German)* 7−98617
polyoxyethylene methyl-n-alkyl ethers, morphology, X-ray and Raman scatt. 7−111422
porphyrin, monolayer assemblies, excitation with dye laser, transient photocurrents 7−92223
pyrene, submonolayer on Si(111) electronic energy transfer, fluoresc. 7−105247
pyridine adsorbed layer on Ag-Pd films, SERS spectra, electromag. quenching and enhancement study 7−77575
pyridine adsorbed on Ni(110) and Ni(100) surfaces, SERS 7−96702
quasi 2D phases, computer simulation, review 7−118276
Scheibe-aggregates of pseudoisocyanine in soln. and molecular monolayers, fluoresc. lifetimes 7−117004
serum albumin, monolayers, 2D press. equilib. and dynamic isotherms 7−70072
Stockmayer mols. between Lennard-Jones plate, mol. dynamics study 7−69567
strained metallic overlayers, struct. energetics, determ. 7−98699
superlattice Langmuir-Blodgett films fabrication, with atmosphere and temp. 7−98749
surface phenomena, reflection electron microscopy studies 7−95682
monolayers continued
surfactant monolayers at air-water interface, shear viscosity 7−70031
TCNQ salt, N-docosylpyridinium-$(TCNQ)_n$, monolayers and Langmuir-Blodgett films, conductivity 7−99018
TMTTF-octadecylTCNQ charge transfer complex, conductivity-area isotherms 7−99019
22-tricosenoic acid, monolayer on water, annealing disclination 7−137715
22-tricosenoic acid Langmuir-Blodgett multilayers, surface press. effects 7−143229
Ag monolayer, adsorbed on Pt substrate, SERS study 7−119005
Ag monolayer growth on Mo (110), AES, ELS, TDS, ADT and work fn. meas. *(German)* 7−131452
Ag, monolayer growth on polycrystalline (111) Al surfaces 7−98737
Ag, monolayer on Cu (111), growth and electronic props. 7−138074
Ag monolayers, lattice contraction, LEED study 7−143295
Ag overlayers on Si (111)-2×1, LEED and AES studies 7−118275
(Al,Ga)As-GaAs heterostructures grown by MBE with growth interruption, photolum. 7−70869
Ar incommensurate monolayers, adsorbed on graphite, orientational ordering, anharmonic effect 7−76597
Ar monolayers adsorbed on graphite, phase diagrams 7−105284
As adsorbed overlayer on Si(100)-2×1, surface state bands, angle-resolved photoelectron spectra 7−125072
Au on Cu (001), ordered surface alloy form. 7−84462
C monolayer on Ru (001), H surface diffusion, laser-induced thermal desorpt. study 7−137698
CO monolayer, adsorbed on Cu (100), asymmetric line shapes, electron-hole pair mechanism 7−105228
CO, near-monolayer nonadsorbed on Pt electrodes, IR reflection-adsorpt. spectra 7−99813
Cd, electrochemical phase formation on glassy C, anions effects 7−92894
Co-Ni, surface segregation, preferential sputtering, Auger spectra computer simulation 7−137575
Cs films, oxidation, UPS 7−71526
Cs on InP (110) and Si (100), catalytic oxidation, photoemission studies 7−93221
Cs, on Si (111), interfacial structural transitions *(Japanese)* 7−76642
Cu adsorbed on Ru (001), CO molecular probe, Fourier transform IR vibr. spectra 7−137695
Cu monolayer and film, with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
Cu monolayer growth on Mo (110), TDS and ADT meas. *(German)* 7−131453
D_2 7−143197
Fe epitaxial FCC film on Cu (001), magnetism, spin polarised photoelectron emission 7−105985
Fe, monolayer, (110), on W (110), ferromagnetic order, Mossbauer study 7−138300
Fe on Ag, direct DC magnetisation temp. and field. depend. meas. 7−112888
GaAs (110), growth of Sb overlayers 7−84523
GaAs atomic layer epitaxy, monolayer control, thickness uniformity and electronic props., review 7−124795
GaAs MBE growth on Ge (100), antiphase domain suppression, RHEED obs. 7−70127
GaAs-AlAs superlattices grown by MBE, struct. props., TEM and X-ray diffr. obs. 7−70123
Gd, monolayers and thin films, ferromagnetic order, critical exponent, ESR studies 7−132091
Ge, monolayer and bilayer growth on Ge(111), RHEED, oscills. 7−70119
Ge on Si (111), π-bonded chain struct., calc. 7−84640
H adsorbed submonolayers on W (100), inverse photoemission studies 7−144150
H_2 monolayer incommensurate struct. on graphite, LEED study 7−143197
HD monolayer incommensurate struct. on graphite, LEED study 7−143197
In adsorbed overlayer on Si (111), surface state bands, angle-resolved photoelectron spectra 7−125072
K, on Cu (001), interfacial structural transitions *(Japanese)* 7−76642
Kr films on graphite, commensurate-incommensurate transition, He atom diffr. study 7−84242
Kr monolayers adsorbed on graphite, phase diagrams 7−105284
Kr-Xe monolayer system on Ag (110), conduction band structure, unoccupied electron levels, inverse photoemission investig. 7−131728
Mn on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7−113307
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
N monolayers adsorbed at low temp., orientational order on graphite substrate 7−91987
Na on Ta (100), covalent bonding, angle resolved UPS study 7−106357
Ni on W (001), H adsorption, bonding, linear APW calcs. 7−124712
O c(2×2) overlayer on Ni (001), growth to saturated NiO, surface struct., X-ray photoelectron diffr. study 7−143157
O_2 monolayers on graphite, specific heat, sound velocity, Debye temp., lattice dynamics 7−137697
O_2 physisorbed monolayers on graphite surface, density-temp. phase diagram, LEED study 7−124698
O_2, two dimensional, physisorbed on granite, Monte Carlo study 7−143234
on Pt (111), symmetry breaking commensurate-incommensurate transitions 7−91995
Pb on Au (111), O uptake, oxidation of Pb overlayers, Auger electron study 7−124709
Pt (111) with H monolayer, bonding and vibration 7−84480
S adsorbed on Cu (100)-(2×2), surface struct., LEED study 7−131421
S on Pd(100), adsorbate reson. enhancement in optical surface second-harmonic generation 7−98672
S on W (110), influence on methanation 7−144753
S, submonolayer coverage on Ni (100), struct. 7−84522
Sb, adsorbed on Si (100), effect of ion bombard., TSD study 7−85933
Sb adsorbed overlayer on GaAs(110)-1×1, surface state bands, angle-resolved photoelectron spectra 7−125072
Si monolayer films, epitaxial growth, optical SHG study 7−131489
SiO_2 (110), MeV ion bombard., Si-H and C-H bond breaking 7−111690
Tl, submonolayers, adsorbed on Cu (111) single cryst. electrodes, struct. determ. 7−98670
V on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7−113307

monolayers continued
WO_3, monolayer on silica particles, hydrolysis, electrochemical measurements, electronic props. 7−138082
Xe monolayers adsorbed on graphite, phase diagrams 7−105284
Xe physisorbed on Pt (111), less than monolayer coverage, molecular dynamics study 7−91998
ZnSe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnSe/Al/Ge heterojunction with monolayer intralayer, tight-binding calcs. 7−99203
ZnTe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016

monolithic integrated circuits
see also bipolar integrated circuits; field effect integrated circuits; integrated optoelectronics; large scale integration
IEICE National Convention, Keio, Japan (March 1987) 7−108028
particle deposition on semiconductor wafers 7−126485
Reticon 1024S type, solar spectrograph appl. *(Chinese)* 7−120278
Reticon detector, fibre optic illumination, noise improvements 7−139929
scanning ion microscopy voltage contrast obs. of monolithic ICs 7−97876
GaAs interfaces, unified defect model, appl. to ICs, book, contrib. 7−85110

monomers *see molecules*

monomolecular films *see monolayers*

monomolecular layers *see monolayers*

Monte Carlo methods
1D XY model, continuous-symmetry ferromagnets with random anisotropy 7−125289
3D Ising model, dynamical critical exponent 7−125418
±J Ising model, phase diagram and critical exponents, Monte Carlo renormalisation group calcs. 7−105940
$\lambda\phi^4$ theory on 10^4 lattice, effective potential in scalar field theory 7−102612
A+B=0 recombination reaction, initial fluctuations influence 7−126414
Abelian Higgs model, Monte Carlo renormalisation group study, symmetry breaking 7−80985
acetone, hydration free energy, finite difference thermodynamic integration 7−106784
adhesive sphere fluid, aggregation and percolation behaviour 7−75955
adhesive spheres, Monte Carlo simulation 7−124056
adsorbates, surface diffusion, formation of an ordered state, simulation 7−98708
aggregation processes, Monte Carlo renormalisation group transformation 7−73249
air showers, delay time differences for γ-ray and proton induced showers 7−115191
alkali metal halides spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
alloys, binary, phase diagram calc., statistical physics methods 7−106486
analyser acceptance angle depend. on photoelectron intensity 7−92827
Anderson mag. impurity, spin and charge correlations 7−112210
angular distribution of flux at the exit of cylindrical tubes 7−137012
ANNNI model, 2 D, domain growth, wetting transition effects 7−108448
astronomical pulsed emission searches, determ. of period and amplitude from epoch folding for sinusoidal signals 7−120281
atoms and mols., ground state Schrodinger eqn., diffusion Monte Carlo simulations 7−129570
AZ111 photoresist, implanted ion profiles, dose and energy depend. 7−91474
BCC metals-H, Monte Carlo calcs., hard core lattice gas 7−105040
benzene-H_2O liq.-liq. interface, Monte Carlo simulation 7−83634
bimolecular surface reactions, Monte-Carlo simulation 7−71529
binary alloys, interaction parameters, correlations 7−84714
binary alloys, short range ordering suppression kinetics 7−124252
binary galaxies, mass-light ratios determ., appl. of Monte Carlo technique 7−128076
binary gas monolayers on homogeneous solid surface, Monte Carlo study 7−84487
Boltzmann equation for fusion plasma, soln. using analytic, Monte Carlo and num. methods 7−74036
bone, mouse, prediction of relative toxicities of ^{224}Ra and ^{226}Ra using Monte Carlo techniques 7−119803
Bose-Einstein correlations, Monte Carlo methods for event generation 7−102707
branched polymers attached in a wedge geometry, critical exponent evaluation 7−108435
chain-chain aggregation in 2D, static and dynamic scaling 7−67229
charged rod-like macrocells in soln., pair-distrib. fn., light scatt. intensity calcs. 7−137188
chemical physics, parallel program struct. using supercomputers 7−108209
Cherenkov counter, light distribution function, position resolutions 7−135747
cholesterol-water interface, Monte Carlo simulation 7−114206
classical anisotropic Heisenberg chain, soliton spin configurations 7−143834
classical one-component plasma, surface properties, Monte Carlo simulations 7−142495
climatology, multivariate tests examination by Monte Carlo expts. 7−145695
climatology, scalar tests examination using Monte Carlo expts. 7−145694
cluster growth models, scaling anal., Monte Carlo simulations 7−108403
cluster properties in 2D percolation, parallel computation 7−67235
cluster-growth processes, nontrapping self-avoiding walks 7−80670
coal, neutron capture prompt γ-ray anal. Monte Carlo model 7−78577
code for simulation studies of low energy gamma ray detection 7−68161
coherently strained Si-like layers, structural metastability, atomistic Monte Carlo study 7−84540
colloidal particles, deformable, in applied external fields 7−78552
compact scalar QED, confined and free charges, order parameters, U(1) lattice Higg's model 7−121418
Compton profile meas. characterisation of multiple scatt. 7−109673
concentrated lattices, tracer diffusion correl. factor, Monte Carlo evaluation 7−84354
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
conical element system, gas flow, Monte Carlo calcs. 7−117676
cosmic ray shower secondaries angular distribs., differences when initiated by gammas or protons 7−139872

Monte Carlo methods continued
cosmic ray showers, photon initiated, development in concrete and punch-through effect 7−139874
cosmic ray showers, secondary charged particles, ang. distrib., appl. to primary direction determ. 7−139873
covalent alloys, network forming, equilib. distrib. of ring structs., Monte Carlo determ. 7−91461
covalent semiconductors, two-particle Monte Carlo method for thermal electrons 7−143474
crack coalescence in low cycle fatigue, life predictions 7−97419
crumpling transition in polymerized membranes 7−111429
crystal blocking patterns, correlated thermal vibrations 7−137431
cylindrical particle detectors, algorithms for scatt. radiation forcing 7−122319
cylindrically blunted wedges, low-density hypersonic flow, direct simulation 7−136782
dense liquid Lennard-Jones soft spheres, grand canonical ensemble Monte Carlo calcs. 7−137177
dichotomous-noise-driven oscillators 7−95477
differential equation solution using simulation 7−134459
diffusion Monte Carlo simulation, Green's fn. method validity 7−134441
diffusivity Monte Carlo method, zeroth order time step validity 7−134653
dilute Ising model, interface roughening and domain growth, Monte Carlo simulations 7−98485
dimethylamine, hydration free energy, finite difference thermodynamic integration 7−106784
discrete cubic model, Monte Carlo renormalisation group study, superconformal invariance 7−134689
discrete Gaussian model, Monte Carlo renormalisation-group study 7−108464
disordered lattice, adsorption isotherms of Lennard-Jones gas, Monte Carlo studies 7−143223
dispersive charge-carrier transport in spatially random systems, Monte Carlo study 7−70268
DITE limiters, wall loading, Monte Carlo neutral particle transport code 7−69365
DNA, salt dependence, preferential interaction coefficient, Donnan coefficients, Poisson-Boltzmann cell model Monte Carlo solutions 7−136105
DNA solution, equilib. Coulomb pot. and charge distrib., Monte Carlo and SCF calcs. *(Russian)* 7−111346
drift chambers with long drift paths, pulse shape simulation 7−135740
EAS, centre determ. using Monte Carlo methods 7−145834
EAS array, cosmic ray muon identification, new method, Monte Carlo simul. 7−127733
EBT particle and energy confinement times, Monte Carlo estimates 7−91357
effective classical potential, Monte Carlo simulation calc. 7−102185
Eguchi-Kawai model with new lattice actions, Monte Carlo study 7−102591
elastic multiple scattering, similarity, critical path length 7−115849
electrolytes, thermodynamic properties, Monte Carlo calcs. 7−111911
electron backscattering; single scattering model *(Korean)* 7−85908
electron beam dose distrib., comparison of Monte Carlo simulation and pencil beam algorithm 7−74220
electron beams, energy broadening, effect of space charge interactions, Monte Carlo simulation *(Japanese)* 7−129957
electron drift and diffusion in gases, Monte Carlo and Bolzmann calcs. 7−75735
electron scattering, Mott cross-sections, FORTRAN 88 Monte Carlo program 7−77717
electron swarm in Ar-like gas, Monte Carlo simulation 7−80692
electron transport calculations for clinical beams, Monte Carlo program using energy grouping 7−101052
elliptic partial differential eqns., solutions Monte Carlo simulation 7−128259
EM cascade shower simulation code EGS4V, vectorisation 7−135798
emission CT, inverse Monte Carlo as a unified reconstruction algorithm 7−93902
emulsion chambers, electron-photon showers, Monte Carlo simulation 7−109615
energy distrib., electron-phonon interactions in the IR field, Monte Carlo calcs. 7−118376
EPR spectra, least-squares fitting, Monte Carlo methods simulation 7−115983
experimental particle physics, appl. *(Hungarian)* 7−74391
external gamma exposure, dose-rate conversion factors using Monte Carlo transport code 7−74213
fast neutron spectrometer, collimator design, using Monte Carlo code MOTSY, 14 MeV neutron distrib. 7−129508
Fermi liquids, almost-localised, antiferromagnetic correlations 7−125409
ferrimagnets, ordered and disordered, phase transitions, correl. mol. field theory, Monte Carlo simulations 7−105944
ferrofluid, hypernetted chain approx., 3D Monte Carlo model 7−77360
ferrofluid composite, props. at MM wave freqs., mag. absorpt. 7−125864
Feynman path integral, discrete-time approx. 7−134566
Feynman path integral, Monte Carlo eval. 7−128255
finite size effects on phase transitions 7−124430
finite spin systems, Helmholtz free energy near criticality, 4−ε expansion and Monte Carlo calcs. 7−80713
finite temperature QCD, lattice Monte Carlo studies, deconfinement 7−108852
first-order phase transitions, mean field methods and stability limits 7−121034
fissionable material, Monte Carlo model of intranuclear cascades by heavy ions, neutron generation calcs. 7−73800
flames, premixed, turbulent, calcs. using probability density function methods 7−78499
fluids, phase coexistence, Monte Carlo simulation in new ensemble 7−124435
fluorescence, self-quenching by statistical traps, Monte Carlo simulations 7−82258
focused ion beam implantation, alignment mark deformation by MBE overgrowth 7−98200
focused ion beams, diameter measurement 7−80932
frustrated Heisenberg antiferromagnet on 3D layered triangular lattice, crit. behaviour 7−77338
functional integral evaluation using Monte Carlo technique 7−115770
furnace slab, radiative scattering effects 7−97274
Fusion Experimental Reactor, radiation streaming through narrow gaps 7−81711

Monte Carlo methods continued
gamma radiation shielding by European houses, Monte Carlo photon transport code study 7−74214
gas mixtures, Monte Carlo calcs. of electron transport 7−109618
gasdynamic separation, statistical mechanics study *(Japanese)* 7−130765
gases on solid surfaces, Monte Carlo computer simulation 7−70079
Gaussian peak centroids, errors in determination 7−134855
geothermal power development economics, GEVA venture analysis model 7−139082
glueball, scalar, lightest, mass and wave fn., SU(3) lattice gauge anal. 7−116075
glycine zwitterion, aq. soln., Auger spectra, Green's function method calcs. 7−103356
Grand Canyon, United States, visibility, Monte Carlo radiative transfer modelling 7−94427
graphite, fast neutron spectra, meas. and Monte Carlo transport code anal. 7−89589
graphite surface, inelastic scatt. of NO, ang. distrib., Monte Carlo trajectory calcs. 7−113332
hadron cascades, vector meson dominance and Monte Carlo dual multistring 7−108924
hard cyclic hexamers, 2D system, elastic props., Monte Carlo calcs. 7−123469
hard disk system, solid-liq. phase transitions, Monte Carlo simulation 7−104967
hard dumb-bells adsorpt. on flat surface, RAM-type perturbational theory 7−98681
hard sphere fluids, pair correl. fn. meas. 7−131000
hard-sphere BCC solid, Helmholtz free energy calcs. 7−105083
heavy ion collisions, baryon multiplicity distrib. in nucl. matter in stopping energy regime 7−89581
heavy ion dose, radial distrib. calcs. for H_2O 7−89889
heavy ion multifragmentation in Monte Carlo TDHF model, mass spectra, multiplicities 7−73794
heavy-ion collisions, high energy, hot quantum drop fragmentation, temp. and density determ. Monte Carlo TDHF calcs. 7−116518
Heisenberg antiferromagnets, phase transitions, triangular and layered-triangular lattices 7−112844
Heisenberg ferromagnets and antiferromagnets, 2D, spin correlation functions *(Russian)* 7−70580
Heisenberg frustrated spin system, elementary excitations and phase transition 7−143832
Heisenberg model, antiferromagnetic, quantum Monte Carlo simulation on triangular lattice 7−85232
Heisenberg model, ground state and thermodynamic properties. on triangular lattice 7−77339
Heisenberg spin glass, Dzyaloshinskii-Moriya anisotropy, relax., FCC lattice, Monte Carlo simulation 7−85341
heliopause, filtering of local interstellar medium, Monte Carlo simulation 7−120230
HELIOS electron pair spectrometer, event simulation 7−68129
Higgs' model, on SU(2) lattice, with doublet scalar field 7−108760
Higgs mass prediction in standard model, Monte Carlo renormalisation group 7−128795
high energy physics supercomputing, pattern recognition and Monte Carlo calcs. 7−135799
hodoscopic hadron and photon scintillation calorimeters, radial distrib. of shower energy release 7−81903
honeycomb lattice gas, p(2×2) ordered phase, order-disorder transition, struct. factor, Monte Carlo calcs. 7−98382
hot nuclear matter, expansion phase, Monte Carlo quantum dynamics anal. 7−116324
hot nuclei, statistical fragmentation, microcanonical Monte Carlo sampling 7−135291
hot nuclei, statistical fragmentation, microcanonical Monte Carlo anal. 7−141082
hot phonons in polar semiconductors, Monte Carlo algorithm 7−92077
Hubbard chain, 1D, diagonal disorder, Monte Carlo simulation 7−76723
Hubbard model, variational Monte Carlo studies 7−89147
hybrid Monte Carlo, numerical simulation of lattice field theory, molecular dynamics/Langevin algorithm 7−134939
hydrated electron, path integral Monte Carlo study 7−119501
ice, Ih phase, Metropolis Monte Carlo X-ray and neutron diffr. 7−98078
implanted intracranial press. monitoring, Monte Carlo technique for signal level detect. 7−119874
inert gases, electron swarm, mass scaling rule 7−75754
infinite clusters in percolation, multiplicity for d>6, hyperscaling, spanning clusters 7−128479
inhomogeneous media, optical props., mean field theory and scaling laws 7−85573
inhomogeneous systems, percolation, Monte Carlo studies 7−89137
interacting particles, transport in random networks in external field, random walks 7−128443
interstellar Fe grains, temp. var. Monte Carlo simulation 7−120550
inverse Monte Carlo method in photon beam physics 7−73294
ion implantation, 2D modelling with allowance for position depend. lateral moments 7−83994
ion implantation in amorphous targets, Monte Carlo simulation model 7−142590
ion implantation mechanisms and related computational issues 7−69728
ion plating, evaporated material transport through support, Monte Carlo calc. 7−100121
ion-water clusters, free energy changes calc. using nonadditive pots. and Monte Carlo method 7−118130
ionic fluids, vapour and critical region props., restricted primitive model 7−83401
ionic reactions, diffusion controlled, in radiation-induced spurs, stochastic models 7−138993
Ising model, 2D triangular lattice, Monte Carlo renormalization group anal *(Chinese)* 7−102324
Ising model, 3D kinetic, renormalisation, self similarity and order-parameter struct. relax. 7−99477
Ising model, spatially varying coupling const., interface phenomena 7−120997
Ising model, time evolution and damage spreading, Monte Carlo simulation 7−120974
Ising model on an irregular lattice as fermion string model 7−95506
Ising models, 2D and 3D, fractal configurations at the critical point 7−128493
Ising models, critical behaviour, Monte Carlo simulations 7−70575
Monte Carlo methods continued
Ising single spin-flip model, domain wall depinning, Monte Carlo simulation studies 7−143841
Ising triangular lattice-gas model, Monte Carlo studies 7−120993
isotropic-nematic phase transitions, crit. behaviour of 3D P^N models 7−131310
±J model, correlation fn. on finite square and simple cubic lattices 7−108474
Josephson junctions, highly hysteretic, percolating network Monte Carlo study 7−138149
Josephson junctions, periodic array, evidence for new ordered phase, quantum Monte Carlo anal. 7−105842
kerma at a point, Monte Carlo evaluation rel. to photon transport problems 7−133468
Kubo oscillator, numerical simulation algorithms for multiplicative noise 7−108404
laminar convective flow, effective diffusion coeff. calc. 7−142263
laser created plasma, charge state evol. and energy losses in beam-plasma interaction 7−81680
lattice chains, eqn. of state, Monte Carlo simulations 7−128468
lattice gases, 2D, struct. factors and surface phase transitions 7−142656
lattice gauge theories, SU(2) and SU(3), overrelaxation and Monte Carlo simulation 7−121363
lattice gauge theory, heavy baryon study using Monte Carlo calcs. 7−108774
lattice massive Schwinger model, numerical simulation using fast fermion Monte Carlo algorithm 7−89374
lattice models, critical properties, Monte Carlo finite size scaling and renormalisation anal. 7−121007
lattice polymer melt-vac. interface, Monte Carlo studies 7−118306
lattice QCD, β-function calcs. and asymptotic scaling of 0^{++} glueball mass 7−95856
lattice QCD, critical behaviour at finite baryon number density and temperature 7−67562
lattice QCD, dynamical quark loops, Monte Carlo calc. 7−89441
lattice QCD, scaling and universality for string tension 7−73527
lattice vortices in the two-dimensional Abelian Higgs model 7−73548
layered materials, implantation process, Monte Carlo simulation 7−111621
Lennard-Jones liquid, atomic icosahedral coordination, Monte Carlo method generation 7−111335
lidar meas. accuracy, atm. drift velocity depend., Monte Carlo method study 7−107548
light beam, spatial coherence under thermal self-interaction, statistics anal. 7−90734
lipid bilayer membrane, gel state, vertical motion and steric effects, analytical and Monte Carlo calcs. 7−78794
liquids, static properties, Monte Carlo FORTRAN 200 program for CYBER 205 7−142548
low-Z materials, gamma-ray buildup factors, discrete ordinates, point Monte Carlo methods 7−129180
LUCIFER program for high p_T photoprod., QED and QCD Compton processes, meson prod. 7−140889
magnetic critical phenomena, Monte Carlo renormalisation group 7−112807
magnetization, nonlinear and linear decay, Monte Carlo comparisons 7−132074
many valley semiconductor, effective mass, nonstationary transport, modelling 7−76742
many-body theory, variational and Green's fn. Monte Carlo methods 7−128254
massless Schwinger model, Hamiltonian Monte Carlo study 7−128734
metal restructuring procedure, Monte Carlo model 7−124657
metallic thin wires elec. resist., effect of normal electron-electron scatt. 7−105524
metals, localised impurity moments magnetic interaction, Monte Carlo simulation 7−85241
metals, thick targets, backscatt. electrons, mean energies, Monte Carlo simulations 7−138554
metals, two mag. impurities, Monte Carlo study of the Alexander-Anderson model 7−118796
methanol, primitive model, Monte Carlo simulation 7−97899
methyl, recombination reaction, rate consts., Monte Carlo integration 7−144692
N-methylacetamide, aq. hydration, Monte Carlo calcs., isomerism effects 7−131006
micellar systems, image change effects in spherical symm. 7−71536
microemulsion as percolating system of interacting particles, electrical conductivity, Monte Carlo simulations 7−131346
mixed spin glass Ising systems, phase diagrams and domains 7−132041
modified heat bath method suitable for Monte Carlo simulations on vector and parallel processors 7−121486
molecular crystals, intermolecular potentials, computer simulation studies 7−142695
molecular flow through two tubes with different diameter, transmission probabilities computing 7−137013
molecular mechanics energy surfaces, stochastic exploration 7−109710
molecular trapping dynamics, by rarefied gas jet free surface, Monte Carlo simulations 7−130746
molecules, post-desorption gas-phase collisions, Monte Carlo simulations 7−112067
monomode fibre characterization by numerical simulation of integrating sphere 7−130375
multiparticle balance equation solution, intranuclear cascade method, quantum balance eqns. 7−121777
multispin Monte Carlo algorithms, random number generator 7−134698
(N+N) identical fermions, delta interaction, numerical approx. and anal. 7−102294
neutral transport in plasmas with velocity dependent charge exchange collision frequency 7−91298
neutron activation analysis, prompt γ-ray, solid angle effect on reproducibility of exptl. set-up 7−100642
NN interactions via neutral scalar boson field, Monte Carlo simulation 7−73705
nonideal gas, press. eqn., algebraic representation 7−75739
noninteracting spin waves, critical behaviour, free-spin-wave theory of Heisenberg ferromagnet 7−138206
noninteracting spin waves, statistical theory, low-temp. results, quantum Heisenberg ferromagnet 7−138205
nonlinear kinetic Fokker-Planck eqn. soln. *(Russian)* 7−83391

Monte Carlo methods continued
nonlinear oscillators under stochastic parametric and external excitations 7−88955
nuclear many-body problem theories, variational and Green fn. Monte Carlo methods 7−109053
nuclear material loss detection in sequence of accounting periods 7−109419
nuclear materials safeguards, Monte Carlo coincidence rate calcs. for sample verification 7−103144
nuclear medicine appl., expt. measured scatt. fractions and energy spectra as a test of Monte Carlo simulations 7−71863
nuclear oil well logging, appl. of Monte Carlo techniques 7−107552
nuclear reactions, mean free path meas., data processing method *(Chinese)* 7−103343
nuclear well logging, density log evaluation, appl. of Monte Carlo techniques 7−107555
nucleus-nucleus collisions, transverse energy distributions, dual Monte Carlo multi-chain fragmentation model anal. 7−89578
O(2) generalized 3D model, phase structure, vortex string suppression/enhancement 7−121340
O(N) symmetric ϕ_3^6 models, small and intermediate N, phase structure 7−121347
on-chip massively parallel Monte Carlo cellular processors, random-number arrays, optical generation 7−68583
one-component plasma, transition from monotonic to oscillatory decay of correlations 7−111169
optical klystron or undulator, Monte Carlo simulation of harmonic generation 7−130139
organ doses in mathematical phantoms, Monte Carlo techniques 7−79089
overrelaxed heat-bath and metropolis algorithms for accelerating pure gauge Monte Carlo calculations 7−108794
ozonosphere, sensitivity to Cl perturbations, modelling 7−139688
parallel Monte Carlo calcs. with many microcomputers 7−134457
particle beams, charged, fast Monte Carlo simulation 7−74824
particle diffusion with short-range attractive interactions, standard percolation model, 2D Monte Carlo simulations 7−80699
particle transport processes, adjoint function anal. 7−141126
particulate matter, size segregation by shaking 7−73220
path integration in real time via complex coordinates 7−120850
percolation, static, refined Monte Carlo simulations 7−73255
photomultiplier resolution, Monte Carlo simulation 7−74344
photon-limited laser pulses, arrival time estimate in presence of shot and speckle noise 7−103864
plasma impurity transport, 2-D calcs. for high recycling divertor 7−75767
polar liquid, effective ionic interaction, Monte Carlo calc. 7−142552
polyelectrolyte solution, 2D, form factor under strong screening conditions, Monte Carlo simulations 7−97892
polyelectrolytes, solution, equilib. Coulomb pot. and charge distrib., Monte Carlo and SCF calcs. *(Russian)* 7−111346
polymer, branched mols., Monte Carlo simulation 7−129910
polymer chains, rot. isomeric state, excluded vol. effects 7−82405
polymer melts, dense cubic lattice multichain systems, long time dynamic props., Monte Carlo study 7−117796
polymer mixture, Flory-Huggins lattice model, crit. props. 7−108432
polymers, sheet, tethered surfaces, equilib. conformations and dynamics, renormalisation and Monte Carlo methods 7−95498
polystyrene, linear chains, Monte Carlo calcs. and neutron scatt. obs. 7−90462
polytetrafluoroethylene membranes, pore characts., Monte Carlo method 7−142365
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93320
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93321
positron emission tomograph simulation, high spatial resolution, based on multiwire proportional chambers, imaging capabilities 7−145213
Potts model, 2D, dynamic universality, Monte Carlo studies 7−120995
Potts model, 2D, first-order phase transition, existence of false ground states, Monte Carlo anal. 7−89152
Potts model, 2D diluted dynamic scaling breakdown 7−120985
Potts model, conformal invariance, Monte-Carlo finite-size scaling, surface magnetic exponent 7−128476
Potts model, four-state, critical dynamics in finite-size scaling theory 7−120978
Potts model, q-state, crit. dynamics in 2D 7−143820
Potts models, antiferromagnetic, phase transitions 7−77332
Potts models with competing interactions, generalized ANNNI model 7−73246
primitive model electrolyte, Poisson-Boltzmann theory, numerical soln. 7−111330
probe polymer in matrix of different degrees of polymerisation, cubic lattice Monte Carlo dynamics 7−117797
protein electron tunnelling paths, quantum path integral Monte Carlo method 7−126702
PYTHIA version 4.8, Lund Monte Carlo method for hadron-hadron collisions 7−135154
Q-state Potts model, dynamical scaling 7−115923
QCD, hadron mass spectrum, Monte Carlo simulations, review 7−67584
QCD jets, Monte Carlo anal. of parton production, in next-to-leading-logarithmic approx. 7−116127
quadrupolar glasses, isotropic Edwards-Anderson models, Monte Carlo simulation 7−142947
quantum dynamics, Monte Carlo theory 7−120849
quantum Monte Carlo methods 7−134679
quantum spin systems, appl. of thermofield quantum Monte Carlo method 7−67187
quantum spin systems, fast algorithm for 1D Monte Carlo simulations 7−99386
quantum systems, Monte Carlo calcs. 7−138260
quasi-2D antiferromagnets with fluctuating exchange, Monte Carlo study 7−132046
radiative transfer, nonlinear, anal. of Monte Carlo method 7−115934
radiative transfer equation, diffusion approx. and random walk method of soln. 7−80695
radiography, X-ray scatt., coupled electron/photon Monte Carlo calcs. 7−78447
radiotherapy, dosimetry and quality specification of high energy photon beams 7−79087
random lattice, percolation 7−67240
random medium, statistical radiative transfer, Monte Carlo method *(Russian)* 7−103746
Monte Carlo methods continued
random solids, geminate pair recombination dynamics, Monte Carlo simulation 7−131660
random surfaces and walks, Monte Carlo simul. on sequential and parallel computer 7−128442
random walk on chain with dynamic disorder due to correlations 7−80703
random walks, two dimens., Monte Carlo diffusion anal. 7−95483
random walks/surfaces, Monte Carlo noncanonical path and surface simulation 7−128444
rarefied fluid dynamics cylindrical vessel, Monte Carlo direct simulation *(Japanese)* 7−142330
reactor criticality problems, Monte Carlo code reliability 7−89591
reactor departure from nucleate boiling, thermal-hydraulics codes, Monte Carlo anal. 7−129142
reactor multi-group criticality safety code, KENO IV, vectorisation 7−89604
reversed field pinch configuration transport, Monte Carlo simulation 7−97786
river floods frequency analysis, statistical intercomparison of EV1 estimators by Monte Carlo simulation 7−139641
rocks, photoelectric index, Monte Carlo simul. and exptl. meas. 7−107405
rough surface fractal dimension, solid-on-solid interface model, Monte Carlo simulation comment 7−140638
rough surface fractal dimension, solid-on-solid interface model, Monte Carlo simulations comment and reply 7−140639
rubber neutron shields for radwaste packaging, expt. props. and Monte Carlo calcs. 7−74243
Runge-Kutta methods, improvement of the global error using Monte Carlo method *(Italian)* 7−88941
scalar lattice QED, photon and bosonium masses, compact U(1) lattice gauge theory 7−121419
scaling properties of *c*-Animals 7−128485
Schrodinger equation, scattering solution, Monte Carlo method calcs. 7−102210
scrape-off layers, generated by pump limiter and ergodic mag. limiter, impurity control 7−75855
self-avoiding walk, nonergodicity of local length-conserving Monte Carlo algorithms 7−108408
self-avoiding walks on diluted lattices near percolation threshold 7−80650
self-avoiding walks with bridges, resistance and spectral dimension 7−102304
self-avoiding walks with local bridges, resistance and spectral dimension investig. 7−89154
self-directed walk, Monte Carlo study on simple cubic lattice, in three dimensions 7−134687
self-scattering in gamma ray sources used in Compton scattering experiments 7−109567
SEM image interpretation, model for secondary and backscatt. electron yields calc. 7−140775
semi-infinite and finite water phantoms, photon irrad. up to 2 MeV, electron spectra, Monte Carlo calc. 7−133419
semiconductor, ion direct writing, radiation damage and pattern resolution 7−99994
semiconductor, warm electrons, HF elec. field, two particle Monte Carlo method 7−137949
semiconductor alloys 7−118474
semiconductor laser, low-power, design 7−123030
semiconductors, impact ionisation, lucky drift theory, test by Monte Carlo simulation 7−112351
semiconductors, photoemission with X-ray standing waves, electron transport problem 7−100006
Sierpinski gasket, 2D, random walk on gasket fractal in external field 7−102338
silicate glasses, dissolution modelling by ETCH Monte Carlo code, radwaste appl. 7−103261
simple cubic lattice, crit. percolation in three dimens., Monte Carlo renormalisation group approach 7−134694
simple quadratic Ising model with crossing bonds, ferromagnetic critical line 7−85334
single impurity Anderson model, many body phenomena simulations 7−124910
small crystals, lattice disorder from thermal fluctuations 7−124412
smectic A-nematic transition, lattice model critical behaviour 7−118094
smectic E-smectic B transition, Monte Carlo computer simulation studies 7−111874
SO(3) lattice gauge theory, 3D, specific heat meas., Monte Carlo simulations 7−95736
soft-core-hard-core transition, percolation thresholds, invariant props. 7−102345
solid soln., short range order evolution, Monte Carlo simulation 7−98385
solids, transformations, computer simulation techniques 7−111861
solvation force between neutral surfaces in H_2O, hydrophobic interaction, Monte Carlo simulation 7−84276
SPECT, improved reconstruction using Inverse Monte Carlo 7−145227
SPECT, maximum likelihood reconstruction, with Monte Carlo modeling 7−87299
sphere, photon absorption, use of stratified sampling, Monte Carlo appl. 7−102359
spin exchange kinetic Ising model, critical dynamics in quasilinear fractal geometries 7−80651
spin glass alloys, classical RKKY model, anisotropy-induced phase transition, Monte Carlo simulation 7−125413
spin glasses, Ising model, hidden valley structure 7−92454
spin systems, high speed algorithm for Monte Carlo simulation *(Japanese)* 7−85233
spiral percolation, Monte Carlo simulations 7−102343
sputtering, computer simulations 7−125885
square-well fluid of variable width, short-range expansion 7−124057
stellarator, ripple transport, hybrid Monte Carlo simulation 7−142485
stepped surface, roughening kinetics, anal. 7−131397
stepped surfaces, adsorption, adsorbate conc. profiles, induced work function change 7−105255
SU(2)×SU(2) on 2D random lattice, Monte Carlo simulation *(Chinese)* 7−102642
SU(2) adjoint Higgs model, mean field approx., phase structure, Monte Carlo comparisons 7−128752
SU(2) gauge theory, finite temp. phase transition, Monte Carlo renormalisation group study 7−95750
SU(2) Higgs model, attempered renormalisation group scheme in 4D 7−108788

Monte Carlo methods continued
SU(2) lattice gauge field, entropy pure adjoint action, mixed fundamental action 7−121364
SU(2) lattice gauge theory, departures from scaling, Monte Carlo anal. 7−89360
SU(2) lattice gauge theory, free energy of higher representation sources 7−121359
SU(3) gluon thermodynamics on Euclidean lattices, transport coeffs., thermal Green's functions method 7−81120
SU(3) lattice gauge theory, topological fluctuations and susceptibility 7−81031
SU(3) sine action, Monte Carlo simul. using discrete subgroup 7−116043
SU (2) lattice gauge theory, coupling <1, glueball mass, Monte Carlo variational study 7−140817
SU (2) lattice gauge theory in 5D, continuum limit, Monte Carlo simulation 7−80999
SU (3) lattice gauge theory, minimal surfaces and string tension from non-planar loops 7−80998
sums of quantum states for nonseparable degrees of freedom: multidimensional Monte Carlo integration 7−135824
Sun, 2.223 MeV γ-ray line emission, time depend. anal. 7−140019
Sun, cosmic ray neutrons prod. and γ-ray line emission anal. 7−134216
superconducting transition temp. enhancement by excitonic negative-U centres, Monte Carlo simulation 7−77135
superconductor-insulator mixtures, conductivity exponent 7−85187
suspended particles, coagulation, Monte Carlo simulation 7−114016
symmetric polymers mixtures, lattice model, Flory-Huggins mean-field theory, Monte Carlo test 7−97986
TFTR, neutron spectral distrib. from internal 14 MeV source, Monte Carlo transport comparisons 7−74043
TFTR, radiation streaming through small penetrations, 3D coupled Monte Carlo calcs. 7−103196
thermal desorption of interacting molecules from heterogeneous surfaces 7−137718
thin film nucleation and growth modes, Monte Carlo simulation 7−105336
thin films, percolation of interacting particles deposited onto a planar substrate 7−124794
three-component liquid systems, Monte Carlo simulation 7−124052
three-dimensional Blume-Emery-Griffiths model, phase diagrams 7−143796
three-dimensional homogeneous turbulence, Hopf characteristic functional eqn., Monte Carlo approach 7−75534
time between effectively independent samples, sampling distrib., meteorological appl. 7−127425
TIPS2 fluid next to surfaces, Monte Carlo investig. 7−83622
Tokamak reactor, effect of blanket opening on nuclear characts., Monte Carlo calcs. 7−67984
tolerancing, statistical aspects 7−110525
topological charge density, long-time-scale correlations on 32^4 lattices 7−89359
Townsend discharges, spatial nonuniformity at low pressure 7−111294
trapped polymer chain in random porous medium, Monte Carlo simulations 7−136994
triangulation ranging, time delay meas. errors modelling by conditional beta density functions 7−123341
TRIPOS code appl. to surface and bulk ion transport problems 7−142858
TTF-chloranil mixed stack cpd., neutral-ionic transition 7−84253
turbomolecular vacuum pump, rotor characteristics calc. 7−102433
two-dimensional anisotropic interface fluctuation thermodynamics, equilib. cryst. shape geometry 7−92007
two-impurity Anderson model electron gas, mag. props., Kondo effect and indirect exchange, Monte Carlo simulation 7−84722
ultrahigh energy cosmic ray nucleus collisions in stratosphere, fragment-γ-ray family simultaneous obs. 7−134101
underwater acoustics, track parameter estimation from multipath delay information 7−123309
unequal size molecule mixtures, local composition models, van der Waals partition function 7−123825
unimolecular dissoc./free radical recombination, rate consts. 7−144692
universality of deconfining phase transition in finite-temperature lattice gauge theories 7−95757
unmixed feed stream plug flow reactors, coalescence-redispersion model, matched asymptotic solns. 7−123783
vacuum charge and induced charge in (2+1) dimensions for massless fermions 7−108787
vapour phase crystal growth Monte Carlo simulation, isotropic variable bond energy model 7−124151
variance estimate, jack-knife technique 7−134460
vectorized Monte Carlo calc., stratified sampling appl. 7−135393
vicious neighbour problem, Monte Carlo simulations 7−73203
water, primitive model, Monte Carlo simulation 7−97899
water, structure, between metals, Monte Carlo simulation 7−97895
wet steam turbine blades erosion, Monte Carlo method calcs., 7−83310
wetting layers, growth, Monte Carlo simulation 7−70035
Wilson loops, perturbative calculation, perturbative background 7−108764
X-Y model, thermodynamic quantities, decoupled cell Monte Carlo method 7−77340
X-Y model with cubic anisotropy, Monte Carlo and coarse graining renormalisation studies 7−67246
Yang-Mills theory, vacuum wavefunctional in 3D, Monte Carlo meas. 7−128758
ZTRAN code anal. of electron, bremsstrahlung and gamma ray beams in multi-layer media 7−91679
(α,f), Monte Carlo model of intranuclear cascades, neutron generation calcs. 7−73800
$e^-e^+ \rightarrow 3$ jets, $O(\alpha_s^2)$ corrections to polar asymmetry meas. 7−81217
$(\mu^-d)+t \rightarrow (\mu^-t)+d$, μ^--transfer cross-sections, Monte Carlo method 7−122668
NN→X, Monte Carlo generator, IRIS, for quark-gluon plasma 7−67668
$\bar{p}p$ collisions, UA(5) high energy simulation program 7−135156
$\bar{p}p \rightarrow$ jets, solid angle anal. of large transverse energy events, comparison with QCD 7−121547
pp→X, 360 GeV/c, in Al/Au, multiparticle production expt., Monte Carlo comparisons 7−140956
Ag vacancy diffusion, Monte Carlo studies 7−91875
α-AgI, Haven ratio, Monte Carlo calc. 7−98574
Al drift-tube counters in VENUS, Monte Carlo simulations of delta ray effects 7−139933
Al films, electron backscatt. and transmission coeffs., Monte Carlo calcs. 7−106321
Monte Carlo methods continued
Al foil, electron transmission, 300-700 keV 7−144190
$Al_xGa_{1-x}As$ heterostructure launchers for ballistic electron generation 7−92281
Ar, liquid, spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
Ar, microwave conductivity, transient imaginary component, freq.-shift meas., Monte Carlo calcs. 7−125034
Ar, solid, vacancy diffusion, Monte Carlo studies 7−91875
Ar_{13} clusters, melting and freezing, microcanonical simulations 7−104959
Au films, electron backscatt. and transmission coeffs., Monte Carlo calcs. 7−106321
Au thin foils, 200-400 keV proton scatt. and stopping, role of single collisions 7−92812
Au-Cu alloys, quantitative Auger anal., backscatt. correction factor 7−132386
$^{10}B(n,\alpha)^7Li$ reaction in cells and tissue, Monte Carlo simulation of biological effect and implication for B neutron capture therapy 7−126942
Be, gamma-ray buildup factors, discrete ordinates, point Monte Carlo methods 7−129180
$Bi_4Ge_3O_{12}$ detector array, response to 0.5-21 MeV photons, Monte Carlo simulation comparisons *(Chinese)* 7−103328
Br, Rydberg states, X-ray spectra 7−74475
CO on catalytic surface, percolation transition in an irreversible-surface reaction model 7−139044
(^{12}C, X) emulsion interaction, relativistic three particle pseudo-rapidity correlations 7−129095
$^{12}C(^{12}C, ^{12}C)$, 20-600 MeV/N, eikonal calcs. with Pauli blocking, energy depend. 7−121933
$Ca^+(H_2O)_n$ cluster, (n=1 to 10), Monte Carlo calcs. and mass spectra 7−122766
Cl_2 liquid, Price and Stone pot., Monte Carlo simulation 7−97883
^{60}Co radiotherapy beam, Monte Carlo simulation 7−133436
Cr, amorphous, microstruct., computer expt. 7−111394
Cs, liquid-vapour interface, pair correl. function, Fischer approx. 7−97906
Cs, liquid-vapour interface, longit. and transverse density distribs. 7−137663
Cu, vacancy diffusion, Monte Carlo studies 7−91875
Cu(II) complexes, absorpt. band shape, Jahn-Teller and pseudo-Teller interactions 7−77524
D-T fusion neutronics, multi-group transport calc. accuracy, blanket design 7−109483
D_2 solid, complex form. in D_3^+ presence, Monte Carlo simulation 7−91662
Fe-Cr-Ni alloy, X-ray quantitative microanalysis, calculation method 7−114048
GaAs central valley conduction band electrons, phonon-electron scattering angle selection, analytical method 7−76764
GaAs, compensated, velocity-electric field characts., two maxima 7−125000
GaAs, electron-electron scatt., Monte Carlo calc. 7−99045
GaAs, electron-hole interactions and high-field photoexcited electron transport, Monte Carlo calcs. 7−105575
n-GaAs, hot electrons, Monte Carlo simulation of screening effect 7−92191
GaAs hot photoexcited electron relaxation 7−92233
GaAs, intervalley transitions, passive near-cathode space 7−84908
GaAs, MBE growth, asymm. interface roughness, computer simulation 7−143159
GaAs multilayer targets, recoil range distrib., Monte Carlo simulation 7−111619
GaAs n^+nn^+ diodes, subMM-wave negative conductance 7−112462
$GaAs/Al_{0.3}Ga_{0.7}As$ single quantum well, exciton parameter calcs., well shape and elec. field effects 7−105407
GaAs-AlGaAs quantum wells, electron and phonon dynamics, Monte Carlo method calcs. 7−125108
GaAs-AlGaAs quantum wells, subpicosecond dynamics of electron injection 7−138013
GaAs-AlGaAs quantum-well struct., atomistic nature of heterointerfaces, rel. to photolum. 7−138498
$(GaAs)_{1-x}Ge_{2x}$, struct. model, energy gap, consequences of stochastic growth process 7−83923
$GaAs_{1-x}P_x/GaP$ strained layer superlattices, planar channelling, Monte Carlo simulation 7−111716
GaInAs single well heterostructs., vel.-field characts., Monte Carlo calcs. 7−143577
GaSb, interband Auger processes, anal. of screening effects 7−118384
$(GaSb)_{1-x}Ge_{2x}$, struct. model, energy gap, consequences of stochastic growth process 7−83923
Ge:Li detectors, response to narrow beam of photons, Monte Carlo simulation 7−116778
$Ge_xAs_{0.2}Te_{0.8-x}$ glassy semiconductor, atomic distrib. models 7−124113
^{76}Ge, neutrinoless double β-decay, Monte Carlo simulation *(Spanish)* 7−109121
H in BCC metals, hopping, incoherent quasi-elastic scatt. fn. Monte Carlo calc. 7−84352
H, multiphoton and above-threshold ionisation, nonperturbative treatments 7−96616
H, multiphoton ionisation, Monte Carlo treatment 7−96618
H, tracer and chemical diffusion in BCC metals 7−84353
H+fully stripped ions, ionis. and excitation to Rydberg states 7−141663
H_2, solid, diffusion Monte Carlo simulation 7−98603
H_2+Ar, nonequilib. dissoc. rate coeff., Monte Carlo trajectory and master eqn. simulation 7−93290
H_3^+, mol. wave fn. sampling in quantum Monte Carlo calcs. 7−81926
H_2O, at surface, Monte Carlo calcs. 7−83621
H_2O, network topology 7−74433
H_2O, spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
H_2O, vibr. effect on second virial coeffs. 7−136030
$^2H(n,2n)$, breakup configuration study, kinematically complete S-curve 7−109183
$^2H(n,n)$, kinematically complete expt., S-curve study 7−109183
^3H, variational Monte Carlo calculations of few-body nuclei 7−67703
He, dense, equation of state, three-body exchange interactions 7−105165
He, excess electron mobility, path integral Monte Carlo study 7−97690
He^+ 175 keV backscatter energy loss from Cu(100) 7−144210
He-Ne light beam transmittance through turbid medium, multiple scattering effects 7−136203
He^{2+}+Li, charge exchange and ionisation cross sections, classical and quantal models calcs. 7−122689

Monte Carlo methods continued
^{3}He, adsorbed phases on graphite, Monte Carlo study 7−118191
^{3}He, BCC, exchange freq. calc. in path integral Monte Carlo method 7−84442
^{3}He, solid, magnetism in classical approx. 7−76532
^{4}He liq., diffusion Monte Carlo simulation, Lennard-Jones pot. 7−98603
^{4}He, liq. and solid, three-body correlations 7−84422
^{A}He, A=3,4, variational Monte Carlo calculations of few-body nuclei 7−67703
HgI_2 detector, Monte Carlo simulation *(French)* 7−141396
^{125}I brachytherapy seeds, Monte Carlo simulation of dose distrib. around 7−133467
InP, intervalley transitions, passive near-cathode space 7−84908
InP short samples, threshold field and peak-valley vel. ratio at 300 K, Monte Carlo calc. 7−105573
Li electron affinity, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
$Li+He^{2+}$, single-electron charge transfer, quantal and classical calcs. 7−129863
LiF/Al interface, photon produced secondary electrons, dosimeter cavity theory, Monte Carlo calcs. 7−87234
LiF/Pb interface, photon produced secondary electrons, dosimeter cavity theory, Monte Carlo calcs. 7−87234
Mg, ionis. pot., ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
MgO surface, CO thermal desorption, Monte Carlo simulations 7−143224
N chemisorbed layer on W, ion-induced desorption and particle refl., Monte Carlo simulation 7−105275
N_2, electron swarm in nonuniform field 7−111155
NO_2^-:$Li^+(H_2O)$, ion-pair hydrate clusters, Monte Carlo simulations 7−90470
Na electron affinity, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
Na, liquid-vapour interface, longit. and transverse density distribs. 7−137663
Na_2, binding energy and pot. energy curve, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
NaCl crystals, electron-phonon relax., XUV electron emission, computer expt. *(Russian)* 7−142935
NaH, binding energy, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
Nb-H, ordered phases, predictions using lattice gas models 7−104987
Ni-H system, diffusion- and tunnelling, fast Fourier transform and Monte Carlo method calcs. 7−69976
Ni-Ta structure on Si, ion-beam mixing, ballistic effects 7−76217
Ni_4Mo, ion irrad. damage profiles, atomic resolution field ion microscopy studies 7−104868
O, ionospheric, acceleration to magnetosphere, cyclotron reson. with broad-band EM turbulence modelling 7−120207
O_2, two dimensional, physisorbed on granite, Monte Carlo study 7−143234
^{16}O, hypernetted chain calcs. for Malfliet-Tjon pot. 7−81311
Pd(111), adsorbed H, theory of subsurface occupation, ordered structures and order-disorder transitions 7−70080
$pp \rightarrow X$, multiple prod. and multiplicity distrib., Monte Carlo simulation model 7−89533
PtCo, dil. alloy, mag. environment model of ferromagnetism 7−125332
Pt_3Co, ion irrad. damage profiles, atomic resolution field ion microscopy studies 7−104868
Si, ion implanted, anomalous channelling effects, Monte Carlo simulation 7−117996
Si self-ion implanted, vacancy and interstitial distribs. 7−83950
a-Si thin film growth by sputtering, Monte Carlo studies 7−105329
Si thin films, electron scattering, core losses, Monte Carlo simulation 7−106322
Si:As^+(P^+), channelled and random implanted ion profiles, Monte Carlo simulation 7−137422
Si:B, hyper-abrupt doping transitions, SIMS studies 7−98213
a-Si:H thin film growth, Monte Carlo simulations 7−92027
Si:H^+, high-energy proton irradiated, energy deposition 7−117991
SiC-Ti, effects of N_2^+ and Ar^+ implantation on atomic mixing and hardness 7−137421
SiD_4, electron input, low energy, cross-section calcs. 7−110122
SiH_4, electron input, low energy, cross-section calcs. 7−110122
SiO_2 thin films, ballistic electron transport 7−105741
Si_xO_y small cluster equilib. configs., semi-empirical pot. energy function, Monte Carlo simulations 7−74803
TiN film deposition on Fe substrate with simultaneous ion bombardment, transition layer form. simulation 7−119174
U calorimeter with proportional chamber readout, Monte Carlo simulation study 7−74374
^{235}U content in samples, γ-ray spectra meas. and Monte Carlo simulation *(German)* 7−103014
W (110), adsorbed Na, repulsive dipole phase diagram 7−112072
Xe, excess electron mobility, path integral Monte Carlo study 7−97690
Xe thin film, low energy electron transmission and reflection, Monte Carlo simulations 7−142857
$Y_3Fe_{5-x}Mn_xO_5$ films, X-ray microanal., Monte Carlo modelling *(Czech)* 7−98728
Zr hydrides, heat of H absorption, effects of H-H interactions 7−105254

Moon
see also lunar seismology; lunar structure
basins, absolute age determ. 7−139950
craters due to meteorite, asteroid and comet impact, present formation rate 7−101708
de Sitter geodetic precession rate for lunar perigee as general relativity test 7−72341
Earth-Moon distance for 680 Myr BP, geological evidence 7−127474
geodesy, progress report (1983 to 1986) 7−134158
grazing occultations from South Africa (1985 to 1986) 7−145802
Imbrium Basin ages from Apollo 16 melt rocks 7−145843
impact-induced seismic events, distinct meteoroid families identified on seismograms 7−101739
interior bulk composition and struct., geophysical constraints 7−88148
Lunar eclipse, 1986 October 17, obs. by geostationary weather satellite GOES 7−134116
lunar phase dependence of nonsphericity of Earth's atmosphere, evidence from astron. refr. meas. *(Russian)* 7−127475
magnetic field of enhanced strength antipodal to impact basins 7−145844

Moon continued
mare-terra tectonics, implications of lithospheric bending and faulting 7−134157
marine mollusk, lunar-modulated geomag. orientation 7−87037
Newton's Earth-Moon-test of 1665/66, reexamination using new obs. *(German)* 7−94641
occultation angular diameters of stars, catalogue 7−145839
occultations of galactic centre, prospects (1986 to 1989) and results (from 1968 to 1970) 7−115208
occultations of IRAS point sources (1986 to 1990) 7−101706
occultations of stars, meas. use for FK5 reference frame corrections 7−88082
orbit characteristics determ. from sedimentary layers in Pichi-Richi Pass rocks, Australia 7−133678
orbit expansion and contraction, effect of $m_g \neq m_i$ hypothesis *(Chinese)* 7−107730
origin and lunar meteorites, review 7−115265
origin of Moon, siderophile element compositions constraining various theories 7−88146
origin scenarios for Moon and it's unique chemical composition 7−115264
petrologic variations on global scale 7−88147
physical librations due to rot. of ecliptic, optimum values of coeffs. 7−94678
selenodesic coordinate systems, regression modelling of divergences 7−88138
teaching, children's conceptions of the Earth, Sun and Moon 7−80221
temperature of interior, megaregolith insulation and bulk U content 7−94679
tidal acceleration, appl. to anal. of evidence for secular changes in mean motions of Galilean satellites 7−101723
topography and geoid spectra, fractal interpretation rel. to other planets 7−101177
Undarum-Spumans-Balmer region, relation between geology and geochemistry 7−134156
^{3}He, lunar source for commercial fusion power appl. 7−71587
Na vapour search 7−134155

Moon structure *see lunar structure*

moonquakes *see lunar seismology*

Morin temperature
see also weak ferromagnetism
antiferromagnets, intermediate state, magnetoelastic interaction effect 7−99538
orthoferrites, magnetic phase diagram, orientational phase transition critical field calcs. 7−85285
α-Fe_2O_3 annealed submicronic monodispersed particles, Morin temp. particle size depend. meas. 7−85290
Fe_2O_3, hematite, magnetisation, thermal hysteresis near Morin transition temp. 7−99495
α-Fe_2O_3, magnetic single-ion anisotropy in hematite, Morin transition 7−143786
FeS:Mn, M=3d transition metal, mag. and crystallographic transitions, Mossbauer, X-ray studies 7−132006
$Gd_3Ga_5O_{12}$:Fe, implanted, annealed, absence of Morin transition 7−125379
YAG:Fe, implanted, annealed, Morin transition 7−125379
YIG, annealing, Morin temp. of α-Fe_2O_3 particles 7−142801
YIG:Fe, implanted, annealed, Morin transition 7−125379

Morse potential
see also intermolecular mechanics; kinetic theory
ABA-type molecules, local and hyperspherical vibr. resons., lifetimes determ. 7−90088
acetaldehydes, nonbonded pots., mol. mechanics calcs. 7−68425
acetones, nonbonded pots., mol. mechanics calcs. 7−68425
anharmonic at. chain, interatomic bond breaking, mol. dynamic method 7−68426
anharmonic atom chain, fluctuation rupture, collective effects influence 7−98326
anharmonic Morse oscillators, coupled, energy transfer, reson. model 7−102184
benzene, anharmonic effects in radiationless vibronic energy relaxation 7−109852
bromobutenes, conformational struct., torsional force consts. calcs. 7−122489
bromopropenes, conformational struct., torsional force consts. calcs. 7−122489
butenes, conformational energies and structs., mol. mech. calcs. 7−110059
conical intersections, Jahn-Teller crossing, topology, application to standard model 7−141476
cyclopropenes, conformational energies and structs., mol. mech. calcs. 7−110059
diatomic molecule-atom collisions, vibr. excitation, Morse osc.-exponential repulsion model calcs. 7−90351
dilatons, subcritical and transcritical types 7−95356
exact path integral solution of Morse oscillator *(Chinese)* 7−95371
gases, second virial coeffs., Morse pot. parameters calcs. 7−97678
heat of molecular chemisorption, within bond order conservation framework, efficiency of Morse potentials 7−86665
linear polyatomic molecules, potential function, Morse-like model 7−122652
$M(XY)_6$ complexes, vibr. anal. and mean bond displacements 7−103467
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
Morse oscillator, perturbational and variational treatments 7−68422
Morse oscillators, matrix elements and Franck-Condon factors, phase-integral and num. calcs. 7−82283
overlap integrals of Morse oscillator wave functions 7−103610
rotating Morse oscillators, matrix elements, Elsum and Gordon approx. method 7−115827
trihalomethanes, CH stretch-bend coupling, kinetic anharmonic coupling calcs. 7−103469
Ar, modified Morse potential function, lattice dynamics 7−131253
BO, band systems, electronic transition moment variation 7−135827
Br_2 matrix isolated, time resolved fluoresc. spectra 7−82245
CrOOH, neutron inelastic scatt., IR spectra, double Morse pot. model 7−144052
H adsorbed layer on LiF (001), vibr. surface states, SCF calcs. 7−137699
H_2, analytic model potentials, perturbed-Morse-oscillator model 7−74724
HF-acetonitrile(propynenitrile), H-bonded dimers, dissoc. energies, rot. spectroscopy 7−82066
H_2O, dissoc., hyperspherical reson. lifetimes eval. 7−90276

Morse potential continued
$^3H(d,X)$, muon catalysed, Schrodinger eqn. series soln. 7−115839
$He+I_2$, harmonic and Morse oscill. models, vibr.-rot. infinite order sudden approx. 7−82327
Ni(115), structure, He diffr. study, hard and soft wall corrugation fns. calcs. 7−92822
MOS devices *see metal-insulator-semiconductor devices*
MOS integrated circuits *see field effect integrated circuits*
MOS structures *see metal-insulator-semiconductor structures*
MOS transistors *see insulated gate field effect transistors*
mosaic structure (microstructure)
heterogeneous materials, microstruct. anal., combined X-ray microdiffr. and topography study 7−78400
Laue diffr. patterns of very small crystals, obs. of mosaic spread 7−76423
metal powders, sintering, motive force and kinetics of diffusion processes *(Russian)* 7−92916
MOSFET *see insulated gate field effect transistors*
Mossbauer effect
absorption Mossbauer spectra on low temp.-oriented nuclei 7−118917
absorption-emission line shapes in presence of electronic transitions 7−132171
agarose gels, molecular dynamics, NMR, Rayleigh scatt., Mossbauer radiation 7−126698
amorphous alloys, composition-induced valence change 7−76842
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
amorphous systems, ferromag. regime, correlated molecular field theory 7−112830
aniline-hemin complex, electronic structure, Mossbauer spectra 7−122623
atomic electronic shell processes, Mossbauer spectrosc. 7−74517
atomic jump processes in metallic systems, in-beam Mossbauer studies 7−118911
basilar membrane motion: results of Mossbauer obs. 7−78892
basilar membrane motion in the pigeon measured with the Mossbauer technique 7−133313
biotite, oxidation of Fe II, Mossbauer effect 7−86582
α-brass, short range order observation by ^{67}Zn Mossbauer spectroscopy 7−85492
conversion electron Mossbauer spectroscopy, plasma induced surface modification anal. 7−106068
covalent crystals with Sb, electronic struct., ^{121}Sb isomer shift, LMTO calc. 7−106064
cryogenic assembly for Mossbauer spectrometer *(Chinese)* 7−80802
decamethylferrocene+TCNQ, reaction products, structs., mag. props., Mossbauer spectra 7−143940
depth selectivity improvement for conversion electron Mossbauer spectra 7−143943
diffusing atoms including fluctuating hyperfine interactions, Mossbauer spectrum 7−118909
diffusion jump dynamic, NMR, PAC, Mossbauer and neutron scatt. study methods 7−99624
dimethyltin (IV) fluoro-metallates, synthesis and ^{119}Sn Mossbauer spectra 7−106071
diorganotin carbohydrates, thermal behaviour, ^{119}Sn Mossbauer and IR spectra 7−90129
double gamma-electron mag. resonance, ESR line inhomogeneous broadening, influence on quasienergy struct. of spectrum 7−143937
dynamical after-effects of nuclear decay in Mossbauer resonance 7−118914
electret forming polymers, struct. and physical props. 7−97993
external stress effects on Mossbauer impurities forming dislocation kinks 7−117925
Fe-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
ferredoxin II from Desulfovibrio gigas containing Fe_3S_4 cluster, Mossbauer spectra 7−144971
ferrite-garnet epitaxial films, Ne ion implanted, annealing, struct., mag. props. *(Russian)* 7−143883
ferrofluid, Mossbauer study of superparamag. amorphous alloy particles 7−118923
gamma radiation, transmission and scatt. switching transient effects *(Russian)* 7−106061
gamma radiation meas. using gas-filled photoelectric detector 7−109656
garnets, Fe^+ ion implantations 7−91612
glass formation by mech. alloying 7−113472
harmonically bound atom, classical motion, Mossbauer spectra 7−90081
hyperfine fluctuating fields, effect on spectra 7−125564
hyperfine interactions, conf., Bangalore, India, (Sept. 1986) 7−115675
intercalation cpd., 2D, variable temp. Mossbauer obs. 7−113047
interferometric velocity calibrator for ^{73}Ge Mossbauer spectrometer 7−116033
iron (III) tetraphenylporphyrin complex mag. susceptibility, Mossbauer study 7−99617
iron p-tolylsulphite, Mossbauer quadrupole splitting, orbit-lattice interaction effects 7−138364
local nuclear orientation using defect-induced electric field gradients in cubic lattices 7−118918
membrane proteins, native, conformational dynamics, Mossbauer spectroscopy study 7−144993
metallic glass ribbons, magnetic texture Mossbauer spectra studies 7−85253
metallic glasses, corrosion, ^{57}Fe Mossbauer spectra studies 7−144607
metallic glasses, Mossbauer spectra anal. 7−125575
metals, point defects, perturbed angular correlation and Mossbauer studies 7−91564
metals and alloys, high power ion beam modified, struct. anal. methods 7−117985
Metglas 2605S-2, struct. relaxation, short range order parameter, Mossbauer hyperfine field distrib. 7−142619
mica, trioctahedral review of Mossbauer data 7−118894
milli-Kelvin temp. region meas. 7−113002
monazite sands, Fe minerals, hyperfine interaction charactn. 7−127198
montmorillonite, Mossbauer spectra, influence of cation substitutions on hyperfine parameters *(Chinese)* 7−132175
nanocrystalline materials, atomic struct. study 7−142675
Ni-Ga ordered β-phase alloys, constitutional and thermal defect form., Mossbauer spectra studies 7−83948
organosulphur-FeOCl intercalation compounds, spectroscopic and mag. props. 7−144050
Mossbauer effect continued
organotellurium cpds., NMR chem. shift correl. with Mossbauer quadrupole splitting 7−99595
organotin cpds., NMR chem. shift correl. with Mossbauer quadrupole splitting 7−99595
orthopyroxenes, spin-spin relax. of Fe(II) ions, Mossbauer spectra 7−92555
Permalloy foils, RF collapse effect from heat narrowing 7−118921
permanent magnet for Mossbauer spectrometer 7−108727
phenolic-Fe phthalimide mixed ligand complexes, hyperfine interactions 7−124942
plane parallel isotropic layer, noncoherent γ-quantum resonance scatt. calcs. 7−77442
polypyrrole containing ferrous cyanide anions, synthesis and spectroscopic charact. 7−77559
polypyrrole films, highly conducting, synthesis and Mossbauer spectroscopy charact. 7−78483
polypyrrole films grown on surface of polyvinyl alcohol-$FeCl_3$ complex 7−78485
polypyrrole-Fe complex system, film and powder synthesis, Mossbauer and IR spectra charactn. 7−118999
programmable function generator for Mossbauer spectrometer 7−128730
purple acid phosphatase, optical, EPR, Mossbauer and reson. Raman spectra, and mag. suscept. meas. 7−116995
quantum mechanics, new approaches to selected topics, book 7−95770
radiation monochromatization by coherent US oscillations 7−138359
Raman scattering of sound in sound in solids, Mossbauer spectroscopy 7−137475
random motion, time delayed Mossbauer spectroscopy study 7−138365
rare earth alloys, R_2Fe_{17}, cryst. field and easy axis direction 7−137866
rare earth alloys, $RFeAl_x$, mag. struct., Fe atom and moment location 7−131988
rare earth hydrides, $RFeAlH_x$, R=Sm,Gd,Dy-Tm, breakdown of Fe sublattice long-range mag. order 7−99447
reflection from Mossbauer mirror, surface hyperfine interactions 7−92562
RFI in collapse Mossbauer expts. 7−116034
scattering study using N_2 cryostat 7−102573
small energy shifts and weak lines, direct method for measurement *(Chinese)* 7−89312
spectrometer, remote microprocessor controlled 7−108719
spectrometer for meas. in high magnetic fields, design 7−102575
spectrometer motion controller 7−108730
spectroscopy, book 7−115695
spin glass ordering, hyperfine interaction techniques, data review 7−112797
staurolite, struct. determ. by Mossbauer spectroscopy 7−125566
staurolite, thermal oxidation, Mossbauer effect anal. 7−126428
steel, austenitic stainless, ion implantation, martensitic transformations, Mossbauer and TEM studies 7−78007
steel, austenitic stainless, strain induced martensite form., surface struct., Mossbauer spectra 7−86174
steel, Fe-Cr, martensitic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, Fe-Ni-Cr, ferritic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, maraging austenitic, Elinvar and mech. props. *(Russian)* 7−78059
steel, N ion implantation, surface struct., wear resist. 7−104775
superparamagnetic particles, hyperfine struct. of anomalous Mossbauer spectra 7−106060
superparamagnetic particles, magnetic hyperfine splitting 7−138288
surface hyperfine fields, Mossbauer, NMR and PAC studies, review 7−112267
time differential Mossbauer emission spectroscopy, new spectrometer 7−109595
time filtering using thermally relaxing acoustic field 7−118913
tobacco mosaic virus, H bonding study, ^{129}I Mossbauer spectra anal. 7−78749
transferrin hydration obs. using Mossbauer spectroscopy 7−133222
transition metal alloys, $Fe_{80-x}M_xB_{20}$, M=Cr,Mn,Co,Ni, metallic glasses, hyperfine mag. field, comp. and temp. depend., Mossbauer spectra meas. 7−77441
transition metal complexes with diene ligands, semiconducting organometallics 7−99066
tunnelling, friction role, muon SR and Mossbauer study 7−118908
ultra high vacuum electron spectrometer for 'DSCEMS' 7−116027
YbPd, mag. and nonmag. charge states, ^{170}Yb Mossbauer meas. 7−76852
Ag-M-Sn dil. alloys, (M=Rh, Pd, Pt), interaction of ^{119}Sn probe with impurities 7−106066
Ag(111)-Fe(110) epitaxial superlattices, growth and examination 7−113032
Al-^{57}Co ion implanted system, quadrupole splittings, Mossbauer studies 7−113005
Al-Fe, formed by interstitial implantation, in-beam Mossbauer study 7−83986
Al-Fe, liq.-quenched, lattice imaging anal. and Mossbauer spectroscopy 7−92999
Al-Fe dilute alloys, defect associations, Mossbauer studies 7−92557
$Al_7(Mn_{1-x}Fe_x)_2$, decagonal, X-ray diffr. and Mossbauer spectroscopy 7−69658
α-Al_2O_3:Fe^+, sapphire, ion implantation effects 7−91609
Al_2O_3-Fe_2O_3, lattice parameters, Mossbauer spectra 7−111478
Al_2O_3-SiO_2-Fe_2O_3 mullites, Fe-substituted, Mossbauer spectra and lattice parameters 7−70680
As-S vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
As-Se vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
Au-Sb dilute alloys, vacancy-solute interactions, ^{119}Sb Mossbauer studies 7−92558
$Au_{1-x}Fe_x$, reentrant ferromagnet, Mossbauer detection of magnetic clusters 7−77301
Ba ferrite-polymer composite, Mossbauer and mag. studies 7−125443
$BaCeO_3$:Dy, synthesis, impurity oxidation state, Mossbauer spectra 7−92553
$Ba_2EuCu_3O_{7.1}$, high T_c superconductor, electronic struct. of Eu, Mossbauer study 7−106069
$BaFe_{12-2x}Co_xM_xO_{19}$, M=Ti, Mo, ferrite particles, synthesis, characterisation 7−125466
$BaFe_{12}O_{19}$ ferrimag. oxide, ion irrad. damage processes and mag. hyperfine field orientation, Mossbauer study 7−91675
$BaFe_{12}O_{19}$, ferrite, prep. by liq. mix technique, charactn. 7−86111

Mossbauer effect continued
$BaFe_{12}O_{19}$ ferrites, hyperfine interaction parameters and mag. props., Mossbauer spectra meas. 7−99622
$BaFe_{12}O_{19}$, high energy heavy ion irradiated, threshold electronic energy loss for latent track formation 7−91666
$Ba_{0.5}La_{0.5}Fe_{1-x}Cu_xO_{2.75-(\delta/2)+\delta}$, struct., oxidation states, elec. props., chem. anal., X-ray diffr., electron diffr., Mossbauer spectra, mag. suscept. meas. 7−84891
$BaO-Fe_2O_3$ glass, roller quenching prep., heat treatment, crystallisation, EPR, Mossbauer spectra *(Japanese)* 7−69604
Be-Fe, technical purity, Fe containing phases, Mossbauer studies 7−142954
Bi, monocrystals, Debye-Waller factor meas., Mossbauer radiation Rayleigh scatt. 7−91753
$Ca_2Fe_{2(1-x)}Al_{2x}O_5$, magnetic properties, molecular field approximation analysis 7−132015
$CaFeSi_2O_6$, electric field gradient, asymmetry parameter, Mossbauer study 7−85496
$CaFe_3VO_8$, new mag. oxide, Mossbauer study 7−118915
Cd-Ni ferrite system, Mossbauer obs. 7−125580
$CdCr_2Se_4$, hyperfine fields, TDPAC, Mossbauer meas. 7−118432
$Cd_xCu_{1-x}Fe_2O_4$, x=0-0.3, struct. phase transition, Mossbauer study 7−142974
$Cd_{0.1}Ni_{0.9}Sn_yFe_{2-2y}O_4$ ferrite, Mossbauer study 7−125568
Co ions in organic coating, emission Mossbauer study 7−143939
Co-Cu compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Co-Ga ordered β-phase alloys, constitutional and thermal defect form., Mossbauer spectra studies 7−83948
Co-Sb(In), mag. hyperfine fields in vacancy-associated defect structs. 7−118447
Co-Sn dilute ion implanted alloy, Sn-vacancy complexes, Mossbauer studies 7−91639
$Co_{0.1}Fe_{0.9}Cr_2S_4$, mag. semicond., crystallographic and mag. props. 7−69666
$CoFe_2O_4$ ferrite epitaxial layer on $Zn_{0.2}Fe_{2.8}O_4$ particles, mag. props. 7−125482
$Co_xNi_{5/3-x}FeSb_{1/3}O_4$, ferrite, ^{57}Fe, ^{61}Ni and ^{121}Sb Mossbauer study 7−113001
$Co_{1-x}O$, polycrystalline, lattice dynamics, Mossbauer spectra study 7−85500
Co_2ScSn, Heusler alloy, mag. and Mossbauer studies 7−118433
$Co(ethylenediamine)_3Fe(CN)_6$, Fe-scale EFG, temp. depend. 7−125572
Cr, Mossbauer effect, evidence of third harmonic of spin-density-waves 7−125563
$Cr_{75}Fe_{25}$, reentrant spin-glass transition temp., Mossbauer studies 7−125408
$CsCoCl_3$:^{57}Fe, 1D antiferromagnet, Mossbauer spectra 7−85494
$Cs_2FeCl_5.H_2O$, crystallographic phase transition, Mossbauer investigation 7−142990
Cu complex, Cu ferrocyanides, valency effects, IR and Mossbauer spectra 7−135982
Cu-Fe, annealing behaviour, Mossbauer study of ion impurity thermal dynamics *(Chinese)* 7−92559
Cu-M-Sn dil. alloys, (M=Rh, Pd, Pt), interaction of ^{119}Sn probe with impurities 7−106066
$Cu_{69-x}Au_{30}Fe_{1+x}$, x=0,2, nuclear spin-lattice relaxation in single domain particles 7−118882
$CuCr_2Se_4$, hyperfine fields, TDPAC, Mossbauer meas. 7−118432
$Cu_xM_{1-x}(H_2O)_6\ SiF_6$, M=Zn,Fe,Ni, metastable phases, successive ordering of Jahn-Teller distortions 7−131285
$Dy\ (BrO_3)_3.9H_2O$, mag. behavior and cryst. field 7−92416
$DyFe_4B_4$, effective mag. fields, ^{57}Mossbauer spectra studies 7−92561
$DyRu_2Ge_2$, ^{161}Dy Mossbauer spectra 7−70686
$Dy_{1-x}Y_xCo_2$, ^{161}Dy and ^{57}Fe Mossbauer studies 7−138357
$^ADy(\gamma,\gamma')$, A=160,162,164, photoexcitation of low-lying collective states 7−109108
$Er(Fe_{1-x}Mn_x)_2$ quasibinary intermetallide, local at. distribs. 7−76087
$(Er_{1-x}Gd_x)_2Fe_{14}B$, spin-reorientation phenomena, ^{57}Fe Mossbauer spectra study 7−92434
$ErPd_2Sn$, hyperfine field, low temp. Mossbauer study 7−138362
Eu, antiferromagnetic ordering and intermediate valency, Mossbauer study 7−112766
Eu, Mossbauer study under high press. 7−113030
$EuBa_2Cu_3O_7$, high T_c supercond., local chem., vibr. behaviour, Mossbauer spectra study 7−113046
$EuBa_2Cu_3O_7$, superconducting Mossbauer study 7−125257
$EuBa_2Cu_3O_x$, high T_c supercond., electronic and mag. props. 7−143705
$Eu(Cu_{1-x}Au_x)_2Si_2$, ^{151}Eu Mossbauer studies 7−118896
$EuIr_2Si_2$, mixed valent cpd., Mossbauer studies 7−138366
$Eu_{0.08}MoO_3$, mag. props., Mossbauer spectra, sp. ht. meas. 7−92430
$Eu(Pd_{1-x}Au_x)_2Si_2$, valence transition, Mossbauer effect, X-ray diffr. meas. 7−92142
$EuPd_2Si_2$, mixed valence cpd., dynamic mag. susceptibility, neutron scatt., magnetisation, Mossbauer effect meas. 7−70264
$Eu_x(Rh_{1-y}Fe_y)_3B_2$, mag. behaviour, Mossbauer spectra 7−118897
EuXGa, X=Pd,Pt, mag. and Mossbauer study 7−118898
Fe (III)complex, iron (III) Schiff-base complex, struct. and electronic props. 7−112941
Fe alloys, metastable cryst. and amorphous, prod. by vapour quenching 7−92924
Fe, amorphous, pure, mag. props. and state nonuniqueness, Mossbauer studies 7−113045
Fe, amorphous, pure, polymorphism, mag. hyperfine field study 7−113023
Fe chelates of salicylhydroxamic and benzohydroxamic acids, Mossbauer study 7−125571
Fe colloidal fine particles, mag. moment, hyperfine field 7−112865
Fe complex, $[Fe(2\text{-pic-}ND_2)_3]Cl_2.EtoD$, spin crossover system, Lamb-Mossbauer f-factor, press. depend. 7−77430
Fe complex, charge transfer salt, struct., mag. susceptibility, ferromag. interaction 7−142714
Fe complex, $Fe(C_5Me_5)_2$ (TCNE), ferromag. props. 7−99426
Fe complex, mixed valence, lattice dynamics, ^2H NMR 7−92511
Fe complex, oxo centered acetate, mixed-valence, solvation, micromodulation 7−92136
Fe complex exhibiting two-step spin conversion, Mossbauer spectroscopy, mag. susceptibility, X-ray diffr. 7−112796
Fe epitaxial (110) film near MnF_2 interface, magnetic surface anomalies persistence obs. 7−132100
Fe ferrimagnetic oxide formed on heating nontronite, magnetisation, Mossbauer spectra and structure studies 7−77354

Mossbauer effect continued
Fe fine particles, prep. mag. props. 7−125477
Fe foils, annealed and plastically deformed, Mossbauer effect 7−138355
Fe II complexes, spin-crossover cpds., lattice dynamical behaviour from Mossbauer spectra 7−77431
γ-Fe metastable phase form in $Fe_{83}B_{17}$ amorphous alloy, Mossbauer spectroscopy and X-ray diffr. studies 7−124521
Fe, monolayer, (110), on W (110), ferromagnetic order, Mossbauer study 7−138300
α-Fe, Mossbauer spectra meas. at 0,10 T 7−102575
Fe, Mossbauer study, saturation magnetization and hyperfine field *(Chinese)* 7−99616
Fe, nanocrystalline, Mossbauer spectroscopy 7−70676
Fe, nitridation by pulsed excimer laser treatment under liquid NH_3, Mossbauer study 7−113751
Fe thermally evaporated layer on muscovite, struct. and quadrupole splitting, Mossbauer study 7−112268
Fe:^{119}Sn, high dose implantation, hyperfine fields, Mossbauer spectra 7−118422
Fe/Ti multilayers, amorphous alloy form. by ion beam mixing 7−76233
Fe-B amorphous alloys, liq.-quenched, struct. study by Mossbauer spectroscopy and high resoln. electron microscopy 7−76022
Fe-B metallic glass, crystn. kinetics study by X-ray diffr. and Mossbauer spectroscopy 7−76025
Fe-B metallic glasses, Mossbauer spectra, hyperfine parameters correls. 7−99630
Fe-C, high C martensite, Fe and C environments during ageing, Mossbauer spectrum *(French)* 7−132643
Fe-Co-B glasses, short range order, comp. depend. props. 7−97966
Fe-Cr, spinodal decomp. during ageing, nucleus internal field, Mossbauer spectra *(Japanese)* 7−100228
Fe-Cr, σ-phase, phase transform. *(French)* 7−86164
Fe-Cr (45.7 at.%), spinodal decomp., Mossbauer effect, internal mag. field distrib. *(Japanese)* 7−106063
Fe-Cr system, long term annealed, miscibility gap, Mossbauer spectra 7−138751
Fe-Cr-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7−83746
Fe-Cu, compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Fe-Cu, FCC alloys, sputtered, magnetic percolation 7−132039
Fe-Cu interface, ion beam mixing, Mossbauer spectra studies 7−76639
Fe-Mn-Al, mag. struct. investig. 7−86373
Fe-Mo mixed multilayers, ion induced, metastable phases, conversion electron Mossbauer spectra study 7−70683
Fe-N solid solutions, interstitial atom redistributions from second order Doppler shift *(French)* 7−125562
Fe-N-He system, ion implanted and α-particle irrad., precipitate form. 7−78027
Fe-Ni, N_2^+ ion implantation effect on corrosion in H_2SO_4 soln. 7−126296
Fe-Ni Invar, metastable modulated state, supermoment dynamics, Mossbauer spectrum study, review 7−70529
Fe-Ni Invar alloys, mag. ground state 7−85499
Fe-Ni multilayers, Fe ferromagnetism 7−99519
Fe-Ni-Si-B amorphous alloys, Ni magnetism, Mossbauer studies 7−113044
Fe-Ni-Si-C, mag. props., struct., Mossbauer obs. *(Russian)* 7−143858
Fe-P, effect of P on electronic struct. of Fe, Mossbauer spectra study 7−70180
Fe-polyethylene interface, ion-beam mixing, conversion electron Mossbauer study 7−124345
Fe-Sb(In), mag. hyperfine fields in vacancy-associated defect structs. 7−118447
Fe-SiO_2 granular solids, mag. props. 7−125476
Fe-Sn dilute alloy, s-p impurity element interaction, Mossbauer studies 7−131161
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7−112902
Fe-Te films, sputtered, struct., Mossbauer spectra 7−112134
Fe-V(Cr)(Mn)-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
Fe-Zr, amorphous, hydrogenation induced changes in mag. props., Mossbauer spectra, magnetisation meas. 7−99444
Fe-Zr amorphous alloys, ion beam mixed, mag. and elec. transport props. 7−113024
Fe-Zr glasses, mechanically alloyed, Mossbauer effect 7−132172
α-Fe-Zr impurity system, spin density perturbation *(Russian)* 7−77275
Fe-Zr metallic glasses, mag. props. study 7−118827
$Fe_x\ Hf_{1-x}$ glasses, mag. props. 7−118922
$Fe_{60}Al_{40}$ magnetic thin films, prep. and mag. props 7−143878
$Fe_{60}Al_{28}B_{12}$, melt spun alloy, Mossbauer study 7−113028
$Fe_{3-x}Al_xSi$ alloys, crystal struct., neutron diffr. and Mossbauer studies 7−131101
$Fe_3Al_2(SiO_4)_2$, almandine, Mossbauer effect obs. 7−125579
$Fe_{100-x}B_x$, amorphous, surface crystn., Mossbauer studies 7−76018
$Fe_{100-x}B_x$, amorphous alloys, crystallisation, Curie temp., mag. props., Mossbauer spectra *(Japanese)* 7−92425
$Fe_{60}B_{40}$ sputtered amorphous alloys, in-plane mag. texture, Mossbauer spectra studies 7−70614
$Fe_{80}B_{20}$, crystn. location by conversion electron Mossbauer spectroscopy 7−76023
Fe_xB_{100-x}, amorphous, struct., Mossbauer spectra 7−97942
$FeBO_3$ cryst., collective nuclear excitations, Bragg mode decay evolution, Mossbauer study 7−85502
Fe_3BO_6, Neel transition, study by Mossbauer diffr. method 7−138358
$Fe_{78}B_{13}Si_9$ amorphous ribbons, mag. moment distrib., Mossbauer study 7−113027
$Fe_{79}B_{16}Si_5$, amorphous, structural relax., crystallisation, Mossbauer spectra, elec. resist., X-ray diffr. *(Japanese)* 7−76004
$Fe_{78}B_{11}Si_9C_2$, amorphous to crystalline transformation, isothermal kinetics 7−142640
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7−106711
$Fe_{81.5}B_{13.5}Si_4C$, amorphous ribbons, annealing, struct., Mossbauer spectra, X-ray diffr. 7−106554
$Fe_{81}Bi_{3.5}Si_{3.5}C_2$, structural changes, effects of annealing, hydrogen and vacuum 7−142638
$Fe_{100-x}C_x$ amorphous alloys, sputtered, crystn. 7−76021

Mossbauer effect continued
$Fe_3C_{1-x}B_x$ orthorhombic system, hyperfine field distrib., Mossbauer study 7−113019
Fe_xCdPS_3 intercalation cpd., Mossbauer studies 7−125569
$Fe_{67}Co_{18}B_{14}Si$, metallic glass, annealing and crystn. behaviour 7−76030
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, struct., Mossbauer spectra, electrochemical props. 7−100450
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, hyperfine fields and phase separation, Mossbauer study 7−111893
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7−106711
$Fe_{67}Co_{18}B_4Si_1$, structural changes, effects of annealing, hydrogen and vacuum 7−142638
$Fe_{1-x}Co_xCr_2S_4$ cryst. struct. and mag. props., X-ray diffr. and Mossbauer spectra studies 7−91539
$Fe_{3-x}Co_xSi$, Mossbauer effect and mag. props. 7−132174
$Fe_{72}Co_3Si_{15}B_{10}$, glassy alloy, Mossauer, elec. and mag. studies 7−99632
$Fe_{85-x}Cr_xB_{15}$ metallic glasses, mag. hyperfine field distrib., Mossbauer spectra 7−99631
$Fe_{80-x}Cr_xB_{14}Si_6$, amorphous, Mossbauer spectra, effects of Cr content and temp. 7−99623
FeCrCoMo two-phase alloy, hyperfine field distrib., Mossbauer spectra study 7−137877
$Fe_{74.7}Cr_{3.8}P_{8.7}C_{10.7}Si_{1.9}$, melt spun amorphous ribbons, mag. props. 7−132076
$Fe_{80-x}Cr_xSi_8B_{12}$ amorphous alloys, hyperfine parameters, Cr addition effects, Mossbauer study 7−112265
$(Fe_{100-x}Cr_x)_{99}Sn$, ^{119}Sn-site hyperfine field changes, Mossbauer effect spectra 7−92134
$Fe_{0.25}Cu_{0.25}Co_{0.5}Cr_2S_4$, cryst. struct., mag. props. *(Korean)* 7−143416
$Fe_{1-x}Cu_xCr_2S_4$, superlattices, struct., cation distrib., hyperfine interaction props., neutron diffr., Mossbauer spectra 7−98061
$FeF_3(HF)_x$ crystallisation to rhombohedral and hexagonal phases, X-ray diffr. and Mossbauer spectra studies 7−83697
FeF_3, amorphous mag. insulator, hyperfine and exchange field distribs. 7−113031
FeF_3 crystallisation to rhombohedral and hexagonal phases, X-ray diffr. and Mossbauer spectra studies 7−83697
FeF_3, pyrochlore form, magnetic struct., Mossbauer study 7−143941
$FeF_3.3H_2O$, mag. ordering of dimorphic phases, Mossbauer studies 7−113037
$Fe_2F_5.7H_2O$ layers on Fe, Mossbauer spectroscopic study 7−77439
$FeF_3.xHF$, amorphous, Mossbauer spectra, mag. suscept. meas. 7−125583
$Fe(H_2O)_6(NH_4)_2(SO_4)_2$, Mossbauer and other expts. on ferrous ion, ligand field model 7−105498
Fe(II) complex, $[Fe_xM_{1-x}(2\text{-pic})_3]Cl_2.MeOH$ (M=Co,Zn), high spin⇌low spin transition 7−99453
$Fe_{100-x}M_x$ (M=B, C, Al, Si, P), rapidly quenched alloys, Mossbauer effect studies 7−113038
$Fe_{8-x}M_xB_{20}$ (M=Cr, Co, Ni), amorphous foils, temp. depend. of mag. props. 7−132166
$Fe_{82-x}M_xB_{18}$ amorphous ribbons, mag. props. and atomic struct. studies 7−99507
$Fe_{0.87}Mg_{0.13}SiO_3$, hyperfine parameters, Mossbauer spectra 7−132176
$Fe_xMn_{1-x}Cl_2$ spin glass, Mossbauer spectra studies 7−118927
FeMnP, hyperfine interaction, mag. struct. 7−118438
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
$Fe_xMn_{1-x}WO_4$, wolframite, Mossbauer hyperfine interactions 7−125570
$Fe_{1-x}Mo_x$, metastable BCC and amorphous, produced by vapour quenching, mag. props. 7−77255
FeNi complexes, prep. and struct. anal. 7−98092
$Fe_{50}Ni_{50}$, in meteorites, shock-induced effects, Mossbauer study 7−145902
$Fe_{50}Ni_{50}:N_2^+$, ion implantation effect on oxidation behaviour 7−119405
$Fe_{40}Ni_{40}B_{20}$ amorphous alloys, aging, Mossbauer and mag. study 7−132167
$Fe_{40}Ni_{40}B_{20}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{40}Ni_{40}B_{20}$, neutron irrad. and annealed, Mossbauer spectroscopy studies 7−91661
$FeNiCrO_4$ system, entropic ferrimagnetism, Mossbauer and X-ray studies 7−85501
$Fe_{82-x-y}Ni_xMo_yB_{16}Si_2$ amorphous alloys, hyperfine interactions, Mo effects, Mossbauer study 7−112266
$Fe_{39}Ni_{39}Mo_4Si_6B_{12}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass ribbons, laser beam and conventional annealing, Mossbauer studies 7−86231
$Fe_{15}Ni_{60}Si_{10}B_{15}$ amorphous alloy, Debye temp., quadrupole splitting temp. depend., Mossbauer study 7−70678
$Fe_{40}Ni_{40}Si_{13}B_7$ amorphous ferromagnet, temp. depend. of mag. props. 7−132165
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
$Fe_{0.8}Ni_{0.2}TiH_{1.24}$, H diffusion, Mossbauer studies 7−84362
$Fe_{1-y}Ni_yTiH_x$, H-diffusion, Mossbauer spectroscopy study 7−118162
FeNiZr glassy and crystallized alloys, Mossbauer and mag. studies 7−85507
$Fe_{1-\delta}O:Al^{3+}$ stabilized system, hyperfine interactions, Mossbauer study 7−118916
γ-Fe_2O_3 recording particles, high-field magnetism 7−85368
Fe_2O_3-Fe_3O_4 iron oxide powder, increasing coercivity with aging 7−125483
α-Fe_2O_3-SnO_2 fine particles, residual surface SO_4^{2-} ions 7−104670
$(Fe_2O_3)_x$-$(Na_2O\text{-}2V_2O_5)_{1-x}$ glass, room temp. Mossbauer study 7−125573
Fe_3O_4, film, surface magnetisation 7−112868
Fe_3O_4, high press. Mossbauer study 7−113039
Fe_3O_4, magnetite, low temp oxidation to maghemite, Mossbauer study 7−86392
Fe_3O_4, magnetite, rapid electron exchange by cationic vacancies *(French)* 7−76947
α-FeOOH, Al-substituted geothites, mag. ordering, effect of crystallinity 7−118798
α-FeOOH, electric field gradient 7−106070
$Fe_3O(acetate)_6(H_2O)_3Cl.6H_2O$, triangular cluster spins, magnetic ordering 7−132025
$Fe_{100-x}P_x$, amorphous, surface crystn., Mossbauer studies 7−76018
$Fe_{1.4}Ru_{1.6}Si$ reentrant spin glass, magnetisation and Mossbauer studies 7−112801
FeS:Mn, M=3d transition metal, mag. and crystallographic transitions, Mossbauer, X-ray studies 7−132006
$FeSe_{0.8}Te_{0.2}$, X-ray crystallography, Mossbauer study 7−131109

Mossbauer effect continued
$FeSe_{1-x}Te_x$, ^{57}Fe Mossbauer spectra, mixed struct. *(Korean)* 7−138363
$Fe_{90-x}Si_xB_{10}$, amorphous, Mossbauer spectra, quadrupole splitting distrib. 7−85506
$Fe_{78}Si_9B_{11}C_2$, metallic glasses, structural defects, Mossbauer study 7−118904
$FeSn_2$ low temp. canted mag. struct., Mossbauer and neutron diffr. meas. 7−99411
FeTi activated powders, H absorption, Mossbauer spectra studies 7−118272
FeTi, activated surface layers, H_2 absorption, conversion electron Mossbauer spectroscopy 7−99621
$Fe_{1-x}Ti_x$, amorphous alloys, prod. by vap. quenching, thermal stability 7−83671
$FeTiH_x$ and $FeTi_{1.15}H_x$, hydriding behaviour, ease of activation, β-phase skipping 7−98469
$Fe_{73}Ti_{27}H_x$ amorphous alloys, mag. props., Mossbauer studies 7−143942
Fe_xTiSe_2 electronic characts. and cryst. dimensionality, Mossbauer, mag. suscept. and X-ray diffr. meas. 7−142725
$Fe_{0.875}V_{0.125}$ disordered alloys, hyperfine field and T_c suppression, Mossbauer study 7−113020
$Fe_{99.5}V_{0.5}$ alloys, internal oxidation and precipitation, spin echo and Mossbauer studies 7−144617
$Fe_{84-x}V_xB_{16}$ amorphous alloys, crystallisation 7−131027
$(Fe_{100-x}V_x)_{99}Sn$, ^{119}Sn-site hyperfine field changes, Mossbauer effect spectra 7−92134
$FeZr_3$, amorphous, local order, mag. perturbed ^{57}Fe Mossbauer spectra 7−99628
Fe_xZr_{100-x}, amorphous, Mossbauer spectra, isomer shift, quadrupole splitting, conc. depend. 7−99629
^{57}Fe ionisation states in rare gas matrices, Mossbauer studies 7−122422
GaAs:Sn, metalorganic VPE grown, Mossbauer spectroscopy 7−143938
GaAs:Te, defect struct. around Te implants, solid phase epitaxial regrowth 7−98205
GaAs:Te, lattice site location, electronic struct. 7−118408
$Ga_{0.4}Fe_{0.6}NiCr_{1-y}Al_yO_4$ mixed spinel ferrite, cation distrib. and entropic disordering, Mossbauer study 7−112740
$Ga_{0.6}Fe_{0.4}NiCrO_4$, anomalous Mossbauer lineshapes and AC susceptibility 7−99425
$Ga_{0.8}Fe_{0.2}NiCrO_4$, mixed spinel ferrite, pinned and entropic disordering 7−92462
$Ga_xFe_{1-x}NiCrO_4$, coexistence of frustration and ferrimagnetism 7−85495
$Ga_xFe_{1-x}NiCrO_4$ mixed spinel, magnetic behaviour and site occupation studies 7−99419
$GdBa_2(Cu_{0.94}Fe_{0.06})_3O_{9-\delta}$, mag. ordering below supercond. transition temp. 7−143799
$GdFe_{4+x}Al_{8-x}$, Fe atom site occupancy, magnetic phases 7−132026
$Gd_3Fe_5O_{12}$, Mossbauer studies of $^{157}Gd(n,\gamma)^{158}Gd$ reactions *(Russian)* 7−113041
GdGG:Fe^+, single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
$GdMn_2Si_2$, mag. ordering, X-ray, magnetisation and Mossbauer studies 7−138224
Gd_2O_3, Mossbauer studies of $^{157}Gd(n,\gamma)^{158}Gd$ reactions *(Russian)* 7−113041
$Gd_xY_{50-x}Ag_{50}$ amorphous and crystalline alloys, hyperfine interactions, Mossbauer study 7−112264
$Ge_{2-2x}Sn_{2x}S_3$, ternary chalcogenide, glass-forming tendency, Raman and Mossbauer obs. 7−85719
$GeSnSe_3$ glass, exception to Ioffe-Regel rule, scanning calorimetry, Mossbauer spectra and molar vol. meas. 7−83725
$Ge_{1-x}Sn_xSe_2$ glasses, phase separation 7−83724
Hg-Fe ferrofluid, Mossbauer spectra studies 7−77435
I_2, isomer shift under high pressure 7−70685
InSb:Sn, ion implanted, defect structs., Mossbauer study 7−99625
$In_2Sn_3S_7$ cryst. struct. determ., Mossbauer spectra and X-ray diffr. studies *(French)* 7−124217
$K_2FeF_5.H_2O$, low temp. Mossbauer spectra study 7−113029
KH_2PO_4:$^{57}Fe^{3+}$, isomer shift, quadrupole split, Mossbauer study 7−143936
$K_{0.3}MoO_3$:Fe, CDW state, Mossbauer studies 7−118928
K_3MoO_3:Fe, CDW state, EPR, Mossbauer and UPS studies 7−98842
$K_9U_6O_{22.5}$, cryst. struct., ^{237}Np Mossbauer spectra, isotypic Np phases *(French)* 7−98070
$LaCoO_3$-$LaFeO_3$ solid soln. system, spin state of Co^{3+}, mag. suscept., Mossbauer spectra 7−125582
La_2CuO_4 high T_c supercond., antiferromag. transition, suscept. and elec. resist. meas. 7−125335
$La_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
$LaNi_{5-x}Fe_xH_y(D_y)$,thermodynamic, structural and mag. props. 7−98468
$Li_{1.125}Ti_{1.25}Fe_{0.625}O_4$ spinel ferrite, transverse spin component, relax. 7−85351
$Li_{0.5}Cr_xFe_{2.5-x}O_4$, Fe^{2+} to Fe^{3+} electronic transfer composition depend., Mossbauer reson. spectra anal. *(Russian)* 7−76857
$LiEu_2DyO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiEu_2GdO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiEu_2YO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$Li_{0.5}Fe_{2.5}O_4$:Sn, Mossbauer spectra, hyperfine mag. fields study 7−132177
Li_xFePS_3 intercalation cpd., Mossbauer spectra 7−70682
Li_xFePS_3, intercalation cpds., band struct., Mossbauer studies 7−131537
Li_xFeS_2 intercalation system, cryst. struct., Mossbauer and electrochem. studies 7−142720
$Li_2Fe_3VO_8$, new mag. oxide, Mossbauer study 7−118915
$LiH_x(D_x)$, diffusion and latt. distortions, Mossbauer studies 7−84363
$LiNbO_3$-Fe_2O_3, amorphous, struct 7−83676
Li_xNiPS_3 intercalation cpds., band struct., Mossbauer studies 7−131537
Li_xTaSe_2, intercalation cpd., charge transfer obs. by Mossbauer spectroscopy 7−99615
LiZnTi ferrite, hyperfine field, relaxation effect, Mossbauer study 7−124941
MFe_2O_4 ferrites (M=Mg, Mn, Fe, Co, Ni, Zn), ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
$MgAl_{2-x}Fe_xO_4$, spinel ferrite, O self-diffusion rel. to Debye temp., Mossbauer spectra 7−111952
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
MnP, mag. struct. as probed by ^{57}Fe, Mossbauer spectra meas. 7−99410

Mossbauer effect continued
MnZn Ferrite formation, Mossbauer study 7−138360
MoCo dilute alloy, interstitial config, and dynamics under irrad., Mossbauer study 7−98123
NH_4MnCl_3:Fe perovskite, Mossbauer and X-ray study of ^{57}Fe impurity 7−70684
$Na_2Fe(CN)_5.2H_2O$, Mossbauer γ-quanta, electronic and nucl. reson. scatt. 7−143944
$NaFeF_4$, amorphous mag. insulator, hyperfine and exchange field distribs. 7−113031
$Na_2O(Fe_{0.5}Al_{0.5})_2O_3$, Mossbauer effect study of spin fluctuation 7−85491
Nd-Fe-B alloys, Mossbauer spectra *(Chinese)* 7−143935
$Nd_{2-x}Dy_xFe_{14}B$, ^{161}Dy and ^{57}Fe Mossbauer effect studies 7−138356
$Nd_{15}Fe_{17}B$, magnetisation, effect of H_2 absorption 7−92459
$Nd_2Fe_{14}B$, crystallographic and Mossbauer study, comparison with $Y_2Fe_{14}B$ 7−69659
$Nd_2Fe_{14}B$ intermetallic cpd., complex Mossbauer spectrum anal. 7−118925
$Nd_2Fe_{14}B$ intermetallic cpd., Mossbauer effect study, temp. depend and spin reorientation 7−118926
$Nd_2(Fe_{1-x}Co_x)_{14}B$, ^{57}Fe Mossbauer study 7−113034
$(Nd_2Fe_{1-x}Co_x)_{14}B$, mag. hyperfine fields between 100 and 780 K 7−98943
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer spectra study, 100-700 K 7−77434
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033
Ni, grain boundaries, Co atoms, Mossbauer study 7−111583
Ni spherical particles, surface hyperfine magnetic field, Mossbauer study 7−92133
Ni-In ion implanted alloys, In-vacancy complexes, channelling and Mossbauer studies 7−91638
Ni-Sb(In), mag. hyperfine fields in vacancy-associated defect structs. 7−118447
Ni-Sn, dilute ion implanted alloy, Sn-vacancy complexes, Mossbauer studies 7−91639
Ni-Ti, amorphous phase crystallisation by ion-implantation 7−91616
Ni_3Fe, ordered, electronic and mag. struct. studied by Mossbauer spectroscopy 7−106065
Ni_3Fe, radiation damage, Mossbauer investig. 7−131195
Ni_xFe_{1-x} evaporated thin films, structural and mag. props. studies 7−98736
$Ni_{80-x}Fe_xB_{16}S_4$ glassy alloy, short range order and mag. props. 7−85324
$Ni_{0.985}Fe_{0.015}Cr_2S_4$, mag. hyperfine, quadrupole interaction, Mossbauer, X-ray diffraction 7−132173
$Ni_{0.01}Fe_{0.99}S$, crystallographic and spin-flip transitions, impurity temp. hysteresis effects, Mossbauer study 7−125578
^{61}Ni, isomer shift calibration by ^{57}Ni electron capture lifetime meas. 7−132169
$NpAl_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899
$NpAl_2$, press. -depend. hyperfine interactions, Mossbauer studies 7−77443
NpAs high press. mag. props., Mossbauer studies 7−77262
NpAs, high pressure Mossbauer studies of magnetic actinide systems 7−118899
NpAs, hyperfine interactions, Mossbauer spectra, high press. study 7−77437
Np_3As_4 magnetic behaviour, Mossbauer spectrum interpretation with cryst. field model 7−70679
$NpCo_2Si_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899
$NpOs_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899
PdFe dilute alloy, spin glass transition, relax., Mossbauer studies 7−112831
$(Pd_xPt_{1-x})_3Fe$ reentrant spin glass, magnetisation and Mossbauer studies 7−112800
$PuSb_{1-x}Te_x$, X=0-0.4, hyperfine field, mag. props., ^{121}Sb Mossbauer spectra 7−77436
$R_2Fe_{14}BH_x$, (R=Dy, Ho, Y), spin rotation, Mossbauer study 7−113025
$Ru_xFe_{80-x}B_{20}$ amorphous alloys, high field magnetisation and ^{57}Fe hyperfine field studies 7−112849
Ru_xFeGa cluster spin glass, ^{57}Fe Mossbauer and bulk magnetisation studies 7−112799
RuFeSi melt-spun cluster spin glass, spin dynamics, Mossbauer studies 7−112802
Sb, electronic struct., ^{121}Sb isomer shift, LMTO calc. 7−106064
Sb, monocrystals, Debye-Waller factor meas., Mossbauer radiation Rayleigh scatt. 7−91753
Si:Co, B(P), impurity solubility, diffusion and ion pairing at 700°C 7−111970
Si:Co, ion implant lattice sites 7−76167
Si:Co,P, impurity distrib. after P diffusion gettering, Mossbauer spectra study 7−111640
a-Si:Fe films, ^{57}Fe impurity states, Mossbauer spectra 7−70677
a-Si:H, Fe films, ^{57}Fe impurity states, Mossbauer spectra 7−70677
Si/Fe interfaces, ion beam mixing, Mossbauer spectra studies 7−76238
SiO_2, quartz, radiation monochromatization by coherent US oscillation 7−138359
$SmFe_4B_4$, effective mag. fields, ^{57}Mossbauer spectra studies 7−92561
Sn, electron configuration, Mossbauer effect 7−76799
Sn^{4+} introduced into corrosion protective coatings by cathodic polarisation, emission Mossbauer studies 7−99618
$SnBi_2Te_4$, Sn and Bi atom distrib., Mossbauer studies 7−124232
SnH_4, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
SnO_2, chemical bonding, ion irradiation effects CEMS study 7−142690
SnTe-Bi_2Te_3, metal atom ordering, Mossbauer investig. 7−83877
SnX_4 (X=F, Cl, Br, I), Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
^{119}Sn Mossbauer isomer shifts 7−85498
^{119}Sn, P-odd effect, emission Mossbauer spectrum, orientation relative to external magnetic field 7−116261
$SrFeO_{3-y}$, first order transition, Fe mixed valence, Mossbauer spectra study 7−92560
$SrFe_{12}O_{19}$ ferrites, hyperfine interaction parameters and mag. props., Mossbauer spectra meas. 7−99622
$SrFeVO_6$, perovskite-like, struct. and mag. props. 7−143789
$SrMn_2Fe_{16}O_{27}$ hexaferrite, mag. props., phase formation 7−138231
$Sr_2Zn_2Fe_{28}O_{46}$, hexagonal ferrite, mag. and Mossbauer study 7−112853
Ta-Co system, segregation of Co atoms at Ta grain boundaries, Mossbauer spectra study *(Russian)* 7−106062
$Ta_{1-x}Fe_xS_3$, 1D, CDW, Mossbauer studies 7−125577

Mossbauer effect continued
$TbFe_2$ polycrystalline films, magnetisation reversal characts. *(Russian)* 7−70603
TeO_2-Fe_2O_3-R_2O_3, R=La, Dy, Sm, Eu or Gd, rare earth tellurite glasses, phys. props. 7−84882
tetramethyl tin, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
$Th_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
TiFe amorphous alloy thin films, heat treatment effects 7−95693
Tm_2Co_{17}, cryst. field effects, Mossbauer study 7−118924
Tm_2Fe_{17}, cryst. field effects, Mossbauer study 7−118924
$Tm_2Fe_{14}B$, ^{169}Tm Mossbauer spectroscopy, hyperfine fields and quadrupole splittings 7−138361
$Tm_{1-x}Lu_xCu_2Si_2$, mag. props. and sp. ht. studies 7−118778
U_6Fe, supercond. transition, ^{57}Fe Mossbauer studies 7−92554
$U(Fe_{1-x}Co_x)_2$ alloys, ordering temp., mag. moments and hyperfine field, ^{57}Fe Mossbauer study 7−113018
$U(Sn_{1-x}Pb_x)_3$, Mossbauer study of mag. state 7−113040
V-Fe:H, effect of H absorption on electronic and structural props. 7−105394
$V_{1-y}Fe_yH_x$ alloys, 3d-like electron localisation and charge transfer 7−76822
$VH_x(D_x)$, Mossbauer spectra, TDPAC studies 7−99620
V_2O_5-BeO-Fe_2O_3 amorphous semicond., struct., Mossbauer, EPR studies 7−124107
YAG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
$Y_3Al_xFe_{5-x}O_{12}$, Mossbauer effect study of spin fluctuation 7−85491
$Y_{1.8}Er_{0.2}Fe_{14}B$, Mossbauer study of spin reorientation 7−113026
$Y_{100-x}Fe_x$ metallic glass ribbons, H absorption 7−84302
Y_2Fe_{17}, Fe hyperfine field and magnetisation anisotropy, Mossbauer studies 7−138222
$Y_2(Fe_{1-x}Al_x)_{14}B$, struct. and mag. props., Mossbauer study 7−113036
$YFeAlH_x$, breakdown of Fe sublattice long-range mag. order 7−99447
$Y_2Fe_{14}B$, crystallographic and Mossbauer study, comparison with $Nd_2Fe_{14}B$ 7−69659
$Y_1(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033
$Y_3Fe_{4.2-x}Ga_{0.8}Sc_xO_{12}$ garnet single cryst., Sc ion distrib. 7−131102
$Y_3Fe_5O_{12}$, high energy heavy ion irradiated, threshold electronic energy loss for latent track formation 7−91666
YFe_3TiO_8, new mag. oxide, Mossbauer study 7−118915
$(Y_{0.97}Hf_{0.03})Fe_2$, hyperfine interactions, influence of hydrogenation 7−99626
YIG, amorphous mag. insulator, hyperfine and exchange field distribs. 7−113031
YIG ferrimag. oxide, ion irrad. damage processes and mag. hyperfine field orientation, Mossbauer study 7−91675
YIG:Fe, implantation, thermal annealing and solid phase reepitaxy, conversion electron Mossbauer spectroscopy 7−142801
YIG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
$Y_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
Y_2O_3-Fe_2O_3, hyperfine interactions, Mossbauer effect 7−125565
$YbCo_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$YbFe_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$Yb_{1-x}In_xCu_z$ valence phase transition studies 7−98948
YbP, Mossbauer evidence for mag. ordering 7−77438
Yb_xPd_{1-x} amorphous alloys, composition-induced valence change 7−76842
$ZnAl_xFe_{2-x}O_4$, polycryst., Mossbauer effect study 7−125567
$Zn_xNi_{1-x}Fe_2O_4$, Mossbauer effect study of spin fluctuation 7−85491
β-Zr-Fe alloys, anomalously fast diffusion of Fe, Mossbauer study 7−105100
Zr-Fe system, heat treatment, plastic deform., phase transform. 7−71176
Zr-Fe-Co-Cu amorphous alloys, Mossbauer studies 7−85505
ZrF_4-LaF_3-BaF_2-AlF_3-FeF_3 glasses, spectral investigations 7−99825
Zr_xFe_{1-x}, amorphous, crystallisation, positron annihilation, Mossbauer spectra 7−97965

Mossbauer spectra *see Mossbauer effect*
motion control *see position control*
motion picture photography *see cinematography*
motor industry *see automobile industry*
motors, electric *see electric motors*
motors, hydraulic *see hydraulic motors*
Mott insulator *see localised electron states*
Mott transition *see metal-insulator transition*
movements, atmospheric *see atmospheric movements*
moving coil microphones *see microphones*
MPU *see microprocessor chips*
MQW lasers *see semiconductor junction lasers*
MR imaging (biomedical) *see biomedical NMR*
MRP *see operations research; production control*
MRP II *see operations research; production control*
MS SCF calculations *see Xalpha calculations*
MS Xalpha calculations *see Xalpha calculations*
MTF (optical) *see optical transfer function*
μ-mesons *see muons*
mud *see sediments*
muffin-tin potential
covalent crystals with Sb, electronic struct., ^{121}Sb isomer shift, LMTO calc. 7−106064
cubic metals EFG due to vacancies and interstitials 7−118450
d-metal compounds, electronic structs., rel. to ideal crysts., defects and impurities 7−143319
d-state metals, cohesion at high press. 7−104628
diamond, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
diamond, XANES spectra, multiple scatt. approach 7−99978
FeS, tetrahedral, electronic band struct. 7−143338
metals, residual resistivity of defects 7−84816
molecular muffin-tin pot. and electron density, Xα-scatt. wave calcs. 7−109764
molecule, electron scatt., shape reson., S matrix poles, multiple scatt. Xα calcs. 7−103391
nonmuffin-tin corrections of the SCF X_α-SW method 7−131523
polyacetylene, self-consistent electronic struct., π electrons 7−76731

muffin-tin potential continued
random alloys, electron states, canonical description, appl. to Ag_xPf_{100-x} 7−70182
semiconductors, bonding and ionicity 7−124162
soft K edge EXAFS spectra, focusing effects, electron wave sphericity, muffin-tin pot. model calcs. 7−70936
transition metal carbides, energy band structure and chemical bonds *(Russian)* 7−124851
BaTe, optical response and band struct. under press. 7−98803
CO^+, semiempirical pot. curves, MS-Xα theory 7−81973
CaO, theory of F-centres 7−92115
CdTe, electronic struct. and positron states at vacancies 7−98879
Ce monopnictides, electronic structures 7−76740
CoAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
CoGa, antisite defects, electronic struct., LMTO method, magnetism 7−98922
CoH electronic props., self-consistent spin-polarised LMTO calcs. 7−84670
CsCl, XANES analysis, multiple scattering study 7−138550
Cu, single crystal, core level X-ray photoelectron spectra, quantum mechanical scattering theory calcs. 7−85939
Cu, thermodynamics, band struct. effects 7−137505
Fe, BCC epitaxial layers on Cu (100), surface electronic behaviour 7−144238
FeAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
$FeGe_2$, electronic structure, LMTO method calc. *(Russian)* 7−124840
$FeNi_3$, spin-polarised bands via the recursion method 7−125302
GaAs, electronic struct. and positron states at vacancies 7−98879
Ge, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
Ir, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
KCl, XANES analysis, multiple scattering study 7−138550
La_2CuO_4, electron struct., ground-state props. and photoemission spectra 7−138588
La_2CuO_4 high T_c supercond., electronic struct., LMTO-ASA method calcs. 7−118358
MgO, theory of F-centres 7−92115
MnH_x, binding energy, energy bands and paramagnetism 7−69642
Mo, ion bombardment, emission spectra of Mo_2 and MoO complexes 7−92813
Mo, shock Hugoniot calcs. and shock vel.-particle vel. relations 7−104910
N_2^+ semiempirical pot. curves, MS-Xα theory 7−81973
$NaWO_3$, electronic band struct., self-consistent semirelativistic LMTO calcs. 7−105400
NbCe superlattice systems, total energy, interface effect, LMTO band calc., density functional theory 7−77046
$Nb_{3+x}Sn_{1-x}$, supercond. non-stoichiometric, electronic struct. 7−105383
Ni atomic cluster, topologically disordered system, electronic density of states, recursive scattered-wave approach 7−76727
Ni, liquid, effective-atom fluctuations, cluster study 7−137789
Ni, thermodynamics, band struct. effects 7−137505
NiAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
NiAs, valence band density of states, photoemission data and LMTO calc. 7−98771
NiH_x, binding energy, energy bands and paramagnetism 7−69642
P, simple cubic metal, electronic band struct. and T_c calcs. 7−137794
Pd, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
Pd, dilute interstitial alloy with H, B or C, electron scattering, interstitial Green fn. application 7−143457
Pd_3FeH, electronic structure and mag. props. 7−124845
Pr, self-consistent band struct. under press 7−143330
Pt, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
PuS(Se)(Te), equations of state, self-consistent energy band calcs. 7−76765
Re, Fermi surface and electronic struct. under press. *(Russian)* 7−124835
Rh, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
Sb, electronic struct., ^{121}Sb isomer shift, LMTO calc. 7−106064
Si, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
Si, electronic struct. and positron states at vacancies 7−98879
Sn, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
^{119}Sn Mossbauer isomer shifts 7−85498
$SrCl_2$, XANES analysis, multiple scattering study 7−138550
SrTe, optical response and band struct. under press. 7−98803
TaS_2 intercalation cpds., 2H polytype, electronic structs. 7−137775
Ti-Cu, amorphous alloys, electronic density of states 7−92055
TiAl alloy, electronic struct. and atomic ordering, LMTO and CPA calcs. *(Russian)* 7−76750
UFe_2 (Co_2) (Mn_2), Laves phase, electronic struct., LMTO calcs. 7−76761
$UIr_3(Pt_3)(Au_3)$, XPS spectra, single site approx. calcs. 7−77757
UPt_3, Fermi surface within local-density approx. 7−98783
Y-Ba-Cu-O high T_c supercond., electronic struct., LMTO-ASA method calcs. 7−118358
$YBa_2Cu_3O_7$, electron struct., ground-state props. and photoemission spectra 7−138588
ZrV_2, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
$ZrZn_2$, self-consistent electronic structures studies of magnetism and superconductivity 7−112586

multi-access systems
nearly geostationary satellites, diurnal error bound in predicted ranges 7−79802

multi-user systems *see multi-access systems*

multichannel analysers *see pulse height analysers*

multicriterion problems *see operations research*

multidimensional digital filters
see also two-dimensional digital filters
3-D digital filtering of biomedical images from computerised axial tomography 7−93924
recursive digital filters, stabilisation method 7−127507

multidimensional systems
advective-diffusive systems, multidimensional time dependent, FEA convergence analysis 7−142247

multidimensional systems continued
bulb turbine flow computation, quasi-3D method 7−142386
space transformation in the simulation of multidimensional random fields 7−139807

multifilamentary superconductors *see composite superconductors*

multigroup diffusion *see neutron diffusion*

multimeters
DMMs for laboratory use, development trends *(German)* 7−73329

multiperipheral models
No entries

multiphase flow
see also two-phase flow
compound parabolic concentrator for single and multiphase flows, thermo-optical anal. 7−71576
conference, The Hague, Netherlands (May 1987) 7−95096
gas-liquid-solid fluidised bed, mass transfer charcts. 7−83325
gas-liquid-solid systems with cocurrent upward gas flow, operating regimes 7−142355
incompressible multiphase particulate suspensions, mechanics and thermodynamics 7−94311
multiphase drops, growth and collapse heat transfer study 7−123716
multispecies solid-gas flows, wall friction modeling 7−69251
one-dimensional, heat and mass transfer *(German)* 7−69252
pipe flow, multiphase, exptl. study 7−142380
plasma, self-gravitating, effects of thermal cond. and finite Larmour radius on magneto-gravit. stability 7−127702
porous materials, multiphase processes calc. 7−130790
in porous media, parametric model 7−127310
powder, loosely compacted, flow charcts., variable relative humidity, bulk density determ. 7−92908
PWR transient three-phase nonequilibrium nonhomogeneous flow, 1D slip model 7−67890
Saffman-Taylor finger width at low interfacial tension 7−97612
simulation, real-time, conservation eqn. appl. 7−123729
sphere, motion in polar fluid, effect of spherical containing walls 7−69215
spherical particles size and velocity meas. 7−123806
stratified multiphase flow, finite-element simulation 7−111056
three-phase fixed and fluidised beds, solid-liq. mass transfer 7−104337
three-phase fluidised bed, mass transfer between solid particles and liq. 7−111067

multiphonon process *see phonon-phonon interactions*

multiphoton spectra
see also two-photon spectra
^{139}La, detection in presence of ^{138}Ba, reson. multiphoton ionisation mass spectra 7−93461
acetylene, ungerade excited states, vibr., photoelectron spectra 7−122611
actinides, trace amounts detection, reson. multiphoton ionisation and TOFMS anal. 7−90066
adiabatic theory of multiphoton ionisation, ionisation of isolated level 7−116926
alkali metal, atoms, core states, multiphoton transition probabilities, model pot. calcs. 7−68269
aniline, multiphoton dissociation, reaction rate const., TOF spectra 7−139032
arene molybdenum tricarbonyls, multiphoton dissoc./ionis., intramol. vibr. relax. effect 7−129822
atom, coherent trapping of populations in a three-level two-mode model with multiphoton transitions 7−74548
atomic many-photon processes, squeezed light participation 7−141826
atoms, above-threshold ionisation, final-state effects 7−96619
atoms, above-threshold ionisation, pondermotive pot. effect 7−96622
atoms, above-threshold-ionisation electron spectra, polarisation depend. 7−96623
atoms, doubly excited states, multiphoton excitation, electron correls. 7−96560
atoms, multiphoton ionisation, photoelectron spectrum 7−96617
atoms, multiphoton ionisation and laser-induced virtual states study 7−90058
atoms, multiple-electron perturbations, nonperturbative techniques 7−96625
benzene, multiphoton ionis., spatial distrib. influence anal. 7−103607
benzene, rovibronic states, intramol. relax., Doppler-free two-photon excitation spectra 7−96724
bromobenzene cations, photoexcited, collisional relax. meas. 7−110036
bromomethane, multiphoton ionis. investig. 7−90303
t-butyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
chiral molecules, permanent moments effect, differential multiphoton absorpt. 7−103606
chlorodifluoromethane-d_1, IR multiphoton dissoc., laser radiation parameters and sample press. effects 7−96808
chlorotrifluoromethane, IR multiphoton vib. excitation and dissoc. 7−103604
complex molecules, electronic transitions four photon spectroscopy, stationary methods theory 7−82308
conference, Liblice, Czechoslovakia (Oct. 1986) 7−72719
cooperative light scattering 7−135903
cyclobutyl acetate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclopropane, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
decafluorocyclohexene, Retro-Diels-Alder reaction, IR multiphoton excitation, UV spectra anal. 7−74658
dodecafluorocyclohexane, intramol. vibr. relax., IR-IR reson. spectra anal. 7−74604
ethyl 3-cyclohexene-1-carboxylate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
ethylbenzene $Cr(CO)_3$, multiphoton dissoc./ionis., collisional effects 7−96811
ethylene, collisionless IR multiple-photon dissoc., radical generation 7−71510
ethylsilane, IR multiphoton dissoc., reaction channels study, ab initio and MNDO calcs. 7−74438
exactly solvable model for multiphoton processes 7−74547
flame and plasma diagnostics, atomic and ionic fluoresc. dip spectroscopy study 7−133010
fluoranthene in tetramethylsilane, multiphoton ionisation study 7−82292
fluorobutanes, bichromophonic, IR laser chemistry, absolute and relative rate coeffs. 7−100594
formaldehyde-$d_0(d_2)$, Rydberg states, multiphoton ionis. 7−90286

multiphoton spectra continued
hexafluoro-2-(trifluoromethyl)-propane-$t_0(t_2)$, CO_2 laser induced multiphoton dissoc., T isotope separation study 7−68415
indigoid dyes, adsorbed on Ag colloids, reson. Raman and three-photon scatt. 7−122551
induced Raman scattering ionization spectroscopy, methods, review 7−134852
inert gases, UV multiphoton electron spectroscopy 7−96630
inter gases VUV radiation production by multiphoton processes 7−90702
iodomethane, photodissoc., multiphoton ionis. detect. 7−117034
ion counting technique for studying multiphoton ionization processes of mols. 7−90304
ion-surface impact, desorbed material, multiphoton reson. ionisation-TOF mass spectra anal. 7−92820
ionisation, strong electromag. field effect, electron energy spectra, approx. method calcs. *(Swedish)* 7−122470
isomers, REMPI mass spectra 7−74717
methane-NO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
methanol clusters, multiphoton ionis., reaction channels var. 7−110051
methyl groups, correlation, multiple-quantum NMR study 7−90218
methylbenzyl alcohol, isomers, REMPI mass spectra 7−74717
molecular beams, laser spectroscopy with sub-Doppler resolution study 7−96646
molecular multiple-photon excitation and dissoc. book 7−88755
molecular transition, four-wave light scatt., non-perturbative theory 7−117035
molecules, large involatile, reson. ionisation, TOF mass spectrometry anal. 7−90293
molecules, multiphoton processes, coupled eqns. approach 7−129820
multilevel atoms, absorpt. and emission line profile coeffs., three-photon process redistrib. fn. 7−82060
multiphoton free-free transitions, high-intensity aspects 7−129679
multiquantum ionisation and tunnelling in stochastic fields 7−103453
nonafluoro-tert-butyl iodide, vibrational overexcitation above dissociation limit in IR multiphoton field 7−103605
nonlinear spectroscopy of excited atoms, molecular cases, and plasma 7−134853
oxetane, chemiluminesc. reaction, IR multiphoton activation study 7−78527
polyatomic molecule, intramolecular vibrational energy redistribution, anal. 7−103625
polyatomic molecules, IR multiphoton excitation, intramol. vibr. redistrib. 7−103608
polymethine dye adsorbed on Ag colloids, inelastic three-photon light scatt. *(Chinese)* 7−129821
2-propanol+CuO reaction, IR multiphoton activation study 7−78527
pyrazine, jet-cooled, two-colour fluoresc., multiphoton ionisation spectra 7−90244
pyrazine highly excited Rydberg states, autoionis. 7−96570
pyrimidine, 3*s* Rydberg state, multiphoton ionis. spectra 7−82307
rare earth ions, two-photon absorpt. amplitudes, electron correlation effects calc. 7−96562
resonant multiphoton ionisation spectroscopy, of reversals 7−122472
resonant phenomena, role in adiabatic theory of multiphoton ionisation 7−116927
resonantly enhanced multiphoton ionisation-PES, photoionisation and photodissoc. study 7−74716
time-resolved ionisation detected stimulated Raman scatt. mechanism 7−90164
trifluoroiodomethane; multiphoton ionis. investig. 7−90303
1,3,5-trioxane, multiphoton dissoc., collision effects, IR spectra anal. 7−74601
two band semiconductors, coherent radiation interaction, cooperative effects 7−106295
two-electron atoms, excited, exact rigid-body solns. 7−96634
unimolecular ion decay kinetics, reson.-enhanced multiphoton ionisation mass spectra anal. 7−90300
UR multiphoton dissociation processes, Arrhenius-type relation applicability 7−103591
UV-multiphoton fragmentation, mass and photoelectron studies 7−122650
Xylene isomers, multiphoton reson. ionisation spectra anal. 7−90181
AlAr, mass-resolved reson.-enhanced multiphoton ionis. 7−110020
Ar, dipole excitations, photon absorpt. cross section meas. 7−109848
Ar, nonreson. multiphoton ionis., electron correl. effects 7−135899
Au, desorption and multiphoton ionisation scheme, appl. in isotope anal. 7−90064
BCl_3, multiphoton dissociation in two-frequency IR laser field, B isotope separation 7−82303
Ba, double Rydberg states, excitation and anal. 7−96626
Ba, isotope relative abundance, double-reson. ionisation mass spectra 7−93458
Br, resonant multiphoton ionisation photoelectron spectra study 7−117030
Br_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
Br_2, resonant multiphoton ionisation photoelectron spectra study 7−117030
C, resonant multiphoton ionis., photoelectron angular distribs. calc. 7−103443
CO, photofragment from HNCO, internal state distrib. 7−126465
CO, resonant multiphoton ionis. cross-sections determ. 7−90305
CO, supersonic jet, multiphoton absorpt. laser-induced fluoresc. 7−117006
CS_2, multiphoton spectra, fragmentation, photodissociation, photoionisation photolysis 7−141639
Ca, multiphoton ionisation probabilities study 7−82294
Cl_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
Cl_2, multiphoton transitions, nonadiabatic effects, coupled eqn. study 7−96809
Cs, excited state and ionisation energies, UV excitation spectra anal. 7−103422
Cs, four-level atoms, Stark spectroscopy and Autler-Townes interactions 7−68251
Cs, multiphoton ionisation cross sections 7−110026
Cs, nonreson. multiphoton ionis., electron correl. effects 7−135899
Cs, vap., multiphoton ionis. spectra 7−90306
Cs, wavefront reversal in six-photon wave interaction investig. 7−109850
F^- multiphoton detachment cross sections, HF wavefn. calc. 7−129675
F_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
multiphoton spectra continued
F_2+NF_3+Si, SiF and SiF_2 radical prod., multiphoton ionisation mass spectrometric detection 7−78463
Fe_n(methanol)y, metal cluster-adduct, IR multiple photon dissoc. spectra 7−129817
H, multiphoton ionis., photoelectron angular distribs., determ. 7−129676
H, multiphoton ionisation, dressed-state perturbation theory 7−96621
H, photoionisation, continuum-state selectivity in Stark fields by charge-shape tuning 7−68382
H, structure and dipole moments in strong, external DC fields 7−90013
H_2, Franck-Condon regions, double-reson. multiphoton ionisation 7−90231
H_2, isotopic species detection, reson. multiphoton ionisation technique anal. 7−90290
H_2, plasma generation for beat wave expts., multiphoton ionisation, electron density anal. 7−104432
H_2, Rydberg states, photoionisation, photoelectron spectra 7−122612
HCO radical, ground and excited states, laser induced fluoresc. and multiphoton ionis. spectra 7−129781
HCl, ion-pair and Rydberg states, multiphoton ionis. laser spectrum 7−90302
HCl mass resolved resonantly enhanced multiphoton ionis. spectra 7−110050
H_2S, vac. UV and REMPI spectra 7−82306
^3H laser isotope separation, IR laser-induced multiphoton dissoc. technique 7−106817
Hg-methane(-ethane)(-N_2)(-CO) complexes, jet-cooled complexes, electronic spectra and intramultiplet relax. 7−90357
HgI_2, hyper-Raman and multiphoton scatt. involving biexciton states 7−85618
^{197}Hg, nuclear isomer separation using reson. multiphoton ionisation technique 7−90070
I_2, $D(0_u^+)$ ion pair state, optical-optical double reson. obs. 7−109965
I_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
I_2, $R0_u^+$ state, rot.-resolved Rydberg transition 7−68419
I_2, rotationally and vibr. cooled, multiphoton ionisation mass spectroscopy 7−110022
K, nonreson. multiphoton ionis., electron correl. effects 7−135899
k, wavefront reversal in six-photon wave interaction investig. 7−109850
KBr, four-photon absorpt. cross section, 532 nm 7−138501
Kr, dipole excitations, photon absorpt. cross section meas. 7−109848
Kr, third-harmonic generation and multiphoton ionis. obs. 7−110019
Kr, three-photon excitation and multiphoton ionis., reson. self-broadening lines meas. 7−116911
Kr_2, gerade states, reson. enhanced multiphoton ionisation 7−141630
KrNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
Li, wavefront reversal in six-photon wave interaction investig. 7−109850
LiF, IR multiphoton excitation dynamics study 7−74597
Lu, isotope ratio meas., reson. ionisation mass spectrometry 7−90063
methyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
Mg, excited states, collisional processes, multiphoton ionisation and reson. fluoresc. investig. 7−90032
Mo, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
N II excited ions, coherent four-photon antiStokes scatt. spectra 7−68242
N, REMPI detect. 7−129673
N_2, light parametric freq. conversion in short wavelength region 7−103886
N_2, multielectron dissociative ionis., femtosecond dynamics 7−110027
$NH_3(ND_3)$, rot. consts., multiphoton ionisation spectra 7−117031
NO, Rydberg series, double reson. multiphoton ionisation, quantum defect anal. 7−68375
NO_2, multiphoton dissoc. investig. 7−110040
NO_2 photodissociation. photofragments angular distrib. meas., multiphoton ionisation technique *(Japanese)* 7−119546
Na, Cherenkov radiation during picosec. light pulse propagation 7−141506
Na, resonant multiphoton ionisation and competing processes study 7−90071
Na, wavefront reversal in six-photon wave interaction investig. 7−109850
NaCl clusters, multiphoton stimulated desorption, magic numbers anal. 7−119559
Nb, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
Nd, vapour, resonance ionisation spectroscopy, laser bandwidth effects 7−82029
Ne, dipole excitations, photon absorpt. cross section meas. 7−109848
O_2, light parametric freq. conversion in short wavelength region 7−103886
O_2, two photon reson. enhanced multiphoton ionisation spectroscopy 7−129819
OsO_4 molecules, UV laser fragmentation, atomic Os^+ ions generation 7−82302
PbI_2, hyper-Raman and multiphoton scatt. involving biexciton states 7−85618
Rb, multiphoton ionisation cross sections 7−110026
Rb vapour, laser-induced resonance ionisation, multiphoton and collisional ionisation 7−141534
Rb, wavefront reversal in six-photon wave interaction investig. 7−109850
Rb-He vapour mixture, two-photon excitation, stimulated processes 7−123102
SF_6-Ar(He)(Xe), mixture, vibr. relax. rate, time-resolved IR multiphoton absorpt. spectra anal. 7−74599
SO_2, IR laser multiphoton excitation, time-dependent SCF approach 7−129818
Si, multiphoton ionisation, UV fluoresc. spectra anal. 7−96585
Sr, autoionising states and AC Stark shifts, multiphoton ionisation spectra anal. 7−90061
Sr, Rydberg and autoionising series, reson. multiphoton photoionisation spectra anal. 7−90069
Tc, isotope ratio meas., reson. ionisation mass spectrometry 7−90063
Tc, trace amounts detection, reson. multiphoton ionisation and TOFMS anal. 7−90066
$VOCl_3$, resonance-enhanced multiphoton ionis., mass spectrometric detect. 7−103586
Xe, dipole excitations, photon absorpt. cross section meas. 7−109848
Xe, fifth harmonic prod. and photon reson., multiphoton ionisation spectra 7−122477
Xe, multiphoton ionisation, screening effects, RPA anal. 7−103442
Xe, nonreson. multiphoton ionis., electron correl. effects 7−135899

multiphoton spectra continued
Xe, resonantly enhanced multiphoton ionisation photoelectron ang. distrib. 7−96624
Xe, three-photon excitation, autoionisation, fine struct., photoelectron spectra 7−90274
Xe, three-photon excitation and multiphoton ionis., reson. self-broadening lines meas. 7−116911
Xe_2, photoelectron spectra obtained by resonantly enhanced multiphoton ionisation 7−110000
XeNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
Zr, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
multiple processor systems *see computer networks*
multiple quantum well lasers *see semiconductor junction lasers*
multiple quantum well structures *see semiconductor superlattices*
multiple scattering SCF-X-alpha calculations *see Xalpha calculations*
multiple stars
see also binary stars
ϵ Aur, eclipsing binary, system characts. 7−107899
IU Aur, eclipsing triple system, up-to-date parameters determ. from UBV photometry 7−140155
ϵ Aur, twisted accretion disk model 7−88535
α CMa (Sirius), possible third star in binary system *(French)* 7−120392
Cyg X-3, accretion rate modulation by possible third body 7−88521
equal mass triple systems, dynamical evolution in 3D 7−127688
63 Gem, quintuple nature confirmed 7−134114
GX 17+2, tidal angular momentum loss, triple star model 7−72530
HD 112313, planetary nebula central star, giant star in triple system, orbital characts. 7−120386
hierarchical triple systems containing compact X-ray binaries, time var. of inner binary separation 7−120501
HR 7041, M-type giant star, photoelectric radial vels. rel. to physical assoc. with optical companion 7−94960
VZ Hya, eclipsing binary, evidence for third component from orbital period changes 7−127956
XY Leo, contact binary star, spectroscopic detect. of BY Dra-like binary companion 7−140165
nearby galaxies, composite stars misidentification as blue bright supergiants 7−140286
VV Ori, eclipsing binary, third component contrib. to light of system 7−107892
α Ori, triple system, speckle imaging and polarisation characts. 7−88398
α Ori (Betelgeuse), triple star, interferometric results 7−101776
1 Peg, spectroscopic binary companion star radial vel. anal. 7−72538
period changes of early-type close binaries and multiplicity 7−80038
R136a, supermassive star in LMC, resolution into individual components *(French)* 7−79961
R 130 in LMC, spectral and photometric study of triple system 7−88436
Sanduleak−69°202 in LMC (SN 1987A progenitor), observations indicating multiple nature 7−80012
structures, use of 3D self-consistent field method 7−101765
triple stars, orbital characts. and masses, CORAVEL obs. 7−101844
ξ UMa, quadruple system, obs. of Li abundances and chromospheric activity 7−72541
AO Vel, B-type eclipsing binary in triple system, orbital characts. and photometric obs. 7−72512
visual double and multiple stars in Southern Hemisphere with some DM number but separate SAO numbers *(French)* 7−72330
DR Vul, eclipsing binary quadruple system, orbital characts. and masses, minima times anal. 7−72536
Wolf 630 system, low-energy X-ray obs. 7−127968
multiplex transmission *see multiplexing*
multiplexers *see multiplexing equipment*
multiplexing
see also frequency division multiplexing; time division multiplexing
binary phase-only filters, multiplexing capabilities 7−82472
CT scanners with continuous X-ray emission, backprojection correction 7−93916
diode laser, multilongitudinal mode, electro-optical modulation at 850 nm with coherence multiplexing 7−130198
fibre multiplexing of interferometric sensors using phase-generated carrier techniques 7−104002
frequency hopping patterns for simultaneous multiple-beam sonar imaging 7−110664
interferometric, fibre optic sensor arrays, series topology, relative optical path delays 7−82807
multiplexed and distributed optical fibre sensor systems 7−130368
optical fibre sensor systems, multiplexed and distributed, review 7−82852
optical storage, wavelength-multiplexed-recording materials, Japanese research 7−110493
temperature mapping of spots using distributed multiplexers and amplifiers 7−73368
multiplexing equipment
analog processing system for liquid Ar calorimeter, sampling and multiplexing hybrid test results, SLAC SLD project 7−68173
argon, ILA-120 laser, holographic grating fabrication 7−136237
Fabry-Perot filters for wavelength demultiplexing, optical monitoring method during growth 7−103945
fibre optic sensor readout, wavelength division multiplexer appl. 7−130334
ILA-120 laser, holographic grating fabrication 7−136237
multimode optical transmission lines, planar microoptical multiplexer/demultiplexer 7−75167
multiplexed electrode VLSI cct. layout for monitoring evoked responses in cerebral cortex 7−114246
nonuniform holographic gratings for WDM fabrication 7−136237
optical FDM transmission system with eight 5-GHz spaced channel 7−117346
optical fibre systems, high capacity, tolerant WDM 7−68903
optical guided-wave multi/demultiplexers with high stopband rejection 7−82860
passive fibre optic components using dispersion shifted fibre, biconical fusion technique fabrication 7−68890
Swedish micromechanical engineering developments *(Swedish)* 7−127019
ultrafast optical multi/demultiplexer utilising optical Kerr effect in polarisation-maintaining single-mode fibres 7−82726
WDM demultiplexer with chirped grating, design 7−75168
GaInAsP-InP laser, five-wavelength integrated DFB with quarter-wave-shifted structures for WDM 7−130158
multiplexing equipment continued
$LiNbO_3$ integrated-optical wavelength multiplexer/demultiplexer for single mode systems 7−136606
$LiNbO_3$ low-insertion-loss tunable WDM 7−142043
multiplier phototubes *see photomultipliers*
multipliers, electron *see electron multipliers*
multiprocessing systems
see also distributed processing; parallel processing; pipeline processing
ACP multiprocessor system, software development 7−135814
ACP multiprocessor system at Fermilab 7−135813
Heidelberg Polyp system, reconfigurable multiprocessor for high energy physics 7−74390
Manda-Lab, compact multiprocessor system for heavy ion physics detector tests 7−68179
multi-band hearing-aid emulation using real-time digital signal processing 7−94024
multiprocessors for high energy physics, review 7−135793
standards for experiments automation 7−80758
supercomputers and fluid dynamics, conf. Nobeyama, Japan, (Sept. 1985) 7−120710
multiprocessor interconnection networks
Heidelberg Polyp system, reconfigurable multiprocessor for high energy physics 7−74390
hypercube algorithms for PDEs 7−128244
multivalley semiconductors *see many-valley semiconductors*
multivariable control systems
chemical processes, constrained, multivariable, on-line optimisation 7−78458
water quality control, decentralised, hybrid technique 7−72109
multiwire proportional chamber *see position sensitive particle detectors; proportional counters*
multiwiring *see printed circuits*
muon absorption
No entries
muon capture
see also muonic atoms; muonic molecules; radioactivity
$N \neq Z$ nuclei, dipole giant resonance in isospin channels and μ^- capture, TDHF calc. 7−135280
(μ^-,X), total nucl. capture rate meas. 7−102865
$^{40}Ca(\vec{\mu}^-,\nu\gamma)$, coeff. of asymmetry, γ ang. distrib. and circular pol. 7−129022
$^1H(\mu^-,\nu\mu n)$, muon capture, next generation expts. 7−73659
$^2H(\mu^-,\nu\mu n)$, muon capture, next generation expts. 7−73659
$^2H(\mu^-,n)$ energetic neutron emission from muon capture, neutron spectrum 7−96030
$^{16}O(\vec{\mu}^-,\nu\gamma)$, coeff. of asymmetry, γ ang. distrib. and circular pol. 7−129022
$Ti(M^-, e^\pm)$, neutrinoless conversion search 7−135134
muon decay
double Majoron emission, electroweak SU(2)×U(1) gauge theory 7−135001
pulsed muons, applications 7−73647
$\mu \to 3e$, lepton number nonconservation in theories with massive ν, review 7−140869
$\mu \to e^+\nu\tilde{\nu}$, internal asymmetry parameter meas. 7−140934
$\mu \to e\gamma$, lepton number nonconservation in theories with massive ν, review 7−140869
$\mu \to e\gamma$, possibility of residual *S-P* interactions and right-handed neutrino singlets 7−102746
$\mu \to e\nu\tilde{\nu}$, Wino mass determ., asymmetry meas. 7−108918
$\mu^+ \to e^+e^+e^-(e^+\nu\tilde{\nu}e^+e^-)(e^+\phi)$, forbidden processes, interactions beyond standard model 7−95905
$\mu^+ \to e^+\gamma$+light boson, emission mechanisms, coupling strength bounds 7−135118
muon detection and measurement
brass tube chambers for L3 muon filter 7−109634
cosmic ray muon identification in EAS array, new method 7−127733
Cyg X-3, underground muon interpretation, cygnets, constraints on lifetime, mass, energy, charge *(German)* 7−134278
Cyg X-3, underground muon search 7−120647
drift-tube counters and readout electronics of VENUS muon detector 7−139932
EM streamer tube calorimeter, muon detection 7−116776
high resolution muon detector for multi-TeV collider experiments 7−68160
rectangular drift tube for muon identifier 7−109648
TOPAZ-TPC cosmic ray test 7−68136
wire chambers as transition radiation detector for cosmic ray muons 7−74367
Al drift-tube counters in VENUS, Monte Carlo simulations of delta ray effects 7−139933
muon interactions *see lepton-hadron interactions; lepton-lepton interactions; muon-nucleon interactions; muon-nucleus reactions*
muon-nucleon interactions
see also muon-nucleon scattering
nucleon structure function at high Q^2, QCD test and Λ meas. from scaling violations in μN 7−135125
$\mu N \to$ charm, cross-section meas., anal. in photon gluon fusion model 7−102751
$\mu N \to eN$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
$\mu N \to \mu' X$, 120-280 GeV, nucleon structure function high stats. meas. in carbon 7−135124
$\mu^- N \to e^- N$ (e^+N) in Ti, neutrinoless conversion search 7−135134
μp, deep inelastic process, hadron azimuthal distrib. meas. 7−95914
μp deep inelastic scatt., pp, $\bar{p}p$ and $\bar{p}\bar{p}$ prod. 280 GeV, Lund fragmentation model predictions 7−135139
μp deep inelastic scattering, multihadron production, comparison with e^+e^- annihilation 7−135137
μp interactions, 280 GeV, comparison with e^+e^- annihilation final state hadrons, Lund model 7−135143
$\mu^- p \to n\nu\gamma$, $\Delta(1232)$ effects on capture rate 7−89511
$\mu^- p \to n\nu_\mu$, muon capture, next generation expts. 7−73659
$\mu N \to K^\pm$, K^0, $\bar{\Lambda}$, Λ, 280 GeV, mechanism anal., forward-backward strangeness asymmetry distrib. 7−95916
$\mu^\pm N$ deep inelastic scatt., leading virtual corrections to charge asymmetry 7−89510

muon-nucleon scattering
see also muon-nucleon interactions
μp deep inelastic scattering, nucleon structure functions, QCD anal. 7−67622
μp→μ′X, 280 GeV, charged hadron multiplicity distribs. 7−140946

muon-nucleus reactions
for inelastic muon-nucleus scattering, see "muon-nucleus scattering"
see also muon capture; muon-nucleon interactions
d-d and d-t fusion, muon-catalysed 7−82398
(μ⁻, pxn), isotopic relation for reaction probability 7−109152
(μ,ψX), parton distrib. functions, behaviour at small x, EMC effect 7−116134
(μ,X), deep inelastic scatt., colour conductivity at high resolution 7−73721
^{12}C(μ,μ′X), 120-280 GeV, nucleon structure function high-stats. meas. 7−135124
DT fusion, muon-catalyzed, stability anal. 7−129125
Fe(μ,μ′X), deep inelastic scatt., nuclear EMC effects, structure function ratio 7−96055
^{2}H(μ,μ′X), deep inelastic scatt., nuclear EMC effects, structure function ratio 7−96055
^{3}H(d,X), muon catalysed, Schrodinger eqn. series soln. 7−115839
^{238}U(μ⁻,f) muon final-state probabilities, fragment quadrupole vibration effects *(Chinese)* 7−109242

muon-nucleus scattering
see also muon-nucleon scattering
No entries

muon probes
bicycloоctene, plastic phase, muon probe investig. 7−85508
classical simple magnets, zero field muon spin relax. 7−85512
diamond, body centered hydrogen or muonium explanation for anomalous muonium and metastability 7−85514
diamond, muonium hyperfine props 7−118933
electrons trapped in the wake of a negative muon 7−138369
ethyl radical, muonated, level-crossing resonance, residual isotope effect 7−136095
fluoride insulators, FμF⁻ ion dipole coupling, zero-point motion effect 7−138368
heavy fermion systems, nuclear and muon hyperfine techniques 7−118929
implanted muon studies in condensed matter science, review 7−143945
isotropic ferromag. μ⁺ longitudinal spin relaxation, mag. field effect 7−85516
low field resonance and relaxation, time-convolution and relaxation, time-convolution equation formalism 7−112925
muonium, environment in solids, empirical approach 7−136103
norbornene, plastic phase, muon probe investig. 7−85508
polyacetylene:I, doped and undoped, muon spin rotation and relax. 7−70688
polyacetylenes, μSR studies 7−118931
relaxation of muonium states in solids 7−85513
spin depolarization of particles in tunnelling states 7−85511
spin glass ordering, hyperfine interaction techniques, data review 7−112797
spin rotation spectroscopy, review 7−118930
tunnelling, friction role, muon SR and Mossbauer study 7−118908
ZnMn uniaxially anisotropic spin glasses, zero-field muon spin relax. temp. depend. meas. 7−85318
Al, electron irrad., defect reactions, muon spin relax. studies 7−92563
Bi, monocrystalline, μ⁺ Knight shift ang. depend. and diamagnetic props. 7−113054
$Cd_{1-x}Mn_xTe$ diluted mag. semicond., zero field muon spin relax. studies 7−92564
$CeAl_3$, μ⁺SR study of Kondo and RKKY interactions 7−113058
Co, magnetic studies with μSR at high pressures 7−118932
Co single cryst., muon hyperfine field, low temp. press. depend. meas. 7−99633
Co, vacancy form. in thermal equilib., positive muon spin rotation studies 7−91571
Cr, antiferromagnetic, μ⁺ diffusivity, SDW and CDW interactions, μSR study 7−113056
Cu, muon diffusion below 4 K, longitudinal mag. field muon spin relax. 7−70687
D_2O, ice, muonium diffusion 7−113048
Dy, paramagnetic and antiferromag. states, muon probe studies 7−70520
$ErRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
Fe, coherent hopping and 4T tunnelling state, μ⁺SR study 7−113057
Fe, magnetic studies with μSR at high pressures 7−118932
Fe, muon precession, failed experiments 7−113050
Fe, muon trapping at substitutional Ti 7−106072
Fe polycrystal, muon hyperfine field, low temp. press. depend. meas. 7−99633
FeSn, antiferromagnet, muon spin precession spectra 7−85515
FeTi, muon trapping at substitutional impurities, μSR study 7−113053
$Fe_{1.75}Ti_{1.25}O_5$ pseudo-brookite spin glass, muon spin relax. study 7−125398
Fl, vacancy form. in thermal equilib., positive muon spin rotation studies 7−91571
Ge, muonium states, hyperfine interaction study, μSr spectra 7−113051
H_2, solid, positive muons, depolarisation 7−105181
H_2O ice, muonium diffusion 7−113048
KCl, muonium depolarisation, spin dynamics at room temp. 7−113049
La_2CuO_4, mag ordering obs. by muon spin rotation 7−143946
La_2CuO_{4-y}, antiferromag. state, muon-spin rot. meas. 7−143947
$La_{1.8}Sr_{0.2}CuO_4$, high-T_c supercond., internal mag. fields from muon spin rotations expts. 7−138121
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. penetration depth, flux-pinning effects, μSR study 7−112650
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductivity, mag. field penetration depth, μSR study 7−112651
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. screening and flux distrib., muon spin rotation spectroscopy 7−118741
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high temp. supercond., evidence against bulk superconductivity 7−125199
MnSi, ^{55}Mn nucl. spin relax. critical divergence, muon-nucl.-spin double relax. 7−125584
Nb, electron irrad., defect reactions, muon spin relax. studies 7−92563
$Nd_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Nd_2Fe_{14}B$, positive muon spectroscopy 7−132178

muon probes continued
Ni, magnetic studies with μSR at high pressures 7−118932
Ni polycrystal, muon hyperfine field, low temp. press. depend. meas. 7−99633
α′-PdH_x, H arrangement around positive muon 7−85509
PdH_x, struct. study using μSR technique 7−113055
$Pr_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Pr_2Fe_{14}B$, positive muon spectroscopy 7−132178
Sb, magnetic studies with μSR at high pressures 7−118932
Si, muonium hyperfine props 7−118933
Si, muonium states, hyperfine interaction study, μSr spectra 7−113051
$SmRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
Ta, electron irrad., defect reactions, muon spin relax. studies 7−92563
TiH_2, muon spin relax. study, comparison with YH_2 7−85510
UAl_2, 5f density of states near Fermi surface, μSR study 7−112160
UAl_2, muon spin rot. and relax. 7−77444
UAs, 5f density of states near Fermi surface, μSR study 7−112160
UAs, muon spin rot. and relax. 7−77444
U_2Zn_{17}, μ⁺SR study of Kondo and RKKY interactions 7−113058
Y-Ba-Cu-O high T_c supercond., magnetic props., positive muon studies 7−112791
$YBa_2Cu_3O_{7-\delta}$, high-T_c supercond., internal mag. fields from muon spin rotations expts. 7−138121
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. penetration depth, temp. depend., s-wave pairing 7−131885
$YBa_2Cu_3O_x$ ceramic high T_c supercond., prep. and props. 7−118608
YH_2, muon spin relax. study, comparison with TiH_2 7−85510

muon production
charged lepton pair anomalous production in K° expts. 7−140928
$D^0 \rightarrow e^{\mp}\mu^{\pm}$, branching ratio upper limit 7−95891
$e^-e^+ \rightarrow \mu^-\mu^+$, cross section and charge asymmetry, 38.3-46.8 GeV 7−102728
$e^-e^+ \rightarrow \tau^+\mu^-$, scalar-lepton mixing, softly broken supersymmetric model 7−135094
e^+e^-, QCD predictions for $R=\sigma(e^+e^- \rightarrow \text{hadrons})/\sigma(e^+e^- \rightarrow \mu^+\mu^-)$, tests 7−67628
$e^+e^- \rightarrow e^+e^-\mu^+\mu^-$, $\sqrt{s}$=14-46.78 GeV, α^4 QED test 7−135089
$e^+e^- \rightarrow$ lX, search for low thrust hadronic event with isolated lepton 7−121525
$e^+e^- \rightarrow$ muons, q′$_e$ pair production anal. using preon model with preonic charge 7−81140
$e^+e^- \rightarrow \mu^+\mu^-\gamma$, differential and total cross sections, electroweak interaction anal *(Russian)* 7−116157
$\gamma\gamma \rightarrow e^+e^-$, $\mu^+\mu^-$, 2-photon contrib. to pair production in heavy-ion collisions 7−95960
$K_L \rightarrow \mu\bar{\mu}$, gluino induced effects on strangeness-changing neutral currents, μ-polarization asymmetry 7−95890
$\mu^+\mu^-$ double pair production via Drell-Yan mechanism, evidence for multiple parton interactions 7−89521
$\nu\mu N \rightarrow \mu^-DX$, reaction rate calcs., $\nu_\mu N \rightarrow \mu^-e^+X$ study 7−140926
$\nu N \rightarrow \mu\mu X$, dimuon prod., nucleon strange quark content 7−73640
$\nu_\mu N \rightarrow \mu^-eX$, 7 GeV, μ^-e^-/charged current interactions ratio, μ^-e^-/μ^-e^+ ratio meas. 7−95888
$\nu_\mu n \rightarrow \mu^-p$, weak nucleon axial vector form factor and second-class current 7−128879
$\bar{\nu}_\mu p \rightarrow \mu p^+ n$, weak nucleon axial vector form factor and second-class current 7−128879
$\bar{p}p \rightarrow$ muons, dimuons (heavy flavour production), cross sections, perturbative QCD anal. 7−140961
$\bar{p}p \rightarrow \mu^+\mu^-$, tagging of heavy flavours, $\bar{b}b$ cross section calcs. 7−67663
$\bar{p}p \rightarrow \mu^+\mu^-X$, beauty prod. and semileptonic decay 7−81245
$\bar{p}p \rightarrow \mu\mu X$, perturbative QCD calcs. 7−95801
$\pi^-N \rightarrow \mu^+\mu^-X$, 140, 286 GeV, nuclear effects on nucleon structure functions 7−135123
$\pi^-N \rightarrow \mu^+\mu^-X$, 140, 286 GeV, nuclear depend. of P_T distrib. of massive muon pairs 7−135161
$\Upsilon(1S) \rightarrow e^+e^-(\mu^+\mu^-)$, branching ratio meas. 7−140930
$\Upsilon(2S) \rightarrow \Upsilon(1S)\pi^+\pi^-(\mu^+\mu^-)(\eta)$, branching ratio meas. 7−140930
$\Upsilon \rightarrow \mu^+\mu^-(e^+e^-)$, χ_b spin states meas., $e^+e^- \rightarrow \Upsilon(2S) \rightarrow \gamma\chi_b$ $(\chi_b \rightarrow \gamma\Upsilon)$ cascade study 7−73662
$\Upsilon \rightarrow \mu\mu$, branching ratio meas. 7−102734
$\Upsilon'' \rightarrow \mu\mu$, branching ratio meas. 7−108911
$e^+e^- \rightarrow$ hadrons, 46.78 GeV, hadronic cross sections, $\bar{t}t$ width determ., inclusive muon events 7−128906

muon scattering *see lepton-hadron scattering; lepton-lepton scattering; muon-nucleon scattering; muon-nucleus scattering*

muon spin rotation in solids *see muon probes*

muonic atoms
adiabatic molecular energy curves with correct united-atom and separated-atom limits 7−89954
catalyzed fusion, conference, Tokyo, Japan (Sept. 1986) 7−140361
catalyzed fusion, nuclear reactions and muon sticking 7−122750
final-state interaction of β electrons and related phenomena 7−116341
Jacobi three to two body reduced mass system, Fock-Tani transformation 7−110143
methane liq. and solid, spin rot. expts. of muons and muonic atoms 7−74788
Mu+1,1-dimethylallene, addition reaction, hyperfine coupling consts. determ. 7−135857
Mu+H_2, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
muon conversion, influence of higher-approximation effects 7−121717
quadrupole moment with total spin j=1/2, hyperfine struct., exotic atoms 7−82394
ddμ, muon-catalysed fusion, kinetics 7−122743
$(\mu^-d)+t \rightarrow (\mu^-t)+d$, μ^--transfer cross-sections, Monte Carlo method 7−122668
Ar + muonic H, μ^-transfer rate at high pressure 7−110147
H, atom, muonic, superdense matter using channeled beams 7−122746
H, muonic, muon transfer from metastable state to He 7−103695
H+He^+, muonic H, elastic scatt. cross sections and charge exchange rates 7−96821
He, kinetics in muon catalyzed d-d, d-t fusion 7−82398
He, muonic, energies, Bohr orbit theory 7−82395
He, muonic, production by DT, PD and DD catalyzed fusion 7−141720
He, muonic atom, atomic cascade pressure depend. calcs. 7−103690
^{3}He, muonic, X-ray spectra after fusion 7−122744
^{4}He, muonic, Lamb shift meas. by laser resonance technique 7−110145

muonic atoms continued
^{4}He, muonic, X-ray meas. of μ^- sticking probability 7−141721
Ne, muonic, charge radii from X-ray data 7−95982
^{237}Np, muonic, X-ray spectrum meas. 7−110144
^{237}Np, muonic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{237}Np, muonic atom, 3d level nonradiative decay 7−117095
$U^{92+}+U^{92+}$ relativistic collisions, inner-shell capture, muon pair prod. 7−103619

muonic molecules
binding energies, Uehling pot. matrix elements 7−103691
catalyzed fusion, conference, Tokyo, Japan (Sept. 1986) 7−140361
EM muon capture, alternate channels 7−122745
ethyl radical, muonated, level-crossing resonance, residual isotope effect 7−136095
muon chemistry and muon spin rotation 7−141718
organic free radicals, muonium-substituted, muon level-crossing spectra study 7−68475
three-body systems, D states, variational expansion appl. to muonic mol. and He 7−117094
$d\mu d$ molecules, resonant formation 7−141719
$dt\mu$, formation, mesic atomic cross-sections 7−141723
$dt\mu$, Schrodinger integral equation, numerical solution 7−122749
$dt\mu$ molecule, intermolecular and internuclear effective potentials 7−122747
$(dt\mu)^+$, lifetime, influence on resonance formation mechanism 7−141724
$(dt\mu)d2e$, resonant molecule formation, many-body effects 7−141722
$\mu He^+(2s^1/_2)He_n$ complexes, symmetric, rate of formation 7−129907
$(pp\mu)^+$, binding energies using variational method 7−122748
D-T alloy, formation rate of muonic molecules 7−122742
D_2, muonic, vibr. predissoc. and prereaction, collinear quantal study 7−122645
$DT\mu$ formation, superthermal mechanism 7−141725
H_2, charge exchange in He and Li 7−103696
H_2, muonic, energy levels, variational calcs. 7−103697

muonium
covariant two-body equation, Moller and Breit pots. 7−122771
diamond, body centered hydrogen or muonium explanation for anomalous muonium and metastability 7−85514
electron line contrib. to hyperfine splitting 7−96894
environment in solids, empirical approach 7−136103
final-state interaction of β electrons and related phenomena 7−116341
Mu^-, prod., N_+ beam electron capture in beam-foil expt. 7−82397
$Mu+H_2$, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
negative ion, Coulomb bound states, binding energies calcs. 7−103375
organic free radicals, muonated, internal dynamics and reactions, μSR study 7−110148
quadrupole moment with total spin j=1/2, hyperfine struct., exotic atoms 7−82394
spectra, covariant two-body equations, QED 7−90452
D_2O, ice, muonium diffusion 7−113048
GaAs anomalous muonium electronic struct., nuclear hyperfine interaction 7−99634
Ge, muonium states, hyperfine interaction study, μSr spectra 7−113051
H_2O ice, muonium diffusion 7−113048
KCl, muonium depolarisation, spin dynamics at room temp. 7−113049
$Mu+H_2(D_2)$ thermal reaction rate const. meas. 7−113890
Mu+Hd, reaction rate const., abstraction and exchange contribs. 7−78468
Si, muonium states, hyperfine interaction study, μSr spectra 7−113051

muons
see also cosmic ray muons; muon probes
(g-2), strongly coupled standard weak interaction model anal. 7−67537
methane liq. and solid, spin rot. expts. of muons and muonic atoms 7−74788
nondestructive analysis of archaeological objects by Coulomb capture of muons 7−113848
tachyonic models of e^- and μ, unresolved problems 7−135088
$e^-e^+ \rightarrow X$, μ supersymmetric particle mass limits determ. 7−108928
μ-e mass ratio, electroweak model with pseudo-scalar coupling 7−108824

muscle
abdominal expiratory muscle, length-tension relationship, effect of emphysema 7−107021
action potentials, cond. vel. estimation using phase and impulse response function techniques 7−71727
adaptive control of electrically stimulated muscle 7−71936
amputee limb-function discrimination method using EMG signals for the control of multifunctional powered prostheses *(Japanese)* 7−79141
ATP compartmentation in skeletal and cardiac muscles, anal. using ^{31}P NMR saturation transfer 7−100791
beef, muscle recognition by automatic image anal. 7−94041
bioactiometry in man, conservative IR laser therapy action on neuromuscular system *(German)* 7−114439
bioelectric potentials anal. 7−93713
blood flow, canine, during fractionated hyperthermia 7−133234
body movements, iso-energetic control 7−126858
capillary network of skeletal muscle tissue algorithm, blood flow 7−145113
cardiac muscle, in vivo perfusion, meas. method based on X-ray fluoresc. 7−71852
cardiac muscle cell, isolated, rapid length meas. using line-scan camera 7−114572
cardiac myofibre, multicomponent, model 7−107122
cardiac ventricular muscle, elec. source strength, interstitial pot., depth function 7−93701
cardiomyocytes, isolated rat, wavelike spontaneous contractions, microcinematography 7−126758
cardioskeletal synchronisation during locomotion, anal. 7−100871
computerized signal processing techniques for the quantification of muscular activity 7−119758
contractile response in resistance airways, effect of resting smooth muscle length 7−107020
coronary arteriograms, image processing for clinical assessment of vascular muscle tone 7−79064
coronary diastolic pressure-flow relationship, smooth muscle tone absence study 7−78932
coronary intermittent sinus occlusion, haemodynamic reaction model 7−78931

muscle continued
cycling, functional roles of hamstrings and quadriceps: Lombard's Paradox 7−107131
deep tissue perfusion meas. using single-fibre laser Doppler flowmetry 7−107200
deep-tumour hyperthermia, performance characts. of Helios thirty-beam ultrasound device 7−107184
diaphragm, human, contractile props. in vivo 7−78926
diaphragmatic action, effect of hyperinflation and abdominal press. equalisation 7−126881
diaphragmatic blood flow, changes rel. to contractile activity 7−114321
dielectric properties at radiofrequencies, in vitro human tissue obs. 7−107031
Duchenne muscular dystrophy, force plate studies 7−145112
Duchenne muscular dystrophy, force platform appl. 7−107268
Duchenne muscular dystrophy carriers, US features 7−101024
elbow angles, muscle equivalent concept validity in human muscular isometric contractions 7−145109
EMF scanning, relationship between narrow and wide bandwidth filter settings 7−119884
EMG, description using math. model for single joint movements 7−126800
EMG, IBM-PC-based myoelec. signal processing device for human back pain evaluation 7−127033
EMG, increase in LF power in nonfatigued contracting skeletal muscle 7−78829
EMG, inter and intra subject profiles and variables during normal walking 7−100869
EMG, intramuscular and surface, human motor unit activity anal. 7−93724
EMG, natural, during rapid human walking, operant conditioning 7−145008
EMG, noninvasive multielectrode, spatial filtering, filter performance in theory and modelling 7−71909
EMG, noninvasive multielectrode, spatial filtering, meas. technique and appls. 7−71908
EMG, power spectrum and turns anal. at different voluntary efforts in normal subjects 7−78828
EMG, quantitative, using automatic anal. 7−94048
EMG, reflex recognition from background locomotory activity 7−100865
EMG, signal modelling and processing by spectral anal. 7−93725
EMG, single fibre, scanning and macro: motor unit study appl. 7−93976
EMG, spatially filtering electrode configs., design and appl. 7−93981
EMG, statistical modelling for computer-aided diagnosis 7−101120
EMG, surface, and muscular sound, compared spectral anal. at fatigue 7−93726
EMG, surface, clinical measuring set-up 7−101104
EMG, surface signal, circuit for monitoring spectrum median freq. 7−93973
EMG, within-breath changes during loaded breathing in adult sheep 7−86948
EMG activity during shivering of muscles acting at the human elbow 7−119759
EMG analysis, quantitative, normal subjects at different ages 7−145009
EMG analysis of the thumb and its appl. to functional neuromuscular stimulation 7−93727
EMG and related clinical neurophysiology, conf., Sorrento, Italy (May 1987) 7−134340
EMG control of artificial limbs, spatial pattern recognition reference model building 7−100867
EMG electrode, impedance obs. and model 7−71907
EMG evoked during muscle relax., waveform anal. 7−100887
EMG gait pattern, clustering with temporal feature 7−101121
EMG interference pattern, quantitative model 7−100873
EMG of elbow antagonist, inverse relationship to movement arm 7−100870
EMG signal data acquisition, low-power multichannel system 7−87266
EMG signs of diaphragmatic fatigue, prediction by diaphragmatic press. waveform 7−126808
EMG study of leg muscles in foot flexion and extension 7−145013
EMG surface signals, inverse filtering, living tissues props., estimation 7−114245
EMG to force processing, comparison with kinetic anal. in calf muscle moment in walking and stepping 7−71801
EMG variables, multivariate anal. 7−93723
EMG-force relationships of skeletal muscle rel. to recruitment range 7−93795
erector spinae model, anatomically detailed, effects on L4/L5 disc compression and shear 7−107133
ergometer to test dynamic and static props. of mammalian muscle 7−71940
F-actin filaments of normal and athyreotic heart myocardium, structural parameters 7−106960
fibre conduction vels. meas. of different locations 7−100852
fibres, rat, slow inactivation of Na^+ channels 7−100851
finger and hand movements in shape recognition, estimation by EMG time series processing 7−145105
flight muscle kinetics for insects with different wingbeat freqs. 7−139303
force manipulation, neuromuscular stimulation system, cat biomech. and electro physiological data 7−71720
force regulation by recruitment modulation using a digital closed loop controller 7−71937
forearm in man, self-terminated fast movement, EMG activity, amplitude depend. of triple burst pattern 7−86950
frontalis EMB activity, effects of variation in phys. effort 7−119757
functional neuromuscular stimulation, portable system for paralysed upper extremities 7−101127
functional neuromuscular stimulation hand grasp, open and closed-loop control using neuroprostheses 7−101149
gait swing phase, dynamic optimisation technique for predicting muscle forces 7−71802
gastrointestinal myoelectric activity, computer models 7−126793
heart muscle cells, spontaneous wave-like contractions, expt. and mathematical model 7−144995
hindlimb suspension and exercise in rats: mech., morphological and biochem. adaptation 7−87050
hyoid muscles, mechanical function during spontaneous breathing in cats 7−107019
inspiratory muscles, pliometric activity: maximal press.-flow curves 7−114322

muscle continued
interstitials hyperthermia, RF low current field and microwave, comparative thermal dosimetry 7−107164
intestinal motor activity, computer anal. 7−127048
knee, rotatory laxity and torsional stiffness, musculature contrib., EMG obs. 7−87055
leg electromyostimulation, technique for muscle force quantification 7−101105
LF sound prod. mechanism, frog gastrocnemius obs. 7−94050
loaded breathing, effort perception: effect of inspiratory muscle fatigue 7−114298
locomotor apparatus, musculo-skeletal system, math. model 7−145111
locomotor rehabilitation, progressive partial weight bearing training system 7−107314
lymph vessel contractile motion, video image analysis, automatic edge, line extraction 7−101169
mechanical properties and heat generation, instrumentation for study *(Japanese)* 7−87405
middle pharyngeal constrictor in rabbits, expiratory activity 7−145010
model comparison for muscle-joint systems 7−133180
motor performance quantification equipment, microprocessor-controlled 7−107289
motor unit action pots. rel. to motor unit architecture 7−93714
motor unit twitch force meas., circuit for improving the precision of the spike-triggered averaging technique 7−133525
motor units activity, motor control basis 7−145002
multichannel time series myoprocessor for A/K prosthesis control 7−94025
muscular endurance index eval. and recording using digital dynamometer with accessory 7−87326
musculo-skeletal systems, math. models 7−145110
musculoskeletal modelling, computer graphics system 7−101165
musculotendon model, dimensionless 7−100959
myocardial contractile force, left ventricular fn. study, preload independent index anal. 7−78930
myocardial contractility mechanism anal., math. models 7−78937
myocardial contractility regulation by system of energy transport, math. model 7−78711
myocardium, noncontracting canine, quantification of mech. props. under simultaneous biaxial loading 7−107132
myoelectric conduction vel. and median freq. estimates, effects of electrode location 7−87394
myoelectric control of upper limb prostheses, response time and control accuracy 7−107312
myoelectric fatigue characteristics of a healthy normal back 7−100868
myoelectric signal processing, nonstationary, some aspects 7−71724
myoelectric signals, automatic decomposition 7−94047
myoelectric signals, cond. vel. distrib. estimation 7−93708
myoelectric signals, surface detected, decomposition 7−100866
myometrium, rabbit, smooth muscle, Ca ion fluxes 7−107014
myosin filaments, 1-headed, sliding movement of single actin filaments 7−86889
myosin heads in oriented synthetic filaments, diffuse X-ray scatt. obs. 7−100808
myotubes, cultured, rat, voltage-dependent actions of tetraethylammonium bromide on single acetylcholine channels 7−100882
myotubes and neurons, Drosophila, obs. revealing 2 distinct A-type K^+ channels 7−119754
neuromotor control model incorporating the stretch reflex 7−100847
neuromuscular anatomy and abnormalities, function oriented identification 7−107025
neuromuscular blockade monitoring using integrated electromyography 7−87265
neuromuscular function monitoring in postoperative period 7−126806
neuromuscular system, multivariable mechs. 7−100957
neuromuscular system modelling using non-invasive experimental methods 7−114227
nicotinic acetylcholine receptor function development, Xenopus laevis muscle obs. 7−100849
NMR imaging, rotating-frame depth selection technique 7−79037
papillary, subjected to rapid temp. steps, pot. meas. using isolated microelectrode amplifier 7−107324
paralysed muscle, mass changes following reconditioning by elec. stimulation 7−100874
periodic cardiac muscle, pot. distrib. determ. by asymptotic anal. 7−86956
perioral neuromuscular system, functional identification, signal flow diagram 7−78908
perioral reflexes of stutterers and nonstutterers, surface EMG recording 7−107096
peripheral nerve and muscle, long-term recordings from normal and dystrophic mice, method 7−87400
plantar flexion, voluntary maximal: mech. and EMG anal. of muscle excitation 7−100872
plasma membranes, rat, trapping single ions inside single ion channels 7−133246
PMR, water-suppression using stored waveform inverse Fourier transform technique 7−71839
positioning movements, acceleration and EMG studies of control process *(Japanese)* 7−139302
power spectra estimators of muscle conduction velocity 7−94010
pressure-flow relations of diaphragm and vital organs with nitroprusside-induced vasodilatation 7−71777
proteins of rat hindquarter muscle, increased catabolism as a manifestation of radiation myopathy 7−126937
quadriceps contraction, conversion to digital signal for microcomputer system 7−87353
reflex responses in human jaw, lip, and tongue muscles elicited by mech. stimulation 7−78909
rehabilitation R&D progress reports (1986) 7−94023
respiratory load-compensating mechanisms in muscular dystrophy 7−126880
respiratory muscle performance quantification 7−100956
respiratory muscles, elec. and mech. activity during hypercapnia, dog obs. 7−71782
sarcomere length uniformity determ. by 3D reconstruction of resting isolated heart cell striation patterns 7−127050
sarcomere shortening in skinned fibres of frog muscle, optical-electronic method for meas. using white light diffr. 7−133516
sensorimotor function measures, age and gender effects 7−126897
simulated muscle fibre, optical diffraction intensity 7−107149
muscle continued
single-skinned fibres, pH-induced rigor effects, optical ellipsometry and electron micrographs study 7−78961
single-skinned fibres of frog muscle, lattice swelling with selective digestion of elastic components 7−133199
skeletal muscle, Ca channels of transverse tubules, alkali and organic monovalents conductance study 7−78812
skeletal muscle, frog, acoustic signals obs. 7−94049
skeletal muscle, physiological stimulation technique 7−101166
skeletal muscle as power source for cardiovascular pump: in vivo assessment in dogs 7−114342
skeletal muscle fatigue in vitro, temp. dependency obs. 7−71702
skeletal muscle fibres, voltage clamped, frog, contraction threshold, Ca binding to troponin 7−93790
skeletal muscle in men, anaerobic energy release during elec. stimulation 7−107006
skeletal muscle layer, effects on EKG quadrupoles 7−93711
skeletal muscle stimulation parameters, cardiac assist appl. 7−87355
skinned single fibres, shortening vel., influence of filament lattice spacing 7−133341
Smart Trigger for real-time spike classification of nerve and muscle signals 7−87415
smooth muscle cells, corkscrew-like shortening 7−126770
smooth muscle impedance meas. and appl., microprocessor-based data acquisition system 7−94046
smooth muscle voltage sensitive Ca^{2+} channels, regulation during hibernation in ground squirrel 7−126809
soleus muscle, cat, motor output: in vivo vs. in situ props. 7−100962
somatosensory evoked pots., posterior tibial, in Duchenne-type progressive muscular dystrophy 7−78914
soreness and intramuscular fluid press., eccentric and concentric load comparison 7−100946
speech-muscle visuomotor tracking in dysarthric and nonimpaired speakers 7−107095
spinal spasticity modification, effects of elec. stimulation parameters 7−119893
stapedius muscle, cat, asymmetries in acoustic reflexes 7−78867
stretch reflex loop model, stability and parameter studies 7−126789
striated, contracting, use of laser-stimulated luminesc. to meas. X-ray diffr. 7−145303
striated muscle, myofilament lattice spacing, osmotic compression, electrochemical meas., Donnan pot. theory 7−78728
striated muscle, rat, water phases as determined by T_2 proton NMR relax. times 7−139207
striations image processing below microscope resolution limit, digital deconvolution 7−93882
stroke patients, microcomputer-based assessment and treatment-planning 7−133504
structure, sliding filament model, X-ray and electron microsc. obs. 7−107326
surface EMG eval. of quadriceps femoris, normal and spastic subjects 7−145012
surface EMG signal adaptive modelling and classification 7−87335
surface EMG with appl. to fatigue, autoregressive modelling 7−93709
tissue, soft, US absorpt. and attenuation *(Japanese)* 7−126914
torso extension method, accuracy for anisotropic anal., ECG appl. 7−86880
tracheal smooth muscle, time depend. of series elasticity 7−126876
tracheoesophageal voice prod., aerodynamic and myoelastic contrib. 7−145092
transcranial activation of motor pathways in man 7−107026
trunk muscle EMG, rel. to lifting moments in sagittal and frontal planes 7−71798
twitch tension method to assess motor nerve function in rat 7−119914
UNB universal myoelectric trainer 7−127043
upper airway dilating forces during wakefulness and sleep in dogs 7−100945
US heating of simulated human muscle, temp. profile 7−71829
uterine electrohysterogram, processing for obstetrical monitoring 7−107282
vascular by conductance in trained and untrained men 7−107114
vocalis canine, twitch response to elec. field stimulation 7−145121
voltage-clamp technique, 3-microelectrode, generalisation to allow unequal, electrode spacings, muscle meas. appl. 7−87396
Ca^{2+}-dependent K^+ currents in Drosophila muscle 7−100881
muscovite *see mica*
music
subband coding without loss of quality 7−145087
time-varying spectra anal. editing 7−104106
music, electronic *see electronic music*
musical acoustics
bassoon input impulse response 7−142123
bowed string, kinematic study *(Japanese)* 7−142124
chamber music, listener sound levels *(German)* 7−142121
Chinese bronze chime bells, acoustic props. 7−117412
digital audio convertors, audible distortion and noise eval. 7−130488
electronic organ synthesis techniques *(Hungarian)* 7−123356
human capability for musical sound evaluation *(Japanese)* 7−119780
literature review 7−110721
missing fundamentals, demonstration expt. 7−80246
musical scales, num. investig. 7−66863
nonsimultaneous complex tones, harmonic relationship in similarity judgement 7−100909
perceptual attack time of musical tones 7−126838
piano practice room acoustical charact. 7−117403
psychometric evaluation studies *(Japanese)* 7−104110
resonant frequencies in sinusoidally driven system, zero reactance condition study 7−108077
sharmisen tones, effects of SAWARI mechanism *(Japanese)* 7−82950
soprano solo and choir singing, acoustic comparison 7−142122
string amplitude and decay time meas. using FFT techniques 7−110685
string instruments, unstable states of vibration *(German)* 7−82948
violin, effect of bridge on driving point impedance 7−130487
wolf note model for stringed instruments *(German)* 7−82949
Yongle Bell, China, charact. *(Chinese)* 7−123355
musical instruments
bassoon input impulse response 7−142123
Chinese bronze chime bells, acoustic props. 7−117412
quality diagnosis, signal processing modelling, expert system *(German)* 7−75220

musical instruments continued
string instruments, unstable states of vibration *(German)* 7−82948
violin, effect of bridge on driving point impedance 7−130487
myoelectricity *see bioelectric potentials; muscle*
myopia *see vision defects*
N-body problems
see also celestial mechanics; many-body problems
celestial mechanics, N-body problem soln. using successive approx. method *(German)* 7−139893
collisional evolution of rotating nonidentical particles system, appl. to Saturn ring system 7−134118
collisions in N-body problem, regularization of equations 7−107698
elliptical asteroidal problem near first-order resonance, averaged motion 7−134117
equal mass triple systems, dynamical evolution in 3D 7−127688
equatorial magnetic-binary problem, families of simple symmetric motions 7−145805
four-body problem, general case, motion restrictions 7−127687
galaxies, dynamics of tidal spiral arms in two-component galaxies 7−72591
galaxy clusters profiles, N-body simulations for cosmological scenarios versus obs. 7−120625
generalised photogravitational restricted three-body problem, existence of libration points 7−72258
integrable relativistic N-particle system in external pot. 7−108231
particle kinetostatics and the multi-body system *(Chinese)* 7−88950
photogravitational three-body problem, stability of triangular libration points *(Russian)* 7−107700
restricted elliptical three-body problem, control of spacecraft motion near collinear libration centre 7−120243
restricted three-body problem, expansion of disturbing force-function for high-eccentricity librations 7−145803
restricted three-body problem, relation between dynamical parameters of Trojan asteroids 7−79861
restricted three-body problem, successive bifurcations and evolution of double and quadrupole periodic orbits 7−72253
restricted three-body problem, three characteristic orbital parameters of Trojan asteroids 7−79860
restricted three-body problem, vibr. stability of double-star Roche model 7−120494
Saturn ring system, collisional evolution of rotating nonidentical particles system 7−134118
spherical stellar systems, effects of successive stellar mergers on dynamical evolution 7−146059
spiral galaxies-satellite galaxies interaction, orbital decay theory 7−95005
stellar dynamics, Antonov criterion for gravothermal instability 7−140186
stellar dynamics, modelling of collective relaxation processes in galactic disks by numerical expts. *(Russian)* 7−107967
stellar dynamics, selective relaxation in one-dimensional self-gravitating systems 7−127979
stellar systems, existence of H-theorem inequality for violent relaxation 7−88546
tethered satellites, relative motion of two-body system with tether of controllable length 7−120245
three parallel sheets system, stability of 1D gravitating system 7−72261
three-body problem, circular case, direct periodic orbits analytic construction 7−115215
three-body problem, circular restricted case, resonant asteroid orbits 7−88162
three-body problem, circular restricted case, Trojan orbits with variable mass ratios 7−88083
three-body problem, general 3D case, zero-vel. hypersurfaces 7−120256
three-body problem, limited circular case, optimal 2-pulse flights on asymptotic trajectory 7−94639
three-body problem, photogravitational case soln. 7−127689
three-body problem, planar elliptic-restricted case of 2/1 Jovian resonance 7−115216
three-body problem, restricted elliptic case, truncated model 7−115212
three-body problem 3/1 planar circular resonant problem, anal. 7−72255
N/D method
relativistic N/D equations with inelasticity, Coulomb effects and analytic props. 7−95774
$^2H(p,p')$, Coulomb effects in perithreshold resonance prod., multichannel N/D eqns. 7−135319
^3He form factor calcs., modified N/D method 7−128949
NAND gates *see logic gates*
narrow band gap semiconductor materials *see narrow band gap semiconductors*
narrow band gap semiconductors
antiferromagnetic, conduction electron spectrum, optical absorpt. edge shifts, Hubbard operator diagram technique calcs. 7−76730
devices, past and current research, review 7−138069
electron and hole recombination 7−84930
gapless, electric susceptibility mass, effect of quantising mag. field 7−131528
helicon soliton propag., Kane dispersion law 7−84957
interband magneto-optical transitions 7−92646
interband magneto-optics 7−125711
inversion layers, subband levels broadening by interband tunnelling 7−77094
IV-VI narrow-band semiconductors, energy bands, dielectric props. and defects 7−84678
Kramers-Kronig relation under resonant transition regime 7−110446
light induced magnetisation, spin polarisation 7−105964
low dimens. structures, electronic energy levels *(Polish)* 7−131768
low temp. sp. ht. 7−137585
magnetophonon effects in high elec. fields *(German)* 7−125030
narrow gap semiconductor superlattices, CARS obs. 7−85698
organic metals, A[M(dmit)$_2$] (Az DBTTF, BEDT-TTF, HMTTeF, BPDT-TTF; M=Ni; Pd) electrical and structural properties 7−99014
polythiophenes, heterosubstituted narrow gap semicond., energy gap and bond length alternation 7−105395
quasi-2D nonparabolic subbands, k.p model calcs. 7−70166
quasi-2D systems, hybrid magneto-elec. quantisation 7−138043
ternary semimagnetic semicond., electronic props., photoemission survey 7−138599
two-photon magnetospectroscopy in high mag. fields *(German)* 7−125709
zero gap electron states, 2D, in mag. field, random impurity fields 7−70238
zero gap extrinsic, density of states in a mag. field 7−70158

narrow band gap semiconductors continued
Ag_2Te, transport props. 7−76954
(Cd, Hg)Te, photoelectromagnetic detectors for middle and far IR 7−89262
CdHgTe, optical nonlinearities 7−130243
$(Cd_{0.917}Mn_{0.083})_3As_2$, exchange interaction, effect on quantum transport 7−70328
$(Cd_{1-x}Mn_x)_3As_2$, magnetisation meas. 7−70585
$Cd_{1-x}Mn_xTe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
CdTe-HgTe, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
$Cs(Pd(S_2C_2(CN)_2)_2).0.5H_2O$, preparation, structure and elec. props. 7−99008
EuO, mag. semicond., elec. resist., press. depend. 7−112338
GaAs, cyclotron resonance, hysteretic, three-photon 7−143911
GaSb-InAs, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
HgCdTe, inversion layers, subband levels broadening by interband tunnelling 7−77094
HgCdTe, laser annealing, effects on mercury loss and surface damage 7−131542
n-HgCdTe, magnetic field induced electron condensation *(German)* 7−125029
$Hg_{0.8}Cd_{0.2}Te$, far IR magnetotransmission of accumulation layers 7−138433
$Hg_{0.8}Cd_{0.2}Te$, far infrared thermomodulation and cyclotron resonance *(German)* 7−125056
$Hg_{0.8}Cd_{0.2}Te$, subband physics in electric quantum limit 7−138001
$Hg_{0.83}Cd_{0.17}Te$, phonon spectra, Raman spectra obs., 10-250 K 7−85689
$Hg_{1-x}Cd_xTe$, elec. props., electronic struct. under hydrostatic press. *(Chinese)* 7−124979
$Hg_{1-x}Cd_xTe$ LPE layers, anomalous Hall effect props. studies 7−143484
$Hg_{1-x}Cd_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
$Hg_{1-x}Cd_xTe$, metal-insulator-metal transition induced by uniaxial strain 7−99140
HgMgTe, laser annealing, effects on mercury loss and surface damage 7−131542
$Hg_{1-x}Mn_xTe$ (Se), diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Hg_{1-x}Mn_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
HgTe cyclotron resonance, hysteretic, three-photon 7−143911
HgTe-CdTe, superlattices, optical properties, review *(Polish)* 7−132219
HgZnTe, laser annealing, effects on mercury loss and surface damage 7−131542
$InAs_xSb_{1-x}$, narrow gap semicond., optical, magneto-optical and transport studies 7−138088
InSb, cyclotron resonance, hysteretic, three-photon 7−143911
InSb, optical nonlinearities 7−130243
$K(Pd(S_2C_2(CN)_2)_2).H_2O$, preparation, structure and elec. props. 7−99008
P, black, lattice dynamics, electron-lattice interaction 7−124418
PbSe narrow gap semicond., band struct., Faraday magnetooptical effect study *(Russian)* 7−98808
$Pb_{1-x}Sn_xTe$ crystals, narrow-gap, transformation of defects, laser irradiation 7−98857
$Pb_{1-x}Sn_xTe$ narrow gap semicond., band struct., Faraday magnetooptical effect study *(Russian)* 7−98808
$Pb_{1-x}Sn_xTe$, narrow-gap, laser irrad. transform of intrinsic and impurity defects, elec. and optical props. change 7−112325
$Pb_{1-x}Sn_xTe:F^+$, impurity depth profiles, resonance nuclear reaction studies 7−142817
PbTe quantum well, band offset, cyclotron reson. determ. 7−70373
PbTe:Ag, elec. props. and photoluminesc. 7−105557
PbTe(Se) and (Pb,Sn)Se IR detectors on Si, heteroepitaxial growth 7−73424
$(Tl\text{-}V\text{-}VI_2)_{1-x}(2\text{-}IV\text{-}VI)_x$ solid solns., semicond., energy band struct. 7−84664
$YCrO_3$:Ca(Mg)(Sr)(Ba), elec. cond., Seebeck coeff. 7−70342
$Zn_{1-x}Mn_xSe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771

natural gas technology
EM ultrasonic transducers and systems for in-service inspection of gas pipelines 7−75239
Klaipeda city air pollution reduction programme *(Russian)* 7−144936
liquid natural gas, rollover phenomena, study 7−73370
USA natural gas field characteristic and development cost database 7−133029

natural resources
see also agriculture; dams; energy resources; mining; water supply
Amazon forest loss rate in Rondonia state 7−86874
Caspian Sea, consequences of water diversion *(Russian)* 7−94330
forest decline attributable to acidic deposition and other conditions 7−106939
forest decline attributable to O_3 exposure and other stress combinations 7−106940
forestry, method of designing fire weather network 7−114865
forestry management, application of SAR radar remote sensing 7−101312
groundwater, optimal pumping policies 7−114847
hydrogeological investigations, appl. of low-pass filtering to noisy Schlumberger sounding field curves 7−127078
Indonesia, remote sensing programme for natural resources 7−114713
North Sea oil and gas reservoirs, conf., Trondheim, Norway (Dec. 1985) 7−140380
ore bodies prospecting, reduction to equator, reduction to pole, and orthogonal reduction of mag. profiles 7−120134
ore deposits, metallogeny rel. to tectonic segregation of lithosphere 7−79330
placer deposits off Vijaydurg Bay, Maharashtra, W India, results from geophysical investigations 7−139585
Que River (Tasmania) ore body, TEM case study 7−119936
remote sensing, resource management applications, review 7−87951
remote sensing in Europe, conf., Lyngby, Denmark (June 1986) 7−95095
remote sensing satellites, prospects for AD 1987 to 1997 period 7−133957
SAR data for agriculture and forestry 7−87984
soda deposits of Torei Basin (Chita Oblast, USSR), evidence from soda mineral springs 7−133673
sulphide ore deposits, dissolved and suspended forms of Cu, Pb and Zn migration in dispersal water flows 7−145456

natural resources continued
USA natural gas field characteristic and development cost database 7−133029
water resource modelling, computer appl. 7−114836
water resources of Sacramento Basin, water balance model development for climate impact assessment 7−145566

natural rubber *see rubber*

natural sciences applications of computers *see natural sciences computing*

natural sciences computing
see also astronomy computing; astrophysics computing; biology computing; chemistry computing; geophysics computing; mathematics computing; medical computing; physics computing
CAI, problem solving software for science classes 7−120745
electron microscopy, image processing appls. *(German)* 7−108704
instruction using local and long-distance computer networks, Earth Lab project 7−120731
LOGO, science laboratory appls. for students 7−134405
microscope focusing automation, microprocessor-controlled system 7−128648
science resources, computers in the science classroom 7−134406
term identification and text description techniques 7−88819

Navier-Stokes equations
2D domain, Chebyshev spectral approx. 7−75515
3D Navier-Stokes eqns., incompressible, soln. using pseudospectral method 7−88984
L^p-stability for the strong solutions of the Navier-Stokes equations in the whole space 7−95346
adaptive grid method for Navier-Stokes flow computation 7−69081
air flow around cubic model, 3D large eddy simulation 7−91095
airfoil, dynamic stall at high Reynolds number, for unsteady viscous incompressible flow *(French)* 7−142248
airfoil, simulation of compressible Navier-Stokes flows 7−111016
annular channel, viscous liq. flow, secondary regimes 7−136999
annular channel flow, Navier-Stokes equation, numerical soln. *(Chinese)* 7−111115
Benard problem, O(2)-symmetric bifurcation theory for convection rolls 7−136859
Biot-Savart model of vortex reconnection 7−83162
Blasius flow, ribbon-induced transition, num. investig. 7−91065
boat-tailed heat shield, supersonic flow simulation 7−97473
Boltzmann, Navier-Stokes and Euler equations, relationship using entropy *(French)* 7−128297
buoyant laminar convection in a vertical cylindrical annulus 7−69100
carotid artery, pulsating flow behaviour in multi-curved segment *(German)* 7−139305
cavity flow dynamics of high Reynolds number and high aspect ratio 7−91230
circular cylinder, flow disturbance and symmetry, Navier-Stokes equations soln. 7−117560
circular cylinder, laminar vortex shedding, flow visualisation 7−136871
circular cylinder, viscous shear flow, unsteady NS eqn. soln., integro-differential anal. 7−142268
circular cylinder in oscillatory flow, vortex generation 7−83151
coherent structures in wall layer, models 7−130659
compressible and incompressible viscous flow simulations 7−136775
compressible eqn. soln., asymptotic behaviour 7−136783
compressible eqns., finite-element soln. 7−136902
compressible Navier-Stokes equations, stationary, L^p theory and incompressible limit, equilibrium solutions 7−75546
compressible supersonic compression corner shock wave/turbulent boundary-layer interaction 7−111022
compressible transonic flow, 2D Navier-Stokes eqns., multigrid method soln. *(French)* 7−91162
computational fluid dynamics appl. in aeronautics 7−97481
concentric sphere gap, stationary and time dependent vortex streams, Navier-Stokes eqns. *(German)* 7−123656
conducting liq. stationary flow in MHD channel *(Romanian)* 7−137033
convection, natural, in enclosures, elec. field effects 7−69154
convective heat transfer from vertical rectangular body 7−97515
coupled marching procedure, appl. to incompressible flows 7−83158
cubic cavity flow, num. anal. *(Japanese)* 7−97482
data calculation method for 3D Navier-Stokes flows *(German)* 7−136786
developing entrance flow, marching control vol. FEM 7−83338
disturbed film flow on a vertical plate, Navier-Stokes eqns. 7−83160
drift flux equations soln., evaluation of computing algorithms, reactor flow appl. 7−96172
eccentric rotating flows, unsteady solutions of Navier-Stokes eqns. 7−130723
electrically conducting liq. flow in mag. field 7−91244
elongated body of revolution surface, line of inflection, spliced asymptotic expansions 7−136791
equatorial ocean waves, mean circulation effects 7−127224
finite element anal., symmetric forms 7−136774
finite elements, physics applications, summer school, Lausanne, Switzerland (Sept. 1986) 7−134339
flat plate trailing edge, laminar flow, Navier-Stokes eqns. soln. 7−136788
flow circulation in container with rot. lid, axisymmetric vortex breakdown 7−123650
flow simulation of channel flow with distorted geometry using spectral code 7−97476
fluid flow due to stretching boundary, uniqueness 7−91074
fluid turbulence, Lagrangean/Hamiltonian formalism 7−83161
free boundary fluid with surface tension, Navier-Stokes equation, small-time existence 7−130620
free convection, attractors for Benard problem, fractal dimens. bounds 7−136856
fully developed flow in a curved pipe of arbitrary curvature ratio 7−123757
gas-agitated liq. reactor, buoyancy-induced flow simulation 7−111070
generalized solutions, partial regularity in exterior domains 7−88982
global relaxation procedure for compressible solutions of the steady-state Euler equations 7−91160
graphical representation of complex flows *(Italian)* 7−83164
Hausdorff dimension of attractor for homogeneous decaying turbulence 7−123599
heat transfer coefficient evaluation in periodically corrugated channels, num. model 7−117602
heatup of initially isothermal fluid in enclosure with semicond. boundaries 7−83224

Navier-Stokes equations continued
hexagonal lattice gas automata, viscosity, Green-Kubo formalism 7−108471
high-Reynolds-number flow computation 7−123578
Hilbert expansion of BGK eqn. and Navier Stokes steady state hydrodynamic eqn. 7−91055
horizontal tube banks, natural convection, gas release at walls effect 7−97517
hypersonic wind tunnel nozzles, simplified Navier-Stokes eqns. anal. 7−142350
impinging stagnation flows of different fluid prop. jets 7−91178
incompressible, spectral method calcs. with staggered grid 7−75513
incompressible flows, boundary conditions 7−104238
incompressible flows, marching multigrid nonlinear method, numerical soln. 7−104234
incompressible fluid flow, iterative calcs., finite difference method *(Japanese)* 7−142251
incompressible fluid flow in cylindrical channel, mechanical values, Navier-Stokes eqns. soln. *(Russian)* 7−123766
incompressible fluids, 2D flow, appl. of invariant tori bifurcation points determination 7−83157
incompressible laminar flow, weakly separated, Navier-Stokes and approx. eqns. 7−83167
incompressible laminar viscous flow, two-dimensional, separation points and Navier-Stokes flow 7−75525
incompressible Navier-Stokes eqns., numerical solns. on a nonstaggered grid 7−83153
incompressible Navier-Stokes eqns. for internal flow, time-marching soln. 7−83154
incompressible Navier-Stokes eqns. on periodic domain, Lagrangian fractional step method anal. 7−88983
incompressible Navier-Stokes eqns. with slip boundary condition, finite element approximation 7−97479
incompressible viscous fluid dynamics, uniqueness theorem 7−80427
internal viscous fluid, semi-elliptic anal. 7−123580
Joukowski airfoil, near wake, self-induced unsteady motion simulation 7−123644
Kolmogorv's constant and local interactions 7−130729
laminar combined convection from isothermal sphere, finite element calcs. 7−69094
laminar flow transition control by period suction blowing 7−83337
laminar subsonic flow past airfoil compressible reduced Navier-Stokes eqns. 7−136798
large eddy simulation, approx. scheme for convective terms *(Japanese)* 7−142252
liquid film, gravity-driven, diffusion from vertical wall 7−98633
longitudinal 2D flow along cylinders and plates, blunt leading-edge separation 7−104277
MHD, two-dimens. turbulence expt. and num. simulation 7−91257
molecular dynamics simulation of flow past a plate 7−104239
multidimensional flow and natural convection, finite difference method with error correction 7−75519
multilayer flow, of two immiscible liqs., Poiseuille flow stability, Navier-Stokes eqn. solns. 7−69248
multiple-grid algorithm, concurrent-processing adaptations, appl. to viscous flows 7−142246
natural convection from a uniform heat flux horizontal cylinder at moderate Rayleigh numbers 7−117601
nearly one dimensional singularities of solutions to the Navier-Stokes inequality 7−123568
non-stationary Navier-Stokes equations, numerical soln., viscous incompressible fluid *(German)* 7−123764
nonradial steady solns. in plane divergent channel 7−102171
nonstationary, determinacy principle violation for large Reynolds numbers 7−134521
nonstationary filament flow, damping model *(German)* 7−83294
numerical fluid simulation and appls. 7−69085
numerical methods, stability and convergence properties *(Spanish)* 7−130629
oblique shock wave/laminar boundary layer interaction, press. distrib. 7−83272
optical fiber preform collapse process, identification 7−90807
parallel plates with localised heat sources, laminar mixed convection heat transfer *(Japanese)* 7−117604
parallelisation of Navier-Stokes code for ICL DAP 7−69084
penalty solution with finite difference method 7−110902
peristaltic pipe flow, analytic soln. 7−123759
pipe flow, numerical spectral method for flows through anevrisms 7−130623
planar liq. wall jet, Navier-Stokes similarity soln. 7−69240
planar liquid wall jet, Navier-Stokes similarity soln. 7−130757
plane 2D mixing layer, unsteady Navier-Stokes eqn. soln. 7−83176
plane channel with moving walls, turbulent flow modelling 7−137000
plane surface, pressure waves−boundary layer interaction, saw-tooth shocks *(German)* 7−136929
pressure Poisson eqn. with Neumann boundary conditions on a nonstaggered grid 7−83152
pseudospectral methods for solution of the incompressible Navier-Stokes equations 7−91057
radiating rarefied gas unsteady flow in rot. channel 7−123683
Reynolds averaged, soln. in general curvilinear coordinates, appl. to vehicular dynamics 7−97483
rigid body-viscous flow interaction, periodic solns. 7−123571
rotating-annulus flow computation by method of artificial compressibility *(Afrikaans)* 7−130722
second order turbulence flow closure model 7−69180
separated periodic flows, upwind Navier-Stokes solutions 7−91069
shear flow transition, Ginzburg-Landau eqn. soln. 7−117674
shear flow turbulence, direct simulation of boundary layer instability by higher order method of lines 7−110922
shear layer, spatial develop., nonlinear binary-mode interactions, Kelly's mechanism 7−111059
slender airfoil, parabolic forward edge, high Reynolds number, point of separation 7−136790
small particle motion in viscous flow past many square cylinders 7−75648
space-marching conservative supra-characteristics method for separated flow 7−130737
space-marching flow calcs., consistent strongly implicit iterative procedure 7−136773
space-periodic Beltrami flows, linear stability 7−137025

Navier-Stokes equations continued
spatially growing waves, intermittency, and convective chaos in an open-flow system 7—75517
spatially periodic harmonic Navier-Stokes problem, augmented Lagrangian technique 7—136778
square prism, laminar flow and heat transfer, finite element solns 7—69099
stationary 2-D Navier-Stokes eqns., nonstandard finite element method 7—123569
stationary incompressible viscous fluid flow through a porous boundary 7—123749
stratified rotating disk flow, Navier-Stokes eqns., similarity solns. 7—142320
stream function solution with interelement penalties 7—75514
suction, boundary layers calibration 7—142289
supercomputers and fluid dynamics, conf. Nobeyama, Japan, (Sept. 1985) 7—120710
supersonic base flow, with thermal action on wake, numerical anal. 7—75610
supersonic flow over sphere in wake of blunt cylinder 7—136920
surface water, 3D modelling using mesh adaptive technique 7—110906
suspensions, hydrodynamics in Brownian dynamics, periodic boundary conditions for computer simulations 7—111332
Taylor's vortex array, nonlinear stability, Navier-Stokes eqn. soln. 7—69192
thermal Marangoni flows, effect of variable transport props. 7—69130
three-dimensional homogeneous turbulence, Hopf characteristic functional eqn., Monte Carlo approach 7—75534
time dependent viscous flows anal., finite element algorithm appl. 7—69083
time-dependent Navier-Stokes problem, mixed method 7—104236
Tollmien-Schlichting wave cooling of chips is flow in grooved channels 7—123636
transonic diffuser flow, self-excited oscills., Navier-Stokes eqn. simulation 7—136910
transonic separated flow predictions, eddy-viscosity/Reynolds-stress closure model 7—83261
triad-angle locking in low-order models of the 2D Navier-Stokes equations 7—67024
turbulence, 2D, inverse cascade of energy 7—130655
turbulence, freely decaying, 3D Navier-Stokes eqn., Kolmogorov similarity 7—123603
turbulence, Hopf space-time functional formalism, closure methods 7—69110
turbulence statistics in fully developed channel flow at low Reynolds number 7—83348
turbulent channel flow, large eddy simulation, convective terms in Navier-Stokes eqns. 7—117573
turbulent channel flow, numerical simulation, low spatial resolution, time-dependent Navier-Stokes eqns. *(German)* 7—123763
turbulent flow, high Reynolds number, 2D Navier-Stokes anal., statistical props and vorticity 7—69108
turbulent flow, self-similar invariant families, Navier-Stokes eqns. 7—123601
turbulent flow, static struct. function, Navier-Stokes eqn. anal. 7—91098
turbulent flow in a channel, bifurcation model 7—123753
turbulent MHD transport coeffs., self-consistent calc. 7—75535
turbulent mixing layers, visualisation and velocimetry meas. 7—123609
turbulent wake of a flat plate 7—130646
two dimensional, stream-function formulation, solution by multivariate quasi-conforming techniques *(Chinese)* 7—128295
two-dimensional flow, num. simulation of transition to turbulence 7—91063
two-dimensional flow in branching channel, Navier-Stokes eqns., num. soln. 7—111105
two-dimensional nonsteady viscous flow simulation on the Navier-Stokes Computer miniNode 7—104237
unfactored implicit scheme with multigrid acceleration soln. 7—110911
unsteady circular Couette flow with random forcing, stability 7—110991
unsteady flow simulation at high Reynolds numbers *(French)* 7—97480
vectored suction on shock-induced separation 7—104307
virtual finite elements separation, rotational flow in cylindrical vessel *(German)* 7—123655
viscocapillary film flow, 3D, downstream development 7—97627
viscous and elastic stress tensors in hydrodynamic calculations *(Russian)* 7—104241
viscous compressible flow simulations using supercomputers 7—123581
viscous flow calculations, nonorthogonal curvilinear coordinates, pressure correction methods 7—123583
viscous flow for 2D dynamics, numerical soln. using orthogonal coordinate systems 7—91064
viscous flow past an airfoil, Navier-Stokes eqn. soln. 7—110907
viscous fluid, spout-like flow evolution 7—130715
viscous fluid movement, asymptotic solns. *(Russian)* 7—97475
viscous gas, heat-conducting, ID flow form. investig. 7—117556
viscous gas, streamline flow round plate, calc. methods *(Russian)* 7—123587
viscous rotating flow past sphere, Navier-Stokes eqns. 7—91061
vocal tract fluid flow, finite element model 7—114309
von Karman swirling flows, book contrib. 7—97546
vortex, unsteady Navier-Stokes eqns., exact solns. 7—91131
vortex dynamics and the existence of solutions to the Navier-Stokes equations 7—130720
vortex filaments, cut and connect, anal. 7—130725
vorticity field structure in homogeneous turbulent flows 7—75592
vorticity-velocity formulation for high Reynolds no. flow 7—91130
wakes, 3D struct., visualisation, incompressible Navier-Stokes eqn. soln. 7—123643
CO_2 gas dynamic laser mixing and relax. characts. 7—141835
GaAs, films, growth in continuous gas-epitaxy reactors, gas-flow regimes, num. study 7—118323
H_2 turbulent jet, supersonic combustion with cotraveling air jet 7—100564
W incandescent lamp, vapour convection, num. model 7—97267

navigation
see also computerised navigation; inertial navigation; radar applications; radionavigation; sonar; tracking
autonomous satellite navigation using the stellar horizon atmospheric dispersion sensor 7—79812
geodetic control surveys in North America, 1983 to 1986, review 7—133546
navigation continued
geodetic positioning in four-dimensions for geophysical surveys 7—127606
geophysical surveys based on time and frequency service means 7—145689
Global Positioning System, appl. in gravimetry developments (1983 to 1986) 7—133547
Global Positioning System (GPS), appls. in geodesy 7—133555
hemispherical resonator gyros, projected performance 7—73339
Hydro '86 symposium, Southampton, England/December 1986 7—128192
inertial navigation, gradiometer-gravimeter equation in various coordinate systems 7—139430
latitude determination from Sun's position, BASIC computer program 7—94497
satellite positioning, appls. of laser ranging, TRANSIT positioning and GPS 7—133554
spacecraft control, simplified techniques for navigational plotting 7—120246
universal acoustic deep ocean transceiver with RF command data link 7—79612
GaAs-GaAlAs laser with high energy brightness appl. 7—82610

NDO calculations
see also CNDO calculations; INDO calculations; MINDO calculations; PCILO calculations
α-acetyl-α,α-dimethylmethyl cations, pot. energy hypersurface, MNDO calcs. 7—116853
(4-amino)-1,3,4,5-tetrahydrobenzo(cd)indazole, tautomerism, MNDO geometry optimisation 7—129601
(5-amino)-4,5,6,7-tetrahydroindazole, tautomerism, MNDO geometry optimisation 7—129601
amino acids, unionised, equilib. structs., MNDO calcs. 7—129600
benzalazine derivatives, H-bond, geometry, CNDO/2 and MNDO, UV, IR and ^1H NMR 7—81979
benz[a]anthracene, dichroism spectra, fluorescence polarisation spectroscopy, transitions, NDO calcs., LCAO calcs., moment directions 7—141611
bicyclobutylidene, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7—96544
bicyclopropylidene, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7—96544
bis(ethylenedithio)-TTF, spatial and electronic struct., SCF-MO-LCAO MNDO RHF calcs. 7—74446
borinine, struct., vibr., ab initio MNDO STO calcs. 7—89967
chloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7—89965
column chromatography, chiral stationary phase 7—141711
Crystal Violet, organic dye, UPS and XPS spectra, MNDO calcs. 7—103577
cyclopentadienyl cations, N and B substitution, mol. struct., ab initio MINDO/3, MNDO, STO calcs. 7—96547
cyclopropylidenecyclobutane, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7—96544
diacetylene, IR intensity parameters, acidity of acetylenic hydrogens, MNDO calcs. 7—82125
diamond (100) surface, oxidised, MNDO anal. 7—105212
closo-dicarbadodecaboranes and 9-halogeno derivatives, He I photoelectron spectra 7—110002
dichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7—89965
3,4—dimethylpyrazole, tautomerism, MNDO geometry optimisation 7—129601
1,3-dithiane derivatives, orbital interactions, UV photoelectron spectra, MNDO calcs. 7—122359
ethylamino ion, fragmentation and isomerisation, MNDO calcs. 7—68216
ethylsilane, IR multiphoton dissoc., reaction channels study, ab initio and MNDO calcs. 7—74438
haloalkoxy radicals, H and Cl extrusion reactions, MNDO CI calcs. 7—141470
histamine and derivatives, tautomerism, ab initio MNDO and MINDO/3 calcs. 7—116855
hydrocarbon systems, polarisability and hyperpolarisabilities, MNDO calcs. 7—109768
hydrogen bonding correction to MNDO, crystallographic analysis, SCF semiempirical calculation modification 7—141712
indazole, tautomerism, MNDO geometry optimisation 7—129601
L-methionine, crystalline, conform. phase transition, IR and Raman spectra, MNDO calcs. 7—124413
methyl carbamate, acid hydrolysis, MNDO method 7—144697
3-methylene-1,4-pentadiene, mol. mechs., ab initio MO calcs. 7—81982
methylfluorosilanes-N_2O_2 exciplexes, singlet and triplet states, enthalpies, MNDO calcs. 7—89960
2-methylfuran, photoisomerism to 3-methylfuran SINDO1 calcs. 7—89963
MNDO-85 system of programs for electronic struct., physicochem. props. and reactivity calcs. 7—109779
7-norbornadienyllithium, struct., MNDO calcs. 7—74445
norbornane, geometry, 2-exo and endo substituents, MNDO and MM2 calcs. 7—129599
nucleic acid bases, tautomers geometrical struct., AM1 method calcs. 7—100802
organic molecules, semiempirical transition states, correl. effects 7—68217
phenylpyrroles, isomers, conform. MNDO and AM1 calcs. 7—103397
polyacetylene, vibr. and soliton dynamics 7—69849
polyaniline, defect states 7—70219
1,3-propanedithiol, oxidation, struct., and H^+ elimination, MNDO calcs. 7—109770
pyrene, single cryst., ^{13}C chem. shielding tensors 7—105503
pyronines, electronic absorption spectra, PNDO calc. 7—74657
retinal Schiff base, protonated, isomerisation barrier heights, MNDO calcs. 7—93278
rodamine 110, electronic absorption spectra, PNDO calc. 7—74657
tetrachloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7—89965
trichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7—89965
1-vinylimidazole, geometry, quantum chemical calcs. 7—109778
1-vinylpyrazole, geometry, quantum chemical calcs. 7—109778
HCN-BM_3, M=F, Cl, C—N bond stretch force consts., MNDO calcs. 7—96546
NH_2BBr_2, unstable substituted, photoelectron spectra 7—109765
NH_2BCl_2, unstable substituted, photoelectron spectra 7—109765
NH_2BF_2, unstable substituted, photoelectron spectra 7—109765
NH_2BH_2, unstable substituted, photoelectron spectra 7—109765

NDO calculations continued
N_2O_2, singlet and triplet states, enthalpies, MNDO calcs. 7−89960
P_4H^{2+} compounds, decomposition pot. hypersurface, MNDO calcs. 7−109769
SiO_2 clusters, electronic struct., props., MNDO calcs. 7−122772
NDT *see nondestructive testing*
near edge structure, X-ray absorption *see XANES*
nearly-free-electron approximation
image states and surface states, energy dispersion near surface Brillouin zone boundary 7−85028
quasicrystalline metals, electronic props., pseudopot. methods 7−143314
Al, nearly free electron metals, photoemission spectra 7−138607
Be, nearly free electron metals, photoemission spectra 7−138607
K, nearly free electron metals, photoemission spectra 7−138607
Mg, nearly free electron metals, photoemission spectra 7−138607
Na, nearly free electron metals, photoemission spectra 7−138607
$Si-Si_{0.5}Ge_{0.5}$ superlattices, strain induced confinement 7−125090
nebulae
see also galaxies; planetary nebulae; supernova remnants
FY Aql, Mira variable in refl. nebula, search for assoc. with 1979 March 31 γ-ray burster 7−140087
Boomerang Nebula, bipolar refl. nebula, Herbig-Haro emission detect. 7−80069
Bruck bipolar nebula, identification as small star cluster illuminating independent refl. nebulae, polarisation meas. 7−72552
η Car nebulosity, echelle and spectropolarimetric obs. 7−140201
Carina nebula (NGC 3372), IR study of stellar population 7−127846
PV Cep, assoc. bipolar refl. nebula, Herbig-Haro emission detect. 7−80069
PV Cep, T Tau star, assoc. counterfan obs. 7−72562
CMa R1 association nebulosity, shock-front compression of interstellar mag. field 7−140226
R CrA dark cloud, IR reflection nebula surrounding IRS 5, HK imagery 7−107920
R CrA reflection nebula (NGC 6729), rapid vars. in surface brightness 7−80076
R CrA star formation region, HH objects and visible stars obs. 7−107915
Crab Nebula, emission line spectra of filaments rel. to chemical comp. 7−127991
Crab Nebula and pulsar, high-energy gamma-ray emission anal. 7−72491
CRL 2688, CO J=1-0 line obs. of bipolar nebula 7−107921
Cygnus Loop, form. of fine struct. of emission filaments 7−127990
dark clouds, CO line obs. of 18 southern objects *(Chinese)* 7−120524
30 Dor nebula, in LMC, imaging, photometry and spectra of Wolf-Rayet population 7−72443
Draco molecular cloud as matrix of potential protostars 7−88585
elongated nebular structures near stars, jets or projection effects 7−115561
emission nebulae, low temp. dielectronic recomb. coeffs. for Ne II-VII 7−79818
faint emission nebula surrounding hot white dwarf PG 0108+101, Hα obs. 7−107930
G 2.4+1.4, filamentary optical nebular nature, SHF obs. 7−72645
gaseous nebulae, emission line ratios for O III 7−140228
GGD 27 IRS, new IR refl. nebula, K-band polarimetric mapping 7−94978
Herbig Haro objects, discovery of extended bow shock-like structures 7−140060
Herbig-Haro objects, CCD images rel. to mass outflows from young stars 7−115253
Herbig-Haro objects, interstellar bow shock emission profiles 7−94979
Herbig-Haro objects, IRAS obs. of exciting stars 7−127742
Herbig-Haro objects, radiative bow shock models rel. to spectral line profiles 7−128012
Herbig-Haro objects in mol. cloud NGC 1333, obs. 7−94988
Herbig-Haro objects in NGC 2023, photographs, spectra, and line profiles 7−120563
HH1 and HH2, spatial vars. of UV spectra and problem of UV continuum 7−128013
HH1-HH2, NH_3 inversion lines obs. towards assoc. mol. cloud 7−101872
HH 100 in Corona Australis, optical linear polarization study 7−146077
HH 1 and 2 region in Orion, IRAS obs. 7−107919
HH 24, optical linear polarisation studies and relation to IR source (SSV 63) 7−128032
HH 32, spectrophotometry of assoc. T Tau star AS 353A 7−101784
HH 46, 47A, 47B, Herbig-Haro object and connecting filament, dynamics from emission-line profiles obs. 7−88598
HH 46-47, obs. of NH_3 emission assoc. with exciting star 7−80077
HH 46/47, radiating gas characts., narrowband imaging 7−146065
HH 52/53/54, high-latit. Herbig-Haro objects, CCD photometry and H_2 emission maps 7−134285
HH 57, optical linear polarisation studies 7−128027
HH 7 to 11 complex of Herbig-Haro objects, velocity field and struct. 7−101883
HH 7-11, obs. of assoc. bipolar mol. overflow in NH_3 lines *(Japanese)* 7−140213
Horsehead Nebula (B33), mag. field struct. 7−128000
Horsehead Nebula and associated nebulosity, features and star form. 7−146078
IC 443, supernova remnant, IR spectroscopy 7−115547
IC 4628, nearby dense compact globule and embedded star obs. 7−94989
ionised galactic nebulae, spectral characts. *(French)* 7−88370
ionization-regulated star formation in magnetized molecular clouds 7−127843
IRAS 18059-3211 (Gomez's Hamburger), spectra, polarimetry and photometry rel. to dust shell struct. 7−128124
IRC+10216 (CW Leo), circumstellar shell geometry rel. to bipolar nebula model 7−79996
Kleinmann-Low Nebula, chem. comp. and star form. effects 7−107936
Kleinmann-Low Nebula, submm polarisation obs. 7−88570
Lagoon Nebula (M8), vel. field anal. from photographic interferograms 7−101876
LDN 134, dark mol. cloud photometry use as reference in search for extragalactic background light 7−95052
LDN 1642, high galactic latitude dark cloud, star form. characts. 7−127995
LMC emission nebulae in HD and HDE catalogues, identifications 7−72614
M1-92, bipolar nebula, OH 1667 MHz maser line profile interpretation 7−88594
nebulae continued
M43, far-IR obs. of dust re-radiation 7−101886
Merope dark cloud, Pleiades, characts. determ. from stellar photometry obs. 7−128005
molecular clouds, magnetic field strengths 7−120543
molecular clouds, size spectrum in outer Galaxy 7−88577
NGC 2023, refl. nebula, fluorescent H_2, level population and para/ortho ratio, IR obs. 7−140242
NGC 2023, reflection nebula, fluorescent H_2 emission characts. 7−140241
NGC 2023, reflection nebula, H_2 ortho/para abundance ratio 7−140243
NGC 2261/R Mon system, polarimetry of nebula and faint jetlike feature to southwest 7−107932
NGC 2264, CO and NH_3 radiowave detection of cone 7−120542
NGC 6164/5 complex, bipolar nebula ejected by Of star HD 148937, obs. and nature 7−79974
NGC 6888, Wolf-Rayet ring nebula, X-ray emission upper limit 7−146067
NGC 7000 (N America Nebula) region, flare stare search 7−79987
noncollisional excitation of low-lying states in gaseous nebulae 7−88588
nova ejecta shells, obs. of interaction with interstellar medium 7−120434
novae ejecta shells, spectroscopic obs. and 3D struct. 7−120435
OH 231.8+4.2, OH-IR star, shocked bipolar outflow and assoc. HH objects obs. 7−72468
ρ Oph dark cloud, radio-emitting young star search 7−101884
ρ Oph dark cloud, X-ray emission from thin thermal plasma 7−140247
ρ Oph dark cloud complex, Hα emission-line survey 7−134290
Orion KL, E-type methanol masers 7−107916
Orion Nebula, central region, fine scale motion 7−120558
Orion Nebula, interaction with Orion Molecular Cloud *(Japanese)* 7−140215
Orion Nebula, submm polarisation obs. 7−88570
Orion Nebula, VBLUW photometry 7−80065
Orion Nebula (M42), possibility of detect. of H I fine-structure lines *(Russian)* 7−107716
Orion nebula complex (M42/43 and NGC 1977) large-scale vel. field from photographic interferograms 7−101877
Pleiades reflection nebulae, IRAS surface brightness maps 7−115548
Pup A, supernova remnant, forbidden coronal Fe line images rel. to cloud evaporation and shocked cloud models 7−115551
RCW 108, IR obs. of active star formation site 7−107918
RCW 34, emission nebula, optical and IR obs. rel. to nature of exciting star (Vel R2 25a) 7−120383
reflection nebulae, CO vel. anal. 7−88602
reflection nebulae, diffuse interstellar bands CCD obs. 7−140231
reflection nebulae, extended red emission nature 7−120550
reflection nebulae characts. determ. from assoc. R-associations polarisation meas. 7−146056
ring nebulae around Ofpe/WN9 stars in Galaxy and LMC, direct imaging obs. 7−134237
ring-shaped nebulae around FU Ori stars, deep CCD images and optical spectra 7−80078
Serpens reflection nebula, mag. field characts. and star form., imaging polarimetry obs. 7−128028
Sh2-106, H II region, assoc. extended IR refl. nebula discovery 7−72574
Sh 2-106, bipolar nebula, dust bar characts. and assoc. source IRS 4 nature 7−127996
Shapley III, in LMC, soft X-ray emission map at 250 eV 7−88608
SSCV 140, nebulous star, optical linear polarisation studies 7−128032
starburst galaxies, large-scale winds evidence and spectral characts. 7−72598
supernova remnants, dynamic models and spectra of radiative shocks 7−127715
supershells, form., role of multiple supernovae in OB associations 7−127981
VB 8, red dwarf star, direct IR imaging rel. to faint circumstellar nebula 7−79959
Fe VII, relative emission line strength in astrophysical plasmas 7−139894
Hα and Hβ emission, line profile asymmetries due to atomic fine struct. 7−134037
necking
block rectangular, with surface imperfection 7−83071
layered solids, plastics, necking modes initiation 7−123490
material, superplastic elongation, rate sensitivity, tensile test instability *(Japanese)* 7−93062
phase transformations modelling based on concept of mechanics 7−67262
plasticity models, pressure-dependent, numerical integration 7−128284
polybutylene terephthalate, high temp. large-strain behaviour 7−132683
polycarbonate, high temp. large-strain behaviour 7−132683
polyetherimide, high temp. large-strain behaviour 7−132683
polyethylene terephthalate, crystallisation, strain and secondary relax. transition *(Russian)* 7−137454
polymer fibres, necking deformations, existence and stability 7−90966
rods nonlinearly elastic, necking deformations, existence and stability 7−90966
shear band form. during plane strain extension, geometric models of internal shape change 7−91700
steel, creep and tensile tests at high temp., uniform deforms. determ. 7−132869
steel, dual-phase, mech. props., bainite effect 7−100318
steel, HSLA, fracture topography 7−126222
steel, stainless, duplex, shear band development during necking 7−113604
superplasticity, limit strain, influence of variation of strain rate sensitivity 7−76276
tensile instability in creep damaging solids 7−142890
tensile testing, deform.-induced heating, numerical method 7−69007
thermoplastics, cold drawing mechanics, large deform. strain hardening modulus 7−119319
Al sheet, plastic instability under uniaxial tension *(Korean)* 7−132672
Al-Cu-Mg sheet, plastic instability under uniaxial tension *(Korean)* 7−132672
Al-Mg sheet, thermal and strain rate softening during necking and shear band form. 7−126193
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7−138784
Neel temperature
antiferromagnetic Ising system on triangular lattice, statics and dynamics 7−85332
N,N′-decamethylenediammonium iron tetrachloride, mag susceptibility meas. 7−131999

Neel temperature continued
$(DMtTTF)_2X$ salts, electronic and mag. props. 7−85293
Dy thin film, Neel temp. thickness depend., electrical resistivity temp. depend. 7−138226
(ethanolammonium)$_2$ copper tetrachloride, mag. props., EPR linewidth meas. 7−125362
high T_c superconductors, doped Mott insulator description 7−125233
Hubbard model in strong-coupling limit, mag. susceptibility 7−138242
mixed valence Cu oxides, high T_c superconductors, double exchange processes effects *(French)* 7−125166
quasi-2D antiferromagnets with fluctuating exchange, Monte Carlo study 7−132046
rare earth hexaborides, antiferromag. with localised moments, magnetoresistance 7−143482
rare earth-Ni_2P_2, R=Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Sm, Ce, Yb, La, mag. props. temp. depend. study 7−118767
$(TMTTF)_2PF_6$, interplay between spin-Peierls and antiferromag. ground states under press., NMR study 7−85476
triethylenetetraammonium copper hexachloride, quasi-2D metamagnet, mag. and structural props. 7−125329
$Ca_2Fe_{2(1-s)}Al_{2s}O_5$, magnetic properties, molecular field approximation analysis 7−132015
$Ca_3Mn_2Ge_3O_{12}$ garnet, antiferromag., obs., of new mag. phase, magnetisation curves meas. 7−125381
CeBi, magnetic resistivity at high press. *(Chinese)* 7−112291
$CeCu_2Ge_2$, Kondo lattice, mag. order., susceptibility, sp. ht., elec. resist. meas. 7−77278
$CeInAg_{2-x}Cu_x$ Heusler phases, crystallographic, mag., elec. resist. meas. 7−77281
CeMg, electrical and mag. props., pressure depend. 7−84810
CeMg, Kondo cpd., elec. resist. meas. under high press., Neel temp. 7−76919
$CePb_3$, heavy fermion behaviour, mag. and mixed valence props. 7−92426
$Ce(Pb_{1-x}Sn_x)_3$, heavy fermion to mixed valence system, resistivity, susceptibility, sp. ht. 7−112822
$CeRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
CeZn, neutron diffr. and mag. studies 7−77248
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
CoO-NiO superlattices, mag. structure, neutron diffr. studies 7−125312
Cr, dislocations, dynamic behaviour at mag. transitions, internal friction meas. 7−111570
Cr magnetoelastic props. and Neel temp. 7−118850
Cr, polycrystalline films, Neel temperature, stress effects 7−143877
Cr thin films, elec. resist. temp. depend. and Neel temp anomalies study 7−112514
Cr-Al dilute alloys, mag. phase diagram from elec. resist. studies 7−125384
Cr-Al dilute alloys, size of elec. resistivity anomaly at Neel transition 7−105523
Cr-Mn-Os-Ru, elec. resist. anomaly and Neel temp. *(Russian)* 7−76880
Cu-Mn, mag. phase diagram, EPR study *(Russian)* 7−112788
Cu-Mn nonmag. alloys, kinetics of martensitic transformation, Neel point *(Russian)* 7−104984
Dy, resistance and sp. ht. anomalies at Neel point 7−92428
$Dy_3Al_5O_{12}$, sp. ht. meas. near T_N 7−85312
$Dy_3Al_5O_{12}$:Y, sp. ht. meas. near T_N 7−85312
Er, magnetic phases, low temp. sp. ht. meas. 7−105928
Er, magnetisation meas. near Neel temp. 7−132071
α-ErH_x, magnetic phases, low temp. sp. ht. meas. 7−105928
ErH_x monocrystals, magnetisation meas. near Neel temp. 7−132071
$Eu_{0.08}MoO_3$, mag. props., Mossbauer spectra, sp. ht. meas. 7−92430
Fe-Cr-Ni, FCC alloy, low temp. mag. suscept. rel. to Mn content and interstitial C and N 7−112765
Fe_3BO_6, Neel transition, study by Mossbauer diffr. method 7−138358
$Fe_{0.25}Cu_{0.25}Co_{0.5}Cr_2S_4$, cryst. struct., mag. props. *(Korean)* 7−143416
$Fe_{0.87}Mg_{0.13}SiO_3$, hyperfine parameters, Mossbauer spectra 7−132176
α-FeOOH, Al-substituted geothites, mag. ordering, effect of crystallinity 7−118798
α-FeOOH, electric field gradient 7−106070
$FePS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
$GdBa_2Cu_3O_{7-x}$, supercond. and normal samples, pres. and field depend. of mag. transition 7−132021
Ho, Neel transition splitting obs. in appl. mag. field 7−125388
$HoRu_2Ge_2$, squared modulated mag. struct., antiferromag. order, neutron diffr. study 7−118774
$LaCoO_3$-$LaFeO_3$ solid soln. system, spin state of Co^{3+}, mag. suscept., Mossbauer spectra 7−125582
La_2CuO_4 antiferromag. ordering, neutron diffr. obs. 7−99408
La_2CuO_4, mag. scatt., Neel temp. 7−125326
$La_2CuO_{4-\delta}$ single cryst., antiferromagnetism and O deficiency, neutron diffr. study 7−112752
La_2CuO_{4-y} antiferromag. ordering, neutron polarisation anal. 7−112751
La_2CuO_{4-y}, physical props., O defect effects 7−142756
LaMg, electrical and mag. props., pressure depend. 7−84810
$La_yU_{1-y}O_{2+x}$, mag. meas., dilution effect 7−112786
$Li_{1.125}Ti_{1.25}Fe_{0.625}O_4$ spinel ferrite, transverse spin component, relax. 7−85351
Mn-Ge-Zr(Nb), antiferromag., elastic props. and thermal expansion 7−144455
$Mn_{1-x}Cd_xF_2$ mixed crystals, mag. props., EPR study 7−85413
$MnFe_2O_4$, electrical properties at the Neel temp. 7−125032
$Mn_xFe_{3-x}O_4$ ferrite, anomalous elec. props. 7−143496
$MnSe_2$ polycryst., magnetic ordering, neutron diffr. study 7−112794
$NdIn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$NdRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$NdSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
NdZn, neutron diffr. and mag. studies 7−77248
$NiPS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
$RCu_3Mn_4O_{12}$ perovskites, polarisation of mag. moments of R^{3+} ions 7−132060
$Rb_2Co_{0.7}Mg_{0.3}F_4$ 2D antiferromag., critical scatt. studies 7−125425
$SmIn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$SmSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$Sr_2Co_2O_5$, phase transitions, neutron thermodiffractometry study 7−91797
Neel temperature continued
$SrFe_{1-x}Co_xO_3$, Curie temp. and Neel temp. 7−77289
$SrFeVO_6$, perovskite-like, struct. and mag. props. 7−143789
Ti-Si, solid solns., itinerant antiferromagnetism, mag. susceptibility meas. 7−138198
TiZr alloy mag. props., Fermi level shift, mag. suscept. meas. 7−99420
α-$TlMnCl_3$, weak ferromagnet, reorientation of mag. moment 7−143794
$(U,Y)O_{2+x}$ solid solutions, magnetic studies 7−77259
$U(Ga_{1-x}Ge_x)_3$ hybridised f-electron system, magnetic to nonmagnetic transition studies 7−112789
UIrGe heavy fermion cpd., low temp. susceptibility and sp. ht. 7−125389
UO_2, dielec. const. below Neel point 7−99646
$U(Pt_{1-x}Pd_x)_3$ heavy-fermion alloys, superconductivity and antiferromagnetism, phase diagram determ. 7−112790
URh_3B, mag. susceptibility, elec. resist. meas., hybridisation weakening 7−77251
URu_2Si_2, mag. excitation, temp. depend. 7−77233
$U(Sn_{1-x}Pb_x)_3$, Mossbauer study of mag. state 7−113040
YMn_2, itinerant electron magnet, paramag. neutron scatt. study 7−85240

negative feedback *see feedback*

negative feedback control systems *see closed loop systems*

negative ions
acetate radical anion, CIDEP and relax., Heisenberg spin exchange investig. 7−116997
acetylide ion, CC stretching vibr., diode laser velocity modulation vibr.-rot. spectra 7−116934
allyl anions, phenyl and cyclopropyl substituted, MINDO-forces calc. 7−74449
anion-H_2O-cation systems, H^+ transfer across H bonds, SCF LCAO MO calcs. 7−89945
atomic ions, double-charged, secondary ion mass spectra meas. 7−93433
beam formation, extraction and acceleration, computer modeling methods 7−141352
carbon tetrachloride cluster, electron attachment, mass spectroscopy 7−82334
chalcone ketyl radical anions, fluoresc. spectra and lifetimes 7−135987
charge delocalised anions, bonding in protic and dipolar aprotic solvent mols. 7−100536
cobalt dicarbollide anions, translocation across lipid bilayer membrane, soln. resist. effect 7−114000
corrosion in aq. Cl^- soln., benzoate effects 7−106660
cyanate anion, ν_3 bending and stretching modes, IR spectra anal. 7−103495
d^0 transition metal tetroxo anions, metastable triplet states, Jablonski diagram 7−113243
2,4-dinitrobenzyl carbanion, photochem. prod., absorpt. spectra, solvent effect 7−99879
disulphide radical anions, photochem. electron detachment reaction 7−100537
electron affinity, ab initio SAC CI calcs. 7−135848
ethylene, electron impact ionisation and fragmentation, electron spectra anal. 7−90428
halide hydrated ions, adsorpt. and desorpt. on Ag and Cu electrodes, energy profiles, CNDO/2 calc. 7−70066
halogen ions, negative, photodetachment cross sections, relativistic RPA calcs. 7−74533
high intensity negative ion sources, emittance study 7−89831
homoazulene radical anion, and rearrangement products, ESR and ENDOR obs. 7−68367
metal clusters, mass-selected, photodissoc., photodetachment, and small mol. desorpt. rate 7−132957
methyl cyanide cluster, electron attachment, mass spectroscopy 7−82334
methyl iodide + Cs collision, negative molecular ion, electronic excitation 7−141653
molecular clusters, ionisation by high-Rydberg rare gas atom collisions 7−82382
Mu^-, prod., N_+ beam electron capture in beam-foil expt. 7−82397
nitratolanthanate complexes, anionic isotropic NMR shifts 7−90213
perfluoromethylcyclohexane anion, ion-ion recomb. reactions, rate coeff. meas. 7−106781
photodetachment, electron pair threshold escape 7−74527
plasma, weak compressive ion acoustic double layers in presence of negative ions on the auroral field lines 7−123872
polymer, water tree growth mechanism, role of ions 7−99672
salicylate anion, electronic struct., polar substituent effects, CNDO/2 calcs. 7−141467
solvated anions, electron photodetachment spectroscopy study 7−96798
stratosphere, negative ion composition, MAP/GLOBUS 1983 balloon-borne meas. 7−133889
terephthalate-d_0(-d_4) ions, vibr. anal., IR and Raman spectra 7−103458
tetraphenylborate ion, hydrophobic interactions, transfer free energies calcs. 7−91423
three-particle systems, Coulomb bound states, binding energies calcs. 7−103375
tris(methylene)metaphosphate, bonding, ab initio calcs. 7−129560
univalent anions, in solns., photoionisation, inner-sphere nucl. reorganisation, solvation model 7−110028
$Al_2H_3^-$, stability and struct., nonempirical CI calcs. 7−141475
Ar glow discharge, instability in presence of negative ions 7−123883
$B_2H_3^-$, stability and struct., nonempirical CI calcs. 7−141475
B_2H_n ions, nuclear and electronic struct., ab initio HF calcs. 7−96531
$B(OH)_4^-$+chiral 1,3-diols, 7−82219
Be^-, autodetachment spectroscopy of metastable negative ions 7−96573
Br^-, assoc. with NH_3, thermochem. props. 7−82414
Br^-+H_2, competing processes dynamics, angular and velocity distrib. meas. 7−141655
C_{2n} ($30 \leq 2n \leq 210$) negative and positive ions in hydrocarbon flames, form. investig. 7−113930
C_2H_n ions, nuclear and electronic struct., ab initio HF calcs. 7−96531
CO_2/CO_2^- couple, reduction potential; 7−139016
$(CO_2)_2^-$, struct. and stability, ab initio electron correl. calcs. 7−82002
$CO_3^-(H_2O)_n$, negative ion clusters, photodissoc. dynamics 7−122642
$Ce(NO_3)_6^{2-}$, electronic struct., INDO calcs. 7−89966
Cl, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
Cl^-, assoc. with NH_3, thermochem. props. 7−82414
Cl^-, radiation and quantum yield in water-chlorobenzene (carbon tetrachloride) systems 7−71511
Cl^-+H_2, angular and energy distrib. meas. 7−113872

negative ions continued
Cl^-+H_2, competing processes dynamics, angular and velocity distrib. meas. 7−141655
Cl^-+H_2, stable mol. products mechanisms, quasiclassical trajectory studies 7−132917
$ClO_2^-+I^-$, heterogeneity induced oscills., stirring effects 7−138990
ClO_n^- anions, aq. solns., absolute Raman intensities and EOPs 7−82147
$Co(CN)_6^{3-}$, isotope and temp. depend. of transition metal shielding 7−103533
CrF_6^{3-} ion, spin density, SCF calcs. 7−109717
F^- multiphoton detachment cross sections, HF wavefn. calc. 7−129675
F^-, photodetachment cross section meas. 7−74536
F^-+H_2 angular and energy distrib. meas. 7−113872
$F^-+H^+(H_2^+)$, HF excited states distrib., UV chemiluminesc. spectra anal. 7−96719
F_2^- radical anion, ionis. pot. and hyperfine splitting const., ab initio calcs. 7−89941
Ge-substituted silicate cages, ^{29}Si 2D NMR 7−90197
H^-, $^1P^0$ shape reson. stability in moderate elect. fields 7−74510
H^- (D^-), volume produced ion source using sheet plasma *(Japanese)* 7−89823
H^- beam, high charge state plasma neutralizer 7−141362
H^- beams, high energy, neutralizer options 7−141361
H^- beams, transverse-field focussing beam transport expt. 7−141353
H^-, charge exchange cross sections, plasma prod. and neutralization in gas neutralizers 7−141363
H^-, doubly excited states, energy level calcs. 7−129669
H^- Fermilab magnetron source operation 7−141348
H^- ion beam prod. in high power pulsed diodes 7−141350
H^- ion beams, emittance characts. of surface- and volume-type sources 7−141351
H^- ion source, H_2 rovibr. population, CARS time-resolved meas. 7−82161
H^- ion source, optically pumped, polarized, development and operation at KEK 7−141359
H^- ion source, polarized, optically pumped, at TRIUMF, status 7−141360
H^- ion source, polarized, relaxation rates of optically pumped Na targets 7−141358
H^- ion source, surface conversion type, using heavy ion impact 7−73465
H^-, one- and two-photon ionisation, spherical δ-shell pot. 7−74534
H^- optically pumped polarized ion sources 7−89832
H^-, photodetachment cross section, ripplelike struct. obs. 7−109847
H^- plasma device, negative ion production 7−122278
H^- polarized ion source using cooled polarized atomic beam 7−141356
H^- polarized source development at BNL 7−141357
H^- production in multicusp ion source 7−116738
H^-, SCF calcs. using scaled STO basis sets 7−68196
H^- surface production by H and Cs ion bombardment 7−141349
H^-, volume ion source, negative ion density spatial variation 7−129504
H^-+Kr, excitation processes, electronic spectrosc. 7−141484
$H^-+Ne(Ar)(He)$, collisional form. and destruction, cross section meas. 7−117066
$H^{13}CO_3^-$, exchange across erythrocyte membrane meas., NMR chem. shifts 7−133256
$(H_2N_2)^{\cdot-}$, structs. and stabilities, ab initio calcs. 7−103372
H_2O-H^-, interaction, quantum-chem. calcs. 7−68240
$(H_2P_2)^{\cdot-}$, structs. and stabilities, ab initio calcs. 7−103372
$(H_2PN)^{\cdot-}$, structs. and stabilities, ab initio calcs. 7−103372
$H_3V_{10}O_{28}^{3-}$, protonation sites, charactn. 7−113882
He_2^-, autodetachment spectroscopy of metastable negative ions 7−96573
I^-, assoc. with NH_3, thermochem. props. 7−82414
I^-, electrosorption valency on electrodeposited Bi 7−91966
I^-, involvement in anodic dissolution of Bi 7−111890
I^-, tracer diffusion in 2-1 electrolyte solns. 7−84344
$I^-+ClO_2^-$, heterogeneity induced oscills., stirring effects 7−138990
I^-+H_2, angular and energy distrib. meas. 7−113872
I^-+H_2, competing processes dynamics, angular and velocity distrib. meas. 7−141655
$I^-.SO_2$, solvated ion, prereson. Raman effect 7−82149
K^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Li^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Li^- form. in Li^+ scatt. from Cs covered W (110) surface 7−85930
Li^- formation via dissociative electron attachment and high-lying Rydberg states 7−141699
Li^- ions, volume production in small multicusp ion source, appl. for plasma diagnostics 7−137124
Li^- source, optically pumped, density scaling 7−141355
$Li^-+He(H_2)$, collisional electron detachment 7−141680
Li_2, dissociative electron attachment, cross sections, negative ion prod. rate 7−141698
$Mn_2O_7^{2-}$+ninhydrin, chem. oscillator, in continuously stirred tank reactor 7−126423
Mo, polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
$Mo_2Cl_8^{4-}$, reson. Raman spectra, simulation 7−82144
Mo(VI) polyoxoanions, charge transfer absorpt. spectra 7−90098
N_3^-, ν_3 band, velocity modulation laser spectroscopy 7−109858
NCO^- anion Fermi doublet, vibr. spectra in aqueous solns. *(Russian)* 7−122495
NH^-, IR rotation-vibr. spectrum, hyperfine struct. meas. 7−90002
NH_2^-, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
$N_2O_2^{2-}$, mol. consts. calc. by force field study 7−103464
Na^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Na^-, charge distrib., model core pot., variation method 7−68206
Ne, electron collisions, negative ion resons. 7−96877
O_2, electron attachment and ion mobility investig. 7−122702
O_2^-, formed by electron trapping on ZnO surface, CARS, obs. 7−74616
O_2-Ar, electron attachment and ion mobility investig. 7−122702
OH^-, electric field gradients, ab initio SCF, CI(SD) CPF calcs. 7−109801
OH^-, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
P, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
PFO_3^{2-}, ^{19}F and ^{31}P NMR, transverse nucl. spin relax. 7−109945
PO_3^-, bonding, ab initio calcs. 7−129560
$P_2O_6^{4-}$, bond props., kinetic consts. method calcs. 7−81916
PtN^-, autodetachment dynamics and spectrosc. 7−122500
$Re_2Cl_8^{2-}$, $\delta\delta^*$ excited electronic state, time-resolved reson. Raman spectra 7−82143

negative ions continued
$Re_2Cl_8^{4-}$, reson. Raman spectra, simulation 7−82144
S containing species, ^{33}S NMR chemical shieldings, ab initio coupled HF perturbation theory calcs. 7−109719
S, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
S^-, laser photodetachment spectroscopy, cross section meas. 7−68262
SCN^-, interaction with H_2O mols., calcs. and NMR 7−89944
SF_6^-, ion-ion recomb. reactions, rate coeff. meas. 7−106781
SH^-, total and orbital energies and multipole moments, LCAO HF STO calcs. 7−81919
$(SO_2)_2^-$, negative ion clusters, photodissoc. dynamics 7−122642
$SO_3^{\cdot-}$, combination reaction, radical pair CIDEP 7−90223
SO_4^{2-}, interference in Mo determ. by AAS, prevention 7−114021
$S_2O_6^{2-}$, bond props., kinetic consts. method calcs. 7−81916
Si, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
Si_n^- (n=1 to 6), cluster ions, reactive etching by NO_2 7−82413
$Si_mO_n^{m-}$, methanolic soln., tetramethylammonium ions effect 7−100535
$Sr(OG)_2$, pyrolysis in vacuum, thermal and emission processes 7−100530
$Ta_2Cl_6(NH_3)_4^-$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
UF_6^-+Ar, ionic fragmentation, internal excitation depend. 7−110066
$V(CO)_6^-$, isotope and temp. depend. of transition metal shielding 7−103533
W, polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
W(VI) polyoxoanions, charge transfer absorpt. spectra 7−90098

negative resistance
absolute negative photoconductivity, microscopic theory 7−105626
dielectrics, breakdown and prebreakdown phenomena, phenomenological models 7−99670
double barrier diodes, resonant tunnelling and sequential tunnelling 7−92265
Gunn diode, high Schottky barrier, negative resistance studies *(Russian)* 7−84914
inert gases, discharges, externally sustained, absolute negative conductivity 7−124022
metal junctions, nonlinear conductance in the mesoscopic regime 7−105669
metal-metal contacts, mesoscopic fluctuations of current-voltage characts *(German)* 7−131743
MIM systems, electroformed, discontinuous films, I-V characts., obs. in high vacuum 7−112511
semiconductors, instabilities, domains, filaments and chaos 7−105587
semiconductors, negative differential conductance, carrier cooling by electric field 7−118492
Al-Al_2O_3-Ag, switching effects and negative resistance 7−131807
Al-Al_2O_3-Au sandwich structures, forming process 7−125142
Al-GeO-Al, switching effects and negative resistance 7−131807
Al-Si-Al, switching effects and negative resistance 7−131807
AlGaAs-$In_xGa_{1-x}As$ double barrier structs., resonant tunnelling 7−138051
Au dispersed films, negative differential resistance and struct. 7−125144
Bi, negative differential resistance, strong mag. field 7−98984
CdSb negative magnetoresist. anal., quantum corrections calcs. 7−70331
CdSe films, negative differential cond. study *(Russian)* 7−92319
GaAs:Cr, semi-insulating, high-field current-voltage characts. 7−105582
GaAs:Fe(Cr), π-ν-n structs., I-V characts., strong electric field 7−105678
GaAs/$Ga_{1-x}Al_xAs$ superlattices, periodic negative conductance by sequential reson. tunnelling 7−112470
GaAs-$Al_xGa_{1-x}As$ struct., space change effects, importance in resonant tunnelling devices 7−77058
GaAs-AlAs resonant tunnelling struct., quantum interf. effects 7−112477
GaAs-AlGaAs heterostruct., real space transfer and negative resist 7−99188
GaAs-AlGaAs-InGaAs quantum well heterostructure, resonant tunnelling 7−112447
InP short samples, threshold field and peak-valley vel. ratio at 300 K Monte Carlo calc. 7−105573
Si polycrystalline resistors, negative resist. characts. anal. 7−118493
n-Si thin film, negative magnetoresist., spectrum anisotropy effect 7−70435
Si_3N_4 negative hopping magnetoresist. in strong elec. field, carrier localisation obs. *(Russian)* 7−76962

negative resistance effects
see also Gunn effect
conductors with N-shaped I-V characts., current and temp. nonlinea oscills., sp. ht. determ. 7−98993
electrical conductors, positive and negative differential resistance 7−7032
nonlinear irreversible processes and negative differential resistivity, variation principles 7−108505
polypropylene films, negative resistance characts. *(Korean)* 7−143475
quantum well, tunneling current, negative differential resistance effect 7−99173
semiconductors, negative dynamic resistance induced by optical radiatio 7−125052
superconducting tunnel junction with nonequilibrium quasiparticle distril function, absolute negative resist. 7−99355
superlattice, spatial bunching of electrons 7−112452
CdSe, film, photocurrent, saturation and negative differential resistanc 7−99119
GaAs n^+n-n-n^+ structures, drift velocity at 300 K 7−85064
GaAs n^+nn^+ diodes, subMM-wave negative conductance 7−112462
GaAs, SCL currents, I-V characteristics 7−112349
GaAs/AlAs superlattices, tunnelling, indirect-gap electron states 7−9227
GaAs-AlGaAs biwell superlattice, negative differential resist. devic 7−70391
In, with N-shaped I-V characts., current and temp. nonlinear oscills., s ht. determ. 7−98993
InAlAs/InGaAs resonant tunneling barrier structures, MBE grown, negative differential resistance 7−70395
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ resonant tunnelling barriers, MBE grow negative differential resistance 7−70397
$In_{0.53}Ga_{0.47}As/AlAs$ resonant tunnelling barrier, pseudomorphic structu 7−138021
$In_{0.8}Ga_{0.2}P$ solid solutions in strong elec. fields 7−76963

negative resistance effects continued
$Pb_{1-x}Sn_xTe$:In, admixture electron capture effect on Gunn domains 7—99077
Pt, with N-shaped I-V characts., current and temp. nonlinear oscills., sp. ht. determ. 7—98993

negative temperature coefficient thermistors *see thermistors*

nematic liquid crystals
5CB, nematic liquid cryst., stimulated scatt. studies 7—103892
8CB nematic and smectic A liq. cryst., phase transitions, photoacoustic detection 7—105017
acetone, nematic phase, ^1H NMR spectra, two-dimens. correl. technique 7—70651
alignment on obliquely deposited films, thickness nonuniformities effect 7—111386
mono- and bis-alkenyl(oxy) substituted esters, mesomorphic props. 7—137229
5-n-alkoxy-2-pyridinecarboxaldehyde, mesomorphic props. 7—137230
N(p-n-alkoxybenzilidene)-p-n-alkylanilines, nematic-smectic and smectic-smectic phase transitions 7—137558
4-n-alkoxybenzoic acids, nematic-smectic C phase transition, X-ray diffraction patterns, microscopic textures 7—124082
4′-(4″-n-alkoxybenzyloxy)-4-cyanostilbene, nematic-smectic A phase transition, critical behaviour 7—131311
alkoxyphenyl trans-4-alkyl cyclohexane carboxylates, solid, nematic and isotropic phases, mag. susceptibility meas. 7—137231
alkyl chain liq. cryst., orientational order, D NMR studies 7—75977
4-n-alkyl-4′-cyanobiphenyls, n CB, nematic-isotropic phase transition, thermal diffusivity, crit. behaviour 7—98446
4-alkyl-4′-cyanostilbene, homologous series, X-ray diffraction studies 7—111373
p-n-alkyl-p′-cyanobiphenyls, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7—124083
4,4′-di-n-alkylazoxybenzene, nematic and smectic A phases, orientation order, NMR studies 7—111358
p-alkyloxyphenyl-p′-alkoxybenzoates, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7—124083
anchoring energy on nematic cells, interferometric determination 7—124098
anchoring props., attenuated total reflection studies, volt. depend. 7—113140
anisotropic features in the dynamics of nematic-nematic phase separation 7—105023
azimuthal anchoring energy at grooved interface 7—137236
BABA mixtures, smectic C-nematic transitions, DSC studies 7—105019
benzene, nematic phase, ^1H NMR spectra, two-dimens. correl. technique 7—70651
benzotrisfuran derivatives, disc-like liquid crystals, synthesis and mesomorphic props. 7—91434
biaxial nematic phase, NN′AC critical point, mean field theory 7—124504
binary mixtures, bend elastic const. of nematic-smectic *A*-smectic *C* multicritical point, Freedericksz deform. meas. 7—111887
binary mixtures of smectic A, creation of nematic phases 7—111884
binary mixtures of smectics A:120CB and compound n-DBT homologous series, phase diagrams 7—137557
biphenylcyclohexanes, substituted species, nematic phase struct., X-ray diffr. exam. 7—97921
3,5-bis-[4-(trans-4-n-propylcyclohexyl)phenyl]-1,2,4-thiadiazol, liq. cryst., thermal and X-ray study 7—124507
1,6-bis[4-(trans-4-n-propylcyclohexyl)phenyl]-hexane, liq. cryst., thermal and X-ray study 7—124507
blue-phase director field on S^3, relation to double-twist structure in R^3 7—97910
bowlic liquid crystals, isotropic to nematic transitions 7—124505
(R,R)-2,3-butanediol esters, chiral cpds., cholesteric phase helix inversion induction investig. 7—75990
4-(trans-4-butylcyclohexyl)benzonitrile, isotropic-nematic transition, high pressure effects 7—76403
butyloxybenzylidene octylaniline, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7—104543
C-6 polysiloxane, polymeric liq. cryst., nematic-smectic C phase transition, high-resolution X-ray study 7—76405
capacitance-voltage characteristics, reverse hysteresis loops 7—124081
chiral liquid crystal polymers, struct. characterisation of thermotropic polyesters 7—111383
chiral mixtures with injected smectic phases, thermochromism 7—99808
chiral nematic mixture, 270° twist supertwisted birefringence effect cell, temp. compensation of threshold voltage 7—142556
cholesteryl 4-n-alkoxy-3-methoxybenzoates, synthesis, thermal props. 7—137213
coating used for obtaining information on internal field distribution in ferroelectric crystals 7—85527
comb-like macromolecules, conformation, small angle neutron scatt. data 7—142565
comb-like polymers, order parameters, theory 7—75972
continuum theory 7—137239
convective instabilities, roll-type solns., existence and stability 7—115798
convective pattern in dielec. regime of EHD instability 7—75974
copolyesters, liq. cryst., comb-like, struct. ordering *(Russian)* 7—111347
curvature elasticity, density functional theory, Berne-Pechukas pair pot. models 7—83664
4-cyano-4′-n-pentyl-d_{11}-biphenyl, nematic liq. cryst., ^1H spin-lattice relax., inter- and intram. contrib. study 7—92532
4-cyano-4′-n-pentylbiphenyl (5CB), homologous series, ^{13}C NOE studies 7—99612
cyanophenyl heptylcinnamate, nematic, unstable mol. orientations and polarisability 7—142578
p-cyanophenyl trans-4-pentyl cyclohexane carboxylate, solid, nematic and isotropic phases, mag. susceptibility meas. 7—137231
p-cyanophenyl trans-4-propylcyclohexane carboxylate, phase transitions, specific vol., US vel. meas. 7—124078
decyl sodium sulphate-decanol-water-Na_2SO_4 lyotropic nematic system, viscoelastic props. 7—76255
deformed crystals, thermomechanical effect *(Russian)* 7—117812
N,N′-dialkanoyldiaminomesitylenes, liq. cryst. phases 7—75981
p-p′-dialkylazoxybenzenes, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7—124083
N-[-4(dimethylamino)phenyl]-and N-(4-nitrophenyl)-α-(4-alkoxyphenyl)nitrone mixtures, liq. cryst. props. 7—137219
director field restoration, tomographic method 7—83670

nematic liquid crystals continued
7,7′-disodiumcromoglycate-water lyomesophases, NMR and X-ray diffr. 7—111364
DNA, low mol. wt. mols. in aqueous-saline polyethylene glycol solns., liq. cryst. microphases form. 7—86883
dyes, in nematic liquid crystals, bleaching by laser 7—117279
dynamic self-diffr. of light, temporal instabilities, obs., anisotropic inhomogeneous medium 7—136196
dyotropic disodium cromoglycate in water, magnetically aligned, polarised absorption spectra 7—137224
EBBA mag. suscept. temp. depend. and nematic-isotropic transition studies 7—111385
EHD, nonlinear effects 7—97916
elastomers, liquid crystalline, orientation, stress effects 7—75986
elastomers, mech. induced mol. switching 7—75989
electric field induced deformation, determ. 7—137215
electrical cond. and charge carrier mobility temp. depend. meas. *(Russian)* 7—111932
EM field interactions with homogeneous and inhomogeneous surfaces 7—97913
esters, carbonyl substituted, effect on mesomorphic props. 7—124503
P-(ethoxyphenyl azophenyl) derivatives, isotropic-nematic transition, mag. susceptibility studies 7—111886
fatty acid cholesteryl esters, homologous series, optical anisotropy and local order parameter 7—113112
ferronematic layer with needle-like ferrite particles, mag. behaviour in external mag. field 7—77359
ferronematic liquid crystals, chiral molecule doped, magnetic field-induced birefringence 7—113161
ferronematic suspension, orientational struct. and mag. props. 7—105969
film, probe beam amplification via two- and four-wave mixings 7—68743
film, probe beam amplification via two- and four-wave mixing 7—103871
film, two-beam mirrorless optical bistability 7—103873
films, intrinsic optical transistor effect 7—103872
first order Freedericksz transitions and intrinsic optical bistability 7—104538
flexoelectric origin of oblique-roll electrohydrodynamic instability 7—83669
fluctuations and light scatt. at phase transitions in external fields *(Japanese)* 7—131023
free energy and eqns. of state, van der Waals theory 7—131016
Freedericksz transition, feedback-induced first-order hysteresis 7—143006
grating, geometrical optics approach 7—90762
Halperin-Lubensky-Ma effect in nematic-smectic A transition 7—143007
heat-indicating mixtures, expt. study *(Russian)* 7—102408
4,4′-di-n-heptylazobenzene, nematic and smectic A phases, orientation order, NMR studies 7—111358
4,4′-di-n-heptylazoxybenzene, nematic and smectic A phases, solvent-solute interactions 7—111359
heptyloxypentylphenylthiolbenzoate-octyloxycyanobiphenyl, nematic-smectic-C heat capacity investig. 7—69908
4-n-heptylphenyl-4′-(4″-nitrobenzoyloxy)benzoate, nematic-smectic phase transition, X-ray reflectivity meas. 7—76404
hexa-n-dodecanoyloxy truxene in nematic phase, dielectric consts., splay and bend elastic consts. 7—137435
N(p-n-hexyloxy benzylidene) p-n-octyl aniline, liq. cryst. transitions 7—124506
4-hexyloxy-4′-cyanobiphenyl-4-octyloxy-4′-cyanobiphenyl liq. cryst., elastic consts. 7—104887
hexyloxycyanobiphenyl, 60CB-d_{21}, reentrant nematic, DMR studies 7—99600
hexyloxycyanobiphenyl-octyloxycyanobiphenyl mixtures, compression modulus meas. in vicinity of nematic-smectic A transition, light scatt. study 7—83658
hexyloxycyanobiphenyl-octyloxycyanobiphenyl mixtures, nematic-smectic A transition, light scatt. study 7—84259
highly chiral-nematic liquid crystals mixtures, isotropic phase, pretransitional optical activity 7—138413
hybrid aligned, nonlinear optical props. 7—103870
hybrid orientation, effect ordinary wave *(Russian)* 7—137212
initially random fractal interface, dynamics 7—120943
instabilities of a moving nematic-isotropic interface 7—105024
interface with isotropic dielec., electrooptic characts. *(Russian)* 7—77514
intermediate boundary-induced smectic A phase obs. in nematic-smectic C transition 7—98443
intermediate nematic phases in binary systems with complex formation 7—111878
internal optical bistability with light-induced structural phase transition 7—141917
IR markers for order parameter determ. 7—137206
IR optical properties, review 7—70748
isotropic phase, laser induced helical structure 7—131014
isotropic phase of nematic liquid crystal, diffusion of brownian particles 7—111930
isotropic phase susceptibility due to orientational/translational order parameters interaction 7—124097
isotropic-nematic phase transition in $2+\epsilon$ dimensions 7—137560
isotropic-nematic transition in restricted geometry, Landau-de Gennes formalism 7—111873
laser-induced molecule collective rotation 7—104540
light absorption and scattering meas. 7—90495
light orienting effect on nematic liq. cryst. near sound wave instability threshold 7—85592
light propagation, geometrical-optics approx. 7—106109
light scattering in cells with director anchored to walls 7—104547
light scattering in the mag. field, threshold reorientation 7—92645
liquid cryst., mixtures, phase diagram, intermediate phase form., dipole-dipole correl. and geometric factors 7—84261
liquid cryst. polymer director order parameter, dielectric relax. and permittivity study 7—92567
liquid crystal elastomers, struct. transition, X-ray diffr. 7—97901
lubricant, sliding friction coeff., vel. and temp. depend., nematic ordering effects 7—69820
lyotropic, oriental fluctuations, anisotropy 7—142568
lyotropic liquid crystal, periodic deformation, dynamics 7—111372
lyotropic nematic micellar aggregates, X-ray diffr. exam. 7—137207
lyotropic phase, inertial and magnetic torque *(French)* 7—142570
MBBA, light scattering in cells with director anchored to walls 7—104547
MBBA, nematic liq. cryst. CARS 7—92686
MBBA, nematic schlieren textures, EHD instabilities 7—104535

nematic liquid crystals continued
MBBA, nonorthogonally twisted nematics, disclinations dynamics 7−111355
MBBA, phase diagram 7−111883
MBBA hybrid aligned nematic cell, flexoelectricity study 7−111380
MBBA mesophases, modelling using neutron scatt. 7−111384
MBBA nematic layers with interfacial surfactants, electrooptic behaviour 7−106137
MBBA wedged homeotropic samples, electrohydrodynamic distortion 7−75976
merocyanine dyes, orientation in nematic liq. crystal matrix, absorpt. spectra study 7−78757
mesogenic-nonmesogenic molecule mixtures, optical behaviour, refractive index and birefringence 7−144002
mesomorphic and solid, phases X-ray diffr. studies 7−104542
mixtures, near-UV photostability 7−77488
mixtures, switching transition in external mag. field, mol. field theory calcs. 7−91802
mixtures of opposite diamag. anisotropies, switching transition, mol. field theory 7−137233
modulators, optimal operation temp. 7−136490
molecular dynamics and spectral density determ. 7−75983
myristyltrimethylammonium bromide, nematic lyotropic, ester hydrolysis catalysis 7−113905
naphthyl-2 p-alkoxybenzoates, 6 substituted, ferroelec. liq. crystals 7−70716
nematic mixture E130, permittivity, splay and twist elastic and viscotic consts. meas. 7−91439
nematic-isotropic transition, fluctuation theory 7−84262
nematic-smectic A phase transition, orientational order of mol. fragments 7−105025
nematic-smectic A transition, lattice model critical behaviour 7−118094
nematic-smectic C transition, influence of boundary conditions 7−124498
nematic-to-smectic A transition and elastic consts. determ., optical response method *(Turkish)* 7−111872
nematic/cholesteric mixtures, laser induced gratings 7−110437
NMR ^{1}H-^{13}C spin pair zero-field study 7−92517
nonlinear dynamics of a nematic director in an alternating magnetic field 7−91426
nonlinear optical processes in ns regime, optically-induced mol. reorientation 7−68745
nonorthogonally twisted nematics, disclinations dynamics 7−111355
normally oriented layer, domain struct. under low freq. shear 7−117813
octyl cyanobiphenyl, pretransitional behaviour of twist and splay elastic and viscotic consts. 7−91438
4-n-octyl-4′-cyanobiphenyl, nematic and smectic ordering 7−75979
4-n-octyl-4′-cyanobiphenyl nematic liq. cryst., twist elastic consts. 7−111722
4,4′-octyl-cyanobiphenyl, isotropic-nematic phase transform. nucleation theory 7−98442
4-n-octyloxy-4′-cyanobiphenyl, liq. cryst. phase transitions, conform. and electronic struct. changes 7−69909
octyloxycyanobiphenyl, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7−104543
optical bistability, CW 7−75043
optical bistability, light induced bleaching 7−117276
optical bistability in Fabry-Perot cavity 7−75044
optical bistability near Freedericksz transition 7−110443
optical Freedericksz transition dynamics 7−124095
optical modulator design 7−141976
optically induced mol. reorientation, common path interferometer arrangement 7−115999
optically induced twist distortion, anal. 7−111379
order parameters, transformation props. 7−111374
4-n-pentyl-4′-cyanobiphenyl, nematic liquid cryst., anchoring strength at SiO interface, temp. depend. 7−98621
4-α,β-d_4-npentyl-4′-cyanobiphenyl, small solutes, orientation mechanisms 7−142567
4-pentyl-4′-cyanobiphenyl liquid crystal film with embedded azo dye, guest-host effect 7−75984
4-n-pentyl-4′-methoxytolane, liq. cryst., dephasing, vibr. freq. correl. function 7−77597
4′-n-pentyl-4-cyanobiphenyl, twist deformation, Frank Elastic const. 7−137220
4,n-pentyl-d_{11}-4′-cyanobiphenyl, nematic phase, pressure and temperature dependence of orientational order 7−75971
N-(4-n-pentyloxybenzylidene)-4-n-alkylaniline, I/N, N/SmA transitions, even-odd effect 7−137555
N-(4-n- pentyloxybenzylidene)-4-n-alkylaniline, nematic-smectic A transition 7−105018
perturbed solitons under time-depend. shear 7−117808
PET-p-oxybenzoate copolyester, fibre spinning from nematic melt, effect of thermal history 7−86123
phase behaviour, influence of lateral substituents 7−111880
phase behaviour in presence of electric and mag. fields 7−137556
photosemiconductor-nematic liq. crystal system, intrinsic optical bistability study 7−118541
polar liquid-liquid crystal boundary, DC voltage controlled pulsations of a homotropic nematic layer 7−104545
polar-nonpolar liq. crystal mixture, phase transitions, microscopic description 7−76402
polarisation-induced optical transitions 7−104539
poly(γ-benzyl-L-glutamate), lyotropic liquid crystal, order parameter 7−111371
poly(ethylene terephthalate-co-p-oxybenzoate), nematic, fibre form. 7−77935
polymer, diffusion coeff. reverse anisotropy meas. 7−124096
polymer, low energy elastic deformations 7−111723
polymer melts of macromolecules, theoretical studies with different flexibility mechanisms 7−137561
polymers, flow and mol. orientation, computer simulation 7−75963
polymers, grafted rods, nematic order, meanfield theory 7−104536
polymers, mesomorphic, side chain, nematic solutions, viscoelastic props. 7−111724
polymers, phase diagram of solns., critical point determ. 7−69907
polymers, side-chain, shear viscosity expt. 7−69958
polymethacrylate comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7−111352
polymethylsiloxane comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7−111352
pretransitional behaviour, mol. field theory 7−111877
nematic liquid crystals continued
(S)-1,2-propanediol esters, chiral cpds., cholesteric phase helix inversion induction investig. 7−75990
4-(4′-n-propylcyclohexyl)benzonitrile, cryst. struct. determ., energy of molecular interaction 7−97912
quasiliquid crystal films, supercooled, polar ordering, electrostatic field effects, optical SHG study 7−137210
quinoline derivatives 7−142566
random copolyether, thermotropic props., mol. weight influence 7−124500
retrogressive nematic phases, dielectric relax. *(Chinese)* 7−132193
ring deuterated smectic liq. cryst., D NMR spin-lattice relax. studies 7−77420
ring-shaped solitons 7−111375
rod-like systems, elongational flow effect on isotropic-nematic phase transform. 7−105016
Schiff's base liquid crystal, oriented, X-ray diffr. and optical studies 7−91432
self-focusing with orientation aberration, polarisation effects 7−69592
l-serine hydrochloride decylester-orthophosphoric acid soln., micellar phases 7−111367
siloxane liquid crystalline side-chain polymer two-freq. addressing, dielec. relaxation spectroscopy 7−132192
simple twisted nematic film, mag. field-induced Freedericksz transition and elasticity, perturbation calcs. 7−111353
solitons, 2D axisymmetric 7−142574
solubilities of the components of binary dye mixtures 7−76420
spontaneous Freedericksz effect, surface instability description 7−111361
stochastic molecular orientational fluctuations, incoherent cold neutron scatt. studies 7−91431
supertwisted nematic structs., transmission characts., birefringence dispersion effects 7−144008
surface coupling coeff. meas. for various substrates 7−97909
surface director reorientation 7−91425
surface tension anisotropy *(Polish)* 7−69590
surface-like volume energy and surface energy, 1D and 3D variation 7−137232
systems with positive and negative mag. susceptibility anisotropies, zero-field NMR 7−91428
thermal convective, pattern form. in mag. fields 7−124090
thermotropic poly(1,4-phenylene-2,5-dialkoxy terephthalate), layered mesophase 7−137223
thin layer, laser radiation reflection, thermooptical modulation 7−75008
thin layer, Williams domain angle-deflective oscill., evolution process 7−75973
time resolved fluorescence depolarisation 7−124093
tolans, nematic, birefringence, viscosity and dielec. const. studies 7−75980
topologically nontrivial loop defects classification 7−115768
topology, manifolds and homotopy, appl. to mag. materials and nematics 7−80388
4-(trans-4-alkylcyclohexyl)-1-(2-cyanoethenyl)-benzene, binary mixture with 60CB, nematic reentrant phase, elec. props. 7−124499
truxene derivatives, disc-like mesogens, phase diagrams, dilatometric and thermobarometric studies 7−98445
twist deformed, surface coupling, optical detection, computer simulation 7−111369
twist elastic constants, forced Rayleigh scattering 7−98291
twisted, light transmission 7−103990
twisted nematic cell, time response, chiral dopant effects 7−97914
twisted nematic cell, transient behaviour 7−131021
twisted thin film, temporal behaviour of molecules 7−75978
uniaxial liquid crystals, steric effects of substituents in mesogens and phase transition temps. 7−111879
vibrational bandshape analysis and inertial-stochastic molecular motion 7−75970
wall-induced order of a liquid crystal 7−117811
yellow dyes for guest-host applications, optical order parameters 7−124087
$Bi_{12}GeO_{20}$-nematic liq. cryst., data storage and reconstruction 7−132189
CdTe-nematic liq. cryst., light-induced orientational effects study 7−85006
N-(p-n-hexyloxybenzylidene)-p-n-toluidine, liquid cryst. transitions, US studies 7−105022
Pt group nitrile complexes, liq. cryst. and cryst. struct. 7−111360

NEMP *see electromagnetic pulse*

neodymium
see also nuclei with .....
adsorption and growth modes on Cu(100), LEED studies 7−118220
S Africa, continental crust evolution, Nd isotopic anal. 7−127138
Archaean Talga-Talga Subgroup, Pilbara Block, Australia, age and mantle evolution, Sm-Nd obs. 7−145375
atom, photon-induced L X-ray fluoresc. cross sections and relative intensities 7−68248
atoms, reson. ionis. spectroscopy, laser bandwidth effects 7−90075
Canadian continental crust formation 1900 million years ago, Nd isotopic evidence 7−101228
crystal purification 7−119128
crystals, laser-excited fluorescence of Nd^{3+} 7−122439
exchange interaction in lanthanum ethyl sulphate, ESR study 7−138322
exchange interaction in yttrium ethyl sulphate, ESR study 7−138322
fibre lasers using direct-coated dielec. mirrors 7−117209
high press. FCC to double HCP phase transition, elec. resist. meas. 7−98439
K-shell ionisation by protons and deuterons 7−86714
L-subshell ionisation by deuteron impact 7−90371
laser mode locking with $GdScGa_5O_{12}$ switch 7−130201
laser spectrum narrowing with plasma mirror 7−141874
NIXE, Nd:glass laser, design and plasma prod. appl. 7−75839
Pacific basalts of mid-ocean ridge, isotope geochemistry 7−114666
rare earth chalcogenides, $RGa_2S_4(Se_4):Nd^{3+}$ *(Russian)* 7−125770
vapour, resonance ionisation spectroscopy, laser bandwidth effects 7−82029
$BaLaGa_3O_7$:Nd single crystals, spectroscopic studies 7−85796
$BaLaGa_3O_7$:Nd single crystals, X-ray emission lines, valence band 7−92783
$Ba_3LaTa_3O_{12}$:Nd^{3+}(Eu^{3+}) cryst., rhombohedral perovskite, spectral luminesc. props. 7−119050
$Bi_{12}GeO_{20}$:Nd^{3+}, energy transfer, sensitised luminesc. study 7−125788
$Bi_{12}SiO_{20}$:Nd^{3+}, energy transfer, sensitised luminesc. study 7−125788
CaF_2:Nd single crystals, dielectric studies 7−132182

neodymium continued
$Ca_2Ga_2SiO_7:Nd^{3+}$, gehlenite, crystal struct., spectral luminesc. and stimulated emission 7−106237
$Ca_3(Nb, Ga)_2Ga_3O_{12}:Nd^{3+}$, cation-deficient garnet, spectral luminesc. props. 7−106236
$Cd_{1-x}Sc_xF_{2+x}:Nd^{3+}$ solid soln. single crysts., growth from melt and low threshold stimulated emission 7−85777
$CsCdBr_3:Nd^{3+}$, de-excitation processes of optically excited Nd^{3+} pairs 7−77635
Fe-Nd multilayer films, mag. props. 7−112903
$GaScGd_5O_{12}:Nd^{3+}$, Cr^{3+}, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
GdScGG:Cr,Nd laser host material, refr. index and $\Delta n/\Delta T$ at 1064 nm 7−68645
GdScGG:Cr^{3+},Nd^{3+}, acoustooptic props. 7−144012
$(GdSc)_3Ga_5O_{12}$:Cr,Nd, short-lived absorpt. rel. to solid-state laser efficiency 7−141869
$KGdWO_3:Nd^{3+}$, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
K_2SO_4-$ZnSO_4$:Nd glass, spectral studies 7−70883
$LaCl_3$:Nd, fluorescence line narrowing, competitive technique to EPR 7−70885
La_2O_2S:Nd, cathodolumin. study 7−138518
$LiLuF_4:Nd^{3+}$ tetragonal crysts., impurity ion luminesc., absorpt. and stimulated emission props. 7−85793
$LiYF_4:Nd^{3+}$, cryst. field parameters, calc. by superposition of charge transfer configurations 7−143414
$Na_{1+x}Mg_xAl_{11-x}O_{17}:Nd^{3+}$, optical pair interactions, four wave mixing spectrum 7−136456
Nd,Cr:$Gd_3Sc_2Al_3O_{12}$ laser hosts, spectroscopic and laser props. 7−74939
Nd,Cr:$Gd_3Sc_2Al_3O_{12}$ laser crystal growth 7−77791
Nd,Cr:$Gd_3Sc_2Ba_3O_{12}$ laser crystal growth, comparative studies 7−77792
Nd,Cr:$Gd_3Sc_2Ga_3O_{12}$ flashlamp-pumped laser, performance and characteris. 7−74940
Nd,Cr:$Gd_3Sc_2Ga_3O_{12}$ laser crystal growth 7−77793
Nd,Cr:$Gd_3Sc_2Ga_3O_{12}$ laser materials, crystal growth 7−86009
Nd,Cr:$Gd_3Sc_2Ga_5O_{12}$ codoped garnet cryst. growth for laser use 7−77782
Nd,Cr:$Gd_3(Sc,GGa)_2Ga_3O_{12}$ laser, 1.06 μm transition cross section 7−90619
Nd,Cr:$Gd_3(ScGa)_2Ga_3O_{12}$ lasers with photochromic centers 7−82575
Nd,Cr:$Gd_3(ScGa)_2Ga_3O_{12}$ laser with prism-resonator and polarisation coupling 7−82576
Nd,MgO:$LiNbO_3$ miniature CW and active internally Q-switched lasers 7−68683
Nd glass laser, inversion dumping and amplification dynamics of ns pulses *(German)* 7−130122
Nd lasers, high power, for industrial appls. 7−82680
Nd^{3+}, Cr^{3+}:$(Gd,Sc)_3Ga_5O_{12}$ laser with stimulated Brillouin scattering mirror and plasma switch for pulse variation 7−130168
Nd^{3+} doped fibre laser, CW, 1064 nm, using all-fibre reflectors 7−117222
Nd^{3+} doped fibre laser 7−82571
Nd^{3+} doped fibre laser operating at 938 nm, diode-laser-pumped 7−142040
Nd: glass laser system, multiple pass amplifiers 7−68687
Nd: phosphate glass amplifying medium, stimulated Brillouin scattering of focused beams 7−136431
Nd:glass four-channel laser for spherical plasma compression 7−69395
Nd:glass Gemini slab laser system, sandwiched flashlamp geometry 7−74985
Nd:glass laser, active mirror system for TW output powers 7−82628
Nd:glass laser, actively-passively mode-locked, feedback control 7−110375
Nd:glass laser, performance of colloidal silica antireflection coatings 7−68815
Nd:glass laser active element, thermo-optical distortion, temp. field distrib. study 7−103827
Nd:glass laser optical filters, Eu activated quartz glass, efficiency 7−130304
Nd:glass laser system, high power, picosecond, with high repetition frequency 7−97019
Nd:glass laser with active-passive mode-locking, electro-optic gain control and cavity dumping 7−110417
Nd:glass laser with composite active element and stimulated Brillouin scattering mirror 7−82643
Nd:glass lasers, pumping using high power flashlamps 7−74968
Nd:glass Nova laser, ultra high power level phenomena 7−82621
Nd:glass Nova laser, ZZ 7−82711
Nd:glass slab lasers, conduction cooling 7−82624
Nd:$La_2Be_2O_5$ athermal lasers 7−82579
Nd:$LiYF_4$ amplifier, high gain 7−82584
Nd:$LiYF_4$ laser, Cs filter resonant operation 7−82657
Nd:$LiYF_4$ laser, flash-lamp-pumped acousto-optically Q-switched, intracavity doubling of 0.527 μm output 7−123098
Nd:phosphate glass laser, colliding pulse mode locking using dye saturable absorber 7−110422
Nd:phosphate glass laser with composite active element, diffraction-limit divergence *(German)* 7−130123
Nd:phosphate glass lasers, Ar laser pumping, thermally induced stresses 7−74931
Nd:SiO_2 monomode fibre laser, Q-switching, mode locking and tunable operation around 0.9 μm 7−103847
Nd:YAG, single cryst. fibre growth and nonlinear optical use 7−75069
Nd:YAG CW mode locked lasers, operating specifications 7−74976
Nd:YAG CW mode locked Q-switched laser pump for cavity dumped dye laser 7−74977
Nd:YAG CW multimode laser beam transmission through fibre optic delivery system 7−136361
Nd:YAG Centurion slab laser system, sandwiched flashlamp geometry 7−74985
Nd:YAG eye-safe laser rangefinder, Raman wavelength shifting 7−82615
Nd:YAG fibres, clad for laser appls., performance 7−110586
Nd:YAG industrial lasers, CW-pumped, design 7−74972
Nd:YAG intracavity-doubled, multi transverse-mode laser 7−122987
Nd:YAG laser, CW, simultaneous passive and kinematic mode locking 7−130202
Nd:YAG laser, CW mode-locked, pumping of fibre Raman soliton laser 7−68694
Nd:YAG laser, coherent laser radar at 1.06 μm 7−75014
Nd:YAG laser, high-power pulse-periodic with unstable telescopic resonator and two-stage amplifier *(German)* 7−130121
neodymium continued
Nd:YAG laser, phase-matched SHG in 2-methyl-4-nitroaniline thin film waveguide *(Japanese)* 7−97089
Nd:YAG laser, pulse pump oscillators SL122, 124 and 126 from NEC *(Japanese)* 7−130171
Nd:YAG laser, pumping using diode lasers 7−68690
Nd:YAG laser, use of $LiF:F_2^-$ colour centre Q-switch 7−117207
Nd:YAG laser 0.532 μm pulse compression in fibre optic compressor 7−141904
Nd:YAG laser at 946 nm, quasi-three-level, modeling and CW operation 7−90618
Nd:YAG laser based lidar system for atm. aerosol remote sensing 7−72208
Nd:YAG laser controlled by passive switch, radiation angular distrib. 7−130219
Nd:YAG laser crystal growth, comparative studies 7−77792
Nd:YAG laser crystals, growth and perfection 7−117211
Nd:YAG laser hosts, spectroscopic and laser props. in presence of colour centres 7−74939
Nd:YAG laser light frequency conversion in single-mode fibre 7−117268
Nd:YAG laser material high temp. fluoresc. lifetime investig. 7−92736
Nd:YAG laser photodiode-pumped CW, amplitude fluctuations 7−136324
Nd:YAG laser pulse shaping by stimulated Mandelstam-Brillouin scattering 7−68782
Nd:YAG laser pump cavity reflector, metal-dielectric coating *(Korean)* 7−82577
Nd:YAG laser pumping with diode laser array 7−68702
Nd:YAG laser pumping with Kr-Rb lamps 7−110363
Nd:YAG laser radiation phase modulation with SHG of ultrashort pulses, correlation meas. 7−141903
Nd:YAG laser rangefinder/designator 7−75019
Nd:YAG laser resonators with low misalignment sensitivity and large mode volumes 7−123035
Nd:YAG laser rod end-pumped by monolithic diode laser, 370 mW 1.06 μm CW 7−103821
Nd:YAG lasers, coherence characts. 7−136274
Nd:YAG lasers, coherent ultrashort pulse amplification 7−136315
Nd:YAG lasers, flashlamp pumped, scientific applications 7−74973
Nd:YAG lasers, freq. doubled, diode laser array pump sources 7−74978
Nd:YAG lidar accommodation on polar meteorological satellite 7−72252
Nd:YAG miniature laser diode pumped lasers 7−68701
Nd:YAG oscillator in Q-switched TEM_{00} mode, birefringence compensation in polarization coupled lasers 7−117206
Nd:YAG ring laser, CW, kinematic mode locking 7−97045
Nd:YAG ring laser, spatial separation of opposite waves 7−130189
Nd:YAG ring laser, unidirectional, diode-laser pumped, mag. field effects 7−74962
Nd:YAG ring oscillator, laser pumped, freq. stability and offset locking 7−68717
Nd:YAG spherical cavity, CW laser oscillation 7−103825
Nd:YAP laser configuration with single frequency CW output at 1.079 μm 7−68716
Nd:$YAlO_3$ perovskite picosec. laser, temporal characts. study 7−103822
Nd^{3+}: phosphate glass laser, contribution of UV absorpt. to laser power 7−90621
Nd^{3+}: silica fibres, P, Co co-doped, lasing spectrum 7−136318
Nd^{3+}:AlG laser light, SHG in $KTiOPO_4$ optically biaxial cryst. 7−123100
Nd^{3+}:β″-Al_2O_3-Na_2O laser, single pass gain 7−82582
Nd^{3+}:glass multifibre laser, lasing props. 7−141870
Nd^{3+}:SiO_2 fibre lasers, single-mode, line-narrowing and hole burning 7−103823
Nd^{3+}:YAG, $^4F_{5/2}$ and $^2H2_{9/2}$ levels, radiative decay probabilities *(Japanese)* 7−130129
Nd^{3+}:YAG CW laser, nonlinear optical effects 7−68655
Nd^{3+}:YAG laser, Q-switched short light pulses generation 7−110419
Nd^{3+}:YAG laser ultrashort pulse generation 7−141906
Nd^{3+}:YAG laser with composite active element, diffraction-limit divergence *(German)* 7−130123
Nd^{3+}:YAG laser with resonator loss modulation, chaotic regimes and stability of peak output power 7−122989
Nd^{3+}:YAG laser with unstable resonator, short giant radiation pulse form., bleachable dye Q-switch 7−97048
Nd^{3+}:YAG lasers, continuously pumped as picosecond radiation sources 7−136316
Nd-Co compositionally modulated thin films, mag. props. 7−99513
$Nd_3Co_2Sn_7$, cryst. struct., mag. suscept., elec. resist. and thermopower meas. *(Russian)* 7−98048
$^{143}Nd/^{144}Nd$ ratios in charts and other siliceous deposits, implications for cherts form. 7−94222
$RbMnF_3:Nd^{3+}$, nonradiative energy transfer without lifetime quenching 7−85818
Si:Nd-SiO_2 interface, elec. props. 7−99209
Si:Nd-SiO_2 interface, negative elec. effects 7−125137
SiO_2-GeO_2-P_2O_5:Nd^{3+} doped optical fibres, prep., optical props. 7−92734
YAG:Nd crysts., defects, laser light scatt. tomography 7−98151
YAG:Nd stoichiometry charactn., absorption spectroscopic method 7−98481
YAG:Nd^{3+}, excitons, thermoluminesc. study 7−125815
YAG:Nd^{3+}, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
YAG:Nd^{3+} X-ray excited phosphoresc. kinetics model *(Russian)* 7−70911
$YAlO_3:Nd^{3+}$, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
ZrF_4-BaF_2-LaF_3-AlF_3-NaF-PbF_2:Nd glass fibre lasers 7−136313

neodymium alloys
Ag-Nd binary liquid alloys, thermodynamic props. 7−118132
Ce-La-Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413
Co-Nd, amorphous mag. props. 7−132000
DyNdFeCoB aligned magnets, permanent magnet props. 7−125465
Fe-Nd-B, prepared by rapid solidification, review 7−86093
Fe-Nd-B permanent magnets, mag. domains, high volt. Lorentz electron microscopy obs. 7−132082
$Fe_{75}B_{25-x}Nd_x$ rapidly quenched alloys, mag. props. 7−77357
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7−132101
FeNdB, melt-spun ribbons, atom probe FIM study 7−78281
FeNdB nanocrystalline alloy, struct. determ. using scanning tunnelling microscopy 7−142540

neodymium alloys continued
FeNdB-based permanent magnets phase comp., atom probe FIM study 7−132576
$Fe_{14}(NdDy)_2B$ permanent magnet alloy, thermal treatment effects, positron annihilation study 7−132372
Na-Fe-B magnet, anisotropy consts. meas., temp. and field depend. determ. 7−125373
Nd-Co amorphous alloy films, magneto-optical props. study 7−113156
Nd-Dy-Fe-B sintered magnets, coercivity, depend. on anisotropy field 7−112859
Nd-Fe amorphous alloy films, magneto-optical props. study 7−113156
Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413
Nd-Fe-B, melt spun permanent magnet alloy, isotropic remanence 7−132084
Nd-Fe-B, sintered magnets, coercivity, thermal ageing effects 7−132083
Nd-Fe-B alloys, Mossbauer spectra *(Chinese)* 7−143935
Nd-Fe-B based isotropic permanent magnet, high performance 7−112861
Nd-Fe-B hot-pressed and die-upset magnets, microstruct., electron microscopy studies 7−131322
Nd-Fe-B magnets, graduated demagnetisation curves, soft phase, oxidation and spin reorientation effects 7−99499
Nd-Fe-B magnets, oxidation behaviour, corrosion reaction kinetics study 7−132805
Nd-Fe-B magnets, sintered, hardness and thermal expansion, temp. depend. *(Chinese)* 7−132702
Nd-Fe-B permanent mag., elec. resist. and sp. ht. studies 7−131611
Nd-Fe-B permanent magnet, magnetisation reversal by use of Hall-effect microprobe 7−132063
Nd-Fe-B permanent magnets, grain-boundary phase 7−111577
Nd-Fe-B permanent magnets, mag. props. and prep., review 7−112864
Nd-Fe-B permanent magnets, sintered, initial magnetisation curves 7−138269
Nd-Fe-B permanent magnets, sintered, demagnetisation curve dip 7−138270
Nd-Fe-B sintered magnet, coercivity of surface grains 7−138287
Nd-Fe-B sintered magnets, mag. viscosity 7−131997
Nd-Fe-B type magnets, coercivity, effect of heat treatment 7−86374
Nd-Fe-B-Dy (Co) permanent magnets, small temp. coeff. 7−70596
Nd-Fe-Co sputtered films, mag. and magneto-optical props. 7−143869
Nd-Fe-Co-B sintered magnets, coercivity, depend. on anisotropy field 7−112859
Nd-Fe-Co-B-Mo alloy, coercivity anisotropy field and thermomag. props. study 7−125445
Nd-Fe-Co-B-Zr permanent magnets, mag. props., effect of Co and Zr *(Korean)* 7−78280
Nd-Fe-CoB permanent mag. alloys, anisotropy, coercivity and hysteresis meas. 7−125446
Nd-Zn, alloying behaviour, phase diagrams 7−77941
$NdAl_2$, thermal expansion, X-ray studies 7−131339
NdBFe magnets for compensation of CERN Large Hadron Collider 10 T superconducting dipole magnets 7−129471
$NdCo_5$, uniaxial permanent magnet, magnetostriction 7−138304
$NdCo_4B$ mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
$Nd_2Co_{14}B$ single crystals, magnetisation, mag. anisotropy 7−112760
$Nd(Co_{1-x}M_x)_5$ M=Ni, Cu, Al, struct. and phase equilibria 7−118078
$Nd_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$NdCu_6$, de Haas-van Alphen effects and transport props. 7−70162
$Nd_{2-x}Dy_xFe_{14}B$, ^{161}Dy and ^{57}Fe Mossbauer effect studies 7−138356
NdDyFeBNb sintered magnets, microstruct., precipitation and coercivity, electron microscopy studies 7−69912
$Nd_{1-x}Dy_xFe_{1-y}Co_yB$ permanent magnets, zero temp. coeff. 7−138286
$Nd_2F_{14}B$ thin film mag. props. study 7−112894
$Nd_{15}(Fe_{0.96}Al_{0.04})_{77}B_7$:$Dy_2O_3$, additive effect on mag. props. 7−99509
NdFeB magnet, domain struct. and magnetisation temp. depend. meas. 7−125439
NdFeB magnets microstruct., hot-pressed and die-upset, TEM study 7−143027
NdFeB magnets. magnetic viscosity meas. 7−125447
NdFeB permanent magnets, coercivity, comp. and heat treatment depend. 7−143853
NdFeB sintered and melt-spun magnets, coercive field studies 7−118826
NdFeB sintered magnets, hardness variation with temp. meas. 7−124388
$Nd_{0.04}Fe_{0.94}B_{0.02}$ amorphous films, thermoelec, power 7−92308
$Nd_{15}Fe_{17}B$, magnetisation, effect of H_2 absorption 7−92459
$Nd_{15}Fe_{77}B_{18}$ sintered permanent magnets, dip in magnetisation curve 7−70594
$Nd_{15}Fe_{77}B_8$ permanent magnet, mag. anisotropy and rotational hysteresis energy 7−138220
$Nd_{15}Fe_{77}B_8$ powder, prep. by mechanical alloying and solid-state reaction, mag. props. 7−113466
$Nd_{15}Fe_{77}B_8$:Dy_2O_3 magnets, mag. surface hardening, microstructural evidence 7−125467
$Nd_2Fe_{14}B$, anisotropy energy and approx. d band calcs. 7−125372
$Nd_2Fe_{14}B$ cpds. mag. anisotropy, effect of Ni and Mn substitution 7−132010
$Nd_2Fe_{14}B$, crystal field and exchange interactions 7−112782
$Nd_2Fe_{14}B$, crystallographic and Mossbauer study, comparison with $Y_2Fe_{14}B$ 7−69659
$Nd_2Fe_{14}B$, electronic struct. calc. 7−118355
$Nd_2Fe_{14}B$ film, EELS 7−125874
$Nd_2Fe_{14}B$ intermetallic cpd., complex Mossbauer spectrum anal. 7−118925
$Nd_2Fe_{14}B$ intermetallic cpd., Mossbauer effect study, temp. depend and spin reorientation 7−118926
$Nd_2Fe_{14}B$, magnetic anisotropy, easy cone 7−85281
$Nd_2Fe_{14}B$, magnetic anisotropy, cryst. elec. field model calcs. 7−125374
$Nd_2Fe_{14}B$ magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
$Nd_2Fe_{14}B$ particles, mag. props. and stability 7−85375
$Nd_2Fe_{14}B$, permanent magnet, remanence direction at 77 K, as function of obliquely appl. mag. field 7−77345
$Nd_2Fe_{14}B$, permanent magnet production, hydrogen decrepitation process 7−92914
$Nd_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Nd_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Nd_2Fe_{14}B$ polycryst., Curie and spin reorientation temps., press. effects study 7−99452
neodymium alloys continued
$Nd_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
$Nd_2Fe_{14}B$, positive muon spectroscopy 7−132178
$Nd_2Fe_{14}B$ single cryst. anomalous magnetisation behaviour 7−77352
$Nd_2Fe_{14}B$ single cryst. first-order field-induced magnetisation transitions 7−125385
$Nd_2Fe_{14}B$ single cryst., domain width, cryst. thickness depend. 7−138263
$Nd_2Fe_{14}B$ single crystals, easy growth axis determ. for anal. of texture in Nd-Fe-B magnets 7−132078
$Nd_2Fe_{14}B$-based alloys, substituent effects, cryst. field model anal. 7−70550
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
$Nd_2Fe_{14-x-y}Co_xAl_yB$, mag. props. substitution effects 7−138217
$Nd_2(Fe_{1-x}Co_x)_{14}B$, ^{57}Fe Mossbauer study 7−113034
$(Nd_2Fe_{1-x}Co_x)_{14}B$, mag. hyperfine fields between 100 and 780 K 7−98943
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer spectra study, 100-700 K 7−77434
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033
$Nd_2(Fe_{1-x}Co_x)_{14}B$ single crystals, magnetisation, mag. anisotropy 7−112760
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$ (M=Co, Ni, Ru) spin reorientation, low temp. mag. meas. 7−77348
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$, M=Sc-Mn, Co, Ni, permanent magnet cpds., mag. props. study 7−92422
$Nd_2(Fe_{1-x}M_x)_{14}B$ (M=Co, Al), thermal expansion anomalies, mag. props. 7−111916
$Nd_2Fe_{14}R$, domain struct., domain wall energy 7−118818
$Nd_2(Fe_{1-x}Ru_x)_{14}B$, low temp. mag. behaviour, spin reorientation phenomena 7−125369
$Nd_2Fe_{14-x}Si_xB$, substituted system, mag. props. 7−105963
$NdIn_3$, electrical resistivity, exchange and quadrupole scatt., crystalline field effects 7−112297
$NdIn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$Nd_{2-x}M_xFe_{14}$ B-based system, (M=Ti,Hf), magnetisation, Curie temp. and anisotropy 7−138218
$Nd_{1.9}M_{0.1}Fe_{12}Co_2B$ (M=Ti, Hf), mag. props., material for permanent magnets 7−118830
$NdMn_2Si_2$, metamagnetic phase transition, magnetocaloric effect 7−132017
$(Nd_{1-x}Pr_x)_2Fe_{14}B$, first-order mag. transition 7−99448
$NdRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$NdSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
NdT_4B, T=Fe, Co, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
$Nd_{2-x}Tb_xFe_{14}B$, magnetocrystalline anisotropy 7−99438
NdZn, neutron diffr. and mag. studies 7−77248
$Nd_{0.06}Fe_{0.94}$ amorphous films, thermoelec, power 7−92308
$Tb_xNd_y(FeCo)_{1-x-y}$ anisotropy and magnetooptical props. for storage appls. 7−113155
$(Y_xNd_{1-x})_2Co_{17}$, ^{59}Co NMR spin echo spectra and relax. times 7−138338

neodymium compounds
see also neodymium alloys
diphthalocyanine, mol. and cryst. struct., X-ray diffr. study 7−104717
tartrate, crystal growth from silica gel 7−85977
Ba-Nd-Cu-O system, high T_c supercond., Meissner state 7−118706
$Ba_{0.6}Nd_{0.4}CuO_{3-x}$, superconductivity, transition temps. 7−99280
$Ba_2NdCu_3O_{7-\delta}$ high T_c supercond. single cryst. growth from soln. 7−142673
$Ba_2NdCu_3O_{9-x}$, high T_c supercond., prep. and charact. 7−118660
$BaTiO_3$-$Nd_2Ti_2O_7$ pseudobinary system, X-ray phase and thermal analyses and electrophysical characteristics 7−91764
$CaMoO_4$:$NdNbO_4$, fluoresc. temp. depend. and time evolution studies 7−144113
$KNdP_4O_{12}$ laser oscillation, tunable CW 7−117212
$KNdP_4O_{12}$:Pr^{3+}, inhomogeneous broadening and energy transfer 7−106242
$K_3NdSi_2O_7$, hexagonal cryst. struct., mini laser material 7−124181
$La_xNd_{1-x}MgAl_{11}O_{19}$ pumping by diode laser 7−122991
$(La_{1-x}Nd_x)_{2-y}(SrBa)_yCuO_4$ high T_c supercond. behaviour systematics 7−118646
$(La_{1-y}Nd_y)_{2-x}(SrBa)_xCuO_4$ high T_c supercond., comp. and unit cell parameters w.r.t. T_c 7−143670
$LiLa_{1-x}Nd_xP_4O_{12}$ glasses, Nd spatial distrib., Raman and kinetic luminesc. spectroscopy 7−76010
$LiLa_{1-x}Nd_xYb_yP_4O_{12}$ glass, fluorescence kinetics and $Nd^{3+}\rightarrow Yb^{3+}$ energy transfer 7−70873
$LiNdP_4O_{12}$ laser oscillation, tunable CW 7−117212
Li_2O-P_2O_5-CaO-Al_2O_3-Nd_2O_3 phosphate glass, low temp. homogeneous linewidths 7−99914
$NaNdP_4O_{12}$, broad tuning range lasers, CW operation at 1.05, 1.32 μm 7−136320
Nd chromites, electrode materials 7−131720
Nd^{3+} complexes, acetate complexes, excited state lifetimes, fluoresc. study 7−68386
Nd-(La)(Gd)(Bi)(Y)P_5O_{14}, decomposition-rate constants 7−86586
Nd-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
$NdAl_3(BO_3)_4$, pulsed laser performance, luminesc. conc. quenching effect rel. to struct. charcts. 7−74933
NdB_6, cryst. electric field level scheme, Raman spectra obs. 7−92678
$NdBa_2Cu_3O_6$, superconductivity above 90 K 7−118650
$NdBa_2Cu_3O_{7-x}$, high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
$NdBa_2Cu_3O_{7-y}$, high T_c supercond., upper critical fields, anisotropy limits 7−131939
$NdBa_2Cu_3O_{8-\delta}$, high T_c supercond., props. 7−138108
$Nd_{1-x}Ca_xF_{3-x}$ solid electrolyte, diffusion mechanism of F ions 7−69967
$(Nd_4Ca_2)Ti_6O_{20}$, incommensurate modulated cpds., 4D struct. determ. 7−69674
$NdCl_3$, melting, liq. molar vols. 7−124461
$NdCo_{12}B_6$ mag. props. studies 7−99418
$Nd_2Fe_{14-x}Co_xB$ cryst. struct., mag. anisotropy and Curie temp., Co substitution effects study 7−105913
$Nd_2Fe_{14-x}Si_xB$ compounds, struct. and mag. props. 7−138278

neodymium compounds continued
$Nd_3Ga_5O_{12}$, colour centres, optical and electrophysical props. *(Russian)* 7−85785
$Nd_3Ga_5O_{12}$ garnets, photoelectrical props., thermal annealing and electron irrad. effects *(Russian)* 7−125053
$Nd_3Ga_5O_{12}$, photo- and thermodepolarisation 7−113068
NdH_{2+x}, x=0-0.75, mag. props. 7−99417
$Nd_2H_3(PO_4)_2$, acid monophosphates, crystal structures 7−104657
$Nd_xLa_{1-x}MgAl_{11}O_{19}$, promising power laser crystal, growth, stability, optical props. 7−138633
$NdNbO_4$, ferroelastic, Raman spectra, press., dependence 7−144054
Nd_2O_3-P_2O_5 system, phase equilibrium 7−119248
NdOCl, Stark levels, mag. splitting factors 7−70258
$Nd(OH)_2NO_3.H_2O$, cryst. struct., X-ray powder diffr. data 7−111484
Nd_2O_2S, oxidation to $Nd_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
NdP_5O_{12}, broad tuning range lasers, CW operation at 1.05, 1.32 μm 7−136320
NdP_5O_{14}, decomposition-rate constants 7−86586
NdP_5O_{14}, ferroelastic domains, linear and nonlinear imaging 7−123392
NdP_5O_{14} laser oscillation, tunable CW 7−117212
NdP_5O_{14} miniature pulsed laser, structure design *(Chinese)* 7−130152
NdP_5O_{14} tunable active optical ferroelastic grating 7−90765
$NdRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_{c2} meas. 7−112647
$Nd(Ru, Os)_2B_2$, cryst. struct. determ. 7−83897
Nd_2S_3, vaporisation, mass spectroscopic investig. *(Japanese)* 7−124467
$Nd_{2-x}(SrBa)_xCuO_4$ high T_c supercond. behaviour systematics 7−118646
$NdTaO_4$, cryst. struct., new modification in rare earth tantalates, X-ray diffr. study 7−104681
$Nd_{0.33}TaO_3$, new polymorphic modification of $NdTa_3O_9$, cryst. struct., X-ray diffr. study 7−104682
$Nd_{2/3+x}TiO_{3\pm y}$, mag. susceptibility, elec. props., 77 to 450 K 7−105880
$Nd_{1/3}UO_2PO_4$, lamellar solids, excited state props. 7−70881
$NdVO_3$ cryst. struct., neutron diffraction study 7−104654
PbF_2-ZnF_2-GaF_3-YF_3-AlF_3-NdF_3 fluoride glass, laser props., calc. 7−68649
$RbNd(WO_4)_2$, optical properties 7−106116
$(Sb_2Te_3)_{1-x}(NdTe)_x$ solid solns., elec. props. temp. and comp. depend. meas. 7−84881
SiO_2-Yb_2O_3-Nd_2O_3-Cr_2O_3 glasses, luminescent solar concentrators 7−144915
SnSe-Nd_2Se_3, phase diagram, congruent melting compounds 7−71156
$(YNd)_3(CoGeFe)_5O_{12}$ epitaxial magnetic films, optical props. comp. depend. study 7−106285
$Y_{3-x}Nd_xFe_5O_{12}$, transferred hyperfine interaction, NMR studies 7−112262
ZnO-TeO_2-Nd_2O_3 oxide glass, laser props., calc. 7−68649
ZrF_4-BaF_2-LaF_3-AlF_3-NdF_3 fluoride glass, laser props., calc. 7−68649
ZrF_4-NdF_3-FeF_3 glass fibres, photolum. studies 7−125785

neon
see also nuclei with .....
atom, dipole excitations, photon absorpt. cross section meas. 7−109848
atom, electron beam pumped, band emission obs. 7−129631
atom, electron collisions, negative ion resons. 7−96877
atom, electron configuration, 2D working model 7−102064
atom, electron density to electron momentum density transform., nonlocal density approx. 7−74421
atom, electron impact, inner-shell ionisation, post-collision interaction 7−103665
atom, electron impact excitation, swarm coefficients, measurement, analyses 7−129879
atom, electron scattering cross sections at low electron energies using photoelectron source 7−122711
atom, four-wave mixing, cross-polarised pumps, backward saturation 7−103903
atom, ionisation, reflected from Cu surface 7−77738
atom, møller-Plesset calculations taking care of the correlation cusp 7−74400
atom, mag. susceptibility from small angle electron scatt. data 7−68430
atom, mean polarisabilities, temp. depend. meas. *(German)* 7−68472
atom, metastable states, inelastic collisions study 7−82329
atom sticking coefficient on Cu (100), trajectory approx. 7−144221
atoms, Coulomb and exchange terms in interatomic pots. 7−129833
atoms, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
atoms, ionisation energy, g-Hartree ab initio calcs. 7−103386
boiling, IPTS-66 scale fixed pts., influence of pressure *(Polish)* 7−134746
cluster ions, metastable decay rate, time depend. 7−117112
core electron shake-up spectra, autoionizing resonances obs. 7−109842
dimer, dispersion and induction energy damping functions calcs. 7−82315
dimer, intermol. interactions, supermol. MP2 approach appl. 7−82311
discharge, electron distrib. function kinetic eqns. soln. 7−69498
discharge, Z-pinch AGAT image-converter camera diagnostics 7−123932
excited states on laser transition, polarisabilities, holographic spectroscopy meas. 7−141843
first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
fluid coexistence curves, three-body interactions, scaling variables, singular diameters 7−124466
galactic centre line-of-sight gas vel. 7−128060
gas, solubility in methanol-$d_0(d_3)(d_1)(d_4)$-$H_2O(D_2O)$, solubility, isotope effects 7−111159
gas, time depend. positron behaviour simulation 7−96881
gas puff Z-pinch implosions on Proto-II accelerator investig. 7−69440
ion implantation and desorption behaviour on Si 7−143226
ion implantation in Si, diffusion anomalies *(German)* 7−142855
ion implanted in Cu bars, thermal energy balances 7−91676
ions implanted into metals, induced X-ray emission 7−104778
laser at 585.3 nm, inversion mechanism 7−110320
lasing at 585.3 and 540.1 nm under transverse-discharge pumping 7−141841
lasing by electron beam pumping 7−96975
lattices, nonadditivity, van der Waals interaction pots. 7−124164
liquefied, acoustic and thermodynamic studies 7−69826
liquid-isothermal compressibility, pair pot., direct correl. function 7−76259
metastable atom, interaction with Au-ZnO structures 7−92295
Orbitron, MM wave generation interpretation as stimulated emission of bremsstrahlung 7−103789

neon continued
photodesorption, field-assisted from W surface 7−131422
planetary nebulae, type II, Ne, Ar and Cl abundances rel. to Galaxy radial abundance gradients 7−72565
plating on graphite, He adsorption, spectral and thermodynamic props. 7−105251
positive column, ionisation waves, mode transition in nonuniform mag. field 7−75898
positronium formation from He, Be, C, O, and N by the impact of high-energy positrons 7−129881
Raman laser, CW, gain and noise characts. 7−141844
self-trapped exciton luminesc., time-resolved study 7−106274
solid, second- and third-order elastic consts., temp. depend. 7−111735
superheated liq., nucleation kinetics 7−137507
thermal accommodation coeff. on graphitised C 7−137706
Townsend discharges, spatial nonuniformity at low pressure 7−111294
α-Al_2O_3:Ne, sapphire, ion implantation effects 7−91608
Ar-Ne mixtures, far IR absorpt. spectra 7−132263
GaAs:Ne, ion implanted, nonlinear strain effects 7−142806
H_2-Ne, mixtures, diffusion coeffs. and thermal diffusion factors meas. 7−84337
He-Ne 1500 nm stabilised transverse Zeeman laser, expt. for coherent communication 7−68612
He-Ne CW lasers, weak-gain at 0.633 μm, routes to chaos 7−110321
He-Ne discharge plasma oscill., optogalvanic spectrum characts. *(Chinese)* 7−129635
He-Ne double-wave laser interferometer for thin-film optical constants *(Chinese)* 7−115998
He-Ne gas laser, multipass mode, amplitude, phase and freq. calcs. 7−74914
He-Ne internal-mirror laser, stabilisation by total power method 7−136377
He-Ne laser, 1.523 μm, NH_3 stabilisation for IR fiber-optic appl. 7−68723
He-Ne laser, 3.39 and 7.69 μm wavelengths, intracavity light correlation 7−122918
He-Ne laser, 543 nm, two-mode stabilisation 7−136268
He-Ne laser, amplitude noise continuous meas. method *(Chinese)* 7−130054
He-Ne laser, Faraday effect current meas. 7−128594
He-Ne laser, I_2 stabilised, international intercomparison involving ten laboratories 7−110429
He-Ne laser, I_2 stabilised, digital device for temp. meas. and control 7−123007
He-Ne laser, interference nanometer for pressure to 120 kPa 7−110433
He-Ne laser, magneto-optical convertor appl. *(Czech)* 7−123005
He-Ne laser, measuring system for light-intensity distribution using time series average *(Japanese)* 7−136272
He-Ne laser, multiline, tunability *(German)* 7−74905
He-Ne laser, polarised wave beat freq., anisotropy effect 7−122917
He-Ne laser, pulse generation with an acousto-optic freq. shifter in a passive cavity 7−110412
He-Ne laser, pulse generator, mode-locking operation 7−136362
He-Ne laser, quasi-isotropic, 3.39 μm polarisation competition effects 7−122915
He-Ne laser, secondary length standard *(Romanian)* 7−95545
He-Ne laser, transportable optical frequency standard and results of its metrological tests 7−141840
He-Ne laser, wavelength determ. using Fourier transform wavemeter 7−123050
He-Ne laser beam, mode estimation using least squares approximations *(Japanese)* 7−136271
He-Ne laser beam, spot size meas. using boundary-diffraction wave 7−136388
He-Ne laser beam mode estimation in least squares approx. 7−130226
He-Ne laser comparator, length unit realisation appl. 7−108513
He-Ne laser generation, single-mode, at 3.39 μm 7−103798
He-Ne laser intracavity photothermal beam deflection densitometer 7−102490
He-Ne laser tubes, precise beam alignment capacity *(Japanese)* 7−130170
He-Ne laser with annular output beam 7−130053
He-Ne lasers, coherence characts. 7−136274
He-Ne lasers, freq. stabilisation at 1.52 μm 7−68611
He-Ne lasers, phase-locking via fast control of discharge current 7−82653
He-Ne lasers for information handling 7−82673
He-Ne light beam transmittance through turbid medium, multiple scattering effects 7−136203
He-Ne magnetically modulated laser *(Chinese)* 7−130055
He-Ne ring laser, opposite beam reson. interactions 7−74992
He-Ne:I_2 laser, freq. reproducibility, ^{127}I absorpt. spectra 7−122916
He-Ne/$^{127}I_2$ laser, output characts. and resonance parameters 7−141838
He-Ne/$^{127}I_2$ laser, regulated power supply 7−110373
He-Ne/I_2 laser, metrological characts. 7−123054
He-Ne/methane laser, absolute freq. meas. 7−122929
He-Ne/methane laser, portable optical freq. standard meas. 7−123051
He-Ne/methane ring laser, competition between counterpropagating waves, axial mag. field effect *(Russian)* 7−82669
He-Ne-Kr laser, 200 μs pulse emission at 724.5 and 703.2 nm 7−130058
He^++Ne collisions, excited state studies *(Chinese)* 7−90355
N_2-Ne Lorentzian mixtures, mutual diffusion coeffs. temp. depend. meas. 7−83394
N_2-Ne(Ar), pot. energy surfaces, HF SCF calcs., dispersion coeffs. 7−96577
Ne I $2p^5nd$ configurations, Zeeman sublevels, mag. field intensities 7−96602
Ne I electroionization lasers based on electronic transitions 7−130056
Ne I excited by discharge with hard component, inversion and stimulated emission due to 585.3 nm transition 7−96978
Ne I Stark effect splittings, energy matrix, wave functions, group theory, radial and spin-orbit effects 7−135878
Ne II spectral lines in pinch discharge, Stark widths and shifts 7−75885
Ne II-VII, dielectronic recomb. coeffs. at low temps. 7−79818
Ne IX, emission line ratios, electron excitation rates and plasma characts., solar appl. 7−140012
Ne IX, X-ray laser, pumping efficiency by Z-pinch plasma 7−117751
Ne K, electron impact, inner-shell ionisation and excitation, post-collision interaction 7−122719
Ne plasma laser inversion production by Penning reaction 7−136269
Ne VII, laboratory plasma emissions compared with astrophysical obs. 7−115224

neon continued
- Ne^+ ion impact on LiF surface, recoiled particles, time of flight spectra 7−70956
- Ne^+ scattering from Cu(110), neutralisation effect 7−125881
- Ne^+ sputtering of chemisorbed O_2 on Ni(111) 7−144211
- Ne^{7+}, dielectronic recombination rates 7−78478
- Ne^{q+} (q=4 to 7), impact on W polycryst. surface, pot. emission yield meas. 7−92802
- Ne-D_2 capillary light sources, luminance, gas warm up influence 7−130284
- Ne-H liq. mixtures, dielec. consts. meas. *(Russian)* 7−77447
- Ne-He travelling-wave laser, transverse HF pumping, radiation amplitude fluctuations 7−130060
- Ne-NH_3 mixture, monomers and clusters, supersonic jets, Raman spectra 7−135946
- Ne-Na mixtures, radiation trapping, line broadening, fluoresc. obs. 7−82034
- Ne-Na_2, supernumerary rot. rainbows 7−90326
- Ne-tetrafluoromethane, diffusion coeffs. and thermal diffusion factors 7−91278
- $Ne+^{3,4}$ He, radiative electron capture X-ray fields, cross sections 7−110092
- $Ne+Ar^{q+}$, 2p-1s transitions in He-like and Li-like recoil ions, polarisation and press. depend. 7−74734
- $Ne+CO_2$, collinear energy transfer. resons. effect 7−117054
- $Ne+CO^+(CF^+)$, dissoc. and electron capture cross sections 7−74750
- $Ne+CO^{2+}$, electron capture cross section meas., energy gain spectrum 7−110074
- $Ne+Cl^{11+}(Br^{14+})$, recoil ion source, time-resolved VUV study 7−90333
- $Ne+F^+$, pot. energy curves calc. 7−103622
- $Ne+F^{8+}$, continuous energy electron emission, impact parameter depend. 7−90362
- $Ne+F^{8+}$ collisions, δ-electron production probability 7−117047
- Ne+H, electron loss and excitation collisions cross sections 7−103635
- $Ne+H_2^+$, excitation and dissoc., Lyman α radiation 7−74745
- $Ne+H_2(N_2)(O_2)(NO)(CO)(N_2O)(CO_2)$(methane) mol. ionisation cross section, vel. depend. 7−129853
- $Ne+H^-$, collisional form. and destruction, cross section meas. 7−117066
- $Ne+H^-(D^-)$, electron detachment, electron energy spectra 7−136049
- $Ne+H^+$, charge-exchange excitation cross section meas. 7−82348
- $Ne+H^+$, charge-transfer cross sections, distorted-wave formalism 7−82346
- $Ne+H^+$, differential cross section meas. 7−74735
- $Ne+H^+$, Lyman-α emission, absolute cross section meas. 7−103623
- $Ne+H^+$, multiple ionisation channels 7−74752
- Ne+He, nonadiabatic and radiative transitions, interatomic interactions 7−129857
- Ne+He+Li collisional excitation transfer, velocity depend. meas. 7−136037
- Ne+HgBr, V-T relax., fluoresc. obs. 7−103629
- Ne+inert gas depolarising collisions, $2p_4$ level broadening and radiative lifetime, Hanle signal obs. *(German)* 7−129660
- Ne+K, differential cross section, left/right asymmetry 7−141656
- $Ne+k^+$, aligned autoionising state, ejected electron spectra 7−74749
- $Ne+K^+$ collisions, ionisation, charge exchange, stripping 7−103640
- $Ne+Kr^{36+}$ high velocity charge transfer collisions, Kr^{35+} states alignment, CDW calcs. 7−122693
- Ne+methane, absolute integral cross section meas. 7−141657
- Ne+methane scatt., absolute integral cross sections meas. 7−90322
- $Ne+N^2$, recoil ion prod. investig. 7−90332
- $Ne+Na_2$, interaction pot. anisotropy, energy depend. 7−90325
- $Ne+Na^+$, two-electron excitation and autoionis., differential energy-loss meas. 7−129802
- $Ne+Ne^+(Ne^{2+})(O^+)$, K-shell vacancy creation by 2pσ-2pπ rot. coupling investig. 7−82322
- Ne+Sr, electronic energy transfer, state-specific orbital alignment effects 7−117058
- Ne+Tl, $8p^2P_{1/2,3/2}$-$7s^2S_{1/2}$, collisional broadening and shifts 7−129657
- Ne+vinyl chloride, energy transfer meas. in collisional deactivation 7−90338
- $Ne+Xe^{q+}$, electron capture, energy gain spectroscopy 7−117065
- $Ne+Xe^{q+}$ charge transfer, translational energy gain spectra anal. 7−90395
- $Ne^+ + (H_2O)_nH^+$, ion-induced desorption, mass distrib. meas. 7−76600
- $Ne^+ + H_2(D_2)$(HD), H atom transfer, isotope effects 7−106778
- Ne^++Ne, charge transfer, reaction cross sections meas. using triple-quadrupole tandem mass spectrometer 7−68452
- Ne^{5+}+He, radiative two-electron capture and excitation collisions 7−136054
- Ne^{8+}+He, charge exchange collision, X-UV spectra anal. 7−122429
- $Ne^{8+} + He(H_2)$, double electron capture, electron spectra 7−90406
- $Ne^{n+} + H(H_2)$, state-selective one-electron capture 7−141683
- Ne^q+Na, electron capture, core interactions effects, UV spectra anal. 7−90023
- Ne^{q+}+He, electron capture, ang. distrib. study 7−96864
- Ne^{q+}+Ne, charge transfer, coincidence TOFS anal. 7−90400
- Ne_2, interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
- Ne_n cluster (up to n=90), prod. and stability, electron impact ionis. mass spectra 7−110163
- ^ANe, A=20, 22, transition isotope shift, wavelength standards 7−96586
- ^{77}Ne, A=20, 22, proton electron capture total probability 7−90374
- Ne^*+H_2, thermal energy collisions, crossed beam investig. 7−129860
- $Ne^*+H_2(D_2)$, $H_3^+(D_3^+)$ form. by Penning ionis. *(French)* 7−82330
- OCS-Ne, supersonic mol. beam, Fourier transform microwave spectra 7−129699
- Si:Ne, implanted, photoluminesc. defects, uniaxial stress study 7−99932
- TlCl-Ne lasers, helical hollow cathode, high-current regime 7−74906
- VSi_2, Ne sputtered, sputter rates *(German)* 7−144223

neon compounds
- $NeBr_2$, ground electronic state, vibr. predissoc. lifetime meas. 7−110035
- $NeCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
- $NeCl_2$, van der Waals mol., laser-induced fluoresc. excitation spectra 7−96776
- NeH excimers, binding energies, bound-free UV fluoresc. spectra anal. 7−96723
- NeH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937

nephelometry *see turbidimetry*

Neptune
- 8-14 and 17-23 μm spectral features 7−120312
- arc system, confinement by satellites Lindblad resonances 7−107699
- Bordeaux Observatory meridian obs., comparison with ephemerides 7−115293
- ionospheres of outer planets, review 7−88172
- IR radiometry using NASA IRTF 7−115296
- occultation of star on 22 June 1987, stellar diameter and secondary minima 7−120310
- ring system possibility from re-analysis of MKE 31 occultation 7−72356
- rings, occultations of stars, diffr. effects 7−127686
- rotation and mass characts. rel. to satellite mass and revolution characts. *(French)* 7−134177
- Triton, chemical processes in atmosphere and surface 7−145872

neptunium
- *see also nuclei with .....*
- α-phase, twinning study using TEM and X-ray diffr. 7−76139
- bulk modulus and P-V relationship up to 52 GPa 7−76264
- English Channel, ^{237}Np meas. on French coast, analysis techniques 7−139149
- environmental distrib. determ. by thermal ionization mass spectrometry 7−103297
- extraction from HLW using di-isodecyl phosphoric acid 7−89731
- migration in peat, sorption coeff. determ. 7−100763
- thermal expansion 7−143056
- Np-H, P-C-T studies, 0.0005 to 70 bar 7−105042
- ^{237}Np, anal. using surface ionisation-diffusion type ionisation source 7−71553
- ^{237}Np, muonic, X-ray spectrum meas. 7−110144
- ^{237}Np, muonic atom, 3d level nonradiative decay 7−117095
- ^{237}Np, permeability in HTR fuel element graphite, spent fuel repository implications 7−135422
- ^{237}Np, pionic, X-ray spectrum meas. 7−110144

neptunium alloys
- $NpAl_2$ ferromagnetic intermetallic, sp. ht. meas. 7−69924
- $NpAl_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899
- $NpAl_2$, press. -depend. hyperfine interactions, Mossbauer studies 7−77443
- NpAs, high pressure Mossbauer studies of magnetic actinide systems 7−118899
- $NpCo_2Si_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899
- $NpOs_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899

neptunium compounds
- hybridising systems, anisotropic mag. behaviour 7−77242
- monochalcogenide pseudobinary single crystals, magnetism 7−105894
- monopnictide pseudobinary single crystals, magnetism 7−105894
- Np-O system, phase relationships 7−86140
- NpAs high press. mag. props., Mossbauer studies 7−77262
- NpAs, high press. phase transformations, X-ray diffr. studies 7−76397
- NpAs, hyperfine interactions, Mossbauer spectra, high press. study 7−77437
- NpAs, mag. phase diagram, neutron scatt. study 7−77283
- Np_3As_4 magnetic behaviour, Mossbauer spectrum interpretation with cryst. field model 7−70679
- $NpMF_6.3H_2O$ (M=Mn,Fe,Co,Ni,Zn), Sternheimer quadrupole antishielding factor eval. from structural data 7−84790

Nernst effect *see thermomagnetic effects*

Nernst-Ettingshausen effect *see thermomagnetic effects*

nerve conduction *see neurophysiology*

nervous system *see brain; neurophysiology*

network analysers
- electrochemical analysis appl. 7−114033
- mm-wave network analyser-based scatterometer for remote sensing 7−107573
- open-ended coaxial-line probe, appl. in dielectric meas. 7−121145
- RF dielectric meas. of biological substances 7−87392
- scalar, permittivity meas. of microwave frequencies 7−121157

network analysis
- *see also circuit analysis computing; nonlinear network analysis*
- random resistor network at percolation threshold, infinite set of exponents, renormalization group anal. 7−80659
- series transformer-coupled network for VLF/MF band loop antenna system, design and anal. 7−134033

network synthesis
- *see also linear network synthesis*
- multicascaded simple-mode fibre optic transversal filters 7−90829

network theory *see circuit theory*

networks *see networks (circuits)*

networks (circuits)
- *see also specific network and circuit headings e.g. communication networks, pulse circuits, oscillators*
- distributed inert electrode with complete RZW_2C_2 network, charging 7−110185
- IEICE National Convention, Keio, Japan (March 1987) 7−108028
- motor unit twitch force meas., circuit for improving the precision of the spike-triggered averaging technique 7−133525
- seismometer on seafloor, signal processing channel with logarithmic conversion 7−145708

Neumann algebra *see algebra*

neural nets
- *see also brain models*
- 3D morphological and elec. parameters reconstruct. from 2D sections of neurones 7−114592
- artificial neural nets, computing 7−114225
- associative memory, retrieval of superimposed connection patterns, neural network 7−100840
- auditory neural networks, influence of temporal context on random field response 7−114293
- bilinear neuron model, dynamical props. of synaptic membrane *(Japanese)* 7−107023
- Boltzmann machines, optical implementations 7−74860
- computational model for neural feature extraction, HUDL language 7−145007
- Hopfield model, extension for biased pattern storage and retrieval 7−71722

neural nets continued
information capacity of outer-product neural networks 7—145006
layered neural network, stochastic dynamics, exact soln. 7—134651
layered neural network model, exact solution 7—119756
mathematical model 7—77306
memory models, Hopfield retrieval algorithm convergence 7—126791
model with speech signal feature extraction, digital simulation *(Japanese)* 7—93782
multiconnected neural network models, Hopfield model generalisation, model thermodynamics 7—134690
nearest-neighbor non-iterative error correcting optical associative memory processor 7—74875
neural membrane pot. of giant squid axon, optical method for anal. *(Japanese)* 7—78834
neural network model for the discrimination of spatio-temporal patterns 7—78816
optical associative memory model based on neural networks having variable interconnection weights 7—82470
optical implementation, neural model anal. as associative memories Hopfield algorithm generalisation 7—136226
optical neural computers 7—110280
pattern information processing mechanism *(Japanese)* 7—93696
simulation model of total elec. activity, point approx. substantiation 7—126783
spin-glass networks, learning of correlated patterns by local learning rules 7—78820
stable points for spin-glasses and neural networks of higher orders 7—77305
two-layered random nerve net, threshold elements, uniform separation *(Japanese)* 7—107024
two-layered random nerve with input pattern separation fn. *(Japanese)* 7—93697
visual system, mammalian self-organising neural network model 7—126815
zero temperature parallel dynamics for infinite range spin glasses and neural networks 7—105924
PLZT-Si spatial light modulators, 1D, performance design and appls. 7—110554

neuristor networks *see neural nets*

neuron models *see neural nets*

neurophysiology
see also brain; neural nets
abdominal expiratory muscle, length-tension relationship, effect of emphysema 7—107021
acetylcholine receptors desensitisation, patch clamp studies 7—100850
acoustic perception, neurophysiological development *(German)* 7—78890
action potential detection, digital real-time system 7—87412
γ-aminobutyric acid release by synaptosomes isolated from cerebral cortex 7—100844
amphibian auditory nerve fibres, coding of signals to noise 7—71759
amyotrophic lateral sclerosis, somatosensory evoked pot. 7—145098
anaesthesia, use of neurophysiologic monitoring 7—126805
anaesthetics halothane and N_2O, sensitivity of an influence on flies and locusts *(German)* 7—126785
auditory, neural tuning in the granite spiny lizard 7—87000
auditory nerve, acoustic signals coding 7—107072
auditory nerve, dynamic effects in input/output relationship 7—119776
auditory nerve, elec. stimulated, single fibre mapping of spatial excitation patterns, cat obs. 7—139288
auditory nerve, elec. stimuli encoding, cochlear prostheses appl. 7—107074
auditory nerve fibre response patterns to tones 7—78876
auditory nerve fibres, effects of excitatory and non-excitatory suppressor tones on 2-tone rate suppression 7—71760
auditory nerve fibres, single, temporal response patterns elicited by periodic elec. stimuli 7—139289
auditory nerve representation as a front-end for speech recognition in a noisy environment 7—114269
auditory nerve representation criteria for speech analysis synthesis 7—114274
auditory physiology, past and present *(Japanese)* 7—71762
auditory serve and cochlear nucleus neuronal responses in kittens, postnatal development 7—114272
auditory-nerve spike-discharge parameter estimation, computer technique 7—87026
axon, squid, SITS as a membrane K^+ channel opener 7—100883
axonal conduction vel. in single mammalian motor axons, cat obs. rel. to method 7—119755
binocular stereo vision system using eye and neuron model 7—86961
bioactiometry in man, conservative IR laser therapy action on neuromuscular system *(German)* 7—114439
body movements, iso-energetic control 7—126858
brainstem auditory evoked response, broadband noise effects: anatomic locus 7—87007
brainstem auditory evoked response, broadband noise effects: latency shifts 7—87008
central nervous system, non-invasive stimulation using US irradiation 7—100978
central nervous system, unconnected vertebrate neurons, in 3-D extracellular matrix, electr. recording feasibility 7—145298
central nervous system cells and tissues, DC and PEMF-induced regeneration 7—107035
central nervous system tumours, PMR relax. times T1 and T2 and histopathologic correlates 7—93851
cerebral cortical neurons of hibernators and nonhibernators, comparison of cold tolerance 7—126729
cerebral dynamics and knowledge representation in brain, fuzzy neurophysiological paradigm 7—139241
cerebral magnetic responses to stimulation of ulnar and median nerves 7—100935
cochlear mechanics, effect of efferent neural activity 7—78896
coherence patterns of the infant sleep EEG in absence of the corpus callosum 7—114232
colour discrimination in honeybees, model of photoreceptor physiology 7—126822
computational model for neural feature extraction, HUDL language 7—145007
conduction velocity distributions of normal and pathological fibres in the same nerve 7—100846
conservation of adapting components in auditory-nerve responses 7—78877

neurophysiology continued
contractile response in resistance airways, effect of resting smooth muscle length 7—107020
cortex transform: rapid computation of simulated neural images 7—139250
cortical language neurodynamics, simplicial differential geometric theory 7—139240
cortical neurons extracellular recording using semicond. microprobes, recording/biocompatibility props. 7—114598
corticofugal pathway from striate cortex to lateral geniculate complex of the cat, duplex character 7—86968
coupled nerve fibres, appl. of comparison principles of reaction-diffusion equations 7—133183
coxa-trochanter joint in stick insect Carausius morosus, feedback control system properties 7—93700
coxo-trochanteral feedback loop in stick insect Carausius moroses, role of depressor trochanteral motoneurones 7—93699
crayfish stretch receptor organs, action potential discharges, excitatory interaction model testing 7—133329
CT graphical error evaluation 7—114541
cuff electrode nerve stimulation, 2-part model 7—101131
data processing for graphic display 7—114542
digital stereotactic meas. system for cerebral metabolism evaluation using autoradiography 7—86940
dopamine receptor density, human caudate D2, quantification by PET, model review 7—145005
dorsal cochlear nucleus, rat, in sliced brainstem, intracellular recordings from neurons 7—78822
dorsal medullary nucleus of grassfrog, sensitivity of neurons to spectral and temporal characts. of sound 7—139290
electric stimulator, microprocessor-controlled, for generating voltage clamp command sequences 7—79167
electrode structure optimisation for chronic transduction of elec. neural signals 7—114599
electroneurophysiologic monitoring, intraoperative 7—78836
electrophysiological signal recording from single fish in group, electrode fixation and low torque swivel 7—87402
electrosurgical current, tissue stimulation cause 7—93847
electrotonus in multicompartment neuron models, numerical anal. by LADDER computer program 7—86951
EMG analysis, quantitative, normal subjects at different ages 7—145009
EMG and related clinical neurophysiology, conf., Sorrento, Italy (May 1987) 7—134340
endplate current kinetics anal., use of driving function 7—78830
epidural spinal cord evaluation system based on evoked pots. recording 7—107277
eye and head movement meas. of small animals using mag. field search coil system 7—87403
foetal ECG enhancement from maternal abdominal lead through digital filtering and averaging 7—107293
foetal primary afferents, spontaneous and evoked activity in vivo, rats obs. 7—87033
functional neuromuscular stimulation, portable system for paralysed upper extremities 7—101127
functional neuromuscular stimulation hand grasp, open and closed-loop control using neuroprostheses 7—101149
ganglion cell layers of hamster retina, displaced amacrine cells 7—100897
ganglion X- and Y-cells, visual latency: comparison with geniculate X- and Y-cells in cats 7—145033
geniculate X-cells, distortion prods.: physiological basis for masking by spatially modulated gratings 7—139254
H-reflex excitability during locomotion, method for testing 7—100845
heart rate control rel. to respiratory sinus arrhythmia, math. modelling and computer simulation 7—100848
high pressure and inert gas narcosis prolonged simultaneous exposure of mice 7—100943
high pressure exposure of mice to He-O_2, effects on seizure and anesthesia liability 7—100843
hippocampal formation, unit activity classification 7—93715
hippocampal slice preparation, hamster, thermal dependence of neural activity 7—126733
Hodgkin-Huxley model, possible regime of packet activity 7—126784
human brain, vector model of interconnected neurons 7—78821
hyoid muscles, mechanical function during spontaneous breathing in cats 7—107019
implant for applying a DC elec. field to peripheral nerve 7—114581
inferior, colliculus, cat, differential neural projections responsive to HF sounds 7—71761
inferior colliculus neurons, stimulus props. influencing responses to AM sounds 7—100922
input action optimisation of neurophysiological system under controllable experimental conditions 7—100838
inset motion, on-line analysis with microcomputer 7—87401
inspiratory neuron activity in the ventrolateral medulla of the dog 7—114242
intraneuronal information processing, electromech. and reaction diffusion system, Ca influx 7—107016
intraneuronal information processing system, electromechanical and reaction-diffusion analogue 7—126782
ion transport through nerves and tissues, review 7—114230
ionic channels and nervous transmission, membrane potential generation *(Japanese)* 7—71721
ionic wave propagation in animal tissues, holographic theory 7—78819
lateral geniculate nucleus neurons, spectrally-opponent, responses to chromatic and achromatic light stimuli 7—107048
lateral line receptors in antarctic fish, sensory tuning to movements of planktonic prey 7—126852
list-mode neural data acquisition 7—87414
locomotor coordination in rock lobster, statistical anal. of walking parameters 7—107105
macular degeneration, senile, and neovascular membrane, laser photocoagulation treatment *(Italian)* 7—145169
mammalian cells, dividing and nondividing, saturation of a DNA repair process after irrad. 7—78811
medial olivocochlear neurons, effects of elec. stimulation on ipsilateral and contralateral cochlear responses 7—139287
median nerve somatosensory evoked pot. latencies, rel. to age and growth parameters in young children 7—133330
microwave hyperthermia, alterations in α-adrenergic and muscarinic cholinergic receptor binding in rat brain 7—78975
middle pharyngeal constrictor in rabbits, expiratory activity 7—145010

neurophysiology continued
mollusc neurones, Ca current, microwave radiation effect 7−126797
motion detection in fruitflies, electrophysiological basis and effect of picrotoxinin 7−126814
motor nerve cond. vel. distribs. in man: results of a computer-based collision technique 7−100839
motor nerve refractory period distrib. meas. in man: double collision technique 7−101102
motor neuronal network simulation 7−114224
motor performance quantification equipment, microprocessor-controlled 7−107289
motor units activity, motor control basis 7−145002
multi-electrode intrafascicular and extraneural stimulation 7−100876
multimicroelectrode for neural impulse meas., fabricated by Si dry etching 7−114569
multineuron-activity signal analysis with diskless microcomputer complexes 7−133515
multiple unit anal., microcomputer-based system 7−87413
myelinated nerve axon modelling, diff. eqn. existence of global solns. 7−114163
myelinated nerve fibre, extracellular pot. field from resting pot., calc. 7−145011
nerve action, electromech. theory of permeability, Ising model of protein sites 7−86949
nerve cylinder excitation and inhibition interaction 7−107017
nerve fibres, information transmission, thermodynamical stability 7−100841
nerve membranes, forced oscillations *(Japanese)* 7−87068
neural biotelemetry implant for powered prostheses 7−114560
neural membrane pot. of giant squid axon, optical method for anal. *(Japanese)* 7−78834
neuro-transmitters of the efferent cochlear system 7−78895
neuroblasts, genetically differing thermosensitivity, heart shock protein expression *(Russian)* 7−144978
neuromagnetic imaging, noninvasive modality for functional brain imaging, reconstruction results 7−145166
neuromotor control model incorporating the stretch reflex 7−100847
neuromuscular anatomy and abnormalities, function oriented identification 7−107025
neuromuscular function monitoring in postoperative period 7−126806
neuromuscular system, multivariable mechs. 7−100957
neuromuscular system modelling using non-invasive experimental methods 7−114227
neuronal activity extraction from noise, signal processing technique 7−87319
neuronal function rel. to multiple Ca^{2+} channels, review 7−126790
neurons and myotubes, Drosophila, obs. revealing 2 distinct A-type K^+ channels 7−119754
neuropathology, computer-aided morphometric data collection, mapping and anal;. 7−139335
neurophysiological signal data acquisition system based on Commodore 64 computer 7−79166
neutral spike train sampling device with built-in memory 7−87320
nonprimary motor cortex, neurons rel. to bilateral hand movement 7−107022
nonstationary point process analysis by time-dependent correlation and recurrence time functions 7−93612
ocular fundus, contour photography, automated image processing algorithm eval. 7−114448
operating room neurophysiological data acquisition and evoked pots. monitoring 7−107302
optical microscope sections, thick, device for computer quantification of depth meas. 7−145299
organisms, spontaneous polarisation and pyroelec. behavior 7−114237
pacemaker and nonpacemaker cells, response patterns, math. model 7−100877
passive dendritic tree transient potential response determ., continuous cable method 7−107018
patch-clamp single-channel current, computer method for acquisition and anal. 7−127057
pattern generator with coupled nonlinear oscillators, modelling, gait generation appl. 7−86937
perception, flip-flops between states with strange attractors, statistical properties 7−133179
perioral neuromuscular system, functional identification, signal flow diagram 7−78908
peripheral nerve and muscle, long-term recordings from normal and dystrophic mice, method 7−87400
phrenic motor axons in rat, firing props. and hypercapnic responses 7−100842
planar pattern recognition by invariant features and human visual system 7−93764
postsynaptic potentials in motoneurons caused by spinal cord stimulation in humans 7−100859
primary afferent neurons, peripheral modulation of mechano-sensitivity 7−87035
propagation of the nerve impulse, partial differential eqn. 7−93695
pulse transmission in nerve fibre, third-order eqn., group anal. 7−78815
real-time covariance computer for cell assemblies based on neuronal principles 7−79168
retina of marine teleost Callionymus lyra L., displaced small amacrine cells 7−145035
retinae, isolated and horizontal cells of cyprinid fish, K^+ activities 7−86967
retinal ganglion cells, carp, variation in light responses, independence of response amplitude 7−71739
retinal ganglion cells, cat, spatial mismatch of rod and cone mediated inputs 7−139262
retinal ganglion cells, displaced, in the wallaby Setonix brachyurus 7−139251
retinal ganglion cells, frog, surround control of centre adaptation in receptive fields 7−139257
retinal ganglion-cell density and receptive-field size as determinants of photopic flicker sensitivity across the human visual field 7−145029
retinal glial cells, axolotl, electrogenic glutamate uptake as major current carrier in membrane 7−107045
rod and cone pathways in cat retina, interactions between, obs. using red and green lights 7−100898
rod output synapse signal clipping 7−126816
saccular fibres, goldfish tone burst response dynamics 7−87090
Smart Trigger for real-time spike classification of nerve and muscle signals 7−87415
somatosensory central conduction time, infancy to childhood 7−145100
somatosensory cortex, electrophysiological evidence for serial processing, monkey obs. 7−133335
somatosensory evoked potentials in alcoholics and patients occupationally exposed to solvents and lead 7−145099
spike separation in multiunit recordings, intelligent software 7−119917
spinal cord, guinea pig, intracellular recording of identified dorsal spinocerebellar tract neurones, prep. technique 7−114243
spinal cord injured veterans, near surface blood flow rel. to altered sensations 7−87038
spinal cord injury, pulsed subcutaneous elec. stimulation treatment 7−94011
spiral ganglion, cat, frequency map 7−87005
spontaneous discharge patterns for single rat mesencephalic reticular neurons, statistical anal. 7−126801
spontaneous synaptic pot. or current releases, freq. estimation 7−100885
squid axons, normal, chaos, phase locking 7−133262
stepper motor-driven microelectrode positioner, neuroscience appl. 7−114582
striate neurons, responses to moving light and dark bars, changes with eccentricity 7−145030
subcortical and cortical responses following infraorbital nerve stimulation in man 7−100858
supraoptic neurosecretory cells, suppression by local cooling in vivo and in vitro, rat obs. 7−126735
sympathetic postganglionic nerve terminals, nerve action pot. rel. to transmitter release 7−86938
synapses for motion interpretation 7−107046
synaptic activities, intracellularly recorded, cross-correl. anal.: evaluation of method through computer simulation 7−78818
synaptic pot., optical recording using intracellular potentiometric dyes 7−93694
synaptosome membranes, elec. characts. 7−107027
tail sensory neurons, Aplysia, long-term sensitisation rel. to withdrawal reflex 7−114299
temporal cortex cells of conscious sheep, preferential response to sight of faces 7−133282
text understanding, fuzzy logic description 7−139242
texture discrimination at different eccentricities 7−145064
tongue, electrophysiological assessment and hypoglossal nerve conduction 7−145001
transcranial activation of motor pathways in man 7−107026
transmission model, hyperbolic system 7−126788
transmitter release modulation by hyperpolarising pulses, rel. to Ca^{2+} hypothesis 7−126787
travelling wave solutions near isolated double-pulse solitary waves of nerve axon equations 7−115805
twitch tension method to assess motor nerve function in rat 7−119914
ulnar nerve stimulation, transient and continuous responses of neuromag. fields 7−133260
VIIIth nerve cap, math. anal. with linearly-fitted expt. unit response 7−139282
vision, neural computation of inner geometric pattern relations 7−114252
visual cognitive functions model and inversion of sensory processing by feedback pathways 7−145031
visual neurons, receptive fields, computer-assisted mappings 7−101150
visual system, mammalian self-organising neural network model 7−126815
Ag-AgCl electrode rel. to offset voltage and current generation, neurophysiology appl. 7−114583
K^+ channel gating in squid neurons, requirement for external Ca^{2+} 7−119762
Na^+ channels, Ca^{2+} block sites, rat brain obs. 7−100880
Na^+ conductance change in nerve, phys. mechanism: electron transfer model 7−78817
Na^+ current in frog node of Ranvier and neuroblastoma X glioma hybrid, props. 7−100879

neutral currents
$\bar{\nu}_e e(\nu_e e)$ elastic scattering, cross section, contrib. of interference of neutral and charged currents 7−121491
E_6 signatures in atomic physics 7−95804
electroweak interaction process, charged and neutral currents, review 7−89400
experimental tests of neutral current interactions 7−95818
Fritzsch mass matrix phenomenology 7−128794
lepton in magnetic field, Z^0 contributions, Weinberg model calcs. 7−135129
mesonic rare decays in N=1 supergravity 7−80577
philosophical perspective of neutral weak current experiments 7−134426
see-saw mechanism for quark and lepton masses, $SU(2)\times SU(2)\times U(1)$ electroweak model 7−135002
standard model, weak neutral currents and intermediate boson mass 7−140866
strangeness-changing neutral currents, gluino induced effects 7−95890
$SU(2)_L\times U(1)\times U(1)$ electroweak model, Higg's mechanisms, nonstandard neutral currents, neutral massive gauge bosons 7−128811
$SU(2)_T\times SU(2)_I\times U(1)_Y$ extended gauge model, neutral current study 7−67539
$SU(2)\times U(1)$ model, strong corrections to flavour changing neutral current vertex 7−81201
SUSY left-right gauge model, Higgs boson struct., neutral current anal. 7−128820
technicolour theories, flavour changing neutral currents 7−121427
$B\rightarrow l^+l^-X$, flavour changing neutral current decay, branching fraction 7−102732
e^+e^- interactions, strong and electroweak props. of quarks 7−135012
$ep\rightarrow X$, cross-sections, effects of extra Z^0 from E_6 GUT 7−102759
$\nu e(\bar{\nu}e)$ scattering, neutral current electroweak couplings including radiative corrections 7−128878
(γ,e^+e^-), coherent production in nuclear electroweak field, P violating asymmetry 7−102859
$SN\rightarrow SN^*$, cross sections for neutral and charged currents, quark model calcs. 7−140925

neutrino detection and measurement
cosmic neutrinos, feasibility of detectors based on coherent interaction with superconductors 7−145832

neutrino detection and measurement continued
crystal scattering, total cross-sections for neutrinos and antineutrinos 7−109647
efficiency improvement methods 7−73168
energetic neutrinos from a new type II supernovae 7−88488
heavy neutrino detection in electron capture processes 7−81340
heavy water Cherenkov detector, solar neutrino problem appl. 7−141400
radiation pressure of neutrinos in refracting media 7−89890
solar neutrino detection using superfluid He 7−115343
solar neutrino flux measurements, exptl. approaches 7−115348
solar neutrino problem, electron meas. in liquids 7−115188
solar neutrinos, detection via $^{81}Br(\nu,e^-)^{8}$ Kr reaction technique 7−94849
superconducting grain based radiation detector 7−129535
Underground Neutrino Observatories in Italy 7−74389
Si crystal acoustic detector for neutrino experiments and dark matter searches 7−129512

neutrino-electron interactions
see also neutrino-electron scattering
coherent interactions in superconductors, appl. to cosmic neutrinos detect. 7−145832
$\nu_\mu(\bar{\nu}_\mu)e$, accelerator lepton number conservation, Dirac neutrino one-loop correction 7−140862
$\nu_\mu e \rightarrow \mu^- \nu_e$, muon energy spectrum, one-loop electroweak corrections 7−89495

neutrino-electron scattering
see also neutrino-electron interactions
$\bar{\nu}_e e(\nu_e e)$ elastic scattering, cross section, contrib. of interference of neutral and charged currents 7−121491
elastic scattering, neutral current electroweak couplings including radiative corrections 7−128878
energy and ang. depend., appl. to solar neutrino problem 7−108909
Mikheyev-Smirnov-Wolfenstein effect in electron-neutrino scattering experiments 7−120228
stellar interiors, neutrino-electron scatt. rel. to trapped lepton fraction during core collapse 7−115366
Weinberg angle determ. by high energy scattering 7−102669

neutrino interactions
see also neutrino-electron interactions; neutrino-neutrino interactions; neutrino-nucleon interactions; neutrino scattering
neutron stars interiors, mean free paths of nondegenerate neutrinos 7−115493
solar neutrinos, use in super microscopes supernovae 7−128877
supernovae, effects of neutrino transport on Fe cores collapse 7−145938

neutrino-neutrino interactions
see also neutrino-neutrino scattering
non-weak interactions between neutrinos, renormalisable model, strong Yukawa interaction 7−128823
$\nu\bar{\nu} \rightarrow e^+e^-$ around collapsar, contrib. to X-ray or γ-ray burst 7−80000
$\nu\bar{\nu} \rightarrow e^+e^-$ in Type II supernovae, contrib. to stellar envelope ejection 7−101826

neutrino-neutrino scattering
see also neutrino-neutrino interactions
cross section and sneutrino coupling const. limits from SN 1987A in LMC 7−120481

neutrino-nucleon interactions
see also neutrino-nucleon scattering
parton model sum rules, two-loop QCD corrections, coeff. fns. of asymptotic operator expansions 7−67591
$\nu(\bar{\nu})$N, 100, 160 and 200 GeV, total charged current cross sections, energy dependence 7−135096
$\nu(\bar{\nu})$N charged current interactions in Ne, spin alignment of ρ^0 produced 7−81168
$\nu\mu N \rightarrow \mu^- DX$, reaction rate calcs., $\nu_\mu N \rightarrow \mu^- e^+ X$ study 7−140926
$\nu N \rightarrow \mu\mu X$, dimuon prod., nucleon strange quark content 7−73640
$\nu N \rightarrow \mu\pi N'$, pion ang. distribs., interference of resonances 7−102730
$\nu_\mu N \rightarrow (\mu^-\pi^+)X$, $\mu\pi$ resonance 7−108908
$\nu_\mu N \rightarrow \mu^- e^+ X$, μe event exptl. study 7−140926
$\nu_\mu N \rightarrow \mu^- eX$, 7 GeV, $\mu^- e^-$/charged current interactions ratio, $\mu^- e^-/\mu^- e^+$ ratio meas. 7−95888
$\nu_\mu n \rightarrow \mu^- p$, weak nucleon axial vector form factor and second-class current 7−128879
$\nu_\tau N \rightarrow \tau X$, BEBC beam dump expt., kinematic method, charged currents 7−135095
νp, deep inelastic process, structure fns., twist-four corrections, Bjorken and Gross-Llewellyn Smith sum rules in QCD 7−67614
$\nu p \rightarrow \mu^- p\pi^+$, angular distribution in neutrino-induced single pion production processes 7−102752
$\bar{\nu}p \rightarrow \mu^+ p\pi^-$, angular distribution in neutrino-induced single pion production processes 7−102752
$\bar{\nu}_\mu p \rightarrow \mu p^+ n$, weak nucleon axial vector form factor and second-class current 7−128879

neutrino-nucleon scattering
see also neutrino-nucleon interactions
neutron stars interiors, scatt. rate and mean free paths of nondegenerate neutrinos 7−115493
Weinberg angle determ. by high energy scattering 7−102669
SN→SN*, cross sections for neutral and charged currents, quark model calcs. 7−140925

neutrino-nucleus reactions
for inelastic neutrino-nucleus scattering, see "neutrino-nucleus scattering"
see also neutrino-nucleon interactions
$^{20}Ne(\bar{\nu}_\mu, \mu^+\rho^-)$, cross section meas., CVC hypothesis, vector meson dominance comparisons 7−141043
$^4He(\bar{\nu},X)^2H$, deuterium yield in cosmological models with massive unstable leptons 7−128138

neutrino-nucleus scattering
see also neutrino-nucleon scattering
No entries

neutrino oscillations
see also neutrino interactions
adiabatic resonant oscillations in three generations, Mikheyev-Smirnov-Wolfenstein model 7−67546
detection possibilities with underground detector 7−73586
experimental tests of neutrino oscillations 7−95818
Landau-Zener probability, solar-neutrino oscillation 7−108829
LMC supernova burst, neutrino mass and mixing bounds 7−139912
Majorana mass term, Dirac neutrinos, selection rules, mass eigenstates 7−135010

neutrino oscillations continued
massive ν and ν oscillations, review 7−140869
matter enhanced solar neutrino oscillations, analytic treatments 7−81078
Mikheyev-Smirnov-Wolfenstein oscillation enhancement, possible soln. to solar P problem 7−121414
mixing angle, effect of density variations 7−140870
neutrino electrodynamics and possible consequences for solar neutrinos 7−102676
neutrino properties in field models 7−73564
nonadiabatic neutrino oscillations in matter 7−121402
oscillation parameter limits from Cl solar-neutrino expt. 7−94619
parametric amplification in materials 7−81088
particle physics advances, solar neutrino oscillations and superstrings 7−116102
quantum measurement theory anal. 7−89038
resonant neutrino oscillations, appl. to solar neutrino problem 7−102668
resonant oscillations of three ν generations 7−73579
solar ν, nonadiabatic resonant conversion in three generations 7−67545
solar ν problem, oscillations, masses and mixing angles, MSW soln. 7−102661
solar neutrino expt., low rates due to vacuum oscillations 7−95807
solar neutrino problem, possible resolutions, overview 7−94844
solar neutrino problem, role of neutrino oscills. 7−94847
solar neutrino problem, test involving neutrino oscills. in Earth 7−72232
standard model conf., Stanford, CA, USA, July 1986 7−102016
statistical mechanics of oscillating neutrinos 7−89412
stellar gravit. collapse, neutrino oscills. in variable density medium 7−72291
supergravity, spontaneous R parity violation, model for solar neutrino oscillations 7−134631
supernova 1987A in Large Megallanic Cloud, neutrino fluxes, temperatures and oscillations 7−107879
supernova neutrino flux, matter oscillation effects 7−140852
supernovae, Type II, neutrino signature, resonant neutrino oscillations 7−140136
three-neutrino oscillations and the solar-neutrino experiments 7−102656
three-neutrino oscillations in matter, anal. results in adiabatic approx. 7−81071
weak and EM interactions in nuclei 7−89399
world publication output, research fronts and cited papers 7−80275
$\nu_\mu \rightarrow \nu_e$, neutrino oscills. near muon threshold energy, detection from $\nu_e + C \rightarrow e^- + X$ 7−128810
$\nu_\mu \rightarrow \nu_e$ oscillations search, comparison of narrow-band and wide-band ν beams 7−128816

neutrino production
neutron stars, neutrino-driven winds from young hot objects 7−88493
$e^+e^- \rightarrow \gamma\nu\bar{\nu}$, bound on number of light ν 7−102729
$\pi^+ \rightarrow \nu e^+$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
$e^+e^- \rightarrow \nu\bar{\nu}\gamma$, neutrino counting for polarised and unpolarised e^-, kinematical configs. 7−89487

neutrino scattering
see also neutrino-electron scattering; neutrino interactions; neutrino-neutrino scattering; neutrino-nucleon scattering
anomalously scattering constraints from crystals, sum rule 7−98287
semileptonic neutrino scatt. experiment analysis, MS and on-shell renormalisation schemes 7−95889

neutrinos
see also cosmic ray neutrinos
17 KeV neutrino models, Goldstone bosons, 'triplet'-Majorons, familons, singlet Higgs fields 7−135009
β-transitions, $O^+ \rightarrow O^+$, electron-massive neutrino mixing parameter constraints 7−121725
conf., Kharkov, USSR, April 1986 7−120688
cosmological, dynamical scenario with unstable neutrinos 7−107989
cosmological dark matter, cosmological constraints on 'ino' particles composing galactic haloes 7−115577
cosmological quark-hadron transition, effects of neutrino flow dominance 7−101960
cosmology, superstring neutrino-dominated Universe model 7−107998
Dirac and majorana fermions, minimal rephrasing-invariant CP-violating parameters, massive majorana neutrinos 7−128814
Dirac neutrino mass calcs. 7−81085
Dirac neutrino masses, calculable in superstring inspired model 7−73581
Dirac neutrino masses, E_6 superstring models 7−135006
Dirac neutrino masses in superstring theories 7−73580
Dirac neutrinos, massive, EM structure 7−67535
E_6 superstring models, particle dichotomy and left-right decomposition, Dirac neutrino, W′ boson 7−128815
electric dipole moment, consequence of solar polarisation hypothesis 7−73652
electric dipole moment, generation using E_6 based mechanism, solar neutrino problem appl. 7−95907
electromagnetic properties in supersymmetric theories 7−95791
electron neutrino, evidence for finite rest mass from SN 1987A in LMC 7−101824
EM properties, solar flux semiannual variations 7−88365
families and primordial nucleosynthesis, N_ν bounds 7−107996
fourth-generation charged lepton, mass, bounds and associated neutrino 7−95803
Galaxy centre, dark matter density, isothermal and adiabatic models 7−107964
ghost neutrino field, Weyl-eqn., flat space-time integration, flux vector and Robinson eqn. 7−108323
GUTs, U(1) generation symmetry, quark, lepton and neutrino masses and mixings, mirror particles 7−140851
heavy neutrino decay, effects on D prod. in cosmological models 7−128138
heavy neutrino detection in electron capture processes 7−81340
heavy neutrino search in e^+e^- 29 GeV annihilation 7−89494
induced electric charge in dispersive medium 7−81190
lifetime limits, long baseline atmospheric neutrino expt. 7−94622
light neutrinos, limits on number in $\bar{p}p \rightarrow W, Z$, standard model comparisons 7−95947
LMC supernova burst, neutrino mass and mixing bounds 7−139912
magnetic moment, effect on solar flux time variations 7−79941
magnetic moment in $SU(2)_L \times U(1)_Y$, N=1 supergravity and $SU(2)_L \times SU(2)_R \times U(1)_{B-L}$ models 7−102744
Majorana ν mass limits from ^{76}Ge double β decay 7−116339
majorana tachyon neutrino, existence discussion 7−140868

neutrinos continued
many particle e^--ν system kinetics in the standard model 7−81086
mass, $E_6 \times SU(3)$ model with Kobayashi-Maskawa mixing 7−135005
mass, electroweak model with pseudo-scalar coupling 7−108824
mass, Majorons, electroweak $SU(2) \times U(1)$ gauge theory 7−135001
mass, SN 1987A gravitational wave/neutrino obs. limits 7−102288
mass, standard model anal. 7−102665
mass determ. from ^{103}Pd electron capture meas. anal. *(Russian)* 7−81346
mass determ. from SN 1987A in LMC 7−140125
mass from ^{3}H decay 7−89560
mass from β spectrum 7−141028
mass in SO(10) unified field theory 7−102652
mass limits, model-independent anal. of SN1987A data 7−107714
mass patterns and mixings, solar neutrino problem, fermion mass matrix 7−108823
mass upper bounds from τ decay and see-saw mechanism 7−89416
masses and e-μ-τ universality, $SU_L(2) \times U_e(1) \times U_\mu(1) \times U_\tau(1)$ standard model extension 7−89419
masses in superstring models with E_6 singlets 7−80559
massive, exclusion in supernovae 7−107715
minimal SU(5) GUT, Dirac neutrino generation 7−140867
neutrino billiards, T-breaking without magnetic fields, Dirac eqn. soln. 7−108801
neutrino electrodynamics and possible consequences for solar neutrinos 7−102676
nondegenerate neutrinos, mean free paths in neutron star matter 7−115493
nonradiatively decaying neutrinos, mass and lifetime, primordial nucleosynthesis with γ_τ 7−73575
PEP measurement of ν flavours 7−102648
properties, study using ^{169}Yb β-decay 7−121739
properties deducible from supernova neutrino emission observations, LMC supernova 7−80019
properties in field models 7−73564
radiatively decaying neutrinos, reexam. of evidence in electroweak models 7−81199
SO(10) models, light neutrino masses and mixing angles 7−89410
solar neutrino detection using superfluid He 7−115343
solar neutrinos, use in super microscopes supernovae 7−128877
spiral galaxies, neutrino halo collapse 7−72633
standard model extension to include invisible axions and majorons 7−121405
stellar interiors, neutrino diffusion rel. to trapped lepton fraction during core collapse 7−115366
supernova 1987A in Large Megallanic Cloud, neutrino fluxes, temperatures and oscillations 7−107879
supernova neutrino pulse bimodal struct. due to gravitational lensing 7−115483
superstrings, ultra-light neutrinos and R-parity 7−81147
unstable neutrino cosmologies, inhomogeneities evol. 7−88695
unstable neutrinos, cosmological scenario, dark matter distrib. scales 7−146118
$\bar{\nu}$ mass upper limit from ^{3}H β-decay 7−121740
$\bar{\nu}_e$, mass limit from ^{3}H beta decay 7−89561
ν_e mass, upper limit from SN 1987A obs. 7−88106
$\bar{\nu}_e$ mass determ. from ^{3}H β-spectrum 7−121737
$\bar{\nu}_e$ mass upper limit from INS expt. on ^{3}H β-decay 7−81343
$\bar{\nu}_e$ upper mass limit determ. from ^{3}H β-decay 7−96031
$\nu_H \rightarrow \nu_L + \gamma$, exotic fermions, right-handed currents in E_6 grand unified theories 7−128813
$\nu_H \rightarrow \nu\mu e$, heavy neutrino decay search, neutrino mass mixing elements 7−128809
$\nu_\mu \rightarrow \nu_e$, neutrino oscills. near muon threshold energy, detection from $\nu_e + C \rightarrow e^- + X$ 7−128810
$\nu_\mu(\bar{\nu}_\mu)e$, accelerator lepton number conservation, Dirac neutrino one-loop correction 7−140862
ν_τ, mass limit from $\tau \rightarrow 5\pi^\pm \nu_\tau(\pi^0 \nu_\tau)$ 7−81185
ν_τ, mass limit in $\tau \rightarrow X^- \nu_\tau$ total charge distrib. meas. 7−81184
ν_e, magnetic moment, restrictions, standard model extension anal. 7−121506
^{3}H, beta decay, neutrino mass effects, differential probabilities of allowed transitions 7−121720
ν_e mass refinement, ^{158}Tb→^{158}Gd K-capture study 7−121723
ν_e, ν_μ, ν_τ masses and decay rates, see-saw mechanism, cosmological bounds 7−140848
τ-neutrino, singlet majoron model 7−81072

neutron absorption
cylinder, neutron transport, use of stratified sampling, Monte Carlo appl. 7−102359
geological samples, thermal neutron cross section determ. 7−94446
JOYO LMFBR, neutron dose and spectra, measurements and evaluations 7−129305
multilevel cross sections, pole representation, practical appl. 7−129130
nuclear ship Mutsu, land-loaded core critical experiment, ex-core detector response anal. 7−129246
SHE-14 core in VHTR, coated particle fuel rod, Doppler effect meas., sample heating device 7−135454
^{197}Au(n, γ), cross sections, γ-spectra calcs. 7−129039
^{10}B content determ. in fuel element shipping casks, nondestructive test method 7−73874
^{56}Fe(n,γ), 1.15 keV, self-calibrated capture meas. using thick/thin samples 7−73768
Li_2O-CdO-SiO_2 system, glass-ceramic and glasses, elec. props., neutron absorpt. 7−143948
^{A}Pu(n, X), A=239, 240, 0.02-0.03 eV, total cross sections, transmission meas., Bayesian method, Doppler broadening 7−129040
^{239}Pu(n, f), transmission and fission-self indication for various materials, unresolved resonance region study 7−129129
^{240}Pu, 1.056 eV resonance parameters, transmission meas., Bayesian method, Doppler broadening 7−129040
^{181}Ta(n, γ), cross sections, γ-spectra calcs. 7−129039
^{A}U(n, f), A=235, 238, transmission and fission-self indication for various materials, unresolved resonance region study 7−129129
^{235}U(n, X), 0.02-0.03 eV, total cross sections, transmission meas., Bayesian method, Doppler broadening 7−129040
^{235}U(n,γ)^{236}U, mean-square charge radii meas. of compound-nucleus states, double-humped barrier model anal. 7−73703
^{236}U(n,γ), 0.96−3.3 MeV, cross section determ. 7−141044
Zr, Gd content determ. using activation anal. technique 7−144769

neutron activation analysis
see also radioactive chemical analysis
atmospheric aerosols, neutron activation anal. methods and Antarctic and Indian Ocean obs. *(Russian)* 7−114926
automated pneumatic transfer system for oxygen determinations by neutron activation analysis 7−93430
blood, animal, instrumental neutron activation anal. by short-term reactor irradiation 7−114584
blood, human, instrumental neutron activation anal. by short-term reactor irradiation 7−114584
ceramics, neutron activation anal. in X-ray region 7−114036
ceramics, trace element content determ. by neutron activation anal. *(Chinese)* 7−86725
coal, neutron capture prompt γ-ray anal. Monte Carlo model 7−78577
coal analysis with ^{252}Cf neutron capture γ-rays 7−78576
detector foils, resonance self-shielding corrections in fast neutron spectra, reactor flux appl. 7−73923
enstatite chondrites, CaS trace element chemistry rel. to origin 7−139988
environmental samples, multielemental anal. 7−93559
epicadmium neutron attenuation, varying Cd-thickness method 7−119602
fast activation analysis appl. at Birmingham 7−93428
fission reactor materials, U concentration meas., neutron activation anal. *(Japanese)* 7−73853
gamma-ray emission from materials pulsed with 14-MeV neutrons, TART code 7−109530
human tissue, P, N determination by 14 MeV neutron activation analysis 7−93427
ion etching concentration profiles meas. 7−139068
microinclusion analysis by neutron-activation autoradiography 7−106854
nuclear bulk solids analysers, continuous, for cement plant raw mix preparation systems 7−119612
nuclear safeguards, neutron activation delayed fission neutron counting 7−109435
obese patients, fasting, body composition meas. by in vivo neutron activation anal. and isotopic dilution 7−145193
planetary surfaces chem. mapping 7−101699
polyacetylene, WCl_6 doping, XPS and NAA studies 7−106379
precision estimation using statistical props. of nuclear source *(Romanian)* 7−144782
prompt γ-ray, solid angle effect on reproducibility of exptl. set-up 7−100642
Quebec, Canada, glacial till, trace elements, lognormal distrib., neutron activation anal. determ. 7−119982
rare earth metals, neutron activation anal. determ. in geological materials 7−100653
review of methods based on nuclei principles *(Italian)* 7−86688
rocks, neutron activation analysis *(Chinese)* 7−94504
soil sample, INAA, homogeneity test *(Chinese)* 7−114039
thermal neutron activation anal. 7−93449
trace element anal. in cancerous human breast tissue 7−87393
Ag, neutron activation analysis in biological samples and mineral ores 7−100656
Ag, neutron activation anal. in biological materials, accuracy study 7−101156
Au, epithermal neutron activation anal. *(Chinese)* 7−114038
B_4C components, rapid grading for ^{10}B enrichment 7−129186
$Bi_4Ge_3O_{12}$, trace element determ. by neutron activation anal. 7−119607
Ca, in vivo activation anal. in human forearm, preliminary phantom meas. 7−101057
Hg, in vivo measurement in kidney by neutron activation anal. by mobile reactor 7−78575
HgCdTe oxide films, composition determ. by NAA 7−93429
^{127,129}I, environmental samples, neutron activation anal., chem. and nucl. interferences 7−119869
$In_xGa_{1-x}As$, In content, photoluminescence and neutron activation anal. 7−106241
Mn, low level determ. in biological reference materials by neutron activation anal. 7−133528
N, in vivo measurement for small animals using nuclear techniques 7−107327
^{237}Np, English Channel, French coast, meas. and analysis techniques 7−139149
$Pb_xSn_{1-x}Te$, impurity detection, neutron activation anal., extraction chromotographic separation 7−100655
Si MBE layers, impurity and defect study 7−76812
^{235}U content in samples, γ-ray spectra meas. and Monte Carlo simulation *(German)* 7−103014
Zr, Gd content determ. using activation anal. technique 7−144769

neutron angular distribution
see also neutron spectra
Boltzmann equation, monodimensional stationary solns. for ang. space-energy neutron flux 7−73821
fission product/neutron correlation detection system, data acquisition, analysis 7−74388
^{134}Ba(^{24}Mg,nX), 180 MeV, neutron spectra, angular distrib. meas. 7−67882
^{252}Cf, spontaneous fission, neutron energy and angular distrib., low energy meas. 7−109248
^{252}Cf, spontaneous fission neutrons, energy/angular distrib. correlations 7−73806
^{2}H(γ,n), angular distribution meas. for E_γ=2.75 MeV 7−81367
^{3}H(d,n), ang. distrib. meas. at 1, 1.5 and 2 MeV 7−73776
^{6}Li(^{6}Li,n)^{11}C, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
^{142}Nd(^{16}O,nX), 207 MeV, neutron spectra, angular distrib. meas. 7−67882
^{108}Pd(^{50}Ti,nX), 216 MeV, neutron spectra, angular distrib. meas. 7−67882
^{126}Te(^{32}S,nX), 180 MeV, neutron spectra, angular distrib. meas. 7−67882
^{232}Th(n,n'), 185, 550, 200-2500 keV, rotational level excitation fns. and angular distrib. 7−116421
^{92}Zr(α,α'n), 109 MeV, n-α' coincidence meas., reaction mechanism study 7−129064

neutron beam effects *see neutron effects*

neutron detection and measurement
see also neutron spectrometers
30 MeV electron linac, pulsed neutron flux and dose equivalent rate *(Chinese)* 7−122220
actinide oxides, mathematical model of neutron yields 7−89881

neutron detection and measurement continued
BGO Compton, suppressed Ge detectors, neutron background meas. 7−135755
Bruce B Unit 6 reactor, flux distrib. meas. using transportable traveling flux detector 7−103062
bubble damage polymer detectors for personal neutron dosimetry 7−74216
bubble detector for dose meas. in critical assembly 7−89788
cellulose nitrate track etch detectors for neutron detect., comparative study of different (n,α) converter materials 7−81883
correlation counters, in-field calibration using calorimetric assay techniques 7−103341
cosmic ray neutron attenuation meas. for snow and soil moisture determ. 7−87740
coupled U cylinders, subcriticality meas. using ^{252}Cf driven neutron noise anal. 7−67911
CR39-BN detector for thermal neutron dosimetry 7−81737
CR-39 detector based personnel fast neutron dosimeter 7−116793
CR-39 plastic neutron dosimeter, operational trials 7−89789
damage track neutron dosemeter, contrib. of heavy recoils to response 7−145247
detector efficiency and flux, simultaneous meas. 7−96482
detector foils, resonance self-shielding corrections in fast neutron spectra, reactor flux appl. 7−73923
dosimeter based on electrochem. etched CR-39 nuclear track detectors 7−139368
dosimeter based on electrochem. etched CR-39 nuclear track detectors 7−139369
dosimetry with detectors of finite size, expts. and calcs. 7−127006
dosimetry with detectors of finite size, theory 7−127005
electrochemically etched damage trade detectors for personal neutron dosimetry 7−74216
epithermal and thermal neutron beamline monitor using ^{6}Li glass scintillator 7−135711
fast neutron detect. using thermoluminesc. phosphors with internal and/or external proton radiators 7−68032
fast neutron therapy field, spectral energy measurements 7−79088
fast neutron TL dosimetry by knock-on protons: energy deposition in thin dosemeter layers 7−87204
fast neutrons, response of several materials dosimeters 7−81743
FBR radiation leakage through long narrow annulus in control rod drive mech. *(Japanese)* 7−73947
fission product/neutron correlation detection system, data acquisition, analysis 7−74388
flat dose-equivalent dosemeter for fast neutrons using a CR-39 polymeric track detector with front radiators 7−87208
fluence rate using 3-detectors for PET agent yield prediction 7−81855
Frascati Tokamak plasma, 14 MeV neutron emission meas. by activation techniques 7−75858
Frascati Torus, time resolved neutron yield meas. 7−74071
gel walled high pressure ionisation chambers for high energy neutron dosimetry 7−109523
international fluence-rate intercomparison for 144 and 565 keV neutrons 7−109603
ionisation chambers, transient response to bias voltage perturbations, simulation 7−74377
JOYO LMFBR, neutron dose and spectra, measurements and evaluations 7−129305
liquid scintillation counter for fast neutron capture cross section meas. *(Chinese)* 7−81873
liquid scintillator neutron coincidence counter for Pu assay 7−103141
low level fast neutron dosimetry using CR-39 plastic sheets 7−89866
low-energy neutrons, dosimetry using low-press. proportional counters 7−127012
LR 115 track etch dosimeters, α-particle and neutron-induced proton detection 7−103337
microdosimetric radiation protection instruments, intercomparison, n and γ detection 7−68033
mixed n-γ fields, dosimetry in relation to individual monitoring *(Czech)* 7−96391
mixed-oxide fuel plants, role of neutron coincidence counting techniques in materials safeguards 7−116623
NE213 scintillation detector for in-assembly fast neutron spectrum meas. 7−96469
NE912 ^{6}Li glass spectrometer for low energy fission neutrons 7−81848
neutron detectors in WWER 440 core, malfunction detection technique *(Russian)* 7−81556
neutron flux monitoring using activation foil method, fission chamber method and ^{10}B technique 7−68162
nuclear ship Mutsu, land-loaded core critical experiment, ex-core detector response anal. 7−129246
operational personal neutron dosimeter based on electrochemical etching of CR-39 7−87207
optical imaging system, search for neutron charge 7−81819
personnel dosimetry and use of higher dose equivalents in CSSR *(German)* 7−81740
polarimeter consisting of cylindrical liquid and plastic scintillators 7−109676
polyethylene and CR-39 fast neutron dosimeter, dosimetric efficiency 7−103336
polyethylene and CR-39 fast neutron dosimeter, emitted proton flux characts. 7−103335
polymer foils, spark counting of particle tracks, neutron flux, spectrometry meas. 7−74335
prompt response self-powered neutron detectors, thermal and epithermal sensitivities 7−129533
pulse shape discrimination for neutron-γ detection 7−68151
PWR ex-core neutron noise analysis 7−67929
PWR spent fuel assemblies, ION-1 Fork meas. 7−116599
radiophotoluminescent glass, γ dosimetry appl. in mixed n-γ fields 7−87193
self-powered neutron detectors, prompt response, effective charge per neutron captured 7−129532
self-powered Rh neutron detector, depletion characts. 7−103340
spherical Pulse Ionisation Chambers for DD-fusion plasma neutron spectroscopy *(German)* 7−74381
stopping power ratios for protons and helium ions in water and tissue equivalent media 7−141333
streak camera, 14 MeV, with UO_2 photocathode, expt. characts. 7−96318
Superheated Drop Detector, appl. to neutron spectrometry and dosimetry 7−74362

neutron detection and measurement continued
TFTR, neutron spectral distrib. from internal 14 MeV source, Monte Carlo transport comparisons 7−74043
thermal and fast neutron dosimetry, techniques based on scintillator-filled etched-track counting 7−139370
thermal-neutron detector with six He counters 7−129526
time of flight high resolution meas. with CYRIC 7−109593
TLD-100 sensitivity, large enhancement in reactor core 7−122312
WWER-440 fuel assembly model, gamma and neutron meas. 7−116650
WWER-440 spent fuel, actinide isotope content and neutron emission, safeguards appl. 7−116596
WWER-440 spent fuel, nondestructive assay using gamma and neutron meas. 7−116597
WWER-440 spent fuel assemblies, quantitative evaluation of passive neutron assay 7−116598
B_4C filters for neutron spectra determ., appls. in graphite and water environments 7−135790
Gd-loaded large liquid scintillation counters for neutron multiplicity distribs. 7−81890
Ge poly- and monocrystals, neutron cross sections at various temps. 7−96466
^{3}He ionisation chamber, anal. of delayed neutron energy spectra 7−74372
HgI_2 detectors for thermal n studies 7−96474
LiF detectors, dose independent use in mixed neutron-γ radiation fields 7−81744
LiF(TLD-700) response to a mixed thermal neutron and γ field 7−139374
^{6}LiF:Eu crystals, photo-energy calibration in mixed radiation fields using ^{24}Na 7−132340
NaI detector, measurement of d+T neutron pulses 7−109623
Pu sample mass determ. by neutron coincidence counting *(French)* 7−103139
Pu source neutron multiplicity distrib. meas. by nondestructive assay, numerical procedures 7−103140
Rh self-powered neutron detectors for PWRs, improved dynamic compensation algorithm 7−67932
SiO_2-$Na_2O(Cs_2O)$ glass, struct. mol. dynamics simulation 7−104576
$^{235}U(n,f)$, fission cross section standards measurements, detectors 7−81465

neutron diffraction
see also neutron diffraction crystallography; neutron diffraction examination of materials
50 years of neutron diffraction, book 7−108065
dilute classical spin chains, thermodynamics, mag. field effects 7−143824
spectral shaping of neutron beams, spatial spin resonance, elimination of higher orders 7−83596
surface acoustic waves, diffraction of cold neutrons 7−112049

neutron diffraction crystallography
see also crystal atomic structure
50 years of neutron diffraction, book 7−108065
absorption cross section for H, wavelength depend. 7−83590
amorphous materials and liquids, isotopic substitution neutron diffr. data anal. 7−69550
amorphous materials and liquids, small angle neutron scatt., max. entropy anal. 7−69552
Bragg-Laue configuration, diffr. from nonabsorbing perfect crystal 7−83594
cold neutron scatt. at rough boundary between homogeneous media, surface roughness effects 7−83595
curved-crystal three-axis spectrometers, optics 7−83587
data analysis, conf., Chilton, England (March 1986) 7−66834
data approximation and surface fitting 7−69555
Debye-Scherrer diffraction pattern analysis method and application to SF_6 7−124043
deconvolution using maximum entropy techniques 7−69556
deep inelastic neutron scatt., struct. depend. of final state effects, quasi-classical theory 7−69543
disordered binary alloys, scatt. intensity distrib. 7−104484
disordered systems, neutron scatt. struct. factors, max. entropy approach 7−83593
double focusing neutron monochromator consisting of facets 7−83592
fractal systems, small angle neutron scatt. methods 7−69554
furnace for crystal growth by floating zone technique and neutron scatt. expts. 7−138646
heterogeneities in solid, very cold neutron scattering 7−83598
high resolution, conf., Daresbury England (March 1986) 7−108017
high resolution D2B powder diffractometer 7−111315
high resolution time-of-flight powder diffractometer at ISIS 7−111316
high-pressure cell 7−75945
inelastic neutron scatt., time-of-flight spectrometer with filter detector 7−69560
interferometer using 3 parallel crystal wafers 7−130984
liquid diffraction data, maximum entropy anal. 7−69551
metal-H systems, inelastic neutron scatt. meas., improved instrumentation 7−83591
neutron interferometry as a new tool in condensed matter research 7−75946
neutron optics, divergent beam dynamical diffr. and coherence props. calcs. 7−90492
nonlinear systems, neutron scattering studies 7−137163
one-dimensional periodic potential, neutron diffraction in ideal single crystals 7−137162
perfect crystal systems for advanced neutron interferometer and resonator devices 7−67457
powder diffraction, ATALANTA multicomponent pulsed diffr. anal. code 7−69547
powder diffraction data anal., Rietveld method 7−69545
powder diffraction for struct. determ. 7−111317
powder diffractometer, high resolution, with solid methane moderator 7−124042
powder studies, pattern decomposition and Rietveld methods 7−83882
quasi-elastic time-of-flight studies, data anal. 7−69558
single crystal time of flight neutron diffr., comparison with monochromatic techniques 7−83589
SIP program for count rate and resolution evaluation 7−69557
small angle neutron scatt., max. entropy method anal. 7−69553
small angle neutron scatt., three-isotopic-substitutions method 7−83588
time of flight diffr., data reduction from single cryst. area detectors 7−69548
time-of-flight neutron scatt., resolution effects 7−69549

neutron diffraction crystallography continued
time-of-flight powder diffr., IPNS Reitveld anal. software package 7−69546
time-of-flight small-angle neutron diffractometers, resolution calcs. 7−137160
triple-axis spectrometer data, scatt. function determ., computer routines 7−69559
triple-axis spectrometry, resolution fn. normalisation and secondary extinction 7−75948
uniaxial jump model with nonequivalent equilibrium positions 7−137274
vibrational analysis of molecular modes 7−69843
H in amorphous metals, quasielastic neutron scatt., small particle delocalisation in glassy matrix 7−137513

neutron diffraction examination of liquids
see also liquid structure
50 years of neutron diffraction, book 7−108065
aqueous ionic solutions, translational diffusive proton motion, quasi-elastic neutron scatt. 7−84339
cyclohexane, liq., neutron diffr. struct. obs. 7−137193
dodecylammonium trifluoroacetate, micellar soln., small angle neutron scatt. obs. 7−114004
hexaethyleneglycolmonohexadecylether micelles, shear flow, neutron scatt. study 7−126488
liquid crystals, stochastic molecular orientational fluctuations, incoherent cold neutron scatt. studies 7−91431
micelles, drag reducing, small angle neutron scatt. expts., conformation 7−69228
microemulsion bicontinuous struct., scatt. props. 7−114015
molecular liquids, structural parameters, maximum entropy estimation from neutron scatt. struct. factors 7−137161
1- and 2-naphthols, inelastic electron tunneling spectra 7−69570
nematic phase, comb-like macromolecules, conformation, small angle neutron scatt. data 7−142565
poly(ethylene oxide) semidilute solns., decoration with sodium dodecyl sulphate surfactant micelles, neutron scatt. study 7−83636
polybutadiene melts, crystallisation, size mismatch effects, small angle neutron scatt. 7−69611
polypropylene with ethylene-propylene copolymer blends, melt compatibility 7−75967
polystyrene, semidilute solns., coexistence curve 7−91766
sodium decyl sulphate/1-decanol/water, lamellar phase, structural fluctuations 7−142571
star polymers, collective relaxation, neutron spin-echo study 7−111343
Cu, liquid, resistivity, temp. depend. 7−143431
^{4}He, superfluid, neutron scattering at very large momentum transfer 7−84418
$K_x(KCl)_{1-x}$, struct., reference pot. examination by Percus-Yevick approx. 7−124074
Li-Ba liq. alloys, neutron diffr. study 7−137204
Li-Pb liquid alloys, atomic dynamics with attractive A-B interactions 7−83656
Na, liquid, velocity autocorrelation neutron scatt. study 7−104531
Na, single particle motion, slow neutron scatt. studies 7−84345
Te, supercooled liquid, local order and semiconductor-metal transition, neutron scatt. study 7−137182

neutron diffraction examination of materials
see also neutron diffraction crystallography; neutron diffraction examination of liquids
50 years of neutron diffraction, book 7−108065
actinide compounds, magnetic response functions, neutron inelastic scatt. 7−77240
actinide cpds., mag. props., neutron scatt. meas. 7−77244
actinide systems, magnetic structure, neutron diffr. meas. 7−138190
adsorbed molecules on graphite, struct. and dynamics 7−143233
alkylenediammonium manganese tetrachloride, rotational motions and phase transitions *(Japanese)* 7−131063
alloys, amorphous hydrogenated, atomic scale struct., pulsed neutron scatt. 7−142589
amorphous solid, structural parameters, maximum entropy estimation from neutron scatt. struct. factors 7−137161
amorphous solids, atomic short range order determ. methods, review 7−83704
antiferromagnetic chain, classical, 1D, soliton excitations in a mag. field with arbitrary direction 7−77319
benzene, rotational dynamics, interaction with zeolitic framework, quasielastic neutron scattering 7−142661
bisphenol A polycarbonate, intermolecular order, neutron scatt. 7−117838
α-brass, short range order, diffuse neutron scatt. studies 7−137320
t-butyl cyanide, disordered phase, cooperative dynamics 7−142940
CHAB, ferromag. chain system, linear and nonlinear excitations 7−125352
clathrate hydrates, struct. studies 7−117883
cubic lattice systems, 3D paracrystalline distortion factor calcs. for elastic scatt. 7−142679
dicychrohexyl 18-crown-6, coherent neutron scatt. following dynamic nuclear polarisation 7−118893
diffuse neutron scatt. by (1, −1, 1)-spectrometer method, obs. 7−83597
diffusion jump dynamic, NMR, PAC, Mossbauer and neutron scatt. study methods 7−99624
diglycidyl ether of bisphenol, phonon fracton density of states, cryst. and amorphous samples 7−76319
dipalmitoyl lecithin, model multilamellar struct., neutron diffr. 7−106989
diphenylpicrylhydrazyl radical, spin density, neutron diffr. 7−83939
disordered systems, high resolution neutron powder diffr. studies 7−111398
ethane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
ferroelectrics, doped, displacive, electric field depend. of neutron inelastic scatt. cross-section 7−70712
ferrofluid, water-based, fractionation 7−77376
fluorites, onset of fast ionic conduction 7−76489
gallosilicate zeolites, dehydrated, synthetic, time-of-flight neutron diffr. 7−69671
graphite intercalated with 2D K-NH_3 metal-ammonia solns., scatt. studies 7−142742
graphite intercalates, charge transfer effects, ab initio calcs. and neutron diffr. expt. 7−84731
graphite substrate, N monolayers adsorbed at low temp., orientational order 7−91987

neutron diffraction examination of materials continued
graphite-HNO_3, intercalation cpd., critical behaviour of diffusion constant for 2D melting 7−84367
graphite-K intercalation cpds., press. induced staging transitions and stage disorder 7−98435
Heisenberg paramagnets, neutron scatt. line profile, temp. depend. *(Russian)* 7−77202
ice, amorphous, neutron scatt. investig. 7−131107
ice, I_c phase, high resolution neutron powder diffraction study 7−117885
ice, Ih phase, Metropolis Monte Carlo X-ray and neutron diffr. 7−98078
ice, Ih phase, water mol. geometry and orientation, neutron diffr. obs. 7−98077
ice, nucleation in porous silica, neutron diffr. studies 7−131294
ice precipitates in glassy LiCl, ice I_c struct. and I_c-I_h transitions 7−131112
intermetallic compound hydrides, neutron scattering studies *(German)* 7−83599
isotactic polystyrene, persistence-length enhancement caused by physical gelation, neutron scatt. evidence 7−83785
isotropic antiferromagnet, correl. functions struct. calcs. *(Russian)* 7−125339
Kondo impurities, neutron scatt. linewidth 7−76814
latex particles, seeded, emulsion polymerised, morphology, small-angle neutron scatt. obs. 7−91482
lithium acetate, press. depend. of tunnelling and librational modes of coupled methyl groups 7−69635
lithium acetate dihydrate, coupled methyl groups, proton spin conversion 7−91496
manganese oxalate dihydrate linear chain system, cryst. and magnetic struct., neutron diffr. study 7−99407
MBBA, phase diagram 7−111883
MBBA amorphous solid states, struct. and dynamics 7−124103
MBBA mesophases, modelling using neutron scatt. 7−111384
methane: Kr, rot. excitation, orientational order, neutron scatt. study 7−104598
methane, disorder effects, rotational excitations 7−142663
methane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
methane adsorbed on MgO (100), diffusivity of 2D lattice fluid 7−84524
methane-Kr, solid solution, disorder effects, rotational excitations 7−142663
methyl group rotations, NMR and neutron scatt. studies 7−137276
methylhalides, polycryst., methyl rot., inelastic incoherent neutron scatt. 7−83795
multiphase polymers, small angle neutron scatt. 7−131057
neopentane, disordered phase, orientational dynamics 7−142750
neopentane, plastic, orientational disorder 7−142745
neopentane-d, plastic cryst., orientational disorder, neutron elastic scatt. obs. 7−83796
neutron scattering techniques for solid state research 7−75947
nickel, ethanediamine nitrite chlorate, $Ni(C_2H_8N_2)_2NO_2ClO_4$, quasi 1D Heisenberg antiferromagnet, quantum energy gap 7−85256
Nimonic PE 16, Ni-base superalloy, precip., quantitative anal. 7−100238
nitromethane, methyl group rotational potential 7−142665
nitromethane-$d_1(d_2)$, cryst., methyl internal rot., neutron scatt., IR and Raman spectra 7−125730
nuclear fuel reprocessing plant, safeguards and process control, non-destructive assay techniques 7−109429
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
PET, amorphous and semicrystalline, small and intermediate angle neutron scatt. 7−69615
phonons, theory and expts., book 7−80187
pivalic acid, dynamic behaviour, Incoherent Quasielastic Neutron scattering 7−142928
trans-polyacetylene, IR, Raman and neutron spectra, vibr. state density 7−110155
polyacetylene films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polybutadiene, crystallisation, size mismatch effects, small angle neutron scatt. 7−69611
polydimethylsiloxane-polymethacrylic acid, interpenetrating networks, swollen struct. study 7−91470
polyethylene-PAA copolymers, radiation grafted, small angle neutron scatt. obs. *(Russian)* 7−97996
polymer blend, mean-field and Ising critical behaviour 7−84192
polymethacrylate comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7−111352
polymethylsiloxane comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7−111352
polyphenylmethylsiloxanes, linear and cyclic, neutron scatt. obs. 7−69617
polypyrrole films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polystyrene, linear chains, Monte Carlo calcs. and neutron scatt. obs. 7−90462
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective solvent effects 7−93310
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective binary solvent-effects 7−93311
random magnetic materials, neutron depolarisation during transmission, density matrix calcs. 7−92405
rare earth alloys, RCo_5, incommensurate phase, hybridisation and mag. form. factor 7−138189
rare earth alloys, $RFeAl_x$, mag. struct., Fe atom and moment location 7−131988
rare earth compounds, anomalous, mag. props., neutron scatt. studies 7−77226
rare earth perovskite phases, R_2NiRuO_6, R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm, cryst. struct., neutron powder and X-ray diffr. 7−83922
rock salt, texture anal., neutron diffraction methods 7−86508
rotational dynamics, interaction with zeolitic framework, quasielastic neutron scattering 7−142661
semicarbazide hydrochloride, cryst. struct., neutron diffr. study 7−104708
β'-sialon phase, struct. evolution under high press. and high temp. 7−137349
silica synthetic materials, porosity 7−111902
steel, austenitic, high Ni-Cr, γ'-precipitation kinetics, small angle neutron scatt. 7−86190
steel, austenitic stainless, intercryst. creep failure, nucleation study using small-angle neutron scatt. 7−126219

neutron diffraction examination of materials continued
steel, cold rolled strip, residual stress state, neutron diffr. study 7−125142
styrene-hydrogenated butadiene-styrene triblock copolymer, chain conform., small angle neutron scatt. 7−69614
TCNQ salts, TEA(TCNQ)$_2$ and MNEB(TCNQ)$_2$, lattice dynamics, inelastic neutron scatt. 7−91743
thiourea, deuterated, X-radiation damage, dielectric susceptibility and neutron diffr. meas. 7−69760
TMMC, classical easy-plane antiferromag., dynamical response at low temps., neutron scatt. data 7−105904
TNCQ conductors, phonons, inelastic neutron scatt. studies 7−84159
transition metal hydrides, cryst. struct. vol. effects 7−83890
unmagnetized ferroliq., polarized neutron small angle scatt. 7−105892
Urea inclusion cpds., diffuse scatt. and disorder 7−86892
vitamin B_{12} coenzyme, cryst. and mol. struct., neutron and X-ray refinement 7−114172
Zr_2Pd, cryst. struct., neutron powder diffr. anal. 7−83847
$AgPO_3$-PbI_2, vitreous electrolyte, small angle, quasielastic and inelastic neutron scatt. 7−98573
Ag_2S, superionic conductor, ion dynamics, inelastic neutron scatt., anal. 7−131357
Ag_3SI nonequilib. phase transition kinetics, neutron diffr. study 7−131297
Al self-interstitial atoms, resonant vibr. modes, inelastic neutron scatt. studies 7−137497
Al single cryst., self-interstitial resonant vibrational modes, diffuse inelastic neutron scatt. study 7−98126
Al-based icosahedral phases, contrast variation effects on neutron diffraction patterns 7−83846
Al-Cr quasicrystalline alloys, neutron diffractometry, contrast variation technique, icosahedral phase 7−142588
Al-Cu, short range order, diffuse neutron scatt. studies 7−137320
Al-Fe quasicrystalline alloy, neutron diffractometry, contrast variation technique, icosahedral phase 7−142588
Al-Mn quasicrystalline alloy, neutron diffractometry, contrast variation technique, icosahedral phase 7−142588
Al-Zn-Mg alloy, dil., stable trajectories during decomposition 7−137570
Al_2O_3, liquid phase sintered, creep cavitation, small angle neutron scatt. 7−100288
Al_2O_3, sintered, grain boundary cavitation, cyclic creep effect, small angle neutron scatt. 7−113621
$AlPO_4$, calcined powder, time of flight neutron powder diffr. study 7−137330
$Al_{70}Si_{17}Fe_{13}$ amorphous alloy, neutron diffr. study 7−137244
$Al_{85}Si_1Mn_{14}$ quasicrysts., thermal transform. to conventional crysts., two-step mechanism 7−105002
$Al_2Y_4O_9$, structure, X-ray and neutron powder studies, pattern decomposition and Rietveld method 7−83882
AlZn single crysts., decomp., clustering anisotropy 7−132627
As, liq. struct., Peierls distortion 7−137195
$Au_{0.81}Fe_{0.19}$, reentrant single crystals, mag. struct. obs. in applied field 7−99412
(α-)$KCrF_4$ magnetic struct., ordered frustration, powder neutron diffr. obs. 7−70526
$BaFe_{12-x}Mn_xO_{19}$ hexaferrite, cation site distrib., X-ray powder and neutron diffr. studies 7−98058
$Ba_2HoCu_3O_{7-x}$ high T_c supercond., cryst. struct., neutron diffr. anal. 7−124202
$BaLa_4Cu_5O_{13+\delta}$, oxygen-deficient perovskite, crystal structure 7−104669
$BaMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$Ba_2Ni_3F_{10}$, magnetic struct., order frustration, powder neutron diff. obs. 7−70525
$BaPb_{1-x}Bi_xO_3$, high T_c supercond., phonons, inelastic neutron scatt. studies 7−91745
Ba_2SrUO_6, cryst. struct., Rietveld refinement of neutron powder diffr. data 7−111466
$Ba_2YCu_3O_6$, structure and properties 7−104685
$Ba_2YCu_3O_{6.26}$, high T_c supercond., cryst. struct. by neutron diffr. 7−131110
$Ba_2YCu_3O_7$, high T_c superconductor, crystal structure, 5-300 K neutron diffraction anal. 7−104656
$Ba_2YCu_3O_7$, high temp. supercond., cryst. struct. by X-ray and neutron powder diffr. 7−137347
$Ba_2YCu_3O_{7-x}$, high T_c superconductor, cryst. struct., Rietveld refinement 7−98088
$Ba_2YCu_3O_{7-x}$ high T_c supercond., cryst. struct., X-ray and TOF neutron diffr., Rietveld anal. *(Japanese)* 7−142734
$Ba_2YCu_3O_{9-\delta}$, cryst. struct., vacancy distrib., neutron powder diffr. study 7−104691
$BaZn_2Fe_{16}O_{27}$, W-type hexagonal ferrite, Zn location, paramag. phase *(French)* 7−111492
Be, metallic, cryst. lattice dynamics and microcontact spectra 7−137494
$Be_{37.5}Ti_{62.5}$ metallic glass, struct., X-ray and neutron diffr. 7−97962
Ca $(NH_3)_6$, molecular glass, disorder effects, rotational excitations 7−142663
$Ca(OH)_2$, structural prereactional transforms; lattice disorder and defect generation, neutron diffr. study 7−84240
$Ca_2Pt_3O_8$ hydrothermal synthesis and structural charactn., X-ray and neutron diffr. 7−83909
Ce alloys, unstable 4f-shell, transport props.−quasielastic neutron spectra linewidth correls. anal. 7−118460
Ce-Sn alloys, struct. and mag. props. correls., comp. depend. 7−76083
$CeAg_2Ge_2$, heavy fermion system, inelastic neutron scatt. study 7−77232
$CeAl_2$, mag. excitation spectrum, neutron scatt. study 7−77231
$CeAl_2$, magnons, inelastic neutron scatt. meas., rel. to sp. ht. coeff. 7−77269
$CeAl_3$, Kondo cpds., neutron scatt. calc. 7−77235
CeAs, order-parameter-conserving antiferromagnet, critical behaviour 7−143817
CeB_6, dense Kondo system, neutron scatt. study of antiferroquadrupolar ordering 7−77230
$CeCu_6$, heavy fermion cpd., mag. correlations 7−70516
$CeCu_6$, heavy fermion system, neutron scatt. study of mag. excitations 7−70519
$CeCu_6$, induced mag. form factor, polarised neutron scatt. obs. 7−125308
$CeCu_2Ge_2$, heavy fermion system, inelastic neutron scatt. study 7−77232
$Ce(Cu_{1-x}Ni_x)_5$, conc. Kondo system state-mixed valence state transition 7−112277
$CeCu_2Si_2$ heavy fermion superconductor, phonon density of states, comparison with $LaCu_2Si_2$ 7−69845
$CeCu_2Si_2$, Kondo cpds., neutron scatt. calc. 7−77235
CeD_{2+x} magnetic ordering, site occupancy and comp. depend., neutron diffr. study 7−85246
CeD_x single crysts., magnetic order and structural transformations studies 7−112745
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$Ce_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$CeGa_2$, Kondo lattice, mag. props. 7−77209
$Ce_{0.75}La_{0.25}B_6$, dense Kondo system, neutron scatt. study of antiferroquadrupolar ordering 7−77230
$CeMg_3$, Kondo cpds., neutron scatt. calc. 7−77235
$CeMo_6S_8$, cryst. struct. and phys. props. 7−77211
CeO_2, stoichiometric, anharmonic interactions, neutron scatt. studies 7−137492
$CePb_3$, crystal field excitations, inelastic mag. neutron scatt. 7−77227
CePd, paramag. response, thermal evolution, scattered neutron polarisation anal. 7−77236
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
CeSb, anomalous mag. interactions, neutron study 7−77229
CeSb, mag. ordering, high press. neutron and magnetisation study 7−77228
$CeSi_{2-x}Ge_x$, crossover from ferromagnetic to Fermi liq. behaviour 7−77280
$Ce_{0.74}Th_{0.26}$, mixed valence alloy, γ-α valence transition, paramag. response, neutron scatt. study 7−70263
$Ce_{1-x}Th_x$ mixed valent alloy, dynamic susceptibility, neutron scatt. studies 7−124948
$CeVO_3$, cryst. struct., neutron diffraction study 7−104654
$Ce_{0.75}Y_{0.25}$, DHCP, mag. struct., neutron powder diffr. study 7−105890
CeZn, neutron diffr. and mag. studies 7−77248
$CeZn_5$ Kondo lattice, mag. props. 7−99404
Co, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7−99526
Co-Cr films, mag. domains, neutron depolarisation study 7−85395
Co(AlMn) alloys, struct. and mag. props. 7−132069
$CoAl_{1-x}Mn_x$, structural study 7−69647
$CoCr_2O_4$, magnetic structure, 2D neutron diffraction 7−125324
$CoIn_2S_4$, struct. and mag. props. 7−125417
$Co(NH_3)_6(PF_6)_2$, solid state free rot. levels, neutron scatt. spectra 7−103468
CoO-NiO superlattices, mag. structure, neutron diffr. studies 7−125312
CrOOH, neutron inelastic scatt., IR spectra, double Morse pot. model 7−144052
Cr_3Si, single crystal time of flight neutron diffr., comparison with monochromatic techniques 7−83589
$(Cr_{1-x}Ti_x)_3Se_4$, cation distrib. and site preference, neutron diffr. and Rietveld anal. 7−83914
$CsCoCl_3$, spin configuration study by neutron polarisation analysis 7−85247
$CsCrCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
$CsCuCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
$CsH_{0.3}D_{0.7}S(Se)O_4$ struct. refinement, neutron powder diffr. study 7−83925
$CsH(D)SeO_4$, superionic phase transition, neutron diffr. investigation 7−124487
$CsHSO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
$CsHSO_4$ superionic phase, struct., neutron diffr. studies 7−104692
$CsHSO_4$, superionic protonic conductor, mechanism and proton dynamics 7−143093
$CsHSeO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
$CsMnBr_3$ triangular antiferromagnet, spin wave props., inelastic neutron scatt. meas. 7−85250
$CsMnBr_3$ triangular antiferromagnet, spin waves, neutron scatt. study 7−125348
$CsMn_xMg_{1-x}Br_3$ crysts., Mn^{2+} cluster mag. excitations, inelastic neutron scatt. study 7−85251
Cs_2NaRBr_6(R=Dy, Ho, Tm), rare earth bromo-elpasolites, soft rotary mode and structural phase transition 7−142987
$CsNiCl_3$, 1D near-Heisenberg antiferromag., inelastic neutron scatt. studies 7−125393
$CsNiCl_3$ triangular lattice antiferromag., phase transitions, neutron scatt. studies 7−77291
$CsNiF_3$, field-induced spin-energy-density coupling, longitudinal spin response, neutron scatt. study 7−125357
CsOH(D), low temp. antiferroelectric ordering transition studies 7−85551
$Cs_2Ti_5O_{11}$, anhydrous, hydrated and deuterated phases, cryst. structures, X-ray and neutron diffr. studies 7−111459
$CsVCl_3$, 1D near-Heisenberg antiferromag., inelastic neutron scatt. studies 7−125393
Cu, nuclear magnetic ordering, susceptibility and entropy meas. 7−77261
Cu-Co alloys, Co precipitates, small-angle neutron scatt. and X-ray diffr. studies 7−138753
Cu-Ni-Fe, irradiation induced phase decomp. and diffusive atom transport 7−104994
Cu-Ni-fe (46, 4 at.%), 2 MeV proton irrad., decomp., small angle neutron scatt. 7−137425
$Cu_xCo_{3-x}O_4$, spinels, cationic distrib., neutron scatt. meas. *(German)* 7−104663
CuH, H diffusion, quasielastic neutron scatt. study 7−69973
CuNi(Fe) alloy, results of diffuse neutron scattering *(Dutch)* 7−69542
$Cu_{0.9}Pd_{0.1}MnSb$, magnetic structure 7−125325
$Cu_{50}Ti_{50}$, amorphous struct., neutron- and X-ray diffr. study 7−91454
$CuTiH_x$ metallic glasses, struct., neutron diffr. studies 7−142642
$Cu_yTi_{1-y}H_x$, amorphous, conc. depend. of H mobility 7−91899
$Cu_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
$D_{0.99}MoO_3$ intercalation cpd., struct. determ. by neutron diffr. 7−111493
Dy-Y multilayers, occurrence of long-range helical spin ordering 7−125320
Dy-Y superlattices, mag. struct., neutron diffr. study 7−99409
$DyBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
Er-Ce, single crystal neutron diffraction studies of mag. struct. 7−85244
$ErBa_2Cu_3O_7$, high T_c supercond., mag. fluctuations, 2D ordering 7−131884

neutron diffraction examination of materials continued
$ErBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$Er_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$ErFe_2H_x$ phase diagram, structural and magnetic props., neutron diffr. study *(French)* 7−83902
$Er_2Fe_{14-x}Mn_xB$, site occupancy study 7−117862
$Er(Fe_{1-x}Ni_x)_3$, atomic and mag. struct. neutron diffr. studies 7−131989
$Er_{1-x}Ho_xRh_4B_4$ compounds, ordered mag. moments, absolute meas. using powder neutron diffr. 7−85259
$ErPd_2Sn$ cubic Heusler superconducting alloy, antiferromag. struct., neutron scatt. meas. 7−112743
$ErVO_3$, cryst. struct., neutron diffraction study 7−104654
$EuAs_3$, field-induced mag. phase struct., neutron diffr. study 7−99405
EuO, Heisenberg ferromag., critical spin dynamics 7−143836
EuO, isotropic Heisenberg ferromagnet, crit. mag. scatt., inelastic neutron study, comparison with renormalisation group theory 7−112750
$EuPd_2Si_2$ intermediate valence impurity state relax. rate model calcs. 7−76845
$EuPd_2Si_2$, mixed valence cpd., dynamic mag. susceptibility, neutron scatt., magnetisation, Mossbauer effect meas. 7−70264
EuS Heisenberg ferromagnet, critical mag. scatt. studies 7−112843
$(Fe,Mn)_{80}P_{20}$, amorphous alloy, crystallisation, time-resolved neutron thermodiffractometry 7−142630
Fe, dynamic struct. factor, calc. from band struct. models 7−143329
γ-Fe, FCC, lattice dynamics, elastic consts. and sp. ht. 7−104933
Fe, ferromagnetic moments in metastable magnetic films by spin-polarized-neutron reflection 7−99526
Fe, film, interference neutron effects, tunnelling 7−76216
Fe, magnetic films, spin-polarised neutron reflectivity studies 7−105986
Fe-Cu(-Ni)(-P), precip. of Cu particles in ferrite matrix 7−78019
Fe-Mn alloys, FCC, electronic struct., spin-density meas. 7−105386
Fe-Mn-C alloy, FCC, C distrib. among interstitial sites, neutron diffr. obs. 7−98214
Fe-Si-B amorphous ferromagnets, spin dynamics, neutron scatt. obs. 7−85322
$Fe_{70}Al_{30-x}M_x$, (M=Cr,Mn,Co), mag. studies 7−125394
$Fe_{3-x}Al_xSi$ alloys, crystal struct., neutron diffr. and Mossbauer studies 7−131101
$Fe_{81}B_{19}$ metallic glass, struct., neutron diffr., quasi-crystalline model 7−97961
α-$FeC_2O_4.2D_2O$ quasi-1D antiferromag., magnetic struct. and transitions neutron diffr. study 7−125316
$Fe_{80}Cr_5B_{15}$, amorphous ferromagnet, paramag. neutron scatt. 7−138192
$(Fe_xCr_{1-x})_2Ca_3(GeO_4)_3$, mixed garnet, mag. frustration, phase diagram, neutron diffr. 7−105889
$(Fe_xCr_{1-x})_{75}P_{15}C_{10}$, amorphous, reentrant spin glass props. 7−112811
$Fe_{1-x}Cu_xCr_2S_4$, superlattices, struct., cation distrib., hyperfine interaction props., neutron diffr., Mossbauer spectra 7−98061
FeF_2 single crystal, 3D anisotropic Ising ferromagnet, neutron scatt. and critical behaviour 7−85249
FeF_3, pyrochlore form, crystal and mag. structs., mag. frustration 7−105891
$FeGe_2$, mag. phase transitions and mag. struct., neutron scatt. studies *(Russian)* 7−138228
$Fe(H_2O)_6(NH_4)_2(SO_4)_2$, Mossbauer and other expts. on ferrous ion, ligand field model 7−105498
$Fe_{0.4}Mg_{0.6}Cl_2$, Ising spin glass, transverse fluctuations 7−105943
$Fe_{1-x}Mg_xCl_2$ spin glass-dilute antiferromag. system, spin wave props., inelastic neutron scatt. study 7−125395
FeNiB alloys, results of diffuse neutron scattering *(Dutch)* 7−69542
$Fe_{40}Ni_{40}B_{20}$, amorphous, quenched, annealed, struct., neutron diffr. 7−83770
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, spin waves at 77 K, inelastic neutron scatt. study 7−92419
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous ferromagnet, spin dynamics, neutron scattering 7−105903
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous ribbon, ferromag., domain struct., neutron depolarisation studies 7−118819
$(Fe_xNi_{1-x})_{80}(P_yB_{1-y})_{20}$, ferromag. glassy ribbons, small angle neutron scatt., domain wall struct. 7−99414
$Fe_{90-x}Ni_xZr_{10}$ amorphous alloys, spin dynamics, inelastic neutron scatt. study 7−125347
FeOCl, structure, neutron diffraction, profile refinement 7−69664
$FeOCl(TTF)_{1/8.5}$, structure, neutron diffraction, profile refinement 7−69664
$Fe_{0.78}P_{0.22}$, amorphous, vibrational spectra, inelastic neutron scatt. 7−98370
FeSi, temperature-induced magnetism, neutron scatt. meas. 7−118781
Fe_3Si, spin dynamics above T_C, high resolution inelastic neutron scatt. study 7−85311
Fe_3Si, spin wave study at low temp. *(Chinese)* 7−118782
$FeSn_2$ low temp. canted mag. struct., Mossbauer and neutron diffr. meas. 7−99411
α$Fe_{0.94}TiCe_{0.06}H_{0.03}$, neutron diffr. study of cryst. struct. 7−83845
$Fe_xV_{3-x}S_4$ cation partitionings and structural formula determ., powder neutron diffr. 7−117880
Gd-Y, initial ordering regime, neutron diffr. study 7−143762
Gd-Y synthetic superlattices, polarised neutron diffr. studies 7−125322
Ge, neutron coherent scatt. lengths, total cross sections 7−130985
a-Ge, Raman coupling-parameter determ., freq. depend. 7−70777
$GeCo_2O_4$ antiferromagnet, first order mag. transition obs. 7−70545
GeO_2, amorphous and cryst., neutron scatt. lengths, total cross sections 7−130985
GeTe, struct. phase transition, neutron diffr. study 7−84235
H intercalation cpds., PMR and neutron diffr. obs. 7−112974
H_2SeO_4, selenic acid struct., single-cryst. neutron diffr. study 7−83870
Hf_2Fe, localisation of H(D), powder neutron diffr. study 7−83850
Hf_2FeD_x, x≈3-5, localisation of H(D), structural and mag. props., powder neutron diffr. study 7−83850
$Hg_{3-\delta}As(Sb)F_6$, long range order development, neutron diffr. study and model calcs. 7−117904
$HoBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$Ho_6Fe_{23}D_x$, x=1,5, 8.2, 12.1, 15.7, struct. and magnetism 7−83851
$HoRu_2Ge_2$, squared modulated mag. struct., antiferromag. order, neutron diffr. study 7−118774
$Ho_{90}Tb_{10}$ single crysts., commensurable helical struct., magnetic excitations, inelastic neutron scatt. 7−125327
I_2O_4, structure, X-ray and neutron powder studies, pattern decomposition and Rietveld method 7−83882
neutron diffraction examination of materials continued
K, CDW, search by high resolution neutron diffr. 7−124886
K-Pb liq. alloy struct. factor determ. neutron diffr. meas. 7−83651
$KAlF_4$ premartensitic phase, neutron and X-ray scatt. 7−142983
$KBr:NH_4^+$, impurity ion rot. states, neutron scatt. intensities calcs. 7−83797
$(KCN)_{0.7}(KBr)_{0.3}$ mixed cryst., struct. and transforms., neutron powder diffr. study 7−142735
KD_2PO_4, accurate struct. parameters, compilation 7−98060
KH_2PO_4, accurate struct. parameters, compilation 7−98060
KH_2PO_4, early studies by neutron diffr. 7−99743
KH_2PO_4, structural studies of KDP and isomorphs, transition, neutron and X-ray diffr. 7−99744
$K_2Mn_xZn_{1-x}F_4$, dil. antiferromagnet, break-up of long range order, zero mag. field 7−112749
$K_{0.3}MoO_3$, Peierls insulating state, low freq. struct. excitations, neutron studies 7−98366
K_2OsCl_6, struct., temp. depend. 7−104978
K_4Pb_4, struct., neutron diffr. meas. 7−131108
$kMnF_3$, tetragonal phase, domain volume distrib. 7−76424
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., competition with magnetic order, NQR study, comp. depend. 7−138134
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., vibr. anomalies, neutron inelastic scatt. studies 7−91741
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., 180 K tetragonal-to-orthorhombic phase transition, anomalous struct. 7−112579
$La_3Ba_3Cu_6O_{14+x}$, nonsuperconducting, struct. determ., relation to high T_c supercond. $YBa_2Cu_3O_{7-\delta}$ 7−111503
$La(Ba_{2-x}La_x)Cu_3O_{7+\delta}$, O ordering and superconductivity 7−131850
La_2CuO_4 2D antiferromag. props., neutron scatt. meas., relevance to high T_c superconds. 7−143763
La_2CuO_4 antiferromag. ordering, neutron diffr. obs. 7−99408
La_2CuO_4, mag. scatt., Neel temp. 7−125326
La_2CuO_4, phonon density of states determ. 7−104943
$La_2CuO_{4-\delta}$ single cryst., antiferromagnetism and O deficiency, neutron diffr. study 7−112752
La_2CuO_{4-y} antiferromag. ordering, neutron polarisation anal. 7−112751
La_2CuO_{4-y}, antiferromag. obs. by powder neutron diffraction 7−112753
$LaCu_2Si_2$, phonon density of states, comparison with $CeCu_2Si_2$ 7−69845
$LaNi_5$, dedeuterided, strain and particle size broadening in Rietveld refinement of neutron diffr. pattern 7−83848
$LaNi_5D_{6.7}$, cryst. struct. determ., neutron powder diffr. data refinement using modified Rietveld method 7−83887
$LaNi_5Fe_xH_y(D_y)$,thermodynamic, structural and mag. props. 7−98468
$LaNi_5H_x(D_x)$, x=0.1, 0.4, localisation of H(D), powder neutron diffr. study 7−83849
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., structural phase transition, neutron powder diffr. anal. 7−111869
$La_{1-85}Sr_{0-15}CuO_4$, high T_c superconductor, phonon density of states determ. 7−104943
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., phonons, inelastic neutron scatt. studies 7−91745
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon density of states 7−104934
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., cryst. struct. temp. depend., powder neutron diffr. study 7−111480
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. and phonon spectrum, neutron and Raman scatt. studies *(Russian)* 7−131327
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., cryst. struct. above and below polymorphic T_c 7−98030
$La_{2-x}Sr_xCuO_4$, soft-phonon behaviour, hopping conduction 7−137546
$LaVO_3$, cryst. struct., neutron diffraction study 7−104654
Li single crystal, martensitic transition from BCC to 9R related struct. 7−98438
Li-Ti-Zn spinel ferrites, mag. and cryst. struct., polarised neutron diffr. study 7−138193
$Li_2Ge_7O_{15}$, ferroelec., struct. phase transition, neutron diffraction study 7−124486
$Li_2Ge_7O_{15}$, neutron diffraction study of crystal struct. at 298 K 7−83875
LiH, ordered spins, phase diagrams at positive temp. 7−105887
$LiIO_3$ powder α to γ to β phase transitions, neutron thermodifraction study 7−84248
$LiIO_3$, thermal expansivity by neutron thermodiffractometry 7−143061
$Li_xMn_2O_4$ spinel phases, struct. refinement, neutron diffr. study 7−83910
$Li_{1-x}VO_2$ struct. refinement, neutron diffr. study 7−83907
Mg_2CoH_5, prep. struct. and props. 7−83893
Mg_2NiD_4, low temp. struct., X-ray and neutron diffr. studies 7−83892
$MgO-Al_2O_3-SiO_2$, cordierite, lattice thermal expansion, neutron diffr. obs. 7−98521
$MgSiO_4$, forsterite, phonon dispersion relations, inelastic neutron scatt. studies 7−137491
$Mg_2Si_2O_6$, enstatite, neutron diffr. refinement of cryst. struct. 7−104702
Mn-Al magnets, texture, neutron TOF diffraction 7−106529
$Mn_{1-t}Cr_tAs$, helimag. states transitions, phase diagram and strong mag. field effects studies 7−118809
$Mn_{0.67}Cu_{0.33}$, phase separation kinetics 7−137572
MnF_2, single crystal time of flight neutron diffr., comparison with monochromatic techniques 7−83589
$MnFeF_5(H_2O)_2$, inverse weberites, frustrated magnetic and crystal structures, powder neutron diffr. 7−77237
MnNi single cryst., mag. struct., compressive loading *(Russian)* 7−105886
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7−112742
MnP itinerant-electron ferromagnet, paramag. neutron scatt. cross section meas. 7−112776
$MnSe_2$ mag. struct. and transitions, neutron diffr. studies 7−125315
$MnSe_2$ polycryst., magnetic ordering, neutron diffr. study 7−112794
Mn_3Si, pure and Fe-doped, itinerant antiferromag., mag. excitations 7−138207
Mn_3Si:Fe, magnetic excitations, inelastic neutron scatt. study 7−125346
$Mn_xZn_{1-x}F_2$, phase transitions, metastable states, random fields 7−77325
$Mn_xZn_{1-x}F_2$, phase transitions and metastable states in the presence of random fields 7−85336
β′-MoO_3, struct. determ. by neutron diffr. 7−111493
Mo_nO_{3n-1}, CDW and resistivity, X-ray and neutron studies 7−99032
Mo_3Si, neutron-induced disordering and amorphisation *(Russian)* 7−97925
$(NH_4)_2SO_4$, ferroelec. phase, NH_4^+ reorientations, neutron scatt. studies 7−104600
$NH_4UO_2PO_4.3H_2O$, cation identity, IR and inelastic neutron scatt. spectra 7−125735
Na, band struct. calc. 7−143328

neutron diffraction examination of materials continued
$Na_6(AlSiO_4)_6.8D_2O$, cryst. struct., localisation of water, neutron powder diffr. Rietveld profile anal. at 10 K 7−98049
$NaBrO_3$, acoustic activity, degeneracy splitting with neutron scatt. 7−104918
Na_2O-WO_3 system, glass form., neutron diffr. structural study 7−97954
$Na_2SiO_2(OD)_2.7D_2O$, location and anisotropic refinement of D atoms, H bonding, thermal stability, neutron diffr. study 7−111460
NaSn alloys, results of diffuse neutron scattering *(Dutch)* 7−69542
NbD_x, coherent quasielastic neutron scatt. 7−69693
$NbH_{0.31}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
$Nb(OH)_x$, dilute metal-H system. quantum nature 7−84165
$NbSe_3$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7−98365
$NdVO_3$ cryst. struct., neutron diffraction study 7−104654
NdZn, neutron diffr. and mag. studies 7−77248
Ni, propagating spin waves above T_c 7−143778
Ni sputtered films, struct., neutron diffr. study 7−104557
Ni-Fe-B, metallic glass, short range struct., neutron diffr. 7−83771
$Ni_{1-x}B_x$ glass, short range struct., comp. variation, neutron scatt. 7−83774
$(Ni_{65}Fe_{35})_{77}B_{23}$ metallic glass, struct., neutron diffr., quasi-crystalline model 7−97961
$Ni_3Fe_{0.7}Nb_{0.3}$, Permalloy, K-state, annealing, struct., neutron diffr. study, elec. resist. meas. *(Russian)* 7−112295
$(Ni_{1-y}Fe_y)_{1-x}S$ mag. semicond., neutron and X-ray diffr. studies 7−85245
$Ni_3FeW(Mo)(Cr)(Mn)$, structural and mag. ordering, impurity effects 7−85284
NiMnSn alloys, crystallographic and mag. struct., neutron diffr. studies 7−69651
$Ni_{80}P_{20}$, metallic glass, atomic struct., isotropic substitution neutron diffr. technique 7−83769
$NiSb_2O_4$, struct. evolution under press., anisotropic compressibilities, magnetic order *(French)* 7−85248
NiTa metallic alloy glasses, X-ray and neutron diffr. meas. 7−76012
$Ni_{0.95}Tb_{0.05}$ amorphous sputtered films, struct., neutron diffr. study 7−104557
$Ni_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
NiZr glass, partial structure factors, isotope substitution neutron diffr. 7−83773
$Ni_{24}Zr_{76}$, metallic glass, dynamic struct. factor, neutron inelastic scatt. 7−83772
$Ni_{24}Zr_{76}$ metallic glass, H diffusion and HF vibrational modes, neutron scatt. obs. 7−105144
$Ni_{36}Zr_{64}$, amorphous alloy, struct., isotope substitution neutron diffr. 7−83775
NpAs, mag. phase diagram, neutron scatt. study 7−77283
β-O, solid, rhombohedral Heisenberg antiferromagnet, infinite degeneracy of ground state 7−125298
$PbHPO_4$, press. depend. of cryst. struct. 7−142719
$PbMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
Pd-Sc(Dy)(Ti)(Mn), atomic short-range order, investig. by diffr. methods 7−142703
Pd_2DySn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
PdH_x, inelastic neutron scatt., single particle pot. *(German)* 7−131131
Pd_2HoSn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
$Pd_xSi_{1-x}H_y$, amorphous, H diffusion, quasielastic neutron scatt. study 7−84372
$Pd_{58.8}Si_{20.6}U_{20.6}$, icosahedral and glassy, low-energy modes, neutron inelastic scatt. 7−118048
Pd_3V long and short range order, diffuse electron, neutron and X-ray scatt., mean-field theory anal. 7−111453
$PrBr_3(Cl_3)$ single and polycrysts., 7−124197
$PrCu_6$, low temp. monoclinic form, neutron diffraction study 7−124168
$PrD_{1.95}$, separation of cryst. field levels and phonons, inelastic polarised neutron scatt. anal. 7−84781
PrD_2, cryst. field levels and phonons, polarised neutron scatt. anal. 7−124934
PrD_{2+x} magnetic ordering, site occupancy and comp. depend., neutron diffr. study 7−85246
Pt_3Mn 3D metallic ferromagnet, forbidden magnons, polarised neutron studies 7−125350
PuBi, mag. ordering, phase diagram, neutron diffr. study 7−77282
PuSb, valency, neutron scatt. study 7−104623
PuTe, valency, neutron scatt. study 7−104623
$Rb_2Co_{0.7}Mg_{0.3}F_4$ 2D antiferromag., critical scatt. studies 7−125425
$RbCrCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
Rb_2CrCl_4:$Mg^{2+}(V^{2+})(Fe^{2+})$, ionic ferromagnet, neutron diffr. and visible spectra 7−112755
$RbCuCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
$RbNO_3$ cryst. struct., space group and symm., single-cryst. neutron diffr. study 7−83866
Ru, phonons and electron-phonon interactions, point-contact and neutron spectroscopy studies 7−70381
SF_6, low temperature solid phase struct., neutron diffraction expts. 7−124043
Si, texture analysis, heterogeneous morphology, neutron diffr. studies 7−124541
a-Si:H, dangling bonds and metastability, expts. and models, review *(French)* 7−131592
Si-Fe single cryst., domain struct., uniaxial stretching effects 7−138266
$Si_3Al_3O_3MN_5$ ceramic material examination by neutron diffraction *(Dutch)* 7−69542
SiC, hot pressed, grain boundary cavitation, cyclic creep effect, small angle neutron scatt. 7−113621
SiO_2, cryst. struct., neutron and X-ray diff. data 7−76089
SiO_2, quartz crystal, neutron diffraction, acoustic oscillation effects 7−137476
SiO_2, silica smoke-particle aggregates, low-frequency vibrational density of states, temp. depend. 7−137500
SiO_2, vitreous, scatt. fn. determ. 7−131031
$SmPd_3$, rare earth metal ions, intermultiplet transitions, inelastic neutron scattering 7−131598

neutron diffraction examination of materials continued
γ-$Sn_{0.8}In_{0.2}$, lattice dynamics, electron-phonon interactions 7−142936
$SnMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
Sr_2CaUO_6, cryst. struct., Rietveld refinement of neutron powder diffr. data 7−111466
$Sr_2Co_2O_5$, phase transitions, neutron thermodiffractometry study 7−91797
$TaH_{0.1}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
Ta_2H, inelastic neutron scatt., single particle pot. *(German)* 7−131131
$(TaSe_4)I$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7−98365
Tb-Fe amorphous alloys, spin ordering, small angle neutron scatt. studies 7−125323
$TbCu_2$, sublattice magnetisation, temp. depend. 7−138281
$Tb_{0.22}Cu_{0.78}$ amorphous alloy, short and medium range mag. order, neutron scatt. obs. 7−85323
$Tb_{72}Fe_{28}$, amorphous alloys, struct. and local anisotropy 7−97970
$TbFe_2H_x$ phase diagram, structural and magnetic props., neutron diffr. study *(French)* 7−83902
Tb_xSi_{1-x}, amorphous, neutron scatt. study of atomic local order 7−75996
$TbVO_3$ cryst. struct., neutron diffraction study 7−104654
ThC_2, cryst. struct. line profile refinements, neutron powder diffr. data 7−111482
β-Ti, self-diffusion via vacancies 7−105099
Ti-N system, phase diagram and homogeneity ranges, neutron diffr. obs. *(Russian)* 7−124445
Ti-N-H solid solutions H and N localisation, vibr. freqs. *(Russian)* 7−137314
Ti_2Cu, H(D) absorpt., X-ray and neutron diffr. studies 7−84283
$TiFeD_{\approx 2}$, cryst. struct., neutron powder diffr. profile anal. 7−83885
$TiH_{0.71}$ metastable superconducting ε phase, H interstitial octahedral position, inelastic neutron-scatt. meas. 7−83951
TiH_2 aggregate form in CuTi alloys, fractal struct., neutron scatt. obs., comment and response 7−137571
TiH_2, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
TiN_x, vacancy ordering, neutron diffr. study 7−131077
TiO_2, polymorphs, struct.-electronic rels., powder neutron diffraction obs. 7−131105
$TlAlF_4$, ferroelastic, struct. phase transitions and cryst. struct. 7−111858
$TmGa_3$, antiferroquadrupolar and antiferromag. structs., neutron diffr. studies 7−118775
TmSe, nonstoichiometric and stoichiometric samples, anomalous thermal expansion 7−98523
$TmSe_{0.45}Te_{0.55}$, under high pressure, magnetic structure determ., neutron scatt., AC susceptibility, resistivity meas. 7−138191
$TmVO_3$, cryst. struct., neutron diffraction study 7−104654
UC_2, cryst. struct. line profile refinements, neutron powder diffr. data 7−111482
$U_{1-y}Ce_yO_{2-x}$, two-phase behaviour, cryst. struct., neutron powder diffr. studies 7−111497
UCl_4, struct. transitions anticipating melting 7−84229
UCl_4, valency, neutron scatt. study 7−104623
UIr, mag. struct. neutron diffr. and magnetisation meas. 7−131990
UMn_2, cubic-orthorhombic transformation, rhombohedral precursor 7−98431
$UP_{0.8}S_{0.2}$ single crysts., neutron diffr., magnetisation, incommensurate and ferrimag. phases 7−112748
$UP_{1-x}S_x$, x=0.2, 0.25, mag. phase diagram, neutron diffr. study 7−77284
UPt_3 heavy fermion superconductor, antiferromag. spin fluctuations, inelastic magnetic neutron scatt. studies review 7−70534
UPt_3, neutron scattering studies of heavy fermion systems 7−112747
URu_2Si_2 7−112747
URu_2Si_2 heavy-electron supercond., magnetic excitations and ordering 7−85271
URu_2Si_2, mag. excitation, temp. depend. 7−77233
USe single domain ferromagnet, spin-wave polarisation, inelastic neutron scatt. study 7−125349
$U_{0.1}Th_{0.9}C_2$, cryst. struct. line profile refinements, neutron powder diffr. data 7−111482
U_2Zn_{17}, antiferromag. heavy-fermion system, spin fluctuations 7−77238
U_2Zn_{17}, neutron scattering studies of heavy fermion systems 7−112747
V, superdiffusion of H 7−105122
$V_2(C, N)$, ordered modifications, struct., neutron diffr. studies 7−111472
V_2C, ordered modifications, struct., neutron diffr. studies 7−111472
$VD_{0.3}$, redistribution of D atoms under stress, neutron diffr. study 7−83886
$VH_{0.33}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
V_2H, inelastic neutron scatt., single particle pot. *(German)* 7−131131
V_2H, localised H vibrs., inelastic neutron scatt. study 7−76327
β-V_2H vibrational spectra and H pot., deep inelastic neutron scatt. study 7−84145
$VO_{0.11}H_{0.01}$, interstitial positions and H atom vibrations, slow neutron scatt. study 7−76325
WO_3, powder diffraction pattern, alternative to Rietveld method-separation of peaks 7−142537
Y/Dy multilayers, long-range incommensurate mag. order, neutron diffr. studies 7−70524
Y-Ba-Cu-O, high T_c supercond., phonon density of states, neutron scatt. study 7−131247
Y-Ba-Cu-O high T_c supercond., low temp. struct., neutron diffr. study 7−104675
Y-Ba-Cu-O high T_c supercond., cryst. struct., neutron diffr. anal. 7−104676
Y-Ba-Cu-O high T_c supercond., high resolution neutron diffr. struct. anal. 7−117874
Y-Ba-Cu-O high T_c supercond., cryst. struct., neutron diffr. obs. 7−117893
Y-Ba-Cu-O high T_c supercond., orthorhombic cryst. struct. 7−117896
Y-Ba-Cu-O high T_c supercond., tetragonal cryst. struct., neutron diffr. studies 7−117897
Y-Ba-Cu-O high T_c supercond. ceramic, phase diagram determ. 7−119251
Y-based metallic glasses, crystallisation, differential scanning calorimetry, neutron diffraction 7−142600
Y-H(D) solid soln., long and short-range ordering 7−84303
$YBa_2Cu_3O_7$, 93 K superconductor, cryst. struct. at 298 and 79.5 K 7−104690
$YBa_2Cu_3O_7$, high T_c supercond., neutron diffraction anal. 7−112645

neutron diffraction examination of materials continued
$YBa_2Cu_3O_{7-\delta}$, single-phase high-temperature superconductor, crystal structure 7−117871
$YBa_2Cu_3O_{7-x}$, excitonic absorption and superconductivity 7−125253
$YBa_2Cu_3O_{7-x}$, high T_c supercond., O ordering and orthorhombic to tetragonal phase transition 7−142995
$YBa_2Cu_3O_{7-x}$ high T_c supercond., magnetic penetration depth, polarised neutron refl. meas. 7−143700
$YClH_2$, double metal-layered monohalides, structure and bonding 7−91541
Y_9Co_7, mag. supercond., struct. studies 7−131094
$YD_{0.17}$, order-disorder transition, D one-dimensional ordering, diffuse neutron scatt. meas. 7−91793
$YD_{0.176}$, cryst. struct., location of D at 573 K, neutron diffr. study 7−83888
$Y_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$Y_2(Fe_{1-x}Co_x)_{14}B$, neutron diffr. study 7−112746
YFe_2O_4, magnetic structure, 2D neutron diffraction 7−125324
$Y_{1-x}Gd_x$ single cryst. dilute alloys, mag. struct. and filed-induced transition, neutron diffr. study 7−125314
YIG, fast neutron irrad., crystalline and amorphous struct., neutron diffr. 7−98259
YMn_2, itinerant electron magnet, paramag. neutron scatt. study 7−85240
YMn_2, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{0.9}Al_{0.1})_2$, longitudinal spin fluctuations, thermal depend. 7−118810
$Y_2Mo_2O_7$, spin-glass-like system, neutron diffr. study 7−112820
Y_2NiRuO_6, cryst. struct., neutron powder and X-ray diffr. 7−83922
Yb alloys, unstable 4f-shell, transport props.−quasielastic neutron spectra linewidth correls. anal. 7−118460
$YbFe_2$ mag. props., neutron diffr. study 7−77225
$Yb_{1-x}In_xCu_z$ valence phase transition studies 7−98948
YbPd and Yb_3Pd_4, intermediate valent cpds., mag. response, inelastic neutron scatt. study 7−70527
$YbVO_3$, cryst. struct., neutron diffraction study 7−104654
$ZnFeF_5(H_2O)_2$, inverse weberites, frustrated magnetic and crystal structures, powder neutron diffr. 7−77237
$Zn_{1-x}Mn_xS(Se)(Te)$ dilute mag. semicond., Mn-Mn exchange interaction 7−125363
$Zn_{0.45}Mn_{0.55}Se$, dilute mag. semicond., mag. ordering, neutron diffr. studies 7−125317
Zr-N-H solid solutions H and N localisation, vibr. freqs. *(Russian)* 7−137314
Zr_2Br_2H, double metal-layered monohalides, structure and bonding 7−91541
ZrD_2, lattice parameters, effect of press. up to 10 GPa, neutron diffr. study 7−83889
ZrN_xH_z, solid solutions, order-disorder phase transformations 7−69892
Zr_2Pd, H(D) absorpt., X-ray and neutron diffr. studies 7−84283
Zr_2PdD_x, x=1.7, 1.96, cryst. struct., neutron powder diffr. anal. 7−83847

neutron diffusion
see also neutron flux; neutron transport theory
3D equation, high order finite difference approxs., analysis 7−121987
3D equation, high order finite difference approxs., formulation 7−121986
Chernobyl-4 RBMK reactor, 3D diffusion theory model for accident anal. 7−109401
core neutronics and depletion analysis, DANDE computer code 7−73832
cylindrical geometry, nodal integral method for neutron diffusion eqn. 7−102934
FBR core calculations, transport corrections 7−89590
FBR core deformation, reactivity anal. model in three dimensions, finite difference method 7−129303
few group neutron diffusion equations, soln. on parallel architecture computers 7−96169
ILLICO, vectorised multigroup multi-dimensional nodal neutron diffusion code 7−102965
local reactor reactivity estimation, one-group nonlinear neutron diffusion eqn. 7−96133
LWR training simulator, 3D nodal coupling coeff. calcs. 7−96250
multigroup diffusion, parabolic diff. eqns., soln. using stochastic method 7−141124
multigroup neutron diffusion computation, family of higher-order nodal methods 7−102933
multigroup neutron diffusion eqn., 1D, analytic nodal technique for soln. 7−141125
Munich research reactor, core design, neutron physics *(German)* 7−129277
neutron noise analysis, multigroup diffusion model, coupled-core reactor appl. 7−129237
Plexiglass, thermal neutron diffusion 7−131191
PWR on-line advanced plant simulator, kinetic modeling 7−96159
response matrix of symmetric nodes with absorber rods 7−135391
simulation methods in nuclear engineering, conf., Montreal, Canada, Oct. 1986 7−95106
subcritical reactivity, spatial effects in frequency-domain quantities 7−102939
synthetic acceleration method for weighted diamond differencing schemes 7−73823
Trench Fast Power Reactor, fuel management calcs. using finite difference diffusion code 7−102996
TRIVAC 3D neutron diffusion code 7−96132
ultracold neutron cryogenic duct with a regeneratable D_2O-ice surface 7−121992

neutron economy *see neutron flux*

neutron effects
see also biological effects of neutrons; irradiation induced creep
A15 superconductors, neutron irrad., transition temp. and critical currents 7−105776
accelerator techniques to study irrad. damage 7−73826
Alloy 718, FBR structural material, fast neutron irrad., fracture toughness 7−86328
alloy 718, neutron irrad., fatigue crack propag., 650°C 7−100345
amorphous alloys, thermally embrittled, restoration of ductility under neutron irrad. 7−78092
austenitic alloys, irradiation induced microstructural evolution rel. to mech. props., survey 7−69770
Canadian research on fusion reactor materials, review 7−141309
coherent backscattering, multiple scatt. effects and cross sections 7−113319
conference on graphite reactor component structural design and integrity, Tokai, Japan (Sept. 1986) 7−140378

neutron effects continued
diamond, synthetic, N isotope effects on defect centre spectras 7−119030
fusion reactor first wall strength anal. *(Japanese)* 7−96309
global radiation damage data eval. for homogeneous amorphous structure materials 7−124340
graphite, neutron irradiated, in ditolylmethane organic coolant, changes in physicomechanical props. 7−141144
graphite, porous struct., changes during neutron irrad. 7−84037
graphite, recrystallised, rad. stability 7−84036
graphite HCB-18, potential first wall material, neutron radiation effects on thermal shock resistance/toughness 7−138821
graphite IG-110, fine-grained isentropic, high temp. neutron irradiation effects, reactor appls. 7−142844
graphite IG-11, neutron irradiated, degradation of thermal shock resistance and fracture toughness 7−138821
HTGR fine-grained isotropic graphite, fatigue behaviour 7−141180
HTGR graphite, radiation effects on props. 7−141176
imperfect crystals, neutron irrad., high-temp. annealing stages 7−69768
Inconel 600, neutron irrad., microstruct., precip., swelling 7−84039
Integrity of Components research program, Phase II, safety assessment of cracked components 7−122006
low energy neutrons, distribution function with internuclear cascade 7−84077
low temp. neutron irradiation facility at Oak Ridge National Laboratory, appl. for radiation effects studies 7−103316
mesogenic cholesteryl esters, effect of neutron irradiation 7−111381
metals, neutron irrad., defect struct. development, cascade energy overlapping 7−104851
metals and alloys, low temperature neutron irrad., defects, diffuse X-ray scatt. studies 7−98260
metals and alloys, neutron irrad. cascade damage point defect processes 7−104849
mice irradiations in mixed n-γ fields, dosimetry and biological results 7−78998
multilayer interference systems, neutron energy bands 7−82450
nonrelativistic particles, depolarisation, isotropic nonmagnetic substance 7−143419
optical fibre, radiation induced time depend. attenuation 7−68873
piezoceramics, radiation resistance in reactor environment, electrical props., core sensing element material 7−77464
polymer matrix composites, neutron irrad. at 5 K and room temp., absorbed-dose calc. 7−76214
polymer matrix composites, neutron irrad. at 5 K and room temp., mech. prop. degradation 7−76215
quartz, polymorphic α-β transform. under neutron irrad., spectral studies 7−104847
quartz, relaxation ultrasonic attenuation, two-level systems in neutron irradiated quartz, influence of heat treatment 7−84143
quartz, twinning, effect of neutron and gamma irradiation 7−69715
reactor graphite, thermal shock resistance and fracture toughness degradation, neutron irradiation effects 7−141168
reactor graphite containing green coke filler, irradiation dimensional stability 7−141178
SIENA, spectrum tailoring device for materials irradiation tests 7−141290
solid solutions, binary metallic, annealed, plastic deformed and neutron irradiated, local order 7−144431
steel, austenitic, stainless, 316L, mechanical props., irrad. effects 7−141275
steel, austenitic stainless, creep, in-reactor stress to rupture, failure rel. to irrad. 7−67910
steel, austenitic stainless, miniaturisation and irrad. effects on mech. props. 7−69772
steel, austenitic stainless, neutron irrad., appl. for use in NET 7−69480
steel, austenitic stainless, neutron irrad., long term thermal cycling resist., strength and ductility 7−113701
steel, austenitic stainless, neutron irrad. creep, void swelling 7−86269
steel, austenitic stainless, phase comp., fusion reactor first wall appl., liq. Li compatibility 7−141264
steel, Cr-Mo-V-Nb(-w), reactor irrad., ageing, impact props. rel. to Ni doping 7−117977
steel, martensitic, neutron irrad., appl. for use in NET 7−69480
steel, martensitic stainless, neutron irrad., effect on mech. props. 7−71257
steel, Mo-Ni, for reactor pressure vessels, segregation behaviour under neutron irradiation *(German)* 7−135439
steel, Mo-Ni-Mn, press. vessel, neutron irrad., fracture toughness and mech. props. 7−111680
steel, reactor pressure vessel, irradiation embrittlement and postirradiation annealing study 7−89621
steel, stainless, creep, neutron and deuteron irrad. induced 7−141291
steel, stainless, neutron irrad., creep and creep fracture props. 7−71256
steel, stainless, neutron irrad., microstruct., precip., swelling 7−84039
steel plate, neutron irrad., spectral meas. 7−137417
steel structure and welded joint reliability, neutron damage assessment *(Hungarian)* 7−122004
tourmaline crysts., elastic consts., thermal neutron irrad. effects study 7−117979
transition metals, fast neutron irrad., low temp., defects, X-ray diffr. studies 7−104852
ultracold neutron beam production using super-thermal/Doppler shift neutron sources 7−68126
VHTR fuel irradiation tests in the JMTR OGL-1 in-pile loop, fission product retention 7−67918
Zircaloy cladding, in-reactor creepdown in LWRs, regression model, development and assessment. 7−109278
Zircaloy-2, reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
Al alloys, neutron effects in fusion reactor breeding blanket 7−89718
Al, fast neutron irrad., void hyperlattice obs. 7−117978
Al, microstructure var. caused by He generation rate and other irrad. parameters 7−69771
Al, proton and neutron irrad., vacancy-gas agglomerates 7−98261
Al-Ag(Zn) dilute alloys, neutron irrad., defect distrib., X-ray scatt. studies 7−91659
Al_2O_3-Br_2O-SiO_2 electroceramic, crystalline and glassy phases, mechanical props., neutron irrad. effects study 7−84038
Al_2O_3-SiO_2 electroceramic, crystalline and glassy phases, mechanical props., neutron irrad. effects study 7−84038
Be, neutron effects in fusion reactor breeding blanket 7−89718
CaF_2:Tm detectors, radiation induced thermoluminescence 7−77664

eutron effects continued
Cu, point defect-dislocation interactions following pulsed neutron and electron irradiations 7−76198
Cu, tensile props, neutron irrad. effects 7−141281
Cu-Ge-Al dilute alloys, neutron irrad., high-damage regions, TEM studies 7−104850
CuCrZr, tensile props, neutron irrad. effects 7−141281
α-Fe alloys, irradiated, exptl. criteria for two-interstitial annealing mechanism 7−106549
α-Fe, decoration of vacancies by C atoms, internal friction peaks 7−104798
Fe, film, interference neutron effects, tunnelling 7−76216
Fe, nitride precipitate dissolution by low-dose neutron irrad. 7−118108
Fe-Cr-Mn(-Ni), neutron irrad., void swelling, phase stability 7−86132
Fe-Cr-Mo, neutron irrad., dislocation struct. rel. to irrad. softening 7−69774
Fe-H, neutron irrad., impurity-defect interactions, positron annihilation spectra 7−84015
Fe-Mn, neutron irrad., void swelling, phase stability 7−86132
Fe-Ni-B amorphous alloy, neutron irrad., elec. resist. spinodal decomposition model 7−105518
$Fe_{80}B_{20}$ amorphous alloys, neutron irradiation, effect on mag. props. 7−70593
$Fe_{40}Ni_{40}B_{20}$ amorphous ribbons, thickness, influence on mechanical props., neutron irradiation, annealing 7−86232
$Fe_{40}Ni_{40}B_{20}$, neutron irrad. and annealed, Mossbauer spectroscopy studies 7−91661
$Fe_{78}Si_9B_{11}C_2$, metallic glasses, structural defects, Mossbauer study 7−118904
GaAs, EPR spectra of As aggregates 7−70642
GaAs, electron and neutron irradiated, reson. Raman study of intrinsic defect modes 7−70775
GaAs, fast neutron irrad., thermal recovery, EPR and elec. transport props. 7−98263
GaAs, ion-implanted and neutron-transmutation doped, rapid thermal annealing, Raman studies 7−111598
GaAs, neutron irrad. and annealed crysts., antisite defects, IR absorpt. spectra meas. 7−98264
GaAs, neutron irrad. damage, ion channelling and ESR studies 7−84040
GaAs neutron irradiated, EPR spectra of As_{Ga} aggregates, determ. 7−99573
GaAs, neutron transmutation doped, electrical props., influence of fast neutrons 7−76929
GaAs, neutron transmutation doped, electron irradiated, radiation defects, spectra 7−131573
GaAs/AlGaAs modulation doped heterostructure interface, neutron irradiation effects on electron transport 7−143562
Ge, disordered, defect and impurity band elec. cond. near metal-insulator transition 7−105566
Ge, neutrons irrad. damage, electron microscope obs. 7−98262
$HfO(NO_3)_2.2H_2O$, quadrupole interaction parameters, TDPAC meas. 7−125581
$HfTe_5$, lattice instabilities, TDPAC nuclear quadrupole interaction studies 7−111856
InAs elec. props., fast neutron irrad. effects, defect form. and annealing 7−137416
InAs, fast neutron irrad., elec. props. 7−124341
InP:Sn,S neutron transmutation doping, photothermal ionisation photocond. studies 7−124300
KH_2PO_4, thermal and dielectric props. at low temp. 7−70692
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., neutron irradiation, influence on supercond. props. *(Russian)* 7−143654
$LiAlO_2$, neutron effects, T release expts. from solid breeder materials 7−129412
$LiAlO_2$, neutron irradiated, swelling and cracking expt. 7−129415
LiF crysts., mechanical props., neutron small dose effect studies 7−69769
LiF, neutron irrad. effect on plasticity and strength characts. 7−104846
LiF, neutron irradiated crystals, dislocations, etching studies 7−131148
Li_2O, neutron irrad., T release and diffusivity in single crysts. 7−109481
Li_2O, neutron irradiated, swelling and cracking expt. 7−129415
$Li_{17}Pb_{83}$, neutron irradiated, tritium release, reaction kinetics expt. 7−122183
Li_7Pb_2, neutron irradiated, tritium release, reaction kinetics expt. 7−122183
Li_4SiO_4, neutron irradiated, swelling and cracking expt. 7−129415
Li_2ZrO_3, neutron irradiated, swelling and cracking expt. 7−129415
^6LiAl, neutron-irradiated, T production by heating 7−129895
MoCo dilute alloy, interstitial config. and dynamics under irrad., Mossbauer study 7−98123
Mo_3Si, neutron-induced disordering and amorphisation *(Russian)* 7−97925
NaCl(Tl), cryst., neutron irradiation 7−124339
$NaIO_4:^{131}I^-$, thermal and radiation annealing effects study 7−117967
$NaKSO_4$ crystals, fast neutron irrad., elec. cond. 7−111679
Nb, neutron irrad., mech. props. *(Japanese)* 7−93060
Nb-V, neutron irrad., mech. props. *(Japanese)* 7−93060
Nb_3Sn binary and alloyed multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7−131956
Nb_3Sn bronze-processed multifilamentary supercond. composite, supercond. and mech props., neutron irrad. effects study 7−131190
Nb_3Sn, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Ni, pure and dilute alloy, neutron and electron irrad., defect struct., diffuse X-ray scatt. studies 7−91656
Ni-Cr, neutron irrad., swelling, order-disorder transform. 7−86168
Si, divacancy study, neutron, proton and deuteron irradiated 7−98914
Si, electron, gamma-ray and fast neutron irrad. defects, DLTS study 7−84756
Si, fast neutron irradiated, low temp., optical and electrophysical props. 7−113232
Si, irradiated with γ-rays or neutrons, radiation defects, divacancy energy levels 7−112224
Si, monocrystalline, P doping by neutron transmutation in Harwell reactors 7−91658
Si, neutron transmutation doped high resist. state, photoinduced current transient spectra 7−112243
Si, plastically deformed, pentavacancies, EPR studies 7−106021
Si, radiation defects after high energy e, γ and n irradiation *(Czech)* 7−124332
Si:C, O, fast neutron irradiated, behaviour of optically active C 7−113233

neutron effects continued
Si:H, e, n, and γ irrad. defects props., DLTS and FTIR spectroscopy study 7−112239
Si:H, γ-ray and neutron irradiated, IR absorption bands 7−92709
Si:H, neutron irradiated, new infrared absorp. bands 7−132279
Si:Na, impurity content determ. by neutron activation anal. *(Russian)* 7−100675
Si(Au) detectors, radiation damage by fast neutron irradiation *(Chinese)* 7−81874
SiC, neutron irradiated 6H polytype, thermal stability of D_I defect lumin., influence of growth conditions 7−99902
β-SiC, reaction sintered, neutron irrad., isochronal annealing, recovery 7−119292
SiC-Si (100), neutron irradiated, defect study 7−98710
$Si_{1-x}Ge_x$, neutron transmutation doped, electrophysical parameters, ϵ_1 cond. 7−84875
$Si_{1-x}Ge_x$, neutron transmutation doped, cond. meas. 7−104768
$(SiH)_n$, polysilane, substitutional doping using thermal neutron irradiation 7−91660
SiO_2:Al(Ge)(Fe) quartz, radiational and thermal stability of cryst. struct., depend. on impurity content 7−98220
Ti, cold worked, neutron irrad. damage, annealing, dislocation loops, voids 7−104848
U, neutron irrad., point defect clustering 7−98139
UO_2, densification at low burn-up 7−81525
V-5Ti, tensile props, he and neutron irrad. effects 7−141274
V-Cr-Ti, neutron and α-particle irrad., tensile props. 7−69773
V_2Zr, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
YIG, fast neutron irrad., crystalline and amorphous struct., neutron diffr. 7−98259
ZnS, annealing of F^+ EPR centres, optical absorpt. spectral bands 7−106024
Zr and its alloys, radiation damage, review 7−137404
Zr-Nb (2.5 wt.%), reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
ZrV_2 intermetallic cpd., phase transitions effect on neutron irrad. of introduction of H *(Russian)* 7−126104

neutron electric moment
dipole moment lower bound in spontaneous CP nonconservation models 7−81189
dipole moments in superstring based models, CP violating interactions 7−81070
electric dipole moment, exptl. overview 7−67624
electric dipole moment meas. possibilities using ultracold superthermal neutron sources 7−68126
electric dipole moment searches, status 7−67625
electric polarizability and RMS radius determ. from $^{209}Bi(n,n')$, quark cloudy bag model comparisons 7−121508
improved limit for neutron electric polarizability 7−121510
measurement, ultracold neutron expt., high-voltage system description 7−81194
measurement by prolonged confinement method, CP-breaking effect 7−81192
spontaneous CP violation in the $SU(2)_L \times U(1)_Y$ model with two Higgs doublets 7−108826
strongly interacting Higgs sector, right-handed charged currents in quark sector, weak K decay 7−134928
Yukawa coupling bounds in low energy superstring models 7−108903

neutron flux
30 MeV electron linac, pulsed neutron flux and dose equivalent rate *(Chinese)* 7−122220
absolute neutron flux monitoring using activation foil method, fission chamber method and ^{10}B technique 7−68162
Boltzmann equation, monodimensional stationary solns. for ang. space-energy neutron flux 7−73821
Bruce B Unit 6 reactor, flux distrib. meas. using transportable traveling flux detector 7−103062
Caorso power plant, neutron flux meas. at vessel boundary 7−129450
closed linear one-cell function spatial approximations 7−89585
detector efficiency and flux, simultaneous meas. 7−96482
Fast Breeder Blanket Facility, fission rates and high-energy neutron fluxes 7−129178
FRENCH method in multidimensional and multigroup neutron transport theory 7−89584
HTR, graphite moderated, neutron flux distrib. and cross sections in reflector regions *(German)* 7−141217
Jordan van der Graaff accelerator, neutron skyshine and safety level 7−74262
linear transport theory in plane geometry, analytic soln. 7−67889
multilayer slab geometry, Legendre expansion of neutron flux 7−121988
Munich research reactor, core design, neutron physics *(German)* 7−129277
neutron noise analysis, multigroup diffusion model, flux fluctuations, reactor appl. 7−129237
noise analysis algorithms 7−129144
PINSTECH 14 MeV Neutron Generator Facility, neutron emission cross sections 7−109589
Plamya installation construction, expt. investigs. 7−69485
PNR flux calc., pseudo-harmonics perturbation anal. 7−73825
polymer foils, spark counting of particle tracks, neutron flux, spectrometry meas. 7−74335
PWR power plant, in-core neutron flux meas., mobile detectors *(French)* 7−73935
RB factor, adjoint flux meas. *(German)* 7−109366
reactor cell neutron flux, practical width determ., temp. depend. 7−122023
reactor neutron field determ. during control rod shift, high speed algorithm 7−73881
SIENA, spectrum tailoring device for materials irradiation tests 7−141290
simplest homogenization problem for neutron flux anal. 7−141190
SIRIUS-M, radiation streaming anal., shielding design appl. 7−103197
Sn-albedo Monte Carlo-albedo Monte Carlo coupling technique, JOYO neutron streaming appl. 7−81471
spatial noise-source reconstruction 7−73824
spectrum, plasma focus devices, solid state track recorders appl. 7−69466
subcritical reactivity, spatial effects in frequency-domain quantities 7−102939

neutron flux continued
Tokamak reactor, effect of blanket opening on nuclear charact., Monte Carlo calcs. 7−67984
tokamak-pumped lasers, exptl. results, laser transitions 7−103839
TRTR, record fusion neutron yield meas. 7−103184
ultracold neutron cryogenic duct with a regeneratable D_2O-ice surface 7−121992
utility guidelines for reactor noise analysis 7−73848
V-1 nuclear plant, neutron field and dose equivalent meas. *(Russian)* 7−81738
VVER-1000, spent fuel rod location at core edge, estimation of effects 7−141188
VVER-440 type reactor unit, neutron flux control system *(Hungarian)* 7−116541
WWER-440 fuel assembly model, gamma and neutron meas. 7−116650
WWER-440 spent fuel, specific neutron yield calcs. *(Russian)* 7−116595
Be, fusion blanket neutron multiplication props. 7−103193
^{9}Be, neutron multiplicity in fusion blanket, stochastic processes 7−135544
D-T fusion neutronics, multi-group transport calc. accuracy, blanket design 7−109483
D_2 plasma focus, neutron energy spectrum, time resolved meas. 7−69470
Zr, Gd content determ. using activation anal. technique 7−144769

neutron flux density *see neutron flux*

neutron interactions *see neutron-nucleus reactions; nucleon-nucleon interactions*

neutron magnetic moment
effect on β-decay in EM field 7−89562
magnetic dipole moment, exptl. overview 7−67624
QD and pion corrections, chiral bag model, anomalous quark moments 7−128894

neutron matter *see nuclear matter*

neutron moderation
see also neutron transport theory
cold neutron sources, neutron scattering dynamics in liquid hydrogen and deuterium 7−129491
UO_2 powder, moisture meas. by neutron moderation 7−116620

neutron-nucleus reactions
for inelastic neutron-nucleus scattering, see "neutron-nucleus scattering"
see also neutron radiative capture; nucleon-nucleon interactions
7−67825
conference, Gaussig, Germany, Nov. 1985 7−72725
even-even deformed nuclei, neutron cross sections for octupole band excitation 7−67697
multilevel cross sections, pole representation, practical appl. 7−129130
oriented nuclei nuclear reactions, book contrib. 7−96050
(n,2n), 14 MeV, isomeric yield ratios for $^{89}Zr_{m,g}$, $^{109}Pd_{m,g}$, $^{141}Nd_{m,g}$, $^{143}Sm_{m,g}$ 7−102867
(n,2n), Schwinger functional method and two-particle Green fn. eqn. *(Chinese)* 7−109156
(n,2n) cross sections, shell effect, integrated preequilibrium statistical model *(Chinese)* 7−96064
(n,f), 8.5-19 MeV, associated particle identification in TCAPM cross section meas. 7−81905
(n,f), even-even nuclei, fission charact. and parity effects 7−96127
(n,f), magnet analysis appl. in the time-correl. associated particle method 7−81467
(n,p), 50-200 MeV, nucl. struct. probe appl. 7−121840
(n,x), charged particle production at intermediate energy 7−96071
(n, X), spontaneous and laser-induced reactions, relation between cross sections 7−67839
(n,X) on A=87-140, 3P size resonance in p-wave neutron strength function 7−67788
^{27}Al(n, 2n), total cross section near threshold, cross section at DT energies 7−109180
^{27}Al(n,2n), cross sections near 14 MeV, meas. and partial statistical model comparison 7−102883
^{27}Al(n,nX), emission cross sections at 7 MeV incident energy 7−81384
^{27}Al(n,p)^{27}Mg, 13.4-14.83 MeV, cross section meas. 7−116416
Al(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
^{241}Am (n,f), 0.08-1.3 MeV, cross section meas., intermediate structure obs. 7−121970
^{241}Am(n_{th},tαf), t-α energy characteristics, emission probabilities 7−73810
^{243}Am(n,f) 1.1-6.8 MeV, cross section ratio relative to ^{235}U 7−135382
^{10}B(n, p), thermal n cross section meas. 7−116405
^{9}Be(n,t), 14.6 MeV, cross sections and ang. distribs., fusion reactor appl. 7−67826
^{209}Bi(n,nX), emission cross sections at 7 MeV incident energy 7−81384
^{12}C(n,X), total cross section meas. in ^{13}C resonance region 7−96076
^{12}C(n,α), differential cross section meas., use of low background telescope system 7−81891
^{12}C(n,pdt), 300-500 MeV, inclusive cross sections, quasi-two-body scaling model anal. 7−129054
^{48}Ca(n,X), total and capture cross-sections, ^{49}Ca level structure, nucleosynthesis relevance 7−81382
^{48}Ca(n,p), 200 MeV, Ikeda sum rules for Gamow-Teller transitions 7−109165
^{252}Cf(n,n'f), neutron spectra, statistical model anal. 7−73804
^{A}Cm(n,f), A=243,244,246,248, fast-neutron fission product yields, mass distrib. calcs. 7−129117
^{245}Cm(n, f), thermal neutron induced, cold and hot fragmentation 7−121967
C(n,X), 4.2 GeV/c, secondary π^- average multiplicities, momenta and ang. charact. 7−67841
C(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
^{50}Cr(n,2n)^{49}Cr, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{52}Cr(n,X), cross sections, optical model anal. *(Russian)* 7−81396
^{52}Cr(n,2n), 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{52}Cr(n,p)^{52}V, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{A}Cu(n,α), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{A}Cu(n,d), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{A}Cu(n,p), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
Cu(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
^{54}Fe(n, α), cross section and excitation function meas. 7−73756
^{54}Fe(n,p)^{54}Mn, 298 MeV cross sections, β^+ Gamow-Teller strength functions 7−121733
Fe(n,X), 15-150 MeV, deep penetration expts. 7−89573

neutron-nucleus reactions continued
^{2}H(n,X), three nucleon models predictions anal. 7−67811
^{2}H(n,2n), 8.6 MeV, differential cross sections *(Chinese)* 7−116403
^{2}H(n,2n), breakup configuration study, kinematically complete S-curve 7−109183
^{2}H(n,2np), 15.8 MeV, diff. cross section meas., nn interaction parameters 7−121829
^{2}H(n,nn), Faddeev calcs. and on-shell props. 7−67821
He(n,X), Los Alamos expts. 7−67820
H(n,X), Los Alamos expts. 7−67820
^{A}Ir(n, 2n), A=191, 193, X-ray spectrometry for cross section meas. 7−73757
^{39}K(n, 2n)^{38g}K, 14.4-18.2 MeV, partial neutron cross sections 7−109161
^{39}K(n,n'p)^{38}Ar, production cross-section determ. 7−73765
^{39}K(n,p)^{39}Ar, production cross-section determ. 7−73765
^{41}K(n, α)^{38}C, 14.4-16.3 MeV, partial neutron cross sections 7−109161
^{41}K(n, p)^{41}Ar, 14.4-17.3 MeV, partial neutron cross sections 7−109161
^{139}La(n,α), cross section meas., E_n=14-15 MeV 7−109184
^{139}La(n,p), Z 7−109184
^{139}La(n,t), cross section meas., E_n=14-15 MeV 7−109184
^{7}Li(n,n't)^{4}He, 7.9-10.5 MeV, cross section meas. 7−129037
Mo(n,X), slow neutrons, scatt. and absorption, cross sections, resonance parameters 7−67845
^{14}N(n,α)^{11}B, 12.2, 14.1, 18 MeV, α-angular distrib., DWBA, coupled channel anal. 7−96083
^{93}Nb(n, 2n), cross section and excitation function meas. 7−73756
^{93}Nb(n,nX), emission cross sections at 7 MeV incident energy 7−81384
^{93}Nb(n,p), exciton distrib. fns. and hybrid precompound decay model 7−96077
^{A}Ni(n,xα), 9.4, 11 MeV, A=58, 60, cross sections and spectra, Hauser-Feshbach anal. 7−67825
^{58}Ni(n, 2n), cross section and excitation function meas. 7−73756
^{60}Ni(n,p), 18.5 MeV, total proton emission cross section meas., ang. distribs. 7−81400
np capture, E_n=61 MeV, differential cross section meas. 7−67830
^{237}Np(n,2n), cross-section meas. in BN-350 reactor core 7−141045
^{237}Np(n,f), effective cross section meas. *(Russian)* 7−102925
^{207}Pb(n,X), E≤700 keV, resonance structure in the ^{207}Pb+n system 7−121618
Pt(n, xn), cross section and excitation function meas. 7−73756
^{A}Pu(n, X), A=239, 240, 0.02-0.03 eV, total cross sections, transmission meas., Bayesian method, Doppler broadening 7−129040
^{A}Pu(n_{th},tαf), A=239, 241, t-α energy characteristics, emission probabilities 7−73810
^{239}Pu(n,X), resolved and unresolved resonance region, resonance parameters 7−73770
^{239}Pu(n,f), 4.8-18.8 MeV, absolute fission cross section meas. using time-correl. associated particle method 7−81468
^{239}Pu(n,f), cross section energy depend., quasi-molecular theory 7−116537
^{239}Pu(n,f), multiplicity meas. as fn. of n energy, safeguards appl. 7−102927
^{239}Pu(n_{th},f), odd even effects, low energy, statistical pair breaking 7−129115
^{240}Pu, 1.056 eV resonance parameters, transmission meas., Bayesian method, Doppler broadening 7−129040
^{241}Pu(n,f), E≤100 eV, cross sections, R-matrix analysis 7−129118
^{241}Pu(n,f), fragments, correlated mass, energy and charge distribs. 7−121975
^{241}Pu(n,f) statistical model, Fermi gas model, fragment angular momenta, isomeric yield ratios 7−129122
^{33}S(n,α), E_n≤1 MeV, cross section meas., resonance anal. 7−129036
^{28}Si(n,α)$_2$ appl. to neutron spectra meas. *(Chinese)* 7−96065
^{28}Si(n,p)^{28}Al, 13.4-14.83 MeV, cross section meas. 7−116416
^{33}Sn(n,X), 10 keV-2 MeV, total cross section meas., resonance structure, optical model anal. 7−129035
^{181}Ta(n, 2n), cross section and excitation function meas. 7−73756
Ta(n,X), 4.2 GeV/c, secondary π^- average multiplicities, momenta and ang. charact. 7−67841
^{A}Te(n,x), A=122, 124, 126, 128, 130 total cross -sections, optical model anal. 7−81393
^{230}Th(n,X), coriolis interaction and variable reflection asymmetry in fission vibrational resonances 7−129120
^{232}Th(n,f), 14.7 MeV, Rh, Ag, In and Sb cumulative and independent yields, charge distrib. *(Chinese)* 7−121966
^{232}Th(n,f), 5-11 MeV, cross section meas. 7−116530
^{232}Th(n,γ), 5-10 MeV, cross section meas., comparisons with ^{235}U fission cross sections 7−141105
^{A}U, A=234, 235, 238, neutron resonance states, mean-square charge radii meas. 7−73702
^{A}U(n,f), A=234, 235, 236, effective cross section meas. *(Russian)* 7−102925
^{A}U(n,f), A=235, 238, multiplicity meas. as fn. of n energy, safeguards appl. 7−102927
^{A}U(n,f), A=235,238, cross section energy depend., quasi-molecular theory 7−116537
^{A}U(n_{th},f), A=233,235, odd even effects, low energy, statistical pair breaking 7−129115
^{A}U(n_{th},tαf), A=233, 235, t-α energy characteristics, emission probabilities 7−73810
^{232}U(n,f), 0.06-7.4 MeV, fission cross section meas. 7−141106
^{235}U(n, X), 0.02-0.03 eV, total cross sections, transmission meas., Bayesian method, Doppler broadening 7−129040
^{235}U(n,f), 1.88 MeV, absolute meas. of fission cross section 7−81466
^{235}U(n,f), 4.45, 18.8 MeV, absolute fission cross section meas. using time-correl. associated particle method 7−81468
^{235}U(n,f), 5-10 MeV, cross section meas., comparisons with ^{232}Th fission cross sections 7−141105
^{235}U(n,f), fission chamber meas. for encapsulated ^{252}Cf sources 7−102924
^{235}U(n,f), fission cross section standards measurements, detectors 7−81465
^{235}U(n,f), fission yields and charge distrib. 7−116534
^{235}U(n,f), identification of new neutron-rich isotopes $^{70-74}$Ni and $^{74-77}$Cu 7−135380
^{236}U(n_{th},f), charged particle associated fission, multiparameter meas. 7−73809
^{238}U(n, f), fission product absolute yields 7−109243
^{238}U(n, xn), 1-70 MeV, direct channel for U isotope prod. in nuclear fuel 7−102987
^{238}U(n,f), 5-11 MeV, cross section meas. 7−116530
^{238}U(n,f), fast neutrons, fission products yield, gamma-ray spectra meas. 7−116531

neutron-nucleus reactions continued
^{238}U(n,f), fission product yield meas., γ-ray emission and half-lives 7−109247
^{238}U(n,n'X), 14.2 MeV, secondary neutron spectra meas. *(Chinese)* 7−96123
^{51}V(n, α), cross section and excitation function meas. 7−73756
^{A}Zr(n,α), A=90,91, α-spectra meas., pick-up and knock-on theories 7−116418
^{90}Zr(n,d)^{89}Y, ang. distrib. meas. 7−121852
^{90}Zr(n,p), E_n=200 MeV, calculated spectra, microscopic model using random phase approx. 7−141053
^{90}Zr(n,p)^{90}Y, isovector monopole and quadrupole resonances 7−135331

neutron-nucleus scattering
see also nucleon-nucleon scattering
even-even deformed nuclei, neutron cross sections for octupole band excitation 7−67697
oriented nuclei nuclear reactions, book contrib. 7−96050
time party violation, aligned nuclei, T-odd, p-even correlation, experimental methods 7−116413
(n,n), 21.6 MeV, ang. distribs., microscopic optical model anal. 7−116419
(n,n), 50-200 MeV, nucl. struct. probe appl. 7−121840
(ñ,ñ), on A=112-126, 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
(n,n'), A=40-238, reduced n widths for s-resonances *(Russian)* 7−102887
(n,n'), exciton model, multi-step energy correl., double-differential cross sections calcs. *(Chinese)* 7−116367
(n,n'), P-nonconservation effects on scattering 7−135314
(n,n'), PNC and TNC neutron spin rotations 7−67531
(n,n'γ), Doppler shift attenuation method for state lifetimes from two targets 7−81401
(n,n'γ), low-spin levels of ^{136}Ba, ^{138}Ba, ^{140}Ce, gamma-ray meas. 7−109045
(ñ,n'γ), nuclear orientation, polarization density matrix anal. 7−121831
^{27}Al(ñ, n), spin-spin interaction and optical pot. 7−121850
^{109}Ag(n,n'), temperature shift meas. of neutron resonances 7−73771
^{27}Al(n,n), elastic and inelastic scatt. at 7 MeV incident energy 7−81384
^{27}Al(n,n),(ñ,n), 14-40 MeV, cross sections, optical model anal. 7−96067
Al(n,n), small angle scatt. at 14.2 MeV 7−116420
^{9}Be(n,n) slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{209}Bi(n,n'), 1-90 eV, cross section neutron electric polarizability and RMS radius meas. 7−121508
^{209}Bi(n,n), elastic and inelastic scatt. at 7 MeV incident energy 7−81384
Bi(n,n), small angle scatt. at 14.2 MeV 7−116420
Br (n,n'), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412
^{12}C(n,n'γ), linear and circular γ-ray polarization calcs. 7−96074
^{12}C(n,n'), above 14 MeV, cross sections, errors in ENDF/B-V evaluation, kerma-factor calcs. 7−121836
^{12}C(n,n), 15.6-16.5 MeV, ^{13}C resonance search at 20 MeV using anal. power meas. 7−96044
^{40}Ca(N,N), N=p or n, 11-48 MeV, diff. cross sections, optical anal. 7−67816
^{40}Ca(n,n'), 21.7, 25.5 MeV, diff. cross sections, deformation, moments, CC anal. 7−67817
^{40}Ca(n,n'), optical model parameters study *(Russian)* 7−102888
^{114}Cd(n,n'γ), $2_3^+ \rightarrow 2_1^+$ transition, multipole mixing parameter determ. 7−135318
Cd(n,n), small angle scatt. at 14.2 MeV 7−116420
Cu(n,n), small angle scatt. at 14.2 MeV 7−116420
Cu(n,n'), 14.9 MeV, cross section meas. using sphere transmission technique *(Chinese)* 7−109158
^{A}Dy(n,n'), A=161, 163, temperature shift meas. of neutron resonances 7−73771
Fe(n,n), small angle scatt. at 14.2 MeV 7−116420
^{A}Ga(n,n) A=69, 71, slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{1}H(ñ, n), 477 MeV, anal. powers, isospin violating charge symmetry breaking 7−121849
^{2}H(ñ, n), 10-14 MeV, vector anal. power comparison to calcs. 7−96047
^{2}H(n,2n), breakup configuration study, kinematically complete S-curve 7−109183
^{2}H(ñ,n'), low-energy scatt. by local pot., Faddeev calcs. and t matrices 7−67819
^{2}H(n,n), 8.6 MeV, differential cross sections *(Chinese)* 7−116403
^{2}H(n,n), doublet scattering, effective-range expansion, interaction profiles, slope parameter, scatt. length *(German)* 7−129048
^{2}H(n,n), E_n<20 MeV, total and differential cross sections, Paris NN potential anal. 7−67829
^{2}H(n,n), Faddeev calcs. and on-shell props. 7−67821
^{2}H(n,n), three-body calcs. using Paris two-nucleon pot. 7−67822
^{4}He(n,n), centre-of-mass effects in resonating group theory 7−116408
^{4}He(n,n), low energy, ^{5}He resonant states, L.S splitting, microscopic calcs. 7−121772
^{4}He(n,n), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
^{4}He(n,n), multichannel scatt. by negative energy Weinberg states 7−67772
He(n,n), Los Alamos expts. 7−67820
H(n,n), Los Alamos expts. 7−67820
^{41}K(n,n')^{41}K, γ-ray spectra, energy and spin dependence 7−81399
k(n,n'), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412
Li fusion reactor blanket materials, multiple neutron scatt. effects 7−96307
^{7}Li(n, n), thermal n, differential elastic scatt. cross sections 7−73755
^{A}Li(n, n'), 6-14 MeV, A=6, 7, diff. cross sections 7−129038
^{25}Mg(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
Mo(n,X), slow neutrons, scatt. and absorption, cross sections, resonance parameters 7−67845
Mo(n,n), small angle scatt. at 14.2 MeV 7−116420
Na, neutron cross section validation 7−129284
^{93}Nb(n,n'), exciton distrib. fns. and hybrid precompound decay model 7−96077
^{93}Nb(n,n), elastic and inelastic scatt. at 7 MeV incident energy 7−81384
Pb fusion reactor blanket materials, multiple neutron scatt. effects 7−96307
^{207}Pb(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051

neutron-nucleus scattering continued
^{208}Pb(ñ,ñ), 2.7 MeV, polarization anal. power meas., optical model comparisons *(Chinese)* 7−96059
Pb(n,n), small angle scatt. at 14.2 MeV 7−116420
^{105}Pd(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{194}Pt(n,n), 4.55 MeV, diff. and total cross sections, nuclear dynamics effects 7−121838
^{103}Rh(n,n'), temperature shift meas. of neutron resonances 7−73771
^{32}S(n,n),(ñ,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{28}Si(n,n')^{28}Si, ^{29}Si unbound states structure from neutron resonance spectroscopy 7−129047
^{28}Si(n,n),(ñ,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{29}Si(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
Si(n,n'), 14.9 MeV, cross section meas. using sphere transmission technique *(Chinese)* 7−109158
^{152}Sm(n,n'), triaxial shape study, Davydov-Filippov model anal. 7−121601
^{152}Sm(n,n'γ), level excitation, spin-parity assignments 7−121554
^{154}Sm (n,n'γ), rotational bands, γ-spectra study 7−121822
^{159}Tb(n,n')^{159}Tb, low-lying state determ., γ-ray ang. distribs. 7−109160
^{A}Te(n,n)^{A}Te, A=122, 124, 126, 128, 130 total cross-sections, optical model anal. 7−81393
^{232}Th(n,n'), 185, 550, 200-2500 keV, rotational level excitation fns. and angular distrib. 7−116421
Ti(n,n), small angle scatt. at 14.2 MeV 7−116420
^{A}Tl(n,n), A=203, 205, slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{169}Tm(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{A}U(n, n), A=235, 238, cross sections, ground state reorientation, coupled channels calcs. 7−116407
^{235}U, bound-coherent-neutron scatt. length 7−81360
^{238}U(n,n'), 14.2 MeV, double differential cross section meas. 7−121853
^{238}U(n,n'), double differential cross section and u spectra, statistical calcs. *(Chinese)* 7−96062
^{238}U(n,n), small angle cross sections at 14.2 MeV *(Chinese)* 7−109157
^{238}U(n,n), small angle scatt. at 14.2 MeV 7−116420
^{51}V(n,N'), spin-dependent scatt. length meas. 7−109177
W(n,n), small angle scatt. at 14.2 MeV 7−116420
^{89}Y(n,n')^{89}Y, microscopic distorted-wave approx. study 7−129046
^{67}Zn(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051

neutron oscillations
detection problems 7−67551
mixing times in ^{16}O, statistical uncertainty 7−108825
period for ñn oscillations, exptl. overview 7−67624

neutron polarisation
electric polarizability and RMS radius determ. from ^{209}Bi(n,n'), quark cloudy bag model comparisons 7−121508
Larmor precession as energy analyser, transmission spectrometer 7−135733
Br (n,n'), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412
$CeCu_6$, heavy fermion cpd., mag. correlations 7−70516
$CsCoCl_3$, spin configuration study by neutron polarisation analysis 7−85247
Fe-Ag neutron-polarising supermirrors 7−74827
k(n,n'), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412

neutron production
capture and production in electric field 7−141384
^{13}C(α,n)^{16}O in evolved stars, constraints on models 7−140091
^{165}Ho(^{14}N,nX), 35 MeV/N, neutron emission, energy and ang. distribs. 7−73787
^{165}Ho(α, xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
^{14}N(γ,n), 12.5-15.5 MeV, absolute cross section meas. 7−81366
^{93}Nb(α, xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
O_2 determination, in absence of external monitoring of electron flow density *(Russian)* 7−81821
^{181}Ta(e,n) threshold-30 MeV, nuclear size effects in virtual photon theory, cross section 7−102863
^{51}V(α,xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893

neutron-proton interactions
see also neutron-proton scattering
ñp, 100-500 MeV/c, total and annihilation cross sections meas. 7−128909
np→ad, heavy axion prod. limits, isovector transition decaying into e^+e^--pairs 7−135148
np→de^+e^-, T-invariance violation, form factors and threshold amplitudes 7−108932
np→dγ, T-invariance violation, form factors and threshold amplitudes 7−108932
np→dγ reaction and amplitudes, polarisation, theory testing 7−128907
np interaction, charge symmetry breaking effects, consistent eval., one-boson-exchange pot. 7−135147
np→π⁻pp, differential and total cross-sections 7−95935
p̄n, σ(p̄n)/σ(p̄p) determ. from ^{4}He(p̄,X) data 7−102764
Q^2Q^2 (1480) evidence in p̄n and γγ studies 7−102765

neutron-proton scattering
see also neutron-proton interactions
analyzing power and charge symm. violation, one-boson exchange model 7−121530
np charge exchange scatt., one-pion-exchange model with quark exchange 7−89514
np elastic scatt., up to 1 GeV, present expt. status 7−116189
p̄n free forward elastic scatt., 400 to 1100 MeV, cross section and analyzing power meas. 7−121534
p̄n̄ inelastic scattering, O.63-1.08 GeV, spin dependent total cross section difference meas. 7−95930
p̄n→np, 25 MeV, analyzing power meas. 7−121533
p̄n̄→np, isoscalar part of interaction 7−95936
np→np, unitary model of πNN dynamics 7−67640
p̄n scattering, 17-50 MeV, analyzing power, cross section and spin correlation meas. 7−121532

neutron radiative capture
collective processes, shell effects on radial coupling, direct-semidirect model 7−102876

neutron radiative capture continued
light nuclide radiative capture, microscopic studies including collective and cluster degrees of freedom 7−121785
oriented nuclei nuclear reactions, book contrib. 7−96050
s-process nucleosynthesis, neutron capture cross sections 7−95114
stellar neutron capture nucleosynthesis, occurrence during core He burning in massive stars 7−107805
(n,γ), 15-20.5 MeV, isomeric yield ratios for $^{89}Zr_{m,g}$, $^{109}Pd_{m,g}$, $^{141}Nd_{m,g}$, $^{143}Sm_{m,g}$ 7−102867
$(\tilde{n},\gamma)$, P violation, review 7−67717
$^{40}Ar(n,\gamma)$, capture cross-section meas. and s-process anal. from ^{34}S to ^{42}Ca 7−72268
$^{197}Au(n,\gamma)$, cross sections, γ-spectra calcs. 7−129039
$^{10}B(n,\alpha)^7Li$ reaction in cells and tissue, Monte Carlo simulation of biological effect and implication for B neutron capture therapy 7−126942
$^{12}C(n,\gamma_0)^{13}C$, 6.5-18.5 MeV, excitation fn., cross section meas. in giant dipole resonance region 7−67828
Ca, primary electric dipole γ-rays from slow-neutron capture 7−129043
$^{40}Ca(n,\gamma)$, collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
$^{40}Ca(n,\gamma)$, nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
$^{52}Cr(n,\gamma)$, nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{133}Cs (n,γ), 5.9, 22.6 eV, ^{134}Cs level scheme, J^π and transitions 7−135180
$^{162}Dy(n,2\gamma)^{163}Dy$, γ-transitions in ^{163}Dy 7−121704
$^{164}Dy(n,\gamma)$, level scheme 7−109041
$^{167}Er(n,2\gamma)$, E2 strength fns. and radiative widths 7−96072
$^{A}Eu(n,\gamma)$, A=151,153, 3-2200 keV, cross section meas., optical model anal. 7−73766
$^{A}Eu(n,\gamma)$, A=153,154,155, cross section meas. for ^{153}Eu triple n capture 7−116402
$^{54}Fe(n,\gamma)$, γ-ray obs. from low-lying resonances 7−81383
$^{56}Fe(n,\gamma)$, 1.15 keV, self-calibrated capture meas. using thick/thin samples 7−73768
$^{56}Fe(n,\gamma)$, γ-ray spectrum, exciton model 7−67831
$^{56}Fe(n,\gamma)$, nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
$^{A}Gd(n,\gamma)$, A=152, 154, up to 2700 eV, resonance parameters, s-wave spacing, radiation width, capture integral 7−121835
$^{74}Ge(n,\gamma)$, nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
$^{1}H(\tilde{n},\gamma)$, 6.0, 13.43 MeV, anal. power for n-p radiative capture 7−81389
$^{1}H(\tilde{n},\gamma)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^{2}H(n,\gamma)^{3}H$, polarisation correlations 7−81380
$^{115}In(n,\gamma)^{116m}In$, 144, 565 keV, cross section meas. *(Chinese)* 7−96060
^{195}Ir, low lying positive parity states following double neutron capture 7−81271
$^{83}K(n,\alpha)$, ^{84}Kr gamma-gamma directional correl. meas., spin-parity, multipole mixing ratios 7−135247
$Kr(n,\gamma)Kr$, stellar cross-sections in s process 7−109166
$^{139}La(n,\gamma)$, parity violation, helicity depend. 7−116404
$^{A}Mo(n,\gamma)$, A=95-98, Maxwellian-averaged neutron capture cross sections 7−115222
$^{143}Nd(n,2\gamma)$, E2 strength fns. and radiative widths 7−96072
$^{143}Nd(n,\gamma)$, excited states characts. from γ-ray spectroscopy 7−121824
Ne-O-F cycle of reactions in stellar interiors 7−88385
$^{A}Ni(n,\gamma)$, A=58,60, resonance capture, γ-ray spectra, valence model comparisons 7−116422
$^{64}Ni(n,\gamma)$, nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
$^{105}Pd(n,\gamma)$, M1 giant resonance observation by averaged γ-ray intensity 7−116359
$^{105}Pd(n,\gamma)$, 2-24 keV, M1 giant resonance obs., γ-strength fns. 7−108993
$^{28}Si(n,\gamma)$, 565 keV, partial radiative widths, for neutron resonance, particle-vibr. coupling model 7−73743
$^{A}Sm(n,\gamma)$, A=144,145, thermal neutron cross section meas., resonance integrals 7−73767
$^{181}Ta(n,\gamma)$, cross sections, γ-spectra calcs. 7−129039
$^{99}Tc(n,\gamma)$, 3-100 KeV, Maxwellian-averaged neutron capture cross sections 7−115222
$^{48}Ti(n,\gamma)$, nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
$^{235}U(n,\gamma)^{236}U$, mean-square charge radii meas. of compound-nucleus states, double-humped barrier model anal. 7−73703
$^{236}U(n,\gamma)$, 0.96−3.3 MeV, cross section determ. 7−141044
^{238}U (n,γ), high resolution cross section meas., E_n=1-100 keV 7−102885
$^{174}Yb(n,2\gamma)$, E2 strength fns. and radiative widths 7−96072

neutron radiography
computer tomography scanner, NDT appl. *(German)* 7−71455
filter behaviour evaluation 7−119482
microinclusion analysis by neutron-activation autoradiography 7−106854
simultaneous dynamic neutron and gamma radiography 7−126380
thermal neutron radiographic testing, standard indicators for image quality determ. 7−86535
Cd, neutron radiography expts. at ANL 7−78450
NbH_x, coherent phase transition, neutron radiography, computerised tomography 7−98217

neutron reflection
thermal-neutron source, impulsive, moderator reflector problem 7−141365
ultracold neutron cryogenic duct with a regeneratable D_2O-ice surface 7−121992

neutron scattering *see neutron-nucleus scattering; nucleon-nucleon scattering*

neutron scattering (crystallography) *see neutron diffraction; neutron diffraction crystallography; neutron diffraction examination of materials*

neutron sources
averaged resonances capture studies at Omega West reactor 7−116742
capture and production in electric field 7−141384
cold sources, neutron scattering dynamics in liquid hydrogen and deuterium 7−129491
conf., Gaithersburg Maryland, USA, Nov. 1983 7−66838
generator, O_2 determ., in absence of external monitoring of electron flow density *(Russian)* 7−81821
High Flux Reactor, ILL, cold neutron facilities 7−68125
ISIS, the accelerator based neutron source at RAL 7−116765
light ion accelerator system for neutron generation 7−89801
low temp. neutron irradiation facility at Oak Ridge National Laboratory 7−103316
MAPLE research reactor, beam tube performance assessment 7−89860

neutron sources continued
monoenergetic polarised neutrons, flux and polarisation 7−135709
NBS cold neutron research facility 7−68124
neutron source, reflector effects on thermal neutron intensity, macroscopic total cross section 7−135701
PINSTECH 14 MeV Neutron Generator Facility, neutron emission cross sections 7−109589
plasma focus ion and neutron source design 7−69483
plasma focus neutrons for half-life meas. 7−68103
plasma focus structure by neutron pinhole camera 7−69471
polarised neutron source, POLKA 7−122299
polarized neutron reflectometer: a new instrument to measure magnetic depth profiles 7−80828
POSEIDON, plasma focus efficiency improvement diagnostics 7−69434
slow neutron production using high-speed Doppler-shifting rotor, applications 7−68127
standard 2.5 MeV source development 7−89844
superthermal UCN source, feasibility study 7−135723
thermal-neutron source, impulsive, moderator reflector problem 7−141365
ultracold superthermal neutron sources 7−68126
white neutron source from 1 to 400 MeV 7−89845
^{241}Am-Be, spontaneous fission neutron source, fluence to dose equivalent conversion factors, microdosimetric meas. 7−119860
B neutron capture therapy, accelerator neutron source for brain tumour treatment 7−114486
^{252}Cf, spontaneous fission neutron source, fluence to dose equivalent conversion factors, microdosimetric meas. 7−119860
H and light element profiling in solid ^{3}H targets for neutron prod. 7−106864
$^{3}H(d,n)^{4}He$, neutron generator targets, d ranges with allowance for T depth distrib. 7−103312

neutron spectra
see also neutron spectrometers
α particle diagnostics using (α,n) and (α,γ) reactions 7−104453
delayed neutron precursor data for reactor appl. 7−102941
delayed neutrons, energy spectra, few-group representations 7−102938
detector foils, resonance self-shielding corrections in fast neutron spectra 7−73923
fast neutron therapy field, spectral energy measurements 7−79088
fusion neutron sources at POSEIDON plasma focus, time resolved neutron spectra 7−97804
fusion reactor design, neutron spectra calcs. using ZZFEWG 1.31/1F data set 7−96308
graphite, fast neutron spectra, meas. and Monte Carlo transport code anal. 7−89589
high level waste in borosilicate glass, ORIGEN-S model for n source spectra 7−103207
JET, D-D plasma, ^{3}He and ^{3}H ions burn up meas. 7−104374
leakage spectra from Pb slabs bombarded by 14 MeV neutrons 7−67888
neutron capture cross sections for s-process studies 7−95114
neutron energy spectra, meas. in plasma focus, time resolution 7−69469
plasma focus devices, solid state track recorders appl. 7−69466
unfolding neutron spectra from measured reaction rates *(Russian)* 7−102945
WWR-SM research reactor at KFKI, channel 182/5 neutron spectrum meas. 7−129264
$^{27}Al(^{3}He,X)$, peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
$^{197}Au(^{3}He,X)$, peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
B_4C filters for neutron spectra determ., appls. in graphite and water environments 7−135790
$^{134}Ba(^{24}Mg,nX)$, 180 MeV, neutron spectra, angular distrib. meas. 7−67882
^{252}Cf, spontaneous fission, neutron energy and angular distrib., low energy meas. 7−109248
$^{252}Cf(n,n'f)$, neutron spectra, statistical model anal. 7−73804
$^{63}Cu(^{3}He,X)$, peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
Cu(p,Xn), 100 MeV, neutron yield meas. 7−73758
D-T plasma, α particle diagnostics study 7−104452
D_2 plasma focus, neutron energy spectrum, time resolved meas. 7−69470
Fe(p,Xn), 100 MeV, neutron yield meas. 7−73758
$^{2}H(\mu^-,n)$ energetic neutron emission from muon capture, neutron spectrum 7−96030
$^{165}Ho(^{12}C,X)$, 300 MeV, precompound decay in heavy ion reactions via the hybrid model 7−96102
$^{165}Ho(^{20}Ne,X)$, 220, 292 MeV, precompound decay in heavy ion reactions via the hybrid model 7−96102
$^{127}I(\gamma,n)^{126}I$, 9.72 MeV, excited states and Q value meas., neutron spectro anal. 7−73701
$^{93}Nb(^{3}He,X)$, peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
$^{142}Nd(^{16}O,nX)$, 207 MeV, neutron spectra, angular distrib. meas. 7−67882
Pb leakage spectrum meas. using MORSE calcs. 7−103171
$^{208}Pb(p,n)^{208}Bi$, 200 MeV., neutron spectra, DWIA, finite fermi system anal. 7−121845
^{209}Pb, neutron evaporation spectra, level density parameter and temperature dependence 7−121927
$^{108}Pd(^{50}Ti,nX)$, 216 MeV, neutron spectra, angular distrib. meas. 7−67882
$^{28}Si(n,\alpha)$, appl. to neutron spectra meas. *(Chinese)* 7−96065
$Ta(\alpha,n)$, 40 MeV, neutron spectra meas. 7−81409
$^{126}Te(^{32}S,nX)$, 180 MeV, neutron spectra, angular distrib. meas. 7−67882
Th(p,Xn), 100 MeV, neutron yield meas. 7−73758
U nuclear data for fission-fusion system *(German)* 7−141311
^{A}U, A=234, 235, 238, neutron resonance states, mean-square charge radii meas. 7−73702
$^{238}U(n,n'X)$, 14.2 MeV, secondary neutron spectra meas. *(Chinese)* 7−96123
$^{238}U(n,n')$, double differential cross section and u spectra, statistical calcs. *(Chinese)* 7−96062
$^{92}Zr(\alpha,\alpha'n)$, 109 MeV, n-α' coincidence meas., reaction mechanism study 7−129064

neutron spectrometers
collimator design, using Monte Carlo code MOTSY, 14 MeV neutron distrib. 7−129508
collinear fragment-neutron coincidence technique 7−116767

neutron spectrometers continued
CR-39 detectors, electrochemically etched, passive fast-neutron spectrometer 7−135760
curved-crystal three-axis spectrometers, optics 7−83587
double-differential neutron emission cross-section meas. 7−109592
fast neutron spectrometer using single wafer Si dE-E detector 7−74332
fusion plasma diagnostics systems 7−89721
highly stable fast-neutron time-of-flight spectrometer 7−81845
Larmor precession as energy analyser, transmission spectrometer 7−135733
NE912 ^{6}Li glass spectrometer for low energy fission neutrons 7−81848
resonance spin echo spectrometer for quasi-elastic and inelastic scatt. 7−129509
spherical Pulse Ionisation Chambers for DD-fusion plasma neutron spectroscopy *(German)* 7−74381
time of flight high resolution meas. with CYRIC 7−109593
^{3}He ionisation chamber, anal. of delayed neutron energy spectra 7−74372
^{3}He neutron spectrometers, response function 7−122302
^{3}He spectrometer, influence of neutron scatt. in walls. 7−116771

neutron stars
see also pulsars
A0535+26, X-ray pulsar, new X-ray outburst obs. (1987 February 20) 7−80041
A 0535+26, binary X-ray pulsar, search for UV variability 7−88537
3A 1907+09, orbital charact., neutron star rot. charact. and pulse averaged spectra 7−72535
AC 211/X2127+119, X-ray binary in M15, CCD photometry rel. to 8.5-hr orbital period 7−115502
accreting neutron stars, quasi-periodic oscillations in ms range 7−80049
accretion column hydrodynamics 7−115364
accretion disks, axisymmetric MHD flows theory 7−115227
V1343 Aql (SS 433), accretion disk model for moving spectral lines 7−127891
Aql X-1, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
beta stable, neutron rich nuclear matter, symmetry energy 7−121688
binary stars, neutron stars and black hole candidates masses *(Russian)* 7−94962
birth of neutron stars and black holes, general review 7−146020
bulge X-ray sources, mag. fields of neutron stars 7−94945
Cen X-4, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
V779 Cen-Cen X-3, neutron star accretion disk model, photometry anal. 7−88502
2CG 353+16, 2CG 054+01, gamma-ray sources, possible identifications with ancient guest stars 7−115631
Cir X-1, QPO, effects of accretion disk rot. and neutron star interactions 7−107904
conf., Burdwan, India, Dec. 1985 7−115694
conversion into strange stars 7−115495
cooling, thermal conduction time scale effects 7−72498
core internal temperature, Einstein equations anal. 7−115864
Cyg X-2, complex cross-spectra of X-ray intensity vars. 7−140172
Cyg X-2, quasi-periodic oscills. obs. by Einstein (HEAO 2) observatory 7−88516
Cyg X-3, neutron star accretion and rot. as power source 7−88534
1 E 1145-6141, X-ray pulsar, masses and mass ratio from new orbital parameters 7−134277
early evolution, role of convection 7−140124
EXO 0748−676, transient X-ray burst source, burst behaviour and neutron star accretion rate depend. changes 7−88513
EXO 120723−5209.8, possible neutron star (in SNR PKS 1209−52) 7−72572
EXO 2030+375, X-ray transient, CCD photometry of optical counterpart 7−134270
fast timing experiments for NASA Space Station 7−79826
formation, physics of baryonic-to-hyperonic transition in collapsing stars 7−88375
formation from accretion-induced gravit. collapse of old white dwarfs 7−127857
formation in early Universe 7−140146
g-modes in zero-temperature neutron stars 7−120487
gamma-ray burst emission, physics issues 7−88683
gamma-ray burst event, 1979 March 5, new synchrotron luminosity distance limit 7−88679
gamma-ray burst sources, role of accretion of comets by neutron stars 7−88678
gamma-ray bursts, spectra from photon-deficient Compton scatt. by non-thermal electrons 7−88682
gamma-ray bursts, synchrotron emission models 7−88677
gamma-ray luminosities, determ. from spatial distrib. of Galactic pulsars 7−140143
gamma-ray pulsars, curvature synchrotron radiation model 7−146105
GB 790 107, transient γ-ray source models 7−115630
GX 301-2 (WRA 977), slow X-ray pulsar, X-ray obs. through two binary cycles 7−107897
GX 339−4, optical obs. of possible 1.13 millisecond periodicity 7−101853
GX 3+1 (4U 1744−26), obs. of quasi-periodic oscills. in X-ray flux 7−94957
GX 5−1, complex cross-spectra of X-ray intensity vars. 7−140172
GX 5−1, quasi-periodic oscills. obs. by Einstein (HEAO 2) observatory 7−88516
Her X-1, 35 day period and neutron star precession *(Russian)* 7−88540
Her X-1 (Hz Her), pulsed TeV gamma rays detect. during X-ray source eclipse 7−88523
hypercritical spherical accretion onto compact objects, flow struct. 7−88093
hyperon and pion role, neutron star matter eqn. of state 7−127939
incompressibility of hot neutron-rich nuclear matter, Hartree-Fock calcs. 7−139895
isothermal atmosphere, infalling plasma stopping mechanisms 7−107885
magnetic field decay, flux expulsion from superconducting interior 7−146019
magnetospheres, Compton scattering in strong magnetic fields 7−88096
magnetospheric plasma of a pulsar, props. investig. 7−120485
massive accretion disks, form. by collision with main-sequence stars in globular cluster cores 7−145939
maximum mass, effects of uniform rapid rotation 7−120486

neutron stars continued
merger events, contrib. to continuous and discrete gravit. wave spectra 7−101670
model atmospheres for cooling neutron stars 7−101836
MXB 1730−335 (Rapid Burster), EXOSAT obs. of new mode of behaviour during outburst 7−101846
Nemesis, accretion, high-energy radiation implications for Earth 7−120286
neutrino propagation, mean free paths of nondegenerate neutrinos in neutron star matter 7−115493
neutrino-driven winds from young hot neutron stars, steady-state outflow solns. 7−88493
nonrotating, maximum mass in metric theories of gravitation 7−101837
nuclear reaction probability of molecular ions in strong mag. field 7−120274
old neutron stars in dense interstellar clouds, radiation signatures 7−88492
opacities, relativistic free-free Gaunt factor of dense high-temp. stellar plasma 7−115228
oscillation damping, viscosity effect 7−107886
pion condensation in neutron star matter with realistic nucleon-nucleon interactions, σ-model anal. 7−73722
polar cap accretion, radiation gas dynamics 7−72496
PSR 0833−45 (Vela pulsar), very high energy gamma rays obs. 7−115488
PSR 1055−52, EXOSAT obs. and temp. determ. 7−127934
PSR 1821-24, millisecond pulsar in globular cluster M28, accretion-induced spinup model 7−140145
PSR 1913+16, binary pulsar, new constraints on progenitor masses 7−88489
pulsar magnetospheres, current sheets contrib. to radio emission 7−94933
QED formalism for scatt. in superstrong mag. fields, neutron star accretion appl. 7−81093
quantised synchrotron radiation in strong mag. fields, radiative transition rates 7−145815
quark gas, nonrelativistic free, para-Fermi statistics of order three, thermodynamic props. 7−141006
quark stars, existence of dense neutron stars from QCD eqn. of state 7−72499
quasi-static winds 7−72497
rapidly rotating neutron stars, X-ray burst spectra 7−94937
redshift database anal. using γ burst annihilation lines, implications for neutron star struct. 7−80025
rotating neutron stars, nonaxisymmetric normal modes and secular instabilities 7−94939
Sco X-1, intensity and source state depend. of quasi-periodic oscills. 7−127967
SN 1987A in LMC, contrib. of pulsar to predicted X-ray, UV and IR spectra 7−140121
SN 1987A in LMC, light particle constraints from neutrino obs. 7−127929
SN 1987A in LMC, neutron star and black hole formation, neutrino evidence 7−127928
spin evolution in wide low-mass X-ray binaries 7−72506
strange stars, properties, neutron star comparison 7−135238
structure of massive models in Ni's theory of gravit. 7−140147
superconducting neutron star, paramagnetic effects 7−145807
thermal evolution of accreting neutron stars, long X-ray bursts as probe into interior 7−107887
thermonuclear reaction rates in degenerate envelopes, effect of electron screening *(Russian)* 7−145820
Tolman-Oppenheimer-Volkov eqn. with ultrarelativistic eqn. of state, soln. 7−115494
4 U2129+47 (=V1727 Cyg), optical behaviour (March to November 1986) 7−115523
4 U 0115+63, recurrent X-ray transient, new outburst obs. (February 1987) 7−72532
4U 0900−40 (HD 77581), massive X-ray binary, X-ray photoionisation effects on P Cyg line profiles 7−120502
4U 1145−619, binary X-ray pulsar, search for UV variability 7−88537
4U 1145−619, neutron star-circumstellar shell interaction model for spectral vars. during outburst 7−127973
4U 1636−53 (MXB 1636−53), evidence for burst-induced accretion disk coronae, multi-peaked X-ray bursts anal. 7−120503
4U 1746−37, X-ray binary in globular cluster NGC 6441, constraints on neutron star mass-radius relation 7−94954
4U 1820−30, in NGC 6624, form. by tidal capture and evolution to white dwarf-neutron star system 7−127970
4U 1820−30, ultra-short period binary star, Doppler effect as cause of X-ray flux modulation *(Russian)* 7−107906
4U 1915−05, X-ray burst source, identification of optical counterpart 7−94951
4U 2127+12, in M15, form. by tidal capture and evolution to common envelope binary stage 7−127970
4U 2129+12, X-ray source in M15, discovery of 8.5-hour X-ray period 7−120505
4U 2129+47, X-ray burst obs. 7−115519
4U/MXB 1636−53, relation between amount of accreted fuel and strength of X-ray burst 7−146040
4U/MXB 1820−30, EXOSAT obs. of double-peaked burst, radius expansion 7−107896
Vel X-1, accretion disk form. in magnetosphere of wind-fed pulsar 7−140152
Vel X-1, binary X-ray pulsar, search for UV variability 7−88537
Vel X-1, eclipsing X-ray binary, ang. accel. fluctuations 7−107891
Vel X-1, light curve modelling involving accretion disk and mass transfer to neutron star 7−127947
viscosity of dense matter, electronic and ionic contribs. 7−120263
viscous secular instability, contrib. to lower limit on rot. period 7−140148
wind accretion from companion star, contrib. to X-ray pulse periods vars. 7−101842
X-ray astronomy (book) 7−88759
X-ray binaries, smearing of beaming pattern by isotropic cloud rel. to nonpulsing sources 7−88509
X-ray binary stars, asymmetric beam emission from neutron star 7−115527
X-ray binary stars, disk form. in magnetospheres of wind-fed pulsars 7−140152
X-ray binary stars, effect of electron scatt. cloud on X-ray oscills. produced by beaming 7−127971

neutron stars continued
X-ray binary stars, influence of physical phenomena on power spectra of quasi-periodic oscills. 7−146037
X-ray binary stars, IR emission, plasma mechanism *(Russian)* 7−72539
X-ray binary stars, origin of time lag between hard and soft X-ray photons in QPD sources 7−120515
X-ray binary stars, resonant Raman-cyclotron scatt. in very strong mag. fields 7−139901
X-ray binary stars, time-dependent calcs. of X-ray and γ-ray emission reprocessing 7−107898
X-ray binary stars in bulge of M31, X-ray spectral props. 7−120598
X-ray burst sources, effects of wind collimation by thick accretion disks 7−80036
X-ray burst sources, Fe spectral features form. in cooling burst spectrum 7−134274
X-ray burst sources, non-LTE radiation-driven wind models in bursting neutron stars 7−101841
X-ray burst sources, origin of absorpt. lines in X-ray spectra *(Japanese)* 7−140160
X-ray burst sources, role of accretion of comets by neutron stars 7−88678
X-ray burst sources, Type I X-ray bursts energetics and nuclear fuel reservoir in stellar envelope 7−146041
X-ray bursters, X-ray spectra and atm. struct. modelling (appl. to MXB 1636−536) *(Japanese)* 7−146024
X-ray bursting neutron stars, non-radial g-mode oscills. rel. to quasi-periodic oscillations 7−127938
X-ray busters, X-ray spectra and atmospheric structures 7−140183
X-ray pulsars, directionality and spectrum of X-ray emission from uniformly heated mag. neutron star 7−127944
X-ray pulsars in Population I binaries, intermittent stellar wind accretion and long-term activity 7−88517
X-ray QPO phenomenon and general relativity 7−115525
XB 1254−690, low-mass X-ray binary, obs. of 3.9 hr periodic dips in X-ray intensity 7−88522

neutron transport theory
see also neutron diffusion; neutron moderation
3D diffusion equation, high order finite difference approxs., formulation 7−121986
3D diffusion equation, high order finite difference approxs., analysis 7−121987
S_2 synthetic acceleration method for two-dimensional nodal S_n calculations 7−102936
bilinear nodal transport method in weighted diamond difference form 7−102935
Boltzmann equation, monodimensional stationary solns. for ang. space-energy neutron flux 7−73821
Chernobyl accident, FASTAR-NOTRUMP reactor kinetics model study 7−103099
Chernobyl reactor accident, three dimensionally coupled neutron physics anal. *(Dutch)* 7−122047
closed linear one-cell function spatial approximations 7−89585
core neutronics and depletion analysis, DANDE computer code 7−73832
counting statistics in nuclear assemblies, stochastic transport theory 7−73822
criticality problems, Monte Carlo code reliability 7−89591
cylinder, neutron transport, use of stratified sampling, Monte Carlo appl. 7−102359
cylindrical geometry, nodal integral method for neutron diffusion eqn. 7−102934
delayed neutron precursor data for reactor appl. 7−102941
delayed neutrons, energy spectra, few-group representations 7−102938
detector foils, resonance self-shielding corrections in fast neutron spectra 7−73923
diffusion synthetic acceleration method for weighted diamond differencing schemes 7−73823
DIGA/NSL calculational model for LWR lattices, slab geometry 7−129148
discrete ordinates approximation, neutron transport in heterogeneous rod lattices, DOXCY 7−129132
DR3 research reactor, 3D neutronic simulator development 7−96155
elastic scattering transformation matrices, BRC and BGU methods 7−135390
FBR core calculations, transport corrections 7−89590
finite non-multiplying media, neutron noise transmission characteristics 7−135388
FRENCH method in multidimensional and multigroup neutron transport theory 7−89584
fusion reactor design, neutron spectra calcs. using ZZFEWG 1.31/1F data set 7−96308
gamma-ray emission from materials pulsed with 14-MeV neutrons, TART code 7−109530
graphite, fast neutron spectra, meas. and Monte Carlo transport code anal. 7−89589
graphite slab, fast neutron transport, vectorized Monte Carlo calc. 7−135393
heat generating BWRs, neutron physics design problems, SHR appl. *(German)* 7−141135
hexagonal geometry neutron diffusion eqn. soln. 7−73819
ILLICO, vectorised multigroup multi-dimensional nodal neutron diffusion code 7−102965
infinite medium, 1D energy dependent neutron transport eqn., steady state solns. 7−102937
integral neutron transport eqn. with anisotropic scatt. after 1st collision, heterogeneous problems *(German)* 7−141127
interface current method, acceleration strategies 7−96134
linear Boltzmann eqn., IVP, asymptotic time behaviour and criticality 7−89587
linear transport theory in plane geometry, analytic soln. 7−67889
local reactor reactivity estimation, one-group nonlinear neutron diffusion eqn. 7−96133
LOCFES, system for spatial transport approximation anal. 7−102961
LWR in-core fuel management, neutronics and fuel cycle 7−116555
LWR training simulator, 3D nodal coupling coeff. calcs. 7−96250
Monte Carlo particle transport processes, adjoint function anal. 7−141126
multigroup neutron diffusion computation, family of higher-order nodal methods 7−102933
multigroup neutron diffusion eqn., 1D, analytic nodal technique for soln. 7−141125
multigroup neutron transport, finite element method, anisotropic scatt. in 1D slab geometry, FELTRAN validation 7−73820

neutron transport theory continued
multigroup neutron transport equation, soln. using Fourier transform technique 7−102932
multilayer slab geometry, Legendre expansion of neutron flux 7−121988
multilevel transport calcs. using group-dependent spatial representation 7−96165
neutron slowing down problem, time-dependent, multigroup approx. anal. 7−102931
neutron transport eqn., soln. using extrapolation methods 7−102928
one-group neutron transport in infinite medium, time-dependent cross sections 7−102930
optimal field regulator of reactor, synthesis 7−141123
perturbation theory methods for numerical soln. 7−89588
planar layer, sphere and cylinder systems, neutron transport and isotropic scatt. 7−96131
PWR cycle length maximization using empirical core models 7−102960
resonance self-shielding near zone interfaces 7−129128
response matrix of symmetric nodes with absorber rods 7−135391
ring reactor, neutron transport theory 7−129131
simulation methods in nuclear engineering, conf., Montreal, Canada, Oct. 1986 7−95106
Sn-albedo Monte Carlo-albedo Monte Carlo coupling technique, JOYO neutron streaming appl. 7−81471
spatial noise-source reconstruction 7−73824
SRAC code system, user manual for updated version 7−73846
stationary linear integrodifferential Boltzmann eqn. 7−73293
stochastic transport theory with delayed neutrons 7−135389
subcritical reactivity, spatial effects in frequency-domain quantities 7−102939
synthetically accelerating discontinuous finite element transport anal., linear method 7−102929
TFTR, neutron spectral distrib. from internal 14 MeV source, Monte Carlo transport comparisons 7−74043
transmission meas., oxygen total cross-section determ. 7−141134
transport equation, plane geometry reformation, approximation and eigenvalue calcs. 7−135392
TRISTAN code development for shielding anal. by direct integration method 7−89598
variational R, T and T^{-1} response matrix formulations, accuracy comparisons 7−89586
WWER-440 spent fuel, neutron emission study *(Czech)* 7−81472
B_4C filters for neutron spectra determ., appls. in graphite and water environments 7−135790
^9Be, neutron multiplicity in fusion blanket, stochastic processes 7−135544
^{252}Cf source method for reactivity meas., source of correlated noise 7−102940
D-T fusion neutronics, multi-group transport calc. accuracy, blanket design 7−109483
DT ignitor/DD fuel pellets, burn dynamics, effect of neutron heating, ICF appl. 7−96314
Li_2O cylindrical assembly, fusion neutronics 7−89723
Na, neutron cross-section validation, integral meas. adjustment, radiation penetration accuracies 7−129284
^{239}Pu resonances, radiative capture to fission cross-section determ. 7−121989
U, neutron cross-section dependence on energy 7−121990

neutrons
see also cosmic ray neutrons; delayed neutrons; neutron oscillations
charge search, neutron optical imaging system, design 7−81819
conf., Gaithersburg Maryland, USA, Nov. 1983 7−66838
dressed neutrons exposed to EM quanta, spin rotation suppression 7−90490
electric dipole moment meas. possibilities using ultracold superthermal neutron sources 7−68126
electric dipole moment measurement by prolonged confinement method, CP-breaking effect 7−81192
electric dipole moment searches, status 7−67625
electric dipole photoabsorpt sum rules in constituent quark model, nucleon struct. 7−67592
electric polarizability and RMS radius determ. from $^{209}Bi(n,n')$, quark cloudy bag model comparisons 7−121508
electromagnetic form factors, bag model with Woods-Saxon confining pot. 7−116171
interferometry, influence of mirrors on spinor propag. 7−89313
lifetime determination by trapped proton counting technique 7−68164
lifetime determination using e-p coincidence technique 7−68163
lifetime meas. through UCN storage 7−81183
lifetime measurements, review 7−67618
lifetime measurements using bottled neutrons at ILL 7−68166
lifetime measurements using in-beam techniques 7−68165
long term storage in nonuniform magnetic field 7−81838
$\tilde{n}\rightarrow H+\bar{\nu}_e$, H=hydrogen, relativistic bound-state Bethe-Salpeter anal. 7−121502
particle properties of the neutron 7−67624
RMS charge radii systematics, values for quark core, Coulomb displacement values 7−116245
Skyrme model, electromagnetic n-p mass difference calcs. 7−95906
tachyonic approach to hadrons, p, n and Δ, beta decay 7−135087
Thomson charge group model for quantitative props. 7−80974
$U(2)_V$ Yang-Mills approach to skyrmions with vector mesons, nucleon EM props. 7−128763
Voigt functions, unified presentation 7−140751
ñ decay, beta-asymmetry meas. for g_A/g_V determ. 7−67619
$n\rightarrow pe\bar{\nu}$, β-decay half-life estimations *(Chinese)* 7−95900
$n\rightarrow pe\bar{\nu}_e$, axial vector current model anal. 7−67617
$\tilde{n}\rightarrow pe\bar{\nu}_e$, triple correlation coefficient meas. and T invariance 7−67620
n spin, PNC and TNC rotations through nuclear targets 7−67531
n-p mass comparisons in nuclei, colour dielectric model anal. 7−67582

Newtonian fluids *see fluids*

nickel
see also nuclei with .....
adsorbed diatomic molecules, inverse-photoemission studies 7−138536
adsorption, of acetylene (ethylene), chemisorption, thermal decomp. 7−137707
adsorption of benzene, on (111) and (100) surfaces, interaction 7−98691
aluminide coatings, corrosion resist. rel. to Cr content 7−86468
anodic oxide film form., Auger spectra 7−113779
anodic passivation, F^- effects 7−106673
anodically polarised, adsorption of polar organic cpds. 7−106675

nickel continued
atom, adsorpt. on stepped W surface, work function meas. *(Russian)* 7−112090
atom, X-ray diffr. electron. correl. and relativistic effects 7−129614
atom clustering and diffusion on W (110) 7−143230
atomic ions reson. level electron excitation contrib. to ionisation cross sections 7−117079
atoms, electronic struct., $L_{2,3}MM$ Auger effect 7−74545
atoms, vaporisation, rare gas matrix isolation spectra 7−82028
autocatalytic plating on Si surfaces 7−144310
backscattered electron diffr. obs. 7−70953
barrier for Ag electroplated Cu leadframes, porosity meas. by electrographic printing 7−138701
bicrystals, H at surface and grain boundaries, SIMS study 7−143094
bulk and evaporated, layers, N ion implantation, diffusion, annealing behaviour 7−91896
cascade collapse to vacancy loops 7−104813
catalyst, methane dissociative adsorpt., kinetics for (111), (100) and (110) surfaces 7−137661
catalysts, H_2 chemisorption obs., using DC conductivity sensor 7−131436
cathode, vacuum arc, erosion plasma jet spatial distrib. study 7−69511
cavity distribution induced by Ne, He, and Ni self damage 7−122159
chemical deposition by AC electrolysis *(Russian)* 7−144317
chemisorption on Si (111) and (100), cluster model and DV-Xα calcs. *(Chinese)* 7−105243
coated C fibre reinforced Mg-Al matrix composite, interface reactions, tensile strength, TEM obs. 7−113634
coating on C fibres, scanning Auger microscopy 7−76647
coatings, friction in lubricated sliding 7−78250
colloidal ferromag. metals, prep., mag. props. 7−77375
conducting ferromagnet, magnetisation reversal, neutron depolarisation study 7−99496
continuous casting, secondary cooling criteria for stress cracking prevention *(German)* 7−100212
corrosion by V_2O_5 coating 7−78339
corrosion in hot conc. salt brines *(German)* 7−93202
corrosion in molten salts, electrochemical monitoring 7−86404
corrosion kinetics in ethanolic HCl 7−132796
corrosion resistance in artificial sweat and synthetic seawater, dermatitis hazard 7−138906
creep deform. rel. to high temp. prestrain 7−100322
crystal, Auger spectra, energy calibration, peak shifts, regression calculations, lattice constants, derivative mode 7−144186
crystal binding 7−124158
D ion driven permeation study 7−76220
D plasma-driven permeation study, Auger electron spectrometry surface anal. 7−76492
d-band partial filling on H diffusion 7−76758
diffusion and solubility of O, thermodynamics 7−71192
diffusion in Zr and Zr alloys 7−105131
dynamic recrystallisation, high temp. mech. behaviour, study using torsion testing 7−93036
electrochemical polarisation in H_2SO_4 soln. 7−78514
electrode, potentiodynamic behavior in acid media 7−71384
electrodeposited from $NiCl_2$, hardness meas. 7−106599
electrodeposition from amide solvents, dielec. const. and basicity effect 7−92897
electrodes, H adsorpt., charging-curves study 7−112063
electroless coating, charactn. by XPS and SEM 7−98752
electroless coatings, corrosion and economics in chemical process environment 7−86428
electroless coatings, struct. and wear 7−76693
electroless deposits, wear resist. rel. to heat treatment *(Japanese)* 7−78254
electroless plating, UV irradiation effects 7−100136
electroless plating on Si wafer, adhesion rel. to etching *(Japanese)* 7−77851
electron density model functional, elastic props. *(Russian)* 7−76262
electron irradiated, HVEM images, rippled patterns 7−69762
electron momentum density, Compton profiles 7−98795
electroplated coatings, high strength, prod. using pulsating current 7−100123
electroplating from acidic acetate solns., brightness rel. to superimposed sinusoidal AC 7−71095
electroplating using pulsed currents *(French)* 7−138697
elemental, plasma source mass spectrometry, electrothermal vaporiser design and optimisation 7−126499
epitaxial growth, RHEED beam intensity oscills. 7−84577
EXAFS of pure and hydrogenated foil, expanded lattice, H-perturbed density of states 7−144168
exchange interactions, local spin density functional calcs. 7−99434
fast neutron irrad., low temp., defects, X-ray diffr. studies 7−104852
fast-rate electrodeposition using pulse current 7−132509
fatigue fracture induced by ultrasound *(Russian)* 7−126224
FCC, deformed, point defect trapping obs. by PAC technique 7−104733
FCC, fatigue, stabilised loading cycle, deformation stages 7−106593
FCC, ion implanted, impurity-vacancy cluster form. 7−91631
FCC, self-diffusion, monovacancy and divacancy contributions 7−76478
FCC metals, shear band angles 7−119283
FCC polycrystalline, fatigued, microcracks 7−71268
ferromagnetic, appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
ferromagnetic, electronic struct., effect of electron correlations and finite temps. 7−105436
ferromagnetic, spin polarisation of secondary electrons 7−119077
ferromagnetic monolayers, spin anisotropy calcs. 7−112784
film, glass form. by N^+ implantation, elec. resist. meas. 7−143013
film, quench condensed, mag. behaviour, Si, SiO, Al, Pd interface effect 7−118837
film, vacuum deposited, fracture characteristics 7−78212
film electrical resistance meas., thermometer and heater appls. 7−80791
film on Si (100), ion beam mixing, Rutherford backscattering and Auger depth-profile anal. 7−91663
films, electroplating, UV-irradiation effects 7−126032
films, ion plated on steel, struct., fatigue 7−118338
flow stress, effects of cathodically charged H 7−78095
foil, first wall materials, surface modification by ion implantation, thermal annealing 7−103176
fractography of H and Hg embrittlement 7−126206
grain boundaries, Co atoms, Mossbauer study 7−111583
nickel continued
grain size measurement using magnetic and acoustic Barkhausen noise 7−126121
He-like, satellite spectra, wavelength and line intensities determ., obs. in TFTR 7−96593
heavy ion irradiated, stage-I recovery 7−111695
high energy He implanted, microstruct. evolution 7−76161
high temp. corrosion in SO_2-O_2 gas mixtures 7−86433
highly ionised, beam-foil spectra 7−90082
hot rolling deform., recrystallisation textures 7−100252
ignition in environments containing Cl_2 and O_2 7−126304
image states and surface states, energy dispersion near surface Brillouin zone boundary 7−85028
impurity hyperfine fields and electronic struct. calcs. 7−70245
interference-free determ., atomic absorpt. spectrophotometry 7−78566
intergranular fracture, effect of H-S co-segregation 7−113652
ion bombardment, defect cascade collapse to dislocation loops 7−98270
ion induced Auger electron spectra, energy thresholds 7−138571
ion irrad., point defect-sink interactions, self-diffusion meas. 7−104804
ion plating on $Co_{66}Fe_4(MoSiB)_{30}$ amorphous ferromag. alloy, FMR and AFMR studies 7−70649
ion plating on graphite, wetting by molten Al *(Japanese)* 7−76550
ions, reson. states, energy levels calcs. 7−141441
laser surface melted, defects, PAC studies 7−137364
lattice vacancies introduced by electron irrad., quenching and cyclic deformation 7−91574
liquid, effective-atom fluctuations, cluster study 7−137789
liquid state, struct., X-ray study 7−104525
low temp. acoustic waves damping calcs. 7−142919
magnetic props., dislocation effects 7−125438
magnetic studies with μSR at high pressures 7−118932
mass transfer in Cu during shock wave passage, residual deform. effect *(Russian)* 7−143105
matrix cathode, O_2-impregnated, duoplasmatron ion source of 35 MeV proton accelerator 7−135705
NW Mediterranean Sea, Ni and Co determ. by differential pulse cathodic stripping voltammetry 7−87708
mirrors, temp. depend. of absorpt. coeff. 7−130291
monolayer on W (001), H adsorption, bonding, linear APW calcs. 7−124712
multilayer thin films, thickness determ., variable exit angle ultrasoft X-ray fluoresc. spectrometry 7−134722
neutron and electron irrad., defect struct., diffuse X-ray scatt. studies 7−91656
neutron irrad., defect struct. development, cascade energy overlapping 7−104851
optical props. at subMM wavelengths 7−70731
oxidation, high temp., using ceramic electrolyte cells 7−113772
oxidation, high-temp., microstruct. and mechanisms, Si alloying effect 7−71396
oxidation in N_2O_4 gas *(Russian)* 7−81537
oxidation kinetics, point defects diffusion 7−106697
oxide growth stress model, creep props. 7−132678
oxidised surface, anodic O_2 evolution, intermediates adsorpt. behaviour eval. 7−91976
passivation in aq. solns., electrochemical polarisation obs. 7−132792
passivation in aq. solns., surface film comp. 7−132791
PKS 0528−250, QSO, Ni II and Cr II absorpt. systems nature 7−140289
plating of graphite cast Fe spent fuel element transportation and storage containers 7−74145
polycrystal, muon hyperfine field, low temp. press. depend. meas. 7−99633
polycrystalline films, SiO_2-covered, temperature-dependent resistivity 7−125151
polycrystalline thin films, ion irradiation induced grain growth, TEM study 7−84056
powder, adsorption of PO_4 ions, anal. using radiotracer technique 7−91920
powder, prep. from basic salt precursors 7−106463
propagating spin waves above T_c 7−143778
proton irradiated, periodic (001) defect walls 7−98273
pulsed slow positron beam lifetime measurements 7−144162
pure, cavity sintering 7−111573
pure, primary creep, expt. and theory 7−113601
pure, repassivation of newly created surface in high temp. and press. neutral soln. 7−78374
quenched vacancy migration, positron studies 7−91877
radiation induced S impurity segregation, resistivity and SIMS studies 7−105050
Raney Ali composite-coated cathode for H_2 production 7−126657
resistance anomalies close to Curie point 7−92429
Salamanca, Spain, meteorological effects on elemental concentration of atmospheric aerosols *(Spanish)* 7−144928
single crystal, low dislocation density, growth by Czochralski method 7−125945
single crystal film, low temp. elec. cond. *(Russian)* 7−143639
sintered, elastic moduli rel. to microstructure 7−126162
slip band distribution and morphology, effect of ion beam mixed Ni-Al surface films 7−76274
small particles, atomic struct. and full energy 7−124166
solidification kinetics 7−77963
spherical particles, surface hyperfine magnetic field, Mossbauer study 7−92133
sputtered films, struct., neutron diffr. study 7−104557
sputtering, by single crystal, mag. phase transition effects 7−77745
stage III and Stage IV defects, recovery and migration 7−91566
substrate, adsorbed CO mol. shape resonance, inverse photoemission obs. 7−99967
surface, (001), chemisorbed O_2, interaction energy 7−70068
surface, (001), with adsorbed Se, surface phases, refl. electron diffr., AES, transfer matrix scaling studies 7−84514
surface, (100), adsorbed C, SEXAFS studies of C K-edge 7−85898
surface, (100), CO and H co-adsorption, vibrational spectroscopy and photoemission 7−105262
surface, (100), electronic structures and surface magnetism at finite temps. 7−77024
surface, (100), reconstructed, lattice dynamics of P4g c(2×2) structures 7−137688
surface, (100), reconstructed, phonon dispersion of C (2×2) phase 7−137689

nickel continued
surface, (100), S-, D- and O-covered, H_2S chemisorption 7−105268
surface, (100), tunneling current through localized surface states 7−92257
surface, (110), adsorbed N_2, IR spectrum, time dependence 7−144062
surface, (110), with adsorbed CO, electron-stimulated desorption, influence of surface corrugations 7−70082
surface, (110) (1×2)-H reconstructed, angle-resolved photoemission at 80 K 7−125912
surface, (110)c(2×2), ferromag., with chemisorbed S, spin resolved photoemission 7−132411
surface, (111), adsorbed O_2, secondary electron spectra and work function 7−85906
surface, (111), adsorption of CO, electronic struct., EELS study 7−91993
surface, (111), CO dissociative chemisorpt. activation investig. 7−112068
surface, (111), methane activated dissociative chemisorpt. dynamics, EELS 7−132968
surface, (111), methylamine surface reaction pathways Auger electron spectroscopy and TPD investig. 7−78542
surface, (111), with adsorbed H, scanning tunnelling microscopy 7−91944
surface, (111), with vapour deposited NaCl, XPS studies 7−85955
surface, (112), chemisorption of CO, semi-empirical topological method 7−84513
surface, (115), Ar atom-surface scattering, energy exchange, surface corrugation effects 7−106346
surface, adsorption of CO and O_2, effect of alkali metal coverage 7−143205
surface, chemisorbed H reemission, coeff. calc. at fusion operating conditions 7−75808
surface, CO chemisorption, indirect interactions and thermal desorpt. model calcs. 7−143180
surface, corrosion under V_2O_5 coating, oxide scale morphological charactn. using AES, SEM and X-ray diffr. *(French)* 7−93193
surface, degree of ionisation of reflected H and He atoms 7−77738
surface, electronic struct., UV photoemission study 7−106359
surface, growth of metastable FCC Co 7−84575
surface, H_2 adsorption kinetics 7−143190
surface, H_2 dissociative chemisorpt., incident angles and rovibr. states depend. 7−118237
surface, H^+, H_2^+, H_3^+ ion scattering, H Balmer series study 7−68243
surface, ion bombarded, morphology development 7−69784
surface, ion implantation of N, C, P phase composition determ. 7−78301
surface, $O^{q+}(Fe^{q+})(Mg^{q+})(Si^{q+})(S^{q+})$ penetration, K-vacancy creation and quenching 7−85925
surface, positronium time of flight spectroscopy of dissimilar metals 7−99986
surface 100, O overlayers, vibr. spectra EELS 7−91971
surface (001), c(2×2)O overlayer growth to saturated NiO, surface struct., X-ray photoelectron diffr. study 7−143157
surface (001), ordered, effects of inelastic scatt. on He diffr. linespaces 7−98659
surface (001), X-ray photoelectron diffraction at high angular resolution 7−125910
surface (001) with adsorbed S (Se), core level photoelectron diffraction 7−144229
surface (100), adsorbed CO, H and CO-H, inverse photoemission obs. 7−119063
surface (100), adsorbed H and D, surface diffusion, isotope effects 7−118265
surface (100), atom-metal surface scatt., distorted wave Born approx. 7−132399
surface (100), C adsorpt., cluster approx., HF calcs. 7−105285
surface (100), chemisorbed NO, UV laser-stimulated reson. desorpt., fluoresc. 7−91965
surface (100), CO coverage depend. diffusion, laser-induced desorption study 7−91973
surface (100), H_2 and O_2 chemisorption and dissoc., one-electron effective core pot. 7−86668
surface (100), methyl mercaptan and dimethyl disulphide reactions, UPS studies 7−144757
surface (100), structure of chemisorbed S overlayers 7−84522
surface (110), adsorbed H, LEED studies 7−118264
surface (110), N_2 chemisorpt., kinetic parameters, thermodynamic quantities and struct., multitechnique approach, review 7−70086
surface (110), O adsorption, magnetic probing depth in spin-polarized secondary-electron spectroscopy 7−119078
surface (110), Pb and Bi overlayers, 5d binding energies and branching ratios, photoelectron spectra studies 7−85947
surface (110) 2×1, CO adsorption, two-dimensional π-d bands, direct observation 7−131727
surface (110) and (100), adsorbed pyridine layers, SERS 7−96702
surface (110)-(2×1), reconstructed surface struct. determ. using ion backscatt. 7−143149
surface (111), adsorption and desorption of H_2, role of surface defects 7−131443
surface (111), clean and O precovered, adsorption behaviour of H_2O 7−84521
surface (111), H implantation, study of H_2 desorption dynamics 7−84519
surface (111), ion beam deposited diamondlike C films 7−118314
surface (111), ion neutralisation spectra, anal. 7−132388
surface (111), ion neutralisation spectra calc., contrast with W(110) 7−144217
surface (111), methane adsorpt., dissoc. chemisorpt. induced by Ar atoms 7−119562
surface (111), preadsorbed K, IR reflection absorpt. spectra 7−106826
surface (111) with adsorbed S, methoxy decomposition kinetics 7−144752
surface (115), structure, He diffr. study, hard and soft wall corrugation fns. calcs. 7−92822
surface analysis and corrosion inhibition mechanisms 7−119454
surface in acidic solns., passive film formation, ellipsometric study 7−93197
surface intergranular cracking in large strain fatigue 7−113650
surface roughening under ion implantation, 300-700°C 7−104772
surface roughness meas. using He-Ne laser 7−134717
surface temp. meas. of particles under thermal plasma conditions, using two-colour pyrometer 7−108563
surfaces, band struct., low energy elastic electron reflection meas. 7−105390
surfaces, H_2 chemisorption and dissociation, potential energy surfaces 7−143189
surfaces, oxidation and O penetration barriers 7−124594
surfaces (100), (113) and (115), step form, and roughening transition temp. calcs. 7−143146
thermodynamics, band struct. effects 7−137505
thin film thickness influence on resistivity, TCR and thermoelectromotive force *(Japanese)* 7−138073
thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
thin films, electronic density of states, phonon effects 7−112204
thin films, H_2 adsorption, low temp., kinetics 7−131448
thin films, proton induced K-shell X-ray cross sections 7−144183
thin films, quenching effects in pulsed heat treatment 7−71215
thin films, spin autocorrel. time calcs. 7−77386
thin films, surface magnetoplasmons, long-range, props 7−138298
thin films, vacancy redistrib. on quenching 7−98116
thin films evaporated on Si and SiO_2, ion modification of props. 7−91673
thin films less than 1 μm, hardness testing 7−100478
thin layer, electroless deposition on diamond particles by photocatalytic Pd nucleation *(Japanese)* 7−132512
thin mag. films. magnetocaloric effect 7−132028
topologically disordered system of atomic clusters, electronic density of states, recursive scattered-wave approach 7−76727
transient K-shell hyperfine fields and polarisation of C and O ions 7−103681
ultra thin film interface probing on mag. substrate using FMR at 73.55 GHz 7−77407
ultradisperse particles, positron diffusion coeff. determ. 7−69959
ultradisperse powders, mag. props. and struct. 7−125472
ultrafine powders, sintering, elastic modulus, elec. resist., contact phenomena 7−71111
uniaxial deformation, dislocation struct. and mech. props. *(Russian)* 7−144467
US attenuation in microwave mag. field 7−125060
vacuum arc coatings, corrosion eval. 7−71397
Valladolid, Spain, atmospheric particulate material, behavior and seasonal variation *(Spanish)* 7−144927
void-lattice form., swelling, temp. depend. 7−83949
yield stress dependence on surface layer thickness 7−78370
Ag-Ni fibrous periodic composite, characteristic lengths determ. laser beam diffr. method 7−69562
Al-Ni bimetallic transition couplings for cryogenic service 7−73362
As_2Se_3:Ni, vitreous, photoelectric props. 7−77001
As_2Se_3-Ni, modified glassy semiconductor, degree of compensation 7−70175
Au/Ni bilayers on Cu substrates, diffusion behaviour 7−105151
Au-Ge-Ni ohmic contact metallisations to n-GaAs 7−125126
$Bi_{12}SiO_{20}$: Ni, absorption and circular dichroism spectra 7−144090
$Bi_{12}SiO_{20}$:Ni, optical absorpt. studies 7−85781
$CdK(SO_4)_2 6H_2O:Ni^{2+}$, single crystals, electronic absorption spectra 7−113229
CdTe:Ni, deep level charactn. using constant photo-EPR 7−112940
CdTe:Ni, deep levels, optical capture-cross sections, constant photo-EPR study 7−92495
Co_3O_4:Ni mixed valence spinel films, charge transfer processes and optical absorpt. spectrum assignment 7−119026
Cr/Ni sandwich on Si(Al), Ar^+ induced X-ray and optical emissions 7−119094
Cr/Ni thin film multilayer struct., depth resolution, substrate roughness effects 7−131500
Cr-Ni multilayer thin films on Si, Auger electron spectra depth profiles, influence of sample roughness 7−138572
Cr-Ni-Cu, laser mixed Cr-Ni films on Cu, microstruct. studies 7−70039
Cu/Ni system, low energy grain boundaries, determ. by rotating-sphere-on-plate method 7−142789
Cu/Ni/Cu system, friction between soft metal and hard thin films electroplated on softer and substrate 7−100398
Cu-Ni, multilayered thin foil diffusion couples, homogenisation process *(Japanese)* 7−105155
Cu-Ni, thin films, on steel, thickness meas. by X-ray fluorescence spectrometry 7−76702
Cu-Ni [100] oriented superlattices, mag. props. study 7−125334
Cu-Ni compositionally modulated films, electrodeposited, mag. props. 7−118843
CuNi sandwich struct., X-ray photoelectron spectroscopy, Auger electron diffraction, multiple scattering 7−138606
D permeation, exptl. study 7−131366
Fe-Ni, multilayered thin foil diffusion couples, homogenisation process *(Japanese)* 7−105155
Fe-Ni mag. fluids, prep. and props. 7−77374
Fe-Ni multilayers, Fe ferromagnetism 7−99519
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props. 7−99530
$FeBO_3$:Ni, easy phase magnet, photoinduced superstructure 7−143772
$FeBO_3$:Ni, photoinduced modulated state, temp. behaviour 7−143771
GaAs:Mn, Ni, Co, Cu films, MBE grown, effect of impurities on electrical props. 7−77110
GaAs:Ni, impurity levels, optical absorption, EPR and Hall effect meas. 7−105471
GaAs:Ni, ion beam gettering of impurities 7−111594
GaAs/Au-Ge-Ni contacts, melting temperatures, X-ray diffr. study 7−70101
GaAs-Ni, interfacial structures, compositions and reaction morphologies, TEM and RBS studies 7−98716
GaP:Ni, ion beam gettering of impurities 7−111594
GaP:Ni^{3+}, EPR spectra, uniaxial compression effect 7−77398
p-Ge/Ni contact with radial charge carrier flow, elec. props. 7−92293
H permeation in polycryst samples implanted with He^+, Ar^+, Ni^+, Y^+ and Pt^+ ions 7−105124
H transport diving plastic deform. 7−113608
He thermal desorption in reactor cores 7−122065
InP:Si-AuGe/Ni/Au rapid thermal alloyed ohmic contact, elec., structural and metallurgical props. 7−138006
$KMgF_3$:Ni, X-ray irrad., tetragonal impurity ions, EPR study 7−70634
$KPbI_3$-Ni, vacuum deposited films for photothermal conversion 7−85585
$LiCsSO_4:Ni^{2+}$, electronic absorpt. spectra 7−74494
LiF:Ni crysts., microhardness, dislocations, magnetic treatment and annealing effects 7−142894
$LiNbO_3$:Ni, pulsed photovoltaic effects at high excitation rates 7−70351
MgF_2:Co^{2+}, Ni^{2+}, Mn^{2+} crystals, absorption and luminescence spectra 7−106255
MgO:Ni, heat-treated, photolum. 7−132333
MgO:Ni, laser-excited luminesc. and absorpt. spectra studies 7−125764

nickel continued
MgO:Ni crystals, heat treated, TEM obs. 7—76409
MgO:Ni crystals, plastically deformed, metallic colloids formation 7—113236
MgO:Ni^{2+}, g-factors, high press. effects 7—112170
Mo/Ni superlattices, magnetisation and anisotropy, torque meas. 7—112785
Mo-Ni magnetic-superlattices, interfacial anisotropy 7—118795
MoO_3-Cu-Ni black films, solar selective, charactn. 7—106451
Ni (100)/H/CO system, CO coadsorption state, IR study 7—85672
Ni, Al-ZZ 7—97802
Ni clusters, hydrogenated, composition determ. 7—110175
Ni II, radiative lifetimes, time-resolved laser-induced fluoresc. 7—122436
Ni ions, beam-foil spectra, intercombination lines of Mg I-, Al I- and Si I-like ions 7—74748
Ni particles, ultrafine, oxidation, appl. of Fourier transform. IR photoacoustic spectroscopy 7—113775
Ni XIX, beam-foil spectra 7—82022
Ni XIX, Ne-like, 3s-3p and 3p-3s transition, DF calcs. 7—74495
Ni XVII, low-lying levels, lifetimes, beam-foil spectra 7—74496
Ni:^{152}Sm(^{172}Yb), hyperfine magnetic fields at rare-earth elements in ferromagnetic transition metals 7—118423
Ni:He, high energy ion implantation, microstructural evolution 7—117941
Ni:He, high energy ion implantation, damage annealing, microstruct., elec. resist., dilatometry 7—119287
Ni:He, ion implantation, diffusion and trapping of He and vacancies 7—104770
Ni:He, ion implanted, gas bubble growth 7—117946
Ni:He films; ion implantation, porosity, dislocation struct. 7—142803
Ni:Si, ion implantation, phase stability rel. to radiation damage, 25-650°C 7—104867
Ni/Au metallisation layers, porosity 7—118311
Ni/B multilayered films, ion-mixing induced amorphous surface alloys 7—98277
Ni/Cr multilayers, AES sputter profiling, depth resolution improvement using two ion beams 7—77708
Ni/Cu/Ni(100) sandwich struct., resonant electron transmission 7—131742
Ni/GaP Schottky barrier diodes, current flow mechanism study *(Russian)* 7—99205
Ni/graphite composite coatings, electroless deposition, friction and wear characts. 7—144318
Ni/InP interface, amorphous and crystalline ternary phase form. 7—98711
Ni/metal hydride sealed battery using microencapsulated H_2 storage alloy 7—100710
Ni/Ni_3Al joints, high press. welding, precip., phase charact. *(French)* 7—84543
Ni/NiS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7—119577
Ni/SiO_2/Si multilayers, ion mixing, isotropic and anisotropic transport 7—76235
Ni/Si(111) $\sqrt{19}$ surface, surface modifications induced by low overage adsorbates 7—124699
Ni/Sn interface, Ni_3Sn_4 form. kinetics and struct. 7—111977
Ni/Zr, ion mixed bilayer, oxidation behaviour 7—138896
Ni-Al interface, ion induced aluminide form. 7—84403
Ni-Al interface, steady-state thermal annealing-induced $NiAl_3$ growth kinetics 7—143239
Ni-Al interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7—70946
Ni-Al thin films, low temp. phase form. by ion beam mixing, amorphisation and chem. disorder effects 7—84057
Ni-Al_2O_3, vacuum condensates, struct. and porosity, 1170 K 7—84564
Ni-Al_2O_3 interface, thermally activated diffusion, electron spectroscopy studies 7—131457
Ni-Al_2O_3 metal-ceramic composites, magnetic and TEM studies 7—77924
Ni-Al_2O_3 system, vacuum condensates, struct., porosity rel. to annealing time 7—132460
Ni-Au-Si, thin film reactions, selectively enhanced silicide formation 7—137629
Ni-C multilayer sputtered films, mag. props. study 7—125509
Ni-C multilayer X-ray mirror, spectral characts. meas. using Be recombining laser plasma emission spectra 7—125843
Ni-C X-ray multilayer mirrors, sputter deposited, performance 7—121315
Ni-Cd battery, comparison with Pb acid battery *(German)* 7—144811
Ni-Cd cell, electrode kinetics, failure model prediction 7—86778
Ni-Cd cells, discharged and shorted, open-circuit voltage recovery transient 7—119637
Ni-Cd sealed prismatic and cylindrical cells, plastic-bonded electrode limitations 7—139103
Ni-Cr alloy, oxidation and sulphidation, scale structs. 7—106706
Ni-Cr multilayered structures, microtopography induced during sputter depth profiling 7—70102
Ni-Cr multilayered thin films, mag. props., dimensional effects study 7—125507
Ni-Cu, compositionally modulated films, magnetisation meas. 7—143845
Ni-Cu sandwiches, finite temp. magnetism, itinerant electron theory 7—85236
Ni-Cu-Ni quantum wells, low-energy electron transmission 7—138562
Ni-Fe alkaline accumulators, study of Fe_3O_4 electrodes 7—93492
Ni-Fe rechargeable cells, alkaline porous Fe electrodes, open circuit potential-recovery transients 7—139108
Ni-H, low temp. annealed, H diffusion, thermoelectric study 7—105456
Ni-H cells, overcharge effects on capacity below 1 V 7—139107
Ni-H system, diffusion- and tunnelling, fast Fourier transform and Monte Carlo method calcs. 7—69976
Ni-H system, H in vacancies, positron lifetime meas. 7—104799
Ni-H_2 battery, anode catalyst for aerospace system 7—78625
Ni-He, quantitative He anal., sputtered neutral mass spectrometry 7—138570
Ni-MgF_2 cermet, solar absorber coatings, accelerated aging tests 7—144914
Ni-MgF_2 interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7—70946
Ni-Mo magnetic superlattice prep. and structural props. study 7—124726
Ni-Pb system, ion beam induced demixing 7—84067
Ni-S system, intergranular segregation, grain boundary plane 7—83975
Ni-SiO, composite film, fracture characteristics 7—78212
Ni-SiO interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7—70946
Ni-SiO_2, ion mixing at low temp., chemical effects 7—76499
Ni-steel friction pair, O-doped struct. in contact friction zone *(Russian)* 7—93105
Ni-Ta structure on Si, ion-beam mixing, ballistic effects 7—76217
Ni-Ti, ion bombardment induced amorphisation, cross-sectional TEM studies 7—111697
Ni-Zn electric vehicle batteries, pulse power tests on NiO electrodes 7—139106
Ni-ZnSe-Ge structures, photoelec. props. 7—105620
Ni-Zr, powder, amorphization by mechanical alloying, X-ray, SEM, microprobe compositional anal. 7—106461
Ni-Zr thin film multilayers, solid state amorphisation, differential scanning calorimetry study 7—75992
Ni+Fe_2O_3 reaction modelling, BWR recirculation pipe dose rate prediction appl. 7—135676
Ni_3 clusters, trapped in Ar matrices, electronic and far IR spectra 7—90021
Ni_3, low-lying states, pot. surface SCF-contracted CI calcs. 7—89997
$Ni^{2+}H$, charge-transfer recomb. rate coeffs. calcs., Landau-Zener approx. 7—82349
NiH_x electronic struct., ab initio band struct. calcs., generalised Slater-Koster fit 7—84655
Ni(II) ion, aq. soln., proton spin-lattice relax. rates 7—129745
Ni—Pd—a—Si, form. of Pd_2Si buffer layer, impeding Ni diffusion 7—124734
^{61}Ni, isomer shift calibration by ^{57}Ni electron capture lifetime meas. 7—132169
^{63}Ni, preparation for large area sources for document imaging 7—109574
Si:B,Ni, donor levels, Hall effect and DLTS meas. 7—137852
Si:B-Ni, vacuum annealed surfaces, elect. props. 7—138004
Si:Ni, dissolution of precipitates by rapid thermal processing 7—71219
Si:Ni, doping props. *(German)* 7—76817
Si:Ni, impurity precipitates, press. induced changes, elec. resistivity meas. 7—143462
Si:Ni, Ni-related deep levels, combined Hall effect and DLTS meas. 7—70247
Si/Ni thin films, stacking faults and F bubbles, dynamical changes, cross-sectional TEM study with intermittent annealings 7—124765
W-Ni point contact diode, far infrared harmonic generation and mixing 7—82703
YAG:Ni luminescent crysts., elec. cond. and defect struct. props. correl. 7—131721
ZrF_6-BaF_2-LaF_3-AlF_3:Ni^{2+}, Co^{2+}, Mn^{2+} glass, absorption and luminescence spectra 7—106255
ZrO_2-Y_2O_3:Ni, laser-excited luminesc. and absorpt. spectra studies 7—125764

nickel alloys
see also Elinvar; Invar; nickel compounds; Permalloy
$_{50}Ni_{10}Au_{40}$, martensitic transformations, shape memory effect 7—138744
$Al_{1-x}Ni_x$, martensitic alloys, structural transformations and phonon anomalies 7—144400
Alloy 600, pit growth kinetics in high temp. chloride solns. 7—132795
Alloy 600, stress corrosion cracking in high temp. water, steam generator tubing test 7—144616
alloy 600 nuclear steam generator tubes, cold leg thinning, wear and corrosion 7—109287
alloy 600 PWR steam generator tubing, pitting, causes and corrective action 7—144630
alloy 600 steam generator tubes, crevice solns., pH and corrosion pots. 7—129187
alloy 600 steam generator tubing, crevices, corrosive field conditions 7—129188
alloy 600 tubing, intergranular SCC susceptibility 7—93206
alloy 600 tubing for PWRs, caustic intergranular corrosion, eddy current testing standards 7—113850
alloy 600 tubing in nuclear steam generators, stress corrosion cracking, remedial methods 7—144629
alloy 690 steam generator tubes, crevice solns., pH and corrosion pots. 7—129187
alloy 690 steam generator tubing, crevices, corrosive field conditions 7—129188
alloy 690 tubing for PWRs, caustic intergranular corrosion, eddy current testing standards 7—113850
Alloy 718, crack growth during quenching 7—93071
Alloy 718, FBR structural material, fast neutron irrad., fracture toughness 7—86328
alloy 718, neutron irrad., fatigue crack propag., 650°C 7—100345
alloy 800 steam generator tubing, crevices, corrosive field conditions 7—129188
Alloy 800H, austenitic alloy, corrosion in sulphurising atm. at low O_2 pot. and high C activity *(French)* 7—86472
Alnico 5 with columnar structure, ageing heat treatment conditions effect on mag. props. 7—143859
atomic diffusion rates, Auger depth profiling, relax. and deformation effects 7—143103
cold rolled, impurity-induced vacancy clustering, positron annihilation study 7—106300
continuous casting, secondary cooling criteria for stress cracking prevention *(German)* 7—100212
corrosion in environment typical of coal gasification plants 7—86448
corrosion resistance in Cl^--containing environments, test techniques 7—144646
creep-resisting, freq. and temp. effect on fatigue resist. 7—100366
dielectric constant meas. of lossy fibres and rods, at microwave freq. 7—95617
dilute, neutron and electron irrad., defect struct., diffuse X-ray scatt. studies 7—91656
dilute alloys, impurity charge and magnetisation perturbation calcs. 7—99400
Eu-Ga-Co(Ni) system ternary, phases with $BaZn_5$ struct. 7—131096
fatigue crack growth and crack resist. at high temp. 7—113712
Fe-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7—76707
graphite particle reinforced Al-Ni, cast, deform. into wires 7—126203
Hastelloy C4, corrosion in hot conc. salt brines *(German)* 7—93202
Hastelloy X, non-isothermal fatigue crack growth 7—113657
Hastelloys and Inconels, weld metal, solidification microstruct., PHACOMP calcs. 7—77971
heat-resistant, protective coatings effect on high-temp. fatigue 7—113784

nickel alloys continued
IN738LC, aluminide coating, high temp. corrosion 7−78341
IN 100, case turbine blade superalloy, creep data analysis 7−144490
IN 100 superalloy, micro-initiation and micro-propag., differential damage rule *(French)* 7−100477
IN 718, direct aged Ni-base superalloy, microstruct. charactn. and elemental partitioning 7−126122
IN 738LC, directionally solidified Ni-base superalloy, creep data anal. 7−106592
IN-713LC, superlattice of β-phase in aluminised coatings 7−86477
IN-738LC, Ni-base superalloys, oxidation or hot corrosion, effect of creep or low cycle fatigue 7−93190
Inco 718, pure hysteresis behaviour props. 7−91695
Incoloy 800, corrosion in molten $NaNO_3KNO_3$, thermal convection loop study 7−93154
Incoloy 800, corrosion in prototype nuclear process He and wet He under special flow conditions 7−86451
Incoloy 800H, oxidation kinetics 7−106656
Incoloy 800H, oxide formation studied with XPS 7−86396
Incoloy 800H, pre-oxidised, Y-ion implanted, sulphidation props. 7−93186
Incoloy 904, magneto-acoustic and Barkhausen emission from domain-wall interactions with precipitates 7−112920
Inconel, thermal conductivity, thermal diffusivity and sp. ht. 7−143432
Inconel 600, grain boundary carbides link to corrosion cracking resistance, PWR tubing 7−141155
Inconel 600, neutron irrad., microstruct., precip., swelling 7−84039
Inconel 600, steam generator tubes, effect of temp. on stress corrosion cracking 7−100456
Inconel 600, vanadate induced corrosion of Ni and MCrAlY coatings 7−119424
Inconel 617, Ni-base superalloy, high temp. corrosion in He containing impurities 7−86447
Inconel 625, marine crevice corrosion resist., effect of Nb content 7−113755
Inconel 625, serrated flow, strain ageing, ladders bands, solute migration to mobile dislocations 7−78138
Inconel 625 superalloy, transient oxides formed on aluminide coating, TEM obs. 7−100443
Inconel 713C, rapidly quenched using twin-roll technique, aging behaviour 7−93031
Inconel 718, creep crack initiation and growth at 650°C 7−126210
Inconel 718, creep rate rel. to γ″ precip. size 7−86279
Inconel 718, environmentally assisted cracking, microstruct. effect 7−78309
Inconel 718, expt. comparison of several current viscoplastic models at elevated temp. 7−119324
Inconel 718, high temp. embrittlement, effect of environment 7−93189
Inconel 718, mixed mode small crack growth 7−111753
Inconel 718, Ni-base superalloy, steady-state creep deform. 7−86276
Inconel 718 powder, dynamically-compacted, heat-treatment response 7−86208
Inconel MA 6000, oxide dispersion strengthened superalloy, cyclic creep, lower stress level effect 7−132680
Inconel MA 6000 powder, dispersion strengthened Ni-base superalloy, charactn. 7−100154
Inconel X750, environmentally assisted cracking in simulated PWR water, heat treatments influence 7−144632
Inconel X-750, heat treatment, SCC, strength, ductility, PWR appls. 7−144447
Inconel X-750, MC particles growth on stacking faults and dislocations 7−78025
Inconel X-750, Ni-base superalloy, plastically strained, high-misfit, dislocation-precip. interaction during coarsening 7−78024
liquid alloys, ternary and multicomponent, N and H solubility, equivalent influence of alloying elements *(German)* 7−111900
MAR-M 002, aluminide coating, high temp. corrosion 7−78341
MAR-M 247, superlattice of β-phase in aluminised coatings 7−86477
meas. in relaxed and crystallized specimens, RBS technique 7−143104
metal-metalloid glasses, Ni-rich, relax. behaviour 7−97972
metallic glasses, rad.-induced growth 7−91678
Monel 400, mass transport of Cu and Co, radioactive tracer obs. 7−118148
Mumetal, soft magnetic materials, mag. props. 17 years after electron irrad. 7−125451
Ni-Ga ordered β-phase alloys, constitutional and thermal defect form., Mossbauer spectra studies 7−83948
Ni-P layer deposition from heterogeneous oxidoreduction 7−100140
Nichrome, Nb alloyed, heat treatment effect on strength and tribotech. props. 7−78265
Nimocast 713, hot corrosion in molten salt mixture 7−119423
Nimonic 75, corrosion in prototype nuclear process He and wet He under special flow conditions 7−86451
Nimonic 75, creep deform. rel. to high temp. prestrain 7−100322
Nimonic 80 A, high temp. SCC in presence of V containing corrodent 7−113782
Nimonic 80A, laser surface treatment *(French)* 7−93185
Nimonic PE16, Ni-base superalloy, coarsening of intergranular Γ′ 7−100230
Nimonic PE 16, grain boundary struct. during post-recrystn. anneals, influence of strong grain boundary pinning by particles 7−111578
Nimonic PE 16, Ni-base superalloy, precip., quantitative anal. 7−100238
Nimonic-75, corrosion behaviour in NaCl and Na_2SO_4 7−93203
pyros, thermal expansion meas. standards 7−121064
rapidly solidified, mechanical props. and potential applications 7−86302
rare earth alloys, RNi_2, Laves phase cpd., magnetism, review *(Japanese)* 7−85319
Rene 80, Ni-base superalloy, coated and uncoated, creep, fatigue and their interaction 7−86337
Rene 95, Ni-base superalloy, rapidly quenched, phase form. during ageing 7−93032
Rene N4 superalloy/Pt interface, ion beam mixing, RBS/AES studies 7−111696
solid solution hardening, extra contrib. of transition-metal solutes 7−71202
steel, Cr-Ni-Mn-Mo, tensile and fracture data 7−78144
steel, Ni-Cr-Mo-V, stress corrosion cracking in A471 turbine disc steel, dissolved O_2 and CO_2 effects 7−144627
steel, Ni-Mo, SA533 Grade B for nuclear pressure vessels, fracture toughness using Charpy specimens 7−132727
superalloy applications, chemical analyses and mechanical properties *(Spanish)* 7−86085

nickel alloys continued
superalloys, γ-γ′ microstructure morphology, automatic image anal. *(French)* 7−119276
superalloys, dendritic arrays, oriented solidification, image anal. *(French)* 7−119256
superalloys, dispersion-stabilised, alternative approaches to processing 7−86084
thermal cycling endurance of alloy EI826, effect of thermal stressed state inhomogeneity 7−113718
transition metal alloys, ANi_2, Laves phase cpds., magnetism, review *(Japanese)* 7−85319
Udimet 500, Ni-base superalloys, oxidation or hot corrosion, effect of creep or low cycle fatigue 7−93190
Udimet 500, Ni-based superalloy, low cycle fatigue, strain rate effects and assoc. deform. mode 7−144534
Ag-Ni, very dil. alloys, surface sandwich segregation, mean field approach 7−105210
Al-Al_3Ni, directionally solidified fibrous eutectic, coarsening, analytical description 7−100229
Al-Cr-Fe, rapidly solidified, microstruct. and mech. props. *(Korean)* 7−77966
Al-Cr-Ni system, phase equilib. at 1423 K 7−132582
Al-Fe-Ni rapidly solidified alloys, microstruct. and mechanical props. at elevated temps. 7−86194
Al-Ge(Ni)(Be), rapidly solidified, microstruct. 7−93000
Al-Ni, molten, wetting of Ni ion plated graphite *(Japanese)* 7−76550
Al-Ni, rapidly solidified by electron beam surface melting, struct. and mech. props. 7−93211
Al-Ni, thermodynamics props., reviews 7−80197
Al-Ni (0.2 to 12 wt.%), cold-worked damping capacity 7−144457
Al-Ni ion implanted alloy, defect-impurity interactions 7−91633
Al-Ni-Co, hysteresis props., thermal treatment and tempering *(Russian)* 7−100256
Al-Ni-Mg, eutectic, mech. props. rel. to Mg addition 7−71242
$Al_{70}Ni_{15}Si_{15}$, amorphous, crystallization study, DTA, resistivity anal. *(French)* 7−75994
$Al_{70}Si_{15}Ni_{15}$ amorphous alloy, crystallisation and structure *(French)* 7−91525
Ar-Ni, amorphous tape, electro beam heating, growth of large Zr_2Ni crystals 7−142605
Au-FeNi, layer thickness meas. using pseudo-Sezawa waves 7−121073
AuGe-Ni metallisation, ohmic contact form. to GaAs by scanned electron beam alloying 7−105708
AuNi dil. alloys, electronic structure study using Cooper minima effects and resonant photoemission 7−76757
AuNi system, latt. distortions, EXAFS and computer simulations studies 7−119072
AuNiGe-GaAs, ohmic contact, interface microstruct., effect on uniformity and thermal stability 7−118282
$BNi-CO_2(N_2)$, gas-solid mixture, spectral emission meas. 7−111083
Bi-Cr clad steel, cyclic strength in chem. preservative medium 7−100436
Bi-Cr-Fe, sensitised, intergranular SCC in high temp. high purity water environment *(Japanese)* 7−71281
Ca-Ga-Ni(Co) system ternary, phases with $BaZn_5$ struct. 7−131096
Ca-Ni based alloys, cyclic response in H_2, effect of Al and mischmetal, Auger spectra *(Japanese)* 7−98687
$CaCu_{1-x}Ni_x$, pseudobinary systems, stacking variants, homogeneity 7−117861
$CaNi_5$, H storage alloys, absorptive behaviour 7−126660
$Ca_{1-x}X_xNi_{5-y}Al_y$ system, X=CeLaNdPrFeMg, H absorption, hydride form. enthalpy *(Japanese)* 7−78684
Cd-Ni alloy electrodeposition from acetate baths with superimposed AC 7−132503
Ce-Ni, liquid, electrical resistivity 7−98967
$Ce(Cu_{1-x}Ni_x)_5$, conc. Kondo system state-mixed valence state transition 7−112277
$Ce(Cu_{1-x}Ni_x)_5$, elec. cond., thermoelec. power and thermal expansion 7−98978
$CeCu_{2-x}Ni_xSi_2$ alloys, heavy fermion to mixed valence transition, sp. ht. behaviour studies 7−124548
$Ce(Ga_yNi_{1-y})_5$, thermoelectric power, influence of unstable valence state 7−143443
$(Ce_{1-x}La_x)Ni$ single crysts., elec. resist., lattice consts., and thermopower temp. depend. meas. 7−76901
$(Ce_{1-x}La_x)Ni_{1+y}$ dilute Kondo-type systems, thermoelec. power meas. 7−76900
$CeLaNi_{5-x}Al_x$, changes in hydrogeneration props. induced by thermal cycling 7−100257
$Ce_{1-y}La_yNi_{1-x}Pt_x$ dense Kondo ferromagnet, magnetisation and elec. resist., substitution effects 7−70522
CeNi, Gruneisen parameter coupling 7−69850
$CeNi_2$ cubic Laves phase, vacancy-induced anomalies in lattice spacing, hardness and thermal expansion 7−76116
$CeNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$Ce(Ni_xCo_{1-x})_2$, thermoelectric power, influence of unstable valence state 7−143443
$CeNi_{0.8}Pt_{0.2}$, dense Kondo ferromagnet, mag. props. 7−77249
β-(Co,Ni)Ga, ternary B2 phases with triple defects, thermodynamic props. 7−76456
Co-Cr-Ni-W superalloy MM-509, coated and uncoated, creep strain-time parameters, 293-1255K 7−86293
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7−113577
Co-Fe-B-Ni, metallic glass, relaxation kinetics and Curie temp. 7−104579
Co-Fe-Nb, special mag. alloys, 7−126133
Co-Ni, melt-spun alloys, martensitic transform. 7−93012
Co-Ni, surface segregation, preferential sputtering, Auger spectra computer simulation 7−137575
Co-Ni alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7−142871
Co-Ni thin film mag. and structural recording props., deposition incidence angle depend., recording appl. 7−105976
Co-Ni-Cr superalloy, relax. internal friction peak of C *(Chinese)* 7−71226
Co-Ni-Cr-Mo, austenitic, strain hardening *(Russian)* 7−113566
Co-Ni-Cr(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Ni-Mn-Re-P film, perp. magnetised, prep. by electroless plating, undercoating layer effect *(Japanese)* 7−92898
Co-Ni-P amorphous films, electrodeposition, chem. comp. and mag. props. 7−99527

ickel alloys continued
Co-Ni-Re-P electroless thin films for mag. recording appls., perp. coercivity, thickness depend. 7−112870
Co-Ni-Ti-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
$(Co_{1-x}(Fe_{0.5}Ni_{0.5})_x)_{75}Si_{15}B_{10}$ metallic glasses, electrical resistivity, temp. depend. 7−76877
$Co_{43}Fe_5Ni_{30}Si_{8.8}B_{13.2}$ ferromag. amorphous alloy, struct. relax. obs. 7−83776
CoNi HCP thin films, magnetisation curves and hysteresis loops, film texture and orientation depend. 7−105979
CoNi mag. thin film, hysteretic phenomena 7−99504
CoNi oblique-deposited thin films, struct. and mag. props. study, recording appls. 7−105313
CoNi thin film hysteresis loops and domain structs., 3D calcs. 7−105995
CoNi thin films for mag. recording, corrosion resist. improvement by surface passivation 7−106667
$Co_{50}Ni_{50}$-S system, surface segregation, effect of S 7−76571
$Co_{58}Ni_{10}Fe_5Si_{11}B_{16}$ metallic glass, relax. phenomena, crossover effects 7−85363
Cr-Mo-Ni alloy steel, ductile fracture micromechanisms 7−71294
Cr-Ni, secondary ion emission, chemical and physical matrix effects 7−77718
Cr-Ni alloy, weldability and joint corrosion resistance expts. 7−86397
Cr-Ni-Mo steel metallurgy for VVER-1000 reactor manufacture 7−135424
Cr-Ni-base alloys, heat resist. in gaseous environments containing S and C, effect of alloying additions 7−100417
Cr_3C_2-Ni base cemented carbides, fabrication and improvement of mech. and chem. props. *(Korean)* 7−77923
Cr_3C_2-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7−93110
Cu Ni, solid solution, small particles, radial distrib. of elements 7−91943
Cu/Ni system, low energy grain boundaries, determ. by rotating-sphere-on-plate method 7−142789
Cu-Al-Ni, β-phase alloys, intergranular embrittlement, Auger electron spectra 7−113674
Cu-Al-Ni, reverse martensitic and intermartensitic transformations, thermal effects *(Russian)* 7−113551
Cu-Al-Ni, single cryst., stress-induced martensitic transform. and assoc. pseudoelasticity, effect of heat treatment 7−93011
Cu-Al-Ni (13.99, 3.5 wt.%), shape memory alloy, two-stage martensitic transform. 7−100222
Cu-Al-Ni alloy ribbon, reversible colour change assoc. with phase transform. 7−78066
Cu-Al-Ni alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7−142871
Cu-Al-Ni-Ti, shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7−126109
Cu-Al-Ni-Ti shape memory alloys, grain refined, X-phase struct. and comp. 7−86192
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7−78009
Cu-Au-Ni system, tetragonality of $L1_0$-type phase region, annealing temp. depend. 7−69660
Cu-NI system, thermodynamic evaluation 7−126086
Cu-Ni, cold worked, twinning after annealing 7−78044
Cu-Ni, compositionally modulated films, optical anisotropy, spectroscopic ellipsometry 7−99952
Cu-Ni, corrosion behaviour of radwaste container materials in Grande Ronde basalt groundwater 7−106713
Cu-Ni, dislocation motion and multiplication 7−104760
Cu-Ni, electron irradiation, dislocation loop kinetics 7−98155
Cu-Ni, low-energy ion bombardment-induced preferential sputtering, statistical model calcs. 7−77732
Cu-Ni, multilayered thin foil diffusion couples, homogenisation process *(Japanese)* 7−105155
Cu-Ni, OTEC systems, metallic materials for heat exchangers 7−86813
Cu-Ni, rapidly solidified, microstruct. and mech. props. 7−92993
Cu-Ni, surface and grain boundary solutions, heats of adsorption and mixing 7−84297
Cu-Ni (12.5, 27 wt.%), rolling texture development 7−100249
Cu-Ni (30 to 42 at.%), elec. resist. minima theory *(Chinese)* 7−76879
Cu-Ni alloy, corrosion behaviour for waste containers 7−106714
Cu-Ni alloys, electron irrad.-induced spinodal decomp. study 7−104843
Cu-Ni compositionally modulated superlattice films, enhanced modulus effect, continuum elasticity anal. 7−84608
Cu-Ni sputtering by Ar^+, low energy model 7−99996
Cu-Ni-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Cu-Ni-Cr, multilayer electroplated coatings, NDT methods and devices 7−132893
Cu-Ni-Cr spinodal alloys, hardening mechanism 7−126189
Cu-Ni-Fe, irradiation induced phase decomp. and diffusive atom transport 7−104994
Cu-Ni-Fe, partial struct. factors, kinetic study, anomalous SAXS 7−85893
Cu-Ni-Fe, torsional fatigue behaviour, influence of environment 7−93089
Cu-Ni-Fe (10, 8 wt.%), rapidly solidified, thermal effect 7−113536
Cu-Ni-Fe single-domain particles, superparamag.-ferromag. transition 7−125470
Cu-Ni-P amorphous alloys, stress relax. studies *(Russian)* 7−100270
Cu-Ni-Sn, liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-Ni-Sn single cryst. yield stress asymmetry *(Russian)* 7−138780
Cu-Ni-fe (46, 4 at.%), 2 MeV proton irrad., decomp., small angle neutron scatt. 7−137425
Cu-Ru-Ni, effect of Ni addition on Cu-Ru system, phase diagrams, physicochemical anal. 7−100184
Cu-Sn-Ti-Ni system, struct. form. mechanism in sintering, contact interaction of Ti-Ni and Cu-Sn 7−119200
Cu-Ti-Al-Ni, adhesion active alloys, interaction with synthetic diamond 7−132903
Cu-Zn-Ni, liq., Zn activity in dil. soln., third element interactions 7−76457
CuAlNi, shape memory alloys, thermoelastic martensitic transform. 7−78006
CuNi composites, elec. and mag. props. after thermal annealing 7−124961
CuNi-Cu thermocouple, transient temperature meas. at centre of glass sphere 7−80788
Cu_xNi_{1-x} (110), Cu surface segregation, ion scatt. spectra and photoemission of adsorbed Xe studies 7−92836
CuNi(Fe) alloy, results of diffuse neutron scattering *(Dutch)* 7−69542

nickel alloys continued
CuNiFe unmixed alloy, partial struct. factors determ. by anomalous small angle X-ray scatt. 7−117867
Cu_2NiZn, short range order diffuse X-ray scatt., intensity expression 7−97854
CuTi-NiTi quasi-binary eutectic system phase diagram 7−106485
$Cu_{60}Zr_{40-x}Ni_x$ glasses, ideal soln. behaviour rel. to Ni addition 7−83768
$Dy_xGd_{1-x}Ni$, amorphous alloys, random anisotropy series, complex susceptibility, low temp. 7−105895
$Er(Fe_{1-x}Ni_x)_3$, atomic and mag. struct. neutron diffr. studies 7−131989
Eu-Ni-Si nonstoichiometric intermetallic cpds., Eu electronic state study *(Russian)* 7−70265
$Eu_3Ni_4Ga_4$, cryst. struct., X-ray powder diffr. study 7−91526
$Eu_3Ni_4Ga_4$, crystal structure 7−69656
Fe-C-Cr-Ni-Si rapidly quenched alloys, solidification struct. 7−144388
Fe-Cr-Ni, complex liq. alloys, N solubility 7−76418
Fe-Cr-Ni, complex liq. alloys, N solubility, effect of Ti 7−76419
Fe-Cr-Ni, corrosion in simulated coal gasification atmospheres, 500-700°C *(French)* 7−86435
Fe-Cr-Ni, elastic moduli, temp. depend. *(Russian)* 7−98294
Fe-Cr-Ni, FCC alloy, low temp. mag. suscept. rel. to Mn content and interstitial C and N 7−112765
Fe-Cr-Ni, galvanic corrosion in reducing acids, comp. and microstruct. effects 7−126291
Fe-Cr-Ni, neutron irrad., void swelling, phase stability 7−86132
Fe-Cr-Ni, secondary ion emission, chemical and physical matrix effects 7−77718
Fe-Cr-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
Fe-Cr-Ni, superalloy, low cycle fatigue life, influence of various environments *(Chinese)* 7−132700
Fe-Cr-Ni (25, 20 wt.%) melt-spun and sputtered alloys, as-quenched microstruct. 7−92988
Fe-Cr-Ni alloy, local ordering by interstitial defect migration 7−105149
Fe-Cr-Ni alloy, X-ray quantitative microanalysis, calculation method 7−114048
Fe-Cr-Ni alloys, prod. by laser surface alloying using mixed powder feed, charactn. 7−119446
Fe-Cr-Ni based austenitic alloys, element radial redistrib. under HVEM electron irrad. 7−104844
Fe-Cr-Ni FCC alloys, point defects study 7−104744
Fe-Cr-Ni-B, crystallised glassy alloy, superplasticity 7−126171
Fe-Cr-Ni-Co superalloy, Refractoloy 26, microstruct. and mech. props., effects of Co *(Chinese)* 7−144424
Fe-Mn-Ni-Si alloys, oxidation-induced transformations, kinetics 7−106670
Fe-Ni, austenite form., hydrostatic press. effects *(Russian)* 7−144396
Fe-ni, diffusional growth of multiphase scales 7−86432
Fe-Ni, electrochemical corrosion in acidic sulphide solns. *(German)* 7−78380
Fe-Ni, electrodeposition from sulphate solns. 7−77848
Fe-Ni, FCC internal friction caused by dissolved H_2 7−144453
Fe-Ni, ferromagnetic-paramagnetic transitions recording at pressures to 30 GPa 7−121163
Fe-Ni, molten, component interaction, viscosity study *(Russian)* 7−91868
Fe-Ni, multilayered thin foil diffusion couples, homogenisation process *(Japanese)* 7−105155
Fe-Ni, N_2^+ ion implantation effect on corrosion in H_2SO_4 soln. 7−126296
Fe-Ni, plastic deformation, magnetically induced Invar hardening 7−76275
Fe-Ni, press. induced BCC-FCC phase transition *(Russian)* 7−142976
Fe-Ni, secondary ion emission, chemical and physical matrix effects 7−77718
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7−138784
Fe-Ni alloys, itinerant-electron spin glasses, local environment effect 7−70557
Fe-Ni alloys, martensitic transform., effect of austenite ordering *(Chinese)* 7−71178
Fe-Ni alloys. mag. props. meas. 7−125340
Fe-Ni and Fe-Ni-Gd thin films, Lorentz microscopy study, mag. props. 7−105997
Fe-Ni based alloys, high temp. corrosion in nuclear process heat plant 7−86440
Fe-Ni films, magnetisation, effect of Al overlayers 7−132072
Fe-Ni films electroplated on nonmagnetic wire, mag. props. 7−132093
Fe-Ni laser induced CVD films, wavelength control of composition 7−92882
Fe-Ni system, PIXE analysis with corrections for matrix effects 7−133015
Fe-Ni-Al, corrosion behaviour in sulphidizing and oxidizing atm. *(French)* 7−86455
Fe-Ni-Al, prior plastic deform. influence on thermal-martensitic-transform. 7−86171
Fe-Ni-Al, with small alloying additions, effect of Al_2O_3 scales on thermal cycling and creep in oxidizing and carburizing atm. 7−93063
Fe-Ni-Al-C alloys, rapidly solidified, lattice modulation and form. of lamellar duplex ferrite/carbide microstruct. 7−100206
Fe-Ni-Al-Ti semi-hard mag. alloy, precipitation phases during tempering *(Chinese)* 7−126119
Fe-Ni-B, amorphous alloys, relax. behaviour 7−98339
Fe-Ni-B, borided layers on Fe alloy, hardness, C, Cr and Ni effect 7−100440
Fe-Ni-B, metallic glasses, struct. relax., microcalorimetric investig. 7−97974
Fe-Ni-B amorphous alloy, neutron irrad., elec. resist. spinodal decomposition model 7−105518
Fe-Ni-B metallic glasses, ferromag., spin polarisation of secondary electrons 7−138559
Fe-Ni-B sputtered amorphous films, stress sources, mag. meas. 7−84609
Fe-Ni-B system, amorphous state structs. 7−97973
Fe-Ni-B-Si metallic glasses, reversible structural relax., DSC and X-ray diffr. 7−131054
Fe-Ni-C, enthalpy contribution to heat of transport 7−111959
γ-Fe-Ni-C, interaction of Ni with C, temp. depend. 7−77943
Fe-Ni-C, martensitic transform., effect of solution strengthening of austenite *(Chinese)* 7−144395
Fe-Ni-C, tensile tests, martensitic transform., AE, mag. suscept. 7−144665
Fe-Ni-C (24, 0.5 wt.%), melt spun ribbons, austenite decomp., metallography 7−100233

nickel alloys continued
Fe-Ni-C system, thermodynamic evaluation 7−137588
Fe-Ni-Co superalloy, IN 903, fracture toughness, effect of H_2 7−138828
Fe-Ni-Cr, austenitic, ageing, low temp. mag. props. rel. to precipitated γ' phase particles *(Japanese)* 7−105958
Fe-Ni-Cr, carburization and oxidation, oxide scale failure 7−86431
Fe-Ni-Cr, γ' strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7−105959
Fe-Ni-Cr, P segregation, depend. on grain boundary crystallography 7−113555
Fe-Ni-Cr, transient state scale from. in H_2-H_2O-H_2S atm. 7−78376
Fe-Ni-Cr alloys, mag. states, low temp. phase diagrams 7−85286
Fe-Ni-Cr based alloy, ion beam induced stable phase, formation at expense of metastable phase 7−138767
Fe-Ni-Cr phase diagram, thermodynamic anal. and calc. 7−100188
Fe-Ni-Cr spin glasses, mag. field-temp. diagram 7−138238
Fe-Ni-Cr/steel composite material, prod. by explosion welding, props. and microstruct. 7−71217
Fe-Ni-Cr-Mo, superalloys, high-temp., high-cycle fatigue *(Japanese)* 7−106617
Fe-Ni-Cr-Ti, welded joints, heat treatment and HAZ props. 7−78074
Fe-Ni-Cr-W, gas-metal reactions in He and H_2-CH_4-H_2S atm., 700 to 950°C 7−86452
Fe-Ni-Cr(Mn) spin glasses, mag. props. 7−105936
Fe-Ni-Mn alloy, α' to γ transform., secondary austenite form. 7−144397
Fe-Ni-Mn-C alloy single crysts., elastic consts., temp. and uniaxial load depend. studies 7−142871
Fe-Ni-N system, with up to 30 wt.% Ni, N activity and solubility 7−126083
Fe-Ni-P, amorphous magnet, crystallisation kinetics 7−111393
Fe-Ni-P-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Fe-Ni-S system, thermodynamic props., phase equilib., 700-900°C, thermogravimetry 7−119241
Fe-Ni-Sb system, segregation profiles, evaluation from regular soln. model 7−126124
Fe-Ni-Si-B, current pulse annealing, effects on mag. props. 7−142641
Fe-Ni-Si-B amorphous alloys, Ni magnetism, Mossbauer studies 7−113044
Fe-Ni-Si-C, mag. props., struct., Mossbauer obs. *(Russian)* 7−143858
Fe-Ni-Si-Cu-C, Cu precip. and solubility 7−100226
Fe-Ni-Ti, aging alloy, martensite to austenite transform. 7−106507
Fe-Ni-W-C, phase diagram assessment 7−77952
Fe-Ni-W-C, phase diagram calc., bonded WC tool comp. selection 7−132568
Fe-Ni-W-C phase diagram at 1273 K, diffusion-couples heat treatment, Gibbs energy anal. 7−132567
Fe-Ni-Zr amorphous alloys, effective susceptibility exponent, temp. depend. 7−143766
Fe-Ni(-Co) systems, metallurgy of diffusion coatings 7−132502
Fe-Ni(-Mn)(-Cr), superplasticity due to isothermal martensitic transform., phenomenological anal. *(Japanese)* 7−100294
Fe-Si-Ni, high Si steel, erosion behaviour with austempering 7−71322
Fe-W-Ni, struct., phase composition and precipitates *(Russian)* 7−71189
$Fe_{48.7}Al_{8.3}Ni_{13.5}Co_{26.5}Cu_3$, Alnico 5, permanent magnet material, mag. props., potentiokinetic polarisation curves 7−99501
FeCoNi-based metallic glasses, induced anisotropy and magnetostriction temp. depend. 7−105912
$Fe_{4.7}Co_{65.6}Ni_{3.4}Cr_{1.1}Nb_{2.5}B_{13.8}$ $Si_{9.1}$, metallic glass, internal friction, struct. relax, microhardness 7−106566
$(FeCoNi)_{78}Si_{10}B_{12}$ amorphous alloys, magnetic anisotropy studies 7−99442
$Fe_{30}Cr_{10}Ni_{40}B_{20}$ metallic glass ribbons, US stressing, fracture toughness 7−113672
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ crystallised glasses, grain size and superplasticity studies 7−91706
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ devitrified metallic glass, fine particle superparamagnetic props. 7−143860
$FeNi_3$ (100), (110), (111), surface lattices, dynamical characteristics 7−84479
$FeNi_3$, binary ordering, surface layer atom distrib. *(Russian)* 7−143139
$FeNi_3$, spin-polarised bands via the recursion method 7−125302
$Fe_{1-c}Ni_c$, electronic struct., first principles calcs. of moments 7−118354
$Fe_{50}Ni_{50}$, in meteorites, shock-induced effects, Mossbauer study 7−145902
$Fe_{50}Ni_{50}$:N_2^+, ion implantation effect on oxidation behaviour 7−119405
Fe_xNi_{100-x} surface, electronic struct., UV photoemission study 7−106359
FeNiB alloys, results of diffuse neutron scattering *(Dutch)* 7−69542
$(Fe_{1-x}Ni_x)_{80}B_{20}$, amorphous alloy, magnetostriction meas. *(Korean)* 7−92487
$(Fe_{1-x}Ni_x)_{80}B_{20}$, amorphous, crystallisation behaviour *(Korean)* 7−137256
$(Fe_{100-x}Ni_x)_{0.83}B_{17}$, metallic glasses, mechanical props. 7−86360
$Fe_{40}Ni_{40}B_{20}$, amorphous, quenched, annealed, struct., neutron diffr. 7−83770
$Fe_{40}Ni_{40}B_{20}$, amorphous, diffusion of ^{59}Fe and ^{32}P 7−91883
$Fe_{40}Ni_{40}B_{20}$, amorphous alloys, thermally embrittled, restoration of ductility under neutron irrad. 7−78092
$Fe_{40}Ni_{40}B_{20}$ amorphous ribbons, thickness, influence on mechanical props., neutron irradiation, annealing 7−86232
$Fe_{40}Ni_{40}B_{20}$, amorphous alloys, struct., effect of prod. conditions 7−131042
$Fe_{40}Ni_{40}B_{20}$ amorphous thin films, crossover effect for uniaxial anisotropy 7−132008
$Fe_{40}Ni_{40}B_{20}$ amorphous alloys, aging, Mossbauer and mag. study 7−132167
$Fe_{40}Ni_{40}B_{20}$ amorphous thin films, coercive field, thermomagnetic annealing influence 7−138292
$Fe_{40}Ni_{40}B_{20}$ and $Fe_{39}Ni_{39}Mo_2(SiB)_{20}$, mag. metallic glasses, corrosion resist. in acidic and neutral aqueous solns. 7−93172
$Fe_{40}Ni_{40}B_{20}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{40}Ni_{40}B_{20}$, $Fe_{40}Ni_{40}P_{20}$, metallic glasses, struct. relax. kinetics, calorimetric and resistometric studies 7−97976
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, corrosion behaviour, role of B and Ni 7−86490
$Fe_{40}Ni_{40}B_{20}$ metallic glass, near neighbour distrib., FIM obs. 7−97963
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, isothermal reversible relax., calorimetric investig. 7−97975
$Fe_{40}Ni_{40}B_{20}$ metallic glass, homogeneous deform., stress relax. meas. 7−98319
$Fe_{40}Ni_{40}B_{20}$ metallic glass, thermal stability, corrosion 7−104586

nickel alloys continued
$Fe_{40}Ni_{40}B_{20}$ metallic glass ribbons, US stressing, fracture toughness 7−113672
$Fe_{40}Ni_{40}B_{20}$, metallic glass, effect of H^+ irradiation, on surface morphology 7−124343
$Fe_{40}Ni_{40}B_{20}$, metallic glass, struct. study using X-ray diffraction 7−142615
$Fe_{40}Ni_{40}B_{20}$, metallic glass, crystallisation, influence of Mo and Si 7−142628
$Fe_{40}Ni_{40}B_{20}$ metallic glass, corrosion charact. in Na salt solns., anion effects 7−144609
$Fe_{40}Ni_{40}B_{20}$, neutron irrad. and annealed, Mossbauer spectroscopy studies 7−91661
$Fe_{40}Ni_{40}B_{20}$, stress annealed amorphous alloy, mag, surface anisotropy, ferromag. resonance 7−106031
$Fe_{40}Ni_{40}B_{20}/Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous ribbon AC two-core transducer, displacement meas. 7−140686
$Fe_{41}Ni_{41}B_{18}$, amorphous, self-diffusion of radioactive ^{59}Fe tracer atoms 7−91884
$Fe_{41}Ni_{41}B_{18}$, amorphous and semicrystalline structure, fatigue and fracture 7−86362
$Fe_{60}Ni_{20}B_{20}$, amorphous alloy, struct. and props., effect of shock loading 7−83708
$Fe_{80-x}Ni_xB_{20}$, amorphous alloys, Curie and crystallization temps. 7−132012
$Fe_{80-x}Ni_xB_{20}$, amorphous foils, temp. depend. of mag. props. 7−132166
$Fe_{80-x}Ni_xB_{20}$ ferromagnetic metglass, anomalous low temp. hysteresis props. study 7−70590
$Fe_{80-x}Ni_xB_{20}$ metallic glasses, hyperfine mag. field, comp. and temp. depend., Mossbauer spectra meas. 7−77441
$Fe_xNi_{80-x}B_{20}$, amorphous alloys, magnetic contribution to electrical resistivity 7−137903
$Fe_xNi_{80-x}B_{20}$ glassy alloys, magnetisation and elec. resist. meas. 7−85360
$Fe_xNi_{80-x}B_{20}$, relax. processes, magnetoelastic meas. 7−85405
FeNiBAl amorphous alloys near critical comp., low field reversible DC magnetisation meas. 7−70591
$Fe_{40}Ni_{40}B_{20-x}Al_x$ metallic glasses, crystn., influence of Al 7−76029
$Fe_{40}Ni_{40}B_{20-x}P_x$, amorphous struct., X-ray RDF 7−83764
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$Fe_{16}Ni_{64}B_{19}Si$ amorphous ferromag., effective susceptibility exponent 7−143770
$Fe_{40}Ni_{40}B_{13}Si_7$ glassy ribbons, process parameters and props. 7−77889
$Fe_xNi_{77-x}B_{13}Si_{10}$, amorphous, spin-disorder scattering 7−143456
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromag., phase transition, AC susceptibility meas. 7−85294
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous alloy, Hall effect meas., influence of contact prep. and cooling rate 7−98992
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromagnets, Curie point anomalies in elec. resist. 7−99461
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, critical exponent, mag. susceptibility meas. 7−85321
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, mag. transition, inhomogeneity effects 7−92427
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, irreversible mag. permeability decay 7−92463
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, magnetic stability, reversible disaccommodation w.r.t. demagnetization 7−92471
$(FeNiCo)_{100-x}(SiB)_x$ amorphous alloys, adhesive wear and friction coeffs. comp. depend. meas. 7−91717
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
FeNiCr alloys, dynamics of point defect populations 7−104743
$Fe_{59}Ni_{21}Cr_{20}$, spin glass transition temp., sound damping 7−105930
$Fe_{80-x}Ni_xCr_{20}$, magnetovol. effects, thermal expansion meas. 7−138305
$Fe_xNi_{80-x}Cr_{20}$, concentrated spin glasses in mag. field, freezing temp. *(German)* 7−132038
$Fe_{40-x}Ni_{40}Cr_xB_{20}$ metallic glasses, thermal stability, exoelectron study, crystallisation 7−131024
$Fe_{40-x}Ni_{40}Cr_xB_{20}$ ribbons, elec. resist. minimum 7−98974
FeNiCrMoSiB, amorphous, electronic transport studies 7−137895
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ amorphous ribbon alloy, laser radiation enhancement of corrosion resistance 7−71369
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, Metglas 2826A, thermal stability assessment, isothermal long-term annealings 7−76026
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, internal friction, creep, annealing effect *(Japanese)* 7−93059
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ metallic glass, inhomogeneous deform., bending meas. 7−98319
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, cold rolling, struct. relax., Young's modulus, internal friction 7−106569
$Fe_3Ni_{82.24}Cr_7Si_{4.5}B_{3.2}C_{0.06}$, amorphous struct., X-ray diffraction study 7−131047
$Fe_{40}Ni_{38}MNO_4B_{18}$ Metglas, domain walls, wall mobility, coercivity and initial permeability 7−132049
$Fe_{65}(Ni_{1-x}Mn_x)_{35}$, plastic deformation, magnetically induced Invar hardening 7−76275
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, chemical short range order, isochronal resist. meas. 7−104583
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous ribbon/steel system, impact weldability domain 7−113851
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, H_2 blistering and bubble form. 7−76223
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystallisation and struct. relaxation study 7−83707
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7−132081
$Fe_{82-x-y}Ni_xMo_yB_{16}Si_2$ amorphous alloys, hyperfine interactions, Mo effects, Mossbauer study 7−112266
$Fe_{39}Ni_{39}Mo_4Si_6B_{12}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{40}Ni_{40}P_{20}$, amorphous alloys, thermally embrittled, restoration of ductility under neutron irrad. 7−78092
$Fe_{50}Ni_{40}P_{10}$, pulsed laser annealing, study using *(Russian)* 7−91462
FeNiPB metallic glass ribbons, domain wall surface energy, complex impedance meas. 7−118820
$(Fe_{1-x}Ni_x)_{80}P_{14}B_6$, amorphous alloys, crystn. free energy changes 7−76028
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, fracture mechanics for embrittlement 7−86356
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, struct. regularities of deformation and fracture 7−86363
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, annealed, struct. study 7−91463

nickel alloys continued
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, spin waves at 77 K, inelastic neutron scatt. study 7−92419
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloys crystn. product, interlamellar spacing var. 7−97960
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous, dissolved H mobility, induced mag. anisotropy 7−104589
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous ferromagnet, spin dynamics, neutron scattering 7−105903
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous ribbon, ferromag., domain struct., neutron depolarisation studies 7−118819
$Fe_{40}Ni_{40}P_{14}B_6$ and $Fe_{40}Ni_{40}B_{20}$ amorphous alloy sheets, spray quenching, warm rolling, surface smoothing and densification 7−86090
$Fe_{40}Ni_{40}P_{14}B_6$, elec. resistance, effect of pressure to 120 kbar 7−143429
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, crystn. kinetics under isothermal and non-isothermal conditions 7−76027
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, H_2 blistering and bubble form. 7−76223
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass ribbons, laser beam and conventional annealing, Mossbauer studies 7−86231
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass, initial oxidation, Auger electron spectra and ion sputtering studies 7−86484
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glasses, isothermal reversible relax., calorimetric investig. 7−97975
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, domain wall motion reproducibility 7−132054
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, thermal stability assessment, isothermal long-term annealings 7−76026
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, creep, structural relax., wear, plastic flow model 7−86295
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, interlamellar spacing variation 7−142631
$Fe_{40}Ni_{40}P_{14}B_6$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7−92929
$Fe_{40}Ni_{40}P_{16}B_4$, amorphous and crystallised alloys, oxidation, initial stages, effect of temp. and kinetics *(Russian)* 7−93192
$Fe_7Ni_{73}P_{14}B_6$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
$(Fe_xNi_{1-x})_{80}(P_yB_{1-y})_{20}$, ferromag. glassy ribbons, small angle neutron scatt., domain wall struct. 7−99414
$(Fe_{0.16}Ni_{0.84})_{75}P_{16}B_6Al_3$, conc. spin glass, spin relax. 7−112932
$Fe_{12}Ni_{63}P_{16}B_6Al_3$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
$(Fe_xNi_{1-x})_{75}P_{16}B_6Al_3$, x=0.06, 0.1, thermal magnetic fluctuations in metallic spin glasses 7−105931
$(FeNi)_8(Pb)_2$, noncrystalline, point defects study by high temp. mass transport expts. 7−105093
$(Fe_{1-y}Ni_y)_{77}Si_{10}B_{13}$, amorphous alloy, mag. contribution of Fe and Ni *(Korean)* 7−85353
$Fe_{15}Ni_{60}Si_{10}B_{15}$ amorphous alloy, Debye temp., quadrupole splitting temp. depend., Mossbauer study 7−70678
$Fe_{25}Ni_{55}Si_{10}B_{10}$ metallic glass, mag. elec. and elastic props. 7−85362
$Fe_{40}Ni_{40}Si_{13}B_7$ amorphous ferromagnet, temp. depend. of mag. props. 7−132165
$Fe_{50}Ni_{30}Si_{10}B_{10}$ amorphous alloy, crystn. and relax. during pulse heating 7−71228
$Fe_{50}Ni_{30}Si_{10}B_{10}$, metallic glass, rapidly heated, crystn. 7−76015
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
$Fe_xNi_{70-x}Ti_{30}$, amorphous alloys, enhanced magnetism on Fe substitution 7−112851
$Fe_{0.8}Ni_{0.2}TiH_{1.24}$, H diffusion, Mossbauer studies 7−84362
$Fe_{1-y}Ni_yTiH_x$, H-diffusion, Mossbauer spectroscopy study 7−118162
FeNiZr glassy and crystallized alloys, Mossbauer and mag. studies 7−85507
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, Curie temp. press. effect 7−132118
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$Fe_{90-x}Ni_xZr_{10}$ amorphous alloys, spin dynamics, inelastic neutron scatt. study 7−125347
GaAs-$Ni_{60}Ta_{40}$, interfacial reactions, phase separation 7−143111
$Gd(Cu_{1-x}Ni_x)_2$, mag. struct. changes and thermal expansion, anomalies *(Russian)* 7−99402
$Gd(Ni_{1-x}Co_x)_2$, hyperfine props., NMR study 7−132141
Hf-Nb-Ni-Ta system, phase equilib., glass form. *(German)* 7−137260
HfNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7−98983
Ho-Er-Co-Ni, spin reorientation, magnetocryst. anisotropy studies 7−138235
La-Ni, liquid, electrical resistivity 7−98967
La-Ni-Ga system ternary, phases with $BaZn_5$ struct. 7−131096
$La_{2-x}Ca_xMg_{16}Ni$, hydrogen storage capacity, Mg_2NiH_4 formation 7−93546
$LaNi_5$, dedeuterided, strain and particle size broadening in Rietveld refinement of neutron diffr. pattern 7−83848
$LaNi_5$ electronic struct., tight-binding recursion method calcs., DOS anal. and comparison with $LaNi_5H_7$ 7−84667
$LaNi_5$, heat of hydride formation, rel. to density of states and Fermi level 7−98470
$LaNi_5$, hydrogen cycling, near surface modifications 7−98644
$LaNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$LaNi_5$, thermal excitations spectral distribs. in crystalline and amorphous states 7−69847
$LaNi_5$-based H_2 storage materials, rechargeable electrodes 7−86838
$LaNi_5$-H_2 system, intrinsic degradation, thermal H_2 absorption-desorption cycling effects 7−86839
$LaNi_5$-MNi_5, M=Pr, Ce, Nd, phase rel. and H adsorpt. props. *(Chinese)* 7−71149
$LaNi_5$-Ni eutectic alloys, unidirectional solidification, hydriding props. *(Japanese)* 7−77865
$LaNi_5$-Ni eutectic alloys, unidirectional solidification, hydride disintegration resist. *(Japanese)* 7−77965
$LaNi_{4.7}Al_{0.3}$, H storage alloys, absorptive behaviour 7−126660
$LaNi_{4.7}Al_{0.3}$-H_2 system, intrinsic degradation, thermal H_2 absorption-desorption cycling effects 7−86839
$LaNi_{5-x}Al_x$, hydrogen cycling, near surface modifications 7−98644
$La(Ni_{1-x}Co_x)_5$, enthalpies of formation and hydrogenation 7−119556
$LaNi_{5-x}Co_x$, enthalpies of formation and hydrogenation 7−100602
$LaNi_{5-x}Fe_xH_y(D_y)$,thermodynamic, structural and mag. props. 7−98468
$LaNi_5H_x(D_x)$, x=0.1, 0.4, localisation of H(D), powder neutron diffr. study 7−83849
$LaNi_3Mn_2$, surface props., H_2 storage material 7−98645
Mg-Ni, mechanical alloying, for hydrogen storage 7−93542
Mg_2Ni, dehydriding kinetics, heat flow effect removal 7−71475
nickel alloys continued
Mg_2Ni, H storage alloys, absorptive behaviour 7−126660
Mg_2Ni hydriding kinetics near isothermal condition for H_2 storage 7−106937
Mg_2Ni-H, hydrogenation characts., effect of thermal cycling 7−119511
Mg_2NiH_x, phase transition, heat conduction calorimetry 7−118080
MnAlC(Ni) aligned mag., magnetoelastic props. 7−138302
MnNi single cryst., mag. struct., compressive loading *(Russian)* 7−105886
$Mn_{0.7}Ni_{0.3}$ FCC alloy, anomalous elastic props. 7−119302
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7−112742
Mo-Ni, discontinuous precip., crit. test for coherency strain as driving force 7−119274
Mo-Ni, heat treatment, grain boundary migration, diffusional coherency strain induced curvature effect 7−131368
Mo-Ni, liq. phase sintering, liq-grain mixture flow and isolated pore elimination during early stages *(Korean)* 7−138705
Mo-Ni alloys, chemically-induced liq. film migration, coherency strain effect 7−71109
Mo-Ni alloys, highly porous, thermophysical characteristics and heat transfer *(German)* 7−131606
Mo-Ni alloys, instability of solid-liq. interface induced by diffusional coherency strain 7−113471
Mo-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
Mo_xNi_{1-x}, amorphous, crystn. temp. and activation energy, DTA 7−75995
Nb-Ni, corrosion-resistant layers form. by electrodeposition or electrowinning 7−119407
NbNi disordered alloys, upper critical field 7−77176
$Nb_3SnNiZn$ multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7−131956
$Nd(Co_xNi_{1-x})_5$, struct. and phase equilibria 7−118078
$Nd_2(Fe_{0.9}Co_{0.1})_{14}B$, spin reorientation, low temp. mag. meas. 7−77348
$Nd_2Fe_{14-x}Ni_xB$, mag. anisotropy 7−132010
$(Ni,Cr,Fe)_{75}Si_{25}$ amorphous film, temp. coeff. of resist., rel. to tempering temp. and noncrystallinity 7−98973
Ni base alloys, dispersion hardened, high temp. yield strength rel. to SiO_2 particle shape 7−113639
Ni base alloys, vapour phase siliconizing, corrosion stability 7−78319
Ni base amorphous alloys, glass form., thermal stability, mag. props. 7−83729
Ni base amorphous alloys, corrosion in hot conc. H_3PO_4 7−138873
Ni base super alloys, oxidation-sulphidation behavior 7−86439
Ni base superalloy, aluminide coatings, corrosion resist. rel. to Cr content 7−86468
Ni base superalloys, creep-corrosion interactions modelling 7−119422
Ni base superalloys, fatigue crack propag., microstruct., temp, effects 7−144541
Ni base superalloys, γ' precip. hardening, SCC resist. in high temp. water *(Japanese)* 7−93173
Ni base superalloys, high temp. corrosion in nuclear process heat He, η' carbide form. 7−86444
Ni base superalloys, mech. props. requirements for aero gas turbines 7−144489
Ni based alloys, high temp. corrosion in nuclear process heat plant 7−86440
Ni based hard surfacing alloys, underwater plasma spraying, microstruct., mech. props. 7−77798
Ni based superalloy, γ' precipitates, dislocation shearing 7−100235
Ni based superalloys, unconstrained, morphological evolution, γ/γ' interface *(French)* 7−144417
Ni based ternary alloys and superalloys, hot corrosion, gas turbine appl. 7−93149
Ni/Cu multilayer struct., interface widths depend. on ion bombardment, secondary ion mass spectral anal. 7−113328
Ni/Ni_3Al joints, high press. welding, precip., phase charact. *(French)* 7−84543
Ni-Ag (2 wt.%), bulk undercooled, grain refinement 7−77985
Ni-Al, Al^+ ion implanted Ni, elevated temp. microstruct. stability 7−144363
Ni-Al, aluminides, temp. coeff. of linear expansion 7−84326
Ni-Al, amorphous alloy formation under shock-wave loading 7−77856
Ni-Al, $\gamma'(Ni_3Al)$ precip. under proton irrad. during ageing 7−84045
Ni-Al, high resolution electron microscopy of small precipitates 7−144418
Ni-Al, ion beam mixing, metastable phase form. 7−84066
Ni-Al, ion implantation, equilib. phase diagram, conc. profiles, Auger spectra, IR emissivity obs. 7−106483
Ni-Al, metastable phase formation by ion beam mixing 7−111691
Ni-Al, polycrystalline, Young's modulus, temp. and comp. depend. 7−86241
Ni-Al (10 at.%), short range order, X-ray diffuse scatt. obs. 7−137308
Ni-Al alloys, effective pair interactions, density functional theory supercell total energy calcs. 7−84710
Ni-Al coating, β-phase instability, scale resist. of surface layer 7−78344
Ni-Al coatings, plasma sprayed, bend testing, AE obs. 7−78227
Ni-Al intermetallic cpds., vacancy diffusion mechanism, DSC and positron annihilation studies 7−105104
Ni-Al ion beam mixed surface films on Ni, effect on slip band distribution and morphology 7−76274
Ni-Al system, mixing energy, calc. by method of model electron density functional 7−143017
Ni-Al type aluminide coatings, hot corrosion in aeronautical conditions *(French)* 7−78334
Ni-Al-Mo system, phase diagram, 1300 to 2000°C 7−100179
Ni-Al-Mo system, phase equilib. for Ni-NiAl-Mo comp. range 7−106482
β-Ni-Al-Ta, second phase precipitates struct. 7−78030
Ni-Al-Ta alloy, thin sample quantitative microanalysis, X-ray absorpt. correction 7−97873
Ni-Al-W system, cast, phase equilib. 7−132569
Ni-As electroplated film contact resistance, adhesion and hardness 7−105663
Ni-B amorphous coating, physicomech. and tribotech. characts. 7−100446
Ni-B based amorphous alloys, elec. resist., effect of press. and temp. 7−98971
Ni-B glass, melt spun ribbons, surface crystallisation 7−131053
Ni-B thin films less than 1 μm, hardness testing 7−100478
Ni-base alloy, DK3, directionally solidified, high temp. low cycle fatigue behaviour *(Chinese)* 7−71265
Ni-base cast superalloy turbine blades, lifetime prediction under constant load creep conditions 7−93233

nickel alloys continued
Ni-base melt-spun alloys, cellular solidification 7−92982
Ni-base multicomponent alloys, solidification range, approx. methods of prediction 7−100201
Ni-base superalloy, cast, fatigue fracture surfaces 7−86314
Ni-base superalloy, directionally solidified, primary dendritic spacing, effect of gravity level 7−77974
Ni-base superalloy, GH99, antiphase domain boundary energy of γ'-$Ni_3(Al,Ti)$ particles and strengthening contrib. *(Chinese)* 7−144425
Ni-base superalloy, heterogeneous, microstruct. anal., combined X-ray microdiffr. and topography study 7−78400
Ni-base superalloy, M38, laser beam irrad., hot corrosion behaviour 7−126302
Ni-base superalloy, oxide dispersion strengthened, abnormal grain growth 7−100242
Ni-base superalloy, PWA 1480, γ' dislocation pairs 7−124280
Ni-base superalloy, single cryst., yield stress, effect of ageing 7−113630
Ni-base superalloy, vibr. fatigue props. of laserglazed specimens 7−119374
Ni-base superalloy compacts, coarse-grained, modelling of plastic flow under isothermal forging 7−113609
Ni-base superalloys, CMSX-2 and Cotac 784, mech. props., influence of protective coatings 7−86275
Ni-base superalloys, tertiary creep, anal. of expt. data and theoretical synthesis 7−144458
Ni-base superalloys, thermal resistance prediction on basis of short-term tests 7−100286
Ni-based, Co-free hard-facing alloys for nuclear appls., lab. evals. 7−96187
Ni-based alloys, corrosion of heat exchanger materials under heat transfer conditions 7−96227
Ni-based amorphous alloys, H embrittlement 7−119327
Ni-based brazing filler metals, elec. resistivity, struct. anal. *(Korean)* 7−83688
Ni-based metallic glasses, initial stage crystn. struct. and morphologies 7−83743
Ni-based superalloys, localised corrosion in chlorine environments 7−93208
Ni-Be (12 at.%), β-phase precip. morphology, atom probe FIM 7−144419
Ni-Be-Ti, β-phase dissoln., influence of soln. treatment *(Chinese)* 7−71186
Ni-Bi, electrodeposited, struct. and changes occurring during annealing 7−86226
Ni-C, flow stress, effects of cathodically charged H 7−78095
Ni-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
α-Ni-C alloys, solvent diffusion 7−105133
Ni-C-Si, rapidly quenched, nonequilib. phases 7−113521
Ni-Cd, anomalous electrocodeposition from sulphate solns. *(Japanese)* 7−77849
Ni-Co, electrodeposited, tensile props. rel. to heat treatment 7−71254
Ni-Co alloy powder, apparent equilib. codeposition from dilute sulphate baths 7−100137
Ni-Co alloy thin films, spin wave reson. obs. 7−106033
Ni-Co diffraction grating deposition from sulphamate electrolyte *(German)* 7−82872
Ni-Co-Al, flow stress, γ' particles, Co content effect 7−78133
Ni-Co-Cr, corrosion fatigue strength at high temp. *(Japanese)* 7−71280
Ni-Co-Cr, powder metallurgy, hot extrusion, stable struct. form., superductility 7−126049
Ni-Co-Cr superalloy, cast, microstruct. and mech. props., effect of prolonged ageing *(Chinese)* 7−132662
Ni-Co-Cr superalloy, GH49, coarse grain form. after critical deform. *(Chinese)* 7−144464
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7−71250
Ni-Co-Cr-Al-Y coatings, oxidation-sulphidation behavior 7−86439
Ni-Co-Cr-Al-Y coatings for high temp. service, diffusion phenomena 7−93183
Ni-Co-Cr-Al-Y overlay coating, high temp. turbine blade appl., simulated service performance 7−78337
Ni-Co-Cr-Al-Y-Ta coatings, low press. plasma sprayed, oxidation, 850°C *(French)* 7−86466
Ni-Co-Cr-Al-Y-Ta protective coatings on mech. props. of Ni-base superalloys CMSX-2 and Cotac 784 7−86275
Ni-Co-Fe alloys, films, motion of tips of domains *(Russian)* 7−105990
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
Ni-Co(Fe), surface damage, ion-induced segregation during sputtering 7−76222
Ni-Cr, creep behavior, effect of trace additions of Ce 7−144485
Ni-Cr, dodecagonal quasicrystal, description by projection method 7−76084
Ni-Cr, high temp. oxidation rel. to surface applied reactive oxides 7−78330
Ni-Cr, neutron irrad., swelling, order-disorder transform. 7−86168
Ni-Cr, straining electrode behaviour in high temp. high press. borate buffer soln. 7−100445
Ni-Cr, sulphidation at high temp. 7−86434
Ni-Cr (10, 20 wt.%), high temp. oxidation of Cr_2O_3-forming alloys, influence of laser surface treatment 7−93187
Ni-Cr (25 wt.%), carburisation kinetics, internal precip., computer based description 7−86442
Ni-Cr (45 wt.%), precip., invariant line strain model 7−119272
Ni-Cr alloy, oxidation and sulphidation, scale structs. 7−106706
Ni-Cr based plasma coatings on steel, corrosion in molten electrolytes 7−119438
Ni-Cr films on Si, pulsed ion beam irradiation, silicide formation 7−104860
Ni-Cr liquid alloys equilibrated with Cr_2O_3, thermodynamic study using EMF method 7−143023
Ni-Cr powders, plasma spheroidisation and cladding 7−144330
Ni-Cr superalloy, Pd coating form. mechanism and kinetics 7−144594
Ni-Cr thin films, X-ray diffr. characterisation 7−98756
Ni-Cr vapour film, conduction during electrolytic anode heating 7−142432
Ni-Cr-Al, corrosion behaviour in NaCl and Na_2SO_4 7−93203
Ni-Cr-Al, Karma alloy, elec. resist. meas., development of adiabatic calorimeter *(Chinese)* 7−70277
Ni-Cr-Al, oxidation mechanism, influence of active elements 7−86458
Ni-Cr-Al, protective oxide scale adherence, role of Y 7−86459
Ni-Cr-Al-Mo system, intermetallic cpd. precip. 7−144411

nickel alloys continued
Ni-Cr-Al-Y based alloy, heat resistant coatings, struct, props., corrosion resistance 7−144600
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
Ni-Cr-Be alloys, dental, cast, solidification struct. 7−113535
Ni-Cr-Ce, ductility and fracture rel. to trace Ce additions 7−132740
Ni-Cr-Co, alloy 617, 72 *(German)* 7−138908
Ni-Cr-Co, high temp. creep, stacking fault energy effect 7−100323
Ni-Cr-Co alloys, creep friction stress 7−113641
Ni-Cr-Co superalloy, diffusion alitized layers, US effect, microstruct., microhardness 7−132800
Ni-Cr-Co superalloy, grain boundary splitting as primary recrystallisation nucleation mechanism 7−106537
Ni-Cr-Co superalloy, laser beam irrad., hot corrosion 7−119457
Ni-Cr-Co-Mo high-temp. alloy, creep rupture behaviour of weldments, local deform. behaviour *(German)* 7−100387
Ni-Cr-Co-W, cast superalloy, creep strength, controlling factors 7−100298
Ni-Cr-Fe, corrosion by molten salt mixtures *(French)* 7−78340
Ni-Cr-Fe, superni, hot corrosion by V, crack growth 7−144583
Ni-Cr-Fe (15, 10 wt.%), S solubility and diffusion, thermodynamic studies 7−76449
Ni-Cr-Fe alloys, anodic dissolution behaviour in sulphur containing solutions 7−138882
Ni-Cr-Fe alloys, intergranular cracking mechanism in $Na_2S_4O_6$ 7−144614
Ni-Cr-Fe-Mo, superalloys, high-temp., high-cycle fatigue *(Japanese)* 7−106617
Ni-Cr-Mo-Fe, corrosion resist. rel-to heat treatment 7−86427
Ni-Cr-Mo-Fe-W, precipitated phase formation, effect of precipitates on corrosion resistance *(Chinese)* 7−132621
Ni-Cr-Nb (16, 2 wt.%), superalloy, hot corrosion, internal sulphidation-oxidation mechanism 7−106694
Ni-Cr-P-B, amorphous surface alloys on mild steel, laser processing, corrosion resist. 7−138875
Ni-Cr-Sc phase diagram, 1100 to 1800°C 7−86129
Ni-Cr-Si-B coatings, plasma sprayed, adhesion, struct., comp, microhardness rel. to laser treatment 7−144269
Ni-Cr-Si-Ce, oxide scale adherence rel. to Ce additions 7−78328
Ni-Cr-Th_2 alloy, cold worked, dispersion hardened, proton irrad., creep, microstruct. 7−100293
Ni-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Cr-W, superalloy, creep behaviour, effect of salts *(Chinese)* 7−132699
Ni-Cr-W, superalloy, microstruct. and strength after laser rad. surface fusion-solidification *(Chinese)* 7−132787
Ni-Cr-W superalloy, grain boundary precip. strengthening, nuclear heat exchanger appl. 7−106526
Ni-Cr-W superalloy single cryst., tensile stress relax., 973-1273K 7−132656
Ni-Cr-W-Ti-Al superalloy, γ' precip. strengthened, alloy design *(Korean)* 7−78037
Ni-Cr(-Mo) based alloys, HLW canister appl., corrosion resist. 7−103205
Ni-Cu, anodic oxide film form., Auger spectra 7−113779
Ni-Cu, high strength nonmagnetic alloy, SCC, H embrittlement in brines 7−86333
Ni-Cu, melt spun, oxidation, diffusion induced grain boundary migration 7−98583
Ni-Cu alloy, near monel composition, rapidly solidified, initial susceptibility studies 7−125333
Ni-Cu-Al (14.5, 3.15 wt.%), elastic const. close to martensite point, effect of compression along one axis *(Russian)* 7−91696
Ni-Cu-Si(Cr), modulated struct. during initial transform., TEM study *(Chinese)* 7−144438
Ni-Fe, electrodeposited protective-decorative layers, dissolution kinetics in acidic media 7−86402
Ni-Fe, soft magnetic materials, mag. props. 17 years after electron irrad. 7−125451
Ni-Fe, surface alloying by pulsed laser irradiation, RBS/channelling studies 7−113769
Ni-Fe alloy films, XPS studies 7−125908
Ni-Fe base superalloys, crack growth, creep-fatigue interactions, environmental effects 7−144542
Ni-Fe thick targets, magnetron sputtering deposition 7−92865
Ni-Fe-B, metallic glass, short range struct., neutron diffr. 7−83771
Ni-Fe-Cr-Al-Hf, laser clad alloys, microstruct. rel. to Hf solubility 7−119395
Ni-Fe-Cr-Mo superalloy, strain hardening and softening, discrete memory description 7−78052
Ni-Fe-La system, phase equilib. and H absorpt. *(Chinese)* 7−144364
Ni-Ge alloy films, vacuum deposited, struct. 7−124753
Ni-Ge electroplated film contact resistance, adhesion and hardness 7−105663
Ni-H system, H-vacancy interaction, PAC studies 7−91640
Ni-In, oxidation quadrupole interaction, PAC study 7−118901
Ni-In alloy electroplating from sulphate-citrate bath 7−106453
Ni-In ion implanted alloys, In-vacancy complexes, channelling and Mossbauer studies 7−91638
Ni-In-H-D dilute alloy, H and D decoration of In-vacancy complexes, effective-medium theory calcs. 7−84751
Ni-Mn (2 wt.%) polycrystals, plastic deform., annealing, island grains form. 7−78043
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-Mo, eutectic alloys, microstruct. rel. to undercooling 7−92975
Ni-Mo, rapidly quenched, faulted structs. 7−76113
Ni-Mo films, ion irrad., dendritic pattern obs. 7−92018
Ni-Mo hardenable electrodeposits, X-ray anal. of structural props. 7−131497
Ni-Mo-Al (33, 5.7 wt.%), directionally solidified, fracture, microstruct., heat treatment effect 7−86326
Ni-Mo-Cr-B rapidly solidified alloys, wear and corrosion resist and mech. props., microstruct. effects 7−91719
Ni-Mo-Cr-Fe, corrosion in molten salts, electrochemical monitoring 7−86404
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7−77799
Ni-Nb amorphous alloys, electronic transport 7−98969
Ni-Nb metallic glasses, creep, free vol. annihilation and relax., isothermal dilatometry meas. 7−98324

nickel alloys continued
Ni-Nb-Pt, amorphous surface alloys on Nb, laser processed electrodes 7−137397
Ni-Ni_3C alloy films, prod. by laser breakdown CVD and ion implantation 7−119165
Ni-P, amorphous, electrodeposited, elastic props., struct. relax. 7−106567
Ni-P, amorphous alloy, electrodeposition of homogeneous flat foils 7−144316
Ni-P, amorphous alloys, densities of stakes, effects of medium-range order 7−143307
Ni-P, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
Ni-P, electroless deposits, corrosion in aerated NaCl soln. 7−144620
Ni-P, metallic glasses, electronic structure 7−92056
Ni-P, microcrystalline and amorphous, thermal expansion and structural relax. 7−84331
Ni-P amorphous alloys, chemical passivity 7−71365
Ni-P amorphous alloys, electrodeposition, foil thickness, comp. rel. to current density 7−138698
Ni-P amorphous coatings, form., role of excitonic-like states in autocatalytic processes 7−93380
Ni-P amorphous electrodeposits, Hall effect meas. 7−98987
Ni-P and Ni-P-C systems, phase form., melting point, eutectics and peritectics, polymorphic transform. temp. 7−119244
Ni-P and Ni-W-P, undercoating layers for prep. of electroless Co alloy films *(Japanese)* 7−92898
Ni-P electroless deposited coatings, activation and coating study using TEM and electron diffraction 7−132508
Ni-P electroplated film contact resistance, adhesion and hardness 7−105663
Ni-P films, electrodeposited, amorphous, crystn. *(Chinese)* 7−131039
Ni-P glass, Avrami exponent for crystn. 7−142645
Ni-P underlayer for mag. recording, M-H curve slope-intercept anal., heat treatment effects 7−105980
Ni-P/PTFE, electroless deposited composite coatings, lubricating props. 7−144562
Ni-P-B, amorphous wires, melt spinning, bending strength, thermal stability rel. to alloy additions 7−93065
Ni-P-B metallic glasses, melt quenched, crystallisation, elec. transport props 7−83758
Ni-P-Cu chemically deposited coatings, heat treatment effects on struct. *(Russian)* 7−143288
Ni-Pd based glassy alloy, crystallisation, particle size 7−83759
Ni-Pd disordered alloys exchange interactions, local spin density functional calcs. 7−99434
Ni-Pd-P amorphous particles, prep. by melt ejection into stirred water, hardness and thermal stability 7−86086
Ni-Pt single crystal alloys, multilayer segregation 7−105214
Ni-S amorphous alloy film, electroplating, struct. 7−86070
Ni-Sb electroplated film contact resistance, adhesion and hardness 7−105663
Ni-Sb(In), mag. hyperfine fields in vacancy-associated defect structs. 7−118447
Ni-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
Ni-Si (Ge)(Sb), dilute electron irrad. alloys, void nucleation, solute atom effects 7−91591
Ni-Si alloys, radiation-induced grain boundary segregation, mechanical props. study 7−104876
Ni-Si oxidation, high-temp. microstruct. and mechanisms, Si alloying effect 7−71396
Ni-Si-B, amorphous wires, melt spinning, bending strength, thermal stability rel. to alloy additions 7−93065
Ni-Si-B alloy, amorphous ribbon and powder compaction, densification and bonding 7−92932
Ni-Si-B amorphous and crystallised alloys, wear behaviour study, embrittlement and ductility 7−91718
Ni-Si-B metallic glass system, thermomechanical behaviour, liquid metal corrosion 7−86361
Ni-Si-B metallic glasses, thermal stability, temp. coeff. of resist. 7−105516
Ni-Si-Mn-Fe, high temp. corrosion in SO_2-O_2 gas mixtures 7−86433
Ni-Sn, dilute ion implanted alloy, Sn-vacancy complexes, Mossbauer studies 7−91639
Ni-Sn, undercooled, dendritic growth, recalescence, high speed optical temp. meas. 7−100208
Ni-Sn, undercooled, solidification, dendritic growth, high speed cinematography 7−100207
Ni-Sn alloys, electrocatalytic props. in H_2 evolution reaction 7−86835
Ni-Sn deposits from pyrophosphate plating bath, tensile fracture 7−138833
Ni-Ta amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta-Cr, single cryst. superalloy, yielding and deform., 20-1093°C 7−71251
Ni-Ta-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta-P amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-TaC based eutectic composite, ageing, fatigue life rel. to test freq. 7−132697
Ni-Te, liq., electrical conductivity 7−84808
Ni-Ti, amorphous phase crystallisation by ion-implantation 7−91616
Ni-Ti, mechanically alloyed, glass form. 7−142643
Ni-Ti, phase transform., in situ TEM obs. 7−77997
Ni-Ti, rapidly quenched shape memory alloys 7−86162
Ni-Ti, shape memory alloy, appl. 7−126108
Ni-Ti, shape memory effect, stepwise phase transform. *(German)* 7−100224
Ni-Ti, thermal cycling, precip., martensitic transform. 7−113560
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7−113553
Ni-Ti films, hydrogenated multilayer, ion beam mixing, Rutherford backscatt. obs. 7−104862
Ni-Ti mechanically alloyed amorphous powder, thin foil prep. and TEM obs. of amorphisation 7−144332
Ni-Ti powder, amorphous, mechanically alloyed, form. and consolidation 7−113474
Ni-Ti-B glassy alloys, crystn. kinetics and mechanism rel. to eutectic comp. 7−131038
Ni-Ti-C mechanical props. and struct. modifications w.r.t. pulsed ion beam effects 7−117988

nickel alloys continued
Ni-TiB_2 coatings, sputtered, erosion resist. rel. to comp. and process parameters 7−132764
Ni-TiC-MC system, M=Zr, Hf, Nb or Ta, phase equilib. 7−100180
Ni-U alloys, U determ. by selective precipitation and α-counting 7−109285
Ni-U fission product source, preparation and characterisation for Super Phenix 7−109284
Ni-W hardenable electrodeposits, X-ray anal. of structural props. 7−131497
Ni-W-C system, thermodynamic evaluation, sublattice model 7−77951
Ni-W-Co superalloy, β-phase precip. 7−86185
Ni-W-Co-Cr single cryst., high temp. fatigue crack growth 7−93091
Ni-W-Co-Cr single crysts., fatigue crack growth 7−93090
Ni-W-Cr, single cryst., high temp. creep, γ' phase subgrain boundaries, TEM 7−78139
Ni-X-B, (X=Al, Ga, Si, Ge), fracture and ductility rel. to comp. 7−113603
Ni-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
Ni-Zr, amorphous phase formation and crystallisation, diffusion mechanism 7−97928
Ni-Zr amorphous alloys, synthesis by mechanic alloying of $Ni_{11}Zr_9/NiZr_2$ mixtures 7−97923
Ni-Zr amorphous ribbons, melt-spun, impurity diffusion 7−69982
Ni-Zr metallic composites, form. of bulk amorphous metals from solid state reaction 7−113477
Ni-Zr metallic glasses, props. rel. to melt temp. and quench rate 7−83766
Ni-Zr metallic glasses, thermal stability, struct. relax. 7−104585
Ni-Zr thin films, amorphous, compositionally modulated, interdiffusion 7−111933
$NiAP_3$ formation on large grained Al substrates, strain annealing, growth kinetics 7−113582
Ni_xAg_{1-x}, amorphous thin films, elec. and mag. props. 7−143430
Ni_3(Al,Nb) single crystals, cyclic deform. at ambient and elevated temps. 7−144503
Ni_3(Al,Nb) single crystals, fatigued at ambient and elevated temps, dislocation struct. 7−144504
Ni_3(Al,Ti), mixed mode fracture, {111} cracking 7−78222
Ni_3(Al,Ti) single crysts., flow stress rel. to strain rate *(Japanese)* 7−100290
Ni_3(Al, Ti) single crysts., high temp. yielding *(Japanese)* 7−126173
NiAl (110), angle resolved UV normal photoemission calcs., surface relax. and correl. effects 7−106365
NiAl (110), multilayer rippled surface structure, medium energy ion scattering study 7−105213
NiAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
NiAl coatings, oxidation resist. on Ni base superalloys, Hf effect *(French)* 7−86469
NiAl films, low temp. amorphisation by intracascade processes 7−104872
NiAl, ion irrad., amorphisation, RBS, channelling studies 7−84058
NiAl, Ni_3Al, plasticity anomaly 7−100284
NiAl ordered BCC alloys, vacancy form. and conc., positron annihilation studies 7−104747
NiAl powders, recrystallised struct., failure rel. to porosity 7−106621
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7−126110
NiAl, transient oxidation, XPS study 7−71350
NiAl, vacancy interaction energy, frozen pot. approx., first principles calcs. 7−104805
β-NiAl:Y, oxidation, scale growth and adherence rel. to implanted Y 7−78329
β-NiAl-α-Cr, pseudobinary alloys, sulphidation behaviour 7−86450
NiAl-Cr quasibinary eutectic, microstruct. and phase solubility extension, effect of rapid solidification vel. 7−92991
$NiAl_3$ steady-state thermal annealing-induced growth kinetics at Ni-Al interface 7−143239
$NiAl_3$ thin film, critical amorphisation dose temp. depend. under electron and ion irrad. 7−83690
Ni_3Al, appl. of embedded atom method 7−69697
Ni_3Al, directional solidification, process parameters characterization 7−119259
Ni_3Al, fracture resist., depend. on crack length 7−132717
Ni_3Al, in situ straining in TEM 7−113602
Ni_3Al, mag excitations, theoretical study 7−118787
Ni_3Al polycrystalline alloys, positron annihilation spectroscopy of vacancies 7−106303
Ni_3Al:B, mixed mode fracture, {111} cracking 7−78222
Ni_3Al-B, ductilization, role of B 7−86287
Ni_3Al-B, fatigue crack growth 7−119361
Ni_3Al-B, intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7−126170
Ni_3Al-B, polycryst., high cycle fatigue 7−119360
Ni_3Al-B-Fe, formability and ductility, effect of solidification rate 7−119325
Ni_3Al-B-Fe, microstructs. and mech. props., influence of Fe additions 7−144492
Ni_3Al-B-Hf, single cryst., creep-fatigue behaviour, orientation effects 7−100313
Ni_3Al-Ni_3Mn, $L1_2$-type intermetallic cpd., high-temp. strength and ductility 7−113622
Ni_5Al_3 phase, crystal structure and phase transformations 7−98041
Ni_3Al(-B), strength, hardness and ductility, effect of B 7−78096
$(Ni_{0.75}Al_{0.25})_{100-x}B_x$, rapid solidification, microstruct. 7−86161
$Ni_{75}Al_{25-c}Mn_c$ solid solns., mag. props., plastic deform. effects 7−70621
$Ni_{1-x}B_x$ amorphous films, ion irrad., radiation damage, comp. depend., resist., annealing 7−111694
$Ni_{1-x}B_x$ glass, short range struct., comp. variation, neutron scatt. 7−83774
Ni_3B, ion irrad., amorphous phase form., RBS, channelling studies 7−84060
$Ni_{55}B_{45}$, $Ni_{62}B_{38}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
$Ni_{60}B_{40}$ glass alloys, low temperature resist. and thermoelec. power *(Russian)* 7−137888
$Ni_{64}B_{36}$, amorphous, localization correlation effect, pot. for struct. modelling *(Chinese)* 7−97922
$Ni_{64}B_{36}$ metallic glass, time-of-flight neutron scatt., resolution effects 7−69549
$Ni_{80}B_{20}$, metallic glasses, structural model, chemical twinning 7−97967

nickel alloys continued
$Ni_{81.6}B_{18.4}$ metallic glass, FMR linewidth and resonance field meas. 7−143913
$Ni_{77.5}B_{14.6}Si_{7.9}$ amorphous alloy, Auger obs. of metalloid redistrib. 7−117823
$Ni_{78}B_{14}Si_8$, amorphous alloy crystn. 7−83756
NiCoCrAlY coatings, plasma-sprayed, stress rupture and creep behaviour 7−71389
NiCoP single layer, flat lozenge-type domain dynamics 7−132051
NiCr crystal structure, similarity to quasi-periodic tilings 7−83826
NiCr thin films, elec. props., substrate surface roughness effect 7−118596
NiCr:Si stable thin film resistors, structural and elec. props. studies 7−138075
$Ni_{66}Cr_{34}$, duplex oxide-metallic substrate system, oxidation stress distrib. determ. by curvature method 7−86470
NiCrAl, undoped, adherent Al_2O_3 scale form. 7−71381
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$, metallic glass, thermal stability, internal friction, TEM, DTA 7−69598
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$ metallic glass, non-isothermal crystn., activation energy determ. using internal friction method *(Polish)* 7−137248
NiCrNb, metallic glass, formation, crystallisation behaviour 7−142627
$Ni_{55}Cr_5Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
$Ni_{55}Cr_5Nb_{40}$ metallic glass, thermal and mech. stability, Cr effects 7−144479
$Ni_{55}Cr_5Nb_{40}$ metallic glasses, H embrittlement susceptibility 7−144530
$Ni_{78-x}Cr_xSi_{10}B_{12}$ metallic glasses, positron annihilation, crystalline embryos model of struct. 7−132368
Ni_xCu_{1-x} alloys, H_2 adsorbed, surface segregation, thermodynamics 7−76596
NiFe films, dual ion-beam sputtering, mag. and struct. props. 7−125502
NiFe-CoCr double layers, FMR and mag. props. 7−92475
NiFe-DyCo films, ferromag.-ferrimag. exchange interaction, quasistatic magnetisation reversal *(Russian)* 7−105954
$Ni_{0.8}Fe_{0.2}$ film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
Ni_3Fe Auger spectra, energy calibration, peak shifts, regression calculations, lattice constants, derivative mode 7−144186
Ni_3Fe Ll_2 ordered alloy single crysts., cross-slip and Kear-Wilsdorf locks, TEM study 7−137368
Ni_3Fe, ordered, electronic and mag. struct. studied by Mossbauer spectroscopy 7−106065
Ni_3Fe, radiation damage, Mossbauer investig. 7−131195
Ni_cFe_{1-c} alloys, Ni-rich, mag. and compositional order interaction 7−118773
Ni_xFe_{1-x} evaporated thin films, structural and mag. props. studies 7−98736
$(Ni_{65}Fe_{35})_{77}B_{23}$ metallic glass, struct., neutron diffr., quasi-crystalline model 7−97961
$Ni_xFe_{0.8-x}B_{0.2}$, amorphous, optically thermally stimulated exoelectron emission, kinetics 7−132419
$Ni_{80-x}Fe_xB_{16}S_4$ glassy alloy, short range order and mag. props. 7−85324
$Ni_{44}Fe_{32}Cr_{11}P_8B_5$ sputter deposited on stainless steel, electrochem. and XPS study 7−113797
$Ni_{0.985}Fe_{0.015}Cr_2S_4$, mag. hyperfine, quadrupole interaction, Mossbauer, X-ray diffraction 7−132173
NiFeCuCrMn mu-metal ferromagnetic overlayer, Nb flux-pinning effect, magneto-optical obs. 7−143737
$Ni_3FeMn(Cr)$, magnetic and atomic ordering, temperature and order parameters *(Russian)* 7−143793
NiFeSiB amorphous alloys, high field susceptibility peak 7−132075
$(Ni_{1-x}Fe_x)_{77}Si_{10}B_{13}$ metallic glasses, valence bands, XPS obs., many-electron effects 7−119107
$Ni_{80-x}Fe_xSi_8B_{12}$ amorphous magnet, reentrant transition studies 7−143797
$(NiFe)_5Sm$ and $(NiFe)_4SmR$, permanent magnets, Ni substitution by Fe 7−112862
$Ni_3FeW(Mo)(Cr)(Mn)$, structural and mag. ordering, impurity effects 7−85284
β-NiGa, binary B2 phases with triple defects, thermodynamic props. 7−76456
NiGa on GaAs, epitaxial thermodynamically stabilised metal/III-V semiconductor interface 7−138063
Ni_3Ga single crystals, plastic flow asymm. 7−113610
NiGe, dil. alloy, electron irrad., isochronal resist. recovery and reciprocal damage rates 7−104838
NiGe dilute alloys, electron-irradiation-induced segregation kinetics study, temp., conc., and dose depend. 7−104842
$Ni_{60}Hf_{40}$ amorphous alloys, crystn. behaviour 7−83751
$Ni_{77}M_3B_{20}$ (M=transition metals), amorphous alloys, influence of transition metal additives on transport props. 7−137892
$Ni_{73}M_5Si_{10}B_{12}$ metallic glasses, M=Ti, V, Cr, Mn, Fe, Co, Ni or Cu, thermal stability effect of transition metal admixture 7−83757
NiMn, low conc. alloys, satellite hyperfine fields 7−118436
NiMn, mixed layer cpds., electron diffr. effects 7−142761
NiMn, reentrant spin glass state, NMR study 7−132155
$Ni_{0.81}Mn_{0.19}$, reentrant single crystals, mag. struct. obs. in applied field 7−99412
$Ni_{75+x}Mn_{25-x}$, x=1,4, hyperfine interaction 7−118437
$Ni_{75}Mn_{25}$ spin glass alloy, magnetisation vector meas. 7−112812
Ni_2MnGa, Heusler alloys, hyperfine mag. field meas. 7−118431
NiMnSn alloys, crystallographic and mag. struct., neutron diffr. studies 7−69651
NiMo alloy, electrochemical polarisation in H_2SO_4 soln. 7−78514
NiMo, S adsorption, Mo effects on electrochemical passivation *(French)* 7−144746
Ni_4Mo, antiphase boundary fine struct. *(Russian)* 7−69714
Ni_4Mo, ion irrad. damage profiles, atomic resolution field ion microscopy studies 7−104868
Ni_4Mo ion irrad. ordered alloys, self-interstitial uncorrel. long range migration, FIM obs. 7−98128
Ni_4Mo, irrad. induced metastable phase form. 7−84021
NiNb amorphous coating, ion beam mixed, corrosion behaviour 7−71368
$Ni_{0.60}Nb_{0.40}$, amorphous diffusion barriers, AES studies 7−124604
$Ni_{60}Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
$Ni_{60}Nb_{40}$ metallic glasses, H embrittlement susceptibility 7−144530
$Ni_{61}Nb_{39}$, amorphous, phase separation and loss of ductility 7−91827
Ni_6Nb_4, noncrystalline, point defects study by high temp. mass transport expts. 7−105093
Ni_xNb_{x-1}, amorphisation by mechanical alloying 7−124102
$Ni_{60}Nb_{40-x}Al_x$ amorphous alloys, H embrittlement 7−113792
$Ni_{60}Nb_{40-x}Al_x$ metallic glasses, annealing effects 7−126149

nickel alloys continued
$Ni_{60}Nb_{40-x}Cr_x$, amorphous, crystallisation, DSC, X-ray diffr. 7−69603
$Ni_{60}Nb_{40-x}Cr_x$ glasses, isothermal crystn. kinetics 7−111412
$Ni_{60}Nb_{40-x}Cr_x$, metallic glasses, influence of Cr content on elec. resist. and thermoelec. power 7−137891
NiP alloys, electrodeposited, crystn., in situ electron diffr. investig. 7−83703
NiP-NiCoP amorphous magnetic film, compositionally modulated, prep. and magnetic props. 7−138291
$Ni_{100-x}P_x$ alloys, amorphous, electroless, struct. relax., crystallisation, anelasticity meas. 7−137242
Ni_2P sputtered film as ohmic contact and diffusion barrier 7−105705
$Ni_{80}P_{20}$, amorphous alloys, electrodeposited in mag. field, struct. 7−104565
$Ni_{80}P_{20}$, metallic glass, atomic struct., isotropic substitution neutron diffr. technique 7−83769
$Ni_{80}P_{20}$ metallic glasses, interatomic pair potentials 7−137258
$Ni_{81.5}P_xB_{18.5-x}$ amorphous and liq. alloys, mag. props. study 7−118768
$Ni_{81}P_{19}C$ metallic glass, crystallisation characterisation 7−111397
$Ni_{1-t}Rh_tBi_3$, cryst. struct. and complete solid miscibility 7−69652
NiSi dilute alloys, electron-irradiation-induced segregation kinetics study, temp., conc., and dose depend. 7−104842
NiSi, $NiSi_2$ epitaxial silicides, forming conditions in system comprising vacuum condensate and single cryst. Si *(Russian)* 7−92888
$NiSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
$NiSi_2$ epitaxial film, surface struct., low energy ion scatt. studies 7−118219
$NiSi_2$ layers grown on Si (111) by MBE and SPE 7−76679
$NiSi_2$/Si high quality epitaxial films grown by MBE, Schottky contact props. 7−76680
Ni_3Si-Ti, intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7−126170
$Ni_{75}Si_8B_{17}$ amorphous alloy sheets, spray quenching, warm rolling, surface smoothing and densification 7−86090
$Ni_{75}Si_8B_{17}$, amorphous alloy, spheroidisation process 7−144357
$Ni_{75}Si_8B_{17}$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7−92929
$Ni_{75}Si_8B_{20}$, amorphous alloy, anisotropy of tensile props. 7−86233
$Ni_{77.5}Si_{7.9}B_{14.6}$, amorphous, crystallisation process, FIM, atom probe techniques *(Korean)* 7−137257
$Ni_{78}Si_{10}B_{12}$ metallic glass, dispersed with μm sized WC particles, yield stress 7−113607
$Ni_{78}Si_8B_{14}$, metal-metalloid glasses, internal friction during crystn., influence of cold rolling 7−76017
$Ni_{78}Si_8B_{14}$, metallic glasses, corrosion behaviour, role of B and Ni 7−86490
$Ni_{78}Si_8B_{14}$, metallic glasses, wear mechanism 7−113725
$Ni_{78}Si_8B_{14}$, thermal expansion, 20-400 K 7−98525
$Ni_{78}Si_8B_{22-x}$ metallic glasses, thermal stability, crystallisation, exoelectron emission study 7−131025
$Ni_{80}Si_{1c}0B_{10}$, $Ni_{80}Si_5B_{15}$, metallic glass ribbons, US stressing, fracture toughness 7−113672
Ni_3Sn_4 intermetallic compound form. at interfaces, growth kinetics and struct. 7−111977
NiTa metallic alloy glasses, X-ray and neutron diffr. meas. 7−76012
$NiTe_2$, thermodynamic props., EMF meas. 7−105078
Ni_xTe_{1-x}, partial and integral molar thermodynamic props. 7−143048
NiTi alloy, two-stage yielding 7−78134
NiTi coating on Ti, wear resist. 7−132761
NiTi, superplastic, stress-induced transform. *(Chinese)* 7−78003
NiTi, wear resistance following light interstitial implantation 7−126254
$Ni_{35}Ti_{65}$, amorphous, H diffusion, NMR relax. rates 7−105145
$Ni_{35}Ti_{65}$ metallic glass, short range and stress-induced directional ordering phenomena 7−98441
$Ni_{33}Ti_{67-x}V_x$ alloys, amorphous, stability and elec. transport props. 7−104571
Ni_3V alloys, cross slip of partial dislocations, stair-rod mode, zigzag propagation of deformation microtwins 7−91596
Ni_3V cryst. struct., phase stability and magnetic props. calcs. 7−98044
$Ni_{73}V_5Si_{10}B_{12}$, metallic glass, crystallisation kinetics, exoelectron emission, effect of hydrogenation 7−132420
$Ni_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
NiZr, amorphous, electronic struct. and chemical short-range order 7−105378
NiZr amorphous alloy, press. depend. of resistivity 7−98977
NiZr amorphous alloy, superconducting transition temp. determ. by AC susceptibility meas. 7−85160
NiZr amorphous wires, formation by mechanical deformation and solid state reaction 7−86091
NiZr glass, partial structure factors, isotope substitution neutron diffr. 7−83773
$Ni_{0.33}Zr_{0.67}$, cathodic behaviour for H_2 evolution 7−139139
$Ni_{24}Zr_{76}$, metallic glass, dynamic struct. factor, neutron inelastic scatt. 7−83772
$Ni_{24}Zr_{76}$ metallic glass, H diffusion and HF vibrational modes, neutron scatt. obs. 7−105144
$Ni_{24}Zr_{76}$, thermal expansion, 20-400 K 7−98525
Ni_3Zr polycrystalline, CO adsorpt., UV photoelectron spectra 7−105286
$Ni_{36}Zr_{64}$, amorphous alloy, struct., isotope substitution neutron diffr. 7−83775
$Ni_{50}Zr_{50}$ amorphous alloys, tracer impurity diffusion and ion beam mixing 7−105134
$Ni_{63}Zr_{37}$ multilayers, amorphisation by microsecond current pulses 7−69593
$Ni_{64}Zr_{36}$, glassy, CO adsorpt., UV photoelectron spectra 7−105286
$Ni_{64}Zr_{36}$ metallic glass, surface damage by Ar ion bombardment 7−76224
Pb-Sn-Ni alloys, Ni diffusion and electromigration 7−118147
Pd-(Fe,Co,Ni)-Si metallic glasses, crystallisation kinetics, resist. obs. 7−83760
Pd-Ni, dil., conduction electron Zeeman splitting, effect of Ni impurities 7−105500
Pd-Ni, plated, tribological props., roughness, hardness *(German)* 7−138855
Pd-Ni binary alloys active-passivation polarisation behaviour 7−78303
Pd-Ni-P, metallic glasses, electronic structure 7−92056
Pd-Ni-P metallic glasses, He solubility, method of determ. in solid and melts 7−91828
Pd-Ni-Si-Be-B liquid metal ion source, emission props., ambient gas effects 7−68101

nickel alloys continued
$Pd_{1-x}(FeNi)_x$, magnetic excitations, saturation magnetisation meas. *(Russian)* 7−143774
PdNi, exchange splitting and spontaneous resistive anisotropy 7−131617
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
$Pd_{40}Ni_{40}P_{20}$ metallic glass, glass transition temp., determ. by low freq. internal friction meas. 7−137562
$Pd_{48}Ni_{32}P_{20}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
Pr-Co-Ni ternary system, phase diagram 7−119238
$PrNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$PrNi_5$ polycryst. high-field magnetisation meas., cryst. field effect calcs. 7−118828
$PrNi_5$, quadrupole scatt., elec. resistivity 7−112274
Pt-Ni, surface sandwich segregation, mean field approach 7−105210
$PtAl_2$-NiAl coatings, ductile-brittle transition temp. 7−86334
PtMnSb/NiMnSb multilayer films, preparation and magneto-optical Kerr effect 7−138431
PtNi, ordering, role of spin-orbit interactions 7−142992
PtNi, system of interacting Kondo moments, mag. props. 7−105885
$Pt_{0.5}Ni_{0.5}$ (110), surface sandwich segregation, multilayer relax., LEED meas. 7−105207
$Pt_{58.4}Ni_{14.6}P_{27}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
Si_3N_4-Al-Invar joints, interface strength and reaction 7−106754
$Sm(Co_{0.67}Fe_{0.21}Cu_{0.08}Ni_{0.02}Zr_{0.02})_{7.6}$ magnets, ageing, coercive force, hysteresis loop squareness *(Japanese)* 7−99497
$SmCo_{5-x}Ni_x$ melt-spin and as-cast alloys mg. props. studies 7−125449
$SmNi_2$ Laves compound, H-induced amorphisation 7−76001
$SmNi_5$ single cryst., magnetisation and mag. anisotropy 7−138268
Sn-Ni electrodeposited alloy coatings, anodic oxidation, optical and electrochem. studies 7−106705
Ta-Ni, corrosion-resistant layers form. by electrodeposition or electrowinning 7−119407
$Tb_2Ni_{17-x}Al_x$, mag. behaviour in the ferrimagnetic and paramagnetic regions 7−99498
Ti-Ni, deform., fracture, electron microscopy obs. *(Russian)* 7−113659
Ti-Ni, electrospark alloying for improved corrosion resist. of Ti 7−144597
Ti-Ni, temp. spectra of internal friction and shear modulus, effect of pre-annealings 7−100278
Ti-Ni (52 at.%), aged, Ti_2Ni_3 precipitates, phase transform. 7−100232
Ti-Ni (5.5 wt.%), rapidly solidified microstruct. and precip. 7−93001
Ti-Ni alloy wire, pseudoelastic, basis of displacement sensor 7−140685
Ti-Ni composite powders, state of sintering by eutectic reaction *(Japanese)* 7−138706
Ti-Ni single crystals, martensitic transform., crystallography 7−119269
Ti-Ni-Cu, amorphous alloys, thermal devitrification kinetics 7−131049
Ti-Ni-Fe (44, 1 wt.%), phase transform., internal friction, elec. resist., 190-300 K 7−86169
Ti-Ni-Mo system, phase equilib. investig. at 1200°C 7−86130
TiC-Ni hardmetals, CVD of Ti_xC layers 7−132485
TiC-NiMo cermet, wear surface, ion mixing modified, Auger electron spectroscopy 7−112033
TiC-steel-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7−93110
TiC-TiNi hard alloy with B addition, inelastic props. determ. by US pulsed method 7−78090
$Ti_{61}Cu_{23}Ni_{16}$, metallic glasses, struct. changes 7−91467
$Ti_{62.5}Cu_{12}Ni_{23}Si_{2.5}$, metallic glasses, struct. changes 7−91467
TiNi alloy, cold working, heat treatment, phase transform., DSC obs. 7−71184
TiNi, alloyed, shape memory effect and martensitic transform. *(Chinese)* 7−126115
TiNi alloys, elastic energy dissipation and acoustic emission 7−118039
TiNi compositionally modulated film, sputtering press., effect on structure and solid state reaction 7−100063
TiNi, electronic struct. close to martensitic transform. point *(Russian)* 7−126113
TiNi films, ion mixing on glass substrates 7−69781
TiNi, ion bombard., amorphisation kinetics 7−104866
TiNi, martensitic transformations, computer simulation *(Chinese)* 7−71179
TiNi, powdered, inert additions effect on superelastic behavior 7−119196
TiNi, shape memory alloys, near-equiatomic, precip. processes, TEM studies 7−144410
TiNi, synthesis, struct. and mech. props. 7−111903
TiNi-TiPd intermetallic compound system, valence band evolution and structural instability 7−84659
$Ti_{49.5}Ni_{48}Cr_{2.5}$, phase transform., TEM study 7−126116
$Ti_{0.5}Ni_{0.5-x}Cu_x$, martensitic transformations, sound emission studies *(Russian)* 7−100219
TiNiFe, martensitic alloys, structural transformations and phonon anomalies 7−144400
$Ti_{60}Ni_{36}P_4$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7−144615
$Ti_{70}Ni_{25}Si_5$, metallic glass, electron phenomena before and after crystallisation 7−125847
$Ti_{75}Ni_{20}Si_5$ alloys, amorphous and crystalline, acid corrosion 7−100444
TiNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7−98983
UGaNi, mag. behaviour studies 7−77298
UNiAl, electron binding energies, oxidation behaviour 7−99160
V-Ni-Cr system, phase diagram, diffusion couples and equilibrated alloys 7−144367
W-Ni, liquid phase sintering, distribution effects *(German)* 7−144343
W-Ni, sintering, liq. phase and solid-state, influence of dislocation density 7−92922
W-Ni alloys, rapidly solidified, microstruct. 7−119268
W-Ni dilute alloys, excess resistivity and thermopower, temp. depend. 7−105545
W-Ni powder compact, sinterability rel. to Ni chemical state 7−100156
W-Ni powder compact, sintering, microstruct., densification mechanism 7−144342
W-Ni-Fe, sintered materials, liq. phase, microstructure, image anal. *(French)* 7−119190
W-Ni-Fe (7, 3 wt.%), heavy alloys, mech. props., influence of heat treatment *(German)* 7−100320
W-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135

nickel alloys continued
WC-(Co, Ni) cemented carbide system, sintering, phase equilib., mech. props. 7−71151
WC-(Fe, Ni) cemented carbide system, sintering, phase equilib., mech. props. 7−71151
WC-Ni/Fe-Cr-C, infiltrated alloys, wear resist. 7−132555
WC-Ni-Cr-Fe hardmetals, mech. props. *(Korean)* 7−126212
$Y_{0.98}Ce_{0.02}Ni_2$, valence instability, resistivity and lattice constant meas. 7−70266
$Y_2(Co_{1-y}Ni_y)_7H_x$, mag. props., effect of H substitution 7−99445
$Y_2(Fe_{1-x}Ni_x)_{14}B$ alloys, magnetic and crystallographic props., comp. depend. study 7−125448
$Y_{0.98}La_{0.02}Ni_2$, valence instability, resistivity and lattice constant meas. 7−70266
Y_2Ni_7 thermal spontaneous ferromagnetism, band model 7−99454
YNiAl, electron binding energies, oxidation behaviour 7−99160
YNi_2Ge_2 cryst., deformation electron density distrib. 7−137312
Zn-Ni alloy coatings, electrodeposited, composition 7−143266
Zr-Fe-Ni, ternary amorphous alloy, production, stability rel. to comp. 7−131029
Zr-Ni, glass forming ability, crystallisation 7−142632
Zr-Ni alloys, glass forming ability and amorphous to cryst. transition 7−83750
Zr-Ni amorphous alloys, crystn. enthalpies, expt. and theoretical study 7−83749
Zr-Ni intermetallic alloy catalysts, XPS and AES studies 7−144235
Zr-Ni metallic glass H, solubility and embrittlement 7−106521
Zr-Ni particle bed, H isotope absorption and desorption characts. *(Japanese)* 7−84489
Zr-Ni-H glass system, electronic struct., soft X-ray emission spectra 7−105380
ZrNi, amorphous alloys, supercond. and struct. props. 7−85176
ZrNi, amorphous H storage, struct. X-ray study *(Chinese)* 7−91445
$(Zr_{0.5}Ni_{0.5})_{100-x}P_x$ metallic glasses, magnetisation, ^{31}P NMR study 7−112762
$Zr_{1-x}Ni_x$, glassy, strain induced conductivity anisotropy 7−98962
$Zr_{100-x}Ni_x$ amorphous superconducting alloys, critical mag. fields, spin-orbit interaction 7−125276
$Zr_{67}Ni_{33}$, crystallisation characteristics *(Korean)* 7−142644
$Zr_{67}Ni_{33}$ metallic glasses, nucleation and crystal growth 7−137241
$Zr_{67}Ni_{33}$-based metallic glasses, mag. susceptibility and superconductivity 7−85265
$Zr_{70}Ni_{30}$, weak localisation effects on upper critical field 7−99371
ZrNiAl, electron binding energies, oxidation behaviour 7−99160
Zr_2NiH_x metallic glass, magnetoresist., H effects 7−84827
ZrNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7−98983
ZrO_2 thermal barrier coating on Ni base superalloy, durability rel. to bond coating *(Korean)* 7−132776
Zr−Ni, amorphous, supercond., structural relax., crystallisation 7−104584
$Zr_{66.5}Ni_{33.5}$:H metallic glass, flow and crystallisation rel. to H doping, dilatometry 7−104590

nickel compounds
see also nickel alloys
bis(dithiolene) nickel substituted complexes, discotic liquid cryst. 7−137214
CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
coenzyme F_{430}, nickel hydrocorphinoids, structural changes, Raman spectroscopy 7−133196
complexes, superconducting, molecular designing analysis 7−84638
complexes with 1-hydroxy-9,10-anthraquinone, IR and reson. Raman spectra 7−132270
ethanediamine nitrite chlorate, $Ni(C_2H_8N_2)_2NO_2ClO_4$, quasi 1D Heisenberg antiferromagnet, quantum energy gap 7−85256
JPDR, residence time of crud on channel box surfaces 7−109341
mag. and magneto-optical props. 7−113150
NiP-NiCoP, amorphous film, pulse current electrodeposition, meg. props. 7−143874
rare earth perovskite phases, R_2NiRuO_6, R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm, cryst. struct., neutron powder and X-ray diffr. 7−83922
rare earth-Ni_2P_2, R=Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Sm, Ce, Yb, La, mag. props. temp. depend. study 7−118767
$Ba_2Ni_3F_{10}$, magnetic struct., order frustration, powder neutron diff. obs. 7−70525
CaF_2-$NiSi_2$-Si (111) structs., MBE growth 7−144285
$Ca_{1-x}Ni_xFe_2O_4$, cryst. struct., substitutional local chem. press. effects study *(French)* 7−124220
$CaNi_2P_2$, Pauli paramagnetism, mag. suscept. temp. depend. study 7−118767
$CaNiSi_2O_6$, crystal structures, and cryst. chemical relations in C2/c clinopyroxenes 7−124187
Cd-Ni ferrite system, Mossbauer obs. 7−125580
$Cd_{0.1}Ni_{0.9}Sn_yFe_{2-2y}O_4$ ferrite, Mossbauer study 7−125568
$CeNi_2H$, structural characterisation 7−91529
$CeNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
$(Co,Ni,Zn)SiO_3$, K-shell electrons, at. positions, X-ray reson. scatt. diffr. 7−75943
$Co_xNi_{5/3-x}FeSb_{1/3}O_4$, ferrite, ^{57}Fe, ^{61}Ni and ^{121}Sb Mossbauer study 7−113001
$CoNiZnFe_2O_4$, polycrystalline ferrite, magnetoelastic props. 7−143885
CoO-NiO superlattices, mag. structure, neutron diffr. studies 7−125312
$CsNiCl_3$ triangular lattice antiferromag., phase transitions, neutron scatt. studies 7−77291
$CsNiF_3$ 1D easy-plane ferromagnetic magnons and solitons, nuclear spin-lattice relax. meas. 7−105909
$CsNiF_3$, field-induced spin-energy-density coupling, longitudinal spin response, neutron scatt. study 7−125357
$CsNiFeF_6$, spin-glass dynamics from mag. noise, relax. and susceptibility 7−118802
$Cs_2R_2(MoO_4)_3$, (R=Ni,Co,Mg,Mn,Cd), struct. investig. 7−142740
Cu (II) complex, IR, Raman, UV and visible spectra, thermal anal. 7−99860
Cu(II)Ni(II)Cu(II), heteropolymetallic systems, spin state structs. investig. 7−112756
$Cu_xNi_{1-x}(H_2O)_6SiF_6$, metastable phases, successive ordering of Jahn-Teller distortions 7−131285
$Cu_{1.8-x}Ni_xMo_6S_8$, supercond. props. and normal state resist. *(Russian)* 7−70443

nickel compounds continued
$EuNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
$EuNi_5P_3$, mag. phase transitions magnetisation steps with field 7−112793
$EuNi_5P_3$ synthesis and cryst. struct. study 7−83915
FeNi complexes, prep. and struct. anal. 7−98092
FeNi mixed complexes, vibr., IR and Raman spectra 7−99862
$FeNiCrO_4$ system, entropic ferrimagnetism, Mossbauer and X-ray studies 7−85501
$Fe_{3-x}Ni_xO_4$, supertransferred hyperfine mag. fields 7−118435
$Ga_{0.4}Fe_{0.6}NiCr_{1-y}Al_yO_4$ mixed spinel ferrite, cation distrib. and entropic disordering, Mossbauer study 7−112740
$Ga_{0.8}Fe_{0.2}NiCrO_4$, mixed spinel ferrite, pinned and entropic disordering 7−92462
$Ga_xFe_{1-x}NiCrO_4$, coexistence of frustration and ferrimagnetism 7−85495
$Ga_xFe_{1-x}NiCrO_4$ mixed spinel, magnetic behaviour and site occupation studies 7−99419
$Ga_xNi_{1-x}Fe_2O_4$, Ca ion content of ferrite, correlation with electrical props., modelling 7−76923
InSb-NiSb, anisotropic amorphous ribbon, eutectic composition, melt spinning technique 7−144359
$KNiAsO_4$, mica analogue, ion-exchange reactions and phys. props. studies 7−144700
$KNiF_3$, superexchange interaction, Madelung correction effect calcs. 7−143782
$LaNi_5$ hydride, microbalance for meas. $H_2(D_2)$ absorption-desorption 7−95577
$LaNi_5D_{6.7}$, cryst. struct. determ., neutron powder diffr. data refinement using modified Rietveld method 7−83887
$La_3Ni_4Ge_4$, cryst. struct. determ. 7−111471
$LaNi_2H$, structural characterisation 7−91529
$LaNi_5H_3$, pressure-composition isotherm meas., X-ray diffr. study 7−84202
$LaNi_5H_7$ electronic struct., tight-binding recursion method calcs., DOS anal. and comparison with $LaNi_5$ 7−84667
$LaNi_5H_x$, thermal desorption of H, 160 to 420 K 7−91982
La_2NiO_4, nonstoichiometric, 2D plasmon, IR reflectivity study 7−113188
La_2O_3-Fe_2O_3-MO (M=Ni, Cu) systems, solid solutions 7−105036
La_2O_3-NiO, formation of binary oxide $La_{12}Ni_8O_{27}$, temp. depend. of elec. resistivity 7−105632
La_2O_3-NiO-Nb_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
La_2O_3-NiO-Ta_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
La_2O_3-NiO-ZrO_2 system, phase relations, materials prep. and elec. props. *(Russian)* 7−124447
Li_xNiPS_3 intercalation cpds., band struct., Mossbauer studies 7−131537
$Li_xNi_{1-x}PS_3$, Li intercalated $NiPS_3$, struct., conduction mechanism, appl. as secondary battery electrode 7−92183
(Mg,Ni)O, internal reduction, effect of NiO conc. gradient 7−76421
Mg-Ni-H system. H diffusion, phase characteristics, PMR study 7−85444
Mg_2Ni-H, phase transition, low and high temp. modifications 7−98429
Mg_2NiD_4, low temp. struct., X-ray and neutron diffr. studies 7−83892
Mg_2NiH_4, bonding, quantum chem. description, electron microscopy obs. 7−83837
Mg_2NiH_4 electric conductivity temp. dependence 7−105556
Mg_2NiH_4, formation during hydrogen storage in $La_{2-x}Ca_xMg_{16}Ni$ 7−93546
Mg_2NiH_4, X-ray crystallographic and thermal props., low and high temp. phases 7−142975
$Mg_xNi_{1-x}O$ and NiO, H_2 reduction on spherical C particles 7−106828
$Mn_{1-x}Ni_xCO_3$, competing antisymmetric exchange and weak ferrimagnetism 7−70537
Na liq.-β-alumina/$NaAlCl_4$-(Fe,Ni)Cl_2 Zebra battery cell 7−139101
$NaNi_2ZrP_3O_{12}$, superionic conductors, synthesis and characts. 7−137611
Ni (II) complexes in aqueous-organic solvent mixtures, PMR spectra anal. 7−109949
Ni carbonyl cluster ions, bonding, synthetic chem. in mol. beam 7−90471
Ni complex, (Et_4N) $(Ni(DMIT)_2)$, cryst. struct. and elec. cond. 7−99024
Ni complex, bis(difluoroborondiphenylglyoximato)NiII, partial oxidation with I_2 7−100544
Ni complex, Ni (II) diethyldithiocarbamate, metal atom environment, solvent effects, EXAFS spectra anal. 7−109927
Ni complex, Ni (II) methylphosphinediacetic acid system, struct. 7−103686
Ni complex, Ni (II) poly-εN-methacryloyl-L-lysine, spectrosc. obs. 7−90183
Ni complex, Ni(II) protoporphyrin IX dimethyl ester, reson. Raman spectra 7−82152
Ni complex, Ni(II)-octaethylporphyrin, out-of-plane deform. modes in reson. Raman spectra 7−85742
Ni complex, $Ni(S_2C_2(CN)_2)_2$, prep., struct., elec. and mag. props. 7−99033
Ni complex, $Ni(S_2C_2(CF_3)_2)_2$, prep., struct., elec. and mag. props. 7−99034
Ni complex, Ni(phthalocyanine)$(ClO_4)_y$, mol. metal, band filling and counterion ordering effects 7−143450
Ni complex, $Nien_2(NCS)_2$ single crysts., synchrotron radiation X-ray topography, defects and phase transitions 7−91594
Ni complex, polydecker sandwich, synthesis and elec. cond. 7−99025
Ni complexes, bis(maleonitriledithiolate)-nickel (III), exchange coupled dimers, mag. props. 7−112771
Ni complexes, I_2 doped, quasi-1D solids with pseudo-$(SN)_x$ bundle-struct., EPR studies 7−92162
Ni II complexes, μ_3-methoxophenolates, ferromagnetic exchange interaction 7−77273
Ni octaethylporphyrine, vibr. struct., picosec. CARS, excited states dynamics 7−122553
Ni/NiS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
Ni-Fe-P oxide system amorphous thin films, struct. and mag. props. 7−112872
Ni-H, high press. phase, supercond. transitions 7−125204
Ni-Mg olivine solid soln., thermodynamics 7−143043
Ni-Mn-O thermistors, form. and elec. props., X-ray diffr., SEM and AES studies 7−92176
Ni-Mo-Al_2O_3 hydrogenation catalysts, Raman spectra 7−113206
Ni-Sn intermetallics, electrocatalytic props. in H_2 evolution reaction 7−86835
Ni-Te system, vaporisation kinetics, β_2 phase form., Knudsen effusion mass spectra 7−118074
Ni-Zn ferrites, Cu-substituted and non-substituted, elec. cond. 7−112330
nickel compounds continued
Ni-Zn ferrites, spinels, NMR spin echo study 7−138346
Ni-Zn ferrites with additives, for magnetic heads use 7−132538
Ni-Zn-Co, polycrystalline ferrite, complex mag. initial permeability, temp. spectra local splitting 7−143847
Ni^{2+}-H_2O-NH_3 system, comp. and electronic spectra of complex species in soln., computer studies 7−144084
$NiAg_4(P_3O_9)_2.6H_2O$, structural study *(French)* 7−124219
$Ni_{1-x}Al_x(OH)_{2+x}$, Ni reduction kinetics, density and specific surface meas. 7−86588
NiAs, valence band density of states, photoemission data and LMTO calc. 7−98771
NiB film phase-quantum-tunnel junction, dielectric flux quantisation 7−138145
NiBr emission spectra at 3800 to 5500 Å 7−122560
$NiBr_2$, aq. soln., conc., X-ray scatt. obs. 7−113314
NiC, CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
Ni_3C metastable formation during laser irrad. 7−92847
$Ni(CO)_4$, ionosphere plasma depletion expts., choice of chem. for release from rocket 7−107536
$Ni(CO)_4$, photolytic reaction, linear combination of GTO-Xα method 7−93354
$Ni(CO)_4$, vibr. spectra, anharmonicity and local mode effects 7−135917
$NiCl_2$, cryst. struct. determ., EPR trigonal symmetric parameter, high-order perturbation formula 7−131130
$NiCl_2$, intercalation cpd. with graphite, second-stage, magnetoresistance 7−112304
$NiCl_2$-$FeCl_3$-graphite intercalation cpds., synthesis 7−113911
$NiCl_2(Br_2)(I_2)$, photocond. and energy gap 7−99126
$NiCr_{2-y}Ga_ySe_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$Ni_{2-x}Cu_xMo_6S_8$, elec. cond. behaviour, electronic instability 7−131723
$Ni_{2-x}Cu_xMo_6S_8$, lattice distortions, Cu substitution effects, elec. cond. studies 7−104687
NiD, rot. anal. UV and visible spectra 7−74653
NiF_2, bending-rot. Hamiltonian, semirigid model 7−141563
NiF_2, photoelectron spectra anal., Green's fn. method, CNDO-UHF calcs. 7−141464
$NiFe_2O_4$ ferrite, ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
$NiFe_2O_4$ ferrite films, growth on MgO substrates 7−100101
$NiFe_2O_4$, high spin-low spin transition under press. 7−138232
$NiFe_2O_4$ polycryst., ultrasound mag. birefringence and dichroism obs. 7−99547
$NiFe_2O_4$ synthesis from polynuclear coord. cpds. 7−132543
$NiFe_2O_4$-$ZnFe_2O_4$, mutual diffusion of cations 7−105107
$Ni_{0.01}Fe_{0.99}S$, crystallographic and spin-flip transitions, impurity temp. hysteresis effects, Mossbauer study 7−125578
$(Ni_{1-y}Fe_y)_{1-x}S$ mag. semicond., neutron and X-ray diffr. studies 7−85245
$Ni_{1+2x}Fe_{2-3x}Sb_xO_4$, spinel ferrite, sp. ht., thermal conductivity and thermal diffusivity 7−92433
$NiFe_{2-x}Sc_xO_4$ spinels, magnetisation and magnetostriction 7−92488
NiH films, highly dispersed, microstruct. and elec. cond. 7−124764
NiH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
NiH_x, binding energy, energy bands and paramagnetism 7−69642
NiH_x, H diffusion mechanism 7−84374
NiH_x self-consistent electronic energy band struct. calcs. 7−84669
$Ni^{2+}(H_2O)_6$, paramag. ^1H NMR 7−103540
NiI_2, resonant photoemission 7−138603
Ni(II) complex, syntheses, charact., X-ray struct. and magnetism 7−111509
$NiK_2P_4O_{12}.5H_2O$, dehydration, crystal struct., IR spectra *(French)* 7−131119
NiM_2O_4 where M=Al,Cr,Ga,Fe,Mn, X-ray Ni Kβ emission, XANES, XPS and optical spectra 7−113313
$(Ni_xMg_{1-x})_{10}Ge_3O_{16}$, crystal structure 7−104666
$Ni_{1-x}Mn_xH_y$ disordered alloy hydrides, magnetoresist. and mag. suscept. meas. 7−84937
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7−144350
$Ni(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
$Ni(NO_3)_2.2H_2O$, pressure induced metamagnetic transition 7−99450
NiO (111), O_2, H_2O, and CO adsorption and interaction, UPS study 7−143201
NiO and similar translucid solid, optical spectra, configuration interaction and oxidation state 7−113217
NiO bicrystals, tilt grain boundaries, atomic resolution electron microscopy studies 7−98178
NiO electrodes, pulse power tests for Ni-Zn electric vehicle batteries 7−139106
NiO, electron tunnelling spectroscopy, magnons obs. *(Polish)* 7−131737
NiO, electronic struct., core-level XPS 7−70974
NiO, electronic struct., density functional study using NiO_6^{10-} cluster 7−98802
NiO, growth in electrolyte cells, structural depend., XANES and EXAFS spectra anal. 7−68341
NiO hydrated films, electrochromic, electrochemical and spectroscopic studies 7−144023
NiO, mixed electronic states, mag. moments, XANES study 7−144180
NiO, point defects and high-temp deformation 7−69812
NiO, pore structure, preparation method effects *(Russian)* 7−124536
NiO powder, prep., grain boundary diffusion 7−106471
NiO, preferential sputtering and surface composition 7−119104
NiO, scales, grain boundary diffusion, rel. to surface preparation *(French)* 7−111947
NiO thin film growth, oxidation by ionic diffusion 7−118312
NiO, tilt grain boundaries, atomic resolution studies 7−69716
NiO-based sputtered coatings, electrochromism 7−144024
NiO-CaO eutectic, directional solidification, fracture initiation, dislocation mechanism 7−113668
NiO-Mn_3O_4 mixture, resist. and I-V meas. of Mn_3O_4 and nickel manganite depend. on Mn_3O_4 content, thermistor use 7−143465
NiO_2, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
$Ni(OH)_2$-$Fe(OH)_3$, coprecipitation, during thermal dehydration 7−100150
NiO_xH_y coatings, electrochromic, produced by RF magnetron sputtering, optical props. 7−92753
NiOOH, β- and γ-forms, Raman spectra rel. to Ni corrosion 7−113177

nickel compounds continued
Ni_2P sputtered films, structure 7−119144
$Ni(PCl_3)_4$, force const. calcs. 7−122488
$Ni(PI_3)_4$, IR spectra 7−109891
$NiPS_3$ cathode for high energy rechargeable Li cell 7−100706
$NiPS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
$NiPS_3(Se_3)$, spin ordering, inelastic light scatt. studies 7−143812
NiS solar selective absorbing films fabrication by dip and dry technique 7−126643
NiS_x, thin films, electrochem. deposition 7−71087
α-$NiSO_4.6H_2O$, structure, absolute configuration, optical activity 7−124175
$NiS_{2-x}Se_x$, isostructural system transitions, phase diagram characts. 7−131268
$NiSb_2O_4$, struct. evolution under press., anisotropic compressibilities, magnetic order *(French)* 7−85248
$NiSi_2$ amorphous thin films, Raman scatt. 7−113202
$NiSi_2$ deposited films, sheet resist. and grain size studies 7−85158
$NiSi_2$, electronic struct. features due to d-s, p resonance *(Russian)* 7−124853
$NiSi_2$, silicide formation by deposit anneal etch anneal method 7−143291
$NiSi_2$/Si ⟨111⟩ structures, laser irradiation damage 7−111655
$NiSi_2$-Si, thin epitaxial layers, cond. and mobility 7−138076
$NiSi_2$-Si (111), cryst. intermediate phases in epitaxial layer formation 7−137748
$NiSi_2$-Si (111), d-metal silicides film epitaxial growth and props., review 7−137747
$NiSi_2$-Si interface, effects of Si surface defects on $NiSi_2$ orientation during deposition, LEED, AES studies 7−112095
$NiSi_2$-Si interface, melting dynamics under pulsed laser irrad. 7−84219
$NiSi_2$-Si(111), evidence for Si diffusion, photoemission study 7−91901
Ni_2Si, empty states, soft X-ray absorpt. spectra 7−119071
Ni_2Si, extended energy loss fine struct., local struct. 7−91538
Ni_4Si polycrystalline layers, optical props. 7−125832
Ni_5Si_2, silicide formation in Ni-Si thin film lateral diffusion couples, struct. study 7−131474
Ni_xSi_y, electronic struct. in extended Huckel approx. method 7−131535
Ni_2SnTe_4, amorphous, mag. props. 7−132024
$NiTiS_2$, intercalation cpd., press. depend. of electrical resistivity 7−76957
Ni_xTiS_2 intercalation cpd., electron and hole cond., elec. resist., Hall coeff. meas. 7−92214
Ni_xTiS_2 intercalation cpds., photoemission studies 7−125905
NiV_2O_6 polymorphism, X-ray and DTA studies 7−142683
NiV_4S_8, orientation and translation domains, struct. variants *(French)* 7−111475
NiX_2, X=F,Cl,Br,I, mixed electronic states, mag. moments, XANES study 7−144180
$Ni_{0.65}Zn_{0.35}Fe_{2-x}Mn_xO_4$, spinel ferrite, mag. and dielec. props. 7−125454
$NiZnFe_2O_4$:GeO_2, SnO_2 ferrites, disaccommodation spectra 7−105971
$Ni_{0.28}Zn_{0.72}Fe_2O_4$, mag. transformations, thermal expansion 7−77277
$Ni_{0.5}Zn_{0.5}Fe_2O_4$, ferrite, sintering, added AlN and Al_2O_3, formation of ferrospinel oxonitride 7−100149
$Ni_{1+t-x}Zn_xTi_tFe_{2-2t}O_4$, mag. props. rel. to Ti content 7−112854
PbS-NiSb eutectic compositions, solid-state superlattices *(Russian)* 7−124534
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
$PrNi_5H_x$, hydrides, cryst. struct. determ. 7−98069
a-Si-Ni_xSi, silicide formation, TEM study 7−111974
SnTe-Ni_2Te_2, interaction, temp. depend. of thermoEMF 7−86138
Ta_2NiS_5, intercalation cpds. with hydrazine, 1,2-diaminoethane and 1,3-diaminopropane 7−111494
TiO_2:NiO catalyst, NaOH, aq. soln. and coating, photocatalytic decomposition study 7−71523
U_2NiC_3, cryst. struct. refinement 7−69683
$YBa_2Cu_{3-y}Ni_y0_{7-\delta}$, superconducting props., Cu site effects 7−112557
YNi_5Ge_3, isotype with orthorhombic YNi_5Si_3 struct. type 7−137327
Y_2NiRuO_6, cryst. struct., neutron powder and X-ray diffr. 7−83922
$YbNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
$Zn_xNi_{1-x}Fe_2O_4$, Mossbauer effect study of spin fluctuation 7−85491
$Zr_2NiH_{3.8}$, H diffusion, perturbed angular correlation spectra study 7−84371
Zr_2NiH_x, H diffusion, NMR studies 7−85463
night sky *see sky brightness*
nightglow
gravity waves seen in OI, NA and OH nightglow emission data 7−94534
low-latitude 630 nm nightglow modeling 7−79736
mesosphere K I nightglow, predicted intensity for 767 nm emission 7−115129
optical spectrum, obs. from high altitude observatory 7−87993
polar mesopause gravity wave activity in Na and OH nightglow 7−94533
thermosphere emission features, spectra study 2000 to 8000 Å 7−79733
tidally driven fluctuations of OH nightglow, model 7−145745
Hα nightglow, intensity distribs. and line profiles from multiple scatt. theory 7−134045
N_2 LBH emission and far UV vehicle glow of S3-4 satellite 7−127627
O and O_2 airglow observations, 557.7 nm, Herzberg and atmos. bands 7−139828
O I 630.0 nm nightglow in winter, obs. and theory 7−127628
O_2, atom recomb., homogeneous and heterogeneous, $a^1\Delta g$ state, reaction rate const. meas., appl. to nightglow 7−78460
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
O_2, nightglow triplet emissions, vibr. levels attitude distribution 7−79732
O_2+NO charge transfer reaction $O_2(b^1\Sigma_g^+)$ vibr. distrib., role in aurora and nightglow 7−79735
OH infrared emissions affected by atmos. gravity waves 7−115134
OH nightglow, kinetic parameters related to sources and sinks of vibrationally excited OH 7−134046
OH nightglow, model of wave-driven fluctuations 7−79737
OH nightglow, seasonal variability of Meinel bands, 2D model 7−139829
OH nightglow at polar mesopause, effects of atmospheric disturbances 7−134047
Nilsson's model *see nuclear shell model*
Nimonic *see nickel alloys*
niobium
see also nuclei with .....
alpha-irradiated and deformed, positron annihilation studies 7−76225
atomic ions, charge transfer collisions, reson. transfer and excitation, X-ray spectra 7−122428
atoms, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
niobium continued
corrosion-resistant layers form. by electrodeposition or electrowinning 7−119407
crystal lattice defects, FIM investig. *(German)* 7−142547
deformed, supercond. transition temp., US interaction and annealing effects 7−99251
diffusion of O, statistical analysis 7−143098
electron irrad., defect reactions, muon spin relax. studies 7−92563
electron irrad., vacancy-impurity interactions, positron annihilation studies 7−91567
electronic excitations, EELS 7−70954
emissivity, hemispherical from 300 to 1000 K 7−98526
films grown in UHV MBE system, epitaxial relations and supercond. props. 7−76687
first ionisation potential meas. by double-resonance field-ionisation spectroscopy 7−109845
flux-pinning effect of ferromagnetic overlayers, magneto-optical obs. 7−143737
fractionally charged particle search in matter, technique, results 7−116040
hardening in H-vacuum system *(Russian)* 7−113564
heat of fusion, microsecond-resolution transient technique 7−142960
high purity, RF superconductivity, production 7−131928
high temp. sulphide corrosion, scale growth and morphology 7−86438
interaction with N_2 at high temps. 7−106664
Josephson junctions, SNS type, high resistance 7−131914
Josephson tunnel junctions with a-Si barriers, fabrication and props. 7−131904
laser plasma deposited superconducting thin films, T_c determ., film thickness and deposition conditions depend. 7−118641
light-sensitive planar interferometers 7−128652
low temp. proton irrad. defect recovery, internal friction study 7−98272
microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
neutron irrad., mech. props. *(Japanese)* 7−93060
nonequilibrium supercond., crystallographic and mag. field effects 7−112712
point contact Josephson junction for DC voltage unit standard 7−105857
radiation damage recovery in Nb with various dopants 7−104840
refractory, lattice imperfections, FIM studies 7−91588
resistivity, determ. by eddy current decay method, hollow circular cylindrical geometry 7−105522
self-interstitial long range migration, dislocation pinning, resist. recovery and internal friction meas. 7−98127
sheet and sputter coated cavity meas. comparison 7−131893
single crysts., dislocation mobility, temp. and impurity interactions depend., selective etching meas. 7−69702
stage II-recovery reactions in BCC transition metals 7−104732
superconducting, anisotropy effects down to millikelvin temp. range 7−77171
superconducting, critical field, field depend. of mag. permeability in flux flow state 7−92391
superconducting cavities, microwave surface resistance rel. to oxide layers 7−131892
superconducting foils in a transverse field, nonuniform critical current distrib. 7−125287
superconducting surface, angle resolved XPS studies of oxides 7−138584
superconductivity and oxidation 7−99340
surface, Ar impact, excited particle secondary emission 7−125899
surface, ion implantation of N, C, P phase composition determ. 7−78301
surface coated by laser treatment, high temp. oxidation 7−100428
surface oxides, angle resolved XPS and supercond. studies 7−113352
surfaces, oxidation and O penetration barriers 7−124594
T, D, H, heat of transport meas., T diffusion under thermal gradient 7−131367
texture of corrosion layers rel. to stratification *(French)* 7−86446
thermal diffusivity and conductivity, anomalies near melting points 7−69997
ultra-high purity, supercond. transition temp. 7−105798
vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7−144280
vapour phase siliconizing, corrosion stability 7−78319
variable thickness bridge array, prep. and props. 7−118725
welded joint structure and impact strength rel. to welding speed and power 7−138811
Al/Nb multilayer structure, SIMS depth profiling using Ne, Ar, Kr and Xe ions and neutral species 7−77744
Au-Nb, thin film interactions, RBS and X-ray diffr. studies 7−69991
BaYCuO-Nb Josephson point contact junction, IV characteristics 7−112699
Cu-Nb composite, heavily cold-worked, strength and microstruct. charactn. 7−144459
Cu-Nb in-situ composites, heavily cold worked, strength and microstruct., influence of Nb dendrite size 7−132690
Cu-Nb interface, proximity-effect-induced superconductivity at millikelvin temperatures 7−77166
Cu-Nb multifilamentary composites, critical current density meas., strain effects 7−92395
ErBaCuO-Nb high T_c supercond. point contacts, AC Josephson effect freq. depend. study 7−125271
H saturation, hydride layer form. and growth 7−133130
n-$In_{0.53}Ga_{0.47}As$/Al(Nb) diodes, Schottky barrier heights 7−70377
$KTaO_3$:Nb, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
Nb film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
Nb XIV, Ni-like 4s-4p transitions and energy levels 7−103522
Nb:B^+ ion implantation-induced amorphisation strain, implant conc. depend., X-ray diffr. study 7−83689
Nb:H,O, Snoek peaks, internal friction studies 7−98335
Nb/Al/Nb Josephson junction structs., TEM, SEM and AES studies 7−105291
Nb/Al_2O_3 metal-ceramic interface, struct., chemistry and diffusion bonding 7−98723
Nb/AlO_x/Nb Josephson junction, fabrication, lift-off processes 7−70484
Nb/Pb Josephson tunnel junctions, fabrication by electron beam evaporation 7−138139
Nb/SiC joint, intermediate cpd. growth at interface 7−124728
Nb-Al_2O_3-Nb SIS tunnel junctions, fabrication 7−138150
Nb-Al-AlO_x-Nb Josephson junction characts., fabrication process and conditions effects 7−105844

niobium continued
Nb-Cu-Nb SNS bridges, directional sputter deposition and anodic oxidation 7−85200
Nb-CuSn diffusion couple, form. of Nb_3Sn *(Chinese)* 7−69988
Nb-GaAs, oriented growth of metal films, microstruct. 7−118303
Nb-Ge-H-Cl system, thermodynamic equilib. anal. 7−98389
Nb-H system, EFG, PAC study 7−85493
Nb-H system, hydride precip., X-ray diffr. study 7−84284
Nb-Mo-H system, hydride precip., X-ray diffr. study 7−84284
Nb-Nb_2O_5, oxide interface, serrations, protrusions, XPS study 7−138595
Nb-Nb_2O_5-PbBi(PbAuIn) tunnel junctions, electron trap states and LF noise 7−131919
Nb-NbO_x-PB Josephson tunnel junctions, HF loss meas. near plasma reson. 7−138143
Nb-NbO_x-Pb Josephson tunnel junctions, with anodised Nb barrier, elec. characts. 7−112687
Nb-NbO_x-Pb(In) tunnel barrier contact parameters 7−143720
Nb-NbO_x-Pb(Nb) Josephson junction, fabrication, characterization *(Korean)* 7−92381
Nb-oxide-Pb 7−131805
Nb-Pb Josephson junctions, fabrication process study *(Japanese)* 7−99357
Nb-Si-Nb Josephson sandwich junctions, Ag shunt, electrophysical and microwave props. 7−70494
Nb-Ta superlattice, critical behaviour of H, in situ X-ray scattering study 7−137727
Nb-Ta superlattices, cryst. direction depend. of interfacial mixing 7−105156
Nb-Ta superlattices, hydrogenated, elec., struct. and supercond. props. 7−112577
$Nb^{1+}+H_2$, resonant electron transfer and L-shell excitation 7−141677
$Nb^{31+}+H_2$, L-shell reson. transfer and excitation 7−90411
Nb_x (x=1-15) clusters, reactivity with benzene, photoionis. TOF mass spectra detect. 7−132971
NbN-Nb/PbSb Josephson tunnel junction prep. in single vac. cycle 7−143719
Ng-Al_2O_3-Nb Josephson tunnel junctions, low-frequency excess noise 7−105841
$Ni_3Fe_{0.7}Nb_{0.3}$, Permalloy, K-state, annealing, struct., neutron diffr. study, elec. resist. meas. *(Russian)* 7−112295
T electromigration in metals meas., sample cell design 7−124606
V-Nb-Se, nonequilibrium system, vibr. chem. reaction process 7−86569
VO_2:Nb, thermochromic materials research for optical switching 7−125979
YBaCuO/Nb tunnel type Josephson junctions, fabrication and characts. 7−143717
YBaCuO-Nb high T_c supercond. point contacts, AC Josephson effect freq. depend. study 7−125271
$YTaO_4$:Nb, X-ray phosphors, development, parameters, future outlook 7−77647
$ZrFe_2$:Nb, hyperfine field distrib., press. depend. 7−118429

niobium alloys
see also niobium compounds
atomic diffusion rates, Auger depth profiling, relax. and deformation effects 7−143103
binary, conc., fabricability and hardness, solute types effect 7−100241
CANDU fuel channels, pressure tube elongation rates 7−89618
high strength, substruct. form. due to rolling, stress relax. *(Russian)* 7−144430
Inconel 625, marine crevice corrosion resist., effect of Nb content 7−113755
microstructure of reorientation bands, high strength Nb alloys with ultradisperse nonmetallic particles *(Russian)* 7−105058
Nb_3Sn composite with distributed internal Sn 7−131952
Nichrome, Nb alloyed, heat treatment effect on strength and tribotech. props. 7−78265
steel, grain boundary segregation of P 7−138748
Al-Nb-Si coatings on Ni alloys, effect on high-temp. fatigue 7−113784
Au-Nb ultrathin films on Si, resistance decrease and diamagnetism increase above 77 K 7−70432
CO-Nb-B glasses, magnetostriction, anomalous temp. depend. 7−85404
Co-Fe-Nb, special mag. alloys, phase anal. and precip. kinetics 7−100248
Co-Fe-Nb amorphous films, magnetisation and FMR studies 7−132102
Co-Hf-Mo-Nb system, phase equilib., glass form. *(German)* 7−137260
Co-Nb amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Nb sputtered thin films *(Korean)* 7−132453
Co-Nb-B icosohedral structs., mag. moments, Curie temp., anisotropy and domain walls 7−131996
Co-Ti-Nb (3 2 wt.%), dil. ternary alloy, discontinuous precip. 7−144408
CoB base alloys, V and Nb substitution effect on induced mag. anisotropy *(Chinese)* 7−99436
$(Co_{0.94-x}Fe_{0.06}Nb_x)_{78}Si_8B_{18}$ amorphous alloys, mag. props., influence of Nb content and heat treatment *(Korean)* 7−138856
$Co_{80-x}Nb_xB_{16}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
$Co_{80}Nb_{14}B_6$, $Co_{84}Nb_{10}B_6$ metallic glasses, martensite transform., plasticity, internal friction 7−106574
$Co_{80}Nb_8B_{12}$, rapidly quenched alloy, magnetostriction, depend, on quenching rate, struct. relax. and temp. 7−112917
$Co_{84}Nb_{10}B_6$ metallic glass, fully-crystallised, elastic moduli, yield stress and ductility 7−71227
$Co_xNb_yTi_z$-SiO_2 double layered mag. films, domain wall structs. 7−99529
Cu-Nb, continuous fibre composites, thermal behaviour and strength 7−113613
Cu-Nb, ductile two-phase alloys, strengthening prediction model for high strains 7−132642
Cu-Nb composite wires, microstruct. anal. mechanical strength 7−104502
Cu-Nb in-situ alloys, etched surfaces, emissivity 7−111922
Cu-Nb-Sn, amorphous alloy prep. by mech. alloying of elemental powders 7−144331
Cu-NbTi interface, proximity-effect-induced superconductivity at millikelvin temperatures 7−77166
CuNb binary and Ti-alloyed superconds., fabrication by hot extrusion and high-field props. study 7−132516
Fe-Cr-C-Nb system, white cast Fe, phase equilib., solidification and solid-state phase transforms. 7−132578
Fe-Cr-Nb-C hardfacing alloys, fracture toughness rel. to microstruct. *(German)* 7−100385
Fe-Nb grain boundary segregation of P 7−138748
Fe-Nb-C-N system, NbCN solubility, thermodynamic calc. 7−86128

niobium alloys continued
$Fe_{4.7}Co_{65.6}Ni_{3.4}Cr_{1.1}Nb_{2.5}B_{13.8}Si_{9.1}$, metallic glass, internal friction, struct. relax, microhardness 7−106566
$(Fe_{1-x}Nb_x)_{80}B_{16}Si_4$, amorphous alloy ribbons, mag. domain props. rel. to annealing and Nb content *(Korean)* 7−132070
$Fe_{80-x}Nb_xSi_5B_{15}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
Hf-Nb-Ge system, phase diagram, isothermal cross-section 7−144369
Hf-Nb-Ni-Ta system, phase equilib., glass form. *(German)* 7−137260
$LiH_x(D_x)$, diffusion and latt. distortions, Mossbauer studies 7−84363
Mg-Nb, mechanical alloying, for hydrogen storage 7−93542
Mn-Ge-Nb, antiferromag., elastic props. and thermal expansion 7−144455
Mn-Nb, high temp. sulphide corrosion, scale growth and morphology 7−86438
Mn-Nb amorphous alloys, mag. and elec. props. 7−76876
Mo-Nb (3 wt.%), single crysts., high temp. stress relax. 7−126163
Nb-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
Nb-Al, thin film reaction couples, interconnect fabrication 7−118318
Nb-Al superconductors, Nb_3Al phase form. by powder process, critical current density 7−131960
Nb-C system, phase equilibr., crystallographic and thermodynamic data, review 7−77942
Nb-Cr, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Ge, undercooling in 100 m drop tube 7−77987
Nb-Ge (25 at.%), mechanical alloying, microstruct. evolution 7−132530
Nb-Ge alloys, drop tube processed, metastable structs. 7−119192
Nb-Ge high T_c superconducting film, prep. and surface study 7−125187
Nb-Hf, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Mo, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Mo, thermal expansion, elastic props. 7−98522
Nb-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Nb-Ni, corrosion-resistant layers form. by electrodeposition or electrowinning 7−119407
Nb-O system, phase comp. and struct. investig. 7−132570
Nb-Pd, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Re, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
Nb-Si, rapid solidification, microstruct., phase analysis 7−86153
Nb-Sn (Al)(Ge)(Si), metastable, phase transforms. 7−93008
Nb-Sn thin film, A15 supercond., sp. ht. meas. 7−112662
Nb-Ta alloys, short range order and superconductivity 7−85166
Nb-Ti, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Ti (46.5 wt.%), precip. at low strains, two-phase region, critical current rel. to heat treatment 7−131316
Nb-Ti alloys, nanometer scale structs., development, influence on supercond. critical current density 7−131949
Nb-Ti alloys, superconductivity and structural instability study 7−105008
Nb-Ti cable-in-conduit conductor, stability, expt. results for magnet coils 7−135573
Nb-Ti composite superconductors, critical current densities 7−85214
Nb-Ti fibres, short sample training behaviour, 4.2 K 7−86376
Nb-Ti filamentary spirals, elec. field and crit. current 7−85216
Nb-Ti fine filament superconductors in Cu-Ni matrix, AC losses 7−138165
Nb-Ti multifilamentary superconductors, current densities, spacing effects 7−85215
Nb-Ti multifilamentary superconductors, review 7−99359
Nb-Ti multifilamentary superconductors, current density improvement 7−125284
Nb-Ti short sample superconducting fibres, mechanical behaviour 7−86377
Nb-Ti superconductors, supermagnet materials, review 7−99358
Nb-Ti two-phase composite superconds., critical temp. suppression, proximity effects study 7−131830
Nb-V, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-V, H embrittlement, dislocation substructure, deform. twinning 7−78181
Nb-V, neutron irrad., mech. props. *(Japanese)* 7−93060
Nb-V foils, tensile deform., dislocation substruct., H embrittlement 7−78113
Nb-V-H, ductility, grain size and H conc. effects 7−100306
Nb-W, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-W (Hf), interaction with N_2 at high temps. 7−106664
Nb-Y alloys, effective pair interactions, density functional theory supercell total energy calcs. 7−84710
Nb-Zr, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Zr-C, hardened, solid soln. struct., yield stress, internal friction *(Russian)* 7−144495
Nb-Zr-C, interaction with borosilicide coatings, X-ray exam. 7−138686
Nb-Zr-N alloys, long-term, high-temp. hardness, effect of Zr/N conc. ratio 7−100338
Nb(Al,Ge) A15 superconductors, neutron irrad., transition temp. and critical currents 7−105776
Nb_3(Al,Ge) composite tapes, electron beam irrad. prep., struct., supercond. props. *(Japanese)* 7−99253
Nb_3(Al,Ge) prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3(Al,Si) prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3Al AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Al A15 superconductors, neutron irrad., transition temp. and critical currents 7−105776
Nb_3Al based superconductors, improved critical current densities 7−131879
Nb_3Al composite tapes, electron beam irrad. prep., struct., supercond. props. *(Japanese)* 7−99253
Nb_3Al multifilamentary wires, AC losses measured by magnetisation 7−77153

niobium alloys continued
Nb_3Al prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3Al wires, powder metallurgy processed, supercond. props. 7−131936
Nb_xAl, laser alloyed coatings on Nb, high temp. oxidation protection 7−100428
$Nb_3Al_{1-x}Ge_x$ composite tape fabrication by laser irrad. powder metallurgy process, supercond. props. study 7−132514
$Nb_3Al_{1-x}Ge_x$ supercond. tape prep. by electron beam annealing, high-field props. study, magnet appl. 7−132518
$Nb_3Al_{1-x}Ge_x(Si_x)$ supercond. tape prep. by continuous liquid quenching method 7−132517
NbCe superlattice systems, total energy, interface effect, LMTO band calc., density functional theory 7−77046
Nb_3Ge AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Ge films, CVD grown, high field superconducting props. 7−112720
Nb_3Ge layers, CVD controlled by gas phase diffusion, supercond. transition temp. 7−112609
Nb_3Ge superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
Nb_3Ge superconducting tapes, CVD synthesis, H_2/Cl_2 ratio effects 7−126003
Nb_3Ge superconducting tapes, CVD fabrication and critical current densities 7−138166
Nb_3Ge tape, prep. by single-roller rapid quenching technique 7−131878
Nb_3Ge:Ar sputtered amorphous films, impurity bubbles, flux pinning and TEM studies 7−131138
$NbH_{0.84}$, low temp. phase transitions, press. up to 22 kbar 7−131287
NbH_x, diffusion of H under hydrostatic press. 7−84364
NbH_x, H ordering symmetry and Landau free energy 7−131075
NbH_x interstitial alloys, statistical props., cluster field method 7−111637
NbH_x, tunnelling states of H in normal and superconducting Nb 7−84365
Nb_3Ir AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Ir, A15 superconductor, radiation damaged, weak localisation 7−105783
$Nb_{50}Mo_{50}$, Fermi surface parameters, positron annihilation study 7−98782
NbNi disordered alloys, upper critical field 7−77176
m-$Nb(Rh_{0.75}Pd_{0.25})_3$, prep. by rapid solidification processing, long-period close-packed phase of $PuGa_3$ type 7−119266
Nb_3Sb, phonon dispersion relations, angular force model 7−142931
$NbSe_2$-2H surface images using STM 7−83604
$NbSe_3$, CDW changes by introduction of Cu atoms into cryst. 7−118365
Nb_3Si, A15 phase, high T_c material, high press. synthesis 7−77121
Nb_xSi, laser alloyed coatings on Nb, high temp. oxidation protection 7−100428
Nb_3Sn AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Sn A15 multifilamentary supercond. form., solid state reaction and transform. kinetics 7−106466
Nb_3Sn A15 superconductors, neutron irrad., transition temp. and critical currents 7−105776
Nb_3Sn binary and alloyed multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7−131956
Nb_3Sn binary and Ti-alloyed superconds., fabrication by hot extrusion and high-field props. study 7−132516
Nb_3Sn, bronze-processed multifilamentary superconductor, crit. current., influence of two-stage annealing 7−112717
Nb_3Sn bronze-processed multifilamentary supercond. composite, supercond. and mech props., neutron irrad. effects study 7−131190
Nb_3Sn, bronze-processed tapes, study of shape anisotropy in critical current densities 7−131959
Nb_3Sn composite superconductor with very fine filaments, development and power freq. appls. 7−138173
Nb_3Sn compound, tensile strength rel. to grain size in bronze processed multi-filamentary supercond. 7−106581
Nb_3Sn, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Nb_3Sn, form. during diffusion in Nb-CuSn couple *(Chinese)* 7−69988
Nb_3Sn, high field superconducting coils for Mirror Fusion Test Facility 7−129393
Nb_3Sn, high-current density supercond., role of defects within flux-line lattice 7−118746
Nb_3Sn jelly roll wire, superconducting phase, critical current density 7−105870
Nb_3Sn layer, form., effect of small alloying additions *(Chinese)* 7−132772
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7−131973
Nb_3Sn multifilamentary supercond. wire, layer form., lattice parameter, critical props. 7−77182
Nb_3Sn multifilamentary superconductor, stress effects on critical currents 7−105871
Nb_3Sn multifilamentary supercond. composites, tensile strength, elongation, fracture 7−106582
Nb_3Sn multifilamentary supercond. wires, resistive transition, shape depend. on composite inhomogeneity 7−138168
Nb_3Sn multifilamentary superconducting wires, design and fabrication, tube technique 7−138708
Nb_3Sn powder, prep., supercond. critical temp. 7−106462
Nb_3Sn, space technological experiments performed with superconducting and mag. alloys 7−71457
Nb_3Sn, supercond., T_c limited by grain-boundary flux-shear 7−138163
Nb_3Sn, supercond. magnet, full array Large Coil Task tests 7−129387
Nb_3Sn supercond. thin films, RF surface resistance 7−138120
Nb_3Sn supercond. wires, fractography and mech. props. at cryogenic temps. *(Japanese)* 7−113687
Nb_3Sn supercond. wires for AC use, development 7−138172
Nb_3Sn superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
Nb_3Sn superconducting surface, angle resolved XPS studies of oxides 7−138584
Nb_3Sn superconducting wires effect of filament diameter and spacing on T_c 7−138170
Nb_3Sn superconductor, flux pinning, grain boundary effects 7−105869
Nb_3Sn superconductors, magnetic measurements using $Cd_xHg_{1-x}Te$ Hall probes 7−73377
Nb_3Sn:Ti in-situ wire, effect of Ti additions 7−131976

niobium alloys continued
Nb_3Sn:Ti wires fabricated by internal Sn diffusion method, Ti addition effects 7−131953
Nb_3Sn-Cu cable-in-conduit superconductor for fusion appls., testing at IFSMTF 7−129392
Nb_3Sn-Cu supercond. wire prep. by liq. phase sintering, supercond. props. study 7−132515
Nb_3Sn-Ta_3Sn multifilamentary wires powder metallurgy 7−131880
Nb_3Sn-Ti composite supercond. wires, new fabrication process, and props. 7−132519
Nb_3Sn-Ti-Cu multifilamentary conductors with high-field critical values 7−131954
$Nb_{3+x}Sn_{1-x}$, supercond. non-stoichiometric, electronic struct. 7−105383
Nb_3Sn(Ti) superconductor for 21 Tesla fields, powder metallurgy 7−131955
$(NbTa)_3Sn$ multifilamentary wires, high field supercond. props. 7−131840
NbTe-Ge multilayers, superconductivity in weakly localised regime 7−112591
NbTi alloys, enhanced upper critical fields 7−77178
NbTi film for mag. shield, thickness depend. of screened mag. fields 7−77147
NbTi fine filament superconductors, anomalous low field magnetization 7−131882
NbTi fine filament superconductors, fabrication techniques 7−132521
NbTi, forced-flow cooled coil, IFSMTF tests for Large Coil Task program 7−129390
NbTi, high field superconducting coils for Mirror Fusion Test Facility 7−129393
NbTi multifilamentary superconducting coil, loss meas. 7−77159
NbTi multifilamentary superconductor, critical current rel. to axial stress 7−131963
NbTi strands extracted from coreless Rutherford cables, electromechanical props. 7−131964
NbTi, supercond. magnet, full array Large Coil Task tests 7−129387
NbTi supercond. wires, fractography and mech. props. at cryogenic temps. *(Japanese)* 7−113687
NbTi superconducting composites, very high current density, effect of heat-treatment temp. 7−131965
NbTi superconductor, flux-pinning, subboundary struct. effects 7−105869
NbTi superconductors, ultra-fine filament, AC losses 7−131967
NbTi ultrafine filamentary supercond. wires, AC losses calc. 7−131946
NbTi ultrafine filament superconductors for SSC, prototype fabrication 7−138171
NbTi-Cu, cryostatic stability of miniaturized composite conductors 7−131961
NbTi-Cu cable-in-conduit conductors, stability at short heat pulse duration 7−77185
NbTi-Cu composite superconducting properties charcts and struct. 7−131962
NbTi-Cu multifilamentary superconductor, electrical and magnetic props. below T_c 7−77143
NbTi-Cu multifilamentary superconducting wire, AC losses 7−77161
NbTi-Cu superconducting composite wires with fine filaments, supercond. props. 7−131966
NbTi-Cu superconductor, Al-stabilised, for use in large magnets 7−77169
$Nb_{0.53}Ti_{0.47}$-Ge multilayers, disordered, anisotropic upper crit. fields 7−143732
$Nb_{0.8}Ti_{0.2}$, ion implanted He porosity and supercond. props. *(Russian)* 7−99243
$Nb_{21}Ti_{79}$ temp. dependence of resistivity above 20 T 7−105531
$Nb_{0.5-x}Ti_{0.5-x}Fe_{2x}$, supercond. critical temp. and upper critical fields 7−77179
NbZn single filament superconducting wire stability, real transition characteristic effects 7−143730
NbZr supercond. thin films, RF surface resistance 7−138120
$(Nb_{1-x}Zr_x)_3Sn$ layers, segregation of Zr and effects 7−77144
NdDyFeBNb sintered magnets, microstruct., precipitation and coercivity, electron microscopy studies 7−69912
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
Ni-Cr-Nb (16, 2 wt.%), superalloy, hot corrosion, internal sulphidation-oxidation mechanism 7−106694
Ni-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Nb amorphous alloys, electronic transport 7−98969
Ni-Nb metallic glasses, creep, free vol. annihilation and relax., isothermal dilatometry meas. 7−98324
Ni-Nb-Pt, amorphous surface alloys on Nb, laser processed electrodes 7−137397
Ni-Ta-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-TiC-NbC system, phase equilib. 7−100180
Ni_3(Al,Nb) single crystals, cyclic deform. at ambient and elevated temps. 7−144503
Ni_3(Al,Nb) single crystals, fatigued at ambient and elevated temps, dislocation struct. 7−144504
NiCrNb, metallic glass, formation, crystallisation behaviour 7−142627
$Ni_{55}Cr_5Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
$Ni_{55}Cr_5Nb_{40}$ metallic glasses, H embrittlement susceptibility 7−144530
NiNb amorphous coating, ion beam mixed, corrosion behaviour 7−71368
$Ni_{0.60}Nb_{0.40}$, amorphous diffusion barriers, AES studies 7−124604
$Ni_{60}Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
$Ni_{60}Nb_{40}$ metallic glasses, H embrittlement susceptibility 7−144530
$Ni_{61}Nb_{39}$, amorphous, phase separation and loss of ductility 7−91827
Ni_xNb_4, noncrystalline, point defects study by high temp. mass transport expts. 7−105093
Ni_xNb_{x-1}, amorphisation by mechanical alloying 7−124102
$Ni_{60}Nb_{40-x}Al_x$ amorphous alloys, H embrittlement 7−113792
$Ni_{60}Nb_{40-x}Al_x$ metallic glasses, annealing effects 7−126149
$Ni_{60}Nb_{40-x}Cr_x$, amorphous, crystallisation, DSC, X-ray diffr. 7−69603
$Ni_{60}Nb_{40-x}Cr_x$ glasses, isothermal crystn. kinetics 7−111412
$Ni_{60}Nb_{40-x}Cr_x$, metallic glasses, influence of Cr content on elec. resist. and thermoelec. power 7−137891
$Ni_{0.95}Tb_{0.05}$ amorphous sputtered films, struct., neutron diffr. study 7−104557
Ti-Al-Nb, as-cast and deformed samples, dislocations 7−124274
Ti-Al-Nb, ordered β phase, atom site occupation, channelling enhanced micro-analysis 7−98045
Ti-Al-Nb-Ta-Mo, fractal charactn. of fractured surfaces 7−113648
Ti-Nb, electrospark alloying for improved corrosion resist. of Ti 7−144597

niobium alloys continued
Ti-Nb, internal friction spectrum in β-phase caused by impurities, effect of nitrogenation 7−100271
Ti-Nb alloys, cold deform. mechanisms 7−86256
Ti_3Al-Nb, intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7−126170
TiC-NbC-TaC-WC-Co cemented carbide, gamma phase layer form., growth kinetics and microstruct. rel. to sintering atmosphere 7−77929
$Ti_{80}Nb_{10}V_{10}$, temp. coeff. of resist., β-phase decomp. effect 7−106517
UN-Li-NbZr, fuel-coolant-cladding of SP-100 reactor, compatibility studies 7−67919
UO_2/Zr-Nb, friction characteristics, in-reactor study 7−122001
V-Nb alloys, short range order and superconductivity 7−85166
Zr Nb fuel element claddings, in-reactor I stress corrosion study *(Russian)* 7−116580
Zr-Fe-Nb, ternary amorphous alloys, production, stability rel. to comp. 7−131029
Zr-Nb, ^{63}Ni tracer diffusion meas. 7−105131
β-Zr-Nb, fast impurity diffusion of Co and Fe 7−105132
Zr-Nb, microhardness anisotropy 7−86327
Zr-Nb (2.5 wt.%), hydrostatically extruded tube, texture *(Chinese)* 7−71203
Zr-Nb (2.5 wt.%), pilgered cold-worked press. tube, in-reactor deform. 7−96186
Zr-Nb (2.5 wt.%), reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
Zr-Nb (2.5 wt.%), surface, H and D profiling, oxidation effect 7−86425
Zr-Nb (2.5 wt.%) pressure tube alloy, cold worked, annealed, dislocation networks 7−98152
Zr-Nb-based dilute alloy, electron and ion irrad., point defect clustering 7−98138
ZrNb tube etching in HNO_3/HF mixture, oxide release 7−78302
$(Zr_{1-x}Nb_x)Fe_2$, C14 and C15 cpds., Laves structs., electronic struct., magnetism 7−84631

niobium compounds
see also niobium alloys
selenides, $A_xNb_2Se_8$, A=Na,K,Rb,Cu,Ag,Zn,Cd,Pb, prep. by molten salt ion exchange and ternary element insertion 7−83819
ternary niobium chalcogenides, $A_xNb_6X_8$ (X=S,Se,Te), quasi-1D cpds., crystal structures 7−111496
/Nb_2O_5 cell employing polyethylene oxide lithium trifluoromethane sulphonate complex as electrolyte 7−93485
$Ag_{0.33}NbSe_2$, intercalated cpd., lattice dynamics, Raman spectra data, valence force field model 7−84162
BaO-TiO_2-Nb_2O_5 phase diagram, cryst. chem. and struct. studies 7−83904
$BaTiO_3$:Fe(Nb_2O_5), monocrystallic, permittivity in combined elec. fields *(Czech)* 7−138391
Cs_2O-Nb_2O_5-Al_2O_3 glasses, struct. and props. 7−137252
$Cu_{1/2}NbS_2$, layered, order-disorder phase transition obs. by elec. resist. meas. 7−104991
Fe-Nb-O, phase equilibria at 1200°C 7−132589
$Fe_xNb_{1-x}Se_3$ with 1D struct. as positive electrodes for secondary Li batteries 7−93500
$HNbO_3.0.5H_2O$ pyrochlore struct. ceramic acid, protonic temp. depend. meas. 7−84370
$Hk_2Ti_5NbO_{14}.H_2O$, topotactic dehydration to $K_4Ti_{10}Nb_2O_{27}$ 7−111487
$KGdNb_6Cl_{18}$, cryst. struct., X-ray diffr. study *(French)* 7−98051
$KNbF_7$, crystal struct., lumin. studies 7−83894
$KNbO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
$K_3Nb_7O_{19}$, cryst. struct., shear, high resolution electron microscopy, X-ray powder diffr. obs. 7−111457
KOH-NbS_2, intercalated H_2O, NMR spectra 7−106041
$K_4Ti_{10}N_2O_{27}$, prep. by topotactic dehydration of $HK_2Ti_5NbO_{14}.H_2O$, struct., electron and X-ray studies 7−111487
$KWNb_2O_9$, hexagonal bronze, domain patterns, electron microscopic studies 7−125645
La_2O_3-CoO-Nb_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
La_2O_3-MnO-Nb_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
La_2O_3-NiO-Nb_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
Li-Nb_2O_5 cell, non-aqueous, electrochemistry of L-Nb_2O_5 7−93486
$LiNbO_3$ crystals, ion-exchange processes study during optical waveguide struct. form. 7−71484
Li_2O-Fe_2O_3-Nb_2O_5, ferrite, sintering, microstruct. 7−86109
$NaNb_{1-x}V_xO_3$, effect of ion substitution, on ferroelectric Curie temp. 7−85544
Na_2O-K_2O-Nb_2O_5-SiO_2 glasses, crystn., phase decomp., permittivity and electro-optic effects 7−83710
NaOH-NbS_2, intercalated H_2O, NMR spectra 7−106041
Nb interface oxides, nuclei for growth of B1 and A15 cpds. 7−91506
Nb-C system, phase equilibr., crystallographic and thermodynamic data, review 7−77942
Nb-H, ordered phases, predictions using lattice gas models 7−104987
Nb-N thin films, amorphous and cryst., struct., electron microdiffr. studies *(Russian)* 7−70108
Nb-Nb_2O_5-PbBi(PbAuIn) tunnel junctions, electron trap states and LF noise 7−131919
Nb-NbO_x-PB Josephson tunnel junctions, HF loss meas. near plasma reson. 7−138143
Nb-NbO_x-Pb Josephson tunnel junctions, with anodised Nb barrier, elec. characts. 7−112687
Nb-NbO_x-Pb(In) tunnel barrier contact parameters 7−143720
Nb-NbO_x-Pb(Nb) Josephson junction, fabrication, characterization *(Korean)* 7−92381
Nb-T, localised vibrations, ^3He precipitation 7−91821
Nb-Ta-H, phase equilibria calc., first principle, model and empirical methods 7−104988
Nb(Al,Ge), laser and electron beam processing of superconductors 7−131175
Nb_3Al, laser and electron beam processing of superconductors 7−131175
$Nb_2(C,N)_xH_y$, electronic struct., interatomic interactions, by cluster MO method 7−70186
NbC, carbides, energy band structure and chemical bonds *(Russian)* 7−124851
NbC, cast, gas abrasive wear resist. 7−100395
NbC, decomposition in presence of ion irradiation in high-temp. conditions 7−144735

niobium compounds continued
NbC films, prepared by reactive laser sputtering, supercond. props., X-ray and chem. anal. 7−99250
NbC, heat treatment, effect on defect formation and props. 7−100247
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
NbC, oxide interface, serrations, protrusions, XPS study 7−138595
NbC superconducting microparticle composite wire, fabrication and props. 7−138175
NbC superconducting surface, angle resolved XPS studies of oxides 7−138584
NbC_x, electronic struct., influence of vacancies, local atomic displacements 7−76733
NbC_x, hot isostatically pressed, steady-state creep 7−144480
NbC_x, optical and elec. props. 7−85649
$Nb_2C_{0.74}$, hot isostatically pressed, kinetics and mechanisms of creep 7−71263
NbCN superconducting films, MOCVD deposited, struct. and props. study 7−131842
NbCN superconducting films, upper critical field meas. and penetration depth determ. 7−131881
$NbC_{1-x}N_x$ coatings on C fibres, superconductivity 7−138167
NbC_xN_{1-x} high T_c superconducting films, high-rate synthesis by hollow target sputtering 7−100062
NbC_xN_{1-x} superconducting films, reactively sputtered in (Ar, N_2, C_2H_4) mixtures, charactn. 7−131843
Nb_3Cl_8 complexes, trinuclear, prep., rel. to local struct. 7−103353
NbD_x, coherent quasielastic neutron scatt. 7−69693
NbF_6 ions, intercalation into HOPG using Hg^{2+} and Hg_2^{2+} salts 7−137340
Nb_3Ga, laser and electron beam processing of superconductors 7−131175
a-Nb_3Ge:Ar, sputtered films, bias threshold for Ar bubble growth 7−117817
$NbH_{0.31}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
NbH_x, coherent phase transition, neutron radiography, computerised tomography 7−98217
NbH_x, electric quadrupole interaction of ^{100}Rh, TDPAC study 7−118443
$Nb_{1-x}M_xH_y$ (M=Y,Zr,Mo), impurity-H and H-H binding energies, tight-binding calcs. 7−84742
NbN and NbCN, RF sputtered films, thermal annealing effects 7−132451
NbN based superconductor-insulator-superconductor junction, heterodyne mixing expts., for radiotelescopes 7−120277
NbN, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7−71120
NbN epitaxial growth on MgO/si ultrathin substrate, Schottky diode characts. 7−143256
NbN film, CVD prep. 7−113422
NbN film, critical current density, Ambegaokar-Baratoff-Ginzburg-Landau crossover effects 7−92396
NbN granular superconducting films, energy gap, STM images 7−99341
NbN high-field supercond. sputter deposited on complex substrates 7−131841
NbN nanobridge in DC-SQUID, effective mag. flux 7−70483
NbN single cryst. films, surface stability, effect on superconducting props. 7−112030
NbN sputtered coatings on practical substrates, high field supercond. props. study 7−131957
NbN, sputtered film, fabrication, struct. and supercond. props. *(Japanese)* 7−112537
NbN sputtered films, electron microscopy study, superconducting props. 7−105341
NbN sputtered thin films, microwave surface resistance 7−131731
NbN, sputtering, damage and nucleation 7−138575
NbN supercond. broad bridges, transition to resistive state 7−105858
NbN, supercond. props. *(Japanese)* 7−99309
NbN supercond. thin films, RF surface resistance 7−138120
NbN superconducting microbridges, current-volt. characts. 7−70481
NbN superconducting surface, angle resolved XPS studies of oxides 7−138584
NbN superconducting thin films, sputter deposition, optical emission spectroscopy 7−132450
NbN, surface meas. using low-temperature scanning tunneling microscope 7−83613
NbN thin films, microstruct., resistivity, anisotropy of upper critical field 7−131934
NbN type BI superconductors, critical inductances *(Turkish)* 7−105863
NbN/a-Si:H/Nb Josephson tunnel junctions, barrier hydrogenation effects 7−112685
NbN/BN granular films−a novel broadband bolometric detector for pulsed far infrared radiation 7−128653
NbN/MgO/NbN Josephson tunnel junctions, temperature-dependent props. 7−131918
NbN-Al_2O_3-NbN tunnel junction series arrays, processing 7−131908
NbN-AlN system, sintered composites, elec. cond. rel. to dispersion of initial components 7−77928
NbN-BN granular cermet films, transport props. study 7−131852
NbN-based compounds, zone struct. *(Russian)* 7−124852
NbN-GaAs contacts, thermal stability and barrier height enhancement 7−70412
NbN-MgO-NbN sputter deposited superconductor-insulator junctions, insulator interface effects 7−125268
NbN-MgO-NbN tunnel junctions, characts. 7−131913
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
NbN-MgO(Al_2O_3)-NbN, tunnel junction fabrication 7−131912
NbN-Nb/PbSb Josephson tunnel junction prep. in single vac. cycle 7−143719
NbN-$NbN_{1-x}O_x$, oxide interface, serrations, protrusions, XPS study 7−138595
NbN-NbO_x-Pb Josephson junctions, AC props. 7−132448
NbN-Si-Nb based Josephson junctions with unoxidised Si barriers 7−131907
NbN(C) surface oxides, angle resolved XPS and supercond. studies 7−113352
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
NbO, photoelectron spectra, bands, ionisation energies, HES calcs. 7−141624
NbO, thermochemistry, mass spectrometric obs. 7−126471

niobium compounds continued
NbO_2, thermochemistry, mass spectrometric obs. 7−126471
Nb_2O_5, amorphisation and phase transform. by fine grinding 7−113545
Nb_2O_5, amorphous film, short range atomic ordering, oxidising pyrolysis of organometallic compounds 7−75999
Nb_2O_5 anodic amorphous oxide films, ionic transport processes, pickup of PO_4^{3-} and F^- ions, XPS study 7−100009
Nb_2O_5, anodic growth, elec. breakdown and electronic cond. study 7−92594
Nb_2O_5 anodic thin films, photoelectrochem. props. at semicond.-electrolyte junctions 7−112483
Nb_2O_5 electrode in rechargeable Li batteries, electrochemical and structural characts. 7−133073
Nb_2O_5 thin films less than 1 μm, hardness testing 7−100478
Nb_2O_5-TiO_2-BaO system, phase equilibria, cryst. chem. and struct. 7−111486
$Nb(OH)_x$, dilute metal-H system. quantum nature 7−84165
$(NbO)_2P_4O_{13}$, crystal structure, framework of $[P_4O_{13}]^{6-}$ and NbO^{3+} ions 7−104658
$Nb_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
$NbPO_5$, allotropic, preparation lattice parameters *(French)* 7−91533
NbPS, superconducting, bonding, electronic struct., TBC 7−70187
NbS, disordered systems, diffuse intensity loci, optical transforms 7−137148
NbS_2, 2H polytype, upper critical field anisotropy and elec. resist. 7−138159
NbS_3, orthorhombic single whisker, thermal cond. studies 7−98600
NbS_3, π-like, resistance, press. and temp. depend. 7−99029
NbS_xSe_{2-x}, prep. and struct. 7−77781
$NbSe_2$, atomic resolution images in air, using bimorph scanning tunnelling microscope 7−128721
$NbSe_2$ layer materials, struct. defects, TEM studies *(French)* 7−104761
2H-$NbSe_2$, surface corrugation, scanning tunnelling microscopy studies 7−70042
2H-$NbSe_2$ surface obs., using scanning tunnelling microscope 7−128722
$NbSe_3$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7−98365
$NbSe_3$, CDW, field induced depinning, nonlinear cond. 7−124973
$NbSe_3$, CDW changes by introduction of Cu atoms into cryst. 7−118365
$NbSe_3$, CDW conduction dynamics in high mag. fields 7−99027
$NbSe_3$ CDW conductors; magnetotransport studies 7−98989
$NbSe_3$, CDW mode locking and RF-induced dynamic coherence length 7−98838
$NbSe_3$, Frohlich conduction, size-depend. threshold field, CDW pinning by cryst. surface 7−84850
$NbSe_3$, mag. field-induced phase transition 7−99141
$NbSe_3$, magnetoresistance and Hall effect, oscillatory behaviour 7−84822
$NbSe_3$, narrow band noise intensity and nonlinear conductivity, temp. depend. 7−124971
$NbSe_3$, nonlinear magnetoresist. and CDW depinning 7−105549
$NbSe_3$, quasi-1D conductors, CDW transport, current oscillations 7−84845
$NbSe_3$, quasi-1D conductor, CDW transport, AC-DC interference phenomena 7−84846
$NbSe_3$:Ta(Zr), CDW depinning field at low temps. 7−98839
$NbSe_3$:Zr(Ta), low freq. broadband noise, impurity effects 7−99144
Nb_2Se_9, cryst. struct., X-ray diffr. study 7−111461
$Nb_4Se_{16}Br_2$, chain-like structures, X-ray diffr. studies 7−76092
$NbSe_2H_x$, NMR Knight shift, spectral and relax. temp. depend. props. *(Russian)* 7−77416
$(NbSe_4)_2I$, dynamical CDW response, freq. depend. cond. meas. 7−99002
$(NbSe_4)_3I$, liner chain semicond., cryst. struct. and far-IR reflectance 7−98097
$(NbSe_4)_3I$, thermal cond. and thermal capacity 7−98601
$(NbSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7−85701
$(NbSe_4)_xI$, liner chain cpd., phase transitions, Raman scatt. studies 7−99869
Nb_3Sn force cooled superconducting coil, development 7−135650
Nb_3Sn, magnetic flux discontinuities meas apparatus 7−134819
$NbT_{0.59}$, swelling, ^3He bubble formation 7−91852
$((Nb_{1-x}Ta_x)Se_4)_3I$, localisation effect in thermopower and resistivity 7−137930
$NbTe_4$, commensurately modulated structure determination 7−124174
$NbTe_4$, incommensurate modulated structures, dualistic interpretation 7−83863
Nb_3Te_4, CDW phase transition, elec. resist., mag. susceptibility and X-ray studies 7−98840
$Nb_2Te_2O_9$, cryst. growth, struct., IR spectra, pyrolysis studies 7−83920
P_2O_5-Nb_2O_5-TiO_2-Fe_2O_3 semicond. glasses, struct. and props. 7−83718
$Pb(Mg_{1/3}Nb_{2/3})O_3$-based perovskites, microwave sintering, capacitor appls. 7−138702
$RbNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7−98433
$Ru_{1-x}Nb_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
$SrTiO_3$:Nb_2O_5 ceramic anodes, photoeffects study 7−84991
$Ta_yNb_{1-y}Se_3$ Peierls-CDW state, interplay between disorder and impurity distrib. $2k_F$-regularity effects 7−112311
$Ta_yNb_{1-y}Se_3$, quasi-1D cpd., elec. props. 7−131629
$Ti_{1-y}Nb_yH_x$, substitutionally disordered, electronic struct., tight-binding CPA calcs. 7−84668
$Ti_{1-x}Nb_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
TiO_2-Nb_2O_5 solid solns., lattice parameter variation for rutile 7−111476
TiO_2-Nb_2O_5-B_2O_3-Na_2O-SiO_2 glass for nonlinear optical waveguides, synthesis and charactn. 7−136469
$TlNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7−98433
ZnO-Nb_2O_5 system, non-ohmic behaviour rel. to comp. and sintering temp. 7−84905
$(Zr_{0.5}Nb_{0.5})C_{0.9}$, solid solution, heat treatment, effect on defect formation and props. 7−100247

nitriding *see surface hardening*

nitrogen
see also nuclei with ...
abundances in dwarf and subdwarf stars, implications for Galactic nucleosynthesis 7−145944
abundances in Sun, α CMi (Procyon) and α Boo (Arcturus), determ. from optical spectra 7−120376

nitrogen continued
active, microwave-induced afterglow, excitation temps. 7−124007
adsorbed on Ba-promoted Fe surfaces, combined XPS-UPS-EELS study 7−77749
adsorbed on graphite, density profiles in RAM perturbation theory 7−105237
adsorbed on Ni, inverse-photoemission studies 7−138536
adsorbed on Ni (110), IR spectrum, time dependence 7−144062
adsorbed on Zr (0001), surface struct., LEED studies 7−143220
adsorption, on ultradisperse amorphous BN 7−76000
adsorption on clean and chemically modified Ru (001) surfaces, role of σ bending 7−105646
adsorption on Fe (111), direct precursor mediated processes 7−132964
adsorption on graphite surface, perturbational reference average Mayer theory 7−91979
ageing under ozonizer excitation, periodicity in discharge current and Joshi effect 7−83572
arc, 2 kA DC, in supersonic nozzle, conservation eqns. solved 7−83566
atom, electron density to electron momentum density transform., nonlocal density approx. 7−74421
atom, emission following N_2 electron impact dissoc. 7−135938
atom, ground state, fine struct. isotope shift, ab initio calc. 7−74470
atom, REMPI detect. 7−129673
atom, triplet state population in low-press. He-N_2 plasma 7−141518
atom, with half-filled electron shells, spin rotation interaction 7−82005
aurora, N_2^+ First Negative bands, model of sunlit aurora 7−139831
aurora, N_2 band emissions, vertical distribution 7−87995
aurora, N^+ 214.3 nm UV emission, altitude profile observations 7−107605
boiling, IPTS-66 scale fixed pts., influence of pressure *(Polish)* 7−134746
boiling during transient heat release 7−84223
CARS, broadband, pump-induced population changes 7−123105
CARS, three-laser, rotational and vibrational spectra 7−103512
CARS N_2 thermometry at high pressure, for internal combustion engine appls. 7−80907
chemisorbed layer on N, ion-induced desorption and particle refl., Monte Carlo simulation 7−105275
chemisorption on PET surface modified by low energy ion bombardment 7−93378
chemisorption on Si (111), ion scatt., LEED and temp.-programmed desorpt. studies 7−143199
clathrate hydrates, struct. studies 7−117883
concentration determ. by Rayleigh light scattering using pulsed laser radiation 7−126523
cryogenic layers, sorptive props, formation conditions depend. 7−143217
cryostat for Mossbauer scattering study 7−102573
dense molecular fluids, vibr. freq. shifts and bond length calcs. 7−82063
diamond: N, faceted void like defects 7−91577
diamond:N, A_1-T_1 splitting and band struct. calcs., EHT method 7−98927
diamond:N, A-defect struct. 7−83946
diamond:N, defects, vibronic struct., UV absorpt. spectrum meas. 7−106226
diamond:N, electronic struct., hyperfine interaction, cluster study 7−118406
diamond:N, UV absorption, vibronic bands 7−99895
diamond, synthetic, N isotope effects on defect centre spectras 7−119030
diatomic melting curves to very high pressure 7−98405
dichlorodifluoromethane-N_2 mixtures, steady-state Townsend conditions, electron swarm props. 7−104474
dichlorodifluoromethane/SF_6/N_2 gas mixtures, electron transport props., Boltzmann eqn. anal. 7−97691
dimer, nucleation and condensation investig. 7−96908
electron drift velocity, longitudinal diffusion coeff. 7−117693
electrons attenuation length, energy depend. study 7−142856
excited ions, coherent four-photon antiStokes scatt. spectra 7−68242
feed gas 3 cm Kaufman ion source, characterisation 7−67428
fluid coexistence curves, three-body interactions, scaling variables, singular diameters 7−124466
gas, electric breakdown, formative time lags below Paschen minimum 7−97841
gas, electron swarm in nonuniform field 7−111155
gas, laser-induced electric breakdown at 1.06 μm, theory 7−104478
gas, low-energy electron beam propag., plasma generation 7−137095
gas, rot. levels, inverted distrib. form. probability calc. 7−68411
gas, rototranslational far-IR absorpt. spectra 7−90111
gas, thermal-nonequilib. ionis., electron density meas., CO_2 gas effect 7−130827
gas, vibr. excited, weak shock wave propag. 7−83274
gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
glow self-sustaining discharge with multisection cathode, spatial struct. dynamics 7−124009
He 2-10, dwarf starburst galaxy, Hα and N II forbidden emission line profiles 7−128092
impurity in diamond crystals meas., temperature coeff. of linear expansion determ., using X-ray spectrometer 7−142535
in vivo measurement for small animals using nuclear techniques 7−107327
ion implantation, of bearing steel, friction rel. to temp. and microstructure 7−106628
ion implantation and gas exposure influence in SiO_2 7−98210
ion implantation effects on Ti-Al-V/polyethylene tribological couple 7−79139
ion implantation in W-Cr-V steel, wear resistance enhancement *(Chinese)* 7−132820
ion implanted in Ni, diffusion, annealing behaviour 7−91896
ionosphere F-region, electron temp. and density model, role of O and N_2 7−139840
ions, spectroscopy by coherent antiStokes light scattering 7−134853
ions in plasma initiated on levitated aerosol drops, time-resolved spectroscopy 7−104381
ions in RF ion trap, total number meas. 7−136181
Kodak emulsions, N baking effects on quantum efficiency and signal-to-noise ratio 7−140769
laser, light pulse instability 7−103802
laser, refractive fringe diagnostic of ruby laser produced plasma 7−83537
laser, short-channel, high-energy output 7−82613
laser, SiC preionised, comparison with CO_2 laser 7−130046
laser, UV operation, transverse discharge, elec. study 7−130073
laser channel current, inductance and resistance meas. 7−74956

nitrogen continued
laser with high output energy, performance 7−82645
level detector based on Archimedes principle 7−108515
liquefied, acoustic and thermodynamic studies 7−69826
liquid, laser beam-induced shock waves, fluid ejection and liq.-vapour interface channel form. *(Japanese)* 7−117026
liquid, perturbation theory for studying thermodynamic props. 7−124554
liquid, saturation effect in Raman scattering obs. 7−141931
liquid electron thermalisation distances and free ion yields calc. 7−111989
M13 II-67, O-poor giant star in M13, search for N overabundance 7−72427
M67, old open cluster, C/N ratios along evolutionary sequence, implications for mixing 7−120377
M71, globular cluster, abundances of metals, C, N, and O in five stars 7−72415
microclusters, nucleation and thermodynamic props. 7−96907
miniature centrifugal pump for an automatic liquid nitrogen filling system 7−80799
molecular, Lyman-Birge-Hopfield band, oscillator strength determ. 7−74777
molecular beam, electron ionisation, optical model 7−68467
molecular chemisorpt. on Ni (110), kinetic parameters, thermodynamic quantities and struct., multitechnique approach, review 7−70086
molecule, $a^1\Pi_g$ state, electron impact excitation cross-section 7−141702
molecule, active, yellow glow, temperature dependence, Thrush mechanism, vibrational levels, emission, empirical equations 7−141619
molecule, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
molecule, adsorpt. in zeolite matrices, induced overtones, IR spectra 7−122517
molecule, core-hole photoelectron satellites 7−90275
molecule, dissoc. energies, extended valence MC SCF calcs. 7−129606
molecule, dissociative chemisorpt. on W (110), dynamics 7−139034
molecule, dissociative excitation cross sections, N I spectral lines 7−82383
molecule, elastic electron scatt., cross sections calc. using multiconfiguration SCF CI wavefunctions 7−122709
molecule, elastic electron scatt., target wave fn., electron correl. inclusion 7−103659
molecule, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
molecule, electron impact dissoc., N emission spectra 7−135938
molecule, excited singlet state, quenching rate const. 7−122619
molecule, excited states, bond fns., MRD-CI calcs. 7−109791
molecule, free jets, homogeneous condensation 7−98418
molecule, high resolution inverse Raman spectra, line widths, collisional contrib. 7−74621
molecule, ICP rot. spectrosc. temp. determ. 7−121117
molecule, ionisation pots., valence shell correl. effects 7−81989
molecule, mean polarisabilities, temp. depend. meas. *(German)* 7−68472
molecule, multielectron dissociative ionis., femtosecond dynamics 7−110027
molecule, multiple bonds description, CASSCF/MRCI calcs. 7−109797
molecule, N core level excitation, oscills, strengths 7−82380
molecule, non-resonant VV transfer, rate consts. determ. 7−110085
molecule, nonequilibrium ionization involving superelastic electronic collisions 7−110120
molecule, nucl. spin-spin coupling consts. calc. 7−129743
molecule, one-electron props., HF limit basis sets 7−89988
molecule, oxidation in nonequilib. weakly ionised plasma, temp. effects, numerical model 7−144686
molecule, photoelectron spectra, vibr. branching ratios, photoionisation cross section 7−82279
molecule, photoionisation, photoelectron ang. distrib. meas. 7−136005
molecule, press. broadening coeff., depend. on rot. quantum number, Raman obs. 7−82157
molecule, quenching rate const. by H 7−117005
molecule, reorientation and rot. energy transfer cross sections, nucl. spin-lattice relax. time meas. 7−103538
molecule, rot., vibr. and electronic excitation in ICP 7−122675
molecule, rot. relax. fitting laws, SRS Q-branch calc. 7−109905
molecule, rot.-diffr. scatt. of model corrugated surface, calcs. using close coupling wave packet method 7−68437
molecule, shock compression, statistical mechanical model 7−74727
molecule, soln. from arc plasma into liq. Fe, arc current effect 7−104465
molecule, spatially resolved rot. and vibr. temps. in ICP 7−121122
molecule, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
molecule, static polarisabilities, vibr. contribs. 7−74550
molecule, STF HF wave fns. calc. 7−81995
molecule, STF HF wavefunctions 7−129588
molecule, total and dissociative photoionis. cross sections meas. 7−103587
molecule, total positron scatt. cross section 7−117072
molecule, two-colour double resonant multiphoton ionis., and laser-induced fluoresc. 7−110023
molecule, virial coeff. calc. 7−75738
molecule, XUV laser Rydberg state ionisation 7−140763
molecules, new emission bands in 85 to 107.8 nm range 7−74659
molecules, Raman Q-branch transitions, self-density frequency shift measurements 7−82286
molecules nonlinear photoprocesses, review 7−136027
monolayer adsorbed on graphite at low temp., orientational order 7−91987
$N_2+Ar^+(^2P_{1/2})$, reactive and nonreactive scatt., crossed-beam investig. 7−90320
N_2 pre-implantation effect on props. of He implanted TiH_x 7−137385
NGC 5253, amorphous galaxy, central ionised gas complex, element abundances, spectral obs. 7−140291
nuclear microanalysis of N_2 and O_2 impurities in C specimens, using semiconductor spectrometer 7−86726
overlayer on Cu (100), vibrational HREELS spectra 7−105232
in planetary nebulae, influence of N abundance on nebulae classification 7−146061
planetary nebulae, spectral characteristics for C, N and O *(Swedish)* 7−128025
plasma, Cs^+-electron recombination in presence of N_2, O_2 and CO_2 7−111163
plasma, high temp., absorpt. cross sections 7−130843
plasma, millimeter wave self-action, num. investig. 7−75800
plasma, nonequilib. flow, non-Maxwell energy distrib. 7−69329
RF discharge, vibr. anal., spectroscopic charactn. 7−83556
rotational Raman gain coefficient ratio of H_2 and N_2 7−130260
nitrogen continued
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
shock-compressed liq., dissoc. 7−106785
solid, α-phase molecular crystal, lattice dynamics, Kohin type potential *(Japanese)* 7−111791
spectroscopy by coherent antiStokes light scattering 7−134853
spin-polarised crystals, stability 7−84444
sputtering, of Si target, angular distrib. of particles 7−77740
sputtering of chemisorbed N from single-crystal planes of W and Mo 7−70957
stagnant, in septum of coarse pores, CO_2 transport 7−91212
steel, austenitic stainless, N implanted, friction and wear 7−78260
steel, GCr15, N^+ ion overlap implanted, wear, fatigue study 7−104787
steel, stainless, N_2^+ implanted, wear behaviour 7−106635
steel, stainless, N_2^+ ion implantation influence on fatigue props. 7−76286
steel, stainless, N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
steel, tool, N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
thermosphere emission features, spectra study 2000 to 8000 Å 7−79733
two-phase flow in vertical channels, heat transfer 7−136852
UHV valve protection system for National Synchrotron Light Source 7−134749
vapour, stopping power from vel. distrib. derived from Compton profiles 7−96609
vapour bubble shape and size during boiling on downward-facing flat surfaces 7−142358
XUV coherent source, frequency tripling into 720-1025 Å region 7−141940
Al alloys, N_2^+ ion implantation influence on fatigue props. 7−76286
Al:N^+, ion implanted, XPS study 7−91615
Al:N^+, surface modification by nonmass analyzed N^+ beam 7−105206
Ar-N_2 arc, Cu cathode erosion 7−104477
Ar-N_2 mixture, DC magnetron sputtering, pumping speed influence on V-A characts. 7−100058
Be-liq. N interface, Be_3N_2 laser irrad.-induced layer growth, RBS and X-ray diffr. studies 7−118234
CO-N_2 mixture, non self-sustained discharge study 7−137145
CO_2:N_2:He mixture, self-sustained discharge in TEA CO_2 laser 7−130044
CO_2-N_2, gas mixtures, surface desublimation study 7−137534
CO_2-N_2, intermolecular pots., vibr., IR absorpt. spectra 7−82120
CO_2-N_2 discharge, optogalvanic effect 7−83557
CO_2-N_2-He, volume discharge initiated by barrier discharge distrib. on cathode surface 7−97843
CO_2-N_2-He gas mixtures, volume-self-sustained-discharge 7−123839
CO_2-N_2-He mixture, volume to spark discharge transition, electrooptic meas. 7−137146
CO_2N_2-He, high power volume discharge, atmospheric press. 7−137143
C−N bonds, force consts. and bond lengths 7−96579
CdP_2:As,Bi,N crystals, cathodoluminescence obs., exciton-impurity complexes 7−106276
Cu, N_2^+ ion implantation influence on fatigue props. 7−76286
Fe:N foils, ion implanted, thermal treatment, diffusion study by depth profiling 7−105123
Fe:N_2^+, ion beam implantation, struct., Auger electron and photoelectron spectra 7−132383
Fe:N^+, microstruct. study 7−91614
Fe-B-N surface alloys on Fe obtained ion beam mixing and implantation, electrochemical behaviour 7−78355
Fe-N solid solutions, interstitial atom redistributions from second order Doppler shift *(French)* 7−125562
Fe-Ni, N_2^+ ion implantation effect on corrosion in H_2SO_4 soln. 7−126296
$Fe_{50}Ni_{50}$:N_2^+, ion implantation effect on oxidation behaviour 7−119405
$Fe_{50}Ti_{50}$, ion beam mixed surface alloy on stainless steel, N implantation, unlubricated friction and wear 7−126277
GaAs:C,B, Czochralski grown, B,C, repartition using charged particle activation 7−93426
$GaAs_{1-x}P_x$:N, impurity bound excitons, reson. excitation, photoluminesc. spectra 7−92740
$GaAs_{1-x}P_x$:N,Zn mixed crysts., radiative recombination 7−70901
$GaAs_{1-x}P_x$:N VPE layers, N conc. determ., SIMS, absorpt. spectra, cathodoluminesc. meas. 7−106227
$GaAs_xP_{1-x}$:N LEDS, deep electron traps 7−84733
GaP:N, laser-induced surface defects, influence on photolum. 7−144100
GaP:N, NN_2 trap study 7−118412
GaP:N, S epitaxial layers, prep. by VPE CVD method 7−86037
GaP:N homoepitaxial films, optically inactive N atoms, structure states 7−70914
GaP:N layers, determ. of N conc., lumin. study 7−85786
$GaPO_4$, liquid phase epitaxy layer, N conc. determ. using charged particle activation anal. *(Chinese)* 7−105327
GdTbFe:ONH_2O sputtered film mag. props., impurity effects study 7−112887
a-Ge:N_2^+ films, electronic props., ion implantation effects 7−117980
H II regions in Seyfert galaxies, abundance characts. 7−140277
H_2-O_2-N_2 flames H conc meas. by photoionisation controlled-loss spectroscopy 7−139006
He-N_2, gas mixture, thermal cond., effective collision cross-sections determ. 7−83400
He-N_2, van der Waals complex, rot. predissoc. investig. 7−117033
He-N_2 plasma, N triplet state population 7−141518
$He+N^{2+}(O^{2+})$, double differential scattering 7−96838
highly charged ion interaction with Au (110), charge exchange processes 7−92800
InP:N^+, ion implantation disorder, annealing effects, RBS channelling study 7−76179
KCl:N, impurity centre, photoluminescence studies 7−77642
Mo film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
N fully stripped ions+H, selective electron capture 7−96850
N I doublet states, dissociative excitation cross sections 7−82383
N V, EUV emission lines in the atmospheres of cool stars 7−88420
N V, quartet term system, beam-foil investig. 7−109851
N^+, interstellar, contrib. of energetic ions to NH^+ form. 7−120564
N^+, ion source, high current ion beam, multi-aperture extraction grids *(Japanese)* 7−121298
N^+ lasing at 428 nm under transverse-discharge pumping 7−141841
N^{3+}, dielectronic recomb. rate coeffs. meas. 7−117067

nitrogen continued
N^{4+}, dielectronic recombination meas. 7−110104
N^{5+} ions, doubly excited autoionising states, reson. positions and widths 7−74482
N^{q+} (q=4 to 6), impact on W polycryst. surface, pot. emission yield meas. 7−92802
N+H^+, charge-transfer cross sections, distorted-wave formalism 7−82346
N+He(Ne)(Ar)(Kr)(Xe)(N_2), $3p^4D^0$ state, radiative lifetime and quenching 7−90327
N+N_2*, deactivation, classical trajectory calcs. on LEPS surface 7−68446
N+O_2(H_2)(HF), reaction rate constants 7−86579
N+O_2(O_3) reaction kinetics, chemiluminescence, rate constants, excitation mechanisms, discharge flow technique 7−144693
N+O_2→NO+O, pot. surfaces, CASSCF/CI calcs. 7−106783
N^++Ar, complex energy complex interaction Nikitin model, L-K vacancy sharing 7−82350
N^++cyclohexane, reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
N^++H_2(HD)(D_2), thermochem., kinetic isotope effects and energy depend., cross section meas. 7−93251
N^++H^+, charge transfer cross-sections meas. 7−141682
N^++hexafluorobenzene, reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
N^++N_2, K-shell vacancy creation by 2pσ-2pπ rot. coupling investig. 7−82322
N^{2+}+Ne, recoil ion prod. investig. 7−90332
N^{5+}+H_2(He), charge exchange processes, VUV spectroscopy 7−90334
N^{5+}+He(H_2), double electron capture, electron spectra 7−90406
N^{7+}+H_2, electron capture, differential cross sections, TOFS anal. 7−90396
N^{7+}+He, Stark-mixed states, autoionis. 7−90050
N^{7+}+He(H_2), charge transfer, UV and X-ray spectra anal. 7−90022
N^{q+}+H(H_2), state-selective one-electron capture 7−141683
N^{q+}+He, electron capture cross sections meas., classical over-barrier model study 7−90405
N_2 + formaldehyde, rot. inelastic scatt. cross-sections 7−82324
N_2 +trifluorohalomethane, visible spectra, collisional quenching rate consts. 7−96713
N_2 abundance in P/Comet Halley (1982i) 7−88262
N_2 adsorption on Fe (111), angle resolved photoemission, microscopic model studies 7−105279
N_2, afterglow cond. meas. following electron beam excitation 7−117779
N_2 catalyst, $O_2(a^1\Delta g)$ form., reaction rate const. meas., appl. to nightglow 7−78460
N_2, cathode layer in externally maintained discharge under subnormal conditions 7−69509
N_2 chemisorption on W(100) with Pt overlayers 7−131445
N_2, collisionally-narrowed isotropic Raman spectra, strong collision model calcs. 7−82177
N_2, crystal, intermol. pots., high pressure Raman spectra anal. 7−85746
N_2, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
N_2 gas, vibrationally excited, steady pipe flow, kinetic theory 7−136931
N_2 in atmosphere, rotational Raman gain coeffs. model 7−133917
N_2 isoelectronic series, struct. anal., ab initio VB calcs. 7−89971
N_2 LBH emission and far UV vehicle glow of S3-4 satellite 7−127627
N_2 laser, TE, LC inversion, design criteria analysis and obs. 7−141889
N_2 laser flash photolysis using dye fluorescence as a monitoring source 7−128668
N_2 laser pumping thin-film energy-transfer dye lasers in spectral region of near ultraviolet to violet 7−96990
N_2, light parametric freq. conversion in short wavelength region 7−103886
N_2 low-press. lasers, 1 ns pulse-generation 7−90580
N_2 matrix, ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7−135920
N_2, melting curves at high temps. and pressures 7−124456
N_2 metastable+IF, prod. of IF $B^3\Pi_{0+}$ state 7−96831
N_2 mols., isolated in solid Ar matrix, mol. rot. motion, calorimetric studies *(Russian)* 7−90096
N_2, resonance effect on the moderation of slow electrons in diatomic gases 7−90442
N_2, resonant vibrational excitation, simple model 7−129891
N_2, rotationally inelastic collision models, Q-branch Raman spectra anal. 7−68308
N_2, solid, anharmonic lattice dynamics *(Japanese)* 7−131257
N_2, solid, intermol. pots., internal modes and p-V curve *(Japanese)* 7−131248
N_2, solid, three-body interactions and cryst. energy *(Japanese)* 7−131090
N_2, vibr. overtone cross sections, ab initio calcs., Raman spectra anal. 7−81969
N_2^+ emission band, partially resolved, for temperature diagnostics 7−97791
N_2^+ ICP rot. spectrosc. temp. determ. 7−121117
N_2^+ photofragments in laser photodissoc. of N_2O, kinetic energy spectra in visible region 7−100597
N_2^+ plasma, A-X system, UV electronic absorpt. spectra 7−123981
N_2^+, reflected ion survival fraction, rel. to surface struct. 7−92818
N_2^+ semiempirical pot. curves, MS-Xα theory 7−81973
N_2-air, diffusion-induced separations, press. swing adsorpt. 7−111140
N_2-Ar free jet, rot. relax. rate consts. and pop. levels study 7−136047
N_2-Ar Lorentzian mixture, diffusion coeffs. temp. depend. meas. 7−83395
N_2-Ar mixture, spontaneous polarised vibr. Raman scatt. study 7−96700
N_2-Ar-CO orientational glass, low temp. specific heat 7−143035
N_2-BNi, gas-solid mixture, spectral emission meas. 7−111083
N_2-CO, low temp. lattice vibrs., far IR absorpt. spectra *(Russian)* 7−76321
N_2-CO, post discharge, vibr. anal., spectroscopic characterization 7−83556
N_2-CO mixture, comp. depend., inversion, temp. depend. 7−123833
N_2-CO mixtures, excess molar enthalpies determ. 7−98506
N_2-H_2 atmosphere for heat treatment, sintering and ion nitriding, preparation from NH_3 7−100412
N_2-H_2 plasma torch, $SiCl_4$ pyrolysis and reaction products 7−100511
N_2-HF(HCl), H bonded complexes, electronic props., ab initio SCF CI calcs. 7−129605
N_2-He Lorentzian mixtures, mutual diffusion coeffs. temp. depend. meas. 7−83394
N_2-He variable density mixing layer, second-order modelling 7−136824
N_2-Kr Lorentzian mixture, diffusion coeffs. temp. depend. meas. 7−83395
nitrogen continued
N_2-methanol mixtures, isothermal phase equilibr. 7−84225
N_2-Ne Lorentzian mixtures, mutual diffusion coeffs. temp. depend. meas. 7−83394
N_2-Ne(Ar), pot. energy surfaces, HF SCF calcs., dispersion coeffs. 7−96577
N_2-O_2, binary liq. mixtures, vibr. relax time as function of conc. 7−68441
N_2-O_2 mixtures, negative corona 7−130955
N_2-O_2 ozonizer, O_3 electrosynthesis, computer simulation 7−71497
N_2-SF_6 mixtures, decay of wall stabilised arcs 7−69502
N_2-tetrafluoromethane(methane), interaction force, ab initio calcs. 7−129831
N_2-water bubble-slug flow pattern transition, instabilities, void fraction waves 7−91197
N_2-Xe Lorentzian mixture, diffusion coeffs. temp. depend. meas. 7−83395
N_2+(methane)$^+$, collision-induced dissoc. press. depend., collisional energy deposition probability anal. 7−86585
N_2+Ar, excitation transfer reaction, rot. and vibr. distrib. energy depend. 7−110083
N_2+Ar^+, charge transfer cross sections calc. 7−103641
N_2+Ar^+ ($^2P_{3/2}$), reactive and nonreactive scatt., crossed-beam investig. 7−90320
N_2+Ar^+(Ar_2^+), thermal energy charge transfer reactions, rates 7−86590
N_2+C, radioactive recoil atom reactions, review 7−106818
N_2+CO, rovibronic energy transfer, laser REMPI spectroscopy investig. 7−129850
N_2+CO vibrational energy transfer rate consts. meas. 7−117051
N_2+CS(S), excitation-transfer, rate consts. investig. 7−93276
N_2+H, collisional destruction investig. 7−141666
N_2+H_2O, rot.-vibr. lines, collisional self-broadening, semiclassical theory 7−129791
N_2+H_2O, vibr. relax., laser schlieren study 7−103627
N_2+HCl, HCl fundamental vibr.-rot. lines broadening and shifting calcs. 7−117056
N_2+He, rot. energy transfer cross sections, quasiclassical trajectories 7−122676
N_2+He, state alignment, decay rate const. determ. 7−129840
N_2+He, transport collision integrals of intermol. pair pot. 7−122657
N_2+He^+, charge transfer, optical emission study 7−113892
N_2+He^+, luminescence in thermal-energy charge transfer reaction 7−119526
N_2+He(Ar)(Xe), rot. energy transfer cross sections, close-coupled quantum scatt. calcs. 7−136040
N_2+Hg, Hg 6s6p($^3P_0$ to $^3P_1$) transition, temp. depend. 7−96826
N_2+HgBr, V-T relax., fluoresc. obs. 7−103629
N_2+K+O_2, third-order rate const., temp. depend., time-resolved atomic reson. absorpt. spectroscopy 7−100644
N_2+Li^+, vibr. relax., modified Landau-Teller model 7−136039
N_2+methanol(methylamine)(H_2O_2)(N_2H_4), electronic-to-electronic energy transfer 7−119504
N_2+N_2(HCl), spectral broadening, temp. depend. 7−82156
N_2+NH_3, vibr. relax. rate and lifetimes meas. 7−110087
N_2+NH_4^+ ($_3O^+(H_2O)n$, n=1-3), assoc. reactions, thermodynamic study 7−126437
N_2+NO^-, rate consts. determ., vibr.-level excitation effects 7−126447
N_2+Ne, mol. ionisation cross section, vel. depend. 7−129853
N_2+O, collision differential cross-sections relevant to ionosphere O^+ precipitation 7−110064
N_2+O_2, O_3 form. on fine wire electrode in corona discharge *(French)* 7−97832
N_2+O^-, N^- formation, mass spectra study 7−138971
N_2+O→NO+N, pot. surfaces, CASSCF/CI calcs. 7−106783
N_2+vinyl chloride, energy transfer meas. in collisional deactivation 7−90338
N_2+XeF_2, energy transfer reactions rate consts., laser appls. 7−138983
N_2^++He, rot. and vibr. relax. rate consts. determ. 7−82323
N_2^++N_2 reaction product isolation in Ne matrix, EPR study 7−126434
N_{2n}^+ clusters, magic losses, statistical evaporation process 7−129914
N_3^-, ν_3 band, velocity modulation laser spectroscopy 7−109858
N_2($A^3\Sigma_u^+$) energy transfer to O as mechanism for auroral 557.7 nm emission 7−94535
N_2F_2, mol. consts. calc. by force field study 7−103464
N^{7+}He, electron capture, differential cross sections, TOFS anal. 7−90396
N_2(N_2−CO), beam-driven discharges, heating studied by interferometric method 7−97825
^{12}N, β-emitting, in V crystal, location following recoil implantation 7−118868
^{12}N in GaN crystal, β-emitting, hyperfine interactions 7−118889
^{14}N, 4f antiprotonic level width, Dover-Richard NN-potential, scattering length, P-wave and S-wave moment 7−110142
^{14}N, antiprotonic, widths and shifts, meas. of strong interaction effects 7−110141
^{14}N, hyperfine struct. after ion-surface interaction, quantum beat study 7−116883
^{14}N nuclear quadrupole coupling constants, ab initio calcs. 7−122345
^{14}N, proton electron capture total probability 7−90374
$^{14}N/^{15}N$ from CN (0-0) band R-branch spectrum of P/Comet Halley (1982i) 7−94818
^{15}N, gaseous activation products prod. for medical purposes *(German)* 7−71867
$^{15}N/^{14}N$ of NO_3^- and NH_4^+ in rain over Pretoria, South Africa 7−94339
N_2*+N, deactivation, classical trajectory calcs. on LEPS surface 7−68446
NaCl:N, impurity centre, photoluminescence studies 7−77642
Nb film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
O_2-N_2 microwave discharge, plasma halo form. 7−124010
O_2-N_2-I mixture laser active medium 7−130080
SF_6-N_2 mixtures, electron-ion pair formation by α-particle, energy requirement 7−117061
SF_6−N_2, vibr.-translational relax. times anal. 7−103633
a-Si:C, N, H films, plasma deposited, struct. characterisation by gas evolution, IR absorpt. 7−143258
Si:Cu,N, precipitation of N, rel. to etch pit formation 7−111901
a-Si:H, P(N) films, photoinduced absorption and conductivity 7−99774
a-Si:H,N films, glow discharge deposited, composition, thermal stability 7−131501
Si:N, defects related to N ion implantation 7−98204
Si:N, implantation producing SOI struct., microstruct. study 7−83997

nitrogen continued
Si:N, implanted, photoluminesc. spectra 7−92712
Si:N, impurity-point defect complexes, optical absorpt. studies 7−132305
Si:N, O, substitutional impurities, thermal annealing, EPR studies 7−98186
Si:N, single crystals, defects related to N implantation 7−137839
Si:N, substitutional impurity charge state, EPR study, effects of additional dopants 7−105458
Si:N,C, photolum. study of defects, N-C interactions 7−125794
Si:N float zone wafers, mechanical props. and CCD device performance, N conc. and state depend. 7−69809
$Si:N^-$, pseudo-Jahn-Teller instability 7−84784
$Si:N^+$, irrad.-induced disorder depth profiles, He^+ Rutherford backscatt. and channelling meas. 7−117987
3C-SiC:N, electrical properties, temp. dependence 7−99227
SiC:N, impurity optical absorpt. spectra, energy struct. of donor 1s states 7−113230
α-SiC:N, ion-implanted, recrystallisation 7−71222
β-SiC:N films, N doped and undoped, elec. props., temp. depend., CVD grown 7−105735
SiC-Ti, effects of N_2^+ and Ar^+ implantation on atomic mixing and hardness 7−137421
SiO_2:N_2(O), ion implantation, IR reflection props. 7−138440
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti-overlaid 4145 steel, N implanted, microhardness temp. depend. 7−113699
ZnS:Al, N, ion implanted defects, photoluminesc. spectra before and after implantation 7−92710
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048

nitrogen compounds
see also ammonia; ammonium compounds
angular geometry, ab initio STO-3G bond orbital calcs. 7−96502
cyclophosphazenes, struct., ^{31}P NMR 7−114189
hydrazinium (2+) fluorometallate, crystal structure 7−104699
methylfluorosilanes NO exciplexes, relative energies, MO calcs. 7−89904
methylfluorosilanes-N_2O_2 exciplexes, singlet and triplet states, enthalpies, MNDO calcs. 7−89960
$(NH_4)_2$ N_2H_6 $(ClO_4)_4$, ^1H relax. times, temp. and freq. depend. study 7−103536
nitrate aerosols in atmosphere, size distribs. 7−78700
nitrate formation in power plant plume model 7−133148
nitrates, $^{15}N/^{14}N$ in rain over Pretoria, South Africa 7−94339
nitrates, wet deposition in Schleswig-Holstein, N Germany 7−100781
NO_2−HF complexes, IR spectra, ab initio UHF SCF calcs. 7−103355
NO−HF complexes, IR spectra, ab initio UHF SCF calcs. 7−103355
oxides formation in atm. at Cretaceous-Tertiary boundary due to impacts 7−127455
oxides in stratosphere during 1983 MAP/GLOBUS 7−133885
rate consts. determ., vibr.-level excitation effects 7−126447
small N-containing molecules, electric field gradients, ab initio quantum chem. calc. 7−103400
Al_2O_3-nitroxyl complex, ESR spectrum calc. 7−109961
Ar:NO cryocrysts., substitutional mol. impurity rotation, crystalline pot. calcs. *(Russian)* 7−76044
CO, adsorpt. on Pd(poly), interactions, spectroscopic methods appls. 7−144760
CO_2-N_2O-He gas-dynamic laser, nonequilib. pumping 7−117175
KCl:NO_2, nonequilib. phonon propagation, strong resonance scatt. at impurities *(Russian)* 7−106228
$K_{0.95}Rb_{0.05}Cl:NCO^-$, mol. impurity centre, ultrasonic excitation, IR absorption spectra 7−132301
Kr:NO cryocrysts., substitutional mol. impurity rotation, crystalline pot. calcs. *(Russian)* 7−76044
N-containing molecules (ions), adsorpt. on Ag(Cu) electrodes 7−91967
N_2, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
NBH_2, high excited vibr. state, laser mag. reson. 7−122583
NCNO, jet-cooled, radiative and nonradiative processes 7−135985
NCNO, photodissociation, microcanonical state-to-state rates, ps photofragment spectroscopy 7−113965
NCO radicals $\tilde{B}^2\Pi_i(00^00)$ state, optical double-reson. 7−68374
NCO^- anion Fermi doublet, vibr. spectra in aqueous solns. *(Russian)* 7−122495
NCS^-, bending and stretching hot bands, vel. modulation laser spectra 7−141573
NCl_3, decomposition flame, kinetic spectrosc. 7−135923
NCl_3, photolysis, spectra, time profiles 7−139028
NCl_3, thermal decomposition in presence of H_2, kinetics, stoichiometry 7−138998
NF, $(b^1\Sigma^+)$ quenching rate consts. meas. in flowing afterglows 7−135997
NF_2 radicals, UV photodissoc. quantum yield study 7−126464
NF_3, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
NF_3, lone pair electrons, electron momentum spectroscopy 7−129867
NF_3^+, inversion barrier, ab initio UHF calcs. 7−96505
NF_3+F_2+Si, SiF and SiF_2 radical prod., multiphoton ionisation mass spectrometric detection 7−78463
NH, A $^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
NH band obs. of Periodic Comet Halley (1982i) 7−88249
NH photofragment from HNCO, rot. state distrib. 7−126466
NH, prod. by NH_3 photodissociative excitation, fluoresc. yield meas. 7−109987
NH radical, photodissociation lifetimes in comets 7−101731
NH, spin-coupled and MO electron densities 7−90441
NH, vibr. excited, rot. and hyperfine consts., IR spectra 7−74593
NH, $X^3\Sigma^-$ state, CAS SCF/MRSD CI calcs. 7−81990
NH^-, IR rotation-vibr. spectrum, hyperfine struct. meas. 7−90002
NH^+ doublet states, ab initio calcs. 7−103351
NH^+, interstellar, contrib. of energetic N^+ ions to reaction rate coeff. 7−120564
NH+O_2 collision induced intersystems crossing 7−136035
NH_2 radical, ν_2 band, IR absorpt. spectrum 7−68303
NH_2 radical, valence states, VB diatomics in mols. calcs. 7−109783
NH_2^-, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
NH_2^-, vertical electron affinities calc. using direct versus indirect many-body methods 7−109696
NH_2+F→HF+NH, vibr. energy distribs., chemiluminesc. determ. 7−113866

nitrogen compounds continued
NH_2+I, gas-phase reactions, intracavity laser spectroscopy method appl. 7−106790
NH_2+NO, rate const., semiclassical trajectory calcs. 7−100517
NH_2+NO, reaction, branching ratio 7−119523
NH_2+O I forbidden line blend resolved in P/Comet Halley (1982i) 7−94767
NH_3+C, radioactive recoil atom reactions, review 7−106818
N_2H_2, ground state pot. energy surface, MC SCF wave fn. calc. 7−109819
N_2H_2-$H_0(d_2)$, mol. consts. calc. by force field study 7−103464
N_2H_4+F, reactions, vibr. energy disposal 7−86592
$N_2H_4+N_2$(Kr)(Ar)(Xe), electronic-to-electronic energy transfer 7−119504
$N_2H_6^{2+}$, bond props., kinetic consts. method calcs. 7−81916
NH_2BBr_2, unstable substituted, photoelectron spectra 7−109765
NH_2BCl_2, unstable substituted, photoelectron spectra 7−109765
NH_2BF_2, unstable substituted, photoelectron spectra 7−109765
NH_2BH_2, unstable substituted, photoelectron spectra 7−109765
NH_3BH^{2+}, pot. energy surfaces, ab initio calcs. 7−109820
N_2HF in slit supersonic jets, IR laser spectroscopy 7−90120
$N_2H_6SbF_5$, hydrazinium (2+) fluorometallate, crystal structure 7−104699
NH* fragment, UV emission spectra 7−122725
NNO, absorpt. line shape and rot. temp., IR spectra 7−74609
$(NO)_2$, vibr. predissoc., energy distrib., time depend. 7−122641
NO, adsorbed on Ni, inverse-photoemission studies 7−138536
NO, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
NO, adsorpt., decomp. and desorpt. on Rh (100), EELS and TPD investig. 7−112069
NO, adsorpt. on Pt-SiO_2, IR obs. 7−135941
NO adsorption on Al(100), AES and XPS studies 7−105272
NO adsorption on Rh, reactions with H and CO, surface struct. effects 7−71521
NO adsorption on Ru (001), temperature dependence, EELS study 7−143185
NO and NO_2 gas emissions from soil, grassland site in Colorado, USA 7−87807
NO, autoionis. in photoionis. spectra 7−110021
NO, $B^2\Pi$ and $C^2\Pi$ states, rot. levels, fluoresc. lifetimes 7−109982
NO, biogenic emission from agricultural soils in Virginia and Colorado, USA 7−79515
NO, chemisorbed on Ni (100), UV laser-stimulated reson. desorpt., fluoresc. 7−91965
NO, collisional quenching rate consts., fluoresc. anal. 7−96771
NO, core-excited, vibr. interference in decay, Auger spectrum 7−74718
NO, $D^2\sigma^+$ state, rot. branching, resonant enhanced photoionisation 7−129799
NO dimer, in micropores, mag. suscept. meas. 7−110168
NO, dissociative chemisorpt. on Ag (111), dynamics 7−139034
NO emission from thermal power station, power system scheduling method 7−71661
NO, gas inner valence electrons photionis., photoelectron spectra 7−109995
NO hourly conc. prediction schemes, regression model stability 7−93584
NO impact on GeO surface, rot. and vibr. energy transfer study 7−113335
NO in atmosphere, airborne meas. methods, intercomparison 7−87928
NO in atmosphere, chemistry of lower, middle and upper atmospheres 7−87778
NO in atmosphere of NE Pacific, tropospheric and boundary layer observations 7−87799
NO, in inert gas matrix, emission, diffusion-controlled quenching 7−135984
NO in lower troposphere at neighboring alpine stations 7−127399
NO in Pacific atmosphere, boundary layer and troposphere obs. 7−87798
NO, in supersonic jets, Fourier transform emission spectroscopy 7−122533
NO, inelastic scatt. from graphite surface, ang. distrib., Monte Carlo trajectory calcs. 7−113332
NO, instrumentation for airborne observation, intercomparison study 7−87927
NO, interaction with K and B contaminated Rh surfaces 7−143206
NO molecular and dissociative adsorpt. on W (110) and (100), UPS study 7−143202
NO molecules, nonlinear photoprocesses, review 7−136027
NO, multiple bonds description, CASSCF/MRCI calcs. 7−109797
NO, N core level excitation, oscills, strengths 7−82380
NO on W (100) and (110) surfaces, UPS and Auger electron spectra studies 7−91997
NO, photoexcitation, luminesc. obs. *(French)* 7−117699
NO, quenching effect on CS_2 photoinduced nucleation 7−98381
NO, resonance enhanced multiphoton ionisation, rot. transitions, PES anal. 7−90291
NO, Rydberg series, double reson. multiphoton ionisation, quantum defect anal. 7−68375
NO, Rydberg states, multiple scatt. calcs. in quantum defect theory *(Chinese)* 7−90007
NO, scatt. from organised amphiphilic monolayers 7−143231
NO seeded mol. beam, IR diode laser absorpt. spectroscopy 7−109884
NO, self-alignment by laser beam irrad. 7−68399
NO, stratospheric profiles, chemiluminescent balloon-borne sondes meas. 7−133882
NO temp. programmed desorpt. from Pt particles, particle size depend. study 7−143203
NO, thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
NO thermosphere density profiles 7−79730
NO, VUV radiation detection up to 160 nm, triethylamine and tripropylamine quantum yield determ. 7−81887
NO^+, dissociative electron recomb., electron temp. depend. 7−144701
NO^+, electric field gradients, ab initio SCF CI(SD) CPF calcs. 7−109801
NO^+, struct. anal., ab initio VB calcs. 7−89971
NO^{2+} $^2\Sigma^+$ and 2Π states, ab initio calcs. 7−129548
^{14} $N^{16}O$-N_2, pressure broadening coefficients, infrared spectroscopy 7−122528
NO+Ar(He), rot. energy transfer cross sections determ. 7−103628
NO+CH(CD), chemiluminesc. reaction, kinetic isotope effect, internal energy disposal 7−71494

nitrogen compounds continued
NO+H, inelastic scatt., rot. vibr. energy transfer, classical trajectory study 7−90343
NO+NH_2, reaction, branching ratio 7−119523
NO+Ne, mol. ionisation cross section, vel. depend. 7−129853
NO+O_2 charge transfer reaction $O_2(b^1\Sigma_g^+)$ vibr. distrib., role in aurora and nightglow 7−79735
NO+O^-, N^- formation, mass spectra study 7−138971
NO_2, $2\nu_1+\nu_3$ and $3\nu_3$ bands, Fourier transform spectra 7−82073
NO_2 adsorption on Pt (111), IR vibr. spectra, temp. programmed desorption 7−98702
NO_2 and HNO_3 in atmosphere, distrib. from model using LIMS and SAMS data 7−79516
NO_2 and NO_3 in stratosphere, meas. during MAP/GLOBUS 1983, intercomparison 7−133883
NO_2 and O_3 in atmos. over McMurdo Station, Antarctica, spring 1986 observations 7−139691
NO_2 and O_3 in stratosphere, trace constituents and dynamics, MAP/Globus 1983 campaign results 7−139667
NO_2 concentration meas. in stack plume by two-wavelength long-path differential absorpt. laser radar *(Japanese)* 7−100788
NO_2, detection using nitration plates, performance evaluation 7−133169
NO_2, dimerisation, chem. equilib., crit. fluctuations effect 7−86660
NO_2, excited electronic states, perturbed visible system, rot. transitions, hyperfine struct. 7−116980
NO_2 gas concentration meas. using SAW chemosensor 7−82975
NO_2, high resol. UV spectra 7−96726
NO_2 in atm., photodissociation rate coeff. determ., use of UV radiometers 7−94447
NO_2, in atmos. of India, trace gas concs. at urban, industrial and rural sites 7−101449
NO_2 in atmosphere, vertical profile determ., by multispectral method 7−120158
NO_2 in stratosphere, MAP/GLOBUS 1983 meas. by Solar Mesosphere Explorer 7−133884
NO_2 in street canyons of cities, conc, height depend., in London, UK 7−144930
NO_2, laser excitation, polarisation inversion effect 7−129797
NO_2, laser-excitation, polarisation inversion study 7−103585
NO_2, multiphoton dissoc. investig. 7−110040
NO_2 photodissoc., photofragments, ang. distribs. 7−86654
NO_2, photodissoc., predissoc. mechanism, rot. prop. distribs. eval. 7−110034
NO_2, photodissociation, primary quantum yields, role of rot. and vibr. energy 7−138984
NO_2 photodissociation. photofragments angular distrib. meas., multiphoton ionisation technique *(Japanese)* 7−119546
NO_2 photolysis rate over central Johannesburg 7−93578
NO_2, spectral absorpt. cross-sections for 426 to 450 nm region 7−135949
NO_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
NO_2, two-photon photodissoc. dynamics 7−110044
NO_2^- centres in alkali halides, excited state absorpt. 7−125765
NO_2^-;$Li^+(H_2O)$, ion-pair hydrate clusters, Monte Carlo simulations 7−90470
NO_2-N_2O_4, laser excitation, energy relax., probe beam deflection meas. 7−91279
NO_2-Xe monolayer system, adsorption on Ag (111), ferromag. order 7−132091
$(NO)_2$+O, crossed beam investig., chemiluminesc. detect. 7−110095
NO_2+O, reaction kinetics at low temps. 7−100516
NO_3 absorption cross section, titration by NO, reaction scheme, absolute concentrations 7−142434
NO_3 in atmosphere above McMurdo Station, Antarctica, spring 1986 observations 7−139693
NO_3, radicals, ν_2 and ν_3 bands, line strength meas., FTIR spectra 7−103499
NO_3, UV reson. Raman enhancement cross section meas. 7−74625
NO_x air pollution from energy combustion, emission predictions 7−93570
NO_x and SO_x removal from combustion gases by pulse-induced plasma chemical process 7−75896
NO_x concentration level control in Tokushima City, Japan, STR method *(Japanese)* 7−100783
NO_x episode in Los Angeles, PAH and nitroarene concs. 7−133151
NO_x in atmosphere, production rates in electrified clouds 7−87806
NO_x in lower troposphere at neighboring alpine stations 7−127399
NO_x in troposphere, 2D global gas transport-photochemistry model 7−139724
NO_x soil gas emissions to atmos., comparison of 2 meas. techniques 7−87931
NO_x wet removal from flue gas, reverse osmosis of wash waters 7−139157
NO_x+O_3 photolytic cycle in atmosphere, modified version 7−93592
N_2O + Ba, chemiluminesc. reaction, mol. stereochem. dynamics 7−144709
N_2O, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
N_2O air pollution from energy combustion, emission predictions 7−93570
N_2O, Auger electron spectra 7−90280
N_2O, biogenic emission from agricultural soils in Virginia and Colorado, USA 7−79515
N_2O chemisorption on GaAs(110), uptake kinetics, comparison with O_2 7−131447
N_2O, dipole moment fn., num. diagonalisation 7−74553
N_2O, excited states, ionic geometries, Franck-Condon anal. 7−110007
N_2O, IR spectra, heterodyne freq. meas. 7−116965
N_2O, IR spectra, hot bands and isotopic transitions, heterodyne meas. 7−90133
N_2O, in air, HF(DF) laser lines, absorpt. cross sections meas. 7−116974
N_2O in atm. due to combustion 7−93589
N_2O in stratosphere, concs. from limb IR spectral observations 7−139694
N_2O, liq., $\nu_3\nu_3$ vibr., time correl. fns. and vibr. energy transfer, IR spectra meas. 7−129849
N_2O, N core level excitation, oscills, strengths 7−82380
N_2O negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
N_2O, photoionisation, photoelectron asymmetry parameters, shape reson. 7−129800
N_2O vibration-rotation parameters derived from IR spectra 7−96890
N_2O^+, laser photodissoc., N_2^+ fragments, kinetic energy spectra in visible region 7−100597
N_2O^+, photodissoc. rot. and angular distribs. calc. 7−110037
nitrogen compounds continued
N_2O+Ar^{13+}, impact ionisation and fragmentation, TOF mass spectra 7−122679
N_2O+H, photochem. and BAC-MP4 calcs. 7−113886
N_2O+H^+, inelastic and charge transfer collisions, vibr. excitation, mode conservation 7−129847
N_2O+K, absolute rate const., time-resolved atomic reson. absorpt. spectroscopy 7−100561
N_2O+Ne, mol. ionisation cross section, vel. depend. 7−129853
N_2O+Xe(Ar)(Kr), chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
N_2O+Zn, reaction kinetics study 7−78465
N_2O_2, singlet and triplet states, enthalpies, MNDO calcs. 7−89960
$N_2O_2^{2-}$, mol. consts. calc. by force field study 7−103464
N_2O_3+O, reaction kinetics at low temps. 7−100516
N_2O_4 in vertical tube, film condensation, local heat transfer and friction coeff., vap. vel. effect 7−117596
N_2O_4, liq., cavitation-induced rupture kinetics study 7−111042
N_2O_4 liq. flow, flashing study 7−111843
N_2O_4→NO coolant irreversible decomposition *(Russian)* 7−81538
N_2O_4, turbulent flow not in chemical equilib., correls. for unsteady state heat transfer 7−117571
$^{14,15}N_2O_4$, mol. consts. determ., normal coord. anal. 7−103466
N_2O_4+O, reaction kinetics at low temps. 7−100516
N_2O_5+OH(HO_2)(Cl)(ClO), rate constants at 293 K 7−120090
N_2O_4. oxidation of Ni in reactor environment *(Russian)* 7−81537
NS+He(H_2)(N_2)(O_2)(SF_6)(N_2O)(CO_2)(NH_3)(methane), $B^2\Pi$ state, collisional quenching and energy transfer rate const. meas. 7−103630
NSe radical, vibr.-rot. and fine struct., laser mag. reson. 7−122577
NMOS integrated circuits *see field effect integrated circuits*
NMOS transistors *see insulated gate field effect transistors*
NMR *see nuclear magnetic resonance*
NMR imaging (biomedical) *see biomedical NMR*
NMR line breadth
L-alanine, D NMR, methyl group dynamics, ^2H spin-lattice relax. 7−92535
amino acid assignments, millimolar solutes, inhomogeneous part elimination of PMR spectra 7−71941
anisotropic power media, ^2H NMR line shapes 7−99598
benzene ring, ^2H quadrupole echo NMR spectra, lineshape calcs. for multiaxis rot. 7−68355
biological systems, solid, magic angle spinning NMR, spectral linewidths origin 7−78752
bisphenol-A polycarbonate glass, ^1H and ^{13}C spin-lattice relax., chemical shift anisotropy line shape collapse 7−106044
broadband decoupling, three-spin effects 7−73392
Brownian rotational reorientation, zero-field NMR and NQR line shapes 7−70668
t-butyl compounds, ^2H NMR, methyl vs. whole group motions 7−142658
diamagnetic crystals, with rigid lattice, NMR lineshape theory 7−143917
double-tuned $^{13}C/^1H$ probe cct. for CP/MAS NMR, linewidths 7−73390
elastic polymers, crosslinked, ^2H NMR lineshape model 7−85449
fast line-scan imaging using line-shaped focusing field *(Japanese)* 7−108608
glucose, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
glycine, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
heterogeneous systems, NMR line shapes and relax. processes, diffusive exchange effects 7−126781
hexamethylbenzene, NMR imaging 7−92547
ice, surface dynamical props. *(Japanese)* 7−106046
incommensurate systems, static displacement waves, EFG tensor and NMR freq. modulation calcs. 7−106057
lineshape thermometry at low temps. 7−89243
lung tissue, NMR simulation study, diamagnetic line broadening effects 7−114575
metal plate, size depend. of NMR signal, helicon excitation in inclined mag. field *(Russian)* 7−106035
methyl iodide in nematic mesophase, NMR linewidth anal., ^1H and ^{13}C NMR spectra 7−74664
minor component anal. without large peak suppression 7−67361
peptides, tyrosyl motion, ^2H NMR line shapes and spin-lattice relax. 7−92533
phase depend. of magnitude-mode spectra of 2 overlapping lines 7−68356
phenylacetylene, one-bond C−H spin coupling consts. and ^{13}C differential line broadening 7−68348
E-N-phenylformamide, homonuclear multiple-quantum NMR relax. rates 7−99602
potassium oxalate monohydrate, single cryst., exchanging systems, NMR lineshape anal. 7−90206
powder spectra, axial chem. shift tensors 7−70658
powder spectrum simulation for nuclei with I>1/2 7−92529
protonated C suppression with total suppression of spinning sidebands of ^{13}C NMR spectra 7−68358
purine derivatives, deuterated, ^2H quadrupole coupling consts., ^2H NMR spectra anal. 7−77419
pyridine, orientation in nematic liq. cryst., nucl. relax., ^1H NMR study 7−90193
quadrupolar nuclei, NMR spectra line narrowing, appl. of supercritical fluid solvents 7−109942
sodium acetate, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
solids, free induction decay, correl. zone contrib., NMR lineshape function anal. 7−77410
spectral profile of solids, numerical calcs. 7−70653
spin-Peierls systems, incommensurate phase, NMR and EPR studies 7−85483
symmetric mols., spin exchange, dynamic NMR spectra 7−68363
tetracyclines, solid, ^{13}C NMR 7−99582
tetrafluoromethane, solid, high press. NMR study 7−132153
2,2,6,6-tetramethylpiperidine radical, solvation of Li^+, complex form., ^7Li NMR study 7−93264
zero-field NMR and NQR line shapes 7−102471
Al-Cu alloys, dipolar NMR lineshape, quadrupolar effects 7−85479
Al-Mn icosahedral and hexagonal Al_4Mn alloys, NMR lines obs., magnetism 7−112968
Al-Mn-Si icosahedral alloys, NMR lines obs., magnetism 7−112968
Al_6Mn, Al_4Mn, and $Al_{12}Mn$ polycrystals, NMR powder patterns, rel. to quasiperiodic materials 7−85457

NMR line breadth continued
Cd acetate dihydrate, symmetry related Cd shielding tensors, assignment to lattice positions 7−76834
$Dy_{0.1}Fe_{0.05}Gd_{0.85}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.1}Gd_{0.9}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.5}Tb_{0.5}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.1}Tb_{0.1}Gd_{0.8}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
GdH_3, paramag. state, PMR linewidths and shifts meas. 7−99586
LiF crysts., F-centre distrib. determ. by ENDOR in nonuniform mag. field 7−99608
$LiNbO_3$:Fe,Cu, disordering effects, quadrupole interactions, NMR obs. 7−70652
Mg-Ni-H system. H diffusion, phase characteristics, PMR study 7−85444
$Mn_xZn_{1-x}F_2$ cpds., NMR of F, line profile, 4.2 to 300 K *(German)* 7−132157
MoRhB amorphous alloys, NMR studies and superconductivity 7−99313
MoRhP amorphous alloys, NMR studies and superconductivity 7−99313
NH_3 chemisorption on γ-Al_2O_3, multinuclear solid state NMR investigation 7−70662
$NH_4Fe(CN)_6.H_2O$, ionic transport, NMR study 7−125550
^{31}P solid state NMR, spectra line narrowing technique study 7−102478
Pd surface, chemisorbed CO, bonding and diffusion, NMR study 7−77429
$Rb_{1-x}(NH_4)_xD_2PO_4$, NMR in random fields, spin-glass-like transition 7−77421
$Rb_{0.22}(ND_4)_{0.78}D_2PO_4$, paraelec.-antiferroelec. transition, ^{87}Rb NMR studies 7−125637
Si:H, amorphous and amorphous microcrystalline mixed phases, ^{29}Si NMR 7−85448
V, β-emitting ^{12}N, location following recoil implantation 7−118868
Y-Ba-Cu-O, high T_c superconductor, ^{89}Y NMR study 7−106038
Y-Ba-Cu-O high-temperature superconductors, EPR and NMR meas. 7−118711
$YBa_2Cu_3O_{9-\delta}$, normal and supercond., NMR of ^{89}Y 7−118717

NMR spin echo *see spin echo (NMR)*

nobelium
No entries

nobelium compounds
No entries

noble gases *see inert gases*

noctilucent clouds *see clouds*

noise
see also acoustic noise; atmospherics; electron device noise; interference; random noise; roundoff errors; white noise
autocorrelation function and cross correl. function evaluation, signal to noise ratio 7−93436
beam-plasma system, instability development, regular external field and noise effect 7−130866
delayed bifurcations in the presence of noise 7−102306
diffusion-limited aggregation, noise-reduction 7−134699
digital audio convertors, audible distortion and noise eval. 7−130488
dilute fractal networks, structure dynamics 7−73224
discrete dynamics and metastability, mean first passage times and escape rates 7−134660
dissipative dynamical systems perturbed by noise, macroscopic nonequilibrium pot., review 7−134677
dye laser, coloured multiplicative noise, steady-state anal. 7−74917
dynamical disorder model in uniform electric field, kinetic eqn. calcs. 7−128501
dynamical systems, numerical simulation of weak colored noise effects 7−73211
film-to-video transfers, noise aspects 7−67412
functional integral approach to bistability in the presence of correlated noise 7−140602
geomagnetic measurements, mag. anomalies discrimination by elimination of theoretical noise effects 7−71957
GHz noise, quantum mechanical source 7−89042
induced exponential dispersal of phase trajectories near regular attractors 7−67215
inertial quantum counter, noise immunity as time interval meter 7−130028
inorganic linear chain compounds, charge density wave transport 7−98837
interferometric sensors, sideband noise of large phase carrier 7−136550
Josephson junctions, quantum fluctuations, effect on onset of chaos 7−112691
lidar meas. accuracy, atm. drift velocity depend., Monte Carlo method study 7−107548
linear stochastic eqn. with quadratic noise, anal. 7−108405
magneto-optical disc storage, antireflection thin films 7−110290
magneto-optical disc substrate birefringence, magneto-optical compensator 7−103769
measurement noise in Michelson interferometer using squeezed-state light source 7−120835
metal films, 1/f noise 7−105636
metal point contacts, flicker noise and electron-phonon interaction calcs. *(Russian)* 7−112437
metal-semiconductor structures, stochastic auto-oscillations in cond. 7−143611
metals, dislocations, book 7−72738
metals, electrical noise associated with dislocations and plastic flow, review 7−77017
modified composite filter for pattern recognition, noise with nonzero mean, experimental results 7−136225
molecular dynamics, nonequilib., subtraction technique study 7−67196
multiclass stochastic images buried in additive noise, classification using optimal correlation filter 7−68576
multiphoton processes, photon number quantum fluctuations dynamics 7−68596
N-level system under Gauss noise, relaxation 7−73189
neuronal activity extraction from noise, signal processing technique 7−87319
non-Markovian processes, first-passage times and multivalued noise 7−128451
nondegenerate semiconductors, unified theory of noise 7−99142
nonlinear discrete-time signal processing in devices 7−102373

noise continued
nonlinear systems driven by coloured noise, unitary point of view 7−115905
nuclear reactor, neutron noise analysis, multigroup diffusion model 7−129237
nuclear reactor noise, digitally simulated, autoregressive anal. 7−96292
period doubling sequences with correlated noise, scaling, renormalization group anal. 7−140612
piezoelectric semiconductors, acoustoelectric current noise, computer study 7−85010
population dynamics in fluctuating environment, stochastic Verhulst eqn., perturbation calcs. 7−108401
potential scattering, /1/f/noise, Handel's quantum theory objections 7−128351
quantum noise in X-ray image intensifiers 7−114465
Raman ring-laser with chaotic pumping 7−130191
redundant versus nonredundant beam recombination in an aperture synthesis with coherent optical arrays 7−128640
relaxation times in the presence of external dichotomous noise 7−140614
ring laser model, with swept parameter and additive coloured noise, postponed bifurcations 7−141900
ring-laser gyroscope, coloured noise effects, theoretical anal. and simulation 7−123031
seismic noise reduction techniques for use with vertical stacking, empirical comparison 7−94465
semiconductor laser, constant current driven, obs. of amplitude squeezing 7−74924
semiconductors, hot electron systems, noise-power temp. calcs. 7−112410
semiconductors, longitudinal extrinsic photoconductors, signal and noise currents, background-limited regime 7−70350
SIR-B ocean wave imagery, speckle noise reduction 7−134002
spin glass dynamics from mag. noise, relax. and susceptibility 7−118802
squeezed states and the quantum noise of measurement 7−141825
statistical nonlinear acoustics, exptl. review 7−104082
stochastic Shilnikov maps, noise effects on chaotic dynamics 7−80613
strong motion accelerographs, noise amplitudes 7−139501
superfluid He II, T-I-T-II transition, noise-induced bistability 7−142300
surface mobility fluctuations in MOSFETs, 1/f noise 7−85118
synthesized speech signals intelligibility, distortion study, anal. of basilar membrane in cochlea 7−126850
transient optical bistability, noise effects 7−90687
transmission surface barrier detectors, noise and breakdown phenomena *(Chinese)* 7−81875
turbulent bursts, spots and slugs in a generalized Ginzburg-Landau equation 7−80428
turbulent jet noise, press. law derivation 7−97590
two-valley semiconductor, hot-electron noise, analytic model 7−137993
unstable system driven by Ornstein-Uhlenbeck noise, scaling soln. 7−73292
US 2D B-scan, texture props. change due to noise 7−101022
Voigt effect coherent forward scattering spectrometer, noise characts. 7−121237
Al films, electrical noise associated with dislocations and plastic flow, review 7−77017
$Al_xGa_{1-x}As$, variband cryst., hot electron noise, mag. field effect 7−99079
Au polycrystalline films, electromigration, 1/f noise, effect of H 7−111980
$Cd_xHg_{1-x}Te$ photoelec. props., local surface deform. effects study *(Russian)* 7−99130
^{252}Cf source method for reactivity meas., source of correlated noise 7−102940
$Eu_{0.4}Sr_{0.6}S$, spin glass, temp. depend. of mag. VF noise 7−112821
GaInAsP laser amplifier, travelling wave, 1.5 μm, characts. 7−122967
Ge current instabilities and e-h plasma stratification during photocarrier exclusion 7−137980
Ge:Ga,As, heavily doped, strongly compensated heteroepitaxial films, elec. props. 7−131814
He, liquid, superfluid turbulence, imperfect pitchfork bifurcation with weak noise 7−134645
$InAs_{1-x-y}Sb_xP_y$ epitaxial diode structs., electrophysical and photoelectric props. 7−99112
$K_{0.3}MnO$ CDW cpd., low temp. cond. noise obs. 7−99143
Nb-NbO_x-Pb Josephson tunnel junctions, with anodised Nb barrier, elec. characts. 7−112687
$NbSe_3$, narrow band noise intensity and nonlinear conductivity, temp. depend. 7−124971
Ne Raman laser, CW, gain and noise characts. 7−141844
Si, p-n junction, microplasma breakdown region, current-voltage charact., noise 7−143565
W field emitters in built-up state, field emission current fluctuations 7−70987

noise abatement
see also acoustic wave absorption
active attenuation of noise radiated by small duct outlets 7−117397
active control in acoustics *(Japanese)* 7−117396
active hearing protection devices, performance characts. 7−130466
active noise and vibration control (ANVC): current trends, permanent aims and future possibilities 7−68937
active noise attenuation in ducts 7−110678
active noise control, theory 7−142095
active noise control systems, review 7−110673
active sound control, causal constraints 7−110694
active suppression of acoustic resonance 7−75202
adaptive acoustic noise reduction techniques for use in aircraft cockpit 7−110681
air-cooled computer systems, noise reduction 7−68943
auditory brain stem response, appl. to nonlinear hearing protector characts. meas. 7−78883
background noise correction, stochastic theory for equiv. nonlinear feedback system 7−117395
barrier sound insertion loss calcs. using programmable calculators 7−123332
barriers, simple estimation methods 7−68938
blast overpressure reduction using aqueous foam in rigid confinement 7−142092
cancellation of acoustic noise in a pipe using digital adaptive filters 7−110696
car exhaust silencers with minimum power loss 7−123328
circular duct muffler design and analysis 7−68932

noise abatement continued
circular expansion chamber, 3-D acoustic analysis 7−110674
cocktail party noise reduction using adaptive array filtering 7−110697
compendium of noise control engineering 7−130467
concrete party floors, sound insulation props. 7−68947
conical absorber/glasswool layer combinations 7−142094
crankcase-scavenged, 2-stroke engine, reduction of primary noise 7−123334
diameter-expanded silencers, characts. *(Chinese)* 7−104094
diesel engine noise reduction by encapsulation and vibration damping 7−90881
diver voice communications, adaptive noise cancelling appl. 7−110683
door banging noise reduction in dwellings 7−68934
duct noise, active control by means of impedance 7−97210
ducts lined with porous material, attenuation calcs. 7−123329
earmuff sound attenuation characts. 7−123326
earplug performance and hearing conservation in the workplace 7−126846
effective acoustic lining for air ducts 7−104095
environmental noise management appl. of mathematical programming 7−75205
expansion chamber mufflers, 3-D analysis 7−130461
hearing protector selection criteria 7−142091
hearing protectors in EEC, standards and recommendations 7−123325
Helmholtz resonators, acoustic response in turbulent boundary layer 7−117398
highway noise barriers, insertion loss studies 7−123333
IIR adaptive filter for active sound attenuation 7−82931
Japan, noise abatement in planning of road route around Tokyo *(Japanese)* 7−86863
measuring nets for environmental protection *(German)* 7−133173
minimum power output on free field point sources and the active control of sound 7−130462
modal analysis of vibroacoustic behaviour of structures: mechanisms and reduction of generated noise *(French)* 7−142088
multi-degree of freedom acoustic lining for noise suppression in broad air ducts 7−130465
nearfield acoustic imaging appls. *(French)* 7−142099
new functional evaluation methods of sound insulation system using the SEA method and an L_x evaluation criterion 7−68946
perforated 3-duct muffler calcs. 7−130464
phase reversal barriers for better noise control at low frequencies: laboratory versus field measurements 7−117400
porous media with internal mean flow, sound propag. 7−90879
return wall as a traffic noise barrier 7−68931
Riedersbach II power station, noise reduction in 160 MW block *(German)* 7−142098
sound insulation requirements in office buildings and schools 7−68949
spatial active noise attenuators *(Chinese)* 7−104093
spectral recording process 7−90878
supersonic radial diffuser, acoustic aspects 7−123327
system noise reduction techniques *(Italian)* 7−68940

noise control (acoustic) *see noise abatement*

noise control (interference) *see interference suppression*

noise elimination *see interference suppression*

noise levels, acoustic *see acoustic noise*

noise measurement
see also acoustic noise measurement; electric noise measurement; optical noise measurement
IR radiometer for background noise investigations *(Russian)* 7−80877

nomenclature
see also units (measurement)
abbreviations, especially symbols for units of measure in technical documentation 7−73312
asteroids, Minor Planet Circulars 11681-11776, 23 new names 7−134172
astronomical radiation sources, designation and nomenclature 7−88133
Chinese ancient meteorites, name transcriptions 7−139995
composite materials, nomenclature scheme 7−106756
crystallographic point groups in 4D space, geometrical symbols 7−91507
Raman spectroscopy, ASTM E 13.08 committee and IUPAC commission 1.5, overview 7−89277
scientific/technical term identification and text description techniques 7−88819
star names, origin 7−66889
stratigraphic nomenclature, use of Upper-Lower and late-early 7−139531
variable stars, 68th name list 7−140101

nomograms
see also graphs
heat exchanger thermal performance nomogram design *(Romanian)* 7−104131
plates with holes, exptl. design, similarity and dimensional theory 7−97304

nomographs *see nomograms*

non-Newtonian flow
see also non-Newtonian fluids
Casson fluid flow on a rot. disc *(Chinese)* 7−142340
channel flow, vel. meas. laser-Doppler anemometry 7−69223
circular tube, unsteady flow of a power-law fluid, numerical simulation *(Chinese)* 7−91171
compression mold filling, flow and heat transfer study 7−113463
concentric fluid in circular pipe, stability study 7−69222
cooling of a stretching sheet in non-Newtonian flow 7−130752
couple stress fluid flow past a stretching sheet 7−117635
dense suspension rheology, computer simulations appls. 7−93383
diblock copolymers, homogeneous disordered phase, shear flow 7−136942
dilute suspensions of slender rods in weak flows, rheology 7−136771
elastico-viscous liq. draining from vertical surface, flow start-up 7−69220
elastoviscoplastic media flow in channels, transient processes 7−142379
entry flow problem for viscoelastic flows through contractions, book contrib. 7−97583
extrudate swell, non-isothermal non-Newtonian, mixed boundary element and finite element method 7−110900
films, thin, planar, drainage 7−123687
flexible macromolecules, dil. soln., config., nonequilibr. statistics 7−90458
flexible macromolecules in dil. soln., Brownian dynamics, nonequilibr. statistics 7−90459
flexible polymers in Newtonian fluid, nonlinear dumbbell model 7−69219
fluid between eccentric rotating cylinders 7−136941
fluid dynamics, annual review, book 7−95112

non-Newtonian flow continued
gas, velocity profiles over flat plate, non Newtonian viscosity, boundary-layer eqns. 7−136943
generalized Couette flow in channels of irregular cross-section 7−137009
incompressible fluids, axisymmetric and plane flows, numerical simulation 7−75516
interaction of spheres in subsonic low-density flows 7−83307
jets, submerged power-law fluid types, boundary layer eqns. soln. 7−97592
K-BKZ fluid, flow between parallel plates, shear thinning and inertial effects 7−69218
Kallodoc bead suspensions, non-Newtonian behaviour study 7−100632
Maxwell fluid, plane slow flow over transverse slot 7−130748
meteorite craters relaxation, finite element models of non-Newtonian relaxation 7−101726
MHD flow, second-order, between two parallel plates, unsteady motion 7−111120
micropolar fluid, exact solns. for flow 7−91172
micropolar fluid flow in diverging channel 7−123690
micropolar fluids, natural convection flow about sphere with blowing and suction 7−69170
mixed finite element method, error estimates 7−75626
non-Newtonian fluid flow through coiled tubes, momentum and heat transfer 7−123689
nonlinear convection in a visco-elastic fluid 7−69216
nonlinear viscoelastic fluids through circular pipes, unsteady shear flow 7−75679
Oldroyd fluid, 3D stretching flow, vortex sheet propag. 7−104313
Oldroyd fluid B, steady spinning flow, asymptotic behaviour 7−130749
Oldroyd liquids, stratified Couette flow, interfacial stability study 7−91181
Oldroyd-B fluid, torsional flow 7−130751
Oldroyd-type fluid, flow through sinusoidally corrugated tube, boundary element method simulation 7−91175
Oseen flow of sphere clusters, wake effect on drag factor *(Chinese)* 7−123637
peristaltic transport of a couple-stress fluid 7−69227
polyacrylamide aq. soln. turbulent flow, press. drop 7−97580
polyethylene, low density, sharkskin defect studied using flow birefringence and roughness meas. 7−75494
polymer liquid, nonisothermal flow in channel under pulsating press. gradient 7−97581
polymer solns., squeezing flow between spherical surface and flat plate 7−75621
polymer solution, converging flow, polymer additive effect calc. 7−91173
polymer solution, dil., channel flow, shear wall effects, Gaussian dumbbell model calcs. 7−111038
polymer solutions, entry flow problem study review 7−91174
polymer solutions, pipe flow, drag reducing behaviour, surface roughness effects study 7−111039
polymer solutions, relaxation oscillators, hydrodynamic interaction eqn. 7−75629
polymer solutions, structural changes during elongation 7−75960
polymeric liquids, conference, Grenoble, France (Jan. 1986) 7−72698
polymers and polyelectrolytes, anisotropic equilibrium conformations, electric field effect, thermodynamic model 7−75962
polypropylene-polystyrene blends, coaxial phase struct., flow *(Russian)* 7−83280
polystyrene solutions, dil., in extensional flows, birefringence and flow modification 7−75719
polyurethane reinforced reaction injection moulding, rheology of glass-filled polyol slurries and polymeric isocyanates 7−92956
porous-permeable medium, non-Newtonian fluid flow 7−111041
power-law fluid laminar flow in curved pipes, boundary layer approx. 7−75623
power-law fluids, laminar flow in curved pipes anal. 7−75622
pseudo-plastic fluid flow between two coaxial cylinders with axial flow rate *(French)* 7−97485
pseudoplastic liquid laminar falling films, gas absorption, instantaneous irreversible reaction 7−142258
red mud slurry, rheological props. and flow characteristics 7−104347
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7−92953
sand, ultrasonic shaking, test system for large landslide physics 7−91170
second grade fluid, free convection flow past hot vertical porous plate 7−142311
secondary flow for transverse and axial slots, hole press. problem 7−142384
solid particle-gas suspension, non-Newtonian flow, eddy viscosity and mixing length distrib. 7−69226
solid particle-gas system, turbulence, local phenomenological props. 7−83306
square curved, laminar flow of non-Newtonian fluids, resist. coeff. 7−104346
stretching sheet in a non-Newtonian fluid flow, non-similar boundary layer 7−104312
styrene, polymerisation in laminar flow tubular reactor, heat and mass transfer 7−119527
suspension of rigid rods, shear flow, stress growth, Galerkin method calcs. 7−114011
suspensions, viscosity modelled by shear depend. maximum packing fraction 7−69229
third grade fluid, plane steady flow, curvilinear coords., partial diff. eqns. soln. 7−69214
turbulent flow, wall vel. gradient fluctuations 7−142345
turbulent flow in circular ducts. friction factor, explicit eqn. *(German)* 7−104311
viscoelastic flow, boundary singularities in complex geometries study 7−83277
viscoelastic fluid, flow around a sphere in uniform translation rate of deform. field struct. 7−69221
viscoelastic fluid, pipe flow, hyperbolicity and flow transition study 7−83351
viscoelastic fluid, slow unsteady flow, Galerkin type representations 7−83281
viscoelastic fluid, squeeze-film flow study 7−83352
viscoelastic liquid, 2D flow with memory, FEM 7−69217
viscoelastic liquid layered medium, torsionally oscillating, interface shapes 7−117633
viscoelastic liquids, dynamic shear flow problem, initial-boundary value problems 7−130750

non-Newtonian flow continued
viscous flow., numerical simulation, FEM 7—104235
yield-power-law fluids, non-Newtonian turbulent flow anal. 7—111037

non-Newtonian fluids
see also colloids; polymer melts; polymer solutions; rheology
book 7—108067
bubble columns, volumetric mass transfer coeff. calcs. 7—142341
Couette flow under press. gradient 7—75628
elastohydrodynamic lubrication, viscoplastic and viscoelastic models 7—142240
extensional viscosity meas. 7—130808
films, thin, planar, drainage 7—123687
flow between eccentric rotating cylinders 7—136941
flow through coiled tubes, momentum and heat transfer 7—123689
gas, velocity profiles over flat plate, non Newtonian viscosity, boundary-layer equns. 7—136943
jets, submerged power-law fluid types, boundary layer eqns. soln. 7—97592
Kallodoc bead suspensions, non-Newtonian behaviour study 7—100632
liquid foams, flowing in pipes, visco-elastic aspects appl. 7—91190
liquids, theory, review *(Russian)* 7—83279
liquids, viscoelasticity, constitutive eqns. 7—130613
lubricant flow in bearing curved gap, pseudo-plastic variable consistency effects *(German)* 7—142342
nonlinear viscoelastic fluids through circular pipes, unsteady shear flow 7—75679
nonNewtonian fluid, laminar flow heat transfer in porous annulus, quasi-linearisation calcs. 7—130747
Oldroyd fluid, Newtonian droplet translation 7—69250
Oldroyd liquids, stratified Couette flow, interfacial stability study 7—91181
Oldroyd-B fluid, torsional flow 7—130751
Oldroyd-type fluid, flow through sinusoidally corrugated tube, boundary element method simulation 7—91175
peristaltic transport of a couple-stress fluid 7—69227
poly(ethylene oxide), non-Newtonian power-law fluids, diffusivities, electrochem. determ. 7—142262
polyacylamide, soln., electrical-discharge cavities, dynamics *(Russian)* 7—97578
polyethylene, low density, sharkskin defect studied using flow birefringence and roughness meas. 7—75494
polymeric liquids, nonequilib. mol. dynamics, rheological props. 7—75502
polymethylsiloxane, soln., electrical-discharge cavities, dynamics *(Russian)* 7—97578
polyvinyl alcohol, soln., electrical-discharge cavities, dynamics *(Russian)* 7—97578
porous medium, interface shape dynamics for non-Newtonian fluids under gravity and interfacial tension 7—137704
porous-permeable medium, non-Newtonian fluid flow 7—111041
Powell-Eyring fluid model 7—136940
power law fluids, conjugate forced convection-conduction plate fin 7—136939
pseudo-plastic fluid flow between two coaxial cylinders with axial flow rate *(French)* 7—97485
Rivlin-Erickson fluid of second grade, torsional flows 7—75627
second grade fluid flow and heat transfer between plates 7—83208
second-order fluid, forced flow between porous discs 7—75624
shear-thinning liquid, with yield stress, flow through porous media 7—123688
shear-thinning liquids in forward roll coating, film-splitting flows 7—117634
sphere, motion in polar fluid, effect of spherical containing walls 7—69215
suspension, flow potentials in viscometer channel 7—111040
suspension, solid particles, three-phase sparged reactors, physical props. effects 7—98620
velocity profiles and parameter maps 7—136938
viscoelastic flow, boundary singularities in complex geometries study 7—83277
viscoelastic fluid, pipe flow, hyperbolicity and flow transition study 7—83351
viscoelastic fluid, squeeze-film flow study 7—83352
viscoelastic liquid layered medium, torsionally oscillating, interface shapes 7—117633
viscoelastic liquids, separation by stirring, propeller in cylinder, velocity and shear rate *(German)* 7—123692
viscous, heat transfer and press. drop in turbulent flow through rectangular passages 7—123691
$Fe(CN)_6^{3-}$, non-Newtonian power-law fluids, diffusivities, electrochem. determ. 7—142262

noncrystalline state structure
see also amorphous state; glass structure; polymer structure; vitreous state
alloys, amorphous, theoretical strength, cohesive energy, effect of topological disorder 7—69815
alloys, amorphous hydrogenated, atomic scale struct., pulsed neutron scatt. 7—142589
alloys, intrinsic defects, positron annihilation studies 7—83701
amorphous, tetrahedrally bonded struct., equilibration anal. 7—104555
amorphous alloys, atomic diffusion coefficients 7—98544
amorphous alloys, local struct., medium range order 7—83705
amorphous alloys, role of atomic two-level system 7—97946
amorphous films, computer simulation of growth mechanism 7—84569
amorphous materials grown by different processes, high resolution electron microscopy *(Japanese)* 7—69594
amorphous metals, simulation of multi-level systems 7—104553
amorphous semiconductor, struct., thermodynamic view 7—142583
amorphous semiconductors, EXAFS, review 7—77690
amorphous semiconductors, modern view, discussion 7—131529
amorphous solid, structural parameters, maximum entropy estimation from neutron scatt. struct. factors 7—137161
amorphous systems, quasicrystalline structural diffusion 7—69597
amorphous-amorphous interface, struct. modelling 7—83683
atomic arrangements, synchrotron-radiation-based techniques 7—142585
atomic short range order, glass form. 7—83728
cadmium organometallic glass-forming materials, struct. 7—97939
ceramic film deposition by high-power CO_2 laser beam *(Japanese)* 7—119151
ceramics formed by pyrolysis of organometallic polymer precursor, TEM charactn. 7—91448

noncrystalline state structure continued
composition stratification processes, influence on mag. props. of amorphous alloys *(Russian)* 7—104549
conference, Passo della Mandola, Italy (Aug.-Sept. 1985) 7—80176
continuous random networks, amorphous materials struct., geometrical modelling by graphs 7—76002
curved space model, structure disordering 7—83678
Delaunay simplexes of simple liquid and amorphous substances 7—104503
disordered media, microstruct. charact., unified approach 7—98484
$Fe_{70}Cr_{10}P_{13}C_7$ amorphous strip, surface composition, AES studies 7—124648
ferrimagnetic metallic films, elec. cond., structural disorder effect 7—112300
ferromagnetic amorphous materials, mag. permeability aftereffect, struct. distortions 7—85382
films, amorphous, supercond. transition temp. 7—105799
geometrical approach to noncrystalline solids 7—117822
graphite brominated pitch-based fibres, microstructure derived macroscopic residual resistance 7—70272
hierarchy and disorder in non-crystalline structures 7—111399
ice, high density amorphous, struct. studies, Raman spectra obs. 7—131032
ice, surface struct. and evolution, low temp. adsorption studies 7—118205
isotopic substitution neutron diffr. data anal. 7—69550
level systems and kinetic processes in amorphous solids 7—97947
MBBA amorphous solid states, struct. and dynamics 7—124103
medium range ordering, calc. 7—83685
metal hydrides obtained by low temp. H implantation, structural, vibr. and electronic props. 7—83674
metals, amorphous, atomic stress parameters *(Russian)* 7—137240
metals, amorphous, hard spheres binary mixtures, dense random packing, numerical simulation 7—117821
metals, amorphous, struct. from depth of radial distrib. function first minimum 7—97934
metals and alloys, electronically driven structural effects, short range order 7—83700
NASICON, superionic cond. and intermediate structure 7—142743
one-component amorphous solids, canonical struct. *(Russian)* 7—97924
$Pd_{82}Si_{18}$, amorphous, isothermal annealing, struct. relax., elec. resist., X-ray diffr. 7—104562
plasma, one-component, glass transition, dynamic correlations, generalised viscoelastic formalism 7—105027
polyphosphazenes, struct., thermodynamic, thermal behaviour 7—117835
PVDF, crystal-amorphous interphase, SAXS and dielec. relax. obs. 7—69618
PVDF-PMMA, crystal-amorphous interphase, SAXS and dielec. relax. obs. 7—69618
quasicrystals, physical rotational symmetry and minimal tensorial rank 7—117854
ribbons, fracture, effect of relax. state and temp. 7—86358
rigidity and ergodicity of randomly cross-linked macromolecules 7—111400
semiconductor amorphous films, optical absorpt. 7—106291
semiconductors, amorphous, electronic props., lattice topology effects 7—112171
short-range order, exptl. investig. 7—142592
SiO_2, vitreous peroxy linkage, semi-empirical calc. 7—137246
small angle neutron scatt., max. entropy anal. 7—69552
soft magnetic materials, mag. and struct. props. 7—85255
structural heterogeneity and multiplet thermal transitions in epoxy binder 7—91446
transition metal-metalloid amorphous alloys, short range order in relaxed and unrelaxed models 7—97944
transition metal-Si rapidly solidified alloys, 3D modulated struct., quasicryst. form. 7—117868
Yang-Mills gauge theory 7—83679
zeolite ZSM-5, synthesis, struct., Raman spectrosc. obs. 7—138449
zirconia-mullite composites, reaction sintered with MgO and CaO additions, TEM study 7—132556
Ag, island film struct., amorphous and liq. states, room temp. 7—92021
Al amorphous island films, close-range order during crystallisation and melting *(Russian)* 7—124756
Al-Fe rapidly cooled alloys decagonal quasicrystal and tenfold twins 7—104763
Al-Li-Cu icosahedral crysts., struct. and Penrose tiling 7—83855
Al-Mn alloy, icosahedral particles electron microscopy obs. 7—98043
Al-Mn icosahedral films, vapour deposition and struct. 7—118313
Al-Mn quasicrystals, struct., computer simulation studies 7—83699
Al_6CuLi_3, quasi crystal, X-ray diffraction studies 7—124173
$Al_{86}Mn_{14}$, quasicrystal or cubic crystal structure 7—111454
Al_2O_3 coating, amorphous, RF sputtered, struct. and tribological behaviour *(German)* 7—93136
Al_2O_3-SiO_2, amorphous, chemical polymerisation form., phase transformations, X-ray diffr. and SEM studies 7—105000
Al_2O_3-SiO_2 amorphous powders from hydrolysis of alkoxides, X-ray fluoresc. spectra, energy shifts 7—92785
$Al_{70}Si_{17}Fe_{13}$ amorphous alloy, neutron diffr. study 7—137244
As glassy chalcogenides, bond stretching force consts., EXAFS meas 7—113315
As halides, bond stretching force consts., EXAFS meas 7—113315
As_2S_3, amorphous, continuous random network models 7—131030
BN, synthesis from triammoniadecaborane and NH_3 *(Japanese)* 7—119224
BN, ultradisperse, amorphous, adsorption of H_2, N_2 and NH_3 7—76000
$(B_2O_3)_{1-x-y}(Li_2O)_x(Li_2Cl_2)_y$, struct., ionic cond. 7—124112
Bi, island film struct., redistribution of atoms on heating 7—92022
a-C, electronic and atomic struct. 7—70177
a-C:H, electronic and atomic struct. 7—70177
CO_2 solid films, amorphous and crystalline, IR Fourier transform spectra anal. 7—77523
CSe_2, polymeric, metallic cond. and synthesis 7—76910
$C_{1-x}Sn_x$:H, amorphous films, sputter-assisted plasma chemical deposited, structural and optical props. 7—125838
Cd-As amorphous films, struct., LAXS and EXAFS studies 7—84571
$Cd_{47}As_{53}$ amorphous films, electron diffr. studies 7—92032
$CeFe_2H_3$ amorphous state, X-ray diffr. study 7—104558
Co-P amorphous alloys, structural relax. and decomp., SAXS study 7—104559
Co-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7—83687

noncrystalline state structure continued
$(Co_{0.94}Fe_{0.06})_{75}Si_{15}B_{10}$ metallic glasses, magnetostriction const. meas., temp., stress, structural relax. depend. 7−85400
$Co_{1-x}P_x$, amorphous, electrodeposited, structural relax., elec. resist., SAXS 7−105520
Cr, amorphous, microstruct., computer expt. 7−111394
Cr-SiO cermet thin films, prep. and elec. props. 7−132469
$Cu_{57}Hf_{43}$ amorphous alloy microstruct., TDPAC meas. 7−111391
$Cu_{50}Ti_{50}$, amorphous struct., neutron- and X-ray diffr. study 7−91454
Cu_5Y amorphous alloys, struct., anomalous X-ray diffr. studies 7−97933
CuZr, amorphous, electronic struct. and chemical short-range order 7−105378
Fe alloys, metastable cryst. and amorphous, prod. by vapour quenching 7−92924
Fe-B-V amorphous and cryst. alloys, local atomic struct., NMR studies 7−118867
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
Fe-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
Fe_xB_{100-x}, amorphous, struct., Mossbauer spectra 7−97942
$Fe_{81.5}B_{13.5}Si_4C$, amorphous ribbons, annealing, struct., Mossbauer spectra, X-ray diffr. 7−106554
$Fe_{80}P_{13}C_7$, amorphous, crystallisation, struct. relax kinetics, elongation, elec. resist. 7−104563
$FeZr_3$, amorphous, local order, mag. perturbed ^{57}Fe Mossbauer spectra 7−99628
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
Ga-Te, amorphous films, structural ordering during vacuum annealing 7−97936
$GdFe_2H_3$, amorphous state, X-ray diffr. study 7−104558
Ge, amorphous, structural characterisation 7−131035
a-Ge, structural study using EXAFS 7−97935
a-Ge:H, EXAFS, review 7−77690
a-Ge:H, structural study using EXAFS 7−97935
a-Ge:Si layers, amorphised by ion implantation, optical props. rel. to enthalpy of relax. 7−85578
GeO_2, amorphous and cryst., neutron scatt. lengths, total cross sections 7−130985
$GeSe_2$, amorphous, laser-induced crystallisation and medium range order 7−83698
K borate glasses, density related to atomic arrangement 7−124110
$LiBGeO_4$, crystalline and glassy, vibrational spectra, Raman and IR obs. 7−118996
$LiNbO_3$-Fe_2O_3, amorphous, struct 7−83676
$LiPO_3$-glass, structural relaxation 7−124509
Mo_xNi_{1-x}, amorphous, crystn. temp. and activation energy, DTA 7−75995
MoO_3 amorphous thin films, short range and medium range struct. 7−84572
$Na_4H_2(H_2(W_3O_{10})_4)$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
Na_2O-SiO_2 amorphous powders from hydrolysis of alkoxides, X-ray fluoresc. spectra, energy shifts 7−92785
$NaPO_3$-glass, structural relaxation 7−124509
Nb-N thin films, amorphous and cryst., struct., electron microdiffr. studies *(Russian)* 7−70108
a-Nb_3Ge:Ar, sputtered films, bias threshold for Ar bubble growth 7−117817
Nb_2O_5, amorphous film, short range atomic ordering, oxidising pyrolysis of organometallic compounds 7−75999
$(Ni,Cr,Fe)_{75}Si_{25}$ amorphous film, temp. coeff. of resist., rel. to tempering temp. and noncrystallinity 7−98973
Ni-Al, metastable phase formation by ion beam mixing 7−111691
Ni-Fe-P oxide system amorphous thin films, struct. and mag. props. 7−112872
$Ni_{1-x}B_x$ amorphous films, ion irrad., radiation damage, comp. depend., resist., annealing 7−111694
$Ni_{100-x}P_x$ alloys, amorphous, electroless, struct. relax., crystallisation, anelasticity meas. 7−137242
$Ni_{0.95}Tb_{0.05}$ amorphous sputtered films, struct., neutron diffr. study 7−104557
NiZr, amorphous, electronic struct. and chemical short-range order 7−105378
Pd-Si metallic glass struct. determ. using scanning tunnelling microscope 7−142540
$Pd_{58.8}U_{20.6}Si_{20.6}$ icosahedral alloy, quasicrystallinity 7−104638
Rh-Zr metallic glass struct. determ. using scanning tunnelling microscope 7−142540
a-Se, amorphous films, short range order, X-ray radial distrib. fn. anal. 7−142587
Si, amorphous, structural characterisation 7−131035
a-Si, defects, threefold or fivefold coordination 7−111401
a-Si, structural and vibrational props. calcs., 216-atom continuous-distorted-network model 7−69848
a-Si, structural model with simulated annealing, tetrahedrally coordinated random networks 7−142586
Si:H, amorphous, glow discharge deposited films, Raman scatt. obs. of struct. changes and SRO 7−99957
Si:H, amorphous and amorphous microcrystalline mixed phases, ^{29}Si NMR 7−85448
a-Si:H, EXAFS, review 7−77690
α-Si:H, near-boundary fields, structural charact. and props. 7−91453
a-Si:H, positron lifetime meas. interpretation 7−132371
a-Si:H, structural and electronic stretched-exponential relax., H dispersive diffusion effects 7−143106
a-Si:H films, plasma deposited, electronic struct. 7−76747
a-Si:H films, structural disorder, Raman scatt. investig. 7−118993
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, adlayers 7−105293
a-SiH_x, atomic and electronic struct., large-scale CRN model 7−83680
Si_3N_4, amorphous, continuous random network model constructed using plastic balls and spokes 7−83675
SiO_2, amorphous, radiation-sensitivity enhancement and annealing 7−124334
SiO_2, amorphous, Si−O bond length modification 7−124105
SiO_2, amorphous, struct. defects and triboluminescence excitation 7−138524
SiO_2, amorphous, thermally grown, struct. interpretation anal. 7−83672
SiO_2, amorphous powder, energetically metastable, X-ray diffr. 7−97927

noncrystalline state structure continued
a-SiO_2, IR absorpt. peak of vibr. stretching mode, struct. order 7−132253
SiO_2 optical glasses, physics and appls. *(Russian)* 7−110491
SiO_2, vitreous, continuous random network model, computer simulation 7−83677
SiO_2, vitreous, scatt. fn. determ. 7−131031
a-SiO_2:OH, γ-ray irrad., H-associated defect centres, ESR studies 7−97932
SiO_2-Al_2O_3-RO:Cr(III), R=Mg, Ca, Zn, transparent glass ceramics, crystalline phases, spectroscopic props. 7−124111
SiO_x, disordered solid, struct. phase transition 7−137243
SiO_x:TbF_3 films, comparative study of doped and undoped samples, comp., struct., elec. and optical props. 7−105332
Tb_xSi_{1-x}, amorphous, neutron scatt. study of atomic local order 7−75996
TeO_2 amorphous evaporated films, optical and elec. props. studies 7−144142
TeO_2-$ZnCl_2$ vitreous system, struct. and US props. 7−104556
Ti-Al_2O_3 cermet, percolation model *(Chinese)* 7−91444
$TiCuD_x$, amorphous and cryst., charactn. by deuteron mag. resonance 7−118876
TiFe amorphous alloy thin films, heat treatment effects 7−95693
WO_3, amorphous film, short range atomic ordering, oxidising pyrolysis of organometallic compounds 7−75999
WO_3 amorphous thin films, short range and medium range struct. 7−84572
Zn_3P_2 film, flash evap., growth morphology and opt. props. 7−100086
$Zn_{43}P_{57}$ amorphous films, electron diffr. studies 7−92032
$Zr_{100-x}Cu_x$, amorphous sputtered alloys, low-energy excitations, struct. relaxation effects 7−143033
$Zr_{70}Cu_{30}$, amorphous, struct. relax., effect on electronic props. 7−83693
Zr_xFe_{1-x}, amorphous, crystallisation, positron annihilation, Mossbauer spectra 7−97965

nondestructive testing
see also acoustic emission testing; eddy current testing; flaw detection; radiography; ultrasonic materials testing
acoustic emission fundamentals and appls. 7−132895
adhesion, conf., Williamsburg, VA, USA (Feb. 1987) 7−134346
adhesively bonded joints, nondestructive inspection 7−138930
archaeological objects, nondestructive anal. by Coulomb capture of muons 7−113848
bearing industry products, contactless diagnosis by IR imaging 7−71433
binary alloys, Rayleigh-Compton backscatter ratio anal. 7−93239
bronze, nondestructive analysis using fundamental parameter method *(Chinese)* 7−86546
CANDU fuel, characterisation by radiochemical anal. 7−96203
CANDU fuel, gamma scanning system for nondestructive meas. 7−96213
CANDU fuel, tomographic examination of a section from the HTBS-004 bundle 7−96197
ceramic surfaces and subsurfaces, NDE 7−126401
ceramics, advanced structural and composites, reliability, review 7−77777
coating nondestructive inspection methods and development trends 7−100483
color laser microscope for inspection of semiconductors 7−121221
composite material shell, internal struct., computer tomography 7−138928
conf. on nuclear materials safeguards, Vienna, Austria, Nov. 1986 7−108038
conference, Dresden, Germany, Feb. 1986 *(German)* 7−140475
conference on graphite reactor component structural design and integrity, Tokai, Japan (Sept. 1986) 7−140378
CT scanning, industrial systems, Radon transform anal. 7−100487
dental restoration wear meas., difference moire contour-mapping system 7−101043
dielectric constant evaluation of insulating materials: an accurate, practical measurement system 7−134812
dielectric waveguide sensor for nondestructive inspection of sheet dielectrics by freq. props. analysis 7−132874
DLTS system, sequential four-rate-window design 7−84739
elastodynamic scattering by fluid-filled nonplanar cracks 7−138936
electronic aids for manual NDT 7−104119
ESCA in failure anal., recent developments 7−67438
FAMOS fatigue monitoring system for power plants *(German)* 7−132902
ferromagnetic cores, magnetisation and secondary EMF harmonics in alternating fields including hysteresis 7−105953
fibre reinforced plastics, embedded optical sensors for NDT, review *(Japanese)* 7−123211
fibre-polymer matrix system, transition layer parameters eval. using dynamic mech. meas. 7−78444
fission reactor fuel rods, pool-side determ. of fission gas release, nondestructive method *(German)* 7−109298
fossil power plant components, nondestructive evaluation, 1986 EPRI summary 7−132901
galvanic coatings NDT, using X-ray fluorescence analyser *(German)* 7−86536
gamma-ray scattering NDE 7−126381
heterodyne holographic interferometry for high resolution 3-D sensing 7−90548
holographic interferometry, thermal wave visualisation 7−122869
holographic interferometry with automatic fringe evaluation 7−74888
inductive test unit for NDT of materials *(German)* 7−126391
inspection of tubes by ultrasonic echo detection *(French)* 7−68965
integral gamma-ray count backscatter instrument design, math. model, appls. 7−67449
irradiated nuclear fuel tomography facility, AECL conceptual design 7−93245
joints, welded, magnetographic inspection, magnetising device and mag. tape selection 7−132889
laminated dielectric structures, broadband introscopy, algebraic approach to parameter identification 7−106744
laminated media, UHF introscopy, radiopulse envelope synthesis 7−71444
laser material diagnostics, conf., Albuquerque, NM, USA (Feb. 1987) 7−102022
laser speckle photography for inhomogeneous strain field studies *(French)* 7−140734
magnetic flux leakage detector signals, 2D finite element calc. 7−138950
magnetic flux leakage signals, permeability variation, 2D finite element calcs. 7−138949
mass fraction profiling based on X-ray tomography, appl. to porous silica boules 7−121074
massive specimen, magnetisation by rod electromagnet, induction distrib. 7−129929

nondestructive testing continued
mechanical and electromagnetic methods [of NDT], review *(Italian)* 7−86534
metallisation stability on semiconductor surface, microscopic control 7−133022
microwave projection imaging for internal struct. determ. 7−71451
multifrequency method of parameters determ. of dielectrics, data processing effectiveness 7−132875
nuclear ceramic materials, energy dissipation, image-analytical, indenting, quantitative methods 7−129183
nuclear materials testing and safety, conf., Stuttgart, Germany (Oct. 1986) 7−120695
nuclear plant components, nondestructive evaluation, 1986 EPRI summary 7−132901
nuclear power station structural materials, polarisation resistance meas. for corrosion rate determ. 7−122010
numerical procedure for interference fringes removal from optical spectra 7−128545
optical disc bow measurement with optical head 7−136767
photo-and Joule-displacement microscopy 7−89217
PHWR fuel, safeguards charact., summation calcs. and nondestructive γ-spectrometry 7−103012
pipes, holographic NDT, predicted fringe patterns and exptl. results 7−119484
PISC-II program, German NDE 7−126386
polarisation-maintaining fibres, alignment using nondestructive temp. modulation technique 7−104005
polymer coating on metallic components, contactless inspection of thickness in prod. line 7−71445
polymer fillers concentration and orientation determ., by far-IR technique 7−92671
polymer/graphite mixture simulating conductive polymers, heat pulse technique for evaluation 7−98598
polymers, Fourier transform IR microspectroscopy appl. 7−89282
portable X-ray radiographic inspection system 7−73945
positron annihilation, appls., review 7−73485
powder metallurgy components, porosity inspection using laser beams 7−71453
protective and thermal barrier coatings, NDE of thickness, adhesion, porosity 7−126379
PWR gadolinia fuel, nondestructive post-irradiation examination 7−116574
PWR pressure vessels, inspection checking at the Inspection Validation Centre, Risley 7−103071
PWR steam generator tubes, nondestructive testing, French strategy 7−129176
radiometric ellipsometry method of surface layer thickness and dielec. props. meas., error calc. 7−132873
reactor cladding tubes, nondestructive testing, sample homogeneity 7−129175
reactor pressure vessel head, deformation anal. using holographic interferometry 7−122049
repair and reclamation, conf., London, England (Sept. 1984) 7−108041
resistivity meas. of III-V semiconductors, using four-point probe meter 7−121154
rock testing, holographic interferometry 7−122873
Russian nuclear power plants, nondestructive fuel anal. methods, safeguards equipment *(Russian)* 7−122018
scanning acoustic microscopy, NDT appls. 7−75226
steam turbine component embrittlement, grain boundary segregation evaluation 7−126394
steel, alloy, NDE using acoustic and mag. Barkhausen signals, effect of intergranular impurity segregation 7−113839
steel, alloy, nondestructive analysis using fundamental parameter method *(Chinese)* 7−86546
steel, austenitic stainless, degradation, material charactn. procedure by use of small punch test and electrochem potentiokinetic reactivation method *(Japanese)* 7−100474
steel, austenitic stainless, electrochemical potentiokinetic reactivation test for IGSCC anal. 7−129173
steel, C, NDE using acoustic and mag. Barkhausen signals, effect of carbide precip. and hardness 7−113838
steel, cold rolled, on-line X-ray texture analyser 7−138761
steel, decarburised, grain size measurement using magnetic and acoustic Barkhausen noise 7−126121
steel, fatigue failure, hardness, density, mag. inspections 7−71435
steel, ferromag., stress, nondestructive meas., harmonic analysis of induced voltage 7−126382
steel, low alloy, C cyclic loading, fatigue damage evaluation, Barkhausen effect method 7−106594
steel, martensitic, surface plastic deformation effect on Barkhausen effect parameters, nondestructive inspection method 7−132878
steel, medium C, heat treatment quality NDT, resonance electromagnetoacoustic method 7−106742
steel, mild, stress meas., Barkhausen noise and magnetisation rotation methods comparison 7−78412
steel, piping and structural materials for power plants, flaw detection and assessment 7−129189
steel components, heat treatment quality inspection using remagnetisation losses 7−71449
steel components, reliability of NDT techniques for fission reactor structures 7−89667
steel components, surface hardening quality inspection, resist. of mag. states of two-layer ferromag. to mag. fields 7−71450
steel pipe, SCC defect evaluation using X-ray CT scanner 7−126385
steels, low C, fatigue microcracks, growth behaviour 7−86313
stress determination using strengthening sensors and specimens under biaxial tension 7−75489
supersonic waves, polarized, appl. in nondestructive testing *(German)* 7−144675
surface defect detection and meas. by automatic fringe anal. 7−102387
surface residual stresses, nonuniform, nondestructive X-ray diffraction anal. 7−86547
synchronous stroboscopic electronic speckle pattern interferometry, developments 7−108651
thermal inspection sensitivity calc. on basis of one-dimens. problem of heating of three-layer sheet 7−132884
thermal neutron radiographic testing, standard indicators for image quality determ. 7−86535
thermal wave imaging as NDT technique 7−86548
thermoelectric NDT instruments *(Polish)* 7−138952
nondestructive testing continued
thermoelectric Seebeck effect in NDT *(Polish)* 7−138951
tomographic imaging technique based on backscattering, in reduced angular extent exploration 7−78452
US, role of computers 7−104120
welded constructions, fitness-for-purpose assessment by NDT, conf., London, England (Nov. 1984) 7−95097
welds, nondestructive testing using the 3MA-analyzer 7−126383
WWER power reactor fuel assemblies, ESNART facility for nondestructive anal. *(Russian)* 7−103011
WWER-440 spent fuel, nondestructive assay using gamma and neutron meas. 7−116597
X-ray microscopy application in materials science 7−86539
X-ray stress measurement, automated system 7−88974
X-ray testing, automated, supervised learning approach to image segmentation 7−86552
Al, X-ray scanner for exam. of intravoluminal cryst. state 7−130980
^{10}B content determ. in fuel element shipping casks, nondestructive test method 7−73874
C fibre reinforced epoxy composite, delamination, NDT by pulsed photothermal method 7−100493
Cu-Ni-Cr, multilayer electroplated coatings, NDT methods and devices 7−132893
Cu-Zn, nondestructive analysis using fundamental parameter method *(Chinese)* 7−86546
GaAs coplanar waveguide, electro-optic meas. of standing waves 7−90777
GaAs, semi-insulating LEC cryst. charactn., selective pair luminesc. studies 7−125803
K_2HPO_4, coherent γ-ray scatt. for density characterisation 7−78573
$LiNbO_3$ boules, polishing and lapping for testing by SHG 7−126270
Ni, grain size measurement using magnetic and acoustic Barkhausen noise 7−126121
Si, semiconductor evaluation technique using heat pulses 7−98597
Si, single crystal damaged surface layer, nondestructive meas. using reflection acoustic microscope 7−138927

nonelectric sensing devices
see also fibre optic sensors
amorphous alloys, appl. to mag. sensors 7−89211
biosensors, design and appl. *(Japanese)* 7−145305
optical couplers, backward wave for sensing, anal. 7−123210
optical interference force sensors and weighing systems, coupled by beam waveguide *(German)* 7−121102
optical waveguide pressure sensor, metal-clad 7−104053
optical waveguides, multimode graded index, sensor functional potentiality and sensitivity 7−130370
refractive index measurement, materials for optical sensors 7−121199
signature modeling for acoustic trainer synthesis 7−123337
FeB amorphous sputtered film temp. sensor 7−89212
$(TbY)_3Fe_5O_{12}$ LPE films for optical mag. field sensors 7−80823

nonequilibrium flow
air, chem. nonequilibrium parameters, wakes 7−75710
chemically nonequilibrium turbulent pipe flow, heat and mass transfer, eigenvalue problem *(Russian)* 7−104357
critical gas flow in Laval nozzle 7−111055
gas flow, shock wave form. 7−69281
MHD flow, cylindrical shock wave form 7−123779
nonequilibrium turbulent recirculating two-phase flow, computational modelling 7−91192
PWR transient three-phase nonequilibrium nonhomogeneous flow, 1D slip model 7−67890
Rayleigh-Benard roll chain, convective pattern deformations under mean flow stress 7−83179
supersonic chemically nonequilib. flow around blunt bodies *(Russian)* 7−83267
trailing flap, attached flow, asymmetric wake, press. and vel. charact. 7−136863
wet steam in pipes, nonequilibr. slug flow diagnostics and struct. 7−137004
H_2O vapour, nonequilibr. dispersed two-phase flow, Raman scatt. 7−129720

nonleptonic decays
see also baryon hadronic decay; meson hadronic decay
ΔS=1 chiral Lagrangians in kaon and hyperon nonleptonic decays 7−81181
effective nonleptonic hamiltonian, simultaneous use from asymptotic freedom and factorization approximation 7−135105
hyperon nonleptonic decays, soft-pion S-wave amplitudes and negative parity baryons 7−81182
$\pi^-\Omega^- \rightarrow \Lambda^0 K^- \pi^+$, Coulomb disintegration cross section, decay rate calcs. *(Chinese)* 7−102785

nonlinear acoustics
3-D quadratic index profile materials, propag. 7−130425
3D doubly periodic parallel plate waveguide, stopband struct. 7−97193
acoustic analogues of nonlinear-optics phenomena 7−104081
aerated agitated water tank, relation between mass transfer and sound spectra 7−142356
n-alkane liquids, B/A parameter calcs. 7−142910
anharmonic crystals, sound propag. calcs. *(French)* 7−117372
broadband aircraft noise, nonlinear propag. 7−97194
cavitation, bubble distribution calcs. 7−130416
condensed mediums, investig. using polarisation echo method, review 7−123297
cylindrical particle in sound field, radiation force 7−97190
defect detection using ultrasonic anomalous behaviour in composite examples 7−97188
disturbed water in tank first subharmonic of sound 7−82901
easy-axis ferromagnet, third acoustic harmonic excitation near orientational phase transition 7−84139
energy separation in a vortex street 7−91122
exact solution of the inverse acoustic scattering problem for the one-dimensional density profile in cylindrical geometry 7−97192
ferroelectrics, nonlinear acoustic props., domain struct. effect calcs. 7−84138
focused field of spherically converging acoustic wave on anisotropic media *(Chinese)* 7−104077
focusing of sound waves by a cavitating jet 7−82899
gas columns, thermally induced oscillations, complex quasiperiodic and chaotic states obs. 7−67200
gas flow velocity distrib. meas. system using nonlinear effects of ultrasonics *(Japanese)* 7−142411

onlinear acoustics continued
gas temp. distrib. meas. using nonlinearity in ultrasonics *(Japanese)* 7−128579
geophysics inverse problem, characterisation of low-frequency scatt. data 7−110641
Helmholtz equation, inverse transmission problem 7−110642
high intensity acoustic waves, effect on turbulent boundary layer *(French)* 7−104125
high intensity sound propagation in flow ducts 7−75192
high-intensity acoustic noise diffraction, statistical characts. 7−90880
in vivo *B/A* determination in a mammalian organ 7−114379
instantaneous and time-averaged energy transfer in acoustic fields 7−123298
intense sound wave attenuation for propag. through air-filled, bulk porous materials 7−130424
isotropic solid, Gaussian beam, shift wave, second harmonic generation 7−82904
Khokhlov's method in nonlinear wave theory 7−102037
large-amplitude subharmonic nonlinear resonance oscillations in an open-closed tube 7−82898
levitator, electrostatic-acoustic, for large charged drop levitation against gravity 7−86012
loudspeakers, acoustic Doppler shift effect 7−82968
mean force, action on small body in sound field, quadratic approx. soln. 7−117373
metals, nonlinear EM excitation of ultrasound 7−70362
multiscale analysis of nonlinear oscillations of gas bubbles in liquids 7−75191
noncollinear interaction of two sound beams from displaced Gaussian sources, with application to parametric receiving arrays 7−117375
nondispersive media, nonlinear interaction of pulsed and noise signals 7−117376
nonhomogeneous fluids, propag. phenomena *(French)* 7−142073
numerical model for nonlinear and attenuative propagation and reflection of an ultrasonic bounded beam 7−82903
parametric interaction of acoustic signals in a plane waveguide 7−104078
parametric phenomena and applied developments *(Japanese)* 7−142072
penetrable medium, time-harmonic acoustic waves, inverse scatt. problem 7−104079
phase conjugation of acoustic beams in an alternating magnetic field 7−85012
physicochemical evaluation of the nonlinear parameter *B/A* for media predominantly composed of water 7−117374
piezoelectric-semiconductor layered structs., nonlinear acoustoelec. effects at high surface wave intensities 7−70055
polyurethane foams, sand propag. calcs. using Biot theory *(French)* 7−104080
propagation, representations for acoustical waves when sound speed varies in space and time 7−110646
pulsating sphere in unsteady rectilinear motion, sound field calcs. 7−110644
radiation force meas. in dual-temp. resonant chamber 7−142126
radiation force on a particle in a temp. gradient 7−110643
radiation pressure forces in the focal region of an acoustic microscope 7−130418
random waves in nonlinear elastic materials, strain spectra 7−130422
reacting-radiating fluid, propag. of small disturbances 7−88092
relative anisotropies of plane waves and guided modes in thin orthorhombic plates: implication for texture characterization 7−97191
resonance in weak critical inhomogeneous medium, prop. normal to inhomogeneity gradient 7−142071
ruby:Cr, inertial self-focusing of hypersound 7−111780
SAW, stress-compensated cuts 7−117377
second harmonic component of a nonlinearly distorted wave in a focused sound field 7−142068
self-action and bistability in an acoustic resonator 7−82900
semiconductors, optoacoustic interaction and acoustic beam wavefront reversal 7−68927
shock wave analysis 7−130420
solids, cryst., lattice-generated stochastic nonlinear acoustic radiation field, residual strain *(Japanese)* 7−124409
solids, isotropic, nonlinear Stoneley waves *(Japanese)* 7−123300
solitary wave propag. on nonlinear elastic rods 7−130423
sound scattering by bubble layer 7−130419
statistical nonlinear acoustics, exptl. review 7−104082
Stokes boundary layer stability calcs. 7−82902
sum and difference frequency generation due to noncollinear wave interaction in a rectangular duct 7−130421
thermal self-action of sound beams in viscous liquids: self-focusing and acoustic self-induced transparency 7−130417
thermoacoustic instability with forced motion of heat-transport medium 7−130521
thigh, dog, enhanced temp. elevation due to nonlinear propag. of focussed US 7−78790
time domain formulation of the absorption limited transient parametric array 7−142069
vortex shedding behind a square cylinder in transonic flows 7−91161
Al alloys, nonlinearity parameters vs. vol. fraction of second phase precipitates *(Japanese)* 7−124408
Gd, nonlinear acoustic parameters, lattice dynamics near mag. transitions *(Russian)* 7−98351
$LiNbO_3$, Y-Z, SAW propagation, bifurcation and chaos 7−91954
$SrTiO_3$, SAW propagation, nonlinear acoustic effects, region near struct. phase transition 7−70054

nonlinear control systems
arterial pressure short-term regulation in cat, dynamic model 7−107140
chemical processes, constrained, multivariable, on-line optimisation 7−78458
hereditary differential eqns., optimal control 7−88878

nonlinear differential equations
abstract nonlinear hyperbolic-parabolic equation, soln. uniqueness and existence 7−66921
analytic solutions for nonlinear differential eqns. 7−102106
bi-hamiltonian system, is it integrable? 7−120776
bifurcation and stability of periodic orbits of nonlinear evolution equations 7−140438
Boltzmann eqn., nonlin. spatially-homogeneous *(Russian)* 7−89171
boundary value problems, nonlinear, decoupling technique with quasi-linearisation and orthogonal collocation 7−88850

nonlinear differential equations continued
cardiac monitoring problem, dynamical complexity and pathological order 7−119702
cauchy problem, slow and quasi-slow solutions of differential inclusions 7−80358
caustics of nonlinear waves 7−140474
conduction-diffusion equation, unknown coeff. determ., num. expt. design 7−134703
conf., Sendai, Japan, Feb. 1986 7−72734
convoluted algebras of analytical functionals 7−108159
coupled fixed points of nonlinear operators with applications 7−88889
coupled nonlinear partial diff. eqns., similarity soln. and Lie symmetry 7−95247
damped extensible beam equation, eigenvalues for nonlinear eqns. 7−66993
damped pendulums, with quasiperiodic forcing, strange nonchaotic attractors 7−95311
damping oscillating system, loss of stability in equilibrium position *(German)* 7−102159
decomposition method, differential operator struct. 7−80351
diaphragm pressure sensors, resonant, freq. characts. *(Chinese)* 7−73328
differential equations with impulse effect, periodic solns., sufficient conditions 7−95262
Dirichlet problem, generalized difference methods and error estimate 7−72891
doubly curved shallow shells on a nonlinear elastic subgrade, nonlinear dynamic response 7−97326
doubly nonlinear diffusion equation in hydrology 7−80701
driven oscillator, exact treatment 7−102148
Duffing's equations, index theorems and bifurcations 7−72905
dynamical systems, nonlinear, gradient algorithm for integrability criteria formulation 7−67031
dynamical systems, numerical simulation of weak colored noise effects 7−73211
eigenvalues examination, Routh-Hurwitz criterion 7−108172
elasticity, nonlinear, 1D, with small viscosity, families of entropies and solution bounds 7−80420
electrostatic film concentrators shape forming using nonlinear Karman DE 7−78607
elliptic equations, nonlinear fourth order, solution, gradient and Laplacian bounds 7−80382
elliptic equations, solution, gradient and Laplacian at interior points 7−108187
elliptic second-order quasi-linear differential eqns., tangential oblique derivative problem *(French)* 7−95234
Euler-Poisson-Darboux eqn., Cauchy problem 7−108157
evolution equation, nonlinear, with nonlocal coeffs., existence of global solutions 7−72865
evolution equations, nonlinear, bounds for solutions 7−72903
evolution equations, superposition functions, Backlund transformations 7−140457
evolution equations, wave modulation anal. 7−108251
evolution equations with almost periodic time dependence, solutions 7−80381
exceptional Lie group G_2, nonlinear eqns. with superposition formulae, eqn. classification 7−72808
focal point trajectories of nonlinear diff. eqns., dynamical anal. 7−88900
free electron laser, nonlinear differential eqns. of motion of charge in a field 7−74897
fully nonlinear wave eqn., initial boundary value problem, soln. local existence 7−80448
functional delay-type differential equations, nonlinear nonantonomous, evolution in L_p-spaces 7−72864
generalised nonlinear Schrodinger eqn., Backlund transform. and N-soliton soln. 7−108264
generalised Riemann problem soln., asymptotic expansion *(French)* 7−66986
global existence of nonlinear electromagnetic waves *(French)* 7−102182
global solution of nonlinear characteristic Cauchy problem *(French)* 7−66924
Grassmann variables, exactly solvable nonlinear evolution eqns. 7−115753
Hamilton-Jacobi eqns. with time-meas. Hamiltonians, generalised viscosity solns. 7−88877
Hamilton-Jacobi-Bellman eqns., asymptotic formula for solns. 7−80618
heat equation, nonlinear, blow-up of solutions, criterion 7−108487
heat equation, semilinear, existence of bounded solutions 7−80379
heat equation with diffusion, blow up time for solns. 7−108486
hereditary differential eqns., optimal control 7−88878
hyperbolic equation, solution zeros 7−115809
hyperbolic equations, nonlinear, hidden regularity 7−128304
hyperbolic equations, nonlinear and multidimensional, cubic interpolated pseudoparticle method anal. 7−88992
hyperbolic equations, quasi-linear, with Fuchsian singularity, anal. *(Italian)* 7−88897
integrable nonlinear evolution eqns. in (2+1) D, combined ∂ and Riemann-Hilbert inverse methods 7−102118
integro-differential equations, stability in variation 7−72818
intergranular corrosion by surface diffusion, differential eqn. soln. *(French)* 7−138867
inverse heat conduction problem in thermal system optimal boundary control 7−75247
Kaup-Newell eigenvalue problem, nonlinear evolution eqns., symmetries and Lie algebra 7−102082
Klein-Gordon equation, strongly damped, convergence props. 7−66938
Klein-Gordon equations, nonlinear, interacting fields, asymptotic props. 7−128750
Klein-Gordon equations, nonlinear, prolongation structure and Backlund transformations 7−80454
Kodomtsev-Petviashvili equation, Lax pair and Backlund transformation 7−102121
Lame equation, finite-gap potentials and Nahm equations 7−128249
Laplace capillary equation, solution using comparison eqns. 7−124636
Lie superalgebras and superposition formulas 7−80356
Lie symmetry generators, maximum number calc. 7−140431
Liouville equations, evolution equations, solutions and linearisation, Hirota's bilinear transformation method 7−128502
local smoothing properties of general dispersive equations *(French)* 7−102190
Madelung fluid, Lie group methods for coupled nonlinear partial differential eqns. 7−115796

nonlinear differential equations continued
magnetic fluid, displacement processes through porous media, instabilities 7−75690
magneto-turbulent plasma, charged particles relative spatial diffusion, global anal. 7−97709
matrix Riccati eqns., integrability, chaos and superposition formulas 7−140439
membrane, square, nonlinear forced oscills., multi-mode response 7−136734
MHD equations, 3D, resistive, soln. using semi-implicit algorithm 7−91349
modified Kassoy problem, solution existence, asymptotic props. 7−115763
moveable branch point free solns. 7−88880
multi-hamiltonian systems, completely integrable 7−128251
multidimensional nonlinear evolution equations, integrability 7−67034
multidimensional nonlinear wave eqn., asymptotic solns. *(Russian)* 7−134526
nerve fibre, pulse transmission, third-order eqn., group anal. 7−78815
nonadiabatic premixed flame dynamics in gravitational field 7−132942
nonlinear coupled parabolic integrodifferential equations 7−80339
nonlinear hyperbolic equations, bounds for functionals of solns. 7−66919
nonlinear random media, localisation, invariant-imbedding approach 7−80443
nonlinear symbolic calculus for a simple classical conormal wave *(French)* 7−67029
nonlinear transmission line, cusp solitons, shock waves and envelope solitons, evol. eqn. 7−102178
nonlinear vibration systems, multi-frequency Hopf bifurcation, averaging methods 7−95289
nonlinear-elastic compressible solid, isolated disclination 7−76123
nuclear power plant piping systems, seismic restraint reduction approach 7−129161
oscillations, power series solutions, software 7−95309
$P(\phi)_2$ theory with a source, algebraic construction of Green's functions 7−95355
Painleve test and integrability 7−108173
parabolic equation, fourth order, semilinear, solns. and pattern formation, solidification appl. 7−80368
parabolic equations, nonlinear, with non-monotonic perturbation, global soln. 7−72906
parabolic equations, semilinear, local and global solvability 7−88881
parabolic problems, error estimates and time step control 7−72886
parabolic stochastic differential eqns. with noise, stochastic quantisation 7−89116
partial diff. eqns., algebraic-geometric construction and integrability 7−134449
partial differential eqns., higher order soliton solns., computer-algebra methods 7−95232
partial differential equations, 1D, linear recursive schemes and the Tau method 7−80397
partial differential equations, necessary conditions for integrability 7−108155
plate and shell dynamics, nonlinear problems soln. method 7−110832
plates, sandwich, skew, on elastic foundation, finite deflection by Galerkin method 7−75344
Poincare maps of differential eqns., simplicial approx. 7−140616
porous medium, travelling combustion waves, solns. of two-point free-boundary problem 7−139008
precursor transition in dynamical systems undergoing period doubling 7−67255
prolongation theory, nonlinear Schrodinger eqn. 7−134556
quasi-linear parabolic eqns., Neumann problem, global existence theorem 7−72907
quasiperiodic solutions of the nonlinear Schrodinger equation 7−128314
quasiperiodically forced dynamical systems with strange nonchaotic attractors 7−108418
rectangular matrix Riccati eqns., superposition formulae 7−72872
respired soluble gas uptake modelling 7−100966
Schrodinger equation, nonlinear, quantum coherence 7−140554
Schrodinger equation, nonlinear, solitons, energy transfer and self-trapping 7−143376
Schrodinger equation, perturbed, Painleve anal., conservation laws and Lie-Backlund symmetries 7−120816
Schrodinger equation, wave modulation anal. 7−108251
second order eqns., boundedness criteria 7−80342
second order equations, oscillation theorems 7−80352
secondary bifurcation of three-dimensional standing waves 7−88999
semilinear reaction-diffusion system, equilibrium solns. 7−80702
shells, spherical under external pressure, bucking anal. 7−123496
sine-Gordon eqns., periodically driven, universal attractor 7−108259
Sine-Gordon equation, discrete backlund transformation 7−73003
sine-Gordon equation, kink motion in applied field 7−80434
sine-Hilbert equation kinks, dynamical motions, dependent variable transform. 7−140434
sine-lattice equation, π-kinks as fundamental nonlinear modes 7−120778
singular integro-differential eqns., solns. 7−72881
singular nonlinear parabolic boundary value problems in one space dimension 7−95255
singular waves, linear superposition in nonlinear hyperbolic system *(French)* 7−95354
solitary waves in the presence of symmetry, stability theory 7−134528
soliton phenomena, finite element method appl. 7−67028
solitons, nonlinear interactions in complex t-plane 7−80445
solvable quantum field theories and polynomial conserved quantities for the quantum nonlinear Schrodinger equation 7−80506
spectral transform from $\bar{\partial}$-approach, general evolution 7−120777
string vibrations, nonlinear hyperbolic problems, explicit bounds 7−66994
subharmonic bifurcations, variational approach 7−108417
supersymmetric nonlinear Schrodinger equation, complete integrability, Painleve criterion, fermionic and bosonic fields 7−140506
supersymmetric sine-Gordon equation and infinite dimensional superalgebras, prolongation structures 7−108168
transonic flow, external spatial streamline problems, boundary value methods for nonlinear differential eqns. 7−97560
two-phase flow model diff. eqn., nonlinear periodic waves, perturbation anal. 7−134520
two-phase flow problem diff. eqn. soln. using iterative technique *(Chinese)* 7−91187
variational inequalities in Orlicz-Sobolev spaces 7−80359
variational inequality related to nonlinear evolution equations 7−128250
vortices and solitons in plasmas, nonlinear wave eqn. review 7−130849

nonlinear differential equations continued
wave equations, Cauchy problem, global classical solns. *(French)* 7−128300
wave equations, covariant exterior derivative, Painleve test and integrability 7−95357
wave equations standing and travelling waves 7−108260
wave transmission across a random medium, localisation, invariant imbedding approach 7−80442
weakly damped Schrodinger eqn., finite dimensional behaviour *(French)* 7−140484

nonlinear equations
see also nonlinear differential equations
abstract parabolic evolution eqns., time analyticity of solns. 7−72856
Aitken-Stephenson method, analogue with adjustable step *(Russian)* 7−120779
approximate solution of monotone nonlinear operator equations 7−66960
Backlund transformation eqns. for 2D nonlinear evolution eqns. 7−128246
beams, tapered, geometrically nonlinear FEM 7−90932
Bratu 2D nonlin. eigenvalue eqn., analytical and num. study 7−102143
convolution-type nonlinear Volterra eqn. with perturbation, asymptotic behaviour 7−102095
couple stress fluid flow past a stretching sheet 7−117635
coupled electromagnetic and scalar fields, anisotropic model 7−108317
damped coupled nonlinear oscillator system, freq. calcs. 7−102149
degenerate hyperbolic and parabolic coupled systems, global solns. 7−80355
difference equations, boundary-value problems existence and uniqueness theorems 7−95261
diffusion in symmetric bistable pot., variational approach 7−73287
direct and inverse scattering problem for the Landau-Lifshitz equation 7−102093
elasticity, solutions and variable parameters for nonlinear problems 7−108232
elastodynamics in two space variables, nonlinear Neumann boundary problem *(French)* 7−72976
elliptic equations with highly oscillatory random coefficients *(French)* 7−102087
existence and iterative approx. of solns. 7−115755
explicit auto-Backlund relation through gauge transformations 7−73037
fast-convergent derivation-free method for solving nonlinear equations 7−72942
fracture mechanics, elastic-plastic nonlinearities 7−91018
frames, elastic, nonlinear finite element analysis 7−117457
fused point perturbation theory, coupled nonlinear equations, Rayleigh-Schrodinger theory, Pade potentials 7−140488
gas desorption mechanism principle and meas. 7−137709
generalized method of solving nonlinear equations 7−95257
globally convergent iterative procedure, efficiency 7−140442
integrable nonlinear Hamiltonian systems, Lax operators for inverse scatt. scheme 7−108174
integral inequalities for functions defined in partially ordered topological spaces 7−80357
isotropy result for isolated singularities of nonlinear elliptic inequalities *(French)* 7−102088
Kadomtsev-Petviashvili eqn., infinite symm. hierarchies and constants of motion 7−108175
KP hierarchy, recursion operator in two and three spatial dimensions 7−140527
magnetic fluids, parametric resonance 7−138289
magnetically confined collisional plasma, diffusion, nonlinear eqns. 7−111177
Master symmetries and point particle representations, recursion operator, soliton eqn. hierarchies 7−140467
maximal and minimal eigenvalues and their associated nonlinear equations 7−140502
Newtonian slightly compressible liquid in porous medium, nonlinear filtration eqns. *(Russian)* 7−111091
nonlinear screening, stability of solutions 7−70221
nonlinear static Poisson eqn. in semiconds., soln. using fast iterative algorithm 7−115751
parabolic equations, quasi-explicit difference schemes 7−108160
radial nonlinear wave eqn., global analytic solns. 7−102175
sine-Gordon breather soln., parametric adiabatic perturbations 7−108176
singular root of nonlinear algebraic equations, modified deflation algorithm 7−72932
sinh-lattice eqn. with nearly integrable solitons 7−73001
soliton solutions to nonlinear equations and group representation theory 7−115928
solitons and instantons, operator quantization 7−115696
solutions of nonlinear equations using singular Jacobian matrices 7−72868
superimplectic operators and Z_2-graded integrable evolution equations 7−88919
three-dimensional EM fields calc., involving laminar eddy currents 7−129931
three-dimensional groundwater flow eqn., comparison of iterative methods 7−123576
transonic flow, nonlinear singular integral equation, existence of continuous solns. 7−69209
Volterra nonlinear integro-differential eqn., existence, uniqueness, initial value problem 7−102098

nonlinear field theory
2D Burgers equations, phase manifold geometry 7−80990
(4, 0) supersymmetric σ-models, finiteness, harmonic superspace formalism 7−102578
β functions, equivalence with massless bosonic string field equations, bosonic nonlinear-model 7−116149
γ_5 anomaly, nonlocality source, removal from gauge theories 7−67479
$\lambda\bar{\phi}^4$ field theory, nonstandard expansion techniques for effective potential 7−89368
$\lambda\phi^4{}_4$ field theory, high temp. series anal., logarithmic scaling corrections 7−95733
$(\lambda\phi^4)_4$ theories, dimensional continuation, Gaussian effective pot., d→4 limits 7−134958
$\lambda\phi^4$ field theory, lattice anal., Yukawa-coupling-generated fermion masses 7−95735
$\lambda\phi^4$ model, new phase, triviality proof 7−89365
$\lambda\phi^4$ theory, 2D, 3D, finite temp., symmetry restoration 7−140824
$\lambda\phi^4$ theory at finite temp., improved one-loop anal. 7−140794

nonlinear field theory continued
$\lambda\phi^4$ theory in curved spacetime, one-loop effective action in interacting quantum field-theory 7−81010
$\lambda\phi^4$ theory on 10^4 lattice, effective potential in scalar field theory 7−102612
π lagrangian and skyrmion masses 7−116088
σ models, soliton solns., inverse scatt. method and n-step superpotential 7−89369
σ models from d=2 conformal supergravity 7−140586
σ models on arbitrary Riemann surfaces, Virasoro algebra 7−140810
σ models with torsion, two-loop β-function 7−102601
σ-model, chirally gauged, spin 0, spin 1 meson anal. 7−108807
σ-model, $G(m_1+m_2)/G(m_1)\times G(m_2)$, G=O, U, Sp, in $2+\epsilon$ dimensions, anomalous dimension calcs. 7−73503
σ-model, $G(m_1+m_2)/G(m_1)\times G(m_2)$, G=O, U, Sp, in $2+\epsilon$ dimensions, anomalous dimensions, Young tableaux representation 7−73504
σ-model, gauged 4D, canonical quantisation 7−73492
σ-model, relaxation time calcs., finite size scaling effects 7−73265
σ-model, supersymmetric, gravitational β function, four-loop corrections, effective action 7−108790
σ-model, two-dimensional, isomorphism with free fermion theory, proof of inequivalence for Sp(N)×Sp(1), N>1 7−73510
σ-model and critical dynamics, finite size effects 7−73266
σ-model in 2D, two-loop β-function 7−128755
σ-model related to fine structure of strings 7−140795
σ-model with ρ meson coupling, chiral soliton stability 7−134930
σ-models, symmetry of the string background field equations 7−121351
σ-models and string theories 7−140792
σ-models with torsion, two-loop renormalisation, bosonic and supersymmetric cases 7−134933
ϕ_2^4, asymptotic completeness and multiparticle structure in field theories 7−89320
ϕ_2^4 field theory, broken symmetry phase, kink sector construction 7−134919
ϕ_6^3 theory, Langevin renormalization of Green's fns. 7−108808
$(\phi^2)^2$ field theory and critical dynamics, finite size effects 7−73266
$\phi^3{}_6$ scalar theory, operator regularization and one-loop Green's fns., background field quantisation 7−108780
ϕ^3 field theory, zero critical dimension, Polyakov string theory 7−73526
ϕ^3 theory, four-rung ladder diagram, scatt. amplitude 7−89350
ϕ^3 theory, ladder diagrams, high-energy large-momentum transfer processes 7−89349
$(\phi^4)_{1+1}$ model, virtual particle number, effect on *S*-matrix, nonperturbative technique 7−108783
$(\phi^4)_{3+1}$ theory, infinitesimal bare coupling constants, BCS-type vacuum state 7−134957
ϕ^4 models with N scalar fields, Zimmermann's coupling reduction 7−73534
ϕ^4 soliton background field at finite temp., fractional fermion number 7−102597
ϕ^6 field equations, exact solutions by symmetry reduction 7−134925
ϕ coupling, implications for initial singularity and inflationary universe 7−95443
Anderson transition, nonlinear σ-model treatment using interacting matrices 7−70156
anti-de Sitter supersymmetry, spontaneous breaking, Wess-Zumino model 7−73560
B=2 skyrmion, axial symmetry, minimal energy config., skyrmion-skyrmion scatt. 7−116065
Backlund transformations, gauge theory and nonlinear evolution eqn. 7−108798
bag model of hadron struct., solitonic nature of hedgehog solns., review 7−128862
baryon elastic scattering cross sections in the Skyrme model 7−80980
baryon octet as SU(3)-subgroup Skyrmions 7−81057
baryon properties, anal. using chiral bag plus skyrmion hybrid model and generator coord. method 7−89453
Born-Infeld action from conformal invariance of the open superstring 7−95430
bosonic σ-model, conditions of Weyl invariance 7−121352
bosonic σ-model perturbation theory, UV fixed point, string background field, conformal anomaly 7−89459
bosonic nonlinear σ-model two-loop β-functions and low-energy string effective action 7−128756
bosonic string theory, Grassmannian σ-models and extrinsic geometry 7−108905
canonical action-angle formalism for quantized nonlinear fields 7−89327
chiral σ model coupled with gauge fields, topologically stable soliton solns. 7−89371
chiral σ-model with quarks, B=2 configs. 7−108756
chiral bag model struct. fns., scaling and Regge behaviour 7−121455
chiral current anomaly from Schwinger terms 4D chiral gauge theory anal. 7−73520
chiral G×G field theory, anomalous current algebra 7−140815
chiral gauge theories, 2D quantization and current algebra 7−95766
chiral nuclear model, multiple solns. in config. space 7−73708
chiral soliton models coupled with vector fields, solutions with spontaneous parity violation 7−140821
chiral soliton quark models, non-hedgehog ansatz and ω-meson role 7−140898
chiral-symmetry-breaking phase transition in lattice gauge-Higgs theories with fermions 7−116076
colour-dielectric model, soliton bags, numerical anal., nucleon props. 7−116137
conformally invariant scalar field at finite temp. in anti-de Sitter space 7−95737
conformally invariant SU(2) σ model, finite operator algebras 7−81007
continuum quantum field theory, nonperturbative regularisation scheme, ϕ_6^3 appl., scalar prototype 7−73511
coupled scalar fields in 2D 7−128742
CP(N−1) models in (2+1) dimens., soln. dynamics, skyrmions 7−95769
current algebra 7−108750
curved space string dynamics, perturbatively renormalised vertex operator, Virasoro algebra 7−116152
curved spacetime sigma models, local renormalisation group eqn., diffeomorphisms, conformal invariance 7−89342
curved superspace σ-models, light cone gauge fixing, θ-expansion of superstring 7−73566
Dirac eqn., 1/n-contracted soliton background, spectral asymm. and fractional charge soln. 7−95719

nonlinear field theory continued
Dirac particle in vortex field, angular momentum eigenvalues and massless fermions 7−102582
Dirac sea effects on finite solitons, mass shift, polarisation effects, Friedberg-Lee appl. 7−108758
double sine-Gordon kink, collective coordinates and linear modes 7−134960
dynamical symmetry breaking, alternative effective pots., Gross-Neveu model pots. 7−81054
effective chiral action and soliton stability, scaling behaviour 7−102598
effective supergravity lagrangians for 4D superstring massless sector, underlying nonlinear σ model 7−135078
electroweak theory in nonlinear gauge, renormalisation 7−81082
exotic Drell-yan processes at Tevatron and SSC, light and heavy bosons 7−134996
exotic skyrmions *(Hungarian)* 7−128766
explicit auto-Backlund relation through gauge transformations 7−73037
extended Skyrmion model from quark flavour dynamics, effective chiral meson Lagrangian 7−121458
external field problems, fractional charges, inverse scatt. method 7−95727
Fermi field, stochastic quantisation, fermions as solitons 7−67475
fermion-meson interacting fields, soliton solns. 7−116087
finite nuclei, pure fermionic chiral field theory anal., radii, binding energies and density 7−140985
finite theory, critical surfaces, flat directions, O(N)×O(N)-symmetric model, phase structure 7−121367
first order chiral phase transition in lattice QCD with 2 light flavours 7−121375
free open spinning string, diagonalisation, nonlinear sigma model critical dimens. 7−108379
gauged chiral SU(2) action, skyrmion-baryon phenomenology 7−108755
glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
Grassmann models and existence of nonlocal currents, canonical structure 7−67174
Grassmannian σ-model in 2D, finite action solutions, stability 7−89325
gravitational plane waves collision, vacuum Einstein eqns., soliton solns. for space-time 7−80533
Gross-Neveu model, asymptotic completeness and multiparticle structure 7−108736
Gross-Neveu model, mass gap for elementary fermions 7−95730
Gross-Neveu models, nonintegrability 7−67462
heterotic string, σ model, Chern-Simons term 7−73518
instantons and lattice confinement 7−121377
integral quantum Hall effect, instanton soln., quantum fluctuations in non-linear σ model 7−125016
interacting $\lambda\phi^4$ theory, effective potential 7−81027
intermediate bosons, longitudinally polarized, scatt. in symm. breaking sector, low energy theorems 7−135004
internal gravitons in higher-dimensional unified theories, nonlinear σ-model 7−80570
kink and skyrmion fields, homotopy conservation laws and extension theorems 7−80988
Klein-Gordon eqn., large-N limit from uncertainty principle 7−67481
Klein-Gordon equations, nonlinear, interacting fields, asymptotic props. 7−128750
Klein-Gordon kink perturbation theory, nonlinear, Green's fns. 7−108749
Klein-Gordon kinks, classical dynamics collective coordinate method 7−134961
Klein-Gordon systems, short-time evolution 7−95724
Landau level, density of states, supersymmetric formalism with Φ^4 interaction 7−70160
Landau-Lifshitz equation, hidden symm., dual eqn. for asymm. chiral field 7−138182
large-N theories, review 7−67576
lattice spin models on a torus, zero modes and perturbation theory 7−80984
lattice Thirring model, finite-element lattice fermions in perturbation theory 7−134946
left-right symmetry model with the Wess-Zumino-Witten effective action 7−134986
light cones in linear and nonlinear field theories *(Russian)* 7−121381
locally supersymmetric sigma models with conformal invariance in 2D 7−73530
mass gap in non-abelian σ models and gauge theories 7−102624
massless ϕ^4 model, thermodynamic limit, Borel summability by phase space expansion 7−89318
massless Kaluza-Klein gauge fields and scalar-induced space-time compactification 7−134599
massless Thirring model, energy spectrum and critical coupling constant 7−121327
matrix valued ϕ^4 field theory, instanton solns. 7−80978
meson radiative decays, vector dominance model, coupling constants and effective lagrangians 7−67610
metastabilities in three-flavor QCD at low quark masses 7−121432
multiflavour Gross-Neveu model, exact soln. and renormalization group β function 7−67485
N=1 centrally extended sigma model, exact SUSY S-matrix, central charges for O(2N) 7−121342
N=2 supergravity, matter couplings 7−108377
N=2 supersymmetric nonlinear sigma model, five-loop divergences 7−89347
N=Z supergravity, topological terms for nonsemisimple groups 7−108381
neutron star matter with realistic nucleon-nucleon interactions, pion condensation, σ-model anal. 7−73722
neutron-rich and symmetric nuclear matter, chiral sigma model calcs., neutron stars 7−121688
non-Abelian bosonization in (1+1) dimensions, current correlation functions, σ-model 7−102618
noncompact σ models, quantisation procedures 7−116052
nonleptonic hyperon decay, Skyrme model 7−73645
nonlinear σ model, field-diffeomorphism anomalies, spectral series technique, Riemannian constraints 7−140802
nonlocal current algebra and N=2 superconformal field theory 7−81061
nontopological soliton bag model, hadron wave fns., first order corrections 7−128857
nonultralocal field theory with soliton solns., Poisson-Bracket algebra for scatt. data 7−108797
O(N+1) σ-model, BRS renormalisation, characterisation 7−108759
O(N) σ model, symm. restoration at finite temp. 7−102644

nonlinear field theory continued
O(N) σ-model with mixed action in large N limit, phase transitions 7−81026
O(N) symmetric $\lambda\phi^4$ theory, Gaussian-effective pot. approach 7−81011
O(N) symmetric $\phi_3{}^6$ models, small and intermediate N, phase structure 7−121347
operator regularization of Green's functions 7−134948
perturbative chiral anomaly in the light cone gauge 7−67527
phase cell cluster expansions and ondelettes in boson scalar field theory 7−89317
QCD, light quark masses from local duality, chiral Lagrangian realization 7−67571
QCD, pion effective Lagrangian and soliton physics 7−89431
QCD and Skyrmions, effective chiral Lagrangian, soliton solns. without baryon quantum nos. 7−116129
quantum lattice models, simple numerical approach, iterative algorithm for trial wave fn. 7−121365
quasi Nambu-Goldstone models, spontaneous internal symm. breaking and mass splittings 7−95789
regular expansion for calculation of the renormalization-group functions in a theory with dimensional coupling constants 7−73541
saturable Klein-Gordon eqn., self-trapped states 7−102610
scalar field, perturbation theory soln. of Heisenberg field eqns. 7−102628
scalar solitons in nonlinear scalar field theories, compactness criterion 7−81018
scale invariant sigma models on homogeneous spaces, symmetry props. 7−121353
sigma model, 2D nonlinear conservation laws, 1/N expansion 7−67468
sigma model, nonAbelian, Wess-Zumino action and canonical quantization 7−116061
Skyrme model, ρ meson model, alternative approach using σ-stabilised solitons 7−73528
Skyrme model, anomalous current algebra 7−140815
Skyrme model, bound baryon number-two soln., axial symmetry, numerical calc. 7−140818
Skyrme model, electromagnetic n-p mass difference calcs. 7−95906
Skyrme model, extended, even-dimensional, higher-dimensional solitons 7−116055
Skyrme model, Goldberger-Treiman relation and nucleon strong interaction mean square radius *(Chinese)* 7−121328
Skyrme model anal. of baryon resonances, inclusion of vector mesons in Lagrangian, phase shifts 7−102593
Skyrme model central NN interaction, attraction 7−89544
Skyrme soliton model for baryons in SU(2)×SU(2) chiral theory 7−67590
Skyrme solitons, effective Lagrangians and static properties of baryons 7−67465
Skyrme solitons with vector mesons, electromagnetic and axial props., nonlinear chiral theory 7−108757
Skyrmion, quantisation, Wess-Zumino term, Berry phases and magnetic monopoles 7−89315
Skyrmion geometry, energy functional geometrical interpretation, conformal transformations, chiral symmetry breaking 7−121325
skyrmions axially deformed, constrained variational anal. 7−80993
skyrmions with large baryon number, props. 7−121332
so(4)-extended d=2 superconformal algebra, nonlinear representation 7−121354
softly-broken superconformal invariance, chaotic inflation possibility, complex scalar fields 7−140340
soliton-antisoliton pair prod. in strong external fields, sine-Gordon theory, generator-coordinate method 7−121374
solitons and instantons, operator quantization 7−115696
space-time compactification induced by nonlinear sigma models, gauge fields and submersions 7−95425
spacetime approach to quantum field theory 7−81033
spheroidal Skyrmion deformation effect on mass, RMS radius, quadrupole moment 7−89331
spontaneously broken non-Abelian gauge models, low mass Skyrmions, stabilization term, GSI particle 7−108745
stress-energy correlation functions, non-Abelian bosonization, massless fermion effective action 7−121366
string theory, Fayet-Iliopoulos terms, vacuum destabilization 7−108877
string theory effective actions and σ-model β-functions 7−121472
strings in background fields 7−108898
strongly interacting Higgs sector, right-handed charged currents in quark sector, weak K decay 7−134928
SU(2) Skyrme model, soliton interaction, interaction energy between topological centres, factorization ansatz 7−128773
SU(2) Skyrme-model Lagrangian, quantum mechanical struct. and collective coord. quantisation 7−89372
SU(3) Skyrme model, baryon mass spectrum calcs. 7−81024
SU(3) Skyrme model, octet dominance of the hadron weak transition, matrix elements 7−89378
SU(3) theory, baryon number violation by chiral colour axiinstantons 7−140855
SU(N) massless Thirring model, free boson equivalence from nonabelian bosonisation 7−89379
SU(N) self-dual gauge theory, Belinsky-Zakharov method, soliton solns. 7−80972
superstring σ-models from bosonic model, four-fermion interactions on world sheet 7−120903
superstring effective actions and Virasoro algebra central charge on Kahler manifold SUSY σ-model 7−80546
superstring world sheet supergravity, prepotentials solns. 7−73624
superstrings, nonperturbative effects in sigma model 7−108342
superstrings, sigma model interpretation, Siegel symmetry origin 7−102252
superstrings from sigma models, bosonic string as example 7−102251
superstrings from the $((1,0)$ superspace$)^2$ nonlinear sigma model 7−80547
supersymmetric σ models, Euclidean superfield quantisation and noise in superinstanton eqns. 7−67492
supersymmetric σ-model, geometry and anomaly struct. study 7−80966
supersymmetric σ-model, resurrecting (2,0) compactifications 7−102711
supersymmetric σ-model in $E_8/E_7\times U(1)$ manifold 7−102664
supersymmetric σ-models, softly broken, ultraviolet behaviour 7−134941
supersymmetric nonlinear σ-model, elliptic cohomology formulation 7−89319
supersymmetric nonlinear σ-model on Riemannian manifold in superspace, Dirac quantisation 7−73547
supersymmetric sigma models with torsion, β-functions and central charge 7−73531

nonlinear field theory continued
supersymmetric theory quantisation, quantum hamiltonian ambiguities, σ-model and SU(2) Yang Mills theory appls. 7−140836
SUSY nonlinear σ-models, 2 D, UV behaviour, off-shell superfields 7−108770
SUSY Wess-Zumino action and U(1) gauge fields, SU(N) anomaly 7−95740
SUSY Wess-Zumino-Witten model, superconformal Ward identities 7−89389
thermodynamics of the Schwinger and Thirring models 7−102611
thermofield dynamics, renormalized soliton statistics 7−116078
Thirring model at finite temp. and density, derivative coupling model anal. 7−128769
Thirring strings, toroidal compactifications, bosons and free fermions 7−108874
two dimensional theories, one-loop corrections to solitons, ϕ^4 kink 7−121368
two-dimensional fermion determinants as Wess-Zumino actions 7−134938
two-scale, two scalar model, spontaneously broken, hierarchy stability 7−89366
U(2)$_v$ Yang-Mills approach to skyrmions with vector mesons, nucleon EM props. 7−128763
vector-vector duality in 3D, Fock-Schwinger gauge 7−80991
virtual domain walls and kinks, dynamics, 1D ϕ^4 scalar model 7−137502
Wess-Zumino conditions in higher dimensions, general solns. 7−116044
Wess-Zumino Lagrangian, anomaly-free quantisation, group manifold strings 7−80995
Wess-Zumino model and OSp(N,4) supersymmetry, semiclassical solns. 7−140837
Wess-Zumino-Witten model, dimensional regularisation and renormalisation 7−95742
Wess-Zumino-Witten system, dynamical analyses 7−95731
Yang Mills theory, generalized, BPST instantons, conformal props., O(4p+1) formulation 7−116056
Yang-Mills fields, soliton solutions and group representation theory 7−115928
Yang-Mills theory, O(4)-invariant instanton type solns., 't Hooft representations 7−102632
z 7−95744
$\Delta(1232)$, hadronic width and chiral fluctuations in Skyrme model 7−102599
$\lambda\phi^4$ theory and scalar electrodynamics, effective action with torsion in de Sitter space 7−89070
$\lambda\phi^4$ theory in de Sitter space, one-loop effective pot. 7−102600
p, strange quark content and chiral symmetry breaking, Skyrme model anal. 7−102640
$\phi_3{}^4$ Euclidean field theory, phase cell cluster expansion 7−80963
$\gamma\gamma\to\gamma\gamma$, finiteness and gauge invariance in SU(2)×U(1) model 7−81264
$\lambda\phi^4$ theory, one-loop effective action, conformal transformation, quantum fluctuations variance 7−121369
N-Δ mass splittings, soft-pion Skyrme model anal. *(Chinese)* 7−102742

nonlinear network analysis
neutron yield of plasma focus device, nonlin. damping resistors influence 7−69482

nonlinear optical phase conjugation *see optical phase conjugation*

nonlinear optical susceptibility
4-butoxycarbonylmethylurethane polydiacetylene, ultrafast resonant optical Kerr effect 7−123130
azo dye attached polymer, nonlinear optical props. 7−136425
benzene ($-d_6$), time-resolved stimulated Raman scattering in a diamond anvil cell 7−68310
n-butane, third-order nonlinear suscept. meas., appl. in coherent anti-States Raman scatt. 7−68777
centro-symmetric media, SHG 7−130246
chlorobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
cubic crystals, four-wave mixing, polarisation depend. 7−110452
2-cyclooctylamino-5-nitropyridine, nonlinear optical crystal, prep. and props. 7−68740
degenerate four-wave mixing, polarisation bistability and instability 7−136419
ethane, third-order nonlinear suscept. meas., appl. in coherent anti-States Raman scatt. 7−68777
ferroelectric liquid crystals, performance parameter meas. methods, review 7−92615
fibres frequency-doubling processes, anal. using Raman spectroscopy 7−136563
four-wave mixing, strong field theory 7−141923
gas susceptibility, nonresonant third-order, CARS spectroscopy meas. 7−123097
Gaussian beam propag. in lens-like medium 7−136402
glasses, CdS_xSe_{1-x}-doped, third-order optical nonlinearity dispersion meas. 7−117260
guided wave theory 7−82696
intensity-dependent generalised optical susceptibilities in polychromatic fields 7−90675
Kramers-Kronig relation generalization for solids and plasmas 7−110446
Langmuir-Blodgett monolayers, linear electro-optic props. 7−123057
meta-nitroaniline for molecular optoelectronics, prediction of second order susceptibility 7−110454
molecular crystals, interference fringes technique meas. of susceptibility tensor 7−130237
nitrobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
organic molecules, large, resonant third-order hyperpolarisabilities 7−123061
orientationally ordered materials, second-order nonlinear-optical processes 7−123058
palladium poly-yne, third-order optical nonlinearity 7−97086
phenol-cinnamic acid interface, second-order susceptibility tensors 7−82686
picosecond active Raman-scattering spectroscopy of biological objects 7−145289
polyacetylene, freq. depend. of third order optical susceptibility 7−141941
polydiacetylenes, excited-state dynamics and temporally resolved nonresonant nonlinear-optical processes 7−123060
polydiacetylenes, nonlinear spectroscopy 7−82715
polymer films, nonlinear optical props. 7−68754
propane, third-order nonlinear suscept. meas., appl. in coherent anti-States Raman scatt. 7−68777
quantum well structures, optical nonlinearities due to exciton localisation 7−130230

nlinear optical susceptibility continued
quartz, single-mode fibres, elliptically polarised light waves 7—117334
SHG in optical fibre by second order susceptibility grating 7—90718
SHG in optical fibre by self-written susceptibility grating 7—68778
sum rules, derivation, appl. for linear and nonlinear optical consts. 7—106122
sum rules for nonlinear susceptibilities, difference freq. generation, anharmonic oscillator model 7—90703
sum rules for sum freq generation, classical anharmonic oscillator model calcs. 7—110462
surface layers, nonlinear optical susceptibility 7—90695
surface optical second harmonic generation, local and nonlocal nonlinearities 7—103895
waveguide having cubic nonlinearity, prism coupling theory 7—82788
BaB_2O_4, optical, mechanical and thermal props. 7—141919
CO jet, two-photon resonant third-order nonlinear susceptibility, third harmonic generation 7—97075
CdS crystals, nonlinear refractive anisotropy near fundamental absorption edge 7—90676
Cs, frequency upconversion from 10 μm atm. window to visible, third-order nonlinear susceptibility *(Japanese)* 7—97088
GaAs, combination-type, third-order nonlinear susceptibility at 10.6 μm, phase conjugate signal 7—110477
GaAs crystal, nonlinear absorpt. and optical activity, picosec. polarisation spectroscopy study 7—97071
GeSi-Si strained layer superlattices, second order optical suscept., Pockels coeff. calcs. 7—118975
H, at. nonlinear susceptibilities at frequencies above ionisation threshold 7—68266
H excited states, nonresonance cubic optical susceptibility 7—82704
Hg, third order susceptibility and excited-state oscill. strengths 7—122454
HgTe, optical nonlinearity 7—110436
$In_{0.53}Ga_{0.47}As/InP$ multiple quantum wells, nonlinear spectroscopy 7—130092
Na, collision-aided Faraday effect, nonlinear susceptibility and optical pumping calcs. 7—82692
Na, frequency upconversion from 10 μm atm. window to visible, third-order nonlinear susceptibility *(Japanese)* 7—97088
$RbNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7—98433
SnF_2-SnO-PbF_2-P_2O_5 glass containing acridine dyes, nonlinear optical props. 7—123124
TiO_2-Nb_2O_5-B_2O_3-Na_2O-SiO_2 glass for nonlinear optical waveguides, synthesis and charactn. 7—136469
$TlNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7—98433

onlinear optics
see also nonlinear optical susceptibility; optical bistability; optical coherent transients; optical frequency conversion; optical hole burning; optical parametric devices; optical phase conjugation; optical saturation; optical self-focusing; quantum optics; self-induced transparency; stimulated scattering; thermal blooming
4-*n*-heptadecylamido-4′-nitrostilbene, a new Langmuir-Blodgett film material for nonlinear optics, prep. 7—110438
7$X CuCl, three-level system, optical nonlinearities and bistability 7—75049
absorption and emission spectroscopy, appls. to excited states 7—108667
acoustic subsystem, nonlinear-optical deformation and smoothing of semiconductor surfaces by short laser pulses 7—142828
anharmonic oscillator, higher-order squeezing of coherent light 7—96971
atoms, nonlinear ionisation in laser beam, evaporating model for highly charged ions form. 7—129674
biopolymers, nonlinear optical and electro-optical properties 7—141928
biphenyl derivatives, second-order nonlinear polarisability determ. by SHG 7—110456
birefringent fibre, optically nonlinear, polarisation state stabilisation 7—82799
birefringent fibre with periodic coupling, spatial polarisation chaos 7—82817
birefringent fibres, soliton polarisation instabilities 7—68861
birefringent single mode fibres, nonlinear pulse propag. 7—68857
bistability in quantum optics, chaos and noise effects 7—136418
Bragg reflection from a cholesteric liquid-crystal slab in the framework of nonlinear optics 7—141920
2-bromo-1,1,1,3,3,3-hexafluoro-2-(trifluoromethyl)propane, nonlinear IR absorption 7—116973
carbon tetrachloride, four-wave mixing, large reflection coefficients 7—110445
chaos and coherence in passive nonlinear systems 7—68767
chirped gratings for efficient coupling into nonlinear waveguides 7—130319
coherent and nonlinear optics, conf., Moscow, USSR (Aug. 1985) 7—134345
coherent radiation, strong beam confinement by thin dielectric films *(Romanian)* 7—141927
complex molecules, in soln., Brownian rot. effect on light-induced anisotropy 7—82688
computing circuits, reversible 7—117152
condensed matter physics conference, Stockholm, Sweden (March 1986) 7—72705
conference, Erice, Italy (July 1986) 7—140376
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7—120703
corundum, particles, in aerosol, optical props. in IR region 7—119590
counterpropagating beams, nonlinear polarisation dynamics, Stokes-vector formalism 7—97069
counterpropagating beams, nonlinear polarisation dynamics 7—136421
crystals isomorphic to KH_2PO_4, refractive index meas. nonlinear, crystals refractive index meas. 7—125667
cubic crystals, photorefractive two-beam coupling 7—144021
cyclotron electron, isola in three-photon optical excitation 7—141775
degenerate four-wave mixing, transient, relaxation effect 7—123055
dielectric optical waveguide with nonlinear media, propag. charcts. of nonlinear TE waves 7—130330
1,4-dioxane, liq., vibr. dephasing and relax. 7—96828
directional couplers, saturation and loss 7—90774
directional couplers with integrating nonlinearities, response anal. 7—75112
discrete periodic resonant medium, coherent interaction of light 7—68762

nonlinear optics continued
distribution laws of a light field propagating in a medium with cubic nonlinearity 7—141918
dye solutions, ultrafast population relaxation obs. using time-delayed four-wave mixing 7—123064
dynamic frequency plane image correlator based on photorefractive nondegenerate four wave mixing 7—110283
elliptically polarised light scatt. by bound electrons, zero freq. and second harmonic waves 7—68789
envelope solitons, stability properties 7—95363
etalons and optical computing 7—90685
Fabry-Perot interferometer, picosecond pulse reshaping 7—134845
femtosecond pulse compression, nonlinear response, inertia influence 7—141905
femtosecond pulse generation through soliton effect in single-mode fibre 7—103875
femtosecond solitons existence in optical waveguides 7—90789
femtosecond wave packets in nonlinear dispersive medium, self-effect, maximum contraction 7—123083
fibers, single-mode, nonlinear and dispersive, femtosecond, pulse propagation 7—75144
fibre devices, nonlinear power transmission limits 7—103867
fibre loop closed by a coupler, field fluctuations 7—110584
fibre nonlinearities in optical communications 7—90809
fibre optic nonlinear interferometric sensor, passive stabilisation using sampling scheme 7—104024
fibre optic pulsed laser delivery for remote meas., nonlinear processes in core 7—123249
fibre waveguide, optical soliton formation, noise effects 7—90808
fibre-grating optical pulse compression limits 7—142008
fibres, modulational instability, theory 7—104015
fibres, nonlinear propagation, dynamic coupled-mode theory 7—130376
fibres, nonlinear pulse propag., general formalism 7—68853
fibres, nonlinear self-guiding and switching 7—130349
fibres, periodically twisted, polarisation instability, all-optical switching and intensity discrimination 7—75145
fibres, picosecond and femtosecond light pulse production, review 7—136552
fibres, pulse propagation, intensity depend. spectra 7—104016
fibres, single-mode, soliton evolution from chirped and noisy pulses 7—75129
film guided waves, propag. 7—136514
four-level system, third-order nonlinearities, cross relax. and line mixing effects 7—97097
four-wave mixer in nonlinear regime, quantum behaviour 7—117164
four-wave mixing, quantum effects of atom-cavity interaction 7—110308
gases, high-resolution nonlinear rot.-vibr. Raman spectrosc. obs. 7—80903
glass nonlinear refractive index meas. using three-wave frequency mixing 7—108629
glasses, glass- and gel-based composites, nonlinear optical properties 7—68753
glasses, resonance HF absorption at low temp., nonequilib. phonons 7—131262
graded waveguides, field structure, defocusing nonlinearity influence 7—130332
graded-index film waveguide, exponential-like profile, nonlinear waves study 7—68797
guided wave theory 7—82696
guided waves, nonlinear, propag., effects of linear absorption 7—75113
high-viscosity liq. surface, mol. scatt. of light 7—85753
holography, caustics 7—130024
hybrid bistable device, second-order differential delay eqn. 7—141925
hysteresis in the bifurcation structure of a nonlinear optical device with a time-dependent bifurcation parameter 7—130245
I_2-IV-VI_3 cpds., refractive index, spin-orbit splitting and optical nonlinearity eval. 7—85581
inertial nonlinearity processes in laser media and effects on high-power beams 7—130211
instabilities and chaos in nonlinear optical beam interactions 7—82702
instability development in focused beams 7—136403
insulators, ionic contributions to Raman tensor 7—123108
integrated optics, conf., Innsbruck, Austria (April 1986) 7—102012
intracavity spectroscopy and magneto-optic phenomena research 7—130187
ion-exchanged semiconductor-doped-glass waveguide, optical switching during prism coupling 7—82683
ion-laser plasma, nonlinear resonances, Coulomb broadening 7—117764
Khokhlov's method in nonlinear wave theory 7—102037
Langmuir-Blodgett films 7—125825
lasers and electro-optics, conf., Baltimore, MD, USA (April-May 1987) 7—120705
lasers and their interactions and appls., conf., Las Vegas, NV, USA (Dec. 1985) 7—108033
liquid crystal, opt. induced mol. reorientation, common path interferometer arrangement 7—115999
liquid crystals, isotropic phase, nonlinear optical props. 7—103874
liquid crystals, nonlinear optical processes 7—103869
liquid crystals, optical properties, conf., Naples Italy (July 1986) 7—102002
liquid suspension, laser-induced optical effects 7—68752
lyotropic liquid crystal waveguide, optical nonlinearities 7—103880
macroscopically distinguishable quantum states generated via nonlinear birefringence 7—68606
materials and devices, conf., Erice, Sicily, Italy (July 1985) 7—80172
Maxwell-Bloch eqns., traveling-wave solns. 7—90573
molecules, cooperative mean-freq. absorpt., two-beam two-photon process 7—82305
monomode fibres, stimulated Raman scatt. and nonlinear pulse broadening obs. at 1.32 μm 7—103888
monomode nonlinear waveguides, power-transfer effects 7—136515
Moscow University, history of research 7—136399
multi-soliton pulse self-compression in optical fibres 7—68761
multi-soliton pulse spectral filtering in optical fibres, pedestal suppression 7—68760
multilevel quantum system, relax. process, radiation interaction 7—122894
N-(4-nitrophenyl)-L-prolinol, quadratic nonlinear props. 7—123059
N-(4-nitrophenyl)-N-methylaminoacetonitrile, quadratic nonlinear props. 7—123059
nematic liq. cryst., films, intrinsic optical transistor effect 7—103872
nematic liquid cryst. film, probe beam amplification via two- and four-wave mixing 7—103871

nonlinear optics continued
nematic liquid crystal, isotropic phase, laser induced helical structure 7—131014
nematic liquid crystal, nonlinear optical processes in ns regime, optically-induced mol. reorientation 7—68745
nematic liquid crystal film, probe beam amplification via two- and four-wave mixings 7—68743
nematic liquid crystals, hybrid aligned, nonlinear optical props. 7—103870
nematic/cholesteric mixtures, laser induced gratings 7—110437
neural model anal. as associative memories Hopfield algorithm generalisation 7—136226
nitrilotriacetic acid monoclinic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7—99726
nonlinear optical mixing, higher order susceptibility, comparative anal. 7—90693
nonlinear pictorial feedback systems, chaos and cooperation 7—136229
nonlocal theory of nonlinear optical effects at an interface 7—82695
optical chaos, conf., Quebec, Canada (June 1986) 7—134353
optical pulse self-action phenomena and femtosecond laser pulse generation, review 7—103884
organic crystal mixtures, nonlinear line-narrowing spectroscopy 7—138441
organic crystalline cored fibres, wave propag. and three wave mixing 7—82850
organic materials, new, prospects 7—82731
parametric amplifier, squeezing in the dynamics 7—68787
pentacene, in o-terphenyl glass, optical dephasing at low temps. 7—75034
phase distortion structure for beam propagating in randomly inhomogeneous nonlinear medium 7—130213
phase fluctuations of coherent light interacting with anharmonic oscillator 7—130033
phase-matching angles calc., simple analytic expressions 7—97066
photorefractive materials, introduction and appls. 7—132221
photorefractive materials, light amplification, nonlinear theory 7—132217
photorefractive materials for optical processing 7—82736
photorefractive two-wave mixing with applied RF fields 7—123062
picosecond pulse generation by fibre-grating pulse compression 7—103876
polarisation domains for EM waves propagating in mirror symmetric medium 7—141954
polarisation in nonlinear isotropic and anisotropic media, analytical solns. and intrinsic instabilities 7—68776
polarization solitons 7—68759
poly(N-vinylcarbazole), nonlinear photochemistry, ablation behaviour 7—93341
polyacetylene, nonlinear optical activity, elec. cond., mag. reson. techniques 7—99607
polychromatic scattering, radiation transfer, nonlinear problem 7—75041
polydiacetylene nonlinear optical response of excitons confined to one dimension 7—110444
polymers, heteroatomic ladder, nonlinear optical activity, elec. cond., mag. reson. techniques 7—99607
polymers, semiconducting, fast response nonlinear optical phenomena 7—136424
positive feedback circuit composed of twin-stripe laser diode, p-i-n photodiode and transistor, optical tristability 7—68739
pulse amplification in picosecond range in single mode fibres 7—68748
pulse compression by fibre and grating, stimulated Raman scattering effect 7—103878
pulse compression of Raman-depleted ps pulses and spectrally windowed self-phase modulated pulses at 1.06 μm 7—103890
pulse compression with fibre-prism pulse compressor 7—103877
pulse expansion/compression for chirped pulse amplification 7—110430
pulse propag. in inhomogeneous nonlinear media 7—130235
pulse propagating through arbitrary nonlinear medium, polarisation dynamics 7—97068
pulse propagation in monomode waveguide 7—90781
quantum electronics, conf., Baltimore, MD, USA (April-May 1987) 7—128191
quantum solitons, squeezing 7—103787
radiation-molecule interactions, mol. QED, book 7—134377
Raman fibre amplifier characteristics for use in optical transmission systems 7—110451
rectification effect, generalised formula 7—90682
refraction nonlinearity anisotropy appl. to laser beam control 7—136398
resonance fluorescence from an atom in a squeezed vacuum 7—122431
resonant degenerate four wave mixing, quantum mechanical anal. using diagrammatic method 7—68746
ring resonator with nonlinear medium excited by partially coherent signal, self-modulation of radiation 7—90678
ring resonator with nonlinear optically active medium, polarisation multistability 7—123066
self-effect femtosecond optical wave packets 7—90674
self-induced light polarisation oscills. in KCl:Li crysts. with F_A centres 7—75039
self-induced spatial disorder in a nonlinear optical system 7—123082
semiconductor low-dimensional structures, optical nonlinearities 7—130244
semiconductor microcrystallites, gigantic nonlinear optical polarisability 7—90691
semiconductor optical waveguides, nonlinear response, carrier diffusion effect 7—136512
semiconductor quantum well structures, field induced optical nonlinearity, optical gate, bistability 7—136408
semiconductor quantum wells, nonlinear interactions and excitonic effects 7—82697
semiconductor-doped fibre waveguides exhibiting picosecond optical nonlinearity 7—82800
semiconductors, coherent nonlinear effects, optical turbulence and stochasticity, coherent excitons, photons and biexcitons 7—68742
semiconductors, instabilities 7—136414
semiconductors, nonlinear refraction of 2D laser beams 7—82687
semiconductors, optical nonlinearities and instabilities 7—75048
semiconductors, photoconductivity, nonlinear light transmission, optical absorpt. saturation 7—118534
semiconductors, transient nonlinear optical effects 7—82698
single mode fibre, self-phase modulation and stimulated Raman scatt., spectral and temporal characts. 7—103889
single mode fibres, reducing soliton interaction 7—104007
single mode fibres, soliton propag. *(Japanese)* 7—68868
single-mode optical fibre ring resonator with nonlinear coupling 7—136572
single-mode waveguide couplers and interferometers, theory 7—82849
slab-type waveguide, SHG using 2-methyl-4-nitroanaline as high index top layer 7—97073
nonlinear optics continued
soliton generation, 1.37-1.49 μm 7—90672
soliton laser pulse compression in fibre 7—103879
spatial coherence under thermal self-interaction, statistics anal. 7—90734
spatial dissipative structures in passive optical systems 7—97070
squeezed light, generating and detecting short-duration pulses 7—82526
squeezed-state generation by the normal modes of a coupled system 7—122897
squeezing and sub-Poisson statistics in three-mode interactions 7—136245
stimulated four-photon mixing in birefringent fibre, Stokes and anti-Stokes spectra, frequency shift 7—130340
stimulated Raman scattering, period-doubling bifurcations 7—68788
strained-layer superlattices, (111) growth axis, nonlinear optical response 7—136401
strong Auger recombination in semiconductor doped glasses, evidence 7—118497
subpulse formation of long optical pulses in monomode fibres 7—136562
surface nonlinear optical effects, light diffr. by surface with large amplitude of modulated relief 7—123065
surfaces and composite materials, nonlinear optical props. 7—82699
tetrachloromethane, ultrafast supercontinuum generation 7—136393
thermal lens oscillations at low laser power in organic liquids 7—130228
thermal lensing systems, nonlinear effects in light scattering 7—123079
thin films, nonlinear surface polaritons, TM modes 7—132364
third-order nonlinear susceptibility, spatial symm. forms generated by computer program 7—68744
three-level atoms, light squeezing via non-degenerate four-wave mixing 7—129665
three-level system, interaction with nonlinear propag. of picosec. laser system 7—123081
time-resolved transient phase grating, polarisation selectivity 7—136406
transient self-diffraction of differently tilted beams 7—130236
transition metal layer cpds., interfacial properties, static and time-resolved nonlinear optical props. 7—75052
transverse Zeeman laser, nonlinear freq. mixing *(Chinese)* 7—97060
two-level atomic medium, nondegenerate multiwave mixing, quantum theory 7—90557
two-level resonant medium, phase modulation and parametric broadening of pulse spectrum 7—97065
two-level systems, interconnected, in resonant EM field 7—74891
ultrafast population relaxation obs. using time-delayed four-wave mixing 7—123064
undamped two-level atoms driven by a coherent electromagnetic wave 7—130035
waveguide, soliton motion with dissipation and pumping 7—141988
waveguides, soliton formation, influence of regular phase modulation 7—141984
zirconium di-alkali metal di(nitrilotriacetate) dihydrate orthorhombic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7—99726
AlGaAs-GaAs, nonlinear directional coupler, response calc. 7—130320
Al_2O_3, ruby, single cryst. fibre growth and nonlinear optical use 7—75069
Ar^+ laser, delayed bifurcation at threshold 7—136270
As_2Se_3 glassy films, photoabsorption and photorefraction under pulsed excitation 7—106118
$BaTiO_3$, photorefractive effect, ferroelectric polarisation reversal 7—68755
$BaTiO_3$ photorefractive crystals, intensity-depend. absorpt. coeff. 7—143999
$BaTiO_3$ self pumped phase conjugate mirror, deterministic chaos 7—82720
$BeAl_2O_4:Cr^{3+}$ crystals, alexandrite four-wave mixing meas. of energy migration and radiationless relax. processes 7—92737
$Bi_{12}SiO_{20}$ crystal, photorefractive optically active, two-beam coupling, polarisation influence in diffusion regime 7—122817
$Bi_{12}SiO_{20}$ photorefractive crystals, amplification of high bandwidth signals through two-wave mixing 7—110435
$Bi_{12}SiO_{20}$ real time intensity inversion by four wave mixing 7—122852
$Bi_{12}TiO_{20}$, gyrotropic photorefractive crystals, energy exchange between light waves 7—82693
CO_2 pulsed amplifier, intensity modulated laser beam propag. 7—123047
CdHgTe, narrow-gap semiconductor 7—130243
CdS, induced absorber in hybrid ring resonator, self-oscillations 7—68758
CdS, refraction nonlinearity anisotropy appl. to laser beam control 7—136398
CdS_xSe_{1-x} doped glass nonlinear guided wave structures 7—136518
CdS_xSe_{1-x} microcrystallite doped glasses, optical nonlinearities 7—106110
CdSe, exciton-biexciton transition, optical nonlinearity and phase coherence 7—136395
Cu mixed chalcopyrites, optical nonlinearity and band-gap energy 7—103882
CuCl, nonlinear refr. index due to induced exciton-biexciton transition, time evolution 7—70737
Eu doped glasses, 7—111800
GaAs, bulk, room temperature, optical nonlinearities, fast-recovery gates arrays for parallel processing 7—141929
GaAs, free carrier absorpt., two-photon ionised impurity-plasmon processes 7—85562
GaAs:Cr, photorefractive, two-wave mixing gain meas., moving grating technique 7—130240
GaAs/AlGaAs quantum wells, nonlinear interactions and excitonic effects 7—82697
GaAs-AlGaAs, multiple quantum well structs., many exciton theory 7—76780
GaSb, nonlinear excitonic optical absorpt. 7—132254
p-Ge, multiphoton nonlinear absorption at submillimeter wavelengths 7—118982
HgCdTe, phys. props., handbook of datareviews 7—134373
InAs, nonlinear absorpt. of opposite waves 7—130239
InSb, narrow-gap semiconductor 7—130243
KCl:Li, self-induced polarisation change in resonant radiation 7—138476
KH_2PO_4 and isomorphs, electro-optical, linear and nonlinear optical props., devices, research areas, review 7—110484
KH_2PO_4, KD_2PO_4, crysts. for nonlinear optics, soln. growth at high rate 7—100036
Kr crystals, pure and doped, two-photon absorpt. coeff. power depend. studies 7—77491
$LiNbO_3$ 3m point group cryst., nonlinear optical props. due to spatially oscillating photovoltaic currents 7—123087
$LiNbO_3$ crystals, four-wave cross-scattering of light 7—82709
$LiNbO_3$ photorefractive crystals, strong optical nonlinearities 7—136397
$LiNbO_3$, single cryst. fibre growth and nonlinear optical use 7—75069
$LiNbO_3$:Cu, holographic type parametric scatt. 7—77599
$LiTaO_3$ photorefractive crystals, strong optical nonlinearities 7—136397

nonlinear optics continued
Na, competition between amplified spontaneous emission and the four-wave-mixing process 7−68600
Na, continuous wave self oscillation, pressure induced two-wave mixing 7−117258
Na vapour, forward four-wave mixing, squeezed noise obs. 7−68598
Na vapour, parametric oscillation due to four-wave mixing 7−117259
$Na_{1+x}Mg_xAl_{11-x}O_{17}:Nd^{3+}$, optical pair interactions, four wave mixing spectrum 7−136456
Nd:glass Nova laser, ultra high power level phenomena 7−82621
Nd:YAG, single cryst. fibre growth and nonlinear optical use 7−75069
$PbBr_2$, lumin. under two-photon excitation *(Russian)* 7−106261
SF_6, nonlinear dispersion meas. 7−136405
Se, interfacial properties, static and time-resolved nonlinear optical props. 7−75052
Se-Te, interfacial properties, static and time-resolved nonlinear optical props. 7−75052
Si, coherent wave mixing, ps pulse amplification 7−103881
Si, induced absorption, picosecond pulse pump speckle effects 7−103883
Si, light induced light diffraction, optical heterogeneities 7−90677
Si-sapphire nonlinear waveguide structure, ultrafast optical switching 7−90784
TeO_2 paratellurite crysts., nonlinear optical activity meas. *(Russian)* 7−85589
Xe crystals, pure and doped, two-photon absorpt. coeff. power depend. studies 7−77491
ZnSe single crystal waveguides, optical bistability, nonlinear switch ing 7−141980

nonlinear programming
see also quadratic programming
environmental noise management appl. of mathematical programming 7−75205
local minimum estimate for nonlinear parametric programming in R^n Euclidean space *(Russian)* 7−72943

nonlinear symmetries
No entries

nonlinear systems
see also nonlinear control systems
invariant tori bifurcation points determination 7−83157
optical fiber preform collapse process, identification 7−90807
oscillations, decomposition method 7−134664
shell structures, nonlinear anal. by flat triangular shell element 7−80401

nonparametric statistics
No entries

nonradiative transitions
acetylene, ungerade excited states, vibr., photoelectron spectra 7−122611
acriflavine-rhodamine B, energy transfer in cellulose acetate 7−96814
alkylbenzenes, substituted, radiationless decay, photophysical properties, excited states, exciplex formation 7−135990
alkylbenzenes, vibr. excited triplet lifetimes, 2-colour photoionis. obs. 7−117011
anthracene, cryst., charge carrier recombination. delayed fluoresc. 7−85788
aromatic molecules, gaseous, S_1-S_0 internal conversion, IVR enhancement 7−109973
barrierless reactions, solution, relaxation rates fractional viscosity dependence, non-steady-state dynamics 7−122593
benzene, $^1B_{2u}$ level, vibr. ang. momentum fluoresc. lifetimes study 7−82263
benzene, anharmonic effects in radiationless vibronic energy relaxation 7−109852
benzene, nonradiative transitions, influence of out-of-plane mode anharmonicities on rates 7−74705
benzene, radiationless decay rate consts., excess-energy depend. 7−129762
benzilidenephthalides, photoexcited, radiationless deactivation rate, solvent influence 7−129768
9,10-bis(phenylethynyl)anthracenes, excimer form., fluoresc. quenching 7−82274
butadiene, photoisomerisation, ab initio CI calcs. 7−93296
crystal violet, nonradiative decay dynamics, absorpt. and fluoresc. spectra meas., temp. and wavelength depend. 7−90254
cyanoanthracene-2,5-dimethyl-2,4-hexadiene, fluoresc. excitation spectra 7−103557
3,3′-diethyloxadicarbocyanine iodide, laser dye, laser induced optoacoustic study 7−78464
trans-3,3-dimethyl-1-(2-naphthyl)-1-butene, photoisomerisation in presence of electron acceptors, mag. field effects 7−93265
donor-acceptor complexes, nonradiative energy transfer, two-photon excitation amplification 7−117014
donor-acceptor molecules, energy transfer process effect on luminesc. and photoexcitation 7−68401
ethylene, photoisomerisation, ab initio CI calcs. 7−93296
2-heteroanyloxazoles, excited state ^1H transfer with acetic acid in ethanol fluoresc. spectra 7−141587
hexatriene, photoisomerisation, ab initio CI calcs. 7−93296
inert gas solids, self-trapped excitons adiabatic pot. surface, tunnelling 7−137802
intramolecular energy redistribution and stochasticity, conf., Orsay, France (June-July, 1986) 7−134365
laser crystals, nonradiative relaxation 7−122995
molecular cations in comets, electronic spectra and relaxation 7−88289
molecular ions, singly and doubly charged, relax., Jablonski diagrams 7−109971
molecules, generalised pot. surface nucl. motion inclusion 7−129627
naphthalene, triplet excimers, conform. and phosphoresc., radiative and nonradiative decay rates 7−82267
naphthalene-benzophenone system, nonradiative triplet-doublet energy transfer meas. 7−109913
naphthalenes, substituted, radiationless processes, vibronic level fluoresc. lifetimes 7−129769
organic compounds, internal conversion, deuteration inverse effect 7−129775
organic molecules, vectorial excitation energy transfer involving inhomogeneously broadened electronic levels 7−116944
photofragmentation, pot. surfaces, exit-channel dynamics 7−122637
pinacyanol, solns., intramolecular and orientational motion, fluoresc. study 7−74697
poly(N-(vinyloxy)carbonyl)carbazole and its monomeric analogue, triplet exciton processes, laser pulse-probe study 7−93347

nonradiative transitions continued
pyrazine, $^1B_{3u}$ state, high resolution lifetime meas. of perturbed $J'=0$ levels 7−82254
pyrazine, radiationless decay rate consts., excess-energy depend. 7−129762
pyrido(2,3-b)pyrazine, $^3n\pi^*$ triplet state optical and mag. props. 7−90257
rare earth complexes with pyrene tetrasulphonate, energy deactivation study 7−125787
rubrene, soln., triplet states, thermally activated intersystem crossing 7−68405
semiconductors, nonradiative transitions, n-mode model 7−70208
tetracene, soln., triplet states, thermally activated intersystem crossing 7−68405
tetrachlorophthalic anhydride-hexamethylbenzene, fluoresc., phosphoresc. and delayed fluoresc. 7−138496
s-tetrazine, photodissoc., ab initio calcs., pot. energy hypersurfaces, radiationless transitions 7−68416
thermally stimulated processes, carrier escape probability, pre-exponential factor 7−99944
time-dependent transfer rate parameters, convolution kinetics and differential eqns. 7−74696
xanthione-d_0(-d_4)(-d_6)(-d_8), radiationless decay, D isotope effect 7−135986
Al II, 266.9 nm intersystem line transition probability 7−90033
AlGaAs quantum wells, photoluminescence switching in elec. field 7−138495
$Al_xGa_{1-x}As$ MBE films, mid-gap electron trap, nonradiative electron-hole recombination 7−98864
Ba, nonradiative transition probabilities relativistic calc. 7−68249
$BaEr_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$BaHo_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$BaYF_5:Eu^{2+}$, Ho^{3+}, fluorescence and energy transfer spectra *(Chinese)* 7−99889
CS_2, laser excitation, energy relax., probe beam deflection meas. 7−91279
$Ca_{1-x}Y(La)_xF_{2+x}:Sm^{2+}$ mixed crysts., impurity optical props. and nonradiative decay studies 7−77637
CdS fine particles, photoacoustic and luminescence spectra 7−70887
$CdS_{1-x}Te_x$, cathodoluminesc. saturation assoc. with isoelectronic additive Te at high excitation rates 7−99941
CdSe, exciton luminescence, lux-intensity charact. 7−77626
$Cr^{3+}:Al_2O_3$, laser crystals, nonradiative relaxation 7−122995
Cu, atom, autoionising energy level assignment, ejected electron spectrosc. 7−141689
Cu complexes, hindered internal conversion in rigid matrix, emission investig. 7−74698
Eu(III) complex, triethylammonium tetrakis-hexafluoroacetylacetone europium(III), gas phase, luminesc. props. 7−137049
GaAs, deep impurity levels, luminescence transient obs. 7−106250
GaAs, dislocation interactions with non-radiative recombination centres 7−70916
GaAs MOVPE layers, optical charact. 7−132360
GaAs, semi-insulating, nonradiative recombination lifetimes, photoacoustic study 7−70889
GaAs:Be, heavily doped MBE layers, nonradiative centres, cathodoluminesc. and electron acoustic studies 7−125810
GaAs:Si epitaxial films, fast electron irrad., luminescence props. 7−77621
GaAs:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
GaAs/AlAs short-period superlattice, localized indirect excitons, optical props. 7−138502
GaAs-GaAlAs multiple quantum well lasers, spontaneous recombination rate 7−90608
GaP, deep impurity levels, luminescence transient obs. 7−106250
GaP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
GaSb, radiation defects, deep levels 7−70242
InP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
$LiErF_4$, fluoresc. dynamics 7−70879
$LiYF_4:Er^{3+}$, fluoresc. dynamics 7−70879
$MgF_2:Co^{2+}$, Ni^{2+}, Mn^{2+} crystals, absorption and luminescence spectra 7−106255
$MnF_2:Er^{3+}$ 7−85818
NH, A $^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
$NH+O_2$ collision induced intersystems crossing 7−136035
NO_2-N_2O_4, laser excitation, energy relax., probe beam deflection meas. 7−91279
$Na_2+Na(Kr)$, collision-induced radiationless transitions, fluoresc. spectra anal. 7−103637
NaCl:Tl, impurity states, photoluminesc. study *(Russian)* 7−85838
^{237}Np, muonic atom, 3d level nonradiative decay 7−117095
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
$POCl_3:SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
PbI_2, exciton luminescence, lux-intensity charact. 7−77626
$RbMnF_3:Nd^{3+}$, nonradiative energy transfer without lifetime quenching 7−85818
$RbMn_xMg_{1-x}F_3$, nonradiative energy transfer without lifetime quenching 7−85818
SO_2, electron-impact excitation, mol. emission determ. 7−82377
Si: transition metals, nonradiative recombination via deep impurity levels 7−119041
Si:Au, deep acceptor and donor levels, press. depend. 7−105477
SiC:B, exciton absorption spectrum 7−70835
SiH_2, low-lying states, pot. energy surfaces and dynamical props., 2D MCSCF/6-31G** calcs. 7−116893
ThF_4-ZnF_2-YF_3-BaF_2-ZrF_4-NaF-LiF-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
Xe, photon-excited Coster-Kronig decay, vanishing post-collision interaction 7−90034
ZnS lattice, three-centre Auger-type nonradiative recomb. mech. 7−138499
ZnS:transition metal, impurity-induced nonradiative recomb. processes, EPR study 7−112364
$ZnS_{1-x}Te_x$, cathodoluminesc. saturation assoc. with isoelectronic additive Te at high excitation rates 7−99941

nonradiative transitions continued
ZrF_4-BaF_2-LaF_3-AlF_3-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
ZrF_6-BaF_2-LaF_3-AlF_3:Ni^{2+}, Co^{2+}, Mn^{2+} glass, absorption and luminescence spectra 7−106255
NOR gates *see logic gates*
normalising
metal surface layer, effect of structure and props. on fatigue resistance 7−86352
Nichrome, Nb alloyed, heat treatment effect on strength and tribotech. props. 7−78265
steel, Cr-Mo-V, microstruct. and mech. props. 7−144493
steel, heating, austenite grain growth rel. to Ti and N addition 7−78073
steel, HSLA, dual-phase, microstruct. and mech. behaviour 7−126221
steel, low alloy, normalising, hardening, tempering, toughness, impact strength, ductile fracture 7−78204
steel, low C, austenite form., TEM study *(Chinese)* 7−71209
steel, medium C, cast, normalising, dendrite-oriented ferrite form. 7−106544
steel, normalised, powder metallurgy, fatigue behaviour, effect of hot repressing 7−144549
steel, Si-Mn, phase changes during inter-critical normalising and welding 7−106536
NOT gates *see logic gates*
notch brittleness
steel, fracture toughness, wide-plate crack arrest test meas. 7−93236
notch ductility
polycarbonate bars, notched, ductile and brittle fracture conditions 7−91712
notch filters
adjustable notch filter for acoustic feedback reduction *(German)* 7−130501
holographic notch filters and filter stacks development for specific spectral transmission 7−122882
notch sensitivity *see notch strength*
notch strength
see also fracture toughness
composite laminates, R-curves and notched tensile strength, prediction 7−84109
concrete, fracture toughness, influence of aggregate size 7−119366
orthotropic 2D elastic body, stress singularities anal. at notch 7−104152
permeable fibrous materials, dynamic strength props. 7−78209
steel, Cr type, sheet, stress concentrator effect on strength and ductility in biaxial tension 7−78128
steel, ferritic stainless, electron beam welded joint, incomplete penetration notches, fracture toughness *(Japanese)* 7−144524
steel, ferritic-creep-fatigue behavior, influence of long-term thermal aging 7−138837
steel, mild, critical notch depth for low temp. brittleness 7−119364
steel, mild, low-temp. fracture rel. to notch depth 7−100370
steel, Ni-Cr type, residual internal microstresses influence on strength, criterion of tensile stresses 7−78219
steel, stainless, semi-austenitic fatigue and fracture toughness props. 7−144555
steel, stainless and Cr-Mo, electron beam welded joints, incomplete penetration notches, fracture toughness *(Japanese)* 7−144525
steel fibres, permeable, dynamic strength props. 7−78209
steel weldments, high strength HY80, notch toughness props. 7−132703
VHTR, graphite materials, notch sensitivity testing 7−141170
C fibre reinforced epoxy, laminates, woven and non-woven, fatigue performance in reversed axial loading 7−78169
Fe, cast, spheroidal graphite, fatigue props., high-cycle, rel. to matrix structs. *(Korean)* 7−132723
Ni_3Al-B, fatigue crack growth 7−119361
SiC fibre reinforced Li_2O-Al_2O_3-SiO_2 glass ceramic, high temp. mech. props. 7−132720
notch testing
see also fracture toughness testing
bar, notched, *(German)* 7−93230
bar impact bending test specimens for mechanical fracture values determ, *(German)* 7−138840
bars, notched, yield strength rel. to notch interference *(Japanese)* 7−144650
fracture toughness test, chevron notched specimens, subcritical crack growth effects 7−71424
martensitic steel, fracture investigations by notch impact testing *(German)* 7−129201
mortar, fracture in shear-compression field 7−126213
PMMA, fracture energy meas. 7−132858
polycarbonate, fracture energy meas. 7−132858
steel, austenitic stainless, notched, plastic zone form., digital image processing 7−71423
steel, fracture toughness, wide-plate crack arrest test meas. 7−93236
steel, Ni-Mo, cleavage fracture toughness testing of chevron notched specimens *(Japanese)* 7−119479
VHTR, graphite materials, notch sensitivity testing 7−141170
novae
1354-64, Ginga X-ray nova, optical identification and obs. (1987 March) 7−80131
And 1986, May 1987 visual magnitudes 7−101810
And 1986, photoelectric UBV photometry (1987 January 20 to 24) 7−72450
And 1986, photographic magnitude and visual magnitude estimates 7−88443
And 1986, UBV obs. 7−79989
And 1986, UBV photometry and light curve obs. 7−145989
And 1986, visual magnitude estimates (1987 April and May) 7−94896
And 1986, visual magnitude estimates (1987 June 3 to 29) 7−120450
And 1986, visual magnitudes (1987) June 7−127898
And 1986 (OS And), UBV photometry and visual magnitude estimates 7−145982
V603 Aql, positrons and proper motions 7−145985
Aql 1982, photometric and spectroscopic obs. by IUE, AAT and WRST 7−140106
VY Aqr, spectral and magnitude obs. of dwarf nova 7−120448
cataclysmic variables, multifrequency obs. and theoretical developments, colloquium Bamberg (1986 June) 7−108009
Cen 1986, IR and visual light curves (1986 November 24 to 1987 April 30) 7−127907
novae continued
Cen 1986, UBV photometry (1986 December 9 and 10) 7−79984
Cir 1987=X-ray nova 1354−64, photometry and spectroscopy 7−88444
classical nova model, evolution through full accretion-outburst-accretion cycle 7−120429
classical nova outbursts, review 7−120427
classical nova outbursts, variable mass transfer rate scenario 7−120428
classical novae, frequency of occurrence of O-Ne-Mg white dwarfs 7−88432
V394 CrA, August 1987 observations of nova magnitudes and position 7−127902
V394 CrA, outburst magnitudes, finder chart, and sequence 7−145970
V394 CrA, spectral characts. and magnitudes (1987 July-August) 7−134244
V394 CrA, visual magnitude estimates and astrometric considerations 7−140099
CrA 1949 (V394 CrA), spectrum and visual magnitudes during new outburst (August 1987) 7−127900
Cyg 1975 (V1500 Cyg), possible AM Her star, photometric and spectroscopic obs. 7−115466
Cyg 1986, IR spectral obs. 7−145981
Cyg 1986, visual magnitude estimates (1987 April-June) 7−107856
Cyg 1986, visual magnitude estimates (1987 June 3 to 29) 7−120451
Cyg 1986, visual magnitudes (1987) May-June 7−127898
Cyg 1986, visual magnitudes estimates (1987 June 29 to August 2) 7−134246
HR Del, positrons and proper motions 7−145985
dust grains formation, role of C grains form. in white dwarf atmosphere 7−120431
dust shells formation, grains nucleation on ions 7−120430
evolutionary relationship between classical novae and dwarf novae, cyclical evolution model 7−145978
expanding ejecta shells, obs. of deceleration due to interaction with interstellar medium 7−120434
galactic production rate 7−140304
Her 1963 (V533 Her), spectroscopic obs. rel. to binary parameters 7−72472
Her 1987, astrometry and possible identification with blue star on 1951 exposure of Palomar Sky Survey 7−134245
Her 1987, IR observations indicating dust formation phase 7−88447
Her 1987, K-band spectroscopy and JHKL'LM magnitudes (1987 May 9 and 19) 7−101809
Her 1987, photoelectric photometry and visual magnitude estimates (May-June 1987) 7−107854
Her 1987, photoelectric UBV photometry (1987 June 15 to 19) 7−120453
Her 1987, spectra observations for 5 June 1987 AD 7−145980
Her 1987, spectroscopic obs. and visual magnitude estimates (April to May 1987) 7−94893
Her 1987, UBV photometry and visual magnitudes (1987 February-March) 7−72449
Her 1987, visual magnitudes (1987) May-June 7−127898
Her 1987, visual magnitudes (1987 March 4-15) 7−88445
Her 1987 spectral, photometric and visual magnitude estimates obs. 7−140098
hibernation model of cataclysmic variables, influence of binary system parameters 7−145977
Kukarkin-Parenago relations, outburst period-amplitude and period-energy relations 7−120433
M31, novae population and spatial distrib. 7−140266
Mon 1975 (=V616 Mon=A0620−00), identification as black hole binary system 7−88511
V616 Mon (A0620−00), black hole binary system, evolutionary scenario 7−140154
RS Oph, recurrent nova, episodic accretion model for outbursts 7−88434
RS Oph, recurrent nova, multi-freq. obs. of 1985 outburst 7−115425
RS Oph, recurrent nova, X-ray obs. from tenuous remnant 7−115421
V841 Oph (Nova Oph 1848), semiregular variations at minima 7−88456
orbital eccentricity and luminosity modulation 7−127909
outburst frequency in Galaxy, implications for total mass ejection 7−120432
GK Per, positrons and proper motions 7−145985
Per 1901, (GK Per), dwarf nova-like outbursts, accretion disk limit cycle mechanism 7−88441
GK Per (Nova Per 1901), short-term optical vars. obs. during 1983 outburst 7−115443
principal absorption systems form., role of high-vel. winds 7−120410
radio survey of classical novae, obs. and results 7−134251
recurrent novae, dynamical effect of radiative heat loss on remnants evolution 7−134252
recurrent novae, observational props. and nature of outbursts 7−115445
recurrent novae, properties and nature of outbursts 7−115456
reference catalogue and atlas 7−115258
remnants of novae, obs. of old novae and ejecta shells 7−120435
U Sco, recurrent nova, May 1987 magnitudes 7−94897
U Sco, recurrent nova, visual magnitude estimates (1987 May 29 to June 3) 7−107853
U Sco, recurrent nova, visual magnitude estimates (May 1987) 7−115462
U Sco, visual magnitude estimates (1987 May 21-25) 7−101807
Ser 1970 (FH Ser), evidence for optically thick wind and super-Eddington total luminosity 7−120404
LW Ser (Nova Ser 1978), optical spectrum during diffuse-enhanced phase 7−115442
Sgr 1987, corrected Right Ascension, upper magnitude limits, and visual magnitude estimates 7−101808
Sgr 1987, discovery, magnitudes, position, and spectrum (1987 May) 7−101806
Sgr 1987, J, H, K, L magnitudes, 12 June 1987 obs. 7−115464
Sgr 1987, JHK photometry and visual magnitude estimates (June 1987) 7−127901
Sgr 1987, visual magnitude estimates (1987 June) 7−107857
Sgr 1987, visual magnitude estimates (May-June 1987) 7−115463
Sgr 1987, visual magnitudes (1987) May-June 7−127898
TA observations (1987 April) 7−120426
TA observations (1987 February) 7−88424
TA observations (1987 January) 7−79978
TA observations (1987 July) 7−145971
TA observations (1987 June) 7−145969
TA observations (1987 March) 7−120424
TA observations (1987 May) 7−140084
UBV photometry, use for lumin. determ. 7−140079

novae continued
UK patrol report (1987 no.1) 7−79977
UK patrol report (1987 no.4) 7−140083
Virgo Cluster elliptical galaxies, novae occurrence and characts. 7−140088
visual magnitude estimates (July-August 1987) 7−134243
Vul 1670, anal. of Cassini's comparison obs. using β Lyr 7−94964
Vul 1979 (PU Vul), photometry, spectrophotometry, spectrum and polarisation (1981 to 1982) 7−140102
Vul 1984 no.1 (PW Vul), late 1986 and early 1987 visual magnitudes 7−94898
Vul 1984 No.1 (PW Vul), possible orbital period from photometric obs. 7−88452
Vul 1984 No.1 (PW Vul), spectroscopic obs. (October-November 1984) 7−72435
Vul 1984 No.2, obs. of unusual early radio outburst 7−140076
Vul 1984 No.2, spectrum during nebular phase 7−120436
Vul 1984 No.2, visual magnitude estimates (1987 June-August) 7−140100
Vul 1984 No.2, visual magnitudes (1987) May-June 7−127898
Vul 1984 No.2 visual magnitude estimates (1986 November 26 to 1987 April 1) 7−79986
Vul 1984 No. 1 and No. 2, spectral evol. 7−115415
Vul 1984 No. 2, 'Ne nova', IR photometry rel. to silicate grains condensation in ejecta 7−88439
Vul 1987 no.2, April-June 1987 magnitude estimates 7−107858
PU Vul (Nova 1979), symbiotic nova, evidence for red giant-white dwarf model 7−115444
white dwarf, spin-up and mixing due to accretion, implications for novae 7−140085
X-ray emission during outburst stage, EXOSAT obs. 7−115430
X-rays during outburst stage, EXOSAT obs. 7−94883
^{22}Na yields in nova explosions, gamma-ray constraints 7−120439
Ne novae, accreting white dwarf models 7−120393

nozzles
air compressible stream in duct, heat transfer effect 7−75543
air-water mixture, plug and annular flow drag study 7−83308
airfoil, controlled circulation using Coanda flow-generating nozzle 7−83296
boundary layer separation prevention using Prandtl's revised theory in convergent-divergent duct 7−83170
channel bottom, vertically incident jet flow, average pressure distribution 7−137001
Coanda jets, flat supersonic nozzles 7−136915
coherent structure acoustic coupling for flow in chamber *(French)* 7−104124
compressible gas flow through subsonic and supersonic nozzles, Mach number distrib. equalisation 7−111014
condensation transient in nozzle cascades with contracting channels 7−83299
conservation law with spatial inhomogeneity, trend to steady state 7−136954
diffuser, rough-wall tapered, hydraulic drag study 7−83298
enthalpy conversion in sonic-nozzle expansions 7−111053
fluidic flowmeter, oscillator type, without control ports or feedback loops *(Japanese)* 7−142413
frictionless channel flows, comparison of explicit and implicit MacCormack methods *(German)* 7−137016
gas superheating in two section forechamber of blowdown wind tunnel 7−136917
gas-particle mixture, nozzle theory inverse problem soln. 7−111077
heat transfer for air-water flow in a nozzle *(Russian)* 7−104322
hydrocyclone apparatus for investigation of hydrobrasive wear 7−73338
hypersonic wind tunnel nozzles, simplified Navier-Stokes eqns. anal. 7−142350
jet, nozzle generated, intermittency fn. calcs. of conditionally averaged parameters 7−83285
jet discharge into swirling crossflow, laser Doppler anemometry 7−111046
jet edge impact oscillations, nozzle asymmetry effects 7−123698
jets, axisymmetric, linear growth of disturbances near nozzle 7−75640
jets, delayed die swell study 7−83291
Laval nozzles, integrated characts. and profiled supersonic parts contours study 7−97597
liquid charged droplets from capillary tube nozzle, drop breakup 7−83300
molecular aerodynamic acceleration obs. using ceramic nozzle 7−141717
molten metal atomisation using Coanda effect nozzles 7−113470
nonequilibrium critical gas flow in Laval nozzle 7−111055
particle bearing gas flow in nozzle and jet, radiant heat transfer 7−123726
plastic material erosion by gas-particle flow, surface instability, mathematical model 7−69107
shock wave starting process in shaped nozzle of large-diameter shock tube 7−136922
slit pulsed valve for generation of long-path-length supersonic expansions 7−97567
sound radiation from single and annular stream nozzles, with modal decomposition of in-duct acoustic power 7−75241
submerged, gas injection, absorption, interfacial areas calcs. 7−104321
subsonic compressible axisymmetric jets, Kelvin-Helmholtz instability, numerical simulation 7−69237
supersonic concentric, center plug shapes study 7−83297
supersonic nozzle flow of gas-particle mixture, num. anal. 7−91179
supersonic turbulent flow development in square duct 7−104302
swirling nozzle flow blocking effect, appl. to aerodynamic laser window design *(Chinese)* 7−104279
three-dimensional bodies in supersonic gas flow, optimisation *(Russian)* 7−123675
total pressure loss in supersonic nozzle flow with condensation *(Japanese)* 7−111054
turbulent jet impingement on screen in external flow, recirculation region boundaries study 7−83288
two phase flow, steady-state models, trajectories and singular points 7−123714
underexpanded sonic jet, from slot nozzle, central compression shock position 7−104308
vapour-droplet flow in 3D nozzle, transonic flow study 7−111019
Al+O_2(SO_2), reactive scatt. using pulsed crossed supersonic mol. beams 7−144707
CO, supersonic nozzle, overtone band, IR emission spectra 7−74608

nozzles continued
CO_2, 16 μm downstream-mixing gasdynamic laser, 2D anal. in CO_2-N_2-H_2 7−103791
Cl, heat transfer in supersonic flow through nozzle *(Russian)* 7−83266
N arc, 2 kA DC, in supersonic nozzle, conservation eqns. solved 7−83566

NTC thermistors *see thermistors*

ν (neutrino) *see neutrinos*

nuclear acoustic resonance *see acoustic nuclear magnetic resonance*

nuclear alignment *see nuclear polarisation*

nuclear binding energy
see also nuclear forces
A=2 system, binding energy determ., NN interactions via neutral scalar boson field, Monte Carlo anal. 7−73705
A=4-16, binding energies and nuclear moments, large-scale shell-model calculations 7−109065
actinide nuclei, double humped fission barriers, macroscopic-microscopic description 7−67885
bound state calcs. for centrifugal, Coulomb repulsive and nucl. pot. superposition 7−135214
charged root mean square radii, 1D analytic formula 7−121595
core densities, droplet model and HF calcs. with generalised Skyrme force 7−121603
desaturation effects, variational calcs. in liq. drop model and Thomas-Fermi approach 7−140989
dibaryonic degree of freedom in nuclei, hadronic force model, binding energy, form factor effects 7−102814
effective interactions for the sd and pf shells 7−116236
Faddeev equations for bound and scattering states 7−67699
FCC nuclear model, radii, binding energies and excited states prediction, nuclear skin parameters 7−128958
few-body calcs. 7−67681
finite nuclei, pure fermionic chiral field theory anal., radii, binding energies and density 7−140985
Hartree-Fock approximation, relativistic treatment, infinite nuclear matter and finite nuclei appl. 7−116312
high order perturbation theory with three-body forces in the Faddeev scheme 7−67702
hot nuclei, mean field theory 7−121660
hot nuclei, statistical fragmentation, microcanonical Monte Carlo sampling 7−135291
hyperspherical calculations for four-nucleon systems 7−67704
infinite nuclear matter, saturation props. and mass formula, Hugenholtz-Van Hove theorem 7−121691
Landau-parameters and isoscalar nuclear excitations in a relativistic mean-field theory 7−109084
light neutron rich nuclei, HF calcs., radii, binding energies, density distribs. 7−102799
many-quark clusters in nuclei 7−67753
multiharmonic oscillator approx. of nuclear structure 7−121641
neutron halo of extremely neutron-rich nuclei 7−121589
nuclear matter, model space approach, infinite order summation of particle-particle ring diagrams 7−67754
nuclear stability w.r.t. spin and isospin alignment due to short-range three-particle forces 7−121590
nucleon size and the attractive nuclear force, form factor, EMC effect 7−95994
Pauli repulsion of α-particles and 3α overbinding problem 7−73719
s-shell hypernuclei, binding energy and excitation energies using realistic interactions 7−67758
Sp(2,R) model for s- and p-shell nuclei props. 7−141001
symmetric and asymmetric nuclear matter, binding energies, lowest-order constrained-variation calc. 7−135243
three nucleons, binding energy relativistic corrections Faddeev components of nonrelativistic wave fn. *(German)* 7−128939
three-and four-nucleon system, realistic scales 7−67682
three-body calculations at Los Alamos 7−67700
trinucleon calcs. with three-nucleon pot. 7−67740
two-nucleon high spin states, Bansal-French, crude shell models, A=56-72 binding energy 7−140987
y-scaling theory in plane wave impulse approx. 7−67774
Δ binding energy in nuclear matter, Paris potential calcs., Δ self-energy effects 7−109087
(μ,X), deep inelastic scatt., colour conductivity at high resolution 7−73721
N binding in nuclear matter, colour dielectric model anal. 7−67582
^{6}n system, binding properties, stability 7−81286
Ξ^- hypernuclei, binding energy anal. using simple pot. model 7−121698
Al(p,p'), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{39}Ar, structure and decay props., spherical shell model calcs. 7−102818
^{A}Be$_\Lambda$, A=9,10, interactions and binding energy, variational calcs. of α-cluster models 7−67759
^{10}Be$_{\Lambda\Lambda}$, double-Λ binding energies, HF calcs. *(Chinese)* 7−96008
^{12}C, excited states, B(E2) transition probabilities, level density, hyperspherical-fn. method 7−121615
^{40}Ca, pp, ph and hh ring diagrams contrib. to binding energy 7−135194
C(p,p'), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{53}Cr(γ,n), threshold cross section meas., resonance study above neutron binding energy 7−116387
Cu(p,p'), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
Δ self-energy in nuclear matter 7−128991
(e,e'(p)), nuclear binding effects, structure fns. 7−116401
^{167}Er(n,2γ), E2 strength fns. and radiative widths 7−96072
^{65}Ga, proton binding energy meas., ^{64}Zn(p,γ)^{65}Ga anal. 7−73736
^{2}H, $^3s_1$ state, convergence behaviour for numerical integration of differential equations by Runge-Kutta and renormalized Numerov methods 7−95974
^{2}H, binding energy, Reid soft core and Paris pot. comparison 7−121592
^{2}H, ground state props., tensor force and one-pion exchange pot. 7−67733
^{2}H, radial excitations and bound state wave fn., RGM and nonrelativistic quark model calcs. 7−121591
^{2}H, two-skyrmion system, symmetry and quantisation, binding energy 7−128938
^{2}H($\vec{p}$,X), Coulomb modified Faddeev calculations of low-energy P-D observables 7−67813
^{2}H(p,p'), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{3}H, binding energy, charge radius, momentum distrib. calcs. 7−67701
^{3}H, binding energy, three-body forces effect, variational calc. 7−116235
^{3}H binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{3}H, binding energy calcs. in two-body model 7−67832

nuclear binding energy continued
^{3}H, off-shell variation in binding energy 7−81289
^{3}H, variational Monte Carlo calculations of few-body nuclei 7−67703
$^{3}H_{\Lambda}$, binding energy from stochastic variational method *(Chinese)* 7−116325
$^{3}H_{\Lambda}$, bound state existence, separable model Faddeev equations 7−109090
$^{3}H_{\Sigma}$, Σ^{-} hypernuclei, bound state existence, separable model Faddeev equations 7−109090
$^{4}H_{\Lambda} \rightarrow \pi^{-} + {}^{4}$He, microscopic theory of four particle hypernuclei 7−67760
^{3}He, binding energy calcs. in two-body model 7−67832
^{3}He ground state, proton-proton Coulomb interaction effects 7−81281
^{3}He(e,e'p), high momentum components and final state interaction 7−67806
^{4}He, binding energy calcs., isobar degrees of freedom in the non-unitary model operator approach 7−109001
^{4}He binding energy calcs. and suppression of off-energy-shell interactions 7−73694
$^{5}He_{\Lambda}$, ground state binding energy, semiphenomenological study 7−81325
$^{5}He_{\Lambda}$, Λ-N interaction and struct. anal., ground state binding energy *(Chinese)* 7−116326
$^{6}He_{\Lambda\Lambda}$, double-Λ binding energies, HF calcs. *(Chinese)* 7−96008
$^{6}He_{\Lambda\Lambda}$ binding, in Λ-α-Λ model, strength and range parameter of Λ-Λ potential 7−109089
^{9}He, ground and excited states from ^{9}Be(π^{-},π^{+}) 7−109003
^{A}He, A=3,4, variational Monte Carlo calculations of few-body nuclei 7−67703
$^{A}He_{\Lambda}$, A=5,6, interactions and binding energy, variational calcs. of α-cluster models 7−67759
$^{7}Li_{\Lambda}$, ground state binding energy, semiphenomenological study 7−81325
^{24}Mg, positive parity rotational bands, binding energy calcs., cranked cluster model anal. 7−116233
^{143}Nd(n,2γ), E2 strength fns. and radiative widths 7−96072
^{16}O, 4-body problem of 4 bound α-particles, α-cluster model, binding energy 7−81287
^{16}O, ground state energy shift, particle-particle ring diagrams and Skyrme effective interactions 7−121588
^{16}O, ground state props. and forces in unitary-model-operator approach 7−128948
^{16}O, pp, ph and hh ring diagrams contrib. to binding energy 7−135194
^{208}Pb, hot finite system, nuclear compressibility, Thomas-Fermi approach, Helmholtz free energy 7−140991
^{28}Si(n,γ), 565 keV, partial radiative widths, for neutron resonance, particle-vibr. coupling model 7−73743
^{A}Th, A=157-169, ground state properties, quadrupolar and magnetic movements, charge radii, binding energies, HF anal. *(German)* 7−128940
^{174}Yb(n,2γ), E2 strength fns. and radiative widths 7−96072

nuclear bombardment targets
see also nuclear reactions and scattering
ANL computer controlled target storage system, status report 7−109577
conference, Chalk River, Ont., Canada (Sept. 1986) 7−108020
gas jet targets at SPS pp collider 7−74326
gas jet transport system for suppression of heavy-mass fission product homologues 7−74316
gas target, use of Hg jet as window for target/beam-line system 7−81834
high-temperature metal targets and ion sources for ISOLDE on-line mass separator 7−96441
implanted targets, production and props. 7−135714
integrated target-ion source for fission yield meas. of rare-earth isotopes 7−96447
isotope materials availability and services for target production at the Oak Ridge National Laboratory 7−93930
JSW cyclotron gas targets, modification, integration 7−89852
materials technology applied to nuclear accelerator targets 7−89853
MIT-Bates cryogenic tritium target system 7−89851
polarized D target, development by spin exchange 7−89854
radioactive target preparation for charged-particle spectroscopy, ISOLDE project 7−135715
refractory oxide, carbide and boride targets for ISOLDE on-line mass separator 7−96442
segmented target chamber for (n,p) studies at TRIUMF 7−109583
storage ring, study of a microparticle internal target for a cooler ring 7−109566
thin films preparation for generating neutral particle beams 7−89850
$BaCl_2$, thin film, preparation as chlorine target 7−109569
C coatings from voltage assisted arc for nuclear targets 7−109579
C stripper foil, failure under ion beam bombardment, model 7−84047
$^{248}CmF_3$, deposition on C foils for nuclear target fabrication 7−109572
$^{254}Es^{g}$, production by neutron irradiation of californium 7−141364
Ge, high-energy particle transmission, energy losses, Landau distrib. comparisons 7−116804
^{2}H, polarised target using spin relaxation of polarised potassium atoms 7−109575
^{3}He polarised gas target, spin relaxation study 7−109586
Li, thin film, preparation of ^{6}Li nuclear targets 7−109570
Mg, s-d shell nuclide target preparation for (p,n) and (d,n) reactions *(Japanese)* 7−81822
MgO, online mass separator targets, beam heating calcs. 7−96443
Na target, polarized, optically pumped, relaxation rate study, H^{-} ion source appl. 7−141358
P_3N_5, vacuum deposition preparation for nuclear target 7−109568
^{31}P, s-d shell nuclide target preparation for (p,n) and (d,n) reactions *(Japanese)* 7−81822
Pb thin film deposition, target for ^{210}Pb nuclear spectroscopy 7−109571
^{A}S, A=32,34, s-d shell nuclide target preparation for (p,n) and (d,n) reactions *(Japanese)* 7−81822
Si, high-energy particle transmission, energy losses, Landau distrib. comparisons 7−116804
^{30}Si, s-d shell nuclide target preparation for (p,n) and (d,n) reactions *(Japanese)* 7−81822
Ta, online mass separator targets, beam heating calcs. 7−96443
Ti online mass separator targets, beam heating calcs. 7−96443
α-U, spallation target material for SNS, proton irradiated, thermostresses, thermal cycling effects 7−131196
UC_2 online mass separator targets, beam heating calcs. 7−96443
$^{235}U^{m}$, target preparation on gold coated polyimide foils 7−109573
Zr, online mass separator targets, beam heating calcs. 7−96443

nuclear branching and mixing ratios
B(E2) values, approximate analytic expression in IBM 7−109103
heavy nuclei, E1 strength in giant dipole resonance, nuclear structure effects, (γ,γ'), expts. 7−116385
isovector quadrupole vibrations, vibrational model anal. 7−67683
(π,γ), sum rule anal. for 1p shell nuclei 7−102919
^{A}At, A=209, 210, 211, enhanced E3 transitions and mixed configs. of core excited isomers from ^{209}Tl(^{9}Be, xn) 7−67687
^{210}At, 19^{+} isomer, lifetime and enhanced E3 decay 7−109105
^{126}Ba, 22 from ^{116}Sn(^{13}C, 3nγ) 7−121572
^{130}Ce, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{63}Cu, proton resonances, γ-angular distrib. meas., intermediate structure obs., spin-parity values 7−121611
^{A}Er, A=158,159, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{145}Eu, octupole multiplets, spin-parity assignments, level transitions 7−108999
^{19}F(e,e'), 500 MeV, transverse excitation of positive/negative parity states, form factors, shell model comparisons 7−128944
^{A}Gd, A=149, 151, low temp. nuclear orientation 7−116243
^{154}Gd, multipole mixing ratios from δ-δ ang. correls. 7−67762
^{100}Mo, level scheme, mixing ratios for $2_2^{+} \rightarrow 2_1^{+}$, $2_3^{+} \rightarrow 2_1^{+}$, β-decay study 7−109123
^{15}N, helion and ^{3}H cluster states, branching ratios 7−67685
^{20}N, high-lying state search, γ-emission probability meas. 7−73731
^{58}Ni(α,α'), 129 MeV, isoscalar giant resonances, decay props., branching ratio calcs. 7−129069
^{15}O, helion and ^{3}H cluster states, branching ratios 7−67685
^{103}Pd, level structure, lifetime meas., level spin determ. using Hauser-Feshbach anal., mixing ratios 7−67691
^{105}Pd(n,γ), 2-24 keV, M1 giant resonance obs., γ-strength fns. 7−108993
^{149}Pm, levels and moments following ^{149}Nd decay 7−116329
^{A}Po, A=208, 209, nuclear orientation following Al decay in Fe 7−116330
^{131}Pr energy levels, J^{π}, branching ratios, bands and transitions from ^{98}Mo(^{37}Cl,4n) 7−135179
^{41}Sc, resonance strengths, excitation energies and γ-ray branching ratios from ^{40}Ca(p,γ) 7−109162
^{43}Sc levels, J, $T_{1/2}$, branching and mixing ratios from ^{40}Ca(α,p) 7−140994
^{A}Sm, A=146-152 even isotopes, E2/M1 mixing ratios using extended phonon projection model 7−121707
^{A}Sm, Az 146-154, nuclear radii, isotope shift, electric monopole transitions 7−116270
^{A}Te, A=116,117, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{129}Te, E2/M1 multipole mixing ratios and spin assignment meas. 7−116331
^{A}Th, A=230, 232, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
^{238}U, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
^{158}Yb, high energy dipole bump in the continuum as a probe for superdeformation 7−109106

nuclear charge
see also form factors (nuclear)
^{1}Sr, A-80, 82, charge radii using ultrasensitive laser spectroscopy 7−121600
A<19, folded and Coulomb pots., analytic formulae and charge distribs. 7−121770
bound state calcs. for centrifugal, Coulomb repulsive and nucl. pot. superposition 7−135214
Brueckner's G-matrix, charge dependence and the Nolen-Schiffer-Okamoto anomaly 7−128935
charge radius formula, fine structure, nuclei far from β-stability *(Chinese)* 7−109005
electric charge fluctuation inside an atomic nucleus 7−116254
FCC model predictions of RMS charge radius values 7−116244
four-body correlations, four-body interaction and the staggering of nuclear charge radii 7−121607
heavy ion collisions, quasi-molecule dinuclear system charge and mass distrib. 7−129104
modified oscillator nuclear charge distribution differences 7−109010
multiquark model calcs. of nuclear props. 7−95997
nuclear density, Fermi-type empirical formula, charge radii, distribution calcs. *(Chinese)* 7−95976
$O(Z\alpha^{2})$ corrections, conserved vector current predictions and universality 7−102844
RMS charge radii, Skyrme interactions 7−121602
RMS charge radii systematics, values for quark core, Coulomb displacement values 7−116245
root mean square radii, 1D analytic formula 7−121595
spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
target nucleus charge and mass no. depend. of optical model phase shifts 7−109130
vacuum polarization potential for finite nuclear charge distrib. *(Russian)* 7−140877
Z=50 nuclei, nuclear moments and charge radii 7−109027
(e,e), nuclear charge density distribution trends, shell effects, expt. evidence 7−121593
Au, neutron-deficient isotopes, charge radii and shape transition 7−116255
Au(U,X), positron and δ-electron emission, coupled channels anal. 7−67870
^{A}Au, A=185-189, 189m, charge radius and distrib., deformation, isotope shift, hyperfine struct. 7−81291
^{A}Au, A=185-189, shape transition, isotope shift hyperfine struct. 7−116241
^{196}Au(^{56}Fe, X), deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
^{7}Be, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
^{12}C, inclusive charge longitudinal response, RPA anal. 7−116252
^{48}Ca, inclusive charge longitudinal response, RPA anal. 7−116252
^{69}Cu(p,X), fragment charge distributions, statistical model anal. 7−109182
(e,e'), nuclear structure probes 7−109147
Er, even A, mean square charge radii changes 7−116240

nuclear charge continued
- ^{A}ErI, A=162-170, isotope shift and nuclear charge radii by laser atomic beam spectroscopy 7−96605
- ^{166}Er(^{86}Kr,X), 8.2 MeV/n, correlation of charge drift with total kinetic energy 7−116493
- ^{168}Er(^{86}Kr, X), deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
- ^{A}Eu, A=147, 149, 151, 152, 153-6, deformation, collinear laser spectroscopy, moments, charge 7−116247
- ^{56}Fe, inclusive charge longitudinal response, RPA anal. 7−116252
- ^{1}H(e,e), charge form factor calcs. and charge density operator 7−128952
- ^{1}H(n̄, n), 477 MeV, anal. powers, isospin violating charge symmetry breaking 7−121849
- ^{3}H, nuclear charge density, quark exchange effects 7−102800
- ^{3}He, nuclear charge density, quark exchange effects 7−102800
- ^{3}He(e,e), charge form factor calcs. and charge density operator 7−128952
- ^{4}He, charge radius deduced from muonic atom Lamb shift 7−110145
- Hg, effective interaction and the staggering of nuclear charge radii 7−73707
- ^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
- ^{84}Kr(p,X), fragment charge distributions, statistical model anal. 7−109182
- ^{6}Li, EM props. from (α+d) cluster model with breathing clusters, form factors, movements 7−121598
- ^{7}Li, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
- Ne, muonic, charge radii from X-ray data 7−95982
- ^{16}O, ground state props. and forces in unitary-model-operator approach 7−128948
- ^{A}Os(e,e′), A=188, 190, 192, shape transition and wave fn. behaviour, charge density determ. 7−135313
- Pb, effective interaction and the staggering of nuclear charge radii 7−73707
- ^{A}Pb, A=206, 208, charge distrib. differences, finite Fermi system theory 7−95983
- ^{208}Pb, proton momentum distrib., coherent density fluctuation model anal. 7−102798
- ^{A}Pt(e,e′), A=194, 196, shape transition and wave fn. behaviour, charge density determ. 7−135313
- ^{241}Pu(n,f), fragments, correlated mass, energy and charge distribs. 7−121975
- Rb transition nuclei, collective zero-point motion contrib. to mean-square charge radii 7−135182
- Rn, nuclear spins, moments and charge radii difference meas. 7−109017
- ^{32}S, charge density and octupole form factor in harmonic oscillator and HF models 7−67713
- ^{A}Sm, A=146, 151, deformation, collinear laser spectroscopy, moments, charge 7−116247
- Sn, effective interaction and the staggering of nuclear charge radii 7−73707
- ^{A}Sn, A=108-111, nuclear spins, moments and charge radii from hyperfine splittings and isotope shifts 7−67714
- ^{120}Sn(^{132}Xe, X), deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
- ^{A}Sr, A=80-90, charge radii and moments, laser spectroscopy meas. 7−95984
- Th(Ta,X), positron and δ-electron emission, coupled channels anal. 7−67870
- ^{A}Th, A=157-169, ground state properties, quadrupolar and magnetic movements, charge radii, binding energies, HF anal. *(German)* 7−128940
- ^{232}Th(α, f), 30 MeV, charge distrib. and fractional cumulative yield of ^{135}I, ^{138}Xe and ^{140}Ba 7−96125
- ^{232}Th(n,f), 14.7 MeV, Rh, Ag, In and Sb cumulative and independent yields, charge distrib. *(Chinese)* 7−121966
- ^{A}U, A=234, 235, 238, neutron resonance states, mean-square charge radii meas. 7−73702
- ^{236}U, mean-square charge radii meas. of compound-nucleus states, fission width correlations 7−73703
- ^{238}U(e,e′), linear response function in quasielastic peak region, long. charge response 7−135306
- ^{132}Xe(p,X), fragment charge distributions, statistical model anal. 7−109182
- Xe(p,X), secondary fragment charge dispersion, statistical multifragmentation model 7−141048

nuclear chemistry
- *see also chemical effects of nuclear reactions and scattering; radiation chemistry; radiochemistry*
- Tc complexes, influence of matrix physical state on ^{95m}Tc decay 7−113970

nuclear cluster model
- 3α orthogonality condition model, appl. of μ truncation model, 3α, ^{16}O+2α system anal. 7−81319
- A=21-23, cluster struct., parity spectrum and electromagnetic transitions 7−135233
- actinide nuclei, α-clustering effects 7−109078
- conference on hadronic few-body systems, Rome, Italy (Oct. 1986) 7−66812
- element abundances in hot nuclear matter, clusters 7−73726
- excited compound nuclei, cluster emission, evaporation model, cross sections from (^{40}Ar,X); and (^{3}He,X) *(German)* 7−129092
- few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
- fp-shell nuclei, alpha-particle cluster states 7−128989
- heavy ion central collisions, classical molecular dynamics anal., fusion-fission, fragmentation, vaporisation 7−121911
- heavy ion reactions, clustering, dynamical fragmentation theory 7−116473
- heavy nuclei, nucleon cluster formation and cluster radioactivity 7−109125
- hypernuclei, α-cluster model variational calcs. in harmonic oscillator basis 7−128366
- many-quark clusters in nuclei 7−67753
- microscopic cluster theory, multi-configuration RGM studies and antisymmetrization 7−67752
- microscopic coupled-channels study of the scattering and breakup of light heavy-ions 7−102914
- multi three-cluster coupling model of reactions 7−67778
- near-vibrational systems, rotational bands, origin similarity to OP(5) bands, α-clustering 7−121563
- Pauli repulsion of α-particles and 3α overbinding problem 7−73719

nuclear cluster model continued
- photospallation and radiative capture, microscopic studies including collective and cluster degrees of freedom 7−121785
- reduced alpha transfer rates, schematic model, α-clustering 7−116366
- resonating group method and Pauli repulsion of clusters 7−67750
- unstable two-cluster system, effect of third particle on two-particle resonance 7−135275
- α-cluster hypernuclei and hypernuclear interactions, nuclear forces 7−128996
- (p,2p), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
- (p,pd), 670 MeV, in 1p-shell nuclei, quasi-elastic fast deuteron ejection, shell anal. 7−121821
- (p,pd), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
- (p,px), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
- α-backbending in gauge space, yrast state rot. and backbending, α-clustering *(Chinese)* 7−108953
- α-like four-nucleon correlations in nuclear superfluid phases, BCS approach 7−135231
- ^{A}Ba, A=140, 142, 2_1^+ state g-factor revolving cluster model 7−102803
- ^{8}Be(α,γ)^{12}C, microscopic theory in 3α cluster model. generator coordinate method, ^{12}C spectroscopy 7−121874
- ^{9}Be$_{\Lambda}$, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
- ^{A}Be$_{\Lambda}$, A=9,10, interactions and binding energy, variational calcs. of α-cluster models 7−67759
- ^{12}C, α-cluster model in harmonic oscillator basis, variational calcs. 7−128366
- ^{12}C, cluster Faddeev calcs. and three-body force effects 7−67751
- ^{12}C, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
- ^{12}C, three-alpha Fadeev calcs., bound-state anal. with Pauli correct α-α potential 7−67729
- ^{12}C(^{16}O,α), angular distrib. calcs. using α-particle model 7−81419
- ^{12}C(^{6}Li,αd)^{12}C, 178 MeV, ^{6}Li→α+d breakup, coupled-channel and α-d cluster model anal. 7−116498
- ^{40}Ca(d,α), 20 MeV, α-particle D-state, DWBA anal., d+d cluster expansion 7−116433
- ^{19}F band structure, level energies, reduced α-widths, B(E2), B(M1) calcs., α+^{15}N cluster model anal. 7−73680
- ^{2}H(d,γ)^{4}He, low energies, ^{4}He D-state effects 7−116435
- ^{4}He(γ,pn)^{2}H, nucleon momentum distributions and quasideuteron correlations, quasi-^{3}He decay 7−121784
- ^{5}He$_{\Lambda}$, ground state binding energy, semiphenomenological study 7−81325
- ^{6}He$_{\Lambda}$, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
- ^{A}He$_{\Lambda}$, A=5,6, interactions and binding energy, variational calcs. of α-cluster models 7−67759
- ^{6}Li, αnp model, ^{6}Li(p,pd)^{4}He reaction anal. 7−121846
- ^{6}Li, EM props. from (α+d) cluster model with breathing clusters, form factors, movements 7−121598
- ^{7}Li, Coulomb excitation of first excited state, cluster model calcs. 7−116234
- ^{7}Li$_{\Lambda}$, ground state binding energy, semiphenomenological study 7−81325
- ^{7}Li(e,e′), longitudinal and transverse form factor calcs., cluster model 7−121810
- ^{7}Li(π^+, e$^+$,e$^-$p)^{6}Li, 380 MeV, cross section, nucleon-cluster, shell model calcs. 7−121959
- ^{A}Li$_{\Lambda}$, A=7, 9, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
- ^{A}Li(γ,t), A=6,7, two-cluster direct mechanism, shell model and cluster model calcs. 7−135297
- ^{24}Mg, cluster struct., form factors, energy levels and parity states 7−135232
- ^{24}Mg, highly excited state sin multi-cluster orthogonality condition model 7−67724
- ^{24}Mg, positive parity rotational bands, binding energy calcs., cranked cluster model anal. 7−116233
- ^{15}N, helion and ^{3}H cluster states, branching ratios 7−67685
- ^{15}N, positive parity triton cluster states, coupled channels calcs. 7−135190
- ^{20}Ne, giant quadrupole resonances, E2-transition strength and α-decay width, cluster model anal. 7−108978
- ^{20}Ne isoscalar giant resonances, sum rules, symplectic model, cluster approach 7−135286
- ^{20}Ne, Yrast structure change in cluster model 7−121569
- ^{22}Ne, rotational bands, E1 transitions, cluster anal. 7−67694
- ^{A}Ni(α,p), A=58, 60, 62, zero and finite range semi-microscopic DWBA anals. *(Chinese)* 7−116438
- ^{15}O, helion and ^{3}H cluster states, branching ratios 7−67685
- ^{16}O, 4-body problem of 4 bound α-particles, α-cluster model, binding energy 7−81287
- ^{16}O, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
- ^{16}O spectrum, microscopic description, multiconfiguration generator coord. basis 7−135212
- ^{16}O+2α system, linear chain structure, appl. of μ-truncation method to 3α orthogonality condition model 7−81319
- ^{16}O+α system, (^{20}Ne), microscopic optical potential 7−96038
- ^{16}O+α system, cranked-cluster model anal. 7−116311
- ^{16}O(^{12}C,^{16}O), differential cross section, independent α-particle model and DWBA calcs. *(Chinese)* 7−109206
- Pb isotopes, microscopic study of collective states, IBA, cluster operators *(Chinese)* 7−108952
- ^{208}Pb(^{6}Li, αd)^{208}Pb, 178 MeV, ^{6}Li→α+d breakup, coupled-channel and α-d cluster model anal. 7−116498
- ^{120}Sn(^{7}Li,αt)^{120}Sn$_{g.s.}$, 70 MeV, ^{7}Li→α+t breakup, coupled-channel and α-t cluster model anal. 7−116499
- ^{232}Th(γ,X), 18-28 MeV, ^{24}Ne emission cross sections, cluster mechanism 7−67800
- ^{A}Ti, A=46,48,52, rotational bands, E1 transitions, cluster anal. 7−67694
- ^{51}V(^{12}C,X), 72 MeV, incomplete fusion, recoil studies, α-cluster behaviour 7−116512

nuclear collective model
- *see also generator coordinate method; interacting boson approximation; nuclear cranking model; nuclear liquid drop model*
- aligned high spin states, nucleon number conserving description of pairing correlations 7−108968
- B(E2) values, approximate analytic expression in IBM 7−109103
- Bohr-Mottelson and IBM-1 models, relationship between electric quadrupole props. 7−116310
- Born-Oppenheimer method, validity by analytically solvable model 7−121656

nuclear collective model continued
Born-Oppenheimer method of nuclear collective motion, test using sixteen-fermion system 7−109076
boson second quantisation techniques, calculation of electron scatt. form factors 7−109069
broken symmetries and vibrations of open shell systems in a partial random phase approximation 7−121586
collective excitations in nuclear hydrodynamics, extended Thomas-Fermi approx. 7−135175
collective manifold decoupling in ATDHF theory 7−135235
collective mode damping, dynamical aspects of phonon-phonon coupling 7−89552
collective motion, boson models, O(4) fermion algebra 7−121653
collective motion damping, memory effects and entropy, dissipative linear response theory 7−135174
collective states, boson and geometrical descriptions, microscopic study *(Chinese)* 7−116209
couplings between large amplitude collective motions and pairing rotations, self-consistent collective coordinate method 7−116307
cranked harmonic oscillator, coherent states 7−109068
deformed nuclei, high-spin props., weak coupling model calcs. 7−95967
deformed odd-A nuclei, A≃100, pairing reduction, RPA shell model calcs. 7−81275
deformed superfluid nuclei, dynamical α-type correlations 7−109082
dipole resonances, dynamic collective model and dipole boson model comparison 7−141035
dissipative, collective and stochastic motion in TDHF theory 7−89548
Elliott's model, coherent state anal., time evolution, nuclear quadrupole rotation 7−128987
even nuclei, vibr. and rot. motion, quadrupole moments and transition operators 7−116213
even-even nuclei, monopole excitations and E0 transitions 7−109094
f-decay, spontaneous fragment emission by heavy nuclei, mechanism 7−121743
Fermi liquid, surface oscillation damping and wall formula 7−109075
fermion dynamical symmetries, SO(8) and Sp(6) collective states 7−135185
finite nuclei, collective modes 7−108949
gas drop model, response function for periodic external fields, force fn., moments 7−121650
gas-drop model, semiclassical approx. 7−96001
giant dipole resonance spectrum, dipole transitions, algebraic calc. *(Chinese)* 7−116357
giant resonance damping, normal mode anharmonic coupling, fluid dynamical model study 7−135272
giant resonance damping widths, nuclear response in Landau Vlasov dynamics 7−135281
ground state bands, collective transverse multipoles, microscopic and collective calcs. 7−116229
harmonic oscillator well, static and dynamic aspects 7−73713
heavy deformed nuclei, rotational bands, split parity doublets, model anal. 7−108996
heavy ion-nucleus reactions, two-particle excitation process, collective pair transfer, sum rules 7−116462
heavy nuclei, g-factors and the proton-neutron interaction 7−95987
heavy nuclei, low-lying states, dipole oscillation mode 7−108982
highly excited nuclear states, macroscopic dynamics, statistical averaging, relation with quantum quantities *(German)* 7−129011
highly excited nuclei, disintegration, Vlasov-Uehling-Uhlenbeck eqn. 7−116315
hot nuclei, mean field theory 7−121660
hot nuclei, total absorption and emission probabilities, giant resonances 7−141034
hot strongly rotating nuclei, continuum in gamma-decay spectrum 7−121672
isoscalar giant resonances, temp. depend. in semi-classical model 7−135278
isoscalar giant resonances in a pot. well, semiclassical descript. 7−135279
isospin-invariant fermion dynamical symm. model, group struct. 7−73716
isovector collective octupole state in f-p shell nuclei 7−95970
large amplitude collective motion, collective manifold uniqueness, adiabatic TDHF anal. 7−121657
large amplitude collective motion, eqns. and coupling in TDHF theory 7−73720
large amplitude collective motion, microscopic theory of dynamical collective subspace 7−116309
large amplitude collective motion, optimum submanifold by self-consistent collective-coordinate method 7−135284
large-amplitude collective motion, selfconsistent collective-coordinate method anal., biunitary representation 7−121654
Lipkin-Meshkov-Glick model, ground state phase transition, rot. spectrum crit. phenomena 7−135224
Lipkin-Meshkov-Glick model for magic nuclides, 2p2h configs., two-level approx. 7−135223
low energy excitations of even, odd and odd-odd nuclei, microscopic description *(French)* 7−81285
low multipolarity giant resonances, vortex oscillations and compression calcs. 7−135273
macroscopic collective movement, hydrodynamic response fn. and kinetic coeffs. 7−121651
macroscopic resonances in planar geometry, free-particle system, resonance frequencies and widths 7−121774
microscopic approaches to nuclear structure calcs., seminar, Sorrento, Italy (May 1986) 7−120707
microscopic theories, overview 7−121661
multipolar vibrational strength fragmentation in semiclassical approach, giant resonances 7−135282
near-vibrational systems, rotational bands, origin similarity to OP(5) bands, α-clustering 7−121563
nuclear rotations in an arbitrary number of dimensions, yrast bands 7−102791
odd-A nuclei, interaction of normal bands and superbands, bandcrossing 7−116230
odd-A nuclei, rot. motion of triaxial shape in unfavoured-signature states 7−121560
odd-even nuclei, Bohr collective hamiltonian, coupling of one quasiparticle to general solution 7−116308
pair excitations in dynamical nuclear field theory 7−89540
pair-excited intrinsic states in deformed nuclei, population unified collective model 7−121584
nuclear collective model continued
pairing correlations, nucleon number conserving description in terms of occupation probability amplitudes 7−81314
photospallation and radiative capture, microscopic studies including collective and cluster degrees of freedom 7−121785
proton-neutron force, nuclear phases, E_1/E_2 versus E_4/E_2 plot discontinuity, ground state bands 7−116290
quadrupole collective motion, IBM and anharmonic vibr. model calcs. 7−135172
quasiparticle model, mass operator energy depend. effects 7−81310
quasiparticle-phonon model, single particle and collective motion fragmentation 7−121567
rare-earth nuclei, band termination and E2 collectivity loss, algebraic fermion model 7−81274
Roper resonance in naive quark model with monopolar collective excitation 7−121775
rotating superfluid nuclei, diabolic pair transfer, Berry phase 7−73717
rotational spectra, degree of freedom of F-spin *(Chinese)* 7−102819
sd shell even-even nuclei, fermion dynamical symmetry model microscopy test 7−121565
selfconsistent collective coordinate method, non-unitary realisation 7−121658
single particle and collective coupling, equation of motion method 7−121585
Sp(2,R) model for s- and p-shell nuclei props. 7−141001
Sp(6,R) model, spin-orbit and tensor interactions 7−81318
Sp (2,R) model, operator matrices 7−141000
spin-isospin volume and surface responses in nuclei, RPA calcs. 7−81297
superfluid nuclei, 2^+ states, response to external fields, (r,λ) representation 7−135173
superfluid rotating nuclei, diabolic pair transfer, nuclear SQUID analogy 7−73689
superheavy nuclei, dynamic deformation model of structure and fission 7−121580
symplectic algebras, boson representations, general scheme 7−109067
symplectic nuclear collective model, subalgebra classification 7−73712
variational derivation of nuclear fluid dynamics 7−102820
vibrational model for isovector quadrupole vibrations 7−67683
workshop on semiclassical and phase space approaches to nuclear dynamics, Aussois, France (Mar. 1987) 7−134349
^{227}Ac, rigid reflection asymmetric rotor description 7−109070
α-backbending in gauge space, yrast state rot. and backbending, α-clustering *(Chinese)* 7−108953
^{126}Ba, 22 from ^{116}Sn(^{13}C, 3nγ) 7−121572
^{12}C(^{12}C,X), molecular resonances, rotation-vibration model *(Chinese)* 7−102903
^{12}C(p̄,p̄′)^{12}C, deformed spin-orbit potential, cross-sections and analysing powers 7−121851
^{40}Ca(^{40}Ca, ^{40}CA′), cross sections and giant resonances in multiphonon excitation model 7−141094
^{40}Ca(n,n′), 21.7, 25.5 MeV, diff. cross sections, deformation, moments, CC anal. 7−67817
^{52}Cr(π, π), multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{161}Dy(^{3}He,^{3}He′), 32 MeV, cross sections, levels, J^π and particle-vibration states 7−135181
Δ-hole phonon and particle-hole phonon interplay, Δ-hole polarization effect 7−135226
^{A}Er, A=156, 158, band 2 formation mechanism, VMI model anal. *(Chinese)* 7−102789
^{168}Er, anharmonic gamma vibrations, self-consistent collective coordinate method 7−116218
Eu, odd-mass nuclei, core-particle coupling calcs. 7−95964
^{A}Fe(π, π), A=54, 56, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{4}He(N,N), resonances in N+α system, oscillator representation in resonating group method 7−67786
Hf-Pt region, variable moment of inertia models in N_pN_n scheme, parameters 7−81273
^{193}Ir, collective states descriptions, triaxial rotor and interacting boson-fermion models 7−108964
^{A}Kr, A≈75, 77, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
La, odd-mass nuclei, core-particle coupling calcs. 7−95964
^{174}Lu, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{24}Mg(δ,δ$^-$), 54 MeV, collective excitations, coupled-channel method, triaxial rotor model comparisons 7−129067
^{97}Mo, level scheme construction from ^{96}Zr(^{3}He,2nγ)^{97}Mo, 11 MeV, particle-plus-rotor model anal. 7−67690
^{A}Ni(^{B}Si,X), A=58,62,64, B=28,30, coupled channels anal., low-lying excitations, rotational and vibrational model comparisons 7−67867
^{58}Ni(^{3}He, ^{3}He), differential cross section ang. distribs., DWBA and collective model anal. 7−73781
^{58}Ni(p,p′), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073
^{238}Np, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{16}O, hypernetted chain calcs. for Malfliet-Tjon pot. 7−81311
^{16}O(α,X), 0 to 30 MeV, Pauli's principle effects 7−116440
^{208}Pb, giant resonances in coordinate space, energy temp. depend., semiclassical density functional calc. 7−135277
^{208}Pb(^{3}He, ^{3}He), differential cross section ang. distribs., DWBA and collective model anal. 7−73781
^{208}Pb(p,p^1), 200, 400 MeV collective DWBA analysis, low lying states, n to p multipole matrix elements 7−108959
Pd, odd-neutron isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{A}Pd(e,e′), A=104-110, low-lying states, IBM and anharmonic vibrator model comparisons 7−109039
^{A}Pt, A=189, 191, 193, quadrupole coherent states, quasiparticle coupling to collective core, particle-core coupling model 7−121573
Rb transition nuclei, collective zero-point motion contrib. to mean-square charge radii 7−135182
Rh odd-mass nuclei, Dyson mapping appl. to low-lying collective states 7−67686
Rh, odd-proton isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
Ru, odd-neutron isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957

nuclear collective model continued
^{A}Se, A=76, 78, level struct. and transitions, shape coexistence, dynamic deformation model 7−116280
^{73}Se, level lifetime meas. and rotor model comparison 7−96021
^{75}Se, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
^{28}Si(n,γ), 565 keV, partial radiative widths, for neutron resonance, particle-vibr. coupling model 7−73743
^{A}Sm, A=146-152 even isotopes, E2/M1 mixing ratios using extended phonon projection model 7−121707
^{A}Sm, A=146-154, vibr.-rot. phase transition, Dyson boson mapping appl. 7−95968
^{116}Sn(^{3}He, ^{3}He), differential cross section ang. distribs., DWBA and collective model anal. 7−73781
Sr, shape transition at N=60 7−116249
^{160}Tb, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
Tc, odd-proton isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{A}Ti(π, π), A=48, 50, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{A}W, A=185, 187, low-lying low-spin levels, Nilsson model and SU(3) Fermi-Bose symmetry scheme 7−81270
^{128}Xe, collective and quasiparticle excitations 7−116221
^{A}Yb, A=161,163,165,167 rotational alignment in $i_{13/2}$-parentage states 7−108955
^{A}Yb, A=162-9, energy levels, pairing fluctuations in rapidly rot. nuclei 7−116232
^{90}Zr(^{3}He, ^{3}He), differential cross section ang. distribs., DWBA and collective model anal. 7−73781
^{90}Zr(p,p'), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073
^{96}Zr, doubly closed subshell, coexisting 0^{+} band in polyspheron model 7−108966

nuclear collective motion *see nuclear collective model*

nuclear collective states and giant resonances
see also isobaric analogue resonances
1p shell nuclei, electric dipole resonances from photonuclear cross section anal. 7−102852
^{168}Er, α-band, M1 transitions and F-spin mixing, IBA-2 comparisons 7−121706
α-backbending, nucleon-nucleon correlation and deformation in nuclei *(Chinese)* 7−102790
A=100 region, correspondence between rotational bands, quartet model 7−128934
A=117, nuclear data sheets, levels, J^{π}, transitions, decays 7−80200
A=118, nuclear data sheets, levels, J^{π}, transitions, decays 7−140390
A=140, nuclear data sheets, levels, J^{π}, transitions, decays 7−140391
A=150 region, correspondence between rotational bands, quartet model 7−128934
A=155, nuclear data sheets, levels, J^{π}, transitions, decays 7−95117
A=158-188, deformed even-even nuclei, hexadecapole states, quasiparticle-phonon model calcs. 7−121571
A=160-246, even-even nuclei with 1^{+} and 3^{+} bands in rot. region, IBM calcs., energy spectra *(Chinese)* 7−121551
A=165, nuclear data sheets, levels, J^{π}, transitions, decays 7−80201
A=170, nuclear data sheets, levels, J^{π}, transitions, decays 7−80204
A=202, nuclear data sheets, levels, J^{π}, transitions, decays 7−95118
A=204, nuclear data sheets, levels, J^{π}, transitions, decays 7−95119
A=226, nuclear data sheets, levels, J^{π}, transitions, decays 7−80202
A=54, nuclear data sheets, levels, J^{π}, transitions, decays 7−80203
A=56, nuclear data sheets, levels, J^{π}, transitions, decays 7−102030
A=70, nuclear data sheets, levels, J^{π}, transitions, decays 7−102031
A=73, nuclear data sheets, levels J^{π}, transitions, decays 7−102032
A=74, nuclear data sheets, levels, J^{π}, transitions, decays 7−140389
A=82, nuclear data sheets, levels, J^{π}, transitions, decays 7−80199
A=94-134, multiplet structure, E2 transitions and quadrupole moments 7−121575
actinides, octupole deformation, α-γ and α-conversion electron decay study 7−109012
actinides, rot. alignment and stable octupole deformation 7−81293
aligned high spin states, nucleon number conserving description of pairing correlations 7−108968
B(E2) values, approximate analytic expression in IBM 7−109103
barrier tunnelling in fission and fusion, pairing correlation effects a probability and dynamics 7−73817
branching ratios for neutron decay, microscopic derivation 7−116363
broken symmetries and vibrations of open shell systems in a partial random phase approximation 7−121586
charge exchange quadrupole excitation in nuclei, RPA calcs. 7−81279
collective excitations in nuclear hydrodynamics, extended Thomas-Fermi approx. 7−135175
collective motion damping, memory effects and entropy, dissipative linear response theory 7−135174
collective motions, generator coordinate method, degrees of freedom *(Chinese)* 7−121550
collective states, boson and geometrical descriptions, microscopic study *(Chinese)* 7−116209
compound nucleus, a classically chaotic quantum system 7−121637
compound resonances, partial El-radiation force constants, OSM anal. 7−121556
couplings between large amplitude collective motions and pairing rotations, self-consistent collective coordinate method 7−116307
damping due to normal mode anharmonic coupling, fluid dynamical model study 7−135272
deformation, onset in collective nuclei, spectroscopic approach 7−109011
deformed boson expansions, reconstitution of rotational band structure, generic model 7−140998
deformed even-even nuclei, mag. dipole transitions 7−121705
deformed nuclei, high-spin props., weak coupling model calcs. 7−95967
deformed nuclei, isovector mag. mode, RPA calcs. 7−108985
deformed nuclei, microscopic basis of the interacting boson model and its extension to actinide nuclei 7−121664
deformed odd-A nuclei, A≃100, pairing reduction, RPA shell model calcs. 7−81275
deformed superfluid nuclei, dynamical α-type correlations 7−109082
diabolic pair transfer in rotating nuclei, Berry phase 7−128931
dipole collectivity and reflection asymmetric nuclear shapes 7−116226
dipole resonances, dynamic collective model and dipole boson model comparison 7−141035

nuclear collective states and giant resonances continued
dissipative, collective and stochastic motion in TDHF theory 7−89548
electric giant resonances, exptl. review 7−89565
electromagnetic moments of nuclei at high-spin 7−116211
Elliott SU(3) model, continuous variable representation *(Chinese)* 7−102822
even nuclei, vibr. and rot. motion, quadrupole moments and transition operators 7−116213
even-even deformed nuclei, neutron cross sections for octupole band excitation 7−67697
even-even deformed nuclei, two-phonon pole shifts, RPA calcs. 7−135191
even-even nuclei, monopole excitations and E0 transitions 7−109094
even-even nuclei, octupole excitation using generator coordinate method 7−109073
fermion dynamical symmetries, SO(8) and Sp(6) collective states 7−135185
finite nuclei, collective modes 7−108949
fragmentation of giant resonances and collective motions, quasiparticle-phonon model 7−121567
g-boson signature in the interacting boson model, g-factor variations 7−135207
gas drop model, response function for periodic external fields, force fn., moments 7−121650
generalized IBM with dipole degrees of freedom for low amplitude excitations 7−121652
giant angle dipole, QRPA formalism, quasi-particle description 7−121587
giant dipole resonance spectrum, dipole transitions, algebraic calc. *(Chinese)* 7−116357
giant resonance damping widths, nuclear response in Landau Vlasov dynamics 7−135281
giant resonances, spreading widths at finite temp. 7−108981
ground state bands, collective transverse multipoles, microscopic and collective calcs. 7−116229
heavy deformed nuclei, rotational bands, split parity doublets, model anal. 7−108996
heavy ion collisions, intermediate/high energies, EM processes 7−116517
heavy ion collisions, molecular model for high spin resonances 7−135372
heavy ion multifragmentation in Monte Carlo TDHF model, mass spectra, multiplicities 7−73794
heavy nuclei, E1 strength in giant dipole resonance, nuclear structure effects, (γ,γ'), expts. 7−116385
heavy nuclei, low-lying states, dipole oscillation mode 7−108982
heavy nuclei, spherical and weakly deformed, parametrization for phonon octupole states 7−140975
high spin rotational bands, crossing frequencies, quadrupole and higher order pairing forces 7−135184
high-momentum phonon exchange and the effective shell-model interaction 7−102810
high-spin, collective and single particle structures 7−121578
highly excited nuclear states, macroscopic dynamics, statistical averaging, relation with quantum quantities *(German)* 7−129011
highly excited nuclei, disintegration, Vlasov-Uehling-Uhlenbeck eqn. 7−116315
hot nuclei, total absorption and emission probabilities, giant resonances 7−141034
hot strongly rotating nuclei, continuum in gamma-decay spectrum 7−121672
IBA model, microscopic foundation 7−121659
IBM, p-n interacting, collective 2^{+} states in the U(5) classical limit 7−140974
isoscalar giant resonances, temp. depend. in semi-classical model 7−135278
isoscalar giant resonances in a pot. well, semiclassical descript. 7−135279
isospin symm. and nuclear struct., review 7−109015
isotropic mixing of isobaric 0^{+} excitations, Coulomb pot. depend. and isospin nonconservation 7−121771
isovector collective octupole state in f-p shell nuclei 7−95970
isovector quadrupole vibrations, vibrational model anal. 7−67683
large amplitude collective motion, eqns. and coupling in TDHF theory 7−73720
large amplitude collective motion, optimum submanifold by self-consistent collective-coordinate method 7−135284
large scale nuclear collective motion, local RPA and transport theory 7−140984
light nuclei, spectrum with O(6) dynamical symmetry from IBM-4 7−135222
light nuclide radiative capture, microscopic studies including collective and cluster degrees of freedom 7−121785
Lipkin-Meshkov-Glick model, ground state phase transition, rot. spectrum crit. phenomena 7−135224
Lipkin-Meshkov-Glick model for magic nuclides, 2p2h configs., two-level approx. 7−135223
low multipolarity giant resonances, vortex oscillations and compression calcs. 7−135273
low-energy symmetry laws, nuclear spectroscopy 7−121625
low-lying isovector 1^{+} states, scissor vibration interpretation 7−121568
lowest collective states and transition probabilities in the Ra region 7−95961
M1 excitations in even-even $f_{7/2}$ shell nuclei, orbital current 7−96015
macroscopic collective movement, hydrodynamic response fn. and kinetic coeffs. 7−121651
macroscopic resonances in planar geometry, free-particle system, resonance frequencies and widths 7−121774
magic and semimagic nuclei, excitations and G-matrix, BPA and RPA calcs. 7−109134
magic nuclei, inclusion of 2p2h configs., generalised microscopic model 7−67787
microscopic approaches to nuclear structure calcs., seminar, Sorrento, Italy (May 1986) 7−120707
monopole resonances, lifetimes in TDHF theory, particle emission rates 7−96043
multipolar vibrational strength fragmentation in semiclassical approach, giant resonances 7−135282
N=20 neutron shell closure, onset of deformation far from stability 7−67710
N≠Z nuclei, dipole giant resonance in isospin channels and μ^{-} capture, TDHF calc. 7−135280
near-magic nuclei, partial El-radiation widths of isobaric analog resonances 7−109133
near-vibrational systems, rotational bands, origin similarity to OP(5) bands, α-clustering 7−121563

nuclear collective states and giant resonances continued
neutron-proton IBM, M1 selection rules, SU(3), O(6) like Hamiltonians 7−116216
nuclear data sheets, recent refs., Jan.-April 1987 7−140392
nuclear data sheets, recent refs., Sept. to Dec. 1986 7−80205
nuclear profile, reconstruction in gauge space 7−135201
nuclear rotations in an arbitrary number of dimensions, yrast bands 7−102791
odd-A nuclei, interaction of normal bands and superbands, bandcrossing 7−116230
odd-A nuclei, rot. motion of triaxial shape in unfavoured-signature states 7−121560
odd-mass nuclei, asymmetric deformation, boson-fermion dynamical SU(3) symmetry, U(16) core 7−140990
odd-odd deformed actinide nuclei, expt. level struct. and rot. parameters determ. 7−121555
pair excitations in dynamical nuclear field theory 7−89540
pair transition density in well deformed nuclei, macroscopic approach 7−108976
pair-excited intrinsic states in deformed nuclei, population unified collective model 7−121584
pion reactions and scatt., nuclear structure probe 7−121964
proton resonances, tests of spectrum and strength fluctuations 7−128937
proton-neutron force, nuclear phases, E_1/E_2 versus E_4/E_2 plot discontinuity, ground state bands 7−116290
quadrupole collective motion, IBM and anharmonic vibr. model calcs. 7−135172
quadrupole Hamiltonian in IBM, algebraic solution 7−128986
rare-earth nuclei, band termination and E2 collectivity loss, algebraic fermion model 7−81274
reduced width-amplitude distrib., test 7−121779
Roper resonance in naive quark model with monopolar collective excitation 7−121775
Rossendorf continuum shell model, collective features, self-organising systems 7−109063
rotating nuclei, diabolic pair transfer, cranking theory 7−121671
rotating nuclei, diabolic pair transfer, cross section anal., expt. obs. possibility 7−109216
rotating nuclei, statistical γ-transitions, giant dipole resonance effects, RPA anal. 7−121702
rotational bands in deformed nuclei 7−108954
rotational bands studies using Spin Spectrometer 7−108956
rotational spectra, degree of freedom of F-spin *(Chinese)* 7−102819
rotational states, creation and time evolution 7−103473
scissor modes, shell model study 7−108948
sd shell even-even nuclei, fermion dynamical symmetry model microscopy test 7−121565
single particle and collective coupling, equation of motion method 7−121585
spectroscopy and microscopic nuclear dynamics, extended shell model approach 7−109061
sphericity tensor anal., side-splash and collective flow effects 7−116474
spin excitation modes, shell model and RPA calcs., review 7−73745
spreading widths of isobaric analog states and the isovector giant monopole resonance 7−73740
spurious continuum effects on excited giant resonances, Thomas-Fermi model 7−73741
superdeformed nuclei study, heavy ion collisions, fission 7−128942
superdeformed states and feeding patterns in rare earths, spectroscopy, pot. energy calcs. 7−135178
superfluid nuclei, 2^+ states, response to external fields, (r,λ) representation 7−135173
superfluid rotating nuclei, diabolic pair transfer, nuclear SQUID analogy 7−73689
superheavy nuclei, dynamic deformation model of structure and fission 7−121580
symmetry and critical phenomena in the rotational spectra of isolated microsystems 7−95965
three axis static deformation of collective excitations in IBA 7−121594
three-photon correlations in rotational nuclei 7−95972
triplet pairing nuclei, superfluid phases 7−116217
two-nucleon high spin states, Bansal-French, crude shell models, A=56-72 binding energy 7−140987
valence shell and particle-hole degrees of freedom coupling in partial RPA 7−73742
Walecka model, exotic isoscalar dipole resonances 7−140980
workshop on semiclassical and phase space approaches to nuclear dynamics, Aussois, France (Mar. 1987) 7−134349
Z=66-70, B(E2) values for high spin isomers 7−140983
(e,e′), form-factor of low-lying $K^\pi=1^+$ excitations in rare-earth nuclei 7−121803
(N, γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
^{13}N, isovector $\Delta J^\pi=0^-$ transition study from (p, n) reactions 7−81386
^{A}O, A=14, 15, isovector $\Delta J^\pi=0^-$ transition study from (p, n) reactions 7−81386
(p, n), giant resonance isospin energy splittings in hydrodynamic model 7−135289
(π^-, π^0), giant resonance isospin energy splittings in hydrodynamic model 7−135289
(t,α), gross struct. study 7−109201
(t,d), gross struct. study 7−109201
(t,t′), gross struct. study 7−109201
^{24}Al, high spin states, anal. using (p,π^-) 7−67693
^{27}Al, high spin states search using ^{24}Mg(α,p) 7−108961
^{27}Al(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{27}Al(^{7}Li,^{7}Be), 150 MeV, high-lying states, neutron decay 7−109232
^{27}Al(^{7}Li,^{7}Li′), 150 MeV, high-lying states, neutron decay 7−109232
^{236}Am, long-lived isomers, high spin and shape isomeric states 7−102807
^{32}Ar superallowed β-decay, axial-vector strength renormalisation 7−109124
^{41}Ar levels and J^π assignments, DWBA anal. of ^{40}Ar(d̄,p) 7−116286
^{A}At, A=209, 210, 211, enhanced E3 transitions and mixed configs. of core excited isomers from ^{209}Tl(^{9}Be, xn) 7−67687
^{210}At, 19^+ isomer, lifetime and enhanced E3 decay 7−109105
Au(U,X), positron and δ-electron emission, coupled channels anal. 7−67870
^{194}Au, high spin states of odd-odd nuclei, interacting boson-fermion-fermion model 7−73688
α-backbending in gauge space, yrast state rot. and backbending, α-clustering *(Chinese)* 7−108953

nuclear collective states and giant resonances continued
^{9}B, first excited state energy from analogue ^{9}Be level 7−108950
^{10}B(γ,xn), 8.44-24.5 MeV, cross section meas., El-giant resonance region study 7−129018
^{124}Ba, yrast band, band crossing and negative parity states 7−81284
^{126}Ba, 22 from ^{116}Sn(^{13}C, 3nγ) 7−121572
^{7}Be(γ,X), photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
^{209}Bi, single-particle proton strengths in $1i_{11/2}$ and $1j_{15/2}$ states 7−67684
^{209}Bi(γ,γ′), exchange currents in El strength and orbital g-factor 7−116279
^{236}Bk, long-lived isomers, high spin and shape isomeric states 7−102807
^{A}C(e,e′)^{A}C, A=12,13 electroexcitation of discrete levels at high momentum transfers 7−129025
^{12}C, 2^+ state, γ-ray ang. correlations, tensor characteristics 7−67763
^{12}C (^{6}Li, ^{6}Li′), 156 MeV, E0 strength at excitation energy 7.65 MeV, 10.2 MeV and 19-21.5 MeV 7−116361
^{12}C(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
^{12}C(^{6}Li,^{6}Li′)^{12}C, isoscalar giant resonances 7−116466
^{12}C(α,α′), 172.5 MeV, angular distrib. meas., multipolarities, deformation lengths, GQR region study 7−121870
^{12}C(e, e′γ), giant resonance electromagnetic decay, RPA calcs. with Skryme-3 interaction 7−116390
^{12}C(e,e′), 200-300 MeV/c, 2p2h correls. effects on longitudinal quasielastic response 7−73690
^{12}C(e,e′), quasielastic peak shift, q depend., relativistic σ-ω model calcs. 7−96057
^{12}C(n,γ$_0$)^{13}C, 6.5-18.5 MeV, excitation fn., cross section meas. in giant dipole resonance region 7−67828
^{12}C(p̄,p̄′)^{12}C, deformed spin-orbit potential, cross-sections and analysing powers 7−121851
^{13}C(^{3}He,t), collective spin-isospin excitations 7−109200
^{14}C(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
Ca, primary electric dipole γ-rays from slow-neutron capture 7−129043
^{40}Ca level widths between 9.5 and 10.5 MeV from (γ,γ) and ^{39}K(p,γ) 7−67723
^{40}Ca(^{40}Ca, ^{40}CA′), cross sections and giant resonances in multiphonon excitation model 7−141094
^{40}Ca(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{40}Ca(ẽ,e†), low momentum transfer ẽ induced nucleon emission, giant resonance decay 7−135307
^{40}Ca(γ,X)Ar, giant dipole resonance, partial decay channels 7−67798
^{40}Ca(n,γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
^{40}Ca(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{40}Ca(p,p′), 319 MeV, spin-flip probabilities meas. 7−109172
^{40}Ca(p,p′)^{40}Ca, fine structure of resonance 7−129045
^{40}Ca(p,p), differential cross sections, polarisations, giant resonances *(Russian)* 7−121843
^{42}Ca(p,n)^{42}Sc 160 MeV, missing Gamow-Teller strength, microscopic anal. 7−89570
^{48}Ca(^{14}C, ^{16}O)^{46}Ar, proton pairing vibration description 7−121953
^{49}Ca level structure, nucleosynthesis relevance from ^{48}Ca(n,X), total and capture cross-sections 7−81382
^{A}Cd(t,p), A=112, 114, intruder-ground state mixing 7−102836
^{14}Cd(p,t), intruder-ground state mixing 7−102836
^{110}Cd, ground band-intruder band mixing meas. and IBM-2 calcs. 7−95966
^{118}Cd, first observation of a near-harmonic vibrational nucleus 7−135189
Cd(γ,n), 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
^{A}Ce, A=124, 126 B(E2) anomaly in ground state bands 7−109104
^{124}Ce, γ-ray decay study using Daresbury Recoil Separator 7−109107
^{130}Ce, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{132}Ce, yrast and yrare lifetime meas. 7−109118
^{142}Ce(p, γγ), isoscalar and isovector quadrupole resonance effects in pγγ ang. correls. 7−67784
^{33}Cl giant Gamow-Teller resonance, delayed proton and γ emissions from ^{33}Ar β^+ decay 7−141027
^{52}Cr(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{131}Cs, new level structure from ^{131}Ba β-decay 7−121576
^{134}Cs, energy levels and electromagnetic properties, IBFFM description, comparison with expt. 7−135253
^{134}Cs level scheme, J^π and transitions from (n,γ) and (d,p) 7−135180
^{57}Cu mass, Q-values, spectroscopy and cross sections from ^{58}Ni(^{14}N,^{15}C) 7−67705
^{63}Cu, statistical giant dipole resonance decay of highly excited states 7−128933
Dy, giant resonances, M1 decay study using particle-γ coincidences 7−109135
^{A}Dy, A=142,144, excited state and J^π, deformation from ^{96}Ru(^{52}Cr,X) and ^{92}Mo(^{54,56}Fe,X) 7−73683
^{A}Dy, A=162, 164, pair transfer at high angular momenta, high spin states, RPA, cranked HFB 7−121564
^{A}Dy(γ,γ′), A=160,162,164, photoexcitation of low-lying collective states 7−109108
^{150}Dy high spin particle-hole states from ^{114}Cd(^{40}Ar, 4n) 7−135187
^{152}Dy, decay scheme up to 40 ħ, coexistence of prolate and oblate structures 7−116225
^{152}Dy, evolution of nuclear structure with increasing spin and internal excitation energy 7−135188
^{152}Dy, obs. of discrete line superdeformed band up to 60 ħ, level transitions 7−116224
^{152}Dy, superdeformed band, rotating nucleus centrifugal solidification 7−95981
^{152}Dy superdeformed bond, decay γ-rays from ^{152}Gd(α,4n), ^{152}Dy superdeformed bond, decay γ-rays 7−141018
^{152}Dy, superdeformed high spin bands 7−121566
^{152}Dy, superdeformed shapes, collective radiation meas. 7−81295
^{152}Dy, superdeformed states, Strutinsky method calcs. 7−81276
^{152}Dy, superdeformed states, γ-spectra and ang. momenta 7−81282
^{154}Dy, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549
^{154}Dy, high spin states, and terminating band struct., cranked shell model comparison 7−81272

nuclear collective states and giant resonances continued
^{154}Dy, high spin struct., γ-γ coincidences and multipolarities, level spins and parities 7−108988
^{156}Dy, rotational phase change evidence, moment of inertia, rot. freq. 7−89537
^{160}Dy rotational side bands, spins and moments of inertia from ^{158}Gd(α,2n) 7−81269
^{161}Dy(^{3}He,^{3}He′), 32 MeV, cross sections, levels, J$^{\pi}$ and particle-vibration states 7−135181
^{161}Dy(^{58}Ni, ^{59}Ni)^{160}Dy, sideband population, intrinsic excitation 7−129081
^{164}Dy(e,e′)^{164}Dy, orbital mag. dipole excitations, inelastic electron scatt. form factor 7−135311
(e,e′) on A=46-238, mixed symmetric 1^{+} states, excitation energy and transition strength 7−81328
Er, collective 1^{+} mode, projected Hartree-Fock description 7−108972
Er, thermal high spin GDR, RPC and cranked HFB calcs. 7−135288
^{A}Er, A=156, 158, band 2 formation mechanism, VMI model anal. *(Chinese)* 7−102789
^{A}Er, A=158,159, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{A}Er, A=159, 160, near-yrast discrete line γ-ray spectroscopy 7−116214
^{A}Er, A=162, 166, giant dipole resonance, thermal and rotational effects in rotating nuclei 7−67695
^{149}Er, energy levels, β-delayed proton emission, K X-ray-proton coincidences in A=149 mass chain from ^{149}Tm decay 7−141026
^{149}Er level structure, yrast levels, isomeric states and transitions from ^{92}Mo/^{60}Ni, X 7−140983
^{155}Er, level scheme, shape coexistence, evol., and parallel p-n core breaking 7−108960
^{158}Er, g-factor at high spins 7−116276
^{158}Er, rotational phase change evidence, moment of inertia, rot. freq. 7−89537
^{158}Er, yrast level sequence, another crossing beyond the first backbend 7−95973
^{159}Er, high spin structures, rot. bands and transitions 7−121561
^{162}Er, correlations, routhian values, ^{130}Te(^{28}Si,4n) study 7−108998
^{164}Er, giant dipole resonance, damping width, role of thermal fluctuations 7−121559
^{168}Er, anharmonic gamma vibrations, self-consistent collective coordinate method 7−116218
^{168}Er, MI transitions between low-lying levels and F-spin purity 7−89558
Eu, odd-mass nuclei, core-particle coupling calcs. 7−95964
^{145}Eu, octupole multiplets, spin-parity assignments, level transitions 7−108999
^{146}Eu, high-spin octupole isomer and four-particle yrast levels 7−109000
^{149}Eu energy levels, nuclear shapes, N=84-88 7−121553
^{153}Eu, level scheme from ^{153}Sm decay 7−121577
^{18}F, coexistence model for even-parity levels, E2 transition probabilities, matrix elements 7−81330
^{18}F, γ-ray circular polarisation meas., weak pion-nucleon coupling strength 7−109102
^{19}F band structure, level energies, reduced α-widths, B(E2), B(M1) calcs., α+^{15}N cluster model anal. 7−73680
^{19}F, γ-decaying states, ^{12}C(^{11}B, ^{4}He)^{19}F study 7−116227
^{19}F(e,e′), 500 MeV, transverse excitation of positive/negative parity states, form factors, shell model comparisons 7−128944
^{19}F, configuration mixing among 11/2^{-} states 7−108965
^{56}Fe, doorway resonances, level spacings 7−116228
^{56}Fe(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
Fr^{+}, electron-impact double ionis. cross section calc., giant reson. contrib., relativistic effects 7−103668
Gd, collective 1^{+} mode, projected Hartree-Fock description 7−108972
^{A}Gd, A=154,156,158, F-spin breaking and energy spectra, IBM calcs. *(Chinese)* 7−109066
^{142}Gd excited state and J$^{\pi}$, deformation from ^{92}Mo(^{54,56}Fe,X) and ^{96}Ru(^{52}Cr, X) 7−73683
^{148}Gd, high spin states and octupole excitations 7−116223
^{148}Gd, I≤44 level structure, spherical and oblate states, fast E2 transitions 7−135186
^{154}Gd, two-quasiparticle struct. study 7−108987
^{156}Gd, 0^{+} and 1^{+} collective excitations, fermion-pair structure, dependence on nuclear deformation 7−108997
^{156}Gd, giant angle dipole structure in self consistent QRPA formalism 7−135283
^{160}Gd(^{206}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{160}Gd(^{208}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
Gd(e,e′), collective phenomena and multipole transition operators, IBM calcs. 7−116393
^{A}Ge, A=70, 72, 74, 76 gyromagnetic ratios of 2$_1$$^{+}$ states 7−73699
^{74}Ge(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
(γ,xn), E1 giant reson. cross sections anal., appl. of ^{181}Ta(e,xn) results 7−135301
^{3}He(γ→,p), E$_{\gamma}$>50 MeV, differential cross section calcs., giant resonance region 7−121795
^{4}He, natural parity states in 10ħω model 7−108975
^{4}He(p,p′)^{4}He, nuclear responses to isoscalar spin-dependent excitations 7−116414
^{6}He (γ,X), photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
^{A}Hf, A=163-166, high spin states study and cranked shell model interpretation 7−73686
^{164}Hf, high spin states and decay sequence routhians, ^{160}Er comparisons 7−108995
^{168}Hf high spin spectroscopy, yrast and negative-parity bands, proton alignment 7−140982
^{178}Hf, collective level energies, SU(3) symm. in sdg boson model 7−96002
Hg, even isotopes, IBM calcs. of spectra, levels and transition probabilities 7−109093
^{201}Hg, nuclear and atomic props. from conversion electron spectroscopy 7−81338
^{150}Ho, yrast level struct., γ-ray spectroscopy 7−108986
^{155}Ho, high spin states, shape transitions and cranked shell model calcs. 7−108984
^{166}Ho, low energy two-particle spectrum, anal. 7−140976
I, giant resonance obs. in dissociative ionisation 7−141704
nuclear collective states and giant resonances continued
I isoelectronic series, electron-impact ionis. giant resons., cross section calc. 7−103669
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{A}In(^{12}C,X), A=113, 115, γ-γ directional correlations, meas. and interpretation 7−73733
^{193}Ir, collective states descriptions, triaxial rotor and interacting boson-fermion models 7−108964
^{195}Ir, low lying positive parity states following double neutron capture 7−81271
^{39}K(γ,N), semidirect giant dipole resonance decay charact., partial photonuclear channels 7−135296
^{39}K(π^{+},π^{+})^{39}K, inelastic scatt., neutron and proton matrix elements for transitions 7−129112
^{41}K(n,n′)^{41}K, γ-ray spectra, energy and spin dependence 7−81399
^{A}Kr, A=75, 77, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
^{76}Kr, high spin states, p-n g$_{9/2}$ alignment ^{40}Ca(^{40}Ca,4p), 155 MeV study 7−108994
^{84}Kr gamma-gamma directional correl. meas., spin-parity, multipole mixing ratios from ^{83}K(n,α) 7−135247
La, odd-mass nuclei, core-particle coupling calcs. 7−95964
^{131}La, collective oblate band due to h$_{11/2}$ neutrons rotational alignment 7−73693
level structure and transitions from ^{160}Tb β-decay 7−89538
(^{7}Li,^{7}Be) reactions on ^{12}C, ^{24}Mg, ^{27}Al, ^{28}Si, ^{48}Ti, isovector giant resonance obs. 7−135356
^{7}Li(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
^{7}Li(γ,X), photodisintegration channel cross sections in giant resonance region 7−135298
^{A}Li (γ,X), A=6,7; photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
^{174}Lu, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{174}Lu level study using ^{176}Yb(p,3nγ), rotational bands, g-factors 7−102792
^{24}Mg, high spin states above 14 MeV, γ and particle decays 7−116334
^{24}Mg, positive parity rotational bands, binding energy calcs., cranked cluster model anal. 7−116233
^{24}Mg, yrast line, self consistent cranked HF+BCS nuclear rotation calcs. 7−102793
^{24}Mg(δ,δ^{-}), 54 MeV, collective excitations, coupled-channel method, triaxial rotor model comparisons 7−129067
^{26}Mg(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
^{26}Mg(p,n), Gamow-Teller strength and isospin channel fractionation, shell model comparison 7−116409
^{A}Mo(p, p′), A=94, 96, 100, 25.6 MeV, level energies, DWBA and coupled channels anal. 7−116406
^{97}Mo, level scheme construction from ^{96}Zr(^{3}He,2nγ)^{97}Mo, 11 MeV, particle-plus-rotor model anal. 7−67690
^{100}Mo, level scheme, mixing ratios for 2$_2$$^{+}$→2$_1$$^{+}$, 2$_3$$^{+}$→2$_1$$^{+}$, β-decay study 7−109123
NN correlations, α-backbending and nuclear shape 7−128951
^{14}N, negative parity isovector states, excitation and decay, form factor calcs. 7−121703
^{15}N, helion and ^{3}H cluster states, branching ratios 7−67685
^{15}N, positive parity triton cluster states, coupled channels calcs. 7−135190
^{15}N(d,γ), E1 transition, giant dipole resonance and strongly collective core excitations 7−121710
^{20}Na, high spin states, anal. using (p,π^{-}) 7−67693
^{22}Na, lifetime of lowest 0^{+}, T=1 state 7−108962
^{23}Na(γ,Xγ′) partial nucleon channels, dipole giant resonance decay, integrated partial cross sections, photoabsorption 7−116381
^{134}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{135}Nd, low-lying band structure extension to higher spins 7−108963
^{135}Nd, superdeformed band obs. 7−95971
^{135}Nd, superdeformed shapes, collective radiation meas. 7−81295
^{136}Nd, g-factors and proton alignment at the backbend 7−95986
^{136}Nd high spin states, band crossings, cranked shell model anal. of ^{116}Cd(^{24}Mg, 4nγ), ^{136}Nd high spin states, band crossings, cranked shell model anal. 7−121562
^{136}Nd, lifetime and g-factor meas. 7−116328
^{136}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{143}Nd high spin states, J$^{\pi}$, T$_{1/2}$ and transitions from ^{130}Te(^{18}O, 5n) 7−102796
^{150}Nd(^{12}C,^{12}C′), 70.4 MeV, CCBA modification for direct reactions in deformed nuclei, bands 7−116488
^{A}Ne, A=20, 22, unnatural parity state excitation in α-transfer reactions, CRC anal. 7−135204
^{A}Ne(α, α′X), A=20,22 giant resonance decays and interference effects 7−102854
^{A}Ne(p,p′)^{A}Ne, A=20, 22, excitation of 1^{+} and 2^{-} states 7−73762
^{18}Ne(e,e′), inclusion of collective nucleon motion, anal. 7−121800
^{20}Ne 0$_4$$^{+}$ rot. band, high spin members, optical anal. of ^{16}O(α,α) 7−116231
^{20}Ne, giant quadrupole resonances, E2-transition strength and α-decay width, cluster model anal. 7−108978
^{20}Ne, high-spin α-cluster resonances from ^{12}C(^{16}O,^{8}Be) reaction 7−109228
^{20}Ne isoscalar giant resonances, sum rules, symplectic model, cluster approach 7−135286
^{20}Ne, O$_4$$^{+}$ rotational band, high spin states, anal. of ^{16}O(α,α) optical potential props. 7−140979
^{20}Ne, Yrast structure change in cluster model 7−121569
^{22}Ne, rotational bands, E1 transitions, cluster anal. 7−67694
^{58}Ni, effective operator for the transition density 7−81331
^{58}Ni(α,α′), 129 MeV, isoscalar giant resonances, decay props., branching ratio calcs. 7−129069
^{58}Ni(e,e^{-}p), 180 MeV, fast proton emission, high-lying collective states, decay props. 7−129028
^{58}Ni(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{60}Ni, 8^{-} stretched states, spectroscopic factors and DWBA calcs., ^{59}Co(α,t)^{60}Ni expt. 7−67689

nuclear collective states and giant resonances continued
^{64}Ni(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{238}Np, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{15}O, helion and ^{3}H cluster states, branching ratios 7−67685
^{16}O, giant dipole transitions in the nuclear WSp(6,R) model 7−96013
^{16}O, high-spin α-cluster resonances from ^{12}C(^{12}C,^{8}Be) reaction 7−109228
^{16}O(N,N′), differential cross section meas., DWBA and coupled channel calcs. 7−73763
^{16}O(ẽ,e′X), low momentum transfer ẽ induced nucleon emission, giant resonance decay 7−135307
^{16}O(e,e′)^{16}O, excitation of 4$^-$ states, form factors 7−109149
^{16}O(γ,γ), differential cross section meas. in giant dipole resonance region 7−116377
^{16}O(p,γ), E1 transition, giant dipole resonance and strongly collective core excitations 7−121710
^{18}O(e,e′), inclusion of collective nucleon motion, anal. 7−121800
Os, prolate to oblate shape transition in decay modes of O$^+$ states 7−116248
^{172}Os, low-frequency anomaly in moment of inertia, yrast sequence from ^{144}Nd(^{32}S, 4n) 7−116215
^{174}Os constant transition quadrupole moments, high spin state lifetimes from ^{31}V(^{127}I, 4n) 7−135205
^{180}Os, high-spin isomers, partial deexcitation scheme 7−108989
^{28}P, high spin states, anal. using (p,π$^-$) 7−67693
Pb, highly excited neutron-deficient isotopes, evidence for prolate deformation 7−67711
Pb isotopes, microscopic study of collective states, IBA, cluster operators *(Chinese)* 7−108952
^{A}Pb, A=192,194,196,198,200, level study from ^{A}Bi β$^+$/electron-capture study, evidence for O$^+$ states 7−141024
^{A}Pb(e,e′)^{A}Pb, A=206, 208 mixing of isoscalar and isovector mag. dipole excitation modes 7−129026
^{196}Pb, particle-hole states and collective excitations, interpretation of isomeric states 7−140973
^{202}Pb, 19$^-$ isomer, g-factor, half-life 7−116269
^{208}Pb, energy level structure, resonance decays, ^{207}Pb(n,X), E≤700 keV study 7−121618
^{208}Pb giant resonance, convergence of particle-hole irreducible vertex *(Chinese)* 7−96039
^{208}Pb, giant resonances in coordinate space, energy temp. depend., semi-classical density functional calc. 7−135277
^{208}Pb(^{A}Li,^{A}Li′), 150-210 MeV, A=6,7, giant resonance study 7−109230
^{208}Pb(^{12}C,^{12}C′), 200 MeV/u, giant resonance excitation 7−109229
^{208}Pb(^{58}Ni,^{58}Ni)^{208}Pb, elastic and inelastic scatt., DWBA and coupled channel anal. 7−129088
^{208}Pb(α,α′n), 120 MeV, isoscalar giant monopole resonance decay 7−96040
^{208}Pb(γ,X), photoabsorption cross section, collective and quasi-deuteron contribs. 7−102861
^{208}Pb(p,p^1), 200, 400 MeV collective DWBA analysis, low lying states, n to p multipole matrix elements 7−108959
^{208}Pb(p,p′), 318 MeV, cross sections, high spin state meas., DWIA anal. 7−67688
^{208}Pb(p,p′), deformation length and matrix elements, collective DWBA formalism 7−102882
^{208}Pb(p,t)^{206}Pb, two-particle pairing excitations 7−116362
^{208}Pb(t,p)^{210}Pb, two-particle pairing excitations 7−116362
^{210}Pb, alpha-clustering and alpha-decay 7−108974
Pb(γ,n), 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
Pd, odd-neutron isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{A}Pd, A=102-112, energy bands and E2 transitions, extended IBA consistent Q formalism 7−135258
^{103}Pd, level structure, lifetime meas., level spin determ. using Hauser-Feshbach anal., mixing ratios 7−67691
^{105}Pd(n, γ), M1 giant resonance observation by averaged γ-ray intensity 7−116359
^{106}Pd, M1 giant resonance obs., ^{105}Pd(n,γ) study 7−108993
^{A}Pm, A=135, 137 collective band structures 7−128932
^{140}Pm levels, J^π and transitions from ^{140}Sm β$^+$-decay 7−67698
^{204}Po, excited states study using in-beam spectroscopic methods 7−73685
^{210}Po, alpha-clustering and alpha-decay 7−108974
^{212}Po, yrast states, level scheme and mean lifetimes 7−109114
^{131}Pr energy levels, J^π, branching ratios, bands and transitions from ^{98}Mo(^{37}Cl,4n) 7−135179
Pt, even isotopes, $\nu_{i13/2}$ pair, exptl. anal., Nilsson cranked model comparisons *(Chinese)* 7−102788
Pt, prolate to oblate shape transition in decay modes of O$^+$ states 7−116248
^{A}Pt, A=189, 191, 193, quadrupole coherent states, quasiparticle coupling to collective core, particle-core coupling model 7−121573
^{184}Pt, yrast band alignment, cranked Nilsson model calcs. 7−128936
^{194}Pt(n,n), 4.55 MeV, diff. and total cross sections, nuclear dynamics effects 7−121838
^{196}Pt, O(6) description in IBM 7−73691
Ra isotopes, low-lying negative parity states, anal. 7−140975
Ra, octupole shapes and shape changes at high spins 7−102797
^{A}Ra, A=222, 224, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
^{A}Ra, A=224, 226, 228, low-lying collective state energies, E2 transitions, IBM-1 anal. 7−121552
^{227}Ra, multipolarity meas., evidence for stable octupole deformation 7−73684
^{230}Ra collective states; bands, J^π, and transitions from ^{230}Fr β-decay 7−73682
^{255}Ra, low-lying bands, SU(3) limit of IBFA model with U(16) core 7−140990
Rb transition nuclei, collective zero-point motion contrib. to mean-square charge radii 7−135182
Rh odd-mass nuclei, Dyson mapping appl. to low-lying collective states 7−67686
Rh, odd-proton isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{100}Rh, negative parity bands, conversion-electron meas. 7−108991
^{109}Rh level scheme, particle-hole states, J^π and transitions from ^{109}Ru β-decay and ^{110}Pd(d,^{3}He) 7−135183
^{214}Rn valence configs., levels, J^π, T$_{1/2}$, shell model anal. of ^{208}Pb(^{9}Be, 3n) 7−102795
nuclear collective states and giant resonances continued
^{214}Rn, yrast spectroscopy, level scheme and spin assignments 7−108983
^{216}Rn, yrast states, excitation spectrum, ^{208}Pb(^{14}C,2nα)^{216}Rn study 7−140977
^{222}Rn, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
Ru, odd-neutron isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{A}Ru, A=98-108, energy bands and E2 transitions, extended IBA consistent Q formalism 7−135258
^{109}Ru, β-decay, level scheme determ. 7−116220
^{30}S, high spin states, anal. using (p,π$^-$) 7−67693
^{31}S, high spin states, anal. using (p,π$^-$) 7−67693
^{32}S(γ,pγ′), 32 MeV, partial photonucleon cross sections, semidirect processes photoabsorption, giant dipole resonances 7−116380
^{33}S, doorway resonances, level spacings 7−116228
^{37}S levels and J^π assignments, DWBA anal. of ^{36}S(d,p) 7−116286
^{117}Sb, 23/2$^-$ isomeric state, evidence for shape coexistence 7−108958
^{41}Sc, resonance strengths, excitation energies and γ-ray branching ratios from ^{40}Ca(p,γ) 7−109162
^{43}Sc, energy levels, transitions and moments in shell model calc. 7−121621
^{43}Sc energy levels, transitions and level lifetimes from ^{40}Ca(α, pγ) 7−121622
^{75}Se, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
^{78}Se, collective and two-particle excitations 7−81283
^{26}Si, high spin states, anal. using (p,π$^-$) 7−67693
^{27}Si, high spin states search using ^{27}Al(^{3}He,t) 7−108961
^{28}Si(^{6}Li, ^{6}Li′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{28}Si(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{28}Si(α,α′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{29}Si, doorway resonances, level spacings 7−116228
^{29}Si, unbound states structure from neutron resonance spectroscopy of ^{28}Si(m,m′)^{28}Si 7−129047
Sm, giant isoscalar resonances in transitional nuclei 7−108969
^{A}Sm, A=134, 136, collectivity of low-lying states 7−108992
^{A}Sm, A=146-154, vibr.-rot. phase transition, Dyson boson mapping appl. 7−95968
^{A}Sm, A=147-50, octupole deformation study and level scheme 7−108990
^{A}Sm(^{16}O, X), A=148, 150, 154, coupled channel approach to subbarrier fusion cross section 7−141121
^{A}Sm(^{58}Ni,^{58}Ni′),A=150,152 gyromagnetic ratios of excited states 7−109211
^{A}Sm(e,e′)^{A}Sm, A=144, 148, 150, 152, 154, ground state band, charge and transition charge densities 7−81378
^{135}Sm spectroscopy, $i_{13/2}$ neutron orbital observation from ^{64}Zn (^{74}Se, 2pn) and ^{92}Mo(^{46}Ti, 2pn) 7−135177
^{138}Sm, yrast states of two quasi-protons coupled with bosons 7−108973
^{150}Sm, high spin states, coexistence of reflection asymmetric and symmetric shapes 7−73692
^{152}Sm, nuclear level study, spin-parity assignments using ^{152}Sm(n,n′γ) 7−121554
^{152}Sm(^{206}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{152}Sm(^{208}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{154}Sm (n,n′γ), rotational bands, γ-spectra study 7−121822
Sm(e,e′), collective phenomena and multipole transition operators, IBM calcs. 7−116393
^{A}Sn, A=110,112 spherical and deformed states in high-spin yrast region 7−116222
^{A}Sn(p,p′), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{A}Sn(p,p), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{116}Sn(α,α′), search for evidence of isoscalar monopole mode, comment 7−141058
^{116}Sn(α,α′), search for evidence of isoscalar monopole mode, comment and reply 7−141059
^{116}Sn(e,e′)^{116}Sn, core polarisation in stretched spin states 7−81402
^{116}Sn(p,p′)^{116}Sn, core polarisation in stretched spin states 7−81402
^{118}Sn(π,π′)^{118}Sn, collective excitations, neutron-proton transition compositions 7−109237
Sr, shape transition at N=60 7−116249
^{80}Sr, high spin state study using ^{54}Fe(^{29}Si,2pn)^{80}Sr, 85-110 MeV 7−108979
^{80}Sr, high spin states, lifetimes, γ-softness meas. 7−73681
^{98}Sr, first excited state half-life, ground state deformation, B(E2) value 7−141020
^{159}Tb(^{12}C,X), γ-γ directional correlations, meas. and interpretation 7−73733
^{159}Tb(n,n′)^{159}Tb, low-lying state determ., γ-ray ang. distribs. 7−109160
^{160}Tb, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
Tc, odd-proton isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{98}Tc, negative parity bands, conversion-electron meas. 7−108991
^{A}Te, A=116,117, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{A}Te, A=118,120,122, evidence for intruder states, E0 transitions, from beta decay of iodine 7−135245
^{129}Te, E2/M1 multipole mixing ratios and spin assignment meas 7−116331
Th isotopes, low-lying negative parity states, anal. 7−140975
Th, octupole shapes and shape changes at high spins 7−102797
Th(Ta,X), positron and δ-electron emission, coupled channels anal 7−67870
^{A}Th, A=228, 230, 232, low-lying collective state energies, E2 transitions IBM-1 anal. 7−121552
^{A}Th, A=230, 232, octopole alignment in rotational states, cranking an RPA calcs. 7−81278
^{230}Th(n,X), coriolis interaction and variable reflection asymmetry in fis sion vibrational resonances 7−129120
^{232}Th, giant quadrupole reson., statistical fission decay evidence 7−81463
^{232}Th(^{16}O, X), coupled channel approach to subbarrier fusion cross sectio 7−141121
^{232}Th(^{206}Pb,X), nucleon transfer with Coulomb excitation, rotational stat population 7−121947

nuclear collective states and giant resonances continued
^{232}Th(^{208}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{232}Th(n,n'), 185, 550, 200-2500 keV, rotational level excitation fns. and angular distrib. 7−116421
^{A}Ti, A=44, 46, 48, s.d.g. IBM calc. 7−135221
^{A}Ti, A=46,48,52, rotational bands, E1 transitions, cluster anal. 7−67694
^{44}Ti, molecular vibrational states, backward angle anomaly in ^{40}Ca(α,α)^{40}Ca reaction 7−129065
^{46}Ti, strong M1 excitations, shell model predictions, review 7−73745
^{46}Ti($\vec{p},p'$), 65 MeV, low energy octupole resonance, excitation strength and state distrib. 7−81361
^{48}Ti, collective M1 transitions, energy and rates, dependence on nuclear effective interaction 7−102833
^{48}Ti(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{199}Tl, energy level spin-parity values, ^{197}Au(α,2n)^{199}Tl anal. *(Chinese)* 7−95963
^{A}Tm, A=162,164 aligned bands and gyromagnetic ratios from Sm(^{14}N,4n) 7−109210
^{150}Tm, decay props., half-life meas. 7−67766
^{152}Tm, yrast level struct., γ-ray spectroscopy 7−108986
^{159}Tm, high spin states, ^{126}Te(^{37}Cl,4n)^{159}Tm, 170 MeV study 7−108980
^{159}Tm, level lifetimes and probabilities 7−102834
^{168}Tm, 17 keV and associated levels, rotational state structure determ. 7−140978
^{234}U, collective level energies, SU(3) symm. in sdg boson model 7−96002
^{234}U high spin state population and γ transitions from ^{235}U(^{58}Ni, ^{59}Ni) 7−95969
^{236}U(^{12}C, X), coupled channel approach to subbarrier fusion cross section 7−141121
(^{238}U,f), incident on nucl. emulsion, reaction mechanisms for clean fission 7−102923
^{238}U, isoscalar GQR, neutron spectra, ^{238}U(α,α'f), 120 MeV study 7−109246
^{238}U, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
^{238}U(μ^-,f) muon final-state probabilities, fragment quadrupole vibration effects *(Chinese)* 7−109242
U(e,e'f), giant multipole resonances, fission decay, exptl. study 7−109245
^{A}W, A=185, 187, low-lying low-spin levels, Nilsson model and SU(3) Fermi-Bose symmetry scheme 7−81270
Xe, even-even nuclei, low-energy collective excitations 7−95962
^{120}Xe, lifetime meas. using coincidence plunger technique in ^{110}Cd(^{13}C,3n) reaction 7−102909
^{128}Xe, collective and quasiparticle excitations 7−116221
^{128}Xe level structure, collective states, and transitions, IBM and shell anals. of ^{126}Te(α,2nγ) *(Chinese)* 7−116210
^{132}Xe level scheme, collectivity and γ-transitions from ^{130}Te(α,2nγ) *(Chinese)* 7−108951
^{137}Xe level density, test of Fermi gas model predictions, comments 7−95991
^{83}Y low-energy level structure, isomer decays from ^{83}Zr decay, ^{83}Y low-energy level structure, isomer decays 7−121619
^{89}Y(n,n')^{89}Y, microscopic distorted-wave approx. study 7−129046
^{90}Y, isovector monopole and quadrupole resonances from (n,p) reaction 7−135331
Yb, pair correlation quenching, double routhians method 7−135192
^{A}Yb, A=161,163,165,167 rotational alignment in $i_{13/2}$-parentage states 7−108955
^{A}Yb, A=162-9, energy levels, pairing fluctuations in rapidly rot. nuclei 7−116232
^{A}Yb, A=165,166, high-spin state spectroscopy and cranked shell model interpretation 7−73687
^{151}Yb isomers from ^{96}Ry(^{58}Ni, X) 7−140983
^{158}Yb, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549
^{158}Yb, high energy dipole bump in the continuum as a probe for superdeformation 7−109106
^{162}Yb, high spin states and decay sequence routhians, ^{160}Er comparisons 7−108995
^{166}Yb, line shape anal. of yrast state lifetimes 7−108967
^{A}Zn(p,p')^{A}Zn, A=68,70, spectroscopy, comparison of low-lying states 7−73761
^{80}Zr, γ-radiation, low lying states, quadrupole deformation 7−141017
^{80}Zr, γ-ray spectroscopy, nuclear stability 7−121711
^{84}Zr, high-spin spectrum and shape coexistence, Strutinsky-Bogolyubov cranking study 7−81280
^{89}Zr, $21/2^+$ level, mean lifetime meas., $21/2^+ \rightarrow 17/2^+$ transition study 7−109117
^{90}Zr, damping of giant spin-flip dipole and quadrupole modes 7−96041
^{90}Zr, giant dipole resonances, cross-section meas. in ^{89}Y(p,γ) reaction 7−102874
^{90}Zr, giant dipole resonance, damping width, role of thermal fluctuations 7−121559
^{90}Zr, giant M1 resonance 7−121773
^{90}Zr(^{3}He,^{3}He'), 270 MeV, giant resonance excitation 7−109193
^{90}Zr(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
^{90}Zr(^{6}Li,^{6}Li')^{90}Zr, isoscalar giant resonances 7−116466
^{90}Zr(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{90}Zr($\vec{p}$,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{90}Zr(p,p'), 200 MeV, 0^- state excitation, resonance and transitions, DWIA calc. 7−67696
^{90}Zr(π,π')^{90}Zr, collective excitations, neutron-proton transition compositions 7−109237
^{92}Zr(^{64}Ni,X)^{156}Er*, fusion, high spin components, neutron emission suppression, comments and reply 7−81470
^{96}Zr, $[g_{9/2}{}^2]8^+$ state, γ-ray angular correl. meas., Gamow-Teller decay 7−121574
^{96}Zr, doubly closed subshell, coexisting 0^+ band in polyspheron model 7−108966
^{101}Zr, ground state band member life-time, strong deformation 7−67715

nuclear coupling, molecular *see molecular nuclear coupling*

nuclear cranking model
diabolic pair transfer in rotating nuclei, Berry phase 7−128931
ground state bands, collective transverse multipoles, microscopic and collective calcs. 7−116229
nuclear cranking model continued
harmonic oscillator hamiltonian, tilted rotation, eigenvalues, eigenfunctions, expectation values 7−116306
high spin rotational bands, crossing frequencies, quadrupole and higher order pairing forces 7−135184
moments of inertia, parallel axis theorem, potential and density distribs. 7−135176
rotating nuclei, diabolic pair transfer, cranking theory 7−121671
rotating nuclei, diabolic pair transfer, cross section anal., expt. obs. possibility 7−109216
rotating nuclei, electromagnetic transition amplitudes with cranking, rotor-plus-particle model 7−141019
unification of nuclear models and properties, book 7−108060
^{A}Dy, A=162, 164, pair transfer at high angular momenta, high spin states, RPA, cranked HFB 7−121564
^{154}Dy, high spin states, and terminating band struct., cranked shell model comparison 7−81272
Er, positive parity bands, signature splitting, cranking calcs. 7−135211
Er, thermal high spin GDR, RPC and cranked HFB calcs. 7−135288
^{A}Er, A=159, 160, near-yrast discrete line γ-ray spectroscopy 7−116214
^{155}Er, level scheme, shape coexistence, evol., and parallel p-n core breaking 7−108960
^{158}Er, yrast level sequence, another crossing beyond the first backbend 7−95973
^{166}Er, temperature-induced noncollective rot., Hartree-Fock-Bogoliubov cranking eqn. 7−102821
Hf, positive parity bands, signature splitting, cranking calcs. 7−135211
^{A}Hf, A=163-166, high spin states study and cranked shell model interpretation 7−73686
^{155}Ho, high spin states, shape transition and side bands, cranked shell model calcs. 7−108984
^{24}Mg, positive parity rotational bands, binding energy calcs., cranked cluster model anal. 7−116233
^{24}Mg, yrast line, self consistent cranked HF+BCS nuclear rotation calcs. 7−102793
^{136}Nd high spin states, band crossings, cranked shell model anal. of ^{116}Cd(^{24}Mg, 4nγ), ^{136}Nd high spin states, band crossings, cranked shell model anal. 7−121562
^{20}Ne(e,e'), convection current determ. using cranked HF wave fn. 7−109014
^{16}O+α system, cranked-cluster model anal. 7−116311
Os, positive parity bands, signature splitting, cranking calcs. 7−135211
^{172}Os, low-frequency anomaly in moment of inertia, yrast sequence from ^{144}Nd(^{32}S, 4n) 7−116215
^{131}Pr energy levels, J^π, branching ratios, bands and transitions from ^{98}Mo(^{37}Cl,4n) 7−135179
Pt, even isotopes, $\nu_{i13/2}$ pair, exptl. anal., Nilsson cranked model comparisons *(Chinese)* 7−102788
^{184}Pt, yrast band alignment, cranked Nilsson model calcs. 7−128936
^{A}Th, A=230, 232, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
^{238}U, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
W, positive parity bands, signature splitting, cranking calcs. 7−135211
Yb, positive parity bands, signature splitting, cranking calcs. 7−135211
^{A}Yb, A=165,166, high-spin state spectroscopy and cranked shell model interpretation 7−73687
^{84}Zr, high-spin spectrum and shape coexistence, Strutinsky-Bogolyubov cranking study 7−81280

nuclear decay schemes *see radioactive decay schemes*

nuclear decay theory
see also alpha decay theory; beta decay theory
^{6}Be, 2^+ states, two-nucleon decays, competing serial cascade mechanisms 7−135261
^{6}He, 2^+ states, two-nucleon decays, competing serial cascade mechanisms 7−135261
^{6}Li, 2^+ states, two-nucleon decays, competing serial cascade mechanisms 7−135261
^{A}Ra, A=222-224, ^{14}C emission, fragmentation anal. 7−67768
^{232}U→^{24}Ne+X, fragmentation anal. 7−67768

nuclear deformation *see nuclear shape*

nuclear density
compression modulus, phenomenological approach, hydrodynamic and Fermi gas models 7−121634
core densities, droplet model and HF calcs. with generalised Skyrme force 7−121603
desaturation effects, variational calcs. in liq. drop model and Thomas-Fermi approach 7−140989
Fermi-type empirical formula, charge radii, distribution calcs. *(Chinese)* 7−95976
finite nuclei, pure fermionic chiral field theory anal., radii, binding energies and density 7−140985
harmonic oscillator energy level spacing, mass number depend. for trapezoidal average density 7−109029
Hartree-Fock approximation, relativistic treatment, infinite nuclear matter and finite nuclei appl. 7−116312
heavy nuclei, nucleon density, shell model description 7−109008
heavy-ion collisions, high energy, hot quantum drop fragmentation, temp. and density determ. Monte Carlo TDHF calcs. 7−116518
high density nucl. matter, eqn. of state, nucleon-dibaryon ideal gas 7−121690
IBM, radial localization of s and d bosons 7−128985
light neutron rich nuclei, HF calcs., radii, binding energies, density distribs. 7−102799
neutron star matter with realistic nucleon-nucleon interactions, pion condensation, σ-model anal. 7−73722
nuclear matter, hot, low density, equation of state calcs. 7−96006
nuclear matter, liquid-gas and superconducting phase transitions, Green's function methods, Skyrme interactions 7−96007
rearrangement effects in shell model calcs. using density dependent interactions 7−73710
spherical nuclei, neutron skin calcs., Hartree-Fock method with Skyrme forces *(Chinese)* 7−109046
(α,πX), GeV energies, differences between proton, neutron nuclear distns. 7−67814
(N,πX), GeV energies, differences between proton, neutron nuclear distns. 7−67814
Au(U,X), positron and δ-electron emission, coupled channels anal. 7−67870

nuclear density continued
^{12}C(e,e'p), quasi-free knockout, nuclear medium effects on ep coupling 7−121812
^{40}Ca, nucleon momentum and density distrib., natural orbital calcs. in single-particle pot. method 7−128946
^{6}Li(e,e'p), quasi-free knockout, nuclear medium effects on ep coupling 7−121812
^{16}O, density distrib., first-order contributions, relative importance 7−116253
^{32}S, charge density and octupole form factor in harmonic oscillator and HF models 7−67713
^{116}Sn, rearrangement effects in shell model calcs. using density dependent interactions 7−73710
Th(Ta,X), positron and δ-electron emission, coupled channels anal. 7−67870

nuclear electric moment
A=4-16, binding energies and nuclear moments, large-scale shell-model calculations 7−109065
A=94-134, multiplet structure, E2 transitions and quadrupole moments 7−121575
Bohr-Mottelson and IBM-1 models, relationship between electric quadrupole props. 7−116310
deformed nuclei, self-consistent Hartree descript. in rel. quantum field theory 7−121599
electric quadrupole moments of Bohr-Mottelson and interacting boson models, relationship 7−109019
electric quadrupole-mag. dipole moments, relationship 7−116271
even nuclei, vibr. and rot. motion, quadrupole moments and transition operators 7−116213
high spin rotational bands, crossing frequencies, quadrupole and higher order pairing forces 7−135184
IBM, quadrupole moments and E2 transitions in the γ-unstable O(6) limit 7−81312
low energy excitations of even, odd and odd-odd nuclei, microscopic description *(French)* 7−81285
parent states, spins and moments, book contrib. 7−95989
Woods-Saxon potential, axially deformed, single-particle energies, wave fns., quadrupole moments, g-factors calcs. 7−140992
Z=50 nuclei, nuclear moments and charge radii 7−109027
^{1}Ba, A=134, 136, 138, first excited state, quadrupole moment and reduced transition probability 7−109025
^{128}Ba, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{134}Ba, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312
^{40}Ca(n,n'), 21.7, 25.5 MeV, diff. cross sections, deformation, moments, CC anal. 7−67817
^{121}Cs, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{3}He electric dipole moment, contrib. from CP-violating NN interaction 7−128954
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{237}Np, muonic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{237}Np, pionic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{174}Os constant transition quadrupole moments, high spin state lifetimes from ^{51}V(^{127}I, 4n) 7−135205
Pt, even-even isotopes, reduced E2 probabilities, excited state quadrupole moments, IBM-I anal. 7−121712
^{A}Pt(^{12}C,^{12}C'), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(^{16}O,^{16}O'), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(α,α'), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{192}Pt, first excited state, electric quadrupole moment determ. and shape transition 7−135206
^{196}Pt, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312
^{A}Ra, A=222, 224, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
Rn, nuclear spins, moments and charge radii difference meas. 7−109017
^{222}Rn, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
^{104}Ru, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312
^{43}Sc, energy levels, transitions and moments in shell model calc. 7−121621
^{A}Sm, Az 146-154, nuclear radii, isotope shift, electric monopole transitions 7−116270
^{141}Sm, hyperfine structure, quadrupole moments, $\delta\langle r^2\rangle$, μ determ. 7−67726
^{A}Sn, A=108-111, nuclear spins, moments and charge radii from hyperfine splittings and isotope shifts 7−67714
^{A}Sr, A=80-90, charge radii and moments, laser spectroscopy meas. 7−95984
^{A}Th, A=157-169, ground state properties, quadrupolar and magnetic movements, charge radii, binding energies, HF anal. *(German)* 7−128940
^{164}Tm, quadrupole moments, $\delta\langle r^3\rangle$, μ determ. 7−67726
^{120}Xe, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199

nuclear electric shielding *see nuclear screening*

nuclear electromagnetic pulse *see electromagnetic pulse*

nuclear electromagnetic transitions *see nuclear energy level transitions*

nuclear electron capture
see also beta-decay
coincidence method, $4\pi\beta-\gamma$, extrapolation curves calc., computer code 7−96481
conf., Kharkov, USSR, April 1986 7−120688
exchange and overlap effects on electron-capture probabilities, approximations 7−121719
heavy atoms, highly ionised, in stellar interiors, electron capture rates 7−101767
heavy neutrino detection in electron capture processes 7−81340
radionuclides, γ- and X-ray spectral line intensities 7−81326
As, crystalline, ^{73}As nuclear electron capture, electron density, chemical changes 7−92556

nuclear electron capture continued
^{195}Au, extrapolation curves calc. in $4\pi\beta-\gamma$ coincidence method 7−96481
^{133}Ba, extrapolation curves calc. in $4\pi\beta-\gamma$ coincidence method 7−96481
^{A}Bi→^{A}Pb, A=192,194,196,198,200, β^+/electron-capture, level study 7−141024
^{76}Br→^{76}Se, electron capture, E0 transitions in ^{76}Se, conversion electron study 7−109111
^{51}G, extrapolation curves calc. in $4\pi\beta-\gamma$ coincidence method 7−96481
GaAs, nuclear electron capture, electron density, chemical changes 7−92556
^{153}Gd→^{153}Eu, γ-transition meas., ^{153}Eu level study 7−102841
GeS(S_2), ^{71}Ge nuclear electron capture, electron density, chemical changes 7−92556
^{81}Kr^{m}, electron capture branching ratio 7−109122
^{81}Kr^{m}→^{81}Br, branching ratio meas., log ft value 7−141025
^{24}Mg, electron capture and collapse of 8-10 $M_\odot$ stars 7−140120
^{91}Nb^{m}, electron capture decay, isomer transition, level lifetimes, J$^{\pi}$ *(Chinese)* 7−116338
^{91}Nb^{m}, electron capture decay meas., K-conversion coeff. 7−121718
^{18}Ne→^{18}F, first forbidden decays, parity-mixing matrix element constraints 7−121738
^{20}Ne, electron capture and collapse of 8-10 $M_\odot$ stars, effect of electron capture on ^{24}Mg and ^{20}Ne 7−140120
^{61}Ni, isomer shift calibration by ^{57}Ni electron capture lifetime meas. 7−132169
^{103}Pd electron capture meas., heavy neutrino mass determ. *(Russian)* 7−81346
^{82}Sr, half-life determ. by high resolution γ-ray spectrometry 7−96028
^{82}Sr, half-life meas. by γ-ray spectrometry 7−96029
^{158}Tb→^{158}Gd, K-capture study, decay scheme, ν_e mass refinement 7−121723
^{201}Tl, extrapolation curves calc. in $4\pi\beta-\gamma$ coincidence method 7−96481
^{149}Tm decay, ^{149}Er energy levels, β-delayed proton emission, K X-ray-proton coincidences in A=149 mass chain 7−141026

nuclear emulsions *see nuclear track emulsions*

nuclear energy *see nuclear power*

nuclear energy level lifetimes
A∼125, odd nuclei, l-forbidden M1 transitions, anal. 7−121713
complex particle emission probability, condensation probability, energy and mass dependence 7−129014
Coulomb re-excitation of radioactive nuclei 7−109100
laser-induced nuclear transitions, metastable state lifetime shortening 7−102837
lowest collective states and transition probabilities in the Ra region 7−95961
neutron resonances, average partial radiation widths, semi-classical calcs. 7−121714
surface hypernuclear states, long-lived, width calcs. 7−121697
ultrarelativistic hypernuclear magnetic moments and lifetimes, polarized light hypernuclei prod. 7−141011
(N, γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
(n,n'γ), Doppler shift attenuation method for state lifetimes from two targets 7−81401
^{26}Al, 7290 keV resonance, γ-transition probabilities 7−135256
^{A}At, A=209, 210, 211, enhanced E3 transitions and mixed configs. of core excited isomers from ^{209}Tl(^{9}Be, xn) 7−67687
^{210}At, 19^{+} isomer, lifetime and enhanced E3 decay 7−109105
^{210}At, g-factor, half-life for microsecond isomers 7−116212
^{1}Ba, A=134, 136, 138, first excited state, quadrupole moment and reduced transition probability 7−109025
^{124}Ba, excited states following ^{124}La β^+ decay 7−109031
^{A}C(p,π^{+}), A=12, 13, cross sections, shell model calcs. 7−102881
^{40}Ca(n,γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
^{41}Ca, level lifetime meas. 7−67764
^{49}Ca, level lifetime meas., excited level decay scheme 7−67764
^{100}Cd level scheme determ., isomer identification, ^{46}Ti(^{58}Ni,2p2n)^{100}Cd study 7−109037
^{132}Ce, yrast and yrare lifetime meas. 7−109118
^{57}Co 1377 keV level lifetime from ^{56}Fe(p, γ) 7−67765
^{A}Cs, A=123, 125, reduced transition probabilities and multipole mixing ratio meas. 7−128998
^{A}Cs, A=125, 127, 129, reduced transition probabilities and multipole mixing ratio meas. 7−128998
^{128}Cs decay, E2 transition probability calcs. 7−95962
^{147}Dy, fine structure of β-decay strength functions 7−141029
^{152}Dy, continuum state lifetimes and γ-ray spectra 7−109115
^{149}Er level structure, yrast levels, isomeric states and transitions from ^{92}Mo/^{60}Ni, X 7−140983
^{168}Er, octupole state props. and two-neutron config. pair deexcitation rates 7−81335
^{136}Gd, compound nucleus, lifetime meas. for lowest states 7−109119
^{155}Ho, high spin states, ang. distrib., γ-γ coincidences and lifetime meas. 7−108984
^{127}I, Coulomb-excitation transition studies 7−109098
level structure and transitions from ^{160}Tb β-decay 7−89538
^{13}N, resonance states, bremsstrahlung lifetime meas. using ^{12}C(p,p) 7−135274
^{14}N, negative parity isovector states, excitation and decay, form factor calcs. 7−121703
^{91}Nb^{m}, electron capture decay, isomer transition, level lifetimes, J$^{\pi}$ *(Chinese)* 7−116338
^{100}Nb→^{100}Mo, 3-s isomer decay scheme, γ-spectra, γ-γ coincidence meas., level lifetime determ. 7−109123
^{134}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{136}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{143}Nd high spin states, J$^{\pi}$, $T_{1/2}$ and transitions from ^{130}Te(^{18}O, 5n) 7−102796
^{58}Ni(^{3}He, ^{3}He), differential cross section ang. distribs., B(EL) values 7−73781
^{16}O spectrum, transition probabilities, microscopic description in generator coord. basis 7−135212
^{18}O(π,π'), DWIA and coupled channels anal. using shell model transition densities 7−102920
^{174}Os constant transition quadrupole moments, high spin state lifetimes from ^{51}V(^{127}I, 4n) 7−135205
^{30}P level lifetimes and transition strengths from ^{29}Si(p,γ) 7−121715

nuclear energy level lifetimes continued
^{A}Pb, A=198,199, g-factor, half-life for microsecond isomers 7−116212
^{202}Pb, 19^{-} isomer, g-factor, half-life 7−116269
^{208}Pb(^{3}He, ^{3}He), differential cross section ang. distribs., B(EL) values 7−73781
^{103}Pd, level structure, lifetime meas., level spin determ. using Hauser-Feshbach anal., mixing ratios 7−67691
^{212}Po, yrast states, level scheme and mean lifetimes 7−109114
^{214}Rn valence configs., levels, J^{π}, $T_{1/2}$, shell model anal. of ^{208}Pb(^{9}Be, 3n) 7−102795
^{A}Ru, A=99,101, B(E2) values, Coulomb excitation 7−109099
^{43}Sc energy levels, transitions and level lifetimes from ^{40}Ca(α, pγ) 7−121622
^{43}Sc levels, J, $T_{1/2}$, branching and mixing ratios from ^{40}Ca(α,p) 7−140994
^{73}Se, level lifetime meas. and rotor model comparison 7−96021
^{28}Si, 13.321 MeV excited state, spin meas. *(Chinese)* 7−109028
^{28}Si, compound state lifetime, blocking effect on Al crystal 7−135257
^{28}Si level lifetimes from ^{27}Al(p,γ) *(Chinese)* 7−109112
^{30}Si, excited level lifetimes from ^{27}Al(α,pγ) 7−81334
^{A}Sm, A=134, 136, collectivity of low-lying states 7−108992
^{132}Sm, compound nucleus, lifetime meas. for lowest states 7−109119
^{A}Sn, A=115, 117, spin-flip mag. quadrupole transitions, $T_{1/2}$, J^{π} and levels from In β-decay 7−135249
^{A}Sn, A=116, 118, 120, 128, 130, transition probabilities 7−109116
^{116}Sn(^{3}He, ^{3}He), differential cross section ang. distribs., B(EL) values 7−73781
^{80}Sr, high spin state study using ^{54}Fe(^{29}Si,2pn)^{80}Sr, 85-110 MeV 7−108979
^{80}Sr, high spin states, lifetimes, γ-softness meas. 7−73681
^{98}Sr, first excited state half-life, ground state deformation, B(E2) value 7−141020
^{49}Ti, level lifetime meas. 7−67764
^{51}Ti, level lifetime meas., excited level decay scheme 7−67764
^{158}Yb, high energy dipole bump in the continuum as a probe for super-deformation 7−109106
^{89}Zr, 21/2^{+} level, mean lifetime meas., 21/2$^{+}\rightarrow$17/2^{+} transition study 7−109117
^{90}Zr(^{3}He, ^{3}He), differential cross section ang. distribs., B(EL) values 7−73781
^{101}Zr, ground state band member life-time, strong deformation 7−67715

nuclear energy level transitions
see also internal conversion; Mossbauer effect; nuclear branching and mixing ratios; nuclear energy level lifetimes
^{168}Er, α-band, M1 transitions and F-spin mixing, IBA-2 comparisons 7−121706
^{96}Zr(^{3}He,2nγ)^{97}Mo, 11 MeV, particle-core multiplets in ^{97}Mo, particle-plus-rotor model anal. 7−67690
γ- and X-ray spectral line intensities 7−81326
A=117, nuclear data sheets, levels, J^{π}, transitions, decays 7−80200
A=118, nuclear data sheets, levels, J^{π}, transitions, decays 7−140390
A=130 mass region, U(6/20) supersymmetry, wave function, EM transition rates, spectra 7−96012
A=140, nuclear data sheets, levels, J^{π}, transitions, decays 7−140391
A=146 region, spectra and decay properties, transition probabilities, doubly magic anal. 7−129000
A=155, nuclear data sheets, levels, J^{π}, transitions, decays 7−95117
A=160-246, even-even nuclei with 1^{+} and 3^{+} bands in rot. region, IBM calcs., energy spectra *(Chinese)* 7−121551
A=165, nuclear data sheets, levels, J^{π}, transitions, decays 7−80201
A=170, nuclear data sheets, levels, J^{π}, transitions, decays 7−80204
A=202, nuclear data sheets, levels, J^{π}, transitions, decays 7−95118
A=204, nuclear data sheets, levels, J^{π}, transitions, decays 7−95119
A=21-23, cluster struct., parity spectrum and electromagnetic transitions 7−135233
A=226, nuclear data sheets, levels, J^{π}, transitions, decays 7−80202
A=36-41, n rich nuclei, level spectra, matrix elements and spectroscopic factors, shell model 7−116335
A=54, nuclear data sheets, levels, J^{π}, transitions, decays 7−80203
A=56, nuclear data sheets, levels, J^{π}, transitions, decays 7−102030
A=70, nuclear data sheets, levels, J^{π}, transitions, decays 7−102031
A=73, nuclear data sheets, levels J^{π}, transitions, decays 7−102032
A=74, nuclear data sheets, levels, J^{π}, transitions, decays 7−140389
A=82, nuclear data sheets, levels, J^{π}, transitions, decays 7−80199
A=94-134, multiplet structure, E2 transitions and quadrupole moments 7−121575
A$\sim$125, odd nuclei, l-forbidden M1 transitions, anal. 7−121713
A$\approx$150 transitional nuclei, effective valence proton and neutron numbers, from B(E2) and g-factors 7−141016
actinide nuclei, α-clustering effects 7−109078
boson representations of fermion systems, fermion spectra and E2 operators 7−96016
combined coincidence factor for complex cascade decay schemes *(Chinese)* 7−81332
compound nucleus, statistical particle and gamma ray emission, temp. dependent effects 7−121926
compound nucleus temperatures, level density parameter temp. dependence, partial widths, branching ratios 7−116368
compound resonances, partial El-radiation force constants, OSM anal. 7−121556
conf., Kharkov, USSR, April 1986 7−120688
Coulomb re-excitation of radioactive nuclei 7−109100
deformed even-even nuclei, mag. dipole transitions 7−121705
E2 radiation admixture effect on M1 transitions 7−96011
E2/M1 transition ratio for γN$\rightarrow\Delta$(1232) in a modified Skyrme model 7−96014
even nuclei, vibr. and rot. motion, quadrupole moments and transition operators 7−116213
even-even deformed nuclei, neutron cross sections for octupole band excitation 7−67697
even-even nuclei, monopole excitations and E0 transitions 7−109094
even-even nuclides, 0^{+} states and E0 transitions 7−121701
first generation of γ-rays from hot nuclei 7−81327
gamma-ray linear polarisation distrib. from oriented nuclei calc. 7−141013
gamma-ray spectra, analysis, role of covariance 7−89887
Gamow-Teller matrix elements, shell model study in $0f_{7/2}$ shell nuclei 7−135251
giant dipole resonance spectrum, dipole transitions, algebraic calc. *(Chinese)* 7−116357

nuclear energy level transitions continued
heavy ion charge exchange, reaction mechanism and energy depend., microscopic description 7−135361
heavy-ion reaction model with friction, pion and photon bremsstrahlung 7−121925
high-lying states, γ-decay props., effects of quasiparticle×phonon components 7−116333
hot strongly rotating nuclei, continuum in gamma-decay spectrum 7−121672
IBM, p-n interacting, collective 2^{+} states in the U(5) classical limit, E2 and M1 transition operator matrix elements 7−140974
IBM, quadrupole moments and E2 transitions in the γ-unstable O(6) limit 7−81312
isotropic mixing of isobaric 0^{+} excitations, Coulomb pot. depend. and isospin nonconservation 7−121771
isovector quadrupole vibrations, vibrational model anal. 7−67683
laser-induced nuclear transitions, metastable state lifetime shortening 7−102837
light nuclei, isospin-symmetry violation, A=21-37 nuclei, T=3/2 state decays 7−116343
light nuclei, spectrum with O(6) dynamical symmetry from IBM-4 7−135222
low energy excitations of even, odd and odd-odd nuclei, microscopic description *(French)* 7−81285
M1 excitations in even-even $i_{7/2}$ shell nuclei, orbital current 7−96015
magic nuclei, inclusion of 2p2h configs., generalised microscopic model 7−67787
multipolar vibrational strength fragmentation in semiclassical approach, giant resonances 7−135282
near-magic nuclei, partial E1-radiation widths of isobaric analog resonances 7−109133
neutron resonances, average partial radiation widths, semi-classical calcs. 7−121714
neutron-proton IBM, M1 selection rules, SU(3), O(6) like Hamiltonians 7−116216
nuclear data sheets, recent refs., Jan.-April 1987 7−140392
nuclear data sheets, recent refs., Sept. to Dec. 1986 7−80205
odd-A nuclei, rot. motion of triaxial shape in unfavoured-signature states 7−121560
open shell nuclei, collective M1 transitions, energy and rates, dependence on nuclear effective interaction 7−102833
orientation formalism, radiation emission and angular distrib. coeffs., book contrib. 7−96019
oriented nuclei, gamma-ray, X-ray and conversion electron emission, book contrib. 7−96024
particle physics concepts, basic theories, book 7−108061
point Coulomb field, bound-bound multipole matrix elements, zeros positions 7−102835
positron-K-electron annihilation, nuclear excitation, cross section calcs. 7−121708
rotating nuclei, electromagnetic transition amplitudes with cranking, rotor-plus-particle model 7−141019
rotating nuclei, statistical γ-transitions, giant dipole resonance effects, RPA anal. 7−121702
rotating triaxial odd-A nuclei, M1 and E2 transitions, signature depend. 7−128999
single particle and collective motion fragmentation, quasiparticle-phonon model 7−121567
spherical nuclei, $\beta^{\mp}$,(n$\rightarrow$p),(p$\rightarrow$n) transition strengths and excitation energies, $\lambda^{\pi}=0^{-}$, 2^{5} 7−109113
superdeformed states and feeding patterns in rare earths, spectroscopy, pot. energy calcs. 7−135178
three-photon correlations in rotational nuclei 7−95972
time-reversal noninvariance, bounds from transition strength fluctuations, random matrix methods 7−141021
transition strength distributions in high dimensional configuration spaces 7−129070
Vlasov theory, quantum effects, response fn. and excitation energies 7−109060
Walsh transform application to nuclear spectral data anal., GAMWAL code 7−109096
Z=66-70, B(E2) values for high spin isomers 7−140983
(α,f), K-distrib. in fission, γ-multiplicities, statistical anal. 7−109244
(d,2p), intermediate energies, d tensor polarisations, spin dependence of cross sections 7−109187
(n,n), 50-200 MeV, nucl. struct. probe appl. 7−121840
(n,p), 50-200 MeV, nucl. struct. probe appl. 7−121840
^{13}N, isovector $\Delta J^{\pi}=0^{-}$ transition study from (p, n) reactions 7−81386
^{A}O, A=14, 15, isovector $\Delta J^{\pi}=0^{-}$ transition study from (p, n) reactions 7−81386
(p,n) reaction and the NN force, review 7−121627
(p,p'), medium energies, 0$^{+}\rightarrow$0^{-} transitions relativistic impulse approx. 7−67835
($\pi^{\pm}$,p) 120,145 MeV, on A=12-58, discrete final state excitation, diff. cross sections. 7−96115
(π,π'), well-deformed nuclei, eikonal and π-nucleus optical model calcs., inclusion of virtual excitations *(Chinese)* 7−102857
^{27}Al, M1 radiation widths 7−109101
^{27}Al(p,γ)^{28}Si, 1588 and 2044 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
^{241}Am decay, 59.5 keV gamma-emission probability meas., disintegration rates 7−135783
^{39}Ar, structure and decay props., spherical shell model calcs. 7−102818
^{A}At, A=209, 210, 211, enhanced E3 transitions and mixed configs. of core excited isomers from ^{209}Tl(^{9}Be, xn) 7−67687
^{203}At, time sequenced spectra meas. of γ-rays, X-rays and conversion e^{5} 7−73732
^{197}Au(^{40}Ar,X), E/A=60 MeV, two-particle correlations, excited state population, statistical model comparisons 7−121900
^{197}Au(α,2n)^{199}Tl, 26 MeV, gamma-ray angular distrib. meas., ^{199}Tl level anal. *(Chinese)* 7−95963
(α,d), D-state effects, finite range DWBA anal., no-recoil peripheral model 7−102894
^{124}Ba, excited states following ^{124}La β^{+} decay 7−109031
^{124}Ba, yrast band, band crossing and negative parity states 7−81284
^{126}Ba, 22 from ^{116}Sn(^{13}C, 3nγ) 7−121572
^{133}Ba decay, gamma-ray energy meas., cascade cross-over relations anal. 7−73730
^{135}Ba, level energies, E2 transition probabilities, appl. of spinor symmetry 7−121616

nuclear energy level transitions continued
^{9}Be, highly excited states, γ excitation fn. meas, ^{6}Li(t,p)^{8}Li and ^{7}Li(d,p)^{8}Li exptl. study 7−121612
^{209}Bi(d, ^{3}He), particle-hole transitions, differential cross section meas. 7−129055
^{210}Bi, X-ray and gamma-ray intensity meas. 7−135248
^{A}C(e,e′)^{A}C, A=12,13 electroexcitation of discrete levels at high momentum transfers 7−129025
^{12}C, 2^{+} state, γ-ray ang. correlations, tensor characteristics 7−67763
^{12}C (^{6}Li, ^{6}Li′), 156 MeV, E0 strength at excitation energy 7.65 MeV, 10.2 MeV and 19-21.5 MeV 7−116361
^{12}C, excited states, B(E2) transition probabilities, level density, hyperspherical-fn. method 7−121615
^{12}C spectroscopy from ^{8}Be(α,γ), distortion effects, cluster model anal. 7−121874
^{12}C(^{12}C,αα), 19-32 MeV, resonances and compounds nucleus form. 7−116482
^{12}C(^{19}F,^{19}F′), 63.8 MeV, substrate population probability meas. 7−129106
^{12}C(α,α′), 172.5 MeV, angular distrib. meas., multipolarities, deformation lengths, GQR region study 7−121870
^{12}C(e, e′γ), giant resonance electromagnetic decay, RPA calcs. with Skryme-3 interaction 7−116390
^{12}C(π, π′), 100-291 meV, diff. cross sections, ang. distribs., DWIA anal. 7−121958
^{12}C(π^{+},π^{-}), 50-120 MeV, excitation function and ang. distrib. for double charge exchange 7−96116
^{13}C(^{58}Ni,^{58}Co), reaction mechanism and energy depend., microscopic description 7−135361
^{13}C(p, d), with subsequent decay to ground state, tensor polarisation, DWBA calcs. 7−135327
^{14}C, extremely strong E1 transition, radiative width 7−89557
Ca, primary electric dipole γ-rays from slow-neutron capture 7−129043
^{40}Ca level widths between 9.5 and 10.5 MeV from (γ,γ) and ^{39}K(p,γ) 7−67723
^{48}Ca(n,p), 200 MeV, Ikeda sum rules for Gamow-Teller transitions 7−109165
^{48}Ca(p,n), 200 MeV, Ikeda sum rules for Gamow-Teller transitions 7−109165
^{49}Ca, level lifetime meas., excited level decay scheme 7−67764
^{A}Cd(t,p), A=112, 114, intruder-ground state mixing 7−102836
^{A}Cd(p,t), intruder-ground state mixing 7−102836
^{110}Cd, ground band-intruder band mixing meas. and IBM-2 calcs. 7−95966
^{111}Cd, photoactivation to ^{111}Cd^{m}, decay scheme 7−141015
^{111}Cd^{m}, half-lives and γ-transitions 7−96025
^{114}Cd(n,n′γ), 2$_{3}^{+}$→2$_{1}^{+}$ transition, multipole mixing parameter determ. 7−135318
^{116}Cd, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{111m}Cd, E3 transition and high multipole order internal conversion coeffs. 7−102838
^{A}Ce, A=124, 126 B(E2) anomaly in ground state bands 7−109104
^{A}Ce, A=130, 132, from beta-decay of ^{130,132}Pr, gamma bands of states 7−129005
^{124}Ce, γ-ray decay study using Daresbury Recoil Separator 7−109107
^{130}Ce, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{138}Ce, level scheme, in-beam spectroscopy study 7−135250
^{142}Ce(p, γγ), isoscalar and isovector quadrupole resonance effects in pγγ ang. correls. 7−67784
^{33}Cl giant Gamow-Teller resonance, delayed proton and γ emissions from ^{33}Ar β^{+} decay 7−141027
^{39}Cl, β-decay study, γ-ray transitions and decay scheme 7−102842
^{53}Co$_{g}$, beta-decay study, half-life meas., beta recoil effect technique 7−116342
^{56}Co, γ-decay, mass determ. from SN 1987A in LMC 7−140123
^{50}Cr(n,2n)^{49}Cr, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{52}Cr(n,2n), 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{52}Cr(n,p)^{52}V, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{52}Cr(π, π), multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{53}Cr(γ,n), threshold cross section meas., level densities and radiative strength fn. 7−116387
^{A}Cs, A=125,127 hot compound nuclei, γ-ray polarisation 7−116332
^{A}Cs^{m}, A=119, 121, transitions from on-line nuclear orientation 7−116275
^{118}Cs^{m} magnetic moment and transitions from on-line nuclear orientation 7−116275
^{120}Cs^{g}, transitions from on-line nuclear orientation 7−116275
^{131}Cs, new level structure from ^{131}Ba β-decay 7−121576
^{134}Cs, energy levels and electromagnetic properties, IBFFM description, comparison with expt. 7−135253
^{134}Cs level scheme, J^{π} and transitions from (n,γ) and (d,p) 7−135180
^{57}Cu mass, Q-values, spectroscopy and cross sections from ^{58}Ni(^{14}N,^{15}C) 7−67705
^{63}Cu, proton resonances, γ-angular distrib. meas., intermediate structure obs., spin-parity values 7−121611
^{63}Cu, statistical giant dipole resonance decay of highly excited states 7−128933
Dy, giant resonances, M1 decay study using particle-γ coincidences 7−109135
^{A}Dy, A=142, 144, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{146}Dy, Gamow-Teller transitions, by γ-ray and conversion electron spectroscopy, decay strength 7−121735
^{147}Dy, fine structure of β-decay strength functions 7−141029
^{152}Dy, decay scheme up to 40 ħ, coexistence of prolate and oblate structures 7−116225
^{152}Dy, evolution of nuclear structure with increasing spin and internal excitation energy 7−135188
^{152}Dy, obs. of discrete line superdeformed band up to 60 ħ, level transitions 7−116224
^{152}Dy superdeformed bond, decay γ-rays from ^{152}Gd(α,4n), ^{152}Dy superdeformed bond, decay γ-rays 7−141018
^{152}Dy, superdeformed high spin bands 7−121566
^{152}Dy, superdeformed states, γ-spectra and ang. momenta 7−81282
^{154}Dy, high spin struct., γ-γ coincidences and multipolarities, level spins and parities 7−108988
nuclear energy level transitions continued
^{161}Dy(^{3}He,^{3}He′), 32 MeV, cross sections, levels, J^{π} and particle-vibration states 7−135181
^{162}Dy, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{162}Dy, highly excited, γ-decay reaction depend. and gross struct. 7−135252
^{163}Dy, γ-transitions, intensities and transition energies, ^{162}Dy(n,2γ)^{163}Dy study 7−121704
^{164}Dy, low-lying K^{π}=1^{+} states and M1 transitions, quasiparticle RPA calcs. 7−102808
(e,e′) on A=46-238, mixed symmetric 1^{+} states, excitation energy and transition strength 7−81328
(e,e′), three-nucleon nuclei, bound state-continuum transition amplitude calcs. 7−67761
^{A}Er, A=158,159, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{A}Er, A=159, 160, near-yrast discrete line γ-ray spectroscopy 7−116214
^{A}Er, A=162-8, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{149}Er, energy levels, β-delayed proton emission, K X-ray-proton coincidences in A=149 mass chain from ^{149}Tm decay 7−141026
^{149}Er level structure, yrast levels, isomeric states and transitions from ^{92}Mo/^{60}Ni, X 7−140983
^{150}Er, decay props. 7−67766
^{155}Er, level scheme, shape coexistence, evol., and parallel p-n core breaking 7−108960
^{159}Er, high spin structures, rot. bands and transitions 7−121561
^{163}Er, high-K decay sequence obs., ^{150}Nd(^{18}O,5n) study 7−109109
^{167}Er(n,2γ), E2 strength fns. and radiative widths 7−96072
^{168}Er, low-lying K^{π}=1^{+} states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{168}Er, MI transitions between low-lying levels and F-spin purity 7−89558
Eu-Gd region, partially violated U(3) limits of U(6/12) dynamical supersymmetry *(Chinese)* 7−121699
^{A}Eu, A=147, 149, 151, 152, 153-6, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{145}Eu, octupole multiplets, spin-parity assignments, level transitions 7−108999
^{146}Eu, high-spin octupole isomer and four-particle yrast levels 7−109000
^{153}Eu, 103.2 keV level, half-life meas., ^{153}Gd electron capture study 7−102841
^{153}Eu, level scheme from ^{153}Sm decay 7−121577
^{154}Eu, gamma-ray intensity meas. *(Chinese)* 7−96010
^{18}F, coexistence model for even-parity levels, E2 transition probabilities, matrix elements 7−81330
^{18}F, γ-ray circular polarisation meas., weak pion-nucleon coupling strength 7−109102
^{19}F band structure, level energies, reduced α-widths, B(E2), B(M1) calcs., α+^{15}N cluster model anal. 7−73680
^{19}F, γ-decaying states, ^{12}C(^{11}B, ^{4}He)^{19}F study 7−116227
^{19}F resonances and γ-transition strength from ^{15}N(α,γ) 7−135287
^{19}F, configuration mixing among 11/2^{-} states 7−108965
^{A}Fe(π, π), A=54, 56, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{54}Fe(p,p′γ), 3.88-4.8 MeV, γ-angular distrib., spectra, d$_{5/2}$ isobaric analogue state in ^{55}Co 7−67785
^{A}Gd, A=152-6, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{A}Gd, A=156, 158, low-lying K^{π}=1^{+} states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{A}Gd(t,p), 17 MeV, A=154, 156, 158, 160, L=O strengths to excited states, N=90 maximum, deformation interpretation 7−129059
^{136}Gd, compound nucleus, lifetime meas. for lowest states 7−109119
^{142}Gd, h$_{11/2}$ proton and neutron excitations 7−116219
^{142}Gd, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{148}Gd, high spin states and octupole excitations 7−116223
^{148}Gd, I≤44 level structure, spherical and oblate states, fast E2 transitions 7−135186
^{149}Gd, γ-transitions study using anti-Compton spectrometer 7−135208
^{153}Gd→^{153}Eu, electron capture, γ-transition meas., ^{153}Eu level study 7−102841
^{154}Gd, multipole mixing ratios from δ-δ ang. correls. 7−67762
^{156}Gd, giant angle dipole structure in self consistent QRPA formalism 7−135283
^{158}Gd(^{40}Ar,^{40}Ar′), γ-transitions from peripheral collisions at 44 MeV/u 7−116509
^{158}Gd(^{40}Ar,X), few nucleon transfer, peripheral collisions at 44 MeV/u 7−116509
Gd(e,e′), collective phenomena and multipole transition operators, IBM calcs. 7−116393
^{72}Ge first excited 0^{+} state, no two-proton strength in ^{70}Zn (^{16}O, ^{14}C) 7−96017
(γ,xn), E1 giant reson. cross sections anal., appl. of ^{181}Ta(e,xn) results 7−135301
^{2}H(γ,n), differential cross section ratio, E2 transition 7−121789
^{4}He(α,α), E≤15 MeV, possible expts., to distinguish Pauli principle treatment in potential models 7−121873
^{168}Hf high spin spectroscopy, yrast and negative-parity bands, proton alignment 7−140982
^{177}Hf, X-ray and gamma-ray intensity meas. 7−135248
Hg, even isotopes, IBM calcs. of spectra, levels and transition probabilities 7−109093
^{198}Hg(α, 6n), γ-ray and conversion electron coincidences, ^{196}Pb collective struct. study 7−140973
^{201}Hg, nuclear and atomic props. from conversion electron spectroscopy 7−81338
^{150}Ho, gamma-transition study 7−67766
^{157}Ho, M1 and E2 transitions, signature depend., RPA study 7−128999
^{166}Ho^{m}, long lived decay, γ-ray spectroscopic investig. 7−109095
^{127}I, Coulomb-excitation transition studies 7−109098
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{113}In^{m}, half-lives and gamma transitions 7−96025
^{113}In(γ, γ′), photoactivation of isomeric levels 7−73753
^{115}In^{m}, half-lives and gamma transitions 7−96025
^{117}In^{m}, internal transition branching and isomer cross-section ratio 7−116340
^{A}Ir(n, 2n), A=191, 193, X-ray spectrometry for cross section meas. 7−73757
^{195}Ir, low lying positive parity states following double neutron capture 7−81271
^{39}K(π$^{±}$, π$^{±}$′), 180 MeV, n and p contribs. to excited states, ang. distribs. 7−116527

nuclear energy level transitions continued
^{39}K($\pi^{\pm},\pi^{\pm}$)^{39}K, inelastic scatt., neutron and proton matrix elements for transitions 7−129112
^{41}K(n,n′)^{41}K, γ-ray spectra, energy and spin dependence 7−81399
^{A}Kr, A=75, 77, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
^{72}Kr shape coexistence in N=Z nuclei, gamma decay of states from ^{16}O(^{58}Ni,2n), E=170 MeV 7−135200
^{76}Kr, high spin states, p-n $g_{9/2}$ alignment ^{40}Ca(^{40}Ca,4p), 155 MeV study 7−108994
^{82}Kr, E2 and M1 transitions, energies and reduced probabilities, extended IBM calcs. 7−121648
^{84}Kr gamma-gamma directional correl. meas., spin-parity, multipole mixing ratios from ^{83}K(n,α) 7−135247
level structure and transitions from ^{160}Tb β-decay 7−89538
^{6}Li, EM props. from (α+d) cluster model with breathing clusters, form factors, movements 7−121598
^{6}Li(^{6}Li,n)^{11}C, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
^{6}Li(^{6}Li,p)^{11}B, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
^{6}Li(p,γ)^{7}Be, ang. distribs. meas. to ground and first excited states 7−109155
^{7}Li(d,αn), 3-15 MeV, excitation and sequential decay mechanism 7−135333
^{7}Li(e,tγ), $E_{\gamma}\leq$20 MeV, radiative transitions to ground state, cross sections 7−116391
^{165}Lu, M1 and E2 transitions, signature depend., RPA study 7−128999
^{174}Lu, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{24}Mg, energy level spin study, ^{12}C(^{16}O,αα)^{20}Ne α-α coincidence meas., level transitions 7−109038
^{24}Mg, high spin states above 14 MeV, γ and particle decays 7−116334
^{24}Mg(^{4}He,^{12}C)^{16}O, 26-37 MeV, excitation fns., resonant structures 7−116497
^{24}Mg(^{4}He,^{4}He′), 26-37 MeV, excitation fns., resonant structures 7−116497
^{26}Mg(π, π′), cross sections and matrix elements for 2^{+} transitions 7−81333
^{A}Mo, A=100, 102, E0 transition meas. and neutron-proton IBM comparison 7−81337
^{100}Mo, level scheme, mixing ratios for $2_2^{+}\rightarrow 2_1^{+}$, $2_3^{+}\rightarrow 2_1^{+}$, β-decay study 7−109123
N isotopes, core polarization effects on Coulomb form factors, perturbation theory 7−109013
^{14}N, negative parity isovector states, excitation and decay, form factor calcs. 7−121703
^{15}N(d,γ), E1 transition, giant dipole resonance and strongly collective core excitations 7−121710
^{20}N, high-lying state search, γ-emission probability meas. 7−73731
^{22}Na, lifetime of lowest 0^{+}, T=1 state 7−108962
^{23}Na(γ,Xγ′) partial nucleon channels, dipole giant resonance decay, integrated partial cross sections, photoabsorption 7−116381
^{91}Nb^{m}, electron capture decay, isomer transition, level lifetimes, J^{π} *(Chinese)* 7−116338
^{93}Nb(α,n), ^{96}Tc spin assignments, decay schemes statistical methods anal. 7−89542
^{A}Nd, A=132, 134, from beta-decay of ^{132,134}Pm, gamma bands of states 7−129005
^{134}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{135}Nd, low-lying band structure extension to higher spins 7−108963
^{135}Nd, superdeformed band obs. 7−95971
^{136}Nd, lifetime and g-factor meas. 7−116328
^{136}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{143}Nd high spin states, J^{π}, $T_{1/2}$ and transitions from ^{130}Te(^{18}O, 5n) 7−102796
^{143}Nd(n,2γ), E2 strength fns. and radiative widths 7−96072
^{148}Nd, antiprotonic, strong-interaction fine struct. effects 7−96018
^{18}Ne(e,e′), inclusion of collective nucleon motion, anal. 7−121800
^{18}Ne→^{18}F, first forbidden decays, parity-mixing matrix element constraints 7−121738
^{20}Ne, giant quadrupole resonances, E2-transition strength and α-decay width, cluster model anal. 7−108978
^{20}Ne isoscalar giant resonances, sum rules, symplectic model, cluster approach 7−135286
^{20}Ne, M1 excitations in even-even sd-shell nuclei, orbital current total strength 7−135246
^{22}Ne, rotational bands, E1 transitions, cluster anal. 7−67694
^{22}Ne(π, π′), cross sections and matrix elements for 2^{+} transitions 7−81333
^{A}Ni(n,γ), A=58,60, resonance capture, γ-ray spectra, valence model comparisons 7−116422
^{58}Ni, effective operator for the transition density 7−81331
^{58}Ni(^{32}S,X), 143 MeV, selective γ-decay of fission-like fragments, deformation 7−116536
^{58}Ni(e,e^{-}p), 180 MeV, fast proton emission, high-lying collective states, decay props. 7−129028
^{58}Ni($\vec{p}$,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{65}Ni, γ-emission probability meas., activity, spectra and half-life determ. 7−135254
^{237}Np, muonic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{237}Np, pionic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{238}Np, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{A}O, A=17-22, low-lying spectra, double delta and surface delta interactions *(Chinese)* 7−121700
^{14}O levels and transitions, CC anal. of ^{12}C(^{3}He,n) 7−95990
^{16}O, giant dipole transitions in the nuclear WSp(6,R) model 7−96013
^{16}O(^{16}O,^{12}C′)^{20}Ne, E_{cm}=11-18 MeV, excitation fns., DWBA optical model comparisons 7−116502
^{16}O(^{16}O,X), 12-20 MeV, cross section resonances in α_0, α_1 exit channels, excitation fns., statistical anal. 7−129101
^{16}O(α,p)^{19}F, transition strength distrib., NN interaction calcs., HF anal 7−129070
^{16}O(p,γ), E1 transition, giant dipole resonance and strongly collective core excitations 7−121710
nuclear energy level transitions continued
^{18}O(e,e′), inclusion of collective nucleon motion, anal. 7−121800
^{18}O(π, π′), cross sections and matrix elements for 2^{+} transitions 7−81333
^{20}O, β-decay, γ-ray study 7−81344
^{A}Os(e,e′), A=190,192, ground state charge and transition densities, HFB calc. comparisons 7−81372
^{172}Os, low-frequency anomaly in moment of inertia, yrast sequence from ^{144}Nd(^{32}S, 4n) 7−116215
^{174}Os constant transition quadrupole moments, high spin state lifetimes from ^{51}V(^{127}I, 4n) 7−135205
^{180}Os, high-spin isomers, partial deexcitation scheme 7−108989
^{188}Os(e,e′), ground state charge and transition densities, HFB calc. comparisons 7−81372
^{190}Os, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{30}P level lifetimes and transition strengths from ^{29}Si(p,γ) 7−121715
^{A}Pb(e,e′)^{A}Pb, A=206, 208 mixing of isoscalar and isovector mag. dipole excitation modes 7−129026
^{208}Pb 1^{+} state excitation, isoscalar character and tensor correls. importance from (p,p′) and (d,d′) 7−81299
^{208}Pb, energy level structure, resonance decays, ^{207}Pb(n,X), E≤700 keV study 7−121618
^{208}Pb(^{58}Ni,^{58}Ni)^{208}Pb, elastic and inelastic scatt., DWBA and coupled channel anal. 7−129088
^{208}Pb(p,p′), deformation length and matrix elements, collective DWBA formalism 7−102882
^{A}Pd, A=102, 104, 106, conversion coeffs. and E0 transitions 7−96023
^{A}Pd, A=102-112, energy bands and E2 transitions, extended IBA consistent Q formalism 7−135258
^{A}Pd, A=108, 110, 112, E0 transition meas. and neutron-proton IBM comparison 7−81337
^{105}Pd(n, γ), M1 giant resonance observation by averaged γ-ray intensity 7−116359
^{140}Pm levels, J^{π} and transitions from ^{140}Sm β^{+}-decay 7−67698
^{149}Pm, levels and moments following ^{149}Nd decay 7−116329
^{A}Po, A=208, 209, nuclear orientation following Al decay in Fe 7−116330
^{204}Po, excited states study using in-beam spectroscopic methods 7−73685
^{141}Pr, X-ray and gamma-ray intensity meas. 7−135248
Pt, even-even isotopes, reduced E2 probabilities, excited state quadrupole moments, IBM-I anal. 7−121712
^{A}Pt(e,e′), A=194,196, ground state charge and transition densities, HFB calc. comparisons 7−81372
^{242}Pu decay, α-particle and γ-ray emission probabilities 7−96033
^{A}Ra, A=224, 226, 228, low-lying collective state energies, E2 transitions, IBM-1 anal. 7−121552
^{227}Ra, multipolarity meas., evidence for stable octupole deformation 7−73684
^{230}Ra collective states; bands, J^{π}, and transitions from ^{230}Fr β-decay 7−73682
^{82}Rb, partial decay scheme study, radiation dose meas. appl. 7−96026
^{101}Rh, high and low spin states, study using ^{94}Zr(^{12}C,4np), ^{102}Ru(p,2n)^{101}Rh 7−89543
^{109}Rh level scheme, particle-hole states, J^{π} and transitions from ^{109}Ru β-decay and ^{110}Pd(d,^{3}He) 7−135183
^{A}Rn, A=202-222, hyperfine struct., isotope shift, spins, moments 7−116242
^{216}Rn, yrast states, excitation spectrum, ^{208}Pb(^{14}C,2nα)^{216}Rn study 7−140977
^{A}Ru, A=98-108, energy bands and E2 transitions, extended IBA consistent Q formalism 7−135258
^{A}Ru, A=99,101, B(E2) values, Coulomb excitation 7−109099
^{106}Ru, E0 transition meas. and neutron-proton IBM comparison 7−81337
^{34}S(π, π′), cross sections and matrix elements for 2^{+} transitions 7−81333
^{38}S, confirmation of 2805 keV level, γ-decay from ^{36}S(t, pγ) 7−116282
^{117}Sb, 23/2^{-} isomeric state, evidence for shape coexistence 7−108958
^{125}Sb, gamma-ray intensity meas. *(Chinese)* 7−96010
^{43}Sc, energy levels, transitions and moments in shell model calc. 7−121621
^{43}Sc energy levels, transitions and level lifetimes from ^{40}Ca(α, pγ) 7−121622
^{45}Sc(p,γ)^{46}Ti, 1026, 1047 and 1377 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
^{A}Se, A=76, 78, level struct. and transitions, shape coexistence, dynamic deformation model 7−116280
^{75}Se, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
^{76}Se, E0 transitions between 0_2^{+}, 0_1^{+} and 2_2^{+}, 2_1^{+} levels 7−109111
^{76}Se(t,p)^{78}Se, 17 meV, excitation energies, angular distrib., J^{π} assignments 7−67716
^{78}Se, collective and two-particle excitations 7−81283
^{28}Si, 15.234 MeV level, radiative decay, ^{27}Al(p,γ) study 7−109110
^{28}Si(^{16}O,^{16}O), 3α transfer mechanism, excitation fns., molecular orbital model 7−121906
^{28}Si(^{6}Li, ^{6}Li′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{28}Si(α,α′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{29}Si, unbound states structure from neutron resonance spectroscopy of ^{28}Si(m,m′)^{28}Si 7−129047
^{30}Si, excited level lifetimes from ^{27}Al(α,pγ) 7−81334
^{30}Si(π, π′), cross sections and matrix elements for 2^{+} transitions 7−81333
^{A}Sm, A=146, 151, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{A}Sm, A=146-152 even isotopes, E2/M1 mixing ratios using extended phonon projection model 7−121707
^{A}Sm, A=146-154, vibr.-rot. phase transition, Dyson boson mapping appl. 7−95968
^{A}Sm, A=146-52, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{A}Sm, Az 146-154, nuclear radii, isotope shift, electric monopole transitions 7−116270
^{A}Sm(^{58}Ni,^{58}Ni′),A=150,152 gyromagnetic ratios of excited states 7−109211
^{132}Sm, compound nucleus, lifetime meas. for lowest states 7−109119
^{135}Sm spectroscopy, $i_{13/2}$ neutron orbital observation from ^{64}Zn (^{74}Se, 2pn) and ^{92}Mo(^{46}Ti, 2pn) 7−135177
^{144}Sm(^{16}O,^{16}O), 61-76 MeV, elastic and inelastic, ang. distribs. and excitation functions 7−116489
^{154}Sm, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
Sm(e,e′), collective phenomena and multipole transition operators, IBM calcs. 7−116393

nuclear energy level transitions continued
^{A}Sn, A=110,112 spherical and deformed states in high-spin yrast region 7−116222
^{A}Sn, A=115, 117, spin-flip mag. quadrupole transitions, $T_{1/2}$, J^{π} and levels from In β-decay 7−135249
^{119}Sn, P-odd effect, emission Mossbauer spectrum, orientation relative to external magnetic field 7−116261
^{124}Sn, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{87}Sr(γ, γ'), photoactivation of isomeric levels 7−73753
^{98}Sr, first excited state half-life, ground state deformation, B(E2) value 7−141020
^{181}Ta(γ,γ'), isomeric state excitation by white radiation, 3.55 MeV activation level detection 7−135295
^{182}Ta, gamma-ray intensity meas. *(Chinese)* 7−96010
^{159}Tb(n,n')^{159}Tb, low-lying state determ., γ-ray ang. distribs. 7−109160
^{160}Tb, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{93}Tc, $17/2^{-}-17/2^{+}$ doublet, parity violation 7−116260
^{95}Tc, chemical effects of m-g isomeric transition in Tc complexes 7−113970
^{A}Te, A=116,117, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{A}Te, A=118,120,122, evidence for intruder states, E0 transitions, from beta decay of iodine 7−135245
^{125}Te^{m}, M4 transitions in telluride compounds, decay meas. 7−121716
^{A}Th, A=228, 230, 232, low-lying collective state energies, E2 transitions, IBM-1 anal. 7−121552
^{232}Th(^{90}Zr,X), 520 MeV, transfer reactions, γ-transition study 7−116507
^{232}Th(n,n'), 185, 550, 200-2500 keV, rotational level excitation fns. and angular distrib. 7−116421
^{A}Ti, A=44, 46, 48, s.d.g. IBM calc. 7−135221
^{A}Ti, A=46,48,52, rotational bands, E1 transitions, cluster anal. 7−67694
^{A}Ti(π, π), A=48, 50, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{46}Ti(p̄,p'), 65 MeV, low energy octupole resonance, excitation strength and state distrib. 7−81361
^{48}Ti, collective M1 transitions, energy and rates, dependence on nuclear effective interaction 7−102833
^{50}Ti(e,e'), C6 transition, electromagnetic spin-orbit contrib. 7−109151
^{51}Ti, level lifetime meas., excited level decay scheme 7−67764
^{A}Tm, A=162,164 aligned bands and gyromagnetic ratios from Sm(^{14}N,4n) 7−109210
^{A}Tm, A=163, 165, 167, 169, 171, γ-transitions, M1, E1 and E2 probabilities 7−135255
^{159}Tm, level lifetimes and probabilities 7−102834
^{169}Tm, level study from ^{169}Yb γ-ray spectrum 7−121722
^{234}U high spin state population and γ transitions from ^{235}U(^{58}Ni, ^{59}Ni) 7−95969
U(e,e'f), giant multipole resonances, fission decay, exptl. study 7−109245
^{182}W, new level study from ^{182}Ta β-decay 7−121709
^{A}Xe, A=131,133, level energies, E2 transition probabilities, appl. of spinor symmetry 7−121616
^{120}Xe, lifetime meas. using coincidence plunger technique in ^{110}Cd(^{13}C,3n) reaction 7−102909
^{128}Xe level structure, collective states, and transitions, IBM and shell anals. of ^{126}Te(α,2nγ) *(Chinese)* 7−116210
^{132}Xe level scheme, collectivity and γ-transitions from ^{130}Te(α,2nγ) *(Chinese)* 7−108951
^{83}Y low-energy level structure, isomer decays from ^{83}Zr decay, ^{83}Y low-energy level structure, isomer decays 7−121619
^{89}Y(^{19}F,X), 135-143 MeV, excitation fns., correlated fluctuations 7−116504
^{89}Y(^{19}F,X), 135-143.25 MeV, cross-section correlated fluctuations, excitation functions 7−121912
^{169}Yb→^{169}Tm, decay γ-ray spectrum study 7−121722
^{170}Yb, X-ray and gamma-ray intensity meas. 7−135248
^{172}Yb, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{174}Yb, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{174}Yb(n,2γ), E2 strength fns. and radiative widths 7−96072
^{64}Zn(p,γ)^{65}Ga, 1.1-2.1 MeV, γ-angular distrib. meas. single level, decay prop. anal. 7−73736
^{A}Zr, A=94, 96, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{A}Zr(α,α'), A=90, 92, 94, 96, isospin decomposition of transition matrix elements by Coulomb interference 7−96088
^{80}Zr, γ-radiation, low lying states, quadrupole deformation 7−141017
^{80}Zr, γ-ray spectroscopy, nuclear stability 7−121711
^{89}Zr, $21/2^{+}$ level, mean lifetime meas., $21/2^{+}\rightarrow 17/2^{+}$ transition study 7−109117
^{90}Zr, giant dipole resonances, cross-section meas. in ^{89}Y(p,γ) reaction 7−102874
^{90}Zr, giant M1 resonance 7−121773
^{90}Zr(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{90}Zr(p,p'), 200 MeV, 0^{-} state excitation, resonance and transitions, DWIA calc. 7−67696
^{96}Zr, [$g_{9/2}^{2}$]8^{+} state, γ-ray angular correl. meas., Gamow-Teller decay 7−121574

nuclear energy levels
see also isobaric analogue states; nuclear collective states and giant resonances; nuclear resonances; nuclear spectroscopic factors
0^{+} intruder states in even-even nuclei; shell model description 7−109034
A=117, nuclear data sheets, levels, J^{π}, transitions, decays 7−80200
A=118, nuclear data sheets, levels, J^{π}, transitions, decays 7−140390
A=140, nuclear data sheets, levels, J^{π}, transitions, decays 7−140391
A=153 nuclei, systematics of particle-rotor model 7−108970
A=155, nuclear data sheets, levels, J^{π}, transitions, decays 7−95117
A=165, nuclear data sheets, levels, J^{π}, transitions, decays 7−80201
A=170, nuclear data sheets, levels, J^{π}, transitions, decays 7−80204
A=202, nuclear data sheets, levels, J^{π}, transitions, decays 7−95118
A=204, nuclear data sheets, levels, J^{π}, transitions, decays 7−95119
A=226, nuclear data sheets, levels, J^{π}, transitions, decays 7−80202
A=34-50, core breaking, shell model anal. 7−116288
A=54, nuclear data sheets, levels, J^{π}, transitions, decays 7−80203
A=56, nuclear data sheets, levels, J^{π}, transitions, decays 7−102030
A=70, nuclear data sheets, levels, J^{π}, transitions, decays 7−102031
A=73, nuclear data sheets, levels J^{π}, transitions, decays 7−102032
A=74, nuclear data sheets, levels, J^{π}, transitions, decays 7−140389

nuclear energy levels continued
A=82, nuclear data sheets, levels, J^{π}, transitions, decays 7−80199
clustering aspects of nuclear structure and reactions 7−121764
complex particle emission probability, condensation probability, energy and mass dependence 7−129014
compound nucleus, statistical particle and gamma ray emission, temp. dependent effects 7−121926
compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
compound nucleus temperatures, level density parameter temp. dependence, partial widths, branching ratios 7−116368
Coulomb re-excitation of radioactive nuclei 7−109100
deformed nuclei, nonrotational states and the IBM 7−116285
deformed nuclei, self-consistent Hartree descript. in rel. quantum field theory 7−121599
deformed nuclei, vibrational band excitation, coupled channel Born approx. calcs. 7−128955
density dependent effective interactions, shell-model calcs. 7−121582
dynamical supersymmetry of Pt-Au pairs 7−128780
elementary quasiparticle and quasihole excitations in nuclei 7−121570
even-even nuclides, 0^{+} states and E0 transitions 7−121701
excited nuclear states, model-free characts. from final-particle ang. correlations 7−135263
exciton state density, unified model formulas 7−135213
FCC nuclear model, nucleon eigenstates equivalence, correspondence with spin-orbit model 7−128977
FCC nuclear model, radii, binding energies and excited states prediction, nuclear skin parameters 7−128958
Fermi gas model, level density parameters *(Chinese)* 7−109138
fp-shell nuclei, alpha-particle cluster states 7−128989
fragmentation reactions final distrib., excited primary fragments sequential decay study 7−81350
harmonic oscillator energy level spacing, mass number depend. for trapezoidal average density 7−109029
heavy ion collisions, doorway states induced by quantum recoils, shell-model 7−121907
heavy ion collisions, intermediate energy, dynamical and statistical aspects, review 7−121918
high-spin, collective and single particle structures 7−121578
hot rotating nuclei, Landau theory of shape transitions 7−128943
infinite nuclear matter, ground-state energy and mass relations 7−116314
interactions for large-scale shell-model calculations 7−121579
isovector quadrupole vibrations, vibrational model anal. 7−67683
light N=Z nuclei with spin-isospin order, excited states, HF calcs. 7−140993
low-energy symmetry laws, nuclear spectroscopy 7−121625
medium mass nuclei, P-nonconservation effects on level density 7−135314
microscopic approaches to nuclear structure calcs., seminar, Sorrento, Italy (May 1986) 7−120707
nondegenerate orthonormal states from coeffs. of fractional parentage for large spaces 7−95999
nuclear data sheets, recent refs., Jan.-April 1987 7−140392
nuclear data sheets, recent refs., Sept. to Dec. 1986 7−80205
nuclear level densities and level spacing distributions, statistical theory tests at low excitation energies 7−128961
nuclear second moments for pre-equilib. reaction theories, level densities 7−141036
p-wave threshold anomaly, mass depend., neutron strength fn. study 7−135268
particle-hole and particle-particle RPA ground state correlations 7−102794
proton resonances, tests of spectrum and strength fluctuations 7−128937
quasistationary state parameters in RGM, algebraic calcs. 7−135228
rare-earth deformed nuclei, low-lying $K^{\pi}=1^{+}$ 7−108971
relative particle number, gauge-space reduced alignment, shape and pair correlations 7−116305
Rossendorf continuum shell model, collective features, self-organising systems 7−109063
Rossendorf shell model, symm. violation, single particle corrections 7−121642
s-shell hypernuclei, binding energy and excitation energies using realistic interactions 7−67758
shell model equivalent harmonic oscillator pot. 7−89546
single particle and collective coupling, equation of motion method 7−121585
single particle and collective motion fragmentation, quasiparticle-phonon model 7−121567
spectral distribution method in nuclear spectroscopy 7−121639
surface hypernuclear states, long-lived, width calcs. 7−121697
Z=50 nuclei, nuclear moments and charge radii 7−109027
(α,γ), parity mixing in nuclear levels, appl. of ion beam energy cooling technique 7−81833
(d,2p), intermediate energies, d tensor polarisations, spin dependence of cross sections 7−109187
(e,e'), excitation cross sections in nonstationary nonuniform medium 7−121799
(e,e'p) reaction, probing single particle structure 7−121813
Λ hypernuclei, single-particle spectra, enhanced interaction radii of multi-strange nuclei 7−121695
Λ-hypernuclear states, widths 7−121696
(n,n), 50-200 MeV, nucl. struct. probe appl. 7−121840
(n,p), 50-200 MeV, nucl. struct. probe appl. 7−121840
(p, α), on A=27-232 nuclei, thermalisation process in inclusive reactions, hot source model 7−67818
(p,d), 100-200 MeV, continuum spectrum study 7−121620
(p, ^{3}He), on A=27-232 nuclei, thermalisation process in inclusive reactions, hot source model 7−67818
(p,n), 100-200 MeV, continuum spectrum study 7−121620
(p,p'), 100-200 MeV, continuum spectrum study 7−121620
(p,t), 100-200 MeV, continuum spectrum study 7−121620
$\pi+\rho$ model, Landau-Migdal parameter calcs., for nucleon ph, nucleon and Δph 7−67741
Σ-hypernuclear states, widths 7−121696
(t,α), gross struct. study 7−109201
(t,d), gross struct. study 7−109201
(t,t'), gross struct. study 7−109201
Ag, odd-A nuclei, g factors of isomeric $7/2^{+}$ states 7−67719
^{A}Ag, A=108, 110, low spin state level scheme, spin, parity and transition multipolarity 7−109042
^{A}Al, A=27, 29 levels and spectroscopic factors CCBA and DWBA anals. from (t,α) 7−102806

nuclear energy levels continued
^{30}Al, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{41}Ar levels and J$^{\pi}$ assignments, DWBA anal. of ^{40}Ar(d,p) 7−116286
^{71}As, intermediate scatt. from ^{70}Ge(p,p′) 7−67725
Au-Pt-Hg region, improved Nilsson parameter set 7−109030
^{198}Au, negative-parity spectrum, IBFFM/OTQM anal. 7−109043
^{10}B(α,dγ), density matrix spin tensor for ^{12}C 2$^+$ 4.43 MeV state, model-free extraction 7−135209
^{11}B(α,tγ), density matrix spin tensor for ^{12}C 2$^+$ 4.43 MeV state, model-free extraction 7−135209
^{A}Ba, A=136, 138, low-spin levels, (n,n′γ) study 7−109045
^{124}Ba, excited states following ^{124}La β$^+$ decay 7−109031
^{135}Ba, level energies, E2 transition probabilities, appl. of spinor symmetry 7−121616
^{138}Ba, first excited 2$^+$ state, g-factor meas., ^{138}Ba(^{32}S,^{32}S′) Coulomb excitation 7−109026
^{8}Be, α-decay, quasistationary state parameters in RGM, algebraic calcs. 7−135228
^{9}Be, first excited state, line shape and excitation strength 7−95992
^{9}Be, highly excited states, γ excitation fn. meas. ^{6}Li(t,p)^{8}Li and ^{7}Li(d,p)^{8}Li exptl. study 7−121612
^{9}Be, three-body calc. of low-lying states 7−67722
^{9}Be$_{Λ}$, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
^{209}Bi, single-particle proton strengths in 1i$_{11/2}$ and 1j$_{15/2}$ states 7−67684
^{209}Bi, valence proton state orbit radii meas., use of barycentric potential 7−109009
^{12}C, cluster Faddeev calcs. and three-body force effects 7−67751
^{12}C, excited states, B(E2) transition probabilities, level density, hyperspherical-fn. method 7−121615
^{12}C, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
^{12}C, three-alpha Fadeev calcs., bound-state anal. with Pauli correct α-α potential 7−67729
^{12}C(γ,p), E$_γ$=60 and 70 MeV, high energy resolution study 7−135302
^{12}C(π$^+$,K$^+$), hypernuclear state production, cross section calcs. 7−67879
^{13}C(e,e′), 2hω structure in ^{13}C, anal. using inelastic scatt. 7−116392
^{13}C(π,π′), 2hω structure in ^{13}C, anal. using inelastic scatt. 7−116392
^{14}C, ^{11}B(α,p)^{14}C, 118 MeV study 7−121617
^{14}C, excitation energies study using 33 MeV ^{12}C(t,p) reaction 7−121623
^{40}Ca, energy level total width meas. 7−116284
^{40}Ca level widths between 9.5 and 10.5 MeV from (γ,γ) and ^{39}K(p,γ) 7−67723
^{40}Ca(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{44}Ca, low-lying spectra, simplified model calcs. *(Chinese)* 7−102812
^{48}Ca(^{18}O, ^{15}O)^{51}Ca, 108 MeV, separation technique for ^{51}Ca detection, ^{51}Ca mass and excited states 7−116467
^{48}Ca(γ,n), cross section meas., isospin components and statistical decay model 7−129017
^{48}Ca(γ,p), cross section meas., isospin components and statistical decay model 7−129017
^{100}Cd level scheme determ., isomer identification, ^{46}Ti(^{58}Ni,2p2n)^{100}Cd study 7−109037
^{140}Ce, low-spin levels, (n,n′γ) study 7−109045
^{57}Co levels, J$^{\pi}$, spectroscopic factors, DWBA anal. of ^{56}Fe(^{7}Li,^{6}He) 7−135210
^{48}Cr level scheme determ., ^{48}Mn→^{48}Cr β$^+$ decay study 7−102840
^{52}Cr, 2$_1^+$ state g-factor meas. 7−109024
^{53}Cr(γ,n), threshold cross section meas., level densities and radiative strength fn. 7−116387
^{A}Cu(n,α), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{A}Cu(n,d), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{A}Cu(n,p), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{63}Cu, proton resonances, γ-angular distrib. meas., intermediate structure obs., spin-parity values 7−121611
^{A}Dy, A=142, 144, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{164}Dy, level scheme above 500 keV, ^{164}Dy(n,γ) study 7−109041
(e,e′K$^+$), cross section for low-lying hypernuclear states, relativistic field theory anal. 7−116327
Er, positive parity bands, signature splitting, cranking calcs. 7−135211
^{164}Er, energy levels, SU(3) phenomenological model Hamiltonian anal. 7−121649
^{149}Eu, excited state population in ^{149}Gd γ-decay, level scheme study 7−135208
^{153}Eu, 103.2 keV level, half-life meas., ^{153}Gd electron capture study 7−102841
^{16}F, low-lying states, ^{16}O(p,n)^{16}F reaction anal. 7−102873
^{18}F, coexistence model for even-parity levels, E2 transition probabilities, matrix elements 7−81330
^{19}F(^{6}Li, d), 34 MeV, energy levels, spin assignments and spectroscopic factors, DWBA comparison 7−141092
^{19}F(e,e′), 500 MeV, transverse excitation of positive/negative parity states, form factors, shell model comparisons 7−128944
^{56}Fe(π$^+$, K$^+$), hypernuclear state production, cross section calcs. 7−67879
^{A}Fr, A=207-228 nuclear and electronic g-factors and single particle structure 7−109021
^{66}Ga, 9$^+$, 3034 keV state, gyromag. factor 7−128953
^{67}Ga, highly deformed compound nucleus, prod. and deexcitation 7−116458
^{142}Gd, h$_{11/2}$ proton and neutron excitations 7−116219
^{142}Gd, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{146}Gd, proton-neutron single particle states, TOPS interaction 7−81268
^{147}Gd, single particle radiation between high spin states from ^{122}Sn(^{30}Si,5n) 7−109209
^{148}Gd, high spin states and octupole excitations 7−116223
^{72}Ge first excited 0$^+$ state, no two-proton strength in ^{70}Zn (^{16}O, ^{14}C) 7−96017
^{73}Ge, proton orbitals, occupation number determ. 7−67727
^{2}H, D-state wave fn., nodes and bound states 7−121624
^{2}H, effect of deuteron structure on hyperfine structure 7−109036
^{2}H, ground state props., tensor force and one-pion exchange pot. 7−67733
^{6}He, 2$^+$ state, energy and width, nonspin αnn model 7−121613
^{6}He$_{Λ}$, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
Hf, positive parity bands, signature splitting, cranking calcs. 7−135211
nuclear energy levels continued
^{151}Ho, β-decay isomers, energies 7−121728
^{126}I, excited state study from ^{127}I(γ,n)^{126}I, 9.72 MeV, neutron spectra meas. 7−73701
^{127}I, Coulomb-excitation transition studies 7−109098
^{47}K, spectroscopic factors and proton core excitation meas. from ^{48}Ca(t,α) 7−81405
^{7}Li, 18 MeV excitation energy, analysis of inclusive α-spectra of ^{9}Be(d, α) 7−116281
^{7}Li, Coulomb excitation of first excited state, cluster model calcs. 7−116234
^{A}Li, A=7,8 multilevel multichannel R-matrix calcs., shell model calcs. 7−109035
^{A}Li$_{Λ}$, A=7, 9, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
^{A}Li(p,p′), A=6,7, continuum spectra near breakup threshold 7−67824
^{24}Mg, cluster struct., form factors, energy levels and parity states 7−135232
^{24}Mg, energy level spin study, ^{12}C(^{16}O,αα)^{20}Ne α-α coincidence meas., level transitions 7−109038
^{24}Mg, energy level total width meas. 7−116284
^{24}Mg, highly excited state sin multi-cluster orthogonality condition model 7−67724
^{24}Mg(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{27}Mg, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{97}Mo, level scheme construction from ^{96}Zr(^{3}He,2nγ)^{97}Mo, 11 MeV, particle-plus-rotor model anal. 7−67690
^{12}N, low-lying states, ^{12}C(p,n)^{12}N reaction anal. 7−102873
^{13}N level structure via the ^{10}B(^{3}He, ^{3}He) elastic scattering 7−109033
^{15}N, helion and ^{3}H cluster states, branching ratios 7−67685
^{15}N levels, J$^{\pi}$, form factors and spectroscopic factors, DWBA anal. of ^{18}O(p,α), 40.9 MeV, ^{15}N levels, J$^{\pi}$, form factors and spectroscopic factors, DWBA anal. 7−102805
^{15}N, resonance obs., ^{11}B(α,p)^{12}C, 0.9-1.7 MeV study 7−121871
^{20}Na level structure, from ^{20}Ne(^{3}He,t)^{20}Na reaction, level structure near proton threshold 7−129066
^{25}Na, levels and spectroscopic factors CCBA and DWBA anals. from (t, α) 7−102806
^{26}Na, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{29}Na, Gamow-Teller β-decay, comparison with shell model predictions 7−128959
^{135}Nd, superdeformed band obs. 7−95971
^{143}Nd(n,γ), excited states characts. from γ-ray spectroscopy 7−121824
^{150}Nd(^{12}C,^{12}C′), vibrational band excitation, coupled channel Born approx. calcs. 7−128955
^{A}Np, A=238, 239, spontaneous fission of highly deformed excited states, shadow method 7−135381
^{A}O, A=18-20, low-lying energy levels, EM props., shell model calc. 7−67730
^{14}O levels and transitions, CC anal. of ^{12}C(^{3}He,n) 7−95990
^{15}O, helion and ^{3}H cluster states, branching ratios 7−67685
^{15}O levels, J$^{\pi}$ and spectroscopic factors from ^{14}N(p,γ) 7−107812
^{16}O, ground state energy shift, particle-particle ring diagrams and Skyrme effective interactions 7−121588
^{16}O, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
^{16}O spectrum, microscopic description, multiconfiguration generator coord. basis 7−135212
^{16}O(p,n), 0$^+$→0$^-$ spin excitation mode transitions, distorted wave calcs. 7−121823
^{16}O(p,p′), 0$^+$→0$^-$ spin excitation mode transitions, distorted wave calcs. 7−121823
^{17}O, single-particle energies, shell model calcs. 7−121581
Os, positive parity bands, signature splitting, cranking calcs. 7−135211
P, neutron-rich isotopes, low-lying states study using multi-nucleon transfer 7−116287
^{A}P, A=31,32,33, level anal. in Si(α,p), 25 MeV 7−67851
^{35}P, β$^-$ decay study 7−141023
^{36}P→^{36}S, β$^-$ decay, nuclear structure, spherical shell model study 7−141023
^{A}Pb, A=192,194,196,198,200, level study from ^{A}Bi β$^+$/electron-capture study, evidence for O$^+$ states 7−141024
^{A}Pb(p,xn), A=204,206-8, E$_p$=25.5 MeV, preequilibrium neutron emission, shell effects, double shell closure 7−141052
^{208}Pb 1$^+$ state excitation, isoscalar character and tensor correls. importance from (p,p′) and (d,d′) 7−81299
^{208}Pb, 3s proton shell occupancy, ^{205}Tl(d,^{3}He)^{204}Hg study 7−129061
^{208}Pb, effective mass and level-density parameter temp. depend., surface coupling model anal. 7−95975
^{208}Pb, energy level structure, resonance decays, ^{207}Pb(n,X), E≤700 keV study 7−121618
^{208}Pb, valence proton state orbit radii meas., use of barycentric potential 7−109009
^{208}Pb(e,e′p), 3s$_{1/2}$ proton orbit, evidence for partial occupancy 7−67728
^{208}Pb(π$^+$, K$^+$), hypernuclear state production, cross section calcs. 7−67879
^{209}Pb, high spin, high lying subshells from (α, ^{3}He) reaction 7−109198
^{209}Pb, neutron evaporation spectra, level density parameter and temperature dependence 7−121927
^{A}Pd(e,e′), A=104-110, low-lying states, IBM and anharmonic vibrator model comparisons 7−109039
^{A}Pt(^{12}C,^{12}C′), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(^{16}O,^{16}O′), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(α,α′), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{192}Pt, first excited state, electric quadrupole moment determ. and shape transition 7−135206
^{A}Rb, A=79,81,83, low-lying levels, proton spectroscopic factor meas. 7−116265
^{A}Re, A=176,178 doubly decoupled bands 7−108977
Rh, odd-A nuclei, g factors of isomeric 7/2$^+$ states 7−67719
^{101}Rh, high and low spin states, study using ^{94}Zr(^{12}C,4np), ^{102}Ru(p,2n)^{101}Rh 7−89543
^{A}Ru, A=99,101, B(E2) values, Coulomb excitation 7−109099
^{32}S level structure spectroscopic factors, ^{31}P(d,n)^{32}S study 7−102804
^{36}S, nuclear structure, spherical shell model study, β$^-$ decay study 7−141023

nuclear energy levels continued
^{37}S levels and J^{π} assignments, DWBA anal. of ^{36}S(d,p) 7−116286
^{38}S, confirmation of 2805 keV level, γ-decay from ^{36}S(t, pγ) 7−116282
^{39}S, excited state obs., ^{40}Ar(^{13}C,^{14}O),^{39}S study 7−128941
^{43}Sc, energy levels, transitions and moments in shell model calc. 7−121621
^{43}Sc energy levels, transitions and level lifetimes from ^{40}Ca(α, pγ) 7−121622
^{43}Sc levels, J, $T_{1/2}$, branching and mixing ratios from ^{40}Ca(α,p) 7−140994
^{76}Se(t,p)^{78}Se, 17 meV, excitation energies, angular distrib., J^{π} assignments 7−67716
^{A}Si, A=29, 31, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{28}Si, 15.234 MeV level, radiative decay, ^{27}Al(p,γ) study 7−109110
^{28}Si(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{30}Si, excited level lifetimes from ^{27}Al(α,pγ) 7−81334
^{35}Si→^{35}P, β⁻ decay, nuclear structure, spherical shell model study 7−141023
^{136}Sm, transition to deformed regime, level scheme 7−116283
^{141}Sm, hyperfine structure, quadrupole moments, $\delta(r^2)$, μ determ. 7−67726
^{A}Sn, A=110,112 spherical and deformed states in high-spin yrast region 7−116222
^{A}Sn, A=115, 117, spin-flip mag. quadrupole transitions, $T_{1/2}$, J^{π} and levels from In β-decay 7−135249
^{A}Sr, A=79-97, nuclear ground state spins of short lived isotopes, hyperfine structure 7−121608
^{A}Sr, A=86,87, nuclear structure study using ^{87,88}Sr(d,^{3}He), DWBA anal. 7−128956
^{147}Tb, β-decay isomers, energies 7−121728
^{120}Te, structure study using (d,t) and (τ,α) 7−128957
^{46}Ti, structure studies using MONSTER model 7−121583
^{A}U, A=234, 235, 238, neutron resonance states, mean-square charge radii meas. 7−73702
^{236}U, mean-square charge radii meas. of compound-nucleus states, fission width correlations 7−73703
^{52}V, energy levels, transitions and spectroscopic factors, ^{51}V(t,d) study 7−128960
W, positive parity bands, signature splitting, cranking calcs. 7−135211
^{A}Xe, A=131,133, level energies, E2 transition probabilities, appl. of spinor symmetry 7−121616
^{128}Xe, collective and quasiparticle excitations 7−116221
^{137}Xe level density, test of Fermi gas model predictions, comments 7−95991
^{83}Y low-energy level structure, isomer decays from ^{83}Zr decay, ^{83}Y low-energy level structure, isomer decays 7−121619
Yb, positive parity bands, signature splitting, cranking calcs. 7−135211
^{A}Yb, A=161,163,165,167 rotational alignment in $i_{13/2}$-parentage states 7−108955
^{90}Zr(e,e'p), quasi-free knock-out, final state interactions, bound state wave fns. 7−116397
^{94}Zr(d,d'), energy levels, distorted-wave anal. 7−102890

nuclear engineering
see also fission reactors; fusion reactors
American Power Conference 48th Annual Meeting, Chicago, IL, USA (April 1986) 7−115687
BWR 540 MW power plant pipe replacement project 7−122026
Canadian Engineering Centennial, Montreal, Que., Canada (May 1987) 7−134371
CANDU, engineering aspects of pressure tube development 7−135441
CANDU power system, significant engineering developments 7−135419
Clinton nuclear power station, reliability-centred maintenance program 7−135513
engineering developments for safety 7−139093
fusion reactor development problems and international collaboration *(Chinese)* 7−81708
heat exchanger U-tubes, nonlinear response to differential axial movement between two legs 7−141154
LMFBR reactor building, seismic load mitigation *(Japanese)* 7−73955
motorised valve packing, performance and maintainability improvements 7−122053
Muhleberg BWR, recirculation pipework replacement 7−141241
NET, maintenance of in-vessel components 7−122097
nuclear power plant life extension through maintenance practices 7−135515
nuclear power plant life extension through operating and maintenance strategies 7−135473
power plant systems interaction, training course 7−102955
preventive maintenance optimization at nuclear power plants 7−135514
San Onofre Unit 2, reliability-centred maintenance, appl. to auxiliary feedwater system 7−135512
steam generator tube repair, stabilizer development, vibration anal. 7−141199
system engineering program for plant management and operation 7−106896
tube plugging, impact on closed feedwater heater operation and maintenance 7−141210
V1 nuclear power plant primary circuit main valve, stress and lifetime calcs. *(Czech)* 7−116542
ZFA filtering unit for nuclear power engineering 7−116715
Cr-Ni-Mo steel metallurgy for VVER-1000 reactor manufacture 7−135424

nuclear engineering computing
see also computerised control; computerised instrumentation
3D neutron diffusion eqn., high order finite difference approxs., formulation 7−121986
3D neutron diffusion eqn., high order finite difference approxs., analysis 7−121987
accident simulation studies *(Japanese)* 7−116665
advanced computer based training for nuclear power plant personnel 7−96140
advanced control test operation (ACTO) facility for nuclear power plants 7−129165
advanced materials control and accountancy systems 7−141232
advanced UT systems for the nuclear industry, status 7−126384
AI applications to safety and maintenance 7−116686
AMOS/D data analysis system for ASDEX Upgrade 7−122168

nuclear engineering computing continued
ANC code for LWR intranodal burnup gradient effects in rod power recovery 7−109261
Angra 1 power plant probabilistic safety assessment, event-tree anal. 7−67955
APWR, thermohydraulics for normal and distorted rod geometries, COBRA-TUBS anal. *(German)* 7−116659
APWR, turbulent flows in complex rod bundle geometries, FEM and turbulence model calcs. 7−73906
ARCYS database for functional and spatial relationship anals. 7−102983
ASDEX-Upgrade, AMOS/D data acquisition system, diagnostic subsystems, communications network 7−122176
ASSERT-4 subchannel anal. for critical heat flux modelling 7−96163
ATHENA model for 4×350 MW(t) HTGR plant side-by-side steel vessel prismatic core concept 7−96177
automated clearance system for safety system status, computer appls. at EdF 7−135531
automated estimation critical position calculation, implementation 7−129318
automated nuclear power plant diagnosis method 7−135451
AVR-U process heat plant, primary He computer flow simulation 7−135460
B&W raised loop PWR, OTIS test programme for SBLOCAs, safety code evals. 7−96282
BETA experiments on melt-concrete interaction, WECHSL code verification 7−129295
BETCY code in ARMP-02 package, PWR reload fuel anal., code manual 7−102986
bilinear nodal transport method in weighted diamond difference form 7−102935
breeder reactor safety systems using fault tolerant computers, software anal. and modelling 7−74017
BURN code for U and Pu isotopic ratios in PWR spent fuel 7−73861
BWR, advanced nuclear predictor, power distribution control 7−96241
BWR, critical signal validation, safety parameter display system 7−129345
BWR ATWS, containment venting anal., computer code calcs. 7−81619
BWR core thermal hydraulic oscillations, anal. with 3D transient program STANDY 7−73895
BWR cores, XCOBRA-T code for transient thermal-hydraulic response 7−102969
BWR efficiency improvement, boiling transition power for 9×9 fuel elements using RINGS *(German)* 7−141222
BWR fuel bundles, boiling transition predictions using MENUETT program 7−73901
BWR high pressure boiloff, core damage, integrated SCDAP/RELAP 5 anal. 7−81622
BWR plant analyzer development at BNL 7−81498
BWR power plants, real-time stability monitoring method, power fluctuation, inverse system 7−129245
BWR reactivity induced accident, waterlogged fuel rod rupture effects on channel box and other rods 7−81583
BWR SBLOCA, counterpart tests at ROSA-III and FIST facilities 7−116673
BWR secondary containment, severe accident mitigation, computer code based anal. 7−81618
BWR vessel breach, debris distrib. containment drywell floor, effect on concrete interactions 7−81620
BWRs, adaptive and physical methods for advanced nuclear calcs., computing *(German)* 7−141221
CAD/CAE systems for French nuclear power plants 7−96242
Calvert Cliffs PWR, LOOSP cooldown to residual heat removal entry conditions, RETRAN-02 and TRAC-PF1 calcs. 7−73927
CAMAC-based real-time noise anal. system for nuclear reactors 7−96244
Canadian Nuclear Society annual conference, Toronto, Ont., Canada, (June 1986) 7−88743
CANDU fuel behaviour during a LOCA, ELOCA-A predictions and PBF meas. 7−96289
CANDU fuel behaviour modelling, overview of AECL activities 7−96195
CANDU fuel bundles, drift flux model using ASSERT subchannel code 7−96162
CANDU fuel performance codes and thermal hydraulic transient analysis 7−102951
CANDU fuel technology developments in Argentina 7−96189
CANDU LOCA, fuel element-pressure tube contact anal. using MINI-SMARTT 7−81612
CANDU RD-12 steam generator, top blowdown test simulation using STGEN 7−81483
CANDU reactor, commissioning test results comparison with physics simulations 7−89639
CANDU reactor, real-time spatial simulation using modal anal. techniques 7−122038
CANDU-600 LOCA, axial variations of sheath strains using ELESTRES and ELOCA-A 7−96290
CASKETSS code for radioactive material packaging thermal and struct. anals. 7−74253
CATHARE code for PWR LOCA anal., implementation and use on FACOM M-380 7−67895
CATHENA code predictions of steam generator depressurization transients 7−96301
Chernobyl accident, plume dose and release rates using SPEEDI code 7−81606
CMS modular automated monitoring system for nuclear plants 7−116642
CODAS, JET control and data acquisition system 7−74030
code uncertainty quantification for reactor safety anals. 7−81508
colloquium on Nuclear Safety Project, Karlsruhe, Germany (June 1986) 7−128176
Combustion Engineering NSSS, safety anals. using RETRAN-02 with relaxed trip setpoints 7−74006
COMPASS control and engineering monitoring system 7−122167
COMPASS Data System 7−122166
computer integrated system for improved productivity in plant engineering 7−129159
computer-aided information system for nuclear plant operation, development *(German)* 7−96137
computer-integrated design and information management for nuclear projects 7−96141
computerised operator support systems, trends review 7−109256
computerized technical specification compliance and equipment tag-out system 7−129317

nuclear engineering computing continued
concrete reactor containments, structural behaviour using the ABAQUS-EPGEN code 7−96288
conf. on fusion technology, Avignon, France, Sept. 1986 7−120706
conference on LWR small-break LOCAs, Pisa, Italy, (June 1985) 7−115681
conference on nuclear power plant operation, Chicago, USA, Aug. 1987 7−134357
conference on nuclear reactor containment, Brussels, Belgium, (Aug. 1985) 7−72702
conference on reactor fuel element modelling, Harwell, England, (Aug. 1985) 7−108019
containment behavior during accidents, process dimensional anal. within code description, scaling effects 7−96264
core analysis workstation development and verification 7−102958
CORE MASTER/PRESTO core supervision system, first results *(German)* 7−109363
CPM-2 code for LWR fuel behaviour, user manual for ARMP-02 documentation 7−109265
CR-39 plastic, automated counting and anal. 7−81882
CRBR, effect of mass rebalancing on COMMIX-1B iterative solution schemes 7−103049
criticality simulator for safety training 7−96296
CSNI validation matrix for PWR and BWR codes 7−81502
DANDE code, nuclear reactor core neutronics and depletion analysis 7−73832
DEMONA program, aerosol behaviour after core meltdown, NAUA code verification *(German)* 7−116701
diagnostic aid−success path monitor for complex transients 7−103132
DIGA/NSL calculational model for LWR lattices, slab geometry 7−129148
digital reactivity meter and reactor physics data processor development 7−129240
DOXCY, neutron transport in heterogeneous rod lattices, discrete ordinates approx. 7−129132
drift flux equations soln., evaluation of computing algorithms, reactor flow appl. 7−96172
early fault detection and diagnosis for nuclear power plants 7−96272
EBR-II, dynamic modelling for simulation and control, reactor safety 7−103117
EBR-II, feedback-reactivity time-depend. for negative reactivity insertion 7−109358
EBR-II, safety anal. for LOF and loss-of-heat-sink without scram tests 7−81598
EBR-II, temperature coefficients of reactivity calc. for kinetic anals. 7−109356
ELESIM code for CANDU UO_2 fuel performance anal., fission gas release model 7−96147
ELESTRES code for CANDU fuel element axisymmetric behaviour, elastic-plastic stresses 7−96149
ELOCA code for fuel performance during CANDU LOCA 7−96150
ELOCA-A code for CANDU fuel element high temp. axial and radial behaviour in LOCAs 7−73836
emergency operating procedures tracking system 7−129349
ENDF/B-V nuclear data library for LWR safety and core design, benchmark expts. tests 7−81482
energy and exergy analyses of a nuclear steam power plant 7−81565
ERFIS information system at Vermont Yankee nuclear plant, emergency response 7−116685
ESCORE, EPRI LWR steady-state core reload evaluator code 7−89606
Euratom information system for safeguards appl. 7−103138
EURDYN-1M code, UO_2-Na interaction calcs. *(German)* 7−109450
EUREKA-2 code and of SPERT III-E core expt. 7−73843
EXPRIME system for reactor primary heat transport system accident anal. 7−96156
EXTRA, real-time knowledge-based alarm system for industrial process control in PWR nuclear power plant 7−103149
FAIG code, anal. of irradiation induced axial changes in PWR fuel assemblies 7−96168
FBR core deformation, reactivity anal. model in three dimensions, finite difference method 7−129303
FEAST, 2D nonlinear finite element code for CANDU fuel stress anal. 7−89607
Ferranti VARS-H displays installation at Hunterston B AGR 7−116639
few group neutron diffusion equations, soln. on parallel architecture computers 7−96169
FFTF fission gas monitor computer system 7−129319
FFTF inherent safety tests, post-test anal. using SASSYS code 7−103115
FFTF integrated leak rate computer system 7−135533
first wall subjected to plasma disruption, thermomechanical behaviour, FEM code anal. 7−109473
fission reactor three-dimensional core model for personal computers 7−122037
Flavia device for vibration, leakage and loose parts detection in nuclear plants 7−116641
FRAPCON-2 experience for CANDU-600 fuel performance under normal conditions 7−96148
French N4 PWRs, entirely computerised control room 7−103039
fuel clads, computer code for strain-stress behaviour and collapse 7−102995
fuel component inspection and test plan format 7−73866
fuel element fission gas release prediction, RAMPX2 code 7−67894
fuel rod modelling, code, requirements of design appls. 7−109275
fuel rod performance code qualification, temp. meas. variability 7−67913
fusion reactor design, neutron spectra calcs. using ZZFEWG 1.31/1F data set 7−96308
fusion reactors, CAD supported remote handling systems 7−74056
GERES code, for processing MC2-II data in fast reactor calcs. 7−129141
Ginna tube rupture, TRAC plant transient benchmark 7−96152
graphics displays design using IMAGE code on IBM-PC 7−96248
graphite slab, fast neutron transport, vectorized Monte Carlo calc. 7−135393
GUARDIAN, IBM PC software for nuclear plant scram reduction 7−135409
Hanford N Reactor, Xe stability anal. for flux flattened reactor, code 7−109355
HDR thermal mixing expts., engineering and multi-dimens. finite difference code anals. 7−81515
HDR thermal mixing tests, comparison with best estimate and simple codes 7−73903
HEATHYD, coolant code for Julich reactor *(German)* 7−129278
nuclear engineering computing continued
heavy ion beam driven ICF reactors, repetition rates 7−81696
HLW management, global database strategy for public engineering decision making 7−96380
HTGR, block-type, design method for core isothermalization, outlet temp. increase 7−135467
HTGR, dynamic anal. computer program PAPS/DJ *(Japanese)* 7−96136
IAEA safeguards information processing 7−103137
ICF target implosion with shock waves, target gain calc., hydrodynamic simulation code 7−81690
ICRF current drive in fusion reactors, 2D Fokker-Planck anal. code 7−81714
ILLICO, vectorised multigroup multi-dimensional nodal neutron diffusion code 7−102965
integral thermal hydraulics codes, development and benchmarking 7−96151
interactive videodisc in maintenance operations on nuclear reactors *(French)* 7−135511
Ispra BWR and PWR subchannel expts. and code anals. for different 2-phase models 7−73905
IVA2/001 transient 3-dimensional computer code, three-component flow, three-field diffusion model 7−129143
J-TRAC code development at JAERI for PWR LOCA anals. 7−81514
JET, prospects for α-particle heating in hot ion regime 7−103200
JET diagnostic systems, engineering aspects 7−74034
JET remote maintenance during active operation 7−74035
JOYO LMFBR, neutron dose and spectra, measurements and evaluations 7−129305
JT-60 feedback control system, appl. of fast array processor 7−122173
Kansai expert systems development for nuclear plant operators 7−116636
KNU-1 PWR, feedwater line break anal. using RELAP4/Mod6, parameter uncertainty and sensitivity 7−129281
Kori Nuclear Unit 2, nuclear safety parameter display system 7−129282
KWU PWRs, provision of optimum operating information in control rooms 7−103040
La Salle County nuclear station, risk-based eval. of technical specification problems 7−141248
large break LOCA in two-loop test apparatus, RELAP5YA simulation 7−102968
LEGO, modular, PWR power plant modelling appl. 7−67893
LEU compact core, reactor physics concept, criticality, MORSE calcs. 7−122033
linac driven heavy ion ICF power plant, performance and cost modelling 7−81694
LINCUP-2 program for coupled dynamical investigation of reactor cores *(Hungarian)* 7−73842
linear accelerator design calculations, use of IBM-PC 7−68056
LINK RETACT code for TMI-1 advanced simulator 7−96154
LMFBR, fuel pin bundles, transient two-phase flow, BACCHUS-3D/TP program 7−73915
LMFBR, pool-type, in-vessel turbulence analysis code using k-σ model 7−73896
LMFBR, thermohydraulics for normal and distorted rod geometries, COBRA-TUBS anal. *(German)* 7−116659
LMFBR core transient modelling, faster than real-time anal. 7−129304
LMFBR primary containment under HCDA conditions, code comparison for benchmark problem 7−73992
LMFBR transient analysis, Na void effects, QUASAR code changes 7−109375
LMFBR whole core accident cales., fuel modelling for LOF and TOP transients 7−109381
LMFBRs, remote equipment and techniques for inspection 7−135501
LOCA, small break, capability of system codes in predictions 7−96178
LOCFES, system for spatial transport approximation anal. 7−102961
LOFT, reactor diagnostics for PWR, multivariate signal anal. algorithms appl. 7−109349
LOFT large break expts., thermal hydraulics and DRUFAN-02 simulation 7−96294
LWR, 1D and 3D load following anal. methods comparison, HLOFO and CMSNAC codes 7−129135
LWR, fission product transport in dry primary circuit under severe accident 7−89636
LWR behavior under severe core damage conditions 7−109379
LWR bottom flooding model, expt. validation of RIBFA 7−73974
LWR core damage freq. anal. 7−81632
LWR fuel rod performance, probabilistic anal. using CASINO-SLEUTH code 7−109276
LWR LOCA, realistic ECCS evaluation methodology for best estimate codes 7−73999
LWR microcomputer-based system anal. and risk assessment system 7−81629
LWR probabilistic risk assessment methodology 7−81631
LWRs, severe accident containment conditions, MELCOR results validation 7−81638
LWRs, severe accident progression modeling in MELCOR code 7−81636
LWRs safety, conf., Gaithersburg, MD, USA (Oct. 1986) 7−80170
material loss detection in sequence of accounting periods 7−109419
materials, elastic creep-fatigue rules assessment, computer program 7−67914
materials accountancy, diversion detection calcs. using SITMUF sequence and Page's test 7−109423
materials accountancy, near real time in reprocessing plant 7−109418
materials accountancy, near real time with PROSA program 7−109422
materials accountancy computer package, CIMACT 7−109420
materials inventory control, near real time accountancy 7−109417
materials real time accountancy DP system, statistical anal. evaluation 7−109416
MICBURN-E code of ARMP-02 core physics package, LWR fuel pin behaviour 7−73844
micro workstations for nuclear engineering codes 7−102956
microcomputer-based codes for reactor physics and shielding anal. 7−102957
microprocessor-based instrumentation for nuclear power plants 7−116640
MINI-SMARTT code for anal. of fuel element/pressure tube contact 7−96167
Mitsubishi knowledge-based AI system, use in nuclear plants 7−116635
MKENO-DAR code system for criticality safety anals., user manual 7−67896
MODSIM code for PWR secondary side modular anal. 7−141197
molten fuel dispersal in hypothetical fast reactor accidents, COMCYL code appl. to LOF 7−109380

nuclear engineering computing continued
Monticello nuclear power plant feedwater control, fault-tolerant digital system *(Japanese)* 7−135489
MORAS modular program system, for PWR fuel management, composition and power distrib. calc. *(German)* 7−129139
Muelheim-Kaerlich PWR plant, boric acid control, state modelling, plant experience 7−135482
Multi Room Fire Code, use in reactor fire prevention *(German)* 7−109455
multigroup neutron transport, finite element method, anisotropic scatt. in 1D slab geometry, FELTRAN validation 7−73820
MUTUAL code for criticality safety using solid angle method, user's manual 7−81481
N3S 3D code for flow calc. in FBR cold plenum *(French)* 7−109334
NET plasma facing materials, tritium inventory, permeation and release calcs. 7−122187
neutron field determ. during control rod shift, high speed algorithm 7−73881
neutron spectrometers, fusion plasma diagnostics systems 7−89721
NORCLA code for heavy ion beam transport and interaction with ICF targets 7−81682
NORGE-B2 code from ARMP-02 core physics package, BWR lattice physics data 7−73845
NPRDS, nuclear plant reliability data system, natural language interface 7−102982
NSRR waterlogged LWR fuel rod expts., RIA simulation using WTRLGD code 7−81475
NUBALL code for pressure tube asymmetric ballooning effects, validation 7−96226
nuclear materials cask design specifications, evaluation using CAPSIZE program 7−74193
nuclear plant analyzer development at the Idaho National Engineering Laboratory 7−81497
Nuclear Plant Data Bank 7−81499
nuclear plant simulator qualification plan 7−73841
nuclear power plant design using CAD system 7−96142
nuclear power plant dynamic simulation, multirate integration methods and table lookup techniques 7−96175
nuclear power plants, core on-line monitoring and computerized procedures systems 7−129269
nuclear reactor core, AGR graphite brick slices response to earthquakes 7−67891
nuclear ship Mutsu, land-loaded core critical experiment, ex-core detector response anal. 7−129246
on-line diagnostic system for pump failure warnings 7−116687
Oyster Creek BWR, MSIV closure and bypass tests, RETRAN simulation 7−109400
Oyster Creek cycled 10 nodal model parameter optimization study using PSMS 7−109346
Pakistan Research Reactor, heat transfer anal. for HEU and LEU cores 7−122034
Paks PWR, primary circuit dynamic responses, LOF test and RELAP4/MOD6 anal. *(Hungarian)* 7−96247
Paks VVER-440 reactor, thermal-hydraulics determs. using VERONA system *(Hungarian)* 7−103069
parity simulation of two-phase thermal hydraulics in plant components 7−103050
PATREC nuclear reliability program, implementation in PROLOG 7−102959
PBX, post-disruptive plasma loss modelling, transport and loss of stability 7−97726
PCTRAN-2 code, use in emergency planning, accident simulation 7−135410
PDQ7-E code for LWR core simulation, user manual in ARMP-02 documentation 7−109266
Peach Bottom station blackout, anal. with MELCOR 7−81637
Philippsburg 2 nuclear power plant, computer based process information system *(German)* 7−96138
PHOEBUS CAE system for EDF *(French)* 7−96144
PHOENICS program for SNR-300 coolant circuit design *(German)* 7−116653
pinwise power calculation, comparison of MBS, CASMO, TURTLE and PDQ-7 7−109353
pipe whip and impact studies 7−89654
piping systems and components, diagnosis and resolution of anomalies during start-up and operation 7−129247
plant analyzers for training, operating support and safety analysis 7−96139
plant piping support system development *(Japanese)* 7−89594
plant risk status information management system study 7−81628
Point Lepreau CANDU Generating Station, fuel management and performance 7−96194
post-dryout heat transfer meas. up to 20 bar, TRAC-PF1/MOD1 and BERTHA anals. 7−81576
postmaintenance testing programme development, computerised approach 7−135415
power plant operator training simulator, Grafenrheinfeld PWR plant 7−81473
power plant simulation and reactor safety 7−122055
power plant simulator qualification using the EPRI methodology 7−135416
power plant simulators, continuous real-time survey 7−121999
power plant training simulator fidelity 7−135417
power station error prevention and reliability improvement by operating personnel, man-machine system *(Russian)* 7−89644
POWERMAX code for optimized reactor operation *(German)* 7−109268
Prairie Island Plant transients, best estimate anal. using Dynode-P 7−96174
probabilistic seismic hazard analysis for nuclear facilities, modelling input interpretation 7−81665
probabilistic systems analysis appl. to enhancing plant operational safety and productivity 7−81664
Promaster computerised process control for nuclear power plants 7−116638
PUNE code, Purex process, steady state conc. profile with nonequilibrium mass transfer 7−129208
PWR, Westinghouse, cold shutdown capability, safety-grade and fire hazards, simulation 7−122060
PWR, Westinghouse 4-loop, LOFW ATWS, RETRAN-02 anal. 7−74008
PWR, Westinghouse 4-loop plant, scram freq. reduction by reactor set-point modification in RETRAN-02 7−74005

nuclear engineering computing continued
PWR boron conc. control by real-time expert system PMS-2 7−73938
PWR compact analyser, interactive simulator for operator training and eval. 7−89603
PWR core depletion, reactivity space anal. using SIMULATE-E 7−73879
PWR five-region nonequilibrium real-time pressuriser model for training simulators, transient response 7−109258
PWR guillotine tube rupture modeling technique using RETRAN-02 7−74007
PWR large-break LOCA, cold leg condensation anal. using TRAC-PF1/MOD1 7−81511
PWR LOCA, pipe whip tests, expt. results and dynamic anal. using ADINA 7−141237
PWR LOCA, steam-water counter-flows calc. using RELAP5 *(German)* 7−141257
PWR LOCA, vapour generation model for flashing in initial blowdown phase 7−141239
PWR LOCA, Westinghouse design, Appendix K conservatisms determ. using TRAC-PD2/MOD1 7−74001
PWR melt-concrete interaction, WECHSL code verification and accident anal. appl. 7−129296
PWR on-line advanced plant simulator, kinetic modeling 7−96159
PWR plant models, STRIP and SFINCS codes, neutronic integrated computing system 7−141132
PWR plants, computer-aided incident mitigation, graphic display 7−96273
PWR power plant chemistry control, computer assisted data trending and problem assessment 7−129364
PWR pressure vessel dosimetry, H.B. Robinson-2 reactor, LEPRICON anal. 7−129451
PWR SBLOCA, 10% cold leg break test at ROSA-IV, RELAP5/MOD1 comparison 7−116674
PWR SBLOCA, LOFT L3-5 expt. anal. with CATHARE code 7−116676
PWR SBLOCA, online pressuriser surveillance by microcomputer, PORV leakage detection 7−74000
PWR SBLOCA transients, RELAP5/MOD1 assessment of LOBI tests 7−116677
PWR small cold leg break LOCA, mitigation study 7−81621
PWR test facility, CATHENA simulation of two-phase thermosiphoning 7−96295
PWR transients, FISA computational method with fully implicit scheme for real-time simulator 7−73831
PWR-LOCA under LOFT L2-3 conditions, THYDE-P2 code anal. of reflooding 7−116666
PWRs, Japanese annunciator system for control room, accident conditions 7−135481
PWRs, Paluel, 1300 MWe, external core meas. *(French)* 7−73936
radiation damage simulation, importance of primary knock-on atom spectrum 7−69741
radiation therapy, automation and computer control of accelerators 7−114492
radioactive waste container stack filling, simulation 7−122209
RAPID plant status monitor, lessons learned from PSA, Oyster Creek plant appl. 7−135532
RAPID/RAM-UM system for reliability assessments 7−129342
RAVE prototype for view factor determ. in arbitrary geometry 7−96166
RBMK, computerised control system for fuel recharging 7−121995
RBMK cell calculations, candidate group structures from CASMO-HEX code 7−109359
Reactor Analysis Support Package RASP, BWR reload and safety anal., set-point methodology 7−96287
reactor control rooms, expert systems as intelligent operator aids 7−81910
reactor fuel, fission gas release, comparison of expt. data and FEMAXI-IV code 7−109281
reactor multi-group criticality safety code, KENO IV, vectorisation 7−89604
reactor physics codes, adaption to microcomputers 7−96170
reactor pressure vessel, ultrasonic inspection defect data evaluation and processing 7−122050
reactor protection, supervisory systems, active-inactive times determ., system availability maximisation 7−122054
real-time simulation for nuclear power plants and fuel pin performance 7−135412
REFLA code, core radial power profile effect model for PWR LOCA 7−135461
RELAP4/MOD6, appl. to HTR-500 containment vessel safety test *(German)* 7−109459
RELAP5/MOD1 anal. of large break BWR LOCA, ROSA-III/FIST similarity studies 7−141235
RELAP5/MOD2, Finish assessment for PWR accident anals. 7−81504
RELAP5/MOD2, IBM version, JRC Ispra experience on LOBI Project 7−81512
RELAP5/MOD2, vapour superheat predictions in rod bundle geometry 7−102967
RELAP5/MOD2 and TRAC-PF1 code assessments in FRG 7−81501
RELAP5/MOD2 assessment for Marviken BWR facility, Swedish experience 7−81503
RELAP5/MOD2 code, modified interfacial drag correlation in two-fluid model 7−102966
RELAP5/MOD2 development, PWR steam generator anals. 7−81495
RELAP5/MOD 2 code assessment and uncertainty identification for uncovered cores and reflooding 7−81513
RELAP V Nuclear code, appl. of parallel processing 7−89658
response matrix theory codes, iteration strategy, benchmark problem appl. 7−121993
RETACT code validation for LWR simulation 7−135418
RETRAN model validation at Diablo Canyon reactor using start-up test data 7−129255
RETRAN thermal-hydraulic code, NSSS safety anals., overview 7−73834
RETRAN transient anal. code, generic review 7−73835
RETRAN-02 MOD 003 anal. of PWR multiple steam generator blow down 7−129321
RETRAN-03 modelling of LWR SBLOCA transients 7−116678
risk and safety anals. development *(Dutch)* 7−103077
risk uncertainty analysis methods for NUREG-1150 7−81634
risk-based performance indicators study, software packages prod. 7−81626
safeguards, computerized record and report system for nuclear facilities 7−103238

uclear engineering computing continued
safety parameter display system, critical signal validation 7−109405
Sandia code accuracy quantification and its application to TRAC-PF1/MOD1 assessment 7−81509
SASSYS code, solution of generalized control system equations at steady state 7−102962
SATURN-FS1 fuel rod behaviour code, development and verification 7−109253
SHE-14 core in VHTR, coated particle fuel rod, Doppler effect meas., sample heating device 7−135454
shipping casks under accident conditions, thermal analysis computer code Q/TRAN 7−74181
SIMULATE-3 nodal code, power distribs. and detector response modelling 7−109259
SIMULATE-3 pin power reconstruction and comparison to fine-mesh PDQ, PWR appl. 7−109348
SIMULATE-E, use in optimization of core reload design in PWRs 7−129235
SIMULATE-E nodal code, vectorised source algorithm, LWR neutronics appl. 7−102964
simulation codes, statistical approach to sensitivity anal. 7−96153
simulation methods in nuclear engineering, conf., Montreal, Canada, Oct. 1986 7−95106
SMARTT code, anal. of pressure tube integrity in CANDU reactors 7−96298
Sn-albedo Monte Carlo-albedo Monte Carlo coupling technique, JOYO neutron streaming appl. 7−81471
soft errors in dynamic random access memories−a basis for dosimetry 7−87215
spent nuclear fuel flasks, thermal anal., use of FLUFF fin heat transfer code 7−74195
spent nuclear fuel shipping casks, microcomputer based thermal and impact code system 7−74199
Sphere-Pac fuel, thermal performance modelling with SPHERE code 7−103003
SRAC analysis code, HCLWR burnup reactivity changes due to Am and Cm nuclides 7−135458
SRAC code system, user manual for updated version 7−73846
SSYST code modelling of WWER-type fuel rods 7−129167
steam generator thermo-hydraulic behavior, TRAC calc. of pipe fracture transient *(German)* 7−141226
steam generators, high resolution digital eddy current testing system *(German)* 7−135539
Super Phenix fast breeder plant, emergency systems training simulators 7−67906
supercomputers, nuclear engineering problem solving, Integrated Planning and Simulation System *(German)* 7−129138
Surry 1, risk and risk reduction results, appl. to NUREG-1150 7−81635
Susquehanna BWRs, recirculation system, transient monitoring using the GETARS system 7−103121
Susquehanna Unit 2 BWR, moisture separator drain tank level, transient response by RETRAN 7−73926
TAMUS expert system for diagnosis of reactor transients using confidence levels 7−102963
Tara control, monitoring, data acquisition and analysis system 7−122181
TEXTOR neutral beam injectors, control system 7−122171
thermal hydraulic analysis, finite element method, upwind difference scheme, balancing dissipation, numerical solutions, reactor appl. 7−116631
THERMIT-UTSG code, steam generator tube rupture simulation 7−96300
THYDE-P2 code for large-break LOCA anal., thermal-hydraulic calcs., user manual 7−129150
TMI-2 accident, core damage behaviour and thermal-hydraulics using SEFDAN code 7−81582
Tokamak de Varennes, data acquisition and control system 7−141305
Tokamak for nuclear fusion expt., computerised control *(German)* 7−130942
TOMCAT, transient and operational microcomputer based code for thermal hydraulic modelling 7−96171
TORE SUPRA control computer system 7−122172
TORE SUPRA data acquisition system, architecture 7−122180
Torness AGR simulator for commissioning and operator training 7−102069
TRAC analysis of multiple-failure steam generator tube rupture events in PWR 7−129322
TRAC development at General Electric 7−81505
TRAC-BD1/MOD1 code assessment and uncertainty identification for uncovered cores and reflooding 7−81513
TRAC-BWR program status, code improvements and test cases 7−81494
TRAC-PD2 validation against LOFT expt. LP-02-6, PWR LOCA 7−81507
TRAC-PF1, MOD1 and MOD2, code development status and plans 7−81496
TRAC-PF1/MOD1, history, characteristics, status 7−96173
TRAC-PF/MOD1 code tests against known analytical solns. for stratified flow 7−81510
TRAC-TOSDYN, 3D neutronics model implementation in TRAC 7−81506
TRACE, accident consequence evaluation program for emergency planning use 7−129316
TRAFIC-2 code for fuel performance 7−73840
training simulator validation using engineering computer codes 7−135411
transient multidimensional thermohydraulic flow problems in complex geometries, COMMIX-2/KfK program 7−73916
TREAT code, validation against plant data 7−96176
turbomachine characts., canonical form 7−96164
turbulent flow development in wall subchannels of rod bundle, mean velocity, wall shear stress 7−129241
TWIGL code testing at Hanford N Reactor 7−109260
two phase flow pump performance under LOCA conditions, physical model 7−81500
two-loop test apparatus small break tests, RELAP5YA simulation for degraded ECCS 7−103098
U-tube steam generator, dynamic model, validation tests 7−96252
VIPRE-01 code for reactor thermal-hydraulics, applications 7−109264
VMEbus in relativistic nuclei research and control tasks 7−81478
VVER-1000 reactor, axial energy distrib. control in manoeuvring mode *(Russian)* 7−129224
WECHSL code simul. of core-concrete interaction, meltdown expt. *(German)* 7−109466
nuclear engineering computing continued
Westinghouse advanced control room for nuclear plants, engineering human factors 7−103038
Westinghouse model D steam generator, RETRAN thermal-hydraulic modelling 7−73925
Westinghouse model E steam generator, secondary side nodalisation study using RETRAN 7−73924
Wolf Greek PWR, RETRAN system anal. by Kansas Gas and Electric Co. 7−74004
Wolsung CANDU, D_2O spill incident of Nov. 1984, CATHENA simulation 7−81615
WTRLGD, anal. of fracture behaviour of waterlogged fuel rod *(Japanese)* 7−73956
Wurgassen BWR, emergency cooling calcs. using SAFER code *(German)* 7−116699
WWER reactor, TEPI code for technical-economic performance data evaluation *(Czech)* 7−116543
WWER small break LOCA, 7.4% cold leg break without accumulator operation *(Hungarian)* 7−89655
WWER-440, 7.4% blowdown, melting zone processes in MARCH-2 program *(Hungarian)* 7−96284
WWER-440, in-core control systems *(Czech)* 7−141194
WWER-440, microprocessor-based system for coolant temp. monitoring 7−141195
ZED-2 research reactor, fault tree anal. techniques for safety system 7−89653
ZETHYF code for fuel rod rewetting during LOCA reflood, thermal behaviour 7−109254
Zion Unit 2 PWR, cycle 1 analysis, QUANDRY, PDQ and ARROTTA comparison 7−67897
Zircaloy fuel cladding, transient failure, cladding rupture, FREY code 7−109283
Zircaloy fuel sheaths, strain and failure in CANDU LOCA 7−129343
DT ignitor/DD fuel pellets, burn dynamics, effect of neutron heating, ICF appl. 7−96314
Gd-poisoned fuel elements, BBR model verification with power plant data *(German)* 7−141157
Na, neutron cross-section validation, integral meas. adjustment, radiation penetration accuracies 7−129284
Th $(NO_3)_4$ extraction by DHPSO from HNO_3 soln., nonlinear optimisation program 7−129205
UO_2 spherical fuel grain, diffusional fission gas release, calc. methods and algorithms 7−109280

nuclear explosions
antimatter induced fusion and thermonuclear explosions 7−67978
battle field fallout prediction model of US Army 7−133154
blast wave effects on decoupling with axisymmetric cavities 7−145349
circular cylinder, response to nuclear blast 7−75383
Hiroshima atomic bomb, thermoluminesc. dosimetry at distances 1.27 to 1.48 km from hypocentre 7−93933
IVY-MIKE, 1952 October 31, empirical study of explosion-induced lightning 7−114921
Mururoa explosions in French Polynesia, magnitudes from T-phases at Rarotonga 7−107350
Nevada Test Site, USA, near-source information from teleseismic obs. 7−139479
nuclear winter, environmental consequences of nuclear war 7−95128
seismic detection, multi-channel deconvolution of P-waves at seismic arrays 7−87459
seismic P waves from Amchitka Island underground explosions 7−107352
seismic P-wave coda for underground explosions, near-source contribs. 7−139478
seismology of underground explosions, nonlinear model of tectonic stress release 7−139477
super-hydrogen bomb test explosion, March 1954, γ-ray spectrum of radioactive dust 7−74082
teleseismic feature extraction for discrimination between earthquakes and nuclear detonations 7−139507
T production sources *(Rumanian)* 7−81748

nuclear fission *see fission*

nuclear fission of plutonium *see fission of plutonium*

nuclear fission of uranium *see fission of uranium*

nuclear fission piles *see fission reactors*

nuclear fission products *see fission products*

nuclear forces
see also meson field theory; nuclear binding energy
^{208}Pb mean field, Woods-Saxon parameterization, extrapolation from positive to negative energy 7−116300
analytic Sturmian functions and convergence of separable expansions 7−128947
bound state calcs. for centrifugal, Coulomb repulsive and nucl. pot. superposition 7−135214
Brueckner's G-matrix, charge dependence and the Nolen-Schiffer-Okamoto anomaly 7−128935
charge exchange quadrupole excitation in nuclei, RPA calcs. 7−81279
colour van der Waals interaction 7−128970
compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
core densities, droplet model and HF calcs. with generalised Skyrme force 7−121603
Coulomb effects on few-body scattering states 7−67770
Coulomb energies, relativistic enhancement of mag. spin-orbit contribs. 7−81267
deformation energy surfaces for axial and nonaxial quadrupole variables, microscopic approach 7−116291
deformed superfluid nuclei, dynamical α-type correlations 7−109082
dibaryonic degree of freedom in nuclei, hadronic force model, binding energy, form factor effects 7−102814
dispersion relations and Castillejo-Dalitz-Dyson pole in the πN P wave scattering amplitude 7−128967
effective interaction in hot nuclear matter, temp. dependence, finite temp. Brueckner theory 7−128964
effective interactions from realistic NN interactions, shell model calcs. 7−116303
electromagnetic meson exchange currents, continuity eqn. 7−67734
EMC effect, nucleon confinement conditions, nuclear forces 7−121605
energy dependent NN pots. in nuclear physics 7−95993

nuclear forces continued
extended Thomas-Fermi model with Skyrme-type force, mass formula 7−121635
Faddeev equations for bound and scattering states 7−67699
few-body calcs. 7−67681
few-body problems in strong interactions 7−67735
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
finite nuclear matter, critical dynamics, renormalisation group anal. 7−81322
four-nucleon systems with central interactions, ATMS method 7−128973
Hartree-Fock seniority method, quasi-spin formalism, mean field and pairing effect 7−109079
heavy ion fusion at sub-barrier energies, threshold anomaly 7−135364
heavy ion physics, nuclear-nucleus pot., review 7−109202
heavy nuclei, g-factors and the proton-neutron interaction 7−95987
heavy-ion fusion barrier, frozen approximation as function of Coulomb strength, Bass potential 7−129127
high order perturbation theory with three-body forces in the Faddeev scheme 7−67702
high-momentum phonon exchange and the effective shell-model interaction 7−102810
hyperspherical calculations for four-nucleon systems 7−67704
inelastic coupled channel NN scatt. S-matrix, elastic component parametrisation. 7−102811
integral equation approach to few-body collision problems 7−67732
isospin symm. and nuclear struct., review 7−109015
large scale nuclear struct. studies, symmetry projected HFB quasiparticle configs. 7−121677
large-scale shell-model calculations, nuclear interactions 7−109065
light nuclear systems, RGM appl. to bound and scatt. pot., variational principles 7−128988
light nuclei, two-meson exchange three nucleon forces 7−121631
linearly velocity-dependent potentials and the Lorentz-Lorenz correction 7−73706
low energy excitations of even, odd and odd-odd nuclei, microscopic description *(French)* 7−81285
many-quark clusters in nuclei 7−67753
mean field, microscopic calc., ground state correls., zero and finite temp. contrib. 7−128962
meson exchange picture of shell model interaction energies 7−128981
meson theoretical model of three-nucleon forces 7−67731
microscopic cluster theory, multi-configuration RGM studies and antisymmetrization 7−67752
microscopic nucleon-nucleus optical pot., semiclassical expansion using Green's fn. method 7−116353
multifragmentation, microcanonical simulation 7−141084
neutron star matter with realistic nucleon-nucleon interactions, pion condensation, σ-model anal. 7−73722
NN interactions via neutral scalar boson field, Monte Carlo simulation 7−73705
non-equilibrium nuclear matter, Dirac-Brueckner approach, quantum kinetic eqn. 7−128963
nuclear electromagnetic currents, role of σ- and ω-meson fields 7−73704
nuclear matter, two-baryon correlations, covariant formalism 7−73723
nuclear matter with momentum-dependent interactions, generalised non-equilib. eqn. of state 7−135241
nuclear stability w.r.t. spin and isospin alignment due to short-range three-particle forces 7−121590
nuclear-density dependence of the electron-proton coupling 7−96056
nucleon size and the attractive nuclear force, form factor, EMC effect 7−95994
nucleon-nucleon scattering with isobar degrees of freedom 7−109050
nucleons, mesons and deltas in nuclear matter, rel. Dirac-Brueckner approach 7−89550
off-shell ambiguity and three-body force in the resonating group model 7−67749
off-shell extension function, configuration-space study, Reid soft core pot. 7−141031
pairing force theory, approximation for seniority-zero states 7−109052
Pauli repulsion of α-particles and 3α overbinding problem 7−73719
pion chiral and fluid dynamics, pion field description, Dirac sea quark distrib. fn. 7−128965
pionic atoms, appl. to strong π-nucleus interaction and optical pot. models 7−110146
pionic atoms of unstable nuclei 7−122751
potential deformation energy surfaces, approximate particle number projection before variation 7−116250
potential scattering, large dimension expansion, nonperturbative approach 7−121762
proton-neutron force, nuclear phases, E_1/E_2 versus E_4/E_2 plot discontinuity, ground state bands 7−116290
rearrangement effects in shell model calcs. using density dependent interactions 7−73710
relativistic antiprotonic nuclei, shifts and widths, spin and isospin effects 7−81359
RMS charge radii, Skyrme interactions 7−121602
Rossendorf shell model, symm. violation, single particle corrections 7−121642
s-shell hypernuclei, binding energy and excitation energies using realistic interactions 7−67758
self-consistent single-particle potential, effects on nuclear effective interaction 7−81301
shell model equivalent harmonic oscillator pot. 7−89546
short range NN interaction, equivalent local pots. from quark exchange kernels 7−121630
six-fermion system, microscopic three-boson quadrupole force, Otsuka-Arima-Iachello mapping 7−140995
Skyrme model, the nuclear force, Lagrangian formulation 7−128968
Skyrme model central NN interaction, attraction 7−89544
Skyrme model in QCD large N_C limit 7−67738
spectroscopy and microscopic nuclear dynamics, extended shell model approach 7−109061
spherical nuclei, neutron skin calcs., Hartree-Fock method with Skyrme forces *(Chinese)* 7−109046
temperature dependence of Skyrme forces and nucl. eqn. of state 7−121629
temperature dependent effective interaction, Landau-Vlasov eqn. and Brueckner renormalisation 7−121761
Thomas-Reiche-Kuhn sum rule in finite nuclei, effective interactions 7−135217
nuclear forces continued
three nucleons, binding energy relativistic corrections Faddeev components of nonrelativistic wave fn. *(German)* 7−128939
three-and four-nucleon system, realistic scales 7−67682
three-body calculations at Los Alamos 7−67700
three-body one-pion-exchange potential, relativistic Fadeev anal. 7−116293
three-nucleon force, $\Delta(1232)$ contribution, Δ-mediated effective three-nucleon potential, Δ-propagation effects 7−116289
three-nucleon forces and trinucleon observables 7−67739
three-nucleon potential, two-pion exchange, tensor forms 7−135216
three-nucleon problems, continued fraction methods 7−67737
three-nucleon system, hyperspherical expansion using spin and isospin central pot. 7−121628
three-nucleon system, NN interaction calcs., Bethe-Salpeter eqn. and relativistic field theory 7−128974
three-nucleon systems, Faddeev calcs., separable expansion techniques 7−128972
three-nucleon systems, Faddeev eqn. soln. by Lanczos algorithm and spline expansions 7−67775
three-nucleon systems with central interactions, ATMS method 7−128973
trinucleon calcs. with three-nucleon pot. 7−67740
two-body interaction and t-matrix, separable expansion methods 7−128971
weak and EM interactions in nuclei 7−89399
y-scaling theory in plane wave impulse approx. 7−67774
α-cluster hypernuclei and hypernuclear interactions, nuclear forces 7−128996
Δ binding energy in nuclear matter, Paris potential calcs., Δ self-energy effects 7−109087
(e,e′), inelastic electron scatt., mesonic exchange currents and longit. response. 7−81377
(e,e′), short-range correlation effects on nucleon sum rule 7−116389
(e,e′p), knockout reaction, spin-orbit forces, using eikonal formalism 7−109136
(e,e′X), few-body systems, correlations, interactions and y-scaling, PWIA calcs. 7−67808
Λ P-wave spin-orbit mass splitting, quark potential model, meson spectroscopy 7−109048
$\Lambda\Lambda$ effective interaction in nuclei *(Chinese)* 7−96008
(N, γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
N binding in nuclear matter, colour dielectric model anal. 7−67582
nα nonlocal interactions, quantal equivalent local potentials from resonating group method 7−109049
NN, time-reversal invariant, symmetries and quantum chaos 7−109051
NN correlations in non-relativistic quark model, six-quark bags, momentum distributions, non-NN components 7−109047
NN interaction, Bonn meson-exchange model 7−73665
NN interaction, colour nucleon cluster calcs. with one-gluon exchange 7−121438
NN interaction, off-shell behaviour, Noyes-Kowalski half-off-shell functions 7−128966
NN interaction, relativistic field theoretical model with meson theory 7−67744
NN interaction, T-invariance bound and spectral fluctuations 7−128465
nn interaction parameters from ^{2}H(n,2np), 15.8 MeV 7−121829
NN isovector meson exchange currents, radial depend. anal. 7−81300
NN potential in Skymion model, improved approximation 7−89545
NN processes, six-quark basis states from parity eigenfunctions 7−128969
NN spin orbit interaction, two-gluon exchange diagrams contribs. 7−121626
NN system, quantum numbers of six-quark states in nuclei 7−81316
(p,n) reaction and the NN force, review 7−121627
(p,p), nonlocality, microscopic optical model calcs. 7−102879
p-n interaction in deformed nuclei 7−116292
$\bar{p}p \rightarrow X$, cross-sections at low momenta, range of nuclear force 7−121535
$\pi+\rho$ model, Landau-Migdal parameter calcs., for nucleon ph, nucleon and Δph 7−67741
πN scattering, σ-term interpretation, S-wave scatt. length and range parameter 7−135151
πN scattering amplitude singularities in nuclear matter, bound states possibility 7−121687
πN scattering lengths, s-wave parameters 7−81236
$\pi^- p \rightarrow \eta n$, $\sqrt{s}<1600$ MeV, polarisation calc., πN phase shift anals. 7−95958
Σ-nucleus potential, effect on resonant and quasi-free Σ-hypernuclear production 7−129109
$^{9}_{\Xi^-}$ hypernuclei, binding energy anal. using simple pot. model 7−121698
^{9}Be, three-body calc. of low-lying states 7−67722
^{9}Be$_\Lambda$, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
^{A}Be$_\Lambda$, A=9,10, interactions and binding energy, variational calcs. of α-cluster models 7−67759
^{209}Bi, valence proton state orbit radii meas., use of barycentric potential 7−109009
^{209}Bi(e,e), nuclear currents in a relativistic mean-field theory 7−129024
^{12}C, cluster Faddeev calcs. and three-body force effects 7−67751
^{12}C, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
^{12}C, spin-isospin probes, RPA finite nucleus response, strength distrib. effects 7−135203
^{12}C(α,α), optical model anal., attractive and repulsive α-nucleus pots. 7−135342
^{12}C(e, e′γ), giant resonance electromagnetic decay, RPA calcs. with Skyrme-3 interaction 7−116390
^{40}Ca(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{40}Ca(γ,p_i), 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
^{40}Ca(n,γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
Ca(α,α), optical model anal., attractive and repulsive α-nucleus pots. 7−135342
Δ self-energy in nuclear matter 7−128991
(e,e′), many-body effects in few-nucleon systems 7−67743
(e,e′), nuclear structure probes 7−109147
(e,e′), three-nucleon nuclei, bound state-continuum transition amplitude calcs. 7−67761
^{1}H(e,e), charge form factor calcs. 7−128952
^{1}H(p,p′γ), bremsstrahlung, off-shell aspects of NN force 7−67736
^{2}H, binding energy, Reid soft core and Paris pot. comparison 7−121592

uclear forces continued
^{2}H, ground state props., tensor force and one-pion exchange pot. 7−67733
^{2}H, magnetic form factor at high Q^2 7−121513
^{2}H, radial excitations and bound state wave fn., RGM and nonrelativistic quark model calcs. 7−121591
^{2}H(N,N)^{2}H, meson theoretical NN interaction predictions 7−67812
^{2}H(N,d), E_N=10 MeV, vector-to-vector spin transfer coeffs., Paris NN potential anal. 7−67829
^{2}H(N,d)N, meson theoretical NN interaction predictions 7−67812
^{2}H(γ,n), forward photodisintegration, 8-140 MeV nucl. forces and reaction process 7−121797
^{2}H(n,n'), low-energy scatt. by local pot., Faddeev calcs. and t matrices 7−67819
^{2}H(n,n), E_n<20 MeV, total and differential cross sections, Paris NN potential anal. 7−67829
^{2}H(n,n), Faddeev calcs. and on-shell props. 7−67821
^{2}H(n,n), three-body calcs. using Paris two-nucleon pot. 7−67822
^{2}H(n,nn), Faddeev calcs. and on-shell props. 7−67821
^{2}H(π,π) discrepancies resolution using short range ΔN interaction 7−102809
^{3}H, binding energy, charge radius, momentum distrib. calcs. 7−67701
^{3}H, binding energy, three-body forces effect, variational calc. 7−116235
^{3}H binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{3}H, binding energy calcs. in two-body model 7−67832
^{3}H, two-pion exchange three-nucleon force, momentum space methods 7−128362
$^3_\Lambda$H, bound state existence, separable model Faddeev equations 7−109090
$^3_\Sigma$H, Σ^- hypernuclei, bound state existence, separable model Faddeev equations 7−109090
^{3}He, binding energy calcs. in two-body model 7−67832
^{3}He electric dipole moment, contrib. from CP-violating NN interaction 7−128954
^{3}He ground state, proton-proton Coulomb interaction effects 7−81281
^{3}He(e,e'), high momentum components and many-body effects 7−67805
^{3}He(e,e'p), continuum state calcs. using Faddeev eqns. with Yukawa pot. 7−67802
^{3}He(e,e'p), cross section meas., proton momentum distrib. and nuclear forces anal. *(French)* 7−81379
^{3}He(e,e'p), high momentum components and many-body effects 7−67805
^{3}He(e,e'p), high momentum components and final state interaction 7−67806
^{3}He(e,e), charge form factor calcs., simple NN forces 7−128952
^{3}He(γ,p)^{2}H, nucleon-nucleon interaction and meson exchange current, Faddeev wave fns. 7−121792
^{4}He binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{4}He, momentum distribs., ATMS method 7−128973
^{4}He(n,n), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
^{4}He(p,p), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
$^5_\Lambda$He, Λ-N interaction and struct. anal., ground state binding energy *(Chinese)* 7−116326
$^6_\Lambda$He, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
$^6_{\Lambda\Lambda}$He binding, in Λ-α-Λ model, strength and range parameter of Λ-Λ potential 7−109089
$^A_\Lambda$He, A=5,6, interactions and binding energy, variational calcs. of α-cluster models 7−67759
Hg, effective interaction and the staggering of nuclear charge radii 7−73707
(^{6}Li,^{6}Li), projectile breakup effect, energy and target depend., coupled channel calcs. 7−116461
$^A_\Lambda$Li, A=7, 9, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
^{24}Mg(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
NN correlations, α-backbending and nuclear shape 7−128951
NN interactions, coupled pion-deuteron system, Low-type eqns. 7−81450
NN interactions short-range part, equivalent local potentials, energy and channel mixing dependence, quark model 7−135053
^{58}Ni(p,p'), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073
^{16}O, ground state energy shift, particle-particle ring diagrams and Skyrme effective interactions 7−121588
^{16}O, ground state props. and forces in unitary-model-operator approach 7−128948
^{16}O, hypernetted chain calcs. for Malfliet-Tjon pot. 7−81311
^{16}O, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
^{16}O(α,X), 0 to 30 MeV, Pauli's principle effects 7−116440
^{16}O(γ,p$_i$), 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
^{17}O(e,e), nuclear currents in a relativistic mean-field theory 7−129024
^{198}Os, self-consistent study of triaxial deformations in heavy nuclei 7−116251
Pb, effective interaction and the staggering of nuclear charge radii 7−73707
^{208}Pb, hot finite system, nuclear compressibility, Thomas-Fermi approach, Helmholtz free energy 7−140991
^{208}Pb, valence proton state orbit radii meas., use of barycentric potential 7−109009
^{208}Pb(^{16}O,^{16}O'), 60-76 MeV, energy depend. of effective interactions 7−116484
^{208}Pb(^{16}O,X), model of transverse energy production in high energy nucleus-nucleus collisions 7−135326
^{208}Pb(p,X), model of transverse energy production in high energy nucleus-nucleus collisions 7−135326
^{196}Pt, self-consistent study of triaxial deformations in heavy nuclei 7−116251
^{240}Pu, mass asymmetric fission barrier, Skyrme-Hartree-Fock calculation 7−121972
πN scattering amplitude in nuclear matter, bound states, Pauli blocking 7−121689
^{28}Si(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{138}Sm, self-consistent study of triaxial deformations in heavy nuclei 7−116251
Sn, effective interaction and the staggering of nuclear charge radii 7−73707

nuclear forces continued
^{116}Sn, rearrangement effects in shell model calcs. using density dependent interactions 7−73710
^{A}Th, A=157-169, ground state properties, quadrupolar and magnetic movements, charge radii, binding energies, HF anal. *(German)* 7−128940
^{238}U(^{238}U,X), optical pot. in sudden and adiabatic approx. 7−95995
^{90}Zr(p,p'), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073

nuclear fusion
see also nuclear reactions involving few nucleon systems
barrier penetration model and direct reaction approach for heavy ion fusion *(Korean)* 7−81349
barrier tunnelling in fission and fusion, pairing correlation effects a probability and dynamics 7−73817
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
electron screening effects on low-energy fusion cross sections, astrophysical aspects 7−141122
energy dependent nucleus-nucleus potential in heavy ion collisions 7−67863
exotic rare-earth nuclei formation in ^{32}S, ^{35}Cl, ^{36}Ar fusion-evaporation reaction on ^{92}Mo, ^{106}Cd, ^{112}Sn 7−96113
heavy ion central collisions, classical molecular dynamics anal., fusion-fission, fragmentation, vaporisation 7−121911
heavy ion collisions, fragment angular distributions, incomplete fusion effects 7−129099
heavy ion collisions, fusion-fission reactions, thermodynamic anal. 7−121882
heavy ion collisions, incomplete fusion, dynamical and statistical aspects, review 7−121918
heavy ion collisions, incomplete fusion, near barrier reaction 7−121883
heavy ion collisions, nuclear fusion and onset of fragmentation, limiting temperatures 7−141068
heavy ion fusion, channel coupling effects, barrier penetration model and threshold anomaly 7−141061
heavy ion fusion at sub-barrier energies, threshold anomaly 7−135364
heavy ion fusion cross section calcs., effects of including the temperature 7−121984
heavy ion fusion cross sections, CC calc., CCFUS computer code 7−135344
heavy ion fusion potential shape in the direct reaction approach 7−67886
heavy ion physics, fusion channels, review 7−109202
heavy ion subbarrier fusion reactions, enhancement due to neck formation 7−67887
heavy-ion collisions, equilibrium model for fusion and orbiting 7−121902
low energy heavy-ion fusion reactions, higher-order coupling effects 7−116455
muon catalysed fusion, recent developments at SIN 7−141113
muon catalyzed fusion, conference, Tokyo, Japan (Sept. 1986) 7−140361
muon catalyzed fusion, general aspects, space appl. 7−135387
muon catalyzed fusion, history and recent developments 7−141111
muon catalyzed fusion, nuclear reactions and muon sticking 7−122750
muon catalyzed fusion, update at LAMPF 7−141112
muon catalyzed fusion expts. at SIN, recent results 7−141115
muon-catalyzed fusion experiments at LAMPF 7−141114
nucleon fusion probability in high energy collisions 7−73748
projectile fragmentation in heavy-ion reactions at intermediate energies 7−96096
statistical fission model, systematic features for fusion-fission processes 7−81363
stellar interiors, effect of electron screening on thermonuclear reaction rates *(Russian)* 7−145820
sub-barrier fusion, excitation functions, structure effects 7−121985
workshop on semiclassical and phase space approaches to nuclear dynamics, Aussois, France (Mar. 1987) 7−134349
d-d and d-t fusion, muon-catalysed, muonic He kinetics 7−82398
ddμ, muon-catalysed fusion, kinetics 7−122743
^{108}Ag(^{40}Ar,αα), 285 MeV, reaction mechanism anal. 7−121885
^{27}Al(^{20}Ne,X), incomplete fusion at 15 and 19 MeV/N, α-spectra meas. 7−116479
^{197}Au(^{40}Ar,X), 40-60 MeV/u, nuclear fusion and onset of fragmentation, limiting temperatures 7−141068
^{12}C(^{16}O,^{8}Be)^{20}Ne, E_{cm}=19-24 MeV, resonances, reduced width meas. 7−116491
^{12}C(^{16}O,X), excitation functions of evaporation residues 7−73789
^{12}C(^{6}Li,α), 30 MeV, direct and fusion components, cross section calcs., statistical model comparisons 7−121899
^{40}Ca(^{40}Ca,X), wall dissipation, fusion excitation fns., entrance channel deformations, deformation dependent inertias 7−129124
DT fusion, muon catalyzed, sticking 7−141116
DT fusion, muon-catalyzed, stability anal. 7−129125
DT fusion, μ-catalysed, X-ray laser prod. 7−117170
Ge(^{16}O,X), fusion, crystal blocking in heavy ion reactions 7−116454
^{2}H(d, γ), low energy fusion, potential model anal., ^{4}He D-state component 7−121982
^{2}H(d,n)^{3}He, spin dependence of low energy fusion reactions, DWBA anal. 7−116539
^{2}H(d,n)$^3\mu$He, muonic catalysed, X-ray and yield meas. 7−96130
^{2}H(d,p)^{3}H, 2.98-162.5 keV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{2}H(p,γ)$^3\mu$He 7−96130
^{3}H(^{3}He,γ)^{6}Li, direct radiative capture, resonant structure of cross-section 7−109197
^{3}H(d, X), muon-α sticking prob. in muon-catalysed fusion 7−129126
^{3}H(d,X), fusion, μ catalyzed, μ transfer rate meas. 7−109249
^{3}H(d,X), muon catalysed, Schrodinger eqn. series soln. 7−115839
^{3}H(d,X), muon catalyzed fusion, muon sticking 7−121979
^{3}H(d,X), muon catalyzed fusion, parameter determ. 7−141119
^{3}H(d,X), muon catalyzed fusion, kinetics 7−141120
^{3}H(d,X), muon-catalyzed, effects of muon lag on sticking probability 7−121981
^{3}H(d,αn), nuclear Coulomb scatt. length, effective radius calcs. 7−122752
^{3}H(d,n)^{3}He, 2.98-162.5 KeV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{3}H(d,n)$^4\mu$He, muonic catalysed, X-ray and yield meas. 7−96130
^{3}H(d,nμ)^{4}He, muon catalyzed, effect of exit-channel on muon sticking 7−121980
^{3}H(t,nnμ)^{4}He, muon-catalyzed fusion, kinetics 7−141117
^{A}H(d,X), A=2,3, muon catalyzed fusion 7−141118

nuclear fusion continued
He, muonic, production by DT, PD and DD catalyzed fusion 7−141720
^{3}He(d,p)^{4}He, 6.95-141.8 KeV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{3}He(d,pα), 14.6 MeV, fast ion burn up in D plasmas, proton spectra meas. 7−73818
^{4}He(^{3}He, π^{0})^{7}Be, subthreshold energy reaction, clustering correlation calcs. 7−81415
^{4}He(^{3}He, π^{+})^{7}Li, subthreshold energy reaction, clustering correlation calcs. 7−81415
^{165}Ho(^{20}Ne, X); 30 MeV/N, energy and linear momentum dissipation in fusion 7−121983
^{165}Ho(^{20}Ne,X), 10-30 MeV/nucleon, production and decay of hot nuclei, neutron emission study 7−141066
^{165}Ho(^{3}He,d), continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
^{6}Li(α, γ), laser polarized target, reaction cross section meas. 7−135386
^{6}Li(^{8}Li,n)^{11}C, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
^{6}Li(^{8}Li,p)^{11}B, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
(^{7}Li,αX), 10 MeV/A break-up reactions, sequential and incomplete fusion mechanisms 7−135368
(^{7}Li,αt), 10 MeV/A break-up reactions, sequential and incomplete fusion mechanisms 7−135368
(^{7}Li,tX), 10 MeV/A break-up reactions, sequential and incomplete fusion mechanisms 7−135368
^{A}Mg(^{32}S,X), A=24-6, 165 MeV, entrance channel effects in fusion cross sections 7−116513
^{100}Mo(^{34}S,4n)^{130}Ce, 144 MeV, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{144}Nd(^{16}O,γ), partial wave fusion cross sections, near Coulomb barrier, γ-spectroscopy 7−121946
^{A}Ni(^{B}Si,X), A=58,62,64, B=28,30, coupled channels anal., low-lying excitations, rotational and vibrational model comparisons 7−67867
^{A}Ni(^{28,30}Si,X), A=58,62,64, sub-barrier fusion cross sections, CC and HF calcs. 7−116538
^{58}Ni(α,d), continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
O(O,X), neutron transfer and fusion cross-sections, subbarrier interactions of the oxygen isotopes 7−129085
^{16}O(^{13}C,X), ^{29}Si prod., two-centre shell model for arbitrarily orientated deformed nuclei 7−116302
^{16}O(^{16}O,X), 8.0-13.8 MeV, cross section meas. near Coulomb barrier 7−67866
^{16}O(^{16}O,X), extended TDHF anal., quantum theory appl., fusion momentum limit 7−121913
^{45}Sc(^{48}Ti,pαX), 16 MeV/u, particle velocity distributions, fusion residue meas. 7−109225
^{80}Se(^{80}Se,γ), partial wave fusion cross sections, near Coulomb barrier, γ-spectroscopy 7−121946
^{28}Si (^{28}Si,X), wall dissipation, fusion excitation fns., entrance channel deformations, deformation dependent inertias 7−129124
^{28}Si(^{12}C, X), fusion at high energies, cross section from direct reaction concept 7−96129
^{A}Sm(^{16}O, X), A=144-54, even isotopes, fusion cross section calcs. using barrier-like pot. 7−141090
^{A}Sm(^{16}O, X), A=148, 150, 154, coupled channel approach to subbarrier fusion cross section 7−141121
^{150}Sm(^{12}C,xn)^{A}Er, x=4,3, A=158,159, 65 MeV, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{118}Sn(^{64}Ni,X), fusion, ang. momentum distribs., 150-70 MeV 7−116476
^{124}Sn(^{58}Ni,X), fusion, ang. momentum distribs., 150-70 MeV 7−116476
^{232}Th(^{16}O, X), coupled channel approach to subbarrier fusion cross section 7−141121
^{232}Th(^{16}O,X), spin distributions, complete fusion cross section calcs., fission yields 7−102905
^{48}Ti(^{23}Na,X), fusion, coupled channels effects, numerical results from unified semiquantal description 7−81435
^{236}U(^{12}C, X), coupled channel approach to subbarrier fusion cross section 7−141121
(^{238}U,X), on A=16-65, 4.6-7.5 MeV/N, diff. cross sections, quasifission and fusion-fission reactors 7−121968
^{238}U(^{6}Li,X), E/A=25 MeV, linear momentum transfer and light particle emission meas. 7−67881
^{51}V(^{12}C,X), 72 MeV, incomplete fusion, recoil studies, α-cluster behaviour 7−116512
^{70}Zn(^{50}Ti,xn)^{A}Te, x=4,3, A=116,117, 170 MeV, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{92}Zr(^{64}Ni,X)^{156}Er*, fusion, high spin components, neutron emission suppression, comments and reply 7−81470

nuclear fusion reactors *see fusion reactors*

nuclear giant resonances *see nuclear collective states and giant resonances*

nuclear induction *see nuclear magnetic resonance*

nuclear instrumentation
see also angular correlation techniques; beam handling equipment; counters; counting circuits; nuclear reactor instrumentation; particle accelerators; particle detectors; particle track visualisation
4π β-γ coincidence equipment, data acquisition system 7−135791
4π β-γ coincidence system with cumulative dead times, theory, capabilities 7−135766
analog processing system for liquid Ar calorimeter, sampling and multiplexing hybrid test results, SLAC SLD project 7−68173
blind sampling and one-eyed sampling methods, electronics 7−135771
conference on radionuclide metrology, Rome, Italy, June 1987 7−134336
Delphi time projection chamber, contiguity trigger 7−109663
DOLIS isotope separator, status, ancillary equipment 7−135816
drift chambers for D0, waveform digitizers 7−109662
FASTBUS, standard routine specification, status 7−68172
front-end data processing in the SLD data acquisition system 7−109680
gamma-ray spectrometers, data acquisition system 7−135791
hadron calorimeter with proportional tubes and pad readout 7−68132
Heidelberg Polyp system, reconfigurable multiprocessor for high energy physics 7−74390
high energy accelerators, perspectives for experimental apparatus, seminar, San Minato, Italy (May 1986) 7−108021
high energy physics research, computing facilities 7−135792
integral gamma-ray count backscatter instrument design, math. model, appls. 7−67449

nuclear instrumentation continued
ionization chamber, electronics system and γ-ray radionuclide activity meas. 7−135770
ISOLDE 3, ion optical design 7−135716
ISOLDE 3 project, status 7−135818
large detector capacitances, transformer ratio for low noise preamplifiers 7−109661
LISOL isotope separator, status 7−135817
multidetector array for γ-ray spectroscopy, data acquisition system 7−109678
NPL beta-ray spectrometer 7−135768
on-line data acquisition system based on Norsk-Data ND-560 computer for VECC 7−109679
optimum weighting functions, energy resolution improvement from input shunt inductor 7−135773
portable multichannel analyser, single chip microcontroller based 7−109660
position sensitive detector development for accelerator beam control 7−81862
pulse-counting system, nonrandomness meas. for self diagnosis 7−68155
radiation dosimetry instrumentation system for neutron and γ-dose rate distrib. meas. 7−74217
scattering chamber for cyclotron expts., angular characteristics, systematic errors 7−81844
spectral data, digital processing 7−141405
spectroscopic ADC based on sliding scale principle 7−135772
symposium, Washington, DC, USA (Oct. 1986) 7−66813
TRIUMF, data acquisition and analysis system, use of structural analysis and design 7−68171
VMEbus interface for spectroscopy ADCs 7−116806
wire chambers, independent readout system 7−109624

nuclear interactions *see nuclear reactions and scattering*

nuclear internal conversion *see internal conversion*

nuclear isobaric analogue resonances *see isobaric analogue resonances*

nuclear isobaric analogue states *see isobaric analogue states*

nuclear isomerism
see also nuclear energy levels
long-lived isomers in medium-heavy and heavy deformed nuclei 7−109032
metastable state search from delayed proton emission from Pb(O, pX) 7−102916
Z=50 nuclei, nuclear moments and charge radii 7−109027
Z=66-70, B(E2) values for high spin isomers 7−140983
Ag, odd-A nuclei, g factors of isomeric $7/2^{+}$ states 7−67719
^{236}Am, long-lived isomers, high spin and shape isomeric states 7−102807
^{A}At, A=209, 210, 211, enhanced E3 transitions and mixed configs. of core excited isomers from ^{209}Tl(^{9}Be, xn) 7−67687
^{210}At, 19^{+} isomer, lifetime and enhanced E3 decay 7−109105
^{210}At, g-factor, half-life for microsecond isomers 7−116212
^{A}Au, A=185-189, 189m, charge radius and distrib., deformation, isotope shift, hyperfine struct. 7−81291
^{A}Au, A=185-189, shape transition, isotope shift hyperfine struct. 7−116241
^{128}Ba, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{236}Bk, long-lived isomers, high spin and shape isomeric states 7−102807
^{100}Cd level scheme determ., isomer identification, ^{46}Ti(^{58}Ni,2p2n)^{100}Cd study 7−109037
^{106}Cd, g-factor and 12^{+} isomer struct. 7−95988
^{111}Cd, photoactivation to ^{111}Cd^{m}, decay scheme 7−141015
^{111}Cd^{m}, half-lives and γ-transitions 7−96025
^{111m}Cd, E3 transition and high multipole order internal conversion coeffs. 7−102838
^{52}Cr(d,2n), ^{52}Mn isomer excitation fn. meas., statistical model comparison 7−116411
^{52}Cr(d,2n), ^{52}Mn isomer prod., direct reaction plus statistical model anal. 7−116428
^{52}Cr(p,n), ^{52}Mn isomer excitation fn. meas., statistical model comparison 7−116411
^{A}Cs^{m}, A=119; 121, transitions from on-line nuclear orientation 7−116275
^{118}Cs^{m} magnetic moment and transitions from on-line nuclear orientation 7−116275
^{120}Cs^{g}, transitions from on-line nuclear orientation 7−116275
^{121}Cs, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{149}Er, energy levels, β-delayed proton emission, K X-ray-proton coincidences in A=149 mass chain from ^{149}Tm decay 7−141026
^{149}Er level structure, yrast levels, isomeric states and transitions from ^{92}Mo/^{60}Ni, X 7−140983
^{254}Es^{g}, production by neutron irradiation of californium 7−141364
^{A}Eu, A=147, 149, 151, 152, 153-6, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{146}Eu, high-spin octupole isomer and four-particle yrast levels 7−109000
^{66}Ga, 9^{+}, 3034 keV state, gyromag. factor 7−128953
^{197}Hg, nuclear isomer separation using reson. multiphoton ionisation technique 7−90070
^{151}Ho, β-decay isomers, energies 7−121728
^{166}Ho^{m}, long lived decay, γ-ray spectroscopic investig. 7−109095
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{113}In^{m}, half-lives and gamma transitions 7−96025
^{113}In(γ, γ'), photoactivation of isomeric levels 7−73753
^{115}In^{m}, half-lives and gamma transitions 7−96025
^{117}In^{m}, internal transition branching and isomer cross-section ratio 7−116340
^{A}Ir(n, 2n), A=191, 193, X-ray spectrometry for cross section meas. 7−73757
^{81}Kr^{m}, electron capture branching ratio 7−109122
^{91}Nb^{m}, 104.5 keV transition, K-conversion coeff. meas. 7−121718
^{91}Nb^{m}, electron capture decay, isomer transition, level lifetimes, J* *(Chinese)* 7−116338
^{91}Nb^{m}, electron capture decay meas., K-conversion coeff. 7−121718
^{100}Nb→^{100}Mo, 3-s isomer decay scheme, γ-spectra, γ-γ coincidence meas., level lifetime determ. 7−109123
^{141}Nd$_{m,g}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{56}Ni shape isomer search in excitation functions from ^{40}Ca(^{16}O,^{28}Si*) 7−81290
^{180}Os, high-spin isomers, partial deexcitation scheme 7−108989
^{A}Pb, A=198,199, g-factor, half-life for microsecond isomers 7−116212

nuclear isomerism continued
^{196}Pb, particle-hole states and collective excitations, interpretation of isomeric states 7−140973
^{202}Pb, 19^{-} isomer, g-factor, half-life 7−116269
^{109}Pd$_{m,g}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{241}Pu(n,f) statistical model, Fermi gas model, fragment angular momenta, isomeric yield ratios 7−129122
^{A}Ra, A=205, 207, isomeric states, new α-emitter observation 7−81348
Rh, odd-A nuclei, g factors of isomeric 7/2^{+} states 7−67719
^{117}Sb, 23/2^{-} isomeric state, evidence for shape coexistence 7−108958
^{141}Sm and ^{164}Tm nuclear isomers, laser separation and resonance photoionisation spectroscopy 7−67726
^{143}Sm$_{m,g}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{A}Sn, A=116, 118, 120, 128, 130, transition probabilities 7−109116
^{112}Sn 6^{+} isomers implanted in hexagonal Cd, electric quadrupole interaction, radiation damage *(Chinese)* 7−111682
^{87}Sr(γ, γ′), photoactivation of isomeric levels 7−73753
^{178}Ta oriented nuclei; NMR meas. 7−73698
^{181}Ta(γ,γ′), isomeric state excitation by white radiation, 3.55 MeV activation level detection 7−135295
^{180m}Ta, excitation cross section determ. from ^{180}Hf(p,n) 7−121614
^{147}Tb, β-decay isomers, energies 7−121728
^{95}Tc, chemical effects of m-g isomeric transition in Tc complexes 7−113970
^{125}Te^{m}, M4 transitions in telluride compounds, decay meas. 7−121716
^{164}Tm and ^{141}Sm nuclear isomers, laser separation and resonance photoionisation spectroscopy 7−67726
^{238}U(α,f) statistical model, Fermi gas model, fragment angular momenta, isomeric yield ratios 7−129122
^{A}Xe^{m}, A=129, 131, NMR studies in Fe, mag. moment determ. 7−81298
^{120}Xe, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{132}Xe, g-factor and 7^{-} isomer struct. 7−95988
^{83}Y low-energy level structure, isomer decays from ^{83}Zr decay, ^{83}Y low-energy level structure, isomer decays 7−121619
^{89}Zr$_{m,g}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{90m}Zr, mag. moment and anomalous orbital g-factor, NMR meas. 7−116274

nuclear isospin
1p shell nuclei, electric dipole resonances from photonuclear cross section anal. 7−102852
FCC nuclear model, nucleon eigenstates equivalence, correspondence with spin-orbit model 7−128977
IBM-2, isospin in a boson approx. for particles and holes 7−135227
IBM-2, isospin in shell with neutrons and protons 7−121655
isospin mixing in the unified exciton model 7−116264
isospin symm. and nuclear struct., review 7−109015
isotropic mixing of isobaric 0^{+} excitations, Coulomb pot. depend. and isospin nonconservation 7−121771
light N=Z nuclei with spin-isospin order, excited states, HF calcs. 7−140993
light nuclei, isospin-symmetry violation effects 7−116343
N≠Z nuclei, dipole giant resonance in isospin channels and μ^{-} capture, TDHF calc. 7−135280
nuclear stability w.r.t. spin and isospin alignment due to short-range three-particle forces 7−121590
particle physics concepts, basic theories, book 7−108061
relativistic antiprotonic nuclei, shifts and widths, spin and isospin effects 7−81359
spin-isospin excitations, intensity distrib., and valence quark model sum rules 7−121724
spin-isospin response functions, semiclassical calc. 7−135202
spin-isospin volume and surface responses in nuclei, RPA calcs. 7−81297
three-nucleon system, hyperspherical expansion using spin and isospin central pot. 7−121628
(p, n), giant resonance isospin energy splittings in hydrodynamic model 7−135289
(π→, π^{0}), giant resonance isospin energy splittings in hydrodynamic model 7−135289
^{A}C(^{3}He,t), A=12, 13, 0.6-2.3 GeV, DWIA calcs. angular distribs., isovector strengths, spin-isospin transitions 7−135339
^{12}C, spin-isospin probes, RPA finite nucleus response, strength distrib. effects 7−135203
^{12}C$_{\Sigma}$ isospin oscillations from (K^{-}, π^{-}) 7−102831
^{12}C(π, π′), 100-291 meV, diff. cross sections, ang. distribs., DWIA anal. 7−121958
^{13}C(^{3}He,t), collective spin-isospin excitations 7−109200
^{48}Ca(γ,n), cross section meas., isospin components and statistical decay model 7−129017
^{48}Ca(γ,p), cross section meas., isospin components and statistical decay model 7−129017
^{1}H(n⃗, n), 477 MeV, anal. powers, isospin violating charge symmetry breaking 7−121849
^{3}He(d,t), isospin asymmetry study 7−67847
^{4}He(d,pn), isospin breaking and breakup calcs. with Coulomb interaction 7−67846
^{4}He(π,π′), 180 MeV, nuclear isospin mixing in ^{4}He 7−116382
^{26}Mg(p,n), Gamow-Teller strength and isospin channel fractionation, shell model comparison 7−116409
^{16}O spectrum, isospin impurities, microscopic description in generator coord. basis 7−135212
^{32}S(γ,pγ′), 32 MeV, partial photonucleon cross sections, semidirect processes photoabsorption, giant dipole resonances 7−116380
^{A}Zr(α,α′), A=90, 92, 94, 96, isospin decomposition of transition matrix elements by Coulomb interference 7−96088

nuclear liquid drop model
charged drops, breakup, role of 3D shapes 7−67748
core densities, droplet model and HF calcs. with generalised Skyrme force 7−121603
desaturation effects, variational calcs. in liq. drop model and Thomas-Fermi approach 7−140989
infinite nuclear matter, ground-state energy and mass relations 7−116314
relative particle number, gauge-space reduced alignment, shape and pair correlations 7−116305
Woods-Saxon potential, axially deformed, single-particle energies, wave fns., quadrupole moments, g-factors calcs. 7−140992
^{67}Ga, highly deformed compound nucleus, prod. and deexcitation 7−116458

nuclear magnetic acoustic resonance *see acoustic nuclear magnetic resonance*

nuclear magnetic moment
see also g-factor; gyromagnetic ratio
A=15, 17, 39, 41, isoscalar mag. moments in σ-ω model, RPA type vertex corrections 7−109020
A=4-16, binding energies and nuclear moments, large-scale shell-model calculations 7−109065
A≈150 transitional nuclei, effective valence proton and neutron numbers, from B(E2) and g-factors 7−141016
absorption Mossbauer spectra on low temp. oriented nuclei 7−118917
electric quadrupole-mag. dipole moments, relationship 7−116271
g-boson signature in the interacting boson model, g-factor variations 7−135207
hypernuclear currents, mean field approx. to extend σ-ω model 7−102832
isoscalar currents and nuclear magnetic moments, one-boson exchange model 7−73700
LS closed shell nuclei, mag. moments in relativistic theories, HF mean field problem 7−67720
multiquark model calcs. of nuclear props. 7−95997
neutron-proton IBA model, SU(3) limit, mag. dipole props. 7−81313
nuclear matter, magnetic moment calcs., role of σ- and ω-meson fields in electromagnetic currents 7−73704
odd nuclei, relativistic approach to nuclear structure 7−81321
on-line nuclear orientation, technique development 7−116732
parent states, spins and moments, book contrib. 7−95989
relativistic vector-scalar model, magnetic moment calcs., inclusion of Jensen-Mayer term 7−116278
ultrarelativistic hypernuclear magnetic moments and lifetimes, polarized light hypernuclei prod. 7−141011
Z=50 nuclei, nuclear moments and charge radii 7−109027
^{11}B, nuclear spin and magnetic moment meas. 7−109018
^{209}Bi(e,e), nuclear currents in a relativistic mean-field theory 7−129024
^{209}Bi(γ,γ′), exchange currents in El strength and orbital g-factor 7−116279
^{118}Cs^{m} magnetic moment and transitions from on-line nuclear orientation 7−116275
^{A}Fr, A=207-228 nuclear and electronic g-factors and single particle structure 7−109021
^{A}Gd, A=147, 149, ground state, mag. dipole moments 7−116268
^{A}Gd, A=149, 151, low temp. nuclear orientation 7−116243
^{3}He and proton nuclei magnetic moments ratio determ. 7−110134
I mag. moments meas. by on-line nuclear orientation 7−116273
^{A}I, A=117-122 mag. moment meas. by nuclear orientation 7−109022
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{6}Li, EM props. from (α+d) cluster model with breathing clusters, form factors, movements 7−121598
^{96}Nb, mag. moment determ. using γ-ray ang. distrib. anisotropy 7−121609
^{136}Nd, lifetime and g-factor meas. 7−116328
^{17}O(e,e), nuclear currents in a relativistic mean-field theory 7−129024
Rn, nuclear spins, moments and charge radii difference meas. 7−109017
^{116}Sb, mag. moment, on-line resonance meas. at DOLIS-COLD facility 7−116272
^{116}Sb$_{g}$, magnetic moment meas., NMR/ON technique 7−109023
^{43}Sc, energy levels, transitions and moments in shell model calc. 7−121621
^{A}Sn, A=108-111, nuclear spins, moments and charge radii from hyperfine splittings and isotope shifts 7−67714
^{A}Sr, A=80-90, charge radii and moments, laser spectroscopy meas. 7−95984
^{A}Th, A=157-169, ground state properties, quadrupolar and magnetic movements, charge radii, binding energies, HF anal. *(German)* 7−128940
^{48}V, 308 keV 2^{+} state, mag. moment 7−116267
^{A}Xe^{m}, A=129, 131, NMR studies in Fe, mag. moment determ. 7−81298
^{90m}Zr, mag. moment and anomalous orbital g-factor, NMR meas. 7−116274

nuclear magnetic resonance
see also acoustic nuclear magnetic resonance; biomedical NMR; chemical shift; double nuclear magnetic resonance; ENDOR; Knight shift; molecular nuclear coupling; NMR line breadth; nuclear magnetic resonance spectroscopy; nuclear quadrupole resonance; nuclear spin-lattice relaxation; proton magnetic resonance; spin echo (NMR); spin-spin relaxation
5d^{1} system, in octahedral symm. cryst. field environment, NMR chem. shift 7−77413
absorption Mossbauer spectra on low temp. oriented nuclei 7−118917
acetonitrile liq., intermol. dipole-dipole NMR relax. rate, mol. dynamics calc. 7−90209
acetonitrile mixtures, local struct. influence on chem. shift *(German)* 7−99594
1- acyl-sn-glycerophosphocholine systems, NMR, diffusion coeff. and spin relax. meas. 7−74679
adamantane, solid, cross polarisation, sample spinning effect 7−90207
aerosil surface, modification by organo-silicon cpds., reactions, ^{29}Si NMR study 7−78551
agarose gels, molecular dynamics, NMR, Rayleigh scatt., Mossbauer radiation 7−126698
L-alanine, D NMR, methyl group dynamics, ^{2}H spin-lattice relax. 7−92535
aldono-1,4-lactones, PWR and NMR, ab initio MO calcs., conformational studies 7−141426
1-^{13}Caldoses, ^{13}C NMR, chemical shifts and ^{13}C-^{13}C spin couplings 7−129741
alkali metal aq. soln., microstruct., NMR relax. obs. 7−106052
alkali metal hydroxides, aq. soln., microstruct., NMR relax. obs. 7−106052
alkali silicate glasses, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
alkaline earth silicate glasses, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
alkyd polyester paints, air-cured, ^{13}C solid-state NMR, T$_{1}$ meas. 7−118886
alkyl chain liq. cryst., orientational order, D NMR studies 7−75977
3-alkyl-7-methyl-3,7-diazabicyclo[3.3.1]nonan-9-ones, conformation, ^{1}H and ^{13}C NMR 7−68359
4,4′-di-n-alkylazoxybenzene, nematic and smectic A phases, orientation order, NMR studies 7−111358
γ-amino butyric acid, counterion effects on NMR chem. shifts 7−68360

nuclear magnetic resonance continued
2-aminoethylphosphonic acid, single crust., ^{31}P NMR chem. shielding tensor 7−99596
amplitude- and frequency-modulated pulses to achieve 90° plane rotations with inhomogeneous B_1 fields 7−71943
amylose nitrates, repeat unit heterogeneity, ^{13}C NMR spectrosc. obs. *(Russian)* 7−112972
2′,5′-anhydroarabinosylcytosine, struct. and conform., X-ray, ^{1}H and ^{13}C NMR anal. 7−98103
aniline derivatives, ^{13}C NMR spectra, isotopic multiplets, H bonding effects 7−74668
aridicin aglycon, primary struct., long-range J valves, COSY and COLOC NMR spectra 7−139198
aromatic molecules, mono- and di-substituted, ^{13}C NMR correl. times 7−90212
Artemia cysts, intracellular water nuclei, nature and origin of chem. shift 7−126761
aryl carboxylic esters (acids) (amides), torsional angles, ^{17}O NMR 7−90196
ATP compartmentation in skeletal and cardiac muscles, anal. using ^{31}P NMR saturation transfer 7−100791
bacteriophage, fd, coat protein, backbone dynamics, solid-state and soln. ^{15}N NMR spectra 7−71687
β-(BEDT-TTF)$_2$I$_3$, anisotropic Knight shifts and spin density distrib. 7−70660
α_t-(BEDT-TTF)$_2$I$_3$, stable superconducting state at 8 K 7−125217
benzenamine-4-(9-anthryl)-N,N-dimethyl related cpds., synthesis, spectroscopic props. 7−90265
benzene, ^{1}H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
benzene ring, ^{2}H quadrupole echo NMR spectra, lineshape calcs. for multiaxis rot. 7−68355
benzene-d_6 multilayer on graphite, ^{2}H NMR spectra meas. 7−77412
benzenes, para-disubstituted, intramolecular interactions, ^{13}C NMR *(French)* 7−96742
benzenes, substituted, nonpolar, elec. quadrupole reaction field, NMR solvent shifts 7−109940
1,5-benzodioxepins, 3-halogenated, gauche conform. effect, mechanism, NMR investig. 7−103534
benzodithiepin, and derivatives, conform. dynamics, ^{1}H and ^{13}C NMR 7−82212
N-(benzylidene)phenylamine-N-oxides, 4-substituted, ionis. pots. and chem. shifts, NMR investig. 7−109929
biaxial smectic E phase, zero-field NMR study 7−91436
bicuculline, counterion effects on NMR chem. shifts 7−68360
bicyclooctene, plastic phase, muon probe investig. 7−85508
biological systems, solid, magic angle spinning NMR, spectral linewidths origin 7−78752
1,2-bis(1-bromoethyl)-3,4,5,6-tetraisopropylbenzene, conformational cycloenantiomerism, NMR investig. 7−109934
Bloch lines, enhancement of NMR 7−143914
borophosphate glass, ^{31}P-NMR study, PO_4 unit discrimination 7−131051
brain, regional glucose metabolism in rats, heterogeneity demonstration by ^{19}F NMR rotating frame zeugmatography 7−139243
bufadienolides, cardiac glycosides, ^{13}C NMR 7−66852
bullvalene, cope rearrangement, dynamic quadrupole echo NMR 7−100532
cadmium formate dihydrate-$d_0(d_2)$, solid, cross polarisation, sample spinning effect 7−90207
caesium pentadecafluorooctanoate-water system, lyotropic mesomorphism, phase diagram 7−142560
calcium acetate, solid, NMR spectrum obs. 7−85445
cardenolides, cardiac glycosides, ^{13}C NMR 7−66852
carnosine, ^{1}H and ^{13}C NMR investig. 7−85454
catalysts, homogeneous, high-press. probe for NMR obs. 7−73389
catalysts, sample cells for NMR and EPR spectroscopy 7−128606
cellobiose, aq. solns., NMR meas. 7−71688
cellulose, mol. orientational order, NMR anal. 7−119717
cellulose, natural abundance ^{13}C spin exchange study 7−70663
cellulose, NMR spectrosc. with magic spinning, review *(Japanese)* 7−132147
cellulose derivatives, NMR spectrosc. with magic spinning, review *(Japanese)* 7−132147
cellulose nitrates, substituted, ^{13}C NMR obs. *(Russian)* 7−112971
cellulose triacetate, solid state, ^{13}C NMR chem. shifts determ. 7−92528
ceramics, amorphous and crystalline, multinuclear magic angle sample spinning NMR spectra 7−92507
chemical shieldings in solids 7−80198
chemical shifts, calculation methods, review 7−112984
CHEMICS, automated struct. elucidation system 7−81912
chiral 1,3-diols+$B(OH)_4^-$, polarimetric, circular dichroism and ^{11}B NMR investig. 7−82219
chloroform-d_1, oriented in liq. crysts., NMR spectra 7−92510
chloromethylstannanes, soln. struct. and preferred orientation in liq. crysts. 7−68362
chlorophyll a-dimyristoyllecithin lipid bilayer, cooperative lengths and elastic consts. 7−114202
cholesteric blue phase III, quasicrystalline ordering, NMR spectrum 7−117809
cholesteric liq. cryst. icosahedral fog phase, NMR spectra *(Hungarian)* 7−131019
clay and pillared clay catalysts, charact. 7−138336
coals, NMR appl. 7−85453
coenzyme B_{12}, base-off form, soln. behaviour, 2-dimens. NMR 7−74671
coil structures, multishield active magnetic screening 7−89234
collagen peptides, high resolution ^{13}C NMR spectra 7−139202
conference, Bangalore, India (Sept. 1986) 7−115675
conference, Garmisch-Partenkirchen, Germany (Sept. 1985) 7−95090
coronene, as model of charcoal, ^{13}C NMR chem. shift tensor investig. 7−109947
coupled spin systems containing high-spin nuclei, multiplet struct. 7−109938
coupled spins, oppositely signed mag. moments, nucl. mag. relax. 7−109939
cryptate, in polyacrylate soln., counterion dynamics probe, NMR relax. 7−82218
CTAB, dil. surfactant soln., viscoelasticity, micellar chain model 7−110897
cyclic allylic alcohols, configurational assignment, NMR 7−74661
cyclic ketones, six-membered-ring, absolute config., ^{13}C NMR 7−96735
nuclear magnetic resonance continued
cyclo-(L-Pro^1-L-Pm^2-D-Pro^3) peptide, strong coupling effects, z-filtered 2D NMR correl. spectroscopy 7−90208
cycloalkanes, chain folding and mesomorphic states DSC anal. 7−117105
1,3-cyclodisiloxanes, bonding, ^{29}Si NMR coupling consts. obs. 7−141604
cyclohexane, ring inversion, dynamic quadrupole echo NMR 7−100532
N-cyclohexylmaleamic acid, isotopic species, NMR zero-quantum transition probability, random-field theory anal. 7−135967
cyclopentanes, substituted, NMR chem. shift, spectra simulation 7−116986
cyclopentanols, substituted, NMR chem. shift, spectra simulation 7−116986
cyclophosphazenes, struct., ^{31}P NMR 7−114189
cyclopropane, r_α-struct., vibr.-rot. correl., NMR study 7−68361
2-deoxy-D-ribose, enthalpies of combustion and form. ^{13}C and ^{1}H NMR 7−93359
2′-deoxyadenylyl-(3′-5′)-deoxythymidine, strong coupling effects, z-filtered 2D NMR correl. spectroscopy 7−90208
desacylguayulin A, stereochem., NMR investig. 7−96744
desertomycin, antibiotic, mol. struct., 2D NMR investig. 7−68345
di-isopropyl ether, tunnelling rotation, of methyl groups 7−142664
di-tert-butyl ethanal, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7−129744
dichloromethane, ^{1}H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
1,1-dicyanoethylene, substituted, electronic struct., conform. mobility, NMR and PMR 7−74684
diffusion in liqs., NMR spin-echo meas., fixed field gradient, Bessel fn. fit anal. 7−92548
diffusion jump dynamic, NMR, PAC, Mossbauer and neutron scatt. study methods 7−99624
9,10-dihydroanthracenes, conformational anal., mol. mechanics calcs. and ^{13}C NMR 7−68347
2,6-dihydroxynaphthalene-1,3,6,8-tetranitronaphthalene, mol. dynamics, EPR 7−143922
dimedone, solid, 2D-exchange separated local field double reson. NMR 7−106036
dimethyl ether, tunnelling rotation, of methyl groups 7−142664
dimethyl phosphonomethyl methylsiloxane dimethylsiloxane copolymers, preparation and props. 7−122759
dimethyl sulphide, tunnelling rotation, of methyl groups 7−142664
4-(4-(N,N-dimethylamino)phenylazo)azobenzene, liq. cryst. solns. orientational order, NMR 7−82220
3,4-dimethylenefuran biradical, matrix isolated, ^{13}C NMR 7−96736
N,N-dimethylformamide, internal rot. barriers, dynamic NMR and ab initio SCF MO method comparison 7−109722
2, 6-dimethylpyridine, ^{13}C-^{15}N scalar splittings in ^{13}C NMR spectra 7−68350
dimethylsiloxane-ethylene oxide copolymer network, elec. cond., ^{23}Na NMR study 7−99590
diphosphine disulphides, solid, ^{31}P NMR spectra 7−92516
dipolar interaction spin systems, thermodynamic props in high field 7−106034
disilenes, bonding, ^{29}Si NMR coupling consts. obs. 7−141604
7,7′-disodiumcromoglycate-water lyomesophases, NMR and X-ray diffr. 7−111364
disordered magnets, competing anisotropy, nuclear spin waves *(Russian)* 7−125343
diterpenoid alkaloids, struct. elucidation, ^{13}C NMR spectra 7−90188
DNA−Na, Ni^{2+} binding is aq. soln., ^{23}Na and ^{31}P NMR study 7−133221
DNR, liquid crystalline phases, isotropic to cholesteric transition, solid-state ^{31}P NMR studies 7−143004
dynamic nuclear polarisation method using lysozyme in deuterated matrix 7−79152
enzymes, NMR studies review 7−100814
erythrocytes, human, ^{7}Li NMR 7−78753
erythrocytes, Na and K NMR relax. times, temp. and osmolarity effects study 7−107007
ethane, p-T phase diagram, NMR study 7−84249
1-ethoxy-4-chlorobenzene dissolved in nematic liquid crystal, conformation and orientational order 7−122570
anti-7-ethylbicyclo[2.2.1]hept-2-ene ring-opened polymer form., mechanism and microstruct. 7−122755
ethylene-α-olefine copolymers, spin-diffusion relax., ^{1}H and ^{13}C NMR 7−92531
ethylene-propylene copolymers, glass transition temp., microtacticity effects *(Russian)* 7−83794
ethylene-vinyl acetate copolymers, chlorinated, ^{13}C-NMR 7−92518
ferrocytochrome c, ^{57}Fe NMR chem. shift anisotropy meas. 7−109936
ferromagnets, nuclear magnetisation and NMR with internal mag. field offset 7−99427
FOLBIS EM isotope separator, on-line nuclear orientation/NMR hyperfine interactions 7−125547
food quality control and studies on human nutrition by mass spectrometric and nuclear magnetic resonance isotope ratio determination 7−86734
formaldehyde, linear oligomers, in mixed solvents, mol. mass distrib., NMR meas. *(Russian)* 7−82226
formaldehyde-methanol aq. soln., ^{13}C NMR study *(French)* 7−96737
formamide, microemulsion microstruct. from NMR meas. of self-diffusion 7−106838
free induction decay of spins in periodic lattice with vacancy diffusion 7−85468
gelatin, grafting of ethylene oxide, ^{13}C NMR spectra study 7−113922
glucose, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
α-D-glucose-1-d_1, C-^{2}H bond, ^{2}H quadrupole coupling const., NMR spectra 7−118873
glycerol, biosynthetic probe, triple-quantum two-dimens. INADEQUATE study 7−94030
glycine, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
glycine, peptide plane and side chains orientation, ^{13}C-^{15}N dipole-dipole couplings, NMR meas. 7−126719
glycol methylethers, substituted, dielectric relax. and NMR spin-lattice relax. meas. correl. 7−74666
glycolaldehyde, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7−129744
graphite intercalated with NH_3 and K, Rb or Cs, NMR study of charge transfer 7−85458

nuclear magnetic resonance continued
graphite intercalation compounds, C_7SbF_5 and $C_{10}AsF_5$, NMR studies 7—106050
gyroscope, review 7—140721
halomethanes, magnetic susceptibility tensors, angular correlation factors, NMR determination 7—129643
Hartmann-Hahn transfer, water suppression, lock and return expt. 7—71683
heavy atom chemical shift in NMR, relativistic contrib. 7—96740
heavy fermion systems, nuclear and muon hyperfine techniques 7—118929
heparin, struct. ROESY spectra with relay artifacts 7—82221
4,4′-di-n-heptylazobenzene, nematic and smectic A phases, orientation order, NMR studies 7—111358
4,4′-di-n-heptylazoxybenzene, nematic and smectic A phases, solvent-solute interactions 7—111359
heterogeneous solid samples, cross-polarisation NMR spectra 7—85467
hexamethylbenzene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7—70673
hexane, partially oriented, conformational probabilities, dipolar couplings assignment, 2D NMR 7—109930
hydrocarbons, solvent and free radical effects, ^{13}C NMR spectra 7—96734
2-hydroxy(dithio)benzoic acid, H bonding, spectrosc. investig. *(German)* 7—96693
2-hydroxy(thio)benzamides; N,N-distributed, H bonding, spectrosc. investig. *(German)* 7—96693
1-hydroxymethylquinolizidines, epimers, conformational anal., IR, NMR and PMR spectra 7—90108
I_2S moieties in polycrystalline systems, NMR, nuclear shielding tensor orientations determ. 7—85455
ice, surface props, NMR study, temp. depend. 7—118874
imaging, sensitivity and resolution 7—73388
in vivo, using double-tuned circuit 7—128610
inorganic phosphates, cryst. and glassy, magic-angle spinning ^{31}P NMR investig. 7—132148
insect cuticle, aromatic cross-links: detect. by solid-state ^{13}C and ^{15}N NMR 7—133211
internuclear distances and correl. times determ., NMR cross-relax. rate meas. 7—109935
intracellular Na detection, dog red blood cells, coherence-transfer ^{23}Na NMR 7—71686
intramolecular H-bonded chains, collective H^+ motion and H^+ polarisability 7—106979
Lac repressor headpiece structure, NMR, restrained mol. dynamics calcs 7—133191
lecithin-water-ethylene glycol nonaqueous liq. cryst., NMR and X-ray studies 7—91437
level mixing resonances method for hyperfine interactions 7—118870
lignin, mol. orientational order, NMR anal. 7—119717
liquid crystalline phases, NMR ^1H-^{13}C spin pair zero-field study 7—92517
liquid crystals, molecular dynamics and spectral density determ. 7—75983
long-range heteronuclear 2D NMR chem. shift correl., response intensity modulation 7—73396
lysozyme, hen egg white, 2D heteronuclear chem. shift correl. 7—68479
magic angle setting using ^{13}C NMR spectra of oriented chloroform 7—135971
magic-angle spinning and the transition to the static limit 7—112969
magnetic field meas. techniques, nuclear resonance probes *(German)* 7—80822
melamine-formaldehyde adducts, charactn. by NMR, UV spectra and chromatography 7—93402
metal hydrides, properties and applications, conf., Maubuisson, France (May 1986) 7—80151
metals and insulators, NMR of oriented nuclei, continuous wave methods, book contrib. 7—99592
methane, adsorpt. equilibr. on zeolites, NMR gas phase meas. 7—92003
methane, in liq. cryst. mixtures, chem. shielding, NMR study 7—90195
methane-ethane, separation factors on zeolites, NMR gas phase meas. 7—92003
methanesulfonyloxy derivatives of napthalene, synthesis and ^{13}C NMR 7—96644
2,4-methanproline, in peptides, conformational energy computations, NMR 7—144969
methoxy compounds, solid, broad line NMR appl. 7—85450
3-methoxy-1,3,4,5-tetrahydro-2-benzoxepin, anomeric effects, NMR investig. 7—90198
methyl formate, methanol soln., NMR longit. two-spin order study 7—135965
methyl group rotations, NMR and neutron scatt. studies 7—137276
methyl groups, correlation, multiple-quantum NMR study 7—90218
methyl iodide, in liq. cryst. solvent, NMR investig. 7—90204
methyl methacrylate, plasma-polymerised, electron beam resist fabrication 7—119164
methyls enantiotopic, stereo specificity, NMR spectra 7—122575
micellar solns., physical chemistry, NMR methods 7—71543
minerals and mols., quantum mechanical studies of Si—O and Si—F bonds 7—131085
mononucleotides, interaction coeffs., ^{31}P NMR *(French)* 7—119726
multidimensional NMR, structural and analytical applications 7—82227
multiple quantum dynamics in NMR, directed walk through Liouville space 7—92515
multispin system, broadband heteronuclear decoupling, Waugh theory appl. 7—103547
muricin aglycone and related pregnene derivatives, ^{13}C and ^1H NMR study 7—90192
NADH models, synthesis and reactivity, NMR study *(French)* 7—93621
naphthalene-d_8, elec. polarisability tensor, NMR study 7—82224
natrolite, orthorhombic, diffusion of water mols., NMR obs. 7—112981
nematic liquid crystal systems with positive and negative mag. susceptibility anisotropies, zero-field NMR 7—91428
nitratolanthanate complexes, anionic isotropic NMR shifts 7—90213
NMR flowmeter, nutation-phase type for laminar flow, relax. error calcs. 7—137036
4-n-nonoxybenzylidene-t′-butylaniline, smectic-F phase, orientational flow, D NMR obs. 7—99589
norbornene, plastic phase, muon probe investig. 7—85508
norbornenyl systems, ^2H/^1H NMR isotope effect on ^{13}C chem. shift, linear correls. 7—68346
2-norbornyl cation, ^{12}C-^{13}C equilibria meas. NMR spectrum 7—109933
norbornyl cation, NMR spectrum, tunneling effects 7—122567
nuclear magnetic resonance continued
nortricyclyl-norbornenyl cation, deuterated, reversible skeletal rearrangement, NMR spectra 7—119600
nuclear orientation techniques applied to on-line separated isotopes 7—121558
nuclear spin ordering, methods for production and observation of states 7—132145
nuclear spin waves, effect on NMR saturation 7—132151
nucleic acid bases, protonation, ^1H and ^{13}C NMR and UV investig. 7—74662
nucleosides, ^{13}C NMR spectra, isotopic multiplets, H bonding effects 7—74668
octahydroindoles, 2D NMR 7—96745
octanoyl-acyl carrier protein, leucine spin system, RELAY expt., strong coupling effects 7—82223
4-n-octyl-4′-cyanobiphenyl, nematic and smectic ordering 7—75979
octylamine-octylammonium chloride-water system, lamellar liquid crystalline phase, NMR and X-ray anals. 7—137211
on-line low-temperature nuclear orientation at DOLIS-COLD 7—125548
on-line nuclear orientation, technique development 7—116732
on-line nuclear orientation at KOOL 7—116733
organic cations-organic phosphate anions, electrostatic interactions, assoc. consts. determ. 7—113894
organic molecules λ, aq. soln., ^{31}P NMR spectra, Prony-Burg method anal. 7—107322
organic phosphates, aq. soln., ^{31}P NMR chem. shift *(French)* 7—100811
organonitriles, correlation between C-N stretching vibr. and ^{13}C NMR chemical shift spectra 7—141602
organosulphur-FeOCl intercalation compounds, spectroscopic and mag. props. 7—144050
organotellurium cpds., NMR chem. shift correl. with Mossbauer quadrupole splitting 7—99595
organotin compounds, solid, high resolution ^{119}Sn NMR spectra 7—138337
organotin cpds., NMR chem. shift correl. with Mossbauer quadrupole splitting 7—99595
oriented nuclei, NMR, transient methods, book contrib. 7—99593
oscillating electric dipole, reaction field, solvent chem. shift 7—109941
2,2,4,4,6-pentacyanocyclohexenamine, cryst. struct. and vibr., spectrosc. obs. 7—98102
pentasil zeolites, isomorphous substitution, ^{29}Si MAS NMR spectra 7—135966
4,n-pentyl-d_{11}-4′-cyanobiphenyl, nematic phase, pressure and temperature dependence of orientational order 7—75971
peptides, tyrosyl motion, ^2H NMR line shapes and spin-lattice relax. 7—92533
perfluorotributylamine, ^{19}F NMR imaging 7—99583
phase depend. of magnitude-mode spectra of 2 overlapping lines 7—68356
N-phenyl phthalimides, substituted, electronic interactions, IR and NMR spectrosc. obs. *(Russian)* 7—135942
phenylacetylene, one-bond C—H spin coupling consts. and ^{13}C differential line broadening 7—68348
phenylcyclohexane, cryogenic trapping, conformer, NMR, thermodynamics 7—68351
E-N-phenylformamide, homonuclear multiple-quantum NMR relax. rates 7—99602
3-phenylpyrazolo(4,3-c)pyridine and derivatives, struct., ^1H and ^{13}C NMR anal., CNDO/2 and PPP calcs. 7—109944
phospholipid bilayer, gramicidin-induced H_{II} phase, acyl chain study, ^2H and ^{31}P NMR meas. 7—74660
phospholipid bilayers, polyunsaturated, acyl chain config. statistics, ^2H NMR obs. 7—106973
phospholipid/water multilayers, pretransitional phenomena, ^2H NMR obs. 7—139218
N-phosphonomethylglycine and salts. polycrystn., high resol. NMR 7—106043
ploybutadiene-dihalocarbene adducts, 2D NMR study 7—91471
poly(ether sulphone)-poly(dimethylsiloxane) alternating block copolymers, Pt-catalysed hydrosilylation study 7—113923
poly(ethylene oxide), grafted on silica, effect of grafting ratio on chain conformation *(French)* 7—110154
poly(ethylenimine) containing nucleic acid pendants, NMR and UV spectra 7—122758
poly(L-glutamates) with n-alkyl side chains, ^{13}C CP/MAS spectra, conformation and mol. packing 7—117101
poly(sulphone-ethylene oxide) block copolymer soln., self-diffusion coeff. determ. 7—118142
trans-polyacetylene, NMR obs. of temp. depend. spin-lattice relax. 7—138339
polyacetylene, soliton pinning, multiple-quantum spin coherence obs. 7—137811
polyacetylene, synthesis, precursor polymer struct. 7—97987
polyacetylenes, electronic struct., INDO/S framework, ^{13}C NMR chem. shift 7—110158
polyacrylate deuterons, relax., counterion influence 7—82217
polyacrylic acid-polyethylene carriers, with metal complexes, struct., mol. mobility *(Russian)* 7—97903
polyaniline, ab initio HF energy band struct. calcs. 7—116820
polyaniline, NMR and transport props., water vapour pressure dependence 7—70656
polycarbosilane fibre, oxidation curing mechanism by solid-state ^{29}Si high-resolution NMR 7—119528
polycrystalline solids, heteronuclear bond distances, NMR 7—132139
polyethylene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7—70673
polyethylene, linear, natural abundance ^{13}C spin exchange study 7—70663
polyethylene, melt crystallised, morphological partitioning of chain ends and methyl branches, NMR obs. 7—124125
polyethylene, solid, cross polarisation, sample spinning effect 7—90207
polyethylene, struct. change with temp., ^{13}C NMR study 7—104596
polyglutamic acid, conform., X-ray, IR and ^{13}C CP/MAS NMR obs. 7—92524
polyimides, aromatic, model cpd. electronic interactions, IR and NMR spectrosc. obs. *(Russian)* 7—135942
polymyxin B, double-quantum filtered COSY expts., decoupling, excitation, NMR 7—67357
polynorbornene, double bonds ^{13}C NMR 7—118881
polyorganosiloxanes, sulphonated, struct., thermal and hydrothermal stabilities, NMR obs. 7—85447
polyoxetanes, solid-state ^{13}C NMR, chain conform. effects 7—92521

nuclear magnetic resonance continued
polyoxymethylene ^{13}C NMR spectra, chemical shift, electronic structure, solid state, tight-binding calcs. conformation 7−143317
polyphenylenesulphide film, doped, cond. mechanism, electronic struct., XPS, IR spectra, NMR, CNDO calc. 7−70983
polyphosphates, open-chain linear, ^{31}P NMR spectra anal. chemical shifts, effect of pH and protonation 7−68353
polyphosphazene, fluorinated, solid, abundant spins, MAS NMR investig. 7−85456
polypropylene, ^{1}H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
polypyromellitimides, electronic interactions, IR and NMR spectrosc. obs. *(Russian)* 7−135942
polypyrrole containing ferrous cyanide anions, synthesis and spectroscopic charact. 7−77559
polystyrene/polymethyl methacrylate, deuterated, intermol. polarisation transfer, CPMAS NMR spectroscopy 7−111428
polystyrene/polyvinyl methyl ether, deuterated, intermol. polarisation transfer, CPMAS NMR spectroscopy 7−111428
polysulphone, synthesis, NMR and rheological study 7−119530
polythienylpyrrole, electrolytic polymerisation and struct. props. 7−78493
polythiophene: BF_4^-, Pauli and Curie susceptibility, ESR/WMR meas. 7−77203
polythiophenes, structure, ^{13}C NMR and Fourier transform IR studies 7−76041
polyurethane elastomers prepolymers, IR, ^{1}H and ^{13}C NMR spectra 7−92508
polyvinylidene fluoride, piezoelec., NMR studies, review 7−112963
polyvinylmethyldialkoxysilanes, struct., ^{13}C NMR *(Russian)* 7−85452
potassium benzoate, disproportionation to potassium terephthalate reaction system, ESCA, NMR, chemical anal. 7−126419
proline, ^{15}N chemical shift tensor for alanyl-prolyl peptide bond 7−139206
E-propene-1-thiol, NMR and mass spectra, vibr. and rot. anal., mol. conformation 7−116991
protein crystal structure, soln. with model obtained from NMR interproton distance restraints 7−114182
protein-DNA interactions, ^{15}N-labelled P22 c2 repressor for NMR studies 7−133187
proteins, ring-current shifts interpretation 7−90460
proteins, structure and interactions, sequential NMR assignments and isotope labelling 7−93639
protonated C suppression with total suppression of spinning sidebands of ^{13}C NMR spectra 7−68358
pulse sequences synthesis yielding arbitrary symmetric magnetisation vectors 7−89237
pulsed amplifier controller 7−89239
pyrazolines, and salts, ^{15}N NMR spectrosc. 7−96746
pyrene, single cryst., ^{13}C chem. shielding tensors 7−105503
pyridene, ^{13}C-^{15}N scalar splittings in ^{13}C NMR spectra 7−68350
pyridine, binding to γ-Al_2O_3, surface site distribs. ^{15}N and ^{1}H NMR 7−92512
pyridine, substituted, solid, broad line NMR appl. 7−85450
pyridine-N-oxides, 4-substituted, ionis. pots. and chem. shifts, NMR investig. 7−109929
pyrido(2,3-b)pyrazine, $^{3}n\pi^*$ triplet state optical and mag. props. 7−90257
quadrupolar nuclei, NMR spectra line narrowing, appl. of supercritical fluid solvents 7−109942
quadrupolar nuclei, VASS NMR investig. 7−106039
quasi-1D organic conductors, electronic correls., nuclear relax. rate anal., scaling calcs. 7−77422
quasi-2D systems, anisotropic supercond. state, NMR relax. rate 7−125552
quasiadiabatic transit for multispin resonances 7−138307
resins, crosslinked, uptake of metal ions from aq. H_2SO_4 7−92523
retinyl Schiff bases, 2-photon, ^{13}C and 2D ^{1}H NMR 7−90199
reversed-phase chromatographic surfaces, temp. effects, ^{13}C NMR 7−129748
rhyolitic glasses, state of water, ^{2}H NMR study 7−138343
α-ribazole-3′-phosphate, detached cobalamins nucleotide, ^{13}C NMR study 7−119723
D-ribose, enthalpies of combustion and form. ^{13}C and ^{1}H NMR 7−93359
rigid body, symmetrical, equations of motion 7−95304
ring deuterated smectic liq. cryst., D NMR spin-lattice relax. studies 7−77420
RNA fragment, conform., NMR study 7−119725
RNA polymer, double stranded poly(rA).poly(rU), imino protons, spin-lattice relax. study, NMR spectra anal. 7−74672
rod- and disk-like solutes in nematic liq. crystal 5CB, orientational order, PMR and DNMR 7−74665
rubber, natural, γ-irradiation cross-linked, solid-state ^{13}C NMR obs. 7−106805
rubber, natural, microstructure and hydrobromination, NMR spectra 7−116994
rubber, natural and synthetic, cold crystallisation, chain microstruct. effects 7−92522
ruby crystals, hypersound self-focusing, APR hysteresis study *(Russian)* 7−91737
ruby solid-state NMR laser with injected signals, instabilities and chaos 7−74937
seeds, oil-yielding, quantitative NMR anal. 7−114057
semiconductors, optically induced nuclear magnetic resonance 7−99613
semiperchlorates of aromatic N-bases, NMR and IR spectra, intramol. NH^+. . .N bond, influence of additional N-atoms 7−90138
DL- serine-d_2, single cryst., quadrupole tensors, ENDOR-detected NMR 7−112995
short lived nuclei, implantation, NMR, ISOL for relativistic heavy ion fragments 7−118869
sideband suppression techniques in magic-angle sample spinning NMR 7−89235
signals, gaussian lineshape, saturation *(Slovak)* 7−134823
silicate glasses, evidence of [SiO_6] units, NMR studies 7−137254
silk fibroins biosynthesis in silkworms 7−114190
slow molecular motion, nuclear magnetic relax. studies 7−106053
sodium acetate, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
sodium alkonoates, lamellar phases, quadrupole coupling const. calc. 7−85478
sodium octanoate-octane-water system, liq. cryst. phase, nucl. mag. relax. study 7−99599
sol/gel polymerisation, NMR 7−86619
nuclear magnetic resonance continued
solid polymers, 2D NMR spectroscopy study of struct. and props. *(German)* 7−132143
solid polymers, NMR spectroscopy, 51st physics conference, Berlin, Germany (March 1987) *(German)* 7−128179
solid surfaces, deuteron NMR for study of physi- and chemisorbed matter 7−124722
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
solids and liq. crystals, broadband heteronuclear decoupling, composite magic-angle rot. sequence 7−102474
spectrometers, microcomputer controlled mag. field parameters *(Czech)* 7−134822
spheroidal surface, fixed or freely rotating, nucl. spin relax., lateral diffusion 7−125553
spin diffusion in zero field 2D deuterium mag. reson. 7−117791
spin glass ordering, hyperfine interaction techniques, data review 7−112797
subcritical Hopf bifurcation obs. in NMR laser device 7−141873
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
superconducting solenoids constant determ., by nuclear induction 7−134821
surface hyperfine fields, Mossbauer, NMR and PAC studies, review 7−112267
surface science investigations, mag. reson. techniques 7−108613
tetraalkylammonium salts, alkyl chain mobilities 7−122571
tetraarylporphyrins, atropisomerism, steric effects 7−74669
1,1,3,3,-tetracyanopropane, cryst. struct. and vibr., spectrosc. obs. 7−98102
tetracyclines, solid, ^{13}C NMR 7−99582
tetraethylorthosilicate, hydrolyses, condensation, multinuclear NMR study 7−126440
tetraethylstiboniummetaperiodate, NMR quadrupole coupling consts. temp. depend. 7−74685
tetrahydropyrans, 2-substituted, anomeric effect, solvent polarity influence, ^{13}C NMR spectra 7−90189
tetramethylammonium ions, tapped in zeolites, NMR chem. shift. surface curvature effects 7−109932
2,2,6,6-tetramethylpiperidine nitroxide radical used to study $LiClO_4$, LiI, LiBr, $NaBPh_4$ and NaI solns. 7−119512
tetramethylsilane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
thionitrites, ethyl and butyl substituted, ^{14}N NMR investig., conform. anal. 7−122569
thioureas, N,N-disubstituted, ^{13}C NRM chem. shifts 7−82215
thymine-d3, elec. field gradient, ^{2}H NMR 7−118872
tiaprofenic acid, ^{1}H and ^{13}C NMR 7−96747
$(TMTSF)_2PF_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
$(TMTSF)_2ReO_4$, metal-semiconductor transition, ^{13}C NMR study 7−106049
$(TMTSF)_2X$ salts, collective modes 7−84853
$(TMTSF)_2X$ salts, quasi-one-dimensional systems, anisotropic supercond., NMR relax. rate calc. 7−85195
$(TMTTF)_2PF_6$, interplay between spin-Peierls and antiferromag. ground states under press., NMR study 7−85476
toluene-α-d_3, isotope shifts, solvent and substituent perturbation on ^{13}C NMR 7−90190
p-toluic acid, polycryst., zero-field NMR, correl. H^+ jumps effect 7−99587
transition metal chromophore as sensitive tag for proteins 7−144970
transition metal cpds., P-containing, struct, reactivity, ^{31}P NMR, review 7−93308
trialkylphosphine probes adsorbed on SiO_2-Al_2O_3, ^{31}P NMR study 7−68349
triangular lattice Heisenberg antiferromagnet, spin wave reson. calcs. 7−106030
trimedlure-Y, ^{13}C and ^{1}H chemical shift assignments and conformation confirmation, 2-D NMR 7−122574
1,3,5-trimethoxybenzene, two-dimens. chemical-shift anisotropy correlation spectra 7−106040
trimethyltin hydroxide, solid, high resolution NMR spectrum 7−85446
triphenylene-d_{12}, elec. polarisability tensor, NMR study 7−82224
1,2,3-triphenylphosphirene, solid, mag. shielding tensor meas. 7−92509
trisarcosine calcium chloride crysts., H bond structural changes at ferroelec. transition, ^{2}D NMR study 7−77409
two level systems, excitation, NMR, iterative maps with multiple fixed points 7−92514
two-dimensional ^{13}C-^{1}H J-resolved NMR recycled-flow method, sensitivity enhancement 7−135969
two-dimensional NMR, free induction decays, exponential sampling study 7−102473
two-dimensional NMR spectra, base-plane distortions correction scheme 7−102476
two-level system, broadband excitation, composite pulse sequences, iterative maps 7−103537
unsaturated systems, isotope effects, ^{13}C NMR chem. shifts and hyperconjugative interactions 7−68344
vancomycin-Ac-D-Ala-D-Na intermolecular interactions, ^{15}N NMR 7−129749
vinylidene cyanide-methyl methacrylate copolymer, microstruct., ^{13}C NMR spectra 7−116993
vinylidene fluoride copolymer fluoroelastomers, composition, sequence distrib., ^{19}F NMR obs. 7−70655
vinylidene fluoride-trifluoroethylene copolymers, struct., morphology, wide-line NMR obs. 7−92520
vinylidene-fluoride terpolymer fluoroelastomers, composition, sequence distrib., ^{19}F NMR obs. 7−70655
4-vinylpyridine copolymerised with styrene in benzene soln., ^{1}H NMR and ^{13}C NMR spectra *(French)* 7−126450
wood components, ^{1}H T_1 and T_2 relax. times, ^{13}C CP/MAS NMR obs. 7−106045
$Y_2Cu_2O_5$, EPR and NMR meas. 7−118710
zeolite Ca-A, thermally treated, framework defects, NMR spectra study 7−70661
zeolites, form., Raman spectrosc. obs 7−70801
zero-field NMR, residual fields, quenching by nonaxially symmetric dipolar coupling 7−135968
:$La_{1.8}Sr_{0.2}CuO_4$, high T_c-supercond. 7−112535
Ag-Al, NMR study of Al diffusion 7−106047
Ag(III) complex *(German)* 7−104698

uclear magnetic resonance continued
$Ag_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
^{104}Ag, nuclear orientation, ground state spin assignments, NMR advances 7−116262
Al halides, o-nitrophenol complexes, NMR spectra 7−109948
Al, in hydrothermally treated zeolites, NMR chem. shift determ. 7−82216
Al, self-diffusion, NMR study 7−105097
$AlCl_3$, aq. soln., water struct. and dynamics, NMR study 7−92534
$Al_xGa_{1-x}As$, undoped, and highly doped Al effective electron density var., at. config., NMR chem. shift obs. 7−98033
Al_2O_3-SiO_2 gels and sols, growth processes and struct. 7−119587
Au-Al, NMR study of Al diffusion 7−106047
^{189}Au, nuclear orientation, ground state spin assignments, NMR advances 7−116262
B halides, o-nitrophenol complexes, NMR spectra 7−109948
BH_3 coordination complexes form. CNDO/2 calcs., NMR coupling const. *(French)* 7−132931
$BaCuO_2$, EPR and NMR meas. 7−118710
$Ba(PO_3)_2$-BaF_2-AlF_3 glasses, struct., NMR obs. 7−104578
$Ba(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578
$BiO_{0.1}F_{2.8}$, tysonite-like solid electrolyte, NMR study of anion mobility 7−91889
$BiVO_4$, ferroelastic, twin struct., NMR, X-ray diffr. studies 7−91599
$BiVO_4$, twin domain wall, NMR study *(Korean)* 7−142889
a−C:H films, inhomogeneous bonding, XPS, NMR, and nuclear resonant studies 7−92028
CO clathrate hydrate, dielectric, NMR and X-ray powder diffr. meas. 7−139911
^{13}C T_1 measurements via polarisation transfer, sensitivity enhancement 7−122568
$CdCr_2Se_4$, pure and In doped spinel, NMR of innerdomain ^{53}Cr nuclei *(Russian)* 7−138342
Co bulk and thin film samples, nuclear spin-lattice relax. meas. *(Russian)* 7−125555
Co-Fe bulk and thin film samples, nuclear spin-lattice relax. meas. *(Russian)* 7−125555
Co-Ga B2 ordered alloys, vacancy and antistruct. atom conc. and diffusion, NMR study 7−105105
Co-ThO_2-ZSM-5, physically admixed catalysts, zero field NMR studies 7−112967
Co-ZSM-5, physically admixed catalysts, zero field NMR studies 7−112967
$Co_{80-x}Fe_xB_{20}$ amorphous alloys, ^{59}Co NMR study 7−132138
$CoSiF_6.6D_2O$, rhombohedral-monoclinic transition, ^{2}D NMR study 7−124475
$CoSiF_6.6D_2O$, struct. phase transitions, ^{2}H NMR 7−91795
$CoTiF_6.6D_2O$, rhombohedral-monoclinic transition, ^{2}D NMR study 7−124475
$CoTiF_6.6D_2O$ struct. phase transitions, ^{2}H NMR 7−91795
^{59}Co NMR spectra, personal computer database construction *(Japanese)* 7−143919
CrO_4^{2-}, in liq. crysts., linear dichroism study 7−82237
Cs ions, complexed, ^{133}Cs solid-state NMR 7−132149
Cs^{133} ions, Gramicidin transmembrane channel, spin 7/2 relaxation processes, NMR spin-echo study 7−77424
^{A}Cs, A=118,121, on-line nuclear orientation, relaxation studies 7−118883
Cu-Al, NMR study of Al diffusion 7−106047
Cu^{2+}-poly(riboadenylic acid) interaction, NMR investig. 7−90211
$Cu_xMo_6S_8$, NMR and mag. susceptibility meas. *(Russian)* 7−99597
CuO, EPR and NMR meas. 7−118710
$Cu_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
^{19}F NMR imaging of the vascular system in vivo, rat obs. 7−139421
Fe complex, mixed valence, lattice dynamics, ^{2}H NMR 7−92511
Fe, NMR spectra, hyperfine splitting frequencies 7−81298
Fe single cryst., hyperfine mag. fields, asymmetric β-decay meas. 7−112964
Fe/V superlattices, atomic configuration near interface, substrate temp. depend. 7−112102
Fe-B-V amorphous and cryst. alloys, local atomic struct., NMR studies 7−118867
Fe-Co, hyperfine anomalies and γ-factors of Co isotopes, NMR/ON meas. 7−112965
α-$Fe_{2-x}Al_xO_3$, hematite, ^{57}Fe NMR, exchange integrals 7−125544
$Fe_3B_{1-x}C_x$, orthorhombic, Mossbauer studies 7−112966
$FeBO_3$, nucl. magnetoelastic reson. obs. 7−70654
FeNi complexes, prep. and struct. anal. 7−98092
Ga halides, o-nitrophenol complexes, NMR spectra 7−109948
GaAs:Cr(Cu), doped and undoped, electric saturation of an NMR line, roles of defects and spin diffusion 7−99584
GaN, β-emitting, ^{12}N quadrupole effects 7−118889
$Gd(T_{1-x}Co_x)$, T=Mn,Fe,Ni,Al, hyperfine props., NMR study 7−132141
$Gd_xY_{1-x}Fe_2$, exchange parameters, omnidirectional pressure effects 7−92525
Ge-substituted silicate cages, ^{29}Si 2D NMR 7−90197
H adsorbed on SiO_2-supported Rh, ^{1}H NMR spectra 7−112059
H_2O solution, solvent reson. selective suppression technique 7−102475
H_2O-amino acid interaction, NMR relax. investig. 7−90219
H_2O-protein interaction, NMR relax. investig. 7−90219
$(H_3O)Zr_2(PO_4)_3$, cation reorientation, ^{31}P and ^{2}H NMR spectra 7−143916
H_3PO_4, ^{31}P NMR, four-field irrad., three-photon reson. anal. 7−109937
^{3}H, solid, high polarised, magneto-static modes 7−118193
^{3}He and proton nuclei magnetic moments ratio determ. 7−110134
^{3}He, liquid, NMR in confined geometries *(Japanese)* 7−98611
^{3}He NMR and superfluidity in ^{3}He-^{4}He solns. 7−131384
^{3}He, superfluid, quantized vortices, NMR studies of ferromagnetism, review 7−143129
^{3}He superfluid B phase, dipole interactions and NMR freq. 7−124619
^{3}He, superfluid B-phase, thin layers, mag. reson. and spin waves 7−70018
^{3}He-A superfluid, nonlinear NMR props. *(Russian)* 7−76524
^{3}He-B, vortex-free state in rotating cylinder, CW NMR spectra 7−137654
Hg complex, octakis (N,N-diethyldithiocarbamato)penta Hg(II)$(ClO_4)_2$, cryst. and mol. struct. 7−92513
Hg-protein-ligand complexes, ^{81}Br NMR spectra study 7−141728
$Hg_{1-x}Cd_xTe$ semiconductor alloy, structural ordering, ^{125}Te NMR chemical shifts 7−118877
$HoCo_2$, NMR study of magnetisation direction change 7−125546

nuclear magnetic resonance continued
^{106}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{108}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
KHF_2, zero field NQR and low-field NMR 7−90203
$K(NH_3)_{4.3}C_{24}$, ^{1}H NMR, ^{14}N quadrupolar coupling, ^{1}H chemical shift, mol. orientation 7−92526
$KNbF_6$, struct. transforms., NMR relax. investig. 7−70666
KSCN, complexation by dibenzo-30-crown-10, ^{39}K NMR obs. 7−90215
$KTaF_6$, struct. transforms., NMR relax. investig. 7−70666
$LaCu_5H_{3.4}$, H absorpt. and diffusion, NMR studies 7−85461
$La_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., NMR and NQR studies 7−138345
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., energy gap, Korringa const., determ. by NMR 7−132144
LiC_6, diffusion processes, β-NMR obs. 7−112990
LiH, ordered spins, phase diagrams at positive temp. 7−105887
LiI-Al_2O_3 composite electrolyte, ^{7}Li NMR study 7−70664
$Li_xMo_6S_8$, Chevrel phases, ^{7}Li NMR obs. 7−112975
$Li_xMo_6Se_8$, Chevrel phases, ^{7}Li NMR obs. 7−112975
$LiNbO_3$-based solid solns., cationic distrib., ferroelec. and NMR studies 7−118959
Li_2O-B_2O_3-SiO_2, struct., ^{11}B NMR studies *(Korean)* 7−137255
Li_2O-P_2O_5-VO_2, noncrystalline, elec. props. and mag. resonance *(Chinese)* 7−112406
Li_2O-Ta_2O_5-MgO ferroelec. ceramic, Mg cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
Li_2O-Ta_2O_5-ZnO ferroelec. ceramic, Zn cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
$LiTaO_3$-based solid solns., cationic distrib., ferroelec. and NMR studies 7−118959
γ-LiV_2O_5 mixed conductor, transferred hyperfine intersection, NMR study 7−112263
Li_2X-B_2O_3-SiO_2 (X=O,Cl_2) glasses, Li^+ conduction enhancement, network dilation and bonding strength variation effects 7−84385
^{8}Li, nuclear spin polarisation by tilted foil technique 7−118871
$MSiO_3$ (M=Mg, Ca, Ba, Sr), NMR chem. shift determ. 7−77414
$MnCl_2.4H_2O$, ^{55}Mn pulsed NMR of oriented nuclei 7−132152
Mo complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
$(ND_4)_2SnCl_6$ single cryst., ammonium ion rotational tunnelling and reorientation, NMR studies 7−91497
NH_3 chemisorption on γ-Al_2O_3, multinuclear solid state NMR investigation 7−70662
$NH_4Ga(SO_4)_2.12H_2O$, NH_4^+ and H_2O motion, NMR and dielec. 7−125554
NH_4HSeO_4, identification of new cryst. phase, polymorphic transform., NMR spectra 7−98029
$NH_4In(SO_4)_2.12H_2O$, NH_4^+ and H_2O motion, NMR and dielec. 7−125554
NH_4NCS, ^{13}C and ^{15}N NMR 7−118866
NH_4ReO_4, cooperative ordering, pseudospin model 7−111435
$(NH_4)Zr_2(PO_4)_3$, cation reorientation, ^{31}P and ^{2}H NMR spectra 7−143916
Na complex, Na lasalocid, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
Na complex, Na monensin, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
$NaHF_2(d_1)$ zero field NQR and low-field NMR 7−90203
$Na_6Si_6Al_6O_{24}$-NaCl, NMR chem. shift determ. 7−77415
$Na_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
$Nd_{1-x}Ca_xF_{3-x}$ solid electrolyte, diffusion mechanism of F ions 7−69967
NiMn, reentrant spin glass state, NMR study 7−132155
^{17}O NMR spectra, acoustic ringing and pulse breakthrough correction, maximum entropy method 7−90030
P_4, NMR shielding consts., ab initio coupled HF calcs. 7−74677
PF_n cpds., ^{31}P NMR shieldings, coupled HF calcs. 7−89935
PFO_3^{2-}, ^{19}F and ^{31}P NMR, transverse nucl. spin relax. 7−109945
PHO_3^{2-}, struct. and dynamics, longit. NMR relax. study 7−141605
PO_4^{3-}, ^{31}P NMR shieldings, coupled HF calcs. 7−89935
Pb complex, Pb(II) amides, natural abundance ^{15}N NMR, INEPT pulse sequence study 7−90210
$Pb_{1-x}Bi_xO_xF_{2-x}$ solid solutions, F ion mobility, NMR studies *(French)* 7−138335
$Pb_{0.92}Mo_6S_{7.5}$ Chevrel phase superconductor, ^{207}Pb electron environment, mag. props., NMR study *(Russian)* 7−143921
PbO-SiO_2 glass, ^{29}Si environment, magic angle spinning NMR studies 7−104577
PbO_2, electrochemical activity, NMR study on battery and chemically prepared material 7−143915
Pd complex, aminopolycarboxylate, ^{1}H and ^{13}C NMR 7−90214
PdT, solid-fluid transition of ^{3}He bubbles, NMR evidence 7−138340
cis-Pt (diamine)(ascorbate) complexes, soln. chem., NMR investig. 7−129742
Pt complex, aminopolycarboxylate, ^{1}H and ^{13}C NMR 7−90214
Rb-Cs alloys, elec. field gradients and diffusion 7−112982
$RbCaF_3$, ^{19}F NMR chemical shift meas., shielding anisotropy anal. 7−112983
$Rb_2Cr_{1-x}Mn_xCl_4$, spin-glass, NMR spectra *(Japanese)* 7−77411
S containing species, ^{33}S NMR chemical shieldings, ab initio coupled HF perturbation theory calcs. 7−109719
SCN^-, interaction with H_2O mols., calcs. and NMR 7−89944
^{116}Sb, mag. moment, on-line resonance meas. at DOLIS-COLD facility 7−116272
$^{116}Sb_g$, magnetic moment meas., NMR/ON technique 7−109023
ScH_x, HCP, H diffusive hopping, proton and ^{45}Sc NMR obs. 7−124585
SeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
Si 7−118887
Si containing cpds., NMR shielding consts., quadrupole coupling, ab initio calcs. 7−68342
a-Si:F films, deposition by flow discharge, magnetron and diode sputtering, NMR and IR studies 7−138333
Si:P, spin localization, ^{31}P NMR studies 7−137864
SiO_2, amorphous, press. induced bond angle var., NMR meas. 7−69596
SiO_2/Si interface, chemical and electronic struct. 7−70099
^{27}Si nuclear spin polarisation by tilted foil technique 7−118871
Sn complex, Sn(II) amides, natural abundance ^{15}N NMR, INEPT pulse sequence study 7−90210
$SnMo_6S_8$, normal and superconducting, NMR studies 7−106054
SrO-B_2O_3-Al_2O_3 glass struct., NMR study 7−91458

nuclear magnetic resonance continued
T_c solid, atom densities, NMR studies 7−138334
^{178}Ta oriented nuclei; NMR meas. 7−73698
$TbFe_2$, NMR study, distrib. of super-thin fields *(Russian)* 7−91449
TeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
$Th_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
Tl-Te-Bi liq. system, electron localisation, NMR studies 7−98787
$TlClO_4$, NMR spin lattice relax. time temp. depend. meas 7−92537
UBe_{13} heavy fermion superconductor, coherence and pair-breaking effects, extended BCS theory 7−70466
UBe_{13} heavy fermion supercond., NMR study 7−118875
UBe_{13}, low temp. ^{9}Be spin-lattice relax. rate meas. in heavy fermion superconductor 7−70477
U_6Co, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
α-UF_5, polycryst., hyperfine interaction, ^{19}F NMR 7−143918
U_6Mn, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
UP, ^{31}P NMR, dynamic mag. behaviour study, paramag. state 7−125551
UPt_3, heavy fermion supercond., ^{195}Pt Knight shift 7−112666
V complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
W complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
h-WO_3, intercalation cpds., H-containing, NMR obs. 7−112977
Xe adsorbed on zeolites, ^{129}Xe NMR, relationship between chemical shift and void space 7−98673
Y-Ba-Cu-O high T_c superconds., NMR and EPR studies 7−118710
$YBa_2Cu_3O_7$, high T_c supercond., NMR and NQR studies 7−138345
$(Y_{1-x}Ba_x)_2CuO_{4-\delta}$ 7−112535
$YH_2(D_2)$, NMR rotating frame relax., spin-spin interactions, rigid lattice regime 7−85466
$YH_x(D_x)$, diffusion of H(D), NMR relax. rates 7−84373
YIG domain walls, NMR relax., defect influence 7−112988
$Y_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
$Y_{3-x}M_xFe_5O_{12}$, M=Ho, Gd, Nd, Pr, La, Bi, transferred hyperfine interaction, NMR studies 7−112262
$Y_{2-x}Sm_xSn_2O_7$, high resolution solid-state NMR, paramag. shift probes 7−132142
YbCuAl, ^{27}Al quadrupole splitting, temp. depend. NMR studies 7−125545
Zn^{2+} solutions in conc. aqueous KOH, structure, Raman and ^{67}Zn studies 7−97896
$Zn(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578
$ZnTiF_6.6D_2O$, rhombohedral-monoclinic transition, ^{2}D NMR study 7−124475
$ZnTiF_6.6D_2O$ struct. phase transitions, ^{2}H NMR 7−91795
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
$(Zr_{0.5}Ni_{0.5})_{100-x}$ P_x metallic glasses, magnetisation, ^{31}P NMR study 7−112762
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564

nuclear magnetic resonance imaging (biomedical) *see biomedical NMR*

nuclear magnetic resonance spectroscopy
2D, overview and app.. 7−108588
2D rotating frame NMR spectroscopy, separation of cross-relax. and J cross-peaks 7−73385
75 GHz spectrometer for microwave-induced optical nuclear polarisation 7−108599
acoustic ringing effects in pulsed Fourier transform NMR spectroscopy 7−108607
amino acid residues in proteins, aq. soln., homonucl. relayed coherence transfer expts. 7−82222
amplitude- and frequency-modulated pulses to achieve 90° plane rotations with inhomogeneous B_1 fields 7−71943
antisymmetric two-dimensional NMR spectra 7−89232
autocorrelation NMR, Fourier transformed signal, free induction decay 7−140720
B_1 field precision mapping, nutation rate, rot. frame expt., spin echo imaging 7−108584
benzene-d, homonucl. dipolar-decoupling technique in heteronucl. NMR 7−80833
blood flow imaging, magnetic resonance, analytic phase correction *(Japanese)* 7−114449
broadband decoupling, three-spin effects 7−73392
catalysts, sample cells for NMR and EPR spectroscopy 7−128606
cell spheroids perfusion for NMR spectroscopy study 7−139416
chemical analysis methods, review *(Italian)* 7−86688
coherence transfer via longitudinal spin order generalized pulse pair filtering for pure phase two-dimensional NMR spectroscopy 7−109931
composite pulses in multiple-quantum NMR 7−67355
computer controlled spin echo spectrometer for the study of ferromagnetic materials 7−115981
data matrix reduction technique of 3D NMR spectroscopy 7−121175
diagnostic imaging developments, MR and NMR imaging 7−79062
double-quantum filtered COSY expts., decoupling, excitation, NMR 7−67357
double-quantum spectra, multiplet effects 7−121174
double-quantum spectra technique, pattern recognition methods 7−134828
double-tuned ^{13}C/^{1}H probe cct. for CP/MAS NMR, linewidths 7−73390
fast line-scan imaging using line-shaped focusing field *(Japanese)* 7−108608
fast scan, magnetic field gradients determ. 7−128614
fast-scan NMR imaging system *(Japanese)* 7−108612
fast-scan NMR imaging using extra nonselective 180° nutation pulses *(Japanese)* 7−108610
field-gradient modulation shapes meas. 7−80837
Fourier, programmable frequency divider appl. *(Czech)* 7−128618
Fourier transform NMR spectroscopy, free induction decay manipulation, freq. shift operation 7−89242
free induction decays, nonstable mag. fields, time-averaging using Hilbert transforms 7−108592
frequency to magnetic field convertor with digital readout 7−108601
Fresnel transform imaging using scannable nonlinear field gradient *(Japanese)* 7−108609
Hartmann-Hahn transfer, water suppression, lock and return expt. 7−71683
heteronuclear spin systems, Overhauser expts., T_1 determ. 7−108606
high current electromagnets for NMR, stabilisation circuit 7−121170
high field, anal. appls. 7−80838
homonuclear coupling const., pure phase NMR subspectra 7−67354
homonuclear editing method for ^{13}C-^{1}H and ^{12}C-^{1}H signals 7−122565

nuclear magnetic resonance spectroscopy continued
human leg, volume selected ^{1}H NMR spectra, surface coil reception technique appl. 7−107199
in-phase and antiphase coherence transfer processes, diagrammatic representation 7−108595
incremental phase shifter and freq. modulator for NMR imaging and spectroscopy 7−87136
linear prediction processing improvement 7−121172
lineshape thermometry at low temps. 7−89243
localised NMR spectroscopy, selective pulse techniques simulation 7−115982
localised spectroscopy using FLASH NMR images, image characterisation 7−73398
long-range heteronuclear chem.-shift correl., one-bond decoupling modulation, BIRD pulse appl. 7−89245
low temp. Fourier transform NMR 7−89233
magic angle ^{13}C NMR spectroscopy, hybrid spinner and new reference material 7−102470
magic-angle spinning NMR, efficient stator rotor assembly 7−95632
magnetism applications of neutron spin echo spectroscopy 7−92546
magnetometer with low-noise limited oscillator 7−95627
medical application, pulse sequence design for vol. selective excitation 7−71842
medical imaging, quantitative anal. 7−87147
microprocessor controlled electronic integrators 7−108590
microprocessor-based, interactive, magnetic field lock-in system 7−121180
microscopic regime potential of NMR imaging 7−114585
minor component anal. without large peak suppression 7−67361
multinuclear transceiver/digitizer for high-resolution NMR spectrometer 7−95631
multiple quantum excitation with one-quantum hamiltonian 7−108589
multiple-quantum-filtered COSY spectra acquisition 7−108593
Nicolet data transfer to the AT&T 6300 computer 7−128617
NMR, broadband heteronuclear decoupling, composite magic-angle rot. sequence 7−102474
NMR RF excitation, Bloch and Korteweg-de Vries eqns. connection 7−89241
NMR spectroscopy, two-dimensional spectra, cross peaks detection, cluster anal. 7−89247
NQR absorption spectrometers, construction and appl. to high technology materials *(Japanese)* 7−73384
organic molecules λ, aq. soln., ^{31}P NMR spectra, Prony-Burg method anal. 7−107322
oriented radioactive nuclei NMR and spin-lattice relaxation, automatic meas. 7−128616
parameter estimation by deconvolution 7−102485
P.E. COSY method study 7−67359
phase distortion, in binomial solvent suppression pulse sequences, elimination 7−128613
PMR spectroscopy, solvent effects 7−134410
polymers, NMR analysis, computerized model fitting 7−78568
probe, low freq. use, active damping circuit 7−115985
protonated C suppression with total suppression of spinning sidebands of ^{13}C NMR spectra 7−68358
pulse programmer for NMR expts. 7−80836
pulse symmetry 7−128609
pulsed NMR probe-monitoring system 7−102484
quadraphase modulator for proton-detected ^{1}H-X correl. spectrosc. 7−73394
quadrupolar nuclei, NMR spectra line narrowing, appl. of supercritical fluid solvents 7−109942
rapid FLASH NMR imaging, transverse coherence 7−89238
reduced multidimens. NMR expts., linear least squares procedure 7−89244
relaxation time and proton density images *(Japanese)* 7−108611
RELAY NMR, multipole-quantum filters appl. 7−102479
remotely controlled crossed coils NMR probe 7−95628
resolution enhancement in NMR spectroscopy, new apodisation fn. 7−73387
selective excitation and phase reversal, Bloch eqns., spherical coord. system 7−134826
selective pulse excitation in NMR imaging microprocessor-based instrument 7−108598
sensitivity increase, using autodyne with precision calibrator 7−102480
sensor for cryomagnets 7−108605
sign-labelled polarisation transfer meas., sensitivity enhancement, bilinear π pulses 7−108591
signal convolution by digital signal processing 7−67358
signal-to-noise ratio enhancement, vector space technique 7−134825
solid state NMR spectrometer component developments 7−128604
solvent signal suppression without phase distortion in high-resolution NMR 7−73399
spatially localised signals, shimming limitations study 7−102477
spectral phasing, partial spin echoes reconstruction method 7−134827
SPLASH imaging 7−73395
spurious echo cancelling in NMR imaging expts., phase-cycling technique 7−73386
stopped-flow NMR tube study 7−140719
SUPER COSY pulse scheme optimisation using fixed delays 7−134824
superconducting solenoids constant determ., by nuclear induction 7−134821
surface coil rot. frame expt., residual Z magnetisation detection 7−67356
symmetric phase-alternating composite pulses 7−73391
three-dimens. J-resolved NMR spectroscopy 7−114576
time-domain model fitting, improved algorithm 7−121173
two-dimensional ^{13}C-^{1}H J-resolved NMR recycled-flow method, sensitivity enhancement 7−135969
two-dimensional homonuclear multiple-quantum spectroscopy, ω_1-scaling pulse sequences 7−121169
two-dimensional interferometry, using cross-correlation technique 7−102510
two-dimensional NMR, cross-peak fine struct. simulation 7−128612
two-dimensional NMR, free induction decays, exponential sampling study 7−102473
two-dimensional NMR spectra, base-plane distortions correction scheme 7−102476
two-dimensional NMR spectroscopy, appl. of freq.-selective soft radiofreq. pulses 7−108597
two-level system, broadband excitation, composite pulse sequences, iterative maps 7−103537
volume-selective multipulse spin-echo spectroscopy 7−80835

uclear magnetic resonance spectroscopy continued
white noise nonlinear system anal. 7−102482
zero-quantum coherence spectra, scalar coupling networks, freq. filtration 7−128611
zero-quantum spectroscopy, multiple-quantum filters, appl. 7−123174
^{13}C longitudinal relax. meas. using ^{1}H detection 7−108596
^{13}C-^{1}H resonances, in in vivo NMR spectrum, editing technique 7−73393
H_2O solution, solvent reson. selective suppression technique 7−102475
^{1}H and ^{31}P NMR, simultaneous in vivo meas. using balanced-matched double-tuned probe 7−71942
KOH, high-temperature Stark and radiofrequency-microwave double-resonance microwave spectrometer 7−103688
^{31}P solid state NMR, spectra line narrowing technique study 7−102478
^{31}P topical NMR spectroscopy, human organ study appl. 7−87132
$TiCuD_x$, amorphous and cryst., charactn. by deuteron mag. resonance 7−118876

uclear magnetic shielding *see nuclear screening*

uclear mass
see also atomic mass; nucleus
A=101-106, β-transition end-point energies, masses, nuclear structure effects 7−141030
actinide mass microscopic formula, fermion dynamical symmetry approx. to spherical shell model 7−135195
deformed nuclei, Thomas-Fermi approach to nuclear mass formula 7−135193
extended Thomas-Fermi model with Skyrme-type force, mass formula 7−121635
fission barriers, Thomas-Fermi approach to nuclear mass formula 7−135193
harmonic oscillator energy level spacing, mass number depend. for trapezoidal average density 7−109029
heavy ion collisions, quasi-molecule dinuclear system charge and mass distrib. 7−129104
infinite nuclear matter, saturation props. and mass formula, Hugenholtz-Van Hove theorem 7−121691
target nucleus charge and mass no. depend. of optical model phase shifts 7−109130
Z=5-15, mass measurements far from stability using (^{40}Ar,X) 7−109002
($\pi^{\pm}$,$\pi^{\mp}$), mass depend. of double charge exchange on A=44-118 7−81453
^{64}(^{12}C,X), 118 MeV, residue mass distrib., γ-ray spectra anal. 7−141101
^{30}Al, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{33}Al mass meas. using ^{48}Ca(^{36}S,^{33}Al)^{51}V, 198 MeV 7−109004
^{48}Ca(^{18}O, ^{15}O)^{51}Ca, 108 MeV, separation technique for ^{51}Ca detection, ^{51}Ca mass and excited states 7−116467
^{A}Cm(n,f), A=243,244,246,248, fast-neutron fission product yields, mass distrib. calcs. 7−129117
^{56}Co, γ-decay, mass determ. from SN 1987A in LMC 7−140123
^{57}Cu mass, Q-values, spectroscopy and cross sections from ^{58}Ni(^{14}N,^{15}C) 7−67705
^{9}He, ground and excited states from ^{9}Be(π^-,π^+) 7−109003
^{A}Kr, A=75, 77, mass from Q-values of (^{3}He,^{6}He) and (d,t) reactions 7−81288
(^{84}Kr,X), 20 MeV/u, reaction product Z, A meas. 7−116506
^{26}Na, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{208}Pb, effective mass and level-density parameter temp. depend., surface coupling model anal. 7−95975
^{39}S, ground state mass excess, ^{40}Ar(^{13}C,^{14}O),^{39}S study 7−128941
(^{129}Xe,X), 20 MeV/u, reaction product Z, A meas. 7−116506

uclear materials safeguards
accountancy, diversion detection calcs. using SITMUF sequence and Page's test 7−109423
accountancy, near real time in reprocessing plant 7−109418
accountancy, near real time with PROSA program 7−109422
accountancy computer package, CIMACT 7−109420
accountancy methods at reprocessing plant, precision and accuracy, RITCEX 7−109421
accounting and control, effectiveness of State's system 7−109449
advanced materials control and accountancy systems 7−141232
advances in safeguards operations, 1982-5 7−109291
assay system for fuel assemblies from material testing reactors 7−109434
BN series pool fast reactors, safeguards procedures *(Russian)* 7−122013
CANDU fuel reprocessing facility, appl. of leached hull monitoring system 7−109318
CETAMA, French organization for quality analyses in materials safeguards *(French)* 7−116601
closed circuit TV-video cable with high tamper resistance 7−122061
computerized record and report system for nuclear facilities 7−103238
conf., Davos, Switzerland, June 1986 7−72723
conf., Vienna, Austria, Nov. 1986 7−108038
destructive analysis in safeguards verifications, eval. of meas. performance 7−116603
destructive assay of nuclear materials, meas. uncertainties, 1987 target values 7−116602
detection and inspection goals, technical problems for 'State as a whole' basis 7−109444
detection sensitivity, influence of contactor and evaporator holdups 7−141227
DoD method of measurement data evaluation 7−109442
Dounreay reprocessing plant, near real time materials accountancy 7−109313
effectiveness assessment, diversion probability 7−109448
Euratom information system for safeguards appl. 7−103138
Euratom nuclear safeguards system 7−109470
Euratom safeguards, world nuclear fuel market conf., Brugge, Belgium, Oct. 1986 7−108047
FBR fuel reprocessing, K-absorption edge densitometer 7−109428
fuel cycle, IAEA safeguards applications, LWRs and spent fuel storage *(Russian)* 7−109443
fuel cycle approaches framework for IAEA safeguards 7−109446
fuel manufacturing facility, safeguards experience under IAEA 7−109432
fuel processing, safeguards process monitoring sensitivities 7−109319
fuel reprocessing, isotope dilution anal. of input samples, automatic system, design, safeguards appl. 7−122022
fuel reprocessing, mixer-settler contactors, nuclear material inventory estimation 7−109316
fuel reprocessing, pulsed column holdup estimators, operating experience 7−109317

nuclear materials safeguards continued
gas centrifuge enrichment, comparison of monitors 7−109414
IAEA measures for materials transport and safeguards 7−116712
IAEA safeguards, future developments 7−109310
IAEA safeguards, problems and progress 7−109289
IAEA safeguards, problems and progress 7−116550
IAEA Safeguards Analytical Laboratory and Network of Analytical Laboratories 7−116600
IAEA safeguards information processing 7−103137
IAEA verification of materials accounting in commercial reprocessing plants 7−141231
inaccessible inventories, safeguards implications 7−103136
insider physical protection technology for nuclear installations 7−135438
inspection sample size, generalised approach in attributes mode 7−109439
International Fuel Cycle Evaluation, political decision making *(German)* 7−78621
international safeguards, unpredictability and unannounced inspections *(French)* 7−109290
inventory control, near real time accountancy 7−109417
ITREC reprocessing plant, input accountability tank, fissile material mass determ. using tracer technique 7−109322
K-edge densitometer, installation at Dounreay reprocessing plant, safeguards appl. 7−109324
Karlsruhe Reprocessing Plant, in-process inventory measurements 7−109314
Laguna Verde Power Plant, nuclear materials safeguards *(Spanish)* 7−116593
laser surveillance system field test at Paks Nuclear Power Plant 7−103148
low enriched uranium plants, non-destructive assay experience 7−116622
LWR, fuel cycle safeguards approaches 7−109445
LWR, safeguards performance evaluation methodology appls. 7−109447
LWR fuel assembly sealing techniques 7−122014
LWR safeguards, modified inspection procedure 7−122062
material balance data, criteria for specification of statistical tests 7−109438
material loss detection in sequence of accounting periods 7−109419
mixed oxide fuel fabrication plant, sampling methodology 7−116621
mixed-oxide fuel plants, role of neutron coincidence counting techniques in materials safeguards 7−116623
modular integrated video system, safeguards appl. 7−122015
monitoring and logging in safeguards applications 7−122016
Monte Carlo coincidence rate calcs. for sample verification 7−103144
near-real-time material accountancy, field testing at PNC-Tokai reprocessing plant 7−141228
neutrino radiation monitoring of reactor power, safeguards appl. 7−122063
neutron activation delayed fission neutron counting 7−109435
NRC licensed nuclear facilities, safeguards 7−116549
nuclear fuel cycle facilities, appl. of IAEA safeguards to radioactive wastes *(Russian)* 7−116624
nuclear fuel reprocessing, U/Pu concentration determ., safeguards appl. 7−109326
nuclear fuel reprocessing, U/Pu input verification, field demonstration of X-ray densitometer 7−109323
nuclear fuel transport/storage flasks, sealing techniques 7−122014
nuclear material solutions, material mass determ. using pressure meas. *(French)* 7−109320
nuclear materials safeguards, containment and surveillance systems, development 7−122012
nuclear materials transport, small quantities, experience 7−74137
nuclear power systems symposium, Washington, DC, USA (Oct. 1986) 7−66813
nuclear safety and security in a changing world 7−116721
packaging and transport of nuclear materials for Japanese safeguards anal. 7−74134
Paks nuclear power plant, laser surveillance system for spent fuel elements *(German)* 7−129372
PHWR fuel, safeguards charact., summation calcs. and nondestructive γ-spectrometry 7−103012
pool type long term spent fuel storage facilities, design, engineering and safeguards *(Russian)* 7−103237
precise vessel calibration for nuclear safeguards 7−109424
procurement and characterization of nuclear materials, PERLA perform. assessment of meas. techniques 7−116606
PWR spent fuel assemblies, ION-1 Fork meas. 7−116599
quadrupole mass spectrometers, transportable, uranium isotopic ratio meas., safeguards appl. 7−122218
radioactive material transport in the GDR, regulations, experience and surveillance practices 7−73872
real time accountancy DP system, statistical anal. evaluation 7−109416
reprocessing input tank accountancy, meas. error anal. by simulation methods 7−109327
reprocessing plant, safeguards and process control, non-destructive assay techniques 7−109429
reprocessing plants, near real time material accountancy 7−109315
rescue container system for defective UF_6 cylinders 7−74138
Russian nuclear power plants, nondestructive fuel anal. methods, safeguards equipment *(Russian)* 7−122018
safeguards, performance evaluations, development of criteria and computerized procedures 7−109292
sequential test procedures for near-real-time accountancy [nuclear safeguards] 7−141229
small centrifuge enrichment cascade, safeguards experiments 7−109413
spent CANDU fuel bundles, Cerenkov radiation meas., safeguards appl. 7−122017
spent fuel, long term storage and final disposal, facility charact. and safeguards 7−103236
spent fuel assemblies, high resolution gamma spectrometry meas., developments 7−116719
spent fuel monitoring using irradiated assembly counter, safeguards appl. *(Russian)* 7−122216
spent fuel solution, Pu assay, comparison of isotope dilution methods using α-, mass spectrometry *(Russian)* 7−119618
spent fuel solutions, U, Pu isotopic dilution assay, resin bed and multi-isotopic tracer technique appl. *(French)* 7−119616
spent nuclear fuel, above-ground dry storage in concrete canisters, safeguards 7−141318
spent nuclear fuel elements, safeguards aspects of intermediate and final storage *(German)* 7−129371
spent nuclear fuel pools laser surveillance system 7−122215

nuclear materials safeguards continued
surveillance, audit and inspection function support 7−106895
thermal quadrupole mass spectrometer for safeguards verification, tests 7−116025
THTR power plant, fuel flow control *(German)* 7−129373
THTR-300, safeguards concept, monitoring and logging system 7−103135
Tokai reprocessing plant, near real time materials accountancy, field test 7−109312
Tokai reprocessing plant, real time accounting system for spent fuel 7−122021
transport of safeguards samples, practical problems *(French)* 7−74135
transportation of small quantities of radioactive materials in Italy 7−74136
ultrasonic tamper indicator for nuclear materials container 7−122217
uncertainty estimates for calibration measurements 7−109441
underwater telescope for nuclear fuel identification, development and experience 7−116594
UV-11, Cherenkov radiation monitoring device, safeguards appl., design 7−122225
Wackersdorf reprocessing plant, sequential anal. of material balances 7−141230
WWER power reactor fuel assemblies, ESNART facility for nondestructive anal. *(Russian)* 7−103011
WWER spent fuel assemblies, storage facility, safeguards aspects 7−103235
WWER-440 spent fuel, actinide isotope content and neutron emission, safeguards appl. 7−116596
WWER-440 spent fuel, nondestructive assay using gamma and neutron meas. 7−116597
WWER-440 spent fuel assemblies, quantitative evaluation of passive neutron assay 7−116598
D_2O, materials balance closing as safeguards basis 7−109436
D_2O, materials balance evaluation in power reactors 7−109437
Pu accountancy tanks, liquid mass meas. 7−109425
Pu assay, 1-10 mg level, experience with ceric oxidation, ferrous reduction and dichromate titration method 7−119615
Pu assay experience using portable K-edge densitometer 7−103143
Pu assay in spent fuel soln., isotope dilution α, mass spectrometric determ. 7−119617
Pu assay using liquid scintillator neutron coincidence counter 7−103141
Pu assay using thermal quadrupole mass spectrometer 7−116025
Pu, fissile material quantitative anal., prompt spontaneous fission gamma meas. *(Russian)* 7−116605
Pu, high precision assay using automatic titrator 7−119614
Pu isotopic abundances, high resolution γ-spectroscopy, safeguards appl. 7−103146
Pu isotopic composition meas. improvements using calibration samples for γ-spectroscopy 7−103145
Pu isotopic ratio and abundances by X-ray and γ-ray spectrometry assay 7−103142
Pu isotopic ratios and abundances, high resolution γ-spectrometry, nuclear safeguards appl. 7−103147
Pu processing plants, design of safeguards systems 7−109311
Pu sample mass determ. by neutron coincidence counting *(French)* 7−103139
Pu source neutron multiplicity distrib. meas. by nondestructive assay, numerical procedures 7−103140
$Pu(NO_3)_4$ holding tanks, volumetric calibration using lutetium 7−109321
$^{239}Pu(n,f)$, multiplicity meas. as fn. of n energy, safeguards appl. 7−102927
U assay by delayed neutron technique, safeguards inspections 7−109433
U assay using thermal quadrupole mass spectrometer 7−116025
U enrichment determ. using microcomputer controlled spectrometric technique 7−109430
U enrichment facility, safeguards system 7−109409
U inventory verification exercise at enrichment fabrication facility 7−109431
U isotopic ratios and abundances, high resolution γ-spectrometry, nuclear safeguards appl. 7−103147
U/Pu concentration determ. using K-edge densitometry, reprocessing output verification 7−109325
U/Pu mixed solutions, assay using gamma-ray densitometer 7−114061
UF_6 cascade header pipe test loop for international safeguards in a gas centrifuge enrichment plant 7−109415
UF_6 cylinder mass verifications, 20 ton capacity load cell based weighing system 7−109426
UF_6 cylinders, gas phase sampling in safeguards verification 7−109427
UF_6 enrichment plants, non-destructive verification techniques 7−109411
UF_6, thermal neutron source device for safeguards determ. *(French)* 7−109412
$UO_2(NO_3)_2.6H_2O$ solution, density meas., safeguards appl. *(French)* 7−109320
$^{A}U(n,f)$, A=235, 238, multiplicity meas. as fn. of n energy, safeguards appl. 7−102927
Uf_6 gas centrifuge enrichment, monitors for safeguards and process control 7−109410

nuclear matter
abnormal matter in relativistic nuclear field theory, hot metastable state 7−135242
analogies between nuclear systems and liquid ^3He 7−135239
anisotropic matter, deconfinement transition 7−121685
average monopole polarization charge and in relation to nuclear incompressibility and effective mass 7−141009
baryon rich hadronic gas, redistribution of strangeness 7−95834
collective mode damping, dynamical aspects of phonon-phonon coupling 7−89552
color degrees of freedom in nuclear physics 7−73728
compression modulus, charge distribution differences 7−116319
compression modulus, phenomenological approach, hydrodynamic and Fermi gas models 7−121634
Compton scattering and pion number in nuclei 7−96053
conference on central nuclear collisions and multifragmentation, Denver, Colorado, USA, April 1987 7−140363
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
core densities, droplet model and HF calcs. with generalised Skyrme force 7−121603
Coulomb sum rules in the relativistic Fermi gas model 7−121686
crossing symmetric self-consistent πN t matrix 7−81457
cumulative-nucleon production, mechanisms 7−73727

nuclear matter continued
deconfinement transition in anisotropic matter, quark-gluon plasma 7−102702
deformed superfluid nuclei, dynamical α-type correlations 7−109082
dense quark or fermionic matter at zero temp., fermionic correlations 7−81323
dense symmetric nuclear matter, pion condensation at finite temp. 7−89554
dilepton radiation from high temperature nuclear matter 7−116318
effective interaction in hot nuclear matter, temp. dependence, finite temp. Brueckner theory 7−128964
elastic form factors, thermodynamic oscillator model calcs. 7−140988
electron-nucleus deep inelastic scatt., cross sections, quantum hadrodynamics calcs. *(Russian)* 7−121806
element abundances in hot nuclear matter, clusters 7−73726
EMC effect, x and Q^2 rescaling equivalence and quark-gluon plasma transition 7−121604
equation of state, determ, from pion yield data, ID shock wave model 7−109088
equation of state, momentum depend. heavy ion interactions 7−109221
equation of state of dense nuclear matter 7−73724
excited nuclei, internal NN scattering, kinematics anal. 7−121682
face-centered-cubic solid-phase theory of the nucleus 7−140997
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
finite nuclear matter, critical dynamics, renormalisation group anal. 7−81322
finite temperature metastable matter 7−73725
fission barrier heights, dependence on nucleon composition, for $Z \geq 90$ 7−116374
Friedel oscillations, phase space study, half-infinite nuclear matter, Wigner function 7−128995
gas, Boltzmann-Uehling-Uhlenbeck equation 7−128992
gas-drop model, semiclassical approx. 7−96001
gluon magnetic mass contrib. to thermodynamic potential QCD plasma 7−140879
gluon plasmon, electric and mag. props., one-loop gauge-invariant effective action calcs. 7−109086
hadronic matter at ultrarelativistic temps., thermodynamics, multiple hadron prod. effects *(Russian)* 7−81324
Hartree-Fock approximation, relativistic treatment, infinite nuclear matter and finite nuclei appl. 7−116312
heavy ion central collisions, classical molecular dynamics anal., fusion-fission, fragmentation, vaporisation 7−121911
heavy ion collisions, baryon multiplicity distrib. in nucl. matter in stopping energy regime 7−89581
heavy ion collisions, dissipative forces and multistage processes 7−121884
heavy ion collisions, entropy production calcs. using equation of state 7−116519
heavy ion collisions, intermediate energy, nonequilib. particle emission, quantum statistical aspects 7−141104
heavy ion collisions, liquid-gas phase transition, dynamical and statistical aspects, review 7−121918
heavy ion collisions, relativistic, quark-gluon plasma formation, hydrodynamical model anal. 7−96090
heavy ion collisions, relativistic Vlasov equation, local-density and semiclassical approx. 7−135358
heavy ion collisions, ultrarelativistic, deconfinement transition in fragmentation region, two-fluid hydrodynamic model anal. 7−102904
heavy ion collisions, ultrarelativistic, quark-gluon plasma electrohydrodynamics, flux-tube model 7−116463
heavy ion high energy collisions, 4π observables in Vlasov-Uehling-Uhlenbeck theory, hadronic matter 7−121915
heavy ion physics at low and intermediate energy at SANAC cyclotron 7−121922
heavy ion reactions, site-bond percolation model on a lattice 7−109213
heavy ion-collisions, momentum-dependent interactions, momentum-flow effects 7−121896
heavy ion-nucleus collisions, high energy, α-particle transverse momentum distrib. meas., possible hadron-quark matter transition *(Chinese)* 7−102897
heavy-ion collisions, fragmentation, instabilities in hot nuclear matter 7−141064
heavy-ion collisions, high energy, hot quantum drop fragmentation, temp. and density determ. Monte Carlo TDHF calcs. 7−116518
heavy-ion collisions, nuclear matter properties at moderate, high, ultrahigh energies 7−109083
high density nucl. matter, eqn. of state, nucleon-dibaryon ideal gas 7−121690
high energy collisions, cumulative p and nucl. fragment prod. mechanisms 7−135262
high energy nuclear collisions, hadron production, transverse momentum distribs. 7−102912
high temperature nuclear matter, e^+e^- pair production 7−141007
high-energy nucleus-nucleus collisions and nuclear matter 7−73798
high-momentum phonon exchange and the effective shell-model interaction 7−102810
highly excited nuclear states, d/p ratio and entropy at high temp. 7−128994
highly excited nuclei, disintegration, Vlasov-Uehling-Uhlenbeck eqn. 7−116315
hot compressed nuclei, spherical solns. of TDHF eqns. 7−102828
hot nuclear matter, expansion phase, Monte Carlo quantum dynamics anal. 7−116324
hot nuclear matter at low density, equation of state 7−96006
hot nuclei, fluid dynamical model 7−116294
hot nuclei, statistical fragmentation, microcanonical Monte Carlo anal. 7−141082
hot nuclei, thermal equilibration, nonequilibrium many-body theory 7−116320
hot nuclei, total absorption and emission probabilities, giant resonances 7−141034
hot quantum drops, fragmentation 7−67869
hydrodynamic flows in expanding quark-gluon plasmas, head-on nucleus-nucleus collision 7−128854
hyperon and pion role, neutron star matter eqn. of state 7−127939
incompressibility of hot neutron-rich nuclear matter, Hartree-Fock calcs. 7−139895
infinite nuclear matter, ground-state energy and mass relations 7−116314
infinite nuclear matter, saturation props. and mass formula, Hugenholtz-Van Hove theorem 7−121691

nuclear matter continued
intermediate energy heavy ion reactions, limits of hot nuclear matter 7−121693
kaon slope parameters as deconfinement signature at finite baryon density 7−102913
KNO scaling as a phase transition in a Feynman-Wilson gas, quark-gluon plasma 7−95743
Landau-parameters and isoscalar nuclear excitations in a relativistic mean-field theory 7−109084
liquid-gas and superconducting phase transitions, Green's function methods, Skyrme interactions 7−96007
magic and semimagic nuclei, excitations and G-matrix, BPA and RPA calcs. 7−109134
magnetic moment calcs. for nuclear matter, anal. using σ- and ω-meson fields 7−73704
many-body problem theories 7−109053
many-quark clusters in nuclei 7−67753
massive quark matter phase transition, quark potential model anal. 7−141010
mean field, microscopic calc., ground state correls., zero and finite temp. contrib. 7−128962
microscopic relativistic description of optical model potential 7−81356
mixed phase matter, dynamical hadronization transition and hydrodynamical stability 7−95838
model space approach, infinite order summation of particle-particle ring diagrams 7−67754
momentum distributions of nuclear matter 7−102826
momentum-dependent interactions, generalised non-equilib. eqn. of state 7−135241
multiquark clusters in nuclei, QCD scaling violation and struct. fns. 7−89555
neutron clusters, spatially localised multiparticle quantum systems 7−67757
neutron star matter with realistic nucleon-nucleon interactions, pion condensation, σ-model anal. 7−73722
neutron stars, accreting, long X-ray bursts rel. to presence of internal pion condensate or quark matter 7−107887
neutron stars, constraints on eqn. of state from possible 1.13 millisecond periodicity in X-ray binary (GX 339−4) 7−101853
neutron stars interiors, mean free paths of nondegenerate neutrinos 7−115493
neutron-rich and symmetric nuclear matter, chiral sigma model calcs., neutron stars 7−121688
non-equilibrium nuclear matter, Dirac-Brueckner approach, quantum kinetic eqn. 7−128963
nucleon-antinucleon system, phase transition 7−102683
nucleon-nucleon scattering with isobar degrees of freedom 7−109050
nucleons, mesons and deltas in nuclear matter, rel. Dirac-Brueckner approach 7−89550
nucleus-nucleus collisions, high energy, rapidity distributions, hydrodynamical model anal. *(Chinese)* 7−102896
optimizing heavy ion experiments to probe dense nuclear matter 7−129082
pion decoupling at finite temp. and density, relevance for hadronic matter 7−128852
QCD bag model with nonzero baryon number, density of states, hadronic matter 7−128853
QCD in nuclear physics 7−121694
QCD phase transition, ultrarelativistic nuclear collisions, dilepton transverse momentum distrib. 7−89579
QCD plasma oscillations, gauge covariant linear response 7−121440
QCD vacuum, strange $q\bar{q}$ pair condensates, partial chiral symm. restoration 7−135029
quark gas, nonrelativistic free, para-Fermi statistics of order three, thermodynamic props. 7−141006
quark plasma, general anal. 7−95841
quark stars, existence of dense neutron stars from QCD eqn. of state 7−72499
quark to hadron matter, strange/antistrange separation in phase transition 7−89551
quark-gluon degrees of freedom in nuclei 7−73709
quark-gluon plasma, signature and hadronization mechanism 7−135244
quark-gluon plasma, SU(3)-multiplet sources at phase transition, QCD lattice approx., 7−121447
quark-gluon plasma and ψ momentum distrib./formation 7−121684
quark-gluon plasma formation in relativistic heavy ion collisions, review *(Polish)* 7−67756
quark-gluon plasma from nuclear multifragmentation 7−141086
quark-gluon plasma hydrodynamics, ultrarelativistic heavy ion collisions, maximum energy density 7−121430
quark-gluon plasma obs. expt. using N($\bar{N}$)-nucleus collisions 7−141008
quark-gluon plasma prod. in heavy ion collisions, particle pol. as signal 7−81428
quark-gluon plasma signal in fragmentation region in ultrarelativistic nucleus-nucleus collisions 7−89549
quark-gluon plasmas, eqn. of state and hydrodynamics 7−102829
quarks, expt. signatures for explicit roles as nucl. constituents 7−67755
relativistic mean field and HF approx., nuclear saturation and spin-orbit splitting 7−109080
relativistic mean-field theory of nucl. struct., effective interaction 7−102825
relativistic nucleus-nucleus collisions, event simulation in NA35 7−67861
saturating fluids, small drops, semiclassical study 7−135240
saturation properties, relativistic optical potential, microscopic calcs. 7−116323
Skyrme parameter in nuclear medium, density and temp. independence, QCD sum rules 7−121683
skyrmions with large baryon number, props., role in quark-gluon plasma formation 7−121332
spherical nuclei, neutron skin calcs., Hartree-Fock method with Skyrme forces *(Chinese)* 7−109046
statistical model of extended hadrons, phase transitions critical behaviour, exponential growing mass spectrum 7−116139
stellar core collapse, physics of baryonic-to-hyperonic transition 7−88375
stellar interiors, eqn. of state of hot dense matter 7−140036
stellar interiors, shear viscosity of dense matter 7−120263
strange condensate realignment in relativistic heavy ion collisions 7−116316
strange matter, self-bound quark matter model 7−135238
superconducting neutron star, paramagnetic effects 7−145807
nuclear matter continued
superfluid nuclei, 2^+ states, response to external fields, (r,λ) representation 7−135173
symmetric and asymmetric nuclear matter, binding energies, lowest-order constrained-variation calc. 7−135243
temperature dependence of Skyrme forces and nucl. eqn. of state 7−121629
thermal fluctuations and finite-temp. HFB approx. 7−116321
thermally excited fermion matter, two phonon induced single particle widths 7−89553
thermodynamic potential, summation of ring diagrams 7−102827
thermodynamical quantities at low excitation energy 7−128993
Tolman-Oppenheimer-Volkov eqn. with ultrarelativistic eqn. of state, soln. 7−115494
topological chiral bags in a baryonic environment 7−128990
triplet pairing nuclei, superfluid phases 7−116217
two-baryon correlations in infinite nuclear matter, covariant formalism 7−73723
ultrarelativistic heavy-ion collisions and the quark-gluon plasma 7−121948
ultrarelativistic nuclear collisions, dilepton emission and multiplicity correl., deconfinement phase transition 7−116317
ultrarelativistic nuclear collisions, hydrodynamic scenario 7−81430
ultrarelativistic nuclear collisions, transition to quark-gluon plasma 7−121949
Vlasov theory, quantum effects, response fn. and excitation energies 7−109060
(α,X), hot nuclei formation and decay, entrance channel effects 7−141074
Δ(1232) propagation in nuclear matter, microscopic calcs. 7−109132
Δ binding energy in nuclear matter, Paris potential calcs., Δ self-energy effects 7−109087
(e,e′), chiral bag model description of nuclear matter, struct. fns. 7−121692
(e,e′), pionic effects in elastic scatt. 7−135308
(e,e′), short-range correlation effects on nucleon sum rule 7−116389
(h, X), hadronization in projectile fragmentation region, outside-inside cascade, Lund model 7−135329
(μ,X), deep inelastic scatt., colour conductivity at high resolution 7−73721
N binding in nuclear matter, colour dielectric model anal. 7−67582
(p,p), $65<E_p<200$ MeV,. folding model potential anal., cross sections, analyzing powers spin rotation parameters 7−67837
($\bar{p}$, X), annihilation in light nuclei, quark-gluon plasma droplet, meson spectra 7−141054
πN scattering amplitude singularities in nuclear matter, bound states possibility 7−121687
σ-scalar meson, high density behavior, nuclear matter, QCD calcs. 7−135047
$\bar{\Xi}$ abundance in quark-gluon plasma, $\bar{\Lambda}$ longitudinal polarisation obs. 7−95835
Ag(^{12}C, pX), 4.5 GeV/c/N, directional coherence of emitted protons, fireball, q-g cluster 7−129078
(^{40}Ar,X), hot nuclei formation and decay, entrance channel effects, pre-equilibrium model comparisons 7−141074
^{209}Bi(e,e), nuclear currents in a relativistic mean-field theory 7−129024
Br(^{12}C, pX), 4.5 GeV/c/N, directional coherence of emitted protons, fireball, q-g cluster 7−129078
^{12}C(e,e′p), quasi-free knockout, nuclear medium effects on ep coupling 7−121812
Ca(Ca,X), bounce-off effect, transparency, stopping power and thermalization 7−96108
Δ self-energy in nuclear matter 7−128991
^{67}Ga, highly deformed compound nucleus, prod. and deexcitation 7−116458
^{3}H binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{4}He binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{6}Li(e,e′p), quasi-free knockout, nuclear medium effects on ep coupling 7−121812
N-π-Δ hadron gas, resonance equilibrium characteristics, temp. dependence 7−116322
Nb(Nb,X), bounce-off effect, transparency, stopping power and thermalization 7−96108
(^{58}Ni,X), hot nuclei formation and decay, entrance channel effects, pre-equilibrium model comparisons 7−141074
(^{16}O,X), 3.2 TeV collisions at CERN, search for quark matter *(German)* 7−109085
(^{16}O, X), 200 GeV, multiplicity distrib. in central rapidity region, wounded nucleon model, q-g plasma 7−121881
^{17}O(e,e), nuclear currents in a relativistic mean-field theory 7−129024
(p,p′), spin response, finite geometry and absorption effects 7−73769
πN scattering amplitude in nuclear matter, bound states, Pauli blocking 7−121689
^{238}U(^{40}Ar,X), perturbed systems far from equilibrium, collision simulation *(French)* 7−89582
Xe(p,X), secondary fragment charge dispersion, statistical multifragmentation model 7−141048

nuclear medicine *see radioisotope scanning and imaging*

nuclear medicine (treatment) *see radiation therapy*

nuclear models
see also nuclear cluster model; nuclear collective model; nuclear reaction and scattering models; nuclear shell model
A=158-188, deformed even-even nuclei, hexadecapole states, quasiparticle-phonon model calcs. 7−121571
charge radius, RMS values, FCC model predictions 7−116244
chiral nuclear model, multiple solns. in config. space 7−73708
compound resonances, partial El-radiation force constants, OSM anal. 7−121556
compression modulus, phenomenological approach, hydrodynamic and Fermi gas models 7−121634
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
constituent quark mass and confinement size in nuclei 7−121453
elastic form factors, thermodynamic oscillator model calcs. 7−140988
electric quadrupole moments of Bohr-Mottelson and interacting boson models, relationship 7−109019
fermion system bound state, multiparticle wave fn. components, solns. to eqns. 7−135218

nuclear models continued
fissioning nucleus, passage through pot. barrier to scission, multidimensional model 7−96052
group theory, expansion coeffs. of bases of $U_g \supset O_n \supset O_{n-1}$ 7−81317
high-lying states, γ-decay props., effects of quasiparticle×phonon components 7−116333
hot nuclei, fluid dynamical model 7−116294
hot rotating nuclei, Landau theory of shape transitions 7−128943
hypernuclear currents, mean field approx. to extend σ-ω model 7−102832
infinite nuclear matter, saturation props. and mass formula, Hugenholtz-Van Hove theorem 7−121691
Landau-parameters and isoscalar nuclear excitations in a relativistic mean-field theory 7−109084
light nuclear systems, RGM appl. to bound and scatt. pot., variational principles 7−128988
many-body problem theories 7−109053
multiquark model calcs. of nuclear props. 7−95997
nonlocal potentials, inverse scatt. problem 7−116346
off-shell ambiguity and three-body force in the resonating group model 7−67749
parent states, spins and moments, book contrib. 7−95989
parton distribution and nuclear shadowing at small x 7−135219
quasiparticle phonon model, Green's fns., exact Hamiltonian calcs. 7−109058
quasistationary state parameters in RGM, algebraic calcs. 7−135228
short range NN interaction, equivalent local pots. from quark exchange kernels 7−121630
SU(3) phenomenological model Hamiltonian, ^{164}Er states appl. 7−121649
superfluid deformed nuclear systems, perturbative treatment using gauge theory formalism 7−140996
two-body interaction and t-matrix, separable expansion methods 7−128971
Vlasov theory, quantum effects, response fn. and excitation energies 7−109060
Walecka model, exotic isoscalar dipole resonances 7−140980
Wigner transform, 1D model for nuclear many-body systems 7−109054
Δ(1232) propagation in nuclear matter, microscopic calcs. 7−109132
(e,e′), chiral bag model description of nuclear matter, struct. fns. 7−121692
NN interaction, colour nucleon cluster calcs. with one-gluon exchange 7−121438
NN interaction, relativistic field theoretical model with meson theory 7−67744
Ξ^- hypernuclei, binding energy anal. using simple pot. model 7−121698
^{7}Be, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
^{8}Be, α-decay, quasistationary state parameters in RGM, algebraic calcs. 7−135228
^{9}Be, three-body calc. of low-lying states 7−67722
^{12}C(e,e′), quasielastic peak shift, q depend., relativistic σ-ω model calcs. 7−96057
^{252}cf(sf), particle emission model, energy spectra, ang. distribs. 7−121971
^{2}H, radial excitations and bound state wave fn., RGM and nonrelativistic quark model calcs. 7−121591
^{2}H(e, e), quark cluster effects on the electromagnetic struct. fns. 7−81374
^{3}H, form factors, group theoretical calcs. with multiquark and meson effects 7−67708
^{6}He, 2^+ state, energy and width, nonspin αnn model 7−121613
^{A}He, A=3,4, form factors, group theoretical calcs. with multiquark and meson effects 7−67708
^{7}Li, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
^{208}Pb giant resonance, convergence of particle-hole irreducible vertex *(Chinese)* 7−96039
^{236}U, fission calcs., transport model with Fokker-Planck eqn. *(Chinese)* 7−109140

nuclear moment of inertia
α-backbending, nucleon-nucleon correlation and deformation in nuclei *(Chinese)* 7−102790
actinides, rot. alignment and stable octupole deformation 7−81293
binary reactions near the Coulomb barrier in systems with dynamically hindered fusion 7−121937
Cassinian ovaloid, fission deformation description 7−116375
nuclear cranking model, moments of inertia, parallel axis theorem, potential and density distribs. 7−135176
proton-neutron force, nuclear phases, E_1/E_2 versus E_4/E_2 plot discontinuity, ground state bands 7−116290
rare-earth nuclei, band termination and E2 collectivity loss, algebraic fermion model 7−81274
superdeformed nuclei study, heavy ion collisions, fission 7−128942
triplet pairing nuclei, superfluid phases 7−116217
α-backbending in gauge space, yrast state rot. and backbending, α-clustering *(Chinese)* 7−108953
^{152}Dy, superdeformed shapes, collective radiation meas. 7−81295
^{154}Dy, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549
^{156}Dy, rotational phase change evidence, moment of inertia, rot. freq. 7−89537
^{160}Dy rotational side bands, spins and moments of inertia from ^{158}Gd(α,2n) 7−81269
^{158}Er, rotational phase change evidence, moment of inertia, rot. freq. 7−89537
^{158}Er, yrast level sequence, another crossing beyond the first backbend 7−95973
Hf-Pt region, variable moment of inertia models in N_pN_n scheme, parameters 7−81273
^{166}Ho, low energy two-particle spectrum, moment of inertia parameters 7−140976
^{135}Nd, superdeformed shapes, collective radiation meas. 7−81295
^{172}Os, low-frequency anomaly in moment of inertia, yrast sequence from ^{144}Nd(^{32}S, 4n) 7−116215
^{149}Pm, levels and moments following ^{149}Nd decay 7−116329
Pt isotopes, softness and shape coexistence, dynamic deformation model, IBA, variational moment of inertia model anal. 7−121596
^{118}Sn (A,f), A=^{14}N, ^{20}Ne, 120, 138 MeV, fission fragment angular distrib., moment of inertia of nuclei at saddle points *(Chinese)* 7−102899
^{80}Sr, high spin states, lifetimes, γ-softness meas. 7−73681
^{158}Yb, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549

nuclear moments
see also nuclear electric moment; nuclear magnetic moment; nuclear moment of inertia
electromagnetic moments of nuclei at high-spin 7−116211
gamma-ray linear polarisation distrib. from oriented nuclei calc. 7−141013
hyperfine interactions, conf., Bangalore, India, (Sept. 1986) 7−115675
in-beam measurements of nuclear moments 7−116266
low-energy symmetry laws, nuclear spectroscopy 7−121625
nuclear orientation techniques applied to on-line separated isotopes 7−121558
nuclear second moments for pre-equilib. reaction theories, level densities 7−141036
unstable nuclei, ground state properties from laser spectroscopy 7−116239
(e,e′γ), bremsstrahlung, spin correlations, electromagnetic struct. and recoil effects 7−135303
^{A}Cs, A=118, 146, isotope shifts, spins and hyperfine structure meas. 7−122448
^{A}Eu, A=147, 149, 151, 152, 153-6, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{A}Rn, A=202-222, hyperfine struct., isotope shift, spins, moments 7−116242
^{A}Sm, A=146, 151, deformation, collinear laser spectroscopy, moments, charge 7−116247

nuclear muon capture *see muon capture*

nuclear optical model
^{208}Pb mean field, Woods-Saxon parameterization, extrapolation from positive to negative energy 7−116300
^{40}Ca(t,t)^{40}Ca, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
angular momentum, semiclassical treatment for fixed modulus and z-component, single-particle propagator 7−128975
channel coupling nonlocality, local phase equivalent optical pot. 7−116347
compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
crossing symmetric self-consistent πN t matrix 7−81457
elastic transfer, optical pot., parity depend. contrib. 7−116356
energy-dependent optical potentials, unitary defect of S-matrix 7−135269
forward scattering amplitudes in hadron-nuclear optical pots. 7−121768
Glauber model, elastic scatt. amplitude calcs. *(Chinese)* 7−96081
heavy ion collisions, two-particle elastic transfer processes, semiclassical anal. 7−121892
heavy-ion cross sections, derivation using optical theorem on elastic data 7−121767
isoscalar pion-nucleus interaction from pionic atoms 7−81451
local optical pot. wells, generalised Wood-Saxon type 7−121766
microscopic nucleon-nucleus optical pot., semiclassical expansion using Green's fn. method 7−116353
microscopic prescriptions for elastic and inelastic scattering 7−81358
microscopic relativistic description of optical model potential 7−81356
multichannel scattering, separable expansions, finite-rank potentials, scattering matrix elements, convergence 7−116352
multiparticle balance equation solution, intranuclear cascade method, quantum balance eqns. 7−121777
near-magic nuclei, partial E1-radiation widths of isobaric analog resonances 7−109133
non-even-even nuclei, cross section calcs. using microscopic optical pot. *(Chinese)* 7−116351
particle-number-dependent theory of few- and many-body systems 7−95387
Perey effect in heavy ion potential 7−121769
phenomenological optical pot., energy depend. of radius 7−135270
pionic atoms, appl. to strong π-nucleus interaction and optical pot. models 7−110146
pionic atoms of unstable nuclei 7−122751
relativistic antiprotonic nuclei, shifts and widths, spin and isospin effects 7−81359
relativistic optical potential, microscopic calcs., nucleon matter saturation props. 7−116323
S-matrix to potential inversion, spin, CRC effects in proton scatt. 7−102851
S-matrix unitarity defect and underlying absorptive pot. 7−81355
supersymmetry between deep and shallow nucleus-nucleus potentials 7−109131
target nucleus charge and mass no. depend. of optical model phase shifts 7−109130
(α,2α), cluster spectroscopic factors using bound wave fns. and three-body coupling 7−135340
(α,α), optical phase shift fn. in Glauber theory 7−135341
(d,d), ^{2}H and N scattering, ^{2}H distortion, relation between N and ^{2}H radius parameters 7−73780
(d, d) composite particle optical pot., breakup contrib., energy and target depend. 7−121861
(d, p̄n̄) Coulomb break-up of an antideuteron atom 7−89564
(N,N), ^{2}H and N scattering, ^{2}H distortion, relation between N and ^{2}H radius parameters 7−73780
(n,n), 21.6 MeV, ang. distribs., microscopic optical model anal. 7−116419
(n̄,n̄), on A=112-126, 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
(n,X) on A=87-140, 3P size resonance in p-wave neutron strength function 7−67788
(p,p), correlation effects in relativistic impulse approx. treatment 7−109169
(p̄,p), microscopic optical model anal. 7−135323
(p,p), nonlocality, microscopic optical model calcs. 7−102879
(p,p), relativistic scatt., Dirac equation with optical potential 7−121857
(p,p′), optical potential scatt., Schrodinger eqn. soln. using enhanced Numerov algorithm 7−140496
p̄N scattering in nucleus, Pauli principle and anisotropy 7−81394
(π^+,π^-), delta-hole approach 7−135373
(π,π′), well-deformed nuclei, eikonal and π-nucleus optical model calcs. inclusion of virtual excitations *(Chinese)* 7−102857
(π,X), optical potential, density matrix dependence of Pauli correction *(Chinese)* 7−102917
($\pi^\pm$, X), 60, 65 MeV, on A=12-90, total reaction cross sections, use in optical anals. 7−121960
π N amplitude, extra mass behaviour 7−129009

nuclear optical model continued
^{A}Si(π,π'), A=28, 30, 50 MeV, diff. cross sections, angular distrib., optical model anal. 7−67878
^{12}C(^{12}C, ^{12}C), microscopic analysis at intermediate energies 7−121929
^{27}Al(n̄, n), spin-spin interaction and optical pot. 7−121850
^{107}Ag(p̄,X), low energies, $\sigma(\bar{p}n)/\sigma(\bar{p}p)$ values, Glauber model 7−116423
^{27}Al (p,p'), E_p=200 MeV, exciton model reformulation to include energy-momentum coupling 7−129032
^{27}Al(n,n),(n̄,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{27}Al(t,t)^{27}Al, differential cross-sections near Coulomb barrier 7−109185
^{11}B(^{7}Li,X), 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
^{11}B(α,α), optical and folding model anal. 7−96087
^{209}Bi(α,α'), 50.5 MeV, Fraunhofer diffraction pattern obs., cross sections 7−116445
^{79}Br(p̄,X), low energies, $\sigma(\bar{p}n)/\sigma(\bar{p}p)$ values, Glauber model 7−116423
^{A}C(^{12}C, ^{12}C), A=12, 13, interference between refraction and diffraction in elastic ang. distribs. 7−102907
^{A}C(α,α), A=12, 13, optical and folding model anal. 7−96087
^{12}C(^{12}C,^{12}C), microscopic optical pot. 7−81357
^{12}C(^{12}C,^{12}C), optical pots. and form factors determ. 7−96093
^{12}C(^{12}C,X), microscopic optical pot. 7−81357
^{12}C(α,α), optical model anal., attractive and repulsive α-nucleus pots. 7−135342
^{12}C(α,α), optical pots. and form factors determ. 7−96093
^{12}C(p̄,p̄), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{12}C(π^+,π^+), excitation function meas., optical model calcs. 7−109238
^{13}C(^{7}Li,X), 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
^{A}Ca(p̄,p'), A=40, 48, cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{40}Ca(^{16}O,^{16}O'), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{40}Ca(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{40}Ca(^{16}O,X), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{40}Ca(^{16}O,X), RGM+WKB method 7−121940
^{40}Ca(^{3}He,^{3}He)^{40}Ca, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
^{40}Ca(^{40}Ca,^{40}Ca), microscopic optical pot. 7−81357
^{40}Ca(^{40}Ca,X), heavy ion optical potential, temp. dependence anal. 7−121890
^{40}Ca(^{40}Ca,X), microscopic optical pot. 7−81357
^{40}Ca(N,N), N=p or n, 11-48 MeV, diff. cross sections, optical anal. 7−67816
^{40}Ca(d, d), 52 MeV, model independent optical pots., virtual breakup 7−121862
^{40}Ca(n,n'), optical model parameters study *(Russian)* 7−102888
^{40}Ca(p̄,p̄), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{40}Ca(p,p)^{40}Ca, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
^{48}Ca(n,X), total and capture cross-sections, ^{49}Ca level structure, nucleosynthesis relevance 7−81382
^{48}Ca(π^+,π^-) double isobaric analog state transition, cross section meas., and optical pot. comparison 7−81458
Ca(α,α), optical model anal., attractive and repulsive α-nucleus pots. 7−135342
^{50}Cr(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{52}Cr(n,X), cross sections, optical model anal. *(Russian)* 7−81396
^{53}Cr(p,p)^{53}Cr, optical potential at low and medium energies 7−67838
^{A}Eu(n,γ), A=151,153, 3-2200 keV, cross section meas., optical model anal. 7−73766
^{19}F(^{16}O,^{16}O$^-$), 60,80 MeV, angular distrib. meas., coupled-channels optical model comparisons 7−129107
^{19}F(^{6}Li, ^{6}Li), 34 MeV, optical pot. derivation from expt. data 7−141092
^{56}Fe(α,α'), 25 MeV, optical model and coupled channel comparisons 7−116444
^{3}H$_\Lambda$, bound state existence, separable model Faddeev equations 7−109090
^{3}H$_\Sigma$, Σ^- hypernuclei, bound state existence, separable model Faddeev equations 7−109090
(^{3}He,^{3}He), polarised elastic scatt., microscopic spin-orbit potentials 7−81411
^{3}He (π,π), 20-65 MeV, diff. cross section and anal. powers from microscopic wavefunctions 7−129108
^{4}He(p̄,X), low energies, $\sigma(\bar{p}n)/\sigma(\bar{p}p)$ values, Glauber model 7−116423
^{4}He(p,p)^{4}He, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
(^{6}Li, ^{6}Li), composite particle optical pot., breakup contrib., energy and target depend. 7−121861
^{6}Li(^{3}He, ^{3}He), 34-70 MeV, exchange effects role in elastic scatt; optical and DW anals. 7−67853
^{6}Li(α,α), 36.6, 50.5 MeV, exchange effects role in elastic scatt; optical and DW anals. 7−67853
^{6}Li(e,e'd), coincidence reactions, PWIA, DWIA and optical model calcs. 7−116396
^{24}Mg(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{24}Mg(α,α), 42 MeV, differential scatt. cross sections, optical potential calcs. *(Chinese)* 7−96081
^{26}Mg(p,p), 5.5-17.5 MeV, optical potential description, compound nucleus scatt., OP parameters 7−121815
^{26}Mg(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{14}N(α,α), optical and folding model anal. 7−96087
^{20}Ne 0_4^+ rot. band, high spin members, optical anal. of ^{16}O(α,α) 7−116231
^{20}Ne(α,α), optical and folding model anal. 7−96087
^{20}Ne(p̄,X), low energies, $\sigma(\bar{p}n)/\sigma(\bar{p}p)$ values, Glauber model 7−116423
^{A}Ni(α,α), A=58,62, differential cross sections meas., optical model and DWBA calcs. 7−116446
^{A}Ni(α,p), A=58,62, differential cross sections meas., optical model and DWBA calcs. 7−116446
^{58}Ni(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{58}Ni(π,π), pionic atom anomalies study using optical pot. 7−102921
^{60}Ni(^{16}O,^{16}O), energy depend., optical model anal. 7−121943
^{60}Ni(d,d), 200, 400, 700 MeV, relativistic anal., Dirac vector/scalar potential strength calcs. 7−116437
nuclear optical model continued
^{64}Ni(^{18}O,^{18}O')^{64}Ni, transition potential for excitation, double folding model anal. 7−129084
^{64}Ni(p,p), phenomenological optical pot., energy depend. of radius 7−135270
^{237}Np, pionic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{A}O(α,α), A=16, 17, 18, optical and folding model anal. 7−96087
(^{16}O, ^{16}O), nucleus-nucleus potential, dispersive contribution, empirical real and imaginary potentials, anomalies 7−116354
^{16}O+α system, (^{20}Ne), microscopic optical potential 7−96038
^{16}O(π^+,π^+)^{16}O, excitation function meas., optical model calcs. 7−109238
^{16}O(^{16}O,^{12}C')^{20}Ne, E_{cm}=11-18 MeV, excitation fns., DWBA optical model comparisons 7−116502
^{16}O(^{16}O,^{16}O), microscopic optical pot. 7−81357
^{16}O(^{16}O,X), microscopic optical pot. 7−81357
^{16}O(^{3}He,^{3}He)^{16}O, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
^{16}O(N,N'), differential cross section meas., DWBA and coupled channel calcs. 7−73763
^{16}O(N,N), differential cross section meas. and phenomenological optical model pot. calcs. 7−73763
^{16}O(α,α) optical potential low energy props., ^{20}Ne rotational band study 7−140979
^{16}O(d,d), 200, 400, 700 MeV, cross sections, analyzing power meas., optical model anal. 7−73779
^{16}O(δ̄,δ̄), 39-104 MeV, differential cross sections, optical-folding model comparisons 7−129068
^{16}O(p̄,p̄), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{16}O(t,t)^{16}O, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
^{208}Pb(^{12}C, ^{12}C), 220, 200 MeV/N, Coulomb rainbow scatt., surface transparency, optical anal. 7−121932
^{208}Pb(^{16}O,^{16}O'), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{208}Pb(^{16}O,X), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{208}Pb(^{17}O,^{17}O), 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{208}Pb,^{208}Pb), microscopic optical pot. 7−81357
^{208}Pb(^{208}Pb,X), heavy ion optical potential, temp. dependence anal. 7−121890
^{208}Pb(^{208}Pb,X), microscopic optical pot. 7−81357
^{208}Pb(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{208}Pb(n̄,n̄), 2.7 MeV, polarization anal. power meas., optical model comparisons *(Chinese)* 7−96059
^{208}Pb(p̄,p'), cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{208}Pb(p,p)^{208}Pb, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
^{A}SM(α,α)^{A}SM, A=144,148,150,152,154 effect of inelastic excitation, optical potential anal. 7−109196
^{32}S(^{32}S, ^{32}S'), 91.3 MeV, one-neutron transfer contrib. to elastic scatt. 7−121891
^{32}S(n,n),(n̄,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{32}S(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317
^{A}Se(p,p) A=78, 80, 82, energy ≤6 MeV, polarization, cross sections, OP parameters. isobaric analog states 7−121816
^{A}Si(p,p), A=28,30, resonance scatt. anal. *(Russian)* 7−109176
^{28}Si(^{16}O,^{16}O), 3α transfer mechanism, excitation fns., molecular orbital model 7−121906
^{28}Si(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{28}Si(^{18}O,^{18}O), 352 MeV, cross sections, optical pot. comparison 7−135365
^{28}Si(^{32}S,^{32}S)^{28}Si, 42-48.1 MeV, angular distrib. meas., cross section excitation fns., intermediate structure obs., optical model calcs. 7−73784
^{28}Si(^{32}S,^{36}Ar)^{24}Mg, 42-48.1 MeV, angular distrib. meas., cross section excitation fns., intermediate structure obs., optical model calcs. 7−73784
^{28}Si(n,n),(n̄,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{28}Si(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317
^{33}Sn(n,X), 10 keV-2 MeV, total cross section meas., resonance structure, optical model anal. 7−129035
^{116}Sn(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{A}Te(n,n)^{A}Te, A=122, 124, 126, 128, 130 total cross-sections, optical model anal. 7−81393
^{A}Te(n,x), A=122, 124, 126, 128, 130 total cross -sections, optical model anal. 7−81393
Th(Ta,X), optical potentials using realistic nucleon-nucleon interactions, existence of pockets 7−109212
Th(Th,X), optical potentials using realistic nucleon-nucleon interactions, existence of pockets 7−109212
^{50}Ti(p,p), resonance scatt. anal. *(Russian)* 7−109176
U(Th,X), optical potentials using realistic nucleon-nucleon interactions, existence of pockets 7−109212
^{238}U(^{238}U,X), optical pot. in sudden and adiabatic approx. 7−95995
^{90}Zr(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{90}Zr(p̄,p'), cross sections and analyzing power, DWBA and optical model calcs. 7−102878

nuclear orientation *see nuclear polarisation*

nuclear Overhauser effect
adenosine-thymidine interaction, selective nucl. Overhauser enhancement meas. 7−109963
2',5'-anhydroarabinosylcytosine, struct. and conform., X-ray, ^{1}H and ^{13}C NMR anal. 7−98103
bacteriophage, fd, coat protein, backbone dynamics, solid-state and soln. ^{15}N NMR spectra 7−71687
5-(m-benzyloxybenzyl)-1-[(1,3-dihydroxy-2-propoxy)methyl]uracil, X-ray and ^{1}H NMR anal. 7−76109
coenzyme B_{12}, base-off form, soln. behaviour, 2-dimens. NMR 7−74671
cross-correlation and 2D NOE spectra, dipole-dipole relax. investig. 7−89240
cross-relax. rate, reson.-offset effects in rot. frame, ROESY spectra 7−67360
4-cyano-4'-n-pentylbiphenyl (5CB), homologous series, ^{13}C NOE studies 7−99612

nuclear Overhauser effect continued
cytochrome c, horse and tuna, ferric forms, proton hyperfine resonance assignments using the nuclear Overhauser effect 7−133219
dichloromethane, spin-lattice relax. times, nucl. Overhauser enhancements and mol. reorientation 7−129747
heteronuclear spin systems, Overhauser expts., T_1 determ. 7−108606
horseradish peroxidase, electronic and mol. struct., PMR and NOE study 7−68478
octahydroindoles, 2D NMR 7−96745
ploybutadiene-dihalocarbene adducts, 2D NMR study 7−91471
proteins, 2D NOE spectra, simplification by ^{13}C labelling 7−78755
proteins, structure and interactions, sequential NMR assignments and isotope labelling 7−93639
spectral symmetry investig. 7−80834
strongly coupled three-spin system, NOE enhancements study 7−103553
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
teicoplanin A_2, structural anal., two-dimens. PMR and NOE spectra 7−71685
^{13}C-^1H distance, NOE spectra meas., indirect effects role 7−135980
^{19}F NMR, proton decoupling in situ, cerebral metabolism appl. 7−93859

nuclear particle track visualisation *see particle track visualisation*

nuclear photoeffect *see photon-nucleus reactions*

nuclear physics
see also fission; fission reactors; nuclear bombardment targets; nuclear decay theory; nuclear reactions and scattering; nuclear structure; radioactivity
Joint Institute for Nuclear Research publication image 7−80274
LAN in nuclear physics expts. 7−108532
struct. information, ENSDF data bank *(French)* 7−80206

nuclear polarisation
see also dynamic nuclear polarisation; magnetic double resonance; nuclear polarisation in liquids and solids
75 GHz spectrometer for microwave-induced optical nuclear polarisation 7−108599
average monopole polarization charge and in relation to nuclear incompressibility and effective mass 7−141009
compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
conf. on electromagnetic isotope separators, Los Alamos, USA 7−140362
cryogenic methods and technical aspects, book contrib. 7−95599
elastic transfer, optical pot., parity depend. contrib. 7−116356
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
FOLBIS EM isotope separator, on-line nuclear orientation/NMR hyperfine interactions 7−125547
G-parity conservation on beta decay, weak nucleon currents 7−116259
high-momentum phonon exchange and the effective shell-model interaction 7−102810
low temperature methods, book 7−95110
low-temperature nuclear orientation in solid-state and nuclear physics, book contrib. 7−99609
nuclear orientation techniques applied to on-line separated isotopes 7−121558
on-line low-temperature nuclear orientation at DOLIS-COLD 7−125548
on-line nuclear orientation, technique development 7−116732
on-line nuclear orientation 7−121557
on-line nuclear orientation at KOOL 7−116733
orientation formalism, radiation emission and angular distrib. coeffs., book contrib. 7−96019
oriented nuclei, alpha- and beta-emission, book contrib. 7−96032
oriented nuclei, fundamental symmetries, book contrib. 7−96049
oriented nuclei, gamma-ray, X-ray and conversion electron emission, book contrib. 7−96024
oriented nuclei nuclear reactions, book contrib. 7−96050
parent states, spins and moments, book contrib. 7−95989
photosynthetic bacterial reaction centres, effects of nuclear spin polarisation on reaction dynamics 7−100792
transient mag. fields for single electron ions 7−118419
ultrarelativistic hypernuclear magnetic moments and lifetimes, polarized light hypernuclei prod. 7−141011
unstable nuclei, ground state properties from laser spectroscopy 7−116239
(n,n), time party violation, aligned nuclei, T-odd, p-even correlation, experimental methods 7−116413
$(\vec{n},n'\gamma)$, nuclear orientation, polarization density matrix anal. 7−121831
^{104}Ag, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{189}Au, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{209}Bi, single-particle proton strengths in $1i_{13/2}$ and $1j_{15/2}$ states 7−67684
^{A}Cs, A=118,121, on-line nuclear orientation, relaxation studies 7−118883
^{A}Cs, A=119, 120, 121, nuclear orientation, temp. dependence 7−112991
Δ-hole phonon and particle-hole phonon interplay, Δ-hole polarization effect 7−135226
Fe−^{154}Eu (^{169}Y), nuclear orientation meas. γ-ray anisotropies 7−118895
Gd−^{166}Tm(^{169}Y), nuclear orientation meas. γ-ray anisotropies 7−118895
^{A}Gd, A=147, 149, ground state, mag. dipole moments 7−116268
^{A}Gd, A=149, 151, low temp. nuclear orientation 7−116243
^2H(d, X) reactions, outgoing nucleon polarisation angular distrib. study 7−116372
^3He, polarisation with tunable laser 7−122460
^4He resonances from ^2H(d, X) polarisation data, R-matrix approach anal. 7−116358
I mag. moments meas. by on-line nuclear orientation 7−116273
^{A}I, A=117-122 mag. moment meas. by nuclear orientation 7−109022
^{106}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{108}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{A}Li(p,X), A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
N isotopes, core polarization effects on Coulomb form factors, perturbation theory 7−109013
^{A}Po, A=208, 209, nuclear orientation following Al decay in Fe 7−116330
^{116}Sb, mag. moment, on-line resonance meas. at DOLIS-COLD facility 7−116272
^{178}Ta oriented nuclei; NMR meas. 7−73698
^{A}U(n, n), A=235, 238, cross sections, ground state reorientation, coupled channels calcs. 7−116407
^{51}V(n,N), spin-dependent scatt. length meas. 7−109177

nuclear polarisation continued
Y:^{160}Tb, nuclear orientation meas. 7−118428
^{90m}Zr, mag. moment and anomalous orbital g-factor, NMR meas. 7−116274

nuclear polarisation in liquids and solids
see also dynamic nuclear polarisation
absorption Mossbauer spectra on low temp. oriented nuclei 7−118917
cryogenic methods and technical aspects, book contrib. 7−95599
Fermi contact interaction, selective determ. by circular polarisation meas. 7−118920
^3He, liq., spin polarised, macroscopic quantum props. investig. 7−118190
implanted ^{12}B, lattice location by cross relax. 7−131171
level mixing resonances on oriented nuclei 7−132163
local nuclear orientation using defect-induced electric field gradients in cubic lattices 7−118918
low temperature methods, book 7−95110
low-temperature nuclear orientation in solid-state and nuclear physics, book contrib. 7−99609
magnetic structure, oriented nuclei studies, book contrib. 7−99413
metals, magnetic, hyperfine interactions, book contrib. 7−98944
metals, nonmagnetic, electric quadrupole interaction nuclear orientation, book contrib. 7−98945
metals, nonmagnetic, nuclear orientation, book contrib. 7−99610
metals and insulators, NMR of oriented nuclei, continuous wave methods, book contrib. 7−99592
metals and insulators, nuclear relaxation and nuclear orientation, book contrib. 7−99603
nuclear orientation below 1 mK, development, appl. 7−118919
nuclear orientation thermometry, accuracy, book contrib. 7−95589
orientation of on-line implanted nuclei, book contrib. 7−99611
oriented nuclei, NMR, transient methods, book contrib. 7−99593
semiconductor, nuclear spin system, optical cooling 7−85843
semiconductors, defect reactions, optical nuclear polarisation and spin-depend. recomb. techniques 7−112996
semiconductors, hot electron luminescence and optical orientation of electron and nuclear spins 7−85841
Si irradiated crysts., defect triplet centres, spin-depend. photocond. and optical nuclei polarisation study 7−98818
$Ca(OH)_2$:O_2^-, proton spin-lattice relax. and dynamic nuclear polarisation meas. 7−143931
CsFe, hyperfine field and relaxation meas. 7−112991
Fe, NMR spectra, hyperfine splitting frequencies 7−81298
^3He, liq., magnetisation by dynamic nuclear polarisation 7−76527
^8Li, nuclear spin polarisation by tilted foil technique 7−118871
$MnCl_2.4H_2O$, ^{54}Mn pulsed NMR of oriented nuclei 7−132152
^{27}Si nuclear spin polarisation by tilted foil technique 7−118871

nuclear power
alkali-metal Rankine power systems for space appl. 7−67905
Asian Pacific Basin, cooperation in nuclear power programmes 7−139089
atomic energy, developments, book 7−72761
Australian attitudes to U mining and export 7−86770
BNFL, role in the future of nucl. power 7−144804
Brayton cycle and radiator study for Ariane 5 space nucl. power appl. 7−67904
Canada's nuclear energy program, historical overview 7−139090
Canadian Engineering Centennial, Montreal, Que., Canada (May 1987) 7−134371
Canadian nuclear power program, key decisions 7−139091
CEGB system, future role of nucl. power 7−144800
Chernobyl accident, effect on nuclear power in USA, TMI-2 comparison 7−116690
China, nuclear power's role within economic development programme 7−133044
complex development of nuclear power in Czechoslovakia *(German)* 7−78620
conference on nuclear power after Sizewell B, London, England (Sept. 1987) 7−140375
developing countries, requirements and constraints 7−133043
developing world, nuclear power prospects 7−86765
development perspectives in the nuclear industry *(German)* 7−139086
district heating, application of established LWR technology 7−133050
engineering developments for safety 7−139093
European fusion program 7−129397
French power plants, operation and prospects for nuclear power development 7−78617
fusion development program in Japan, role of industry 7−133049
fusion programs in Canada, Varennes Tokamak and Fusion Fuels Technology Project 7−133046
fusion reactor development problems and international collaboration *(Chinese)* 7−81708
fusion research, international collaboration activities 7−133047
fusion research, international collaborations, Canadian perspective 7−133048
fusion research, international collaborations, Japanese perspective 7−129399
future developments and options, CANDU role 7−144807
future of nuclear power, Canadian utility perspective 7−144806
Germany, nuclear power, concept of the electricity utilities *(German)* 7−135683
Germany, nuclear power use during 1986 *(German)* 7−133056
International Fuel Cycle Evaluation, political decision making *(German)* 7−78621
international fusion research, inertial and magnetic fusion, future prospects *(Norwegian)* 7−139088
Japan, status and future development of nuclear power *(German)* 7−139087
management, development and exploitation *(Czech)* 7−78619
operator training examinations in Czechoslovakia *(Czech)* 7−71586
pebble bed HTR suitable for district heating schemes, construction, safety, costs *(German)* 7−93482
post-Chernobyl anal. of nuclear power engineering status and development *(Slovenian)* 7−103167
power and energy-CHP, nuclear power, generators secondary cells and acid rain 7−71658
power prices, effects of nuclear energy *(German)* 7−126562
present status and future of nuclear energy in Yugoslavia *(Croatian)* 7−133051
regulatory approach in Canada 7−139092
risk perspective 7−139094
Sizewell decision, influence on UK nuclear licensing 7−144801

nuclear power continued
Spain, public opinion and the nuclear debate 7−86769
Spanish nuclear technology, general overview 7−109537
status and trends of nuclear power in 1987 *(Croatian)* 7−133053
studies at Dutch Energy Research Centre *(Dutch)* 7−126535
Sweden after Chernobyl, public opinion and nuclear energy 7−86768
UK nuclear power programme, radiation protection aspects 7−141338
UKAEA, role in the future of nucl. power 7−144805
United States, nuclear power market outlook 7−86766
United States, energy policy, fusion and international collaborations 7−133045
United States magnetic fusion program 7−129396
United States U producers in the world market 7−86767
USA nuclear power options for industry and Government policy 7−119629
VHTR role in nuclear process heat utilisation in future energy systems 7−86763
world energy prospects and the role of nuclear power 7−86764
world market, U prod. and public opinion, conf., London, England, Sept. 1986 7−80181
Yugoslavia, effects of Chernobyl accident on nuclear power programme *(Croatian)* 7−133052
Yugoslavia, status and future of nuclear energy 7−109538
^{3}He, lunar source for commercial fusion power appl. 7−71587

nuclear power stations
see also power station control
900 MW PWR at Daya Bay Nuclear Station, Framatome 3-loop nuclear steam supply system 7−89592
advanced computer based training for nuclear power plant personnel 7−96140
advanced control test operation (ACTO) facility for nuclear power plants 7−129165
advanced installation planning of power plants, model appl. *(German)* 7−133055
AGR scatter plugs, control model validation by distortion technique 7−96146
agricultural use of waste heat from French nuclear power plants *(Hungarian)* 7−126566
AI applications to safety and maintenance 7−116686
aircraft crash hazards, site-specific assessments 7−129350
ALARA, appl. to nuclear power station operation 7−96304
ALARP principle, appl. to power station design 7−96179
Angra 1 power plant probabilistic safety assessment, event-tree anal. 7−67955
annual effective dose equivalents near nuclear power stations under meteorological dispersion conditions 7−103288
Argos PHWR-380 with enhanced safety features, design 7−103083
Arkansas Nuclear One 1, fuel integrity after misaligned control rod incident 7−109407
atomic emission spectrometry with inductively coupled plasma *(German)* 7−139073
austenitic welded joints, flaw detection using US monitoring *(Russian)* 7−71452
automated clearance system for safety system status, computer appls. at EdF 7−135531
automated nuclear power plant diagnosis method 7−135451
automated system for recording abnormal situations in an automatic power plant *(Russian)* 7−81561
automatic remote monitoring system for nuclear reactors in Bavaria 7−109522
AVR 15 MW experimental nuclear power station with pebble-bed high temp. reactor 7−73887
Barsebeck Nuclear Power Plant, outage planning and execution 7−141206
Beaver Valley PWR, on-line monitoring of secondary-cycle chemistry with morpholine 7−141214
Belgian nuclear power plants, safety re-evaluation 7−96277
Beznau PWR plant, backfitting of the NANO bunkered emergency heat removal system 7−135506
blow-down from a pressure vessel containing steam-water mixtures 7−96266
BOR 60, steam generator design and five years of operation *(Czech)* 7−67936
Browns Ferry Nuclear Plant, liq. radwaste in-leakage reduction 7−129184
Bruce A, in-service monitoring of safety system reliability 7−109388
BWR, advanced nuclear predictor, power distribution control 7−96241
BWR 540 MW power plant pipe replacement project 7−122026
BWR plant surveillance and diagnosis system using noise anal. 7−129340
BWR plants, NUCAMM-80 advanced control and instrumentation system 7−129259
BWR power plant, 1220 MWe power range, design *(German)* 7−135400
BWR power plants, real-time stability monitoring method, power fluctuation, inverse system 7−129245
BWR power uprate feasibility study 7−129256
BWR pressure vessel life extension 7−129359
BWR station power resin condensate polishing plant for waste reduction *(German)* 7−116711
Byron Nuclear Power Station, Duty Health Physicist Programme, radiation protection 7−135529
cable-tray supports, effective length factors for buckling 7−141240
CAD/CAE systems for French nuclear power plants 7−96242
Calvert Cliffs PWR, LOOSP cooldown to residual heat removal entry conditions, RETRAN-02 and TRAC-PF1 calcs. 7−73927
Canadian Nuclear Society annual conference, Toronto, Ont., Canada, (June 1986) 7−88743
CANDU, current and planned developments 7−135420
CANDU 300, rapid construction methods 7−102946
CANDU reactor, commissioning test results comparison with physics simulations 7−89639
CANDU-600, load following at Embalse power station, operating experience, anal. summary 7−81572
CANDU-CANDU (Th/Pu)-LMFBR(PuO_2) nuclear power system, optimisation using stochastic approach 7−129133
capacity utilization and availability, 1986 *(German)* 7−119627
cause coding tree to identify event root causes at nuclear plants 7−109396
CDFR, low capital cost achievement, refuelling, fuel design, nuclear island layout 7−102947
CEGB off-site training for power plant operators, safety 7−115717

nuclear power stations continued
Chernobyl accident, causes and consequences, implications for US nuclear plants 7−135490
Chernobyl accident, effect on nuclear power in USA, TMI-2 comparison 7−116690
Chernobyl accident, Hungarian population irradiation and pollution *(Hungarian)* 7−126662
Chernobyl nucl. power plant accident *(Hungarian)* 7−116662
Chernobyl plant comparison with Zwentendorf *(German)* 7−96280
Class 1E equipment seismic qualification, IEEE recommended practice 7−141249
Class IE equipment safe part replacement, IEEE standard 7−141250
Clinton, reliability-centred maintenance program 7−135513
colloquium on Nuclear Safety Project, Karlsruhe, Germany (June 1986) 7−128176
Combustion Engineering System 80 PWR, work in Advanced LWR programme 7−135402
component life extension, cost assessment *(Czech)* 7−141145
components, nondestructive evaluation, 1986 EPRI summary 7−132901
computer integrated system for improved productivity in plant engineering 7−129159
computer-aided information system for nuclear plant operation, development *(German)* 7−96137
computerized technical specification compliance and equipment tag-out system 7−129317
conf., London, England, Sept. 1986 7−95108
conference on nuclear power after Sizewell B, London, England (Sept. 1987) 7−140375
conference on nuclear power plant operation, Chicago, USA, Aug. 1987 7−134357
configuration management of plant modifications for nuclear power plants 7−135524
containment behavior during accidents, process dimensional anal. within code description, scaling effects 7−96264
control and instrumentation systems in nuclear power plants *(German)* 7−73885
control room design modifications 7−106891
coolant pump vertical fixed speed motors *(French, English)* 7−141191
cooling system for nuclear power stations, design criteria and methods 7−74259
CORD process chemical system decontamination 7−135519
core on-line monitoring and computerized procedures systems 7−129269
Creys-Malville plant fast breeder station tests and start-up 7−129270
Daya Bay PWR power plant, radiological consideration of plant siting 7−89645
D.C. Cook PWR plant, fuel performance eval. and experience 7−135432
decommissioning, scientific, technical, economic and legal problems *(French)* 7−74019
decontamination methods and their development, Paks appl. *(Hungarian)* 7−81580
design and procedure changes in nuclear plants, guideline development 7−135414
design basis reconstitution for an effective design control program 7−102973
design inspections for systems undergoing design modifications 7−102976
design quality and safety, human factors in nuclear power systems, quality assurance 7−116667
Diablo Canyon, role of safety evals. in design change process 7−103119
Duke Power operating experience management and analysis 7−109345
dynamic simulation, multirate integration methods and table lookup techniques 7−96175
dynamic simulation models for control, quantitative analysis 7−96145
early fault detection and diagnosis for nuclear power plants 7−96272
EBARR, power maneuvering code, load follow appls. 7−141131
electrical drawing system for operation and maintenance activity support 7−67933
electrical equipment moisture tightness for reliable and safe operation 7−73943
electrical equipment qualification *(French)* 7−109372
Electricite de France, outage planning and scheduling 7−141205
electricity production, long term prospects *(Dutch)* 7−126563
electrochemical decontamination process 7−135519
emergency exercises, scenario development methodology 7−141243
emergency operating procedures tracking system 7−129349
emergency planning, off-site relations and self-evaluation programs 7−141242
emergency procedures in nuclear plants, French approach 7−135504
energy and exergy analyses of a nuclear steam power plant 7−81565
EPRI nuclear plant life extension program overview 7−129358
EPRI operations and maintenance source book, strategic programme element 24 7−89635
ERFIS information system at Vermont Yankee nuclear plant, emergency response 7−116685
error prevention and reliability improvement by operating personnel, man-machine system *(Russian)* 7−89644
EXTRA, real-time knowledge-based alarm system for industrial process control in PWR nuclear power plant 7−103149
failure diagnosis method for nuclear power plant, based on transient information 7−135496
FAMOS fatigue monitoring system for power plants *(German)* 7−132902
Farley Nuclear Plant, refueling outage performance improvement 7−141201
fast-breeder reactors in operation *(German)* 7−129225
fault detection using quasi-continuous nuclide meas. *(German)* 7−129370
feedwater control, fault-tolerant digital system, at Monticello nuclear power plant *(Japanese)* 7−135489
feedwater line break anal. using RELAP4/Mod6, parameter uncertainty and sensitivity 7−129281
feedwater treatment *(German)* 7−96245
Ferranti VARS-H displays installation at Hunterston B AGR 7−116639
Finland, backfitting to mitigate severe accidents in nuclear plants 7−135505
Florida Power and Light Company, quality improvement program 7−106897
Fort Calhoun nuclear power station, computerized training program 7−128229
French 900 MW nuclear power plants, operating results *(French)* 7−93481
French 900/1300 MW nuclear plants, standardization of instrumentation and control structure 7−135523
French N4 PWRs, entirely computerised control room 7−103039

nuclear power stations continued
French nuclear facilities, emergency planning and preparedness 7−129323
French nuclear power program 7−133054
French nuclear power stations, hydrobiology and aquatic chemistry of cooling tower contaminants *(French)* 7−89633
French power plants, operation and prospects for nuclear power development 7−78617
French PWR's erection and operating experience *(German)* 7−73892
French PWR construction programme *(French)* 7−93480
Fukushima BWRs, start of commercial operation for 10th unit, design improvements 7−135465
generic seismic ruggedness of nuclear plant equipment 7−129347
German nuclear generating units above 1000 MW, 1986 operating experience *(German)* 7−119626
German nuclear power plants, 1986 performance data *(German)* 7−109333
German nuclear power station risk study, phase B, radiation protection modelling and preventive measures *(German)* 7−109457
Gosgen PWR, core behavior during main coolant pump malfunction *(German)* 7−141253
gravitational separation investigations using RBMK-1500 drum separator model, efficiency study *(Russian)* 7−135453
Grohnde and Philippsburg II nuclear power stations operating cycles, chemistry field experience. *(German)* 7−89634
Guangdong nuclear power station, NSSS from Framatome, design improvements 7−135464
Guangdong nuclear power station, site characteristics and site specific needs 7−135503
Haddam Neck NPP, integrated safety assessment of O_2 reduction project 7−135526
heavy ion ICF electric power plants, economic studies 7−81697
heavy reactor components, automated multi-function ultrasonic testing 7−129299
heavy-ion fusion reactor concepts, requirements, and attractive features 7−81699
high-tech testing of process and safety equipment 7−129283
HTER-100, applications, power output and economics *(German)* 7−133057
HTGR application and development trends *(Hungarian)* 7−109263
HTR, design concept for heat generating station *(German)* 7−129164
HTR 100 100 MW high-temp. reactor for cogeneration of heat and electricity, safety characts. 7−116661
HTR 500 550 MW high-temp. reactor, safety and operation 7−116660
ICF power plants using KrF lasers, plant and driver efficiencies improvements 7−110391
Ignalina RBMK-1500 plant, safety after Chernobyl 7−103081
Ignalina RBMK-1500 plant, Soviet perspective after Chernobyl 7−103087
in-reactor inspection, photographic and photogrammetric techniques 7−129298
in-service inspection techniques, safety criteria 7−129232
industrial countries' nuclear power developments and fuel cycles *(Hungarian)* 7−78618
inherent safety in nuclear reactors *(Dutch)* 7−122043
inherently safe reactors with passive safety, designs, risks *(German)* 7−116697
inspection and enforcement activity interface at nuclear plants 7−109397
ion chromatographic anion determ. automation *(German)* 7−100680
Kalkar nuclear power station, ECCS construction calcs. checking during commissioning *(German)* 7−116693
Kalkar power station, SNR-300 thermohydraulic calcs. for heat exchangers and steam generators *(German)* 7−116653
Kalkar SNR-300, reactor vessel system 7−135508
Kalkar SNR-300 plant, primary and secondary main piping systems 7−135469
Kalkar SNR-300 plant, refuelling system fabrication and testing 7−135403
Kalkar SNR-300 plant, summer 1986 status 7−135507
Kansai expert systems development for nuclear plant operators 7−116636
Kol'skaya VVER-440, first fuel charge modernisation, neutron physics 7−103027
Kori Nuclear Unit 2, nuclear safety parameter display system 7−129282
KRB B and C BWRs, 9×9 fuel element contrib. to stability *(German)* 7−141223
Krsko nuclear power plant, IAEA safety mission, incident anal. *(Slovenian)* 7−103076
Krsko nuclear power plant, operating experience 7−109343
KWU nuclear power plants, accident management measures, emergency procedures 7−96271
KWU PWRs, provision of optimum operating information in control rooms 7−103040
La Salle County nuclear station, risk-based eval. of technical specification problems 7−141248
Laguna Verde Power Plant, nuclear materials safeguards *(Spanish)* 7−116593
laser scanning cameras for nuclear reactor inspection 7−81562
Leibstadt COSA containment venting system, safety assessment by PRA *(German)* 7−116696
Leibstadt nuclear power station, experience gained during construction and operation 7−73888
life extension, economic aspects 7−106892
Lilco's Shoreham nuclear power plant evacuation planning 7−122040
linac driven heavy ion ICF power plant, performance and cost modelling 7−81694
loss of power events at FRG nuclear plants, redundancy in emergency power supplies 7−103086
Loviisa PWR, process computer system replacement, simulator upgrade 7−116637
LWR, 1D and 3D load following anal. methods comparison, HLOFO and CMSNAC codes 7−129135
LWR development program at EPRI 7−129151
LWR major components, performance characterisation for life extension studies 7−81563
LWR nuclear power stations, power control *(German)* 7−109336
LWR piping, snubber elimination using energy absorbers 7−103130
LWR plant life extension, methodologies and overview of related work 7−89651
LWR power plants, HEPA air cleaning filters, development and appls. 7−129297
maintenance practices for nuclear plant life extension 7−135515
material management performance indicators for upper management 7−103052
nuclear power stations continued
mathematical modelling of nuclear power plants, sources of errors 7−102942
McGuire nuclear plant, integrated operating schedule 7−135475
McGuire Unit 1, power distrib. monitoring experience, COSMOS system 7−141208
microprocessor-based instrumentation for nuclear power plants 7−116640
Millstone 2 nuclear power station makeup water, organic contaminants reduction 7−129365
Mitsubishi knowledge-based AI system, use in nuclear plants 7−116635
mobile robots for use in hazardous environments in nuclear plants 7−129346
Monticello BWR plant, life extension study, phase 1 7−135534
Muelheim-Kaerlich PWR plant, boric acid control, state modelling, plant experience 7−135482
Muhleberg BWR, chemical decontamination of recirculation loops *(German)* 7−116720
Muhlheim-Karlich nuclear power plant, damaged fuel elements, inspection and repair *(German)* 7−129200
Mulheim-Karlich nuclear power plant, shut-down safety meas. *(German)* 7−141252
multi-unit CANDU power plants, pressure relief structures 7−81591
neutron dosimetry in nuclear power plants *(German)* 7−129454
North Anna nuclear power plant decommissioning public attitudes 7−103150
North Anna power station, solid radioactive waste characterization 7−103005
North Anna-1 PWR, steam generator hideout return data, eval. methods for corrosion 7−67940
NPRDS, nuclear plant reliability data system, natural language interface 7−102982
NRC performance indicator program 7−129250
NRC performance monitoring program, overview 7−129249
nuclear development, effects of Chernobyl 7−103088
nuclear regulation in the UK after Chernobyl, NII role, safety standards 7−89641
nuclear safety reports from critical inspections, USA and FRG procedures *(Hungarian)* 7−89656
Obrigheim power plant, fuel element operation, position-depend. neutron spectra *(German)* 7−141158
occupational exposure minimisation at Finnish nuclear power plants 7−135681
occupational radiation exposures during maintenance activities at nuclear power plants in Japan 7−81735
on-line diagnostic system for pump failure warnings 7−116687
Ontario Hydro radiation protection programme for nuclear plants 7−135528
open circuit nuclear power stations, thermal control and environmental impact *(French)* 7−139154
operating and maintenance strategies for nuclear plant life extension 7−135473
operating experience evaluation at Northeast Utilities 7−109399
operating experience lessons for safety systems 7−109395
operation experience with nuclear power installations in the Federal Republic of Germany, 1986 *(German)* 7−141186
operational safety and productivity system reliability anal. 7−141244
operations personnel computer based training 7−129268
operator training simulator, Grafenrheinfeld PWR plant 7−81473
optical data transmission system with variable priority of integrated information for nuclear plants *(Japanese)* 7−116664
out-of-core radiation reduction 7−89786
outage management in Finland 7−141203
outage performance, Public Service of New Jersey-Westinghouse joint study 7−141202
outage time for fuel reloading, maintenance and inspection *(Czech)* 7−73890
outages, ALARA health physics support 7−129324
Oyster Creek BWR, MSIV closure and bypass tests, RETRAN simulation 7−109400
Oyster Creek cycled 10 nodal model parameter optimization study using PSMS 7−109346
Paks (Hungary) nuclear power plant measurement and control circuits *(Hungarian)* 7−116629
Paks (Hungary) nuclear power plant ventilation system commissioning and operation *(Hungarian)* 7−122039
Paks Nuclear Power Plant, laser surveillance system field test 7−103148
Paks nuclear power plant, laser surveillance system for spent fuel elements *(German)* 7−129372
Paks power plant, LOF expts. at PMK-NVH facility, primary circuit dynamics, flow meas. *(Hungarian)* 7−103131
Paks reactor, consistence gauges of hermetic spaces measured for overpressure *(Hungarian)* 7−109369
Paks reactor, semi-axial water cooling pumps starting, partial immersion of running wheels *(Hungarian)* 7−109337
Paks VVER-440 reactor, thermal-hydraulics determs. using VERONA system *(Hungarian)* 7−103069
Palisades nuclear power plant, employee involvement in radiological work practice upgrading 7−135530
performance indicator program 7−129251
Perry Nuclear Power Plant, instrumentation and control, performance improvement program 7−129261
PGV-2000 steam generator, hydrodynamics investig. at Novovoronezhskaya atomic power station *(Russian)* 7−129223
Philippsburg 2 nuclear power plant, computer based process information system *(German)* 7−96138
photogrammetry applications for safety related components 7−128698
Pickering A CANDU plant, leakage from biological shield cooling system 7−81616
Pickering Nuclear Generating Station, outage management techniques 7−141204
Pickering operations fuel performance review 7−96193
plant component decontamination by ice-blasting *(Japanese)* 7−129446
plant information management system, quality assurance 7−106894
plant life extension, sampling programs of reevaluation 7−129357
plant maintenance, European practice 7−122035
plant maintenance practices, performances and improvement requirements 7−81578
plant modifications, design bases inputs control using configuration management 7−135413
plant operator errors during simulator training 7−74014
plant piping support system development *(Japanese)* 7−89594

nuclear power stations continued
Plant Vogtle, independent design review 7—102979
Plant Vogtle nuclear plant, readiness review for construction and design programmes 7—102977
Point Lepreau CANDU Generating Station, fuel management and performance 7—96194
portable electron linear accelerator, appl. to inspection in nucl. power industry 7—89799
power plant as-built efforts, photogrammetry appl. 7—129157
power plant piping systems, seismic restraint reduction approach 7—129161
power plant simulation and reactor safety 7—122055
power plants, epoxy coatings penetration by contaminants 7—129362
power plants, safety-related piping system, snubber reduction 7—129361
power plants, seismic requalification advancements 7—129363
power plants, steel piping and structural materials, flaw detection 7—129189
pragmatic pairwise group decision method for site selection in Saudi Arabia 7—81593
primary coolant circuit behaviour, expt. and theoretical investigations *(Czech)* 7—141193
PRISM, passively safe, economic and testable advanced power reactor 7—129155
process instrumentation, micro electronic surveillance and calibration techniques 7—129267
Promaster computerised process control for nuclear power plants 7—116638
PWR, containment-venting filter concept and its first application in a German nuclear power plant *(German)* 7—129369
PWR, oscillating coolant flow, temp. fluctuations, Rheinsberg expt. fuel assemblies *(German)* 7—141196
PWR, Sizewell B design, main features *(German)* 7—135398
PWR, three-loop design, 900-1000 MWe power range *(German)* 7—135397
PWR, turbine deaerating cycle, economic evaluation 7—129355
PWR, UK safety aspects and replication programme 7—144802
PWR boron conc. control by real-time expert system PMS-2 7—73938
PWR component operability, safety aspects, in normal and adverse environments 7—129285
PWR fuel performance, Korean experience 7—135435
PWR high burnup experience at Farley 1 and Point Beach 2 7—141151
PWR life span, EDF study *(French)* 7—96281
PWR LOCA, pipe whip tests, expt. results and dynamic anal. using ADINA 7—141237
PWR operation, procedure for start-up, system details, data for 4-loop Sizewell 'B' prototype 7—116633
PWR power plant chemistry control, computer assisted data trending and problem assessment 7—129364
PWR power plant modelling using LEGO modular simulation package 7—67893
PWR power plants, long term reliability assessment based on power generation stats. 7—81553
PWR safe shutdown during blackout, French backup power supplies and procedures 7—103085
PWR thermal-hydraulic characts. during commercial operation, steam generator secondary water chem. 7—73908
PWRs, evolution of 1000 MW power plants in the USSR *(German)* 7—81477
PWRs, Japanese annunciator system for control room, accident conditions 7—135481
PWRs, Paluel, 1300 MWe, external core meas. *(French)* 7—73936
PWRs in France, EdF technical and ergonomic eval. of control rooms 7—135480
PWRs in France, safety experience 7—129289
quality assurance techniques 7—106893
radiation exposure detection limits for nuclear power station operation, environmental TLD obs. 7—129444
radiation protection in Czechoslovak nuclear power plants 7—81739
radioactive pollution, relative population exposures from coal-fired and nuclear power plants in India 7—119863
radioactive waste solution chemical treatment at VVER-440 nuclear power plants *(Hungarian)* 7—116707
Rancho Seco Power Plant, inspection guidelines from generic PRA information 7—103107
Rankine-cycle heat engines, water-based, direct manipulation interface 7—126641
RAPID plant status monitor, lessons learned from PSA, Oyster Creek plant appl. 7—135532
RAPID/RAM-UM system for reliability assessments 7—129342
reactor physics, developments *(Dutch)* 7—126564
reactor vessels dosimetry *(Hungarian)* 7—109272
real-time simulation for nuclear power plants and fuel pin performance 7—135412
reliability allocation in nuclear power plants, multiobjective programming approach 7—73833
reliability aspects of probabilistic risk anal. *(German)* 7—81588
relicensing procedures, preliminary evaluation and safety anal. 7—71585
risk assessments and safety goals, UK perspective 7—144803
risk perspectives and the use of risk-based information in regulation 7—129290
risk-based methods for technical specification improvement, appl. to LaSalle BWR 7—129147
River Bend Station Unit-1, nucl. construction project, planning and scheduling 7—129158
Russian nuclear power plants, nondestructive fuel anal. methods, safeguards equipment *(Russian)* 7—122018
sabotage mitigation and avoidance ranking of design and operational alternatives 7—109389
safety analyses develop. for nuclear power stations *(Dutch)* 7—103077
safety and International Atomic Energy Agency *(Hungarian)* 7—135493
safety and reliability practice in Japan 7—129257
safety assessment and risk management 7—129280
safety system and control *(Spanish)* 7—96263
San Onofre Unit 1, water hammer event in 1985, lessons learned 7—103122
San Onofre Unit 2, reliability-centred maintenance, appl. to auxiliary feedwater system 7—135512
scram reduction, appl. of reliability based methodology 7—129341
seismic verification of nuclear plant equipment anchorage 7—129348
selection criteria and requirements for floors in nuclear plants *(German)* 7—74206
nuclear power stations continued
self-assessment program for Commonwealth Edison Company 7—129329
semiautonomous robotic system for surveillance, maintenance and emergency response work 7—103055
seminar on understanding Chernobyl, London, England (Sept. 1986) 7—88747
Shippingport Atomic Power Station decommissioning, operational experience 7—103153
Shippingport Atomic Power Station decommissioning project 7—103151
Shippingport Station Decommissioning Project, barge transportation of waste, economic and safety aspects 7—103154
Shippingport Station decommissioning project, cost/schedule control system 7—103152
Shippingport Station Decommissioning Project, quality assurance program 7—103156
Shippingport Station Decommissioning Project, sampling plan for unconditional release of materials 7—103155
simulator qualification plan 7—73841
simulator qualification using the EPRI methodology 7—135416
simulators, continuous real-time survey 7—121999
siting near consumers, safety engineering, safeguards and PRA *(German)* 7—96283
Sizewell B PWR design modifications 7—89593
spare parts classification and procurement program 7—129351
spares management for improved maintenance 7—103053
start up tests for 1300 MWe nuclear plants, objectives and organisation 7—73937
Super Phenix fast breeder plant, emergency systems training simulators 7—67906
Superphenix, operating experience over first few months *(French)* 7—116647
Superphenix, steam-water circuits and electrical generating system *(French)* 7—116645
Superphenix internal structure, low freq. vibr., hydraulic testing *(French)* 7—116551
Superphenix nuclear power station, organisation and testing *(French)* 7—119630
Superphenix steam generators, commissioning and behaviour *(French)* 7—116644
Surry power station, solid radioactive waste characterization 7—103005
Surry Power Station PWR, fuel inspection and reconstitution experience 7—141149
Surry Unit 2, secondary circuit piping rupture event *(Japanese)* 7—135494
surveillance, audit and inspection function support 7—106895
surveillance test intervals methodology 7—109392
Susquehanna BWRs, recirculation system, transient monitoring using the GETARS system 7—103121
Susquehanna Unit 2 BWR, moisture separator drain tank level, transient response by RETRAN 7—73926
system engineering program for plant management and operation 7—106896
systematic functional task anal. for control room instrumentation 7—67934
systems interaction, training course 7—102955
technical and engineering services for nucl. power plant industry 7—109271
thermal performance on-line monitoring and anal. system 7—103059
THTR300 nucl. power station with pebble bed high temp. reactor 7—109250
THTR, radioactivity emission monitoring *(German)* 7—109536
THTR power plant, fuel flow control *(German)* 7—129373
THTR power station, radiation exposure meas. *(German)* 7—109535
Tihange Unit 1 PWR, upflow conversion of operating plant *(German)* 7—116651
TOPFORM nuclear plant modification review, utility design change programme 7—102974
tornado protection by venting 7—103123
Torness AGR simulator for commissioning and operator training 7—102069
tracking prod., quality and licensing 7—129353
training simulator fidelity 7—135417
training simulator validation using engineering computer codes 7—135411
Tsuruga-2 PWR, start of commercial operation, commissioning programme review 7—135466
Union Electric technical specification improvement program 7—135478
USA, nuclear plant emergency diesel generator reliability 7—103084
V1 nuclear power plant primary circuit main valve, stress and lifetime calcs. *(Czech)* 7—116542
V-1 nuclear plant, neutron field and dose equivalent meas. *(Russian)* 7—81738
Vermont Yankee and Monticello BWRs, radiation build-up factors comparison 7—103133
VERONA plus, extended core monitoring system for Paks WWER-440 power plant 7—129262
Virginia Power's nuclear plants, eval. of design change process 7—102975
Vogtle Electric Generating Plant, operations readiness review 7—102978
Vogtle Electric Generating Plant Unit 1 Readiness Review Program 7—103120
Vogtle Unit 1, NRC implementation of readiness review pilot programme 7—102980
Vogtle Unit 1, NRC involvement in readiness review 7—102981
VVER 440 reactor unit control and safety protection system *(Hungarian)* 7—81579
VVER power station steam turbines, argument for initial superheating 7—116552
VVER-440 nuclear power station steam generator blowdown water cleaning with chelating agent treatment 7—73939
Westinghouse advanced control room for nuclear plants, engineering human factors 7—103038
Westinghouse plant license/life extension program 7—129356
Westinghouse PWR power plant design 7—129156
wet steam turbine expansion curve determ. by radioactive tracer meas. of moisture *(Croatian)* 7—67943
Windscale advanced gas-cooled reactor decommissioning, radiation-resistant cutting and handling robot 7—74020
Wolf Greek PWR, RETRAN system anal. by Kansas Gas and Electric Co. 7—74004
Wolsung CANDU, D_2O spill incident of Nov. 1984, CATHENA simulation 7—81615
Wolsung Nuclear Power Plant, fuel performance improvement 7—116569

nuclear power stations continued
Wurgassen BWR, emergency cooling calcs. using SAFER code *(German)* 7−116699
WWER reactor, TEPI code for technical-economic performance data evaluation *(Czech)* 7−116543
WWER-440 nuclear power plants, personnel collective dose equivalent comparison *(Czech)* 7−122222
Zion Unit 2 PWR, cycle 1 analysis, QUANDRY, PDQ and ARROTTA comparison 7−67897
^{3}H monitoring near nuclear power station during operation 7−93569

nuclear pumped lasers
ruby solid-state NMR laser with injected signals, instabilities and chaos 7−74937
tokamak-pumped lasers, exptl. results, laser transitions 7−103839
He, purification by forced circulation through cooled sorbers 7−123006

nuclear quadrupole moments *see nuclear electric moment*

nuclear quadrupole resonance
absorption spectrometers, construction and appl. to high technology materials *(Japanese)* 7−73384
adenosine, ^{2}H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
adiabatic rotational splittings and Berry's phase in nuclear quadrupole resonance 7−106055
benzothiazole-2-one, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
Brownian rotational reorientation, zero-field NMR and NQR line shapes 7−70668
5-chloro-2-pyridone, phase transition, IR, Raman and dielec. meas., NQR spectrum 7−77423
cinnolin-4-ones, quadrupole coupling, cryst. struct., ab initio calcs. 7−70667
cyclopropenylidene-d_1, ^{2}H nuclear quadrupole hyperfine struct. study 7−101891
deuteron quadrupole coupling const. in high temp. limit 7−109964
diamond:N, electronic struct., hyperfine interaction, cluster study 7−118406
dielectric crystals, quadrupole spin-lattice interactions, role of point defects 7−132159
diglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
1,2-dimethylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
dipole-couple spin systems, multipulse NQR, characts. 7−143925
glycine, NQR, ^{14}N quadrupole coupling const. 7−90202
guanosine dihydrate, ^{2}H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
harmonic torsional oscillator libration, NQR freqs., temp. depend. 7−129746
histidinium chloride, nucl. quadrupole coupling, ab initio calcs. 7−116987
hydrate crystals, ^{17}O nuclear quadrupole double reson. study 7−112998
hydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
imidazolium hydrogen maleate, nucl. quadrupole coupling, ab initio calcs. 7−116987
incommensurate systems, static displacement waves, EFG tensor and NMR freq. modulation calcs. 7−106057
inosine, ^{2}H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
isatin, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
lecithin-water-ethylene glycol nonaqueous liq. cryst., NMR and X-ray studies 7−91437
low freq. susceptibility for quadrupole splittings, low temps. 7−85480
methylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
multiple quantum NMR for spin-3/2 nuclei, tensor operator approach quadrupole asymmetry term 7−68354
pulse NQR spectrometer, wideband transmitter 7−108604
purine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
purines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
2-pyridinone, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
pyrimidine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
pyrimidines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
quantization of spin degrees of freedom in the field of an acoustic wave 7−132158
rhyolitic glasses, state of water, ^{2}H NMR study 7−138343
small N-containing molecules, electric field gradients, ab initio quantum chem. calc. 7−103400
structurally incommensurate systems, static quadrupolar perturbed NMR, electric field gradient tensor 7−92544
sym-tetrachloropyrazine, distorted lowest excited triplet state, phosphoresc., ODMR and ODNQR investig. 7−135981
tetraglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
triglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
urocanic acid, nucl. quadrupole coupling, ab initio calcs. 7−116987
zero-field NMR and NQR line shapes 7−102471
Ag_3SbS_3, pyrargyrite, NQR spectra, hydrostatic and axial press. 7−143924
Al-Cu alloys, dipolar NMR lineshape, quadrupolar effects 7−85479
$Ba_2YCu_3O_7$, high T_c supercond., NQR studies 7−143712
Co complexes, NQR, H-bonding, quadrupole coupling const. 7−96741
$Cs_2Hg(Cd)Br_4$, incommensurate phases, elec. field gradients NQR freqs. temp. depend. meas. and model calcs. 7−132161
GaN, β-emitting, ^{12}N quadrupole effects 7−118889
$HfV_2H_x(D_x)$ systems, order-disorder phase transitions and quadrupole interaction, NMR studies 7−76381
$HoVO_4$, nuclear electric quadrupole resonance, Zeeman effects 7−132160
In-Na-Sb liquid alloys, nuclear quadrupole relax. and thermodynamics 7−85482
In-Sb (Hg) liquid alloys, atomic dynamics with attractive A-B interactions 7−83656
$In_3Sb_5O_{12}$, phase transition, NQR study 7−105003
$K_2B_4O_7.4H_2O$, NQR lines, intensity 7−143926
$K_3Co(CN)_6$, 20r polytype, incommensurate struct., NQR linewidth, low temp. 7−70669
KHF_2, zero field NQR and low-field NMR 7−90203
K_2OsCl_6, structural phase transition, hydrostatic pressure effect, ^{35}Cl NQR meas. 7−91786
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., competition with magnetic order, NQR study, comp. depend. 7−138134
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., magnetic ordering, NQR study 7−138135
La_2CuO_4, ^{139}La nuclear quadrupole moment, low temp. antiferromag. order 7−143927
La_2CuO_4, antiferromagnetic, ^{139}La NQR 7−138344
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Sr), high T_c supercond., ^{139}La pure quadrupole resonance studies 7−92543
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., NMR and NQR studies 7−138345
$LiIO_3$, NQR spectra, hydrostatic and axial press. 7−143924
$MgBr_2.6H_2O$, ^{25}Mg NQR spectra study 7−68352
$MgCl_2.6H_2O$, ^{25}Mg NQR spectra study 7−68352
MgF_2, ^{25}Mg NQR spectra study 7−68352
$MgNO_3.6H_2O$, ^{25}Mg NQR spectra study 7−68352
$Na_2B_4O_7.10H_2O$, NQR lines, intensity 7−143926
$NaHF_2(d_1)$ zero field NQR and low-field NMR 7−90203
$NaNO_2$, elec. field on ^{14}N NQR in single domain state 7−92541
$NaNO_2$, polycrystalline, ^{14}N NQR obs. via suppression of piezoelec. reson. 7−92540
$NaNO_2$ powder, ^{14}N NQR, particle size and stress depend. studies 7−92542
Pb complex, bis(pyridinium)hexachloroplumbate, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Pt complex, bis(pyridinium)hexachloro-platinate, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Pt complexes, M(II)$PtCl_6.6H_2O$, NQR freq., temp. depend. 7−106056
Rb-Cs alloys, elec. field gradients and diffusion 7−112982
Rb_2ZnBr_4 single crysts., structural transitions and elec. field gradient tensor, quadrupolar perturbed NMR study 7−92545
Sn complex, bis(pyridinium) hexa-chlorometallates, phase transform., X-ray and ^{35}Cl NQR study 7−124228
$SnCl_4$-benzoyl chloride, substituted, complexes, ^{35}Cl NQR spectra 7−141610
Te complex, bis(pyridinium)hexachlorotellurate, phase transform., X-ray and ^{35}Cl NQR study 7−124228
$YBa_2Cu_3O_7$, high T_c supercond., NMR and NQR studies 7−138345
$ZrV_2H_x(D_x)$ systems, order-disorder phase transitions and quadrupole interaction, NMR studies 7−76381

nuclear radius *see nuclear size*

nuclear reaction and scattering models
see also nuclear optical model
barrier penetration model and direct reaction approach for heavy ion fusion *(Korean)* 7−81349
EMC effect, alternative explanations, factorization scale independence and QCD nuclear prop. predictions 7−128950
exclusive light-ion disintegration process, diffraction model 7−116355
Glauber model, unitarity and total cross sections 7−67783
heavy ion collisions, fragmentation, Cascade-Vlasov anal. 7−141088
heavy ion collisions, molecular model for high spin resonances 7−135372
heavy ion collisions, of deformed nuclei, deep inelastic, frictional forces 7−121887
heavy-ion collisions, 70, 100, 150 MeV/nucleon, mass distributions, microscopic anal. 7−67865
heavy-ion collisions, equilibrium model for fusion and orbiting 7−121902
heavy-ion collisions, intermediate energies, photon production, Boltzmann-Uehling-Uhlenbeck eqn. model anal. 7−141098
heavy-ion reaction model with friction, pion and photon bremsstrahlung 7−121925
high-energy heavy-ion collisions, space-time picture, scaling properties 7−109214
intermediate energy reactions, semiclassical model 7−141089
nonrelativistic nucleons only formalism in few- and many-body theories 7−67779
nuclear matter equation of state, determ, from pion yield data, ID shock wave model 7−109088
one nucleon transfer to continuum states, semiclassical model, energy spectra calcs. 7−129075
(p,p), $65<E_p<200$ MeV,. folding model potential anal., cross sections, analyzing powers spin rotation parameters 7−67837
(p,p′), cross section and r.m.s radii calcs., nuclear surface oscillation effects, diffractional model anal. 7−135315
$\bar{p}$ annihilation at rest, nucleus excitation and deexcitation 7−135325
(π,3π), 40 GeV/c, phase shifts, partial nuclear amplitudes, inelastic-screening effects, hadron diffractive dissociation 7−116525
$^{27}Al(^{14}N,X)$, 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
$^{A}Ar(p,n)$, A=90,91,92,94, preequilibrium model anal. 7−129044
(^{40}Ar,X), hot nuclei formation and decay, entrance channel effects, pre-equilibrium model comparisons 7−141074
$^{197}Au(\pi,X)$, 100, 180, 300 MeV, spallation recoil meas., two-step velocity vector model comparisons 7−121957
$^{11}B(p,p^1)$, analysing power excitation functions, coupled channel model calcs., ^{12}C resonances 7−129041
(^{12}C, X) emulsion interaction, relativistic three particle pseudo-rapidity correlations 7−129095
$^{12}C(^{14}N,X)$, 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
$^{12}C(d,p)$, 4.2 GeV, hybrid model cross section calcs., exptl. comparisons 7−121860
$^{12}C(n,pdt)$, 300-500 MeV, inclusive cross sections, quasi-two-body scaling model anal. 7−129054
$^{12}C(\bar{p},n)X$, cascade model calcs. 7−109168
$^{13}C(^{12}C, ^{12}C)$, 49.14 MeV, cross section meas., optical model, DWBA anal. 7−73790
$^{14}C(\pi^+,\pi^-)^{14}O$, impulse approx. model 7−129110
$^{48}Ca\rightarrow^{48}Ti$, $2\nu\beta\beta$ process, half-life calcs., two-nucleon mechanism, shell model anal. 7−73734
(^{56}Fe,X), 1.8 GeV/nucleon, in nuclear emulsion, secondary particle props., cascade-evaporative model comparisons 7−135359
^{2}H, formation microscopic mechanism in high energy collisions, emission cross section 7−135265
$^{2}H(\pi,\pi)$, coupled channel quasipotential model, string energy dependence of anal. power 7−81225

nuclear reaction and scattering models continued
^{2}He(p̄,X) 180 MeV, break-up cross-section meas., Glauber model predictions 7−141051
^{3}He(e,e'p), cross section meas., proton momentum distrib. and nuclear forces anal. *(French)* 7−81379
^{7}Li(π^{+}, e^{+},e^{-}p)^{6}Li, 380 MeV, cross section, nucleon-cluster, shell model calcs. 7−121959
^{24}Mg(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{A}Mo(p,n), A=92,94,95,96,97,98,100 preequilibrium model anal. 7−129044
^{14}N(p,γ)^{15}O, 7.56 MeV resonance, nuclear bremsstrahlung potential model anal. 7−109178
^{20}Na level structure, from ^{20}Ne(^{3}He,t)^{20}Na reaction, level structure near proton threshold 7−129066
(^{58}Ni,X), hot nuclei formation and decay, entrance channel effects, preequilibrium model comparisons 7−141074
^{58}Ni(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{16}O(^{12}C, ^{12}C), 48.06 MeV, cross section meas., optical model, DWBA anal. 7−73790
^{16}O(^{13}C, ^{13}C), 48.48 MeV, cross section meas., optical model, DWBA anal. 7−73790
Pb(p, X), Fragments transverse energy distrib., no-plasma model anal. 7−89525
^{110}Pd(p,n), preequilibrium model anal. 7−129044
^{159}Tb(^{4}He, pxnγ), γ-coincidence data, model anal. 7−135336
^{48}Ti(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{235}U(n,γ)^{236}U, mean-square charge radii meas. of compound-nucleus states, double-humped barrier model anal. 7−73703
^{238}U(^{16}O, X), Fragments transverse energy distrib., no-plasma model anal. 7−89525
^{238}U(^{238}U,X), E=5.05-6.07, 7.42 MeV/N, deformed ion collisions, damping effects and sub-Coulomb transfer model 7−129073
^{89}Y(n,n')^{89}Y, microscopic distorted-wave approx. study 7−129046
^{68}Zn(^{40}Ar, X), 15-35 MeV/nucleon, direct transfer of nucleons, diffractional model, projectile fragmentation, modified abrasion model 7−129094

nuclear reaction and scattering theory
see also nuclear reaction and scattering models; statistical theory of nuclear reactions and scattering
A<19, folded and Coulomb pots., analytic formulae and charge distribs. 7−121770
asymmetric fragmenting nuclear system, isotope distrib., partitioning of a two component particle system 7−135292
bremsstrahlung amplitudes in the soft-photon approximation 7−67780
clustering aspects of nuclear structure and reactions 7−121764
collective flow mechanism charge from transverse flow scaling anal. 7−135266
colliding-particle internal structure, integral eqns. for partial amplitudes at energy surface 7−121750
complex particle emission probability energy depend. of condensation probability *(Chinese)* 7−121748
Compton scattering and pion number in nuclei 7−96053
conf., Kharkov, USSR, April 1986 7−120688
conference on central nuclear collisions and multifragmentation, Denver, Colorado, USA, April 1987 7−140363
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
Coulomb effects in quasi-free scattering, breakup reactions appl., PWIA 7−96037
Coulomb effects on few-body scattering states 7−67770
coupled channel inversion method, higher order contribs. to nuclear pots. 7−121758
coupled channel method, Pauli principle effects, semiclassical anal. 7−116349
coupled channel system with nonlocal interaction, Berry's phase and additional phase, semiclassical anal. 7−116348
coupled channels S matrix in elastic case, parametrization, relation to Arndt-Roper form 7−109126
coupled discretised continuum channels, method formalism 7−102850
coupled-channel equation, multi-dimensional, semi-classical quantization 7−116350
deformed nuclei, vibrational band excitation, coupled channel Born approx. calcs. 7−128955
density-matrix approach to thermal equilibrium states 7−67782
diffraction in nuclear physics, book 7−108063
direct reactions, role in multiparticle and quasimolecular state investigations 7−135346
DWIA, microscopic prescriptions for elastic and inelastic scattering 7−81358
electron inclusive scattering, y scaling 7−121805
electron screening effects on low-energy fusion cross sections, astrophysical aspects 7−141122
electron-nucleus deep inelastic scatt., cross sections, quantum hadrodynamics calcs. *(Russian)* 7−121806
energy dependent nucleus-nucleus potential in heavy ion collisions 7−67863
equation of state, momentum depend. heavy ion interactions 7−109221
excited nuclear states, model-free characts. from final-particle ang. correlations 7−135263
exciton-model approach to fast-particle emission in heavy-ion collisions 7−109128
few-nucleon systems, polarization meas. for A=4-6 7−67776
Feynman diagrams, square nonrelativistic, singularities 7−135264
finite-rank potentials, form factors in phenomenological calcs. Fredholm matrix, rank-two interactions 7−128945
fission, heavy-ion induced, transient times 7−141108
forward reactions and the exploration of particle dynamics 7−140914
four-body scatt. and break-up, integral eqn. approach 7−67777
fragmentation reactions final distrib., excited primary fragments sequential decay study 7−81350
fusion cross sections in heavy ion reactions, coupled-channel calc., CCFUS computer code 7−135344
gamma-ray scattering by deformed nuclei 7−73751
Gamow vectors, matrix eigenvalue problem soln. 7−102848
Geiger-Nutall law for isobaric nuclides, theory 7−121749
hadron photoabsorption cross sections in nucleon resonance photoexcitation energy range 7−102862

nuclear reaction and scattering theory continued
heavy ion central collisions, classical molecular dynamics anal., fusion-fission, fragmentation, vaporisation 7−121911
heavy ion collisions, 10-300 MeV/nucleon, total cross sections, microscopic model comparisons 7−121898
heavy ion collisions, 15-150 MeV/u, dynamical aspects, quantal single particle motion in phase space 7−109224
heavy ion collisions, dissipative effects in projectile fragmentation 7−73782
heavy ion collisions, doorway states induced by quantum recoils, shell-model 7−121907
heavy ion collisions, fast abrasion model, simplified geometrical approach 7−81354
heavy ion collisions, intermediate energy, thermal models, dynamical and statistical aspects, review 7−121918
heavy ion collisions, low energy, fission, nucleon exchange and one-body dissipation 7−116477
heavy ion collisions, multifragmentation, Thomas-Fermi and site-bond percolation model study 7−109203
heavy ion collisions, pair transfer in deformed nuclei, macroscopic description 7−116483
heavy ion collisions, quantal permeation current, discrepant initial state N- and Z-drifts 7−129074
heavy ion collisions, quasi-molecule dinuclear system charge and mass distrib. 7−129104
heavy ion collisions, relativistic Coulomb excitation and fission, QED description 7−141060
heavy ion collisions, relativistic Vlasov equation, local-density and semi-classical approx. 7−135358
heavy ion collisions, two-neutron transfer cross sections, form factor anomalies 7−135352
heavy ion collisions, two-particle elastic transfer processes, semiclassical anal. 7−121892
heavy ion collisions, ultrarelativistic, deconfinement transition in fragmentation region, two-fluid hydrodynamic model anal. 7−102904
heavy ion collisions, ultrarelativistic, energy flow, additive quark and wounded nucleon models 7−109129
heavy ion collisions multinucleon transfer, projectile fragmentation model 7−135362
heavy ion elastic scatt. cross sections at intermediate energies 7−102915
heavy ion elastic scattering, intermediate energy microscopic anal. 7−141032
heavy ion fusion, channel coupling effects, barrier penetration model and threshold anomaly 7−141061
heavy ion fusion cross section calcs., effects of including the temperature 7−121984
heavy ion high energy collisions, 4π observables in Vlasov-Uehling-Uhlenbeck theory, hadronic matter 7−121915
heavy ion intermediate energy collisions, quantal versus classical equilib. in phase space 7−141103
heavy ion physics at low and intermediate energy at SANAC cyclotron 7−121922
heavy ion reactions, clustering, dynamical fragmentation theory 7−116473
heavy ion reactions, site-bond percolation model on a lattice 7−109213
heavy ion reactions and scatt., coupled channel method simplification by wave function transformations 7−96104
heavy ion relative motion near caustic surfaces, wave fn. features at short distances 7−135345
heavy ion scattering, HF density matrix, physical interpretation 7−121897
heavy ion subbarrier fusion reactions, enhancement due to neck formation 7−67887
heavy-ion collisions, γ-ray production, high energy, n-p bremsstrahlung interpretation 7−121901
heavy-ion collisions, fragmentation, computer simulations, semiclassical model 7−67834
heavy-ion deep inelastic collisions, open quantum system of two coupled harmonic oscillators 7−109207
heavy-ion fusion barrier, frozen approximation as function of Coulomb strength, Bass potential 7−129127
heavy-ion one-nucleon transfer reactions, continuum spectra 7−121920
high energy collisions, cumulative p and nucl. fragment prod. mechanisms 7−135262
high energy collisions, EM final state interactions, isobaric comparisons 7−109127
high energy heavy ion collisions, π reabsorption effect on π spectra 7−81436
higher-order processes in the photon-nucleus interaction 7−73750
hyperspherical harmonic method, recent developments 7−67771
inelastic coupled channel NN scatt. S-matrix, elastic component parametrisation. 7−102811
inelastic scattering, coupled channels method, S-matrix parametrisation 7−121763
ion-atom collisions, interplay of nuclear and atomic physics 7−81438
Landau-Vlasov dynamics, peripheral reactions at intermediate energies 7−81426
Lippmann's identities in a soluble three-particle model 7−121755
low energy heavy-ion fusion reactions, higher-order coupling effects 7−116455
low-energy scattering theory for Coulomb plus long-range potentials 7−81351
microscopic cluster theory, multi-configuration RGM studies and antisymmetrization 7−67752
microscopic coupled-channels study of the scattering and breakup of light heavy-ions 7−102914
multi three-cluster coupling model of reactions 7−67778
multichannel Coulomb nuclear scattering, reson. state parameters calcs. 7−73746
multichannel scattering, separable expansions, finite-rank potentials, scattering matrix elements, convergence 7−116352
multistage-processes, quasiclassical approx., coupled channel method and frictional forces 7−121751
multistep direct and compound reactions, semiclassical model 7−135360
neutron transfer to the continuum states, transfer probability 7−121760
nonlocal interaction, nonsymmetric, equivalent potentials 7−81353
nonlocal potentials, inverse scatt. problem 7−116346
nonspherical-symmetric inverse scattering problem in spheroidal coordinates 7−73739
nuclear matter with momentum-dependent interactions, generalised non-equilib. eqn. of state 7−135241
nuclear science, challenges and opportunities *(Czech)* 7−140972

nuclear reaction and scattering theory continued
nuclear temperature distributions, broad temp. distribs. in intermediate energy regime 7−141100
nuclear-density dependence of the electron-proton coupling 7−96056
nucleon compositeness and relativistic phenomena in nuclear physics 7−121757
nucleus-nucleus collisions, transverse energy distributions, dual Monte Carlo multi-chain fragmentation model anal. 7−89578
off-shell extension function, configuration-space study, Reid soft core pot. 7−141031
p- 7−73674
p-wave threshold anomaly, mass depend., neutron strength fn. study 7−135268
parity dependent potential, scattering semi-classical treatment 7−67067
potential scattering, large dimension expansion, nonperturbative approach 7−121762
projectile breakup processes in coupled discretised continuum channels method 7−102849
projectile fragmentation in heavy-ion reactions at intermediate energies 7−96096
prompt fission neutron emission, mechanisms, review 7−73804
proton reactions and scatt., review of major trends 7−121855
QCD, diffractive dissociation on nuclei, leading log approx., wave fn. penetration, dissociation cross section 7−128856
quark-gluon string model, inclusive spectra on nuclear targets, production mechanism sensitivity 7−129050
recoil range studies of reaction mechanisms 7−96112
reduced alpha transfer rates, schematic model, α-clustering 7−116366
relativistic Coulomb excitation, clean fission, finite p_T contrib. 7−121917
relativistic nuclear hydrodynamics in curvilinear coords. 7−81362
relativistic nuclear many-body problem, quantum field theoretic techniques 7−121765
relativistic nuclear scatt., Coulomb interaction effects in N/D eqns. 7−95774
resonances in nuclear, atomic and mol. physics 7−102853
Rossendorf continuum shell model, unified anal. of nuclear structure and reactions 7−116297
rotating nuclei, diabolic pair transfer, cross section anal., expt. obs. possibility 7−109216
scission, fast particle emission, catapult mechanism 7−73815
single-particle resonances, approx. to RPA continuum calcs. 7−135290
sphericity tensor anal., side-splash and collective flow effects 7−116474
spin-dependent inversion method 7−121759
stripping reactions, charged particle transfer 3-body approach 7−67789
sub-barrier fusion, excitation functions, structure effects 7−121985
sub-Coulomb barrier heavy-ion collisions, positron and electron peak prod. 7−116460
supersymmetry between deep and shallow nucleus-nucleus potentials 7−109131
tagged quasimonochromatic photon prod. in the acceleration of relativistic ^{7}Li nuclei 7−68105
temperature dependent effective interaction, Landau-Vlasov eqn. and Brueckner renormalisation 7−121761
temperature measurements in heavy ion collisions, distortions from fragment decay 7−81433
tensor interaction in polarised heavy-ion scatt., partial-wave expansions 7−81423
three-body breakup, asymptotic boundary conditions, standard approach nonutility 7−121756
three-body breakup reaction in FSI region 7−121752
three-nucleon problems, continued fraction methods 7−67737
three-nucleon systems, Faddeev eqn. soln. by Lanczos algorithm and spline expansions 7−67775
three-nucleon transfer reactions, extended basis shell model 7−129012
three-particle system, Schrodinger eqn. for spherical coordinate system 7−67781
threshold effects in reaction mechanisms, spectroscopic aspects 7−135267
threshold resonance effects, energy depend. of scatt. matrix 7−135276
tidal spin conservation in nucl. collisions, coupled channels basis 7−116263
tidal symmetry in nuclear reactions, cross sections for polarised projectiles 7−73749
triple α reaction, S-matrix calc. 7−127710
two-body nuclear reactions involving zero spin particles, reaction amplitude, CRAZS computer code 7−135343
two-body sequential decay reactions, double diff. cross section calcs. 7−129008
ultrarelativistic nuclear collisions, hydrodynamic scenario 7−81430
unification of nuclear models and properties, book 7−108060
wave packet theory of collisions, elementary deconvolution method 7−81352
workshop on semiclassical and phase space approaches to nuclear dynamics, Aussois, France (Mar. 1987) 7−134349
y-scaling theory in plane wave impulse approx. 7−67774
Z=92 DWBA calculation of pair production cross-section for 10.0 MeV photons 7−73752
^{12}C(γ,π^0), 138-146 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
^{12}C(p,p′), anal. using relativistic impulse approx. with exchange 7−67836
(d,d), 52MeV, elastic scatt. in rainbow region. scatt. pot. features 7−96080
(d, d), 56-700 MeV, d virtual breakup effects on elastic and inelastic scatt., CC anal. 7−102891
(d,d), eikonal approx. for elastic scatt. 7−121863
(d, d) composite particle optical pot., breakup contrib., energy and target depend. 7−121861
(d,pn), three-body coupled-channel theory of scattering and breakup of light and heavy ions 7−121866
(d, pn) breakup reactions, cross sections and spectra, coupled channels approach 7−102892
(d,X), three-body Schrodinger eqn., Pauli blocking correction 7−73777
(e,ΔX), Δ electroproduction in relativistic model 7−135309
(e,e′), form-factor of low-lying $K^\pi=1^+$ excitations in rare-earth nuclei 7−121803
(e,e′), inclusive process, y scaling anal. 7−67810
(e, e′), longitudinal and transverse responses, free nucleon form factor effects 7−135310
(e,e′), relativistic collisions, radiation tail, distorted wave calcs. 7−67809
(e,e′), short-range correlation effects on nucleon sum rule 7−116389
(e,e′K$^+$), low-lying hypernuclear excitations, relativistic 7−102864
nuclear reaction and scattering theory continued
(e,e′p), knockout reaction, spin-orbit forces, using eikonal formalism 7−109136
(e,e′p), medium modified EM form factors, relativistic dynamics 7−141033
(e,e′p), two-step processes, coupled channels effects 7−102866
(e,e′p) reaction, probing single particle structure 7−121813
(e,e′X), few-body systems, correlations, interactions and y-scaling, PWIA calcs. 7−67808
(e, e′X), y-scaling in inclusive scattering, structure function expansions 7−121753
(e, e$^-$N), charge-exchange process calcs., Lane equation anal. 7−121802
(γ,N) reactions, differential cross sections, RPA approach 7−116384
(h,X), cross section values, analytical calcs. *(Russian)* 7−102886
(h,X), multiplicity distribs., multiple collision model 7−102774
(h, X), scaling and mean normalised multiplicity 7−109173
(h,X), secondary slow π absorption, cascade-evaporative model calcs. 7−96075
(K$^-$,π^+), Σ^- hypernuclear spectra from inclusive reactions 7−135376
^{6}Li(γ,π^0), 138.5-146.5 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
(μ^-, pxn), isotopic relation for reaction probability 7−109152
(n,2n), Schwinger functional method and two-particle Green fn. eqn. *(Chinese)* 7−109156
(N, γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
(N,N′), 100-400 MeV, anal. using relativistic impulse approx. with exchange 7−67836
(N,N′), impulse approx. and spin transfer observables 7−109163
(n, X), spontaneous and laser-induced reactions, relation between cross sections 7−67839
(p,2p), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
(p, n), as probe of β-decay strength 7−121832
(p,n), to continuum states, cross sections, analysing powers, DWBA calc. 7−102872
($\bar{p}$, $\bar{p}$), 180 MeV, spin effects in closed-shell nuclei, Glauber mult. scatt. anal. 7−67843
(p,p), relativistic dynamical effects, interpretation 7−109171
(p,p′), intermediate energy inelastic scatt. by spin 0 nuclei, spin-orbit interaction effects calcs. *(Russian)* 7−81395
(p,p′), medium energies, $0^+\rightarrow0^-$ transitions relativistic impulse approx. 7−67835
(p,p′), tensor potentials and linearly velocity-dependent potentials with a Lorentz-Lorenz correction 7−73706
(p,p′), to continuum states, cross sections, analysing powers, DWBA calc. 7−102872
(p,pd), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
(p,pN), on A=6-16 nuclei, t-matrix approx. with distorted waves 7−121825
(p,pX), cluster knock-out, on A=6-16 nuclei, t-matrix approx. with distorted waves 7−121825
(p,px), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
(p,X), 400 GeV, transverse energy distribs., folding model 7−135330
(p,X), fragmentation, computer simulations, semiclassical model 7−67834
(p,X), N*(1470) formation, quasi-elastic forward scatt. in two-nucleon cluster, anal. 7−121828
($\pi^\pm$,$\pi^\mp$), mass depend. of double charge exchange on A=44-118 7−81453
(π,X), many-body absorption processes in Δ isobar region 7−109240
(π^-,X), correlations of cumulative protons and deuterons, azimuthal correls. 7−67842
^{12}(^{12}C, ^{12}C$^-$), E/u>10 MeV, role of 3α fragmentation processes, coupled channel anal. 7−129103
^{12}(^{12}C, ^{12}C), microscopic analysis at intermediate energies 7−121929
Ag(^{84}Kr,X), 22 MeV/N, peripheral reactions, fragment spectra, projectile fragmentation 7−73788
^{A}Ag(α,p), A=107,109, differential cross sections, DWBA and microscopic calcs. 7−116449
Ag(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
^{A}Al, A=27, 29 levels and spectroscopic factors CCBA and DWBA anals from (t,α) 7−102806
^{27}Al(^{3}He,X), peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
^{A}Ar(d,d), A=36, 40, differential cross sections and reorientation effect 7−81404
Au(U,X), positron and δ-electron emission, coupled channels anal 7−67870
^{196}Au(^{56}Fe, X), deep inelastic multinucleon transfer, cross sections, nuclear structure effects 7−67871
^{197}Au(^{20}Ne,X), 290 MeV, projectilelike fragments, correlated energy transfer from n counting 7−121908
^{197}Au(^{3}He,X), peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
(α,d), D-state effects, finite range DWBA anal., no-recoil peripheral model 7−102894
^{11}B(^{7}Li,X), 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
^{11}B(^{7}Li,X), 88 MeV, ^{14,15}O spectrum, search for ^{3}n and ^{4}n 7−96106
^{11}B(α,p)^{14}C, 118 MeV, proton angular distrib., DWBA anal., ^{14}C energy level study 7−121617
^{11}B(p,p′), 4-10 MeV, analyzing power calcs., coupled-channels anal 7−116415
^{9}Be(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
Be(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
^{209}Bi(^{136}Xe,X), 940 and 1130 MeV, memory effect, nonMarkovian transport eqn. 7−135371
^{209}Bi(d,^{3}He)^{208}Pb, proton and neutron contributions to isoscalar $J^\pi=1^+$ 7−116431
^{A}C(^{3}He,t), A=12, 13, 0.6-2.3 GeV, DWIA calcs. angular distribs., isovector strengths, spin-isospin transitions 7−135339
^{A}C(^{6}Li,^{6}He), A=12,14, 14, 25, 35 MeV/nucleon, angular distrib., G-transitions, cross sections, reaction mechanism, DWBA comparison 7−121903
^{A}C(p̄,n)^{A}N, A=12,13,14 differential cross-sections and analysing power 7−129042
^{12}C (p, p′)^{12}C, correlation function symmetry, PWIA for 1^+ state 7−96070
^{12}C (p, p), relativistic microscopic calcs. and spin observables 7−81392

nuclear reaction and scattering theory continued
$^{12}C(^{12}C, ^{12}C)$, 18.50 MeV, modified Newton method appl. to elastic phase inversion 7−96097
$^{12}C(^{12}C, ^{12}C)$, 20-600 MeV/N, eikonal calcs. with Pauli blocking, energy depend. 7−121933
$^{12}C(^{12}C, X)$, sub-Coulomb resonances, doorway formalism 7−129007
$^{12}C(^{12}C,^{12}C')^{12}C$, cross-sections, coupled channels framework 7−81441
$^{12}C(^{12}C,^{12}C)^{12}C$, excitation functions and angular distributions 7−121942
$^{12}C(^{12}C,^{13}C)^{11}C$, 25-35 MeV/nucleon, ground-state angular distrib., cross sections, DWBA calcs. 7−129100
$^{12}C(^{17}O,^{17}O')$, nucleon promotion, DWBA calcs. 7−102910
$^{12}C(^{6}Li,X)$, 178 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
$^{12}C(^{6}Li,\alpha d)^{12}C$, 178 MeV, $^{6}Li \rightarrow \alpha + d$ breakup, coupled-channel and α-d cluster model anal. 7−116498
$^{12}C(^{7}Li,X)$, 132 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
$^{12}C(\gamma,K)$, relativistic impulse approx. using Dirac single particle wave fns. 7−102860
$^{12}C(p,n)$, 35, 40 MeV, ^{12}N low-lying states study, DWBA anal. 7−102873
$^{12}C(\pi, \pi')$, 100-291 meV, diff. cross sections, ang. distribs., DWIA anal. 7−121958
$^{12}C(\pi^+,K^+)$, hypernuclear state production, cross section calcs. 7−67879
$^{12}C(t,^{7}Li)^{8}Bi$, cluster transfer angular distrib., DWBA calcs. 7−129062
$^{13}C(^{12}C, ^{12}C)$, 49.14 MeV, cross section meas., optical model, DWBA anal. 7−73790
$^{13}C(^{13}C,^{12}C)^{14}C$, neutron transfer, molecular particle-core 7−129087
$^{13}C(^{7}Li,X)$, 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
$^{13}C(e,e')$, p-shell config. mixing and meson exchange current effects, Cohen-Kurath have function calcs. 7−89568
$^{13}C(e,e')$, $2\hbar\omega$ structure in ^{13}C, anal. using inelastic scatt. 7−116392
$^{13}C(p, d)$, with subsequent decay to ground state, tensor polarisation, DWBA calcs. 7−135327
$^{13}C(p,d)$, 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
$^{13}C(\pi,\pi')$, $2\hbar\omega$ structure in ^{13}C, anal. using inelastic scatt. 7−116392
Ca(Ca,X), 800 MeV/N, d and entropy prod. in rel. collisions 7−81431
Ca(Ca,X), bounce-off effect, transparency, stopping power and thermalization 7−96108
$^{A}Ca(p, p)$, A=40, 48, relativistic microscopic calcs. and spin observables 7−81392
$^{A}Ca(p,p)$, A=40,48, 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
$^{40}Ca(^{16}O,X)$, E=230 MeV, composite system symmetric disintegration, nonequilibrium particle emission evidence 7−135354
$^{40}Ca(^{40}Ca, X)$, 1.05 GeV/nucleon, specific entropy and cluster formation, impact parameter dependence 7−116516
$^{40}Ca(^{40}Ca, X)$, tangential friction in nuclear reactions studied with the time-dependent Hartree-Fock model 7−129079
$^{40}Ca(^{40}Ca,X)$, wall dissipation, fusion excitation fns., entrance channel deformations, deformation dependent inertias 7−129124
$^{40}Ca(\alpha,\alpha)$, resonant states, excitation fns. and ang. distribs., Regge pole formalism 7−135285
$^{40}Ca(\alpha,p)$, DWBA calcs. with ALAS pots. 7−116450
$^{40}Ca(\alpha,p)$, differential cross sections, DWBA and microscopic calcs. 7−116449
$^{40}Ca(\vec{d},X)$, X=t, ^{3}He, 20 MeV, D-state effect, finite range DWBA, anal. powers 7−116434
$^{40}Ca(\vec{d},\alpha)$, 20 MeV, α-particle D-state, DWBA anal., d+d cluster expansion 7−116433
$^{40}Ca(e,e'p)^{39}K$, bound nucleon response function 7−81376
$^{40}Ca(\vec{e},e\vec{f})$, low momentum transfer $\vec{e}$ induced nucleon emission, giant resonance decay 7−135307
$^{40}Ca(\gamma,p_i)$, 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
$^{40}Ca(n,\gamma)$, collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
$^{40}Ca(n,n')$, 21.7, 25.5 MeV, diff. cross sections, deformation, moments, CC anal. 7−67817
$^{40}Ca(\vec{p}, p)$, 30.3 MeV, CC-inversion approach to pol. pots. 7−121780
$^{40}Ca(p,p)$, 800 MeV, nonrelativistic multiple scatt. theory, virtual $N\bar{N}$ processes, relativistic correction 7−81385
^{57}Co levels, J^{π}, spectroscopic factors, DWBA anal. of $^{56}Fe(^{7}Li,^{6}He)$ 7−135210
$^{59}Co(^{32}S,X)$, 4-S MeV/N, fission-like fragmentation, intermediate mechanisms 7−73785
$^{59}Co(\alpha,p)$, differential cross sections, DWBA and microscopic calcs. 7−116449
$^{59}Co(\alpha,p)^{62}Ni$, 25.7 MeV, differential cross sections, zero-range DWBA and quasi-triton transfer approx. comparisons 7−129072
$^{59}Co(\alpha,t)^{60}Ni$, 80.9 MeV, 8^- stretched states spectroscopic factors and DWBA calcs. 7−67689
$^{52}Cr(\pi, \pi)$, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
$^{63}Cu(^{32}S,X)$, 4-S MeV/N, fission-like fragmentation, intermediate mechanisms 7−73785
$^{63}Cu(^{3}He,X)$, peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
(d,d), antisymmetrisation corrections in approx. three-body model 7−81403
(d,p), antisymmetrisation corrections in approx. three-body model 7−81403
^{A}Dy, A=162, 164, pair transfer at high angular momenta, high spin states, RPA, cranked HFB 7−121564
(e,e'), three-nucleon nuclei, bound state-continuum transition amplitude calcs. 7−67761
$(e,e'K^+)$, cross section for low-lying hypernuclear states, relativistic field theory anal. 7−116327
$^{166}Er(^{86}Kr,X)$, 8.2 MeV/n, correlation of charge drift with total kinetic energy 7−116493
$^{168}Er(^{86}Kr, X)$, deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
$^{19}F(^{12}C,^{12}C^-)$,30,40,50,60 MeV, phase anomaly, coupled channels calcs. 7−129105
$^{19}F(^{16}O,^{16}O^-)$, 60,80 MeV, angular distrib. meas., coupled-channels optical model comparisons 7−129107
$^{19}F(^{6}Li, d)$, 34 MeV, energy levels, spin assignments and spectroscopic factors, DWBA comparison 7−141092

nuclear reaction and scattering theory continued
$^{A}Fe(\pi, \pi)$, A=54, 56, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
$^{56}Fe(\alpha,\alpha')$, 25 MeV, optical model and coupled channel comparisons 7−116444
$^{56}Fe(\pi^+, K^+)$, hypernuclear state production, cross section calcs. 7−67879
$^{1}H(^{3}He, t)$, Δ^{++} formation, DWBA calcs. 7−116439
$^{1}H(\vec{d},\vec{d})^{1}H$, stability of angular extrapolation methods for determining the deuteron asymptotic *D*-state to *S*-state ratio 7−109189
$^{1}H(e,e)$, charge form factor calcs., Rosenbluth formula 7−128952
$^{1}H(\vec{n},\gamma)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^{2}H(N,N)$, multichannel N/D equations, new formulation, Coulomb interaction effects, K matrix method 7−121817
$^{2}H(\alpha,\alpha p)$, Coulomb effects in breakup reactions 7−96085
$^{2}H(d, \gamma)$, low energy fusion, potential model anal., ^{4}He D-state component 7−121982
$^{2}H(d,d)$, d-d and d-^{3}H, equivalent local potentials, single channel, two-channel RGM anal. *(Chinese)* 7−102889
$^{2}H(d,n)^{3}He$, spin dependence of low energy fusion reactions, DWBA anal. 7−116539
$^{2}H(e,e'\pi^+)$, $^{1}S_0$ state resolution, Born amplitudes and effective hamiltonian 7−109148
$^{2}H(\gamma,n)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^{2}H(\gamma,n)$, total cross section, centre-of-mass motion, Siegert's theorem 7−121790
$^{2}H(\gamma,pn)$, above π threshold, coupled channel anal. with Δ degrees of freedom 7−102858
$^{2}H(n,2n)$, breakup configuration study, kinematically complete S-curve 7−109183
$^{2}H(\vec{n},n')$, low-energy scatt. by local pot., Faddeev calcs. and t matrices 7−67819
$^{2}H(n,n)$, Faddeev calcs. and on-shell props. 7−67821
$^{2}H(n,n)$, three-body calcs. using Paris two-nucleon pot. 7−67822
$^{2}H(n,nn)$, Faddeev calcs. and on-shell props. 7−67821
$^{2}H(p,\gamma)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^{2}H(p,p')$, Coulomb effects in perithreshold resonance prod., multichannel N/D eqns. 7−135319
$^{2}H(p,\pi^+)$, coherent prod., three-body mechanisms 7−141047
$^{2}H(\pi,np)$, vector anal. power calc. near 3,3 resonance, relativistic Fadeev theory anal. 7−121956
$^{2}H(\pi,\pi)$, relativistic Faddeev theory of πNN system 7−121754
$^{2}H(\pi^-,\gamma nn)$, charge asymmetry and nn scatt. parameters 7−129111
$^{3}H(d,d)$, d-d and d-^{3}H, equivalent local potentials, single channel, two-channel RGM anal. *(Chinese)* 7−102889
$^{3}H(d,n)$, cross section meas., R-matrix and S-matrix anal. 7−116427
$^{3}H(d,n\mu)^{4}He$, muon catalyzed, effect of exit-channel on muon sticking 7−121980
$^{3}H(e,e'p)$, cross section meas., PWIA comparisons 7−129029
$^{A}H(d, n)$, A-2, 3, differential cross sections, determ. of nuclear vertex consts., Coulomb effects 7−116429
^{3}He (π,π), 20-65 MeV, diff. cross section and anal. powers from microscopic wavefunctions 7−129108
$(^{3}He, dp)$, breakup reactions, cross sections and spectra, coupled channels approach 7−102892
^{3}He, π absorption on 3 nucleons, doorway model with πNN intermediate resonance 7−116521
$^{3}He(e,e'2p)$, correlations and exchange currents in few-body systems 7−67773
$^{3}He(e,e'p)$, coincidence study, PWIA anal. 7−116398
$^{3}He(e,e'p)$, continuum state calcs. using Faddeev eqns. with Yukawa pot. 7−67802
$^{3}He(e,e'p)$, high momentum components and final state interaction 7−67806
$^{3}He(e,e)$, charge form factor calcs., Rosenbluth formula 7−128952
$^{3}He(\vec{\gamma},p)$, cross sections, asymmetry coeff. and electromagnetic current conservation 7−121796
$^{3}He(\gamma,p)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^{3}He(\vec{\gamma},p)^{2}H$, nucleon-nucleon interaction and meson exchange current, Faddeev wave fns. 7−121792
$^{3}He(\gamma,pn)$, correlations and exchange currents in few-body systems 7−67773
$^{3}He(p,np)$, 2.5 and 5.0 GeV/c, $^{3}He \rightarrow ppn$ nuclear vertex fn. determination 7−135320
$^{3}He(p,p)$, Glauber multiple scattering theory anal. 7−109164
$^{3}He(p,\pi^+)$, microscopic mechanism 7−102868
$^{3}He(\pi, \pi'p)X$, quasi-free scattering and multistep processes cross section meas. 7−81452
$^{3}He(\pi^{\pm}, X)$, 3-nucleon absorption 7−121962
$^{3}He(\pi^{\pm}, X)$, >65 MeV, quasi-free π absorption, reaction mechs. 7−121961
$^{3}He \rightarrow d+p$, nuclear vertex consts., determ. from charged particle reactions 7−116429
$^{4}He(\alpha, X)$, ultrarelativistic, energy flow, additive quark and wounded nucleon models 7−109129
$^{4}He(\alpha,\alpha)$, 126 GeV, Chou-Yang model anal., cross sections 7−89574
$^{4}He(\alpha,\alpha)$, cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
$^{4}He(\alpha,\alpha)$, E≤15 MeV, possible expts., to distinguish Pauli principle treatment in potential models 7−121873
$^{4}He(\vec{d},^{3}He)$, 35, 45 MeV, diff. cross section and anal. power ang. distribs., asymptotic normalisation 7−116373
$^{4}He(d,pn)$, isospin breaking and breakup calcs. with Coulomb interaction 7−67846
$^{4}He(n,n)$, centre-of-mass effects in resonating group theory 7−116408
$^{4}He(n,n)$, mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
$^{4}He(n,n)$, multichannel scatt. by negative energy Weinberg states 7−67772
$^{4}He(p,p)$, 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
$^{4}He(p,p)$, cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
$^{4}He(p,p)$, mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
$^{4}He \rightarrow t+p$, nuclear vertex consts., determ. from charged particle reactions 7−116429

nuclear reaction and scattering theory continued
^{5}He resonant states, L.S splitting, microscopic calcs. of ^{4}He(n,n) 7−121772
^{A}He(e,X), A=3,4 y scaling behaviour of response functions, impulse approx. 7−67804
^{206}Hg(0^{+})→^{206}Tl(0^{-}), renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839
^{165}Ho(^{14}N,nX), 35 MeV/N, neutron emission, energy and ang. distribs. 7−73787
^{165}Ho(^{3}He,d), continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
^{165}Ho(^{56}Fe,X), damped reaction, temps., energies and thermal equilibration of fragments 7−96105
^{39}K($\pi^{\pm},\pi^{\pm}$)^{39}K, inelastic scatt., neutron and proton matrix elements for transitions 7−129112
^{72}Kr shape coexistence in N=Z nuclei, gamma decay of states from ^{16}O(^{58}Ni,2n), E=170 MeV 7−135200
(l,l′X), impulse approximation, energy conservation kinematics modification, scaling violation, EMC effect *(Chinese)* 7−121517
LiD single cryst., neutron emission accompanying crack propag. and fracture 7−124391
(^{6}Li,^{6}Li), ^{6}Li-breakup cross sections, energy and target dependence, coupled discretized continuum channel anal. 7−116500
(^{6}Li,^{6}Li), projectile breakup effect, energy and target depend., coupled channel calcs. 7−116461
(^{6}Li, ^{6}Li), composite particle optical pot., breakup contrib., energy and target depend. 7−121861
^{6}Li-α system in nucleus-nucleus collisions, inelastic coupling potential, microscopic anal. 7−116501
^{6}Li(^{3}He, ^{3}He), 34-70 MeV, exchange effects role in elastic scatt; optical and DW anals. 7−67853
^{6}Li(α,α), 36.6, 50.5 MeV, exchange effects role in elastic scatt; optical and DW anals. 7−67853
^{6}Li(p,Δ^{++})^{6}He, quark-quark spin-isospin interaction, DWBA anal. 7−67844
^{6}Li(p,pd)^{4}He, 0.5-1.0 GeV, deuteron production mechanism, tensor polarization calcs., ^{6}Li αnp model 7−121846
^{7}Li(^{6}Li, ^{6}He), 14, 25, 35 MeV/nucleon, angular distrib., G-T transitions, cross sections, reaction mechanism, DWBA comparisons 7−121903
^{7}Li(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
(^{A}Li,X), A=6,7 three-body coupled-channel theory of scattering and breakup of light and heavy ions 7−121866
^{A}Li(p,X), A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
^{24}Mg(^{32}S,X), E=230 MeV, composite system symmetric disintegration, nonequilibrium particle emission evidence 7−135354
^{24}Mg(δ,δ^{-}), 54 MeV, collective excitations, coupled-channel method, triaxial rotor model comparisons 7−129067
^{26}Mg(^{6}Li,^{6}He), 14, 25, 35 MeV/nucleon, angular distrib., G-T transitions, cross sections, reaction mechanism, DWBA comparisons 7−121903
^{26}Mg(d,^{3}d), differential cross sections and reorientation effects 7−81404
^{26}Mg(t,^{3}He), 36 MeV, differential cross sections, energy spectra, mass meas. and energy levels, DWBA and coupled channel calcs. 7−121858
^{27}Mg, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{28}Mg→^{28}Al, β-decay, dependence of Coulomb matrix element on deformation parameter 7−121726
^{55}Mn(α,p), differential cross sections, DWBA and microscopic calcs. 7−116449
^{55}Mn(α,p)^{58}Fe, 25.7 MeV, differential cross sections, zero-range DWBA and quasi-triton transfer approx. comparisons 7−129072
^{1}Mo(p,p′), A=94, 96, 100, strong coupling effects, semimicroscopic description, angular distrib. and cross sections 7−121818
^{A}Mo(^{84}Kr, X), A=92,98, 22 MeV/N, peripheral reactions, fragment spectra, projectile fragmentation 7−73788
^{A}Mo(p, p′), A=94, 96, 100, 25.6 MeV, level energies, DWBA and coupled channels anal. 7−116406
^{100}Mo(^{100}Mo,X), 12-19 MeV/u, ternary processes, kinematic coincidences anal. 7−116511
^{100}Mo(^{100}Mo,X), E≥2 MeV/N, binary versus ternary fragmentation processes, statistical multifragmentation model 7−135353
^{13}N(p,γ), stellar energies, microscopic coupled channel approach, cross section 7−73759
(^{14}N,^{6}Li), direct reactions, role in multiparticle and quasimolecular state investigations 7−135346
(^{14}N,d), direct reactions, role in multiparticle and quasimolecular state investigations 7−135346
^{14}N(e,e), elastic and inelastic, form factors, Cohen-Kurath wave functions anal. 7−67807
^{14}N(γ,π^{+}), Cohen-Kurath wave functions anal. 7−67807
^{14}N(n,α)^{11}B, 12.2, 14.1, 18 MeV, α-angular distrib., DWBA, coupled channel anal. 7−96083
^{15}N levels, J$^{\pi}$, form factors and spectroscopic factors, DWBA anal. of ^{18}O(p,α), 40.9 MeV, ^{15}N levels, J$^{\pi}$, form factors and spectroscopic factors, DWBA anal. 7−102805
^{23}Na(γ,Xγ') partial nucleon channels, dipole giant resonance decay, integrated partial cross sections, photoabsorption 7−116381
^{25}Na, levels and spectroscopic factors CCBA and DWBA anals. from (t, α) 7−102806
Nb(Nb,X), bounce-off effect, transparency, stopping power and thermalization 7−96108
^{93}Nb(^{3}He,X), peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
^{93}Nb(^{84}Kr,X), 34.5 MeV/u, binary break-up of high velocity hot source, fragment prod. 7−96101
^{144}Nd(p,α), mechanism and ang. distrib., pick-up and knock-on theories 7−116417
^{150}Nd(^{12}C,^{12}C′), 70.4 MeV, CCBA modification for direct reactions in deformed nuclei, bands 7−116488
^{150}Nd(^{12}C,^{12}C′), vibrational band excitation, coupled channel Born approx. calcs. 7−128955
^{A}Ne, A=20, 22, unnatural parity state excitation in α-transfer reactions, CRC anal. 7−135204
^{A}Ne(α, α′X), A=20,22 giant resonance decays and interference effects 7−102854
^{A}Ne(d,d), A=20, 22, differential cross sections and reorientation effects 7−81404
^{20}Ne(^{12}C,^{12}C), double differential cross section, LCNO theory 7−116487
^{20}Ne(^{16}O,^{16}O), double differential cross section, LCNO theory 7−116487
nuclear reaction and scattering theory continued
(^{22}Ne,X), 4.1 GeV/c/N in nuclear emulsion multiplicities, charged particle angular distribs. *(German)* 7−129093
Ni(^{14}N,X), 96 MeV, α-particle emission mechanism, fragment sequential decay *(Chinese)* 7−109204
^{A}Ni(^{B}Si,X), A=58,62,64, B=28,30, coupled channels anal., low-lying excitations, rotational and vibrational model comparisons 7−67867
^{A}Ni(^{28,30}Si,X), A=58,62,64, sub-barrier fusion cross sections, CC and HF calcs. 7−116538
^{A}Ni(^{28}Si,^{29,30}Si), A=58, 62, transfer cross sections near Coulomb barrier, DWBA anal. 7−116490
^{A}Ni(α,p), A=58, 60, 62, zero and finite range semi-microscopic DWBA anals. *(Chinese)* 7−116438
^{A}Ni(α,p), A=58,60,62, differential cross sections, DWBA and microscopic calcs. 7−116449
^{A}Ni(α,p), A=58,60,62, finite-range j-j coupling microscopic form factor 7−116447
^{58}Ni(^{16}O,X), X=^{13}C, ^{13}N, 80 MeV, stripping reactions, OM pot. ambiguities in EFR-DWBA anal. 7−116485
^{58}Ni(^{16}O,X), X=^{15}O, ^{15}N, 80 MeV, stripping reactions, j, l and π depends. in EFR-DWBA anal. 7−116486
^{58}Ni(^{58}Ni,pX), 876.5 MeV, energy spectra, diabatic dissipation model 7−135366
^{58}Ni(α,d), continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
^{58}Ni(d,^{3}He)^{57}Co, strong fragmentation of $1d_{5/2}$ hole strength 7−116430
^{58}Ni(d,d), coupled discretized continuum channels methods 7−67849
^{60}Ni(^{58}Ni, pX), inclusive proton spectra, multiple-source analysis, equilibrium, deep-inelastic, pre equilibrium processes 7−129097
^{60}Ni(d,d), 200, 400, 700 MeV, relativistic anal., Dirac vector/scalar potential strength calcs. 7−116437
^{A}O(p,p), 11-60 MeV, A=16, 17, coupled channel variational method appl. 7−102884
^{14}O levels and transitions, CC anal. of ^{12}C(^{3}He,n) 7−95990
(^{16}O, X), 200 GeV, multiplicity distrib. in central rapidity region, wounded nucleon model, q-g plasma 7−121881
^{16}O(^{12}C, ^{12}C), 48.06 MeV, cross section meas., optical model, DWBA anal. 7−73790
^{16}O(^{12}C,^{16}O), differential cross section, independent α-particle model and DWBA calcs. *(Chinese)* 7−109206
^{16}O(^{13}C, ^{13}C), 48.48 MeV, cross section meas., optical model, DWBA anal. 7−73790
^{16}O(^{16}O, ^{16}O), 17 MeV, nuclear glory scatt., phase shift anal. 7−73786
^{16}O(^{16}O,^{12}C′)^{20}Ne, E_{cm}=11-18 MeV, excitation fns., DWBA optical model comparisons 7−116502
^{16}O(^{16}O,X), extended TDHF anal., quantum theory appl., fusion momentum limit 7−121913
^{16}O(^{16}O,α), resonant fluctuations in cross sections, compound nucleus decay model 7−81437
^{16}O(N,N′), differential cross section meas., DWBA and coupled channel calcs. 7−73763
^{16}O(d, p), 11-60 MeV, coupled channel variational method appl. 7−102884
^{16}O(d,d), 400 MeV, folding model anal. 7−135334
^{16}O(ē,e′X), low momentum transfer ē induced nucleon emission, giant resonance decay 7−135307
^{16}O(e,e′), RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{16}O(e,e′n) RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{16}O(e,e′p), RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{16}O(γ,p$_{i}$), 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
^{16}O($\tilde{p}$, nπ^{+})^{16}O, DWBA calculation using Dirac equation 7−135324
^{16}O(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{16}O(p,n), 0^{+}→0^{-} spin excitation mode transitions, distorted wave calcs. 7−121823
^{16}O(p,n), 35, 40 MeV, ^{16}F low-lying states study, DWBA anal. 7−102873
^{16}O(p,p′), 0^{+}→0^{-} spin excitation mode transitions, distorted wave calcs. 7−121823
^{16}O(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual N$\bar{N}$ processes, relativistic correction 7−81385
^{16}O(π^{+},2p)^{14}N, 60 MeV, quasi-deuteron mechanism, distorted wave calcs. 7−67877
^{18}O(π,π'), DWIA and coupled channels anal. using shell model transition densities 7−102920
(p,d), antisymmetrisation corrections in approx. three-body model 7−81403
(p,X), correlations of cumulative protons and deuterons, azimuthal correls. 7−67842
(p,X), hadron prod. at forward angles, single scatt. model study 7−89572
^{31}P(d,n)^{32}S, 24.8 MeV, diff. cross sections, ^{32}S level study, DWBA anal. 7−102804
^{208}PG(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual N$\bar{N}$ processes, relativistic correction 7−81385
Pb(^{16}O,X), transverse energy distrib. in central rapidity region, wounded nucleon model 7−81429
Pb(U,X), 1.7 GeV, deep inelastic, time delay effects on K X-ray prod. probab. 7−121910
^{208}Pb(^{16}O,^{16}O′), 60-76 MeV, energy depend. of effective interactions 7−116484
^{208}Pb(^{16}O,X), 80 MeV, quasielastic channels, coupled channels anal. 7−121944
^{208}Pb(^{17}O,^{16}O)^{209}Pb, 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,^{17}O′), 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,^{17}O), 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,^{18}O)^{207}Pb, 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,X), 78 MeV, quasielastic channels, coupled channels anal. 7−121944
^{208}Pb(^{17}O,X), X=^{16}O, ^{18}F, 376 MeV, ang. distribs., DWBA anal. 7−121909
^{208}Pb(^{28}Si,^{28}Si′), quasielastic yields, coupled channels and DWBA comparison 7−116459
^{208}Pb(^{28}Si,^{28}Si), quasielastic yields, coupled channels and DWBA comparison 7−116459
^{208}Pb(^{58}Ni,^{58}Ni)^{208}Pb, elastic and inelastic scatt., DWBA and coupled channel anal. 7−129088

nuclear reaction and scattering theory continued
^{208}Pb(^{6}Li, αd)^{208}Pb, 178 MeV, ^{6}Li→α+d breakup, coupled-channel and α-d cluster model anal. 7−116498
^{208}Pb(^{6}Li,X), 178 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
^{208}Pb(^{7}Li,X), 132 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
^{208}Pb(d,d), origin of spin-dependence at low-energy 7−109186
^{208}Pb(d,p), origin of spin-dependence at low-energy 7−109186
^{208}Pb(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{208}Pb(p,n)^{208}Bi, 200 MeV., neutron spectra, DWIA, finite fermi system anal. 7−121845
^{208}Pb(p,p^{1}), 200, 400 MeV collective DWBA analysis, low lying states, n to p multipole matrix elements 7−108959
^{208}Pb(p,p′), 318 MeV, cross sections, high spin state meas., DWIA anal. 7−67688
^{208}Pb(p,p′), deformation length and matrix elements, collective DWBA formalism 7−102882
^{208}Pb(p,p), 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{208}Pb(p,p), 800 MeV, relativistic impulse approximation in an additive potential model 7−121839
^{208}Pb($\vec{p}$,t), 22 MeV, reaction mechanism and struct. depend., expt. and DWBA calcs. 7−135328
^{208}Pb(π^{+}, K^{+}), hypernuclear state production, cross section calcs. 7−67879
^{208}Pd(d,d), coupled discretized continuum channels methods 7−67849
^{194}Pt(n,n), 4.55 MeV, diff. and total cross sections, nuclear dynamics effects 7−121838
^{196}Pt(p,p′)^{196}Pt, coupled channel formalism 7−109167
^{239}Pu(n,f), cross section energy depend., quasi-molecular theory 7−116537
^{A}S(d,d), A=32, 34, differential cross sections and reorientation effects 7−81404
^{32}S(γ,pγ′), 32 MeV, partial photonucleon cross sections, semidirect processes photoabsorption, giant dipole resonances 7−116380
^{76}Se(t,p)^{78}Se, 17 meV, excitation energies, angular distrib., J^{π} assignments 7−67716
^{A}Si, A=29, 31, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{A}Si(α,p)^{B}P, A=28-30, B=31-33, 25 MeV, P energy level anal., DWBA comparisons 7−67851
^{A}Si(t,^{3}He), 36 meV, A=28,30, differential cross sections, energy spectra, mass meas. and energy levels, DWBA and coupled channel calcs. 7−121858
^{28}Si (^{28}Si,X), wall dissipation, fusion excitation fns., entrance channel deformations, deformation dependent inertias 7−129124
^{28}Si(^{16}O,^{16}O), 3α transfer mechanism, excitation fns., molecular orbital model 7−121906
^{28}Si(^{6}Li, ^{6}Li′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{28}Si(Si, X), dissipative processes at forward angles, heavy residues, angular and velocity distribs. 7−129096
^{28}Si(α,α′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{28}Si(d,d), differential cross sections and reorientation effects 7−81404
^{A}Sm(^{16}O, ^{16}O), A=144-54, even isotopes, scatt. cross section calcs. using barrier-like pot. 7−141090
^{A}Sm(^{16}O, X), A=144-54, even isotopes, transfer cross section calcs. using barrier-like pot. 7−141090
^{A}Sm(^{16}O, X), A=148, 150, 154, coupled channel approach to subbarrier fusion cross section 7−141121
^{144}Sm(^{16}O,^{16}O), 61-76 MeV, elastic and inelastic, ang. distribs. and excitation functions 7−116489
^{144}Sm(^{84}Kr,X), 720 MeV, memory effect, nonMarkovian transport eqn. 7−135371
^{152}Sm(n,n′), triaxial shape study, Davydov-Filippov model anal. 7−121601
^{A}Sn(p,p′), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{A}Sn(p,p), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{112}Sn(^{120}Sn,Sn), quasi-elastic n transfer and pairing effects 7−96111
^{116}Sn(d,p), three-body model, antisymmetrization corrections 7−116432
^{120}Sn(^{132}Xe, X), deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
^{120}Sn(^{7}Li,^{6}Li), tensor analyzing power meas., coupled channel anal. 7−116472
^{120}Sn(^{7}Li,^{7}Li), coupled channels effects, numerical results from unified semiquantal description 7−81435
^{120}Sn(^{7}Li,^{8}Li), tensor analyzing power meas., coupled channel anal. 7−116472
^{120}Sn(^{7}Li,αt)^{120}Sn$_{g.s.}$, 70 MeV, ^{7}Li→α+t breakup, coupled-channel and α-t cluster model anal. 7−116499
^{A}Sr, A=86,87, nuclear structure study using ^{87,88}Sr(d,^{3}He), DWBA anal. 7−128956
^{181}Ta(e,n) threshold-30 MeV, nuclear size effects in virtual photon theory, cross section 7−102863
^{120}Te(d,t), 1.2 MeV, ^{120}Te structure study, DWBA calcs. 7−128957
Th(Ta,X), positron and δ-electron emission, coupled channels anal. 7−67870
^{232}Th(^{16}O, X), coupled channel approach to subbarrier fusion cross section 7−141121
^{232}Th(^{16}O,X), spin distributions, complete fusion cross section calcs., fission yields 7−102905
^{232}Th(^{58}Ni, f), formation and decay of hot composite-like nuclei 7−135355
^{A}Ti($\vec{\pi}$, $\vec{\pi}$), A=48, 50, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{46}Ti(^{6}Li, X), intermediate mass fragment cross section, sequential binary decay model 7−96110
^{48}Ti(^{23}Na,X), fusion, coupled channels effects, numerical results from unified semiquantal description 7−81435
^{206}Tl(0^{-})→^{206}Pb(0^{+}), renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839
U(U,X), 1.7 GeV, deep inelastic, time delay effects on K X-ray prod. probab. 7−121910
^{A}U(n, n), A=235, 238, cross sections, ground state reorientation, coupled channels calcs. 7−116407
^{A}U(n,f), A=235,238, cross section energy depend., quasi-molecular theory 7−116537
^{236}U(^{12}C, X), coupled channel approach to subbarrier fusion cross section 7−141121

nuclear reaction and scattering theory continued
^{238}U(^{32}S,f), ang. distrib. meas., comparison with coupled channels and transition state theory 7−116456
^{238}U(e,e′), linear response function in quasielastic peak region, long. charge response 7−135306
^{238}U(μ^{-},f) muon final-state probabilities, fragment quadrupole vibration effects *(Chinese)* 7−109242
U(γ,e^{+}e^{-}), electron pair production in DWBA calc. 7−129019
^{51}V(^{12}C,X), 72 MeV, incomplete fusion, recoil studies, α-cluster behaviour 7−116512
^{51}V(α,p), differential cross sections, DWBA and microscopic calcs. 7−116449
^{51}V(α,p)^{54}Cr, 25.7 MeV, differential cross sections, zero-range DWBA and quasi-triton transfer approx. comparisons 7−129072
Xe(p,X), 1-19 GeV, light fragment prod., diff. cross sections, binary process 7−96068
^{89}Y(^{19}F,X), 135-143.25 MeV, cross-section correlated fluctuations, excitation functions 7−121912
^{89}Y(α,p), differential cross section meas. and microscopic DWBA anal. 7−116448
^{89}Y(α,p), differential cross sections, DWBA and microscopic calcs. 7−116449
^{68}Zn(^{40}Ar,X), 27.6 MeV/N, fragment isotopic distribs., projectile fragmentation 7−96095
^{A}Zr(α,α′), A=90, 92, 94, 96, isospin decomposition of transition matrix elements by Coulomb interference 7−96088
^{90}Zr(^{6}Li,^{6}He), 14, 25, 35 MeV/nucleon, angular distrib., G-T transitions, cross sections, reaction mechanism, DWBA comparisons 7−121903
^{90}Zr(n,p)^{90}Y, isovector monopole and quadrupole resonances 7−135331
^{90}Zr(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{90}Zr(p,p′), 200 MeV, 0^{-} state excitation, resonance and transitions, DWIA calc. 7−67696
^{92}Zr(^{64}Ni,X)^{156}Er*, fusion, high spin components, neutron emission suppression, comments and reply 7−81470
^{94}Zr(d,d′), energy levels, distorted-wave anal. 7−102890

nuclear reactions and scattering
see also alpha particle-nucleus reactions; alpha particle-nucleus scattering; chemical effects of nuclear reactions and scattering; deuteron-nucleus reactions; deuteron-nucleus scattering; direct nuclear reactions and scattering; fission; form factors (nuclear); hadron-nucleus reactions; hadron-nucleus scattering; heavy ion-nucleus reactions; heavy ion-nucleus scattering; helium 3-nucleus reactions; helium 3-nucleus scattering; lepton-nucleus reactions; lepton-nucleus scattering; muon-nucleus scattering; nuclear fusion; nuclear reaction and scattering theory; nuclear reactions involving few nucleon systems; nuclear resonance reactions and scattering; nuclear scattering involving few nucleon systems; nuclear spallation; nuclear spectroscopic factors; nucleosynthesis; photon-nucleus reactions; photon-nucleus scattering; polarisation in nuclear reactions and scattering; triton-nucleus reactions; triton-nucleus scattering
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
mean free path meas., data processing method *(Chinese)* 7−103343
neutron stars, nuclear reaction probability of molecular ions in strong mag. field 7−120274

nuclear reactions involving few nucleon systems
for nuclear inelastic scattering involving few nucleon systems see "nuclear scattering involving few nucleon systems"
conference on hadronic few-body systems, Rome, Italy (Oct. 1986) 7−66812
d-d and d-t fusion, muon-catalysed 7−82398
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
DT fusion, muon-catalyzed, stability anal. 7−129125
^{1}H(^{3}He, t), Δ^{++} formation, DWBA calcs. 7−116439
^{1}H(^{3}He,tΔ^{++}), 2 GeV, DWBA anal. and expts. comparisons 7−116453
^{1}H(d,^{2}He), 650 MeV, 2 GeV, energy spectra and tensor anal. power meas. 7−135293
^{1}H($\vec{d}$,γ), tensor analyzing power and D-state effects 7−109192
^{1}H($\vec{n}$,γ), intermediate energy, meson exchange and relativistic correction effects 7−121842
^{2}H($\vec{N}$,$\vec{d}$), E_N=10 MeV, vector-to-vector spin transfer coeffs., Paris NN potential anal. 7−67829
^{2}H($\vec{N}$,$\vec{d}$)N, meson theoretical NN interaction predictions 7−67812
^{2}H(α, X), momentum spectra and differential cross sections at 7.0 GeV/c 7−81416
^{2}H(α,αp), Coulomb effects in breakup reactions 7−96085
^{2}H(d,n)^{3}He, 80,120,160,200,460,1000 keV, vector analyzing power meas. 7−129060
^{2}H(d,n)^{3}He, spin dependence of low energy fusion reactions, DWBA anal. 7−116539
^{2}H(d,n)^{3}μHe, muonic catalysed, X-ray and yield meas. 7−96130
^{2}H(d,p)^{3}H, 2.98-162.5 keV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{2}H($\vec{d}$,p)^{3}H, 80,120,160,200,460,1000 keV, vector analyzing power meas. 7−129060
^{2}H(d,pnn), 50 MeV, disintegration mechanism study using coincidence techniques 7−135332
^{2}H(d,π^{0})^{4}He, 0.8 GeV, charge symmetry breaking cross sections 7−109191
^{2}H(n,X), three nucleon models predictions anal. 7−67811
^{2}H(n,2n), 8.6 MeV, differential cross sections *(Chinese)* 7−116403
^{2}H(n,2n), breakup configuration study, kinematically complete S-curve 7−109183
^{2}H(n,2np), 15.8 MeV, diff. cross section meas., nn interaction parameters 7−121829
^{2}H(n,γ)^{3}H, polarisation correlations 7−81380
^{2}H(n,nn), Faddeev calcs. and on-shell props. 7−67821
^{2}H($\vec{p}$,X), Coulomb modified Faddeev calculations of low-energy P-D observables 7−67813
^{2}H(p,γ), intermediate energy, meson exchange and relativistic correction effects 7−121842
^{2}H(p,γ)^{3}He, polarisation correlations 7−81380
^{2}H(p,γ)^{3}μHe 7−96130
^{2}H($\vec{p}$,$\vec{n}$p), polarization transfer coeff., precision meas. 7−109174
^{2}H($\vec{p}$,$\vec{n}$p), quasielastic scatt., 223-492 MeV, spin transfer parameters meas. 7−121854
^{2}H(p,π^{+}), coherent prod., three-body mechanisms 7−141047
^{3}H(^{3}He,γ)^{6}Li, direct radiative capture, resonant structure of cross-section 7−109197
^{3}H(d, n)^{4}He, neutron generator targets, d ranges with allowance for T depth distrib. 7−103312

nuclear reactions involving few nucleon systems continued
^{3}H(d, X), muon-α sticking prob. in muon-catalysed fusion 7−129126
^{3}H(d,X), fusion, μ catalyzed, μ transfer rate meas. 7−109249
^{3}H(d,X), muon catalyzed fusion, muon sticking 7−121979
^{3}H(d,X), muon catalyzed fusion, parameter determ. 7−141119
^{3}H(d,X), muon catalyzed fusion, kinetics 7−141120
^{3}H(d,X), muon-catalyzed, effects of muon lag on sticking probability 7−121981
^{3}H(d,αn), nuclear Coulomb scatt. length. effective radius calcs. 7−122752
^{3}H(d,n), ang. distrib. meas. at 1, 1.5 and 2 MeV 7−73776
^{3}H(d,n), cross section meas., R-matrix and S-matrix anal. 7−116427
^{3}H(d,n)^{3}He, 2.98-162.5 KeV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{3}H(d,n)$^{4}\mu$He, muonic catalysed, X-ray and yield meas. 7−96130
^{3}H(d,nμ)^{4}He, muon catalyzed, effect of exit-channel on muon sticking 7−121980
^{3}H(t,nnμ)^{4}He, muon-catalyzed fusion, kinetics 7−141117
^{A}H(d, n), A-2, 3, differential cross sections, determ. of nuclear vertex consts., Coulomb effects 7−116429
^{A}H(d,X), A=2,3, muon catalyzed fusion 7−141118
^{3}He(^{3}He,X), 17.9, 21.7, 24 MeV, X=p,d,t,^{3}He,α total cross section meas. 7−67852
^{3}He(^{3}He,2p), 17.9−342.5 keV, astrophysical S(E) factor at solar energies 7−107814
^{3}He(d,p), 1.0-13.0 MeV, cross section and analyzing power meas. 7−116436
^{3}He(d,p)^{4}He, 6.95-141.8 KeV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{3}He(d,pα), 14.6 MeV, fast ion burn up in D plasmas, proton spectra meas. 7−73818
^{3}He(d,t), isospin asymmetry study 7−67847
^{3}He(p,X), 1.2 GeV, evidence for narrow isovector nonstrange dibaryons 7−135316
^{3}He(p,np), 2.5 and 5.0 GeV/c, ^{3}He→ppn nuclear vertex fn. determination 7−135320
^{3}He($\bar{p}$,pd), ang. distrib. and analyzing power in final state interaction region 7−67823
^{4}He(^{3}He, π^{0})^{7}Be, subthreshold energy reaction, clustering correlation calcs. 7−81415
^{4}He(^{3}He, π^{+})^{7}Li, subthreshold energy reaction, clustering correlation calcs. 7−81415
^{4}He(α, X), ultrarelativistic, energy flow, additive quark and wounded nucleon models 7−109129
^{4}He(d,^{3}He), 35, 45 MeV, diff. cross section and anal. power ang. distribs., asymptotic normalisation 7−116373
^{4}He(d,e^{+}e^{-})^{6}Li, pair production, polarisation phenomena 7−73775
^{4}He(d,pn), isospin breaking and breakup calcs. with Coulomb interaction 7−67846
^{4}He($\bar{p}$,X), 192.8, 306.2, 607.7 MeV/c, determ. of $\sigma(\bar{p}n)/\sigma(\bar{p}p)$ 7−102764
^{A}He(α, X), A=3, 4, momentum spectra and differential cross sections at 7.0 GeV/c 7−81416
np capture, E_n=61 MeV, differential cross section meas. 7−67830

nuclear reactor fuel *see fission reactor fuel; fusion reactor fuel*

nuclear reactor instrumentation
see also fission reactor instrumentation; fusion reactor instrumentation
ionisation chambers, thermal stability for SUZ fast reactors 7−122025
radiation-hardened microelectronics for nuclear power systems 7−103043
steam generators, high resolution digital eddy current testing system *(German)* 7−135539

nuclear reactor materials *see fission reactor materials; fusion reactor materials*

nuclear reactor operation *see fission reactor operation*

nuclear reactor theory and design *see fission reactor theory and design; fusion reactor theory and design*

nuclear reactors *see fission reactors; fusion reactors; nuclear power stations*

nuclear resonance reactions and scattering
see also nuclear resonances
^{50}Cr(p,p′), 6.05 MeV, resonance props., elastic, inelastic scatt. 7−121830
compound nucleus reactions, Gaussian versus non-Gaussian statistics 7−81364
compound resonances, partial El-radiation force constants, OSM anal. 7−121556
conf., Kharkov, USSR, April 1986 7−120688
conference, Gaussig, Germany, Nov. 1985 7−72725
heavy ion collisions, molecular model for high spin resonances 7−135372
hot nuclei, statistical fragmentation, microcanonical Monte Carlo sampling 7−135291
multichannel Coulomb nuclear scattering, reson. state parameters calcs. 7−73746
multilevel cross sections, pole representation, practical appl. 7−129130
oriented nuclei nuclear reactions, book contrib. 7−96050
resonances, mathematical anal. 7−102218
resonances in nuclear, atomic and mol. physics 7−102853
shattering mechanism from intermediate-energy hadrons 7−67790
single-particle resonances, approx. to RPA continuum calcs. 7−135290
threshold resonance effects, energy depend. of scatt. matrix 7−135276
triple α reaction, S-matrix calc. 7−127710
(e,ΔX), Δ electroproduction in relativistic model 7−135309
(e,e′), electromagnetic excitation of the delta resonance in nuclei 7−109150
(γ,γ'), heavy nuclei, E1 strength in giant dipole resonance, nuclear structure effects 7−116385
(K^{-},π^{+}), Σ-hypernuclear production, resonant and quasi-free mechanisms, shell model anal. 7−129109
(n,n′), A=40-238, reduced n widths for s-resonances *(Russian)* 7−102887
(n, X), spontaneous and laser-induced reactions, relation between cross sections 7−67839
(n,X) on A=87-140, 3P size resonance in p-wave neutron strength function 7−67788
$\bar{p}$N scattering in nucleus, Pauli principle and anisotropy 7−81394
(π,π'), resonance region study 7−109132
(π,X), optical potential, density matrix dependence of Pauli corrections *(Chinese)* 7−102917
^{109}Ag(n,n′), temperature shift meas. of neutron resonances 7−73771
^{27}Al(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{27}Al(^{7}Li,^{7}Be), 150 MeV, high-lying states, neutron decay 7−109232
^{27}Al(^{7}Li,^{7}Li′), 150 MeV, high-lying states, neutron decay 7−109232
^{27}Al(p,γ)^{28}Si, 1588 and 2044 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360

nuclear resonance reactions and scattering continued
^{241}Am (n,f), 0.08-1.3 MeV, cross section meas., intermediate structure obs. 7−121970
^{10}B(γ,xn), 8.44-24.5 MeV, cross section meas., El-giant resonance region study 7−129018
^{11}B(α,p)^{12}C, 0.9-1.7 MeV, total cross sections, resonance obs. 7−121871
^{12}C (^{15}N,X), resonant structures 7−121938
^{12}C+^{12}C, noncompact-group model for quasimolecular nuclei *(Chinese)* 7−109205
^{12}C+^{18}O, noncompact-group model for quasimolecular nuclei *(Chinese)* 7−109205
^{12}C(^{12}C, X), sub-Coulomb resonances, doorway formalism 7−129007
^{12}C(^{12}C,X), molecular resonances, rotation-vibration model *(Chinese)* 7−102903
^{12}C(^{12}C,$\alpha\alpha$), 19-32 MeV, resonances and compounds nucleus form. 7−116482
^{12}C(^{16}O,^{8}Be)^{20}Ne, E_{cm}=19-24 MeV, resonances, reduced width meas. 7−116491
^{12}C(^{6}Li,^{6}Li′)^{12}C, isoscalar giant resonances 7−116466
^{12}C(α,α'), 172.5 MeV, angular distrib. meas., multipolarities, deformation lengths, GQR region study 7−121870
^{12}C(n,γ_0)^{13}C, 6.5-18.5 MeV, excitation fn., cross section meas. in giant dipole resonance region 7−67828
^{12}C($\pi,\pi\gamma$)^{12}C, angular correlations in Δ-resonance region 7−96119
^{40}Ca(α,α)^{40}Ca, elastic scatt., resonant states 7−121876
^{40}Ca(γ,X)Ar, giant dipole resonance, partial decay channels 7−67798
^{40}Ca(p,p), differential cross sections, polarisations, giant resonances *(Russian)* 7−121843
Cd(γ,n), 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
^{50}Cr(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{53}Cr(γ,n), threshold cross section meas., resonance study above neutron binding energy 7−116387
^{A}Dy(n,n′), A=161, 163, temperature shift meas. of neutron resonances 7−73771
^{54}Fe(n,γ), γ-ray obs. from low-lying resonances 7−81383
^{54}Fe(p,p′γ), 3.88-4.8 MeV; γ-angular distrib., spectra, $d_{5/2}$ isobaric analogue state in ^{55}Co 7−67785
^{A}Gd(n,γ), A=152, 154, up to 2700 eV, resonance parameters, s-wave spacing, radiation width, capture integral 7−121835
^{70}Ge(p,p′), intermediate structure of ^{71}As 7−67725
(γ,xn), E1 giant reson. cross sections anal., appl. of ^{181}Ta(e,xn) results 7−135301
^{1}H(^{3}He, t), Δ^{++} formation, DWBA calcs. 7−116439
^{2}H(p,p′), Coulomb effects in perithreshold resonance prod., multichannel N/D eqns. 7−135319
^{3}H(γ,π), elastic photoproduction in Δ(1232) resonance region 7−135299
^{3}He, π absorption on 3 nucleons, doorway model with πNN intermediate resonance 7−116521
^{3}He(γ,X), photon absorption mechanism in Δ resonance region 7−67796
^{3}He(γ,π), elastic photoproduction in Δ(1232) resonance region 7−135299
^{3}He(γ,π), photon absorption mechanism in Δ resonance region 7−67796
^{39}K($\pi^{\pm}$, $\pi^{\pm\prime}$), 180 MeV, n and p contribs. to excited states, ang. distribs. 7−116527
(^{7}Li,^{7}Be) reactions on ^{12}C, ^{24}Mg, ^{27}Al, ^{28}Si, ^{48}Ti, isovector giant resonance obs. 7−135356
^{24}Mg(^{24}Mg, ^{24}Mg′)^{24}Mg, spin alignment in inelastic scatt. 7−129080
^{24}Mg(^{24}Mg,^{20}Ne), 89.7−95.5 MeV, correlated intermediate structures in α-transfer 7−73744
^{24}Mg(^{24}Mg, ^{24}Mg), 89.7−95.5 MeV, correlated intermediate structures in elastic and inelastic scatt. 7−73744
^{24}Mg(^{4}He,^{12}C)^{16}O, 26-37 MeV, excitation fns., resonant structures 7−116497
^{24}Mg(^{4}He,^{4}He′), 26-37 MeV, excitation fns., resonant structures 7−116497
^{26}Mg(p,p), resonance scatt. anal. *(Russian)* 7−109176
Mo(n,X), slow neutrons, scatt. and absorption, cross sections, resonance parameters 7−67845
^{14}N(p,γ)^{15}O, 7.56 MeV resonance, nuclear bremsstrahlung potential model anal. 7−109178
^{23}Na(p,^{12}C)^{12}C, 11-18 MeV, possible new 2^{+} resonances in ^{12}C+^{12}C system 7−116364
^{A}Ni(n,γ), A=58,60, resonance capture, γ-ray spectra, valence model comparisons 7−116422
^{58}Ni(α,α'), 129 MeV, isoscalar giant resonances, decay props., branching ratio calcs. 7−129069
^{14}O(α,γ)^{18}Ne in stars 7−127704
^{14}O(α,p)^{17}F in stars 7−127704
^{16}O(^{15}N,X), resonant structures 7−121938
^{16}O(^{16}O,X), 12-20 MeV, cross section resonances in α_0, α_1 exit channels, excitation fns., statistical anal. 7−129101
^{16}O(^{16}O,α), resonant fluctuations in cross sections, compound nucleus decay model 7−81437
(p,p′), 6-15 MeV, resonances, nonstatistical nature 7−109159
^{207}Pb(n,X), E≤700 keV, resonance structure in the ^{207}Pb+n system 7−121618
^{208}Pb(p,t)^{206}Pb, two-particle pairing excitations 7−116362
^{208}Pb(t,p)^{210}Pb, two-particle pairing excitations 7−116362
Pb(γ,n), 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
^{105}Pd(n,γ), 2-24 keV, M1 giant resonance obs., γ-strength fns. 7−108993
^{239}Pu(n, f), transmission and fission-self indication for various materials, unresolved resonance region study 7−129129
^{239}Pu(n,X), resolved and unresolved resonance region, resonance parameters 7−73770
^{241}Pu(n,f), E≤100 eV, cross sections, R-matrix analysis 7−129118
(π,π'), pion physics at the meson factories 7−89856
^{103}Rh(n,n′), temperature shift meas. of neutron resonances 7−73771
^{32}S(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317
^{33}S(n,α), E_n≤1 MeV, cross section meas., resonance anal. 7−129036
^{45}Sc(p,γ)^{46}Ti, 1026, 1047 and 1377 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
^{A}Si(p,p), A=28,30, resonance scatt. anal. *(Russian)* 7−109176
^{28}Si(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{28}Si(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317
^{A}Sm(n,γ), A=144,145, thermal neutron cross section meas., resonance integrals 7−73767
^{154}Sm(α,α'), 119 MeV, splitting of low energy octupole resonance 7−109199

nuclear resonance reactions and scattering continued
^{33}Sn(n,X), 10 keV-2 MeV, total cross section meas., resonance structure, optical model anal. 7−129035
^{50}Ti(p,p), resonance scatt. anal. *(Russian)* 7−109176
U(U,X), 5.6, 5.9 MeV/u, multiple positron structures 7−67875
^{A}U, A=234, 235, 238, neutron resonance states, mean-square charge radii meas. 7−73702
^{A}U(n, f), A=235, 238, transmission and fission-self indication for various materials, unresolved resonance region study 7−129129
^{235}U, bound-coherent-neutron scatt. length 7−81360
^{235}U(n,γ)^{236}U, mean-square charge radii meas. of compound-nucleus states, double-humped barrier model anal. 7−73703
^{238}U(α,α′f), neutron spectra from isoscalar GQR in ^{238}U 7−109246
U(e,e′f), giant multipole resonances, fission decay, exptl. study 7−109245
^{51}V(p̄,p′), spin transfer meas. in M1 region 7−81387
^{64}Zn(p,γ)^{65}Ga, 1.1-2.1 MeV, γ-angular distrib. meas. single level, decay prop. anal. 7−73736
^{90}Zr(^{6}Li,^{6}Li′)^{90}Zr, isoscalar giant resonances 7−116466
^{90}Zr(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231

nuclear resonances
see also nuclear collective states and giant resonances
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
Landau-parameters and isoscalar nuclear excitations in a relativistic mean-field theory 7−109084
magic and semimagic nuclei, excitations and G-matrix, BPA and RPA calcs. 7−109134
multiquark model calcs. of nuclear props. 7−95997
neutron resonances, average partial radiation widths, semi-classical calcs. 7−121714
nuclear level densities and level spacing distributions, statistical theory tests at low excitation energies 7−128961
proton resonances, tests of spectrum and strength fluctuations 7−128937
unstable two-cluster system, effect of third particle on two-particle resonance 7−135275
Δ(1232) propagation in nuclear matter, microscopic calcs. 7−109132
(n,n′), A=40-238, reduced n widths for s-resonances *(Russian)* 7−102887
(π,X), many-body absorption processes in Δ isobar region 7−109240
^{26}Al, 7290 keV resonance, γ-transition probabilities 7−135256
Al(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
Al(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{11}B(α,p)^{12}C, 0.9-1.7 MeV, total cross sections, resonance obs. 7−121871
C resonance levels, effect of time evolution of extra spatial dimens. 7−89418
^{12}C (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
^{12}C resonances from ^{11}B(p,p^1) 7−129041
^{12}C(n,X), total cross section meas. in ^{13}C resonance region 7−96076
^{13}C resonance search at 20 MeV using anal. power meas. in ^{12}C(n, n), ^{13}C resonance search at 20 MeV using anal. power meas. 7−96044
^{40}Ca(α,α), resonant states, excitation fns. and ang. distribs., Regge pole formalism 7−135285
C(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
C(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
Cu(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
Cu(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
(e,e′), nuclear structure probes 7−109147
^{19}F resonances and γ-transition strength from ^{15}N(α,γ) 7−135287
^{1}H(^{3}He, t), Δ^{++} formation, DWBA calcs. 7−116439
^{2}H(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{3}He(p,X), 1.2 GeV, evidence for narrow isovector nonstrange dibaryons 7−135316
^{4}He resonances from ^{2}H(d, X) polarisation data, R-matrix approach anal. 7−116358
^{4}He(N,N), resonances in N+α system, oscillator representation in resonating group method 7−67786
^{5}He resonant states, L.S splitting, microscopic calcs. of ^{4}He(n,n) 7−121772
^{6}He, 2$^+$ state, energy and width, nonspin αnn model 7−121613
^{81}Kr, Gamow-Teller strength distrib. meas. 7−96042
^{7}Li, 18 MeV excitation energy, analysis of inclusive α-spectra of ^{9}Be(d, α) 7−116281
^{13}N, resonance states, bremsstrahlung lifetime meas. using ^{12}C(p,p) 7−135274
^{148}Nd, antiprotonic, strong-interaction fine struct. effects 7−96018
^{56}Ni resonances from ^{24}Mg(^{32}S,^{32}S) 7−129010
^{56}Ni shape isomer search in excitation functions from ^{40}Ca(^{16}O,^{28}Si*) 7−81290
O resonance levels, effect of time evolution of extra spatial dimens. 7−89418
^{16}O, (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
^{240}Pu, 1.056 eV resonance parameters, transmission meas., Bayesian method, Doppler broadening 7−129040
^{28}Si(n,γ), 565 keV, partial radiative widths, for neutron resonance, particle-vibr. coupling model 7−73743
Sm resonance levels, effect of time evolution of extra spatial dimens. 7−89418
^{46}Ti(p̄,p′), 65 MeV, low energy octupole resonance, excitation strength and state distrib. 7−81361
^{90}Zr(p,p′), 200 MeV, 0$^-$ state excitation, resonance and transitions, DWIA calc. 7−67696

nuclear scattering *see nuclear reactions and scattering*

nuclear scattering involving few nucleon systems
conference on hadronic few-body systems, Rome, Italy (Oct. 1986) 7−66812
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
three-body calculations at Los Alamos 7−67700
^{1}H(d̄,d)^{1}H, elastic scatt., analysing power meas. 7−73778
^{1}H(n̄, n), 477 MeV, anal. powers, isospin violating charge symmetry breaking 7−121849
^{1}H(p,p′γ), bremsstrahlung, off-shell aspects of NN force 7−67736
^{1}H(p̄,p′γ), bremsstrahlung expt. 7−67641
^{2}H(N,N), NN interaction off-shell behaviour, Noyes-Kowalski half-off-shell functions 7−128966
^{2}H(N,N)^{2}H, meson theoretical NN interaction predictions 7−67812
^{2}H(d,d), d-d and d-^{3}H, equivalent local potentials, single channel, two-channel RGM anal. *(Chinese)* 7−102889
^{2}H(d,d), differential partial amplitudes, orbital Young scheme *(Russian)* 7−141057
^{2}H(n̄, n), 10-14 MeV, vector anal. power comparison to calcs. 7−96047
^{2}H(n,2n), breakup configuration study, kinematically complete S-curve 7−109183
nuclear scattering involving few nucleon systems continued
^{2}H(n̄,n′), low-energy scatt. by local pot., Faddeev calcs. and t matrices 7−67819
^{2}H(n,n), 8.6 MeV, differential cross sections *(Chinese)* 7−116403
^{2}H(n,n), doublet scattering, effective-range expansion, interaction profiles, slope parameter, scatt. length *(German)* 7−129048
^{2}H(n,n), E_n<20 MeV, total and differential cross sections, Paris NN potential anal. 7−67829
^{2}H(n,n), Faddeev calcs. and on-shell props. 7−67821
^{2}H(n,n), three-body calcs. using Paris two-nucleon pot. 7−67822
^{2}H(p̄, p̄), 500, 800 MeV, proton spin observable meas. 7−141050
^{2}H(p,p′), Coulomb effects in perithreshold resonance prod., multichannel N/D eqns. 7−135319
^{2}H(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{2}H(p,p′), scattering length correlation with binding energy, two-body model anal. 7−67832
^{2}H(p,p), 1 GeV, cumulative processes, isobar role, kinematically forbidden region, intranuclear cascade method 7−121820
^{2}H(p̄,p), 65 MeV, depolarisation parameter meas. 7−96048
^{2}H(p,p), differential cross section, multiple-scattering theory, inelastic screening, 3 TeV prediction 7−116195
^{3}H(d,d), d-d and d-^{3}H, equivalent local potentials, single channel, two-channel RGM anal. *(Chinese)* 7−102889
^{3}He(α,α), analyzing power, ang. and energy depend. 7−96086
^{3}He(p,p), Glauber multiple scattering theory anal. 7−109164
^{4}He(α,α), 126 GeV, Chou-Yang model anal., cross sections 7−89574
^{4}He(α,α), cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
^{4}He(α,α), E≤15 MeV, possible expts., to distinguish Pauli principle treatment in potential models 7−121873
^{4}He(n,n), centre-of-mass effects in resonating group theory 7−116408
^{4}He(n,n), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
^{4}He(n,n), multichannel scatt. by negative energy Weinberg states 7−67772
^{4}He(p,p), 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{4}He(p,p), cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
^{4}He(p,p), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
^{4}He(p,p), phase shifts and differential cross section calcs. *(Chinese)* 7−96066

nuclear screening
2-aminoethylphosphonic acid, single crust., ^{31}P NMR chem. shielding tensor 7−99596
atom external electric field shielding 7−90005
atomic relativistic photoionisation cross sections, analytical determ. 7−141540
atoms, Z=1-92, Dirac-HFS screening function 7−122349
buckminsterfullarene, π-electron-ring-current suscept. 7−68203
chemical shieldings in solids 7−80198
p-dimethoxymethane, ^{13}C chem. shielding anisotropy, variable angle sample spinning obs. 7−77408
Gaussian basis functions, elec. and mag. props. calcs. *(French)* 7−141414
I_2S moieties in polycrystalline systems, NMR, nuclear shielding tensor orientations determ. 7−85455
$M(XY)_6$ complexes, isotope and temp. depend. of transition metal shielding 7−103533
methane, electromag., nuclear shielding tensors, second order props. relations 7−116879
methane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
methyl iodide, in liq. cryst. solvent, NMR investig. 7−90204
pyrene, single cryst., ^{13}C chem. shielding tensors 7−105503
small distance atomic electron screening effects 7−68231
tetramethylsilane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
toluene-α-d_3, isotope shifts, solvent and substituent perturbation on ^{13}C NMR 7−90190
1,3,5-trimethoxybenzene, ^{13}C chem. shielding anisotropy, variable angle sample spinning obs. 7−77408
trimethylphosphine, second-order mag. parameters and mag. isoscreening lines 7−103409
1,2,3-triphenylphosphirene, solid, mag. shielding tensor meas. 7−92509
two-electron systems, revised Rydberg formula 7−82004
ultrarelativistic positronium atoms, probability of passage through matter, inelastic screening *(German)* 7−129906
B IV, 2l2l′ dielectronic satellite lines, width and electron-produced shift anal. 7−129656
Be_{51} and Be_{57} clusters, electronic states; ab initio SCF calcs., binding energy 7−74401
Cd acetate dihydrate, symmetry related Cd shielding tensors, assignment to lattice positions 7−76834
H_2O_2, nucl. mag. isoscreening lines, 2nd order mag. parameters 7−103408
PF_n cpds., ^{31}P NMR shieldings, coupled HF calcs. 7−89935
PH_3, second-order mag. parameters and mag. isoscreening lines 7−103409
PO_4^{3-}, ^{31}P NMR shieldings, coupled HF calcs. 7−89935
S containing species, ^{33}S NMR chemical shieldings, ab initio coupled HF perturbation theory calcs. 7−109719
SeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
Si containing cpds., NMR shielding consts., quadrupole coupling, ab initio calcs. 7−68342
TeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
Tm, Ne matrix isolated, spectral and temporal characts. 7−68245
Xe, multiphoton multielectron ionisation, many-electron dynamics 7−96629

nuclear shape
see also nuclear collective states and giant resonances; nuclear energy levels; nuclear resonances
α-backbending, nucleon-nucleon correlation and deformation in nuclei *(Chinese)* 7−102790
A=100 region, correspondence between rotational bands, quartet model 7−128934
A=150 region, correspondence between rotational bands, quartet model 7−128934
A=158-188, deformed even-even nuclei, hexadecapole states, quasiparticle-phonon model calcs. 7−121571
A=250, 251, deformation energy role in superheavy nuclei, heavy ion reactions, fission barrier 7−121934

nuclear shape continued
actinide nuclei, strongly-deformed, dipole and octupole pairs, BCS anal. 7−109059
actinides, octupole deformation, α-γ and α-conversion electron decay study 7−109012
actinides, rot. alignment and stable octupole deformation 7−81293
atomic spectroscopy and nuclear struct. using laser illumination *(German)* 7−141716
Cassinian ovaloid, fission deformation description 7−116375
charged drops, breakup, role of 3D shapes 7−67748
clustering aspects of nuclear structure and reactions 7−121764
collective pair excitations in dynamical nuclear field theory 7−89540
deformation, onset in collective nuclei, spectroscopic approach 7−109011
deformation energy surfaces for axial and nonaxial quadrupole variables, microscopic approach 7−116291
deformed even-even nuclei, mag. dipole transitions 7−121705
deformed nuclei, dipole resonances, dynamic collective model and dipole boson model comparison 7−141035
deformed nuclei, high-spin props., weak coupling model calcs. 7−95967
deformed nuclei, isovector mag. mode, RPA calcs. 7−108985
deformed nuclei, mag. dipole form factors, HFB and IBM calcs. 7−95978
deformed nuclei, microscopic basis of the interacting boson model and its extension to actinide nuclei 7−121664
deformed nuclei, nonrotational states and the IBM 7−116285
deformed nuclei, radial localization of s and d bosons 7−128985
deformed nuclei, self-consistent Hartree descript. in rel. quantum field theory 7−121599
deformed nuclei, Thomas-Fermi approach to nuclear mass formula 7−135193
deformed nuclei, vibrational band excitation, coupled channel Born approx. calcs. 7−128955
deformed odd-A nuclei, A≃100, pairing reduction, RPA shell model calcs. 7−81275
deformed region, microscopic approach to IBM 7−121667
deformed superfluid nuclei, dynamical α-type correlations 7−109082
dipole collectivity and reflection asymmetric nuclear shapes 7−116226
electric quadrupole moments of Bohr-Mottelson and interacting boson models, relationship 7−109019
electromagnetic moments of nuclei at high-spin 7−116211
even nuclei, vibr. and rot. motion, quadrupole moments and transition operators 7−116213
even-even deformed nuclei, neutron cross sections for octupole band excitation 7−67697
even-even deformed nuclei, two-phonon pole shifts, RPA calcs. 7−135191
even-even nuclei, octupole excitation using generator coordinate method 7−109073
gamma-ray scattering by deformed nuclei 7−73751
ground state deformations, shell effects on lifetimes of exotic radioactivities 7−73696
heavy deformed nuclei, rotational bands, split parity doublets, model anal. 7−108996
heavy ion collisions, molecular model for high spin resonances 7−135372
heavy ion collisions, of deformed nuclei, deep inelastic, frictional forces 7−121887
heavy ion collisions, pair transfer in deformed nuclei, macroscopic description 7−116483
heavy nuclei, g-factors and the proton-neutron interaction 7−95987
hot nuclei, mean field theory 7−121660
hot rotating nuclei, Landau theory of shape transitions 7−128943
in-beam measurements of nuclear moments 7−116266
infinite nuclear matter, saturation props. and mass formula, Hugenholtz-Van Hove theorem 7−121691
long-lived isomers in medium-heavy and heavy deformed nuclei 7−109032
low-lying isovector 1^+ states, scissor vibration interpretation 7−121568
N=20 neutron shell closure, onset of deformation far from stability 7−67710
nuclear profile, reconstruction in gauge space 7−135201
odd-A nuclei, rot. motion of triaxial shape in unfavoured-signature states 7−121560
odd-mass deformed nuclei, fermion dynamical symmetry, spherical shell model approx., coupling schemes 7−116301
odd-mass nuclei, asymmetric deformation, boson-fermion dynamical SU(3) symmetry, U(16) core 7−140990
odd-odd deformed actinide nuclei, expt. level struct. and rot. parameters determ. 7−121555
oriented nuclei nuclear reactions, book contrib. 7−96050
pair transition density in well deformed nuclei, macroscopic approach 7−108976
pair-excited intrinsic states in deformed nuclei, population unified collective model 7−121584
potential deformation energy surfaces, approximate particle number projection before variation 7−116250
prolate and oblate potentials, phase-space organisations, classical, semiclassical and quantum results 7−140986
rare-earth deformed nuclei, low-lying $K^\pi=1^+$ 7−108971
relative particle number, gauge-space reduced alignment, shape and pair correlations 7−116305
rotating triaxial odd-A nuclei, M1 and E2 transitions, signature depend. 7−128999
rotational bands in deformed nuclei 7−108954
single particle and collective motion fragmentation, quasiparticle-phonon model 7−121567
spectroscopy and microscopic nuclear dynamics, extended shell model approach 7−109061
spherical nuclei, neutron skin calcs., Hartree-Fock method with Skyrme forces *(Chinese)* 7−109046
superdeformed nuclei study, heavy ion collisions, fission 7−128942
superdeformed states and feeding patterns in rare earths, spectroscopy, pot. energy calcs. 7−135178
superfluid deformed nuclear systems, perturbative treatment using gauge theory formalism 7−140996
superheavy nuclei, dynamic deformation model of structure and fission 7−121580
three axis static deformation of collective excitations in IBA 7−121594
toroidal nuclei, evidence in heavy ion multifragmentation expts. 7−109007
two-centre shell model for arbitrarily orientated deformed nuclei 7−116302
unification of nuclear models and properties, book 7−108060
Woods-Saxon potential, axially deformed, single-particle energies, wave fns., quadrupole moments, g-factors calcs. 7−140992

nuclear shape continued
(μ,X), deep inelastic scatt., colour conductivity at high resolution 7−73721
(p,p′), cross section and r.m.s radii calcs., nuclear surface oscillation effects, diffractional model anal. 7−135315
p-n interaction in deformed nuclei 7−116292
^{227}Ac, rigid reflection asymmetric rotor description 7−109070
^{236}Am, long-lived isomers, high spin and shape isomeric states 7−102807
Au, neutron-deficient isotopes, charge radii and shape transition 7−116255
Au-Pt-Hg region, improved Nilsson parameter set 7−109030
^{A}Au, A=185-189, 189m, charge radius and distrib., deformation, isotope shift, hyperfine struct. 7−81291
^{A}Au, A=185-189, shape transition, isotope shift hyperfine struct. 7−116241
^{197}Au(^{56}Fe, X), 485 MeV, nuclear shape deformations, fusion-like fission, deep inelastic reactions 7−116246
Ba, neutron rich nuclei, octupole deformation 7−116313
^{128}Ba, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{236}Bk, long-lived isomers, high spin and shape isomeric states 7−102807
^{12}C(p̄,p̄′)^{12}C, deformed spin-orbit potential, cross-sections and analysing powers 7−121851
^{40}Ca(n,n′), 21.7, 25.5 MeV, diff. cross sections, deformation, moments, CC anal. 7−67817
^{248}Cm(^{238}U,X), pocket in pot. energy surfaces, deformation in energy density formalism 7−109217
^{A}Cs, A=121, 123 Hartree-Fock description of octupole deformations and rotation 7−81292
^{121}Cs, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{A}Dy, A=142,144, excited state and J^π, deformation from ^{96}Ru(^{52}Cr,X) and ^{92}Mo(^{54,56}Fe,X) 7−73683
^{152}Dy, decay scheme up to 40 ħ, coexistence of prolate and oblate structures 7−116225
^{152}Dy, superdeformed band, rotating nucleus centrifugal solidification 7−95981
^{152}Dy, superdeformed shapes, collective radiation meas. 7−81295
^{152}Dy, superdeformed states, Strutinsky method calcs. 7−81276
^{152}Dy, superdeformed states, γ-spectra and ang. momenta 7−81282
^{154}Dy, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549
Er, collective 1^+ mode, projected Hartree-Fock description 7−108972
^{155}Er, level scheme, shape coexistence, evol., and parallel p-n core breaking 7−108960
^{164}Er, giant dipole resonance, damping width, role of thermal fluctuations 7−121559
^{166}Er, Landau theory of shape transitions 7−128943
^{166}Er, temperature-induced noncollective rot., Hartree-Fock-Bogoliubov cranking eqn. 7−102821
^{170}Er, temperature dependence of shape and pair gaps 7−121606
^{A}Eu, A=147, 149, 151, 152, 153-6, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{149}Eu energy levels, nuclear shapes, N=84-88 7−121553
^{67}Ga, highly deformed compound nucleus, prod. and deexcitation 7−116458
Gd, collective 1^+ mode, projected Hartree-Fock description 7−108972
^{A}Gd, A=149, 151, low temp. nuclear orientation 7−116243
^{A}Gd, A=152-160, proton spectroscopic factor calcs. in pairing plus quadrupole model 7−121632
^{A}Gd(t,p), 17 MeV, A=154, 156, 158, 160, L=O strengths to excited states, N=90 maximum, deformation interpretation 7−129059
^{136}Gd, compound nucleus, lifetime meas. for lowest states 7−109119
^{142}Gd excited state and J^π, deformation from ^{92}Mo(^{54,56}Fe,X) and ^{96}Ru(^{52}Cr, X) 7−73683
^{148}Gd, I≤44 level structure, spherical and oblate states, fast E2 transitions 7−135186
^{156}Gd, 0^+ and 1^+ collective excitations, fermion-pair structure, dependence on nuclear deformation 7−108997
^{155}Ho, high spin states, shape transition and side bands, cranked shell model calcs. 7−108984
^{157}Ho, M1 and E2 transitions, signature depend., RPA study 7−128999
I mag. moments meas. by on-line nuclear orientation 7−116273
^{A}In(^{12}C,X), A=113, 115, γ-γ directional correlations, meas. and interpretation 7−73733
^{72}Kr shape coexistence in N=Z nuclei, gamma decay of states from ^{16}O(^{58}Ni,2n), E=170 MeV 7−135200
^{84}Kr gamma-gamma directional correl. meas., spin-parity, multipole mixing ratios from ^{83}K(n,α) 7−135247
^{131}La, collective oblate band due to $h_{11/2}$ neutrons rotational alignment 7−73693
^{165}Lu, M1 and E2 transitions, signature depend., RPA study 7−128999
^{24}Mg, Hartree-Fock description of octupole deformations and rotation 7−81292
^{24}Mg, yrast line, self consistent cranked HF+BCS nuclear rotation calcs. 7−102793
NN correlations, α-backbending and nuclear shape 7−128951
^{135}Nd, superdeformed band obs. 7−95971
^{135}Nd, superdeformed shapes, collective radiation meas. 7−81295
^{136}Nd high spin states, band crossings, cranked shell model anal. of ^{116}Cd(^{24}Mg, 4nγ), ^{136}Nd high spin states, band crossings, cranked shell model anal. 7−121562
^{150}Nd(^{12}C,^{12}C′), 70.4 MeV, CCBA modification for direct reactions in deformed nuclei, bands 7−116488
^{150}Nd(^{12}C,^{12}C′), vibrational band excitation, coupled channel Born approx. calcs. 7−128955
^{56}Ni shape isomer search in excitation functions from ^{40}Ca(^{16}O,^{28}Si*) 7−81290
^{58}Ni(^{32}S,X), 143 MeV, selective γ-decay of fission-like fragments, deformation 7−116536
^{58}Ni(p,p′), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073
^{A}Np, A=238, 239, spontaneous fission of highly deformed excited states, shadow method 7−135381
^{16}O(^{13}C,X), ^{29}Si prod., two-centre shell model for arbitrarily orientated deformed nuclei 7−116302
Os, prolate to oblate shape transition in decay modes of O^+ states 7−116248
^{A}Os(e,e′), A=188, 190, 192, shape transition and wave fn. behaviour, charge density determ. 7−135313
^{188}Os, temperature dependence of shape and pair gaps 7−121606

nuclear shape continued
^{198}Os, self-consistent study of triaxial deformations in heavy nuclei 7−116251
Pb, highly excited neutron-deficient isotopes, evidence for prolate deformation 7−67711
^{208}Pb(p,p$'$), 200, 400 MeV collective DWBA analysis, low lying states, n to p multipole matrix elements 7−108959
^{208}Pb(p,p$'$), deformation length and matrix elements, collective DWBA formalism 7−102882
^{131}Pr energy levels, J$^{\pi}$, branching ratios, bands and transitions from ^{98}Mo(^{37}Cl,4n) 7−135179
Pt isotopes, softness and shape coexistence, dynamic deformation model, IBA, variational moment of inertia model anal. 7−121596
Pt, prolate to oblate shape transition in decay modes of O^+ states 7−116248
^{A}Pt(^{12}C,^{12}C$'$), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(^{16}O,^{16}O$'$), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(α,α'), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(e,e$'$), A=194, 196, shape transition and wave fn. behaviour, charge density determ. 7−135313
^{186}Pt, self-consistent study of triaxial deformations in heavy nuclei 7−116251
^{192}Pt, first excited state, electric quadrupole moment determ. and shape transition 7−135206
Ra, octupole shapes and shape changes at high spins 7−102797
^{A}Ra, A=222, 224, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
^{222}Ra, Hartree-Fock description of octupole deformations and rotation 7−81292
^{227}Ra, multipolarity meas., evidence for stable octupole deformation 7−73684
^{222}Rn, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
^{117}Sb, 23/2$^-$ isomeric state, evidence for shape coexistence 7−108958
^{A}Se, A=70,72,74, $g_{9/2}$ orbit, coexistence of shapes 7−109006
^{A}Se, A=76, 78, level struct. and transitions, shape coexistence, dynamic deformation model 7−116280
^{28}Si(e,e$'$p), momentum distribs., in deformed nuclei 7−129021
^{A}Sm, A=134, 136, collectivity of low-lying states 7−108992
^{A}Sm, A=134-152, proton rich nuclei prod., triaxial stability, lattice H-F and BCS calcs. 7−81294
^{A}Sm, A=146, 151, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{A}Sm, A=147-50, octupole deformation study and level scheme 7−108990
^{A}Sm(^{16}O,X), A=144,154, 65-72 MeV, charged particle transfer cross sections rel. to nucl. deformation 7−116508
^{A}Sm(e,e$'$)^{A}Sm, A=144, 148, 150, 152, 154, ground state band, charge and transition charge densities 7−81378
^{132}Sm, compound nucleus, lifetime meas. for lowest states 7−109119
^{136}Sm, transition to deformed regime, level scheme 7−116283
^{138}Sm, self-consistent study of triaxial deformations in heavy nuclei 7−116251
^{148}Sm, temperature dependence of shape and pair gaps 7−121606
^{150}Sm, high spin states, coexistence of reflection asymmetric and symmetric shapes 7−73692
^{152}Sm(n,n$'$), triaxial shape study, Davydov-Filippov model anal. 7−121601
^{A}Sn, A=110,112 spherical and deformed states in high-spin yrast region 7−116222
^{A}Sn(p,p$'$), A=116,120,124, spin-orbit pot., deformation parameters 7−116410
^{A}Sn(p,p), A=116,120,124, spin-orbit pot., deformation parameters 7−116410
Sr, shape transition at N=60 7−116249
^{98}Sr, first excited state half-life, ground state deformation, B(E2) value 7−141020
^{159}Tb(^{12}C,X), γ-γ directional correlations, meas. and interpretation 7−73733
Th, octupole shapes and shape changes at high spins 7−102797
^{238}U(^{238}U,X), E=5.05-6.07, 7.42 MeV/N, deformed ion collisions, damping effects and sub-Coulomb transfer model 7−129073
^{238}U(^{238}U,X), pocket in pot. energy surfaces, deformation in energy density formalism 7−109217
^{238}U(μ^-,f) muon final-state probabilities, fragment quadrupole vibration effects *(Chinese)* 7−109242
^{120}Xe, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{158}Yb, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549
^{158}Yb, high energy dipole bump in the continuum as a probe for superdeformation 7−109106
^{80}Zr, γ-ray spectroscopy, nuclear stability 7−121711
^{84}Zr, high-spin spectrum and shape coexistence, Strutinsky-Bogolyubov cranking study 7−81280
^{90}Zr, giant dipole resonance, damping width, role of thermal fluctuations 7−121559
^{90}Zr(p,p$'$), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073
^{101}Zr, ground state band member life-time, strong deformation 7−67715

nuclear shell model
0^+ intruder states in even-even nuclei; shell model description 7−109034
1p shell nuclei, electric dipole resonances from photonuclear cross section anal. 7−102852
^{208}Pb mean field, Woods-Saxon parameterization, extrapolation from positive to negative energy 7−116300
A=146 region, spectra and decay properties, transition probabilities, doubly magic anal. 7−129000
A=34-50, core breaking, shell model anal. 7−116288
A=36-41, n rich nuclei, level spectra, matrix elements and spectroscopic factors, shell model 7−116335
A≈150 transitional nuclei, effective valence proton and neutron numbers, from B(E2) and g-factors 7−141016
A≃100, Nilsson model parameter systematics 7−135220
A≃130, Nilsson model parameter systematics 7−135220
A≃80, Nilsson model parameter systematics 7−135220
actinide mass microscopic formula, fermion dynamical symmetry approx. to spherical shell model 7−135195

nuclear shell model continued
barrier tunnelling in fission and fusion, pairing correlation effects a probability and dynamics 7−73817
collective boson operator from microscopic shell model hamiltonian 7−81309
compatibility with nuclear bag models 7−121640
Coulomb energies, relativistic enhancement of mag. spin-orbit contribs. 7−81267
density dependent effective interactions, shell-model calcs. 7−121582
effective interactions for the sd and pf shells 7−116236
effective interactions from realistic NN interactions, shell model calcs. 7−116303
effective shell-model matrix elements 7−109062
effective shell-model operators 7−116304
embedding method for Lie subalgebra chain determ. 7−116299
equations of motion methods, foundations and selected appls. 7−121646
equations-of-motion approach to nuclear structure calculations 7−121647
extended commutator method for boson mapping in the seniority scheme 7−128982
fermion dynamical symmetries, SO(8) and Sp(6) collective states 7−135185
finite nuclei, collective modes 7−108949
Friedel oscillations, phase space study, half-infinite nuclear matter, Wigner function 7−128995
Gamow-Teller matrix elements, shell model study in $0f_{7/2}$ shell nuclei 7−135251
ground state deformations, shell effects on lifetimes of exotic radioactivities 7−73696
harmonic oscillator pot., shell model equivalent 7−89546
heavy ion collisions, doorway states induced by quantum recoils, shell-model 7−121907
heavy nuclei, nucleon density, shell model description 7−109008
high-momentum phonon exchange and the effective shell-model interaction 7−102810
IBF Hamiltonian, shell-model evidence for exchange term. 7−109074
IBM, shell-model foundations, review 7−109071
infinite nuclear matter, ground-state energy and mass relations 7−116314
interacting boson model, shell model structure 7−121662
interactions for large-scale shell-model calculations 7−121579
isospin-invariant fermion dynamical symm. model, group struct. 7−73716
large-basis multi-shell wave functions, 0s-1d shell 7−121644
large-scale shell-model calculations, nuclear interactions 7−109065
light nuclei, isospin-symmetry violation, shell model anal. 7−116343
local optical pot. wells, generalised Wood-Saxon type 7−121766
magic and semimagic nuclei, excitations and G-matrix, BPA and RPA calcs. 7−109134
many-particle model spaces visualisation, shell model calcs. appl. 7−102816
meson exchange picture of shell model interaction energies 7−128981
microscopic approaches to nuclear structure calcs., seminar, Sorrento, Italy (May 1986) 7−120707
multiharmonic oscillator approx. of nuclear structure 7−121641
N=20 neutron shell closure, onset of deformation far from stability 7−67710
near-magic nuclei, partial E1-radiation widths of isobaric analog resonances 7−109133
nondegenerate orthonormal states from coeffs. of fractional parentage for large spaces 7−95999
odd-even nuclei, Bohr collective hamiltonian, coupling of one quasiparticle to general solution 7−116308
odd-mass deformed nuclei, fermion dynamical symmetry, spherical shell model approx., coupling schemes 7−116301
open shell nuclei, collective M1 transitions, energy and rates, dependence on nuclear effective interaction 7−102833
pair correlation studies in identical nucleon systems, tensor basis approach 7−128983
pair-breaking mechanism in semi-magic nuclei 7−121645
R-matrix theory for Dirac eqn., non-existence 7−102817
rearrangement effects in shell model calcs. using density dependent interactions 7−73710
reduced alpha transfer rates, schematic model, α-clustering 7−116366
relative particle number, gauge-space reduced alignment, shape and pair correlations 7−116305
Rossendorf continuum shell model, collective features, self-organising systems 7−109063
Rossendorf continuum shell model, unified anal. of nuclear structure and reactions 7−116297
Rossendorf shell model, symm. violation, single particle corrections 7−121642
rotating triaxial odd-A nuclei, M1 and E2 transitions, signature depend. 7−128999
scissor modes, shell model study 7−108948
six-fermion system, microscopic three-boson quadrupole force, Otsuka-Arima-Iachello mapping 7−140995
Sp(2,R) model for s- and p-shell nuclei props. 7−141001
spectroscopy and microscopic nuclear dynamics, extended shell model approach 7−109061
spin excitation modes, shell model and RPA calcs., review 7−73745
spontaneous nuclear decay A>4 particle emission shell model anal. 7−121744
spurious components in the ideal boson states 7−141002
statistical study of shell-model eigenstates 7−109064
superdeformed nuclei study, heavy ion collisions, fission 7−128942
superdeformed states and feeding patterns in rare earths, spectroscopy, pot. energy calcs. 7−135178
three-nucleon transfer reactions, extended basis shell model 7−129012
transverse electron scatt. form factors in shell model 7−95998
two-centre shell model for arbitrarily orientated deformed nuclei 7−116302
two-level model with competing pairing interactions 7−121643
two-nucleon high spin states, Bansal-French, crude shell models, A=56-72 binding energy 7−140987
(α,p), on A=54-63, shell effect in transition matrix of exciton model 2-body residual interaction 7−116443
(α,ρ), shell effect in transition matrix element of two-body residual interaction 7−96082
(e,e), nuclear charge density distribution trends, shell effects, expt. evidence 7−121593
(e,e$'$p) reaction, probing single particle structure 7−121813
(K^-,π^+), Σ-hypernuclear production, resonant and quasi-free mechanisms, shell model anal. 7−129109

nuclear shell model continued
(n,2n) cross sections, shell effect, integrated preequilibrium statistical model *(Chinese)* 7−96064
(N, γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
(n,X) on A=87-140, 3P size resonance in p-wave neutron strength function 7−67788
(p,pd), 670 MeV, in 1p-shell nuclei, quasi-elastic fast deuteron ejection, shell anal. 7−121821
(p,π^+), cross sections, shell model calcs. 7−102881
(π,γ), sum rule anal. for 1p shell nuclei 7−102919
(π^+, $\pi^+\pi^-$), on semimagic even-even nuclei, shell model calcs. 7−135377
^{27}Al(^{16}O,X),80.6MeV, dissipative collision shell structure effects on nucleon transport 7−129102
^{30}Al, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{39}Ar, structure and decay props., spherical shell model calcs. 7−102818
Au-Pt-Hg region, improved Nilsson parameter set 7−109030
^{11}B(α,p)^{14}C, 118 MeV, proton angular distrib., DWBA anal., ^{14}C energy level study 7−121617
^{A}C(p,π^+), A=12, 13, cross sections, shell model calcs. 7−102881
^{12}C(e,e′), M1 and E2 form factors 7−109154
^{40}Ca(n,γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
^{48}Ca(^{16}O,^{14}C)^{50}Ti$_{gs}$, 160 MeV, cross sections, shell model comparisons 7−129098
^{48}Ca→^{48}Ti, $2\nu\beta\beta$ process, half-life calcs., two-nucleon mechanism, shell model anal. 7−73734
^{152}Dy, decay scheme up to 40 ħ, coexistence of prolate and oblate structures 7−116225
^{152}Dy, superdeformed shapes, collective radiation meas. 7−81295
^{154}Dy, high spin states, and terminating band struct., cranked shell model comparison 7−81272
^{164}Dy, low-lying $K^\pi=1^+$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{A}Er, A=159, 160, near-yrast discrete line γ-ray spectroscopy 7−116214
^{158}Er, yrast level sequence, another crossing beyond the first backbend 7−95973
^{168}Er, low-lying $K^\pi=1^+$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{19}F(e,e′), 500 MeV, transverse excitation of positive/negative parity states, form factors, shell model comparisons 7−128944
^{A}Gd, A=156, 158, low-lying $K^\pi=1^+$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{146}Gd, proton-neutron single particle states, TOPS interaction 7−81268
^{3}H binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{4}He binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{4}He, $L=0^+$ states, appl. of symplectic shell model 7−81308
^{5}He$_\Lambda$, ground state binding energy, semiphenomenological study 7−81325
^{A}Hf, A=163-166, high spin states study and cranked shell model interpretation 7−73686
^{155}Ho, high spin states, shape transition and side bands, cranked shell model calcs. 7−108984
^{157}Ho, M1 and E2 transitions, signature depend., RPA study 7−128999
^{72}Kr shape coexistence in N=Z nuclei, gamma decay of states from ^{40}O(^{58}Ni,2n), E=170 MeV 7−135200
^{6}Li(^{6}Li,n)^{11}C, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
^{6}Li(^{6}Li,p)^{11}B, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
^{6}Li(e,e′p)^{5}He, s and p proton momentum distribs. 7−121809
^{7}Li$_\Lambda$, energy spectra in shell model *(Russian)* 7−141012
^{7}Li$_\Lambda$, ground state binding energy, semiphenomenological study 7−81325
^{7}Li(π^+, e^+,e^-p)^{6}Li, 380 MeV, cross section, nucleon-cluster, shell model calcs. 7−121959
^{A}Li, A=7,8 multilevel multichannel R-matrix calcs., shell model calcs. 7−109035
^{A}Li(γ,t), A=6,7, two-cluster direct mechanism, shell model and cluster model calcs. 7−135297
^{A}Li(p,X), A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
^{165}Lu, M1 and E2 transitions, signature depend., RPA study 7−128999
^{26}Mg(p,n), Gamow-Teller strength and isospin channel fractionation, shell model comparison 7−116409
^{28}Mg→^{28}Al, β-decay, dependence of Coulomb matrix element on deformation parameter 7−121726
^{A}Mo, A>102, Nilsson model parameter systematics 7−135220
^{14}N, negative parity isovector states, excitation and decay, form factor calcs. 7−121703
^{26}Na, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{29}Na, Gamow-Teller β-decay, comparison with shell model predictions 7−128959
^{135}Nd, superdeformed shapes, collective radiation meas. 7−81295
^{136}Nd high spin states, band crossings, cranked shell model anal. of ^{116}Cd(^{24}Mg, 4nγ), ^{136}Nd high spin states, band crossings, cranked shell model anal. 7−121562
^{58}Ni, effective operator for the transition density 7−81331
^{A}O, A=18-20, low-lying energy levels, EM props., shell model calc. 7−67730
^{16}O(^{13}C,X), ^{29}Si prod., two-centre shell model for arbitrarily orientated deformed nuclei 7−116302
^{16}O(α,p)^{19}F, shell-model study of nuclear form factors for multi-nucleon transfer reactions 7−121872
^{16}O(π^+, $\pi^+\pi^-$), shell model amplitude calcs. 7−135377
^{17}O, single-particle energies, shell model calcs. 7−121581
^{18}O(π,π′), DWIA and coupled channels anal. using shell model transition densities 7−102920
^{172}Os, low-frequency anomaly in moment of inertia, yrast sequence from ^{144}Nd(^{32}S, 4n) 7−116215
^{36}P→^{36}S, β$^-$ decay, nuclear structure, spherical shell model study 7−141023
^{A}Pb, A=206, 208, charge distrib. differences, finite Fermi system theory 7−95983
^{A}Pb(p,xn), A=204,206-8, E_p=25.5 MeV, preequilibrium neutron emission, shell effects, double shell closure 7−141052
^{131}Pr energy levels, J^π, branching ratios, bands and transitions from ^{98}Mo(^{37}Cl,4n) 7−135179

nuclear shell model continued
Pt, even isotopes, $\nu_{i13/2}$ pair, exptl. anal., Nilsson cranked model comparisons *(Chinese)* 7−102788
^{A}Pt, A=189, 191, 193, quadrupole coherent states, quasiparticle coupling to collective core, particle-core coupling model 7−121573
^{184}Pt, yrast band alignment, cranked Nilsson model calcs. 7−128936
^{241}Pu, thermal neutron induced fission, fragment angular momenta. determ. 7−116532
^{A}Ra, A=222-224, ^{14}C emission, fragmentation anal. 7−67768
^{214}Rn valence configs., levels, J^π, $T_{1/2}$, shell model anal. of ^{208}Pb(^{9}Be, 3n) 7−102795
^{43}Sc, energy levels, transitions and moments in shell model calc. 7−121621
^{A}Si(d, p), A=29, 30, 12.3 MeV, spectroscopic factors, shell model comparisons 7−116426
^{35}Si→^{35}P, β$^-$ decay, nuclear structure, spherical shell model study 7−141023
^{146}Sm and other N=84 isotones, alpha decay half-life and energy, subshell closure 7−129006
^{154}Sm, low-lying $K^\pi=1^+$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{116}Sn, rearrangement effects in shell model calcs. using density dependent interactions 7−73710
^{A}Ti, A=44, 46, 48, s.d.g. IBM calc. 7−135221
^{43}Ti, β-decay, Gamow-Teller matrix elements, expt. and shell model study 7−141022
^{46}Ti, strong M1 excitations, shell model predictions, review 7−73745
^{48}Ti, collective M1 transitions, energy and rates, dependence on nuclear effective interaction 7−102833
^{232}U→^{24}Ne+X, fragmentation anal. 7−67768
^{128}Xe, collective and quasiparticle excitations 7−116221
^{128}Xe level structure, collective states, and transitions, IBM and shell anals. of ^{126}Te(α,2nγ) *(Chinese)* 7−116210
^{A}Yb, A=165,166, high-spin state spectroscopy and cranked shell model interpretation 7−73687
^{174}Yb, low-lying $K^\pi=1^+$ states and M1 transitions, quasiparticle RPA calcs. 7−102808

nuclear size
^{1}Sr, A-80, 82, charge radii using ultrasensitive laser spectroscopy 7−121600
charge radius, RMS values, FCC model predictions 7−116244
charge radius formula, fine structure, nuclei far from β-stability *(Chinese)* 7−109005
charged root mean square radii, 1D analytic formula 7−121595
compression modulus, phenomenological approach, hydrodynamic and Fermi gas models 7−121634
deformed nuclei, self-consistent Hartree descript. in rel. quantum field theory 7−121599
FCC nuclear model, radii, binding energies and excited states prediction, nuclear skin parameters 7−128958
finite nuclei, pure fermionic chiral field theory anal., radii, binding energies and density 7−140985
four-body correlations, four-body interaction and the staggering of nuclear charge radii 7−121607
light neutron rich nuclei, HF calcs., radii, binding energies, density distribs. 7−102799
RMS charge radii, Skyrme interactions 7−121602
RMS charge radii systematics, values for quark core, Coulomb displacement values 7−116245
Sp(2,R) model for s- and p-shell nuclei props. 7−141001
spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
spherical nuclei, neutron skin calcs., Hartree-Fock method with Skyrme forces *(Chinese)* 7−109046
three-body calculations at Los Alamos 7−67700
unstable nuclei, ground state properties from laser spectroscopy 7−116239
Z=50 nuclei, nuclear moments and charge radii 7−109027
(p,p′), cross section and r.m.s radii calcs., nuclear surface oscillation effects, diffractional model anal. 7−135315
Au, neutron-deficient isotopes, charge radii and shape transition 7−116255
^{A}Au, A=185-189, 189m, charge radius and distrib., deformation, isotope shift, hyperfine struct. 7−81291
^{7}Be, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
^{209}Bi, valence proton state orbit radii meas., use of barycentric potential 7−109009
Er, even A, mean square charge radii changes 7−116240
^{A}ErI, A=162-170, isotope shift and nuclear charge radii by laser atomic beam spectroscopy 7−96605
^{3}H, binding energy, charge radius, momentum distrib. calcs. 7−67701
^{3}H, variational Monte Carlo calculations of few-body nuclei 7−67703
^{4}He, charge radius deduced from muonic atom Lamb shift 7−110145
^{A}He, A=3,4, variational Monte Carlo calculations of few-body nuclei 7−67703
Hg, effective interaction and the staggering of nuclear charge radii 7−73707
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{6}Li, EM props. from (α+d) cluster model with breathing clusters, form factors, movements 7−121598
^{7}Li, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
Ne, muonic, charge radii from X-ray data 7−95982
^{16}O, ground state props. and forces in unitary-model-operator approach 7−128948
Pb, effective interaction and the staggering of nuclear charge radii 7−73707
^{208}Pb, hot finite system, nuclear compressibility, Thomas-Fermi approach, Helmholtz free energy 7−140991
^{208}Pb, valence proton state orbit radii meas., use of barycentrie potential 7−109009
Rb transition nuclei, collective zero-point motion contrib. to mean-square charge radii 7−135182
Rn, nuclear spins, moments and charge radii difference meas. 7−109017
^{A}Sm, Az 146-154, nuclear radii, isotope shift, electric monopole transitions 7−116270
^{141}Sm, hyperfine structure, quadrupole moments, $\delta\langle r^2\rangle$, μ determ. 7−67726

nuclear size continued
Sn, effective interaction and the staggering of nuclear charge radii 7−73707
^{A}Sn, A=108-111, nuclear spins, moments and charge radii from hyperfine splittings and isotope shifts 7−67714
^{A}Sr, A=80-90, charge radii and moments, laser spectroscopy meas. 7−95984
^{181}Ta(e,n) threshold-30 MeV, nuclear size effects in virtual photon theory, cross section 7−102863
^{A}Th, A=157-169, ground state properties, quadrupolar and magnetic movements, charge radii, binding energies, HF anal. *(German)* 7−128940
^{164}Tm, quadrupole moments, $\delta\langle r^3\rangle$, μ determ. 7−67726

nuclear spallation
photospallation, p-shell nuclei, microscopic studies including collective and cluster degrees of freedom 7−121785
(p,α^3HeX), 62 MeV, α-, ^{3}He multiplicities, comparison with (π^-,α^3HeX) data 7−109179
(p,X), in supernova remnants, limits on hadronic cosmic ray prod. by young pulsars 7−134095
(π^-,α^3HeX), α-, ^{3}He multiplicities, comparison with (p,α^3HeX) data 7−109179
Ag(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
^{197}Au (α,X), multi-nucleon removal following bombardment of 177 MeV α particles 7−121877
^{197}Au(π,X), 100, 180, 300 MeV, spallation recoil meas., two-step velocity vector model comparisons 7−121957
^{12}C(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
Cu(γ,X), cross-sections for photospallation 7−81370
Fe(^{20}Ne,X), 1.1 GeV N, anomalous fragment production, nucleon-participant multiplicity effect 7−121928
La(p,X), 800 GeV, thick-target recoil props. of deep spallation and fragmentation products 7−129034
Lu(p,X), 800 GeV, thick-target recoil props. of deep spallation and fragmentation products 7−129034
^{16}O(^{16}O,X), mean field model of spallation and oscillations 7−81440
^{16}O(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
Pb(α,X), multi-nucleon removal following bombardment of 177 MeV α particles 7−121877
Pb(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
^{24}Sn(α,X), multi-nucleon removal following bombardment of 177 MeV α particles 7−121877
^{159}Tb(p,X), 800 GeV, thick-target recoil props. of deep spallation and fragmentation products 7−129034
U(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
U(p,X), spallation cross-sections 7−81398

nuclear spectroscopic factors
A=36-41, n rich nuclei, level spectra, matrix elements and spectroscopic factors, shell model 7−116335
deformation, onset in collective nuclei, spectroscopic approach 7−109011
heavy ion charge exchange, reaction mechanism and energy depend., microscopic description 7−135361
heavy ion collisions multinucleon transfer, projectile fragmentation model 7−135362
rotating nuclei, electromagnetic transition amplitudes with cranking, rotor-plus-particle model 7−141019
threshold effects in reaction mechanisms, spectroscopic aspects 7−135267
(α,2α), cluster spectroscopic factors using bound wave fns. and three-body coupling 7−135340
^{A}Al, A=27, 29 levels and spectroscopic factors CCBA and DWBA anals. from (t,α) 7−102806
^{39}Ar, structure and decay props., spherical shell model calcs. 7−102818
^{11}B(^{7}Li,X), 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
^{9}Be(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
^{209}Bi(d, ^{3}He), particle-hole transitions, differential cross section meas. 7−129055
^{13}C(^{58}Ni,^{58}Co), reaction mechanism and energy depend., microscopic description 7−135361
^{13}C(^{7}Li,X), 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
^{13}C(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
^{57}Co levels, J$^\pi$, spectroscopic factors, DWBA anal. of ^{56}Fe(^{7}Li,^{6}He) 7−135210
^{19}F(^{6}Li, d), 34 MeV, energy levels, spin assignments and spectroscopic factors, DWBA comparison 7−141092
^{72}Ga, spectroscopic factors, spin-parity values from ^{73}Ge(d,^{3}He)^{72}Ga, 25 MeV 7−67727
^{47}K, spectroscopic factors and proton core excitation meas. from ^{48}Ca(t,α) 7−81405
^{7}Li(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
^{27}Mg, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{15}N levels, J$^\pi$, form factors and spectroscopic factors, DWBA anal. of ^{18}O(p,α), 40.9 MeV, ^{15}N levels, J$^\pi$, form factors and spectroscopic factors, DWBA anal. 7−102805
^{25}Na, levels and spectroscopic factors CCBA and DWBA anals. from (t, α) 7−102806
^{60}Ni, 8$^-$ stretched states, spectroscopic factors and DWBA calcs., ^{59}Co(α,t)^{60}Ni expt. 7−67689
^{15}O levels, J$^\pi$ and spectroscopic factors from ^{14}N(p,γ) 7−107812
^{16}O(^{12}C,^{16}O), differential cross section, independent α-particle model and DWBA calcs. *(Chinese)* 7−109206
^{A}Pb, A=206, 208, charge distrib. differences, finite Fermi system theory 7−95983
^{A}Pb(e,e′p), A=206,208, knock-out reaction, relative 3s spectroscopic strengths meas. 7−116395
^{208}Pb(^{28}Si,^{28}Si′), quasielastic yields, coupled channels and DWBA comparison 7−116459
^{208}Pb(^{28}Si,^{28}Si), quasielastic yields, coupled channels and DWBA comparison 7−116459

nuclear spectroscopic factors continued
^{A}Rb, A=79,81,83, low-lying levels, proton spectroscopic factor meas. 7−116265
^{109}Rh level scheme, particle-hole states, J$^\pi$ and transitions from ^{109}Ru β-decay and ^{110}Pd(d,^{3}He) 7−135183
^{32}S level structure spectroscopic factors, ^{31}P(d,n)^{32}S study 7−102804
^{A}Si, A=29, 31, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{A}Si(d, p), A=29, 30, 12.3 MeV, spectroscopic factors, shell model comparisons 7−116426
^{28}Si(^{18}O,^{18}O), 352 MeV, cross sections, optical pot. comparison 7−135365
^{28}Si(n,γ), 565 keV, partial radiative widths, for neutron resonance, particle-vibr. coupling model 7−73743
^{A}Sr, A=86,87, nuclear structure study using ^{87,88}Sr(d,^{3}He), DWBA anal. 7−128956
^{120}Te, structure study using (d,t) and (τ,α) 7−128957
^{205}Tl(d,^{3}He)^{204}Hg, 52 MeV, 3s proton shell occupancy, cross sections, anal. powers, spectroscopic factors 7−129061
^{52}V, energy levels, transitions and spectroscopic factors, ^{51}V(t,d) study 7−128960

nuclear spin and parity
see also nuclear isospin
^{168}Er, α-band, M1 transitions and F-spin mixing, IBA-2 comparisons 7−121706
β-transitions, $O^+\rightarrow O^+$, electron-massive neutrino mixing parameter constraints 7−121725
A=117, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−80200
A=118, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−140390
A=140, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−140391
A=155, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−95117
A=165, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−80201
A=170, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−80204
A=202, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−95118
A=204, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−95119
A=21-23, cluster struct., parity spectrum and electromagnetic transitions 7−135233
A=226, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−80202
A=54, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−80203
A=56, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−102030
A=70, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−102031
A=73, nuclear data sheets, levels J$^\pi$, transitions, decays 7−102032
A=74, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−140389
A=82, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−80199
deformed boson expansions, reconstitution of rotational band structure, generic model 7−140998
elastic transfer, optical pot., parity depend. contrib. 7−116356
even-even nuclides, 0^+ states and E0 transitions 7−121701
excitation modes, shell model and RPA calcs., review 7−73745
excited nuclear states, model-free characts. from final-particle ang. correlations 7−135263
G-parity conservation on beta decay, weak nucleon currents 7−116259
Geiger-Nutall law for isobaric nuclides, exptl. comparisons 7−121741
heavy deformed nuclei, rotational bands, split parity doublets, model anal. 7−108996
IBM, p-n interacting, collective 2^+ states in the U(5) classical limit 7−140974
light N=Z nuclei with spin-isospin order, excited states, HF calcs. 7−140993
medium mass nuclei, P-nonconservation effects on level density 7−135314
neutron-proton IBM, M1 selection rules, SU(3), O(6) like Hamiltonians 7−116216
nuclear data sheets, recent refs., Jan.-April 1987 7−140392
nuclear data sheets, recent refs., Sept. to Dec. 1986 7−80205
nuclear level densities and level spacing distributions, statistical theory tests at low excitation energies 7−128961
nuclear orientation techniques applied to on-line separated isotopes 7−121558
nuclear stability w.r.t. spin and isospin alignment due to short-range three-particle forces 7−121590
odd-mass deformed nuclei, fermion dynamical symmetry, spherical shell model approx., coupling schemes 7−116301
parent states, spins and moments, book contrib. 7−95989
particle-hole and particle-particle RPA ground state correlations 7−102794
primary fission fragments, spin determ. from prompt γ-ray multiplicities 7−121783
relativistic antiprotonic nuclei, shifts and widths, spin and isospin effects 7−81359
rotating nuclei, statistical γ-transitions, giant dipole resonance effects, RPA anal. 7−121702
rotating superfluid nuclei, diabolic pair transfer, Berry phase 7−73717
spin-isospin excitations, intensity distrib., and valence quark model sum rules 7−121724
spin-isospin response functions, semiclassical calc. 7−135202
spin-isospin volume and surface responses in nuclei, RPA calcs. 7−81297
three-nucleon system, hyperspherical expansion using spin and isospin central pot. 7−121628
tidal spin conservation in nucl. collisions, coupled channels basis 7−116263
two-nucleon high spin states, Bansal-French, crude shell models, A=56-72 binding energy 7−140987
unstable nuclei, ground state properties from laser spectroscopy 7−116239
(α,γ), parity mixing in nuclear levels, appl. of ion beam energy cooling technique 7−81833
(d,2p), intermediate energies, d tensor polarisations, spin dependence of cross sections 7−109187
(d,pf), even-even nuclei, fission characts. and parity effects 7−96127
(e,e′γ), bremsstrahlung, spin correlations, electromagnetic struct. and recoil effects 7−135303
(n,f), even-even nuclei, fission characts. and parity effects 7−96127
($\vec{n}$,γ), P violation, review 7−67717
(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
(n,n), time party violation, aligned nuclei, T-odd, p-even correlation, experimental methods 7−116413
(N,N′), impulse approx. and spin transfer observables 7−109163
(n,n′), P-nonconservation effects on scattering 7−135314
(n,n′), PNC and TNC neutron spin rotations 7−67531
(p,n) reaction and the NN force, review 7−121627

nuclear spin and parity continued
($\vec{p}$, $\vec{p}$), 180 MeV, spin effects in closed-shell nuclei, Glauber mult. scatt. anal. 7−67843
(t,pf), even-even nuclei, fission charact. and parity effects 7−96127
^{A}Ag, A=108, 110, low spin state level scheme, spin, parity and transition multipolarity 7−109042
^{104}Ag, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{24}Al, high spin states, anal. using (p,π^-) 7−67693
^{27}Al(n,2n), cross sections near 14 MeV, meas. and partial statistical model comparison 7−102883
^{27}Al(p,γ)^{28}Si, 1588 and 2044 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
^{30}Al, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{39}Ar, structure and decay props., spherical shell model calcs. 7−102818
^{41}Ar levels and J$^{\pi}$ assignments, DWBA anal. of ^{40}Ar($\vec{d}$,p) 7−116286
^{189}Au, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{198}Au, negative-parity spectrum, IBFFM/OTQM anal. 7−109043
^{10}B(α,dγ), density matrix spin tensor for ^{12}C 2$^+$ 4.43 MeV state, model-free extraction 7−135209
^{11}B, nuclear spin and magnetic moment meas. 7−109018
^{11}B(α,tγ), density matrix spin tensor for ^{12}C 2$^+$ 4.43 MeV state, model-free extraction 7−135209
^{A}Ba, A=136, 138, low-spin levels, (n,n'γ) study 7−109045
^{126}Ba, 22 from ^{116}Sn(^{13}C, 3nγ) 7−121572
^{209}Bi($\vec{d}$, ^{3}He), particle-hole transitions, parity assignments and cross sections 7−129055
^{A}C(^{3}He,t), A=12, 13, 0.6-2.3 GeV, DWIA calcs. angular distribs., isovector strengths, spin-isospin transitions 7−135339
^{12}C (p, p), relativistic microscopic calcs. and spin observables 7−81392
^{12}C, spin-isospin probes, RPA finite nucleus response, strength distrib. effects 7−135203
^{12}C, three-alpha Fadeev calcs., bound-state anal. with Pauli correct α-α potential 7−67729
^{13}C(^{3}He,t), collective spin-isospin excitations 7−109200
^{A}Ca(p, p), A=40, 48, relativistic microscopic calcs. and spin observables 7−81392
^{40}Ca(p,p'), 319 MeV, spin-flip probabilities meas. 7−109172
^{132}Ce, yrast and yrare lifetime meas. 7−109118
^{140}Ce, low-spin levels, (n,n'γ) study 7−109045
^{57}Co levels, J$^{\pi}$, spectroscopic factors, DWBA anal. of ^{56}Fe(^{7}Li,^{6}He) 7−135210
^{A}Cs, A=118, 146, isotope shifts, spins and hyperfine structure meas. 7−122448
^{134}Cs level scheme, J$^{\pi}$ and transitions from (n,γ) and (d,p) 7−135180
^{63}Cu, proton resonances, γ-angular distrib. meas., intermediate structure obs., spin-parity values 7−121611
^{A}Dy, A=142, 144, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{A}Dy, A=142,144, excited state and J$^{\pi}$, deformation from ^{96}Ru(^{52}Cr,X) and ^{92}Mo(^{54,56}Fe,X) 7−73683
^{152}Dy, decay scheme up to 40 $\hbar$, coexistence of prolate and oblate structures 7−116225
^{152}Dy, obs. of discrete line superdeformed band up to 60 $\hbar$, level transitions 7−116224
^{152}Dy, superdeformed shapes, collective radiation meas. 7−81295
^{154}Dy, high spin states, and terminating band struct., cranked shell model comparison 7−81272
^{154}Dy, high spin struct., γ-γ coincidences and multipolarities, level spins and parities 7−108988
^{160}Dy rotational side bands, spins and moments of inertia from ^{158}Gd(α,2n) 7−81269
^{161}Dy(^{3}He,^{3}He'), 32 MeV, cross sections, levels, J$^{\pi}$ and particle-vibration states 7−135181
Er, positive parity bands, signature splitting, cranking calcs. 7−135211
^{A}Er, A=159, 160, near-yrast discrete line γ-ray spectroscopy 7−116214
^{A}Er, A=162, 166, giant dipole resonance, thermal and rotational effects in rotating nuclei 7−67695
^{162}Er, correlations, routhian values, ^{130}Te(^{28}Si,4n) study 7−108998
^{168}Er, MI transitions between low-lying levels and F-spin purity 7−89558
^{168}Er(^{20}Ne,X), ang. momentum transfer symm. axes, spin vector distribs. 7−116475
^{145}Eu, octupole multiplets, spin-parity assignments, level transitions 7−108999
^{18}F, γ-ray circular polarisation meas., weak pion-nucleon coupling strength 7−109102
^{19}F, γ-decaying states, ^{12}C(^{11}B, ^{4}He)^{19}F study 7−116227
^{19}F(^{6}Li, d), 34 MeV, energy levels, spin assignments and spectroscopic factors, DWBA comparison 7−141092
^{19}F(e,e'), 500 MeV, transverse excitation of positive/negative parity states, form factors, shell model comparisons 7−128944
Fr isotopes, isotope shifts, spins and hyperfine structure meas. 7−122448
^{A}Fr, A=207-228 nuclear and electronic g-factors and single particle structure 7−109021
^{66}Ga, 9$^+$, 3034 keV state, gyromag. factor 7−128953
^{72}Ga, spectroscopic factors, spin-parity values from ^{73}Ge(d,^{3}He)^{72}Ga, 25 MeV 7−67727
^{A}Gd, A=154,156,158, F-spin breaking and energy spectra, IBM calcs. *(Chinese)* 7−109066
^{142}Gd excited state and J$^{\pi}$, deformation from ^{92}Mo(^{54,56}Fe,X) and ^{96}Ru(^{52}Cr, X) 7−73683
^{142}Gd, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{148}Gd, I≤44 level structure, spherical and oblate states, fast E2 transitions 7−135186
^{156}Gd, 0$^+$ and 1$^+$ collective excitations, fermion-pair structure, dependence on nuclear deformation 7−108997
^{2}H($\vec{p}$,$\vec{n}$p), quasielastic scatt., 223-492 MeV, spin transfer parameters meas. 7−121854
^{4}He, natural parity states in 10$\hbar\omega$ model 7−108975
^{4}He(p,p')^{4}He, nuclear responses to isoscalar spin-dependent excitations 7−116414
Hf, positive parity bands, signature splitting, cranking calcs. 7−135211
^{164}Hf, high spin states and decay sequence routhians, ^{160}Er comparisons 7−108995
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{106}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
nuclear spin and parity continued
^{108}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{76}Kr, high spin states, p-n $g_{9/2}$ alignment ^{40}Ca(^{40}Ca,4p), 155 MeV study 7−108994
^{84}Kr gamma-gamma directional correl. meas., spin-parity, multipole mixing ratios from ^{83}K(n,α) 7−135247
^{139}La(n,γ), parity violation, helicity depend. 7−116404
^{7}Li$_{\Lambda}$, energy spectra in shell model *(Russian)* 7−141012
^{24}Mg, cluster struct., form factors, energy levels and parity states 7−135232
^{24}Mg, energy level spin study, ^{12}C(^{16}O,$\alpha\alpha$)^{20}Ne α-α coincidence meas., level transitions 7−109038
^{24}Mg, positive parity rotational bands, binding energy calcs., cranked cluster model anal. 7−116233
^{24}Mg, yrast line, self consistent cranked HF+BCS nuclear rotation calcs. 7−102793
^{100}Mo, level scheme, mixing ratios for $2_2^+ \rightarrow 2_1^+$, $2_3^+ \rightarrow 2_1^+$, β-decay study 7−109123
^{14}N, negative parity isovector states, excitation and decay, form factor calcs. 7−121703
^{15}N levels, J$^{\pi}$, form factors and spectroscopic factors, DWBA anal. of ^{18}O(p,α), 40.9 MeV, ^{15}N levels, J$^{\pi}$, form factors and spectroscopic factors, DWBA anal. 7−102805
^{15}N, positive parity triton cluster states, coupled channels calcs. 7−135190
^{20}Na, high spin states, anal. using (p,π^-) 7−67693
^{26}Na, energy levels, mass meas. and spin values, shell model comparisons 7−121858
^{91}Nb^{m}, electron capture decay, isomer transition, level lifetimes, J$^{\pi}$ *(Chinese)* 7−116338
^{135}Nd, superdeformed shapes, collective radiation meas. 7−81295
^{143}Nd high spin states, J$^{\pi}$, $T_{1/2}$ and transitions from ^{130}Te(^{18}O, 5n) 7−102796
^{A}Ne, A=20, 22, unnatural parity state excitation in α-transfer reactions, CRC anal. 7−135204
^{18}Ne→^{18}F, first forbidden decays, parity-mixing matrix element constraints 7−121738
^{20}Ne, O_4^+ rotational band, high spin states, anal. of ^{16}O(α,α) optical potential props. 7−140979
^{22}Ne, rotational bands, E1 transitions, cluster anal. 7−67694
^{58}Ni(d,d), coupled discretized continuum channels methods 7−67849
^{58}Ni($\vec{p}$,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{A}O(p,p'), 201 MeV, A=16, 18, spin-flip transitions excited by forward inelastic scatt. 7−81296
^{15}O levels, J$^{\pi}$ and spectroscopic factors from ^{14}N(p,γ) 7−107812
^{16}O(p, p), relativistic microscopic calcs. and spin observables 7−81392
Os, positive parity bands, signature splitting, cranking calcs. 7−135211
(p,p'), spin response, finite geometry and absorption effects 7−73769
^{28}P, high spin states, anal. using (p,π^-) 7−67693
^{A}Pb, A=192,194,196,198,200, level study from ^{A}Bi β^+/electron-capture study, evidence for O$^+$ states 7−141024
^{202}Pb, 19$^-$ isomer, g-factor, half-life 7−116269
^{208}Pb, energy level structure, resonance decays, ^{207}Pb(n,X), E≤700 keV study 7−121618
^{208}Pb(^{A}Li,^{A}Li'), 150-210 MeV, A=6,7, giant resonance study 7−109230
^{208}Pb(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{208}Pb(p,p'), 318 MeV, cross sections, high spin state meas., DWIA anal. 7−67688
^{208}Pb($\vec{p}$,$\vec{p}$), spin observables at 290 MeV 7−67827
^{208}Pb($\vec{p}$,t), 22 MeV, reaction mechanism and struct. depend., expt. and DWBA calcs. 7−135328
^{103}Pd, level structure, lifetime meas., level spin determ. using Hauser-Feshbach anal., mixing ratios 7−67691
^{208}Pd($\vec{d}$,d), coupled discretized continuum channels methods 7−67849
^{140}Pm levels, J$^{\pi}$ and transitions from ^{140}Sm β^+-decay 7−67698
^{149}Pm, levels and moments following ^{149}Nd decay 7−116329
^{131}Pr energy levels, J$^{\pi}$, branching ratios, bands and transitions from ^{98}Mo(^{37}Cl,4n) 7−135179
^{A}Ra, A=222, 224, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
^{A}Ra, A=224, 226, 228, low-lying collective state energies, E2 transitions, IBM-1 anal. 7−121552
^{230}Ra collective states; bands, J$^{\pi}$, and transitions from ^{230}Fr β-decay 7−73682
^{100}Rh, negative parity bands, conversion-electron meas. 7−108991
^{101}Rh, high and low spin states, study using ^{94}Zr(^{12}C,4np), ^{102}Ru(p,2n)^{101}Rh 7−89543
^{109}Rh level scheme, particle-hole states, J$^{\pi}$ and transitions from ^{109}Ru β-decay and ^{110}Pd(d,^{3}He) 7−135183
Rn, nuclear spins, moments and charge radii difference meas. 7−109017
^{A}Rn, A=202-222, hyperfine struct., isotope shift, spins, moments 7−116242
^{214}Rn valence configs., levels, J$^{\pi}$, $T_{1/2}$, shell model anal. of ^{208}Pb(^{9}Be, 3n) 7−102795
^{214}Rn, yrast spectroscopy, level scheme and spin assignments 7−108983
^{216}Rn, yrast states, excitation spectrum, ^{208}Pb(^{14}C,2nα)^{216}Rn study 7−140977
^{222}Rn, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
^{30}S, high spin states, anal. using (p,π^-) 7−67693
^{31}S, high spin states, anal. using (p,π^-) 7−67693
^{37}S levels and J$^{\pi}$ assignments, DWBA anal. of ^{36}S($\vec{d}$,p) 7−116286
^{43}Sc levels, J, $T_{1/2}$, branching and mixing ratios from ^{40}Ca(α,p) 7−140994
^{45}Sc(p,γ)^{46}Ti, 1026, 1047 and 1377 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
^{73}Se, level lifetime meas. and rotor model comparison 7−96021
^{76}Se(t,p)^{78}Se, 17 meV, excitation energies, angular distrib., J$^{\pi}$ assignments 7−67716
^{26}Si, high spin states, anal. using (p,π^-) 7−67693
^{28}Si, 13.321 MeV excited state, spin meas. *(Chinese)* 7−109028
^{145}Sm, low and medium spin states 7−109016
^{A}Sn, A=108-111, nuclear spins, moments and charge radii from hyperfine splittings and isotope shifts 7−67714
^{A}Sn, A=115, 117, spin-flip mag. quadrupole transitions, $T_{1/2}$, J$^{\pi}$ and levels from In β-decay 7−135249
^{119}Sn, P-odd effect, emission Mossbauer spectrum, orientation relative to external magnetic field 7−116261

nuclear spin and parity continued
^{A}Sr, A=79-97, nuclear ground state spins of short lived isotopes, hyperfine structure 7−121608
^{80}Sr, high spin state study using ^{54}Fe(^{29}Si,2pn)^{80}Sr, 85-110 MeV 7−108979
^{80}Sr, high spin states, lifetimes, γ-softness meas. 7−73681
^{178}Ta oriented nuclei; NMR meas. 7−73698
^{93}Tc, $17/2^{-}-17/2^{+}$ doublet, parity violation 7−116260
^{96}Tc, spin assignments, decay schemes statistical methods anal. 7−89542
^{98}Tc, negative parity bands, conversion-electron meas. 7−108991
^{129}Te, E2/M1 multipole mixing ratios and spin assignment meas. 7−116331
^{A}Th, A=228, 230, 232, low-lying collective state energies, E2 transitions, IBM-1 anal. 7−121552
^{232}Th(^{16}O,X), spin distributions, complete fusion cross section calcs., fission yields 7−102905
^{A}Ti, A=44, 46, 48, s.d.g. IBM calc. 7−135221
^{A}Ti, A=46,48,52, rotational bands, E1 transitions, cluster anal. 7−67694
^{199}Tl, energy level spin-parity values, ^{197}Au(α,2n)^{199}Tl anal. *(Chinese)* 7−95963
^{159}Tm, high spin states, ^{126}Te(^{37}Cl,4n)^{159}Tm, 170 MeV study 7−108980
^{48}V, 308 keV 2^{+} state, mag. moment 7−116267
^{51}V(p̄,p′), spin transfer meas. in M1 region 7−81387
^{52}V, energy levels, transitions and spectroscopic factors, ^{51}V(t,d) study 7−128960
W, positive parity bands, signature splitting, cranking calcs. 7−135211
Xe, even-even nuclei, low-energy collective excitations 7−95962
^{137}Xe level density, test of Fermi gas model predictions, comments 7−95991
Yb, positive parity bands, signature splitting, cranking calcs. 7−135211
^{162}Yb, high spin states and decay sequence routhians, ^{160}Er comparisons 7−108995
^{89}Zr, $21/2^{+}$ level, mean lifetime meas., $21/2^{+}\rightarrow17/2^{+}$ transition study 7−109117
^{90}Zr(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{90}Zr(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365

nuclear spin echo *see spin echo (NMR)*

nuclear spin-lattice relaxation
1- acyl-sn-glycerophosphocholine systems, NMR, diffusion coeff. and spin relax. meas. 7−74679
adenosine-thymidine interaction, selective nucl. Overhauser enhancement meas. 7−109963
L-alanine, D NMR, methyl group dynamics, ^{2}H spin-lattice relax. 7−92535
alkyd polyester paints, air-cured, ^{13}C solid-state NMR, T_1 meas. 7−118886
anisotropic power media, ^{2}H NMR line shapes 7−99598
aryl ethers, in alkaloids, conform. preferences, ^{1}H spin-lattice relax. obs. 7−82214
β-(BEDT-TTF)$_2$I$_3$, high-and low-T_c superconducting phases study 7−77141
β-(BEDT-TTF)$_2$I$_3$, organic supercond., nuclear mag. relax. 7−70475
β-(BEDT-TTF)$_2$I$_3$, supercond., electronic props., PMR anal. 7−85474
biphenyl incommensurate phase III excitations and transitions, proton spin reson. and relax. meas. 7−111867
bisphenol-A polycarbonate glass, ^{1}H and ^{13}C spin-lattice relax., chemical shift anisotropy line shape collapse 7−106044
p-bromo-p-n-hexyloxybenzylidene aniline, smectic B phase, mol. dynamics, PMR relax. meas. 7−137228
butanol, deuterated, aligned spins relaxation, RF irrad. effects 7−118885
N-(1- butyl)pyridinium-AlCl$_3$, spin-lattice relax. time meas. 7−74680
CHAB, ferromag. chain system, linear and nonlinear excitations 7−125352
chlorophyll a-dimyristoyllecithin lipid bilayer, cooperative lengths and elastic consts. 7−114202
copper phthalocyanine, 1D Heisenberg magnet, proton spin-lattice relax. rate meas. 7−85343
coupled spin systems in high mag. fields, differential T_1 and T_2 relax. 7−112973
4-cyano-4′-n-pentyl-d_{11}-biphenyl, nematic liq. cryst., ^{1}H spin-lattice relax., inter- and intram. contrib. study 7−92532
4-cyano-4′-n-pentylbiphenyl (5CB), homologous series, ^{13}C NOE studies 7−99612
N-cyclohexylmaleamic acid, isotopic species, NMR zero-quantum transition probability, random-field theory anal. 7−135967
di(tetramethylammonium) tetraiodo cadmate, mol. dynamics, PMR study 7−92538
dichloromethane, spin-lattice relax. times, nucl. Overhauser enhancements and mol. reorientation 7−129747
2,6-dihydroxynaphthalene-1,3,6,8-tetranitronaphthalene, mol. dynamics, EPR 7−143922
5,6-dioxycarbonyl(2.2.1)bicyclohept-2-ene, phase transition, temp. depend., plastic crystal phase form. 7−137542
disordered systems, proton NMR, hopping rate distrib. effects 7−132154
DNA−Na, Ni^{2+} binding is aq. soln., ^{23}Na and ^{31}P NMR study 7−133221
enol ethers, in alkaloids, conform. preferences, ^{1}H spin-lattice relax. obs. 7−82214
erythrocyte superoxide dismutase, bovine, anion binding, nucl. relax., ^{1}H NMR 7−119724
ethane, solid, proton spin relax. at high press., reorientational models 7−70665
ethylene-α-olefine copolymers, spin-diffusion relax., ^{1}H and ^{13}C NMR 7−92531
formaldehyde-methanol aq. soln., ^{13}C NMR study *(French)* 7−96737
glycol methylethers, substituted, dielectric relax. and NMR spin-lattice relax. meas. correl. 7−74666
heavy fermion materials, nuclear relax. rates, theory 7−77417
heavy fermion systems, nuclear and muon hyperfine techniques 7−118929
heavy-electron cpds., nuclear and electronic mag. moments relax. calcs. 7−92536
heterocyclic molecular crystal, quantum tunnelling, methyl group motion, NMR studies 7−143923
heteronuclear spin systems, Overhauser expts., T_1 determ. 7−108606
hexagonal crystals, nuclear spin relax. due to dipolar interactions 7−85464
hexyloxycyanobiphenyl, 60CB-d_{21}, reentrant nematic, DMR studies 7−99600

nuclear spin-lattice relaxation continued
human organs, in vivo ^{31}P relax. rates. rot.-frame depth selection NMR 7−71923
ice, surface dynamical props. *(Japanese)* 7−106046
ketones, homologous series, potential barriers hindering reorientation of methyl groups 7−142657
localized proton spectroscopy using stimulated echoes appl. to phantoms and human extremities 7−93868
low frequency field cycling experiment for relaxation dispersion measurements 7−112986
medical ^{1}H NMR, diagnostic value of T_1 and T_2 7−71841
metals and insulators, nuclear relaxation and nuclear orientation, book contrib. 7−99603
methylphenanthrenes, methyl reorientation, ^{1}H spin-lattice relax. study 7−112987
molecular and liq. crysts., proton magnetic relax. investig. 7−106048
NMR imaging, relaxation time and proton density images *(Japanese)* 7−108611
oil and water in sandstone rock, thin-slice chemical shift imaging, 80 MHz 7−132140
peptides, tyrosyl motion, ^{2}H NMR line shapes and spin-lattice relax. 7−92533
(perylene)$_2$(AsF$_6$)(PF$_6$)CH$_2$Cl$_2$ quasi-1D organic metal, NMR studies 7−85459
phthalocyaninato-copper(II)iodide, mag. transitions and embedded local moments 7−99459
trans-polyacetylene, NMR obs. of temp. depend. spin-lattice relax. 7−138339
polyacrylate deuterons, relax., counterion influence 7−82217
polypropylene, structure, molecular motion and glass transitions, NMR study 7−98100
porous media permeability, mag. resonance probes 7−83334
2,2-propane diyl-bis(4-hydroxyphenyl) polyformal, spin relax. and local motion, temp. and conc. depend. 7−117102
proton spin-lattice relaxation time measurement, instrumentation problems in MRI *(French)* 7−93864
purine derivatives, deuterated, ^{2}H quadrupole coupling consts., ^{2}H NMR spectra anal. 7−77419
pyridine, orientation in nematic liq. cryst., nucl. relax., ^{1}H NMR study 7−90193
quasi-1D organic conductors, electronic correls., nuclear relax. rate anal., scaling calcs. 7−77422
reversed-phase chromatographic surfaces, temp. effects, ^{13}C NMR 7−129748
ring deuterated smectic liq. cryst., D NMR spin-lattice relax. studies 7−77420
RNA polymer, double stranded poly(rA).poly(rU), imino protons, spin-lattice relax. study, NMR spectra anal. 7−74672
slow molecular motion, nuclear magnetic relax. studies 7−106053
small metallic particles, magnetism theory 7−70597
sodium octanoate-octane-water system, liq. cryst. phase, nucl. mag. relax. study 7−99599
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
tetrabutylammonium iodide, polycryst., mol. reorientation, spin-lattice relax. times meas. 7−76049
tetrafluoromethane, solid, high press. NMR study 7−132153
tetramethylammonium tetrabromoplatinate(II), cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tetrahalopalladate(II) cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tribromocadmate, NMR study, proton relax. 7−85469
1,4,7,10-tetraoxacyclododecane and complexes, pseudorotation activation energies, dipole-dipole relax. time 7−74682
tetraselenotetracene iodomercurate, quasi-1D conductor, mag. props., ESR study *(German)* 7−132156
thymidine, ^{13}C spin-lattice relax. rates meas., ^{1}H perturbation effects 7−96733
(TMTSF)$_2$ClO$_4$, ^{13}C NMR meas. 7−85477
(TMTSF)$_2$ClO$_4$, supercond. state, proton spin-lattice relax. rate meas. 7−85194
(TMTSF)$_2$PF$_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
(TMTSF)$_2$PF$_6$, supercond., electronic props., PMR anal. 7−85474
(TMTSF)$_2$ReO$_4$, electronic props., ^{13}C NMR meas. 7−85477
(TMTSF)$_2$ReO$_4$, metal-semiconductor transition, ^{13}C NMR study 7−106049
(TMTSF)$_2$X salts, collective modes 7−84853
(TMTSF)$_2$X salts, quasi-one-dimensional systems, anisotropic supercond., NMR relax. rate calc. 7−85195
(TMTTF)$_2$PF$_6$, interplay between spin-Peierls and antiferromag. ground states under press., NMR study 7−85476
tris(trimethylammonium)nonachlordiantimonate (III), mol. dynamics, PMR studies 7−85473
(TTF)$_6$CuBr$_4$ and (TTF)$_2$CuCl$_2$, proton magnetic relaxation studies 7−106051
TTF-p-chloranil, neutral-ionic transition, ^{1}H-NMR and EPR studies 7−84256
wood components, ^{11}H T_1 and T_2 relax. times, ^{13}C CP/MAS NMR obs. 7−106045
Ag-Al, NMR study of Al diffusion 7−106047
Al, self-diffusion, NMR study 7−105097
AlCl$_3$, aq. soln., water struct. and dynamics, NMR study 7−92534
Au-Al, NMR study of Al diffusion 7−106047
BaPbO$_3$, high T_c supercond., temp. depend. NMR study 7−138136
CO$_2$, nucl. spin-lattice relax. times meas. 7−90200
^{13}C T_1 measurements via polarisation transfer, sensitivity enhancement 7−122568
^{13}C-^{1}H distance meas., ^{13}C spin-lattice relax. rates method 7−135970
CaF$_2$, ^{19}F spin-lattice relaxation below 1 K 7−85471
Ca(OH)$_2$:O_2^-, proton spin-lattice relax. and dynamic nuclear polarisation meas. 7−143931
Ce compounds, electronic spin fluctuations, NMR study 7−77418
CeCu$_2$Si$_2$, unconventional even parity superconductivity, nucl. relax. rate 7−70470
Ce$_x$La$_{1-x}$Cu$_6$, heavy fermion system, electrical and mag. props. 7−70278
CeNi$_2$P$_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
C$_8$kH$_{2/3}$, H chemisorbed intercalation cpd., metallic electronic state, ^{1}H NMR study 7−138341

nuclear spin-lattice relaxation continued
Co bulk and thin film samples, nuclear spin-lattice relax. meas. *(Russian)* 7−125555
Co-Fe bulk and thin film samples, nuclear spin-lattice relax. meas. *(Russian)* 7−125555
Cr complex, tris(acetylacetonato)chromium(III), dilute chloroform solns., ^{1}H spin relax. anal. 7−116990
CsFe, hyperfine field and relaxation meas. 7−112991
$CsNiF_3$ 1D easy-plane ferromagnetic magnons and solitons, nuclear spin-lattice relax. meas. 7−105909
Cu-Al, NMR study of Al diffusion 7−106047
Cu^{2+}-poly(riboadenylic acid) interaction, NMR investig. 7−90211
$Cu_{69-x}Au_{30}Fe_{1+x}$, x=0,2, nuclear spin-lattice relaxation in single domain particles 7−118882
$Cu_xMo_6S_8$, NMR and mag. susceptibility meas. *(Russian)* 7−99597
Cu_xRh_{1-x} alloy, mag. and electronic props. 7−105387
$Dy_{0.1}Fe_{0.05}Gd_{0.85}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.1}Gd_{0.9}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.5}Tb_{0.5}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.1}Tb_{0.1}Gd_{0.8}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$EuNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
GaAs:Cr(Cu), doped and undoped, electric saturation of an NMR line, roles of defects and spin diffusion 7−99584
H, spin polarised, nuclear spin-lattice relax. rate on liq. He coated surface, substrate mag. particles effects 7−84445
H_2O-amino acid interaction, NMR relax. investig. 7−90219
H_2O-protein interaction, NMR relax. investig. 7−90219
^{3}He, solid, liq., adsorbed, surface relaxation time in porous glasses 7−143128
HfH_x:^{181}Ta, nuclear relaxation, H-diffusion, TDPAC study 7−118912
$HfV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175
$LaCu_5H_{3.4}$, H absorpt. and diffusion, NMR studies 7−85461
LaH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., spin-lattice relax. of ^{63}Cu and ^{139}La nuclei *(Russian)* 7−143920
Li-methylamine system, PMR 7−116992
LiC_6, diffusion processes, β_2-NMR obs. 7−112990
$Li_xMo_6S_8$, Chevrel phases, ^{7}Li NMR obs. 7−112975
$Li_xMo_6Se_8$, Chevrel phases, ^{7}Li NMR obs. 7−112975
MoF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
^{14}N:^{15}N spin-label pairs, ELDOR and saturation recovery, rate eqns. appl. 7−129754
N_2, reorientation and rot. energy transfer cross sections, nucl. spin-lattice relax. time meas. 7−103538
NH_3 chemisorption on γ-Al_2O_3, multinuclear solid state NMR investigation 7−70662
NH_4ClO_4, NMR spin lattice relax. time temp. depend. meas 7−92537
$NH_4Ga(SO_4)_2.12H_2O$, NH_4^+ and H_2O motion, NMR and dielec. 7−125554
$NH_4In(SO_4)_2.12H_2O$, NH_4^+ and H_2O motion, NMR and dielec. 7−125554
Na complex, Na lasalocid, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
Na complex, Na monensin, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
$Na_2(FeCN_5)NO.2H_2O$, H_2O mol. flipping motions, PMR spin-lattice relax. time meas. 7−85472
$NbSe_2H_x$, NMR Knight shift, spectral and relax. temp. depend. props. *(Russian)* 7−77416
Ni(II) ion, aq. soln., proton spin-lattice relax. rates 7−129745
NiMn, reentrant spin glass state, NMR study 7−132155
$Ni_{35}Ti_{65}$, amorphous, H diffusion, NMR relax. rates 7−105145
PHO_3^{2-}, struct. and dynamics, longit. NMR relax. study 7−141605
$Pb_{0.92}Mo_6S_{7.5}$ Chevrel phase superconductor, ^{207}Pb electron environment, mag. props., NMR study *(Russian)* 7−143921
Pd surface, chemisorbed CO, bonding and diffusion, NMR study 7−77429
$Pd_{99}Co_1$, nuclear spin-lattice relaxation 7−118884
$PdH_{0.7}$, single crystal anisotropy of nuclear spin lattice relax. times 7−85465
$Pt_{99}Co_1$, nuclear spin-lattice relaxation 7−118884
$Rb_{1-x}(NH_4)_xD_2PO_4$, NMR in random fields, spin-glass-like transition 7−77421
$Rb_{0.22}(ND_4)_{0.78}D_2PO_4$, paraelec.-antiferroelec. transition, ^{87}Rb NMR studies 7−125637
$Rb_{1-x}(NH_4)_xH_2AsO_4$, proton pseudo-spin-glass, stretched-exponential nucl. magnetisation recovery 7−99601
SF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
ScF_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
ScH_x, HCP, H diffusive hopping, proton and ^{45}Sc NMR obs. 7−124585
SeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
Si:Fe, spin polarised electronic struct., supercell full pot. linear APW calc. 7−98875
$SnMo_6S_8$, normal and superconducting, NMR studies 7−106054
$TaS_2(NH_3)$, low temp. spin-lattice relax. 7−112989
TeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
$TiCoH_x$, struct., electronic props., comparison with $TiFeH_x$, X-ray diffr., PMR meas. 7−98772
$TiFeH_x$, struct., electronic props., comparison with $TiCoH_x$, X-ray diffr., PMR meas. 7−98772
TiH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
$TlClO_4$, NMR spin lattice relax. time temp. depend. meas 7−92537
UBe_{13} heavy fermion superconductor, coherence and pair-breaking effects, extended BCS theory 7−70466
UBe_{13}, low temp. ^{9}Be spin-lattice relax. rate meas. in heavy fermion superconductor 7−70477
UBe_{13}, unconventional even parity superconductivity, nucl. relax. rate 7−70470
U_6Co, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
UF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
U_6Mn, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
UP, ^{31}P NMR, dynamic mag. behaviour study, paramag. state 7−125551
$V_{1-x}Ti_xH_2$ electronic struct., NMR spin-lattice relax., Knight shift and mag. suscept. meas. 7−84666
nuclear spin-lattice relaxation continued
WF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
^{129}Xe, nuclear spin relaxation determ. in ^{87}Rb collisions 7−96822
Y-Ba-Cu-O, high T_c superconductor, ^{89}Y NMR study 7−106038
$YBa_2Cu_3O_{9-\delta}$, normal and supercond., NMR of ^{89}Y 7−118717
$Y(Co_{1-x}Al_x)_2$, weakly itinerant ferromagnet, NMR and magnetisation 7−85470
$YH_{0.2}$, PMR search for evidence of H pairing 7−85460
YH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
YIG domain walls, NMR relax., defect influence 7−112988
$(Y_xNd_{1-x})_2Co_{17}$, ^{59}Co NMR spin echo spectra and relax. times 7−138338
Yb compounds, electronic spin fluctuations, NMR study 7−77418
$YbNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
ZrH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
Zr_2NiH_x, H diffusion, NMR studies 7−85463
$ZrV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175

nuclear spin-spin relaxation *see spin-spin relaxation*

nuclear structure
see also EMC effect; form factors (nuclear); nuclear binding energy; nuclear charge; nuclear density; nuclear energy level transitions; nuclear energy levels; nuclear forces; nuclear isomerism; nuclear isospin; nuclear matter; nuclear moments; nuclear polarisation; nuclear shape; nuclear size; nuclear spectroscopic factors; nuclear spin and parity; nuclear structure theory
exclusive light-ion disintegration process, diffraction model 7−116355
heavy ion physics at low and intermediate energy at SANAC cyclotron 7−121922
quark effects in nuclear structure 7−89539
(e,e'), many-body effects in few-nucleon systems 7−67743
$^{A}H(d, n)$, A-2, 3, differential cross sections, determ. of nuclear vertex consts., Coulomb effects 7−116429
$^{3}He \rightarrow d+p$, nuclear vertex consts., determ. from charged particle reactions 7−116429
$^{4}He \rightarrow t+p$, nuclear vertex consts., determ. from charged particle reactions 7−116429

nuclear structure theory
see also HF calculations; nuclear models; nuclear reaction and scattering theory; RPA calculations
abnormal matter in relativistic nuclear field theory, hot metastable state 7−135242
actinide mass microscopic formula, fermion dynamical symmetry approx. to spherical shell model 7−135195
actinide nuclei, strongly-deformed, dipole and octupole pairs, BCS anal. 7−109059
analogies between nuclear systems and liquid ^{3}He 7−135239
analytic Sturmian functions and convergence of separable expansions 7−128947
angular momentum, semiclassical treatment for fixed modulus and z-component, single-particle propagator 7−128975
axial charge transitions in relativistic nuclear models and nonrelativistic meson exchange currents, A=16 nuclei 7−116298
boson representations of fermion systems, fermion spectra and E2 operators 7−96016
boson-fermion group chain decomposition 7−141004
charge radius formula, fine structure, nuclei far from β-stability *(Chinese)* 7−109005
compound nucleus, a classically chaotic quantum system 7−121637
conf. on quantum chaos and statistical nuclear physics, Cuernavaca, Mexico, Jan, 1986 7−128188
conference, 9th Biennial Studies of Nuclear Physics, Aussois, France (March 1987) 7−80182
conference on hadronic few-body systems, Rome, Italy (Oct. 1986) 7−66812
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
deformed boson expansions, reconstitution of rotational band structure, generic model 7−140998
deformed nuclei, self-consistent Hartree descript. in rel. quantum field theory 7−121599
diabolic pair transfer in rotating nuclei, Berry phase 7−128931
dibaryonic degree of freedom in nuclei, hadronic force model, binding energy, form factor effects 7−102814
E2/M1 transition ratio for $\gamma N \rightarrow \Delta(1232)$ in a modified Skyrme model 7−96014
electric charge fluctuation inside an atomic nucleus 7−116254
electron-nucleus deep inelastic scatt., cross sections, quantum hadrodynamics calcs. *(Russian)* 7−121806
electronuclear sum rule, formalism from hyperspherical harmonics 7−121633
even-even nuclei, half-lives, peninsula of stability 7−81304
face-centered-cubic solid-phase theory of the nucleus 7−140997
Faddeev equations for bound and scattering states 7−67699
FCC nuclear model, nucleon eigenstates equivalence, correspondence with spin-orbit model 7−128977
FCC nuclear model, radii, binding energies and excited states prediction, nuclear skin parameters 7−128958
fermionic collective motion, functional collective motion 7−102823
few particle systems, stepwise optimisation and global chaos of nonlinear parameters 7−81302
finite nuclei, pure fermionic chiral field theory anal., radii, binding energies and density 7−140985
finite temperature metastable matter 7−73725
fractional parentage matrix inversion for nuclear and atomic struct. calcs. 7−102813
geometrized dynamics and search of structural instabilities in SU(2) models 7−96003
hard core effect inclusion in Thomas-Fermi method 7−95996
Hartree-Fock seniority approximation, a symmetry conserving self-consistent method 7−121680
high order perturbation theory with three-body forces in the Faddeev scheme 7−67702
hot nuclei, fragmentation in constrained mean-field approx. 7−121678
hot nuclei, thermal equilibration, nonequilibrium many-body theory 7−116320
hyperspherical calculations for four-nucleon systems 7−67704
integral analysis of nuclear systems 7−116296
integral equation approach to few-body collision problems 7−67732
isospin dependent potentials, minimal substitution 7−128979

uclear structure theory continued
large rectangular random matrices 7−140607
large scale nuclear struct. studies, symmetry projected HFB quasiparticle configs. 7−121677
laser-induced nuclear transitions, metastable state lifetime shortening 7−102837
magic nuclei, inclusion of 2p2h configs., generalised microscopic model 7−67787
many-body approximation methods, construction of analytically solvable model 7−121676
mean field, microscopic calc., ground state correls., zero and finite temp. contrib. 7−128962
mean field theory, symmetry conserving generalisation 7−121638
microscopic approaches to nuclear structure calcs., seminar, Sorrento, Italy (May 1986) 7−120707
multiparticle cluster correlations in ground state of many-body systems 7−109055
neutron-rich and symmetric nuclear matter, chiral sigma model calcs., neutron stars 7−121688
non-equilibrium nuclear matter, Dirac-Brueckner approach, quantum kinetic eqn. 7−128963
nuclear level densities and level spacing distributions, statistical theory tests at low excitation energies 7−128961
nuclear matter, liquid-gas and superconducting phase transitions, Green's function methods, Skyrme interactions 7−96007
nucleon compositeness and relativistic phenomena in nuclear physics 7−121757
nucleon effective mass lowering by attractive scalar mean field, rel. effects in nuclear physics 7−140999
nucleon size and the attractive nuclear force, form factor, EMC effect 7−95994
nucleons, mesons and deltas in nuclear matter, rel. Dirac-Brueckner approach 7−89550
particle physics concepts, basic theories, book 7−108061
particle-hole and particle-particle RPA ground state correlations 7−102794
pion reactions and scatt., nuclear structure probe 7−121964
potential models, off-energy-shell behaviour 7−128980
prolate and oblate potentials, phase-space organisations, classical, semiclassical and quantum results 7−140986
QCD description of nuclei, theoretical developments 7−121636
quark antisymmetrisation effects in schematic model 7−81305
quark-gluon degrees of freedom in nuclei 7−73709
quasiparticle relativistic *G*-matrix interaction 7−135237
relativistic energy density functionals, Hartree-Fock limit, relativistic TFDW-model 7−129575
RMS charge radii systematics, values for quark core, Coulomb displacement values 7−116245
RPA Bethe-Salpeter equation, numerical problems 7−121681
science, challenges and opportunities *(Czech)* 7−140972
semiclassical propagation and time-dependent density functional theory, time-dependent integrals 7−128976
separable approximations to energy dependent potentials 7−128978
SO(2r) time-dependent variational principle, TDHF generalisations 7−96005
spectral distribution method in nuclear spectroscopy 7−121639
spin-isospin response functions, semiclassical calc. 7−135202
strongly bound nuclear antiproton states, system width 7−109056
structure functions, relativistic description 7−95979
symmetric and asymmetric nuclear matter, binding energies, lowest-order constrained-variation calc. 7−135243
TDH solution of the Suzuki model of nuclear monopole oscillation 7−81307
temporal evolution, approx. description 7−67745
Thomas-Reiche-Kuhn sum rule in finite nuclei, effective interactions 7−135217
three-and four-nucleon system, realistic scales 7−67682
three-body calculations at Los Alamos 7−67700
three-nucleon force, Δ(1232) contribution, Δ-mediated effective three-nucleon potential, Δ-propagation effects 7−116289
three-nucleon problems, continued fraction methods 7−67737
trinucleon system with central and tensor interactions, geometrical structure coefficients, sum rules 7−116295
unification of nuclear models and properties, book 7−108060
wave function expansion, natural bases 7−81303
^{6}n system, binding properties, stability 7−81286
NN correlations in non-relativistic quark model, six-quark bags, momentum distributions, non-NN components 7−109047
p-n interaction in deformed nuclei 7−116292
πN scattering amplitude singularities in nuclear matter, bound states possibility 7−121687
Σ-hypernuclei, continuum effects, prod. in pole graph method, struct. interpretation 7−96009
^{9}B, first excited state energy from analogue ^{9}Be level 7−108950
^{12}C, semi-classical longitudinal response, RPA theory 7−121675
^{40}Ca, nucleon momentum and density distrib., natural orbital calcs. in single-particle pot. method 7−128946
^{40}Ca, pp, ph and hh ring diagrams contrib. to binding energy 7−135194
^{40}Ca, semi-classical longitudinal response, RPA theory 7−121675
^{44}Ca, low-lying spectra, simplified model calcs. *(Chinese)* 7−102812
^{170}Er, temperature dependence of shape and pair gaps 7−121606
Eu-Gd region, partially violated U(3) limits of U(6/12) dynamical supersymmetry *(Chinese)* 7−121699
^{18}F, coexistence model for even-parity levels, E2 transition probabilities, matrix elements 7−81330
^{A}Gd, A=152-160, proton spectroscopic factor calcs. in pairing plus quadrupole model 7−121632
^{2}H, D-state wave fn., nodes and bound states 7−121624
^{2}H, two-skyrmion system, symmetry and quantisation, binding energy 7−128938
^{2}H, wave function and OPE pot. 7−67742
^{3}H, charge form factor, multiquark compound states 7−109057
^{3}H, nuclear charge density, quark exchange effects 7−102800
$^{3}H_{\Lambda}$, binding energy from stochastic variational method *(Chinese)* 7−116325
$^{3}H_{\Lambda}$, bound state existence, separable model Faddeev equations 7−109090
$^{3}H_{\Sigma}$, Σ^{-} hypernuclei, bound state existence, separable model Faddeev equations 7−109090
$^{4}H_{\Lambda} \rightarrow \pi^{-} + {}^{4}$He, microscopic theory of four particle hypernuclei 7−67760
^{3}He, nuclear charge density, quark exchange effects 7−102800
^{4}He D-state component from ^{2}H(d, γ) 7−121982
nuclear structure theory continued
^{4}He ground state, D-state admixture from ^{2}H(d, γ) 7−121859
^{4}He(γ,pn)^{2}H nucleon momentum distributions and quasideuteron correlations, quasi-^{3}He decay 7−121784
$^{5}H_{\Lambda}$, Λ-N interaction and struct. anal., ground state binding energy *(Chinese)* 7−116326
^{20}Ne isoscalar giant resonances, sum rules, symplectic model, cluster approach 7−135286
^{20}Ne, M1 excitations in even-even sd-shell nuclei, orbital current total strength 7−135246
^{A}O, A=17-22, low-lying spectra, double delta and surface delta interactions *(Chinese)* 7−121700
^{A}O, A=18-20, low-lying energy levels, EM props., shell model calc. 7−67730
^{16}O, giant dipole transitions in the nuclear WSp(6,R) model 7−96013
^{16}O, Hartree-Fock-Bogoljubov formalism for relativistic mean field theories 7−121679
^{16}O, n-n̄ oscillations, statistical uncertainty 7−108825
^{16}O, pp, ph and hh ring diagrams contrib. to binding energy 7−135194
^{188}Os, temperature dependence of shape and pair gaps 7−121606
^{208}Pb, effective mass and level-density parameter temp. depend., surface coupling model anal. 7−95975
^{208}Pb, one-particle characteristics in problems with allowance for complex configurations 7−81306
^{208}Pb, proton momentum distrib., coherent density fluctuation model anal. 7−102798
πN scattering amplitude in nuclear matter, bound states, Pauli blocking 7−121689
^{32}S, charge density and octupole form factor in harmonic oscillator and HF models 7−67713
^{148}Sm, temperature dependence of shape and pair gaps 7−121606
^{137}Xe level density, test of Fermi gas model predictions, comments 7−95991

nuclear track emulsions
anomalon research, experimental status *(German)* 7−89575
electron-photon showers, Monte Carlo simulation 7−109615
momentum measurement of particle tracks 7−81864
scanning efficiency formula, modification 7−81850

nucleation
see also crystal growth; crystallisation
A15 multifilamentary supercond. form., solid state reaction and transform. kinetics 7−106466
acetone-H_2O, binary nucleation theory 7−98379
adiabatic, numerical approximations 7−91760
alloys, electron irradiation, dislocation loop kinetics 7−98155
alloys, structural, grain boundary cavity nucleation under combined influence of He and appl. stress 7−76138
alloys, two-phase zone and the transition to non-selective melting 7−144384
amorphous alloys, consolidated, strengthening mechanisms 7−113644
cloud seeding experiment, control gauge assessment 7−115029
cloud simulation facility at University of Missouri-Rolla, Proto II chamber 7−101550
clouds, ice crystal nucleation rates and aggregation processes var., effect on orographic snowfall 7−87790
coherently strained Si-like layers, structural metastability, atomistic Monte Carlo study 7−84540
condensation, kinetics, transition heat effects, passive gas conc. effects. 7−76372
copper acetylacetonate aerosols, ice-forming activity in supercooled cloud 7−72133
crystallisation, long induction periods, theory 7−91502
deformed ice, annealing recrystn., lattice orientation and texture studies 7−114820
diamond, microwave plasma growth under low press., particle struct., substrate adhesion 7−113411
diamond powder particle nucleation in RF methane plasma, struct. 7−98009
DNA polymer, melting nucleation defect, H bond vibr. fluctuations anal. 7−71671
dynamic scaling behaviour 7−142952
elastoplastic media, nucleation, thermodynamic theory 7−69857
enhanced vacancy accumulation near planar sinks, diffusion mechanisms 7−98136
epitaxial films, layer by layer film growth and morphological transitions, continuum model 7−137764
ethanol-H_2O, binary nucleation theory 7−98379
exothermic isomerisation reaction, nucleation and growth process, mol. dynamics method 7−86602
film, vacuum condensation kinetics, independent lateral and normal growth 7−76703
first-order phase transitions, mean field methods and stability limits 7−121034
first-order phase transitions, thermodynamics of finite systems 7−128511
fracture morphology and softening behaviour 7−86354
fructose, crysts., contact nucleation and growth kinetics 7−131067
gas-fluid system, metastable and unstable state decay, mechanisms and open problems 7−84196
glass, crystal nucleation, combined homogeneous and heterogeneous, temp. depend. 7−131043
glass, nucleation, isothermal and adiabatic theories 7−83713
glassy system, single component, high density, nucleation, growth and transform. of crysts. 7−76013
hydrocarbons, nucleation in pyrolysis, thermodynamic-potential minimisation 7−106773
ice, crystal growth and nucleation kinetics 7−119548
ice, nucleating ability of AgI-AgBr-CuI system, water soluble salts effect 7−104962
ice, nucleation in porous silica, neutron diffr. studies 7−131294
ice, thermal diffusion chamber for horizontal-gradient continuous flow studies 7−127556
ice formation, cubic and hexagonal, in water-glycerol mixture 7−137286
ice heterogeneous nucleation on aerosol particles in supercooled fog 7−118054
ice-forming particles from compounds with low AgI content 7−87835
incommensurate phase, 2D model phase diagram, mol. dynamics simulation 7−118055
large metal cluster formation by surface nucleation 7−143251
localized autostructures in homogeneous two-dimensional media 7−67249
martensitic transformations, dislocation theory, review 7−76352

nucleation continued
martensitic transformations, new view 7−144399
metal clusters, vaporised, form. mechanism 7−98377
metal droplets, atomised, solidification, nucleation catalysed by spherically-shaped oxide particles 7−119262
metal surface oxidation, nucleation control, model 7−119448
metallic glasses, crystallisation kinetics 7−83739
metallic glasses, crystallisation kinetics 7−142624
metallic glasses, formation and growth processes by solid state diffusion reactions 7−104587
metallic glasses, metal-metalloid, crystn. statistics 7−76014
metallic melts, thermodynamics and kinetics of amorphisation *(Russian)* 7−124114
metals, layer structure, from low temp. pulsed plasma 7−76704
metals and alloys, void and vacancy cluster nucleation processes 7−98129
methanol-H_2O, binary nucleation theory 7−98379
micromagnetics, surface anisotropy 7−125473
minerals, nucleation and grain growth in astrophysical environments 7−134129
4,4′-octyl-cyanobiphenyl, isotropic-nematic phase transform. nucleation theory 7−98442
optical disc media defects effects on error detection and correction and disc longevity 7−75088
percolation growth and dynamical discrete models 7−132960
pit nucleation on passivated metals 7−91501
polyalcohol aqueous solns., vitreous state decomposition 7−131319
polycrystalline solids, microcrack nucleation 7−111752
polyethylene, 2D cryst. growth, step positions fluctuations anal. 7−124145
polyethylene, crystallisation and liq.-liq. phase separation in binary systems 7−69871
polyethylene oxide-PMMA blends, nonisothermal crystallisation 7−69870
polyethylene twins, growth kinetics, nucleation and growth processes 7−98018
polymers, folded and extended chain crysts., nucleation, unified theory 7−117852
precipitate nucleation kinetics under time depend. supersaturation 7−84188
1-propanol-H_2O, binary nucleation theory 7−98379
quartz, polymorphic α-β transform. under neutron irrad., spectral studies 7−104847
random-field Ising model, metastable states, critical props., dynamical model calcs. 7−84189
recrystallization dynamic, nucleation criteria 7−119284
seed diffusion growth, in external periodic field, first order phase transitions 7−143293
semiconductors, layer structure, from low temp. pulsed plasma 7−76704
simple fluids, generalised van der Waals anal. of crit. drops and cavities 7−111329
solid state nucleation, microscopic approach 7−137514
solutions, homogeneous nucleation of bubbles, crit. supersaturation meas. 7−144741
steam condensation, condenser surface roughness effect, heat transfer anal. 7−76368
steam turbines, nucleation and droplet growth study 7−130773
steel, Cr-Mo, weldment, heat affected zone, H attack behaviour 7−144613
steel, eutectoid, austenite form. during thermomech. treatment 7−71223
steel, ferrite grain size, effect of cooling 7−100215
steel, hypo-eutectoid, graphitisation rel. to austenitising treatment *(Japanese)* 7−106548
steel, low C, austenite form., TEM study *(Chinese)* 7−71209
steel, mild, void nucleation and growth is ductile fracture 7−78232
Steel, Nb, low C, transform texture, proeutectoid ferrite nucleation 7−78000
steel, Nb microalloyed austenite, precip., comp., thermomech. processing 7−78021
steel, texture development and recrystn., effect of C content 7−78055
superheated liq., pot. nucleation sites 7−136840
superheated liquids, classical and semiquantum, nucleation kinetics 7−137507
surface decoration, step nucleation processes 7−119474
TGS, collinear ferroelec. crystals, switching kinetics 7−99748
TGS thin platelets, domain dynamics, polarisation reversal 7−99770
thin film growth mode models 7−137744
thin film nucleation and growth modes, Monte Carlo simulation 7−105336
thin films, phase and morphological transform. kinetics 7−112133
thin organic polymer film growth, ellipsometric investig. 7−98727
transient, interpretation of expt. meas. 7−76353
two-dimensional perfect crystals, nucleation of fracture, computer modelling 7−111754
type I superconductors, nonuniform state relax. *(Russian)* 7−92356
water, superheated droplets on solid surfaces, wettability 7−111073
whisker growth under sputtering conditions, kink site saturation mechanism 7−98760
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7−124775
Al, dislocation emission from grain- and sub-boundaries during recrystallisation 7−76137
Al, solidification, undercooling 7−126095
Al-Cu, age-hardenable, zone form. kinetics, influence of rapid solidification 7−100210
Al-Cu-Mg-Ag, precipitates nucleation and growth 7−144413
Al-Mn (14 at.%), rapidly solidified droplets, icosahedral quasicrystals and glass form. 7−131052
Al-Si, undercooled, solidification struct. development 7−77984
Al-Ti-B, rapidly quenched, microstruct. 7−119263
Al-Zn dilute alloys, homogeneous precipitate nucleation upper limit temp. determ. 7−98456
Al_2O_3 films, CVD on Si single crysts., nucleation and growth 7−86046
Al_2O_3-MgO, triphasic xerogels, densification using isostructural seeding 7−113491
Al_2O_3-ZrO_2, eutectic struct., formation mechanism 7−71165
As-Sb-Se, non-isothermal crystallisation, rel. to heating rates 7−142639
As_2Se_3 glass, nonisothermal crystallisation, crystallisation peak temp., enthalpy, activation energy 7−142593
Au films, nucleation and growth on NaCl surfaces 7−118319
Au films, nucleation and growth on NaCl surfaces 7−118320
Au films, nucleation on NaCl substrates, model 7−112146
$Ba(Mn,Ti)_xFe_{12-x}O_{19}$, cryst. growth from soln., struct., Curie temp., chem. anal. 7−83818
nucleation continued
BaO-B_2O_3-TiO_2 glasses, crystallisation for glass ceramics 7−104573
$(Ba_{1-x}Sr_x)_2Zn_2Fe_{12}O_{22}$, single cryst. growth from high temp. soln. 7−113367
CS_2, photoinduced nucleation, NO quenching effect 7−98381
C0-B glass, melt spun ribbons, surface crystallisation 7−131053
$CaSO_4$, hydration and hardening, activation by metallic cations, elec. potential *(French)* 7−111816
$Cd_xHg_{1-x}Te$, photo-assisted epitaxy, UV laser source 7−132497
CdS thin films, spray-pyrolyzed, nucleation and growth 7−71009
CdSe films, electrodeposited, growth and morphology 7−112121
Ce, isostructural γ-α reversible transition nucleation features 7−138742
$Co_{75}B_{25}$, metallic glasses, diffusion of Si and B 7−91885
Cr electrodeposits from LiCl-KCl eutectic for fuel cladding against carbonisation and oxidation 7−116546
Cr electroplating from $CrCl_2$ dissolved in LiCl-KCl eutectic 7−119408
Cr_5Si_3, amorphous films, cryst., elec. resist., TEM obs. 7−131034
Cu, fatigued single crysts., persistent slip band nucleation 7−111568
Cu monolayer growth on Mo (110), TDS and ADT meas. *(German)* 7−131453
Cu, pure, cold rolled, nucleation of recrystallisation, TEM obs. 7−86217
Cu-Pd, plastic deformation and nucleation, mobile dislocations *(Russian)* 7−71236
Cu-Ti system, laser irrad., nucleation temp. modelling 7−86160
Cu-Zn, diffusion induced recrystn., nucleation 7−100251
Cu-Zn-Al (25.83, 3.96 wt.%), prebainitic transform. *(Chinese)* 7−71174
$CuSO_4$, aq. supersaturated solns. in batch isothermal stirred tank, crystn. simulation 7−142670
Fe, creep cavitation, oxides as nucleation sites 7−144462
Fe, creep cavitation, sulphides and carbides as nucleation sites 7−144461
Fe-C alloys, bainitic transform., thermodynamics *(Chinese)* 7−131328
$Fe_{75}B_{25}$, metallic glasses, diffusion of Si and B 7−91885
$Fe_{67}Co_{18}B_{14}Si$, amorphous mag. material, isothermal nucleation and growth studies 7−117818
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ devitrified metallic glass, fine particle superparamagnetic props. 7−143860
$Fe_{3+x}Ga_{1-x}$ off-stoichiometric alloys, DO_3-type ordering and phase separation *(Japanese)* 7−137537
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, crystn. kinetics under isothermal and nonisothermal conditions 7−76027
Fe_2O_3, hematite, magnetisation, thermal hysteresis near Morin transition temp. 7−99495
GaAs defect struct. generated during MBE, growth temp. depend., TEM study 7−112138
GaAs, MBE growth on Si(100), dislocation accommodation 7−100084
GaAs, nucleation, MBE growth stages on Si(100), 3D critical transition 7−111814
GaAs, nucleation on vicerial Si, multilayer step formation after As adsorption 7−105309
GaAs, surface As oxide formation 7−78390
Ga_2O_3-CaO eutectic comp., glass form., heterogeneous nucleation 7−142595
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
H_2O, supersaturated vapor, condensation in shock tube 7−98419
^4He, superheated liq., nucleation kinetics 7−137638
Hg, vapor, homogeneous nucleation 7−98378
InAs/GaAs heterojunction, MBE, nucleation, surface phase diagrams 7−71017
$InAs_{1-x}Sb_x$ LPE on GaSb substrates, supercooling effects study 7−137742
$K_2Cr_2O_7$, cryst. growth from aq. solns., growth morphology 7−91518
KH_2PO_4, nucleation and growth behaviour from degassed, undegassed aq. solns. 7−138628
KNO_3, crystallisation under diffusive and convective conditions 7−117846
Li_2-Al_2O_3-SiO_2 glass-ceramics, oxide nucleation mechanism 7−142598
Li_2O-SiO_2 glass ceramic, crystn. kinetics 7−142596
$Li_{17}Pb_{83}$, T recovery by pumping, bubble nucleation effects 7−122185
MgO, sputtering, damage and nucleation 7−138575
Mn-Zn ferrite single crysts., haematite second phase form., SEM and TEM obs. 7−113561
Mo single crysts., electron irrad., vacancy defects, positron studies 7−98137
N_2, microclusters, nucleation and thermodynamic props. 7−96907
N_2, nucleation and condensation investig. 7−96908
NH_4HSeO_4, identification of new cryst. phase, polymorphic transform., NMR spectra 7−98029
NaA zeolites, gel growth in presence of triethanolamine 7−70996
Nb/Al/Nb Josephson junction structs., TEM, SEM and AES studies 7−105291
NbN, sputtering, damage and nucleation 7−138575
NdFeB sintered and melt-spun magnets, coercive field studies 7−118826
Ni-Ag (2 wt.%), bulk undercooled, grain refinement 7−77985
Ni-B glass, melt spun ribbons, surface crystallisation 7−131053
Ni-Cr-Co superalloy, grain boundary splitting as primary recrystallisation nucleation mechanism 7−106537
Ni-Mo, eutectic alloys, microstruct. rel. to undercooling 7−92975
Ni-P glass, Avrami exponent for crystn. 7−142645
Ni-Pd based glassy alloy, crystallisation, particle size 7−83759
Ni-Sn, undercooled, dendritic growth, recalescence, high speed optical temp. meas. 7−100208
Ni-Ti-B glassy alloys, crystn. kinetics and mechanism rel. to eutectic comp. 7−131038
$Ni_{78}B_{14}Si_8$, amorphous alloy crystn. 7−83756
$Ni_{60}Hf_{40}$ amorphous alloys, crystn. behaviour 7−83751
Pb-Bi, undercooled droplets, crystn. kinetics during rapid solidification 7−77983
Pb-Sb, undercooled, solidification struct. development 7−77984
Pd-(Fe,Co,Ni)-Si metallic glasses, crystallisation kinetics, resist. obs. 7−83760
Pd-Cu-Si metallic glass, solid-undercooled liq. interfacial energy 7−76558
Pd-Si metallic glasses, stabilisation by irrad. with picosecond laser pulses 7−117973
$Pd_{77.5}Cu_6Si_{16.5}$, undercooled melts, $PdSi_3$ nucleation 7−131272
$Pd_{77}Si_{23}$ metallic glasses, crystn. kinetics, effect of surface 7−117830
Pt (100), adsorbate covered, nucleation and growth, STM obs. 7−76625
Pt-Si reaction, silicide formation, elec. meas. 7−99195
SF_6, phase, nucleation, electron diffr. investig. 7−98380
Sb_2S_3, amorphous film, crystal formation and growth *(Russian)* 7−83720
SeF_6, phase, nucleation, electron diffr. investig. 7−98380
$Se_{100-x}Sb_x$, amorphous, nucleation, cryst. growth, elec. resist. 7−111410

nucleation continued
Si film, MBE, substrate cleaning, layer nucleation, in situ light scatt. 7−77817
Si, film edge induced dislocation, nucleation role of point defects 7−98170
a-Si layers, ion implanted, explosive crystn. 7−83691
Si, MBE, nucleation and annealing, LEED, spot profile analysis 7−76676
Si, microcrystalline, nucleation, in situ spectroscopic ellipsometry study 7−118052
Si, nucleation of oxide precips., high temp. annealing 7−144406
Si seed particle growth by silane pyrolysis, runaway nucleation in aerosol reactors 7−71047
Si:Au, substitutional impurity annealing, indiffusion and nucleation 7−113584
Si-SiN_x-Si structure formed by ion implantation, structural characterisation 7−76634
SiO_2-Si:Fe interface, catastrophic oxide breakdown, impurity behaviour effects 7−143624
SrO-GeO_2 system, time-temp.-transform. diagram *(Japanese)* 7−132592
TeF_6, phase, nucleation, electron diffr. investig. 7−98380
$TiSi_2$ sputtered films, nucleation and growth, TEM studies 7−118295
U_6Fe amorphous, crystallisation and nucleation limited stability 7−97938
W CVD films, interaction with metal underlayers 7−112150
W, CVD on thermal oxide, model for nucleation 7−112147
W, selective deposition by hot-wall LPCVD, importance of HF partial press. 7−119168
W-SiO_2, nucleation of W on insulator, selective CVD 7−86039
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
YIG:Si single crysts., photoinduced magnetisation reversal mechanism and threshold studies *(Russian)* 7−99550
Zn nucleation and crystal growth by electrodeposition from acidic solns., obs. 7−132504
Zn-Al-Ti, solidified, eutectic struct. rel. to cooling rate and Ti addition 7−113538
Zr, oxidation, AES study, room temp., 10^{-8}-10^{-5} Torr 7−138899
ZrO_2, MgO partially stabilised, eutectoid decomp. 7−132586

nuclei *see nucleus*

nuclei with mass number 1 to 5
$^2H(\pi,\pi)$, 134 MeV, tensor observables meas. in elastic scatt. 7−121963
A<19, folded and Coulomb pots., analytic formulae and charge distribs. 7−121770
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
conference on hadronic few-body systems, Rome, Italy (Oct. 1986) 7−66812
Coulomb effects on few-body scattering states 7−67770
d-d and d-t fusion, muon-catalysed 7−82398
Faddeev equations for bound and scattering states 7−67699
few-body calcs. 7−67681
few-body problems in strong interactions 7−67735
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
four-nucleon systems with central interactions, ATMS method 7−128973
hyperspherical calculations for four-nucleon systems 7−67704
integral equation approach to few-body collision problems 7−67732
light neutron rich nuclei, HF calcs., radii, binding energies, density distribs. 7−102799
meson theoretical model of three-nucleon forces 7−67731
three nucleons, binding energy relativistic corrections Faddeev components of nonrelativistic wave fn. *(German)* 7−128939
three-and four-nucleon system, realistic scales 7−67682
three-body calculations at Los Alamos 7−67700
three-nucleon potential, two-pion exchange, tensor forms 7−135216
three-nucleon system, hyperspherical expansion using spin and isospin central pot. 7−121628
three-nucleon system, NN interaction calcs., Bethe-Salpeter eqn. and relativistic field theory 7−128974
three-nucleon systems, Faddeev calcs., separable expansion techniques 7−128972
three-nucleon systems, Faddeev eqn. soln. by Lanczos algorithm and spline expansions 7−67775
three-nucleon systems with central interactions, ATMS method 7−128973
trinucleon system with central and tensor interactions, geometrical structure coefficients, sum rules 7−116295
(d,pn), three-body coupled-channel theory of scattering and breakup of light and heavy ions 7−121866
NNN system, two-body model, Coulomb effect on band and scattering states 7−67832
($\bar{p}$, X), annihilation in light nuclei, quark-gluon plasma droplet, meson spectra 7−141054
$^9Be_\Lambda$, energy level anal. using OBE-based effective ΔN interaction, cluster model calcs. 7−109092
DT fusion, muon-catalyzed, stability anal. 7−129125
(e,e'), electromagnetic probing in few-nucleon systems 7−67803
(e,e'), three-nucleon nuclei, bound state-continuum transition amplitude calcs. 7−67761
$H(^{12}C,p^{11}B)$, 2.1 GeV/N, relativistic fragmentation, cross section, direct step anal. 7−121914
$H(^3He,t)$, search for Δ bound states 7−81454
$^1H(^{19}F,\alpha\gamma)$, appl. to H profiling in materials *(Chinese)* 7−111633
$^1H(^2He, t)$, Δ^{++} formation, DWBA calcs. 7−116439
$^1H(^3He,t\Delta^{++})$, 2 GeV, DWBA anal. and expts. comparisons 7−116453
$^1H(^{56}Fe,X)$, 1.8 GeV/nucleon, in nuclear emulsion, secondary particle props., cascade-evaporative model comparisons 7−135359
$^1H(\vec{d},^2He)$, 650 MeV, 2 GeV, energy spectra and tensor anal. power meas. 7−135293
$^1H(\vec{d},d)^1H$, elastic scatt., analysing power meas. 7−73778
$^1H(\vec{d},d)^1H$, stability of angular extrapolation methods for determining the deuteron asymptotic *D*-state to *S*-state ratio 7−109189
$^1H(\vec{d},\gamma)$, tensor analyzing power and D-state effects 7−109192
$^1H(e,e)$, charge form factor calcs. in configuration and momentum space 7−128952
$^1H(\gamma,p)$, cross section meas. in Δ(1232) region 7−121788
$^1H(\gamma,pn(p))$, cross section meas. in Δ(1232) region 7−121788
$^1H(\mu^-,\nu\mu n)$, muon capture, next generation expts. 7−73659
$^1H(\vec{n},n)$, 477 MeV, anal. powers, isospin violating charge symmetry breaking 7−121849
$^1H(\vec{n},\gamma)$, 6.0, 13.43 MeV, anal. power for n-p radiative capture 7−81389
$^1H(\vec{n},\gamma)$, intermediate energy, meson exchange and relativistic correction effects 7−121842

nuclei with mass number 1 to 5 continued
$^1H(p,p'\gamma)$, bremsstrahlung, off-shell aspects of NN force 7−67736
$^1H(\vec{p},p'\gamma)$, bremsstrahlung expt. 7−67641
$^2H(\vec{p},p)X$, knock-out reactions, search for $\bar{p}$-nucleus states 7−135322
^2H, binding energy, Reid soft core and Paris pot. comparison 7−121592
^2H, D-state wave fn., nodes and bound states 7−121624
^2H, dynamics and electromagnetic props., relativistic field theoretical model 7−67744
^2H, effect of deuteron structure on hyperfine structure 7−109036
^2H, elastic form factor and $A(q^2)$ struct. function 7−67706
^2H form factors in topological soliton approach 7−128891
^2H, formation microscopic mechanism in high energy collisions, emission cross section 7−135265
^2H, ground state props., tensor force and one-pion exchange pot. 7−67733
^2H, isobar and quark degrees of freedom, elastic form factors 7−116257
^2H, mag. form factor at high momentum transfer from $^2H(e,e)$ 7−95980
^2H magnetic form factor and meson exchange currents calcs. 7−81191
^2H, magnetic form factor at high Q^2 7−121513
^2H, radial excitations and bound state wave fn., RGM and nonrelativistic quark model calcs. 7−121591
^2H, relativistic electromagnetic form factors 7−67712
^2H, two-skyrmion system, symmetry and quantisation, binding energy 7−128938
^2H, wave function and OPE pot. 7−67742
$^2H(N,N)$, multichannel N/D equations, new formulation, Coulomb interaction effects, K matrix method 7−121817
$^2H(N,N)$, NN interaction off-shell behaviour, Noyes-Kowalski half-off-shell functions 7−128966
$^2H(\vec{N},\vec{N})^2H$, meson theoretical NN interaction predictions 7−67812
$^2H(\vec{N},\vec{d})$, E_N=10 MeV, vector-to-vector spin transfer coeffs., Paris NN potential anal. 7−67829
$^2H(\vec{N},\vec{d})N$, meson theoretical NN interaction predictions 7−67812
$^2H(\alpha, X)$, momentum spectra and differential cross sections at 7.0 GeV/c 7−81416
$^2H(\alpha,\alpha p)$, Coulomb effects in breakup reactions 7−96085
$^2H(\vec{d},\gamma)$, low energy fusion, potential model anal., ^4He D-state component 7−121982
$^2H(\vec{d},\gamma)^4He$, low energy reaction, big-bang nucleosynthesis extrapolation, ^4He ground state, D-state admixture 7−121859
$^2H(\vec{d}, X)$ reactions, outgoing nucleon polarisation angular distrib. study 7−116372
$^2H(d,\vec{d})$, d-d and d-^3H, equivalent local potentials, single channel, two-channel RGM anal. *(Chinese)* 7−102889
$^2H(d,\vec{d})$, differential partial amplitudes, orbital Young scheme *(Russian)* 7−141057
$^2H(\vec{d},\gamma)^4He$, low energies, ^4He D-state effects 7−116435
$^2H(\vec{d},n)^3He$, 80,120,160,200,460,1000 keV, vector analyzing power meas. 7−129060
$^2H(d,n)^3He$, spin dependence of low energy fusion reactions, DWBA anal. 7−116539
$^2H(d,n)^2\mu He$, muonic catalysed, X-ray and yield meas. 7−96130
$^2H(d,p)^3H$, 2.98-162.5 keV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
$^2H(\vec{d},p)^3H$, 80,120,160,200,460,1000 keV, vector analyzing power meas. 7−129060
$^2H(d,pnn)$, 50 MeV, disintegration mechanism study using coincidence techniques 7−135332
$^2H(d,\pi^0)^4He$, 0.8 GeV, charge symmetry breaking cross sections 7−109191
$^2H(e, e)$, quark cluster effects on the electromagnetic struct. fns. 7−81374
$^2H(e,e'n)$, electrodisintegration, mag. form factors and meson exchange currents 7−135305
$^2H(\vec{e},e'n)$, nonrelativistic description, final state interactions and neutron electric form factor 7−121811
$^2H(e,e'n)$, polarization effects and subnuclear degrees of freedom 7−67793
$^2H(e,e'\vec{n})$, tensor polarized, nucleon emission asymmetry 7−81373
$^2H(e,e'n)^1H$, Bonn potential calc. 7−81375
$^2H(e,e'\pi^+)$, $^1S_0$ state resolution, Born amplitudes and effective hamiltonian 7−109148
$^2H(\vec{e},e'p)n$, disintegration determ. *(Russian)* 7−109153
$^2H(e,e)$, NN interaction off-shell behaviour, Noyes-Kowalski half-off-shell functions 7−128966
$^2H(\gamma, p)n$, 80-130 MeV, diff. cross section meas. 7−121793
$^2H(\gamma,\gamma')$, narrow dibaryon formation 7−121791
$^2H(\gamma,n)$, 4-18 MeV, relative ang. distrib. meas. 7−116378
$^2H(\gamma,n)$, angular distribution meas. for E_γ=2.75 MeV 7−81367
$^2H(\gamma,n)$, differential cross section ratio, E2 transition 7−121789
$^2H(\gamma,n)$, forward photodisintegration, 8-140 MeV nucl. forces and reaction process 7−121797
$^2H(\gamma,n)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^2H(\gamma,n)$, neutron counting method for γ-ray detection 7−96484
$^2H(\gamma,n)$, polarization effects and subnuclear degrees of freedom 7−67793
$^2H(\gamma,n)$, polarization meas. for E_γ=0.7-1.0 GeV 7−95913
$^2H(\gamma,n)$, relativistic gauge-invariant model, unified description, box diagrams 7−116181
$^2H(\gamma,n)$, total cross section, centre-of-mass motion, Siegert's theorem 7−121790
$^2H(\gamma,p)$, cross section meas. in Δ(1232) region 7−121788
$^2H(\gamma,pn(p))$, cross section meas. in Δ(1232) region 7−121788
$^2H(\gamma,pn)$, above π threshold, coupled channel anal. with Δ degrees of freedom 7−102858
$^2H(\gamma,pn)$, deuteron struct., gauge invariance in covariant approach *(Russian)* 7−121521
$^2H(\vec{\gamma},pn)$, photodisintegration by elliptically pol. γ-rays, ang. distribs. 7−81368
$^2H(\gamma,\pi^0)^2H$, 500-800 MeV, differential cross section, double scattering, dibaryon resonance contribution 7−141040
$^2H(\mu,\mu'X)$, deep inelastic scatt., nuclear EMC effects, structure function ratio 7−96055
$^2H(\mu^-,\nu\mu n)$, muon capture, next generation expts. 7−73659
$^2H(\mu^-,n)$ energetic neutron emission from muon capture, neutron spectrum 7−96030
$^2H(\vec{n}, n)$, 10-14 MeV, vector anal. power comparison to calcs. 7−96047
$^2H(n,X)$, three nucleon models predictions anal. 7−67811
$^2H(n,2n)$, 8.6 MeV, differential cross sections *(Chinese)* 7−116403
$^2H(n,2n)$, breakup configuration study, kinematically complete S-curve 7−109183
$^2H(n,2np)$, 15.8 MeV, diff. cross section meas., nn interaction parameters 7−121829

nuclei with mass number 1 to 5 continued
^{2}H(n,γ)^{3}H, polarisation correlations 7−81380
^{2}H(ñ,n′), low-energy scatt. by local pot., Faddeev calcs. and t matrices 7−67819
^{2}H(n,n), 8.6 MeV, differential cross sections *(Chinese)* 7−116403
^{2}H(n,n), doublet scattering, effective-range expansion, interaction profiles, slope parameter, scatt. length *(German)* 7−129048
^{2}H(n,n), E_n<20 MeV, total and differential cross sections, Paris NN potential anal. 7−67829
^{2}H(n,n), Faddeev calcs. and on-shell props. 7−67821
^{2}H(n,n), three-body calcs. using Paris two-nucleon pot. 7−67822
^{2}H(n,nn), Faddeev calcs. and on-shell props. 7−67821
^{2}H(p̄, p̄), 500, 800 MeV, proton spin observable meas. 7−141050
^{2}H(p̄,X), Coulomb modified Faddeev calculations of low-energy P-D observables 7−67813
^{2}H(p,γ), intermediate energy, meson exchange and relativistic correction effects 7−121842
^{2}H(p,γ)^{3}He, polarisation correlations 7−81380
^{2}H(p,γ)^{3}μHe 7−96130
^{2}H(p̄,n̄p), polarization transfer coeff., precision meas. 7−109174
^{2}H(p̄,n̄p), quasielastic scatt., 223-492 MeV, spin transfer parameters meas. 7−121854
^{2}H(p,p′), Coulomb effects in perithreshold resonance prod., multichannel N/D eqns. 7−135319
^{2}H(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{2}H(p,p′), scattering length correlation with binding energy, two-body model anal. 7−67832
^{2}H(p,p), 1 GeV, cumulative processes, isobar role, kinematically forbidden region, intranuclear cascade method 7−121820
^{2}H(p̄,p), 65 MeV, depolarisation parameter meas. 7−96048
^{2}H(p,p), differential cross section, multiple-scattering theory, inelastic screening, 3 TeV prediction 7−116195
^{2}H(p,π^+), coherent prod., three-body mechanisms 7−141047
^{2}H(π, X), 0 to 300 MeV, coupled nucleon-nucleon system, low-type eqns. 7−81450
^{2}H(π,π), 0 to 300 MeV, coupled nucleon-nucleon system, low-type eqns. 7−81450
^{2}H(π,π), coupled channel quasipotential model, string energy dependence of anal. power 7−81225
^{2}H(π,π), few-body system study 7−67876
^{2}H(π,π), relativistic Faddeev theory of πNN system 7−121754
^{2}H(π,π) discrepancies resolution using short range ΔN interaction 7−102809
^{2}H(π^-, $\mu^+\mu^-$X), nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
^{2}H(π^-, π^-), 1.75-3.1 GeV/c, backward scatt., differential cross section 7−96114
^{2}H(π^-,γnn), charge asymmetry and nn scatt. parameters 7−129111
^{3}H, beta decay, neutrino mass effects, differential probabilities of allowed transitions 7−121720
^{3}H beta decay, ν mass determ. 7−89560
^{3}H beta decay, $\bar{\nu}_e$ mass limit determ. 7−89561
^{3}H, binding energy, charge radius, momentum distrib. calcs. 7−67701
^{3}H, binding energy, three-body forces effect, variational calc. 7−116235
^{3}H binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{3}H, binding energy calcs. in two-body model 7−67832
^{3}H, β-decay, $\bar{\nu}$ mass upper limit 7−121740
^{3}H β-decay, $\bar{\nu}_e$ mass upper limit 7−81343
^{3}H, β-decay, $\bar{\nu}_e$ upper mass limit determ. 7−96031
^{3}H β-spectrum endpoint, $\bar{\nu}_e$ mass determ. 7−121737
^{3}H, charge form factor, multiquark compound states 7−109057
^{3}H, elastic form factor, isoscalar and isovector component separation 7−67706
^{3}H, electromagnetic trinucleon form factors 7−67709
^{3}H, Em form factor, bound state wave fn. props. 7−102801
^{3}H, form factors, group theoretical calcs. with multiquark and meson effects 7−67708
^{3}H, half-life determ. and Gamow-Teller transition rate 7−67767
^{3}H, nuclear charge density, quark exchange effects 7−102800
^{3}H, off-shell variation in binding energy 7−81289
^{3}H, two-pion exchange three-nucleon force, momentum space methods 7−128362
^{3}H, variational Monte Carlo calculations of few-body nuclei 7−67703
$^3_\Lambda$H, binding energy from stochastic variational method *(Chinese)* 7−116325
$^3_\Lambda$H, bound state existence, separable model Faddeev equations 7−109090
$^3_{\Sigma^-}$H, Σ^- hypernuclei, bound state existence, separable model Faddeev equations 7−109090
^{3}H(^{3}He,γ)^{6}Li, direct radiative capture, resonant structure of cross-section 7−109197
^{3}H(α,γ), 79-464 keV, astrophysical S(E) factor, ^{7}Li prod. rate 7−115229
^{3}H(α,γ)^{7}Li, cross sections, implications for solar neutrino prod. and big bang nucleosynthesis 7−135335
^{3}H(d, n)^{4}He, neutron generator targets, d ranges with allowance for T depth distrib. 7−103312
^{3}H(d, X), muon-α sticking prob. in muon-catalysed fusion 7−129126
^{3}H(d,X), fusion, μ catalyzed, μ transfer rate meas. 7−109249
^{3}H(d,X), muon catalysed, Schrodinger eqn. series soln. 7−115839
^{3}H(d,X), muon catalyzed fusion, muon sticking 7−121979
^{3}H(d,X), muon catalyzed fusion, parameter determ. 7−141119
^{3}H(d,X), muon catalyzed fusion, kinetics 7−141120
^{3}H(d,X), muon-catalyzed, effects of muon lag on sticking probability 7−121981
^{3}H(d,αn), nuclear Coulomb scatt. length, effective radius calcs. 7−122752
^{3}H(d,d), d-d and d-^{3}H, equivalent local potentials, single channel, two-channel RGM anal. *(Chinese)* 7−102889
^{3}H(d,n), ang. distrib. meas. at 1, 1.5 and 2 MeV 7−73776
^{3}H(d,n), cross section meas., R-matrix and S-matrix anal. 7−116427
^{3}H(d,n)^{3}He, 2.98-162.5 KeV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{3}H(d,n)^{4}μHe, muonic catalysed, X-ray and yield meas. 7−96130
^{3}H(d,nμ)^{4}He, muon catalyzed, effect of exit-channel on muon sticking 7−121980
^{3}H(e,e′), mag. form factors and meson exchange currents 7−135305
^{3}H(e,e′p), cross section meas., PWIA comparisons 7−129029
^{3}H(γ,X), low-energy reactions and three-body calcs. 7−67795
^{3}H(γ,n), electromagnetic observables, separable pot. formalism 7−128952
^{3}H(γ,π), elastic photoproduction in Δ(1232) resonance region 7−135299
^{3}H(t,nnμ)^{4}He, muon-catalyzed fusion, kinetics 7−141117
^{3}He(α,α), analyzing power, ang. and energy depend. 7−96086

nuclei with mass number 1 to 5 continued
$^4_\Lambda$H→π^-+^{4}He, microscopic theory of four particle hypernuclei 7−67760
^{A}H(d, n), A-2, 3, differential cross sections, determ. of nuclear vertex consts., Coulomb effects 7−116429
^{A}H(d,X), A=2,3, muon catalyzed fusion 7−141118
^{A}H(d,γ), A=1,2, tensor polarized reactions, D-state effects 7−67848
^{A}H(e,X), A=2, 3, struct. fns. and meson exchange currents 7−135305
^{A}H(e,e), A=1,2, form factor meas. at large momentum transfer 7−67707
^{2}He(e,X), quasielastic region scaling, inclusive spectra, struct. fns., 0.36 to 1.16 GeV^2 7−116184
^{2}He(γ,n), disintegration study using LADON photon beam 7−67794
^{2}He(p̄,X) 180 MeV, break-up cross-section meas., Glauber model predictions 7−141051
(^{3}He,^{3}He), polarised elastic scatt., microscopic spin-orbit potentials 7−81411
(^{3}He,t), charge exchange reactions, quasielastic peak shift 7−81418
^{3}He (e,pn), 0.7 GeV^2, electrodisintegration spectrum and struct. factor meas. 7−135304
^{3}He (π,π), 20-65 MeV, diff. cross section and anal. powers from microscopic wavefunctions 7−129108
^{3}He and proton nuclei magnetic moments ratio determ. 7−110134
^{3}He, binding energy calcs. in two-body model 7−67832
^{3}He electric dipole moment, contrib. from CP-violating NN interaction 7−128954
^{3}He, electromagnetic trinucleon form factors 7−67709
^{3}He, Em form factor, bound state wave fn. props. 7−102801
^{3}He form factor calcs., modified N/D method 7−128949
^{3}He ground state, proton-proton Coulomb interaction effects 7−81281
^{3}He, nuclear charge density, quark exchange effects 7−102800
^{3}He, polarisation with tunable laser 7−122460
^{3}He, π absorption on 3 nucleons, doorway model with πNN intermediate resonance 7−116521
^{3}He(^{3}He,X), 17.9, 21.7, 24 MeV, X=p,d,t,^{3}He,α total cross section meas. 7−67852
^{3}He(^{3}He,2p), 17.9−342.5 keV, astrophysical S(E) factor at solar energies 7−107814
^{3}He(α,γ)^{7}Be, cross sections, implications for solar neutrino prod. and big bang nucleosynthesis 7−135335
^{3}He(d,p), 1.0-13.0 MeV, cross section and analyzing power meas. 7−116436
^{3}He(d,p)^{4}He, 6.95-141.8 KeV, low energy fusion cross sections, ang. distribs., and excitation functions 7−81469
^{3}He(d,pα), 14.6 MeV, fast ion burn up in D plasmas, proton spectra meas. 7−73818
^{3}He(d,t), isospin asymmetry study 7−67847
^{3}He(e,X), electrodisintegration, struct. fns. and meson exchange currents 7−135305
^{3}He(e,e′2p), correlations and exchange currents in few-body systems 7−67773
^{3}He(e,e′), 538 MeV, struct. factor meas. 7−135304
^{3}He(e,e′), high momentum components and many-body effects 7−67805
^{3}He(e,e′p), 560 MeV, cross section meas., momentum distrib. and NN correlations 7−116400
^{3}He(e,e′p), coincidence study, PWIA anal. 7−116398
^{3}He(e,e′p), continuum state calcs. using Faddeev eqns. with Yukawa pot. 7−67802
^{3}He(e,e′p), cross section meas., proton momentum distrib. and nuclear forces anal. *(French)* 7−81379
^{3}He(e,e′p), high momentum components and many-body effects 7−67805
^{3}He(e,e′p), high momentum components and final state interaction 7−67806
^{3}He(e,e), charge form factor calcs. in configuration and momentum space 7−128952
^{3}He(γ,X), low-energy reactions and three-body calcs. 7−67795
^{3}He(γ,X), photon absorption mechanism in Δ resonance region 7−67796
^{3}He(γ̄,p), 90-350 MeV, cross section asymmetry in two particle photodisintegration 7−67799
^{3}He(γ̄,p), cross sections, asymmetry coeff. and electromagnetic current conservation 7−121796
^{3}He(γ,p), intermediate energy, meson exchange and relativistic correction effects 7−121842
^{3}He(γ̄,p)^{2}H, nucleon-nucleon interaction and meson exchange current, Faddeev wave fns. 7−121792
^{3}He(γ,pn), correlations and exchange currents in few-body systems 7−67773
^{3}He(γ,π^+)^{3}H, differential cross-sections, pion-nucleus coupling constant 7−81371
^{3}He(γ,π), elastic photoproduction in Δ(1232) resonance region 7−135299
^{3}He(γ,π), photon absorption mechanism in Δ resonance region 7−67796
^{3}He(γ→,p), E_γ>50 MeV, differential cross section calcs., giant resonance region 7−121795
^{3}He(p,X), 1.2 GeV, evidence for narrow isovector nonstrange dibaryons 7−135316
^{3}He(p,np), 2.5 and 5.0 GeV/c, ^{3}He→ppn nuclear vertex fn. determination 7−135320
^{3}He(p,p)$_2$, Glauber multiple scattering theory anal. 7−109164
^{3}He(p,π^+), microscopic mechanism 7−102868
^{3}He(π, π′)X, quasi-free scattering and multistep processes cross section meas. 7−81452
^{3}He(π, π′p)X, quasi-free scattering and multistep processes cross section meas. 7−81452
^{3}He(π,X), few-body system study 7−67876
^{3}He(π^-,η)^{3}H, 680 MeV/c, η-meson prod. cross section 7−89583
^{3}He(π^-,γ), capture from mesic atoms, current algebra model 7−121954
^{3}He($\pi^\pm$, X), 3-nucleon absorption 7−121962
^{3}He($\pi^\pm$, X), >65 MeV, quasi-free π absorption, reaction mechs. 7−121961
^{3}He→d+p, nuclear vertex consts., determ. from charged particle reactions 7−116429
^{4}He ($\bar{\nu}$,X)^{2}H, deuterium yield in cosmological models with massive unstable leptons 7−128138
^{4}He abundance in cosmological models with massive unstable leptons 7−128138
^{4}He, binding energy calcs., isobar degrees of freedom in the non-unitary model operator approach 7−109001
^{4}He binding energy calcs. and suppression of off-energy-shell interactions 7−73694
^{4}He, charge radius deduced from muonic atom Lamb shift 7−110145
^{4}He D-state component from ^{2}H(d, γ) 7−121982
^{4}He ground state, D-state admixture from ^{2}H(d, γ) 7−121859
^{4}He, L=0$^+$ states, appl. of symplectic shell model 7−81308

uclei with mass number 1 to 5 continued
^{4}He, momentum distribs., ATMS method 7−128973
^{4}He, natural parity states in 10ħω model 7−108975
^{4}He resonances from ^{2}H(d, X) polarisation data, R-matrix approach anal. 7−116358
^{4}He(^{3}He, π^0)^{7}Be, subthreshold energy reaction, clustering correlation calcs. 7−81415
^{4}He(^{3}He, π^+)^{7}Li, subthreshold energy reaction, clustering correlation calcs. 7−81415
^{4}He(N,N), resonances in N+α system, oscillator representation in resonating group method 7−67786
^{4}He(α, X), ultrarelativistic, energy flow, additive quark and wounded nucleon models 7−109129
^{4}He(α,α), 126 GeV, Chou-Yang model anal., cross sections 7−89574
^{4}He(α,α), cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
^{4}He(d,^{3}He), 35, 45 MeV, diff. cross section and anal. power ang. distribs., asymptotic normalisation 7−116373
^{4}He(d,e$^+$e$^-$)^{6}Li, pair production, polarisation phenomena 7−73775
^{4}He(d,pn), isospin breaking and breakup calcs. with Coulomb interaction 7−67846
^{4}He(e,e′), inelastic scatt. charge form factor calc. 7−121597
^{4}He(γ,pn)^{2}H nucleon momentum distributions and quasideuteron correlations, quasi-^{3}He decay 7−121784
^{4}He(γ,pnn), disintegration study using LADON photon beam 7−67794
^{4}He(n,n), centre-of-mass effects in resonating group theory 7−116408
^{4}He(n,n), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
^{4}He(n,n), multichannel scatt. by negative energy Weinberg states 7−67772
^{4}He(p̄,X), 192.8, 306.2, 607.7 MeV/c, determ. of σ(p̄n)/σ(p̄p) 7−102764
^{4}He(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
^{4}He(p,p′)^{4}He, nuclear responses to isoscalar spin-dependent excitations 7−116414
^{4}He(p,p), 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{4}He(p,p), cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
^{4}He(p,p), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
^{4}He(p,p), phase shifts and differential cross section calcs. *(Chinese)* 7−96066
^{4}He(p,p)^{4}He, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
^{4}He(π,π′), 180 MeV, nuclear isospin mixing in ^{4}He 7−116382
^{4}He(π$^-$,π$^+$)4n, tetraneutron bound state 7−73799
^{4}He→t+p, nuclear vertex consts., determ. from charged particle reactions 7−116429
^{5}He resonant states, L.S splitting, microscopic calcs. of ^{4}He(n,n) 7−121772
^{5}He$_Λ$, α-cluster hypernuclei and hypernuclear interactions, nuclear forces 7−128996
^{5}He$_Λ$, ground state binding energy, semiphenomenological study 7−81325
^{5}He$_Λ$, interactions and binding energy, variational calcs. of α-cluster models 7−67759
^{5}He$_Λ$, Λ-N interaction and struct. anal., ground state binding energy *(Chinese)* 7−116326
^{6}He$_Λ$, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
^{A}He, A=3,4, form factors, group theoretical calcs. with multiquark and meson effects 7−67708
^{A}He, A=3,4, variational Monte Carlo calculations of few-body nuclei 7−67703
^{A}He(α, X), A=3, 4, momentum spectra and differential cross sections at 7.0 GeV/c 7−81416
^{A}He(e,X), A=3,4 y scaling behaviour of response functions, impulse approx. 7−67804
^{A}He(π, π(π$^-$)), intermediate energies, theoretical and exptl. review 7−109234
^{A}He(π,X), A=3,4, intermediate energies, theoretical and exptl. review 7−109234
^{A}He(π,π), A = 3,4, cross sections and ang. distrib., 300-475 MeV 7−109235
^{6}He, elastic form factor, isoscalar and isovector component separation 7−67706
He(n,X), Los Alamos expts. 7−67820
He(n,n), Los Alamos expts. 7−67820
He(p,X), Los Alamos expts. 7−67820
He(p,p), Los Alamos expts. 7−67820
He(π,X), Los Alamos expts. 7−67820
He(π,dN)N, quasifree-nucleon absorption mode obs. 7−96117
He(π,π), Los Alamos expts. 7−67820
H(n,X), Los Alamos expts. 7−67820
H(n,n), Los Alamos expts. 7−67820
H(p,X), Los Alamos expts. 7−67820
H(p,p), Los Alamos expts. 7−67820
H(π,X), Los Alamos expts. 7−67820
H(π,π), Los Alamos expts. 7−67820
^{A}Li$_Λ$, A=7, 9, energy level anal. using OBE-based effective ΛN interaction, cluster model calcs. 7−109092
np capture, E_n=61 MeV, differential cross section meas. 7−67830
(p,p′), 6-15 MeV, resonances, nonstatistical nature 7−109159

nuclei with mass number 6 to 19
1p shell nuclei, electric dipole resonances from photonuclear cross section anal. 7−102852
A=15, 17, 39, 41, isoscalar mag. moments in σ-ω model, RPA type vertex corrections 7−109020
A=4-16, binding energies and nuclear moments, large-scale shell-model calculations 7−109065
A<19, folded and Coulomb pots., analytic formulae and charge distribs. 7−121770
axial charge transitions in relativistic nuclear models and nonrelativistic meson exchange currents, A=16 nuclei 7−116298
light neutron rich nuclei, HF calcs., radii, binding energies, density distribs. 7−102799
nuclear-density dependence of the electron-proton coupling 7−96056
Z=5-15, mass measurements far from stability using (^{40}Ar,X) 7−109002
^{12}C(γ,π^0), 138-146 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
^{12}C(p,p′), anal. using relativistic impulse approx. with exchange 7−67836

nuclei with mass number 6 to 19 continued
^{6}Li(γ,π^0), 138.5-146.5 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
^{6}n system, binding properties, stability 7−81286
^{13}N, isovector ΔJ^π=0$^-$ transition study from (p, n) reactions 7−81386
^{A}O, A=14, 15, isovector ΔJ^π=0$^-$ transition study from (p, n) reactions 7−81386
(p,pN), on A=6-16 nuclei, t-matrix approx. with distorted waves 7−121825
(p,pX), cluster knock-out, on A=6-16 nuclei, t-matrix approx. with distorted waves 7−121825
(π$^±$,p) 120,145 MeV, on A=12-58, discrete final state excitation, diff. cross sections. 7−96115
(π$^±$, X), 60, 65 MeV, on A=12-90, total reaction cross sections, use in optical anals. 7−121960
^{12}(^{12}C, ^{12}C$^-$), E/u>10 MeV, role of 3α fragmentation processes, coupled channel anal. 7−129103
^{12}(^{12}C, ^{12}C), microscopic analysis at intermediate energies 7−121929
^{8}B decay, β$^+$- and ν-spectra 7−121731
^{9}B, first excited state energy from analogue ^{9}Be level 7−108950
^{10}B(^{3}He, ^{3}He), ^{13}N level struct. study 7−109033
^{10}B(α,dγ), density matrix spin tensor for ^{12}C 2$^+$ 4.43 MeV state, model-free extraction 7−135209
^{10}B(γ,xn), 8.44-24.5 MeV, cross section meas., El-giant resonance region study 7−129018
^{10}B(n, p), thermal n cross section meas. 7−116405
^{10}B(n,α)^{7}Li reaction in cells and tissue, Monte Carlo simulation of biological effect and implication for B neutron capture therapy 7−126942
^{11}B (p,n)^{11}C, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{11}B, nuclear spin and magnetic moment meas. 7−109018
^{11}B(^{7}Li,X), 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
^{11}B(^{7}Li,X), 88 MeV, ^{14,15}O spectrum, search for ^{3}n and ^{4}n 7−96106
^{11}B(α,α), optical and folding model anal. 7−96087
^{11}B(α,p)^{12}C, 0.9-1.7 MeV, total cross sections, resonance obs. 7−121871
^{11}B(α,p)^{14}C, 118 MeV, proton angular distrib., DWBA anal., ^{14}C energy level study 7−121617
^{11}B(α,tγ), density matrix spin tensor for ^{12}C 2$^+$ 4.43 MeV state, model-free extraction 7−135209
^{11}B(γ,^{3}Hγ′), reaction mechanism, photon energy spectrum 7−81369
^{11}B(p,3α), 22-1100 keV, cross sections, kinematically complete coincidence measurements, astrophysical S(E) factor 7−121848
^{11}B(p,p^1)$_2$, analysing power excitation functions, coupled channel model calcs., ^{12}C resonances 7−129041
^{11}B(p,p′), 4-10 MeV, analyzing power calcs., coupled-channels anal. 7−116415
^{6}Be, 2$^+$ states, two-nucleon decays, competing serial cascade mechanisms 7−135261
^{7}Be, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
^{7}Be(γ,X), photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
^{8}Be, α-decay, quasistationary state parameters in RGM, algebraic calcs. 7−135228
^{8}Be(α,γ)^{12}C, microscopic theory in 3α cluster model. generator coordinate method, ^{12}C spectroscopy 7−121874
^{9}Be, first excited state, line shape and excitation strength 7−95992
^{9}Be, highly excited states, γ excitation fn. meas. ^{6}Li(t,p)^{8}Li and ^{7}Li(d,p)^{8}Li exptl. study 7−121612
^{9}Be, three-body calc. of low-lying states 7−67722
^{9}Be$_Λ$, α-cluster hypernuclei and hypernuclear interactions, nuclear forces 7−128996
^{9}Be(^{93}Nb,X), E/A=8.4-30.3 MeV, complex fragment emission meas. 7−141075
^{9}Be(e,X), 225 MeV, X=^{3}He, α, cross sections, quadrupole excitation contributions 7−121807
^{9}Be(γ,X), 100-250 MeV, X=^{3}He, α, cross sections, quadrupole excitation contributions 7−121807
^{9}Be(γ,p), cross section meas. in Δ(1232) region 7−121788
^{9}Be(γ,pn(p)), cross section meas. in Δ(1232) region 7−121788
^{9}Be(n,n) slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{9}Be(n,t), 14.6 MeV, cross sections and ang. distribs., fusion reactor appl. 7−67826
^{9}Be(p̄, d), analyzing power meas. of inclusive spectra 7−121833
^{9}Be(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
^{A}Be$_Λ$, A=9,10, interactions and binding energy, variational calcs. of α-cluster models 7−67759
^{10}Be$_{ΛΛ}$, α-cluster hypernuclei and hypernuclear interactions, nuclear forces 7−128996
^{10}Be$_{ΛΛ}$, double-Λ binding energies, HF calcs. *(Chinese)* 7−96008
$_Λ^9$Be, hypernuclei, Λ-α effective interaction *(Chinese)* 7−102830
Be(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
Be(π$^-$, φX), cross section meas. at 85 GeV/c 7−116520
C resonance levels, effect of time evolution of extra spatial dimens. 7−89418
C(Ar,X), 30 MeV/u, hard photon prod., ang. distrib. meas. 7−116471
C(C,X), in-plane light particle correlations 7−129086
C(^{12}C,p^{1}B), 2.1 GeV/N, relativistic fragmentation, cross section, direct step anal. 7−121914
C(^{3}He,t), search for Δ bound states 7−81454
C(Kr,X), 44 MeV/u, hard photon prod., ang. distrib. meas. 7−116471
C(^{14}N,X), 20, 30 and 40 MeV, γ-ray energy and ang. distribs. 7−116515
C(Ne,X), 200 to 1000 MeV/u, fragment prod. at small angles study 7−81448
^{A}C(^{12}C, ^{12}C), A=12, 13, interference between refraction and diffraction in elastic ang. distribs. 7−102907
^{A}C(^{3}He,^{3}He), 16-22 MeV, A=12,13,14, ^{3}He angular distrib., cross section meas. 7−121869
^{A}C(^{3}He,t), A=12, 13, 0.6-2.3 GeV, DWIA calcs. angular distribs., isovector strengths, spin-isospin transitions 7−135339
^{A}C(^{6}Li,^{6}He), A=12,14, 14, 25, 35 MeV/nucleon, angular distrib., G-T transitions, cross sections, reaction mechanism, DWBA comparisons 7−121903
^{A}C(α,α), A=12, 13, optical and folding model anal. 7−96087
^{A}C(e,e′)^{A}C, A=12,13 electroexcitation of discrete levels at high momentum transfers 7−129025
^{A}C(p,π$^+$), A=12, 13, cross sections, shell model calcs. 7−102881

nuclei with mass number 6 to 19 continued
(^{12}C,X), on emulsion, pion and proton production in forward and backward hemisphere 7−135350
(^{12}C,X) in emulsion, 4.5 GeV/C/N, multiparticle prod., multiplicity and pseudorapidity 7−129077
(^{12}C, ^{12}C), microscopic coupled-channels study of the scattering and breakup of light heavy-ions 7−102914
^{12}C, 2^+ state, γ-ray ang. correlations, tensor characteristics 7−67763
^{12}C (^{15}N,X), resonant structures 7−121938
^{12}C (^{6}Li, ^{6}Li′), 156 MeV, E0 strength at excitation energy 7.65 MeV, 10.2 MeV and 19-21.5 MeV 7−116361
^{12}C (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
^{12}C (γ,n)^{11}C, cross-section meas. 7−121794
^{12}C (p, p′)^{12}C, correlation function symmetry, PWIA for 1^+ states 7−96070
^{12}C (p, p), relativistic microscopic calcs. and spin observables 7−81392
^{12}C ($\bar{p}$, p)X, knock-out reactions, search for $\bar{p}$-nucleus states 7−135322
^{12}C, α-cluster model in harmonic oscillator basis, variational calcs. 7−128366
^{12}C, cluster Faddeev calcs. and three-body force effects 7−67751
^{12}C, excited states, B(E2) transition probabilities, level density, hyperspherical-fn. method 7−121615
^{12}C, inclusive charge longitudinal response, RPA anal. 7−116252
^{12}C, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
^{12}C resonances from ^{11}B(p,p^1) 7−129041
^{12}C, semi-classical longitudinal response, RPA theory 7−121675
^{12}C spectroscopy from ^{8}Be(α,γ), distortion effects, cluster model anal. 7−121874
^{12}C, spin-isospin probes, RPA finite nucleus response, strength distrib. effects 7−135203
^{12}C, three-alpha Fadeev calcs., bound-state anal. with Pauli correct α-α potential 7−67729
(^{12}C, X), microscopic coupled-channels study of the scattering and breakup of light heavy-ions 7−102914
(^{12}C, X) emulsion interaction, relativistic three particle pseudo-rapidity correlations 7−129095
$^{12}C_\Sigma$ isospin oscillations from (K^-, π^-) 7−102831
^{12}C-emission natural radioactivity, anal. 7−121746
^{12}C+^{12}C, noncompact-group model for quasimolecular nuclei *(Chinese)* 7−109205
^{12}C+^{18}O, noncompact-group model for quasimolecular nuclei *(Chinese)* 7−109205
^{12}C(^{A}C,^{A}C), 20 MeV/nucleon, A=12, 13, obs. of nuclear rainbow scattering effect *(Chinese)* 7−96091
^{12}C(^{11}B, ^{4}He)^{19}F, 33, 35, 38, 48 MeV, γ-decaying states in ^{19}F 7−116227
^{12}C(^{12}C, ^{12}C), 18.50 MeV, modified Newton method appl. to elastic phase inversion 7−96097
^{12}C(^{12}C, ^{12}C), 1.45, 2.46 GeV, surface transparency at NN cross section minimum 7−121931
^{12}C(^{12}C, ^{12}C), 20-600 MeV/N, eikonal calcs. with Pauli blocking, energy depend. 7−121933
^{12}C(^{12}C, ^{12}C), 9.6-10.4 and 11.75-12.5 MeV, elastic scatt. reaction, finer structure 7−135347
^{12}C(^{12}C, pX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{12}C, ppX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{12}C, X), sub-Coulomb resonances, doorway formalism 7−129007
^{12}C(^{12}C,^{12}C′)^{12}C, cross-sections, coupled channels framework 7−81441
^{12}C(^{12}C,^{12}C), microscopic optical pot. 7−81357
^{12}C(^{12}C,^{12}C), optical pots. and form factors determ. 7−96093
^{12}C(^{12}C,^{12}C)^{12}C, excitation functions and angular distributions 7−121942
^{12}C(^{12}C,^{12}N), 10-45 MeV/u, cross sections, final state population anal. 7−109233
^{12}C(^{12}C,^{12}N), 35 MeV/u, reaction anal. 7−116496
^{12}C(^{12}C,^{13}C)^{11}C, 25-35 MeV/nucleon, ground-state angular distrib., cross sections, DWBA calcs. 7−129100
^{12}C(^{12}C,^{8}Be), ^{16}O high-spin α-cluster resonances 7−109228
^{12}C(^{12}C,X), ^{1,2,3}H emission by projectile break-up, 4 MeV/u 7−135363
^{12}C(^{12}C,X), 4.2 GeV/c/N, proton emission region size from two-proton correls. 7−141055
^{12}C(^{12}C,X), below Coulomb barrier, semi-statistical formalism 7−129013
^{12}C(^{12}C,X), intermediate structure 7−121936
^{12}C(^{12}C,X), microscopic optical pot. 7−81357
^{12}C(^{12}C,X), molecular resonances, rotation-vibration model *(Chinese)* 7−102903
^{12}C(^{12}C,α), 37.1 MeV, high lying state search 7−73731
^{12}C(^{139}La,X), compound nucleus binary decay, complex fragment emission 7−96099
^{12}C(^{139}La,X), E/A=50 MeV/u, complex fragment emission meas. 7−141075
^{12}C(^{13}C,^{13}N), 10-45 MeV/u, cross sections, final state population anal. 7−109233
^{12}C(^{14}N,X), ^{1,2,3}H emission by projectile break-up, 4 MeV/u 7−135363
^{12}C(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{12}C(^{14}N,d)^{24}Mg, analysis of ang. distribs. 7−81439
^{12}C(^{16}O, pX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{16}O, ppX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{16}O,^{8}Be), ^{20}Ne 7−109228
^{12}C(^{16}O,^{8}Be)^{20}Ne, E_{cm}=19-24 MeV, resonances, reduced width meas. 7−116491
^{12}C(^{16}O,X), ^{1,2,3}H emission by projectile break-up, 4 MeV/u 7−135363
^{12}C(^{16}O,X), excitation functions of evaporation residues 7−73789
^{12}C(^{16}O,α), angular distrib. calcs. using α-particle model 7−81419
^{12}C(^{16}O,αα)^{20}Ne, 51.5 MeV, ^{24}Mg energy level spin study 7−109038
^{12}C(^{17}O,^{17}O′), nucleon promotion, DWBA calcs. 7−102910
^{12}C(^{19}F,^{19}F′), 63.8 MeV, substrate population probability meas. 7−129106
^{12}C(^{20}Ne,αX), X=^{12}C, ^{16}O, ^{20}Ne, 157 MeV, projectile breakup and transfer reemission, stat. anal. 7−81434
^{12}C(^{24}Mg, ^{24}Mg), elastic and inelastic, fluctuations, statistical anal. 7−129089
^{12}C(^{56}Fe,X), 1.8 GeV/nucleon, in nuclear emulsion, secondary particle props., cascade-evaporative model comparisons 7−135359
^{12}C(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
^{12}C(^{6}Li,^{6}Li′)^{12}C, isoscalar giant resonances 7−116466

nuclei with mass number 6 to 19 continued
^{12}C(^{6}Li,X), 178 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
^{12}C(^{6}Li,α), 30 MeV, direct and fusion components, cross section calcs., statistical model comparisons 7−121899
^{12}C(^{6}Li,αd)^{12}C, 178 MeV, ^{6}Li→α+d breakup, coupled-channel and α-d cluster model anal. 7−116498
^{12}C(^{7}Li,^{7}Be)^{12}B 7−135356
^{12}C(^{7}Li,X), 132 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
^{12}C(^{7}Li,αt), 70 MeV, wide angle fragment correlations 7−135369
^{12}C(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{12}C(X,X′), X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844
^{12}C(α,X), 200, 400, 600, 800 A.MeV, (p,p), (d,d) correlation fn. meas. 7−116452
^{12}C(α,X), 4.2 GeV/c/N, proton emission region size from two-proton correls. 7−141055
^{12}C(α,α′), 172.5 MeV, angular distrib. meas., multipolarities, deformation lengths, GQR region study 7−121870
^{12}C(α,α′), 30 MeV, α-γ angular correlations, 2^+→0^+ transition 7−121867
^{12}C(α,α), optical model anal., attractive and repulsive α-nucleus pots. 7−135342
^{12}C(α,α), optical pots. and form factors determ. 7−96093
^{12}C(α,α)^{12}C, elastic scatt. phase shifts and partial waves 7−81412
^{12}C(α,γ), E1 and E2 contribs., R-matrix fit 7−81408
^{12}C(α,π), 200, 400, 600, 800 A.MeV, $\pi^\pm$ multiplicity meas. 7−116451
^{12}C(α,xpX), 4.2 GeV/N, two-proton correls., proton emission region dimensions 7−67854
^{12}C(d,^{2}He), 650 MeV, 2 GeV, energy spectra and tensor anal. power meas. 7−135293
^{12}C(d,^{6}Li)^{8}Be, vector and tensor analysing powers 7−109190
^{12}C(d,X), 4.2 GeV/c/N, proton emission region size from two-proton correls. 7−141055
^{12}C(d,n)^{13}N, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{12}C(d,p), 4.2 GeV, hybrid model cross section calcs., exptl. comparisons 7−121860
^{12}C(d,p)^{13}C reaction for trace element analysis of meteorites and cosmic dust 7−94833
^{12}C(e, e′γ), giant resonance electromagnetic decay, RPA calcs. with Skryme-3 interaction 7−116390
^{12}C(e,X), 225 MeV, X=^{3}He, α, cross sections, quadrupole excitation contributions 7−121807
^{12}C(e,e′), 200-300 MeV/c, 2p2h correls. effects on longitudinal quasielastic response 7−73690
^{12}C(e,e′), quasielastic peak shift, q depend., relativistic σ-ω model calcs. 7−96057
^{12}C(e,e′p), quasi-free knockout, nuclear medium effects on ep coupling 7−121812
^{12}C(e,e), 238, 419 and 431 MeV, form factor energy depend., dispersive effects 7−116394
^{12}C(e,f), 250 MeV, proton, deuteron spectra 7−89569
^{12}C(e,ν_e)^{12}B, 0.5-6.0 GeV, differential cross section vs. nuclear angle, form factors 7−141041
^{12}C(γ, pd)^{9}Be, 80 MeV, cross sections, angular distribs., energy correlations *(Russian)* 7−116379
^{12}C(γ,K), relativistic impulse approx. using Dirac single particle wave fns. 7−102860
^{12}C(γ,X), 100-250 MeV, X=^{3}He, α, cross sections, quadrupole excitation contributions 7−121807
^{12}C(γ,n)^{11}C, total activity and relative radiolysis prod. yields, nuclear medicine appl. 7−133451
^{12}C(γ,np), 80-130 MeV, correlated n-p pair meas. 7−116386
^{12}C(γ,p), cross section meas. in Δ(1232) region 7−121788
^{12}C(γ,p), E_γ=60 and 70 MeV, high energy resolution study 7−135302
^{12}C(γ,pd)^{9}Be, angular pd correlations 7−121787
^{12}C(γ,pn(p)), cross section meas. in Δ(1232) region 7−121788
^{12}C(γ,pn) ^{10}B, 70-150 MeV, nuclear vertex constant estimation for ^{12}C→d+^{10}B 7−116388
^{12}C(γ,π^0), 130-155 MeV, near threshold prod. cross section meas. 7−121798
^{12}C(μ,μ′X), 120-280 GeV, nucleon structure function high-stats. meas. 7−135124
^{12}C(n,X), total cross section meas. in ^{13}C resonance region 7−96076
^{12}C(n,α), differential cross section meas., use of low background telescope system 7−81891
^{12}C(n,γ_0)^{13}C, 6.5-18.5 MeV, excitation fn., cross section meas. in giant dipole resonance region 7−67828
^{12}C(n,n′γ), linear and circular γ-ray polarization calcs. 7−96074
^{12}C(n,n′), above 14 MeV, cross sections, errors in ENDF/B-V evaluation, kerma-factor calcs. 7−121836
^{12}C(n,pdt), 300-500 MeV, inclusive cross sections, quasi-two-body scaling model anal. 7−129054
^{12}C(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
^{12}C(p,X), 4.2 GeV/c/N, proton emission region size from two-proton correls. 7−141055
^{12}C(p,γ)^{13}N, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{12}C(p,n), 35, 40 MeV, ^{12}N low-lying states study, DWBA anal. 7−102873
^{12}C($\bar{p}$,$\bar{n}$)X, cascade model calcs. 7−109168
^{12}C($\bar{p}$,$\bar{p}$′)^{12}C, deformed spin-orbit potential, cross-sections and analysing powers 7−121851
^{12}C($\bar{p}$,$\bar{p}$), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{12}C(p,p), reaction time meas. for ^{13}N resonant state lifetime study 7−135274
^{12}C(p,pπγ), 10 GeV/c invariant inclusive cross section meas., reaction props. 7−121847
^{12}C(π, π′), 100-291 meV, diff. cross sections, ang. distribs., DWIA anal. 7−121958
^{12}C(π,πγ)^{12}C, angular correlations in Δ-resonance region 7−96119
^{12}C(π^-, ppp), 5 GeV/c, multibaryon resonance search 7−135379
^{12}C(π^-,γX), 4 GeV/c, inclusive characts. of γ-rays 7−67880
^{12}C(π^-,γ), capture from mesic atoms, current algebra model 7−121954
^{12}C(π^+,K^+), hypernuclear state production, cross section calcs. 7−67879

uclei with mass number 6 to 19 continued

$^{12}C(\pi^+,3p)X$, E=355,375,405 MeV/c, Δ(1232) region, proton spectra, quasi-free scatt. broad structure 7−135375
$^{12}C(\pi^+,\pi^-)$, 50-120 MeV, excitation function and ang. distrib. for double charge exchange 7−96116
$^{12}C(\pi^+,\pi^+)$, excitation function meas., optical model calcs. 7−109238
$^{12}C(t,^7Li)^8Bi$, cluster transfer angular distrib., DWBA calcs. 7−129062
$^{12}C(t,p)$, 33 Mev, ^{14}C excitation energies study 7−121623
^{13}C resonance search at 20 MeV using anal. power meas. in $^{12}C(n, n)$, ^{13}C resonance search at 20 MeV using anal. power meas. 7−96044
$^{13}C(^{12}C, ^{12}C)$, 49.14 MeV, cross section meas., optical model, DWBA anal. 7−73790
$^{13}C(^{13}C,^{12}C)^{14}C$, neutron transfer, molecular particle-core 7−129087
$^{13}C(^3He,t)$, collective spin-isospin excitations 7−109200
$^{13}C(^{58}Ni,^{58}Co)$, reaction mechanism and energy depend., microscopic description 7−135361
$^{13}C(^7Li,X)$, 34 MeV, elastic scatt. and single nucleon transfer, optical anal., DWBA calcs. 7−96098
$^{13}C(\alpha,n)^{16}O$ in evolved stars, constraints on models 7−140091
$^{13}C(e,e')$, p-shell config. mixing and meson exchange current effects, Cohen-Kurath have function calcs. 7−89568
$^{13}C(e,e')$, 2ħω structure in ^{13}C, anal. using inelastic scatt. 7−116392
$^{13}C(\gamma,\pi^-)^{13}N$, axial current form factor in the time-like region 7−109142
$^{13}C(p, d)$, with subsequent decay to ground state, tensor polarisation, DWBA calcs. 7−135327
$^{13}C(p, n)^{13}N$, isovector $\Delta J^\pi=0^-$ transition study 7−81386
$^{13}C(p,d)$, 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
$^{13}C(p,n)^{13}N$, recoil charged particle induced reactions, yields, average cross-sections 7−89571
$^{13}C(\pi,\pi')$, 2ħω structure in ^{13}C, anal. using inelastic scatt. 7−116392
^{14}C energy levels, $^{11}B(\alpha,p)^{14}C$, 118 MeV study 7−121617
^{14}C, excitation energies study using 33 MeV $^{12}C(t,p)$ reaction 7−121623
^{14}C, extremely strong E1 transition, radiative width 7−89557
^{14}C, radioactivity, even-odd effect, superasymmetric fission model 7−135294
$^{14}C(^6Li,^6He)$, 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
$^{14}C(\pi^+,\pi^-)$, 50 MeV, pionic atom search 7−109241
$^{14}C(\pi^+,\pi^-)^{14}O$, impulse approx. model 7−129110
$C(\alpha,X)$, relativistic collisions, pion spectra 7−81417
C(h,X), narrow jet obs. in 0.4 TeV cosmic hadron-C collisions 7−140968
C(n,X), 4.2 GeV/c, secondary π^- average multiplicities, momenta and ang. characts. 7−67841
C(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
C(p,X), four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203
C(p,X), pseudorapidity meas. and fireball model 7−96058
C(p,p'), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
C(π, X), 5 GeV/c, noninvariant distributions, longitudinal and transverse momenta, scaling in the mean 7−116523
C(π,X), pseudorapidity meas. and fireball model 7−96058
C(π⁻,X), four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203
C(π⁻,X), kinematic variables and associative multiplicities, correlation characts. 7−95941
C(π,2π), multistep processes 7−96118
C(π,xp), search for Δ bound states 7−81454
F(Ne,X), 200 to 1000 MeV/u, fragment prod. at small angles study 7−81448
^{16}F, low-lying states, $^{16}O(p,n)^{16}F$ reaction anal. 7−102873
^{17}F, ^{17}O Coulomb displacement energy calcs., Brueckner's G-matrix anal. 7−128935
^{18}F, coexistence model for even-parity levels, E2 transition probabilities, matrix elements 7−81330
^{18}F, γ-ray circular polarisation meas., weak pion-nucleon coupling strength 7−109102
^{19}F band structure, level energies, reduced α-widths, B(E2), B(M1) calcs., $\alpha+^{15}N$ cluster model anal. 7−73680
^{19}F, γ-decaying states, $^{12}C(^{11}B, ^4He)^{19}F$ study 7−116227
^{19}F resonances and γ-transition strength from $^{15}N(\alpha,\gamma)$ 7−135287
$^{19}F(^{12}C,^{12}C^-)$,30,40,50,60 MeV, phase anomaly, coupled channels calcs. 7−129105
$^{19}F(^{16}O,^{16}O^-)$, 60,80 MeV, angular distrib. meas., coupled-channels optical model comparisons 7−129107
$^{19}F(^6Li, ^6Li)$, 34 MeV, optical pot. derivation from expt. data 7−141092
$^{19}F(^6Li, d)$, 34 MeV, energy levels, spin assignments and spectroscopic factors, DWBA comparison 7−141092
$^{19}F(e,e')$, 500 MeV, transverse excitation of positive/negative parity states, form factors, shell model comparisons 7−128944
$^{19}F(p,\gamma)$, 1.35, 4.15 MeV, T=1 isobaric analogue states in ^{20}Ne 7−109040
$^{19}F(p,p)$, 2-3.5 MeV, T=1 isobaric analogue states in ^{20}Ne 7−109040
$^{19}F(t,X)$, cluster transfer angular distrib. 7−129062
^{19}F, configuration mixing among $11/2^-$ states 7−108965
^6He $_{\Lambda\Lambda}$ double-Λ binding energies, HF calcs. *(Chinese)* 7−96008
^6He, 2^+ state, energy and width, nonspin αnn model 7−121613
^6He, 2^+ states, two-nucleon decays, competing serial cascade mechanisms 7−135261
^6He (γ,X), photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
$^6He_\Lambda$, interactions and binding energy, variational calcs. of α-cluster models 7−67759
$^6He_{\Lambda\Lambda}$, α-cluster hypernuclei and hypernuclear interactions, nuclear forces 7−128996
$^6He_{\Lambda\Lambda}$ binding, in Λ-α-Λ model, strength and range parameter of Λ-Λ potential 7−109089
^9He, ground and excited states from $^9Be(\pi^-,\pi^+)$ 7−109003
$^{\Lambda\Lambda}{}^6He$, hypernuclei, Λ-α effective interaction *(Chinese)* 7−102830
$^6Li(\alpha,\gamma)$, laser polarized target, reaction cross section meas. 7−135386
Li fusion reactor blanket materials, multiple neutron scatt. effects 7−96307
$(^6Li,^6Li)$, ^6Li-breakup cross sections, energy and target dependence, coupled discretized continuum channel anal. 7−116500
$(^6Li, ^6Li)$, composite particle optical pot., breakup contrib., energy and target depend. 7−121861
^6Li, 2^+ states, two-nucleon decays, competing serial cascade mechanisms 7−135261
^6Li (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^6Li, αnp model, $^6Li(p,pd)^4He$ reaction anal. 7−121846

nuclei with mass number 6 to 19 continued

^6Li, EM props. from $(\alpha+d)$ cluster model with breathing clusters, form factors, movements 7−121598
$^6Li(^3He, ^3He)$, 34-70 MeV, exchange effects role in elastic scatt; optical and DW anals. 7−67853
$^6Li(^6Li,n)^{11}C$, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
$^6Li(^6Li,p)^{11}B$, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
$^6Li(\alpha,\alpha)$, 36.6, 50.5 MeV, exchange effects role in elastic scatt; optical and DW anals. 7−67853
$^6Li(\alpha,\alpha d)$, 45 MeV, cluster knockout reactions 7−121878
$^6Li(d,X)$, 1-100 keV, cross section meas. in target under laser compression 7−116425
$^6Li(e,e'd)$, coincidence reactions, PWIA, DWIA and optical model calcs. 7−116396
$^6Li(e,e'p)$, density depend. of electron-proton coupling 7−141042
$^6Li(e,e'p)$, quasi-free knockout, nuclear medium effects on ep coupling 7−121812
$^6Li(e,e'p)^5He$, s and p proton momentum distribs. 7−121809
$^6Li(\gamma,pd)^3H$, direct mechanism and low-energy peak of p spectrum 7−96054
$^6Li(p,^3He)^4He$, 149-463 keV, CR-39 anal. *(Korean)* 7−81381
$^6Li(p,\Delta^{++})^6He$, quark-quark spin-isospin interaction, DWBA anal. 7−67844
$^6Li(p,\gamma)^7Be$, ang. distribs. meas. to ground and first excited states 7−109155
$^6Li(p,pd)^4He$, 0.5-1.0 GeV, deuteron production mechanism, tensor polarization calcs., ^6Li αnp model 7−121846
$^6Li(\pi,\pi d)X$, triple differential cross-section meas. 7−96120
$^6Li(\pi^-,\gamma)$, capture from mesic atoms, current algebra model 7−121954
$^6Li(t,p)^8Li$, 2-10 MeV, highly excited states in ^9Be, exptl. study 7−121612
^7Li, 18 MeV excitation energy, analysis of inclusive α-spectra of $^9Be(d, \alpha)$ 7−116281
^7Li, Coulomb excitation of first excited state, cluster model calcs. 7−116234
^7Li, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
$^7Li_\Lambda$, energy spectra in shell model *(Russian)* 7−141012
$^7Li_{\Lambda_2}$ ground state binding energy, semiphenomenological study 7−81325
$^7Li(^6Li, ^6He)$, 14, 25, 35 MeV/nucleon, angular distrib., G-T transitions, cross sections, reaction mechanism, DWBA comparisons 7−121903
$^7Li(^6Li,^6He)$, 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
$^7Li(d,\alpha n)$, 3-15 MeV, excitation and sequential decay mechanism 7−135333
$^7Li(d,n)2\alpha$ reaction lin Li-LiD wires 7−104438
$^7Li(d,p)^8Li$, 2-10 MeV, highly excited states in ^8Be, exptl. study 7−121612
$^7Li(e,e')$, longitudinal and transverse form factor calcs., cluster model 7−121810
$^7Li(e,t\gamma)$, $E_\gamma \leq 20$ MeV, radiative transitions to ground state, cross sections 7−116391
$^7Li(\gamma,X)$, photodisintegration channel cross sections in giant resonance region 7−135298
$^7Li(n, n)$, thermal n, differential elastic scatt. cross sections 7−73755
$^7Li(n,n't)^4He$, 7.9-10.5 MeV, cross section meas. 7−129037
$^7Li(p,d)$, 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
$^7Li(\pi^+, e^+,e^-p)^6Li$, 380 MeV, cross section, nucleon-cluster, shell model calcs. 7−121959
$(^ALi,X)$, A=6,7 three-body coupled-channel theory of scattering and breakup of light and heavy ions 7−121866
$(^ALi,xn)$, A=6,7 neutron yields on ^7Li, ^9Be, ^{12}C, Cu 7−109208
^ALi (γ,X), A=6,7, photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
^ALi, A=7, 8, neutron decay of excited nuclear states from $Ag(^{14}N,X)$ 7−121745
^ALi, A=7,8 multilevel multichannel R-matrix calcs., shell model calcs. 7−109035
$^ALi(\gamma,t)$, A=6,7, two-cluster direct mechanism, shell model and cluster model calcs. 7−135297
$^ALi(n, n')$, 6-14 MeV, A=6, 7, diff. cross sections 7−129038
$^ALi(p,2p)$, A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
$^ALi(p,p')$, A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
$^ALi(p,p')$, A=6,7, continuum spectra near breakup threshold 7−67824
$^ALi(p,pn)$, A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
$(^{6,7}Li, ^{6,7}Li)$, microscopic coupled-channels study of the scattering and breakup of light heavy-ions 7−102914
$(^{6,7}Li, X)$, microscopic coupled-channels study of the scattering and breakup of light heavy-ions 7−102914
$^AN(e,e)$, A=14, 15, M1 form factors 7−89541
$^AN(p, n)^AO$, A=14, 15 isovector $\Delta J^\pi=0^-$ transition study 7−81386
^{12}N, low-lying states, $^{12}C(p,n)^{12}N$ reaction anal. 7−102873
^{13}N level structure via the $^{10}B(^3He, ^3He)$ elastic scattering 7−109033
^{13}N, resonance states, bremsstrahlung lifetime meas. using $^{12}C(p,p)$ 7−135274
$^{13}N(p,\gamma)$, stellar energies, microscopic coupled channel approach, cross section 7−73759
^{14}N, negative parity isovector states, excitation and decay, form factor calcs. 7−121703
$^{14}N(^{56}Fe,X)$, 1.8 GeV/nucleon, in nuclear emulsion, secondary particle props., cascade-evaporative model comparisons 7−135359
$^{14}N(A,X)$, 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
$^{14}N(\alpha,\alpha)$, optical and folding model anal. 7−96087
$^{14}N(e,e')$, negative parity isovector states, excitation and decay data, shell model comparisons 7−121703
$^{14}N(e,e)$, elastic and inelastic, form factors, Cohen-Kurath wave functions anal. 7−67807
$^{14}N(\gamma,n)$, 12.5-15.5 MeV, absolute cross section meas. 7−81366
$^{14}N(\gamma,n)^{13}N$, total activity and relative radiolysis prod. yields, nuclear medicine appl. 7−133451
$^{14}N(\gamma,\pi^+)$, Cohen-Kurath wave functions anal. 7−67807
$^{14}N(n,\alpha)^{11}B$, 12.2, 14.1, 18 MeV, α-angular distrib., DWBA, coupled channel anal. 7−96083

nuclei with mass number 6 to 19 continued
^{14}N(p,α)^{11}C, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{14}N(p,γ), 0.2−3.6 MeV, stellar reaction rate and H burning in massive stars 7−107812
^{14}N(p,γ)^{15}O, 7.56 MeV resonance, nuclear bremsstrahlung potential model anal. 7−109178
^{14}N(π$^-$,γ), capture from mesic atoms, current algebra model 7−121954
^{15}N, helion and ^{3}H cluster states, branching ratios 7−67685
^{15}N levels, J^π, form factors and spectroscopic factors, DWBA anal. of ^{18}O(p,α), 40.9 MeV, ^{15}N levels, J^π, form factors and spectroscopic factors, DWBA anal. 7−102805
^{15}N, positive parity triton cluster states, coupled channels calcs. 7−135190
^{15}N, resonance obs., ^{11}B(α,p)^{12}C, 0.9-1.7 MeV study 7−121871
^{15}N(d,γ), E1 transition, giant dipole resonance and strongly collective core excitations 7−121710
Ne-O-F cycle of reactions in stellar interiors 7−88385
^{18}Ne(e,e′), inclusion of collective nucleon motion, anal. 7−121800
^{18}Ne→^{18}F, first forbidden decays, parity-mixing matrix element constraints 7−121738
^{20}Ne, high-spin α-cluster resonances from ^{12}C(^{16}O,^{8}Be) reaction 7−109228
O resonance levels, effect of time evolution of extra spatial dimens. 7−89418
O(O,O)O, elastic and inelastic scatt., subbarrier interactions of the oxygen isotopes 7−129085
O(O,X), neutron transfer and fusion cross-sections, subbarrier interactions of the oxygen isotopes 7−129085
^{A}O, A=17-22, low-lying spectra, double delta and surface delta interactions *(Chinese)* 7−121700
^{A}O, A=18-20, low-lying energy levels, EM props., shell model calc. 7−67730
^{A}O(α,α), A=16, 17, 18, optical and folding model anal. 7−96087
^{A}O(p,p′), 201 MeV, A=16, 18, spin-flip transitions excited by forward inelastic scatt. 7−81296
^{A}O(p,p), 11-60 MeV, A=16, 17, coupled channel variational method appl. 7−102884
^{A}O(π$^+$, π$^-$), A=16, 18, energy depend. of ang. distrib. 7−102918
^{14}O levels and transitions, CC anal. of ^{12}C(^{3}He,n) 7−95990
^{14}O(α,γ)^{18}Ne in stars 7−127704
^{14}O(α,p)^{17}F in stars 7−127704
^{15}O, helion and ^{3}H cluster states, branching ratios 7−67685
^{15}O levels, J^π and spectroscopic factors from ^{14}N(p,γ) 7−107812
^{15}O-^{15}N Coulomb displacement energy calcs., Brueckner's G-matrix anal. 7−128935
(^{16}O,X), 3.2 TeV collisions at CERN, search for quark matter *(German)* 7−109085
(^{16}O,X), 4.5 GeV/c/N, anomalon and fractional charge fragment search 7−67872
(^{16}O, ^{16}O), nucleus-nucleus potential, dispersive contribution, empirical real and imaginary potentials, anomalies 7−116354
^{16}O, 4-body problem of 4 bound α-particles, α-cluster model, binding energy 7−81287
^{16}O, (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
^{16}O, density distrib., first-order contributions, relative importance 7−116253
^{16}O, giant dipole transitions in the nuclear WSp(6,R) model 7−96013
^{16}O, ground state energy shift, particle-particle ring diagrams and Skyrme effective interactions 7−121588
^{16}O, ground state props. and forces in unitary-model-operator approach 7−128948
^{16}O, Hartree-Fock-Bogoljubov formalism for relativistic mean field theories 7−121679
^{16}O, high-spin α-cluster resonances from ^{12}C(^{12}C,^{8}Be) reaction 7−109228
^{16}O, hypernetted chain calcs. for Malfliet-Tjon pot. 7−81311
^{16}O, low-lying energy levels Faddeev-Yakubovsky calcs. 7−67721
^{16}O, n-ñ oscillations, statistical uncertainty 7−108825
^{16}O, pp, ph and hh ring diagrams contrib. to binding energy 7−135194
^{16}O spectrum, microscopic description, multiconfiguration generator coord. basis 7−135212
^{16}O, spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
(^{16}O, X), 200 GeV, multiplicity distrib. in central rapidity region, wounded nucleon model, q-g plasma 7−121881
^{16}O+2α system, linear chain structure, appl. of μ-truncation method to 3α orthogonality condition model 7−81319
^{16}O+α system, cranked-cluster model anal. 7−116311
^{16}O(π$^+$,π$^+$)^{16}O, excitation function meas., optical model calcs. 7−109238
^{16}O(^{12}C, ^{12}C), 48.06 MeV, cross section meas., optical model, DWBA anal. 7−73790
^{16}O(^{12}C,^{12}N), 10-45 MeV/u, cross sections, final state population anal. 7−109233
^{16}O(^{12}C,^{16}O), differential cross section, independent α-particle model and DWBA calcs. *(Chinese)* 7−109206
^{16}O(^{13}C, ^{13}C), 48.48 MeV, cross section meas., optical model, DWBA anal. 7−73790
^{16}O(^{13}C,X), ^{29}Si prod., two-centre shell model for arbitrarily orientated deformed nuclei 7−116302
^{16}O(^{13}N,^{13}N), 10-45 MeV/u, cross sections, final state population anal. 7−109233
^{16}O(^{13}N,X), resonant structures 7−121938
^{16}O(^{16}O, ^{16}O), 17 MeV, nuclear glory scatt., phase shift anal. 7−73786
^{16}O(^{16}O,^{12}C′)^{20}Ne, E_{cm}=11-18 MeV, excitation fns., DWBA optical model comparisons 7−116502
^{16}O(^{16}O,^{16}O), microscopic optical pot. 7−81357
^{16}O(^{16}O,X), 12-20 MeV, cross section resonances in $α_0$, $α_1$ exit channels, excitation fns., statistical anal. 7−129101
^{16}O(^{16}O,X), 8.0-13.8 MeV, cross section meas. near Coulomb barrier 7−67866
^{16}O(^{16}O,X), extended TDHF anal., quantum theory appl., fusion momentum limit 7−121913
^{16}O(^{16}O,X), mean field model of spallation and oscillations 7−81440
^{16}O(^{16}O,X), microscopic optical pot. 7−81357
^{16}O(^{16}O,α), resonant fluctuations in cross sections, compound nucleus decay model 7−81437
^{16}O(^{3}He,^{3}He)^{16}O, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
^{16}O(^{56}Fe,X), 1.8 GeV/nucleon, in nuclear emulsion, secondary particle props., cascade-evaporative model comparisons 7−135359

nuclei with mass number 6 to 19 continued
^{16}O(N,N′), differential cross section meas., DWBA and coupled channel calcs. 7−73763
^{16}O(N,N), differential cross section meas. and phenomenological optical model pot. calcs. 7−73763
^{16}O(α,X), 0 to 30 MeV, Pauli's principle effects 7−116440
^{16}O(α,α) optical potential low energy props., ^{20}Ne rotational band study 7−140979
^{16}O(α,p)^{19}F, shell-model study of nuclear form factors for multi-nucleon transfer reactions 7−121872
^{16}O(α,p)^{19}F, transition strength distrib., NN interaction calcs., HF anal 7−129070
^{16}O(d, p), 11-60 MeV, coupled channel variational method appl. 7−102884
^{16}O(d,^{6}Li)^{12}C 7−109190
^{16}O(d,d), 200, 400, 700 MeV, cross sections, analyzing power meas., optical model anal. 7−73779
^{16}O(d,d), 400 MeV, folding model anal. 7−135334
^{16}O(d,n)^{17}F, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{16}O(δ,δ), 39-104 MeV, differential cross sections, optical-folding model comparisons 7−129068
^{16}O(ê,e′X), 130 MeV, fifth structure function, HF and RPA calcs. 7−121808
^{16}O(ê,e′X), low momentum transfer ê induced nucleon emission, giant resonance decay 7−135307
^{16}O(e,e′X), secondary particle angular and energy distribs. 7−73754
^{16}O(e,e′), RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{16}O(e,e′)^{16}O, excitation of 4$^-$ states, form factors 7−109149
^{16}O(e,e′n) RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{16}O(e,e′p), RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{16}O(γ,γ), differential cross section meas. in giant dipole resonance region 7−116377
^{16}O(γ,n)^{15}O, total activity and relative radiolysis prod. yields, nuclear medicine appl. 7−133451
^{16}O(γ,p$_i$), 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
^{16}O(γ,π$^±$), 200-350 MeV, π spectra and cross section determ. 7−129016
^{16}O(μ$^-$,νγ), coeff. of asymmetry, γ ang. distrib. and circular pol. 7−129022
^{16}O(p̄, nπ$^+$)^{16}O, DWBA calculation using Dirac equation 7−135324
^{16}O(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{16}O(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
^{16}O(p,4αp), 50 MeV, cross section meas., ^{5}Li and ^{8}Be formation cross section 7−121826
^{16}O(p,α)^{13}N, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{16}O(p,γ), E1 transition, giant dipole resonance and strongly collective core excitations 7−121710
^{16}O(p,n), 0$^+$→0$^-$ spin excitation mode transitions, distorted wave calcs. 7−121823
^{16}O(p,n), 35, 40 MeV, ^{16}F low-lying states study, DWBA anal. 7−102873
^{16}O(p,p′), 0$^+$→0$^-$ spin excitation mode transitions, distorted wave calcs. 7−121823
^{16}O(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual NN̄ processes, relativistic correction 7−81385
^{16}O(p̄,p̄), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{16}O(π$^+$, π$^+$π$^-$), 280 MeV, energy- and angle-integrated cross section, coincidence meas. 7−135378
^{16}O(π$^+$, π$^+$π$^-$), shell model amplitude calcs. 7−135377
^{16}O(π$^+$,2p)^{14}N, 60 MeV, quasi-deuteron mechanism, distorted wave calcs. 7−67877
^{16}O(π$^+$,2p)^{14}N, spectroscopic aspects 7−96121
^{16}O(t,n)^{18}F, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{16}O(t,t)^{16}O, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
^{17}O, single-particle energies, shell model calcs. 7−121581
^{17}O(e,e), nuclear currents in a relativistic mean-field theory 7−129024
^{18}O(e,e′), inclusion of collective nucleon motion, anal. 7−121800
^{18}O(p,n)^{18}F, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{18}O(π, π′), cross sections and matrix elements for 2$^+$ transitions 7−81333
^{18}O(π,π′), DWIA and coupled channels anal. using shell model transition densities 7−102920
(p,p′), 6-15 MeV, resonances, nonstatistical nature 7−109159
^{208}Pb(^{12}C,^{12}C′), 200 MeV/u, giant resonance excitation 7−109229

nuclei with mass number 20 to 38
A=21-23, cluster struct., parity spectrum and electromagnetic transitions 7−135233
A=34-50, core breaking, shell model anal. 7−116288
A=36-41, n rich nuclei, level spectra, matrix elements and spectroscopic factors, shell model 7−116335
light neutron rich nuclei, HF calcs., radii, binding energies, density distribs. 7−102799
N=20 neutron shell closure, onset of deformation far from stability 7−67710
Z=5-15, mass measurements far from stability using (^{40}Ar,X) 7−109002
^{20}Ne($\bar{ν}_μ$, μ$^+$ρ$^-$), cross section meas., CVC hypothesis, vector meson dominance comparisons 7−141043
(p,p), A=23-110, E_p~6 MeV, threshold isotopic effect, contrib. to scatt. from compound nucleus, stat. anal. 7−121819
(π$^±$,p) 120,145 MeV, on A=12-58, discrete final state excitation, diff. cross sections. 7−96115
(π$^±$, X), 60, 65 MeV, on A=12-90, total reaction cross sections, use in optical anals. 7−121960
^{A}Si(π,π′), A=28, 30, 50 MeV, diff. cross sections, angular distrib., optical model anal. 7−67878
^{27}(Al^{16}O,αX), 82.7 MeV, α-particle, projectile-like fragment coincidence meas. *(Chinese)* 7−102900
^{27}Al(ñ, n), spin-spin interaction and optical pot. 7−121850
^{A}Al, A=27, 29 levels and spectroscopic factors CCBA and DWBA anals. from (t,α) 7−102806
^{24}Al, high spin states, anal. using (p,π$^-$) 7−67693
^{26}Al, 7290 keV resonance, γ-transition probabilities 7−135256

ei with mass number 20 to 38 continued
^{26}Al content of Antarctic meteorites, correl. with natural thermoluminesc. 7−101746
^{26}Al in cometary nuclei, contrib. to radiogenic heating and implications for time of form. 7−145879
^{26}Al in Galactic centre, 1.8 MeV gamma-ray line emission map 7−146090
^{26}Al^{m}, beta-decay, right handed currents bounds 7−89559
^{27}Al (p,p′), E_p=200 MeV, exciton model reformulation to include energy-momentum coupling 7−129032
^{27}Al, high spin states search using ^{24}Mg(α,p) 7−108961
^{27}Al, M1 radiation widths 7−109101
^{27}Al(^{12}C,X), ^{1,2,3}H emission by projectile break-up, 4 MeV/u 7−135363
^{27}Al(^{14}C,X), ^{1,2,3}H emission by projectile break-up, 4 MeV/u 7−135363
^{27}Al(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{27}Al(^{14}N,X), 77, 93 MeV, fragment angular distributions 7−116495
^{27}Al(^{16}C,X), ^{1,2,3}H emission by projectile break-up, 4 MeV/u 7−135363
^{27}Al(^{16}O,X), 80.6 MeV, dynamics of dissipative collisions 7−116494
^{27}Al(^{16}O,X), quasi-elastic and deep inelastic collisions, differential cross-sections *(Chinese)* 7−102901
^{27}Al(^{16}O,X),80.6MeV, dissipative collision shell structure effects on nucleon transport 7−129102
^{27}Al(^{20}Ne,X), incomplete fusion at 15 and 19 MeV/N, α-spectra meas. 7−116479
^{27}Al(^{28}Si, X), deep inelastic reactions, inclusive distribs. and fragment-fragment coincidences 7−89577
^{27}Al(^{3}He,X), peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
^{27}Al(^{3}He,t)^{27}Si, high spin states search 7−108961
^{27}Al(^{40}Ar,X), 15 MeV/u, composite system form. and decay 7−116510
^{27}Al(^{40}Ar,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{27}Al(^{40}Ar,X), onset of ineffectual and incomplete fusion near Fermi energy 7−141087
^{27}Al(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{27}Al(^{7}Li,^{7}Be), 150 MeV, high-lying states, neutron decay 7−109232
^{27}Al(^{7}Li,^{7}Be)^{27}Mg, isovector giant resonance obs. 7−135356
^{27}Al(^{7}Li,^{7}Li′), 150 MeV, high-lying states, neutron decay 7−109232
^{27}Al(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{27}Al(A,X), 42-151 MeV/nucleon, A=^{20}Ne, ^{40}Ar, fragment production 7−121905
^{27}Al(d,αp)^{24}Na, excitation function meas. *(Chinese)* 7−109188
^{27}Al(n, 2n), total cross section near threshold, cross section at DT energies 7−109180
^{27}Al(n,2n), cross sections near 14 MeV, meas. and partial statistical model comparison 7−102883
^{27}Al(n,nX), emission cross sections at 7 MeV incident energy 7−81384
^{27}Al(n,n), elastic and inelastic scatt. at 7 MeV incident energy 7−81384
^{27}Al(n,n)$_3$(ñ,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{27}Al(n,p)^{27}Mg, 13.4-14.83 MeV, cross section meas. 7−116416
^{27}Al(p,X), 360 GeV/c, multiparticle production expt. 7−140956
^{27}Al(p,γ), 15.234 MeV level in ^{28}Si, radiative decay 7−109110
^{27}Al(p,γ)^{28}Si, 1588 and 2044 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
^{27}Al(t,t)^{27}Al, differential cross-sections near Coulomb barrier 7−109185
^{33}Al mass meas. using ^{48}Ca(^{36}S,^{33}Al)^{51}V, 198 MeV 7−109004
Al(γ,X), photodisintegration by coherent and incoherent bremsstrahlung from high energy electrons 7−67801
Al(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
Al(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
Al(n,n), small angle scatt. at 14.2 MeV 7−116420
Al(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{32}Ar superallowed β-decay, axial-vector strength renormalisation 7−109124
^{33}Ar β^+ decay, half-life, ^{33}Cl giant Gamow-Teller resonance, delayed proton and γ emissions 7−141027
^{36}Ar(d,d), differential cross sections and reorientation effects 7−81404
^{33}Cl giant Gamow-Teller resonance, delayed proton and γ emissions from ^{33}Ar β^+ decay 7−141027
(δ,f), λ 0.8-1.8 GeV, intermediate nuclei, cross section meas. 7−129123
^{20}F, beta-spectrum meas., CVC prediction comparisons, low-energy electroweak model test 7−129001
^{A}Mg(^{32}S,X), A=24-6, 165 MeV, entrance channel effects in fusion cross sections 7−116513
^{A}Mg(d,^{6}Li), A=24, 26, forbidden transitions to unnatural parity states, CRC anal. 7−135204
^{24}Mg, cluster struct., form factors, energy levels and parity states 7−135232
^{24}Mg, electron capture and collapse of 8-10 $M_\odot$ stars 7−140120
^{24}Mg, energy level spin study, ^{12}C(^{16}O,αα)^{20}Ne α-α coincidence meas., level transitions 7−109038
^{24}Mg, energy level total width meas. 7−116284
^{24}Mg, Hartree-Fock description of octupole deformations and rotation 7−81292
^{24}Mg, high spin states above 14 MeV, γ and particle decays 7−116334
^{24}Mg, highly excited state sin multi-cluster orthogonality condition model 7−67724
^{24}Mg, positive parity rotational bands, binding energy calcs., cranked cluster model anal. 7−116233
^{24}Mg symmetric fission in ^{12}C(^{24}Mg,X) 7−116535
^{24}Mg, yrast line, self consistent cranked HF+BCS nuclear rotation calcs. 7−102793
^{24}Mg(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{24}Mg(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{24}Mg(^{19}F,X), 72 MeV, multinucleon transfer, dynamical interpretation of deep inelastic processes 7−121945
^{24}Mg(^{24}Mg, ^{24}Mg′)^{24}Mg, spin alignment in inelastic scatt. 7−129080
^{24}Mg(^{24}Mg,^{20}Ne), 89.7−95.5 MeV, correlated intermediate structures in α-transfer 7−73744
^{24}Mg(^{24}Mg,^{20}Ne), 89.72-95.52 MeV, correlated structs., statistical fluctuation anal. 7−116480
^{24}Mg(^{24}Mg,^{24}Mg′), 89.72-95.52 MeV, correlated structs., statistical fluctuation anal. 7−116480
^{24}Mg(^{24}Mg,^{24}Mg′), resonances, single and correlated spin alignments 7−116464

nuclei with mass number 20 to 38 continued
^{24}Mg(^{24}Mg,^{24}Mg), 89.7−95.5 MeV, correlated intermediate structures in elastic and inelastic scatt. 7−73744
^{24}Mg(^{32}S,X), E=230 MeV, composite system symmetric disintegration, nonequilibrium particle emission evidence 7−135354
^{24}Mg(^{4}He,^{12}C)^{16}O, 26-37 MeV, excitation fns., resonant structures 7−116497
^{24}Mg(^{4}He,^{4}He′), 26-37 MeV, excitation fns., resonant structures 7−116497
^{24}Mg(^{7}Li,^{7}Be)^{24}Na, isovector giant resonance obs. 7−135356
^{24}Mg(α,α), 42 MeV, differential scatt. cross sections, optical potential calcs. *(Chinese)* 7−96081
^{24}Mg(α,p)^{27}Al, high spin states search 7−108961
^{24}Mg(δ,δ^{-}), 54 MeV, collective excitations, coupled-channel method, triaxial rotor model comparisons 7−129067
^{24}Mg→^{8}B+^{16}O relativistic decay due to inelastic peripheral interactions, nuclear emulsion obs. 7−81464
^{25}Mg (p,γ), ang. distrib., ^{26}Al 7290 keV resonance state study 7−135256
^{25}Mg(P,γ) at stellar energies, astrophysical aspects, ^{26}Al abundance 7−107813
^{25}Mg(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{26}Mg(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
^{26}Mg(^{6}Li,^{6}He), 14, 25, 35 MeV/nucleon, angular distrib., G-T transitions, cross sections, reaction mechanism, DWBA comparisons 7−121903
^{26}Mg(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{26}Mg(d,d), differential cross sections and reorientation effects 7−81404
^{26}Mg(p,n), Gamow-Teller strength and isospin channel fractionation, shell model comparison 7−116409
^{26}Mg(p,n)^{26}Al, cross-section and ang. distrib. meas. 7−102875
^{26}Mg(p,n)^{26}Al, stretched state excitations 7−109181
^{26}Mg(p,p), 5.5-17.5 MeV, optical potential description, compound nucleus scatt., OP parameters 7−121815
^{26}Mg(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{26}Mg(π, π′), cross sections and matrix elements for 2^+ transitions 7−81333
^{26}Mg(t,^{3}He), 36 MeV, differential cross sections, energy spectra, mass meas. and energy levels, DWBA and coupled channel calcs. 7−121858
^{27}Mg, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{28}Mg→^{28}Al, β-decay, dependence of Coulomb matrix element on deformation parameter 7−121726
^{20}N, high-lying state search, γ-emission probability meas. 7−73731
Na, neutron cross section validation 7−129284
Na(Ne,X), 200 to 1000 MeV/u, fragment prod. at small angles study 7−81448
^{20}Na, high spin states, anal. using (p,π^{-}) 7−67693
^{20}Na level structure, from ^{20}Ne(^{3}He,t)^{20}Na reaction, level structure near proton threshold 7−129066
^{22}Na, lifetime of lowest 0^+, T=1 state 7−108962
^{22}Na positron emission, chirality study 7−121727
^{23}Na(α,n)^{26}Al, cross-section and ang. distrib. meas. 7−102875
^{23}Na(d,^{12}C)^{13}C, differential cross-sections, mechanisms 7−81407
^{23}Na(γ,Xγ′) partial nucleon channels, dipole giant resonance decay, integrated partial cross sections, photoabsorption 7−116381
^{23}Na(p,^{12}C)^{12}C, 11-18 MeV, possible new 2^+ resonances in ^{12}C+^{12}C system 7−116364
^{25}Na, levels and spectroscopic factors CCBA and DWBA anals. from (t, α) 7−102806
^{29}Na, Gamow-Teller β-decay, comparison with shell model predictions 7−128959
Ne, muonic, charge radii from X-ray data 7−95982
Ne-O-F cycle of reactions in stellar interiors 7−88385
^{A}Ne, A=20, 22, unnatural parity state excitation in α-transfer reactions, CRC anal. 7−135204
^{A}Ne(α, α′X), A=20,22 giant resonance decays and interference effects 7−102854
^{A}Ne(d,d), A=20, 22, differential cross sections and reorientation effects 7−81404
^{A}Ne(p,p′)^{A}Ne, A=20, 22, excitation of 1^+ and 2^- states 7−73762
^{20}Ne 0_4^+ rot. band, high spin members, optical anal. of ^{16}O(α,α) 7−116231
^{20}Ne (p̄,K^{0}X), 607 MeV/c, prod. cross section meas. 7−141049
^{20}Ne, electron capture and collapse of 8-10 $M_\odot$ stars, effect of electron capture on ^{24}Mg and ^{20}Ne 7−140120
^{20}Ne, giant quadrupole resonances, E2-transition strength and α-decay width, cluster model anal. 7−108978
^{20}Ne isoscalar giant resonances, sum rules, symplectic model, cluster approach 7−135286
^{20}Ne, M1 excitations in even-even sd-shell nuclei, orbital current total strength 7−135246
^{20}Ne, O_4^+ rotational band, high spin states, anal. of ^{16}O(α,α) optical potential props. 7−140979
^{20}Ne, T=1 isobaric analogue states, ^{19}Fe(p,p), ^{19}F(p,γ) study 7−109040
^{20}Ne, Yrast structure change in cluster model 7−121569
^{20}Ne(^{12}C,^{12}C), double differential cross section, LCNO theory 7−116487
^{20}Ne(^{16}O,^{16}O), double differential cross section, LCNO theory 7−116487
^{20}Ne(^{20}Ne,X), fluctuations and clustering 7−73793
^{20}Ne(^{3}He.t), charge exchange reaction, level struct. near proton threshold 7−129066
^{20}Ne(α,α), optical and folding model anal. 7−96087
^{20}Ne(e,e′), convection current determ. using cranked HF wave fn. 7−109014
^{20}Ne(p̄,Δ^0X), 607 MeV/c, prod. cross section meas. 7−141049
^{20}Ne(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
(^{22}Ne,X), 4.1 GeV/c/N in nuclear emulsion multiplicities, charged particle angular distribs. *(German)* 7−129093
^{22}Ne, rotational bands, E1 transitions, cluster anal. 7−67694
^{22}Ne(^{93}Nb,X), 30 MeV/nucleon, projectile break-up study 7−81449
^{22}Ne(p,γ)^{23}Na in H-burning stars, Na core enrichment *(Russian)* 7−140046
^{22}Ne(π, π′), cross sections and matrix elements for 2^+ transitions 7−81333
^{24}Ne cluster emission from ^{232}Th(γ,X) 7−67800
^{24}Ne, radioactivity, even-odd effect, superasymmetric fission model 7−135294
^{24}Ne-emission natural radioactivity, anal. 7−121746
^{A}O, A=17-22, low-lying spectra, double delta and surface delta interactions *(Chinese)* 7−121700

nuclei with mass number 20 to 38 continued
^{A}O, A=18-20, low-lying energy levels, EM props., shell model calc. 7−67730
^{16}O+α system, (^{20}Ne), microscopic optical potential 7−96038
^{20}O, β-decay, γ-ray study 7−81344
(p,p'), 6-15 MeV, resonances, nonstatistical nature 7−109159
P, neutron-rich isotopes, low-lying states study using multi-nucleon transfer 7−116287
^{A}P, A=31,32,33, level anal. in Si(α,p), 25 MeV 7−67851
^{28}P, high spin states, anal. using (p,π^-) 7−67693
^{30}P level lifetimes and transition strengths from ^{29}Si(p,γ) 7−121715
^{31}P(d,n)^{32}S, 24.8 MeV, diff. cross sections, ^{32}S level study, DWBA anal. 7−102804
^{35}P, β^- decay study 7−141023
^{36}P→^{36}S, β^- decay, nuclear structure, spherical shell model study 7−141023
^{A}S(d,d), A=32, 34, differential cross sections and reorientation effects 7−81404
^{30}S, high spin states, anal. using (p,π^-) 7−67693
^{31}S, high spin states, anal. using (p,π^-) 7−67693
^{32}S, charge density and octupole form factor in harmonic oscillator and HF models 7−67713
^{32}S level structure spectroscopic factors, ^{31}P(d,n)^{32}S study 7−102804
^{32}S, spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
^{32}S(^{24}Mg,X), dissipative processes in deep inelastic reactions 7−102895
^{32}S(^{32}S, ^{32}S'), 91.3 MeV, one-neutron transfer contrib. to elastic scatt. 7−121891
^{32}S(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{32}S(γ,pγ'), 32 MeV, partial photonucleon cross sections, semidirect processes photoabsorption, giant dipole resonances 7−116380
^{32}S(n,n),($\tilde{n}$,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{32}S(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317
^{33}S, doorway resonances, level spacings 7−116228
^{33}S(n,α), $E_n \leq 1$ MeV, cross section meas., resonance anal. 7−129036
^{34}S to ^{42}Ca, s-process anal. from meas. of ^{40}Ar neutron capture cross section 7−72268
^{34}S(π, π'), cross sections and matrix elements for 2^+ transitions 7−81333
^{36}S, nuclear structure, spherical shell model study, β^- decay study 7−141023
^{37}S levels and J$^\pi$ assignments, DWBA anal. of ^{36}S($\vec{d}$,p) 7−116286
^{38}S, confirmation of 2805 keV level, γ-decay from ^{36}S(t, pγ) 7−116282
S(γ,X), photodisintegration by coherent and incoherent bremsstrahlung from high energy electrons 7−67801
^{A}Si, A=29, 31, levels and spectroscopic factors CCBA and DWBA anals. from (t,d) 7−102806
^{A}Si(α,X), A=28,30, compound nucleus contribs., Hauser-Feshbach model 7−116442
^{A}Si(α,p)^{B}P, A=28-30, B=31-33, 25 MeV, P energy level anal., DWBA comparisons 7−67851
^{A}Si(d, p), A=29, 30, 12.3 MeV, differential cross sections and analyzing powers 7−116426
^{A}Si(p,p), A=28,30, resonance scatt. anal. *(Russian)* 7−109176
^{A}Si(t,^{3}He), 36 meV, A=28,30, differential cross sections, energy spectra, mass meas. and energy levels, DWBA and coupled channel calcs. 7−121858
^{22}Si, T_z=3, obs. in ^{36}Ar fragmentation reactions 7−116465
^{26}Si, high spin states, anal. using (p,π^-) 7−67693
^{27}Si, high spin states search using ^{27}Al(^{3}He,t) 7−108961
^{28}Si, 13.321 MeV excited state, spin meas. *(Chinese)* 7−109028
^{28}Si, 15.234 MeV level, radiative decay, ^{27}Al(p,γ) study 7−109110
^{28}Si (^{28}Si,X), wall dissipation, fusion excitation fns., entrance channel deformations, deformation dependent inertias 7−129124
^{28}Si, compound state lifetime, blocking effect on Al crystal 7−135257
^{28}Si level lifetimes from ^{27}Al(p,γ) *(Chinese)* 7−109112
^{28}Si, spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
^{28}Si(^{12}C, X), fusion at high energies, cross section from direct reaction concept 7−96129
^{28}Si(^{12}C,X), cross section meas., comparisons with fusion and orbiting equilibrium model 7−121902
^{28}Si(^{16}O,^{16}O), 3α transfer mechanism, excitation fns., molecular orbital model 7−121906
^{28}Si(^{16}O,^{16}O)^{28}Si, elastic scatt., model independent anal. 7−109218
^{28}Si(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{28}Si(^{18}O,^{18}O), 352 MeV, cross sections, optical pot. comparison 7−135365
^{28}Si(^{28}Si, X), deep inelastic reactions, inclusive distribs. and fragment-fragment coincidences 7−89577
^{28}Si(^{32}S,^{32}S)^{28}Si, 42-48.1 MeV, angular distrib. meas., cross section excitation fns., intermediate structure obs., optical model calcs. 7−73784
^{28}Si(^{32}S,^{36}Ar)^{24}Mg, 42-48.1 MeV, angular distrib. meas., cross section excitation fns., intermediate structure obs., optical model calcs. 7−73784
^{28}Si(^{6}Li, ^{6}Li'), continuum struct. and γ-transitions in giant resonance region 7−96046
^{28}Si(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{28}Si(^{7}Li,^{7}Be)^{28}Al, isovector giant resonance obs. 7−135356
^{28}Si(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{28}Si(Si, X), dissipative processes at forward angles, heavy residues, angular and velocity distribs. 7−129096
^{28}Si(α,α'), 5-12 MeV, excitation fns., possible α-^{28}Si quasimolecule formation 7−116441
^{28}Si(α,α'), continuum struct. and γ-transitions in giant resonance region 7−96046
^{28}Si(d,d), differential cross sections and reorientation effects 7−81404
^{28}Si(d,p), Coulomb effects, three-body problem study 7−96078
^{28}Si(e,e$^-$), 720-787 MeV, crystal orientation dependence on scattered electron yields 7−135312
^{28}Si(e,e'p), momentum distribs., in deformed nuclei 7−129021
^{28}Si(n,α), appl. to neutron spectra meas. *(Chinese)* 7−96065
^{28}Si(n,γ), 565 keV, partial radiative widths, for neutron resonance, particle-vibr. coupling model 7−73743
^{28}Si(n,n')^{28}Si, ^{29}Si unbound states structure from neutron resonance spectroscopy 7−129047
^{28}Si(n,n),($\tilde{n}$,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{28}Si(n,p)^{28}Al, 13.4-14.83 MeV, cross section meas. 7−116416
^{28}Si(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317

nuclei with mass number 20 to 38 continued
^{28}Si→^{12}C+^{16}O relativistic decay due to inelastic peripheral interactions, nuclear emulsion obs. 7−81464
^{29}Si, doorway resonances, level spacings 7−116228
^{29}Si, unbound states structure from neutron resonance spectroscopy of ^{28}Si(m,m')^{28}Si 7−129047
^{29}Si(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{30}Si, excited level lifetimes from ^{27}Al(α,pγ) 7−81334
^{30}Si(π, π'), cross sections and matrix elements for 2^+ transitions 7−81333
^{35}Si→^{35}P, β^- decay, nuclear structure, spherical shell model study 7−141023
Si(γ,X), photodisintegration by coherent and incoherent bremsstrahlung from high energy electrons 7−67801
Si(n,n'), 14.9 MeV, cross section meas. using sphere transmission technique *(Chinese)* 7−109158
^{33}Sn(n,X), 10 keV-2 MeV, total cross section meas., resonance structure, optical model anal. 7−129035

nuclei with mass number 39 to 58
7−67825
^{40}Ca(t,t)^{40}Ca, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
^{50}Cr(p,p'), 6.05 MeV, resonance props., elastic, inelastic scatt. 7−121830
A=15, 17, 39, 41, isoscalar mag. moments in σ-ω model, RPA type vertex corrections 7−109020
A=34-50, core breaking, shell model anal. 7−116288
A=36-41, n rich nuclei, level spectra, matrix elements and spectroscopic factors, shell model 7−116335
A=54, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−80203
A=56, nuclear data sheets, levels, J$^\pi$, transitions, decays 7−102030
supermassive X$^-$ particle search in Fe 7−81345
two-nucleon high spin states, Bansal-French, crude shell models, A=56-72 binding energy 7−140987
(p,p), A=23-110, E_p~6 MeV, threshold isotopic effect, contrib. to scatt. from compound nucleus, stat. anal. 7−121819
($\pi^\pm$,p) 120,145 MeV, on A=12-58, discrete final state excitation, diff. cross sections. 7−96115
($\pi^\pm$,$\pi^\mp$), mass depend. of double charge exchange on A=44-118 7−81453
($\pi^\pm$, X), 60, 65 MeV, on A=12-90, total reaction cross sections, use in optical anals. 7−121960
Ag(^{12}C, pX), 4.5 GeV/c/N, directional coherence of emitted protons, fireball, q-g cluster 7−129078
^{39}Ar, structure and decay props., spherical shell model calcs. 7−102818
(^{40}Ar,X), 1.88 GeV/N, anomalon production in nuclear emulsion, projectile mean free path 7−135348
(^{40}Ar,X), hot nuclei formation and decay, entrance channel effects, pre-equilibrium model comparisons 7−141074
(^{40}Ar, X) in emulsion, 1.8 GeV/N, Z=2-18 fragment anomalous interaction mean free paths 7−141102
^{40}Ar(^{13}C,^{14}O),^{39}S, 96 MeV, ground state mass excess determ. for ^{39}S 7−128941
^{40}Ar($\vec{d}$,d), differential cross sections and reorientation effects 7−81404
^{40}Ar(n,γ), capture cross-section meas. and s-process anal. from ^{34}S to ^{42}Ca 7−72268
^{41}Ar levels and J$^\pi$ assignments, DWBA anal. of ^{40}Ar($\vec{d}$,p) 7−116286
Ar(p,X), multiplicity distributions of produced particles and energy loss in proton-nucleus collisions at 200 GeV/c *(Chinese)* 7−102871
^{12}C(e,e'), quasielastic peak shift, q depend., relativistic σ-ω model calcs. 7−96057
Ca, primary electric dipole γ-rays from slow-neutron capture 7−129043
Ca(Ca,X), 400, 1050 MeV/N, central collisions, relation between entropy and nucleosynthesis 7−81432
Ca(Ca,X), 800 MeV/N, d and entropy prod. in rel. collisions 7−81431
Ca(Ca,X), bounce-off effect, transparency, stopping power and thermalization 7−96108
Ca(^{14}N,X), deep inelastic collision, differential cross-sections *(Chinese)* 7−102902
^{A}Ca, A=40, 48, spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
^{A}Ca(p, p), A=40, 48, relativistic microscopic calcs. and spin observables 7−81392
^{A}Ca($\vec{p}$,p'), A=40, 48, cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{A}Ca(p,p), A=40,48, 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{A}Ca($\vec{p}$,π^-)$^{A+1}$Ti, A=42,48 cross-sections and analysing power ang. distrib. meas. 7−109170
^{40}Ca, energy level total width meas. 7−116284
^{40}Ca level widths between 9.5 and 10.5 MeV from (γ,γ) and ^{39}K(p,γ) 7−67723
^{40}Ca, nucleon momentum and density distrib., natural orbital calcs. in single-particle pot. method 7−128946
^{40}Ca, pp, ph and hh ring diagrams contrib. to binding energy 7−135194
^{40}Ca, semi-classical longitudinal response, RPA theory 7−121675
^{40}Ca(^{16}O,^{16}O'), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{40}Ca(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{40}Ca(^{16}O,X), E=230 MeV, composite system symmetric disintegration, nonequilibrium particle emission evidence 7−135354
^{40}Ca(^{16}O,X), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{40}Ca(^{16}O,X), RGM+WKB method 7−121940
^{40}Ca(^{3}He, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{40}Ca(^{3}He,^{3}He)^{40}Ca, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
^{40}Ca(^{40}Ca, ^{40}CA'), cross sections and giant resonances in multiphonon excitation model 7−141094
^{40}Ca(^{40}Ca, X), 1.05 GeV/nucleon, specific entropy and cluster formation, impact parameter dependence 7−116516
^{40}Ca(^{40}Ca, X), tangential friction in nuclear reactions studied with the time-dependent Hartree-Fock model 7−129079
^{40}Ca(^{40}Ca, ^{40}Ca), microscopic optical pot. 7−81357
^{40}Ca(^{40}Ca,X), heavy ion optical potential, temp. dependence anal. 7−121890
^{40}Ca(^{40}Ca,X), microscopic optical pot. 7−81357
^{40}Ca(^{40}Ca,X), wall dissipation, fusion excitation fns., entrance channel deformations, deformation dependent inertias 7−129124

nuclei with mass number 39 to 58 continued

^{40}Ca(^{40}Ca,4p), 155 MeV, high spin states in ^{76}Kr 7−108994
^{40}Ca(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{40}Ca(A,X), 42-151 MeV/nucleon, A=^{20}Ne, ^{40}Ar, fragment production 7−121905
^{40}Ca(N,N), N=p or n, 11-48 MeV, diff. cross sections, optical anal. 7−67816
^{40}Ca(α,α), resonant states, excitation fns. and ang. distribs., Regge pole formalism 7−135285
^{40}Ca(α,α)^{40}Ca, backward angle anomaly, ^{44}Ta molecular vibrational states 7−129065
^{40}Ca(α,α)^{40}Ca, elastic scatt., resonant states 7−121876
^{40}Ca(α,p), DWBA calcs. with ALAS pots. 7−116450
^{40}Ca(α,p), differential cross sections, DWBA and microscopic calcs. 7−116449
^{40}Ca(d, d), 52 MeV, model independent optical pots., virtual breakup 7−121862
^{40}Ca(d,X), X=t, ^{3}He, 20 MeV, D-state effect, finite range DWBA, anal. powers 7−116434
^{40}Ca(d,α), 20 MeV, α-particle D-state, DWBA anal., d+d cluster expansion 7−116433
^{40}Ca(d,p), Coulomb effects, three-body problem study 7−96078
^{40}Ca(e,e'p)^{39}K, bound nucleon response function 7−81376
^{40}Ca(e,e'p)^{39}K, cross section meas., nuclear medium effects 7−116399
^{40}Ca(ẽ,eẽ), low momentum transfer ẽ induced nucleon emission, giant resonance decay 7−135307
^{40}Ca(γ,X)Ar, giant dipole resonance, partial decay channels 7−67798
^{40}Ca(γ,p_i), 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
^{40}Ca($\vec{\mu}^-,\nu\gamma$), coeff. of asymmetry, γ ang. distrib. and circular pol. 7−129022
^{40}Ca(n,γ), collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
^{40}Ca(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{40}Ca(n,n'), 21.7, 25.5 MeV, diff. cross sections, deformation, moments, CC anal. 7−67817
^{40}Ca(n,n'), optical model parameters study *(Russian)* 7−102888
^{40}Ca($\vec{p}$, p), 30.3 MeV, CC-inversion approach to pol. pots. 7−121780
^{40}Ca(p,γ), resonance strengths, excitation energies and γ-ray branching ratios 7−109162
^{40}Ca(p,p'), 319 MeV, spin-flip probabilities meas. 7−109172
^{40}Ca($\vec{p}$,p'), cross sections and analyzing power meas. 7−102880
^{40}Ca(p,p')^{40}Ca, fine structure of resonance 7−129045
^{40}Ca(p,p), 0.497-1 GeV, elastic and inelastic, polarisation characteristics 7−67840
^{40}Ca(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual N$\bar{\text{N}}$ processes, relativistic correction 7−81385
^{40}Ca(p,p), differential cross sections, polarisations, giant resonances *(Russian)* 7−121843
^{40}Ca($\vec{p}$,$\vec{p}$), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{40}Ca(p,p)^{40}Ca, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
^{41}Ca, level lifetime meas. 7−67764
^{42}Ca(p,n)^{42}Sc 160 MeV, missing Gamow-Teller strength, microscopic anal. 7−89570
^{44}Ca, low-lying spectra, simplified model calcs. *(Chinese)* 7−102812
^{47}Ca, beta-ray spectra meas. using e-γ coincidence system 7−135768
^{48}Ca, inclusive charge longitudinal response, RPA anal. 7−116252
^{48}Ca, RMS charge radii, Skyrme interactions 7−121602
^{48}Ca(^{14}C, ^{16}O)^{46}Ar, proton pairing vibration description 7−121953
^{48}Ca(^{16}O,^{14}C)^{50}Ti$_{gs}$, 160 MeV, cross sections, shell model comparisons 7−129098
^{48}Ca(^{18}O, ^{15}O)^{51}Ca, 108 MeV, separation technique for ^{51}Ca detection, ^{51}Ca mass and excited states 7−116467
^{48}Ca(^{36}S, ^{33}Al)^{51}V, 198 MeV, ^{33}Al mass meas. 7−109004
^{48}Ca(d,p)^{49}Ca, 6 MeV, level lifetime meas. 7−67764
^{48}Ca(γ,n), cross section meas., isospin components and statistical decay model 7−129017
^{48}Ca(γ,p), cross section meas., isospin components and statistical decay model 7−129017
^{48}Ca(n,X), total and capture cross-sections, ^{49}Ca level structure, nucleosynthesis relevance 7−81382
^{48}Ca(n,p), 200 MeV, Ikeda sum rules for Gamow-Teller transitions 7−109165
^{48}Ca(p,n), 200 MeV, Ikeda sum rules for Gamow-Teller transitions 7−109165
^{48}Ca(π^+,π^-) double isobaric analog state transition, cross section meas., and optical pot. comparison 7−81458
^{48}Ca(t,α), spectroscopic factors and proton core excitation meas. 7−81405
^{48}Ca→^{48}Ti, 2$\nu\beta\beta$ process, half-life calcs., two-nucleon mechanism, shell model anal. 7−73734
^{49}Ca, level lifetime meas., excited level decay scheme 7−67764
^{49}Ca level structure, nucleosynthesis relevance from ^{48}Ca(n,X), total and capture cross-sections 7−81382
^{54}Ca(^{3}He, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
Ca(α,α), optical model anal., attractive and repulsive α-nucleus pots. 7−135342
^{39}Cl, β-decay study, γ-ray transitions and decay scheme 7−102842
^{53}Co$_g$, beta-decay study, half-life meas., beta recoil effect technique 7−116342
^{55}Co, $d_{5/2}$ isobaric analogue state 7−67785
^{56}Co, γ-decay, mass determ. from SN 1987A in LMC 7−140123
^{56}Co in Type II supernovae, radioactive decay mechanism for late-time luminosity and H I ionisation *(Russian)* 7−146011
^{57}Co 1377 keV level lifetime from ^{56}Fe(p, γ) 7−67765
^{57}Co levels, J$^\pi$, spectroscopic factors, DWBA anal. of ^{56}Fe(^{7}Li,^{6}He) 7−135210
^{57}Co, low energy conversion electron spectra meas. 7−96022
Co(α, X), 10-120 MeV, excitation functions for reaction residues 7−109195
^{48}Cr level scheme determ., ^{48}Mn→^{48}Cr β^+ decay study 7−102840
^{50}Cr(n,2n)^{49}Cr, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{50}Cr(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{52}Cr, 2_1^+ state g-factor meas. 7−109024
^{52}Cr(^{208}Pb,X), symmetric mass fragmentation using fusion model 7−109219
^{52}Cr(α,X), 100 MeV, total cross sections, isotope-isotope effect 7−135338

nuclei with mass number 39 to 58 continued

^{52}Cr(α,X), Coulomb and nuclear excitation, soliton nature of interference 7−121868
^{52}Cr(α,α'), 100 MeV, isotope-isotone effect, cross section meas. 7−135338
^{52}Cr(d,2n), ^{52}Mn isomer excitation fn. meas., statistical model comparison 7−116411
^{52}Cr(d,2n), ^{52}Mn isomer prod., direct reaction plus statistical model anal. 7−116428
^{52}Cr(n,X), cross sections, optical model anal. *(Russian)* 7−81396
^{52}Cr(n,2n), 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{52}Cr(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{52}Cr(n,p)^{52}V, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
^{52}Cr(p,n), ^{52}Mn isomer excitation fn. meas., statistical model comparison 7−116411
^{52}Cr(π,π), multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{53}Cr(γ,n), threshold cross section meas., level densities and radiative strength fn. 7−116387
^{53}Cr(p,p)^{53}Cr, optical potential at low and medium energies 7−67838
^{57}Cu mass, Q-values, spectroscopy and cross sections from ^{58}Ni(^{14}N,^{15}C) 7−67705
(δ,f), λ 0.8-1.8 GeV, intermediate nuclei, cross section meas. 7−129123
Fe(^{20}Ne,X), 1.1 GeV N, anomalous fragment production, nucleon-participant multiplicity effect 7−121928
^{A}Fe(π,π), A=54, 56, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{54}Fe, RMS charge radii, Skyrme interactions 7−121602
^{54}Fe(^{29}Si, 2pn)^{80}Sr, 85-110 MeV, ^{80}Sr high spin state study 7−108979
^{54}Fe(α,X), 100 MeV, total cross sections, isotope-isotone effect 7−135338
^{54}Fe(α,α'), 100 MeV, isotope-isotone effect, cross section meas. 7−135338
^{54}Fe(α,p), 26 MeV, shell effect in transition matrix of exciton model 2-body residual interaction 7−116443
^{54}Fe(n, α), cross section and excitation function meas. 7−73756
^{54}Fe(n,γ), γ-ray obs. from low-lying resonances 7−81383
^{54}Fe(n,p)^{54}Mn, 298 MeV cross sections, β^+ Gamow-Teller strength functions 7−121733
^{54}Fe(p,p'γ), 3.88-4.8 MeV, γ-angular distrib., spectra, $d_{5/2}$ isobaric analogue state in ^{55}Co 7−67785
(^{56}Fe,X), 1.8 GeV/nucleon, in nuclear emulsion, secondary particle props., cascade-evaporative model comparisons 7−135359
^{56}Fe, doorway resonances, level spacings 7−116228
^{56}Fe, inclusive charge longitudinal response, RPA anal. 7−116252
^{56}Fe nuclei abundance in solar flares, effects on proton spectrum determ from gamma-ray lines intensities *(Russian)* 7−72389
(^{56}Fe, X), on emulsion, multiplicity and ang. distribs. of charged particles 7−135349
^{56}Fe(^{197}Au,X), 200 MeV/u, multifragmentation and collective flow study 7−141076
^{56}Fe(α,α'), 25 MeV, optical model and coupled channel comparisons 7−116444
^{56}Fe(n,γ), 1.15 keV, self-calibrated capture meas. using thick/thin samples 7−73768
^{56}Fe(n,γ), γ-ray spectrum, exciton model 7−67831
^{56}Fe(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{56}Fe(π^+, K$^+$), hypernuclear state production, cross section calcs. 7−67879
^{56}Fe(π^+,π^-)^{56}Ni, forward angle cross sections 7−109239
^{58}Fe(^{208}Pb,X), symmetric mass fragmentation using fusion model 7−109219
Fe(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
Fe(μ,μ'X), deep inelastic scatt., nuclear EMC effects, structure function ratio 7−96055
Fe(n,X), 15-150 MeV, deep penetration expts. 7−89573
Fe(n,n), small angle scatt. at 14.2 MeV 7−116420
Fe(p,Xn), 100 MeV, neutron yield meas. 7−73758
^{51}G, extrapolation curves calc. in $4\pi\beta-\gamma$ coincidence method 7−96481
^{39}K(γ,N), semidirect giant dipole resonance decay characts., partial photonuclear channels 7−135296
^{39}K(n, 2n)^{38g}K, 14.4-18.2 MeV, partial neutron cross sections 7−109161
^{39}K(n,n'p)^{38}Ar, production cross-section determ. 7−73765
^{39}K(n,p)^{39}Ar, production cross-section determ. 7−73765
^{39}K($\pi^\pm,\pi^\pm$), 180 MeV, n and p contribs. to excited states, ang. distribs. 7−116527
^{39}K($\pi^\pm,\pi^\pm$)^{39}K, inelastic scatt., neutron and proton matrix elements for transitions 7−129112
^{41}K(n, α)^{38}C, 14.4-16.3 MeV, partial neutron cross sections 7−109161
^{41}K(n, p)^{41}Ar, 14.4-17.3 MeV, partial neutron cross sections 7−109161
^{41}K(n,n')^{41}K, γ-ray spectra, energy and spin dependence 7−81399
^{47}K, spectroscopic factors and proton core excitation meas. from ^{48}Ca(t,α) 7−81405
k(n,n'), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412
^{48}Mn→^{48}Cr, β^+ decay, half-life, proton and gamma spectra meas., ^{48}Cr level scheme 7−102840
^{55}Mn(^{12}C,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{55}Mn(α,p), 26 MeV, shell effect in transition matrix of exciton model 2-body residual interaction 7−116443
^{55}Mn(α,p), differential cross sections, DWBA and microscopic calcs. 7−116449
^{55}Mn(α,p)^{58}Fe, 25.7 MeV, differential cross sections, zero-range DWBA and quasi-triton transfer approx. comparisons 7−129072
^{55}Mn(α,p)^{58}Fe, energy level angular distrib., microscopic form factor anal. 7−129071
N isotopes, core polarization effects on Coulomb form factors, perturbation theory 7−109013
^{58}N:(d,d)^{58}Ni 79 MeV elastic scatt., cross section and polarisation characts. anal. *(Russian)* 7−81406
Ni(^{14}N,X), 96 MeV, α-particle emission mechanism, fragment sequential decay *(Chinese)* 7−109204
Ni(^{58}Ni,X), 55A.MeV, obs. of proton rich nuclei, 23≤Z≤29 7−109223
^{A}Ni, A=56, 58, RMS charge radii, Skyrme interactions 7−121602
^{A}Ni(^{B}Si,X), A=58,62,64, B=28,30, coupled channels anal., low-lying excitations, rotational and vibrational model comparisons 7−67867
^{A}Ni(^{28,30}Si,X), A=58,62,64, sub-barrier fusion cross sections, CC and HF calcs. 7−116538
^{A}Ni(^{28}Si,^{29,30}Si), A=58, 62, transfer cross sections near Coulomb barrier, DWBA anal. 7−116490

nuclei with mass number 39 to 58 continued
^{A}Ni(α,p), A=58, 60, 62, zero and finite range semi-microscopic DWBA anals. *(Chinese)* 7−116438
^{A}Ni(γ,X), A=58,60-62,64, 4.5 GeV expts. 7−89567
^{A}Ni(n,xα), 9.4, 11 MeV, A=58, 60, cross sections and spectra, Hauser-Feshbach anal. 7−67825
^{B}Ni(D,X), B=58, 64, D=^{12}C, ^{18}O, E/A=30-84 MeV, isotope yields as probe of reaction dynamics 7−141073
^{56}Ni in exploding Wolf-Rayet stars, contrib. of radioactive decay to supernova light curve 7−127916
^{56}Ni resonances from ^{24}Mg(^{32}S,^{32}S) 7−129010
^{56}Ni shape isomer search in excitation functions from ^{40}Ca(^{16}O,^{28}Si*) 7−81290
(^{58}Ni,X), hot nuclei formation and decay, entrance channel effects, pre-equilibrium model comparisons 7−141074
^{58}Ni, effective operator for the transition density 7−81331
^{58}Ni(^{12}C,^{12}N), 10-45 MeV/u, cross sections, final state population anal. 7−109233
^{58}Ni(^{12}C,X), complex fragments, isotopic yield ratios 7−89580
^{58}Ni(^{13}N,^{13}N), 10-45 MeV/u, cross sections, final state population anal. 7−109233
^{58}Ni(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{58}Ni(^{16}O,X), X=^{13}C, ^{13}N, 80 MeV, stripping reactions, OM pot. ambiguities in EFR-DWBA anal. 7−116485
^{58}Ni(^{16}O,X), X=^{15}O, ^{15}N, 80 MeV, stripping reactions, j, l and π depends. in EFR-DWBA anal. 7−116486
^{58}Ni(^{16}O,αX), 35 MeV/nucleon, α-emission expt., reaction mechanism 7−141097
^{58}Ni(^{18}O,X), complex fragments, isotopic yield ratios 7−89580
^{58}Ni(^{32,36}S,P), one-proton stripping near Coulomb barrier 7−116478
^{58}Ni(^{32,36}S,S), one- and two-neutron transfer near Coulomb barrier 7−116478
^{58}Ni(^{32,36}S,Si), two-proton stripping and α-stripping near Coulomb barrier 7−116478
^{58}Ni(^{32}S,X), 143 MeV, selective γ-decay of fission-like fragments, deformation 7−116536
^{58}Ni(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{58}Ni(^{40}Ar,X), 15 MeV/u, composite system form. and decay 7−116510
^{58}Ni(^{58}Ni,pX), 876.5 MeV, energy spectra, diabatic dissipation model 7−135366
^{58}Ni(α,α'), 129 MeV, isoscalar giant resonances, decay props., branching ratio calcs. 7−129069
^{58}Ni(α,α), differential cross sections meas., optical model and DWBA calcs. 7−116446
^{58}Ni(α,d), continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
^{58}Ni(α,p), 26 MeV, shell effect in transition matrix of exciton model 2-body residual interaction 7−116443
^{58}Ni(α,p), differential cross sections meas., optical model and DWBA calcs. 7−116446
^{58}Ni(α,p), differential cross sections, DWBA and microscopic calcs. 7−116449
^{58}Ni(α,p), finite-range j-j coupling microscopic form factor 7−116447
^{58}Ni(d,^{3}He)^{57}Co, strong fragmentation of $1d_{5/2}$ hole strength 7−116430
^{58}Ni(d,d), coupled discretized continuum channels methods 7−67849
^{58}Ni(dd)^{58}Ni, nuclear rainbow regime, saturation of analysing powers 7−121864
^{58}Ni(e,e^{-}p), 180 MeV, fast proton emission, high-lying collective states, decay props. 7−129028
^{58}Ni(n, 2n), cross section and excitation function meas. 7−73756
^{58}Ni(n,γ), resonance capture, γ-ray spectra, valence model comparisons 7−116422
^{58}Ni(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{58}Ni(p,p'), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073
^{58}Ni(π,π), pionic atom anomalies study using optical pot. 7−102921
(p,p'), 6-15 MeV, resonances, nonstatistical nature 7−109159
^{30}P, beta-decay, right handed currents bounds 7−89559
^{34}S to ^{42}Ca, s-process anal. from meas. of ^{40}Ar neutron capture cross section 7−72268
^{39}S, ground state mass excess, ^{40}Ar(^{13}C,^{14}O),^{39}S study 7−128941
^{41}Sc, resonance strengths, excitation energies and γ-ray branching ratios from ^{40}Ca(p,γ) 7−109162
^{43}Sc, energy levels, transitions and moments in shell model calc. 7−121621
^{43}Sc energy levels, transitions and level lifetimes from ^{40}Ca(α, pγ) 7−121622
^{43}Sc levels, J, $T_{1/2}$, branching and mixing ratios from ^{40}Ca(α,p) 7−140994
^{45}Sc(^{40}Ar,X), 15 MeV/u, composite system form. and decay 7−116510
^{45}Sc(^{48}Ti,pαX), 16 MeV/u, particle velocity distributions, fusion residue meas. 7−109225
^{45}Sc(p,γ)^{46}Ti, 1026, 1047 and 1377 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
Ti(M^{-}, e$^{\pm}$), neutrinoless conversion search 7−135134
^{A}Ti, A=44, 46, 48, s.d.g. IBM calc. 7−135221
^{A}Ti, A=46,48,52, rotational bands, E1 transitions, cluster anal. 7−67694
^{A}Ti(π, π), A=48, 50, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{43}Ti, β-decay, Gamow-Teller matrix elements, expt. and shell model study 7−141022
^{44}Ti, molecular vibrational states, backward angle anomaly in ^{40}Ca(α,α)^{40}Ca reaction 7−129065
^{46}Ti, strong M1 excitations, shell model predictions, review 7−73745
^{46}Ti, structure studies using MONSTER model 7−121583
^{46}Ti(^{58}Ni,2p2n)^{100}Cd, 230 MeV, ^{100}Cd level scheme determ. 7−109037
^{46}Ti(^{6}Li, X), intermediate mass fragment cross section, sequential binary decay model 7−96110
^{46}Ti(p̄,p'), 65 MeV, low energy octupole resonance, excitation strength and state distrib. 7−81361
^{48}Ti, collective M1 transitions, energy and rates, dependence on nuclear effective interaction 7−102833
^{48}Ti(^{14}N,X), 15, 25, 35 MeV/nucleon, projectilelike fragment momentum distrib. Friedman model comparisons 7−67868
^{48}Ti(^{23}Na,X), fusion, coupled channels effects, numerical results from unified semiquantal description 7−81435
^{48}Ti(^{28}Si,X), cross section fluctuations and excitation fns. 7−116481
^{48}Ti(^{7}Li,^{7}Be)^{48}Sc, isovector giant resonance obs. 7−135356

nuclei with mass number 39 to 58 continued
^{48}Ti(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{48}Ti(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{49}Ti, level lifetime meas. 7−67764
^{49}Ti(p,γ)^{48}V, profiling technique for Ti implantation into Fe and Ni 7−141046
^{50}Ti(^{208}Pb,X), symmetric mass fragmentation using fusion mode 7−109219
^{50}Ti(α,X), 100 MeV, total cross sections, isotope-isotone effect 7−135338
^{50}Ti(α,α'), 100 MeV, isotope-isotone effect, cross section meas. 7−135338
^{50}Ti(d,p)^{51}Ti, 6 MeV, level lifetime meas. 7−67764
^{50}Ti(e,e'), C6 transition, electromagnetic spin-orbit contrib. 7−109151
^{50}Ti(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{51}Ti, level lifetime meas., excited level decay scheme 7−67764
Ti(n,n), small angle scatt. at 14.2 MeV 7−116420
^{48}V, 308 keV 2^{+} state, mag. moment 7−116267
^{51}V(^{12}C,X), 72 MeV, incomplete fusion, recoil studies, α-cluster behaviour 7−116512
^{51}V(^{16}O,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{51}V(α,3n), 10-120 MeV, excitation fns. and nonequilibrium effects 7−121879
^{51}V(α,α'p)^{50}Ti, deep inelastic and quasi-free processes 7−121935
^{51}V(α,n), 10-120 MeV, excitation fns. and nonequilibrium effects 7−121879
^{51}V(α,p), differential cross sections, DWBA and microscopic calcs 7−116449
^{51}V(α,p)^{54}Cr, 25.7 MeV, differential cross sections, zero-range DWBA and quasi-triton transfer approx. comparisons 7−129072
^{51}V(α,p)^{54}Cr, energy level angular distrib., microscopic form factor anal 7−129071
^{51}V(α,xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
^{51}V(n, α), cross section and excitation function meas. 7−73756
^{51}V(n,N), spin-dependent scatt. length meas. 7−109177
^{51}V(p̄,p'), spin transfer meas. in M1 region 7−81387
^{51}V(t,d), 33 MeV, ^{52}V energy levels determ. 7−128960
^{52}V, energy levels, transitions and spectroscopic factors, ^{51}V(t,d) study 7−128960
^{90}Zr(p,p'), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073

nuclei with mass number 59 to 89
7−67825
^{1}Sr, A-80, 82, charge radii using ultrasensitive laser spectroscopy 7−121600
A=70, nuclear data sheets, levels, J$^{\pi}$, transitions, decays 7−102031
A=73, nuclear data sheets, levels J$^{\pi}$, transitions, decays 7−102032
A=74, nuclear data sheets, levels, J$^{\pi}$, transitions, decays 7−140389
A=82, nuclear data sheets, levels, J$^{\pi}$, transitions, decays 7−80199
A≃80, Nilsson model parameter systematics 7−135220
beta-decay rates in stellar interiors, determ. for highly ionised atoms 7−101767
heavy nuclei, spherical and weakly deformed, parametrization for phonon octupole states 7−140975
two-nucleon high spin states, Bansal-French, crude shell models, A=56-72 binding energy 7−140987
(n,X) on A=87-140, 3P size resonance in p-wave neutron strength function 7−67788
(p,p), A=23-110, E_p∼6 MeV, threshold isotopic effect, contrib. to scatt from compound nucleus, stat. anal. 7−121819
(π$^{\pm}$,π$^{\mp}$), mass depend. of double charge exchange on A=44-118 7−81453
^{64}(^{12}C,X), 118 MeV, residue mass distrib., γ-ray spectra anal. 7−141101
^{71}As, intermediate scatt. from ^{70}Ge(p,p') 7−67725
Br (n,n'), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412
Br(^{12}C,X) 4.5 GeV/c/A, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
Br(^{12}C, pX), 4.5 GeV/c/N, directional coherence of emitted protons, fireball, q-g cluster 7−129078
Br(^{24}Mg,X), 4.5 GeV/c/A, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
^{76}Br→^{76}Se, electron capture, E0 transitions in ^{76}Se, conversion electron study 7−109111
^{79}Br(δ,X), 1-5.5 GeV, fragmentation, cross section meas. 7−129123
^{79}Br(δ,f), 1-5.5 GeV, cross section meas. 7−129123
^{79}Br(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
Br(p̄,X), 1.4 GeV/c, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
Br(p̄,X), 300-1400 MeV/c, charged particle multiplicity, negative binomial anal. 7−129031
Br(π^{-},π^{-}p), 170 MeV, integrated cross section, angular distribs., energy and momentum spectra, nucleon charge exchange *(German)* 7−129114
Co(^{3}He,X), target mass depend. of average linear momentum transfer 7−96084
Co(^{14}N,X), target mass depend. of average linear momentum transfer 7−96084
Co(^{20}Ne,X), target mass depend. of average linear momentum transfer 7−96084
^{59}Co(^{15}F,α), 65 MeV, α-energy spectra and angular distrib., reaction mechanism anal. 7−116503
^{59}Co(^{32}S,X), 4-S MeV/N, fission-like fragmentation, intermediate mechanisms 7−73785
^{59}Co(^{3}He,d), inclusive of spectra, influence of detector geometry on breakup observables 7−121875
^{59}Co(α,p), 12-18 MeV, exciton model, inclusion of slow particle emission 7−116370
^{59}Co(α,p), 26 MeV, shell effect in transition matrix of exciton model 2-body residual interaction 7−116443
^{59}Co(α,p), differential cross sections, DWBA and microscopic calcs 7−116449
^{59}Co(α,p)^{62}Ni, 25.7 MeV, differential cross sections, zero-range DWBA and quasi-triton transfer approx. comparisons 7−129072
^{59}Co(α,p)^{62}Ni, energy level angular distrib., microscopic form factor anal 7−129071
^{59}Co(α,t)^{60}Ni, 80.9 MeV, 8^{-} stretched states spectroscopic factors and DWBA calcs. 7−67689

nuclei with mass number 59 to 89 continued
Co(α, X), 10-120 MeV, excitation functions for reaction residues 7−109195
Co(α,X), target mass depend. of average linear momentum transfer 7−96084
Cu, odd-odd nuclei, $U^B(5)$ boson limit, spin $^{BF(\pi\nu)}(5)$ boson-fermion symmetry 7−121673
Cu(^{3}He,X), target mass depend. of average linear momentum transfer 7−96084
Cu(^{14}N,X), target mass depend. of average linear momentum transfer 7−96084
Cu(^{20}Ne,X), target mass depend. of average linear momentum transfer 7−96084
^{A}Cu, A=74-77, new neutron-rich isotope identification in ^{235}U(n,f) 7−135380
^{A}Cu(γ,X), A=63,65 spallation reactions, spatial distrib. of radionuclides 7−109143
^{A}Cu(n,α), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{A}Cu(n,d), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{A}Cu(n,p), A=63, 65, 9 and 11 MeV, emission cross sections, statistical and preequilibrium model calcs. 7−121834
^{63}Cu, proton resonances, γ-angular distrib. meas., intermediate structure obs., spin-parity values 7−121611
^{63}Cu, statistical giant dipole resonance decay of highly excited states 7−128933
^{63}Cu(^{32}S,X), 4-S MeV/N, fission-like fragmentation, intermediate mechanisms 7−73785
^{63}Cu(^{3}He,X), peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
^{63}Cu(α,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{63}Cu(α,p), 26 MeV, shell effect in transition matrix of exciton model 2-body residual interaction 7−116443
^{63}Cu($\bar{p}$, p)X, knock-out reactions, search for $\bar{p}$-nucleus states 7−135322
^{65}Cu(^{45}Sc,X), 200 MeV, complex fragment emission, angular momentum dependence, γ-distribs. 7−141069
^{69}Cu(α,X), 200, 400, 600, 800 A.MeV, (p,p), (d,d) correlation fn. meas. 7−116452
^{69}Cu(α,π), 200, 400, 600, 800 A.MeV, $\pi^{\pm}$ multiplicity meas. 7−116451
^{69}Cu(p,X), fragment charge distributions, statistical model anal. 7−109182
Cu(α,X), relativistic collisions, pion spectra 7−81417
Cu(α,X), target mass depend. of average linear momentum transfer 7−96084
Cu(γ,X), cross-sections for photospallation 7−81370
Cu(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
Cu(n,X), N_ϕ narrow resonance prod., A-dependence meas. 7−96045
Cu(n,n), small angle scatt. at 14.2 MeV 7−116420
Cu(n,n′), 14.9 MeV, cross section meas. using sphere transmission technique *(Chinese)* 7−109158
Cu(p,X), pseudorapidity meas. and fireball model 7−96058
Cu(p,Xn), 100 MeV, neutron yield meas. 7−73758
Cu(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
Cu(π,X), pseudorapidity meas. and fireball model 7−96058
(δ,f), λ 0.8-1.8 GeV, intermediate nuclei, cross section meas. 7−129123
^{A}Ga(n,n) A=69, 71, slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{65}Ga, proton binding energy meas., ^{64}Zn(p,γ)^{65}Ga anal. 7−73736
^{66}Ga, 9$^+$, 3034 keV state, gyromag. factor 7−128953
^{67}Ga, highly deformed compound nucleus, prod. and deexcitation 7−116458
^{72}Ga, spectroscopic factors, spin-parity values from ^{73}Ge(d,^{3}He)^{72}Ga, 25 MeV 7−67727
Ge(^{40}Ar,X), fragmentation crystal blocking in heavy ion reactions 7−116454
Ge(^{16}O,X), fusion, crystal blocking in heavy ion reactions 7−116454
^{A}Ge, A=70, 72, 74, 76 gyromagnetic ratios of 2_1^+ states 7−73699
^{65}Ge, β^+ decay, Gamow-Teller strength meas., level anal. 7−73736
^{70}Ge(p,p′), intermediate structure of ^{71}As 7−67725
^{72}Ge first excited 0$^+$ state, no two-proton strength in ^{70}Zn (^{16}O, ^{14}C) 7−96017
^{73}Ge, proton orbitals, occupation number determ. 7−67727
^{73}Ge(d,^{3}He)^{72}Ga, 25 meV, ^{72}Ga level anal. 7−67727
^{74}Ge(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{76}Ge, double β decay study, Majorana ν mass limits 7−116339
^{76}Ge, neutrinoless double β decay calcs., right-handed leptonic current limit 7−121736
^{76}Ge, neutrinoless double β-decay, Frejus expt. *(Spanish)* 7−109120
^{76}Ge, neutrinoless double β-decay, Monte Carlo simulation *(Spanish)* 7−109121
^{76}Ge neutrinoless double β-decay, on-line data acquisition system *(Spanish)* 7−109677
^{76}Ge, neutrinoless double β-decay, search for majoron emission 7−135259
^{76}Ge, suppression of the two-neutrino double β decay, quasiparticle RPA calcs. 7−121729
^{82}Ge, suppression of the two-neutrino double β decay, quasi-particle RPA calcs. 7−121729
^{A}Kr, A=75, 77, mass from Q-values of (^{3}He,^{6}He) and (d,t) reactions 7−81288
^{A}Kr, A=75, 77, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
^{A}Kr(^{3}He,d), A=78,80,82, proton spectroscopic factor meas. in Rb isotopes 7−116265
^{72}Kr shape coexistence in N=Z nuclei, gamma decay of states from ^{16}O(^{58}Ni,2n), E=170 MeV 7−135200
^{76}Kr, high spin states, p-n $g_{9/2}$ alignment ^{40}Ca(^{40}Ca,4p), 155 MeV study 7−108994
^{81}Kr, Gamow-Teller strength distrib. meas. 7−96042
^{81}Kr^m, electron capture branching ratio 7−109122
^{81}Kr^m→^{81}Br, electron capture, branching ratio meas., log ft value 7−141025
^{82}Kr, E2 and M1 transitions, energies and reduced probabilities, extended IBM calcs. 7−121648
(^{84}Kr,X), 20 MeV/u, reaction product Z, A meas. 7−116506
^{84}Kr gamma-gamma directional correl. meas., spin-parity, multipole mixing ratios from ^{83}K(n,α) 7−135247

nuclei with mass number 59 to 89 continued
^{84}Kr(p,X), fragment charge distributions, statistical model anal. 7−109182
Kr(n,γ)Kr, stellar cross-sections in s process 7−109166
Kr(p, X), isotope distrib. of medium-sized nuclei, statistical multifragmentation model anal. 7−121837
Ni(^{14}N,X), 96 MeV, α-particle emission mechanism, fragment sequential decay *(Chinese)* 7−109204
Ni(^{58}Ni,X), 55A.MeV, obs. of proton rich nuclei, 23≤Z≤29 7−109223
^{A}Ni, A=70-74, new neutron-rich isotope identification in ^{235}U(n,f) 7−135380
^{A}Ni(^{B}Si,X), A=58,62,64, B=28,30, coupled channels anal., low-lying excitations, rotational and vibrational model comparisons 7−67867
^{A}Ni(^{28,30}Si,X), A=58,62,64, sub-barrier fusion cross sections, CC and HF calcs. 7−116538
^{A}Ni(^{28}Si,^{29,30}Si), A=58, 62, transfer cross sections near Coulomb barrier, DWBA anal. 7−116490
^{A}Ni(α,p), A=58, 60, 62, zero and finite range semi-microscopic DWBA anals. *(Chinese)* 7−116438
^{A}Ni(α,p), A=60,62, differential cross sections, DWBA and microscopic calcs. 7−116449
^{A}Ni(α,p), A=60,62, finite-range j-j coupling microscopic form factor 7−116447
^{A}Ni(γ,X), A=58,60-62,64, 4.5 GeV expts. 7−89567
^{A}Ni(n,xα), 9.4, 11 MeV, A=58, 60, cross sections and spectra, Hauser-Feshbach anal. 7−67825
^{B}Ni(D,X), B=58, 64, D=^{12}C, ^{18}O, E/A=30-84 MeV, isotope yields as probe of reaction dynamics 7−141073
^{60}Ni, 8$^-$ stretched states, spectroscopic factors and DWBA calcs., ^{59}Co(α,t)^{60}Ni expt. 7−67689
^{60}Ni, spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
^{60}Ni(^{16}O,^{16}O), energy depend., optical model anal. 7−121943
^{60}Ni(^{20}Ne,X), ^{7}Li production, Hauser-Feshbach calculations 7−81443
^{60}Ni(^{20}Ne,X), heavy residue masses, impact parameter indicators 7−109220
^{60}Ni(α,X), Coulomb and nuclear excitation, soliton nature of interference 7−121868
^{60}Ni(d,d), 200, 400, 700 MeV, relativistic anal., Dirac vector/scalar potential strength calcs. 7−116437
^{60}Ni(n,γ), resonance capture, γ-ray spectra, valence model comparisons 7−116422
^{60}Ni(n,p), 18.5 MeV, total proton emission cross section meas., ang. distribs. 7−81400
^{61}Ni, isomer shift calibration by ^{57}Ni electron capture lifetime meas. 7−132169
^{62}Ni(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{62}Ni(α,α), differential cross sections meas., optical model and DWBA calcs. 7−116446
^{62}Ni(α,p), differential cross sections meas., optical model and DWBA calcs. 7−116446
^{64}Ni(^{12}C,^{3}He), energy spectra, ang. distrib. and isotope yield ratio meas. *(Chinese)* 7−96092
^{64}Ni(^{12}C,X), complex fragments, isotopic yield ratios 7−89580
^{64}Ni(^{12}C,αX), 35.5-69.4 MeV, particle energy spectra, angular distrib., α-distribution dependence on incident energy *(Chinese)* 7−102898
^{64}Ni(^{12}C,α), energy spectra, ang. distrib. and isotope yield ratio meas. *(Chinese)* 7−96092
^{64}Ni(^{12}C,d), energy spectra, ang. distrib. and isotope yield ratio meas. *(Chinese)* 7−96092
^{64}Ni(^{12}C,p), energy spectra, ang. distrib. and isotope yield ratio meas. *(Chinese)* 7−96092
^{64}Ni(^{12}C,t), energy spectra, ang. distrib. and isotope yield ratio meas. *(Chinese)* 7−96092
^{64}Ni(^{18}O,^{18}O′)^{64}Ni, transition potential for excitation, double folding model anal. 7−129084
^{64}Ni(^{18}O,X), complex fragments, isotopic yield ratios 7−89580
^{64}Ni(^{208}Pb,X), symmetric mass fragmentation using fusion model 7−109219
^{64}Ni(^{28}Si,X), cross section fluctuations and excitation fns. 7−116481
^{64}Ni(^{32,36}S,P), one-proton stripping near Coulomb barrier 7−116478
^{64}Ni(^{32,36}S,S), one- and two-neutron transfer near Coulomb barrier 7−116478
^{64}Ni(^{32,36}S,Si), two-proton stripping and α-stripping near Coulomb barrier 7−116478
^{64}Ni(n,γ), nonstatistical effects in the 3s giant resonance region *(Chinese)* 7−96063
^{64}Ni(p,p), phenomenological optical pot., energy depend. of radius 7−135270
^{65}Ni, γ-emission probability meas., activity, spectra and half-life determ. 7−135254
Rb transition nuclei, collective zero-point motion contrib. to mean-square charge radii 7−135182
^{A}Rb, A=79,81,83, low-lying levels, proton spectroscopic factor meas. 7−116265
^{82}Rb, β^+ decay scheme study 7−96029
^{82}Rb, half-life determ. 7−96027
^{82}Rb, partial decay scheme study, radiation dose meas. appl. 7−96026
^{85}Rb(^{7}Li,3n)^{89}Zr, 27 MeV, excited states production, ^{89}Zr 21/2$^+$ level, mean lifetime meas. 7−109117
^{A}Se, A=70,72,74, $g_{9/2}$ orbit, coexistence of shapes 7−109006
^{A}Se, A=76, 78, level struct. and transitions, shape coexistence, dynamic deformation model 7−116280
^{A}Se(p,p) A=78, 80, 82, energy ≤6 MeV, polarization, cross sections, OP parameters. isobaric analog states 7−121816
^{73}Se, level lifetime meas. and rotor model comparison 7−96021
^{75}Se, pseudobands in non-SU(3) nuclei, coherent state structs. of quadrupole phonons 7−140981
^{76}Se, E0 transitions between 0_2^+, 0_1^+ and 2_2^+, 2_1^+ levels 7−109111
^{76}Se(t,p)^{78}Se, 17 meV, excitation energies, angular distrib., J$^\pi$ assignments 7−67716
^{77}Se, internal conversion coefficients *(Spanish)* 7−81336
^{78}Se, collective and two-particle excitations 7−81283
^{80}Se(^{80}Se,γ), partial wave fusion cross sections, near Coulomb barrier, γ-spectroscopy 7−121946
Sr, shape transition at N=60 7−116249
^{A}Sr, A=79-97, nuclear ground state spins of short lived isotopes, hyperfine structure 7−121608
^{A}Sr, A=80-89, charge radii and moments, laser spectroscopy meas. 7−95984

nuclei with mass number 59 to 89 continued
^{A}Sr, A=86,87, nuclear structure study using ^{87,88}Sr(d,^{3}He), DWBA anal. 7−128956
^{A}Sr(d,^{3}He)^{B}Sr, 28 MeV, A=87,88, B=86,87, nuclear structure study 7−128956
^{80}Sr, high spin state study using ^{54}Fe(^{29}Si,2pn)^{80}Sr, 85-110 MeV 7−108979
^{80}Sr, high spin states, lifetimes, γ-softness meas. 7−73681
^{82}Sr, half-life determ. by high resolution γ-ray spectrometry 7−96028
^{82}Sr, half-life meas. by γ-ray spectrometry 7−96029
^{87}Sr(γ, γ′), photoactivation of isomeric levels 7−73753
^{89}Sr, β-decay inner bremsstrahlung 7−73735
^{83}Y low-energy level structure, isomer decays from ^{83}Zr decay, ^{83}Y low-energy level structure, isomer decays 7−121619
^{88}Y, γ-ray sum-peak counting, instrumental corrections of peak areas 7−96480
^{89}Y(^{19}F,X), 135-143 MeV, excitation fns., correlated fluctuations 7−116504
^{89}Y(^{19}F,X), 135-143.25 MeV, cross-section correlated fluctuations, excitation functions 7−121912
^{89}Y(^{3}He, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{89}Y(α,p), differential cross section meas. and microscopic DWBA anal. 7−116448
^{89}Y(α,p), differential cross sections, DWBA and microscopic calcs. 7−116449
^{89}Y(n,n′)^{89}Y, microscopic distorted-wave approx. study 7−129046
^{89}Y(p,γ)^{90}Zr, giant dipole resonances, cross-section meas. 7−102874
Zn(^{14}N,X), 20, 30 and 40 MeV, γ-ray energy and ang. distribs. 7−116515
^{A}Zn(p,p′)^{A}Zn, A=64, 66 inelastic scatt., excitation energies and ang. distribs. 7−73760
^{A}Zn(p,p′)^{A}Zn, A=68,70, spectroscopy, comparison of low-lying states 7−73761
^{64}Zn(p,γ)^{65}Ga, 1.1-2.1 MeV, γ-angular distrib. meas. single level, decay prop. anal. 7−73736
^{67}Zn(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{68}Zn(^{40}Ar, X), 15-35 MeV/nucleon, direct transfer of nucleons, diffractional model, projectile fragmentation, modified abrasion model 7−129094
^{68}Zn(^{40}Ar,X), 14.6-35 MeV/N, light charged particle emission, stat. models anal. 7−67873
^{68}Zn(^{40}Ar,X), 27.6 MeV/N, fragment isotopic distribs., projectile fragmentation 7−96095
^{68}Zn(^{64}Zn,γX), 290 MeV, γ-spectra observed in coincidence with fragment K X-ray spectra 7−109226
^{70}Zn(^{50}Ti,xn)^{A}Te, x=4,3, A=116,117, 170 MeV, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{80}Zn, β-decay, implications for shell structure and r-process nucleosynthesis 7−129002
^{80}Zr, γ-radiation, low lying states, quadrupole deformation 7−141017
^{80}Zr, γ-ray spectroscopy, nuclear stability 7−121711
^{83}Zr decay, ^{83}Y low-energy level structure, isomer decays 7−121619
^{84}Zr, high-spin spectrum and shape coexistence, Strutinsky-Bogolyubov cranking study 7−81280
^{89}Zr, $21/2^{+}$ level, mean lifetime meas., $21/2^{+}\rightarrow 17/2^{+}$ transition study 7−109117
^{89}Zr$_{mg}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{90}Zr, giant dipole resonances, cross-section meas. in ^{89}Y(p,γ) reaction 7−102874

nuclei with mass number 90 to 149
^{130}Te(^{28}Si,4n), correlations in ^{162}Er, exptl. study 7−108998
^{90}Zr(p,α), 18 meV, alpha-energy spectra meas., shell and odd-even effects anal., knock-out model calcs. 7−67833
A=100 region, correspondence between rotational bands, quartet model 7−128934
A=101-106, β-transition end-point energies, masses, nuclear structure effects 7−141030
A=117, nuclear data sheets, levels, J^{π}, transitions, decays 7−80200
A=118, nuclear data sheets, levels, J^{π}, transitions, decays 7−140390
A=130 mass region, U(6/20) supersymmetry, wave function, EM transition rates, spectra 7−96012
A=140, nuclear data sheets, levels, J^{π}, transitions, decays 7−140391
A=146 region, spectra and decay properties, transition probabilities, doubly magic anal. 7−129000
A∼125, odd nuclei, l-forbidden M1 transitions, anal. 7−121713
A≈150 transitional nuclei, effective valence proton and neutron numbers, from B(E2) and g-factors 7−141016
A≃100, Nilsson model parameter systematics 7−135220
A≃130, Nilsson model parameter systematics 7−135220
beta-decay rates in stellar interiors, determ. for highly ionised atoms 7−101767
deformed odd-A nuclei, A≃100, pairing reduction, RPA shell model calcs. 7−81275
exotic rare-earth nuclei formation in ^{32}S, ^{35}Cl, ^{36}Ar fusion-evaporation reaction on ^{92}Mo, ^{106}Cd, ^{112}Sn 7−96113
heavy ion collisions, highly excited nuclei produced in fast dissipative collisions, decay props. 7−141067
heavy nuclei, spherical and weakly deformed, parametrization for phonon octupole states 7−140975
isobaric analog states and the isovector giant resonance, spreading widths 7−73740
rare-earth nuclei, band termination and E2 collectivity loss, algebraic fermion model 7−81274
superdeformed states and feeding patterns in rare earths, spectroscopy, pot. energy calcs. 7−135178
(n,X) on A=87-140, 3P size resonance in p-wave neutron strength function 7−67788
(p,p), A=23-110, E_p∼6 MeV, threshold isotopic effect, contrib. to scatt. from compound nucleus, stat. anal. 7−121819
($π^{±}$,$π^{∓}$), mass depend. of double charge exchange on A=44-118 7−81453
($π^{±}$,′X), 60, 65 MeV, on A=12-90, total reaction cross sections, use in optical anals. 7−121960
Ag (^{32}S,X), 30 MeV/N, inclusive fragment prod., asymmetric fission-like process 7−73792
Ag (p̄,X), 1.4 GeV/c, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
Ag, cumulative and independent yields, charge distrib. from ^{232}Th(n,f) *(Chinese)* 7−121966
Ag, odd-A nuclei, g factors of isomeric $7/2^{+}$ states 7−67719
Ag(Ar,X), 30 MeV/u, hard photon prod., ang. distrib. meas. 7−116471
Ag(^{40}Ar,X), 336 MeV, excited compound nuclei, cluster emission, evaporation model, cross sections *(German)* 7−129092
Ag(^{40}Ar, X), 337 MeV, ^{4}He−^{1,2,3}H, ^{4}He−^{4}He energy, angular correlations, nuclear stratosphere, statistical model 7−121893
Ag(C,X), in-plane light particle correlations 7−129086
Ag(^{12}C,X), 4.5 GeV/c/A, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
Ag(^{12}C,X), complex fragments, isotopic yield ratios 7−89580
Ag(D,X), D=^{12}C, ^{18}O, E/A=30-84 MeV, isotope yields as probe of reaction dynamics 7−141073
Ag(^{3}He,X), target mass depend. of average linear momentum transfer 7−96084
Ag(^{3}He,X); 50-130 MeV, excited compound nuclei, cluster emission, evaporation model, cross sections *(German)* 7−129092
Ag(Kr,X), 44 MeV/u, hard photon prod., ang. distrib. meas. 7−116471
Ag(^{84}Kr,X), 22 MeV/N, peripheral reactions, fragment spectra, projectile fragmentation 7−73788
Ag(^{24}Mg,X), 4.5 GeV/c/A, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
Ag(^{14}N, X), 35 MeV/N, intermediate-mass fragments from nonbinary processes, linear momentum transfer mechanism 7−141099
Ag(^{20}Ne,X), target mass depend. of average linear momentum transfer 7−96084
Ag(^{18}O,X), complex fragments, isotopic yield ratios 7−89580
^{A}Ag, A=108, 110, low spin state level scheme, spin, parity and transition multipolarity 7−109042
^{A}Ag, A=108, 110, multiplet structure, E2 transitions and quadrupole moments 7−121575
^{A}Ag(α,p), A=107,109, differential cross sections, DWBA and microscopic calcs. 7−116449
^{104}Ag, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{107}Ag(α, xn), x=1, 2, α, α2, excitation functions 7−109194
^{107}Ag(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
^{107}Ag(p,α), 18 meV, alpha-energy spectra meas., shell and odd-even effects anal., knock-out model calcs. 7−67833
^{108}Ag(^{40}Ar,αα), 285 MeV, reaction mechanism anal. 7−121885
^{108}Ag(δ,X), 1-5.5 GeV, fragmentation, cross section meas. 7−129123
^{108}Ag(δ,f), 1-5.5 GeV, cross section meas. 7−129123
^{109}Ag(α, xn), x=2, 3, 4, excitation functions 7−109194
^{109}Ag(n,n′), temperature shift meas. of neutron resonances 7−73771
Ag(α, X), 70 to 800 MeV/U, fission to multifragmentation transition 7−81413
Ag(α,X), target mass depend. of average linear momentum transfer 7−96084
Ag(^{14}N,X), target mass depend. of average linear momentum transfer 7−96084
Ag(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
Ag(p̄,X), 300-1400 MeV/c, charged particle multiplicity, negative binomial anal. 7−129031
Ag(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
Ag($π^{-}$,$π^{-}$p), 170 MeV, integrated cross section, angular distribs., energy and momentum spectra, nucleon charge exchange *(German)* 7−129114
^{A}Ar(p,n), A=90,91,92,94, preequilibrium model anal. 7−129044
^{197}Au(^{197}Au,X), 200 MeV/u, multifragmentation and collective flow study 7−141076
Ba, neutron rich nuclei, octupole deformation 7−116313
^{1}Ba, A=134, 136, 138, first excited state, quadrupole moment and reduced transition probability 7−109025
^{A}Ba, A=136, 138, low-spin levels, (n,n′γ) study 7−109045
^{A}Ba, A=140, 142, 2_1^{+} state g-factor revolving cluster model 7−102803
^{124}Ba, excited states following ^{124}La $β^{+}$ decay 7−109031
^{124}Ba, yrast band, band crossing and negative parity states 7−81284
^{126}Ba, 22 from ^{116}Sn(^{13}C, 3nγ) 7−121572
^{128}Ba, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{131}Ba, β-decay, ^{131}Cs new level structure 7−121576
^{133}Ba decay, gamma-ray energy meas., cascade cross-over relations anal. 7−73730
^{133}Ba, extrapolation curves calc. in $4πβ−γ$ coincidence method 7−96481
^{134}Ba, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312
^{134}Ba(^{24}Mg,nX), 180 MeV, neutron spectra, angular distrib. meas. 7−67882
^{135}Ba, level energies, E2 transition probabilities, appl. of spinor symmetry 7−121616
^{136}Ba (α,2n), level scheme study of ^{138}Ce 7−135250
^{138}Ba, first excited 2^{+} state, g-factor meas., ^{138}Ba(^{32}S,^{32}S′) Coulomb excitation 7−109026
^{138}Ba(^{32}S,^{32}S′), 105 MeV, Coulomb excitation of first excited 2^{+} state, g-factor meas. 7−109026
^{A}Cd(t,p), A=112, 114, intruder-ground state mixing 7−102836
^{14}Cd(p,t), intruder-ground state mixing 7−102836
^{100}Cd level scheme determ., isomer identification, ^{46}Ti(^{58}Ni,2p2n)^{100}Cd study 7−109037
^{106}Cd, g-factor and 12^{+} isomer struct. 7−95988
^{110}Cd, ground band-intruder band mixing meas. and IBM-2 calcs. 7−95966
^{110}Cd(^{13}C,3n), ^{120}Xe, lifetime meas. using coincidence plunger technique 7−102909
^{111}Cd, photoactivation to ^{111}Cd^{m}, decay scheme 7−141015
^{111}Cd^{m}, E3 transition, ICC meas. 7−116337
^{111}Cd^{m}, half-lives and γ-transitions 7−96025
^{111}Cd(γ,γ′), photoactivation to ^{111}Cd^{m}, decay scheme 7−141015
^{114}Cd(^{27}Al,4n); ^{137}Pm collective band structures 7−128932
^{114}Cd(n,n′γ), $2_3^{+}\rightarrow 2_1^{+}$ transition, multipole mixing parameter determ. 7−135318
^{116}Cd, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{117}Cd, β-decay, branching fractions 7−116340
^{118}Cd, first observation of a near-harmonic vibrational nucleus 7−135189
^{111m}Cd, E3 transition and high multipole order internal conversion coeffs. 7−102838

nuclei with mass number 90 to 149 continued
Cd(γ,n), 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
Cd(ñ,ñ), 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
Cd(n,n), small angle scatt. at 14.2 MeV 7−116420
^{A}Ce, A=124, 126 B(E2) anomaly in ground state bands 7−109104
^{A}Ce, A=130, 132, from beta-decay of ^{130,132}Pr, gamma bands of states 7−129005
^{124}Ce, γ-ray decay study using Daresbury Recoil Separator 7−109107
^{130}Ce, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{132}Ce, yrast and yrare lifetime meas. 7−109118
^{138}Ce, level scheme, in-beam spectroscopy study 7−135250
^{140}Ce, low-spin levels, (n,n′γ) study 7−109045
^{142}Ce(p, γγ), isoscalar and isovector quadrupole resonance effects in pγγ ang. correls. 7−67784
^{A}Cs, A=121, 123 Hartree-Fock description of octupole deformations and rotation 7−81292
^{A}Cs, A=123, 125, reduced transition probabilities and multipole mixing ratio meas. 7−128998
^{A}Cs, A=125, 127, 129, reduced transition probabilities and multipole mixing ratio meas. 7−128998
^{A}Cs, A=125,127 hot compound nuclei, γ-ray polarisation 7−116332
^{A}Cs^{m}, A=119, 121, transitions from on-line nuclear orientation 7−116275
^{118}Cs^{m} magnetic moment and transitions from on-line nuclear orientation 7−116275
^{120}Cs^{g}, transitions from on-line nuclear orientation 7−116275
^{121}Cs, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{128}Cs decay, E2 transition probability calcs. 7−95962
^{131}Cs, new level structure from ^{131}Ba β-decay 7−121576
^{134}Cs, energy levels and electromagnetic properties, IBFFM description, comparison with expt. 7−135253
^{134}Cs level scheme, J$^{\pi}$ and transitions from (n,γ) and (d,p) 7−135180
^{134}Cs, multiplet structure, E2 transitions and quadrupole moments 7−121575
^{132}De, high-spin, collective and single particle structures 7−121578
^{A}Dy, A=142, 144, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{A}Dy, A=142,144, excited state and J$^{\pi}$, deformation from ^{96}Ru(^{52}Cr,X) and ^{92}Mo(^{54,56}Fe,X) 7−73683
^{146}Dy, Gamow-Teller transitions, by γ-ray and conversion electron spectroscopy, decay strength 7−121735
^{147}Dy, fine structure of β-decay strength functions 7−141029
^{147}Dy, γ-decay, delayed protons and γ-ray emission, competition 7−121734
^{152}Dy, decay scheme up to 40 ħ, coexistence of prolate and oblate structures 7−116225
(δ,f), λ 0.8-1.8 GeV, intermediate nuclei, cross section meas. 7−129123
^{149}Er, energy levels, β-delayed proton emission, K X-ray-proton coincidences in A=149 mass chain from ^{149}Tm decay 7−141026
^{149}Er level structure, yrast levels, isomeric states and transitions from ^{92}Mo/^{60}Ni, X 7−140983
^{150}Er, decay props. 7−67766
^{A}Eu, A=147, 149, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{145}Eu, octupole multiplets, spin-parity assignments, level transitions 7−108999
^{146}Eu, high-spin octupole isomer and four-particle yrast levels 7−109000
^{149}Eu energy levels, nuclear shapes, N=84-88 7−121553
^{149}Eu, excited state population in ^{149}Gd γ-decay, level scheme study 7−135208
^{A}Gd, A=147, 149, ground state, mag. dipole moments 7−116268
^{A}Gd, A=149, 151, low temp. nuclear orientation 7−116243
^{136}Gd, compound nucleus, lifetime meas. for lowest states 7−109119
^{142}Gd excited state and J$^{\pi}$, deformation from ^{92}Mo(^{54,56}Fe,X) and ^{96}Ru(^{52}Cr, X) 7−73683
^{142}Gd, $h_{11/2}$ proton and neutron excitations 7−116219
^{142}Gd, level scheme, neutron dependence of Z=64 shell closure 7−109044
^{146}Gd, proton-neutron single particle states, TOPS interaction 7−81268
^{147}Gd, single particle radiation between high spin states from ^{122}Sn(^{30}Si,5n) 7−109209
^{148}Gd, α-radioactive decay, flicker-noise fluctuations 7−102845
^{148}Gd, high spin states and octupole excitations 7−116223
^{148}Gd, I≤44 level structure, spherical and oblate states, fast E2 transitions 7−135186
^{149}Gd, γ-transitions study using anti-Compton spectrometer 7−135208
I mag. moments meas. by on-line nuclear orientation 7−116273
^{A}I, A=117-122 mag. moment meas. by nuclear orientation 7−109022
^{126}I, excited state study from ^{127}I(γ,n)^{126}I, 9.72 MeV, neutron spectra meas. 7−73701
^{127}I, Coulomb-excitation transition studies 7−109098
^{127}I(γ,n)^{126}I, 9.72 MeV, excited states and Q value meas., neutron spectro anal. 7−73701
I(ñ, ñ), 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
In, cumulative and independent yields, charge distrib. from ^{232}Th(n,f) *(Chinese)* 7−121966
^{A}In, A=104-127, spins, moments and mean square charge radii for laser spectroscopy 7−73695
^{A}In β-decay, A=115, 117, ^{115,117}Sn spin-flip mag. quadrupole transitions, $T_{1/2}$, J$^{\pi}$ and levels 7−135249
^{A}In(^{12}C,X), A=113, 115, γ-γ directional correlations, meas. and interpretation 7−73733
^{106}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{108}In, nuclear orientation, ground state spin assignments, NMR advances 7−116262
^{113}In^{m}, half-lives and gamma transitions 7−96025
^{113}In(γ, γ′), photoactivation of isomeric levels 7−73753
^{115}In^{m}, half-lives and gamma transitions 7−96025
^{115}In(n,γ)^{116m}In, 144, 565 keV, cross section meas. *(Chinese)* 7−96060
^{116}In^{m}, β-activity meas. *(Chinese)* 7−96060
^{117}In^{m}, internal transition branching and isomer cross-section ratio 7−116340
La, odd-mass nuclei, core-particle coupling calcs. 7−95964
^{131}La, collective oblate band due to $h_{11/2}$ neutrons rotational alignment 7−73693

nuclei with mass number 90 to 149 continued
^{139}La(^{12}C,X), 50 MeV/u, onset of ineffectual and incomplete fusion 7−141087
^{139}La(^{139}La,πX), 138, 183, 246 MeV/nucleon, energy and angular depend. meas. 7−109222
^{139}La(n,α), cross section meas., E_n=14-15 MeV 7−109184
^{139}La(n,γ), parity violation, helicity depend. 7−116404
^{139}La(n,p), Z 7−109184
^{139}La(n,t), cross section meas., E_n=14-15 MeV 7−109184
^{139}La(p,2n), level scheme study of ^{138}Ce 7−135250
La(p,X), 800 GeV, thick-target recoil props. of deep spallation and fragmentation products 7−129034
Mo(Mo,X), disintegration of highly excited nuclei 7−81444
^{A}Mo, A=100, 102, E0 transition meas. and neutron-proton IBM comparison 7−81337
^{A}Mo, A>102, Nilsson model parameter systematics 7−135220
^{A}Mo(^{84}Kr, X), A=92,98, 22 MeV/N, peripheral reactions, fragment spectra, projectile fragmentation 7−73788
^{A}Mo(n,γ), A=95-98, Maxwellian-averaged neutron capture cross sections 7−115222
^{A}Mo(p, p′), A=94, 96, 100, 25.6 MeV, level energies, DWBA and coupled channels anal. 7−116406
^{A}Mo(p,α), A=92,94,96,98,100, 18 meV, alpha-energy spectra meas., shell and odd-even effects anal., knock-out model calcs. 7−67833
^{A}Mo(p,n), A=92,94,95,96,97,98,100 preequilibrium model anal. 7−129044
^{A}Mo(p,p), A=94,96,100, elastic, inelastic scatt., coupled channel anal. *(Russian)* 7−109175
^{92}Mo(^{40}Ca,2pα)^{126}Ce, 180 MeV, ^{132}Sm formation, lifetime meas. for lowest states 7−109119
^{92}Mo(^{40}Ca,4p)^{128}Ce, 180 MeV, ^{132}Sm formation, lifetime meas. for lowest states 7−109119
^{92}Mo(^{46}Ti,2p2n)^{134}Sm, 210 MeV, collectivity of low-lying states in ^{134}Sm 7−108992
^{92}Mo(^{50}Cr,2pα)^{136}Sm, 230 MeV, collectivity of low-lying states in ^{134}Sm 7−108992
^{97}Mo, level scheme construction from ^{96}Zr(^{3}He,2nγ)^{97}Mo, 11 MeV, particle-plus-rotor model anal. 7−67690
^{100}Mo, level scheme, mixing ratios for $2_2^+ \rightarrow 2_1^+$, $2_3^+ \rightarrow 2_1^+$, β-decay study 7−109123
^{100}Mo(^{100}Mo,X), 12-19 MeV/u, ternary processes, kinematic coincidences anal. 7−116511
^{100}Mo(^{100}Mo,X), E≥2 MeV/N, binary versus ternary fragmentation processes, statistical multifragmentation model 7−135353
^{100}Mo(^{36}S,4n)^{130}Ce, 144 MeV, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{100}Mo(^{36}S,4n)^{132}Ce, 145 MeV, yrast and yrare lifetime meas. in ^{132}Ce 7−109118
Mo(n,X), slow neutrons, scatt. and absorption, cross sections, resonance parameters 7−67845
Mo(n,n), small angle scatt. at 14.2 MeV 7−116420
Nb(Nb,X), 400, 650 MeV/N, central collisions, relation between entropy and nucleosynthesis 7−81432
Nb(Nb,X), bounce-off effect, transparency, stopping power and thermalization 7−96108
Nb(Ne,X), 200 to 1000 MeV/u, fragment prod. at small angles study 7−81448
^{91}Nb^{m}, electron capture decay, isomer transition, level lifetimes, J$^{\pi}$ *(Chinese)* 7−116338
^{91}Nb^{m}, electron capture decay meas., K-conversion coeff. 7−121718
^{93}Nb(^{3}He,X), peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
^{93}Nb(^{84}Kr,X), 34.5 MeV/u, binary break-up of high velocity hot source, fragment prod. 7−96101
^{93}Nb(α, xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
^{93}Nb(α,2n), 10-120 MeV, excitation fns. and nonequilibrium effects 7−121879
^{93}Nb(α,n), ^{96}Tc spin assignments, decay schemes statistical methods anal. 7−89542
^{93}Nb(α,n), 10-120 MeV, excitation fns. and nonequilibrium effects 7−121879
^{93}Nb(d,X), 7.3GeV, α-ray yields, cross sections and isomeric ratios 7−67850
^{93}Nb(n, 2n), cross section and excitation function meas. 7−73756
^{93}Nb(n,nX), emission cross sections at 7 MeV incident energy 7−81384
^{93}Nb(n,n′), exciton distrib. fns. and hybrid precompound decay model 7−96077
^{93}Nb(n,n), elastic and inelastic scatt. at 7 MeV incident energy 7−81384
^{93}Nb(n,p), exciton distrib. fns. and hybrid precompound decay model 7−96077
^{93}Nb(p,α), 18 meV, alpha-energy spectra meas., shell and odd-even effects anal., knock-out model calcs. 7−67833
^{94}Nb, multiplet structure, E2 transitions and quadrupole moments 7−121575
^{96}Nb, mag. moment determ. using γ-ray ang. distrib. anisotropy 7−121609
^{100}Nb→^{100}Mo, 3-s isomer decay scheme, γ-spectra, γ-γ coincidence meas., level lifetime determ. 7−109123
^{A}Nd, A=132, 134, from beta-decay of ^{132,134}Pm, gamma bands of states 7−129005
^{134}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{135}Nd, low-lying band structure extension to higher spins 7−108963
^{135}Nd, superdeformed band obs. 7−95971
^{135}Nd, superdeformed shapes, collective radiation meas. 7−81295
^{136}Nd, g-factors and proton alignment at the backbend 7−95986
^{136}Nd high spin states, band crossings, cranked shell model anal. of ^{116}Cd(^{24}Mg, 4nγ), ^{136}Nd high spin states, band crossings, cranked shell model anal. 7−121562
^{136}Nd, lifetime and g-factor meas. 7−116328
^{136}Nd, yrast states, recoil distance lifetime meas., level structure 7−116336
^{141}Nd$_{m,g}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{142}Nd(^{18}O,nX), 207 MeV, neutron spectra, angular distrib. meas. 7−67882
^{143}Nd high spin states, J$^{\pi}$, $T_{1/2}$ and transitions from ^{130}Te(^{18}O, 5n) 7−102796
^{143}Nd(n,2γ), E2 strength fns. and radiative widths 7−96072
^{143}Nd(n,γ), excited states characts. from γ-ray spectroscopy 7−121824

nuclei with mass number 90 to 149 continued
^{144}Nd, hot rotating nucleus, fission barrier, constrained temp. HF study 7−121782
^{144}Nd(^{16}O,γ), partial wave fusion cross sections, near Coulomb barrier, γ-spectroscopy 7−121946
^{148}Nd(p,α), mechanism and ang. distrib., pick-up and knock-on theories 7−116417
^{148}Nd, antiprotonic, strong-interaction fine struct. effects 7−96018
Pd, odd-neutron isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{A}Pd, A=102, 104, 106, conversion coeffs. and E0 transitions 7−96023
^{A}Pd, A=102-112, energy bands and E2 transitions, extended IBA consistent Q formalism 7−135258
^{A}Pd, A=108, 110, 112, E0 transition meas. and neutron-proton IBM comparison 7−81337
^{A}Pd(e,e′), A=104-110, low-lying states, IBM and anharmonic vibrator model comparisons 7−109039
^{103}Pd electron capture meas., heavy neutrino mass determ. *(Russian)* 7−81346
^{103}Pd, level structure, lifetime meas., level spin determ. using Hauser-Feshbach anal., mixing ratios 7−67691
^{105}Pd(n, γ), M1 giant resonance observation by averaged γ-ray intensity 7−116359
^{105}Pd(n,γ), 2-24 keV, M1 giant resonance obs., γ-strength fns. 7−108993
^{105}Pd(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{106}Pd, M1 giant resonance obs., ^{105}Pd(n,γ) study 7−108993
^{106}Pd(p,α), 18 meV, alpha-energy spectra meas., shell and odd-even effects anal., knock-out model calcs. 7−67833
^{108}Pd(^{48}Ca,4n), 205 MeV, obs. of discrete line superdeformed band in ^{152}Dy 7−116224
^{108}Pd(^{50}Ti,nX), 216 MeV, neutron spectra, angular distrib. meas. 7−67882
^{109}Pd$_{m,g}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{110}Pd(p,n), preequilibrium model anal. 7−129044
^{A}Pm, A=132, 134, β decay, gamma-ray spectra of neutron-deficient isotopes, systematic trends 7−129005
^{A}Pm, A=135, 137 collective band structures 7−128932
^{A}Pm, A=143-145, β^+ decay half-lives rel. to appl. as cosmic ray clock 7−139871
^{140}Pm levels, J$^{\pi}$ and transitions from ^{140}Sm β^+-decay 7−67698
^{149}Pm, levels and moments following ^{149}Nd decay 7−116329
^{A}Pr, A=130, 132, β-decay, gamma-ray spectra of neutron-deficient isotopes, systematic trends 7−129005
^{131}Pr energy levels, J$^{\pi}$, branching ratios, bands and transitions from ^{98}Mo(^{37}Cl,4n) 7−135179
^{141}Pr(^{28}Si,X), evidence for Coulomb-field induced light-particle emission during scission 7−81427
^{141}Pr(γ,p), zero-range approximation limits, anal. power, sensitivity to force range 7−116383
Ra, octupole shapes and shape changes at high spins 7−102797
Rh, cumulative and independent yields, charge distrib. from ^{232}Th(n,f) *(Chinese)* 7−121966
Rh, odd-A nuclei, g factors of isomeric 7/2$^+$ states 7−67719
Rh odd-mass nuclei, Dyson mapping appl. to low-lying collective states 7−67686
Rh, odd-proton isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{100}Rh, negative parity bands, conversion-electron meas. 7−108991
^{103}Rh(n,n′), temperature shift meas. of neutron resonances 7−73771
^{103}Rh(p,nγ), 2.8-4.6 MeV, gamma-ray meas., ^{103}Pd level anal. 7−67691
^{109}Rh level scheme, particle-hole states, J$^{\pi}$ and transitions from ^{109}Ru β-decay and ^{110}Pd(d,^{3}He) 7−135183
Ru, odd-neutron isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{A}Ru, A=98-108, energy bands and E2 transitions, extended IBA consistent Q formalism 7−135258
^{A}Ru, A=99,101, B(E2) values, Coulomb excitation 7−109099
^{96}Ru(^{40}Ca,3p)^{133}Pm, 180 MeV, ^{136}Gd formation, lifetime meas. for lowest states 7−109119
^{96}Ru(^{40}Ca,4p)^{132}Nd, 180 MeV, ^{136}Gd formation, lifetime meas. for lowest states 7−109119
^{102}Ru(p,2n)^{101}Rh, 13, 18, 23 MeV, high and low spin states in ^{101}Rh 7−89543
^{104}Ru, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312
^{106}Ru, E0 transition meas. and neutron-proton IBM comparison 7−81337
^{109}Ru β-decay, ^{109}Rh level scheme, particle-hole states, J$^{\pi}$ and transitions 7−135183
^{109}Ru, β-decay, level scheme determ. 7−116220
^{A}SM(α,α)^{A}SM, A=144,148,150,152,154 effect of inelastic excitation, optical potential anal. 7−109196
Sb, cumulative and independent yields, charge distrib. from ^{232}Th(n,f) *(Chinese)* 7−121966
^{116}Sb, mag. moment, on-line resonance meas. at DOLIS-COLD facility 7−116272
^{116}Sb$_g$, magnetic moment meas., NMR/ON technique 7−109023
^{117}Sb, 23/2$^-$ isomeric state, evidence for shape coexistence 7−108958
^{125}Sb, gamma-ray intensity meas. *(Chinese)* 7−96010
^{129}Sb, β-decay to ^{129}Te, γ-transitions, directional correl. meas. 7−116331
Sb(ñ, ñ), 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
Sm, giant isoscalar resonances in transitional nuclei 7−108969
^{A}Sm, A=134, 136, collectivity of low-lying states 7−108992
^{A}Sm, A=134-152, proton rich nuclei prod., triaxial stability, lattice H-F and BCS calcs. 7−81294
^{A}Sm, A=146-152 even isotopes, E2/M1 mixing ratios using extended phonon projection model 7−121707
^{A}Sm, A=146-154, vibr.-rot. phase transition, Dyson boson mapping appl. 7−95968
^{A}Sm, A=146-9, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{A}Sm, A=147-9, octupole deformation study and level scheme 7−108990
^{A}Sm, Az 146-154, nuclear radii, isotope shift, electric monopole transitions 7−116270
^{A}Sm(^{16}O, ^{16}O), A=144, 148, scatt. cross section calcs. using barrier-like pot. 7−141090
^{A}Sm(^{16}O, X), A=144, 148, fusion cross section calcs. using barrier-like pot. 7−141090
^{A}Sm(^{16}O, X), A=148, 150, 154, coupled channel approach to subbarrier fusion cross section 7−141121
nuclei with mass number 90 to 149 continued
^{A}Sm(^{58}Ni;X) E$_{cm}$=245 MeV, A=144,149,154, quasi-elastic neutron transfer cross sections 7−141096
^{A}Sm(n,γ), A=144,145, thermal neutron cross section meas., resonance integrals 7−73767
^{132}Sm, compound nucleus, lifetime meas. for lowest states 7−109119
^{135}Sm spectroscopy, i$_{13/2}$ neutron orbital observation from ^{64}Zn (^{74}Se, 2pn) and ^{92}Mo(^{46}Ti, 2pn) 7−135177
^{136}Sm, transition to deformed regime, level scheme 7−116283
^{138}Sm, self-consistent study of triaxial deformations in heavy nuclei 7−116251
^{138}Sm, yrast states of two quasi-protons coupled with bosons 7−108973
^{140}Sm β$^+$-decay, half-life, ^{140}Pm levels, J$^{\pi}$ and transitions 7−67698
^{141}Sm, hyperfine structure, quadrupole moments, δ⟨r^2⟩, μ determ. 7−67726
^{143}Sm$_{m,g}$, isomeric yield ratios, (n,2n), (γ,n), production 7−102867
^{144}Sm(^{18}O,^{16}O), 61-76 MeV, elastic and inelastic, ang. distribs. and excitation functions 7−116489
^{144}Sm(^{16}O,X), 65-72 MeV, charged particle transfer cross sections rel. to nucl. deformation 7−116508
^{144}Sm(^{84}Kr,X), 720 MeV, memory effect, nonMarkovian transport eqn. 7−135371
^{145}Sm, low and medium spin states 7−109016
^{146}Sm and other N=84 isotones, alpha decay half-life and energy, subshell closure 7−129006
^{146}Sm, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{147}Sm(^{40}Ca,X), ^{182}Pb α-decay identification and half-life meas. 7−102847
^{148}Sm, temperature dependence of shape and pair gaps 7−121606
^{149}Sm(d,2n), E$_d$=13.5 MeV, ^{149}Eu energy levels study 7−121553
Sn, effective interaction and the staggering of nuclear charge radii 7−73707
Sn(^{40}Ar, γX), 300 MeV, γ-spectra observed in coincidence with fragment K X-ray spectra 7−109226
Sn(^{58}Ni,X), transfer reaction meas. below Coulomb barrier 7−121939
^{A}Sn, A=108-111, nuclear spins, moments and charge radii from hyperfine splittings and isotope shifts 7−67714
^{A}Sn, A=110,112 spherical and deformed states in high-spin yrast region 7−116222
^{A}Sn, A=115, 117, spin-flip mag. quadrupole transitions, T$_{1/2}$, J$^{\pi}$ and levels from In β-decay 7−135249
^{A}Sn, A=116, 118, 120, 128, 130, transition probabilities 7−109116
^{A}Sn, A=116, 124, RMS charge radii, Skyrme interactions 7−121602
^{A}Sn(^{58}Ni, X), A=even 116-124, subbarrier transfer reactions, cross sections, 1N pick-up 7−135357
^{A}Sn(p,p′), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{A}Sn(p,p), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{24}Sn(^{37}Cl,X), evidence for Coulomb-field induced light-particle emission during scission 7−81427
^{24}Sn(α,X), multi-nucleon removal following bombardment of 177 MeV α particles 7−121877
^{172}Sn 6$^+$ isomers implanted in hexagonal Cd, electric quadrupole interaction, radiation damage *(Chinese)* 7−111682
^{112}Sn(^{120}Sn,Sn), quasi-elastic n transfer and pairing effects 7−96111
^{116}Sn, rearrangement effects in shell model calcs. using density dependent interactions 7−73710
^{116}Sn(^{24}Mg,p4n), ^{135}Pm collective band structures 7−128932
^{116}Sn(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{116}Sn(α,α′), search for evidence of isoscalar monopole mode, comment 7−141058
^{116}Sn(α,α′), search for evidence of isoscalar monopole mode, comment and reply 7−141059
^{116}Sn(d,p), three-body model, antisymmetrization corrections 7−116432
^{116}Sn(d,p)^{117}Sn, 79 MeV, l=0 reaction mechanism, cross sections, proton polarization and anal. powers 7−129056
^{116}Sn(d,p)^{117}Sn, 79 MeV, effects of far-side dominance on j-dependence of reaction 7−129057
^{116}Sn(e,e′)^{116}Sn, core polarisation in stretched spin states 7−81402
^{116}Sn(p,p′)^{116}Sn, core polarisation in stretched spin states 7−81402
^{118}Sn (A,f), A=^{14}N, ^{20}Ne, 120, 138 MeV, fission fragment angular distrib., moment of inertia of nuclei at saddle points *(Chinese)* 7−102899
^{118}Sn(^{64}Ni,X), fusion, ang. momentum distribs., 150-70 MeV 7−116476
^{118}Sn(π,π′)^{118}Sn, collective excitations, neutron-proton transition compositions 7−109237
^{119}Sn, P-odd effect, emission Mossbauer spectrum, orientation relative to external magnetic field 7−116261
^{120}Sn(^{132}Xe, X), deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
^{120}Sn(^{48}Ti,4n), 225 MeV, high spin states and decay sequence routhians of ^{164}Hf 7−108995
^{120}Sn(^{7}Li,^{6}Li), tensor analyzing power meas., coupled channel anal. 7−116472
^{120}Sn(^{7}Li,^{7}Li), coupled channels effects, numerical results from unified semiquantal description 7−81435
^{120}Sn(^{7}Li,^{8}Li), tensor analyzing power meas., coupled channel anal. 7−116472
^{120}Sn(^{7}Li,αt), 70 MeV, wide angle fragment correlations 7−135369
^{120}Sn(^{7}Li,αt), projectile breakup, reaction mechanism study 7−135370
^{120}Sn(^{7}Li,αt)^{120}Sn$_{g.s.}$, 70 MeV, ^{7}Li→α+t breakup, coupled-channel and α-t cluster model anal. 7−116499
^{122}Sn(^{30}Si,5n), ^{147}Gd single particle radiation between high spin states 7−109209
^{122}Sn(^{37}Cl,4n), high spin state study for ^{155}Ho 7−108984
^{122}Sn(^{44}Ca,4n), 195 MeV, high spin states and decay sequence routhians of ^{162}Yb 7−108995
^{124}Sn, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{124}Sn(^{12}C,X), heavy residue prod., velocity and ang. distribs. 7−116470
^{124}Sn(^{14}N,X), heavy residue prod., velocity and ang. distribs. 7−116470
^{124}Sn(^{20}Ne,X), heavy residue prod., velocity and ang. distribs. 7−116470
^{124}Sn(^{40}Ar,X), heavy residue prod., velocity and ang. distribs. 7−116470
^{124}Sn(^{58}Ni,X), fusion, ang. momentum distribs., 150-70 MeV 7−116476
Sn(ñ, ñ), 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
Sr, shape transition at N=60 7−116249
^{A}Sr, A=79-97, nuclear ground state spins of short lived isotopes, hyperfine structure 7−121608
^{90}Sr, charge radii and moments, laser spectroscopy meas. 7−95984

nuclei with mass number 90 to 149 continued
^{98}Sr, first excited state half-life, ground state deformation, B(E2) value 7−141020
^{120}Su, spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
^{147}Tb, β-decay isomers, energies 7−121728
Tc, odd-proton isotopes, positive- and negative-parity states, proton-neutron interacting boson-fermion model 7−108957
^{A}Tc, A=95-99, β^+ decay half-lives rel. to appl. as cosmic ray clock 7−139871
^{93}Tc, $17/2^- - 17/2^+$ doublet, parity violation 7−116260
^{95}Tc, chemical effects of m-g isomeric transition in Tc complexes 7−113970
^{98}Tc, negative parity bands, conversion-electron meas. 7−108991
^{99}Tc(n,γ), 3-100 KeV, Maxwellian-averaged neutron capture cross sections 7−115222
^{A}Te, A=116,117, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{A}Te, A=118,120,122, evidence for intruder states, E0 transitions, from beta decay of iodine 7−135245
^{A}Te, A=128, 130 suppression of the two-neutrino double β decay, quasi-particle RPA calcs. 7−121729
^{A}Te, A=128,130, double β decay search 7−81341
^{A}Te(n,n)^{A}Te, A=122, 124, 126, 128, 130 total cross-sections, optical model anal. 7−81393
^{A}Te(n,x), A=122, 124, 126, 128, 130 total cross -sections, optical model anal. 7−81393
^{120}Te, structure study using (d,t) and (τ,α) 7−128957
^{120}Te(d,t), 1.2 MeV, ^{120}Te structure study, DWBA calcs. 7−128957
^{120}Te(τ,α), 2.3 MeV, ^{120}Te structure study, DWBA calcs. 7−128957
^{125}Te^{m}, M4 transitions in telluride compounds, decay meas. 7−121716
^{126}Te(^{32}S,nX), 180 MeV, neutron spectra, angular distrib. meas. 7−67882
^{126}Te(^{37}Cl,4n)^{159}Tm, 170 MeV, ^{159}Tm high spin state study 7−108980
^{128}Te, double beta decay, RIMS detect. 7−89563
^{129}Te, E2/M1 multipole mixing ratios and spin assignment meas. 7−116331
Te(ñ, ñ), 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
Th, octupole shapes and shape changes at high spins 7−102797
^{149}Tm decay, ^{149}Er energy levels, β-delayed proton emission, K X-ray-proton coincidences in A=149 mass chain 7−141026
^{150}Tm, decay props., half-life meas. 7−67766
Xe, even-even nuclei, low-energy collective excitations 7−95962
^{A}Xe, A=131,133, level energies, E2 transition probabilities, appl. of spinor symmetry 7−121616
^{A}Xe^{m}, A=129, 131, NMR studies in Fe, mag. moment determ. 7−81298
^{120}Xe, lifetime meas. using coincidence plunger technique in ^{110}Cd(^{13}C,3n) reaction 7−102909
^{120}Xe, shape coexistence and quadrupole moments, self-consistent mean field approx. 7−135199
^{128}Xe, collective and quasiparticle excitations 7−116221
^{128}Xe level structure, collective states, and transitions, IBM and shell anals. of ^{126}Te(α,2nγ) *(Chinese)* 7−116210
(^{129}Xe,X), 20 MeV/u, reaction product Z, A meas. 7−116506
^{129}Xe, internal conversion coefficients *(Spanish)* 7−81336
^{131}Xe, fragmentation, temp. distrib., heavy fragment correlations 7−141082
^{132}Xe, g-factor and 7^- isomer struct. 7−95988
^{132}Xe level scheme, collectivity and γ-transitions from ^{130}Te(α,2nγ) *(Chinese)* 7−108951
^{132}Xe(p,X), 1-20 GeV, fragment energy spectra meas., two distinct fragment production mechanisms 7−141070
^{132}Xe(p,X), fragment charge distributions, statistical model anal. 7−109182
^{132}Xe(π^-,X), 3-5 GeV/c $\pi^\circ\pi^\circ$ interference obs., pion emission volume size 7−116528
^{136}Xe, double beta decay, half lines *(Hungarian)* 7−129004
^{137}Xe level density, test of Fermi gas model predictions, comments 7−95991
Xe(p,X), 1-19 GeV, light fragment prod., diff. cross sections, binary process 7−96068
Xe(p,X), multiplicity distributions of produced particles and energy loss in proton-nucleus collisions at 200 GeV/c *(Chinese)* 7−102871
Xe(p,X), secondary fragment charge dispersion, statistical multifragmentation model 7−141048
Xe(π,X), 2.34-9 GeV/c, nucleon emission intensity, reaction mech. 7−116526
^{90}Y, isovector monopole and quadrupole resonances from (n,p) reaction 7−135331
^{170}Yb, X-ray and gamma-ray intensity meas. 7−135248
^{A}Zr, A=94, 96, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{A}Zr(^{3}He, ^{3}He), A=90, 91, 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{A}Zr(α,α′), A=90, 92, 94, 96, isospin decomposition of transition matrix elements by Coulomb interference 7−96088
^{A}Zr(n,α), A=90,91, α-spectra meas., pick-up and knock-on theories 7−116418
^{90}Zr, damping of giant spin-flip dipole and quadrupole modes 7−96041
^{90}Zr, giant dipole resonance, damping width, role of thermal fluctuations 7−121559
^{90}Zr, giant M1 resonance 7−121773
^{90}Zr, RMS charge radii, Skyrme interactions 7−121602
^{90}Zr, spherical nuclei, charge density and radii using HF model with Skyrme forces *(Chinese)* 7−116237
^{90}Zr(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{90}Zr(^{3}He,^{3}He′), 270 MeV, giant resonance excitation 7−109193
^{90}Zr(^{40}Ar,X), 15 MeV/u, composite system form. and decay 7−116510
^{90}Zr(^{6}Li,^{6}He), 14, 25, 35 MeV/u, Gamow-Teller transitions and reaction mechanism anal. 7−116496
^{90}Zr(^{6}Li,^{6}He), 14, 25, 35 MeV/nucleon, angular distrib., G-T transitions, cross sections, reaction mechanism, DWBA comparisons 7−121903
^{90}Zr(^{6}Li,^{6}Li′)^{90}Zr, isoscalar giant resonances 7−116466
^{90}Zr(^{7}Li,^{7}Be), 0-50 MeV, isovector giant resonances 7−109231
^{90}Zr(d, α), differential cross sections and analyzing powers, E_d=22 MeV 7−141056
^{90}Zr(e,e′p), quasi-free knock-out, final state interactions, bound state wave fns. 7−116397
^{90}Zr(n,d)^{89}Y, ang. distrib. meas. 7−121852
nuclei with mass number 90 to 149 continued
^{90}Zr(n,p), E_n=200 MeV, calculated spectra, microscopic model using random phase approx. 7−141053
^{90}Zr(n,p)^{90}Y, isovector monopole and quadrupole resonances 7−135331
^{90}Zr(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{90}Zr(p,X), sub-Coulomb energies, radiative capture, elastic and inelastic scatt., cross sections 7−81390
^{90}Zr(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{90}Zr(p,p′), 200 MeV, 0^- state excitation, resonance and transitions, DWIA calc. 7−67696
^{90}Zr(p̄,p′), cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{90}Zr(π,π′)^{90}Zr, collective excitations, neutron-proton transition compositions 7−109237
^{92}Zr(^{64}Ni,X)^{156}Er*, fusion, high spin components, neutron emission suppression, comments and reply 7−81470
^{92}Zr(α,α′n), 109 MeV, n-α′ coincidence meas., reaction mechanism study 7−129064
^{94}Zr(^{12}C,4np), 80, 100 MeV, high and low spin states in ^{101}Rh 7−89543
^{94}Zr(d,d′), energy levels, distorted-wave anal. 7−102890
^{96}Zr, $[g_{9/2}^{-2}]8^+$ state, γ-ray angular correl. meas., Gamow-Teller decay 7−121574
^{96}Zr, doubly closed subshell, coexisting 0^+ band in polyspheron model 7−108966
^{96}Zr(^{7}Li,αt), projectile breakup, reaction mechanism study 7−135370
^{101}Zr, ground state band member life-time, strong deformation 7−67715
^{90m}Zr, mag. moment and anomalous orbital g-factor, NMR meas. 7−116274

nuclei with mass number 150 to 189
^{168}Er, α-band, M1 transitions and F-spin mixing, IBA-2 comparisons 7−121706
A=150 region, correspondence between rotational bands, quartet model 7−128934
A=153 nuclei, systematics of particle-rotor model 7−108970
A=155, nuclear data sheets, levels, J^π, transitions, decays 7−95117
A=158-188, deformed even-even nuclei, hexadecapole states, quasiparticle-phonon model calcs. 7−121571
A=160-246, even-even nuclei with 1^+ and 3^+ bands in rot. region, IBM calcs., energy spectra *(Chinese)* 7−121551
A=165, nuclear data sheets, levels, J^π, transitions, decays 7−80201
A=170, nuclear data sheets, levels, J^π, transitions, decays 7−80204
A≈150 transitional nuclei, effective valence proton and neutron numbers, from B(E2) and g-factors 7−141016
beta-decay rates in stellar interiors, determ. for highly ionised atoms 7−101767
isobaric analog states and the isovector giant resonance, spreading widths 7−73740
rare-earth nuclei, band termination and E2 collectivity loss, algebraic fermion model 7−81274
Z=66-70, B(E2) values for high spin isomers 7−140983
Au, neutron-deficient isotopes, charge radii and shape transition 7−116255
Au-Pt-Hg region, improved Nilsson parameter set 7−109030
^{A}Au, A=185-189, 189m, charge radius and distrib., deformation, isotope shift, hyperfine struct. 7−81291
^{A}Au, A=185-189, shape transition, isotope shift hyperfine struct. 7−116241
^{189}Au, nuclear orientation, ground state spin assignments, NMR advances 7−116262
Dy, giant resonances, M1 decay study using particle-γ coincidences 7−109135
^{A}Dy, A=162, 164, pair transfer at high angular momenta, high spin states, RPA, cranked HFB 7−121564
^{A}Dy(γ,γ′), A=160,162,164, photoexcitation of low-lying collective states 7−109108
^{A}Dy(n,n′), A=161, 163, temperature shift meas. of neutron resonances 7−73771
^{150}Dy high spin particle-hole states from ^{114}Cd(^{40}Ar, 4n) 7−135187
^{152}Dy, continuum state lifetimes and γ-ray spectra 7−109115
^{152}Dy, evolution of nuclear structure with increasing spin and internal excitation energy 7−135188
^{152}Dy, high-spin, collective and single particle structures 7−121578
^{152}Dy, obs. of discrete line superdeformed band up to 60 ħ, level transitions 7−116224
^{152}Dy, superdeformed band, rotating nucleus centrifugal solidification 7−95981
^{152}Dy superdeformed bond, decay γ-rays from ^{152}Gd(α,4n), ^{152}Dy superdeformed bond, decay γ-rays 7−141018
^{152}Dy, superdeformed high spin bands 7−121566
^{152}Dy, superdeformed shapes, collective radiation meas. 7−81295
^{152}Dy, superdeformed states, Strutinsky method calcs. 7−81276
^{152}Dy, superdeformed states, γ-spectra and ang. momenta 7−81282
^{154}Dy, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549
^{154}Dy, high spin states, and terminating band struct., cranked shell model comparison 7−81272
^{154}Dy, high spin struct., γ-γ coincidences and multipolarities, level spins and parities 7−108988
^{156}Dy, rotational phase change evidence, moment of inertia, rot. freq. 7−89537
^{160}Dy, 6^+ state, life time deduction from transition probabilities 7−96020
^{160}Dy rotational side bands, spins and moments of inertia from ^{158}Gd(α,2n) 7−81269
^{161}Dy(^{3}He,^{3}He′), 32 MeV, cross sections, levels, J^π and particle-vibration states 7−135181
^{161}Dy(^{58}Ni, ^{59}Ni)^{160}Dy, sideband population, intrinsic excitation 7−129081
^{162}Dy (^{3}He,^{3}He′), highly excited state prod., γ-decay reaction depend. and gross struct. 7−135252
^{162}Dy, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{162}Dy, highly excited, γ-decay reaction depend. and gross struct. 7−135252
^{162}Dy(n,2γ)^{163}Dy, γ-transitions in ^{163}Dy 7−121704
^{163}Dy, γ-transitions, intensities and transition energies, ^{162}Dy(n,2γ)^{163}Dy study 7−121704
^{163}Dy(^{3}He,α), highly excited state prod., γ-decay reaction depend. and gross struct. 7−135252
^{164}Dy, level scheme above 500 keV, ^{164}Dy(n,γ) study 7−109041

nuclei with mass number 150 to 189 continued
^{164}Dy, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{164}Dy, rare-earth deformed nuclei, low-lying $K^{\pi}=1^{+}$ 7−108971
^{164}Dy(e,e')^{164}Dy, orbital mag. dipole excitations, inelastic electron scatt. form factor 7−135311
^{164}Dy(n,γ), level scheme 7−109041
(δ,f), λ 0.8-1.8 GeV, intermediate nuclei, cross section meas. 7−129123
Er, collective 1^{+} mode, projected Hartree-Fock description 7−108972
Er, even A, mean square charge radii changes 7−116240
Er, positive parity bands, signature splitting, cranking calcs. 7−135211
Er, thermal high spin GDR, RPC and cranked HFB calcs. 7−135288
^{A}Er, (γ,X), A=162, 166, γ-absorption cross sections, comparison with dynamical strength functions 7−67695
^{A}Er, A=156, 158, band 2 formation mechanism, VMI model anal. *(Chinese)* 7−102789
^{A}Er, A=158,159, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{A}Er, A=159, 160, near-yrast discrete line γ-ray spectroscopy 7−116214
^{A}Er, A=162, 166, giant dipole resonance, thermal and rotational effects in rotating nuclei 7−67695
^{A}Er, A=162-8, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{A}Erl, A=162-170, isotope shift and nuclear charge radii by laser atomic beam spectroscopy 7−96605
^{155}Er, level scheme, shape coexistence, evol., and parallel p-n core breaking 7−108960
^{158}Er, g-factor at high spins 7−116276
^{158}Er, rotational phase change evidence, moment of inertia, rot. freq. 7−89537
^{158}Er, yrast level sequence, another crossing beyond the first backbend 7−95973
^{159}Er, high spin structures, rot. bands and transitions 7−121561
^{160}Er*, partial wave fusion cross sections, near Coulomb barrier, γ-spectroscopy 7−121946
^{162}Er, correlations, routhian values, ^{130}Te(^{28}Si,4n) study 7−108998
^{163}Er, high-K decay sequence obs., ^{150}Nd(^{18}O,5n) study 7−109109
^{164}Er, energy levels, SU(3) phenomenological model Hamiltonian anal. 7−121649
^{164}Er, giant dipole resonance, damping width, role of thermal fluctuations 7−121559
^{166}Er, Landau theory of shape transitions 7−128943
^{166}Er, temperature-induced noncollective rot., Hartree-Fock-Bogoliubov cranking eqn. 7−102821
^{166}Er(^{86}Kr,X), 8.2 MeV/n, correlation of charge drift with total kinetic energy 7−116493
^{167}Er(n,2γ), E2 strength fns. and radiative widths 7−96072
^{168}Er, anharmonic gamma vibrations, self-consistent collective coordinate method 7−116218
^{168}Er, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{168}Er, MI transitions between low-lying levels and F-spin purity 7−89558
^{168}Er, octupole state props. and two-neutron config. pair deexcitation rates 7−81335
^{168}Er, rare-earth deformed nuclei, low-lying $K^{\pi}=1^{+}$ 7−108971
^{168}Er(^{20}Ne,X), ang. momentum transfer symm. axes, dynamical and statistical models 7−116475
^{168}Er(^{86}Kr, X), deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
^{170}Er, temperature dependence of shape and pair gaps 7−121606
Eu, odd-mass nuclei, core-particle coupling calcs. 7−95964
Eu-Gd region, partially violated U(3) limits of U(6/12) dynamical supersymmetry *(Chinese)* 7−121699
^{A}Eu, A=151, 152, 153-6, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{A}Eu(n,γ), A=151,153, 3-2200 keV, cross section meas., optical model anal. 7−73766
^{A}Eu(*n*,γ), A=153,154,155, cross section meas. for ^{153}Eu triple n capture 7−116402
^{153}Eu, 103.2 keV level, half-life meas., ^{153}Gd electron capture study 7−102841
^{153}Eu, level scheme from ^{153}Sm decay 7−121577
^{154}Eu, gamma-ray intensity meas. *(Chinese)* 7−96010
^{162}Eu, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{158}Ev, high-spin, collective and single particle structures 7−121578
Gd, collective 1^{+} mode, projected Hartree-Fock description 7−108972
^{A}Gd, A=149, 151, low temp. nuclear orientation 7−116243
^{A}Gd, A=152-160, proton spectroscopic factor calcs. in pairing plus quadrupole model 7−121632
^{A}Gd, A=152-6, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{A}Gd, A=154,156,158, F-spin breaking and energy spectra, IBM calcs. *(Chinese)* 7−109066
^{A}Gd, A=156, 158, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{A}Gd, A=156, 158 rare-earth deformed nuclei, low-lying $K^{\pi}=1^{+}$ 7−108971
^{A}Gd(n,γ), A=152, 154, up to 2700 eV, resonance parameters, s-wave spacing, radiation width, capture integral 7−121835
^{A}Gd(t,p), 17 MeV, A=154, 156, 158, 160, L=O strengths to excited states 7−129059
^{153}Gd→^{153}Eu, electron capture, γ-transition meas., ^{153}Eu level study 7−102841
^{154}Gd, multipole mixing ratios from δ-δ ang. correls. 7−67762
^{154}Gd, two-quasiparticle struct. study 7−108987
^{156}Gd, 0^{+} and 1^{+} collective excitations, fermion-pair structure, dependence on nuclear deformation 7−108997
^{156}Gd, giant angle dipole structure in self consistent QRPA formalism 7−135283
^{158}Gd(^{40}Ar,^{40}Ar'), γ-transitions from peripheral collisions at 44 MeV/u 7−116509
^{158}Gd(^{40}Ar,X), few nucleon transfer, peripheral collisions at 44 MeV/u 7−116509
^{160}Gd(^{206}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{160}Gd(^{208}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
Gd(e,e'), collective phenomena and multipole transition operators, IBM calcs. 7−116393
Hf, positive parity bands, signature splitting, cranking calcs. 7−135211
Hf-Pt region, variable moment of inertia models in N_pN_n scheme, parameters 7−81273

nuclei with mass number 150 to 189 continued
^{A}Hf, A=163-166, high spin states study and cranked shell model interpretation 7−73686
^{164}Hf, high spin states and decay sequence routhians, ^{160}Er comparisons 7−108995
^{168}Hf high spin spectroscopy, yrast and negative-parity bands, proton alignment 7−140982
^{177}Hf, X-ray and gamma-ray intensity meas. 7−135248
^{178}Hf, collective level energies, SU(3) symm. in sdg boson model 7−96002
^{180}Hf(p,n), excitation cross section determ. for ^{180m}Ta 7−121614
^{150}Ho, gamma-transition study 7−67766
^{150}Ho, yrast level struct., γ-ray spectroscopy 7−108986
^{151}Ho, β-decay isomers, energies 7−121728
^{155}Ho, high spin states, shape transitions and cranked shell model calcs. 7−108984
^{157}Ho, M1 and E2 transitions, signature depend., RPA study 7−128999
^{165}Ho(^{12}C,X), 300 MeV, precompound decay in heavy ion reactions via the hybrid model 7−96102
^{165}Ho(^{14}N,X), neutron emission from light fragments collinear fragment-neutron coincidence technique 7−116767
^{165}Ho(^{14}N,nX), 35 MeV/N, neutron emission, energy and ang. distribs. 7−73787
^{165}Ho(^{20}Ne, X); 30 MeV/N, energy and linear momentum dissipation in fusion 7−121983
^{165}Ho(^{20}Ne,X), 10-30 MeV/nucleon, production and decay of hot nuclei, neutron emission study 7−141066
^{165}Ho(^{20}Ne,X), 220, 292 MeV, precompound decay in heavy ion reactions via the hybrid model 7−96102
^{165}Ho(^{3}He,d), continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
^{165}Ho(^{56}Fe,X), 9 MeV/N, excitation energy division for damped fragments 7−73791
^{165}Ho(^{56}Fe,X), damped reaction, temps., energies and thermal equilibration of fragments 7−96105
^{165}Ho(α, *xn*), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
^{165}Ho(α,2n), 10-120 MeV, excitation fns. and nonequilibrium effects 7−121879
^{165}Ho(α,4n), 10-120 MeV, excitation fns. and nonequilibrium effects 7−121879
^{165}Ho(π,f), fission fragments, light charged particle spectrum meas., cross-sections 7−67883
^{165}Ho(π^{+}, π^{0}), isobaric analog state excitation 7−81455
^{166}Ho, low energy two-particle spectrum, anal. 7−140976
^{166}Ho^{m}, long lived decay, γ-ray spectroscopic investig. 7−109095
Ho(α, X), 70 to 800 MeV/U, fission to multifragmentation transition 7−81413
level structure and transitions from ^{160}Tb β-decay 7−89538
^{165}Lu, M1 and E2 transitions, signature depend., RPA study 7−128999
^{174}Lu, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{174}Lu level study using ^{176}Yb(p,3nγ), rotational bands, g-factors 7−102792
Lu(p,X), 800 GeV, thick-target recoil props. of deep spallation and fragmentation products 7−129034
^{A}Nd, A=153,154,155,156, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{150}Nd(^{12}C,^{12}C'), 70.4 MeV, CCBA modification for direct reactions in deformed nuclei, bands 7−116488
^{150}Nd(^{12}C,^{12}C'), vibrational band excitation, coupled channel Born approx. calcs. 7−128955
^{150}Nd(^{18}O,5n), ^{163}Er high-K decay sequence study 7−109109
^{155}Nd, identification and activity meas. 7−81339
^{172}Os, low-frequency anomaly in moment of inertia, yrast sequence from ^{144}Nd(^{32}S, 4n) 7−116215
^{174}Os constant transition quadrupole moments, high spin state lifetimes from ^{51}V(^{127}I, 4n) 7−135205
^{180}Os, high-spin isomers, partial deexcitation scheme 7−108989
^{187}Os to ^{187}Re ratio, HF calcs. use in galaxy age estimation 7−73737
^{188}Os, temperature dependence of shape and pair gaps 7−121606
^{188}Os(e,e'), ground state charge and transition densities, HFB calc. comparisons 7−81372
^{188}Os(e,e'), shape transition and wave fn. behaviour, charge density determ. 7−135313
^{182}Pb, α-decay identification and half-life meas. in ^{147}Sm(^{40}Ca,X) 7−102847
^{A}Pm, A=156,157,158, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{141}Pr, X-ray and gamma-ray intensity meas. 7−135248
^{153}Pr, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
Pt, even isotopes, $\nu_{i13/2}$ pair, exptl. anal., Nilsson cranked model comparisons *(Chinese)* 7−102788
Pt isotopes, softness and shape coexistence, dynamic deformation model, IBA, variational moment of inertia model anal. 7−121596
^{A}Pt, A=189, 191, 193, quadrupole coherent states, quasiparticle coupling to collective core, particle-core coupling model 7−121573
^{184}Pt, yrast band alignment, cranked Nilsson model calcs. 7−128936
^{186}Pt, self-consistent study of triaxial deformations in heavy nuclei 7−116251
^{A}Re, A=176,178 doubly decoupled bands 7−108977
^{A}SM(α,α)^{A}SM, A=144,148,150,152,154 effect of inelastic excitation, optical potential anal. 7−109196
Sm resonance levels, effect of time evolution of extra spatial dimens. 7−89418
^{A}Sm, A=134-152, proton rich nuclei prod., triaxial stability, lattice H-F and BCS calcs. 7−81294
^{A}Sm, A=146-152 even isotopes, E2/M1 mixing ratios using extended phonon projection model 7−121707
^{A}Sm, A=146-154, vibr.-rot. phase transition, Dyson boson mapping appl. 7−95968
^{A}Sm, A=150-2, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{A}Sm, A=159,160, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{A}Sm, Az 146-154, nuclear radii, isotope shift, electric monopole transitions 7−116270
^{A}Sm(^{14}N,4n)$^{A+10}$Tm, A=152,154 aligned bands and gyromagnetic ratios 7−109210
^{A}Sm(^{16}O, ^{16}O), A=150, 152, 154, scatt. cross section calcs. using barrier-like pot. 7−141090

nuclei with mass number 150 to 189 continued
^{A}Sm(^{16}O, X), A=148, 150, 154, coupled channel approach to subbarrier fusion cross section 7−141121
^{A}Sm(^{16}O, X), A=150, 152, 154, fusion cross section calcs. using barrier-like pot. 7−141090
^{A}Sm(^{58}Ni,^{58}Ni′),A=150,152 gyromagnetic ratios of excited states 7−109211
^{A}Sm(^{58}Ni;X) E_{cm}=245 MeV, A=144,149,154, quasi-elastic neutron transfer cross sections 7−141096
^{A}Sm(e,e′)^{A}Sm, A=144, 148, 150, 152, 154, ground state band, charge and transition charge densities 7−81378
^{150}Sm, high spin states, coexistence of reflection asymmetric and symmetric shapes 7−73692
^{150}Sm, octupole deformation study and level scheme 7−108990
^{150}Sm(^{12}C,xn)^{A}Er, x=4,3, A=158,159, 65 MeV, yrast transitions, gamma-ray total energy distrib., multiplicities 7−67692
^{151}Sm, deformation, collinear laser spectroscopy, moments, charge 7−116247
^{152}Sm, nuclear level study, spin-parity assignments using ^{152}Sm(n,n′γ) 7−121554
^{152}Sm(^{206}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{152}Sm(^{208}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{152}Sm(n,n′), triaxial shape study, Davydov-Filippov model anal. 7−121601
^{152}Sm(n,n′γ), level excitation, spin-parity assignments 7−121554
^{152}Sm(p,4n), E_p=26-39 MeV, ^{149}Eu energy levels study 7−121553
^{152}Sm(π,π′), 180 MeV, eikonal and π-nucleus optical model anal., exptl. comparisons *(Chinese)* 7−102857
^{153}Sm, β-decay, ^{153}Eu level scheme 7−121577
^{154}Sm (n,n′γ), rotational bands, γ-spectra study 7−121822
^{154}Sm, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{154}Sm, rare-earth deformed nuclei, low-lying $K^{\pi}=1^{+}$ 7−108971
^{154}Sm(^{14}N,X), E/A=35 MeV, mean field dynamics and non-equilibrium particle emission, γ-polarization meas. 7−141077
^{154}Sm(^{14}N,X), NN collisions and mean field deflection at intermediate energy 7−121941
^{154}Sm(^{16}O,X), 65-72 MeV, charged particle transfer cross sections rel. to nucl. deformation 7−116508
^{154}Sm(^{40}Ar,X), 336 MeV, excited compound nuclei, cluster emission, evaporation model, cross sections *(German)* 7−129092
^{154}Sm(α,α′), 119 MeV, splitting of low energy octupole resonance 7−109199
Sm(e,e′), collective phenomena and multipole transition operators, IBM calcs. 7−116393
^{178}Ta oriented nuclei; NMR meas. 7−73698
^{181}Ta(^{12}C,nX), 9 MeV/N, energy spectra and angular distributions for fast neutron emission *(German)* 7−129090
^{181}Ta(^{19}F,X), appl. to ang. momentum depend. of ^{200}Pb fission 7−73802
^{181}Ta(^{20}Ne,nX), 9 MeV/N, energy spectra and angular distributions for fast neutron emission *(German)* 7−129090
^{181}Ta(e,n) threshold-30 MeV, nuclear size effects in virtual photon theory, cross section 7−102863
^{181}Ta(e,xn) cross sections, appl. to (γ,xn) E1 giant reson. cross sections 7−135301
^{181}Ta(γ,γ′), isomeric state excitation by white radiation, 3.55 MeV activation level detection 7−135295
^{181}Ta(n, 2n), cross section and excitation function meas. 7−73756
^{181}Ta(n, γ), cross sections, γ-spectra calcs. 7−129039
^{182}Ta, β-decay, ^{182}W new level study 7−121709
^{182}Ta, gamma-ray intensity meas. *(Chinese)* 7−96010
^{180m}Ta, excitation cross section determ. from ^{180}Hf(p,n) 7−121614
Ta(α,n), 40 MeV, neutron spectra meas. 7−81409
Ta(n,X), 4.2 GeV/c, secondary π^{-} average multiplicities, momenta and ang. characts. 7−67841
Ta(p,X), four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203
^{158}Tb→^{158}Gd, electron capture, decay scheme, ν_e mass refinement 7−121723
^{159}Tb(^{12}C,X), γ-γ directional correlations, meas. and interpretation 7−73733
^{159}Tb(^{14}N, αX), 6-22 MeV/u, systematics and cross section meas. 7−141093
^{159}Tb(^{14}N,X), 6-22 MeV/u, inclusive angular distrib. and energy spectra 7−121888
^{159}Tb(^{14}N,X), 6-22 MeV/μ, cross section balance, KX-ray method 7−121889
^{159}Tb(^{40}Ar, ^{40}Ar′), 380 MeV, total KE loss per emitted nucleon meas. 7−116468
^{159}Tb(^{40}Ar,X), 380 MeV, cold fragmentation, ejectile energy spectra meas. 7−116469
^{159}Tb(^{4}He, pxnγ), γ-coincidence data, model anal. 7−135336
^{159}Tb(d,X), 7.3GeV, α-ray yields, cross sections and isomeric ratios 7−67850
^{159}Tb(n,n′)^{159}Tb, low-lying state determ., γ-ray ang. distribs. 7−109160
^{159}Tb(p,X), 800 GeV, thick-target recoil props. of deep spallation and fragmentation products 7−129034
^{160}Tb, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{160}Tb β-decay, level structure and transitions 7−89538
^{A}Th, A=157-169, ground state properties, quadrupolar and magnetic movements, charge radii, binding energies, HF anal. *(German)* 7−128940
Tm, natural level width meas. in ^{169}Yb decay 7−96022
^{A}Tm, A=162,164 aligned bands and gyromagnetic ratios from Sm(^{14}N,4n) 7−109210
^{A}Tm, A=163, 165, 167, 169, 171, γ-transitions, M1, E1 and E2 probabilities 7−135255
^{152}Tm, yrast level struct., γ-ray spectroscopy 7−108986
^{159}Tm, high spin states, ^{126}Te(^{37}Cl,4n)^{159}Tm, 170 MeV study 7−108980
^{159}Tm, level lifetimes and probabilities 7−102834
^{164}Tm, quadrupole moments, $\delta\langle r^2\rangle$ and μ determ. 7−67726
^{168}Tm, 17 keV and associated levels, rotational state structure determ. 7−140978
^{169}Tm, level study from ^{169}Yb γ-ray spectrum 7−121722
^{169}Tm(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
W, positive parity bands, signature splitting, cranking calcs. 7−135211
^{A}W, A=185, 187, low-lying low-spin levels, Nilsson model and SU(3) Fermi-Bose symmetry scheme 7−81270

nuclei with mass number 150 to 189 continued
^{182}W, new level study from ^{182}Ta β-decay 7−121709
^{184}W(^{16}O,X), appl. to ang. momentum depend. of ^{200}Pb fission 7−73802
^{184}W(^{18}O,^{18}O), reaction product angular distribs. and cross sections 7−81422
^{184}W(p,f), 1 GeV, kinematic characteristics of fragments, influence of nucleon emission *(German)* 7−129121
W(n,n), small angle scatt. at 14.2 MeV 7−116420
W(π^{-}, $\mu^{+}\mu^{-}$X), nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
Yb, pair correlation quenching, double routhians method 7−135192
Yb, positive parity bands, signature splitting, cranking calcs. 7−135211
^{A}Yb, A=161,163,165,167 rotational alignment in $i_{13/2}$-parentage states 7−108955
^{A}Yb, A=162-9, energy levels, pairing fluctuations in rapidly rot. nuclei 7−116232
^{A}Yb, A=165,166, high-spin state spectroscopy and cranked shell model interpretation 7−73687
^{151}Yb isomers from ^{96}Ry(^{58}Ni, X) 7−140983
^{158}Yb, core excitations, shape transitions and backbends in high spin region, IBA calcs. 7−121549
^{158}Yb, high energy dipole bump in the continuum as a probe for super-deformation 7−109106
^{162}Yb, high spin states and decay sequence routhians, ^{160}Er comparisons 7−108995
^{166}Yb, line shape anal. of yrast state lifetimes 7−108967
^{169}Yb beta-decay, ν props. study 7−121739
^{169}Yb, low energy conversion electron spectra and Tm level width meas. 7−96022
^{169}Yb→^{169}Tm, decay γ-ray spectrum study 7−121722
^{172}Yb, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{174}Yb, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{174}Yb, rare-earth deformed nuclei, low-lying $K^{\pi}=1^{+}$ 7−108971
^{174}Yb(n,2γ), E2 strength fns. and radiative widths 7−96072
^{176}Yb(p,3nγ)^{174}Lu, 18.3, 20.7, 22.7 MeV, ^{174}Lu level study 7−102792

nuclei with mass number 190 to 219
^{208}Pb mean field, Woods-Saxon parameterization, extrapolation from positive to negative energy 7−116300
A=202, nuclear data sheets, levels, J^{π}, transitions, decays 7−95118
A=204, nuclear data sheets, levels, J^{π}, transitions, decays 7−95119
beta-decay rates in stellar interiors, determ. for highly ionised atoms 7−101767
isobaric analog states and the isovector giant resonance, spreading widths 7−73740
^{A}At, A=209, 210, 211, enhanced E3 transitions and mixed configs. of core excited isomers from ^{209}Tl(^{9}Be, xn) 7−67687
^{203}At, time sequenced spectra meas. of γ-rays, X-rays and conversion e^{s} 7−73732
^{210}At, 19^{+} isomer, lifetime and enhanced E3 decay 7−109105
^{210}At, g-factor, half-life for microsecond isomers 7−116212
^{213}At, fission barriers and anomaly of symmetric to asymmetric yield ratio 7−141107
Au, neutron-deficient isotopes, charge radii and shape transition 7−116255
Au-Pt-Hg region, improved Nilsson parameter set 7−109030
Au(Ar,X), 30 MeV/u, hard photon prod., ang. distrib. meas. 7−116471
Au(C,X), in-plane light particle correlations 7−129086
Au(^{12}C,X), complex fragments, isotopic yield ratios 7−89580
Au(Kr,X), 44 MeV/u, hard photon prod., ang. distrib. meas. 7−116471
Au(^{16}O, X), 60, 200 GeV/N, target fragmentation at ultrarelativistic energies 7−121894
Au(^{16}O,X), complex fragments, isotopic yield ratios 7−89580
Au(U,X), positron and δ-electron emission, coupled channels anal. 7−67870
^{194}Au, high spin states of odd-odd nuclei, interacting boson-fermion-fermion model 7−73688
^{195}Au, extrapolation curves calc. in $4\pi\beta-\gamma$ coincidence method 7−96481
^{196}Au(^{56}Fe, X), deep inelastic multinucleon transfer, cross sections. nuclear structure effects 7−67871
^{197}Au (α,X), multi-nucleon removal following bombardment of 177 MeV α particles 7−121877
^{197}Au(^{14}N,αdf), E/A=35 MeV, two particle correlation fns., dependence on linear momentum transfer 7−81461
^{197}Au(^{16}O, X), relativistic energies, fragments Z distrib study 7−81446
^{197}Au(^{20}Ne,X), 290 MeV, projectilelike fragments, correlated energy transfer from n counting 7−121908
^{197}Au(^{32}S,X), 30 MeV/N, inclusive fragment prod., asymmetric fission-like process 7−73792
^{197}Au(^{3}He,X), peripheral collisions, break-up contrib. to inclusive n spectra 7−96089
^{197}Au(^{40}Ar,X), 23.8 MeV/u, coincidence meas., fragment energy spectra, two component obs. 7−116505
^{197}Au(^{40}Ar,X), 336 MeV, excited compound nuclei, cluster emission, evaporation model, cross sections *(German)* 7−129092
^{197}Au(^{40}Ar,X), 40-60 MeV/u, nuclear fusion and onset of fragmentation, limiting temperatures 7−141068
^{197}Au(^{40}Ar,X), E/A=60 MeV, two-particle correlations, excited state population, statistical model comparisons 7−121900
^{197}Au(^{56}Fe, X), 485 MeV, nuclear shape deformations, fusion-like fission, deep inelastic reactions 7−116246
^{197}Au(^{56}Fe,X), heavy fragment correlations, relationships to spin and lifetime 7−81425
^{197}Au(^{86}Kr, X), 10-18.2 MeV/u, excitation energy sharing in quasielastic reactions, energy spectra 7−102908
^{197}Au(A,X), 42-151 MeV/nucleon, A=^{20}Ne, ^{40}Ar, fragment production 7−121905
^{197}Au(A,X), A=p, ^{4}He, ^{20}Ne, coincidence meas. and fragmentation 7−141071
^{197}Au(B,X), B=^{12}C, ^{20}Ne, ^{32}S, ^{40}Ar, ^{84}Kr, ^{139}La, intermediate energies, formation of large target residues 7−141072
^{197}Au(D,X), D=^{12}C, ^{18}O, E/A=30-84 MeV, isotope yields as probe of reaction dynamics 7−141073
^{197}Au(α,2n)^{199}Tl, 26 MeV, gamma-ray angular distrib. meas., ^{199}Tl level anal. *(Chinese)* 7−95963
^{197}Au(d,2n), excitation fn. meas. for 6.6-13.1 MeV *(Chinese)* 7−96079
^{197}Au(d,p), excitation fn. meas. for 6.6-13.1 MeV *(Chinese)* 7−96079
^{197}Au(d,pnn), excitation fn. meas. for 6.6-13.1 MeV *(Chinese)* 7−96079
^{197}Au(n, γ), cross sections, γ-spectra calcs. 7−129039
^{197}Au(p,X), 360 GeV/c, multiparticle production expt. 7−140956

nuclei with mass number 190 to 219 continued
^{197}Au(p,f), 1 GeV, kinematic characteristics of fragments, influence of nucleon emission *(German)* 7−129121
^{197}Au(π,X), 100, 180, 300 MeV, spallation recoil meas., two-step velocity vector model comparisons 7−121957
^{197}Au(π,f), fission fragments, light charged particle spectrum meas., cross-sections 7−67883
^{198}Au, negative-parity spectrum, IBFFM/OTQM anal. 7−109043
Au(α, X), 70 to 800 MeV/U_3 fission to multifragmentation transition 7−81413
^{A}Bi→^{A}Pb, A=192,194,196,198,200, β$^+$/electron-capture, level study 7−141024
^{207}Bi, γ-ray sum-peak counting, instrumental corrections of peak areas 7−96480
^{209}Bi (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{209}Bi, single-particle proton strengths in $1i_{11/2}$ and $1j_{15/2}$ states 7−67684
^{209}Bi, valence proton state orbit radii meas., use of barycentric potential 7−109009
^{209}Bi(^{136}Xe,X), 940 and 1130 MeV, memory effect, nonMarkovian transport eqn. 7−135371
^{209}Bi(^{3}H3, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{209}Bi(α,α′), 50.5 MeV, Fraunhofer diffraction pattern obs., cross sections 7−116445
^{209}Bi(d̄, ^{3}He), particle-hole transitions, differential cross section meas. 7−129055
^{209}Bi(d,^{3}He)^{208}Pb, proton and neutron contributions to isoscalar $J^π=1^+$ 7−116431
^{209}Bi(d,X), 7.3GeV, α-ray yields, cross sections and isomeric ratios 7−67850
^{209}Bi(e,e), nuclear currents in a relativistic mean-field theory 7−129024
^{209}Bi(γ,γ′), exchange currents in El strength and orbital g-factor 7−116279
^{209}Bi(n,nX), emission cross sections at 7 MeV incident energy 7−81384
^{209}Bi(n,n′), 1-90 eV, cross section neutron electric polarizability and RMS radius meas. 7−121508
^{209}Bi(n,n), elastic and inelastic scatt. at 7 MeV incident energy 7−81384
^{209}Bi(p̄,f), delayed fission, lifetime meas., evidence for hypernuclear decay 7−135384
^{210}Bi, X-ray and gamma-ray intensity meas. 7−135248
Bi(e,f), 700 and 1200 MeV, observation of hypernuclei in fission fragment activity 7−121977
Bi(n,n), small angle scatt. at 14.2 MeV 7−116420
^{A}Fr, A=207-228 nuclear and electronic g-factors and single particle structure 7−109021
Hf-Pt region, variable moment of inertia models in N_pN_n scheme, parameters 7−81273
Hg, effective interaction and the staggering of nuclear charge radii 7−73707
Hg, even isotopes, IBM calcs. of spectra, levels and transition probabilities 7−109093
^{198}Hg(α, 6n), γ-ray and conversion electron coincidences, ^{196}Pb collective struct. study 7−140973
^{201}Hg, nuclear and atomic props. from conversion electron spectroscopy 7−81338
^{206}Hg(0$^+$)→^{206}Tl(0$^-$), renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839
^{A}Ir(n, 2n), A=191, 193, X-ray spectrometry for cross section meas. 7−73757
^{A}Ir(t,α)$^{A-1}$Os, A=191,193 implications for supersymmetry tests 7−129058
^{193}Ir, collective states descriptions, triaxial rotor and interacting boson-fermion models 7−108964
^{195}Ir, low lying positive parity states following double neutron capture 7−81271
Ir(p,f), prod. cross sections and isotope distrib. meas. 7−96126
Os, positive parity bands, signature splitting, cranking calcs. 7−135211
Os, prolate to oblate shape transition in decay modes of O^+ states 7−116248
^{A}Os(e,e′), A=190,192, ground state charge and transition densities, HFB calc. comparisons 7−81372
^{A}Os(e,e′),A=190, 192, shape transition and wave fn. behaviour, charge density determ. 7−135313
^{190}Os, E2/M1 mixing ratios, IBA-1 calcs. 7−128997
^{198}Os, self-consistent study of triaxial deformations in heavy nuclei 7−116251
^{208}PG(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual NN̄ processes, relativistic correction 7−81385
Pb, effective interaction and the staggering of nuclear charge radii 7−73707
Pb fusion reactor blanket materials, multiple neutron scatt. effects 7−96307
Pb, highly excited neutron-deficient isotopes, evidence for prolate deformation 7−67711
Pb isotopes, microscopic study of collective states, IBA, cluster operators *(Chinese)* 7−108952
Pb(^{14}N,X), 20, 30 and 40 MeV, γ-ray energy and ang. distribs. 7−116515
Pb(Ne,X), 200 to 1000 MeV/u, fragment prod. at small angles study 7−81448
Pb(^{16}O,X), transverse energy distrib. in central rapidity region, wounded nucleon model 7−81429
Pb(^{16}O, X), transverse energy production in proton-nucleus and nucleus-nucleus collisions 7−95950
Pb(O, pX), metastable state search from delayed proton emission 7−102916
Pb(^{208}Pb,X), 8.5 MeV/nucleon, three dimens. anal. using mica track detectors 7−67855
Pb(U,X), 1.7 GeV, deep inelastic, time delay effects on K X-ray prod. probab. 7−121910
^{A}Pb, A=192,194,196,198,200, level study from ^{A}Bi β$^+$/electron-capture study, evidence for O^+ states 7−141024
^{A}Pb, A=198,199, g-factor, half-life for microsecond isomers 7−116212
^{A}Pb, A=206, 208, charge distrib. differences, finite Fermi system theory 7−95983
^{A}Pb(^{3}He, ^{3}He), A=207, 208, 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{A}Pb(e,e′)^{A}Pb, A=206, 208 mixing of isoscalar and isovector mag. dipole excitation modes 7−129026
^{A}Pb(e,e′p), A=206,208, knock-out reaction, relative 3s spectroscopic strengths meas. 7−116395

nuclei with mass number 190 to 219 continued
^{A}Pb(p,xn), A=204,206-8; E_p=25.5 MeV, prequilibrium neutron emission, shell effects, double shell closure 7−141052
^{196}Pb, particle-hole states and collective excitations, interpretation of isomeric states 7−140973
^{200}Pb, fission, ang. momentum depend. 7−73802
^{202}Pb, 19$^-$ isomer, g-factor, half-life 7−116269
^{207}Pb, mag form factors from 180° electron scatt. 7−102802
^{207}Pb(d,X), 7.3GeV, α-ray yields, cross sections and isomeric ratios 7−67850
^{207}Pb(n,X), E≤700 keV, resonance structure in the ^{207}Pb+n system 7−121618
^{207}Pb(n,n), slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{208}Pb 1$^+$ state excitation, isoscalar character and tensor correls. importance from (p,p′) and (d,d′) 7−81299
^{208}Pb, 3s proton shell occupancy, ^{205}Tl(d̄,^{3}He)^{204}Hg study 7−129061
^{208}Pb (X,X′), X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844
^{208}Pb (α,X), 200, 400, 600, 800 A.MeV, (p,p), (d,d) correlation fn. meas. 7−116452
^{208}Pb (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{208}Pb, coupling matrix elements, strength distributions 7−116462
^{208}Pb, effective mass and level-density parameter temp. depend., surface coupling model anal. 7−95975
^{208}Pb giant resonance, convergence of particle-hole irreducible vertex *(Chinese)* 7−96039
^{208}Pb, hot finite system, nuclear compressibility, Thomas-Fermi approach, Helmholtz free energy 7−140991
^{208}Pb, one-particle characteristics in problems with allowance for complex configurations 7−81306
^{208}Pb, proton momentum distrib., coherent density fluctuation model anal. 7−102798
^{208}Pb, RMS charge radii, Skyrme interactions 7−121602
^{208}Pb, valence proton state orbit radii meas., use of barycentric potential 7−109009
^{208}Pb(^{A}Li,^{A}Li′), 150-210 MeV, A=6,7, giant resonance study 7−109230
^{208}Pb(^{12}C, ^{12}C), 220, 200 MeV/N, Coulomb rainbow scatt., surface transparency, optical anal. 7−121932
^{208}Pb(^{14}C,2nα)^{216}Rn, 67-68 MeV, ^{216}Rn yrast states excitation spectrum 7−140977
^{208}Pb(^{16}O,^{15}N), GANIL study at 793 MeV 7−96109
^{208}Pb(^{16}O,^{15}O), GANIL study at 793 MeV 7−96109
^{208}Pb(^{16}O,^{16}O′), 60-76 MeV, energy depend. of effective interactions 7−116484
^{208}Pb(^{16}O,^{16}O′), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{208}Pb(^{16}O,X), 80 MeV, quasielastic channels, coupled channels anal. 7−121944
^{208}Pb(^{16}O,X), heavy ion pot., real and imaginary parts near Coulomb barrier 7−135271
^{208}Pb(^{16}O,X), model of transverse energy production in high energy nucleus-nucleus collisions 7−135326
^{208}Pb(^{17}O,^{16}O)^{209}Pb, 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,^{17}O′), 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,^{17}O), 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,^{18}O)^{207}Pb, 78 MeV, cross section meas., multistep effects 7−73783
^{208}Pb(^{17}O,X), 78 MeV, quasielastic channels, coupled channels anal. 7−121944
^{208}Pb(^{17}O,X), X=^{16}O, ^{18}F, 376 MeV, ang. distribs., DWBA anal. 7−121909
^{208}Pb(^{208}Pb,^{208}Pb), microscopic optical pot. 7−81357
^{208}Pb(^{208}Pb,X), heavy ion optical potential, temp. dependence anal. 7−121890
^{208}Pb(^{208}Pb,X), microscopic optical pot. 7−81357
^{208}Pb(^{28}Si,^{28}Si′), quasielastic yields, coupled channels and DWBA comparison 7−116459
^{208}Pb(^{28}Si,^{28}Si), quasielastic yields, coupled channels and DWBA comparison 7−116459
^{208}Pb(^{3}He, ^{3}He), differential cross section ang. distribs., optical model anal. 7−73781
^{208}Pb(^{40}Ar,X), binary reactions near the Coulomb barrier in systems with dynamically hindered fusion 7−121937
^{208}Pb(^{40}Ar,X), quasi-fission near Coulomb barrier 7−81442
^{208}Pb(^{50}Ti,X), binary reactions near the Coulomb barrier in systems with dynamically hindered fusion 7−121937
^{208}Pb(^{56}Fe,X), binary reactions near the Coulomb barrier in systems with dynamically hindered fusion 7−121937
^{208}Pb(^{56}Fe,X), Z=108 composite nuclei formation, fragment mass distributions 7−73795
^{208}Pb(^{58}Ni,^{58}Ni)^{208}Pb, elastic and inelastic scatt., DWBA and coupled channel anal. 7−129088
^{208}Pb(^{6}Li, αd)^{208}Pb, 178 MeV, ^{6}Li→α+d breakup, coupled-channel and α-d cluster model anal. 7−116498
^{208}Pb(^{6}Li,X), 178 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
^{208}Pb(^{7}Li,X), 132 MeV, projectile breakup, cross sections, coupled channels calcs. 7−116514
^{208}Pb(^{7}Li,αt), 70 MeV, wide angle fragment correlations 7−135369
^{208}Pb(^{7}Li,αt), projectile breakup, reaction mechanism study 7−135370
^{208}Pb(^{86}Kr, X), 10-18.2 MeV/u, excitation energy sharing in quasielastic reactions, energy spectra 7−102908
^{208}Pb(^{9}Be,3n), yrast scheme and spin assignments for ^{214}Rn 7−108983
^{208}Pb(A,X), 36-216.6 MeV, A=^{10}B, ^{12}C, ^{13}C, ^{14}N, ^{16}O, ^{32}S, single proton transfer, anal. 7−141095
^{208}Pb(K_L, K_S)^{208}Pb, radial localisation of regeneration process *(French)* 7−81459
^{208}Pb(α,^{3}He), ^{209}Pb high spin, high lying subshells 7−109198
^{208}Pb(α,α′n), 120 MeV, isoscalar giant monopole resonance decay 7−96040
^{208}Pb(α,π), 200, 400, 600, 800 A.MeV, π$^±$ multiplicity meas. 7−116451
^{208}Pb(α,t), damping of single-particle proton strengths in $1j_{15/2}$ and $1i_{11/2}$ states 7−67684
^{208}Pb(d, α), differential cross sections and analyzing powers, E_d=22 MeV 7−141056
^{208}Pb(d,d), origin of spin-dependence at low-energy 7−109186
^{208}Pb(d,p), origin of spin-dependence at low-energy 7−109186
^{208}Pb(e,e′p), $3s_{1/2}$ proton orbit, evidence for partial occupancy 7−67728

nuclei with mass number 190 to 219 continued
^{208}Pb(γ,X), photoabsorption cross section, collective and quasi-deuteron contribs. 7−102861
^{208}Pb(n̄,n̄), 2.7 MeV, polarization anal. power meas., optical model comparisons *(Chinese)* 7−96059
^{208}Pb(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{208}Pb(p,X), model of transverse energy production in high energy nucleus-nucleus collisions 7−135326
^{208}Pb(p,n)^{208}Bi, 200 MeV., neutron spectra, DWIA, finite fermi system anal. 7−121845
^{208}Pb(p,p^{1}), 200, 400 MeV collective DWBA analysis, low lying states, n to p multipole matrix elements 7−108959
^{208}Pb(p,p′), 318 MeV, cross sections, high spin state meas., DWIA anal. 7−67688
^{208}Pb(p̄,p′), cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{208}Pb(p,p′), deformation length and matrix elements, collective DWBA formalism 7−102882
^{208}Pb(p,p), 3-4.6 MeV, colour van der Waals interaction study 7−128970
^{208}Pb(p,p), 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{208}Pb(p,p), 800 MeV, relativistic impulse approximation in an additive potential model 7−121839
^{208}Pb(p̄,p̄), spin observables at 290 MeV 7−67827
^{208}Pb(p,p)^{208}Pb, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
^{208}Pb(p̄,t), 22 MeV, reaction mechanism and struct. depend., expt. and DWBA calcs. 7−135328
^{208}Pb(p,t)^{206}Pb, two-particle pairing excitations 7−116362
^{208}Pb(π^+, K^+), hypernuclear state production, cross section calcs. 7−67879
^{208}Pb(t,p)^{210}Pb, two-particle pairing excitations 7−116362
^{209}Pb, high spin, high lying subshells from (α, ^{3}He) reaction 7−109198
^{209}Pb, neutron evaporation spectra, level density parameter and temperature dependence 7−121927
^{210}Pb, alpha-clustering and alpha-decay 7−108974
Pb(α,X), multi-nucleon removal following bombardment of 177 MeV α particles 7−121877
Pb(α,X), relativistic collisions, pion spectra 7−81417
Pb(d,f), cross section study at 4.4, 6.3 and 8.3 GeV 7−102922
Pb(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
Pb(γ,n), 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
Pb(n,n), small angle scatt. at 14.2 MeV 7−116420
Pb(p, X), Fragments transverse energy distrib., no-plasma model anal. 7−89525
Pb(p,X), n correlations at 7.5 GeV/c 7−96069
Pb(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
Pb(p,X), pseudorapidity meas. and fireball model 7−96058
Pb(p, X), transverse energy production in proton-nucleus and nucleus-nucleus collisions 7−95950
Pb(π,X), fission fragments, light charged particle spectrum meas., cross-sections 7−67883
Pb(π,X), pseudorapidity meas. and fireball model 7−96058
^{208}Pd(d,d), coupled discretized continuum channels methods 7−67849
^{A}Po, A=208, 209, nuclear orientation following Al decay in Fe 7−116330
^{204}Po, excited states study using in-beam spectroscopic methods 7−73685
^{210}Po, alpha-clustering and alpha-decay 7−108974
^{212}Po, yrast states, level scheme and mean lifetimes 7−109114
Pt, even isotopes, $\nu_{i13/2}$ pair, exptl. anal., Nilsson cranked model comparisons *(Chinese)* 7−102788
Pt, even-even isotopes, reduced E2 probabilities, excited state quadrupole moments, IBM-I anal. 7−121712
Pt, prolate to oblate shape transition in decay modes of O^+ states 7−116248
^{A}Pt, A=189, 191, 193, quadrupole coherent states, quasiparticle coupling to collective core, particle-core coupling model 7−121573
^{A}Pt(^{12}C,^{12}C′), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(^{16}O,^{16}O′), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(α,α′), A=192,194,196,198, first excited state, static quadrupole moment 7−116277
^{A}Pt(e,e′), A=194, 196, shape transition and wave fn. behaviour, charge density determ. 7−135313
^{A}Pt(e,e′), A=194,196, ground state charge and transition densities, HFB calc. comparisons 7−81372
^{192}Pt, first excited state, electric quadrupole moment determ. and shape transition 7−135206
^{192}Pt(^{12}C,^{12}C′), Coulomb excitation, electric quadrupole moment determ. 7−135206
^{192}Pt(^{16}O,^{16}O′), Coulomb excitation, electric quadrupole moment determ. 7−135206
^{192}Pt(α,α′), Coulomb excitation, electric quadrupole moment determ. 7−135206
^{194}Pt(n,n), 4.55 MeV, diff. and total cross sections, nuclear dynamics effects 7−121838
^{196}Pt, O(6) description in IBM 7−73691
^{196}Pt, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312
^{196}Pt(p,p′)^{196}Pt, coupled channel formalism 7−109167
Pt(n, xn), cross section and excitation function meas. 7−73756
^{A}Ra, A=205, 207, isomeric states, new α-emitter observation 7−81348
^{A}Rn, A=202-222, hyperfine struct., isotope shift, spins, moments 7−116242
^{214}Rn valence configs., levels, J^π, $T_{1/2}$, shell model anal. of ^{208}Pb(^{9}Be, 3n) 7−102795
^{214}Rn, yrast spectroscopy, level scheme and spin assignments 7−108983
^{216}Rn, yrast states, excitation spectrum, ^{208}Pb(^{14}C,2nα)^{216}Rn study 7−140977
^{219}Rn half-life calcs. for spontaneous ^{14}C emission 7−121747
^{A}Tl(n,n), A=203, 205, slow neutron scattering lengths, spin dependence, pseudomagnetic precession method 7−129051
^{199}Tl, energy level spin-parity values, ^{197}Au(α,2n)^{199}Tl anal. *(Chinese)* 7−95963
^{201}Tl, extrapolation curves calc. in 4πβ−γ coincidence method 7−96481
^{201}Tl, low energy conversion electron spectra meas. 7−96022
^{205}Tl, mag form factors from 180° electron scatt. 7−102802

nuclei with mass number 190 to 219 continued
^{205}Tl(d,^{3}He)^{204}Hg, 52 MeV, 3s proton shell occupancy, cross sections, anal. powers, spectroscopic factors 7−129061
^{206}Tl(0^-)↔^{206}Pb(0^+), renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839

nuclei with mass number 220 or higher
A=160-246, even-even nuclei with 1^+ and 3^+ bands in rot. region, IBM calcs., energy spectra *(Chinese)* 7−121551
A=226, nuclear data sheets, levels, J^π, transitions, decays 7−80202
A=250, 251, deformation energy role in superheavy nuclei, heavy ion reactions, fission barrier 7−121934
actinide mass microscopic formula, fermion dynamical symmetry approx. to spherical shell model 7−135195
actinide nuclei, double humped fission barriers, macroscopic-microscopic description 7−67885
actinides, octupole deformation, α-γ and α-conversion electron decay study 7−109012
conference, Gaussig, Germany, Nov. 1985 7−72725
heavy elements, fission properties calcs. 7−121781
isobaric analog states and the isovector giant resonance, spreading widths 7−73740
lowest collective states and transition probabilities in the Ra region 7−95961
odd-odd deformed actinide nuclei, expt. level struct. and rot. parameters determ. 7−121555
U(d,f), cross section study at 4.4, 6.3 and 8.3 GeV 7−102922
Z>100 nuclei, synthesis and study 7−121919
^{238}U, incident on nucl. emulsion, reaction mechanisms for clean fission 7−102923
^{A}Ac, A=223, 226, half-life measurement of products from photodisintegration of ^{232}Th 7−116345
^{227}Ac, rigid reflection asymmetric rotor description 7−109070
^{236}Am, long-lived isomers, high spin and shape isomeric states 7−102807
^{241}Am (n,f), 0.08-1.3 MeV, cross section meas., intermediate structure obs. 7−121970
^{241}Am, α-radioactive decay, flicker-noise fluctuations 7−102845
^{241}Am decay, 59.5 keV gamma-emission probability meas., disintegration rates 7−135783
^{241}Am/^{233}U, alpha activity ratios determ., alpha spectra 7−96034
^{241}Am(n_{th},tαf), t-α energy characteristics, emission probabilities 7−73810
^{242}Am, fission barrier height, curvature meas., ^{241}Am (n,f) study 7−121970
^{243}Am(n,f) 1.1-6.8 MeV, cross section ratio relative to ^{235}U 7−135382
^{236}Bk, long-lived isomers, high spin and shape isomeric states 7−102807
^{249}Cf(^{136}Xe,X), actinide prod. cross section meas. 7−116457
^{249}Cf(^{22}Ne,X), Z=108 composite nuclei formation, fragment mass distributions 7−73795
^{252}Cf, polar particle emission in spontaneous fission 7−73816
^{252}Cf, spontaneous fission, fragment energy and mass distrib. correlations 7−73807
^{252}Cf, spontaneous fission, fine struct. variation with excitation energy 7−129116
^{252}Cf, spontaneous fission, identification of new neutron-rich rare earth isotopes 7−141109
^{252}Cf, spontaneous fission, low mass fission product search 7−73808
^{252}Cf spontaneous fission, neutron and fission fragment study 7−73805
^{252}Cf, spontaneous fission, neutron energy and angular distrib., low energy meas. 7−109248
^{252}Cf, spontaneous fission, symmetric tripartition 7−129119
^{252}Cf, spontaneous fission neutrons, energy/angular distrib. correlations 7−73806
^{252}Cf, spontaneous π emission from ground state, expt. evidence 7−96036
^{252}Cf(n,n′f), neutron spectra, statistical model anal. 7−73804
^{252}cf(sf), particle emission model, energy spectra, ang. distribs. 7−121971
^{252}Cf→^{48}Ca+X, $T_{1/2}(\alpha)T_{1/2}(^{48}Ca)$ upper limit meas., low mass fission product search 7−73808
^{A}Cm(n,f), A=243,244,246,248, fast-neutron fission product yields, mass distrib. calcs. 7−129117
^{244}Cm, α-radioactive decay, flicker-noise fluctuations 7−102845
^{244}Cm/^{233}U, alpha activity ratios determ., alpha spectra 7−96034
^{245}Cm(n, f), thermal neutron induced, cold and hot fragmentation 7−121967
^{248}Cm(^{238}U,X), pocket in pot. energy surfaces, deformation in energy density formalism 7−109217
^{254}Es^g, production by neutron irradiation of californium 7−141364
^{A}Fr, A=207-228 nuclear and electronic g-factors and single particle structure 7−109021
^{230}Fr β-decay, half-life, ^{230}Ra collective states; bands, J^π, and transitions 7−73682
^{A}Np, A=238, 239, spontaneous fission of highly deformed excited states, shadow method 7−135381
^{237}Np, muonic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{237}Np, pionic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{237}Np(γ,tαf), 12, 15, 20 MeV, t, α emission probability meas. 7−73812
^{237}Np(n,2n), cross-section meas. in BN-350 reactor core 7−141045
^{237}Np(n,f), effective cross section meas. *(Russian)* 7−102925
^{238}Np, bands and spectroscopic props. in rotor-plus-two-quasiparticle approach 7−81329
^{238}Np, fission time, shadow method 7−67884
^{231}Pa, ^{24}Na radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{208}Pb (^{16}O,X), 200 GeV/nucleon, multiplicity and transverse energy distrib., exptl. comparisons 7−89578
^{A}Pu(n, X), A=239, 240, 0.02-0.03 eV, total cross sections, transmission meas., Bayesian method, Doppler broadening 7−129040
^{A}Pu(n_{th},tαf), A=239, 241, t-α energy characteristics, emission probabilities 7−73810
^{238}Pu, α-radioactive decay, flicker-noise fluctuations 7−102845
^{239}Pu/^{233}U, alpha activity ratios determ., alpha spectra 7−96034
^{239}Pu(n, f), transmission and fission-self indication for various materials, unresolved resonance region study 7−129129
^{239}Pu(n,X), resolved and unresolved resonance region, resonance parameters 7−73770
^{239}Pu(n,f), 4.8-18.8 MeV, absolute fission cross section meas. using time-correl. associated particle method 7−81468
^{239}Pu(n,f), cross section energy depend., quasi-molecular theory 7−116537
^{239}Pu(n,f), multiplicity meas. as fn. of n energy, safeguards appl. 7−102927

nuclei with mass number 220 or higher continued
^{239}Pu(n_{th},f), odd even effects, low energy, statistical pair breaking 7−129115
^{240}Pu, 1.056 eV resonance parameters, transmission meas., Bayesian method, Doppler broadening 7−129040
^{240}Pu, mass asymmetric fission barrier, Skyrme-Hartree-Fock calculation 7−121972
^{241}Pu, half-life review 7−116344
^{241}Pu, thermal neutron induced fission, fragment angular momenta. determ. 7−116532
^{241}Pu(n,f), E≤100 eV, cross sections, R-matrix analysis 7−129118
^{241}Pu(n,f), fragments, correlated mass, energy and charge distribs. 7−121975
^{241}Pu(n,f) statistical model, Fermi gas model, fragment angular momenta, isomeric yield ratios 7−129122
^{242}Pu decay, α-particle and γ-ray emission probabilities 7−96033
^{242}Pu(γ,tαf), 12, 15, 20 MeV, t, α emission probability meas. 7−73812
^{244}Pu, spontaneous fission, long range α-emission LRA/B ratios 7−121976
Ra isotopes, half-life calcs. for spontaneous ^{14}C emission 7−121747
Ra isotopes, low-lying negative parity states, anal. 7−140975
Ra nuclei, ^{14}C emission decay, decay width microscopic calc. 7−73738
^{A}Ra, A=222, 224, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
^{A}Ra, A=222-224, ^{14}C emission, fragmentation anal. 7−67768
^{A}Ra, A=222-6, ^{14}C radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{A}Ra, A=224, 226, 228, low-lying collective state energies, E2 transitions, IBM-1 anal. 7−121552
^{222}Ra, Hartree-Fock description of octupole deformations and rotation 7−81292
^{223}Ra, alpha-particle-^{14}C ion radioactivity branching ratio determ. 7−102846
^{226}Ra, air kerma constant calc. in equilibrium with decay products 7−74218
^{227}Ra, multipolarity meas., evidence for stable octupole deformation 7−73684
^{230}Ra collective states; bands, J^{π}, and transitions from ^{230}Fr β-decay 7−73682
^{255}Ra, low-lying bands, SU(3) limit of IBFA model with U(16) core 7−140990
Rn, nuclear spins, moments and charge radii difference meas. 7−109017
^{A}Rn, A=202-222, hyperfine struct., isotope shift, spins, moments 7−116242
^{A}Rn, A=220, 222, half-life calcs. for spontaneous ^{14}C emission 7−121747
^{222}Rn, ground state, stable octupole deform., H-F and BCS method calcs. 7−81277
Th, fissionable element anal., fission track method *(Romanian)* 7−141110
Th isotopes, low-lying negative parity states, anal. 7−140975
Th(Ta,X), optical potentials using realistic nucleon-nucleon interactions, existence of pockets 7−109212
Th(Ta,X), positron and δ-electron emission, coupled channels anal. 7−67870
Th(Th,X), optical potentials using realistic nucleon-nucleon interactions, existence of pockets 7−109212
^{A}Th, A=225, 226, half-life measurement of products from photodisintegration of ^{232}Th 7−116345
^{A}Th, A=228, 230, 232, low-lying collective state energies, E2 transitions, IBM-1 anal. 7−121552
^{A}Th, A=230, 232, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
^{230}Th, ^{24}Na radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{230}Th(n,X), coriolis interaction and variable reflection asymmetry in fission vibrational resonances 7−129120
^{232}Th, giant quadrupole reson., statistical fission decay evidence 7−81463
^{232}Th(^{12}C,αX), 85 MeV, α-fragment correlation measurements 7−73796
^{232}Th(^{14}N, X), intermediate mass fragments, source props. 7−121916
^{232}Th(^{14}N,X), E/A=35 MeV, intermediate mass fragment/angle-correlated fission fragment coincidence meas. 7−141078
^{232}Th(^{16}O, X), coupled channel approach to subbarrier fusion cross section 7−141121
^{232}Th(^{16}O,X), 95 MeV/nucleon, subthreshold pion prod. study 7−81447
^{232}Th(^{16}O,X), spin distributions, complete fusion cross section calcs., fission yields 7−102905
^{232}Th(^{16}O,f), anisotropy in transfer-induced fission 7−102911
^{232}Th(^{206}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{232}Th(^{208}Pb,X), nucleon transfer with Coulomb excitation, rotational state population 7−121947
^{232}Th(^{3}He,X), 270 MeV, source props. of intermediate mass fragments, fission fragment correls. 7−73803
^{232}Th(^{3}He,X), E/A=90 MeV, intermediate mass fragment/angle-correlated fission fragment coincidence meas. 7−141078
^{232}Th(^{40}Ar,X), Z=108 composite nuclei formation, fragment mass distributions 7−73795
^{232}Th(^{44}Ca,X), synthesis and study of Z>100 nuclei 7−121919
^{232}Th(^{58}Ni, f), formation and decay of hot composite-like nuclei 7−135355
^{232}Th(^{90}Zr,X), 520 MeV, transfer reactions, γ-transition study 7−116507
^{232}Th(α, f), 30 MeV, charge distrib. and fractional cumulative yield of ^{135}I, ^{138}Xe and ^{140}Ba 7−96125
^{232}Th(α,f), 12, 20 MeV, bremsstrahlung induced, gamma ray spectrometry and energy correlation meas. 7−73811
^{232}Th(γ,X), 18-28 MeV, ^{24}Ne emission cross sections, cluster mechanism 7−67800
^{232}Th(γ,f), 5-11 MeV, cross section meas. 7−116530
^{232}Th(γ,f), cross section meas. below 10 MeV 7−109145
^{232}Th(γ,n), cross section meas. below 10 MeV 7−109145
^{232}Th(n,f), 14.7 MeV, Rh, Ag, In and Sb cumulative and independent yields, charge distrib. *(Chinese)* 7−121966
^{232}Th(n,f), 5-11 MeV, cross section meas. 7−116530
^{232}Th(n,γ), 5-10 MeV, cross section meas., comparisons with ^{235}U fission cross sections 7−141105
^{232}Th(n,n′), 185, 550, 200-2500 keV, rotational level excitation fns. and angular distrib. 7−116421
^{232}Th(p,f), 1 GeV, kinematic characteristics of fragments, influence of nucleon emission *(German)* 7−129121
Th(e^{+},X), e^{+} and e^{-} energy spectra, peak struct. search 7−121804
Th(p,Xn), 100 MeV, neutron yield meas. 7−73758
U, fissionable element anal., fission track method *(Romanian)* 7−141110
nuclei with mass number 220 or higher continued
U(Th,X), optical potentials using realistic nucleon-nucleon interactions, existence of pockets 7−109212
U(U,X), 1.7 GeV, deep inelastic, time delay effects on K X-ray prod. probab. 7−121910
U(U,X), 5.6, 5.9 MeV/u, multiple positron structures 7−67875
U(^{132}Xe,^{132}Xe), elastic and inelastic scatt., solid state nuclear track detector technique 7−81421
^{A}U, A=232, 233, ^{24}Na radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{A}U, A=233, 234, α-decay, heavy ion emission and cold fission, half-life spectrum 7−135385
^{A}U, A=234, 235, 238, neutron resonance states, mean-square charge radii meas. 7−73702
^{A}U(γ,tαf), A=233, 235, 12, 15, 20 MeV, t, α emission probability meas. 7−73812
^{A}U(n, f), A=235, 238, transmission and fission-self indication for various materials, unresolved resonance region study 7−129129
^{A}U(n, n), A=235, 238, cross sections, ground state reorientation, coupled channels calcs. 7−116407
^{A}U(n,f), A=234, 235, 236, effective cross section meas. *(Russian)* 7−102925
^{A}U(n,f), A=235, 238, multiplicity meas. as fn. of n energy, safeguards appl. 7−102927
^{A}U(n,f), A=235,238, cross section energy depend., quasi-molecular theory 7−116537
^{A}U(n_{th},f), A=233,235, odd even effects, low energy, statistical pair breaking 7−129115
^{A}U(n_{th},tαf), A=233, 235, t-α energy characteristics, emission probabilities 7−73810
^{A}U(p,f), A=235, 238, E_p=1-4 MeV, anomalous behaviour of fission cross section 7−81462
^{A}U(p,fission), A=235, 236, 238 pulse-height and time of flight spectroscopy 7−121973
^{232}U(n,f), 0.06-7.4 MeV, fission cross section meas. 7−141106
^{232}U→^{24}Ne+X, fragmentation anal. 7−67768
^{233}U→^{24}Ne+X, radiochemical decay search using gamma-ray spectrometer, half light limit 7−67769
^{234}U, collective level energies, SU(3) symm. in sdg boson model 7−96002
^{234}U high spin state population and γ transitions from ^{235}U(^{58}Ni, ^{59}Ni) 7−95969
^{235}U, bound-coherent-neutron scatt. length 7−81360
^{235}U(n, X), 0.02-0.03 eV, total cross sections, transmission meas., Bayesian method, Doppler broadening 7−129040
^{235}U(n,f), 1.88 MeV, absolute meas. of fission cross section 7−81466
^{235}U(n,f), 4.45, 18.8 MeV, absolute fission cross section meas. using time-correl. associated particle method 7−81468
^{235}U(n,f), 5-10 MeV, cross section meas., comparisons with ^{232}Th fission cross sections 7−141105
^{235}U(n,f), disintegration rates for fission product chains, reactor appls. 7−96124
^{235}U(n,f), fission chamber meas. for encapsulated ^{252}Cf sources 7−102924
^{235}U(n,f), fission cross section standards measurements, detectors 7−81465
^{235}U(n,f), fission yields and charge distrib. 7−116534
^{235}U(n,f), identification of new neutron-rich isotopes $^{70-74}$Ni and $^{74-77}$Cu 7−135380
^{235}U(n,γ)^{236}U, mean-square charge radii meas. of compound-nucleus states, double-humped barrier model anal. 7−73703
^{235}U(n_{th},f), fission fragments, short-lived I,Br meas. *(Chinese)* 7−135383
^{236}U, fission calcs., transport model with Fokker-Planck eqn. *(Chinese)* 7−109140
^{236}U, mean-square charge radii meas. of compound-nucleus states, fission width correlations 7−73703
^{236}U(^{12}C, X), coupled channel approach to subbarrier fusion cross section 7−141121
^{236}U(n,γ), 0.96−3.3 MeV, cross section determ. 7−141044
^{236}U(n_{th},f), charged particle associated fission, multiparameter meas. 7−73809
(^{238}U,X), mass distribution drift, expt. study 7−116492
(^{238}U,X), on A=16-65, 4.6-7.5 MeV/N, diff. cross sections, quasifission and fusion-fission reactors 7−121968
^{238}U 960 MeV/nucleon interaction with CR-39 polycarbonate detector atoms 7−116533
^{238}U (n,γ), high resolution cross section meas., E_n=1-100 keV 7−102885
^{238}U, isoscalar GQR, neutron spectra, ^{238}U(α,α′f), 120 MeV study 7−109246
^{238}U, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
^{238}U(^{12}C,f), fission fragment yield meas. 7−121969
^{238}U(^{16}O, X), Fragments transverse energy distrib., no-plasma model anal. 7−89525
^{238}U(^{22}Ne,f), 172 MeV, occurrence time determ. 7−121969
^{238}U(^{238}U,X), deformed nuclei, inclusion of frictional forces, model anal. 7−121887
^{238}U(^{238}U,X), E=5.05-6.07, 7.42 MeV/N, deformed ion collisions, damping effects and sub-Coulomb transfer model 7−129073
^{238}U(^{238}U,X), optical pot. in sudden and adiabatic approx. 7−95995
^{238}U(^{238}U,X), pocket in pot. energy surfaces, deformation in energy density formalism 7−109217
^{238}U(^{32}S,X), Z=108 composite nuclei formation, fragment mass distributions 7−73795
^{238}U(^{32}S,f), ang. distrib. meas., comparison with coupled channels and transition state theory 7−116456
^{238}U(^{40}Ar,X), onset of ineffectual and incomplete fusion near Fermi energy 7−141087
^{238}U(^{40}Ar,X), perturbed systems far from equilibrium, collision simulation *(French)* 7−89582
^{238}U(^{6}Li,X), E/A=25 MeV, linear momentum transfer and light particle emission meas. 7−67881
^{238}U(^{6}Li,X), E/A≥20 MeV, momentum and energy transfer mechanisms 7−141065
^{238}U(α,α′f), excitation fn. of fission probability, reaction mechanism 7−96128
^{238}U(α,α′f), neutron spectra from isoscalar GQR in ^{238}U 7−109246
^{238}U(α,f), 32-56 MeV, fission fragment kinetic energy, mass distrib. 7−73801
^{238}U(α,f) statistical model, Fermi gas model, fragment angular momenta, isomeric yield ratios 7−129122
^{238}U(e,e′), linear response function in quasielastic peak region, long. charge response 7−135306

nuclei with mass number 220 or higher continued
^{238}U(γ,f), 5-11 MeV, cross section meas. 7−116530
^{238}U(γ,f), cross section meas., 5-10 MeV 7−109146
^{238}U(γ,n), cross section meas. and a multiplicity, 5-10 MeV 7−109146
^{238}U(n, f), fission product absolute yields 7−109243
^{238}U(n, xn), 1-70 MeV, direct channel for U isotope prod. in nuclear fuel 7−102987
^{238}U(n,f), 5-11 MeV, cross section meas. 7−116530
^{238}U(n,f), fast neutrons, fission products yield, gamma-ray spectra meas. 7−116531
^{238}U(n,f), fission product yield meas., γ-ray emission and half-lives 7−109247
^{238}U(n,n'X), 14.2 MeV, secondary neutron spectra meas. *(Chinese)* 7−96123
^{238}U(n,n'), 14.2 MeV, double differential cross section meas. 7−121853
^{238}U(n,n'), double differential cross section and u spectra, statistical calcs. *(Chinese)* 7−96062
^{238}U(n,n), small angle cross sections at 14.2 MeV *(Chinese)* 7−109157
^{238}U(n,n), small angle scatt. at 14.2 MeV 7−116420
^{238}U(p,X), 11.5 GeV, coincidence meas. and fragmentation 7−141071
^{238}U(p,f), 1 GeV, kinematic characteristics of fragments, influence of nucleon emission *(German)* 7−129121
^{238}U(p̄,x), hypernuclei production probability 7−121978
U(α,f), fission fragment kinetic energy loss calcs. *(Russian)* 7−102926
U(e,e'f), giant multipole resonances, fission decay, exptl. study 7−109245
U(γ,e$^+$e$^-$), electron pair production in DWBA calc. 7−129019
U(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
U(p,X), spallation cross-sections 7−81398
U(π,f), fission fragments, light charged particle spectrum meas., cross-sections 7−67883

nucleic acids *see macromolecules*

nucleon electric moment
see also neutron electric moment; proton electric moment
Dirac equation soln. for quarks confined in Woods-Saxon pot. 7−121512

nucleon interactions *see nucleon-nucleon interactions; nucleon-nucleus reactions*

nucleon magnetic moment
see also neutron magnetic moment; proton magnetic moment
chiral potential model, magnetic moments of nucleon octet 7−73650
Dirac equation soln. for quarks confined in Woods-Saxon pot. 7−121512
octet nucleons, independent quark model in relativistic logarithmic pot. 7−73608
pionic corrections, light cone wave fn., valence quark config. 7−135120
QCD, asymptotically similar series, external field problems, renormalisation, N mag. moment 7−108862
QCD sum rule calcs., gluon-field contribs., Wilson coeff. 7−135127

nucleon-nucleon interactions
see also nucleon-nucleon scattering; proton-proton interactions
beam dump experiments for axion searches 7−102783
Bonn meson-exchange model, for NN interaction 7−73665
colour nucleon cluster calcs. with one-gluon exchange 7−121438
colour SU(3) gauge invariance, constituent quark model calcs. 7−108866
dibaryons, properties and couplings to NN channels 7−116190
Faddeev equation for local pots., analytical continuation in complex energy plane 7−67056
high energy nuclear collisions, hadron production, transverse momentum distribs. 7−102912
leading baryon spectrum in high-energy nuclear collisions, dual parton model calcs. 7−73674
neutron stars interiors, effects of nucleon-nucleon interactions on neutrino mean free path 7−115493
nucleon-nucleon interaction above pion threshold 7−67639
off-shell extension function, configuration-space study, Reid soft core pot. 7−141031
partial wave pot. from phase shifts, inverse scatt. method 7−95937
proton-neutron force, nuclear phases, E_1/E_2 versus E_4/E_2 plot discontinuity, ground state bands 7−116290
quark model description with flavour SU(6) wave functions 7−67577
theoretical ideas, review 7−67638
e$^+$e$^-$ spontaneous pair creation in heavy-ion collisions 7−121895
N̄N, low energy annihilation studies at LEAR 7−128911
N̄N, low energy antiproton physics at LEAR 7−89513
NN, production of isolated nucleons with large P_T, cross section calc. 7−95944
NN, total cross-sections, law of growth, sea constituents, valence quarks 7−116192
NN correlations in non-relativistic quark model, six-quark bags, momentum distributions, non-NN components 7−109047
nN→hyperons, inclusive production, dynamic characteristics 7−81258
NN interaction, few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
NN interaction, off-shell behaviour, Noyes-Kowalski half-off-shell functions 7−128966
NN interactions, mesonic and dibaryonic excitations in πNN systems 7−67654
NN→NN(πd)(πNN), intermediate energies, effects of πd channel coupling on other channels 7−67643
NN→NNπ, differential cross sections and spin observables, unitary model 7−108934
NN→πd, relativistic spin correction angle 7−108933
NN spin orbit interaction, two-gluon exchange diagrams contribs. 7−121626
NN weak interaction, experimental and theoretical overview 7−67648
NN→X, Monte Carlo generator, IRIS, for quark-gluon plasma 7−67668
NN→X, multiplicity distribs., energy density fluctuations 7−81252
NN→X, transverse energy distribs. in heavy-ion collisions 7−89525
pA→X, multiplicity, rapidity and rapidity correlations 7−102777
p̄N, 300-1400 MeV/c, charged particle multiplicity, negative binomial anal. 7−129031
pN, 70 GeV, high p_T hadron production, formation lengths, parton absorption cross sections 7−116206
pN, cluster production at 400 GeV/c 7−121542
pN, E_p=70 GeV, shower multiplicities, target nucleus depend. 7−140960
pN→charmed particles, detection of decays in emulsion 7−81257
pN in emulsion, 800 GeV, multiparticle prod. and pseudorapidity distribs. 7−81247
pN in nuclei, subthreshold K$^+$ prod. on multiquark configs., coloured string dynamics 7−67647

nucleon-nucleon interactions continued
pN inclusive scattering at high-energy, hyperon polarization, final state interactions 7−135160
pN interactions, massive Drell-Yan pairs prod., optimized perturbative QCD 7−81239
pN→K^{0}X, 12 GeV, cross section meas. and triple Regge behaviour 7−135163
pN→Λ^{0}X, 12 GeV, cross section meas. and triple Regge behaviour 7−135163
pN→pX(πX), 10^3-10^9 GeV, scaling violation in quasieikonal model for supercritical pomeron 7−73544
pN→πX, 300 GeV/c, low momenta (<220 MeV/c) π-yield meas. 7−102769
p̄n→ρ$^-$X(1110), quasinuclear NN̄ bound state, mass and width 7−73666
pN→Σ^0(Λ^0)X, 28.5 GeV/c, Σ^0/Λ^0 cross section ratio, effects on pol. meas. 7−128921
pN→X, 400 GeV/c, large transverse energy prod., wounded nucleon and additive quark model interpretation 7−135155
pN→X, charged particle multiplicity and angular distribs. in nuclear emulsion 7−102778
pN→X, cosmic ray protons, derivation of $\nu_\mu/\bar{\nu}_\mu$ and neutrino spectra from pion and kaon decay 7−120227
pN→X, measurement of the nuclear enhancement in high-E_t and jet event production 7−81251
pN→X, multiplicity and pseudorapidity distribs. 7−89526
pN→X, multiplicity distributions of produced particles and energy loss in proton-nucleus collisions at 200 GeV/c *(Chinese)* 7−102871
pN→X, transverse energy production in proton-nucleus and nucleus-nucleus collisions 7−95950
NN interactions short-range part, equivalent local potentials, energy and channel mixing dependence, quark model 7−135053
pd→ppn, 800-1000 MeV, effective mass spectra, narrow dibaryon resonances 7−140955

nucleon-nucleon scattering
see also neutron-proton scattering; nucleon-nucleon interactions; proton-proton scattering
excited nuclei, internal NN scattering, kinematics anal. 7−121682
Kemmer-Fermi-Yang theory of nucleon-nucleon scattering 7−73664
meson exchange contribs., pot. model with OBE terms 7−121531
variational operator Pade approximants method 7−128791
vertex constant, limitation in dispersion approach 7−89517
NN→NN(πd)(πNN), intermediate energies, effects of πd channel coupling on other channels 7−67643
nn scattering parameters from ^{2}H(n,2np), 15.8 MeV 7−121829
np→np, analysing power meas. at SATURNE II 7−81224
p̄N scattering in nucleus, Pauli principle and anisotropy 7−81394
pp→p'p, few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
NN→πd, inelastic threshold effects, coupled channel quasipotential model 7−81225

nucleon-nucleus reactions
for inelastic nucleon-nucleus scattering, see "nucleon-nucleus scattering"
see also neutron-nucleus reactions; nucleon-nucleon interactions; proton-nucleus reactions
charge exchange reactions, spin resonance in nuclei 7−121856
conference on hadronic few-body systems, Rome, Italy (Oct. 1986) 7−66812
exciton model, angular distributions and data comparison at medium energies, preequilibrium reactions 7−129052
high energy cosmic rays, hadronic component, inelastic cross sections, cascade model 7−116524
quark-gluon plasma obs. expt. using N(N̄)-nucleus collisions 7−141008
(N,πX), GeV energies, differences between proton, neutron nuclear distns. 7−67814
(N,X) interaction at 70 GeV, pion energy distrib., fireball states 7−129030
^{2}H(N̄,d̄), E_N=10 MeV, vector-to-vector spin transfer coeffs., Paris NN potential anal. 7−67829
^{2}H(N̄,d̄)N, meson theoretical NN interaction predictions 7−67812

nucleon-nucleus scattering
see also neutron-nucleus scattering; nucleon-nucleon scattering; proton-nucleus scattering
conf., Kharkov, USSR, April 1986 7−120688
temperature dependent effective interaction, Landau-Vlasov eqn. and Brueckner renormalisation 7−121761
(N,N), ^{2}H and N scattering, ^{2}H distortion, relation between N and ^{2}H radius parameters 7−73780
(N,N'), 100-400 MeV, anal. using relativistic impulse approx. with exchange 7−67836
(N,N'), impulse approx. and spin transfer observables 7−109163
NN interaction, implications applied to few body problems 7−128966
^{2}H(N,N), multichannel N/D equations, new formulation, Coulomb interaction effects, K matrix method 7−121817
^{2}H(N,N), NN interaction off-shell behaviour, Noyes-Kowalski half-off-shell functions 7−128966
^{2}H(N̄,N̄)^{2}H, meson theoretical NN interaction predictions 7−67812
^{4}He(N,N), resonances in N+α system, oscillator representation in resonating group method 7−67786
^{16}O(N,N'), differential cross section meas., DWBA and coupled channel calcs. 7−73763
^{16}O(N,N), differential cross section meas. and phenomenological optical model pot. calcs. 7−73763

nucleon scattering *see nucleon-nucleon scattering; nucleon-nucleus scattering*

nucleons
see also neutrons; protons
axial vector coupling constant and relativistic quark confinement 7−121456
bag model anal. of nucleon resonance current 7−121450
colour-dielectric model, soliton bags, numerical anal., nucleon props. 7−116137
Dirac form factors, leading-order perturbative QCD calc. 7−116128
distribution amplitudes, neutron and N-Δ form factors 7−116173
effective lagrangian and static props., N-ρ-π system 7−81006
effective mass lowering by attractive scalar mean field, rel. effects in nuclear physics 7−140999
electric form factor, core motion effects, bag model anal. 7−108922
electromagnetic properties, pionic corrections, light cone wave fn., valence quark config. 7−135120
form factors in relativistic quark model with chiral symmetry 7−108847
gluon distribution function from muon production of J/ψ and EMC effect *(Chinese)* 7−102677

nucleons continued
hyperfine splitting and the colour Coulomb spike effect 7−67583
mass calcs. in chiral bag plus skyrmion hybrid model 7−89453
mass determination from temperatures in $\bar{p}p \rightarrow \pi X$ 7−95920
masses, gauge field theory calcs. for higher generations 7−140798
size increase in nucleus and EM polarizability 7−116256
Skyrme model, Goldberger-Treiman relation and nucleon strong interaction mean square radius *(Chinese)* 7−121328
Skyrme solitons with vector mesons, electromagnetic and axial props., nonlinear chiral theory 7−108757
static properties, bag formation constraints from the scalar sector 7−108869
strange-quark sea, constraints on nonperturbative component 7−102700
structure function at high Q^2, QCD test and Λ meas. from scaling violations in μN 7−135125
structure functions from deep inelastic μp, μd scattering data, QCD anal. 7−67622
symmetry conserving linear chiral soliton model for N and Δ 7−95762
$\mu N \rightarrow \mu' X$, 120-280 GeV, nucleon structure function high stats. meas. in carbon 7−135124
N_τ bare mass determ., NN interactions via neutral scalar boson field, Monte Carlo simulation 7−73705
N properties in chirally gauge σ-model 7−108807
NN interaction in quark model with quark-antiquark excitations 7−67573
$\nu N \rightarrow \mu\mu X$, dimuon prod., nucleon strange quark content 7−73640
N-Δ mass splittings, soft-pion Skyrme model anal. *(Chinese)* 7−102742

nucleosynthesis
antinucleons from decaying gravitinos in supersymmetric cosmology 7−102284
big bang ^{7}Li production, implications of ^{3}He$(\alpha,\gamma)^7$Be and ^{3}H$(\alpha,\gamma)^7$Li cross sections 7−135335
large black holes, tidal influence and nuclear processes in closely approaching stars 7−80026
core He flash in giant stars, contrib. to surface abundance anomalies 7−120378
cosmic rays, ultraheavy particle fluxes rel. to source r and s-process exposures 7−115189
cosmological light element yields, antimatter effects rel. to baryonic dark matter model 7−128148
element abundances in hot nuclear matter, clusters 7−73726
evolved stars, $^{12}C/^{14}C$ ratio-upper limit determ. from $^{14}C^{16}O$ meas., use for nucleosynthesis constraints 7−140091
explosive, star formation triggering by expanding supernova shell shocks 7−140044
galactic chemical evolution, Z versus $\ln(1/\mu)$ relation with metal-poor gas infall 7−107952
Galactic nucleosynthesis, implications of CND abundances in dwarf and subdwarf stars 7−145944
Galactic nucleosynthesis from study of low-mass stars, conference, New Delhi, India (November 1985) 7−140354
Galactic primary nucleosynthesis, implications for stellar mass function and Galaxy chemical evolution 7−120602
galaxies chemical evolution, relation to element abundances in low-mass stars 7−146092
Galaxy chemical evolution, implications of light element abundances (Na to Ca) in disk and halo stars 7−145945
Galaxy chemical evolution, relation to dark matter problem 7−95022
heavy element yields in M101, implications of radial abundance gradient determ. from H II region models 7−95009
light element production in Barker's cosmologies 7−95054
merging white dwarfs, off-centre ignition of nuclear burning 7−107822
mirror universe, hypothetical forces, particles, universe coupling, positronium decay anomaly 7−120665
neutron capture cross sections for s-process studies 7−95114
neutron capture nucleosynthesis, occurrence during core He burning in massive stars 7−107805
neutron-rich equilib. nucleosynthesis, evidence from Cr isotopic anomalies in Allende meteorite 7−88184
nonradiatively decaying neutrinos, mass and lifetime, primordial nucleosynthesis with γ_τ 7−73575
novae, gamma-ray constraints on ^{22}Na yields 7−120439
Population III, explosions, implications for microwave background and nucleosynthesis 7−146052
pregalactic nucleosynthesis, influence on metallicity histogram of globular clusters 7−146060
primordial nucleosynthesis, effects of neutrino flow dominance during quark-hadron transition 7−101960
primordial nucleosynthesis, implications of dynamics of superconducting strings 7−108002
primordial nucleosynthesis, light element abundance in Brans-Dicke theory with variable cosmological term 7−115634
primordial nucleosynthesis and N_ν bounds 7−107996
primordial nucleosynthesis in inhomogeneous cosmologies 7−88698
s-process, pulsed neutron source models, parametric study 7−88374
s-process analysis from ^{34}S to ^{42}Ca, implications of ^{40}Ar neutron capture cross section 7−72268
s-process nucleosynthesis, implications of abundance anals. of red supergiants ϵ Peg and 12 Pup 7−94872
s-process nucleosynthesis, implications of beta-decay rates in stellar interiors 7−101767
s-process nucleosynthesis, Maxwellian-averaged neutron capture cross sections for ^{99}Tc and $^{95-98}$Mo 7−115222
SN 1980K in NGC 6946, ^{56}N; synthesis rel. to late-time spectrum 7−88468
stars, collapse of 8-10 $M_\odot$ stars, effect of electron capture on ^{24}Mg and ^{20}Ne 7−140120
stellar and early Universe nucleosynthesis, review 7−107815
stellar nucleosynthesis, effects of variable star form. rate on Galaxy chemical evolution 7−115586
Sun, interior processes (book) 7−80189
supernovae, contrib. of ^{56}Ni prod. and decay to light curves of exploding Wolf-Rayet stars 7−127916
thick accretion disks around black holes, thermodynamics of nuclear processes 7−101838
time evolution of extra spatial dimens., effect on primordial nucleosynthesis 7−89418
triple α reaction, S-matrix calc. 7−127710
white dwarf explosions, ^{56}Ni prod. rel. to Type I supernova light curves 7−120467

nucleosynthesis continued
Ca(Ca,X), 400, 1050 MeV/N, central collisions, relation between entropy and nucleosynthesis 7−81432
^{49}Ca level structure, nucleosynthesis relevance from ^{48}Ca(n,X), total and capture cross-sections 7−81382
^{2}H(d, γ)^{4}He, low energy reaction, big-bang nucleosynthesis extrapolation, ^{4}He ground state, D-state admixture 7−121859
^{3}H(α,γ), 79-464 keV, astrophysical S(E) factor, ^{7}Li prod. rate 7−115229
Kr(n,γ)Kr, stellar cross-sections in s process 7−109166
^{25}Mg(P,γ) at stellar energies, astrophysical aspects, ^{26}Al abundance 7−107813
Nb(Nb,X), 400, 650 MeV/N, central collisions, relation between entropy and nucleosynthesis 7−81432
Ne-O-F cycle of reactions in stellar interiors 7−88385
^{14}O$(\alpha,\gamma)^{18}$Ne in stars 7−127704
^{14}O$(\alpha,p)^{17}$F in stars 7−127704
^{80}Zn, β-decay, implications for shell structure and r-process nucleosynthesis 7−129002

nucleus
see also hypernuclei; nuclear mass; nuclei with mass number 150 to 189; nuclei with mass number 190 to 219; nuclei with mass number 1 to 5; nuclei with mass number 20 to 38; nuclei with mass number 220 or higher; nuclei with mass number 39 to 58; nuclei with mass number 59 to 89; nuclei with mass number 6 to 19; nuclei with mass number 90 to 149
No entries

number theory
acoustics, appls. and techniques *(Japanese)* 7−117416
Favard's problem, geometrical approach *(French)* 7−80287
lattice statistical mechanics, number theory in exactly solvable models 7−73270
quadrature sums for p^{th} powers of polynomials 7−80310

numerical analysis
see also approximation theory; curve fitting; difference equations; error analysis; finite element analysis; function approximation; functional analysis; functional equations; interpolation; iterative methods; molecular dynamics method; Monte Carlo methods
(2+1)-dimensional Ising model on square lattice, amplitude-exponent relation for correl. length 7−140628
anisotropic scatterers, 3D, numerical anal. 7−136146
artificial satellites motion, algorithm for evaluation of inclination and eccentricity functions 7−94638
ASDEX Upgrade vacuum vessel, numerical anal. of eddy currents and mag. forces 7−122114
bistable, stability analysis 7−122969
ceramic-epoxy composites, acoustic wave propag., Bloch theory, numerical anal. 7−98358
circular tube laminar flow, vel. and temp. distribs., orthogonal collocation method *(Japanese)* 7−83355
composite panels, heating-cooling problems 7−136664
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
concentric sphere gap, stationary and time dependent vortex streams, Navier-Stokes eqns. *(German)* 7−123656
cracks with unknown boundaries, elasticity theory problems soln. 7−83107
cubic container convection, numerical and experimental investigations, viscous medium, flow patterns *(German)* 7−123635
dendritic solidification, numerical results in 2D 7−76363
discrete convolution equation, most ill-posed non-negative kernels 7−108197
Duffing systems, stable, jump phenomena, numerical simulations 7−134469
elastic layer under tension, bonded contact problem 7−110875
elliptic equations, coupled, soln. using SOR methods 7−115773
EM fields, 3D, numerical analysis using two-component vector potential 7−141752
EM scattering by underground inhomogeneities, numerical modelling of 2D time-domain scatt. 7−101199
EM scattering of cylindrical wave by four conducting rectangular cylinders 7−110216
evaporation processes, computer simulation 7−124784
fibre reinforced composite articles, transversely reinforced, monolithic integrity, design algorithm 7−142232
finite periodic notches in ground plane, numerical anal. of surface-wave scattering 7−82437
flaw detection, EM, permeability and cond. rel. to depth in monitored layer of ferromag. cylinder 7−132876
fluctuating hydrodynamic equations, numerical integration 7−108242
fluid flow in porous media, DPP84 simulation 7−69261
fracture mechanics computational methods, book 7−66851
fundamentals of computers and numerical anal. appl. 7−66988
gasdynamics, conservative eqns., implicit boundary treatment 7−123579
Gaussian beam wave scatt. from cond. strips placed on ground plate *(Japanese)* 7−129942
generalised Riemann problem soln., asymptotic expansion *(French)* 7−66986
gravity measurements, terrain corrections improvement using numerical integration techniques and bicubic spline interpolation 7−127072
groundwater flow eqn. modelling, improved numerical soln. for diffusion eqn. 7−94310
Hamiltonian maps, low-dimensional, chaos, numerical anal. 7−134665
heat equation, Cauchy problem approximations 7−108196
high energy physics, numerical and computational methods 7−102784
infinite plane grating, numerical anal. of surface current distrib. 7−136145
KdV equation, complex, blow-up, numerical anal. of eigenvalue collisions 7−134541
laminar shock-boundary layer interaction, numerical investigation, skewed shock wave *(German)* 7−123681
linearly coupled oscillators, numerical study of bifurcations 7−72956
MHD oscillatory α^2-dynamo, numerical investigation 7−107702
microcomputer graphics and the teaching of numerical analysis 7−95163
modified Korteweg-de Vries eqn., shape preserving splines appl., fractional time-step method 7−134524
multimode laser with modulated inversion 7−117172
nonequilibrium two-phase flow, 1D, anal. using control volume method *(Japanese)* 7−116630
nonlinear film guided waves, propag. 7−136514

numerical analysis continued
ocean currents, numerical study of secondary flows over continental shelf edges 7−94242
open and closed random walk shapes, asphericity, radii of gyration, 1/d expansion 7−134655
optical waveguides planar, GRIN, numerical anal. using matrix method 7−110563
plate, impulsively loaded, large displacements calc. methods 7−110811
plate, orthotropic, transverse dynamic bending problem soln. 7−83092
plates, buckling analysis under nonproportional planar loading 7−75361
Raman optical frequency conversion, numerical anal. and optimisation 7−110466
restricted numerical range and weak convergence on the boundary of the numerical range 7−80395
satellite motion analysis, restricted error meas. of three parameters of motion for diurnal satellites 7−120242
scattering integral equations, soln. using global moment method 7−88942
shell, circular cylindrical, free vibr. anal. 7−83087
shell, cylindrical, multilayer, matrix method of solving contact problems 7−69073
shell, thin, convergence of approx. methods by assemblage of flat facets *(French)* 7−128282
similar-element method in fluid dynamics 7−91067
steady-state heat transfer, numerical solution techniques 7−123624
stellar dynamics, modelling of collective relaxation processes in galactic disks by numerical expts. *(Russian)* 7−107967
stress intensity factors and improved convergence estimates at a corner 7−88980
stress intensity factors calc. method for typical spatial defects 7−110871
supercomputers and fluid dynamics, conf. Nobeyama, Japan, (Sept. 1985) 7−120710
system of partial differential equations, numerical invariant 7−95244
thermal convection in fluid layer, dynamics 7−134517
toroidal loop, natural convection, 3D anal., tilt angle effect 7−69160
transient light scattering by hypersound 7−97080
transonic flow, explicit finite-difference multigrid solution for the Euler equations 7−111020
transonic potential flows, numerical simulation using pseudo-unsteady methods 7−111021
turbulent channel flow, numerical simulation, low spatial resolution, time-dependent Navier-Stokes eqns. *(German)* 7−123763
turbulent flow with two scales 7−97499
two-dimensional buoyant plume, similarity solution computation 7−123623
ultrarelativistic positronium atoms, probability of passage through matter, inelastic screening *(German)* 7−129906
unstable EM field problems, topological approach 7−110199
vibro-impact motions, numerical anal. of chaotic behaviour 7−104136
viscoelastic thin-walled structural components, longit. dynamic bending problems soln. method 7−142188
CO_2, coupled modes, vibr. kinetics, numerical anal. 7−90095
D-O_3-CO_2 chemical laser, CW, using chemical generator of D atoms *(German)* 7−132943
H-O_3-CO_2 chemical laser, CW, using chemical generator of H atoms *(German)* 7−132943
H_2-cl_2 chain-reaction chemical laser, numerical analysis *(German)* 7−130077
$LiNbO_3$:Ti waveguides, proton exchanged, parametric oscill. numerical model 7−103896

numerical methods
see also convergence of numerical methods
astronomical low-count-rate sources, variability anal., use of a χ^2 test 7−107727
auxiliary source method in direct and inverse electromagnetic scattering problems *(Hungarian)* 7−136159
block implicit algorithms for confined flame propagation 7−78504
Boltzmann equation for fusion plasma, soln. using analytic, Monte Carlo and num. methods 7−74036
brittle fracture waves, calc. by numerical method 7−97443
canonical structures, numerical computation of diffraction coefficients 7−82430
classic wavefield scattering from bounded objects, numerical treatment 7−67036
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
deficient polynomial systems, numerical solution 7−88946
dilute solute mass transfer with chemical reaction on nonuniform surface 7−132966
dye IR lasers, synchronously pumped, pulse parameter anal. 7−130088
elastodynamics, regularised boundary integral eqn. method *(French)* 7−115787
electromagnetic environments, volumes irradiated by unknown sources, lattice approach 7−96917
elliptic boundary value problems, numerical solution 7−80330
EM calcs., numerical solution of fields in cavities using the magnetic Hertz vector 7−68511
EM scattering problems, integral eqn. method *(Japanese)* 7−110215
EM theory, conf., Budapest, Hungary (Aug. 1986) 7−134360
EM wave edge-type scattering problems, numerical method 7−136178
ergodic adiabatic invariants of chaotic systems, time-dependent Hamiltonian system 7−134667
flow over circular cylinder with parabolic vel. distrib. 7−130622
folded radiation spectrum, numerical method for soln. of Fredholm integral eqn. 7−74386
fracture mechanics anal., conf., San Antonio, TX, USA (March 1987) 7−108036
fracture mechanics computational methods, book 7−66851
Galerkin procedure for the diffusion equation subject to the specification of mass 7−108489
Gauss-Birkhoff quadrature formulas, uniqueness 7−72935
geodetic appls. *(Japanese)* 7−101185
Gregory's quadrature rules, monotony and error control *(German)* 7−120789
hybrid Monte Carlo, numerical simulation of lattice field theory, molecular dynamics/Langevin algorithm 7−134939
incomplete beta-function appearing in sampling plan, numerical calc. 7−88933
inexact Newton/finite difference projection methods 7−88945
integral eqns. of first kind with logarithmic kernel singularity, and diffraction appl. *(Russian)* 7−120791

numerical methods continued
interference fringes removal from optical spectra, numerical procedure 7−128545
interstitial Green fns., computational method 7−143318
inverse eigenvalue problems, anal. of numerical methods 7−108208
inviscid flow calculations, use of cut-off functions in vortex methods 7−115801
Lagrangian augmented algorithms for nonlinear flow problems *(Spanish)* 7−97623
laser beam scattering, off-axis, multiGaussian phase function model 7−129978
lattice methods for numerical integration 7−72933
least squares approximation, accuracy with degree of polynomial *(Japanese)* 7−72940
long-time behaviour of dynamical systems, effects of phase space discretisation 7−72883
meteorology, numerical variational methods for data filtering and interpolation 7−127561
MOSFET, grating-gate, electron states in narrow channels, self-consistent calc. 7−92306
multigroup neutron transport equation, soln. using Fourier transform technique 7−102932
multigroup radiation integrals, evaluation using polylogarithm-based methods 7−89163
Navier-Stokes eqns. on periodic domain, Lagrangian fractional step method anal. 7−88983
Navier-Stokes equations for compressible and incompressible viscous flow simulations 7−136775
neutron transport, diffusion synthetic acceleration method for weighted diamond differencing schemes 7−73823
neutron transport eqn., soln. using extrapolation methods 7−102928
non-equilibrium thermodynamics, renormalization group techniques appl., 1D spin model 7−108497
non-stationary Navier-Stokes equations, numerical soln., viscous incompressible fluid *(German)* 7−123764
nonlinear algebraic equations, singular root, modified deflation algorithm 7−72932
nonlinear oscillations, power series solutions, software 7−95309
nonlinear vibration systems, multi-frequency Hopf bifurcation, averaging methods 7−95289
nonsymmetric matrices, conjugate gradient method and orthogonal error algorithms 7−72790
oceanography, forced baroclinic coastal-trapped wave problem solution method 7−115085
operator splitting algorithms for confined flame propagation 7−78504
optically thick diffusive regimes, asymptotic solutions of numerical transport problems 7−80694
p-n junctions, breakdown voltages, 2D numerical method *(Chinese)* 7−125111
parabolic partial diff. eqns., soln. using stochastic method, multigroup neutron. diffusion appl. 7−141124
PET, 3D image reconstruct., review 7−145200
piecewise-linear continuation algorithms, average intersection and pivoting densities 7−72934
plasticity models, pressure-dependent, numerical integration 7−128284
plates, yield line analysis 7−117477
polyacetylene, stochastic adaptation of microcanonical simulation method 7−89111
random four-dimensional lattice, fermion propagators, numerical calc., continuum limits 7−140816
ray trace algorithms for GRIN media 7−129961
recursive computation scheme for multivariate rational interpolants 7−72939
RELAP 5/MOD.1 Cycle 19 computer code reliability test, numerical simulator *(Italian)* 7−135472
relativistic quantum theory, nonperturbative methods for square root kinetic energy operators 7−80468
Runge-Kutta algorithms, comparison of truncation error estimates and intrinsic algorithms 7−80394
scattering problems, surface fields, numerical determ. at interior resonance 7−136179
Schrodinger eqn. for (p,p′) optical potential, soln. using enhanced Numerov algorithm 7−140496
Schrodinger equation, numerical integration, exponential and Bessel fitting methods 7−95382
Schrodinger equation, numerical integration, soln. subspace accuracy 7−120875
seismic reflection, parameter identification using pseudogradient method *(Spanish)* 7−133604
semiconductor laser gain distrib. and photon density profiles, numerical anal. 7−122985
semiconductor optical waveguides, nonlinear response, carrier diffusion effect 7−136512
semilinear parabolic eqns., numerical methods 7−72887
shallow water wedge mode propag., numerical modelling 7−123315
shells, variational and numerical approach to shakedown and limit analysis 7−117490
simulation, real-time, conservation eqn. appl. 7−123729
singular boundary problems, numerical methods 7−67022
singular boundary value problems, numerical solution 7−72859
singular Poisson problems, numerical soln. via sinc-Galerkin method 7−72888
Skyrme model, bound baryon number-two soln., axial symmetry, numerical calc. 7−140818
sloshing, nonlinear responses, shallow water wave theory 7−130728
solar magnetic reconnection process, numerical simulation 7−101756
sound intensity probes, numerical calc. of sound diffraction *(French)* 7−117427
space structure vibration modes, math. concept 7−72969
spatially induced perturbation waves, boundary layer flow along plates *(German)* 7−123588
spherically symmetric problems, numerical soln. using theory of Cosserat surface 7−128262
stiff ordinary differential eqns., numerical methods of soln., review 7−80332
stiff string wave equation, finite difference method analysis *(Japanese)* 7−117443
Stokes problem, spectral approx. *(French)* 7−83166
stress integration with finite rotations, accurate numerical algorithm 7−120807

numerical methods continued
strong shock calculations using artificial viscosity and heat flux methods, sources of error 7−142337
SU(2) lattice gauge theory, topological susceptibility, high statistics computation algorithm 7−140807
SU(3) lattice gauge theory, topology, Chern number computation, gauge fixing, winding numbers 7−140808
substepping schemes for numerical integration of elastoplastic stress-strain relations 7−97331
surface weather data, appl. to tropospheric delay estimation for microwaves 7−114975
Taylor series expansion, Brewster-angle reflection polarizers, angular sensitivity 7−123167
telescope coincidence and ang. correlation expts., numerical method for G-factor calcs. 7−109668
thermal hydraulic analysis, finite element method, upwind difference scheme, balancing dissipation, numerical solutions, reactor appl. 7−116631
thermal stresses in plane elasticity, numerical solns. based only on harmonic functions 7−83042
time dependent viscous flows anal., finite element algorithm appl. 7−69083
tumour treatment, acoustic field synthesis by sector-vortex array 7−126983
turbulent axisymmetric jets flowing into closed tubes, numerical study 7−75644
TVD finite difference scheme using artificial viscosity 7−66992
unfolding of spectra, iterative methods 7−109672
US radiation coupling for noncoaxial alignment and unequal size transmitter and receiver *(Japanese)* 7−123409
vector radiative transfer equation solving in discrete random media 7−136204
vibronic coupling problem, numerical algorithm for band matrix eigenvalue problem 7−81930
weighted Sobolev spaces, props. and appl. to Chebyshev collocation *(French)* 7−66925
Wiener integrals, approximation 7−80331
^{36}Ar-^{40}Ar mixture, concentration profiles in thermal diffusion column, convection-diffusion equation 7−117091
He atom, Hartree eqn., num. method 7−89902

numerical methods, convergence *see convergence of numerical methods*

numerical stability *see convergence of numerical methods*

nutation, Earth *see Earth rotation*

Nyquist criterion
natural circulation flow in bent loop with U-shaped type cooler, stability anal. 7−83185
thermally fluctuating magnetic field meas. of normal metals at low temp. using SQUID magnetometer 7−73383

Nyquist noise *see thermal noise*

O groups
$\lambda\phi^4$ model, higher order contributions in finite temp. renormalisation 7−73536
σ-model, $G(m_1+m_2)/G(m_1)\times G(m_2)$, G=O, U, Sp, in $2+\epsilon$ dimensions, anomalous dimension calcs. 7−73503
σ-model, $G(m_1+m_2)/G(m_1)\times G(m_2)$, G=O, U, Sp, in $2+\epsilon$ dimensions, anomalous dimensions, Young tableaux representation 7−73504
Benard problem, O(2)-symmetric bifurcation theory for convection rolls 7−136859
cylindrical group and massless particles 7−89387
de Sitter space, massless minimally coupled scalar field, Fock vacuum states 7−102278
double-diffusive convection, Takens-Bogdanov bifurcation with O(2)-symmetry 7−136857
expansion coeffs. of bases of $U_n \supset O_n \supset O_{n-1}$ 7−81317
fermionic strings, twisted and extended, BRST quantization, O(2) and SU(2) strings, ghost systems 7−121478
finite theory, critical surfaces, flat directions, O(N)×O(N)-symmetric model, phase structure 7−121367
finite-dimensional lorentz covariant bifurcations 7−89386
higher derivative gravity, new variable formalism, SU(2) gauge invariant form, O(4) field variables 7−128415
IBM, quadrupole moments and E2 transitions in the γ-unstable O(6) limit 7−81312
IBM, SU(3), O(5), O(6) anal., Casimir operator calcs. *(Chinese)* 7−96000
Landau-Lifshitz equation, hidden symm., dual eqn. for asymm. chiral field 7−138182
local O(2,1)-invariant two-dimens. gravit. interacting with scalar matter fields 7−102277
multiflavour Gross-Neveu model, exact soln. and renormalization group β function 7−67485
neutron-proton IBM, M1 selection rules, SU(3), O(6) like Hamiltonians 7−116216
nuclear collective motion, boson models, O(4) fermion algebra 7−121653
O(16)⊗O(16) heterotic model, twisted bosonic strings 7−140905
O(2n)×O(2n) fermionic string models, equivalence to bosonic models with non-zero torsion 7−67597
O(2N) symmetric theories, exact Bethe ansatz solution 7−73505
O(2n-1)×O(2n-1) fermionic string models, bosonization 7−67597
O(5)×U(1) electroweak gauge theory, relation between Cabibbo and Weinberg angles 7−121413
O(N) model with several coupling constants, phase transitions, chiral symm. breaking 7−134955
OSp(M/N), Young diagrams, supercharacters and modification rules 7−140833
super-Riemann surfaces, N=2, O(N) and SO(N) surfaces 7−73555
superconformal algebra, N=3 case, formulation for N≥1, central operator, transformation rule, O(3) representation 7−116093
superstring, addition of holes and crosscaps to world-sheet, finiteness of O(32) theory 7−134990
SUSY Wess-Zumino-Witten model, superconformal Ward identities 7−89389
type I superstring with O (32) gauge group, one-loop divergences 7−67544
Yang Mills theory, generalized, BPST instantons, conformal props., O(4p+1) formulation 7−116056
Yang-Mills theory, O(4)-invariant instanton type solns., 't Hooft representations 7−102632
^{134}Ba, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312

O groups continued
^{196}Pt, O(6) description in IBM 7−73691
^{196}Pt, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312
^{104}Ru, quadrupole props., IBM comparison in γ-unstable O(6) limit 7−81312

O-type tubes *see microwave tubes; travelling-wave-tubes*

observability
hydrology, linear diffusion water model observability 7−107442

observers *see state estimation*

occultations
P/Comet Halley (1982i), occultation of BD+6°5207, Belgrade observations 7−94789
P/Comet Halley (1982i), OH absorpt. obs. during occultations of background radio sources 7−115300
P/Comet Halley (1982i), search for unidentified interstellar features in coma during occultation 7−72372
Crab Nebula, lunar occultation obs. at metre and decametre wavelengths 7−134296
galactic centre region, lunar occultation results for 1968 to 1970 (and prospects for 1986 to 1989) 7−115208
Galilean satellites, occultation obs. catalogue 7−88168
IRAS point sources, list of lunar occultation objects (1986 to 1990) 7−101706
lunar occultation angular diameters of stars, catalogue 7−145839
Mars, obs. of stellar occultation (1985 March 17) 7−101716
microcomputer data acquisition synchronisation with WWV time, use in asteroid occultation photometry 7−80266
Moon, grazing occultations from South Africa (1985 to 1986) 7−145802
Neptune, possible ring system from re-analysis of MKE 31 occultation 7−72356
Neptune stellar occultation on 22 June 1987, stellar diameter and secondary minima 7−120310
Pluto occultation of Charon (4 April 1987), spectra and methane absorpt. features 7−115295
Pluto-Charon mutual events 7−145873
radio sources, precise positions and struct. from Ooty lunar occultation survey 7−80116
SAO 076608, angular diameter from photoelectric obs. of lunar occultation *(Chinese)* 7−120365
SAO 076613, separation and magnitudes of components from photoelectric obs. of lunar occultation *(Chinese)* 7−120365
Saturn of SAO 158763, magnetospheric extinction 7−139959
small bodies occultation of stars, diffr. effects 7−127686
solar wind turbulence modelling using radio occultation meas. 7−139877
stars, lunar occultation meas. use for FK5 reference frame corrections 7−88082
Uranus, 1982 May 1 occultation of KME 15 at Mount Stromlo Observatory, rings and atm. characts. 7−120311
Uranus, stellar occultation obs., 1982 April 22, rel. to ring profile fits and atmospheric temp. profile 7−88177
Venus, radio occultation obs. rel. to conditions for night-time ionosphere form. 7−120294
Voyager 2, photopolarimeter stellar occultation expt. rel. to Saturn ring features props. 7−115291

ocean thermal energy conversion
closed cycle and open cycle systems, characts. 7−78657
developments in the past and future 7−93523
floating-type plant, condensation on smooth vertical tube, periodic motion effect 7−97276
heat engines for OTEC, max. power and efficiency theory 7−139125
marketing and funding of develop., recent and future progress 7−86815
metallic materials for heat exchangers 7−86813
status, historical perspective and future prospects 7−100747

ocean water *see seawater*

ocean waves
acoustic pseudonoise pulse reflection from wavy surface of ocean 7−72099
Adriatic Sea shelf, inertia period oscills. 7−139622
agitated water surface, energy exchange of stratified air flow 7−72075
Agulhas Current, extreme waves and wave-current interactions 7−133747
Agulhas current area (southeast of S Africa), radar remote sensing observations 7−101343
Airborne Oceanographic Lidar for ocean waves meas. capabilities, comparison with Surface Contour Radar 7−134000
anomalous sea surface states, AD 1935 to 1983, visual observations 7−72082
NE Atlantic, SIR-B radar observations 7−101341
equatorial Atlantic basin, forced oscills. obs. during SEQUAL programme (1983 to 1984) 7−114746
midlatitude North Atlantic interannual baroclinic Rossby waves 7−94277
Atlantic Ocean, equatorial Kelvin waves and wind stress 7−87670
Atlantic Ocean, equatorial long wave model for thermocline response to seasonally varying trade winds 7−114729
equatorial Atlantic Ocean, long waves obs. (June to July 1983) 7−94267
E Australia continental shelf, coastal trapped waves theory use for currents and sea-level hindcasting 7−72068
Australian Coastal Experiment region, coastal-trapped waves energy source 7−114776
E Australian continental shelf, coastal trapped waves, modes propag. 7−72067
Australian North West Shelf, internal hydraulic jumps and solitons at shelf break region 7−114756
barotropic coastally trapped waves, resonant forcing 7−114767
beach, sloping, wave spectrum transformation under the action of current *(Chinese)* 7−87661
Black Sea, shelf short period internal waves excitation by wind var. *(Russian)* 7−79435
Black Sea, surf zone secondary waves in Bulgaria area 7−87693
breaking of ocean waves, first-order 1D shallow water theory 7−101328
breaking surface waves, obs. of bubble clouds and temp. anomalies rel. to mixing processes 7−114791
bubbles generated by breaking waves, spatial distrib. 7−127260
bubbles measurement between wave trough and wave crest levels, laser-based single-particle technique 7−94272
California beaches, infragravity edge waves 7−145501
Chinese marginal seas, influence of waves on China coastline 7−94195
coastal Kelvin waves adjustment to ocean under buoyancy forces 7−94280
coastal oceanography, suspended sediment stratification correction for combined wave and current flows 7−127261

ocean waves continued
complex systems investig., turbulence fields statistical modelling of atmosphere and sea wave motion 7—133894
conformal-mapping technique for topographic-wave problems 7—87663
contamination of XCP vel. data during use for wind-generated currents during severe storms estimation 7—79695
corrugated boundaries, shallow-water waves, resonant reflection 7—139630
crests, two-scale stochastic model 7—72100
current whirl of circular shape, causing refraction of propagating waves 7—107422
deep-water Stokes wavepackets in presence of nonuniform medium, Benjamin-Feir instability 7—79443
diffraction by slender body, shallow water limit 7—139628
directional distrib., max. entropy estimation 7—94276
directional wave data, spread factors interpretation 7—133700
directional wave generation modelling 7—145474
directional wave spectra, approaches for comparing remote and in-situ meas. 7—133995
directional wave spectra and ships 7—133745
energy extraction system dynamics *(Portuguese)* 7—78601
energy spectra estimation from SAR imagery 7—133998
energy spectra estimation using radar ocean wave spectrometer 7—133999
equatorial Kelvin waves, topographic scattering 7—114769
equatorial ocean waves, mean circulation effects 7—127224
fine structure of wind-wave surfaces, laboratory expts. 7—107418
finite-depth water, mean angular momentum of gravity waves 7—136894
Fleet Numerical Oceanography Center global spectral ocean-wave model 7—133743
floating ice plate, waves due to a steadily moving source 7—139629
fluid dynamics, annual review, book 7—95112
forced baroclinic coastal-trapped wave problem solution method 7—115085
forced waves, generation and directed propag. *(Russian)* 7—101319
forecast models for surface waves, trends and future prospects 7—87700
generation with time-variable wind, Phillips-Miles theory 7—72074
Georgia Strait, off Vancouver, Canada, X-band microwave backscatter obs. 7—101336
gravity wave equilib.-range spectral behaviour, Seasat microwave altimeter meas. 7—107590
gravity waves, nonlin., flow visualisation by BEM 7—114720
gravity-capillary waves spectrum, nonlinear interactions, Lagrangian theory 7—145491
E Greenland Sea, aerosol size distribs. above and below whitecap form. threshold 7—133841
Greenland Sea, fine structure, internal waves and intrusions in marginal ice zone 7—133706
NE Greenland Sea, high-freq. internal waves obs. in marginal ice zone 7—133707
group struct. obs. and limitations of spectral measures 7—133740
Gulf Stream rings and modon-with-rider solns. to equivalent barotropic eqn. 7—133733
Hangzhou Bay, East China Sea, sedimentation distrib. and 2D tidal waves *(Chinese)* 7—79450
Hawaii, waves generation due to landslides of volcanic origin 7—127162
HF ground-wave radar remote meas. of Celtic Sea ocean wave and current, NURWEC 2 project 7—101611
HF radar, wave and current sensing 7—101606
HF radar sea echo interpretation, role of second-order shallow water hydrodynamic coupling coeff. 7—107591
Hurricane Josephine 1984, ocean swell age and source 7—133746
SW India coast, wave energy spectra 7—72046
SE India coast, wave power potential 7—114074
SW Indian coast, wave climate off Kerala 7—114723
internal solitary waves in rot. system, rot. influence on intumescence 7—83240
internal wave currents, estimation from SAR and IR scatterometer imagery 7—107434
internal wave energy dissipation in continental shelf bottom boundary layer 7—87668
internal wave surface patterns, airborne SAR imagery analysis 7—114800
internal waves, parameters estimation from backscattered radio signals *(Russian)* 7—145489
internal waves overturning statistics, temp. obs. 7—72056
Japan Sea, 1983 May tsunami, propag. *(Japanese)* 7—79239
joint distributions of wave height and period, theoretical distribs. 7—139634
JONSWAP spectral model for surface waves, Monte Carlo study 7—94293
JONSWAP spectral model for surface waves 7—94294
Lagrangian moments and mass transport in Stokes waves 7—111002
large thermal anomalies evolution and shock waves form. 7—133732
lidar remote sensing method for ocean wave determ. 7—139792
Ligurian Sea, coastal zone morphology modelling, wave and current effects 7—79362
liquid transport by traveling solitary waves 7—114725
long internal wave transformation over underwater obstacle, analytical soln. for two-layer fluid *(Russian)* 7—145487
long-wave field effects on resonant Bragg waves, implications for SAR imagery of ocean bottom topography 7—107580
measurement, use of VDK sensor as a velocity meter 7—72197
measurement of wave action, vibratory pressure transducer 7—72196
Mediterranean Sea, third generation wave model 7—79426
meter for wave meas., parallel capacitance wire wave sensor 7—139799
Michoacan earthquake, Mexico (1985 September 19), tsunami charact. 7—114619
microwave backscatter from surface, two-scale model 7—101333
microwave remote sensing of ocean wave directional spectra by aircraft 7—133996
microwave scattering and emission from sea surface, boundary perturbation theory 7—101334
microwave scattering on simple water waves, backscattering spectra study 7—133773
monomolecular film on sea surface, wave damping due to Marangoni effect 7—107426
multilook images processing by SAR 7—101316
nadir-looking radar for simultaneous ocean cross section and rainfall meas. 7—115055
Nantucket Shoals, roughness transition obs. rel. to surface currents and radar imaging of sea bottom 7—107435
near-surface currents meas. using satellite telemetering buoy 7—101608

ocean waves continued
nonbreaking waves in shallow water, formation of velocity fluctuations 7—133764
nondivergent planetary oscillations in midlatitude ocean basins with continental shelves 7—72066
nonlinear Rossby waves in rotating spheroidal fluid 7—133703
nonlinear waves, statistics of elevation, vel. and accel. *(Chinese)* 7—79448
North Sea, Kelvin wave refl. model at oscillating boundary 7—94240
North Sea waves, tower-based radar backscatter observations 7—101575
obliquely incident waves over trench 7—79441
one-way equations, pseudodifferential operators operating orders, marching algorithms, path integrals 7—142083
operational wave forecasting, status 7—133742
NE Pacific, interannual baroclinic long waves on Line P 7—114782
E Pacific Ocean, equatorial, inverted echo sounder obs. of var. during 1982-3 El Nino 7—94244
W Pacific Ocean, tropical waves wind forcing 7—127269
Pacific Ocean off California coast, appl. of wind-forced long coastal trapped wave theory 7—87666
Palawan Island, coastal seiches and Sulu Sea tide-generated internal waves 7—120029
planetary waves, adjustment to ocean under buoyancy forces 7—94281
radar altimetry of sea surface, relation of rms surface displacement to significant wave height 7—101600
radar backscatter from sea surface, meas. at extremely low grazing angle by C-band Doppler radar 7—107438
radar detection of waves, spatial depend. on sea spikes 7—101576
radar remote sensing by SAR method for directional wave spectra, satellite altitude requirements 7—101596
radar remote sensing from satellite, method for nonlinear wave parameters 7—94471
radar remote sensing method for wave height, SIR-B SAR technique 7—101597
radar remote sensing method for wave parameters, dual-radar system 7—127513
radar remote sensing of 2D wave spectra, SIR-B SAR method 7—101342
radar remote sensing of water directions, airborne Doppler method 7—94472
random gravity waves in finite depth water, nonlinearity 7—94275
random vibrations of mechanical structures, mathematics, book 7—128464
recording system using laser to measure sea slope 7—87949
reflective beaches, adjustment to waves 7—101271
refraction diffraction by an island 7—120027
Reynolds stresses under wind waves, ocean tower obs. 7—107421
Sargasso Sea, front internal-inertial waves 7—72055
Scilly Isles, UK, wave spectra obs. 7—94294
sea wave measurements using ship radar, directional wave spectrum determ. 7—107437
seafloor sands, storm wave-induced displacement 7—87596
seawater intake wave and shore current effects 7—114721
secondary waves in surf zone with a bar, of dispersional nature 7—87693
shallow sea wind wave spectrum representations 7—79472
shallow water eqns., two-state finite-element FORTRAN program 7—115027
shallow water wave charact., simulation 7—120025
shallow water waves, effect of wave breaking on wave spectrum 7—114749
shallow-water soliton, reflection, numerical evaluation 7—94253
shallow-water waves, stochastic filtering of lin. processes 7—94295
shear current influence on wave propagation 7—101327
shoreline waves, HP 67/97 calculator programs 7—145679
short gravity-capillary waves, intrinsic freq. spectra obtained from temporal meas. of wave height 7—114750
short surface wave propag. on longer gravity waves 7—87662
short wavelength fetch-limited wind waves, directional spreading 7—127270
short-crested waves in water of finite depth, props. 7—110999
simulated white caps, discriminating between film drops and jet drops 7—120028
SIR-B ocean-wave enhancement with fast Fourier transform techniques 7—134002
solitary waves near obstacle or uneven bottom, long wave eqns. including curvature effects 7—75602
solitons in a channel emerging from three-dimensional initial wave, theory 7—79444
sonar meas. of waves and currents, Doppler sonar methods 7—134012
South China Sea, tides and tidal currents distrib. *(Chinese)* 7—79449
spaceborne remote sensing, conf., Baltimore, USA (April 1986) 7—128175
spectra estimation technique from SIR-B data 7—134001
spectral forecasts, approaches assessment 7—133738
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7—134003
Spectrasat radar ocean-wave spectrometer, design and operation 7—134004
Spectrasat system, design for ocean waves meas., assoc. communications and ground support 7—134110
specular points statistics 7—136171
STABLE instrument for studying benthic boundary layer current struct. and sediment transport 7—101609
storm wave heights prediction, research and appls. involving directional wave spectra 7—94299
Strait of Messina, long internal waves and columnar disturbances 7—127239
Straits of Florida, CODAR operations 7—79608
Straits of Gibraltar, internal waves tide generated 7—101323
stratified rapidly rotating flow, response to pulsating topography 7—83239
submerged spheroid in regular waves, hydrodynamics, linearised pot. theory 7—142269
Sulu Sea tide-generated internal waves and Palawan Island coastal seiches 7—120029
surf zone turbulence, kinetic energy anal. 7—114748
Surface Contour Radar for wave meas., capabilities comparison with Airborne Oceanographic Lidar 7—134000
surface ship wakes, anal. of synthetic aperture radar imagery 7—107436
surface slopes determ. by optical locator *(Russian)* 7—79437
surface wave problem, new approx. soln. using Green's function technique 7—79427
surface wave refraction patterns, appl. of SAR obs. to water depth determ. 7—107581
surface waves, contrib. to near-surface shear in ocean 7—94269

ocean waves continued
surface waves trapped by shores and bottom relief irregularities, asymptotic behaviour 7−114718
swell decay under opposing wind 7−127272
thermocline diapycnal mixing, review 7−120032
third generation models 7−133744
tides and waves meas. with double transmission line *(Spanish)* 7−94509
topographic Rossby wave propagation, numerical study 7−114780
topographically rectified tidal flow, horizontal profile 7−117612
trapped edge waves soln. for convex upward topographies 7−127243
tsunami, earthquake hazards on Cascadia subduction zone, NW United States 7−114647
tsunami, long surface wave propag. calcs., nonlinear dispersion model 7−110993
tsunami assoc. with Nihonkai-chubu (Japan) earthquake, numerical simulation of propag. *(Japanese)* 7−107364
tsunami at Hyuganada, Japan, 7 Aug. 1984 wave 7−127121
tsunami danger to Kamchatka coast, NW Pacific 7−114646
tsunami due to Mt. St. Augustine volcano, Alaska 7−127115
tsunami flooding extension for coastal zones of Mexico 7−133749
tsunami forces exerted on vertical cylindrical barriers 7−87465
tsunami generation in Gulf of Alaska, due to Shumagin seismic gap 7−145361
tsunami hazard delineation in Pacific Ocean 7−133602
tsunami magnitude scale classification 7−114621
tsunami of Japanese coasts 7−127125
tsunami propagation in bay, coastal run-up soln. *(Russian)* 7−127112
tsunami travel time charts, accuracy 7−133601
Tsunami Warning System for the Pacific coast of Canada 7−133603
tsunami wave generation mechanism, model 7−133588
tsunamis, theoretical investigations, book contrib. 7−101222
tsunamogenicity of earthquakes, determ. method involving teleseismic waves 7−133589
Tucker and microwave-type wave recorders, comparison *(Japanese)* 7−101532
upper ocean internal wave field, influence of surface and mixed layer 7−114741
vertical acceleration meas. 7−114763
Wavescan buoy data acquisition module 7−101605
weakly nonlinear non-symmetric gravity waves on water of finite depth 7−136893
weather-ship obs. of sea state, error analysis 7−127574
Weddell Sea ice sheet dynamics, role of standing waves 7−72080
whitecaps and condensation nuclei generation 7−127388
wind direction changes and ocean wave direction change response 7−145506
wind energy flux to surface waves, numerical model for turbulent boundary layer 7−72096
wind generated gravity waves, spectra, quasi-universal form 7−133739
wind speed and direction estimation from directional wave buoy wave meas. 7−79701
wind wave generation, friction vel. scaling 7−101370
wind wave heights for ocean engineering planning 7−72078
wind wave spectrum, nonlinear energy transport *(Russian)* 7−127231
wind waves, energy and fetch 7−127271
wind waves, parameterisation of width of ang. distrib. of wave energy at limited fetches *(Russian)* 7−145488
wind waves, spectral model rel. to SWAMP system 7−133755
wind waves effects on vel. field above air-water interface, influence of thermal stability 7−127390
wind waves growth, effects of swell 7−133741
wind waves with short fetches, influence of air stratification *(Russian)* 7−79436
wind-generated wave breaking 7−94285
wind-generated waves, radar scatt. and equilib. ranges with appl to scatterometry 7−114739
wind-generated waves, two-scale Bragg scatt. model for microwave backscatter 7−101332

oceanic crust
accumulating sediments surface, deep heat flux evaluation 7−94160
Aegean arc subduction, constraints placed by gravity anomaly data 7−71996
N Aegean Trough, seismic profiling and geomagnetic study of crust 7−94094
Africa-Sicily sill, heat flow, age and tectonic origin 7−72000
Agulhas Bank (off S Africa), seismic study of crust deep structure 7−79282
Alpha Ridge, Arctic Ocean, magnetotelluric obs. of crust and mantle 7−79217
Anegada Passage, Virgin Islands, Seabeam survey and wrench tectonics *(French)* 7−79344
Antarctica-Australia-Pacific plate circuit, geological constraints on Cenozoic relative plate motion 7−145423
S Antilles region, geodynamics over past 20 my 7−79350
Ascension fracture zone, geoid anomalies and lithosphere cooling 7−127075
N Atlantic, magma-metamorphosed crust depth and seismic velocity struct. 7−139527
S Atlantic, relative plate motions from Seasat altimeter data 7−145431
South Atlantic geoid by Seasat altimetry and crust struct. 7−119925
Atlantic Ocean, equatorial, fracture zones anal. use for Pangea breakup characts. determ. 7−133644
E Atlantic off Africa, abyssal plain forming ocean-continent crust boundary 7−145401
mid-Atlantic ridge, geochemical constraints on crust origin 7−133630
Mid-Atlantic Ridge, quartz-cemented breccias due to hydrothermal activity 7−145441
mid-Atlantic Ridge south of Kane fracture zone, seafloor geology and extensional tectonics 7−133653
Axial Seamount, Juan de Fuca Ridge, microseismicity survey 7−87456
Azores-Gibraltar fracture zone, seismic profile for crust struct. 7−71980
back-arc spreading in Proterozoic time, implications of oceanic plates thermal model 7−145435
Bahamas, subsidence history, crustal thinning and plate tectonics 7−133643
Bahamas Bank area, ODP drill core studies 7−127154
NW Banda Arc, Indonesia, heat flow and seismic obs. rel. to tectonic movements 7−87558
Barbados Ridge accretionary complex, tectonic fabric mapping 7−79354

oceanic crust continued
W Barents Sea, free-air gravity anomaly map rel. to continent-ocean transition 7−71955
Bay of Bengal near to Visakhapatnam, Structural linearments and mag. anomalies 7−114616
Bay of Biscay, northern margin formation and crust struct. 7−101245
Bengal fan, magnetic anomalies 7−114615
Bermuda Rise, dynamic uplift due to mantle plume convective upwelling 7−127139
Bermuda Rise, ODP drill core and seismic studies 7−127155
Black Sea, crustal heat flow and lithosphere thickness 7−119973
Black Sea, sedimentary geology of the Caucasus section 7−133633
black smoker chimneys of deep-sea floor, laboratory expts. and theory 7−87592
Brazil deep trough, S Atlantic Ocean, structural features of oceanic crust 7−79365
W Canada-NE Pacific convergent margin struct., seismic profiling study 7−79256
Mid-Cayman Rise spreading centre, petrology and origin of gabbroic rocks 7−71990
Chichijima region, Bonin Islands, earthquake swarm characts, and tectonic features *(Japanese)* 7−139499
core data, high resolution, detail-preserving smoothing technique, FORTRAN 77 program 7−145681
Crozet Bank, S Indian Ocean, bathymetry rel. to gravity field 7−139558
deep-sea hydrothermal deposits, anomalous $^{234}U/^{238}U$ ratios 7−72004
Del Cano rise, S Indian Ocean bathymetry rel. to gravity field 7−139558
density changes and motion preceding strong earthquake, meas. using ocean bottom gravity meter 7−79702
East Pacific Rise, plume flow meas. from hydrothermal vent field 7−87602
W Ecuador, rotated oceanic blocks, palaeomagnetic meas. 7−119996
formation conditions implications of comps. of Precambrian gabbroids of Baikal-Muya ophiolite belt 7−145455
French Polynesia, Society and Tuamotu islands, crustal struct., seismic meas. 7−71983
Galicia margin, N Atlantic, ODP borehole core sample study 7−119986
geothermal sources, large-scale influence on ocean abyssal flow 7−94268
E Greenland, continental margin rel. to N Atlantic tectonic evolution 7−127179
Greenland Sea, free-air gravity anomaly map rel. to continent-ocean transition 7−71955
Hatton Bank (Rockall Plateau), continental margin struct. from seismic profiles 7−79264
Hawaii, tectonic setting of volcanoes 7−127162
Hawaii earthquake, 1975 November 29, apparent stresses, stress drops, and amplitude ratios of preceding and following earthquakes 7−87451
high-velocity subducted slab, seismic waveform effects 7−119995
horizontal inhomogeneity of crustal layers, evidence from refracted wave data anal. *(Spanish)* 7−133620
hotspot motions in Pacific, Atlantic and Indian oceans since Late Cretaceous, plates motions anal. 7−107381
impact cratering, contrib. of crustal fracturing to submarine volcanism 7−107411
S India and adjacent oceanic crust, geoelectric induction models 7−79220
S Indian Ocean, bathymetry rel. to gravity field 7−139558
Indian Ocean, intraplate crustal deformation 7−114685
Indian Ocean, Seasat gravity undulations rel. to tectonics 7−145312
Indian Ocean and Indonesian Region, teleseismic phase velocity distribution 7−107357
W Indian Ocean north of Madagascar, gravity and magnetic anomalies, seismic profiles 7−145432
Indus Cone, deep-sea fan sediments, morphology and struct. *(French)* 7−120006
isotopic evolution, combined La-Ce and Sm-Nd isotope systematics in petrogenetic studies 7−107373
Iturup Island region, Kuril Island arc, March 1978 earthquakes, aftershock hypocentres distrib. and seismotectonic processes 7−94104
NE Japan accretionary prism, crustal heat and water flow 7−94162
Japan Sea, crustral temp. profiles determ. by 16-channel heat flow measuring system *(Japanese)* 7−87970
Juan de Fuca plate, subduction zone geodynamics rel. to seismic instability of lithoprobe transect 7−79240
Juan de Fuca Ridge, cataclysmic hydrothermal venting 7−139588
Juan de Fuca Ridge, Pacific, massive sulphide deposits 7−87593
layer 2, elastic vels. vars. near Hawaii and correl. with lithosphere flexure 7−87604
lithosphere formation and magmatism 7−119970
lithospheric heating by mantle plumes 7−145390
Madagascar-East Africa, plate tectonic reconstruction 7−145432
N Mariana Islands, volcanic rocks O, S, Sr and Pb isotopic var., implications for crustal recycling 7−127136
Marquesas Archipelago, central Pacific, basalt origin, geochem. study 7−87529
microscale photographic survey, acquisition using autonomous submersible 7−94512
Mid-Atlantic Ridge, seismic velocity struct. of uppermost crust 7−145359
mid-ocean ridge gabbros, two-phase separation and fracturing (above 700°C) 7−127193
mid-ocean ridge volume, depend. on seafloor generation rate and inversion using long-term sea-level change 7−145439
midocean ridge crest processes, review 7−139539
Norwegian and E Greenland continental margins, seismic study of crust struct. 7−139493
Norwegian continental margin, ODP drilling results 7−139533
ocean island basalts, Ce isotope geochemistry 7−79334
Oceanographer transform fault, N Atlantic, crust struct. 7−133597
Oligocene bathymetric map for oceans 7−72008
S centralPacific, anomalous elastic thickness of lithosphere 7−119984
W Pacific, high-freq. seismic attenuation 7−79309
N Pacific, satellite altimetry geoid anomalies *(Chinese)* 7−139427
Pacific, seismic 3D velocity struct. Love wave study *(Chinese)* 7−139468
Pacific Central basin, struct. of sedimentary cover, seismic refl. study 7−87489
Pacific Ocean, lithosphere elastic thickness, geodetic constraints 7−145384
NW Pacific Ocean and continental margin, stages of tectonic transformations 7−79351
Pacific plate, motion detect. from 1984-5 VLBI meas. 7−94186
E. Pacific Rise, seismic imaging of crustal magma chamber 7−71991

oceanic crust continued
East Pacific Rise at 19°S, hydrothermal deposition rel. to volcanotectonics 7—127177
East Pacific Rise axis, structural evolution 7—87563
plate motions, lithosphere elastic drag forces rel. to upper mantle convection 7—133649
plate spreading rates, relation to pulsation tectonics and long-term stratigraphic cycles 7—133658
Project Kaiko 7—127141
Red Sea, fault pattern and crustal spreading from sonar obs. 7—94170
Red Sea, role of fracture zones during early rifting from Space Shuttle and Landsat obs. 7—145463
Red Sea continental shelf of Egypt, gravity anomalies and tectonics of Safaga area 7—133650
Reykjanes Ridge, morphology of rift zone of mid-ocean ridge 7—133656
Reykjanes Ridge, volcanism and axial struct., comp. anal. 7—87536
Rockall Bank rifted margin, DSDP heat flow and tectonics 7—145400
Rockall Plateau southwest flank, crust seismic velocity struct. 7—133586
Samoa region, seamounts petrology rel. to Samoan volcanism, age and geochemical anal. 7—101227
Savu Sea, outer Banda arc, free-air gravity evidence for oceanic crust 7—139441
seamount detection from Seasat-type geodetic data 7—134007
seamount loading of compressible viscoelastic plate, analytical soln. 7—133652
seismic velocities of oceanic crust rocks, influence of pore water pressures 7—133596
Sohm abyssal plain, Atlantic Ocean, heat flow and depth versus age 7—127139
spreading centres, appraisal of evidence for vars. in magma prod. near fracture zones 7—133655
subduction zone decollement horizon, fluids expulsion from depth 7—87562
Teahitia submarine volcano, French Polynesia, anal. of hydrothermal deposits *(French)* 7—94198
teleseismic P_n and S_n phases and Q freq. depend. 7—94108
Thermaikos plateau, NW Aegean Sea, Holocene sediments and sedimentation, seismic study 7—127192
thermal evolution of oceanic spreading zone, effect of accumulating sediments 7—133634
thermal thinning of lithosphere near hot spots, modelling via optimal shape design method 7—101276
Troodos ophiolite, Cyprus, dikes vertical distrib. and alteration 7—87561
Tyrrhenian Sea area, plate tectonic opening and crust struct. 7—114673
vertical crustal movements, role of Helmholtz waves in two-layer model of upper mantle 7—145427
Au in basalts of E Pacific, DSDP hole 504B 7—94123

oceanographic equipment
see also oceanographic techniques; water pollution detection and control
Absolute Velocity Profiler for motional elec. currents meas. 7—127526
acoustic Doppler current profiler, design and operation 7—101607
acoustic measurement of gravel transport 7—101610
acoustic tomography technology for ocean dynamics study 7—134013
Airborne Oceanographic Lidar for ocean waves meas. capabilities, comparison with Surface Contour Radar 7—134000
airborne type visible and thermal IR radiometer, review *(Japanese)* 7—79622
automatic observation system for the physical environment of the coastal sea 7—127607
buoy-mounted acoustic Doppler current profiler meas. of Somali Current 7—120154
buoys use for directional wave spectra meas. 7—133995
Coastal Zone Colour Scanner on Nimbus-7, effects of multiple scatt. on atmospheric correction algorithm 7—115005
current meter mooring motion, correction methods for temp. and vel. data 7—127587
current meter of moored buoy type, for surface flow 7—145682
current meters, comparison of obs. in equatorial Pacific 7—114727
current remote sensing, compact HF direction finding antenna 7—72178
depth measurement in shallow waters, airborne scanning lidar system 7—79676
DFVLR side-looking airborne radar, appl. to marine oil slicks detect. 7—114805
digital XBT system for dynamic height real-time computation 7—127577
Doppler shear profiler for midocean front study 7—127235
drifting instrument, recalibration period tests 7—87973
EAVE-East, autonomous unmanned submersible, appl. to microscale photographic undersea survey 7—94512
electrical conductivity cells for profiling instruments, transient behaviour 7—133977
electrical conductivity meter for sea water, design using active transformer 7—72193
electrical conductivity microstructure meas. equipment for thermohaline characts. determ. 7—115049
ERS-1 altimeter, automatic tracking mode switching algorithm 7—101663
ERS-1 payload instruments, development status 7—101660
ERS-1 radar altimeter, performance, calibration, and data validation 7—101662
ERS-1 radar remote sensing satellite, data processing facilities at ground station 7—101494
ERS-1 sensors, ESA approach for calibration and performance verification 7—101491
expendable bathythermographs, digitization and calibration 7—79619
fibre optic remote sensing for in situ measurement of marine optical properties 7—79700
Fishing Master electronic tide calculator development using dual-CPU system *(Japanese)* 7—87933
Geosat, radar altimeter characts. and results 7—107587
hydrometeorological measurement system made in USSR 7—72192
ice cover movement measurement, sonar system 7—79704
incoherent Doppler sonar systems, receiver and analogue homodyning effects on vel. estimates 7—127567
light flux in deep-sea, instrumentation to measure light background conditions 7—134144
magnetomodulatory amplifier for electrical prospecting apparatus, theoretical design and config. *(Russian)* 7—107544
Marine Observation Satellite-1, visible and IR radiometer *(Japanese)* 7—79621
membrane-covered polargraphic O_2 sensors, performance improvement using pulsing technique 7—79699

oceanographic equipment continued
moored buoy wind meas., field evaluation 7—114867
moored current meters, use of fairings for meas. in high currents 7—127539
mooring cables for current and temperature meters, drag coeffs. 7—127592
multichannel ship-borne digitizer system 7—79663
near-surface currents meas. using satellite telemetering buoy 7—101608
Neil Brown Mark III CTD, algorithm for combining separately digitised fast and slow temp. signals 7—133948
Ocean Surface Current Radar (OSCR), appl. to vector meas. on inner continental shelf 7—94243
pressure fluctuation gauge for use in deep-sea 7—133979
radar ocean wave spectrometer use for wave energy spectra estimation 7—133999
RAFOS neutrally buoyant subsurface float, acoustic tracking, data acquisition and telemetry 7—133971
Rapid-Sampling Vertical Profiler, design and evaluation 7—127565
resistivity probe with four ring electrodes 7—127497
Savonius rotor-type current meter, influence of support rods on rot. speed 7—115063
scanning lidar bathymeter for water depth measurement 7—79368
Sea floor heat flow measuring system, appl. on floor of Japan sea *(Japanese)* 7—87970
Sea-Bird temp. and cond. probes, dynamic response calibration 7—127545
sediment traps for surf zone appl. 7—101522
semiconductor laser-based instrumentation for ocean studies 7—139811
ship's radar, appl. to ocean waves directional spectrum meas. 7—107437
shore based sea-level meas. data acquisition and transmission 7—101497
solid-state recorders for long-term deployment oceanographic instrumentation 7—79610
sonar meas. of waves and currents, Doppler sonar methods 7—134012
sonar workstation, design and construction for oceanography appl. 7—79698
sonars for submersible vehicles, for obstacle avoidance and obstacle searching 7—134011
spaceborne remote sensing, conf., Baltimore, USA (April 1986) 7—128175
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7—134003
Spectrasat radar ocean-wave spectrometer, design and operation 7—134004
Spectrasat radioaltimeter/SAR instrument design and processing of data 7—134005
STABLE instrument for studying benthic boundary layer current struct. and sediment transport 7—101609
Surface Contour Radar for wave meas., capabilities comparison with Airborne Oceanographic Lidar 7—134000
thermistor chain for midocean front study 7—127235
tides and waves meas. with double transmission line *(Spanish)* 7—94509
towed body for turbulence meas. 7—127560
towed thermistor spar 7—101604
towed vehicle for dye dispensing at depth, design and dispensing methods 7—94513
Tucker and microwave-type wave recorders, comparison *(Japanese)* 7—101532
underwater sound positioning system, high precision short range, development 7—97204
universal acoustic deep ocean transceiver with RF command data link 7—79612
vector averaging current meter and Edgerton Germeshausen and Grier Inc. vector meas. current meter comparison 7—87932
velocity and CTD profiler, TOPS free-fall instrument 7—133978
vertically rising microstructure profiler for temp. and cond. meas. 7—115060
wave measurement, use of VDK sensor as a velocity meter 7—72197
wave measuring pressure transducers 7—72196
wave meter, parallel capacitance wire wave sensor 7—139799
Wavescan buoy data acquisition module 7—101605
wide-band monopulse sonar, remote seafloor profiling appl. 7—127496

oceanographic techniques
see also bathymetry; oceanographic equipment; water pollution detection and control
absolute geostrophic velocities determ., appl. of hydrographic data and vertically-averaged currents 7—79454
acoustic method for currents meas. 7—79696
acoustic scintillation measurement, appl. to determ. of struct. of turbulent tidal flow 7—114754
acoustic tomography: use of surface refl. rays *(French)* 7—104088
acoustic tomography, critique of Munk-Wunsch method for performance evaluation 7—114743
acoustic tomography by Hamiltonian methods including the adiabatic approximation 7—101548
acoustic tomography technology for ocean dynamics study 7—134013
airborne SAR imagery analysis of ocean internal wave surface patterns 7—114800
N Atlantic, atmosphere characts. influencing infrared remote sensing 7—127345
Bernoulli inverse method for determining the ocean circulation 7—94492
bivalve molluscs used for PAH monitoring in estuaries, use of 2 different species 7—79459
bubbles measurement between wave trough and wave crest levels, laser-based single-particle technique 7—94272
bulk-method-determination of ocean fluxes, stability and roughness, accuracy study 7—107538
chart production, Automated Nautical Charting System 7—79705
chemical monitoring, use of standard reference materials 7—79706
chlorophyll concentration remote sensing, two-look method to overcome atmos. effects 7—94470
conformal-mapping technique for topographic-wave problems 7—87663
current measurement, influence of support rods on rot. speed of Savonius rotors 7—115063
current meter mooring motion, correction methods for temp. and vel. data 7—127587
current profiling techniques, receiver and analogue homodyning effects on incoherent Doppler vel. estimates 7—127567
current remote sensing, compact HF direction finding antenna 7—72178
current remote sensing method using interferometric radar 7—134015
currents at surface, determ. from surface temp. field 7—72191

oceanographic techniques continued
depth measurement in shallow waters, airborne scanning lidar system 7−79676
differential pulse cathodic stripping voltammetry use for Ni and Co determ. 7−87708
digital doubling integrating filter for heave meas. 7−79697
digital image processing for sidescan sonar data analysis 7−97203
directional wave spectra, approaches for comparing remote and in-situ meas. 7−133995
drag coeff. obs. over open ocean, dissipation techniques 7−127225
dye dispensing at depth, design of towed submersible vehicle 7−94513
eigenanalysis, appl. to tide-gauge records of sea level 7−139777
electrical conductivity cells for profiling instruments, transient behaviour 7−133977
ELIA knowledge-based Landsat TM image anal. system 7−94519
evaporation rate determ., by satellite microwave radiometry method 7−127611
expendable bathythermographs, digitization and calibration 7−79619
geodetic satellite altimeter data for marine geoid or seafloor topography, interpolation method 7−87919
GPS, differential mode, hydrographic surveys 7−79707
Green's function technique, appl. to new approx. soln. of surface wave problem 7−79427
HF ground-wave radar remote meas. of Celtic Sea ocean wave and current, NURWEC 2 project 7−101611
HF radar, wave and current sensing 7−101606
HF radar sea echo interpretation, role of second-order shallow water hydrodynamic coupling coeff. 7−107591
hydrophysical fields sampling, evaluation of Rapid-Sampling Vertical Profiler 7−127565
ice concentration remote sensing, radar, passive microwave imagery and optical methods 7−127254
ice floe melting rates, determ. method involving airborne photogrammetry 7−133717
ice on sea surface, remote sensing methods, SIR-B and SMMR techniques 7−133726
internal wave currents estimation, appl. of SAR and IR scatterometer imagery 7−107434
internal wave parameters estimation, appl. of backscattered radio signals *(Russian)* 7−145489
IR remote sensing imaging, extraction method for eddy-like structs. 7−72173
laser fluorosensing of natural waters, environmental effects on laser-induced fluoresc. spectra 7−79688
laser remote sensing of upper ocean layers, problems and methods 7−139791
laser-Doppler anemometry of currents, role of light scatt. by microparticles *(Russian)* 7−101520
LF underwater acoustic propagation and sediment depth, meas. 7−97205
light flux in deep-sea, instrumentation to measure light background conditions 7−134144
lithoseismic analysis for sedimentology *(French)* 7−87946
magnetic records interpretation in lacustrine and ocean sediments, model for contributing mag. mineral sources 7−87628
marine pollution detection, tests of recalibration period of drifting instrument 7−87973
matched-field processing in deep-water Pacific environment, simulation 7−123307
membrane-covered polargraphic O_2 sensors, performance improvement using pulsing technique 7−79699
mesoscale eddy determ. by acoustic tomography method in marginal ice zone 7−127602
mesoscale vortex tracking using centre of mass estimation 7−133980
microwave radiometer weather-correcting sea ice algorithm 7−127241
microwave remote sensing, statistics of specular refl. points on ocean surface 7−136171
microwave remote sensing of ocean wave directional spectra by aircraft 7−133996
microwave scattering and emission from sea surface, boundary perturbation theory 7−101334
microwave signatures of sea ice, inter-sensor comparison 7−101564
midocean front study with Doppler shear profiler and thermistor chain 7−127235
mixing processes sampling, effects of fossil turbulence and intermittency 7−114755
mooring cables for current and temperature meters, drag coeffs. 7−127592
MOS-1 VTIR data processing software *(Japanese)* 7−73346
multichannel ship-borne digitizer system 7−79663
nadir-looking radar for simultaneous ocean cross section and rainfall meas. 7−115055
Neil Brown Mark III CTD, algorithm for combining separately digitised fast and slow temp. signals 7−133948
New York Bight, pollution and marine monitoring 7−78708
numerical method for solving the forced baroclinic coastal-trapped wave problem of general form 7−115085
observational array systematic design and tide gauges example 7−145698
ocean acoustic tomography, appl. to mesoscale vel. field determ. 7−114735
ocean technology electronics, conf., Edinburgh, Scotland (March 1987) 7−95103
ocean waves energy spectra estimation using radar ocean wave spectrometer 7−133999
oil pollution diagnostics, appl. of laser-induced fluoresc. method 7−114804
oil slick detection, appl. of side-looking airborne radar 7−114805
oil spill detection and analysis, results from radar and microwave radiometry 7−114806
organochlorines and trace metals, micropollutants in open ocean waters, sampling procedures 7−93608
palaeocurrent directions determ., results from 2D exposures of cross laminae in Devonian flysch 7−101293
partial spline method for discontinuities inclusion in otherwise smooth 2D and 3D objective anal. 7−133975
pollution detection, discrimination between crude oil spills and monomolecular sea slicks by airborne remote sensors 7−114803
pollution monitoring programs in Australia 7−78709
pollution monitoring programs in China 7−78707
quasi-geostrophic modal amplitude estimation from XBT/CTD survey data 7−127559

oceanographic techniques continued
radar altimetry of sea surface, relation of rms surface displacement to significant wave height 7−101600
radar for ocean surface object detection, problem of optimal discrimination in presence of receiver noise 7−87948
radar imaging of Earth's surface, use of lognormal random-field models 7−79658
radar imaging of land and sea surfaces, by imaging radar polarimetry 7−134023
radar imaging of sea bottom, implications of surface currents obs. at Nantucket Shoals 7−107435
radar mapping method for mesoscale dynamics below sea ice 7−127253
radar remote sensing of land and sea, requirement for ground truth studies 7−139788
radionavigation for aircraft doing coastal hydrographic surveys, Thomson-Trident system *(French)* 7−79618
remote laser sounding of sea surface, echo signal statistics 7−87966
remote sensing, acquisition and anal. of NOAA HRPT data by FRS-68010 system 7−101571
remote sensing, appls. of satellite microwave radiometry in Finland and Baltic Sea 7−79623
remote sensing, appls. to coral reef studies 7−79430
remote sensing, automatic tracking mode switching algorithm for ERS-1 altimeter 7−101663
remote sensing, development status of ERS-1 payload instruments 7−101660
remote sensing, effects of multiple scatt. on atmospheric correction algorithm for Coastal Zone Colour Scanner 7−115005
remote sensing, ESA approach for ERS-1 sensor calibration and performance verification 7−101491
remote sensing, first-order spectral component of microwave scatt. on water waves 7−133773
remote sensing, overview and status of ERS-1 programme 7−101490
remote sensing, performance, calibration, and data validation of ERS-1 radar altimeter 7−101662
remote sensing, two-scale Bragg scatt. model for microwave backscatter from wind-generated waves 7−101332
remote sensing by passive microwave radiometry, use of microwave emission model 7−107534
remote sensing of physical and biological properties using ship, aircraft, satellite methods 7−115018
SAR automated remote sensing for sea ice 7−101566
SAR image reconstruction algorithm with complex phase correction *(Japanese)* 7−145720
SAR imagery of ocean bottom topography, results from improved model 7−107580
SAR imagery use for ocean waves energy spectra estimation 7−133998
satellite altimetry, oceanographic and geophysical appls. 7−133553
satellite radar altimetry methods, technique for radar pulse return averaging 7−115045
scanning beam radar ocean-wave spectrometer technique 7−134004
sea floor heat flow determ., appl. of 16-channel heat flow measuring system in Japan Sea *(Japanese)* 7−87970
sea ice, surface roughness meas. *(Japanese)* 7−107428
sea ice microwave remote sensing method 7−127251
sea ice monitoring, microwave backscatter coeffs. of artificially-grown first-year ice 7−101330
sea ice monitoring, operational SAR data collection and dissemination plans for ERS-1 data in Canada 7−101331
sea ice props. determ. using diffusive transport of light 7−133694
sea ice sensing, shipborne interface system (STAR-VUE) for tactical ice navigation 7−115118
sea ice topography remote sensing, 36 GHz surface contour radar method 7−107535
sea level monitoring program for local and global scales 7−87699
sea level variations determ. using tide gauge data 7−79361
sea surface scatterometry, radar scattering and equilibr. ranges in wind-generated waves 7−114739
sea surface temp. monitoring using IR radiometry, review 7−134026
sea surface temperature meas., comparison of satellite-derived temps. with in situ skin meas. 7−94270
sea surface temperature meas., implications of surface emissivity meas. for turbid waters 7−79453
sea surface temperatures measurement, comparison of aircraft meas. using remote and direct sensing techniques 7−127236
sea wave measurements using ship radar, directional wave spectrum determ. 7−107437
seafloor composition and depth, ocean optics of remote sensing 7−94247
seafloor mapping by sonar methods 7−134008
seafloor mapping by sonar methods 7−134009
seamount detection from Seasat-type geodetic data 7−134007
Seasat microwave altimeter meas. of ocean gravity wave equilib.-range spectral behaviour 7−107590
seasons in surface water properties, method for determ. of seasonal boundaries 7−72088
seawater standard, certification procedures in USSR for 'normal' seawater 7−87947
sediment organic carbon determ. method, dry combustion technique 7−134018
sedimentation rate determination method using ^{210}Pb radioactivity 7−72195
seismic reflection exploration of seafloor, influence of heave of towed source 7−72159
shoreline waves, HP 67/97 calculator programs 7−145679
SIR-B ocean-wave enhancement with fast Fourier transform techniques 7−134002
sonar Doppler method for currents and turbulence, signal processing techniques 7−139793
sonar for seafloor object detection, problem of optimal discrimination in presence of receiver noise 7−87948
sonar meas. of waves and currents, Doppler sonar methods 7−134012
sonar methods used in offshore oil industry 7−134010
sonar sounding of seafloor, using lateral waves from sound source 7−133765
sonar workstation, design and construction for oceanography appl. 7−79698
sonars for submersible vehicles, for obstacle avoidance and obstacle searching 7−134011
sound wave reflection in porous media, limit angle variation *(Spanish)* 7−87911

oceanographic techniques continued
spaceborne remote sensing of ocean waves, conf., Baltimore, USA (April 1986) 7−128175
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7−134003
storm wave heights prediction, research and appls. involving directional wave spectra 7−94299
surface friction vel. determ. from wind speed and air-sea temp. difference 7−127601
surface height mapping, method using SIR-B SAR method 7−101342
surface slopes determ. by optical locator *(Russian)* 7−79437
surface temperature fields, method for data processing and display, use of VAS multispectral data 7−139773
temperature determ., passive microwave remote sensing affected by wind 7−72172
temperature field analysis method, for monthly norm data on a one-degree grid 7−114790
temperature gradient microstructure study using Wigner-Ville distrib. 7−94491
tide harmonic constants computation from hourly data, Fortran program 7−127223
tracers for remote sensing of surface flow 7−94469
transmissometer measurements, use for near-bottom sediment characts. anal. 7−139581
turbulence measurement upstream of axisymmetric body, errors anal. 7−127564
undersea surveys, microscale photographic survey acquisition using autonomous submersible 7−94512
visible imagery for bottom-related surface patterns detect. 7−107439
water depth determ. from surface wave refr. patterns, improved method 7−107581
water level and circulation forecasting, appl. of real-time data systems 7−94298
water mass composition anal., least squares multiple tracer technique 7−94488
water quality criteria establishment, methodology and management 7−86846
wave 2D spectra remote sensing by radar, SIR-B SAR method 7−101342
wave detection by radar, spatial depend. on sea spikes 7−101576
wave determination, by tower-based radar backscatter 7−101575
wave directional spectra radar remote sensing by SAR method, satellite attitude requirements 7−101596
wave height remote sensing by SAR radar, SIR-B method 7−101597
wave meas. at sea using radar *(German)* 7−139808
wave measurement, use of VDK sensor as a velocity meter 7−72197
wave measurements using Airborne Oceanographic Lidar and Surface Contour Radar, comparison 7−134000
wave measuring pressure transducers 7−72196
wave parameter remote sensing method, using dual-radar system 7−127513
wave recording system using laser to measure sea slope 7−87949
wave remote sensing, radar Bragg scatt. simulation using wire wave sensor 7−139799
wave remote sensing, SIR-B SAR radar method 7−101341
wave remote sensing by airborne lidar method 7−139792
wave remote sensing by Doppler airborne radar, for wave directions 7−94472
wave remote sensing by radar, method for nonlinear wave parameters 7−94471
wave spectra estimation technique from SIR-B data 7−134001
waves, spectral forecasts, approaches assessment 7−133738
waves and tides meas. with double transmission line *(Spanish)* 7−94509
weather-ship obs. of sea state, momentum, heat and humidity flux 7−127574
wind measurement at sea, comparison of meas. from spar and toroidal buoy in E equatorial Pacific 7−127391
wind wave height calc. for ocean engineering planning 7−72078
X-ray computed tomography in sea ice internal struct. obs. *(Japanese)* 7−107541
XBT profile data, cluster analysis method 7−87702
XCP velocity data use for wind-generated currents during severe storms estimation 7−79695

oceanography
see also bathymetry; ocean waves; sea ice; seawater; sediments; tides
3D ocean sound propagation, math. model 7−68928
1986 June-August global climatic features 7−127456
θ-S relations in northern seas, implications for deep circulation 7−79451
abnormal phenomena in ocean, oceanographic approach for diagnosis *(Japanese)* 7−114785
abyssal flow, large-scale influence of geothermal sources 7−94268
acoustic field in deep-sea, horizontal line array response to wind-induced noise 7−145490
acoustic gravity waves, nonlin. eqn. 7−82907
acoustic lateral waves due to concentrated sound source near ocean bottom 7−133765
acoustic multipath signal processing in inhomogeneous ocean water *(Portuguese)* 7−130478
acoustic propagation in stratified moving media over impedance boundary *(Russian)* 7−127350
acoustic propagation through sea ice edge eddy 7−127255
acoustic pseudonoise pulse reflection from wavy surface of ocean 7−72099
active layer, global variability 7−87676
adjustment under buoyancy forces, role of coastal Kelvin waves 7−94280
adjustment under buoyancy forces, role of planetary waves 7−94281
Adriatic Sea, 3D primitive eqn. model 7−79605
N Adriatic Sea, atmospheric correction of meas. data 7−133941
S Adriatic Sea, bottom vein of dense water, characts. 7−139619
N Adriatic Sea, bura effects on circulation 7−79424
Adriatic Sea, current system influenced by seafloor barriers, model 7−94234
Adriatic Sea, MEDALPEX sea level data set 7−79414
N Adriatic Sea, wind-curl currents and bottom friction 7−87681
N Adriatic Sea, wind-induced vertical shearing 7−79425
Adriatic Sea, winter convection and E Mediterranean deep water formation 7−79423
Adriatic Sea shelf, inertia period oscills. 7−139622
SW African coast, sea surface temps. rel. to rainfall vars. in equatorial and southern Africa 7−145626
Agulhas Current, extreme waves and wave-current interactions 7−133747
Agulhas Retroflection, stratification and circulation 7−133698

oceanography continued
air-sea gas exchange 7−78549
air-sea interaction stability in equatorial region 7−94252
air-sea interactions, drag coeff. choice 7−133702
air-sea interface energy exchange model 7−79456
Alaska Coastal Current, flow and salinity characts. 7−139621
along-trench currents 7−79441
Amorican Shelf in Celtic Sea, internal waves forced by tide 7−114716
Amundsen Sea, Antarctica, sediments rel. to Recent glacial history and rapid ice stream retreat 7−145493
analysis models for oceanic field estimation 7−114726
angular momentum of steady isolated disturbances on beta-plane 7−79445
anomalous sea surface states, AD 1935 to 1983, visual observations 7−72082
anoxia in oceans, model describing levels of particulate organic carbon, dissolved O_2 and dissolved phosphate 7−120040
Antarctic Circumpolar Current thermohaline finestructure at 25°E 7−133762
Antarctic continental shelf, oceanography book 7−80209
Central Arabian Sea, circulation and water mass struct. (December 1982) 7−139627
Arabian Sea, distrib. of various forms of Cd, Pb and Cu in Wadge Bank region 7−139637
Arabian Sea, evaporation rate estimates from satellite data 7−127611
NEWArabian Sea, thermal response to summer monsoon 7−101321
S Arabian Sea, wind profile modelling 7−101417
central Arabian Sea during MONSOON-77, cooling and deepening of mixed layer 7−114786
Arabian Sea surface temp. rel. to moisture field during 1984 summer monsoon 7−101415
Arctic and N Atlantic Oceans, modelling of asynchronous relationships between temp. anomalies 7−133752
Arctic Ocean, deforming broken ice field dynamics, granular flow theory 7−94233
Arctic Ocean, mass balance determ. with special emphasis on Fram Strait 7−139633
Arctic Ocean, O_2 concs. in mixed layer, balance calc. 7−133776
Arctic Ocean, ventilation rate of deep ocean basins from ^{14}C data 7−114733
Aruba island, Netherlands Antilles, sand beach erosion 7−87598
asynchronous relationships modelling between water temp. anomalies, appl. to N Atlantic and Arctic Oceans 7−133752
NE Atlantic, deep circulation, benthic foraminiferal record 7−87682
tropical Atlantic, diagnostic analysis of historical hydrographic data 7−133690
N Atlantic, forecasting synoptic motions in POLYMODE region 7−87686
North Atlantic, heat transport north of 32 degrees N 7−145507
Atlantic, numerical model of equatorial currents 7−72077
N Atlantic, ocean-atmosphere energy exchange, 20 year study 7−72076
South Atlantic, planktic foraminifera sediment record of palaeotemperatures 7−133767
equatorial Atlantic, pressure variations seen by ocean press. sensors 7−72048
E Atlantic, reconstructed Mediterranean salt lens trajectories 7−114774
North Atlantic, short-range prediction of temperature and climate 7−120035
tropical Atlantic, surface current seasonal changes and circulation model 7−72047
N Atlantic, T and primordial ^3He in seawater of Charlie-Gibbs Fracture Zone region 7−79458
South Atlantic, temperatures of surface waters during late Quaternary 7−133767
N Atlantic (POLYMODE area), seasonal variability of thermal struct. 7−72097
N Atlantic and Arctic Oceans, modelling of asynchronous relationships between temp. anomalies 7−133752
North Atlantic and beta triangle, Bernoulli inverse method for determining the ocean circulation 7−94492
equatorial Atlantic basin, forced oscills. obs. during SEQUAL programme (1983 to 1984) 7−114746
Atlantic coast of North Carolina, USA, oil spill at sea, tar ball transport by internal waves 7−133779
E Atlantic deep water, renewal rates estimation by inversion of ^{14}C data 7−94273
Atlantic North Equatorial Countercurrent, seasonal vel. cycle meas. by surface drifters and current meters 7−114728
tropical Atlantic Ocean, annual cycle of subsurface heat budget and thermal struct. 7−87659
tropical Atlantic Ocean, comparison between geostrophic currents and ship drifts 7−114745
Atlantic Ocean, Eocene and Oligocene circulation rel. to Gulf trough form. in United States 7−139521
Atlantic Ocean, equatorial, seasonal response of sea surface to wind 7−87669
Atlantic Ocean, equatorial, surface dynamic height, wind forced model anal. 7−87671
NE Atlantic Ocean, evidence of recent Pb pollution in deep-sea sediments 7−78693
NW Atlantic Ocean, glacial thermocline struct. at Little Bahama Bank 7−114792
Equatorial Atlantic Ocean, hindcasts of sea surface dynamic height (1982 to 1984) 7−114730
equatorial Atlantic Ocean, long waves obs. (June to July 1983) 7−94267
NW Atlantic Ocean, mesoscale vel. field determ. by ocean acoustic tomography 7−114735
Equatorial Atlantic Ocean, North Equatorial Countercurrent obs. (July 1982 to August 1984) 7−114731
N Atlantic Ocean, ratio of mixing coeffs. of heat and salt of Antarctic Bolton Water 7−94274
Atlantic Ocean, response of equatorial thermocline to seasonally varying trade winds 7−114729
Equatorial Atlantic Ocean, response to trade wind vars. (1983 to 1984) 7−114732
Atlantic Ocean, SE of Barbados, thermohaline steps characts. 7−94245
equatorial Atlantic Ocean, surface temp. and thermocline depth response to wind stress vars. 7−114910
equatorial Atlantic Ocean, vel. and temp. obs. at 28°W during SEQUAL expt. 7−114744

oceanography continued
N Atlantic polar front, retreat vel. during last deglaciation from ^{14}C accelerator mass spectrometry 7−133757
NW Atlantic sub-tropical front, small-scale structures 7−94292
Atlantic-Mediterranean waterfront, temp. and salinity fine structure 7−114764
atmosphere velocity field above air-water interface, thermal stability effects 7−127390
atmosphere-ocean moisture exchange, mathematical model 7−114943
atmosphere-ocean system, C and thermodynamic cycles interaction 7−133753
atmosphere-ocean system and climate 7−120121
Australasia, low latitude, ocean-atmosphere interactions 7−139636
E Australia continental shelf, coastal trapped waves theory use for currents and sea-level hindcasting 7−72068
S Australian coastal waters, acquisition and anal. of NOAA HRPT data by FRS-68010 system 7−101571
Australian marine pollution monitoring programs 7−78709
Australian North West Shelf, internal hydraulic jumps and solitons at shelf break region 7−114756
authigenic magnetite formation in suboxic marine sediments 7−87606
azimuthally perturbed vortices adjustment, reduced-gravity quasi-geostrophic model 7−127259
Azores Current frontal zone, meander and eddy form. modelling 7−133736
Baffin Bay, oceanographic conditions rel. to polar water outflow through Canadian Arctic Archipelago 7−79452
Baltic Sea, dense water flow computations from hydrographic meas. in Arkona Basin 7−94297
Baltic Sea entrance, cooling in autumn 7−101326
Barents Sea, suspended matter distribution and dynamics 7−133657
barotropic-baroclinic energy transfer eqn. 7−75527
barrier island migration, annotated bibliography 7−80216
Barrow Strait, Northwest Passage, mixing and transport 7−145483
Barrow Strait, nutrient fluxes during ice algae extended blooms 7−87706
Bay of Bengal, northwest section, coastal gyres 7−114724
Bay of Bengal, region near Visakhaptnam, hydrographic data and pollution 7−72045
Bay of Bengal, sea surface temperature, NOAA AVHRR observations 7−127290
Bay of Calvi, Corsica, CO_2 turbulent diffusion coeff. 7−127226
bay or harbour with dredged channel, study of wind-induced flushing 7−107423
beaches (of carbonate type), sedimentary charcts. of lower-energy beaches 7−87597
SEBeaufort Sea, data collection for WIEBS 7−133751
SE Beaufort Sea, nutrients distrib. rel. to water circulation and primary prod. 7−94303
Bella Coola delta, BC, Canada, morphology of underwater part of delta 7−87591
benzthiazole pollution of San Francisco Bay sediments, due to car tyres and street runoff 7−107441
Bering and Chukchi seas, northward circulation by numerical model 7−133722
Bering Sea, phytoplankton bloom, nitrogen dynamics 7−145521
Bering Sea, spring blooming of phytoplankton, ocean colour obs. 7−133775
biosphere of the Earth, evolution through geological time, book 7−80213
bispectra of sea-surface temperature anomalies 7−114765
NW Black Sea, asphyxiation phenomena 7−87707
Black Sea, parameterisation of width of ang. distrib. of wind wave energy at limited fetches *(Russian)* 7−145488
Black Sea, redox zone depth 7−87711
Black Sea, seiche fluctuations by two-layer numerical model 7−114788
Black Sea-W Georgian SSR gravel coast protection 7−101272
Bombay harbour bay, particle size distrib. in bottom sediments 7−139586
bottom-related surface patterns detect. in visible spectrum imagery 7−107439
bounded basin fluid dynamics, conservation principles from quasi-geostrophic eqns. 7−79446
Brazil, coastal management plan 7−78697
Bristol Channel, UK, Ocean Surface Current Radar (OSCR) vector meas. on inner continental shelf 7−94243
Broggerhalvoya, Spitsbergen, Z 7−72001
bubbles generated by breaking waves, spatial distrib. 7−127260
bulk transfer coefficients for heat and momentum over leads and polynyas 7−72063
Buzzards Bay, Massachusetts, $^{222}Rn/^{226}Ra$ and $^{234}Th/^{238}U$ disequilib. rel. to transport processes in nearshore sediments 7−94200
S California, evidence for cool last interglacial ocean from stable isotope comps. of fossil molluscs 7−133704
California area of Pacific, current obs. near Point conception in spring 7−107424
N California coast, barotropic semidiurnal tidal currents during CODE 7−94264
California coast, upwelling and boundary layer winds 7−94378
California coastal area, ocean colour spatial heterogeneity at mesoscale 7−127279
California coastal area, spring transition of oceanic conditions 7−94256
N California coastal area during CODE expt., current field obs. 7−94259
California coastal area near Point Arena, upwelling area oceanic observations 7−94260
California coastal upwelling area, thermal struct. during relaxation of upwelling 7−94261
California continental margin, AD 1978 to 1980 current observations 7−145480
California continental shelf, subtidal pressure field during CODE 7−94258
California continental shelf and upper slope, AD 1981 and 1982 oceanic conditions 7−94257
N California continental slope and basin, subtidal currents 7−94263
N California continental slope and deep-sea basin, tidal current obs. 7−94265
S California shelf, subinertial currents, forcing mechanisms 7−72054
N California upwelling region during CODE, marine atmospheric boundary layer 7−94377
Campeche Bank, Gulf of Mexico, mixing, circulation and nitrate composition 7−72103
Canary upwelling region of N Atlantic thermohaline synoptic variability 7−72094

oceanography continued
North Carolina, USA, saltmarsh loss due to sea level rise and dredging operations 7−87601
N Catalan Sea, deep water formation, water column model 7−79420
Catalan Sea, water mass structure near Catalan coast 7−79419
Celtic Sea, sediment transport by internal tides 7−114691
Changjiang River, estuary, China, major dissolved constituents origin and migration *(Chinese)* 7−79474
channel currents and sea levels, influence of channel geometry changes 7−94235
Chesapeake Bay, 1984-5 water quality, spatio-temp. patterns 7−78695
Chesapeake Bay, USA, PAH monitoring using 2 bivalve mollusc species 7−79459
Chesapeake Bight, nearshore surface currents during summer 7−94241
Chesterfield Plateau, SW Pacific, geophysical study *(French)* 7−71994
China coastline, description and classification 7−94195
East China Sea, biological productivity in coastal upwelling area 7−79460
East China Sea, bottom friction study using numerical model and satellite altimeter data 7−101344
chlorophyll remote determ., radiance-ratio algorithm wavelengths 7−114566
circulation computation using palaeo-geographic maps 7−133539
circulation in three-dimens., estimation by variational inverse method 7−133689
circulation models, transmission coefficients constraints, influence of bottom topography *(Russian)* 7−79438
circulation of ocean including sea ice effects, diagnostic ice-ocean model 7−145514
climate, atmospheric trace gas concentration effects, role of oceans *(German)* 7−133915
coastal dynamics and beach erosion 7−101275
Coastal Ocean Dynamics Experiment, research program 7−94442
coastal ocean physical processes, review 7−114796
coastal oceanography, suspended sediment stratification correction for combined wave and current flows 7−127261
coastal upwelling model, discontinuous surface stress effects 7−94278
coastal upwelling on sloping bottom, form. of plumes, jets and pinched-off cyclones 7−79442
coastally trapped waves, scattering due to continental shelf width changes 7−145510
colour characts. 7−127273
colour spatial and temporal var., Nimbus-7 meas. 7−107440
conference, New Orleans, USA (Jan. 1986) 7−108011
conference, Strasbourg, France (April 1987) 7−95088
continental shelf and slope., mean currents driven by topographic drag 7−94284
continental shelf and slope, sea-levels and along-shelf dynamics 7−145484
continental shelf and slope, topographic drag due to barotropic flow 7−94283
continental shelf waves, effects of bottom friction 7−145476
continental shelf waves, finite difference methods 7−145479
continental shelf wind-driven currents, stochastic model 7−87665
convectively driven turbulent mixing in the upper ocean 7−72057
Cook Strait, New Zealand, induced currents channelling 7−71958
Cordova Channel, British Columbia, acoustic scintillation structure of turbulent tidal flow 7−114754
corrugated boundaries, shallow-water waves, resonant reflection 7−139630
coupled atmosphere-ocean seasonal energy balance model, appl. to CO_2-induced climate warming simulations 7−114999
Cretaceous Atlantic ocean, N biogeochemistry and sedimentary isotope record 7−87532
Cretaceous epeirogeny and eustatic sea-level changes, for central and W USA 7−114686
Cretaceous-Tertiary boundary, effects of impacts 7−127455
current profiling techniques, receiver and analogue homodyning effects on incoherent Doppler vel. estimates 7−127567
currents at surface, determ. from surface temp. field 7−72191
currents induced by wind and waves in rotating sea, theory 7−145511
currents laser-Doppler anemometry, role of light scatt. by microparticles *(Russian)* 7−101520
Deep Bay, Hong Kong, tidal current mathematical modelling 7−139626
deep waters, vars. in form. mode and temp. over past 125 kyr 7−107431
Delaware, tidal and subtidal variability in inland bays 7−114784
diagenesis of nearshore marine sediments, REE elements in pore waters 7−87595
dimethylsulphide, regional and seasonal vars. in flux to atmosphere 7−94302
Discovery Gap, bathymetry, flow charcts. and pot. temp. 7−145500
dispersion of marked fluid elements in a turbulent Ekman layer 7−94279
Dixon Entrance, BC, Canada, permanent eddies 7−145481
double-diffusive interleaving, effect of vertical temp. and salinity gradients 7−133695
drag coeff. obs. over open ocean, dissipation technique 7−127225
dyed sand tracers dispersion in oscillatory flow field 7−87605
dynamic height real-time computation using digital XBT system 7−127577
dynamics, feedback between feedback between ice flow, barotropic flow and baroclinic flow in presence of bottom topography 7−114736
El Nino events, relation to variability in United States cloudiness 7−145627
El Nino-Southern Oscillation, detect. of signal in continental temperature and precip. records 7−107503
El Nino/Southern Oscillation, quadratic temp. iteration 7−87660
elliptical vortices of the shallow-water eqns., exact analytical solns. 7−101324
energy conversion during geostrophic adjustment 7−94290
equations of state for seawater, Knudsen-Ekman compared to International 1980 7−87694
equatorial currents, numerical modelling 7−72077
equatorial currents numerical modeling, with free upper surface 7−72086
equatorial dynamics, review 7−114797
equatorial long-wave structs. seen in satellite SST data for Pacific 7−72049
erodible beds with suspended sediment, instability *(Japanese)* 7−107384
ERS-1 programme, overview and status 7−101490
estuarine plume onset, 3D primitive eqn. model 7−94282
estuary-shelf waters interaction, two-layer density stratified flow modelling 7−133731
NW Europe continental shelf, extreme storm surge currents 7−145475
NW European shelf seas, subtidal response, 2D model 7−87656

oceanography continued
evanescent pressure gradient response of upper ocean to subinertial wind stress forcing 7−145516
finite-depth water, mean angular momentum of gravity waves 7−136894
flooding of coastal areas, 3D eqns. of motion in curvilinear coords. *(Russian)* 7−127227
Florida and Bahamas coastal areas, sea temp. response to cold-air outbreaks 7−145478
Florida Current, meas. using moored currents meters with fairings 7−127539
Florida Current at 27°N, struct. and var. (April 1982 to July 1984) 7−145495
Florida Current meanders (June to July 1984) 7−145496
Florida Current tidal transport rel. to tidal heights and cable voltages 7−94289
Florida Keys, sedimentary characts. of lower-energy beaches of shell sand 7−87597
fluorescence spectra, laser-induced, of natural waters, environmental effects 7−79688
Fortune Bay, Newfoundland, density current flow 7−145519
Fram Strait, atmospheric boundary layer dynamics in marginal ice zone 7−133840
Fram Strait, marginal ice zone melting and sub-ice mesoscale features 7−107425
Fram Strait, mesoscale eddies during Marginal Ice Zone Expts. 7−127248
Fram Strait, mesoscale ocean dynamics below sea ice 7−127253
Fram Strait, mesoscale oceanographic processes beneath ice 7−133770
Fram Strait, phytoplankton biomass and productivity in marginal ice zone 7−127283
Fram Strait, summer 1984 large-scale phenomena during MIZEX 7−127245
Fram Strait, underwater acoustic tomography in marginal ice zone area 7−127256
Fram Strait marginal ice zone, ice and ocean characts. 7−133769
Fram Strait marginal ice zone, ice-edge eddies 7−133768
Fram Strait marginal ice zone, ocean dynamics and acoustic fluctuations 7−133771
French Guiana continental margin, Late Quaternary sedimentation characts. *(French)* 7−87607
gas exchange with air, role of wind and waves 7−87674
Gass Strait water cascade (summer 1981-2) 7−139620
general circulation by primitive eqn. model, parameter sensitivity study 7−145513
Georges Bank, seasonal cycle in current meas. 7−114781
Georges Bank, tidally induced residual current 7−127266
Georgia Strait, BC, Canada, internal wave observations 7−101335
geostrophic boundary current separation from coast, potential vorticity conservation model 7−114751
global C pools and fluxes 7−139749
global circulation rel. to marine biota production, effects of nutrients transformation 7−139638
global water masses, temp.-salinity meas. 7−87677
Grand Bahama Island, vortex shedding and flow patterns 7−130716
Great Barrier Reef Marine Park, environmental monitoring program 7−79457
E Greenland Polar Front, summer 1984 current regimes 7−127247
E Greenland Sea, acoustic propagation through sea ice edge eddy 7−127255
Greenland Sea, dynamics and thermodynamics of ice-upper ocean system in marginal ice zone 7−133715
E Greenland Sea, effect of observed ice conditions on drag coeff. in summer marginal ice zone 7−133710
Greenland Sea, fine structure, internal waves and intrusions in marginal ice zone 7−133706
NE Greenland Sea, high-freq. internal waves obs. in marginal ice zone 7−133707
Greenland Sea, mesoscale var. in surface stress, heat fluxes and drag coeffs. in marginal ice zone 7−133708
Greenland Sea, wind stress meas. over rough ice during 1984 Marginal Ice Zone Experiment 7−133709
Greenland Sea marginal ice zone, boundary layer, upper ocean and ice obs. 7−133713
E Greenland Shelf, circulation and water masses 7−127246
Gulf of Alaska, coastal winds and atmos. forcing of sea 7−107474
Gulf of Alaska, current meas. along shelf break 7−72072
NW Gulf of Alaska, numerical model of M_2 and K_1 tides 7−145504
Gulf of California, seasonal and interannual thermohaline variability 7−145477
Gulf of California, upwelling intensity and varved sediments for last 3000 years 7−139632
Gulf of Guinea, appl. of sea surface temps. to prediction of Sahelian rainfall 7−79559
Gulf of Maine, influence of warm core rings on slope water influx 7−127257
E Gulf of Mexico, atm. heat fluxes surface distrib., effects of surface wind and Loop Current position 7−127275
Gulf of Mexico, circulation patterns from detached buoy movements 7−145482
E Gulf of Mexico, surface temp. effect on air parcels 7−127275
Gulf of Riga, Baltic Sea, sedimentation rate 7−72195
Gulf of Trieste, sea-level rel. to atmos. press., the inverted barometer effect 7−127220
Gulf Stream, heat exchange between atmosphere and ocean *(Russian)* 7−94250
Gulf Stream, seasonal variability from satellite altimetry obs. 7−72050
Gulf Stream, surface-subsurface frontal separation modulation by path curvature 7−145497
Gulf Stream, thermohaline struct. for AD 1983-4 winter *(Russian)* 7−94251
Gulf Stream, vel. field horizontal and vertical struct. at 68°W 7−72059
Gulf Stream and frontal structure 7−114771
Gulf Stream and weather blocking, isolated eddy or modon models, book contrib. 7−101678
Gulf Stream branching, studied using variational inverse method 7−133691
Gulf Stream off Georgia coast, USA, bottom temperatures 7−127232
Gulf Stream surface currents influenced by hurricanes, 3D model 7−127277
Gulf Stream warm core ring, multiplatform sampling of biological and physical props. 7−115018

oceanography continued
Gullmaren fjord, under ice cover response to wind and Baltic Sea outflow 7−120030
Harvard open ocean model, calibration and appl. to dynamical process, forecasting and data assimilation 7−133693
Hawaii, age of tilted reefs rel. to postglacial rises in sea level 7−87603
heat and freshwater fluxes at 30°S 7−94287
heat flux to atm. through sea ice *(Japanese)* 7−107427
heat transport study using dynamic stochastic model 7−72083
Hebrides of NW Scotland, Jurassic tectonic subsidence history and sea-level changes 7−139569
HEXOS-Humidity Exchange Over the Sea program 7−139763
Late Holocene sea-level record, determ. from sediment core in Puget Lowland, Washington 7−87698
Hudson Bay, bottom friction study using numerical model and satellite altimeter data 7−101344
Hudson Bay, ocean bottom friction coeff. determ. from Seasat-alt data 7−72043
hurricanes, atm.-ocean temp. difference maintenance 7−127383
Hydro '86 symposium, Southampton, England/December 1986 7−128192
hydrophysical fields sampling, evaluation of Rapid-Sampling Vertical Profiler 7−127565
ice edge bands formation, in stability theory of ice-air interaction 7−133711
ice-seawater turbulent boundary layer with melting or freezing 7−72060
ideal thermocline equations, eastern boundary conditions and weak solns. 7−72064
images, digital filtering from NOAA series satellites 7−145670
India east coast, storm surge model for Kalpakkam area 7−114722
Indian Arm, Canada, internal tide and reson. 7−120031
E Indian coast, suspended-load and bed-load sediment transport on Puri and Madras beaches 7−139587
W Indian Ocean, ^{210}Pb distrib., disequilibrium and partitioning between dissolved and particulate phases 7−145524
W Indian Ocean, ^{226}Ra profiles and oceanographic characts. 7−145523
Indian Ocean, climatological seasonal cycle of equatorial upper ocean 7−145509
N Indian Ocean, sea surface temperature variability in contrasting monsoon seasons 7−127278
E Indian Ocean, seasonal anomalies, wind anomalies, structure and evolution 7−101432
Indian Ocean, seasonal currents, schematic patterns 7−133760
W Indian Ocean, temp. struct. var. 7−133699
Indian Ocean, variability patterns from XBT profile data 7−87702
Indus Cone, deep-sea fan sediments, morphology and struct. *(French)* 7−120006
inertial motion of a homogeneous ocean 7−133701
inner shelf fronts, numerical study of wind-driven motion 7−107420
internal gravity waves under Arctic pack ice 7−72052
internal inertial gravity waves, study of wave action and stability *(Chinese)* 7−133896
internal wave currents, estimation from SAR and IR scatterometer imagery 7−107434
internal waves, parameters estimation from backscattered radio signals *(Russian)* 7−145489
internal waves in stratified ocean, generation mechanism involving seafloor topography *(Russian)* 7−94249
internal waves influenced by vertical current shear 7−72087
internal waves observed by microwave scatterometry during SCATTMOD expt. 7−101335
internal waves over topography, forced by tide, numerical model 7−114716
intrathermocline vortex dynamics, formation mechanism 7−120036
Irish Sea, chlorophyll conc., remote sensing obs. 7−94470
Irish Sea, inertial oscillations and internal mixing 7−72042
island wakes and headland eddies 7−72053
isolated eddy propagation, shallow-water model 7−145486
isolated intrathermocline eddy dynamics, theory 7−72084
Italian seas, tidal characts. *(Italian)* 7−101314
Japan Sea, propag. of tsunami accompanying Nihonkai-chubu earthquake (1983 May 26) *(Japanese)* 7−107364
Juan de Fuca Ridge, cataclysmic hydrothermal venting 7−139588
Juan de Fuca Ridge, Pacific Ocean, vent fields hydrothermal plumes characts. 7−145485
N Kerala coast, India, beach erosion and accretion due to longshore currents 7−87599
Kiel Bay, Germany, energy balance at sea surface 7−120037
Knight Inlet, B.C., Canada, internal waves forced by tide 7−114716
Koombana Bay, SW Australia, wind-induced flushing affected by deep channel 7−107423
Koombana Bay, Western Australia, characts. of surface buoyant jet 7−114759
Kuril region, extreme weather and tidal fluctuations of sea level 7−107429
Kuroshio Current, role of current meander capture by coastal geometry 7−94296
Kuroshio Extension, N Pacific Ocean, meas. near Emperor Seamounts 7−114738
Kuroshio large meander dynamics, two-layer model 7−114768
Kuroshio-Japan area of NW Pacific, low-salinity water masses 7−145512
W Labrador Sea, buoyancy flux-driven cyclonic gyre 7−114772
Lagrangian analysis of turbulent diffusion 7−139635
Langmuir circulation due to wind, similarity theory for parameters *(Russian)* 7−94248
large thermal anomalies evolution and shock waves form. 7−133732
Late Palaeozoic ocean sediment hiatuses, role of circulation 7−139584
NW Laurentide Ice Sheet, reinterpretation of glacial and marine limits 7−114810
Leeuwin Current and Pacific-Indian Ocean throughflow dynamics 7−94288
E Levantine basin (Mediterranean Sea), small synoptic/mesoscale eddies and energetic variability 7−107430
LF shelf water flow, influence of sloping mean density surfaces, wind forcing effects 7−133734
light flux in deep-sea, instrumentation to measure light background conditions 7−134144
light propagation, at slant angle through absorbing anisotropically scatt. media *(Russian)* 7−122824
Ligurian Sea, deep water formation effect on circulation 7−79418
Ligurian Sea, mesoscale structure from DYOME expt. 7−79415

oceanography continued
Ligurian Sea, thermohaline and dynamic structure, MEDALPEX data 7−79416
liquid transport by traveling solitary waves 7−114725
long internal wave transformation over underwater obstacle, analytical soln. for two-layer fluid *(Russian)* 7−145487
long-wave field effects on resonant Bragg waves, implications for SAR imagery of ocean bottom topography 7−107580
Longkou Harbour, Chinese coast of Yellow Sea, seiche characts. 7−145518
M_2 tide, Poincare waves obliquely incident to continental shelf 7−72041
Mallorca, Pleistocene stratigraphy, sea levels, etc. 7−133686
Malvinas-Brazil confluence, local dynamics time-space var. 7−87672
Marginal Ice Zone Experiments (1983), bottom ablation and heat transfer coeffs. 7−133714
marine geographic information systems 7−78699
marine pollution, methodology for establishing water quality criteria 7−86846
marine pollution detection, tests of recalibration period of drifting instrument 7−87973
mean currents driven by topographic drag over continental shelf and slope. 7−94284
mean ocean temperature-sea ice system, periodic forcing rel. to long-term climatic vars. 7−79582
MEDALPEX sea level data set 7−79414
W Mediterranean, circulation and temp. for last 140000 years, foraminifera isotope and species records *(French)* 7−139623
Mediterranean, current structure and variability in Strait of Sicily 7−79422
NW Mediterranean, deep water formation, water column model of N Catalan Sea 7−79420
W Mediterranean, deep water formation 7−79417
NW Mediterranean, Ligurian Sea, mesoscale structure from DYOME expt. 7−79415
W Mediterranean, MEDALPEX sea level data set 7−79414
W Mediterranean, MODEM contribution to MEDALPEX 7−79605
W Mediterranean, seiche of long period, numerical model 7−94236
NW Mediterranean, water mass structure near Catalan coast 7−79419
W Mediterranean, wind forcing effects on dynamics 7−79421
Mediterranean coast of Spain, coastal geomorphological feature mapping 7−87651
E Mediterranean deep water formation and winter convection in Adriatic Sea 7−79423
Mediterranean outflow, hydrographic evidence for contrib. from Western Mediterranean Deep Water 7−94271
Mediterranean salt lens trajectories, reconstruction 7−114774
W Mediterranean Sea, circulation of Levantine Intermediate Water in Algerian Basin 7−127262
Mediterranean Sea, deep water formation prior to 8000 years BP 7−79429
Mediterranean Sea, desiccation 7−120024
Mediterranean Sea, third generation wave model 7−79426
W Mediterranean Sea, trace metal input from atmos. 7−139701
Mediterranean waterfront, temp. and salinity fine structure SE of Azores 7−114764
mesoscale eddy determ. by acoustic tomography method in marginal ice zone 7−127602
mesoscale vortex tracking using centre of mass estimation 7−133980
Meteorological Office Historical Sea Surface Temperature Data Set, quality control and appls. 7−133756
Miami-Atlantic City sea level slope, effects of runoff and coastal wind stress 7−127263
microwave backscatter from surface, two-scale model 7−101333
microwave emissivity of surface, depend. on wind speed and roughness 7−79431
microwave scattering and emission from sea surface, boundary perturbation theory 7−101334
midocean front study with Doppler shear profiler and thermistor chain 7−127235
midocean ridge crest processes, review 7−139539
midocean ridge effects on general circulation, numerical model 7−114777
Miocene sea-level falls, implications of geological history of Midway Atoll 7−139601
mixing efficiency is stably stratified grown turbulence, meas. in uniform gradient shear flows 7−114762
mixing in stratified fluids, conf., Margaret River, WA, Australia (August 1985) 7−108016
Molloy Deep cyclonic eddy in deep sea of Fram Strait 7−127249
motion of linearly stratified rotating fluids past capes 7−136959
Mozambique Ridge Current, large cyclonic eddy, AD 1982 observations 7−79428
mushroom-like currents under rot. and stratified conditions *(Russian)* 7−75646
NASA Ocean Data System, satellite data management 7−94445
near-surface shear measurement, relation to wind speed 7−94269
nearshore tidal and residual circulation, fine struct., HF radar obs. 7−127267
nepheloid layers, radiant energy trapping and absorpt. 7−87673
New Brunswick area, sea level changes and postglacial stratigraphy 7−94239
New Caledonia, SW Pacific, sedimentology of coral reef lagoon 7−87600
New York Bight, 3D model of baroclinic circulation 7−87655
New York Bight, water quality management and historical database of chem. and biological characts. 7−87712
New York City effluent treatment and ocean coliform bacteria levels 7−78696
Newfoundland energy active zone polygon, 4D analysis 7−72079
nondivergent planetary oscillations in midlatitude ocean basins with continental shelves 7−72066
nonlinear finite difference models, soln. by optimisation methods 7−72062
nonlinear Rossby waves in rotating spheroidal fluid 7−133703
North Sea, discrimination between crude oil spills and monomolecular sea slicks by airborne remote sensors 7−114803
North Sea, extreme storm surge currents 7−145475
North Sea, Kelvin wave refl. model at oscillating boundary 7−94240
North Sea, oil slick detect. with side-looking airborne radar 7−114805
North Sea, oil spill detection and analysis using radar and microwave radiometry 7−114806
North Sea, results of Dutch monitoring programme, on TiO_2 acid waste discharges 7−139152

oceanography continued
North Sea, Southern Bight, subgrid tidally induced residual circulations 7−87657
North Sea and adjacent waters, pollution dispersion model suitable for radioactivity 7−120038
Northumberland Strait, Gulf of St. Lawrence, Holocene sea level, palaeocean and glacial ice configuration 7−114811
Norwegian Sea overflow water in E North Atlantic, circulation 7−87678
numerical modelling on midlatitude mesoscale and gyre-scale, review 7−114799
ocean-atmosphere coupling and short term fluctuations of Earth rotation 7−87684
oil slick movement at sea, calculation by nomogram method 7−94305
oil slicks, diagnostic technique using laser-induced fluoresc. method 7−114804
oil spill at sea, tar ball transport by internal waves 7−133779
oil spill on Bombay beach, characterisation and source identification by gas chromatography and IR spectroscopy 7−139147
oil spills on outer continental shelf, stoichiometric modeling of oil movements 7−87713
Okhotsk Sea, storm surge estimation by spectral regression 7−87691
Oligocene bathymetric map for oceans 7−72008
open boundary conditions use for ocean box model numerical soln. *(French)* 7−87680
optical absorption coeff., empirical relations 7−72038
optical brightness of sea, mesoscale variability 7−72098
optical properties meas. by fibre optics equipment 7−79700
optical zonation of World Ocean 7−87692
Ota river, Japan, turbulent boundary layer of tidal estuary *(Japanese)* 7−139618
outflow bifurcation 7−114766
E Pacifc Ocean, N tropical region, O_2 regime 7−127284
tropical Pacific, 20°C isotherm topography, obs. and model 7−87683
NE Pacific, deep-sea currents of N California 7−72051
central tropical Pacific, dynamic heights and zonal geostrophic transports 7−114770
NW Pacific, frontal zone thermohaline struct. near 160° E 7−72090
tropical Pacific, general circulation model, initial conditions 7−114773
Pacific, Santa Monica-San Pedro Basin off Los Angeles, particle flux study 7−87658
E Pacific, sea level intraseasonal oscillations 7−114778
NE Pacific, seasonal cycles of ocean variables and wind 7−94254
W Pacific, seasonal wind anomalies, structure and evolution 7−101432
NE Pacific, spring transition of coastal ocean off northern USA 7−94255
NE Pacific, steric height trends at Ocean Station PAPA 7−133748
Pacific, tsunami hazard delineation 7−133602
Pacific, tsunami travel time charts, accuracy 7−133601
equatorial Pacific, upper ocean current meter obs. comparison 7−114727
N Pacific coast, phytoplankton pigment temporal and spatial distrib. 7−94301
Pacific coast of Canada, Tsunami Warning System 7−133603
Pacific coast of Mexico, tsunami flooding extension 7−133749
Pacific continental slope off Monterey Bay, turbulence measurements from a towed body 7−127560
Pacific during last interglacial period, ocean thermal struct., climate and vegetation 7−72154
Pacific Ocean, California, coastal region, mixed layer vel. struct. 7−133729
NE Pacific Ocean, diffuse attenuation coeff. spectrum vertical struct. 7−133697
E Pacific Ocean, hydrographic variability west of Galapagos Islands during 1982-3 El Nino 7−87697
E Equatorial Pacific Ocean, M_2 tidal currents meas. 7−114737
NE Pacific Ocean, mesoscale variability off Central California coast 7−87696
Pacific Ocean, North America coastal region, shelf currents and coastal sea level, atm. forcing 7−87664
Pacific Ocean, NW tropical region, volume budget var. 7−133730
SE Pacific Ocean, O_2 distrib. finestructure in tropical zone 7−133778
equatorial Pacific Ocean, obs. of annual and El Nino thermal and flow vars. (1980 to 1985) 7−127258
E Pacific Ocean, primary prod., new prod. and vertical flux 7−72105
equatorial Pacific Ocean, sea level trends (1974-75 to 1981) 7−114742
Pacific Ocean, subArctic region, surface waters biological new prod. and seasonal O_2 cycles 7−127281
W Pacific Ocean, tropical, heat content use for El Nino-Southern Oscillation events hindcasting-forecasting 7−127269
Pacific Ocean, tropical region, atm. circulation characts. with and without anomalous sea surface temp. 7−79440
Pacific Ocean, tropical region, convection, effects of low-level wind and moisture 7−127276
Pacific Ocean, tropical region, T as tracer of water motion 7−145494
S Pacific Ocean, wind-driven circulation 7−145499
Pacific Ocean along North America west coast, drifter motion and upwelling filaments 7−127237
Pacific Ocean off California coast, continental shelf storm-dominated bottom boundary layer 7−87667
NE Pacific off USA coast, suspended particulate matter study 7−94262
East Pacific Rise, hydrothermal vent water chemistry 7−114692
Pacific upwelling rate in central equatorial zone 7−133766
Pacific upwelling regions, marine aerosols 7−120077
Pacific-Indian Ocean throughflow dynamics 7−94288
palaeo-oceanography, pulsation tectonics as control of long-term stratigraphic cycles 7−133658
palaeo-oceanography of Palaeozoic midcontinental seaways, conference, Kent, Ohio (April 1986) 7−128178
Early Palaeozoic oceans, Nd, Sr isotopes of marine fossils and tectonic and circulation inferences 7−114802
Palaeozoic reef deposits in Arctic Canada, geology and tectonic movement 7−101239
Panama Basin, response of particulate matter distribs., chemistry and flux to environmental forcing 7−87695
particle and solution phase depth distributions of transuranics and ^{55}Fe in the North Pacific 7−78691
physical oceanography, 1982-6 report review 7−114793
planetary geostrophic equations, mean flow instabilities 7−72071
planetary waves in presence of bottom topography, theory 7−127221
Pleistocene sea surface temp. distrib., from ice age climate model 7−120119
Pleistocene times, O isotope record of ice volume and sea levels 7−133792

oceanography continued
plume flow measurements from hydrothermal vent field, total heat flow and max. plume height 7−87602
point eddies on beta-plane and solitary Rossby waves 7−72091
polar oceans, review 7−114798
polar water outflow through Canadian Arctic Archipelago, implications of oceanographic conditions in Baffin Bay 7−79452
pollution information network services in USA 7−79613
POLYMODE area of N Atlantic, transport and mixing due to synoptic eddies 7−72095
Precambrian-Cambrian boundary, C isotope age curve and biotic and ocean changes 7−107374
pycnocline, vertical temperature and density gradients 7−133761
pycnocline deformation during topographic cyclogenesis in two-layer fluid, exptl. investigation *(Russian)* 7−127230
quasi-geostrophic turbulence forced by stochastic wind fluctuations 7−114783
radar backscatter from sea surface, meas. at extremely low grazing angle by C-band Doppler radar 7−107438
radiative transfer eqns. in vertically inhomogeneous scattering media, Green's functions determ. *(Russian)* 7−145663
radiocommunication below the sea surface, influence of seabed on subLF radiowaves 7−133570
Red Sea rift zone sediments, radiocarbon ages and sedimentation history 7−87608
reflective beaches, adjustment to waves 7−101271
response of upper ocean to summertime smoke injection into atm. during nuclear war 7−86853
Rijeka Bay, Yugoslavia, absolute geostrophic vels. determ. 7−79454
River Periyar, India, lower reaches estuarine characts. 7−72108
Rossby waves, model for strongly nonlinear baroclinic solitary waves 7−87687
Rupert Inlet, British Columbia, continuous and surge-type flows rel. to submarine channel form. 7−94202
Rupert Inlet, British Columbia, surge-type turbidity currents and submarine channel form 7−94201
Saguenay Fjord, Quebec, 20th-century record of climatologically-modulated sediment accumulation rates 7−127196
salt fingering and turbulence induced microstructure 7−87675
San Francisco Bay, tidal current observations using new radar method 7−134015
San Francisco Bay, USA, benzthiazole pollution of sediments, due to car tyres and street runoff 7−107441
Santa Monica Basin, E Pacific, marine sediment processes and chemistry 7−127195
Santa Monica Basin, Th isotopes in dissolved and particulate form., profiles 7−145522
Santa Monica-San Pedro Basin off Los Angeles, particle flux study 7−87658
NW Sargasso Sea, contrib. of advection and diapycnal mixing to seasonal cycle of upper ocean struct. 7−114753
Sargasso Sea, front internal-inertial waves 7−72055
satellite altimeter data assimilation into ocean models 7−72065
scattered light off surface, intensity *(Russian)* 7−101317
Scotland, late pleistocene temperatures, derived from marine mollusc evidence 7−87892
Scotland west coast waters, spread of trace metals from Irish Sea 7−145520
sea ice, role of shortwave radiation in summer decay of ice cover 7−133716
sea level change, effects on prehistoric man 7−133705
sea level changes detection by study of Earth rotation variations 7−139625
sea level fluctuations, Triassic to Tertiary, sequence stratigraphy and chronology 7−133931
sea level intraseasonal oscillations along W coast of Americas 7−114778
sea level measurement program, on global scale and for USA E coast 7−87699
sea surface, microwave radiometry, parameter retrieval using two-step algorithm 7−115111
sea surface studies, book 7−128203
sea surface temp. at Puerto Chicama, Peru, time series rel. to strange attractor for Southern Oscillation 7−87886
sea surface temperature, hemispheric and global response to increasing greenhouse gases 7−87887
sea surface temperature changes, response of atmospheric boundary layer height 7−127389
sea surface temperature meas., comparison of satellite-derived temps. with in situ skin meas. 7−94270
sea surface temperatures, comparison of aircraft meas. using remote and direct sensing techniques 7−127236
sea wave measurements using ship radar, directional wave spectrum determ. 7−107437
sea with a strait, model of upper layer thermohaline struct. and dynamics 7−87690
sea-air interface, particulate accumulation by slicks *(French)* 7−86844
sea-level long-term change, inversion for seafloor generation rate determ. 7−145439
sea-level variations due to glacial rebound, new appraisal 7−107419
seafloor composition and depth, ocean optics of remote sensing 7−94247
seasons in surface water properties, method for determ. of seasonal boundaries 7−72088
seawater convection model for dolomitisation of atolls, evidence from Niue island, South Pacific 7−101273
seawater intake wave and shore current effects 7−114721
secondary flows over continental shelf edges, numerical study 7−94242
sediment bedform horizontal evolution due to flow in shallow water 7−107382
Seto Inland Sea, Japan, thermohaline and tidal fronts 7−72040
Seychelles and Amirante banks, Indian Ocean, seafloor geology and sediments 7−72009
shallow water waves, effect of wave breaking on wave spectrum 7−114749
short gravity-capillary waves, intrinsic freq. spectra obtained from temporal meas. of wave height 7−114750
sidewall effects in a double diffusive system 7−123593
sill floor with bottom friction, hydraulic control 7−72070
Skagerrak, large-scale circulation observations 7−101325
small-scale physics, review 7−114794
solitons in a channel emerging from three-dimensional initial wave, theory 7−79444

oceanography continued
solitons in continuously stratified equatorial ocean 7−145515
Somali Current, obs. with buoy-mounted acoustic Doppler current profiler 7−120154
sound field in shallow water, calc. using approx. soln. of 1D wave eqn. *(Chinese)* 7−136643
South Atlantic Bight, ^{228}Ra distrib. and circulation characts. 7−120039
South China Sea, light field observations by equipment in deep-sea 7−134144
South China Sea, surface temp. correl. with Changjiang rainfall and Pacific subtropical high behaviour *(Chinese)* 7−72101
South China Sea, tides and tidal currents distrib. *(Chinese)* 7−79449
Southern Ocean, effect of sea ice changes on atmospheric winter circulation 7−114952
Southern Ocean, large-scale circulation in Atlantic sector 7−72093
Southern Ocean, obs. of recurring polynyas over Cosmonaut Sea and Maud Rise 7−94266
Southern Ocean, water masses and currents at Greenwich Meridian 7−127238
Southern Oscillation, possible existence of strange attractor 7−87886
Southern Oscillation, study of S Hemisphere atmos. press. and sea temperature fields 7−114955
Spencer Gulf, S Australia, gravity currents of dense salty water 7−107432
Spencer Gulf, South Australia, episodic stratification and gravity currents in modulated turbulence environment 7−114761
stable salinity gradient heated from below, layered struct. form. 7−145492
stably stratified flows, length and scales and decay times of turbulence, comparison 7−72061
steady coastal circulation due to oceanic alongshore pressure gradients 7−145498
steady stratified oceanic circulation 7−145505
Stockholm archipelago, chemical fingerprinting of petroleum hydrocarbons in bottom-sediment, plankton and seston 7−139151
storm induced currents, calc. of 50-year extreme storm surge currents 7−145475
storm surge due to hurricane Gloria at N Carolina coastline 7−79447
storm surges due to hurricanes, numerical forecast model 7−87701
Strait of Bell Isle, flow fluctuations freq. depend. struct. and dynamics 7−127264
Strait of Georgia low-freq. current fluctuations 7−114779
Strait of Gibraltar, surface inflow seasonal var. 7−87679
Strait of Messina, long internal waves and columnar disturbances 7−127239
Strait of Sicily, current structure and variability 7−79422
Straits of Florida, CODAR operations 7−79608
stratified fluids, transition phenomena and turbulence devel., oceanic appl. 7−117641
stratified quasi-geostrophic ocean, steady free circulation 7−72058
subgrid tidally induced residual circulations 7−87657
subsea saline permafrost, thermal simulation 7−79363
subsurface currents tagging, design of dye-dispensing towed vehicle 7−94513
Suisun Bay, California, tidal circulation 7−72102
surf zone steady longshore currents 7−72069
surf zone turbulence, kinetic energy anal. 7−114748
surface backscatter, two-colour short-pulse laser altimeter meas. 7−87653
surface circulation south of 20°S, results from first GARP Global Experiment drifters 7−114747
surface currents observations at Nantucket Shoals, implications for radar imaging of sea bottom 7−107435
surface flow estimation from visible and IR data 7−127234
surface height mapping, method using SIR-B SAR method 7−101342
surface layers mixing, obs. of bubble clouds and temp. anomalies in upper ocean 7−114791
surface roughness and IR flux var. *(Russian)* 7−101318
surface roughness imaging and bathymetric characts. determ. 7−107586
surface ship wakes, anal. of synthetic aperture radar imagery 7−107436
surface temp. effect on dynamical long-range weather forecast skill 7−101423
surface temperature climatologies, annual cycle comparison 7−127265
surface topography and flow estimation from IR satellite imagery 7−127233
surfactant films, dynamics in inhomogeneous currents field 7−139639
Svalbard, shoreline displacement during L Weichselian and Holocene 7−133683
SE Sweden, Late Weichselian shoreline positions during deglaciation of Scandinavian ice sheet 7−145559
synoptic eddy formation conditions, by 3-layer quasigeostrophic model 7−87688
synoptic eddy theory using quasigeostrophic approximation 7−72085
synoptic processes theory, conservation of potential vorticity eqn. 7−133759
synoptic vortex model, singular geostrophic vortices on beta-plane 7−72092
Tahiti sea level, variability minimum 7−114775
Tasman Sea, elec. pot. differences and ocean current transport 7−133696
temperature and vel. time series, correction for current meter mooring motion 7−127587
temperature anomalies of sea surface, due to synoptic atmos. processes *(Russian)* 7−127229
temperature anomalies of sea surface, stochastic model and air temp. changes *(Russian)* 7−127228
temperature anomaly seasonal features of upper quasi-homogeneous layer 7−114787
temperature field analysis method, for monthly norm data on a one-degree grid 7−114790
temperature of sea surface, rel. to solar radiation intensity variations 7−139631
temperature spectra in stably stratified turbulence 7−94286
Texas estuaries, model of freshwater inflow requirements 7−79455
Thermaikos plateau, NW Aegean Sea, Holocene sediments and sedimentation, seismic study 7−127192
thermal convection at large Rayleigh number, convection lines on heated bottom plate 7−110959
thermal stratification, one-dimensional modelling 7−120026
thermal structure lateral variability in active layer due to synoptic eddy passage 7−87689
thermocline and currents of subtropical and subpolar gyres, model 7−145508

oceanography continued
thermocline diapycnal mixing, review 7−120032
thermohaline stratification conditions for World Ocean 7−127274
tidally induced residual current, effects of mean and tidal current interactions 7−127266
tide forecasting, estimate of number of harmonics required 7−127222
tide harmonic constants computation from hourly data, Fortran program 7−127223
tide-gauge records of sea level, appl. of eigenanalysis 7−139777
tides, mathematical analysis (book) 7−128205
tides on continental shelves with longshore topographic variations 7−114717
topographic drag due to barotropic flow over continental shelf and slope 7−94283
topographically rectified tidal flow, horizontal profile 7−117612
transilient turbulent algorithms to model mixing across finite distances 7−87770
Triassic palaeoocean in W Siberian lowland 7−87906
Trieste sea levels in Adriatic, long period oscillations 7−94238
tropical cyclone, atmosphere/ocean boundary layer interaction 7−87837
tropical cyclone influence on ocean thermal structure 7−114789
tropical ocean circulation experiments, wind forcing 7−127268
tsunami propagation in bay, coastal run-up soln. *(Russian)* 7−127112
turbidity current, self-preserving solns. 7−94193
turbidity currents, palaeoslope reconstruction using hydromechanical parameters of deposit 7−94194
turbulence, available potential energy of overturn as indicator of mixing in seasonal thermocline 7−114752
turbulence, search for peak at Equator 7−72073
turbulence and solar energy, effect on climate *(Italian)* 7−139743
turbulence measurement upstream of axisymmetric body, errors anal. 7−127564
turbulent boundary layer near rough sea bed, model of fluid motions 7−72039
turbulent front collapse in stratified fluid, nominally 2D evolution in narrow tank 7−114758
turbulent layer in shear-free flow, thermal stabilisation *(Russian)* 7−107433
turbulent momentum transfer in stratified oceanic boundary layer, time-depend. model 7−133712
turbulent motion theory *(Italian)* 7−139624
two-layer stratified flow, boundary-induced entrainment model 7−114757
underwater light, two-stream irradiance model for deep waters 7−114714
United States east coast continental shelf, suspended matter conc. during storms, optical characts. technique use 7−139581
upper ocean dynamics, review 7−114795
upper ocean internal wave field, influence of surface and mixed layer 7−114741
upwelling at ice edge, mechanism for deep water form. 7−114740
USA, storm surges on Atlantic and Gulf of Mexico coasts 7−87701
vector averaging current meter and Edgerton Germeshausen and Grier Inc. vector meas. current meter comparison 7−87932
ventilated thermocline, by eddy-resolving numerical model 7−145517
Victoria Land Basin, Antarctica, Mid-Cenozoic record of glaciation and sea level change 7−133782
viscosity influence on small-scale motions in stratified ocean 7−133763
visibility and image formation, influence of vertical inhomogeneity of hydrooptical characts. 7−72089
Wadge Bank, Indian Ocean, current meas. over tidal cycle during monsoons 7−72044
Washington continental shelf, sediment transport of volcanic ash from Columbia river 7−145440
wastewater dumping, off E coast of USA 7−79461
water depth determ. from surface wave refr. patterns, improved method 7−107581
water level and circulation forecasting, appl. of real-time data systems 7−94298
water mass composition anal., least squares multiple tracer technique 7−94488
water masses, lateral mixing in mag. field and porous medium 7−120033
water-mass conversion, role of thermobaricity and cabbeling 7−114760
wave-contaminated XCP vel. meas. during severe storms 7−79695
waves and tides meas. with double transmission line *(Spanish)* 7−94509
NW Weddell Sea, upper layers ^{3}He balance 7−94300
Weddell sea boundary in Atlantic sector of Antarctica 7−133758
Weddell-Scotia Sea, nutrients, phytoplankton biomass in ice edge zone 7−133727
West Spitsbergen Current, disposition and water mass transform. 7−114734
whale and walrus feeding marks in sediments of Bering Sea floor 7−79369
wind drag coeff. variability over sea in near-shore zone *(German)* 7−139730
wind wave spectrum, nonlinear energy transport *(Russian)* 7−127231
wind-driven circulation, 3D simulation algorithm 7−114719
wind-driven circulation in subtropical-subpolar basin, three-layer model, subcritical state 7−145502
wind-driven circulation in subtropical-subpolar basin, three-layer model, supercritical and hypercritical states 7−145503
World Ocean, phase differences, heat flows, and interlatitudinal exchange 7−133754
world ocean, rate of change of heat storage 7−133735
World Ocean Circulation Experiment−WOCE *(Afrikaans)* 7−139765
World Ocean-climate model 7−87685
Younger Dryas age, water circulation and climate characts. 7−127457
Al in surface waters of N Pacific, atmos. aerosol contribution 7−133774
Be isotopes in Pacific seawater, ^{10}Be and ^{9}Be vertical profiles 7−87703
CO_2 air-sea exchanges, effects of 1982-3 El Nino/Southern Oscillation event 7−127242
CO_2, atmospheric conc. increase and temperature rise, influence of ocean 7−87893
CO_2 in atmosphere and oceans, conference, Kandersteg, Switzerland (September 1985) 7−102013
Cd in corals, appl. as tracer of historical ocean upwelling and industrial fallout 7−133777
Cl-metal element ratios in ocean 7−87710
H_2 concentration in Atlantis-2 depression geothermal brines 7−87709
H_2O_2 variability in ocean surface water, contrib. of rainwater 7−94304
H_2S production due to OCS hydrolysis 7−87705
Np transfer from seawater for sediments and organisms 7−78692
OCS, ocean chemistry leading to H_2S 7−87705
oceanography continued
Pb pollution in corals, record of historical industrial fluxes 7−87704
Th in seawater and suspended particulate matter, scavenging and vertical flux 7−72104
OCR *see optical character recognition*
octet theory *see SU_3 theory*
ODENDOR *see optical double resonance*
ODMR *see microwave-optical double resonance*
oecology *see ecology*
OH^--centers *see OH^--centres*
OH^--centres
LiF, F_2^+-centres, stabilisation by OH^- *(Chinese)* 7−111551
OH-IR stars
10 μm dust feature, contrib. of interstellar extinction 7−107851
high-resolution 18 cm OH maser emission obs. 7−72439
I−K colour index, depend. on period of light var. rel. to origin of polarisation 7−127873
IR speckle interferometry imaging 7−107850
OH 231.8+4.2, shocked bipolar outflow and assoc. HH objects obs. 7−72468
S Per, interferometric obs. of H_2O and OH maser emission 7−72433
radio continuum emission search, discovery of two OH emitting planetary nebulae 7−101878
supergiant OH-IR sources, narrow polarised components obs. in OH 1612 MHz maser emission 7−88417
type-II OH-IR stars, visible and IR photometric and spectral obs. 7−120411
OH maser emission mapping 7−140090
OH masers far-IR excitation 7−88673
ohmic contacts
electronic cond. in insulating films, book contrib. 7−105743
high-low junctions, voltage meas. 7−112458
metal-semiconductor ohmic contacts, specific contact resist. determ., effects of non-zero metal resist. and metallisation *(Chinese)* 7−125125
surface-layer, specific resist. calc. computer model 7−85109
Ag-Pt/ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
Au-Cu/ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
Au-GaAs, improved morphology using CVD SiO_2 cap layer 7−85104
Au-Ge/Ag/Au ohmic contact on GaAs, elec. props. *(Korean)* 7−85108
AuGe-GaAs, ohmic contacts, Auger electron and X-ray spectroscopic anal. 7−77704
AuNiGe-GaAs, ohmic contact, interface microstruct., effect on uniformity and thermal stability 7−118282
Cu-Pt/ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
n-GaAs, Au-Ge-Ni ohmic contact metallisations 7−125126
GaAs, interfacial resist., flange correction formula 7−85105
GaAs, MBE grown, δ-doping, device appl. 7−77811
n-GaAs, ohmic contacts, design 7−99198
n-GaAs, ohmic contacts, selective form. 7−85103
n-GaAs, ohmic contacts using high-temperature rapid thermal annealing for self-aligned processing 7−92289
n-GaAs, process induced microdefects rel. to metallisation and degradation 7−112492
GaAs refractory-metal contacts research in microelectronics under RUI and IBM research grants 7−112491
GaAs tunnel junction, MOVPE growth for multigap cascade solar cells 7−144834
GaAs:Pd-AuIn, electroless deposition of InAu alloys for ohmic contacts 7−113456
GaAs:Sn, MBE grown, low resist. nonalloyed ohmic contacts 7−131783
GaAs/Au/Cr/Au/Ge ohmic contacts, alloying reactions, TEM, AES and elec. studies 7−70414
GaAs/Au-Ge-Ni contacts, melting temperatures, X-ray diffr. study 7−70101
GaAs/AuGe-Ni ohmic contact form. by scanned electron beam alloying 7−105708
n^+-GaAs/MGe, M=Au, Ag, Al, ohmic contacts, laser/furnace annealed, resistance, surface morphology study 7−143613
GaAs/Pd/Ge nonalloyed ohmic contacts by solid phase epitaxy 7−143637
GaAs-Au, encapsulated ohmic contacts, alloying process 7−98722
GaAs-In-Pd, ohmic contact formation by metallisation 7−125122
GaAs-metal contacts with TiN diffusion barrier, solid-phase reactions 7−105157
GaAs-metal structs., ohmic contact resist. 7−105709
Ge/n-GaAs ohmic contacts, solid phase epitaxy of ion implanted evaporated Ge films 7−76690
In/polypyrrole Schottky barrier formation 7−92296
In-$Cd_{0.2}Hg_{0.8}Te$, deterioration of contacts 7−105706
$In_{1-x}Ga_xAs$-n-GaAs, influence of InAs-GaAs miscibility gap 7−143025
$In_{1-x}Ga_xAs_yP_{1-y}$ superlattices grown by LPE, electroabsorpt. characts. 7−138692
InP, ohmic contact form. by Nd:YAG laser alloying *(Chinese)* 7−77091
n-InP, ohmic contact form., optimal annealing technique 7−77092
InP:Si-AuGe/Ni/Au rapid thermal alloyed ohmic contact, elec., structural and metallurgical props. 7−138006
InP/AuZn system, ion implanted, contamination layer and ohmic contacts 7−84539
Ni_2P sputtered film as ohmic contact and diffusion barrier 7−105705
PdGe-GaAs, ohmic contacts formed by solid phase epitaxy 7−85102
Pt-ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
Ti_xW_{1-x}/Si contacts, barrier height and contact resistance 7−118585
W photochemical deposition on InP, (Ga,In)As and GaAs for ohmic contacts 7−92883
ZnTe-Ohmic contact systems, contact resist., high temp. behaviour 7−92292
ohmmeters
see also electric resistance measurement
No entries
oil technology
AGIS expert system for automated geophysical interpretation of seismic images 7−115110
petrophysics knowledge engineering research 7−87979
subsea positioning and control in hydrocarbons exploration, use of transponder network 7−75199
US meas. techniques in oil well logging 7−127620
water-oil dispersion, particle size distrib. meas. using image processing 7−126489

oiling (lubrication) *see lubrication*

oils, insulating *see insulating oils*

olfaction *see chemioception*

omega mesons
bag model, topological chiral solitons, ω meson role 7−116136
Skyrme model, ρ meson model, alternative approach using σ-stabilised solitons 7−73528
$\omega \rightarrow 3\pi$, QCD bosonization, meson effective action, phenomenology, parameters, global colour symmetry model 7−128847
ω total width meas. in $e^+e^- \rightarrow \omega \rightarrow \pi^+\pi^-\pi^0$ 7−89512
$\Omega^- \rightarrow {}^0K^-$, relative decay rate calcs, w.r.t. $\pi^+\Omega^- \rightarrow \Lambda^0K^-\pi^-$ band state decay *(Chinese)* 7−102785
π-ρ-ω-A_1 system, baryons as solitons, hedgehog mass, baryon phenomenology 7−73529
$\psi \rightarrow \gamma\omega\omega$, pseudoscalar $\omega\omega$ prod. at threshold, bump in mass distrib. 7−116159
$\psi \rightarrow \omega\pi^+\pi^-$, theoretical approach to enhancement at low $\pi\pi$ masses 7−95899

omegatrons *see cyclotrons*

on-off control
solar heating with distributed storage, microprocessor-based control 7−133118

one-dimensional conductivity
see also synthetic metals
1D quasi-periodic lattices, electronic states, tight binding Fibonacci model calcs. 7−76735
AC conductivity, weakly pinned ID CDW systems 7−137911
alkylthio-1,2-dithiolium-TCNQ charge transfer complexes, elec., spectral and struct. props. 7−83942
aluminium polyfluorophthalocyanine, conducting polymer, chem. doping with $IF_5(MoF_6)(WF_6)$ *(French)* 7−112310
Anderson model, conductivity of a random electron chain renormalization group approach 7−70269
atom attached to mol. chain, conversion electrons soliton capture 7−92078
Bechgaard salts, mag. field induced SDW, band energy transverse second harmonics 7−112309
Bechgaard salts, oscillatory magnetoresist., electron scatt. between open-orbit states 7−76896
BEDSe-TSeF cation radical salts, crystal and electronic structs. 7−99013
$(BEDT\text{-}TTF)_2Au(CN)_2$, synthesis, structure and elec. props. 7−99011
β-$(BEDT\text{-}TTF)_2AuBr_2$, mag. and high press. cond. meas. 7−85172
$(BEDT\text{-}TTF)_2AuI_2$, microwave cond. meas. 7−84965
$(BEDT\text{-}TTF)_2CuCl_2$, cryst. struct., X-ray diffr. study 7−104707
β-$(BEDT\text{-}TTF)_2I_2Br(AuI_2)$, IR and far IR polarised reflectance spectra studies 7−77563
$(BEDT\text{-}TTF)_2I_3$, α- and β-phases, CESR spectra, 5-300 K 7−85438
β-$(BEDT\text{-}TTF)_2I_3$, high T_c supercond. state and normal state cond. anisotropy study 7−77140
β-$(BEDT\text{-}TTF)_2I_3$, high-and low-T_c superconducting phases study 7−77141
β-$(BEDT\text{-}TTF)_2I_3$, organic supercond., nuclear mag. relax. 7−70475
α-$(BEDT\text{-}TTF)_2I_3$, pure and I doped, microwave cond., freq. depend. 7−84964
β-$(BEDT\text{-}TTF)_2I_3(IBr_2)$ IR and visible reflectance spectra temp. depend. obs. 7−77564
β-$(BEDT\text{-}TTF)_2I_3(IBr_2)$ refl. spectra temp. depend., conductivity spectrum TBA calcs. 7−77501
β-$(BEDT\text{-}TTF)_2I_3$ highly defective crystals, conducting props. characts. 7−137906
β-$(BEDT\text{-}TTF)_2IBr_2$, CESR spectra, 5-300 K 7−85438
$(BEDT\text{-}TTF)_3(Cl(Re)O_4)_2$ IR and visible reflectance spectra temp. depend. obs. 7−77564
$(BEDT\text{-}TTF)Ag_xI_8$ and $(BEDT\text{-}TTF)Ag_4(CN)_5$, polymeric-anion derivatives, elec. props. 7−99010
BEDT-TTF molecular conductors, crystal and electronic structures 7−99012
BEDT-TTF salts, $(ET)_4(Mo_6Cl_8)Cl_6(THF)$ and $(ET)_2X$ (X=AuI_2, $AuBr_2$, $Au(CN)_2$), structures and elec. props 7−98110
BEDT-TTF salts of copper halides, elec. props. 7−99015
BEDT-TTF unsymmetrical derivative, DIMET, radical cation salts 7−99005
$(BPTTF)_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
carrier drift and trapping, master eqn. approach, exact, scaling and CPA calcs. 7−105553
CDW, DC nonlinear props., perturbational anal., Fukuyama-Lee-Rice model 7−92158
CDW, incommensurate, Thirring model interpretation 7−70222
CDW conductors, elastic props. 7−137477
CDW conductors, harmonic and direct AC mixing props. 7−118465
CDW DC-AC combined phenomena, perturbational anal., Fukuyama-Lee-Rice model 7−92159
CDW depinning in quasi-1D metals, tunnelling model development 7−76913
CDW dynamics, sliding motion *(Japanese)* 7−118390
charge density waves, pinning, metastability and sliding in an electric field 7−124889
charge transfer salts, cooperative charge transport mechanism by order parameter fluctuations 7−76916
conjugated sulphide polymers, synthesis and electroconductivities 7−100175
DBTTF and DBTSF salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
deformable CDW, thermally assisted depinning 7−92160
3,6-dicyano-1,2,4,5-tetrazine charge transfer complexes, elec. cond. 7−84860
$(DIMET)_2SbF_6$, antiferromagnetic properties 7−85280
$DIPS\phi_4(I_3)_{0.76}$, quasi-1D conductor, Peierls transition and I_3^- ordering 7−99020
disordered conductor, resistance fluctuations, elec. field effect calcs. 7−92161
disordered conductors, macroscopic approach to statistical phenomena 7−141037
disordered media, transport correlation functions 7−118456
disordered metals in 1D, spatial dispersion of conductivity, temp. and freq. depend., review 7−98997
disordered molecular structures, charge carrier jump transport and generation 7−98996

one-dimensional conductivity continued
disordered systems, charge jumping transition, 1D cond. and diffusion, bond breaking method calcs. *(Russian)* 7−98953
dithiadiselenafulvane salts, unsymmetrical, synthesis and elec. props. 7−99004
3,10-dithiaperylene and derivatives, charge transfer complexes, elec. cond. and cryst. struct. 7−84855
1,6-dithiapyrene and derivatives, charge transfer complexes, elec. cond. and cryst. struct. 7−84855
1,3-dithiol-2-ylidene and 1,3-dichalcogenole donors for organic metals 7−99007
$(DMEDT\text{-}TTF)_2AsF_6^-(SbF_6^-)$ radical cation salts, struct. investig. 7−83941
$DMTM(TCNQ)_2$, thermoelec. power, elec. cond. and first order phase transition 7−84835
$(DMtTTF)_2X$ salts, electronic and mag. props. 7−85293
electrically conducting plastics for battery electrodes *(German)* 7−119634
electromagnetic radiation polarizer based on a quasi-one-dimensional conductor 7−128630
electron-phonon interaction and phonon dynamics, spinless fermions 7−124419
electronic density of states for quasi 1D CDWs 7−124822
fluoranthenо[3,4-cd]-1,2-dithiole (diselenole) (ditellurole) electron donors, charge transfer complexes and radical cation salts 7−99009
$(fluoroanthene)_2PF_6$ radical cation salt, mag. reson. on cond. electrons 7−85487
$(fluoroanthenyl)_2X$ conductors, EPR, NMR studies 7−85439
heterocyclic conducting polymers, electrochemical doping effects on electrical and optical properties 7−124972
heterocyclic polymer composite conducting films, prep. and elec. props. 7−76909
heterocyclic ring chain polymers, electronic struct. 7−98788
hexamethoxytriphenylene multiple cationic salts, quasi-1D semiconductors 7−99021
HMTTeF radical salts, electric conduction and electrochemical prep. 7−84857
Hubbard-Peierls model, quarter-filled, charge versus fermion fractionalization 7−105550
inorganic linear chain compounds, charge density wave transport 7−98837
inversion layers, quasi-one-dimensional, transport props. and density of states 7−125093
magnetic field induced metal-SDW transition, sp. ht. jump 7−105925
metal and alloy electronic structure, conf., Johnsbach, Germany (Apr. 86) 7−128195
molecular solids, surface electronic and vibr. studies 7−77027
morpholinium $TCNQ_2$ substituted cpds., conductivity, field and freq. depend. 7−84861
normal-metal networks, quasi-1D disordered, magnetoresist. oscills. 7−118462
organic charge transfer crystals, neutral-ionic phase transitions, high press., IR studies 7−84254
organic charge transfer crystals, struct. phase transition, IR reflection spectra studies 7−85678
organic compounds, quasi-1D, small interchain coupling, 1D to 3D crossover 7−99040
organic metals, $A[M(dmit)_2]$ (Az DBTTF, BEDT-TTF, HMTTeF, BPDT-TTF; M=Ni; Pd) electrical and structural properties 7−99014
organic mixed stack charge transfer crysts., phase diagrams and optical props. 7−84206
organic polymeric conductors, substitutional alloys elec. cond. 7−71486
organic quasi-1D conductors, cascade of field-induced SDW phases 7−99460
organic quasi-1D conductors, quantised field-induced SDW ordering 7−99473
organic semiconductors, doped, cond., quasi-1D percolation model 7−76933
organosulphur-FeOCl intercalation compounds, spectroscopic and mag. props. 7−144050
$(PEDTTTF)_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
Peierls instability in system with half-filled band, dimerization 7−143348
$(perylene)_2(AsF_6)(PF_6)CH_2Cl_2$ quasi-1D organic metal, NMR studies 7−85459
$(perylene)_2M(mnt)_2$ family, (M=Pt, Au, Pd), thermoelec. power 7−84834
perylene-hexacyanobutadiene charge transfer complex, struct., optical studies 7−83943
perylene-metal-bis(1,1-dithio 2,2-dicyanoethylene)-based conductor, elec. cond. 7−84856
phthalocyaninato stacked bridged metal complexes, synthesis and elec. cond. 7−99026
phthalocyaninato-copper(II)iodide, mag. transitions and embedded local moments 7−99459
phthalocyaninatoiron (II) and -ruthenium (II) bridged cpds., I_2 doping 7−131626
poly(3-benzylthiophene) films, electrochem. doping, cond. meas. 7−118467
poly(3-butylthiophene) films, electrochem. doping, cond. meas. 7−118467
poly(3-methylthiophene) films, ordering processes, NEXAFS obs. 7−125850
poly(p-perfluorophenylene), K-doped, conducting polymer, EPR study 7−106014
poly(p-phenylene pentadienylene) and model cpd., H^+abstraction, elec. cond. 7−100554
poly(p-phenylene vinylene), films, highly drawn, molecular orientation and conductivity 7−111432
poly(p-phenylene vinylene), synthesis, doping and elec. cond. 7−99000
poly-2, 2′-dithienyl-5,5′ diylvinylene, prep. and elec. cond. props 7−76908
poly-3 methylthiophene, conductivity, charge and size dopant effects 7−70295
poly-3-(2-alkanesulphonate)thiophenes, conducting polymers, self-doping 7−105551
poly-3-methylthiophene, optical spectra and electronic struct. 7−77562
poly-3-methylthiophene, resonance Raman scatt., vibr. freqs. 7−77561
polyacene, prep., elec. cond. and IR spectra 7−84852
polyacetylene: I, high elec. cond. in doped polymer 7−112337
polyacetylene:alkali metal films, Raman spectra studies 7−70793
polyacetylene:I, optical props. and valence to conduction band transition 7−70790
polyacetylene:I stretched system, polarised resonant Raman scatt. studies 7−70795

one-dimensional conductivity continued
polyacetylene:Li(Na), semicond.-metal transition, ESR studies 7−98810
polyacetylene:Na, Raman and EPR spectra studies 7−70792
polyacetylene, cis- and trans-, morphology control by epitaxial polymerisation 7−69623
polyacetylene, cis- and trans-, photogenerated solitons, IR-active vibrs. 7−70788
polyacetylene, cis- and trans-, Raman spectra using 1064 nm and 532 nm laser light 7−70794
polyacetylene, cis- and trans-, transport props., mol. wt. depend. 7−99039
polyacetylene, conducting, charge fluxes and electron delocalisation, IR intensities anal. 7−70251
trans polyacetylene, conducting polymer, synthesis and elec. props. 7−124970
polyacetylene, doped, XPS, Coulomb interaction effects 7−100017
polyacetylene, Durham, conformational defects, IR and Raman studies 7−69624
polyacetylene, Durham form., order-disorder, elec. cond., struct. 7−97988
polyacetylene, heavily-doped, transition to a gapless Peierls insulator 7−70367
polyacetylene, near IR absorption and pulsed photocond. 7−99870
polyacetylene, neutral and electrochemically doped, secondary radiation emission 7−70906
polyacetylene, ordered and disordered 1D crysts., mol. dynamics 7−142934
polyacetylene, oxidative deterioration, control by localised energy levels 7−71339
trans-polyacetylene, photoinduced IR spectra, lattice dynamical calcs. 7−70789
polyacetylene copolymers, Raman and photoinduced IR absorption spectra 7−70791
polyacetylene doped chain, charged soliton conduction 7−99037
cis-polyacetylene films, doping with metal hexafluorides, conductivity, ESR and ENDOR studies 7−131625
polyalkylthiophene films, conducting, electrochem. prep. 7−78513
polyaniline, charge and conductivity, potential-pH diagrams 7−112314
polyaniline, soluble, synthesis and elec. props. 7−105052
polyaniline, vibr. spectra, Raman studies 7−98369
polyaniline conducting polymer, doping and elec. props. 7−76912
polycarbazole: BF_4^-, X-ray photoelectron spectra studies 7−77769
polycarbonate films, reticulate doped, effective content of cryst. charge transfer complex, vel. to elec. cond. 7−97992
polydiacetylene:I_2, electrical props. 7−70296
polydiacetylene, urethane-substituted, elec. props. 7−84851
polydiacetylene chain π-radical electron, electronic states, config. model and continuum model 7−118351
polydiacetylene films, synthesised by ion beam induced polymerisation of diacetylene, electrical and optical props. 7−93318
m-polydiphenylcarbene, ferromag. props., periodic Kondo-Hubbard model calcs. 7−77201
m-polydiphenylcarbene quasi-1D ferromagnet, periodic Kondo-Hubbard model calcs. 7−77200
polyene linear chain, Hartree-Fock eigenvalues, instability numbers *(Russian)* 7−143451
polyenes, synthesis with electron donor and electron acceptor groups 7−71145
polyethylene, C KVV Auger line shape, satellite identification 7−125870
polyfluoroacetylenes, electronic structure and conduction props. 7−112165
polyimide, pyrolysed, elec. cond., ESR study 7−99001
polymers, broken charge conjugation symmetry model, kink and polaron solns. 7−76785
polymers, conducting, synthetic metal superlattices 7−105664
polymers, conducting, with anthracene repeating units and single bonds 7−76904
polymers, electronic props., MO-based and valence effective Hamiltonian study 7−118352
polymers, quasi-one-dimensional conductors, bipolaron lattice theory 7−98998
polymers and charge-transfer complexes, elec. cond., electronic and optical device appl. 7−97105
polyolefines, conducting, reticulate doped with cryst. charge-transfer complexes, prep. and elec. props, 7−84839
polyparaphenylene, conducting, charge fluxes and electron delocalisation, IR intensities anal. 7−70251
polyperylene and poly(p-phenylene), substituted polymers with metallic props., design 7−131522
polyphenylenevinylene, conducting, charge fluxes and electron delocalisation, IR intensities anal. 7−70251
polypyrene: BF_4^-, X-ray photoelectron spectra studies 7−77769
polypyrrole, conducting polymer, synthesis and elec. props. 7−124970
polypyrrole, lightly doped, frequency dependent conductivity 7−137907
polypyrrole films, anodic deposition from aqueous electrolytes, anion doping and elec. props. 7−71089
polypyrrole films, electrochemically polymerised, struct., elec. props. 7−77934
polypyrrole poly-p-styrenesulphonate salts, films, DC cond. 7−84848
polypyrrole-PVC conducting polymer alloy film, anisotropic conductivity 7−92163
polythienylpyrrole, electrolytic polymerisation and struct. props. 7−78493
polythiophene: BF_4^-, Pauli and Curie susceptibility, ESR/WMR meas. 7−77203
polythiophene: $FeCl_4$ films, synthesis and elec. props. 7−76907
polythiophene, doped, polarons and bipolarons 7−118383
polythiophene, elec. cond. and vibr. key bands, IR and Raman spectra anal. 7−76905
polythiophene, photoluminescence and optically detected mag. resonance studies 7−77653
polythiophene, processible, environmentally stable and highly conducting forms 7−76911
polythiophene, resonant Raman scatt. photoinduced absorption studies 7−77560
polythiophene conducting polymers, struct. and electronic struct. 7−76040
polythiophene electroconducting polymers, synthesis method 7−78490
polythiophene films, electrochemical polymerisation under ultrasonic fields 7−78489
polythiophenes, electrochemical polymerisation, optical props. 7−78492
polythiophenes, optical, electrical and structural props. 7−76042
polythiophenes, structure, ^{13}C NMR and Fourier transform IR studies 7−76041
pyrrole fused systems, conducting polymers, electrochem. props. 7−106798
one-dimensional conductivity continued
quantum electron system under a finite voltage 7−98999
quantum resistance fluctuations, 1D conductor with static disorder 7−137910
quasi 1D conductors, magnetic field-induced phase transitions 7−84708
quasi-1D CDW electrodynamics, interelectron Coulomb interaction effects calcs. 7−98845
quasi-1D conductors, CDW statics and dynamics, numerical study 7−76914
quasi-1D conductors, field-induced SDW phases, quantum cascade 7−76794
quasi-1D organic conductors, electronic correls., nuclear relax. rate anal., scaling calcs. 7−77422
quasihomogeneous molecular crystals, with nonuniform charge carriers, optical props. 7−112315
segregated stack quasi-1D organic charge transfer solids, extended Hubbard model calcs. 7−76917
speciality polymers, conf., Baltimore, MD, USA (Aug. 1986) 7−95083
spin-Peierls systems, incommensurate phase, NMR and EPR studies 7−85483
spinless 1D conductors, Peierls instability 7−137909
trans-stilbene-TCNQ complex, physical props. 7−84902
TCNQ complexes, AzaTCNQ, organic conductors, elec. and struct. props. 7−84863
TCNQ metallic salts, elec. cond. and mag. props., solvent inclusion effects 7−84862
TCNQ salt, $MBM(TCNQ)_2$, noise spectrum 7−143534
TCNQ salt, N-docosylpyridinium-$(TCNQ)_n$, monolayers and Langmuir-Blodgett films, conductivity 7−99018
TCNQ salted conducting polymer, elec. transport 7−131622
TCNQ salts, morpholinium $(TCNQ)_2$, shot noise, soliton transport 7−143535
TCNQ salts, morpholinium $(TCNQ)_2$ cpds., nonlinear cond. 7−92157
TCNQ salts, $TEA(TCNQ)_2$ and $MNEB(TCNQ)_2$, lattice dynamics, inelastic neutron scatt. 7−91743
TCNQ salts, TEA-$(TCNQ)_2$, magnetic susceptibility anomaly 7−85306
TCNQ-2, 3, 7, 8-tetramethoxychalcogenanthrene complexes, structure and elec. conductivity 7−131627
$TCNQF_4$ charge transfer complexes, vibrational and vibronic studies 7−84147
p-terphenyl, radical cation salt crystals, EPR studies 7−112933
tetraselenotetracene iodomercurate, quasi-1D conductor, mag. props., ESR study *(German)* 7−132156
tetrathiafulvalene salt of $CuCl_2$, ESR study and metal-semicond. transition 7−138310
tetrathiolate-based polymers, $[M(C_2S_4)]_n$, conductive molecular complexes, synthesis, properties and structure 7−99310
thiophene oligomer: I_2, electrical and spectroscopic props. 7−76906
$TMDBF\text{-}BF_4(ClO_4)(AsF_6)(PF_6)$, cation radical salts, elec. and mag. props. 7−112313
$(TMN)_3(ClO_4)_2((ASF_6)_2)$ cation radical salts, electronic props. 7−84858
$(TMTSeF)_2SCN$, incommensurate struct. modulation and electronic localization 7−137908
$(TMTSF)_2AsF_6$, far-IR reflectivity through the spin density wave transition 7−118980
$(TMTSF)_2AsF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2ClO_4$ Bechgaard salt, field-induced SDW Green's function calcs. 7−77312
$(TMTSF)_2ClO_4$, ^{13}C NMR meas. 7−85477
$(TMTSF)_2ClO_4$, elec. cond., temp. depend. model 7−84842
$(TMTSF)_2ClO_4$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2ClO_4$, mag. field induced SDW transitions, DTA study 7−92069
$(TMTSF)_2ClO_4$, non-Ohmic transport in field-induced SDW state 7−84847
$(TMTSF)_2ClO_4$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2PF_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
$(TMTSF)_2PF_6$, crystallographic and electronic struct. 7−83940
$(TMTSF)_2PF_6$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2PF_6$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2PF_6$, SDW transitions in mag. field, comparison with $(TMTSF)_2ClO_4$, magnetotransport behaviour 7−84854
$(TMTSF)_2ReO_4$, elec. cond., temp. depend. model 7−84842
$(TMTSF)_2ReO_4$, electronic props., ^{13}C NMR meas. 7−85477
$(TMTSF)_2SbF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2X$, Bechgaard salts, small period oscillation of magnetoresistance 7−84823
$(TMTSF)_2X$ salts, collective modes 7−84853
$(TMTSF)_2X$ salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
$(TMTSF)(PO_2F_2)$ organic metal, synthesis, unit cell dimensions and elec. cond. props. 7−84838
TMTSF salts of copper halides, elec. props 7−99015
$(TMTTF)_2AsF_6(PF_6)(Br)$ salts, spin-Peierls transition evolution under press., renormalisation group anal. 7−77313
$(TMTTF)_2BF_2$, CESR meas. under hydrostatic pressure 7−77404
$(TMTTF)_2PF_6$, interplay between spin-Peierls and antiferromag. ground states under press., NMR study 7−85476
$(TMTTF)_2X$ salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
TMTTF-octadecylTCNQ, conducting Langmuir-Blodgett films, ESR studies 7−99556
TMTTF-octadecylTCNQ, conducting Langmuir-Blodgett films 7−99017
TMTTF-octadecylTCNQ charge transfer complex, conductivity-area isotherms 7−99019
TNCQ conductors, phonons, inelastic neutron scatt. studies 7−84159
transport properties, inertial effects, numerical solns. 7−118385
2,4,6-tricyano-sym-triazine charge transfer complexes, elec. cond. 7−84860
TTeF heterocyclic π-donors, TMHM-TTeF and CpHM-TTeF, synthesis and elec. props. 7−99016
$(TTF)_6CuBr_4$ and $(TTF)_2CuCl_2$, proton magnetic relaxation studies 7−106051
TTF dimer charge transfer complexes, synthesis and elec. props. 7−99006

one-dimensional conductivity continued
TTF radical cation salts with metal halides, elec. cond. and struct. 7−84859
TTF salts of copper halides, elec. props. 7−99015
TTF-1, 3, 5-trinitrobenzene complexes, preparation and props. 7−131628
TTF-chloranil, neutral-ionic interface, interchain Coulomb interactions 7−83843
TTF-chloranil mixed stack cpd., neutral-ionic transition 7−84253
TTF-p-chloranil, neutral-ionic transition, ^{1}H-NMR and EPR studies 7−84256
TTF-p-chloranil, neutral-ionic transition, elec. conductivity, devil's staircase behaviour 7−112312
TTF-p-chloranil single cryst., neutral-ionic phase transition 7−84255
TTF-TCNQ, CDW state, dielectric losses, temp. depend. 7−99668
TTF-TCNQ, CESR meas. under hydrostatic pressure 7−77404
TTF-TCNQ, collective modes 7−84853
TTF-TCNQ, DC elec. cond., temp. depend. 7−112308
TTF-TCNQ, quasi-1D semiconductor, ionised impurity scattering 7−131624
TTF-TCNQ Langmuir-Blodgett films 7−99003
TTF-TCNQ quasi-1D conductor, CDW transport, defect conc. depend. 7−84844
TTF-TCNQ resistivity, one- and two-phonon scatt. process contribs. calcs. 7−76915
(TTM-TTF)$(I_3)_{0.823}$, organic conductor, mag. props. 7−99557
TTM-TTF complexes, cryst. struct. and stacking sequences 7−83944
TTT salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
zinc bis(oxalato(platinate, $Zn_{0.81}[Pt(C_2O_4)_2].6H_2O$, 1D conductor, transport props. and phase transitions 7−105552
$Ag_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
β-$Ag_xV_2O_5$, phase transition and bipolaron form. 7−137548
Au complex, β-bis(ethylenedithio)TTF $AuCl_2$, intermol. interactions, electronic and elec. props. 7−92063
AuPd pseudo-one-dimensional wires, inelastic electron scatt. 7−92145
CSe_2, polymeric, metallic cond. and synthesis 7−76910
$Cs(Pd(S_2C_2(CN)_2)_2).0.5H_2O$, preparation, structure and elec. props. 7−99008
Cu chain compounds, 1D, commensurate Peierls struct., elec. cond. studies 7−99035
Cu complex, phthalocyaninato Cu iodide, mol. metal, 1D array of charge carriers 7−92156
Cu complexes, I_2 doped, quasi-1D solids with pseudo-$(SN)_x$ bundle-struct., EPR studies 7−92162
$Cu_{1/2}NbS_2$, layered, order-disorder phase transition obs. by elec. resist. meas. 7−104991
$Cu_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
Fe complex, $Fe(py)_3Cl_3.py$, 1D single crystal, mag. susceptibility meas., 2-300 K 7−143764
$Fe_xNb_{1-x}Se_3$ with 1D struct. as positive electrodes for secondary Li batteries 7−93500
$Hg_{3-\delta}AsF_6$, 1D BCS Hamiltonian, electron-phonon interactions 7−99316
$K_3Cu_5S_6$, CDW's X-ray scatt. study 7−98835
$K_{0.3}MoO_3$, 1D conductor, sine-Gordon type equations, intermittent oscillations *(Japanese)* 7−80641
$K_{0.3}MoO_3$ blue bronzes, distortion wave vector, X-ray scatt. meas. 7−111511
$K_{0.3}MoO_3$, CDW, field-activated relax., characteristic times 7−84711
$K_{0.3}MoO_3$, CDW material, cond. and low freq. damping 7−98843
$K_{0.3}MoO_3$, CDW state, dielectric losses, temp. depend. 7−99668
$K_{0.3}MoO_3$, current-field relation of CDW near depinning threshold 7−84841
$K_{0.3}MoO_3$, depinning threshold, CDW transient response, critical divergence 7−118466
$K_{0.3}MoO_3$, electron-irradiated, hysteresis and memory effects 7−76902
$K_{0.3}MoO_3$:Fe, CDW state, Mossbauer studies 7−118928
$K_{0.3}MoO_3$:W(Rb), 1D conductor, CDW transport and struct. props. 7−99031
K_3MoO_3:Fe, CDW state, EPR, Mossbauer and UPS studies 7−98842
K_xMoO_3 blue bronze, CDW transport, sp. ht. and ion channelling 7−99030
$K(Pd(S_2C_2(CN)_2)_2).H_2O$, preparation, structure and elec. props. 7−99008
$Li_{0.9}Mo_6O_{17}$, localisation and superconductivity 7−76903
Mo_nO_{3n-1}, CDW and resistivity, X-ray and neutron studies 7−99032
$Na_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
NbS_3, orthorhombic single whisker, thermal cond. studies 7−98600
NbS_3, π-like, resistance, press. and temp. depend. 7−99029
$NbSe_3$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7−98365
$NbSe_3$, CDW, field induced depinning, nonlinear cond. 7−124973
$NbSe_3$, CDW conduction dynamics in high mag. fields 7−99027
$NbSe_3$ CDW conductors; magnetotransport studies 7−98989
$NbSe_3$, CDW mode locking and RF-induced dynamic coherence length 7−98838
$NbSe_3$, mag. field-induced phase transition 7−99141
$NbSe_3$, magnetoresistance and Hall effect, oscillatory behaviour 7−84822
$NbSe_3$, narrow band noise intensity and nonlinear conductivity, temp. depend. 7−124971
$NbSe_3$, nonlinear magnetoresist. and CDW depinning 7−105549
$NbSe_3$, quasi-1D conductors, CDW transport, current oscillations 7−84845
$NbSe_3$, quasi-1D conductor, CDW transport, AC-DC interference phenomena 7−84846
$NbSe_3$:Ta(Zr), CDW depinning field at low temps. 7−98839
$NbSe_3$:Zr(Ta), low freq. broadband noise, impurity effects 7−99144
$(NbSe_4)_2I$, dynamical CDW response, freq. depend. cond. meas. 7−99002
$(NbSe_4)_3I$, liner chain semicond., cryst. struct. and far-IR reflectance 7−98097
$(NbSe_4)_3I$, thermal cond. and thermal capacity 7−98601
$(NbSe_4)_xI$, liner chain cpd., phase transitions, Raman scatt. studies 7−99869
$((Nb_{1-x}Ta_x)Se_4)_3I$, localisation effect in thermopower and resistivity 7−137930
Nb_3Te_4, CDW phase transition, elec. resist., mag. susceptibility and X-ray studies 7−98840
Ni complex, (Et_4N) $(Ni(DMIT)_2)$, cryst. struct. and elec. cond. 7−99024
Ni complex, $Ni(S_2C_2(CN)_2)_2$, prep., struct., elec. and mag. props. 7−99033
one-dimensional conductivity continued
Ni complex, $Ni(S_2C_2(CF_3)_2)_2$, prep., struct., elec. and mag. props. 7−99034
Ni complex, polydecker sandwich, synthesis and elec. cond. 7−99025
Ni complexes, I_2 doped, quasi-1D solids with pseudo-$(SN)_x$ bundle-struct., EPR studies 7−92162
Ni complexes, superconducting, molecular designing analysis 7−84638
Pd complex, (Et_4N) $(Ni(DMIT)_2)$, cryst. struct. and elec. cond. 7−99024
$PdPt(C_2S_2O_2)_2$ bimetallic 1D polymer, synthesis and physical props. 7−99038
Pt chain compounds, 1D, commensurate Peierls struct., elec. cond. studies 7−99035
Pt complex, $Pt(en)_2$ $Pt(en)_2I_2$ $(ClO_4)_4$, halogen bridged, photocond. studies 7−99129
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7−105548
Pt^{II}-Pt^{IV} mixed valence complex, quasi-one-dimens. soliton-to-band optical absorption 7−106205
$Pt_6(NH_3)_{14}Cl_{10}X_4$ (X=ClO_4, BF_4, PF_6) synthesis and elec. cond. 7−99036
p-quaterphenyl, radical cation salt crystals, EPR studies 7−112933
$Rb_3(H_3O)_{0.2}Pt(CN)_4(O_3SOHOSO_3)_{0.5}.0.8H_2O$, 1D platinum chain cpd., conductivity and thermopower 7−131623
$Rb_{0.3}MoO_3$, current-field relation of CDW near depinning threshold 7−84841
$(SN)_x$, positron annihilation Doppler broadening study 7−92778
$Ta_{1-x}Fe_xS_3$, 1D, CDW, Mossbauer studies 7−125577
$Ta_xNb_{1-x}Se_3$, quasi-1D cpd., elec. props. 7−131629
TaS_2, 1T and 2H polytypes, CDW images obtained with scanning tunnelling microscopy 7−92090
TaS_3, CDW material, cond. and low freq. damping 7−98843
TaS_3, CDW state, shear modulus meas. 7−137442
TaS_3, orthorhombic, non-Ohmic 1D cond. and narrow band noise 7−99028
TaS_3 orthorhombic, Peierls transition, cryst. defect effects 7−98811
TaS_3, orthorhombic single whisker, thermal cond. studies 7−98600
TaS_3, pinned CDW, hysteresis and condensate quakes 7−143455
$TaSe_2$, 1T and 2H polytypes, CDW images obtained with scanning tunnelling microscopy 7−92090
$TaSe_3$ quasi-1D conductor normal state elec. resistivity 7−143447
$TaSe_3$, thermoelec. power and elastoresistance 7−84843
$(TaSe_4)I$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7−98365
$(TaSe_4)_2I$, CDW material, cond. and low freq. damping 7−98843
$(TaSe_4)_2I$, CDW system, Hall effect meas. 7−105541
α-UF_5, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
U_2F_9, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
one-dimensional conductors *see one-dimensional conductivity*
online literature searching *see information retrieval*
online operation
used for systems software in online and real-time systems but for hardware aspects see real-time systems
see also interactive systems; real-time systems
inset motion, on-line analysis with microcomputer 7−87401
Onsager relations *see thermodynamics*
Onsager theory of dielectrics *see dielectric properties of substances*
opacimeters *see turbidimetry*
opacity *see turbidity*
opalescence
see also critical opalescence
quartz, incommensurate phase, low freq. modes, Raman and Brillouin obs. 7−70819
$BaTiO_3$ crystalline powders, inelastic low freq. opalescence near struct. phase transitions 7−132291
H, spin polarised gas, giant opalescence and magnetokinetic effects calcs. 7−83408
^{3}He, spin polarised gas, giant opalescence and magnetokinetic effects calcs. 7−83408
$LiTaO_3$, inelastic light scattering, low-frequency opalescence obs. 7−85757
Rb, spin polarised gas, giant opalescence and magnetokinetic effects calcs. 7−83408
OPDAR *see optical radar*
operating amplifiers *see operational amplifiers*
operating systems (computers)
see also distributed processing; input-output programs
high energy physics computing, conference, Asilomar, CA, USA (Feb. 1987) 7−134338
PDP-11 CAMAC programming, modular multiuser approach 7−81908
VM/CMS in the HEP community (HEPVM) 7−135794
operational amplifiers
logarithmic conversion signal processing channel for ocean bottom seismic station 7−145708
photointegrator, high-precision SNR calc. 7−128656
operations analysis *see operations research*
operations research
see also critical path analysis; forecasting theory; scheduling
industrial waste heat use in agriculture *(German)* 7−144808
operator training *see training*
optic mode of crystals *see lattice dynamics*
optical aberrations *see aberrations*
optical absorption *see light absorption*
optical absorption coefficients *see optical constants*
optical absorption spectra *see spectra*
optical activity *see optical rotation*
optical beam modulators *see optical modulation*
optical beam splitters *see optical elements*
optical bistability
absorption bistability, increasing, transverse diffusion effects 7−141922
acoustooptic deflector, bistability and multistability in wavelength 7−68822
all-optical device appls., review 7−136409
bad cavity, optical bistability with small numbers of atoms, master eqn. soln. 7−68741
bad cavity limit, master equation solutions 7−110441

optical bistability continued
bistable Fabry-Perot etalon with local saturable nonlinearity, focusing role 7−90688
bistable optical logic devices 7−123068
cavity optimisation, thermal optical bistability anal. 7−136404
cavity properties influence on exptl. results interpret. 7−68764
chaos, optical, conf., Quebec, Canada (June 1986) 7−134353
chaos and coherence in passive nonlinear systems 7−68767
chaotic signal origin, dimension and correl. entropy, rate eqns. validity 7−68766
chemically active medium, bistability 7−90679
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
counterpropagating light field polarisation, chaotic and periodic behaviour 7−110483
crosstalk modelling, 2D bistable arrays with carrier diffusion 7−130241
cylindrical pixels, bistable response characts. 7−75045
α-cylodextrin-iodine inclusion compounds, dichroic and photodichroic props. and appls. 7−135983
degenerate four-wave mixing, polarisation bistability and instability 7−136419
dense optical materials with saturated absorption *(Spanish)* 7−117275
detuned ring laser, with saturable absorber, semiclassical anal. 7−82646
dielectric spheres on a substrate, 2D array, enhancement of local field 7−138454
digital optical circuits, fan-out considerations 7−90514
dispersion relations, nonlinear response function 7−90561
dispersive, effect of diffusion and surface recombination 7−82691
dynamic instabilities in optical bistability 7−90690
electro-optical device, optical bistability model 7−123063
Fabry-Perot bistable device, biased multibeam cascadable type, optimum control beam angle 7−97062
Fabry-Perot cavities, metal mirrored containing thermo-optic materials, optical bistability 7−75044
Fabry-Perot etalon liquid crystal bistable device, electrically addressable 7−68750
Fabry-Perot etalons, bistable, filled with saturable medium, transverse effects in switching 7−97063
Fabry-Perot resonators, coupled nonlinear, dispersive bistability 7−97064
Fabry-Perot semicond. laser amplifier, high-speed all-optical gate switching expt. 7−129991
Fabry-Perot semiconductor-laser amplifier appl. to bistable switching 7−117257
ferroelectric liquid crystal, bistable optical switching element 7−68747
ferroelectric liquid crystals, helicoidal structure, optical switching and memory effects 7−99800
ferroelectric liquid crystals, optical computing and image processing appls. 7−110263
fibres, high birefringence, optical multistability and phase conjugation 7−136441
flip-flop interferometer using He-Ne laser 7−80860
four-wave mixing, instabilities 7−136390
gas laser, single-mode standing-wave, freq. pushing and hysteresis 7−68775
hierarchical multistability and cooperative flip-flop operation 7−123080
hybrid, instability condition and frequency-locking 7−68769
hybrid bistable device, second-order differential delay eqn. 7−141925
hybrid device with delayed feedback, Poincare analysis 7−68772
hybrid optical bistability in Fabry-Perot interferometer containing plasma 7−82681
hybrid systems with short delay times, optical multistability and oscillations 7−68771
hysteresis in the bifurcation structure of a nonlinear optical device with a time-dependent bifurcation parameter 7−130245
II-VI wide gap semiconductors, optical nonlinearity and bistability 7−75051
instabilities, optical, new classification 7−136417
instabilities and chaos in nonlinear optical beam interactions 7−82702
interference filters, loop narrowing and critical slowing down 7−82757
interferometer, nonlinear Fabry-Periot, dichroic optical bistability *(German)* 7−130234
Kerr medium, instabilities in propag. of counterpropagating vector fields 7−68800
liquid crystals, EM field interactions with homogeneous and inhomogeneous surfaces 7−97913
liquid crystals, review 7−136400
logic elements, demonstration 7−74865
logic elements based on bistable thin-film interferometers 7−129999
logic elements from four level systems interacting with two fields 7−90686
logic functions using nearly degenerate four-wave mixing in laser diodes 7−90723
mechanism of optical bistability by surface resonance modes 7−75047
nematic liq. cryst., first order Freedericksz transitions and intrinsic optical bistability 7−104538
nematic liq. cryst., optical bistability, light induced bleaching 7−117276
nematic liquid cryst. film, two-beam mirrorless optical bistability 7−103873
nematic liquid crystal, internal optical bistability with light-induced structural phase transition 7−141917
nematic liquid crystals, optical bistability near Freedericksz transition 7−110443
nematic liquid crystals, polarisation-induced optical transitions 7−104539
nematic liquid crystals CW optical bistability 7−75043
noisy delay-differential equations 7−136420
nonabsorbing liquids, CW optical bistability 7−75043
noncoherent coupling of twin-laser system appl. to bistable devices 7−82685
noncritical slowing down 7−136407
nonlinear diode laser amplifiers in optical processors and interconnects 7−123071
nonlinear eikonal treatment to design of optical bistable devices 7−90689
nonlinear optical materials and devices, conf., Erice, Sicily, Italy (July 1985) 7−80172
nonlinear prism coupler, optical bistability 7−117313
nonlinear stationary slab-guided wave stability in saturable media, numerical anal. slab-guides waves in saturable media, stationary, stability 7−130326
nonlinear thin film, laser beam transmission, transverse self-phase modulation and bistability 7−110440
optical computing, conference, Jerusalem, Israel (July 1986) 7−88738
optical bistability continued
PAM-to-PDM conversion for bistable system 7−68749
parallel multiprocessing systems, development 7−74858
paramagnetic atomic vapours, unpolarised light pumping bistability, spontaneous spin polarisation 7−141926
periodic waveforms in a chaotic bistable device 7−136413
photochromic fulgides, bistable optical switching and logic elements, single-wavelength illum. 7−82682
photonic switching, conf., Incline Village, NV, USA (March 1987) 7−102019
photosemiconductor-nematic liq. crystal system, intrinsic optical bistability study 7−118541
planar waveguide, spatial hysteresis and switching waves 7−82782
planar waveguides, prism coupling, photothermal displacements, optical bistability 7−75114
polarisation in nonlinear isotropic and anisotropic media, analytical solns. and intrinsic instabilities 7−68776
polarisation switching, two-level atoms with lower-level degeneracy 7−136411
polarisational bistability, theory 7−130242
polarization slaving mechanisms in vectorial bistable lasers 7−75036
positive feedback circuit composed of twin-stripe laser diode, p-i-n photodiode and transistor, optical tristability 7−68739
prism coupling into planar waveguides, self-pulsing 7−117318
pyrimidine type ferroelectric liquid crystal, electrooptic switching element 7−99804
quantum optics, chaos and noise effects 7−136418
quantum tunneling in dispersive optical bistability 7−68757
quantum-Fokker-Planck equation for dispersive optical bistability, soln. 7−82689
Raman processes, two-photon optical bistability obs. 7−97072
randomly inhomogeneous media, interaction between opposite waves and optical bistability 7−130238
recent developments, review 7−136410
reflection of light beam from nonlinear medium, bistability 7−90680
reversible computing: all-optical implementation of interaction and Priese gates 7−104037
ring cavity, nonlinear, wave-bundle stability 7−130233
ring cavity, spatiotemporal chaos 7−123032
ring cavity filled with nonlinear gyrotropic medium, polarisation multistability and optical chaos 7−130232
ring laser, homogeneously broadened, multimode instabilities 7−68718
ring resonator with nonlinear optically active medium, polarisation multistability 7−123066
running waves in photorefractive crystals, absolute instability *(Russian)* 7−82694
semiconductor active directional coupler, optical switching by saturation-induced phase changes 7−117256
semiconductor bistable lasers, stability analysis 7−122969
semiconductor elements, optical data processing, photonic logic 7−75050
semiconductor film, dimensionally quantised, plane transverse mag. wave, bistable reflection 7−70440
semiconductor injection lasers, absorptive and dispersive bistability, review 7−123069
semiconductor laser, common-cavity two-section, bistability, computer simulation 7−123075
semiconductor laser, inhomogeneously-pumped, bistability, influence of carrier leakage 7−90613
semiconductor laser amplifier, bistable optical switching, injection-current-controlled operation 7−123040
semiconductor laser optical bistability on reflection 7−123070
semiconductor lasers, cascadable optical triggering scheme using photoconductors 7−90638
semiconductor lasers, optical bistable, optical fibre directional coupled *(Chinese)* 7−103812
semiconductor lasers, polarisation bistability, rate eqn. anal. 7−110350
semiconductor lasers for device appls., static and dynamic bifurcations, review 7−123078
semiconductor lasers optical feedback effect 7−123074
semiconductor microcrystallites, linear and nonlinear optical props. 7−118979
semiconductor optical bistability, towards the optical computer 7−82700
semiconductor quantum well structures, field induced optical nonlinearity, optical gate, bistability 7−136408
semiconductor with induced absorption in ring cavity, optical bistability and chaotic output 7−68796
semiconductors, optical bistability, review 7−75037
semiconductors, optical bistability and nondegenerate wavefront reversal 7−75071
semiconductors, optical bistability of excitons, Fabry-Perot resonator 7−130229
semiconductors, optical characteristics, hysteresis, two-band model 7−75040
signal regenerator using bistable laser amplifier, error-rate meas. 7−123072
single-mode theory, quantitative test 7−82690
slowing down far from the limit points in optical bistability 7−141921
smectic C liquid crystals, polarisation-induced optical transitions 7−104539
soliton transverse structure and optical bistability 7−75046
solitons, bistable and optical switching 7−130231
spontaneous oscillations, transverse diffusion instability and spatial dissipative structures in optical bistability and multistability 7−123067
surface effects in bistable and transphasor devices 7−103868
symbolic substitution using ZnS interference filters 7−74864
thermally induced optical bistability, switching dynamics 7−90683
TM-polarised nonlinear modes guided by symmetric five-layer dielectric structure 7−103975
transient bimodality in a bistable laser with saturable absorber 7−141908
transient optical bistability, noise effects 7−90687
transverse optical bistability, laser spot size dependence, nonlocality and saturation effects 7−136422
transverse optical bistability and instabilities, cylindrically symmetric calcs. 7−68770
two-level atoms, cavity field mode optical bistability quantum fluctuations study 7−90684
two-level atoms, spacially distributed, conditions of stability and instability 7−136423
two-photon bistable system in standing wave cavity, stability analysis 7−68774

optical bistability continued
unimolecular excitation, coherent, bistability, hysteresis and transitions to chaos 7−136415
waveguide having cubic nonlinearity, prism coupling theory 7−82788
$BaTiO_3$ total internal reflection phase conjugator, bistability and switching 7−117255
CO_2 infrared laser with intracavity absorber, static and dynamic nonlinear behaviour 7−136262
CO_2 laser, dimension and correl. entropy tests, chaotic signal origin 7−68766
CO_2 laser with feedback on intracavity modulator, self-pulsing and deterministic chaos 7−68726
CO_2 laser with internal modulation, chaotic phenomena 7−136263
CO_2 laser with saturable absorber, bistability, dynamic behaviour 7−110427
CdHgTe, narrow-gap semiconductors, optical nonlinearities 7−130243
CdMnTe magnetically mixed semiconds., optical bistability mechanism 7−75038
CdS, induced absorber, coexisting oscill. modes and optical chaos in hybrid ring cavity 7−96969
CdS, induced absorber in hybrid ring resonator, self-oscillations 7−68758
CdS, related materials, nonlinear dynamics and optical bistability 7−136416
CdS thin sprayed films, cavityless optical bistability 7−138530
CuCl dispersive optical bistable devices, switching dynamics 7−75035
CuCl platelets, optical bistability and dielec. function nonlinearities due to biexcitons 7−82701
GaAlAs external cavity semiconductor lasers, polarisation bistability 7−130184
GaAlAs laser coupled to external cavity of variable length, bistable behavior 7−123073
GaAlAs waveguides, induced absorpt. optical bistability 7−136394
GaAs, nonlinear Fabry-Perot etalons, MOVPE grown, optical bistability and gating 7−97061
GaAs-AlGaAs DH laser, inhomogeneously excited, bistable operation, lasing wavelength depend. 7−110360
GaInAs-AlInAs MQW etalon, room temp. 1.55 μm optical bistability 7−141916
GaSe, multistable transmission dynamics in Fabry-Perot interferometer 7−80867
GaSe-type layered semiconductors, resonant dynamic nonlinearities and optical bistability 7−136396
InGaAs-InAlAs MQW laser diodes, optically bistable operation using reson. tunnelling effect 7−123056
InGaAs-InP multiple quantum wells, 1.55 μm optical logic etalon with picojoule switching energy 7−110434
InGaAsP laser optical bistability on reflection 7−123070
InGaAsP TM-wave injected laser based optical RS flip-flop 7−90692
InGaAsP/InP nonlinear laser diode amplifiers for optical thresholding and logic 7−90648
InGaAsP-InP bistable lasers optical feedback effect 7−123074
InGaAsP-InP injection lasers, twin-ridge, modal bistability 7−123077
InGaAsP-InP laser amplifier, bistable, dynamics 7−74991
InGaAsP-InP laser, polarisation bistability, mode inhibition mechanism 7−122968
InGaAsP-InP laser, polarisation-bistable, switching mechanism 7−123076
InGaAsP-InP ridge-waveguide stripe structure bistable DH laser, expt. characts. *(Chinese)* 7−74920
InGaAsP-InP semiconductor lasers, bistable control 7−136304
InP:Fe self-electrooptic effect devices, nonresonant optical bistability 7−97067
InSb etalon, regenerative pulsations, model 7−75042
InSb, narrow-gap semiconductors, optical nonlinearities 7−130243
InSb transphasor channels, diffusive transverse coupling 7−142045
$LiNbO_3$:Ti waveguide with SiO_x film coating, oscillatory optical bistability in Mach-Zehnder interferometer 7−68763
Na filled Fabry-Perot cavity, transmission properties 7−136412
Na two-level atoms, steady states and dynamic instabilities 7−68765
Na, vap., transmission characts. below bistability threshold 7−141924
Na vapour, parametric oscillation due to four-wave mixing 7−117259
Na vapour, two-phase clock based on transverse-profile Ikeda instability 7−68773
Na vapour-filled Fabry-Perot cavity, period doubling and intermittency in transmission 7−68768
Si Schottky SEED device, hybrid optical bistability based on increasing absorpt. in depletion layer 7−82684
ZnS Fabry-Perot interference filter, optical bistability *(Korean)* 7−80865
ZnSe bistable interference filters switched by ns light pulses, temporal behaviour 7−110442
ZnSe nonlinear interference filter, thermally induced optical bistability model 7−90683
ZnSe optically bistable element arrays, appl. as man-machine interface 7−90681
ZnSe single crystal waveguides, optical bistability, nonlinear switch ing 7−141980

optical cables
bending strain of fibre in cable *(Japanese)* 7−97167
conference, fibre characts. and standards, Cannes, France (Nov. 1985) 7−66821
conference, optical fibre communication and integrated optics, Reno, NV, USA (Jan. 1987) 7−120704
construction methods *(Polish)* 7−82878
CSELT optical fibres research activities for telecom. *(Italian)* 7−103998
drum twister for stranding of optical fibre cables 7−110602
failure mechanisms and life span *(Danish)* 7−75121
fiber optic components for communication applications 7−136605
fibre cables, liquid crystal polymer material appls. 7−68885
fibre optic fanout connector for fibre-ribbon cable termination, struct. design 7−110595
fibres, fabrication, light transmission, cable design 7−97158
hydrogen problems and long term reliability of fibre cables 7−68872
longitudinal strain measurements, optical techniques 7−75124
losses meas., using Siemens universal reflectometer 7−82877
Luch instruments for fibre optic guides and cables meas. 7−104009
manufacturing process, microwave plasma appl. 7−130403
modified SZ stranding of optical fibre cable conductors 7−110601
monomode fibres with loose tube jelly filled jacket, loss mechanisms 7−68875
powder mixing rate instrumentation system *(Japanese)* 7−113465

optical cables continued
reliability considerations, conf., Cambridge, MA, USA (Sept. 1986) 7−140366
RF radiation spectrum of semiconductor laser, optical communication line wave reflection 7−123016
single process cable, optical loss increase at low temp. 7−110598
single-mode fibre cable developments by NTT, review 7−82826
single-mode optical fibre, pure silica core, struct. and characts., transmission cable appl. 7−82843
single-mode/multimode fibre line characts. 7−117331
submarine cables, optical fibre strength improvement 7−68877
telecommunication optical fibres, props. and manufacture *(Polish)* 7−68887
water ingress in fibre cables 7−130345
SiO_2:Ge optical fibre loss increase due to H_2 and long-term loss stability 7−90800

optical character recognition
see also character recognition equipment
character reader with speech output for blind people *(Japanese)* 7−145281
ionic pattern recognition, large class, OCR case study 7−110277
optical pattern recognition by spatial filtering *(Japanese)* 7−110540

optical choppers *see optical elements*

optical coatings *see antireflection coatings; optical films*

optical coherence *see light coherence*

optical coherent transients
see also photon echo
injection laser, single-frequency with external dispersive resonator, intensity fluctuations 7−97038
masers, single-atom, QED test 7−117168
organic molecules λ, aq. soln., ^{31}P NMR spectra, Prony-Burg method anal. 7−107322
picosecond phase shifted laser multiple-pulse sequences, spectroscopic demonstration 7−90728

optical collimators
compact discs, axial gradient index singlet collimator lens 7−82748
compact-size optical head for magneto-optical disk drive 7−82502
differential zero position grating type, accuracy considerations *(Chinese)* 7−75102
electronic autocollimators, specifications and operating principles 7−123170
positioning systems 7−103940
soft X-ray collimation 7−128727
XUV multilayer optics theory 7−136481

optical communication
see also optical links
34 Mbit/s optical fibre transmission at wavelength of 2.4 μm 7−136602
ASK two-part optical homodyne receivers, impact of laser intensity noise 7−142038
channel capacity increase in light-wave communication system by photon-number squeezed light 7−110314
coherent OTDR instrument development for fault location in fibres 7−97154
color image transmission in optical fibres by polychromatic encoding *(French)* 7−117326
color image transmission in single optical fibre *(French)* 7−117327
compound glass fibre with low loss, large core and high numerical aperture *(Japanese)* 7−117341
conference, optical fibre communication and integrated optics, Reno, NV, USA (Jan. 1987) 7−120704
direct-detection optical communication systems, symbol and frame synchronisation 7−68571
fibre manufacturing techniques and technology at AT&T 7−110611
fibres, single-mode, eccentric core, polarisation characts. 7−97152
fibres, single-mode, solitons at zero-group-dispersion wavelength 7−123255
graded-index optical fibres, light propag. theory *(Polish)* 7−110592
laser spot dynamics covering optical aperture of receiver 7−68728
lasers and electro-optics, conf., Baltimore, MD, USA (April-May 1987) 7−120705
materials, review 7−110488
multiport homodyning, quantum theory 7−103782
organic molecules and optical signal processing *(French)* 7−129990
power penalty due to jitter 7−122847
propagation model for optical communication through nonuniform clouds 7−133930
signal regenerator using bistable laser amplifier, error-rate meas. 7−123072
single mode optical fibre laser transmission, dynamics of deterministic chaos 7−136232
single-mode fibre for digital optical communication, techniques *(German)* 7−130342
ultra lowloss communication with fluoride fibres 7−110593
wavefront determination in optical reception system with multichannel phase modulation 7−141801
InGaAsP tunable fibre-extended-cavity laser 7−68710

optical communication equipment
see also optical cables; optical waveguides
1.55 μm narrow-linewidth multielectrode DFB laser for coherent FSK transmission 7−136601
1/f-type FM noise, impact on coherent optical communications 7−141855
AM sideband injection locking of slave semicond. laser, characts. for WDM 7−82554
ASK two-part optical homodyne receivers, impact of laser intensity noise 7−142038
attenuator, programmable, for fibreoptic test environments, design approach 7−68898
BH distributed feedback laser emitting at 1.3 μm for high-bit-rate systems 7−75166
cascaded single-mode fiber optic transversal filters 7−90829
circulator for fibre optic transceivers 7−136539
coherent lightwave communications, receiver modelling 7−90833
commutation devices using gradans for fibre optic communication lines, parameter meas. 7−104025
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference, optical fibre communication and integrated optics, Reno, NV, USA (Jan. 1987) 7−120704
CSELT optical fibres research activities for telecom. *(Italian)* 7−103998

optical communication equipment continued
CSP diode lasers, NASA developments 7—130178
DBR surface emitting lasers with semicond. multilayer, anal. and appl. 7—90610
DC and LF AC meas. optical receivers anal. for optical fibre communication systems 7—104034
deep space communications, development program 7—134133
densely spaced WDM coherent optical star network 7—142039
DFB laser, low threshold, high bit-rate appl. 7—68698
DFB laser evaluation at 1.53 μm for high dispersion multi-Gbit transmission system 7—68899
DFB lasers and phase diversity reception for coherent transmission system 7—68902
DH lasers for optical communication 7—82618
dichroically combined diode laser transmitter, space communications 7—130180
directional-coupler wavelength filters made of dissimilar single-mode fibres, bandwidth 7—68850
Fabry-Perot bistable device, biased multibeam cascadable type, optimum control beam angle 7—97062
Fabry-Perot filters for wavelength demultiplexing, optical monitoring method during growth 7—103945
Fabry-Perot-type semiconductor lasers, modulation capabilities 7—82656
fiber optic components for communication applications 7—136605
fiber-optic communications, 1.3 μm lasers and LEDs 7—82616
fibre optic sources, high reliability packaging 7—142041
fibre optic system design, reliability considerations 7—142042
fibre optic transceivers for microwave signal transmission 7—90831
fibre Raman amplifier pumped by high-power semicond. lasers, 1.5 μm, amplification of WDM signals 7—68674
fibre switch using piezoelectric actuated evanescent-wave directional fibre coupler 7—82859
fibre-optic balanced heterodyne detection, excess-noise suppression 7—73418
fibre-optics, single-mode, coupler, demultiplexing 7—142025
fibres, EM fields at facets 7—104001
fibres, ionising-radiation hardness, testing and standards 7—123258
fibres, reliability issues and telecomm. appls. 7—142026
fibres, single-mode splice loss, effect of eccentricity 7—136554
fibres having distorted refractive index profile cladding loss 7—142021
field appl. of coherent optical communication systems 7—90834
Fredkin gate array as high-efficiency optical interconnection network 7—110252
frequency translators, electro-optic, coherent optical fibre system appls. 7—103959
GaInAsP 1.5 μm broadband travelling-wave laser amplifier with high-saturation output power 7—68632
Gbit/s tuned optical receivers, noise performance 7—82855
glass optical guided-wave technology, review 7—68844
grating rhomb diode laser power combiner 7—130225
guided-wave multi/demultiplexers with high stopband rejection 7—82860
heterodyne optical receivers, transformer-tuned front-ends 7—117344
HF laser package for microwave optical communications 7—90832
HF optical communications, conf., Cambridge, Ma, USA (Sept. 1986) 7—88739
high capacity fibre optic systems, London, England (Feb. 1987) 7—66841
holograms, absorbing, mode-stabilized laser diodes prod., satellite communications link use 7—141816
holographic gratings for WDM 7—136237
in-line optical fibre filters using dispersive materials 7—68897
injection laser, frequency-modulated, with interferometer, high-frequency amplitude beat signal generation 7—82655
injection lasers, chirping and intersymbol interference reduction by pulse shaping 7—68724
integrated digital optical transmitter and receivers, high performance 7—82863
integrated optical filter, design *(Korean)* 7—82861
integrated optical filter, fabrication and improvement *(Korean)* 7—82862
integrated optics and guided wave transmission 7—123281
intersatellite and fiber-optic communication with stripe domains 7—75169
Japanese fibre-optic system and optoelectronic IC developments 7—90827
laser, narrow-linewidth, with prism grating/GRIN rod lens config. as external cavity 7—90657
laser diode, accelerated life testing considerations 7—141888
laser light modulation using acrylic plate Faraday rotator, educational use 7—102061
linear travelling wave semiconductor laser amplifiers for optical communication systems 7—130151
linewidth analyser *(Japanese)* 7—123045
linewidth reduction by coupled-phase-shift DFB lasers 7—141858
liquid crystal ferroelec. spatial light modulators for optical interconnection 3D gate array 7—136491
long-span optical fibre transmission systems, 2 to 4 μm wavelength 7—68889
long-wavelength high-reliability lasers, characts. 7—97015
MESFET front-end cct. for 1.55 μm, 450 Mbit/s high-sensitivity receiver design and a long distance transmission experiment 7—117347
microoptical components for optical communication, microlenses *(Japanese)* 7—68812
multimode fibre design, trends 7—142023
multimode optical transmission lines, planar microoptical multiplexer/demultiplexer 7—75167
narrow-bandwidth optical waveguide transmission filters, all-fibre device 7—82858
novel fibre break locator for optical duplex transmission systems 7—82856
optical branching waveguide, modal distrib. eval. by phase space method 7—123193
optical CPFSK 2 Gbit/s 202 km transmission experiment using a narrow-linewidth multielectrode DFB LD 7—141880
optical FDM transmission system with eight 5-GHz spaced channel 7—117346
optical fibres, dispersion characts., tutorial review 7—130351
optical switch using thermo-optical effect 7—97172
photodetector with fiber-optic communication line, EM noise resistant 7—136603
photodiodes optical fibre communication, rise-time meas. 7—102526
photonic switching, conf., Incline Village, NV, USA (March 1987) 7—102019
polarisation controlling coatings appl. 7—136604
polycarbonate stacked film star coupler 7—110594
optical communication equipment continued
Raman fibre amplifier characteristics for use in optical transmission systems 7—110451
semiconductor DFB laser, multielectrode, FM 7—97010
semiconductor DFB laser sources for coherent optical communication systems 7—68901
semiconductor injection lasers, reliability 7—141887
semiconductor laser amplifier for multiplexed coherent systems 7—68725
semiconductor laser devices for coherent optical communication 7—90671
semiconductor laser-amplifier repeater, bidirection and two-channel transmission system meas. 7—136600
semiconductor lasers for optical fibre communications 7—130163
single-mode fibre designs for telecommunications, review 7—130352
single-mode laser diode, coupling to optical waveguide via gap, theoretical study 7—90779
single-mode optical-fibre switch 7—90828
single-mode-fibre passive components made in the fused-head-end technique 7—82857
soliton generation at 1.5 μm, femtosecond single-pass cascade Raman scatt. 7—141996
TE-TM polarization transformer with reset-free optical operation for monolithic integrated optics 7—136621
TEGFET based baseband photoreceiver, sensitivity improvement with low-temp. operation 7—68895
thermoelectrically tunable DBR laser, monolithically integrated 7—141861
transmitter/receiver, boresight alignment 7—75018
travelling-wave optical amplifier at 1.3 μm 7—141859
tuned optical receivers, improved design 7—117345
TW semiconductor laser amplifier, picosecond pulse response 7—136298
twin-rectangular-cored fibre couplers, fabrication and characts. 7—97147
WDM demultiplexer with chirped grating, design 7—75168
AlGaAs/GaAs double heterostruct. laser diode for fibre optic transmission system 7—103817
AlGaAs-GaAs DFB lasers, λ/4 shifted, double window structs., MOCVD fabrication and characts. 7—97028
AlGaAs-GaAs GRIN-SCH SQW microcleaved facet laser as one-chip optoelectronic integrated transmitter 7—68679
Er^{3+} doped fibre amplifier operating at 1.54 μm 7—141881
Er^{3+} doped single-mode fibre laser, AlGaAs diode laser pumped operation 7—141882
GaAlAs/GaAs surface-emitting laser, directly modulated, single longitudinal mode operation 7—117202
GaAs monolithic receiver and laser driver for GHz transmission rates 7—90830
GaAs monolithically integrated photoreceiver with large gain-bandwidth product for 800 nm wavelength 7—97174
GaAs Schottky photodiode and FET association, planar monolithic integrated photoreceiver 7—95651
GaAs, waveguide interferometers and couplers for high-speed electro-optic modulation and switching 7—75117
GaAs-GaAlAs Bragg grating filters, rib waveguide type for 1.5 μm wavelength 7—97125
GaInAsP 1.5 μm travelling-wave laser amplifier with angled facets 7—136301
GaInAsP/InP BH lasers, CW operation at 3 μm at room temp. *(Korean)* 7—82561
GaInAsP-InP 1.5-1.6 μm bundle-integrated-guide DBR lasers 7—117204
GaInAsP-InP DBR injection locked dynamic single mode lasers, struct. and fabrication 7—130165
GaInAsP-InP laser, five-wavelength integrated DFB with quarter-wave-shifted structures for WDM 7—130158
GaSb-AlGaSb MQW laser diode, high-speed modulation characts. 7—68720
GaSb-AlGaSb MQWs, electroabsorption effect and high-speed waveguide optical modulator fabrication 7—90767
He-Ne 1500 nm stabilised transverse Zeeman laser, expt. for coherent communication 7—68612
He-Ne lasers, freq. stabilisation at 1.52 μm 7—68611
HgCdTe photodiodes for heterodyne appls. 7—73425
InGaAs 8 GHz low-noise p-i-n photodiode for GaAs FET optical receiver 7—68896
InGaAs/InP p-i-n photodiodes for microwave fibre links, high-speed self passivated 7—97173
InGaAsP 1.5 μm travelling-wave laser amplifier with 5.2 dB noise figure 7—68631
InGaAsP BH laser with 22 GHz bandwidth and high modulation efficiency 7—136299
InGaAsP DFB lasers for optical communication, operational characts. 7—130164
InGaAsP Fabry-Perot cavity-type laser amplifier for 1.5 μm wavelength. 7—104033
InGaAsP MQW BH lasers grown by LPE, dynamic spectral linewidth 7—68633
InGaAsP/InP 1.3 μm DFB p-substrate partially inverted BH laser diode 7—96999
InGaAsP/InP lasers at 1.3 μm with high facet power densities, CW performance 7—97007
InGaAsP-InP DFB lasers, 1.53 μm, VPE fabricated, very low-threshold design 7—97027
InP/InGaAsP heterojunction photodiodes for 1-1.6 μm high bit rate communications 7—73421
$LiNbO_3$ based electro-optical devices, modelling and BPM calcs. 7—104045
$LiNbO_3$ integrated-optical wavelength multiplexer/demultiplexer for single mode systems 7—136606
$LiNbO_3$ low-insertion-loss tunable WDM 7—142043
$LiNbO_3$:Ti electro-optically tunable narrowband wavelength filter 7—97177
$LiNbO_3$:Ti nonblocking 4×4 switch array for optical switching system 7—136617
$LiNbO_3$;Ti directional coupler polarisation splitter, design, operation and characts. 7—97178
Nd^{3+} doped fibre laser operating at 938 nm, diode-laser-pumped 7—142040
Si Fabry-Perot interferometers, micromachining manufacture 7—134841

optical components *see optical elements*

optical computing *see optical information processing*

optical constants
see also light absorption; reflectivity; refractive index
absorbing thin film *n*, *k* and *d* meas. by multi-incident-angle ellipsometry *(Chinese)* 7−99956
amorphous semiconductors, Urbach rule, mol. model 7−85586
antiferromagnetic semicond., conduction electron spectrum, optical absorpt. edge shifts, Hubbard operator diagram technique calcs. 7−76730
Bechgaard salts, dimerisation, vibronic structs. and optical gaps 7−98362
chalcogenide glasses, laser-induced optical anisotropy and photodarkening 7−85572
coating, IR opaque, materials survey 7−110532
crystals, n-dimensional, interband dielec. function of crit. point electrons, fractional integral representation 7−77493
electron spectrum and indirect exchange 7−138213
films, dispersion effects on optical consts. determ. 7−106292
graphite-K intercalation cpd., normal and hydrided, optical reflectivity studies 7−125670
II-IV-V_2 phosphides, semicond., optical refl. spectra, optical functions, band calcs. 7−113220
III-V semiconductor zinc-blende systems, high press. phases and phase transformations 7−105004
III-V semiconductors, dielec. function, optical consts., Kramers-Kronig relations 7−118978
inhomogeneous media, optical dielec. function derivation near percolation, phenomenological approach 7−125676
inhomogeneous media, optical props., mean field theory and scaling laws 7−85573
isolated small spheres, stopping power, analytical calc. 7−117998
KR5-5, optical absorption edge, press. depend. interferometric obs. 7−77492
laser erosion torch, absorpt. and scatt. variations 7−113118
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7−125752
liquid crystals, isotropic phase, nonlinear optical props. 7−103874
metal optical constants determ. by surface polariton excitation using attenuated total reflection *(German)* 7−113306
metal-semiconductor random heterostructures, Cu, Ag, Au embedded particles, microstructures for IR detection 7−132290
metal-semiconductor superlattices, with adsorbed diatomic mol. layer, IR absorpt. study 7−99849
metallic mirrors, temp. depend. of absorpt. coeff. 7−130291
metals, absorptivity, integral hemispherical, electrical resistivity meas. 7−130518
metals, optical constants, Kramers-Kronig method determ. *(Japanese)* 7−132231
metals, optical consts. evaluation from emissivity 7−125679
methyl cyanide, liq., optical consts., IR dispersion spectra 7−70798
mineral optical reflectivity meas. method for polished absorbing grains 7−133946
montmorillonite pressed pellets, prep. depend. props. rel. to optical consts. meas. in FIR 7−92627
multilayer film optical constant determ. 7−125677
multilayer Langmuir films, photoinduced optical anisotropy 7−138531
multiple-frustrated total-internal-reflection spectroscopy, optical constants 7−116010
noble metal like films, optical props. 7−106293
opacity coefficients, Thomas-Fermi model anal. 7−106115
poly(vinylidenefluoride-trifluorethylene) ferroelectric copolymers, phase transition, spectroscopic study in submillimetre region 7−118956
trans-polyacetylene, anisotropic defect photogeneration, interchain effects 7−106132
polymers, conducting, synthetic metal superlattices 7−105664
practical techniques for the determination of optical constants 7−121182
quantum well structs., two-photon absorption 7−85579
quantum wells, quasi-2D excitons, phonon sideband, absorpt. spectral characts. 7−85775
quantum-well wire, exciton binding energy 7−70204
Schottky diodes, photocurrent polariton peak, optical const. effects 7−105659
semiconductor amorphous films, optical absorpt. 7−106291
semiconductor-metal system, photodoping process modelling, three-layer struct. and optical consts. *(Russian)* 7−137384
semiconductors, cathodoluminescence, scanning electron microscope meas., semicond. parameters determ. 7−132346
semiconductors, II-VI and III-V, 3d impurity induced transitions, optical cross section 7−106123
semiconductors, photon assisted two-photon transitions 7−132230
sodium cryptand(2.2.2) sodide, optical reflectivity and absorpt. meas. 7−113222
stibnite (Sb_2S_3), reflectivity and optical consts. at 546 nm 7−133946
strained-layer superlattices, (111) growth axis, nonlinear optical response 7−136401
TCNQ salt, TeEA(TCNQ)$_2$, IR props. 7−99850
$(TMTSF)_2AsF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2SbF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2X$ salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
$(TMTTF)_2X$ salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
water, liq., optical consts., temp. variation, Fourier transform IR spectra 7−77532
zincblend III-V semiconds., chem. bond ionicity calcs. *(Russian)* 7−137305
Ag chemically deposited layer on glass, optical props. 7−138525
Ag particle array, optical absorbance 7−113300
Ag_xTiS_2 intercalation cpd., Z 7−99855
Al optical constants determ. 7−108614
Al surfaces, optical constants, ellipsometric studies 7−113115
$Al_xGa_{1-x}As$ MBE layers, energy gap, Al conc. depend., photoluminesc. meas. 7−138507
As_2O_3-V_2O_5, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
As_2Se_3 amorphous films, photoabsorption and photorefractive effect under pulsed excitation 7−113304
As_2Se_3 glassy films, photoabsorption and photorefraction under pulsed excitation 7−106118

optical constants continued
Au, optical props. at subMM wavelengths 7−70731
Au-MgO cermet thin films, optical dielec. function derivation near percolation, phenomenological approach 7−125676
AuV, far IR optical absorpt. study 7−99783
B_2O_3-V_2O_5, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
BaTe, optical response and band struct. under press. 7−98803
$BaTiO_3$ photorefractive crystals, intensity-depend. absorpt. coeff. 7−143999
Bi size quantised films, interband absorption 7−138529
$Bi_{12}SiO_{20}$, optical absorption, hydrostatic press. dependence 7−143998
a−C films, arc evaporated, optical and mobility gap determ. 7−125674
C glassy layers, optical and electrical energy gap investig. 7−84651
a-C:H films, arc evaporated, optical and mobility gap determ. 7−125674
C-Sn amorphous thin films, semicond., optical and elec. props. 7−70318
$C_{1-x}Sn_x$:H, amorphous films, sputter-assisted plasma chemical deposited, structural and optical props. 7−125838
$CdGa_2Se_4$:Co^{2+}, pure and doped, optical energy gaps, temp. depend. 7−138411
$CdInGaS_4$, photoluminescence props. 7−125805
$Cd_{1-x}Mn_xSe$ solid solns., variation of optical energy gap with composition 7−70735
$CeBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
Cs, optical spectra, refl. coeff., electronic struct., high press. calcs. 7−99886
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crysts., optical and elec. props. study 7−118542
$CuInSe_2$ thin films, DC triode sputtering conditions rel. to elec. and optical props., solar cell appls. *(Japanese)* 7−100069
Cu_2O, electrodeposited films, optical absorption coeff. and thickness meas. 7−144145
Cu_2O on stainless steel, thin films galvanostatic deposition 7−118315
Cu_6PS_5I, superionic phase transition, dielec. and optical props. 7−69966
FeS_2 pyrite thin layers, spray pyrolysis deposited, absorpt. edge meas. 7−119058
GaAs films, electro-co-deposited, structural, electrical and optical props. 7−92899
GaAs, optical spectroscopy of unoccupied density of states 7−106208
GaP, band edge shift and X_1-X_3 absorption, donor conc. depend. 7−113111
GaP, optical spectroscopy of unoccupied density of states 7−106208
GaSe, recombination mechanisms investig. by optoelectronic switching 7−131663
Ga_2Se_3:Fe, optical absorption, photocond., temp. coeff. *(Korean)* 7−84996
Ge amorphous, optical consts. from EELS, Kramers-Kronig anal. 7−144192
Ge amorphous film, electrical and optical props., influence of substrate temp. 7−143645
Ge bicrystals, grain boundaries, electronic props. 7−124917
Ge, optical absorpt. apparent value, effect of surface smoothness *(Chinese)* 7−125660
a-Ge sputtered films, optical gap and void fraction, thickness depend. 7−125828
a-Ge:H, optical properties, influence of hydrogenation *(Korean)* 7−85576
a-Ge:Si layers, amorphised by ion implantation, optical props. rel. to enthalpy of relax. 7−85578
Ge-As-S thin films, refractive index and absorption coefficient 7−85872
Ge-Sb-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
Ge-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
a-$Ge_{1-x}C_x$:H, RF sputtered, IR, optical, EPR study 7−144137
GeO_x thin films, optical absorption edge, deposition press. effects 7−106290
$(GeS_2)_x(As_2S_3)_{1-x}$, absorpt. edge under hydrostatic press. 7−106126
$Ge_x(Se_{1-y}Te_y)_{1-x}$ glasses, prep., for optical appl. 7−106119
HD, solid, rot. $R_0(0)$ transition, interf. effects 7−98000
He-Ne double-wave laser interferometer for thin-film optical constants *(Chinese)* 7−115998
HfS_2, indirect absorpt. edge, transmission spectra meas. 7−132298
$Hg_{1-x}Cd_x$Te:In, Burstein-Moss effect 7−106128
HgTe-CdTe superlattices, optical props., quantitative theory 7−92629
InSb single crystals, effect of laser radiation in liquid N_2 medium *(Japanese)* 7−132382
InSe amorphous thin films, optical absorpt., effects of thermal annealing 7−85882
$KPbI_3$-Al(Au)(Ni)(Cu)(glass), vacuum deposited films for photothermal conversion 7−85585
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., IR and Raman spectra studies 7−92666
La_2O_2S single crysts., optical props. study 7−144007
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, for IR meas. 7−105825
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma edge and optical phonon spectra 7−113117
LiH, reflection spectrum, optical consts., 4-40 eV range 7−138400
$LiNbO_3$:Mg, doped and undoped, fundamental absorpt. edge, spectral depend., superlattice model 7−92636
Mg_2NiH_4 electric conductivity temp. dependence 7−105556
a-MoS_3 thin films, fundamental energy gap, optical studies 7−99955
Na, optical conductivity, pseudopot. method calcs. *(Russian)* 7−99777
$(Na_2B_4O_7)_{80}$-$(Pb_3O_4)_{20-x}$-$(CuO)_x$ glasses, IR spectra, optical absorpt., DSC obs. 7−104568
NbC_x, optical and elec. props. 7−85649
Ni, optical props. at subMM wavelengths 7−70731
P_4Se_{10} amorphous thin films, photoinduced changes in optical and struct. props. 7−132362
Pb, optical props. at subMM wavelengths 7−70731
Pb thermoreflectance meas. appl. to optical constant determ. 7−77520
PbSe laser-deposited films, IR absorpt. and electronic struct. props. 7−77672
PbSe, quasilocal states, vacancies, impurity bands, optical absorpt. spectra 7−106218
$Pb_{1-x}Sn_xTe(Se)$, free-carrier absorption spectra 7−77528
Pt-Al_2O_3 cermet thin films 7−125676
Pt-Si, glassy alloys, dielec. functions and optical conductivity 7−99791
Rb, optical spectra, refl. coeff., electronic struct., high press. calcs. 7−99886
SB_2S_3 (mineral), reflectivity and optical consts. at 546 nm 7−133946
$Sb_{0.2}Se_{0.8}$ amorphous films, photoinduced optical density changes and crystn. 7−77670

optical constants continued
$Se_{1-x}Sb_x$ semiconducting glasses, optical energy gap meas., photoacoustic studies 7−144001
$Se_{1-x}Te_x$ semiconducting glasses, optical energy gap meas., photoacoustic studies 7−144001
Si bicrystals, grain boundaries, electronic props. 7−124917
Si, optical absorpt. apparent value, effect of surface smoothness *(Chinese)* 7−125660
Si surface, anisotropically etched, selective IR optical props. *(Russian)* 7−77550
Si surfaces, Ne^+ ion bombard., implantation, spectroscopic ellipsometry study 7−84062
a-Si:C, doping effects on defects, optical and electrophys. props. 7−137380
Si:H, amorphous and cryst., temp. depend. optical absorption 7−99781
a-Si:H, deep localised states of D-centres originating from dangling bonds 7−84772
a-Si:H, doped and undoped, density of states 7−84623
a-Si:H, optical absorption edge, photoacoustic spectroscopy study 7−125669
Si:H films, amorphous and polycrystalline, optical gaps, 4 to 973 K 7−125680
a-Si:H films, electron cyclotron resonance microwave plasma CVD, photodiode appl. 7−86050
a-Si:H films, microwave electron-cyclotron-resonance plasma CVD 7−100104
a-Si:H films, optical and elec. props., film thickness effects 7−106133
a-Si:H films, RF glow discharge deposited, optical props. 7−119163
a-Si:H films, thickness, homogeneity and optical props. 7−70923
a-Si:H(H,P) films, optical and electrical props. 7−85871
Si-Ag, tailored microstructures for IR detection 7−132290
$Si\text{-}Si_{0.5}Ge_{0.5}$ superlattices, strain induced confinement 7−125090
$Si\text{-}SiO_2$ amorphous multilayered structures, quantum dimensional effect 7−85126
$Si_{1-x}Ag_x$:H amorphous thin films, RF sputtered, optical props. 7−92757
a-SiC:F(H) films, prep. by magnetron sputtering, props. 7−112400
a-SiC:H,B, elec. and optical props., substrate temp. depend. *(Korean)* 7−137936
a-SiC:H magnetron sputtering, H effects on film props. 7−92866
a-SiC:H thin films, magnetron sputtering using methane *(Japanese)* 7−92887
$Si_{1-x}C_xH_{2-y}$, semicond. polymer, electronic, optical and struct. props. 7−99961
SiH,B(P) plasma CVD coatings with $(SiH_2)_n$ groups, doping, cond., optical gap control 7−98750
$a\text{-}SiH_x$:B, annealing effect on optical props. *(Korean)* 7−85876
$a\text{-}Si_{1-x}H_x$ films, vibrational and optical props., optical absorpt. and Raman scatt. meas. 7−125830
SiN_x:H amorphous films, optical props. 7−144140
$Si_{1-x}N_x$, amorphous, electronic struct., defect states, optical absorpt. 7−124930
Si_3N_4, amorphous, ion irrad., optical absorption edge shift 7−77495
SiO_2, fused silica, extinction coeff. for CO_2 laser wavelengths, temp. depend. 7−92628
SiO_2 quartz, optical props., influence of thermal annealing after $N^+(O^+)$ ion implantation 7−106130
$Sn_2P_2(S_xSe_{1-x})_6$ uniaxial ferroelectrics; critical behaviour near Lifshitz point 7−118961
SnS single crystal, optical energy gap calc. from absorpt. coeff., temp. depend. 7−85563
SnS thin films, chemical deposition and optical props. 7−126037
SnTe thin films, synthesis by solid-state reactions 7−100057
SrTe, optical response and band struct. under press. 7−98803
$SrTiO_3$, fund. absorpt. edge meas. 7−106125
Tb-Co sputtered films, mag. and magneto-optical props., stability in air 7−144043
$ThBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
Ti, thin films, struct. and optical props. meas. 7−144136
TmS, optical props., spectrum of ground electronic states 7−98848
UBe_{13} heavy fermion superconductor, optical props. 7−92630
UBe_{13}, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
V films, vacuum evaporated, struct. and optical props. 7−143269
$V_2O_5\text{-}P_2O_5$, semiconducting glass, optical absorption *(Korean)* 7−85771
WO_3 thin films, CVD deposited, structure and optical props. 7−70928
$W_{1.02}Se_2$, optical consts. from reflectivity meas. 7−85566
YAG:Nd stoichiometry charactn., absorption spectroscopic method 7−98481
Y_2SiO_5:Ce thin films, cryst. and amorphous, struct. effects on absorpt. and luminesc. props. *(Russian)* 7−85884
$(YSmCa)_3(FeGaV)_5O_{12}$, He^+ implanted, dielectric tensor elements, spectral and temp. depend. 7−144033
YVO_4, press.-induced transition from zircon-type to scheelite-type struct., Raman study 7−142984
N-ZnSe, free carrier absorption, materials characterisation 7−113108
ZnTe films, optical props. 7−99951
ZnTe, press. depend. of lowest direct absorption edge 7−70840
ZrS_2, indirect absorpt. edge, transmission spectra meas. 7−132298

optical correlation
acousto-optic triple product processor and its applications 7−117148
acousto-optical processors, transform domain filter effects anal., simulation 7−82495
acousto-optical time-integrating correlator for signal detect. *(Korean)* 7−82755
acoustooptic image correlators 7−74872
adaptive real-time pattern recognition using a liquid crystal TV based joint transform correlator 7−90512
adjustment errors influence on optical information processing system operation 7−122845
associative processor, error-correction coding 7−122840
astigmatic system, random signal processing 7−68570
astronomical speckle masking, image reconstruction by cross triple correlation 7−101693
binary phase-only filter reconstruction using Hughes liquid crystal light valve 7−82471
binary phase-only filters, multiplexing capabilities 7−82472
coherent optical image correlation system, behaviour of binary spatial light modulators 7−82772

optical correlation continued
coherent-optical correlator with spatial carrier combined modulation 7−68816
colour image statistical pattern recognition filter using incoherent optical correlator 7−129988
computer-assisted spectrum-resolved SHG autocorrelator for monitoring phase characteristics of femtosecond pulses 7−136387
correlator anal. and improvement 7−110285
distortion invariant recognition using iteratively designed optical correlation filters 7−74876
dynamic frequency plane image correlator based on photorefractive nondegenerate four wave mixing 7−110283
dynamic light scattering, correlation techniques 7−90521
filters, distortion-invariant, iterative technique for synthesis 7−103759
holographic filters, optimal property 7−68592
holographic measurement systems, correlation props. 7−90549
image correlator, updatable, optimisation 7−110267
in-plane translation meas. by speckle calculation, using linear image sensor 7−80863
inhomogeneously broadened absorbing materials, convolution correlation and storage of optical data 7−82729
integrated-optic correlator, time integration, Bragg acoustooptic cell, bandwidth study 7−82868
laser beam propag. in turbulent atm., correlation and structure functions 7−94436
laser Doppler velocimetry, low cost photon statistics technique 7−69292
liquid crystal TV spatial light modulator, distortion correction with real-time joint transform correlator 7−136446
low noise correlation filters construction 7−74877
microscopic cell image sequences, motion vectors determ. 7−94037
motion blur compensation of CCD endoscope images by colour deviation method 7−90529
multichannel optical correlator/convolver utilizing the magnetooptic spatial light modulator 7−110248
multiclass stochastic images buried in additive noise, classification using optimal correlation filter 7−68576
multimode fibres, statistical correlation of optical field, vibr. effect 7−104013
multiply scattered radiation field, time correl. function 7−68555
neural model anal. as associative memories Hopfield algorithm generalisation 7−136226
nonclassical correlation between light beams in a Jaynes-Cummings-type model system 7−141819
object recognition with incoherent holographic correlators 7−122864
overlapped input images, Fourier transform 7−117149
partially coherent optical correlator with phase defects at input plane, anal. 7−74854
particle image velocimetry, directional ambiguity removal using holographic image separation 7−104360
pattern recognition using volume Fresnel holographic filter 7−110272
phase distortion, signal depend., in spatial modulator, effect on optical correlator performance 7−110249
phase-only and classical matched filters, scale sensitivities 7−68818
picosecond light pulse phase and width meas. by third order correlation function method *(Chinese)* 7−130209
quantum optics field operators, commutation relations and correl. functions *(German)* 7−90562
quasiphase-only matched filtering 7−110538
real-time polychromatic signal detection using colour liquid crystal television 7−110268
receiver SNR, light intensity correlations effect 7−128657
rotation invariant correlation filters, iteratively designed, expt. use 7−136211
sine-cosine cascade correlator with real-valued filters 7−103761
single-clipped correlation and the Bell polynomials 7−90532
speckle patterns, light scatt., correlation props. 7−122825
thin inhomogeneous method, phase conjugation resolving power 7−68793
three-level system, quantum beats theory in optical transmission correl. and pump probe meas. 7−68474
time-integrating optical correlators, coherent differential demodulation 7−82496
Vander Lugt correlator, appl. to industrial inspection 7−74878
$Bi_{12}SiO_{20}$, 3D photorefractive signal processing 7−103765
He-Ne laser, 3.39 and 7.69 μm wavelengths, intracavity light correlation 7−122918
$LiNbO_3$ photorefractive acoustoelectro-optic correlator 7−130005
Nd:YAG laser radiation phase modulation with SHG of ultrashort pulses, correlation meas. 7−141903

optical correlation methods *see optical correlation*

optical correlators *see optical correlation*

optical coupler losses *see optical losses*

optical couplers
backward wave, sensors, anal. 7−123210
bandpass filters, co-directional, mode converting, spatially-variant coupling design 7−103948
beam transformers for obtaining low-loss splices between dissimilar single-mode fibers 7−104011
biconical tapered couplers, automated manufacture and charactn. overcoupled operation 7−123257
branching component for bunched optical fibre using two GRIN rod lenses 7−82805
chirped gratings for efficient coupling into nonlinear waveguides 7−130319
coherent nonlinear directional coupler, power depend. switching in presence of saturation 7−123192
commutation devices using gradans for fibre optic communication lines, parameter meas. 7−104025
concatenated tapered coaxial couplers as all-fibre wavelength filters 7−103943
connector with spherical-ended fibres *(Japanese)* 7−82815
coupled mode theory 7−68855
coupled-cavity lasers, coupling coeffs. 7−74990
coupled-mode equations for guided modes in two parallel waveguides 7−103972
cubic crystals, photorefractive two-beam coupling 7−144021
curved planar Bragg gratings, coupled beam anal. 7−136528
demountable multi-fiber connectors for optical waveguides 7−68882
densely spaced WDM coherent optical star network 7−142039
diode laser arrays, coupling with photorefractive passive phase conjugate mirrors 7−110414

optical couplers continued
directional coupler, fibre-film single mode 7−82809
directional coupler resonators as guided-wave optical components 7−117309
directional couplers, grating-assisted, made of nonidentical asymmetric slabs 7−82780
directional couplers with two level saturable media, parameter tradeoffs 7−136510
directional-coupler wavelength filters made of dissimilar single-mode fibres, bandwidth 7−68850
discontinuity anal. in optical waveguides *(Japanese)* 7−141991
doublecore optical fibres, propagation props. 7−136574
fiber optic components for communication applications 7−136605
fibre communications and computer networks, conf., Cambridge, MA, USA, (Sept. 1986) 7−128181
fibre coupled CO_2 laser for medical use 7−79054
fibre coupler, tapered, fused, optical charcts. while undergoing fabrication 7−103999
fibre coupler fabrication method with automatic fusion-elongation processes 7−123227
fibre couplers, single-mode fused tapered, core effects 7−104021
fibre ends, positioning and treatment *(French)* 7−130374
fibre Michelson interferometer, coherence determ. of single freq. semicond. laser 7−142014
fibre optic connectors, developments 7−142018
fibre optic connectors, optical component specifications 7−75152
fibre optic connectors with spherically convex-polished ends, connection stability *(Japanese)* 7−97166
fibre optic fanout connector for fibre-ribbon cable termination, struct. design 7−110595
fibre optic interconnects, reliability 7−142032
fibre optic power divider, 3-dB fabrication for sensor appls. 7−130364
fibre optic sources, high reliability packaging 7−142041
fibre optic system advanced components 7−123260
fibre optic systems, review 7−130377
fibre splicing techniques involving crimping *(German)* 7−130347
fibre star coupler, biconically tapered, fabrication 7−110612
fibre-optic ring resonator, novel type, for wavelength selective transmission 7−104004
fibre-optics, single-mode, coupler, demultiplexing 7−142025
fibres, EM fields at facets 7−104001
force sensors and weighing systems, coupled by beam waveguide *(German)* 7−121102
Fredkin gate array as high-efficiency optical interconnection network 7−110252
fused tapered couplers, condition for insensitivity to external refractive index 7−68847
fused tapered couplers reliability 7−142031
gain-switched pulse-compressed DFB laser diodes for optical waveform sampling 7−68729
grating coupler, two-beam coupling into planar waveguide study 7−82787
holographic lens-fibre coupling system coherent transfer function 7−123247
injection heterolasers and diffuse planar optical waveguides, coupling methods 7−68838
installed link, attenuation meas., insertion loss modification method 7−136577
integrated optical circuits appls. of curved waveguides 7−103983
integrated optical directional couplers, charactn. by local absorpt. technique 7−110564
interwaveguide transmission efficiency 7−110576
jointing of monomode optical fibres *(Spanish)* 7−117339
laser and single-mode fibre far field power meas., two dimens., high ang. resolution and dynamic range 7−82833
laser diode array, injection locking and single-mode fibre coupling 7−103846
laser diode to multimode fibre coupling, using plano-convex GRIN lens 7−130335
laser output coupler based on a radially variable interferometer 7−141877
lens coupling systems for laser modules and single mode fibres *(German)* 7−136590
lens formation by fiber fusion for terminating optical connectors 7−130344
liquid crystal ferroelec. spatial light modulators for optical interconnection 3D gate array 7−136491
LP_{01} and LP_{11} modes propagation in coupled fibres 7−123273
Mach-Zehnder interferometer, compact all-fibre, as elec. activated switch 7−104008
mirror matching with hollow dielectric waveguide 7−90787
modified 1×2 directional coupler modulator with low drive voltage 7−90768
non-parallel dielectric rod waveguides, coupling analysis 7−103967
nonlinear directional couplers, saturation and loss 7−90774
nonlinear directional couplers with integrating nonlinearities, response anal. 7−75112
nonlinear optical fibre loop closed by a coupler, field fluctuations 7−110584
nonlinear optical waveguide devices 7−82849
nonlinear prism coupler, optical bistability 7−117313
nonlinear prism output coupler, theoretical study 7−75084
overjacketed single-mode fibre taper devices, gap device props. 7−136581
passive fibre optic components using dispersion shifted fibre, biconical fusion technique fabrication 7−68890
passive integrated optical components made by ion exchange in glass 7−136611
planar waveguides, prism coupling, photothermal displacements, optical bistability 7−75114
polarisation-maintaining single-mode fibre/semicond. laser optical coupling technique 7−68849
polycarbonate stacked film star coupler 7−110594
polymer waveguides, efficient grating coupler fabrication by reactive ion beam etching 7−117302
pressure tolerant single-mode fiber coupler for sensor appl. 7−97136
prism couplers in guided-wave optics, design 7−117308
prism coupling into planar waveguides, self-pulsing 7−117318
prism coupling with optical waveguide having cubic nonlinearity 7−82788
reflection grating couplers for waves at oblique incidence anal. 7−103971
resonator with variable-refl. output coupler using standard grating and polarising components 7−117232
rigid contact between a channel $LiNbO_3$:Ti waveguide and single-mode fiber waveguides 7−130325
optical couplers continued
semiconductor active directional coupler, optical switching by saturation-induced phase changes 7−117256
semiconductor laser, coupling stabilisation to optical fibre *(Japanese)* 7−68884
semiconductor laser, high-power, external-cavity, with single-mode fibre output port 7−97035
semiconductor lasers, optical bistable, optical fibre directional coupled *(Chinese)* 7−103812
side coupler for coupling between laser diode and single-mode fibre 7−123200
signal processing devices design 7−104028
single mode fibre couplers, freq. multiplex operation 7−82812
single mode fused-tapered optical fibre couplers, tutorial introduction 7−130362
single mode to multimode optical fibre coupler, nonreciprocal behaviour 7−68862
single-mode fibre couplers, fused tapered, perturbation anal. 7−123203
single-mode fibre coupling to LED, efficiency and alignment tolerances 7−136559
single-mode fibre taper filters, wavelength response, fine tuning 7−82760
single-mode fibre Y-junction beam-splitter, fabrication, operation and performance 7−141970
single-mode fibre-coupler blocks, core-to-surface spacing determ. 7−68864
single-mode GRIN waveguide structures, propag. props. 7−82774
single-mode laser diode, coupling to optical waveguide via gap, theoretical study 7−90779
single-mode optical fibre ring resonator with nonlinear coupling 7−136572
single-mode-fibre fused coupler, propagating-beam model 7−75128
single-mode-fibre passive components made in the fused-head-end technique 7−82857
six-port fibre couplers, vector modes 7−141995
source-fiber optical coupler, excitation by light source 7−117343
spectral inverse problems for optical waveguides and couplers 7−136529
storage head, focusing grating coupler type, aberration minimisation under wavelength shift 7−110294
storage head, focusing grating coupler type, physical optics 7−110293
strongly-coupled mode theory appl. to integrated optical devices 7−90780
switch using piezoelectric actuated evanescent-wave directional fibre coupler 7−82859
symmetric three-guide optical coupler with nonidentical center and outside guides, power transfer efficiency 7−82778
transient behaviour of optical coupling constants of materials 7−137401
transverse coupling between single-mode fibre and thin film waveguide 7−103976
twin-rectangular-cored fibre couplers, fabrication and charcts. 7−97147
V-type fibre-optic couplers with low losses for duplex communication lines 7−130348
waveguide attenuation measurement, compensatory method 7−136524
wavelength dependence of devices fabricated in single-mode fibre 7−82840
wavelength-insensitive couplers using dispersive materials 7−117320
WDM narrowband wavelength-selective optical fibre tap and combiner 7−104003
(Al,Ga)As-GaAs MQW planar waveguides, optical props., reactive ion etching of rib waveguides and directional couplers 7−117350
AlGaAs-GaAs, nonlinear directional coupler, response calc. 7−130320
GaAlAs-GaAs stripe laser arrays, phase locking of stimulated emission using active directional couplers 7−141863
GaAs, waveguide interferometers and couplers for high-speed electro-optic modulation and switching 7−75117
GaAs-AlGaAs, waveguide, grating coupler, selective superlattice intermixing 7−141990
GaInAsP VIPs lasers, 1.3 μm, high-power output coupling to single-mode fibre 7−122961
$In_{0.52}Al_{0.48}As$ electro-optic directional coupler grown on InP by MBE 7−136498
K^+-doped borosilicate glass monomode ring coupler, fabrication 7−103984
KH_2PO_4 coated glass fibre optical coupler modulator 7−136545
$LiNbO_3$ directional coupler optical switch at 1.3 μm, compact design and performance 7−75170
$LiNbO_3$:Ti single-mode waveguide crossings and switches, design rules and appls. 7−104046
$LiNbO_3$:Ti directional coupler polarisation splitter, design, operation and charcts. 7−97178
SiO_2, plastic clad, fibre charcts., temp. depend. 7−68874
optical data processing *see optical information processing*
optical deflectors
acousto-optical deflectors, cryogenic large bandwidth, attenuation reduction 7−82762
acoustooptic deflector, bistability and multistability in wavelength 7−68822
electro-optical materials for optical electronics *(Spanish)* 7−117280
fibre-optic circuit switch, thermooptic bulk deflector, theoretical and expt. behaviour 7−142003
laser beam scanning, high speed, using acousto-optical deflector 7−123177
local beam deflector integrated in a diode laser cavity 7−82864
piezoelectric laser-beam deflector 7−123178
rectangular triangular prism of crystals with symmetry, light scanning on inclined face 7−90759
total-internal-reflection electrooptic deflector/modulator 7−90760
YAG laser marker with optical deflectors, operating principles *(Chinese)* 7−103861
optical design techniques
see also optical instruments
7.5 m thin meniscus mirror, gravit. deform. and support 7−90737
aberration theory rel. to optical design techniques 7−122858
aberrations calc. using ZX-Spectrum microcomputer, education appl. 7−103755
algorithms for optical thin film software 7−103935
alignment, fine adjustments 7−75097
aplanatic two-surface systems, design 7−123146
aspheric ophthalmic lenses, aberrations, design and performance 7−94020
aspherical objective lenses for compact disc players, design and measurement 7−90741
aspherical optics, conf., Orlando, FL, USA (April 1986) 7−88737
aspherical surface design, analytical method 7−90739
aspherical surfaces in optical systems, design methods 7−117290

optical design techniques continued
astronomical image reconstruction using space slit aperture telescope 7−115251
astronomical three-lens apochromatic objectives 7−82742
asymmetric reflecting surface CAD 7−103922
attenuator, programmable, for fibreoptic test environments, design approach 7−68898
balloon-borne FIR telescope design 7−115235
bi-aspherical readout lens, replicated, for optical disc systems 7−90742
boresight module, temperature stability 7−90746
CAD of optical system 7−103923
characteristic matrix anal. method 7−103920
coating design technique, automatic 7−90749
coating laboratories, IBM PC use for maximizing production 7−104069
code for system design optimisation in thermal-mechanical environments 7−117289
COMO, optical design program 7−110517
computer software, development 7−110515
computer-aided optical design 7−141960
concave grating spectrometers, aberration reduced, numerical design method 7−130306
conference, Innsbruck, Austria (April 1986) 7−108026
conference, Innsbruck, Austria (April 1986) 7−134352
contact lenses, spline algorithm and computing and developing 7−94018
Czerny-Turner spectrograph, automatic design by nonlinear optimisation method 7−121233
damped least squares optimisation, analytical derivatives 7−110522
decentered reflecting optical systems for high-speed cameras, meridianal aberrations computation and compensation 7−97119
depth discrimination criteria in confocal optical systems 7−110501
double-mirror concentric systems, overall-dimension calc. *(Russian)* 7−110498
dual-component multilayer optical coatings, synthesis method 7−90754
dummy lens for the computer optimization of autostigmatic null correctors 7−117285
electro-optical systems integration 7−136477
electrooptic travelling-wave modulators, broad-band, transmission line aspects of design 7−82768
Faraday optical isolator, design and limiting factors 7−82756
fibre optic connectors, optical component specifications 7−75152
fibres, dual-mode, dispersion free at 1.55 μm 7−90806
fibres, fabrication, light transmission, cable design 7−97158
fibres for sensors, design and fabrication 7−82851
flux density formulas, exact lens and mirror eqns. and caustic surfaces 7−123155
frame scan in image convertor camera 7−97170
Gaussian beam optical system analysis by microcomputer with artificial intelligence 7−110527
Gaussian brackets use, progress in optics book 7−66843
Gaussian Schell-model beams, propagation, matrix method 7−110524
gradient index optical imaging systems, conf., Reno, NV, USA (Jan. 1987) 7−95098
gradient index optics 7−141962
grating fabrication by microcomputer and laser printer 7−136627
grazing incidence optics, modified sine condition 7−96946
GRIN lenses with revolution symmetry, effective radius, numerical aperture 7−130287
HOE design using equivalent lens method 7−123157
holographic lens design for near IR 7−96952
holographic zone plates with aberration corrections, systematic design method 7−110539
illumination distribution in diffraction image of off-axis point 7−110269
illumination system analysis, local illuminance calc. 7−123149
integrated optic waveguide-field overlap, polarisation insensitive modulator design appls. 7−104047
integrating sphere-Fourier transform spectrophotometer emissometer for diffuse IR reflectance meas. design 7−108627
interactive program for computation of stray radiation in infrared telescopes 7−140726
IR, adaptive, and synthetic aperture optical systems, confs., Arlington, VA, USA (Apr. 1985), Orlando, FL, USA (Apr. 1986) 7−108025
IR system athermalisation techniques, defocus effect 7−123147
IR systems, spatial resolution, automated characterisation 7−110528
IR systems design, impact of novel production methods 7−117360
Kirkpatrick-Baez grazing incidence X-ray mirrors, automated figure formation 7−95709
Laguerre-Gaussian beams derivation of ABCD law 7−136205
laser diffractometer for small dimensions errors introduced by Fourier processor 7−103748
laser scanning subsystems, specifications 7−75015
laser scanning system, rotating polygon mirror and drive systems 7−75017
laser windows, IR optical materials 7−75011
lasers, design and component specification for high power systems 7−74963
lasers and optical systems, component specifications, conf., (Los Angeles, CA, USA, Jan. 1986) 7−72709
lens design, multilevel approach to user-friendly software 7−110516
lens design, optimisation by extended range diffraction based merit function 7−110518
lens model by CODEV, translation into IGES input file 7−110526
lens principal plane location, focal length determ. by least-squares technique 7−130286
matrix algebra appl. to beam optics solution *(Slovak)* 7−129949
matrix analysis of optical systems with arbitrary quadratic phase-amplitude correctors 7−141961
micro-optics, design, specification and manufacture 7−75176
microcomputer programme for optical design 7−75095
mirrors, graded reflectivity, design and characterisation 7−123153
monochromator, high power, design and fabrication 7−97124
monochromators based on Wadsworth binary system, astigmatism elimination using cross-dispersion *(Russian)* 7−110544
multi-passband birefringent filter types *(Chinese)* 7−97122
multielement homogeneous thin-film lens design 7−90747
multilayer coating design programs 7−103931
multilayers, spectral props. variations from different coating runs, inverse synthesis anal. 7−103936
multiple aspheric systems for lithography of VLSI circuits 7−90745
multiple mirror telescope, four-barrel, design, performance, aligning and phasing method 7−115242
objective lens assemblies, opto-mechanical designs 7−136476
optical design techniques continued
ocean-optical studies, design, testing and calibration of semiconductor laser-based instrumentation 7−139811
ophthalmic lens design with splines 7−94017
optical elements, design, inverse scatt. problems 7−136472
paraxial theory of optical system with plural decentered sub-systems by means of Gaussian brackets 7−110521
periscope design, glass choice procedures 7−117291
perturbed aspherics, use in broad band optical systems, design 7−90743
phase function of spatial coherence from multiple intensity correlations 7−110503
phased array optical systems, operation and design 7−110509
phased array system, arbitrary config., performance degradation due to system jitter 7−110513
phased array system, zero opt. path difference, Ar laser spectral content effect 7−110514
phased array systems, diffr. limited multiple aperture, alignment constraints 7−110506
phased array systems, polarisation-related coherence losses 7−110504
phased array systems, technique for aligning and phasing of multiple apertures 7−110505
planar waveguide refractive waveguide lenses: a new design 7−68904
polarisers, thin-film cubic-type, for high power lasers, design parameters 7−117220
prism couplers in guided-wave optics, design 7−117308
raster, plate-type, elementary cell, investig. 7−103939
ray tracing, non-rotationally symmetrical systems using desktop computer 7−110520
reflectors, parabolic cylindrical, cross-polarisation, aperture-field uniformity 7−130288
refracting system design for annular laser beam transform. 7−110425
refractive Offner compensators, third-order design 7−117284
relative illumination calculations 7−110529
replication manufacturing process, overview and design guide 7−117358
scan lenses, specification 7−75096
scanning techniques for optical data storage 7−82500
SCL programming language, applications for optical design 7−110519
second-order aberrations in aligned optical systems *(Russian)* 7−110497
sine condition in presence of spherical aberration 7−110274
single-mode optical fibres, CAD calc. method *(French)* 7−130343
Solc equivalent filters in single mode fibre, practical design and manufacture 7−117299
specular black coatings, use in well-baffled optical systems 7−141964
storage head, focusing grating coupler type, aberration minimisation under wavelength shift 7−110294
stray light, current technology 7−141793
stray light analysis with APART/PADE.version 8.7 7−141799
stray light control, assessment and evaluation of technologies 7−110523
stray radiation, conf., San Diego, USA (Aug. 1986) 7−140369
stray radiation analysis, interactive, graphical, CAD integrated tool 7−141797
stray radiation analysis, interactive graphical CAD integrated tool 7−122821
stray radiation analysis program, ray-based 7−141798
Strehl coefficient estimation in presence of aberrations and defocusing 7−110270
symmetrical slit electron lens, three-slit design 7−82452
synchrotron radiation mirror design, thermal loading considerations 7−95707
synthesis telescopes based on interferometric image synthesis and computational phase retrieval 7−115240
synthetic aperture concepts for future space telescopes 7−115241
synthetic aperture imaging systems, partially-filled, review of exptl. work 7−110510
synthetic aperture optical system, multiline focal plane phase measurement, algorithm 7−110512
synthetic aperture system, phase algorithms and control software, mini- and microcomputer implementation 7−110502
synthetic aperture telescope configurations for coherent imaging applics., parametric study 7−110511
system containing decentered surfaces, matrix 7−130295
systems analysis of absorbing media, filter design calcs. 7−103738
Technology Mirror Assembly (TMA), mirror quality requirements and achievements 7−95703
telescope, reimaging wide field-of-view, design and optical performance 7−110508
telescopes, glancing incidence, surface equations 7−68804
thin film coatings, versatile software package for CAD 7−103934
thin film technologies, conf., Innsbruck, Austria (April 1986) 7−102011
three-field IR telescope, specification, optical and mechanical design 7−123151
tolerance optimisation in optical system modelling *(German)* 7−68806
tolerances on optical system parameters, calc. 7−110500
tolerancing, statistical aspects 7−110525
transfer optics system to throughput match Fourier transform spectrometer, first-order design 7−108669
transverse ray aberrations of Wolter type 1 telescopes 7−96945
Tschebyshev optical filter design 7−103946
two-component optical coatings synthesis, optimality 7−90755
two-stage systems design for diffuse reflectance meas. 7−110507
Varilux lenses conception, visual reliability 7−94019
viewing optics for image intensifier, design 7−117296
WAMDII for upper atmosphere studies, optical system design 7−127612
wavefront deformation in circular plate with radial temp. gradient 7−110238
waveguide component design using beam propag. techniques 7−82838
waveguides, planar, design with prescribed propagation constants 7−136525
wideband antireflection coating design by the random research approach 7−103932
X-ray conical imaging mirror design and development 7−97116
X-ray grazing incidence optical systems, diffr. limited performance 7−95701
X-ray hybrid telescope systems, design and performance considerations 7−95702
X-ray mirror replication method 7−88114
zoom lens system for CO_2 laser, precalc. and final design 7−123150
ZZ 7−110541

optical design techniques continued
Al_2O_3-Ta_2O_5 medium-index mixed-oxide layers for antireflection coatings 7−103933
CO_2 compact laser receiver lens for rangefinder, design, interferometric test 7−123024
optical detection of ENDOR *see ENDOR; optical double resonance*
optical detection of magnetic resonance (EPR) *see microwave-optical double resonance*
optical detection of magnetic resonance (radiofrequency) *see magnetic double resonance; optical double resonance*
optical difference frequency generation *see optical frequency conversion*
optical diffraction *see light diffraction*
optical disc storage
see also CD-ROMs
amorphous C dielectric coatings for magneto-optical discs 7−110288
antireflection thin films for magneto-optical discs 7−110290
ATLDB: Astronomical Target Location Data Base for rapid digital image retrieval 7−127744
birefringence effects 7−82504
bow measurement with optical head 7−136767
chalcogenide films for reversible optical discs, thermodynamic anal. 7−97102
compact-size optical head for magneto-optical disk drive 7−82502
cytometry, optical memory discs in image database management 7−139329
cytometry, optical memory discs in image database management 7−139330
diffraction properties of optical discs, studied using rigorous mode method *(Chinese)* 7−90522
diode lasers for DRAW optical disc systems 7−82676
erasable and write-once phase-change media 7−103912
erasable bilayer dye-polymer optical recording medium 7−110489
erasable media, optical and thermal anal. 7−110291
focusing grating for integrated optical-disk pickup devices 7−123182
frequency-domain storage, photon-gated materials 7−110292
high-density frequency-domain optical recording 7−82503
integrated disk archive for digital radiographic images, software and hardware subsystem 7−87327
laser specification for image and optical disk recording 7−75016
laser-induced hole formation, FEM model 7−110289
materials, review 7−136212
media defects effects on error detection and correction and disc longevity 7−75088
optical component inspection for data storage applications 7−82750
organic dye-binder recording media, influence of melt viscosity on writing sensitivity 7−103914
PbTeSe thin films, optical write-read charact. with pit-edge recording 7−103772
polycarbonate substrate for magneto-optical disc, optical anisotropy effect on CNR 7−77507
polycarbonate substrates for magneto-optical discs 7−110287
polymeric film disc, laser marking and pit form., thermal expansion and flow model 7−124123
readout power dependence on thin-film magneto-optic media properties 7−103767
retardation effects in magneto-optic readout 7−82505
S/N ratio anal. using polarisation simulator 7−103770
scanning techniques for optical data storage 7−82500
status and developments *(Czech)* 7−136219
substrate, moulding compounds, minimal birefringence 7−77506
substrate birefringence, magneto-optical compensator 7−103769
two-beam optical head 7−82501
wavelength-multiplexed-recording materials, Japanese research 7−110493
write-once phase-change media 7−103913
AlN/GdTbFe/AlN/Al magneto-optical disc 7−74882
CS_2-Te optical disk, high-density recording 7−136213
Fe-Tb multilayers, magnetic properties and structural charactn. 7−112907
In thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
InO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
Pb-Te-Se optical recording film, oxidation resistance, comp. depend. study 7−144569
Sb-Se-Bi film, erasable optical disc media 7−75089
Sn thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
SnO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
Te-Ge-Sn-Au phase change recording film for optical disk 7−76706
Te-TeO_2:Pd write-once media for optical discs 7−75087
optical dispersion
see also optical constants
anisotropic optical waveguides, waveguide dispersion 7−141985
anomalous dispersion curve of HF laser, meas. 7−108640
bistable Fabry-Perot etalon with local saturable nonlinearity, focusing role 7−90688
characteristics meas. of fibre optic guides 7−104010
couplers, wavelength insensitive using dispersive materials 7−117320
dispersive media, radiation refl., bounded surface effects on dispersion indicatrix *(Japanese)* 7−129975
double-layer interferometer appl. to group-velocity dispersion meas. 7−102504
dye laser, femtosecond pulses, dispersion compensation using high-index prisms 7−117240
equivalent tube index for fibre charactn. 7−90824
fibers, single-mode, nonlinear and dispersive, femtosecond, pulse propagation 7−75144
fibre, birefringent, polarisation-dependent chromatic dispersion 7−75150
fibre chromatic dispersion meas. 7−90817
fibre measurements, symposium, Boulder, CO, USA (Sept. 1986) 7−80177
fibre optic interferometer, temporal coherence props. of dispersively propagating beam 7−75132
fibre waveguides, single-mode, birefringence and polarisation dispersion, spectral polarisation method 7−82814
fibres, chromatic dispersion meas. system using phase-shift technique 7−123217
fibres, chromatic dispersion measurement by phase shift method, influence of LP_{11} mode cutoff length depend. 7−82830
fibres, dispersion charact., tutorial review 7−130351
optical dispersion continued
fibres, dispersion-shifted, bending charact. *(Japanese)* 7−136543
fibres, dual-shape core with α-index centre core, charact. 7−123256
fibres, graded-index, dispersion-optimised, phase integrals 7−82836
fibres, nonlinear, single-mode, picosecond steps and dark pulses 7−110590
fibres, pulse propagation, intensity depend. spectra 7−104016
fibres, single mode, chromatic dispersion meas. using phase shift method, precision anal. 7−82829
fibres, single-mode, mode diameter and cutoff wavelength meas. 7−90822
films, dispersion effects on optical consts. determ. 7−106292
four-layer thin-film waveguide, generalised dispersion props. 7−68833
graded-index film waveguide, exponential-like profile, nonlinear waves study 7−68797
GRIN waveguides, guided nonlinear TE waves 7−136511
injection laser, single-frequency with external dispersive resonator, intensity fluctuations 7−97038
IR dispersive photothermal beam deflection spectroscopy 7−89281
laser beam wandering variance in turbulent atm. 7−72151
methyl cyanide, liq., optical consts., IR dispersion spectra 7−70798
monochromators based on Wadsworth binary system, astigmatism elimination using cross-dispersion *(Russian)* 7−110544
multimode dispersion behavior in optical fibers at high resolution 7−136556
multiphoton optical rotary dispersion 7−102489
nonhomogeneous optical pianar waveguides, surface layer depth determination 7−117316
nonlinear film guided waves, propag. 7−136514
nonlinear pulse propagation in monomode waveguide 7−90781
optical pulse self-action phenomena and femtosecond laser pulse generation, review 7−103884
passive fibre optic components using dispersion shifted fibre, biconical fusion technique fabrication 7−68890
polarisation-maintaining fibres, loss and dispersion charact. 7−68854
pulse amplification in picosecond range in single mode fibres 7−68748
quartz, single-mode fibres, elliptically polarised light waves 7−117334
rainbow hologram with inbuilt reference beam, angular image blur, spectral wavelength spread 7−117156
ring cavity, partially filled, DFB modes 7−68713
single mode fibre characteristics 7−130353
single mode fibre measurements and standardization 7−130354
single mode fibres, broadening of intensity-modulated pulses 7−130357
single mode lightguides, dispersion shifted, optical charact. tailoring 7−75118
single mode optical fibres with zero total dispersion, design at 1.3 μm and 1.55 μm 7−82797
single-mode fibre characterisation using equalisation wavelengths 7−90820
single-mode fibre chromatic dispersion meas. technique, high resolution, review 7−82828
single-mode fibre designs for telecommunications, review 7−130352
single-mode fibre for digital optical communication, techniques *(German)* 7−130342
single-mode fibres, chromatic dispersion meas. from Fourier transform of white light interf. patterns 7−68911
single-mode fibres, dispersion meas. using LEDs, modulation freq. shift technique 7−142049
single-mode fibres, dispersion-optimised, highly accurate charactn. 7−90810
single-mode fibres, dispersion-shifted, charact. 7−123220
single-mode fibres with low dispersion and low loss for LED-signals 7−130378
single-mode optical fibre, pure silica core, struct. and charact., transmission cable appl. 7−82843
single-mode polarisation maintaining fibre, birefringence and polarisation mode dispersion, expt. study 7−68848
spatially dispersive media, Kramers-Kronig relations appls. *(Russian)* 7−110239
stimulated Raman scattering, power-dependent dispersion effects 7−90698
transmission system, high dispersion multi-Gbit, 1.53 μm DFB laser evaluation 7−68899
transversal interferometric measurements of optical fibres spectral dispersion *(Polish)* 7−75119
two-component nonlinear composite medium, intense light propag. 7−130279
two-level system, interaction with two intense fields, absorptive response, dispersion profiles 7−141951
waveguides, metal-clad GRIN, guided wave charact., analytical results 7−90783
AlGaAs DBR laser, index-guided surface emitting type, effective index and dispersion meas. 7−68638
Cu_2O, electrodeposits, optical dispersion meas. 7−138526
Cu_2O, quadrupole absorpt., spatial dispersion effects 7−125684
Ge, optical dispersion parameters, temp. depend. 7−132228
$Hg_{1-x}Cd_xTe$, free-carrier absorpt., photon-ionised impurity-plasmon processes 7−132275
$LiNbO_3$:Ti optical waveguides, wavelength dispersions as function of diffusion parameters 7−110565
$LiNbO_3$:Ti travelling wave interferometric modulator, 1.3 μm, low insertion loss 7−103960
$LiNbO_3$:Ti(H^+) optical waveguides, refractive index profiles 7−123279
PbF_2, optical props., 2-12 μm 7−92760
SF_6, nonlinear dispersion meas. 7−136405
Si, optical dispersion parameters, temp. depend. 7−132228
SiO_2:F multiclad single mode fibres 7−136575
ZnS, optical props., 2-12 μm 7−92760

optical double resonance
see also microwave-optical double resonance
atomic high resolution coherence spectroscopy, optical double resonance and Raman anal. *(German)* 7−129644
deuteron quadrupole coupling const. in high temp. limit 7−109964
1,2-dichloro-2-fluoroethanone, enantiomers and racemic mixture, IR-RF double reson. spectra 7−90230
difluoromethane-d_2 ν_5 and ν_6 laser lines, IR-IR double reson. 7−122582
fluoromethane-$d_0(d_3)$, laser lines, asymmetry and line shape effects, IR-IR double reson. 7−122581
formaldehyde + $CO_2(N_2)(O_2)(H_2)$, rot. inelastic scatt. cross-sections 7−82324
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342

optical double resonance continued
formaldoxime, asymmetry and line shape effects, IR-IR double reson. 7−122581
formic acid-d_2, asymmetry and line shape effects, IR-IR double reson. 7−122581
glyoxal, IR optical double reson. signal 7−82233
heteronuclear molecules, electronic struct., double reson. investig. *(German)* 7−129757
high resolution spectroscopy, 51st physics conference, Berlin, Germany (March 1987) *(German)* 7−128179
hydrate crystals, ^{17}O nuclear quadrupole double reson. study 7−112998
methane, F_1 state, double reson. obs., vibr.-rot. lines 7−82234
methane-d_4, centrifugal distortion const., rot. IR-RF double reson. 7−90229
methanol, asymmetry and line shape effects, IR-IR double reson. 7−122581
methanol, IR-RF doubt resonance 7−129756
photon statistics in collective double optical resonant process 7−103786
semiconductors, optically induced nuclear magnetic resonance 7−99613
semiconductors, point defect charactn. using optically detected mag. reson. methods, review 7−112999
signal pulse formation from transient double resonance in gaseous medium with strong inhomogeneous atomic spectral transition broadening 7−129755
two-level atom, time depend. pulses in quantum optics, optical double reson. and reson. fluoresc. spectra 7−122887
AlO, Ar matrix isolated, vibr. relax., IR-optical double reson. 7−82235
Br_2, $1g(^3P_2)$ ion-pair state, pump-probe excitation science, optical-optical double resonance technique 7−135978
Br_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
CN, rot. state population, even-odd alternation quenching, optical double reson. 7−129753
Cl_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
CuO, microwave pure rot. transitions, detection using microwave optical double reson. 7−90104
F_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
H_2, Autler-Townes effect, low-press. 7−141613
H_2, Franck-Condon regions, double-reson. multiphoton ionisation 7−90231
HD, triplet 3s,3d complex, laser photofragment spectroscopy 7−141588
I_2, $D(0_u^+)$ ion pair state, optical-optical double reson. obs. 7−109965
I_2, excited states, optical-optical double reson. spectra of phased multiphoton transition *(Japanese)* 7−96812
$KEu(WO_4)_2$, RF hole burning with inhomogeneously broadened Raman heterodyne signals 7−85488
Li_2, $E^1\Sigma_g^+$ shelf, optical double reson. 7−122579
NBH_2, high excited vibr. state, laser mag. reson. 7−122583
NCO radicals $B^2\Pi_i(00^00)$ state, optical double-reson. 7−68374
NO, Rydberg series, double reson. multiphoton ionisation, quantum defect anal. 7−68375
Na atomic beams, Autler-Townes effect in optical pumping expt. 7−103433
Na_2, perturbation facilitated optical-optical double reson. spectroscopy, hyperfine splittings, struct. 7−96753
^{103}Rh, hyperfine struct. determ. using laser RF double resonance method and laser spectroscopy 7−74471
UO_2^+ complexes, IR laser-induced decomp., double reson. results 7−68373
Xe, Lande g factors, laser-RF double reson. 7−74549

optical elements
see also diffraction gratings; fibre optics; holographic optical elements; mirrors; monochromators; optical collimators; optical deflectors; optical fibres; optical films; optical filters; optical isolators; optical modulation; optical polarisers; optical prisms; optical waveguides; optical zone plates
adverse environments, conf., Albuquerque, NM, USA (Feb. 1987) 7−102023
aerodynamic laser window design, blocking effect of swirling nozzle flow *(Chinese)* 7−104279
ball-bed mode mixer for fiber evaluation and micro-optic device assembly 7−82837
beam combiner in HIPPARCOS astrometric telescope 7−115243
beam optics solution by matrix algebra *(Slovak)* 7−129949
beam splitter, quantum description 7−97121
beam splitter coatings for producing phase quadrature interferometer outputs, thicknesses computations 7−95644
beam splitter commutator of linearly polarised radiation 7−110535
beam splitters, relation between input and output states 7−123168
beamsplitter, nematic liq.-cryst.-clad electro-optic waveguide 7−130299
bistable and transphasor devices, surface effects 7−103868
centering and assembling of optical components, w.r.t. tolerance checks *(German)* 7−130400
coatings, applications, devices and markets 7−123164
compact optical generalized perfect shuffle, design 7−82752
component specifications, conf., (Los Angeles, CA, USA, Jan. 1986) 7−72709
computers, optical neural 7−110280
concentrators, two-stage photovoltaic with dielectric second stages, optics 7−82753
conducting polymers, appl. in electronic and optoelectronic devices 7−97106
corrector plate for zonal aberration correction in astronomical optics 7−79829
depolariser for light of any wavelength *(German)* 7−110536
design, inverse scatt. problems 7−136472
double-beam interferometer fringe contrast, effect of optical element polarisation props. 7−128642
fibre optic power divider, 3-dB fabrication for sensor appls. 7−130364
free electron laser short wavelength coated optics, damage processes 7−97053
glass components fabrication, rough grinding effects *(German)* 7−82870
grazing incidence optics replication 7−97182
HIPPARCOS telescope beam combiner, design, manufacture and testing 7−110537
IR reflection polarisers, using transparent high-index films on transparent low-index substrates, efficiency 7−123169
IR-transmitting windows and radomes, rain impact damage 7−68823
laser components, damage considerations 7−82600
laser windows, IR optical materials 7−75011
manufacturing tolerances, surface quality 7−123285
microoptical components for optical communication, microlenses *(Japanese)* 7−68812
optical arrays, interference effects, diffr. integral 7−103941
plate, gyrotropic birefringent, as quarter-wave plate 7−110534
pneumatic shutter for high power arc lamps, optical annealers appl. 7−128554
portable TV cameras, electromechanical devices for optical components control *(Russian)* 7−130303
precision mechanical-optical devices, test instruments selection *(German)* 7−82871
projectors, temperature fields of primary optical elements, calc. 7−103925
raster, plate-type, elementary cell, investig. 7−103939
reflaxicon, dimension optimisation *(Russian)* 7−82744
reflectors, corner cube, performance and shape 7−136482
retarders, birefringent, variable wavelength interferometry 7−123284
semiconductor optical bistability, towards the optical computer 7−82700
shutter with controllable exposure time 7−103831
subMM technology, quasi-optical components 7−82754
surface roughness classification and evaluation *(Czech)* 7−90843
synchrotron radiation optics, surface roughness property survey 7−95705
uniaxial crystals in beam splitters, effects on polarimetry and imagery 7−101681
uniform irradiation production of optical device with TEM gaussian beam *(French)* 7−117295
US precision cleaning of optical components prior to and after vacuum coating 7−104067
viewing optics for image intensifier, design 7−117296
wavefront deformation in circular plate with radial temp. gradient 7−110238
windows, large, stimulated Brillouin scattering parasitics 7−103894
X-ray optics, lacquer coating technique 7−97181
CO_2 laser optics, high-power, quality control 7−82634
CO_2 laser optics, Japanese National program 7−82633
InGaAs-InP multiple quantum wells, 1.55 μm optical logic etalon with picojoule switching energy 7−110434
KCl CO_2 laser optics, Japanese National program 7−82633
PLZT large-aperture shutter with enhanced operational/environment capabilities 7−90761
Si slit structure, birefringence, appl. to switchable IR waveplates and shutters 7−103938
ZnSe CO_2 laser optics, Japanese National program 7−82633
optical ellipsometers *see ellipsometers*
optical ellipsometry *see ellipsometry*
optical fabrication *see optical workshop techniques*
optical fibre cables *see optical cables*
optical fibre losses *see optical losses*
optical fibre sensors *see fibre optic sensors*
optical fibres
see also optical cables
34 Mbit/s optical fibre transmission at wavelength of 2.4 μm 7−136602
acoustoelectromagnetic solitons in fiber optic waveguides 7−123215
advanced components for fibre optic systems 7−123260
anisotropic, depressed-cladding profile 7−75146
anisotropic optical fibres, with an arbitrary index distrib., finite element anal. 7−82793
applications, conf., Warsaw, Poland (Feb. 1986) 7−134354
attenuator, programmable, for fibreoptic test environments, design approach 7−68898
automated spectrophotometric system with fibre-optic link, construction 7−134834
ball-bed mode mixer for fiber evaluation and micro-optic device assembly 7−82837
beam propagation method approx. of Helmholtz eqn., anal., report 7−90814
beam transformers for obtaining low-loss splices between dissimilar single-mode fibers 7−104011
bending strain of fibre in cable *(Japanese)* 7−97167
bent, birefringent, coupled mode anal. 7−117337
bent birefringent fibre, retardation characteristics, fibre-optic sensing appl. 7−123241
benzene filled capillary waveguides as stimulated Brillouin scattering mirrors 7−136443
biconical tapered couplers, automated manufacture and charactn. overcoupled operation 7−123257
bipolar tap implementation using incoherent optical source 7−136564
birefringent, longitudinal coherence props. of light waves 7−104019
birefringent, polarisation-dependent chromatic dispersion 7−75150
birefringent, single-mode, polarisation-mode interferometry 7−123253
birefringent, soliton stability 7−123251
birefringent fibre, optically nonlinear, polarisation state stabilisation 7−82799
birefringent fibre with periodic coupling, spatial polarisation chaos 7−82817
birefringent fibres, angular alignment by interferometric technique with broadband source 7−130341
birefringent fibres, soliton polarisation instabilities 7−68861
birefringent single mode fibres, nonlinear pulse propag. 7−68857
book 7−88756
branching component for bunched optical fibre using two GRIN rod lenses 7−82805
cable, failure mechanisms and life span *(Danish)* 7−75121
cable construction methods *(Polish)* 7−82878
cables, liquid crystal polymer material appls. 7−68885
cascaded single-mode fiber optic transversal filters 7−90829
CCITT standardisation for telecomm. systems 7−82831
chalcogenide glass optical fibre losses, low temp. photoinduced changes 7−136571
characterisation using modified FT IR spectrometer 7−82792
chromatic dispersion meas. system using phase-shift technique 7−123217
chromatic dispersion meas. using edge-emitting LEDs 7−90817
chromatic dispersion measurement by phase shift method, influence of LP_{11} mode cutoff length depend. 7−82830
circulator for fibre optic transceivers 7−136539
cladding loss in optical fibres having distorted refractive index profile 7−142021
coating adhesion effects on fiber strength and fatigue properties 7−136594

optical fibres continued
coating evaluations for composite embedment appls. 7−136593
coating requirements and developments 7−68870
coherent optical fibre systems, polarisation control 7−110579
coherent OTDR instrument development for fault location in fibres 7−97154
color image transmission in optical fibres by polychromatic encoding *(French)* 7−117326
color image transmission in single optical fibre *(French)* 7−117327
communications networks, installation techniques, considerations 7−97169
compound glass fibre with low loss, large core and high numerical aperture *(Japanese)* 7−117341
concatenated tapered coaxial couplers as all-fibre wavelength filters 7−103943
conference, fibre characts. and standards, Cannes, France (Nov. 1985) 7−66821
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference, London, England (April-May 1986) 7−80162
conference, optical fibre communication and integrated optics, Reno, NV, USA (Jan. 1987) 7−120704
connector with spherical-ended fibres *(Japanese)* 7−82815
connectors, developments 7−142018
connectors, optical component specifications 7−75152
connectors with spherically convex-polished ends, connection stability *(Japanese)* 7−97166
coupled, LP_{01} and LP_{11} modes propagation 7−123273
coupled mode formulations, error considerations 7−141981
coupled mode theory 7−68855
coupler, tapered, fused, optical characts. while undergoing fabrication 7−103999
couplers, single-mode fused tapered, core effects 7−104021
couplers for fibre optic systems, review 7−130377
coupling efficiency of semiconductor laser source *(Japanese)* 7−68884
coupling of laser diode to multimode using plano-convex GRIN lens 7−130335
cross-phase modulation in optical fibers 7−123254
crossphase modulation in optical fibres, generation of short pulses from CW light 7−141998
CSELT optical fibres research activities for telecom. *(Italian)* 7−103998
cut-off frequencies of modes in multistep index fibres, eqns. *(Polish)* 7−68846
cylindrical fibre guided-wave modes, math. anal. 7−75130
cylindrical step-index optical waveguides, radial image transfer 7−75111
data links between laboratories 7−110589
DC and LF AC meas. optical receivers anal. for optical fibre communication systems 7−104034
demountable multi-fiber connectors for optical waveguides 7−68882
diameter monitoring during pulling using dual edge diode beam of light 7−104014
dichroism evaluation in high birefringence fibres by cross-talk measurements 7−82794
dielectric guides for energy transmission, losses problem in optimum design 7−123265
differential Doppler velocity meter with fiber waveguides 7−123786
directional coupler, fibre-film single mode 7−82809
directional coupler resonators as guided-wave optical components 7−117309
directional-coupler wavelength filters made of dissimilar single-mode fibres, bandwidth 7−68850
dispersion characteristics meas. of fibre optic guides 7−104010
dispersion characts., tutorial review 7−130351
dispersion-shifted fibres, characts. *(Japanese)* 7−136543
doublecore optical fibres, propagation props. 7−136574
doubly clad lightguides, field evolution 7−75127
drawing process, temp. regime effect on stability 7−77933
drum twister for stranding of optical fibre cables 7−110602
dual-mode, dispersion free at 1.55 μm, design 7−90806
dual-shape core with α-index centre core, characts. 7−123256
dye waveguide laser, amplification effect of evanescent wave on LP_{0m} modes *(Chinese)* 7−90655
ECG monitoring unit for use in operating room 7−119894
educational activities 7−130359
elliptic core, equivalent step index model 7−142000
elliptic-core with stress induced anisotropy, polarisation characts. 7−82803
end evaluation before splicing using spatial freq. analysis 7−68922
equilibrium mode distribution development, Corning data broadband fibre transient behaviour and steady state mandrel charact. 7−82823
equivalent tube index for fibre charactn. 7−90824
fabrication, light transmission, cable design 7−97158
fabrication method for fibre couplers with automatic fusion-elongation processes 7−123227
fabrication techniques 7−130401
fabrication techniques for optical sensors and lasers *(Japanese)* 7−123212
fabrication using hybridised sol-gel process 7−136549
fanout connector for fibre-ribbon cable termination, struct. design 7−110595
far field power meas., two dimens., high ang. resolution and dynamic range 7−82833
far-field meas. using integrating sphere 7−82835
fault detection using phase compensated reflectometer *(Japanese)* 7−97165
fault location system based on interferometry for optical waveguide devices 7−104000
femtosecond pulse generation through soliton effect in single-mode fibre 7−103875
fiber optic components for communication applications 7−136605
fibre communications and computer networks, conf., Cambridge, MA, USA, (Sept. 1986) 7−128181
fibre outside diameter meas. using Fizeau fringe interferometer 7−102499
fibre-grating optical pulse compression limits 7−142008
fluoride glass IR optical fibres in medicine and biology 7−79042
fluoride glass single-mode fibres, spectral attenuation meas. by fourier transform spectroscopy 7−68852
fluoride optical fibres, scattering characteristics 7−68845
force measurement in optical fibres using fibre optic sensor 7−97157
frequency translators, electro-optic, coherent optical fibre system appls. 7−103959
frequency-doubling processes, anal. using Raman spectroscopy 7−136563
optical fibres continued
fused tapered couplers, condition for insensitivity to external refractive index 7−68847
fused tapered couplers reliability 7−142031
geometric characts. meas. by diffraction method 7−108514
glass, preforms for telecommunication, fabrication 7−123244
glass, tensile strength anal. using modified Weibull-type function 7−124367
glass fibres, arbitrary cross section and curvature, EM wave anal., analytical 3D method 7−104027
glass fibres, curves hollow core, soft X-ray transmission factors, upper limits 7−123222
glass optical guided-wave technology, review 7−68844
graded index fibre diameter measurement using diffr. pattern 7−82819
graded-index, dispersion-optimised, phase integrals 7−82836
graded-index optical fibres, light propag. theory *(Polish)* 7−110592
halide glasses, ultratransparent, optical fibres appls. 7−82732
heat-shrinkable-sleeve reinforcement method, reinforcement machine using induction heating 7−110599
heavy metal fluoride glasses, viscosity temp. depend. and crystallisation 7−137608
heavy metal halide glasses as optical fibre material 7−136470
Helmholtz eqn., beam propag. method 7−136558
hermetic coatings 7−142028
heuristic approach for engineering students 7−95130
HF fibre optic links, fundamental gain/bandwidth limitations 7−90813
HF optical communications, conf., Cambridge, Ma, USA (Sept. 1986) 7−88739
high capacity fibre optic systems, London, England (Feb. 1987) 7−66841
high capacity optical fibre systems, tolerant WDM 7−68903
high power light transmission 7−82841
high tensile strength fibres 7−68876
high-resolution image fiber system using an image separating/reconstructing method 7−82846
holographic interferometer single-mode optical fibre system for physical fields meas. 7−108650
holographic lens-fibre coupling system coherent transfer function 7−123247
hybrid birefringent, polarisation parameters of plane waves 7−130366
hydrogen problems and long term reliability of fibre cables 7−68872
hydrostatic pressure measurements with multimode optical fibers 7−124364
image fibre, 250000 pixel capacity, development and fabrication, hazardous environments monitoring appl. 7−82845
image fibre, crosstalk characts. improvement, theoretical study 7−97143
imageguide, 2D image resolution, wavelength multiplexing 7−142010
in-line optical fibre filters using dispersive materials 7−68897
industrial measurement appls. *(French)* 7−130373
integrated optic components, alignment and evaluation using OTDR 7−136612
interaction forces between solitons, obs. 7−104018
interconnects, reliability 7−142032
intersatellite and fiber-optic communication with stripe domains 7−75169
intravascular delivery of laser energy via optical fibers 7−114455
ionising-radiation hardness, testing and standards 7−123258
IR fibre optics materials, review 7−117281
IR fibre waveguides, optical characts. 7−142013
jacketing material using $KTiO_3$ whisker filled nylon 12 *(Japanese)* 7−117342
Japanese fibre-optic system and optoelectronic IC developments 7−90827
jointing of monomode optical fibres *(Spanish)* 7−117339
laser diode array, injection locking and single-mode fibre coupling 7−103846
laser light frequency conversion in single-mode fibre 7−117268
lens coupling systems for laser modules and single mode fibres *(German)* 7−136590
lens formation by fiber fusion for terminating optical connectors 7−130344
light polarisation, propagation in optical fiber, phase rot. investig. 7−117138
light scattering profiles, measurements 7−142033
lightguide fabrication technology, development 7−82796
literature sources for fibre optics 7−97161
long-span optical fibre transmission systems, 2 to 4 μm wavelength 7−68889
longitudinal strain measurements, optical techniques 7−75124
loss meas. by Fourier transform spectroscopy 7−90818
loss meas. system, detector selection for production testing 7−130379
low-loss single-mode fiber with reduced inner cladding 7−97139
low-loss single-mode fibres for use in 1.55 μm wavelength region, optimisation 7−130346
LP_{11} mode cutoff freq., calc. method 7−90804
Luch instruments for fibre optic guides and cables meas. 7−104009
Mach-Zehnder interferometer, compact all-fibre, as elec. activated switch 7−104008
manufacture using MCVD process 7−68916
manufacturing process, microwave plasma appl. 7−130403
manufacturing processes and testing *(German)* 7−82869
manufacturing techniques and technology at AT&T 7−110611
materials, fabrication, book 7−120716
materials, review 7−110488
materials and props., conf., Boston, MA, USA (Dec. 1986) 7−134364
MCVD for optical fibre fabrication, Ge chemistry 7−82810
measurement, conf., London, England (May 1987) 7−88748
measurements, symposium, Boulder, CO, USA (Sept. 1986) 7−80177
measuring techniques, Bandwidth Test Set *(Italian)* 7−104056
mechanical tempering of optical fibres 7−138728
medicine and biology, endoscopy, diagnostics and power transmission 7−79041
medicine and biology, optical fibre use, conf., San Diego, CA, USA (Aug. 1985) 7−72708
microstructure characterisation 7−136578
microwave signal transmission using fibre optic links 7−90812
mid infrared, materials *(Danish)* 7−123202
mid-IR waveguide developments *(Japanese)* 7−117338
mode field diam. meas. using far field pattern method 7−82834
mode field radius meas. 7−90821
mode scrambled optical beams, phase conjugation, spatial recovery, interbeam temporal information exchange 7−110472
modified rod-in tube (MRT), radiation resistance *(Japanese)* 7−142019
modified SZ stranding of optical fibre cable conductors 7−110601

optical fibres continued
modulational instability, theory 7−104015
modulators, acousto-optic, for single mode fibres, design and performance 7−123188
monomode, characterization by numerical simulation of integrating sphere 7−130375
monomode, OH^- ion content reduction *(Polish)* 7−75120
monomode, with flowing dye system, coherent amplification 7−136321
monomode fibre polarisation scrambler 7−97149
monomode fibres, cutoff wavelength meas. using azimuthal filtering technique 7−90803
monomode fibres, stimulated Raman scatt. and nonlinear pulse broadening obs. at 1.32 μm 7−103888
monomode fibres with loose tube jelly filled jacket, loss mechanisms 7−68875
monomode graded index fibres with arbitrary cross sections, iterative eigenfunction expansion method 7−142036
multi-soliton pulse self-compression in optical fibres 7−68761
multi-soliton pulse spectral filtering in optical fibres, pedestal suppression 7−68760
multichannel anisotropic single-mode fiber waveguide for fiber-optic sensors 7−130372
multiclad monomode optical fibres, multivariable zone diaphragm technology appl. 7−136573
multicore optical fibres, general props. 7−104031
multimode, bandwidth meas. in frequency domain 7−130367
multimode, correction of polarisation and model scrambling by phase conjugation 7−117335
multimode, image distortion and restoration by polarisation-preserving phase conjugation 7−117151
multimode dispersion behavior in optical fibers at high resolution 7−136556
multimode fibre, effect of higher order modes on pulse propag., theoretical and expt. study 7−142035
multimode fibre baseband freq. response 7−68879
multimode fibre connections, attenuation and interference calc. 7−82789
multimode fibre design, trends 7−142023
multimode fibre industrial meas. methods 7−82822
multimode fibre lightguide power diffusion, influence of microbends and polymer coatings *(Russian)* 7−75165
multimode fibre link, reliable bandwidth prediction 7−68880
multimode fibre source power distrib. charact. by splice offset technique 7−82825
multimode fibres, mode excitation and modal power distrib. meas. using computer-generated holograms 7−130355
multimode fibres, splice loss anal. for multiple misalignment 7−130385
multimode fibres, statistical correlation of optical field, vibr. effect 7−104013
multimode fibres, stimulated Raman scattering components, influence of stimulated Brillouin scattering 7−130369
multimode fibres bandwidth concatenation, review 7−130356
multimode light guides, polarisation charact. 7−90811
multimode optical transmission lines, planar microoptical multiplexer/demultiplexer 7−75167
multimode quartz light guides welding technology 7−104026
multiplexing of interferometric sensors using phase-generated carrier techniques 7−104002
network applications 7−136541
nonlinear, single-mode, picosecond steps and dark pulses 7−110590
nonlinear effects in optical fibres and fibre devices 7−103907
nonlinear interactions and quantum optics 7−130380
nonlinear optical materials and devices, conf., Erice, Sicily, Italy (July 1985) 7−80172
nonlinear power transmission limits in fibre devices 7−103867
nonlinear propagation, dynamic coupled-mode theory 7−130376
nonlinear pulse propag., general formalism 7−68853
nonlinear pulse propagation in monomode waveguide 7−90781
nonlinear refr. index meas., direct interferometric meas. by crossphase modulation 7−130398
nonlinear self-guiding and switching in an all-fiber device 7−130349
nonlinearities in optical communications 7−90809
novel fibre break locator for optical duplex transmission systems 7−82856
numerical aperture, macrobending effects 7−110587
optical multistability and phase conjugation in high birefringence optical fibres 7−136441
optical-mechanical treatment of units of fibre-optical elements *(Russian)* 7−82786
organic crystal cored fibre design of parametric interactions, phase matching requirements 7−103899
organic crystalline cored fibres, wave propag. and three wave mixing 7−82850
organosilsesquioxane use as coating/cladding for silica optical fibres 7−136595
OSEE method, fibre preforms defect determ. 7−136579
OVD manufacturing technology 7−68915
passive fibre optic components using dispersion shifted fibre, biconical fusion technique fabrication 7−68890
periodically twisted, polarisation instability, all-optical switching and intensity discrimination 7−75145
photodiodes optical fibre communication, rise-time meas. 7−102526
photostimulated absorption of light in chalcogenide glass fibers 7−130371
picosecond and femtosecond light pulse production, review 7−136552
picosecond pulse generation by fibre-grating pulse compression 7−103876
plasma CVD process for large scale prod. 7−68917
plastic-clad silica fibres, attenuation props., modelling 7−123245
plastics and polymers as optical fibre materials 7−136463
polarisation maintaining optical fibre develop. 7−136551
polarisation state of transmitted optical wave, influence of external vibrs. *(Japanese)* 7−97164
polarisation-maintaining fibres, alignment using nondestructive temp. modulation technique 7−104005
polarisation-maintaining fibres, loss and dispersion charact. 7−68854
polarisation-maintaining fibres with circular pits outside circular core 7−97146
polarisation-maintaining single-mode fibre/semicond. laser optical coupling technique 7−68849
polarised-ray optics theory 7−130358
polycarbonate stacked film star coupler 7−110594
polymer clad silica optical fibres, γ-irrad., transmission losses 7−68881
polymer optical fibre development, loss mechanisms and fabrication 7−90799
optical fibres continued
polymer-coated optical fibres, mechanical reliability considerations 7−142027
positioning and treatment of optical fibre ends *(French)* 7−130374
powder mixing rate instrumentation system *(Japanese)* 7−113465
powder process use for fibre manufacture, LAN appls. *(German)* 7−142050
power measurements, accuracy 7−68859
preform measurements and their industrial application 7−68923
preform refractive index meas. model 7−90816
preforms, high rate fabrication by multiflame VAD method *(Japanese)* 7−136544
preforms prepared by plasma-impulse-CVD 7−68921
primary coating charactn., thermomech. props. 7−68871
production microprocessor control system *(Czech)* 7−136628
pulse amplification in picosecond range in single mode fibres 7−68748
pulse compression and MW picosecond pulse generation 7−97137
pulse compression by fibre and grating, stimulated Raman scattering effect 7−103878
pulse compression with fibre-prism pulse compressor 7−103877
pulse propagation, intensity depend. spectra 7−104016
pulse propagation in single mode optical fibres, soliton mode, possible experimental realisation 7−82818
pulsed laser radiation, transmission, attenuation, damage thresholds *(German)* 7−104012
quartz, single-mode fibres, elliptically polarised light waves 7−117334
quartz fiber preform collapse process, identification 7−90807
quartz glass, microdefects, rel. to stimulated Raman scatt. of optical fibres *(Japanese)* 7−132287
quartz optical fibres, thermochromism in luminous and solar radiation transmission 7−117323
R&D in China, review 7−75126
radial effective-index method of analysis 7−130339
radiation from bend of step-index single-mode fibres 7−90801
radiation induced time depend. attenuation 7−68873
radiation resistant, image fibres, photobleaching effect, expt. study 7−82844
Raman amplification, output moments and photon statistics 7−142002
Raman amplifier pumped by high-power semicond. lasers, 1.5 μm, amplification of WDM signals 7−68674
Raman fibre amplifier characteristics for use in optical transmission systems 7−110451
Raman laser, synchronously pumped with self-phase modulation 7−141867
Raman scattering 7−82848
Raman spectroscopic characterisation 7−68802
rare-earth-doped fibres, fabrication by soln., doping technique 7−68910
Rayleigh backscatter statistics of single-mode fibre 7−68858
refracted near-field profiling technique, thermal effect 7−82832
refractive index distrib. meas. using single-mode and multimode optical fibres 7−108630
refractive index profile meas. 7−104029
refractive index profile meas. by cladding-mode near-field technique 7−136568
refractive index profiling and dimensional meas. 7−90815
reliability considerations, conf., Cambridge, MA, USA (Sept. 1986) 7−140366
reliability issues and telecomm. appls. 7−142026
remote and in situ Raman spectroscopy using optical fibres 7−89276
remote sensing of city gas using fibre optic link and LED 7−106950
RF magnetic field meas. system, amplitude and phase sensitivity, LD and optical fibre 7−102468
RF radiation spectrum of semiconductor laser, optical communication line wave reflection 7−123016
rigid contact between a channel $LiNbO_3$:Ti waveguide and single-mode fiber waveguides 7−130325
ring resonator, novel type, for wavelength selective transmission 7−104004
ring system formed by laser and fibre-optic delay line, self-modulation oscillations, parametric stability 7−97079
scalar soln. for calc. method, errors *(German)* 7−142020
scattering diagram calcs. 7−82842
selection advice 7−82802
self-focusing with picosecond pulses 7−136461
self-phase modulation, stimulated Raman scatt., pulse walk-off effect 7−97155
semiconductor epitaxial structures, for light generation, detection and modulation 7−132495
semiconductor laser, high-power, external-cavity, with single-mode fibre output port 7−97035
semiconductor lasers, optical bistable, optical fibre directional coupled *(Chinese)* 7−103812
semiconductor optical integration, progress, review 7−103986
semiconductor-doped fibre waveguides exhibiting picosecond optical nonlinearity 7−82800
SHG, self-organised phase-matched 7−136433
SHG in optical fibre by second order susceptibility grating 7−90718
SHG in optical fibre by self-written susceptibility grating 7−68778
shop floor links using optical fibre 7−110581
side coupler for coupling between laser diode and single-mode fibre 7−123200
signal processing devices design 7−104028
silica core fibres, 2 eV optical absorption, cladding material effects 7−75133
silica core fibres, defect formation and nonstoichiometry 7−97109
silica core fibres, gamma-ray induced 2 eV optical absorption band 7−130280
silica fibre light guide, doping additives, Raman scatt. determ. 7−114059
silica glass, OH diffusion at high temp. 7−131365
silica glass fibres, elongated, Raman spectra 7−97108
silica optical fibres, drawing-induced peroxy radicals 7−136553
silicone optical fibre coatings, UV curable 7−136592
single mode, characterisation by equivalent step index and mode field diameter meas. 7−90823
single mode, chromatic dispersion meas. using phase shift method, precision anal. 7−82829
single mode, cutoff wavelength determ. 7−110591
single mode, effective mode index meas. 7−90826
single mode, reducing soliton interaction 7−104007
single mode fibre, self-phase modulation and stimulated Raman scatt., spectral and temporal charact. 7−103889
single mode fibre characteristics 7−130353

optical fibres continued
single mode fibre couplers, freq. multiplex operation 7—82812
single mode fibre measurements and standardization 7—130354
single mode fibre taper filters, wavelength response fine tuning methods 7—68891
single mode fibre testing methods for industrial environment, review 7—82821
single mode fibres, broadening of intensity-modulated pulses 7—130357
single mode fibres, soliton propag. *(Japanese)* 7—68868
single mode fibres with arbitrary index profiles, cutoff frequencies calc. 7—130363
single mode fused-tapered optical fibre couplers, tutorial introduction 7—130362
single mode lightguides, dispersion shifted, optical charcts. tailoring 7—75118
single mode optical fibre laser transmission, dynamics of deterministic chaos 7—136232
single mode optical fibres with zero total dispersion, design at 1.3 μm and 1.55 μm 7—82797
single mode to multimode optical fibre coupler, nonreciprocal behaviour 7—68862
single process cable, optical loss increase at low temp. 7—110598
single-mode, birefringence and polarisation dispersion, spectral polarisation method 7—82814
single-mode, calcs. *(Russian)* 7—123266
single-mode, channel-dropping filter using high-index overlay waveguide 7—75148
single-mode, chromatic dispersion meas. from Fourier transform of white light interf. patterns 7—68911
single-mode, coated, microbending effects at low temp. 7—142005
single-mode, coupler, demultiplexing 7—142025
single-mode, deformation under static longitudinal stress 7—123224
single-mode, eccentric core, polarisation charcts. 7—97152
single-mode, microbending loss approx. formulas 7—104020
single-mode, mode diameter and cutoff wavelength meas. 7—90822
single-mode, nonlinear and dispersive, femtosecond, pulse propagation 7—75144
single-mode, nonreciprocity meas. 7—90825
single-mode, optical time domain reflectometry signatures interpret. 7—123263
single-mode, periodically deformed, strain effects 7—117321
single-mode, phase delay of coupled modes 7—136567
single-mode, soliton evolution from chirped and noisy pulses 7—75129
single-mode, solitons at zero-group-dispersion wavelength 7—123255
single-mode, spot size estimation from far field meas. 7—136555
single-mode, standardization 7—75123
single-mode, stimulated Brillouin scattering excited by two pump waves 7—142007
single-mode, stimulated Brillouin scattering with laser diode pumping 7—123101
single-mode, wave generation through four-wave mixing, efficiency, phase-mismatch depend. 7—130252
single-mode channel waveguide charactn. from far field meas. 7—123246
single-mode fibre, bent, field calc. using perturbation theory 7—82798
single-mode fibre beyond cutoff freq. of LP_{11} mode, charcts. 7—97145
single-mode fibre cable developments by NTT, review 7—82826
single-mode fibre characterisation using equalisation wavelengths 7—90820
single-mode fibre chromatic dispersion meas. technique, high resolution, review 7—82828
single-mode fibre components for advanced optical systems 7—82839
single-mode fibre couplers, fused tapered, perturbation anal. 7—123203
single-mode fibre coupling to LED, efficiency and alignment tolerances 7—136559
single-mode fibre designs for telecommunications, review 7—130352
single-mode fibre for digital optical communication, techniques *(German)* 7—130342
single-mode fibre props. at 1.3 μm and 1.5 μm 7—82820
single-mode fibre spectral attenuation precision meas. 7—82811
single-mode fibre taper filters, wavelength response, fine tuning 7—82760
single-mode fibre Y-junction beam-splitter, fabrication, operation and performance 7—141970
single-mode fibre-coupler blocks, core-to-surface spacing determ. 7—68864
single-mode fibres, asymptotic effective cutoff condition 7—82804
single-mode fibres, cut-off wavelength and mode-field diam. meas., standardisation issues, trends 7—82827
single-mode fibres, cut-off wavelength meas. technique *(Slovenian)* 7—104055
single-mode fibres, dispersion meas. using LEDs, modulation freq. shift technique 7—142049
single-mode fibres, dispersion-optimised, highly accurate charactn. 7—90810
single-mode fibres, dispersion-shifted, charcts. 7—123220
single-mode fibres, mass fusion splice method 7—110600
single-mode fibres, mode field dia. determ. approaches 7—68856
single-mode fibres, mode field diameter eval. by transmitted field pattern methods *(Japanese)* 7—130384
single-mode fibres, self-phase modulation and stimulated Rama scattering 7—136560
single-mode fibres, soliton propag. in presence of source chirping and mutual interaction 7—68851
single-mode fibres, step index, radiation from circular bend, theoretical anal. 7—97141
single-mode fibres, stuffing-pulling mass fusion splice techniques *(Japanese)* 7—130382
single-mode fibres with low dispersion and low loss for LED-signals 7—130378
single-mode lightguide system, guided-wave reflectometry with micrometer resolution 7—123201
single-mode optical fibre, pure silica core, struct. and charcts., transmission cable appl. 7—82843
single-mode optical fibre ring resonator with nonlinear coupling 7—136572
single-mode optical fibres, CAD calc. method *(French)* 7—130343
single-mode optical fibres, equalisation wavelength meas. technique 7—68909
single-mode optical fibres, matched and depressed cladding, fabrication, CVD 7—68912
single-mode optical piezoceramic phase modulator, anal. 7—123189
single-mode optical-fibre switch 7—90828
single-mode polarisation maintaining, modal birefringence meas. by heterodyne interferometry 7—97153
optical fibres continued
single-mode polarisation maintaining fibre, birefringence and polarisation mode dispersion, expt. study 7—68848
single-mode splice loss, effect of eccentricity 7—136554
single-mode with nonGaussian profiles, mode field diameter meas, 7—82806
single-mode with strong and weak birefringence, optical Kerr effect 7—142012
single-mode-fibre fused coupler, propagating-beam model 7—75128
single-mode-fibre passive components made in the fused-head-end technique 7—82857
single-mode/multimode fibre line charcts. 7—117331
sol-gel processing 7—136597
Solc equivalent filters in single mode fibre, practical design and manufacture 7—117299
soliton formation, noise effects 7—90808
soliton generation, 1.37-1.49 μm 7—90672
soliton generation at 1.5 μm, femtosecond single-pass cascade Raman scatt. 7—141996
soliton interaction in presence of loss and periodic amplification 7—104017
soliton laser, computational two-cavity model 7—103826
soliton laser pulse compression in fibre 7—103879
soliton propag., numerical anal. 7—117336
soliton pulse compression and splitting at 1.32 μm in a single mode fibre 7—130350
soliton pulse nonlinear interaction 7—104030
soliton shaping by stimulated Raman process 7—136561
source-fiber optical coupler, excitation by light source 7—117343
sources, high reliability packaging 7—142041
sources and detectors., conf., Cannes, France (Nov. 1985) 7—66822
spatial filtering method of oblique slit for measurement of refractive-index profile of optical-fibre preforms 7—136547
spectral attenuation, FT IR spectrosc. investig. 7—82791
spectral attenuation meas. using cut-back method 7—82795
splicing method for high quality connections *(German)* 7—123283
spontaneous Raman scatt. and polarisation mode coupling 7—142001
standards role in technology 7—142030
star coupler, biconically tapered, fabrication 7—110612
step-index fibres, geometrical birefringence calc. 7—123216
step-index optical fibres, modal delay reduction 7—68869
step-index optical fibres, uniformly curved, effective cutoff freq. of LP_{11} mode *(Japanese)* 7—68883
step-index used for point source scanning, lateral offset power loss meas. 7—123250
stimulated four-photon mixing in birefringent fibre, Stokes and anti-Stokes spectra, frequency shift 7—130340
strain effects on highly elliptical core two-mode fibers 7—136566
stress-applied polarisation maintaining type, birefringence calc. using vector anal. 7—141997
stress-applied polarisation-maintaining, vectorial wave anal. 7—90802
stress-induced birefringence fibres with lossy stress-applying sections, single-polarisation single-mode guidance 7—82801
stress-induced polarisation-holding fibres, strength assurance 7—142004
submarine cables, optical fibre strength improvement 7—68877
subpulse formation of long optical pulses in monomode fibres 7—136562
supershort pulse self-interaction, computer simulation using inverse scatt. method 7—110583
surface relief gratings, high reflectivity, in single mode optical fibres 7—103950
switch using piezoelectric actuated evanescent-wave directional fibre coupler 7—82859
synchronously pumped soliton Raman fibre ring laser, expt study 7—90617
system design, reliability considerations 7—142042
tap, switchable fibre-optic using acoustic transducers 7—68863
tapers at 1.3 μm for self-aligned beam expansion and single-mode hardware 7—142006
telecommunication optical fibres, props. and manufacture *(Polish)* 7—68887
temperature-phase sensitivity, sensor appl. 7—141999
tensile strength, modified Weibull distrib. function 7—144471
testers review 7—123268
transducer, optically powered, with optical fibre data and power link *(Japanese)* 7—128569
transmission loss of liquid-crystal-polyester-coated optical fibers at liquid-nitrogen-temperatures 7—68886
transmission systems applications 7—110585
transmitted near field meas. based fibre characterisation 7—82824
transversal interferometric measurements of optical fibres spectral dispersion *(Polish)* 7—75119
transverse coupling between single-mode fibre and thin film waveguide 7—103976
tunable fibre Fabry-Perot interferometer filters 7—117330
tunable lasers, 10 μm, guided transmission 7—142029
two-mode, periodic microbends, intermodal coupling 7—75147
two-mode fibre devices using highly elliptical core fibres 7—136565
two-mode optical fibres, optical frequency shifting by flexural acoustic waves 7—123269
ultra lowloss communication with fluoride fibres 7—110593
ultrafast light-controlled optical-fiber modulator 7—90798
ultrafast optical multi/demultiplexer utilising optical Kerr effect in polarisation-maintaining single-mode fibres 7—82726
undergraduate fibre-optic communication lab. 7—102070
UV optical fibre techniques *(Polish)* 7—130387
UV-cured primary coating, low temp. performance 7—75125
VAD for fibre manufacture, latest developments 7—68918
water ingress in fibre cables 7—130345
wavefront correction of laser radiation after multimode lightguides 7—142022
wavefront reversal of microsecond radiation in fiber waveguides 7—142011
waveguide, parameters meas. during quartz shell removal by HF *(Russian)* 7—117333
wavelength dependence of devices fabricated in single-mode fibre 7—82840
WDM narrowband wavelength-selective optical fibre tap and combiner 7—104003
weakly guiding fibres, power loss calc. using far-field method 7—142037
AgCl-AgBr IR fibre, fabrication, charcts. and appls. 7—82847
Al coated optical fibres, mech. and optical props. 7—68878

optical fibres continued
Al_2O_3, ruby, single cryst. fibre growth and nonlinear optical use 7−75069
As_2S_3 IR glass fibre with Teflon cladding, CO laser power delivery for medical appls. 7−79044
$Bi_{12}SiO_{20}$ cryst. appl. as voltage sensor in optical fibres 7−123204
CO_2 laser processing of glass and single crystal fibers 7−136631
CsBr IR fibre waveguides, optical characts. 7−142013
Er^{3+} doped single-mode fibre laser, AlGaAs diode laser pumped operation 7−141882
Er: GeO_2-SiO_2 fibre laser, 1555 nm, low-threshold CW operation 7−136314
GaAs BH waveguides with high coupling efficiency for single-mode fibres 7−110572
GaInAsP VIPs lasers, 1.3 μm, high-power output coupling to single-mode fibre 7−122961
Ge-Sb-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
Ge-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
GeSbSe chalcogenide glass IR optical fibres, properties and applications 7−68860
$Ge_x(Se_{1-y}Te_y)_{1-x}$ glasses, prep., for optical appl. 7−106119
He-Ne 1500 nm stabilised transverse Zeeman laser, expt. for coherent communication 7−68612
InGaAsP tunable fibre-extended-cavity laser 7−68710
LaF_3 for fluoride optical fibres, synthesis, ultrapurification and anal. 7−136464
$LiNbO_3$, integrated optical devices, technology 7−104039
$LiNbO_3$, single cryst. fibre growth and nonlinear optical use 7−75069
$LiNbO_3$:Ti travelling wave interferometric modulator, 1.3 μm, low insertion loss 7−103960
Nd^{3+} doped fibre laser, CW, 1064 nm, using all-fibre reflectors 7−117222
Nd:YAG CW multimode laser beam transmission through fibre optic delivery system 7−136361
Nd:YAG fibres, clad for laser appls., performance 7−110586
Nd^{3+}: silica fibres, P, Co co-doped, lasing spectrum 7−136318
Nd^{3+}:SiO_2 fibre lasers, single-mode, line-narrowing and hole burning 7−103823
Nd-doped fibre lasers using direct-coated dielec. mirrors 7−117209
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7−136466
P_2O_5-GeO_2-SiO_2 optical fibre preform, parameters distrib. along radius 7−136467
Pb-Cd-Al-Li fluoride glass, resistance to chem. degradation by water, low loss optical fibre appls. 7−71336
SiO_2 based optical fibres, γ-radiation effects on optical loss and defects *(Japanese)* 7−117340
SiO_2 fibre Raman laser, UV short pulse, excimer laser pumped 7−82573
SiO_2 fused silica fibres, damage threshold meas. using long optical pulse XeCl lasers 7−136386
SiO_2 optical fibre sensitivity to radiation, radioluminescence and ESR *(Polish)* 7−68888
SiO_2 optical fibres, characts., influences of drawing conditions 7−123252
SiO_2 optical fibres, interactions with H_2 and D_2, review 7−110588
SiO_2, plastic clad, fibre characts., temp. depend. 7−68874
SiO_2 plastic clad fibres, axial lateral plasma deposition for single and multimode fibres 7−68919
SiO_2, pure and Ge-doped optical fibres, E′ centre thermodynamic props., drawing conditions depend., EPR study 7−98146
SiO_2:F multiclad single mode fibres 7−136575
SiO_2:F optical fibres, stress props. 7−82790
SiO_2:Ge optical fibre loss increase due to H_2 and long-term loss stability 7−90800
SiO_2:Ge optical fibres; trapezoidal index single-mode for 1.55 μm band 7−82808
SiO_2:GeO_2 high NA multimode fibre made by pressurized MCVD 7−68920
SiO_2:GeO_2 optical fibres, stress props. 7−82790
SiO_2:Sb_2O_3 fibres fabricated by VAD method 7−123219
SiO_2:Yb^{3+}, Er^{3+} optical fibres, multiphoton effects 7−90819
SiO_2-B_2O_3-K_2O ternary glass forming system, props. and chemical composition relationship 7−136465
SiO_2-core single-mode fibres, refractive indices, residual stress effects 7−97138
SiO_2-GeO_2, fibre light guides, radial distribution of impurity defects 7−97107
SiO_2-GeO_2 optical fibre, impurity diffusion from jacketing material 7−110596
SiO_2-GeO_2 optical fibre, impurity diffusion during MCVD deposition 7−110597
SiO_2-GeO_2-P_2O_5:Nd^{3+} doped optical fibres, prep., optical props. 7−92734
SiO_2-GeO_2(P_2O_5) single mode fibers, Brillouin-gain spectra 7−75143
SiO_2-SiO_2:F, pure silica core fibre with doped cladding, VAD fabrication technique and characts. 7−97144
TlBr-TlI, KRS-5, IR fibre antireflection coatings for CO_2 lasers 7−82633
YAG:Nd single cryst. fibre growth and nonlinear optical use 7−75069
ZnO bulk wave transducer struct. for acousto-optic phase modulation of single-mode fibres 7−123390
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984
ZnSe optical fibre for CO_2 laser medical appls. 7−79043
ZrF_4 based fluoride optical fibres, scatt. loss due to crystallites 7−117328
ZrF_4-Ba-F_2 based glass fibres, progress for optical communication 7−110578
ZrF_4-BaF_2-LaF_3-AlF_3-NaF-PbF_2:Nd glass fibre lasers 7−136313
ZrF_4-NdF_3-FeF_3 glass fibres, photolum. studies 7−125785

optical films
see also antireflection coatings
absorbing thin film *n*, *k* and *d* meas. by multi-incident-angle ellipsometry *(Chinese)* 7−99956
absorption meas. by laser calorimetry 7−121127
absorption measurements for high power laser systems 7−82751
algorithms for optical thin film software 7−103935
automated optical coating processes with optical thickness monitoring 7−104063
CAD of thin film optical coatings, versatile software package 7−103934
chalcogenide films for reversible optical discs, thermodynamic anal. 7−97102
characterisation techniques, nonoptical 7−123161
CNC of optical coating systems 7−104068

optical films continued
coating form. kinetics, charact. props. 7−123160
coating laboratories, IBM PC use for maximizing production 7−104069
coating quality assessment using total integrated scatter meas. system 7−123286
coatings, applications, devices and markets 7−123164
coherence loss due to thin film interface roughness 7−122833
conducting polymers, appl. in electronic and optoelectronic devices 7−97106
conference, thin film technologies, Innsbruck, Austria (April 1986) 7−102011
deposition, sorption processes 7−104060
design technique, automatic 7−90749
dielectric multilayer mirrors, combined phase parameter, appl. to interferometers 7−68811
dispersion effects on optical consts. determ. 7−106292
dual-component multilayer optical coatings, synthesis method 7−90754
eddy current methods, analogy with long transmission line *(Czech)* 7−106748
evaporation monitoring system featuring 'software' trigger points and on line evaluation of refractive indices 7−104065
evaporation processes, computer simulation 7−124784
excimer lasers, high power, coatings 7−110395
fabrication by vacuum evaporation technology 7−141967
fibre optics, UV-cured primary coating, low temp. performance 7−75125
free electron laser optics coating test device 7−136345
In-Se based phase change reversible optical recording film 7−75090
infrared materials, characterisation, X-ray diffraction techniques 7−130982
insulating films, micro-, ultramicro- hardness meas. 7−106736
ion and photon-beam assisted deposition 7−125969
ion based technique prod., progress in optics book 7−66843
IR opaque coating materials survey 7−110532
IR reflection polarisers, using transparent high-index films on transparent low-index substrates, efficiency 7−123169
lacquer polishing of X-ray optics 7−90841
Langmuir-Blodgett films, optical props. 7−125825
laser damage to optical coatings, overview of understanding 7−123008
laser induced damage in optical materials, conf., Boulder, CO, USA (Oct. 1984) 7−95102
laser mirror design for high power CO_2 laser 7−117223
lasers, coatings for high energy systems 7−74949
lasers, optical coatings on high power components 7−74948
layered synthetic microstructures, optimisation for broadband refl. at soft X-ray, EUV wavelengths 7−121310
light scattering and characterisation 7−123162
linear capacitive displacement sensor with frequency readout 7−95568
liquid crystal droplet-polymer light control film, struct., optical and thermal props. 7−123133
liquid crystal droplet-polymer light control film, struct. and optical props. 7−123132
magneto-optical disc storage, antireflection thin films 7−110290
mechanical properties, ultra low load Vickers hardness meas. in SEM 7−106735
mirror protection using transparent lacquers 7−75100
mirrors and multilayers, high-resolution angle-resolved X-ray scatt. 7−97118
multilayer coating design programs 7−103931
multilayer film optical constant determ. 7−125677
multilayer interference systems, structurally invariant and nonsteady props. 7−141785
multilayer optical films subjected to high power CW lasers, model 7−117293
multilayer optical films subjected to high power CW lasers, model 7−117294
multilayer stacks, calc. technique based on R matrix propag. algorithms 7−129964
multilayers, spectral props. variations from different coating runs, inverse synthesis anal. 7−103936
multimode fibre lightguide power diffusion, influence of microbends and polymer coatings *(Russian)* 7−75165
nonlinear surface polaritons, TM modes 7−132364
nonlinear thin film, laser beam transmission, transverse self-phase modulation and bistability 7−110440
nonquarterwave film thicknesses in multilayer struct. fabrication, optical monitoring using turning point method 7−130396
ophthalmic lenses, thin film coating technology 7−90753
optical baffle materials, spacecraft thermal control, UV and visible BRDF data 7−141796
organosilsesquioxane use as coating/cladding for silica optical fibres 7−136595
photoresist coating on telescope corrector plate, contrib. to zonal aberration correction 7−79829
polarisation controlling coatings for optical communication appls. 7−136604
polarisers, thin-film cubic-type, for high power lasers, design parameters 7−117220
polymer films, nonlinear optical props. 7−68754
quarterwave multilayers, optical monitoring of thickness *(French)* 7−97179
refractive index determ. by spectrophotometry, ellipsometry and Abeles method 7−102496
rugate coatings subject to CW and pulsed lasers, transient temp. distrib. model, CW case 7−124328
rugate coatings subject to CW and pulsed lasers, transient temp. distrib. model, repetitive pulsed case 7−124329
silicide layers, polycrystalline, optical props. 7−125832
solar absorbers, black chrome optical film properties, substrate surface preparation effects 7−139133
solar cell coverglass and second surface mirror coating improvements 7−144870
solar concentrator collector, silver-polymer film development, specular reflectance properties 7−144790
solar conversion efficiency improvement using optical materials 7−126559
solar photothermal conversion, metal-dielectric layers absorption spectra in 0.5 to 2.0 μm range 7−71635
spectral props., photoacoustic studies 7−92756
steel, stainless, solar collector, selective film 7−126642
substrates, coated and uncoated, roughness characterisation using scatt. distrib. meas. 7−123163
surface inspection, subjective versus objective methods 7−104070

optical films continued
systems analysis of absorbing media, filter design calcs. 7—103738
thermal indicators based on cholesteric liquid crystals, optical parameters obs., biomedical appl. 7—125821
thickness monitoring, sensitivity improvement using graphical methods 7—67363
thickness monitoring fully automated system for thin film prod. 7—104064
thin film characterisation via ellipsometric methods 7—121197
thin organic polymer film growth, ellipsometric investig. 7—98727
translucent, refractive index correction 7—136197
transparent thin film on transparent substrate, reflectances at oblique incidence 7—68556
22-tricosenoic acid, Langmuir-Blodgett multilayers, optical loss 7—138527
two-component optical coatings synthesis, optimality 7—90755
US precision cleaning of optical components prior to and after vacuum coating 7—104067
weak absorption meas. in optical thin films, using adiabatic laser calorimeter 7—108615
Ag and Ag on Cu mirrors, glancing incidence absorptance meas. 7—110495
Ag-Zn thin films, magnetron-sputtered, optical recording appl. *(Japanese)* 7—125977
AgN thin-films, optical constants 7—125833
(Al,Ga)As/$(Ca,Sr)F_2$ multilayer structures, MBE growth as broad-band high-reflectivity mirror 7—77825
Al_2O_3 films, optical props. 7—113303
As-S amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7—130282
As-Se amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7—130282
Au coating on Al substrate, total spectral reflectance and bidirectional reflectance distrib. function 7—108627
Au-MgO cermet thin films, optical dielec. function derivation near percolation, phenomenological approach 7—125676
B_2O_3-SiO_2 glass films, sol-gel prep., surface roughness, optical transparency rel. to prep. atmosphere 7—132510
BaF_2 optical films, linear expansion coeffs. 7—103930
Bi/Se multilayer thin films, optical recording 7—74880
Bi_2O_3-Au-Bi_2O_3 heat mirrors, transmission charact., effects of layer thickness var. and annealing 7—106288
a-C:H, IR coatings, structural studies 7—132500
CaF_2 coating on Si, scatter charact. and surface smoothing effects 7—141969
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7—77387
Ga-Ge-Se-Te films for reversible optical recording 7—68801
He-Ne double-wave laser interferometer for thin-film optical constants *(Chinese)* 7—115998
In coating for D shaped fibre polariser 7—75149
In thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7—82730
$In_{2-x}Ga_xS_3$, prepared by spray pyrolysis, opt. energy gaps 7—85870
InO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7—82730
In_2O_3 transparent conducting coating for IR region, activated reactive evaporation 7—86032
In_2O_3:Sn transparent films as IR filters 7—82761
InSnO film optical constants in amorphous semiconductor multilayers 7—125831
$LiTaO_3$ thin films, prep. by dipping method, dielec. and optical props *(Japanese)* 7—132511
MgF_2 coated VUV high reflectance mirrors 7—141966
MgF_2, effects of various ambient-aging processes in chopped and non-chopped optical films 7—85881
MgO films, nondestructive depth profiling by spectroscopic ellipsometry 7—130298
Na_3AlF_6, effects of various ambient-aging processes in chopped and non-chopped optical films 7—85881
Na_3AlF_6-MgF_2 mixture, effects of various ambient-aging processes in chopped and non-chopped optical films 7—85881
Nd:YAG laser pump cavity reflector, metal-dielectric coating *(Korean)* 7—82577
Ni_4Si polycrystalline layers, optical props. 7—125832
Pd_4Si polycrystalline layers, optical props. 7—125832
Pt-Al_2O_3 cermet thin films 7—125676
Pt_4Si polycrystalline layers, optical props. 7—125832
Sb chalcogenides, amorphous film, photoinduced changes in optical props. *(Russian)* 7—113302
Sb-S, amorphous film, mechanism of optical recording *(Russian)* 7—111659
Sb-Se, amorphous film, mechanism of optical recording *(Russian)* 7—111659
Sb-Se-Bi film, erasable optical disc media 7—75089
SeGe films, real-time hologram recording 7—110296
a-Si:H film optical constants in amorphous semiconductor multilayers 7—125831
SiH_4 optical films, plasma-deposited and dip-coated, charactn. 7—90748
Si_3N_4 films, selective area laser CVD, microlenses fabrication 7—71062
Si_3N_4 thin films produced by low temp. photo-CVD, characterisation, optoelectronic device appls. 7—126018
SiO_2 films, selective area laser CVD, microlenses fabrication 7—71062
SiO_2 layers obtained by ion assisted deposition, growth, optical study, optical filter appls. 7—125970
SiO_2 optical films, plasma-deposited and dip-coated, charactn. 7—90748
Sn thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7—82730
SnO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7—82730
SrF_2 optical films, linear expansion coeffs. 7—103930
Ta_2O_5 layers obtained by ion assisted deposition, growth, optical study, optical filter appls. 7—125970
Te-Ge-Sn-Au phase change recording film for optical disk 7—76706
Te-TeO_2:Pd write-once media for optical discs 7—75087
Ti, thin films, struct. and optical props. meas. 7—144136
TiN thin-films, optical constants 7—125833
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7—125834
VO_2 thermochromic films for energy efficient windows 7—125994
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7—125979

optical films continued
WO_3, electrochromic form. of anodic film on W electrode, IR reflection and Raman spectroscopies 7—99812
WO_3 film electrochromic behaviour obs., prepared by anodic oxidation 7—125695
WO_3 thin films for electrochromic windows 7—123135
YIG films, parametrically excited elastic waves, optical studies 7—131233
ZnO:Al films, transparent and heat reflecting, reactively sputtered, optical props. 7—125819
ZnS films, nondestructive depth profiling by spectroscopic ellipsometry 7—130298
ZnS optical films, linear expansion coeffs. 7—103930
ZnSe optical films, linear expansion coeffs. 7—103930
ZrO_2, thin films, optical losses in UV region 7—97120

optical filters
see also light absorption; optical films; optical isolators; spatial filters
adaptive filter, analytical model 7—82758
adaptive filter, interferometric 7—82759
bandpass filters, co-directional, mode converting, spatially-variant coupling design 7—103948
Bragg diffraction of light by a standing sonic wave 7—129974
cascaded single-mode fiber optic transversal filters 7—90829
chalcogenide semiconductors, as optical interference filters with controlled parameters 7—117300
Chelsea filter, transmission curve 7—68819
coatings, applications, devices and markets 7—123164
coatings for large area interference 7—136480
colour image statistical pattern recognition filter using incoherent optical correlator 7—129988
components testing, development trends 7—136614
composite matched filter output partitioning for pattern recognition 7—117298
concatenated tapered coaxial couplers as all-fibre wavelength filters 7—103943
cosmic rays composition meas., light attenuators for plastic scintillation detectors 7—139934
dielectric interference filter for 4.4 μm, sapphire substrate, mech. and optical props. *(Slovenian, English)* 7—103942
directional-coupler wavelength filters made of dissimilar single-mode fibres, bandwidth 7—68850
displacement sensors based on spectral filtering, sub-carrier interferometry 7—80743
dye laser, tunable ps pulse generation using ruby laser pump and grating spectrometer 7—68670
efficiencies meas. of filter and mirror, using vacuum reflectometer in UV, VUV 7—103947
electrooptic Fabry-Perot filter in spectrophotometer for solar oscillations study 7—120276
eye safety protection for field use of laser rangefinders 7—93961
Fabry-Perot filters for wavelength demultiplexing, optical monitoring method during growth 7—103945
fibre, single-mode, channel-dropping filter using high-index overlay waveguide 7—75148
fibre-optic ring resonator, novel type, for wavelength selective transmission 7—104004
fibres, periodically twisted, polarisation instability, all-optical switching and intensity discrimination 7—75145
gas analyser for stack emissions, solid state, acousto-optic tunable filter based 7—71555
granular noise reduction of high-sensitive film, opt. filtering technique 7—73473
HAIFA multichannel modular spectroscopic diagnostic for Tokamak plasma 7—123991
holographic notch filters and filter stacks development for specific spectral transmission 7—122882
holographic optical configurations for eye protection against lasers 7—119865
hybrid solar energy conversion systems, liq. and thin-film filters 7—86827
image processing, Hotelling trace criterion for feature enhancement 7—141809
in-line optical fibre filters using dispersive materials 7—68897
integrated optical filter, design *(Korean)* 7—82861
integrated optical filter, fabrication and improvement *(Korean)* 7—82862
interference filters with controlled parameters 7—117300
ionic pattern recognition, large class, OCR case study 7—110277
IR scattering dispersion filters of air-crystal type *(Czech)* 7—123175
laser protective filters for visible and IR 7—87247
liquid crystal polarisation filter, refractive index matched to silica 7—113113
multi-passband birefringent filter types *(Chinese)* 7—97122
multi-soliton pulse spectral filtering in optical fibres, pedestal suppression 7—68760
multiclass stochastic images buried in additive noise, classification using optimal correlation filter 7—68576
multilayer coating design programs 7—103931
multimode fibres, mode excitation and modal power distrib. meas. using computer-generated holograms 7—130355
multistep filters using gyrotropic crystals, angular aperture 7—103944
narrow-band interference filters, transmission bands, angular depend. 7—90758
narrow-band selective optical filters using gyrotropic crystals 7—130305
narrow-bandwidth optical waveguide transmission filters, all-fibre device 7—82858
nonlinear interference filters, loop narrowing and critical slowing down 7—82757
object phase distributions detection by optical differentiation operations *(Japanese)* 7—110255
pattern recognition by spatial filtering *(Japanese)* 7—110540
pattern recognition using volume Fresnel holographic filter 7—110272
phase-only composite filter, design, appl. 7—123173
point spread functions of optical systems with rotationally symmetric amplitude filters 7—141805
quarterwave multilayers, optical monitoring of thickness *(French)* 7—97179
quartz glass, Eu activated, luminescence optical filters for laser, efficiency 7—130304
Rayleigh line rejection filter for Raman spectrometers 7—89273
reflectively tapped optical fibre transversal filters 7—97148
resonator memories and optical novelty filters 7—110266
rib waveguide grating resonator filters, anal. *(German)* 7—136483

optical filters continued
ring laser, unidirectional operation using absorbing Fabry-Perot filter 7−103843
signal processing devices design 7−104028
single mode fibre taper filters, wavelength response fine tuning methods 7−68891
single-mode fibre taper filters, wavelength response, fine tuning 7−82760
slab waveguide electrooptic filters, modal dimensionality and dephasing effects 7−141983
slowing down far from the limit points in optical bistability 7−141921
Solc equivalent filters in single mode fibre, practical design and manufacture 7−117299
systems analysis of absorbing media, filter design calcs. 7−103738
thin film technologies, conf., Innsbruck, Austria (April 1986) 7−102011
thin-film reflection filters having nonuniform multiperiodic interface corrugations 7−90793
Tschebyshev optical filter design 7−103946
tunable fibre Fabry-Perot interferometer filters 7−117330
tunable optical band pass filter using optically active and biaxial crystals 7−110542
zero-quantum spectroscopy, multiple-quantum filters, appl. 7−123174
AlGaAs lasers, index guided with mode filter, local normal mode analysis 7−122960
As_2S_3 based antireflection coatings for IR filters 7−103929
As_2Se_3 based antireflection coatings for IR filters 7−103929
$Bi_{12}SiO_{20}$ 2D optical temporal bandpass filter using four-wave mixing, dynamic schlieren imaging system 7−97090
Cs filter resonant operation of Nd:$LiYF_4$ laser 7−82657
$Ga_{1-x}Al_xAs$ optical filters, thermo-optical effects 7−70755
GaAs-GaAlAs Bragg grating filters, rib waveguide type for 1.5 μm wavelength 7−97125
GaP-$GaAs_{0.35}P_{0.65}$, optical interference filter, photodiode, single-crystal integration 7−140747
Hg_2Cl_2 vapour-phase-grown crystals, acousto-optic tunable filters and optical signal processing 7−97123
In_2O_3:Sn transparent films as IR filters 7−82761
$LiNbO_3$:Ti electro-optically tunable narrowband wavelength filter 7−97177
Si Fabry-Perot interferometers, micromachining manufacture 7−134841
SiO_2 layers obtained by ion assisted deposition, growth, optical study, optical filter appls. 7−125970
Ta_2O_5 layers obtained by ion assisted deposition, growth, optical study, optical filter appls. 7−125970
TiO_2/SiO_2 multicavity filter stability 7−123176
Tl_3AsSe_3 IR acousto-optic tunable filter for multi-gas stack emission monitoring 7−133177
Tl_3AsSe_3 single crystal filter for IR source for spectrochemical anal. of flue gases 7−126502
ZnS Fabry-Perot interference filter, optical bistability *(Korean)* 7−80865
ZnS interference filters for symbolic substitution 7−74864
ZnSe interference filters for symbolic substitution 7−74864
ZnSe nonlinear interference filter, thermally induced optical bistability model 7−90683

optical free induction decay *see optical coherent transients*

optical frequency conversion
see also optical harmonic generation; optical parametric devices
cubic crystals, four-wave mixing, polarisation depend. 7−110452
difference frequency source for very low optical freq. spectroscopy, CO_2 collision induced spectra 7−103488
dye laser frequency conversion by stimulated Raman scattering in alkali metal vapour 7−130257
electro-optical materials for optical electronics *(Spanish)* 7−117280
enhanced incoherent sum-frequency generation by group velocity difference 7−110461
fibres, single-mode, wave generation through four-wave mixing, efficiency, phase-mismatch depend. 7−130252
four-wave parametric upconvertors for IR detection, acceptance angle characts. study 7−90696
frequency mixing of synchronously pumped CW femtosecond laser 7−68751
garnet films, ferrimag. reson.-induced dynamical optical modes conversion study 7−123090
glass fibres, second harmonic and sum freq. generation 7−97076
idler wave; SHG effect on difference freq. generation 7−117263
II-IV-V_2 cpds., birefr., gyrotropy characts. 7−113122
injection and switchout scheme for multipass laser amplifiers 7−82596
laser light frequency conversion in single-mode fibre 7−117268
near UV CW coherent radiation generation 7−75062
nondegenerate multiwave mixing, Doppler-broadened Stark splitting 7−123113
nonlinear susceptibilities, sum rules, difference freq. generation, anharmonic oscillator model 7−90703
nonlinear susceptibility sum rules for sum freq generation, classical anharmonic oscillator model calcs. 7−110462
organic molecules and optical signal processing *(French)* 7−129990
photorefractive oscillator, double-colour-pumped, image colour conversion 7−136434
poly-vinylidene fluoride copolymer poled guest/host composite for freq. doubling and waveguiding structs. 7−103909
trans-polyacetylene picosecond time-resolved absorption in the mid-infrared by seeded optical parametric generation 7−138396
pumping radiation under saturation, effect of stimulated Raman scattering on coherence 7−90706
quartz surface with adsorbed coumarin 504, vibrational spectroscopy by infrared-visible sum frequency generation 7−70785
Raman frequency conversion, numerical anal. and optimisation 7−110466
Raman laser developments for remote sensing appl. 7−75066
rectangular waveguide, laser radiation generation at difference frequency by nonlinear crystal 7−90701
rotational Raman gain coefficient ratio of H_2 and N_2 7−130260
solid laser sources, efficient freq. conversion in nonlinear crysts. 7−75067
subPoissonian light observation in parametric downconversion 7−97084
sum rules, derivation, appl. for linear and nonlinear optical consts. 7−106122
three-wave freq. mixing, influence of photondensity *(Chinese)* 7−110447
two-step upconversion for efficient IR detect. 7−110453
VUV radiation, coherent sources 7−82716
$AgGaS_2(Se_2)$, chalcopyrite, crystal growth, nonlinear IR appl. 7−68783
$AgGaS_2(Se_2)$, IR freq. generation 7−75068

optical frequency conversion continued
BaF_2-ThF_2:Yb^{3+}, Er^{3+} glass, IR to visible fluoresc. upconversion efficiency and multiphonon relaxation study 7−117264
Cs, frequency upconversion from 10 μm atm. window to visible, third-order nonlinear susceptibility *(Japanese)* 7−97088
GaAs Schottky diode, 52nd order harmonic mixing 7−110459
GaP, nonlinear laser radiation interaction, microwave generation 7−68785
Ge, picosecond time-resolved absorption in the mid-infrared by seeded optical parametric generation 7−138396
p-H_2 laser radiation frequency conversion by four wave mixing 7−136438
H_2 stimulation vibrational Raman conversion of 1.06 μm radiation 7−110467
He-K, XUV laser radiation generation by stimulated Raman scattering 7−90697
Hg, two-photon-resonant frequency conversion, amplified spontaneous emission effects 7−141939
KH_2PO_4 and isomorphs, electro-optical, linear and nonlinear optical props., devices, research areas, review 7−110484
$KNbO_3$ crystals, noncritically phase-matched sum freq. generation, image up-conversion 7−75053
$LiNbO_3$ crystal, difference frequency generation, appl. to tunable subpicosecond infrared pulse generation to 4 μm 7−130259
N_2, light parametric freq. conversion in short wavelength region 7−103886
Na, frequency upconversion from 10 μm atm. window to visible, third-order nonlinear susceptibility *(Japanese)* 7−97088
Na gas vapour, optical anisotropy by strong pump field *(Russian)* 7−141942
Na vapour, generation of high brightness UV radiation at 343.1 nm 7−110465
Nd^{3+}:YAG CW laser, nonlinear optical effects 7−68655
O_2, light parametric freq. conversion in short wavelength region 7−103886
Pb vapor heat pipe as stimulated Raman convertor for XeCl lasers 7−123112
SiO_2:Yb^{3+}, Er^{3+} optical fibres, multiphoton effects 7−90819
XeCl laser, radiation conversion is H_2 and methane 7−129724
XeCl laser radiation, tunable VUV generation by anti-Stokes stimulated Raman conversion 7−123099
XeCl/H_2 Raman shifting to blue-green region 7−130249

optical frequency doubling *see optical harmonic generation*

optical gap *see energy gap; optical constants*

optical glass
CMZ coverglass optical and physical characteristics for solar arrays 7−144869
fibre drawing process, temp. regime effect on stability 7−77933
fibre materials and props., conf., Boston, MA, USA (Dec. 1986) 7−134364
fibre preforms for telecommunication, fabrication 7−123244
fibre with high tensile strength 7−68876
fibres, sol-gel processing 7−136597
fibres, tensile strength, modified Weibull distrib. function 7−144471
fibres, tensile strength anal. using modified Weibull-type function 7−124367
fluoride glass IR optical fibres in medicine and biology 7−79042
fluoride glass single-mode fibres, spectral attenuation meas. by fourier transform spectroscopy 7−68852
fluoride optical fibres, scattering characteristics 7−68845
fluorozirconate glass, optical and elastic props., investig. using Brillouin scattering 7−130281
glass, refractive index gradient form. by light radiation 7−77496
glass components fabrication, rough grinding effects *(German)* 7−82870
glass-molten salt ternary ionic system, computer simulation of uphill diffusion by ion exchange *(Japanese)* 7−92951
gradient index lens fabrication, computer simulation of uphill diffusion by ion exchange *(Japanese)* 7−92951
grinding with diamond tools, subsurface damage depth rel. to surface roughness 7−117355
guided-wave technology, review 7−68844
halide glasses, ultratransparent, optical fibres appls. 7−82732
heavy metal fluoride glasses, viscosity temp. depend. and crystallisation 7−137608
heavy metal fluoride glasses for laser applications 7−82580
heavy metal halide glasses as optical fibre material 7−136470
heliostats and parabolic concentrators, performance of transparent fused quartz and 96% silica glass 7−144793
IR fibre optics materials, review 7−117281
joints made by optical contact, stress state, design and service factors effect on strength 7−75173
laser glasses, status and prospects 7−68653
milky glass transmission factors comparison for spontaneous and coherent radiations 7−123137
nonlinear optical properties 7−68753
OF 3 and 4 in astronomical three-lens apochromatic objectives 7−82742
periscope design, glass choice procedures 7−117291
photochromic, rate eqn. considering thermal and optical regeneration 7−106107
photographic lenses as eyepieces, radioactivity warning 7−88109
quartz glass, Eu activated, luminescence optical filters for lasers, efficiency 7−130304
Raman spectroscopic characterisation 7−68802
refractive index meas. of plane-parallel transparent materials, method based on Lau's interf. principle 7−67376
refractive-index change due to thermo-optic effect, meas. technique 7−121198
silica core fibres, 2 eV optical absorption, cladding material effects 7−75133
silica core fibres, defect formation and nonstoichiometry 7−97109
silica core fibres, gamma-ray induced 2 eV optical absorption band 7−130280
silica fibre light guide, doping additives, Raman scatt. determ. 7−114059
silica glass, OH diffusion at high temp. 7−131365
silica glass, sol-gel derived, impurity distribution, dehydration/sintering effects 7−141955
silica glass fibres, elongated, Raman spectra 7−97108
silica optical fibres, drawing-induced peroxy radicals 7−136553
soda-lime glass, thermo-optic effects and applications 7−136468
sol-gel process preparation *(Japanese)* 7−68914
solar cell coverglass and second surface mirror coating improvements 7−144870

optical glass continued
substrates for transmissive and reflective optics, laser design 7—75010
ultra lowloss communication with fluoride fibres 7—110593
waveguide fabrication, diffusion parameters evaluation with gradient index gratings 7—82874
waveguide profiles, ion-exchanged control with Ag thin film sources 7—141982
waveguides, curved, integrated optical circuits appls. 7—103983
waveguides, multimode GRIN strip, fabricated in glass by ion exchange 7—103982
Al_2O_3-B_2O_3-SiO_2-Na_2O glass, heavy metal doped, generation of optically wave-guiding layers 7—103970
As_2S_3 based antireflection coatings for IR filters 7—103929
As_2S_3 IR glass fibre with Teflon cladding, CO laser power delivery for medical appls. 7—79044
As_2Se_3 based antireflection coatings for IR filters 7—103929
BaF_2-InF_3-ZnF_2-YbF_3-ThF_4 glass, phase and IR props. 7—104572
CeO_2 doped coverglass UV cut-on wavelength for satellite solar cells 7—144873
Cs^+-doped glass buried waveguides for passive integrated optics 7—104041
CuCl-NaCl photochromic glasses, light-sensitive phases 7—70728
Ge-S-In(Ga) glasses, appls. in microelectronics and optics 7—103915
Ge-Sb-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7—106120
Ge-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7—106120
GeSbSe chalcogenide glass IR optical fibres, properties and applications 7—68860
$Ge_x(Se_{1-y}Te_y)_{1-x}$ glasses, prep., for optical appl. 7—106119
In-Se-Tl films, phase-change optical media, single-beam overwrite expt. 7—75091
Na_2O-CaO-SiO_2 glass, stress-induced index change for Na^+-K^+ ion exchange 7—123136
Na_2O-CaO-SiO_2 glass single-mode channel waveguides, fabrication by two-step diffusion *(Japanese)* 7—110571
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7—136466
P_2O_5-GeO_2-SiO_2 optical fibre preform, parameters distrib. along radius 7—136467
Pb-Cd-Al-Li fluoride glass, resistance to chem. degradation by water, low loss optical fibre appls. 7—71336
PbO optical glass, Kerr const. and struct. relax. 7—99798
SeGe films, real-time hologram recording 7—110296
SiO_2 optical glasses, physics and appls. *(Russian)* 7—110491
SiO_2-B_2O_3-K_2O ternary glass forming system, props. and chemical composition relationship 7—136465
SiO_2-core single-mode fibres, refractive indices, residual stress effects 7—97138
SiO_2-GeO_2, fibre light guides, radial distribution of impurity defects 7—97107
TiO_2-Nb_2O_5-B_2O_3-Na_2O-SiO_2 glass for nonlinear optical waveguides, synthesis and charactn. 7—136469
ZrF_4-BaF_2-LaF_3-AlF_3-NaF-PbF_2:Nd glass fibre lasers 7—136313

optical gratings *see diffraction gratings*

optical harmonic generation
see also lasers
2-(N,N-dimethylamino)-5-nitroacetanilide single crystals at 1.3 μm 7—117262
acetylene derivatives, optical SHG, recrystn. solvent effects 7—110450
alkanes, cubic hyperpolarisabilities, meas. by third harmonic generation 7—123095
4-aminostilbene, systems with low energy double transitions, second-order hyperpolarisabilities, evaluation by three-level model 7—130268
l-arginine phosphate monohydrate, frequency conversion material for high power lasers 7—82712
azo dye, DPNA, Langmuir-Blodgett multilayers, second harmonic generation 7—68779
azo dye attached polymer, nonlinear optical props. 7—136425
benzene chromium tricarbonyl-thiourea inclusion complexes, SHG study 7—75054
biphenyl derivatives, second-order nonlinear polarisability determ. by SHG 7—110456
bowlic liquid crystals, struct., optical and elec. props. 7—124089
centro-symmetric media, SHG 7—130246
chirped pulse parameters, direct and second harmonic interferometric determination 7—128635
computer-assisted spectrum-resolved SHG autocorrelator for monitoring phase characteristics of femtosecond pulses 7—136387
1,3-cyclohexadiene iron tricarbonyl-thiourea inclusion complexes, SHG study 7—75054
dye coverages, SHG efficiency 7—110458
dye coverages on quartz substrates, conc. depend. orientation studied by SHG 7—124693
dye laser, cavity dumped, pumped by CW mode locked Q-switched Nd:YAG laser, picosec. pulses 7—74977
dye laser, CW synchronously pumped pulse shape asymmetry 7—136288
electrochemical interfaces, optical props., SHG and photoacoustic anal. 7—78515
electron tunnelling time meas. with STM junction and laser-rectification expts. 7—118555
elliptically polarised light scatt. by bound electrons, zero freq. and second harmonic waves 7—68789
FEL in Compton regime, XUV harmonic enhancement by magnetic fields 7—130138
FEL klystron, superradiant harmonic emission, 3D modelling and numerical anal. 7—130137
ferroelectric liquid crystals, performance parameter meas. methods, review 7—92615
fibres, frequency-doubling processes, anal. using Raman spectroscopy 7—136563
fibres, nonlinear, single-mode, picosecond steps and dark pulses 7—110590
fibres, SHG, self-organised phase-matched 7—136433
free electron, circularly polarised light scatt. 7—122808
gases, frequency mixing, tunable VUV radiation generation 7—130253
glass fibres, second harmonic and sum freq. generation 7—97076
hemicyanine Langmuir-Blodgett films, multilayered, enhanced SHG 7—75060
hemicyanine-fatty acid Langmuir-Blodgett monolayers, SHG 7—110457
hemicyanine/nitrostilbene dye bilayer Langmuir-Blodgett films for nonlinear optics 7—90715

optical harmonic generation continued
high-average power harmonic generation 7—90700
homogeneous media, second-harmonic generation, surface probe appls. 7—123107
idler wave; SHG effect on difference freq. generation 7—117263
image potential states, two-photon photoemission and optical SHG studies 7—106373
inert gas mixtures, third harmonic generation, optical consts., multiphoton ionisation meas. 7—122648
injection and switchout scheme for multipass laser amplifiers 7—82596
insulators, ionic contributions to Raman tensor 7—123108
inter gases VUV radiation production by multiphoton processes 7—90702
interface between two media, EM radiation from polarisation sheet 7—130247
intracavity SHG, light intensity fluctuations in fundamental mode 7—103893
klystron or undulator, Monte Carlo simulation of harmonic generation 7—130139
laser freq. bandwidth, influence on time and space structs., $2\omega_0$ harmonic generation *(Chinese)* 7—117261
laser harmonics, external field, generation by electron beam in multicomponent undulator with axial magnetic field *(German)* 7—130256
laser plasma, low temp., optical harmonic generation 7—136437
laser plasmas, harmonic space and time resolved struct. and density profile 7—90711
meta-nitroaniline for molecular optoelectronics, prediction of second order susceptibility 7—110454
metal surfaces, SHG, density functional approach 7—117270
2-methyl-4-nitroaniline, systems with low energy double transitions, second-order hyperpolarisabilities, evaluation by three-level model 7—130268
molecular crystals, nonlinear optical susceptibility meas. by interference fringes technique 7—130237
multiple higher harmonic generation, squeezing 7—122884
2-(N,N-dimethylamino)-5-nitroacetanilide single crystals, efficient SHG 7—123094
N-(4-nitrophenyl)-L-prolinol, quadratic nonlinear props. 7—123059
N-(4-nitrophenyl)-N-methylamino-aceto-nitrile for SHG, growth, crystal structure 7—123093
N-(4-nitrophenyl)-N-methylaminoacetonitrile, quadratic nonlinear props. 7—123059
near UV CW coherent radiation generation 7—75062
p-nitroaniline, systems with low energy double transitions, second-order hyperpolarisabilities, evaluation by three-level model 7—130268
p-nitrophenol, at air-water interface, chem. reactions, surface SHG investig. 7—119553
optical harmonics at microwave freqs., interferometric generation using freq. modulated semiconductor laser 7—130250
optical third-harmonic generation from polydiacetylene thin films deposited by vacuum evaporation 7—97074
organic crystal cored fibre design of parametric interactions, phase matching requirements 7—103899
orientationally ordered materials, second-order nonlinear-optical processes 7—123058
palladium poly-yne, third-order optical nonlinearity 7—97086
partially coherent beam, SHG 7—117269
partially ordered systems, third-order susceptibility tensors 7—130255
phase-matched SHG of surface polariton along Ag layer on slab optical waveguide 7—123084
photorefractive crysts., optical generation and explosive instability due to circular photovoltaic effect 7—82708
phthalocyanine thin films, third harmonic generation study 7—123091
picosecond cascadable inverter gate using second harmonic pumping 7—110460
poly-p-phenylene vinylidene thin films, optical third harmonic generation study 7—141930
polyacetylene, freq. depend. of third order optical susceptibility 7—141941
polydiacetylenes, nonlinear spectroscopy 7—82715
polymethylmethacrylate-hemicyanine Langmuir-Blodgett films, multilayered, enhanced SHG 7—75060
pulse compression and MW picosecond pulse generation 7—97137
quasiliquid crystal films, supercooled, polar ordering, electrostatic field effects, optical SHG study 7—137210
second harmonic emission from an underdense laser-produced plasma and filamentation 7—91302
second harmonic generation as surface magnetization probe 7—125442
second-harmonic signal, pulsed, amplitude and phase 7—123096
semiconductor lasers, directly-modulated, second harmonic distortions due to spatial filtering 7—103851
semiconductor surface layers, local crystal-symmetry meas. by harmonic generation and stimulated reflection spectroscopy 7—136428
seventh order in wave plane approx., theoretical anal. 7—97087
SHG in optical fibre by second order susceptibility grating 7—90718
SHG in optical fibre by self-written susceptibility grating 7—68778
SHG of laser radiation, noncollinear interaction, US diffraction effects 7—75063
slab-type waveguide, SHG using 2-methyl-4-nitroanaline as high index top layer 7—97073
solid-state slab geometry lasers as tunable sources 7—68705
squeezing in SHG 7—136246
squeezing of field amplitude square in SHG 7—90555
surface layers, nonlinear optical susceptibility 7—90695
surface microscopic roughness meas. by second harmonic intensity variation anal., appl. to Si and Ag surfaces 7—121068
surface nonlinearity origins 7—110464
surface optical second harmonic generation, local and nonlocal nonlinearities 7—103895
surfaces and composite materials, nonlinear optical props. 7—82699
tetrafluoromethane, second hyperpolarisability, vibr. contrib., SHG 7—130277
ultrashort pulse characterisation, direct Young interferometric technique 7—95637
vacuum UV coherent light generation in relativistic electron beam 7—136426
vinylidene cyanide/vinyl acetate copolymer, SHG using pulsed Nd:YAG laser 7—136432
vinylidene fluoride/trifluoroethylene copolymer film, SHG of pulsed YAG laser 7—68780
wavefront correction of laser radiation after multimode lightguides 7—142022
wing-suppressed IR sampling, technique 7—90717

optical harmonic generation continued
XUV coherent source, frequency tripling into 720-1025 Å region 7−141940
Ag (111) electrodes, second harmonic intensity, rot, anisotropy obs. 7−117265
Ag cooled films, second harmonic generation surface enhancement mechanism 7−82707
Ag mirror, optical SHG at 1.064 μm 7−136430
Ag surface, optical SHG from Tl 7−82706
Ag-aqueous electrolyte interface, optical SHG and differential capacitance obs. 7−76629
$AgGaS_2(Se_2)$, IR freq. generation 7−75068
AlGaAs DH laser, optical SHG 7−136302
Al_2O_3, thin film microstruct., probe by second harmonic generation 7−131468
Ar, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
β-BaB_2O_4 frequency doubling crystal, autocorrelation meas. of Ar^+ mode-locked laser pulses *(Chinese)* 7−103854
β-BaB_2O_4 SHG crystal, characts. in femtosecond region 7−97083
BaF_2 (111), photoemission and laser-induced ion desorption, multiphoton processes 7−106369
$BaTiO_3$, ferroelectric crystals, surface phase transition, second optical harmonic 7−123109
CO jet, two-photon resonant third-order nonlinear susceptibility, third harmonic generation 7−97075
CO laser emission frequency doubling 7−141936
CO_2 laser irradiated targets, higher order harmonics emission *(Chinese)* 7−97056
$Ca_3(VO_4)_2$-$Pb_3(VO_4)_2$ solid solns., nonlinear props., optical structural, dielec. and thermal meas. *(French)* 7−124527
$CdGeAs_2$ crystals, SHG of NH_3 laser radiation 7−141937
Cd_3P_2, surface pot., nonlinear-optical electroreflection meas. 7−85596
H, at. nonlinear susceptibilities at frequencies above ionisation threshold 7−68266
He, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
$HgIn_2Te_4$, linear and nonlinear properties in mid infrared 7−123111
I laser radiation, high-order harmonics generation 7−130254
KD_2PO_4, cryst., refractive index dispersion, harmonic generation study 7−82705
KD_2PO_4, high-average power harmonic generation 7−90700
KH_2PO_4 crystal frequency doubling for 160 fs XeCl amplifier system 7−122926
KH_2PO_4 single crystal growth for optical harmonic generation, seed cryst. 7−98003
KH_2PO_4 single crysts. for high power harmonic generation, growth by temp. decrease method *(Japanese)* 7−113370
KIO_3 single crystal, growth morphology and structure, second harmonic wave generation using ND:YAG laser 7−83926
$KNbO_3$, ferroelectric crystals, surface phase transition, second optical harmonic 7−123109
$KTiOPO_4$, flux-grown, SHG and accurate index of refr. meas. 7−110448
$KTiOPO_4$, KTP, long pulse SHG 7−75057
$KTiOPO_4$ optically biaxial cryst., SHG of light from AIG-Nd^{3+} laser 7−123100
$KTiOPO_4$ SHG crystals, hydrothermal growth technique 7−77786
$KTiOPO_4$, second harmonic generation with noncritical matching 7−136436
$KTiPO_4$ frequency doubling for Nd:YAG laser 7−122987
Kr, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
Kr, third-harmonic generation and multiphoton ionis. obs. 7−110019
$LINbO_3$ boules, polishing and lapping for testing by SHG 7−126270
$LiIO_3$, coherent 440 nm light source by freq. doubling of phase-locked high power laser array 7−90694
$LiIO_3$ crystal in Nd:YAG laser cavity, noncollinear SHG 7−97085
α-$LiIO_3$, tunable UV radiation generation, intracavity freq. doubling of ring dye laser output *(Chinese)* 7−130251
$LiNbO_3$ crystals with regular domain struct., light diffr. in volume phase grating, SHG 7−97081
$LiNbO_3$, plate homogeneity, SHG anal., optical substrate appls. 7−123086
$LiNbO_3$ waveguides, guided mode effective index meas. using Cherenkov SHG 7−103978
$LiNbO_3$:Ti waveguides, SHG, phase matching via periodic structures 7−103897
Nd^{3+} laser with intracavity SHG, output characts., α-$LiIO_3$ radiation defect effects *(Russian)* 7−82588
Nd:glass laser, active mirror system for TW output powers 7−82628
Nd:glass Nova laser, ZZ 7−82711
Nd:$LiYF_4$ laser, flash-lamp-pumped acousto-optically Q-switched, intracavity doubling of 0.527 μm output 7−123098
Nd:YAG CW mode locked lasers, operating specifications 7−74976
Nd:YAG laser, phase-matched SHG in 2-methyl-4-nitroaniline thin film waveguide *(Japanese)* 7−97089
Nd:YAG laser radiation phase modulation with SHG of ultrashort pulses, correlation meas. 7−141903
Nd:YAG lasers, freq. doubled, diode laser array pump sources 7−74978
Ne, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
Ni (111) with adsorbed S, methoxy decomposition kinetics, second harmonic generation study 7−144752
$PbHPO_4$, ferro- and para-electric phases, optical SHG 7−141933
S on Pd(100), adsorbate reson. enhancement in optical surface second-harmonic generation 7−98672
Si (111), single cryst. electrode, surface structural symmetry, electrochem. process effects, SHG investig. 7−91953
Si, ion implanted, microstruct. obs., correlation with optical meas. 7−104791
Si monolayer films, epitaxial growth, optical SHG study 7−131489
Si, reflected second-harmonic light generation, surface contribs. 7−68790
Si surface reflection, third optical harmonic processes interference 7−90712
Si:P, SHG, total freq. with refl., cryst. struct. randomisation 7−90713
TlAsSe used for CO_2 TEA laser radiation SHG 7−103885
$TlInS_2$ crystals, second optical harmonic, temperature relation 7−82713
W-Ni point contact diode, far infrared harmonic generation and mixing 7−82703
Xe, fifth harmonic prod. and photon reson., multiphoton ionisation spectra 7−122477
optical harmonic generation continued
Xe, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
YAG laser radiation used in atm. sounding, wavefront reversal of second harmonic 7−141944

optical hole burning
alcohol glass, dimethyl-s-tetrazine doped, dispersive relax. and spectral diffusion, ageing effects 7−75074
amorphous solids, dispersive kinetic processes, optical linewidths and dephasing, hole growth and filling 7−75080
amorphous solids, hole burning spectroscopy and relax. dynamics at low temp., phonon assisted tunnelling 7−136457
bacteriochlorophyll, frozen solns., site-selection fluoresc. spectra 7−138493
bacteriopheophytin frozen solns., site-selection fluoresc. spectra 7−138493
centrosymmetric mols. in glassy matrix, linear Stark effect, hole burning profiles 7−77606
chlorin, in amorphous SiO_2, hole-burning spectroscopy 7−123119
chlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
chlorin, matrix isolated, stark effect, spectral hole burning 7−96757
chlorophyllide in apomyoglobin, nonphotochemical hole burning in protein matrix 7−71677
chloroplast, photosystem I, persistent hole burning, electron-phonon coupling 7−78520
coproporphyrin, in amorphous ethanol matrices, dephasing and vibronic relax. luminesc. and hole burning investig. 7−92720
DFB lasers, single mode, stability, facet effects 7−68697
disc storage, high-density frequency-domain optical recording 7−82503
doped solid systems, photochemistry and spectroscopy, zero-phonon lines props. *(Russian)* 7−106219
dye mols. in amorphous solids, spectral holes, elec. field effects 7−123123
etioporphyrin I, monomer and dimer, in organic glass *(Russian)* 7−75083
glasses, optical transition, homogeneous line broadening, review 7−75075
impurity centres, monochromatic excitation, luminesc. 7−119038
isobacteriochlorin in n-octane crystal, photochemical hole-burning spectroscopy, Stark effect 7−82723
laser-induced hole formation, FEM model 7−110289
metal-tetrabenzoporphyrin-halomethane systems, donor-acceptor electron transfer, spectral hole burning 7−130270
octaethylchlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
optically dense sample, spectral hole burning *(Russian)* 7−103906
organic glasses, impurity mol. zero-phonon line broadening, hole burning studies, review 7−75076
organic glasses, low temp. dynamics, optical hole burning studies 7−141952
organic glassy hosts, guest mol. optical linewidths and dephasing, hole burning study 7−75077
organic low temperature glasses, struct. relax. and hole burning 7−142649
oxazine-4-perchlorate, in amorphous SiO_2, hole-burning spectroscopy 7−123119
pentacene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
perylene, nonphotochem. laser hole burning *(Japanese)* 7−130272
phenanthrene, short-lived S_2-state, transient photophysical hole burning studies 7−130274
photo-induced struct. changes, theory 7−85559
photo-induced structure changes 7−144730
photon-gated spectral hole burning by donor-acceptor electron transfer 7−103905
PMMA film with zinc-tetrabenzoporphyrin donors and chloroform acceptors, spectral hole burning 7−68795
polar molecules, solvation dynamics and vibr. relax., hole-burning spectroscopy 7−82326
polyethylene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polymethylmethacrylate: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polystyrene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
porphyrin, in ethanol, electron state dephasing, spectral diffusion, photochemical gap burnout 7−141629
porphyrins in ethanol glass, hole burning in absorpt. spectrum 7−90673
pseudoisocyanine bromide, J-bands, photon echo and hole burning investig. 7−103904
reactions, hole-burning, rate const. determ., fluoresc. 7−78518
resorufin, in ethanol glass, linewidths, photon echo and hole-burning results 7−110479
resorufin, in glycerol glass, photon echo and hole burning, temp. depend. 7−129796
resorufin in ethanol glass, linewidths, phases, relaxation processes 7−136451
semiconductor DFB lasers, gain nonlinearities 7−130100
spectral hole burning, scientific and practical applications, review *(Russian)* 7−103887
storage, wavelength-multiplexed-recording materials, Japanese research 7−110493
storage using freq. domain, photon-gated materials 7−110292
tetracene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
tetracene in alcohol glass, tunnelling dynamics, photophysical hole burning system anal. 7−97098
three-level system, pulsed photoburning and excitation *(Russian)* 7−75082
zinc tetrabenzoporphin, substituted, matrix isolated, stark effect, spectral hole burning 7−96757
GaInAsP-InP lasers, phase-adjusted DFB, stability in single longitudinal mode operation 7−122963
InGaAsP semiconductor laser, nondegenerate four-wave mixing, spectral hole burning 7−123118
$KEu(WO_4)_2$, RF hole burning with inhomogeneously broadened Raman heterodyne signals 7−85488
$KNdP_4O_{12}$:Pr^{3+}, inhomogeneous broadening and energy transfer 7−106242
Mg-porphyrin, in amorphous ethanol matrices, dephasing and vibronic relax. luminesc. and hole burning investig. 7−92720
Si:Ge, S, H, IR spectral hole burning of S-H deep donors 7−136455
SrF_2:Pr^{3+}, D^-, spectral hole burning due to deuteron tunneling 7−141950
ZnO:Co^{2+}, saturation spectroscopy and fluorescence 7−99926

optical images
see also aberrations
2D image depth information extraction from focus 7−68584

optical images continued
3D optical microscopic image reconstruction, freq. and spatial domain methods comparison 7−80871
aberration tolerances based on line spread function 7−110256
adaptive imaging systems with combined correctors, optical transfer functions 7−117150
analysis, math. morphology, review *(French)* 7−117143
angular periodicities determ., one-dimens. invariant functions applic. 7−141806
antireflection coatings in non-imaging and imaging electro-optical systems, single figure merit function 7−123165
apodisation filters, point spread functions 7−68817
astronomical images restoration, automatic log spectrum restoration of atmospheric seeing 7−72316
asymmetrical aberrations effect on OTF and image shift 7−122857
bar and periodic objects, partially coherent defocused imaging 7−103751
Bessel annular apodizers: imaging characteristics, computer-simulated images 7−122843
brightness amplifier, image formation with polarized light beams 7−82506
chronotomography: a new approach to high speed frame recording 7−96947
color image transmission in optical fibres by polychromatic encoding *(French)* 7−117326
color image transmission in single optical fibre *(French)* 7−117327
composite reflection hologram recording 7−117159
confocal imaging systems, detector size effects 7−74867
cylindrical step-index optical waveguides, radial image transfer 7−75111
decentered reflecting optical systems for high-speed cameras, meridianal aberrations computation and compensation 7−97119
degradation theory, introduction 7−136214
detective quantum efficiency of imaging systems with amplifying and scattering mechanisms 7−114468
disruption of images: the caustic-touching theorem 7−79590
Earth imaging spectrometry, aircraft and space programme 7−101567
electronic imaging conf., Arlington, VA, USA (Oct. 1986) 7−134348
experimental data in weighted spaces, iterative inversion 7−136166
far UV spectroscopic explorer (FUSE) telescope, optical surface anal. code (OSAC) anal. 7−101687
fiber imageguide, 2D image resolution, wavelength multiplexing 7−142010
grating interferometric imaging of 2D objects by computed tomography 7−74868
gravitational lenses, imaging procedure for images positions, shapes and luminosities determ. 7−72269
grazing incidence optics, modified sine condition 7−96946
GRIN lenses, tapered, paraxial imaging, Fourier transform properties 7−136475
Hamilton's method, image form. by general optical system 7−129993
hardcopy output of reconstructed imagery 7−136231
high-aperture optical systems, imaging, nonparaxial effects 7−129994
high-resolution image fiber system using an image separating/reconstructing method 7−82846
holographic scanning objective, optical imaging system for video discs 7−122881
illumination distribution in diffraction image of off-axis point 7−110269
image anal., random textures models, microstructure modelling *(French)* 7−118113
image analysis, γ-γ' microstructure morphology in Ni base superalloys *(French)* 7−119276
image analysis, carbides morphology in low C sheet steel *(French)* 7−119288
image analysis, cellular macrostructure of eutectic alloys *(French)* 7−119257
image analysis, characterisation of clones *(French)* 7−119747
image analysis, dendritic arrays in Ni base superalloys *(French)* 7−119256
image analysis, dendritic solidification *(French)* 7−119255
image analysis, microstructure of sintered W-Ni-Fe *(French)* 7−119190
image analysis, nuclei in tissue sections of non-Hodgkin's lymphomas *(French)* 7−119746
image analysis, pattern recognition, in human cytogenetics *(French)* 7−119913
image analysis, plane coordinance function, crystallographic stacking *(French)* 7−117145
image analysis, polar coordinates, anisotropy of grain struct. *(French)* 7−119289
image analysis, quality control of Al alloys, for can production *(French)* 7−119291
image analysis, quantitative fractography *(French)* 7−119477
image analysis, rat liver, during experimental carcinogenesis *(French)* 7−119749
image analysis, sperm motility appl. *(French)* 7−119748
image processing, edge enhancement, Laplace operators *(French)* 7−117144
imaging systems, optimizing evaluation using equatorial Gauss moment *(German)* 7−110281
incoherent image formation in the presence of scattering eye media 7−145019
interferometric method for imaging through inhomogeneities 7−68582
laser beam focusing and imaging, distinguishing 7−90530
laser scattering tomography, quality control of III-V wafers *(French)* 7−115988
light scatt. material, optical image transfer, transmission quality 7−82478
measurement applications and trends *(Japanese)* 7−121188
microscopic imaging systems, three-dimens. object represent. 7−89257
mirages of inferior and superior type, laboratory water tank expts. 7−79593
morphological optics and hypotheses role in image analysis 7−96942
multiaperture optics pattern recognition process 7−82499
multiclass stochastic images buried in additive noise, classification using optimal correlation filter 7−68576
multiple grey level objects, image reconstruction from projections 7−74870
objective lens aberration effects in optical meas. microscope 7−136210
ophthalmoscopic, double lenses for ocular fundus exam., photographic validation *(Italian)* 7−145259
partially coherent imaging of straight-edge object associated with periodic structures of acoustically modified coherence 7−141807
periodic and single object diffr. image intensity, spatial spectra *(Chinese)* 7−130001
optical images continued
phase distortion correction in coherent optical systems by adaptation 7−130000
photogrammetry, optical distortion effects in zoom lens 7−94054
point spread functions of optical systems with rotationally symmetric amplitude filters 7−141805
PRIZ space-time light modulator transmission function 7−68832
quality, effects due to differences between sagittal and tangential OTFs *(German)* 7−74869
rectangular transmission gratings, image form. 7−68575
reoxan, holographic gratings recording using copropagating beams 7−68589
rotational symmetric optical systems, apodization for diffraction limited image of axial point *(German)* 7−90511
short telescopes, field correctors and spot diagrams 7−72313
sintered materials, neck meas., automatic image analyser *(French)* 7−119189
sinusoidal grating, diffr. images, partial spatial coherence 7−122819
slab waveguide refractive index profile, automatic meas. by interferometric fringe processing 7−102508
smooth pursuit eye movement, limiting velocity determ. from retinal image 7−126817
soft copy display of electro-optical imagery 7−139268
speckle images, Erlangen-bispectral processing 7−74871
stereo images, correspondence searching algorithm, probabilistic relaxation 7−130008
stereo images correspondence searching algorithm, probabilistic relaxation 7−130007
synthesis technique using extended incoherent source 7−82476
thermoplastic recording, frosty, in projection systems, reproduction charact. 7−103924
three-dimensional imagery methods in light microscopy 7−95647
transmission in turbulent atmosphere 7−107509
turbulent atm., optical image random shift from Lambert surface *(Chinese)* 7−133925
two-phase digital holograms, synthesis method *(Chinese)* 7−130023
vector nature of light use in imagery and image processing 7−117155
wide-field three-mirror telescope, atm. dispersion compensator 7−72312
As_2S_3, film, phase conjugation, one-way image transmission *(Korean)* 7−82719
$Bi_{12}SiO_{20}$ 2D optical temporal bandpass filter using four-wave mixing, dynamic schlieren imaging system 7−97090
$Bi_{12}SiO_{20}$ PRIZ space-time light modulator, pulsed readout of image 7−75107
$LiNbO_3$:Ti channel waveguides, optical mode intensity meas., two dimens., comparison with numerical calcs. 7−104051

optical information processing
see also optical correlation; spatial filters
acoustic fields, directionality anal. by shadowgraph recording, coherent-optics anal. 7−68960
acousto-optic Bragg cells for microwave signal processing 7−82481
acousto-optic Bragg cells for signal processing 7−75210
acousto-optic spectrum analyser for laser radar applications 7−75029
adaptive optical threshold gates, algorithm 7−82489
associative memories appl. to symbolic substitution logic 7−122834
astigmatic system, random signal processing 7−68570
bimodal optical computers, speed and convergence 7−74861
binarisation procedure generating 2D pulse density modulation 7−110258
binary images, morphological transformations by hybrid optical-electronic methods 7−74873
binary logic by spatial filtering, review 7−74862
binary processors, design aspects 7−82490
biological cell, diffr. pattern analysis through opt. density data acquisition 7−114588
bistability, all-optical device appls. 7−136409
bistability, thermally induced, switching dynamics 7−90683
bistable semiconductor elements, optical data processing, photonic logic 7−75050
bistable system, hierarchical multistability and cooperative flip-flop operation 7−123080
Boltzmann machines, optical implementations 7−74860
Bragg cell, multichannel acousto-optic, design and fabrication 7−82769
camera for robotics, based on principles of insect eye 7−102556
circular birefringence meas. by circular fibre optic techniques, opto-electronic processing schemes 7−74853
color discrimination by optical pattern recognition 7−82509
colour discriminator, optical self-adaptive 7−73402
computer-aided system for automatic fringe analysis 7−73412
computer-generated holography, image reconstruction, speckle improvement *(Japanese)* 7−130026
computers, optical neural 7−110280
computing circuits, reversible 7−117152
conditional symbolic modified signed-digit arithmetic using optical content-addressable memory logic elements 7−122838
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference, Orlando, FL, USA (April 1986) 7−80161
continuous tone pictures, redundancy reduction, variable size block coding scheme 7−130009
control operator digital optical computer concept, review 7−82488
coordinate transformations with multiple computer-generated optical elements 7−141813
cylindrical pixels, bistable response charact. 7−75045
deconvolution algorithm for a Fabry-Perot interferometer 7−108635
differentiating spatial light modulator based on nematic liquid crystal, for optical preprocessing and pattern recognition 7−130317
diffraction pattern sampling using holographic optical element in imaging configuration 7−90520
digital computing, one-rule cellular automata 7−68567
digital moire-effect processing of holographic interferograms 7−128542
digital optical circuits, fan-out considerations 7−90514
digital optical computing, overview 7−122863
digital optical isochronous array processing method 7−136208
digital optical multiplier using modified signed-digit number representation, encoding schemes 7−82487
electrooptical processing of signal transforms 7−68566
Fabry-Perot bistable device, biased multibeam cascadable type, optimum control beam angle 7−97062
Fabry-Perot semicond. laser amplifier, high-speed all-optical gate switching expt. 7−129991

optical information processing continued
ferroelectric liquid crystals, optical computing and image processing appls. 7−110263
ferroelectric liquid crystals, props. and appls. 7−110262
fibre optic bipolar tap implementation using incoherent optical source 7−136564
Fredkin gate array as high-efficiency optical interconnection network 7−110252
full-adder circuit, all-optical single-gate expt. realisation 7−136227
geometric moments from optical cosinusoidal transform, hybrid optical/digital method 7−103758
geometrical optics, diffraction tomography transform and inverse 7−129969
high-resolution image fiber system using an image separating/reconstructing method 7−82846
holographic pattern recognition using resonance atomic media 7−68594
holographic phase retrieval and digital reconstruction 7−74889
holographic spectrum reconstruction method for display of spectrum and image in one plane, lensless coherent optical processor appl. 7−136233
Hough-transform-based circle detection using multimode fibre array 7−74855
hybrid electronic/optical digital adder, construction 7−90513
hybrid image processing, conf., Orlando, FL, USA (Apr. 1986) 7−72713
hybrid image processing *(Japanese)* 7−122851
hybrid optical system for linear transformation processing 7−103962
hybrid optical/digital approach to machine vision, techniques 7−141811
hydrostatic pressure measurements with multimode optical fibers 7−124364
image digitizer system comparison with coherent and incoherent light, speckle size influence 7−117147
image subtraction techniques review 7−74874
image synthesis technique using extended incoherent source 7−82476
incoherent light optical processing and holography appls. 7−117154
inhomogeneously broadened absorbing materials, convolution correlation and storage of optical data 7−82729
integrated disk archive for digital radiographic images, software and hardware subsystem 7−87327
integrating digital post-processor, design and development 7−82494
interferometric convertor, core of optical residue computer 7−110250
interferometric signal processing scheme, extended range dual-wavelength FMCW 7−80870
interferometric triple product processor 7−82493
inverse filter transfer function optimisation in blurred image restoration with incoherent light 7−90531
inverse problems of optics 7−103766
iterative algorithm for matrix inversion, optical implementation 7−110251
knowledge in optical symbolic pattern recognition processors 7−74863
lasers and electro-optics, conf., Baltimore, MD, USA (April-May 1987) 7−120705
liquid crystal ferroelec. spatial light modulators for optical interconnection 3D gate array 7−136491
liquid crystal television display as spatial light modulator for optical processing 7−82770
local spectrum display, pseudocoloring approach 7−122839
logic elements based on bistable thin-film interferometers 7−129999
logic gate based on magneto-optical spatial light modulator 7−130002
logic gates, multiple-valued, complement and literals 7−136220
lower bounds on the computational efficiency of optical computing systems 7−122842
materials, review 7−110488
matrix multiplication with 2D light source array 7−82469
microscopic images of living cells, 3D restoration 7−101168
modified composite filter for pattern recognition, noise with nonzero mean, experimental results 7−136225
monomode nonlinear waveguides, power-transfer effects 7−136515
morphological optics and hypotheses role in image analysis 7−96942
multiaperture optics pattern recognition process 7−82499
NDT by holographic interferometry with automatic fringe evaluation 7−74888
nearest-neighbor non-iterative error correcting optical associative memory processor 7−74875
neuro-optic processors, interconnectability 7−103764
nonlinear diode laser amplifiers in optical processors and interconnects 7−123071
nonlinear etalons and optical computing 7−90685
nonlinear interference filters, loop narrowing and critical slowing down 7−82757
nonlinear optical interactions, strong beam confinement by thin dielectric films *(Romanian)* 7−141927
nonlinear optical logic elements, demonstration 7−74865
nonlinear optical materials and devices, conf., Erice, Sicily, Italy (July 1985) 7−80172
nonlinear optical processing with halftones: accurate predictions for degradation and compensation 7−122841
object motion constraint equation under space-varying or time-varying illumination 7−82480
on-chip massively parallel Monte Carlo cellular processors, random-number arrays, optical generation 7−68583
one-way image transmission, phase conjugation in As_2S_3 amorphous film *(Korean)* 7−82719
optical computing, conference, Jerusalem, Israel (July 1986) 7−88738
optical crossbar interconnected signal processor, optimal least square filtering 7−82491
optical excisor processor, improving signal detection 7−82497
optical flow computation using gradient-based multiconstraint method 7−82479
optical linear algebra processor performance for optimal control apls. 7−82486
optical-hybrid matrix processor, comparison with digital electronic processor 7−82485
opto-electronic signal processing, spatial light modulators and bus systems *(German)* 7−122848
organic molecules and optical signal processing *(French)* 7−129990
parallel logic gate, polarisation based, using ferroelectric liquid crystals 7−122856
parallel multiprocessing systems, development 7−74858
parallel processing, speed limitations 7−103747
partial deconvolution and spectral extrapolation with limited field 7−90525
partially coherent light optical processing, progress in optics book 7−66843
pattern recognition, automatic, real-time 7−75109
pattern recognition by spatial filtering *(Japanese)* 7−110540
photo echoes, information processing appl. 7−122850
photodetectors for acousto-optic signal processing, review 7−80878
photodetectors for optical data processing systems *(Russian)* 7−73419
photorefractive materials, introduction and appls. 7−132221
photorefractive materials appl. to signal processing 7−130014
picosecond cascadable inverter gate using second harmonic pumping 7−110460
polarisation-encoded optical shadow-casting logic units, design 7−136207
polynomial convolution algorithm for matrix multiplication with application for optical computing 7−136206
position-coded residue look-up table using laser diodes 7−74856
PRIZ conducting spatial light modulators, fabrication and props. 7−82483
processors, digital accuracy acousto-optic, system efficiency 7−82484
pupil-function design for complex incoherent spatial filtering 7−136218
quality improvements in variable size encoding system by post processing 7−130010
quantum limits, rigged-reservoir response, multiatom squeezed states 7−122892
quantum wells for optical information processing, materials and devices 7−110261
real-time optical scale-invariant transformation 7−68569
resonator memories and optical novelty filters 7−110266
reversible computing: all-optical implementation of interaction and Priese gates 7−104037
semiconductor optical bistability, towards the optical computer 7−82700
semiconductor quantum well structures, field induced optical nonlinearity, optical gate, bistability 7−136408
semiconductor quantum wells, optoelectronics appls. 7−136619
signal processing devices design 7−104028
signal regenerator using bistable laser amplifier, error-rate meas. 7−123072
slab waveguide refractive index profile, automatic meas. by interferometric fringe processing 7−102508
space-variant linear systems, piecewise isoplanatic modelling 7−74852
spatial light modulator based on deformable gel surface 7−110555
spectral hole burning, scientific and practical applications, review *(Russian)* 7−103887
spectral memory concept, holographic recording for picosecond signals, space-time holography in data processing 7−130017
star transit time recording by grating vibrator and ADP demodulator *(German)* 7−79832
stereo images, correspondence searching algorithm, probabilistic relaxation 7−130008
stereo images correspondence searching algorithm, probabilistic relaxation 7−130007
symbolic substitution pattern recognizer based on AND operation 7−136228
symbolic substitution using ZnS interference filters 7−74864
systolic lattice processing by optical coupled-wave device arrays 7−68581
turbulence-degraded image reconstruction using Knox-Thompson algorithm 7−74851
vector nature of light use in imagery and image processing 7−117155
white-light optical signal processing, colour image processing 7−110282
white-light processing application to holographic interferometric and metrological studies 7−117161
white-light processing system based on cross-spectral density function 7−141808
$Ba_{2-x}Sr_xK_{1-y}Na_yNb_5O_{15}$ photorefractive crystals, development and modification 7−113141
$Bi_{12}SiO_{20}$, 3D photorefractive signal processing 7−103765
$Bi_{12}SiO_{20}$, moving photorefractive gratings, applications 7−130309
$Bi_{12}SiO_{20}$ real time intensity inversion by four wave mixing 7−122852
GaAs, bulk, room temperature, optical nonlinearities, fast-recovery gates arrays for parallel processing 7−141929
GaAs crystals, spatial light modulation by beam coupling 7−141979
GaAs, photorefractive, enhanced beam coupling modulation using polarization props., appls. 7−125693
GaAs-AlAs monolithic microresonator arrays as logic devices 7−129989
Hg_2Cl_2 vapour-phase-grown crystals, acousto-optic tunable filters and optical signal processing 7−97123
InGaAs-InP multiple quantum wells, 1.55 μm optical logic etalon with picojoule switching energy 7−110434
InGaAsP/InP nonlinear laser diode amplifiers for optical thresholding and logic 7−90648
InSb transphasor channels, diffusive transverse coupling 7−142045
$LiNbO_3$:Ti channel waveguides, optical mode intensity meas., two dimens., comparison with numerical calcs. 7−104051
PLZT-Si spatial light modulators, 1D, performance design and appls. 7−110554
$Sr_{1-x}Ba_xNb_2O_6$ photorefractive crystals, development and modification 7−113141
Tl_4AsS_4 acousto-optic Bragg cells, performance 7−82482
ZnSe optically bistable element arrays, appl. as man-machine interface 7−90681

optical instrument testing
see also aberrations
astronomical optics, appl. of ring aspherometer for aspheric surfaces testing 7−127732
astronomical optics testing using laser interferometer 7−80861
conference, Quebec City, Canada (June 1986) 7−115684
fibre optic rotation sensor, passive, 1.3 μm, lab. test results 7−123264
gyroscope, passive ring laser in very high finesse cavity, laser feedback control system 7−123034
ocean-optical studies, design, testing and calibration of semiconductor laser-based instrumentation 7−139811

optical instruments
see also colorimeters; coronagraphs; ellipsometers; holographic instruments; light interferometers; optical microscopes; optical prisms; photometers; polarimeters; refractometers
alignment techniques, conf. (Los Angeles, CA, USA, Jan 1986) 7−72710
attenuator, programmable, for fibreoptic test environments, design approach 7−68898
book 7−88756
DMIPS cell analyser, implementation and evaluation 7−101167
error correction of dividing heads of optical instruments *(German)* 7−67364

optical instruments continued
fluid-physics research in microgravity, optical diagnostic instruments development 7−128620
frequency response characteristics of an optical scatterometer and a surface profilometer 7−141794
in-vacuum bidirectional reflectance transmission distribution function measurement apparatus 7−142051
microparticle optical analyzers, characts. calc. taking account of beam conversion 7−128521
mirror energy analyser, off-axis sources, instrument fn. calc. 7−117292
Mount Stromlo coude echelle spectrograph, instrumental response function meas. 7−134137
reading aid for people with impaired vision *(German)* 7−71927
scatter measurements, improved facility 7−141795
scatterometer appl. to documentation of damage to smooth mirrors 7−141963
stereopsis using image intensifiers in binocular devices 7−119765
surveyor's levels, modern trends in development, review 7−102488
synthetic crystals appl. in precision instrument manufacture *(German)* 7−102486
theodolite for wind velocity meas., Apple II microcomputer appl. 7−87936
TV camera lenses with integrated digital control electronics *(French)* 7−130402
waveguide, optical, investigation instruments 7−134829

optical interference *see light interference*

optical interferometers *see light interferometers*

optical interferometry *see light interferometry*

optical isolators
acoustooptic and Faraday effect based 7−123166
cascaded optical isolator with high-isolation characts. over wide temp. and wavelength range 7−130300
Faraday optical isolator, design and limiting factors 7−82756
garnet magneto-optic film non-reciprocal waveguides, isolator appls., 7−103992
local-oscillator isolation using multiple acousto-optic modulators and frequency diversity 7−123191
$(BiGd)_3(FeAlGa)_5O_{12}$, pure and Ca doped epitaxial garnet film as 0.8 micron range optical isolator 7−103937
$(BiLuGd)_3Fe_5O_{12}$, thick-film LPE growth, magneto-optical props., optical isolator appls. 7−86061
$(GdBi)Fe_5O_{12}$, magneto-optical props., appl. to 1.3 μm optical isolator 7−85605
$Lu_{3-z}Bi_zFe_{5-y-z}Mg_yPt_zO_{12-z}$ films, optical absorpt. reduction by annealing 7−106283
YIG cryst. laser diode module with optical isolator, floating zone growth method 7−103815
YIG multilayers, LPE, single mode magneto-optical waveguide props. 7−110562
$(Yb,Tb,Bi)_3Fe_5O_{12}$, Bi-substituted epitaxial garnet films, magneto-optical props., appl. for optical isolators 7−113151

optical Kerr effect
4-butoxycarbonylmethylurethane polydiacetylene, ultrafast resonant optical Kerr effect 7−123130
amplifier for terahertz AM signals 7−82867
benzene-hexa-n-heptanoate, discotic, in isotropic soln. phase, elec. birefringence and specific Kerr const. 7−113125
chlorobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
chlorobenzene, liq., optical Kerr effect, femtosecond dynamics, laser spectra 7−129693
counterpropagating light field polarisation, chaotic and periodic behaviour 7−110483
DNA, interaction with radioprotectors cysteamine and WR-1065, Kerr effect 7−139180
DNA, optical Kerr effects, rel. to orientation 7−93646
fibres, beam propagation method approx. of Helmholtz eqn., anal., report 7−90814
fibres, birefringent, soliton stability, use of Kerr nonlinearity 7−123251
fibres, high birefringence, optical multistability and phase conjugation 7−136441
fibres, single-mode with strong and weak birefringence 7−142012
fibres and fibre devices, Kerr nonlinearity 7−103907
four-photon Raman spectroscopy using elastic scattering of pump waves 7−128673
graded-index film waveguide, exponential-like profile, nonlinear waves study 7−68797
graded-index slab waveguides, arbitrarily nonlinear, finite-element soln. 7−82725
GRIN waveguides, guided nonlinear TE waves 7−136511
instabilities in propag. of counterpropagating vector fields in nonlinear Kerr medium 7−68800
intermolecular, Kerr effect obs. 7−136459
nitrobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
nitrobenzene, liq., optical Kerr effect, femtosecond dynamics, laser spectra 7−129693
nitrobenzene, optical Kerr effect, third-order suscept. relax. times, time-resolved study 7−141953
nonlinear guided waves in Kerr-like dielectric films 7−97101
nonlinear prism output coupler, theoretical study 7−75084
number-phase minimum-uncertainty states, quantum nondemolition meas. with Kerr medium 7−110311
optical fibre, Helmholtz eqn., beam propag. method 7−136558
phase conjugate resonator, transverse dynamics 7−97093
phase-conjugate resonator with mirror of fast Kerr medium, transverse dynamics 7−110473
polarisation in nonlinear isotropic and anisotropic media, analytical solns. and intrinsic instabilities 7−68776
polymer solutions, rigid, Kerr effect, mol. mass depend. *(Russian)* 7−113105
pyridine methyl derivatives, mol. struct. effect on optical orientation 7−103554
rib waveguide with nonlinear substrate, anal. 7−117319
slab waveguide, TE modes, nonlinear coupling, beam propagation study 7−97128
soliton transverse structure and optical bistability 7−75046
symmetric dielectric slab waveguide with Kerr like nonlinear permittivity, TE wave propag. 7−90735
tetrafluoromethane, second hyperpolarisability, vibr. contrib., SHG 7−130277

optical Kerr effect continued
transverse magnetic polarised guided waves at nonlinear interface 7−68798
two-component nonlinear composite medium, intense light propag. 7−130279
ultra-short pulses, spectral super-broadening in Kerr medium, computer simulation 7−75085
ultrafast light-controlled optical-fiber modulator 7−90798
ultrafast optical multi/demultiplexer utilising optical Kerr effect in polarisation-maintaining single-mode fibres 7−82726
water, ultrafast supercontinuum generation enhancement by addition of Zn^{2+} and K^+ ions 7−130278
waveguide modes, nonlinear coupling 7−110558
CS_2, liq., femtosecond laser induced Kerr responses 7−90733
CS_2, optical Kerr effect, third-order suscept. relax. times, time-resolved study 7−141953
GS_2, liq., optical Kerr effect, femtosecond dynamics, laser spectra 7−129693
Na vapour, collision-aided self-focusing and -defocusing 7−75086

optical lenses *see lenses*

optical links
see also optical communication equipment
1.55 μm, 450 Mbit/s high-sensitivity receiver design and a long distance transmission experiment 7−117347
CCITT standardisation for telecomm. systems 7−82831
channel capacity increase in light-wave communication system by photon-number squeezed light 7−110314
coherent optical fibre systems, polarisation control 7−110579
conference, fibre characts. and standards, Cannes, France (Nov. 1985) 7−66821
conference, optical fibre communication and integrated optics, Reno, NV, USA (Jan. 1987) 7−120704
CSP diode lasers, NASA developments 7−130178
data links between laboratories 7−110589
data transmission system with variable priority of integrated information for nuclear plants *(Japanese)* 7−116664
direct-detection optical communication systems, symbol and frame synchronisation 7−68571
fibre communications and computer networks, conf., Cambridge, MA, USA, (Sept. 1986) 7−128181
fibre optic links for microwave signal transmission 7−90812
fibre optic system design, reliability considerations 7−142042
fibres, single-mode splice loss, effect of eccentricity 7−136554
HF fibre optic links, fundamental gain/bandwidth limitations 7−90813
HF laser package for microwave optical communications 7−90832
HF optical communications, conf., Cambridge, Ma, USA (Sept. 1986) 7−88739
high capacity fibre optic systems, London, England (Feb. 1987) 7−66841
high capacity optical fibre systems, tolerant WDM 7−68903
high energy accelerators, perspectives for experimental apparatus, seminar, San Minato, Italy (May 1986) 7−108021
impedance matched fibre optic transceivers for microwave signal transmission 7−90831
industrial measurement appls. *(French)* 7−130373
installed link, attenuation meas., insertion loss modification method 7−136577
intersatellite and fiber-optic communication with stripe domains 7−75169
IR and MM wave propagation in arid climate, expt. studies 7−94440
LAN, plastic clad silica fibre characts., temp. depend. 7−68874
lightwave device technology for communications 7−110559
long-span optical fibre transmission systems, 2 to 4 μm wavelength 7−68889
Luch instruments for fibre optic guides and cables meas. 7−104009
multimode fibre link, reliable bandwidth prediction 7−68880
novel fibre break locator for optical duplex transmission systems 7−82856
phased locked semiconductor laser arrays, design 7−97033
photodetector with fiber-optic communication line, EM noise resistant 7−136603
polarisation controlling coatings appl. 7−136604
powder process use for fibre manufacture, LAN appls. *(German)* 7−142050
PSK heterodyne expt., 100 Mbit/s, using travelling wave laser amplifier 7−68900
single mode fibre couplers, freq. multiplex operation 7−82812
single mode lightguides, dispersion shifted, optical characts. tailoring 7−75118
single mode optical fibre laser transmission, dynamics of deterministic chaos 7−136232
single mode to multimode optical fibre coupler, nonreciprocal behaviour, LAN and recirculating ring appls. 7−68862
space, communications, dichroically combined diode laser transmitter appl. 7−130180
space communication systems, advanced laser diode structures appl. 7−130179
space communications from limits of solar system, missions and problems *(Italian)* 7−134107
telecommunication optical fibres, props. and manufacture *(Polish)* 7−68887
transducer, optically powered, with optical fibre data and power link *(Japanese)* 7−128569
transmission system, high dispersion multi-Gbit, 1.53 μm DFB laser evaluation 7−68899
undergraduate fibre-optic communication lab. 7−102070
waveform optical sampling with gain-switched pulse-compressed DFB laser diodes 7−68729
InGaAs/InP p-i-n photodiodes for microwave fibre links, high-speed self passivated 7−97173
SiO_2:GeO_2 high NA multimode fibre made by pressurized MCVD 7−68920
ZrF_4-Ba-F_2 based glass fibres, progress for optical communication 7−110578

optical losses
chalcogenide glass optical fibre losses, low temp. photoinduced changes 7−136571
compound glass fibre with low loss, large core and high numerical aperture *(Japanese)* 7−117341
connector with spherical-ended fibres *(Japanese)* 7−82815
dielectric guides for energy transmission, losses problem in optimum design 7−123265

optical losses continued
dynamic instability in the amplitude of a light beam in a real optical light guide 7−130327
electro-optical modulators, trading coupling loss for modulation efficiency 7−75105
emerald laser, tuned from 720 to 842 nm spectroscopic parameters meas. 7−122988
fibre, modified rod-in tube (MRT), radiation resistance *(Japanese)* 7−142019
fibre, radiation induced time depend. attenuation 7−68873
fibre, single-mode, channel-dropping filter using high-index overlay waveguide 7−75148
fibre, single-mode, optical time domain reflectometry signatures interpret. 7−123263
fibre cables, hydrogen problems and long term reliability 7−68872
fibre equilibrium mode distribution development, Corning data broadband fibre transient behaviour and steady state mandrel charact. 7−82823
fibre light guide, uninterrupted radiation detection, demonstration *(Russian)* 7−123214
fibre loss meas. by Fourier transform spectroscopy 7−90818
fibre loss meas. system, detector selection for production testing 7−130379
fibre measurements, symposium, Boulder, CO, USA (Sept. 1986) 7−80177
fibre optic cable, single process, optical loss increase at low temp. 7−110598
fibre optic cables losses meas., using Siemens universal reflectometer 7−82877
fibre optic fanout connector for fibre-ribbon cable termination, struct. design 7−110595
fibre optic links for microwave signal transmission 7−90812
fibre optic photoelastic press. sensor with fibre-loss compensation 7−68867
fibre optic temperature sensor utilising thermally induced bending loss *(Japanese)* 7−108556
fibre optic transceivers for microwave signal transmission 7−90831
fibre tapers at 1.3 μm for self-aligned beam expansion and single-mode hardware 7−142006
fibre-optic polarizer, D-shaped, with In coating 7−75149
fibres, anisotropic, depressed-cladding profile 7−75146
fibres, birefringent, longitudinal coherence props. of light waves 7−104019
fibres, dispersion-shifted, bending charact. *(Japanese)* 7−136543
fibres, dual-shape core with α-index centre core, charact. 7−123256
fibres, radiation from bend of step-index single-mode fibres 7−90801
fibres, reliability issues and telecomm. appls. 7−142026
fibres, single-mode, coated, microbending effects at low temp. 7−142005
fibres, single-mode, soliton evolution from chirped and noisy pulses 7−75129
fibres, single-mode splice loss, effect of eccentricity 7−136554
fibres, spectral attenuation meas. using cut-back method 7−82795
fibres, step-index used for point source scanning, lateral offset power loss meas. 7−123250
fibres for pulsed laser radiation, transmission, attenuation, damage thresholds *(German)* 7−104012
fibres having distorted refractive index profile cladding loss 7−142021
fibres single-mode, microbending loss approx. formulas 7−104020
fluoride optical fibres, scattering characteristics 7−68845
geodesic lenses, perfect imaging requirement 7−136610
heavy metal halide glasses as optical fibre material 7−136470
HF fibre optic links, fundamental gain/bandwidth limitations 7−90813
high capacity optical fibre systems, tolerant WDM 7−68903
hollow waveguides, excitation depend. losses and temp. increase at 10.6 μm 7−136509
IR fibre optics materials, review 7−117281
IR fibre waveguides, optical charact. 7−142013
lamellar grating, highly conducting, power losses 7−103952
lasers with saturable gain and distributed loss, 1D model 7−117171
link, installed, attenuation meas., insertion loss modification method 7−136577
long-span optical fibre transmission systems, 2 to 4 μm wavelength 7−68889
low-loss single-mode fiber with reduced inner cladding 7−97139
low-loss single-mode fibres for use in 1.55 μm wavelength region, optimisation 7−130346
metal-clad planar optical waveguides produced by diffusion, guided mode charact. 7−97131
mode transducers utilising coupling effects of multi-mode coupling system, appl. to optical cct. components *(Japanese)* 7−130329
monomode fibres with loose tube jelly filled jacket, loss mechanisms 7−68875
multimode fibre connections, attenuation and interference calc. 7−82789
multimode fibre source power distrib. charact. by splice offset technique 7−82825
multimode fibres, splice loss anal. for multiple misalignment 7−130385
multimode fibres bandwidth concatenation, review 7−130356
multimode optical transmission lines, planar microoptical multiplexer/demultiplexer 7−75167
nonlinear directional couplers, saturation and loss 7−90774
nonlinear film guided waves, propag. 7−136514
passive fibre optic components using dispersion shifted fibre, biconical fusion technique fabrication 7−68890
planar structures, leaky absorbing, for polarisers, loss coeff. and perturbed propag. const. 7−117352
planar waveguides with leaky modes, propag. consts. of TE modes 7−141986
plastic-clad silica fibres, attenuation props., modelling 7−123245
polarisation-maintaining fibres, loss and dispersion charact. 7−68854
polarisation-maintaining single-mode fibre/semicond. laser optical coupling technique 7−68849
poly-vinylidene fluoride copolymer poled guest/host composite for freq. doubling and waveguiding structs. 7−103909
polymer clad silica optical fibres, γ-irrad., transmission losses 7−68881
polymer optical fibre development, loss mechanisms and fabrication 7−90799
resonators with Gaussian reflectivity mirrors, hard aperture effects on mode props. 7−68807
rigid contact between a channel $LiNbO_3$:Ti waveguide and single-mode fiber waveguides 7−130325
semiconductor optical waveguides, loss and facet reflectivity meas. technique 7−103994
optical losses continued
single mode fibre characteristics 7−130353
single-mode fibre spectral attenuation precision meas. 7−82811
single-mode fibres, dispersion-shifted, charact. 7−123220
single-mode fibres, mass fusion splice method 7−110600
single-mode fibres, mode field diameter eval. by transmitted field pattern methods *(Japanese)* 7−130384
single-mode fibres, step index, radiation from circular bend, theoretical anal. 7−97141
single-mode fibres, stuffing-pulling mass fusion splice techniques *(Japanese)* 7−130382
single-mode optical fibre, pure silica core, struct. and charact., transmission cable appl. 7−82843
single-mode optical fibres, matched and depressed cladding, fabrication, CVD 7−68912
single-mode step-tapered waveguide section design, power loss 7−68836
single-mode-fibre fused coupler, propagating-beam model 7−75128
solar photoelectrochemical cells, optical losses calc. and meas. 7−71627
stray light control, assessment and evaluation of technologies 7−110523
stress-induced birefringence fibres with lossy stress-applying sections, single-polarisation single-mode guidance 7−82801
transmission loss of liquid-crystal-polyester-coated optical fibers at liquid-nitrogen-temperatures 7−68886
22-tricosenoic acid, Langmuir-Blodgett multilayers, optical loss 7−138527
V-type fibre-optic couplers with low losses for duplex communication lines 7−130348
water ingress in fibre cables 7−130345
waveguide attenuation measurement, compensatory method 7−136524
waveguide loss measurement by scatt. radiation detect. at visible and near-IR wavelengths, optimum conditions 7−103993
waveguides, bending losses, numerical matrix calc. 7−75115
waveguides, curved, integrated optical circuits appls. 7−103983
waveguides, metal-clad GRIN, guided wave charact., analytical results 7−90783
waveguides, planar, GRIN, numerical anal. using matrix method 7−110563
weakly guiding fibres, power loss calc. using far-field method 7−142037
AgCl-AgBr IR fibre, fabrication, charact. and appls. 7−82847
Al coated optical fibres, mech. and optical props. 7−68878
Al-MgF_2 replicated coating aspheric mirrors for far UV, quality control and ageing tests 7−103928
Al_2O_3, ruby, single cryst. fibre growth and nonlinear optical use 7−75069
CsBr IR fibre waveguides, optical charact. 7−142013
GaAs BH waveguides with high coupling efficiency for single-mode fibres 7−110572
GaAs, waveguide interferometers and couplers for high-speed electro-optic modulation and switching 7−75117
GaAs-AlGaAs optical waveguides, bend losses 7−136608
GaAs-AlGaAs single-mode miniature optical waveguide with low transmission loss coeff. 7−110573
GaAs-GaAlAs high-NA optical waveguides with low losses 7−82776
GaInAsP/InP electro-optic modulators using passive rib waveguides 7−75108
GaSb-AlSb multiquantum well heterostructures, enhanced T_0-values, laser appls. 7−130109
$(GdSc)_3Ga_5O_{12}$:Cr,Nd, short-lived absorpt. rel. to solid-state laser efficiency 7−141869
Ge-As-Se IR fibre waveguides, optical charact. 7−142013
HF CW chemical laser, Fabry-Perot and stable resonator performance 7−110411
$In_{0.52}Al_{0.48}As$ electro-optic directional coupler grown on InP by MBE 7−136498
InGaAlAs-InP ridge optical waveguide grown by MBE, low loss 7−136531
InGaAsP/GaAs laser, internal loss and gain factor 7−82565
InGaAsP-InP laser amplifier, 1.3 μm with integrated passive waveguides 7−123278
InGaAsP-InP material, waveguide struct. by epitaxial techniques 7−136532
InGaAsP-InP waveguide mirrors, self-aligned low-loss totally reflecting *(German)* 7−136534
InP-InGaAsP optical waveguides, MOVPE grown, low-loss, single-mode, fabrication, props. and appls. 7−103966
KH_2PO_4-KD_2PO_4 mixed cryst. optical waveguide grown on {101} plane of KD_2PO_4 cryst., charact. 7−97135
$LiNbO_3$, double proton exchange for low loss and quasi-embedded waveguides 7−136635
$LiNbO_3$ low-insertion-loss channel waveguides fabricated by proton exchange 7−68835
$LiNbO_3$, single cryst. fibre growth and nonlinear optical use 7−75069
$LiNbO_3$ waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:Ti travelling wave interferometric modulator, 1.3 μm, low insertion loss 7−103960
$LiNbO_3$:Ti waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:Ti:MgO waveguides, bend loss reduction through double diffusion 7−117351
$LiTaO_3$ optical waveguides, fabrication by H^+ exchange 7−82781
Nd,Cr:$Gd_3Sc_2Ga_3O_{12}$ laser materials, crystal growth 7−86009
Nd:YAG fibres, clad for laser appls., performance 7−110586
Nd^{3+}:YAG laser with resonator loss modulation, chaotic regimes and stability of peak output power 7−122989
Si solar cells with high conversion efficiency 7−126609
Si_3N_4-SiO_2 optical waveguides on Si, low loss 7−117349
SiO_2 based optical fibres, γ-radiation effects on optical loss and defects *(Japanese)* 7−117340
SiO_2 optical fibres, charact., influences of drawing conditions 7−123252
SiO_2:Ge optical fibre loss increase due to H_2 and long-term loss stability 7−90800
SiO_2:GeO_2 high NA multimode fibre made by pressurized MCVD 7−68920
SiO_2:Sb_2O_3 fibres fabricated by VAD method 7−123219
SiO_2-GeO_2 optical fibre, impurity diffusion from jacketing material 7−110596
SiO_2-SiO_2:F, pure silica core fibre with doped cladding, VAD fabrication technique and charact. 7−97144
SiO_x film waveguides for integrated optics, losses 7−97175
$Si_xO_yN_z$ film waveguides for integrated optics, losses 7−97175
Ta_2O_5 sputtered films, optical losses, light scatt. and absorpt. meas. 7−113301
YAG:Nd single cryst. fibre growth and nonlinear optical use 7−75069

optical losses continued
YIG cryst. laser diode module with optical isolator, floating zone growth method 7−103815
ZrF_4 based fluoride optical fibres, scatt. loss due to crystallites 7−117328
ZrO_2, thin films, optical losses in UV region 7−97120

optical masers *see lasers*

optical materials
see also glass; optical films; optical glass
anthraquinone dye films, reversible laser marking process based on photothermal transformations 7−82733
concentrator material selection for optical pumping of UV and VUV lasers 7−97104
conducting polymers, appl. in electronic and optoelectronic devices 7−97106
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
dense optical materials with saturated absorption *(Spanish)* 7−117275
disc, materials, review 7−136212
disc media defects effects on error detection and correction and disc longevity 7−75088
disc storage, erasable and write-once phase-change media 7−103912
disc storage, erasable bilayer dye-polymer medium 7−110489
disc storage, erasable media, optical and thermal anal. 7−110291
disc storage, high-density frequency-domain optical recording 7−82503
disc storage, laser-induced hole formation, FEM model 7−110289
disc storage, organic dye-binder recording media, influence of melt viscosity on writing sensitivity 7−103914
disc storage, PbTeSe thin films, optical write-read characts. with pit-edge recording 7−103772
disc storage, wavelength-multiplexed-recording materials, Japanese research 7−110493
disc storage, write-once phase-change media 7−103913
disc storage using freq. domains, photon-gated materials 7−110292
electro-optic materials for guided-wave optics 7−68829
electro-optical materials for optical electronics *(Spanish)* 7−117280
electrooptic ferroelectric materials, desirability for guided-wave optics 7−90794
fibre materials and props., conf., Boston, MA, USA (Dec. 1986) 7−134364
fibre optic pulsed laser delivery for remote meas., choice of fibre materials 7−123249
fibres, fabrication, book 7−120716
garnet crystals use as laser hosts 7−74939
gradient index optical imaging systems, conf., Reno, NV, USA (Jan. 1987) 7−95098
high density laser recording materials *(Japanese)* 7−129996
holographic diffractive structures design for solar illumination engineering 7−122883
III-V semiconductor waveguides for integrated optics 7−136615
In-Se based phase change reversible optical recording film 7−75090
inhomogeneously broadened absorbing materials, convolution correlation and storage of optical data 7−82729
IR, adaptive, and synthetic aperture optical systems, confs., Arlington, VA, USA (Apr. 1985), Orlando, FL, USA (Apr. 1986) 7−108025
IR emittance and reflectance of optical material surfaces 7−110487
IR fibre optics materials, review 7−117281
IR materials, pulsed CO_2 laser irradiation damage *(Chinese)* 7−111651
IR science and technology, conf., Wuxi, Jiangsu, China (Nov. 1986) *(Chinese)* 7−95073
laser crystal growth, cryst. quality and comp. control 7−77791
laser damage to optical material with defects, numerical simulation 7−131181
laser induced damage in optical materials, conf., Boulder, CO, USA (Oct. 1984) 7−95102
laser materials, advanced crystalline, development 7−74986
laser windows, IR optical materials 7−75011
lasers and electro-optics, conf., Baltimore, MD, USA (April-May 1987) 7−120705
leucosapphire optical strength at 248 and 193 nm 7−69756
new materials, state of the art *(Spanish)* 7−119117
nonlinear optical materials and devices, conf., Erice, Sicily, Italy (July 1985) 7−80172
nonlinear organic materials, new, prospects 7−82731
optical disc substrate, moulding compounds, minimal birefringence 7−77506
optical discs, readout power dependence on thin-film magneto-optic media properties 7−103767
organic films, laser marking, optical data storage appl. 7−110485
organic optical storage medium, dynamic laser marking 7−74881
photochromic fulgides, bistable optical switching and logic elements, single-wavelength illum. 7−82682
photopolymerisable recording materials, resolution *(Russian)* 7−82735
photorefractive materials, introduction and appls. 7−132221
photorefractive materials for optical processing 7−82736
plastics, birefringent optical materials, preparation 7−97103
plastics and polymers as optical fibre materials 7−136463
poly-vinylidene fluoride copolymer poled guest/host composite for freq. doubling and waveguiding structs. 7−103909
polycarbonate substrate for magneto-optical disc, optical anisotropy effect on CNR 7−77507
polyimide planar optical waveguides, fabrication 7−103988
polymer optical fibre development, loss mechanisms and fabrication 7−90799
polymers, fluorinated, optical props. *(Japanese)* 7−103911
polymers and charge-transfer complexes, elec. cond., electronic and optical device appl. 7−97105
quartz, optical strength at 248 and 193 nm 7−69756
refractive index measurement, materials for optical sensors 7−121199
review of optical materials for variety of appls. 7−110488
N-salicylidene-2-thenylamines, solid state photochromism and thermochromism 7−85557
silica based materials for mid infrared optical fibres *(Danish)* 7−123202
solar absorber materials, bidirectional and directional-hemispherical spectral reflectance meas. 7−126649
solar conversion efficiency improvement using optical materials 7−126559
solar energy conversion and lighting technology, materials and optics conf., San Diego, CA, USA (Aug. 1986) 7−120700
storage, effect of incident angle on readout 7−103768
storage media, conductive polymers as active technology 7−110490
surfaces and composite materials, nonlinear optical props. 7−82699

optical materials continued
synthetic crystals appl. in precision instrument manufacture *(German)* 7−102486
synthetic nonlinear media developments for freq. conversion of solid laser sources 7−75067
$AgGaS_2(Se_2)$, chalcopyrite, crystal growth, nonlinear IR appl. 7−68783
AlN/GdTbFe/AlN/Al magneto-optical disc 7−74882
Al_2O_3 sintered plate white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
Al_2O_3:Ti sapphire laser crystal growth 7−77791
Al_2O_3-Ta_2O_5 medium-index mixed-oxide layers for antireflection coatings 7−103933
a-As_2S_3:Sb_2S_5 films, hologram recording 7−122875
β-BaB_2O_4 SHG crystal, characts. in femtosecond region 7−97083
BaF_2 optical films, linear expansion coeffs. 7−103930
$BaSO_4$ white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
$Ba_{2-x}Sr_xK_{1-y}Na_yNb_5O_{15}$:Ce as self-pumped phase conjugator 7−90719
$BaTiO_3$ photorefractive materials for optical processing 7−82736
$BeAl_2O_4$:Cr alexandrite laser crystal growth 7−77793
Bi/Se multilayer thin films, optical recording 7−74880
$Bi_{12}GeO_{20}$ photorefractive materials for optical processing 7−82736
$Bi_{12}SiO_{20}$ photorefractive materials for optical processing 7−82736
CS_2-Te optical disk, high-density recording 7−136213
CaF_2, optical strength at 248 and 193 nm 7−69756
Fe-Tb multilayers, magnetic properties and structural charactn. 7−112907
Fe_2O_3-Cr_2O_3-Fe solar spectrally selective surfaces on stainless steel, prep. by chemical conversion 7−86830
$Ga_{1-x}Al_xAs$ optical filters, thermo-optical effects 7−70755
$Gd_3Sc_2Al_3O_{12}$:Cr and $Gd_3Sc_2Al_3O_{12}$:Nd,Cr laser crystal growth 7−77791
$Gd_3Sc_2Ga_3O_{12}$:Nd,Cr codoped garnet cryst. growth for laser use 7−77782
$Gd_3Sc_2Ga_3O_{12}$:Nd,Cr laser crystal growth, comparative studies 7−77792
$Gd_3Sc_2Ga_3O_{12}$:Nd,Cr laser crystal growth 7−77793
$HgIn_2Te_4$, linear and nonlinear properties in mid infrared 7−123111
$In_{0.52}Al_{0.48}As$ as waveguide material lattice-matched to InP, refr. index 7−136462
InGaAsP-InP material, waveguide struct. by epitaxial techniques 7−136532
$KD_{2x}H_{2(1-x)}PO_4$ crystals, temp. dispersion of quarter-wave voltage meas., simple compensation cct. 7−85597
KH_2PO_4 and isomorphs, electro-optical, linear and nonlinear optical props., devices, research areas, review 7−110484
KH_2PO_4 crystals, laser damage threshold, microbe detection by chromogenic limulus test 7−98235
$KNbO_3$ photorefractive materials for optical processing 7−82736
$KTiOPO_4$ SHG crystals, hydrothermal growth technique 7−77786
LaF_3 for fluoride optical fibres, synthesis, ultrapurification and anal. 7−136464
LiF white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
$LiNbO_3$ integrated optical substrates, refractive index meas. by TIR, prism coupling method 7−125662
$LiNbO_3$, plate homogeneity, SHG anal., optical substrate appls. 7−123086
$LiNbO_3$:He^+ optical waveguides, ion implanted, damage profiles, propag. const. and attenuation var. with annealing temp. and time 7−82784
$LiNbO_3$:MgO single crystals, growth for optical applications 7−104038
$LiNbO_3$:Ti, ion-implanted, solid-phase epitaxy, optical waveguide fabrication 7−97132
MgF_2, grain growth enhancement of bend strength on hot pressing 7−113624
MgF_2 optical strength at 248 and 193 nm 7−69756
$NH_4H_2PO_4$ birefringence, temperature variation 7−110232
$NaLaS_2$, IR window material, fused salt synthesis 7−103910
PLZT electro-optic material props. and appls., review 7−125697
Pb-Te-Se optical recording film, oxidation resistance, comp. depend. study 7−144569
S white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
a-Si, optical recording medium appl. 7−82728
SrF_2 optical films, linear expansion coeffs. 7−103930
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. characts., saturation Kerr rot. meas. 7−125499
Te-TeO_2:Pd write-once media for optical discs 7−75087
Tl_2Se-As_2Se_3 system, aligned structures 7−86152
YAG:Nd laser crystal growth, comparative studies 7−77792
ZnS optical films, linear expansion coeffs. 7−103930
ZnSe, bidirectional scatt. distrib. functions, 0.63 to 10.6 μm 7−110486
ZnSe optical fibre for CO_2 laser medical appls. 7−79043
ZnSe optical films, linear expansion coeffs. 7−103930

optical microscopes
see also optical microscopy
AUTOSCOPE P from Leitz for automatic particle analysis 7−102516
chromosome analysis system using knowledge based image anal. 7−79169
color laser microscope for inspection of semiconductors 7−121221
computer workstation/optical microscope system for standardised cell meas. and anal. 7−139410
computerised microscope photometer 7−102511
confocal scanning laser microscope, fluorescence microscopy appl. in 3D/microtomoscopy 7−95648
darkfield-illuminator for direct surface imaging of chromosomes 7−139417
DIAPLAN, microscope from Leitz 7−102515
differential confocal optical ranging for distance meas. 7−108511
displacement meas. use, nm accuracy 7−134715
focusing automation, microprocessor-controlled system 7−128648
laser beam formation for intracavity processing of objects 7−67387
Leitz ELSAM acoustic and optical microscope, realisation of production model 7−104114
Leitz METALLUX 3 microscope for metallographic structure investig. 7−102517
leukocyte analysers, high-resolution: retrospective and prospective review 7−139324
magnetic recording head dimensions, meas., optical microscope design 7−121067
microinterferometer, double-refracting, with variable interfringe spacing across image plane 7−140735
multispectral microscope, automated, use in a high performance pathology workstation 7−139326

optical microscopes continued
noncontacting optical probe with optical microscope and dual chopper 7−95569
Nova laser, target plane imaging system 7−74966
objective lens aberration effects 7−136210
objectives, spherical aberration, cover slip effects 7−110247
ophthalmoscopic, double lenses for ocular fundus exam., photographic validation *(Italian)* 7−145259
ophthalmoscopic, yellow lens use for fundus exam. *(Italian)* 7−145261
ophthalmoscopic double aspheric lens design for ocular fundus exam. *(Italian)* 7−145258
polarised light microscopy, development 7−108130
polarizing microscope with crossed polarizers, defocusing and third-order spherical aberration 7−73415
profilometry, Angstrom resolution for microscopic objects 7−116005
Reflex Microscope, analytical plotter attachment 7−95646
Reflex Microscope and Metrograph, direct 3D meas., dentistry, medicine and anthropology appls. 7−101039
scanning laser microscope, acousto-optic modulation and scanning 7−68736
SEM, Cambridge S180, with specimen stage incorporating light microscopical optics 7−128719
submicrometer linewidth metrology in the optical microscope 7−140668
waveguide investigation instruments 7−134829

optical microscopy
see also optical microscopes
3-D images of cell nuclei, anal. 7−94007
3D image reconstruction, freq. and spatial domain methods comparison 7−80871
acrylic polymers, with phenyl benzoate side groups, mesophase obs. *(Russian)* 7−137199
analogue processing of optical data 7−102512
arterial thrombi images recorded by light transmission digital image processing 7−93881
automated microscopy in blood-cell analysis 7−87144
bilinear transfer in microscopy, spectral anal. 7−103750
bimorph-driven *x-y-z* translation stage for scanned image microscopy 7−80872
biological cell, diffr. pattern analysis through opt. density data acquisition 7−114588
bladder cancer diagnosis by optical microscopy, automated image anal. 7−139332
brass rubbing surface, periodic changes of electron work function rel. to fatigue damage 7−100396
caesium pentadecafluorooctanoate-water system, lyotropic mesomorphism, phase diagram 7−142560
cancer diagnosis, image DNA-index (ploidy) anal. 7−139331
cell biology appl., new developments in optical microscopy 7−127062
cell image anal. instruments, spatial and photometric resolution and calibration requirements 7−139412
cell image sequences, motion vectors determ. 7−94037
cell populations in a continuous-motion imaging cell scanner, automated densitometry 7−139328
cells, strategies for automated placement onto slides 7−139411
cervical cell smears, correlative exam. by opt. and scanning electron microscopy, photographic grid system 7−87399
chemical microscopy 7−100635
chromatin texture of melanocytic nuclei; correl. between light and electron microscopy 7−139227
chromosome surface imaging, improved darkfield-illumination system 7−139417
combined light microscopy and SEM techniques, review 7−145294
comparison with acoustic microscopy 7−136657
computer-microscope system for brain tissue mapping 7−139413
confocal imaging, use in biological structs. study 7−139407
confocal laser scanning microscope data, 3D display using vector representation 7−134848
confocal scanning microscopy, resolution improvement 7−108654
crystal optical axis of uniaxial precious stones determ. by polarised-light microscope, photometry, microprocessor control 7−95645
crystal-soln. interfacial layer, dissolution obs. by holographic interference microscope 7−131318
cytogenetics, automated, multiprocessing interval processor 7−139394
cytological screening system for uterine cancer, automated 7−139327
di-n-dodecyl quaternary ammonium salts, thermotropic liq. cryst. props. 7−124091
dielectric films, current cond. imaging and detection by emission microscopy 7−92322
differential polarisation microscopy of changes in struct. in spermatocyte nuclei 7−139422
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7−78730
dispersed systems, wetting microscopic techniques 7−112024
dodecyl sodium sulphonate-water system, prelamellar lyomesophase, X-ray and polarising microsc. obs. 7−111356
flicker spectroscopy of erythrocytes, membrane bending stiffness changes 7−87390
fluorescence microscopy appl. in 3D/microtomoscopy, confocal scanning laser microscope 7−95648
fructose, crysts., contact nucleation and growth kinetics 7−131067
histological diagnosis, flexible image processing system for automated mapping of residual tumor lesions 7−93880
histological specimens anal. through contextual karyometry, PC-based system 7−139325
image reconstruction, microcomputer system, for three-dimens. microstruct. in histology and histopathology 7−145265
images of living cells, 3D restoration 7−101168
imaging systems, three-dimens. object represent. 7−89257
insulating films, micro-, ultramicro- hardness meas. 7−106736
interference layer systems, optical microscopy, optimum contrasts for microstructural constituents 7−138926
IR, development trends 7−102513
laryngotracheal epithelium in salamanders, correlated light and electron microscopic obs. 7−78808
laser magneto-optic microscope for optical imaging of magnetic domain dynamics 7−108655
laser scan microscopy, pot. clinical uses 7−139336
liquid crystalline blue phases, electric field-induced phase transitions 7−111875

optical microscopy continued
liquid-crystalline poly(β-thioester)s containing *p*-oxybenzoate triads, DTA and optical polarising microscopy 7−83668
lung cancer, optical microscopy of sputum cells, computerised image anal. 7−139333
lymphocyte membrane potential meas. by flow cytometry 7−114574
magneto-optical Kerr effect imaging, lock-in technique for depth-profiling 7−108657
metallographic images, phase particle classification using shape descriptors 7−78404
metallographic images, region classification using texture descriptors 7−78403
metallographic images, segmentation techniques for localisation of microstruct. regions 7−78402
microinterferometry, variable wavelength, for thickness and refr. index meas. of sections, layers and films 7−128639
microlithographic network for deformation expts. with SEM and optical microscopy 7−142539
muscle striations image processing below microscope resolution limit, digital deconvolution 7−93882
neurons, microscope sections, thick, device for computer quantification of depth meas. 7−145299
neuropathology, computer-aided morphometric data collection, mapping and anal;. 7−139335
objectives, Leitz PLAN, for microscopy 7−103921
ophthalmoscopic, double lenses for ocular fundus exam., photographic validation *(Italian)* 7−145259
ophthalmoscopic, yellow lens use for fundus exam. *(Italian)* 7−145261
ophthalmoscopic double aspheric lens design for ocular fundus exam. *(Italian)* 7−145258
p-n junctions, current parameters, meas. by optical beam excitation, scan vel. effect 7−118562
phase contrast microscopy, two-wavelength phase-shifting interferometry, step height measurement 7−121206
phosphatidylcholine membrane, phase transitions, polarizing microscopy study 7−100818
phosphatidylethanolamine membrane, phase transitions, polarizing microscopy study 7−100818
polarised light compensator measurements, evaluation using computers 7−108656
polarised light microscope to investigate thin sections of urinary calculi 7−114587
polarised-light microscopic investigations of histological specimens 7−114586
polyethylene, Vickers hardness indentations depth meas. by interference microscopy 7−113820
polystyrene, colloid spheres, struct., Debye-screening length role microscopic exam. 7−91418
polystyrene spheres, monodisperse, deionised suspensions, microscopic obs. of crystallites 7−114003
porous media, quantitative image, analysis, genus and pore map software 7−87934
porous media, quantitative image analysis, specific genus, cubic lattice models 7−87935
potassium laurate-1-decanol-D_2O-brucine sulphate-ferrofluid cholesteric lyotropic mesophase, phase diagram 7−83660
rosette-forming cells, computer classification from microscope images 7−119891
SAMBA microscopic anal. system with automatic sweep *(French)* 7−73414
sarcomere length uniformity determ. by 3D reconstruction of resting isolated heart cell striation patterns 7−127050
scanning microscopy, computerised microtomography 7−102514
scanning optical microscopy and its applications in materials science 7−132852
schistosome egg screening by optical microscopy and digital image processing 7−139334
sea urchin eggs, artificially activated, cyclic stiffness changes, centrifuge microscope meas. 7−78942
semiconductor formation and charactn. on lipid bilayer membranes 7−105204
soft X-ray contact microscopy of biological specimens using plasma source produced with lab. sized laser 7−79165
sputum cell blocks preparation using microwave technique 7−79163
steel, HSLA, combined TEM and opt. metallographic study of microstruct. after welding 7−86516
surface plasmon microscopy for metal film examination 7−140743
test pattern for fluorescence microscopy 7−80873
three-dimensional imagery methods in light microscopy 7−95647
tissue microscopy, computerised, advances 7−87146
vertebrate sensory hair cells in vivo visualisation, incident light polarisation microscopy 7−139418
Al alloy, eutectic binary, automatic description of microstruct. 7−78402
Al alloy, eutectic binary, automatic description of microstruct. 7−78403
Al alloy, eutectic binary, automatic description of microstruct. 7−78404
$BiGeO_3$ single cryst., microscopic defects, TEM, SEM and optical microscopy studies 7−131135
$Bi_4Ge_3O_{12}$ crystals, high temp. melt growth, in situ optical microscopy 7−100047
C-C composites, US attenuation and porosity determ. 7−126398
Cu complex, Cu(II) alkanoate, crystalline and columnar phase structs. 7−111526
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7−77387
FeAl, B2-structured alloy, dynamic recrystn, and grain boundary migration, obs. 7−138759
GaAs epitaxial layers, crystallographic defect form. during MOCVD growth 7−104759
H_2O-oligo(ethylene oxide) eutectic system, light microscopy investig. 7−76376
InGaAsP/InP, quality control, defect detection by IR luminesc. microscopy 7−113846
KH_2PO_4 cryst., domain form., optical and X-ray studies 7−77485
K_2O-Al_2O_3-SiO_2, feldspar, growth twinning mechanisms 7−104762
$LiNbO_3$ single cryst., as-grown defects, optical and electron microscopy studies 7−131134
Mg-Er solid soln., precipitation, elec. and mech. meas. *(Russian)* 7−71190
NbTi-Cu composite superconducting properties charact and struct. 7−131962
$PbTiO_3$, crystal growth, phase transform., and microcracking 7−100038

optical microscopy continued
Ta_2O_5, amorphous, electrically stimulated structural changes, X-ray anal. and optical microscopy 7−132655
Y-Ba-Cu-O high T_c supercond., struct. and morphology studies 7−111514
Y-Ba-Cu-O high T_c supercond. system, 950°C subsolidus phase diagram 7−119246
$Y_{2.6}Sm_{0.4}Fe_{3.9}Ga_{1.1}O_{12}$ epitaxial films, submicron domain struct. obs. by optical microscopy 7−70615

optical model (nuclear) *see nuclear optical model*

optical modulation
acoustic wave enhanced detect. using thick and thin reference gratings 7−75103
acousto-electro-optic modulation of coherent light in SAW devices 7−90908
acousto-optic modulator as electronically selectable unidirectional device in ring laser 7−141978
acousto-optic modulators, for single mode fibres, design and performance 7−123188
acousto-optical modulation with large bandwidth and angular aperture 7−130315
acousto-optical modulators phase conjugation, photorefractive, new appls. 7−110475
acousto-optical spectrum analyser, transmission dynamics of freq. modulated signals 7−123185
acoustooptic light modulator, dynamic range 7−90771
acoustooptical modulators, dielectric joint props. *(Polish)* 7−110556
AM laser system for distance and displacement meas. 7−75007
BH DFB lasers, 1.5 μm, low-pressure MOVPE growth and low-threshold operation 7−68673
BH distributed feedback laser emitting at 1.3 μm for high-bit-rate systems 7−75166
binarisation procedure generating 2D pulse density modulation 7−110258
birefringent fibre gyroscope, polarisation cross coupling, bias drift reduction 7−68865
birefringent single mode fibres, nonlinear pulse propag., modulational instability 7−68857
Bragg cell, multichannel acousto-optic, design and fabrication 7−82769
chirped pulse parameters, direct and second harmonic interferometric determination 7−128635
cholesteric liq. crysts., optical modulation and rotary power 7−106134
cholesteric liquid crystals, optical rotation, wavelength modulation 7−113120
coherent optical image correlation system, behaviour of binary spatial light modulators 7−82772
coherent-optical correlator with spatial carrier combined modulation 7−68816
communications in deep space, development program 7−134133
correlation filters, rotation invariant, iteratively designed, expt. use 7−136211
cross-phase modulation in optical fibers 7−123254
crossphase modulation in optical fibres, generation of short pulses from CW light 7−141998
DFB lasers, λ/4 phase-shifted corrugations fabrication using positive and negative photoresists 7−82650
DFB lasers, high-power 1.5 μm, design and performance *(Japanese)* 7−110399
DFB lasers, modulation-induced wavelength shifts 7−75006
differentiating spatial light modulator based on nematic liquid crystal, for optical preprocessing and pattern recognition 7−130317
diode DFB laser, intrinsic bandwidth meas. utilising satellite mode induced by far end refl. 7−117196
diode laser, multilongitudinal mode, electro-optical modulation at 850 nm with coherence multiplexing 7−130198
diode laser arrays, coupling with photorefractive passive phase conjugate mirrors 7−110414
diode lasers, instabilities by optical feedback, modulation, and mode-hopping 7−136307
direct-detection optical communication systems, symbol and frame synchronisation 7−68571
dye laser, femtosecond pulses, dispersion compensation using high-index prisms 7−117240
dye laser pumped by compressed laser pulses 7−110343
dye laser spectrometer, ultra-high resolution using non-tunable reference resonator 7−102528
dye lasers, multimode, temporal smoothing of pulses 7−103849
electro-optic materials for guided-wave optics 7−68829
electro-optical materials for optical electronics *(Spanish)* 7−117280
electro-optical modulator, vacuum-tube, for Q-switching in solid-state lasers 7−68830
electro-optical modulators, trading coupling loss for modulation efficiency 7−75105
electrooptic ferroelectric materials, desirability for guided-wave optics 7−90794
electrooptic travelling-wave modulators, broad-band, transmission line aspects of design 7−82768
Fabry-Perot cavity response to phase modulated light 7−130192
Fabry-Perot interferometer, modulation effects elimination 7−128646
Fabry-Perot modulator, refl. mode integrated optical 7−136502
Fabry-Perot phase modulator, high freq., using KDP cryst. 7−103954
Fabry-Perot semicond. laser amplifier, high-speed all-optical gate switching expt. 7−129991
Fabry-Perot-type semiconductor lasers, modulation capabilities 7−82656
Faraday multipass rotator for use in high accuracy polarimetric or ellipsometric devices 7−128628
femtosecond pulse compression, nonlinear response, inertia influence 7−141905
femtosecond pulse generation in nonlinear quadratic media 7−136429
ferroelectric liquid crystal spatial light modulator 7−110553
fiber optic gyroscope, phase-modulated, coherent backscatter 7−75155
fibre nonlinear refr. index meas., direct interferometric meas. by cross-sphase modulation 7−130398
fibre optic gyroscopes, serrodyne modulated, coherent backscatter-induced noise *(Japanese)* 7−130383
fibre optic interferometers, phase modulation 7−82816
fibre optic photoelastic press. sensor with fibre-loss compensation 7−68867
fibre optic point sensors, intensity modulated, FDM system 7−123240
fibre optic polarimetric strain sensor, extended range 7−136570
fibre optic sensing systems, intensity modulation, time domain referencing 7−123261

optical modulation continued
fibre optic sensors, intensity modulation 7−97159
fibre optic sensors, multiplexing using FM source 7−123231
fibre optics, pulse compression and MW picosecond pulse generation 7−97137
fibre Raman laser, synchronously pumped with self-phase modulation 7−141867
fibre transmission properties, dynamical model parameter identification 7−136542
fibres, modulational instability, theory 7−104015
fibres, nonlinear, single-mode, picosecond steps and dark pulses 7−110590
frequency translators, electro-optic, coherent optical fibre system appls. 7−103959
gas ring laser with intracavity nonlinear absorpt., freq. modulated reson. in radiation *(German)* 7−130190
hybrid image processing *(Japanese)* 7−122851
hybrid optical system for linear transformation processing 7−103962
III-V semiconductors, electro-optic modulation at microwave freqs. 7−136499
images recording by interferometric method in IR band 7−89251
information processing, conf., Orlando, FL, USA (April 1986) 7−80161
injection heterostructure laser, Q-switched, picosecond pulses 7−103850
injection laser, external resonator equipped, frequency capture of semiconductor laser 7−82659
injection laser, frequency-modulated, with interferometer, high-frequency amplitude beat signal generation 7−82655
injection lasers, chirping and intersymbol interference reduction by pulse shaping 7−68724
integrated electro-optic modulators and switches, state-of-the-art 7−68826
integrated optic frequency shifters with SAWs 7−104049
integrated optic waveguide-field overlap, polarisation insensitive modulator design appls. 7−104047
integrated optics, overview 7−130393
integrated optics single-band modulator 7−141977
interferometer, sinusoidal phase modulating using integrating-bucket method 7−108634
IR laser light modulator of ridge-type optical waveguide struct. using free carrier absorpt. effect *(Japanese)* 7−68831
laser beam, ZZ 7−75000
laser beam modulation for recorded image quality improvement 7−90517
laser diode modules, SPICE simulation 7−82550
laser frequency modulated fiber optic interferometric sensors *(Portuguese)* 7−130389
laser hyperbolic secant π pulse, coherent optical spectroscopy appl. 7−90662
laser interferometer for measuring displacement and distance 7−102503
laser light modulation using acrylic plate Faraday rotator, educational use 7−102061
laser machining and microscope systems, acousto-optic modulation and scanning 7−68736
laser pulse compression, scientific appls., picosec. and femtosec. sources 7−75005
laser radiation transmission by turbulent atmosphere, photocount statistics 7−133924
laser-plasma detection by UHF electrical current production with modulated laser beam 7−111278
light beam, phase conjugation by stimulated scatt. 7−123103
light velocity meas., laser beam modulation in Pockels cell 7−108084
liquid crystal bared modulator 7−141976
liquid crystal devices, optical cell design for sub-millisecond switching 7−75106
liquid crystal ferroelec. spatial light modulators for optical interconnection 3D gate array 7−136491
liquid crystal interferometer, spatial light modulation, optical control 7−73406
liquid crystal light modulator, optical multistability 7−68827
liquid crystal modulator, optical logic gates, multiple-valued, complement and literals 7−136220
liquid crystal modulators, optimal operation temp. 7−136490
liquid crystal television display as spatial light modulator for optical processing 7−82770
liquid crystal TV based joint transform correlator for adaptive real-time pattern recognition 7−90512
liquid crystal TV spatial light modulator, distortion correction with real-time joint transform correlator 7−136446
local-oscillator isolation using multiple acousto-optic modulators and frequency diversity 7−123191
logic gate based on magneto-optical spatial light modulator 7−130002
microchannel spatial light modulator under white-light illumination, operating characts. and appls. 7−136489
microchannel spatial light modulator with white light processing 7−136495
microwave, 1.3 μm DFB and multimode lasers under deep microwave modulation, linearity with optical feedback 7−136309
microwaveguides, integrated optical components, acoustooptical and electrooptical diffraction based 7−90836
mirror double phase conjugate, optical information processing appls. 7−110264
mode-filter type optical modulator using, ZnS crystals, propag. characts. study 7−90766
modulator for integrated optics, based on electric capillarity *(German)* 7−130314
modulator for motion picture camera, field standard facilities and requirements *(Czech)* 7−130316
MQW optical modulators, high speed operation 7−68828
multichannel optical correlator/convolver utilizing the magnetooptic spatial light modulator 7−110248
nematic liquid crystal, nonlinear optical processes in ns regime, optically-induced mol. reorientation 7−68745
nematic liquid crystal, thin layer, laser radiation reflection, thermooptical modulation 7−75008
nonlinear optical waveguide devices 7−82849
nonlinear thin film, laser beam transmission, transverse self-phase modulation and bistability 7−110440
nonlinearly chirped pulse compression using Gires-Tournois interferometers 7−95639
optical fibres, self-phase modulation, stimulated Raman scatt., pulse walk-off effect 7−97155
optical harmonics at microwave freqs., interferometric generation using freq. modulated semiconductor laser 7−130250
optical pattern recognition system, automatic, real-time 7−75109

optical modulation continued
optical pulse self-action phenomena and femtosecond laser pulse generation, review 7−103884
opto-electronic signal processing, spatial light modulators and bus systems *(German)* 7−122848
optoelectronic fog detectors with continuous sinusoidal modulation, signal backscatter *(Polish)* 7−94510
optoelectronic single quantum well devices based on electron bleaching of exciton absorpt. 7−110605
PAM-to-PDM conversion for bistable system 7−68749
parallel multiprocessing systems, development 7−74858
periodic objects, sawtooth waveform, modulation by narrow rectangular aperture 7−82764
phase distortion, signal depend., in spatial modulator, effect on optical correlator performance 7−110249
phase modulation, precision meas. in optical interferometer beyond shot-noise limit 7−122898
phase modulator using electric-field sensitive fibre with coaxial electrodes 7−123230
phase-modulated holography for detection of phase and absorpt. gratings 7−103774
phase-reversal travelling wave modulator, optimisation *(German)* 7−136503
photoelastic all-fibre polarisation modulator for birefringent monomode fibres 7−130338
photorefractive wave mixing, spatial light modulation, filtering effects 7−68791
picosecond laser pulses, generation using Q self-switching 7−110418
picosecond phase shifted laser multiple-pulse sequences, spectroscopic demonstration 7−90728
PRIZ conducting spatial light modulators, fabrication and props. 7−82483
PRIZ space-time light modulator transmission function 7−68832
pulse amplification in picosecond range in single mode fibres 7−68748
pulse compression of Raman-depleted ps pulses and spectrally windowed self-phase modulated pulses at 1.06 μm 7−103890
quasistatic carrier induced frequency chirp in semiconductor laser diodes 7−97042
Raman Doppler velocimetry, single-pulse, with FM or AM CW laser beam 7−82670
RF radiation spectrum of semiconductor laser, optical communication line wave reflection 7−123016
ring laser, acoustooptic nonreciprocity rel. to Fizeau effect 7−141897
ring resonator with nonlinear medium excited by partially coherent signal, self-modulation of radiation 7−90678
ring system formed by laser and fibre-optic delay line, self-modulation oscillations, parametric stability 7−97079
rotation measurement by laser beam polarisation modulation 7−73321
self-maintained reed chopper for beam modulation in UHV 7−82392
semiconductor DFB laser, multielectrode, FM 7−97010
semiconductor laser, FM noise and spectral linewidth 7−110359
semiconductor laser, water vapour stabilised, absolute stability study 7−68654
semiconductor laser amplifier for multiplexed coherent systems 7−68725
semiconductor laser in short external cavity, optical signal detection and rate eqn. anal. 7−110361
semiconductor laser output, lateral phase uniformity under sine current modulation *(Chinese)* 7−74999
semiconductor laser parametric modulation, lateral carrier diffusion effect 7−117203
semiconductor lasers, directly-modulated, second harmonic distortions due to spatial filtering 7−103851
semiconductor lasers, dynamic behaviour Auger recombination, simulation 7−110352
semiconductor lasers, rate equation models and wavelength modulation 7−130197
semiconductor lasers oscillation and chaotic behaviour obs., under DC modulation 7−90616
semiconductor quantum well lasers, dynamic props., review *(Japanese)* 7−74930
single mode fibre, self-phase modulation and stimulated Raman scatt., spectral and temporal characts. 7−103889
single mode fibres, broadening of intensity-modulated pulses 7−130357
single-mode fibres, self-phase modulation and stimulated Rama scattering 7−136560
single-mode modulated laser, detuning effect 7−123042
single-mode optical piezoceramic phase modulator, anal. 7−123189
slot electrooptical magnetooptical phase modulator, electrodynamic characts. calc., singular integral equations method 7−68825
solitary acoustic pulses used in light modulation 7−123187
spatial light modulator, electrically addressed viscoelastic, anal. 7−136494
spatial light modulator based on deformable gel surface 7−110555
stable pulsations of semiconductor lasers by optoelectronic feedback with avalanche photodiodes 7−82652
surface wave electro-optic modulator 7−90770
surface-emitting-type optical threshold device, operation anal. *(Japanese)* 7−110358
synthesis telescopes based on interferometric image synthesis and computational phase retrieval 7−115240
total-internal-reflection electrooptic deflector/modulator 7−90760
transmission system, high dispersion multi-Gbit, 1.53 μm DFB laser evaluation 7−68899
travelling wave integrated optic modulator, with phase reversal electrodes, theory 7−103958
travelling-wave modulators, velocity mismatch compensation using pseudorandom switched electrode patterns 7−103956
travelling-wave wideband modulator design 7−103957
twisted nematic liquid crystal cell, bright area modulative 7−82771
two-level resonant medium, phase modulation and parametric broadening of pulse spectrum 7−97065
two-photon spectroscopy, absorption, Doppler-free with frequency-modulated dye laser 7−140753
ultra high frequency electric field sensing 7−136497
ultrafast light-controlled optical-fiber modulator 7−90798
ultrafast supercontinuum white laser source 7−110470
ultrashort IR pulse generation via electron-density waves 7−130199
ultrashort light pulse duration measurement using two-beam interference 7−68719
US, disc transducer, radiation field, laser probe investig. with tomographic scanning 7−132879

optical modulation continued
wavefront determination in optical reception system with multichannel phase modulation 7−141801
waveguide lasers, nonlinear conversion of CW radiation into short pulses 7−117244
waveguides, soliton formation, influence of regular phase modulation 7−141984
(Al,Ga)As-GaAs MQW DH optical waveguides as electroabsorpt. modulators 7−136501
n-AlGaAs-GaAs, modulation doped quantum wells, optical modulation and switching 7−125762
$Bi_{12}SiO_{20}$ cryst. appl. as voltage sensor in optical fibres 7−123204
$Bi_{12}SiO_{20}$ crystal, electrooptic modulation of light with multiple passes 7−117306
$Bi_{12}SiO_{20}$ crystals, electrooptic modulation of light 7−132239
$Bi_{12}SiO_{20}$ PRIZ modulator, write-beam induced damage 7−123190
$Bi_{12}SiO_{20}$ PRIZ space-time light modulator, pulsed readout of image 7−75107
$Bi_{12}SiO_{20}$ signal modulator operating on longit. transverse electrooptical effect 7−123186
CO_2 laser, CW, low power, high frequency modulation using semiconductor laser 7−136264
CO_2 laser with feedback on intracavity modulator, self-pulsing and deterministic chaos 7−68726
CO_2 laser with internal modulation, chaotic phenomena 7−136263
CO_2 pulsed amplifier, intensity modulated laser beam propag. 7−123047
$CdS_{1-x}Se_x$, semicond. layers, waveguide, index and depth profiles determ. 7−130331
GaAlAs buried heterostruct. laser, high speed digital modulation 7−130193
GaAlAs diode laser, wavelength stabilisation in high-speed modulation using Rb-D_2 absorpt. line 7−110415
GaAlAs diode lasers, wide freq. modulation operation using composite-optical cavity *(Japanese)* 7−110420
GaAlAs lasers, wide-band electrical noise and modulation response, parasitic element influence 7−122971
GaAlAs single-mode LD, large signal nonlinear distortion prediction under microwave intensity modulation 7−82563
GaAlAs/GaAs surface-emitting laser, directly modulated, single longitudinal mode operation 7−117202
GaAlAs-GaAs photoexcited quantum well laser, 140 ps optical pulse generation 7−68721
GaAs crystals, spatial light modulation by beam coupling 7−141979
GaAs integrated electrooptical phase modulator, low drive voltage, 10.6 μm appls. 7−103961
GaAs laser diodes, double contacted BCRW type, self-pulsating operation with high repetition rate 7−130195
GaAs modulators, travelling wave integrated optic, optimisation 7−136496
GaAs, PIN electrooptic modulator, high-throughput, 3 dB bandwidth of 9.6 GHz at 1.3 μm 7−103955
GaAs quantum wells, below-gap photoexcitation dynamics 7−92286
GaAs quantum-well waveguide modulators, electroabsorption 7−136492
GaAs, waveguide interferometers and couplers for high-speed electro-optic modulation and switching 7−75117
GaAs-AlGaAs coupled quantum well waveguides, electroabsorption 7−90775
GaAs-AlGaAs multiple quantum well reflection modulator 7−97127
GaAs-GaAlAs MQW optical modulators, effect of residual doping on optimum structure 7−82766
GaAs-GaAlAs system, electro-optic modulation at microwave freqs. 7−136499
GaInAs-InP, phase and amplitude modulation by free carriers injection at 10.6 μm 7−136500
GaInAsP p-type substrate mass-transported diode laser, sinusoidal and digital high-speed modulation 7−82654
GaInAsP/InP electro-optic modulators using passive rib waveguides 7−75108
GaInAsP-InP lasers, DBR dynamical single mode bundle-integrated-guide, 1.5 μm, spectral behaviour 7−122962
GaInAsP-InP lasers at 1.3 μm, high speed dynamics 7−122984
GaSb-AlGaSb MQW laser diode, high-speed modulation characts. 7−68720
GaSb-AlGaSb MQWs, electroabsorption effect and high-speed waveguide optical modulator fabrication 7−90767
Ge acousto-optic modulators, thermal design 7−82765
He-Ne laser, pulse generation with an acousto-optic freq. shifter in a passive cavity 7−110412
He-Ne/methane ring laser, competition between counterpropagating waves, axial mag. field effect *(Russian)* 7−82669
InAlAs/InGaAs modulator structs., excitonic energies and inhomogeneous line broadening 7−143578
$In_{0.52}Al_{0.48}As$ electro-optic directional coupler grown on InP by MBE 7−136498
InGaAs-InAlAs MQW optical modulator integrated with DFB laser 7−130391
InGaAs-InAlAs waveguide MQW optical modulators with high on/off ratio and low drive voltage 7−110557
InGaAsP BH laser with 22 GHz bandwidth and high modulation efficiency 7−136299
InGaAsP buried crescent injection lasers, hybrid growth and 1.3 μm operation 7−123009
InGaAsP laser, 16 Gbit/s direct modulation 7−117239
InGaAsP laser, gain-switched, picosecond dynamics 7−122970
InGaAsP-InP DFB lasers, 1.53 μm, VPE fabricated, very low-threshold design 7−97027
InGaAsP-InP quantum well modulators, MBE grown 7−110552
InGaAsP-InP ridge-waveguide stripe structure bistable DH laser, expt. characts. *(Chinese)* 7−74920
InGaAsP-InP:Fe VPE, high speed buried heterostructure laser diode 7−141896
InP based modulators and switches 7−104042
InP-InGaAsP optical waveguides, MOVPE grown, low-loss, single-mode, fabrication, props. and appls. 7−103966
KH_2PO_4 coated glass fibre optical coupler modulator 7−136545
KH_2PO_4 Pockels cell electrooptic light modulator, piezooptic transients 7−130312
$KTiOPO_4$ waveguide modulator, fabrication and characterisation 7−90776
LiF crystal, with F_2^+ colour centres, for passive shutter for ruby laser 7−117245

optical modulation continued
$LiNbO_3$ acoustooptic modulators guided wave interaction efficiency for selected cuts 7−136493
$LiNbO_3$ crystals with regular domain struct., light diffr. in volume phase grating, SHG 7−97081
$LiNbO_3$ monocryst., light modulators, electro-optical investig. 7−132236
$LiNbO_3$:Ti electro-optic waveguide switch, optical intensity modulation to 40 GHz 7−117305
$LiNbO_3$:Ti integrated optic strip waveguide phase modulator driven by SAW 7−82767
$LiNbO_3$:Ti modified 1×2 directional coupler modulator with low drive voltage 7−90768
$LiNbO_3$:Ti travelling wave interferometric modulator, 1.3 μm, low insertion loss 7−103960
$LiNbO_3$:Ti waveguide interferometric modulators, charact. *(Chinese)* 7−75110
$LiNbO_3$:Ti waveguide technology and devices 7−90790
$LiNbO_3$:Ti waveguide modulators, props. 7−142048
$LiNbO_3$:Ti waveguides, SHG, phase matching via periodic structures 7−103897
Na beams optical pumping, efficient electro-optic modulator design 7−82773
Nd:YAG laser 0.532 μm pulse compression in fibre optic compressor 7−141904
Nd:YAG laser radiation phase modulation with SHG of ultrashort pulses, correlation meas. 7−141903
Nd^{3+}:YAG laser with resonator loss modulation, chaotic regimes and stability of peak output power 7−122989
Nd^{3+}:YAG lasers, continuously pumped as picosecond radiation sources 7−136316
PLZT-Si spatial light modulators, 1D, performance design and appls. 7−110554
$(Tm,Bi)_3(Fe,Ga)_5O_{12}$ garnet epitaxial film, magneto-optical laser beam convertor appl. *(Czech)* 7−123005
ZnO bulk wave transducer struct. for acousto-optic phase modulation of single-mode fibres 7−123390
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984

optical modulators *see modulators; optical modulation*

optical monochromators *see monochromators*

optical noise measurement
GaAlAs lasers, wide-band electrical noise and modulation response, parasitic element influence 7−122971
He-Ne laser, amplitude noise continuous meas. method *(Chinese)* 7−130054
InGaAsP 1.5 μm travelling-wave laser amplifier with 5.2 dB noise figure 7−68631
Ne-He travelling-wave laser, transverse HF pumping, radiation amplitude fluctuations 7−130060

optical nutation *see optical coherent transients*

optical parametric amplifiers
coherent pulse propagation in a collisionally-broadened Raman amplifier 7−90709
femtosecond pulse generation in nonlinear quadratic media 7−136429
frequency conversion of solid laser sources in nonlinear crysts. 7−75067
N-(4-nitrophenyl)-L-prolinol crystal, IR tunable femtosecond pulse generation 7−123092
organic crystal cored fibre design of parametric interactions, phase matching requirements 7−103899
phase phenomena in parametric amplifiers and generators of ultrashort light pulses 7−136439
rigged-reservoir response, effects of squeezed vacuum 7−122891
rigged-reservoir response, general theory 7−122890
rigged-reservoir response, multiatom squeezed states 7−122892
SBS amplifier and four-wave hypersonic phase-conjugating mirror, limiting sensitivity 7−123089
squeezed states, parametric amplification producing k-photon correls. 7−68601
squeezing in the dynamics of a parametric amplifier 7−68787
turbulent medium with thermal nonlinearity, radiation fluctuations, parametric amplification 7−123110

optical parametric devices
see also optical parametric amplifiers; optical parametric oscillators
four-wave parametric upconvertors for IR detection, acceptance angle charact. study 7−90696
organic crystal cored fibre design of parametric interactions, phase matching requirements 7−103899
three-photon interaction, tunable picosecond light pulse generation *(German)* 7−75058
Na atoms, two-photon excited parametric emission 7−130248
Na vapour, parametric four-wave mixing 7−75061

optical parametric oscillators
see also lasers
frequency conversion of solid laser sources in nonlinear crysts. 7−75067
local-oscillator isolation using multiple acousto-optic modulators and frequency diversity 7−123191
nondegenerate optical parametric oscillator, generation of twin photon beams 7−123085
phase phenomena in parametric amplifiers and generators of ultrashort light pulses 7−136439
photorefractive optical oscillators 7−130262
pulsed oscillator, improvement of output charact. 7−130258
Raman oscillator, synchronously pumped fibre optic 7−141932
rigged-reservoir response, effects of squeezed vacuum 7−122891
ring system formed by laser and fibre-optic delay line, self-modulation oscillations, parametric stability 7−97079
tunnel generation and mode locking 7−75055
$AgGaS_2(Se_2)$, IR freq. generation 7−75068
Al_2O_3, ruby, single cryst. fibre growth and nonlinear optical use 7−75069
$Ba_2NaNb_5O_{15}$, tunable nonresonator parametric oscillator, picosecond pulse generation 7−90704
$LiNbO_3$:Ti channel waveguides, optical parametric fluorescence 7−103898
$LiNbO_3$:Ti waveguides, proton exchanged, parametric oscill. numerical model 7−103896
$Sr_{1-x}Ba_xNb_2O_6$:Ce crysts., self-induced holographic gratings, coherent light oscillation obs. 7−123129

optical phase conjugation
acetone, stimulated Raman scattering, wavefront reversal 7−90705
associative memory in a phase conjugate resonator cavity utilizing a hologram 7−90546
associative memory with shift invariance and multiple-image recall 7−103760
backward stimulated scattering, producing phase-conjugate wave *(Chinese)* 7−90722
cresyl violet, thin films, four-wave mixing 7−136442
decoupling method for laser system with wavefront reversal 7−136367
degenerate four-wave-mixing geometry 7−97094
diode laser arrays, coupling with photorefractive passive phase conjugate mirrors 7−110414
dye laser, flashlamp pumped, phase conjugation in gain saturation 7−110480
fibres, high birefringence, optical multistability and phase conjugation 7−136441
fibres, multimode, correction of polarisation and model scrambling by phase conjugation 7−117335
fibres, multimode, image distortion and restoration by polarisation-preserving phase conjugation 7−117151
four wave mixing in absorbing media, time depend. description 7−136445
four-wave mixing, instabilities 7−136390
four-wave wavefront-reversing mirror, imaging props. angular selectivity 7−130264
free electron laser resonators, phase conjugate 7−136371
fundamentals and applications *(Czech)* 7−136449
gas, phase conjugation on stimulated thermal scattering 7−141946
high reflectivity phase conjugation at 10 μm 7−110476
laser-plasma detection by UHF electrical current production with modulated laser beam 7−111278
laser-produced plasma, laser light scatt. and phase conjugation *(German)* 7−130899
light beam, phase conjugation by stimulated scatt. 7−123103
logic functions using nearly degenerate four-wave mixing in laser diodes 7−90723
low-power beams, phase conjugation using liquid-crystal light valves 7−117274
mirror, phase conjugate, interference pattern prod. on reflection, theory 7−123114
mirror, phase conjugate, interference pattern prod. on reflection, expt. 7−123115
mirror double phase conjugate, optical information processing appls. 7−110264
mirrors, phase-conjugate, semi-self-pumped 7−136447
mirrors, wavefront-reversing, in interferometer, charact. 7−140736
mirrors as thresholding elements for optical associative memories 7−90724
mode scrambled optical beams, phase conjugation, spatial recovery, inter-beam temporal information exchange 7−110472
nitrobenzene, single and collective particle correlation kinetics, time resolved picosec. phase conjugation 7−110478
non-frequency-shifted phase conjugation by Brillouin-enhanced four-wave mixing 7−130263
nondegenerate four-wave interaction in resonant medium, absorption line Doppler broadening 7−130265
nondegenerate multiwave mixing, Doppler-broadened Stark splitting 7−123113
nonlinear optical materials and devices, conf., Erice, Sicily, Italy (July 1985) 7−80172
optical distortions, phase-conjugate corrections, thermodynamic bound 7−68794
phase conjugate resonator, transverse dynamics 7−97093
phase retrieval algorithm, optical implementation using photorefractive phase conjugate mirror 7−90519
phase-matching condition, generalised, for nondegenerate four-wave mixing 7−97092
photorefractive, new appls. 7−110475
photorefractive materials for optical processing 7−82736
photorefractive optical oscillators 7−130262
photorefractive wave mixing, spatial light modulation, filtering effects 7−68791
plasma, low temperature, phase conjugation in stimulated Brillouin scatt. 7−136448
plasma, phase conjugate reflection of electromagnetic waves, flow-wave interaction 7−137084
polarisation distortion correction using phase conjugation via stimulated Brillouin scattering 7−110474
polychromatic phase conjugation appl. to short pulse synthesis 7−97091
propagation distortion in nonreciprocal media 7−103900
resonator with mirror of fast Kerr medium, transverse dynamics 7−110473
resonators, reflectivity fluctuations 7−68786
ruby, phase conjugation by degenerate four wave mixing, saturation effects 7−130266
SBS amplifier and four-wave hypersonic phase-conjugating mirror, limiting sensitivity 7−123089
semiconductor laser media, four-wave mixing and phase configuration 7−75072
semiconductors, optical bistability and nondegenerate wavefront reversal 7−75071
stimulated Brillouin scattering lasers, self-pumped, field structure 7−82642
stimulated Brillouin scattering mirrors made of capillary waveguides 7−136443
stimulated Mandelstam-Brillouin scattering, Stokes pulse compression and wavefront inversion 7−97082
stimulated scatt., phase conjugation 7−117272
thin inhomogeneous method, phase conjugation resolving power 7−68793
US, interferometric detection at rough surfaces using optical phase conjugation 7−97232
wave front reversal with four-wave premixing 7−123117
wave-front replication versus beam cleanup by stimulated scattering 7−97077
wavefront control by nonlinear phase conjugation 7−82721
wavefront reversal of microsecond radiation in fiber waveguides 7−142011
As_2S_3, amorphous film, phase conjugation, one-way image transmission *(Korean)* 7−82719
$Ba_2NaNb_5O_{12}$ crystals, wavefront reversal 7−141945
$Ba_{2-x}Sr_xK_{1-y}Na_yNb_5O_{15}$:Ce as self-pumped phase conjugator 7−90719

optical phase conjugation continued
$BaTiO_3$ crystal, phase conjugation for distortion correction in liquid crystal television 7−136446
$BaTiO_3$, mutually incoherent beam coupling, anal. 7−117273
$BaTiO_3$ nonlinear phase conjugation, coherent coupling of pulsed dye oscillators 7−90721
$BaTiO_3$ phase conjugate mirror master-oscillator power amplifier using AlGaAs semiconductor diode laser 7−75070
$BaTiO_3$ phase conjugator, spatial filtering characts. 7−141943
$BaTiO_3$, photorefractive phase conjugation, dancing modes and frequency shifts 7−75073
$BaTiO_3$, physics of photorefractive effect 7−132222
$BaTiO_3$ self pumped phase conjugate mirror, deterministic chaos 7−82720
$BaTiO_3$, self-oscillation using multimode laser 7−117271
$BaTiO_3$ self-phase-conjugation appl. to dynamic holographic method of imaging phase objects 7−82510
$BaTiO_3$, self-pumped, self-pulsation and incoherent beam coupling effects 7−132223
$BaTiO_3$, self-pumped phase conjugation 7−90725
$BaTiO_3$ total internal reflection phase conjugator, bistability and switching 7−117255
$Bi_{12}SiO_{20}$ 2D optical temporal bandpass filter using four-wave mixing, dynamic schlieren imaging system 7−97090
$Bi_{12}SiO_{20}$, moving photorefractive gratings, applications 7−130309
$Bi_{12}SiO_{20}$ photorefractive crystal, spatially multiplexed phase conjugate imaging and processing 7−110260
CO_2 laser radiation phase conjugation by three-beam interaction 7−136444
CS_2, phase conjugation by Brillouin-enhanced four-wave mixing 7−103902
CdS, self-induced changes in refractive index at λ=532 nm 7−130267
Cs, wavefront reversal in six-photon wave interaction investig. 7−109850
GaAs, combination-type, third-order nonlinear susceptibility at 10.6 μm, phase conjugate signal 7−110477
Gabor dynamic volume phase holograms, contrast inversion 7−130019
$GdAlO_3:Cr^{3+}$, phase conjugation by degenerate four wave mixing, saturation effects 7−130266
InGaAsP semiconductor laser, nondegenerate four-wave mixing, spectral hole burning 7−123118
k, wavefront reversal in six-photon wave interaction investig. 7−109850
KCl, F_A-centres, polarisation hologram writing, self-induced dichroism effects 7−141817
$KNbO_3$, anisotropic self-diffraction 7−117157
$LaF_3:Pr^{3+}$, image storage and phase conjugation for backward-stimulated echo 7−96944
$LaF_3:Pr^{3+}$, image storage and phase conjugation using backward-stimulated echoes 7−122855
$LaF_3:Pr^{3+}$ long lived conjugate optical echo 7−123116
Li, wavefront reversal in six-photon wave interaction investig. 7−109850
Na, hollow cathode discharge, optical phase conjugate spectroscopy 7−129634
Na seeded flame as phase-conjugate oscillator 7−141947
Na, wavefront reversal in six-photon wave interaction investig. 7−109850
Nd: phosphate glass amplifying medium, stimulated Brillouin scattering of focused beams 7−136431
Nd:glass laser with composite active element and stimulated Brillouin scattering mirror 7−82643
Nd:phosphate glass laser with wavefront reversing cell *(German)* 7−130123
Nd^{3+}:YAG laser with wavefront reversing cell *(German)* 7−130123
Ne, four-wave mixing, cross-polarised pumps, backward saturation 7−103903
Rb, wavefront reversal in six-photon wave interaction investig. 7−109850
Si, four-wave mixing reflectivity, free-carrier absorption 7−90720
Si, phase conjugate reflecting, pump-beam intensity depend. saturation behaviour 7−68792
$Sr_{0.75}Ba_{0.25}Nb_2O_6$:Ce self-pumped phase conjugate mirror, time response 7−103901
$Sr_xBa_{1-x}Nb_2O_6$:Ce as broadband self-pumped phase conjugate mirror 7−90726
YAG laser radiation used in atm. sounding, wavefront reversal of second harmonic 7−141944

optical polarimeters *see polarimeters*

optical polarimetry *see polarimetry*

optical polarisation *see light polarisation*

optical polarisers
Brewster-angle reflection polarizers, angular sensitivity 7−123167
cover-type wideband high-power polariser, circular polarisation *(Chinese)* 7−75101
electro-optical polariser with several parallel electrodes on one surface, effect of relative dimensions 7−110533
fibre optic system advanced components 7−123260
imaging characteristics of perfect lens with linear polarising mask 7−110273
IR reflection polarisers, using transparent high-index films on transparent low-index substrates, efficiency 7−123169
multilayer thin film waveguide polarizer with metal-clad *(Japanese)* 7−130328
non-depolarising optical system, polarizing and retardation parameters from polar decomposition of Mueller matrix 7−90503
planar structures, leaky absorbing, for polarisers, loss coeff. and perturbed propag. const. 7−117352
polymer film waveguide polarisers with a-Si:H film clad 7−110574
resonator with variable-refl. output coupler using standard grating and polarising components 7−117232
thin-film cubic-type polarisers for high power lasers, design parameters 7−117220
vector nature of light use in imagery and image processing 7−117155
XUV multilayer optics theory 7−136481
$LiNbO_3$:Ti directional coupler polarisation splitter, design, operation and characts. 7−97178

optical prisms
apodised apertures for laser systems 7−103833
boresight module, temperature stability 7−90746
Bronica GS-1 lenses and prism viewfinders, review 7−95662
corner reflector testing by computational diffraction of measured wavefronts 7−110609
couplers in guided-wave optics, design 7−117308
coupling into planar waveguides, self-pulsing 7−117318
coupling with waveguide having cubic nonlinearity 7−82788

optical prisms continued
dye laser, 200 ns narrow-linewidth flashlamp pumped, multiple-prism grating Littrow config. 7−110402
dye laser, femtosecond pulses, dispersion compensation using high-index prisms 7−117240
dye laser, Quasimodal pulsed tunable at 440 nm using prism beam expander and gratings 7−82639
dye laser oscillator, diffr. limited single longit. mode multiple prism flashlamp pumped, linewidth anal. 7−117224
fibre optic prism configuration internally referenced temperature sensor 7−123206
fibre optic sensor readout, wavelength division multiplexer appl. 7−130334
injection heterolasers and diffuse planar optical waveguides, coupling methods 7−68838
light guides progress and development 7−123198
metal optical constants determ. by surface polariton excitation using attenuated total reflection *(German)* 7−113306
multiple-prism dispersion theory for pulse compression in ultrafast dye lasers 7−136292
nonlinear prism coupler, optical bistability 7−117313
nonlinear prism output coupler, theoretical study 7−75084
planar waveguides, prism coupling, photothermal displacements, optical bistability 7−75114
pulse compression to 6 fs using cubic phase compensation 7−130301
pulse compression with fibre-prism pulse compressor 7−103877
rectangular triangular prism of crystals with symmetry, light scanning on inclined face 7−90759
reference beam optical interferometer for gas dynamics studies 7−123813
unstable ring resonator with an intracavity prism beam expander 7−68808
wide-field three-mirror telescope, atm. dispersion compensator 7−72312
CO laser radiator; selective attachment 7−110398
CO_2 large-scale lasers, multiple-prism grating techniques for linewidth narrowing 7−110401
Nd,Cr:$Gd_3(ScGa)_2Ga_3O_{12}$ laser with prism-resonator and polarisation coupling 7−82576

optical projectors
3D cameras and projectors, theory and practice *(German)* 7−89290
electronic imaging conf., Arlington, VA, USA (Oct. 1986) 7−134348
equipment for optical projection in entertainment industry 7−123154
GRIN rod-lens appl. to projector *(Japanese)* 7−110531
illumination system analysis, local illuminance calc. 7−123149
light intensity distrib. curves, anal. for case of near rot. symm. *(German)* 7−82461
light valve system of TV colour projector, OTF calc. with dark field obs. 7−117283
motion picture projection system, alignment 7−75098
overview of projected optical effects 7−123156
planetarium projector, 'Space Voyager' equipment and computer system 7−79853
power supply for slide projectors *(German)* 7−95664
projection display technology, review 7−136473
temperature fields of primary optical elements, calc. 7−103925
thermoplastic recording, frosty, in projection systems, reproduction characts. 7−103924

optical propagation *see light propagation*

optical properties of substances
see also acousto-optical effects; birefringence; brightness; cathodochromism; colour; dichroism; dielectric function; electro-optical effects; electrochromism; magneto-optical effects; optical constants; optical Kerr effect; optical rotation; optical saturation; optical susceptibility; photochromism; piezo-optical effects; pleochroism; reflectivity; thermo-optical effects
actinide tetravalent ions and cpds., optical and mag. props. 7−106106
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
cermet thin films, microstruct., transport and optical props. 7−85136
chalcogenide glasses, photoinduced changes in struct., optical and mech. props. 7−142823
dye molecule diffusion in polar solvent, dependence on optical excitation 7−124567
ferroelasticity, conference, Kharkov, USSR (May 1985) 7−120689
gas-evaporated metal particles, optical props., fractal struct. effects, effective medium theory calcs. 7−118967
granular films, optical props., retardation effects, dipolar treatment 7−118965
graphite, polarisability components, re-evaluation from optical data 7−83842
interstellar dust, optical props. of cylindrical core-mantle dust grains 7−127993
liquid cryst. nematic-to-smectic A transition and elastic consts. determ., optical response method *(Turkish)* 7−111872
low-dimensional structs., optical props., conf., St. Andrews, Scotland (July-Aug. 1986) 7−128196
metal and alloy electronic structure, conf., Johnsbach, Germany (Apr. 86) 7−128195
metal-dielectric composites, emissivity optical props. calcs. 7−138398
nonmetallic materials, defect properties and processing, conf., Boston (USA), Dec. 1985 7−66833
poly(p-phenylene vinylene) film, anisotropic photoconductivity 7−92230
trans-polyacetylene picosecond time-resolved absorption in the mid-infrared by seeded optical parametric generation 7−138396
pyramidally textured surfaces, light trapping props., solar cell and photovoltaic energy conversion appls. 7−118966
rare earth ions in crystals, intensities of optical transitions 7−138399
semiconducting ferroelectrics and ferroelectric mag. materials, interband electron excitations, elec., mag. and toroidal oscills., optical props. 7−99732
semiconductors, amorphous, conference, Balatonszeplak, Hungary (Sept. 1986) 7−80153
semiconductors, amorphous, transport and optical data, interpretation 7−84883
semiconductors, complex lattice structure, amorphisation problem 7−131033
semiconductors, II-VI and III-V, 3d impurity induced transitions, optical cross section 7−106123
solid state science, book contrib. 7−102035
ternary compounds, defect chemistry, elec. and optical props. 7−124249

optical properties of substances continued
transition metal dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728
Al, black, optical props., annealing effects 7−70925
Al_2O_3 MOCVD by oxidation of trimethylaluminium, elec. and optical props. studies 7−71053
As-S (Se) amorphous chalcogenide films, mech. props., photoinduced changes 7−84607
Au, black, optical props., annealing effects 7−70925
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7−138111
CuO, selective surfaces, optical props., effect of oxidation rate 7−143991
GaAs multiple-quantum-well structs., high-speed optical phenomena 7−92283
GaAs:Si LED, elec. and optical props. *(Korean)* 7−84869
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
GaSb-AlSb, semiconductor superlattices, optical properties *(Polish)* 7−132220
GaSb-InSb semiconductor superlattices, optical properties *(Polish)* 7−132220
Ge, picosecond time-resolved absorption in the mid-infrared by seeded optical parametric generation 7−138396
HgTe-CdTe, superlattices, review *(Polish)* 7−132219
InSb-CdTe heterojunctions, interface characterisation and MBE growth *(Polish)* 7−132475
KH_2PO_4 and isomorphs, electro-optical, linear and nonlinear optical props., devices, research areas, review 7−110484
$LiNbO_3$ crysts., optical anomalies, tertiary pyroelec. effect, thermal stress model anal. 7−125656
Mo vacuum condensates, struct., elec., and optical props. *(Russian)* 7−70109
$PbMoO_4$ single cryst., electrophys. and optical props., point defect interaction effects 7−84013
Si polycrystalline solar cells, H ion passivation 7−126623
a-Si:H, Ar dilution effect on optical and electrical props. *(Korean)* 7−85877
SnO_2:F spray pyrolysis coating, optically allowed transitions 7−106289
Th, FCC, electron struct. and optical props. of (100) and (110) surfaces *(Russian)* 7−143548

optical pumping
see also lasers; multiphoton spectra
alkali atoms, population nonequilibrium distrib. in ground state induced by laser MW double resonances *(Chinese)* 7−90000
alkali metal, atom, reson. excitation, induced IR emission 7−74508
2-aminophenyl phenylsulphone, luminescence, temperature dependence, emission and absorption spectra, excited states, solvent effects, change transfer 7−141620
atom acceleration by inverse bremsstrahlung 7−103456
atomic giant resonances, deexcitation spectra study 7−141515
atomic response to intense fs UV radiation study 7−141543
atoms, classically stochastic many-photon absorpt. processes, scaling 7−74525
atoms, coherent excitation and photoionisation of Rydberg states using ps laser pulses 7−90060
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7−116977
bistability, polarisation switching, two-level atoms with lower-level degeneracy 7−136411
bromomethane, FIR laser stabilisation using Stark effect 7−117186
chloromethane, FIR laser stabilisation using Stark effect 7−117186
chloromethane-d_3, ν_2 and ν_5 bands, assignments and predictions of FIR laser emission lines 7−90583
coherent X-ray production via laser pumping of relativistic ion beam 7−82597
collinear fast ion-laser beam spectroscopy, sensitivity, optical pumping 7−121234
complex molecules, delayed luminesc. in gas phase 7−109972
concentrator material selection for optical pumping of UV and VUV lasers 7−97104
coumarin 47 laser pumped by high-power semiconductor lasers *(Russian)* 7−136290
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
DFB laser dynamic, transient regime, theory and numerical anal. 7−90570
p-difluorobenzene+Ar, vibr. relax., stimulated emission pumping-single vibronic level fluoresc. investig. 7−74741
difluoroethene laser, 889 μm, optically pumped frequency pulling 7−122923
difluoromethane-d_2 ν_5 and ν_6 laser lines, IR-IR double reson. 7−122582
diode laser pumping of solid-state lasers 7−68690
disc amplifiers, optimised flashlamp pumping 7−74969
dye IR lasers, synchronously pumped, pulse parameter anal. 7−130088
dye laser, 200 ns narrow-linewidth flashlamp pumped, efficient operation 7−110402
dye laser, cavity dumped, pumped by CW mode locked Q-switched Nd:YAG laser, picosec. pulses 7−74977
dye laser, CW energy transfer, operating around 750 nm, passive mode locking 7−141853
dye laser, CW synchronously pumped, asymmetry of pulse shape 7−117194
dye laser, grazing incidence, subnanosecond pulse generation 7−130082
dye laser, high-power high-energy linear flash lamp pumped 7−82603
dye laser, lamp-excited, diffraction divergence *(Japanese)* 7−130089
dye laser, picosecond, N_2-laser-pumped. Streak camera anal. 7−74916
dye laser, Raman shifted, for water vapour DIAL measurements 7−103859
dye laser, tunable ps pulse generation using ruby laser pump and grating spectrometer 7−68670
dye laser oscillator, diffr. limited single longit. mode multiple prism flashlamp pumped, linewidth anal. 7−117224
dye laser pumped by compressed laser pulses 7−110343
dye laser system, excimer laser pumped, 3 ps pulse generation using gated saturable absorbers 7−90645
dye laser with colliding pulse mode locking, pump rate, DODCI conc. and pulse width 7−110423
dye lasers, DFB, achromatic for subpicosecond operation 7−117225
dye lasers, flashlamp excited, review 7−74970
dye lasers, synchronously pumped, picosecond pulse characts. 7−117195
dye lasers high-power broadband for manufacturing appls. 7−136365

optical pumping continued
dye mixed solutions, radiative transfer of energy mechanism 7−122944
dye ultrashort ASE pulses generated by transversal travelling wave pumping *(Chinese)* 7−103808
electroionization lasers based on electronic transitions in inert gas atoms 7−130056
excimer picosecond laser amplifier, PSL 4000, pumped by short pulse dye laser 7−74975
far IR gas lasers, pulsed high-power, performance and spectral survey 7−82537
fibre laser using phase-matched four-photon mixing 7−117268
fibre Raman laser, synchronously pumped with self-phase modulation 7−141867
fibre Raman soliton laser pumped by Nd:YAG laser 7−68694
fibres, monomode, with flowing dye system, coherent amplification 7−136321
fibres, single-mode, stimulated Brillouin scattering excited by two pump waves 7−142007
FIR laser, optically pumped, sample tube optimum length calc. 7−122903
flame, temperature meas. by single-pulse CARS, pump. laser linewidth, effect on noise 7−128583
flash lamp power supplies for laser pumping 7−110371
four-level three-mode system, operator soln. dynamics 7−141822
four-wave mixing, pump-probe cross-correl.-induced reson. 7−116916
free electron laser, Raman-type, using TM pump wave, 2D mode anal. 7−90624
frequency mixing of synchronously pumped CW femtosecond laser 7−68751
gapless semiconds., population inversion by optical interband pumping *(Polish)* 7−137955
gas laser, FIR optically pumped, unstable emission 7−90582
highly excited atoms, interaction with electromagnetic radiation 7−135865
hydroxylamine, diode laser spectroscopy, rot. and distortion consts. 7−116964
industrial pulsed lasers, flashlamp pumping, design 7−74951
Kiton red 610 dye laser, Na vapour optical pumping and UV emission 7−122423
laser crystals, nonradiative relaxation 7−122995
laser electro-optic shutter control, w.r.t. luminance level of active medium 7−136360
lasers, flashlamp pumping technology 7−72711
lasers, optically pumped, line and mode competition and Lorenz chaos 7−136253
many-electron atoms, short-laser pulse excitation, Rydberg wave packets 7−122461
methane laser, influence of laser radiation field on pump radiation absorption 7−141846
methanol FIR laser line freq. meas. 7−123043
methanol optically pumped laser lines, new wavelength meas. 7−68625
methanol-d_3 FIR laser lines, optically pumped, freq. meas. 7−122924
mid-IR gas lasers, pulsed high-power, survey 7−82538
military lasers, flashlamp technology 7−74950
molecular lasers, spontaneous mode splitting and frequency shifting due to coherent effects 7−136285
molecular systems, coherently pumped, two-level laser instabilities 7−136252
multilevel systems, off-resonantly pumped, line selection 7−122905
optical anisotropy near a two-photon resonance induced by a linearly polarized coherent pulse 7−141642
paramagnetic atomic vapours, unpolarised light pumping bistability, spontaneous spin polarisation 7−141926
pentafluorobenzene, vibrational energy transfer, Hg tracer UV absorpt. spectra anal. 7−135956
phase conjugation, photorefractive, new appls. 7−110475
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
plasma, stimulated Brillouin scattering, influence of radiation polarisation 7−141938
plastic fibre dye laser characts. *(Japanese)* 7−122945
polarisation-symmetric laser with large photon correlation times 7−141833
polyatomic molecule, intramolecular vibrational energy redistribution, anal. 7−103625
pulsed oscillator, improvement of output characts. 7−130258
quantum state spatial selection by coherent EM radiation interactions 7−103457
radiation under saturation, effect of stimulated Raman scattering on coherence 7−90706
Raman oscillator, synchronously pumped fibre optic 7−141932
rhodamine 6G alcohol and aq.-micellar solns. with lamp pumping, radiation angular distrib. depend. on cavity spacing *(German)* 7−130086
rhodamine 6G laser, femtosecond pulse generation 7−130204
rhodamine 6G laser pumped by high-power semiconductor lasers *(Russian)* 7−136290
rhodamine 6G solns., stimulated laser emission quantum yield 7−130085
self Bragg matched beam steering using double colour pumped photorefractive oscillator 7−130208
semiconductor laser, electron beam pumped, influence of excitation inhomogeneity on output characts. 7−97012
semiconductor laser, inhomogeneously-pumped, bistability, influence of carrier leakage 7−90613
semiconductor lasers, pump fluctuation and amplitude squeezing, high-impedance suppression 7−103816
single-mode laser linewidth, polarization symmetry 7−96988
single-mode optically pumped lasers, stability 7−130042
slab lasers, flashlamp pumping 7−74971
solar pumped laser technology options for space power transmission 7−71579
solar-pumped laser research, progress 7−136266
solid lasers, efficiency, elliptical pump cavities effects *(German)* 7−122986
solid lasers, pumping efficiency factors, anal. 7−122994
solid state laser pump cavity design 7−74996
solid state tunable laser crystal host systems 7−68657
solid-laser, high performance developments and prospects 7−130120
solid-state lasers 7−68688
squeezed light, generating and detecting short-duration pulses 7−82526
stimulated Brillouin scattering gain obs. with dual spectral-line pump 7−123104
stimulated Mandelstam-Brillouin scatt., phase synchronism disruption in light absorbing media 7−130261

optical pumping continued
strong Auger recombination in semiconductor doped glasses, evidence 7−118497
styryl compound dye laser, CW optically pumped tunable from 840 to 1030 nm, ps and fs pulse generation 7−136378
submillimetre laser pumped by CO_2 laser, Stark effect appl. to stabilisation 7−90643
sulforhodamine 101 dye laser femtosecond pulse generation at 675 nm 7−74915
synchronously pumped soliton Raman fibre ring laser, expt study 7−90617
thin-film energy-transfer dye lasers in spectral region of near ultraviolet to violet pumped by N_2 laser 7−96990
three level atoms, stimulated one-photon spectra, cooperative and dipole-dipole effects 7−74506
three-level atoms, stimulated three-photon processes, cooperative and dipole-dipole effects 7−74507
travelling wave masers, 3 mm, use of andalusite as active material 7−110315
two-level atoms, light-induced drift, high-field effects 7−116917
ultrashort IR pulse generation via electron-density waves 7−130199
undamped two-level atoms driven by a coherent electromagnetic wave 7−130035
Ba, resonance ionisation mass spectra lineshapes, optical pumping effect 7−90059
$BaTiO_3$ self pumped phase conjugate mirror, deterministic chaos 7−82720
CO, core electron excitations, VUV photoelectron and TOF mass spectra 7−122614
CO_2, coupled modes, VV exchange and VT relax. kinetics, num. calcs. 7−68443
CO_2 solar-pumped laser research, progress 7−136266
CO_2-N_2O-He gas-dynamic laser, nonequilib. pumping 7−117175
CdO semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
CdS_xSe_{1-x}, semiconductor doped glasses, picosecond carrier recombination dynamics, strong pumping conditions 7−112356
Cl, photoexcited Kα X-ray satellites spectra 7−135873
Co, photoexcited Kα X-ray satellites spectra 7−135873
$Cr,Nd:(GdSc)_3Ga_5O_{12}$, short-lived absorpt. rel. to solid-state laser efficiency 7−141869
Cr^{3+}:Al_2O_3, laser crystals, nonradiative relaxation 7−122995
Cr^{3+}:$BeAl_2O_4$, alexandrite laser pumped tunable intracavity Raman laser 7−82626
Cs_2, optically excited levels, mag. field effects, reson. fluoresc. study 7−129772
Cu, two step excitation, radiative lifetimes, UV spectra anal. 7−116901
Er, Yb:glass laser at 1.54 μm pumped by Nd:YAG laser 7−136322
Er^{3+} doped single-mode fibre laser, AlGaAs diode laser pumped operation 7−141882
Er: GeO_2-SiO_2 fibre laser, 1555 nm, low-threshold CW operation 7−136314
Er^{3+}:$LiYF_4$, laser, diode-pumped, CW and pulsed 2.8 μm operation 7−97016
GaSe, photomodulation spectroscopy 7−85768
H atom, energy levels in intense, high-frequency laser field 7−135892
H^- ion source, optically pumped, polarized, development and operation at KEK 7−141359
H^- ion source, polarized, optically pumped, at TRIUMF, status 7−141360
H^+ ion plasma laser, far-UV, amplification factors of transitions, analytical theory 7−136275
H_2CO, vibrationally excited, collisional energy transfer, stimulated emission pumping-transient absorpt. spectra 7−136044
He optical pumping and magnetic resonance signal recording 7−122991
^{3}He, polarisation with tunable laser 7−122460
^{4}He resonance magnetometers, optically pumped 7−102483
$He(2^3P)+He(2^3S_1)$, excited states, mag. reson. signal 7−129846
Hg, low pressure discharges, pulsed optical pumping 7−129671
Ho,Tm:YAG laser, CW operation at 2.1 μm pumped by diode laser 7−141872
Ho:$YLiF_4$, efficiency laser, longitudinally pumped by semiconductor laser array 7−136311
I photodissociation laser with slow pumping, active-medium perturbation evolution and radiation focusing 7−130079
I_2, high sensitivity intracavity stimulated emission pumping, small optical gains meas. 7−129795
I_2 laser, optically pumped, chaotic emission at 1.3 μm 7−74912
In_2O_3 semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
K, photoexcited Kα X-ray satellites spectra 7−135873
Kr-Rb pumping lamps, appl. to Nd:YAG laser pumping 7−110363
KrF laser, single mode operation 7−122919
$La_xNd_{1-x}MgAl_{11}O_{19}$ pumping by diode laser 7−122991
Li^- generation by dissociative electron attachment in vol. source with optical pumping 7−103618
Li_2 diffuse violet bands, 4000 Å region, intense spontaneous amplified emission, radiation enhancement 7−122555
Li_2, optically pumped, dissociative electron attachment, ion source appls. 7−141355
LiF crystals, F_2^- colour centres lasing behaviour, optical props. and form. conditions 7−68648
LiF F_3^+ centre laser, characts. 7−141871
LiF flashlamp pumped lasers using F-centre conversion 7−136323
Mg+Bi, energy transfer and pooling, emissions anal. 7−90390
N, triplet state population in low-press. He-N_2 plasma 7−141518
N_2 CARS, broadband, pump-induced population changes 7−123105
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
NH_3 laser, optically pumped, output energy and gain, temp. depend. 7−141847
NH_3 laser, two-frequency excitation under fast rotational relaxation conditions 7−130070
NH_3 laser operating in 11-13 μm region 7−130074
NH_3 lasers, FIR, optically pumped, self pulsing props. 7−117184
NH_3 optically pumped tunable laser in 12 μm band *(Chinese)* 7−130063
NH_3 Raman laser amplifier, CW, 12 μm, high-power 7−90642
NO_2, laser excitation, polarisation inversion effect 7−129797
^{23}Na beam source, spin polarisation using double-resonance technique 7−109580
Na, at. fluoresc., subnatural linewidth optical pumping dips in homogeneously broadened spectral line 7−74503
optical pumping continued
Na atomic beam, single-state, prep. by optical pumping and radiative deflection 7−129900
Na atomic beams, Autler-Townes effect in optical pumping expt. 7−103433
Na atoms, two-photon excited parametric emission 7−130248
Na beams, efficient electro-optic modulator design 7−82773
Na, collision-aided Faraday effect, nonlinear susceptibility and optical pumping calcs. 7−82692
Na D_1 line, high resolution polarisation spectroscopy 7−82051
Na filled Fabry-Perot cavity, transmission properties 7−136412
Na gas vapour, optical anisotropy by strong pump field *(Russian)* 7−141942
Na target, polarized, optically pumped, relaxation rate study, H^- ion source appl. 7−141358
Na two-level atoms, steady states and dynamic instabilities 7−68765
Na vapour, laser excited, atomic collisional energy transfer study 7−141669
Na vapour, two-phase clock based on transverse-profile Ikeda instability 7−68773
Na vapour-filled Fabry-Perot cavity, period doubling and intermittency in transmission 7−68768
Na, velocity selective optical pumping, subnatural linewidth effects 7−68259
Na-inert gas mixture, light-induced drift velocities 7−109841
NaCl:$OH(F_2^+)_H$ colour centre laser tunable from 1.47 to 1.87 μm 7−130127
NaF flashlamp pumped lasers using F-centre conversion 7−136323
$NaNdP_4O_{12}$, broad tuning range lasers, CW operation at 1.05, 1.32 μm 7−136320
$Nd,Cr:Gd_3Sc_2Ga_3O_{12}$ flashlamp-pumped laser, performance and characteris. 7−74940
Nd^{3+} doped fibre laser, CW, 1064 nm, using all-fibre reflectors 7−117222
Nd^{3+} doped fibre laser operating at 938 nm, diode-laser-pumped 7−142040
Nd:glass lasers, pumping using high power flashlamps 7−74968
Nd:$LiYF_4$ laser, flash-lamp-pumped acousto-optically Q-switched, intracavity doubling of 0.527 μm output 7−123098
Nd:phosphate glass lasers, Ar laser pumping, thermally induced stresses 7−74931
Nd:YAG CW mode locked lasers, operating specifications 7−74976
Nd:YAG industrial lasers, CW-pumped, design 7−74972
Nd:YAG laser pumping with diode laser array 7−68702
Nd:YAG laser rod end-pumped by monolithic diode laser, 370 mW 1.06 μm CW 7−103821
Nd:YAG lasers, flashlamp pumped, scientific applications 7−74973
Nd:YAG lasers, freq. doubled, diode laser array pump sources 7−74978
Nd:YAG miniature laser diode pumped lasers 7−68701
Nd:YAG ring laser, unidirectional, diode-laser pumped, mag. field effects 7−74962
Nd:YAG ring oscillator, laser pumped, freq. stability and offset locking 7−68717
Nd^{3+}:glass multifibre laser, lasing props. 7−141870
Nd^{3+}:YAG lasers, continuously pumped as picosecond radiation sources 7−136316
NdP_5O_{12}, broad tuning range lasers, CW operation at 1.05, 1.32 μm 7−136320
NdP_5O_{14} miniature pulsed laser; pumping lamp/laser rod optimum matching size *(Chinese)* 7−130152
Ne IX, X-ray laser, pumping efficiency by Z-pinch plasma 7−117751
Ne Raman laser, CW, gain and noise characts. 7−141844
OH maser stars, OH masers far-IR excitation 7−88673
P, photoexcited Kα X-ray satellites spectra 7−135873
^{87}Rb atomic clock, laser pumped 7−80751
Rb-Ar mixture, optical piston due to light induced drift, fine structure, hyperfine structure depend. 7−135891
S, photoexcited Kα X-ray satellites spectra 7−135873
Si:P, selective optical electron pumping, intervalley scatt. at impurity centres 7−137843
SiO_2 fibre Raman laser, UV short pulse, excimer laser pumped 7−82573
Sr plasma, superelastic collisional excitation, one- and two-photon laser pumping 7−68263
Ti:Al_2O_3 laser, flashlamp pumped efficiency 7−68660
Ti:Al_2O_3 laser performance pumped by doubled Nd:YAG laser, cavity configs. 7−68661
Ti:Al_2O_3 laser pumped by a frequency doubled Nd:YAG laser 7−68662
Ti:sapphire laser material characts. 7−141868
Tm^{3+}, Ho^{3+}:YAG laser, diode pumped, CW room-temp. operation at 2.1 μm 7−97017
Xe III Auger laser at 108.9 nm, low-energy pumping 7−103797
Xe:Cl, impurity centers, cooperative optical transitions 7−117940
XeCl, bandwidth limited amplification of 220 fs pulses 7−103803
XeF laser emitting visible light, optical pumping by surface-discharge radiation 7−96985
XeF pumped with excimer radiation, kinetics of formation and quenching 7−68398
Xe_2F^* pumped with excimer radiation, kinetics of formation and quenching 7−68398
Yb-Er glasses, bleaching on pumping by Nd:glass laser, obs. 7−90731

optical quantum generators *see lasers*

optical radar
see also remote sensing by laser beam
acousto-optic spectrum analyser for laser radar applications 7−75029
aerosol attenuation factor profile determ. using two-wave laser sounding 7−117253
aerosol space distrib. meas. in atmosphere using laser sounding technique 7−72158
air currents velocity, lidar correlation meas. 7−107549
Airborne Doppler lidar for wind meas., error evaluation 7−127573
airborne inertial surveying using laser tracking and profiling techniques 7−115099
airborne laser air motion sensing system, concepts 7−115077
airborne laser air motion sensing system, design and meas. possibilities 7−115078
Airborne Oceanographic Lidar for ocean waves meas. capabilities, comparison with Surface Contour Radar 7−134000
atmosphere aerosol concentration in varying atm. background density lidar mapping algorithm 7−133976
atmosphere-searching laser radar, appls. *(Japanese)* 7−103863

optical radar continued
atmospheric aerosol distrib. measurement by laser radar with photomultiplier noise, accuracy improvement *(Japanese)* 7−72202
atmospheric aerosol remote sensing by Nd:YAG and ruby based lidar systems 7−72208
atmospheric laser radar target area accurate positioning *(Japanese)* 7−79691
atmospheric pressure profile remote sensing with tunable alexandrite laser transmitter 7−72209
bipath method meas. of spatial backscatter and extinction coeffs. with lidar 7−72157
cloud base measurement, comparison of lidar and rotating beam ceilometer signals with pilot ceiling 7−115008
clouds investig. by lidar, lack of reflection, explanation 7−87894
CO_2 lidar soundings of water clouds, backscatter signatures 7−87759
continuous wave Doppler lidar meas. of wind magnitude and direction 7−127520
DF laser for ranging appls. 7−75020
differential absorption lidar (DIAL) meas. averaging methods 7−120131
differential absorption lidar (DIAL) measurements, mathematical limits to accuracy set by resolution limits 7−115006
differential absorption lidars with Raman lasers for O_3 profiles meas. 7−120132
dual-Doppler lidar measurement of winds in the JAWS experiment 7−127529
dye laser, Raman shifted, for water vapour DIAL measurements 7−103859
environmental pollution meas. by laser beams *(German)* 7−126682
eye safety protection for field use of laser rangefinders 7−93961
eye-safe solid-state lasers design 7−74980
Geiger mode APD for very low light levels laser ranging, expt. eval. 7−75021
geodetic laser ranging station to monitor satellites, at Santiago de Cuba 7−79656
hard target calibration of lidar backscatter data, polarisation effects 7−68734
high pulse rate lidar for boundary layer dynamics meas. via aerosol and smoke obs. 7−127521
humidity, range meas. using parametric light oscillator radar 7−102420
ionospheric species mapping, solid state bistatic lidar for Tethered Satellite System 7−72207
laser cloud mapper and its applications 7−75030
laser docking system radar flight experiment 7−75025
laser radar cross section of Earth atmosphere objects, theory and numerical results 7−79599
laser radar technology, conf., Quebec City, Que., Canada (June 1986) 7−72714
laser rangefinder, optics 7−82671
laser sounding of atmospheric parameters 7−115095
LIDAR, fluorescence, land and sea remote sensing appls. 7−75033
LIDAR, imaging in random media, atmospheric influences 7−139762
lidar for atm. plume dispersion clouds and stratospheric aerosols anal. 7−133966
lidar in-space technology expt. from space shuttle 7−75031
lidar meas. accuracy, atm. drift velocity depend., Monte Carlo method study 7−107548
lidar measurement of turbulence encountered by horizontal-axis wind turbines 7−114869
lidar obs. of atm. phenomena 7−107565
lidar returns from broken clouds, mean characts. 7−133918
lidar soundings, appl. to cirrus clouds recording *(German)* 7−79539
lidar system optical alignment and its verification 7−103858
Mini Laser Rangefinder, review 7−75024
ocean and lake depth measurement, scanning lidar bathymeter, airborne hydrographic surveying 7−79676
optoelectronic fog detectors with continuous sinusoidal modulation, signal backscatter *(Polish)* 7−94510
parametric laser-reception lidar, anal. and design 7−103857
peak-detecting laser radars, performance anal. 7−75022
pulsed two-colour laser-ranging systems, performance eval. 7−90669
remote sensing from space platforms, advanced laser lidar systems 7−72206
scanning lidar bathymeter for water depth measurement 7−79368
self-calibrating low power laser rangefinder for space applications 7−75026
solid state tunable lasers for differential LIDAR, development 7−74981
space lidar NASA plans, Earth Observing System 7−72205
stratospheric aerosol meas. by laser radar, calibration and error analysis *(Japanese)* 7−79692
transmitter/receiver, boresight alignment 7−75018
troposphere aerosol, lidar probing study 7−107492
tropospheric water vapour DIAL meas., correction for Rayleigh scattering effects 7−133919
two-frequency lidar inversion technique 7−87912
wavefront determination in optical reception system with multichannel phase modulation 7−141801
CO_2 compact laser receiver lens for rangefinder, design, interferometric test 7−123024
CO_2 DIAL meas. of water vapour 7−133940
CO_2 laser radars, optical resonator design 7−75027
CO_2 TEA mode-locked lasers, pulse coherence meas. 7−74901
GaAs laser rangefinders for industrial appls. 7−75023
H_2O and aerosols profiles meas. from NASA ER-2 aircraft, lidar instrument appl. 7−75032
HgCdTe intermediate temperature detector for 10.6 micron heterodyne rangefinder 7−75028
HgCdTe photodiodes for heterodyne appls. 7−73425
NO_2 concentration meas. in stack plume by two-wavelength long-path differential absorpt. laser radar *(Japanese)* 7−100788
Nd:YAG eye-safe laser rangefinder, Raman wavelength shifting 7−82615
Nd:YAG laser, coherent laser radar at 1.06 μm 7−75014
Nd:YAG laser rangefinder/designator 7−75019
Nd:YAG lidar accommodation on polar meteorological satellite 7−72252

optical receivers *see optical communication equipment; receivers*

optical reflection *see light reflection; reflectivity*

optical reflection spectra *see reflectivity; spectra*

optical reflectometry *see reflectometry*

optical refraction *see light refraction*

optical resolving power
see also optical instrument testing
3D optical microscopic image reconstruction, freq. and spatial domain methods comparison 7−80871
acuity and hyperacuity, optical resolution, spatial localization, form perception, review 7−145015
beam splitters using uniaxial crystals, effects on polarimetry and imagery 7−101681
catastrophe theory anal. of optical resolution 7−129995
cone positional disorder influence on resolution 7−145020
confocal imaging systems, detector size effects 7−74867
confocal scanning microscopy, resolution improvement 7−108654
dye laser spectrometer, ultra-high resolution using non-tunable reference resonator 7−102528
electronic imaging conf., Arlington, VA, USA (Oct. 1986) 7−134348
FIR/submm hinge spectrometer using grating Fabry-Perot configuration 7−72300
focal monochromator with holographic composite lens *(Spanish)* 7−68821
grating detection and resolution, retinal limits 7−145059
High Precision Optical Surface Sensor for diamond-turned metal mirror surface roughness *(Japanese)* 7−82873
holographic imaging of underwater objects, resolution 7−68588
image degradation theory, introduction 7−136214
image processing, edge enhancement, Laplace operators *(French)* 7−117144
imageguide, 2D image resolution, wavelength multiplexing 7−142010
imaging system, airborne vehicular, resolution limits, mechanical vibration effects anal. 7−122854
incoherent light optical processing and holography appls. 7−117154
IR systems, spatial resolution, automated characterisation 7−110528
measurement applications and trends *(Japanese)* 7−121188
scan lenses, specification 7−75096
superresolution by incoherent-to-coherent conversion using interferometry 7−103752
vision, cone spacing and the visual resolution limit 7−145058
vision, two-point resolution near detection threshold 7−145055
X-ray telescopes, high resolution imaging technique 7−134901
ReW-C multilayer X-ray coatings, improved resolution 7−128728

optical rotation
see also Faraday effect; Kerr magneto-optical effect; rotational isomerism
N-acetyl-1-pyrenylalanine methyl ester, intermol. excimer, dissoc., chiral discrimination 7−110015
3-amino-N-methylphthalimide, optical anisotropy investig. 7−110012
amplified optical rotation obs. 7−136191
artifacts, in natural Raman optical activity, Stokes-Mueller treatment 7−80887
asymmetric top, optical activity, semiclassical theory 7−82289
azo dye-cyclodextrin inclusion systems, Raman optical activity 7−106161
benzenes, substituted, magneto-optic rotatory dispersion, dispersion relation 7−109968
benzol chromophores, circular dichroism *(German)* 7−103555
(R,R)-2,3-butanediol esters, chiral cpds., cholesteric phase helix inversion induction investig. 7−75990
chiral 1,3-diols+$B(OH)_4^-$, polarimetric, circular dichroism and ^{11}B NMR investig. 7−82219
chiral molecule-solvent interaction, ordering mechanism, conflict with second law of thermodynamics 7−110009
chiral particles, light scatt., optical activity, coupled dipole method 7−139205
chiral protein-nonpolar solvent interaction, thermodynamic behaviour 7−110010
chiral-nonchiral liq. cryst. mixture, blue phases, phase diagram determ. 7−91803
cholesteric liq. crysts., optical modulation and rotary power 7−106134
cholesteric liquid crystals, optical rotation, wavelength modulation 7−113120
crystal optical axis of uniaxial precious stones determ. by polarised-light microscope, photometry, microprocessor control 7−95645
crystals, electrogyration props., review 7−125698
di(tetramethylammonium) zinc chloride, incommensurate phase, anomalous electro-optic and electrogyration effects 7−125700
(±)-1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)ethane, chem. resolution 7−110011
diene and dione chromophores, chiroptical props., quantum chem. calcs. 7−129794
dispersion relation: rel.-to optical rot. dispersion, magnetooptic rot. dispersion and mol. polarisation 7−110013
double sulphates, langbeinite structure, electronic spectra 7−113227
ferroelectric liquid crystals, spontaneous polarisation and twisting power 7−77455
fibre optics polarimetry techniques and appls. 7−75154
fibres, single-mode, nonreciprocity meas. 7−90825
gyrotropy, impurity-induced, in spectral regions near host exciton resons. 7−85588
heavy atoms, parity violation, optical rot. and Stark-interference study 7−122459
4-n-hexyloxyphenyl-4n-decyloxybenzoate, smectic C phase, tilt angle and optical biaxiality meas. 7−99792
II-IV-V_2 cpds., birefr., gyrotropy characts. 7−113122
inhomogeneous medium, gyrotropic, normal oscillation modes 7−136202
isotopic molecules, vibr. Raman optical activity, freq.-weighted sum rule 7−135944
laser beam polarisation and intensity parameters for Raman optical activity meas. 7−141911
lasers, polarisation coupled, birefr. compensation 7−117206
light polarisation, propagation in optical fiber, phase rot. investig. 7−117138
lipoproteins, high-density, struct. in arterial and venous blood in myocardial infarct 7−87298
liquid crystal system of high chirality, isotropic phase, pretransitional optical activity 7−138413
magnetic and natural optical activity, symmetry props. anal. *(Spanish)* 7−122820
methane, electromag., nuclear shielding tensors, second order props. relations 7−116879
1-methyl-alkoxy-phenyl group chiral smectic liq. cryst., phys. props. 7−77456

optical rotation continued
(+)-methylcyclohexanone, optical activity, Raman obs. 7−128670
(+)-(3R)-methylcyclohexanone, Raman optical activity meas. 7−74617
(+)-(3R)-methylcyclohexanone, Raman optical activity spectra 7−90171
molecular chirality forces 7−110056
multichannel Raman optical activity spectrometer 7−128670
multiphoton optical rotary dispersion 7−102489
multistep filters using gyrotropic crystals, angular aperture 7−103944
narrow-band selective optical filters using gyrotropic crystals 7−130305
nematic liquid crystals, IR optical properties, review 7−70748
nonpolar critical binary liquid mixture, circular dichroism 7−113124
optical activity, Biot's bequest 7−74838
optical anisotropy near a two-photon resonance induced by a linearly polarized coherent pulse 7−141642
$Pb_3GeO_{11}:Eu^{3+}$ one-domain crysts., magnetopolarisation pseudogyration 7−144006
photographic layers, gelatin conformation role *(Hungarian)* 7−140771
(-)-α-pinene, optical activity Raman obs. 7−128670
(-)-β-pinene, polarised Raman optical activity meas. 7−90173
plasma, stimulated Brillouin scattering, influence of radiation polarisation 7−141938
plate, gyrotropic birefringent, as quarter-wave plate 7−110534
polyacetylene, nonlinear optical activity, elec. cond., mag. reson. techniques 7−99607
polymers, heteroatomic ladder, nonlinear optical activity, elec. cond., mag. reson. techniques 7−99607
polypeptide, β-form-random coil transition in solution 7−71667
polystyrene, dichloromethane solns., excimer emission, optical anisotropy 7−77503
(S)-1,2-propanediol esters, chiral cpds., cholesteric phase helix inversion induction investig. 7−75990
α-quartz, electrogyration and electro-optical coeffs., simultaneous meas., HAUP method 7−125699
radiation-molecule interactions, mol. QED, book 7−134377
Raman optical activity, bond polarisability and vibronic coupling 7−141628
Raman optical activity, instrumental advances 7−89271
raman optical activity in CARS meas. 7−90716
Raman optical activity of small molecules 7−90172
relativistic electrodynamics and natural optical activity 7−120886
ring resonator with nonlinear optically active medium, polarisation multistability 7−123066
rotation sensing by geometric effect of fibre loop twisting 7−123228
Stokes Mueller calculus in terms of relative rotation angles 7−74844
symmetry properties of the Mueller matrix 7−117132
TGS crystals, L-alanine content determ. by optical activity 7−70739
TGS-L-α-alanine cryst. mixture, dielec. props., effect of L-α-alanine conc. 7−138390
two-level atoms, optically active, gas-kinetic effects modelling 7−129666
Zeeman laser, stabilised transverse, applics. to polarisation meas. *(Chinese)* 7−75013
Ag (111) electrodes, second harmonic intensity, rot. anisotropy obs. 7−117265
B_2O_3-SiO_2:Tb, FR-5, glass, HF Faraday rotation 7−106141
Bi atoms, parity-nonconserving optical rotation at 876 nm 7−135888
$Bi_{12}GeO_{20}$ electrogyratory and electro-optic effect meas. 7−99805
$Bi_{12}GeO_{20}$ optically active and linearly birefringent crysts., holographic grating props. studies 7−122872
$Bi_{12}SiO_{20}$, 3D photorefractive signal processing 7−103765
$Bi_{12}SiO_{20}$ crystal, electrooptic modulation of light with multiple passes 7−117306
$Bi_{12}SiO_{20}$ crystal, photorefractive optically active, two-beam coupling, polarisation influence in diffusion regime 7−122817
$Bi_{12}SiO_{20}$ crystals, electrooptic modulation of light 7−132239
$Bi_{12}SiO_{20}$ electrogyratory and electro-optic effect meas. 7−99805
$Bi_{12}SiO_{20}$ type crystals, photorefractive diffraction, efficiency and polarisation characts. 7−125682
$Bi_{12}TiO_{20}$, gyrotropic photorefractive crystals, energy exchange between light waves 7−82693
GaAs crystal, nonlinear absorpt. and optical activity, picosec. polarisation spectroscopy study 7−97071
$InPS_4$ cryst., vibr., pseudotensor of gyration, Raman scatt. 7−125741
$IrCl_6$, in soln. optical activity, Raman obs. 7−128670
$KLiSO_4$, twin domains and twin boundaries optical, pyroelectric and X-ray topographic studies 7−83968
$LiNbO_3$:Ti waveguides, photoinduced TE-TM mode conversion 7−130333
Mo_2 complex, quadruply bonded, optical activity 7−90282
α-$NiSO_4.6H_2O$, structure, absolute configuration, optical activity 7−124175
Re_2 complex, quadruply bonded, optical activity 7−90282
TeO_2 paratellurite crysts., nonlinear optical activity meas. *(Russian)* 7−85589
ZnP_2, gyrotropic, Raman light scatt., spatial dispersion effects 7−99818

optical saturable absorption
alkane radical cations, in hydrocarbon matrices, γ-irrad., ESR and electronic spectra 7−109959
azulene, saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750
BDN dye in liquid crystal ground state recovery time 7−123127
BDN saturable absorber for laser mode locking *(Chinese)* 7−90729
bisanthene dyes, dichroic, in liq. cryst. matrix, bleaching, order parameter changes effects *(Japanese)* 7−130273
bistable Fabry-Perot etalon with local saturable nonlinearity, focusing role 7−90688
bistable laser with saturable absorber, transient bimodality 7−141908
blue dyes, two-photon absorpt. cross sections 7−136452
dense optical materials with saturated absorption *(Spanish)* 7−117275
detuned ring laser, with saturable absorber, semiclassical anal. 7−82646
donor-acceptor complexes, nonradiative energy transfer, two-photon excitation amplification 7−117014
dye laser system, excimer laser pumped, 3 ps pulse generation using gated saturable absorbers 7−90645
dye lasers synchronously pumped, femtosecond pulse generation by saturable absorpt. 7−141852
dye mixture saturable absorbers in passive switch for laser mode locking 7−141948
dyes, in nematic liquid crystals, bleaching by laser 7−117279
etioporphyrin I, monomer and dimer, in organic glass, spectral hole burning *(Russian)* 7−75083
FEL self mode-locked oscill., saturable absorpt. mechanism 7−130134

optical saturable absorption continued
fibre, modified rod-in tube (MRT), radiation resistance, photobleaching effects *(Japanese)* 7−142019
fluorescence photobleaching recovery, delayed, implications for cell membrane system studies 7−94028
four-level system, third-order nonlinearities, cross relax. and line mixing effects 7−97097
gas ring laser with intracavity nonlinear absorpt., freq. modulated reson. in radiation *(German)* 7−130190
glass, photochromic, rate eqn. considering thermal and optical regeneration 7−106107
liquids, saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750
metal vapours, resonance atomic media, holographic pattern recognition applications 7−68594
molecular rotation alignment parameters, laser-induced fluoresc., saturation effects 7−96761
nematic liq. cryst., optical bistability, light induced bleaching 7−117276
optoelectronic single quantum well devices based on electron bleaching of exciton absorpt. 7−110605
passive *Q* switch with an activated absorber, CO_2 laser pulse control 7−97047
pentamethylidyne dye saturable absorber, colliding pulse mode locking of Nd:glass laser 7−110422
pentamethylidyne saturable absorber for laser mode locking *(Chinese)* 7−90729
trans-polyacetylene, nanosecond time-resolved photoinduced absorption 7−77545
polyaniline, spectroelectrochemical expts. 7−71500
polydiacetylenes, excited-state dynamics and temporally resolved nonresonant nonlinear-optical processes 7−123060
polymethine laser dyes, in polymer matrix, near IR radiation generation, photobleaching *(Japanese)* 7−130090
polystyrene latex, radiation passage, bleaching phenomenon 7−117277
n-propyl methyl-isopropyl methyl silane copolymer, laser ablation props. 7−131179
pulse propag. through saturable absorber having excited state absorption 7−136460
pyridine dye laser, synchronously pumped, femtosecond pulse generation using saturable absorber 7−75002
Q-switches, dye-cell, characts. and appls. 7−117243
radiation resistant, image fibres, photobleaching effect, expt. study 7−82844
randomly inhomogeneous media, interaction between opposite waves and optical bistability 7−130238
resonantly absorbing medium under bleaching conditions, selective light refl. statistical modelling 7−130271
rhodamine 6G, dye solution absorptive saturation, concentration-dependent decay 7−97095
ridge waveguide laser array, in-phase coupling using distributed saturable absorpt. in subordinate laser cavities 7−97041
ruby, phase conjugation by degenerate four wave mixing, saturation effects 7−130266
self-diffraction in population gratings 7−130269
semiconductor laser, common-cavity two-section, bistability, computer simulation 7−123075
semiconductor with induced absorption in ring cavity, optical bistability and chaotic output 7−68796
semiconductors, transient nonlinear optical effects 7−82698
strong Auger recombination in semiconductor doped glasses, evidence 7−118497
styryl compound dye laser, CW optically pumped tunable from 840 to 1030 nm, ps and fs pulse generation 7−136378
surface-emitting-type optical threshold device, operation anal. *(Japanese)* 7−110358
three-level system, pulsed photoburning and excitation *(Russian)* 7−75082
two photon absorption from strong coherent beam, squeezing 7−96963
two-level molecular gas, Gaussian-beam saturated absorpt. 7−123126
two-level system, interaction with two intense fields, absorptive response, dispersion profiles 7−141951
two-wave mixing absorption in resonant medium, intensity dependence 7−136454
undecamethylidyne saturable absorber for laser mode locking *(Chinese)* 7−90729
AlGaAs/GaAs MQW structure, MOCVD grown, nonlinear absorption 7−90727
n-AlGaAs-GaAs, modulation doped quantum wells, optical modulation and switching 7−125762
$Al_xGa_{1-x}As$, highly excited carriers, femtosecond dynamics 7−125006
$Al_xGa_{1-x}As$, hot carrier scatt. processes, experimental determ. 7−137944
$Ba_3LaTa_3O_{12}$, single crystal, physical props. 7−106117
CO_2 infrared laser with intracavity absorber, static and dynamic nonlinear behaviour 7−136262
CO_2 laser with intracavity absorber, Q-switching and bistability 7−97043
CO_2 laser with saturable absorber, bistability, dynamic behaviour 7−110427
CO_2 pulsed TEA laser, with CO_2 saturable absorber, passive mode-locking *(Korean)* 7−136259
CO_2 two-frequency laser, delay control between pulses by passive Q-switch 7−97049
Cs saturated absorption spectra, spectral width 7−90041
GaAs-$Al_xGa_{1-x}As$, quantum well struct., intersubband relaxation 7−144069
GaInAs-InP quantum wells, nonlinear excitonic optical absorption 7−136450
GaSb, nonlinear excitonic optical absorpt. 7−132254
$GdAlO_3:Cr^{3+}$, phase conjugation by degenerate four wave mixing, saturation effects 7−130266
I_2, dissoc., saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750
$In_{0.53}Ga_{0.47}As$/InP multiple quantum wells, nonlinear spectroscopy 7−130092
KrF electron beam pumped laser, parametric studies 7−68617
LiF crystal, with F_2^+ colour centres, for passive shutter for ruby laser 7−117245
Na, cascade system, two-photon-induced saturated dispersion at glass-vapour interface 7−68268
Na, optical transition saturation by phase-diffusing laser field 7−116906
Nd^{3+}:YAG laser ultrashort pulse generation 7−141906
Nd^{3+}:YAG laser with unstable resonator, short giant radiation pulse form., bleachable dye Q-switch 7−97048

optical saturable absorption continued
SnF_2-SnO-PbF_2-P_2O_5 glass containing acridine dyes, nonlinear optical props. 7−123124
Yb-Er glasses, bleaching on pumping by Nd:glass laser, obs. 7−90731
optical saturation
see also optical saturable absorption
coherent nonlinear directional coupler, power depend. switching in presence of saturation 7−123192
DFB diode laser, multielectrode type with saturable absorber, tunable optical-wavelength conversion 7−141883
directional couplers with two level saturable media, parameter tradeoffs 7−136510
dye laser, flashlamp pumped, phase conjugation in gain saturation 7−110480
Fabry-Perot etalons, bistable, filled with saturable medium, transverse effects in switching 7−97063
free electron laser saturation, approx. scaling laws 7−90629
intensity fluctuations in atmospheric laser propagation, amplifier saturation effects 7−107508
lasers with saturable gain and distributed loss, 1D model 7−117171
nonlinear stationary slab-guided wave stability in saturable media, numerical anal. slab-guides waves in saturable media, stationary, stability 7−130326
plasma diagnostics by laser saturation spectroscopy 7−111279
pumping radiation under saturation, effect of stimulated Raman scattering on coherence 7−90706
reaction products, laser induced fluoresc. detect., coherent saturation effects 7−96783
saturation spectroscopy, coherent effects 7−89270
saturation spectroscopy for optically thick atomic samples 7−80893
semiconductor active directional coupler, optical switching by saturation-induced phase changes 7−117256
semiconductor electron beam pumped lasers, amplified spontaneous emission 7−68647
semiconductor laser, constant current driven, obs. of amplitude squeezing 7−74924
stimulated Raman scattering, power-dependent dispersion effects 7−90698
transverse optical bistability, laser spot size dependence, nonlocality and saturation effects 7−136422
two-colour gain saturation in optical amplifier 7−82722
two-photon laser oscillation process *(Chinese)* 7−130040
GaAs, combination-type, third-order nonlinear susceptibility at 10.6 μm, phase conjugate signal 7−110477
I_2 visible spectra, saturation, cross-relaxation effects 7−109918
InGaAsP, 1.5 μm travelling wave semiconductor laser amplifiers, homogeneous gain saturation 7−130095
N_2, liquid, saturation effect in Raman scattering obs. 7−141931
$Na_{1+x}Mg_xAl_{11-x}O_{17}:Nd^{3+}$, optical pair interactions, four wave mixing spectrum 7−136456
Ne, four-wave mixing, cross-polarised pumps, backward saturation 7−103903
Si, phase conjugate reflecting, pump-beam intensity depend. saturation behaviour 7−68792
optical scattering *see light scattering*
optical self-focusing
see also electrostriction; Kerr electro-optical effect; optical Kerr effect
edge self-focusing, nonlinear refraction obs. 7−82727
external self-focusing, self-bending and optical limiting with thin nonlinear media 7−123131
fibres, self-focusing with picosecond pulses 7−136461
laser radiation self-focusing in plasma corona of spherical targets 7−69393
laser self focusing enhanced by relativistic electron motion in laser plasma 7−69357
laser self-focusing in plasma 7−69356
nematic liquid crystals, hybrid orientation, effect ordinary wave, aberration self-focusing *(Russian)* 7−137212
nonlinear stationary slab-guided wave stability in saturable media, numerical anal. slab-guides waves in saturable media, stationary, stability 7−130326
organic liquids, generation of excited vibrational states during stimulated Raman scattering 7−90707
periodic length meas. of self-focusing media by mol. scatt. method *(Chinese)* 7−130276
physical optics, nonlinear phase asymmetry and self-bending of light 7−110482
planar waveguides, surface-guided nonlinear TM waves 7−103908
plasma, relativistically intense laser light pulse self-focusing 7−69360
resonant self focusing in plasma propagation *(Chinese)* 7−97099
self-focusing with orientation aberration, polarisation effects 7−69592
solid state lasers, short pulse generation by novel passive Q-switching technique 7−130203
spark, underdense plasma prod., laser beam self-focusing 7−104435
stripe geometry semicond. laser, theory of elec. and optical waveguiding processes *(Chinese)* 7−122949
trifluoromethane-d_1, self-focusing and self-defocusing of TEA CO_2 laser pulse 7−90732
CO_2 pulsed lasers, self-interaction as laser radiation wavefront instability cause 7−130052
CdHgTe, narrow-gap semiconductors, optical nonlinearities 7−130243
InSb, narrow-gap semiconductors, optical nonlinearities 7−130243
NH_3, self-focusing and defocusing of TEA CO_2 laser radiation 7−130275
Si, self-defocusing of convergent beams, circular intensity waves 7−68799
$Sr_{1-x}Ba_xNb_2O_6$:Ce crysts., self-induced holographic gratings, coherent light oscillation obs. 7−123129
optical self-induced transparency *see self-induced transparency*
optical shutters *see optical elements*
optical sources *see light sources*
optical spectra *see spectra*
optical spectrometers *see spectrometers*
optical spectroscopy *see spectroscopy*
optical storage
see also holographic storage; optical disc storage
alkali metal halide cryst., cathodoluminors, local self-activation and quenching effects 7−70918
anthraquinone dye films, reversible laser marking process based on photothermal transformations 7−82733
associative memory model based on neural networks with variable interconnection weights 7−82470
optical storage continued
associative memory with shift invariance and multiple-image recall 7−103760
associative processor, error-correction coding 7−122840
bistable optical logic devices 7−123068
conducting polymers, appl. in electronic and optoelectronic devices 7−97106
conductive polymers as active optical storage media 7−110490
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference, Stateline, NV, USA (March 1987) 7−102017
continuous tone and textual images storage *(Japanese)* 7−129997
dye-polymer layer, laser-induced fluid motion, optical data storage 7−130207
erasable recording media for optical data storage, review 7−129998
gratings, polarization properties of diffraction, optically active and linearly birefringent materials 7−130311
head, focusing grating coupler type, physical optics 7−110293
high density laser recording materials *(Japanese)* 7−129996
IEICE National Convention, Keio, Japan (March 1987) 7−108028
In-Se based phase change reversible optical recording film 7−75090
incident angle, effect on readout 7−103768
inhomogeneously broadened absorbing materials, convolution correlation and storage of optical data 7−82729
liquid crystalline polysiloxanes for optical write-once storage 7−129992
magnetic recording media, conf., Parma, Italy (Sept. 1986) 7−80148
mass data storage, conf., San Diego, CA, USA, (Aug. 1986) 7−74879
MIS optoelectronic storage medium, charcts. 7−136222
neural model anal. as associative memories Hopfield algorithm generalisation 7−136226
optical computing, conference, Jerusalem, Israel (July 1986) 7−88738
optoelectronic single quantum well devices based on electron bleaching of exciton absorpt. 7−110605
organic films, laser marking, optical data storage appl. 7−110485
phase conjugate mirrors as thresholding elements for optical associative memories 7−90724
phase conjunction phenomenon appls. *(Czech)* 7−136449
photoconducting piezoelectric, acoustic wave excitation during optical recording and erasure *(Japanese)* 7−131246
photon-gated spectral hole burning by donor-acceptor electron transfer 7−103905
photopolymerisable recording materials, resolution *(Russian)* 7−82735
photorefractive materials, introduction and appls. 7−132221
PRIZ conducting spatial light modulators, fabrication and props. 7−82483
scanning techniques for optical data storage 7−82500
semiconductor injection lasers, absorptive and dispersive bistability, review 7−123069
shift-invariant optical associative memories 7−74859
spectral memory concept, holographic recording for picosecond signals, space-time holography in data processing 7−130017
Ag-Zn thin films, magnetron-sputtered, optical recording appl. *(Japanese)* 7−125977
Bi-Se multilayer thin films, optical wiring characteristics 7−122853
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7−77387
Ga-Ge-Se-Te films for reversible optical recording 7−68801
Ge-S-In(Ga) glasses, appls. in microelectronics and optics 7−103915
In-Se-Tl films, phase-change optical media, single-beam overwrite expt. 7−75091
$LaF_3:Pr^{3+}$, image storage and phase conjugation for backward-stimulated echo 7−96944
$LaF_3:Pr^{3+}$, image storage and phase conjugation using backward-stimulated echoes 7−122855
$LiNbO_3$, optical recording of standing SAW 7−70745
Sb-S, amorphous film, mechanism of optical recording *(Russian)* 7−111659
Sb-Se, amorphous film, mechanism of optical recording *(Russian)* 7−111659
a-Si, optical recording medium appl. 7−82728
optical storage devices *see optical storage*
optical stores *see optical storage*
optical sum frequency generation *see optical frequency conversion*
optical susceptibility
see also nonlinear optical susceptibility
atomic bound-continuum transitions, strongly perturbed, absorpt. props. 7−96614
classical Coulomb systems, shape dependence of dielectric susceptibility 7−73182
collisionally broadened transitions, complex susceptibility 7−96794
complex formation, electrostatic interaction 7−122777
di(tetramethylammonium) tetrachlorozincate, commensurate-incommensurate phase transitions, thermodynamic study 7−118955
disordered solids thermal and dielectric props. at low temp. 7−77463
displacive ferroelectrics, Curie-Weiss dielec. suspectibility 7−99754
electron gas, density response function calcs. 7−105430
electron glass, critical behaviour, dielec. suscept., entropy, and sp. ht., Coulomb interaction effects calcs. 7−105428
ferroelectric liquid crystals, performance parameter meas. methods, review 7−92615
narrow gap semiconductor superlattices, CARS obs. 7−85698
quantum ferroelectrics, struct. phase transition, dielectric susceptibility temp. depend. 7−125642
Rochelle salt, dielectric susceptibility and soft mode parameters, temp. dependence 7−85552
squaric acid, struct. phase transition, pseudospin-lattice coupled mode model 7−104996
thiourea, deuterated, X-radiation damage, dielectric susceptibility and neutron diffr. meas. 7−69760
Al_2O_3 amorphous anodic films, time-depend. dielec. susceptibility 7−99677
$Bi_{12}MO_{20}$ (M=Ge, Si, Ti, Zn), dielec., elastic and piezoelec. props. 7−69798
GaSe, lattice dynamics, photoelasticity, Raman scatt., optical suscept., high press. studies 7−98364
KH_2PO_4, central mode, dynamical light scatt. study 7−111809
Rb_2CoCl_4 ferroelec. crysts., phase transitions, elec. suscept. and elastic wave temp. depend. studies 7−77473
Rb_2ZnCl_4, commensurate-incommensurate phase transitions, thermodynamic study 7−118955

optical systems
see also adaptive optics
adverse environments, conf., Albuquerque, NM, USA (Feb. 1987) 7—102023
antireflection coatings in non-imaging and imaging electro-optical systems, single figure merit function 7—123165
astronomical image reconstruction using space slit aperture telescope 7—115251
astronomical optics, laboratory expts. on zonal aberration correction 7—79829
camera for robotics, based on principles of insect eye 7—102556
cascade diffr. under partially coherent illumination 7—129972
chaos, optical, definitions, measuring characteristics, review 7—134674
characteristic matrix anal. method 7—103920
collimator systems for positioning 7—103940
colour discriminator, optical self-adaptive 7—73402
compact discs, optical pickup using no glass lens 7—82749
concentrator material selection for optical pumping of UV and VUV lasers 7—97104
correctors for prime focus of 7.5-m telescope, optimisation of three-lens corrector 7—134130
depth discrimination criteria in confocal optical systems 7—110501
design using desktop computers 7—103923
diffraction reduction using Lyot stop, anal. 7—130289
directed radiation field, equivalent transform. 7—117288
elliptical Gaussian beam with general astigmatism transformed by optical system, complex parameters *(Russian)* 7—123142
Faint Object Spectrograph for 2.5-m Isaac Newton Telescope, design and operation 7—127729
field-aberration compensator for double-mirror objective *(Russian)* 7—123141
frame scan in image convertor camera 7—97170
Gaussian beam propagation through optical systems with complex focal points 7—103926
Gaussian beam transform., ray method 7—117135
grazing incidence optics, modified sine condition 7—96946
grazing incidence optics for synchrotron-radiation insertion-device beams 7—95706
grazing incidence optics metrology at National Physical Laboratory 7—95710
high-resolution image fiber system using an image separating/reconstructing method 7—82846
high-speed camera with shadow-indicator instrument 7—121258
holographic elements with rotational symmetry, for opt. systems, construction *(German)* 7—90550
holographic system for studying phase inhomogeneities 7—130025
illumination system analysis, local illuminance calc. 7—123149
image formation, general optical system, Hamilton's method 7—129993
imaging systems, optimizing evaluation using equatorial Gauss moment *(German)* 7—110281
integrating sphere-Fourier transform spectrophotometer emissometer for diffuse IR reflectance meas. design 7—108627
IR, adaptive, and synthetic aperture optical systems, confs., Arlington, VA, USA (Apr. 1985), Orlando, FL, USA (Apr. 1986) 7—108025
IR system athermalisation techniques, defocus effect 7—123147
Laguerre-Gaussian beams derivation of ABCD law 7—136205
laser beam shaping device for max. uniformity and min. loss 7—117249
laser light sheet generator for flow-visualisation 7—123794
line focus geometry for X-ray laser research 7—103916
matrix analysis of optical systems with arbitrary quadratic phase-amplitude correctors 7—141961
matrix multiplication with 2D light source array 7—82469
matrix of system containing decentered surfaces 7—130295
multimirror optical stand for calibrating sensors of high-intensity radiant fluxes 7—108544
multiple aspheric systems for lithography of VLSI circuits 7—90745
multiple mirror telescope, four-barrel, design, performance, aligning and phasing method 7—115242
optical testing and metrology, conf., Quebec City, Canada (June 1986) 7—115684
paraxial theory of optical system with plural decentered sub-systems by means of Gaussian brackets 7—110521
phase distortion correction in coherent optical systems by adaptation 7—130000
phase function of spatial coherence from multiple intensity correlations 7—110503
phase retrieval algorithm, optical implementation 7—90519
phased array optical systems, operation and design 7—110509
phased array system, arbitrary config., performance degradation due to system jitter 7—110513
phased array system, zero opt. path difference, Ar laser spectral content effect 7—110514
phased array systems, diffr. limited multiple aperture, alignment constraints 7—110506
phased array systems, polarisation-related coherence losses 7—110504
phased array systems, technique for aligning and phasing of multiple apertures 7—110505
point spread functions of optical systems with rotationally symmetric amplitude filters 7—141805
pressure sensor, metal-clad ion-exchanged glass waveguide 7—104053
ray tracing, non-rotationally symmetrical systems using desktop computer 7—110520
reflective surfaces and dielectrics, surface contamination caused by space and terrestrial effects 7—103919
reflectors, parabolic cylindrical, cross-polarisation, aperture-field uniformity 7—130288
remote optical systems for ophthalmic examination and vision research 7—93858
segmented, dynamical behaviour analytical approx. 7—75099
short telescopes, field correctors and spot diagrams 7—72313
Space Shuttle instruments using occulting mask on end of long boom, boom vibration detection method *(Portuguese)* 7—134136
structural mechanics, conf., Los Angeles, CA, USA (Jan. 1987) 7—140368
synthesis telescopes based on interferometric image synthesis and computational phase retrieval 7—115240
synthetic aperture, phase algorithms and control software, mini- and microcomputer implementation 7—110502
synthetic aperture concepts for future space telescopes 7—115241
synthetic aperture imaging systems, partially-filled, review of exptl. work 7—110510

optical systems continued
synthetic aperture optical system, multiline focal plane phase measurement, algorithm 7—110512
synthetic aperture telescope configurations for coherent imaging applics., parametric study 7—110511
synthetic crystals appl. in precision instrument manufacture *(German)* 7—102486
telescope, reimaging wide field-of-view, design and optical performance 7—110508
thermal imager using CVROS scanner and SPRITE detector 7—110604
three mirror optical path length corrector *(Russian)* 7—136478
tolerance optimisation in optical system modelling *(German)* 7—68806
tolerances on optical system parameters, calc. 7—110500
two-stage, for diffuse reflectance meas. 7—110507
wavefront dynamic distortion compensation by flexible mirror adaptive system 7—130292
wide-field three-mirror telescope, atm. dispersion compensator 7—72312
Wigner distribution in connection with Talbot effect in defocused optical systems *(German)* 7—103763
X-ray grazing incidence optical systems, diffr. limited performance 7—95701
X-ray hybrid telescope systems, design and performance considerations 7—95702
X-ray synchrotron radiation monochromators, diffraction props., optical systems and dynamical theory 7—128729

optical telescopes *see telescopes*

optical television recording *see video recording*

optical testing
Used for testing of optical components. For testing by optical means see materials testing or nondestructive testing
see also optical instrument testing; optical workshop techniques
adaptive mirrors, local deform. monitoring using holographic interferometer 7—130290
antireflection coating, optical monitoring strategies rel. to reproducibility of completed layer systems 7—104066
antireflection coatings, dual-beam referenced reflectometry 7—68907
aspheric surface contours, direct phase measurement 7—90855
aspheric surface ultrahigh accuracy 3-D profilometer using laser heterodyne interferometer 7—103917
aspheric surfaces testing in astronomical optics, ring aspherometer appl. 7—127732
aspherical lenses as high power laser focusing optics 7—90744
aspherical mirror testing with an area detector array and interferometer 7—97112
aspherical objective lenses for compact disc players, design and measurement 7—90741
aspherical optics, conf., Orlando, FL, USA (April 1986) 7—88737
aspherical surfaces, scanning with focus-wavelength encoded profilometer 7—90844
automated optical coating processes with optical thickness monitoring 7—104063
automatic laser diode test system *(Japanese)* 7—104054
ball-bed mode mixer for fiber evaluation and micro-optic device assembly 7—82837
biconical tapered couplers, automated manufacture and charactn. overcoupled operation 7—123257
CCD line camera, microcomputer-controlled, light guiding fibre devices meas. appl. *(German)* 7—104006
coating mechanical properties, ultra low load Vickers hardness meas. in SEM 7—106735
coatings, nonoptical charactn. techniques 7—123161
coherent OTDR instrument development for fault location in fibres 7—97154
component flaws, specification and measurement 7—75174
conference, Innsbruck, Austria (April 1986) 7—108026
conference, Innsbruck, Austria (April 1986) 7—134352
conference, Quebec City, Canada (June 1986) 7—115684
contact lenses, automatic optical meas. 7—82876
convex aspheric secondary mirrors testing methods *(Chinese)* 7—97111
corner reflector testing by computational diffraction of measured wavefronts 7—110609
cross grating moire measurements, phase shift method 7—110549
cylindrical lens evaluation with slit diffraction interferometer 7—75094
cylindrical optics, new test 7—123152
detection methods for particles on optical surfaces 7—140725
diffraction gratings, radial, errors meas. by mutual intercomparison 7—141975
digital interferogram analysis and DIN norms 7—110616
digital phase-stepping interferometry, effects of multiply reflected beams 7—115995
disc storage, optical component inspection 7—82750
evaporation monitoring system featuring 'software' trigger points and on line evaluation of refractive indices 7—104065
Extreme Ultraviolet Explorer mirror optical tests and results 7—97183
Fabry-Perot filters for wavelength demultiplexing, optical monitoring method during growth 7—103945
far UV spectroscopic explorer (FUSE) telescope, optical surface anal. code (OSAC) anal. 7—101687
far-field meas. using integrating sphere 7—82835
fault location system based on interferometry for optical waveguide devices 7—104000
fibre, single-mode, optical time domain reflectometry signatures interpret. 7—123263
fibre characterisation by transmitted near field meas. 7—82824
fibre characteristics and standards, conf., Cannes, France (Nov. 1985) 7—66821
fibre chromatic dispersion meas. using edge-emitting LEDs 7—90817
fibre diameter monitoring during pulling using dual edge diode beam of light 7—104014
fibre end evaluation before splicing using spatial freq. analysis 7—68922
fibre equilibrium mode distribution development, Corning data broadband fibre transient behaviour and steady state mandrel charact. 7—82823
fibre loss meas. by Fourier transform spectroscopy 7—90818
fibre manufacturing processes and testing *(German)* 7—82869
fibre measurement, conf., London, England (May 1987) 7—88748
fibre measurements, symposium, Boulder, CO, USA (Sept. 1986) 7—80177
fibre measuring techniques, Bandwidth Test Set *(Italian)* 7—104056
fibre mode field diam. meas. using far field pattern method 7—82834
fibre mode field radius meas. 7—90821

optical testing continued
fibre optic cables losses meas., using Siemens universal reflectometer 7−82877
fibre optic guides and cables meas., using Luch instruments 7−104009
fibre optics, longitudinal strain measurements, optical techniques 7−75124
fibre optics, single-mode, standardization 7−75123
fibre preform measurements and their industrial application 7−68923
fibre preform refractive index meas. model 7−90816
fibre preforms defect determ. OSEE method 7−136579
fibre testers review 7−123268
fibre-optical waveguide, parameters meas. during quartz shell removal by HF *(Russian)* 7−117333
fibreoptic testing, design approach for programmable opt. attenuator 7−68898
fibres, chromatic dispersion measurement by phase shift method, influence of LP_{11} mode cutoff length depend. 7−82830
fibres, ionising-radiation hardness, testing and standards 7−123258
fibres, refractive index profiling and dimensional meas. 7−90815
fibres, single mode, chromatic dispersion meas. using phase shift method, precision anal. 7−82829
fibres, single mode, effective mode index meas. 7−90826
fibres, single-mode, mode diameter and cutoff wavelength meas. 7−90822
fibres, single-mode, nonreciprocity meas. 7−90825
fibres, single-mode polarisation maintaining, modal birefringence meas. by heterodyne interferometry 7−97153
fibres single mode, characterisation by equivalent step index and mode field diameter meas. 7−90823
filter and mirror efficiencies meas. using vacuum reflectometer in UV, VUV 7−103947
free electron laser optics coating test device 7−136345
frequency response characteristics of an optical scatterometer and a surface profilometer 7−141794
glancing incidence scatt. meas. interpretation, X-ray and UV mirror testing appls. 7−97117
graded index fibre diameter measurement using diffr. pattern 7−82819
gradient-index lenses, refr. index profiling by total reflection method 7−97114
grazing incidence metal mirrors for Extreme UV Explorer satellite 7−97115
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986) 7−95085
grazing incidence optics metrology at National Physical Laboratory 7−95710
grazing-incidence optics surface characterisation for use in extreme UV and X-ray regions 7−95704
heterodyne Fizeau interferometer for testing flat surfaces, error anal. 7−121205
heterodyne interferometer for surface profile measurements in the Angstrom region 7−134843
High Precision Optical Surface Sensor for diamond-turned metal mirror surface roughness *(Japanese)* 7−82873
HIPPARCOS telescope beam combiner, design, manufacture and testing 7−110537
ICs, optical and opto-electronic components testing, development trends 7−136614
in-vacuum bidirectional reflectance transmission distribution function measurement apparatus 7−142051
instruments for automated testing of objectives and camera adjustment 7−104061
insulating films, micro-, ultramicro- hardness meas. 7−106736
integrated optical directional couplers, charactn. by local absorpt. technique 7−110564
interferometer for inspecting surface shape of large optical components 7−128643
interferometer for optical surface meas., design and fabrication *(Chinese)* 7−73405
interferometric testing, optimal removal of mislocation effects 7−121217
IR interferometers at 10 μm using dynamic recording medium 7−121219
large aspherics, direct contact profilometry 7−90854
large optics generator, micron tolerances, accuracy and stability problems 7−75177
laser optics, fabrication and testing 7−74995
laser pickups, compact disc, wavefront meas. using phase measuring radial shear interferometer 7−116000
lens, aspherical, generating, grinding and figuring, direct contact profilometry meas. 7−110615
lens OFT testing, automatic off-axis 7−75178
lens testing method using holographic interferometry 7−104058
lenses, aerial, image quality evaluation 7−122860
lever for metrology of grazing incident optics 7−90858
link, installed, attenuation meas., insertion loss modification method 7−136577
loss meas. system, detector selection for production testing 7−130379
measuring systems, bi-directional reflectance distrib. fn., comparison 7−140724
micromachined spherical zones, in process measurement of radius of curvature 7−90849
mirrors, smooth, damage documentation, scatterometer appl. 7−141963
mirrors and multilayers, high-resolution angle-resolved X-ray scatt. 7−97118
mirrors for high-power CW Ar lasers 7−130143
modulator for motion picture camera, field standard facilities and requirements *(Czech)* 7−130316
monomode fibres, cutoff wavelength meas. using azimuthal filtering technique 7−90803
MTF testing of imaging systems 7−117153
multimode fibre industrial meas. methods 7−82822
multimode fibre source power distrib. charact. by splice offset technique 7−82825
multimode optical fibre, bandwidth meas. in frequency domain 7−130367
narcissus as tool for testing thermal imaging systems 7−134738
nonconventional optics, fabrication and testing 7−117361
nonquarterwave film thicknesses in multilayer struct. fabrication, optical monitoring using turning point method 7−130396
optical coherence-domain reflectometry, optical eval. tech. 7−67378
parabolic mirrors, off-axis, fabrication and testing 7−68810
phase shifting interferometry using polarization component phase shifters 7−121218
plano-cylindrical lens curvature radii meas., by opto-electronic method 7−142052
plastic lens coatings evaluation by abrasion tester 7−90750
optical testing continued
plastic ophthalmic lenses, coating evaluation 7−90751
plastic ophthalmic lenses, vacuum coated, abrasion testing 7−90752
polarisation-maintaining fibres, alignment using nondestructive temp. modulation technique 7−104005
precision mechanical-optical devices, test instruments selection *(German)* 7−82871
programmable interferometry, data processing techniques 7−128547
refractive Offner compensators, third-order design 7−117284
retarders, birefringent, variable wavelength interferometry 7−123284
scatter measurements, improved facility 7−141795
semiconductor laser-based instrumentation for ocean studies 7−139811
side coupler for coupling between laser diode and single-mode fibre 7−123200
single mode fibre testing methods for industrial environment, review 7−82821
single-mode fibre characterisation using equalisation wavelengths 7−90820
single-mode fibre chromatic dispersion meas. technique, high resolution, review 7−82828
single-mode fibre spectral attenuation precision meas. 7−82811
single-mode fibres, chromatic dispersion meas. from Fourier transform of white light interf. patterns 7−68911
single-mode fibres, cut-off wavelength and mode-field diam. meas., standardisation issues, trends 7−82827
single-mode fibres, cut-off wavelength meas. technique *(Slovenian)* 7−104055
single-mode fibres, dispersion meas. using LEDs, modulation freq. shift technique 7−142049
single-mode fibres, dispersion-optimised, highly accurate charactn. 7−90810
single-mode lightguide system, guided-wave reflectometry with micrometer resolution 7−123201
single-mode optical fibres, equalisation wavelength meas. technique 7−68909
solar power plant heliostat focal spot characteristics test equipment and methodology *(Romanian)* 7−114079
spectacle lens, scratch diamond test 7−90740
spectroscope, longitudinal chromatic aberration, design and performance 7−134856
steel ball, convex spherical reflector as laser beam expander, diverging wavefront aberrations 7−68809
step height meas. using two-wavelength phase-shifting interferometry 7−121206
stray radiation, conf., San Diego, USA (Aug. 1986) 7−140369
subaperture optical testing, expt. verification 7−117363
substrates, coated and uncoated, roughness characterisation using scatt. distrib. meas. 7−123163
surface inspection, subjective versus objective methods 7−104070
surface relief grating, SEM study, moire fringes appl. 7−83601
surface roughness, evaluation by laser speckle spectral density 7−90857
surfaces, cylindrical optical, testing 7−136630
synchrotron radiation mirror super-high accuracy profile meas. for machining *(Japanese)* 7−117357
synchrotron radiation optics, surface roughness property survey 7−95705
Technology Mirror Assembly project assembly and alignment techniques 7−95708
thickness monitoring fully automated system for thin film prod. 7−104064
thin film characterisation via ellipsometric methods 7−121197
thin film technologies, conf., Innsbruck, Austria (April 1986) 7−102011
thin films, light scatt. and characterisation 7−123162
total integrated scatter measurement system for quality assessment of coatings on optical surfaces 7−123286
TV camera lenses, specification and testing 7−136479
TV camera lenses with integrated digital control electronics *(French)* 7−130402
waveguide attenuation measurement, compensatory method 7−136524
waveguide investigation instruments 7−134829
waveguide preforms testing using interferometers 7−136522
Al-MgF_2 replicated coating aspheric mirrors for far UV, quality control and ageing tests 7−103928
CO_2 compact laser receiver lens for rangefinder, design, interferometric test 7−123024
GaAs coplanar waveguide, electro-optic meas. of standing waves 7−90777
TiO_2/SiO_2 multicavity filter stability 7−123176

optical transfer function
3D optical microscopic image reconstruction, freq. and spatial domain methods comparison 7−80871
adaptive imaging systems with combined correctors, optical transfer functions 7−117150
asymmetrical aberrations effect on OTF and image shift 7−122857
atmosphere, automatic log spectrum restoration of astronomical seeing 7−72316
Bessel annular apodizers: imaging characteristics, computer-simulated images 7−122843
bilinear transfer in microscopy, spectral anal. 7−103750
biological cell, diffr. pattern analysis through opt. density data acquisition 7−114588
eye point spread function determ. using hybrid optical digital method 7−107039
flicker sensitivity in human vision for linear polarization and colour 7−145041
holographic lens-fibre coupling system coherent transfer function 7−123247
holographic scanning objective, optical imaging system for video discs 7−122881
image form. through inhomogeneities, interferometric method study 7−68582
image quality, effects due to differences between sagittal and tangential OTFs *(German)* 7−74869
image quality standardisation 7−122862
imaging characteristics of perfect lens with linear polarising mask 7−110273
imaging system, airborne vehicular, resolution limits, mechanical vibration effects anal. 7−122854
intensely scattering layer OTF 7−74884
inverse filter transfer function optimisation in blurred image restoration with incoherent light 7−90531

optical transfer function continued
Lau effect magnified grating images used in displacement sensing 7−123180
lens design, optimisation by extended range diffraction based merit function 7−110518
lens OFT testing, automatic off-axis 7−75178
lens partially masked by retarder, frequency response characts. 7−90527
lenses, aerial, image quality evaluation 7−122860
light scatt. material, optical image transfer, transmission quality 7−82478
light valve system of TV colour projector, OTF calc. with dark field obs. 7−117283
liquid crystal television display as spatial light modulator for optical processing 7−82770
microscopic images of living cells, 3D restoration 7−101168
microscopic imaging systems, three-dimens. object represent. 7−89257
MTF improvement by aperture modulation *(Korean)* 7−82747
MTF testing of imaging systems 7−117153
multimode fibre baseband freq. response 7−68879
muscle striations image processing below microscope resolution limit, digital deconvolution 7−93882
on-line vision systems, light source characts. and electro-optics optimum choice 7−121191
optical imaging with rectangular transmission gratings 7−68575
photorefractive materials appl. to signal processing 7−130014
polarizing microscope with crossed polarizers, defocusing and third-order spherical aberration 7−73415
scanning OTF measurement system *(Korean)* 7−90528
screen/film MTF data, Logit analysis 7−139358
solid lasers, efficiency, elliptical pump cavities effects *(German)* 7−122986
SPRITE detectors for anamorphic imaging, optimisation 7−80875
synthetic aperture imaging systems, partially-filled, review of exptl. work 7−110510

optical transmission *see light transmission*

optical variables control
evaporation monitoring system featuring 'software' trigger points and on line evaluation of refractive indices 7−104065
gyroscope, passive ring laser in very high finesse cavity, laser feedback control system 7−123034
laser electro-optic shutter control, w.r.t. luminance level of active medium 7−136360
Michelson interferometer, fibre optic, remote polarisation control 7−68866
Xe flash tubes, controlled intensification of output 7−121262

optical variables measurement
see also colorimetry; densitometry; laser variables measurement; light velocity measurement; optical noise measurement; photometry; polarimetry; refractive index measurement; streak photography; turbidimetry
absolute specular reflectance meas. in IR 7−121203
analogue divider for fast circular dichroism meas. 7−108616
birefringence measurements by double speckle photography 7−67380
coherent light phase meas. by zero fringe integration method *(Japanese)* 7−73413
compound parabolic concentrator, nonimaging secondary, design, testing 7−144792
conference, Wroclaw, Poland, Sept. (1986) *(Polish)* 7−72707
constant determination, practical techniques 7−121182
dispersion characteristics meas. of fibre optic guides 7−104010
dispersive resonator selectivity anal., telescope system *(Russian)* 7−68813
elliptically polarised light analysis over range of wavelengths 7−128619
emissivity of hot cathode determ. during arc discharge, by laser reflectometry 7−121202
Extreme Ultraviolet Explorer mirror optical tests and results 7−97183
fibre, single-mode, optical time domain reflectometry signatures interpret. 7−123263
fibre characterisation by transmitted near field meas. 7−82824
fibre characteristics and standards, conf., Cannes, France (Nov. 1985) 7−66821
fibre chromatic dispersion meas. 7−90817
fibre equilibrium mode distribution development, Corning data broadband fibre transient behaviour and steady state mandrel charact. 7−82823
fibre loss meas. by Fourier transform spectroscopy 7−90818
fibre measurement, conf., London, England (May 1987) 7−88748
fibre measurements, symposium, Boulder, CO, USA (Sept. 1986) 7−80177
fibre Michelson interferometer for narrow laser output line detection and meas. 7−123048
fibre mode field diam. meas. using far field pattern method 7−82834
fibre mode field radius meas. 7−90821
fibre optics, power measurements, accuracy 7−68859
fibre profiling technique, refracted near-field based, thermal effect 7−82832
fibres, chromatic dispersion meas. system using phase-shift technique 7−123217
fibres, chromatic dispersion measurement by phase shift method, influence of LP_{11} mode cutoff length depend. 7−82830
fibres, single mode, chromatic dispersion meas. using phase shift method, precision anal. 7−82829
fibres, single-mode, mode diameter and cutoff wavelength meas. 7−90822
fibres, single-mode, nonreciprocity meas. 7−90825
fibres, single-mode with nonGaussian profiles, mode field diameter meas, 7−82806
fibres, step-index used for point source scanning, lateral offset power loss meas. 7−123250
fibres single mode, characterisation by equivalent step index and mode field diameter meas. 7−90823
films, dispersion effects on optical consts. determ. 7−106292
fluoride glass single-mode fibres, spectral attenuation meas. by fourier transform spectroscopy 7−68852
four-zone null-type spectroscopic ellipsometer, construction and appls. *(Japanese)* 7−121193
gradient calorimeter for measuring the energy parameters of optical radiation 7−121126
inhomogeneous media, optical dielec. function derivation near percolation, phenomenological approach 7−125676
integrated optic device parameter meas. using computer aided meas. techniques 7−104050
integrating sphere-Fourier transform spectrophotometer emissometer for diffuse IR reflectance meas. design 7−108627
IR emittance and reflectance of optical material surfaces 7−110487

optical variables measurement continued
laser and single-mode fibre far field power meas., two dimens., high ang. resolution and dynamic range 7−82833
laser radiation spectral charact. meas., using Fabry-Perot interferometer 7−123049
link, installed, attenuation meas., insertion loss modification method 7−136577
Luch instruments for fibre optic guides and cables meas. 7−104009
microscope focusing automation, microprocessor-controlled system 7−128648
mineral optical reflectivity meas. method for polished absorbing grains 7−133946
mirrors, spherical, measuring radii of curvature by holographic interferometry *(Russian)* 7−82743
monomode fibres, cutoff wavelength meas. using azimuthal filtering technique 7−90803
montmorillonite pressed pellets, prep. depend. props. rel. to optical consts. meas. in FIR 7−92627
multilayer film optical constant determ. 7−125677
multimode fibre industrial meas. methods 7−82822
multimode fibre source power distrib. charact. by splice offset technique 7−82825
multimode fibres, mode excitation and modal power distrib. meas. using computer-generated holograms 7−130355
multimode optical fibre, bandwidth meas. in frequency domain 7−130367
multiphoton optical rotary dispersion 7−102489
nondestructive inspection methods and development trends 7−100483
nonlinearity meas. in optical radiation detectors, by light addition 7−102518
nonstationary light field, spatial coherence function meas., diffraction technique 7−121181
phase shifting interferometry using polarization component phase shifters 7−121218
power measurement with integrated optical waveguide refractometer *(German)* 7−136624
semiconductor optical waveguides, loss and facet reflectivity meas. technique 7−103994
single mode fibre measurements and standardization 7−130354
single mode fibre testing methods for industrial environment, review 7−82821
single-mode, spot size estimation from far field meas. 7−136555
single-mode fibre characterisation using equalisation wavelengths 7−90820
single-mode fibre chromatic dispersion meas. technique, high resolution, review 7−82828
single-mode fibre spectral attenuation precision meas. 7−82811
single-mode fibres, chromatic dispersion meas. from Fourier transform of white light interf. patterns 7−68911
single-mode fibres, cut-off wavelength and mode-field diam. meas., standardisation issues, trends 7−82827
single-mode fibres, cut-off wavelength meas. technique *(Slovenian)* 7−104055
single-mode fibres, dispersion meas. using LEDs, modulation freq. shift technique 7−142049
single-mode optical fibres, equalisation wavelength meas. technique 7−68909
spectral corrections to optical-density measurements 7−102487
spectral linewidth of semiconductor lasers meas., for use with coherent communications systems 7−123052
spectral reflectance meas. of high reflectance coatings 7−121204
Stokes parameters spectral dependence determ. 7−121190
thermal indicators based on cholesteric liquid crystals, optical parameters obs., biomedical appl. 7−125821
thin film characterisation via ellipsometric methods 7−121197
time domain reflectometry in 1.5 μm range using LD and APD *(Japanese)* 7−140731
transparency meas. of plastic scintillators 7−129524
two-stage systems design for diffuse reflectance meas. 7−110507
waveguide loss measurement by scatt. radiation detect. at visible and near-IR wavelengths, optimum conditions 7−103993
weak absorption meas. in optical thin films, using adiabatic laser calorimeter 7−108615
Zeeman laser, stabilised transverse, applics. to polarisation meas. *(Chinese)* 7−75013
Ag halide *(Japanese)* 7−128621
Al optical constants determ. 7−108614
Au-MgO cermet thin films, optical dielec. function derivation near percolation, phenomenological approach 7−125676
CO_2 laser beam diagnostics and control 7−136391
InSnO film optical constants in amorphous semiconductor multilayers 7−125831
$LiNbO_3$ waveguides, guided mode effective index meas. using Cherenkov SHG 7−103978
$LiNbO_3$:Ti channel waveguides, optical mode intensity meas., two dimens., comparison with numerical calcs. 7−104051
Pt-Al_2O_3 cermet thin films 7−125676
a-Si:H film optical constants in amorphous semiconductor multilayers 7−125831

optical video discs *see video and audio discs*

optical wavefront reversal *see optical phase conjugation*

optical waveguide components
see also optical couplers; optical isolators
branching waveguide, modal distrib. eval. by phase space method 7−123193
components testing, development trends 7−136614
design using beam propag. techniques 7−82838
frequency translators, electro-optic, coherent optical fibre system appls. 7−103959
guided-wave multi/demultiplexers with high stopband rejection 7−82860
integrated electro-optic modulators and switches, state-of-the-art 7−68826
integrated optic frequency shifters with SAWs 7−104049
integrated optical filter, design *(Korean)* 7−82861
integrated optical filter, fabrication and improvement *(Korean)* 7−82862
mode transducers utilising coupling effects of multi-mode coupling system, appl. to optical cct. components *(Japanese)* 7−130329
multielement homogeneous thin-film lens design 7−90747
multilayer thin film waveguide polarizer with metal-clad *(Japanese)* 7−130328
multimode fibre connections, attenuation and interference calc. 7−82789

optical waveguide components continued
multimode fibre source power distrib. charact. by splice offset technique 7−82825
nonlinear optical waveguide devices 7−82849
planar waveguide refractive waveguide lenses: a new design 7−68904
polymer film waveguide polarisers with a-Si:H film clad 7−110574
ring resonators, high finesse, fabrication and analysis 7−104052
surface relief gratings, high reflectivity, in single mode optical fibres 7−103950
switch using piezoelectric actuated evanescent-wave directional fibre coupler 7−82859
total-internal-reflection switch crosstalk analysis *(Chinese)* 7−117314
GaAs plasma dispersion effect total refl. type optical switches, wavelength bandwidth 7−110608
GaAs quantum-well waveguide modulators, electroabsorption 7−136492
GaAs-GaAlAs Bragg grating filters, rib waveguide type for 1.5 μm wavelength 7−97125
GaSb-AlGaSb MQWs, electroabsorption effect and high-speed waveguide optical modulator fabrication 7−90767
p-InP/n-InGaAsP/n-InP heterojunction waveguide photodetectors 7−89263
$LiNbO_3$ electrooptical waveguide switch *(Czech)* 7−110569
$LiNbO_3$ integrated optical multimode components 7−104048
$LiNbO_3$:Ti single-mode waveguide crossings and switches, design rules and appls. 7−104046
$LiNbO_3$:Ti waveguide interferometric modulators, charact. *(Chinese)* 7−75110

optical waveguide losses *see optical losses*

optical waveguide theory
see also guided light propagation
1D image fibre bundle transmission charact., strong coupling case 7−97140
absorbing optical waveguides, initial field and energy flux 7−103973
anisotropic optical waveguides, 3D type, vector variational anal. of guided modes 7−90778
anisotropic optical waveguides, waveguide dispersion 7−141985
beam transformers for obtaining low-loss splices between dissimilar single-mode fibers 7−104011
bending losses, numerical matrix calc. 7−75115
bent dielectric rectangular waveguides, optical charact. 7−117315
bent waveguides, modal parameters 7−123194
branching waveguide, modal distrib. eval. by phase space method 7−123193
coupled mode formulations, error considerations 7−141981
coupled mode theory 7−68855
coupled-mode equations for guided modes in two parallel waveguides 7−103972
coupler, symmetric three-guide with nonidentical centre and outside guides, power transfer efficiency 7−82778
curved planar Bragg gratings, coupled beam anal. 7−136528
cylindrical fibre guided-wave modes, math. anal. 7−75130
cylindrical step-index optical waveguides, radial image transfer 7−75111
discontinuity anal. in optical waveguides *(Japanese)* 7−141991
doubly clad lightguides, field evolution 7−75127
electro-optic waveguides, electric field, permittivity and strain distribs. induced by interdigitated electrodes 7−110607
femtosecond solitons existence in optical waveguides 7−90789
fibre waveguide, optical soliton formation, noise effects 7−90808
fibres, anisotropic, depressed-cladding profile 7−75146
fibres, EM fields at facets 7−104001
fibres, nonlinear pulse propag., general formalism 7−68853
fibres, polarised-ray optics theory 7−130358
fibres, radiation from bend of step-index single-mode fibres 7−90801
fibres, scalar soln. for calc. method, errors *(German)* 7−142020
fibres, single-mode, soliton evolution from chirped and noisy pulses 7−75129
fibres, stress-applied polarisation maintaining type, birefringence calc. using vector anal. 7−141997
fibres, stress-applied polarisation-maintaining, vectorial wave anal. 7−90802
four-layer thin-film waveguide, generalised dispersion props. 7−68833
glass fibres, arbitrary cross section and curvature, EM wave anal., analytical 3D method 7−104027
grating coupler, two-beam coupling into planar waveguide study 7−82787
GRIN taper, wave propag. 7−117307
GRIN waveguides, calc. of number of guided modes 7−136507
image fibre, crosstalk charact. improvement, theoretical study 7−97143
injection heterolasers and diffuse planar optical waveguides, coupling methods 7−68838
integrated optical waveguide, propagation props. using domain integral 7−136527
integrated optical waveguides, electromagnetic analyses 7−130392
interwaveguide transmission efficiency 7−110576
layered coupled waveguide arrays, approx. soln. of eigenmode problems 7−90782
metal-clad GRIN, guided wave charact., analytical results 7−90783
metal-clad planar optical waveguides produced by diffusion, guided mode charact. 7−97131
method of moments and weighted index method, accuracy 7−117311
modal field analysis of injection-laser devices 7−130321
mode transducers utilising coupling effects of multi-mode coupling system, appl. to optical cct. components *(Japanese)* 7−130329
monomode graded index fibres with arbitrary cross sections, iterative eigenfunction expansion method 7−142036
multilayer slab waveguide guiding props., field distrib. 7−68839
multimode fibre, effect of higher order modes on pulse propag., theoretical and expt. study 7−142035
multimode fibres, splice loss anal. for multiple misalignment 7−130385
multistep index fibres, cut-off freqs. of modes, eqns. *(Polish)* 7−68846
non-parallel dielectric rod waveguides, coupling analysis 7−103967
nonhomogeneous optical planar waveguides, surface layer depth determination 7−117316
nonlinear guided wave propag., effects of linear absorption 7−75113
nonlinear pulse propagation in monomode waveguide 7−90781
nonlinear TE waves in dielectric optical waveguide with nonlinear media, propag. charact. 7−130330
nonlinear waveguide, soliton motion with dissipation and pumping 7−141988
normal modes in waveguide, demonstration device 7−120726
planar, GRIN, numerical anal. using matrix method 7−110563

optical waveguide theory continued
planar anisotropic inhomogeneous optical waveguides, FEM 7−97130
planar waveguides, surface-guided nonlinear TM waves 7−103908
planar waveguides with curved surfaces, optics equations 7−97133
power distribution in optical channel waveguide intersection 7−82779
preform refractive index distrib., interference meas. 7−136519
Raman scattering of guided waves by polaritons in piezoelectric slab-waveguides *(German)* 7−90714
random volume perturbations, equivalent parameters 7−68843
Rayleigh backscatter statistics of single-mode fibre 7−68858
rectangular waveguide, laser radiation generation at difference frequency by nonlinear crystal 7−90701
resonators with side reflectors, soln. by means of waveguide modes *(Chinese)* 7−103918
rib waveguide, propagation constants approximate values calc. 7−130322
single mode fibres with arbitrary index profiles, cutoff frequencies calc. 7−130363
single-mode fibre, bent, field calc. using perturbation theory 7−82798
single-mode fibre beyond cutoff freq. of LP_{11} mode, charact. 7−97145
single-mode fibres, asymptotic effective cutoff condition 7−82804
single-mode fibres, step index, radiation from circular bend, theoretical anal. 7−97141
single-mode GRIN waveguide structures, propag. props. 7−82774
single-mode laser diode, coupling to optical waveguide via gap, theoretical study 7−90779
single-mode step-tapered waveguide section design, power loss 7−68836
six-port fibre couplers, vector modes 7−141995
slab waveguide, TE modes, nonlinear coupling, beam propagation study 7−97128
slot electrooptical magnetooptical phase modulator, electrodynamic charact. calc., singular integral equations method 7−68825
soliton formation, influence of regular phase modulation 7−141984
spectral inverse problems for optical waveguides and couplers 7−136529
spot size, adiabaticity and diffraction in tapered fibres 7−136548
storage head, focusing grating coupler type, physical optics 7−110293
strip waveguides, pulse propag., generalized nonlinear Schrodinger eqn. description 7−90772
stripe geometry semicond. laser, theory of elec. and optical waveguiding processes *(Chinese)* 7−122949
strongly-coupled mode theory appl. to integrated optical devices 7−90780
symmetric dielectric slab waveguide with Kerr like nonlinear permittivity, TE wave propag. 7−90735
taper, GRIN, exact ray paths 7−82775
thin-film reflection filters having nonuniform multiperiodic interface corrugations 7−90793
thin-film waveguide, guiding props. of TM modes 7−90785
TM-polarised nonlinear modes guided by symmetric five-layer dielectric structure 7−103975
weakly guiding fibres, power loss calc. using far-field method 7−142037
Y-junction from bimode planar light guide to monomode light guides, parameters 7−103968
Y-junction semiconductor laser array, anal. 7−123010
Y-junction semiconductor laser arrays fabricated by MOCVD 7−123011

optical waveguides
see also optical fibres; optical waveguide components; optical waveguide theory
absorbing optical waveguides, initial field and energy flux 7−103973
attenuation measurements, compensatory method 7−136524
beamsplitter, nematic liq.-cryst.-clad electro-optic waveguide 7−130299
bend, etched mirror corner, for semiconductor optical circuits 7−104043
bent, modal properties 7−123194
bent waveguide in surface emitting laser diode 7−110376
book 7−88756
buried-stripe self-aligned lasers, coupled-guide waveguiding 7−74955
chirped gratings for efficient coupling into nonlinear waveguides 7−130319
circular metallic hollow waveguides for IR radiation from CO_2 laser, Ge-coated 7−110561
composite waveguide structure, hologram spatial-angular selectivity 7−123277
conference, integrated optics, Glasgow, Scotland (May 1987) 7−134362
corrugated waveguide, Gaussian light beam reflection 7−82783
CSP phased laser arrays, array mode charact. study 7−82562
curved planar Bragg gratings, coupled beam anal. 7−136528
DFB lasers, quarter-wave-shifted type with epitaxial layer taper, props. study 7−90611
DFB thin-film quasi-waveguide laser, returnable ultrashort light pulse generation 7−74959
DFB thin-film quasi-waveguide laser 7−136356
DH ridge-waveguide lasers, single mode, threshold current optimisation 7−68642
dielectric waveguides, bending losses, 3D anal. 7−68841
diode laser arrays, phase locked, direct supermode anal. 7−130096
distributed Bragg mirrors, asymmetric 7−82745
doubly clad slab waveguides, leaky modes, curvature losses 7−68840
dye laser, quasiwaveguide, tunable, recent results 7−136289
dye lasers, thin-film energy-transfer using polymer waveguide 7−122942
dynamic instability in the amplitude of a light beam in a real optical light guide 7−130327
electro-optical effect, FEM anal. 7−136537
electro-optical modulators, trading coupling loss for modulation efficiency 7−75105
electrooptic ferroelectric materials, desirability for guided-wave optics 7−90794
ethylene adsorption on ZnO, CARS spectroscopy with optical waveguides 7−84491
fault location system based on interferometry for optical waveguide devices 7−104000
FDM transmission system with eight 5-GHz spaced channel 7−117346
fibre, single-mode, channel-dropping filter using high-index overlay waveguide 7−75148
field structure, defocusing nonlinearity influence 7−130332
fluorescent emission from solns. at surface of polymer thin-film waveguides 7−132307
force sensors and weighing systems, coupled by beam waveguide *(German)* 7−121102
four-layer planar optical waveguides near cutoff, props. 7−130323
garnet buried magneto-optic channel waveguides, LPE growth 7−138693
garnet magneto-optic film non-reciprocal waveguides, isolator appls., 7−103992

optical waveguides continued
gas laser waveguide lasing regime, active medium influence on spatial characts. 7−122908
geodesic lenses for wavelength optical devices, design and fabrication 7−142044
glass optical guided-wave technology, review 7−68844
graded-index film waveguide, exponential-like profile, nonlinear waves study 7−68797
graded-index slab waveguides, arbitrarily nonlinear, finite-element soln. 7−82725
gradient index gratings, evaluation of diffusion parameters for waveguide fabrication 7−82874
gradient index optical imaging systems, conf., Reno, NV, USA (Jan. 1987) 7−95098
gratings, TM-TM coupling 7−136487
GRIN taper, wave propag. 7−117307
GRIN waveguides, calc. of number of guided modes 7−136507
GRIN waveguides, guided nonlinear TE waves 7−136511
hollow waveguides, excitation depend. losses and temp. increase at 10.6 μm 7−136509
hologram grating structures formed in isotropic materials, anisotropic props. 7−141814
holographic chirped grating for integrated optics, fabrication and appl. 7−136235
homogeneous molecular profiles, in optical waveguides, quantitative Raman spectrosc. meas. 7−86691
homogeneous molecular profiles, quantitative Raman spectrosc. meas. 7−80885
III-V semiconductor waveguides for integrated optics 7−136615
inhomogeneous wave propag. 7−103997
injection heterolasers and diffuse planar optical waveguides, coupling methods 7−68838
instruments for investigation 7−134829
insulators, optical effects of ion implantation, refractive index control, review 7−104790
integrated electro-optic devices 7−142048
integrated optic waveguide-field overlap, polarisation insensitive modulator design appls. 7−104047
integrated optical devices, developments *(Italian)* 7−90835
integrated optical frequency shifter for fibre laser Doppler velocimeter 7−123225
integrated optical waveguide, propagation props. using domain integral 7−136527
integrated optical waveguide refractometer, construction and props. *(German)* 7−136624
integrated optics, conf., Innsbruck, Austria (April 1986) 7−102012
integrated optics, introduction 7−142047
integrated optics, overview 7−130393
ion exchanged channel waveguides, fabrication directly into IC mask plates 7−123275
ion-exchanged waveguide profiles control with Ag thin film sources 7−141982
IR laser light modulator of ridge-type optical waveguide struct. using free carrier absorpt. effect *(Japanese)* 7−68831
laminated-periodic planar waveguide, natural modes anal. 7−130324
large area waveguide diffraction structures, optical radiation output 7−123276
lasers, waveguide, nonlinear conversion of CW radiation into short pulses 7−117244
lens, planar, GRIN, aberrations, calc. 7−90838
loss measurement by scatt. radiation detect. at visible and near-IR wavelengths, optimum conditions 7−103993
Luneburg lenses, multiple focus and single focus 7−136609
lyotropic liquid crystal waveguide, optical nonlinearities 7−103880
magneto-optical mode conversion in waveguides 7−138432
metallic capillaries, IR radiation absorpt. 7−136508
methane waveguide Raman laser, low-threshold operation at 1.54 μm 7−103799
2-methyl-4-nitroaniline thin film waveguide, phase-matched SHG of Nd:YAG laser *(Japanese)* 7−97089
microwaveguides, integrated optical components, acoustooptical and electrooptical diffraction based 7−90836
mid-IR waveguide developments *(Japanese)* 7−117338
mirror matching with hollow dielectric waveguide 7−90787
mode-filter type optical modulator using, ZnS crystals, propag. characts. study 7−90766
monomode nonlinear waveguides, power-transfer effects 7−136515
multichannel waveguide junctions for guided-wave optics 7−103965
multimode graded index, sensor functional potentiality and sensitivity 7−130370
multimode GRIN strip, fabricated in glass by ion exchange 7−103982
N-(4-nitrophenyl)-N-methylamino-aceto-nitrile for SHG, growth, crystal structure 7−123093
nonlinear coupling of waveguide modes 7−110558
nonlinear film guided waves, propag. 7−136514
nonlinear ion-exchanged semiconductor-doped-glass waveguide, optical switching during prism coupling 7−82683
nonlinear optical interactions, strong beam confinement by thin dielectric films *(Romanian)* 7−141927
nonlinear optical materials and devices, conf., Erice, Sicily, Italy (July 1985) 7−80172
nonlinear planar waveguide, spatial hysteresis and switching waves 7−82782
nuclear techniques for optical waveguide characterization 7−141992
optoelectronic single quantum well devices based on electron bleaching of exciton absorpt. 7−110605
planar, inhomogeneous, EM field distribution *(Polish)* 7−110568
planar anisotropic inhomogeneous optical waveguides, FEM 7−97130
planar design, with prescribed propagation constants 7−136525
planar waveguide lenses for integrated optical circuits *(Polish)* 7−130394
planar waveguides with leaky modes, propag. consts. of TE modes 7−141986
PMMA films, doped, optical waveguiding, refractive index pattern 7−99787
PMMA light guides, fabrication by photo-induced self-condensation 7−103991
poly-vinylidene fluoride copolymer poled guest/host composite for freq. doubling and waveguiding structs. 7−103909
polyimide planar optical waveguides, fabrication 7−103988
polymer waveguides, efficient grating coupler fabrication by reactive ion beam etching 7−117302
optical waveguides continued
power distribution in optical channel waveguide intersection 7−82779
preform refractive index distrib., interference meas. 7−136519
preform refractive index distrib. in interferometer with reference plane wave, interference meas. 7−136520
preform refractive index distrib. interference meas. in radial shearing interferometer 7−136521
preforms testing using interferometers 7−136522
pressure sensor, metal-clad ion-exchanged glass waveguide 7−104053
prism coupling into planar waveguides, self-pulsing 7−117318
prism coupling with optical waveguide having cubic nonlinearity 7−82788
prism light guides progress and development 7−123198
radiation propag., parabolic eqn. approx. 7−117317
random volume perturbations, equivalent parameters 7−68843
RF discharge for waveguide laser pumping, num. study 7−117774
rib waveguide, propagation constants approximate values calc. 7−130322
rib waveguide grating resonator filters, anal. *(German)* 7−136483
rib waveguide with nonlinear substrate, anal. 7−117319
rigid contact between a channel $LiNbO_3$:Ti waveguide and single-mode fiber waveguides 7−130325
scattering by dielectric discontinuities, integral eqn. formulation 7−136506
semiconductor heterostructure coupled waveguide devices, optical characts. 7−97134
semiconductor laser arrays, gain-guided, free-running modes 7−123014
semiconductor lasers, high-power, astigmatism 7−68730
semiconductor optical integration, progress, review 7−103986
semiconductor optical waveguides, loss and facet reflectivity meas. technique 7−103994
semiconductor optical waveguides, nonlinear response, carrier diffusion effect 7−136512
semiconductor ridge waveguide DH lasers, self-consistent anal. 7−74922
silica fibre light guide, doping additives, Raman scatt. determ. 7−114059
slab waveguide electrooptic filters, modal dimensionality and dephasing effects 7−141983
slab waveguide refractive index profile, automatic meas. by interferometric fringe processing 7−102508
slab waveguides, almost-periodic distributed feedback, anal. via fundamental matrices 7−136504
slab-type waveguide, SHG using 2-methyl-4-nitroanaline as high index top layer 7−97073
soda-lime glass, thermo-optic effects and applications 7−136468
spectral inverse problems for optical waveguides and couplers 7−136529
step height meas. using two-wavelength phase-shifting interferometry 7−121206
stress-optical effects in optical waveguides produced in glass by K^+-Na^+ ion exchange *(German)* 7−136536
strip-loaded waveguide using underlay 7−103977
surfaces and layered structures, Raman spectrosc. using optical waveguides and surface plasmons 7−77588
thin film lenses with acircular boundaries *(German)* 7−136625
thin-film waveguide, guiding props. of TM modes 7−90785
TM-polarised nonlinear modes guided by symmetric five-layer dielectric structure 7−103975
transverse coupling between single-mode fibre and thin film waveguide 7−103976
22-tricosenoic acid, Langmuir-Blodgett multilayers, optical loss 7−138527
22-tricosenoic acid Langmuir-Blodgett multilayers, surface press. effects 7−143229
weakly inhomogeneous, approx. variable separation method 7−110575
Y coupled laser diode arrays with single-lobe far-field radiation pattern 7−68677
Y-junction from bimode planar light guide to monomode light guides, parameters 7−103968
Ag layer on slab optical waveguide, phase-matched SHG of surface polariton 7−123084
Ag^+-Na^+ ion-exchanges channel waveguides in optical glasses charactn. 7−103985
(Al,Ga)As-GaAs MQW planar waveguides, optical props., reactive ion etching of rib waveguides and directional couplers 7−117350
(Al,Ga)As-GaAs MQW DH optical waveguides as electroabsorpt. modulators 7−136501
Al anodising technique for fabricating optical thin-film waveguides 7−123282
AlGaAs DBR laser, index-guided surface emitting type, effective index and dispersion meas. 7−68638
AlGaAs lasers, index guided with mode filter, local normal mode analysis 7−122960
AlGaAs-GaAs, multi quantum well laser, index guided, Si induced disordering 7−141893
AlGaAs-GaAs DQW-SCH metal-clad ridge waveguide lasers 7−82604
AlGaAs-GaAs laser, SCH DFB, at 880 nm, grown by MOCVD 7−130098
AlGaAs-GaAs laser diodes, index-guided 6950 to 7150 Å, optimisation and charactn. 7−122955
AlGaAs-GaAs laser waveguide under current injection, carrier-induced phase shift and absorpt. 7−82549
Al_2O_3-B_2O_3-SiO_2-Na_2O glass, heavy metal doped, generation of optically wave-guiding layers 7−103970
AnS crystals in mode-filter type optical modulator, propag. characts. study 7−90766
antiresonant reflecting optical waveguide structures for III-V integrated optics 7−130390
As_2S_3, glassy, optical effects in thin film waveguides 7−103969
$Bi_{12}SiO_{20}$ silicosillenite, photoinduced optical waveguide form. 7−110567
CO waveguide laser, output power, discharge current oscillation effect 7−96973
CO waveguide laser, pulsed, operating at room temp. 7−103834
CO waveguide laser, RF discharge excitation 7−90581
CO waveguide laser, water-cooled, gain 7−96986
CO_2 laser, Pyrex waveguide type with freq. tuning, construction and performance 7−123022
CO_2 laser gain cavities, waveguide-like, RF- and DC-excitation, transverse gain profiles meas. 7−117234
CO_2 single pass waveguide laser amplifier, studies 7−122912
CO_2 waveguide laser, phase locking and tunability 7−122907
CO_2 waveguide laser, small signal gain and saturation intensity, curve-fitting technique 7−82529
CO_2 waveguide laser with quartz capillary and separated diffr. grating 7−130186

optical waveguides continued
CO_2 waveguide lasers, servo loop technique for locking slave resonator to master oscillator 7−110416
CdS substrate diffusion waveguides, fabrication and props. *(Russian)* 7−75116
$CdS_{1-x}Se_x$, semicond. layers, waveguide, index and depth profiles determ. 7−130331
CdS_xSe_{1-x} doped glass nonlinear guided wave structures 7−136518
CdS_xSe_{1-x} integral optics waveguides, fabrication study 7−103996
Cs^+-doped glass buried waveguides for passive integrated optics 7−104041
FeNi thin films, magneto-optical effects, waveguide appls. 7−123197
Ga-Al-In-As ternary and quaternary alloy compositions, MBE growth and device appl. 7−77810
GaAlAs waveguides, induced absorpt. optical bistability 7−136394
GaAlAs-GaAs GRIN ridge waveguide laser developed by ion beam etching 7−74957
GaAlAs-GaAs laser with dielectric-film waveguide DBR 7−130101
GaAs BH waveguides with high coupling efficiency for single-mode fibres 7−110572
GaAs coplanar waveguide, electro-optic meas. of standing waves 7−90777
GaAs, integrated optical bent waveguide with 45° mirror, selective LPE growth 7−123195
GaAs laser diodes, double contacted BCRW type, self-pulsating operation with high repetition rate 7−130195
GaAs travelling wave polarization electrooptic waveguide modulator 7−130313
GaAs, waveguide interferometers and couplers for high-speed electro-optic modulation and switching 7−75117
GaAs/AlGaAs GRIN-SCH lasers, fabrication with ridge waveguides 7−123019
GaAs/AlGaAs superlattice waveguide, 2DEG, intersubband absorpt. and photon drag, IR detector appls. 7−112471
GaAs-AlGaAs, low-loss, single mode optical waveguides, organometallic VPE grown, appl. for integrated optoelectronics 7−117310
GaAs-AlGaAs, waveguide, grating coupler, selective superlattice intermixing 7−141990
GaAs-AlGaAs coupled quantum well waveguides, electroabsorption 7−90775
GaAs-AlGaAs MQW waveguides for integrated optics *(German)* 7−136533
GaAs-AlGaAs MQW waveguide structs. optical props. 7−138512
GaAs-AlGaAs mixed-mode phase-locked quantum well laser arrays 7−90652
GaAs-AlGaAs optical waveguides, bend losses 7−136608
GaAs-AlGaAs single-mode miniature optical waveguide with low transmission loss coeff. 7−110573
GaAs-AlGaAs:Zn superlattices, impurity-induced disorder-delineated optical waveguides 7−90773
GaAs-GaAlAs electron-beam-pumped semiconductor laser with a waveguide output 7−123020
GaAs-GaAlAs high-NA optical waveguides with low losses 7−82776
GaAs-GaAlAs lasers, linear tailored gain broad area, anal. 7−123015
GaAs-GaAlAs planar waveguide acoustooptic Bragg cells fabrication and characts. 7−123199
GaInAs strained layer quantum well GRIN ridge waveguide injection laser 7−110377
GaInAs/InP low-loss optical waveguides for 10.6 μm wavelength 7−82777
GaInAs-InP, phase and amplitude modulation by free carriers injection at 10.6 μm 7−136500
GaInAsP/InP electro-optic modulators using passive rib waveguides 7−75108
GaInAsP-InP, laser amplifier, 1.3 μm with integrated passive waveguides 7−123278
GaInAsP-InP lasers, DBR dynamical single mode bundle-integrated-guide, 1.5 μm, spectral behaviour 7−122962
GaInPAs-InP, heterostructure waveguide, liq. phase epitaxy 7−68837
HCN waveguide laser at 0.337 mm, optimisation 7−110335
HgCdTe IR optical waveguides 7−103995
III-V semiconductor waveguides and phase modulators, VPE 7−103987
$In_{0.52}Al_{0.48}As$ as waveguide material lattice-matched to InP, refr. index 7−136462
InGaAlAs-InP monolithic integrated ridge waveguide photodiodes, MBE grown, 1.55 μm operation 7−104036
InGaAlAs-InP ridge optical waveguide grown by MBE, low loss 7−136531
$In_{0.53}(Ga_xAl_{1-x})_{0.47}As$ layers, MBE growth, photoluminesc. charactn., optointegrated device appls. 7−144288
InGaAs/InP antiresonant reflecting optical waveguides for integrated optics 7−68834
InGaAs-InAlAs waveguide MQW optical modulators with high on/off ratio and low drive voltage 7−110557
InGaAsP-InP material, waveguide struct. by epitaxial techniques 7−136532
InGaAsP-InP quantum well modulators, MBE grown 7−110552
InGaAsP-InP ridge-waveguide-laser diodes, polarisation control 7−90607
InGaAsP-InP waveguide mirrors, self-aligned low-loss totally reflecting *(German)* 7−136534
InGaP-InP waveguides, pure and Fe doped, fabrication and characterisation 7−103964
InP inverted rib waveguide, monolithic integration with GaInAs photodiode 7−136616
InP-InGaAsP optical waveguides, MOVPE grown, low-loss, single-mode, fabrication, props. and appls. 7−103966
K^+-doped borosilicate glass monomode ring coupler, fabrication 7−103984
KH_2PO_4-KD_2PO_4 mixed cryst. optical waveguide grown on {101} plane of KD_2PO_4 cryst., characts. 7−97135
$KTiOPO_4$ optical waveguides, fabrication and characterisation 7−90776
$LiNbO_3$ crystals, ion-exchange processes study during optical waveguide struct. form. 7−71484
$LiNbO_3$, double proton exchange for low loss and quasi-embedded waveguides 7−136635
$LiNbO_3$ electric-field-assisted proton-exchanged 7−136505
$LiNbO_3$, integrated optical devices, technology 7−104039
$LiNbO_3$, ion implanted stripe optical waveguide, fabrication 7−90786
$LiNbO_3$ low-insertion-loss channel waveguides fabricated by proton exchange 7−68835
$LiNbO_3$, microfabrication of planar waveguides 7−104040
$LiNbO_3$ optical waveguides, microstructs., TEM exam. 7−90796
optical waveguides continued
$LiNbO_3$ optical waveguides produced by Ti in-diffusion, ion exchange, and ion implantation 7−141993
$LiNbO_3$, proton exchange, integrated optics development 7−136632
$LiNbO_3$ substrate, outdiffusion during waveguide fabrication 7−136636
$LiNbO_3$ Ti-indiffused optical waveguide fabrication, Ti implantation, shallow perturbation 7−136633
$LiNbO_3$ tree-structured optical switch matrix, geometrical design 7−82865
$LiNbO_3$ waveguides, annealed proton-exchanged, surface wave studies 7−90792
$LiNbO_3$ waveguides, guided mode effective index meas. using Cherenkov SHG 7−103978
$LiNbO_3$ waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:H^+ single-mode waveguides, planar and stripe 7−103980
$LiNbO_3$:He^+, ion implanted, damage profiles, propag. const. and attenuation var. with annealing temp. and time 7−82784
$LiNbO_3$:He^+, optical waveguides, characteristics formed by ion implantation 7−136526
$LiNbO_3$:He^+, sample temp. effect on struct. 7−103974
$LiNbO_3$:He^+ implanted optical waveguides, annealing using an optical furnace 7−110566
$LiNbO_3$:He^+ low-loss optical stripe waveguides, form. by ion implantation 7−117312
$LiNbO_3$:He^+ optical waveguides, electro-optical effect 7−82866
$LiNbO_3$:He^+ optical waveguides, spectral props. 7−103981
$LiNbO_3$:He^+ waveguide, optical props. 7−141987
$LiNbO_3$:Ti, H combined optical and acoustic strip waveguides for efficient collinear acousto-optical interactions 7−136620
$LiNbO_3$:Ti, MgO TE-TM mode convertors 7−117353
$LiNbO_3$:Ti, positive index waveguide fabrication by ion implantation 7−69786
$LiNbO_3$:Ti channel waveguides, z-axis oriented, optical damage effects 7−90791
$LiNbO_3$:Ti channel waveguides, optical parametric fluorescence 7−103898
$LiNbO_3$:Ti channel waveguides, optical mode intensity meas., two dimens., comparison with numerical calcs. 7−104051
$LiNbO_3$:Ti electro-optic waveguide switch, optical intensity modulation to 40 GHz 7−117305
$LiNbO_3$:Ti graded index waveguide 7−136523
$LiNbO_3$:Ti guided wave devices, reliability considerations 7−141989
$LiNbO_3$:Ti integrated optic strip waveguide phase modulator driven by SAW 7−82767
$LiNbO_3$:Ti integrated-optical absorbers 7−136607
$LiNbO_3$:Ti optical waveguide form. by CO_2 laser annealing 7−90795
$LiNbO_3$:Ti optical waveguides, wavelength dispersions as function of diffusion parameters 7−110565
$LiNbO_3$:Ti optical waveguides, Ti conc. inhomogeneities, electro-optical characts. 7−136513
$LiNbO_3$:Ti slab type optical waveguides, Ti thermal diffusion *(Japanese)* 7−103963
$LiNbO_3$:Ti waveguide, reflection mode integrated optical Fabry-Perot modulator 7−136502
$LiNbO_3$:Ti waveguide with SiO_x film coating, oscillatory optical bistability in Mach-Zehnder interferometer 7−68763
$LiNbO_3$:Ti waveguide technology and devices 7−90790
$LiNbO_3$:Ti waveguide bends for integrated optics 7−103979
$LiNbO_3$:Ti waveguide mode control via fingering of Ti strips 7−136530
$LiNbO_3$:Ti waveguides with suppressed Li_2O outdiffusion, props. 7−68842
$LiNbO_3$:Ti waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:Ti waveguides, planar, photorefraction 7−90788
$LiNbO_3$:Ti waveguides, proton exchanged, parametric oscill. numerical model 7−103896
$LiNbO_3$:Ti waveguides, SHG, phase matching via periodic structures 7−103897
$LiNbO_3$:Ti waveguides, photoinduced TE-TM mode conversion 7−130333
$LiNbO_3$:Ti waveguides, implantation and integrated optical devices 7−136626
$LiNbO_3$:Ti waveguides, refr. index step induced by wet atm. diffusion 7−136634
$LiNbO_3$:Ti:MgO waveguides, bend loss reduction through double diffusion 7−117351
$LiNbO_3$:Ti(H^+) optical waveguides, refractive index profiles 7−123279
$LiNbO_3$:Ti, ion-implanted, solid-phase epitaxy, optical waveguide fabrication 7−97132
$LiTaO_3$ optical waveguides, fabrication by H^+ exchange 7−82781
$LiTaO_3$, planar and channel low loss optical waveguides 7−130318
$LiTaO_3$, proton exchange, integrated optics development 7−136632
$LiTaO_3$:H^+ single-mode waveguides, planar and stripe 7−103980
MnSb thin films, magneto-optical effects, waveguide appls. 7−123197
Na^+ ionic conducting glasses for batteries and wave-guide devices 7−106479
Na_2O-CaO-SiO_2 glass, stress-induced index change for Na^+-K^+ ion exchange 7−123136
Na_2O-CaO-SiO_2 glass single-mode channel waveguides, fabrication by two-step diffusion *(Japanese)* 7−110571
PLZT thin films, for high speed total internal reflection optical switches 7−103989
Si substrate for integrated optics 7−104044
Si:Be optical waveguide, emission from impurities 7−136516
Si-clad planar optical waveguides, FEM analysis of propagation characts. 7−110560
Si-sapphire nonlinear waveguide structure, ultrafast optical switching 7−90784
Si_3N_4-SiO_2 optical waveguides on Si, low loss 7−117349
SiO_2:GeO_2 optical waveguides, optical props. effect of laser heating 7−136538
SiO_2-Si_3N_4-SiO_2 rib waveguides, low loss Bragg reflectors 7−117348
SiO_2-TiO_2 glass planar optical waveguides, fabrication by soot deposition process 7−97129
SiO_x film waveguides for integrated optics, losses 7−97175
$Si_xO_yN_z$ film waveguides for integrated optics, losses 7−97175
Ta_2O_5-SiO_2-GaAs waveguide, acoustooptic interaction 7−136517
TiO_2-Nb_2O_5-B_2O_3-Na_2O-SiO_2 glass for nonlinear optical waveguides, synthesis and characts. 7−136469
XeCl microwave discharge waveguide laser 7−68693
YIG film, bulk spin wave-light waveguide interaction obs. *(Polish)* 7−138301
YIG gyroanisotropic planar waveguide, magnetooptical mode conversion 7−123196

optical waveguides continued
YIG multilayers, LPE, single mode magneto-optical waveguide props. 7−110562
YIG:Gd, Ga thin films, magneto-optical effects, waveguide appls. 7−123197
ZnO optical waveguide, adsorbed O_2, CARS 7−76606
ZnS substrate diffusion waveguides, fabrication and props. *(Russian)* 7−75116
ZnSe single crystal waveguides, optical bistability, nonlinear switch ing 7−141980

optical windows *see optical elements*

optical workshop techniques
air-bearing turn-tables for micromachining of aspherical and Fresnel mirrors 7−90848
antireflection coating, optical monitoring strategies rel. to reproducibility of completed layer systems 7−104066
aspheric optics by diamond machining 7−82875
aspherical lens fabrication, flexible manufacturing system 7−117364
aspherical lenses as high power laser focusing optics 7−90744
aspherical micromachining, prediction and minimisation working zone migration on ND-tools 7−90847
aspherical optics, conf., Orlando, FL, USA (April 1986) 7−88737
automated aspheric polishing machine 7−90853
automated machining of large optical components with small tool, test 7−110614
automated optical coating processes with optical thickness monitoring 7−104063
bi-aspherical readout lens, replicated, for optical disc systems 7−90742
biconical tapered couplers, automated manufacture and charactn. overcoupled operation 7−123257
blazed zone plates, manufacture using Fabry Perot interferometer, report 7−90757
cements, luminesc. 7−104062
centering and assembling of optical components, w.r.t. tolerance checks *(German)* 7−130400
CNC of optical coating systems 7−104068
coating form. kinetics, charact. props. 7−123160
coating laboratories, IBM PC use for maximizing production 7−104069
computer-controlled electron-beam writing system for thin film microoptics 7−68913
conference, Innsbruck, Austria (April 1986) 7−108026
conference, Innsbruck, Austria (April 1986) 7−134352
couplers for fibre optic systems, review 7−130377
diamond machined optical components, specifications and manufacturing 7−75175
diamond machining as production tool 7−117362
diamond tools, verifying quality using plunge cuts and microinterferometer 7−90846
diamond turning with MOORE machine for infra red applications 7−90850
digital interferogram analysis and DIN norms 7−110616
disc substrate replication master 7−90842
drum twister for stranding of optical fibre cables 7−110602
element fabrication for adverse environments, conf., Albuquerque, NM, USA (Feb. 1987) 7−102023
evaporation monitoring system featuring 'software' trigger points and on line evaluation of refractive indices 7−104065
evaporation processes, computer simulation 7−124784
Fabry-Perot filters for wavelength demultiplexing, optical monitoring method during growth 7−103945
Fabry-Perot interferometer, use of gamma ray radiation to parallel the plates 7−80856
far-field meas. using integrating sphere 7−82835
fibre cable construction methods *(Polish)* 7−82878
fibre characteristics and standards, conf., Cannes, France (Nov. 1985) 7−66821
fibre coating requirements and developments 7−68870
fibre coupler fabrication method with automatic fusion-elongation processes 7−123227
fibre diameter monitoring during pulling using dual edge diode beam of light 7−104014
fibre drawing process, temp. regime effect on stability 7−77933
fibre end evaluation before splicing using spatial freq. analysis 7−68922
fibre ends, positioning and treatment *(French)* 7−130374
fibre fabrication techniques 7−130401
fibre gratings, fabrication and simulation 7−75161
fibre lightguide fabrication technology, development 7−82796
fibre manufacture by VAD, latest developments 7−68918
fibre manufacture using MCVD process 7−68916
fibre manufacturing processes and testing *(German)* 7−82869
fibre manufacturing techniques and technology at AT&T 7−110611
fibre optic power divider, 3-dB fabrication for sensor appls. 7−130364
fibre OVD manufacturing technology 7−68915
fibre preform measurements and their industrial application 7−68923
fibre preform refractive index meas. model 7−90816
fibre preforms, high rate fabrication by multiflame VAD method *(Japanese)* 7−136544
fibre preforms defect determ. OSEE method 7−136579
fibre preforms prepared by plasma-impulse-CVD 7−68921
fibre production microprocessor control system *(Czech)* 7−136628
fibre profiling technique, refracted near-field based, thermal effect 7−82832
fibre sensors and lasers fabrication techniques *(Japanese)* 7−123212
fibre sensors fabrication and props. 7−142009
fibre spliced portion, heat-shrinkable-sleeve reinforcement method, reinforcement machine using induction heating 7−110599
fibre splicing method for high quality connections *(German)* 7−123283
fibre splicing techniques involving crimping *(German)* 7−130347
fibre star coupler, biconically tapered, fabrication 7−110612
fibre strength improvement for submarine cables, preform treatment and drawing conditions 7−68877
fibres, birefringent, angular alignment by interferometric technique with broadband source 7−130341
fibres, materials, fabrication, book 7−120716
fibres, sol-gel processing 7−136597
fibres for sensors, design and fabrication 7−82851
fibres for telecommunication, plasma CVD process for large scale prod. 7−68917
film deposition, sorption processes 7−104060
film ion based technique prod., progress in optics book 7−66843

optical workshop techniques continued
float polishing of optical materials 7−68908
geodesic lenses for wavelength optical devices, design and fabrication 7−142044
glass, grinding with diamond tools, subsurface damage depth rel. to surface roughness 7−117355
glass components fabrication, rough grinding effects *(German)* 7−82870
glass fibre preforms for telecommunication, fabrication 7−123244
glass joints made by optical contact, stress state, design and service factors effect on strength 7−75173
glass-molten salt ternary ionic system, computer simulation of uphill diffusion by ion exchange *(Japanese)* 7−92951
glasses for optical use, sol-gel process preparation *(Japanese)* 7−68914
glow discharge cleaning of C contamination of optical elements 7−75172
graded index fibre diameter measurement using diffr. pattern 7−82819
gradient index lens fabrication, computer simulation of uphill diffusion by ion exchange *(Japanese)* 7−92951
gradient index optical imaging systems, conf., Reno, NV, USA (Jan. 1987) 7−95098
grating fabrication by microcomputer and laser printer 7−136627
grazing incidence metal mirrors for Extreme UV Explorer satellite 7−97115
grazing incidence mirror free abrasive grinding simulation with vertical honing and flexible blades 7−97180
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986) 7−95085
grazing incidence optics metrology at National Physical Laboratory 7−95710
grazing incidence optics replication 7−97182
grazing-incidence optics surface characterisation for use in extreme UV and X-ray regions 7−95704
grinding attachment for lathe for lens mold fabrication 7−117359
HIPPARCOS telescope beam combiner, design, manufacture and testing 7−110537
image fibre, 250000 pixel capacity, development and fabrication, hazardous environments monitoring appl. 7−82845
incandescent light source with transparent heat mirror, design, construction and performance 7−141956
integrated optics elements, fabrication by diffusion localised by elec. field 7−130397
ion exchanged channel waveguides, fabrication directly into IC mask plates 7−123275
IR systems design, impact of novel production methods 7−117360
jointing of monomode optical fibres *(Spanish)* 7−117339
Kirkpatrick-Baez grazing incidence X-ray mirrors, automated figure formation 7−95709
lacquer polishing of X-ray optics 7−90841
laser optics, fabrication and testing 7−74995
lens, aspherical, generating, grinding and figuring, direct contact profilometry meas. 7−110615
lens formation by fiber fusion for terminating optical connectors 7−130344
lens model by CODEV, translation into IGES input file 7−110526
machining of optical surfaces, using single-diamond tools *(German)* 7−130399
manufacturing tolerances, surface quality 7−123285
MARTHE−Mirror Array Telescope for High Energies, rocket borne 7−88114
MCVD for optical fibre fabrication, Ge chemistry 7−82810
micro-optics, design, specification and manufacture 7−75176
micromachined optical surfaces, undulation due to precision machining vibration, anal., 7−90845
micromachined spherical zones, in process measurement of radius of curvature 7−90849
micromachining with focused ion beams 7−68905
micropositioning equipment for optical laboratories *(Czech)* 7−121088
mirrors, graded reflectivity, design and characterisation 7−123153
mirrors for CO_2 lasers for high power material processing appls. 7−82635
modified SZ stranding of optical fibre cable conductors 7−110601
mount with 180° angle of view, with self-locking angular adjustments 7−123287
multiclad monomode optical fibres, multivariable zone diaphragm technology appl. 7−136573
multilayers, spectral props. variations from different coating runs, inverse synthesis anal. 7−103936
multimode quartz light guides welding technology 7−104026
nonconventional optics, fabrication and testing 7−117361
nonquarterwave film thicknesses in multilayer struct. fabrication, optical monitoring using turning point method 7−130396
objective lenses for compact disc players, mass production 7−90851
optical fiber manufacturing process, microwave plasma appl. 7−130403
parabolic mirrors, off-axis, fabrication and testing 7−68810
passive fibre optic components using dispersion shifted fibre, biconical fusion technique fabrication 7−68890
passive integrated optical components made by ion exchange in glass 7−136611
planar surface fabrication, using calibrating tool *(Czech)* 7−104057
PMMA light guides, fabrication by photo-induced self-condensation 7−103991
polishing machine, microcomputer controlled, for very smooth and deep aspherical surfaces 7−110610
polyimide planar optical waveguides, fabrication 7−103988
polymer optical fibre development, loss mechanisms and fabrication 7−90799
polymer waveguides, efficient grating coupler fabrication by reactive ion beam etching 7−117302
powder process use for fibre manufacture, LAN appls. *(German)* 7−142050
process engineering aspects of optical scale manufacture 7−136629
process planning of prismatic parts, dialogue system 7−123288
quarterwave multilayers, optical monitoring of thickness *(French)* 7−97179
quartz fiber preform collapse process, identification 7−90807
rare-earth-doped fibres, fabrication by soln., doping technique 7−68910
replication manufacturing process, overview and design guide 7−117358
ring resonators, high finesse, fabrication and analysis 7−104052
side coupler for coupling between laser diode and single-mode fibre 7−123200
single mode fibre testing methods for industrial environment, review 7−82821

optical workshop techniques continued
single-mode fibres, stuffing-pulling mass fusion splice techniques *(Japanese)* 7−130382
single-mode optical fibres, matched and depressed cladding, fabrication, CVD 7−68912
spheres, full, sphericity measurements using subaperture optical testing techniques 7−121069
surface metrology, statistical and signal processing concepts 7−90856
surface roughness classification and evaluation *(Czech)* 7−90843
surface shaping by ion processing method, calc. 7−110613
synchrotron radiation mirror super high-precision machining to give high quality images *(Japanese)* 7−117356
synchrotron radiation mirror super-high accuracy profile meas. for machining *(Japanese)* 7−117357
synchrotron radiation optics, surface roughness property survey 7−95705
Technology Mirror Assembly project assembly and alignment techniques 7−95708
telecommunication optical fibres, props. and manufacture *(Polish)* 7−68887
thickness monitoring fully automated system for thin film prod. 7−104064
thin film coating technology for ophthalmic lenses 7−90753
thin film technologies, conf., Innsbruck, Austria (April 1986) 7−102011
thin films, ion and photon-beam assisted deposition 7−125969
US precision cleaning of optical components prior to and after vacuum coating 7−104067
VUV diffraction gratings, multisectional concave, fabrication 7−104059
waveguide, circular metallic hollow, with Ge coating, for IR laser radiation transmission 7−110561
waveguide fabrication, diffusion parameters evaluation with gradient index gratings 7−82874
waveguide profiles, ion-exchanged control with Ag thin film sources 7−141982
waveguides, curved, integrated optical circuits appls. 7−103983
waveguides, multimode GRIN strip, fabricated in glass by ion exchange 7−103982
waveguides produced in glass by K^+-Na^+ ion exchange *(German)* 7−136536
X-ray mirror, grazing incidence, manufacture 7−90852
X-ray optics, lacquer coating technique 7−97181
(Al,Ga)As/$(Ca,Sr)F_2$ multilayer structures, MBE growth as broad-band high-reflectivity mirror 7−77825
(Al,Ga)As-GaAs MQW planar waveguides, optical props., reactive ion etching of rib waveguides and directional couplers 7−117350
Al anodising technique for fabricating optical thin-film waveguides 7−123282
Al coated optical fibres, mech. and optical props. 7−68878
AlGaAs-GaAs laser diode, inner stripe type, single-step MBE fabrication 7−68675
CO_2 laser processing of glass and single crystal fibers 7−136631
CdS_xSe_{1-x} doped glass nonlinear guided wave structures 7−136518
CdS_xSe_{1-x} integral optics waveguides, fabrication study 7−103996
Cu mirrors, ion beam smoothing 7−117949
Er^{3+}:SiO_2, single-mode fibre laser operating at 1.55 μm 7−68692
GaAs, integrated optical bent waveguide with 45° mirror, selective LPE growth 7−123195
GaAs, waveguide interferometers and couplers for high-speed electro-optic modulation and switching 7−75117
GaAs-AlGaAs, waveguide, grating coupler, selective superlattice intermixing 7−141990
GaInAsP/InP unstable resonator lasers, fabrication using chemical facet etching method, characts. and performance 7−130157
GaInPAs-InP, heterostructure waveguide, liq. phase epitaxy 7−68837
Ge aspherical lens fabrication by ion milling 7−110617
GeSbSe chalcogenide glass IR optical fibres, properties and applications 7−68860
$In_{0.52}Al_{0.48}As$ electro-optic directional coupler grown on InP by MBE 7−136498
KH_2PO_4-KD_2PO_4 mixed cryst. optical waveguide grown on {101} plane of KD_2PO_4 cryst., characts. 7−97135
$LiNbO_3$, double proton exchange for low loss and quasi-embedded waveguides 7−136635
$LiNbO_3$, microfabrication of planar waveguides 7−104040
$LiNbO_3$, proton exchange, integrated optics development 7−136632
$LiNbO_3$ substrate, outdiffusion during waveguide fabrication 7−136636
$LiNbO_3$ Ti-indiffused optical waveguide fabrication, Ti implantation, shallow perturbation 7−136633
$LiNbO_3$ waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:He^+ optical waveguides, ion implanted, damage profiles, propag. const. and attenuation var. with annealing temp. and time 7−82784
$LiNbO_3$:Ti waveguide mode control via fingering of Ti strips 7−136530
$LiNbO_3$:Ti waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:Ti waveguides, refr. index step induced by wet atm. diffusion 7−136634
$LiNbO_3$;Ti, ion-implanted, solid-phase epitaxy, optical waveguide fabrication 7−97132
$LiTaO_3$ optical waveguides, fabrication by H^+ exchange 7−82781
$LiTaO_3$, proton exchange, integrated optics development 7−136632
MgF_2 coated VUV high reflectance mirrors 7−141966
Mo mirrors, ion beam smoothing 7−117949
Ni-Co diffraction grating deposition from sulphamate electrolyte *(German)* 7−82872
Si, reactive ions etching, large scale optical components fabrication 7−144641
Si_3N_4 antireflection coatings for semiconductor lasers, reactive sputtering directly controlled deposition 7−68668
Si_3N_4 films, selective area laser CVD, microlenses fabrication 7−71062
SiO_2 films, selective area laser CVD, microlenses fabrication 7−71062
SiO_2 optical fibres, characts., influences of drawing conditions 7−123252
SiO_2 plastic clad fibres, axial lateral plasma deposition for single and multimode fibres 7−68919
SiO_2:F optical fibres, stress props. 7−82790
SiO_2:GeO_2 high NA multimode fibre made by pressurized MCVD 7−68920
SiO_2:GeO_2 optical fibres, stress props. 7−82790
SiO_2:Sb_2O_3 fibres fabricated by VAD method 7−123219
SiO_2-SiO_2:F, pure silica core fibre with doped cladding, VAD fabrication technique and characts. 7−97144
YIG cryst. laser diode module with optical isolator, floating zone growth method 7−103815

optical zone plates
blazed zone plates, manufacture using Fabry Perot interferometer, report 7−90757
electron beam generated cylindrical zone plates, quantisation effects 7−123172
equilateral hyperbolic, use in Mach-Zehnder interferometer alignment 7−90756
Gaussian beam diffraction through different types of zone plates 7−96938
holographic zone plates with aberration corrections, systematic design method 7−110539
holographically produced parabolic zone plates 7−110301
multiple annular circular aperture, diffr. pattern maxima and minima 7−129963
optical sensors, spectral props. and parameters 7−110541
soft X-ray undulator, optical matching with condenser Fresnel zone plates 7−67448

optics
see also aberrations; adaptive optics; atmospheric optics; fibre optics; Fourier transform optics; geometrical optics; gradient index optics; holography; integrated optics; nonlinear optics; optical elements; physical optics
book, progress in optics 7−66843
Goethe's rejection of Newton's Opticks, Bezold-Brucke phenomenon 7−134421
Lie algebraic methods for Hamiltonian systems 7−129492

optimal control
see also dynamic programming; game theory; maximum principle; minimum principle
chemical reactions, optimal regulator control, inverse problem 7−78459
chemical reactors, catalyst decay, distrib. control for optimal temp. 7−93366
contingent Hamilton-Jacobi eqns. in optimal control problems *(French)* 7−72831
function space null controllability of linear delay systems 7−102104
heat conductivity eqns., optimal control problem soln. using iterative process *(Russian)* 7−90919
hyperthermia treatment equipment, feedback control and optimisation, present status and future needs 7−107221
infinite horizon optimal control, Lagrange problems and controllability 7−80360
neutron field regulator of reactor, synthesis 7−141123
nonlinear hereditary differential eqns., optimal control 7−88878
nonlinear inverse heat conduction problem in thermal system optimal boundary control 7−75247
parabolic variational inequalities appl. 7−83005
parameter identification using pseudogradient method *(Spanish)* 7−133604
permanent magnet castings, thermomag. treatment regimes optimisation 7−77872
phase distortion structure for beam propagating in randomly inhomogeneous nonlinear medium 7−130213
Stefan problem, stochastic, one phase, optimal control 7−97279
Stefan problem with state-space constraints 7−97533

optimisation
see also mathematical programming; minimisation
2D elasticity shape optimisation by dual finite element method 7−72983
active solar collectors, calcs. and appls. (book) 7−100759
Bethe spin glass, random graph bipartitioning ferromagnetic Bethe lattice, optimisation 7−143826
biomass-to-methane conversion, two-product system, dynamic programming optimization anal. 7−100741
brachytherapy, optimisation of radioactivity distrib. 7−133472
CANDU reactor, optimization of in-core devices and fuel management, numerical anal. 7−96225
CANDU-CANDU (Th/Pu)-LMFBR(PuO_2) nuclear power system, optimisation using stochastic approach 7−129133
cardiopulmonary resuscitation, coronary blood flow optimisation, computer simulation results 7−114548
closed hierarchical information systems in physics described in the language of graph theory and applications of information theory constructs 7−80276
column, compressed, multimodal optimal design, w.r.t. buckling 7−104189
combinatorial optimisation using simulated annealing, protein folding appl. 7−133198
COMO, optical design program 7−110517
composite rods for beam structures, load-bearing capacity, minimal weight design 7−68987
cryostat CAD, thermal analysis and optimisation 7−73361
CT maximum entropy reconstruction with constraints, reduction using duality principles 7−145212
DC plasma for at. emission spectrosc., simplex optimisation 7−89269
dynamic press. meas. systems 7−89192
EELS, optimal background estimation 7−138560
electron spectrometer data acquisition and control system 7−67434
fibre reinforced composite articles, transversely reinforced, monolithic integrity, design algorithm 7−142232
filament shells, loaded by internal press. in field of centrifugal forces, optimal design 7−142159
gait swing phase, dynamic optimisation technique for predicting muscle forces 7−71802
gel solar pond, design, optimisation 7−126650
graph optimisation problems and the Potts glass 7−140624
Helmholtz equation, inverse transmission problem, optimisation anal. 7−110642
high power laser installations, optical layout study 7−103832
human motor self-paced path control task optimisation model 7−126866
imaging systems, optimizing evaluation using equatorial Gauss moment *(German)* 7−110281
large telescope optical quality optimisation and cost reduction, active optics control 7−107720
magnetic deflection system optimisation by method of orthogonal design 7−74830
neurophysiological system under controllable experimental conditions, input action optimisation 7−100838
nonlinear structural response, design sensitivity anal. and optimisation 7−130550
nonstationary thermoelasticity, optimal design and sensitivity anal. problems 7−97324
nuclear power plants, optimization of preventive maintenance 7−135514

optimisation continued
optical design code for system design optimisation in thermal-mechanical environments 7−117289
p-n junction capacitance determ. using curve fitting procedure 7−138015
parallel tube-manifold system for dynamic press. meas. optimisation 7−89193
plates, elastic perforated, least-weight design 7−97319
plates, elastic perforated, least-weight design 7−97320
polycrystalline structure reconstruction, combinatorial optimisation appl. 7−69532
polymatroids in E_+^3 *(German)* 7−108194
PWR, Gd burnable absorber optimization for improved power distrib., conjugate gradients method 7−129233
PWR, low-leakage fuel management, optimization of core reload design 7−129235
radioactive waste management, role of optimization techniques in assessment of practicable environmental options 7−100762
ring laser, random frequency base, anal. 7−130206
slab, layered, struct. optimisation with rigid striker penetration 7−69072
sound speed determination of acoustic medium from its surface impulse response 7−123294
spacecraft rendezvous trajectories., fuel-optimal and singular, based on linearisation about point in circular orbit 7−145806
sphere, layered, from finite set of materials, optimisation of mass 7−68988
spherical vessel under pressure, multilayered, optimal piecewise homogeneity 7−83043
superconducting magnets for whole-body NMR imaging, optimal design 7−133497
surface-groundwater systems, optimal cropping patterns determination using multilevel optimisation techniques 7−114848
synthetic sounds quantitative anal. of similarities between data using MDS-kNN 7−82947
test intervals for means of meas. optimisation 7−128517
thermoelastic solids, material and load optimisation, sensitivity analysis 7−88971
two-component optical coatings synthesis, optimality 7−90755
unidirectional ring gas laser, output irradiance, system optimisation 7−136368
urban area power structure optimisation model including ecological aims *(Croatian)* 7−139144
wheelchair seat position optimisation anal. 7−100954
X-ray powder pattern indexing, optimisation appls. 7−97851
Fe electrode for alkaline storage batteries, statistical optimisation 7−86780
NH_3 sensitive MOS structures with Pt gates 7−121098

optimum control *see optimal control*

optoacoustic effect *see photoacoustic effect*

optoacoustic spectra *see photoacoustic spectra*

optoacoustic spectroscopy *see photoacoustic spectroscopy*

optoelectronic devices
see also integrated optoelectronics; photoelectric devices
conducting polymers, appl. in electronic and optoelectronic devices 7−97106
conference, lasers and electro-optics, Baltimore, MD, USA (April-May 1987) 7−120705
CSELT optical fibres research activities for telecom. *(Italian)* 7−103998
Digital Photogrammetry System, stereo-push-broom scanner system charcts. 7−101557
fibres and appls., conf., Warsaw, Poland (Feb. 1986) 7−134354
fog detectors with continuous sinusoidal modulation, signal backscatter *(Polish)* 7−94510
IEICE National Convention, Keio, Japan (March 1987) 7−108028
impulse and transfer charcts., error of expt. estimates 7−102374
laser based opto-electronic system for displacement and vibration measurements 7−140672
multispectral thermal IR push-broom imager for remote sensing 7−101559
piezoelectric thin films, epitaxial growth, SAW and optoelectronic appls. 7−99720
semiconductor quantum well structures, field induced optical nonlinearity, optical gate, bistability 7−136408
signal processing, spatial light modulators and bus systems *(German)* 7−122848
AlGaInAsSbP material parameters determ. for pot. optoelectronic device appls. 7−105392
GaAs and related cpds., conf., Las Vegas, NA, USA (Sept. 1986) 7−120702
GaSe, recombination mechanisms investig. by optoelectronic switching 7−131663

optoelectronic integrated circuits *see integrated optoelectronics*

optogalvanic spectra
chlorodifluoromethane, optogalvanic investig. 7−82072
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
diffuse discharges, optogalvanic diagnostics in the cathode fall region *(German)* 7−130977
inert gases, hollow cathode discharge, optogalvanic spectra investig. 7−90026
resonantly absorbing medium under bleaching conditions, selective light refl. statistical modelling 7−130271
Ar optogalvanic spectra for wavelength calibration of dye laser 7−73314
Ba^+, ion Rydberg states, laser-microwave ionisation mass spectroscopy 7−68235
Br_2 discharge, Doppler limited laser optogalvanic spectra 7−129731
CO, inter-Rydberg $K^1\Sigma^+$-$B^1\Sigma^+$ and $L^1\pi$-$B^1\Sigma^+$ transitions obs., optogalvanic spectra 7−129728
CO_2 discharge, thermorelaxation studied by optogalvanic spectrum 7−130958
CO_2 discharges, optogalvanic effect at low press. 7−68293
CO_2, optogalvanic investig. 7−82072
CO_2-N_2 discharge, optogalvanic effect 7−83557
Fe UV optogalvanic laser spectroscopy for reference wavelengths 7−129639
He, glow discharge, elec. field profile, Rydberg state Stark spectroscopy 7−111299
He positive column, pulsed optogalvanic signal decay mechanism 7−75884
He-Ne discharge plasma oscill., optogalvanic spectrum charcts. *(Chinese)* 7−129635
Hg, low pressure discharge, radiative lifetimes and optogalvanic effect 7−129671
I_2, laser optogalvanic spectrum, DC voltage effect 7−116979
Kr, autoionis. spectrum, optogalvanic obs. 7−90052
Kr, autoionising levels, optogalvanic double-reson. spectra, config. interaction anal. 7−103354
Kr, hollow cathode discharge, Stark shift, optogalvanic spectra 7−129633
NH_3, optogalvanic investig. 7−82072
O, Rydberg atoms, optogalvanic study 7−109823
U, hollow-cathode discharge, Zeeman effect. optogalvanic detection 7−122443

optogalvanic spectroscopy
hollow-cathode discharges, laser photoionis., galvanic detect. 7−124021

optothermal effects *see photothermal effects*

optothermal spectroscopy *see photothermal spectroscopy*

OPW calculations
Cu, inelastic scattering of γ-rays by deeply bound electrons 7−99966

OR *see operations research*

OR gates *see logic gates*

orbital calculation methods
see also APW calculations; atomic orbitals calculations; EHT calculations; GO calculations; GTO calculations; HMO calculations; KKR calculations; LCAO calculations; molecular orbitals calculations; NDO calculations; OPW calculations; PNO calculations; PPP calculations; STO calculations
crystals, paramag. ions, anisotropic two-body orbit-orbit interactions 7−143755
exponential-type orbitals, mol. overlap integrals 7−135820
Wigner-Racah calculus for transitive representations of cyclic groups 7−134545

orbitals, atomic *see atomic structure*

orbitals, molecular *see molecular energy levels*

order, long-range *see long-range order*

order, short-range *see short-range order*

order-disorder changes *see order-disorder transformations*

order-disorder transformations
see also polymorphic transformations
adsorbed layers on metals, order-disorder transitions causing electron field emission spectra 7−100022
alkylenediammonium manganese tetrachloride, rotational motions and phase transitions *(Japanese)* 7−131063
alloys, binary, BCC and FCC, mutual diffusion processes, ordering effects *(Russian)* 7−76476
alloys, binary, FCC lattice, existence of 1D disordered structs. 7−131076
alloys, interstitial, isotopic ordering kinetics *(Russian)* 7−76067
alloys, interstitial, phase transition temps. composition depend. *(Russian)* 7−76068
alloys, ternary, short range order diffuse X-ray scatt., intensity expression 7−97854
alloys possessing charcts. of isomorphic and nonisomorphic dissociation and ordering, regular structs. *(Russian)* 7−124488
aluminosilicates, energetics and thermodynamics 7−111909
α-(BEDT-TTF)$_2$IBr$_2$, EPR meas., 15 to 300 K 7−85410
binary BCC alloy, second Hessian determinant for tricritical point determ. 7−84195
t-butyl cyanide, disordered phase, cooperative dynamics 7−142940
cadmium arachidate, order disorder transition, trace water effects 7−104617
p-chlorobenzamide, order-disorder phase transition, IR and Raman studies 7−142685
crystal-aperiodic solid phase transition in 2D hard dumb-bell system, free vol. approx. calcs. 7−131266
desorption kinetics, influence of adlayer statistics, order-disorder effects 7−124713
DNA, structural transformations 7−144959
driven sine-Toda chain, nonlinear wave propag. calcs. 7−115926
energy parameters, calc. for cluster var. and order parameter functional methods 7−104948
fatty acids, premelting, IR and Raman spectra 7−99828
graphite-K intercalation cpd., $C_{24}K$, P-T phase diagram, basal plane resistivity meas. 7−105006
honeycomb lattice gas, p(2×2) ordered phase, order-disorder transition, struct. factor, Monte Carlo calcs. 7−98382
3-hydroxy-2,2,5,5-tetramethyl-1-pyrrolidinyloxy, orientational and chiral disorders 7−142749
ice, phases V and VI, phase transitions, heat flow calorimetry obs. 7−131293
ice I_h doped with alkali hydroxides, calorimetric study, transformation to ice XI 7−118127
II-VI semiconductor pseudobinary alloys, local bonding, thermodynamic props., EXAFS studies 7−106309
incommensurate phase, 2D model phase diagram, mol. dynamics simulation 7−118055
intermetallic $L1_2$ compounds, ductile/brittle grain boundary fracture, order-disorder transitions 7−106601
Ising model, spatially varying coupling const., interface phenomena 7−120997
isostructural solids, binary A_xB_{1-x} phase diagrams, chem. and elastic interaction effects 7−84191
liquid alloys, volumetric and surface props., effect of trace elements 7−105185
metals, disordered, superconductivity, magnetism and surface reconstruction 7−84472
methane-perfluoromethane, stability and struct., mol. dynamics model 7−105014
molecular crystal, orientationally disordered phases, large amplitude motions 7−142666
molecular crystals, phase transitions, computer simulation 7−143003
neopentane, disordered phase, orientational dynamics 7−142750
orientational and translational correlations, macroscopic continuum elastic theory calcs. 7−83834
paraelectric soft modes, dielectric spectroscopy 7−124421
pentylenediammonium cadmium tetrachloride, Imma-Pnma phase transition, X-ray diffr. study 7−104618
pentylenediammonium cadmium tetrachloride, orientational conformational disorder 7−142748
Permalloy, order-disorder transitions, recovery of electron irradiated Fe-Ni alloys 7−104993

order-disorder transformations continued
perovskites, $A(B'B'')O_3$, B-site ordering, Raman scatt. obs. 7−106153
phospholipid monolayer ordering, synchrotron X-ray diffr. and fluoresc. microscopy studies 7−114205
poly(3-methylthiophene) films, ordering processes, NEXAFS obs. 7−125850
polyacetylene:Na, incommensurate-commensurate and order-disorder transformations 7−105007
polyacetylene, Durham form., order-disorder, elec. cond., struct. 7−97988
polybisphenoxyphosphazene, crystal modifications, electron microscopy 7−111425
polystyrene-polyisoprene-polystyrene triblock copolymer, order-disorder transition, rheological obs. 7−126102
semiconductor tetrahedrally bonded alloys, theory of ordering 7−104952
sinusoidal phase, wave vector dependent suscept., Landau theory 7−118757
small particles in glassy matrix, delocalisation 7−137513
solid soln., short range order evolution, Monte Carlo simulation 7−98385
solid solns., 7−69856
surface critical phenomena at first-order phase transitions 7−124431
surface order-disorder transition on BCC(110) surface 7−118214
ternary tetrahedral compounds, struct. distortions and polymorphic behaviour 7−124156
tetracyanobenzene mixed stack mol. cryst. orientational instabilities 7−131080
$(TMTSF)_2ReO_4$, electronic props., ^{13}C NMR meas. 7−85477
transition metal dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728
tris(hydroxymethyl)aminomethane, H bonding, vibr. study 7−144076
two-dimensional Lennard-Jones system melting line, thermodynamic integration calcs. 7−98383
Urea inclusion cpds., diffuse scatt. and disorder 7−86892
Ag_3SI nonequilib. phase transition kinetics, neutron diffr. study 7−131297
BN, turbostratic, ordering at high pressures and temps. 7−91787
$Ba_2YCu_3O_{7-\delta}$, high T_c supercond., electron diffr. and microscopy study 7−112589
Bi_2O_3-Nb_2O_5(Ta_2O_5)(MoO_3)(WO_3)(V_2O_5), solid soln., ordered phases 7−69858
$Ca(OH)_2$, structural prereactional transforms; lattice disorder and defect generation, neutron diffr. study 7−84240
Co-Al-C, quenched, polymorphic transform., 1D disordered long period struct. 7−144393
$CsHSO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
$CsHSeO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
Cu-Au disorder phase, thermodynamic props., phenomenological calc. 7−84293
Cu-Mn (20 at.%), ordering and solute segregation to dislocations 7−86184
Cu-Zn-Al, Cu-Zn, martensite and equilib. phases stability and transforms 7−78008
Cu-Zn-Al, shape memory effects, effect of martensite ordering 7−144486
Cu_3Au, recrystallisation during annealing, TEM studies *(Russian)* 7−144429
$Cu_xLi_{0.5-x/2}Al(Ga)_{2.5-x/2}O_4$, spinels, order-disorder transitions 7−111443
$Cu_{1/2}NbS_2$, layered, order-disorder phase transition obs. by elec. resist. meas. 7−104991
Cu_3Pd, electron irrad., spinodal ordering beyond Lifshitz point, HVEM 7−132600
Dy, electrical resistance near order-disorder transition, temp. hysteresis 7−118459
Fe-Al, B2→DO_3 ordering, atom probe FIM, TEM obs. 7−138741
Fe-Cr, σ-phase, phase transform. *(French)* 7−86164
Fe-Ge, BCC system, miscibility gap rel. to ordering 7−132579
Fe-Ni alloys, martensitic transform., effect of austenite ordering *(Chinese)* 7−71178
Fe-Pd, ordering, elec. resist., X-ray diffr., TEM obs. *(Japanese)* 7−93004
Fe-Si system, thermodynamic anal. and formulation of A2/B2/DO3 atomic ordering energy 7−138733
$Fe_{3+x}Ga_{1-x}$ off-stoichiometric alloys, DO_3-type ordering and phase separation *(Japanese)* 7−137537
$FeNi_3$ (100), (110), (111), surface lattices, dynamical characteristics 7−84479
FePd, quenched, order-disorder transform. kinetics, microstructure, annealing *(Russian)* 7−113542
$FePd_2Au$, elec. resist. and temp. coeff. meas. during ordering annealing 7−84809
$Fe_{3-x}Pt_{1+x}$ ordered alloys comp. and temp. depend. elec. resist. study 7−105528
GaAs, ion implantation, disordering, oxide film thickness 7−76183
$(GaSb)_{1-x}Ge_{2x}$ semicond. alloy, struct., electronic and thermodynamic props., role of correlations 7−118396
Ge, semiconductors, dissipative struct. form. 7−76970
graphite-$SbCl_5$ intercalation cpd., ordering kinetics obs. by ESR 7−137544
$HfV_2H_x(D_x)$ systems, order-disorder phase transitions and quadrupole interaction, NMR studies 7−76381
KCN, permutation-inversion symmetry groups, optical props. 7−124212
$KD_3(SeO_3)_2$, order-disorder phase transitions microscopic theory 7−131284
KH_2PO_4, paraelectric phase, orientationally disordered anion sublattice, vibr. spectra 7−111785
KH_2PO_4 type crystals, order-disorder models, review 7−113092
KH_2PO_4 type ferroelectrics, proton tunnelling model, review 7−113093
KH_2PO_4 type mixed ferroelec.-antiferroelec. crystals, proton glass phase, tunnelling 7−113087
KH_2PO_4-type crystals, US expts., review 7−111778
KH_2PO_4-type ferroelectrics, proton order-disorder, Slater theory and Ising model in transverse tunnelling field, review 7−113094
$KH_3(SeO_3)_2$, order-disorder phase transitions microscopic theory 7−131284
$K_{1-x}Li_xTaO_3$, cluster glass and domain state props., phase boundary 7−113090
$KTaO_3$, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
$KTaO_3$:Nb(Li)(Na), RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
La-Ba-Cu-O high T_c supercond. and semicond., cryst. struct. studies 7−117902
order-disorder transformations continued
$LiMS(Se)_2$ (M=La, Ce, Nd, Sm, Gd, Tb, Dy, Ho, Er, Y), synthesis, order-disorder transition, mag. props. 7−111862
$LiN(H_xD_{1-x})_4SO_4$, lattice vibrs., Raman spectra, 77-143 K 7−106171
$LiNH_4SO_4$, phase transition mechanism, doping effect, ionic cond., dielec. meas. 7−106100
$LiNaSO_4$, lattice dynamics above room temp. studied by IR spectroscopy 7−118043
$LiNbO_3$ single cryst., thermal expansion and transitions study 7−124559
NH_4AlF_4, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
NH_4Cl, third order elastic consts. near λ point, Brillouin scatt. study 7−104897
$NH_4H_2PO_4$, order-disorder models, review 7−113092
$(NH_4)_3H(SO_4)_2$, phase transitions, vibr. study 7−143001
NH_4I, vibr. mode, variable temp. Raman obs. 7−70808
$(NH_4)_2SO_4$, structural changes 7−76394
$NaNO_2$, permutation-inversion symmetry groups, optical props. 7−124212
Nb-H, ordered phases, predictions using lattice gas models 7−104987
NbH_x, H ordering symmetry and Landau free energy 7−131075
Ni (001), with adsorbed Se, surface phases, refl. electron diffr., AES, transfer matrix scaling studies 7−84514
Ni complex, Ni(phthalocyanine)$(ClO_4)_y$, mol. metal, band filling and counterion ordering effects 7−143450
Ni-Cr, neutron irrad., swelling, order-disorder transform. 7−86168
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7−113553
Ni_5Al_3 phase, crystal structure and phase transformations 7−98041
$Ni_3FeMn(Cr)$, magnetic and atomic ordering, temperature and order parameters *(Russian)* 7−143793
$Ni_3FeW(Mo)(Cr)(Mn)$, structural and mag. ordering, impurity effects 7−85284
Ni_4Mo, irrad. induced metastable phase form. 7−84021
$Ni_{35}Ti_{65}$ metallic glass, short range and stress-induced directional ordering phenomena 7−98441
β-PbF_2, order-disorder transition and fast-ion transition, X-ray diffr. obs. of thermal props. 7−131291
$PbTe_{1-x}Se$, Fermi surface symmetry change induced by order-disorder transitions 7−143321
Pd_3Mn, disorder-order system, elec. resist. anomalies, H solubilities 7−76883
Pd_3Mn-H system, reversible transitions between ordered structs. 7−132610
Pd(111), adsorbed H, theory of subsurface occupation, ordered structures and order-disorder transitions 7−70080
p-polyphenyls, conformational instabilities, press. depend. *(Japanese)* 7−131079
PtCo order-disorder system, anomalous mag. effects 7−132068
PtNi, ordering, role of spin-orbit interactions 7−142992
Pt_xTi, ordering phenomena, electron diffr., high resolution electron microscopy 7−138740
Pt_xV, ordering phenomena, electron diffr., high resolution electron microscopy 7−138740
$RbAlF_4$, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
Rb_xCrF_3, struct. and Rb atom ordering, HREM image studies 7−98098
RbD_2PO_4 crysts., microwave dielec. dispersion near ferroelec. transition 7−125586
RbH_2SO_4, order-disorder models, review 7−113092
$Rb_x(NH_4)_{1-x}AlF_4$, order-disorder transformation, EPR studies 7−142684
$Rb_{1-x}(NH_4)_xH_2PO_4$, ferroelec., antiferroelec., proton glass behaviour, order-disorder models, review 7−113092
Ru, (0001), with adsorbed O, order-disorder critical behaviour, LEED study 7−137719
$SbCl_5$-intercalated graphite ordering kinetics, time-resolved X-ray scattering 7−137301
Si (100), order-disorder transition *(Japanese)* 7−118215
Si, laser-irradiated melt morphology, order-disorder transitions, comment 7−142966
Sm-Co permanent magnets, ordering process, positron annihilation studies 7−92769
$SrTiO_3$, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
TaH_x, H ordering symmetry and Landau free energy 7−131075
TiAl alloy, electronic struct. and atomic ordering, LMTO and CPA calcs. *(Russian)* 7−76750
TiC_x, N effect on order-disorder transition, nonmetallic defect superlattice *(Russian)* 7−144394
TiN_x, vacancy ordering, neutron diffr. study 7−131077
$Tl_xV_6S_8$, low temp. phase transition, PES study 7−98430
W (110), chemisorbed O, ordering kinetics, scaling relationship 7−118251
Y-Ba-Cu-O high T_c supercond., vacancy order-disorder transformation 7−111550
Y-Ba-Cu-O high T_c supercond., unit cell dimensions and O contents 7−117898
$YBa_2Cu_3O_{7-x}$, high T_c supercond., orthorhombic-tetragonal transition, order-disorder model 7−137551
$YBa_2Cu_3O_{7-x}$, high T_c supercond., O ordering and orthorhombic to tetragonal phase transition 7−142995
$YBa_2Cu_3O_{9-y}$, high T_c supercond., orthorhombic and tetragonal phases 7−118077
$YD_{0.17}$, order-disorder transition, D one-dimensional ordering, diffuse neutron scatt. meas. 7−91793
ZrN_yH_z, solid solutions, decomposition 7−69892
ZrO_2:Y_2O_3 disordered cubic crysts., low freq. Raman spectra, Rayleigh wing broadening obs. 7−118994
ZrO_2-xY_2O_3, stabilised, acoustic mode freqs., Brillouin scatt. meas. 7−119024
$ZrV_2H_x(D_x)$ systems, order-disorder phase transitions and quadrupole interaction, NMR studies 7−76381

ores *see minerals*

organic acids *see organic compounds*

organic compounds
see also DNA; free radicals; macromolecules; organic semiconductors; organic superconductors; organometallic compounds; plastics; polymers; proteins; Rochelle salt; waxes
(1,2-) diradylphosphatidylethanolamines, cryst. packing, lamellar electron diffr. study 7−91556
1,2-propadiene-1-amine 7−141434
1,3-dioxolan-2-one, triple point evaluation 7−89220

organic compounds continued
(1,6-)bis(2,4-dinitrophenoxy)-2,4-hexadiyne analogs synthesis, dielectric props. 7−92572
1,6-diphenyl-1,3,5-hexatriene, time-resolved fluoresc. spectrosc. 7−82393
(1-) chloro-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
1-cyanonaphthalene-triethylamine van der Waals complex, exciplex form., fluoresc. study 7−82264
1-propanol, dielectric meas. using resonance method 7−102459
2-chloro-6-(trichloromethyl)pyridine, heat capacity and thermodynamic props. 7−98515
4-*n*-heptadecylamido-4′-nitrostilbene, a new Langmuir-Blodgett film material for nonlinear optics, prep. 7−110438
4-ethyl-2′-fluoro-4′-(4″-pentylcyclohexyl)biphenyl, mesogenic compounds, crystal and mol. structs. 7−137353
5CB, nematic liquid cryst., stimulated scatt. studies 7−103892
8CB, liquid crystal, phase transitions, photoacoustic study 7−131309
8CB nematic and smectic A liq. cryst., phase transitions, photoacoustic detection 7−105017
15-crown-5-derived lariat ethers+Na(k), thermodynamic parameters determ. using ion-selective electrodes 7−119549
α-angelicalactone, internal rotation, microwave spectroscopy 7−122512
β-palmitoyl-α-oleoyl-L-α-phosphatidylcholine, thin films obs. at gas-water interface 7−80850
9,9′-bianthryl, excited state dipole moments, fluoresc. study 7−135996
1-butanol-water mixtures, electron reactivity, solvent struct. 7−86662
β-phenylvinylphosphonic acid, cryst. and mol. struct., H bonds, X-ray study 7−104726
o-xylene on carbon catalysts, vapour phase oxidation 7−126274
aceanthrenones, isomeric, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
acetaldehyde, multiphoton ionisation dynamics *(Chinese)* 7−90283
acetaldehyde, oxidation in shock waves, mass spectrometric obs. 7−139001
acetaldehyde in dense interstellar clouds, prod. by gas-phase reactions 7−115550
acetaldehydes, nonbonded pots., mol. mechanics calcs. 7−68425
acetaldoximes, isomeric, metalated, structs., rel. energies, calcs. 7−89927
acetamide, hypersonic attenuation, Brillouin light scatt. obs. 7−84134
acetamide, microwave spectrum, internal axis method anal. 7−82085
acetamide, vibr. spectra, Fermi reson. and H-bond investig. 7−74556
acetamide-NaCNS eutectic mixture, dielec., relax. spectrosc. 7−99663
acetamides, alkyl-substituted, in N,N-dimethylformamide, enthalpies of interaction 7−76411
2-acetamido-2-deoxy-D-glucopyranoses, circular dichroism, rotations strength, solvent dependence, anomeric effects 7−141614
acetanilide, electronic struct., biological activity, UV PES anal. 7−78751
acetanilide unconventional amide I band 7−90128
acetate radical anion, CIDEP and relax., Heisenberg spin exchange investig. 7−116997
acetic acid, aq. soln., Raman spectroscopy, factor anal. and band contour resolution 7−68315
acetic acid, conductivity meas., mol. interactions obs. 7−85023
acetic acid, doped on oxide layer in Zn-ZnO-Pb, inelastic electron tunnelling spectroscopy 7−70428
acetic acid, hole lattice model, thermodynamic props., eqns. of state 7−124069
acetic acid, OH stretching band shape anal., proton dynamics 7−144078
acetic acid, thermal lens oscillations at low laser power 7−130228
acetic acid, unimolecular pyrolysis mechanisms, ab initio quantum chem. calcs. 7−126426
acetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
acetic acid decarboxylation, catalytic activity of $ZnCrFEI_4$ spinel 7−100051
acetic acid-$d_0(d_1)(d_3)(d_4)$, force consts., vibr., normal coordinate anal. 7−141557
acetone, electronic excitation, SCF-CI calcs., substituent effects 7−122371
acetone, fragmentation by excitation in O K edge region 7−82298
acetone, hydration free energy, finite difference thermodynamic integration 7−106784
acetone, in troposphere, chemistry, sources and sinks 7−120089
acetone, interstellar, quadruplet lines detect. in Sgr B2 mol. cloud 7−120534
acetone, nematic phase, ^1H NMR spectra, two-dimens. correl. technique 7−70651
acetone, photoreduction, CIDEP and relax., Heisenberg spin exchange investig. 7−116997
acetone, stimulated Raman scattering, wavefront reversal 7−90705
acetone UV reson. Raman enhancement cross section meas. 7−74625
acetone-chloroform mixtures, isothermal compressibilities calcs. 7−111719
acetone-H_2O, binary nucleation theory 7−98379
acetone-n-hexane, molar enthalpy study 7−76371
acetones, nonbonded pots., mol. mechanics calcs. 7−68425
acetonitrile, bonding, wave fn. characts. 7−129563
acetonitrile, Debye and far-IR absorption, dipole-dipole coupling and inertial effects theory comparisons 7−132280
acetonitrile, dil. spin I=3/2 powder, rot. isomerism, Zeeman and dipolar coherences, PMR spectra 7−68357
acetonitrile, hydrolysis, ab initio calcs. 7−113902
acetonitrile, liq., dipole-dipole interactions, integral eqn. 7−137194
acetonitrile, liquid, A_1 modes vibr. dephasing, computer simulation 7−97882
acetonitrile, mols. in liq. phase, vibr. and orientational relax. 7−103516
acetonitrile, solns., vibr., Raman spectra 7−85617
acetonitrile, UV reson. Raman enhancement cross section meas. 7−74625
acetonitrile+Ar, dissociative excitation reaction cross sections, TOF spectra 7−138977
acetonitrile+He, rot. excitation cross section, modified sudden approx. calc. 7−68431
acetonitrile abundance determ. in stratosphere, passive chem. ionization mass spectrometry method 7−120162
acetonitrile at tropopause altitudes 7−79543
acetonitrile far IR gas lasers, pulsed high-power, performance and spectral survey 7−82537
acetonitrile in electrochemical solvents, dielectric characterisation 7−77459
acetonitrile in stratosphere, MAP/GLOBUS 1983 ion composition meas. 7−133888

organic compounds continued
acetonitrile liq., intermol. dipole-dipole NMR relax. rate, mol. dynamics calc. 7−90209
acetonitrile mixtures, local struct. influence on chem. shift *(German)* 7−99594
acetonitrile-halocarbons, solid-liquid phase equilibr., phase diagrams, heat of fusion 7−76360
acetonitrile-HF, H-bonded dimers, dissoc. energies, rot. spectroscopy 7−82066
acetonitrile-water binary critical mixtures, D isotope effects 7−124512
acetonitrile-water mixtures, hyperfiltration 7−113995
acetophenol hydrogenation on Fe catalyst, H activation, Raman scatt. anal. *(Russian)* 7−132963
acetophenone, aryl and methyl local modes, CH overtones 7−135939
acetophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
acetophenone, vibronic coupling contrib. to overtone intensities, UV spectra 7−96725
acetophenone-(O-phenyl-N,N-di(2-chloroethyl)amidophosphonyl)hydrazone, struct. 7−137351
3-acetoxy-4-hydroxy-4-methyl-7-isopropenylselenopane, struct., X-ray diffr. exam. 7−111529
acetyl isocyanates, Cl-substituted, struct., IR spectrosc. 7−141576
N-acetyl N′-methyl serine amide, struct., ab initio geometry refinement 7−129584
N-acetyl-1-pyrenylalanine methyl ester, intermol. excimer, dissoc., chiral discrimination 7−110015
α-acetyl-α,α-dimethylmethyl cations, pot. energy hypersurface, MNDO calcs. 7−116853
2-acetylanthracene, electronic spectra 7−74567
9-acetylanthracene, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
acetylene, adsorbed on Ni (100), chemisorption, thermal decomp. 7−137707
acetylene, adsorpt. on Ru (001) with preadsorbed H, EELS and thermal desorption mass spectrometry 7−71524
acetylene, adsorption on Ir (111), high resolution EELS, XPS studies 7−86678
acetylene, dynamic screening effect, local field description 7−129804
acetylene, electron impact excitation, cross section meas. 7−90439
acetylene, electron impact spectrum investig. 7−136075
acetylene, gas phase X-ray emission spectra, SCF and restricted HF calcs. anal. 7−141599
acetylene, interaction with O adsorbed on Ir (111) 7−119578
acetylene, intruder-state problems in effective Hamiltonian theory 7−122347
acetylene, photolysis, CCH radical ν_3 band, IR spectra study 7−109885
acetylene, production by pyrolysis in chemical plasma reactor 7−100510
acetylene, protonated, Gaussian basis sets, bridged structure, proton affinity, rotational constant, stretching frequency 7−135840
acetylene, protonated, rot. and vibr. spectrum, H migration tunneling effects 7−96642
acetylene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
acetylene, synthesis in H plasma jet, thermodynamic models 7−97697
acetylene, thermal plasma prod., equilib. calcs. 7−130831
acetylene, torsional barrier, ab initio calcs. 7−74456
acetylene, ungerade excited states, vibr., photoelectron spectra 7−122611
acetylene+α-pyrone cycloaddition reaction mechanism, F substitution, ab initio SCF MO calcs. 7−96530
acetylene+$C_3H_3^+$, gas-phase reactions, FT ICR mass spectrosc. obs. 7−138986
acetylene+He^+, charge transfer, vibr. and rot. distribs. 7−126439
acetylene+He, differential cross section meas., anisotropic pot. meas. 7−129855
acetylene+O_2 jets, multifront detonation, critical diameter and propag. study 7−97568
acetylene+OH, radical reactions, barrier heights, perturbation theory 7−132918
acetylene adsorption on Fe(110), Auger spectra studies 7−118271
acetylene blacks, modified, adsorpt. props., gas chromatography and ESR obs. 7−76610
acetylene clathrate hydrates, IR spectra 7−70768
acetylene derivatives, optical SHG, recrystn. solvent effects 7−110450
acetylene ion, ν_3 band, IR spectra anal. 7−90121
acetylene ions, neutralisation−reionisation study using hybrid mass spectrometer 7−119496
acetylene radical cation, IR spectra, SCF, MCSCF and CI methods 7−89989
acetylene trimer, IR vibr.-rot. spectrum 7−82092
acetylene-acetone clathrate hydrates, IR spectra 7−70768
acetylene-air flames, collisional ionisation of at. excited levels 7−122475
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
acetylene-NH_3 mixtures, photolysis in Jovian atm. 7−88174
acetylene-O_2-Ar diffusion flame, mass spectrometry anal. *(French)* 7−119601
acetylene-vinylidene rearrangement, metal atom catalysed, mechanism 7−119518
acetylide ion, CC stretching vibr., diode laser velocity modulation vibr.-rot. spectra 7−116934
N-acetyloxypyridinium halides, ion pairs, molecular structure, interionic vibrations 7−122660
N-acetylproline amide, γ turn, ab initio calcs. 7−129556
N-acetylproline methylamide, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
1-acetylpyridinium halides, ion pairs, interionic vibrs. and mol. struct. calcs. 7−74427
aclacinon effect on repair of sublethal and potentially lethal X-ray damage in HeLa cells 7−79000
acridine dyes, luminesc. in solvents and biological systems *(Japanese)* 7−129785
acridine dyes adsorbed layers, Silufol plates substrate, luminesc. spectra, temp. depend. 7−106265
acridine dyes in SnF_2-SnO-PbF_2-P_2O_5 glass nonlinear optical props. 7−123124
acridine-fluorene mixed cryst. photochemical H-transfer, cryst. constraints 7−106806
acridinium, fluorescence quenching by Pb^{2+}, Hg^{2+}, Cu^{2+}, Ag^+ and H_2S, fluorescence quenching 7−82276
acriflavine-rhodamine B, energy transfer in cellulose acetate 7−96814
acrolein, and Lewis acid complexes, conform., ab initio calcs. 7−68194
acrylamide, adsorbed on Ag colloids, polymerisation, SERS 7−144056

organic compounds continued
acrylic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7—119509
acrylic acid, matrix isolated rot. isomerism, IR spectra 7—82106
acrylic acid, polymerisation on Ag colloids surfaces, SERS spectra anal. 7—74798
acrylic acid, rot. isomerism, HF 4-21 basis set calcs. 7—81934
acrylic acid, site selectivity, reaction pot. map anal. 7—86614
acrylic acid adsorbed on Si (111) (7×7), NEXAFS study 7—106308
acrylonitrile, site selectivity, reaction pot. map anal. 7—86614
acrylonitrile, sorption on capron fibres, heat of sorption meas. *(Russian)* 7—84532
1- acyl-sn-glycerophosphocholine systems, NMR, diffusion coeff. and spin relax. meas. 7—74679
adamantanamine hydrochloride, solid, phase transition and mol. rot. investig. 7—77543
adamantane, high temp. phase, mol. rotational processes 7—142668
adamantane, solid, cross polarisation, sample spinning effect 7—90207
adamantane derivatives, phase transitions and struct. 7—143000
5-adamantyl-2,4-diaminopyrimidines, 6-substituted, cryst. and mol. struct. investig. 7—142744
adenine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7—122544
adenine, aq. soln., self-assoc., UV spectra 7—78474
adenine compounds, mol. interactions, Raman and IR spectra studies 7—86604
adenosine, ^2H quadrupole coupling at C8, field-cycled NQR double reson. study 7—93643
adenosine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7—122544
adenosine, aq. soln., self-assoc., UV spectra 7—78474
adenosine triphosphate and glucose-6-phosphate dehydrogenase in CaNT mouse tumour, effect of X-irrad. 7—101013
adenosine triphosphate production under extended anaerobic conditions 7—107006
adenosine-thymidine interaction, selective nucl. Overhauser enhancement meas. 7—109963
adipic acid, solubility in water from 278.15 to 338.15 K 7—84279
adsorpt. equilibr. on zeolites, NMR gas phase meas. 7—92003
agar based gels, US induced gas bubble prod., expt. obs. 7—139311
agar based gels, US induced gas bubble prod., theoretical anal. 7—139312
agarose gels, molecular dynamics, NMR, Rayleigh scatt., Mossbauer radiation 7—126698
air-H_2 (methane) mixtures, turbulent combustion, kinetic calcs. 7—75706
L-alanine: propionic acid single crysts., ESR spectra hyperfine splittings temp. depend. study *(Russian)* 7—85441
L-alanine, D NMR, methyl group dynamics, ^2H spin-lattice relax. 7—92535
alanine, detect. of low- and high-LET radiation 7—68029
alanine dipeptide in water, integral eqn. methods for evaluation of correlations 7—114164
L-α-alanine EPR, rel. to continuous 3D radiation dosimetry in tissue-equiv. phantoms 7—133473
alanine free radical dosimeter, dose range *(Chinese)* 7—93937
alanine radiation detector for high and low LET dosimetry 7—139373
alanines, interactions with positrons from ^{22}Na decay rel. to chirality 7—121727
alcohol+alkyl radical, H atom detachment, cage mols. determ. 7—93304
alcohol (surfactant)-water-electrolyte media, adhesion and thermodynamics at organophilic silicate surface 7—112021
alcohol glass, dimethyl-s-tetrazine doped, dispersive relax. and spectral diffusion, ageing effects 7—75074
alcohol-alcohol binary systems, vapour-liq. equilibr. and heat of mixing data 7—76437
tert-alcohol-diethyl ether complexes, vibr. dephasing, IR bandshapes 7—96691
alcohol-ketone highly polar complex mixtures, phase equilib. calcs. using Peng-Robinson eqn. of state and van der Waals mixing rules 7—69853
alcohol-water mixtures, positron annihilation and compressibility studies 7—92776
alcohol-water networks, small amplitude collective proton motions, Raman spectra features 7—99831
alcohol-water systems containing dissolved salt, vap.-liq. equilib. 7—142967
alcohols, liquid, dielectric relaxation, time domain spectroscopy *(Japanese)* 7—113071
alcohols, saturated, ν_{OH} freq., gas-solvent shifts 7—109813
alcohols, strongly sterically hindered, dielec. relax. and IR spectra in polystyrene matrix 7—68299
alcohols, structural and conformational properties, ab initio calcs, internal rotation 7—141457
alcohols and alkanes solvation props., mol. dynamics method, thermodynamic-cycle perturbation theory 7—138978
aldehydes, chiral, addition reactions, steric effects 7—113884
aldono-1,4-lactones, PWR and NMR, ab initio MO calcs., conformational studies 7—141426
1-^{13}Caldoses, ^{13}C NMR, chemical shifts and ^{13}C-^{13}C spin couplings 7—129741
aliphatic amino acids, interactions, ab initio pair potentials 7—89931
alkali naphtholates, emission and absorpt. props., solvent effect 7—113959
alkane+methyl radical, high temp. reactions, H abstraction 7—126417
n-alkane liquids, B/A parameter calcs. 7—142910
alkane radical cations, in hydrocarbon matrices, γ-irrad., ESR and electronic spectra 7—109959
alkane radical cations, linear, selective deprotonation, ESR obs. 7—68371
alkane-urea clathrates, cryst., Raman linewidths 7—85730
n-alkanenitriles, critical temps. and pressures, investig. 7—104976
n-alkanenitriles, thermal-press. coeffs. 7—104885
alkanes, adsorpt. on graphite, pot. calcs. EHT method 7—131429
alkanes, binary mixtures, diffusion coeffs., <573 K, <3.5 MPa 7—131342
alkanes, cubic hyperpolarisabilities, meas. by third harmonic generation 7—123095
alkanes, cyclic, C_{24}-C_{288}, vibr. spectrosc., chain folding and packing, conforms. 7—90130
alkanes, dipole moments, theoretical investig. 7—116831
alkanes, dissoc. adsorpt. on Ir (110), dynamics study 7—106825
alkanes, gas, thermal cation mobility 7—75752
alkanes, halogen substituted, thermal attachment cross sections and rate consts. 7—103674

organic compounds continued
alkanes, linear, C_{24}-C_{288}, vibr. spectrosc., chain folding and packing, conforms. 7—90130
alkanes, liquid, solvation forces between smooth surfaces meas. 7—137660
alkanes, normal, perturbed soft chain theory eqn. of state parameters calcs. 7—69851
n-alkanes, odd-numbered C_{11}-C_{23}, high temp. Raman studies 7—106164
alkanes, radical and carbocation form., SCF-CI calcs., substituent effects 7—122371
alkanes, Raman active bands, motion and conform. effects 7—109911
n-alkanes, Raman trace scattering, intensity parameters 7—74646
n-alkanes, sorption mechanism within stationary phases, thermodynamics investig. 7—113978
n- alkanes, thermally unstable, crit. temp. meas. 7—91756
n-alkanes, torsional and CCC bend frequencies, crystal analyzer spectrosc. 7—136079
n-alkanes in organic solvents, predictive eqn. for determ. solubility 7—98460
alkanethiols, conform. anal., mol. mech. force field appl. 7—109862
alkanoic acids, C_1-C_{10}, vap. pressures, crit. temps and pressures 7—98390
alkanoic acids, cross-sectional areas, fractal theory and mol. shape 7—68238
n-alkanols, hole lattice model, thermodynamic props., eqns. of state 7—124069
2-alkanones, glass matrices, dielectric absorption, relaxation processes 7—99659
alkene-ICl mol. complexes, form. consts., alkene struct. effects 7—86571
n-alkenes, hole lattice model, thermodynamic props., eqns. of state 7—124069
alkenes, matrix isolated, contact-charge-transfer bands and photochem. reactions, UV-vis. absorpt. spectra 7—82208
alkenes, polymerisation kinetics on zeolites 7—139038
mono- and bis-alkenyl(oxy) substituted esters, mesomorphic props. 7—137229
5-n-alkoxy-2-pyridinecarboxaldehyde, mesomorphic props. 7—137230
N(p-n-alkoxybenzilidene)-p-n-alkylanilines, nematic-smectic and smectic-smectic phase transitions 7—137558
4-n-alkoxybenzoic acids, nematic-smectic C phase transition, X-ray diffraction patterns, microscopic textures 7—124082
4′-(4″-n-alkoxybenzyloxy)-4-cyanostilbene, nematic-smectic A phase transition, critical behaviour 7—131311
alkoxyethanol+di-n-butylether mixtures, excess molar enthalpies, mole fraction depend. 7—118105
n-alkoxyethanol-di-n-butylether mixtures, excess props. 7—143041
alkoxyphenyl 4-alkoxybenzoate-based ferroelec. liq. crysts., synthesis and props. 7—125701
alkoxyphenyl trans-4-alkyl cyclohexane carboxylates, solid, nematic and isotropic phases, mag. susceptibility meas. 7—137231
alkyl cyclohexyl benzotrifluorides, synthesis and liq. crystal behaviour 7—78477
n-alkyl formate-n-alkanol, excess molar enthalpies 7—76445
alkyl iodide and substituted alkyl iodides, photodissoc., two-photon VUV laser induced fluoresc. detection 7—90242
alkyl iodides, formation in nucl. power plants 7—71512
alkyl mercury bromides. laser activity 7—82540
alkyl polyoxyethylene micellar solutions cloud curve phase separation, perturbation theory, Flory-Huggins theory, low critical volume fractions 7—143039
alkyl radical+alcohol, H atom detachment, cage mols. determ. 7—93304
alkyl radicals, Ar and O_2 matrices, IR spectra 7—74595
2-alkyl radicals, sequential intramol. vibr. energy relax. 7—136046
alkyl radicals, substituted, partly delocalised, isomerisation kinetics 7—138988
n-alkyl thiols, monolayers on Au, ellipsometric, spectrosc. and ellipsometric obs. 7—131426
alkyl xanthates, Raman spectra, vibr. anal., rot. isomerism 7—82137
4-n-alkyl-4′-cyanobiphenyls, n CB, nematic-isotropic phase transition, thermal diffusivity, crit. behaviour 7—98446
4-n-alkyl-4′-cyanobiphenyls liquid crystals, C—H dipolar coupling consts., pot. of mean torque calcs. 7—137208
4-alkyl-4′-cyanostilbene, homologous series, X-ray diffraction studies 7—111373
3-alkyl-7-methyl-3,7-diazabicyclo[3.3.1]nonan-9-ones, conformation, ^1H and ^{13}C NMR 7—68359
N-alkyl-N,N-dimethylamilinium benzenesulphonate ion pairs, IR spectra, electric dipole moments and interionic struct. 7—90126
p-n-alkyl-p′-cyanobiphenyls, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7—124083
alkylamine clusters, H-bonded, photoionis. mass spectrosc. 7—136115
7-alkylaminocoumarines, substituted, spectral-luminescence props. and participation in intermol. interactions, amino group fixation effects 7—125773
bis(di-n-alkylammonium)tetrachlorometallates, conformational disorder 7—129898
alkylammonium derivatives, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7—85702
alkylammonium nitrate salts, thermal decomp. site shifting by backbone substitution 7—119517
alkylaryl ureas, configs., IR spectra 7—96670
4,4′-di-n-alkylazoxybenzene, nematic and smectic A phases, orientation order, NMR studies 7—111358
alkylbenzenes, substituted, radiationless decay, photophysical properties, excited states, exciplex formation 7—135990
alkylbenzenes, vibr. excited triplet lifetimes, 2-colour photoionis. obs. 7—117011
alkylenediammonium manganese tetrachloride, rotational motions and phase transitions *(Japanese)* 7—131063
n-alkyloligo(oxyethylene)s, solid-state mol. conform., Raman spectrosc. obs. 7—85731
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7—77499
p-alkyloxyphenyl-p′-alkoxybenzoates, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7—124083
alkylperoxy radicals, Ar and O_2 matrices, IR spectra 7—74595
4-alkylphenyl 4-(4-nitrobenzoyloxy) benzoate liq. cryst., facile synthesis 7—126441
bis(n-alkylpyridine)dichlorometallates, conformational disorder 7—129898
N alkylpyridinium chlorides, adsorpt. from aq. or aq. salt solns., on cellulose acetate membranes 7—112076
alkylthio-1,2-dithiolium-TCNQ charge transfer complexes, elec., spectral and struct. props. 7—83942

organic compounds continued
alkyltrimethylammonium bromides, aq. solns., heat capacities and densities meas. 7−143030
alkynes, oxygen bases, H bonding, IR spectroscopy 7−129703
allyl anions, phenyl and cyclopropyl substituted, MINDO-forces calc. 7−74449
allyl cations, phenyl and cyclopropyl substituted, MINDO-forces calc. 7−74449
allyl cations and anions, 2-substituted, MINDO calcs. 7−122362
allyl radicals, gas phase, vibronic spectrum, multiphoton ionis. 7−135909
allyl radicals, hot and relaxed, oscill. strengths, UV bands 7−109923
allylmethacrylate, dielectric relax. determ. 7−118943
alpha-helices stabilisation, tests of helix dipole model 7−86888
aluminium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
aluminomethylammonium alum decahydrate, isostructural ordering, dielectric and pyroelectric props. meas. 7−92608
amide groups, two-photon ionisation in UV, ionic fragmentation patterns 7−129798
amide solvents, dielec. const. and basicity effect on Ni electrodeposition 7−92897
amides, rotational transition structs., ab initio MO calcs. 7−103471
amides, UV irrad., gas-free radical reaction, EPR obs. 7−92492
amido nitrostilbene highly ordered Langmuir-Blodgett monolayer 7−110439
amines, aromatic and aliphatic, correl. of N-H_2 IR freqs. 7−96689
amines, electron impact ionis., crossed beams expt. 7−103676
amines, protonation, SCF-CI calcs., substituent effects 7−122371
(4-amino)-1,3,4,5-tetrahydrobenzo(cd)indazole, tautomerism, MNDO geometry optimisation 7−129601
(5-amino)-4,5,6,7-tetrahydroindazole, tautomerism, MNDO geometry optimisation 7−129601
amino acid aqueous solutions, viscosities, solute-solvent interactions 7−91866
amino acid extracts, stable isotope ratios in Murchison meteorite 7−88334
amino acids, low frequency Raman scatt. spectra, laser light effects 7−113195
amino acids, unionised, equilib. structs., MNDO calcs. 7−129600
amino acids, UV reson. Raman excitation profiles study 7−68323
amino acids and dipeptides, adsorbed on Ag electrodes and hydrosols, enhanced combination scatter spectra 7−126711
amino acids in solution, recognition, hydrophobic forces role 7−86884
amino alcohols, liq., intermol. interactions and struct., isothermal compressibility meas. 7−111725
γ-amino butyric acid, counterion effects on NMR chem. shifts 7−68360
4(5)-amino-2-aryl-1,3-indandiones, fluoresc. meas. 7−74704
4(5)-amino-2-aryl-2-carboxylmethyl-1,3-indandiones, fluoresc. meas. 7−74704
4-amino-4′-nitrodiphenyl, ethanol soln., dipole moment, visible fluoresc. spectra, edge-excitation red shift 7−135950
2-amino-4H-pyran derivatives, Raman and IR spectra 7−74645
3-amino-N-methylphthalimide, optical anisotropy investig. 7−110012
9-aminoacridine, multi-wavelength frequency domain fluorometry and global anal., rot. diffusion 7−96764
1-aminoalkanes, glass matrices, dielectric absorption, relaxation processes 7−99659
1-aminoalkyl-2-naphthols, excited state H^+ transfer, fluoresc. study 7−90256
aminoanthraquinones, intramolecular orientation, transition moment, fluoresc. 7−82273
2(4-aminobenzosulphonimido)-5-methyl-3H-1,3,4-thiadiazole, crystal struct., X-ray diffr. 7−117916
γ-aminobutyric acid and inhibitors of restricted conform., electrostatic pot. maps, biological activity, CNDO STO calcs. 7−78732
γ-aminobutyric acid release by synaptosomes isolated from cerebral cortex 7−100844
aminocoumarins, laser radiation spectral tuning range expansion due to acid-base interaction 7−141849
2-aminoethylphosphonic acid, single crust., ^{31}P NMR chem. shielding tensor 7−99596
aminonitrene+ethylene, addition, nonempirical gradient quantum chem. calcs. 7−103384
2-aminophenyl phenylsulphone, luminescence, temperature dependence, emission and absorption spectra, excited states, solvent effects, change transfer 7−141620
p-aminophenylthiyl free radical, extinction coeff. and radiative lifetime estimation 7−129729
aminophosphone complexes, cryst. and mol. struct. 7−111532
2-aminopyridine, van der Waals and H-bonded systems, structs., excited state dynamics 7−136031
4-aminostilbene, systems with low energy double transitions, second-order hyperpolarisabilities, evaluation by three-level model 7−130268
5-aminotetrazole monohydrate, single cryst., polarised Raman and IR spectra 7−85725
ammonium hydrogen oxalate semihydrate, phase diagram, Raman and Brillouin scatt. 7−85732
ammonium hydrogen tartrate, single cryst., gel-grown, microstruct. 7−124140
ammonium hydrogen tartrate single crystals, dislocation tracing 7−83957
ammonium hydrogen tartrate single crysts., microhardness, annealing and quenching effects 7−98325
ammonium nitrates, substituted, phase transitions, Raman and IR obs. 7−70817
ammonium perchlorates, substituted, phase transitions, Raman and IR obs. 7−70817
ammonium Rochelle salt, ferroelec. phase transition and Raman spectra 7−125724
5′-AMP, aq. soln., self-assoc., UV spectra 7−78474
amphiphile, bilayer-forming, adsorbed monolayers, polarised UV reson. Raman and absorpt. spectra 7−71698
amyl alcohol, conductivity meas., mol. interactions obs. 7−85023
n-amyl alcohol/nitromethane critical mixtures, acoustic and optical studies 7−111774
amyl benzoate, dil. soln., dielectric props. temp. depend. 7−70689
amyl salicylate, dil. soln., dielectric props. temp. depend. 7−70689
androst-4-en-3,17-dione, γ-induced free radicals, ESR spectra anal. 7−126933
trans-anethole-9-cyanophenanthrene, exciplex luminescence, magnetic field effect, polar solvents, dielectric constant 7−141618

organic compounds continued
2′,5′-anhydroarabinosylcytosine, struct. and conform., X-ray, ^1H and ^{13}C NMR anal. 7−98103
aniline, conductivity meas., mol. interactions obs. 7−85023
aniline, electrochemical polymerisation 7−71488
aniline, resonance Raman depolarization ratios as a probe of excited state dephasing times 7−129714
aniline, two-color photoionis. spectra 7−110018
aniline, UV laser-induced surface ionis., TOF mass spectra 7−92786
aniline adsorpt. on Ag electrode in acidic soln., SERS study 7−77578
aniline and derivatives, soln., rot. dynamics, picosecond fluoresc. anisotropies 7−90255
aniline derivatives, ^{13}C NMR spectra, isotopic multiplets, H bonding effects 7−74668
aniline radical cation, vibr., time resolved reson. Raman spectra 7−90139
aniline-carboxylic acids mixtures, US vel., excess vols., heat capacities and compressibilities *(German)* 7−91728
aniline-hemin complex, electronic structure, Mossbauer spectra 7−122623
aniline-PbI_2 intercalation cpd., aniline sublattice mol. packing after phase transition, IR spectra study 7−142979
anilines, ground and excited electronic states, H bonding, electronic spectra 7−96645
anilino radical, vibr., time resolved reson. Raman spectra 7−90139
anisole, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
anisole, solns., proton-proton couplings and chem. shifts meas. 7−122566
anisoles, in-plane vibrs., valence force field, normal coordinate anal., pot. energy distrib. 7−109857
14-annulene, struct., aromaticity, SINDO1 SCF and CI calcs. 7−116854
Mobius annulenes, mag. susceptibilities, HMO calcs. 7−74450
9,10-anthiaquinone, IR and UV linear dichroism in stretched polyethylene matrix 7−108668
anthracene, cryst., charge carrier recombination, delayed fluoresc. 7−85788
anthracene, cryst., triplet exciton process, thermal effects, fluoresc. 7−92073
anthracene, crystal growth by Bridgeman method 7−138644
anthracene, drift-velocity saturation of holes, room temp. 7−118488
anthracene, energy resolved emission, rot. effects 7−74740
anthracene, first excited state, vibronic coupling, mol. fluoresc. and Raman spectra anal. 7−82180
anthracene, fluoresc. free Raman spectroscopy 7−92690
anthracene, fluoresc. quenching in alcohols and water-alcohol mixtures 7−117016
anthracene, graph theory adjacency matrices, eigenvectors, topological anal. 7−109701
anthracene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
anthracene, in liq. methylcyclohexane, electron-ion pair geminate recomb. kinetics 7−90444
anthracene, Kekule structs., enumeration 7−89913
anthracene, microwave modulation of delayed fluorescence 7−138500
anthracene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
anthracene, molecular crystals, surface phonons, electro-optical parameters 7−76589
anthracene, peri effect in carcinogenesis, empirical force field calcs. 7−100798
anthracene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
anthracene, supersonic beam, intramolecular dephasing and vibr. redistrib., fluoresc. 7−129773
anthracene, surface exciton polariton, guided wave mode 7−125780
anthracene, triplet exciton fusion at edge dislocations, delayed fluoresc. anal. 7−137801
anthracene adsorbates, fluorescence spectra, fine structure 7−113282
anthracene complexes, hypochromism-hyperchromism, second derivative UV spectroscopy *(Spanish)* 7−70837
anthracene crysts., mech. props., photoplastic and photomemory effects studies 7−131214
anthracene perfect crysts., thermally stimulated nonbasal edge dislocation generation, fluoresc. spectra study 7−69703
anthracene-alkane complexes, fluoresc. excitation spectra 7−96763
anthracene-d_{10}, cryst., external phonons, press. and temp. depend., Raman spectrosc. obs. 7−85724
anthracene-d_{10}, mol. cryst., external phonons, Raman spectrosc. obs. 7−85622
anthracene-potassium complex cryst., electroluminescence props. *(Japanese)* 7−132342
anthracene-TCNB, phase transitions, Brillouin scatt. and calorimetric studies 7−142998
anthracene-TCNB charge transfer crystals, phase transition, lattice dynamical approach 7−111806
anthracene-tetracyanobenzene cryst., triplets annihilation, reaction yield detected mag. reson. line shape study 7−92075
anthracene-trinitrobenzene complex, lattice vibr., polarised Raman spectra 7−70769
9-anthracenecarboxylic acid, assoc. with TiO_2, triplet-triplet energy transfer 7−93368
anthracyclines, aglycone moieties, redox props., electrochemical expts., ab initio MO calcs. 7−100796
anthracyclines, imino derivatives, electronic props., relative stabilities 7−133214
9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7−68400
9,10-anthraquinone, fine struct., Dushinsky effect, phosphoresc. spectrum 7−129776
anthraquinone, laser photolysis, photoreduction, time-resolved spectra, charge transfer, polarisation, hydrogen transfer, solvents 7−141608
anthraquinone, photoreduction, free radical prod., product yield-detected ESR 7−103545
9,10-anthraquinone aligned in stretched polyethylene, IR spectra, vibr., symmetry assignments 7−82124
anthraquinone anion radical, vibr. bands, isotopic shift, IR spectra 7−74606
anthraquinone derivatives, photochem., time-resolved reson. Raman spectrosc. obs. 7−68311
anthraquinone dye films, reversible laser marking process based on photothermal transformations 7−82733
anthraquinone dye mixtures in a nematic host, solubilities of the components 7−76420

rganic compounds continued
anthraquinone-2, 6-disulphonate, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7—82192
9,10-anthraqunone, sulphonated derivatives, photophysics, photochemistry, emission and absorption spectra, photolysis, kinetics, transient species, states 7—144729
7-(2-anthryl)-1-heptanoic acid, Langmuir-Blodgett films, UV spectra, Davydov splitting 7—98678
4-(9-anthryl)-N,N-dimethylaniline, time residual spectra, solvent dependence, charge transfer, reorientation, relaxation, laser spectroscopy 7—141480
p-(9-anthryl)-N,N-dimethylaniline derivatives, complex excited state relax., fluoresc. lifetime distribs. 7—117013
anticodonic nucleotides, interaction with cognate amino acid, fast atom bombard. mass spectroscopy study 7—86887
aqueous non-electrolytes, thermodynamic parameter studies 7—111770
arachic acid, Langmuir Project membrane, Penning ionisation electron spectroscopy *(Japanese)* 7—77711
arachidate chains on Langmuir-Blodgett monolayers on Si (111), orientation 7—143216
arginine, aq, soln., UV reson. Raman spectra study 7—70800
l-arginine phosphate monohydrate, frequency conversion material for high power lasers 7—82712
aridicin aglycon, primary struct., long-range J valves, COSY and COLOC NMR spectra 7—139198
aromatic π-electron system-$H_2O(D_2O)$(HDO) interaction, matrix isolation IR obs. 7—96674
aromatic aldehydes, effect on stabilization of U, Pu extractive props. of Purex solvent 7—96230
aromatic amino acids adsorbed on Ag particles, SERS studies 7—106962
aromatic CN cpds. on Pd (111) and (100), comparison of single-, double-, and triple-bonded cpds., HREELS studies 7—124715
aromatic cpds, liq. soln., triplet excimer phosphoresc., review 7—68404
aromatic cpds., suspension, particle shape determ. using magneto-optical method 7—71540
aromatic hydrocarbon rings bonded to surfaces, NEXAFS studies, review 7—144173
aromatic hydrocarbon thin films, laser-induced photocond. study 7—143507
aromatic hydrocarbons, excited state quenching, Xe heavy atom effect 7—68237
aromatic hydrocarbons, solns., triplet-triplet annihilation *(Japanese)* 7—129624
aromatic hydrocarbons, triplet states quenching by tertiary amines 7—68392
aromatic molecules, excited, stereospecific quenching by electron acceptors 7—122606
aromatic molecules, gaseous, S_1-S_0 internal conversion, IVR enhancement 7—109973
aromatic molecules, heavy atom perturbers in rigid solns., kinetics of excited states 7—96775
aromatic molecules, microsolvation, spectroscopic investig. 7—129823
aromatic molecules, mono- and di-substituted, ^{13}C NMR correl. times 7—90212
aromatic molecules, radiative singlet-triplet transitions, nonadiabatic channel study 7—117023
aromatic molecules sorbed on silicalite, heat of adsorpt., calorimetric study 7—76605
aromatic radicals, π-electron props., RHF calcs. 7—109760
aromatics in solution, microscopic solvation dynamics, time-resolved spectroscopic meas. 7—93288
aryl and methyl local modes, CH overtones 7—135939
aryl carboxylic esters (acids) (amides), torsional angles, ^{17}O NMR 7—90196
aryl ethers, in alkaloids, conform. preferences, ^1H spin-lattice relax. obs. 7—82214
8-(arylazo)-7-hydroxy-4-methylcoumarins, UV excitation and fluoresc. spectra 7—96787
5-arylazoimidazo(2,1-b)-1,3,4-thiadiazoles, dichroic T-dyes for LCD appl. 7—124084
N-arylcarbamates-DDQ (TCNQ), charge-transfer complexes, ^1H-NMR spectra 7—74755
L-ascorbic acid, single cryst., X-irradiated, ESR spectra 7—85440
L-ascorbic acid. single cryst., X-irradiated, triplet radical pairs, ESR investig. 7—112955
aspartic acid, side reactions in peptide synthesis, mass spectrometric obs. 7—144704
atmosphere volatile pollutants meas. with cryogenic trap/porous polymer sampling technique 7—93601
ATP, cellular, extraction, microwave method 7—94029
ATP compartmentation in skeletal and cardiac muscles, anal. using ^{31}P NMR saturation transfer 7—100791
ATP molecules, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7—122544
azaamidinium salt, bicyclic, transannular interaction, quantum mech. study 7—116856
2-azabutadiene, IR spectrum, force consts., ab initio MO calcs. 7—116961
2-azallyl radical, struct. and electron affinities 7—74432
azanaphthalenes, triplet state reson. Raman spectroscopy 7—82132
azanaphthalenes, triplet states, proton hyperfine struct., ESR spectra anal. 7—74674
8-azapurine nucleoside analogs, interaction energy during transcription 7—106957
azatetrahedranes, struct., MNDO and MINDO/3 calcs. 7—109773
azetidine, pyramidal inversion barrier, PMR and ab initio MO calcs. 7—109713
1-azetine, IR spectra, ab initio MO calcs. 7—116960
azide-phenolic resin composite film, thermolysis, photolysis and appl. as antirefl. layer in resist 7—100534
3′-azido-2′, 3′-dideoxythymidine reverse transcriptase inhibitor, spatial struct. 7—139196
azidoethane, mol. struct., conform., vibr., ab initio HF SCF calcs. 7—81967
azidoethene, mol. struct., conform., vibr., ab initio HF SCF calcs. 7—81967
azidomethanal, mol. struct., conform., vibr., ab initio HF SCF calcs. 7—81967
azidomethane, mol. struct., conform., vibr., ab initio HF SCF calcs. 7—81967
3—azidopropyne, structure, IR and Raman spectra, electron diffr. 7—122341

organic compounds continued
azine, struct., protonation, isomers, ab initio MO calcs. 7—81955
aziridine, saturated cycle struct., oscillatory anal. 7—141447
azo and azomethine cpds., thermal E/Z isomerisation, ab initio STO-3G calcs. 7—109746
azo dye, DPNA, Langmuir-Blodgett multilayers, second harmonic generation 7—68779
azo dye-anthraquinone dye mixtures in nematic host, solubilities of the components 7—76420
azo dye-cyclodextrin inclusion systems, Raman optical activity 7—106161
azoalkane, gas-phase, sequential bond cleavage, time-resolved CARS obs. 7—68309
azoaromatic compounds, electron-excited, $n\pi^*$ triplet state deactivation 7—110091
azobenzene-containing ammonium amphiphile, aq. solns., UV resonance Raman and UV-VIS absorpt. spectra 7—132295
cis-azobenzenes, push-pull-substituted, substituent and solvent effects, electronic absorption spectra and thermal isomerisation 7—122399
azomethane, excimer laser photolysis product yields and mechanism 7—71509
azomethynes, electrochem. reduction and reactivity, quantum-chem. calcs. *(German)* 7—68222
azulene, S_2 state, intramol. vibr. redistrib., picosecond dynamics 7—96770
azulene, S_2-S_0 transition, vibronic effects, QCFF/PI calcs. 7—89961
azulene, saturated absorpt., anharmonic forced Rayleigh scatt. 7—85750
azulene, solvent effects, Raman excitation profiles, line broadening stochastic model calcs. 7—82190
azurin+metalloporphyrin electron transfer reactions 7—119522
BABA mixtures, smectic C-nematic transitions, DSC studies 7—105019
bacterial peptidoglycan, conform. struct., N-acetyl group role, PCILO calcs. 7—114185
bacteriochlorophyll, bacterial photosynthetic reaction centers, electron transfer mechanism study 7—71710
bacteriochlorophyll, frozen solns., site-selection fluoresc. spectra 7—138493
bacteriochlorophyll α, pheophytin substitute fluoresc. spectra, critical energy transfer distances calc. 7—106983
bacteriochlorophylls, photosynthetic reaction centres, ground-state interactions, reson. Raman spectra 7—78760
bacteriorhodopsin, charge conduction, collective H^+ motion 7—106979
bacteriorhodopsin, light- and dark-adapted, femtosecond absorpt. spectra 7—109914
bacteriorhodopsin, reson. Raman spectra, vibr. anal. 7—109907
bacteriorhodopsin, solvation dynamics, mol. fluoresc. and near reson. Raman yields probe 7—103562
barbituric acid derivatives, chem. struct. effect on water tree inhibition in polymers 7—99673
barium oxalate, periodic crystallisation, from SiO_2 hydrogel 7—125940
barium oxalate dihydrate, gel-grown, etching studies 7—126268
base pairs, optimal environment props. for inducing tautomerisation 7—86612
basket handle porphyrins, extremely short chain, synthesis, spectrosc., struct. 7—103476
basketanes, geometric and electronic struct., iterative maximum overlap calcs. 7—96528
BDN dye in liquid crystal ground state recovery time 7—123127
BDN saturable absorber for laser mode locking *(Chinese)* 7—90729
Bechgaard salts, dimerisation, vibronic structs. and optical gaps 7—98362
Bechgaard salts, mag. field induced SDW, band energy transverse second harmonics 7—112309
Bechgaard salts, oscillatory magnetoresist., electron scatt. between open-orbit states 7—76896
β-(BEDD-TTF)$_2I_3$, self-consistent band struct. calcs. using local density approx. 7—118357
BEDSe-TSeF cation radical salts, crystal and electronic structs. 7—99013
(BEDT=TTF)$_2$X salts, superconductors, structural phase transitions 7—84252
β-(BEDT-TFF)$_2I_3$, high T_c superconductivity, anion alloying and solvent effects 7—77142
BEDT-TTF$_3$Ta$_2$F$_{11}$, optically enhanced phase transition, ESR studies 7—99558
(BEDT-TTF)$_2$Au(CN)$_2$, synthesis, structure and elec. props. 7—99011
β-(BEDT-TTF)$_2$AuBr$_2$, mag. and high press. cond. meas. 7—85172
β-(BEDT-TTF)$_2$AuI$_2$, mag. and high press. cond. meas. 7—85172
(BEDT-TTF)$_2$AuI$_2$, microwave cond. meas. 7—84965
(BEDT-TTF)$_2$CuCl$_2$, cryst. struct., X-ray diffr. study 7—104707
ζ-(BEDT-TTF)$_2I_{10}$ cryst. struct. determ. 7—124235
β-(BEDT-TTF)$_2$I$_2$Br(AuI$_2$), IR and far IR polarised reflectance spectra studies 7—77563
(BEDT-TTF)$_2I_3$, α- and β-phases, CESR spectra, 5-300 K 7—85438
(BEDT-TTF)$_2I_3$, α- and β-phases, intermolecular contact directions rel. to magneto-effects 7—85197
(BEDT-TTF)$_2I_3$, α- and β-phases, static mag. suscept. meas., press. depend. 7—85239
β-(BEDT-TTF)$_2I_3$, anisotropic Knight shifts and spin density distrib. 7—70660
(BEDT-TTF)$_2I_3$, CESR, press. depend., 80-300 K 7—70645
β-(BEDT-TTF)$_2I_3$, direct detect. of supercond. β-1.5-β-8 phase transition 7—99308
β-(BEDT-TTF)$_2I_3$, high T_c supercond. state and normal state cond. anisotropy study 7—77140
β-(BEDT-TTF)$_2I_3$, high-and low-T_c superconducting phases study 7—77141
(BEDT-TTF)$_2I_3$, mol. vibrs., Raman spectra study 7—85675
β-(BEDT-TTF)$_2I_3$, organic supercond., nuclear mag. relax. 7—70475
β-(BEDT-TTF)$_2I_3$, phase stability, DTA studies 7—118058
α-(BEDT-TTF)$_2I_3$, pure and I doped, microwave cond., freq. depend. 7—84964
α-(BEDT-TTF)$_2I_3$, quasi-2D metal, light scatt. by plasmons 7—77530
β-(BEDT-TTF)$_2I_3$, supercond., electronic props., PMR anal. 7—85474
β-(BEDT-TTF)$_2I_3$, supercond., temperature-stress phase diagram 7—85173
β-(BEDT-TTF)$_2I_3$, thermal expansion meas., structural phase transition 7—85192
β-(BEDT-TTF)$_2I_3$(AuI$_2$) salts, superconducting critical field, press. depend. 7—77177
β-(BEDT-TTF)$_2I_3$(IBr$_2$) IR and visible reflectance spectra temp. depend. obs. 7—77564
β-(BEDT-TTF)$_2I_3$(IBr$_2$) refl. spectra temp. depend., conductivity spectrum TBA calcs. 7—77501
α-(BEDT-TTF)$_2I_3$ 2D conductor, vibronic props., IR polarised refl. spectra 7—77565

organic compounds continued
β-(BEDT-TTF)$_2I_3$ highly defective crystals, conducting props. characts. 7−137906
β-(BEDT-TTF)$_2I_3$ organic supercond., resist. and magnetoresist. 7−99312
β-(BEDT-TTF)$_2I_3$ quasi-2D metal, spin susceptibility and ESR line profile *(Russian)* 7−143894
β-(BEDT-TTF)$_2I_3$ quasi-2D organic metal supercond., conductivity anisotropy and T_c meas. 7−137886
β-(BEDT-TTF)$_2I_3$ single crysts., low temp. cond. under electron irrad. *(Russian)* 7−84868
β-(BEDT-TTF)$_2I_3$ supercond., low temp. struct. transition 7−124497
β−I (BEDT-TTF)$_2$IAuI, microwave conductivity 7−125035
β-(BEDT-TTF)$_2$IAuI, superconductor, reson. Raman spectra 7−106190
β-(BEDT-TTF)$_2IBr_2$, CESR spectra, 5-300 K 7−85438
(BEDT-TTF)$_2IBr_2$, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
α-(BEDT-TTF)$_2IBr_2$, EPR meas., 15 to 300 K 7−85410
(BEDT-TTF)$_2IBr_2$, mol. vibrs., Raman spectra study 7−85675
α-(BEDT-TTF)$_2IBr_2$ cryst. struct. determ 7−124234
(BEDT-TTF)$_2$IBrCl, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
(BEDT-TTF)$_2ICl_2$, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
β'-(BEDT-TTF)$_2ICl_2$, EPR meas., 15 to 300 K 7−85410
β-(BEDT-TTF)$_2$X, (X=I_3, IBr_2), quasi-2D metals, spin relax. and diffusion 7−92491
(BEDT-TTF)$_2XI_2$ salts, X=Au, Br, electronic struct., props., polarised IR reflectance spectra 7−113189
(BEDT-TTF)$_3$(Cl(Re)O_4)$_2$ IR and visible reflectance spectra temp. depend. obs. 7−77564
(BEDT-TTF)$_3(NO_3)_2((ClO_4)_2)$, 2D organic metal, elec. anisotropy, polarised IR refl. meas. 7−76875
(BEDT-TTF)$_3Cl_2H_2O$, superconductivity under press. 7−143679
(BEDT-TTF)Ag_xI_8 and (BEDT-TTF)$Ag_4(CN)_5$, polymeric-anion derivatives, elec. props. 7−99010
β-(BEDT-TTF)I_3, superconductivity mechanism 7−70459
β-(BEDT-TTF)I_3 high temp. superconducting phase, critical field temp. depend. meas. 7−131941
(BEDT-TTF)I_3 trichloroethane, organic conductor, cryst. struct., X-ray diffr. study 7−104719
BEDT-TTF molecular conductors, crystal and electronic structures 7−99012
BEDT-TTF salts, (ET)$_4(Mo_6Cl_8)Cl_6$(THF) and (ET)$_2$X (X=AuI_2, $AuBr_2$, Au(CN)$_2$), structures and elec. props 7−98110
BEDT-TTF salts with $AuCl_2$, cryst. struct ., existence of divalent Au 7−98108
BEDT-TTF trihalides, crystal growth 7−100037
BEDT-TTF unsymmetrical derivative, DIMET, radical cation salts 7−99005
behenic acid Langmuir-Blodgett films, X-ray reflectivity curves 7−84573
benzal chloride, dichloromethyl group orientation, conform., overtone spectra investig. 7−68300
benzalazine derivatives, H-bond, geometry, CNDO/2 and MNDO, UV, IR and ^{1}H NMR 7−81979
benzaldehyde, geometry, barrier height, STO calcs. 7−129582
benzaldehyde, protonated, photodissoc. in ion trap mass spectrometer 7−103593
benzaldehyde adsorbed on Cu, secondary ion mass spectra and XPS studies 7−92835
benzamide, electronic struct., biological activity, UV PES anal. 7−78751
1,2-benzanthracene, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
1,2-benzanthracene, geometry, fine struct. fluoresc. and phosphoresc. *(German)* 7−90267
1,2-benzanthracene, IR and UV linear dichroism, fluoresc., transition moments 7−96655
1,2-benzanthracene + carbon tetrabromide, fluoresc., collisional quenching studied by freq. domain fluorometry 7−96765
benzazulenes, He(I) photoelectron spectra 7−103576
benzenamine-4-(9-anthryl)-N,N-dimethyl related cpds., synthesis, spectroscopic props. 7−90265
benzene, $^1B_{2u}$ level, vibr. ang. momentum fluoresc. lifetimes study 7−82263
benzene, ^{1}H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
benzene, π bonds, ab initio electron correl. calcs. 7−109805
benzene, adiabatic colorimeter, computer controlled with pyroelec. thermometer, sp. ht. meas. 7−108560
benzene, adsorbed on Pt (111), mol. distortion, angle resolved UPS study 7−82281
benzene, adsorbed on SiO_2 gel, capillary condensation, thermophysical props. determ. 7−91777
benzene, adsorpt. on acidified Al_2O_3, UV-visible reflectance spectra 7−98683
benzene, adsorpt. on Ni(111) and (100), interaction 7−98691
benzene, adsorpt. on Pd(111), vibr. EELS obs. 7−69789
benzene, adsorption on fresh surface of Fe-C-Mn steel 7−70064
benzene, adsorption on Si, valence and core states, photoemission obs. 7−118248
benzene, anharmonic effects in radiationless vibronic energy relaxation 7−109852
benzene, C-H motions, picosecond quasi-CW CARS experiments *(Japanese)* 7−132288
benzene, catacondensed, Wiener numbers determ. 7−89912
benzene, cavitation, critical condition 7−69233
benzene, CH stretch overtones, intramol. vibr. relax. 7−82065
benzene, chemisorption on a-Si 7−71520
benzene, complexing reaction with IBr, far IR spectra anal. 7−103497
benzene, cryogenic solvents, spectroscopic studies 7−135921
benzene, cryst., static equilibr. struct. at negative press. 7−104724
benzene, dicationic states, Green's fn. calcs., Auger spectra anal. 7−74420
benzene, double core vacancies binding energies, algebraic diagrammatic construction scheme calcs. 7−74419
benzene, electron transmission, EELS and MCD spectra 7−68385
benzene, excited states, exponentially generated wave functions, SAC-CI study 7−129613
benzene, ground state, a_{2g} mode, two-photon fluoresc. spectra 7−122599
benzene, ground state, harmonic force field 7−136028
benzene, high resolution zero kinetic energy photoelectron spectroscopy and ionisation pot. 7−90270

organic compounds continued
benzene, isotopically substituted mixtures, thermal diffusion in liqs. study 7−91860
benzene, liq., polaritons, stimulated Raman scatt. induced anti-Stokes Raman scatt. 7−70773
benzene, liquid, Raman spectra, resonant intermolecular coupling 7−90142
benzene, local modes, highly resolved vibrational spectra 7−141558
benzene, multiphoton ionis., spatial distrib. influence anal. 7−103607
benzene, multiphoton ionisation, influence of laser intensity fluctuations 7−82291
benzene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
benzene, nematic phase, ^{1}H NMR spectra, two-dimens. correl. technique 7−70651
benzene, nonradiative transitions, influence of out-of-plane mode anharmonicities on rates 7−74705
benzene, optimized virtual orbital space for high-level correlated calculations 7−116864
benzene, photoionisation spectra, adiabatic ionisation energy determ. 7−103590
benzene, proton irrad., C X-ray and Auger electron cross sections 7−90380
benzene, radiationless decay rate consts., excess-energy depend. 7−129762
benzene, Raman enhanced nondegenerate four-wave mixing 7−75059
benzene, resonant multiphoton ionisation, hydrogen ion production 7−129803
benzene, rotational dynamics, interaction with zeolitic framework, quasielastic neutron scattering 7−142661
benzene, rovibronic intramol. vibr. energy redistrib., linewidth distribs. 7−129681
benzene, rovibronic states, intramol. relax., Doppler-free two-photon excitation spectra 7−96724
benzene, Rydberg states 7−122404
benzene, solid, slow molecular motion, nuclear magnetic relax. studies 7−106053
benzene, solvated electron reaction kinetics 7−132959
benzene, thermal lens oscillations at low laser power 7−130228
benzene, valence and Rydberg excitations and ionis., wave fns., cluster expansion 7−122335
benzene, valence shells, photoelectron dynamics 7−103575
benzene, van der Waals cluster, vibronic struct. 7−96911
benzene, van der Waals complexes, electrostatic interactions 7−82314
benzene+ethylene, meta photocycloaddition, semi-empirical calcs. 7−113912
benzene (-d_6), time-resolved stimulated Raman scattering in a diamond anvil cell 7−68310
benzene adsorbed on activated C, fixed-bed adsorpt. cycles anal. 7−113975
benzene adsorbed on Na-Y zeolite, high resolution neutron powder diffr. studies 7−111398
benzene adsorbed on Rh (111), azimuthal orientation, ARPES study 7−100016
benzene cations, substituted, INDO and CNDO/2 calcs. 7−81977
benzene chromium tricarbonyl-thiourea inclusion complexes, SHG study 7−75054
benzene derivative mol. electronic struct. anisotropic medium effects calc. 7−116829
benzene derivatives, electronic transitions, UV reson. Raman spectra anal. 7−82186
benzene derivatives, liq., electrostatic interactions, CNDO and ab initio STO-4G calcs. 7−74443
benzene derivatives, Raman intensity and mol. interaction investig., substituent effects 7−90152
benzene dimer, and dimer cation, dissoc. energies, ionics. pot. 7−110136
benzene filled capillary waveguides as stimulated Brillouin scattering mirrors 7−136443
benzene hydrogenation on Ru(001), desorpt. studies 7−106831
benzene in propane, optical absorpt. and emission transitions 7−90178
benzene in supercritical N_2, spectroscopic studies 7−90179
benzene on Pt (111), coadsorbed with CO, LEED intensity anal. 7−84526
benzene ring, ^{2}H quadrupole echo NMR spectra, lineshape calcs. for multiaxis rot. 7−68355
benzene-Ar clusters, Penning ionisation, UV spectra line shapes 7−82331
benzene-$C_4H_8O_2$, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7−125602
benzene-carbon disulphide, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7−125602
benzene-CO coadsorbed layers Rh, LEED analysis 7−124679
benzene-cyclohexane system, solid-liquid phase equilibria, high press. 7−131269
benzene-d_0(d_6), CH and CD overtones, intramol. vibr. energy redistrib. 7−103631
benzene-d_0(d_6), isotopic isomers, solns., excess free energy, vol. depend. investig. 7−82006
benzene-d_0 (d_6), liq., isotopic dilution anal., vibr. Raman spectrum 7−90155
benzene-d_6 liq., second and third order IR spectra, intermol. modes and anharmonicity calcs. *(Russian)* 7−85679
benzene-d_6 multilayer on graphite, ^{2}H NMR spectra meas. 7−77412
benzene-d, homonucl. dipolar-decoupling technique in heteronucl. NMR 7−80833
benzene-ethyl acetate, excess volumes, calcs. and meas. 7−86658
benzene-ethyl acetate-cyclohexane multicomponent liq. adsorpt. equilibr. on activated C 7−112057
benzene-F, clusters, stability, struct., enthalpy, ab initio MO calcs. 7−93356
benzene-H_2O liq.-liq. interface, Monte Carlo simulation 7−83634
benzene-HCl van der Waals complex, dissociative photoionis. 7−96799
benzene-He van der Waals mol., intramolecular vibr. energy relax. 7−90298
benzene-hexa-n-alkanoate discotic mol. Langmuir monolayers, expanded liq.-condensed liq. phase transition obs. 7−111850
benzene-hexa-n-heptanoate, discotic, in isotropic soln. phase, elec. birefringence 7−113125
benzene-K intercalation cpd. with graphite, structure 7−111515
benzene-methane(-methane-d_4)(carbon tetrachloride), clusters, van der Waals modes 7−103472
benzene-pyridine mixtures, liquid, Raman spectra, resonant intermolecular coupling 7−90142

organic compounds continued
benzene-tetrachloromethane, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7−125602
benzenes, adsorbed on Rh (111), lattice-dynamical model calcs. 7−112060
benzenes, liq. and solid, vibr. props., mol. dynamics simulation 7−91740
benzenes, monosubstituted, dipole moments, ab initio MO calcs. 7−109739
benzenes, monosubstituted, two-photon thermal lensing spectrosc. 7−68289
benzenes, para-disubstituted, intramolecular interactions, ^{13}C NMR *(French)* 7−96742
benzenes, substituted, magneto-optic rotatory dispersion, dispersion relation 7−109968
benzenes, substituted, nonpolar, elec. quadrupole reaction field, NMR solvent shifts 7−109940
benzenethiol adsorbed on Cu (110), angle resolved polarisation dependent photoemission spectra 7−90272
benzenoid chains, unbranched and cata-condensed, Kekule structs. investig. 7−89914
benzenoid hydrocarbons, adjacency matrix spectral radius, variational treatment 7−109757
benzenoid hydrocarbons, chem. graphs, Randic mol. connectivity index 7−129547
benzenoid hydrocarbons, enumeration and classification 7−103366
benzenoid hydrocarbons, Kekule structs. enumeration study 7−122353
benzenoid hydrocarbons, nonKekulean struct., topological props. 7−81956
benzenoid hydrocarbons, stability, unified theory 7−89921
benzenoids, trigonal, Kekule struct., symm.-adapted fragmentation method study 7−96529
benzil, mol. struct. and conform., GPED 7−82357
benzil, phase transition and order parameter 7−142999
benzilidenephthalides, photoexcited, radiationless deactivation rate, solvent influence 7−129768
benzisatins, UV spectra study in ethanol 7−141595
benzo(a)pyrene, air emission risk assessment at Mt. Tom coal-fired power plant, USA 7−114144
benzo(a)pyrene, antibody-based fibre optics biosensor, fluoresc. anal. 7−145287
benzoate, effect on corrosion of mild steel in aq. Cl^- soln. 7−106660
benzoate, IETS, vibrational mode energy, bias voltage polarity depend. 7−143557
benzoates, metal influence, IR absorpt spectra 7−122516
benzobisdithiazole, ESR obs., diradical oligomer form. 7−103542
1,5-benzodioxepins, 3-halogenated, gauche conform. effect, mechanism, NMR investig. 7−103534
benzodithiepin, and derivatives, conform. dynamics, ^1H and ^{13}C NMR 7−82212
benzoic acid, adsorbed on Ag colloids, SERS spectra study 7−74631
benzoic acid, chemisorbed on Ag sol, SERS 7−96708
benzoic acid, crystalline, field effect on proton transfer 7−142662
benzoic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7−119509
benzoic acid, dil. soln., dimerisation, IR spectra 7−90131
benzoic acid, doped on oxide layer in Zu-ZnO-Pb, inelastic electron tunnelling spectroscopy 7−70428
benzoic acid, H bonded dimers, delocalised states obs., fluoresc. line-narrowing expts. 7−109977
benzoic acid adsorbed on Ag, SERS in attenuated-total-refl. geometry 7−125748
benzoic acid adsorbed on Cu, secondary ion mass spectra and XPS studies 7−92835
benzoic acid heat capacity meas., adiabatic calorimeter, automated, small simple-size design 7−121128
benzol bromide, dibromomethyl group orientation, conform., overtone spectra investig. 7−68300
benzol chromophores, circular dichroism *(German)* 7−103555
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7−116977
benzophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
benzophenone, triplet, quenching rate const. determ. 7−96780
benzophenone crystal, self-suppression of exciton-exciton annihilation 7−70206
benzophenone melting transition, opto-thermal transient emission radiometry 7−91854
benzophenone oxide, self-reaction, optical modulation spectrosc. 7−68290
benzophenones, in molten acetamide, electrochem. reduction at 85°C 7−113953
p-benzosemiquinone radical anion, ESR spectra obs. 7−109955
benzothiazole-2-one, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
benzotriazole addition effect on Cu electrodeposit microhardness 7−92896
benzotriazoles-I_2, charge-transfer complex, form. and stability, visible spectra anal. 7−74649
benzotrisfuran derivatives, disc-like liquid crystals, synthesis and mesomorphic props. 7−91434
benzoyl fluoride, barrier to internal rotation, force field calculations, thermodynamic functions, vibrational spectra 7−122736
benzoyl peroxide, in glassy polymer films, decomp. kinetics, ionol effects 7−138997
N-benzoylindoles, charge transfer fluoresc., solvent effects 7−96760
benzo[3,4]cyclobuta[1,2-b]quinoxaline, ionisation pot., photoelectron spectra 7−96792
benzo[*a*]pyrene−DNP adducts, phosphoresc. 7−109976
benzo[a]pyrene, fluoresc., decay lifetime meas. 7−68393
benzo[f]quinoline, solid-surface luminesc. anal., calib. curves 7−92713
benzthiazole pollution of San Francisco Bay sediments, due to car tyres and street runoff 7−107441
benzyl alcohol, gas and liq., He(I) photoelectron spectra meas. 7−103574
benzyl alcohol, toluene soln., diffusion behaviour, H-bonding influence 7−91861
benzyl alcohol in phospholipid bilayers, orientational ordering, dipole-spin interaction meas. 7−139225
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
benzyl radicals, captodative substituent effects, stabilisation, spin delocalisation 7−109960
N-(benzylidene)phenylamine-N-oxides, 4-substituted, ionis. pots. and chem. shifts, NMR investig. 7−109929
3-benzylidene-isobenzofuranone, luminophore, photophys. props. *(German)* 7−103560
organic compounds continued
N-benzylideneaniline derivatives conformation, substituent effects, UV and ^1H NMR spectra 7−74654
benzylidenephthalides, indan-diones, photoinduced isomerisation, UV fluoresc. spectra 7−96729
benzylidneaniline, intermolecular energy calcs. 7−137222
5-(m-benzyloxybenzyl)-1-[(1,3-dihydroxy-2-propoxy)methyl]uracil, X-ray and ^1H NMR anal. 7−76109
$(N\text{-benzylpiperazinium})_2$ copper tetrachloride, mag. props., EPR linewidth meas. 7−125362
o-benzyne, N_2 matrix isolated, vibr., IR spectra 7−82116
benz[a]anthracene, dichroism spectra, fluorescence polarisation spectroscopy, transitions, NDO calcs., LCAO calcs., moment directions 7−141611
betaine arsenate, ferroelec., critical exponents 7−85553
betaine calcichloride, incommensurate ferroelec., soft modes 7−85550
biacetyl, vibronic coupling contrib. to overtone intensities, UV spectra 7−96725
9,9′-bianthyl, alcohol soln., picosec. excited state solvation dynamics 7−119516
bicuculline, counterion effects on NMR chem. shifts 7−68360
bicyclo(3.1.0)hexane, zero-point-average struct., ab initio geometry 7−81954
bicyclo (n,1,0) alkanes with trimethylsilyl groups and alpha-chlorosilicon compounds, IR and Raman spectra *(French)* 7−96681
bicyclobutane, bond between bridgehead carbons, substituent effect 7−90006
bicyclobutylidene, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7−96544
bicyclooctene, plastic phase, muon probe investig. 7−85508
bicyclopropylidene, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7−96544
bicyclo[1.1.0]but-1(3)-ene, vibr. spectrum, ab initio calcs. 7−89928
bicyclo[1.1.0]tetraarsane, mol. struct. isomers, ab initio calcs. 7−81963
bicyclo[2.2.1]heptanes, and derivatives, struct., ab initio HF MO calcs. 7−129583
bicyclo[3.3.1]nonane, conformers, ab initio STO-3G calcs. 7−109738
biferrocenium trihalide compounds, mixed valence complexes, electronic delocalisation, intermol. interactions effect 7−70261
bifurans, mol. configs., STO calcs. 7−68201
bile salt-lecithin mixtures, dinaphthylpropane fluoresc. probe investig. 7−86886
bimethylpyrichrominium ion, protonated, adiabatic proton transfer, reaction kinetics, electronic excitation, fluorescent state, population inversion 7−144694
binary mixture of propane and ethene analysis, using US analyser 7−86701
binary mixtures, phase separation and critical phenomena 7−142969
biomolecules, pulsed laser desorpt., reson. two-photon ionis. detect. 7−117028
biomolecules, secondary ion emission from liquid matrices, primary ion beam parameters effects 7−139057
bioorganic mol. desorpt. and cluster emission under heavy ion bombardment, shock wave mechanism model 7−76298
biosensors, design and appl. *(Japanese)* 7−145305
biphenyl, incommensurate phase transition model calcs. 7−142949
biphenyl, inter-ring rot. pot., ab initio SCF MO calcs. 7−103387
biphenyl crysts., superradiance of guest pyrene molecules, effect of struct. transitions *(Russian)* 7−99888
biphenyl derivatives, dihedral angle, theoretical calcs., IR and electro-optic meas. 7−109721
biphenyl derivatives, long-term $^{13}C,^{19}F$ and $^{19}F,^{19}F$ coupling consts., mechanisms 7−82213
biphenyl derivatives, second-order nonlinear polarisability determ. by SHG 7−110456
biphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
biphenyl incommensurate phase II, stripe-like modulation calcs. 7−142950
biphenyl incommensurate phase III excitations and transitions, proton spin reson. and relax. meas. 7−111867
biphenyl phase transitions, press. effects study 7−142951
biphenyl-d_{10}, cryst., successive phase transitions, calorimetric obs. 7−104985
biphenylcyclohexanes, substituted species, nematic phase struct., X-ray diffr. exam. 7−97921
2,2′-bipyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7−77582
2,2′-bipyridine, phosphoresc. and ODMR meas. 7−82250
2,2′-bipyridine in acidic media, Raman spectra, conformational behaviour 7−116976
1,2-bis(1-bromoethyl)-3,4,5,6-tetraisopropylbenzene, conformational cycloenantiomerism, NMR investig. 7−109934
1,10-bis(1-pyrenyl)decane, confinement and fluoresc. in microporous amorphous superlattices 7−122609
2,5-bis(2-benzothiazolyl)hydroquinone, jet cooled, excited state intramol. H^+transfer 7−86599
bis(2-ethylhexyl) sulphosuccinate micelles in aq. solns., struct. and growth 7−114012
1,3-bis(2-naphthyl)propane, in alkane solns., excimer form., press. effects 7−135999
bis(β-diketonato)Cu(II) complexes octa-substituted, discotic liq. cryst., double melting 7−137217
bis(acetylacetonato)dichlorotin, small centrosymmetric cryst. struct., maximum entropy soln. 7−75939
$bis(bis(triphenylphosphine)Ag)OsCl_6$, mol. struct. 7−129901
1,8-bis(dimethylamino)naphthalene 2,4-dinitroimidazolate, struct. and IR spectra 7−76111
bis(dithiolene) nickel substituted complexes, discotic liquid cryst. 7−137214
bis(ethylenedithio)-TTF, spatial and electronic struct., SCF-MO-LCAO MNDO RHF calcs. 7−74446
bis(ethylenedithio)tetrathiafulvalene(-d_8), IR and Raman spectra, vibrs. assignment 7−82123
bis(ethylenedithiolo)tetrathiofulvalene iodide of β-$(ET)_2I_3$, supercond. transition temp. of β phase, influence of press. 7−138096
bis(guanine), intrastrand chelation of d(CpGpG) to cis-Pt, X-ray investig. 7−78716
1,2-bis(methylseleno)ethene, Se coupling consts., IPPP-INDO and PCILO-CNDO calcs. 7−103395
9,10-bis(phenylethynyl)anthracenes, excimer form., fluoresc. quenching 7−82274

organic compounds continued
bis(phenylmethylenyl)[2.2]paracyclophanes, isomeric, spin states 7−103544
bis(tetramethylammonium) tetrathiophenyl iron sulphide, γ-irradiated cryst., g̃ tensors, EPR investig. 7−112928
bis(tetramethylammonium) zinc tetrachloride, incommensurate, electric field gradient tensor determ. 7−76833
bis(tetramethylammonium) zinc tetrachloride, normal-incommensurate-commensurate phase transition *(Japanese)* 7−131562
bis(trimethylsilyl)acetylene, liq. state dynamics, Raman scatt. obs. 7−92662
bis (8-mercaptoquinoline) oxovanadium(IV), ^{14}N ENDOR study 7−112994
bis-(2-hydroxy-3-t-butyl-5-methylphenyl)sulphide, UV spectra and kinetics of transients, radiolysis anal. 7−96727
bis-methylammonium copper tetrachloride, strange attractor of chaotic magnons 7−77271
3,5-bis-[4-(trans-4-n-propylcyclohexyl)phenyl]-1,2,4-thiadiazol, liq. cryst., thermal and X-ray study 7−124507
bisanthene dyes, dichroic, in liq. cryst. matrix, bleaching, order parameter changes effects *(Japanese)* 7−130273
biscarbocyanines, conform. equilib. calcs. from absorpt. spectra 7−103479
bishydroxycyclopentylbutadiyne, diffusion kinetics in silicone rubber, density profiles 7−118171
1,6:7,12-bismethano[14]annulene, excited states, UV-visible absorpt., fluoresc. and MCD spectra 7−82270
bisphenol-A polycarbonate glass, ^1H and ^{13}C spin-lattice relax., chemical shift anisotropy line shape collapse 7−106044
1,6-bis[4-(trans-4-n-propylcyclohexyl)phenyl]-hexane, liq. cryst., thermal and X-ray study 7−124507
blue dyes, two-photon absorpt. cross sections 7−136452
(BMDT-TTF)SbF_6, cryst. struct., X-ray diffr. study 7−111520
BOH8-MPOOBC, ferroelec. liq. cryst., thin cell dielec. response 7−97917
boiling points, correl. with mol. struct., nonlinear group contrib. model 7−124464
bonding between S and O, ab initio SCF-MO study 7−116817
borinine, struct., vibr., ab initio MNDO STO calcs. 7−89967
borneol-paraffin, columnar-dendritic, interdendritic liq., permeability for flow 7−77977
boromomethane far IR gas lasers, pulsed high-power, performance and spectral survey 7−82537
boron methylidenide ion, cryst. struct., double bonds, X-ray study 7−117912
$(BPTTF)_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
brittle crystals conductivity meas., clamp module 7−108578
2-bromo-1,1,1,3,3,3-hexafluoro-2-(trifluoromethyl)propane, nonlinear IR absorption 7−116973
2-bromo-1,4-phenylenediyl bis(trans-4-n-propylcyclohexanoate), nematogenic, crystal structure 7−83934
1-bromo-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
1-bromo-4-chloronaphthalene, triplet-triplet energy transfer, double reson. and laser line narrowing obs. 7−112997
bromo-aliphatic acid esters, rot. isomerism, Raman and IR spectroscopic investig. 7−103486
p-bromo-p-n-hexyloxybenzylidene aniline, smectic B phase, mol. dynamics, PMR relax. meas. 7−137228
bromobenzene, derived thermodynamic data, high press. 7−142943
bromobenzene cations, photoexcited, collisional relax. meas. 7−110036
bromobenzoic acids, cryst., enthalpies of combustion, calorimetric determ. 7−100601
p-bromobenzonitrile, single cryst., pyroelectric props. dielectric meas. 7−106079
bromobutenes, conformational struct., torsional force consts. calcs. 7−122489
bromochlorodifluoromethane-HI, laser induced multiphoton dissoc. 7−129805
bromochloromethane, liq. vibr., IR obs. 7−74607
N-bromodifluoromethylenimine, stretching valence force consts. and coord. anal., GF and CNDO/2 calcs. 7−109771
2-bromoethanol, in Ar matrix, IR photolysis, quantum yield distrib. 7−86648
2-bromoethyl methyl ether, IR spectra, absorpt. curves calcs. 7−74612
bromoform, in Ar matrix, IR spectra 7−96696
bromomethane, core excited, photoionis. decay 7−136020
bromomethane, FIR laser stabilisation using Stark effect 7−117186
bromomethane, multiphoton ionis. investig. 7−90303
bromomethane+Xe, opacity and excitation fns. 7−117044
p-bromophenacyl ester of 15-fluoro-15-desoxy-11-epi-prostaglandin $F_{2\alpha}$, cryst. and mol. struct. determ. 7−124236
bromopropenes, conformational struct., torsional force consts. calcs. 7−122489
n-Bu_4NI/sulpholane binary solutions, US studies 7−84130
buckminsterfullarene, π-electron-ring-current suscept. 7−68203
bufadienolides, cardiac glycosides, ^{13}C NMR 7−66852
bullvalene, cope rearrangement, dynamic quadrupole echo NMR 7−100532
1,3-butadience, s-cis and gauche conformers, planarity, matrix isolation IR obs. 7−90114
butadiene, 2^1Ag state, UV reson. Raman spectra anal. 7−82184
1,3-butadiene, ab initio calcs., isomers, excited states 7−141444
butadiene, photoisomerisation, ab initio CI calcs. 7−93296
butadiene, substituted, conrotatory ring closure, kinetic principles 7−86577
butadiene iron tricarbonyl absorbed 2D system, optical spectra 7−99885
1,3-butadiyne in deoxycholic acid and apocholic acid canals, inclusion polymerisation, struct., elec. and optical props. 7−86623
butadiynyl (C_4H), detect. of vibrationally-excited mm-wave doublets in C star (IRC+10216) 7−134234
butalene, stability assessment, approximate HMO calcs., review 7−89970
butan-2-one-benzene(toluene)(chlorobenzene), speeds of sound, excess molar vols., compressibilities 7−76258
butan-2-one-heptane(cyclohexane)(methyl-cyclohexane), speeds of sound, molar vols., compressibilities 7−76257
n-butane, clusters, electron diffr. obs. of supersonic jets 7−103655
n-butane, condensed phase, mol. dynamics simulation, plastic transition 7−137179
n-butane, condensed phases, mol. dynamics simulation 7−137178
butane, fluorinated, core-level XPS spectra, ab initio calcs. 7−122327

organic compounds continued
n-butane, gas susceptibility, nonresonant third-order, CARS spectroscopy meas. 7−123097
n-butane, liq., rheology, nonequilib. mol. dynamics simulation 7−83146
butane, n- and iso-, conduction band energy meas. 7−112162
n-butane, shear viscosity, equilib. and nonequilib. mol. dynamics calcs. 7−98540
n-butane, third-order nonlinear suscept. meas., appl. in coherent anti-Stokes Raman scatt. 7−68777
n-butane radical cation, rot. isomers, ESR charactn. 7−109957
butane superheated liq., nucleation kinetics 7−137507
1,4-butanediol, solns., IR spectrosc. 7−109897
(R,R)-2,3-butanediol esters, chiral cpds., cholesteric phase helix inversion induction investig. 7−75990
1-butanethiol, chemisorption on Ag sol, SERS 7−96704
1,2-butanethiol, chemisorption on aq. Ag sol surface, SERS study 7−125734
butanol, adsorpt. on TiO_2, isotherm meas. 7−112071
t-butanol, adsorpt. on TiO_2, struct. effects, IR spectra 7−98684
t-butanol, aq. soln., compressibility, US rel. meas. 7−84079
+−butanol, aq. soln., hydrophobic hydration, Raman spectra 7−132255
butanol, deuterated, aligned spins relaxation, RF irrad. effects 7−118885
butanol, fluidity correl. using modified free vol. eqn. 7−98535
1-butanol-acetone, liq., mol. interactions, ultrasonic velocity meas. 7−75229
1-butanol-benzene, liq., mol. interactions, ultrasonic velocity meas. 7−75229
butanol-solvent interactions, dielectric const. meas. 7−99644
1-butanol-tetrachloromethane, liq., mol. interactions, ultrasonic velocity meas. 7−75229
2-butanone, local mode analysis, near IR spectrum 7−122537
butatriene, force field study by kinetic consts. method 7−68278
1-butene, Henry's consts. determ. 7−69934
1-butene, isomerization on $Al(H_2PO_4)_3$ catalyst, PMR and catalytic activity studies 7−132965
butenes, conformational energies and structs., mol. mech. calcs. 7−110059
butenes, isomers, electronic struct., reson. Raman spectra anal. 7−82188
2-butoxyethanol. liq. mixtures, US vels. apparent molar vols., compressibilities 7−104913
N-(1- butyl)pyridinium-$AlCl_3$, spin-lattice relax. time meas. 7−74680
t-butyl alcohol-water mixtures, small-angle X-ray scatt. investig. 7−117800
t-butyl bromide, liq., band maxima molar absorptivities, temp. depend. 7−103483
n-butyl bromide, liquid phase, IR spectra molar absorptivities, temp. depend. 7−144046
t-butyl chloride, liq., band maxima molar absorptivities, temp. depend. 7−103483
t-butyl compounds, ^2H NMR, methyl vs. whole group motions 7−142658
t-butyl cyanide, disordered phase, cooperative dynamics 7−142940
t-butyl iodide, A band region, MCD investig. 7−109970
t-butyl iodide, liq., band maxima molar absorptivities, temp. depend. 7−103483
t-butyl methyl ether clathrate hydrates, struct. studies 7−117883
t-butyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
n-butylacrylate, dielectric relax. determ. 7−118943
tert-butylammonium chloride, cryst. struct., X-ray diffr. study at 115 K 7−104709
butylbenzene-$d_0(d_3)(d_9)$, photodissoc., isotope effects 7−103595
4-(trans-4-butylcyclohexyl)benzonitrile, isotropic-nematic transition, high pressure effects 7−76403
butyloxybenzylidene octylaniline, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7−104543
butyronitrile, IR and Raman spectra, conformational and vibr. anal. 7−109892
cadmium acetate dihydrate, symmetry related Cd shielding tensors, assignment to lattice positions 7−76834
cadmium and selenium diethyldithiocarbamates, simultaneously heated, behaviour, IR spectra 7−113173
cadmium arachidate, order disorder transition, trace water effects 7−104617
cadmium arachidate multilayers, variable temp. Raman obs. using integrated optics techniques 7−85612
cadmium formate dihydrate-$d_0(d_2)$, solid, cross polarisation, sample spinning effect 7−90207
cadmium stearate, Langmuir-Blodgett monolayers, order charactn., Raman spectra 7−112061
cadmium stearate Langmuir-Blodgett films, charge injection into organic polymers 7−112494
cadmium stearate Langmuir-Blodgett films, X-ray diffraction studies 7−98738
caesium hydroacetate, cryst. struct. 7−142747
caesium pentadecafluorooctanoate-water system, lyotropic mesomorphism, phase diagram 7−142560
caffeine, aq. electrolytes soln., Setschenow coeffs. 7−91813
caffeine, diffusion coeff. in supercritical CO_2 7−75743
caffeine, supercritical fluid chromatography/Fourier transform mass spectrometry 7−100641
caffeine in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7−85831
calcium acetate, solid, NMR spectrum obs. 7−85445
calcium monoalkylamides, laser spectroscopy 7−96715
calcium oxalate crystallisation, supersat. generated employing reverse osmosis 7−142671
calcium oxalate monohydrate, contact and penetration twinning 7−142792
calcium oxalate trihydrate and epitaxy in weddellite-whewellite system 7−100801
calcium tartrate single crystals, ferroelectricity, dielec. props. 7−92623
calixspherand sodium picrate complex, X-ray struct., kinetic stability 7−144691
calmodulin-binding peptides, fluoresc. props. rel. to α-helical periodicity 7−126720
camphene-cyclohexanol, directional solidification, cryst. growth direction, influence of changing heat flow direction *(Chinese)* 7−71162
camphor-polystyrene solid solutions, dielectric props. at microwave freqs. 7−106078
ε-caprolactone, rot. transitions, microwave spectrosc. 7−135929
(+)-car-3-ene, conform., fully optimised STO-3G structs. 7−109741
carbamates, thermal stability, struct. effects, quantum-chem. MINDO/3 calcs. 7−109776

organic compounds continued
3-carbamoyl-2,2,5,5-tetramethylpyrroline-1-oxyl, radicals, ESR spectra 7−74687
carbazole-anthracene, Langmuir-Blodgett monolayer films, excitation energy transfer 7−74701
carbene cations and neutral mols., association reactions kinetics 7−113898
carbocations, α-substituted, substituent, stabilisation energies, ab initio MO calcs. 7−109748
carbocations, cyclic and β-substituted, struct. and stability, ab initio MO calcs. 7−109749
carbocations, mag. props., calcs. from localised quantities 7−89926
carbon phenolic solid mass removal, laser/heat shield interaction 7−113320
carbon tetrabromide soln., dipole moments, far-IR spectra 7−141574
carbon tetrachloride, adsorption on Al surface 7−78546
carbon tetrachloride, four-wave mixing, large reflection coefficients 7−110445
carbon tetrachloride, soln., dipole moments, far-IR spectra 7−141574
carbon tetrachloride cluster, electron attachment, mass spectroscopy 7−82334
carbon tetrachloride in liq. state at 296 K, T_d-symmetry mol., diffusion, dynamical cross correl. function 7−97887
carbon tetrachloride liquid surface, capillary wave and intrinsic thicknesses 7−84449
carbon tetrachloride multicentre Lennard-Jones mols., tetrahedral and octahedral model fluids, thermodynamic perturbation theory 7−69852
carbon tetrachloride-Ar(Kr) discharges, dissoc. excitation, CCl prod. 7−82198
carbon tetrachloride-NH_3 RF pulsed discharges, radical formation/reaction kinetics 7−119531
carbon tetrachloride-water mixtures Lennard-Jones pot., mol. dynamics simulation 7−91412
carbon tetrafluoride, discharge plasma, Boltzmann eqn. anal. of electron gas 7−75902
carbon tetrafluoride, vibr. energy distrib., collisional energy transfer rates, IR absorpt. spectra anal. 7−74600
carbon tetrafluoride multicentre Lennard-Jones mols., tetrahedral and octahedral model fluids, thermodynamic perturbation theory 7−69852
carbon tetrafluoride-O_2 plasma, low temp. discharge, etching of PMMA film 7−71343
carbon tetrahalide ions, stability, electron impact investig. 7−82376
carbon tetraioide, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
carbonaceous chondrites, organic material 7−115331
carbonaceous chondrites organic matter (book) 7−108052
carbonic anhydrase B, bovine, fluoresc. correl. spectroscopy, rot. diffusion 7−119722
carbonyl compound corrosion inhibitors for mild steel in K_2SO_4 medium 7−93169
carbonyl fluoride, IR and microwave spectra, ν_6 band, vibr.-rot. anal. 7−116959
carbonyl sulphide mol. cryst., intermol. pot. functions *(Japanese)* 7−131256
carbonyl ylides, dynamic stability, ab initio MCSCF calcs. 7−89952
3-carboxyethyl-7-ethylthioxanthone, energy and electron transfer, time resolved UV spectra 7−82206
carboxylate latex particles, surface props. EPR probe investig. 7−131390
carboxylic acid extracts, stable isotope ratios in Murchison meteorite 7−88334
carboxylic acids, transfer from decane to water, interfacial resistance 7−69948
cardenolides, cardiac glycosides, ^{13}C NMR 7−66852
cardiolipin, lipid bilayer, FTIR spectra 7−90112
carnosine, ^1H and ^{13}C NMR investig. 7−85454
β-carotene, conducting, UPS meas. 7−70982
β-carotene, reson. Raman scatt. and luminesc., excitation profiles, nonmotional narrowing effect 7−90146
β-carotene, reson. Raman scatt. cross sections 7−129723
β-carotene isomers, excited triplet-state, transient reson. Raman spectra 7−90161
carotenoids, contained in photosynthetic bacteria, Raman and IR spectra study 7−68317
carotenoporphyrins, conform. study related to photophysical props. 7−68195
catanionic surfactant-water systems, phase equilib. 7−111826
catechin, conformational anal. 7−74422
catecholamines, peripheral metabolism in guinea-pigs, changes during thermal adaptation 7−119737
CCN free radical laser-induced fluoresc., Fourier transform detection, rot. consts. 7−90252
cellobiose, aq. solns., NMR meas. 7−71688
cellulose acetate foils, thermal conductivity and diffusivity meas. 7−140696
ceramic-epoxy multilayered struct., elastic, piezoelectric and dielectric constants calc. 7−125616
cerebroside sulphate-cholesterol, interaction forces meas. 7−93668
cerium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
cetyltrimethylammonium bromide, monolayers, adsorpt. thermodynamic fns. investig. 7−70075
CHAB, ferromag. chain system, linear and nonlinear excitations 7−125352
chain-band silicates, structural variety, complete symbolic description 7−124152
chalcone ketyl radical anions, fluoresc. spectra and lifetimes 7−135987
charge delocalised anions, bonding in protic and dipolar aprotic solvent mols. 7−100536
charge transfer crystals, neutral-ionic phase transitions, high press., IR studies 7−84254
charge transfer crystals, struct. phase transition, IR reflection spectra studies 7−85678
charge-transfer crystals, mixed-stack, dimerisation model 7−138980
charged molecules, free energies of hydration, hydration shell model 7−144739
chelate: Cr^{3+} crystal, asymmetric spin-phonon coupling, low temp. behaviour of dipole subsystem 7−132134
CHEMICS, automated struct. elucidation system 7−81912
chiral 1,3-diols+$B(OH)_4^-$, polarimetric, circular dichroism and ^{11}B NMR investig. 7−82219
chiral-nonchiral liq. cryst. mixture, blue phases, phase diagram determ. 7−91803
Chlorazole Black E dye, space charge limited currents, 7−124997

organic compounds continued
chlorin, in amorphous SiO_2, hole-burning spectroscopy 7−123119
chlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
chlorin, matrix isolated, stark effect, spectral hole burning 7−96757
1-chloro-2-butyne, barrier to internal rotation, microwave spectrum 7−122509
2-chloro-2-methylpropane, overtone spectra, local mode anal. 7−135910
5-chloro-2-pyridone, phase transition, IR, Raman and dielec. meas., NQR spectrum 7−77423
chloroacetonitrile, isotopic species, microwave rot. spectra, N hyperfine struct. 7−96653
chloroacetylene, C-H stretching, hyperfine props., RF spectra 7−129696
α-chloroacrolein, conformation equilib., mol. struct. determ., gas-phase electron diffr. 7−68460
chloroaluminium phthalocyanine, thin films, Raman spectra, Davydov splitting 7−99864
p-chloroaniline, aq. soln. adsorp.. by macroporous copolymers 7−112078
chloroanilines, ground and excited electronic states, H bonding, electronic spectra 7−96645
α-chloroanthraquinones, lowest excited triplet states, EPR ODMR and phosphoresc. spectra study 7−106010
chloroanthraquinones, triplet states, visible absorpt. and phosphoresc. spectra anal. 7−103521
p-chlorobenzamide, order-disorder phase transition, IR and Raman studies 7−142685
chlorobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
chlorobenzene, liq., optical Kerr effect, femtosecond dynamics, laser spectra 7−129693
chlorobenzene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7−116940
chlorobenzene ion, time-resolved photodissoc. 7−96804
chlorobenzene-benzene (1-propanol) mixtures, $^{37}Cl(n,\gamma)^{38}Cl$ effects 7−93355
chlorobenzenes, isomers, bond orders, valence indices, oxidation numbers, ab initio calcs. 7−96527
2-chlorobenzoxazole, tautomerism, vap. IR and UV absorpt. spectra 7−103487
chlorobutane, adsorpt. on TiO_2, isotherm meas. 7−112071
3-chlorocyclopropene and its deuterated modifications, IR and Raman spectra, vibr. anal. 7−96682
chlorodifluoromethane, IR multiphoton dissociation, C_2^+ radical formation *(Chinese)* 7−110029
chlorodifluoromethane, isotope selective dissoc. using q-switched CO_2 laser 7−78530
chlorodifluoromethane, liquid speed of sound meas. 7−118037
chlorodifluoromethane, optogalvanic investig. 7−82072
chlorodifluoromethane + Cl, rate const., use of vibr. energy to control prod. distrib. 7−113877
chlorodifluoromethane decomposition kinetics, laser freq. effect 7−136026
chlorodifluoromethane-d_1, IR multiphoton dissoc., laser radiation parameters and sample press. effects 7−96808
n-chlorodifluoromethanimine, isotopic species, struct. quadrupole coupling consts., microwave spectra 7−122513
N-chlorodifluoromethylenimine, stretching valence force consts. and coord. anal., GF and CNDO/2 calcs. 7−109771
N-chlorodifluoromethylenimine, struct., harmonic force field and microwave spectrum meas. 7−74570
chlorodifluoronitrosylmethane, photodissociation, photofragment fluoresc. spectra anal. 7−96801
2-chloroethyl methyl ether, IR spectra, absorpt. curves calcs. 7−74612
chloroethylene, spin-coupled and MO electron densities 7−90441
chloroethylenes, π excited state struct. reson. Raman spectra anal. 7−82187
chlorofluoroethanes, electron attachment, transient nonequilibr. effects 7−103653
chlorofluoromethylene, photoabsorpt. and fluoresc. cross sections meas. 7−90239
chloroform, conductivity meas., mol. interactions obs. 7−85023
chloroform, liq., Raman spectra depolarisation ratios 7−128671
chloroform, membranes for selective separation of alkali metal cations 7−113991
chloroform transport in stress whitened polypropylene 7−76495
chloroform-d_1, oriented in liq. cryst., NMR spectra 7−92510
1-chlorohexane-hexane isomers mixtures, excess vols. 7−84319
chloroiodomethane, quadrupole coupling constant tensor, microwave spectroscopy 7−122510
chloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
chloromethane, FIR laser stabilisation using Stark effect 7−117186
chloromethane, opacity and excitation fns. 7−117044
chloromethane, Rayleigh line rejection in Raman spectra 7−89273
chloromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7−89908
chloromethane far IR gas lasers, pulsed high-power, performance and spectral survey 7−82537
chloromethane-d_3, ν_2 and ν_5 bands, assignments and predictions of FIR laser emission lines 7−90583
chloromethanes, photodissociative excitation, fluoresc. yields 7−110030
chloromethyl ether, ionis. pot. and intramol. charge transfer, photoelectron spectra 7−68409
chloromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7−90246
chloromethylformate, conformers and rotamerisation, matrix isolated IR spectra and ab initio calcs. 7−109894
chloromethylsilane-pyridazine (pyrazine) phase diagrams, thermodynamic functions *(German)* 7−91776
chloromethylstannanes, soln. struct. and preferred orientation in liq. cryst. 7−68362
m-chloronitrobenzene, single cryst., pyroelectric props. dielectric meas. 7−106079
chloropentafluoroethane, IR absorp. spectra, picosecond dynamical temporal evolution 7−129710
(2-chlorophenyl)carbene, matrix isolated, oxidation, chemiluminesc. 7−100578
2-p-chlorophenyl-4-hydroxy-6-oxo-1, 3-thiazine, crystal struct., X-ray, UV, IR and PMR spectra 7−111527
chlorophyll, aggregation in solns., Raman excitation profile anal. 7−82191
chlorophyll, isomers, metal-substitution, Raman and IR spectra study 7−68317

organic compounds continued
chlorophyll, oceanic, remote determ., radiance-ratio algorithm wavelengths 7−114566
chlorophyll a aggregates, electronic origins, Raman excitation profiles, resonant two-photon spectra 7−93641
chlorophyll a and chlorophyll a dihydrate dimers in water/acetone mixtures, dipole-dipole transfer 7−114211
chlorophyll a and photochlorophyll in frozen solns., fluoresc.-detected triplet kinetics study 7−100812
chlorophyll a-dimyristoyllecithin lipid bilayer, cooperative lengths and elastic consts. 7−114202
chlorophyll model cpds., normal modes, reson. Raman spectra 7−116975
chlorophyll phosphorescence in cells of marine algae, excitation spectra at −196°C 7−139231
chlorophyll-carotenoid complexes, Photosystem I photosynthesis model 7−71679
chlorophyllide in apomyoglobin, nonphotochemical hole burning in protein matrix 7−71677
chloroplast, photosystem I, persistent hole burning, electron-phonon coupling 7−78520
3-chloropropanal, gas phase data, conformational energies and struct. 7−117069
3-chloropropanoyl chloride, gas phase data, conformational energies and struct. 7−117069
chlorotrifluoromethane, ν_4 and ν_1 bands, FTIR spectrum 7−129702
chlorotrifluoromethane, in liq. Ar, Coriolis interaction in IR spectra 7−68304
chlorotrifluoromethane, IR multiphoton vib. excitation and dissoc. 7−103604
chlorotrifluoromethane + Cl, rate const., use of vibr. energy to control prod. distrib. 7−113877
chlorotrimethylsilane, overtone spectra, local mode anal. 7−135910
chlorpropamide, and tablets, PMR spectrometric determ. 7−100673
cholest-4-en-3-one, single cryst., radiation damage, ENDOR obs. 7−77426
cholestane spin probe in phospholipid multilayers, saturation transfer ESR 7−74688
cholestanyl fluoroalkanoates, phase transitions 7−111876
cholesterol, fibrous crysts., growth in silica gel 7−113368
cholesterol p-n-octyloxybenzoate, mesophase crystalline precursors struct., X-ray study, intermol. interaction energy calcs. 7−91555
cholesterol-cholesteryl oleate binary mixtures, X-ray diffr. study 7−75987
cholesterol-generated liquid membranes, electrokinetic energy conversion 7−119567
cholesterol-water interface, Monte Carlo simulation 7−114206
cholesteryl, α,α,ω-trihydrofluoroalkylcarbonates, homologous series, phase transitions 7−111882
cholesteryl 4-n-alkoxy-3-methoxybenzoates, synthesis, thermal props. 7−137213
cholesteryl δ-monohydrofluoropentanoate, crystal structure 7−98107
cholesteryl acetate, substituted isomers, mesomorphic props. 7−91429
cholesteryl erucate, smectic liquid crystal, ultrasonic waves propagation, specific volume 7−91727
cholesteryl oleate, density, refractive index, optical anisotropy 7−137218
cholesteryl oleyl carbonate, phase transitions, ultrasonic studies 7−105020
cholesteryl oleyl carbonate-chloride mixtures, liq. cryst. transition, US study 7−105021
cholesteryl pelargonate at glycerin interface, surface tension, temp. depend. 7−131393
cholesteryl valerate, phase transitions, ultrasonic studies 7−105020
chromium(III) polypyridyls, doublet state, phosphoresc. decay time 7−68395
chromium tris-acetylacetonates, radiation decomposition 7−106811
chromophore containing bilayer film, elec. cond. 7−99128
chromophores, in adhesive on PET base film, fluoresc. depolaris. 7−96773
chromophores form. in Jupiter's atm. 7−88174
chrysanthemic acid, flexible mol. fitting technique using distance matrices 7−74424
chrysene, electronic states struct., reson. Raman spectra anal. 7−82194
chrysene fluorescence quenching by KI in methanol-ethanol solns. 7−122600
cinnolin-4-ones, quadrupole coupling, cryst. struct., ab initio calcs. 7−70667
citric acid, solubility in water from 278.15 to 338.15 K 7−84279
CNP herbicide contamination of Japanese aquatic environment 7−126667
cobalt dicarbollide anions, translocation across lipid bilayer membrane, soln. resist. effect 7−114000
cobalt oxydiacetate trihydrate, mag. props. and mol. struct. determ. 7−112769
cobalt phthalocyanine impregnated PTFE bonded C electrodes, CO_2 electrochemical reduction 7−144726
coenzyme F_{430}, nickel hydrocorphinoids, structural changes, Raman spectroscopy 7−133196
colour photographic dyes, photo-fading reactions *(Japanese)* 7−128687
P/Comet Halley(1982i), dust organic component Vega 1 PUMA meas. anal. 7−88208
P/Comet Halley (1982i), 3.2-3.6 μm features characts. possibly due to organic compounds 7−94720
P/Comet Wilson (1986l), IR spectra, H_2O and methane production and magnitudes 7−101735
complex acids bonded to surfaces, NEXAFS studies, review 7−144173
complex alcohols adsorbed on Si (111) (7×7), NEXAFS study 7−106308
complexes, covalent and H-bonded assoc., pot. energy profile, ab initio MO calcs. 7−81921
concentration meas., Pt hot wire gas sensor, with positive ion emission 7−100668
conducting magnets, intermol. effective exchange interaction, MO cluster calcs. 7−74805
conformational struct., transition energies, thermochemical parameters, all valence electron approx. calcs. 7−109759
conjugated carbonyl acetylene compounds, He(I) photoelectron spectra 7−90271
conjugated hydrocarbons, topological spin Hamiltonian, graph theoretical approach 7−81917
copper acetylacetonate aerosols, ice-forming activity in supercooled cloud 7−72133
copper chloride tetramethyl sulphoxide, ferromag. linear chain, mag. birefringence 7−113154
copper diformate tetrahydrate, 2D Heisenberg antiferromagnet, spontaneous staggered magnetisation, PMR study 7−105899
organic compounds continued
copper diformate-urea-D_2O complex, 2D Heisenberg antiferromagnet, spontaneous staggered magnetisation, PMR study 7−105899
copper formate complexes, form. at surface, Raman spectrosc. obs. 7−74632
copper halide salts of TTF, TMTSF and BEDT-TTF, elec. props. 7−99015
copper heptachloride N-methylphenethyl ammonium, anomalous mag. props. 7−125328
copper hexachloride (cyanomethane), anomalous mag. props. 7−125328
copper I trifluoroacetate, mol. struct., GPED 7−96871
copper octaethylporphyrins, solns., nondegenerate CARS spectra 7−90168
copper phthalocyanine, 1D Heisenberg magnet, proton spin-lattice relax. rate meas. 7−85343
coproporphyrin, in amorphous ethanol matrices, dephasing and vibronic relax. luminesc. and hole burning investig. 7−92720
coronene, as model of charcoal, ^{13}C NMR chem. shift tensor investig. 7−109947
coronene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
correl. wavefunction, canonical and localised orbital basis 7−109788
cosmomycins, anthracycline antibiotics, field desorption mass spectrometric obs. 7−103685
coumarin, picosecond solvation dynamics investig. 7−106777
Coumarin 102-fluorescein dye lasers, energy transfer type 7−68627
coumarin 120 laser pulses close to the Fourier transform limit from a simplified resonant cavity 7−117191
coumarin 311, ultrashort ASE pulses generated by transversal travelling wave pumping *(Chinese)* 7−103808
coumarin 450 laser dye, simultaneous dual superradiance from planar and twisted conformations 7−110053
coumarin 504 adsorbed on quartz, vibrational spectroscopy by infrared-visible sum frequency generation 7−70785
creatinine, aq. soln., electrokinetic studies across urinary bladder membrane 7−119753
cresol, isomers, REMPI mass spectra 7−74717
cresol isomers and complexes, supersonic free jets, fluoresc. excitation spectra 7−90238
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
cresyl violet, thin films, four-wave mixing 7−136442
CRID/RICH detectors, wire aging of hydrocarbon gases with TMAE additions 7−74357
trans-crotyl alcohol, high resolution microwave spectrum, torsional pot. energy surfaces 7−122514
crown ether based on 1,4-naphthoquinone, cryst. struct., X-ray anal. 7−124237
crown ether surfactant micelles, role in pyrene excimer form. 7−109816
crown macrocycle, H^+ coupled transport of alkali metal cations in liq. membrane systems 7−100608
cryogenically-based analytical instrumentation for atm. volatile organic compounds trace quantities anal. 7−127541
cryptate, in polyacrylate soln., counterion dynamics probe, NMR relax. 7−82218
cryptosin monohydrate, new cardioactive glycoside, cryst. struct. determ. 7−139191
crystal mixtures, nonlinear line-narrowing spectroscopy 7−138441
crystal violet, Au surface, resulting complex Raman spectra study 7−74628
crystal violet, liq. torsional dynamics on barrierless pots. 7−109924
crystal violet, nonradiative decay dynamics, absorpt. and fluoresc. spectra meas., temp. and wavelength depend. 7−90254
Crystal Violet, organic dye, UPS and XPS spectra 7−103577
crystal violet, solns., nonradiative torsional dynamics meas., viscosity and press. depend. 7−103563
crystal violet adsorbed layer, Ag colloids, reason. SERS and fluoresc. spectra coverage depend. 7−74629
crystal violet adsorbed layer, Ag island film, reson. SERS spectra study 7−77572
crystal violet chloride adsorbed layer, on transition metal surface, Raman spectra study 7−77571
CTAB, dil. surfactant soln., viscoelasticity, micellar chain model 7−110897
CTAB, thin films adsorpt. on nonmetallic surface, SERS 7−77583
cubane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
cumene-ethanol(1-propanol) mixtures, speeds of sound, densities and viscosities 7−98347
cumene/alcohol mixtures, excess thermodynamic and transport props., US studies 7−131239
cyanamide, ionising radiation effects, radical form., ESR study 7−78519
cyanate anion, ν_3 bending and stretching modes, IR spectra anal. 7−103495
cyanate radical, $B^2\Pi$ state, CI calculations 7−122405
cyanate radical, struct. and electron affinities 7−74432
cyaninatometal compounds, phthalo- and naphthalo-based, synthesis and semicond. props. 7−100146
cyanine Langmuir-Blodgett dye thin films, electroluminescence *(Japanese)* 7−113289
cyano biphenyl sidechain liq. cryst. polysiloxanes, X-ray diffraction anal. 7−124086
4-cyano-4′-(2″-methylbutyl)-biphenyl mixtures, blue phase, elec. field induced phase diagrams 7−118095
4-cyano-4′-n-pentyl-d_{11}-biphenyl, nematic liq. cryst., ^1H spin-lattice relax., inter- and intram. contrib. study 7−92532
4-cyano-4′-n-pentylbiphenyl (5CB), homologous series, ^{13}C NOE studies 7−99612
4-cyano-4′-pentylbiphenyl, CW optical bistability 7−75043
1-cyano-adamantane, glassy and plastic phases, reorientations, local order 7−142659
p-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
p-cyano-N,N-dimethylaniline, intramolecular excited state charge transfer, fluoresc. 7−135995
2-cyano-N-(4-(4-n-pentyloxybenzoyloxy) benzylidene) aniline, nematogenic, cryst. struct., mol. conform., X-ray diffr. study 7−111522
cyanoacetylene, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
cyanoadamantane glassy plastic phase, glass-like transition and annealing *(French)* 7−143015
9-cyanoanthracene, fluoresc. quenching 7−68394

organic compounds continued
cyanoanthracene-2,5-dimethyl-2,4-hexadiene, fluoresc. excitation spectra 7−103557
9-cyanoanthracene-dimer crysts. solid-state photoreactions, ESR and visible-UV spectra 7−144733
cyanobenzene, struct., ring distortions, GPED study 7−122708
cyanocarbon acids, ionis., solvent kinetic isotope effects 7−141477
cyanocobalt(III)phthalocyanine, cryst. struct. and elec. cond. 7−98958
cyanocyclobutane, microwave spectrum, ab initio structure, dipole moment 7−116950
3-cyanocyclopropene, mol. struct., microwave spectra and ab initio MO calcs. 7−109877
cyanogen photolysis, Ar-cyanogen flow, CN UV fluoresc. spectra anal. 7−96718
cyanogen-HF binary complex, ν, vibr. fundamental investig. 7−135932
cyanomethane, electron impact, reson. vibr. excitation obs. 7−82379
N-cyanomethanimine, isomer charactn., collision activation mass spectra 7−110132
cyanophenyl heptylcinnamate, nematic, unstable mol. orientations and polarisability 7−142578
p-cyanophenyl trans-4-pentyl cyclohexane carboxylate, solid, nematic and isotropic phases, mag. susceptibility meas. 7−137231
p-cyanophenyl trans-4-propylcyclohexane carboxylate, phase transitions, specific vol., US vel. meas. 7−124078
p-cyanophenylviologen/potassium ferrocyanide system, green electrochromism 7−138423
cyclic alcohols, high press. thermodynamic and dielec. props. *(Japanese)* 7−131336
cyclic allylic alcohols, configurational assignment, NMR 7−74661
cyclic cpds., ambergris type odour origin, CNDO calcs. 7−74447
cyclic hydrocarbon-HX complexes, X=Cl,F,Br, matrix isolation studies 7−82107
cyclic ketones, six-membered-ring, absolute config., ^{13}C NMR 7−96735
cyclic molecule, number of rings formula 7−108094
cyclo-(L-Pro^1-L-Pm^2-D-Pro^3) peptide, strong coupling effects, z-filtered 2D NMR correl. spectroscopy 7−90208
cycloalkanes, phases, vibrs. of kinks and folds 7−77586
cycloalkanones, H^+ affinity, ring size effect, MINDO/3 calc. 7−81983
cyclobutane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
1,2-cyclobutanedione, gas phase, visible absorpt. spectrum 7−82197
cyclobuta[1,2-b:3,4-b′]diquinoxaline, ionisation pot., photoelectron spectra 7−96792
cyclobuten-3,4-diones, halogenated, vibr. anal. 7−96694
cyclobutene and its syn- and anti-dimers, UV-photoelectron spectra, ab initio CI calcs. 7−109802
cyclobutyl acetate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclobutylgermane, conform. anal., internal rot. barriers, Raman investig. 7−74636
cyclobutylsilane, conform. anal., internal rot. barriers, Raman investig. 7−74636
γ-cyclodextrin, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
cyclodextrin-crown ether-cation inclusion complexes, cryst. and mol. struct. 7−117911
β-cyclodextrin-indole inclusion complex, absorpt. and fluoresc. spectra 7−103569
1,3-cyclodisiloxanes, bonding, ^{29}Si NMR coupling consts. obs. 7−141604
cycloheptatrienes, fast internal conversions investigated by multiphoton ionisation 7−96797
cycloheptimidazoles, 2,6-disubstituted, liq. cryst. transition temps., DSC 7−124502
1,3-cyclohexadiene, femtosec. photochem. ring opening, reson. Raman obs. 7−74619
1,3-cyclohexadiene iron tricarbonyl-thiourea inclusion complexes, SHG study 7−75054
cyclohexane, electrical conduction of electrolyte solns. between alumina/polyphenyleneoxide coated electrodes 7−143070
cyclohexane, lightly purified, electrical conductivity study in tip-plane electrode geometry *(French)* 7−143071
cyclohexane, liq., neutron diffr. struct. obs. 7−137193
cyclohexane, liq., pulse radiolysis, radical form., time-resolved EPR meas. 7−113968
cyclohexane, positive charge carrier prod., lifetimes, accumulated dose effect 7−110005
cyclohexane, ring inversion, dynamic quadrupole echo NMR 7−100532
cyclohexane+He^+(C)(N^+), reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
cyclohexane+OH, absolute rate const. meas. 7−93247
cyclohexane−d_0(d_{12}), harmonic force field Raman scatt. intensity 7−122547
cyclohexane solutions, electrical conduction, effect of type of ionic surfactant 7−143069
cyclohexane with Cu complex, dynamical behaviour and gelation kinetics, EPR study 7−85417
cyclohexane-benzene mixtures, radioluminesc., mag. field effect 7−90248
cyclohexane-d_{12} and mixtures, phase behaviour at high press. 7−91792
cyclohexane-ethyl acetate, excess volumes, calcs. and meas. 7−86658
cyclohexane-hexane (1-hexanol) heat of mixing meas. using microflow calorimeter 7−108559
cyclohexane-methanol, fluid interface struct. near critical point, optical reflectivity anal. 7−137662
cyclohexane-xylene mixtures, US vel. eval. at 25 to 50°C 7−69828
cyclohexane-xylenes, energy of vaporisation eval. 7−69882
cyclohexene decomp. on Ru (001), desorpt. studies 7−106831
cyclohexene radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
cyclohexylammonium trichlorocuprate (II), mag. susceptibility, bound magnon contribs. 7−112768
N-cyclohexylmaleamic acid, isotopic species, NMR zero-quantum transition probability, random-field theory anal. 7−135967
cyclooctanol, phase behaviour at temp. 100 K, 370 K and press. up to 300 MPa 7−137541
cyclooctatetraene, fluoresc. quenching of 9-methylanthracene in aq. micellar solvent 7−90261
2-cyclooctylamino-5-nitropyridine, nonlinear optical crystal, prep. and props. 7−68740
cyclopentadienyl cations, excited states, polarisability, CI and PPP calcs. *(French)* 7−116872
organic compounds continued
cyclopentadienyl cations, N and B substitution, mol. struct., ab initio MINDO/3, MNDO, STO calcs. 7−96547
cyclopentanes, substituted, NMR chem. shift, spectra simulation 7−116986
cyclopentanols, substituted, NMR chem. shift, spectra simulation 7−116986
cyclopentanone, mol. struct., GPED and microwave spectra 7−96869
cyclopropane, $\nu_9+\nu_{10}$ combination FTIR spectral band, l-type resons. effects 7−109895
cyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
cyclopropane, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
cyclopropane, r_α-struct., vibr.-rot. correl., NMR study 7−68361
cyclopropane, saturated cycle struct., oscillatory anal. 7−141447
cyclopropane, surface-induced isomerisation, incident translational energy effect 7−113900
cyclopropane, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclopropane clusters, electron diffr. obs. of supersonic jets 7−103655
cyclopropane-Lewis acid interaction, matrix isolation, IR spectra 7−82108
cyclopropene, empirical pot. function 7−90017
cyclopropene analogues, ionisation energies, Green's function ab initio study 7−81950
cyclopropene-1,3-d_2, vibr. spectra 7−90017
cyclopropenes, conformational energies and structs., mol. mech. calcs. 7−110059
cyclopropenylidene, ab initio mol. orbital studies of low-energy metastable isomers 7−88590
cyclopropenylidene, isotopomers, mol. struct., millimeter wave spectra 7−82083
cyclopropenylidene, synthesis in interstellar clouds 7−128024
cyclopropenylidene (C_3H_2), elec. dipole moment meas. from Stark effect in microwave spectrum 7−120272
cyclopropenylidene (C_3H_2), first interstellar organic ring, laboratory and astronomical spectroscopy 7−115552
cyclopropenylidene detect. in NGC 7027 planetary nebula 7−127994
cyclopropenylidene-d_1, ^{2}H nuclear quadrupole hyperfine struct. study 7−101891
cyclopropyl silane, mol. struct., GPED 7−96872
cyclopropyl-1,1-carboxamidoacetate, Raman and IR spectra 7−90149
cyclopropyl-1-cyanocarboxamide, Raman and IR spectra 7−90149
γ-cyclopropyl-bis(1,2,3′-trimethyl-indolenine-2-yl) pentamethinium tetrafluoroborate, mol. cryst., exciton-phonon coupling study 7−92074
cyclopropylamine, IR spectra, conformation, force const. 7−82127
cyclopropylbenzene, mol. ions, Fourier transform ion cyclotron reson. mass spectra 7−122727
cyclopropylidenecyclobutane, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7−96544
cyclopropylisothiocyanate, gas phase electron diffr., mol. struct., ab initio HF calcs. 7−82356
cyclopropylmethyl free radical clock, calibration, 30-89°C 7−71471
l-cystine, stretching vibr., UV reson. Raman excitation 7−129721
cytidine-5′-phosphoric acid, proton transfer, FTIR spectra 7−74576
cytochrome b_5 electron transfer, role of heme vinyl groups 7−71664
cytosine, photoexcited states, electronic struct., CNDO/S3 calcs. 7−68218
D-ribose, parity-violating weak interactions, ab initio calcs. 7−100793
DABCO, at Ag electrode, SERS, photon-driven charge transfer 7−76628
decafluorocyclohexene, Retro-Diels-Alder reaction, IR multiphoton excitation, UV spectra anal. 7−74658
trans-decalin, positive charge carrier prod., lifetimes, accumulated dose effect 7−110005
decamethylene-N,N′-diaminium-iron(II) tetrachloride, mag. susceptibility 7−112759
N,N′-decamethylenediammonium iron tetrachloride, mag susceptibility meas. 7−131999
decamethylferrocene+TCNQ, reaction products, structs., mag. props., Mossbauer spectra 7−143940
n-decane, liq., rheology, nonequilib. mol. dynamics simulation 7−83146
decane, pyrolysis in chemical plasma reactor 7−100510
n-decanenitrile, thermal-press. coeffs. 7−104885
decyl sodium sulphate-decanol-water-Na_2SO_4 lyotropic nematic system, viscoelastic props. 7−76255
n-decylammonium chloride, chain dynamics, IR and Raman spectrosc. obs. 7−71699
decylammonium chloride, phase transitions, Raman and IR spectroscopy 7−84251
decyltrimethylammonium bromide, aq. soln. heat capacity meas. 7−91832
deoxy-2-aminopurine, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
2′-deoxy-3′,5′-di-O-acetyl adenosine, mol. conform., cryst. struct., PMR obs. 7−98104
2-deoxy-D-ribose, enthalpies of combustion and form. ^{13}C and ^{1}H NMR 7−93359
2′-deoxyadenylyl-(3′-5′)-deoxythymidine, strong coupling effects, z-filtered 2D NMR correl. spectroscopy 7−90208
deoxycholate, methyl group dynamics, double quantum filtered NMR relax. obs. 7−141609
deoxyheme, parity-forbidden transitions 7−86913
2′-deoxythymidine and 2′-deoxyadenosine, coordinate anal. 7−144954
desacylguayulin A, stereochem., NMR investig. 7−96744
desertomycin, antibiotic, mol. struct., 2D NMR investig. 7−68345
deuteromethane-Kr solid solns., thermal expansion anomaly, X-ray diffr. study *(Russian)* 7−76459
deuteromethyl bromide, IR band, high-resolution investig. 7−74584
deuteronaphthalene, isotopic mixed crystals, hydrostatically compressed, quasi-resonance 7−138479
1,4-di(2-(5-phenyloxazolyl)benzene), electron impact excitation, fluoresc. 7−68470
di(2-ethylhexyl) phosphoric acid, mobile carrier for Zn transport through supported liq. membrane 7−119568
di(2-ethylhexyl)sebacate, viscosity, effects of press. and temp. 7−69955
2,4-di(2-pyrenyl)pentane, diastereoisomers, conformer anal., excimer form., PMR obs. 7−129750
di(tetramethylammonium) tetrachlorozincate, commensurate-incommensurate phase transitions, thermodynamic study 7−118955
di(tetramethylammonium) tetrachlorozincate, ferroelectric-incommensurate systems, cryst. growth and related dielec. props. 7−118964
di(tetramethylammonium) tetraiodo cadmate, mol. dynamics, PMR study 7−92538

organic compounds continued
di(tetramethylammonium) zinc chloride, incommensurate phase, anomalous electro-optic and electrogyration effects 7−125700
di(tetramethylammonium)$ZnCl_{4-x}Br_x$ solid solns., dielec. meas. and Raman spectroscopy 7−118954
di-2-ethylhexyl phthalate-dibutyl phthalate (di-2-ethylhexyl sebacate), binary mixture vaporisation 7−111844
di-isopropyl ether, tunnelling rotation, of methyl groups 7−142664
di-n-butylamine, Raman bands, temp. depend. intensities 7−85639
di-n-dodecyl quaternary ammonium salts, thermotropic liq. cryst. props. 7−124091
di-n-propyl sulphide, mol. ions, Fourier transform ion cyclotron reson. mass spectra 7−122727
2,6-di-t-butyl-4-methylphenol, UV spectra and kinetics of transients, radiolysis anal. 7−96727
di-tert-butyl ethanal, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7−129744
diacetamide, polymorphic transformation, reaction path model *(Japanese)* 7−131078
diacetylene, IR intensity parameters, acidity of acetylenic hydrogens, MNDO calcs. 7−82125
diacetylene, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
diacetylene+$C_3H_3^+$, gas-phase reactions, FT ICR mass spectrosc. obs. 7−138986
diacetylene crystal, irradiated, inherent phase transition and polymerisation mech. 7−86622
diacetylene films, ion beam induced polymerisation 7−93318
diacetylene Langmuir-Blodgett films, polymerisation, vapour treatments 7−100553
diacetylenes, anisotropic heat conduction 7−84408
diacetylenes, polymerisation in the frozen state by UV or high energy beam irradiation 7−71491
diacetylenic acid Langmuir-Blodgett films, STM investigations 7−76624
N,N′-dialkanoyldiaminomesitylenes, liq. cryst. phases 7−75981
dialkyl peroxides, gas phase thermolysis, trapped radicals, ESR study 7−74709
dialkylaminopyridine, acylation catalysis; synthesis, attachment to polymer support 7−93312
p-p′-dialkylazoxybenzenes, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7−124083
sym-dialkylureas, H-bonded, struct., dielectric relax. 7−77461
1-(p-(N,N-diamethylamino)phenyl)-4-(p-nitrophenyl)-1,3-butadiene, laser and gain spectra 7−109983
diamine chelate rings, 5-membered, conform. interconversion, strain energy calcs. 7−116839
diamines, dipole moment from dielectric const. 7−118936
diamines, liq., intermol. interactions and struct., isothermal compressibility meas. 7−111725
p-diaminobenzene, mol. struct. in gas phase and cryst. 7−90443
4,4′− diaminophenyl sulphone, intramol. charge transfer state, time-resolved fluoresc. spectra 7−129783
2,6-diaminopyridine, structure and electronic props. calc. *(Japanese)* 7−81978
trans-diaminostilbene, fluoresc. rel. to cure characterisation of epoxy network 7−90262
2,5-diaryloxazole pyridine analogs, quaternary salts, solid solns., fluoresc. 7−119048
diarylphosphonyl radical, ESR spectrum, ^{17}O isotropic hyperfine coupling const. 7−90273
diastereoisomeric salts, optical resolution optimisation, phase diagram role 7−142955
diastereomeric noncovalent electron transfer complexes, conform., thermodynamics 7−82018
4,13-diaza-18-crown-6, N,N′-disubstituted, complexes with NaI(KI), cryptand-like behavior, X-ray cryst. struct. 7−117913
diazabenzenes, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7−82256
1,4-diazabicyclo[2.2.2]octane, Rydberg state, fluoresc. obs. 7−96778
1,4-diazabicylo[2.2.2]octane, vap., internal conversion rates meas., subpicosecond IR transient absorpt. spectra 7−135934
diazines in aqueous and protic solvents, electronic and vibr. spectra 7−129700
diazirine, isotope effects, mol. consts., vibr. anal. 7−68273
diazirine molecule, quadratic force field calc. for vibrs. 7−81947
diazomethane, electronic struct., spin-coupled descriptions 7−122326
diazomethane chemisorbed on Fe, interaction with decomposition products, XPS study 7−100014
1,2,5,6-dibenzanthracene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
sym-dibenzo-16-crown-5-oxyacetic acid, soln., mol. relax. dynamics 7−118041
dibenzo-18-crown-6, conformations, Raman spectra 7−74637
dibenzofuran, single crysts., doped, triplet energy transport and excitation density 7−70675
dibenzo[f,h]quinoxaline, phosphoresc., external heavy-atom effect 7−117003
dibenzylsulphide, FT IR and Raman spectra 7−99867
dibenz[a,h]anthracene, linear dichroism spectra in stretched polyethylene matrix 7−108668
4,4′-dibromobenzophenone, press. depend. of LF Raman spectra 7−77525
dibromodifluoromethane, IR spectrum, vibr. study 7−82129
1,2-dibromoethane-ketone mixtures, US vel. and isentropic compressibilities at 303.15 K 7−69829
dibromonaphthalene, triplet excitons, impurity and phonon scatt., optical line broadening 7−132294
1,4dibromonaphthalene-pyrene mixed crystals, conc. effect on delayed fluoresc. emissions 7−113281
2,4-dibromophenol, aq. soln. adsorp.. by macroporous copolymers 7−112078
1,2-dibromopropane-cyclohexane(benzene) (tetrachloromethane), excess molar enthalpies 7−84278
2,3-dibromothiophene, 2D NMR, heteronuclear chemical shift correl., virtual one-bond coupling effects 7−125560
dibutyl phthalate, dil. soln., dielectric props. temp. depend. 7−70689
dibutyl sulphoxide, solns., structural transition temp., PMR and light scatt. intensity meas. 7−90201
dicalcium barium propionate, Mn^{2+} doped single crystals, phase transitions under high press. EPR study 7−138315
dicalcium strontium propionate, deuterated, Brillouin scatt. 7−125758
organic compounds continued
dicalcium strontium propionate, deuterated, ferroelec., spontaneous polarisation 7−99753
closo-dicarbadodecaboranes and 9-halogeno derivatives, He I photoelectron spectra 7−110002
3,5-dichloro-2,6-diphenyl-1,4=benzoquinone, cryst. struct. 7−111535
(±)-1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)ethane, chem. resolution 7−110011
1,1-dichloro-2-bromomethyl-cyclopropane, mol. struct., GPED 7−96874
1,1-dichloro-2-cyanomethyl-cyclopropane, mol. struct., GPED 7−96874
1,2-dichloro-2-fluoroethanone, enantiomers and racemic mixture, IR-RF double reson. spectra 7−90230
9,10-dichloroanthracene, cryst. press. effect on luminesc. 7−77617
9,10-dichloroanthracene, triplet exciton migration with photoexcitation 7−125802
p- dichlorobenzene, high pressure phase transition, X-ray diffraction study 7−76398
dichlorobenzene-dibromobenzene mixed cryst., nondiffusive triplet energy transport 7−132328
p-dichlorobenzophenone, phase transitions, Brillouin scatt. and calorimetric studies 7−142998
dichlorodiammineplatinum-guanosine complexes, UV reson. Raman spectra, pH effects 7−68325
dichlorodifluoromethane, Freon-12, IR absorpt. spectrum 7−68302
dichlorodifluoromethane, interaction with solid surface, thermal desorpt. mass spectrosc. 7−124680
dichlorodifluoromethane + Cl, rate const., use of vibr. energy to control prod. distrib. 7−113877
dichlorodifluoromethane-HI laser induced multiphoton dissoc. 7−129805
dichlorodifluoromethane-N_2 mixtures, steady-state Townsend conditions, electron swarm props. 7−104474
dichlorodifluoromethane/SF_6/N_2 gas mixtures, electron transport props., Boltzmann eqn. anal. 7−97691
dichlorodimethylsilane-treated glass surface, Rb chemisorption and chemical reactions, effects on spin-relax. props. 7−126481
1,1-dichloroethane, critical consts. vapour press. 7−91759
1,2-dichloroethylene, laser-induced interconversion, GPED anal. 7−132950
dichloromethane, ^1H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
dichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
dichloromethane, in Ar matrix, IR spectra 7−96696
dichloromethane, liquid speed of sound meas. 7−118037
dichloromethane, spin-lattice relax. times, nucl. Overhauser enhancements and mol. reorientation 7−129747
2,5-dichlorophenol, aq. soln. adsorp.. by macroporous copolymers 7−112078
2,6-dichlorophenol, vibr. dephasing, IR bandshapes 7−96685
1,3-dichloropropane, liq., conform. at 253 K, wide-angle X-ray scatt. obs. 7−117092
2,3-dichloroquinoxaline, in calcinated Vycor glass emission and excitation spectra, surface-adsorbate interaction, phosphorescence lifetimes, Bronsted acid sites 7−141626
dichromated gelatin films, sensitiser concentration gradients reduction 7−130018
dichromium tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
dicopper tetracarboxylates, thermotropic columnar mesophase, vibr. studies 7−142572
3,6-dicyano-1,2,4,5-tetrazine charge transfer complexes, elec. cond. 7−84860
dicyanoacetylene, vibr. IR and Raman spectra 7−82128
9,10-dicyanoanthracene, electron transfer, friction effects 7−119493
1,1-dicyanocyclobutane, mol. struct., ab initio and GPED investig. 7−110107
1,1-dicyanoethylene, substituted, electronic struct., conform. mobility, NMR and PMR 7−74684
dicyanomethane molecules, valence ionisation spectra 7−90015
dicychrohexyl 18-crown-6, coherent neutron scatt. following dynamic nuclear polarisation 7−118893
dicyclohexyl-18-crown-6, conformations, Raman spectra 7−74637
α,α-dicyclohexyl-cyclohexanemethanol open dimers, lattice vibr. coupling, Raman and IR spectra 7−113180
dicyclopropyl ketone, conformational equilibrium, vibrational spectra 7−122538
1, 2-dicyclopropylacetylene, unsymm., chem. activated restricted energy flow 7−106774
diene and dione chromophores, chiroptical props., quantum chem. calcs. 7−129794
diesel fuel, vapour-liq. equilib. continuous thermodynamics appl. 7−111848
diethanolamine, aq. solns., degrad. in heat transfer tube 7−113868
diethyl(silyl)amine, mol. struct., GPED 7−96873
diethyl sulphoxide, solns., structural transition temp., PMR and light scatt. intensity meas. 7−90201
1,1′-diethyl-2,2′ cyanine dye, adsorbed on Ag colloids, SERS 7−68314
1,1′-diethyl-2, 2′-cyanine iodide, mol. cryst., exciton-phonon coupling study 7−92074
3,3′- diethyl-6,6′-diphenyl-9-enthyloxacarbocyanine iodine, time-resolved fluoresc. spectra, solvent depend. 7−82252
diethylbenzenes, supersonic mol. jet spectroscopy 7−141592
diethylene glycol dimethyl ether-d_{14}, liq. and solid states, Raman spectra 7−68313
1-diethyleneamidophosphoryl-2-trichloromethyl-Δ^2-imidazolene, cryst. and mol. struct., X-ray study 7−104725
diethylether-I complex, UPS, electron states 7−96791
3,3′-diethyloxadicarbocyanine iodide, laser dye, laser induced optoacoustic study 7−78464
diethylsulphide-I complex, UPS, electron states 7−96791
3,3′-diethylthiacarbocyanine bromide, vibr. modes, CARS, transform theory appl. 7−141584
N,N′-diethylurea, mol. struct., self-assoc., IR spectra 7−96672
p-difluorobenzene, vibr. levels, lifetimes, SEP-SVLF spectra 7−74702
p-difluorobenzene+Ar, vibr. relax., stimulated emission pumping-single vibronic level fluoresc. investig. 7−74741
p-difluorobenzene vapour, fluoresc., quantum yield, intramol. vibr. redistrib., rot. effect 7−90260
4,4′-difluorobenzophenone, press. depend. of LF Raman spectra 7−77525
difluorodichloromethane, vibr. energy relax., IR fluoresc. spectra anal. 7−74602

organic compounds continued
difluorodichloromethane/SF_6 gas mixtures, ionisation and attachment coeffs. meas. 7—137140
1,2-difluoroethane, conformational energies, ab initio MO calcs. 7—129573
difluoroethanes, semiempirical pot. energy surface for reactions 7—113865
difluoroethene laser, 889 μm, optically pumped frequency pulling 7—122923
difluoromethane-d_2 ν_5 and ν_6 laser lines, IR-IR double reson. 7—122582
difluoromethylene, photoabsorpt. and fluoresc. cross sections meas. 7—90239
difluoromethylene+$Br_2(Cl_2)(H_2)$, reaction rate consts., IR diode laser spectroscopy 7—78466
1,3-difluoropropanone, IR spectra and dipole moment, stabilities calc. by PCILO method and Onsager formalism *(French)* 7—116857
2,6-difluoropyridine, vap., electronic absorpt. spectra, vibronic anal. 7—103527
diglycidyl ether of bisphenol, phonon fracton density of states, cryst. and amorphous samples 7—76319
diglycine, NQR, ^{14}N quadrupole coupling const. 7—90202
diglycine nitrate crysts. γ-irrad., electrical polarisation obs. 7—113067
dihexyl phthalate, dil. soln., dielectric props. temp. depend. 7—70689
2,3-dihydro-1,4-diazepine derivatives, struct. and tautomeric forms, ^1H and ^{13}C NMR spectra anal. 7—74663
5, 6-dihydro-2H-pyran-2-one, microwave spectrum, dipole moment and conform. investig. 7—109882
N,N-dihydro-4,4′-bipyridinium radical cation and parent dication, reson. Raman spectra 7—144060
9,10-dihydroanthracene, cryst. struct., X-ray powder diffr. studies *(French)* 7—83937
9,10-dihydroanthracenes, conformational anal., mol. mechanics calcs. and ^{13}C NMR 7—68347
dihydrobromide heptahydrate of norbinaltorphimine, crystal struct. 7—117915
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7—109876
dihydrophenazine, doped in mol. cryst., excited states characterisation 7—96571
1,8-dihydroxyanthraquinone, cryst. ground state vibrs. assignment, Raman excitation profiles anal. 7—85747
1,4-dihydroxyanthraquinone, S_1←S_0 transition, Stark effect 7—90236
1,2-dihydroxybenzene, microwave spectra, conformation 7—116952
2,6-dihydroxynaphthalene-1,3,6,8-tetranitronaphthalene, mol. dynamics, EPR 7—143922
diiodomethane, adsorbed molecules, photodissociation and desorption 7—143188
diisopropyl ether, mol. struct. and conform., GPED 7—74762
N-(2-(N,N-diisopropylamino)ethyl)-2-oxo-1-pyrrolidinacetamide sulphate, conform., X-ray anal. 7—76110
diketone compounds, excited states, EELS anal. 7—103671
dilaurylphosphatidylcholine, interaction forces meas. 7—93668
2,3-dilithiopropene, ab initio calcs. 7—89932
dimedone, solid, 2D-exchange separated local field double reson. NMR 7—106036
2,5-dimercapto-1,3-4-thiodiazole, tautomeric forms struct., ab initio STO calcs. 7—96536
$(DIMET)_2SbF_6$, antiferromagnetic properties 7—85280
dimetal complexes, multiply bonded, intramol. bridging phosphine ligands, chemistry 7—93309
dimetal tetraformates, metal-metal multiple bonds, Xα-SW MO calcs. 7—89957
p-dimethoxymethane, ^{13}C chem. shielding anisotropy, variable angle sample spinning obs. 7—77408
2,2-dimethoxypropane, conform., anomeric effect, MO calcs. 7—96543
dimethyl cyanamide, ionising radiation effects, radical form., ESR study 7—78519
dimethyl disulphide, adsorption and reaction on Cu and Ni 7—144757
dimethyl ester of N-phthalyl-4-bromo-DL-glutamic acid, rotational isomers struct. 7—104711
dimethyl ether, tunnelling rotation, of methyl groups 7—142664
dimethyl ether in dense interstellar clouds, prod. by gas-phase reactions 7—115550
N,N-dimethyl formamide, vibr. spectra, force field and isotopic shifts 7—96641
dimethyl fumarate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7—90437
2,5-dimethyl hexatriene, lowest excited triplet states struct., time resolved reson. Raman spectra 7—90162
dimethyl maleate, electron impact fragmentation mechanism investig., MIKE spectroscopy 7—90437
dimethyl methylphosphonate, adsorbed on oxidised Fe surface, effect of coadsorbed water, TPD, AES studies 7—71522
2,6-dimethyl pyridine-water, binary crit. mixture, light scatt. and specific heat near lower crit. point 7—113211
dimethyl sulphide, tunnelling rotation, of methyl groups 7—142664
dimethyl sulphide (disulphide), soil gas emissions, from wetland soils of Florida, USA 7—126665
dimethyl sulphoxide, vibr. spectra in different media, IR and Raman obs. 7—103505
dimethyl sulphoxide/water binary liquid system, ultrasonic studies 7—124399
dimethyl terephthalate, electrochromic characteristics 7—113139
2,5-dimethyl-1,3,4-thiadiazole-I_2 charge-transfer complex, form. and stability, visible spectra anal. 7—74649
2,5-dimethyl-1,3,5-hexatriene, isomers, UV absorpt. and Raman spectra 7—74624
3,7-dimethyl-1,5-diphenylbispydone-9-CuCl 1:1 complex, cryst. struct. 7—104715
trans-3,3-dimethyl-1-(2-naphthyl)-1-butene, photoisomerisation in presence of electron acceptors, mag. field effects 7—93265
N,N-dimethyl-4-nitro-2,6-xylidine, cryst. and mol. struct., X-ray diffr. 7—98105
N,N-dimethyl-acetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7—90294
N,N-dimethylacetamide-tetrachloromethane, solid-liquid phase equilibria 7—76359
1,1-dimethylallene+Mu, addition reaction, hyperfine coupling consts. determ. 7—135857
dimethylamine, hydration free energy, finite difference thermodynamic integration 7—106784
dimethylamine, internal rot., character tables, symmetry eigenvectors 7—129568

organic compounds continued
4-2′-(dimethylamino)-6′-naphthoylcyclohexanecarboxylic acid, dynamic fluoresc. study 7—117009
4-(N,N-dimethylamino)benzoate, twisted intramol. charge transfer phenomenon, press. effects 7—90241
4-(N,N-dimethylamino)benzonitrile, visible spectra, solvent effects 7—74652
4-(4-(N,N-dimethylamino)phenylazo)azobenzene, liq. cryst. solns. orientational order, NMR 7—82220
N-[-4(dimethylamino)phenyl]-and N-(4-nitrophenyl)-α-(4-alkoxyphenyl)nitrone mixtures, liq. cryst. props. 7—137219
4-dimethylamino-4′-chlorostilbene, in polymer films, transition moments, absorpt. anisotropy 7—103531
4-dimethylamino-4′-nitrostilbene, in polymer films, transition moments, absorpt. anisotropy 7—103531
4-N,N-dimethylaminobenzonitrile, dual luminesc., quenching by H_2O 7—103558
4-N-N-dimethylaminobenzonitrile, jet-cooled, dispersed fluoresc. spectra and lifetimes 7—109980
p-dimethylaminobenzonitrile, soln., photoisomerisation dynamics, polarity depend. barriers 7—93268
α-(4-dimethylaminophenyl)-ω-(9-phenanthryl) alkanes, exciplex fluoresc., mag. field effects 7—90245
dimethylammonium copper trichloride, cryst. morphology and struct. correl. using modified X-ray film 7—91490
dimethylammoniumnonachlorodiantimonate, ferroelectric single crystal, pyroelectric properties 7—132206
dimethylaniline, carbonyl derivatives, twisted intramol. charge transfer excited states, picosecond absorpt. spectra 7—109915
N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7—129598
dimethylaniline, soln., absorpt. and reactions of SO_2 7—91963
2,3-dimethylanthracene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7—99899
dimethylated asymmetrical molecule, internal rot., character tables, symmetry eigenvectors 7—129568
5,6-dimethylbenzimidazole, tautomerism, vap. IR and UV absorpt. spectra 7—103487
2,3-dimethylbenzonitriles, near ultraviolet absorpt. spectra 7—122502
2,3-dimethylbutane, rot. isomerism, US investig. at high press. 7—98346
dimethylcyclohexane, conformer populations, press. and temp. depend., Raman intensity meas. 7—74639
trans-1, 2-dimethylcyclopropane, internal rot., character tables, symmetry eigenvectors 7—129568
3,4-dimethylenefuran, and rel. diradicals, singlet-triplet energy separation ab initio calcs. 7—68192
3,4-dimethylenefuran, config., spectrosc. and chem. props. 7—68330
3,4-dimethylenefuran biradical, matrix isolated, ^{13}C NMR 7—96736
dimethylenepolycyclobutadienes, non-Kekule alternant hydrocarbon structs. 7—89929
3,4-dimethylenethiophene, config., spectrosc. and chem. props. 7—68330
dimethylether, protonated, fragmentation studied in tandem quadrupole mass spectrometer 7—71552
1,1′-dimethylferrocenium-TCNQ, 1:2 cpd., optical props. 7—119027
dimethylformamide, carbonyl band frequency, solvent polarity and acidity properties influence 7—122735
N,N-dimethylformamide, internal rot. barriers, dynamic NMR and ab initio SCF MO method comparison 7—109722
dimethylformamide, solns., depolarised Rayleigh wing and Raman splitting 7—90154
N,N- dimethylformamide, solvated metal cations, molar cond. and volume meas. 7—69946
dimethylformamide-cyclohexane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7—110669
1,2-dimethylhydrazine, mol. struct. and conform., GPED and microwave spectra 7—74574
1,2-dimethylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7—74678
N,N-dimethylhydroxylamine, normal vibr., IR spectra *(German)* 7—90132
1,3-dimethylisoxasole, molecular electronics, intramolecular p-n junction, polarised N—O bond, PMR study 7—99168
N,N-dimethylmorpholinium pentaiodotetraargentate, ID solid electrolyte, crystal struct. and elec. cond. 7—105112
dimethylnaphthalene, harmonic and anharmonic dynamics *(Japanese)* 7—131254
2,3-dimethylnaphthalene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7—99899
dimethylnitramine, CH stretching modes, vibr. relax. 7—90087
p-N-N-dimethylnitroaniline in ethanol, excitation depend. fluoresc. to phosphoresc. ratio 7—74699
S-3,7-dimethyloctan-1-ol, liquid crystalline derivatives 7—111382
S-3,7-dimethyloctyl 4-n-hexadecyloxybenzoyloxybenzoate, spontaneous polarisation depend. on the cell thickness 7—113085
4,5-dimethylphenanthrene, mol. geometry and conform. stability, buttressing effect 7—90450
dimethylpropane, speed of sound, spherical acoustic resonator meas. 7—117695
3,4-—dimethylpyrazole, tautomerism, MNDO geometry optimisation 7—129601
2, 6-dimethylpyridine, ^{13}C-^{15}N scalar splittings in ^{13}C NMR spectra 7—68350
dimethylsilyene, gas-phase, reaction rate consts., time-resolved investig. 7—86560
dimethylsulphide, in atmosphere, prod. by oceanic phytoplankton rel. to cloud albedo and climate 7—87864
dimethylsulphide, in ocean, regional and seasonal vars. in flux to atmosphere 7—94302
dimethylsulphite-$d_0(d_8)$, low temp. matrix isolated, vibr., IR spectra 7—82111
dimethyltelluride-d_0(-d_6), vibr. spectra and normal coord. calcs. 7—96695
dimolybdenum tetraacetate, metal-metal binding, thin films UPS investig. 7—109998
dimolybdenum tetraacetate, metal-metal distortions for metal-metal orbital electronic ionisations and excitations 7—68406
dimolybdenum tetraacetate, vibr. assignments, ligand deuteration method, Raman spectra 7—82153
dimyristoyl phosphatidylcholine, lipid membranes, Raman spectra and head group hydration 7—71696
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7—78730
dinaphthylpropane, fluoresc. probe of bile salt-lecithin mixtures 7—86886

organic compounds continued
dinitrobenzenes, (o−, m− and p−), vibr. spectra and normal coord. anal. 7−74642
4,6-dinitrobenzofurazan, bis(dimethylamino)naphthalene adduct, PMR obs. 7−96731
4,6-dinitrobenzofuroxan, bis(dimethylamino)naphthalene adduct, PMR obs. 7−96731
4-(2′,4′-dinitrobenzyl)pyridine, time resolved resonance Raman studies 7−85637
2,4-dinitrobenzyl carbanion, photochem. prod., absorpt. spectra, solvent effect 7−99879
2,4-dinitrodiphenylamine, solubility study in micelles and microemulsions 7−98464
1,2-dinitrododecane, dilute solutions, dielec. props. 7−106075
1,12-dinitrododecane, single crysts., molecular composite, Fourier transform IR spectra, hardness 7−113178
2,4-dinitrophenol, intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7−122501
1,6-bis(2,4dinitrophenoxy)-2,4-hexadiyne single crysts., pyroelec. and dielec. props. 7−99729
dinitrophenylpolyenes, polar fragments, selective orientational solvation effects on spectra 7−144705
dinitrotoluenes, solns., picosec. transient absorpt. 7−68331
dioleylphosphatidyl-choline, hexagonal phases, deform. energy meas. 7−90971
dioleylphosphatidyl-ethanolamine, hexagonal phases, deform. energy meas. 7−90971
diols, liq., intermol. interactions and struct., isothermal compressibility meas. 7−111725
1,4-dioxadiene, MINDO/3 vibr. obs., canonic quadratic force field calcs. 7−103460
dioxane, determ. in water and soil by GC/MS or charcoal tube enrichment GC 7−139059
1,4-dioxane, effect on cond. and ion-pairing in HCl mixtures 7−98530
1,4-dioxane, liq., vibr. dephasing and relax. 7−96828
1,4-dioxane in benzene and cyclohexane, intermol. interactions, ultrasonic velocity meas. 7−137470
1,4-dioxane ions, photodissoc., 7−119538
1,4-dioxane-oxalyl fluoride complex., cryst. struct., Raman and visible obs. 7−70763
dioxane/D(+) tartaric acid aqueous mixtures, US studies 7−84133
1,3-dioxanes ring, Si substitution effects, X-ray diffr. exam. 7−111528
3,6-dioxaoctane-n-heptane, vapour-liquid equilibr. 7−91778
dioxirane, O−O bond props., SCF MO calcs. 7−109732
2,6-dioxo-1,4,7,10,13,16-hexaoxacyclooctadecane, struct., ^{1}H spin-spin obs. 7−96748
1,3-dioxolane, ice clathrate, thermal conductivity 7−111986
5,6-dioxycarbonyl(2.2.1)bicycloheptene-2-ene, phase transition, temp. depend., plastic crystal phase form. 7−137542
dipalmitoylphosphatidylcholine, in fused salt, phase transitions, X-ray diffraction, subcell arrangement 7−142973
dipalmitoylphosphatidylcholine bilayers, phase transitions, X-ray studies 7−76378
dipalmitoylphosphatidylglycerol, vib. freq. shift, Raman spectroscopy 7−90175
dipalmitoylthiophosphatidylcholine, chiral, thermotropic props., config. effect 7−71706
diphenyl, surface melting light scatt., surface liq. cryst. phase formation 7−124459
diphenyl sulphide-paraterphenyl radical ion pair recomb. fluoresc. kinetics, quantum beats induction 7−100521
N,N′-(diphenyl-1,2-vinylidene)-meso-tetraporphyrin, X-ray cryst. and mol. struct. 7−111524
1,3-diphenyl-2-pyrazoline, UV photoelectron spectra, substituent effect 7−74711
2,6-diphenyl-4-(2,4,6-triphenyl-l-pyridinio)phenoxide, lipid membranes, interfacial solvent props. and surface pot. determ. 7−93664
l,n-diphenyl-l,n-diyls, substituted, UV spectral lifetimes, substituent and solvent effects 7−82204
diphenylacetylene, acetylenic bridge vibrs., Raman meas. 7−74638
1,4-diphenylbutadiene, in polymer films, transition moments, absorpt. anisotropy 7−103531
diphenylchlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
diphenyldecapentaene in n-decane, single crystal, polycrystalline solutions, fluorescence decay rates, high resolution spectroscopy 7−135993
diphenyldiacetylene, acetylenic bridge vibrs., Raman meas. 7−74638
diphenyldodecahexaene in n-dodecane, single crystal, polycrystalline solutions, fluorescence decay rates, high resolution spectroscopy 7−135993
2,5-diphenylfuran molecules, gaseous phase, photophysical parameters 7−82272
2,5-diphenylfuran-alkane complexes and related cpds., fluoresc. excitation spectra 7−82247
1,6-diphenylhexatriene, in polymer films, transition moments, absorpt. anisotropy 7−103531
1,8-diphenyloctatetraene, in polymer films, transition moments, absorpt. anisotropy 7−103531
α,ω-diphenylopolyenes, lowest excited state, CARS spectra 7−90167
2,5-diphenyloxazole, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
diphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
diphenylpicrylhydrazyl radical, spectra-spatial two-dimensional EPR imaging 7−90227
diphenylpicrylhydrazyl radical, spin density, neutron diffr. 7−83939
diphenylpolyene solns., fluoresc. amplification and light quenching 7−129778
diphenylpolyenes, dual fluoresc. in solns. 7−90258
diphenylpolyenes, picosecond photophysics, excited-state conformational changes 7−96717
diphenylsulphurdiimides, ^{1}H NMR, conformational studies 7−109943
1,3-diphenyltetrahydro-1,2-diazine 7−74711
diphosphine disulphides, solid, ^{31}P NMR spectra 7−92516
diphthalocyanines of rare earths, substituted, magneto-optical study *(Chinese)* 7−129761
$DIPS\phi_4(I_3)_{0.76}$, quasi-1D conductor, Peierls transition and I_3^- ordering 7−99020
dipyridotetraazapentalene, photooxidation, fluoresc. and phosphoresc. spectra 7−82268
disilenes, bonding, ^{29}Si NMR coupling consts. obs. 7−141604

organic compounds continued
7,7′-disodiumcromoglycate-water lyomesophases, NMR and X-ray diffr. 7−111364
disordered layers, anomalous transport and drift mobility 7−84890
disordered solids, aromatic mol. photoexcited triplet state zero field electron spin-lattice relax. meas. 7−85429
dissolved organic C in humic Lake Tjeukemeer, conc. and molecular size meas. 7−127304
disulphide radical anions, photochem. electron detachment reaction 7−100537
diterpenoid alkaloids, struct. elucidation, ^{13}C NMR spectra 7−90188
ditetrabutylammonium dirhenium octachloride, single cryst., lumines. 7−132309
1,5-dithiacyclooctane, cation radical and dication, Raman spectra and structs. 7−74644
dithiadiselenafulvane salts, unsymmetrical, synthesis and elec. props. 7−99004
1,3-dithiane derivatives, orbital interactions, UV photoelectron spectra, MNDO calcs. 7−122359
3,10-dithiaperylene and derivatives, charge transfer complexes, elec. cond. and cryst. struct. 7−84855
1,6-dithiapyrene and derivatives, charge transfer complexes, elec. cond. and cryst. struct. 7−84855
1, 2-dithiete, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
dithioacetic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
dithioformic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
dithioglyoxal, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
1,3-dithiol-2-ylidene and 1,3-dichalcogenole donors for organic metals 7−99007
ditungsten tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
divicine, favism-inducing cpds., MINDO/3 calcs. 7−141462
Dizatrifone, analytic activity, conform. and electronic struct., SCF-LCAO-MO calcs., CNDO/2 approx. 7−100803
$(DMEDT\text{-}TTF)_2AsF_6^-(SbF_6^-)$ radical cation salts, struct. investig. 7−83941
$(DMET)_2AuBr_2$, superconductivity, semiconductor to metal transition 7−125186
DMET DSDTF radical cation salts, metallic elec. props. and cryst. struct. 7−84807
$DMSO{:}Dy^{3+},Ho^{3+}$, diffusion-limited energy transfer 7−106245
DMSO, solns., structural transition temp., PMR and light scatt. intensity meas. 7−90201
$DMTM(TCNQ)_2$, thermoelec. power, elec. cond. and first order phase transition 7−84835
$(DMtTTF)_2X$ salts, electronic and mag. props. 7−85293
DNA base pairs, nonempirical ab initio SCF calcs. 7−96514
DNA solution meas., laser cross-correlation spectrometer based on Kh6-4 correlator 7−121236
DOBAMBC, ferroelectric, mixture with smectic C liquid crystal, electro-optical response 7−99799
DOBAMBC, smectic-A-chiral-smectic-C phase transition 7−98444
DOBAMBC helicoidal ferroelec. smectic C* liq. cryst., spontaneous polarisation 7−113065
N-docosylpyridinium-bistetracyanoquinodimethane, Langmuir-Blodgett films, random exchange Heisenberg antiferromag. chains 7−70627
DODCI, first excited singlet state, photosensitised electron transfer reaction 7−116888
dodecafluorocyclohexane, excited above dissoc. threshold, IR spectroscopy and intramol. vibr. relax. 7−109883
dodecafluorocyclohexane, intramol. vibr. relax., IR-IR reson. spectra anal. 7−74604
dodecane, swelling agent for solid-gas mass transfer meas. 7−75261
dodecyl hexaoxyethylene ether, phase behaviour, sodium dodecyl sulphate effects 7−104975
dodecyl sodium sulphonate-water system, prelamellar lyomesophase, X-ray and polarising microsc. obs. 7−111356
dodecylammonium trifluoroacetate, micellar soln., small angle neutron scatt. obs. 7−114004
4-dodecyloxy-4′-cyano biphenyl thermotropic liq. cryst., vibr. IR and Raman study 7−137554
dodecyltrimethylammonium bromide, aq. soln. heat capacity meas. 7−91832
dodecyltrimethylammonium chloride, liq. cryst., chain interactions, Raman spectrosc. obs. 7−70803
donor-acceptor compounds, intramol. charge transfer, dielectric relax. effect 7−117064
doxyl labelled alkyl chains, EPR spectra, inhomogeneous line broadening 7−90228
16-doxylstearic acid interaction with α-poly-γ-methyl-l-glutamate 7−84495
DPPH, disordered solid, hyperfine and quadrupole interactions, electron spin echo modulations 7−112926
durene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
duroquinone, Raman spectra, triplet state, semi-reduced form, laser pumping, transient species 7−141582
duroquinone, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7−82192
dye aggregate-semiconductor interface, exciton migration and chemical reactions 7−98816
dye coverages, SHG efficiency 7−110458
dye coverages on quartz substrates, conc. depend. orientation studied by SHG 7−124693
dye mixture saturable absorbers in passive switch for laser mode locking 7−141948
dye molecules, adsorbed on vesicle surface, excitation energy transfer 7−118242
dye molecules, isolated, adsorbed on organic single crysts., site-dependent fluoresc. lifetimes 7−82271
dye molecules, monolayers, luminescence and excitation energy transfer 7−144107
dye molecules, monolayers, luminescence and excitation energy transfer 7−144108
dye mols. in amorphous solids, spectral holes, elec. field effects 7−123123
dye monolayer on sapphire, laser irrad. heat deposition, fluoresc. yields meas., photoacoustic spectra 7−116012

organic compounds continued
dye solns., triplet-triplet annihilation *(Japanese)* 7−129624
dye solution, fluoresc. profiles calc. 7−90253
dye solution, refractive index, spectral depend. 7−113106
dye solutions, fluorescence damping at 77 K 7−125800
dye solutions, ultrafast population relaxation obs. using time-delayed four-wave mixing 7−123064
dye-polymer layer, laser-induced fluid motion, optical data storage 7−130207
dyes, energy transfer in methanol, fluoresc. quenching 7−96785
dyes, in nematic liquid crystals, bleaching by laser 7−117279
dyes, methanol soln., laser irrad. heat deposition, fluoresc. yields meas., photoacoustic spectra 7−116012
dyes intercalated in DNA, steady-state fluoresc. polaris. anisotropy meas. 7−93645
dyestuffs use as corrosion inhibitors of brass in ammonia soln. 7−93170
dynorphins, FAB mass spectrometric fragmentation behaviour 7−71676
dyotropic disodium cromoglycate in water, magnetically aligned, polarised absorption spectra 7−137224
dysprosium tartrate, crystal growth from silica gel 7−85977
dysprosium tartrate hydrate, gel grown, characteris. and thermal behaviour 7−111525
dysprosium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
EBBA mag. suscept. temp. depend. and nematic-isotropic transition studies 7−111385
effect of dephasing collisions on Raman polarisation 7−82170
n-eicosane paraffin, melting in rot. vertical tube study 7−98397
electrolyte solutions for rechargeable Li batteries 7−133080
electron affinity, ab initio SAC CI calcs. 7−135848
electron-beam-induced damage, analytical theory 7−111674
electron-transfer photoreaction, energy storage, optimal conditions 7−126469
electronic properties, MO-based mol. mechanics calcs. 7−129909
emeraldine, and related mols., electronic struct., CNDO/S3 calcs. 7−89964
energy well connection graph appls. 7−89901
enol ethers, in alkaloids, conform. preferences, ^{1}H spin-lattice relax. obs. 7−82214
enzymic cofactors, and photochem.-induced transients, UV reson. Raman spectrosc. 7−133223
eosin, assoc. equilibr., spectroscopic anal. *(German)* 7−106792
eosin, Y, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
eosin in aqs. micellar dispersions, flash photolysis 7−86646
epicatechin, conformational anal. 7−74422
epoxide membranes, ionic, separation of acid and salt by dialysis 7−119566
epoxy, transition metal ions, effects on positron annihilation 7−125845
epoxy compounds, ferroelectric liquid crystals, fast-switching, physical props. 7−99758
epoxy matrix, carbon fibre reinforced, relaxation phenomena viscoelasticity *(French)* 7−93046
erythrocyte membranes, rot. diffusion and protein interactions, transient dichroism 7−71707
erythrocytes, human, ^{7}Li NMR 7−78753
erythrosine, adsorbed on semiconductor-molecular film insulator system, charged defects effects on mol. fluoresc. 7−77654
ester crystal dispersing elements for soft X-ray spectroscopy, growth technique and 2d spacings meas. 7−144256
ester systems, effect of lateral substitution on smectic C formation 7−111363
esters, carbonyl substituted, effect on mesomorphic props. 7−124503
esters incorporating cyclobutane, spiro[3.3]heptane, dispiro[3.1.3.1]decane rings, synthesis 7−137221
β-$(ET)_2I_3$, organic supercond., exceeding paramag. limit of H_{c2} 7−138160
β-$(ET)_2IBr_2(AuI_2)$, vol. superconductivity, DC low field magnetisation meas. 7−77152
ethane, adsorpt. equilib. meas. by volumetric apparatus 7−118072
ethane, CH stretch-bend force consts., isotope shifts, Raman spectra anal. 7−103508
ethane, fluid coexistence curves, three-body interactions, scaling variables, singular diameters 7−124466
ethane, Henry's consts. determ. 7−69934
ethane, inner valence shell Rydberg transitions, electron impact ionisation 7−122728
ethane, IR spectral line parameters determ. 7−139757
ethane, p-T phase diagram, NMR study 7−84249
ethane, solid, proton spin relax. at high press., reorientational models 7−70665
ethane, thermal conductivity meas. in critical region 7−83398
ethane, third-order nonlinear suscept. meas., appl. in coherent anti-States Raman scatt. 7−68777
ethane, two-phase liq. equilib. with hydrate 7−124468
ethane+OH, absolute rate const. meas. 7−93247
ethane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
ethane surface tension and capillary const. meas. in liq.-vapour coexistence range *(Russian)* 7−112025
ethane-bisporphyrins, covalently linked, electronic excitation energy transfer 7−141455
ethane-H_2 binary mixtures, temp. depend. of H_2 component fugacities 7−130822
ethane-n-heptadecane (n-octadecane), tricrit. phenomena determ. 7−84183
ethane-pentacosane, three-phase equilibr. 7−84185
ethane-propane mixtures, excess enthalpies meas. 7−76441
ethane-tetracosane, phase equilibr,. meas. and calcs. 7−91771
ethane-water mixtures, excess molar enthalpies at high temps. and pressures 7−75747
ethanes, hexasubstituted, large amplitude motions and phase transitions 7−142933
ethanethiol radical, laser-induced fluoresc., visible spectra anal. 7−96712
ethanol, aq. soln., hydrophobic hydration, Raman spectra 7−132255
ethanol, behaviour in various binary solns., C-H stretching vibrs., difference Raman spectroscopy 7−74622
ethanol, cavitational boiling 7−76374
ethanol, fluidity correl. using modified free vol. eqn. 7−98535
ethanol, four-photon Raman spectroscopy using elastic scattering of pump waves 7−128673
ethanol, mol. adsorption on SiO_2 7−76621
ethanol adsorbed on Cu (110), near edge EXAFS study 7−85899
organic compounds continued
ethanol adsorpt. on CuO_2, selectivity and sensitivity, surface struct. effects, Pd overlayer effects *(Russian)* 7−76626
ethanol layer uniformly heated from below, heat transfer and statistical characts. of temp. field 7−117595
ethanol vapour bubble shape and size during boiling on downward-facing flat surfaces 7−142358
ethanol-H_2O, binary nucleation theory 7−98379
ethanol-H_2O, convection onset, lin-stability problem soln. 7−97273
ethanol-H_2O mixtures, convection; travelling waves and spatial variation 7−130516
ethanol-H_2O mixtures, convection onset, confined travelling-wave patterns 7−130731
ethanol-monochlorobenzene dosimeter, electron dose determ. 7−68028
ethanol-water, excess enthalpy of mixing, appl. to reference mixture use 7−91814
ethanol-water-$CaCl_2$, vapour-liq. equilib. at 25°C 7−111846
ethanol-zeolite 13X system, cooling, kinetics *(French)* 7−119672
$(ethanolammonium)_2$ copper tetrachloride, mag. props., EPR linewidth meas. 7−125362
$(ethanolammonium)_2$ copper tribromide, antiferromag. coupling, magnetostructural correlations, mag. suscept. meas. 7−125361
ethchlorvynol, ^{1}H NMR spectral simplification using lanthanide shift reagents 7−74683
ethene, atmospheric concentrations, meas. by lidar 7−115095
ethene, Henry's consts. determ. 7−69934
ethene, mean polarisabilities, temp. depend. meas. *(German)* 7−68472
ethene, mol. beams, terminal rot. distrib. meas. 7−141672
ethene, overtone and combination stretching vibr. bands 7−90086
ethene, photon stimulated desorpt. form V_3Si (100) 7−118252
ethene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
ethene+iodotrifluoromethane, CO_2 laser induced telomerisation study 7−78528
ethene adsorbate orientation on Pt (111) and (110), polar angle X-ray photoelectron diffr. study 7−143209
ethene dimers, IR predissoc. spectra 7−116972
ethene-d_1, ν_{10} absorpt. band, tunable diode-laser IR spectra 7−74588
ethene-ethane system, orthobaric surface temp. meas. at cryogenic temps. 7−91923
ethene-Xe, liq., excess enthalpies, at 162.9 K 7−76440
ethenonyl radical, rot. spectra in submillimeter-wave region 7−82079
ethenyl halides, electron-donating ability, core electron spectrosc. and ab initio theory 7−129574
ether lipids from archaebacteria, monolayers, surface behaviour study 7−78715
ethidium bromide, alcohol-water soln. fluoresc. study 7−99909
ethidium bromide, DNA intercalated, laser flash photolysis, methylviologen effects 7−133225
ethoxy adsorbed on Cu (110), near edge EXAFS study 7−85899
1-ethoxy-4-chlorobenzene dissolved in nematic liquid crystal, conformation and orientational order 7−122570
P-(ethoxyphenyl azophenyl) derivatives, isotropic-nematic transition, mag. susceptibility studies 7−111886
ethyl 3-cyclohexene-1-carboxylate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
ethyl alcohol, forced convection in heated pipe, boiling crisis 7−136842
ethyl alcohol in dense interstellar clouds, prod. by gas-phase reactions 7−115550
ethyl azidoformate, conformational anal., MINDO/3 quantum-chem. calcs. and IR spectra 7−109775
ethyl carbamate, aq. solns., dielectric dispersion meas. 7−85518
ethyl carbamate-methyl carbamate, aq. solns., dielectric dispersion meas. 7−85518
ethyl dication, open or bridged struct., ab initio MO CI calcs. 7−116862
ethyl ether, boiling onset in superheated liq. 7−136970
ethyl ether-chloroform, excess volumes, calcs. and meas. 7−86658
ethyl halides, electron-donating ability, core electron spectrosc. and ab initio theory 7−129574
ethyl isocyanate, vibr. spectrum, normal coord. anal., conform. stability and ab initio calcs. 7−90093
ethyl lactate, IR spectra, solvent influence 7−90123
o-ethyl phenol, fundamental freqs., Raman and IR spectra 7−90136
ethyl radical, muonated, level-crossing resonance, residual isotope effect 7−136095
ethyl radicals, fluorinated, struct., conform. anal., ab initio SCF MO study 7−81952
ethyl radicals, fluorinated, vibr. freq., UHF/3-21G model 7−81953
ethyl radicals, hyperfine coupling constant, angular dependence, rotational angle, ab initio calculations 7−135906
ethyl radicals, matrix IR spectra and UV photolysis 7−116971
ethyl radicals, protonated heterosubstituted, 1,2-rearrangement, ab initio SCF calcs. 7−81949
4-ethyl-4′-(4″-pentylcyclohexyl)biphenyl, and its fluoro derivative, mesogenic compounds, crystal and mol. structs. 7−137353
ethylamino ion, fragmentation and isomerisation, MNDO calcs. 7−68216
ethylbenzene, catalytic dehydrogenation to styrene 7−93381
ethylbenzene, struct. and internal rot. in solns., PMR and MO investig. 7−103532
ethylbenzene, supersonic mol. jet spectroscopy 7−141592
ethylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
ethylbenzene-alkanol mixture, excess volumes 7−143044
ethylbenzene-$d_0(d_2)(d_7)(d_{10})$, photodissoc., isotope effects 7−103595
ethylcycloheptatriene, vibrationally excited, collisional deactivation, energy depend. 7−100509
ethyldifluorophosphine, IR and Raman spectra, conformational stability normal coord. anal. 7−96677
ethyldifluorophosphine-$BH_3(BD_3)$ 7−68312
ethyldimethylphosphine-borane-$d_0(d_3)$, conform. stability, normal coord. anal., IR and Raman spectra 7−109910
ethylene, adsorbed on Ni (100), chemisorption, thermal decomp. 7−137707
ethylene, adsorption on Ir (111), high resolution EELS, XPS studies 7−86678
ethylene, adsorption on MO (111), evidence for subsurface C 7−118256
ethylene, collisionless IR multiple-photon dissoc., radical generation 7−71510
ethylene, correl. wavefunction, canonical and localised orbital basis 7−109788
ethylene, electron impact ionisation and fragmentation, electron spectra anal. 7−90428

organic compounds continued
ethylene, equilibr. geometric config., reson. stark effect 7−129758
ethylene, fluid coexistence curves, three-body interactions, scaling variables, singular diameters 7−124466
ethylene, interaction with O adsorbed on Ir (111) 7−119578
ethylene, intracavity and extracavity photoacoustic reson. spectroscopy 7−90107
ethylene, molecular orbital coeffs., energy minima, CNDO/2 MC-SCF calcs. *(French)* 7−141461
ethylene, new 10 μm ν_7 lines in C star spectrum 7−107849
ethylene, on Pt (111), laser-driven thermal reactions, mass spectral investig. 7−113979
ethylene, phase diagram up to 10 kbar, DSC studies 7−91762
ethylene, photoisomerisation, ab initio CI calcs. 7−93296
ethylene, production by pyrolysis in chemical plasma reactor 7−100510
ethylene, use as reference state for thermodynamic props. of homologous series 7−78532
ethylene+aminonitrene, addition, nonempirical gradient quantum chem. calcs. 7−103384
ethylene+OH, radical reactions, barrier heights, perturbation theory 7−132918
ethylene + $(HCl)_2$ $(CHF)_2$, addition, ab initio SCF calcs. 7−144696
ethylene adsorbed on Pt (111), adatom conc., determ. by elastic recoil detection anal. 7−84517
ethylene adsorpt. equilib. meas. by volumetric apparatus 7−118072
ethylene adsorption on Fe (110), Auger spectra studies 7−118271
ethylene adsorption on Pt(100), evidence for vinylidene formation 7−131444
ethylene adsorption on Pt (111), surface decomposition, K co-adsorption effects, AES, LEED, TPD and EELS studies 7−143184
ethylene adsorption on ZnO, CARS spectroscopy with optical waveguides 7−84491
ethylene clusters, IR predissoc. spectra 7−122518
ethylene desorption from Ru (001) during cyclohexene decomp. 7−106831
ethylene diamine, protonated, intramolecular H bonding MP2/D95V** calcs. 7−129586
ethylene dication, gas phase isomers stability study, ab initio MO calcs. 7−96501
ethylene dimer, vibr. predissoc. 7−122643
ethylene dimer and trimer cations, ab initio study, counterpoise correction 7−109743
ethylene glycol, aq. soln., compressibility, US rel. meas. 7−84079
ethylene glycol, polymerisation effect on mol. polarizability and diamagnetic suscept., refractive index method 7−113926
ethylene glycol, vibration circular dichroism, ab initio calcs. 7−74689
ethylene glycol dimethyl ether-d_{10}, liq. and solid states, Raman spectra 7−68313
ethylene oxide, grafting onto gelatin, ^{13}C NMR spectra study 7−113922
ethylene oxide, ionis., ab initio MO calcs. 7−81920
ethylene oxide clathrate hydrates, thermal expansion, unit cell parameter 7−118137
ethylene oxide hydrate, struct. I, thermal expansion obs. 7−143058
ethylene oxide-H_2O complexes, electronic struct., CNDO/BW calcs. 7−109774
ethylene-methyacrylate mixtures, phase behaviour under high press. 7−100550
ethylene-polyethylene mixtures, phase equilibria, calc. methods comparison *(German)* 7−111819
ethylene-water mixtures, excess molar enthalpies at high temps. and pressures 7−75747
1,1′-ethylenebis[4-(methoxycarbonyl)pyridinyl] diradical, ESR spectrum 7−109956
ethylenediaminetetraacetic acid on Ag and Cu electrodes, SERS 7−99810
ethylenediammonium molybdate, prep., cryst. struct., thermal behaviour 7−83938
ethylenediammonium vanadate, preparation, crystal struct. and thermal decomposition 7−104721
ethylidene adsorbed on Pt (111), adatom conc., determ. by elastic recoil detection anal. 7−84517
ethylidyne, on Pt (111), laser-driven thermal reactions, mass spectral investig. 7−113979
ethylidyne form. on Pt (111), IR spectra studies 7−144756
ethylisobutyrate-phenol(4-chlorophenol) complexes, dipole moment meas. 7−99645
ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7−135920
ethylperoxy, radicals, matrix IR spectra and UV photolysis 7−116971
ethylphosphonothioic dichloride-$d_0(d_3)$, solid and liq., IR and Raman spectra 7−144057
ethylsilane, IR multiphoton dissoc., reaction channels study, ab initio and MNDO calcs. 7−74438
ethyltoluenes, supersonic mol. jet spectroscopy 7−141592
ethyne, intramol. dynamics investig. 7−90314
ethyne, mol. beams, terminal rot. distrib. meas. 7−141672
ethyne, solid, three-body interactions and cryst. energy *(Japanese)* 7−131090
ethyne, ultracold gas, FTIR spectra 7−129711
ethyne adsorbate orientation on Pt (111) and (110), polar angle X-ray photoelectron diffr. study 7−143209
ethynyl (-d_1) radical, colour centre laser spectroscopy, IR spectra, vibronic state 7−116968
ethynyl radical, Ar matrix isolated, Fourier transform IR spectra 7−82097
2-ethynyl-1,3-butadiene, conform. vibr., IR and Raman obs. 7−96669
ethynyl-copper compounds, I_z doping 7−131167
ethynyldiazonium ion, dissociation, ab initio study 7−129562
etioporphyrin I, monomer and dimer, in organic glass, spectral hole burning *(Russian)* 7−75083
europium (oxydiacetate)$_3$, mag. dipole transition moments, rotatory strengths, dynamic ligand polarisation 7−70255
excess molar vols., Gibbs energies press. depend. 7−76446
fast atom bombardment (FAB) mass spectrometry of biological components *(Japanese)* 7−71563
fatty acid cholesteryl esters, homologous series, optical anisotropy and local order parameter 7−113112
fatty acid dimers, centrosymmetric, dipole, vector sum law calcs. 7−143963
fatty acid fluorinated monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
fatty acid salts, Langmuir monolayers, mean free path of electrons, AES 7−77707

organic compounds continued
fatty acids, long-chain, solid-liquid phase relations in organic solvents 7−124454
fatty acids, premelting, IR and Raman spectra 7−99828
fatty acids, vacuum evaporated films, molecular orientation and growth mechanism 7−132461
fenchones, enthalpies of vaporisation, 298.15 K 7−76370
ferric stearate Langmuir-Blodgett films, deposition method 7−70149
ferricytochrome c interactions with model phospholipid bilayers, Raman obs. 7−71695
ferromagnets, synthesis 7−126041
films, multilayer thermodesorption spectra 7−118263
five-membered saturated rings, intramol. dynamics in condensed phase 7−90143
flavins, closed shell, molecular orbital studies 7−144952
flavins, one-electron oxidation, flush photolysis and pulse radiolysis obs. 7−71480
bis-(fluoranthen) hexafluorophosphate, electron mobility, electron spin-echo spectrosc. 7−92490
fluoranthene in tetramethylsilane, multiphoton ionisation study 7−82292
fluoranthenо[3,4-cd]-1,2-dithiole (diselenole) (ditellurole) electron donors, charge transfer complexes and radical cation salts 7−99009
fluorene, derivatives, long-term ^{13}C,^{19}F and ^{19}F,^{19}F coupling consts., mechanisms 7−82213
fluorescein, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
fluorescein, fluoresc. free Raman spectroscopy 7−92690
fluorescein, in glassy media, fluoresc. spectrosc. 7−122596
fluorescein dye molecules, excited state quenching by external heavy atoms 7−90012
fluorescein-mercury acetate, in glassy media, fluoresc. spectrosc. 7−122596
fluorescent dye molecules, energy transfer with Ag island films, appl. for solar concentrators 7−144124
fluoride-bearing liquid crystal MB80.5 (F), structure and phase transitions *(Chinese)* 7−97911
fluoro vinyl radical isomers, vibr. anal., ab initio calcs. *(French)* 7−96533
2-fluoro-5-chlorotoluene, laser Raman spectra 7−74618
3-fluoro-6-chlorotoluene, laser Raman spectra 7−74618
fluoroadamantane, mol. motion, NMR relaxation times 7−142660
$(fluoroanthene)_2PF_6$ radical cation salt, mag. reson. on cond. electrons 7−85487
$(fluoroanthenyl)_2PF_6$, with defects created by decomp. or electron irrad., EPR linewidth meas. 7−85411
$(fluoroanthenyl)_2X$ conductors, EPR, NMR studies 7−85439
fluorobenzene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7−116940
fluorobenzene-d_5 liquid, rot. Fokker-Planck-Langevin model, mag. relax. data anal. 7−106012
fluorobenzenes, electron transmission, EELS and MCD spectra 7−68385
fluorobutanes, bichromophonic, IR laser chemistry, absolute and relative rate coeffs. 7−100594
fluorocarbon film deposition effects on Si etching in CF_4/H_2 glow discharge 7−126335
fluorocarbons as tracers of air motion 7−139684
fluorocarbonylsulfenyl chloride, vibr. anal. IR and Raman spectra 7−135943
3-fluorocyclopropene-d_0(-d_3), vibr. spectra 7−96690
fluoroethylene, spin-coupled and MO electron densities 7−90441
fluoroform, far IR spectrum, microwave and mm wave data, rot. and centrifugal distortion const. 7−96665
fluoroform-$d_0(d_1)$, mol. consts., normal coordinate anal. 7−68274
fluoroform-d_1, IR multiphoton excitation dynamics study 7−74597
fluoromethane, intra- and intermol. vibr. energy flow, nonlinear vibr. relax 7−110090
fluoromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7−89908
fluoromethane, vibr. relax. mechanism, IR fluoresc, spectra anal. 7−74598
fluoromethane collision with quartz surface rovibrationally extracted, surface light induced drift 7−122674
fluoromethane far IR gas lasers, pulsed high-power, performance and spectral survey 7−82537
fluoromethane gas laser, distributed-feedback FIR, standard and phase-matched grazing-incidence configs. study 7−68669
fluoromethane gas molecules, light induced isotope separation 7−129892
fluoromethane-$d_0(d_3)$, laser lines, asymmetry and line shape effects, IR-IR double reson. 7−122581
fluoromethane-d_2(-d_3) isolated CH chromophore, spectra calcs. 7−135919
fluoromethylene, mol. beams, vibronic bands, laser induced fluoresc. 7−90246
2-fluorophenol, H-bonding, rot. isomerism, mol. orbital study 7−109747
fluoropropanone, IR spectra and dipole moment, stabilities calc. by PCILO method and Onsager formalism *(French)* 7−116857
fluoropyridine, geometries MO calcs. 7−129581
fluorotoluenes, He I and He II photoelectron spectra, vibr. anal. 7−117022
formaldehyde, $n\rightarrow\pi^*$ forbidden transition intensity, effect of electronic-vibrational interaction 7−90186
formaldehyde, dissoc. rates and reson., quantum mech. calcs., comparison with RRKM and exact models 7−71468
formaldehyde, dissoc. reaction energies, coupled cluster and MBPT calcs. 7−93266
formaldehyde, electric field gradients, ab initio SCF CI(SD) CPF calcs. 7−109801
formaldehyde, endogenous level in human blood and urine determ., dimedone-^{14}C radiometric method 7−114475
formaldehyde, foreign-gas broadening parameters and line strengths, 9 to 11 μm, tunable diode laser meas. 7−103581
formaldehyde, ionis. pot. and excitation energies, multireference coupled-cluster method calcs. 7−109700
formaldehyde, linear oligomers, in mixed solvents, mol. mass distrib., NMR meas. *(Russian)* 7−82226
formaldehyde, rovib. states, Hartree theory calcs. 7−135916
formaldehyde, second-order Moller-Plesset dipole moment derivatives 7−109693
formaldehyde, vibr., IR intensities, MC SCF wave functions 7−89909
formaldehyde, vibr. excited ground state, dissoc., pot. energy surfaces 7−122413
formaldehyde+H_2, rot. transitions, differential cross sections meas. 7−129851

ganic compounds continued
formaldehyde + $CO_2(N_2)(O_2)(H_2)$, rot. inelastic scatt. cross-sections 7−82324
formaldehyde aq. solns. and oligomers, Raman spectra studies, vibrations 7−106166
formaldehyde detect. in CO clouds 7−115546
formaldehyde in molecular cloud cores, multi-transitional study 7−140223
formaldehyde-$d_0(d_2)$, Rydberg states, multiphoton ionis. 7−90286
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342
formaldehyde-d_2, ground state Stark shift, laser microwave double reson. 7−122580
formaldehyde-d_2, spectroscopic consts. determ., FTIR spectra 7−82102
formaldehyde-HCN(DNC) dimer, angular geometry, hydrogen bond effects, rotational spectra 7−135927
formaldehyde-HF, mm wave spectrum rot., structural, ab initio and semirigid bender anal. 7−96650
formaldehyde-methanol aq. soln., ^{13}C NMR study *(French)* 7−96737
$(formaldehyde.H.NH_3)^+$ complexes, covalent and H-bonded assoc., pot. energy profile, ab initio MO calcs. 7−81921
formaldoxime, asymmetry and line shape effects, IR-IR double reson. 7−122581
formamide, conformation, microwave spectrum 7−122505
formamide, core excited electronic states, oscillator strengths, EELS 7−122704
formamide, gas and liq., He(I) photoelectron spectra meas. 7−103574
formamide, hypersonic attenuation, Brillouin light scatt. obs. 7−84134
formamide, liq., mol. dynamics simulations, test particle model pot. 7−91417
formamide, microemulsion microstruct. from NMR meas. of self-diffusion 7−106838
formamide bond fragments, electrostatic fields 7−96511
formamide monomer- and dimer- $do(d_1)(d_2)(d_4)$, mol. force consts., Fermi reson., intra-intermol. coupling ab initio SCF calcs. 7−74407
formamide-NH_3 complex, H_2O effect on H bonding, ab initio SCF MO calcs. 7−96498
formate adsorbate adsorption site and bond length determ., EXAFS simulation 7−144172
formate adsorbed on Cu (100) and (110), struct. SEXAFS study 7−98704
formate chemisorption on Cu(100) and Cu(110), quantum chemical studies 7−105271
formate species on Cu (110), struct. and electronic energy levels study 7−105651
formic acid, core excited electronic states, oscillator strengths, EELS 7−122704
formic acid, laser photolysis, OH quantum yield determ. 7−119542
formic acid, OH stretching band shape anal., proton dynamics 7−144078
formic acid, unimol. pyrolysis mechanisms, ab initio calcs. 7−93281
formic acid adsorbed on Si (111) (7×7), NEXAFS study 7−106308
formic acid dimer- $do(d_1)(d_2)(d_4)$, mol. force consts., Fermi reson., intra-intermol. coupling, ab initio SCF calcs. 7−74407
formic acid in atm., conc. and origin 7−139686
formic acid submillimetre laser, optically pumped CW, enhanced laser emission, triple cascade operation 7−110322
formic acid-d_1, ν_3 fundamental band, laser Stark and Fourier transform spectroscopy 7−122588
formic acid-d_2, asymmetry and line shape effects, IR-IR double reson. 7−122581
formic acids, mixtures, gaseous, spectra resolution, FTIR spectra 7−122540
formic and dimer, C=O stretch mode splitting, electrostatic model 7−109724
formyl fluoride, core excited electronic states, oscillator strengths, EELS 7−122704
formyl ion formation and H_3^++CO protonation process 7−138965
formyl ion in C-rich circumstellar shells 7−120367
formyl radical, electron affinity, ab initio SAC CI calcs. 7−135848
N-formylproline amide, γ turn, ab initio calcs. 7−129556
free radicals, muonium-substituted, muon level-crossing spectra study 7−68475
Freon 113, disassociation V-V energy transfer in intense IR low field *(Chinese)* 7−96800
Freon 113 system, steady state transition boiling heat fluxing *(Chinese)* 7−69149
Freon 12, cavitation, critical condition 7−69233
freon-113, cavitational boiling 7−76374
freon-11, forced convection in heated pipe, boiling crisis 7−136842
Freon-11, subcooled, flow film boiling from sphere 7−69879
Freon-12, ν_6 band integral intensity, diode laser spectroscopy 7−122520
Freon-12, capillary retention on horizontal finned cylinder, heat transfer anal. 7−98618
freon-12, forced convection in heated pipe, boiling crisis 7−136842
Freon-12, liq., boiling crisis study 7−136839
Freon-12, moving vapour condensation on horizontal tubes, heat transfer anal. 7−98412
Freon-12, temp.-depend. props. 7−83149
freons, IR absorbing gas, appl. for transparent thermal insulation 7−142152
frozen solns., site-selection fluoresc. spectra 7−138493
fructose, crysts., contact nucleation and growth kinetics 7−131067
fumaronitrile, C_2 Swan band emission by multiphoton photodissociation at 193 nm 7−141636
furano-coumarin-sphondin, X-ray diffr. 7−111523
furanose ring, alternative conform. probabilities, statistical stereochemical model 7−114171
α-furil, mol. config., X-ray diffr. study 7−83933
furylpyrroles, mol. configs., STO calcs. 7−68201
galactosemic cataracts, Raman spectroscopic study on rats 7−74627
gallium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
galvinoxyl radical, EPR imaging, T_1 selectivity, inversion-recovery 3-pulse sequence technique 7−74686
galvinoxyl radical, spectra-spatial two-dimensional EPR imaging 7−90227
galvinoxyl radical mixed crystals and hydrogalvinoxyl cpd., diamag.-paramag. phase transition, thermodynamic props. 7−138239
gasoline, cavitation, critical condition 7−69233
glass matrix, impurity spectra zero-phonon line broadening in organic glass matrices, review *(Russian)* 7−106223
glasses, damage and failure in alternating long-term and cyclic loading 7−78160

organic compounds continued
glasses, impurity mol. zero-phonon line broadening, hole burning studies, review 7−75076
glasses, low temp. dynamics, optical hole burning studies 7−141952
glassy hosts, guest mol. optical linewidths and dephasing, hole burning study 7−75077
glucofuranoimidazolidine crystals, mol. packing anal. 7−83835
glucose, aq. soln., electrokinetic studies across urinary bladder membrane 7−119753
glucose, aq. soln., Raman spectroscopy 7−89276
α-D-glucose, conformational studies, mol. dynamics simulations, pot. energy surfaces 7−68193
glucose, force constant calculations, CNDO/force program 7−141463
glucose, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
β-D-glucose dinitrates, vibr. spectra calcs., site localisation and substitution effects study 7−103474
glucose tolerance of human body, physical models study 7−108087
α-D-glucose-1-d_1, C-^{2}H bond, ^{2}H quadrupole coupling const., NMR spectra 7−118873
glutamate, electrogenic uptake in axolotl retinal glial cells as major current carrier in membrane 7−107045
glutathione, interaction with antimicrotubular agents, Raman spectra 7−68329
glycerin, laser beam-induced shock waves, fluid ejection and liq.-vapour interface channel form. *(Japanese)* 7−117026
glycerin, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7−142189
glycerine levitated aerosol drops, time-resolved spectroscopy of laser produced plasma 7−104381
glycerol, amorphous solids, thermal conductivity above the plateau 7−98596
glycerol, aq., permittivity meas. 7−85519
glycerol, aq. soln., compressibility, US rel. meas. 7−84079
glycerol, aq. soln. vertically-incident jet, ladle filling study 7−69241
glycerol, biosynthetic probe, triple-quantum two-dimens. INADEQUATE study 7−94030
glycerol, excitations above liquid-glass transition, Brillouin scatt. study 7−92698
glycerol, glass form. by linear cooling, isothermal enthalpy relax. meas. 7−84318
glycerol, glass transition, freq.-depend. shear modulus meas. 7−124511
glycerol matrix, polyatomic ions sputtering, collision cascade model anal. 7−138566
glycerol mono-oleate bilayer interactions, interferometric investig. 7−93669
glycerol monooleate monolayers on liq. surfaces, light scatt. study of thermotropic transitions 7−76553
glycerol-water mixture, nucleation of cubic and hexagonal ice 7−137286
glycerol-water mixture surface, splash form. processes on impact of steel/glass sphere/cylinder 7−130753
glycerophospholipids, membrane struct. and phase transitions, regulation mechanism 7−93666
glycine, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
glycine, metastable supersaturated solns., diffusion coeffs. 7−111924
glycine, NQR, ^{14}N quadrupole coupling const. 7−90202
α-glycine, powder, vibr. modes, far-IR Raman Fourier transform spectra anal. 7−68320
glycine, thermal decomposition on solid surfaces, mol. beam studies 7−100613
glycine amino acids, adsorption on SiO_2, photoelectron spectroscopy 7−106374
glycine zwitterion, aq. soln., Auger spectra, Green's function method calcs. 7−103356
glycol methylethers, substituted, dielectric relax. and NMR spin-lattice relax. meas. correl. 7−74666
glycolaldehyde, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7−129744
glycolic acid, ^{18}O incorporation following bleomycin mediated DNA degradation 7−106976
glycyl peptides, partial molar vol. and adiabatic compressibilities calc. 7−76450
glycyl-L-alanylglycine, aq. soln., excess enthalpies of dil. 7−91815
N^6-(N-glycylcarbonyl) adenine, nucleic acid base, conform. preferences 7−89962
glycylproline, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
glyoxal, intramol. vibr. state mixing, stimulated emission pumping spectra meas. 7−136015
glyoxal, IR optical double reson. signal 7−82233
glyoxal, long-lived fluoresc. decay components 7−109985
cis-glyoxal, selective pumping, isomerisation vibronic levels, IR fluoresc. spectra anal. 7−103489
glyoxal, trans-cis energy difference, electron correlation effects 7−96549
glyoxal+H_2, rot. and vibr. energy transfer, crossed beam study 7−136045
glyoxal-d_1, conformers rot. and quadrupole coupling const. microwave Fourier transform spectroscopy 7−96648
Gramicidin A, cryst. and membrane bound, vibr. spectrosc. obs. 7−71697
Gramicidin transmembrane channel, ^{133}Cs spin 7/2 relaxation processes, NMR spin-echo study 7−77424
grisorixin in solution and in KBr matrix, IR spectra *(French)* 7−116955
guaiacol-glycerin solution, double critical point study 7−84200
guanidine aluminium sulphate, collinear ferroelectric crystals, domain struct. dynamics *(Chinese)* 7−132214
guanidine aluminium sulphate hexahydrate, ferroelectric, far IR transmission spectra 7−77536
guanine, and related mols., Ar matrix isolated, IR spectra 7−96671
guanine, free state and thin films, geometries, UV spectra 7−103525
guanine and isocytosine, keto-enol tautomerism 7−139192
guanine and methylated derivatives adsorbed layers, Ag electrode surface, SERS spectra study 7−77576
guanine cation, decay product, struct., X-ray irrad., ESR and ENDOR anal. 7−93640
guanine derivatives, resonance Raman studies 7−106963
guanine series, adsorbed on Ag sol, SERS 7−132265
guanines, matrix isolated, tautomeric equilibria and and vibr. spectrosc. 7−68306
guanosine dihydrate, ^2H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
H-bonded complexes, interaction-induced effects in IR spectra 7−141570

organic compounds continued
haemotoporphyrin photosensitiser bonding to normal and malignant cells, intracellular fluoresc. 7−90264
haloalkoxy radicals, H and Cl extrusion reactions, MNDO CI calcs. 7−141470
halobenzonitriles, photoionisation spectra, adiabatic ionisation energy determ. 7−103590
haloethenes, valence shell photoelectron spectra, electron correl. effects 7−117019
halogen substituted acetaldehyde, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogen substituted ketones, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogenated benzenes, aqueous solubilities, correlations 7−84295
halogenated hydrocarbons, heterogeneous photolysis, implications for Antarctic O_3 depletion 7−120071
halogenocyanoacetylene, pot. and mol. consts. eval., vibr. anal. 7−103463
halogenocyanophosphazenes, laser Raman spectra 7−90150
haloidmethylmethylsulphones, IR and Raman spectra, vibr. anal., conformations 7−82122
halomercuriomethanes, Raman spectra 7−82150
halomethanes, magnetic susceptibility tensors, angular correlation factors, NMR determination 7−129643
heat transfer features 7−130698
hemicyanine Langmuir-Blodgett films, multilayered, enhanced SHG 7−75060
hemicyanine/nitrostilbene dye bilayer Langmuir-Blodgett films for nonlinear optics 7−90715
heparin, struct. ROESY spectra with relay artifacts 7−82221
hept-l-ene-benzene(cyclohexane)(n-hexane) 7−84280
heptafluoroiodopropane, photodissoc., spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
heptafluoropropane, IR multiphoton dissoc. 7−136025
heptane, adsorpt. on TiO_2, isotherm meas. 7−112071
heptane, subcooled boiling and convective heat transfer in annulus 7−69167
heptane, subcooled boiling and convective heat transfer in annulus 7−69168
niheptane mixtures with dichloromethane and dichloroethane, sound vel. and molar compressibility, 304.15 K 7−98348
heptanol, density, specific heat, thermodynamic props. 7−143038
2-heptanone, potential barriers hindering reorientation of methyl groups 7−142657
4,4′-di-n-heptylazobenzene, nematic and smectic A phases, orientation order, NMR studies 7−111358
4,4′-di-n-heptylazoxybenzene, nematic and smectic A phases, solvent-solute interactions 7−111359
N(p-n-heptyloxy benzylidene) p′-n-octylaniline, structural and phase transition studies of mesophases 7−111377
heptyloxypentylphenylthiolbenzoate-octyloxycyanobiphenyl, nematic-smectic-C heat capacity investig. 7−69908
4-n-heptylphenyl-4′-(4″-nitrobenzoyloxy)benzoate, nematic-smectic phase transition, X-ray reflectivity meas. 7−76404
2-heteroanyloxazoles, excited state ^1H transfer with acetic acid in ethanol fluoresc. spectra 7−141587
heteroarylene vinylene units, five-membered, semiconductors, polymerisation and doping 7−76958
heterocycles, 3 member, N bearing, struct, oscillatory anal., ab initio calc. 7−141446
heterocyclic molecular crystal, quantum tunnelling, methyl group motion, NMR studies 7−143923
heterocyclic thiones, 5-membranes, bonding modes, INDO calcs. 7−81976
hex-l-yne-benzene (cyclohexane)(n-hexane), excess molar enthalpies and vols. meas. 7−84280
hexa-ethyleneglycol-mono-n-dodecyl ether lyotropic liq. cryst., displacement disorder 7−117807
hexa-n-dodecanoyloxy truxene in nematic phase, dielectric consts., splay and bend elastic consts. 7−137435
2,3,6,7,10,11-hexa-n-hexyloxytriphenylene, thermotropic columnar phases, time resolved luminesc. 7−99897
hexa-O-alkanoyl-scyllo-inositoles, struct., X-ray study 7−104546
hexabenzocoronenes, mol. vibr., force field approx. 7−74560
hexabromobenzene crysts., twin boundary laws, reciprocal space partitions and symm. 7−98173
hexachlorobenzenes, in gas phase and in n-hexane soln., UV absorpt. spectra 7−116981
all-trans-2,4,6,8,10,12,14-hexadecaheptaene, vibronic coupling, fluoresc. spectra 7−141617
hexadecane, swelling agent for solid-gas mass transfer meas. 7−75261
n-hexadecane-n-hexafluorobenzene(-benzene), vapour-liquid equilib., 323.15 K 7−124462
N-4-hexadecylpyridinium chloride, anhydrous, mesomorphic behaviour 7−111376
hexadecylpyridiniumsalicylate, aq. soln., rod-like micelles alignment, nearest neighbor order 7−111341
2,4-hexadiyne, laser multiphoton ionis. dissoc. mechanism 7−110024
hexaethyleneglycolmonohexadecylether micelles, shear flow, neutron scatt. study 7−126488
hexafluoro-2-(trifluoromethyl)-propane-$t_0(t_2)$, CO_2 laser induced multiphoton dissoc., T isotope separation study 7−68415
hexafluorobenzene, electron affinity, thermal electron attachment, rate const. 7−74486
hexafluorobenzene, vibr. excited, collisional deactivation, UV absorpt. spectra 7−109919
hexafluorobenzene+$He^+(C)(N^+)$, reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
hexafluorobenzene cation, vibr. freqs., perturbation by Ne matrix 7−96640
hexafluorobenzene-benzene-n-tetradecane mixtures, vapour press. and excess vols. calcs. 7−105077
hexafluorobenzene-n-tetradecane mixtures, vapour press. and excess vols. calcs. 7−105077
hexafluorobenzene-naphthalene-type cpd. mixture, excess enthalpies 7−76412
hexafluorobenzene-pentafluorobenzene, organic Rankine cycle engine efficiencies 7−71631
hexafluoroisopropanol, conform. stability and low freq. vibr assignment, Raman obs. 7−74641
hexafluoroisopropyl methyl ether, conform. stability and low freq. vibr assignment, Raman obs. 7−74641

organic compounds continued
hexafluoropropene cation radical, photodissoc. in ion trap mass spectrometer 7−103593
hexakis(1,3-dithiol-2-ylidene)cyclohexanes, substituted, ring conforms. 7−141490
hexamethylbenzene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
hexamethylbenzene, NMR imaging 7−92547
hexamethylbenzene-TCNQ, electron donor-acceptor complex, reson. Raman spectra 7−90153
hexamethylbenzene-tetracyanobenzene (tetrachlorophthalic anhydride), charge transfer crystals, ESR and ODMR meas. 7−138353
hexamethylcyclotrisilazane derivatives, structs. and vibr. spectra 7−109868
4,4,8,8,12,12-hexamethyltrispiro(2,1,2,1,2,1)dodecane, gas phase electron diffr., mol. struct. and conformation 7−117070
n-hexane, electrical breakdown development 7−130968
n-hexane, isobaric specific heat at high press. 7−137582
hexane, partially oriented, conformational probabilities, dipolar couplings assignment, 2D NMR 7−109930
hexane, pyrolysis in chemical plasma reactor 7−100510
-hexane mixtures with dichloromethane and dichloroethane, sound vel. and molar compressibility, 304.15 K 7−98348
n-hexane-n-perfluorohexane liq. crit. mixture, phase separation in porous medium, light scatt. study 7−76379
n-hexane-toluene mixture, excess molar enthalpies, isothermal flow calorimeter meas. 7−118106
n-hexanenitrile, thermal-press. coeffs. 7−104885
1,2,6-hexanetriol, glassy, isothermal enthalpy relax. 7−98516
2-hexanone, potential barriers hindering reorientation of methyl groups 7−142657
hexanone-2, Debye and far-IR absorption, dipole-dipole coupling and inertial effects theory comparisons 7−132280
hexathiopentacene, energy struct., absorption spectra *(Russian)* 7−122503
hexatriene,, lowest excited triplet states struct., time resolved reson. Raman spectra 7−90162
trans-1,3,5-hexatriene, ground state vibr. assignments 7−68280
1,3,5-hexatriene, isomers, excited triplet states, time-resolved reson. Raman spectra 7−74596
hexatriene, photoisomerisation, ab initio CI calcs. 7−93296
1,3,5-hexatriene, scaled quantum mechanical force field, vibr. anal., ab initio HF calcs. 7−96534
1,3,5-hexatriyne radical, fine and hyperfine struct., astron. study, EHF obs. 7−120538
1,3,5-hexatriyne radical, mol. struct. ab initio SCF calcs., astron. appl. 7−103381
1,3,5-hexatriyne radical, possible detect. in TMC-1, SHF and EHF obs. 7−80075
1,3,5-hexatriyne radical detect. in IRC+10216 shell 7−107867
hexatriynyl radical (C_6H), possible detect. in mm-wave spectrum of IRC+10216 (CW Leo) 7−79969
N(p-n-hexyloxy benzylidene) p-n-octyl aniline, liq. cryst. transitions 7−124506
4-hexyloxy-4′-cyanobiphenyl-4-octyloxy-4′-cyanobiphenyl liq. cryst., elastic consts. 7−104887
hexyloxycyanobiphenyl, 60CB-d_{21}, reentrant nematic, DMR studies 7−99600
hexyloxycyanobiphenyl-octyloxycyanobiphenyl mixtures, compression modulus meas. in vicinity of nematic-smectic A transition, light scatt. study 7−83658
hexyloxycyanobiphenyl-octyloxycyanobiphenyl mixtures, nematic-smectic A transition, light scatt. study 7−84259
4-n-hexyloxyphenyl-4′-(2″-methylbutyl)biphenyl-4-carboxylate cholesteric/smectic phase transition, high pressure study 7−143005
4-n-hexyloxyphenyl-4n-decyloxybenzoate, smectic C phase, tilt angle and optical biaxiality meas. 7−99792
high torque organic mol. liq. dynamics, reorientational correlation fn., Raman scatt. study 7−82173
histamine H_2 receptor agonists and antagonists, quantum mech. calcs. *(French)* 7−141428
histidinium chloride, nucl. quadrupole coupling, ab initio calcs. 7−116987
histones, single, high energy radiation effects, calf thymus obs. 7−93820
HMTTeF radical salts, electric conduction and electrochemical prep. 7−84857
hole-burning reactions, rate const. determ., fluoresc. 7−78518
holmium complexes in aqueous soln., Judd-Ofelt parameters 7−70254
homoazulene radical anion, and rearrangement products, ESR and ENDOR obs. 7−68367
homotryptophan derivatives, fluoresc. lifetime distribs. 7−117007
horizontal flow boiling of pure and mixed refrigerants 7−110957
hydrate crystals, ^{17}O nuclear quadrupole double reson. study 7−112998
hydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
hydrazoic acid, mol. struct., conform., vibr., ab initio HF SCF calcs. 7−81967
hydrocarbon dications, stability, spectroscopic constants and thermodynamic functions 7−96520
hydrocarbon films, hot electron induced radiation damage, exoelectron emission detection 7−100021
hydrocarbon fuel combustion products mixture in air, boundary layer characts. at cooled surface 7−138961
hydrocarbon molecule, Hosoya index bounds, C-atom skeleton depend. 7−96537
hydrocarbon systems, polarisability and hyperpolarisabilities, MNDO calcs. 7−109768
hydrocarbon-acetone-alkanenitrile mixtures, critical props. 7−142968
hydrocarbons, aromatic, excited singlet state, absorpt. cross sections 7−129622
hydrocarbons, bonds, structs., charge concs. and charge relax. 7−89923
hydrocarbons, catalytic oxidation, heat liberation, vol. change 7−144690
hydrocarbons, conformational analysis, WIZARD expert systems 7−74412
hydrocarbons, conjugated, MMP2 calc. method appls. 7−116838
hydrocarbons, conjugated, mol. orbital based mol. mechanics calcs. 7−141425
hydrocarbons, gas phase and chemisorbed, K-shell excitation spectra, C−H resonance identification 7−138545
hydrocarbons, group props., additivity, strain energy 7−89924
hydrocarbons, large conjugated, reson. energies by statistical method 7−109690

organic compounds continued
hydrocarbons, linear, conformational states as function of internal energy 7−122343
hydrocarbons, liq., electrical cond. and bulk charge near surface 7−69950
hydrocarbons, long-chain, liq., electron mobility and thermalisation study 7−99055
hydrocarbons, nucleation in pyrolysis, thermodynamic-potential minimisation 7−106773
hydrocarbons, photon absorptiometry, total mass attenuation coeffs. 7−96390
hydrocarbons, radiolysis singlet and triplet yields, mag. field effects in fluoresc. 7−71508
hydrocarbons, solvent and free radical effects, ^{13}C NMR spectra 7−96734
hydrocarbons, strained, vibr. force fields, ab initio calcs. 7−81961
hydrocarbons, swift proton stopping cross sections 7−111706
hydrocarbons, valence space only calcs. for prototype mols. 7−141429
hydrocarbons, vapours, absorpt. in polyethylene films, thermodynamics 7−118239
hydrocarbons+H^+, C K-shell and Auger electron prod. cross sections 7−110096
hydrocarbons adsorbed on oxidized polycrystalline SiC surfaces, angle resolved XPS 7−98634
hydrocarbons on O_2 film, ion-mol. surface reactions induced by slow electrons 7−119575
hydrogen diformiate complex, active site model for aspartyl proteinases, ab initio calcs. 7−81960
hydrogen isocyanate, photodissoc., CO internal state distrib. 7−126465
hydrogen isocyanate, photodissoc., NH rot. state distrib. 7−126466
hydroquinone clathrates, single crysts., Raman spectra 7−106192
hydroquinone oxidation on n-CdS, photoelectrochem. kinetics 7−99192
2-hydroxy(dithio)benzoic acid, H bonding, spectrosc. investig. *(German)* 7−96693
2-hydroxy(thio)benzamides; N,N-distributed, H bonding, spectrosc. investig. *(German)* 7−96693
hydroxy compounds, microcomputer controlled pulsed amperometric detector system, appl. 7−67397
1-hydroxy tetrahydrofuran, C2-endo formation, parity violation 7−90449
1-hydroxy-1,2,3-triazole, prototropy, UV photoelectron spectrosc. obs. 7−96793
8-hydroxy-1,3,6-pyrene trisulfonate, intermol. proton transfer, solvent depend. investig., absorpt. spectra 7−93305
3-hydroxy-2,2,5,5-tetramethyl-1-pyrrolidinyloxy, orientational and chiral disorders 7−142749
4-hydroxy-2,2,6,6-tetramethyl-piperidine-1-oxyl, nitroxide radical, ESR study, proton interactions 7−125539
4-hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl, radicals, ESR spectra 7−74687
N-hydroxy-2-alkenals, conform. and struct. analyses 7−86899
1-hydroxy-2-methyl-11-methylene-tricyclo $(5.3.1.0)^{2,7}$-undecan-5-one, mol. and cryst. struct. 7−104723
2-hydroxy-4,5-benzotropone, in inert gas matrices and ethanol solns., H^+ transfer 7−71478
2−hydroxy-4, 5-benzotropone, proton transfer dynamics, matrix isolation spectra 7−133001
1-hydroxy-9,10-anthraquinone and metal complexes, IR and reson. Raman spectra 7−132270
2-hydroxy-benzolhydrazones of acetylpyridines, electrochemical and metallochromic props., UV, visible, IR and mass spectra 7−82126
p-hydroxybenzoic acid, solid, intramol. motion, PMR investig. 7−74667
3−hydroxychromone, proton transfer dynamics, matrix isolation spectra 7−133001
β-hydroxyethyliminodiacetic acid, cryst. and mol. struct. obs. 7−111533
3-hydroxyflavone, in Ar matrix, intramol. H^+ transfer, fluoresc. 7−136000
3-hydroxyflavone, intramol. excited state proton transfer, picosecond transient absorpt. study 7−74655
3−hydroxyflavone, proton transfer dynamics, matrix isolation spectra 7−133001
hydroxyl groups, adsorbed, IETS, freq. shifts 7−143558
4-hydroxyl-4-methyl-2-pentanone, proton affinity determ. 7−74484
hydroxylamine, diode laser spectroscopy, rot. and distortion consts. 7−116964
1-hydroxymethylquinolizidines, epimers, conformational anal., IR, NMR and PMR spectra 7−90108
2-(2′-hydroxyphenyl)benzothiazole, nitro-derivatives, photophys., photochem., solvent effects 7−117012
4-hydroxypyrimidine, struct., tautomerisation energy, ab initio calcs. 7−109750
8-hydroxyquinoline, metal chelate formation by solid-state reaction with $ZnCO_3(CdCO_3)$ 7−106786
hydroxystyryl cyanine dye, corrosion inhibitor for Cu in nitric acid soln. 7−93171
hypoxanthine, and related mols., Ar matrix isolated, IR spectra 7−96671
hypoxanthine, IR spectra obs. by low temp. matrix isolation in Ar, vibr. spectra calc. 7−144962
I-102, conform. and electrostatic props., ab initio PCILO calcs. 7−78733
imidazole, adsorp. on Cu and Ag electrodes, SERS 7−131433
imidazoline-2-one, Raman and IR spectra, vibr. anal., force consts. 7−96707
imidazoline-2-thione, Raman and IR spectra, vibr. anal., force consts. 7−96707
imidazolium hydrogen maleate, nucl. quadrupole coupling, ab initio calcs. 7−116987
imidazolium ion, adsorpt. on Cu and Ag electrodes, SERS 7−131433
iminacetonitrile, isomer charactn., collision activation mass spectra 7−110132
imine-carboxyl complexes, ab initio HF calcs. 7−74431
imines, model cpd. for force field pot. energy function optimisation 7−103615
iminopyruvonitrile centrifugal distortion, Stark splittings, microwave spectra, rotation, vibration 7−135925
indazole, tautomerism, MNDO geometry optimisation 7−129601
indigoid dyes, adsorbed on Ag colloids, reson. Raman and three-photon scatt. 7−122551
indium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
indole, fluoresc. quenching, transient effects, freq. domain fluorometric meas. 7−109992
indole, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7−103524
indoles, ^1L_a state, fluoresc. and electronic spectra 7−82269
organic compounds continued
indoles, one-electron oxidation by free radicals 7−138991
indoles, substituted, in polyethylene films, UV absorpt. spectra 7−96728
indolinospironaphthoxazine derivatives, photochromic effect, time-resolved spectra 7−129784
indolyl radicals, acid-base props. 7−138991
3-indolylacetic acid, struct. refinement, X-ray anal. 7−71666
inosine, ^2H quadrupole coupling at C8, field-cycled NQR double reson. study 7−93643
internal conversion, deuteration inverse effect 7−129775
interstellar complex molecules, abundances modelling 7−140209
interstellar grains, organic model 7−107917
interstellar molecules 7−115563
interstellar molecules and processes (book) 7−108052
interstellar molecules containing 2 or 3 C atoms, form. in mol. shocks 7−128030
intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7−122501
iodobenzene, ^{125}I Auger electron energy distrib. 7−76252
iodobenzene ions, IR radiative relax. obs. using photodissoc. 7−96805
iodoethane, A band region, MCD investig. 7−109970
iodoethane, photofragmentation dynamics spectroscopy 7−68418
iodoethane+F, crossed beam laser-induced fluoresc. investig. 7−90388
iodohexane impurity sorption and steady-state diffusion front motion in polystyrene, case-II diffusion regime 7−118165
iodohexane sorption by polystyrene, transient swelling in the case-II diffusion regime 7−118164
iodomethane, core excited, photoionis. decay 7−136020
iodomethane, photodissoc., multiphoton ionis. detect. 7−117034
iodomethane, rotational dynamics, time-resolved CARS obs. 7−122543
iodomethane+Xe, opacity and excitation fns. 7−117044
iodomethane far IR gas lasers, pulsed high-power, performance and spectral survey 7−82537
iodomethane-$d_0(d_3)$, photoacoustic spectrometer for nonradiative relaxation detection 7−102538
iodomethane-d_3, rot. levels, hyperfine interactions, RF-microwave spectra 7−122515
iodonium salts, positive secondary ion mass spectra, solvent effect 7−71549
1-iodopropane, microwave spectra, conform. and quadrupole coupling consts. determ. 7−74571
n-iodopropane, scatt. from diamond (111), kinetic energy induced surface dissociative ionis. 7−77719
iodopropene+F, crossed beam laser-induced fluoresc. investig. 7−90388
iodotrifluoromethane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
iodotrifluoromethane+ethene, CO_2 laser induced telomerisation study 7−78528
ionol, effects on decomp. kinetics of benzoyl peroxide, in glassy polymer films 7−138997
IR absorption band halfwidths, rel. to struct. groupings 7−109902
iron(III)porphyrins, low temp. high field magnetisation investig. 7−112770
Δ-iron $(bipyridyl)_3^{2+}$, circular dichroism of subnanosecond state 7−68378
iron (III) tetraphenylporphyrin complex mag. susceptibility, Mossbauer study 7−99617
iron p-tolylsulphite, Mossbauer quadrupole splitting, orbit-lattice interaction effects 7−138364
iron phthalocyanine systems, electrical cond. and pyroelectric effect 7−77471
iron porphyrins, CO photodissoc., ps time-resolved IR spectra 7−119719
isatin, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
isobacteriochlorin in n-octane crystal, photochemical hole-burning spectroscopy, Stark effect 7−82723
isobacteriochlorins, dual fluoresc., rel. to tautomerism 7−109989
isobutanol, dehydration on $Al(H_2PO_4)_3$ catalyst, PMR and catalytic activity studies 7−132965
isobutyl benzoate, dil. soln., dielectric props. temp. depend. 7−70689
isobutyl salicylate, dil. soln., dielectric props. temp. depend. 7−70689
isobutylacrylate, dielectric relax. determ. 7−118943
isobutylene, photocatalytic oxidation, impurity centers 7−126482
isobutylmethacrylate, dielectric relax. determ. 7−118943
isobutyric acid-water, quenched-liq. interface, instability 7−84448
isobutyrophenone-$d_0(-d_5)$, vibronic coupling contrib. to overtone intensities, UV spectra 7−96725
isocyanomethane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
isocynocyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
isocytosine and guanine, keto-enol tautomerism 7−139192
isopolymolybdates in glassy aqueous solutions, radiation reduction 7−106812
isopolytungstates in glassy aqueous solutions, radiation reduction 7−106812
isoprene, excited state struct. and dynamics, reson. Raman intensities 7−90145
isopropanol, adsorpt. on TiO_2, struct. effects, IR spectra 7−98684
isopropanol, aq. soln., hydrophobic hydration, Raman spectra 7−132255
isopropanol, photoassisted thermal decomp. in fluidised bed 7−144689
isopropanol-H_2O-CO_2 mixtures, three- and four-phase equilibria at elevated press., comp., molar vol. and critical points 7−76365
isopropyl radical, struct. and internal rot. barriers, pot. fns. calc. 7−74726
N-isopropylacrylamide, ionised gels, volume-phase transitions 7−119586
isopropylbenzoic acids, enthalpies of form. sublimation and combustion, vapour press. 7−78535
isopropylthio radicals, photodissociation, fluorescence, radiative lifetime, vibrational levels, stretching modes 7−135988
isoquinoline van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
isouramil, favism-inducing cpds., MINDO/3 calcs. 7−141462
Kekule and sextet patterns, KHF-graphs, topological props. 7−109758
kerogen, evaporating grains in coma of P/Comet Halley 7−88315
kerosene, cavitation, critical condition 7−69233
ketene, photodissoc., pot. energy surfaces 7−122413
ketene, sub-millimetre wave rotational transitions 7−109875
ketene adsorption on Pt(111), surface chemistry, HREELS and TPD studies 7−105270
ketene adsorption on Pt (111), surface chemistry, TPD and SIMS studies 7−105269
ketene-d_2, IR spectrum, ν_9, ν_6 and ν_5 7−122531

organic compounds continued
ketenes, isotopic, A_1 species fundamentals, IR rovibr. spectra 7−74587
keto sulfides, triplet, intramol. charge-transfer interactions investig. 7−113883
3-keto-steroids, aq. soln., protein binding, mol. fluoresc. study 7−78748
ketone, nonrigid mols., far-IR broadband absorpt. obs. 7−129701
ketones, cyclic aliphatic, photolysis, biradical reactions, CIDNP field depend. 7−68343
ketones, homologous series, potential barriers hindering reorientation of methyl groups 7−142657
ketones, triplet state, matrix interactions phosphoresc. kinetics 7−68390
β-lactam inhibitor complex with elastase, crystallographic study at 1.84 Å resolution 7−93629
lactate, living tissue metabolism, DANTE pulse for PMR 7−71682
L-lactate oxidase-old yellow enzyme interaction, reson. inverse Raman study 7−133226
lactic ethers, ferroelectric liquid crystals, fast-switching, physical props. 7−99758
Langmuir-Blodgett films from glycerol subphase, elec. and optical props. 7−124766
lanthanide bis-phthalocyanines, near IR absorpt. spectra 7−103485
lanthanum ethylsulphate: Gd^{3+}, effective crystal fields, spin-orbit coupling, residual interactions 7−105499
lanthanum ethylsulphates:Gd^{3+}, correl. crystal fields and zero field splittings, inter-site contrib. 7−143415
large molecule electronic sputtering by plasma desorption and heavy-ion bombardment 7−125894
LD490 organic dye laser, fluorescence characteristics *(Korean)* 7−90598
lead carboxylate, confirm. order determ. from optical and acoustic Raman modes 7−70814
lead phthalocyanine, columnar mesophase, antiferroelec. stacking 7−99733
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7−125752
lead stearate monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7−112083
lecithin-water systems, hydrophobic mols., form. of reversed hexagonal phases 7−126706
leuco compounds, electronic struct., absorpt. spectra 7−103480
ligand-enzyme binding electrostatic effects 7−114168
light harvesting chlorophyll complex, picosec. dynamics, detergent effects 7−71681
light hydrocarbons, vol. mixing ratios for troposphere and lower stratosphere 7−94388
lignoceric acid monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7−112083
limonenes, enthalpies of vaporisation, 298.15 K 7−76370
lipid bilayer polypeptide interactions, mol. dynamics simulation 7−119741
lipid layers, photoelectron spectra, surface adsorption 7−93637
lipid-water multilayer, films, X-ray scattering studies 7−111370
lipids, long range atm. transport from S Pacific 7−72135
lipids, Raman active bands, motion and conform. effects 7−109911
liq. cryst., thermal and X-ray study 7−124507
liquid crystal binary mixtures of smectics A:120CB and compound n-DBT homologous series, phase diagrams 7−137557
liquid crystalline polymers containing polychloroacrylate and polyacrylate, mol. dynamics, permittivity meas. 7−137225
liquid crystals, ferroelec. mixtures and pure compounds, correl. between mol. struct. and spontaneous polarisation 7−137227
liquid mixtures, dynamic viscosity eqn. 7−143073
liquid scintillation cocktails, alkylbenzene and detergent based, performance comparisons for disposal 7−132958
liquid scintillator, energy transfer and quenching, effect of dil. and temp. 7−132341
liquids, crit. temps. and press. estimation using Rackett eqn. 7−142946
liquids, fluoresc. quenching, conc. gradient model 7−82248
liquids, mag. orientation of diamagnetic molecules, molecular interaction *(Japanese)* 7−118766
lithium acetate, press. depend. of tunnelling and librational modes of coupled methyl groups 7−69635
lithium acetate dihydrate, coupled methyl groups, proton spin conversion 7−91496
lithium oxalate, solid, isotopic product rule investig. 7−68232
lithium phthalocyanine radical, spin exchange narrowing 7−125368
lithium thallium tartrate, low temp. phase transition, critical fluctuations, Raman spectra anal. 7−85713
lithium thallium tartrate, thermally unstable mode, submillimetre spectrum 7−77472
long-chain molecules with strongly absorbing chromophores, Fourier transform Raman spectra 7−141579
low temperature glasses, struct. relax. and hole burning 7−142649
low-temperature deposits of organic compounds, morphology and structure meas. apparatus 7−104495
lutetium bis-phthalocyanine thin film, laser-induced intramol. charge transfer 7−136051
2-6-lutidine-water soln., kinetic mobility meas. 7−131011
lyotropic liquid crystal waveguide, optical nonlinearities 7−103880
magnesium tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539
malachite green, adsorbed on SiO_2, fractal distrib., pore-size effects, electronic energy transfer investig. 7−131423
maleic acid, solubility in water from 278.15 to 338.15 K 7−84279
malic acid, solubility in water from 278.15 to 338.15 K 7−84279
malonic acid, solubility in water from 278.15 to 338.15 K 7−84279
malononitrile, phase transition studies 7−69894
maltoheptaose, acetylated, ^{252}Cf plasma desorpt. mass spectrosc. 7−116019
manganese(II), porphyrins, low temp. high field magnetisation investig. 7−112770
manganese oxalate dihydrate linear chain system, cryst. and magnetic struct., neutron diffr. study 7−99407
manganese tris-acetylacetonates, radiation decomposition 7−106811
Mannich base, trisubstituted, isotopic ratio and intramol. H bond strength, solvent effect 7−129734
mannose, ^{14}C labelled, absorbed dose obs. 7−107249
mannose, radiolyoluminescence, dosimetry characts. 7−87232
matrix isolation Fourier transform IR spectra study 7−141569
MBBA, light scattering in cells with director anchored to walls 7−104547
MBBA, nematic liq. cryst. CARS 7−92686
MBBA, nematic schlieren textures, EHD instabilities 7−104535
MBBA, nonorthogonally twisted nematics, disclinations dynamics 7−111355
organic compounds continued
MBBA, phase diagram 7−111883
MBBA, smectic structs., modelling using neutron scatt. 7−111384
MBBA amorphous solid states, struct. and dynamics 7−124103
MBBA hybrid aligned nematic cell, flexoelectricity study 7−111380
MBBA nematic layers with interfacial surfactants, electrooptic behaviour 7−106137
MBBA wedged homeotropic samples, electrohydrodynamic distortion 7−75976
$(Me_4N)_3\ Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
melamine-formaldehyde adducts, charactn. by NMR, UV spectra and chromatography 7−93402
melaminium copper hexachloride, antiferromag. coupling, magnetostructural correlations, mag. suscept. meas. 7−125361
melanin, aq. soln., metal binding transition metal ions, use of CTPO assay, ESR spectra anal. 7−74675
melittin-phosphatidylcholine complexes, model for lipid-protein interactions 7−71665
$MEM(TCNQ)_2$, far IR transmission and lattice dynamical calcs. 7−84160
menadione, photoreduction, free radical prod., product yield-detected ESR 7−103545
2-mercaptobenzothiazole, tautomerism, vap. IR and UV absorpt. spectra 7−103487
2-mercaptobenzoxazole, tautomerism, vap. IR and UV absorpt. spectra 7−103487
merocyanine dye in polyvinyl alcohol matrix, large edge excitation fluoresc. red shift 7−68396
merocyanine dyes, orientation in nematic liq. crystal matrix, absorpt. spectra study 7−78757
mesitylene binary mixtures, ultrasonic study 7−118036
mesogenic cholesteryl esters, effect of neutron irradiation 7−111381
mesomorphic and solid, phases X-ray diffr. studies 7−104542
meta-nitroaniline for molecular optoelectronics, prediction of second order susceptibility 7−110454
metal carboxylates, gaseous phase, electron impact mass spectrometry 7−74778
metallobacteriochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
metallochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
metallochlorin complexes, reson. Raman and IR spectral charactn. 7−78772
metallochlorins, fine struct. fluoresc, spectra 7−117018
metallophthalocyanine crystal thin films, electronic conductivity 7−99231
metallophthalocyanines, reson. Raman spectra, correl. with structs. 7−82151
metallophthalocyanines, stretching band, IR absorpt. spectra 7−96686
metalloporphin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
metalloporphyrin π-cation radicals, spin coupling 7−103535
metalloporphyrins, SCF perturbation calcs., oxidation and ionis. calcs. 7−103380
methallyl radicals, hot and relaxed, oscill. strengths, UV bands 7−109923
methanal beam, rot. transitions in pulsed strong field 7−129680
methane: Kr, rot. excitation, orientational order, neutron scatt. study 7−104598
methane=n-pentane mixtures, vapour-liq. equilib. meas. at high press. and temps. 7−98417
methane, ^3H-labelled, radioactivity meas. 7−89861
methane, accelerator based mass spectrometry 7−93421
methane, adsorpt. equilib. meas. by volumetric apparatus 7−118072
methane, adsorpt. equilibr. on zeolites, NMR gas phase meas. 7−92003
methane, adsorption on (100) faces of MgO and NaCl 7−112080
methane, atmospheric meas. using MgF_2:Co laser 7−133942
methane, catalytic oxidation with $La_{1-x}M_xCoO_3$ (M-Ce, Sr), Auger parameter in XPS 7−71547
methane, CH bond dipole moment, SCF wave fn. estimate 7−122339
methane, degenerate vibr. state, rot. struct. study 7−122493
methane, dense hard-sphere fluid, Enskog theory corrections for viscosity and thermal cond. 7−83630
methane, disorder effects, rotational excitations 7−142663
methane, dissociative adsorpt. on Ni, kinetics for (111), (110) and (100) surfaces 7−137661
methane, dissociative chemisorpt. on W (110), dynamics 7−139034
methane, double ionis. energy, double electron capture obs. 7−141675
methane, electromag., nuclear shielding tensors, second order props. relations 7−116879
methane, electron impact dissoc., H* ang. difference Doppler profiles 7−90434
methane, electron impact excitation, cross section meas. 7−90439
methane, electron impact ionisation cross-sections 7−141703
methane, electron interaction cross sections, local approx. 7−129835
methane, explosive vaporisation, discharge from ducts 7−136973
methane, F_1 state, double reson. obs., vibr.-rot. lines 7−82234
methane, frozen, chemical evolution by keV ion bombardment 7−111689
methane, gas-phase IR intensities, bond polar parameter model 7−82115
methane, general props. eval., approximate double substitution coupled-cluster method 7−109699
methane, ground state struct., split-valence bond-orbital calcs. 7−109786
methane, in air, HF(DF) laser lines, absorpt. cross sections meas. 7−116974
methane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
methane, in nonpremixed flames, Raman meas., fluoresc. interference 7−96772
methane, Knudsen flow, mag. field effects 7−104309
methane, laser spectroscopy, review *(Japanese)* 7−82077
methane, liq., thermal cond. meas. 7−91906
methane, liq. and gas, time-resolved coherent Raman spectra 7−90166
methane, liquefied, acoustic and thermodynamic studies 7−69826
methane, methane activated dissociative chemisorpt. dynamics, EELS 7−132968
methane, microgravity physical vapour transport expt. 7−138664
methane, nonpremixed flames, spontaneous Raman scatt. study 7−86627
methane, one electron scatt. props., ab initio SCF CI calcs. 7−103404
methane, photoionisation, angle-resolved photoelectron spectra 7−136008
methane, polarisation distortion correction using phase conjugation via stimulated Brillouin scattering 7−110474
methane, positron scatt. cross sections, complex optical pot. calcs. 7−103675

organic compounds continued
methane, proportional tubes design with 30 mm diameter 7−81880
methane, protonated, struct., vibr., ab initio MO calcs. 7−96558
methane, pyrolysis, at. H, multiphoton ionis. 7−71477
methane, refractivity virial coeffs., dielectric virial coeffs. and IR induced absorption comparisons 7−142435
methane, RF plasma, etching and deposition phenomena 7−71341
methane, rot. and rovibr. transitions, millimeter-wave spectrum 7−82084
methane, SCF proton densities HF calcs. 7−103371
methane, search in Periodic Comet Halley (1982i) 7−88254
methane, shock compression, statistical mechanical model 7−74727
methane, solid, partially ordered phase II, IR spectra 7−132262
methane, solid deuterated, delayed emission of H_2 from ion bombardment 7−93350
methane, sorption and diffusion in polystyrene and polycarbonate films 7−98459
methane, spectroscopic diffusion coeff. at 3.39 μm, laser study 7−74713
methane, thermal desorpt. from graphite following H_3^+ ion beam irrad. 7−76603
methane, total energy, random walks, quantum chemistry 7−89934
methane, ultrahigh-resolution laser spectroscopy with cold particles 7−141487
methane, UV radiation stimulated Raman scatt. 7−129724
methane, vapour, stopping power from vel. distrib. derived from Compton profiles 7−96609
methane, vapour conversion in fluidised beds 7−144719
methane, vol. mixing ratio for troposphere and lower stratosphere 7−94388
methane+Ag^+(Cu^+), association, complex form., rate consts. 7−93282
methane+Ar_n^+, (n=1 or 2), rate coeffs. determ., energy depend. 7−126407
methane+Ar(Ne)(Kr)(Xe) scatt., absolute integral cross sections meas. 7−90322
methane+Ar reaction, CH radical prod., vibr. energy, fluoresc. spectra anal. 7−138967
methane+D_2, Q-branch Roman spectra line broadening meas. and rate law anal. 7−117024
methane+Ne, mol. ionisation cross section, vel. depend. 7−129853
methane+Ne(Ar)(kr)(Xe)(O)(O_2) absolute integral cross section meas. 7−141657
methane+OH, C kinetic isotope effect of tropospheric chemistry 7−87808
(methane)$_{1-x}$$Kr_x$, solid mixture, orientational disorder and rot. excitation, neutron scatt. meas. 7−74782
(methane)$^+$+N_2(He), collision-induced dissoc. press. depend., collisional energy deposition probability anal. 7−86585
methane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
methane -d_4 as atmospheric tracers 7−94452
methane adsorbed on MgO (100), diffusivity of 2D lattice fluid 7−84524
methane adsorption on MgO (001), pot. energy calcs. 7−118231
methane clusters, ion-molecule reactions initiated by photoionisation 7−113897
methane complexes, collision-induced rototranslation absorpt. spectra 7−116962
methane crystals, dynamical props., rotation-translation coupling effects 7−83799
methane dications, dissoc., state-to-state study, photoion-photoion coincidence technique 7−86596
methane dissociative and molecular adsorption on Rh surface 7−143225
methane films, molecular decomposition and fragment emission under MeV ion bombardment 7−111687
methane ice, erosion by energetic ions 7−115294
methane in atmosphere, global emissions from waste landfill sites 7−86852
methane in early atm., effect on surface temp. 7−94424
methane in stratosphere, concs. from limb IR spectral observations 7−139694
methane in troposphere, 2D global gas transport-photochemistry model 7−139724
methane in Venezuelan savannah, nocturnal atmospheric dispersion capacity 7−139725
methane laser, influence of laser radiation field on pump radiation absorption 7−141846
methane liq. and solid, spin rot. expts. of muons and muonic atoms 7−74788
methane on Ni(111) surface, dissoc. chemisorpt. induced by Ar atoms 7−119562
methane on Pluto, absorpt. vars. in optical spectrum 7−134178
methane on Pluto, spectra and methane absorpt. features 7−115295
methane on Titan, modelling 7−120307
methane oxidation and methane fluxes in the ocean surface layer and deep anoxic waters 7−101345
methane pairs, 50 to 300 K collision-induced rototranslational absorpt. spectra, astron. appl. 7−135930
methane sensor, fibre optic evanescent wave using optical absorption 7−104023
methane sulphonate composition in Antarctic ice 7−79476
methane waveguide Raman laser, low-threshold operation at 1.54 μm 7−103799
methane-2,2-dimethylbutane-2,3-dimethylbutane, tricrit. phenomena meas. 7−84184
methane-^{13}C-d_4, high resolution stimulated Raman spectrosc. 7−82159
methane-air, silent discharge plasmas, CO prod. 7−104481
methane-air flame, C, chain mechanism investig. 7−97645
methane-air flame, impingement forced convective heat transfer 7−130688
methane-air flames, index of refraction, beam-deflection optical tomography 7−69291
methane-air mixtures, near threshold, ignition by spark discharge 7−75903
methane-air mixtures, turbulent combustion. combustion products and water vapour addition 7−75702
methane-air premixed flames, forced convective heat transfer 7−83216
methane-alkane mixture, vapour-liq. equilib., temp. dependent. interaction parameter, Soave eqn. of state 7−98414
methane-Ar, binary liq. mixtures, vibr. relax time as function of conc. 7−68441
methane-d0(d_2)(d_4), adsorbed on NaCl, struct, props., IR spectra 7−82113

organic compounds continued
methane-d_1, ν_6 band, halfwidths and intensities, diode-laser meas. 7−74714
methane-d_1, self-, N_2- and H_2-broadened linewidths in ν_6 fundamental, diode laser meas. 7−68410
methane-d_3, transition probabilities calc. 7−96795
methane-d_4, centrifugal distortion const., rot. IR-RF double reson. 7−90229
methane-d_4, IR multiphoton excitation dynamics study 7−74597
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7−90269
methane-H_2O, molecular interactions, basis sets 7−116841
methane-HF, matrix isolated, vibr. stretches, IR spectra 7−90116
methane-Kr, solid solution, disorder effects, rotational excitations 7−142663
methane-methanol, supercritical mixtures, static dielec. const. and density 7−113059
methane-NO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
methane-O_2(CO_2)(N_2)(CO), interaction force, ab initio calcs. 7−129831
methane-O_2 flame, alkali metal dopants, ion density and temp., equilib. consts., mass spectra anal. 7−86629
methane-O_2 flames, vibr. excited O_2, laser-induced fluoresc. 7−82261
methane-O_2 premixed laminar flame, sensitivity anal. based on brute force method, rate consts. 7−78497
methane-O_2 systems, lean detonation limit, decrease mechanism 7−93331
methane-perfluoromethane, stability and struct., mol. dynamics model 7−105014
methane/He-Ne ring laser, competition between counterpropagating waves, axial mag. field effect *(Russian)* 7−82669
methane/SF_6 gas mixtures, ion-ion recombination 7−96849
methanesulfonyloxy derivatives of napthalene, synthesis and ^{13}C NMR 7−96644
methanesulphonate esters, mol. conforms., Raman spectrosc. obs. 7−74643
methanethiol, IR vibr. spectra, MCD study 7−96759
methanethiol, photoexcitation, photofragment fluorescence, excitation spectra, Rydberg series, bands 7−144731
methanethiol cation in inner coma of P/Comet Halley (1982i) 7−88261
methanimine radical, struct. and electron affinities 7−74432
methanol, asymmetry and line shape effects, IR-IR double reson. 7−122581
methanol, biological solutions, US absorpt. mechanism 7−126912
methanol, crysts., vibr. band dynamic splitting in IR spectra 7−125742
methanol, dipole moments, Stark spectra 7−122589
methanol, doped on oxide layer, in Zn-ZnO-Pb, inelastic electron tunnelling spectroscopy 7−70428
methanol, E-type masers in Orion KL and Sgr B2 regions 7−107916
methanol, fluidity correl. using modified free vol. eqn. 7−98535
methanol, H bonded complexes in cryogenic solns., IR spectra 7−82090
methanol, IR vibr. spectra, MCD study 7−96759
methanol, IR-RF doubt resonance 7−129756
methanol, irradiated polycrystal, electron spin echo modulation, nuclear quadrupole interaction 7−106011
methanol, lattice vibrs., Raman spectrosc. obs. 7−85727
methanol, lean premixed laminar flames, calcs. 7−142398
methanol, liq., mol. dynamics calcs., flexible three-site model 7−137191
methanol, liquid, Raman spectra, isotropic bandwidths and freq. shifts of CH and CO modes 7−92658
methanol, on Ru (001), decomposition, laser induced thermal desorption study 7−132967
methanol, photoassisted thermal decomp. in fluidised bed 7−144689
methanol, primitive model, Monte Carlo simulation 7−97899
methanol, rot.-torsion energy levels, FTIR spectra 7−82101
methanol, surface, splash form. processes on impact of steel/glass sphere/cylinder 7−130753
methanol, thermal diffusivity, photon correl. spectroscopy 7−76464
methanol, turbulent combustion, engine compression stroke simulation 7−100563
methanol+N_2(Kr)(Ar)(Xe), electronic-to-electronic energy transfer 7−119504
methanol 7−108560
methanol 119 μm line, stable 1.25 W CW FIR laser radiation 7−103800
methanol 2_0-3_{-1}E transition masers towards galactic H II regions 7−72576
methanol adsorbed on Al (110), high resolution EELS study 7−84518
methanol adsorbed on MgO, IR studies 7−118230
methanol adsorpt. on ThO_2, STEM and Fourier transform IR spectra 7−98682
methanol. adsorpt. on TiO_2, struct. effects, IR spectra 7−98684
methanol adsorption on O_2-covered Zn (0001), UPS study 7−91980
E-methanol astronomical maser sources, pump mechanisms 7−127691
methanol clusters, multiphoton ionis., reaction channels var. 7−110051
methanol droplets, Leidenfrost boiling on hot surfaces 7−75262
methanol FIR laser line freq. meas. 7−123043
methanol laser at 119 μm, gain line shape, buffer gas press. depend. 7−122925
methanol mid-IR gas lasers, pulsed high-power, survey 7−82538
methanol on Pd (100) oxidation, H transfer pathways 7−86679
methanol optically pumped laser lines, new wavelength meas. 7−68625
methanol submillimetre laser pumped by CO_2 laser, Stark effect appl. to stabilisation 7−90643
methanol vapour, thermal diffusivity and cond. meas. 7−75745
methanol-carbon tetrachloride, liq. mixture, eqn. of state, lattice model 7−111847
methanol-cyclohexane mixtures, positron annihilation in vicinity of critical soln. point 7−113309
methanol-d_0(d_1)(d_3)(d_4) glass, methyl radical trapping sites struct., ESR spectra anal. 7−106027
methanol-d_2 mid-IR gas lasers, pulsed high-power, survey 7−82538
methanol-d_3, laser Stark spectra 7−117002
methanol-d_3 FIR laser lines, optically pumped, freq. meas. 7−122924
methanol-d_4 mid-IR gas lasers, pulsed high-power, survey 7−82538
methanol-ethanol-$CaCl_2$, vapour-liq. equilib. at 25°C 7−111846
methanol-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7−124465
methanol-H_2O, binary nucleation theory 7−98379
methanol-isooctane binary critical mixtures, D isotope effects 7−124512
methanol-methane (H_2)(N_2)(CO)(CO_2) mixtures, isothermal phase equilibr. 7−84225

organic compounds continued
methanol-triethylamine(diethylamine), excess molar vols., Gibbs energies press. depend. 7−76446
methanol-water mixture, viscosity B coeff., dielectric friction effect 7−98537
methanol-water mixtures, excess molar enthalpies and thermodynamic props. 7−98504
2,4-methanproline, in peptides, conformational energy computations, NMR 7−144969
L-methionine, crystalline, conform. phase transition, IR and Raman spectra, MNDO calcs. 7−124413
methionyl homopeptides, intramol. three-electron bond formation 7−68207
N-methlacetamide, far-IR and mm-wave spectra, dielectric anisotropy 7−85621
methoxy compounds, solid, broad line NMR appl. 7−85450
2-methoxy ethylamine, conform., vibr., microwave spectrum 7−96652
methoxy on S covered Ni (111), decomposition kinetics 7−144752
methoxy radical, (A^2A_1) state, collisional quenching 7−109990
methoxy radical+CO reaction rate const., temp. depend., fluoresc. spectra meas. 7−138966
3-methoxy-1,3,4,5-tetrahydro-2-benzoxepin, anomeric effects, NMR investig. 7−90198
2-methoxy-1,7,7-trimethylbicyclo (2.2.1)hept-2-ylium fluoroborate, mol. struct. 7−141427
2-methoxy-9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7−68400
N-meta-methoxybenzoyl-N′,N′,N″,N″-diethylenetriamide of phosphoric acid, cryst. and mol. struct. 7−104714
methoxydifluorophosphinoxide-$d_0(d_3)$, liq. gas, solid vibr., conform., IR and Raman spectra 7−96687
2-methoxyethylamine, low-lying torsionally excited states, vibr., microwave spectrum 7−82087
methyl, recombination reaction, rate consts., Monte Carlo integration 7−144692
syn-(methyl,chloro) bimane, organic dye, laser action 7−130083
methyl 2-deoxy-3,5-di-O-P-nitrobenzoyl-β-D- ribofuranoside, cryst. struct. 7−86896
N-methyl acetamide, UV reson. Raman enhancement cross section meas. 7−74625
methyl acetate, radical cation, isomerisation, dissoc., ab initio MO study 7−100531
2-methyl acetophenone derivatives, isomerisation, tunnelling model 7−132913
methyl acrylate, 2D NMR, heteronuclear chemical shift correl., virtual one-bond coupling effects 7−125560
methyl acrylate, and Lewis acid complexes, conform., ab initio calcs. 7−68194
methyl alcohol, $^{12}CH_3OH$ and $^{13}CH_3OH$, FIR laser line meas. and assignment 7−130061
methyl alcohol, aq. soln., refractive index meas. of conc. by diffr. grating 7−114023
methyl alcohol aq. solns., struct. and adiabatic compressibility 7−124070
methyl alkyl ethers, ionis. pot. and intramol. charge transfer, photoelectron spectra 7−68409
methyl bromide, adsorpt. on LiF, photodissoc., photoreaction and photodesorpt. 7−124684
methyl bromide, molecular resonances, autoionisation, photoelectron spectra study 7−141633
methyl bromide, normal and deuterated, Raman and IR spectra 7−85635
methyl carbamate, acid hydrolysis, MNDO method 7−144697
methyl carbamate, aq. solns., dielectric dispersion meas. 7−85518
methyl cation+NH_3, binary reaction and ternary assoc., rate coeffs. 7−132924
methyl chloride, adsorbed on Al_2O_3, H bonding, Fermi reson., IR study 7−137702
methyl chloride, microclusters and their internal ang. modes, rot. anal. 7−90134
methyl chloride + Cl^-, combined ab initio quantum mechanical and mol. mechanical method appl. 7−74423
methyl chloride-Ar, rot. spectra using pulsed nozzle Fourier transform microwave spectrometer, internal rot. 7−90102
methyl cyanide, centrifugal distortion consts. 7−68187
methyl cyanide, collisional excitation in interstellar clouds 7−88587
methyl cyanide, collisional interactions, rot. relax. rate consts. 7−122673
methyl cyanide, fragmentation under nonlinear UV excitation, delayed CN $B^2\Sigma^+$ chemiluminesc. ion-mol. collisions 7−78475
methyl cyanide, liq., optical consts., IR dispersion spectra 7−70798
methyl cyanide, rot. spectra and vibr. states in freq. range 17 to 56 GHz, quadrupole struct. 7−90103
methyl cyanide, vibrational spectroscopy, characterisation of mol. clusters 7−141739
methyl cyanide cluster, electron attachment, mass spectroscopy 7−82334
methyl cyanide-HCN, H bonded dimer, rot. spectrum and props. 7−109879
methyl cyanide-HF, FTIR spectra 7−96676
methyl dithioformate, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
methyl ethyl sulphone-d_0 (-d_1)(-d_5), vibr. spectra, rot. isomerism 7−96692
methyl fluoride, equilibr. struct. rot. struct., electron diffr. study 7−68456
methyl fluoride, IR laser sideband and submillimeter wave spectroscopy, vibr. state, rot. transitions 7−96666
methyl fluoride, IR vibr. intensities, ab initio MO calcs. 7−103360
methyl fluoride, liq., ν_3 band, noncoincidence effect, Raman and IR spectra 7−106156
methyl fluoride+HCl, complex-forming reactions in neutral noble gas clusters 7−119503
methyl fluoride-$d_0(d_2)$, vibr. energy levels, ab initio pot. function 7−90091
methyl formate, c-type transitions 7−135924
methyl formate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl formate, methanol soln., NMR longit. two-spin order study 7−135965
methyl formate anion + OH^-, pot. surfaces, MINDO/3 method 7−86613
methyl group dynamics in molecular crystals, ENDOR obs. 7−96754
methyl groups, correlation, multiple-quantum NMR study 7−90218
methyl groups, vibr. deactivation, laser photolysis and IR fluoresc. 7−110089
methyl halides, chemisorption on Pt (111), HREELS and temp. programmed desorption study 7−98695
organic compounds continued
methyl halides, ionised clusters, intramolecular ion-molecule reactions 7−141733
methyl halides+$Ag^+(Cu^+)$, association, complex form., rate consts. 7−93282
1-methyl indole, in polar and nonpolar solvents, fluoresc. decays 7−117010
methyl iodide, in liq. cryst. solvent, NMR investig. 7−90204
methyl iodide, molecular resonances, autoionisation, photoelectron spectra study 7−141633
methyl iodide, photodissoc., spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
methyl iodide, rotational constants, microwave spectroscopy 7−122506
methyl iodide + Cs collision, negative molecular ion, electronic excitation 7−141653
methyl iodide in nematic mesophase, NMR linewidth anal., ^1H and ^{13}C NMR spectra 7−74664
methyl isocyanide, centrifugal distortion consts. 7−68187
methyl isopropyl ether, gas phase dissociations 7−119498
methyl mercaptan, adsorption and reaction on Cu and Ni 7−144757
methyl mercaptan+OH, reaction kinetics 7−119519
methyl methacrylate in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7−138380
methyl nitrite, mol. beam photodissoc., translational spectra 7−74721
methyl nitrite photodissoc. in second UV absorpt. band, photofragment TOF spectra 7−116984
methyl oxalate anion + OH^-, pot. surfaces, MINDO/3 method 7−86613
methyl radical, full CI calcs. 7−109798
methyl radical+alkanes, high temp. reactions, H abstraction 7−126417
methyl radical+I, gas-phase reactions, intracavity laser spectroscopy method appl. 7−106790
methyl radical+O, reaction kinetics, 294-900 K 7−138987
methyl radicals, fluorinated, vibr. freq., UHF/3-21G model 7−81953
methyl radicals, hot and relaxed, oscill. strengths, UV bands 7−109923
methyl silane, torsional band studied using tunable diode laser spectrometer 7−96662
methyl thienyl ketone oxime, struct., PMR 7−68364
methyl thiocyanide, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
methyl thiolformate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl thionoformate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl thiourea, Fermi reson. lineshapes, IR spectra 7−109900
methyl trifluorosilane, VUV and fluoresc. excitation spectra 7−109912
3-methyl-2-(parachlorophenyl)-butyric acid, flexible mol. fitting technique using distance matrices 7−74424
5-methyl-2-aminopyridinium copper octachloride, anomalous mag. props. 7−125328
3-methyl-2-penten-4-yn-l-ol, E and Z isomers, self-assoc. parameters determ., PMR spectra 7−113917
2-methyl-3-carboethoxyquinoxaline 1,4-dioxide, synthesis, crystal and mol. struct. 7−117914
2-methyl-3-chloroaniline, vicinally trisubstituted, IR and Raman spectra 7−103500
4-methyl-3-penten-2-one, proton affinity determ. 7−74484
N-methyl-3-phenyl-3-(o-methoxyphenoxy) propylamine, energy well connection graph appls. 7−89901
3-methyl-4-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
2-methyl-4-nitroaniline, systems with low energy double transitions, second-order hyperpolarisabilities, evaluation by three-level model 7−130268
2-methyl-4-nitroaniline crystal, SHG in slab waveguide with high index top layer 7−97073
2-methyl-4-nitroaniline thin film waveguide, phase-matched SHG of Nd:YAG laser *(Japanese)* 7−97089
2-methyl-6-chloroaniline, vicinally trisubstituted, IR and Raman spectra 7−103500
1-methyl-alkoxy-phenyl group chiral smectic liq. cryst., phys. props. 7−77456
2-methyl-l-(4-methylthiophenyl)-2-morpholinopropan-l-one, energy and electron transfer, time resolved UV spectra 7−82206
3-methyl-l-penten-4-yn-3-ol, E and Z isomers, self-assoc. parameters determ., PMR spectra 7−113917
4-methyl-pyridine-d_0 (-d_7), cryst., phase transitions, mol. dynamics 7−85729
methyl/fluoride, symmetrical top dipolar molecules, ions, hitting collisions, adiabatic invariance treatment 7−135831
N-methylacetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7−90294
N-methylacetamide, aq. hydration, Monte Carlo calcs., isomerism effects 7−131006
N-methylacetamide, liq., H bonding, low freq. Raman spectra study 7−68319
N-methylacetamide and H_2O in carbon tetrachloride solution, interaction, PMR study 7−92527
O-methylacetophenone and related cpds., photochemistry, ESR study 7−119540
methylacetylene, photocatalytic hydrogenation on TiO_2 catalyst, size effect 7−139030
9−methyladenine, aq. soln., excimers, time-resolved fluoresc. 7−129765
2-methylallyl alcohol, conform. equilib. and internal H bonding, microwave spectroscopy., ab initio calcs. 7−122508
methylamine, surface reaction pathways, on Ni (111), Auger electron spectroscopy and TPD investig. 7−78542
methylamine+N_2(Kr)(Ar)(Xe), electronic-to-electronic energy transfer 7−119504
$(methylamine)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
methylamine cpds., IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
methylamine-BrH, H-bonded complexes, pot. surface, H^+ transfer, ab initio SCF calcs. 7−89976
methylamine-d_2+F reactions, vibr. energy disposal 7−86592
methylammonium nitrate, N-deuterated, single cryst., Raman spectra 7−132273
9-methylanthracene, fluoresc. quenching by cyclooctatetraene in aq. micellar solvent 7−90261
methylating agents, mol. reactivity, Raman spectra studies 7−86603

organic compounds continued
methylbenzene, α-substituted, liq., mol. reorientation, Raman spectra 7−92681
methylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
1-methylbenzimidazoles, 2 substituted, UV spectra 7−141596
methylbenzoate radical anion derivatives, planarity, ESR 7−96751
methylbenzyl alcohol, isomers, REMPI mass spectra 7−74717
α-methylbenzylamines, enthalpies of vaporisation, 298.15 K 7−76370
methylbixin crystals, charge carrier transport, photoconductivity decay 7−84992
2-methylbutan-2-ol-n-hexadecane, excess enthalpies and excess vols. meas. 7−143040
2-methylbutan-2-ol-n-hexane, excess enthalpies and excess vols. meas. 7−143040
(+)-2-methylbutyl-p-[(p-methoxybenzylidene) amino] cinnamate, cholesteric blue phase II is FCC struct. 7−117810
N-methylcaprolactam-n-octane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
methylchloropentanoic acid-4′,4″-octyloxybiphenyl ester, ferroelectric liq. cryst., dielec. polarisation obs. 7−85530
methylcyclobutane, conform. anal., internal rot. barriers, Raman investig. 7−74636
methylcyclohexane clathrate hydrates, struct. studies 7−117883
methylcyclohexane-isooctane organic glass, spectral hole burning of etioporphyrin I impurities *(Russian)* 7−75083
3-methylcyclohexanone, conform. and microwave spectrum 7−82086
(+)-methylcyclohexanone, optical activity, Raman obs. 7−128670
(+)-(3R)-methylcyclohexanone, Raman optical activity meas. 7−74617
(+)-(3R)-methylcyclohexanone, Raman optical activity spectra 7−90171
3-methylcyclopent-3-enone, internal rot. barrier, microwave spectrum 7−109881
methyldiazohydroxide, interconversion mechanism, ab initio MO SCF calcs. 7−109756
methyldiethanolamine + CO_2, reaction kinetics in aqs. solns. 7−126420
methyldioxy radicals, disproportionation reaction, rate const. temp. depend., UV spectra anal. 7−135957
methylene, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
methylene, insertion reactions 7−126424
methylene, optimized virtual orbital space for high-level correlated calculations 7−116864
methylene, triplet ν_2 and ν_3 ab initio calcs. and vibrationless singlet-triplet splitting determ. 7−129609
methylene and cation, ions. pot. and excitation energies, FCI wave fns. calc. 7−81993
methylene anion, excited states, photodetachment, radiative decay lifetimes ab initio calcs. 7−90285
methylene blue particle generation using vibrating orifice aerosol generators 7−119582
methylene blue sensitized gelatin as a photosensitive medium for conventional and polarizing holography 7−96953
methylene cation, $^2A_1$ electronic state, nonadiabatic transition probabilities, avoided crossings 7−103584
methylene chloride, harmonic force field, struct., rot. consts. 7−109861
methylene chloride-d_1, C−H and C−D interbond coupling, photoacoustic spectrosc. 7−122572
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7−82185
methylene dications, substituted, bond lengths, isomeric structs., ab initio MO calcs. 7−109711
methylene difluoride, liq. vap. press., isotope effect 7−142971
methylene iodide, normal and deuterated cryst., Raman and far-IR spectra 7−106168
methylene iodide-d_0 (-d_2), cryst., Raman and far IR spectra 7−85728
methylene phosphoranes, semipolar P−O and P−C bonds 7−129559
methylene radical, 10 μm search in C star spectrum 7−107849
3-methylene-1,4-pentadiene, mol. mechs., ab initio MO calcs. 7−81982
3,3′-methylene-bis(1-oxyl-2,2′,6,6′-tetramethyl-5-methylene-4-oxopiperidine), cryst. and molecular struct. determ. *(Chinese)* 7−131133
methylenecyclopropene, electronic charact., microwave spectrum, struct., dipole moment 7−68294
bis(2,3:6,7-bis(methylenedioxydibenzofuran)) hexafluoro-arsenate, semiconducting radical salt struct. determ. 7−83932
methyleneimine, dipole moment orientation determination, infrared spectroscopy 7−122523
N-methylethylenediamine, conform. and H-bonding, microwave spectrum 7−74573
cis-N-methylethylidenimine, internal rot., character tables, symmetry eigenvectors 7−129568
methylfluorosilanes NO exciplexes, relative energies, MO calcs. 7−89904
methylfluorosilanes-N_2O_2 exciplexes, singlet and triplet states, enthalpies, MNDO calcs. 7−89960
N-(methylformamide)$_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
2-methylfuran, photoisomerism to 3-methylfuran SINDO1 calcs. 7−89963
methylhalides, polycryst., methyl rot., inelastic incoherent neutron scatt. 7−83795
3-methylhexanes, deuterated, gamma-irradiated, free radical production, ESR spectra 7−122578
methylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
methylidyne, $X^2\Pi$ state, vibr.-rot. emission spectrum 7−90090
methylidyne ion in interstellar medium, determ. of $^{12}C/^{13}C$ ratio 7−128016
methylidyne radical, obs. of G159.1+3.3 mol. cloud envelope 7−146064
methylindoles, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7−103524
(methyliodide)$_n$, cluster formation photodissociation, ultraviolet spectra 7−135922
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
N-methylketenimine, IR spectrum, normal coordinate anal., ab initio MO calcs. 7−116967
2-methylmercapto-3-methylpyrazine, IR absorpt. and electronic spectra 7−74581
methylmethacrylate, continuous flow emulsion polymerisation, reactor start up procedures effect 7−126448

organic compounds continued
1-methylnaphthalene, separation from dodecane using liq. membrane, surfactant effects 7−113988
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
1-methylnaphthalene, swelling agent for solid-gas mass transfer meas. 7−75261
methylnitrite ions, unimolecular decomposition, rate consts. and kinetics study 7−126425
3-methylpentane-carbon tetrachloride glasses and liquids, pulse radiolysis 7−119543
3-methylpentanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975
methylperoxide, use in oxidation of S(IV), reaction kinetics 7−120086
methylperoxy radicals+HO_2, cross-disproportionation, kinetic meas. 7−138970
methylphenanthrenes, methyl reorientation, ^1H spin-lattice relax. study 7−112987
1-(4-methylphenyl)sydnone, molecular electronics, intramolecular p-n junction, polarised N−O bond, PMR study 7−99168
N-methylpiperazinium copper octachloride, anomalous mag. props. 7−125328
methylpropargyl radicals form. from tetramethylcyclobutadiene radical cations, ESR study 7−109952
4-methylpyridine, phase transitions, mol. mechanism 7−143002
4-methylpyridine-pentachlorophenol complex, struct., UV and IR spectra 7−98106
5-methylpyrimidine, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7−82256
N-(methylpyrolidinone)$_2H^+PW_{12}O_{40}^{3-}$, photochem., picosec. spectrosc. 7−126461
N-methylpyrolidone-n-hexane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
N-methylpyrrole adsorbed on Pt (111), orientation and dissociation of adsorbed molecules, NEXAFS study 7−99979
N-methylpyrrolidinone-tetrahydrofuran, mixtures, density, viscosity and thermodynamics 7−98496
methyls enantiotopic, stereo specificity, NMR spectra 7−122575
methylsilsesquioxane, reference material for magic angle ^{13}C NMR spectroscopy 7−102470
methylsilylsulfide, internal rot., struct., dipole moment and microwave spectra meas. 7−74569
methylthio radical, laser-induced fluoresc., vibr. relax. and electronic quenching 7−68391
methylviologen, effect on laser flash photolysis of DNA intercalated ethidium bromide 7−133225
methylviologen, solvent cage escape yields following electron transfer quenching 7−82076
methylviologen radicals, decay, catalysis by colloidal Pt 7−139040
mexoticin, unit cell and space group determ. by X-ray diffr. 7−117910
mitomycin C-DNA covalent cross-link adduct, isolation and struct. 7−133212
mixed alums, dielectric props., phase transition 7−106094
mixed stack charge transfer crysts., phase diagrams and optical props. 7−84206
mixed-stack charge-transfer crysts., neutral-to-ionic transform. and ground-state props., Hubbard Hamiltonian model 7−118087
mixed-stack cpds., dimerisation transition versus neutral-ionic transition 7−112281
mixtures, density, viscosity and thermodynamics 7−98496
MMBA, intermolecular energy calcs. 7−137222
MMSA, intermolecular energy calcs. 7−137222
molecular alloys, phase diagrams 7−111829
molecular harmonic potential fn., isotopic centrifugal distortion consts. based calcs. 7−117038
molecular path codes applied to comparability and similarity 7−129551
molecular semiconductor devices review 7−118566
molecular solids, dynamic effects in VUV and X-ray photoelectron spectra 7−125923
molecules, absorpt. of H_2, O_2 and CO, ab initio HF calcs. 7−78538
molecules, large, resonant third-order hyperpolarisabilities 7−123061
molecules, semiempirical transition states, correl. effects 7−68217
molecules, vectorial excitation energy transfer involving inhomogeneously broadened electronic levels 7−116944
molecules in solution, Jablonski diagram and electronic energy relax. 7−109974
monensin, liquid membrane, reverse transport, membrane pot. and ion flux 7−119563
Monensin and its neutral methylester, use for Na^+ selective disk electrodes *(German)* 7−79101
monochloroacetic acid, in aq. ethanol, US vel., temp. and conc. depend. 7−98345
monocyanomethane molecules, valence ionisation spectra 7−90015
monohetero cyclopropanes and cyclopropenes, nuclear spin-spin coupling consts., ab initio equations of motion calcs. 7−74426
monomethylnitrosamine, interconversion mechanism, ab initio MO SCF calcs. 7−109756
monomolecular layers, struct., phase transitions *(Japanese)* 7−76697
mononucleotides, interaction coeffs., ^{31}P NMR *(French)* 7−119726
monothioformic acids, internal rot. barriers, struct., HF calcs. 7−109808
morpholine, conformational equilib., IR spectra 7−109904
morpholinium $TCNQ_2$ substituted cpds., conductivity, field and freq. depend. 7−84861
multidimensional NMR, structural and analytical applications 7−82227
muonated organic free radicals, internal dynamics and reactions, μSR study 7−110148
muricin aglycone and related pregnene derivatives, ^{13}C and ^1H NMR study 7−90192
myristyltrimethylammonium bromide, nematic lyotropic, ester hydrolysis catalysis 7−113905
2-(N,N-dimethylamino)-5-nitroacetanilide single crystals, efficient SHG 7−123094
(n)heptane-1-chlorobutane, vapour-liq. equilibr., error-in-variables model 7−84221
(n)heptane-n-propanol-1-chlorobutane, vapour-liq. equilibr., error-in-variables model 7−84221
N-(4-nitrophenyl)-L-prolinol, quadratic nonlinear props. 7−123059
N-(4-nitrophenyl)-L-prolinol crystal, IR tunable femtosecond pulse generation 7−123092
N-(4-nitrophenyl)-N-methylamino-aceto-nitrile for SHG, growth, crystal structure 7−123093

organic compounds continued
N-(4-nitrophenyl)-N-methylaminoacetonitrile, quadratic nonlinear props. 7−123059
N-containing molecules, ab initio calcs. using 3-21G(N*) basis set 7−89917
n-octadecane, solar energy storage with phase change 7−144921
n-pentane/iso-pentane mixture hydrostatic pressure limit determ., self-supporting Manganin pressure gauge appl. 7−128561
NADH models, synthesis and reactivity, NMR study *(French)* 7−93621
naphthalene:pentacene impurities, electronic, excitation-phonon coupling, Raman 7−135945
naphthalene, catacondensed, Wiener numbers determ. 7−89912
naphthalene, contact density and hyperfine splitting of positronium 7−74787
naphthalene, cryst. growth, orientational order in soln. interfaces 7−132427
naphthalene, diffusion coeff. in supercritical CO_2 7−75743
naphthalene, dissolving in supercrit. CO_2, mass transfer resistance meas. 7−118099
naphthalene, graph theory adjacency matrices, eigenvectors, topological anal. 7−109701
naphthalene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
naphthalene, Kekule structs., enumeration 7−89913
naphthalene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
naphthalene, mol. cryst., self-diffusion, pot. energy calcs. 7−98563
naphthalene, peri effect in carcinogenesis, empirical force field calcs. 7−100798
naphthalene, supercrit. solns. in CO_2 intermol. interactions, Raman obs. 7−74614
naphthalene, triplet excimers, conform. and phosphoresc., radiative and nonradiative decay rates 7−82267
naphthalene, triplet excitation zero-field ODMR 7−90233
naphthalene, triplet state, exchange interactions, number of effective dimensions 7−105408
naphthalene, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
naphthalene, UV absorpt. spectrum, press. effects 7−99880
naphthalene and related cpds., excimer phosphoresc. 7−122598
naphthalene crystals, kinetic roughening and step free energy, solid-on-solid model 7−76050
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
naphthalene molecular crystals, US relaxation absorption crystals *(Chinese)* 7−104921
naphthalene-benzophenone system, nonradiative triplet-doublet energy transfer meas. 7−109913
naphthalene-d_8, cryst., external phonons, press. and temp. depend., Raman spectrosc. obs. 7−85724
naphthalene-d_8, elec. polarisability tensor, NMR study 7−82224
naphthalene-d_8, mol. cryst., external phonons, Raman spectrosc. obs. 7−85622
naphthalenes, substituted, electronic spectra, PPP calcs. 7−89968
naphthalenes, substituted, radiationless processes, vibronic level fluoresc. lifetimes 7−129769
naphthalocyanine compounds, electrical props. 7−105559
1- and 2-naphthols, inelastic electron tunneling spectra 7−69570
1,4-naphthoquinone, Raman spectrum, transferable valence force fields anal. 7−74647
9-(2-naphthyl)anthracene, S_1 torsional pot., vibr. struct., laser induced fluoresc. 7−68388
naphthyl-2 p-alkoxybenzoates, 6 substituted, ferroelec. liq. crystals 7−70716
1,1-di-α-naphthylmethane, electronically excited mols., intermol. interactions 7−78462
α-naphthylphenyloxazole, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
napthalene based cation radical salts, donor synthesis 7−98957
natural waters, zeotropic distillation from N,N-dimethylformamide 7−100764
Nd^{3+} doped, press. depend. of exchange interaction, ESR study 7−138322
nematic mixtures, near-UV photostability 7−77488
neodymium (III) tris(diglycolate) complex, single cryst., circular dichroism and absorpt. spectra 7−85590
neodymium diphthalocyanine, mol. and cryst. struct., X-ray diffr. study 7−104717
neodymium tartrate, crystal growth from silica gel 7−85977
neopentane, clusters, electron diffr. obs. of supersonic jets 7−103655
neopentane, disordered phase, orientational dynamics 7−142750
neopentane, plastic, orientational disorder 7−142745
neopentane-d, plastic cryst., orientational disorder, neutron elastic scatt. obs. 7−83796
n.heptane+methanol, binary liquid system near critical temp., dielectric const. 7−85524
nickel, ethanediamine nitrite chlorate, $Ni(C_2H_8N_2)_2NO_2ClO_4$, quasi 1D Heisenberg antiferromagnet, quantum energy gap 7−85256
nickel II dihydroporphyrins, normal modes, reson. Raman spectra, model for chlorophyll 7−116975
nickel octaethylporphyrins, solns., nondegenerate CARS spectra 7−90168
nickel phthalocyanine, low temp. reson. Raman spectra 7−132266
nickel porphyrins, axial coordination, Raman difference and transient spectra 7−78766
nickel porphyrins, noncoordinating solvents, excited state dynamics, reson. Raman spectra anal. 7−82196
nigericin in solution and in KBr matrix, IR spectra *(French)* 7−116955
Nile blue, ethanol soln., nonlin. receptivity, nonMarkovian model 7−90180
ninhydrin+$Mn_2O_7^{2-}$, chem. oscillator, in continuously stirred tank reactor 7−126423
nisin, antibiotic, ^{252}Cf plasma desorpt. mass spectrosc. 7−116019
nitrilotriacetic acid monoclinic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
4-nitro-4'-aminodiphenyl layers, amorphous, photoelec. and photodielec. props. 7−84988
nitroacetylene derivatives, electrostatic potentials and rel. bond strengths 7−129829
nitroalkane, UV photolysis, OH radical form. and detect. 7−86576
3-nitroaniline, solubility study in micelles and microemulsions 7−98464
p-nitroaniline, systems with low energy double transitions, second-order hyperpolarisabilities, evaluation by three-level model 7−130268
organic compounds continued
2-nitroanisole, solute probe for Xe and SF_6 supercrit. solvent props. investig. 7−103411
nitroarene concs. in Los Angeles during NO_x episode 7−133151
nitroaromatic anions, collision-induced dissocs., mass analysed ion kinetic energy spectra 7−119497
nitrobenzene, decomposition pathway, ab initio MRD-CI calcs. 7−116873
nitrobenzene, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
nitrobenzene, liq., optical Kerr effect, femtosecond dynamics 7−97100
nitrobenzene, liq., optical Kerr effect, femtosecond dynamics, laser spectra 7−129693
nitrobenzene, optical Kerr effect, third-order suscept. relax. times, time-resolved study 7−141953
nitrobenzene, quadratic Kerr effect control of holographic diffr. grating 7−110298
nitrobenzene, single and collective particle correlation kinetics, time resolved picosec. phase conjugation 7−110478
nitrobenzene cation, IR multiphoton dissoc. 7−119545
nitrobenzene-xylene(toluene), liq. mixture, dielectric const. 7−70690
nitrobenzene/n-heptane binary mixtures, ultrasonic attenuation studies 7−111773
2-nitrobenzidine, in methanol-water mixtures, electrochem. reduction 7−113952
S-nitrobenzimidazoles, 2 substituted, UV spectra 7−141596
p- nitrobenzoate adsorbed on Ag films, SERS 7−138450
p-nitrobenzonitrile, single cryst., pyroelectric props. dielectric meas. 7−106079
nitrocellulose film, periodic surface microrelief, effects of laser irradiation 7−76572
nitrocellulose small arms propellant methyl centralite conc. profile, Raman study 7−85643
nitrocellulose-nitroglycerine mixtures, dynamic mechanical meas. 7−119304
nitrocellulose-tetrahydrofuran-ethanol, lyotropic behaviour, isotropic and anisotropic phases 7−137192
nitrocompounds, condensed, thermal decomp. kinetics, automated data acquisition appls. 7−138999
nitromethane, fragmentation dynamics, quantum mechanical close coupling calcs. 7−82301
nitromethane, laser-induced photolysis, photofragments fluoresc. spectra anal. 7−129727
nitromethane, methyl group rotational potential 7−142665
nitromethane+K, energy loss and angular meas. 7−141654
nitromethane-butan-l-ol, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
nitromethane-$d_1(d_2)$, cryst., methyl internal rot., neutron scatt., IR and Raman spectra 7−125730
nitrone, electronic struct., spin-coupled descriptions 7−122326
nitrone, valence bond struct. calcs. using orthogonalised at. orbitals 7−109784
p-nitrophenol, at air-water interface, chem. reactions, surface SHG investig. 7−119553
N-(w-(p-nitrophenoxy)alkyl)anilines, photochemistry, mag. field effects, hyperfine coupling 7−78517
1-nitropyrene, fluoresc. background in Raman spectroscopy, solvent effects 7−103506
nitrosamine metabolites, SCF calcs. polarisation functions and electron correlation effects, decomp. 7−109708
N-nitrosamines, form. and metabolism transition structs., ab initio RHF calcs. 7−89940
nitrosoacetylene, derivatives, electrostatic potentials and rel. bond strengths 7−129829
nitrosyl chloride molecules, photolysis, I quantum yields 7−129815
nitrotoluene in cyclohexane soln., dielectric polarisation, precritical state 7−132187
nitroxide spin labels, ESR spectra, linewidths, conc. and temp. depend. 7−93642
nitroxyl radical, EPR imaging, T_1 selectivity, inversion-recovery 3-pulse sequence technique 7−74686
nitroxyl radicals, EPR spectra, functional groups protonation (deprotonation) effects 7−135976
nitroxyl tricyclic biradical, cryst. and mol. struct., X-ray diffr. study 7−104720
n-nonacosane, first-order phase transitions, dilatometric obs. 7−111859
n-nonadecane, first-order phase transitions, dilatometric obs. 7−111859
n-nonadecane-n-heneicosane, solid state, Raman spectra 7−144058
nonafluoro-4-iodobutane, photodissoc. and vibr. relax. study, IR fluoresc. spectra anal. 7−74603
nonafluoro-tert-butyl iodide, vibrational overexcitation above dissociation limit in IR multiphoton field 7−103605
nonanes, branched, Raman and IR spectra meas., normal coord. anal. 7−90147
nonaqueous solvent interaction with alkali metals, AES and LEED studies 7−143196
nonionic molecules, free energies of hydration, hydration shell model 7−144738
nonlinear absorption and emission spectroscopy, appls. to excited states 7−108667
nonlinear organic materials, new, prospects 7−82731
4-n-nonoxybenzylidene-t'-butylaniline, smectic-F phase, orientational flow, D NMR obs. 7−99589
nonplanar conjugated organic molecules, rehybridisation and π-orbital overlap 7−89969
nonpolar liquids, electronic conduction and breakdown 7−143072
nonsterol cholesterogens, mesomorphic phases, vibr. spectra 7−113186
n-nonyl alcohol, isobaric specific heat at high press. 7−137582
7-norbornadienyllithium, struct., MNDO calcs. 7−74445
norbornane, geometry, 2-exo and endo substituents, MNDO and MM2 calcs. 7−129599
norbornene, plastic phase, muon probe investig. 7−85508
norbornenyl systems, $^2H/^1H$ NMR isotope effect on ^{13}C chem. shift, linear correls. 7−68346
2-norbornyl cation, ^{12}C-^{13}C equilibria meas. NMR spectrum 7−109933
2-norbornyl cation, gas phase charactn. 7−100600
norbornyl cation, NMR spectrum, tunneling effects 7−122567
2-norbornyl cation, stabilisation energies, solvent models role 7−139003
2-norbornyl cation salt, mol. struct. 7−141427
nortricyclyl-norbornenyl cation, deuterated, reversible skeletal rearrangement, NMR spectra 7−119600
nuclei acid bases, out-of-plane vibr. modes 7−119721

organic compounds continued
nucleic acid base complexes with acridine orange dye, compensation effect in the electrical conduction process 7−76955
nucleic acid base pairs, H-bonded, free energy increments 7−119550
nucleic acid bases, electrostatic pots., dipole pot. mapping approach 7−129908
nucleic acid bases, out-of-plane vibr. modes 7−119720
nucleic acid bases, protonation, ^{1}H and ^{13}C NMR and UV investig. 7−74662
nucleic acid bases, tautomers geometrical struct., AM1 method calcs. 7−100802
nucleic acids, 1H NMR spectra; chemical exchange rates and Overhauser effects calc. 7−106978
nucleic acids, in viruses, struct. determ. by Raman spectrosc. 7−71690
nucleic acids, macromol, dynamics simulations, interpretation of expts. 7−133190
nucleic acids, vibr. modes, normal coord. anal. 7−68285
nucleophilic addition reactions, carbonyl group, steric effects 7−126446
nucleosides, ^{13}C NMR spectra, isotopic multiplets, H bonding effects 7−74668
nucleotide-acetamide complexes, laser Raman spectroscopic obs. 7−68326
nucleotides, binding to Cu(II), Raman spectrosc. obs 7−68327
oct-1-ene, liquid, thermal conductivity, 307 to 360 K, 0.5 GPa 7−131373
n-octadecane, close-contact melting 7−69874
4-n-octadecyl phenol, film on Cu, IR absorpt. intensity, rel. to film thickness 7−92759
n-octadecyl-3-(3,5-di-t-butyl-4-hydroxyphenyl)-propionate, UV spectra and kinetics of transients, radiolysis anal. 7−96727
4-n-octadecylphenol film on Cu substrate, surface EM wave absorption, Ag layer effect 7−113305
octaethylchlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
octaethylporphine, in Ne matrix, nondestructive photoorientation, IR and visible obs. 7−68297
octaethylporphyrins, resonance coherent Raman scatt. 7−132249
octahydroindoles, 2D NMR 7−96745
9,10-octalin, radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
n-octane-hexane isomer mixtures, heat capacities, 298.15 K 7−84306
n-octane-hexane isomer mixtures, US vel. and isentropic compressibilities meas. 7−98343
n-octanenitrile, thermal-press. coeffs. 7−104885
n octanol binary liq. mixtures, US studies 7−124401
octanone, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
octatetraene, isoelectronic cpds., struct., longit. electric polarisability, ab initio STO calcs. 7−116847
n-octyl alcohol, isobaric specific heat at high press. 7−137582
octyl cyanobiphenyl, pretransitional behaviour of twist and splay elastic and viscotic consts. 7−91438
octyl ester of diethanolamine use as corrosion inhibitor of constructional steel 7−93163
4-n-octyl-4′-cyanobiphenyl, nematic and smectic ordering 7−75979
4-n-octyl-4′-cyanobiphenyl nematic liq. cryst., twist elastic consts. 7−111722
4,4′-octyl-cyanobiphenyl, isotropic-nematic phase transform. nucleation theory 7−98442
octylamine-octylammonium chloride-water system, lamellar liquid crystalline phase, NMR and X-ray anals. 7−137211
n-octylammonium chloride, chain dynamics, IR and Raman spectrosc. obs. 7−71699
octylcyanobiphenyl (8CB) smectic A phase, X-ray scatt. study *(Hungarian)* 7−131020
4-n-octyloxy-4′-cyanobiphenyl, liq. cryst. phase transitions, conform. and electronic struct. changes 7−69909
octyloxycyanobiphenyl, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7−104543
octyltrimethylammonium bromide, micellar soln., X-ray scatt., hypernetted chain approx. 7−100622
N-ocyl-homooligoglycines, N-deuterated derivatives, conform. anal., IR Raman spectra study 7−70799
oil and water in sandstone rock, thin-slice chemical shift imaging, 80 MHz 7−132140
oil in water microemulsion, vapour press. meas. 7−71535
oil-in-water microemulsions, aerosol OT stabilised, time-resolved fluoresc. 7−100623
oils, sunflower, maize zerm, sunflower and groundnut, refractive index determ. by soln. technique 7−118973
olefin+free radical, addition, free radical polarity effects 7−126445
olefins adsorbed on oxide surfaces, mol. interactions, FT-IR study 7−98694
oligomers, hardened, rheology, interphase slip *(Russian)* 7−83148
OOBBA, liq. cryst., phase transitions, ultrasonic studies 7−105020
optical signal processing appls. of organic molecules *(French)* 7−129990
optical storage medium, dynamic laser marking 7−74881
organic cations-organic phosphate anions, electrostatic interactions, assoc. consts. determ. 7−113894
organic crysts., halogen-halogen specific interactions, geometry 7−68428
organic free radicals, EPR spectra anal., Simplex algorithm 7−116998
organic free radicals solns., paramag. species relative concs., EPR spectra least-squares anal. 7−116999
organic seven component mixtures, negative chem. ionis. and mass meas., GC/FTIR/FTMS investig. 7−86741
organochlorides, remote detect. with fibre optic based sensor 7−71545
organochlorine pesticides in S Sweden atm. 7−93574
organochlorines and trace metals, micropollutants in open ocean waters, sampling procedures 7−93608
organonitriles, correlation between C-N stretching vibr. and ^{13}C NMR chemical shift spectra 7−141602
organophosphorus cpds., conform. anal. by gas phase Raman spectrosc. 7−74640
organosilicon films, plasma polymerised, phase transition effects 7−131290
organosilsesquioxane use as coating/cladding for silica optical fibres 7−136595
organosulphur chemisorption studies on Au surfaces 7−143194
organosulphur-FeOCl intercalation compounds, spectroscopic and mag. props. 7−144050
oxadiazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7−82203
oxalic acid, solubility in water from 278.15 to 338.15 K 7−84279
organic compounds continued
oxalic acid crystals, dynamical coordinates generation 7−76313
oxaloglycolic acid, tautomerism, IR spectrosc. obs. 7−141577
oxazine 17, fluoresc. in H^+ donor and aprotic solvents, steady-state and picosec. excitation 7−117017
oxazine 1 perchlorate, absolute fluoresc. quantum yield meas. with photoacoustic spectroscopy *(Chinese)* 7−103559
oxazine dyes, US mol. jet, luminesc. and visible-UV spectra 7−68402
oxazine-18, ethanol soln., nonlin. receptivity, nonMarkovian model 7−90180
oxazine-4-perchlorate, in amorphous SiO_2, hole-burning spectroscopy 7−123119
oxazolidines, conform. anal., ^{1}H NMR spectra, mol. mechanics and PCILO calcs. 7−68215
oxetane, chemiluminesc. reaction, IR multiphoton activation study 7−78527
oxetane, ring-puckering pot., perturbation calcs. 7−135911
oxide single cryst. growth, ferroelec. props. 7−131066
oximes, model cpd. for force field pot. energy function optimisation 7−103615
oxirane, vibrational circular dichroism, C-H and C-D stretching modes 7−141612
oxiranes, circular dichroism vac. UV spectra 7−82238
μoxo-(iron phthalocyanine)$_2$, stretching band, IR absorpt. spectra 7−96686
oxonine, electron-transfer quenching radical pair prod., time-resolved recomb. investig. in W/O microemulsion 7−106769
β-oxygenated acyclic sulphoxides, configurational assignment by ^{1}H NMR and IR spectra 7−109888
E Pacific Ocean, primary prod., new prod. and vertical flux 7−72105
PAH in sediments of Saguenay Fjord, Quebec, Canada 7−126668
palladium etioporphyrin, triplet state, conc. quenching, phosphoresc. study 7−68397
palmitic acid, crystallisation from n-hexane solutions 7−83802
palmitic acid, crystn. and spherulitic growth by rapid evaporation of solvent solns. 7−98002
palmitic acid, Langmuir Project membrane, Penning ionisation electron spectroscopy *(Japanese)* 7−77711
O-para-chlorophenylhydrazido-N,N-di(2-chloroethyl)amidophosphoric acid, struct. 7−137350
para-terphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
paracetamol, electronic struct., biological activity, UV PES anal. 7−78751
[5]paracyclophane, mol. struct., ab initio mol. quantum mech. calcs. 7−109709
paracyclophanes-tetracyanoethylene, charge transfer complexes, solid state struct. 7−142751
β-paradichlorobenzene, molecular crystals, surface phonons, electro-optical parameters 7−76589
β-paradichlorobenzene with paradibromobenzene monolayer, surface phonons 7−76589
paraffin, beam-sensitive specimen, spot-scan procedure for recording low-dose micrographs 7−97870
paraffin crystals, electron irradiated, specimen movement, model for initial beam damage 7−97872
paraffin wax coatings, influence on surface sensitivity of Joshi effect 7−142519
paraffinic crude oils, swelling factors and bubble points, impurity effects 7−124443
paraffins, normal, rotational eqn. of state 7−76340
parafluorocarbonic acid, vacuum deposition *(Japanese)* 7−77828
parathion, electronic isodensity surface plots with gradient color encoding, INDO calcs. 7−74444
paraxylene clusters, reson. enhanced multiphoton ionisation study 7−90292
PCBs on tree bark near landfill site in Bloomington, Indiana, USA 7−126673
$(PEDTTTF)_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
pentacene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
pentacene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739
pentacene, in o-terphenyl glass, optical dephasing at low temps. 7−75034
pentacene crystals, optical release of carriers 7−131705
pentachlorobenzene, normal modes, IR and Raman spectra 7−90135
pentachlorobenzenes, in gas phase and in n-hexane soln., UV absorpt. spectra 7−116981
pentachlorophenol-acetonitrile complex, H-bonded, IR dispersion 7−125718
2,2,4,4,6-pentacyanocyclohexenamine, cryst. struct. and vibr., spectrosc. obs. 7−98102
n-pentadecanoic acid, monolayers, liq.-vap. transformations 7−84224
1,3-pentadiene, 1,5-sigmatropic H shift, correlated transition struct. 7−109794
pentaerythritol-polyalcohols neopentylglycol, mixture, calorimetric study 7−118089
pentafluorobenzene, electron affinity, thermal electron attachment, rate const. 7−74486
pentafluorobenzene, vibrational energy transfer, Hg tracer UV absorpt. spectra anal. 7−135956
pentafluorobenzenes, substituted, radical anions, HFS, optical detection of ESR 7−82236
pentafluorochloroethane, vibrational excitation, IR absorpt. spectra, ps pulse duration depend. study 7−109886
pentafluoroiodethane+F, crossed beam laser-induced fluoresc. investig. 7−90388
pentaglycerine-polyalcohols neopentylglycol, mixture, calorimetric study 7−118089
pentamethylidyne dye saturable absorber, colliding pulse mode locking of Nd:glass laser 7−110422
pentamethylidyne saturable absorber for laser mode locking *(Chinese)* 7−90729
pentan-2-one-benzene, speeds of sound, excess molar vols., compressibilities 7−76258
pentan-2-one-heptane(cyclohexane), speeds of sound, molar vols., compressibilities 7−76257
pentane, multicentre Lennard-Jones mols., tetrahedral and octahedral model fluids, thermodynamic perturbation theory 7−69852
pentane, normal dense liq., thermal cond. meas. 7−84405
n-pentane, spherical shell pot., equivalent eqns. method calcs. 7−129827
n-pentane-ethanol., vapour-liquid equilib. 7−98416

organic compounds continued
n-pentanenitrile, thermal-press. coeffs. 7—104885
pentanol, mol. adsorption on SiO_2 7—76621
pentanol-sodium dodecyl sulphate micelles, surface pot. meas. 7—85043
3-pentanone, translational energy release determ., mass spectra 7—90436
1,2,3-pentatriene, internal rotation barrier, dipole moment, microwave spectra 7—135928
pentazine, Penning ionisation electron spectroscopy *(Japanese)* 7—77711
4-α,β-d_4-npentyl-4′-cyanobiphenyl, small solutes, orientation mechanisms 7—142567
4-pentyl-4′-cyanobiphenyl liquid crystal film with embedded azo dye, guest-host effect 7—75984
4-n-pentyl-4′-methoxytolane, liq. cryst., dephasing, vibr. freq. correl. function 7—77597
4′-n-pentyl-4-cyanobiphenyl, twist deformation, Frank Elastic const. 7—137220
4,n-pentyl-d_{11}-4′-cyanobiphenyl, nematic phase, pressure and temperature dependence of orientational order 7—75971
pentylenediammonium cadmium tetrachloride, Imma-Pnma phase transition, X-ray diffr. study 7—104618
pentylenediammonium cadmium tetrachloride, orientational conformational disorder 7—142748
N-(4-n-pentyloxybenzylidene)-4-n-alkylaniline, I/N, N/SmA transitions, even-odd effect 7—137555
N-(4-n- pentyloxybenzylidene)-4-n-alkylaniline, nematic-smectic A transition 7—105018
peptide β-turn conform., Pro-Asp and -Asn dipeptides study, IR, ^1H NMR and X-ray diffr. spectra 7—78750
peptides, α-helical, electrostatic interactions role in stabilisation, spin-spin coupling studies 7—86897
peptides, conform. anal., normal coordinate calcs., IR Raman spectra study 7—68321
peptides, synthesis, aspartic acid side reactions, mass spectrometric obs. 7—144704
peptides, tyrosyl motion, ^2H NMR line shapes and spin-lattice relax. 7—92533
perchlorobiphenyl, heat capacities and intramol. twisting vibrs. 7—76431
perchlorodiphenylnitroxide radical, spectra-spatial two-dimensional EPR imaging 7—90227
perdeuterochrysene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7—122739
perfluoro-3-thiolen, mol. struct., GPED 7—74759
perfluoro-cyclobutane, mol. struct., GPED 7—96870
perfluoro-tert-butanol, H bonded complexes in cryogenic solns., IR spectra 7—82090
perfluoro-thiirane, mol. struct., GPED 7—96870
perfluoroalkyl iodides, photofragmentation, IR, multiphoton, absolute rate parameters determ. 7—122639
perfluorobenzene clusters, electron diffr. obs. of supersonic jets 7—103655
perfluorobiphenyl, heat capacities and intramol. twisting vibrs. 7—76431
perfluorocarbon compounds, Rn solubility 7—91808
perfluorocarbon tracer verification of trajectory models 7—119700
perfluorocyclobutane, clusters, electron diffr. obs. of supersonic jets 7—103655
perfluorocyclobutane, quenching and excitation of Ar 7—122434
perfluoromethylcyclohexane and K(nd), low energy electron attachment 7—136056
perfluoromethylcyclohexane anion, ion-ion recomb. reactions, rate coeff. meas. 7—106781
perfluoromethylcyclohexane-methylcyclohexane, anomalous thermal cond. near upper critical soln. point 7—111983
perfluoroolefins, ion+molecule reactions, gas phase, 295 K 7—119520
perfluorotributylamine, ^{19}F NMR imaging 7—99583
pergolide, stereochem., cryst. and mol. struct. 7—98101
pergolide mesylate, stereochem., cryst. and mol. struct. 7—98101
1,3-perinaphthadiyl diradical, spin-forbidden H^+ tunnelling 7—78471
peroxide radicals, recombination mechanism, MINDO/3 calcs. 7—74448
peroxyacetic acid, use in oxidation of S(IV), reaction kinetics 7—120086
peroxyacetylnitrate in atm. large-scale distrib., STRATOZ III flights obs. 7—139687
peroxytrifluoroacetic acid, O—O bond props., SCF MO calcs. 7—109732
perylene, nonphotochem. laser hole burning *(Japanese)* 7—130272
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7—96762
$(perylene)_2(AsF_6)(PF_6)CH_2Cl_2$ quasi-1D organic metal, NMR studies 7—85459
$(perylene)_2M(mnt)_2$ family, (M=Pt, Au, Pd), thermoelec. power 7—84834
perylene crystalline dye thin films, electroluminescence *(Japanese)* 7—113289
perylene in n-octane and n-heptane, admixtures, nonphonon line shift in luminescence spectra 7—144123
perylene-d_{12}, jet-cooled, fluoresc. excitation and dispersed emission spectra 7—103556
perylene-hexacyanobutadiene charge transfer complex, struct., optical studies 7—83943
perylene-metal-bis(1,1-dithio 2,2-dicyanoethylene)-based conductor, elec. cond. 7—84856
perylenetetracarboxylic dianhydride films, mol. organisation, spectrosc. obs. 7—106159
petroleum biede gradation compounds in water, SiO_2 complexing rel. to increased solubility of quartz 7—87622
petroleum hydrocarbons in bottom-sediment, plankton and seston of Stockholm archipelago, chemical fingerprinting 7—139151
phenacetine, electronic struct., biological activity, UV PES anal. 7—78751
phenacyl phenyl sulphone in micellar soln., photodecomposition, mag. field effects 7—113958
phenalenone, and derivatives, electronic spectra and mol. struct. 7—103523
phenanthrene, crysts., elastic consts., lattice dynamical calc. 7—118009
phenanthrene, Kekule structs., enumeration 7—89913
phenanthrene, peri effect in carcinogenesis, empirical force field calcs. 7—100798
phenanthrene, short-lived S_2-state, transient photophysical hole burning studies 7—130274
phenanthrene fluorescence quenching by KI in methanol-ethanol solns. 7—122600
phenanthrene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7—129689
phenanthrene-tetrachlorophthalic anhydride charge-transfer cryst., struct., luminesc. 7—106262
organic compounds continued
phenazine, triplet-triplet absorpt. and polarisation spectra 7—96716
phenetole, surface-induced dissoc., mass spectra 7—125878
phenetole, two-color photoionis. spectra 7—110018
phenetole ions, laser-induced dissoc., appearance energies determ. 7—110032
phenmedipham, fluoresc. and phosphoresc., quantum yields *(French)* 7—82277
phenol, gas and liq. He(I) photoelectron spectra meas. 7—103574
phenol, organic solns., internal press. meas. 7—105062
phenol, oxidation in aq. media in jet-shear mixer two-phase reactor 7—91260
phenol, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7—109753
phenol, two-color photoionis. spectra 7—110018
phenol blue, mol. interactions in dil. supercritical fluid solns. 7—122655
phenol derivatives-Schiff base complexes, H bonds, IR spectra 7—96673
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7—110042
phenol-cinnamic acid interface, second-order susceptibility tensors 7—82686
phenol-ethylacetate mixtures, US studies 7—84132
phenol-pyridine, in organic solvents, H bond equilibrium 7—86663
phenolic-Fe phthalimide mixed ligand complexes, hyperfine interactions 7—124942
phenothiazine, single cryst., ferroelastic phase transition and Raman spectra 7—111851
phenoxyphosphoryl xylofuranose derivative, radiolysis form. of P-centered radicals, ESR spectra anal. 7—68370
n-phenyl moleimide in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7—138380
N-phenyl phthalimides, substituted, electronic interactions, IR and NMR spectrosc. obs. *(Russian)* 7—135942
phenyl radical, vac. UV photoelectron spectra and ab initio CI calcs. 7—117020
phenyl salicylate, (salol), morphology from melt growth *(Chinese)* 7—98027
2-phenyl-2-dehydrosparteine and its diprotonated salts, IR spectra, synthesis, struct., props. 7—109889
1-phenyl-5-mercaptotetrazole, effect on corrosion of Cu, Raman spectrosc. obs. 7—85620
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7—90191
phenylacetylene, acetylenic bridge vibrs., Raman meas. 7—74638
phenylacetylene, clusters, reson. enhanced multiphoton ionisation study 7—90292
phenylacetylene, one-bond C—H spin coupling consts. and ^{13}C differential line broadening 7—68348
phenylacetylene, vibronic spectra, vibr. band intensity redistrib., Herzberg-Teller theory 7—116940
phenylacetylene+H, addition, matrix absorpt. spectra 7—86600
phenylacetylene-HF complexes, Ar and N_2 matrix isolated, Fourier transform IR spectra 7—82110
α-phenylalkylamine hydrochlorides, far UV circular dichroism obs. 7—109967
α-phenylalkylamines, far UV circular dichroism obs. 7—109967
2-phenylanthracene, S_1 torsional pot., vibr. struct., laser induced fluoresc. 7—68388
1-phenylazo-2-naphthols, photoisomerisation 7—106789
α-phenylazo-β-benzoyloxystilbene, solid state rearrangement 7—132929
phenylbenzenes, triplet states, zero field splitting parameters 7—135977
phenylbenzothiazole derivatives, photophysics, photochem., solvent effects 7—116943
1-phenylbromoethanes, substituted, racemisation and radio-Br exchange, solvent effects 7—96886
phenylchlorocarbene, matrix isolated, oxidation, chemiluminesc. 7—100578
phenylcyclohexane, cryogenic trapping, conformer, NMR, thermodynamics 7—68351
trans-2-phenylcyclopropanecarboxylic acid derivatives, vibr. circular dichroism 7—117001
phenyldichlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7—103561
p-phenylenediamines, N-substituted, photographic dye image stability, oxidative deamination influence 7—78522
N-(1-phenylethyl)-Δ^4-thiazoline-2-thiones, and analogues, conform. anal. 7—74670
phenylethylamine drugs, UV absorpt. spectra, INDO calcs. 7—96541
phenylethynyldisilanes, photochemical and photophysical props., intramol. charge transfer emission 7—93346
E-N-phenylformamide, homonuclear multiple-quantum NMR relax. rates 7—99602
phenylphosphine, conformation, internal rot. and struct. studied by microwave spectroscopy 7—116948
phenylpropyne-HF complexes, Ar and N_2 matrix isolated, Fourier transform IR spectra 7—82110
bis-phenylpyrazole copper chloride powder and single crysts., exchange averaging, EPR study 7—85420
3-phenylpyrazolo(4,3-c)pyridine and derivatives, struct., ^1H and ^{13}C NMR anal., CNDO/2 and PPP calcs. 7—109944
phenylpyrroles, isomers, conform. MNDO and AM1 calcs. 7—103397
1-phenylsydnone, molecular electronics, intramolecular p-n junction, polarised N—O bond, PMR study 7—99168
pheophytine-accessory monomer, charge separation and recomb. in bacterial reaction centers 7—119707
phosphaalkenes intramolecular electronic effects, quantum-chemical study 7—122360
1-phosphapropyne, ν_2 infrared band, Fourier transform spectroscopy 7—122522
phosphates, aq. soln., ^{31}P NMR chem. shift *(French)* 7—100811
phosphatidylcholine, lipid bilayer, FTIR spectra 7—90112
phosphatidylcholine bilayers, aq. dispersions, barotropic behaviour, ether and ester links effect, IR spectra anal. 7—78743
phosphatidylcholines, photoelectron spectra, lowest ionisation energy band 7—86910
phosphatidylethanolamine, lipid bilayer, FTIR spectra 7—90112
phosphatidylglycerophosphate, lipid bilayer, FTIR spectra 7—90112
phosphocreatine, electronic isodensity surface plots with gradient color encoding, INDO calcs. 7—74444
phospholipid, paracryst. struct., direct imaging in electron microscope 7—101155

organic compounds continued
phospholipid bilayer, gramicidin-induced H_{II} phase, acyl chain study, ^2H and ^{31}P NMR meas. 7−74660
phospholipid bilayers, models, interactions with ferricytochrome c, Raman obs. 7−71695
phospholipid bilayers, polyunsaturated, acyl chain config. statistics, ^2H NMR obs. 7−106973
phospholipid monolayer, density distrib. at air-water interface, X-ray reflectivity study 7−139183
phospholipid monolayers, acyl chain ordering and crystallisation 7−100823
phospholipid monolayers, at air-water interfaces, phase transitions 7−114174
phospholipid monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
phospholipid monolayers, crystalline domains, diffusion limited growth 7−84490
phosphonates, photolysis products, mass-spectrometry 7−126470
N-phosphonomethylglycine and salts. polycrystn., high resol. NMR 7−106043
phosphorodithioic acid, O,O′-dialkyl esters, rot. isomerism, Raman investig. 7−74648
photoelectrochem. memory effect 7−70408
photoexcited, oscillatory femtosecond relax. 7−90281
photoreceptor for electrophotography, sensitivity eval. *(Japanese)* 7−84972
photoreduction in thin layers of FE^{III} to Fe^{II} in presence of oxalic acid, form. of spatial dissipative structs. 7−100593
photosystem II, struct. and function in H_2O oxidation 7−106981
phthalic anhydride, electron transfer, phosphorescence emission decay, reacting distance, excited states 7−135989
phthalimides, intramolecular orientation, transition moment, fluoresc. 7−82273
phthalocyanatonickel salts, prep., struct. and elec. props. 7−98111
phthalocyaninato stacked bridged metal complexes, synthesis and elec. cond. 7−99026
phthalocyaninato-copper(II)iodide, mag. transitions and embedded local moments 7−99459
phthalocyanine, substituted, Langmuir-Blodgett films in acoustoelectric devices 7−123414
phthalocyanine complexes, ^7Be chemical behaviour formed from $^{12}C(\gamma,n\alpha)$reaction 7−100598
x-phthalocyanine crystals, dislocation array, TEM obs. 7−76131
phthalocyanine derivatives, mol. semicond. and junction formation 7−92276
phthalocyanine monolayer, Penning ionisation electron spectroscopy *(Japanese)* 7−77711
phthalocyanine thin films, third harmonic generation study 7−123091
phthalocyanine-$AlCl_n$ thin films, Raman spectra, Davydov splitting 7−74635
phytochrome, absorpt. spectra and phototransformation quantum yield, temp. depend. study 7−78756
phytol, Rayleigh scatt. and IR spectra meas. *(French)* 7−122554
phytyl acetate, Rayleigh scatt. and IR spectra meas. *(French)* 7−122554
picric acid, dissoc., solvent effects, -10 to +80°C 7−106765
pigments, alkyd resins adsorpt., IR spectra determ. 7−70074
pinacolone clathrate hydrates, struct. studies 7−117883
pinacyanol, photoisomerisation, time-resolved reson. CARS 7−129719
pinacyanol, solns., intramolecular and orientational motion, fluoresc. study 7−74697
(-)-α-pinene, optical activity Raman obs. 7−128670
(-)-β-pinene, polarised Raman optical activity meas. 7−90173
piperdinium copper tribromide, antiferromag. coupling, magnetostructural correlations, mag. suscept. meas. 7−125361
piperidine, liquid, hypersonic speed, isentropic compressibility, Brillouin spectroscopy 7−118038
pivalic acid, dynamic behaviour, Incoherent Quasielastic Neutron scattering 7−142928
PMMA, radiation-induced charge effects in insulation 7−70705
polar pure liquids, thermal conductivity prediction 7−137634
poly(L-glutamates) with n-alkyl side chains, ^{13}C CP/MAS spectra, conformation and mol. packing 7−117101
poly(N-(vinyloxy)carbonyl)carbazole and its monomeric analogue, triplet exciton processes, laser pulse-probe study 7−93347
poly cyclic aromatic hydrocarbons, interstellar, relation to C in interplanetary dust particles and meteorites 7−145822
α-poly-γ-methyl-l-glutamate, interaction with 5- and 16-doxylstearic acids 7−84495
poly-aza chain cpds., and metal complexes, Raman and IR spectrosc. obs. 7−74613
polyacene crysts., electronic polarisation energies eval. 7−116813
polyacetylene: I, high elec. cond. in doped polymer 7−112337
polyacetylene, doped chain, charged soliton conduction mechanism, interstitial and hole dislocations 7−131561
polyacetylene, Peierls-PPP-model appl. *(German)* 7−129603
polyacetylene, stochastic adaptation of microcanonical simulation method 7−89111
polyalcohol aqueous solns., vitreous state decomposition 7−131319
polyaniline, metallic, thermopower and conductivity 7−137905
polyaromatic hydrocarbons, π-electron props., HMO calcs. 7−116858
polyatomic molecules, surface-induced dissoc., TOF mass spectra 7−126430
polycarbonate: TDP, single-trap-controlled transient hopping, time-of-flight meas. 7−118486
polychlorinated biphenyls in River Seine, France, pollution study 7−126666
polycyclic aromatic hydrocarbon and nitroarene concentrations in ambient air during a wintertime high-NO_x episode in the Los Angeles Basin 7−133151
polycyclic aromatic hydrocarbons, air pollutants near Norwegian Al prod. plants. 7−93573
polycyclic aromatic hydrocarbons, isomeric, diffusion in compressed propane 7−83388
polycyclic aromatic hydrocarbons, vibr. excited, anharmonicity effects and interstellar IR emission 7−120559
polycyclic aromatic hydrocarbons and interstellar unidentified IR emission lines 7−106154
polycyclic hydrocarbons, moments, Huckel calcs. 7−74453
polydiacetylene oligomer, electronic struct., mol. fluoresc. and UV spectra anal. 7−90185
polydimethylsiloxane silicone oils of different viscosity, ionic mobility meas. *(French)* 7−143068

organic compounds continued
polyelectrolytes, cationic, low level determ. in water, complexation method 7−106849
polyene chains, bond-length alternation electron correl., PPP model 7−74451
polyene-radicals, π-electron props., RHF calcs. 7−109760
polyenes, dipole polarisability, spin-Hamiltonian method calcs. 7−103383
polyenes, methylated, vibr. freqs., a priori calcs. 7−74565
polyenes, valence ionisations, non-Koopmans' effect, photoelectron spectra 7−117021
polyethylene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polyethylene, γ-irradiated, linear low density, carrier traps. TSC study 7−92320
polyhexes, computer enumeration, compact naming approach 7−141438
polyimides, aromatic, model cpd. electronic interactions, IR and NMR spectrosc. obs. *(Russian)* 7−135942
polymers, vibronic coupling, absorption and emission spectra interpretation 7−135994
polymethine dye adsorbed on Ag colloids, inelastic three-photon light scatt. *(Chinese)* 7−129821
polymethine dyes, asymmetric, electron density distrib., HMO, PPP and CNDO/2 calcs. 7−74452
polymethine dyes, struct. parameters, fluoresc. lifetimes and quantum yields 7−90266
polymethine laser dyes, in polymer matrix, near IR radiation generation *(Japanese)* 7−130090
polymethines, intramolecularly coupled, topological effect on MO energies 7−109740
polymethylmethacrylate: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polynuclear aromatic containing hydrocarbon fuels that permeate glove materials, meas. by room temp. phosphoresc. 7−87410
polyorganosilane chain, energy band struct. calcs. 7−70176
polyoxymethylene (polymerised formaldehyde), Giotto detect. in Periodic Comet Halley (1982i) 7−139982
polyoxymethylene (polymerised formaldehyde), Giotto identification in Periodic Comet Halley (1982i) 7−139983
polypeptide, conform., energy minimisation, ellipsoid algorithm 7−119708
polypeptides, conformational anal., rel. to protein folding, mol. recognition and mol. design 7−133203
polypeptides, struct., mol. force field appl., Raman spectra anal. 7−68318
polyphosphazene, fluorinated, solid, abundant spins, MAS NMR investig. 7−85456
polypyromellitimides, electronic interactions, IR and NMR spectrosc. obs. *(Russian)* 7−135942
polysiloxanes with steroid substituents, liq. cryst., chromatographic props. 7−137216
polystyrene: 4-bromo-4′-chlorobenzophenone films, mol. aggregation, phosphoresc. spectra 7−99918
polystyrene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polysulphide extreme-pressure additives, chem. struct. rel. to effectiveness *(French)* 7−104906
polyvinylidene fluoride piezoelectric sensors for robot gripper control system 7−123377
porphine, D_{2h} configuration, C_{2v} configuration, normal mode frequencies, QCFF/PI calculations, dynamic instability 7−135905
porphycene, photoexcited triplet state, time-resolved EPR spectroscopy 7−103548
porphyrin, in ethanol, electron state dephasing, spectral diffusion, photochemical gap burnout 7−141629
porphyrin, monolayer assemblies, excitation with dye laser, transient photocurrents 7−92223
porphyrin dimers, covalently linked, hybrid, triplet state sensitisation, intramol. triplet energy transfer 7−78523
porphyrin-quinone, electron transfer, friction effect two reaction coordinate case 7−93284
porphyrin-quinone mols. as photosynthesis model, fluoresc. lifetimes rel. to effects of exothermicity on electron transfer rate 7−106980
porphyrins, free-base carbonyl, conform. effects, MCD, visible obs. 7−68384
porphyrins, Langmuir-Blodgett films form. 7−124745
porphyrins, pyromellitimide-bridged, photoinduced electron transfer, fluorescence techniques, charge separation, inverted regions, dielectric relaxation recombination rates 7−141674
porphyrins, synthetic, light-harvesting complex 7−114165
porphyrins, water-soluble, reactivity, polymer binding effects 7−119521
porphyrins in ethanol glass, hole burning in absorpt. spectrum 7−90673
positronium-glycine complex form., N-substituted phenyl glycine rate consts. and basicities relationship 7−113967
potassium 4-pentenoate, conformational change on micellisation, vibr. spectra 7−82067
potassium 5-hexenoate, conformational change on micellisation, vibr. spectra 7−82067
potassium acid phthalate, pyroelectric props., temp. depend. 7−92607
potassium benzoate, disproportionation to potassium terephthalate reaction system, ESCA, NMR, chemical anal. 7−126419
potassium hydrogen (2R, 3R)-tartrate, least squares absolute struct. refinement, effect of absorpt. correction, data region, stability const. and neglect of light atoms 7−75937
potassium hydrogen diformate, cryst., electron density, ab initio MO-LCAO-SCF calcs. 7−91553
potassium laurate-1-decanol-D_2O micellar cholesteric liq. cryst. solns., microscopic textures, phase transitions 7−124088
potassium n-butanoate, heat capacities and thermodynamic props. 7−76444
potassium oxalate: VO^{2+} low symmetry ligand field effects on EPR 7−112935
potassium oxalate monohydrate, single cryst., exchanging systems, NMR lineshape anal. 7−90206
PPDPC-DPPC Langmuir-Blodgett film, excimer form., UV fluoresc. spectra anal. 7−100824
preparation, cyclooctatetraene ring flattening by annulation, PMR investig. 7−119500
primary aliphatic amines, dipole moment from dielectric const. 7−118936
PRODAN, intramolecular reaction, time resolved spectroscopy 7−122594
proflavine-dinucleotide complexes, eq. solns., PMR obs. 7−141607
proline, ^{15}N chemical shift tensor for alanyl-prolyl peptide bond 7−139206
proline, γ turn, ab initio calcs. 7−129556

organic compounds continued
proline, peptide linkage, UV reson. Raman excitation spectra study 7−68324
prolylglycine, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
prop-2-ylperoxyl radicals, self-reaction rate consts. meas., UV absorpt. spectra 7−113862
prop-1-yne, ultracold gas, FTIR spectra 7−129711
propadiene, overtone and combination stretching vibr. bands 7−90086
propadienone, microwave spectra, rot.-vibr. anal., double-minimum v_{12} pot. function, semirigid bender anal. 7−96649
propane, adsorpt. equilib. meas. by volumetric apparatus 7−118072
propane, effect on at. spectrometric signals in Ar ICP 7−89268
propane, gas susceptibility, nonresonant third-order, CARS spectroscopy meas. 7−123097
propane, Henry's consts. determ. 7−69934
propane, phase diagram up to 10 kbar, DSC studies 7−91762
propane, superheated liq., nucleation kinetics 7−137507
propane, third-order nonlinear suscept. meas., appl. in coherent anti-States Raman scatt. 7−68777
propane, turbulent diffusion flame, chemical reactions and mixing process effects 7−100565
propane, two-phase liq. equilib. with hydrate 7−124468
propane and tissue equiv. gas, W values for heavy particles 7−83405
propane-air laminar flame, 3D development in closed vessel 7−78495
propane-$d_0(d_7)(d_8)$, harmonic force field, ab initio HF theory 7−141471
propane-$d_0(d_7)(d_8)$, Raman trace scatt. intensity parameters 7−141581
(S)-1,2-propanediol esters, chiral cpds., cholesteric phase helix inversion induction investig. 7−75990
1,3-propanedithiol, oxidation, struct., and H^+ elimination, MNDO calcs. 7−109770
propanenitrile, H bonded complexes, ab initio calcs. 7−109730
propanoic acid adsorbed on Si (111) (7×7), NEXAFS study 7−106308
n-propanol, aq. soln., compressibility, US rel. meas. 7−84079
propanol, coexistence curve diameter temp. depend. near critical point, scaling eqn. approx. *(Russian)* 7−67267
propanol, fluidity correl. using modified free vol. eqn. 7−98535
n-propanol, internal press. var. with temp. 7−104914
2-propanol+CuO reaction, IR multiphoton activation study 7−78527
1-propanol-H_2O, binary nucleation theory 7−98379
propargyl alcohol, overtone excitations, classical and quantum dynamics 7−109871
propargyl radical, ground and excited states, vibrational frequencies, SCF calculations, molecular geometries, electronic structures 7−141458
propellane, [1.1.1]- and [2.2.2]; bridgehead carbon interaction, ab initio studies 7−129557
propellanes, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
propenal, He(I) photoelectron spectra and MO calcs. 7−103573
propene, Henry's consts. determ. 7−69934
E-propene-1-thiol, NMR and mass spectra, vibr. and rot. anal., mol. conformation 7−116991
propenoyl halides, He(I) photoelectron spectra and MO calcs. 7−103573
propiolic acid, mm-wave spectrum 7−116951
propiolic acid adsorbed on Si (111) (7×7), NEXAFS study 7−106308
propionyl bromide, conformers, mol. struct., energies and entropies, gas-phase electron diffr. 7−129868
n-propyl alcohol, eqn. of state, calorimetric meas. 7−97673
2-propyl ethanoate, proton affinity determ. 7−74484
n-propyl iodide, photofragmentation dynamics 7−122646
n-propylamine, vibrational and conformational analysis, ab initio MO calcs, infrared spectroscopy 7−122539
n-propylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
4-(4′-n-propylcyclohexyl)benzonitrile, cryst. struct. determ., energy of molecular interaction 7−97912
propylene, catalytic reaction over K_2MoO_3 7−132969
propylene carbonate-acetonitrile, mixtures, density, viscosity and thermodynamics 7−98496
3,10,-bis(propylthio)-5,7,12,14,-tetramethyl-1,2,4,8,9, 11-hexaazacyclotetradeka-2,4,6,9,11,13-hexaenato (2-) N^1,N^4,N^8, N^{11}-Ni (II), struct. 7−104713
propyltoluenes, supersonic jet, dispersed emission and TOFMS 7−129771
propyne, IR absorbing gas, appl. for transparent thermal insulation 7−142152
propyne, mol. beams, terminal rot. distrib. meas. 7−141672
propyne, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
propyne, vibr. anal., normal coord. anal. 7−82062
propynenitrile in P/Comet Halley (1982i), J=4-3 36 GHz emission *(Russian)* 7−139981
propynenitrile-HF, H-bonded dimers, dissoc. energies, rot. spectroscopy 7−82066
2-propynylidene, ion, molecular reactions, isomers anal., appl. to 2-propynylidene ion+H_2 reaction 7−138972
propynyliumylidene, intramol. dynamics investig. 7−90314
prostaglandins and gastric secretion in rhesus monkeys rel. to ionising radiation 7−101012
protochlorophyll, Mg atom coordination, spectral-luminesc. obs. 7−141566
protonic acids, in water-organic media, dissoc. thermodynamics 7−119508
pseudoisocyanine bromide, J-bands, photon echo and hole burning investig. 7−103904
pteridine, N-heterobicyclic π system, inter-ring coupling effects anal. 7−89916
pterocarpin, near UV spectrum, interpretation 7−141597
purine derivatives, deuterated, ^2H quadrupole coupling consts., ^2H NMR spectra anal. 7−77419
purine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
purines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
purines, out-of-plane vibr. modes 7−119721
4H-pyran-4-one, vibr., force fields, CNDO/2 and MINDO/3 calcs. 7−109767
4H-pyran-4-thione in solns., phosphoresc., quantum yields and triplet lifetimes 7−96767
pyrazine, $^1B_{3u}$ state, fluoresc. quantum yield 7−90251
pyrazine, $^1B_{3u}$ state, high resolution lifetime meas. of perturbed $J'=0$ levels 7−82254
pyrazine, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7−82256
pyrazine, jet-cooled, dual fluoresc., rot. effects 7−109994
organic compounds continued
pyrazine, jet-cooled, two-colour fluoresc., multiphoton ionisation spectra 7−90244
pyrazine, radiationless decay rate consts., excess-energy depend. 7−129762
pyrazine, rot. Raman spectrum 7−109908
pyrazine, surface-induced dissoc., mass spectra 7−125878
pyrazine highly excited Rydberg states, autoionis. 7−96570
pyrazoline amorphous dye thin films, electroluminescence *(Japanese)* 7−113289
pyrazolines, and salts, ^{15}N NMR spectrosc. 7−96746
pyrene, dimeric adsorbed on SiO_2 gel, fluoresc. spectra obs. 7−109984
pyrene, excimer form. in crown ether surfactant micelles 7−109816
pyrene, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
pyrene, graph theory adjacency matrices, eigenvectors, topological anal. 7−109701
pyrene, Kekule structs., enumeration 7−89913
pyrene, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrene, polarised fluoresc. spectrum in stretched polyethylene matrix 7−108668
pyrene, single cryst., ^{13}C chem. shielding tensors 7−105503
pyrene, submonolayer on Si(111) electronic energy transfer, fluoresc. 7−105247
pyrene, surface-induced dissoc., mass spectra 7−125878
pyrene+cyclodextrins assoc. consts. meas., vibronic states, UV fluoresc. spectra anal. 7−96721
pyrene complexes, complexation shift in $S_0 \rightarrow S_1$ spectrum, fluoresc. spectra 7−82246
pyrene cryst., transient free-exciton luminesce. and exciton-lattice interaction 7−92719
pyrene in non-polar hydrocarbon solvents, slow conductivity signals from pulsed laser irradiation 7−137978
pyrene methyl cholesterol adduct, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrene-dimethylaniline, exciplex luminescence, magnetic field effects, polar solvents, dielectric constant 7−141618
pyrene-N,N-dimethylaniline exciplex, fluoresc. spectra, thermochromic shifts 7−136012
pyrene-pyromellitic anhydride solns., charge recomb. dynamics, picosec laser spectrosc. obs. 7−68291
pyrenes, 4, 9−disubstituted, liq. cryst. hosts, fluoresc. polarisation 7−129763
ω-(1-pyrenyl)-α-N,N-dimethylaminoalkanes, intramol. exciplex form. photophys. 7−74480
10-(1-pyrenyl)decanoic acid, Langmuir Project membrane, Penning ionisation electron spectroscopy *(Japanese)* 7−77711
16-(1-pyrenyl)hexadecanoic acid, Langmuir Project membrane, Penning ionisation electron spectroscopy *(Japanese)* 7−77711
1-pyrenyldodecanoic acid and styrene, mixed membranes, vacuum deposition *(Japanese)* 7−77828
pyridazine adsorbed on Ag electrode, vibr. freq. shifts, SERS 7−74620
pyridazine van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
pyridene, ^{13}C-^{15}N scalar splittings in ^{13}C NMR spectra 7−68350
pyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7−77582
pyridine, adsorbed mols., voltage-induced energy level shifting 7−74633
pyridine, adsorpt. on Ag island films, SERS charge-transfer band investig. 7−77580
pyridine, adsorpt. on MoO_3 supported catalysts, Raman and X-ray diffr. study 7−98685
pyridine, adsorpt. on Pd(111), vibr. EELS obs. 7−69789
pyridine, aq. soln., Raman scatt. intracavity laser spectroscopy 7−70771
pyridine, Auger spectra, localisation effects 7−82288
pyridine, binding to γ-Al_2O_3, surface site distribs. ^{15}N and ^1H NMR 7−92512
pyridine, gas phase, mol. struct., electron diffr., IR and microwave spectra 7−68457
pyridine, liquid, hypersonic speed, isentropic compressibility, Brillouin spectroscopy 7−118038
pyridine, liquid, Raman spectra, resonant intermolecular coupling 7−90142
pyridine, orientation in nematic liq. cryst., nucl. relax., ^1H NMR study 7−90193
pyridine, substituted, solid, broad line NMR appl. 7−85450
pyridine adsorbed layer on Ag film, SERS, cavity model discussion 7−77573
pyridine adsorbed layer on Ag-Pd films, SERS spectra, electromag. quenching and enhancement study 7−77575
pyridine adsorbed on Ag, charge transfer band, SERS mechanism 7−92676
pyridine adsorbed on Ag, surface enhanced Raman scatt., collective fermi resonance nature 7−77555
pyridine adsorbed on AgCl colloids, SERS, enhancement origin 7−82140
pyridine adsorbed on Ni(110) and Ni(100) surfaces, SERS 7−96702
pyridine adsorbed on Pt(111), angle resolved PES studies 7−132417
pyridine and dye-1555 adsorbed on AgBr colloids, SERS 7−82139
pyridine carboxylic acids, isomeric species, mol. vibr., IR and Raman spectra anal. 7−135935
pyridine coadsorbed with Ag on cold Cu films, SERS study 7−138444
pyridine coadsorbed with Cu on cold Ag films, SERS study 7−138444
pyridine dye laser, synchronously pumped, femtosecond pulse generation 7−75002
pyridine intercalation in $CdPS_3$, nonisothermal calorimetric studies 7−93362
pyridine methyl derivatives, mol. struct. effect on optical orientation 7−103554
pyridine-carboxylic acids, mixtures, US vel., excess vols., heat capacities and compressibilities *(German)* 7−91728
pyridine-ICl(IBr) charge transfer complexes, far-IR spectra 7−99863
pyridine-methylpyridine coadsorption on Ag electrode, SERS investig. 7−74634
pyridine-N-oxides, 4-substituted, ionis. pots. and chem. shifts, NMR investig. 7−109929
pyridines, substituted, protonated, acidity consts. in acetonitrile-water 7−93301
pyridinium cations, N-naphthyl, struct. relax. effect on fluoresc. 7−138494

organic compounds continued
pyridinium compounds, quaternary, cation radicals, spectrosc. investig. *(German)* 7−96743
pyridinium oxazole dye laser salts, stability 7−117192
2-pyridinone, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
pyrido(2,3-b)pyrazine, $^3n\pi^*$ triplet state optical and mag. props. 7−90257
N-(2-pyridyl)thioacetamide, PMR, Raman and IR spectra meas. 7−74676
N-(2-pyridyl)thioformamide, PMR, Raman and IR spectra meas. 7−74676
di-2-pyridyl ketone, bridged quaternary salts, crystal struct., Raman and reson. Raman spectra 7−118998
2-(2-pyridylazo)-5-diethylaminophenol, resonance Raman spectra 7−106167
pyrimidine, 3s Rydberg state, multiphoton ionis. spectra 7−82307
pyrimidine, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7−82256
pyrimidine, supersonic jet, mag. field effects on fluoresc. polarisation 7−90243
pyrimidine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
pyrimidine type ferroelectric liquid crystal, electrooptic switching element 7−99804
pyrimidines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
pyrimidines, out-of-plane vibr. modes 7−119720
pyrimidinones, Dewar struct., rel. to biological significance of TpT3 7−106975
pyrimidonecarbocyanine dye, absorpt. and emission behaviour, conc. depend. 7−109978
4-N-pyrolidyl-3-penten-2-one isomers, cryst. struct., MM2 and MMP2 calcs. 7−109723
pyromellitdianilic acid-dimethylformamide complex, cryst. struct., X-ray investig. 7−111534
pyromellitic dianhydride-phenanthrene, charge transfer cryst., delayed fluoresc. study 7−77616
pyronines, electronic absorption spectra, PNDO calc. 7−74657
pyrrole, photoelectrochemical polymerisation on TiO_2, appl. to conducting pattern generation 7−100551
pyrrole adsorbed on Pt (111), orientation and dissociation of adsorbed molecules, NEXAFS study 7−99979
pyrrole in aqueous solns., electrochemical polymerisation and conductivity 7−78486
pyrrolo(3,2-f) indolizines, spectral luminesc. obs., fibre optical laser methods 7−79060
pyruvic acid in atm., conc. and origin 7−139686
pyrylium salts, spectral luminescent props. 7−119051
pyrylium substituted salts, laser effects studies 7−122943
quadruply bonded dimers, mol., electronic and cryst. structs., ligand perturbations 7−74409
quasi-1D, cascade of field-induced SDW phases 7−99460
quasi-1D, small interchain coupling, 1D to 3D crossover 7−99040
quasi-1D conductors, quantised field-induced SDW ordering 7−99473
quasi-1D organic conductors, electronic correls., nuclear relax. rate anal., scaling calcs. 7−77422
quinoline derivatives, liquid crystalline phases 7−142566
quinoline-hydrocarbon mixtures, vapour pressures and excess Gibbs energies 7−76369
quinoline-ICl(IBr), charge transfer complexes, far-IR spectra 7−99863
quinones, MCD, PPP wave fns. and CNDO calcs. 7−90237
quinoxaline, electronic states investig., Raman excitation profile 7−82189
p-quinquephenylene-p-sexiphenylene solid solns., heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
RBY, excited-state absorption 7−122562
reactions catalyst, transition metal on silica gel 7−113904
reactive radicals, CIDEP and relax., Heisenberg spin exchange investig. 7−116996
redox processes, at. orbital hybridisation dynamic changes effects 7−113880
resin reinforced dentine, Raman microprobe study 7−132994
resonance Raman scatt., CARS, vibronic interaction, polarisation obs. *(Japanese)* 7−129712
α-resorcinol, cryst. growth, solvent effect 7−70998
resorufin, in ethanol glass, linewidths, photon echo and hole-burning results 7−110479
resorufin, in glycerol glass, photon echo and hole burning, temp. depend. 7−129796
resorufin in ethanol glass, linewidths, phases, relaxation processes 7−136451
retinal, two-photon absorpt. spectra and polaris. *(Japanese)* 7−129694
13-cis-retinal chromophore, vibr. anal., reson. Raman spectra 7−74623
trans-retinal Schiff base, IR spectra, acids effects 7−96675
retinal Schiff base, protonated, isomerisation barrier heights, MNDO calcs. 7−93278
retinol, electronic states investig., Raman excitation profile 7−82189
retinyl acetate, two-photon absorpt. spectra and polaris. *(Japanese)* 7−129694
retinyl Schiff bases, 2-photon, ^{13}C and 2D ^1H NMR 7−90199
trans-retinylidene-N-butylamine, complexation with Lewis acids, C=N stretching freq. increase, reson. Raman spectra 7−90144
rhodamine, photoelectrochemical cells, electrodic dye layers effects 7−86638
rhodamine 110-coumarin bifluorophoric systems, laser emission under coaxial flashlamp pumping 7−130084
rhodamine 590 dye laser, 200 ns narrow-linewidth flashlamp pumped, efficient operation 7−110402
rhodamine 590 laser oscillator, diffr. limited single longit. mode multiple prism flashlamp pumped, linewidth anal. 7−117224
rhodamine 6 G, associated, absorpt. band shape approximation 7−90278
rhodamine 6G, aq. solns., visible excitation and luminesc. spectra 7−125786
rhodamine 6G, B, ultrashort ASE pulses generated by transversal travelling wave pumping *(Chinese)* 7−103808
rhodamine 6G, dye solution absorptive saturation, concentration-dependent decay 7−97095
rhodamine 6G, ethanol solution, dynamic Stokes shift, fluoresc. spectrum, stochastic behaviour 7−82249
rhodamine 6G, glycerol soln., fluoresc. lifetime and polaris. characts., relax. effects 7−74706

organic compounds continued
rhodamine 6G, struct. rearrangements, reson. stimulated Raman scatt. *(German)* 7−129725
rhodamine 6G(C)-oxazine 17 systems, radiative transfer of energy mechanism 7−122944
rhodamine 6G adsorbed layer, Ag colloids, reason. SERS and fluoresc. spectra coverage depend. 7−74629
rhodamine 6G alcohol and aq.-micellar solns. with lamp pumping, radiation angular distrib. depend. on cavity spacing *(German)* 7−130086
rhodamine 6G CW laser with spherical cavity, incoherently pumped 7−96993
rhodamine 6G laser, femtosecond pulse generation 7−130204
rhodamine 6G solns., energy accumulation, luminesc. study 7−129777
rhodamine 6G solns., laser-induced transient gratings efficiency and decay 7−82763
rhodamine 6G solns., stimulated laser emission quantum yield 7−130085
rhodamine 6G solns., sub-ns fluoresc. lifetimes eval. by phase plane method *(Chinese)* 7−141627
rhodamine 6G solutions, highly conc., fluorescence behaviour 7−99911
rhodamine 6G-cresyl violet system, radiative transfer of energy mechanism 7−122944
rhodamine B, adsorbed on silica, depth profile, photoacoustic spectrosc. obs. 7−124681
rhodamine B, fluoresc. free Raman spectroscopy 7−92690
rhodamine B and rhodamine 6G, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
rhodamine B dye, adsorption on CdS, optical absorption, luminesc. 7−76616
rhodamine B dye laser femtosecond pulse generation at 650 nm 7−74915
rhodamine B dye overlayer on Ag island films, optical transmission spectra 7−113297
rhodamine B-acriflavine, energy transfer in cellulose acetate 7−96814
rhodamine dye hexahydrate, cryst. and mol. struct., H bonds, X-ray diffr. study 7−104718
rhodamine dye solution/SnO_2 interface, laser-induced photoelectrochem. transients 7−70409
rhodamine dyes, absorpt. spectra, homogeneous relax. component, temp. depend. 7−141567
rhodium(I) aryldiisocyanide polymers and oligomers, photocond. 7−125049
α-ribazole-3′-phosphate, detached cobalamins nucleotide, ^{13}C NMR study 7−119723
riboflavin-diethanolamine system, photogalvanic effect 7−77008
riboflavin-indole complexes, mol. associations, spectroscopic study 7−86609
D-ribose, enthalpies of combustion and form. ^{13}C and ^1H NMR 7−93359
ring deuterated smectic liq. cryst., D NMR spin-lattice relax. studies 7−77420
RNA fragment, conform., NMR study 7−119725
RNA synthesis, replication-mutation systems struct. and dynamics 7−78720
rod- and disk-like solutes in nematic liq. crystal 5CB, orientational order, PMR and DNMR 7−74665
rodamine 110, electronic absorption spectra, PNDO calc. 7−74657
rotational dynamics, interaction with zeolitic framework, quasielastic neutron scattering 7−142661
RSSH radical anions, props., matrix isolation EPR obs. 7−109958
rubidium acid phthalate, pyroelectric props., temp. depend. 7−92607
rubrene, soln., triplet states, thermally activated intersystem crossing 7−68405
rubrene ditertbutyl, substituted, triplet excitons, mag. reson., fluoresc. 7−70893
ruffigallol hexa-n-alkoxylates, discotic mesomorphism 7−142564
rufigallol-hexa-n-alkanoates, liq. cryst., disc-like mesophase, X-ray diffr. studies 7−131018
saccharide composites, cryst. struct. and piezoelec. props. 7−99715
saccharides, γ-irradiated, subjected to post-irradiation ultrasonic treatment, lyoluminescence obs. 7−144132
salicylamide, electronic struct., biological activity, UV PES anal. 7−78751
salicylate anion, electronic struct., polar substituent effects, CNDO/2 calcs. 7−141467
salicylic acid, metal effects on aromatic system, Raman obs. 7−82154
N-salicylidene-2-thenylamines, solid state photochromism and thermochromism 7−85557
salicylideneaniline, intermolecular energy calcs. 7−137222
salicylideneaniline, nitro-derivatives, photophys., photochem., solvent effects 7−117012
salicylideneaniline, photophysics, photochem., solvent effects 7−116943
saturated carbon atoms, chemical shift depend. on nature of directly bonded substituent 7−82225
saturated hydrocarbon films, electron mean free paths and scatt. processes 7−132389
saturated hydrocarbons, entropy jumps in phase transitions, lattice model calcs. 7−126754
Scheibe-aggregates of pseudoisocyanine in soln. and molecular monolayers, fluoresc. lifetimes 7−117004
Schiff's base liquid crystal, oriented, X-ray diffr. and optical studies 7−91432
Schiff bases, conjugated, protonation, quantum chem. study 7−132930
segregated stack quasi-1D organic charge transfer solids, extended Hubbard model calcs. 7−76917
selenoformaldehyde, electronic transitions, vibr. anal. 7−109853
selenoformaldehyde- ^{77}Se, rot. spectrum, spin-rotation hyperfine struct. 7−135918
semibullvalene, vibr., IR and Raman obs. *(French)* 7−129715
semicarbazide hydrochloride, and deuterated single cryst., dielec. props. and thermal expansion 7−85521
semicarbazide hydrochloride, cryst. struct., neutron diffr. study 7−104708
semiperchlorates of aromatic N-bases, NMR and IR spectra, intramol. $NH^+ \cdots N$ bond, influence of additional N-atoms 7−90138
semiquinone radicals, methoxyl-substituted, ^1H hyperfine coupling consts., ab initio UHF calcs. 7−109744
semiquinones, flash photolysis and pulse radiolysis, rel. to cancer induction and therapy 7−71507
l-serine hydrochloride decylester-orthophosphoric acid soln., micellar phases 7−111367
DL- serine-d_2, single cryst., quadrupole tensors, ENDOR-detected NMR 7−112995
p-sexiphenylene-p-quinquephenylene solid solns., heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
silacrown ionophores, metal ion transport efficiency 7−113993

organic compounds continued
silver anthraquinone derivatives, thin films, photosensitive props. 7−125837
silyl acetylene, $4\nu_{10}$ state, microwave spectroscopy 7−122511
small molecules, dipole polarisabilities, Unsold approx., LCAO MO SCF calcs. 7−96539
small polyatomic molecules, angular geometry, ab initio STO-3G bond orbital calcs. 7−96502
sodium acetate, homonuclear J-couplings. rotationally induced sideband enhancements, NMR spectrosc. 7−122564
sodium acetate trihydrate, crystal struct., X-ray diffr. exam. 7−111531
sodium acid urate, precip. from electrolyte solns., chem. pot. diagrams 7−126474
sodium alkanoates, solid and liq. cryst., struct. parameters 7−111357
sodium alkonoates, lamellar phases, quadrupole coupling const. calc. 7−85478
sodium bis(2-ethylhexyl) sulfosuccinate, (Aerosol-OT)-oil-brine systems, phase behavior, surfactants, hydrocarbons 7−144763
sodium cryptand(2.2.2) sodide, optical reflectivity and absorpt. meas. 7−113222
sodium decyl sulphate/1-decanol/water, lamellar phase, structural fluctuations 7−142571
sodium dodecyl sulphate micelle, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
sodium dodecyl sulphate surfactant micelles, decoration of poly(ethylene oxide) semidilute solns., neutron scatt. study 7−83636
sodium dodecyl sulphate/hexylamine/water/heptane system, lamellar liquid crystal phases 7−131308
sodium dodecylsulphate, surface tension determ. using automatic apparatus 7−131391
sodium formate, crystalline and powdery thin solid films, IR and Raman spectra, intensity transfer 7−85663
sodium laurate, oriented multilayers, ATR IR spectra 7−82089
sodium octanoate-octane-water system, liq. cryst. phase, nucl. mag. relax. study 7−99599
sodium oleate-potassium oleate micellar solns., photon correlation spectroscopy 7−71541
sodium p-nitrobenzoate trihydrate crystal, deform. directions, atom-atom pots. calcs. 7−117909
sodium propionate, isotopic species, low-temp. IR spectra, isotope shifts anal. 7−96698
sodium salicylate, luminesc., VUV, X-ray and β particle excited, time depend. 7−113262
sodium uranyl acetate, absorption spectra, linear dichroism, electric-dipole, electric-quadrupole 7−135959
solids, electronic struct., photoemission study 7−125926
solids, UV photoemission study 7−125925
solutions, laser beam-induced shock waves, fluid ejection and liq.-vapour interface channel form. *(Japanese)* 7−117026
solvated anions, electron photodetachment spectroscopy study 7−96798
solvents, liq., compressibility, light scatt. obs. 7−138468
solvents, volatile, ICP spectrometric anal. 7−126497
Somatotropin, conform. anal., Raman spectra study 7−68322
sorbic acid adsorbed on graphite, vibr. spectra, scanning tunnelling microscopy study 7−105245
speeds of sound, excess molar vols., compressibilities 7−76258
spiro(3.3)heptane ring containing liquid crystals, thermal props. 7−91435
squaric acid, Brillouin scatt. under uniaxial stresses 7−85752
squaric acid, struct. phase transition, pseudospin-lattice coupled mode model 7−104996
starch hydrolyzates, dry substance meas., computer-aided automatic refractometer 7−121200
stearic acid, B form crysts. micropolytype structs., Raman microprobe obs. 7−99827
stearic acid, dissolution kinetics and etch figures in octane 7−111437
stearic acid, twinned crystal form. 7−124281
stearic acid Langmuir Blodgett films on metal and semiconductor substrates, transport mech. 7−99166
sterol cholesterogens, mesomorphic phases, vibr. spectra 7−113186
trans-stilbene, gas and liq. phase photoisomerisation, transition state theory 7−93285
stilbene, in alkane and alcohol solns., rot. diffusion 7−69947
trans-stilbene, internal rot., phosphoresc. excitation and stimulated emission spectroscopy 7−68440
t-stilbene, intramol. vibr. redistrib., time-resolved fluoresc. spectra, photochem. timing meas. 7−117055
trans-stilbene, jet-cooled, vibr., isotope shift, fluoresc. excitation 7−129764
trans-stilbene, low-freq. modes assignment, fluoresc. spectra 7−96779
t-stilbene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
trans-stilbene, vibr. freqs., transferable valence force field calcs. 7−74564
stilbene, vibr. spectra anal. 7−109866
α,α'-trans-stilbene-^{13}C, ground and excited states struct., Raman spectra anal. 7−82193
trans-stilbene-TCNQ complex, physical props. 7−84902
stopping powers in organic materials, review 7−111708
streptomycin, dielectric relax. time meas. 7−77460
strontium monoalkylamides, laser spectroscopy 7−96715
structural heterogeneity and multiplet thermal transitions in epoxy binder 7−91446
styrene, polymerisation in laminar flow tubular reactor, heat and mass transfer 7−119527
styrene, post-radiation grafting on to polyethylene film, polystyrene distrib. *(Russian)* 7−86652
styrene-polybutadiene copolymerisation, phase struct. form., regularities *(Russian)* 7−93326
styryl compound dye laser, CW optically pumped tunable from 840 to 1030 nm, ps and fs pulse generation 7−136378
styryl dyes, fluorescent, fast optical probes of cardiac membrane action potential 7−87391
Styryl-9 ring dye laser, freq. selection using low-loss Mach-Zehnder interferometer 7−74954
β-styryldichlorophosphine, geometrical struct., electronographic investig. 7−110139
styrylpyridinium cyanine dye, thin-film crystals, electro-optic effect, AC modulation 7−144018
succinic acid, solubility in water from 278.15 to 338.15 K 7−84279
succinonitrile, crystal purification and growth 7−92858
succinonitrile-neopentyl alcohol, eutectic mixture, solidification 7−117847
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
organic compounds continued
sucrose crystals, equilib. and growth form kinetics 7−113366
sugars, low frequency Raman scatt. spectra, laser light effects 7−113195
sulfocationite membranes, perfluorinated, mol. mobility of H_2O, H^+ mag. relax 7−135972
sulfonium salts, positive secondary ion mass spectra, solvent effect 7−71549
sulforhodamine 101 dye laser femtosecond pulse generation at 675 nm 7−74915
sulphadimethoxine, ($C_{12}H_{14}N_4O_4S$), cryst. and mol. struct. 7−83936
sulphones, organic, liq. solutions and crystal, IR and Raman spectra, vibr. spectra and conformations 7−96679
sulphonyl radicals, optical absorpt. spectra, meas. and calcs. 7−135953
surface analysis techniques and their application to materials and device characterization 7−125904
surfactant, soln., expanding adsorbed layer viscosity and dynamic surface tension 7−112077
surfactant-alcohol-brine lyotropic lamellar phases, X-ray scatt. study 7−83659
surfactants, coadsorption on activated carbon in water *(French)* 7−118238
symmetry changes, group theory analysis for R_2Mx_4 cpds., (R=organic cation; M=Cu,Cd,Hg,Zn; X=Cl,Br) 7−137297
TANOL organic free radical, magnetic interaction and phase transitions 7−77290
tartaric acid, solubility in water from 278.15 to 338.15 K 7−84279
tartaric acid composites, complex piezoelec. response 7−99688
A-TCNB single crystal, T-T annihilation, fluoresc. detected low field reson. 7−144120
TCNQ, Langmuir-Blodgett films in acoustoelectric devices 7−123414
TCNQ, mol. cryst., exciton-phonon coupling study 7−92074
TCNQ complexes, AzaTCNQ, organic conductors, elec. and struct. props. 7−84863
TCNQ metallic salts, elec. cond. and mag. props., solvent inclusion effects 7−84862
TCNQ salt, Cs_2 $(TCNQ)_3$, low temp. organic semiconductor, ESR studies 7−70625
TCNQ salt, $MBM(TCNQ)_2$, noise spectrum 7−143534
TCNQ salt, methylselenouronium TCNQ, cryst. struct., X-ray diffr. study 7−111521
TCNQ salt, methylthiouronium TCNQ, cryst. struct., X-ray diffr. study 7−111521
TCNQ salt, $MPht(TCNQ)_2$, phase transitions, IR absorpt. spectra 7−138439
TCNQ salt, N-docosylpyridinium-$(TCNQ)_n$, monolayers and Langmuir-Blodgett films, conductivity 7−99018
TCNQ salt, N-n propyl quinoxalinium $TCNQ_2$, struct., cond., triplet spin excitons 7−105570
TCNQ salt, $TeEA(TCNQ)_2$, IR props. 7−99850
TCNQ salted conducting polymer, elec. transport 7−131622
TCNQ salts, Hubbard-Peierls model, quarter-filled, charge versus fermion fractionalization 7−105550
TCNQ salts, $MEM(TCNQ)_2$, far IR absorpt. spectra 7−77534
TCNQ salts, morpholinium $(TCNQ)_2$, shot noise, soliton transport 7−143535
TCNQ salts, morpholinium $(TCNQ)_2$ cpds., nonlinear cond. 7−92157
TCNQ salts, quasi-1D dimerised, IR spectral props., temp. depend. 7−85626
TCNQ salts, $TEA(TCNQ)_2$ and $MNEB(TCNQ)_2$, lattice dynamics, inelastic neutron scatt. 7−91743
TCNQ salts, $TEA\text{-}(TCNQ)_2$, magnetic susceptibility anomaly 7−85306
TCNQ salts, with 1-methyl-3-alkylimidazolium derivatives, elec. cond., spectral props. 7−105571
TCNQ-2, 3, 7, 8-tetramethoxychalcogenanthrene complexes, structure and elec. conductivity 7−131627
TCNQ-N-docosylpyridinium charge transfer salts, Langmuir-Blodgett films, struct. props. 7−70115
$TCNQF_4$ charge transfer complexes, vibrational and vibronic studies 7−84147
Teflon FEP corona charged insulating films, natural decay 7−70704
teicoplanin A_2, structural anal., two-dimens. PMR and NOE spectra 7−71685
TEMPOL-^{15}N, slow two-jump processes, saturation recovery electron paramagnetic resonance spectroscopy 7−135974
tempone radical, spectra-spatial two-dimensional EPR imaging 7−90227
terbium ethyl sulphate, quasi-1D paramagnet, ferromag. phase transition 7−132029
terbium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
terephthal-bis-butylaniline, smectic H phase, texture and conoscopic interference figure 7−137235
terephthalate-d_0(-d_4) ions, vibr. anal., IR and Raman spectra 7−103458
terephthalic acid, cryst. aging, purification technique possibility 7−117856
terephthalylidene-bis-p-n-decylaniline, structural and phase transition studies of mesophases 7−111377
terephthalylidene-p-n-decylaniline smectic liq. cryst., transitions and density studies 7−124366
p-terphenyl, amorphous and cryst., dielec. props. and inter-trap hopping 7−85535
p-terphenyl, conform. anal., FTIR and Raman spectra 7−109893
p-terphenyl, dielectric props., model 7−77454
p-terphenyl, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
p-terphenyl, in polymer films, transition moments, absorpt. anisotropy 7−103531
p-terphenyl, radical cation salt crystals, EPR studies 7−112933
o-terphenyl, supercooled, dielec. relax., press. effects 7−143962
paraterphenyl in squalane solns., ion recombination luminesc. excited by 15 to 150 eV 7−77615
tetra-*n*-butylammonium picrate, in ionic solvent, elec. cond., viscosity and density 7−143065
tetra-n-butylammonium bistrifluoroacetate, organic solvent solns., IR and PMR spectra 7−96738
tetra-n-butylammonium $UO_2(NO_3)_3$, in PMMA, site-selected fluoresc. 7−103566
tetraalkylammonium bromides, permeability in PMMA stereocomplex membranes 7−113992
tetraalkylammonium salts, alkyl chain mobilities 7−122571
tetraalkylammonium salts, sampling behaviour charactn., electrohydrodynamic mass spectrometry 7−102559
tetraarylporphyrins, atropisomerism, steric effects 7−74669
1,3,15,17 tetraaza-6,9,12,20,23,28-hexaoxabicyclo[15.8.5]-triacontane-2,16-dithione, struct. determ. 7−83935

organic compounds continued
1,3,12,14- tetraaza-6,9,17,20-tetraoxadocosa-1,2,12,13-tetraene, cryst. and mol. struct. 7−104712
1,3,4,6-tetraazapentalenes, dipyrido substituted, synthesis, struct., physicochem. props. 7−71472
tetrabenzofulvalene, amorphous and cryst., elec. cond. and dielec. losses 7−85534
tetrabutylammonium iodide, polycryst., mol. reorientation, spin-lattice relax. times meas. 7−76049
tetracene, doped in glass, hole-burning, site-selective fluoresc. 7−68387
tetracene, soln., triplet states, thermally activated intersystem crossing 7−68405
tetracene and its van der Waals complexes with inert gas atoms, rot. resolved laser spectroscopy 7−129733
tetracene films, trapped charge transfer excitons, TSC spectra obs. 7−131661
tetracene in alcohol glass, tunnelling dynamics, photophysical hole burning system anal. 7−97098
2,3,4,5-tetrachloro-6-(dimethylamino methyl) phenol, isotope ratios, solvent effects 7−96697
tetrachlorobenzenes, in gas phase and in n-hexane soln., UV absorpt. spectra 7−116981
1,1,2,2-tetrachloroehtane-n-hexane, excess molar enthalpies, molar vols. and vapour pressures 7−98505
tetrachloroethene, thermal attachment cross sections and rate consts. 7−103674
1,1,2,2-tetrachloroethyl alkyl ethers, vibr. spectra and confirmations 7−74568
tetrachloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
tetrachloromethane, formation of highly compressed Brillouin scattering pulses 7−68781
tetrachloromethane, laser beam-induced shock waves, fluid ejection and liq.-vapour interface channel form. *(Japanese)* 7−117026
tetrachloromethane, photoionisation, angle-resolved photoelectron spectra 7−136008
tetrachloromethane, stimulated Brillouin scattering, laser mirror appl. 7−130168
tetrachloromethane, thermal lens oscillations at low laser power 7−130228
tetrachloromethane, ultrafast supercontinuum generation 7−136393
tetrachloromethane Faraday effect meas. in high mag. field 7−113145
tetrachloromethane-carbon disulphide, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7−125602
tetrachlorophthalic anhydride-hexamethylbenzene, fluoresc., phosphoresc. and delayed fluoresc. 7−138496
sym-tetrachloropyrazine, distorted lowest excited triplet state, phosphoresc., ODMR and ODNQR investig. 7−135981
tetracosane, liq. bubble and crystn. press., molar vol. 7−91771
tetracosane-tetracosane-d_{50}, solid, γ-irrad., isotope exchange study 7−126467
tetracyanobenzene mixed stack mol. cryst. orientational instabilities 7−131080
tetracyanobenzene-methylated benzene exciplexes, time-resolved mol. luminesc. 7−109975
tetracyanoethylene, adsorpt. on Cu (III), surface anion radical form., EELS obs. 7−105253
tetracyanoethylene with meta-disubstituted benzenes, EDA complexes, charge transfer spectra 7−122393
tetracyanoethylene-paracyclophanes, charge transfer complexes, solid state struct. 7−142751
tetracyanomethane molecules, valence ionisation spectra 7−90015
1,1,3,3,-tetracyanopropane, cryst. struct. and vibr., spectrosc. obs. 7−98102
tetracyanoquinodimethane system, electron exchange, solvent dependence 7−100518
tetracyclines, solid, ^{13}C NMR 7−99582
tetracyclines, solns., US and thermodynamic obs. 7−98342
tetradecane, swelling agent for solid-gas mass transfer meas. 7−75261
n-tetradecane-n-hexafluorobenzene(-benzene), vapour-liquid equilib., 323.15 K 7−124462
tetradecanes, spin labelled, line broadening correction, EPR spectra 7−82228
tetradesmethyl-β-carotene, reson. Raman and fluoresc. lineshapes, vibr. relax., solvation dynamics 7−74615
tetraethyl-ammonium hydrogen dichloride salt, ^{2}H and ^{36}Cl isotope exchange, H bonding role study 7−119524
tetraethyleneglycol diacrylate, photopolymerisation, thermal and mechanical anal. 7−119529
tetraethylorthosilicate, hydrolyses, condensation, multinuclear NMR study 7−126440
tetraethylorthosilicate, initial stages of hydrolysis and polymerisation, Raman studies 7−138448
tetraethylsilane, surface-induced dissoc., mass spectra 7−125878
12,4,5-tetrafluorobenzene, S_1 state Q_{11} butterfly motion, vibronic coupling 7−135912
tetrafluorobenzenes, substituted, radical anions, HFS, optical detection of ESR 7−82236
1,1,2,2-tetrafluorocyclopropane, microwave spectra, elec. dipole moments and mol. struct. 7−90101
tetrafluoroethylene, low-temp. radiation-induced postpolymerisation, kinetics *(Russian)* 7−86626
tetrafluoromethane, adsorption on graphite, multilayer phase diagram 7−70081
tetrafluoromethane, edge inversion process, spectrosc. props. 7−109870
tetrafluoromethane, electron impact dissoc., 3p⟶3s line emissions, absolute cross section determ. 7−90440
tetrafluoromethane, in liq. Ar, Coriolis interaction in IR spectra 7−68304
tetrafluoromethane, photoionisation, angle-resolved photoelectron spectra 7−136008
tetrafluoromethane, second hyperpolarisability, vibr. contrib., SHG 7−130277
tetrafluoromethane, solid, high press. NMR study 7−132153
tetrafluoromethane + Ar, RF discharge, at. excited level quenching 7−129647
tetrafluoromethane cation, $\tilde{D}^2A_1 \rightarrow \tilde{C}^2T_2$ emission band system 7−68336
tetrafluoromethane laser, pulsed operation 7−90588
tetrafluoromethane plasma, reactive ion etching of Si_3N_4 7−100402
tetrafluoromethane plasma etching and diagnostics characts. study using elec. probe method *(Korean)* 7−86498
organic compounds continued
tetrafluoromethane-Ar gas mixture, Rayleigh and Raman spectra 7−103514
tetrafluoromethane-He(Ne), diffusion coeffs. and thermal diffusion factors 7−91278
tetrafluoromethane-$O_2(CO_2)(N_2)(CO)$, interaction force, ab initio calcs. 7−129831
tetraglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
tetrahaloethylenes, force consts., mean amplitude of vibr., Coriolis coupling and centrifugal distortion consts. eval. 7−103465
tetrahydroazepines, conformational struct. and energies, QCFF/PI method calcs. 7−109752
tetrahydrofuran clathrate hydrate: KOH, phase transition, sp. ht. meas. 7−91798
tetrahydrofuran clathrate hydrate, thermal conductivity 7−118181
tetrahydrofuran clathrate hydrates, thermal expansion, unit cell parameter 7−118137
tetrahydrophenanthridine hydroxynitrostyrils. absorpt, spectra 7−141568
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7−106212
tetrahydropyrans, 2-substituted, anomeric effect, solvent polarity influence, ^{13}C NMR spectra 7−90189
tetrahydrothiophene, adsorption on Pt (100), (111) and (210) 7−85957
tetraiodoethylene, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
tetralkylammonium chlorobromo ruthenate, vibr. and electronic reson. Raman spectra *(German)* 7−106189
(tetramesitylporphyrin)iron(II), oxidation mechanism, reson. Raman spectra 7−78481
tetramethoxysilane gel, mass transport of NaCl, conc. and diffusion coeff. meas. 7−144257
tetramethyl ammonium nickel tribromide, metamagnetic phase diagram, AC mag. suscept. meas. 7−85291
tetramethyl stannane, photoelectron study using synchrotron radiation 7−82278
tetramethyl sulphoxide.$CuCl_2$ ferromag. chain cpd., magnetic interactions, magnetisation, FMR and AFMR meas. 7−99435
tetramethyl-ammonium hydrogen dichloride salt, ^{2}H and ^{36}Cl isotope exchange, H bonding role study 7−119524
tetramethyl-p-phenylenediamine, gas and liq., He(I) photoelectron spectra meas. 7−103574
tetramethyl-p-phenylenediamine, solns., photoionisation, solvent effects, reson., Raman spectra anal. 7−82195
tetramethyl/tetraselenafulvalene, incorporated in Nafion-coated membrane, electrochem. behaviour 7−113950
(tetramethylammonium)$ZnCl_{1.8}Br_{2.2}$, cryst. struct. at 198 K and 293 K, X-ray diffr. 7−111519
tetramethylammonium cobalt tetrachloride, single cryst., phase transitions, laser Raman study 7−144059
tetramethylammonium copper bromide, phase transitions, EPR studies 7−131302
tetramethylammonium copper trichloride, pseudo-Jahn-Teller effect, coupled with E⊗e effect 7−92125
tetramethylammonium fluoride hydrates, crystallisation from aq. soln., struct., IR spectra 7−124147
tetramethylammonium hydroxide monohydrate, IR spectra, struct. and stoichiometry 7−118997
tetramethylammonium ions, tapped in zeolites, NMR chem. shift. surface curvature effects 7−109932
tetramethylammonium manganese chloride, 1D antiferromagnet, easy-plane, Kink-antikink scatt. 7−105873
tetramethylammonium metal trihalides, 1D magnetism investig. 7−112772
tetramethylammonium tetrabromoplatinate(II), cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tetrachlorozincate, incommensurate phase, X-ray radiation damage effect 7−104827
tetramethylammonium tetrachlorozincate (II), struct. anal., incommensurate and lock-in phases 7−124233
tetramethylammonium tetrahalogenometallate (II), solid soln. single crystals, phase transitions 7−124471
tetramethylammonium tetrahalopalladate(II) cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tribromocadmate, NMR study, proton relax. 7−85469
1,1,3,3-tetramethylbutyl group, hydrophobic moiety of Triton X surfactants, Raman spectra 7−96705
1,2-tetramethylene-3-methylcyclooctatetraene, preparation, cyclooctatetraene ring flattening by annulation, PMR investig. 7−119500
tetramethylenes, substituted, bonding and polymerisation mechanism 7−132934
3,4,5,6-tetramethylphenanthrene, mol. geometry and conform. stability, buttressing effect 7−90450
N,N,N′,N′-tetramethylphenylene diamine, electron transfer, phosphorescence emission decay, reacting distance, excited states 7−135989
2,2,6,6-tetramethylpiperidine nitroxide radical used to study $LiClO_4$, LiI, LiBr, $NaBPh_4$ and NaI solns. 7−119512
2,2,6,6-tetramethylpiperidine radical, solvation of Li^+, complex form., ^{7}Li NMR study 7−93264
tetramethylsilane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
tetramethylsilane, liq., injected electron mobility meas. 7−112372
tetramethylsilane, Si L edges resonances, gas phase UV photoabsorpt. spectra 7−116982
tetranitramines, bicyclo and spiro forms, thermal decomp. 7−71481
tetranitromethane, electronically excited, transient species and product form. 7−68234
1,4,7,10-tetraoxacyclododecane and complexes, pseudorotation activation energies, dipole-dipole relax. time 7−74682
tetraphenylborate ion, hydrophobic interactions, transfer free energies calcs. 7−91423
tetraphenylporphinatozinc, oxidation investigated using thin layer spectroelectrochemical cell employing specular reflectance 7−119596
tetraphenylporphyrin ultrathin film, luminesc. quenching, depend. on SnO_2 substrate conductivity 7−106254
tetraphenylporphyrin-polypeptide complexes, model photosynthetic system, fluoresc. props. 7−129766
(tetraphenylporphyrinato)iron(III) complexes, electronic struct. and EPR investig. 7−112929
5,6,11,12-tetraphenyltetracene, fragmentation in ^{252}Cf-plasma desorpt. mass spectrometry 7−122739

organic compounds continued
tetraselenotetracene iodomercurate, quasi-1D conductor, mag. props., ESR study *(German)* 7−132156
tetratelluradicyclopenta[b,g]napthalene, molecular complexes, crystal structures 7−98109
tetrathiafulvalene salt of $CuCl_2$, ESR study and metal-semicond. transition 7−138310
tetrathiafulvalene-*p*-chloranil, mixed-stock charge transfer crystal, reflectivity spectra, hydrostatic press. 7−118455
tetrathiafulvalene-Au-bis-dithiolene, spin-Peierls system, high field phase, ESR study 7−118856
tetrathiotetracene, energy struct., absorption spectra *(Russian)* 7−122503
s-tetrazine, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
s-tetrazine, photodissoc., ab initio calcs., pot. energy hypersurfaces, radiationless transitions 7−68416
s-tetrazine, van der Waals complexes, electrostatic interactions 7−82314
s-tetrazine molecule, out-of-plane vibrations, general quadratic force field 7−122734
tetrazine-Ar complex, supersonic free jet, reson. and dispersed fluoresc. 7−82262
s-tetrazine-H_2O complex, struct. and electronic spectrum 7−96638
s-tetrazine-HCl complexes, fluoresc. and Vis-UV spectra, struct. determ. 7−96777
TGS: alanine, monocryst. piezooptical props. 7−92638
TGS:As(Cr)(P), charge compensation, pyroelec. props. enhancement, ESR study 7−92610
TGS:Cu^{2+}, temp. depend. of elastic moduli, Cu^{2+} doping influence 7−142880
TGS:Pt, ferroelec., cryst. growth and domain struct. 7−125643
TGS, collinear ferroelec. crystals, switching kinetics 7−99748
TGS, collinear ferroelectric crystals, domain struct. dynamics *(Chinese)* 7−132214
TGS, conversion into pyroelec. by doping with chiral substitutes 7−92611
TGS, elastic moduli near the phase transition, fluctuation contributions 7−84082
TGS, elastooptic coeff. of transparent meas., using optical heterodyne method 7−138420
TGS, ferroelec., long lasting relax. currents 7−106081
TGS, ferroelec. phase, elec. cond. meas. 7−70302
TGS, ferroelectric, domains and imperfections investig. 7−125641
TGS, ferroelectric, improved method for obtaining I-U charact. 7−106093
TGS, ferroelectric, LO-TO splittings, Raman spectra 7−99832
TGS, perfect and imperfect crystals, microwave permitt. meas. 7−70695
TGS containing l-α-alanine, internal fields distribution studied using nematic liquid crystals 7−85527
TGS cryst., paraelec. phase, permittivity nonlinearity study 7−99642
TGS crystal growth from soln. at constant growth rate 7−138624
TGS crystal growth in low-g, reconstruction techniques of holograms from Spacelab 3 7−110295
TGS crystals, L-alanine content determ. by optical activity 7−70739
TGS crysts., aniline family doped, growth, pyroelec. props. 7−100034
TGS crysts., well-defined domain struct., thermally stimulated electron emission 7−106353
TGS film and single cryst., surface layer thickness determ., far IR spectra study 7−99815
TGS thin platelets, domain dynamics, polarisation reversal 7−99770
TGS-L-α-alanine cryst. mixture, dielec. props., effect of L-α-alanine conc. 7−138390
TGSe:alanine, P, growth and pyroelec. props. 7−92612
thallium n-tetradecanoate, heat capacity and thermodynamic functions 7−84312
theobromine, aq. electrolytes soln., Setschenow coeffs. 7−91813
theophylline, aq. electrolytes soln., Setschenow coeffs. 7−91813
theophylline in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7−85831
thermal-conductivity standards (organic liquids) 7−102403
thiadiazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7−82203
thiamine dichloride monohydrate cryst. struct. anal., equivalence of $P2_1/c$ and $P2_1/n$ space groups 7−91515
thiane-1-tosylimide, and derivatives, conformational anal., X-ray anal. 7−68420
thiazole-iodine complexes, charge transfer complex equilibria studied by constant activity method 7−100543
thin film deposition, using simple electron gun 7−106421
thin films deposition, microgravity physical vapour transport expt. 7−138664
thin films on surfaces, unenhanced Raman spectrosc. 7−77590
3-thio-2-propenals, S substituted, conform. pot. energy surfaces 7−93269
thioacetamide, Fermi reson. lineshapes, IR spectra 7−109900
thioacetamide, vibr. spectra, Fermi reson. and H-bond investig. 7−74556
thioamides, rotational transition structs., ab initio MO calcs. 7−103471
thiobenzoate series, ferroelectric smectic C* phases 7−69588
thiocholesteryl acetate, substituted isomers, mesomorphic props. 7−91429
thiocyanate radical, struct. and electron affinities 7−74432
thiocyclopentanone, visible absorpt. spectra, vibr. anal. 7−82199
thioethers, conform. anal., mol. mech. force field appl. 7−109862
thioformaldehyde, vibrs., Green's fn. anal. 7−74551
thioformyl cation in inner coma of P/Comet Halley (1982i) 7−88261
thioindigo, electronic spectra and isomerisation pot. investig. 7−82201
thioketene, excited-state struct., UV-visible spectrum 7−82209
thiolane-1-tosylimide, and derivatives mol. struct., X-ray diffr. 7−68421
thiols, structural and conformational properties, ab initio calcs, internal rotation 7−141457
thionitrites, ethyl and butyl substituted, ^{14}N NMR investig., conform. anal. 7−122569
thiophene, adsorption on Pt (100), (111) and (210) 7−85957
thiophene, chemisorption and decomposition on Mo (111) 7−100614
thiophene adsorption and hydrodesulphurisation, electronic factors on MoS_2 7−144748
thiophene on Si (111), desulphurisation process study 7−114001
thiophenes, polycyclic aromatic, mol. struct., phosphoresc. study 7−122608
thiophenol, electron impact ionis., relax., photodissoc. 7−136073
thiophenophanes, and binaphthyl derivatives, circular dichroism meas. 7−82240
thiopyrylium salts, spectral luminescent props. 7−119051
thiopyrylium substituted salts, laser effects studies 7−122943
organic compounds continued
thiosemicarbizide, complex form. and struct. on Ag and Cu surfaces, SERS spectra anal. 7−74630
thiourea, aq. soln., electrokinetic studies across urinary bladder membrane 7−119753
thiourea, deuterated, X-radiation damage, dielectric susceptibility and neutron diffr. meas. 7−69760
thiourea, orthorhombic ferroelectric, thermoelastic and third-order elastic constants 7−76270
H-thiourea, phase transitions under elec. field 7−118957
thiourea 1:1 complex with parabanic acid, cryst. struct. and charge density at 298 K 7−86893
thioureas, N,N-disubstituted, ^{13}C NRM chem. shifts 7−82215
thulium ethyl sulphate, Van Vleck paramag., impurity centre relax. 7−70518
thymidine, ^{13}C spin-lattice relax. rates meas., ^{1}H perturbation effects 7−96733
thymidine phenyl cyclic 3′,5′-monophosphate diastereomers, PMR and X-ray obs. 7−141603
thymine, aq. soln., polarised fluoresc. excitation spectra 7−103568
thymine-d3, elec. field gradient, ^{2}H NMR 7−118872
tiaprofenic acid, ^{1}H and ^{13}C NMR 7−96747
TMDBF-$BF_4(ClO_4)(AsF_6)(PF_6)$, cation radical salts, elec. and mag. props. 7−112313
TMMC, classical easy-plane antiferromag., dynamical response at low temps., neutron scatt. data 7−105904
TMMC, soliton-magnon interference, obs. by AFMR 7−106029
$(TMN)_3(ClO_4)_2((ASF_6)_2)$ cation radical salts, electronic props. 7−84858
TMPD in methylcyclohexane, photocond. kinetics with pulsed laser ionisation 7−92224
TMPO free radical, H donor solvents, assoc. consts., ESR spectra study 7−103546
$(TMTSeF)_2SCN$, incommensurate struct. modulation and electronic localization 7−137908
$(TMTSF)_2AsF_6$, far-IR reflectivity through the spin density wave transition 7−118980
$(TMTSF)_2AsF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2ClO_4$ Bechgaard salt, field-induced SDW Green's function calcs. 7−77312
$(TMTSF)_2ClO_4$, ^{13}C NMR meas. 7−85477
$(TMTSF)_2ClO_4$, band struct., temp. effect 7−84641
$(TMTSF)_2ClO_4$, elec. cond., temp. depend. model 7−84842
$(TMTSF)_2ClO_4$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2ClO_4$, low temp. metallic phase, rapid mag. quantum oscills. obs. 7−143440
$(TMTSF)_2ClO_4$, mag. field induced SDW transitions, DTA study 7−92069
$(TMTSF)_2ClO_4$, MO calcs. for $(TMTSF)^+$ and $(TMTSF)_2^+$ cations 7−81948
$(TMTSF)_2ClO_4$, non-Ohmic transport in field-induced SDW state 7−84847
$(TMTSF)_2ClO_4$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2ClO_4$, polarised single cryst. specular reflectance spectra 7−113224
$(TMTSF)_2ClO_4$, static mag. suscept. meas., press. depend. 7−85239
$(TMTSF)_2ClO_4$, supercond. state, proton spin-lattice relax. rate meas. 7−85194
$(TMTSF)_2ClO_4$, thermal expansion meas. 7−85192
$(TMTSF)_2ClO_4(PF_6)$ conductors, high field magnetoresistance studies *(German)* 7−124968
$(TMTSF)_2PF_2O_2$, supercond., competing phase transitions 7−84252
$(TMTSF)_2PF_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
$(TMTSF)_2PF_6$, crystallographic and electronic struct. 7−83940
$(TMTSF)_2PF_6$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2PF_6$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2PF_6$, SDW transitions in mag. field, comparison with $(TMTSF)_2CLO_4$, magnetotransport behaviour 7−84854
$(TMTSF)_2PF_6$, static mag. suscept. meas., press. depend. 7−85239
$(TMTSF)_2PF_6$, supercond., electronic props., PMR anal. 7−85474
$(TMTSF)_2PF_6$, thermal expansion meas. 7−85192
$(TMTSF)_2ReO_4$, band struct., temp. effect 7−84641
$(TMTSF)_2ReO_4$, elec. cond., temp. depend. model 7−84842
$(TMTSF)_2ReO_4$, electronic props., ^{13}C NMR meas. 7−85477
$(TMTSF)_2ReO_4$, metal-semiconductor transition, ^{13}C NMR study 7−106049
$(TMTSF)_2ReO_4$, static mag. suscept. meas., press. depend. 7−85239
$(TMTSF)_2ReO_4$, supercond., press. induced anion ordering transform. 7−84252
$(TMTSF)_2SbF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2X$, Bechgaard salts, small period oscillation of magnetoresistance 7−84823
$(TMTSF)_2X$, superconductivity mechanism 7−70459
$(TMTSF)_2X$ Bechgaard salts, longit. nesting mechanism in antiferromag. transition 7−85292
$(TMTSF)_2X$ crystals, Bechgaard's salts, type of superconductivity 7−99337
$(TMTSF)_2X$ salts, collective modes 7−84853
$(TMTSF)_2X$ salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
$(TMTSF)_2X$ salts, intermolecular contact directions rel. to magneto-effects 7−85197
$(TMTSF)_2X$ salts, quasi-one-dimensional systems, anisotropic supercond., NMR relax. rate calc. 7−85195
$(TMTSF)_2X$ salts, superconductors, structural phase transitions 7−84252
$(TMTSF)(PO_2F_2)$ organic metal, synthesis, unit cell dimensions and elec. cond. props. 7−84838
TMTSF Bechgaard salts, field induced SDW states, thermodynamics 7−112828
TMTSF compounds, Bechgaard salts, field induced SDWs in presence of normal impurities 7−70551
TMTSF radical cation-inorganic metal cluster anion hybrids, absorption spectra studies 7−144077
TMTSF salts, 2D open orbit edge states, quantum oscillation 7−137784

organic compounds continued
$(TMTTF)_2AsF_6(PF_6)(Br)$ salts, spin-Peierls transition evolution under press., renormalisation group anal. 7−77313
$(TMTTF)_2BF_2$, CESR meas. under hydrostatic pressure 7−77404
$(TMTTF)_2ClO_4$, band struct., temp. effect 7−84641
$(TMTTF)_2PF_6$, interplay between spin-Peierls and antiferromag. ground states under press., NMR study 7−85476
$(TMTTF)_2X$ salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
TMTTF radical cation-inorganic metal cluster anion hybrids, absorption spectra studies 7−144077
TMTTF-octadecylTCNQ, conducting Langmuir-Blodgett films, ESR studies 7−99556
TMTTF-octadecylTCNQ, conducting Langmuir-Blodgett films 7−99017
TMTTF-octadecylTCNQ charge transfer complex, conductivity-area isotherms 7−99019
TNCQ conductors, phonons, inelastic neutron scatt. studies 7−84159
tobacco mosaic virus solution meas., laser cross-correlation spectrometer based on Kh6-4 correlator 7−121236
tolane, vibr. freqs., transferable valence force field calcs. 7−74564
tolans, nematic, birefringence, viscosity and dielec. const. studies 7−75980
toluene, adsorpt. on Pd(111), vibr. EELS obs. 7−69789
toluene, liquid thermal conductivity, measurement by computer-controlled instrument 7−140690
toluene, organic Rankine cycle engine efficiencies 7−71631
toluene, phonon dispersion, single relaxation mechanism 7−84150
toluene, supersonic jet, dispersed emission and TOFMS 7−129770
toluene, thermal diffusivity, photon correl. spectroscopy 7−76464
toluene, ultrasonic velocity measurement, sensitivity determ. for new measuring system 7−123367
toluene-α-d_3, isotope shifts, solvent and substituent perturbation on ^{13}C NMR 7−90190
toluene-$d_0(d_3)(d_5)(d_8)$, photodissoc., isotope effects 7−103595
toluene-n-heptane, separation by oil-water-oil liq. membrane 7−113990
toluene-n-heptane separation by oil-water-oil liq. membrane 7−113989
p-toluic acid, polycryst., zero-field NMR, correl. H^+ jumps effect 7−99587
o-toluidine, electronically excited state, methyl group internal rotation 7−109993
toluidine, ground and excited electronic states, H bonding, electronic spectra 7−96645
trans-1, 3-butadiene, superexcited states transitions, ab initio CI calcs. 7−135843
4-trans-4′-n-hexyl-cyclohexyl-isothiocyanato-benzene binary mixtures, dielec. studies 7−125585
4-(trans-4-alkylcyclohexyl)-1-(2-cyanoethenyl)-benzene, binary mixture with 60CB, nematic reentrant phase, elec. props. 7−124499
transient species, photoinduced, dielec. relax. obs. 7−113062
transition metal carbonyls, temporary anion states studied by electron transmission spectroscopy and Xalpha calcs. 7−141459
tri(methylammonium)diantimony nonabromide single crysts., dielec. and pyroelec. props. 7−99728
tri-N-butylamine, Raman spectrum and gauche interactions, temp. depend. 7−96699
tri-n-octylamine xylene based transport membranes Cr VI ion separation appls. 7−119574
N,N′N″-trialkyl-1,3,5-benzenetricarboxamides, liq. cryst. phases 7−75982
trialkylphosphine probes adsorbed on SiO_2-Al_2O_3, ^{31}P NMR study 7−68349
trialkylsilylakanethiols, electronic struct., UV absorpt. spectra 7−68340
triazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7−82203
tribromoacetonitrile, isotope shifts, vibr. Raman spectra *(French)* 7−129718
tricarbocyanine dyes, triplet state yield and photosensitisation of singlet O_2 *(French)* 7−117027
1,1,2-trichloro- 1,2,2-trifluoroethane in stratosphere, balloon-borne sample analysis (1982-4) 7−133159
trichloroacetonitrile, liq., permittivity meas. 7−92587
trichlorobenzenes and higher chlorinated benzenes, in gas phase and in n-hexane soln., UV absorpt. spectra 7−116981
trichlorofluoromethane, fluoresc. emission and absorpt. spectra meas. 7−116985
trichlorofluoromethane, interaction with solid surface, thermal desorpt. mass spectrosc. 7−124680
trichlorofluoromethane, microwave and mm-wave spectra, rot., centrifugal distortion and quadrupole parameters 7−96651
trichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
trichloromethane+O, dynamics and microscopic kinetics, time-resolved Fourier transform spectroscopy 7−132919
trichloromethane-triethylamine(acetone)(diethylether), excess molar vols., Gibbs energies press. depend. 7−76446
trichloromethylene-benzene(toluene)(p-xylene)(chloroform)(carbon tetrachloride), internal press. and molar refraction meas. *(German)* 7−69830
1,1,2-trichlorotrifluoroethane, matrix isolation vibr., conform., IR spectra 7−82109
trichlorotrifluoroethane+K, electron attachment investig. 7−90329
trichlorotrifluoroethane/SF_6 gas mixtures, ionisation and attachment coeffs. 7−104479
ω-tricosenoic acid, Langmuir-Blodgett films in acoustoelectric devices 7−123414
22-tricosenoic acid, Langmuir-Blodgett multilayers, optical loss 7−138527
22-tricosenoic acid, thin Langmuir-Blodgett films, surface plasmon-polaritons study 7−84590
22-tricosenoic acid Langmuir-Blodgett multilayers, surface press. effects 7−143229
ω-tricosenoic acid-docosylamine ultrathin superlattices, pyroelec. effect 7−92613
2,4,6-tricyano-sym-triazine charge transfer complexes, elec. cond. 7−84860
tricyclo(4.4.0.$0^{3,8}$)-decane (twistane) containing liquid crystals, thermal props. 7−91435
tricyclo(5.2.1.$0^{2,6}$)decane-2,6-diol, struct., X-ray diffr. exam. 7−111530
tricyclophosphates $KM^{II}P_3O_9$ where M^{II}=Mg, Ca, Co, Mn, Zn, Cd), Raman and IR spectra 7−85664
triethylacetic acid, liq. cryst. phase transition, IR and Raman spectrosc. investig. *(Japanese)* 7−132286
triethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
organic compounds continued
triethylamine, electron photoelectron spectra, ionisation potentials, excited states, transitions, SCF calculations, binding energies 7−141688
triethylamine, quantum yield for VUV radiation detection up to 160 nm 7−81887
triethylamine 7−108560
triethylammonium salts, H-bonded ion pair to the tetrabutylammonium, rearrangement, IR spectra 7−113893
triethylammonium tetrakis(dibenzoylmethanato) europate, cryst. disorder and triboluminesc. 7−106280
triethylenediamine, polyiodides, reson. Raman spectra and X-ray struct. 7−92663
triethylenetetraammonium copper hexachloride, quasi-2D metamagnet, mag. and structural props. 7−125329
1,1,1-trifluoro-2-propanol, gas, far IR and Raman spectra, conform. stability, internal rot. barriers 7−109898
trifluoroacetic acid-diethylether (acetone) complexes, matrix isolated, IR spectra 7−96688
trifluoroethanol, H bonded complexes in cryogenic solns., IR spectra 7−82090
trifluoroethyl cation, structs., stabilities, ab initio MO calcs. 7−89903
2,2,2- trifluoroethyl methyl ether, conformation stability and vibr. assignment, microwave, IR and Raman spectra 7−82133
trifluoroethylene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
trifluoroethylidynesulphur trifluoride, gas phase struct., nonlinear coord. 7−141571
trifluorohalomethanes, in inert gas soln., Raman spectra 7−90176
trifluorohalomethanes+N_2, visible spectra, collisional quenching rate consts. 7−96713
trifluoroiodoethane, photofragmentation dynamics spectroscopy 7−68418
trifluoroiodoethene, A band region, MCD investig. 7−109970
trifluoroiodomethane; multiphoton ionis. investig. 7−90303
trifluoroiodomethane, excimer laser photolysis, decay times, emission spectra, ultraviolet spectra 7−139017
1,1,1-trifluoroisopropanol, conform. stability and low freq. vibr assignment, Raman obs. 7−74641
1,1,1-trifluoroisopropylmethyl ether, conform. stability and low freq. vibr assignment, Raman obs. 7−74641
trifluoromethane, desorption and scatt. from Ag (111), orientation 7−137721
trifluoromethane+Ar, orientation depend. CF_3 chemiluminesc. study 7−100577
trifluoromethane+O, dynamics and microscopic kinetics, time-resolved Fourier transform spectroscopy 7−132919
trifluoromethane-d_1, self-focusing and self-defocusing of TEA CO_2 laser pulse 7−90732
trifluoromethyl bromide, ionosphere plasma depletion expts., choice of chemical for release from rocket 7−107536
trifluoromethyl hypofluorite-H_2 mixture, multiphoton dissoc., IR fluoresc. 7−141640
m-trifluoromethyl-N-ethyl-amphetamine, energy well connection graph appls. 7−89901
trifluoronitrosomethane, jet-cooled, fluoresc. excitation spectrum, visible transition 7−96768
trifluorotrifluoromethylsilane bond lengths, fluorination effects 7−103660
triglycine, NQR, ^{14}N quadrupole coupling const. 7−90202
triglycine sulphate, growth kinetics of (001) face below ferroelec. transition temp. 7−142672
triglycine sulphate ferroelec. material, low-freq. permittivity dispersion, linear electrocaloric effects 7−70694
triglycine sulphate refractive index measurement, materials for optical sensors 7−121199
triglycine sulphate study, flux calorimeter for meas. thermophysical props., of solids appl. 7−108561
trihalomethanes, CH stretch-bend coupling, kinetic anharmonic coupling calcs. 7−103469
trihalomethanes, CH stretch-bend coupling consts., FTIR and photoacoustic spectra 7−103491
trihydroxybenzenes, aq., pulse radiolytic oxidation, time-resolved reson. Raman spectra 7−90165
2,4,6-triisopropylbenzophenones, lowest triplet states, rot. relax., picosecond laser spectroscopy investig. 7−129690
trimedlure-Y, ^{13}C and ^1H chemical shift assignments and conformation confirmation, 2-D NMR 7−122574
1,3,5-trimethoxybenzene, ^{13}C chem. shielding anisotropy, variable angle sample spinning obs. 7−77408
1,3,5-trimethoxybenzene, two-dimens. chemical-shift anisotropy correlation spectra 7−106040
3,5,7-trimethoxyflavone, absorpt. and fluoresc. spectra, acidity depend. 7−82243
3,5,7-trimethoxyflavone, fluoresc. quenching by halide and pseudohalide ions 7−122592
trimethyl ammonium cadmium trichloride, dielec. dispersion, mol. reorientation of trimethyl ammonium ions 7−106074
1,3,3-trimethyl-6′-nitro-spiro(indoline-2,2′-[2H-1]benzopyran), open, phosphoresc. polaris. 7−77655
trimethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
trimethylamine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
trimethylamine, excited state, ionis. and internal conversion, photoelectron spectra 7−74710
trimethylamine, lone pair electrons, electron momentum spectroscopy 7−129867
trimethylamine cadmium trichloride cryst. struct. in high temp (3×3) phase 7−142746
tris(trimethylammonium)nonachlordiantimonate (III), mol. dynamics, PMR studies 7−85473
trimethylammonium tetrachlorozincate polycryst., low temp. high press. PMR phase transition studies 7−112970
trimethylarsine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
(2,4,6-trimethylbenzoyl)diphenylphosphine oxide, micellar soln., photodecomp. in mag. field 7−129814
1,2-trimethylene-3-methylcyclooctatetraene, preparation, cyclooctatetraene ring flattening by annulation, PMR investig. 7−119500
trimethyloxonium ion, fragmentation studied in tandem quadrupole mass spectrometer 7−71552
2,2,4-trimethylpentane, rot. isomerism, US investig. at high press. 7−98346

organic compounds continued
trimethylphosphine, C—H stretching overtones, photoacoustic spectrosc. 7—129691
trimethylphosphine, second-order mag. parameters and mag. isoscreening lines 7—103409
trimethyltin hydroxide, solid, high resolution NMR spectrum 7—85446
2,4,6-trinitrodiphenylamine, solubility study in micelles and microemulsions 7—98464
1,3,5-trioxane, multiphoton dissoc., collision effects, IR spectra anal. 7—74601
triphenylarsine, FT IR and Raman spectra 7—99867
triphenylcarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7—103561
triphenylene-d_{12}, elec. polarisability tensor, NMR study 7—82224
triphenylmethane dyes in soln., barrierless electronic relax. 7—100520
triphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7—68221
triphenylphosphine, FT IR and Raman spectra 7—99867
1,2,3-triphenylphosphirene, solid, mag. shielding tensor meas. 7—92509
triphenylstibene, FT IR and Raman spectra 7—99867
tripropylamine, quantum yield for VUV radiation detection up to 160 nm 7—81887
triptycene, electronic states, two-photon UV excitation spectra, polarisation depend. 7—68335
triptycene, trimeric system, vibronic coupling model, UV spectrum 7—135954
tris(dimethylamino)cyclopropenium 2,3-dichloro -5,6-dicyanobenzoquinonide, triplet spin excitons 7—112190
tris(hydroxymethyl)aminomethane, H bonding, vibr. study 7—144076
tris(methylene)metaphosphate, bonding, ab initio calcs. 7—129560
tris(substituted amino) sulphonium ions, cryst. and mol. struct. 7—74410
tris(tetrabutyl ammonium) europium hexathiocyanate, IR, Raman and fluoresc. spectra 7—116969
tris(trifluoromethyl)iodomethane, IR absorption spectra, vibr.-relaxation time 7—82121
tris (dimethylammonium) nonabromodiantimonate (III), ferroelectricity and phase transitions 7—125634
tris hydroxymethyl aminomethane, lyoluminescence, γ dosimetry appl. 7—87231
trisarcosine calcium chloride crysts., H bond structural changes at ferroelec. transition, ^{2}D NMR study 7—77409
Triton X-114-H_2O, lamellar phase to isotropic liq. transition, phase diagram determ., DSC anal. 7—111871
tropolone, tunnelling dynamics, fluctuations, stochastic Liouville eqn. 7—129626
tropolone+U(VI) reaction, extraction-spectrophotometric determ. 7—100557
tropone, decarbonylation, time depend. mass spectra, breakdown graphs 7—93273
troponoid spiro compounds, absolute stereostruct., CD spectra calcs. 7—90235
truxene derivatives, disc-like mesogens, phase diagrams, dilatometric and thermobarometric studies 7—98445
trypaflavine, acceptor luminesc. enhancement by donor luminesc. reabsorpt. 7—117015
trypaflavine-rhodamine B mixture, acceptor luminesc. enhancement by donor luminesc. reabsorpt. 7—117015
tryptophan, excited, solvation, in polar glasses *(Japanese)* 7—132932
tryptophan and its derivatives in soln., nonexponential fluoresc. decay, conformational states, lifetimes 7—90259
tryptophan residue, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7—136002
$(TSeT)_2I$ crystals, chirality and microtwinning 7—91551
TTeC$_n$-TTF, high-mobility organic semiconductor, struct. and cond. 7—124989
TTeF heterocyclic π-donors, TMHM-TTeF and CpHM-TTeF, synthesis and elec. props. 7—99016
$TTF(Ni(dmit)_2)_2$, supercond. transition temp., effect of press. 7—70455
$(TTF)_6CuBr_4$ and $(TTF)_2CuCl_2$, proton magnetic relaxation studies 7—106051
TTF dimer charge transfer complexes, synthesis and elec. props. 7—99006
TTF radical cation salts with metal halides, elec. cond. and struct. 7—84859
TTF-1, 3, 5-trinitrobenzene complexes, preparation and props. 7—131628
TTF-chloranil, neutral-ionic interface, interchain Coulomb interactions 7—83843
TTF-chloranil mixed stack cpd., neutral-ionic transition 7—84253
TTF-p-chloranil, neutral-ionic transition, ^{1}H-NMR and EPR studies 7—84256
TTF-p-chloranil, neutral-ionic transition, elec. conductivity, devil's staircase behaviour 7—112312
TTF-p-chloranil single cryst., neutral-ionic phase transition 7—84255
TTF-TCNQ, CDW state, dielectric losses, temp. depend. 7—99668
TTF-TCNQ, CESR meas. under hydrostatic pressure 7—77404
TTF-TCNQ, collective modes 7—84853
TTF-TCNQ, DC elec. cond., temp. depend. 7—112308
TTF-TCNQ Langmuir-Blodgett films 7—99003
TTF-TCNQ quasi-1D conductor, CDW transport, defect conc. depend. 7—84844
TTF-TCNQ resistivity, one- and two-phonon scatt. process contribs. calcs. 7—76915
$(TTM\text{-}TTF)(I_3)_{0.823}$, organic conductor, mag. props. 7—99557
TTM-TTF complexes, cryst. struct. and stacking sequences 7—83944
tyrosine, persulphate oxidised, chemiluminesc. and Raman spectrosc. charact. 7—122541
undecamethylidyne saturable absorber for laser mode locking *(Chinese)* 7—90729
undecylic acid, polar liquid, associating behaviour, dielectric props. determ. 7—104513
unsaturated hydrocarbon radicals, MINDO/3 calcs. *(German)* 7—68219
unsaturated systems, isotope effects, ^{13}C NMR chem. shifts and hyperconjugative interactions 7—68344
uracil and analogs, core-electron binding energies, semiempirical HAM/3 study 7—81965
uranyl formate monohydrate, laser-induced photodecomposition, appl. to U isotope separation 7—106788
urea, aq. soln., electrokinetic studies across urinary bladder membrane 7—119753
urea, cryst., N-H stretching modes, Raman and IR spectra 7—85726
Urea inclusion cpds., diffuse scatt. and disorder 7—86892
urethane macrorings; conform. effects on polyrotaxane form. 7—106799
organic compounds continued
uric acid dihydrate, precip. diagrams and solubility 7—126475
uric acid-NaOH-HCl-water system, computed phase diagrams, dissolution and precip. 7—126476
uridine, Fourier transform IR and laser Raman microprobe spectra 7—132271
uridines, 5-substituted, conform. anal. and biological activity, PCILO calcs. 7—78734
urocanic acid, nucl. quadrupole coupling, ab initio calcs. 7—116987
γ-valerolactone, ground and vibrationally excited states, microwave spectrum 7—82082
vanadyl(IV) phosphate, $(VOHPO_4)_2.2.5H_2O.EtOH$, layered compound, preparation and structure 7—104722
vanadyl phthalocyanine films, electroabsorption spectra 7—85874
vancomycin-Ac-D-Ala-D-Na intermolecular interactions, ^{15}N NMR 7—129749
vapours, separation from air, membrane process 7—119701
verdazyl cations, electronic struct., absorpt. spectra 7—103480
verdazyl radicals, electronic struct., absorpt. spectra 7—103480
vinyl cation, rot. and internal rot. energy level calcs. 7—81932
vinyl cation, structs. and energies obtained using ab initio MO theory 7—109697
vinyl chloride, isomerisation equilib. rel. to carcinogenicity 7—93277
vinyl chloride+He(Ar)$(N_2)(CO_2)$, energy transfer meas. in collisional deactivation 7—90338
vinylamine, amino wagging and torsion vibrations, far-infrared spectra 7—122526
vinylamine, inversion-torsion motion, microwave spectrum analysis 7—122504
9-vinylanthracene, S_1 torsional pot., vibr. struct., laser induced fluoresc. 7—68388
vinylchloride, multiphoton ionisation-fragmentation pattern, TOFMS 7—122625
1-vinylimidazole, geometry, quantum chemical calcs. 7—109778
1-vinylpyrazole, geometry, quantum chemical calcs. 7—109778
4-vinylpyridine copolymerised with styrene in benzene soln., ^{1}H NMR and ^{13}C NMR spectra *(French)* 7—126450
viologen cpds., reduced, IR spectra and dimer struct. 7—129706
viologen dimer, reduction by TiO_2 conduction band electrons 7—93369
viologen-cyclodextrin/ferrocyanide system, blue electrochromism 7—138422
vitamin B12, sorption from aq. soln. 7—105241
vitamin B_{12}, active centre quantum chem. simulation 7—106969
vitamin B_1, fluorescent derivatives, photophys. and photochem. props. 7—100813
water-alcohol highly polar complex mixtures, phase equilib. calcs. using Peng-Robinson eqn. of state and van der Waals mixing rules 7—69853
water-decane-AOT, microemulsion viscosity charactn. 7—139047
water-fluoroalkanol mixtures, excess molar enthalpies meas. 7—98507
water-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7—124465
water-ketone highly polar complex mixtures, phase equilib. calcs. using Peng-Robinson eqn. of state and van der Waals mixing rules 7—69853
water-methanol mixture, chaotic advection by modulated traveling waves 7—130732
water-phenol mixtures, surface props. 7—70032
water-soap-alcohol system, phase equilib., thermodynamic model 7—69862
water-sodium bis(2-ethylhexyl)sulphosuccinate-undecane, cond., percolation transition, temp. and salinity effect 7—98533
woody tissue, O_2 sensitive background, Raman spectra 7—90148
xanthene dye solutions, spectral props. *(Japanese)* 7—136291
xanthene dyes, photochem., anionic micelle characterisation 7—119544
xanthene dyes, US mol. jet, luminesc. and visible-UV spectra 7—68402
α-(xanthene-2-carbonyloxy)-ω-(xanthene-2-carbonyloxy)alkanes, intramol. H abstraction, mag. field effects 7—113878
xanthione-d_0(-d_4)(-d_6)(-d_8), radiationless decay, D isotope effect 7—135986
xanthomonas oryzae ^{14}C tracer method *(Chinese)* 7—114497
xanthone, polarised UV and phosphoresc. spectra 7—74700
xanthylium salt, broadband tuned CW dye laser emission, fluoresc. and absorpt. spectra 7—90599
o-xylene, chemisorption, oxidative catalysis on activated C 7—78550
para-xylene, internal rot., character tables, symmetry eigenvectors 7—129568
Xylene isomers, multiphoton reson. ionisation spectra anal. 7—90181
xylenes, supersonic jet, dispersed emission and TOFMS 7—129770
xylenols, fluorescence quenching of excited states due to H bonding with triethylamine 7—82266
xylose, ^{14}C labelled, absorbed dose obs. 7—107249
D-(x)-xylose, adsorpt. at Hg-water interface 7—112087
yeast alcohol dehydrogenase, Raman and Fourier transform IR study 7—86900
yeast composition anal. by PIXE X-ray fluorescence, Rutherford backscatt. 7—93412
yeast flavocytochrome b_2, interactions between haeme and flavin, EPR and spin-lattice relax. time obs. 7—133186
ylides, gas phase struct., ab initio MO calcs. 7—116863
ylidions, gas phase struct., ab initio MO calcs. 7—116863
yttrium ethyl sulphate, Nd^{3+} doped, press. depend. of exchange interaction, ESR study 7—138322
yttrium trifluoromethanesulphonate nonahydrate:Er^{3+}(Dy^{3+})(Gd^{3+}), spin Hamiltonian parameters, EPR study 7—125532
zinc bis(oxalato(platinate, $Zn_{0.81}[Pt)C_2O_4)_2].6H_2O$, 1D conductor, transport props. and phase transitions 7—105552
zinc octaethylporphyrins, solns., nondegenerate CARS spectra 7—90168
zinc phthalocyanine, low temp. reson. Raman spectra 7—132266
zinc tetrabenzoporphin, substituted, matrix isolated, stark effect, spectral hole burning 7—96757
zinc tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7—119539
zirconium di-alkali metal di(nitrilotriacetate) dihydrate orthorhombic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7—99726
Zn propionate, anhydrous, orthorhombic cryst. struct. determ. 7—83931
ATP, adsorbed on Ag electrode, SERS, protonation effects 7—114188
Ag electromigration suppression effect 2,4-diamino-6-vinyl-s-triazine compounds 7—91856
Al/porphyrin/Au Schottky barrier cells, exciton diffusion lengths and apparent barrier widths 7—105653
n-alkane in n-alkane solvent, partial molar volumes at 298.15 K 7—98508
Ar-ethene gas mixtures, Monte Carlo calcs. of electron transport 7—109618

organic compounds continued
Au-stearic acid-InP Schottky barrier *(Chinese)* 7−125079
β-(BEDT-TTF)$_2$X crystals, (X=I_3IAuI), electron-phonon coupling and supercond. gap 7−131926
BaF_2-TMAE detector for PET appl. 7−79117
barium stearate Langmuir-Blodgett films, STM investigations 7−76624
Be ethylene, exciplexes, triplet state, reaction hypersurfaces 7−68236
Be salicylate complexes, electronic struct., polar substituent effects, CNDO/2 calcs. 7−141467
benzene-Ar complex, zero kinetic energy photoelectron spectra, ionisation energy determ. 7−96789
$Bi_2(CO_3)_3$-8-hydroxyquinoline complex, solid state reaction product, cryst. struct., bonding, X-ray diffr., IR spectra 7−124159
C black-copper phthalocyanine mixtures, elec. cond., grain size 7−112333
C network in coal pitches, structural order, microraman investig. 7−90989
C_8 aromatic isomer mixtures, separation by pervaporation through polymer films 7−78544
CCl in carbon tetrachloride-Ar(Kr) discharges, dissoc. excitation 7−82198
CD+NO, chemiluminesc. reaction, kinetic isotope effect, internal energy disposal 7−71494
CH, $A^2\Delta$ state, collisionally induced rot. energy transfer 7−96829
CH acids, ionisation, Bronsted rel., α coefficient anomaly 7−103417
CH bond lengths, conjugation effect, CNDO/2 calcs. 7−81981
CH, collisional quenching cross sections meas. at 1300 K, meas. using pyrolysis/laser fluoresc. technique 7−74694
CH radical, Ar+methane reaction prod., vibr. energy, fluoresc. spectra anal. 7−138967
CH radical, $C^2\Sigma^+-X^2\Pi$ system, transition probabilities, laser induced fluoresc. 7−96781
CH^+, isotopic species, vibr.-rot. transition probabilities, electric dipole moment fn. calcs. 7−96504
CH^+, laser photofragment spectrosc. 7−122498
CH^+, photodissoc. to open-shell atoms, nonadiabatic effects 7−122633
CH^{2+} product ions form., high resolution energy loss spectra 7−82352
CH+NO, chemiluminesc. reaction, kinetic isotope effect, internal energy disposal 7−71494
CH+propane (isobutane)(neopentane), reaction rate consts. meas. 7−86574
CH_2 isolated in solid Ar, IR spectra, $\tilde{A}^2\Pi$-$\tilde{x}^2\Sigma^+$ transition 7−90119
CH_3 radical, ionisation energy determ. using mass spectrometer 7−71554
C_2H_n ions, nuclear and electronic struct., ab initio HF calcs. 7−96531
$C_3H_3^+$+acetylene (diacetylene), gas-phase reactions, FT ICR mass spectrosc. obs. 7−138986
$C_4H_9^+$, energy hypersurface, isomerisation MINDO calcs. 7−81980
C_nH abundances (in TMC-1) 7−80075
CHO^+ isomers, C^++H_2O prod., proton transfer rates with N_2O detection 7−83363
$C_3H_4O^{+\cdot}$, struct., ab initio MO calcs. 7−109742
CH_3O_4H, conform. role in peroxide radical recombination, MINDO/3 calcs. 7−74448
CO-methane mixtures, excess enthalpies meas. 7−76441
CO_2-cyclohexane mixtures, excess enthalpies meas. 7−76442
CO_2-toluene mixtures, excess molar enthalpies and volumes meas. 7−143045
CX^{2+}, X=F, Cl, charge separation reactions, mass-analysed ion kinetic energy spectra 7−144684
carbon tetrafluoride, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
β-carotene, ground state reson. Raman spectra, saturation and line broadening study 7−103510
CdTe-nematic liq. cryst., light-induced orientational effects study 7−85006
Cu (II) aromatic hydroxyoxime homologous complexes, ESR spectra study 7−103550
Cu-epoxy one-dimensional composite, acoustic wave transmission 7−123389
Cu(100) and (111), geometry and vibrs. of molecular adsorbate, acetylene, determ. 7−118259
D_2-methane, aq. solns., sonolysis, isotopic exchange 7−144699
Er acetate, nitrate and sulphate solutions, interaction and intensity parameters 7−70882
ethylene, formation from ethyl radical +O_2, Arrhenius parameters, negation temperature coefficient, reaction path 7−144683
Fe chelates of salicylhydroxamic and benzohydroxamic acids, Mossbauer study 7−125571
Fe complex, trans-MFe(CO)$_3$ substituted phosphine 7−129619
$Fe_3O(acetate)_6(H_2O)_3Cl.6H_2O$, triangular cluster spins, magnetic ordering 7−132025
Fe_n(methanol)y, metal cluster-adduct, IR multiple photon dissoc. spectra 7−129817
Ge-ALC, anal. of polarographic adsorptive complex waves 7−106861
H halide-cyclopropyl derivates, H bonded complexes, matrix isolation spectra 7−109734
H-bonded complexes, triple bonds, ab initio methods 7−129561
HCCN, bent and linear conform., multiconfig. SCF calcs. 7−103364
HCO radical, ground and excited states, laser induced fluoresc. and multiphoton ionis. spectra 7−129781
H_2O-amino acid interaction, NMR relax. investig. 7−90219
H_2O-DMSO, structural relax. times, Brillouin spectra 7−99876
H_2O-methane-NaCl($CaCl_2$), fluid phase equilibria, to 800 K and 250 MPa 7−124442
H_2O_2, O−O bond props., SCF MO calcs. 7−109732
^{3}H-selegine, preparation and purification *(Chinese)* 7−114496
He-Ne/methane laser, absolute freq. meas. 7−122929
He-Ne/methane laser, portable optical freq. standard meas. 7−123051
N-(p-n-hexyloxybenzylidene)-p-n-toluidine, liquid cryst. transitions, US studies 7−105022
(hydroxyphenyl)benzotriazoles, internally H bonded, spectrosc. and kinetic investig. 7−82202
I_2-organic complexes, Raman spectra motional narrowing 7−90151
KCl-sucrose, diffusion-convection system, stability anal. 7−76466
Kr-ethane system, vapour-liquid equilib. 7−137532
Li-methylamine system, PMR 7−116992
methane, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
methyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
3-methylhexanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975

organic compounds continued
Mg-porphyrin, in amorphous ethanol matrices, dephasing and vibronic relax. luminesc. and hole burning investig. 7−92720
$MgCl_2$-18-crown-6 complex, struct. and conformation 7−137352
molecules+H^+, C K-shell Auger-electron prod. cross sections meas. 7−122678
N containing saturated organic compounds, photoelectron spectra 7−110003
NH_4ClO_4, burning surface, copper and sodium salicylate impurities elec. cond. meas. 7−100567
Nb_x (x=1-15) clusters, reactivity with benzene, photoionis. TOF mass spectra detect. 7−132971
Ni octaethylporphyrine, vibr. struct., picosec. CARS, excited states dynamics 7−122553
OH+cyclohexane(ethane), absolute rate const. meas. 7−93247
PbI_2-aniline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7−76399
PbI_2-hynoline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7−76399
PbI_2-quinoline intercalation compound, phase transition, miniband spectrum, superlattice 7−131306
phenanthrene in low temp. alcohol glasses, quenching of fluorescence and phosphorescence 7−99912
p-polyphenyls, conformational instabilities, press. depend. *(Japanese)* 7−131079
Pr complex, $((C_4H_9)_4N)_3(Pr(NCS)_6)$, crystal struct. 7−91554
Pt group nitrile complexes, liq. cryst. and cryst. struct. 7−111360
p-quaterphenyl, radical cation salt crystals, EPR studies 7−112933
S containing molecules, first derivatives of SCF energies, basis set depend. Rys polynomial method 7−116826
SF_6-propane, vibr.-translational relax. times anal. 7−103633
SO_2 in polar organic solvents, vapour-liq. equilibria 7−98413
a-Si:H,B(P)-(quinone-hydroquinone), liquid Schottky barrier, charact. 7−77039
$SnCl_4$-benzoyl chloride, substituted, complexes, ^{35}Cl NQR spectra 7−141610
T, laser isotope separation by multiphoton dissociation of organic cpds. *(Romanian)* 7−144734
$^{99}Tc^m$-urokinase, activity meas. *(Chinese)* 7−114498
Xe-ethane gas mixtures, Monte Carlo calcs. of electron transport 7−109618
Xe-methane 7−109618
Zr citrate, thermal decomposition, ZrO_2 prep. 7−77854

organic insulating materials
see also insulating oils; paper; plastics; rubber; silicones; varnish; waxes
acrylic insulator, UV-induced flashover using pulsed excimer laser 7−69506
dielectric with evaporated thin electrodes, chem. processes during elec. breakdown 7−99671
epoxy-isocyanate resins, network polymers, as insulating materials 7−104594
ethylene copolymers, elec. breakdown 7−99674
ethylene-styrene copolymer, insulating material, breakdown strength 7−70703
Kapton insulation failure expts. simulating ECS solar array in-orbit power losses 7−144856
LDPE, space charge polarisation in divergent AC field, role of atmospheric gases 7−125608
LDPE films, charge trapping and cond., modification by additives 7−84917
PMMA, electron beam irrad., Kerr electro-optic field mapping meas. 7−99795
polyether ether ketone films, dielec. and cond. props. 7−85532
polyethylene, AC elec., ageing phenomena, thermally stimulated discharge current meas. 7−85529
polyethylene film, highly elongated, surface potential decay and residual voltage 7−70697
polyethylene films, low-density, light emission under DC field 7−99937
polyethylene-(ethyl-vinyl acetate copolymer) interface, elec. props. 7−125609
polymer, water tree growth mechanism, role of ions 7−99672
polymer insulators, carrier injection, space charge, and elec. breakdown 7−125607
polymer insulators, nonequilib. charge carrier transport, stochastic description 7−124981
polymers, interactions with water and suitability for use as electrical insulators 7−118253
polymers, water tree inhibition using barbituric acid derivatives 7−99673
polymers, water treeing rel. to morphology and microstruct. 7−99675
polyolefin insulation oxidative degradation due to surface influences 7−106652
polystyrene recovery voltage in capacitor dielec. absorpt. and equiv. cct. 7−99654
XLPE, thermally stimulated surface pot. meas. using temp. gradient, trapped carrier polarity 7−125601

organic molecule configurations
see also isomerism
(1-) chloro-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
4-ethyl-2′-fluoro-4′-(4″-pentylcyclohexyl)biphenyl, mesogenic compounds, crystal and mol. structs. 7−137353
β-phenylvinylphosphonic acid, cryst. and mol. struct., H bonds, X-ray study 7−104726
acetaldehydes, nonbonded pots., mol. mechanics calcs. 7−68425
acetaldoximes, isomeric, metalated, structs., rel. energies, calcs. 7−89927
2-acetamido-2-deoxy-D-glucopyranoses, circular dichroism, rotations strength, solvent dependence, anomeric effects 7−141614
acetones, nonbonded pots., mol. mechanics calcs. 7−68425
acetonitrile, dil. spin I=3/2 powder, rot. isomerism, Zeeman and dipolar coherences, PMR spectra 7−68357
acetophenone-(O-phenyl-N,N-di(2-chloroethyl)amidophosphonyl)hydrazone, struct. 7−137351
3-acetoxy-4-hydroxy-4-methyl-7-isopropenylselenopane, struct., X-ray diffr. exam. 7−111529
acetyl isocyanates, Cl-substituted, struct., IR spectrosc. 7−141576
N-acetyl N′-methyl serine amide, struct., ab initio geometry refinement 7−129584
α-acetyl-α,α-dimethylmethyl cations, pot. energy hypersurface, MNDO calcs. 7−116853
2-acetylanthracene, electronic spectra 7−74567

organic molecule configurations continued
acetylene, protonated, Gaussian basis sets, bridged structure, proton affinity, rotational constant, stretching frequency 7−135840
acetylene, torsional barrier, ab initio calcs. 7−74456
N-acetyloxypyridinium halides, ion pairs, molecular structure, interionic vibrations 7−122660
N-acetylproline amide, γ turn, ab initio calcs. 7−129556
1-acetylpyridinium halides, ion pairs, interionic vibrs. and mol. struct. calcs. 7−74427
acrolein, and Lewis acid complexes, conform., ab initio calcs. 7−68194
acrylic acid, and Lewis acid complexes, conform., ab initio calcs. 7−68194
5-adamantyl-2,4-diaminopyrimidines, 6-substituted, cryst. and mol. struct. investig. 7−142744
adenosylcobalamin, 3D struct. anal. 7−109712
alcohols, structural and conformational properties, ab initio calcs, internal rotation 7−141457
aldono-1,4-lactones, PWR and NMR, ab initio MO calcs., conformational studies 7−141426
1-^{13}Caldoses, ^{13}C NMR, chemical shifts and ^{13}C-^{13}C spin couplings 7−129741
alkane radical cations, linear, selective deprotonation, ESR obs. 7−68371
alkanes, cyclic, C_{24}-C_{288}, vibr. spectrosc., chain folding and packing, conforms. 7−90130
alkanes, linear, C_{24}-C_{288}, vibr. spectrosc., chain folding and packing, conforms. 7−90130
alkanethiols, conform. anal., mol. mech. force field appl. 7−109862
alkanoic acids, cross-sectional areas, fractal theory and mol. shape 7−68238
2-alkanones, glass matrices, dielectric absorption, relaxation processes 7−99659
alkene-ICl mol. complexes, form. consts., alkene struct. effects 7−86571
3-alkyl-7-methyl-3,7-diazabicyclo[3.3.1]nonan-9-ones, conformation, ^{1}H and ^{13}C NMR 7−68359
bis(di-n-alkylammonium)tetrachlorometallates, conformational disorder 7−129898
alkylammonium nitrate salts, thermal decomp. site shifting by backbone substitution 7−119517
alkylaryl ureas, configs., IR spectra 7−96670
n-alkyloligo(oxyethylene)s, solid-state mol. conform., Raman spectrosc. obs. 7−85731
bis(n-alkylpyridine)dichlorometallates, conformational disorder 7−129898
allyl cations and anions, 2-substituted, MINDO calcs. 7−122362
amides, rotational transition structs., ab initio MO calcs. 7−103471
(4-amino)-1,3,4,5-tetrahydrobenzo(cd)indazole, tautomerism, MNDO geometry optimisation 7−129601
(5-amino)-4,5,6,7-tetrahydroindazole, tautomerism, MNDO geometry optimisation 7−129601
amino acids, unionised, equilib. structs., MNDO calcs. 7−129600
γ-amino butyric acid, counterion effects on NMR chem. shifts 7−68360
1-aminoalkanes, glass matrices, dielectric absorption, relaxation processes 7−99659
aminoanthraquinones, intramolecular orientation, transition moment, fluoresc. 7−82273
γ-aminobutyric acid and inhibitors of restricted conform., electrostatic pot. maps, biological activity, CNDO STO calcs. 7−78732
aminophosphone complexes, cryst. and mol. struct. 7−111532
2-aminopyridine, van der Waals and H-bonded systems, structs., excited state dynamics 7−136031
2′,5′-anhydroarabinosylcytosine, struct. and conform., X-ray, ^{1}H and ^{13}C NMR anal. 7−98103
anisole, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
18-ANNULENE, struct., aromaticity, SINDO1 SCF and CI calcs. 7−116854
anthracene, graph theory adjacency matrices, eigenvectors, topological anal. 7−109701
anthracene, Kekule structs., enumeration 7−89913
anthracyclines, aglycone moieties, redox props., electrochemical expts., ab initio MO calcs. 7−100796
anthracyclines, imino derivatives, electronic props., relative stabilities 7−133214
aromatic molecules, mono- and di-substituted, ^{13}C NMR correl. times 7−90212
aryl ethers, in alkaloids, conform. preferences, ^{1}H spin-lattice relax. obs. 7−82214
2-azallyl radical, struct. and electron affinities 7−74432
azanaphthalenes, triplet state reson. Raman spectroscopy 7−82132
azatetrahedranes, struct., MNDO and MINDO/3 calcs. 7−109773
azetidine, pyramidal inversion barrier, PMR and ab initio MO calcs. 7−109713
3−azidopropyne, structure, IR and Raman spectra, electron diffr. 7−122341
azine, struct., protonation, isomers, ab initio MO calcs. 7−81955
aziridine, saturated cycle struct., oscillatory anal. 7−141447
azo and azomethine cpds., thermal E/Z isomerisation, ab initio STO-3G calcs. 7−109746
bacterial peptidoglycan, conform. struct., N-acetyl group role, PCILO calcs. 7−114185
bacteriophage Pf1 coat flexibility, struct. temp. depend., dynamic light scatt. study 7−78746
bacteriorhodopsin, photochemical cycle, ps time-resolved reson, Raman spectra anal. 7−86915
basket handle porphyrins, extremely short chain, synthesis, spectrosc., struct. 7−103476
basketanes, geometric and electronic struct., iterative maximum overlap calcs. 7−96528
(BEDT-TTF)$_2$I$_3$, α- and β-phases, intermolecular contact directions rel. to magneto-effects 7−85197
β-(BEDT-TTF)$_2$I$_3$, anisotropic Knight shifts and spin density distrib. 7−70660
benzal chloride, dichloromethyl group orientation, conform., overtone spectra investig. 7−68300
benzalazine derivatives, H-bond, geometry, CNDO/2 and MNDO, UV, IR and ^{1}H NMR 7−81979
benzaldehyde, geometry, barrier height, STO calcs. 7−129582
1,2-benzanthracene, geometry, fine struct. fluoresc. and phosphoresc. *(German)* 7−90267
benzene, π bonds, ab initio electron correl. calcs. 7−109805
benzene, adsorbed on Pt (111), mol. distortion, angle resolved UPS study 7−82281
organic molecule configurations continued
benzene, catacondensed, Wiener numbers determ. 7−89912
benzene cations, substituted, INDO and CNDO/2 calcs. 7−81977
benzene chromium tricarbonyl-thiourea inclusion complexes, SHG study 7−75054
benzenes, monosubstituted, dipole moments, ab initio MO calcs. 7−109739
benzenoid chains, unbranched and cata-condensed, Kekule structs. investig 7−89914
benzenoid hydrocarbons, enumeration and classification 7−103366
benzenoid hydrocarbons, nonKekulean struct., topological props. 7−81956
benzenoid hydrocarbons, stability, unified theory 7−89921
benzenoids, trigonal, Kekule struct., symm.-adapted fragmentation method study 7−96529
benzil, mol. struct. and conform., GPED 7−82357
1,5-benzodioxepins, 3-halogenated, gauche conform. effect, mechanism, NMR investig. 7−103534
benzodithiepin, and derivatives, conform. dynamics, ^{1}H and ^{13}C NMR 7−82212
benzol bromide, dibromomethyl group orientation, conform., overtone spectra investig. 7−68300
p-benzoquinone-hydroquinone, complex, H-bonded and stacked structures, ab initio SCF calcs. 7−109745
benzothiazole-2-one, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
N-benzylideneaniline derivatives conformation, substituent effects, UV and ^{1}H NMR spectra 7−74654
benzylidenephthalides, indan-diones, photoinduced isomerisation, UV fluoresc. spectra 7−96729
(N-benzylpiperazinium)$_2$ copper tetrachloride, mag. props., EPR linewidth meas. 7−125362
benz[a]anthracene, dichroism spectra, fluorescence polarisation spectroscopy, transitions, NDO calcs., LCAO calcs., moment directions 7−141611
bicuculline, counterion effects on NMR chem. shifts 7−68360
bicyclo(3.1.0)hexane, zero-point-average struct., ab initio geometry 7−81954
bicyclo (n,1,0) alkanes with trimethylsilyl groups and alpha-chlorosilicon compounds, IR and Raman spectra *(French)* 7−96681
bicyclobutylidene, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7−96544
bicyclopropylidene, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7−96544
bicyclo[1.1.0]tetraarsane, mol. struct. isomers, ab initio calcs. 7−81963
bicyclo[2.2.1]heptanes, and derivatives, struct., ab initio HF MO calcs. 7−129583
bicyclo[3.3.1]nonane, conformers, ab initio STO-3G calcs. 7−109738
bifurans, mol. configs., STO calcs. 7−68201
biphenylcyclohexanes, substituted species, nematic phase struct., X-ray diffr. exam. 7−97921
2,2′-bipyridine in acidic media, Raman spectra, conformational behaviour 7−116976
1,2-bis(1-bromoethyl)-3,4,5,6-tetraisopropylbenzene, conformational cyclononantiomerism, NMR investig. 7−109934
bis(bis(triphenylphosphine)Ag)OsCl$_6$, mol. struct. 7−129901
bis(ethylenedithio)-TTF, spatial and electronic struct., SCF-MO-LCAO MNDO RHF calcs. 7−74446
1,2-bis(methylseleno)ethene, Se coupling consts., IPPP-INDO and PCILO-CNDO calcs. 7−103395
biscarbocyanines, conform. equilib. calcs. from absorpt. spectra 7−103479
borinine, struct., vibr., ab initio MNDO STO calcs. 7−89967
1-bromo-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
bromobutenes, conformational struct., torsional force consts. calcs. 7−122489
p-bromophenacyl ester of 15-fluoro-15-desoxy-11-epi-prostaglandin $F_{2\alpha}$, cryst. and mol. struct. determ. 7−124236
bromopropenes, conformational struct., torsional force consts. calcs. 7−122489
1,3-butadience, s-cis and gauche conformers, planarity, matrix isolation IR obs. 7−90114
butane, fluorinated, core-level XPS spectra, ab initio calcs. 7−122327
1-butanethiol, chemisorption on Ag sol, SERS 7−96704
butenes, conformational energies and structs., mol. mech. calcs. 7−110059
n-butyl bromide, liquid phase, IR spectra molar absorptivities, temp. depend. 7−144046
tert-butylammonium chloride, cryst. struct., X-ray diffr. study at 115 K 7−104709
butyronitrile, IR and Raman spectra, conformational and vibr. anal. 7−109892
calcium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
calixspherand sodium picrate complex, X-ray struct., kinetic stability 7−144691
(+)-car-3-ene, conform., fully optimised STO-3G structs. 7−109741
carbamates, thermal stability, struct. effects, quantum-chem. MINDO/3 calcs. 7−109776
carbocations, α-substituted, substituent, stabilisation energies, ab initio MO calcs. 7−109748
carbocations, cyclic and β-substituted, struct. and stability, ab initio MO calcs. 7−109749
β-carotene in liposomes, pot. dependent changes in mol. conformation, combination scatt. spectroscopy obs. 7−126705
carotenoids, contained in photosynthetic bacteria, Raman and IR spectra study 7−68317
carotenoporphyrins, conform. study related to photophysical props. 7−68195
catechin, conformational anal. 7−74422
ceruloplasmin, trigonal cryst. struct., rot. function, X-ray diffr. study with 6 Å resolution 7−106967
CHEMICS, automated struct. elucidation system 7−81912
α-chloroacrolein, conformation equilib., mol. struct. determ., gas-phase electron diffr. 7−68460
chloroanthraquinones, triplet states, visible absorpt. and phosphoresc. spectra anal. 7−103521
chlorobenzenes, isomers, bond orders, valence indices, oxidation numbers, ab initio calcs. 7−96527
n-chlorodifluoromethanimine, isotopic species, struct. quadrupole coupling consts., microwave spectra 7−122513

organic molecule configurations continued
N-chlorodifluoromethylenimine, struct., harmonic force field and microwave spectrum meas. 7—74570
chloromethylformate, conformers and rotamerisation, matrix isolated IR spectra and ab initio calcs. 7—109894
chloromethylstannanes, soln. struct. and preferred orientation in liq. crysts. 7—68362
2-p-chlorophenyl-4-hydroxy-6-oxo-1, 3-thiazine, crystal struct., X-ray, UV, IR and PMR spectra 7—111527
chlorophyll, isomers, metal-substitution, Raman and IR spectra study 7—68317
3-chloropropanal, gas phase data, conformational energies and struct. 7—117069
3-chloropropanoyl chloride, gas phase data, conformational energies and struct. 7—117069
chrysanthemic acid, flexible mol. fitting technique using distance matrices 7—74424
cobalt oxydiacetate trihydrate, mag. props. and mol. struct. determ. 7—112769
conference, Marineland, FL, USA (Mar. 1986) 7—72693
conformational struct., transition energies, thermochemical parameters, all valence electron approx. calcs. 7—109759
copper I trifluoroacetate, mol. struct., GPED 7—96871
coronene, as model of charcoal, ^{13}C NMR chem. shift tensor investig. 7—109947
cosmomycins, anthracycline antibiotics, field desorption mass spectrometric obs. 7—103685
coumarin 450 laser dye, simultaneous dual superradiance from planar and twisted conformations 7—110053
cubane, force consts. and equilib. geometry, MINDO/3 calcs. 7—68220
cyanate radical, struct. and electron affinities 7—74432
2-cyano-N-(4-(4-n-pentyloxybenzoyloxy) benzylidene) aniline, nematogenic, cryst. struct., mol. conform., X-ray diffr. study 7—111522
cyanobenzene, struct., ring distortions, GPED study 7—122708
3-cyanocyclopropene, mol. struct., microwave spectra and ab initio MO calcs. 7—109877
cyclic allylic alcohols, configurational assignment, NMR 7—74661
cyclic cpds., ambergris type odour origin, CNDO calcs. 7—74447
cyclic ketones, six-membered-ring, absolute config., ^{13}C NMR 7—96735
cyclic molecule, number of rings formula 7—108094
cyclobutane, force consts. and equilib. geometry, MINDO/3 calcs. 7—68220
cyclobutylgermane, conform. anal., internal rot. barriers, Raman investig. 7—74636
cyclobutylsilane, conform. anal., internal rot. barriers, Raman investig. 7—74636
cyclodextrin-crown ether-cation inclusion complexes, cryst. and mol. struct. 7—117911
1,3-cyclohexadiene iron tricarbonyl-thiourea inclusion complexes, SHG study 7—75054
cyclohexane, liq., neutron diffr. struct. obs. 7—137193
cyclohexene radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7—68214
cyclopentadienyl cations, N and B substitution, mol. struct., ab initio MINDO/3, MNDO, STO calcs. 7—96547
cyclopentadienyl cobalt complex, planar conform., triplet state, ab initio MO-SCF calcs. 7—116818
cyclopentanone, mol. struct., GPED and microwave spectra 7—96869
cyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7—81964
cyclopropane, force consts. and equilib. geometry, MINDO/3 calcs. 7—68220
cyclopropane, r_α-struct., vibr.-rot. correl., NMR study 7—68361
cyclopropane, saturated cycle struct., oscillatory anal. 7—141447
cyclopropenes, conformational energies and structs., mol. mech. calcs. 7—110059
cyclopropenylidene, ab initio mol. orbital studies of low-energy metastable isomers 7—88590
cyclopropenylidene, isotopomers, mol. struct., millimeter wave spectra 7—82083
cyclopropenylidene (C_3H_2), first interstellar organic ring, centrifugal distortion consts. from laboratory spectroscopy 7—115552
cyclopropyl silane, mol. struct., GPED 7—96872
cyclopropylidenecyclobutane, geometric struct. and energetics, ab initio IMO, MINDO/3 and MNDO calcs. 7—96544
cyclopropylisothiocyanate, gas phase electron diffr., mol. struct., ab initio HF calcs. 7—82356
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7—125725
deoxy-2-aminopurine, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7—136002
2′-deoxy-3′,5′-di-O-acetyl adenosine, mol. conform., cryst. struct., PMR obs. 7—98104
desacylguayulin A, stereochem., NMR investig. 7—96744
desertomycin, antibiotic, mol. struct., 2D NMR investig. 7—68345
di-tert-butyl ethanal, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7—129744
p-diaminobenzene, mol. struct. in gas phase and cryst. 7—90443
diastereomeric noncovalent electron transfer complexes, conform., thermodynamics 7—82018
dibenzo-18-crown-6, conformations, Raman spectra 7—74637
dibutyl sulphoxide, solns., structural transition temp., PMR and light scatt. intensity meas. 7—90201
1,1-dichloro-2-bromomethyl-cyclopropane, mol. struct., GPED 7—96874
1,1-dichloro-2-cyanomethyl-cyclopropane, mol. struct., GPED 7—96874
1,2-dichloroethylene, laser-induced interconversion, GPED anal. 7—132950
1,3-dichloropropane, liq., conform. at 253 K, wide-angle X-ray scatt. obs. 7—117092
1,1-dicyanocyclobutane, mol. struct., ab initio and GPED investig. 7—110107
1,1-dicyanoethylene, substituted, electronic struct., conform. mobility, NMR and PMR 7—74684
dicyclohexyl-18-crown-6, conformations, Raman spectra 7—74637
dicyclopropyl ketone, conformational equilibrium, vibrational spectra 7—122538
1, 2-dicyclopropylacetylene, unsymm., chem. activated restricted energy flow 7—106774
diethyl(silyl)amine, mol. struct., GPED 7—96873
diethyl sulphoxide, solns., structural transition temp., PMR and light scatt. intensity meas. 7—90201
diethylbenzenes, supersonic mol. jet spectroscopy 7—141592

organic molecule configurations continued
1-diethyleneamidophosphoryl-2-trichloromethyl-Δ^2-imidazolene, cryst. and mol. struct., X-ray study 7—104725
N,N′-diethylurea, mol. struct., self-assoc., IR spectra 7—96672
1,2-difluoroethane, conformational energies, ab initio MO calcs. 7—129573
2,3-dihydro-1,4-diazepine derivatives, struct. and tautomeric forms, ^1H and ^{13}C NMR spectra anal. 7—74663
5, 6-dihydro-2H-pyran-2-one, microwave spectrum, dipole moment and conform. investig. 7—109882
9,10-dihydroanthracenes, conformational anal., mol. mechanics calcs. and ^{13}C NMR 7—68347
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7—109876
dihydrophenazine, doped in mol. cryst., excited states characterisation 7—96571
1,2-dihydroxybenzene, microwave spectra, conformation 7—116952
diisopropyl ether, mol. struct. and conform., GPED 7—74762
N-(2-(N,N-diisopropylamino)ethyl)-2-oxo-1-pyrrolidinacetamide sulphate, conform., X-ray anal. 7—76110
2,5-dimercapto-1,3-4-thiodiazole, tautomeric forms struct., ab initio STO calcs. 7—96536
dimetal complexes, multiply bonded, intramol. bridging phosphine ligands, chemistry 7—93309
2,2-dimethoxypropane, conform., anomeric effect, MO calcs. 7—96543
3,7-dimethyl-1,5-diphenylbispydone-9-CuCl 1:1 complex, cryst. struct. 7—104715
N,N-dimethyl-4-nitro-2,6-xylidine, cryst. and mol. struct., X-ray diffr. 7—98105
dimethylcyclohexane, conformer populations, press. and temp. depend., Raman intensity meas. 7—74639
3,4-dimethylenefuran, config., spectrosc. and chem. props. 7—68330
dimethylenepolycyclobutadienes, non-Kekule alternant hydrocarbon structs. 7—89929
3,4-dimethylenethiophene, config., spectrosc. and chem. props. 7—68330
1,2-dimethylhydrazine, mol. struct. and conform., GPED and microwave spectra 7—74574
N,N-dimethylhydroxylamine, normal vibr., IR spectra *(German)* 7—90132
4,5-dimethylphenanthrene, mol. geometry and conform. stability, buttressing effect 7—90450
3,4—dimethylpyrazole, tautomerism, MNDO geometry optimisation 7—129601
dimethylsulphite-$d_0(d_8)$, low temp. matrix isolated, vibr., IR spectra 7—82111
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7—78730
4,6-dinitrobenzofurazan, bis(dimethylamino)naphthalene adduct, PMR obs. 7—96731
4,6-dinitrobenzofuroxan, bis(dimethylamino)naphthalene adduct, PMR obs. 7—96731
1,3-dioxanes ring, Si substitution effects, X-ray diffr. exam. 7—111528
2,6-dioxo-1,4,7,10,13,16-hexaoxacyclooctadecane, struct., ^1H spin-spin obs. 7—96748
dipalmitoylphosphatidylcholine, in fused salt, phase transitions, X-ray diffraction, subcell arrangement 7—142973
dipalmitoylthiophosphatidylcholine, chiral, thermotropic props., config. effect 7—71706
N,N′-(diphenyl-1,2-vinylidene)-meso-tetraporphyrin, X-ray cryst. and mol. struct. 7—111524
2,5-diphenyloxazole, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7—129779
diphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7—68221
diphenylsulphurdiimides, ^1H NMR, conformational studies 7—109943
diterpenoid alkaloids, struct. elucidation, ^{13}C NMR spectra 7—90188
1,5-dithiacyclooctane, cation radical and dication, Raman spectra and structs. 7—74644
1, 2-dithiete, energies, geometries, vibr., ionisation pot., ab initio calcs. 7—129569
dithioacetic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7—109751
dithioformic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7—109751
dithioglyoxal, energies, geometries, vibr., ionisation pot., ab initio calcs. 7—129569
divicine, favism-inducing cpds., MINDO/3 calcs. 7—141462
Dizatrifone, analytic activity, conform. and electronic struct., SCF-LCAO-MO calcs., CNDO/2 approx. 7—100803
DMSO, solns., structural transition temp., PMR and light scatt. intensity meas. 7—90201
DNA base pairs, nonempirical ab initio SCF calcs. 7—96514
emeraldine, and related mols., electronic struct., CNDO/S3 calcs. 7—89964
β-endorphin, spatial organisation of N-terminal tridecapeptide 7—144949
enkephalin analogs, rigidity imparted to backbone conformation by D-amino acid residues, ^1H NMR obs. 7—78729
enniatin B, conformation, effects of cryst. packing and hydration 7—86891
enol ethers, in alkaloids, conform. preferences, ^1H spin-lattice relax. obs. 7—82214
epicatechin, conformational anal. 7—74422
$(ethanolammonium)_2$ copper tetrachloride, mag. props., EPR linewidth meas. 7—125362
ether lipids from archaebacteria, monolayers, surface behaviour study 7—78715
1-ethoxy-4-chlorobenzene dissolved in nematic liquid crystal, conformation and orientational order 7—122570
ethyl azidoformate, conformational anal., MINDO/3 quantum-chem. calcs. and IR spectra 7—109775
ethyl dication, open or bridged struct., ab initio MO CI calcs. 7—116862
ethyl isocyanate, vibr. spectrum, normal coord. anal., conform. stability and ab initio calcs. 7—90093
ethyl radicals, fluorinated, struct., conform. anal., ab initio SCF MO study 7—81952
ethyl radicals, fluorinated, vibr. freq., UHF/3-21G model 7—81953
ethyl radicals, hyperfine coupling constant, angular dependence, rotational angle, ab initio calculations 7—135906
4-ethyl-4′-(4″-pentylcyclohexyl)biphenyl, and its fluoro derivative, mesogenic compounds, crystal and mol. structs. 7—137353
ethylamino ion, fragmentation and isomerisation, MNDO calcs. 7—68216
ethylbenzene, struct. and internal rot. in solns., PMR and MO investig. 7—103532

organic molecule configurations continued
ethylbenzene, supersonic mol. jet spectroscopy 7−141592
ethylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
ethyldifluorophosphine, IR and Raman spectra, conformational stability normal coord. anal. 7−96677
ethyldimethylphosphine-borane-$d_0(d_3)$, conform. stability, normal coord. anal., IR and Raman spectra 7−109910
ethylene, equilibr. geometric config., reson. stark effect 7−129758
ethylene, use as reference state for thermodynamic props. of homologous series 7−78532
ethylene diamine, protonated, intramolecular H bonding MP2/D95V** calcs. 7−129586
ethylene dication, gas phase isomers stability study, ab initio MO calcs. 7−96501
ethylphosphonothioic dichloride-$d_0(d_3)$, solid and liq., IR and Raman spectra 7−144057
ethyltoluenes, supersonic mol. jet spectroscopy 7−141592
2-ethynyl-1,3-butadiene, conform. vibr., IR and Raman obs. 7−96669
fluoride-bearing liquid crystal MB80.5 (F), structure and phase transitions *(Chinese)* 7−97911
fluoro vinyl radical isomers, vibr. anal., ab initio calcs. *(French)* 7−96533
2-fluorophenol, H-bonding, rot. isomerism, mol. orbital study 7−109747
fluoropyridine, geometries MO calcs. 7−129581
formamide, conformation, microwave spectrum 7−122505
formamide-NH_3 complex, H_2O effect on H bonding, ab initio SCF MO calcs. 7−96498
N-formylproline amide, γ turn, ab initio calcs. 7−129556
free radicals, muonium-substituted, muon level-crossing spectra study 7−68475
furanose ring, alternative conform. probabilities, statistical stereochemical model 7−114171
α-furil, mol. config., X-ray diffr. study 7−83933
furylpyrroles, mol. configs., STO calcs. 7−68201
galactosemic cataracts, Raman spectroscopic study on rats 7−74627
glycolaldehyde, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7−129744
N^6-(N-glycylcarbonyl) adenine, nucleic acid base, conform. preferences 7−89962
cis-glyoxal, selective pumping, isomerisation vibronic levels, IR fluoresc. spectra anal. 7−103489
glyoxal, trans-cis energy difference, electron correlation effects 7−96549
glyoxal-d_1, conformers rot. and quadrupole coupling const. microwave Fourier transform spectroscopy 7−96648
guanine, and related mols., Ar matrix isolated, IR spectra 7−96671
guanine, free state and thin films, geometries, UV spectra 7−103525
guanine and isocytosine, keto-enol tautomerism 7−139192
halogen substituted acetaldehydes, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogen substituted ketones, conformational energies, structs., torsional barrier height and force consts. 7−109720
haloidmethylmethylsulphones, IR and Raman spectra, vibr. anal., conformations 7−82122
heparin, struct. ROESY spectra with relay artifacts 7−82221
heterocycles, 3 member, N bearing, struct, oscillatory anal., ab initio calc. 7−141446
heterocyclic thiones, 5-membranes, bonding modes, INDO calcs. 7−81976
hexakis(1,3-dithiol-2-ylidene)cyclohexanes, substituted, ring conforms. 7−141490
hexamethylcyclotrisilazane derivatives, structs. and vibr. spectra 7−109868
4,4,8,8,12,12-hexamethyltrispiro(2,1,2,1,2,1)dodecane, gas phase electron diffr., mol. struct. and conformation 7−117070
hexane, partially oriented, conformational probabilities, dipolar couplings assignment, 2D NMR 7−109930
1,3,5-hexatriene, scaled quantum mechanical force field, vibr. anal., ab initio HF calcs. 7−96534
histamine H_2 receptor agonists and antagonists, quantum mech. calcs. *(French)* 7−141428
horseradish peroxidase, electronic and mol. struct., PMR and NOE study 7−68478
hydrocarbon dications, stability, spectroscopic constants and thermodynamic functions 7−96520
hydrocarbon molecule, Hosoya index bounds, C-atom skeleton depend. 7−96537
hydrocarbons, bonds, structs., charge concs. and charge relax. 7−89923
hydrocarbons, conformational analysis, WIZARD expert systems 7−74412
hydrocarbons, large conjugated, reson. energies by statistical method 7−109690
hydrocarbons, linear, conformational states as function of internal energy 7−122343
hydrocarbons, polycyclic aromatic, peri effect in carcinogenesis, empirical force field calcs. 7−100798
hydrogen diformiate complex, active site model for aspartyl proteinases, ab initio calcs. 7−81960
N-hydroxy-2-alkenals, conform. and struct. analyses 7−86899
1-hydroxy-2-methyl-11-methylene-tricyclo $(5.3.1.0)^{2,7}$-undecan-5-one, mol. and cryst. struct. 7−104723
2-hydroxy-4,5-benzotropone, in inert gas matrices and ethanol solns., H^+ transfer 7−71478
β-hydroxyethyliminodiacetic acid, cryst. and mol. struct. obs. 7−111533
1-hydroxymethylquinolizidines, epimers, conformational anal., IR, NMR and PMR spectra 7−90108
4-hydroxypyrimidine, struct., tautomerisation energy, ab initio calcs. 7−109750
hypoxanthine, and related mols., Ar matrix isolated, IR spectra 7−96671
I-102, conform. and electrostatic props., ab initio PCILO calcs. 7−78733
imines, model cpd. for force field pot. energy function optimisation 7−103615
indazole, tautomerism, MNDO geometry optimisation 7−129601
indoles, substituted, in polyethylene films, UV absorpt. spectra 7−96728
1-iodopropane, microwave spectra, conform. and quadrupole coupling consts. determ. 7−74571
IR absorption band halfwidths, rel. to struct. groupings 7−109902
iron porphyrins, CO photodissoc., ps time-resolved IR spectra 7−119719
isatin, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
2-isocyanato-1,3,2-dioxaphospholane, mol. struct. GPED 7−103662
isocyanato-triphenyl(pyridine-N-oxide) tin, cryst. and mol. struct., Raman and far-IR spectra 7−92655
organic molecule configurations continued
isocyanomethane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
isocynocyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
isocytosine and guanine, keto-enol tautomerism 7−139192
isopropyl radical, struct. and internal rot. barriers, pot. fns. calc. 7−74726
isouramil, favism-inducing cpds., MINDO/3 calcs. 7−141462
Kekule and sextet patterns, KHF-graphs, topological props. 7−109758
lead carboxylate, confirm. order determ. from optical and acoustic Raman modes 7−70814
metallophthalocyanines, reson. Raman spectra, correl. with structs. 7−82151
metalloporphyrin π-cation radicals, spin coupling 7−103535
methane, CH bond dipole moment, SCF wave fn. estimate 7−122339
methane, general props. eval., approximate double substitution coupled-cluster method 7−109699
methane, protonated, struct., vibr., ab initio MO calcs. 7−96558
methane-^{13}C-d_4, high resolution stimulated Raman spectrosc. 7−82159
methane-$d0(d_2)(d_4)$, adsorbed on NaCl, struct, props., IR spectra 7−82113
methanesulphonate esters, mol. conforms., Raman spectrosc. obs. 7−74643
methanimine radical, struct. and electron affinities 7−74432
2,4-methanproline, in peptides, conformational energy computations, NMR 7−144969
2-methoxy ethylamine, conform., vibr., microwave spectrum 7−96652
3-methoxy-1,3,4,5-tetrahydro-2-benzoxepin, anomeric effects, NMR investig. 7−90198
2-methoxy-1,7,7-trimethylbicyclo (2.2.1)hept-2-ylium fluoroborate, mol. struct. 7−141427
methoxydifluorophosphinoxide-$d_0(d_3)$, liq. gas, solid vibr., conform., IR and Raman spectra 7−96687
methyl 2-deoxy-3,5-di-O-P-nitrobenzoyl-β-D- ribofuranoside, cryst. struct. 7−86896
methyl acrylate, and Lewis acid complexes, conform., ab initio calcs. 7−68194
methyl dithioformate, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
methyl fluoride, equilibr. struct. rot. struct., electron diffr. study 7−68456
methyl fluoride, IR vibr. intensities, ab initio MO calcs. 7−103360
methyl formate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl radicals, fluorinated, vibr. freq., UHF/3-21G model 7−81953
methyl thienyl ketone oxime, struct., PMR 7−68364
methyl thiolformate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl thionoformate, conformer stability, ab initio SCF-MO calcs. 7−81968
3-methyl-2-(parachlorophenyl)-butyric acid, flexible mol. fitting technique using distance matrices 7−74424
2-methyl-3-carboethoxyquinoxaline 1,4-dioxide, synthesis, crystal and mol. struct. 7−117914
2-methylallyl alcohol, conform. equilib. and internal H bonding, microwave spectroscopy., ab initio calcs. 7−122508
methylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
methylbenzoate radical anion derivatives, planarity, ESR 7−96751
methylcyclobutane, conform. anal., internal rot. barriers, Raman investig. 7−74636
3-methylcyclohexanone, conform. and microwave spectrum 7−82086
methylene, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
methylene chloride, harmonic force field, struct., rot. consts. 7−109861
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7−82185
methylene dications, substituted, bond lengths, isomeric structs., ab initio MO calcs. 7−109711
methylene phosphoranes, semipolar P−O and P−C bonds 7−129559
3-methylene-1,4-pentadiene, mol. mechs., ab initio MO calcs. 7−81982
methylenecyclopropene, electronic charact., microwave spectrum, struct., dipole moment 7−68294
N-methylethylenediamine, conform. and H-bonding, microwave spectrum 7−74573
methylfluorosilanes-N_2O_2 exciplexes, singlet and triplet states, enthalpies, MNDO calcs. 7−89960
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
methyls enantiotopic, stereo specificity, NMR spectra 7−122575
methylsilylsulfide, internal rot., struct., dipole moment and microwave spectra meas. 7−74569
molecular path codes applied to comparability and similarity 7−129551
monothioformic acids, internal rot. barriers, struct., HF calcs. 7−109808
morpholine, conformational equilib., IR spectra 7−109904
multidimensional NMR, structural and analytical applications 7−82227
N-containing molecules, ab initio calcs. using 3-21G(N*) basis set 7−89917
naphthalene, catacondensed, Wiener numbers determ. 7−89912
naphthalene, graph theory adjacency matrices, eigenvectors, topological anal. 7−109701
naphthalene, Kekule structs., enumeration 7−89913
naphthalene, triplet excimers, conform. and phosphoresc., radiative and nonradiative decay rates 7−82267
neodymium diphthalocyanine, mol. and cryst. struct., X-ray diffr. study 7−104717
nitroxyl radicals, EPR spectra, functional groups protonation (deprotonation) effects 7−135976
nitroxyl tricyclic biradical, cryst. and mol. struct., X-ray diffr. study 7−104720
nonanes, branched, Raman and IR spectra meas., normal coord. anal. 7−90147
nonplanar conjugated organic molecules, rehybridisation and π-orbital overlap 7−89969
7-norbornadienyllithium, struct., MNDO calcs. 7−74445
norbornane, geometry, 2-exo and endo substituents, MNDO and MM2 calcs. 7−129599
2-norbornyl cation, gas phase charactn. 7−100600
2-norbornyl cation salt, mol. struct. 7−141427
nucleic acid bases, tautomers geometrical struct., AM1 method calcs. 7−100802
nucleic acids, in viruses, struct. determ. by Raman spectrosc. 7−71690
nucleophilic addition reactions, carbonyl group, steric effects 7−126446

organic molecule configurations continued
9,10-octalin, radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
octatetraene, isoelectronic cpds., struct., longit. electric polarisability, ab initio STO calcs. 7−116847
N-ocyl-homooligoglycines, N-deuterated derivatives, conform. anal., IR Raman spectra study 7−70799
organic azides, mol. struct., conform., vibr., ab initio HF SCF calcs. 7−81967
organic compounds, boiling points, correl. with mol. struct., nonlinear group contrib. model 7−124464
organic cpds., bonding between S and O, ab initio SCF-MO study 7−116817
organic crysts., halogen-halogen specific interactions, geometry 7−68428
organometallic clusters, structure and electron counting 7−110178
organophosphorus cpds., conform. anal. by gas phase Raman spectrosc. 7−74640
organotungsten hydrides, cryst. and mol. structs., ^{1}H NMR obs. 7−69691
oxazolidines, conform. anal., ^{1}H NMR spectra, mol. mechanics and PCILO calcs. 7−68215
oximes, model cpd. for force field pot. energy function optimisation 7−103615
O-para-chlorophenylhydrazido-N,N-di(2-chloroethyl)amidophosphoric acid, struct. 7−137350
[5]paracyclophane, mol. struct., ab initio mol. quantum mech. calcs. 7−109709
Pauling bond order concept 7−89895
peptide β-turn conform., Pro-Asp and -Asn dipeptides study, IR, ^{1}H NMR and X-ray diffr. spectra 7−78750
peptides, α-helical, electrostatic interactions role in stabilisation, spin-spin coupling studies 7−86897
peptides, conform. anal., normal coordinate calcs., IR Raman spectra study 7−68321
perfluoro-3-thiolen, mol. struct., GPED 7−74759
perfluoro-cyclobutane, mol. struct., GPED 7−96870
perfluoro-thiirane, mol. struct., GPED 7−96870
pergolide, stereochem., cryst. and mol. struct. 7−98101
pergolide mesylate, stereochem., cryst. and mol. struct. 7−98101
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7−96762
phenalenone, and derivatives, electronic spectra and mol. struct. 7−103523
phenanthrene, Kekule structs., enumeration 7−89913
phenol, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7−90191
phenylcyclohexane, cryogenic trapping, conformer, NMR, thermodynamics 7−68351
N-(1-phenylethyl)-Δ^4-thiazoline-2-thiones, and analogues, conform. anal. 7−74670
phenylethylamine drugs, UV absorpt. spectra, INDO calcs. 7−96541
phenylphosphine, conformation, internal rot. and struct. studied by microwave spectroscopy 7−116948
phenylpyrroles, isomers, conform. MNDO and AM1 calcs. 7−103397
phospholipid bilayer, gramicidin-induced H_{II} phase, acyl chain study, ^{2}H and ^{31}P NMR meas. 7−74660
phospholipid bilayers, polyunsaturated, acyl chain config. statistics, ^{2}H NMR obs. 7−106973
phospholipids, defects in ripple structure, anal. 7−114204
photosystem II, struct. and function in H_2O oxidation 7−106981
phthalimides, intramolecular orientation, transition moment, fluoresc. 7−82273
phytochrome, absorpt. spectra and phototransformation quantum yield, temp. depend. study 7−78756
poly-aza chain cpds., and metal complexes, Raman and IR spectrosc. obs. 7−74613
polycumulenes, equilibrium geometry and electric polarisability, ab initio calc. 7−122357
polyethylene surfaces, conform. signature, valence XPS, ab initio STO calcs. 7−92825
polyhexes, computer enumeration, compact naming approach 7−141438
polymethacrylate comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7−111352
polymethine dyes, struct. parameters, fluoresc. lifetimes and quantum yields 7−90266
polymethylsiloxane comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7−111352
polypeptide, conform., energy minimisation, ellipsoid algorithm 7−119708
polypeptides, struct., mol. force field appl., Raman spectra anal. 7−68318
polypeptides, struct. organisation at the air-water interface 7−144948
polyvinylidene fluoride, conformational and struct. changes during polarisation hysteresis 7−106103
porphine, D_{2h} configuration, C_{2v} configuration, normal mode frequencies, QCFF/PI calculations, dynamic instability 7−135905
porphyrins, free-base carbonyl, conform. effects, MCD, visible obs. 7−68384
porphyrins, pyromellitimide-bridged, photoinduced electron transfer, fluorescence techniques, charge separation, inverted regions, dielectric relaxation recombination rates 7−141674
potassium 4-pentenoate, conformational change on micellisation, vibr. spectra 7−82067
potassium 5-hexenoate, conformational change on micellisation, vibr. spectra 7−82067
proline, γ turn, ab initio calcs. 7−129556
1,3-propanedithiol, oxidation, struct., and H^+ elimination, MNDO calcs. 7−109770
propargyl radical, ground and excited states, vibrational frequencies, SCF calculations, molecular geometries, electronic structures 7−141458
propellanes, force consts. and equilib. geometry, MINDO/3 calcs. 7−68220
E-propene-1-thiol, NMR and mass spectra, vibr. and rot. anal., mol. conformation 7−116991
propionyl bromide, conformers, mol. struct., energies and entropies, gas-phase electron diffr. 7−129868
n-propylamine, vibrational and conformational analysis, ab initio MO calcs, infrared spectroscopy 7−122539
n-propylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
2-propynylidene, ion, molecular reactions, isomers anal., appl. to 2-propynylidene ion+H_2 reaction 7−138972

organic molecule configurations continued
pteridine, N-heterobicyclic π system, inter-ring coupling effects anal. 7−89916
pyramidalisation, geometrical interpretation of π-orbital axis vector in 3D 7−135836
pyrazolines, and salts, ^{15}N NMR spectrosc. 7−96746
pyrene, graph theory adjacency matrices, eigenvectors, topological anal. 7−109701
pyrene, Kekule structs., enumeration 7−89913
pyridine, gas phase, mol. struct., electron diffr., IR and microwave spectra 7−68457
pyridine carboxylic acids, isomeric species, mol. vibr., IR and Raman spectra anal. 7−135935
pyridine methyl derivatives, mol. struct. effect on optical orientation 7−103554
pyridine-phenol complex, H-bonded and stacked structures, ab initio SCF calcs. 7−109745
pyridine-pyrrole, complex, H-bonded and stacked structures, ab initio SCF calcs. 7−109745
2-pyridinone, solid state environment, nucl. quadrupole coupling and NQR spectra, ab initio simulation 7−118888
2-(2-pyridylazo)-5-diethylaminophenol, resonance Raman spectra 7−106167
pyrimidinones, Dewar struct., rel. to biological significance of TpT3 7−106975
4-N-pyrolidyl-3-penten-2-one isomers, cryst. struct., MM2 and MMP2 calcs. 7−109723
radical clusters, intermol. effective exchange interaction, MO calcs., appl. to organic conducting magnet design 7−74805
rhodamine 6G, struct. rearrangements, reson. stimulated Raman scatt. *(German)* 7−129725
rhodamine dye hexahydrate, cryst. and mol. struct., H bonds, X-ray diffr. study 7−104718
riboflavin-indole complexes, mol. associations, spectroscopic study 7−86609
Schiff bases, conjugated, protonation, quantum chem. study 7−132930
p-sexiphenylene-p-quinquephenylene solid solns., heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
silk, struct. and thermal props. *(Japanese)* 7−100800
Somatotropin, conform. anal., Raman spectra study 7−68322
spinach ribulose bisphosphate carboxylase, cryst. struct., 1D disorder 7−139188
stilbene, vibr. spectra anal. 7−109866
strontium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
β-styryldichlorophosphine, geometrical struct., electronographic investig. 7−110139
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
sulphadimethoxine, ($C_{12}H_{14}N_4O_4S$), cryst. and mol. struct. 7−83936
sulphones, organic, liq. solutions and crystal, IR and Raman spectra, vibr. spectra and conformations 7−96679
teicoplanin A_2, structural anal., two-dimens. PMR and NOE spectra 7−71685
p-terphenyl, conform. anal., FTIR and Raman spectra 7−109893
p-terphenyl, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
tetraalkylammonium salts, alkyl chain mobilities 7−122571
1,3,4,6-tetraazapentalenes, dipyrido substituted, synthesis, struct., physicochem. props. 7−71472
1,1,2,2-tetrachloroethyl alkyl ethers, vibr. spectra and confirmations 7−74568
1,1,2,2-tetrafluorocyclopropane, microwave spectra, elec. dipole moments and mol. struct. 7−90101
tetrahydroazepines, conformational struct. and energies, QCFF/P1 method calcs. 7−109752
tetrahydrophenanthridine hydroxynitrostyrils. absorpt, spectra 7−141568
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7−106212
tetrahydropyrans, 2-substituted, anomeric effect, solvent polarity influence, ^{13}C NMR spectra 7−90189
1,1,3,3-tetramethylbutyl group, hydrophobic moiety of Triton X surfactants, Raman spectra 7−96705
1,2-tetramethylene-3-methylcyclooctatetraene, preparation, cyclooctatetraene ring flattening by annulation, PMR investig. 7−119500
3,4,5,6-tetramethylphenanthrene, mol. geometry and conform. stability, buttressing effect 7−90450
s-tetrazine-H_2O complex, struct. and electronic spectrum 7−96638
s-tetrazine-HCl complexes, fluoresc. and Vis-UV spectra, struct. determ. 7−96777
thermitase, X-ray structural investigation at 2.5 Å resolution 7−106966
thiane-1-tosylimide, and derivatives, conformational anal., X-ray anal. 7−68420
3-thio-2-propenals, S substituted, conform. pot. energy surfaces 7−93269
thioacetaldehyde, isotopic species, torsional vibrs., internal rot. barriers, visible spectra anal. 7−109917
thioamides, rotational transition structs., ab initio MO calcs. 7−103471
thiocyanate radical, struct. and electron affinities 7−74432
thioethers, conform. anal., mol. mech. force field appl. 7−109862
thiolane-1-tosylimide, and derivatives mol. struct., X-ray diffr. 7−68421
thiols, structural and conformational properties, ab initio calcs, internal rotation 7−141457
thionitrites, ethyl and butyl substituted, ^{14}N NMR investig., conform. anal. 7−122569
thiophenes, polycyclic aromatic, mol. struct., phosphoresc. study 7−122608
thiosemicarbizide, complex form. and struct. on Ag and Cu surfaces, SERS spectra anal. 7−74630
thymidine, ^{13}C spin-lattice relax. rates meas., ^{1}H perturbation effects 7−96733
thymidine phenyl cyclic 3′,5′-monophosphate diastereomers, PMR and X-ray obs. 7−141603
tiaprofenic acid, ^{1}H and ^{13}C NMR 7−96747
$(TMTSF)_2ClO_4$, ^{13}C NMR meas. 7−85477
$(TMTSF)_2ReO_4$, electronic props., ^{13}C NMR meas. 7−85477
$(TMTSF)_2X$ salts, intermolecular contact directions rel. to magneto-effects 7−85197
TpT3, struct. and biological significance, rel. to DNA and Dewar pyrimidinones 7−106975
tribromoacetonitrile, isotope shifts, vibr. Raman spectra *(French)* 7−129718

organic molecule configurations continued
1,1,2-trichlorotrifluoroethane, matrix isolation vibr., conform., IR spectra 7−82109
tricyclo(5.2.1.$0^{2,6}$)decane-2,6-diol, struct., X-ray diffr. exam. 7−111530
1,1,1-trifluoro-2-propanol, gas, far IR and Raman spectra, conform. stability, internal rot. barriers 7−109898
trifluoroethyl cation, structs., stabilities, ab initio MO calcs. 7−89903
2,2,2- trifluoroethyl methyl ether, conformation stability and vibr. assignment, microwave, IR and Raman spectra 7−82133
trifluoroethylidynesulphur trifluoride, gas phase struct., nonlinear coord. 7−141571
1,1,1-trifluoroisopropanol, conform. stability and low freq. vibr assignment, Raman obs. 7−74641
trifluoromethane+Ar, orientation depend. CF_3 chemiluminesc. study 7−100577
trifluorotrifluoromethylsilane bond lengths, fluorination effects 7−103660
2,4,6-triisopropylbenzophenones, lowest triplet states, rot. relax., picosec-cond laser spectroscopy investig. 7−129690
trimedlure-Y, ^{13}C and ^{1}H chemical shift assignments and conformation confirmation, 2-D NMR 7−122574
1,2-trimethylene-3-methylcyclooctatetraene, preparation, cyclooctatetraene ring flattening by annulation, PMR investig. 7−119500
triphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
tris(substituted amino) sulphonium ions, cryst. and mol. struct. 7−74410
troponoid spiro compounds, absolute stereostruct., CD spectra calcs. 7−90235
tryptophan and its derivatives in soln., nonexponential fluoresc. decay, conformational states, lifetimes 7−90259
tryptophan in apocytochrome c, fluoresc. quenching dynamics, rot. isomerism study 7−78745
tryptophan residue, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
urethane macrorings; conform. effects on polyrotaxane form. 7−106799
uridines, 5-substituted, conform. anal. and biological activity, PCILO calcs. 7−78734
vancomycin-Ac-D-Ala-D-Na intermolecular interactions, ^{15}N NMR 7−129749
vinyl cation, structs. and energies obtained using ab initio MO theory 7−109697
vinylamine, inversion-torsion motion, microwave spectrum analysis 7−122504
1-vinylimidazole, geometry, quantum chemical calcs. 7−109778
1-vinylpyrazole, geometry, quantum chemical calcs. 7−109778
viologen cpds., reduced, IR spectra and dimer struct. 7−129706
vitamin B_{12} coenzyme, cryst. and mol. struct., neutron and X-ray refinement 7−114172
vitamin B_1, fluorescent derivatives, photophys. and photochem. props. 7−100813
Xylene isomers, multiphoton reson. ionisation spectra anal. 7−90181
ylides, gas phase struct., ab initio MO calcs. 7−116863
ylidions, gas phase struct., ab initio MO calcs. 7−116863
C_2H_3 ions, nuclear and electronic struct., ab initio HF calcs. 7−96531
CHO^+ isomers, $C^+ + H_2O$ prod., proton transfer rates with N_2O detection 7−83363
$C_3H_4O^{+\cdot}$, struct., ab initio MO calcs. 7−109742
CH_3O_4H, conform. role in peroxide radical recombination, MINDO/3 calcs. 7−74448
Co complex, cytochrome P450 active site analogue, synthesis, struct., spectrosc. 7−114192
Cr complex, tris(acetylacetonato)chromium(III), dilute chloroform solns., ^{1}H spin relax. anal. 7−116990
Cu (II) aromatic hydroxyoxime homologous complexes, ESR spectra study 7−103550
Ge-substituted silicate cages, ^{29}Si 2D NMR 7−90197
HCCN, bent and linear conform., multiconfig. SCF calcs. 7−103364
H_2O_2, nucl. mag. isoscreening lines, 2nd order mag. parameters 7−103408
OCS, $^{1}\Sigma^{+} \rightarrow {}^{1}\Delta$ transition, MCD spectra 7−129760
Pt group nitrile complexes, liq. cryst. and cryst. struct. 7−111360
Zn complex, 2,3-naphthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758
Zn complex, phthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758

organic molecule electronic structure *see molecular electronic states*

organic semiconductor materials *see organic semiconductors*

organic semiconductors
aluminium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
anthracene, photoconductivity, elec. field dependence, effect of contacts 7−70348
anthracene, semiconductors, high magnetic field investigations *(German)* 7−125119
anthracene single crystals, Davydov splitting of excitons, magnetoabsorption studies *(German)* 7−125712
BEDSe-TSeF cation radical salts, crystal and electronic structs. 7−99013
$(BEDT\text{-}TTF)_2IBr_2$, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
(BEDT-TTF)$_2$IBrCl, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
$(BEDT\text{-}TTF)_2ICl_2$, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
bis(propylenedithio)tetrathiofulvalene-ICl_2 salt, crystal struct., elec. cond. and band struct. 7−137354
butadiene-acrylonitrile films, conduction, heat treatment and UV irradiation effects 7−105577
butadiene-acrylonitrile films, conduction, heat treatment and UV irradiation effects 7−105578
chelate polymers, electrical cond. meas. 7−76989
conference, Balatonszeplak, Hungary (Sept. 1986) 7−80153
copper (II) phthalocyanine thin films, molecular beam deposition on amorphous substrates 7−126002
copper halide salts of TTF, TMTSF and BEDT-TTF, elec. props. 7−99015
cyaninatometal compounds, phthalo- and naphthalo-based, synthesis and semicond. props. 7−100146
DBTTF and DBTSF salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
doped, cond., quasi-1D percolation model 7−76933
electrical cond., electronic and optical device appl. 7−97105

organic semiconductors continued
fluorantheno[3,4-cd]-1,2-dithiole (diselenole) (ditellurole) electron donors, charge transfer complexes and radical cation salts 7−99009
gallium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
heteroarylene vinylene units, five-membered, semiconductors, polymerisation and doping 7−76958
hexamethoxytriphenylene multiple cationic salts, quasi-1D semiconductors 7−99021
hydroxyaluminium phthalocyanine photoelectrochem. cells, phthalic acid treatment 7−106913
indium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
Langmuir-Blodgett films from glycerol subphase, elec. and optical props. 7−124766
LB films of *N*-(4-*n*-dodecyloxyphenyl) and *N*-(1-pyrenyl) carbamates of 2-bromo-5-(2′-hydroxyethoxy)-TCNQ, towards organic rectifiers 7−112513
lithium phthalocyanine radical, spin exchange narrowing 7−125368
metal complex molecular conductors, $A[M(dmit)_2]$ (Az DBTTF, BEDT-TTF, HMTTeF, BPDT-TTF; M=Ni; Pd) electrical and structural properties 7−99014
metal phthalocyanine sheet polymers, mag. susceptibility, electrical cond., X-ray diffr. 7−76949
metallophthalocyanine crystal thin films, electronic conductivity 7−99231
bis(2,3:6,7-bis(methylenedioxydibenzofuran)) hexafluoro-arsenate, semiconducting radical salt struct. determ. 7−83932
methylpropylpolysilane, photocond. 7−112391
molecular fastener systems, high elec. cond. 7−99067
molecular semiconductor devices review 7−118566
Nafion-conducting polymer hybrids, anisotropic electronic conduction 7−92239
naphthalocyanine compounds, electrical props. 7−105559
nucleic acid base complexes with acridine orange dye, compensation effect in the electrical conduction process 7−76955
organopolysilane, electronic struct., LCAO calcs. 7−98789
organosulphur-FeOCl intercalation compounds, spectroscopic and mag. props. 7−144050
photoreceptor materials for electronic photography *(Japanese)* 7−99110
photoreceptor materials for PPC *(Japanese)* 7−99111
phtalocyaninatoaluminium fluoride films, I ion implanted, elec. props. 7−105738
phthalocyanine, substituted, Langmuir-Blodgett films in acoustoelectric devices 7−123414
phthalocyanine, vacuum deposited film, characterisation *(Japanese)* 7−77829
phthalocyanine derivatives, mol. semicond. and junction formation 7−92276
phthalocyanine films, organic photoconductors for near IR region 7−143514
phthalocyanine thin films, elec. and optical props. 7−99234
phthalocyanine thin films, Langmuir-Blodgett and spin cast deposited, direct patterning and elec. props. 7−143650
poly(4-(N,N-diphenylamino-)phenyl methylmethacrylate), electrochemical doping, rectification and photovoltaic props. 7−69631
poly(vinyl pyrrolidone) films between Al electrodes, elec. cond. mechanism 7−99082
poly (3-methyl thiophene) film with aq. electrolyte contact, impedance and electrorefl. spectra, polaron transition obs. 7−99797
poly-1,4-dithianaphthalene, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
poly-N-epoxypropylcarbazole, amorphous semiconductor, charge carrier mobility 7−84994
poly-N-vinylcarbazole, amorphous semiconductor, charge carrier mobility 7−84994
poly-p-phenylene(-d), donor- and acceptor-doped, temp. depend. electron spin echo studies 7−70641
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond., band gap, IR absorpt. spectra 7−71499
poly-p-phenylenes, heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
polyacenic materials, elec. cond. and thermoelectric power 7−84954
polyacenic semiconductive material, in situ doped, ESR study 7−85431
polyacenic semiconductor based battery 7−93498
polyacenoquinones, dielec. spectroscopy studies 7−99653
polyacetylene: I, high elec. cond. in doped polymer 7−112337
polyacetylene:Li(Na), semicond.-metal transition, ESR studies 7−98810
polyacetylene, freq. depend. of third order optical susceptibility 7−141941
polyacetylene, longit. dielec. function calc. 7−124897
polyacetylene, nonlinear optical activity, elec. cond., mag. reson. techniques 7−99607
polyacetylene, picosec. Raman transients obs. 7−85735
polyacetylene, reversible doping with I_2 in gas phase 7−92314
trans-polyacetylene electronic props., self-consistent linear combination of Gaussian orbitals method 7−105399
polyacetylene films, ion implanted, elec. props. 7−124986
n-type polyacetylene junctions, photovoltaic effect 7−92278
polyanthracene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
polyarenemethines, synthesis, doping, struct., conductivity meas. 7−71146
polydiacetylene-bis-p-toluene sulphonate, fast transient photocond. 7−112401
polyfluoroacetylenes, electronic structure and conduction props. 7−112165
polymers, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polymers, conjugated, kink excitations 7−137816
polymers, heteroatomic ladder, nonlinear optical activity, elec. cond., mag. reson. techniques 7−99607
polymers, mag. resonance from short lived particle pairs in spin-depend. processes 7−138350
polymers, semiconducting, fast response nonlinear optical phenomena 7−136424
polymethylphenylsilylene, hole transport, hopping mechanism 7−99064
polynaphthylene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
polyorganosilane chain, energy band struct. calcs. 7−70176
trans-polyphenylacetylene films, electron currents, temp. and field depend. 7−99127
polyphenylenesulphide, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630

organic semiconductors continued
polypyrrole polymer, electric conductivity meas., appl. as source mount in $4\pi\beta$ counting 7−135698
polypyrrole/In Schottky barrier formation 7−92296
polypyrrole/polythiophene p-n junction diode, electrochemical fabrication 7−93325
polyselenophene electrochemically grown films, comp., surface morphology and elec. cond. temp. depend. studies 7−118481
polythiazole, semicond. polymer having heteroatom in conduction pathway, DC cond. meas. 7−76959
polythiophene derivatives-GaAs based electronic structures and devices 7−92277
polythiophenes, doped, polarons and bipolarons 7−76789
polythiophenes, heterosubstituted narrow gap semicond., energy gap and bond length alternation 7−105395
pyropolymers, semiconducting, hopping conduction, metal-insulator transition 7−112183
p-sexiphenylene-p-quinquephenylene solid solns., heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
silicon phthalocyanine Langmuir-Blodgett film Schottky barriers and MIS structures, photoelec. props. 7−99162
speciality polymers, conf., Baltimore, MD, USA (Aug. 1986) 7−95083
trans-stilbene-TCNQ complex, physical props. 7−84902
TCNQ, Langmuir-Blodgett films in acoustoelectric devices 7−123414
TCNQ salt, Cs_2 (TCNQ)$_3$, low temp. organic semiconductor, ESR studies 7−70625
TCNQ salt, N-n propyl quinoxalinium $TCNQ_2$, struct., cond., triplet spin excitons 7−105570
TCNQ salts, with 1-methyl-3-alkylimidazolium derivatives, elec. cond., spectral props. 7−105571
tetrathiafulvalene salt of $CuCl_2$, ESR study and metal-semicond. transition 7−138310
(TMTSF)$_2AsF_6$, far-IR reflectivity through the spin density wave transition 7−118980
(TMTSF)$_2AsF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
(TMTSF)$_2SbF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
transition metal complexes with diene ligands, semiconducting organometallics 7−99066
ω-tricosenoic acid, Langmuir-Blodgett films in acoustoelectric devices 7−123414
$TTeC_3$-TTF, high-mobility organic semiconductor, struct. and cond. 7−124989
TTF-TCNQ, quasi-1D semiconductor, ionised impurity scattering 7−131624
TTT salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
vitamin A acid, retinoic acid, elec. conduction, substituent group effects 7−100794
Au complex, β-bis(ethylenedithio)TTF $AuCl_2$, intermol. interactions, electronic and elec. props. 7−92063
Cu complexes, copper tetrabenzotetraazacyclohexadecine(TCNQ)$_n$, semicond. props., spectroscopic anal. 7−70298
Li-organic electrolyte batteries, electro-chemical stability of heterocyclic semicond. polymers as cathode-active materials 7−93496

organic superconductors
β-(BEDD-TTF)$_2I_3$, self-consistent band struct. calcs. using local density approx. 7−118357
(BEDT=TTF)$_2$X salts, superconductors, structural phase transitions 7−84252
β-(BEDT-TFF)$_2I_3$, high T_c superconductivity, anion alloying and solvent effects 7−77142
β-(BEDT-TTF)$_2AuI_2$, mag. and high press. cond. meas. 7−85172
(BEDT-TTF)$_2I_3$, α- and β-phases, intermolecular contact directions rel. to magneto-effects 7−85197
β-(BEDT-TTF)$_2I_3$, direct detect. of supercond. β-1.5-β-8 phase transition 7−99308
β-(BEDT-TTF)$_2I_3$, high T_c supercond. state and normal state cond. anisotropy study 7−77140
β-(BEDT-TTF)$_2I_3$, high-and low-T_c superconducting phases study 7−77141
(BEDT-TTF)$_2I_3$, mol. vibrs., Raman spectra study 7−85675
β-(BEDT-TTF)$_2I_3$, organic supercond., nuclear mag. relax. 7−70475
β-(BEDT-TTF)$_2I_3$, phase stability, DTA studies 7−118058
α_t-(BEDT-TTF)$_2I_3$, stable superconducting state at 8 K 7−125217
β-(BEDT-TTF)$_2I_3$, supercond., electronic props., PMR anal. 7−85474
β-(BEDT-TTF)$_2I_3$, supercond., temperature-stress phase diagram 7−85173
β-(BEDT-TTF)$_2I_3$, thermal expansion meas., structural phase transition 7−85192
β-(BEDT-TTF)$_2I_3$(AuI_2) salts, superconducting critical field, press. depend. 7−77177
β-(BEDT-TTF)$_2I_3$ highly defective crystals, conducting props. characts. 7−137906
β-(BEDT-TTF)$_2I_3$ organic supercond., resist. and magnetoresist. 7−99312
β-(BEDT-TTF)$_2I_3$ quasi-2D metal, spin susceptibility and ESR line profile *(Russian)* 7−143894
β-(BEDT-TTF)$_2I_3$ quasi-2D organic metal supercond., conductivity anisotropy and T_c meas. 7−137886
β-(BEDT-TTF)$_2I_3$ single crysts., low temp. cond. under electron irrad. *(Russian)* 7−84868
β-(BEDT-TTF)$_2I_3$ supercond., low temp. struct. transition 7−124497
β−I (BEDT-TTF)$_2$IAuI, microwave conductivity 7−125035
β-(BEDT-TTF)$_2$IAuI, superconductor, reson. Raman spectra 7−106190
(BEDT-TTF)$_2IBr_2$, mol. vibrs., Raman spectra study 7−85675
(BEDT-TTF)$_2XI_2$ salts, X=Au, Br, electronic struct., props., polarised IR reflectance spectra 7−113189
(BEDT-TTF)$_3Cl_2H_2O$, superconductivity under press. 7−143679
β-(BEDT-TTF)I_3, superconductivity mechanism 7−70459
β-(BEDT-TTF)I_3 high temp. superconducting phase, critical field temp. depend. meas. 7−131941
BEDT-TTF molecular conductors, crystal and electronic structures 7−99012
bis(ethylenedithiolo)tetrathiofulvalene iodide of β-(ET)$_2I_3$, supercond. transition temp. of β phase, influence of press. 7−138096
electron pairing mechanism, vibronic coupling control calcs. 7−77145
β-(ET)$_2I_3$, organic supercond., exceeding paramag. limit of H_{c2} 7−138160
β-(ET)$_2IBr_2$(AuI_2), vol. superconductivity, DC low field magnetisation meas. 7−77152

organic superconductors continued
quasi-2D systems, anisotropic supercond. state, NMR relax. rate 7−125552
review of superconductivity developments *(Norwegian)* 7−131839
superconductivity type 7−143686
(TMTSF)$_2ClO_4$, elec. cond., temp. depend. model 7−84842
(TMTSF)$_2ClO_4$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
(TMTSF)$_2ClO_4$, polarised single cryst. specular reflectance spectra 7−113224
(TMTSF)$_2ClO_4$, semiconductors, high magnetic field investigations *(German)* 7−125119
(TMTSF)$_2ClO_4$, supercond. state, proton spin-lattice relax. rate meas. 7−85194
(TMTSF)$_2ClO_4$, thermal expansion meas. 7−85192
(TMTSF)$_2PF_2O_2$, supercond., competing phase transitions 7−84252
(TMTSF)$_2PF_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
(TMTSF)$_2PF_6$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
(TMTSF)$_2PF_6$, supercond., electronic props., PMR anal. 7−85474
(TMTSF)$_2PF_6$, supercond. organic salt, low temp. and high press. struct. 7−124238
(TMTSF)$_2PF_6$, thermal expansion meas. 7−85192
(TMTSF)$_2ReO_4$, elec. cond., temp. depend. model 7−84842
(TMTSF)$_2ReO_4$, supercond., press. induced anion ordering transform. 7−84252
(TMTSF)$_2$X, superconductivity mechanism 7−70459
(TMTSF)$_2$X crystals, Bechgaard's salts, type of superconductivity 7−99337
(TMTSF)$_2$X salts, collective modes 7−84853
(TMTSF)$_2$X salts, intermolecular contact directions rel. to magneto-effects 7−85197
(TMTSF)$_2$X salts, quasi-one-dimensional systems, anisotropic supercond., NMR relax. rate calc. 7−85195
(TMTSF)$_2$X salts, superconductors, structural phase transitions 7−84252
TTF(Ni(dmit)$_2$)$_2$, supercond. transition temp., effect of press. 7−70455
TTF-analogs, superconductivity mechanism 7−70459
TTF[Ni(dmit)$_2$]$_2$, superconductive molecular complexes, synthesis, properties and structure 7−99310
β-(BEDT-TTF)$_2$X crystals, (X=I_3IAuI), electron-phonon coupling and supercond. gap 7−131926
Ni complexes, superconducting, molecular designing analysis 7−84638

organometallic compounds
adenosylcobalamin, 3D struct. anal. 7−109712
alkyllead, atm. pollution in Norway 7−93575
arene molybdenum tricarbonyls, multiphoton dissoc./ionis., intramol. vibr. relax. effect 7−129822
benzene chromium tricarbonyl-thiourea inclusion complexes, SHG study 7−75054
benzenetricarbonylchromium, electron deform. density determ. 7−74411
bond energies, HFS MO calcs. 7−96540
butadiene iron tricarbonyl, in inert gas soln., Raman spectra 7−90176
butyltin aquatic pollutant, monitoring with time-integrating remotely-moored automated sampling-conc. system 7−86873
butyltin baseline meas. in US harbours and estuaries 7−93564
butyltin compound concs. in Maryland waters of Chesapeake Bay 7−93562
butyltin compound speciation in Great Bay Estuary, New Hampshire 7−93563
butyltin compounds in San Diego Bay sediments, distrib. and fate 7−93560
butyltin in San Diego Bay, monitoring survey 7−93565
cadmium organometallic glass-forming materials, struct. 7−97939
calcium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
chemical bonds, MO LCAO approx. 7−68210
clusters, structure and electron counting 7−110178
cobalticinium-cobaltocene, electrochem. exchange, solvent-depend. kinetics meas. 7−113887
cryst. and mol. struct., Raman and far-IR spectra 7−92655
1,3-cyclohexadiene iron tricarbonyl-thiourea inclusion complexes, SHG study 7−75054
μ-(η^5:η^5-cyclooctatetraene)bis(η^2-cyclopentadienyl)vanadium, ab initio calcs. 7−89933
cyclopentadienylchromium tricarbonyl in cyclopentadienylmanganese tricarbonyl single cryst., EPR spectrum 7−132126
cyclopentadienylcobalt, $^1A_1$ state, electronic struct., ab initio LCAO-MO SCF calcs. 7−68208
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7−125725
decamethylferrocenium tetracyanoethenide, ferromag. ground state obs. 7−112767
dialkyltin(IV) chloride anions, DBTTF, DBTSF and TTT salts, elec. resistivity 7−99023
dicyclopentadienyltungsten dichloride enthalpy of form. and combustion 7−78536
diethylzinc, Zn photodeposition rates 7−71515
dimethyl mercury, valence and Hg 5d levels, photoelectron spectra 7−122610
dimethyltin (IV) fluoro-metallates, synthesis and ^{119}Sn Mossbauer spectra 7−106071
diorganotin carbohydrates, thermal behaviour, ^{119}Sn Mossbauer and IR spectra 7−90129
ethylbenzene $Cr(CO)_3$, multiphoton dissoc./ionis., collisional effects 7−96811
ferrocene, polarisability, second hyperpolarisability, CHF-PT-EB-CNDO calcs. 7−122361
ferrocene, T_1 state, quantum yield determ. 7−103518
first row transition metals, inorganic and organometallic compound props. mol. orbital theory 7−141435
intermediates, IR spectroscopy analytical techniques 7−86738
IPA copper tetrachloride, trimeric antiferromag. chain, stability anal. 7−78472
isocyanato-triphenyl(pyridine-N-oxide) tin, cryst. and mol. struct., Raman and far-IR spectra 7−92655
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7−103520
methylmercury chloride, gas phase, electric dipole moment and quadrupole coupling determ., microwave spectrum 7−135926

organometallic compounds continued
methylstannane, VUV and UPS ab initio CI calcs. 7−129787
methyltin compound speciation in Great Bay Estuary, New Hampshire 7−93563
organotellurium cpds., NMR chem. shift correl. with Mossbauer quadrupole splitting 7−99595
organotin compounds, solid, high resolution ^{119}Sn NMR spectra 7−138337
organotin cpds., NMR chem. shift correl. with Mossbauer quadrupole splitting 7−99595
organotin in harbours, transport and fate, 2D mathematical model 7−93566
organotungsten hydrides, cryst. and mol. structs., ^1H NMR obs. 7−69691
oxidising pyrolysis, formation of WO_3 and Nb_2O_5 amorphous films 7−75999
palladium poly-yne, third-order optical nonlinearity 7−97086
rare earth systems, conference, Hamilton, Ont., Canada (June 1986) 7−66817
second row transition metals, inorganic and organometallic compound props., mol. orbital theory 7−141436
selenophene, out-of-plane motions, force field calcs. 7−116931
strontium acetylide, free radicals, vibr. and electronic struct., fluoresc. 7−90247
synthesis, for production of metal oxide powders and films 7−71106
tellurophene, out-of-plane motions, force field calcs. 7−116931
tetraethylstiboniummetaperiodate, NMR quadrupole coupling consts. temp. depend. 7−74685
tetramethyl lead, Pb^+ production following 5d core photoionisation as revealed by coincidence expt. 7−82296
tetramethyl tin, isolated in Ar matrix, rotational tunnelling 7−141643
tetramethyltin, photodissoc. at 193 nm 7−110049
transition metal complexes with diene ligands, semiconducting organometallics 7−99066
trialkylarsine used in CVD of GaAs, UV absorpt. spectra 7−135961
trialkylgallium used in CVD of GaAs, UV absorpt. spectra 7−135961
tributyltin chloride, in water trace level determ. procedures 7−93610
tributyltin concs. in waters of S Chesapeake Bay 7−93561
trimethylgallium, photon enhancement of decomposition, appl. to GaAs photo-CVD 7−71514
trimethylgallium and triethylgallium, pyrolysis reactions during MOCVD growth 7−100110
triphenyltin isochalcocyanates and adducts, IR and Raman spectra 7−92655
tumour scintigraphic agents, synthesis and characterization 7−133450
Fe complex, $Fe(CO)_3(ethylene)_2$, substitution kinetics, gas phase 7−78470
$LaCH_2$, gas phase photodissoc., bond energies determ. 7−129808
$NbCH_2^+$, gas phase photodissoc., bond energies determ. 7−129808
$RhCH_2^+$, gas phase photodissoc., bond energies determ. 7−129808
tetramethyl tin, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
UO_2^+ complexes, IR laser-induced decomp., double reson. results 7−68373
UO_2^+ complexes, IR laser-induced decomp., mol. beam depletions anal. 7−68450

organs (artificial body) *see artificial organs*

origin of elements *see element origin*

origin of life *see evolution (biological)*

orotrons *see free electron lasers; microwave generation; microwave tubes*

orthicons *see television camera tubes*

orthogonalised plane wave calculations *see OPW calculations*

orthosis *see orthotics*

orthotics
see also handicapped aids; prosthetics
gait restoration using functional elec. stimulation and orthoses, control methodology 7−101148
rehabilitation R&D progress reports (1986) 7−94023
shoe insole materials for plantar press. relief, comparative study 7−79140
upper extremities control, functional elec. stimulation system 7−139405

oscillations
see also circuit oscillations; electromagnetic oscillations; harmonic oscillators; harmonics; liquid oscillations; piezoelectric oscillations; plasma oscillations; resonance; stability; vibrations; waves
air jet impingment on Helmholtz resonator, self-sustained oscill. 7−123697
amplitude decay of damped nonlinear oscillators studied with Jacobian elliptic functions 7−75278
anharmonic oscillator at finite temp., quantum and classical stochastic calcs. comparison 7−140608
equatorial Atlantic basin, forced oscills. obs. during SEQUAL programme (1983 to 1984) 7−114746
atmospheric gravity waves, Doppler anal. of ionospheric effects on radio waves 7−94570
autonomous Hamiltonian systems, existence and stability of periodic oscillations 7−95316
autooscillations in a wind tunnel, acoustic suppression 7−110994
axisymmetric cavity, shear layer, flow oscills. effect 7−83251
axisymmetric cavity shear layer oscillations, response to external forcing 7−69196
axisymmetric diffusion, nonsteady-state turbulent flow 7−83190
beams, flexure, stress oscills., field-consistency interpretation 7−83065
boundary layer flow over smooth and rough walls, turbulence 7−142297
bubble cloud cavitation noise calcs. 7−142070
bubble motion in varying press. field 7−111062
coherent velocity oscillations in detached flows and planar turbulent mixing layers 7−75537
collapsible tube, self-excited and resonant oscillation of air flow 7−104349
collisional excitation of oscillator, integrability of Hamiltonian system 7−102219
composite wedge-like region, excitation of steady harmonic oscills. 7−75398
conservative oscillating systems, inner resonances and orbital instabilities *(German)* 7−102157
controlled stress rheometer and pulsatile pipe flow apparatus, combined steady and oscillatory stress mode 7−75720
correlation function for a quantum oscillator in a low-temperature heat bath 7−108395
coupled KdV equations, leapfrogging solitons 7−140473
coupled Lorenz oscillators 7−66998

oscillations continued
cylinder wake, Benard-von Karman instability, oscillation threshold, laser probe study 7−142314
damped coupled nonlinear oscillator system, freq. calcs. 7−102149
damping oscillating system, loss of stability in equilibrium position *(German)* 7−102159
dependence upon delays 7−72819
double sine−Gordon solitons, dynamics, radioactive and inelastic effects 7−120823
Duffing oscillator crises, persistent props., analog simulation 7−102310
electrically conducting fluid, supercritical modes, convective stability 7−69134
entrained oscillations in a system of mutually coupled van der Pol oscillators with time delay in the coupling paths 7−75274
excitation of gas bubbles for free oscillations by increasing their energy 7−130777
fibers, light scattering finite length cylinders, perpendicular incidence illumination 7−136192
flapping wing, hydrodynamic forces meas. 7−91147
float-type flowmeter for gas flow meas., anal. of float bouncing *(Japanese)* 7−142412
floating vertical cylinder on waves, oscills. and drifts *(Russian)* 7−97547
flow induced oscillations of bluff bodies, robust modelling 7−69040
fluid flow with small viscosity and capillarity, traveling wave soln. 7−83255
fluid turbulence, intermittency and De Bruijn's oscillations 7−115797
fluidic flowmeter, oscillator type, without control ports or feedback loops *(Japanese)* 7−142413
forced nonlinear oscillations, global behaviour *(German)* 7−67007
FPU oscillating system, nonlinear, obs. on superperiod 7−115780
free electron laser, Raman type, 2D model, oscill. characts. anal. 7−97024
gas bubble in seismic wave source, spectral props. of press. oscill. *(Spanish)* 7−133592
gas bubbles generated by underwater explosions 7−104325
gas columns, thermally induced oscillations, complex quasiperiodic and chaotic states obs. 7−67200
global analysis of a system with multiple responses including a strange attractor 7−97297
half-plane, elastic, dynamic contact problem with HF oscills. 7−75481
heavy rigid body with one fixed point, stability of pendulum-like oscills. 7−72950
incompressible micropolar fluid, elliptic cylinder rectilinear oscills. 7−117569
internal friction conversion to intrinsic values, forced oscillations study 7−130610
isotropic star cluster, gravit. Landau damping theory 7−88550
large-amplitude subharmonic nonlinear resonance oscillations in an open-closed tube 7−82898
linearly coupled oscillators, numerical study of bifurcations 7−72956
long-scale thermodiffusional convection 7−142309
maximal and minimal eigenvalues and their associated nonlinear equations 7−140502
membrane, square, nonlinear forced oscills., multi-mode response 7−136734
metal shells with laminated polymer composites, energy dissipation in bending oscillations 7−110834
methane-air premixed flames, forced convective heat transfer 7−83216
monolithic damp coatings interaction with turbulent flow 7−136816
Morse oscillator driven by impulse interactions, dissociation dynamic 7−67212
Morse-Feshbach oscillator, differential geometric props. 7−128328
multiscale analysis of nonlinear oscillations of gas bubbles in liquids 7−75191
neutral delay differential eqns., oscillation conditions 7−80343
neutral equations, sufficient conditions for oscillation and nonoscillation 7−95252
nonequilibrium phase transition, entropy decrease during excitation of sustained oscillations 7−134707
nonlinear, method of harmonic balance 7−130526
nonlinear bubble oscillations, numerical study of thermal effects 7−111078
nonlinear chemical system bistable limit cycle oscills., noise-induced transitions 7−93259
nonlinear mechanical systems, transformation operator method in parametric identification problem 7−95302
nonlinear oscillation theory joining of local expansions 7−67003
nonlinear oscillations, power series solutions, software 7−95309
nonlinear oscillations in physical systems, decomposition method 7−134664
nonlinear oscillator, 2D, prototype, parameter space struct. 7−128272
nonlinear oscillator eqns., approx. solutions using iteration procedure 7−130524
nonlinear oscillators, quantifying chaos with amplitude probability density function 7−90928
nonstationary filament flow, damping model *(German)* 7−83294
octic oscillator, ground state energy, maximum entropy summation of divergent perturbation series 7−80471
oscillator lattices, local and global self-entrainments 7−121003
oscillators, driven nonlinear, stable limit cycle, fast relax. limit 7−128271
parametric resonances when dry friction forces are present 7−95301
PASCO harmonic motion apparatus, interface to computer 7−120730
pendulum, damped, eqns. of motion 7−117445
pendulum, inverted, stability conditions derivation 7−120741
pendulums, orbit precessions due to mag. interactions 7−108080
pendulums, underdamped motion study using videotaping 7−108088
planets, contrib. of nonradial oscills. to confinement of planetary arcs 7−107699
plate, vertically oscillating in fluid, radiated wavetrain prod. 7−123665
plate with defect, stiffness and freq. of natural oscillations in bending, vibrodiagnostics of defects 7−130567
Poincare's criterion for orbital stability of limit cycles of autonomous systems, energetic interpretation 7−120798
postcollapse star clusters, gravothermal oscills., analogous sphere anal. 7−101859
power flow between nonconservatively coupled oscillators 7−75275
prototype nonlinear oscillator, structure of parameter space 7−108211
Rabi oscills. under quasiperiodic perturbation, nonchaotic motion 7−73221
random vibrations of mechanical structures, mathematics, book 7−128464
Rayleigh's principle via least action 7−68986

oscillations continued
restricted-excitation oscillatory system, motion near resonance 7−120794
reversed compound pendulum with nonperiodically oscillating suspension, modelling 7−66997
rigid body with cavity containing heavy inhomogeneous liquid, 1D oscills. 7−75264
ring, rotating viscoelastic, free and forced vibrs. 7−97373
rotating steady forced 2D flow, spectral modes bifurcations 7−69193
second order strongly sublinear differential eqns., oscillation criterion 7−80344
self-excited value systems 7−83018
semibounded elastic solid in contact with elastic inertial element, dynamic props. 7−97370
solid particle migration in shear flow, local instabilities 7−136961
Space Shuttle instruments using occulting mask on end of long boom, boom vibration detection method *(Portuguese)* 7−134136
spatial decay estimates in continuum dynamics 7−95359
stellar systems, variational principle for determining oscillations and stability 7−101933
stick-slip motion during peeling, anal. of inertial effects *(French)* 7−91038
stochastic self-excited oscillator, chaotic modes, determinism 7−120965
strip stamp on elastic half-space, high-freq. shear oscills. 7−75397
supercritical vibration-induced thermal convection in a cylindrical cavity 7−69137
superposed fluids, common boundary, viscous attenuation of waves, components of motion 7−142327
Taylor-Couette flow, very LF oscills. 7−117566
thermal decomposition reactions oscillating traveling waves 7−93261
transonic diffuser flow, self-excited oscills., Navier-Stokes eqn. simulation 7−136910
turbulence response to large amplitude oscills. in channel flow 7−142388
two nonlinear oscillators, integrable system as an attractor 7−72960
two-layer system, convection onset, equilibr. instability, perturbation method 7−69135
Van der Pol system, periodic random excitations 7−72951
viscoelastic, solid, hydrostatic compression in fluid oscillatory instability 7−69006
viscous incompressible fluid, unsteady free convective flow from rot. disk 7−117597
vocal field oscillation, simulation using lumped mass-spring approach 7−126849
weakly nonlinearly coupled oscillators with slowly varying parameters, internal resonances 7−67008
X-ray measurement of residual stress, use of oscillation on position-sensitive detectors 7−123556
$ClO_2^- + I^-$, heterogeneity induced oscills., stirring effects 7−138990
^{3}He-He II, mode-locking and chaos in Rayleigh-Benard convection 7−76530

oscillator strengths
acoustical polaron in three dimensions, impedance function calc. 7−98830
allyl radicals, hot and relaxed, oscill. strengths, UV bands 7−109923
Bechgaard salts, dimerisation, vibronic structs. and optical gaps 7−98362
benzene, valence and Rydberg excitations and ionis., wave fns., cluster expansion 7−122335
closed classical orbits effect on quantum spectra, ionisation in mag. field 7−96598
core excited levels, laser spectroscopy 7−109817
extinction laser spectroscopic technique, meas. of level positions, oscillator strengths and autoionising linewidths 7−102542
formamide, core excited electronic states, oscillator strengths, EELS 7−122704
formic acid, core excited electronic states, oscillator strengths, EELS 7−122704
formyl fluoride, core excited electronic states, oscillator strengths, EELS 7−122704
high T_c superconductivity, charge transfer excitations, supercond. pairing mechanism 7−105818
hydrogenic ions, relativistic and quasirelativistic line strengths 7−103437
inert gas mixtures, third harmonic generation, optical consts., multiphoton ionisation meas. 7−122648
interpolation of oscillator strength sum rule data using scaled hydrogenic moments, excitation energy 7−110105
inverse hook method, AC Stark interaction 7−130145
lanthanides in solar photosphere 7−88338
light ions, extreme UV absorpt. spectra 7−74497
metallobacteriochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
metallochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
metalloporphin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
methallyl radicals, hot and relaxed, oscill. strengths, UV bands 7−109923
methyl radicals, hot and relaxed, oscill. strengths, UV bands 7−109923
organic mixed stack charge transfer crysts., phase diagrams and optical props. 7−84206
phytochrome, absorpt. spectra and phototransformation quantum yield, temp. depend. study 7−78756
polydiacetylene crystal, electronic struct. and photo-induced struct. change 7−112172
pyronines, electronic absorption spectra, PNDO calc. 7−74657
rodamine 110, electronic absorption spectra, PNDO calc. 7−74657
semiconductor microcrystallites, gigantic nonlinear optical polarisability 7−90691
stellar atmosphere opacities determ., astrophys. and fusion appls. 7−115230
trans-1, 3-butadiene, superexcited states transitions, ab initio CI calcs. 7−135843
vibrational spectrum. intensity distrib. calcs. 7−109855
Al oscillator strength and effective mass correls., ASW ab initio band struct. calcs. 7−84645
AlAs oscillator strength and effective mass correls., ASW ab initio band struct. calcs. 7−84645
Ar II, ^2S and $^2P^0$ states, wavefunctions, CI calcs. 7−82000
B isoelectronic sequence, electric dipole oscillator strengths and radiative lifetime, LS-coupling calcs. 7−135880
BH, $A^1\pi$ state, transition moment and radioactive lifetime calc. 7−110004
Ba, energies and oscillator strengths relativistic multiconfiguration DF calcs. 7−96565

oscillator strengths continued
Ba^{2+}, $5p^6 \rightarrow 5p^5nl$ (J=1) Rydberg series, photoabsorpt., multichannel quantum-defect theory approach 7−141526
$BaTiO_3$, Roman spectrum, line shapes of oblique phonons computation *(Korean)* 7−85647
Be, $2s2p^1P^0 \rightarrow 2p^2,2snd^1D$ transitions, oscillator strength, multiconfig. HF calcs. 7−103436
C I VUV oscillator strengths, arc emission meas. 7−116909
C-like ions, atomic data and spectral line intensities 7−95115
C_{60} mol., geometrical struct. and UV spectrum, PPP CI MO calcs. 7−109780
CaF_2:$Li^+(Na^+)(K^+)$, F_{2A} oscillator strengths 7−138478
Cd, electron elastic scatt., differential cross sections 7−141691
Cd, excited state pots. and oscillator strengths determ. 7−109838
CdTe, exciton oscillator strength, mag. field induced enhancement 7−143356
Cl I 108.8 nm, oscillator strength from interstellar absorpt. line obs. 7−88584
Co, electron impact excitation cross section *(Russian)* 7−110113
Cr I, test for solar atm. LTE using oscillator strengths 7−120346
Cs, discrete and continuous spectra, oscillator-strength distrib. 7−103435
Cs, four-level atoms, Stark spectroscopy and Autler-Townes interactions 7−68251
Cs isoelectronic series, collapse region oscillator strengths, valence-core electron exchange, model pot. calcs. 7−116846
Cs, satellite two-electron radiative transitions due to relaxation effects 7−68255
D Rydberg atoms in mag. field, transition to chaos 7−90039
Eu I, radiative lifetimes, time resolved fluoresc. decay 7−103430
EuI, reson. broadening, line profile asymmetry 7−129659
F_2^n (n=+ or 0), Rydberg states, pot. energy curves, CI calcs. 7−109790
Fe I and Fe abundance in solar atmosphere 7−88361
GaAs, exciton oscillator strength, mag. field induced enhancement 7−143356
GaAs free excitons, radiative lifetimes and giant oscillator strengths determ. 7−105410
GaAs oscillator strength and effective mass correls., ASW ab initio band struct. calcs. 7−84645
GaAs:Co, Co^{16} double acceptor state, high press. optical transmission meas. 7−105466
GaAs:H(D), implanted, localised vibr. stretching modes, IR spectra, comparison with Ge:H(D) 7−104944
$GaAs/Al_xGa_{1-x}As$ multiple quantum wells, transition energies and oscillator strengths 7−118573
GaAs-$Al_xGa_{1-x}As$ MQW, photoreflectance modulation mechanisms 7−70839
GaSb, surface phonons, high resolution EELS studies 7−143174
Ge:H(D), implanted, localised vibr. stretching modes, IR spectra, comparison with GaAs:H(D) 7−104944
H, long-range hyperfine freq. shift, dipole, quadrupole and octupole terms 7−82041
H plasma, oscillator strength density, one-particle pot. approx. 7−122452
H_2^+, generalised oscillator strengths, Born-Oppenheimer wave functions 7−103583
H_2O, $A^1B_1 0\text{-}X^1A_1$ transition, oscillator strengths, ab initio MRD CI calcs. 7−103399
H_2O, electron impact direct and dissoc. ionisation cross sections 7−103673
H_2O^+, fluoresc. efficiency factors and absorpt. oscillator strengths 7−120264
H_2S, electron impact direct and dissoc. ionisation cross sections 7−103673
He, triple differential electron impact ionisation cross sections, critical eval. 7−117075
Hg, excited state pots. and oscillator strengths determ. 7−109838
Hg, low-lying states, model pot. CI calcs. 7−68229
Hg, third order susceptibility and excited-state oscill. strengths 7−122454
InAs, surface phonons, high resolution EELS studies 7−143174
K, discrete and continuous spectra, oscillator-strength distrib. 7−103435
K, satellite two-electron radiative transitions due to relaxation effects 7−68255
Li, discrete and continuous spectra, oscillator-strength distrib. 7−103435
Li-like ions, energies and relativistic radiative transition rates, MC Dirac-Fock calcs. 7−135883
Mg, bound-bound transitions oscillator strengths, 8-state close coupling approx. 7−109837
Mg, oscillator strengths, CI calcs. 7−122377
MgF_2:Co^{2+}, Ni^{2+}, Mn^{2+} crystals, absorption and luminescence spectra 7−106255
MnI sextet relative oscillator strengths meas. 7−74514
N_2, Lyman-Birge-Hopfield band, oscillator strength determ. 7−74777
N_2, N core level excitation, oscills, strengths 7−82380
NH_3, electron impact direct and dissoc. ionisation cross sections 7−103673
NO, N core level excitation, oscills, strengths 7−82380
N_2O, N core level excitation, oscills, strengths 7−82380
Na, 3s-3p transition, generalised oscill. strength calcs. 7−96796
Na, discrete and continuous spectra, oscillator-strength distrib. 7−103435
Na, isoelectronic ions, optical oscillator strengths 7−129654
Ne-like ions, collision and oscillator strengths for electron impact excitation 7−140385
Ne-lite ions, oscillator strengths and energy levels, ab initio HF SCF CI calcs. 7−140384
O_2, UV absorpt. cross-sections and band oscillator strengths 7−135962
PO in interstellar medium, beta bands oscillator strengths 7−128003
Rb, discrete and continuous spectra, oscillator-strength distrib. 7−103435
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287
S VII-XIV spectra, wavelengths, oscill. strengths and energy levels 7−109825
S^{10+}, radiative rates and collision strengths, configuration calcs. 7−116875
SO_2, high-energy electron impact, inner shell excitation, EELS 7−129886
Sr^{+}, absolute photoionisation cross section meas. 7−103446
SrF_2:$Li^+(Na^+)(K^+)$, F_{2A} oscillator strengths 7−138478
Te V, reson. transitions, oscillator strength meas. 7−96604
Ti I, test for solar atm. LTE using oscillator strengths 7−120346
TiO transition rates for β, δ, ϕ, γ', γ, and α systems 7−82282
U plasma, oscillator strengths, emission spectrum 7−97842
Xe VII and VIII, reson. transitions, oscillator strength meas. 7−96604

oscillator strengths continued
Yb isoelectronic series, electronic transitions, multiconfig. Dirac-Fock calcs. 7−116874
ZrF_6-BaF_2-LaF_3-AlF_3:Ni^{2+}, Co^{2+}, Mn^{2+} glass, absorption and luminescence spectra 7−106255
oscillators
see also Gunn oscillators; microwave oscillators; parametric oscillators; relaxation oscillators; tunnel diode oscillators; variable-frequency oscillators
atomic dipole moments moving in a medium, spontaneous radiative alignment 7−68272
biological oscillator, topological patterns of synchronization 7−119703
Duffing systems, stable, jump phenomena, numerical simulations 7−134469
elastic-plastic oscillator with work hardening, energy separation, uniqueness of motions 7−80415
exact path integral solution of Morse oscillator *(Chinese)* 7−95371
jump phenomena in coupled Duffing oscillators under random excitation 7−82929
low-dissipation, magnetic susceptibility and low-temp meas. appls. 7−80800
low-noise limited oscillator for NMR magnetometer 7−95627
Morse oscillator, dynamic Stark splitting 7−122442
nonconservative dynamic systems, constrained, extension of Noether's theorem 7−88954
nonlinear oscillators, periodic solns. determined by fast Galerkin method 7−88953
nonlinear oscillators under stochastic parametric and external excitations 7−88955
nonlinear random vibration problems, appl. of complex stochastic averaging 7−134468
nonlinear random vibration problems, generalisation of equivalent linearization method 7−134467
quartz cryst. oscillators and atomic oscillators, comparison 7−115949
trace chemical vapor detection using SAW delay line oscillators 7−82978
vibro-impact response of a harmonically excited and preloaded one-dimensional linear oscillator 7−117444
oscillograms *see oscillographs*
oscillograph recorders *see oscillographs*
oscillographs
see also cathode-ray oscilloscopes
ASEO-1, automatic seismic electrographic oscillograph appl. 7−120175
PEO-1M electrographic oscillograph for strong earthquake recording 7−120178
oscilloscopes
see also cathode-ray oscilloscopes
ferromagnetics magnetic characts. obs. on oscilloscope display 7−121162
oscilloscopes, cathode-ray *see cathode-ray oscilloscopes*
Oseen method *see flow*
osmium
see also nuclei with .....
ions traversing Fe and Ni, transient fields 7−131600
isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
meteorite Ru, Re, Os, Pt, Au contents, for 41 iron meteorites 7−127786
γ-Fe_2O_3:Os sputtered films for mag. recording appl., grain growth, impurity effects 7−105315
Os-coated cathodes for very high emission-density appls. in FEL 7−97025
$^{184}Os/^{192}Os$ abundance, reson. ionisation mass spectroscopy study 7−86697
^{187}Os, accel. mass spectrometry 7−93422
osmium alloys
see also osmium compounds
$CeRu_{2-x}Os_xSi_2$, magnetism changes 7−70552
Cr-Mn-Os-Ru, elec. resist. anomaly and Neel temp. *(Russian)* 7−76880
$NpOs_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899
Os-W in Os-coated cathodes for very high emission-density appls. in FEL 7−97025
Pd-Cr-Os/Cu-Fe thermocouple, magnetic field effect on thermo EMF 7−134737
V-Os system, electronic and supercond. props. 7−112605
$Y_5Os_4Ge_{10}$, DC electrical resistivity and upper critical mag. field 7−84814
osmium compounds
see also osmium alloys
carboxylates, gaseous phase, electron impact mass spectrometry 7−74778
polymeric osmium-polypyridine complex, films, ion mobility and electron transport 7−92237
K_2OsCl_6, struct., temp. depend. 7−104978
K_2OsCl_6, structural phase transition, hydrostatic pressure effect, ^{35}Cl NQR meas. 7−91786
Os^{2+} complex, $[Os(phen)(das)_2]^{2+}$, glass-to-fluid transition, time-resolved emission, charge-transfer delocalisation or localisation investig. 7−84265
$Os_5C(CO)_{15}$, cluster struct. determ. IR spectra 7−113181
$Os_n(CO)_m$ clusters, electronic struct. calcs. 7−90467
OsF_6-graphite intercalation cpd., ESR props., anisotropy, 2D effects 7−85408
OsF_6-graphite intercalation cpds., charge transfer, optical reflection obs. 7−106127
OsO_4, isotope separation using IR multifrequency, multiphoton excitation 7−129893
OsO_4 molecules, UV laser fragmentation, atomic Os^+ ions generation 7−82302
OsO_4, ν_3 bands anal., FTIR spectra 7−74592
$U_4Os_7Ge_6$, struct., mag. and elec. props. 7−117878
osmosis
see also membranes
calcium oxalate crystallisation, supersat. generated employing reverse osmosis 7−142671
cholesterol-generated liquid membranes, electrokinetic energy conversion 7−119567
dioleylphosphatidyl-choline, hexagonal phases, deform. energy meas. 7−90971
dioleylphosphatidyl-ethanolamine, hexagonal phases, deform. energy meas. 7−90971
disperse dielectric particles, hydrodynamic interaction, double layer polarisation influence 7−71538
osmosis continued
disperse particles pair interaction in electric field, theory generalisation 7−71537
electrophoresis, continuous flow, aspects in microgravity 7−71906
F-actin solutions, nonideality of vol. flows and phase transitions in response to osmotic stress 7−93619
glycerol mono-oleate bilayer interactions, interferometric investig. 7−93669
hydrophilic solutes, aq. solns., stepwise hydration, thermodynamic model 7−93364
infinite rod-like mols., colloid crystal, osmotic bulk modulus 7−114005
β-lactoglobin, solns., ultrafiltration protein assoc. effects 7−119705
membrane operation, mass transfer under turbulent cross flow 7−86674
Millstone 2 nuclear power station makeup water, organic contaminants reduction 7−129365
muscle, striated, myofilament lattice spacing, osmotic compression, electrochemical meas., Donnan pot. theory 7−78728
nonideal macromolecular solutes, osmotic flow across membranes 7−113997
poly(2,2-propane-bis(4-phenylthiocarbonate)), soln. props. and chain flexibility 7−124066
poly(ether sulphone)-poly(dimethylsiloxane) alternating block copolymers, Pt-catalysed hydrosilylation study 7−113923
polyacenaphthylene, soln., unperturbed dimensions and chain conform. obs. 7−97890
polycarbonate microporous membranes, apparent ionic diffusion coeffs. of LiCl and $MgCl_2$ electrolytes 7−106829
polymer melts, 2D, asymptotic high-mol. weight behaviour 7−69575
polymer solutions, semidilute, in theta domain, renormalisation group study 7−117798
polymeric dosimeters, electrochemical etching dielectric loss, electro-osmosis, dielectrophoresis, electrostriction obs. 7−77462
salinity power generation, membrane and permeator, preliminary study 7−93483
seawater, osmotic press. as salinity and temp. function 7−72032
solutes in ethanol solns. reverse osmosis separation with cellulose acetate membranes 7−126480
solvent structure effects 7−86675
sporangiophore of Phycomyces blakesleeanus, water relations, pressure probe study 7−78801
styrene-divinylbenzene copolymer, macroporous, adsorpt. of dissolved organic cpds., from water 7−112078
ultrafiltration, membrane osmotic polarisation, piezoimpulsional meas. *(French)* 7−142369
urinary bladder membranes, electrokinetic studies using aq. solns. 7−119753
CS_2SO_4-Li_2SO_4(Na_2SO_4)(K_2SO_4), phase equilibr. thermodynamics 7−76413
Na-Cs, liquid alloys, osmotic pressure, temp. and press. dependence 7−83648
SO_2/NO_x wet removal from flue gas, reverse osmosis of wash waters 7−139157
osmotic pressure *see osmosis*
OTEC *see ocean thermal energy conversion*
OTF *see optical transfer function*
otology *see ear*
ovens
see also domestic appliances; electric heating
box-type solar cooker, thermal performance, transient anal. 7−119676
cooker, hot plate solar type with thermal energy storage system 7−78660
glass annealing process, knowledge-based simulation 7−78083
metal pollutants in air and water, ring-oven technique abs. 7−106945
solar, modification of box-type solar cooker, mathematical analysis and computer simulation 7−126645
solar cooker, design and devel. for maximum energy capture in stationary mode 7−71644
solar cookers, box-type, thermal test procedures 7−144909
solar kilns, box-type collector, performance determ. methods 7−106929
overcurrent protection
JET pulse termination network 7−122170
magnetic-discharge pump, power supply overload protection 7−121137
Overhauser effect
see also nuclear Overhauser effect
(fluoroanthene)$_2PF_6$ radical cation salt, mag. reson. on cond. electrons 7−85487
nucleic acids, 1H NMR spectra; chemical exchange rates and Overhauser effects calc. 7−106978
oxidation
see also anodisation; combustion; corrosion; reduction (chemical)
o-xylene on carbon catalysts, vapour phase oxidation 7−126274
acetaldehyde, oxidation in shock waves, mass spectrometric obs. 7−139001
adenine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
adenosine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
alloy, high-temp., oxide scale growth rate kinetics, medium O_2 press. range 7−144631
alloys, high temp., cyclic oxidation, thermal stresses, oxide scale spallation 7−119420
alloys, oxidation, review of key principles 7−119419
alloys, oxide scale, lamellar morphology, comp. 7−86437
aluminide coatings, high temp. oxidation 7−86453
aniline, electrochemical polymerisation 7−71488
anthracyclines, aglycone moieties, redox props., electrochemical expts., ab initio MO calcs. 7−100796
ATP molecules, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
biotite, oxidation of Fe II, Mossbauer effect 7−86582
brass, special, wear, alloying effects, metallography 7−113732
brass, thermal oxidation resistance, comp. depend. 7−113777
brass, thin corrosion layers prep. method for TEM 7−132850
BWR fuel rods, Zr alloy canister tubes, nodular corrosion reduction *(German)* 7−129194
BWR piping passivation, prefilming using air oxidation, radiation buildup control 7−109394
CANDU fuel element high temp. axial and radial behaviour in LOCAs, ELOCA-A code 7−73836
catalytic isotope exchange, D_2O prod. using wetproof catalyst 7−132970

oxidation continued
ceramics, advanced structural and composites, reliability, review 7—77777
ceramics, ion beam modified, friction and wear behaviour 7—106630
Cerro Prieto (Mexico) geothermal H_2S removal by upstream reboiler and catalytic reactor 7—114076
chlorobenzenes, isomers, bond orders, valence indices, oxidation numbers, ab initio calcs. 7—96527
(2-chlorophenyl)carbene, matrix isolated, oxidation, chemiluminesc. 7—100578
combustion system surfaces, reaction monitoring using Raman scatt. 7—113936
corrosion protective coatings, energy producing systems appl. review 7—86387
corrosion science, appl. of ion beam technology *(Chinese)* 7—132818
cytochrome C, spin and REDOX equilib. at Ag electrode/electrolyte interface, SERS spectra anal. 7—78778
diamond (100) surface, oxidised, MNDO anal. 7—105212
diamonds, synthetic, heat stability, mass spectroscopic measurements 7—89224
N,N′-(diphenyl-1,2-vinylidene)-meso-tetraporphyrin, X-ray cryst. and mol. struct. 7—111524
dipyridotetraazapentalene, photooxidation, fluoresc. and phosphoresc. spectra 7—82268
DODCI, first excited singlet state, photosensitised electron transfer reaction 7—116888
ethylene-propylene copolymers, thermal oxidation, chemiluminesc. and IR spectra 7—96897
flavins, one-electron oxidation, flush photolysis and pulse radiolysis obs. 7—71480
flavoprotein intermediates, reson. Raman spectra study 7—68487
graphite film, adsorbed Cs and Ba, KVV Auger spectra, oxidation effects 7—70947
graphite materials, oxidation rates, cryst. defect effects 7—126271
graphite oxidation products, thermal decomposition, DSC studies 7—106648
HTGR fine-grained isotropic graphite, fatigue behaviour 7—141180
HTGR graphite, fine-grained isotropic, oxidation effects on fatigue strength *(Japanese)* 7—135426
HTGR graphite, radiation effects on props. 7—141176
hydrocarbon oxidation, cool flame-ignition oscillations, thermokinetic model 7—134658
hydrocarbons, catalytic oxidation, heat liberation, vol. change 7—144690
hydroquinone oxidation on n-CdS, photoelectrochem. kinetics 7—99192
III-V semiconductors, anodic oxide film form., optical and photoelec. props. *(Russian)* 7—125822
Incoloy 800H, oxidation kinetics 7—106656
Incoloy 800H, oxide formation studied with XPS 7—86396
Incoloy 800H, pre-oxidised, Y-ion implanted, sulphidation props. 7—93186
Inconel 617, Ni-base superalloy, high temp. corrosion in He containing impurities 7—86447
Inconel 625 superalloy, transient oxides formed on aluminide coating, TEM obs. 7—100443
Inconel 718, high temp. embrittlement, effect of environment 7—93189
indoles, one-electron oxidation by free radicals 7—138991
isobutylene, photocatalytic oxidation, impurity centers 7—126482
liquid surface, convective struct. form. under laser radiation, holographic interferometry 7—130684
magnesium tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7—119539
magneto-optic alloys, duplex coatings for oxidation and corrosion protection 7—144582
metal surface oxidation, nucleation control, model 7—119448
metallisation stability on semiconductor surface, microscopic control 7—133022
metalloporphyrins, SCF perturbation calcs., oxidation and ionis. calcs. 7—103380
metals, corrosion and oxidation anal. using spectroscopic techniques 7—93207
metals, laser-controlled isothermal oxidation method based on internal photoelectric effect 7—132823
metals, low-temp. electrochemically-driven oxidation kinetics, oxide props. effects 7—119435
metals, oxidation, nonstationary, heterogeneous, model 7—139042
metals, oxidation and O penetration barriers 7—124594
metals, oxidation kinetics, parabolic reaction rate calcs. 7—119431
metals, oxide growth stress model, creep props. 7—132678
metals, pure, oxidation behaviour, role of point defects in oxide scales, review 7—86457
metals, surface modification by ion beams, conf., Kingston, Ontario, Canada (Jul. 1986) 7—102001
methane, catalytic oxidation with $La_{1-x}M_xCoO_3$ (M-Ce, Sr), Auger parameter in XPS 7—71547
methane oxidation and methane fluxes in the ocean surface layer and deep anoxic waters 7—101345
methane-air flame, C, chain mechanism investig. 7—97645
methanol adsorption on O_2-covered Zn (0001), UPS study 7—91980
methoxy radical+CO reaction rate const., temp. depend., fluoresc. spectra meas. 7—138966
organic compounds, electronic properties, MO-based mol. mechanics calcs. 7—129909
organic impurities in water, photooxidation using thin TiO_2 film 7—113961
organometallic compounds, oxidising pyrolysis, formation of WO_3 and Nb_2O_5 amorphous films 7—75999
oxide scale growth, tracer isotope distrib. 7—119390
phenol, oxidation in aq. media in jet-shear mixer two-phase reactor 7—91260
phenylchlorocarbene, matrix isolated, oxidation, chemiluminesc. 7—100578
photographic dye image stability, oxidative deamination influence 7—78522
poly(4,4′-triphenylamine), cyclic voltammetric, spectroscopic and ESR meas. 7—70317
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond., band gap, IR absorpt. spectra 7—71499
polyacetylene, oxidative deterioration, control by localised energy levels 7—71339
polyacetylene, reversible doping with I_2 in gas phase 7—92314
polyacrylonitrile, film and powder, thermooxidative degradation laser irrad. effects *(Russian)* 7—113914
polyamide thin films, adhesive interaction investig. 7—70140
polyamines, synthesis and struct. 7—71487
oxidation continued
polyaniline, electrochemistry and appl. to rechargeable batteries 7—71502
polyaniline, Raman and IR spectra determ. of struct. 7—70797
polyaniline, redox chemistry 7—71489
polyazulene film, electrochemical, EPR and optical props. 7—70629
polycarbonate surface props., adhesion of yeast cells 7—106643
polycarbosilane fibre, oxidation curing mechanism by solid-state ^{29}Si high-resolution NMR 7—119528
polyethylene, irradiated, radiation oxidised layer thickness evaluation *(Russian)* 7—139031
polyethylene, thermal oxidation, chemiluminesc. and IR spectra 7—96897
polyindene film, electrochemical, EPR and optical props. 7—70629
polyisoprene, oxidative-degradative processes, mech. stress effects *(Russian)* 7—113915
polymer blends, supermolecular structure, vibr. spectra obs. 7—74796
polyolefin insulation oxidative degradation due to surface influences 7—106652
polypropylene, isotactic, solid phase photooxidation, photoinitiator efficiency *(Russian)* 7—113963
polypropylene, thermal oxidation, chemiluminesc. and IR spectra 7—96897
polypyrrole film form. and modification on Pt electrodes cyclic voltammetry 7—100555
polypyrrole-Fe complex system, film and powder synthesis, Mossbauer and IR spectra charactn. 7—118999
polysilicon oxide film growth by rapid thermal processing 7—86496
polythiophene film, degradation by doping-undoping cycles 7—78491
polythiophene films, electrochemical polymerisation under ultrasonic fields 7—78489
1,3-propanedithiol, oxidation, struct., and H^+ elimination, MNDO calcs. 7—109770
rate measurements using solid oxide ionic conductors 7—119611
redox processes, at. orbital hybridisation dynamic changes effects 7—113880
reflective surfaces, oxidation resistant for solar dynamic power generation 7—138891
rocks, electrical properties from 10^{-3} to 10^{+9} Hz, solvent effects 7—114702
semiconductors, low-temp. electrochemically-driven oxidation kinetics, oxide props. effects 7—119435
semiconductors, point defects and diffusion mechanisms 7—104751
β-sialon-SiC composites, annealing, mech. props., thermal expansion *(Japanese)* 7—132654
solar-electric water purification using photocatalytic oxidation 7—100754
solid solution, three-component, heterophase zone growth during diffusion saturation of O *(Russian)* 7—91822
staurolite, thermal oxidation, Mossbauer effect anal. 7—126428
steel, austenitic stainless, AISI 304, oxidation kinetics 7—106656
steel, austenitic stainless, Al implanted, oxidation resistance and optical reflectivity 7—86485
steel, austenitic stainless, Alloy 800 H, oxidation, scale struct. and comp., EPMA obs. *(German)* 7—138908
steel, austenitic stainless, corrosion resistance in wet oxidation environment *(Japanese)* 7—132798
steel, austenitic stainless, FBR fuel claddings, simultaneous oxidation and tellurization 7—86454
steel, austenitic stainless, Mn substituted, high temp. oxidation in air 7—144625
steel, austenitic stainless, Nb stabilized, oxidation behaviour, influence of Ce^+, Y^+ and La^+ ion implantation 7—106683
steel, austenitic stainless, oxidation and Cr depletion profile meas., diffusion model anal. *(Japanese)* 7—119410
steel, austenitic stainless, oxide film characterisation for surfaces in BWR cooling systems 7—126310
steel, austenitic stainless, oxide formation studied with XPS 7—86396
steel, austenitic stainless, sensitised, corrosion behaviour in CO_2 atm. 7—113778
steel, austenitic stainless, surface studies of interaction with CsOH vapour 7—126311
steel, austenitic stainless Y^+ ion implanted, Rutherford backscatt.-channelling study before and after oxidation 7—106684
steel, Cr, oxidation, morphology, comp. and cation diffusion in scale 7—100426
steel, Cr, passivity breakdown studies with Cl^- ion addition 7—138904
steel, Cr-Mo, fatigue crack growth at 525°C, effect of oxidation 7—113688
steel, Cr-Mo, ferritic, behaviour in oxidizing and/or sulphidizing atm. *(French)* 7—86449
steel, Cr-Mo, high temp. oxidation, layered oxide struct. 7—106696
steel, Cr-Mo, oxidation behaviour, study using AE technique 7—144604
steel, Cr-Mo, thermal cycling, oxide scale cracking, AE obs. 7—78196
steel, double ion implanted with O^+ and Ti^+, surface layer characterisation 7—76158
steel, ferritic stainless, Cr-Ti, oxidation resist., influence of Al and Si 7—86445
steel, high C, Sn implanted, thermal oxidation, effects of ion implantation and radiation enhanced Sn diffusion 7—126315
steel, magnetite coated, oxidation and corrosion rel. to chemical cleaning 7—78315
steel, mild, N_2^+ ion implantation, treatment initiating sustained oxidative wear 7—106691
steel, mild, N ion implanted, oxidation and diffusion during wear 7—78358
steel, near-threshold fatigue crack propag., oxide/roughness-induced crack closure, effect of sheet thickness 7—78231
steel, polished surface, friction and transfer behaviour of graphite *(French)* 7—106629
steel, stainless, austenitic, LOMI decontamination of oxide layers *(Finnish)* 7—96185
steel, stainless, Cr-Ni type, with 4% Si, development for highly oxidising conditions 7—93182
steel, stainless, low-Cr, high-temp. oxidation resist., Al and Si alloying effect 7—78384
steel, stainless, oxidation resistance using Zr-Cr composite oxide films, electrochem. form. 7—106672
steels, BWR component materials, radioactive ion deposition 7—93155
steels, oxide films rel. to wear 7—71394
steels, stainless, solar materials, high flux photodegradation 7—144584
superalloy, turbine blade materials, high temp. fatigue crack growth 7—144540

oxidation continued
superalloys, high temp. corrosion, conf., London, England (Feb. 1986) 7−115678
superalloys, protective coating by diffusion *(French)* 7−86460
surface phenomena, reflection electron microscopy studies 7−95682
(tetramesitylporphyrin)iron(II), oxidation mechanism, reson. Raman spectra 7−78481
tetraphenylporphinatozinc, oxidation investigated using thin layer spectroelectrochemical cell employing specular reflectance 7−119596
thin layer activation, material loss monitoring technique during high temp. surface degradation processes 7−93243
thin oxide growth by rapid thermal processing 7−106726
thin oxides, breakdown due to DC and dynamic stressing 7−92596
trihydroxybenzenes, aq., pulse radiolytic oxidation, time-resolved reson. Raman spectra 7−90165
TTF radical cation salts with metal halides, elec. cond. and struct. 7−84859
tyrosine, persulphate oxidised, chemiluminesc. and Raman spectrosc. charact. 7−122541
ultrathin oxides, breakdown depend. on thickness and hole current 7−92595
VHTR, graphite materials corrosion in coolant, oxidation effect on props. 7−141174
VHTR support posts, graphite corrosion rate eqn. 7−141175
vibrational EELS study of redox tuning of surfaces 7−113326
white-black selective coatings for solar-energy transducers and radiators, electrolytic oxidation 7−78662
wire chamber aging, anode material depend. 7−74355
workpiece surface modification using elec. discharge machining, corrosion and oxidation resist. *(Japanese)* 7−132808
XPS, materials science appls. 7−132407
o-xylene, chemisorption, oxidative catalysis on activated C 7−78550
zinc tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539
Zircaloy-2, reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
Zircaloy-4 cladding oxidation kinetics and mechanical props. at high temps. in PWR accident 7−129292
Zircaloy-4 fuel cladding, deformation, oxidation and embrittlement in hot steam environment 7−89610
Pt/SiO_2/n-Si photoelectrodes in I and Br aq. solns., elec. props. and thermal oxide growth 7−100585
AP, solid and liquid forms, initial oxidation, Auger and EELS studies 7−71348
Ag monolayer, adsorbed on Pt substrate, SERS study 7−119005
Al anodic oxidation, Al_2O_3 film growth, TEM study 7−119436
Al foils, planar alumina growth, photoelectron studies 7−119449
Al, oxidation in moist atm., H_2 accumulation kinetics in artificial blisters *(German)* 7−113793
Al powder, sintering characts., effects of oxidation 7−144339
Al-Be alloys, surface segregation and oxidation 7−113788
Al-Li-Cu-Mg-Zr, thermal oxidation behaviour 7−100432
Al-Mg, air heating, internal oxidation, spinel phase precip. 7−106516
Al-Mg (4.2 wt.%), high temp. oxidation 7−86480
Al-Si alloys, oxidation in air 7−86409
$Al+O_2(SO_2)$, reactive scatt. using pulsed crossed supersonic mol. beams 7−144707
AlMgSi alloy, heat treatment, influence on atomic and electronic struct., X-ray emission study 7−132380
AlN, hot pressed, oxidation kinetics in humid atmospheres, 1100-1400°C 7−106647
Am, radiolytically induced oxidation reactions of actinide ions in concentrated salt solutions 7−106716
As_2S_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
As_2Se_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
Au (111) with Pb overlayers, O uptake, oxidation of Pb overlayers, Auger electron study 7−124709
Au electrodes, in situ microweighing meas. 7−100581
Au single crystal (111) and (100) UHV-prepared surfaces, stability in aq. electrolyte, LEED and electrochem. anal. 7−105216
Au-Si mixture films, oxidation behaviour, appl. for integrated circuits 7−113735
B, crystalline powders, oxidation, DTA and TGA studies 7−106720
B_2H_6, oxidation, matrix isolation study, IR spectra 7−116970
$Ba_{0.5}La_{0.5}Fe_{1-x}Cu_xO_{2.75-(x/2)+\delta}$, struct., oxidation states, elec. props., chem. anal., X-ray diffr., electron diffr., Mossbauer spectra, mag. suscept. meas. 7−84891
$Bi_2Te_{3-x}Se_x$ alloys, instability to air annealing 7−93218
C fibres, surface chemistry, use of XPS and labelling techniques 7−86700
C, oxidation on Pt catalyst, statistical energy partitioning 7−119561
C-fibre/C matrix composites, oxidation resistance, antioxidation treatments 7−106644
CN^-, anodic oxidation on Pt electrode in solns. 7−93370
CO, catalytic oxidation on Pt (100), kinetic oscills. appl. 7−113986
CO on catalytic surface, percolation transition in an irreversible-surface reaction model 7−139044
CO oxidation, on pt, molecular beam/infrared emission spectroscopy 7−144759
CO oxidation during N_2O catalytic decomposition in power plant process blowoffs *(Russian)* 7−103010
CO, oxidation in laminar diffusion flame 7−100559
CO oxidation on Pt/SiO_2, integrated kinetic modelling and transient FTIR studies 7−126421
CO_2, temp.-programmed desorpt. from Pt/CeO_2, oxidation 7−112073
Cd-Cu, bronze, sliding contacts, electron spectroscopy of surface oxide films 7−78365
$CdCr_2Se_4$, thermal stability, stoichiometric and doping effects 7−78386
CdHgTe surface and interface defect prodn., AES and XPS studies 7−111541
$CdIn_2S_4$, thermal stability, stoichiometric and doping effects 7−78386
CdS, photocond., air-sintered pellets, surface occurrence of impurity phases 7−86500
CdTe, thermal oxidation, kinetics and oxide composition 7−138912
Co based superalloys, strengthening mechanisms, hot corrosion resist., gas turbine appls. 7−86461
Co black, selective solar absorber surfaces, comparison of different forms 7−144911
Co obliquely evaporated films, partially oxidised, exchange interactions, mag, anisotropy 7−112878
oxidation continued
Co, oxidation on Pt catalyst, statistical energy partitioning 7−119561
Co, thermal oxidation rel. to ion implanted impurities 7−138897
Co-Cr, high temp. oxidation rel. to surface applied reactive oxides 7−78330
Co-Cr-Al, oxidation mechanism, influence of active elements 7−86458
Co-Cr-Si, isothermal oxidation rel. to dispersed Si_3N_4 particles 7−119430
Co-Mn, oxidation, 1273-1473 K, scale struct. 7−106695
$Co_{75}B_{25}$, metallic glasses, diffusion of Si and B 7−91885
CoNi thin films for mag. recording, corrosion resist. improvement by surface passivation 7−106667
CoO single cryst. wafer, growing surface morphology under O chemical pot. gradient 7−119441
Cr, Cr_2O_3 growth mechanism in 1 atm. O_2 at 950°C 7−126314
Cr electrodeposits from LiCl-KCl eutectic for fuel cladding against carbonisation and oxidation 7−116546
Cr, oxidation, NaCl induced accel. 7−106698
Cr, oxidation kinetics and mechanisms in H_2-H_2O-H_2S gas mixtures 7−126313
Cr, polycrystalline, initial oxidation, XPS, EELS and Auger electron spectra studies 7−93196
Cr-Ni-base alloys, heat resist. in gaseous environments containing S and C, effect of alloying additions 7−100417
Cr_3C_2-Ni base cemented carbides, fabrication and improvement of mech. and chem. props. *(Korean)* 7−77923
CrN coatings, prod. by high rate sputter deposition, props. 7−119143
Cs films, oxidation, UPS 7−71526
$CsHSeO_3.2H_2SeO_3$, cryst. struct., thermal behavior, IR absorpt. spectrum 7−111485
Cu, adherence of growing scale to surface of solid substance 7−86475
Cu contact surface, contaminant film growth, ellipsometric anal. 7−113790
Cu electroless deposition mechanism 7−124743
Cu, fatigued in neutral oxidising environment, development of current transients 7−86336
Cu, laser-induced oxidation, optical self-regulation 7−100418
Cu substrate with adsorbed benzoic acid, secondary ion mass spectra and XPS studies 7−92835
Cu wire resistor aging model *(Russian)* 7−119406
Cu-CuO, O incorporation into bulk Cu, evidence for electron transfer control 7−113340
$CuInSe_2$, selective electrochemical etching, influence on photovoltaic performance 7−126356
CuO, selective surfaces, optical props., effect of oxidation rate 7−143991
$Cu_{50}Ti_{50}$ amorphous alloy, XPS study 7−85962
Dy_2O_2S, oxidation to $Dy_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
Eu, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
$EuBa_2Cu_3O_x$, high T_c ceramic superconductor, preparation by rapid solidification and oxidation 7−126052
Eu_2O_2S, oxidation to $Eu_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
Fe (111), nitridation and oxidation, XPS and AES obs. 7−131407
Fe, adherence of growing scale to surface of solid substance 7−86475
Fe, Armco, protection from oxidation and sulphidation by silicization, heat treatment and aluminisation *(French)* 7−86462
Fe, cast, diffusion impregnation with Cr and Al, coating struct. and props. 7−78349
Fe complex, $Fe_4(Fe(CN)_6)_3$, prussian blue, site-transfer cond., dielectric relaxometry, voltammetry and spectrophotometry anal. 7−70307
Fe, oxidation wustite grain coalescence, hot stage environmental SEM obs. 7−119432
Fe surface, Mott-Schottky plot of passive film formed in neutral borate and phosphate solns. 7−144601
Fe targets, RF sputtering, surface oxidation 7−113331
Fe/FeO_x interface, current and capacity, computer supported pulse meas. 7−113753
Fe-Al, with small alloying additions, effect of Al_2O_3 scales on thermal cycling and creep in oxidizing and carburizing atm. 7−93063
Fe-Al alloys, oxidation, surface segregation of AlO_x, S effects *(French)* 7−71371
Fe-Al-Mn-C, oxidation, high temp. investig. 7−138905
Fe-base amorphous and crystallised alloys, oxidation, initial stages, effect of temp. and kinetics *(Russian)* 7−93192
Fe-based metallic glasses, oxidation and electronic struct., UV, X-ray and electron spectra 7−144610
Fe-based superalloys, high temp. oxidation and corrosion 7−93165
Fe-Cr, oxidation to sulphidation transition in H_2-H_2O-H_2S gas mixtures 7−119433
Fe-Cr alloy, oxidation, ion microprobe mass anal., FBR fuel-cladding gap appl. *(Japanese)* 7−100545
Fe-Cr-Al, decarburising during high-temp. oxidation 7−106663
Fe-Cr-Al, oxidation mechanism, influence of active elements 7−86458
Fe-Cr-Al, oxidation sulphidation, kinetic boundary 7−86443
Fe-Cr-Al, protective oxide scale adherence, role of Y 7−86459
Fe-Cr-Al, stress relaxation kinetics of growth during oxidation *(French)* 7−86473
Fe-Cr-Ce, high temp. oxidation, protective oxide scale morphology and adhesion 7−119453
Fe-Cr-Mo (100), O-induced Fe surface segregation, AES studies 7−144409
Fe-Cr-Si-B amorphous alloy, oxidation behaviour, influence of Cr addition 7−93198
Fe-Cr-Ti-Mo, ferritic, creep, precip., strengthening intermetallic phase, high temp. appls 7−138803
Fe-Cr(Ni), transient state scale from. in H_2-H_2O-H_2S atm. 7−78376
Fe-Mn-Ni-Si alloys, oxidation-induced transformations, kinetics 7−106670
Fe-Ni-Al, corrosion behaviour in sulphidizing and oxidizing atm. *(French)* 7−86455
Fe-Ni-Al, with small alloying additions, effect of Al_2O_3 scales on thermal cycling and creep in oxidizing and carburizing atm. 7−93063
Fe-Ni-Cr, carburization and oxidation, oxide scale failure 7−86431
Fe-Ni-Cr-W, gas-metal reactions in He and H_2-CH_4-H_2S atm., 700 to 950°C 7−86452
Fe-rare earth-B powder oxidation during permanent magnet prep., DSC study 7−132804
Fe-Si, oxidation kinetics, 900-1100°C 7−106700
Fe-Si-B amorphous alloy, oxidation behaviour, influence of Cr addition 7−93198
$Fe_{75}B_{25}$, metallic glasses, diffusion of Si and B 7−91885

oxidation continued
$Fe_{78}B_{13}Si_9$, metallic glass, surface oxidation, annealing, AES obs. 7−106709
$Fe_{50}Ni_{50}:N_2^+$, ion implantation effect on oxidation behaviour 7−119405
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass, initial oxidation, Auger electron spectra and ion sputtering studies 7−86484
FeO grains, formation conditions 7−132425
Fe_3O_4, magnetite, low temp oxidation to maghemite, Mossbauer study 7−86392
FeS_2, pyrite, surface oxidation 7−71332
$Fe_{99.5}V_{0.5}$ alloys, internal oxidation and precipitation, spin echo and Mossbauer studies 7−144617
Fe(100), oxidised, adsorbed O layers, surface struct. anal. by low energy ion scatt. 7−91951
GaAs (110), oxidation enhancement by mixed valence SM overlayers 7−71420
GaAs (110) surface, oxidised, yield photoemission study 7−70969
GaAs (111), initial stages of oxidation 7−86502
GaAs, ion implantation, disordering, oxide film thickness 7−76183
GaAs surface, oxide film, trap form. and recharging 7−92249
GaAs, surface As oxide formation 7−78390
GaAs surface oxide desorption temp. meas. 7−143213
GaAs, surface struct. after oxidation, asymptotic Bragg X-ray diffr. 7−76561
GaAs, thermal oxidation in presence of $SbCl_3$ and $InCl_3$ 7−93217
$GaAs/In_2S_3$ structures, thermal oxidation 7−93216
GaAs-oxide interface, electronic states charge DLTS response rel. to plasma oxide growth conditions 7−77030
Gd, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
Gd-Fe amorphous film, surface layer mag. props., oxidation effect 7−92485
GdCo amorphous films, DC diode getter sputtered, with perp. anisotropy, anomalous aging characts. 7−125497
Gd_2O_2S, oxidation to $Gd_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
GdTbCo films, RF diode sputtered, prep. conditions effect on mag. props. and ageing behaviour 7−125498
Ge, native insulators, elec. charactn. *(French)* 7−125141
Hf-Te, penta, tri- and ditellurides, oxidative degradation 7−132783
HgCdTe surface formed by fracture in solution, anodic oxidation 7−71408
$Hg_{0.8}Cd_{0.2}Te$, surface oxide chemistry 7−106725
HgTe, epitaxial layers, chem. composition, effects of surface treatment 7−84460
HgTe surface formed by fracture in solution, anodic oxidation 7−71408
InAs (110), O_2 adsorption, oxidation, Auger spectra, EELS and UPS studies 7−118258
InP (110), adsorbed Cs, catalytic oxidation, photoemission studies 7−93221
InP (110), oxidation rate enhancement by Cs catalyst 7−113807
InP MIS struct. with double insulators *(Chinese)* 7−77099
InP surface, electron beam modifications 7−144640
InSb anodic oxide growth kinetics, anion migration and distrib. calcs. 7−119471
Ir (111), interaction of O, adsorption, oxidation, XPS and HREELS studies 7−105280
Ir-C composite films, thermal oxidation, IrO_x electrochromic films prep. 7−99796
Ir_3Si_5, semiconducting silicides, formation and oxidation 7−126346
$K+N_2O$, absolute rate const., time-resolved atomic reson. absorpt. spectroscopy 7−100561
$La_{0.7}A'_{0.3}MnO$ (where A'=Sr, Ba, Ca), perovskite type catalysts, MS-Xalpha and CNDO calcs. 7−93374
$LaCrO_3$, crystn. kinetics, effect of comp. and nucleating agent 7−144568
La_2O_2S, oxidation to $La_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma oxidation and supercond. transition 7−126267
$(La_{1.8}Sr_{0.2}Cu)_xO_y$, high T_c superconductor, preparation by oxidation of amorphous $La_{1.8}Sr_{0.2}Cu$ ribbon 7−99267
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., formation of perovskite by oxidation of La-Sr-Cu alloy 7−119411
$La_yU_{1-y}O_{2+x}$, mag. meas., dilution effect 7−112786
Li foil electrodes, thin-oxide surface layer study 7−133061
Li_xFePS_3, intercalation cpds., band struct., Mossbauer studies 7−131537
Li_xFeS_2 intercalation system, cryst. struct., Mossbauer and electrochem. studies 7−142720
Li_xNiPS_3 intercalation cpds., band struct., Mossbauer studies 7−131537
Mg single crystal, Hf implanted, annealing and internal oxidation 7−78076
Mg-Ta implanted system, elec. field gradients, TDPAC studies 7−113009
MgO (100), Fe-covered, reaction of CO and H_2, UPS, EELS, SEELFS studies 7−86677
Mn, in photosystem II, struct. and function in H_2O oxidation 7−106981
Mn oxidation states in solids, determ. by EELS 7−132391
Mn-Fe-O spinels, Mn cation, deficient, reduction-reoxidation behavior, TGA, elec. cond. meas. 7−113903
$Mn_{1-x}Zn_xFe_xO_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7−77912
Mo, surface oxide form. by O ion implantation 7−138887
Mo-C fibers, heat treatment 77 to 1170 K, effect on state of Mo 7−106545
Mo-TiC eutectic composite, lamellar struct. stability under low vacuum at high temps. 7−144621
MoB_2, single cryst. prep. from Al flux, props. 7−132429
Mo_2B-glass, oxidation, high temp. annealing 7−100405
Mo_2B_5-glass, oxidation, high temp. annealing 7−100405
N_2, oxidation in nonequilib. weakly ionised plasma, temp. effects, numerical model 7−144686
NH_3 oxidation on Pt surface, laser initiation 7−78540
$NaIO_4$:$^{131}I^-$, thermal and radiation annealing effects study 7−117967
Nb, superconducting surface, angle resolved XPS studies of oxides 7−138584
Nb, superconductivity and oxidation 7−99340
Nb, surface coated by laser treatment, high temp. oxidation 7−100428
Nb surface oxides, angle resolved XPS and supercond. studies 7−113352
Nb, texture of corrosion layers rel. to stratification *(French)* 7−86446
Nb-Nb_2O_5, oxide interface, serrations, protrusions, XPS study 7−138595
Nb-oxide-Pb junction tunnel barrier, voltage induced variations 7−131805
Nb-Pb Josephson junctions, fabrication process study *(Japanese)* 7−99357
NbC, oxide interface, serrations, protrusions, XPS study 7−138595
oxidation continued
NbC superconducting surface, angle resolved XPS studies of oxides 7−138584
NbN superconducting surface, angle resolved XPS studies of oxides 7−138584
NbN-Al_2O_3-NbN tunnel junction series arrays, processing 7−131908
NbN-$NbN_{1-x}O_x$, oxide interface, serrations, protrusions, XPS study 7−138595
NbN(C) surface oxides, angle resolved XPS and supercond. studies 7−113352
Nb_3Sn superconducting surface, angle resolved XPS studies of oxides 7−138584
Nd-Fe-B magnets, graduated demagnetisation curves, soft phase, oxidation and spin reorientation effects 7−99499
Nd-Fe-B magnets, oxidation behaviour, corrosion reaction kinetics study 7−132805
$Nd_2Fe_{14}B$ particles, mag. props. and stability 7−85375
Nd_2O_2S, oxidation to $Nd_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
Ni (111), adsorbed O_2, secondary electron spectra and work function 7−85906
Ni alloy, heat-resistant, protective coatings effect on high-temp. fatigue 7−113784
Ni base super alloys, oxidation-sulphidation behavior 7−86439
Ni complex, bis(difluoroborondiphenylglyoximato)NiII, partial oxidation with I_2 7−100544
Ni, ignition in environments containing Cl_2 and O_2 7−126304
Ni, oxidation, high temp., using ceramic electrolyte cells 7−113772
Ni, oxidation and sulphidation, scale structs. 7−106706
Ni oxidation in N_2O_4 gas *(Russian)* 7−81537
Ni, oxidation kinetics, point defects diffusion 7−106697
Ni/Zr, ion mixed bilayer, oxidation behaviour 7−138896
Ni-base superalloys, oxidation or hot corrosion, effect of creep or low cycle fatigue 7−93190
Ni-Co-Cr-Al-Y coatings, oxidation-sulphidation behavior 7−86439
Ni-Co-Cr-Al-Y coatings for high temp. service, diffusion phenomena 7−93183
Ni-Co-Cr-Al-Y-Ta coatings, low press. plasma sprayed, oxidation, 850°C *(French)* 7−86466
Ni-Cr, high temp. oxidation rel. to surface applied reactive oxides 7−78330
Ni-Cr (10, 20 wt.%), high temp. oxidation of Cr_2O_3-forming alloys, influence of laser surface treatment 7−93187
Ni-Cr alloy, oxidation and sulphidation, scale structs. 7−106706
Ni-Cr-Al, oxidation mechanism, influence of active elements 7−86458
Ni-Cr-Al, protective oxide scale adherence, role of Y 7−86459
Ni-Cr-Al-Y based alloy, heat resistant coatings, struct, props., corrosion resistance 7−144600
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
Ni-Cr-Co, alloy 617, 72 *(German)* 7−138908
Ni-Cr-Si-Ce, oxide scale adherence rel. to Ce additions 7−78328
Ni-Cu, melt spun, oxidation, diffusion induced grain boundary migration 7−98583
Ni-In, oxidation quadrupole interaction, PAC study 7−118901
Ni-Si alloy, high-temp. oxidation, microstruct. and mechanisms, Si alloying effect 7−71396
NiAl coatings, oxidation resist. on Ni base superalloys, Hf effect *(French)* 7−86469
NiAl, transient oxidation, XPS study 7−71350
β-NiAl:Y, oxidation, scale growth and adherence rel. to implanted Y 7−78329
$Ni_{66}Cr_{34}$, duplex oxide-metallic substrate system, oxidation stress distrib. determ. by curvature method 7−86470
NiCrAl, undoped, adherent Al_2O_3 scale form. 7−71381
$NiFe_2O_4$ ferrite films, growth on MgO substrates 7−100101
NiO, growth in electrolyte cells, structural depend., XANES and EXAFS spectra anal. 7−68341
NiO thin film growth, oxidation by ionic diffusion 7−118312
OCN^-, anodic oxidation on Pt electrode in solns. 7−93370
P, red, oxidation in air 7−93130
Pb-Te-Se optical recording film, oxidation resistance, comp. depend. study 7−144569
PbAuIn-SiO-PbBi Josephson junction, RF plasma oxidised, annealing and aging phenomena 7−118722
PbS polycrystalline films, recrystallisation with activation annealing, oxidation 7−100258
Pd (100) with adsorbed methanol, oxidation, H transfer pathways 7−86679
Pd small particles, CO oxidation and desorption, SIMS studies 7−119580
Pd-Si metallic glasses, surface-induced crystn., DSC study 7−111405
PdRh polycrystalline foil, high temp. oxidation, XPS and Raman studies 7−138590
$Pd_{80}Si_{20}$, amorphous, thermal stability, effect of surface oxidation *(Chinese)* 7−144581
Pr-O, phase composition rel. to optical absorption, degree of oxidation 7−99884
Pr_2O_2S, oxidation to $Pr_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
Pt (110) 1×2, adsorbed CO oxidation, reaction dynamics 7−144750
Pt (111), struct.-property relations for surface processes at metal/soln. interface 7−143158
Pt-Rh (111) and (100) surfaces, plasma induced erosion 7−113780
$Pt_6(NH_3)_{14}Cl_{10}X_4$ (X=ClO_4, BF_4, PF_6) synthesis and elec. cond. 7−99036
Pu, radiolytically induced oxidation reactions of actinide ions in concentrated salt solutions 7−106716
Pu-Ga (1 wt.%), oxidation in N_2-5.5%O_2 atm. 7−78324
Re, catalysts, interaction with decomposition products of NH_4ReO_4 and silica 7−139043
Re complex, tricarbonylchloro(polypyridyl) Re (I), charge transfer excited state luminesc. and redox reactions 7−70867
Ru (001), Na adsorption and coadsorption with O, EELS study, electronic excitations 7−98700
Ru_2Si_3, semiconducting silicides, formation and oxidation 7−126346
SF_6, pyrolysis and oxidation, thermochemical data 7−80193
SO_2 oxidation to sulphate in aerosols 7−93579
SO_2 transport and oxidation in foggy San Joaquin Valley 7−133146
Si, 2D thermal oxidation 7−106719
Si (001) clean surfaces, surface state band, deformations due to roughening and misorientation 7−85035

oxidation continued
Si (100), adsorbed Cs and Na, catalytic oxidation, photoemission studies 7−93221
Si (100) diffusion limited dry oxidation, power law modelling 7−71412
Si (111), oxidation enhancement by mixed valence SM overlayers 7−71420
Si (111), Pb^+ ion implantation, surface layer struct., after high temp. treatment 7−84461
Si, automatic system for electrical band profile meas. by anodic oxidation *(French)* 7−70312
Si, curved surfaces, oxidation 7−71410
Si detector, p-i-n type, surface protection using anode oxidation technique 7−71401
Si, dislocation and oxidation stacking fault generation, influence of contamination 7−124291
Si, dopant distrib., cathodoluminescent monitoring, surface oxide layers 7−77660
Si, dry oxidation kinetics, fits to the linear parabolic model 7−71411
a-Si films, thermal oxide characterisation 7−93214
Si, high pressure steam oxidation, selective, defect formation 7−126347
Si initial oxidation states under electron bombardment, AES studies 7−119470
Si, laser-enhanced thermal oxidation, rate constants 7−144637
Si, laser-stimulated oxidation, model 7−113806
a-Si low press. oxidation kinetics, AES study 7−126337
Si, native oxide films, phys., chem., and elec. props. 7−113811
Si, nonplanar oxidation and oxide leakage current reduction by rounding-off oxidation 7−132829
Si oxidation, initial parabolic growth regime, direct O transport mechanism 7−119466
Si oxidation, SiO_2 thin film growth by O_3^+ defect electromigration 7−119467
Si, oxidation, stress effects on reaction kinetics and oxidant diffusion 7−93224
Si oxidation and amorphisation via crystalline SiO_2 interface layer, TEM modelling 7−124733
Si, oxidation by O_2, rate eqn. 7−144639
Si, oxidation in dry O_2, parallel oxidation mechanism 7−132833
Si, oxidation kinetics in afterglow of microwave-induced plasma 7−138910
Si oxidation mechanisms, model comparison 7−119468
Si oxidation model 7−113803
Si, oxidation stacking faults at mechanically induced weak surface defects 7−69718
Si, oxidation-induced stacking faults, length, density and dislocation interactions model 7−98181
Si, p^+-n-n^+ solar cells with AM1 efficiency of 19.5%, excimer laser processing and oxide passivation 7−86795
Si, passive thermal oxidation, ^{18}O tracer study 7−126342
Si, process-induced point defects, EPR study 7−126354
Si RAD ribbons, gettering effects, XPS/AES study 7−86497
Si, reactive sputter etching damage removal methods 7−144642
Si, stacking faults, oxidation-induced, TEM 7−91603
Si substrate, (001), local oxidation, film-edge-induced dislocation generation 7−112131
Si substrate, passivation-induced phenomena, book contrib. 7−106728
p-Si substrates, oxide layer form. kinetics from porous surface layer 7−144635
Si surface, direct formation of dielec. thin films by low energy ion beam bombardment 7−84075
Si surface, O removal via reaction with adsorbed Ge 7−71398
Si, surface oxidation, cleaning procedure effects 7−106723
Si surface oxide growth, variable refractive index 7−71409
Si surfaces, oxidation, dislocation generation at cracks 7−86495
Si, thermal oxidation, mech. stress effect 7−126332
Si, thermal oxidation, simulation 7−138913
Si, thermal oxide form., thermal and struct. deform. 7−71417
Si transient defect kinetics during oxidation and dopant diffusion phenomena 7−111968
Si:As, As redistribution during high press. thermal oxidation 7−78385
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
Si:B(As), oxidation-enhanced diffusion, HCl effects 7−118163
Si:Ge^+, ion implanted, oxidation kinetics 7−144633
a-Si:H, luminesc. mechanism during anodic oxidation *(Japanese)* 7−85867
a-Si:H natural oxidation kinetics 7−126344
Si/SiO_x/Mo MOS VLSI, oxide form. at Mo/Si interface, contact resist. *(Japanese)* 7−78388
Si-Si_3N_4, point defects, influence on LOCOS process 7−131143
Si-SiO_2, dioxide formation by rapid thermal oxidation of SiO 7−126329
Si-SiO_2, growth mechanisms, oxidation theories, book contrib. 7−106727
Si-SiO_2, oxide interface, serrations, protrusions, XPS study 7−138595
Si-SiO_2, plasma-grown, elec. props of oxide 7−126334
Si-SiO_2, thermally grown, electron traps 7−112502
Si-SiO_2, ultrathin gate oxide formation, catalytic Si oxidation 7−119461
Si-SiO_2 interface and Si, oxidation, HRTEM and ellipsometry studies 7−100459
Si-SiO_2 interface roughness evolution 7−112107
Si-SiO_2 structures, passivation and related instabilities, book 7−102026
Si-SiO_2:As, As depth profiling at interface, SIMS study 7−84533
SiC ceramics, oxidizing atmosphere behaviour, microstruct. *(French)* 7−86388
SiC, hot pressed, fracture toughness rel. to grain boundary oxidation 7−144518
SiC, obs. of deep levels, surface treatment 7−105448
SiC, oxidized polycrystalline surface, adsorbed hydrocarbons, angle resolved XPS 7−98634
SiC yarn, thermomech. props. 7−78282
Si_3N_4 ceramics, oxidizing atmosphere behaviour, microstruct. *(French)* 7−86388
Si_3N_4, hot pressed bars, oxidation, cristobalite form., EPMA obs. *(Japanese)* 7−132786
Si_3N_4 joining with Al braze, pre-heat-treatment effects 7−86383
Si_3N_4 powder, hydrothermal oxidation 7−144571
Si_3N_4 powders, oxidised without additives, very high press. hot pressing *(Japanese)* 7−126066
Si_3N_4, reaction bonded, thermal diffusivity, effect of oxidation 7−76507
Si_3N_4:Y_2O_3, sintered reaction bonded, flash oxidation, flexural stress rupture life 7−86324
Si_3N_4-(ZrO_2-Y_2O_3), structural ceramics, effect of Y_2O_3 additions, degradation 7−71276
Si_3N_4-based ceramics, high-temp. oxidation by water vapour 7−113744
oxidation continued
Si_3N_4-SiC based ceramics, strength degradation in salt environments 7−78284
Si_3N_4-SiC material, oxidation effect on strength and thermal stability 7−113749
Si_3N_4-SiC-MgO reaction-sintered, oxidation in presence of salts, effect on strength 7−119392
Si_3N_4-ZrO_2 system, phase reactions, influence of atm. 7−77954
SiO_2, amorphous, thermally grown, struct. interpretation anal. 7−83672
SiO_2 film growth, chem. bonding, ellipsometry and IR spectroscopy studies 7−143271
SiO_2 films, 5 nm thick, post-oxidation anneal and reoxidation effects 7−126355
SiO_2 films, γ-irrad. effect on dielec. props. 7−104831
SiO_2 films, hole trapping, annealing in low press. O_2 atmosphere effects 7−143479
SiO_2, grains, formation conditions 7−132425
SiO_2 layers on Si, mobile ions, book contrib. 7−105140
SiO_2 thermal films grown polycrystalline Si, transport props. 7−112524
SiO_2 thin film growth, oxidation by ionic diffusion 7−118312
SiO_2:Cl films formed suing trichloroethane oxidation and low pressure CVD 7−71049
SiO_2-Si, thermally grown films, ionic current study 7−77103
Si−SiO_2 structures, interfacial P_{b0} defects, low temp. EPR obs. 7−112950
Sm, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
Sm_2O_2S, oxidation to $Sm_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
Sn-Ni electrodeposited alloy coatings, anodic oxidation, optical and electrochem. studies 7−106705
$SrFeO_{3-y}$, first order transition, Fe mixed valence, Mossbauer spectra study 7−92560
Steel, Cr-Mn, electron flux irrad., surface layer local anal. 7−124650
Ta, oxidation, bulk Ta_2O_5 form. below 35 K 7−100435
Ta, texture of corrosion layers rel. to stratification *(French)* 7−86446
Ta thin film, oxidation, grain boundary particle effects 7−119451
TaN, oxidation by CO_2-CO mixtures *(French)* 7−144570
TaN sputtered films, thermal oxidation, dielec. props. 7−113746
Ta_2O_5 MIS capacitors, dielec. characts., effect of SiO_2 at Ta_2O_5-Si interface 7−118934
Tb-Co sputtered films, mag. and magneto-optical props., stability in air 7−144043
Tb_2O_2S, oxidation to $Tb_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
Te thin films, photo-oxidized photoconduction 7−85005
(Ti, Al)N coatings, prod. by high rate sputter deposition, props. 7−119143
Ti, adhesion of thermal oxide films 7−132904
Ti alloys, ion implantation, wear, fatigue and oxidation resist., biomaterial appls. 7−138902
Ti alloys, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7−144595
Ti, defects produced by Ar^+ bombardment 7−91991
Ti films, evaporated, oxidation, surface struct. 7−113776
Ti, hydrothermal oxidation, TiO_2 powder form. 7−126061
Ti, oxidation, effects of Sn^+ and N_2^+ ion implantation 7−106686
Ti, oxidation, O dissolution rel. to alloying elements, microhardness 7−86422
Ti, oxidation kinetics in laser irrad., scale phase transform. 7−144585
Ti, oxidation mechanism 7−93160
Ti plate, self-sustaining exothermic oxidation kinetics in gas flow 7−71463
Ti plate, self-sustaining exothermic reaction, multipulse light initiation 7−106813
Ti, texture of corrosion layers rel. to stratification *(French)* 7−86446
Ti-Al, oxidation, O dissolution rel. to alloying elements, microhardness 7−86422
Ti-Al (W)(Sn)(Ge)(Si)(Ni), oxidation, effect of alloying 7−106665
Ti-Al-V alloy, component surface condition effect on working capacity after annealing in different atm. 7−126309
Ti-Al(Cr)(Si), oxide film adherence, influence of nature of alloying elements 7−126312
Ti-Cr, oxidation, O dissolution rel. to alloying elements, microhardness 7−86422
Ti-Si, ion implanted, thermal oxidation studies 7−78359
Ti-Si, oxidation, O dissolution rel. to alloying elements, microhardness 7−86422
Ti-TiO_2, thermal oxidation of Ti, influence of anodic TiO_2 films 7−126300
TiB_2 particle reinforced SiC, hot-pressed, mech. props. and oxidation behaviour 7−78147
TiB_2 particle reinforced SiC, microstruct. and material props. 7−78148
TiFe, oxidised layers, semiconductor photoelectrodes, surface composition and topology 7−98646
TiN-TiB_2, Ti(CN)-TiB_2, sintered ceramics, frictional props. 7−100390
TiO_2 films, thermally grown, surface struct. 7−113776
TiO_2-Pt composite electrodes by dispersion plating, photoelectrochem. behaviour *(Japanese)* 7−86639
TiO_{2-x}, thin oxide coatings on Ti, photopolarisation studies 7−105612
$Ti_{0.97}Ru_{0.03}O_2$ pyrolytic films on Ti, XPS studies 7−106378
U^{3+} stability in $HCl(H_2O)$ tri-butyl phosphate extraction system, oxidation rate meas. 7−100507
UMn_2, electronic struct., reson. photoemission meas. 7−96790
UNiAl, electron binding energies, oxidation behaviour 7−99160
UO_2 CANDU fuel, oxidation and dissolution mechanisms 7−96188
UO_2 CANDU fuel residing in air, model for heat transfer 7−96205
UO_2 LWR fuel pellets, oxidative sintering, NIKUSI process 7−116613
UO_2 oxidation behaviour in air and steam with relevance to fission product releases 7−96210
UO_2, oxidation in air, fission product release 7−96209
UO_2 spent fuel, oxidation in groundwater products 7−96219
UO_2, used CANDU fuel, effect of radiolysis of water on oxidation 7−89777
VN, oxidation behaviour in CO_2-CO mixtures 7−93135
VO_2, formation by oxidation of V, kinetics, stability 7−100603
WSi_2, plasma sprayed coatings, corrosion and oxidation resist. 7−78372
WSi_x, multilayer-derived, microstruct., elec. and surface props. studies 7−137581
W(001), (011), oxidised, electron stimulated desorption of metal atoms and ions 7−91990

xidation continued
Y-Ba-Cu-O high T_c supercond., oxidation treatment, stoichiometry and lattice parameters w.r.t. T_c 7−118605
Y-Ba-Cu-O high T_c supercond., colloidal method prep. and transition temp. 7−119218
Y-Ba-Cu-O high T_c supercond., struct. behaviour and superconductivity 7−124226
Y-Ba-Cu-O high T_c supercond. prep. by oxidation of alloy foil, T_c and J_c studies 7−126055
Y-Ba-Cu-O high T_c supercond., plasma oxidation and supercond. transition 7−126267
Y_9Co_7, oxidation resist. and constitution 7−113774
$Y_2Fe_{14}B$ particles, mag. props. and stability 7−85375
YNiAl, electron binding energies, oxidation behaviour 7−99160
$Yb_{0.17}Ba_{0.33}Cu_{0.50}$ glassy alloy as precursor for $Yb_1Ba_2Cu_3O_x$ high T_c supercond., 7−144333
Zn electrodes in aq. alkali and carbonate solns., oxidation and reduction, cyclic voltammetry study 7−100586
Zn electrodes in aq. alkali and carbonate solns., oxide film form. and dissolution, cyclic voltammetry study 7−100587
Zn, hydrothermal oxidation, ZnO powder form. 7−126061
Zn, hydrothermal oxidation *(Japanese)* 7−71395
ZnHgTe surface and interface defect prodn., AES and XPS studies 7−111541
ZnO, porous, varistor props. 7−99053
Zr, AES study, room temp., 10^{-8}-10^{-5} Torr 7−138899
Zr alloy, oxidation and hydriding under irradiation, corrosion in LWRs, PNL results 7−113794
Zr alloys 7−86436
Zr, oxidation, reflection EELS study 7−138563
Zr, oxidation anisotropy, heat tinting method 7−100424
Zr, surface, H and D profiling, oxidation effect 7−86425
Zr-Nb (2.5 wt.%), reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
Zr-Nb (2.5 wt.%), surface, H and D profiling, oxidation effect 7−86425
Zr-Te, penta, tri- and ditellurides, oxidative degradation 7−132783
ZrN coatings, plasma spraying, controlled N_2 atmosphere, struct., hardness, thermal expansion 7−71383
ZrNb tube etching in HNO_3/HF mixture, oxide release 7−78302
ZrNiAl, electron binding energies, oxidation behaviour 7−99160

oxide coated cathodes
see also thermionic electron emission
MATS-III ion source, oxide cathode lifetime improvements 7−89838

oxide isolation technology *see integrated circuit technology; semiconductor technology*

oxygen
see also nuclei with .....
4f antiprotonic level width, Dover-Richard NN̄-potential, scattering length, P-wave and S-wave moment 7−110142
ε phase, extended interactions, isotope effects, IR and Raman spectra 7−99822
abundances in dwarf and subdwarf stars, implications for Galactic nucleosynthesis 7−145944
abundances in Sun, α CMi (Procyon) and α Boo (Arcturus), determ. from optical spectra 7−120376
acetylene+O_2 jets, multifront detonation, critical diameter and propag. study 7−97568
acetylene-O_2-Ar diffusion flame, mass spectrometry anal. *(French)* 7−119601
adsorbed δ-phase, an graphite, possibility of spiral spin ordering 7−124694
adsorbed atoms on metallic surfaces, surface binding energy, calc. 7−91960
adsorbed into PbSe layers, effect on carrier mobility and photocond. *(Russian)* 7−99235
adsorbed layer effects on Cr (100) surface magnetism 7−99424
adsorbed layer on Al(100), Auger and XPS studies, relaxation energies 7−92837
adsorbed layer on Cu (111), two-photon photoemission from adsorbate-induced states 7−77765
adsorbed layer on GaAs (110), local state density, long range screening 7−85034
adsorbed layer on Si (100) 2×1 and Cs or Na overlayer, electronic props., photoemission spectra studies 7−113344
adsorbed on Cu (110), angle resolved UPS, 2D electronic energy bands 7−119111
adsorbed on Fe (100), surface struct. anal. by low energy ion scatt. 7−91951
adsorbed on GaP (111), effect on surface photovoltage spectroscopy 7−77036
adsorbed on Ir (111), interaction with acetylene 7−119578
adsorbed on Ir (111), interaction with ethylene 7−119578
adsorbed on MgO($MgCO_3$), transient characterisation 7−70078
adsorbed on Ni (110), magnetic probing depth in spin-polarized secondary-electron spectroscopy 7−119078
adsorbed on Ni (111), secondary electron spectra and work function 7−85906
adsorbed on Pt (111), adsorbate induced Rayleigh phonon gap 7−76588
adsorbed on Rh (111), detection of neutral sputtered atoms, ejection, surface struct., energy and angle resolved meas. 7−138569
adsorbed on Ru (0001), order-disorder critical behaviour, LEED study 7−137719
adsorbed on ZnO optical waveguide, CARS 7−76606
adsorption, on TiO_2 reduced by Ar^+ bombardment 7−91991
adsorption, Zr (0001), Auger electron spectroscopy and LEED 7−76595
adsorption and reaction on Si, mol. beam and XPS studies 7−143195
adsorption and SiO desorption from Si (100) 7−118266
adsorption and superstructures on Cu (100) and (110), relation with stable stepped Cu faces 7−92001
adsorption of H_2, O_2 and CO on organic mols. and polymers, ab initio HF calcs. 7−78538
adsorption on Ag particles 7−84503
adsorption on alkali metal covered Ni 7−143205
adsorption on alkali metal covered Pt 7−143205
adsorption on alkali metal covered Ru 7−143205
adsorption on Cu, UPS studies 7−124686
adsorption on GaAs:H, photoelectron spectroscopy 7−138582
adsorption on GaAs-GaAlAs superlattice, GaAs-GaAlAs superlattices, photoemission and photolum. studies 7−77767

oxygen continued
adsorption on GaSb surfaces, work function and photovoltage measurements 7−125073
adsorption on metallic metastable surfaces, dimensional effects 7−124687
adsorption on Pd_3Sn, XPS and SIMS studies 7−138592
adsorption on Pd (100), nonequilib. percolative c(2×2) ordering, 8-site model 7−137700
adsorption on Pd (111), work fn. change 7−124721
adsorption on polycryst. Cu surfaces 7−118250
adsorption on $Pt_{60}Re_{40}$, induced Re segregation, SIMS and Auger effect study 7−98697
adsorption on SnO_2 (110) crystal, chemical, electronic and structural props. obs. 7−133003
adsorption on Zr (0001), lowest coverage surface struct., LEED intensity anal. 7−91994
adsorption with H_2O and OH on Ag(110), LEED, AES, TDS, ESDIAD and work function studies 7−105267
adsorption/desorption on polycrystalline Zr, TPD and ESD studies 7−105281
anodic evolution electrocatalysis from Co_3O_4, surface intermediate states preps. 7−113942
asymptotic giant branch stars, $^{12}C/^{13}C$ and $^{16}O/^{17}O$ isotopic ratios 7−120397
upper atmosphere, O atom conc., above Palestine, Texas, USA 7−120185
upper atmosphere and mesosphere, O and O_3 abundances, 10 Feb. 1987 obs. 7−145739
atmosphere during Palaeozoic times, C and S cycles model 7−87758
atmospheric, nanosecond pulses compression, radiowave absorption 7−127356
atom, 2p-3s transitions investigated using MCHF method with Breit-Pauli corrections 7−74430
atom, binding energy, rel. to at. charge, XPS obs. 7−141542
atom, coadsorpt. on Rh (100) with H_2O and CO, EELS, LEED and TPRS investig. 7−118236
atom recomb., homogeneous and heterogeneous, $a^1\Delta g$ state, reaction rate const. meas., appl. to nightglow 7−78460
atoms, excitation by electron impact, energy transfer, appl. to atm. electron precipitation process 7−79744
automated pneumatic transfer system for oxygen determinations by neutron activation analysis 7−93430
Bidart, France, O isotope ratio of carbonate during Campanian and Maastrichtian *(French)* 7−94196
blood flow, O_2 transport, short-term autoregulation anal. 7−114308
blood O_2 monitoring sensors, intensive care appl. 7−145266
c(2×2) overlayer on Ni (001), growth to saturated NiO, surface struct., X-ray photoelectron diffr. study 7−143157
carbon tetrafluoride-O_2 plasma, low temp. discharge, etching of PMMA film 7−71343
chemical diffusion in $(U_{0.8}Pu_{0.2})O_{2-x}$ at 1400°C *(French)* 7−96184
chemisorbed mols. on Ag(110) and Pt(111), bond length and orientation, near-edge EXAFS study 7−112081
chemisorbed on Al_n^+ clusters, collision induced dissoc. 7−122765
chemisorbed on Ni(111), net sputtering 7−144211
chemisorbed on Ni (001), interaction energy 7−70068
chemisorbed overlayer on W (110), ordering kinetics, scaling relationship 7−118251
chemisorption, on CdTe film, kinetics of electronic-molecular processes 7−76623
chemisorption, on Fe (001), giant adsorption induced surface relaxation 7−105261
chemisorption and dissoc. on Ni (100), one-electron effective core pot. 7−86668
chemisorption and interactions on NiO (111), UPS study 7−143201
chemisorption on Cu (001) many-electron embedding theory 7−93373
chemisorption on Fe (001), first principles determ. of mag. struct. 7−84508
chemisorption on Si (331), surface reconstruction, LEED, UPS, AES *(Chinese)* 7−124682
chemisorption on ZnO films, influence on temp. and press. depend. 7−85140
chemisorption on Zr (0001), Auger spectra and LEED study 7−131420
clathrate hydrates, struct. studies 7−117883
coadsorbed on Rh (100), formate production 7−144747
coadsorption on Ag (111) with H_2O, H_2O-OH-O surface chem. and interactions, LEED and desorpt. studies 7−143212
coadsorption with CO_2 on CU in Cu-ZnO-Al_2O_3 catalyst, O coverage determ. 7−98698
coadsorption with K on Ru (001), K−O cpds., form. study 7−124690
coadsorption with Na on Cu(110), evidence for Na_2O_2 surface species 7−131440
coadsorption with Na on Ru (001), EELS study 7−98700
P/Comet Halley (1982i), long-period hydromagnetic waves assoc. with O^+ or H_2O^+, Sakigake obs. 7−88236
concentration meas. using fluoresc. quenching, biomedical sensor appl. 7−78579
coverage on Ni (111), influence on H_2O adsorption behaviour 7−84521
coverage on U surfaces, interaction of H_2O vapour 7−85958
desorption from Si (100), real-time anal. 7−84504
determination method, neutron generator, in absence of external monitoring of electron flow density *(Russian)* 7−81821
dewpoint, IPTS-66 scale fixed pts., influence of pressure *(Polish)* 7−134746
diatomic melting curves to very high pressure 7−98405
diffusion, in Nb, field depend. of mag. permeability in flux flow state 7−92391
diffusion and solubility in Ni 7−71192
diffusion in Nb, statistical analysis 7−143098
electron stimulated desorption from rare-gas films. enhancement by coherent scatt. 7−138564
electrons attenuation length, energy depend. study 7−142856
evolution enhancement, at stabilised n-Si photoanode 7−86636
film, on graphite, identification of para-positronium production 7−125846
gas, depolarised Rayleigh scatt., expt. and mol. dynamics study 7−122546
globular clusters, metal rich, O abundances 7−94969
glow discharge, pot. fall produced by space-charge dipole layer 7−104470
granites of alkaline anorogenic type, O isotope geochemistry and origin 7−133609
graphite, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
hydrocarbons on O_2 film, ion-mol. surface reactions induced by slow electrons 7−119575

oxygen continued
impurities in ASDEX discharge radiation losses, VUV diagnostics 7−91366
India-Asia collision zone, NW India, tectonic inferences from O isotopic studies 7−139574
initial adsorption kinetics on polycrystalline Cu 7−131439
interaction with clear Ir(111), adsorption, oxidation, XPS and HREELS studies 7−105280
interaction with Cs films, UPS 7−71526
interactions with Ti gettered surface in UHV conditions 7−139072
Io, IUE detect. of O I and S I emissions 7−139957
ion, electron stimulated desorption from O_2 on Ar on Pt 7−124702
ion implantation and gas exposure influence in SiO_2 7−98210
ionosphere, O^+ heating by shear Alfven waves 7−115150
ionosphere F-region, electron temp. and density model, role of O and N_2 7−139840
ionospheric, acceleration to magnetosphere, cyclotron reson. with broad-band EM turbulence modelling 7−120207
ions, transient K-shell hyperfine fields and deduced polarisations in ferro-magnets 7−103681
isotope fractionation, mass-independent, in microwave plasma 7−136082
Jupiter, water abundance rel. to O abundance 7−120303
lattice O_2, oxidation of CO on Pt/CeO_2 surface 7−112073
liquefied, acoustic and thermodynamic studies 7−69826
liquid, magneto-volume and field induced transparency effects *(Japanese)* 7−99545
liquid, vibrationally and electronically excited, nonlinear and luminesc. spectroscopy 7−141580
M71, globular cluster, abundances of metals, C, N, and O in five stars 7−72415
magnetosphere, O^+, O^{2+}, O^{6+}, C^{6+} energetic ions of ionospheric or solar wind origin 7−107658
N Mariana Islands, volcanic rocks O, S, Sr and Pb isotopic var., implications for crustal recycling 7−127136
measurement using $SIRO_2$ sensors 7−100652
membrane-covered polargraphic O_2 sensors, performance improvement using pulsing technique 7−79699
mesosphere, ionization and O_2 $^1\Delta_g$ state depletion during solar proton events 7−139827
mesosphere and upper atmosphere, O, O_2, O_3 and OH composition 7−145740
metastable ordered surface phase on Pd (100), diffusion/adsorption competition 7−124704
methane-O_2 flame, alkali metal dopants, ion density and temp., equilib. consts., mass spectra anal. 7−86629
methane-O_2 premixed laminar flame, sensitivity anal. based on brute force method, rate consts. 7−78497
methane-O_2 systems, lean detonation limit, decrease mechanism 7−93331
microcirculatory O_2 transport, in vitro capillary system development 7−107321
Miocene, Middle and Late, climatic var., higher-order eccentricity cycles, ^{18}O and $^{13}CO^{2-}$ data anal. 7−101478
molecular adsorpt. on CuO_2, selectivity and sensitivity, surface struct. effects *(Russian)* 7−76626
molecular ion, $c^4\Sigma_u^-$ state, predissoc., isotope effect 7−110047
molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
molecular photofragment, CARS spectra 7−90163
molecular physisorbed monolayers on graphite surface, density-temp. phase diagram, LEED study 7−124698
molecular plasma, electrical cond., electron temp. and ionis. degree depend. 7−91282
molecule, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
molecule, adsorpt. in zeolite matrices, induced overtones, IR spectra 7−122517
molecule, dimer form., Herzberg photoabsorpt. continuum, press. depend. 7−136036
molecule, dissoc. energies, extended valence MC SCF calcs. 7−129606
molecule, elastic electron scatt., cross section meas. 7−68459
molecule, electron attachment and ion mobility investig. 7−122702
molecule, electron impact dissoc. excitation O IR emission 7−141701
molecule, electron impact electronic excitation, multichannel effective range theory 7−129888
molecule, evolution at oxidised Ni surface, intermediates adsorpt. behaviour eval. 7−91976
molecule, excited singlet state, collisional relax., temp. depend. 7−122672
molecule, in flames, vibr. excited, laser induced fluoresc. 7−82261
molecule, multiple bonds description, CASSCF/MRCI calcs. 7−109797
molecule, O-O stretch, adsorbate-induced resonance, vibrational polarisability, electron-phonon coupling 7−135933
molecule, photodissociation in stratosphere and mesosphere, O production and isotope effects 7−120101
molecule, photon stimulated desorpt. from V_3Si (100) 7−118252
molecule, position energy loss spectra meas. using TOF method 7−82378
molecule, pot. energy curve and spectroscopic consts., CARS photofragment spectra 7−82134
molecule, Q branch, high resolution CARS using injection locked dye lasers 7−82162
molecule, rot. transition, Fourier transform coherent Raman spectra 7−82130
molecule, shock compression, statistical mechanical model 7−74727
molecule, singlet photosensitisation and triplet state yield from tricarbocyanine dyes *(French)* 7−117027
molecule, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
molecule, UV absorpt. cross-sections and band oscillator strengths 7−135962
molecule, UV photoabsorpt. cross-section, pot. curves 7−129735
molecule, virial coeff. calc. 7−75738
molecule chemisorpt. on ZrO_2 film, activation energy and rate, work function depend., adsorpt. luminesc. studies *(Russian)* 7−76627
molecule XUV laser Rydberg state excitation 7−140763
molecules, isotope effects 7−96567
monatomic adsorption on Si (111), theoretical study of UPS spectra 7−77768
multifunctional O_2-humidity sensor, limiting current type 7−121104
nightglow emission from upper atmosphere 7−139828
nuclear microanalysis of N_2 and O_2 impurities in C specimens, using semiconductor spectrometer 7−86726

oxygen continued
O_2 chemisorption on metals and III-V semiconductors, excited molecular ion emission on Ar^+ bombardment 7−70959
O_2-CO_2-CO conc. cell using NASICON-Na_2CO_3 solid electrolytes, EMF and elec. cond. meas., partial press. depend. 7−86641
overlayer on Cu (100), quantitive multiple-scatt. anal. of NEXAFS 7−118245
overlayer on Cu (100), vibrational HREELS spectra 7−105232
overlayer on Ni (100) vibr. spectra EELS 7−91971
E Pacifc Ocean, N tropical region, O_2 regime 7−127284
SE Pacific Ocean, O_2 distrib. finestructure in tropical zone 7−133778
Pacific Ocean, subArctic region, surface waters biological new prod. and seasonal O_2 cycles 7−127281
phase transformations, melting and solid-solid, 120-650 K 7−113184
photoelectrochemical cells with TiO_2-based photoelectrodes, O_2 evolution and performance 7−93512
photofragment rotational distributions, parent internal motion, semiclassical calculation 7−136024
photofragment visible photodissociation dynamics 7−135947
physisorbed layer on graphite, solidification, susceptibility studies 7−124696
physisorption, on granite, two-dimensional solid monolayer, Monte Carlo methods 7−143234
PIXE and RBS anal. on and in Be 7−106862
planetary nebulae, spectral characteristics for C, N and O *(Swedish)* 7−128025
plasma, Cs^+-electron recombination in presence of N_2, O_2 and CO_2 7−111163
plasma, Langmuir probe and optical emission spectrosc. obs. 7−137132
plasma subject to alternating electric field, electron density and temp. 7−75759
plasmas, low-press., electron energy distrib., effect of collisions of various kinds 7−83413
positronium formation from He, Be, C, O, and N by the impact of high-energy positrons 7−129881
in Precambrian atmosphere, theoretical constraints from geochemical models 7−79544
precipitation in Si:B,O,C wafers, preannealing and impurity conc. effects 7−98477
production rates in P/Comet Halley (1982i), CCD spectrophotometry 7−88272
recombination in sealed Pb acid cell 7−93489
reduction in fuel cells with acidic or alkaline electrolytes 7−93501
retinal oximetry using fundus photographs, vessel absorpt. profiles anal. 7−71844
Robert Victor eclogites, O isotopes in minerals, implications for petrogenesis and mantle metasomatism 7−127137
Rydberg atoms, optogalvanic study 7−109823
semiconductor anal. for H, C and O using SIMS *(Japanese)* 7−93403
sensor based on semicond. props. of $(U_{0.3}Y_{0.7})O_{2-x}$ 7−115954
singlet, triplet-sensitized form., time-resolved luminesc. meas. 7−109986
SN 1983N and SN 1984L, Type Ib SN, He detect. and O obs., corresponding atm. models construction 7−127915
snow, falling particles, ^{18}O content var. and snow form. process 7−79565
solid, β-phase, rhombohedral Heisenberg antiferromagnet, infinite degeneracy of ground state 7−125298
solid, far IR absorpt. spectra, spin and phonon subsystems effects *(Russian)* 7−77529
solid, mag. and dynamic props. in external mag. fields *(Japanese)* 7−131255
solid α- and β-, mag. coupling and dynamics, ab initio calcs. 7−85220
solid α- and β-, mag. coupling and dynamics, mag. field effects 7−85287
SOS, O^+ ion implanted, carrier lifetime depend. on ion implantation dose 7−70324
steel, austenitic stainless, D ion driven permeation, surface struct. and O conc. effects, Auger electron spectra 7−76221
Sun, quiescent prominences, diagnostic capability of O 777.4 nm line 7−88341
Sun, transition region UV brightenings, Si IV and O IV obs. 7−72384
surface coverage on Fe, effect on surface-limited release of D from Fe 7−76604
thermodynamic desorption of O in high T_c supercond. oxides 7−131427
thermosphere emission features, spectra study 2000 to 8000 Å 7−79733
two photon reson. enhanced multiphoton ionisation spectroscopy 7−129819
uptake by Pb overlayers on Au (111), Auger electron study 7−124709
vapour bubble shape and size during boiling on downward-facing flat surfaces 7−142358
Venus, solar wind interaction, effect of hot O corona 7−120236
Ag:In,O, vacancy struct. following α-bombardment, PAC study 7−117964
Al:O, D trapping study 7−76196
Ar-O_2, solid HCP and FCC soln., thermal expansion determ. *(Russian)* 7−91848
Ar-O_2 mixture, atom-atom excitation in shock waves 7−96825
C stars, envelopes C and O isotopic abundances, CO obs. 7−140095
C stars with O-rich circumstellar dust shells, evolutionary charact. 7−88440
C_2N_2-O_2 mixtures, photodissociated, chemiluminesc. reactions 7−68417
$Ca(OH)_2$:O_2^-, proton spin-lattice relax. and dynamic nuclear polarisation meas. 7−143931
$Ca(OH)_2$:O_2^-, Raman electron spin-lattice relax. rate calcs 7−143908
$Ca(OH)_2$:O_2^-, Raman electron spin-lattice relax. rate meas. 7−143909
CdSe:O/Au Schottky diodes, struct. and elec. props., O effects 7−105655
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7−77387
GaAs:O_2, semi-insulating, LEC cryst. growth, resist. levels 7−91498
GaAs/AlGaAs interfaces, MBE grown, O accumulation, SIMS profiling 7−105289
GdTbFe:ONH_2O sputtered film mag. props., impurity effects study 7−112887
Ge:O, far-IR absorption lines of O donors 7−99844
H II regions in Seyfert galaxies, abundance charact. 7−140277
H_2-O_2 flames, Na and Cs emission intensity, mag. field effect 7−116903
H_2-O_2 reactivity mixture, planar laminar flame, stationary states stability 7−75703
H_2-O_2-N_2 flames H conc meas. by photoionisation controlled-loss spectroscopy 7−139006
H_2+liquid O_2 spray, detonation wave, unidimens. stability 7−97570
He-O_2, van der Waals complex, rot. predissoc. investig. 7−117033
He+N^{2+}(O^{2+}), double differential scattering 7−96838

oxygen continued
highly charged ion interaction with Au (110), charge exchange processes 7−92800
$In_{0.52}Al_{0.48}As$:O^+ diodes, O^+ implantation and annealing-effect on electrical props. 7−93115
InP:O,O anal. by ^3H beams 7−106866
InP:Si,S,O, donor impurity incorporation, O_2 effects, spectroscopic evidence 7−98184
KCl:Na^+,O_2^- F_2^+-like centre laser operation in 1.7 to 2.2 μm range 7−68652
KCl:O_2^-, superfluorescence-amplified spontaneous emission transition, transition dipole dephasing rate 7−136250
LiF:Mg,Ti,O, thermostimulated luminescence and photoluminescence 7−132351
LiF:O^{2-}, F_2 centres, thermal stability, appl. to lasers 7−124265
N_2-O_2 mixtures, negative corona 7−130955
N_2-O_2 ozonizer, O_3 electrosynthesis, computer simulation 7−71497
NaCl:O, O-perturbed F_2^+ colour centre, optical props. 7−106204
Nb:H,O, Snoek peaks, internal friction studies 7−98335
O, ^1D excitation in aurora, form. modes, electron and visible spectra study 7−79738
O fully stripped ions+H, selective electron capture 7−96850
O I, differential and integral electron excitation cross-sections for (^3P−$^3D^0$) transition (98.9 nm) from 20 to 200 eV 7−129874
O I, electron impact excitation cross sections of ^3P and ^5P states at 30 eV 7−90430
O I, neglected selection rule for excitation of forbidden fine-structure transitions 7−134127
O I 630 nm forbidden line emission from P/Comet Halley (1982i) 7−88268
O I 630.0 nm nightglow in winter, obs. and theory 7−127628
O I (IV), EUV emission lines in the atmospheres of cool stars 7−88420
O I energy transfer from $N_2(A^3\Sigma_u^+)$ as mechanism for auroral 557.7 nm emission 7−94535
O I forbidden line+NH_2 feature blend resolved in P/Comet Halley (1982i) 7−94767
O, II and III, beam foil spectra, VUV spectra, line assignment, displaced term systems 7−135871
O II emission in aurora, satellite-borne obs. 7−145747
O II spectral wavelengths 7−141500
O III, electron excitation rates R-matrix calcs., use for nebulae plasma characts. determ. 7−140228
O V, laboratory plasma emissions compared with astrophysical obs. 7−115224
O V ions, dielectronic recombination cross section, electric field effects 7−82354
O VI, quartet spectra, wavelengths, transition probabilities and lifetimes 7−74441
O VI, quartet term system, beam-foil investig. 7−109851
O^+, Venus ionosphere dynamics, 2D spectral model 7−107733
^{17}O NMR spectra, acoustic ringing and pulse breakthrough correction, maximum entropy method 7−90030
^{18}O, incorporation into glycolic acid following bleomycin mediated DNA degradation 7−106976
O^{2+}, beam foil excitation, (*n,l*) state distrib. study 7−96847
O^{4+}, dielectronic recomb. rate coeffs. meas. 7−117067
O^{44}, partial autoionisation widths, complex eigenvalue Schrodinger eqn. 7−135885
O^{44}, partial autoionisation widths, Auger spectra 7−135902
O^{5+}, dielectronic recombination meas. 7−110104
O^{5+}, electron impact ionisation cross section meas. 7−122724
O^{7+}, Rydberg states, electric field ionis. detect. 7−122729
O/O_2 ratio in high-latit. upper atmosphere, implications for mass transport during polar night *(German)* 7−134042
O-D-H plasma, ion cyclotron modes, near perpendicular propag. 7−130865
O+$(NO)_2$, crossed beam investig., chemiluminesc. detect. 7−110095
O+CS→S+CO, reaction dynamics calcs. 7−96816
O+$D_2(H_2)$, transition states, effective bending freqs., energies and tunnelling parameters 7−144698
O+H_2, neglected selection rule for excitation of [O I] fine-struct. transitions 7−134127
O+H_2, quantum mechanical reaction probabilities calc. 7−138974
O+H_2, reaction dynamics, OH product, laser induced fluoresc. 7−93289
O+H_2, thermal rate consts., effects of internal energy distrib., appl. to shocked interstellar medium 7−126416
O+H_2 in shocked interstellar clouds 7−128020
O+H_2 reaction, extended active space CASSCF/MRSD CI calcs. 7−100533
O+H_2→OH+H, reactive collision, crossed beam expt. 7−144710
O+H^+, charge-transfer cross sections, distorted-wave formalism 7−82346
O+HCl, cross sections, reagent rot. effect 7−71466
O+HD, tunneling, intramol. kinetic isotope effect, laser-induced fluoresc. meas. 7−86575
O+HI, chemical exchange reactions, quasiclassical trajectory calcs. 7−113869
O+HI(GeH_4)(SiH_4)(H_2Se)(H_2S), vibr. distrib. and rate const. meas. 7−113885
O+He, neglected selection rule for excitation of [O I] fine-struct. transitions 7−134127
O+He(N_2)(O_2), collision differential cross-sections relevant to ionosphere O^+ precipitation 7−110064
O+methane, absolute integral cross section meas. 7−141657
O+methyl radical, reaction kinetics, 294-900 K 7−138987
O+N_2→NO+N, pot. surfaces, CASSCF/CI calcs. 7−106783
O+NO_2(N_2O_4)(N_2O_3), reaction kinetics at low temps. 7−100516
O+O atomic elastic and inelastic collisions, the ^1D and ^3P states 7−90383
O+O_3, vibr. excitation effects in Earth's upper atmosphere 7−94530
O+PH_3, flash photolysis, rate const. meas. 7−132954
O+trichloromethane (trifluoromethane), dynamics and microscopic kinetics, time-resolved Fourier transform spectroscopy 7−132919
O^-+N_2(NO), N^- formation, mass spectra study 7−138971
O^++Ar, complex energy complex interaction Nikitin model, L-K vacancy sharing 7−82350
O^++O_2, K-shell vacancy creation by 2pσ-2pπ rot. coupling investig. 7−82322
O^{4+}+Ar, electron loss, doubly differential cross-sections calcs. 7−141679
O^{5+}+He, electron capture cross sections meas., classical over-barrier model study 7−90405
O^{6+}+He, electron capture, travelling MO method calcs. 7−82342
oxygen continued
O^{6+}+He, low-energy collisions, evidence for correlated double-electron capture 7−74746
O^{6+}+He(H_2), double electron capture, electron spectra 7−90406
O^{8+}+H, electron capture, absolute line emission cross sections 7−141686
O^{8+}+H_2, electron capture, energy gain-X-ray coincidence meas. 7−90399
O^{8+}+He, charge exchange collision, X-UV spectra anal. 7−122429
O^{8+}+He, double electron capture, continuum distorted-wave and intermediate-state approx. calcs. 7−110102
O^{8+}+He, electron capture, differential cross sections, TOFS anal. 7−90396
O^{9+}+He, q=5-8, transfer ionisation, scaling rule 7−90414
O^{n+}+H(H_2), state-selective one-electron capture 7−141683
O^{n+}+He (n=2,3,4), O K Auger electron spectra 7−103452
O_2 + formaldehyde, rot. inelastic scatt. cross-sections 7−82324
O_2 adsorption on InAs (110), Auger spectra, EELS and UPS studies 7−118258
O_2 adsorption on Mn covered Ru (001) 7−143207
O_2 adsorption on Si (100), roughness effect of dangling bond band 7−144240
O_2 adsorption on Si (110), early stage behaviour 7−124708
O_2, blood gas $P(O_2)$, clinical comparison of 4 sensors during cardiopulmonary bypass 7−145256
O_2 chemisorbed on Ag, evidence for superoxo and peroxo species, combined EELS-XPS study 7−125928
O_2 chemisorption on GaAs(110), uptake kinetics, comparison with N_2O 7−131447
O_2, condensed on Pt, dissociative attachment in electron-stimulated desorption 7−136076
O_2 consumption by cell suspensions, photometric method for meas. 7−71938
O_2, dense fluid, Raman scatt., MDM calc. 7−82175
O_2 end-Hall ion source 7−135702
O_2, light parametric freq. conversion in short wavelength region 7−103886
O_2, local-tissue press., polarographic meas. 7−107271
O_2, low lying singlet states, collisional energy transfer kinetics 7−136048
O_2 monolayers on graphite, specific heat, sound velocity, Debye temp., lattice dynamics 7−137697
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
O_2, nightglow triplet emissions, vibr. levels attitude distribution 7−79732
O_2 phosphorescence quantum yield in benzene solvent, IR spectra 7−116954
O_2, positive burst pulse corona 7−142527
O_2, real ionisation and attachment coeff. determ. *(Chinese)* 7−90279
O_2, resonance effect on the moderation of slow electrons in diatomic gases 7−90442
O_2 supercooled liquids and solids in porous sol-gel glasses 7−98406
O_2 UV photolysis, O_3 formation and isotopic fractionation 7−126462
O_2^-, formed by electron trapping on ZnO surface, CARS, obs. 7−74616
O_2^- ions in nonequilib. plasma, form. and breakup, electric field effects 7−83414
O_2^+, autoionising Rydberg states, polarised fluoresc. spectroscopy 7−141615
O_2^+, $B^2\Sigma_g^-$ state, photoionis. cross section 7−82290
O_2^+, direct dissociative recomb., cross section windows, Morse pot. curves 7−78461
O_2^+ dissociative recombination, O ^1S state production rate in upper atmosphere 7−113933
O_2^+, impact on Ag (111), harpooning transitions 7−125901
O_2-Ar, electron attachment and ion mobility investig. 7−122702
O_2-Ar(N_2), binary liq. mixtures, vibr. relax time as function of conc. 7−68441
O_2-enriched air production using passive liquid membranes 7−100609
O_2-enriched air production using facilitated transport membranes 7−100610
O_2-enriched air production using membranes, process design and economics 7−100611
O_2-HF, H bonded complexes, matrix isolated, IR spectra 7−90117
O_2-I chemical laser, theory and expt. 7−130076
O_2-I chemical laser, water vapour content in active medium 7−130081
O_2-N_2 microwave discharge, plasma halo form. 7−124010
O_2-N_2-I mixture laser active medium 7−130080
O_2-tetrafluoromethane(methane), interaction force, ab initio calcs. 7−129831
O_2+Al, reactive scatt. using pulsed crossed supersonic mol. beams 7−144707
O_2+Al_n^+, size-depend. barriers for reaction 7−113876
O_2+Ar, collisional energy transfer dynamics investig. 7−117053
O_2+Ar^+, flow tube parameters effect on reaction rate consts. 7−86584
O_2+Ar^{13+}, impact ionisation and fragmentation, TOF mass spectra 7−122679
O_2+C, crit. irradiation dose determ. appl. to impurity flux in fusion machine meas. 7−74052
O_2+C, radioactive recoil atom reactions, review 7−106818
O_2+H, collisional destruction investig. 7−141666
O_2+H_2O, rot.-vibr. lines, collisional self-broadening, semiclassical theory 7−129791
O_2+H^+, differential cross section meas. 7−74735
O_2+methane, absolute integral cross section meas. 7−141657
O_2+N, reaction kinetics, chemiluminescence, rate constants, excitation mechanisms, discharge flow technique 7−144693
O_2+N, reaction rate constants 7−86579
O_2+N_2, O_3 form. on fine wire electrode in corona discharge *(French)* 7−97832
O_2+N_2+K, third-order rate const., temp. depend., time-resolved atomic reson. absorpt. spectroscopy 7−100644
O_2+NH, collision induced intersystems crossing 7−136035
O_2+NO charge transfer reaction $O_2(b^1\Sigma_g^+)$ vibr. distrib., role in aurora and nightglow 7−79735
O_2+NO^-, rate consts. determ., vibr.-level excitation effects 7−126447
O_2+N→NO+O, pot. surfaces, CASSCF/CI calcs. 7−106783
O_2+Na(Rb), intermultiplet collision transfer cross sections 7−129856
O_2+Ne, mol. ionisation cross section, vel. depend. 7−129853
O_2+O_2, vibr. excitation and relax. 7−68442
O_2+OCS, IR spectra, ν_1 band, diode-laser meas., press. broadening parameters 7−96663
O_2+$SiCl_2$, UV absorpt. spectra, rate const. meas. 7−100515
O_2^++C, crit. irradiation dose determ. appl. to impurity flux in fusion machine meas. 7−74052

oxygen continued
O_2^++Kr, vibr. relax. mechanisms, computational evidence 7−113875
$(O_2)_n^-$ and $(O_2)_nO^-$, electron attachment at low energies 7−71470
$O_2^-(H_2O)_n$, gas phase, electron transfer, ab initio MO calcs. 7−68500
OI for O_2 electron impact dissoc. excitation, IR emission 7−141701
^AO (A=16,17,18) abundances in N-type and J-type stars 7−127893
^AO, A=16,18, antiprotonic atoms, interaction shifts and level widths, optical model anal. 7−96892
^{15}O, gaseous activation products prod. for medical purposes *(German)* 7−71867
^{15}O production, current methodology 7−133448
^{15}O-CO_2, inhaled, radiation dose to upper airways 7−133459
$^{18}O/^{16}O$ in cores from Riiser-Larsenisen Ice Shelf 7−114833
O_2.Rayleigh scatt. cooperative rot. motion and collision-induced term study 7−82174
SO_2-O_2^+, weakly bound clusters photodissoc. dynamics 7−93344
Si:B,O, Czochralski grown, furnace and rapid thermal annealed, minority carrier lifetime 7−131659
Si:C, O, electron irrad. damage effects, defect centres 7−137413
Si:C, O, fast neutron irradiated, behaviour of optically active C 7−113233
Si:C, O, impurity related deep level complexes, Xα cluster model calc. 7−98904
Si:C,O, defect identification by photolum. 7−125804
Si:C,O, electron irrad., divacancy accumulation kinetics, impurity effect, IR absorpt. spectra 7−104837
Si:C,O, microsegregation, scanning Fourier transform IR spectroscopy 7−98216
Si:C,O, thermal donors, C-O defects 7−76820
Si:C,O,Fe precipitation of O and C, effect of Fe *(Chinese)* 7−105032
Si:C,O grown by Czochralski and crucibleless zone-melting methods, influence of impurities on swirl defects 7−91560
a-Si:H,O^+ films, mobility gap defect states obs. 7−112248
Si:N, O, substitutional impurities, thermal annealing, EPR studies 7−98186
Si:O, annealed, defect centres, microwave cond., inverted EPR signal obs. 7−99569
Si:O, C, impurity interaction with multiphonon IR absorpt. bands at low temps. 7−113231
Si:O, Czochralski grown, O-related defect generation 7−124315
Si:O, defects and doping, positron studies 7−144161
Si:O, defects produced by O^+ implantation, EPR study 7−99577
Si:O, elec. resistivity, O precipitation effects 7−112326
Si:O, enhanced impurity diffusion at 500°C, SIMS study 7−98582
Si:O, enhanced O diffusion, stress-induced dichroism studies 7−98581
Si:O, Fe(Cr)(Pt), transition metal solubility, O precipitate effects 7−98476
Si:O, Ge, vibr. absorpt. spectra 7−99891
Si:O, H, B, substitutional off-centre and small aggregate defects, electronic struct. 7−98870
Si:O, impurity conc. meas. using IR absorpt. 7−84007
Si:O, impurity vibrations, IR spectrum 7−113175
Si:O, interstitial depletion during annealing, thermal donor model calcs. 7−131141
Si:O, interstitial O conc. by IR method, influence of back surface roughness 7−113209
Si:O, interstitial O vibr. modes, IR absorption spectra studies 7−91750
Si:O, ion implanted, defects, EPR spectra 7−125537
Si:O, ion implanted, PAC study., EFG-surface charge relationship 7−118905
Si:O, ion implanted wafers, annealing stacking faults form., SiO_2 precipitates dissolution 7−111587
Si:O, ion implanted with O isotopes, IR absorption studies 7−98203
Si:O, metal impurity surface segregation, O effects 7−124528
Si:O, new donors and n-type cond., bulk/precipitate inversion layer effects 7−98908
Si:O, new thermal donors form., photolum. and EPR studies 7−98909
Si:O, O implantation, internal gettering, carrier lifetime 7−84041
Si:O, O-induced defects, negative EBIC contrast 7−69694
Si:O, O-vacancy complex, electronic struct., ENDOR studies 7−98903
Si:O, oxide precipitates in ion-implanted Si, morphologies, TEM study 7−98221
Si:O, P(B), O-related defects, doping and annealing effects 7−98227
Si:O, precipitation behaviour and control 7−84298
Si:O, precipitation of O and O related donor formation, review 7−124530
Si:O, pseudo-Jahn-Teller instability 7−84784
Si:O, SIMOX implantation, layer thicknesses 7−98208
Si:O, thermal donors, ^{17}O ENDOR study 7−98912
Si:O, thermal donors, generation kinetics at 430°C 7−111638
Si:O,B,P, Czochralski grown, nucleation of O precipitates 7−124316
Si:O,C, Czochralski-grown, donor formation 7−84004
Si:O,C, heat treated, deep level defects, DLTS studies 7−105485
Si:O,C, point defects influence on intrinsic gettering 7−111590
Si:O,H, O-related thermal donor clusters, H passivation 7−104767
Si:O (100), secondary ion emission, dynamical charge transfer processes 7−125902
Si:O clusters, charge transfer in secondary ion emission, tight binding model 7−113336
Si:O Czochralski grown, defect distrib. due to multi-step heat treatment 7−124293
Si:O films, ion implanted and rapid thermal annealed, microstruct. studies 7−105060
Si:O light induced mobility transition, photo-Hall effect meas. 7−112409
Si:O wafers, precipitation testing 7−84299
Si:O/Al system, electron diffusion length improvement by gettering 7−125012
Si:O^+, SOI buried layer anal. from high dose O^+ implantation 7−98207
Si:O-rich acceptor-doped material, photoluminesc. studies 7−92733
Si:OC, C_i-O_i complex, electrical activity 7−131579
Si:Sn, O, C, irradiated, optical band at 3942 cm^{-1} 7−99842
SiO_2:N_2(O), ion implantation, IR reflection props. 7−138440
V:H,O, Snoek peaks, internal friction studies 7−98335
W, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728

oxygen compounds
metal oxides, search in interstellar clouds and circumstellar shells 7−127998
OH 18 cm monitoring of Periodic Comet Halley (1982i) 7−88302
OH masers, search in radio H II regions 7−120539

oxygen compounds continued
OH post-perihelion monitoring of Periodic Comet Halley (1982i) 7−88303
COS+OH, reaction kinetics and tropospheric chemistry 7−86595
Fe-Cr-O system melt, ^{51}Cr diffusion coeffs. meas. with opposite convection, capillary method 7−131343
$HOCS^+$, IR identification using difference freq. laser spectroscopy 7−122532
KI:OH^-, press. induced preferred orientation transition, microscopic models 7−111642
LiF:OH^-, F_2 centres, thermal stability, appl. to lasers 7−124265
NaCl:$OH(F_2^+)_H$ colour centre laser tunable from 1.47 to 1.87 μm 7−130127
O-containing molecules (ions), adsorpt. on Ag(Cu) electrodes 7−91967
OC-HF complex, ν_1 state predissoc. lifetime, vibrs. state mixing, IR spectra anal. 7−103496
OCN^-, anodic oxidation on Pt electrode in solns. 7−93370
OCS, $^1\Sigma^+ \rightarrow {}^1\Delta$ transition, MCD spectra 7−129760
OCS, absorpt. line shape and rot. temp., IR spectra 7−74609
OCS, atmospheric determ., isotope dilution gas chromatography/mass spectrometry 7−100769
OCS, autoionis. resons. 7−90288
OCS, dipole moments, laser stark spectra 7−122590
OCS, ground state, pot. energy functions 7−96816
OCS, IR spectra, vibr. and rot. consts. 7−96661
OCS, interstellar obs. 7−107937
OCS, isotopic species, CO_2 laser sat. Stark spectra and global rovibr. anal. 7−96758
OCS, J=2→3 line half-width and shift parameters *(French)* 7−129695
OCS, ocean chemistry leading to H_2S 7−87705
OCS, phase space bottlenecks, quantum and classical intramolecular dynamics 7−90312
OCS, photoionisation, threshold reson. features in outer-valence shell partial cross sections 7−90284
OCS, supersonic mol. beam, Fourier transform microwave spectra 7−129699
OCS-Ar(Kr)(Ne), supersonic mol. beam, Fourier transform microwave spectra 7−129699
OCS-HCN dimer, microwave spectra, geometry and intermol. force const. 7−109880
OCS+He, differential cross section meas., anisotropic pot. meas. 7−129855
OCS+O_2, IR spectra, ν_1 band, diode-laser meas., press. broadening parameters 7−96663
OC_3S, interstellar search 7−107937
OCSe, infrared spectrum. Fourier transform spectroscopy 7−122521
OClO, absorpt. cross section meas. 7−103530
OClO in atmosphere above McMurdo Sound, Antarctica, spring 1986 observations 7−139692
OD, Lamb dip spectra obs. in mol. beam 7−135858
OD radicals, photodissoc. product, laser induced fluoresc. 7−132956
OD+DNO_3, rate const. determ., press. depend. and kinetic isotope effect 7−86559
OH 1667 MHz maser line profile interpretation of M1−92 bipolar nebula 7−88594
OH 1.667 GHz line monitoring of P/Comet Halley (1982i) 7−94772
OH absolute conc. in homogeneous premixed flame, laser-induced fluoresc. meas. 7−106851
OH, adsorbed on Pt (111), HREELS charactn. of H_2O form. intermediate 7−86669
OH airglow and vibrationally excited states vertical profile 7−139830
OH, collisional quenching and energy transfer meas. 7−129782
OH coma of Periodic Comet Halley (1982i) modelling *(Russian)* 7−88210
OH desorption dynamics from Pt polycrystalline foils and (111) surface 7−98701
OH distrib. at 18 cm in Sgr A region 7−115534
OH excited lines towards Sgr B2, VLA 5 GHz obs. 7−72575
OH, far IR detection in P/Comet Halley (1982i) 7−88258
OH fragment, rot. and translational energies, laser-induced fluoresc. 7−110119
OH in atmosphere, diurnal variations at Michigan, USA 7−87773
OH in atmosphere, press. depend. of O_3 interference in laser fluoresc. meas. 7−115004
OH in atmosphere of Pacific and USA, H_2O, O_3, CO distribs. 7−87796
OH in coma of Periodic Comet Halley (1982i), determ. from OH absorpt. obs. of background radio sources 7−115300
OH in mesosphere, kinetic parameters related to sources and sinks of vibrationally excited OH in nightglow 7−134046
OH in mesosphere and upper atmosphere 7−145740
OH in P/Comet Halley (1982i), narrow-band photometry 7−94762
OH in P/Comet Halley (1982i), Arecibo obs. 7−94774
OH in Pacific atmosphere, near the Intertropical Convergence Zone 7−87797
OH in polar mesopause, from airglow observations 7−107598
OH in troposphere, 2D global gas transport-photochemistry model 7−139724
OH, instrumentation for airborne observation, intercomparison study 7−87927
OH J=3-2 1.667 GHz line obs. of P/Comet Giacobini-Zinner (1985 XIII) 7−134181
OH maser emission mapping of OH-IR stars 7−140090
OH maser in compact H II region W3(OH), struct. 7−72567
OH maser in W33, VLBI obs. *(Russian)* 7−128108
OH maser search at 1665 MHz between galactic longitudes 233° and 326° 7−80117
OH maser stars, OH masers far-IR excitation 7−88673
OH megamaser emission detect. from NGC 4418, UHF obs. 7−88631
OH megamaser in IRAS 1525+3609 discovery 7−80124
OH nightglow, polar mesopause gravity wave activity 7−94533
OH nightglow, seasonal variability of Meinel bands, 2D model 7−139829
OH obs. of Periodic Comet Halley (1982i) in UHF 7−88301
OH observations of Periodic Comet Halley (1982i) 7−72362
OH, quantum yield from laser photolysis of formic acid 7−119542
OH radical, 306.4 nm emission in reduced pressure ICPs 7−122561
OH radical, nucl. hyperfine parameter determ., far-IR laser mag. reson. spectrum 7−82229
OH radical, prod. by nitroalkane UV photolysis, fluoresc. detect. 7−86576
OH radical, reson. CARS spectrosc. in high-freq. discharge 7−82160
OH radical in flames, laser-probed reson. Voigt effect 7−122591

oxygen compounds continued
OH radicals, H_2O_2 photolysis, rot. distrib., laser-induced fluoresc. study 7−68333
OH radicals, in flames, A^2Z^+-$X^2\Pi_i$ transition probabilities, laser-induced fluoresc. 7−122597
OH radicals in flame, absolute density meas. by time-resolved laser-induced fluorescence 7−71493
OH, real-time picosecond clocking 7−119547
OH rotational lines in far IR, atmospheric collisional broadening 7−133920
OH, VLA imaging of P/Comet Halley (1982i) 7−88267
OH, vibr. excited, form., IR chemiluminesc. obs. using SISAM 7−68287
OH, $X^2\Pi$ state, dipole moment, SCF CI calcs. 7−103401
OH, Zeeman effect in molecular clouds, magnetic field strengths 7−120543
OH^- + methyl formate (methyl oxalate) anions, pot. surfaces, MINDO/3 method 7−86613
OH^-, adsorbed on Ag electrode, SERS 7−99809
OH^-, electric field gradients, ab initio SCF CI(SD) CPF calcs. 7−109801
OH^-, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
OH^-, vertical electron affinities calc. using direct versus indirect many-body methods 7−109696
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of inter-system crossing 7−82244
OH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
OH^{2+}, collisions with atoms, pot. energy curves 7−117043
OH^{3+}, collisions with atoms, pot. energy curves 7−117043
OH+acetylene (ethylene), radical reactions, barrier heights, perturbation theory 7−132918
OH+COS, reaction kinetics and tropospheric chemistry 7−86595
OH+H_2, inelastic scatt. cross section rot. and fine struct. *(German)* 7−74737
OH+H_2, nonequilibr. reaction, OH rot. effect 7−138982
OH+HO_2, isotopic species, discharge flow reaction rate consts., far IR mag. reson. meas. 7−100508
OH+HONO, gas-phase reaction kinetics 7−132915
OH+methane, C kinetic isotope effect and tropospheric chemistry 7−87808
OH+methyl mercaptan-d_0(-d_3), reaction kinetics 7−119519
OH+N_2O_5, rate constant at 293 K 7−120090
OH+p-H_2, rot. excitation, rate coeffs. calc., astrophys. appl. 7−90359
$(OH_2)_2$ dimer, H bond energy, basis set and correlation effects, HF calcs. 7−74414
ONCl, IR spectra, $V_1+\nu_3$ vibr. band, 435 A type rovibr. line 7−96680
ONNHF, H-bonded complex, geometric isomerism, near-IR spectrum obs. 7−116958
OPF, form. struct., mass spectra, IR spectra, ab initio calcs. 7−68296
a-SiO_2:OH, γ-ray irrad., H-associated defect centres, ESR studies 7−97932
Ti-O system, ordering and phase relationships in TiO existence area 7−77958
$ZnWO_4$:Fe, OH single crystal, infrared absorption of OH 7−138464

ozone
absorption of high power IR radiation as result of weakly forbidden transitions 7−135915
Antarctic 1986 spring O_3 meas. of atm. 7−120072
Antarctic O_3 depletion, effect of halogenated hydrocarbons heterogeneous photolysis 7−120071
Antarctic O_3 hole, implications of breaking planetary waves 7−127433
Antarctica, climatic implications of O_3 depletion 7−139750
atmosphere, air pollution downwind of London, hydrocarbon photochemical model 7−145572
atmosphere, concentrations, sensitivity to Cl perturbations 7−139688
in atmosphere, equatorial O_3 profiles meas. from ground to 52 km during southern hemisphere autumn 7−114914
atmosphere, global total O_3, empirical model 7−107487
in atmosphere, interdiurnal and interannual variability at high latits. and near equator 7−133855
atmosphere, missing observations anal. methods 7−94448
atmosphere, O_3, CO and potential vorticity 7−87802
atmosphere, O_3,H_2O_2 and SO_2 in lower troposphere over eastern USA during autumn 7−79512
atmosphere, O_3 and aerosol profile of tropopause fold over western USA 7−87803
atmosphere, O_3 annual and semiannual oscills. in stratosphere 7−101448
atmosphere, O_3 chemistry with chlorofluorocarbons, Antarctica ozone hole 7−108092
atmosphere, O_3 conc. changes due to El Chichon volcanic eruption 7−139696
atmosphere, O_3 in stratosphere and mesosphere above Switzerland 7−107473
atmosphere, O_3 photochemistry, effect on inertio-gravity waves 7−79501
atmosphere, O_3 production rate in NO_x polluted rural troposphere 7−120088
atmosphere, O_3 profile determ., SAGE 1, SBUV and Umkehr meas. methods 7−139804
atmosphere, O_3 total content prediction based on Arosa AD 1932 to 1971 data 7−101447
atmosphere, O_3 vertical profile determ., by multispectral method 7−120158
atmosphere, O_3 vertical profiles in stratosphere, from limb IR spectral obs. 7−139695
in atmosphere, press. depend. of interference in OH laser fluoresc. meas. 7−115004
atmosphere, quasi-biennial circulation cycle influencing O_3 total content 7−107488
atmosphere, quasi-biennial oscill. of O_3 in tropical stratosphere 7−101394
atmosphere, solar cycle influence on atmos. total ozone 7−87809
atmosphere, theoretical determ. of vertical distrib. statistical characts. 7−107486
atmosphere, total O_3, seasonal differences in trend, contrib. from troposphere and stratosphere 7−133866
atmosphere, total O_3 and vertical O_3 profiles over India 7−101412
atmosphere, total O_3 content retrieval from TOVS radiance meas. *(Chinese)* 7−72141
atmosphere, tropics region, total stratospheric and tropospheric O_3 distrib. 7−139685
atmosphere above Antarctica, October O_3 decrease due to lower stratosphere forcing 7−101381

ozone continued
upper atmosphere and mesosphere, O and O_3 abundances, 10 Feb. 1987 obs. 7−145739
atmosphere O_3, H_2O, methane, N_2O, stratosphere concs. from limb IR spectral obs. 7−139694
atmosphere O_3 conc. determ. by UV absorpt. spectra method 7−139805
atmosphere O_3 concentration, influence of short-term solar radiation vars. *(Russian)* 7−145592
atmosphere of Belgrade, Yugoslavia, pollution episodes during warm periods 7−126670
atmosphere of Earth, solar UV changes, influences on middle atmos. at low-latitude 7−79510
atmosphere of Earth, solar UV variation induced changes 7−79511
atmosphere of India, trace gas concs. at urban, industrial and rural sites 7−101449
atmosphere of N Atlantic, surface layer O_3 concs. and origin 7−114948
atmosphere of NE Pacific, O_3 and CO vertical profiles in autumn 7−87800
atmosphere of Pacific and USA, H_2O, O_3, CO distribs. 7−87796
atmosphere over McMurdo Station, Antarctica, spring 1986 observations 7−139691
atmospheric background level trends 7−127396
atmospheric O_3 levels over Antarctica, concs. rel. to quasi-biennial oscillation 7−145586
atmospheric O_3 photochem. production in N Pacific troposphere 7−87805
atmospheric vertical profiles of O_3 and CO over Pacific and E USA 7−87804
S California, USA, pollution characts., effects of Catalina Eddy 7−133156
centrifugal distortions, ab initio pot. energy hypersurfaces 7−129566
cleaning of Si-SiO_2 system, organics removal 7−113798
decomposition laminar flame, reaction-diffusion eqns., num. soln. 7−93329
dissociation process, energetics, MC SCF, CI, MBPT calcs. 7−129607
dry deposition fluxes, averaging strategies assoc. with day/night sampling 7−139690
electrosynthesis in N_2-O_2 ozonizer, computer simulation 7−71497
forest decline attributable to O_3 exposure and other stress combinations 7−106940
formation, on fine wire electrode in corona discharge *(French)* 7−97832
global transport, role of planetary waves, satellite obs. 7−94384
Hartley band photodissoc., O_2 photofragment CARS spectra anal. 7−103511
IR laser fields, strong, effects 7−136014
IR laser heterodyne spectroscopy 7−80914
isotopic fractionation in formation by UV photolysis of O_2 7−126462
Johannesburg region, South Africa O_3 meas. in atm. 7−93571
mesosphere, annual conc. vars. 7−134043
mesosphere, O_3 photochemistry, SME obs. anal. 7−94529
in mesosphere, tidal influences on vertical diffusion and O_3 diurnal variability 7−115128
mesosphere and stratosphere, O_3 and H_2O concs. during MAP-WINE Campaign 7−145738
molecule, ν_1 and ν_3 bands, line positions and intensities, Fourier transform spectra 7−74555
molecule, electronic states, pot. energy surfaces, UV continuum, ab initio calcs. 7−96515
molecule, Hartley absorpt. band, reson. Raman spectra, time depend. anal. 7−122548
molecule, mass-independent isotopic fractionation in nonadiabatic molecular collisions 7−103597
molecule, nonbending, eigenvalues determ. Moller-Plesset perturbation calc. 7−96561
molecule, photodissoc., CARS spectra 7−129816
molecule, photolysis, photofragment rotational distributions, parent internal motion, semiclassical calculation 7−136024
molecule, UV photolysis dynamics 7−90163
molecule, vibr. excitation effects in Earth's upper atmosphere 7−94530
molecule, visible photodissociation dynamics 7−135947
multiphoton IR excitation dynamics study, UV spectra anal. 7−74597
permeability meas. in silicone polycarbonate copolymers 7−142428
production by surface and glow discharges at cryogenic temps. 7−75912
stratosphere, diabatic circulation determ. using radiative transfer model, temp. and O_3 meas. anal. 7−127385
stratosphere, MAP/GLOBUS 1983, balloon and ground-based meas. 7−133877
stratosphere, MAP/GLOBUS 1983, balloon-borne remotely sensed O_3 meas. 7−133880
stratosphere, MAP/GLOBUS 1983, comparison of in situ O_3 meas. 7−133878
stratosphere, MAP/GLOBUS 1983, NASA-JSC UV photometer O_3 meas. 7−133879
stratosphere, MAP/GLOBUS 1983, O_3 vertical profiles comparison 7−133881
stratosphere, MAP/GLOBUS 1983 O_3 maps from UV and IR satellite obs. 7−133876
stratosphere O_3 changes, prod. and destruction chemistry and pollution effects 7−145650
stratosphere O_3 depletion over Antarctica, implications of kinetics of BrO+ClO reaction 7−139712
stratosphere O_3 depletion over Antarctica, implications of high ClO concs at low altitudes 7−139713
stratosphere O_3 depletion over Antarctica, implications of secular var. of ClO concs. at low altitudes 7−139714
stratosphere O_3 long term changes meas. by SBUV/2 radiometer 7−115061
stratosphere O_3 profiles determ. using differential absorpt. lidars with Raman lasers 7−120132
stratosphere O_3 seasonal variations rel. to meteorological parameters 7−114855
stratosphere trace constituents and dynamics, MAP/Globus 1983 campaign results 7−139667
stratospheric research, calibration system based on preparation of O_3-N_2 gas mixture 7−107550
strong laser field absorpt., vibr.-rot. transitions, IR spectra study 7−74605
transport by middle atmosphere flows 7−79568
troposphere, 2D global gas transport-photochemistry model 7−139724
NE United States, meso-meteorological features assoc. with high O_3 conditions 7−126675
SE United States, O_3 pollutant conc. 7−93572

ozone continued
United States, regional visibility and O_3 distrib. during persistent elevated pollution episodes, impact of mesoscale convection systems 7−87787
in Venezuelan savannah, nocturnal atmospheric dispersion capacity 7−139725
vertical transport in mesosphere 7−139824
D-O_3-CO_2 chemical laser, CW, using chemical generator of D atoms *(German)* 7−132943
H-O_3-CO_2 chemical laser, CW, using chemical generator of H atoms *(German)* 7−132943
NO_x+O_3 photolytic cycle in atmosphere, modified version 7−93592
$^{16}O_3$, ν_1 and ν_3 bands, line positions and intensities 7−122499
O_3+HO_2, rate const. determ. 7−132906
O_3+I_2+H_2O→HIO_2, Raman spectra 7−122542
O_3+N, reaction kinetics, chemiluminescence, rate constants, excitation mechanisms, discharge flow technique 7−144693
PH_3-O_3, photolysis products, FTIR spectra 7−74594

ozonosphere
alkoxy radical extrusion reactions and importance for stratosphere O_3 layer depletion 7−141470
Antarctic 1986 spring O_3 meas. of atm. 7−120072
Antarctic O_3 depletion, effect of halogenated hydrocarbons heterogeneous photolysis 7−120071
Antarctic O_3 hole, implications of breaking planetary waves 7−127433
Antarctic O_3 hole in 1986, balloon-borne obs. 7−72136
Antarctic ozonosphere, ClO concs. secular var. rel. to springtime O_3 destruction 7−139714
Antarctic ozonosphere, high ClO concs. obs. rel. to springtime O_3 destruction 7−139713
Antarctic ozonosphere, kinetics of BrO+ClO reaction rel. to springtime O_3 depletion 7−139712
Antarctic stratosphere, aerosols, sulphate production and photochemistry 7−133873
Antarctica, decay of El Chichon stratospheric aerosol cloud rel. to O_3 content 7−127333
atmosphere, O_3 conc. changes due to El Chichon volcanic eruption 7−139696
chemistry, contrib. of pollution to O_3 changes 7−145650
damage due to emission from Nemesis, energy flux requirements 7−120286
global transport, role of planetary waves, satellite obs. 7−94384
instrument calibration systems, for instruments to determine O_3 concs. 7−107550
MAP/GLOBUS 1983, balloon and ground-based meas. of O_3 profile 7−133877
MAP/GLOBUS 1983, balloon-borne remotely sensed O_3 meas. 7−133880
MAP/GLOBUS 1983, comparison of in situ O_3 meas. 7−133878
MAP/GLOBUS 1983, NASA-JSC UV photometer O_3 meas. 7−133879
MAP/GLOBUS 1983, O_3 vertical profiles comparison 7−133881
MAP/GLOBUS 1983 O_3 maps from UV and IR satellite obs. 7−133876
natural and anthropogenic perturbations, review 7−120109
polar region O_3 seasonal variations rel. to meteorological parameters 7−114855
quasi-biennial circulation cycle influencing O_3 total content 7−107488
sensitivity to Cl perturbations, photochemical modelling 7−139688
short-term O_3 variations, influence of short-term solar radiation vars. *(Russian)* 7−145592
solar cycle influence on atmos. total ozone 7−87809
solar UV changes, influences on middle atmos. at low-latitude 7−79510
solar UV variations causing O_3 and temperature changes to stratosphere, chemical model 7−79511
temperature response to solar cycle UV flux vars. 7−120110
total O_3 and vertical O_3 profiles over India 7−101412
O_3 and H_2O in mesosphere and stratosphere, during MAP-WINE Campaign 7−145738
O_3 and NO_2, trace constituents and dynamics, MAP/Globus 1983 campaign results 7−139667
O_3 annual and semiannual oscills. in stratosphere 7−101448
O_3 chemistry with chlorofluorocarbons, Antarctica ozone hole 7−108092
O_3 content in tropics, implications for tropospheric O_3 distrib. 7−139685
O_3 global total O_3, empirical model 7−107487
O_3 in atmos. over McMurdo Station, Antarctica, spring 1986 observations 7−139691
O_3 in stratosphere, above Antarctica, decrease due to lower stratosphere forcing 7−101381
O_3 in stratosphere and mesosphere above Switzerland, microwave radiometry obs. 7−107473
O_3 in stratosphere of Antarctica, concs. rel. to quasi-biennial oscillation 7−145586
O_3, NO_2 and aerosol vertical profile determ., by multispectral method 7−120158
O_3 profile, theoretical determ. of vertical distrib. statistical charact. 7−107486
O_3 profile determ., SAGE 1, SBUV and Umkehr meas. methods 7−139804
O_3 profiles determ. using differential absorpt. lidars 7−120132
O_3 quasi-biennial oscill. in tropical stratosphere 7−101394
O_3 total content prediction based on Arosa AD 1932 to 1971 data 7−101447
O_3 vertical profiles in stratosphere, from limb IR spectral obs. 7−139695

P invariance
anomaly construction in background instanton gauge pot. 7−89351
chiral soliton models coupled with vector fields, solutions with spontaneous parity violation 7−140821
Dirac equation with separable potential, C-, P-, T-invariant, Coulomb potential $1s_{1/2}$, $2p_{1/2}$ eigenvalues 7−128747
discrete space-time symmetry violation study 7−67522
fermion-gauge field interacting theory, stochastically quantized in odd N, renormalization, P-invariance 7−116057
lattice QCD with Wilson fermions, numerical evidence for parity violating phase 7−95829
left-right Pati-Salam model, P invariance and isospin breaking, SO(10) model 7−128812
parity-violating anomalies from stochastic quantization 7−116094
pulsed muons, applications 7−73647
spherical tensor expansion for the electron-electron parity non-conserving interaction 7−108906
type-I superstring theory, parity-violating one-loop six-point fn. 7−89479
type-I superstring with external gauge bosons, parity violation 7−67606
n spin, PNC and TNC rotations through nuclear targets 7−67531

P invariance continued
pp→pp, P-odd two-pion potentials and scatt. asymmetry at low energy 7−73667
$\vec{p}p$→$\vec{p}p$, parity nonconservation, 45 MeV, precision meas. 7−81229
(γ,e^+e^-), coherent production in nuclear electroweak field, P violating asymmetry 7−102859
$\vec{p}p$→pp, cross section, parity-violating helicity depend. 7−108935
^{119}Sn, P-odd effect, emission Mossbauer spectrum, orientation relative to external magnetic field 7−116261

p-n heterojunctions
binary heterostructure, electron-hole plasma, stratification dynamics study 7−131697
double heterostructures, dense electron-hole plasma, nonstationary heating 7−105677
epitaxial structures, for light generation, detection and modulation 7−132495
GaAs-AlGaAs, quantum well struct., electro-optic effect, room temp. 7−144029
(II-IV-V_2)-(III-V) semicond. heterojunctions, epitaxial growth, electrophysical props., review 7−112455
n-type polyacetylene junctions, photovoltaic effect 7−92278
polythiophene derivatives-GaAs based electronic structures and devices 7−92277
pressure change-induced EMF 7−143598
step p-n heterojunctions, minority-carrier leakage 7−77080
valence band offsets, ab initio pseudopot. calcs. 7−77054
VPE grown heterojunctions, factors impairing comp. transition abruptness 7−138675
X-ray emission spectroscopy of substrate-under-film transition layers in heterostructures 7−102572
AlGaAs-GaAs, quantum well, coupled states 7−143600
AlGaAs-GaAs heterostruct., quantum 'zero-point oscillations' in structures with a 2D electron gas 7−125110
AlGaAs-InGaAs resonant tunnelling structs., MBE growth 7−144286
$Al_xGa_{1-x}As$:Sn-$Al_xGa_{1-x}As$:Ge LPE junctions, Ge-related DX level 7−98897
$Al_xGa_{1-x}As$/GaAs numerical simulation of the dynamics of field impoverishment modes 7−143568
$Al_{0.48}In_{0.52}As$-$Ga_{0.47}In_{0.53}As$, superlattice avalanche photodiode, impact ionization 7−143604
CdTe-$Cd_xHg_{1-x}Te$ heterostructures, electrical and photoconducting props. 7−85000
CdTe-CdS, photoelectric props. 7−105673
CdTe-CdS heterosystem, rear-barrier photoelectric transducer, preparation and props. *(Russian)* 7−95649
Cu_2S-$Zn_xCd_{1-x}Se$ heterostructs., appl. as thin film detectors in SEM *(Russian)* 7−73476
Cu_xS-CdS heterojunction form. by photoelectrochem. deposition 7−86782
Cu_xS-CdS p-n junction photocathode in a wet solar cell, quantum efficiency meas. 7−114112
$Ga_{1-x}Al_xAs$/GaAs heterostruct., strain depth profiling, X-ray diffr. studies 7−98713
GaAs, interfaces, STM and potentiometry studies 7−76649
GaAs solar cells, n^+-p junction, back-surface field design 7−78646
GaAs/n-AlGaAs, modulation doped heterostruct., low temp. photoluminescence *(Chinese)* 7−99167
n-GaAs/polythiophene organic-on-inorganic p-n heterojunction, realisation and charactn. 7−85058
GaAs-(AlGa)As heterostructure, oscillatory current-voltage characteristics, magnetocapacitance effects 7−131777
GaAs-$Al_xGa_{1-x}As$, multiple quantum well struct., expansion of electron-hole plasma 7−143602
GaAs-$Al_xGa_{1-x}As$, multi-quantum-well struct., magneto-optical studies 7−144045
GaAs-AlAs, quantum well struct., electro-optic effect, room temp. 7−144029
GaAs-AlAs multimode double-heterostructure lasers, growth condition influence on props. 7−68643
GaAs-AlGaAs, superlattice photodiodes, responsitivity 7−143605
GaAs-AlGaAs single-mode miniature optical waveguide with low transmission loss coeff. 7−110573
GaAs-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
GaAs-GaAlAs heterostructures for HBTs, Mg-implanted, high doping level by rapid thermal annealing 7−85060
GaAs-GaAlAs heterostructure, with spacer, mag. field-induced metal-nonmetal transition 7−131780
GaAs-GaAlAs solar cells with back pot. barrier based on isotype heterojunctions 7−100722
$GaAs_{0.6}P_{0.4}$:Te p^+n and Schottky diodes, RTA and Zn implementation, electron traps, DLTS study 7−131575
$GaAs_{1-x}P_x$-$Cu_{1.8}S$ hetero-photovoltaic cells props. study 7−86793
$GaAs_{1-x}P_xCu_{2-y}S$ heterojunction solar cells, photoelectric charact. 7−114104
GaAs−$Al_xGa_{1-x}As$ heterojunctions in solar cells for improved efficiency 7−114102
GaInAs-InP heterojunction, two-dimensional hole gas 7−131775
$Ga_{0.47}In_{0.53}As$-InP, quantum well photodiode, photocurrent step-like struct. 7−143603
GaInAsP/AlGaAs visible laser diodes on GaAs, LPE, planar BH, 674 nm 7−68699
GaInPAs-InP, heterostructure waveguide, liq. phase epitaxy 7−68837
GaP-$GaAs_{0.35}P_{0.65}$, optical interference filter, photodiode, single-crystal integration 7−140747
GaP-Si, electron affinity rule, photoemission tests 7−138600
Ge-Si, artificially layered struct., automatic process control 7−138663
HgCdTe, heterojunction devices, model for composition and doping profiles 7−131766
InAsPSb-InAs, double heterostructure, growth and modelling 7−143296
InAsSbP p-n structures, coherent emission at 3.9 μm 7−144085
$InAs_{1-x-y}Sb_xP_y$ epitaxial diode structs., electrophysical and photoelectric props. 7−99112
InGaAs/InP and InGaAsP/InP, defects, cathodoluminescence study 7−99943
InGaAs-InAlAs, superlattice photodiodes, responsitivity 7−143605
InGaAs-InAsP, epitaxial heterojunction structures, growth, luminescence props. 7−70387
InGaAs-InP, lattice matched heterostructure, metallorganic VPE, for high speed photodetectors 7−140746

p-n heterojunctions continued
p^+-$In_{0.53}Ga_{0.47}As$/n-InP heterojunctions, thermionic currents and acceptor diffusion studies 7−143575
InGaAsP/GaAs heterojunction diode defect distrib., light-beam-induced current method study 7−118577
p-InP/n-InGaAsP/n-InP heterojunction waveguide photodetectors 7−89263
InP-CdS heterophotovoltaic cells, damage caused by proton irradiation 7−86789
InP-$Ga_{0.47}In_{0.53}As$ heterojunctions, band offsets, meas. by admittance spectroscopy 7−112446
InSb-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
InSb-CdTe interface prepared by MBE, quasi-2D electron gas, Shubnikov-de Haas obs. 7−77072
n-InSe/p-ZnTe thin film heterojunction, DC current-voltage charact. meas. 7−143567
InSnO-Si heterojunction solar cells prep. by thick film techniques 7−119663
PbS-Si heterostructures, current-voltage charact. 7−131745
Sb_2S_3 amorphous condensates, two-phase system, p-n heterojunctions, photovoltage studies *(Russian)* 7−92231
a-Si:H/Si amorphous-cryst. heterojunction, C-V eqns. at low freq. 7−105695
a-Si:H/c-Si heterojunction, optoelectrical props., imaging device appl. 7−112456
Si-CdS p-n heterojunction struct. for 11% efficiency solar cell, fabrication and elec. charact. 7−100721
$Si_{1-x}C_x$:H, amorphous, junction struct. with cryst. Si:H, blue-white electrolum. obs. *(Chinese)* 7−125808
TiO_2-Se thin film solar cells, fabrication and charactn. 7−93502
$Zn_xCd_{1-x}S$-Si, heterojunction, electrophys. parameters 7−70385
$Zn_xCd_{1-x}S$-Cu_2S thin film heterojunctions in solar cells, electron microprobe X-ray anal. 7−78631
ZnSe-Ge, electron affinity rule, photoemission tests 7−138600

p-n homojunctions
7X Si, p-n junction electrodes, photocurrent stability, decomposition potentials 7−70410
diamond semiconductor devices, fabrication and high temp. charact. 7−111631
molecular electronics, intramolecular p-n junction, polarised N−O bond, PMR study 7−99168
p^+-n junctions diffusion current, influence of implementation-induced defects 7−125116
phthalocyanine derivatives, mol. semicond. and junction formation 7−92276
polyacetylene films, ion implanted, elec. props. 7−124986
n-type polyacetylene junctions, photovoltaic effect 7−92278
polypyrrole/polythiophene p-n junction diode, electrochemical fabrication 7−93325
pressure change-induced EMF 7−143598
shallow junctions by ion implantation and rapid thermal annealing 7−76171
Si polycrystalline p-n junctions, photoelec. props., tunnelling and noise, grain boundary struct. effects *(Russian)* 7−85096
p-$Al_xGa_{1-x}As$-p-GaAs-n-GaAs heterostructures, electric and photoelectric charact. 7−112453
$Cd_xHg_{1-x}Te$ p-n junctions, transport mech. 7−77052
$CuInSe_2$, type conversion on deposition of CdS, appl. for solar cells 7−125118
$Ga_{1-x}Al_xAs$:Si variable gap p-n structures, expansion of spectral photosensitivity by reradiation 7−137987
$Ga_{0.96}Al_{0.04}Sb$ junctions, LPE grown, 1.55 μm photodetection props. *(French)* 7−131756
GaAs doping superlattices, tunable electroabsorption 7−92639
GaAs, p-n junction, deformative EMF of n-GaAs-n-$Al_xGa_{1-x}As$ *(Russian)* 7−112466
GaAs p-n junctions, MBE growth on AlGaAs buffer layers 7−138017
GaAs, PIN electrooptic modulator, high-throughput, 3 dB bandwidth of 9.6 GHz at 1.3 μm 7−103955
GaAs polycrystalline p-n junction diodes, origin of shunt effect 7−77083
GaAs solar cells, n^+-p junction, back-surface field design 7−78646
GaAs tunnel junction, MOVPE growth for multigap cascade solar cells 7−144834
GaAs:Be p-n junctions, ion implanted and rapid thermal annealed, surface recombination currents 7−112451
GaAs:Si, Be, dual implantation, p-n junction formation *(Chinese)* 7−131166
GaAs:Sn, n-layer fabrication and charact. by open-tube diffusion process 7−124306
GaAs:Te-GaAs:C(Mg)-$Al_xGa_{1-x}As$ 7−119659
GaP:Fe p-i-n^+ structs., photoelec. props. 7−77062
Ge tunnel diodes, I-V charact., temp. depend. 7−88775
Ge:Li p-i-n junction spheric-coaxial γ-detector, bulk charge and elec. field profile calcs. 7−135763
HgCdTe, ion implanted, Hf diffusion, role in junction formation, elec. profile 7−125084
HgCdTe LPE layers, ion-implanted p-n junctions on CdTe substrates 7−98190
$Hg_{1-x}Mn_xTe$ p-n junctions, charact. 7−77055
InP fully ion-implanted abrupt p-n junctions, mesa diode fabrication 7−138014
InP, shallow homojunction solar cells, fabrication by MOCVD, charact. 7−126597
InP:Zn, $p^+(p^-)$n junction form. rel. to substrate conc., time and temp. depend. 7−111964
Si, high resistance neutron transmutation doped, prep. and props. 7−71100
Si p^+n junction, one-side abrupt, space charge region, un-depletive anal. *(Chinese)* 7−77060
Si p-n homojunction solar cells, influence of defects on performance 7−114114
Si, p-n junction, microplasma breakdown region, current-voltage charact., noise 7−143565
Si p-n junction, Zn borosilicate glass passivated, reverse I-V charact., H annealing effects study 7−99179
Si p-n junction produced by low temp. diffusion of B 7−70392
Si p-n junctions, self-interstitials and generation lifetime 7−92271
Si p-n junctions in strong electric field, static elec. conductivity due to rectilinear dislocations 7−131746

p-n homojunctions continued
Si planar cylindrical junctions, breakdown voltage, choice of ionisation coeffs. 7−138044
Si, polycrystalline, photovoltaic cells charact. study 7−100724
Si solar cells, direct meas. of junction ideality factor 7−133104
Si, thin film polycryst. p-n junction solar cells, 2-D model 7−133103
Si:As ion implanted and laser-annealed diodes, elec. charact. 7−92258
Si:As^+, shallow n^+p junction formation, charact. 7−118565
Si:B, diffused wafers, O_2 plasma damage 7−71405
Si:B, low energy implants, RTP shallow junction formation 7−117953
Si:B shallow p^+ junction fabrication using laser-induced melting doping technique 7−124299
Si:B surface amorphous layers, As implanted, SIMS crystallisation anal. 7−117859
Si:B/Si:P bilayered crystals, free exciton capture 7−70203
Si:BF_2 p^+/n junction, ion implantation through surface oxide 7−137383
a-Si:H/p-Si junctions, dark current and spectral response 7−77086
a-Si:H-Si p-n junction, built-in pot., interface pot., and depletion widths 7−77087
Si:Pt, p^+n diodes, emission rate, trap conc., accurate determ. methods 7−118411
Si:Sb shallow p-n junctions, form. by Sb recoil implantation, phys. and elec. props., annealing temp. effect 7−112432
Si:Sn, B, ion implantation and annealing, shallow junction form. 7−76173
SiC p-n structure, voltage limitation studies 7−112472
SiC:Al, ion implanted 4H polytype, p-n junctions, capacitance spectroscopy 7−99177
3C-SiC/6H-SiC MBE growth, elec. props. of p-n junction 7−77823
$TiSi_2$/p^+n Si junctions, elec. props., post-silicidation annealing effects 7−143610
$TiSi_2$/Si, p-n shallow junction form. by impurity ion implantation and drive-in method 7−104769

p-n junctions
see also p-n heterojunctions; p-n homojunctions
abrupt, asymmetric, capacity calc. 7−85099
breakdown voltage walkout, charge trapping saturation effects 7−131748
breakdown voltages, 2D numerical method *(Chinese)* 7−125111
capacitance determ. using curve fitting procedure 7−138015
capacitance study of semiconductors with high dielectric constant 7−108577
current parameters, meas. by optical beam excitation, scan vel. effect 7−118562
electron holography obs. of electrostatic fields in reversed-biased p-n junctions 7−141783
EMF kinetics across p-n junction with high temp. gradient 7−85062
forward voltage, space charge region capacitance, model, time-domain reasoning 7−118564
forward voltage decay, influence of series resist. and internal capacitance 7−77088
four-layer semiconductor structs., plasma phenomena, expt. study *(Czech)* 7−131698
impact ionisation rate determ. 7−131761
linearly graded, pot. profile 7−131749
p^+-n junctions, barrier capacitance under injection conditions 7−118560
p^+-n-n^+ heavily doped struct., minority carrier dragging by majority carriers 7−118582
p-n-n^+ structures, breakdown volt., n-region thickness effects *(French)* 7−125113
photovoltaic effect in hot current carriers, nonlinear theory *(Russian)* 7−99174
position dependent band structure junction with low temp. gradient 7−77059
shallow p^+n junction formation by dual F^+/B^+ implantation 7−111625
solar cell power losses to spreading resistance eval. 7−86788
solar cells, saturation photocurrent and photovoltage calcs. 7−106905
space-charge region, minority carrier accumulation at base edge under short-circuit conditions 7−126631
space-charge region under high forward voltage, analytical study 7−143571
space-charge-limited transient currents and carrier density 7−77063
tandem solar cell design, spectral p-n junction model 7−71605
transient behaviour, asymptotic anal. 7−131759
TSC spectra anal. 7−112414
voltage-controlled structure of certain *p-n* and *p-i-n* junctions 7−92269

P-V-T relations *see equations of state*

Pa *see protactinium*

pacemakers
see also patient treatment
automatic defibrillator, antitachy pacemaker and cardioverter 7−87387
coil design using numerical model 7−107317
diaphragm, heart-rate-responsive 7−119903
dual chamber pacemakers, refractoryless atrial sensing 7−87379
electrodes for cardiac pacing, use of C 7−87370
electrodes for pacing, comparison of macroporous and microporous types 7−87369
rate control of an implantable pacemaker, appropriateness of temp. as a metabolic sensor 7−87378
rate-responsive pacer, medical electronics 7−71928
sensors for automatic pacing control 7−87377
testing instrument for external cardiac pacemakers 7−127040
third-generation implanted pacemaker design *(Polish)* 7−145286

packages (software) *see software packages*

packaging
see also encapsulation; modules
fibre optic sources, high reliability packaging 7−142041
HLW, long-term performance of waste packaging materials 7−96378
HLW, package long-term performance, development, application and validation of models 7−96379
HLW package licensing considerations 7−96377
measuring instruments, explosion-proof pressurized housings *(Polish)* 7−67299
nuclear material packages, mixing and nuclear criticality safety 7−74225
radioactive material packages under vehicle accident conditions, tie-down systems 7−74100
radioactive material packagings, leak test methods, review of standardization and requirements 7−74223
radioactive materials, Type A packaging, compliance with regulations 7−74224
radioactive waste packaging, quality assurance 7−74222

packaging continued
Ag electromigration suppression effect 2,4-diamino-6-vinyl-s-triazine compounds 7−91856
Ag electroplated Cu leadframes, porosity meas. by electrographic printing 7−138701
Pb-Sn solder/Cu joints, tensile behaviour 7−119312
$PbO-SiO_2-B_2O_3-GeO_2$, glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845
$ZnO-SiO_2-B_2O_3-P_2O_5$ glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845

packing *see packaging*

pair algebra *see algebra*

pair annihilation, electron *see electron-positron inclusive interactions*

pair breaking, Cooper *see Cooper pairs*

pair production, electron *see electron pair production*

pairing, Cooper *see Cooper pairs*

pairs, electron *see electron pairs*

palaeomagnetism
accretionary tectonics and structural geology, appl. of palaeomagnetism 7−139461
Akchagil Basin, USSR, authigenic mineralisation of sedimentary rocks rel. to partial remagnetisation time 7−145445
Alaska, Pleistocene and Holocene palaeomagnetism and climate from lake core record 7−139449
Anticosti Island, Quebec, palaeomag. study of Late Ordovician-Early Silurian platform sequence 7−79197
Appalachian redbeds, Brunhes-age viscous overprint and magnetization theory 7−107387
Ardenne and Brabant massifs (France-Belgium), palaeomagnetism and tectonic rotations 7−107343
Bahamas Bank area, ODP drill core studies 7−127154
Baja California peninsula, Mexico, Miocene palaeomagnetism and tectonic setting 7−87439
basalt samples selection for palaeointensity studies 7−79372
Bey Daglari, Turkey, cainozoic formations, paleomag. study *(French)* 7−87427
Braggs, Alabama, USA, biotic, geochem. and palaeomag. changes across Cretaceous-Tertiary boundary 7−139519
Bulgaria, archaeomagnetic data characts. 7−79208
Cajamarca, Peru, geomag. field intensity var., pre-Inca potsherds meas. 7−79212
Late Cambrian stable reverse polarity epoch, intensity changes 7−133563
W Canada, 5000 yr. geomag. palaeosecular var. record 7−145328
N Canada, Pleistocene sediments palaeomagnetism 7−133561
Cape Fold belt, South Africa, study of Palaeozoic apparent polar wander path 7−133556
North Carolina Piedmont, USA, palaeomagnetism and dike emplacement 7−87442
W Carpathians, mag. field palaeointensity meas. for three geological time periods, igneous rocks meas. 7−79207
centred and eccentric geomag. dipoles and their poles (1600 to 1985) 7−101193
Chile coastal cordillera, palaeomagnetic constraints on tectonic evolution 7−94183
S China, mag. field intensity var. (4500 BC to 1500 AD), archaeological samples anal. 7−79209
China, palaeomag. constraints on collision and rot. of North and South China 7−107346
China Loess Plateau, palaeomag. evidence for Late Pleistocene climatic optimum 7−139647
Chinese pottery, evidence for intensity variations since the year 4000 BC 7−127087
Coast Range ophiolite and Great Valley sequence, California, overprinted magnetizations 7−94075
Col du Somport, France, Pyrenean Permian redbeds, palaeomag. direction determ. by strain removal 7−145321
Cretaceous-Tertiary boundary in Egyptian W Desert, apparent polar wander 7−107345
Dunn Point volcanics (Early Silurian), Avalon Zone, Nova Scotia, palaeomagnetism and rock magnetism 7−119945
W Ecuador, rotated oceanic blocks, palaeomagnetic meas. 7−119996
Egypt E Desert, study of Dokhan Volcanic formation and younger granites 7−119943
Egyptian W Desert, palaeomagnetism near Cretaceous-Tertiary boundary 7−107345
equipment for rapid determ. of rotational remanent magnetization 7−120139
W Europe, geomag. field relative palaeointensity var., lake sediments anal. 7−145329
fine particle magnetism, implications for paleomagnetism 7−139591
fold-test evaluation of syn-folding remagnetization and grain-scale deformation 7−87614
Greek vases as record of intensity variations between 300 and 1650 AD 7−133567
haematite, synthesized, chemical remanent magnetisation acquisition appl. in palaeomagnetism 7−107390
Harbour Main Group metabasalts, E Newfoundland, palaeomag. study 7−145335
Hasteinen region, Norway, tectono-magmatic signature of old red sandstone and pre-Devonian strata 7−139541
Hungary, palaeofield intensity var. 7−79214
inclination of field at Kamchatka for last 8500 years 7−87437
intensity determ. using marine sediments, comparison with lake sediments and archaeomagnetism 7−107337
intensity determination by Thellier technique, reliability 7−79672
intensity estimates from Italian kilns meas., corrections due to samples laboratory heating 7−79205
intensity of palaeofield, determ. from rock mag. data by heatless statistical method 7−145325
ironcrust from SE Belgium, magnetic props. and synthetic Mn-substituted goethite studies 7−101285
W Japan, mag. field var. (5000 BC to 1800 AD), archaeological samples anal. 7−79210
NE Japan, remagnetization of pre-Oligocene rocks 7−139444
SW Japan region, clockwise rot., palaeomagnetic data anal. 7−145421
Kopet-Dagh Mts. (East of Caspian Sea), palaeomagnetism and tectonics 7−94081
S Korea, Cretaceous palaeomagnetism and tectonic situation 7−94076

palaeomagnetism continued
Kupferschiefer mineralization in Poland, palaeomagnetic age and geological origin 7−71962
Lachlan Fold Belt, Australia, folded Early Devonian rock form. palaeomag. characts. 7−145330
lacustrine sediments, simple model for mag. records interpretation 7−87628
Laurasian paleomagnetism and tectonics, conf., Prague, Czechoslovakia (Aug. 1985) 7−115685
Liberia, Ar isotope ages, palaeomagnetism and Precambrian APW data base 7−133566
limestone magnetization due to bacteria magnetite grains 7−101288
magnetostratigraphy, appl. to palaeosecular variation, polarity transitions, and mag. reversal sequences 7−145324
magnetostratigraphy review 7−139460
Massif Central, France, Carboniferous Palaeomagnetic evolution and tectonics 7−87428
Mecca Hills, San Andreas fault zone, mag. stratigraphy and test for Quaternary block rot. 7−71963
Mesozoic polarity chrons and calpionellid zones correlation 7−145381
Mesozoic polarity chrons CM1 to CM23, biostratigraphic correl. at Capriolo and Xausa 7−145380
metamorphic control of black shale magnetic mineralogy in Swiss Alps 7−133660
morphology of geomagnetic reversals 7−139457
Mull dyke swarm, Scotland, dyke contact aureole showing CRM self-reversal 7−133662
S Nevada, palaeomagnetism and crustal rotations along Las Vegas Valley Shear Zone 7−127091
W-central Nevada, paleomag. and structural evidence for Mid-Tertiary counterclockwise block rotation 7−133646
New Zealand, Miocene mag. field intensity var., lavas meas. 7−79211
Niger, W. Africa, Palaeomagnetism, age, tectonics of mid-Palaeozoic ring complexes 7−133562
Norway cave sediments of mid-Weichselian age, geomagnetic excursions 7−94080
ocean sediments, simple model for mag. records interpretation 7−87628
oceanic crust deep layers, mag. rocks responsible for anomalous fields 7−87441
overview of geomagnetism and paleomagnetism (1983 to 1986) 7−139590
Pacific hotspots, latitudinal shift during Cretaceous-Tertiary 7−87440
Central Pacific volcanic islands, Pleistocene mag. reversals 7−87438
palaeointensity measurement, improvement of accuracy using mineral alteration meas. technique 7−133569
palaeointensity methods and results, conf. Prague, Czechoslovakia (August 1985) 7−72695
Philippines, palaeomagnetism and tectonic rotations 7−71961
polar wander and paleomagnetic reference pole controversies, review 7−139462
pole rotation, computer-assisted, FORTRAN 77 program 7−115026
Precambrian dolerite dykes from Tamil Nadu, India, palaeomag. and geochemical studies 7−79226
Sardinia, W Mediterranean, aeromagnetism, paleomagnetism and tectonic rotation 7−87429
Scaglia Rossa limestone, Umbria, Italy showing mag. foliation due to compaction 7−87611
secular variations, implications for core models 7−139458
sediments of deep-sea, magnetization acquisition for sediments undergoing compaction 7−133666
Mt Shasta, California, USA, reverse magnetization of dacitic pumice blocks 7−101287
Sheep Mt. Anticline, Wyoming, USA, Phosphoria Formation magnetization rel. to hydrocarbon content 7−107340
Siberian platform, horizontal displacement in Triassic, palaeomag. data anal. 7−79348
Sicily, field var., lava meas. 7−79206
S Spain, Jurassic magnetostratigraphy of Subbetic Cordillera 7−87430
N Spain, palaeomagnetism of Permo-Triassic redbeds from Asturias and Cantabric Chain 7−139465
N Spain, redbeds of lower Cretaceous, multistage magnetization acquisition 7−127092
Spitsbergen, Permo-Carboniferous sediments, magnetisation characts. 7−145444
Sudetes, Poland, Upper Carboniferous magnetization and Permian remagnetization 7−139455
Tel-el-Amarna, Egypt, sherds archaeomagnetism, effects of mineral alteration at high temp. 7−79213
United States, fire hearths mag. anomalies 7−94073
Watchung Mts., Newark Basin, USA, palaeomagnetism and tectonics 7−101190

paleomagnetism *see palaeomagnetism*

palladium
see also nuclei with .....
adsorbed diatomic molecules, inverse-photoemission studies 7−138536
adsorption, of benzene (toluene) (pyridine), vibr. EELS obs. 7−69789
adsorption, on sapphire, wetting and adhesion of $Pd-Al_2O_3$ interface *(French)* 7−112106
adsorption of Xe, face-specific effects 7−124697
adsorption on Si (111) vicinal surface, facetting *(French)* 7−112035
Ag-Pd films, pyridine adsorbed layer, SERS spectra, electromag. quenching and enhancement study 7−77575
catalyst, S-poisoned, analytical electron microscopy with dedicated STEM 7−100676
catalytic activity for hydrogenation on acetylene, determ. 7−106832
coating, on Ni-Cr superalloy, form. mechanism and kinetics 7−144594
coatings on stainless steel, appl. in weak current sliding contacts 7−71313
conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
deformed, anomalous H solubility 7−124522
deposited particles on MgO surface, scanning reflection electron microscopy study 7−105219
determination, investigation, graphite furnace technique 7−126496
electron momentum density distribs. 7−76760
electronic struct., photoelectron spectra, hydride form. appls. 7−85940
ferromagnetic, appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
free surface impurities segregation, XPS obs. 7−106355
interferometric fibre-optic hydrogen sensor 7−82813
magnetic ordering and supercond. at microkelvin temps. *(German)* 7−112567

palladium continued
nanocrystalline, struct., positron annihilation studies 7−98034
overlayer on CuO_2, ethanol adsorpt., selectivity and sensitivity, surface struct. effects *(Russian)* 7−76626
paramagnons, effects in proximity sandwich 7−70488
particles formation on MgO, refl. electron microscopy obs. 7−143140
polycrystalline thin films, ion irradiation induced grain growth 7−118301
powder, synchrotron X-ray diffraction, line broadening anal. 7−111307
printing, investig. 7−108684
small particles, CO oxidation and desorption, SIMS studies 7−119580
small particles, struct. and CO adsorption 7−119581
surface, (111), adsorbed H, theory of subsurface occupation, ordered structures and order-disorder transitions 7−70080
surface, (111), clean and O covered, Auger neutralisation spectroscopy by metastable noble gas atom deexcitation 7−113321
surface, (111), sorption of H, TPD spectra, sample exposure temp. effect 7−84510
surface, $)_2$−covered, dissoc. studied with H_2 sensitive Pd-MOS device and mass spectrometry 7−106830
surface, chemisorbed CO, bonding and diffusion, NMR study 7−77429
surface, CO chemisorption, indirect interactions and thermal desorpt. model calcs. 7−143180
surface, interacting adsorbed inert gas atoms, effective polarisability 7−105242
surface, ion bombarded, morphology development 7−69784
surface, passivation by adsorbed S layers, interaction of H atoms 7−76620
surface, scanning tunneling microscopy 7−91404
surface, sticking coeff. for H and H_2 7−135559
surface (100), adsorbate reson. enhancement in optical surface second-harmonic generation 7−98672
surface (100), adsorbed methanol, oxidation H transfer pathways 7−86679
surface (100), H adsorption, decorated lattice gas model 7−124703
surface (100), O metastable ordered surface phase, diffusion/adsorption competition 7−124704
surface (110), clean and C contaminated, LEED studies 7−84468
surface (110)-(1×2), reconstructed surface struct. determ. using ion back-scatt. 7−143149
surface (111), angle resolved inverse photoemission 7−92766
surface (111), band struct., angle-resolved two-photon photoemission spectra study 7−144236
surface (111), H adsorption, role of surface resonances in vibr. cross section enhancements 7−124719
surface (111), work fn. change during O_2 adsorption 7−124721
surface state effect on H permeation, AES 7−135558
surfaces, adsorbed H, surface resonances and nondipole excitations 7−143543
surfaces (111) and (100), adsorbed aromatic CN cpds., comparison of single-, double-, and triple-bonded cpds., HREELS studies 7−124715
total gamma ray cross section meas. using high resolution detector 7−125574
Fe/Pd multilayers, collective magnetostatic spin wave excitation obs. 7−112777
GaAs:Pd-AuIn, electroless deposition of InAu alloys for ohmic contacts 7−113456
GaAs/Pd/Ge nonalloyed ohmic contacts by solid phase epitaxy 7−143637
GaAs-In-Pd, ohmic contact formation by metallisation 7−125122
GaAs-Pd, interfacial structures, compositions and reaction morphologies, TEM and RBS studies 7−98716
H as probe for average thickness of grain boundary 7−131154
Ni−Pd−a−Si, form. of Pd_2Si buffer layer, impeding Ni diffusion 7−124734
Pd (111)-H, H transport in surface and subsurface regions, 6-800 K 7−105046
Pd complex, $(Pd(cyclohexanediamine)_2Br)Br_2$, mixed valence, reson. Raman spectra 7−85740
Pd:H system, diffusivity, microstruct., galvanostatic permeation meas. 7−84358
$Pd/Al_2O_3/SiO_2/Si$ struct., appl. as H sensor 7−71053
Pd/Co multilayers, mag. interface anisotropy 7−99520
Pd/Fe multilayers, mag. interface anisotropy 7−99520
Pd/ice interface, proton exchange processes 7−99199
Pd/Si interface reactions, high energy ion scatt./channelling studies 7−113998
Pd/SiO_2/semicond. diode H_2 sensor, ultrahigh vacuum studies 7−124689
Pd-Al_2O_3 interface, wetting and adhesion *(French)* 7−112106
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-H, thin films, absorption-desorption, pressure-composition isotherms 7−105041
Pd-$H_2(D_2)$, hysteresis effects in desorption and absorption, p(n) isotherms 7−105249
Pd-Ni interface effect on mag. behaviour of Ni films 7−118837
Pd-Si interface, phase comp., Si Auger spectrum intensities meas. 7−106856
Pd-SnO_x MIS capacitor as O_2 gas sensor 7−80765
Pd-TiN-Pd-Ag metallisation system for contacts to GaAs, solid-phase reactions 7−105157
Pd-Xe thin films, texture studies using synchrotron radiation and energy dispersive diffr. 7−92014
Pd_n+CO, electronic struct, pseudopot. CI calcs., relationship between surface and organometallic chemistry 7−113901
PdH_x, inelastic neutron scatt., single particle pot. *(German)* 7−131131
PdH_x superconducting transition, low temp. ion beam mixing and implantation effects 7−105749
^{100}Pd, diffusion in Pb, PAC studies 7−105130
Pd(poly), adsorption of NO and CO, interactions, spectroscopic methods appls. 7−144760
a-Si:H,Pd films, impurity diffusion studies 7−84392
Si:Pd, defect energy levels identification *(Chinese)* 7−105451
Si:Pd, energy levels identification by DLTS 7−98899
Si:Pd, energy levels identification *(Chinese)* 7−105453
Si:Pd, impurity energy levels, uniaxial stress and hydrostatic press. depend. 7−105474
SnO_2:Pd, gas sensing props., dopant effect *(Japanese)* 7−80773
Te-TeO_2:Pd write-once media for optical discs 7−75087
$Zn_{1-x}Cd_xS$ phosphor powders, surface recombination mediation by Pd microislands 7−113259

palladium alloys
see also palladium compounds
dilute interstitial alloy with H, B or C, electron scattering, interstitial Green fn. application 7−143457
hydride formation, heat of solution, rel. to density of states and Fermi level 7−98470
metallic glasses, rad.-induced growth 7−91678
$Pd_{82}Si_{18}$, amorphous, isothermal annealing, struct. relax., elec. resist., X-ray diffr. 7−104562
Pn-Sn colloidal catalysts with accelerators for electroless Cu deposition, TEM studies 7−71091
YbPd, mag. and nonmag. charge states, ^{170}Yb Mossbauer meas. 7−76852
Zr_2Pd, cryst. struct., neutron powder diffr. anal. 7−83847
Ag-Pd random alloys, Auger spectra, matrix elements effects 7−106317
Ag_xPd_{1-x}, transition metal alloys, Knight shift 7−132150
Ag_xPd_{100-x} random alloys, electron states, canonical description 7−70182
Au-Pd concentrated alloys, vacancies and vacancy behaviour, SRO kinetics, elec. resistivity meas. 7−104736
Au-Pd-Cr alloys, anomalous thermal resist. *(Chinese)* 7−131375
AuPd pseudo-one-dimensional wires, inelastic electron scatt. 7−92145
Au_xPd_{1-x}, electronic struct., soft X-ray emission, Fermi surface props. 7−137785
Ce(Pd, Rh)$_3B_1$, resistivity and Ce L_3 valence state, temp. depend. 7−124960
$CePd_3$, paramag. response, thermal evolution, scattered neutron polarisation anal. 7−77236
$CePd_3B_{0.3}$, high field low temp. heat capacity, exchange interactions 7−91835
$CePd_3B_{0.6}$, heavy fermion cpd., sp. ht. meas., anomalous cryst. field effects 7−76433
$CePd_{3-x}Pt_x$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$CePd_2Si_2$, mag. susceptibility, heat capacity 7−118779
$CePd_3Si_{0.3}$, heavy fermion cpd., sp. ht. meas., anomalous cryst. field effects 7−76433
$Ce_{1-x}Y_xPd_3$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$Ce_{1-x}Y_xPd_3$, unstable valence state and conduction electron hybridisation, thermoelec. power meas. 7−76899
Cu-Pd, plastic deformation and nucleation, mobile dislocations *(Russian)* 7−71236
Cu-Pd, surface atoms, core level binding energies 7−143193
CuPd, electronic struct., ab initio calcs. 7−105391
Cu_3Pd, electron irrad., spinodal ordering beyond Lifshitz point, HVEM 7−132600
Cu_xPd_{1-x}, transition metal alloys, Knight shift 7−132150
$Cu_{0.9}Pd_{0.1}MnSb$, magnetic structure 7−125325
$ErPd_2Sn$ cubic Heusler superconducting alloy, antiferromag. struct., neutron scatt. meas. 7−112743
$ErPd_2Sn$, hyperfine field, low temp. Mossbauer study 7−138362
$Eu(Au_xPd_{1-x})_2Si_2$ alloy, ferromagnetism and valence mixing studies, high press. effects 7−112278
Eu_xPd_{1-x} amorphous alloys, composition-induced valence change 7−76842
$Eu(Pd_{1-x}Au_x)_2Si_2$, valence transition, Mossbauer effect, X-ray diffr. meas. 7−92142
EuPdGa, cryst. struct., X-ray powder diffr. study 7−91526
$EuPd_2Si_2$ intermediate valence impurity state relax. rate model calcs. 7−76845
$EuPd_2Si_2$, mixed valence cpd., dynamic mag. susceptibility, neutron scatt., magnetisation, Mossbauer effect meas. 7−70264
EuXGa, X=Pd,Pt, mag. and Mossbauer study 7−118898
Fe-Pd, mag. domain struct. rel. to FCT martensite variants 7−85348
Fe-Pd, ordering, elec. resist., X-ray diffr., TEM obs. *(Japanese)* 7−93004
FePd, quenched, order-disorder transform. kinetics, microstructure, annealing *(Russian)* 7−113542
$FePd_2Au$, elec. resist. and temp. coeff. meas. during ordering annealing 7−84809
$FePd_2Au$, sp. ht. meas., 3-20 K *(Russian)* 7−76428
Gd-Pd, enthalpy of form. of intermetallic phases 7−100189
$Gd_{72-x}Pd_xGa_{18}B_{10}$, spin glass system, double transition behaviour, effect of alloying elements 7−112809
LaPd, inner shell photoemission and photoabsorption spectra, many body effects 7−77694
Nb-Pd, conc. binary, fabricability and hardness, solute types effect 7−100241
m-$Nb(Rh_{0.75}Pd_{0.25})_3$, prep. by rapid solidification processing, long-period close-packed phase of $PuGa_3$ type 7−119266
Ni-Pd based glassy alloy, crystallisation, particle size 7−83759
Ni-Pd disordered alloys exchange interactions, local spin density functional calcs. 7−99434
Ni-Pd-P amorphous particles, prep. by melt ejection into stirred water, hardness and thermal stability 7−86086
Pb-Pd (3 wt.%), directionally solidified, dendritic characts. 7−77973
Pd based alloys, splat cooling, glass forming ability, struct. 7−83732
Pd/ice interface, proton exchange processes 7−99199
Pd-(Fe,Co,Ni)-Si metallic glasses, crystallisation kinetics, resist. obs. 7−83760
Pd-Ag, surface struct. and segregation, calc. 7−143155
Pd-Ag disordered alloys, electronic states, tight-binding CPA calcs. 7−124844
Pd-Ag-In, impurity repulsive interaction between In and Ag, PAC study 7−118902
Pd-As based liq. metal ion sources 7−73467
Pd-Au, solubility of H, D and T, at low hydrogen concs., 250-733 K 7−105039
Pd-Au, surface struct. and segregation, calc. 7−143155
Pd-Au disordered alloys, electronic states, tight-binding CPA calcs. 7−124844
Pd-B based liq. metal ion sources 7−73467
Pd-based binary alloys active-passivation polarisation behaviour 7−78303
Pd-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
Pd-Ce (12.5 at.%), ordered and disordered, diffusivity of H 7−84400
Pd-Ce-Y-B, diffusion and solubility of H, lattice dilation effect 7−84401
Pd-Co, disordered alloy, absorption of H_2, pressure-composition isotherm 7−105038
Pd-Co dilute alloys, ferromagnetic transition, deform. effects study 7−125387
Pd-Co dilute alloys, ferromag. transition obs. 7−132019
Pd-Cr-Os/Cu-Fe thermocouple, magnetic field effect on thermo EMF 7−134737

palladium alloys continued
Pd-Cu, surface struct. and segregation, calc. 7−143155
Pd-Cu disordered alloys, electronic states, tight-binding CPA calcs. 7−124844
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
Pd-Cu-Si metallic glass, solid-undercooled liq. interfacial energy 7−76558
Pd-Er alloys, elec. resistivity, Matthiessen's rule 7−99041
Pd-Fe, impurity dynamical props. from anharmonic recoilless fractions 7−98372
Pd-Fe dilute alloys, ferromag. transition obs. 7−132019
Pd-Gd system, AC susceptibility meas. 7−77257
Pd-Ge, liq. alloys, thermodynamic behaviour 7−77947
Pd-Ni, dil., conduction electron Zeeman splitting, effect of Ni impurities 7−105500
Pd-Ni, plated, tribological props., roughness, hardness *(German)* 7−138855
Pd-Ni-P, metallic glasses, electronic structure 7−92056
Pd-Ni-P metallic glasses, He solubility, method of determ. in solid and melts 7−91828
Pd-Ni-Si-Be-B liquid metal ion source, emission props., ambient gas effects 7−68101
Pd-P based liq. metal ion sources 7−73467
Pd-Pt solid solutions, H solubility, composition depend. *(Russian)* 7−76410
Pd-Ru-In system, struct. and props. 7−132574
Pd-Sc(Dy)(Ti)(Mn), atomic short-range order, investig. by diffr. methods 7−142703
Pd-Se system, phase relations, superconductivity 7−113519
Pd-Si, amorphous, H diffusivity rel. to comp. 7−105143
Pd-Si, glassy, crystallisation, H absorption, internal friction, elec. resist. 7−104588
Pd-Si, glassy alloys, two-site model of H solubility 7−106522
Pd-Si, liq. alloys, thermodynamic behaviour 7−77947
Pd-Si, rapidly quenched, comparison with form. by mech. alloying 7−113476
Pd-Si metallic glass struct. determ. using scanning tunnelling microscope 7−142540
Pd-Si metallic glasses, stabilisation by irrad. with picosecond laser pulses 7−117973
Pd-Si metallic glasses, surface-induced crystn., DSC study 7−111405
Pd-Si metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Pd-U, disordered alloy, absorption of H_2, pressure-composition isotherm 7−105038
Pd-U-Si glassy alloys, electronic struct., photoelectron spectra 7−98791
Pd-U-Si glassy and icosahedral alloys, low temp. thermal cond. meas. 7−70276
Pd-Y, amorphous, electronic struct., photoemission and inverse photoemission studies *(French)* 7−100018
Pd-Y (8 at.%), H solubility, elec. resist. anomalies, phase transition 7−98467
Pd-Y solid solutions, H diffusion 7−124598
Pd-Y solid solutions, struct., density and X-ray diffr. studies 7−76086
PdAuFe, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
PdAuMn, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
$Pd_{72}B_{28}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
$Pd_{73}B_{27}$, ion source, alloy fabrication and mass spectroscopy anal., test bed system 7−134889
$Pd_{73}B_{27}$ liquid metal ion source for focused ion beam system 7−73466
$Pd_{99}Co_1$, nuclear spin-lattice relaxation 7−118884
$PdCuH_x$ superconducting transition, low temp. ion beam mixing and implantation effects 7−105749
$Pd_{1-y}Cu_yH_x$, T_c enhancement on addition of Cu *(Russian)* 7−99247
$Pd_{77.5}Cu_6Si_{16.5}$, amorphous, relax., internal friction 7−106565
$Pd_{77.5}Cu_6Si_{16.5}$ metallic glass, internal friction near the glass transition temp. and crystallisation temp. 7−76295
$Pd_{77.5}Cu_6Si_{16.5}$, metallic glass, internal friction, creep, annealing effect *(Japanese)* 7−93059
$Pd_{77.5}Cu_6Si_{16.5}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
$Pd_{77.5}Cu_6Si_{16.5}$, undercooled melts, $PdSi_3$ nucleation 7−131272
Pd_2DySn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
PdFe dilute alloy, spin glass transition, relax., Mossbauer studies 7−112831
$Pd_{100-x}Fe_x$-Cu ferromagnetic-paramagnetic bilayer interface, magnetisation transport, FMR, EPR studies 7−85254
Pd_3Fe disordered alloy, electronic struct. 7−118348
Pd_3FeH, electronic structure and mag. props. 7−124845
$Pd_{1-x}(FeNi)_x$, magnetic excitations, saturation magnetisation meas. *(Russian)* 7−143774
PdGd, magnetoresist. and ferromag. ordering 7−131613
$PdH_{0.7}$, single crystal anisotropy of nuclear spin lattice relax. times 7−85465
α'-PdH_x, H arrangement around positive muon 7−85509
Pd_2HoSn, Heusler alloy, mag. struct., powder neutron diffr. study 7−92404
PdIn β-electron cpds., lattice disorder and defects study 7−104729
PdMg-TiN-PdMg-Ag metallisation system for contacts to GaAs, solid-phase reactions 7−105157
Pd_3Mn, disorder-order system, elec. resist. anomalies, H solubilities 7−76883
Pd_3Mn-H system, reversible transitions between ordered structs. 7−132610
Pd_2MnSn, Heusler alloys, hyperfine mag. field meas. 7−118431
PdNi, exchange splitting and spontaneous resistive anisotropy 7−131617
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
$Pd_{40}Ni_{40}P_{20}$ metallic glass, glass transition temp., determ. by low freq. internal friction meas. 7−137562
$Pd_{48}Ni_{32}P_{20}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
$(Pd_xPt_{1-x})_3Fe$ reentrant spin glass, magnetisation and Mossbauer studies 7−112800
PdRh polycrystalline foil, high temp. oxidation, XPS and Raman studies 7−138590
PdSi-base amorphous alloys, thermal expansion and vol. effect on transform. *(Chinese)* 7−143054

palladium alloys continued
$Pd_{77}Si_{23}$, amorphous ribbons, crystallisation; effect of Cr and Si coating 7−142626
$Pd_{77}Si_{23}$ metallic glasses, crystn. kinetics, effect of surface 7−117830
$Pd_{80}Si_{20}$, amorphous, liq. quenched, cold rolled, SAXS obs. 7−126147
$Pd_{80}Si_{20}$, amorphous, thermal stability, effect of surface oxidation *(Chinese)* 7−144581
$Pd_{80}Si_{20}$ amorphous alloys, low temperature neutron irrad., defects, diffuse X-ray scatt. studies 7−98260
$Pd_{80}Si_{20}$ metallic glasses, creep behaviour *(Chinese)* 7−132664
$Pd_{82}Si_{18}$, metallic glasses, relax., thermophys. investig. 7−97980
$Pd_{1-x}Si_xH_y$ amorphous alloys, H solubility, press.-comp. isotherms, EMF and resistivity meas. 7−118107
$Pd_{58.8}Si_{20.6}U_{20.6}$, icosahedral and glassy, low-energy modes, neutron inelastic scatt. 7−118048
Pd_3U, absorption of H_2, pressure-composition isotherm 7−105038
$Pd_{58.8}U_{20.6}Si_{20.6}$ icosahedral alloy, quasicrystallinity 7−104638
Pd_3V long and short range order, diffuse electron, neutron and X-ray scatt., mean-field theory anal. 7−111453
PdX (X=C, Si, Ge Sn), LCGTO MP LSD calcs. 7−109694
$Pd_{30}Zr_{70}$, thermal expansion, 20-400 K 7−98525
Pt-Pd, mutual diffusion coeffs., comp. depend., X-ray microanalysis *(Russian)* 7−111940
Pt-Pd, mutual diffusion coeffs., X-ray microanal. results *(Russian)* 7−137610
Re-Pd, sputter-deposited, UPS studies 7−144230
RePd sputtered alloys, work function w.r.t. surface comp., appearance pot. spectra studies 7−143555
$SmPd_3$, rare earth metal ions, intermultiplet transitions, inelastic neutron scattering 7−131598
Ti-Pd, electrospark alloying for improved corrosion resist. of Ti 7−144597
Ti-Pd, rapidly quenched, comparison with form. by mech. alloying 7−113476
TiNi-TiPd intermetallic compound system, valence band evolution and structural instability 7−84659
$TlAsPd_5$, cryst. struct. rel. to Cu_2Sb 7−69682
U-Cu-Pd system, mag. and electrical props. 7−77215
UPd_3, anomalous Hall effect 7−98985
$U(Pt_{0.95}Pd_{0.05})_3$, mag. order 7−77350
$U(Pt_{1-x}Pd_x)_3$ heavy-fermion alloys, superconductivity and antiferromagnetism, phase diagram determ. 7−112790
$U(Pt_{1-x}Pd_x)_3$ pseudobinary heavy fermion systems, sp. ht., resist. and mag. suscept. meas. 7−69929
YbPd and Yb_3Pd_4, intermediate valent cpds., mag. response, inelastic neutron scatt. study 7−70527
$YbPd_3$, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
Yb_xPd_{1-x} amorphous alloys, composition-induced valence change 7−76842
$YbPd_2Si_{2-x}Ge_x$, spin fluctuation changes 7−77300
Zr-Pd alloys, electronic struct., photoelectron spectra, hydride form. appl. 7−85940
Zr-Pd metallic glass, H solubility and embrittlement 7−106521
Zr-Pd-H, crystalline-to-amorphous transformation, thermal analysis 7−97929
Zr_2Pd, H(D) absorpt., X-ray and neutron diffr. studies 7−84283
Zr_2PdD_x, x=1.7, 1.96, cryst. struct., neutron powder diffr. anal. 7−83847

palladium compounds
see also palladium alloys
carboxylates, gaseous phase, electron impact mass spectrometry 7−74778
complex, K bis(1,2-cyclobutanedione 3,4-dithiolato) palladate, interstack interactions and crystal structure 7−76096
$BaPdR_2O_5$ (R=Pr, Tb), single cryst. X-ray anal., cryst. struct. *(German)* 7−69669
$Cs(Pd(S_2C_2(CN)_2)_2).0.5H_2O$, preparation, structure and elec. props. 7−99008
$K(Pd(S_2C_2(CN)_2)_2).H_2O$, preparation, structure and elec. props. 7−99008
Pd complex, (Et_4N) $(Ni(DMIT)_2)$, cryst. struct. and elec. cond. 7−99024
Pd complex, aminopolycarboxylate, ^1H and ^{13}C NMR 7−90214
Pd complex, bis-1,4,10,13-tetraoxa-7,16-dithiocyclooctadecanthicyanato-Pd(II), cryst. and mol. struct. 7−111518
Pd complex with glycerine, electronic struct., X-ray spectra and quantum-chem. calcs. 7−109928
Pd complexes with polyacids, circular dichroism and electronic absorpt. spectra 7−90234
Pd H_x, heat of adsorption meas. using differential scanning calorimeter 7−80783
Pd^{2+} complexes, Magnus-type salts, single-cryst optical absorpt. spectra 7−77605
Pd-Ag-O-Cs photocathodes, photoemission charact. under star illum. *(Chinese)* 7−77753
Pd-H, nonstoichiometric, thermodynamic aspects, two-phase theory 7−98509
Pd-T, phase boundaries, solubility, superconducting temp. ^3He precipitation 7−91821
$PdC_{0.15}$, interstitial solid solutions hydrogen accommodation 7−91820
Pd_nC clusters, bonding mechanism., Xα calcs. *(German)* 7−68502
PdC_xH_y, coexistence of hydrogen and carbon solutes 7−91820
$PdCl_2$, electronic struct., XPS and quantum chem. investig. 7−103382
$Pd_{1-y}Cu_yH_x$, influence of Cu on supercond. props. 7−112713
PdH_x, H diffusion mechanism 7−84374
PdH_x, struct. study using μSR technique 7−113055
PdH_x total energy and self-consistent electronic energy band struct. calcs. 7−84669
$PdH_x(D_x)$, elastic consts., optical and acoustic phonon effects determ. 7−98298
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
$PdPt(C_2S_2O_2)_2$ bimetallic 1D polymer, synthesis and physical props. 7−99038
Pd_2Si film on Si (100), struct. props., scanning tunnelling microscopy and PES studies 7−76648
Pd_2Si, form. on amorphous Si by thermal annealing 7−124734
Pd_2Si-Si, submicron epitaxial islands, formation 7−76500
Pd_4Si polycrystalline layers, optical props. 7−125832
$Pd_xSi_{1-x}H_y$, amorphous, H diffusion, quasielastic neutron scatt. study 7−84372
PdT, solid-fluid transition of ^3He bubbles, NMR evidence 7−138340
$Pd(acac)_2$, complex, Pd L_{III} X-ray absorpt. edge spectra 7−138548
$Pd_2(dba)_3.CHCl_3$, complex, Pd L_{III} X-ray absorpt. edge spectra 7−138548

palladium compounds continued
$Ps_3(PS_4)_2$, PdPS, PdP_2 and PdS, semiconducting cpds., photoelectrochem. props. 7−105702
Tl_3PdCl_5, cryst. struct. determ., prep. *(German)* 7−117876
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
Zr_2PdH_x, phase comp., cryst. struct. X-ray diffr. PMR studies 7−83891
PAM *see pulse amplitude modulation*
paper
crumpled paper balls, fractal struct. 7−73248
sheet materials, basis weight and moisture content, microwave cavity measurements 7−121134
paraelectric materials *see dielectric materials*
paraelectric resonance
No entries
parallel access storage *see random access storage*
parallel algorithms
2D particle coarsening boundary-integral simulation method 7−102355
confocal laser scanning microscope data, 3D display using vector representation 7−134848
continuous speech, parallel algorithms for hypotheses generation 7−142120
hypercube algorithms and implementations, appl. to real fluids 7−88988
hypercube algorithms for PDEs 7−128244
M-matrices, convergence of parallel multisplitting iterative methods 7−95201
Navier-Stokes code, parallelisation for ICL DAP 7−69084
spin systems, high speed algorithm for Monte Carlo simulation *(Japanese)* 7−85233
parallel architectures
multiprocessors for high energy physics, review 7−135793
Navier-Stokes computer miniNode, 2D nonsteady viscous flow simulation 7−104237
optical parallel multiprocessing systems, development 7−74858
phase shifted noise interferometry, parallel architecture computer adaptation 7−89254
pyramidal pipelines for spatial analysis of geoscience map data, considerations 7−145320
textual and chemical information retrieval 7−141713
parallel machines
3081/E systems, UA1 data anal. 7−135815
Navier-Stokes computer miniNode, 2D nonsteady viscous flow simulation 7−104237
parallel processing
see also parallel algorithms; parallel architectures; parallel machines; parallel programming
array processor with emulator for lattice gauge theory simulations 7−134918
auditory system parallel model 7−114268
biological systems, quantum chemistry, statistical mechanics, fluid dynamics, supercomputer calcs. 7−133189
Boltzmann machines, optical implementations 7−74860
cloud size distrib., remote sensing by satellite imagery in real time 7−127510
collisionless stellar systems, phase space simulation on massively parallel processor 7−94968
data driven parallelism in experimental high energy physics applications 7−135812
drift chamber track finding and fitting, vectorisation 7−135735
Earth and planetary sciences, supercomputing and graphics 7−133954
front-end data processing in the SLD data acquisition system 7−109680
FX, digital spectro-correlator system for radio astronomy 7−127728
high energy physics computing, conference, Asilomar, CA, USA (Feb. 1987) 7−134338
high energy physics supercomputing, pattern recognition and Monte Carlo calcs. 7−135799
histological diagnosis, flexible image processing system for automated mapping of residual tumor lesions 7−93880
Hypercube machine, appl. to structural mechanics problems 7−83025
Ising spin exchange simulations on the MPP 7−92455
liquid crystal ferroelec. spatial light modulators for optical interconnection 3D gate array 7−136491
Monte Carlo calcs. with many microcomputers 7−134457
Monte Carlo EM cascade shower simulation code EGS4V, vectorisation 7−135798
motor neuronal network simulation 7−114224
multichannel flash-ADC system, parallel data analysis, JADE jet-chamber appl. 7−68174
multichannel optical correlator/convolver utilizing the magnetooptic spatial light modulator 7−110248
nuclear power plant dynamic simulation, multirate integration methods and table lookup techniques 7−96175
on-chip massively parallel Monte Carlo cellular processors, random-number arrays, optical generation 7−68583
optical parallel processing, speed limitations 7−103747
protein and nucleic acid sequence database searching: a suitable case for parallel processing 7−141729
reactor multi-group criticality safety code, KENO IV, vectorisation 7−89604
RELAP V Nuclear code, appl. of parallel processing 7−89658
reversible computing: all-optical implementation of interaction and Priese gates 7−104037
SAR radar data, knowledge based processing system 7−79710
vectorized Monte Carlo calc., stratified sampling appl. 7−135393
weather forecasting, Cray supercomputer appl. *(French)* 7−120093
parallel programming
chemical physics, parallel program struct. using supercomputers 7−108209
Navier-Stokes code, parallelisation for ICL DAP 7−69084
transputers, parallel computation of Racah coefficients in atomic struct. appls. 7−135819
parallel software *see parallel programming*
paralleled resonator filters *see band-pass filters*
paramagnetic-antiferromagnetic transitions
see also Neel temperature
antiferromagnets, random mixture with magnetic easy plane, role of mixed couplings 7−77335
Ising antiferromagnets with competing exchange coupling consts., mag. phase diagram *(Russian)* 7−92447
paramagnetic-antiferromagnetic transitions continued
$CeAl_2$, Kondo cpd., pressure-temperature phase diagram, high press. X-ray diffr. and elec. resist. meas. 7−85288
$CeCu_{1.54}Si_{1.46}$, heavy electron Kondo lattice, mag., sp. ht., elec. resist. meas. 7−77279
$Ce_{1-x}Gd_xAl_3$, heavy fermion, Kondo, spin glass-like and antiferromagnetic behaviour 7−70554
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$CfCl_3$, mag. suscept. meas., cryst. struct. depend. 7−92410
Cr, dislocations, dynamic behaviour at mag. transitions, internal friction meas. 7−111570
Dy, resistance and sp. ht. anomalies at Neel point 7−92428
$DyRu_2Ge_2$, ^{161}Dy Mossbauer spectra 7−70686
$Eu_{0.08}MoO_3$, mag. props., Mossbauer spectra, sp. ht. meas. 7−92430
γ-Fe-Mn-Al(Cr), antiferromag., resist., temp. depend. *(Chinese)* 7−143788
FeGe, hexagonal, symmetry analysis of antiferromagnetic phase transitions 7−85289
$Fe_{80-x}Ni_xCr_{20}$, magnetovol. effects, thermal expansion meas. 7−138305
$FePS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
GVO_4, heat capacity over the range 5 to 300 K 7−91833
$GdBa_2Cu_3O_{7-x}$, supercond. and normal samples, pres. and field depend. of mag. transition 7−132021
$K_2MnCl_4.2H_2O$, mag. transitions 7−99451
$La_yU_{1-y}O_{2+x}$, mag. meas., dilution effect 7−112786
NaCl:Mn^{2+}, mag. transition, Suzuki phase, sp. ht. meas. 7−112823
$NiPS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
$Sr_2Co_2O_5$, phase transitions, neutron thermodiffractometry study 7−91797
$TbRh_{2-x}Ir_xSi$, cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
Ti-Si, solid solns., itinerant antiferromagnetism, mag. susceptibility meas. 7−138198
$U(Ga_{1-x}Ge_x)_3$ hybridised f-electron system, magnetic to nonmagnetic transition studies 7−112789
UIrGe heavy fermion cpd., low temp. susceptibility and sp. ht. 7−125389
YMn_2, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{0.9}Al_{0.1})_2$, longitudinal spin fluctuations, thermal depend. 7−118810
$YbPd_3$, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
$YbPt_3$ and Yb_3Pt_5, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
paramagnetic Curie temperature *see Curie temperature*
paramagnetic-ferromagnetic transitions *see ferromagnetic-paramagnetic transitions*
paramagnetic properties of substances
see also paramagnetic resonance; paramagnetism
actinide intermetallics, electronic struct. and mag. props., review 7−76759
actinide pseudobinary monochalcogenide and monopnictide single crystals, magnetism 7−105894
C14 and C15 cpds., Laves structs., electronic struct., magnetism 7−84631
$[C(NH_2)_3]_3FeF_6$, crystal structure, mag. characterisation 7−131117
cerium trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
chelate: Cr^{3+} crystal, asymmetric spin-phonon coupling, low temp. behaviour of dipole subsystem 7−132134
crystals, paramag. ions, anisotropic two-body orbit-orbit interactions 7−143755
decamethylferrocene+TCNQ, reaction products, structs., mag. props., Mossbauer spectra 7−143940
erythrocytes, flowing, inhomogeneous mag. field effects 7−93785
ferrimagnets, ordered and disordered, phase transitions, correl. mol. field theory, Monte Carlo simulations 7−105944
galvinoxyl radical mixed crystals and hydrogalvinoxyl cpd., diamag.-paramag. phase transition, thermodynamic props. 7−138239
lithium phthalocyanine radical, spin exchange narrowing 7−125368
metallic glasses, electron transport props., systematic studies 7−92149
metals, mode pseudopot. calcs., binding energy, resistivity and paramag. suscept. determ. 7−76724
monazite sands, Fe minerals, hyperfine interaction charactn. 7−127198
monolayers and thin films, ferromagnetic order, critical exponent, ESR studies 7−132091
$NaMg[Cr(Oxalate)_3].9\ H_2O$, single cryst., paramagnetic anisotropy 7−125305
paramagnetic Boltzmann gases, spin wave damping 7−105879
polythiophene: BF_4^-, Pauli and Curie susceptibility, ESR/WMR meas. 7−77203
rare earth alloys RCo_2B_2, magnetism and structural chemistry, B substitution 7−142700
rare earth garnets, Faraday paramagnetic effect 7−144044
rare earth-Ni_2P_2, R=Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Sm, Ce, Yb, La, mag. props. temp. depend. study 7−118767
trans-stilbene-TCNQ complex, physical props. 7−84902
terbium ethyl sulphate, quasi-1D paramagnet, ferromag. phase transition 7−132029
thulium ethyl sulphate, Van Vleck paramag., impurity centre relax. 7−70518
TTF radical cation salts with metal halides, elec. cond. and struct. 7−84859
U-based systems, heavy electron materials, chem. trends rel. to their formation 7−105066
- *(Russian)* 7−92401
Am^{3+} ion, mag. behaviour, review 7−105882
BaO:^{140}Ce, 10^+ isomer, mag. moment, paramag. temp. depend. 7−118771
$BaZn_2Fe_{16}O_{27}$, W-type hexagonal ferrite, Zn location, paramag. phase *(French)* 7−111492
$CaNi_2P_2$, Pauli paramagnetism, mag. suscept. temp. depend. study 7−118767
$Cd_{1-x}Fe_xSe$ dilute mag. semicond., Van Vleck paramagnetism, photolum. study 7−85238
$Cd_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
CdS, anomalous diamagnetism, paramagnetism and superconducting behaviour 7−112613
CdS, superconductivity and soft modes, e-p coupling and mag. props., variational calcs. 7−143690
CdS:Cl, press. quenched, elec. and anomalous mag. transitions 7−112732
Ce-Sn alloys, struct. and mag. props. correls., comp. depend. 7−76083
$CeCu_6$, induced mag. form factor, polarised neutron scatt. obs. 7−125308
$CeCu_2Ge_2$, Kondo lattice, mag. order., susceptibility, sp. ht., elec. resist. meas. 7−77278

paramagnetic properties of substances continued
$CeCu_{1.54}Si_{1.46}$, heavy electron Kondo lattice, mag., sp. ht.; elec. resist. meas. 7−77279
$Ce_{1-x}La_xB_6$, single cryst., magnetoelastic studies 7−77391
$CeNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$CePd_3$, paramag. response, thermal evolution, scattered neutron polarisation anal. 7−77236
$CePd_2Si_2$, mag. susceptibility, heat capacity 7−118779
$CeRh_3B_2$, Ce local moment meas. 7−118772
Ce_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$Ce_{0.74}Th_{0.26}$, mixed valence alloy, γ-α valence transition, paramag. response, neutron scatt. study 7−70263
Cf_2O_3, enthalpy of formation and mag. susceptibility 7−93361
Cm^{4+} ion, mag. behaviour, review 7−105882
Co-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
CoAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
Co(AlMn) alloys, struct. and mag. props. 7−132069
$Co(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
CoGa, antisite defects, electronic struct., LMTO method, magnetism 7−98922
$CoMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
CrB_2 itinerant-electron antiferromagnet, magneto-vol. effects 7−106007
$Cr_{1-t}Mn_tAs$, paramag.-helimagnetic transition, struct. and mag. charcts 7−132020
Cu-Mn, mag. phase diagram, EPR study *(Russian)* 7−112788
Cu-$Pd_{100-x}Fe_x$ paramagnetic-ferromagnetic bilayer interface, magnetisation transport, FMR, EPR studies 7−85254
CuCl, anomalous diamagnetism, paramagnetism and superconducting behaviour 7−112613
$Cu_{99.2}Fe_{0.8}$ rapidly quenched alloys, change of mag. props. with heat treatment 7−71329
$CuSO_4.5H_2O$, quasi-1D Heisenberg mag. system, spin dynamics, EPR linewidth meas. 7−70566
Cu_2Te-Cr_2Te_3 solid soln., mag. props. and metallic cond. 7−125380
Dy, paramagnetic and antiferromag. states, muon probe studies 7−70520
$DyAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
$ErAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
$ErPd_2Sn$, hyperfine field, low temp. Mossbauer study 7−138362
EuS Heisenberg ferromagnet, critical mag. scatt. studies 7−112843
Fe complex, $Fe(C_5Me_5)_2$ (TCNE), ferromag. props. 7−99426
Fe complex, $Fe(py)_3Cl_3.py$, 1D single crystal, mag. susceptibility and Pauli paramagnetism 7−143764
Fe, Heisenberg model, paramag. response 7−131981
Fe, paramagnetic, dilute impurities, surface segregation and electronic struct. 7−84301
α-Fe, vacancy migration and form., positron annihilation studies 7−91572
Fe-B, melts, high temp. mag. suscept. 7−143759
Fe-Cr disordered alloys, finite-temp. magnetism, local environment effects calcs. 7−85242
Fe-Mn-Al, mag. struct. investig. 7−86373
Fe-Ni-Zr amorphous alloys, effective susceptibility exponent, temp. depend. 7−143766
FeAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
$Fe_{70}Al_{30-x}M_x$, (M=Cr,Mn,Co), mag. studies 7−125394
$FeGe_2$, electronic structure, LMTO method calc. *(Russian)* 7−124840
$Fe_{1-x}Mo_x$, metastable BCC and amorphous, produced by vapour quenching, mag. props. 7−77255
$Fe_{80-x}Ni_xCr_{20}$, magnetovol. effects, thermal expansion meas. 7−138305
$FeOHSO_4$ fine particles, ESR linewidth temp. depend. anal. 7−85409
FeSi, anomaly in meg. susceptibility 7−85237
Fe_3Si, spin dynamics above T_C, high resolution inelastic neutron scatt. study 7−85311
FeZr amorphous alloys, magnetoresist. and superconductivity 7−98966
$Gd_3Ga_5O_{12}$, paramag. garnet, field depend. of Faraday effect 7−144034
GdH_3, paramag. state, PMR linewidths and shifts meas. 7−99586
^3He, solid, mag. polarons 7−70025
^3He, superfluid, paramagnetic instability phenomenon in strong mag. field 7−137647
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Hg_{1-x-y}Cd_xMn_yTe$, spin modulated energy state, Shubnikov-de Haas analysis *(German)* 7−125311
$Hg(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$HgMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
$HoBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., monovalent Cu-induced O 2p valence band holes 7−124856
La_2CuO_4, semicond., elec. and mag. props. 7−92179
$(La_{1-x}M_x)CuO_4$ (M=Sr, Ba) high T_c supercond., mag. susceptibility studies 7−92365
$LaNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$LaRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$La_{1.85}Sr_{0.15}CuO_4$, superconducting, magnetisation 5 to 300 K 7−99321
La_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$Li_{1+x}Ti_{2-x}O_4$:V, paramag. suscept. meas. 7−131986
$Li_xZn_{1-x}V_2O_4$, mag. susceptibility meas. 80-300 K 7−77205
$LuCo_2$, intermetallic compounds, metamagnetic transition 7−132022
$Lu(Co_{1-x}Al_x)_2$, band paramag., ferromagnetism onset with increasing x 7−143801
$Lu(Fe_{1-x}Al_x)_2$, cryst. struct. and mag. props. 7−137309
MCo_6Ge_6 (M=Hf, Zr) magnetic suscept. temp. depend. and elec. resist. meas. *(Russian)* 7−92401
Mg ultrafine particles, mag. susceptibility, paramagnetic enhancement 7−118769
$Mn_{1-t}Cr_tAs$, helimag. states transitions, phase diagram and strong mag. field effects studies 7−118809
MnH_x, binding energy, energy bands and paramagnetism 7−69642
MnOOH, isomorphic compounds, modulating magnetic structures *(Russian)* 7−125313
MnP itinerant-electron ferromagnet, paramag. neutron scatt. cross section meas. 7−112776
$MnSe_2$ mag. struct. and transitions, neutron diffr. studies 7−125315
$Na(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$NaMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
Nd-Fe-B alloys, Mossbauer spectra *(Chinese)* 7−143935
Ni complex, $Ni(S_2C_2(CN)_2)_2$, prep., struct., elec. and mag. props. 7−99033
Ni-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
NiAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
NiH_x, binding energy, energy bands and paramagnetism 7−69642
$Ni_{81.5}P_xB_{18.5-x}$ amorphous and liq. alloys, mag. props. study 7−118768
Ni_2SnTe_4, amorphous, mag. props. 7−132024
Ni_3V cryst. struct., phase stability and magnetic props. calcs. 7−98044
Pd_3FeH, electronic structure and mag. props. 7−124845
$PrIn_3$, singlet ground state, mag. resist., cryst. field effects 7−92166
$PrNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$PuSb_{1-x}Te_x$, X=0-0.4, hyperfine field, mag. props., ^{121}Sb Mossbauer spectra 7−77436
$ScCo_2$, intermetallic compounds, metamagnetic transition 7−132022
Si:P, mag. susceptibility across the metal-insulator transition 7−112734
$SmNi_5$ single cryst., magnetisation and mag. anisotropy 7−138268
$(SnTe)_{1-x}(EuTe)_x$, mag. susceptibility, effect of Eu doping on physical props. 7−105881
$SrFe_{1-x}Co_xO_3$, Curie temp. and Neel temp. 7−77289
$TbAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
$Tb_2Ni_{17-x}Al_x$, mag. behaviour in the ferrimagnetic and paramagnetic regions 7−99498
TiCo, electronic struct., mag. props. *(Russian)* 7−98793
$Ti_4Co_7Ge_6$ cryst. struct., magnetic suscept. temp. depend. and elec. resist. meas. *(Russian)* 7−92401
$TmGa_3$, paramag. phase, magnetoelasticity and quadrupolar interactions study 7−99541
UFe_2 (Co_2) (Mn_2), Laves phase, electronic struct., LMTO calcs. 7−76761
$U(Ga_{1-x}Ge_x)_3$ hybridised f-electron system, magnetic to nonmagnetic transition studies 7−112789
UP, ^{31}P NMR, dynamic mag. behaviour study, paramag. state 7−125551
U_3Sb_4 single crysts., Hall effect and high field magnetisation studies, microscopic spin model anal. 7−118514
USi_x, elec. resist., temp. variation 7−92153
UTe_3, electronic excitations, phonons, Raman scatt. 7−92660
$U_{1-x}Th_xCu_2Si_2$, effect of Th substitution on magnetism 7−125456
Y-Ba-Cu-O high T_c supercond., metamorphic phase characterisation 7−111828
Y-Ba-Cu-O high T_c supercond., mag. props. study 7−112655
Y-Ba-Cu-O high T_c supercond., ESR and mag. susceptibility studies 7−112939
$YBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$(Y_{1-x}Ba_x)_3Cu_3O_{7-y}$, supercond., structural, electronic and mag. props., comp. depend. 7−99295
$Y(Fe\text{-}Co)_2$, mag. props., rigid band model 7−99390
YMn_2, itinerant electron magnet, paramag. neutron scatt. study 7−85240
YMn_2, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{0.9}Al_{0.1})_2$, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{1-x}Al_x)_2$, characteristic spin fluctuations, thermal expansion and susceptibility meas. 7−132034
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
$YbCo_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$YbFe_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$Yb_{0.4}In_{0.6}Cu_2$, valence phase transition, rare earth substitution effects, mag. suscept. meas. 7−76851
$YbXCu_4$, X=Al, Ag, Ga, X depend. of struct. and Yb valence state, mag. suscept. meas. 7−98042
$Zn(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$ZnMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
$Zn_{1-x}Mn_xSe$, magnetospectroscopy studies *(German)* 7−125028
$Zn(P_xAs_{1-x})_2$, solid solutions, mag. susceptibility 7−99396
ZrF_4-EuF_2-CeF_3, paramagnetic fluoride glasses *(French)* 7−69606
$Zr(Fe_{1-x}Co_x)_2$, mag. props., rigid band model 7−99391

paramagnetic resonance
see also acoustic paramagnetic resonance; CESR; CIDEP; electron spin-lattice relaxation; ENDOR; EPR line breadth; paramagnetic resonance of colour centres; paramagnetic resonance of free radicals; paramagnetic resonance of ions and impurities; spin echo (EPR); spin-spin relaxation
A-bomb radiation, ESR dosimetry using tooth enamel and granite rocks 7−87213
acetylene blacks, modified, adsorpt. props., gas chromatography and ESR obs. 7−76610
azanaphthalenes, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
$BEDT\text{-}TTF_3Ta_2F_{11}$, optically enhanced phase transition, ESR studies 7−99558
α_t-(BEDT-TTF)$_2I_3$, stable superconducting state at 8 K 7−125217
benzobisdithiazole, ESR obs., diradical oligomer form. 7−103542
biaxial goniometer for electron paramagnetic resonance measurements 7−102481
biomembranes, lipid translational diffusion coeffs., ESR determ. at low spin-label concs. 7−78795
bis(phenylmethylenyl)[2.2]paracyclophanes, isomeric, spin states 7−103544
bistability effects and hysteresis loops 7−118854
Bloch electrons, mag. suscept. in presence of localised mag. moments 7−85219
blood plasma of patients with Down's syndrome, computer modelling of ESR spectra 7−126713

paramagnetic resonance continued
calcite speleothems, routine ESR technique for dating, equiv. dose meas. 7−87962
catalysts, sample cells for NMR and EPR spectroscopy 7−128606
α-chloroanthraquinones, lowest excited triplet states, EPR ODMR and phosphoresc. spectra study 7−106010
9-cyanoanthracene-dimer crysts. solid-state photoreactions, ESR and visible-UV spectra 7−144733
γ-cyclodextrin, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
diamond, natural, adiabatic rapid passage ESR 7−132124
dihydrophenazine, doped in mol. cryst., excited states characterisation 7−96571
electret forming polymers, struct. and physical props. 7−97993
electron spin reson., principles explanation *(Danish)* 7−68366
ESR dating using valency or ligands of transition metals 7−108602
ESR imaging, review 7−108603
ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7−135920
Eurocom 2 microcomputer and interface system for an ESR spectrometer 7−128608
exchange coupled systems, EPR and mag. susceptibility meas. 7−112931
F_1-ATPase complex and ATP synthesis on illum. with visible light, EPR obs. 7−139201
ferredoxin II from Desulfovibrio gigas containing Fe_3S_4 cluster, Mossbauer spectra 7−144971
flat cell for flow orientation X-band ESR expts. 7−115986
geochronology, ESR dating method for sediments containing fossil teeth 7−127483
guanine cation, decay product, struct., X-ray irrad., ESR and ENDOR anal. 7−93640
hexamethylbenzene-tetracyanobenzene (tetrachlorophthalic anhydride), charge transfer crystals, ESR and ODMR meas. 7−138353
isobutylene polymers and copolymers, compatibility with polyorganosiloxanes *(Russian)* 7−83793
isotropic hyperfine coupling consts., symmetry develop. transformation technique 7−102472
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7−125752
least-squares fitting, Monte Carlo methods simulation 7−115983
longitudinal relax., T_1 selectivity, inversion-recovery 3-pulse sequence technique 7−74686
magnetic fluids, ESR spectra, spin glass formation 7−77395
microscopic imaging with microfabricated field gradient coils 7−121176
microwave field strength, pulsed ESR, microwave-induced transitory oscills. anal. 7−89246
molecules, triplet exciton ESR line shapes, local exciton-phonon interaction temp. depend. calc. 7−99554
naphthalene, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
nitroxide spin labels, ESR spectra, linewidths, conc. and temp. depend. 7−93642
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
phenanthrene-tetrachlorophthalic anhydride charge-transfer cryst., struct., luminesc. 7−106262
phenylbenzenes, triplet states, zero field splitting parameters 7−135977
phospholipids in membranes, ESR spectra, linewidths, conc. and temp. depend. 7−93642
photosystem II O_2 evolving system, origin of multiline and g=4.1 EPR signals 7−93674
phthalocyanatonickel salts, prep., struct. and elec. props. 7−98111
poly(4,4′-triphenylamine), cyclic voltammetric, spectroscopic and ESR meas. 7−70317
poly(p-perfluorophenylene), K-doped, conducting polymer, EPR study 7−106014
poly(phenylene sulphide) films, ion irrad., spectroscopic anal. 7−99852
poly-1,4-dithianaphthalene, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
α-poly-γ-methyl-l-glutamate, interaction with 5- and 16-doxylstearic acids 7−84495
cis-polyacetylene films, doping with metal hexafluorides, conductivity, ESR and ENDOR studies 7−131625
polyazulene film, electrochemical, EPR and optical props. 7−70629
polyethylene terephthalate films, direct fluorination 7−93377
polyimide, pyrolysed, elec. cond., ESR study 7−99001
polyindene film, electrochemical, EPR and optical props. 7−70629
polymers, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polyphenylenesulphide, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polypyrrole, conducting polymer, ESR study of polarons and bipolarons 7−76791
polypyrrole films grown on surface of polyvinyl alcohol-$FeCl_3$ complex 7−78485
polystyrene, spin labeled crosslinked, double modulation EPR study, molecular-motion 7−125526
polythiophene, photoluminescence and optically detected mag. resonance studies 7−77653
porphycene, photoexcited triplet state, time-resolved EPR spectroscopy 7−103548
pulsed EPR spectrometer, relaxation times of dilute solutions obs. 7−140722
purple acid phosphatase, optical, EPR, Mossbauer and reson. Raman spectra, and mag. suscept. meas. 7−116995
Q-band ESR spectra at liq. N_2 temps. 7−121171
semiconductors, optical detection of mag. resonance, conf., Kiev, USSR (May 1985) 7−134343
signals, gaussian lineshape, saturation *(Slovak)* 7−134823
single-crystal, symmetry constraints on EPR spin-Hamiltonian parameters 7−129752
sodium dodecyl sulphate micelle, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
spectrometer, microsecond time resolution using 200 kHz magnetic field modulation 7−95630
spectrometer with Gunn oscillators 7−121178
spectrometers with AFC, power supply of klystron oscillator 7−121179
spectroscopy, signal power calc. 7−128615
spin waves, combinative parametric resonance, calc. *(Russian)* 7−99552
superheterodyne channel of microwave EPR spectrometer 7−121177
surface science investigations, mag. reson. techniques 7−108613

paramagnetic resonance continued
TCNQ complexes, AzaTCNQ, organic conductors, elec. and struct. props. 7−84863
TCNQ-2, 3, 7, 8-tetramethoxychalcogenanthrene complexes, structure and elec. conductivity 7−131627
TCNQ-N-docosylpyridinium charge transfer salts, Langmuir-Blodgett films, struct. props. 7−70115
TEMPOL-^{15}N, slow two-jump processes, saturation recovery electron paramagnetic resonance spectroscopy 7−135974
tetradecanes, spin labelled, line broadening correction, EPR spectra 7−82228
time discreteness, EPR probe study 7−128346
$(TMN)_3(ClO_4)_2((AsF_6)_2)$ cation radical salts, electronic props. 7−84858
$(TMTTF)_2PF_6$, interplay between spin-Peierls and antiferromag. ground states under press., NMR study 7−85476
TMTTF-octadecylTCNQ, conducting Langmuir-Blodgett films, ESR studies 7−99556
transition metal chromophore as sensitive tag for proteins 7−144970
transition metal ions, aq. soln., metal binding with melanin, use of CTPO assay, ESR spectra anal. 7−74675
TTF-p-chloranil single cryst., neutral-ionic phase transition 7−84255
$(TTM\text{-}TTF)(I_3)_{0.823}$, organic conductor, mag. props. 7−99557
variable temperature accessory design and operation for Q-band ESR 7−128585
X-band ESR spectrometer for electronic spin-lattice relaxation time measurements 7−95629
$Y_2Cu_2O_5$, EPR and NMR meas. 7−118710
yeast flavocytochrome b_2, interactions between haeme and flavin, EPR and spin-lattice relax. time obs. 7−133186
zero-field splitting tensor, $S=^3/_2$ paramag. centres, EPR rot. and powder spectra 7−115984
As-P-S glassy chalcogenide semiconds., photoinduced paramagnetic centres, ESR study 7−143896
As-S vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
As-Se vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
B_2, matrix isolated, ESR and ab initio CI calcs. 7−129751
$BaCuO_2$, EPR and NMR meas. 7−118710
$BaO\text{-}Fe_2O_3\text{-}B_2O_3$ system, crystallisation of W-type hexagonal ferrites in oxide glass 7−131048
C_{61} lowest $^3\Sigma$ state, electron spin reson. anal. 7−90225
$C_2{}^{17}O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
Cu-Mn nonmag. alloys, kinetics of martensitic transformation, Neel point *(Russian)* 7−104984
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
D_2 molecular crystal, recombination and spin relax. of D atoms *(German)* 7−132136
Er, nanocrystalline, prep., mag. transitions, suscept. meas. 7−125478
$Eu_x(NH_3)_yTiS_2$, mixed valence intercalation cpds., synthesis, characterisation, mag. props. 7−85352
Ge, plastically deformed, EPR spectra 7−99578
Ge-Tl-S glassy chalcogenide semiconds., photoinduced paramagnetic centres, ESR study 7−143896
$Ge_{1-y}Se_y$ amorphous films, gap states, ESR spectra studies 7−92493
H, adsorbed on catalyst, cross-relax., EPR spectra 7−84493
$H_4(PVMo_{11}O_{40}).xH_2O$, struct. elucidation, EPR and CNDO/2 calcs. 7−90226
$La_{1.85}Ba_{0.15}CuO_{4-y}$ system, metastable mag. phase detection, high T_c supercond. 7−125404
$Li_yMgYb_2S_4(Se_4)$ lithiated spinels, elec. and mag. meas 7−143422
$LiNbO_3$, phase diagram under anisotropic compression, ESR studies 7−137519
$LiTaO_3$, phase diagram under anisotropic compression, ESR studies 7−137519
Mn_xB_{100-x} amorphous system, magnetism studies 7−112816
^{14}N:^{15}N spin-label pairs, ELDOR and saturation recovery, rate eqns. appl. 7−129754
$NiCl_2$, cryst. struct. determ., EPR trigonal symmetric parameter, high-order perturbation formula 7−131130
OsF_6-graphite intercalation cpd., ESR props., anisotropy, 2D effects 7−85408
$Pd_{100-x}Fe_x$-Cu ferromagnetic-paramagnetic bilayer interface, magnetisation transport, FMR, EPR studies 7−85254
SiC, Nicalon, fibres, mech. props., free C content, ESR obs. 7−92494
$SiC^{17}O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
$a\text{-}SiN_{1.4}$:H/a-Si:H band offset and electronic struct., AES, XPS and IPES studies 7−92300
SiO_2 optical fibre sensitivity to radiation, radioluminescence and ESR *(Polish)* 7−68888
$^{29}Si_2O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
V-Ti oxide, anatase-type solid-state soln., evidence of formation 7−84291
$V_2O_5\text{-}BeO\text{-}Fe_2O_3$ amorphous semicond., struct., Mossbauer, EPR studies 7−124107
Y-Ba-Cu-O high T_c superconds., NMR and EPR studies 7−118710
$YBa_2Cu_3O_7$, high temp. superconductor, EPR study 7−85196
YIG thin film, ferromag. reson. linewidth, ESR spectrometer meas. study 7−118863
$Y_{0.75}Lu_{0.25}Ba_2Cu_3O_7$, high temp. superconductor, EPR study 7−85196
ZnS, Auger-type energy transfer 7−70323

paramagnetic resonance of colour centres
see also paramagnetic resonance of defects
BN, pyrolytic, effects of heat treatment in N_2 and Ar, EPR study 7−106023
CaF_2:$Li^+(Na^+)(K^+)$, F_{2A} oscillator strengths 7−138478
LiCl:Fe, X-irradiated, electron-trapped centres 7−83953
MgO crystal, colour centres, luminesc., irrad. by high energy particles *(Russian)* 7−142776
MgO, fracture, crack formation, EPR colour centre anal. 7−92502
MgO:X (X=Al, Be), colour centres, luminesc., irrad. by high energy particles *(Russian)* 7−142776
NaCl crystals, struct. of H interstitials and creation of Frenkel defects *(Russian)* 7−142771
SiO_2, E′$_1$ centres, oscillatory free-induction decay 7−85435
SiO_2, vitreous, radiation H(I) and H(II) centers, photo- and thermostimulated processes 7−70643
$a\text{-}SiO_2$:OH, γ-ray irrad., H-associated defect centres, ESR studies 7−97932

paramagnetic resonance of colour centres continued
SrF_2:$Li^+(Na^+)(K^+)$, F_{2A} oscillator strengths 7−138478
ZnS, annealing of F^+ EPR centres, optical absorpt. spectral bands 7−106024

paramagnetic resonance of conduction electrons *see CESR*

paramagnetic resonance of defects
see also paramagnetic resonance of colour centres
EPR spectra of As aggregates 7−70642
quartz:Ge cryst. resonators, radiation effects, anelastic loss spectrum 7−104833
a-Si:H, defects, EPR studies 7−138328
Si irradiated crysts., defect triplet centres, spin-depend. photocond. and optical nuclei polarisation study 7−98818
vacancy-impurity defect in electron irradiated Si, ESR study 7−112947
As_2S_3-Sb_2S_3 chalcogenide glasses, EPR and IR spectra studies 7−85434
As_2S_3; vitreous, below-gap excitation of optically induced paramag. states 7−118861
$CaWO_4$, reorientation of hole centres, optical absorption and EPR studies 7−137854
n-GaAs, As anti-site formation by electron irradiation 7−76213
GaAs, As antisite defect, relation to EL2 7−98883
GaAs, As antisite-vacancy complex, EPR study 7−99574
GaAs, atomic configuration for EL2 defect, EPR and DLTS study, model 7−98882
GaAs, EL2 defect, atomic struct. 7−98880
GaAs, fast neutron irrad., thermal recovery, EPR and elec. transport props. 7−98263
GaAs neutron irradiated, EPR spectra of As_{Ga} aggregates, determ. 7−99573
GaAs, plastically deformed, EPR spectra 7−99578
GaAs, semi-insulating crysts., determ. of EL2 midgap levels, ESR studies 7−99575
GaP LPE crysts., electron irrad. defects, EPR and ENDOR studies 7−98254
a-Ge:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
Ge-S, amorphous, photo-induced effects 7−143910
InP-Zn, electron irrad., annealing, EPR, ODMR 7−125535
$LiNbO_3$, pure and Fe doped, X-ray irrad. defects, optical absorpt. effects study 7−144089
$LiTaO_3$, X-ray irrad. damage, EPR study 7−84027
MgF_2, colour centres, electronic struct. and spectroscopic props. 7−70644
$NaAl_3(PO_4)_2(OH)_4$, brasilianite, hole centres, GPR 7−106025
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7−136466
Sc, triplet centres, spin depend. phenomena, ESR, optical nuclear polarisation study 7−138327
Si, dangling bond defects, struct., ESR obs. 7−112951
Si, electron states with spin ≥1 at dislocations, EPR spectrum fine struct. 7−98858
a-Si films, ESR, sputter deposition rate depend. 7−85433
Si, laser processed, cyclotron reson. variations induced by paramag. defects 7−112952
Si, low energy Ar ion etching damage charactn. 7−126351
Si, plastically deformed, defects classification 7−99576
Si, plastically deformed, EPR spectra 7−99578
Si, plastically deformed, pentavacancies, EPR studies 7−106021
Si, process-induced point defects, EPR study 7−126354
a-Si:H, dangling bonds and metastability, expts. and models, review *(French)* 7−131592
a-Si:H, level of dangling bond centres 7−76827
a-Si:H, optical absorption edge, photoacoustic spectroscopy study 7−125669
a-Si:H, sub-bandgap optical absorpt. and light-induced defects 7−144086
a-Si:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
a-Si:H,B, dangling bond defect occupancy, ESR, sub-bandgap absorpt. and transport meas. 7−84779
a-Si:H and a a-Si:H,P, light-induced changes, ENDOR-detected ESR study 7−143928
a-Si:H films, asymmetric lineshape of dangling bond ESR spectrum 7−92503
a-Si:H films, ESR, sputter deposition rate depend. 7−85433
a-Si:H films, evaporated, elec. props., hydrogenation effects 7−70360
a-Si:H films, light-induced degradation and thermal recovery, rate equations 7−143513
a-Si:H films, reversible struct. changes, prolonged illumination, annealing 7−98734
Si:O, annealed, defect centres, microwave cond., inverted EPR signal obs. 7−99569
Si:O, defects produced by O^+ implantation, EPR study 7−99577
Si:O, ion implanted, defects, EPR spectra 7−125537
Si:O, new thermal donors form., photolum. and EPR studies 7−98909
Si:P, n-type, type-1 thermal donor, ESR study, electron irradiation 7−106022
Si/SiO_2 interface, in MOS struct., EPR obs. 7−112949
Si/SiO_2 interface of SiO_2 precipitates in Si, defects, EPR obs. 7−112954
Si/SiO_2 interface trap state props., EPR studies, overview 7−112948
Si-SiO_2, defects in device oxides, soft X-ray damaged, EPR study 7−118860
a-$Si_{1-x}C_x$:H, glow discharge deposited films, ESR and photoluminescence 7−125536
a-$Si_{1-x}C_x$:H films, XPS and ESR charactn. *(Japanese)* 7−124748
a-Si_3N_4:H, stable photoinduced paramag. defects, ESR study 7−138326
SiO_2, amorphous, Si−O bond length modification 7−124105
SiO_2 films, E′ centres, symm., rebound effects 7−112953
SiO_2 films, on Si, paramag. point defects, generation by electron injection and ionising radiation 7−111555
SiO_2 glasses, selective generation of oriented defects, EPR studies 7−83723
SiO_2, pure and Ge-doped optical fibres, E′ centre thermodynamic props., drawing conditions depend., EPR study 7−98146
Si−SiO_2 interface, struct., EPR obs. 7−112111
Si−SiO_2 structures, interfacial P_{b0} defects, low temp. EPR obs. 7−112950

paramagnetic resonance of free radicals
L-alanine: propionic acid single crysts., ESR spectra hyperfine splittings temp. depend. study *(Russian)* 7−85441
alanine, detect. of low- and high-LET radiation 7−68029
L-α-alanine EPR, rel. to continuous 3D radiation dosimetry in tissue-equiv. phantoms 7−133473

paramagnetic resonance of free radicals continued
alkane radical cations, in hydrocarbon matrices, γ-irrad., ESR and electronic spectra 7−109959
alkane radical cations, linear, selective deprotonation, ESR obs. 7−68371
amides, UV irrad., gas-free radical reaction, EPR obs. 7−92492
androst-4-en-3,17-dione, γ-induced free radicals, ESR spectra anal. 7−126933
anthraquinone, photoreduction, free radical prod., product yield-detected ESR 7−103545
L-ascorbic acid, single cryst., X-irradiated, ESR spectra 7−85440
L-ascorbic acid. single cryst., X-irradiated, triplet radical pairs, ESR investig. 7−112955
benzene cations, substituted, INDO and CNDO/2 calcs. 7−81977
benzobisdithiazole, ESR obs., diradical oligomer form. 7−103542
p-benzosemiquinone radical anion, ESR spectra obs. 7−109955
benzyl radicals, captodative substituent effects, stabilisation, spin delocalisation 7−109960
n-butane radical cation, rot. isomers, ESR charactn. 7−109957
3-carbamoyl-2,2,5,5-tetramethylpyrroline-1-oxyl, radicals, ESR spectra 7−74687
carboxylate latex particles, surface props. EPR probe investig. 7−131390
cholest-4-en-3-one, single cryst., radiation damage, ENDOR obs. 7−77426
cyanamide, ionising radiation effects, radical form., ESR study 7−78519
cyclohexane, liq., pulse radiolysis, radical form., time-resolved EPR meas. 7−113968
cyclohexene radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
dialkyl peroxides, gas phase thermolysis, trapped radicals, ESR study 7−74709
diarylphosphonyl radical, ESR spectrum, ^{17}O isotropic hyperfine coupling const. 7−90273
dimethyl cyanamide, ionising radiation effects, radical form., ESR study 7−78519
diphenylpicrylhydrazyl radical, spectra-spatial two-dimensional EPR imaging 7−90227
1,1′-ethylenebis[4-(methoxycarbonyl)pyridinyl] diradical, ESR spectrum 7−109956
galvinoxyl radical, spectra-spatial two-dimensional EPR imaging 7−90227
homoazulene radical anion, and rearrangement products, ESR and ENDOR obs. 7−68367
4-hydroxy-2,2,6,6-tetramethyl-piperidine-1-oxyl, nitroxide radical, ESR study, proton interactions 7−125539
4-hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl, radicals, ESR spectra 7−74687
K_2SO_4:BF_4^-, X-ray irrad., FSO_2 radical, ESR and ENDOR study 7−92551
lithium phthalocyanine radical, spin exchange narrowing 7−125368
magnesium tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539
menadione, photoreduction, free radical prod., product yield-detected ESR 7−103545
methanol-$d_0(d_1)(d_3)(d_4)$ glass, methyl radical trapping sites struct., ESR spectra anal. 7−106027
O-methylacetophenone and related cpds., photochemistry, ESR study 7−119540
methylbenzoate radical anion derivatives, planarity, ESR 7−96751
3-methylhexanes, deuterated, gamma-irradiated, free radical production, ESR spectra 7−122578
3-methylpentanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975
methylpropargyl radicals form. from tetramethylcyclobutadiene radical cations, ESR study 7−109952
nitroxyl radical in soln., exchange and hyperfine contrib. to EPR line shifts 7−68372
nitroxyl radicals, EPR spectra, functional groups protonation (deprotonation) effects 7−135976
9,10-octalin, radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
organic free radicals, EPR spectra anal., Simplex algorithm 7−116998
organic free radicals solns., paramag. species relative concs., EPR spectra least-squares anal. 7−116999
organic reactive radicals, CIDEP and relax., Heisenberg spin exchange investig. 7−116996
perchlorodiphenylnitroxide radical, spectra-spatial two-dimensional EPR imaging 7−90227
phenoxyphosphoryl xylofuranose derivative, radiolysis form. of P-centered radicals, ESR spectra anal. 7−68370
PMMA, molecular motions studied by spin-probe and spin-label techniques 7−82231
poly(vinyl acetate), spin-labelled, ESR spectra 7−125538
poly(vinyl acetate) spin probes rot. diffusion, ESR 7−92504
poly-p-phenylene(-d), donor- and acceptor-doped, temp. depend. electron spin echo studies 7−70641
polyacrylamide, UV irrad., gas-free radical reaction, EPR obs. 7−92492
polyphenylacetylene polymerised with ferric acetylacetonate/triethylammonium catalyst, ESR spectra 7−70646
polyvinylidene fluoride, high energy O ion irradiation, electronic and struct. modification 7−91668
probe molecules in lipid multibilayers, mol. reorientational dynamics and orientational order correl. 7−90249
proteins, g-factor tensor anisotropy, ESR spectra 7−103702
pyridinium compounds, quaternary, cation radicals, spectrosc. investig. *(German)* 7−96743
radical pairs, spin-correlated, photosynthetic reactions, EPR study 7−133220
RSSH radical anions, props., matrix isolation EPR obs. 7−109958
semiquinone radicals, methoxyl-substituted, ^1H hyperfine coupling consts., ab initio UHF calcs. 7−109744
silica optical fibres, drawing-induced peroxy radicals 7−136553
spin-correlated radical pairs in micelles, EPR 7−96749
tempone radical, spectra-spatial two-dimensional EPR imaging 7−90227
2,2,6,6-tetramethylpiperidine nitroxide radical used to study $LiClO_4$, LiI, LiBr, $NaBPh_4$ and NaI solns. 7−119512
TMPO free radical, H donor solvents, assoc. consts., ESR spectra study 7−103546
tris(dimethylamino)cyclopropenium 2,3-dichloro -5,6-dicyanobenzoquinonide, triplet spin excitons 7−112190
zinc tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539

paramagnetic resonance of free radicals continued
AlH^+ and AlD^+ cation radicals, in Ar matrices, ESR, generation by reactive laser sputtering 7−90222
Al_2O_3-nitroxyl complex, ESR spectrum calc. 7−109961
CO_3^{3-} radicals, spectroscopy for personal dosimetry 7−109527
$GeH_4+H\rightarrow H_2+GeH_3$, free radical ESR investig. in Xe matrix 7−90224
IO_4^{2-}, ESR spectrum 7−106026
$KH_2PO_4:MoO_4^{3-}$ single crysts., ferroelec. transitions, EPR study 7−106028
KH_2PO_4-type crystals, mag. reson. studies, review 7−112927
$LiCsSo_4:NH_3^+$, ferroelastic transition, EPR studies 7−124496
$LiKSO_4:NH_3^+$, low temp. phase transitions, EPR study 7−131303
3-methylhexanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975
P radical cations, form. by radiation chemistry, electronic struct., ESR spectra anal. 7−68369
SO_3^- combination reaction, radical pair CIDEP 7−90223
$UO_2^{2+}:SrSO_4$ phosphor, gamma-irrad., thermally stimulated free radical reactions, EPR and CIDNP 7−77428

paramagnetic resonance of ions and impurities
see also paramagnetic resonance of iron group ions and impurities; paramagnetic resonance of palladium and platinum group ions and impurities; paramagnetic resonance of rare earth ions and impurities
degenerate ^3He-^4He soln., negative ions paramagnetic relaxation 7−131385
diamond:S, type Ib, singly ionised S centre, ESR obs. 7−98187
Ising model, local freezing, mean field theory 7−112839
magnetically mixed semiconductors, ESR and spin-dependent Raman scatt. at electron centres 7−138324
3-methylpentanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975
nuclear polarisation enhancement, spin-pumping scheme calcs. 7−106013
poly-p-phenylene(-d), donor- and acceptor-doped, temp. depend. electron spin echo studies 7−70641
polyacenic semiconductive material, in situ doped, ESR study 7−85431
polyacetylene:Li(Na), semicond.-metal transition, ESR studies 7−98810
polyacetylene:Na, Raman and EPR spectra studies 7−70792
polyacetylene, heavy alkali metal doping, X-ray diffr. and EPR spectroscopy 7−69629
polyacetylene, reversible doping with I_2 in gas phase 7−92314
polythiophene: BF_4^-, Pauli and Curie susceptibility, ESR/WMR meas. 7−77203
polythiophene:BF_4^- film, conducting polymer, elec. and optical props. of polaronic states 7−77403
pyridinium compounds, quaternary, cation radicals, spectrosc. investig. *(German)* 7−96743
quartz:Ge cryst. resonators, radiation effects, anelastic loss spectrum 7−104833
review of EPR of transition metal, lanthanide and actinide ions in solids, 1979 literature 7−77400
RSSH radical anions, props., matrix isolation EPR obs. 7−109958
SOI films, paramag. centres at Si-SiO_2 interfaces 7−112943
symmetric EPR spectrum of $S\geq 3/2$ Kramers ion, approximate analytical calcs. *(Russian)* 7−85412
TCNQ salt, N-n propyl quinoxalinium $TCNQ_2$, struct., cond., triplet spin excitons 7−105570
tetramethylammonium copper bromide, phase transitions, EPR studies 7−131302
TGS:As(P), charge compensation, pyroelec. props. enhancement, ESR study 7−92610
type II superconductors, spin kinetics and EPR 7−77156
BN:C, spin density distrib., EPR spectrum calc. 7−99567
$Ca(OH)_2:O_2^-$, Raman electron spin-lattice relax. rate calcs 7−143908
$Ca(OH)_2:O_2^-$, Raman electron spin-lattice relax. rate meas. 7−143909
$CaWO_4$, reorientation of hole centres, optical absorption and EPR studies 7−137854
$CsCaCl_3:Gd^{3+}$, S^{2-}, cubic-tetragonal phase transition, EPR of Gd^{3+}-S^{2-} pair 7−92501
GaAs, neutron irrad. damage, ion channelling and ESR studies 7−84040
a-Ge:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
$a\text{-}Ge_{1-x}C_x$:H, RF sputtered, IR, optical, EPR study 7−144137
$Ge_{20}S_{80-x-y}Bi_xMn_y$ glassy chalcogenide semicond., Bi sites, EPR studies 7−106020
$(GeSe_{3.5})_{100-x-y}Bi_xMn_y$ glassy chalcogenide semicond., Bi sites, EPR studies 7−106020
InP-Zn, electron irrad., annealing, EPR, ODMR 7−125535
InSb, effective g-factor of donor bound electrons, spin reson. obs., FIR magnetotransmission spectra 7−118853
$KD_2PO_4:SeO_4^{3-}$, pretransitional excitations in paraelec. phase, EPR study 7−99761
$KD_2PO_4:Tl^{2+}$, paraelectric hyperfine couplings and ferroelec. symm. signals, EPR study 7−99572
$KH_2PO_4:Hg^+$, superhyperfine interactions, EPR study 7−99570
$KH_2PO_4:Tl^{2+}$, paraelectric hyperfine couplings and ferroelec. symm. signals, EPR study 7−99572
KH_2PO_4-type crystals, mag. reson. studies, review 7−112927
$KLiSO_4:Tl^{2+}$ phase transitions, ESR temp. depend. study 7−124482
$K_3Na(SO_4)_2$, ESR of SO_4^- centres 7−85430
LiF:OH, H in anion vacancies, ESR linewidth, temp. and stress depend. effects 7−70638
$LiKSO_4$, structural phase transitions, EPR using SO_4^- probe 7−76385
$LiKSO_4$:Cr, EPR of SO_4^- and CrO_4^{3-} centres, low temp. phase transition 7−70640
$LiKSO_4:NH_3^+$, low temp. phase transitions, EPR study 7−131303
3-methylhexanes, selectively deuteriated radical cations, in γ-irrad. matrices, ESR obs. 7−135975
N_4^+ reaction products in Ne matrix EPR study 7−126434
$ND_4D_2PO_4:Hg^+$, superhyperfine interactions, EPR study 7−99570
$NH_4H_2PO_4:Hg^+$, superhyperfine interactions, EPR study 7−99570
$(NH_4)_2SO_4$, protonic motion and weak first order transition, EPR study 7−99762
RbH_2AsO_4-$NH_4H_2AsO_4$ and RbD_2AsO_4-$ND_4D_2AsO_4$ proton glasses, mol. motion, EPR study 7−99571
Si:B(Al)(Ga)(In), heat treatment centres, EPR, resist. meas. 7−99568
Si:H, EPR of Si−H centres 7−138325
a-Si:H, light soaked, ^1H ENDOR EPR spectra obs. 7−85485
a-Si:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111

paramagnetic resonance of ions and impurities continued
a-Si:H,P(As), thermally and optically induced metastabilities, EPR obs. 7−124931
Si:N, O, substitutional impurities, thermal annealing, EPR studies 7−98186
Si:N, substitutional impurity charge state, EPR study, effects of additional dopants 7−105458
Si:O, annealed, defect centres, microwave cond., inverted EPR signal obs. 7−99569
Si:P, shallow donors, influence of quenching 7−71328
Si:P, spin dynamics across the metal-insulator transition 7−112944
$a\text{-}Si_{1-x}C_x$:H,B(P) films, ESR and IR studies 7−85427
$Si_{1-x}Ge_x$:P, EPR study, hyperfine interaction, influence of uniaxial press. 7−143907
$a\text{-}Si_{1-x}N_x$:H,B films, ESR and IR studies 7−85427
SiO_2, amorphous, Si−O bond length modification 7−124105
$SiO-CeO_2$ thin films, admixtures, ESR study 7−132135
$YBa_3Cu_3O_{7-x}S_x$ T_c supercond., magnetism and critical fields 7−143736
YIG microcrystal crystallisation in a borate glass, EPR and magnetisation meas. 7−97931
ZnS:Al, self-activated photolum., quantum efficiency 7−70854

paramagnetic resonance of iron group ions and impurities
anatase, hydrated, UV irrad., EPR obs. 7−138314
blood, mouse, ESR signal intensity during acute radiation sickness *(Russian)* 7−93651
$Cs_2NaYCl_6:Cr^{3+}$, electron-nuclear interaction of Cr^{3+}, ligand and quadrupole interactions 7−143929
cyclopentadienylchromium tricarbonyl in cyclopentadienylmanganese tricarbonyl single cryst., EPR spectrum 7−132126
dopant in dicalcium barium propionate, phase transitions under high press., EPR study 7−138315
ethynyl-copper compounds, I_z doping 7−131167
garnets, transition metal doped, Jahn-Teller interactions in EPR spectra 7−77397
magnesium tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539
montmorillonites, ion exchanged, ESR spectra 7−138319
bis-phenylpyrazole copper chloride powder and single crysts., exchange averaging, EPR study 7−85420
photosystem II, struct. and function in H_2O oxidation 7−106981
phthalocyaninato-copper(II)iodide, mag. transitions and embedded local moments 7−99459
poly(phenylethynylcopper), k-band ESR investig. 7−109954
review of EPR of transition metal, lanthanide and actinide ions in solids, 1979 literature 7−77400
tetramethylammonium metal trihalides, 1D magnetism investig. 7−112772
(tetraphenylporphyrinato)iron(III) complexes, electronic struct. and EPR investig. 7−112929
TGS:Cr, charge compensation, pyroelec. props. enhancement, ESR study 7−92610
zinc tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539
β-$Ag_xV_2O_5$, phase transition and bipolaron form. 7−137548
$Al_2BeO_4:Cr^{3+}$, alexandrite, ESR study, pseudo-Stark effect 7−138312
$Al_{86}Mn_{14}$ quasicrystalline alloy, EPR study, spherical harmonics, icosahedral crystal field 7−143903
β″ $Al_2O_3:Co^{2+}$, optical and ESR studies 7−111442
$Al_2O_3:Fe^{3+}$, EPR zero-field splitting anal. 7−125529
As_2O_3-V_2O_5, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
B_2O_3-V_2O_5, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
BaO-Fe_2O_3 glass, roller quenching prep., heat treatment, crystallisation, EPR, Mossbauer spectra *(Japanese)* 7−69604
$BaTiO_3$, ferroelectric phase transitions, EPR probes 7−143989
$Bi_{25}FeO_{40}$:B single cryst., X band Fe^{3+} ESR spectra studies 7−85415
$Bi_{12}Si(Ge)(Ti)O_{20}$:Fe single cryst., X band Fe^{3+} ESR spectra studies 7−85415
CaS:Mn^{2+}, ESR and fluoresc. emission studies 7−106018
$CdGa_2Se_4:Fe^{3+}$, cryst. paramag. reson. 7−77402
$Cd(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
CdO:Mn^{2+} treated in CS_2 at 700°C, $Mn^{2+}Cd_m$ formation 7−84791
CdTe:Cr, photo-ESR and photoconductivity studies, photoionisation of Cr ions 7−99564
CdTe:Fe(Ni), deep level charactn. using constant photo-EPR 7−112940
CdTe:Ni, deep levels, optical capture-cross sections, constant photo-EPR study 7−92495
Co complex, $Co(ClO_4)_2$(γ-picoline-N-oxide), 2D antiferromag. Ising layer cpd., mag. excitations, EPR 7−105905
Co complex, cytochrome P450 active site analogue, synthesis, struct., spectrosc. 7−114192
Co^{2+} in $LiNbO_3$ and $LiTaO_3$, ESR line broadening, dynamic Jahn-Teller effect 7−112946
CoC_2, Ar matrix isolated, ESR spectra 7−82230
$Co(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
Cr(V) complex, Cr 2,3-dioxynaphthalene, in liq. cryst., ESR obs. 7−109962
$CrVO_4$, EPR linewidth, temp. depend. 7−138318
CsBr:Cr^{3+}, optical absorption and EPR 7−143904
CsCl:Cr^{3+}, optical absorption and EPR 7−143904
CsCl:Fe^{3+}, EPR spectrum 7−99562
Cu (II) aromatic hydroxyoxime homologous complexes, ESR spectra study 7−103550
Cu (II) complexes of 2,2′,2″-triaminotriethylamine and its hexamethyl derivative, ESR studies 7−112936
Cu acetate-pyridine derivative complexes, UV, visible and EPR obs., solvent effect 7−96752
Cu complex, 3-ethoxy-2-oxobutyraldehyde bis(N^4, N^4-dimethylthiosemicarbazonato)copper (II) orientation and mobility in lipid bilayer 7−68368
Cu complex, Cu(3-picoline)$_2(N_3)_2$, cryst., EPR, IR and UV-Vis spectra 7−143905
Cu complex, tetraphenylphosphonium bis (dithiosquarato) copper, crystal structure and EPR study *(French)* 7−92496
Cu complex Cu[2,5-diphenyloxazole]$_4(ClO_4)_4.4H_2O$, 77 and 300 K ESR 7−85414
Cu complex in cyclohexane, dynamical behaviour and gelation kinetics, EPR study 7−85417
Cu complexes, 1D Heisenberg antiferromagnet, cryst. to discotic phase transition, ESR studies 7−92499

paramagnetic resonance of iron group ions and impurities continued
Cu complexes, copper tetrabenzotetraazacyclohexadecine$(TCNQ)_n$, semicond. props., spectroscopic anal. 7−70298
Cu complexes, delocalised metal-ligand bonds, ESR spectra 7−103552
Cu complexes, I_2 doped, quasi-1D solids with pseudo-$(SN)_x$ bundle-struct., EPR studies 7−92162
Cu complexes of 4-fluoro, 3-nitroaniline in dimethylformamide and pyridine solns., ESR studies, metal-ligand bonding, linewidth 7−143901
Cu^{2+} complex, deuterated ligand, electron spin-echo modulation, spherical-averaging approx. study 7−112938
Cu^{2+} cpds., oxide supported, XPES and ESR study 7−99560
Cu-Mn, mag. phase diagram, EPR study *(Russian)* 7−112788
Cu_3 in N_2 matrix, EPR spectra 7−110001
$CuCs_{2.2}Na$ zeolite, electron spin echo envelope modulation simulation 7−106016
Cu(II) complex, tetrakis(aqua(pyridinyl)(pyrazinyl) triazolato)copper(II) tetranitrate, mag. susceptibility and EPR 7−112937
Cu(II) complexes, copper(II) methoxonitrophenolate dimers, structs., mag. parameters and ESR spectra 7−112942
Cu(II) complexes, stereochem., struct. phase transition 7−105010
CuO, EPR and NMR meas. 7−118710
$EuBa_2(Cu_{1-7}M_7)_3O_{9-x}$, M=Gr, Mn, Fe, Co, Ni, Zn, high T_c supercond., EPR, magnetisation studies 7−138320
Fe (III) complex, low-spin metalloporphyrin, mol. struct. 7−90221
Fe (III)complex, iron (III) Schiff-base complex, struct. and electronic props. 7−112941
Fe complex, bis(imidazole)(meso-tetraphenylporphinato)Fe(III) Cl, cryst. and mol. struct. 7−91537
Fe complexes, mononitrosyl chelates, intermol. interactions, ESR 7−103551
$Fe(H_2O)_6(NH_4)_2(SO_4)_2$, Mossbauer and other expts. on ferrous ion, ligand field model 7−105498
$xFe_2O_3(PbO.2B_2O_3)$, mag. interactions, ESR and FMR spectra 7−125531
$FeSiF_6.6H_2O$, cryst. struct., EPR and optical spectra study 7−142718
GaAs:Fe^{3+}, EPR spectra, uniaxial compression effect 7−77398
GaAs:Mn^0, Mn acceptor electronic struct. 7−124915
GaAs:Ni, impurity levels, optical absorption, EPR and Hall effect meas. 7−105471
GaAs:V, deep level Jahn-Teller systems, random strain effects, TD-EPR studies 7−105465
GaAs:V, gap levels, optical absorption, EPR and Hall effect meas. 7−105467
GaAs:V, nature of vanadium centre, EPR studies 7−131162
GaP:Cr, deep level Jahn-Teller systems, random strain effects, TD-EPR studies 7−105465
GaP:Cr, thermally detected absorpt. spectra, photo-induced changes 7−132303
GaP:Cr^{3+}, thermally detected EPR studies 7−99563
GaP:$Fe^+(Co^{2+})(Mn^{2+})(Ni^{3+})(Cr^{4+})$, EPR spectra, uniaxial compression effect 7−77398
GaP:V, gap levels, optical absorption, EPR and Hall effect meas. 7−105467
InF_3-BaF_2-Th(Zn)F_2 glasses, EPR and X-ray diffr. studies, structural model *(French)* 7−124116
InP:Fe^{3+}, EPR spectra, uniaxial compression effect 7−77398
$KAl(SO_4)_2.12H_2O$, alum crystals, EPR of Cr^{3+} 7−132130
$KAl(SO_4)_2.12D_2O$:CrO_4^{3-}, single crystal, EPR study 7−85426
$K_2Cd(SO_4)_2.6H_2O$:Cu^{2+}, EPR study 7−138316
KCl:Mn^{2+} crysts., impurity ESR obs. in regular environment 7−70632
$KMgF_3$:Ni, X-ray irrad., tetragonal impurity ions, EPR study 7−70634
K_3MoO_3:Fe, CDW state, EPR, Mossbauer and UPS studies 7−98842
K_2O-Al_2O_3-B_2O_3:Fe_2O_3(CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7−104830
K_2O-B_2O_3:Fe_2O_3 (CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7−104830
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., oxidation state study 7−118715
$La_{2-x}Sr_xCuO_4$, high T_c supercond., EPR studies *(Russian)* 7−125527
$LiKSO_4$:Cu^{2+} single cryst., phase transitions, EPR studies 7−106017
$LiNbO_3$:Cr^{3+}, charge compensation methods of Cr^{3+} ions, ESR and ENDOR studies 7−138311
$LiNbO_3$:Cr^{3+} single crysts., ESR spectra temp. depend. study 7−92498
$LiNbO_3$:Fe, ESR lines, widths and intensities 7−70633
$LiNbO_3$:Fe, X-ray irrad., optical props. and ESR spectra 7−113121
Li_2O-B_2O_3 glass, ESR of VO^{2+} and Cu^{2+}, spin Hamiltonian parameters 7−85416
Li_2O-P_2O_5-VO_2, noncrystalline, elec. props. and mag. resonance *(Chinese)* 7−112406
$MgGeF_6.CH_2O$:Mn^{2+}, ferroelastic with incommensurate phase, ESR study 7−132125
MgO:Mn^{2+}, polycryst., ESR spectrum, powder pattern effects 7−132127
$MgTiF_6.6H_2O$:Mn^{2+} single crysts., ESR at phase transition 7−99559
Mn (II) doped Zn complex, EPR study 7−112934
$Mn_{1-x}Cd_xF_2$ mixed crystals, mag. props., EPR study 7−85413
$Mn_xCd_{1-x}Se_4$ crystal growth from vapour phase by chem. transport, EPR 7−100025
$ND_4D_2AsO_4$:CrO_4^{3-}, pretransitional excitations in paraelec. phase, EPR study 7−99761
$NH_4Al(SO_4)_2.12D_2O$:CrO_4^{3-}, single crystal, EPR study 7−85426
NH_4Cl:Fe^{3+}, EPR spectrum 7−99562
$NH_4H_2AsO_4$:CrO_4^{3-}, pretransitional excitations in paraelec. phase, EPR study 7−99761
$NaAl(SO_4)_2.12D_2O$:CrO_4^{3-}, single crystal, EPR study 7−85426
NaCl:V^{2+}, dipole equilibrium, population distrib., EPR 7−125528
Na_2O-P_2O_5-TiO_2 phosphate glass, optical and spectromagnetical props., ESR and visible-UV absorpt. investig. 7−85421
Na_2SO_4-$ZnSO_4$:Mn glasses, ESR and optical absorpt. of Mn^{2+} ions 7−132128
Ni complexes, I_2 doped, quasi-1D solids with pseudo-$(SN)_x$ bundle-struct., EPR studies 7−92162
$Ni(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
$Pb_{1-x}Sn_xTe$:Mn narrow-gap crystals, transformation of defects, laser irradiation, ESR study 7−98857
$Pb_3V_2O_8$:Cu^{2+}, undoped and doped, struct., EPR, DSC, photoacoustic spectrum 7−125530
$Rb_x(NH_4)_{1-x}AlF_4$, order-disorder transformation, EPR studies 7−142684
ScC_2, Ar matrix isolated, ESR spectra 7−82230
Si:Co, ion implant lattice sites 7−76167
Si:Fe, B, shallow acceptor impurity pairs, Xalpha calculations 7−98874
Si:O, Fe(Cr)(Pt), transition metal solubility, O precipitate effects 7−98476

paramagnetic resonance of iron group ions and impurities continued
SiO_2:Fe^{3+}, EPR cryst.-field parameters, Newman superposition model 7−143902
SrO:Co^{2+}, paramag. noncentral impurity ion, spin and electric-dipole polarisation effects 7−138313
SrO:Co^{2+}, reorientable dipole centre ESR lines, elec. field splitting, time depend. 7−143900
TeO_2:Cr, ESR of Cr^{5+} 7−77399
V-P-Mo-O system, preparation and characterisation 7−104664
VC_2, Ar matrix isolated, ESR spectra 7−82230
VO^{2+} doped potassium oxalate monohydrate, EPR, low symmetry ligand field effects 7−112935
V_2O_5-Bi_2O_3 glasses, prep. and charactn. 7−111411
WO_3:Cu^{2+}, EPR study of Cu^{2+} impurity centre 7−85418
Y-Ba-Cu-O, high T_c supercond., normal and supercond. phases, microwave absorpt., ESR studies 7−132129
Y-Ba-Cu-O high T_c supercond., ESR and mag. susceptibility studies 7−112939
Y-Ba-Cu-O high T_c supercond., EPR spectrum, zero-field effects 7−118855
Y-Ba-Cu-O system, high T_c supercond., EPR studies *(Russian)* 7−125527
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., X-ray diffr. and ESR studies 7−124214
$Y_{0.2}Ba_{0.8}CuO_x$, high T_c supercond., paramag. reson. of Cu^{2+} ions 7−112667
Zn complex Zn[2,5-diphenyloxazole]$_4(ClO_4)_2.4H_2O$, 77 and 300 K ESR 7−85414
$ZnAl_2S_4$, IR transmittance and Mn^{2+} EPR spectrum 7−99561
ZnS:Mn on Y_2O_3 (quartz), thin films, electrolum. characts. and struct. 7−138516
ZnS:Mn^{2+} thin CVD films, EPR obs. 7−77401
ZnS:transition metal, impurity-induced nonradiative recomb. processes, EPR study 7−112364
$ZnSiF_6.6H_2O$:Mn^{2+}, temp. depend. of EPR zero-field splitting 7−92497
$ZnTiF_6.6H_2O$:Cu^{2+}, Jahn-Teller effect, EPR spectra temp. depend. anal. 7−106015
ZrF_4-LaF_3-BaF_2-AlF_3-FeF_3 glasses, spectral investigations 7−99825

paramagnetic resonance of palladium and platinum group ions and impurities
review of EPR of transition metal, lanthanide and actinide ions in solids, 1979 literature 7−77400
tetrathiafulvalene-Au-bis-dithiolene, spin-Peierls system, high field phase, ESR study 7−118856
Ag_7 cluster, form. in Ne matrix, EPR study 7−122763
$Mo(CO)_6$, in liq. crysts., linear dichroism study 7−82237
Mo(V) complexes, multifrequency ESR spectra 7−103543
Na_2O-P_2O_5-RuO_2 phosphate glass 7−85421
$Pt_6(NH_3)_{14}Cl_{10}X_4$ (X=ClO_4, BF_4, PF_6) synthesis and elec. cond. 7−99036
Ru complexes, mixed ligand, intermol. electron hopping, ESR obs. 7−70635
Si:Au, EPR detect. of Si-Au pair 7−92500
Si:O, Fe(Cr)(Pt), transition metal solubility, O precipitate effects 7−98476
TeO_2:Pt, paramag. Pt centres study 7−132131
W(V) complexes, multifrequency ESR spectra 7−103543
$Y_2(Al_{2-x}Sc_x)Al_3O_{12}$:$Mo^{3+}$, ESR of Mo^{3+} ions 7−138321
YCo_3, electron spin resonance and magnetocrystalline anisotropy 7−99565
ZnS:transition metal, impurity-induced nonradiative recomb. processes, EPR study 7−112364

paramagnetic resonance of rare earth ions and impurities
0 7−124292
lanthanum ethyl sulphate, Nd^{3+} doped, press. depend. of exchange interaction, ESR study 7−138322
review of EPR of transition metal, lanthanide and actinide ions in solids, 1979 literature 7−77400
thulium ethyl sulphate, Van Vleck paramag., impurity centre relax. 7−70518
yttrium ethyl sulphate, Nd^{3+} doped, press. depend. of exchange interaction, ESR study 7−138322
yttrium trifluoromethanesulphonate nonahydrate:$Er^{3+}(Dy^{3+})(Gd^{3+})$, spin Hamiltonian parameters, EPR study 7−125532
BaF_2:Dy, g-tensor of paramag. centre, determ. 7−143906
$Ba_3LaM_3O_{12}$:Eu^{3+} (M=Ta, Nb), struct. of lumin. centres 7−99922
Ca_2:$Gd^{3+}K^+$ electron spin echo envelope modulation 7−118858
CaF_2:U^{6+}, aq. soln. heat-treated coprecipitates, luminesc. and EPR spectra anal. 7−106872
$CaSO_4$:Dy, EPR of defect centres, thermolum. models, dosimetry appl. 7−85425
$CaSO_4$:Dy single crysts., thermolum. mechanisms, EPR obs. 7−85862
$CaTiO_3$: $Er^{3+}(Yb^{3+})$, single cryst., EPR study 7−99566
$CaWO_4$:Ce^{3+}, impurity dilute magnetic system, ESR spectral diffusion and spin packet profiles studies 7−118859
CdTe:Eu^{2+}, ESR spectra, transferred hyperfine interaction 7−125533
$CeAl_3$, frustration of magnetic order, ESR studies 7−132023
CeF_3:Gd^{3+} single cryst., EPR linewidth var. with temp. 7−106019
$CsCaCl_3$:Gd^{3+}, impurity spin Hamiltonian parameters, EPR spectra 7−85423
$CsCaCl_3$:Gd^{3+}, S^{2-}, cubic-tetragonal phase transition, EPR of Gd^{3+}-S^{2-} pair 7−92501
$CsPbCl_3$:Gd^{3+}, impurity spin Hamiltonian parameters, EPR spectra 7−85423
Er paramagnetic relaxation in single crystal 7−118857
GaSe:Gd, impurity centres model, ESR and ENDOR studies 7−131160
$GdAl_3$, frustration of magnetic order, ESR studies 7−132023
InP:Er^{3+}, ESR study 7−132132
KBr:Eu single crystals, hardening, yield stress meas., temp. and impurity conc. depend. 7−91704
$KCl_{1-x}Br_x$:Eu^{2+} mixed crysts., EPR ionic thermocurrent, optical absorpt. and emission spectra meas. 7−124292
KY_3F_{10}:$Ce^{3+}(Yb^{3+})$, spin-lattice relax., EPR spectra, Raman scatt. 7−70636
$LiYF_4$:Er^{3+}, paramagnetic relaxation time, defect concentration depend. 7−132133
$LuPO_4$:Ce^{3+}, excited doublets, EPR obs. 7−70637
$Pb_5Ge_3O_{11}$:Gd^{3+}, halogen ion localisation and motion, ESR studies 7−137377
$PbTiO_3$:Gd^{3+}, polycrystalline, localisation of Gd^{3+} ions 7−85422
SmB_6:Er^{3+}, valency mixing, paramagnetic resonance and Jahn-Teller effect 7−137879

paramagnetic resonance of rare earth ions and impurities continued
W (110), Gd adsorption, monolayers and thin films, ferromagnetic order, critical exponent, ESR studies 7−132091
Y-Ba-Cu-O high T_c supercond., Gd ESR spectra studies 7−125534
$YPO_4:Ce^{3+}$, excited doublets, EPR obs., optical absorpt. spectrum, Zeeman effect meas. 7−70637
$YbCl_3.6H_2O$, spin-lattice relax. time, temp. depend. 7−138323
ZrF_4 based glasses, EPR of Gd^{3+} and Eu^{2+} 7−85424

paramagnetism
see also paramagnetic properties of substances
actinide compounds, magnetic response functions, neutron inelastic scatt. 7−77240
alloys, impurity centres, fluctuon states 7−98860
cluster paramagnets with chaotic anisotropy, nonlinear permeability *(Russian)* 7−92439
dislocation dynamics in isotropic paramagnetic electrically conducting solid in large magnetic field 7−91582
electron Fermi liquid with paramag. impurities, elementary excitations 7−98834
electron self-energy, spin fluctuation effects 7−85301
ferromagnetic-paramagnetic bilayers, Kirkendall effect, spin wave reson. study 7−69992
free-electron lasers, induced undulator radiation, diamagnetic and paramagnetic effects 7−123017
Gaussian basis functions, elec. and mag. props. calcs. *(French)* 7−141414
heavy fermions, effective mag. moments and Kondo lattice Wilson ratio 7−112737
heavy fermions, effective mag. moments and Kondo lattice Wilson ratio 7−112739
Heisenberg paramagnets, neutron scatt. line profile, temp. depend. *(Russian)* 7−77202
Ising model, spin=1, effective field theory 7−85224
localised spins, 1/z renormalisation of temp. Green function, excitations in singlet-singlet model 7−105884
one-dimensional two-band Anderson model, mag. suscept. calc. 7−92399
planar dipolar system on honeycomb lattice, ground state energy 7−143808
quantum mechanical electron theory of metals, development, 1928-33 7−66888
self-induced transparency in the paramagnetic *(Russian)* 7−110481
semiconductors, carrier energy fluctuation shifts 7−70184
semiconductors, impurity centres, fluctuon states 7−98860
semiconductors, light induced magnetisation, spin polarisation 7−105964
spin paramagnetism, classical limit 7−131984
spin system low temp. excitation by variable field, quantum effects *(Russian)* 7−77346
thermomagnetoelectric discrete and continuous metallic interfaces, transport props., nonequilib. thermodynamics anal. 7−84831
three-state chiral clock model, Bethe approx. 7−85227
uniaxial cylindrical mag. domain film, asymptotic solns. 7−70611
Fe, self-diffusion and V impurity diffusion 7−98560

parameter estimation
2D flow dispersion problem, model verification and parameter estimation 7−69290
acoustic spectrum analyser, spectrum parameter estimation and random signals discrimination 7−82934
arterial compliance and aortic characteristic impedance in dog as function of pressure 7−114307
arterial pressure short-term regulation dynamics, freq. depend. and arterial compliance role 7−107141
arterial pressure short-term regulation in cat, dynamic model 7−107140
auditory-nerve spike-discharge parameter estimation, computer technique 7−87026
breathing mechanics, exptl. conditions influence on parameter estimation, sensitivity analysis approach 7−107143
cantilevered Euler-Bernoulli beams with tip bodies, stiffness/damping estimation 7−75281
composite signal in nonwhite Gaussian noise, amplitude and time delay parameters estimation 7−110682
earthquake forecasting by precursor parameter estimation, effect of researcher 7−79310
hyperthermia, limited temp. obs. to predict complete temp. fields 7−106988
lungs, mech. props. during artificial ventilation, exponential model-based estimation 7−100967
NMR spectral parameter estimation by deconvolution 7−102485
optical fibre transmission properties, dynamical model parameter identification 7−136542
parabolic time-periodic system, spatially varying parameter identification 7−127226
parameter identification using pseudogradient method *(Spanish)* 7−133604
positron emission tomography, quantitation, effects of nonlinear parameter estimation on functional images 7−119842
postural control, human, parameter estimation of model 7−114365
real-time speech synthesis model, estimation of articulatory trajectories by Kalman filtering 7−90888
respiratory system impedances in dogs, lumped linear element models 7−107109
solar collector parameter identification by step input test procedure 7−71645
sound field, logarithmic least mean square estimation 7−110666
underwater acoustics, track parameter estimation from multipath delay information 7−123309
NO_2 concentrations near roadways, estimation using optimal filtering theory 7−78704

parameter identification *see parameter estimation*

parametric oscillators
see also acoustic parametric oscillators; microwave parametric oscillators; optical parametric oscillators
parametrically and self-excited mechanical systems, dynamic phenomena 7−95295

parametric varactor diodes *see varactors*

parametrons *see parametric oscillators*

Pariser-Parr-Pople calculations *see PPP calculations*

parity
see also elementary particle spin and parity; nuclear spin and parity
flow, parity simulation 7−69082
Cs, parity nonconserving electric dipole transition amplitudes, Dirac-H-F calcs. 7−89949
Tl, parity nonconserving electric dipole transition amplitudes, Dirac-H-F calcs. 7−89949

partial differential equations
see also boundary value problems; wave equations
1 D transient heat conduction, hybrid Laplace transform/FEM 7−142144
1D time dependent potentials, rational functions of momentum as invariants, basic theory 7−67057
1D time dependent potentials, rational functions of momentum as invariants, 2- and 3-resonance cases 7−67058
2-dimensional critical statistical theories, correl. fns., conformal invariance, operator product expansion 7−121464
2D vorticity eqn., Fourier pseudospectral method 7−69188
3D elliptic BVPs, boundary integral approach 7−140450
τ-functions of $A_2^{(2)}$, partial diff. eqns. corresponding Lie algebra 7−140429
Anderson localization in nonlinear random media, invariant embedding method 7−80606
anharmonic oscillator, averaging method 7−73014
arbitrary Lagrangian−Eulerian computations, accurate conservative remapping 7−108246
asymptotic Morse inequalities, heat equation proof 7−88883
boundary-element methods and fundamental solns. 7−91058
Burger eqn., implicit/explicit spectral method 7−89156
Burton's theorem for functional differential eqns., extension 7−95265
cantilevered Euler-Bernoulli beams with tip bodies, stiffness/damping estimation 7−75281
chemical reactors, catalyst decay, distrib. control for optimal temp. 7−93366
circular tube nonsteady turbulent heat transfer calc. allowing for heat flow in wall 7−117607
compressible Euler equation, wave operators and incompressible limit 7−102170
computer-extended series for a source/sink driven gas centrifuge 7−97541
conducting continua, error determ. in BVP simulation *(Russian)* 7−128256
conf., Sendai, Japan, Feb. 1986 7−72734
conical shells, eigenfrequencies, exact soln. *(Chinese)* 7−142198
convective diffusion eqn., unsteady, transient boundary-element solns., appl. to EM field anal. 7−108490
coupled nonlinear partial diff. eqns., similarity soln. and Lie symmetry 7−95247
cylindrically invariant flows in relativistic fluid dynamics 7−123785
degenerate elliptic equation, solvability of the first boundary-value problem 7−72869
degenerate nonlinear diffusion system with boundary feedback 7−108476
delay-differential equations, 1D, 3/2 stability theorem 7−95260
dictionary approach to reaction-diffusion systems with nonlinear diffusion coefficients 7−126776
diffusion and boundary conditions interaction 7−88890
Dirichlet problem, substitutional electric charge method, num. stability *(Japanese)* 7−96919
doubly curved shallow shells on a nonlinear elastic subgrade, nonlinear dynamic response 7−97326
doubly nonlinear diffusion equation in hydrology 7−80701
Einstein equations, regular conformal system, partial diff. eqns. system *(French)* 7−128386
elasticity, nonlinear, 1D, with small viscosity, families of entropies and solution bounds 7−80420
elasticity Galerkin methods for time-dependent incompressible eqns. 7−108233
elliptic equation, identification of conductivity coeff. 7−108182
elliptic equations, coupled, soln. using SOR methods 7−115773
elliptic equations, nonlinear fourth order, solution, gradient and Laplacian bounds 7−80382
elliptic equations, superlinear, anal. using supersolution-subsolution method 7−72866
elliptic partial differential eqns., solutions Monte Carlo simulation 7−128259
energy derivatives, stationary props. 7−88854
Enskog-Boltzmann equation in the whole space $\mathbf{R}^3$: some global existence, uniqueness and stability results 7−123824
Euler equation soln. using irregular grid algorithm technique 7−115794
evolution equation, nonlinear, with nonlocal coeffs., existence of global solutions 7−72865
evolution equations, associated quasidifferential systems 7−134527
evolution equations, wave modulation anal. 7−108251
evolution partial differential equation, explicit solns., solitronic props. 7−72873
feedback FEM with a posteriori error estimation 7−67017
field calcs., Galerkin method with singular shape functions *(German)* 7−141744
finite difference representations 7−80334
finite-rank perturbations of discrete operators *(Russian)* 7−108154
flow over circular cylinder with parabolic vel. distrib. 7−130622
fluid dynamics, finite difference calcs. using boundary-fit curvilinear coord. transform. *(Japanese)* 7−142254
fourth order equations, Dirichlet problem, uniqueness theorems 7−72867
Fueter mappings and their Jacobians, characterisation 7−72849
generalised parabolic transmission problems *(French)* 7−88886
generalised Riemann problem soln., asymptotic expansion *(French)* 7−66986
glass fibres, arbitrary cross section and curvature, EM wave anal., analytical 3D method 7−104027
global solution of nonlinear characteristic Cauchy problem *(French)* 7−66924
gravitational hydrodynamic eqns., perfect fluid axially symm. rotating body 7−108337
group-invariant solutions of differential equations 7−95266
Hamilton-Jacobi eqn., soln. singularities *(Japanese)* 7−128242
heat equation, Cauchy problem approximations 7−108196
heat equation, nonlinear, blow-up of solutions, criterion 7−108487
heat equation, semilinear, existence of bounded solutions 7−80379
heat equation with diffusion, blow up time for solns. 7−108486
heat kernels of partial diff. eqns. with regular singularities, symmetric spaces appls. *(French)* 7−66927
heat transfer, hyperbolic equation, inclusion of travelling wave effects, numerical simul. 7−115933

partial differential equations continued
homogenization of differential equations in a net with fine mesh *(Russian)* 7−88848
hydromagnetic dynamo in random stream, mathematical theory *(Russian)* 7−102172
hyperbolic equation, nonlinear, solution zeros 7−115809
hyperbolic equations, finite element soln., time discretization 7−88937
hyperbolic equations, nonlinear and multidimensional, cubic interpolated pseudoparticle method anal. 7−88992
hyperbolic equations, quasi-linear, with Fuchsian singularity, anal. *(Italian)* 7−88897
hyperbolic semi-linear equations, interaction of three waves *(French)* 7−72826
hyperbolic systems of conservation laws, variable boundary solns. *(French)* 7−88938
hyperbolic-parabolic conservation eqns., large-time behaviour of solns. 7−115799
hyperbolic-parabolic singular perturbation problems, asymptotics, asymptotic Galerkin method anal. 7−108200
hyperbolicity conditions for systems of partial differential equations *(French)* 7−95233
hypercube algorithms and implementations, appl. to real fluids 7−88988
hypercube algorithms for PDEs 7−128244
integrable potentials with cubic and quartic invariants 7−128269
integral solutions of the $\bar{\partial}$ equation in some pseudoconvex domains without holomorphic support function 7−72821
isospectral transformations in relativistic and nonrelativistic mechanics 7−80405
isovortical orbits in uniformly rotating coordinates 7−115214
Kaluza-Klein theory, Cauchy problem and Jordan-Thiry extension 7−73119
KdV equation, lattice eqn., hierarchies and Hamiltonian structs. 7−80680
Khokhlov-Zabolotskaya equation, Lie symmetries 7−80318
Klein-Gordon equations, nonlinear, prolongation structure and Backlund transformations 7−80454
Kodomtsev-Petviashvili equation, Lax pair and Backlund transformation 7−102121
KP equation, conservation laws in Lagrangian and Hamiltonian formalism, group theoretic anal. 7−95225
Lame system, boundary value problems for weak solns., plane sector elasticity *(French)* 7−95331
Laplacian, determinant on spinor fields on Riemann surface 7−89321
laser-induced hole formation, FEM model 7−110289
linear homogeneous differential eqns., coupled system, appl. to hydrodynamics 7−91081
Liouville equation, partial differential eqn. form 7−80596
Lorenz-like chaos in a partial differential equation for a heated fluid loop 7−67210
Madelung fluid, Lie group methods for coupled nonlinear partial differential eqns. 7−115796
massless particle on Reissner-Nordstrom horizon, generalized Kerr-Schild metric 7−89059
mechanics of a continuous medium and classical fields, Lie-Backlund groups 7−120805
membrane, square, nonlinear forced oscills., multi-mode response 7−136734
MHD equations, 2D, nonstationary, similarity solutions, Lie algebra and conservation laws 7−140432
molecular predissociation, matrix Schrodinger operators and resonances, mathematical theory 7−141635
multidimensional nonlinear wave eqn., asymptotic solns. *(Russian)* 7−134526
myelinated nerve axon modelling, diff. eqn. existence of global solns. 7−114163
n-homogeneous partial differential eqns. system, appl. to hydrodynamic stability 7−117565
nerve fibre, pulse transmission, third-order eqn., group anal. 7−78815
neural transmission model, hyperbolic system 7−126788
neutron transport theory with linear Boltzmann eqn. 7−89587
nonadiabatic premixed flame dynamics in gravitational field 7−132942
nonlinear, algebraic-geometric construction and integrability 7−134449
nonlinear conduction-diffusion equation, unknown coeff. determ., num. expt. design 7−134703
nonlinear differential equations, 1D, linear recursive schemes and the Tau method 7−80397
nonlinear differential equations, necessary conditions for integrability 7−108155
nonlinear partial differential eqns., higher order soliton solns., computer-algebra methods 7−95232
nonlinear symbolic calculus for a simple classical conormal wave *(French)* 7−67029
numerical invariant for a system of partial differential equations 7−95244
odd-even hopscotch scheme for numerical integration of time-depend. partial differential eqns. 7−128245
Painleve test and integrability 7−108173
parabolic, soln. using stochastic method, multigroup neutron. diffusion appl. 7−141124
parabolic conservation laws in several space variables, global existence of solns., compressible flow appl. 7−88985
parabolic equation, fourth order, semilinear, solns. and pattern formation, solidification appl. 7−80368
parabolic equations, forced oscillations of solns. 7−95230
parabolic equations, nonlinear, with non-monotonic perturbation, global soln. 7−72906
parabolic equations, semilinear, local and global solvability 7−88881
parabolic evolution eqns., anal. 7−88882
parabolic wave eqn., modified wide angle, finite difference discretization 7−115804
periodic parabolic problems with Neumann boundary conditions, spatial homogeneity 7−95249
plasma diagnostics, mathematical problems of active corpuscular techniques 7−104458
plate and shell dynamics, nonlinear problems soln. method 7−110832
plate bending by a boundary point method 7−117456
Poisson's eqn. in multiregion bodies, implicit boundary-integral method 7−108477
population ecology, habitat segregation problem, free boundary problem for parabolic eqns. 7−72904
porous-permeable medium, non-Newtonian fluid flow 7−111041
quadratic regulator problems for linear hyperbolic equations *(Russian)* 7−66931
partial differential equations continued
quantum scattering theory, inverse problem formulation 7−95408
quasi-linear parabolic eqns., Neumann problem, global existence theorem 7−72907
reaction diffusion equations on symmetric domains, generic hyperbolicity 7−72897
real analytic equations, local stable solutions *(French)* 7−72824
real analytic partial differential eqns., Cauchy problem anal. 7−66926
relativistic dynamical systems, Lax representation 7−88959
resonances and microlocal analysis 7−102193
Schwarz alternating procedure convergence for 2D problems 7−72929
second order partial diff. eqns., Cauchy and Dirichlet-Cauchy type problems 7−115761
second order turbulence flow closure model 7−69180
seismic reflection, parameter identification using pseudogradient method *(Spanish)* 7−133604
self-dual Yang-Mills system, generalized isovector formalism 7−116050
semilinear reaction-diffusion system, equilibrium solns. 7−80702
shear wave propagation, nonlinear combined axial and torsional, incompressible hyperelastic solid 7−142207
shells, elastic thin shallow, direct integration of governing equations and lower order method 7−117467
sine-Gordon eqns., periodically driven, universal attractor 7−108259
singular nonlinear parabolic boundary value problems in one space dimension 7−95255
singularly-perturbed BVPs, soln. *(Russian)* 7−120792
solitary waves in the presence of symmetry, stability theory 7−134528
soliton phenomena, finite element method appl. 7−67028
space structure vibration modes, math. concept 7−72969
spray drop condensation, hydrodynamics, heat and mass transfer study 7−111075
steady plane MHD flows of viscous incompressible fluid, solns. and geometries 7−142389
steady-state convection diffusion problems, characteristics method appl. 7−75584
Stefan problem, 1D, interface-following methods *(Spanish)* 7−95522
stochastic partial differential equation with multiplicative noise 7−120949
Sturm's theorems and Picone integral identity for fourth order class 7−72860
superposition functions, Backlund transformations, nonlinear evolution equations 7−140457
systems of first order partial diff. eqns., chaotic solns. 7−128462
tensor product generalized ADI methods for separable elliptic problems 7−72890
third grade fluid, plane steady flow, curvilinear coords., partial diff. eqns. soln. 7−69214
transient gas flow in pipelines, finite element anal. 7−97630
transonic flow, inverse problem soln. for S_2 surface, elliptic algorithm 7−111018
truncation scheme, Lorenz equation calcs. 7−108167
tunneling effect between submanifold wells *(French)* 7−128243
turbulence, nonMarkovian covariance evolution eqns., soln. 7−104254
TVD finite difference scheme using artificial viscosity 7−66992
two-dimensional integrable eqns., bilocal recursion structure 7−134446
two-phase flow model diff. eqn., nonlinear periodic waves, perturbation anal. 7−134520
unsteady mixed convection along a thin long vertical cylinder 7−104261
US crack detection, elastic waves and continuous-medium model *(Japanese)* 7−100501
variational inequality related to nonlinear evolution equations 7−128250
vertical isothermal flat plate, particle deposition, natural convection flow, scale analysis 7−136979
viscoelasticity, nonlinear conservation laws, initial-boundary value problems 7−69004
viscous conservation laws, convergence to diffusion waves 7−102085
viscous incompressible rot. MHD flow, hodograph transform. 7−75682
Vlasov equation with static self-consistent potential, soln. 7−81320
von Karman eqns. for vibrating plate, classical soln. for free/clamped boundaries, integral eqn. method 7−128273
water waves in straits of varying depths and widths, integrable nonlinear eqns. 7−104287
Wilson's differential eqn., derivation, series solns., convergence of Mayer expansions 7−134462
H_2-air system, chemically reacting flow, efficient calc. 7−142397
Si, crystal ribbon growth, stress-free, numerical simulation 7−85989

partial discharges
15 to 200 MVA power transformers, ultrasound testing for insulation faults 7−97234
HV elec. equipment insulation breakdown, early detection using discharge testers and ultrasonic detectors 7−123359
location using modulated X-rays 7−67455

particle accelerator accessories
betatron with removable four-element poles 7−109552
CERN SPS, vacuum chambers in composite material 7−135703
Cherenkov ring imaging detector, prototype tests at SLD expt. 7−74359
controller for pulse generator thyristors of betatron 7−134729
duoplasmatron ion source of 35 MeV proton accelerator, O_2-impregnated Ni-matrix cathode 7−135705
eight-channel gas threshold Cherenkov counter for GIPERON spectrometric system 7−81881
electron accelerators, radiation shielding, technicoeconomic evaluation 7−122219
goniometer for van de Graaff accelerator ion beam channeling expts., design *(Japanese)* 7−135684
HERA project, prototype He transfer line 7−74301
LEP injection system, high tension burst pulse generator 7−74298
microsecond square HV pulses generation for high-current electron accelerators 7−129530
multilayer dimpled insulation for TOPAZ supercond. solenoid cryostat 7−74303
photon stimulated desorption in vacuum duct, angular distrib. obs. using unidirectional detector 7−135693
power supply using unipolar rotary pulse generator 7−81763
pulse beam charge monitor for charged particle accelerators 7−122296
pulse-charge meter 7−129502
pulsed X-ray facility for testing radiation detect. instruments at SLAC 7−89886
regulated resonant charging of modulators, linear accelerator appl. 7−129461

particle accelerator accessories continued
RF accelerating voltage shaper for ring injector, initial-frequency generator 7−129483
small inexpensive scattering chamber constructed from commercially available components 7−89867
SSC magnets, suspension system design 7−74302
UHV valve protection system for National Synchrotron Light Source 7−134749
ultrahigh vacuum systems for storage rings and accelerators 7−81769
vacuum feedthrough insulator with shielded dielectric surface 7−68042
variable energy cyclotron, ion source gas flow control 7−121293
variable energy cyclotron, quadrupole residual gas analyser appl. 7−126498

particle accelerators
see also beam handling equipment; beam handling techniques; cyclotrons; electron accelerators; electron ring accelerators; electrostatic accelerators; ion accelerators; linear accelerators; proton accelerators; storage rings; synchrotrons
accelerator mass spectrometry, graphite target preparation for radiocarbon dating 7−134884
accelerators in research and industry, conf., Denton, TX, USA (Nov. 1986) 7−88733
advanced accelerator concepts, conference, Madison, WI, USA (Aug. 1986) 7−120682
beam dynamics, wake fields, impedances and Green's function 7−116755
bunched beam coherent instabilities 7−116753
CERN accelerator school on advanced accelerator physics, Oxford, England (Sept. 1985) 7−115668
charged particle optics, conference. Albuquerque, NM, USA (May 1986) 7−128177
circular accelerator design, optics modules 7−141370
circular accelerators, longitudinal motion 7−81791
circular accelerators, single particle dynamics, Hamiltonian formulation 7−81794
circular accelerators, transverse beam dynamics 7−81790
circular machine design techniques and tools 7−141342
colliders, effect of RF noise on bunches 7−116756
configuration for most efficient accelerator 7−122238
electromagnetism eigenvalue problem, weak formulations and FEM 7−103722
electron and ion beams generation in modified ns accelerator *(Japanese)* 7−129506
electron sources for advances accelerator expts., low emittance requirement 7−122270
evolution of particle accelerators 7−74263
ground motion effects on accelerator design 7−81768
high current spallation facility, sky-and groundshine phenomena, radiological quantities 7−87181
intelligent multichannel analyzer for stability supervision of pulse height spectra 7−116795
invariant beam phase space of an accelerator *(Chinese)* 7−116723
ion losses elimination in EGP-10-1 charge-exchange accelerator 7−109547
Landau damping, beam interaction and beam stability 7−116752
large particle accelerators, applied geodesy school, Geneva, Switzerland (April 1986) 7−72733
limiting technologies for particle beams and high energy physics 7−81770
low energy accelerator vacuum requirements 7−135722
mechanisms for particle acceleration, possibilities and constraints 7−96411
modulating width multipole permanent magnets, field distrib. studies *(Chinese)* 7−121159
multipole magnets for particle accelerators, coil end configurations 7−141343
nonlinear behaviour, one degree of freedom 7−81801
pion physics at the meson factories 7−89856
plasma-filled diode systems in high-current accelerators 7−96406
positive-ion, solids study by radiation physics, apparatus for comprehensive meas. 7−108732
principles and current development trends *(Japanese)* 7−103182
Reacting Plasma Project, high power ion source and neutral beam injector development 7−74312
rebatron, acceleration process anal., beam dynamics 7−122261
RF field evaluation in waveguides and cylindrically symmetric cavities, triangular discretisation 7−68040
RMS emittance growth, mechanisms and time scales, ICF appls. 7−81782
space charge dominated beam transport 7−116754
summer school, physics of particle accelerators, Stanford, CA, USA (Aug. 1984 and July 1985) 7−80145
superconducting accelerator magnets, epoxy-free winding and assembly of cos θ coils 7−129489
superconducting magnets, requirements 7−74026
superfine magnets for accelerator, design and testing 7−129488
vacuum science, technology, appl., conference, Glasgow, Scotland (March 1986) 7−134358
vacuum-to-air interface for the advanced test accelerator 7−135704
γ-ray laser action for ultimate accelerator 7−103310

particle backscattering
see also electron energy loss spectra
absolute stopping cross sections by backscattering methods 7−111709
accelerators in research and industry, conf., Denton, TX, USA (Nov. 1986) 7−88733
atmospheric particle size distrib., extinction and backscatt. coeff., refractive index influence 7−94432
automatic display of backscattered ion spectra 7−92810
carbonization layers, props. relevant to plasma-surface interaction 7−104419
chemical analysis methods based on nucl. principles, review *(Italian)* 7−86688
computer controlled wide range three axis goniometer for Rutherford backscattering channeling experiments 7−91396
elastic peak electron spectroscopy, electron inelastic mean free path 7−132394
electron backscattering coefficient, energy-dependent 7−99985
electrons, Monte Carlo calcs. *(Korean)* 7−85908
electrons, small area semiconductor detector 7−109658
enhanced ion backscatt. near 180°, flux peaking and interchangeable return paths calcs. 7−92811
erosion measurement techniques for plasma-driven railgun barrels 7−93106

particle backscattering continued
GaAs:Si^+, p^+, electrical activation using laser beam annealing 7−131174
garnets, Fe^+ ion implantations 7−91612
glass:Br, implanted, Br ion range distrib. anal. 7−91682
graphite:Mo, radiation enhanced self-diffusion, influence of Mo impurities 7−91871
graphite erosion and deposition in JET wall surfaces, SIMS anal. 7−75809
interface, ion induced aluminide form. 7−84403
ion beams analysis with a 6 MV van de Graaff 7−106865
ionized cluster beam deposition, RBS studies 7−71081
MBE growth, high resolution RBS anal. 7−138621
metal overlayers on stainless steel and Ni-Fe substrates, surface alloying by pulsed laser irradiation, RBS/channelling studies 7−113769
metal surfaces, H_2 interactions, backscattering and chemisorption 7−77736
metallic glasses, heavy and light ion bombardment, near-surface and bulk props. 7−142851
metallic thin films, proton induced K-shell X-ray cross sections 7−144183
metals, thick targets, backscatt. electrons, mean energies, Monte Carlo simulations 7−138554
microbeam RBS and PIXE applied to microelectronics 7−93417
multilayer thin films, thickness, density, stoichiometry meas. 7−108517
neutron coherent backscattering, multiple scatt. effects and cross sections 7−113319
nonRutherford proton scatt. in RBS spectra 7−93424
nuclear techniques for optical waveguide characterization 7−141992
phthalocyanines, polymeric, ion implementation, effect on optical props., DC cond. 7−83789
polyimide:$Ar^+(Cu^+)(Zn^+)$ films, ion-implanted, structure and morphology 7−91938
polymers, surface charging by electron irrad., secondary emission yield determ. 7−85052
polystyrene, iodohexane impurity sorption and steady-state diffusion front motion, case-II diffusion regime 7−118165
polystyrene transient swelling, iodohexane sorption, case-II diffusion regime 7−118164
RBS/channelling technique using thin window cell, interface analysis 7−113338
SOS epitaxial films, rapid thermal processing 7−70103
SOS films, As dopant redistrib. during thermal annealing, theoretical and expt. study 7−76661
steel, W-Cr-V, bearing, N ion implantation, wear, friction, hardness, surface struct. 7−119378
stopping power uncertainty effects in thick target RBS analysis 7−98285
TFR graphite tiles, metal coverage effect on plasma impurity content 7−75817
thin film deposition, in-situ RBS analysis, sample holder 7−115967
thin films on substrates, electron backscattering 7−77716
topaz stones, ion beam anal. microscopic characterisation 7−144776
trace element and surface analysis at the University of Montreal 7−93418
transition metal silicides, anodic oxidation, low temp. form. of insulating layers 7−132784
Weibel instability, collisional effects 7−83459
yeast composition anal. by PIXE X-ray fluorescence, Rutherford backscatt. 7−93412
0_2, content on and in Be, PIXE and RBS anal. 7−106862
Ag-Cu eutectic alloy, low energy sputtering 7−125882
Ag-Si thin film, prep. by ion assisted deposition *(Chinese)* 7−132499
Al films, electron backscatt. and transmission coeffs., Monte Carlo calcs. 7−106321
Al films by ionised cluster beam deposition 7−106438
Al-Kr, Kr ion implanted in Al films, precipitation, phase stability of Kr in cavities 7−106519
Al-Pt interface, ion induced aluminide form. 7−84403
Al-V interface, ion induced aluminide form. 7−84403
$Al_xGa_{1-x}As$, Al conc. meas. by proton activation and RBS 7−93420
$Al_xGa_{1-x}As$, band edge, depend. on composition, absolute meas. of x 7−144201
$Al_xGa_{1-x}As/GaAs$ superlattices, ion implantation induced damage, RBS studies 7−83988
AlN thin films by RF reactive sputtering 7−92871
Al_2O_3 relatively pure films on Al, formation by anodic polarisation 7−106703
Al_2O_3:$He^+(Zn^+)(In^+)(Pb^+)$, ion implanted, lattice damage and impurity distributions 7−91607
Al_2O_3-ZrO_2 tetragonal, stabilisation in reactive magnetron sputtered thin films 7−137745
Au (110), surface reconstruction and relax., ion scatt. study 7−143147
Au (110)-(1×2), reconstructed surface struct. determ. using ion backscatt. 7−143149
Au films, electron backscatt. and transmission coeffs., Monte Carlo calcs. 7−106321
Au/GaAs, sputtering-controlled ion mixing 7−91664
Au-Ti(Zr)(V)(Nb) thin film interactions, RBS and X-ray diffr. studies 7−69991
AuCu-Al bilayer system, ion beam mixing 7−84065
Be_3N_2 laser irrad.-induced layer growth at B-liq. N interface, RBS and X-ray diffr. studies 7−118234
BeO laser irrad.-induced layer growth at Be-water interface, RBS and X-ray diffr. studies 7−118234
$Bi_{1-x}Sb_x$, thin film alloys produced by ion beam mixing, thermoelectric props 7−137566
a-C:H diamond like films, effects of heavy ion irradiation 7−98268
$(Ca,Sr)F_2$ compositionally graded layers, growth and characterisation 7−113447
CaF_2, fluorine depth analysis using Rutherford backscattering 7−93423
$Ca_{0.43}Sr_{0.57}F_2/GaAs$ (100), epitaxial heterostructures, flash evaporation, charactn. 7−84537
CdMnTe, synthesis by implantation of Mn into CdTe 7−91611
Co black, selective solar absorber surfaces, comparison of different forms 7−144911
Co-Sb films and foils, ion implanted, amorphous phase form., RBS, TEM studies 7−84061
Co-Te films and foils, ion implanted, amorphous phase form., RBS, TEM studies 7−84061
CoSi-Si permeable base transistors, role of epitaxially grown silicide films 7−137747
Cr-Ni-Cu, laser mixed Cr-Ni films on Cu, microstruct. studies 7−70039
Cr_3Si films, elec. resist., Hall coeff. meas. 7−99223

particle backscattering continued
Cr_5Si_3 films, elec. resist., Hall coeff. meas. 7−99223
Cu (110)-(2×1), reconstructed surface struct. determ. using ion backscatt. 7−143149
Cu epitaxial overlayers on Ni, backscattered electron diffr. obs. 7−70953
Cu, ion implantation with Al, damage studies 7−76163
Cu, ion mixing of marker layers, thermochem. prop. effects 7−76229
Fe/SiO_2 system, Ar^+ irradiated, ion beam mixing effects 7−117983
Fe/Ti multilayers, amorphous alloy form. by ion beam mixing 7−76233
Fe-Al bilayers, ion beam induced at. mixing, RBS, TEM, SIMS, resist. meas. 7−84069
Fe-Mo (3 at.%), trapping of interstitials and vacancies, ion-channelling/lattice-location studies 7−104731
Fe-Sn (1.3 wt.%), (111) surface, Sn segregation, struct. transitions 7−143154
Fe-Ti films, hydrogenated multilayer, ion beam mixing, Rutherford backscatt. obs. 7−104862
Fe-Zr amorphous alloys, ion beam mixed, mag. and elec. transport props. 7−113024
FeAl, ion irrad., disordering, RBS, channelling studies 7−84058
$Fe_{82}B_{18}$, Au diffusion, meas. in relaxed and crystallized specimens, RBS technique 7−143104
GaAs, defect formation, Al ion implantation 7−83993
GaAs epitaxial films, growth and characterisation 7−84603
GaAs, ion bombarded, struct. changes and defects 7−137426
GaAs, ion implanted, defect distrib., optical transmission spectra studies 7−85773
GaAs layer, MBE on (100)-oriented Si substrate, preheating effect, charactn. 7−113394
a-GaAs, MBE deposited, solid phase crystal growth 7−143262
GaAs MBE growth on high temp. H annealed (100) Si substrates, expt. study 7−144279
GaAs, multilayer structures, C^+ RBS studies 7−144215
GaAs, rapid thermal processing, evaporation through encapsulants, RBS studies 7−91782
GaAs:Cr,Si dopant distrib. and elec. activation by short time annealing 7−84019
GaAs:Si/Si, ion implanted structure, defects and donor activation 7−91604
GaAs:Sn, electron beam induced Sn diffusion from dopant emulsions, backscatt. study 7−143101
GaAs:Sn, form. by pulsed ruby laser interdiffusion, props. and elec. charcts. for FET contact structs. 7−76151
GaAs:Sn, heavily implanted, annealing effects, channelling/RBS studies 7−98195
GaAs:Te, defect struct. around Te implants, solid phase epitaxial regrowth 7−98205
GaAs:Te, lattice site location, electronic struct. 7−118408
GaAs/Au layer structs., ion beam mixing, struct. and elec. props. 7−76242
GaAs/metal contacts, interface reactions and elec. characteristics 7−125121
GaAs/Pd/Ge nonalloyed ohmic contacts by solid phase epitaxy 7−143637
GaAs-Au, encapsulated ohmic contacts, alloying process, RBS studies 7−98722
GaAs-GaAlAs:Si superlattices, enhanced disordering by Si ion beam implantation 7−118291
GaAs-Ir, interfacial interactions 7−143082
GaAs-Ni(Pd)(Pt), interfacial structures, compositions and reaction morphologies, TEM and RBS studies 7−98716
GaAs-Si, heteroepitaxy of GaAs, improvement 7−137730
GaInAs, anodic oxidation, Auger and RBS comp. anal. 7−132834
GaP, laser induced damage, channelling in Rutherford backscatt. obs., defect prod. mechanisms 7−131176
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
$(Gd_{20}Co_{80})As$ amorphous thin films, ion mixing form. 7−84070
GdGG:Fe^+, single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
Ge epitaxial films, growth and characterisation 7−84603
Ge heteroepitaxy, search for geometrical lattice matching 7−84558
Ge, ion implanted and excimer-laser-annealed, RBS studies of surface density reduction 7−76190
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
$GeSe_2$:Ag, amorphous, high energy ion beam induced impurity diffusion, RBS 7−124351
GeSi-Si strained layer superlattices, growth using limited reaction processing, struct., TEM, AES, RBS 7−118300
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
He^+ 175 keV backscatter energy loss from Cu(100) 7−144210
He^+ ion beam, focused, for PIXE and RBS microanalysis 7−100658
$Hg_{1-x}CdTe$, near surface characterisation, computer-aided Rutherford backscattering spectrometry 7−132402
InGaAs/InP quantum well struct., ion channelling strain meas. 7−112468
InP, amorphised, ion implanted, epitaxial regrowth study 7−104560
InP:Bi^+(N^+), ion implantation disorder, annealing effects, RBS channelling study 7−76179
InP:Si-AuGe/Ni/Au rapid thermal alloyed ohmic contact, elec., structural and metallurgical props. 7−138006
Ir (110), surface reconstruction and relax., ion scatt. study 7−143147
$(LaSr)_2CuO_4$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$LiIO_3$, combined channelling study in an electrostatic field, ionic cond. 7−131198
$LiInSe_2$ thin film hot wall epitaxy and structural charactn., RBS, SEM and AES studies 7−118328
MgF_2, fluorine depth analysis using Rutherford backscattering 7−93423
Mo-Si layers, sputtering from composite targets, AES and RBS studies 7−100068
Mo-Ta interface, sputter deposited, sticking coeff., struct., RBS, X-ray diffr. studies 7−105296
Na β alumina crysts. and electrolytes, surface comp. and struct., water adsorption and diffusion, conc. profiles studies 7−84463
NbN high-field supercond. sputter deposited on complex substrates 7−131841
Ni (110)-(2×1), reconstructed surface struct. determ. using ion backscatt. 7−143149
Ni, backscattered electron diffr. obs. 7−70953
Ni film on Si (100), ion beam mixing, Rutherford backscattering and Auger depth-profile anal. 7−91663

particle backscattering continued
Ni-Co alloy thin films, spin wave reson. obs. 7−106033
Ni-Cr films on Si, pulsed ion beam irradiation, silicide formation, RBS studies 7−104860
Ni-Pb system, ion beam induced demixing 7−84067
Ni-Ti films, hydrogenated multilayer, ion beam mixing, Rutherford backscatt. obs. 7−104862
NiAl coatings, oxidation resist. on Ni base superalloys, Hf effect *(French)* 7−86469
NiAl, ion irrad., amorphisation, RBS, channelling studies 7−84058
Ni_3B, ion irrad., amorphous phase form., RBS, channelling studies 7−84060
NiO hydrated films, electrochromic, electrochemical and spectroscopic studies 7−144023
$NiSi_2$ epitaxial film, surface struct., low energy ion scatt. studies 7−118219
$NiSi_2$/Si ⟨111⟩ structures, laser irradiation damage, RBS/channelling studies 7−111655
$NiSi_2$-Si interface, melting dynamics under pulsed laser irrad. 7−84219
Pd (110)-(1×2), reconstructed surface struct. determ. using ion backscatt. 7−143149
Pt (110)-(1×2), reconstructed surface struct. determ. using ion backscatt. 7−143149
Pt loss and migration in porous gas diffusion fuel cell electrodes, RBS study 7−114095
Pt/Rene N4 superalloy interface, ion beam mixing, RBS/AES studies 7−111696
Pt-Al system, thin film, phase formation and dissociation 7−131370
Pt-Si reaction, silicide formation, elec. meas. 7−99195
RuO_2, reactively sputtered diffusion barriers in Si-RuO_2-Al structs., thermal stability 7−112118
Si (100)/Ti-W interface, Schottky barrier height 7−112427
Si crystalline/amorphous interface, ion beam induced crystn. and amorphisation, temp. depend. study 7−84051
Si heteroepitaxy, search for geometrical lattice matching 7−84558
Si, ion implantation, formation mech. and structures of buried SiO_xNy layers 7−69726
Si, reactive sputter etching damage removal methods 7−144642
Si thin membranes, channelling transmission of protons 7−69790
Si:Ar^+(Ti^+), ion implanted, stresses and radiation damage 7−142848
Si:As, defects, Rutherford backscatt.-channelling studies 7−138579
Si:As, heavily doped, phase transformation, post-rapid-thermal annealing, TEM and Rutherford backscatt. study 7−142982
Si:As, implant electrical activation and transient enhanced diffusion during rapid thermal annealing 7−84398
Si:As, implant redistrib., activation and diffusion during rapid thermal annealing 7−86214
Si:As, ion implanted, electron beam annealing, RBS and channelling studies 7−137415
Si:As, ion implanted, low-temperature annealing 7−111601
Si:As, ion implanted, rapid thermal annealing, RBS studies 7−98211
Si:As, low implant conc. meas. by RBS microanal. 7−77733
Si:As implanted polycrystalline films on Si, epitaxial realignment by rapid thermal annealing 7−112114
Si:As^+, shallow n^+p junction formation, charcts. 7−118565
Si:As-insulator interface, implanted, impurity distrib. after annealing, RBS study 7−83991
Si:B, Harwell series II implantation RBS standards calibration 7−76170
Si:B, solid phase epitaxial regrowth, low press. CVD 7−137736
Si:B^+(BF_2^+) diffusion and elec. props. charactn. after rapid thermal annealing 7−86215
Si:BF_2 ion implantation and annealing, RBS, SIMS and NRA studies 7−76168
Si:BF_2^+ self-annealed implantation, electrical and structural characterisation 7−83989
Si:B(As) single cryst. and preamorphised wafers, implant activation and diffusion during rapid thermal annealing 7−86213
Si:Ge^+(As^+), ion implanted amorphous layers, rapid thermal annealing induced epitaxy 7−143259
a-Si:H layers, H depth profiles and impurity contents, elastic recoil detection and RBS 7−83681
Si:N^+, irrad.-induced disorder depth profiles, He^+ Rutherford backscatt. and channelling meas. 7−117987
Si:P^+ implantation self annealing and ion beam assisted recrystn. studies 7−84053
Si:P^+(Si^+) amorphous layer, ion assisted epitaxial regrowth, orientation and doping effects study 7−84052
Si:Pb, implanted, IR transient annealing, lattice disorder and impurity distrib. *(Chinese)* 7−104821
Si:Te (111), doping under pulsed laser irradiation, He^+ backscattering 7−91620
Si:Zn, implanted, impurity depth distrib., radiation damage, diffusion, RBS, channelling anal. *(Chinese)* 7−124344
Si/Cr bilayers, Cr^+ ion irrad., silicide form., annealing effects 7−76237
Si/Mo interface, $MoSi_2$ form. by ion beam mixing 7−76239
Si/Ti interface, TiSi silicide form. by ion beam mixing 7−76641
Si-Ag, O_2^+ bombardment, Ag redistribution, oxide formation 7−113329
Si-Ge multilayered structs., Bi ion range distributions 7−119085
Si-SiO_2-Si buried layer structure, formation by ion implantation and annealing 7−76637
Si-SiO_w multilayer planar structures formed by ion synthesis 7−99211
Si-Ti-As, silicidation by halogen lamp annealing, effect of As 7−99992
SiC, ion beam mixing of B, Cr and ZrO_2 layers 7−106330
SiC, surface modification by ion implantation, RBS/channeling meas. 7−71344
α-SiC:N(Cr), ion-implanted, recrystallisation 7−71222
SiC-Ti, effects of N_2^+ and Ar^+ implantation on atomic mixing and hardness 7−137421
p-SiN:F, low temp. plasma deposition, elec. props., bonding and stability 7−132480
Si_3N_4, ion beam mixing of Y and Cr layers 7−106330
a-Si_xN_{1-x}:H films, laser induced CVD, film props., deposition parameters 7−100095
a-Si_xN_{1-x}:H layers, H depth profiles and impurity contents, elastic recoil detection and RBS 7−83681
Si_xN_y, substoichiometric, ion beam assisted deposition, optical props. 7−92877
SiO_2 amorphous RF sputtered films, IR and Rutherford backscatt. studies 7−85917
SiO_2:Cs films, Cs diffusion, RBS studies 7−91898

particle backscattering continued
SiP, implantation-amorphised, recrystallisation rate during rapid thermal annealing, RBS/channelling studies 7−105308
SnO_2 films, CVD, evidence of CL removal by annealing in H_2 atmosphere, AES and RBS 7−71055
SnTe (001) surface, specularly reflected light ions, energy losses 7−124358
$TaSi_2$, low-temperature plasma anodization, RBS studies 7−113770
$TaSi_2$-WSi_2, solid solutions, phase diagrams and resistivities 7−111823
Tb-Fe amorphous films, stability of mag. props. 7−92480
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti/Si sputtered multilayers, Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti/Si thin layer system, ion implantation and struct. 7−137419
Ti/Si:As silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
Ti/SiC(Si_3N_4) systems, high-energy ion beam mixing, TEM and RBS studies 7−98269
Ti-Si_3N_4, thin film reaction 7−86666
TiC coatings, D ion bombardment, thermal cycling, fatigue, comp. analysis 7−84046
$Ti_{1-x}Nb_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
$TiSi_2$:As/Si silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
$Ti_{1-x}V_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
V, soluble and nonsoluble implanted atoms, lattice site occupation, dose effects 7−131170
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
W, proton channelling, RBS, Coulomb excitation and X-ray prod. 7−124361
W, selective deposition on $CoSi_2$ by LPCVD 7−113431
W:F-Si contact structs., LPCVD formed, F conc., thermal stability, silicide formation 7−106424
Y-Ba-Cu-O high T_c supercond., pulsed laser evaporation prep. 7−126026
Y-Ba-Cu-O high temp. supercond. film on $SrTiO_3$, epitaxial ordering, RBS and AES obs. 7−131833
YAG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
$YBa_2Cu_3O_7$ thin films, electron beam deposition, structural, supercond. props. 7−118335
YIG:Fe, implantation, thermal annealing and solid phase reepitaxy, Rutherford backscatt. study 7−142801
YIG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
YSi_{2-x}-Si, epitaxial silicide, vacuum annealing 7−124740
β-Zr, ion mixing of marker layers, thermochem. prop. effects 7−76229
Zr-Al_2O_3 interface, ion beam mixing, RBS studies 7−137428
Zr-Co multilayers, interdiffusion and amorphisation, metastable phase equilib. 7−98384
$Zr_{61}Ni_{39}$, Au diffusion, meas. in relaxed and crystallized specimens, RBS technique 7−143104

particle beam diagnostics
3 MV tandem pelletron system 7−103308
accelerator design calculations, use of IBM-PC 7−68056
analysis of beam by boundary integral equation method 7−68104
Antiproton Collector, nonlinear betratron oscillations 7−81796
beam developments for the Harwell microprobe system 7−89309
beam envelope profile of polygonal phase space in the linear field region *(Chinese)* 7−109555
beam loading on RF cavities 7−116762
beam position monitor for X-ray synchrotron radiation facilities 7−81826
beam position monitor signals with harmonic functions and their Taylor series expansions 7−135713
beam profile scanner for polarised beams, microprocessor controlled 7−74315
betatron coupling with radiation, vertical and horizontal oscillators 7−116751
betatron oscillation resonances deformation under long-range focussing 7−129505
betatron oscillations, electron beam diagnostics using Doppler-shifted radiation 7−109558
betatrons, large tune shifts and distortions, correction method 7−74297
betatrons, relativistic electron rings, kinetic equilibr. and stability props. 7−135718
bunch separation in a damping ring, RF manipulation 7−122272
bunched beam coherent instabilities 7−116753
bunched beam stability anal. in linear accelerators *(French)* 7−109581
bunched electron beam, resonances 7−81806
cavity and waveguide design by triangular mesh code URMEL-T 7−68045
CEBAF superconducting linac, multipass beam breakup simulation 7−68121
CERN accelerator school on advanced accelerator physics, Oxford, England (Sept. 1985) 7−115668
charged particle beams, emittance and brightness meas. technique *(Russian)* 7−96413
charged particle in an accelerator, general method for the Hamiltonian *(Chinese)* 7−109556
charged particle optics, conference. Albuquerque, NM, USA (May 1986) 7−128177
charged-particle identification by energy release meas. in thick scintillator 7−81902
chromatic effects and their first-order correction 7−116746
chromaticity, nonlinear aberrations 7−116747
circular accelerators, dynamic aperture calcs. 7−81798
circular accelerators, longitudinal motion 7−81791
circular accelerators, single particle dynamics, Hamiltonian formulation 7−81794
circular accelerators, transverse beam dynamics 7−81790
coasting beam in storage ring, nonlinear saturation of longit. modes 7−135720
coherent beam-beam effects with long-range interactions, theory 7−122292
colliders, effect of RF noise on bunches 7−116756
colliding electron-positron beams with negligible disruption, beamstrahlung 7−109564
computer programs, beam dynamics and EM field appl. 7−81792

particle beam diagnostics continued
computers and the design of ion beam optical systems 7−103729
cooled ion beams for physics experiments 7−89829
CP-42 cyclotron, modification for clinical needs 7−89820
CW 400 keV accelerator characteristics *(Korean)* 7−89824
density wave excitation at near-limiting currents 7−68106
double charged ion beam, energy purity for serial process ion implanters 7−104783
Dynamitron tandem accelerator, technical develop. for high energy resolution 7−74264
Eindhoven proton microbeam, beam parameter improvements 7−89812
electromagnetic railgun diagnostics 7−89848
electron accelerator, microsecond duration high current electron beam 7−122297
electron accelerators, beam dosimetry, power meas. 7−74309
electron beam current density distrib., X-ray bremsstrahlung meas. with pin-diode matrix 7−135724
electron beam diagnostics, computerised 3D meas. and anal. system 7−89859
electron beam diagnostics with computer controlled beam analyser 7−89858
electron beam dose distrib., comparison of Monte Carlo simulation and pencil beam algorithm 7−74220
electron beam hollowing instabilities simulation 7−68540
electron beam instability in longit. mag. field *(German)* 7−135699
electron beam propag. through N_2 gas, plasma generation 7−137095
electron beam transport in curved system with periodic solenoid lenses 7−135700
electron bunch dynamics, radiation losses effect 7−129507
electron cooling, theory and expt. aspects, future applications 7−116760
electron cyclic induction accelerator with constant master field, external injection 7−81840
electron linacs, beam break-up instability 7−116761
electron storage rings, equilibrium polarisation calcs. using Lie algebra 7−116741
electron storage rings, low emittance damping rings 7−122259
electron storage rings, statistical mechanics 7−81807
electron storage rings, Unruh effect and quantum fluctuations 7−74317
electron storage rings, with localised wake force sources, bunch lengthening theory 7−141344
electron stream, auto-oscillation mode of relaxation 7−129955
electron synchrotrons, polarisation and spin kinetics in stationary mag. field 7−116763
electron-beam pulse-charge meter 7−129502
EM fields, impedances and wakes in particle accelerators and storage rings 7−81803
emittance exchange in 2D charged particle beams, numerical studies 7−68110
emittance growth from charge density changes in high-current beams, ICF appls. 7−67970
emittance of intense charged-particle beams, influence of equipartitioning 7−68111
energy spreads in charged particle beams, cooling using intratarget accel. in gas cells 7−81833
epithermal and thermal neutron beamline monitor using ^{6}Li glass scintillator 7−135711
equilibrium polarisation eval. in electron storage rings 7−116744
extraction of high current deuterium ion beam with low emittance *(Korean)* 7−81823
Fermilab linac H^- beam performance factors 7−74322
field desorption meas., automatic recording of ions energy distrib. 7−134885
focused ion beams, diameter measurement 7−80932
FOFO channel, periodic soln. of Kapchinskij-Vladimirskij envelope eqn. in emittance dominated region 7−122294
Giotto heavy ion analyser PICCA 7−139887
Giotto implanted ion spectrometer characts. 7−139924
heavy ion storage and cooler ring project ESR at GSI 7−89810
heavy-ion beams, energy calibration of analysing-magnet systems 7−109582
HERA, fast luminosity monitoring 7−103324
HIBALL heavy ion ICF scenario, Xe^+ beam losses in storage ring due to charge changing 7−81766
high current beams in periodic focusing structures, emittance and field energy, 3D eqns. 7−96455
high current electron beam acceleration principles 7−141375
high tune damping rings, beam emittance 7−122271
high-current modified betatrons, improved negative mass instability dispersion relation 7−122260
high-energy proton accelerators, Moyer model approximations for point and extended beam losses 7−109563
high-transmission high-luminance energy analyzer with retarding field 7−134892
HISTRAP proposal, Heavy Ion Storage Ring for Atomic Physics 7−89811
hollowing instability triggered by avalanche ionisation of air 7−68539
image processing system for electron linac beam diagnosis 7−68082
intense ion beam in strong mag. field, compression and propag. 7−68544
intense lithium ion beam diagnostic using the inverse nuclear reaction D(^{7}Li, n)^{8}Be 7−89830
intra-beam scattering, rise times and damping times of beam dimensions 7−116757
invariant beam phase space of an accelerator *(Chinese)* 7−116723
inverse Cherenkov accelerators, gas collision effects, simulation 7−74272
ion beam, pulsed, intense, motion in sector torus mag. field 7−96418
ion beam growth due to intrabeam scattering at high energies 7−81832
ion beams, biased charge collector measurements 7−109560
ion beams, intense, neutralising electrons, thermalisation 7−110229
ion induction linac, head-to-tail velocity tilt, ICF appls. 7−81751
ion linac tuning, bunch shape measuring technique 7−68109
ion source characteristics for 400 keV CW accelerator *(Korean)* 7−89825
JET neutral particle analyser design and calibration 7−96457
Landau damping, beam interaction and beam stability 7−116752
laser focusing of high-energy charged-particle beams 7−122273
LEP Injector Linac, simulation of trajectory control, beam displacement 7−68076
LEP injector linacs, design and electron beam study 7−68122
linac long time transit cavities, beam dynamics 7−68052
linear colliders, multi-bunch instability 7−122255
longitudinal dynamics in storage rings, single-particle equations of motion 7−141341

particle beam diagnostics continued
longitudinal transit time factors of short independently phased accelerating structures for low velocity ions 7−116740
Los Alamos ATs, longitudinal emittance meas. 7−74278
magnetic multipoles, nonlinear dynamics 7−81795
magnetic quadrupole transport line, beam transport with space charge compensation 7−68107
magnetised plasma, local particle diffusion coeff. meas. 7−130935
many-dimensional Hamiltonian systems 7−81802
Maryland Transport Experiment for ICF beams, off-centred beam results 7−67971
microwave Cherenkov radiation as a diffraction phenomenon 7−89849
microwave ion source, beam energy spread meas. 7−96449
Milan superconducting cyclotron, extraction system, beam phase space characts. 7−122265
mirror analyser/quadrupole mass spectrometer for plasma processes 7−137128
Moellenstedt energy analyser dispersion and resolution 7−102565
monoenergetic polarised neutrons, flux and polarisation 7−135709
multiparticle phenomena and Landau damping 7−81805
multiple-measurement beam probe 7−74323
neutral circular beam of relativistic particles, electric field intensity *(Czech)* 7−129486
neutron beam, collimated, space-time props. 7−81829
noninterceptive wideband pickups for low intensity RF beam diagnostics 7−89841
nonlinear behaviour, one degree of freedom 7−81801
particle tracking in solenoid channels using TRACK2D code, ICF appls. 7−81785
particulate acceleration problems, micrometeorite simulation 7−104877
path profiles determ. of implanted ions, by atomic probe 7−102567
permanent magnet quadrupole lenses, appl. in linac beam transport and focusing *(Chinese)* 7−103302
plasma beat wave saturation, simple model 7−122231
polarisation origin and buildup in storage rings 7−116743
ponderomotive confinement of ion beams in a cylindrical waveguide 7−81786
position sensitive detector development for accelerator beam control 7−81862
positron beam production in Giessen linac, characteristics 7−74265
propagation characteristics of intense relativistic electron beam *(Korean)* 7−89826
proton beam average energy meas. by two-cone and differential Cherenkov methods 7−129520
proton storage rings, applications of particle tracking 7−116764
proton synchrotron, induced radioactivity and relation to beam losses 7−109585
proton synchrotron, space charge effects, tune shifts and resonances 7−81797
proton synchrotrons, polarisation and spin kinetics in stationary mag. field 7−116763
PS-booster, coherent betatron oscillation accompanying the extraction bump orbit 7−122263
pulse beam charge monitor for charged particle accelerators 7−122296
pulsed RF signals, fast on-line meas. 7−74277
rebatron, acceleration process anal., beam dynamics 7−122261
relativistic beam energy change through nonuniform linearly polarised EM field 7−122298
relativistic electron beams, propagation in nonconducting vacuum drift tube and through plasma source 7−109559
relativistic electron rings or layers azimuthal instabilities, particle in cell simulation 7−122295
RF acceleration and synchrotron motion 7−116748
RFQ accelerator using split coaxial resonator with four rod structure 7−68051
RFQ linac TALL, field tuning and beam test 7−68115
RFQ linacs with constant inner aperture and modulation 7−68050
RMS emittance growth, mechanisms and time scales, ICF appls. 7−81782
Schottky noise and beam transfer function diagnostics 7−116758
self-polarization of protons in storage rings 7−81825
SLAC low emittance Accelerator Test Facility 7−74287
SLC, beam-beam deflections as an interaction point diagnostic 7−68078
SLC, wakefield effects 7−81808
SLC energy spectrum monitor using synchrotron radiation 7−68119
SLC final focus, beamstrahlung monitor using γ-ray energies 7−68079
SLC final focus, beamstrahlung monitor using visible wavelengths 7−68080
solenoids, emittance degradation dependence on beam ang. momentum 7−141373
SPAC-VI toroidal device, relativistic electron beam ring, X-ray bremsstrahlung 7−130917
SPAC-VII toroidal device, relativistic electron rings 7−130916
space charge dominated beam transport 7−116754
space-charge dominated beams, internal dynamics and RMS emittance growth 7−122293
space-charge dominated beams, transverse combination simulation, emittance growth, ICF 7−81783
SPS, peak luminosity and luminosity lifetime 7−81774
sputter depth profiling of solid surfaces, scanned ion and neutral beams diagnostics 7−109561
stochastic cooling, diagnostic methods 7−116759
storage ring, ion trapping, differences between uniform and partial bunch fillings 7−74295
storage ring coherent instability modes 7−81804
storage rings, beam-beam effects 7−116749
storage rings, dynamics of area-preserving maps 7−81800
storage rings, electron dynamics with radiation and nonlinear wigglers 7−116730
storage rings, radiative polarisation of electrons and positrons 7−89822
strongly curved supercond. mag. effect on storage ring optics 7−89842
summer school, physics of particle accelerators, Stanford, CA, USA (Aug. 1984 and July 1985) 7−80145
synchrobetatron sideband overlap in electron-positron colliding beams 7−81799
synchrotrons, nonlinear resonances, Hamiltonian dynamics 7−116729
synchrotrons, synchro-betatron resonances 7−116750
tandem electrostatic accelerator, system for measuring the energy spread of an accelerated beam 7−116724
TEAPOT, thin-element accelerator program for optics and tracking 7−141383

particle beam diagnostics continued
TEAPOT tracking code, Lie algebraic maps and invariants 7−141382
time-of-flight ion charge state diagnostic 7−141385
transition radiation diagnostics for intense charged particle beams 7−89846
transport system design with arbitrary config., computer program 7−68116
transverse wakefield effects in 1 cm structures 7−122251
two beam accelerator, stochasticity and resonances 7−122247
unified formulation for linear accelerator design 7−74290
UNILAC as a fast switching, variable ion and energy accelerator 7−68048
Unilac beam profile grid electronics high performance design 7−74318
UNILAC universal electronic phaseshifter for time-sharing operation 7−74319
wake fields, impedances and Green's function 7−116755
D_1^+-D_2^+-T_1^+ ratio, obs. in deuteron accelerator using TOF technique 7−109587
H atomic beam, low-energy neutral particle analyser for plasma expts. 7−80926
H^- beam form. in reflex systems diagnostic study 7−122276
He^+ beam, emittance and current meas., matching with periodic electrostatic quadrupole channel 7−81830
He^+ beam, transport through periodic electrostatic quadrupole channel, current limits 7−81831
Li, neutral beam production, high temp. plasma probing appl. 7−80933

particle beams
see also atomic beams; beam handling techniques; electron beams; ion beams; molecular beams; particle beam diagnostics; particle optics
charge-neutral beams injection into space plasmas, ambient plasma environment response 7−134123
charged, fast Monte Carlo simulation 7−74824
charged particle beam, space charge effects, statistical dynamics theory 7−74826
charged particle beam scatt. by electrostatic grid electrodes 7−68505
deflectron with plane electrodes, pot. distribs. study 7−68538
electrostatic transaxial mirror objective, geometric aberration coeffs. calcs. 7−68537
EM interaction between charge-particle beams and environment 7−136187
envelope profile of arbitrary config. phase space in linear field *(Chinese)* 7−96415
irreversible beam dynamics in phase space, generalized Langevin eqn. *(Chinese)* 7−96416
magnetic particle beams, focusing by transaxial mag. fields *(Japanese)* 7−129951
neutron beam, collimated, space-time props. 7−81829
relativistic beam bunch length in storage ring, vacuum chamber struct. interactions *(Japanese)* 7−129950
relativistic particle beams, curvature instability in strong mag. field 7−136186
transmission lines, magnetically insulated, energy losses due to microparticles 7−104424

particle counters *see counters*

particle counting
counting of microscopic particles in disperse systems (aerosols, colloids etc.)
aerosols, electrooptical spectrometers, metrological support 7−73431
fine particles, fractal dimensions, image anal. 7−128732
ionizing particles, surface discharge in amorphic samples *(Polish)* 7−141393
optical particle counters, count variance evaluation *(Japanese)* 7−89314
vacuum arcs, high current, particle and vapour density meas. by laser techniques 7−69528

particle detectors
see also ionisation chambers; particle track visualisation; position sensitive particle detectors
accelerators in research and industry, conf., Denton, TX, USA (Nov. 1986) 7−88733
adiabatic demagnetisation cryostat for ionising radiation detector development 7−121131
alpha-particle emission from contaminants in counter materials 7−81867
conf., Sandhamn, Sweden, June 1986 7−95109
DELPHI interactive anal., TANAGRA buffer processor 7−135806
evolution as particle accelerators have evolved 7−74338
Faraday cylinder-calorimeter system for beam dosimetry in high-power electron accelerators 7−74309
front ends for large detector system, fast signal calibration 7−81907
gas sampling electromagnetic calorimeter using conductive plastic tubes 7−109605
hadron calorimeters, energy resolution of uranium and other absorbers 7−135739
high-energy nuclear collisions, detectors 7−67860
homogeneous modular calorimeters, incident coords. determ. for $e^{\pm}$, γ *(Spanish)* 7−109666
ionising radiation and luminescent detectors, conf., Tallin, USSR (April 1985) 7−128172
large capacitance detectors, dependence of transformer ratio on the shaper weighting function in transformer-coupled low noise preamplifiers 7−141404
large detectors, software design 7−135734
large solid angle detection system for heavy fragments 7−135743
large solid angle magnetic detector for precision studies of e.m. processes in low-energy $\bar{p}$ interactions 7−135738
neutron detector efficiency and flux, simultaneous meas. 7−96482
nuclear power systems symposium, Washington, DC, USA (Oct. 1986) 7−66813
optical track detectors, calibration of automated meas. systems 7−89862
optimum weighting functions, energy resolution improvement from input shunt inductor 7−135773
particle-γ angular correlations, gamma detectors efficiency 7−81897
PETRA, short-lived particle meas., detectors and anal. techniques 7−135788
physics of particle detectors 7−89821
pile-up effect, clip method for rejecting small pulses 7−68158
prompt response self-powered neutron detectors, thermal and epithermal sensitivities 7−129533
quasi-adiabatic calorimeter for high-intensity electron beams 7−116788
relativistic heavy-ion collisions, event simulation for the WA80 experiment 7−67862

particle detectors continued
relativistic heavy-ion experimentation, detector issues 7−67856
response, adjoint versus forward solution of anisotropic transport problems 7−73296
response functions, removal of Compton scattered γ-rays from γ-ray spectra 7−116802
self-powered neutron detectors, prompt response, effective charge per neutron captured 7−129532
self-powered Rh neutron detector, depletion characts. 7−103340
single particle calorimeters, pulse shapes 7−109608
Stanford octagonal magnetic monopole detector 7−135736
superconducting induction detectors for cosmic-ray monopole detection 7−134140
thermoluminescence sheets, spatial distribution readout system 7−109667
transition radiation detectors using superconducting granules 7−122303
transmission surface barrier detectors, noise and breakdown phenomena *(Chinese)* 7−81875
ultra-relativistic heavy ion collisions, issues of calorimetry 7−67859
ultrarelativistic nuclear collisions, detectors 7−68146
VENUS detector, excitation of a superconducting large thin solenoid magnet 7−129515
vertex detection and tracking at future accelerators, vertex reconstruction 7−96485
VMEbus interface for spectroscopy ADCs 7−116806
WIMPs superheated superconducting detector 7−129513
$\bar{p}p$ collider results and detectors, W, Z and heavy flavour physics 7−95945
HgI_2 detectors for thermal n studies 7−96474
Rh self-powered neutron detectors for PWRs, improved dynamic compensation algorithm 7−67932

particle focusing *see focusing; particle optics*

particle lenses, electrostatic *see electrostatic lenses*

particle lenses, magnetic *see magnetic lenses*

particle optics
see also aberrations; beam handling techniques; electrodynamics; electron optics; ion optics; particle beam diagnostics
achromatic radial wedge systems 7−129953
beam dynamics, method of power series tracking 7−141368
beam ellipsoid, effects of dipole magnet inhomogeneities using RAYTRACE code 7−129501
CERN accelerator school on advanced accelerator physics, Oxford, England (Sept. 1985) 7−115668
charged beams, fast Monte Carlo simulation 7−74824
charged particle beam, multiple slit focusing-deflection lens 7−136185
charged particle beam transport system design, matrix methods *(Czech)* 7−116739
charged particle optics, appl. to signal flow graph method 7−136190
charged particle optics, conference. Albuquerque, NM, USA (May 1986) 7−128177
charged particle trajectory calc., Runge-Kutta and Adams methods compared *(Russian)* 7−74823
chromatic effects and their first-order correction 7−116746
chromaticity, nonlinear aberrations 7−116747
circular accelerator design, optics modules 7−141370
circular machines, optics principles for design 7−81793
corpuscular optical systems, transfer matrix calcs. using COSY 5.0 code 7−129496
cylinder lenses and einzel lenses, calculation method using transfer matrices *(Chinese)* 7−89806
deflectron with plane electrodes, pot. distribs. study 7−68538
electron colliders, final focus and beam alignment using particle bunches as lenses 7−122274
electrostatic transaxial mirror objective, geometric aberration coeffs. calcs. 7−68537
Hamiltonian equations of motion, solution using HAMILTON program 7−129494
imaging properties using Hamiltonian magnetic optics 7−129495
Lie algebraic methods for Hamiltonian systems 7−129492
magnets with nondipole field components, design 7−141369
matrix algebra appl. to beam optics solution *(Slovak)* 7−129949
multilayer interference systems, neutron energy bands 7−82450
neutron curved-crystal three-axis spectrometers, optics 7−83587
neutron microscope, image detection 7−67456
neutron optical imaging system, search for neutron charge 7−81819
neutron optics, divergent beam dynamical diffr. and coherence props. calcs. 7−90492
neutron-mirror microscope with magnetic compensation of gravitational distortions 7−116041
periodic achromatic, aberrations study using Lie algebraic techniques 7−129493
quadrupole focusing systems, space-charge and third-order aberrations 7−141376
reference trajectory continuity and midplane symmetry 7−129500
RF acceleration and synchrotron motion 7−116748
transfer matrix for trajectories of charged particles between concentric spherical equipotential surfaces 7−110223
Wien filter first-order transformation matrix derivation 7−141374
X-ray synchrotron radiation monochromators, diffraction props., optical systems and dynamical theory 7−128729
Fe-Ag neutron-polarising supermirrors 7−74827
H^- polarized ion source using cooled polarized atomic beam 7−141356

particle range *see energy loss of particles*

particle reinforced composites
see also filled polymers
bronze-ferrochrome composite, comp. and prod. conditions effect on mech. and tribotech. props. 7−78267
bronze-ferrochromium composites, comp. influence on tribotech. characts. 7−119385
ceramics, chemically bonded, new strong cement materials 7−113502
diamond-glass composite processing in a microgravity condition 7−71143
glass fibre/ZrO_2 particle reinforced epoxy, hybrid composite, fatigue life study using US technique 7−78172
glass fibres, mechanical props. rel. to Al dispersoids 7−113620
graphite particle reinforced Al-Ni, cast, deform. into wires 7−126203
graphite particle reinforced Al-Si-Cu alloy, cast, corrosion characts. in different environments 7−93140
laminated and reinforced metal composite manufacture and properties *(Spanish)* 7−86094
sintered polydisperse system, dimensional effect in percolation processes 7−76864

particle reinforced composites continued
Al_2O_3-ZrC composites, pressure sintered, mech. props. 7−86119
$Co_{70.5}Fe_{4.5}Si_{10}B_{15}$, Cr_2O_3 and ZrO_2 particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
Cu based powder composites, tribotech. characts. in high-speed friction 7−78262
Cu-graphite materials for sliding elec. contacts, struct. and tribotech. characts., particle content and dimens. influence 7−119384
$Fe_{78}Si_{10}B_{12}$, WC particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
$MgCr_2O_4$-ZrO_2 composites, fracture surface energy rel. to ZrO_2 inclusions 7−132728
Ni/graphite composite coatings, electroless deposition, friction and wear characts. 7−144318
$Ni_{78}Si_{10}B_{12}$ metallic glass, dispersed with μm sized WC particles, yield stress 7−113607
Si particle reinforced Si_3N_4, fracture toughness and strength 7−78150
SiC fibre and particle reinforced Al composites, mech. props. 7−138819
SiC fibre reinforced Al-Cu matrix composites, mech, props., struct. *(Japanese)* 7−78112
SiC particle reinforced Al-Mg-Fe, internal stress/strain, X-ray diffr. study 7−86197
SiC particle reinforced Al-Zn-Mg, high strength, powder metallurgy, superplasticity 7−100303
SiC particle reinforced Al-Zn-Mg composite, thermal cycling induced internal stresses, plastic deform. 7−132687
SiC particle reinforced Al alloys, stiffness, strength, struct. 7−138787
Si_3N_4 matrix based ceramics, strength, fracture toughness 7−78157
TiB_2 particle reinforced SiC, hot-pressed, mech. props. and oxidation behaviour 7−78147
TiB_2 particle reinforced SiC, microstruct. and material props. 7−78148
ZrO_2:Y_2O_3 polycrystals, Al_2O_3 and SiC particle dispersed, thermal stability, mech. props. 7−78183

particle scattering *see collision processes; energy loss of particles; particle backscattering; potential scattering; radiation effects; transport processes*

particle separators
exotic nuclei, isotope separation with LISE 7−122301

particle size
acrylonitrile-butadiene random copolymer, particle size distrib. prediction 7−117834
aerosols (book) 7−108058
airborne particle measurements near Kinleith, New Zealand 7−86860
atmosphere aerosols, conc. and size distrib. function, vertical distrib. over tropics 7−139758
atmosphere aerosols, morphology and size distrib. of particles deposited on foliage and inert surfaces 7−101387
atmosphere aerosols, size distrib., visibility and radiative characts. 7−94434
atmosphere aerosols, size distrib. and total conc. in Tokyo *(Japanese)* 7−145647
atmosphere aerosols, size distrib. and total conc. in Tokyo and other places *(Japanese)* 7−145648
atmosphere aerosols, size distribs. in E Greenland Sea marginal ice zone 7−133841
atmospheric aerosol, sizes of particulate sulphate and nitrate 7−78700
atmospheric particle size distrib., extinction and backscatt. coeff., refractive index influence 7−94432
bisphenol-A diglycidyl ether epoxy resin, particle size distrib. prediction 7−117834
ceramic powders, morphology 7−92906
cloud condensation nuclei, effect of detector size limit on Twomey-type CCN counter performance 7−115062
coal, heterodisperse suspensions, of fine particles, flocculation 7−93386
coarsening theory with log-normal distrib. 7−113464
P/Comet Halley (1982i), dust size distrib. heuristic model 7−115317
comets, dust coma particle sizes 7−72364
continuous dissolution processes analysis by population balance techniques 7−98465
diamond, polycrystalline sintered compacts, microstruct., phase form. at high temp. and press. 7−111768
disperse particles, Fermi energy and electrostatic interaction force size depend., electron level density calcs. 7−98778
dust grains in protostellar cocoons, size distrib. rel. to conditions for massive stars form. 7−145940
electrophotographic toner powder, charge, electrostatic meas. 7−67411
ferrofluid, Mossbauer study of superparamag. amorphous alloy particles 7−118923
ferrofluid, water-based, fractionation 7−77376
ferrofluids, complex susceptibility, rotational Brownian motion 7−77378
ferromagnetic particles, growth from cation reduction by borohydride ions 7−105967
flocculated suspensions, floc breakage, dynamic response of particle size distrib. 7−93385
fracture, transgranular cleavage, independent roles of particle and grain size, stochastic modelling 7−98328
graphite-supported Pt particles, catalysts, X-ray diffr. evidence of preferential orientation 7−118218
ice crystal size distribs. in continental cumulus clouds, determ. for seeded and nonseeded clouds 7−145628
Inconel 718, Ni-base superalloy, steady-state creep deform. 7−86276
interplanetary dust, grain radii in solar F-corona from radial vel. obs 7−79914
interstellar dust, grain-size depend. of far-IR extinction spectra of amorphous fine grains 7−120549
interstellar grains, effect of size distrib. on extinction by spheroidal absorbing grains 7−72563
interstellar grains, extinction efficiencies for submicron amorphous C grains in 100 nm to 300 μm wavelength range 7−140212
interstellar grains, size distrib. rel. to density-depend. abundance depletions 7−88580
interstellar grains, size distrib. rel. to IRAS surface brightness maps of Pleiades reflection nebulae 7−115548
ionic ferrofluid, optical props. 7−77505
laser aerosol spectrometers, calibration 7−73438
latex particles, seeded, emulsion polymerised, morphology, small-angle neutron scatt. obs. 7−91482
liquid phase sintering, agglomeration, capillary forced between spheres 7−71104
loess-like red-yellow soil of SW coastal Korea, grain sizes compared with loess of China and Japan 7−139653

particle size continued
marine bubbles, size spectrum meas. between wave trough and wave crest levels 7−94272
marine sediments, particle size distrib. in bottom sediments of Bombay harbour bay 7−139586
metal droplets, atomised, solidification, nucleation catalysed by spherically-shaped oxide particles 7−119262
metallic glass, comminution mechanisms of amorphous alloys, effects on mag. charact. 7−77873
metallic particles in infinite dielec. medium, surface plasma oscills. spectrum *(Russian)* 7−84616
metallic small particle aggregates, optical absorpt. calcs. in quasistatic limit 7−99785
metallographic images, phase particle classification using shape descriptors 7−78404
meteoroids from Comet Bennett (1970 II), size distrib. rel. to contrib. to zodiacal dust cloud 7−145875
methane frost on Pluto, particle sizes from methane absorption vars. 7−134178
mixed particle size distribution effects on heat transfer in a fluidized bed 7−69259
Ostwald ripening, correlations, diffusive interactions effect 7−124526
particulate matter suspension from tailings disposal area, particle size anal. 7−101378
Pleistocene sediments of Lake Biwa, Japan, grain sizes rel. to time vars. of erosional force 7−145560
polyester, sand filled, fracture toughness, effect of filler size and matrix props. 7−106610
polystyrene, polybutadiene toughened, yield stress, rubber particle size effect 7−106573
powder, fine, autohesion and limiting shear resistance rel. to temp., particle size and press. 7−77861
powder, particle size assessment with allowance for particle shape 7−77858
powder compacts, unequal sized particles, hot isostatic pressing, densification mechanism maps 7−71105
powders, contact surface area, rel. to interaction of mixtures 7−86074
protostellar cloud, charged dust particles distrib. 7−88563
refractory carbide powders, plasma metallising 7−126043
rock weathering products in maritime Antarctic, size range rel. to freeze-thaw weathering studies 7−87612
rubber, modulus, gel effect, physical model 7−104890
Saharan aerosols, optical thickness and size distribs. 7−133827
segregation of particulate matter by size, on shaking 7−73220
β'-sialon powders, derived from aluminosilicate minerals, densification behaviour 7−138726
sintered polydisperse system, dimensional effect in percolation processes 7−76864
sintering, stresses, distortion and damage due to heterogeneities 7−71107
sintering rate, particle size distrib. effects, comment 7−119185
sintering rate, particle size distrib. effects, reply to comment 7−119186
spherical metal powder production by rotating electrode process 7−126046
spheroidal mag. particles, dilute polydispersive suspension, mechanical description 7−75683
steel, cooling from solidification, intergranular sulphide precip. 7−93019
steel, HSLA, intercritically annealed, martensitic transform. of retained austenite, AE study 7−113548
steel, HSLA, VC coarsening kinetics 7−126123
steel, melt extracted fibres and particulate, prod., props., and appls. 7−92934
steel, Mn-Cr-Si, dual-phase, tensile stress-strain anal. 7−126190
steel, rapidly solidified particulate, sintering, consolidation and struct. studies 7−92917
supported metal particle surface plasmon excitation with external electron beam, EELS 7−132392
supported metal particles, generation of surface plasmon excitation by external electron beam 7−132393
surface energy measurement method 7−70063
transition metal carbides, powder spheroidisation in low temp. plasma 7−86102
turbulent Couette flow, floc stability study *(German)* 7−75531
two-phase refractory powder mixtures, densification behaviour during sintering 7−77926
water-insoluble particles in rain water over suburban area 7−133153
Ag interlayers in polyimide film, sintering process and charactn., laser writing appl. 7−119187
AgBr microcrystals, size effect on spectral absorpt. of photochem. colouring centres 7−77613
Al alloy, eutectic binary, automatic description of microstruct. 7−78404
Al materials, wear resistance improvement *(German)* 7−126264
Al powder, sintering characts., effects of oxidation 7−144339
Al-Cu powder compacts, particle size effect on vol. changes during liq. phase sintering 7−119197
Al-Li-Cu-Mg-Zr alloy powders, rapidly solidified, gas-atomised solidification microstructs. 7−86150
Al-Pb, coarsening kinetics 7−71196
Al_2O_3 ceramic, crack resistance rel. to struct. development 7−113704
γ-Al_2O_3, prep. of ultrafine spherical particles by burning of Al powder 7−126069
Al_xO_y-Pb sputtered, duplex, anomalous elec. resist. behaviour 7−105729
BN, ultradisperse, amorphous, adsorption of H_2, N_2 and NH_3 7−76000
BaB_6-LaB_6 solid soln. based thick films, powder dispersion effect on electrophys. props. 7−77927
$BaFe_{12}O_{19}$, ferrite, prep. by liq. mix technique, charactn. 7−86111
$BaFe_{12}O_{19}$ particles prep. by glass crystn. method 7−86104
$BaTiO_3$ commercial powder, centrifugation and fast firing 7−100167
Bi, island film struct., redistribution of atoms on heating 7−92022
$Bi_4Ti_3O_{12}$, preparation from Bi and TiO_x, in presence of molten NaCl and KCl 7−92848
$CoFe_2O_4$ ultrafine ferrite particles, mag. props. 7−77373
CrO_2 particles for magnetic recording, improved prep. method 7−86105
Cu powder, produced by autoclave method, surface-active agents effect on props. 7−77878
Cu-graphite materials for sliding elec. contacts, struct. and tribotech. charcts., particle content and dimens. influence 7−119384
$(Cu\text{-}M)_{100-x}(Pb_{0.6}Bi_{0.4})_x$, M=Al, Si or Sn, rapidly quenched alloys containing immiscible Pb and Bi elements, microstruct. and supercond. props. 7−99255
$Cu_{35}Ti_{65}$ metallic glasses, crystalline particles, deform.-induced amorphisation 7−111417
Fe fine particles, prep. mag. props. 7−125477
(Fe, Mn)WO_4, wolframite, spherical agglomeration of particles from dispersion 7−93468
Fe ultrafine particles in Fe-SiO_2 granular solids, spontaneous magnetisation, temp. depend. 7−125475
Fe-based amorphous and cryst. materials, produced by spark erosion, microstruct. and props., effect of quench rate 7−119202
Fe-Fe_2Ti system, transient liq. phase sintering, strength, elongation 7−77864
Fe-Ni mag. fluids, prep. and props. 7−77374
Fe-rare earth-B powder oxidation during permanent magnet prep., DSC study 7−132804
Fe_3C-dispersed C, synthesised from ferrocene, vinylferrocene and divinylbenzene systems, mag. props. 7−77853
α-Fe_2O_3 annealed submicronic monodispersed particles, Morin temp. particle size depend. meas. 7−85290
γ-Fe_2O_3 powders for mag. recording, surface props. 7−84482
γ-Fe_2O_3:Co^{2+},Zn^{2+} acicular particles, mag. props. modification 7−85371
γ-Fe_2O_3-Fe_3O_4 films, pyrolysis prep., Mossbauer and Faraday rot. study 7−85387
Fe_3O_4 particles in ferrofluid, initial suscept. meas., 80-300 K 7−125474
Fe_3O_4, ultrafine ferrite particles, mag. props. 7−77373
Ge-Sn(Pb)(In), rapidly quenched, unusual elec. resist charact. 7−70335
KCl:Ca powders, γ-irradiated, Z_1 centres growth, particle size depend. 7−76209
$KTa_{1-x}Nb_xO_3$ powders, prep. by sol-gel technique from metal alkoxides 7−100169
$LaNi_5$, dedeuterided, strain and particle size broadening in Rietveld refinement of neutron diffr. pattern 7−83848
$LaNi_5$-H_2 system, intrinsic degradation, thermal H_2 absorption-desorption cycling effects 7−86839
$LaNi_5D_{6.7}$, cryst. struct. determ., neutron powder diffr. data refinement using modified Rietveld method 7−83887
MFe_2O_4 ferrites (M=Mg, Mn, Fe, Co, Ni, Zn), ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
$MnFe_2O_4$, ultrafine ferrite particles, mag. props. 7−77373
$Mn_{1-x}Zn_xFe_xO_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7−77912
NaCl microcrystalline powder, colloid formation 7−111552
$NaNO_2$, ferroelectric, paraelectric transition, surface charge layer effect *(Korean)* 7−143983
$NaNO_2$ powder, ^{14}N NQR, particle size and stress depend. studies 7−92542
NbN-AlN system, sintered composites, elec. cond. rel. to dispersion of initial components 7−77928
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7−131973
Ni-Pd based glassy alloy, crystallisation, particle size 7−83759
Pt particles, CO, H_2 and NO temperature programmed desorpt., particle size depend. study 7−143203
SiC powders, hot isostatic pressing sintering without additives *(Japanese)* 7−126063
SiC powders, prep. by RF plasma *(Japanese)* 7−119222
SiC whisker reinforced Al_2O_3, sintered, fabrication 7−77916
SiC-Si_3N_4 system, composite particles prep. by vapour reaction method *(Japanese)* 7−113504
Si_3N_4 powders, prep. by RF plasma *(Japanese)* 7−119222
Si_3N_4 powders, prep. methods 7−77913
$SnO_2(H_2O)_n$, Raman light scatt. spectra, size effects 7−119020
$Sn_{33}Pb_{67}$ disperse system, mag. field, influence on superconductivity 7−70471
$TaH_{0.58}$-graphite, electrical explosion in water, phase composition of products 7−93330
TiB_2-TaB_2-CoB hot pressed bodies from fine powders, transverse rupture strength *(Japanese)* 7−93099
TiC-TiB_2 two-phase powder mixtures, densification behaviour during sintering 7−77926
TiN, high-temp. synthesis from nitriding of Ti and TiH_x powders, struct. of particles 7−119221
TiO_2 particles, prep. by wire exploding method *(Japanese)* 7−126071
W powder, particle size rel. to oxide phase precursor 7−132523
W-Cu pseudoalloy, sintered, failure features rel. to processing conditions 7−78208
W-K powder, particle size and internal strain meas., X-ray methods study 7−100147
WC-Co, sintering, grain growth rel. to inhomogeneous milling 7−71136
YAG:Ce phosphor powders, prep. 7−71102
ZrO_2, MgO partially stabilised, milling, cast microstruct., sinterability 7−100158
ZrO_2, Y_2O_3 partially stabilized powders, effect of spray pyrolysis conditions *(Japanese)* 7−119227

particle size measurement
aerosol detector using pre-onset positive corona pulses, particle size meas. 7−78560
aerosols, particle size meas. via isokinetic sampling train using emission gas recycle 7−101521
automatic counter for particles suspended in a liquid 7−123793
AUTOSCOPE P from Leitz for automatic particle analysis 7−102516
average particle size meas. in emulsions and suspensions, wide-range meter 7−102386
calcium oxalate crystallisation, supersat. generated employing reverse osmosis 7−142671
cloud drops, aircraft flow effects on drop images and concs. meas. by NAE Twin Otter 7−127367
coal fly ash particle characterisation by micro-surface analytic techniques 7−78591
distribution determination from small-angle scattering data, histogram technique 7−67277
drop sizing instruments, performance comparison 7−80727
droplet size meas. techniques, comparison of Malvern laser-diffraction and Aerometrics phase/Doppler techniques 7−108510
droplet sizing interferometry comparison of visibility and phase/Doppler techniques 7−108509
electrophotographic powder electrostatic props., 3D meas. method 7−73452
fat emulsions, parenteral, particle size determ. using SEM method and fixation procedure 7−139419
fibre optic miniature probe for particle sizing 7−123235

particle size measurement continued
granulometric study of pyroclastics, discriminate top hat transformation and algorithm of erosion 7−94514
high purity gases, particle origin determ. techniques 7−139070
holography, far-field, at non-image planes, small particles analysis 7−117163
laser cross-correlation spectrometer based on Kh6-4 correlator 7−121236
laser diffraction spectrometry, Fraunhofer diffraction and Mie scatt. 7−108519
laser Doppler anemometer meas. vol. size, automatic calibration 7−117685
Malvern Particle Sizer, model-independent inversion programme 7−128532
multiphase flow, spherical particles size and velocity meas. 7−123806
oil-water dispersion, particle size distrib. meas. using image processing 7−126489
optical array spectrometers with greyscale for precipitation meas. 7−115079
particle counter for rapid determination of size distributions 7−134716
powder, particle size assessment with allowance for particle shape 7−77858
sieving of test samples, error reduction 7−128533
snow, IR meas. of free-water content and grain size 7−114834
soot particles in flames, light scatt. meas. techniques 7−113935
soot particulate, agglomerated, particle size, Rayleigh scatt. 7−100625
spectrophotometry, particle size and numerical density determ. *(Japanese)* 7−67283
thermal spray powders, retesting schemes 7−77800
volume magnification in particle field holography 7−110297
water droplet size measurement in steam turbine using optical fibre system 7−67284
$Co_{1-x}Zn_xFe_2O_4$ magnetic pigments, particle size distrib. meas. by TEM 7−85378
CrO_2 magnetic pigments, particle size distrib. meas. by TEM 7−85378
γ-Fe_2O_3 magnetic pigments, particle size distrib. meas. by TEM 7−85378
Sb clusters produced by inert-gas aggregation, time-of-flight spectrometry study 7−108694

particle sources
see also electron sources; ion sources; neutron sources; radioactive sources
accelerators in research and industry, conf., Denton, TX, USA (Nov. 1986) 7−88733
antiprotons trapping and cooling 7−74327
pion physics at the meson factories 7−89856
pulsed high-intensity source of polarized protons 7−81824
Rabbit capsule, irradiation and design techniques 7−89857
slit pulsed valve for generation of long-path-length supersonic expansions 7−97567
B factory, e^+e^- linear collider 7−122253
γ-sources, large-area, calibration using γ-ray spectrometer 7−135697
H atomic beam source, with cooling and transition Teflon tube sections 7−80935

particle spectrometers
see also alpha-particle spectrometers; beta-ray spectrometers; electron spectrometers; gamma-ray spectrometers; neutron spectrometers; X-ray spectrometers
achromatic spectrometer LISE at GANIL 7−109596
air-core superconducting solenoid as nuclear-reaction-product spectrometer, tests 7−141389
angular characteristics of charged particle spectrometer and scattering chamber 7−81844
ASTROMAG, superconducting particle astrophysics magnet Facility for NASA Space Station 7−134141
Beijing QDDD spectrograph, reoptimising calc. using RAYTRACE calc. *(Chinese)* 7−116766
Bragg peak spectroscopy of low-energy heavy ions 7−109598
CDF forward/backward hadron calorimeter using proportional tubes 7−68131
detection limit determination in spectroscopy 7−135728
eight-channel gas threshold Cherenkov counter for GIPERON spectrometric system 7−81881
electrostatic energy analyser, cylindrical, construction and characteristics 7−102450
European hybrid spectrometer, performance, charm detection 7−116775
exotic nuclei, isotope separation with LISE 7−122301
Fermilab tagged photon spectrometer facility, performance of Cherenkov counters 7−135729
FRAMM spectrometer, vertex detector geometrical reconstruction program 7−74380
gas telescope detector, UHV compatible for depth profiling 7−135732
large Bragg curve spectrometer, performance 7−81842
large solid angle tracking of Monte Carlo events of heavy ion collisions in TPC magnetic spectrometers 7−68128
LISE magnetic spectrometer at GANIL, identification of exotic nuclei 7−81849
Omega Spectrometer ring imaging Cherenkov detector, detector modifications and event anal. 7−68130
perturbed angular correlation spectrometer, microcomputer-controlled 7−141390
Phobos spacecraft plasma spectrometer with solar power generator 7−145828
proton spectrometer for energy spectra under ICRF heating in JET 7−91371
NaI(Tl) scintillation spectrometer stability at high count rates 7−81846

particle track visualisation
see also bubble chambers; cloud chambers; nuclear track emulsions; scintillation chambers; spark chambers; streamer chambers
dielectric track detectors, heavy nuclei registration time determ. 7−81878
emulsions, scanning efficiency formula, modification 7−81850
Fricke dosimeter as one-hit detector, track theory 7−89785
glasses, thermoluminescence energy yield, ion track studies 7−132348
ionising radiation and luminescent detectors, conf., Tallin, USSR (April 1985) 7−128172
Muscovite mica detectors, reaction product parameters determ. 7−135756
particle track fitting using constrained nonlinear least squares method and CNFIT program 7−140440
phosphate glass detectors, annealing of relativistic nuclei tracks 7−135758
porous glass microsphere prod. by nuclear track technique 7−89877
Tuffak nuclear track Rn detector 7−139371

particle track visualisation continued
video-based automatic method to measure charges in nuclear track emulsions 7−109617
videoelectronic system for heavy ion microscopic track struct. meas. 7−141391
Th, fissionable element anal., fission track method *(Romanian)* 7−141110
U, fissionable element anal., fission track method *(Romanian)* 7−141110
YAG:Ce, ionising particle tracks, activator effects 7−129517

particle tracks
see also energy loss of particles
No entries

particle velocity analysis
see also energy loss of particles; ion mobility; mass spectrometers; particle spectrometers
AC corona charging of particles, mobility statistics meas. 7−69499
molecular beam diagnostics, using CAMAC time-of-flight analyser 7−103689

particles, elementary *see elementary particles*

parton model
$ae^+e^- \rightarrow$ jets, coherent parton showers versus matrix elements, PETRA/PEP data implications 7−73661
dual parton model, charm prod. calcs. 7−95862
hadron-proton multiplicity distributions, KNO scaling, quark-parton model anal. 7−95943
heavy ion collisions, ultrarelativistic, parton system props. 7−109215
inclusive π^0 production, interpretation in terms of quark-parton models 7−102779
jet cascades, probabilistic evolution in perturbative QCD, Lorentz invariants 7−108868
KNO scaling at Fermilab Tevatron Collider energies 7−121461
leading baryon spectrum in high-energy nuclear collisions, dual parton model calcs. 7−73674
minijets, QCD, and unitarity 7−89442
multiple parton-parton interactions in an impact parameter picture 7−89531
nuclear collisions in the dual parton model 7−67595
nuclear parton distribution and nuclear shadowing at small x 7−135219
orbital angular momentum and the parton model 7−116133
QCD, diffractive dissociation on nuclei, leading log approx., wave fn. penetration, dissociation cross section 7−128856
QCD jets, Monte Carlo anal. of parton production, in next-to-leading-logarithmic approx. 7−116127
quark dynamics and the parton model 7−95841
TWISTER program for QCD high p_T scatt. processes 7−140888
χ_c charmonium, ang. distrib. and gluon polarization study 7−81136
(e,e'), pionic effects in elastic scatt. 7−135308
e^+e^- annihilation, ^{280} GeV, comparison with μp final state hadrons, Lund model 7−135143
$e^+e^- \rightarrow$hadrons, possible hadronization scale signatures in parton jets 7−95921
$e^+e^- \rightarrow q\bar{q}$, quark confinement and hadronization effects, parton model low energy deviation 7−140948
$\bar{e}N \rightarrow e'X$, deep-inelastic process, sum rules and axial anomaly, parton model comparisons 7−121519
$(\mu,\psi X)$, parton distrib. functions, behaviour at small x, EMC effect 7−116134
$\mu^+\mu^-$ double pair production via Drell-Yan mechanism, evidence for multiple parton interactions 7−89521
μp interactions, 280 GeV, comparison with e^+e^- annihilation final state hadrons, Lund model 7−135143
$NN \rightarrow X$, multiplicity distribs., energy density fluctuations 7−81252
νN, sum rules, two-loop QCD corrections coeff. fns. of asymptotic operator expansions 7−67591
pN, 70 GeV, high p_T hadron production, formation lengths, parton absorption cross sections 7−116206
$\bar{p}p$, heavy quark prod. in order α_s^3, one loop corrections, cross sections on partonic level 7−95957
pp, transverse momenta in minimum bias events, dual parton model anal. 7−67660
$pp \rightarrow \eta'X$, high p_T prompt prod., higher twist mechanism and parton scatt. 7−135158
pp→heavy flavour particles, delayed thresholds Pomeron structure and dual parton model 7−116191
pp→mesons+baryons, 360 GeV/c, quark-diquark fragmentation mechanism, parton model comparisons 7−81255
$\bar{p}p \rightarrow pX$, pseudorapidity distn., dual parton model comparisons 7−67662
$pp \rightarrow \pi^-K^-\bar{p}X$ (π^+K^+pX), cross section meas., parton model comparison 7−108945
$pp \rightarrow \pi^0X$, 300 GeV/c, cross section meas. at large transverse momentum, parton-model comparisons 7−116201
$\bar{p}p \rightarrow \tilde{w}+X(\tilde{z}+X)$, first order supersymmetric QCD corrections to rapidity, massless partons 7−135168
$\pi^-N \rightarrow \mu^+\mu^-X$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
$\pi p \rightarrow \pi^0X$, 300 GeV/c, cross section meas. at large transverse momentum, parton-model comparisons 7−116201
$^2H(\pi^-, \mu^+\mu^-X)$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
PP, ISR energies, gluon scatt. and fragmentation in high p_T interactions 7−73673
$pp \rightarrow X$, double parton scatt. at 63 GeV 7−81260
$W(\pi^-, \mu^+\mu^-X)$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157

Pascal listings
hearing testing, IBM PC appl. *(German)* 7−133495
microfossil analysis and pollen counting system for data collection 7−101505

Paschen-Back effect *see Zeeman effect*

passivation
amorphous film, dangling bond passivation by gas adsorpt. 7−71419
brass, 63/37, electrochem. behaviour in aq. binary mixtures of dimethyl formamide 7−71353
breakdown of passive films, distribution functions 7−71362
MINP solar cells, surface recomb. vel. 7−106910
pit nucleation on passivated metals 7−91501
repassivation kinetics model, I-straining electrodes 7−138883
semiconductor defects, conf., Paris, France (Aug. 1986) 7−95080
semiconductors, crystalline, props. of H, review 7−111632
steel, austenitic stainless, anodic behaviour in HCl soln., N alloying effect 7−132793

passivation continued
steel, austenitic stainless, corrosion, AC current effect 7−126287
steel, austenitic stainless, corrosion pitting behaviour, effect of carbide precip. *(Korean)* 7−78317
steel, austenitic stainless, crevice corrosion studies, using electrochem. noise meas. 7−71352
steel, austenitic stainless, electropolishing in H_3PO_4-H_2SO_4 electrolytes 7−126317
steel, austenitic stainless, erosion-corrosion in aq. chloride-sulphide soln. 7−93201
steel, austenitic stainless, intergranular attack in H_2SO_4, simulation 7−119400
steel, austenitic stainless, passivation behaviour, influence of acid soluble sulphide inclusions 7−119398
steel, austenitic stainless, SCC susceptibility rel to cathodic reduction treatment *(Japanese)* 7−78325
steel, austenitic stainless, sensitised, SCC performance in chloride and sulphate solns., effect of N and C 7−93141
steel, Cr, passivity breakdown studies with Cl^- ion addition 7−138904
steel, low alloy, corrosion by Co_2/brine mixtures 7−126281
steel, passivation in ammonium EDTA solns. 7−86408
steel, stainless, BCC, corrosion fatigue mechanisms 7−119396
steel, stainless, corrosion fatigue cracks, initiation and early growth mechanisms 7−78321
steel, stainless, localised corrosion in high-purity acid sulphate soln. 7−119399
steel, stainless, sputter profiling of passive films, Auger electron spectroscopy, quantitative approach 7−138573
steels, stainless, corrosion, electrochem. behaviour under urea synthesis conditions 7−93153
steels, stainless, SCC testing methods in hot chloride media, crit. study 7−119475
Al, corrosion and passivity in dil, Na_2SO_4 solns. 7−132790
Al, corrosion resist. in chloride media, impedance obs. 7−71385
Al dry etch reactor, surface passivation by adding fluorocarbons and chlorofluorocarbons 7−132815
Al foil, chemically treated, surface states 7−132803
Al, surface, interaction of CCl_4 vapour, adsorption and desorption 7−78546
Al-Mg-Si-Fe, corrosion, influence of Li-containing solns. 7−119440
AlGaAs:Si, passivation of donors and DX centres, H_2 plasma exposure 7−92105
$Al_xGa_{1-x}As$-GaAs selectively doped heterostruct., MBE, GaAs oval defect elimination by substrate prep. 7−71023
C porous cathode passivation in Li-$SOCl_2$ cells 7−133067
C steel wire ropes, corrosion, spalling mechanism control 7−106676
CdTe, high-resistivity, passivation by H^+ implantation 7−98189
$Co_{80}B_{20}$ glassy alloys, corrosion rel. to crystn. 7−126278
CoNi thin films for mag. recording, corrosion resist. improvement by surface passivation 7−106667
Cu passivation in acid medium 7−108109
Fe, anodic dissolution in H_2SO_4, current oscillations, math. model 7−106674
Fe, cast, grey, corrosion in H_2SO_4 and NaOH solns., potentiostatic studies 7−93137
Fe, corrosion in saturated $Ca(OH)_2$ soln., effect of AC *(Korean)* 7−126298
Fe, electrochemical electrode, Fe_2O_3 passivating film, ellipsometric meas. 7−71358
Fe, electropolishing in H_3PO_4-H_2SO_4 electrolytes 7−126317
Fe, passivation in borate buffer solution, ^{18}O/SIMS study 7−100419
Fe, passivity, in situ Raman spectrosc., obs. 7−77595
Fe, pure, pitting and repassivation in simulated concrete solns. 7−71386
Fe, repassivation, straining electrode behaviour in high temp. and high press. borate buffer soln. 7−93200
Fe surface, Mott-Schottky plot of passive film formed in neutral borate and phosphate solns. 7−144601
Fe-B thin films, amorphisation during B^+ ion implantation *(Russian)* 7−91450
Fe-Cr, Cr^+ ion-implanted, electrochem. props. 7−106688
Fe-Cr, electropolishing in H_3PO_4-H_2SO_4 electrolytes 7−126317
Fe-Cr, straining electrode behaviour in high temp. high press. borate buffer soln. 7−100445
Fe-Cr (26 wt.%), passivation, effect of Cl^- ions 7−93139
Fe-Cr-Si-B glass, passivity-maintaining current density, cooling-condition depend. 7−144605
Fe-Si (3 wt.%) alloy, deformed H impregnated, corrosion-electrochem. behaviour in H_2SO_4 electrolyte 7−144591
$Fe_{80}B_{20}$ glassy alloys, corrosion rel. to crystn. 7−126278
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glass, corrosion in H_2SO_4, chloride ions effect 7−106710
$Fe_{75-x}Cr_xB_{15}Si_{10}$, amorphous wires, corrosion fatigue 7−113796
$Fe_{40}Ni_{40}B_{20}$ and $Fe_{39}Ni_{39}Mo_2(SiB)_{20}$, mag. metallic glasses, corrosion resist. in acidic and neutral aqueous solns. 7−93172
$Fe_{40}Ni_{40}B_{20}$ metallic glass, corrosion characts. in Na salt solns., anion effects 7−144609
GaAs MBE grown surface, Sb used for passivation 7−71402
GaAs passivation in N multipolar plasma, photoemission study 7−119469
GaAs, passivation in $N_2(H_2)$ multipolar plasmas, photoemission study *(French)* 7−132836
GaAs:C, H passivation of C acceptors, photolum., Hall effect studies 7−138483
GaAs:H, shallow impurity neutralisation by H plasma treatment, photolum. study 7−112241
GaAs:Si, shallow level impurities, deep level defects 7−105491
GaAs:Sn MBE grown in hydrogen presence, DLTS and photolum. 7−70239
GaAs:Zn epilayers, H(D) passivation of acceptors, IR absorpt. spectra 7−113240
$Hg_{1-x}Cd_xTe$, doping and composition profiling, graded capacitance-voltage method 7−143622
InP surface, passivation with group V elements, electrical props., MIS structs. 7−100461
Li electrode passivation using surface films 7−133060
$Mg_{70}Zn_{30}$ metallic glass, passivation and passive film breakdown, electrochem. study 7−113795
Ni, anodic passivation, F^- effects 7−106673
Ni, corrosion resistance in artificial sweat and synthetic seawater, dermatitis hazard 7−138906
Ni electrode, potentiodynamic behavior in acid media 7−71384
Ni in acidic solns., passive film formation, ellipsometric study 7−93197
passivation continued
Ni, passivation in aq. solns.; surface film comp. 7−132791
Ni, passivation in aq. solns., electrochemical polarisation obs. 7−132792
Ni, pure, repassivation of newly created surface in high temp. and press. neutral soln. 7−78374
Ni-Cr, straining electrode behaviour in high temp. high press. borate buffer soln. 7−100445
Ni-Cr-P-B, amorphous surface alloys on mild steel, laser processing, corrosion resist. 7−138875
Ni-P, electroless deposits, corrosion in aerated NaCl soln. 7−144620
Ni-P amorphous alloys, chemical passivity 7−71365
$Ni_{55}Cr_5Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
NiMo, S adsorption, Mo effects on electrochemical passivation *(French)* 7−144746
NiNb amorphous coating, ion beam mixed, corrosion behaviour 7−71368
$Ni_{60}Nb_{40}$ metallic glasses, anodic polarisation behaviour 7−126303
Pb salt, lasers, long-wavelength, LPE growth 7−74929
$Pb0\text{-}B_2O_3\text{-}SiO_2{:}Na^+$, metal-glass-semiconductor capacitors; surface charge studies 7−70416
Pd, surface, passivation by adsorbed S layers, interaction of H atoms 7−76620
Pd-based binary alloys active-passivation polarisation behaviour 7−78303
PtSi/n-Si:H Schottky barrier height variation by ion implantation 7−76180
Si amorphous film, dangling bond passivation by gas adsorpt. 7−71419
Si, p^+-n-n^+ solar cells with AM1 efficiency of 19.5%, excimer laser processing and oxide passivation 7−86795
Si, polycrystalline, barrier height and minority carrier capture cross-sections, plasma annealing effect 7−125007
Si, polycrystalline, extended crystallographic defects, passivation 7−124290
Si polycrystalline solar cells, H ion passivation 7−126623
Si solar cells, front surface passivation with antireflection coating 7−114110
Si solar cells fabrication using glow-discharge implantation, thermal annealing and oxide passivation 7−71603
Si substrate, passivation-induced phenomena, book contrib. 7−106728
Si: As (111) surface, As terminated, electronic and atomic struct., passivation 7−98651
Si:H, crystalline, effect of H on passive dopants 7−84734
Si:H, interstitial H diffusion and dopant passivation reactions 7−112240
Si:H, thermally induced deep levels, H passivation 7−104807
Si:O,H, O-related thermal donor clusters, H passivation 7−104767
Si:P, thermal donor defects, passivation by H_2 plasma exposure 7−70234
Si:P,C,H, polycrystalline, impurity-defect interactions, overview 7−124321
Si-SiO_2 structures, passivation and related instabilities, book 7−102026
SiO_xN_y films, plasma processing studies 7−132462
Ti alloys, ion implantation, wear, fatigue and oxidation resist., biomaterial appls. 7−138902
Ti, passivated, self-activation in H_2SO_4 soln. *(Japanese)* 7−93177
TiO_2 films, with various Pd^+ ion implantation profiles, electrochem. studies 7−104779
TiO_n films, Pd implantation, high energy defect migration 7−111597
Zn electrode, passivation and passive layer stability on phosphate solns. 7−106659
Zn_3P_2, H_2 passivation, DLTS and Schottky diode studies 7−70243
Zr, pitting corrosion in chloride soln. 7−93158
passive attenuators *see attenuators*
passive filters
acoustic charge transport devices overview 7−123370
matching of interdigital transducers with a field of surface acoustic waves in delay lines and filters 7−123416
ripple shielding coils for accurate resistivity meas. in hybrid magnets 7−105531
SAW filters, low-loss, using single-phase unidirectional transducers 7−82988
single shaping and Gaussian filters, signal/noise and rate capability characteristics 7−81871
patents *see industrial property*
path control *see position control*
patient care
see also handicapped aids
fibre optic sensors, medical appls. 7−142016
intensive care unit, rationale for neuromonitoring 7−107305
medical technology in the 21st century 7−127036
neurosurgical intensive care, evoked pot. monitoring 7−107304
patient diagnosis
see also biomedical NMR; biomedical ultrasonics; computerised tomography; diagnostic radiography; electrocardiography; electroencephalography; medical diagnostic computing; radioisotope scanning and imaging
3D boundary detection algorithm, medical scanner and seismic images appl. 7−87975
applied potential tomography: noninvasive technique for assessing gastric function 7−87292
applied potential tomography, appls. in respiratory medicine 7−87294
applied potential tomography and elec. impedance imaging, conf., Sheffield, England (July 1986) 7−80146
applied potential tomography and localisation of cardiac related impedance changes in the thorax 7−87295
applied potential tomography evaluation: clinician's view 7−87296
auditory brainstem responses in retrocochlear diagnosis, reference data 7−87023
Bagolini striated lens test for strabismic subjects, anomalous sensory responses, target size effect 7−93742
bicycle ergometers, dynamic torquemeter calibration, research and diagnostic appl. 7−79158
biomagnetic measurement appl. research in superconductor, meas. and cooling technology at Tampere University *(Finnish)* 7−100937
biopsy, NMR-guided, localisation grid 7−145189
biostereometrics, conf., Cannes, France (Dec. 1985) 7−95084
biosystems characteristics recognition by phys. instrumentation, development of X-ray CT *(Japanese)* 7−119885
bladder cancer diagnosis by optical microscopy, automated image anal. 7−139332
blood, viscosity factors rel. to disease/fitness 7−119788
blood flow velocity, 2D, vector imaging system based on Doppler US 7−87124
blood gas measurement of O_2, CO_2, inert and anaesthetic gases, review 7−93986

patient diagnosis continued
blood platelet survival mean time, isotope labelled, different formulae evaluation 7−93676
blood proteins, diagnostic method using astronomical software 7−79120
bone fracture and diseases, sonic diagnosis, time series and freq. anal. 7−126979
bone mineral analysis, single- and dual-photon absorptiometry techniques 7−93909
brain, immature, spin-echo pulse sequence parameters for high-contrast NMR imaging 7−93887
breast, human, data collection system for gathering elec. impedance meas. 7−87289
breast, normal, transverse relax-times in NMR imaging during menstrual cycle 7−79033
breast NMR images, multispectral anal. 7−145185
breast NMR imaging with loop-gap resonators 7−79059
burn injuries, clinical evaluation using an optical reflectance technique 7−71837
burns diagnosis by IR instrument 7−127027
cancer detection using NMR to detect change in blood lipids 7−119890
cancer diagnosis, image DNA-index (ploidy) anal. 7−139331
cardio-respiratory systems of children, functional parameter factor anal. 7−79119
carotid artery disease, adding of valuable haemodynamic information by Doppler exam. of periorbital arteries 7−107175
carotid artery disease, flow disturbance quantification by Doppler US 7−139320
cell populations in a continuous-motion imaging cell scanner, automated densitometry 7−139328
cervical cell smears, correlative exam. by opt. and scanning electron microscopy, photographic grid system 7−87399
cervical spine NMR imaging: generating high-signal cerebrospinal fluid in sagittal and axial images 7−145183
chest X-ray images texture anal., automatic diagnosis of pneumoconiosis 7−114487
chromatin texture of melanocytic nuclei; correl. between light and electron microscopy 7−139227
City University Colour Vision Test, anal. of Mark II edition 7−93982
closed ultrasonic tank with a convex compliant inspection surface 7−101113
colour threshold test, clinical, for eye disease detect. 7−71920
congenital colour vision defects, averaging method for interpretation of Farnsworth-Munsell 100-hue test 7−133295
coronary arteriosclerosis examination using microwaves 7−139350
cranial bruit produced by turbulent blood flow, method for detect. and anal. 7−71827
criterion-free parameter-free distribution-independent index of diagnostic test performance, appl. to glaucoma visual data 7−93983
CT graphical error evaluation 7−114541
diabetic retinopathy related colour vision defects, Farnsworth-Munsell 100-hue test interpretation 7−133296
diagnosis imaging, medical electronics 7−71928
disphonic voices, speech pattern recognition for laryngeal disease diagnosis *(Spanish)* 7−119782
Doppler echocardiography, current developments, real-time 2D flow imaging system 7−139319
dual-frequency applied potential tomography technique: computer simulations 7−87290
duchenne muscular dystrophy carrier detection using US attenuation meas. 7−133402
electric impedance imaging, current topics 7−87281
electric impedance imaging, obs. on agar blocks in saline soln. 7−87345
electrical imaging using multi-electrode systems, phys. study of sensitivity distrib. 7−87280
electrical impedance based medical imaging system 7−87347
electrical impedance body imaging, prototype system and reconstruction algorithms 7−87284
electrical impedance imaging, characts. of linear electrode arrays 7−87291
electrical impedance imaging, hardware design limitations 7−87287
electrical impedance imaging, math. aspects 7−87286
electrical impedance imaging, Sheffield data collection system 7−87288
electrical impedance imaging, some phys. results from an impedance camera 7−87285
electrical impedance imaging in the newborn, cerebral haemodynamics appl. 7−87293
electrical impedance tomography, comparison of reconstruction algorithms 7−87283
electrical metrology applied to biological and aqueous systems 7−101158
electrical resistance images, fast reconstruction 7−87282
EM energy, diagnostic and therapeutic appls. 7−87135
EMF scanning, relationship between narrow and wide bandwidth filter settings 7−119884
EMG, power spectra estimators of muscle conduction velocity 7−94010
endoscopic catheter system using image fibre, config. and appls. 7−87328
ERG, ganzfeld, pattern and optic fibre, scleral lens design 7−93988
eye disorder remote sensing utilising retinal reflex photometer 7−93877
Farnsworth-Munsell 100-Hue test, discrete value nature of total error scores 7−133297
fibre optic pulmonary angioscopy, comparison of two prototype angioscopes 7−79045
fibre optic sensors, medical appls. 7−142016
fibre optic techniques in medicine and biology, endoscopy, diagnostics and power transmission 7−79041
field focusing NMR-CT for noninvasive thermometry, temp. resolution study 7−101032
fluorescence endoscopy instrumentation for improved tissue charactn. 7−133406
fluorescence imaging, real time colour system for tumour diagnosis 7−133407
FM 100 Hue test and lightness discrimination test 7−79115
haemorheological technique, appl. in clinical disease evaluation 7−87339
hearing examination using nonlinearly transformed speech signals 7−87018
hearing impaired infants, brainstem auditory evoked potentials and otoacoustic emissions 7−100912
hearing testing, IBM PC appl. *(German)* 7−133495
heart sounds, spectral anal. 7−87129
heart-lung system, absorbed power distrib. due to microwave irrad. *(Japanese)* 7−145192
hospital automation, radiology appls. *(Italian)* 7−133496
patient diagnosis continued
ileal function combined test using whole-body counter, ^{75}Se-HCAT and ^{58}Co-B_{12}, critical analysis of accuracy 7−101055
imaging system MTF, method for determ. from edge profiles 7−133182
imaging technology *(Japanese)* 7−145264
imaging with ionising radiations, book 7−72739
impedance imaging, algorithm for electrode positioning and configuration 7−101124
impedance imaging, theoretical limits to sensitivity and resolution 7−87279
impedance tomography, optimal reconstruction algorithm 7−87346
intracranial lesions: flow-related enhancement on NMR images using time-of-flight effects 7−79058
IPECAC expert system for poisoning incidents management 7−87321
IR dynamical thermovision of biological objects 7−107192
kidney, effective renal plasma flow calc., prep. of quantitative standards 7−93908
laser scan microscopy, pot. clinical uses 7−139336
leukocyte analysers, high-resolution: retrospective and prospective review 7−139324
liver carinoma, enhanced detect. by using ferrite particles as a superparamag. NMR contrast agent 7−93886
liver US imaging, particulate contrast agent 7−139321
lower limb vascular diagnosis, comparison of laser Doppler and Doppler US 7−145172
magnetic brain stimulation for investigation of disorders of nervous system 7−126991
magnetic resonance imaging, brain lesions, morphological segmentation *(French)* 7−119824
magnetic resonance imaging system, Fe yoke resistive type, Toshiba MRT-22A 7−139348
magnetocardiography: localisation of accessory pathways 7−93848
magnetocardiography: perspectives in clinical appl. 7−93849
magnetocardiography, assessment of clinical usefulness 7−93788
magnetocardiography, high resolution field mapping and anal. 7−93850
medical technology in the 21st century 7−127036
microbubble response to finite amplitude waveforms 7−126987
microwave thermography for biomedical appls., multiprobe radiometers 7−107223
microwave tomography, imaging performance results 7−101044
multinuclear NMR imaging: technique for combined anatomical and physiological studies 7−107203
multiple sclerosis, test based on somatosensory evoked pot. components 7−114297
multivariate tissue characterization in diagnostic ultrasound 7−75234
MUP-PET for studying metabolism, brain operation and drug uptake 7−145194
myocardial infarct, struct. of high-density lipoproteins in arterial and venous blood 7−87298
myocardial perfusion study using contrast echocardiography 7−87121
neurophysiological data processing for graphic display 7−114542
NMR, ^{1}H, diagnostic value of T_1 and T_2 7−71841
NMR, blood vel. imaging by rapid cycle tagging 7−101033
NMR, double loop receiver coil for imaging at 0.15 T 7−79036
NMR, linear spiral scan interpolation for image reconstruct. 7−145173
NMR based functional studies, book 7−88757
NMR FLASH imaging, signal-to-noise and contrast-to-noise ratios maximisation 7−93872
NMR images, phantom material for quantitative evaluation 7−87142
NMR images, quantitative study of flow dependence at low flow vels. 7−79034
NMR imaging: reduction of respiration artifacts by breath holding 7−79035
NMR imaging, appl. of equiv. circuit 7−93871
NMR imaging, chemical shift-induced amplitude modulations in images obtained with gradient refocusing 7−93875
NMR imaging, conf., San Antonio, TX, USA (Feb.-Mar. 1987) 7−66818
NMR imaging, developments 7−79062
NMR imaging, effect on human cognition 7−93873
NMR imaging, effects of random directional distrib. flow 7−71843
NMR imaging, equiv. circuit for coil-patient interactions 7−93870
NMR imaging, Gibbs artefact removal 7−133408
NMR imaging, in vivo tissue charactn., prolonged T_1-relax. in acute leukaemia 7−139343
NMR imaging, mag. field mapping 7−139346
NMR imaging, magnets with reduced stray fields, considerations in design 7−139337
NMR imaging, nonorthogonal, techniques and clinical appl. 7−87141
NMR imaging, operational safety issues 7−139344
NMR imaging, quantitative, slice profile effects and their calibration and correction 7−145176
NMR imaging, rapid, steady-state magnetisations using small flip angles and short repetition intervals 7−119821
NMR imaging, sample noise with circular surface coils 7−133405
NMR imaging, use of ferrite particles as a superparamag. contrast agent for the reticuloendothelial system 7−93885
NMR imaging and spectroscopy, incremental phase shifter and freq. modulator 7−87136
NMR imaging and spectroscopy in vivo 7−87329
NMR imaging of hepatic metastases, optimal pulse sequence 7−79057
NMR imaging of oblique slices, effects of simultaneous pulsing in different gradient coils 7−101034
NMR imaging system stability: temporal variability in signal intensity, S/N ratio, T_1 and T_2 obs. 7−71845
NMR imaging using partial flip angle 7−107201
NMR spectroscopic imaging, quantitative anal. 7−87147
NMR spectroscopy, pulse sequence design for vol. selective excitation 7−71842
NMR velocity imaging, human brain motion and cerebrospinal fluid circulation demonstration appl. 7−145188
NMR velocity-selective excitation composites for flow and motion imaging and static tissue signal suppression 7−119819
oesophageal echocardiography, 5 MHz transoesophageal US probe 7−87122
oesophageal manometry, computer-aided: prospects and problems 7−114529
ophthalmoscopic, double lenses for ocular fundus exam., photographic validation *(Italian)* 7−145259
ophthalmoscopic, yellow lens use for fundus exam. *(Italian)* 7−145261
ophthalmoscopic double aspheric lens design for ocular fundus exam. *(Italian)* 7−145258

patient diagnosis continued
optical fibre technology in medicine 7—79055
optical fibres in medicine and biology, conf., San Diego, CA, USA (Aug. 1985) 7—72708
optical stimulator for the study of eye movements pathology, cct. *(Spanish)* 7—114533
osteoporosis diagnosis rel. to wave propag. charact. in long bones 7—114331
parathyroid gland lesions, technical aspects of NMR imaging 7—79028
peripheral venous disorder noninvasive diagnostics via optical fibres 7—79051
peripheral visual field loss, efficient evaluation method, automated kinetic perimetry 7—93984
phonocardiogram, 3-channel microcomputer system for segmentation and charactn. 7—114433
portable diagnostic radiometer, microwave, battery-operated with on-board microprocessor and LCD display 7—87149
positron annihilation, appls., review 7—73485
postural sway, computer anal. and appl. to equilib. dysfunction diagnosis 7—114545
pulmonary oedema, multiple spin echo imaging and quantitative relax meas. 7—93874
pyrrolo(3,2-f) indolizines, spectral luminesc. obs., fibre optical laser methods 7—79060
radiolabelled-antibody imaging, subtracted images thresholding method 7—139352
RADPLANET—a functional radiology PACS and much much more 7—114544
rectal carcinoma, quantitative NMR imaging, T_1 and T_2 relax. times obs. 7—126994
respiration diagnostics, tunable diode laser based spectroscopic system 7—107291
retina disorder diagnosis, freq. anal. of human ERGs 7—145032
retinal images, feature-based registration 7—145263
rheocardiography, method for systemic and pulmonary blood flow assessment 7—87338
rheoplethysmography in lower extremities diseases diagnostics 7—127034
schistosome egg screening by optical microscopy and digital image processing 7—139334
somatosensory responses rel. to bit-mapped colour imaging of human evoked pots. 7—87262
sonographic gallstone detection, importance of appropriate freq. selection 7—119810
spin-echo NMR imaging, sampling time effects on signal-to-noise and contrast-to-noise ratios 7—87140
spin-inversion imaging: a technique for NMR imaging under highly nonuniform mag. fields 7—119820
spine, cerebrospinal fluid-gated NMR imaging: theory and clinical implementation 7—145187
spine, conventional NMR imaging optimisation 7—145186
spirometer system, pointer volume, for respiratory tests 7—87325
stroke patients, microcomputer-based assessment and treatment-planning 7—133504
subdural empyema, diagnosis by EEG 7—79116
surface EMG eval. of quadriceps femoris, normal and spastic subjects 7—145012
synthetic focused US imaging system, image reconstruction in presence of delay noise 7—126960
T_2-weighted NMR imaging, method for reducing motion induced errors 7—133404
therapeutic US system incorporating real-time US scanning 7—126986
thoracic surface maps produced by ECG, interpretation and eval. with expert system 7—101116
tissue acoustic charact. rel. to medical US diagnosis *(Japanese)* 7—87112
tissue imaging with US sector scanning, spectral anal. *(Japanese)* 7—126977
tissue viability noninvasive meas., spectrophotometric and replication techniques evaluation 7—119830
tongue, electrophysiological assessment and hypoglossal nerve conduction 7—145001
unborn child abnormalities diagnosis using ultrasonics *(Swedish)* 7—119811
US blood flow imaging system, Toshiba SSH-65A, config. and features 7—79023
US Doppler colour imaging system, 2D 7—87123
US images, noise reduction by digital filtering 7—87105
US imaging, B-mode speckle pattern changes meas. 7—126959
US imaging, speckle S/N ratio vs. lateral resolution 7—126958
US reflected echo signal nonlinearity parameter meas., in vivo appls. *(Japanese)* 7—119815
US tissue charactn. by envelope amplitude anal. following narrow-band filtering 7—133401
vectorcardiograms, shape anal. technique 7—87342
visual deficit in glaucoma, electrophysiological assessment, steady-state visual evoked potentials 7—93735
visual disorder diagnosis, hybrid perimetry blend of static and kinetic techniques 7—93985
^{31}P topical NMR spectroscopy, human organ study appl. 7—87132

patient monitoring
see also electrocardiography; electroencephalography
anaesthesia, use of neurophysiologic monitoring 7—126805
angioscopic monitoring of in vivo laser angioplasty 7—79047
applied potential tomography, appls. in respiratory medicine 7—87294
applied potential tomography for noninvasive temp. mapping in hyperthermia 7—87352
auditory brainstem responses, computer monitoring 7—139400
automatic cardiological data registration system, construction implementation 7—79107
bedside monitoring system for mech. ventilation: SIVA 7—101136
bladder distension sensor using US technique for handicapped 7—126980
blood clotting, US wave velocity changes for monitoring 7—101017
blood flow and physiological data collection, microcomputer base system 7—139298
blood flow monitoring using optical fibre probe 7—79052
blood hydration measurement during ultrafiltration using optical methods 7—107269
blood O_2 monitoring sensors, intensive care appl. 7—145266
body temp. meas., whole-day variations, skin heat-flow compensation technique 7—79103
body temp. monitoring/control system, structural element anal. 7—79108

patient monitoring continued
cardiac function monitoring using noninvasive techniques 7—87110
EEG monitoring, clinical appls. 7—107274
EEG monitoring techniques 7—107275
electrical impedance tomography for thermal monitoring of hyperthermia treatment by microwave diathermy 7—87351
electroneurophysiologic monitoring, intraoperative 7—78836
EM kinetocardiography, method for cardiac kinetics monitoring 7—93889
evoked potentials, automated monitoring, brainstem auditory and somatosensory pots. appl. 7—107276
fibre optic ECG monitoring unit for use in operating room 7—119894
fibre optic sensors, medical appls. 7—142016
field-effect monitor, expt. design 7—126992
foetal cerebral ventricular growth, US prenatal monitoring 7—107182
foetal ECG enhancement from maternal abdominal lead through digital filtering and averaging 7—107293
foetal monitors, electronic, current state 7—107284
foetal monitors, US Doppler equipment, survey of acoustic output 7—93840
haemodialysis, optical, therapeutic parameter and computer control 7—101132
haemofiltration, continuous arterio-venous, computer managed 7—101133
implanted intracranial press. monitoring, Monte Carlo technique for signal level detect. 7—119874
infant's apnea, bradycardia and tachycardia monitor based on the Z-80 microprocessor 7—139392
intensive care unit, rationale for neuromonitoring 7—107305
intra-operative continuous monitoring of cardiac output, Doppler US based instrument 7—87357
intracranial pressure monitoring by waveform analysis 7—107278
intragastric pH in man, continuous 24 hour ambulatory monitoring 7—101098
IR capnometer, sampling, microcomputer-controlled 7—71918
laser speckle displacement cardiography 7—119825
maternal-foetal blood gases, continuous skin-surface and intravascular mass spectroscopic anal. 7—79102
metabolic monitor, Datex Deltatrac 7—127022
metabolism monitoring by blood O_2 saturation meas., near-IR technique 7—101051
muscle therapy, quadricep contraction conversion into digital signal for microcomputer system 7—87353
neonatal brain monitoring: near IR spectroscopy 7—107209
neonatal EEG recordings, spectral detect. and elimination test algorithms of ECG and EOG artefacts 7—71914
neonates, heart rate variability monitoring 7—107283
neuromuscular blockade monitoring using integrated electromyography 7—87265
neuromuscular function monitoring in postoperative period 7—126806
neurosurgical intensive care, evoked pot. monitoring 7—107304
open heart surgery, patient monitoring during and after by deep body thermometer 7—139402
ophthalmoscopy on TV monitor, compensation of random eye motion 7—79032
perinatal bioengineering, developing countries needs, technical advances 7—79112
pressure monitor for continuous positive airway pressure systems 7—87348
pulse oximetry: historical review and Ohmeda functional analysis 7—127021
respiratory inductive plethysmograph, accuracy during loaded breathing 7—107285
respiratory mechanics, non-invasive measurement in ICU patients 7—87046
respiratory phase detection and delay determination for breath-by-breath analysis 7—107286
surgical monitoring using a contact lens photostimulator 7—101125
therapeutic US system incorporating real-time US scanning 7—126986
US hyperthermia temp. monitoring technique 7—126985
uterine electrohysterogram, processing for obstetrical monitoring 7—107282
visual evoked potentials in preterm neonates, changes with arousal states as assessed by EEG monitoring 7—133280

patient treatment
see also biomedical ultrasonics; radiation therapy; surgery
arterial gas pressure, adaptive control, artificial respirator *(Japanese)* 7—119897
biocompatible anodes and cathodes for enhanced tooth movement 7—114552
blood clotting, electronic antihaemocoagulation 7—87349
burns, artificial thermoregulation using microcomputer device 7—100817
cancer therapy, thermal dose, conf., Las Vegas, NV, USA (Apr. 1986) 7—128171
capacitance RF hyperthermia, model for impedance determ. and power deposition charactn. 7—71835
capacitive RF hyperthermia, model for impedance determ. and power deposition charactn. 7—71834
cardiac defibrillation, obtaining uniform cardiac fields 7—87359
cardiac defibrillation by crossed shocks, decrease of energy required 7—87358
cardiopulmonary resuscitation, coronary blood flow optimisation, computer simulation results 7—114548
cuff electrode nerve stimulation, 2-part model 7—101131
dental polishing of teeth, erosion meas. using SEM stereoscopic technique 7—80944
dentistry, alignment inclinometer in tooth prep. 7—119896
dialysis modelling: requirements for clinical appl. 7—127038
diathermy forceps for sealing blood vessels *(Swedish)* 7—145274
drug release kinetics from colloidal particles determ., automated device 7—133505
EEG biofeedback, instrumentation for CNS studies 7—87360
electrical metrology applied to biological and aqueous systems 7—101158
electro-stimulation, scientific basis, bone fracture/disease treatment appl. 7—79124
endocardial-epicardial cardioversion-defibrillation of ventricular tachyarrhythmias, expt. and clinical results 7—127037
ferromagnetic thermoseed materials for tumor hyperthermia 7—107189
fibre optic sensors, medical appls. 7—142016
functional electrical stimulation, develops. *(Japanese)* 7—139246
functional electrical stimulation, principles and methods 7—87354
functional electrical stimulation, role of quantification 7—101130

patient treatment continued
functional neuromuscular stimulation, portable system for paralysed upper extremities 7−101127
functional neuromuscular stimulation rel. to thumb EMG anal. 7−93727
haemodialysis, optical, therapeutic parameter and computer control 7−101132
haemofiltration, continuous arterio-venous, computer managed 7−101133
HF intermittent mandatory ventilation method for respiratory weaning 7−101137
hospital based synchrotron for proton radiation therapy, scaling rules 7−93914
hyperthermia, clinical appl. of thermal isoeffect dose 7−133230
hyperthermia, local, use of implanted closed-tip catheters for thermometry probes introduction 7−133503
hyperthermia, noninvasive temp. mapping by applied pot. tomography 7−87352
hyperthermia, regional, feasibility anal. 7−133233
hyperthermia for cancer treatment: sweating, haemodynamic responses and thermal equilibration 7−126726
hyperthermia high-temp. region increase using ferromagnetic seed implants *(Japanese)* 7−79126
hyperthermia in the treatment of cancer, review 7−128161
interstitial hyperthermia, temp. distrib. prod. by 3 systems 7−78780
IPECAC expert system for poisoning incidents management 7−87321
leg systems, meas. of functional elec. stimulation feedback parameters with accelerometers 7−101129
leprotic feet, barographic technique for meas. of press. beneath, ulcer prevention footwear design appl. 7−119900
mechanical respiration, weaning method 7−101135
medical technology in the 21st century 7−127036
microwave phased array system for deep hyperthermia through layered tissue 7−94014
muscle therapy, quadricep contraction conversion into digital signal for microcomputer system 7−87353
myopic progress prevention by glasses, study on schoolchildren 7−145018
neutron therapy and dosimetry at the UCLA Neutron Therapy Facility 7−93912
nonvolitional biofeedback therapy based on filtered EEG 7−114553
oxygenators; bubble and membrane, complement activation 7−107297
paralysed muscle, mass changes following reconditioning by elec. stimulation 7−100874
pneumatic compression device for treatment of swollen limbs 7−87350
pressure monitor for continuous positive airway pressure systems 7−87348
pulmonary oedema treatment chamber temp. and pressure control improvements 7−119892
quadriplegia, sensory feedback in functional neuromuscular stimulation by shoulder skin electrostimulation 7−101128
real-time analysis of intracardiac electrograms, automatic arrhythmia diagnosis and electrical stimulation therapy 7−145268
rehabilitation R&D progress reports (1986) 7−94023
rheumatoid joint rehabilitation, significance of intra-articular pressure 7−119795
skin, postburn hypertrophic, human, mech. charactn. during press. therapy 7−107125
spinal cord injury, pulsed subcutaneous elec. stimulation treatment 7−94011
spinal spasticity modification, effects of elec. stimulation parameters 7−119893
stimulation with capacitor electrodes 7−107187
stroke patients, microcomputer-based assessment and treatment-planning 7−133504
tissue pressure management, role of technology, rel. to prevention and treatment of press. sores 7−119899
tracking movement dysfunction, visual feedback method for improvement 7−101134
transcutaneous stimulator, HV linear, design strategy 7−114436
transoesophageal pacing using Pill Electrode, clinical testing 7−87356
upper limb electrostimulation: programmed hand function 7−101126
ventricular tachyarrhythmias, treatment using implanted devices 7−79145
whole body hyperthermia and heat-sensitising drugs: pilot study in canine lymphoproliferative disease 7−114550
wound healing studies, constant-current and constant-voltage stimulators 7−107331

pattern classification *see pattern recognition*

pattern recognition
see also character recognition; computer vision; computerised pattern recognition; speech recognition
2D fluorescence, Fourier transform based pattern recognition algorithm 7−102533
2D speech/ECG signal processing using Wigner-Ville distribution 7−79109
3D boundary detection algorithm, medical scanner and seismic images appl. 7−87975
3D shape inference from 2D silhouettes 7−136216
acoustooptic image correlators appl. 7−74872
adaptive optical threshold gates, algorithm 7−82489
adaptive real-time pattern recognition using a liquid crystal TV based joint transform correlator 7−90512
adaptive US sensor for object identification 7−123379
AE signal analysis, pattern recognition appl. 7−144670
associative memory, retrieval of superimposed connection patterns, neural network 7−100840
AUTOSCOPE P from Leitz for automatic particle analysis 7−102516
binary phase-only filter reconstruction using Hughes liquid crystal light valve 7−82471
binary phase-only filters, multiplexing capabilities 7−82472
centroid location of nonoverlapping objects 7−136209
cluster analysis for investigation of Southern Oscillation in different fields 7−145696
clustering method by bipartite graph theory 7−87512
colour image statistical pattern recognition filter using incoherent optical correlator 7−129988
composite matched filter output partitioning 7−117298
correlation filters, distortion-invariant, iterative technique for synthesis 7−103759
correlation filters, low noise, construction 7−74877
correlation filters, rotation invariant, iteratively designed, expt. use 7−136211
correlator with overlapped input images, Fourier transform 7−117149
cosmological filamentary structure, photography and human eye comparisons 7−128160
differentiating spatial light modulator based on nematic liquid crystal, for optical preprocessing and pattern recognition 7−130317
disphonic voices, speech pattern recognition for laryngeal disease diagnosis *(Spanish)* 7−119782
distortion invariant pattern recognition with phase filters 7−122837
distortion invariant recognition using iteratively designed optical correlation filters 7−74876
ECG pattern recognition by relational matching of significant points 7−87273
form recognition using moment invariants for 3D perspective transformations 7−110278
geometric moments from Hartley transform intensities 7−82498
high energy physics appls. 7−96486
holographic, using resonance atomic media 7−68594
human visual system and planar pattern recognition by invariant features 7−93764
hybrid image processing, conf., Orlando, FL, USA (Apr. 1986) 7−72713
iconic filters for large class recognition 7−117297
image analysis, in human cytogenetics *(French)* 7−119913
image primitives selection for general purpose visual processing 7−86981
image processing, Hotelling trace criterion for feature enhancement 7−141809
image processing and perimetric sampling for pattern recognition 7−130004
intensity correlation for pattern recognition using volume Fresnel holographic filter 7−110272
interference pattern of deformed object, normal displacements influence 7−130012
invariant pattern recognition using quantum-limited images and photon counting 7−130013
knowledge in optical symbolic pattern recognition processors 7−74863
Landsat data classification, watershed algorithm approach 7−115097
Landsat-4 multispectral scanner and thematic mapper data classification accuracy, expts. 7−79713
machine vision, perception theories, avoiding human illusions 7−86979
map data processing: recognition of lines and symbols 7−115096
modified composite filter for pattern recognition, noise with nonzero mean, experimental results 7−136225
multiclass stochastic images buried in additive noise, classification using optimal correlation filter 7−68576
multivariate tissue characterization in diagnostic ultrasound 7−75234
myocardial tissue characterization using pattern recognition procedures on backscattered ultrasonic signals 7−79025
nearest-neighbor non-iterative error correcting optical associative memory processor 7−74875
neural computation of inner geometric pattern relations 7−114252
noisy-image normalization using low-order radial moments of circular-harmonic functions 7−136217
nonlinear etalons and optical computing 7−90685
object recognition with incoherent holographic correlators 7−122864
optical flow computation using gradient-based multiconstraint method 7−82479
optical pattern recognition by spatial filtering *(Japanese)* 7−110540
optical symbolic substitution pattern recognizer based on AND operation 7−136228
orientation selection and optical flow 7−86978
pattern matching techniques for speech recognition *(Japanese)* 7−75215
phase-only composite filter, design, appl. 7−123173
precursory seismicity rel. to sunspot and Earth rotation parameters 7−87511
real-time deformation invariant optical pattern recognition using coordinate transformations 7−82473
real-time polychromatic signal detection using colour liquid crystal television 7−110268
reduced information content filters appl. to pattern recognition 7−122836
remote sensing, results from SLAR mode of dual-mode radar with very low PRF 7−115098
shape recognition from single silhouettes 7−119769
solid shape description and inference from occluding contours 7−136215
spatial frequency channels and perceptual grouping in texture segregation 7−86982
statistical recognition, introduction 7−130011
structure detection by symbolic constructions on tokens 7−86980
subject response model in pattern recognition, identification of parameters 7−126826
supersonic wave systems appl. 7−90904
surface objects orientation determ., photometric approach, vision system appl. 7−74885
syntactical wind streamline pattern identification 7−101473
teleseismic feature extraction for discrimination between earthquakes and nuclear detonations 7−139507
textual and chemical information retrieval 7−141713
texture analysis of diagnostic X-ray images by use of fractals 7−93922
Vander Lugt correlator, appl. to industrial inspection 7−74878
vectorcardiograms, shape anal. technique 7−87342
vibroacoustic diagnostics based on pattern recognition, multivariate correl. and regression anal. appl. *(German)* 7−142129
C fibre reinforced epoxy matrix laminates, AE signal, pattern recognition analysis, autoregressive modelling 7−144671

Patterson diagrams *see crystallography; X-ray crystallography calculation methods*

PC manufacture *see printed circuit manufacture*

PCB *see printed circuits*

PCB manufacture *see printed circuit manufacture*

PCILO calculations
azomethynes, electrochem. reduction and reactivity, quantum-chem. calcs. *(German)* 7−68222
bacterial peptidoglycan, conform. struct., N-acetyl group role, PCILO calcs. 7−114185
1,2-bis(methylseleno)ethene, Se coupling consts., IPPP-INDO and PCILO-CNDO calcs. 7−103395
1,3-difluoropropanone, IR spectra and dipole moment, stabilities calc. by PCILO method and Onsager formalism *(French)* 7−116857
fluoropropanone, IR spectra and dipole moment, stabilities calc. by PCILO method and Onsager formalism *(French)* 7−116857
N^6-(N-glycylcarbonyl) adenine, nucleic acid base, conform. preferences 7−89962

PCILO calculations continued
N-hydroxy-2-alkenals, conform. and struct. analyses 7−86899
I-102, conform. and electrostatic props., ab initio PCILO calcs. 7−78733
oxazolidines, conform. anal., ^{1}H NMR spectra, mol. mechanics and PCILO calcs. 7−68215
uridines, 5-substituted, conform. anal. and biological activity, PCILO calcs. 7−78734
PCM *see pulse-code modulation*
P²CMOS *see CMOS integrated circuits*
PD control *see two-term control*
pearlitic steel *see steel*
Peierls instability
1D antiferromagnet, correlation length temp. depend. in open 1/2 alternating Heisenberg XY model 7−99389
CDW 2D electron lattice and ferroelec. incommensurate phase surface electron lattice models 7−76797
covalent structs., Peierls instabilities 7−105366
diatomic Peierls system, amplitude breathers, analytic expressions and numerical dynamics calcs. 7−143446
dimensional regularisation approach, 1/N expansion 7−131558
$DIPS\phi_4(I_3)_{0.76}$, quasi-1D conductor, Peierls transition and I_3^- ordering 7−99020
disordered crystals with high Peierls barriers, dislocation motion, simulation 7−142777
$(DMtTTF)_2X$ salts, electronic and mag. props. 7−85293
hexamethoxytriphenylene multiple cationic salts, quasi-1D semiconductors 7−99021
impurity distribution, Peierls lattice distortion effect 7−69735
localised mixed electron-phonon excitation, soliton retardation effects 7−143372
$MEM(TCNQ)_2$, far IR transmission and lattice dynamical calcs. 7−84160
one dimensional system with half-filled band, dimerization 7−143348
Peierls-CDW state, interplay between disorder and impurity distrib. $2k_F$-regularity effects 7−112311
polyacetylene, bond-charge repulsion, extended Hubbard model 7−105432
trans-polyacetylene chains, soliton states, electron correls. effects 7−105424
polymers, cond., with different 3D mag. ordering, instability of polarons and bipolarons 7−92085
polymers, conducting, synthetic metal superlattices 7−105664
polymers, quasi-one-dimensional conductors, bipolaron lattice theory 7−98998
polyyne infinite linear C chain, defect states, dynamics, photoexcitation and coherent anharmonicity 7−143448
spin-Peierls systems, incommensurate phase, NMR and EPR studies 7−85483
spin-Peierls transition theory for quasi-1D antiferromagnet, Heisenberg model calcs. 7−77342
spinless 1D conductors, Peierls instability 7−137909
TCNQ salts, $TEA(TCNQ)_2$ and $MNEB(TCNQ)_2$, lattice dynamics, inelastic neutron scatt. 7−91743
tetrathiafulvalene-Au-bis-dithiolene, spin-Peierls system, high field phase, ESR study 7−118856
three-sites three-electrons system, charge transfer instability with structural change 7−84796
$(TMTTF)_2AsF_6(PF_6)(Br)$ salts, spin-Peierls transition evolution under press., renormalisation group anal. 7−77313
$(TMTTF)_2PF_6$, interplay between spin-Peierls and antiferromag. ground states under press., NMR study 7−85476
TTF-TCNQ, CDW state, dielectric losses, temp. depend. 7−99668
TTF-TCNQ, collective modes 7−84853
As, liq. struct., Peierls distortion 7−137195
$K_{0.3}MoO_3$, CDW state, dielectric losses, temp. depend. 7−99668
$K_{0.3}MoO_3$, current-field relation of CDW near depinning threshold 7−84841
$K_{0.3}MoO_3$, Peierls insulating state, low freq. struct. excitations, neutron studies 7−98366
$K_{0.3}MoO_3$:Fe, CDW state, Mossbauer studies 7−118928
K_3MoO_3:Fe, CDW state, EPR, Mossbauer and UPS studies 7−98842
$La_{2-x}Ba_xCuO_4$, lattice instability, high T_c supercond., elec. resist., mag. susceptibility meas. 7−77131
La_2CuO_4, Peierls distortion evidence from vibr. spectroscopy 7−85658
$(La_{1-x}M_x)_2CuO_4$ high T_c supercond., T_c enhancement due to Peierls instability 7−112578
$La_{2-y}X_yCuO_4$, electronic band props., superconductivity, using La_2CuO_4 results 7−77132
$NbSe_3$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7−98365
$Ni_{2-x}Cu_xMo_6S_8$, elec. cond. behaviour, electronic instability 7−131723
P simple cubic phase stability under press., local density functional calcs. 7−118090
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7−105548
$Rb_{0.3}MoO_3$, current-field relation of CDW near depinning threshold 7−84841
TaS_3 orthorhombic, Peierls transition, cryst. defect effects 7−98811
$(TaSe_4)I$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7−98365
$(TaSe_4)_2I$, CDW system, Hall effect meas. 7−105541
Peierls transition *see Peierls instability*
Peltier effect
measurement of thermal diffusivity appl., using modified Angstrom method 7−102406
Bi_2Te_3 thermoelectric radiation detector with fast response 7−128576
Zn electrolytic coating deposition, struct., Peltier heat effects 7−112305
PEM effect *see photoelectromagnetic effects*
Pendellosung fringes *see X-ray crystallography*
pendulums
see also time measurement
active pendulum with interferometric sensing for low frequency, gravit. wave detection 7−73173
amorphous polymers, torsional pendulum with sustained selfoscills. *(German)* 7−80403
damped pendulums, with quasiperiodic forcing, strange nonchaotic attractors 7−95311
dielectric losses meas. using torsion pendulum 7−121149
differential equation with variable gravity and damping, harmonic maps construction *(French)* 7−72947
pendulums continued
dissipative system, Mel'nikov technique appl. 7−95322
double pendulum with tangential following load, loss of stability *(German)* 7−102155
driven damped pendulum, chaotic behaviour, expt. study 7−108423
driven damped pendulum, periodic chaos, power spectra structure 7−80639
forced pendulum, KAM tori existence, rigorous numerical stability estimates 7−134465
heavy rigid body with one fixed point, stability of pendulum-like oscills. 7−72950
inverted, stability conditions derivation 7−120741
loading of chaotically vibrating mechanical systems *(German)* 7−102318
magnetic pendulum, precursor to chaos, homoclinic orbits 7−67213
orbit precessions due to mag. interactions 7−108080
plane pendulum, heavy, two-link, non-existence of supplementary integral 7−95319
reversed compound pendulum with nonperiodically oscillating suspension, modelling 7−66997
rigid, pivoting on flattened knife edges, period 7−108124
rigid body in moving fluid filled cavity, dynamics 7−97295
roll pendulums, isochronism study *(Japanese)* 7−108212
Scott pendulum, dynamics anal. *(German)* 7−140447
simple pendulum with oscillating support, power series soln., convergence props. 7−134485
simple plane pendulum, numerical scheme for one-dimensional mechanical problems 7−134466
underdamped motion study using videotaping 7−108088
unperturbable, eqns. of motion, exact solns. 7−95306

penetration depth (superconductivity)
high T_c superconductors, critical fluctuations 7−143713
irreversibility of magnetic flux penetration in superconductors 7−131875
mixed state of hollow current-carrying type II superconductors, mag. induction distribution 7−99375
nontrivial superconductivity, phys. props., defect contribution 7−105832
p-wave superconductor, mag. penetration depths 7−92368
p-wave superconductor under externally applied weak fields, response functions, collective modes 7−92369
superconducting superlattice, penetration depth 7−70474
temperature depend. as basis for superconducting thermometer for bolometric appls. 7−108551
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical fields and critical current density 7−143735
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. penetration depth, flux-pinning effects, μSR study 7−112650
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductivity, mag. field penetration depth, μSR study 7−112651
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high temp. supercond., evidence against bulk superconductivity 7−125199
$NaHg_4$, supercond., surface magnetisation 7−125240
NbCN superconducting films, upper critical field meas. and penetration depth determ. 7−131881
NbN/a-Si:H/Nb Josephson tunnel junctions, barrier hydrogenation effects 7−112685
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
$NdRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_{c2} meas. 7−112647
$SmRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_{c2} meas. 7−112647
V Josephson junctions, mag. penetration depth determ. 7−77151
V-Ag multilayered superconductors, mag. field penetration depth, material parameters 7−105828
Y-Ba-Cu-O high T_c supercond., transition at 105 K 7−112538
$YBa_2Cu_3O_{7-x}$ high T_c superconductor, magnetic penetration depth, polarised neutron refl. meas. 7−143700
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. penetration depth, temp. depend., s-wave pairing 7−131885
$YBa_2Cu_3O_x$ ceramic high T_c supercond., prep. and props. 7−118608
$YBa_2Cu_3O_x$, high T_c supercond., struct., transport and mag. props. 7−99373
$Y_1Ba_2Cu_3O_{7-\delta}$, high T_c composite cpd, mag. behaviour 7−138125

Penning ionisation
benzene-Ar clusters, Penning ionisation, UV spectra line shapes 7−82331
electron spectroscopy, surface characterisation of organic solids 7−144209
inert gases, metastable atom collisions 7−141488
metastable atom reactions, product rotational alignment 7−141489
paraxylene clusters, reson. enhanced multiphoton ionisation study 7−90292
phenylacetylene, clusters, reson. enhanced multiphoton ionisation study 7−90292
polyatomic cations, spectrosc. characterisation 7−68286
solid surfaces, epitaxial growth, phase changes, Penning ionisation electron spectroscopy *(Japanese)* 7−77711
Ar discharge, electron distrib. fn., excited state effects for discharge and post-discharge conditions 7−97824
CS_2+Ar, photodissoc. and Penning ionis., steric depend. 7−90389
Cu monolayer and film, with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
D_2+He*(Ne*), Penning ionis., D_3^+ form. *(French)* 7−82330
H_2+He*(Ne*), Penning ionis., H_3^+ form. *(French)* 7−82330
H_2+Ne*, thermal energy collisions, crossed beam investig. 7−129860
HBr+He, Penning ionis., product nascent rovibr. distribs. investig. 7−132927
HCl+He, Penning ionis., product nascent rovibr. distribs. investig. 7−132927
He-Cd capillary glow discharge, population inversion, spectroscopic study 7−96982
He*+H, spin exchange and chemiionisation cross sections 7−68447
He*+Li, ion pair prod., Penning and associative ionisation 7−82333
Kr, hollow cathode discharge, Stark shift, optogalvanic spectra 7−129633
N_2, rot., vibr. and electronic excitation in ICP 7−122675
Ne I excited by discharge with hard component, inversion and stimulated emission due to 585.3 nm transition 7−96978
Ne plasma laser inversion production by Penning reaction 7−136269
Rb, atoms excited in high s or d level, Penning and Hornbeck-Molnar ionisation 7−74742
Rb+K, Penning ionis., exchange and direct mechanisms 7−141665
Rb+Rb, associative and Penning ionisation cross sections 7−74743

penny-shaped cracks
AE, generalised theory and source representation 7−144662
brittle fracture, crack tip stress field anal. 7−75453
ceramic, indentation toughness formula, Palmqvist crack extension 7−71278
crack resistance by interfacial bridging, role in determining strength charcts. 7−137460
cylinder, transversely isotropic with penny-shaped crack, impact response 7−75447
semi-infinite elastic medium, torsional wave interaction with penny-shaped crack 7−97446
stress anal., externally cracked elastic solid, anal. 7−136745
transient thermoelastic crack problems in transverse isotropy 7−130600
transversely isotropic elastic body, closed form solns. 7−142234
transversely isotropic medium with penny-shaped crack under transient loading, stress intensity factors 7−75469
uniqueness for penny-shaped crack equilibrium problem in linear elasticity 7−142226
weight functions and fundamental fields for penny-shaped and half-plane cracks in three-space 7−75446
Na_2O-CaO-SiO_2 glass, median crack initiation, appl. of AE technique *(Japanese)* 7−138842
Si_3N_4, hot pressed ceramics, bending test, crack size distrib., nondestructive inspection 7−106746

pentary algebra *see algebra*

perception (hearing) *see hearing*

percolation
see also lattice theory and statistics
2D bond-diluted O(n) model, phase transitions 7−143811
adhesive sphere fluid, aggregation and percolation behaviour 7−75955
agarose gel-sol transition, shear modulus crit. behaviour investig. 7−100628
aggregation processes, Monte Carlo renormalisation group transformation 7−73249
amorphous As and Ge chalcogenides, photodoping as radiation enhanced solid state reaction 7−126468
anisotropic disordered system of superconducting filaments in normal metal, critical props. calcs. 7−118691
bipartite percolation, gelation, partial generating function, weight-average molecular weight, critical behaviour. 7−128477
breakdown, percolation modelling, failure distrib. 7−86329
ceramic superconductors, high T_c, 2D electron system model 7−112619
cermet thin films, microstruct., transport and optical props. 7−85136
cluster growth models, scaling anal., Monte Carlo simulations 7−108403
cluster numbers, infinitely many independent exponents 7−102349
cluster properties in 2D percolation, parallel computation 7−67235
cluster size distrib. on both sides of percolation threshold, amplitude ratio of second moments 7−67237
clusters in percolation, multifractal structure 7−80682
composite materials, tunnelling and nonuniversal conductivity 7−143426
composites, transverse Young modulus for nonregular structures 7−126156
conference, critical phenomena, random systems, gauge theories, Les Houches, France, (Aug.-Sept. 1984) 7−66826
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
connected clusters at the percolation threshold, fractal dimensionalities 7−121008
correlated model for free and bound water 7−102326
correlation length and critical exponent 7−73262
covalent glasses, chalcogen-based, struct. consequences of rigidity percolation 7−142613
critical exponent inequality, lattice animal expansion for $\beta \geq 2/\delta$ 7−120986
critical exponents in 2D percolation, strict inequalities 7−95490
critical percolation clusters, random walks, scaling theory for dynamic density profile 7−102339
deterministic fractal model, regular model for cluster numbers and structure just below percolation threshold 7−67233
dielectric composites, breakdown elec. field, nonuniversal behaviour 7−132198
diffusion and conductivity near threshold 7−80698
diffusion limited aggregates, bond percolation clusters, second order light scatt., local anisotropy 7−108411
diffusion-limited aggregation and viscous fingering 7−108413
dilute resistor networks, linear to nonlinear resistance crossover 7−108485
diluted antiferromagnets, magnons and fractons 7−118785
diluted Ising model, mean field renormalization group with reaction field 7−102342
dimensionality characteristics and geometrical critical exponents, review 7−128494
directed, thermal and field exponents, scaling in 2D and 3D 7−95503
directed lattices, exact solution for information propagation model 7−108436
directed percolation, real space renormalisation group for arbitrary dimensions 7−102336
directed percolation models with disorder 7−121001
disks continuum percolation on planar triangulated random lattice 7−108467
disordered semicond. system, polycryst. powders and film, elec. cond., grain barrier effects under particle adsorpt. 7−105567
disordered solid, role of desorption of inert gaseous, percolation theory 7−84506
disordered systems, charge jumping transition, 1D cond. and diffusion, bond breaking method calcs. *(Russian)* 7−98953
disordered systems, small polaron mobility, intersite tunnelling percolation 7−76934
disordered systems, $T^{3/7}$ hopping conductivity, wave fn. superlocalization on percolation clusters 7−131631
disordered systems of cylinders, mechanical behavior 7−73243
effective conductivity and percolation threshold, anisotropic effect of structural constituents in random mixtures 7−98952
epoxy resin-based composite, random filler distrib., mech. props., appl. of percolation approach 7−142872
exact fractal dimension of percolation hull exponent on two dimens. 7−102347
excitable medium, ring dynamics and percolation 7−115916
ferromagnetic systems, phase structure and critical behaviour, vigorous studies 7−85315
first-order transitions in percolation models 7−73268

percolation continued
fluid percolation transport through inhomogeneous composite medium 7−136992
fractal dimension of the boundary of a percolation cluster 7−95488
fractal dimensionalities from conformal invariance in percolation and self-avoiding walks 7−73250
fractal media, superlocalization of impurity quantum and Anderson localized states 7−112216
fractal properties of the percolating backbone in 2D 7−73261
fractals growth 7−75654
fracture of percolative media, stress+strain meas. 7−142901
gently sloping beaches, free boundary problem of unsteady flow 7−83336
geometrical phase transitions, microcomputer program appl. 7−120737
glasses, electron-irradiated, network relax. processes governing alkali-metal transport 7−91657
granular superconductors and spin glasses, analogies 7−131899
growth and dynamical discrete models 7−132960
gyrotropic percolation in strong mag. fields 7−76859
heavy ion collisions, multifragmentation, Thomas-Fermi and site-bond percolation model study 7−109203
heavy ion reactions, site-bond percolation model on a lattice 7−109213
heterogeneous composites, piezoresistance 7−112328
hypercubic lattices, dynamic scaling breakdown of bond diluted Ising model at percolation threshold 7−89145
infinite AB percolation clusters, absence in bipartite graphs 7−120979
infinite AB percolation clusters on a square lattice 7−80653
infinite AB percolation clusters on triangular lattice 7−120980
infinite clusters in percolation, multiplicity for d>6, hyperscaling, spanning clusters, Monte Carlo simulations 7−128479
inhomogeneous media, optical dielec. function derivation near percolation, phenomenological approach 7−125676
inhomogeneous media, optical props., mean field theory and scaling laws 7−85573
inhomogeneous media in strong mag. fields, conductivity 7−76858
inhomogeneous percolation problems and incipient infinite clusters 7−80661
inhomogeneous systems, percolation, Monte Carlo studies 7−89137
interacting particles, transport in random networks in external field, random walks 7−128443
Ising model, ferromagnetic, translation invariant, sharp phase transition 7−112837
Ising model, time evolution and damage spreading, Monte Carlo simulation 7−120974
Ising model at percolation threshold, Glauber dynamics and ultradiffusion 7−121009
Ising models, 2D and 3D, fractal configurations at the critical point 7−128493
Ising spins, 2D, with correlated dilution, low-temperature behaviour at the percolation threshold 7−77318
Josephson junctions, highly hysteretic, percolating network Monte Carlo study 7−138149
lattice animals, percolation and compact clusters, scaling props. of perimeter distrib. 7−120975
lattice animals and percolation clusters, shapes 7−120981
lattice hard core particle model with pure excluded volume interactions, clusters, geometrical factors 7−120968
lattice models, critical properties, Monte Carlo finite size scaling and renormalisation anal. 7−121007
linear chain and ring-type random walks, theoretical description of shape 7−128456
localisation and tunnelling effects in percolating systems 7−84732
localization properties, atomic cluster coalescence 7−137882
many-electron excitations, percolation theory at low temps. 7−84800
mesoscopic meal particles, quantum-size affected conductivity 7−143500
metal foils, randomly perforated, elastic consts. near percolation threshold 7−137438
metal-insulator composites, surface plasmon modes, AC dielec. response and scaling behaviour 7−124894
metallic-insulating particle composite system, Scher and Zallen criterion 7−112411
methane, solid deuterated, delayed emission of H_2 from ion bombardment 7−93350
microemulsion as percolating system of interacting particles, electrical conductivity, Monte Carlo simulations 7−131346
microemulsions, three-component, random connected cylinders struct. model 7−132975
microparticle superconductor, transport mechanisms 7−138174
model random networks, elastic props. and site percolation, Green's function calcs. 7−118013
nonlinear resistor network, randomly diluted, field-theoretic formulation 7−80629
oil-continuous microemulsions, percolation phenomena 7−114002
order transmission in some dil. systems 7−76348
organic semiconductors, doped, cond., quasi-1D percolation model 7−76933
particle diffusion with short-range attractive interactions, standard percolation model anal. 7−80699
pattern growth and fluid displacements through porous media 7−83335
Penrose quasilattice in 2D, percolation and scaling 7−95491
percolation clusters generated on Cayley tree at criticality, probability distrib. 7−108452
polymers, branched, in dil. and semidilute solns., lattice magnetic analog, lattice animals and percolation 7−80669
polymers, tricritical exponents, Θ point in two dimensions 7−137512
porous materials, multiphase processes calc. 7−130790
porous media, charact. pore sizes and transport 7−95519
porous media, miscible flows, stable and unstable, acoustical technique studies 7−111089
porous medium, invasion front structure under hydrostatic pressure gradient 7−97622
Potts model, 2D diluted dynamic scaling breakdown 7−120985
Potts model, ferromagnetic, phase transition and percolation 7−92444
Potts model, perturbation expansion in percolation problem 7−108447
q-state Potts model, correlated percolation, critical amplitude calcs. 7−120999
quantum percolation system, density expansion, generalised Bloch eqn. approach 7−144153
quantum percolation thresholds and random walk fractal dimensions 7−102330
quenched random-fuse network, breakdown props. 7−120994

percolation continued
random Boolean networks, transition between frozen and chaotic behaviour, forcing functions 7−73215
random lattice, percolation 7−67240
random lattice invasion percolation, crit. points and exponents, Voronoi network 7−134691
random lattices, electric failure thresholds and fracture in percolation 7−118945
random media systems, percolation models and props., review 7−67252
random resistor network, noise exponents 7−80628
random resistor network, Potts model formulation, critical exponents determ. 7−95502
random resistor network at percolation threshold, infinite set of exponents, renormalization group anal. 7−80659
random spin systems, critical behaviour at the percolation threshold 7−85333
random walk motion, critical slowing down at percolation threshold 7−73204
randomly diluted *xy* and resistor networks near the percolation threshold 7−95501
randomly diluted inhomogeneous elastic networks near the percolation threshold 7−134512
reentrant ferromagnets near percolation conc., coordination no. determ. using mag. reson. 7−112833
scaling relations for 2*D*-percolation 7−67222
self-avoiding walks on diluted lattices near percolation threshold 7−80650
semiconductors, disordered, resist., electron hopping with virtual bound states 7−137916
short and long range, infinite cluster uniqueness and connectivity function continuity 7−134680
silica rough particles in soln., surface fractal props., colloids growth simulation model, comment and reply 7−76051
simple cubic lattice, crit. percolation in three dimens., Monte Carlo renormalisation group approach 7−134694
sintered polydisperse system, dimensional effect in percolation processes 7−76864
soft-core-hard-core transition, percolation thresholds, invariant props. 7−102345
spiral percolation, Monte Carlo simulations 7−102343
static, refined Monte Carlo simulations 7−73255
superconducting composites, critical current density, nonuniversal breakdown behaviour 7−132198
surface fractals in irreversible aggregation 7−120961
Swiss-cheese model for conductive substance, percolation transport exponents 7−95515
symposium on statistical mechanics of phase transitions, Trebon, Czechoslovakia, (Sept. 1986) 7−120693
thin films, percolation of interacting particles deposited onto a planar substrate 7−124794
tight-binding Hamiltonians with incommensurate pot., multifractal props. of wave fns. 7−131503
TMTTF-octadecylTCNQ charge transfer complex, conductivity-area isotherms 7−99019
turbulence, transition by spatio-temporal intermittency, probabilistic cellular automata *(French)* 7−89139
two-dimensional electron gas, quantum Hall effect, percolation approach 7−131676
two-dimensional percolation model, critical amplitude ratio calcs. using series expansions 7−80654
two-phase strongly inhomogeneous composite, effective elec. cond. calcs. near percolation threshold 7−118457
uniformly biased diffusion on 2D percolation network 7−108478
water, connectivity in hydrophilic confinements, percolation model simulations 7−124072
water-in-oil microemulsion, macrofluid-like, percolation model self-consistency 7−100624
water-sodium bis(2-ethylhexyl)sulphosuccinate-undecane, cond., percolation transition, temp. and salinity effect 7−98533
wetting velocity near the directed percolation threshold 7−73252
Al-Ge mixtures, 3D percolation system, Hall effect studies 7−125020
Au-MgO cermet thin films, optical dielec. function derivation near percolation, phenomenological approach 7−125676
AuFe spin glass, transport props. near the percolation limit 7−137902
$Au_{1-x}Fe_x$, evidence against reentrant mag. behaviour, PAC spectra 7−70681
CO on catalytic surface, percolation transition in an irreversible-surface reaction model 7−139044
$Ce_{1-x}Gd_xAl_3$ spin glass-like heavy fermion system, percolation behaviour, low field suscept. meas. 7−125403
$Co_pMg_{1-p}O$, randomly dil. FCC system, percolation effects, mag. props. 7−99422
Cu-oxide ceramic high T_c superconds., perovskite struct., studies on bulk and thin film samples 7−118656
Cu-ZnO two-phase metal-insulator system, highly disperse mixture, optical props. 7−70733
Fe-Cu, FCC alloys, sputtered, magnetic percolation 7−132039
Fe-SiO_2 granular solids, mag. props. 7−125476
$Fe_xNi_{77-x}B_{13}Si_{10}$, amorphous, spin-disorder scattering 7−143456
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, mag. transition, inhomogeneity effects 7−92427
He bubbles in metal tritides, eqn. of state, percolation 7−98113
^3He-^4He films, third sound detection of superfluid transitions 7−124626
In-InO_x supercond. film, SAW attenuation *(Japanese)* 7−125258
$In_{1-x}Ti_xTe$ alloys, energy spectrum, cond. in a mag. field, press. depend. 7−131672
$In_{1-x}Tl_xTe$ solid solns., transport effects, percolation 7−70333
$(La_{1-x}Ba_x)_2CuO_{4-y}$, Balacuo, exciton exchange percolated superconductivity 7−125200
$La_{2-x}Sr_xCuO_4$, microstructural and electromagnetic characterisation 7−112644
$Mn_xZn_{1-x}F_2$, dil. antiferromag., spin dynamics 7−118786
NaCl:Eu^{2+}, aggregation processes, fractal and percolative features, time resolved spectra study 7−84757
$Na_3Zr_2Si_2PO_{12}/Na_2Zr_4Si_{16}P_8O_{61}$, NASICON/glass composite ceramics, conductivity and microstruct. *(French)* 7−131361
NiFeSiB amorphous alloys, high field susceptibility peak 7−132075
Pt-Al_2O_3 cermet thin films 7−125676
Sn-Ge granular system, supercond. transitions *(Russian)* 7−92324
TaO_x thick film, electron hopping and tunnelling cond. investigations 7−137939
percolation continued
Ti films on nonwetted sapphire, laser produced bond percolators, surface free energy 7−98667
Ti-Al_2O_3 cermet, percolation model *(Chinese)* 7−91444
performance evaluation
used for computer equipment performance
see also queueing theory
hydrogeochemical models, portable FORTRAN benchmark for CPU and in-memory data transfer operation speed calc. 7−145678
periodic system of elements
see also elements (chemical)
No entries
peripheral controllers *see computer interfaces*
peripheral drivers *see input-output programs*
peripheral equipment (computers) *see computer peripheral equipment*
peripheral models
see also multiperipheral models
deeply inelastic diagram asymptotics calcs. with vector mesons in exchange channel 7−89522
nonAbelian gauge dynamics, slowly moving fermions, gauge invariant potential, gluon exchange 7−128776
d, magnetic form factor at high Q^2, isoscalar meson exchange current strength 7−121513
$\gamma N \rightarrow \pi N$, u-channel $\Delta(1232)$ exchange model with crossing symm. 7−135140
ΛN interaction, nonrelativistic quark cluster model with gluon and meson exchange 7−121536
NN interaction, colour nucleon cluster calcs. with one-gluon exchange 7−121438
NN scattering, meson exchange contribs., pot. model with OBE terms 7−121531
np charge exchange scatt., one-pion-exchange model with quark exchange 7−89514
np scattering, analyzing power and charge symm. violation, one-boson exchange model 7−121530
$\bar{p}p$ annihilation, 180-600 MeV/c, cross sections, potential model anal. 7−95929
$\bar{p}p$ elastic scattering, 180-600 MeV/c, cross sections, potential model anal. 7−95929
$\bar{p}p \rightarrow \bar{n}n$, 180-600 MeV/c, cross sections, potential model anal. 7−95929
ΣN interaction, nonrelativistic quark cluster model with gluon and meson exchange 7−121536
peripheral processors *see satellite computers*
peripheral speed *see velocity*
peristaltic flow
entrainment, nonlinear effects 7−69262
peristaltic pipe flow, analytic soln. 7−123759
two-dimensional channels with sinusoidal waves, peristaltic flow 7−137011
viscoelastic fluid, squeeze-film flow study 7−83352
peritectic transformations *see decomposition*
Permalloy
corrosion in thin film devices, approaches for investigating 7−125153
films, Bloch lines, cross ties and taffy, Kerr effect studies 7−132108
films, surface magnons, Brillouin light scattering 7−125510
foils, RF collapse effect from heat narrowing 7−118921
ion implanted, mag. recording material, struct. changes *(Chinese)* 7−131402
magnetoresistive thin film sensor, dual-coupled self-biased, micromag. anal. 7−102462
multilayer metal films, composition and thickness determ., fundamental parameters X-ray fluoresc. approach 7−114028
order-disorder transitions, recovery of electron irradiated Fe-Ni alloys 7−104993
patterns propag. of mag. bubble, mag. field anal. *(Polish)* 7−70610
plate, kinetic magnetostriction phenomena obs. using fast scanning tunnelling microscope 7−124050
soft ferromagnetic films, irreversible magnetisation transforms 7−105992
soft magnetic materials, mag. props. 17 years after electron irrad. 7−125451
thin films, ferromag. reson., ang. dispersion of mag. anisotropy 7−132137
ultradispersed film, structural kinetics, laser diffractometry 7−84580
Fe_3O_4-Permalloy composites, hydrothermal reaction sintering *(Japanese)* 7−71137
$Ni_{80}Fe_{20}$ ferromag. double layers, spin wave modes in parallel and antiparallel magnetised states, light scatt. study 7−85270
$Ni_{80}Fe_{20}$-FeMn(α-Fe_2O_3)(TbCo), exchange coupled alloys, temp. stability 7−125514
$Ni_3Fe_{0.7}Nb_{0.3}$, K-state, annealing, struct., neutron diffr. study, elec. resist. meas. *(Russian)* 7−112295
permanent magnets
alloys and particulate recording media, mag. viscosity meas. 7−132066
Alnico 5 with columnar structure, ageing heat treatment conditions effect on mag. props. 7−143859
castings, thermomag. treatment regimes optimisation 7−77872
Curie temp., spin reorientation, anisotropy and magnetisation 7−70544
direction of magnetic lines of force meas. instrument 7−121164
electron storage ring, large permanent magnet quadrupoles 7−135695
field anal. by BEM *(Japanese)* 7−117122
hard magnets, rare earth-transition metal, disclinations and magnetism 7−111559
linear accelerators, permanent magnet quadrupole innovations 7−68067
magnetic props., composition depend. study 7−125390
modulating width multipole permanent magnets, field distrib. studies *(Chinese)* 7−121159
Mossbauer spectrometer appl. 7−108727
particle accelerators, permanent magnet systems 7−81811
polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
quadrupole, rare-earth, spin separation of metal clusters 7−80827
quadrupole lenses, appl. to beam transport and focusing in electron linac *(Chinese)* 7−103302
(rare earth)$_2Fe_{14}B$ polycryst. alloys, spin reorientations simulation w.r.t. permanent magnet and recording appls. 7−125351
rare earth alloys, RCo_5, magnetisation anisotropy 7−138215
rare earth systems, conference, Hamilton, Ont., Canada (June 1986) 7−66817
rare earth-Co_4B, R=Pr, Nd, Sm, Gd, Tb, Dy, Er, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064

ermanent magnets continued
rare earth-Fe_4B, R=Pr, Nd, Sm, Gd, Tb, Dy, Er, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
rare earth-Fe-B permanent magnets, corrosion characts. and mag. props. studies 7−132806
$BaFe_{12}O_{19}$ anisotropic ferrite, rotational hysteresis and torque curve meas. 7−125461
$BaFe_{12}O_{19}$ permanent magnet, intrinsic coercivity, ang. depend. meas. 7−105957
$Dy_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
DyNdFeCoB aligned magnets, permanent magnet props. 7−125465
$Er_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Er_2Fe_{14-x}Mn_xB$, moment canting, magnetisation effects 7−112852
$Er_2Fe_{14-x}Mn_xB$, site occupancy study 7−117862
Fe-Al-C permanent mag. alloys, structural characterisation 7−78065
Fe-Cr-Co permanent magnets, low Co, mag. rotational hysteresis energy 7−138271
Fe-Cr-Co-based cold-rolled magnets, mag. props. and microstruct. studies 7−132065
Fe-Nd-B permanent magnets, mag. domains, high volt. Lorentz electron microscopy obs. 7−132082
Fe-rare earth-B powder oxidation during permanent magnet prep., DSC study 7−132804
$Fe_{48.7}Al_{8.3}Ni_{13.5}Co_{26.5}Cu_3$, Alnico 5, permanent magnet material, mag. props., potentiokinetic polarisation curves 7−99501
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7−132101
$Fe_{47.5}Cr_{28}Co_{23.5}Si$, permanent magnet material, mag. props., potentiokinetic polarisation curves 7−99501
FeNdB, melt-spun ribbons, atom probe FIM study 7−78281
FeNdB-based permanent magnets phase comp., atom probe FIM study 7−132576
$Fe_{14}(NdDy)_2B$ permanent magnet alloy, thermal treatment effects, positron annihilation study 7−132372
$Ho_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
Na-Fe-B magnet, anisotropy consts. meas., temp. and field depend. determ. 7−125373
Nd-Dy-Fe-B sintered magnets, coercivity, depend. on anisotropy field 7−112859
Nd-Fe-B, melt spun permanent magnet alloy, isotropic remanence 7−132084
Nd-Fe-B, sintered magnets, coercivity, thermal ageing effects 7−132083
Nd-Fe-B based isotropic permanent magnet, high performance 7−112861
Nd-Fe-B hot-pressed and die-upset magnets, microstruct., electron microscopy studies 7−131322
Nd-Fe-B magnets, oxidation behaviour, corrosion reaction kinetics study 7−132805
Nd-Fe-B magnets, sintered, hardness and thermal expansion, temp. depend. *(Chinese)* 7−132702
Nd-Fe-B magnets, texture, anal. on basis of easy growth axis determ. of $Nd_2Fe_{14}B$ single crystals 7−132078
Nd-Fe-B permanent mag., elec. resist. and sp. ht. studies 7−131611
Nd-Fe-B permanent magnet, magnetisation reversal by use of Hall-effect microprobe 7−132063
Nd-Fe-B permanent magnets, grain-boundary phase 7−111577
Nd-Fe-B permanent magnets, mag. props. and prep., review 7−112864
Nd-Fe-B permanent magnets, sintered, initial magnetisation curves 7−138269
Nd-Fe-B permanent magnets, sintered, demagnetisation curve dip 7−138270
Nd-Fe-B sintered magnets, mag. viscosity 7−131997
Nd-Fe-B type magnets, coercivity, effect of heat treatment 7−86374
Nd-Fe-B-Dy (Co) permanent magnets, small temp. coeff. 7−70596
Nd-Fe-Co-B sintered magnets, coercivity, depend. on anisotropy field 7−112859
Nd-Fe-Co-B-Mo alloy, coercivity anisotropy field and thermomag. props. study 7−125445
Nd-Fe-Co-B-Zr permanent magnets, mag. props., effect of Co and Zr *(Korean)* 7−78280
NdBFe, compensation of CERN Large Hadron Collider 10 T superconducting dipole magnets 7−129471
$NdCo_5$, uniaxial permanent magnet, magnetostriction 7−138304
$Nd_{1-x}Dy_xFe_{1-y}Co_yB$ permanent magnets, zero temp. coeff. 7−138286
NdFeB magnet, domain struct. and magnetisation temp. depend. meas. 7−125439
NdFeB magnets microstruct., hot-pressed and die-upset, TEM study 7−143027
NdFeB magnets. magnetic viscosity meas. 7−125447
NdFeB permanent magnets, coercivity, comp. and heat treatment depend. 7−143853
NdFeB sintered and melt-spun magnets, coercive field studies 7−118826
NdFeB sintered magnets, hardness variation with temp. meas. 7−124388
$Nd_{15}Fe_{77}B_{18}$ sintered permanent magnets, dip in magnetisation curve 7−70594
$Nd_{15}Fe_{77}B_8$ permanent magnet, mag. anisotropy and rotational hysteresis energy 7−138220
$Nd_{15}Fe_{77}B_8$ powder, prep. by mechanical alloying and solid-state reaction, mag. props. 7−113466
$Nd_2Fe_{14}B$, anisotropy energy and approx. d band calcs. 7−125372
$Nd_2Fe_{14}B$, magnetic anisotropy, cryst. elec. field model calcs. 7−125374
$Nd_2Fe_{14}B$, permanent magnet production, hydrogen decrepitation process 7−92914
$Nd_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Nd_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Nd_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
$Nd_2Fe_{14}B$, remanence direction at 77 K, as function of obliquely appl. mag. field 7−77345
$Nd_2Fe_{14}B$ single cryst. first-order field-induced magnetisation transitions 7−125385
$Nd_2Fe_{14}B$ single cryst., domain width, cryst. thickness depend. 7−138263
$Nd_2Fe_{14}B$-based alloys, substituent effects, cryst. field model anal. 7−70550
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033

permanent magnets continued
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$, M=Sc-Mn, Co, Ni, permanent magnet cpds., mag. props. study 7−92422
$Nd_2(Fe_{1-x}M_x)_{14}B$ (M=Co, Al), thermal expansion anomalies, mag. props. 7−111916
$Nd_2(Fe_{1-x}Ru_x)_{14}B$, low temp. mag. behaviour, spin reorientation phenomena 7−125369
$Nd_{1.9}M_{0.1}Fe_{12}Co_2B$ (M=Ti, Hf), mag. props., material for permanent magnets 7−118830
$(NiFe)_5Sm$ and $(NiFe)_4SmR$, permanent magnets, Ni substitution by Fe 7−112862
$(PbO\text{-}Fe_2O_3)_{100-x}$ $(La_2O_3)_x$ magnets, mag. and phys. props. 7−105966
$Pr_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Pr_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
Sm-Co permanent magnets, ordering process, positron annihilation studies 7−92769
$Sm_2(Co, Fe, Cu, Zr)_{17}$, permanent magnet production, hydrogen decrepitation process 7−92914
SmCo, compensation of CERN Large Hadron Collider 10 T superconducting dipole magnets 7−129471
$SmCo_5$ permanent magnet materials, study leading to discovery of H_2 sorption props. of $LaNi_5$, survey 7−86838
$SmCo_5$, permanent magnet production, hydrogen decrepitation process 7−92914
$SmCo_5$ powder magnet, mag. struct. and texture state influence 7−77381
$Sm(Co_{0.67}Fe_{0.21}Cu_{0.08}Ni_{0.02}Zr_{0.02})_{7.6}$ magnets, ageing, coercive force, hysteresis loop squareness *(Japanese)* 7−99497
SmCoFeCuZr permanent magnets, thermal remagnetisation study 7−138283
$SmCo_{5-x}Ni_x$ melt-spin and as-cast alloys mg. props. studies 7−125449
$SrFe_{12}O_{19}$ 7−125461
$SrFe_{12}O_{19}$ permanent magnet, intrinsic coercivity, ang. depend. meas. 7−105957
$Y_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Y_{1.8}Er_{0.2}Fe_{14}B$ anisotropy free energy, high field torque magnetometry meas. 7−132009
$Y_2Fe_{14}B$, anisotropy energy and approx. d band calcs. 7−125372
$Y_1(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033
$Y_2(Fe_{1-x}T_x)_{14}B$, T=Al, Ti, Cr, Mn, Ni, alloys, magnetic and crystallographic props., comp. depend. study 7−125448

permeability
alloys, columnar-dendritic, interdendritic liq., permeability for flow 7−77977
annulus, porous, horizontal, with step distrib. in permeability, natural convection 7−69164
carboxylate ion exchanger, hydraulic permeability meas. *(French)* 7−144745
conf. on tritium technology, Tokyo, Japan, 1986 7−128200
copolyester, thermotropic liq. cryst., gas transport characts. 7−124569
epoxide membranes, ionic, separation of acid and salt by dialysis 7−119566
flow in random porous medium, network model, effective medium approx. 7−136993
gas ion and atom penetration through barrier in various temp. conditions 7−123906
glass, sol-gel process, structural evolution 7−113512
high T_c supercond. composites, permeability, supercond.-nonsupercond. phase mixture 7−143694
HTR fuel element graphite, permeability to ^{99}Tc, ^{137}Cs and ^{237}Np, spent fuel repository implications 7−135422
infiltration kinetics of capillary-porous solids by melts, investig. method 7−77859
lamellar phases, relationship between permeation and screw dislocations *(French)* 7−98148
lipid bilayer membrane, permeability during phase transition, intermolecular Ca bridges 7−126773
lipid bilayers, amphotericin permeability rel. to glycerol induced structural rearrangements 7−106995
membrane, ion exchange, hydraulic permeability determ. *(French)* 7−78539
membrane, permeation and recycling of H_2, adsorbed molecules effects 7−93382
membranes, liquid, supported, lifetime, interfacial, chemical and water transport effects 7−119564
membranes, microporous, for plasma separation, characterisation 7−114578
metal hydrides, hydrogen storage, contribution of cathodic charging 7−93544
metal layers, H transport, asymmetric effects 7−124596
metals, H permeation, surface effects *(Japanese)* 7−76491
nonideal macromolecular solutes, osmotic flow across membranes 7−113997
plane plate and long circular cylinder, eddy current dispersion of complex permeability *(German)* 7−74809
PMMA stereocomplex membranes, charged, salt permeability maxima 7−113992
polycarbonate films, sorption and diffusion of CO_2 and methane 7−98459
polymer blends, laminar morphology, structure and props. 7−137269
polymer membranes, liquid permeability investig. *(Russian)* 7−100616
polymers, gas sorption and transport, antiplasticization effect, free vol. interpretation 7−84498
polymers, interactions with water and suitability for use as electrical insulators 7−118253
polyphenylene oxide, gas sorption and permeability rel. to antiplasticization 7−84497
polypropylene and PET mixtures, mechanical props. and permeability 7−137265
polystyrene films, sorption and diffusion of CO_2 and methane 7−98459
polysulfone, gas sorption rel. to antiplasticization, thermal and mech. props. 7−84496
polyvinyl alcohol membrane, swollen with aq. solns. of nonvolatile cpds., $O_2(N_2)$ permeability 7−119565
porous material, consolidated, temp. effects 7−130785
porous media permeability, mag. resonance probes 7−83334
porous powder materials,. deform. anisotropy, of mech. props. in uniaxial compression 7−106585
pulmonary endothelium of canine visceral pleura, effect of hypoxia on permeability 7−71717

permeability continued
pulmonary epithelial permeability, alteration in canine radiation lung injury 7−78991
relative permeabilities coupling for flows in capillary tube and a porous medium *(French)* 7−97615
renal proximal tubules, suspended, diffusional water permeability in cell membranes, ^1H NMR obs. 7−93691
rocks, deformation effects on porosity and permeability 7−94206
snow, thermal convection and conductivity, experimental study *(French)* 7−111985
spheres, uniform, bidisperse mixtures, Knudsen diffusion 7−123713
steel, austenitic, first wall material, for NET, tritium inventory, permeation and release calcs. 7−122187
steel, austenitic, fusion reactor material, permeability study, safety implications 7−131351
steel, austenitic stainless, D ion driven permeation, surface struct. and O conc. effects, Auger electron spectra 7−76221
steel, austenitic stainless, effect of C ion displacement damage on D permeation 7−76493
steel, austenitic stainless, H diffusion, permeation and surface reaction 7−106679
steel, Fe-G type, sintered, infiltration kinetics by Cu-Fe melts 7−77859
steel, ferritic, fusion reactor material, permeability study, safety implications 7−131351
steel, martensitic, first wall material for NET, tritium inventory, permeation and release calcs. 7−122187
steel, Ni-Mo, plastic deform., H diffusion and trapping 7−113605
sulfocationite membranes, perfluorinated, mol. mobility of H_2O, H^+ mag. relax 7−135972
tetramethyl-p-silphenylenesiloxane-dimethylsiloxane block and graft copolymers, selective permeable membranes 7−69622
urinary bladder membranes, electrokinetic studies using aq. solns. 7−119753
wood composites, radiation-induced, gas permeability and polymer loading correl. 7−98242
Al, D ion driven permeation study 7−76220
Cu, D ion driven permeation study 7−76220
α-Fe, fusion reactor material, permeability study, safety implications 7−131351
Fe membrane, selective tritium pumping *(German)* 7−129404
H permeability of metals, study using colouring of amorphous WO_3 7−118168
H recycling at first wall in CTR *(Japanese)* 7−74053
H_2, UHV permeation apparatus 7−121138
Mo, divertor armour material, for NET, tritium inventory, permeation and release calcs. 7−122187
Ni, D ion driven permeation study 7−76220
Ni, D permeation from implantation, expt. 7−131366
Ni, D plasma-driven permeation study, Auger electron spectrometry surface anal. 7−76492
O_3, permeability meas. in silicone polycarbonate copolymers 7−142428
T permeation studies, exptl. apparatus 7−129419
$V_{15}Cr_5Ti$, fusion reactor material, permeability study, safety implications 7−131351
W divertor armour material for NET, tritium inventory, permeation and release calcs. 7−122187
Zn, transport through supported liquid membrane using mobile carrier 7−119568

permeability (magnetic) *see magnetic permeability*

permeability measurement (magnetic) *see magnetic permeability measurement*

permeable base transistors *see bipolar transistors*

permittivity
see also electric strength
(1,6-)bis(2,4-dinitrophenoxy)-2,4-hexadiyne analogs synthesis, dielectric props. 7−92572
1D inhomogeneous lossy medium, inverse scatt. method using linear prediction method *(Japanese)* 7−110214
acetamide-NaCNS eutectic mixture, dielec., relax. spectrosc. 7−99663
acetonitrile in electrochemical solvents, dielectric characterisation 7−77459
ADTGSP crystal for pyroelectric detector, optimum cut direction *(Chinese)* 7−99725
alkali metal halide molten salts, struct., radial distrib. fn. calc. 7−137183
2-alkanones, glass matrices, dielectric absorption, relaxation processes 7−99659
p-n-alkyl-p′-cyanobiphenyls, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7−124083
p-alkyloxyphenyl-p′-alkoxybenzoates, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7−124083
aluminomethylammonium alum decahydrate, isostructural ordering, dielectric and pyroelectric props. meas. 7−92608
amide solvents, dielec. const. and basicity effect on Ni electrodeposition 7−92897
1-aminoalkanes, glass matrices, dielectric absorption, relaxation processes 7−99659
amorphous semiconds., optical absorpt. and dielec. const., two-band tight binding model calcs. 7−143994
trans-anethole-9-cyanophenanthrene, exciplex luminescence, magnetic field effect, polar solvents, dielectric constant 7−141618
aragonite, photoelastic consts. determ. from Raman intensity anal. of calcite 7−70741
BOH8-MPOOBC, ferroelec. liq. cryst., thin cell dielec. response 7−97917
bone, elec. and dielec. properties, 0.4 to 1.3 GHz, UV irrad. effect 7−86944
p-bromobenzonitrile, single cryst., pyroelectric props. dielectric meas. 7−106079
butanol-solvent interactions, dielectric const. meas. 7−99644
calcium tartrate single crystals, ferroelectricity, dielec. props. 7−92623
ceramic/methacrylic copolymer emulsion composite piezoelectric paints 7−99693
ceramics, dielectric characts. and HF appls. 7−92573
charge motion in dielectric continuum, effects of polarization lag and spatial dispersion of susceptibility 7−122799
charged spherical particles, suspensions in electrolyte solns., permittivity meas. 7−106839
5-chloro-2-pyridone, phase transition, IR, Raman and dielec. meas., NQR spectrum 7−77423
m-chloronitrobenzene, single cryst., pyroelectric props. dielectric meas. 7−106079
cholestanyl fluoroalkanoates, phase transitions 7−111876

permittivity continued
collagen-apatite composite bone system, elastic consts., density resist., dielec. props., US vel. obs. 7−71803
composite materials multilayered struct., elastic, piezoelectric and dielectric constants calc. 7−125616
composites, general theory for dielectric const. 7−85522
correlated barrier hopping model, numerical approach 7−105509
corundum, particles, in aerosol, optical props. in IR region 7−119590
di(tetramethylammonium) tetrachlorozincate, ferroelectric-incommensurate systems, cryst. growth and related dielec. props. 7−118964
p-p′-dialkylazoxybenzenes, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7−124083
diamines, dipole moment from dielectric const. 7−118936
dielectric and DTA study 7−70691
dielectric constants, microscopic derivation of fluctuation formulas by simulation 7−74807
diglycine nitrate crysts. γ-irrad., electrical polarisation obs. 7−113067
1,2-dinitrododecane, dilute solutions, dielec. props. 7−106075
1,6-bis(2,4dinitrophenoxy)-2,4-hexadiyne single crysts., pyroelec. and dielec. props. 7−99729
2,6-diphenyl-4-(2,4,6-triphenyl-l-pyridinio)phenoxide, lipid membranes, interfacial solvent props. and surface pot. determ. 7−93664
elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7−93127
electro-optic waveguides, electric field, permittivity and strain distribs. induced by interdigitated electrodes 7−110607
electrolyte solution, dielectric constant and conductivity, finite wavelength and freq. 7−111926
esters, dil. soln., dielectric props. temp. depend. 7−70689
ethyl carbamate, aq. solns., dielectric dispersion meas. 7−85518
ethyl carbamate-methyl carbamate, aq. solns., dielectric dispersion meas. 7−85518
ethylene-propylene-rubber-base elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7−93127
ethylisobutyrate-phenol(4-chlorophenol) complexes, dipole moment meas. 7−99645
excitons, phenomenological theory, additional light waves, boundary conditions *(Russian)* 7−118970
ferroelectric ceramics, grain-oriented, processing, microstruct. and elec. props. 7−99736
ferroelectric ceramics, tetragonally distorted, 90°-domain well relax. 7−125646
ferroelectric crystals, defect locking, effect on permittivity *(Russian)* 7−113089
ferroelectric liq. crystal mixture, smectic A−smectic C* phase transition, Goldstone mode and soft mode, dielectric relax. 7−84260
ferroelectric liquid crystals, spontaneous polarisation, elec. and optical props. 7−99734
ferroelectric medium with nonlocal polarisability, impurity electron state 7−76784
ferroelectric phase transitions, size effect, anharmonicity of normal vibr. *(Russian)* 7−113100
ferrofluids, magnetodielectric anisotropy, pair orientation model 7−77362
glass, electrostriction effects study using uniaxial stress compressometer 7−99724
gluon plasmon, electric and mag. props., one-loop gauge-invariant effective action calcs. 7−109086
glycerol, aq., permittivity meas. 7−85519
granular films, optical props., retardation effects, dipolar treatment 7−118965
gyrotropy, impurity-induced, in spectral regions near host exciton resons. 7−85588
heavy-metal fluoride glasses, optical dispersion 7−85568
heterocyclic polymer composite conducting films, prep. and elec. props. 7−76909
hexa-n-dodecanoyloxy truxene in nematic phase, dielectric consts., splay and bend elastic consts. 7−137435
human tissues, in vitro dielec. props. at radiofrequencies 7−107031
ice, high-frequency dielec. const., Kirkwood correl. factor 7−143956
ice, low-frequency space charge dispersion, proton charge carrier mobility 7−99676
impurity gyrotropy enhancement near host cryst. exciton reson. 7−76811
ionic crystals, permitt. and higher order elastic consts., interrelationship between press. derivatives, appl. to alkali metal halides 7−92571
ionic crystals, press. depend. of dielectric const., exchange-charge model 7−85523
laser driven acoustic instabilities in materials with strain-dependent dielectric constants 7−97258
leaf, Jade, dielec. response over extended freq. range 7−86935
$LiNbO_3$ ceramics, dielectric const., loss tangent and elec. cond. meas. 7−138381
liquid cryst., mixtures, phase diagram, intermediate phase form., dipole-dipole correl. and geometric factors 7−84261
liquid cryst. polymer director order parameter, dielectric relax. and permittivity study 7−92567
liquid crystalline polymers containing polychloroacrylate and polyacrylate, mol. dynamics, permittivity meas. 7−137225
liquid crysts., dielectric const., effective local field, Lorentz tensor and refractive index calcs. 7−125596
lithium thallium tartrate, thermally unstable mode, submillimetre spectrum 7−77472
Maxwell eqn. general solution for excitation by slotted aperture source in conducting cylinder with concentric layering 7−68512
metal particle-plane interaction, van der Waals repulsion, jellium model calcs. 7−143377
metal-semiconductor random heterostructures, Cu, Ag, Au embedded particles, microstructures for IR detection 7−132290
metallic particles in infinite dielec. medium, surface plasma oscills. spectrum *(Russian)* 7−84616
metallic small particles, EM props., quantum mechanical approach 7−124893
methane-methanol, supercritical mixtures, static dielec. const. and density 7−113059
methyl carbamate, aq. solns., dielectric dispersion meas. 7−85518
microemulsions, ionic and nonionic, dielectric spectroscopic study 7−113060
microwave irradiated material, temp. runaway 7−130522
molecular crystals, dielectric props., effect of exciton conc., refraction and absorption props. 7−99635
molecular crystals, two-level excitonic system, light absorpt. and refr. props., electric field effects 7−92072

permittivity continued
multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
nematic mixture E130, permittivity, splay and twist elastic and viscotic consts. meas. 7−91439
n.heptane+methanol, binary liquid system near critical temp., dielectric const. 7−85524
nitrobenzene-xylene(toluene), liq. mixture, dielectric const. 7−70690
p-nitrobenzonitrile, single cryst., pyroelectric props. dielectric meas. 7−106079
noncodimensional phases, defect-induced ferroelastic and ferroelec. props. 7−125626
nonmetallic crystals, bipolarons, binding energy 7−143375
nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7−125602
4-n-octadecyl phenol, film on Cu, IR absorpt. intensity, rel. to film thickness 7−92759
optical boundary, frequency shift of laser light 7−103737
optical waveguides, weakly inhomogeneous, approx. variable separation method 7−110575
optically nonlinear Langmuir-Blodgett monolayers, linear electro-optic props. 7−123057
organosilicon films, plasma polymerised, phase transition effects 7−131290
oxide interfaces, stabilisation by defects and impurities 7−112105
paraelectric soft modes, dielectric spectroscopy 7−124421
PBZT ceramic, ultrasonic characterization of elastic and piezoelectric props. 7−131244
pentachlorophenol-acetonitrile complex, H-bonded, IR dispersion 7−125718
perovskites, $A(B'B'')O_3$, B-site ordering, Raman scatt. obs. 7−106153
Perspex non-planar dielec. samples, complex permittivity meas. 7−140714
piezoelectric ceramic-polymer fired composites 7−99695
piezoelectric composite ceramic, effective props. theory 7−77470
plasma-maser effect in weakly nonstationary medium with nonsteady ion-sound turbulence 7−75794
polar crystals, long wavelength optical mode freqs., determ., differential reflection spectroscopy 7−138409
polar liquid, adiabatic electron transfer generalised Langevin eqn. fluctuation effect 7−71482
polar semiconductors, collective excitations in superlattice structs., electron energy loss, sensitivity to outermost layer 7−85911
polaron states, in finite crystals, adjacent to dielectric media 7−84707
poly(methoxy-substituted phenyl methacrylate), dielectric relax. meas. 7−132191
poly(phenyl methacrylate), dielectric relax. meas. 7−132191
polydomain order-disorder ferroelectrics, pseudospin excitation spectra local states study *(Russian)* 7−77486
polyethylene, C black filled, dielec. props. rel. to filler conc. 7−77458
polyimide high resolution ion implantation masks, thin film surface morphology and dielec. props. study 7−69723
polypropylene films, finely dispersed Au loaded, cond. props. 7−85135
polyvinylidene fluoride, ferroelectric polymer, nonlinear dielectricity 7−125651
polyvinylidene fluoride-polymethyl methacrylate, soln. mixed blends, dielectric and struct. props. 7−132181
polyvinylidene fluoride-trifluoroethylene copolymers, far IR spectra, dielec. props., phase transitions 7−126101
primary aliphatic amines, dipole moment from dielectric const. 7−118936
propane, two-phase liq. equilib. with hydrate 7−124468
pyrene-dimethylaniline, exciplex luminescence, magnetic field effects, polar solvents, dielectric constant 7−141618
quartz, single cryst., relaxation function and dielec. const. 7−113075
quartz, synthetic, ultrasonic characterization of elastic and piezoelectric props. 7−131244
quartz ceramics, heat treatment, thermal and mech. props. 7−78077
radiation cured polyester compositions containing metal-properties, softening temp., creep current resistance, dielectric loss and permittivity meas. 7−124335
random dielectric media, back-scattering of EM waves 7−82439
retrogressive nematic phases, dielectric relax. *(Chinese)* 7−132193
sandstones, dielectric constant in 60 kHz-4 MHz range 7−114704
Schottky diodes, photocurrent polariton peak, optical const. effects 7−105659
Seignette salt, dielectric permitt., low-freq. dispersion, domain struct. reordering, stress effects study *(Swedish)* 7−125593
semicarbazide hydrochloride, and deuterated single cryst., dielec. props. and thermal expansion 7−85521
semiconductor film, dielectric permittivity, screening of charged centre fields 7−92568
semiconductor films, inhomogeneous polariton scatt. ny dielec. const. fluctuations 7−124877
semiconductor heterostructures and quantum wells, image force effects, determ. 7−85089
semiconductor surface layer, hyper-Raman scatt. by lattice vibrs. 7−77531
skin, human, normal and wounded, comparison of dielec. props. 7−78824
snow, microwave dielectric and scatt. behaviour 7−101357
sodium cryptand(2.2.2) sodide, optical reflectivity and absorpt. meas. 7−113222
soil water saturation determ. using dielectric meas. 7−127309
Space Shuttle tile, new millimeter and microwave substrate for aerospace applications 7−115206
spontaneous polarisation anomalies of ferroelectrics and linear pyroelectrics 7−132185
static, computer simulation calcs. 7−125597
streptomycin, dielectric relax. time meas. 7−77460
surface materials, power reflectivity investig. 7−99778
swallow-tailed liquid crystalline mixtures, dipole-dipole interactions 7−106077
symmetric dielectric slab waveguide with Kerr like nonlinear permittivity, TE wave propag. 7−90735
p-terphenyl, amorphous and cryst., dielec. props. and inter-trap hopping 7−85535
TGS, ferroelectric, domains and imperfections investig. 7−125641
TGS, perfect and imperfect crystals, microwave permitt. meas. 7−70695
TGS cryst., paraelec. phase, permittivity nonlinearity study 7−99642
TGS-L-α-alanine cryst. mixture, dielec. props., effect of L-α-alanine conc. 7−138390
TGSe:alanine, P, growth and pyroelec. props. 7−92612
H-thiourea, phase transitions under elec. field 7−118957
permittivity continued
TMPO free radical, H donor solvents, assoc. consts., ESR spectra study 7−103546
tolans, nematic, birefringence, viscosity and dielec. const. studies 7−75980
4-trans-4′-n-hexyl-cyclohexyl-isothiocyanato-benzene binary mixtures, dielec. studies 7−125585
4-(trans-4-alkylcyclohexyl)-1-(2-cyanoethenyl)-benzene, binary mixture with 60CB, nematic reentrant phase, elec. props. 7−124499
transient species, photoinduced, dielec. relax. obs. 7−113062
transition metal oxide semiconducting glasses, dielec. props. freq. depend. model 7−143951
trichloroacetonitrile, liq., permittivity meas. 7−92587
triglycine sulphate ferroelec. material, low-freq. permittivity dispersion, linear electrocaloric effects 7−70694
trimethyl ammonium cadmium trichloride, dielec. dispersion, mol. reorientation of trimethyl ammonium ions 7−106074
tungsten bronze ferroelectrics, dielectric responses, rotational mode 7−125633
two-component boson-fermion plasma, permittivity calcs. 7−99643
undecylic acid, polar liquid, associating behaviour, dielectric props. determ. 7−104513
V-VI-VII monocrystals, electron dielec. permittivity, band struct., Hueckel method calc. 7−143953
variable range hopping, modifications due to long range Coulomb interactions 7−92184
vinylidene fluoride-trifluoroethylene copolymers, dielec., piezoelec., and pyroelec. props. 7−99717
vinylidene fluoride-trifluoroethylene ferroelec. copolymers, electron irrad. and annealing effects 7−143978
water, high-frequency dielec. const., Kirkwood correl. factor 7−143956
water, liq., optical consts., temp. variation, Fourier transform IR spectra 7−77532
water vapour, humidity meas. at temp. above 100 °C 7−128587
waxes, thermo-electrets, dielectric props., electrical DC cond. determ. 7−118939
weakly polar ferroelec., dielectric props., soft modes 7−143986
zincblend III-V semiconds., chem. bond ionicity calcs. *(Russian)* 7−137305
Ag substrate, coupled to Ag or dielec. sphere, optical response, surface plasmon polariton excitation 7−106160
Ag thin films with organic overlayers, SERS, short-ranged EM fields 7−125756
$Ag_7I_4VO_4$ solid electrolyte thin film electrodeposition, cond. and permittivity obs. 7−131354
$AgNO_3$, metastable phase III, ferroelectricity 7−99742
Ag_3SbS_3, broad phase transition near T∼150 K, permitt., US meas. 7−69888
$AgTaO_3$, structural phase transitions, Raman scatt., X-ray diffr. and dielectric meas. 7−76386
Al surface liquid films, dielectric loss meas. 7−99779
Al_2O_3, porous ceramics, electrolyte saturated, dielec. anomaly 7−133667
Al_2O_3-Ta_2O_5 composite RF sputtered films, dielec. props. study 7−99678
Ar fluid, intermediate excitons, reflectivity spectra 7−84686
$As_xSb_{1-x}SI$ mixed crystals, dielectric and ferroelectric props. 7−77477
As_xSe_{1-x} chalcogenide glasses, dispersion parameters of a Sellmeier and Lorentz-Lorenz relation 7−85567
Au thin film/fluid interface, surface plasmon-polariton studies 7−138532
B_2O_5-P_2O_5-SiO_2, borophosphosilicate glass films, low pressure CVD using miscible liquid precursors 7−71050
$(Ba_{0.95}Ca_{0.05})(Ti_{1-y}Ca_y)O_{3-y}$ ceramics, dielectric props. 7−70717
$Ba_3LaTa_3O_{12}$, single crystal, physical props. 7−106117
$Ba_{1-x}M_xTi_{1-x}Mg_xO_{3-3x}F_{3x}$, M=Na, K, solid soln. ceramics, dielec. and pyroelec. props. study *(French)* 7−125598
$Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics with ultra-low loss at microwave frequencies 7−92593
$Ba(NO_3)_2$, thermal hysteresis 7−76393
$Ba_4Na_2Nb_{10}O_{30}$:$La^{3+}(Pr^{3+})$, ferroelectric ceramics, modified, dielec. behaviour 7−85520
$Ba_4Na_2Nb_{10}O_{30}$:$La^{3+}(Sm^{3+})(Dy^{3+})$ ceramics, dielec. and ferroelec. props., effect of rare-earth ions 7−92621
BaO-SrO-SiO_2-TiO_2 system glass-ceramics, piezoelec. props. and microstruct. 7−99703
$Ba(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$Ba_{0.5}Sr_{1.5}K_{0.5}Na_{0.5}Nb_5O_{15}$, MM-wave dielec. props. at 77 and 300 K 7−99650
$Ba_{0.4}Sr_{0.6}Nb_2O_6$, cryst., electrooptic effect, temp. and field depend. 7−132241
$Ba_{0.85}Sr_{0.15}TiO_3$ ferroelectric thin film, crystal struct. and dielectric props. study 7−70708
$Ba_{0.06}Sr_{0.94}TiO_3$, permittivity meas., deviations from Curie-Weiss behaviour, high hydrostatic press., quantum effects 7−125591
$Ba_{0.65}Sr_{0.35}TiO_3$ ceramics, prep. from citrate precursors, dielec. and microstruct. props. 7−99648
$BaTiO_3$, fine grained, dielec. const. and spontaneous polarisation 7−92576
$BaTiO_3$, high purity, microstruct. and props., effects of prep. and stoichiometry 7−125590
$BaTiO_3$ piezoceramics, dielec. const., ageing behaviour 7−92575
a-$BaTiO_3$ RF sputtered film dielec. and optical props., active display device appls. 7−143967
$BaTiO_3$, semicond. ceramic, dielectric response 7−99731
$BaTiO_3$ semiconducting ceramics, elec. cond. meas., models and varistor effects 7−84900
$BaTiO_3$ thin films, RF sputtering prep., struct., elec., and optical props. 7−100072
$BaTiO_3$:Ca ceramics, ferroelec. transition, effect of octahedrally coordinated impurity 7−92620
$BaTiO_3$:Fe, ferroelec. hysteresis, statistical theory 7−132213
$BaTiO_3$:Fe(Nb_2O_5), monocrystallic, permittivity in combined elec. fields *(Czech)* 7−138391
$BaTiO_3$:Sm hot-pressed ferroelectric ceramics, elec. cond. study *(Japanese)* 7−131645
$BaTiO_3$/polyvinylidene fluoride composite, temp. and freq. depend. of dielec. props. 7−70724
$BaTiO_3$-$Cd_5(PO_4)_3Cl$ impurity-modified ceramic for high-temp. applic. 7−143980
$BaTiO_3$-$Nd_2Ti_2O_7$ pseudobinary system, X-ray phase and thermal analyses and electrophysical characteristics 7−91764
$BaZnGeO_4$, powder calcination, phase transitions, DTA, dielec. meas., X-ray diffr., SEM obs. 7−126107
$Bi_4MTi_4O_{15}$ (M=Ca, Sr, Ba, Pb) ceramics, piezoelec. and ferroelec. props. 7−92604

permittivity continued
Bi_3TiNbO_9, heterovalent ion substitution, ferroelec. props. *(Japanese)* 7−124196
$Bi_4Ti_3O_{12}$ ceramics, grain-oriented fabrication and dielec. props. 7−99699
$Bi_4Ti_3O_{12}$ RF sputtered films, dielec. props. 7−99679
C fibres, PAN-based, impedance, temp. depend. of resistivity 7−70271
$Ca_8(Al_{12}O_{24})(CrO_3)_2$, aluminate-chromate sodalite ceramics, prep. and dielec. meas. 7−92579
CaF_2:Nd single crystals, dielectric studies 7−132182
$Ca_xSr_{1-x}F_2$, lattice matched epitaxial layer on GaAs (100), growth, characterisation 7−143253
$CdIn_2O_4$ sputtered films, scatt. of charge carriers 7−77117
$Cd_2Nb_2O_7$, dielec. nonlinearity near ferroelec. transitions 7−138372
$Cd_2Nb_2O_7$, Raman soft mode damping, thermal hysteresis of dielectric const. 7−125589
$CdO-B_2O_3$ glass system, struct., dielectric and optical props. 7−111407
CdP_2, tetragonal single crystals, superionic conductivity 7−98566
$Cd(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
CeO_2 single crysts., covalent insulator, optical reflectivity meas. 7−125673
Co island films, magneto-optical method anal. 7−125823
$Co-Al_2O_3$ composite films, low freq. dielectric props. 7−92566
$CrVO_4$, elec. transport props. 7−105602
CsH_2PO_4, dielec. props., hydrostatic press. effect 7−77474
$CsM(MoO_4)_2$:Li, M=Sc,Dy, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
Cs_2O thin film, optical props. dielectric consts. *(Chinese)* 7−99950
CsOH(D), low temp. antiferroelectric ordering transition studies 7−85551
CuCl, photoactivated defect-induced dielec. anomalies 7−113073
Cu_6PS_5I, superionic phase transition, dielec. and optical props. 7−69966
Cu_2S (natural chalcocite mineral), ferroelectric properties 7−87613
$CuSO_4.5H_2O$, dielectric and DTA study 7−70691
CuV_2O_6, elec. cond., thermoelec power, dielec const. 7−137973
Dy_2S_3, elastic, piezoelectric and piezooptic props. 7−131203
Fe/FeO_x interface, current and capacity, computer supported pulse meas. 7−113753
$Fe_2(MoO_4)_3$, elec. transport props. 7−131692
Fe_3O_4 magnetite, thermal and dielectric props. near Verwey transition 7−132027
GaAs, optical charactn., IR reflectance spectroscopy 7−77535
GaAs:Cr(Si)(Zn), optical charactn., IR reflectance spectroscopy 7−77535
Ge-Sb-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
Ge-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
H_2O, adsorbed on TiO_2, dielectric permittivity and loss meas. 7−92585
H_2O, liq., dielectric props., mol. dynamics simulation 7−125594
He films adsorbed on sapphire or rutile, film effect on microwave reson. freq. of dielec. cryst. 7−70726
He, liq. film, dielec. const., thickness depend. 7−124628
HgI_2, dielectric and electrical props., effect of visible light intensity 7−99637
HgI_2, elec. and dielec. props., high field effects 7−105576
HgI_2, illuminated, dielec. behaviour, temp. dependence 7−99636
HgTe-CdTe, superlattices, optical properties, review *(Polish)* 7−132219
InP, thermal ionisation energy of impurities, conc. depend. 7−84763
KCl-KBr mixed crystal system, dielectric props. 7−77452
KD_2PO_4, monoclinic crystal, phase transition 7−131288
KH_2PO_4, domain freezing, dielectric dispersion 7−113097
KH_2PO_4 group crystals, domain struct. dynamics, electrophysical props. 7−99768
KH_2PO_4, longitudinal and transverse dielectric consts., KDP-type ferro- and antiferroelectrics 7−99640
KH_2PO_4, thermal and dielectric props. at low temp. 7−70692
α-KIO_3HIO_3, ferroelectricity disappearance under hydrostatic pressure 7−132209
$K_x(KCl)_{1-x}$, struct., reference pot. examination by Percus-Yevick approx. 7−124074
$K_{1-x}Li_xTaO_3$, cluster glass and domain state props., phase boundary 7−113090
$K_{1-x}Li_xTaO_3$ cryst., low-freq. permittivity, amplitude depend. 7−70693
$K_{1-x}(NH_4)_xH_2PO_4$ mixed crysts., dielec. const. and elastic compliance, comp. depend., phase transitions 7−77450
$K_{0.5}Na_{0.5}NbO_3$, dielectric props., phase transitions, press. effects 7−125629
$KNbO_3$ single crysts., growth and doping, dielec. and optical props. 7−99739
$KSc(MoO_4)_2$:Li, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
$KTa_{0.68}Nb_{0.32}O_3$, dielectric props., phase transitions, press. effects 7−125629
$KTa_{0.92}Nb_{0.08}O_3$, low freq. dielec. response, temp. depend. meas. 7−138371
$KTa_{1-x}Nb_xO_3$ ceramic discs, prep. by sol-gel processing and hot pressing 7−100170
$KTaO_3$, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
$KTaO_3$:Nb(Li)(Na), RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
Kr fluid, intermediate excitons, reflectivity spectra 7−84686
$LaAsO_4$, dielec. and thermal props. 7−131722
LaSrCuO/Al contact, I-V charact. meas. 7−105662
$Li_2B_4O_7$, crystal growth, piezoelec., dielec., elastic, and acoustic props. 7−99711
$LiCsSO_4$ crystals, ferrobielectric props., temp. depend. 7−125624
LiF, single crysts., X-ray irrad. under DC fields, dielec. props. 7−106073
Li_2GeO_3, elastic, dielectric and piezoelectric constants, thermal expansion, 62-600 K 7−84085
$Li_2Ge_7O_{15}$, ferroelectric phase transition 7−132210
$LiIO_3$ crysts., dielec. dispersion and ionic cond., defect structural model 7−143949
$LiMO_3$ (M=Ta,Nb), dielectric props., phase transitions, press. effects 7−125629
$LiNH_4SO_4$ crystal, ferroelectric phase transition 7−99757
$LiNH_4SO_4$, phase transition mechanism, doping effect, ionic cond., dielec. meas. 7−106100
$Li(N_2H_5)SO_4$ pure and doped single cryst., DC cond. and dielec. props., phase transition 7−113076
$LiNbO_3$ ceramic pellets, dielec. and ultrasonic props. studies 7−85525
$LiNbO_3$, nonlinear constants determ. *(Japanese)* 7−125618
$LiNbO_3$, single crystal growth, Curie temp. meas. 7−138636
permittivity continued
$LiNbO_3$, uniaxial ferroelectric ceramic, dielectric const. meas. 7−85526
$Li_2O-CdO-SiO_2$ system, glass-ceramic and glasses, elec. props., neutron absorpt. 7−143948
$Li_2O-Ta_2O_5-MgO$ ferroelec. ceramic, Mg cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
$Li_2O-Ta_2O_5-ZnO$ ferroelec. ceramic, Zn cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
$Li_2O-Ta_2O_5-(WO_3)_2$, nonstoichiometry and ferroelec. props. at 1250°C and atmospheric press. 7−84304
$LiTaO_3$, ferroelectric relax. 7−70720
$LiTaO_3$ thin films, prep. by dipping method, dielec. and optical props *(Japanese)* 7−132511
$MgMn_{2-x}V_xO_4$, structural and dielectric props. 7−92570
MgO:Co^{2+}, single cryst., dielec. props. 7−85517
MgO:Mn^{2+}, single cryst., dielec. props. 7−85517
Mn-Zn ferrite, single cryst., dielec. spectrum *(Japanese)* 7−132183
$MnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
ND_4DSeO_4 crystals, coexistence of polar and nonpolar phases, dielectric const. 7−99638
$(NH_4)_2BeF_4$, low freq. permitt. meas. 7−99641
$(NH_4)_2BeF_4$, permittivity, influence of electric field, commensurate-incommensurate transition 7−132180
NH_4Cl, dispersion and spontaneous current phenomena 7−77446
$NH_4H_2AsO_4$, single crystal, growth, props. real antiferroelectric phase transition *(Korean)* 7−85987
NH_4HSeO_4, incommensurate phase, dielectric const. under bias electric field 7−99639
$(NH_4)_2SO_4$ improper ferroelec., phase transition, phenomenological theory 7−106099
NO_2, dimerisation, chem. equilib., crit. fluctuations effect 7−86660
Na complex, cryptand [2.2.2], electronic props. 7−85019
$Na_8Al_6Ge_9O_{25}(OH)_2$, hydrosodalite, ferroelastic phase transition and dielec. relax. 7−124484
γ-$Na_3M_2(PO_4)_3$ (M=Sc,Fe,Cr), superionics, elec. props. 7−91892
$NaNH_4SO_4.2H_2O$, dielec. and elastic props. above Curie temp. 7−113063
$NaNbO_3$, antiferroelectric transition, influence of reduction of Nb ions valency 7−92619
$NaNbO_3-SiO_2$ glasses, dielec. props. comp., freq. and temp. depend. 7−143952
$Na_2O-K_2O-Nb_2O_5-SiO_2$ glasses, crystn., phase decomp., permittivity and electro-optic effects 7−83710
$Na_3Sc_2(PO_4)_3$, relaxation dispersion, freq. relations, temp. depend. 7−99647
$Na_5W_{3-x}Ti_xO_{9-2x}F_{5+2x}$, crystallographic, thermal and dielectric meas. *(French)* 7−92618
Ne-H liq. mixtures, dielec. consts. meas. *(Russian)* 7−77447
PLZT ceramic electrodes by laser chem. processing, dielec. props. 7−100410
PLZT ceramics, dielec. and elec. props. 7−99134
PLZT ceramics, grain-grown, dielec. props. 7−92622
PLZT ceramics, research programme at Shanghai Institute of Ceramics 7−92616
PLZT, hot-pressed, pyroelectric charact., appl. for IR detectors 7−113084
PLZT, transparent ferroelectric ceramic, dielectric memory effects 7−143950
PLZT-silicone rubber porous ceramic composites, dielec. and piezoelec. props. study 7−125587
PZT ceramics, low temp. dielec., piezoelec., and elastic props. 7−99701
PZT films, growth and charactn. by reactive sputtering of metallic targets 7−100073
PZT perovskite ferroelec., first order transitions, phenomenological theory 7−99750
PZT piezoceramics, modified, bulk resist., temp. depend 7−99068
PZT piezoceramics, modified, dielec., piezoelec., and SAW props. 7−99710
PZT-polyethylene composites, prep. and piezoelec. props. 7−99697
PZT-polymer composites, dielec. and elec. cond. props. 7−99669
PZT-silicone rubber composites, dielec. and piezoelec. props., stress stability 7−99689
$(Pb,Ca)TiO_3$ ceramics, electromech. props. 7−99702
$(Pb,K,La)Nb_2O_6$ ceramics, dielec. and ferroelec. props. 7−99651
Pb $(Mn_{2/3}Sb_{1/3})_{0.08}Ti_{0.495}Zr_{0.425}O_3$ sintered powders, electrical properties *(Korean)* 7−143955
$Pb-Fe_{1/2}Nb_{1/2}O_3-PbFe_{1/2}Ta_{1/2}O_3-Li_2CO_3$ ceramics, low-temperature sintered, dielectric props. 7−77451
$Pb_{1-x}Ba_xNb_2O_6$ ferroelectric tungsten bronze crystals, dielectric and piezoelectric preps. 7−125592
$Pb_{1-x}Ba_xNb_2O_6$ single crystals, Czochralski growth and dielec. props. 7−92578
$(PbCaCoWTi)O_3$ ceramics, electromechanical anisotropy mechanisms 7−125614
$PbFe_{0.5}Nb_{0.5}O_2$, positive temp. coeff. of resist. effects charact. study 7−84876
$Pb(Fe_{1/2}Nb_{1/2})O_3$, thin films, sol-gel prep. and dielec. props. 7−126054
$Pb(Fe_{1/2}Ta_{1/2})O_3$ ceramic, dielec. props. under press. 7−92574
$Pb_{1-x}Gd_xTe$ semimag. cpd., optical props. temp. depend. meas. 7−113116
$Pb_5Ge_3O_{11}$, cryst. growth and characterisation 7−138635
$Pb_5Ge_3O_{11}$, single crystal ferroelectric, growth, elec. props. *(Korean)* 7−86008
$PbHPO_4$, quasi-1D ferroelec., dielec. const. 7−125595
$PbHfO_3$ permittivity meas., elec. field-induced phase transitions 7−77448
$Pb_2KNb_5O_{15}-Ba_2NaNb_5O_{15}(Sr_2NaNb_5O_{15})$ ceramics, struct. and ferroelec. props. 7−99760
$Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics, microstruct. and dielec. props., influence of powder purity 7−92577
$Pb(Mg_{1/3}Nb_{2/3})O_3-PbTiO_3$ ceramics, low temp. fired, densification and dielec. props. 7−92948
$Pb(Mg_{1/3}Nb_{2/3})O_3-PbTiO_3-MnO$ relaxor ferroelec. ceramics, dielec. ageing effects 7−99740
$Pb(Mg_{1/3}Nb_{2/3})O_3-Pb(Co_{1/3}Nb_{2/3})O_3-PbTiO_3-PbZrO_3$ ceramics, piezoelec. props. and microstruct. 7−99707
$Pb(NO_3)_2$, thermal hysteresis 7−76393
$Pb_4(NO_3)_2(PO_4)_2.2H_2O$, ferroelec., dielec. props. 7−125621
$PbNb_2O_6-Sr_2NaNb_5O_{15}$ ceramics, struct. and ferroelec. props. 7−99760
$Pb(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$Pb(Sc_{0.5}Nb_{0.5})O_3$, polycrystalline ferroelectric, glasslike behaviour at low temp. 7−125588

permittivity continued
PbSe laser-deposited films, IR absorpt. and electronic struct. props. 7−77672
$(PbSmTMn)O_3$ ceramics, electromechanical anisotropy mechanisms 7−125614
$PbTiO_3$ ceramics, modified, dielec. props. 7−99649
$PbTiO_3$ films, epitaxial growth on $MgAl_2O_4$-Si substrates 7−100071
$PbTiO_3$ films from metallo-organic precursors 7−99738
$PbTiO_3$, sol-gel derived, struct. control of monolithic gels 7−113489
$PbTiO_3$:Sm(Ca) ceramics, electromech. coupling anisotropy 7−99700
$PbTiO_3$-polymer composites, poling study, dielec. and piezoelec. props. 7−99692
$Pb(Zn_{1/3}Nb_{2/3})O_3$-0.1$PbTiO_3$ single crysts., growth, dielec., and pyroelec props. 7−99730
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$-$PbTiO_3$ system, dielec. and ferroelec. props., phase relations 7−70713
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$-$PbTiO_3$ ceramic electrostrictors for micropositioner appls. 7−99722
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$-$BatiO_3$ ceramics, dielec. and piezoelec. props. 7−99706
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$SrTiO_3$-$PbTiO_3$ system, phase relations, dielec. and piezoelec. props. 7−92598
Pt complexes, $Pt(en)_2$ $Pt(en)_2X_2$ $(ClO_4)_4$ (X=Br and Cl), charge transfer excitons 7−98817
RbCl-RbBr mixed crystals, dielectric constant, temp. and composition depend. 7−143954
RbD_2PO_4 crysts., microwave dielec. dispersion near ferroelec. transition 7−125586
RbD_2PO_4, phase transitions, dielec. and optical meas. 7−113091
$RbSc(MoO_4)_2$:Li, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
Rb_2ZnCl_4 crystals, incommensurate-commensurate phase transition, permittivity, birefringence 7−137550
Rb_2ZnCl_4, discommensurations, interaction potential, direct meas. 7−113064
Rb_2ZnCl_4, ferroelec., incommensurate phase, permitt., anomalous thermal hysteresis under uniaxial deform. 7−77483
Rb_2ZnCl_4, ferroelectric-incommensurate systems, cryst. growth and related dielec. props. 7−118964
Rb_2ZnCl_4, low freq. permitt. meas. 7−99641
Sb-S-I glasses, Raman spectra, dielec. props. 7−77566
SbSBr, crit. exponents determ., ferroelectric 7−125640
Se, permittivity, press. depend. 7−118937
Sc, vacuum-deposited thin films, optical props., direct transmission spectra meas. 7−76657
a-Si:Mn, localised states spectrum of Mn impurity, Coulomb gap collapse 7−84773
SiBN amorphous films, plasma-enhanced CVD, dielec. props. 7−100102
SiC, dielectric susceptibility determ. 7−138373
p-SiN:F, low temp. plasma deposition, elec. props., bonding and stability 7−132480
SiN_x amorphous layers, charact. using Auger parameter in XPS 7−85938
Si_3N_4 films deposited by ECR plasma CVD, properties *(Japanese)* 7−137765
Si_3N_4, noncrystalline, insulators, optical props. 7−77497
Si_3N_4, reaction-bonded, permittivity and dielec. loss, freq. and temp. depend. 7−113061
SiO, noncrystalline, insulators, optical props. 7−77497
SiO_2, charact. using Auger parameter in XPS 7−85938
SiO_2, noncrystalline and crystalline, insulators, optical props. 7−77497
SiO_2 thin film. technological parameters effects on dielectric props. obs. *(Slovak)* 7−125980
SiO_2 thin films, low temp. growth by double excitation photo-CVD 7−113414
SiO_xNy thin films, plasma enhanced CVD, deposition rate and props. depend. on N_2O conc. *(Slovenian)* 7−86042
$SmAsO_4$, IR reflection and optical absorption 7−99826
$SmAsO_4$, polycryst. samples, dielec. props., temp. and freq. depend. 7−106076
$Sn_2P_2(Se_xS_{1-x})_6$, ferroelectric phase transition splitting, phenomenological anal. 7−125636
$Sr_8(Al_{12}O_{24})(CrO_4)_2$, aluminate-chromate sodalite ceramics, prep. and dielec. meas. 7−92579
$(SrBa)Nb_2O_6$ ceramics, modified, effect of rare earth ions on props. 7−118935
$Sr_{0.61}Ba_{0.39}Nb_2O_6$, MM-wave dielec. props. at 77 and 300 K 7−99650
$Sr_{1-x}Ba_xNb_2O_6$ ferroelectric ceramics, doped, elec. cond. and dielec. props. 7−92186
SrF_2:Ce, hopping ionic conductivity, complex dielec. const., impedance, meas. 7−91895
$Sr(NO_3)_2$, thermal hysteresis 7−76393
SrO films, MBE heteroepitaxial growth on Si, permitt., breakdown field 7−118299
$Sr(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$SrTiO_3$, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
$SrTiO_3$-$SrNb_2O_3$, glass ceramic, temperature autostabilisation 7−113072
TaN sputtered films, thermal oxidation, dielec. props. 7−113746
Ta_2O_5 anodic films, form. in H_3PO_4 electrolytes, dielec. props., struct. 7−113080
Ta_2O_5 films, reactively sputtered, electrical, optical and structural props. 7−70707
Ta_2O_5 MIS capacitors, dielec. characts., effect of SiO_2 at Ta_2O_5-Si interface 7−118934
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7−70706
TaS_2, 1T polytype, 2D conductor, submillimeter spectra of dynamic conductivity 7−144184
Te, permittivity, press. depend. 7−118937
TiO_2, rutile, d-transition metal oxide doped, physical props. 7−92569
TiO_2:Sb, rutile, Sb oxidation state and elec. props. 7−105558
$TlBiSe_2$, prep., characterisation, electrical props. *(French)* 7−70311
$TlSbS_2$ ternary layered semicond. crysts., dielec. spectra meas., ferroelec. transition determ. 7−77449
TmS, optical props., spectrum of ground electronic states 7−98848
TmSe mixed valence cpd., light absorpt. and refl., optical density of states calcs. 7−143997
UO_2, dielec. const. below Neel point 7−99646
V_2O_5-P_2O_5-Bi_2O_3 glass, conductivity minimum 7−137927
V_2O_5-P_2O_5-Sb_2O_3 glass, conductivity minimum 7−137927
$YAsO_4$, polycryst. samples, dielec. props., temp. and freq. depend. 7−106076

permittivity continued
ZnO ceramic, elec. props., high-temp. annealing effects 7−92188
ZnP_2, tetragonal single crystals, superionic conductivity 7−98566
ZnSe, magnetoresistance, hopping conduction over localised states in Coulomb gap 7−84944
$ZnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
ZrF_4 based fluoride glass, ionic motions, dielectric and dynamic mechanical study 7−138370

permittivity measurement
absorbing thin film *n*, *k* and *d* meas. by multi-incident-angle ellipsometry *(Chinese)* 7−99956
anisotropic rubber sheets, complex permittivity tensor meas., reflecting characteris. 7−134802
biological and aqueous systems meas. 7−101158
complex permittivity meas. of lossy liquids and biological tissues, at 35 GHz 7−128591
complex permittivity tensor meas., rectangular waveguide standing-wave method 7−115976
Debye dielectric, computer-based permitt. meas. and microwave power absorpt. anal. 7−80811
dielectric meas. in infra-low frequency band 7−95609
EM hyperthermia, temp. meas. technique using refl. method 7−107211
humidity meas. at temp. above 100 °C 7−128587
insulating materials, accurate practical measurement system 7−134812
liquid crystals dielectric and elastic props. determ., semiautomated capacitance meas. 7−128590
lossy fibres and rods meas. at microwave freq. 7−95617
lossy materials, using open-ended coaxial-line probe 7−121145
microwave 7−134813
microwave county perturbation method 7−67346
microwave frequencies, automatic material characterising instrument 7−121157
monopole probes for in situ permittivity meas., coaxial line excited 7−121153
multifrequency method of parameters determ. of dielectrics, data processing effectiveness 7−132875
non-planar dielec. samples, complex permittivity meas. technique using open resonator 7−140714
radiometric ellipsometry method of surface layer thickness and dielec. props. meas., error calc. 7−132873
rubber sheet, lossy anisotropic, meas. methods for complex permittivity tensor, reliability study *(Japanese)* 7−128598
torsion pendulum appl. 7−121149
waveguide sensor for nondestructive inspection of sheet dielectrics by freq. props. analysis 7−132874

personal computers *see microcomputers*

personnel
see also education; management; teaching; training
nuclear power plant simulator qualification using the EPRI methodology 7−135416

personnel monitoring *see radiation monitoring*

perturbation techniques
see also control system analysis; control system synthesis
atmosphere circulation, effect of stochastic perturbations on low-order spectral model 7−79556
equatorial ocean waves, mean circulation effects 7−127224
fibre acoustic waveguides, perturbation anal. of guided modes 7−68926
flow over circular cylinder with parabolic vel. distrib. 7−130622
rough surface scattering theory, Kirchoff approach and small perturbation method 7−82436
scattering from uneven surface in lamellar medium *(Russian)* 7−74817
step-index optical fibres, uniformly curved, effective cutoff freq. of LP_{11} mode *(Japanese)* 7−68883
turbulence, nonMarkovian covariance evolution eqns., soln. 7−104254
turbulence, renormalisation group anal., theory 7−104253
two-layer system, convection onset, equilibr. instability, perturbation method 7−69135

perturbation theory
see also quantum theory
3D doubly periodic parallel plate waveguide, stopband struct. 7−97193
$\lambda\phi^4$ theory, 2D, 3D, finite temp., symmetry restoration and perturbation theory validity 7−140824
σ models with torsion, two-loop β-function 7−102601
$(\phi^4)_{1+1}$ model, virtual particle number, effect on *S*-matrix, perturbation theory comparison 7−108783
acetone, hydration free energy, finite difference thermodynamic integration 7−106784
acetylene, torsional barrier, ab initio calcs. 7−74456
acetylene-vinylidene rearrangement, metal atom catalysed, mechanism 7−119518
acoustic localisation in 1D in the presence of a flow field 7−84420
acoustic transmission problems, limiting behaviour of solutions 7−128247
alcohols and alkanes solvation props., mol. dynamics method, thermodynamic-cycle perturbation theory 7−138978
alkali metal atoms, second-order energies, third-order matrix elements 7−96523
alloys, substitutionally disordered, AC cond., cluster formulation and numerical appls. 7−124964
Anderson model, finite-temp. spectra density calcs. 7−124816
anharmonic oscillator, quantised, time evolution, spin analogue 7−67083
anharmonic oscillators, perturbation theory convergence radius estimation 7−95403
antiferromagnetic Heisenberg S=1/2 chains, dimerisation gap at 0 K 7−138257
arcs, helical mag. instability, linear time depend. perturbation theory 7−124018
aromaticity, perturbation MO calcs. 7−96519
atomic dipole radiative transitions with $\Delta l=3$ 7−82024
atomic many-electron problem, g-Hartree mean-field, QED anal. 7−122387
atomic polarisability, self-convergent HF field calcs., Sturm expansions method *(Swedish)* 7−122332
atomic polarisability calc. using variation-perturbation approach with CI formalism 7−122373
atoms, charge distrib., dynamical correl. 7−68223
atoms, Dirac eqn. soln., variational approx., appl. to H- and Be-like systems 7−122384
atoms, energy spectra, radiational lifetime correl. 7−122330
atoms, field isotope shift, theory 7−141525

perturbation theory continued
atoms, perturbation theory progression, quantum angular momentum theory graphical methods *(Swedish)* 7−120847
atoms, Rydberg states in parallel elec. and mag. fields 7−122408
atoms, strong Coulomb interactions, continuum distorted wave theory 7−122658
atoms with one valence electron, wave fns., many-body perturbation theory calcs. 7−140387
bag model of hadron struct., gluonic and pionic effects calcs., review 7−128862
BBM equation, solitary-wave solns., amplitude changes, perturbation theories method 7−140460
BCS superconductor, mixed-valence impurities, reduced transition temp. and sp. ht. jump, Brillouin-Wigner perturbation calcs. 7−85185
beams, thin-walled box, warping and distortion, asymptotic solns. 7−123492
Bell-Mann-Low function, Migdal-Kadanoff determination, scaling parameter, lattice actions within perturbative region 7−108766
benzene derivatives, liq., electrostatic interactions, CNDO and ab initio STO-4G calcs. 7−74443
Bertrand's paradox and Bell's inequalities 7−102201
bimetallic layered systems with randomness, infinite order perturbation theory 7−105668
binary mixtures, thermodiffusion, nonlinear convective motion 7−69136
binary stars, perturbation Hamiltonian for coupling of normal-mode oscills. with orbital motion 7−127974
bloch-Siegert shift in giant-dipole molecules 7−129825
bosonic σ-model perturbation theory, UV fixed point, string background field, conformal anomaly 7−89459
boundary value problems, singularly perturbed, quasilinear, nonmonotone interior layer theory 7−80378
boundary value problems, singularly perturbed, rate of convergence of viscosity solns. 7−80377
Brillouin-Wigner series, derivation algorithm 7−120735
canonical perturbation theory for Anosov diffeomorphisms 7−66966
canonical perturbation theory in statistical mechanics 7−73176
Casimir effect, radiative corrections at nonzero temps. 7−95826
Casimir effect, real time, free field approximation, electromagnetic field strength tensor, boundary conditions. 7−128826
causal Green's function in relativistic quantum mechanics, free-fluid Klein-Gordon eqn. 7−134924
celestial mechanics problems with two critical arguments 7−115212
channel flows, compressible viscous, perturbation solution 7−91231
charged rod-like macrocells in soln., pair-distrib. fn., light scatt. intensity calcs. 7−137188
chemical reactivity and density polarisation, LCAO MO calcs. 7−96538
chiral anomaly in the light cone gauge 7−67527
chiral molecules, permanent moments effect, differential multiphoton absorpt. 7−103606
classical fluid, perturbation theory of struct. factor and Helmholtz free energy 7−104506
classical impurity diffusion on a lattice, perturbation theory anal. 7−124583
classical mechanics, perturbation theory series summation 7−102145
closed-shell atoms, nonlinear response, density functional formalism 7−141495
closed-shell mols., chem. bonds, localised geminals appl. 7−129571
complex potential, one-turning-point scatt. problem, phase shift calc. 7−108308
conformal anomaly, perturbative eval. at crit. points, appl. to random systems 7−121338
conjugated organic polymers, nonlin. susceptibilities, tight-binding calcs. 7−103373
Coulomb gauge QCD, perturbative ambiguities, Feynman rules 7−140881
coupled KdV equations, leapfrogging solitons 7−140473
covariant string field theory, loop amplitudes in perturbation theory 7−67605
crossing symmetric self-consistent πN t matrix 7−81457
crystalline surfaces, gas adsorpt., thermodynamic and distrib. fns. 7−112091
deeply inelastic diagram asymptotics calcs. with vector mesons in exchange channel 7−89522
diatomic centrifugal distortion consts., direct computation 7−81933
diatomic molecule, excited rigid polar molecule, Stark effect, Rayleigh-Schrodinger perturbation theory *(Russian)* 7−109969
diatomic molecules, centrifugal distortion constants, Prufer phase function 7−122414
diatomic mols., rot.-vibr. interaction effect on Franck-Condon factors 7−74558
diblock copolymer molecules, conform. props. 7−110152
differential equations, linear, exponential dichotomies, perturbation theorem 7−115759
differential equations, planar Hamiltonian, periodic orbits, perturbation anal. 7−108222
diffraction tomography in the Fresnel zone 7−74883
diffractive hard scattering, perturbative QCD and Regge phenomenology 7−81106
dimethylamine, hydration free energy, finite difference thermodynamic integration 7−106784
discrete molecular chains, perturbation theory for soliton dynamics 7−105425
discrete spectra variation, symmetric matrix eigenvalues under perturbation, selfadjoint operator 7−120759
disordered nonequilibrium system, fluctuation-dissipation theorem 7−89121
disordered systems, phase transitions and critical phenomena, perturbative treatment 7−121039
disordered systems, relativistic spectrum, two. dimens. models, exact results, $1/N$ expansion 7−128463
DNA base pairs, stacking interactions, config. specificity 7−119709
dynamic mass generation, gauge boson mass, fermion mass, Abelian vector, quarks, perturbation calcs. 7−140916
dynamic systems, linear large, general perturbation theory 7−95296
elastic media, homogenization method 7−123447
electric quadrupole perturbation coefficients for $I=2$ spin-level in angular correlations 7−92132
electrodynamics of continuous media, perturbation theory 7−122800
electron system ground state, freq.-depend. s-representability, density functional theory 7−105171
EM field on rough surface, Green function 7−82426
ethyl dication, open or bridged struct., ab initio MO CI calcs. 7−116862
perturbation theory continued
ethylene diamine, protonated, intramolecular H bonding MP2/D95V** calcs. 7−129586
exact effective Hamiltonian for a perturbed Landau level 7−105427
exchange perturbation theories 7−129539
excitons in homogeneous mag. field, modified perturbation approach 7−105413
exponential anharmonic oscillator, Feynman diagrams and large order estimates 7−73016
fermion and boson ground-state matter, van der Waals perturbation theory 7−91912
ferrocene, polarisability, second hyperpolarisability, CHF-PT-EB-CNDO calcs. 7−122361
few body scattering and bound state problems in momentum space 7−128362
fibre acoustic waveguides anal. meas. *(Japanese)* 7−123408
finite-rank perturbations of discrete operators *(Russian)* 7−108154
first-order logarithmic perturbation iteration method convergence, Schrodinger eqn. appl. 7−67073
fluid coexistence curves, three-body interactions, scaling variables, singular diameters 7−124466
formaldehyde, dissoc. reaction energies, coupled cluster and MBPT calcs. 7−93266
formaldehyde, second-order Moller-Plesset dipole moment derivatives 7−109693
formic acid, unimol. pyrolysis mechanisms, ab initio calcs. 7−93281
free electron laser, thick electron beam, 3D theory 7−136344
free-electron laser, long-pulse narrow band radiation, perturbative anal. 7−90630
fused point perturbation theory, coupled nonlinear equations, Rayleigh-Schrodinger theory, Pade potentials 7−140488
gas, nearest-neighbour lattice, revised scaling variables, thermodynamic perturbation theory calcs. 7−104368
Ginzburg-Landau lattice model in 1D, hydrodynamic limit 7−108460
graphite surface, N_2 adsorpt., perturbational reference average Mayer theory 7−91979
Gross-Neveu model, mass gap for elementary fermions 7−95730
ground state energy, steepest descent perturbation theory calcs. 7−74413
ground state energy perturbation series, large order estimates 7−95397
H_3PO, ground state pot. energy surface 7−90016
hadronic short distance propagators in long range background field 7−81126
Hamilton-Jacobi eqns., invariant tori in phase space 7−108416
hard dumb-bells adsorpt. on flat surface, RAM-type perturbational theory 7−98681
harmonic oscillator, 1D, induced potential and Klauder phenomenon for even confinement potentials 7−73048
heavy fermion systems, Kondo effect cooperative enhancement, perturbation theory anal. 7−99043
heavy quarkonia, prod. from gluons, helicity amplitudes in perturbative QCD 7−135028
heteronuclear diatomic alkali molecules, long range states, lowest asymptotes, spin-orbit effects, dissoc., perturbative model, matrix methods, wavefunctions 7−144685
hyperbolic-parabolic singular perturbation problems, asymptotics, asymptotic Galerkin method anal. 7−108200
hyperbolical dynamical systems, smooth conjugacy of diffeomorphisms 7−88912
inert gas atoms, interacting pair polarisability expressions studied using many-body perturbation theory 7−96813
inflationary Universe, evolution of perturbations 7−101979
inhomogeneous liquid metals, surface props., calc., variational perturbation theory 7−105182
inhomogeneous plasma, drift convective modes instability and saturation 7−111207
integral quantum Hall effect, multielectron state, perturbation theory treatment 7−143489
interaction site fluids, struct., thermodynamics, cluster perturbation theory 7−137173
interfaces, renormalisation group theory, book contrib. 7−137667
intermolecular interactions, SCF calcs., basis set superposition error correction 7−96819
invariant light front perturbation theory 7−128778
ion model, population rate equation calcs., ionization in nonlocal thermal-equilibrium 7−74771
ion-acoustic solitons in warm 2-ion plasma, ionic temp. effects 7−97738
ions, spectral manifestations of configuration interactions review *(Swedish)* 7−122369
Ising model, random-field diagrammatic expansion and metastability, lower crit. dimens. 7−125424
isolated many-body system, correction terms to $\lambda^2 t$ limit of van Hove 7−67078
Kaluza-Klein theory, light-fermion-mass generation, Minkowski space, perturbation theory, Yukawa couplings 7−120909
KdV equation, perturbed, Painleve anal., conservation laws and Lie-Backlund symmetries 7−120816
Kerr black holes, perturbation calcs. of gravit. radiation and 3D relativity 7−73104
Klein-Gordon kink perturbation theory, nonlinear, Green's fns. 7−108749
Kondo lattice model, strong coupling, d-wave supercond. 7−143685
laminar film condensation of outside of vertical circular cylinder 7−91779
laminar natural convection in nonuniformly heated annular fluid layer 7−130631
lanthanum ethylsulphate: Gd^{3+}, effective crystal fields, spin-orbit coupling, residual interactions 7−105499
laser induced fluorescence spectroscopy, multilevel rate eqns. perturbation treatment 7−106850
lattice Abelian Higgs model, mean field anal. of confined, Coulomb and Higgs phases 7−81028
lattice field theory, nonAbelian chiral anomaly, perturbative calcs. 7−108776
lattice spin models on a torus, zero modes and perturbation theory 7−80984
lattice Thirring model, finite-element lattice fermions in perturbation theory 7−134946
light diffraction with surface-polariton resonances on bigrating, perturbation theory 7−82458
liquid crystals, light propagation in quasi-adiabatic limit 7−106112
liquid metals, surface tension, nonlocal pseudopot. calc. 7−76546
logarithmic perturbation theory, excited states 7−73051

perturbation theory continued
magnetic fluid, displacement processes through porous media, instabilities 7−75690
magnetic islands dynamics, tearing mode instability, self-consistent nonlinear theory 7−83441
many-body Coulombic interaction, Rayleigh-Schrodinger perturbation theory, diagrammatic method 7−96818
many-electron systems, correlation and relativistic effects, Dirac-Coulomb eqn., double perturbation theory 7−122385
many-particle effects in nearly integrable systems 7−67039
metal corrugated surfaces, image states, photoemission and STM appls. 7−99148
metal lattice, single H perturbation, electron density distrib. 7−98930
metalloporphyrins, SCF perturbation calcs., oxidation and ionis. calcs. 7−103380
metals, indirect exchange interaction, realistic calc. 7−118794
metals, stacking fault interaction with nonspherical Fermi surface *(Russian)* 7−98179
metals, trivacancy migration energies and point defect interactions 7−91630
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
micropolar media, elastodynamics, Signorini perturbation scheme for initial-value problem 7−72973
MIT bag model wave fn., Peierls-Yoccoz projected, deep inelastic struct. fn. calcs. 7−135055
modified Rayleigh-Schrodinger perturbation theory 7−140539
molecular crystals, distortion induced IR and Raman activity, vibr. dynamics 7−104926
molecular excited states, nonradiatively coupled, photodissoc., time-domain formulation 7−103600
molecular predissociation, matrix Schrodinger operators and resonances, mathematical theory 7−141635
molecular resonant excitation transfer, QED study 7−90310
molecules, Heisenberg Hamiltonians, approximate solns. 7−96510
Morse oscillator, perturbational and variational treatments 7−68422
multicentre Lennard-Jones mols., tetrahedral and octahedral model fluids, thermodynamic perturbation theory 7−69852
multidimensional polaron, perturbation theory 7−92084
multidimensional systems, algebraic quantisation using classical perturbation theory 7−115824
multiflavour Gross-Neveu model, exact soln. and renormalization group β function 7−67485
multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
multipolar fluid, mol. orientational ordering in elec. field near interface 7−75966
neutron transport equation, perturbation theory methods for numerical soln. 7−89588
NMR chemical shifts, calculation methods, review 7−112984
noncollinear Compton process appl. to light amplification and electron acceleration 7−122802
nonHamiltonian eigenvalue eqns. stationary perturbation theory 7−103349
nonlinear Fokker-Planck eqn., stable nonequilibrium probability density and phase transition in thermodynamic limit 7−73290
nonlinear model of scalar field, perturbation theory soln. of Heisenberg field eqns. 7−102628
nonlinear molecular hyperpolarisabilities, first-order and second-order, calcs. using perturbation method 7−74425
nonlinear O(N+1) σ-model, BRS renormalisation, characterisation 7−108759
nonlinear optical mixing, higher order susceptibility, comparative anal. 7−90693
nonlinear response and its behavior in transient and stationary processes 7−128310
nonlinear vibration systems, multi-frequency Hopf bifurcation, averaging methods 7−95289
nonrelativistic electrons in the field of two strong electromagnetic waves 7−117128
nuclear elastic transfer, optical pot., parity depend. contrib. 7−116356
octic oscillator, ground state energy, maximum entropy summation of divergent perturbation series 7−80471
oil-water microemulsions, interfaces between phases in lattice model 7−71542
on mass-shell renormalisation conditions for particles with mixing 7−128793
one-dimensional adiabatic gas flow, small perturbations of wave study 7−136890
optical fibres, nonlinear propagation, dynamic coupled-mode theory 7−130376
optical waveguide, bent, modal properties 7−123194
optical waveguides, metal-clad GRIN, guided wave characts., analytical results 7−90783
Ostwald ripening, correlations, diffusive interactions effect 7−124526
oxetane, ring-puckering pot., perturbation calcs. 7−135911
paraffins, normal, rotational eqn. of state 7−76340
parametric oscillators, analogue simulation, expts. 7−80643
parametrically changed size-Gordon eqn., solitons, perturbation anal. 7−120825
particle in a square well with a δ-function perturbation 7−80238
parton showers, probabilistic evolution in perturbative QCD, Lorentz invariants 7−108868
PERTURB, algebraic manipulation program for classical perturbation theory 7−128330
perturbed Kepler problem, expectation value formulation 7−108083
perturbed soft chain theory eqn. of state parameters calcs. 7−69851
phase equilibria prediction model based on thermodynamic perturbation theory, anal. of industrial use 7−124433
phase space analysis and particle structure, asymptotically free and renormalizable models 7−121333
phase-changing material in finite domain heat transfer, self-consistent perturbation expansion 7−104132
photon echo signal form., diffr. influence 7−141949
photon structure function and optimised perturbation theories 7−81188
plane perturbations near sonic flow through oscillating cascades, nonlin. and nonstationary effects *(German)* 7−123299
plate, thin, prestressed orthotropic rectangular, vibr. studied using singular perturbation technique 7−69019
polar fluids liquid-vapour interface, struct. and surface tension, integro-diff. eqn. and perturbation theory 7−76547
perturbation theory continued
polaron model, energy anal. using Feynman diagram perturbation theory 7−76793
polarons, two-dimensional, cyclotron resonance freq., fourth order perturbation calc. 7−105420
polarons, two-dimensional, ground state energy Feynman theory anal. 7−105421
polyatomic molecules, local mode excitation by freq.-modulated lasers 7−103470
polyatomic molecules, semiclassical quantisation, review 7−135823
population dynamics in fluctuating environment, stochastic Verhulst eqn., perturbation calcs. 7−108401
potential barrier, transfer matrix and transmission coeff. calc., perturbative anal. 7−128336
Potts model, perturbation expansion in percolation problem 7−108447
principal component anal., optimal use *(French)* 7−95282
propane-$d_0(d_7)(d_8)$, harmonic force field, ab initio HF theory 7−141471
propargyl alcohol, overtone excitations, classical and quantum dynamics 7−109871
QCD, transverse plasmon effect, nonexistence, high-temp. approx. anal. 7−135030
QCD plasma oscillations, gauge covariant linear response 7−121440
QED, induced fractional spin and statistics in 3D 7−67558
QED, photon sector at high temp. in two spatial dimens. 7−67555
QED, radiative corrections to Casimir pressure at finite temp. 7−67554
QED, thermal props. and confinement in 2+1 dimens. 7−95825
quantized string fields, gauge fixing and perturbation theory 7−89461
quantum field theory, operator regularization and one-loop Green's fns., background field quantisation 7−108780
quantum mechanics, degeneracy removal 7−120743
quantum mechanics and field theory, perturbation theory to higher order, 1/n expansion 7−95409
quantum particle Brownian motion in periodic pot., perturbation expansion calcs. 7−108402
quantum wells, exciton binding energy, variational-perturbational approach 7−105409
quark and gluon propagators in perturbative QCD, infrared asymptotic behaviour 7−128855
quasicontinuum photoexcitation, rates and recurrences 7−122403
quasicrystals and Fibonacci lattices, anomalous elec. cond., perturbation theory calcs. 7−112290
quasidegenerate many-body perturbation theory, unitary transformations on model space 7−89898
quasiperiodicity-chaos transition, perturbation theory anal. 7−80632
Rabi oscills. under quasiperiodic perturbation, nonchaotic motion 7−73221
radial Schrodinger equation, simplified fixed-point perturbation theory 7−67062
radical Schrodinger equation, fixed point perturbation theory, Pade pots. appl. 7−102199
randomly inhomogeneous medium, infrared representation and large-distance behaviour 7−102627
rare earth ions, two-photon absorpt. amplitudes, electron correlation effects calc. 7−96562
rare earth ions in crystals, elec. dipole transition amplitudes, electron correl. contribs. 7−137869
Rayleigh-Schrodinger perturbation theory, energy corrections 7−66872
Rayleigh-Schrodinger perturbation theory with a tridiagonal zeroth-order hamiltonian 7−80495
Rayleigh-Schrodinger series, derivation algorithm 7−120735
Rebbi's lattice fermion proposal, perturbative analysis, vacuum polarization, anomaly, spectrum doubling 7−116073
reflection grating couplers for waves at oblique incidence anal. 7−103971
relativistic sheet electron beam propag. over sinusoidal grating, 2D radiation 7−110221
relaxation processes in chaotic states of one dimensional maps 7−89135
renormalisable quantum field theory, variational operator Pade approximants method 7−128791
rotating harmonic oscillators, energy levels, 1/N expansion and nonrelativistic pot. problems 7−129590
RSM high conversion reactor, sensitivity studies, perturbation methods, information conditioning, spectral shift 7−121997
S-matrix formalism for particles interacting with phonon fields, coherent state representation 7−70220
saturation spectroscopy, coherent effects 7−89270
SAW, stress-compensated cuts 7−117377
SAW reflection from periodic shallow grooves *(Japanese)* 7−118223
scalar electrodynamics in three dimensions with topological mass terms 7−134950
Schrodinger equation, logarithmic perturbation expansion for central pot. 7−102188
Schrodinger equation, nonlinear, perturbed, Painleve anal., conservation laws and Lie-Backlund symmetries 7−120816
second-order molecular props., analytical geometrical derivatives from perturbation theory 7−96496
semiconductor crysts., direct and indirect two-photon absorpt. processes, perturbation calcs. 7−77489
semiconductor infinite superlattice, plasmon polariton dispersion and damping 7−137807
semiconductor superlattices, plasmon polaritons, dispersion and damping props. 7−143596
shape resonances for class of Schrodinger operators 7−89015
single-mode fibre, bent, field calc. using perturbation theory 7−82798
single-mode fibre couplers, fused tapered, perturbation anal. 7−123203
slowly varying oscillators, homoclinic orbits, perturbation anal. 7−108223
small distance atomic electron screening effects 7−68231
solid state, quantum field theory renormalization 7−76718
solitary waves overtaking collisions, water-wave eqn. anal. 7−104284
soliton motion in fluctuating parameters medium 7−128301
solvent-molecule interaction, perturbation theory for nonlinear Schrodinger eqn. 7−108270
squeezed-light generation in a medium governed by the nonlinear Schrodinger equation 7−90556
stationary perturbation theory, expansion, irreducible tensorial operators 7−108263
stochastic transfer equation, perturbation method appls. *(Russian)* 7−108426
stratified shear layer, long internal wave propag., perturbation solution 7−130764
strong perturbation theory, impurities in semiconductors 7−124909
SU(N) gauge theories, gribov problem in perturbation theory 7−81002

perturbation theory continued
substitutional impurity near a surface, segregation energies 7−91941
superconducting transition temp. enhancement by excitonic negative-U centres, Monte Carlo simulation 7−77135
superfield operator regularization, one-particle irreducible Green's fns. 7−108781
superfluid deformed nuclear systems, perturbative treatment using gauge theory formalism 7−140996
supersymmetric Adler-Bardeen theorem and regularization by dimens. reduction, axial current anomaly 7−128761
supersymmetric QCD, gluon fusion, lowest order perturbation theory 7−102693
TEMPOL-^{15}N, slow two-jump processes, saturation recovery electron paramagnetic resonance spectroscopy 7−135974
thermofield dynamics, path-ordered formalism and nonequilibrium phenomena 7−108741
transition metal hydrides positive ions, spectroscopic parameters and dissoc. energies, CI calcs. 7−116869
truncated perturbation theory using bounds for exact energy 7−67060
tunnel model, current calcs., nonequilib. formulation and thermal Green's fn. techniques 7−95407
turbulence, hydrodynamic eqns., ε expansion 7−123602
two-dimensional Ising model, generalised Gaussian model with randomness, replica method exactness, crit. renormalisation 7−80666
two-level system, vibronic transition, stochastic description *(Chinese)* 7−129687
two-particle decay, nonrelativistic model, reduced resolvent, centre of mass motion, coupling constant 7−140969
two-phase flow model diff. eqn., nonlinear periodic waves, perturbation anal. 7−134520
unmixed feed stream plug flow reactors, coalescence-redispersion model, matched asymptotic solns. 7−123783
vacuum polarisation by Coulomb field and strong mag. field, Uehling's correction 7−96513
valence fluctuating heavy electron systems, in applied and molecular fields, degenerate Anderson model 7−84617
wave functions optimisation of parameterised perturbative approx. 7−120855
weakly nonlinear slow magnetoacoustic wave propagation, modified Burgers equation 7−142075
Wilson loops, cusp singularities, anomalous dimension, perturbation expansion in Minkowski space, cusp angle 7−116084
Yang-Mills perturbative vacuum, essential quantum instability 7−102594
Yukawa potential, virtual and resonance levels *(Russian)* 7−140913
Zeeman effect, ground state energies, 1/N expansion and nonrelativistic pot. problems 7−129590
zero energy universes, metric perturbations, Friedmann cosmology appl. 7−101990
$\gamma p \rightarrow \gamma X$, open charm prod., perturbative QCD approach 7−81207
$hh \rightarrow X$, cross sections for semihard interactions beyond perturbative QCD leading order 7−67671
K decay amplitude calcs., perturbative QCD and chiral perturbation theory 7−95898
$K \rightarrow \pi l^+ l^-$, decay amplitudes, chiral perturbation theory in standard model 7−135099
$K^0 \rightarrow \pi^0 \gamma\gamma$, chiral perturbation theory calcs. 7−95897
$\pi^- N \rightarrow \mu^+ \mu^- X$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
Ag_2, electron correls., SCF, extended basis set 7−89995
AgH, electron correls., SCF, extended basis set 7−89995
AgO, electron correls., SCF, extended basis set 7−89995
BH_3, gas-phase infrared spectrum 7−135936
B_2H_6 dissociation to BH_3, enthalpy, vibr. spectra, coupled-cluster and MBPT theory 7−135846
Ba, resonant multiphoton ionisation, multichannel quantum defect parametrisation 7−141667
Be, multiconfiguration Hartree-Fock and MBPT calcs. 7−141449
Be-like ions, energy levels, perturbation theory calcs. 7−122331
$Be+H_2$, valence space for quasidegenerate many-body perturbation theory, mol. geometry influence 7−113874
Be_4 and Be_{13}, struct. and dissoc. energies, electron correl. and basis set effects 7−74458
Bi, energy bands, carrier density and Fermi energy in a uniform mag. field 7−143335
C, density of states calcs., recursion method 7−143308
C, ground state, fine struct. isotope shift, ab initio calc. 7−74470
CN radicals, electron affinity, Moller-Plesset perturbation theory 7−122328
CO_2, hydration, ab initio calcs. 7−86615
CS_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
Ca, partial photoionis. cross sections and reson. struct. determ. 7−141541
CdTe, bound piezopolaron ground and excited state energy calcs. 7−118377
Cl compounds, $K\alpha$ X-ray emission spectra chemical effects, SCC-DV-Xα MO calcs. 7−129593
Cu_3 trimer, stability, variational and perturbational configuration interaction theory 7−96566
CuI isoelectronic series, $3d^94s^2\ ^2D$ term, fine struct., relativistic HF calcs. 7−68204
Eu, photoionisation cross section near 4d4f reson. calc. by many-body perturbation theory 7−116919
Eu, reson. photoemission, open-shell and solid state effects 7−144231
$(FH)_2$ dimer, H bond energy, basis set and correlation effects, HF calcs. 7−74414
GaAs, electron and neutron irradiated, reson. Raman study of intrinsic defect modes 7−70775
n-GaAs/$Ga_{1-x}Al_xAs$ single layer heterojunction, effective mass meas. using electron cyclotron reson. 7−118579
Ge, density of states calcs., recursion method 7−143308
Ge, lattice dynamics, microscopic calc. using pseudo-atoms 7−142924
p-Ge, multiphoton nonlinear absorption at submillimeter wavelengths 7−118982
H atom, energy levels, perturbation and stochastic geometry 7−134564
H elastic electron scatt. at intermediate energies 7−122714
H, electron impact excitation cross section 7−122721
H, fundamental states, perturbation method calcs. 7−129545
H, Lamb shift, radiative-recoil contribs. and proton mass corrections 7−141524
H, multiphoton ionisation, dressed-state perturbation theory 7−96621
H_2^+, Dirac eqn., third order variational perturbation calcs. 7−122397
H_3^-, electronic struct. and stability, perturbation theory and CI calcs. 7−135850
HBr, acidity scale, ab initio MO calcs. 7−135832
HCN, dissoc. energy, Moller-Plesset perturbation theory 7−122328
HCN, second-order Moller-Plesset dipole moment derivatives 7−109693
HCl, acidity scale, ab initio MO calcs. 7−135832
$H^+(HCl)_2$ dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7−109809
$H^+(H_2S)_2$, dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7−109809
H_2O, geometry, analytical energy gradient, Moller-Plesset perturbation theory 7−116815
H_2O, second-order Moller-Plesset dipole moment derivatives 7−109693
H_2O_2, geometry, analytical energy gradient, Moller-Plesset perturbation theory 7−116815
$H^+(PH_3)_2$, dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7−109809
$(H_2S)_2$, ionisation energies, MBPT calcs. 7−74403
$^2H(\pi^-, \mu^+\mu^- X)$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
H(1s)-H(1s), van der Waals interaction, third order energy coeff. determ. 7−117039
He, interaction energy components, basis set extension effects, decomposition scheme 7−129826
He-like atoms, 1/N expansion and nonrelativistic pot. problems 7−129590
He-like atoms. ground-state energies, generalized D-dimens. Schrodinger eqn. soln., HF calcs. 7−74415
$He+H^+(He^{2+})(C^{6+})$, continuum electron capture cross sections, perturbation approx. 7−90413
$He+Li_2$ interaction, SCF and MP2 methods 7−141649
He_2, dispersion and exchange-dispersion-energies, explicitly correl. Gaussian geminals 7−96815
He_2 interaction energy, HF calcs., exchange-perturbation expansion 7−129550
He_2 interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
He_3, interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
^4HeD, excited states, rot. struct., perturbation anal. 7−135907
HgH_2, pot. energy surfaces calcs. 7−74485
KCl, F_H,H pair creation mechanisms *(Russian)* 7−143354
KCl-X(X=Br,I), F_H,H pair creation mechanisms *(Russian)* 7−143354
$LiYF_4$:Ho cryst., IR spectra, hyperfine struct. 7−119019
MgO:Cr^{3+}(Ni^{2+}), g-factors, high press. effects 7−112170
Mn^{2+} impurity systems, zero-field splitting, uniaxial stress effects 7−112271
N adsorbed on graphite, density profiles in RAM perturbation theory 7−105237
N, ground state, fine struct. isotope shift, ab initio calc. 7−74470
N isotopes, core polarization effects on Coulomb form factors, perturbation theory 7−109013
N_2, lig., perturbation theory for studying thermodynamic props. 7−124554
NF_3^+, inversion barrier, ab initio UHF calcs. 7−96505
$(NH_3)_2$ dimer, H bond energy, basis set and correlation effects, HF calcs. 7−74414
Na, optical conductivity, pseudopot. method calcs. *(Russian)* 7−99777
Ne_2, interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
O_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
O_3 dissociation process, energetics, MC SCF, CI, MBPT calcs. 7−129607
O_3, Hartley absorpt. band, reson. Raman spectra, time depend. anal. 7−122548
O_3, nonbending, eigenvalues determ. Moller-Plesset perturbation calc. 7−96561
OH+acetylene (ethylene), radical reactions, barrier heights, perturbation theory 7−132918
$(OH_2)_2$ dimer, H bond energy, basis set and correlation effects, HF calcs. 7−74414
P compounds, tricoordinated, electronic and stereochem. struct., $\delta^{31}P$ chem. shift 7−103541
P oxyacids, conjugate bases and neutral radicals, ab initio calcs. 7−109733
PF_n cpds., ^{31}P NMR shieldings, coupled HF calcs. 7−89935
PN, $A^1\Pi$-$X^1\Sigma^+$ bands, rot. anal., perturbation studies 7−141560
PO_4^{3-}, ^{31}P NMR shieldings, coupled HF calcs. 7−89935
S containing species, ^{33}S NMR chemical shieldings, ab initio coupled HF perturbation theory calcs. 7−109719
S_2, effective valence shell Hamiltonian, electronic struct. and bond length depend. 7−81929
Si, density of states calcs., recursion method 7−143308
α-Sn, density of states calcs., recursion method 7−143308
Tm dilute mixed valence system, perturbative theory calcs. 7−76856
$U^{92+}+U^{92+}$, inner-shell electron capture, electron-positron pair prod. 7−103646
$U^{92+}+U^{92+}$ relativistic collisions, inner-shell capture, muon pair prod. 7−103619
$W(\pi^-, \mu^+\mu^- X)$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
Xe, atomic polarisability calc. using variation-perturbation approach with CI formalism 7−122373
YIG films, flexural domain wall modes, field depend. 7−132109
ZnS(Se)(Te), bound piezopolaron ground and excited state energy calcs. 7−118377

perturbed angular correlation spectroscopy *see gamma-ray spectra; gamma-ray spectra of liquids and solids*

Petri nets *see directed graphs*

petrol engines *see internal combustion engines*

petroleum industry
microearthquakes near Sleepy Hollow oil field, SW Nebraska, contrib. of water injection 7−87454
oilfield production geology and production industry, book 7−95126
petrophysics knowledge engineering research 7−87979
pumping fluid from point sink in isotropic elastic half-space with anisotropic permeability 7−94325

pH
acetophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
alkali metal cations, H^+ coupled transport by crown macrocycle in liq. membrane system 7−100608
alloy 600 steam generator tubes, crevice solns., pH and corrosion pots. 7−129187
alloy 690 steam generator tubes, crevice solns., pH and corrosion pots. 7−129187
amide solvents, dielec. const. and basicity effect on Ni electrodeposition 7−92897
aniline, electrochemical polymerisation 7−71488
Antarctic ice, acidity and S budget, contrib. of methanesulphonate 7−79476
atmospheric precipitation in E. Greenland, pH determ. and origin 7−79564
azine, struct., protonation, isomers, ab initio MO calcs. 7−81955
bacteriophage Pf1 coat flexibility, struct. temp. depend., dynamic light scatt. study 7−78746
bacteriorhodopsin as a light-driven proton pump, Halobacterium halobium pH obs. 7−93675
benzophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
cartilage electromechanics: electrokinetic transduction and effects of electrolyte pH and ionic strength 7−107135
chymotrypsin, enzyme activity and conform., pH and pressure effects, Raman spectra study 7−68498
cloud and rain water over India, alkaline particulate effects on pH 7−101366
Cretaceous-Tertiary boundary impacts atm. acid rain prod. and effects 7−127455
dichlorodiammineplatinum-guanosine complexes, UV reson. Raman spectra, pH effects 7−68325
dimethylformamide, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
L-x-dimyristoyl-phosphatidic acid with cholesterol monolayers, crystalline domain form., fluoresc. microscopy study 7−78730
2,4-dinitrophenol, intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7−122501
dipalmitoyl phosphatidic acid lipid bilayer, phase transition, H bonds, cond., pH effect 7−106993
forest decline attributable to acidic deposition and other conditions 7−106939
indolyl radicals, acid-base props. 7−138991
intracellular pH of Chinese hamster ovary cells, effect of hyperthermia 7−114217
intragastric pH in man, continuous 24 hour ambulatory monitoring 7−101098
intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7−122501
β-lactoglobin, solns., ultrafiltration protein assoc. effects 7−119705
lipid bilayers, planar, gating processes of channels induced by colicin A, C-terminal fragment and colicin E_1 7−93705
α-loctalbumin, tyrosine doublet intensity ratio, pH and Co^{2+} conc. effects, IR Raman spectra anal. 7−68491
lysozyme, lytic activity towards M. lysodeikticus, electrostatic interactions anal., electrophoresis meas. 7−78804
lysozyme in buffer solns., thermal inactivation 7−126689
microelectrochemical transistors, electrostatic binding and response to two chemical stimuli 7−106848
mountain snowfall, snowpack chemistry, meteorology, acidity 7−120051
muscle, single-skinned fibres, pH-induced rigor effects, optical ellipsometry and electron micrographs study 7−78961
Muvattupuzha River (SW India), effect of pulp-paper effluents on water quality 7−139148
myeloperoxidase, human leucocyte, oxidation state, pH depend., Raman difference spectroscopy 7−93616
nitroxyl radicals, EPR spectra, functional groups protonation (deprotonation) effects 7−135976
p- 7−113952
poly-L-ornithine, dye binding, conform. transition and induced circular dichroism 7−103699
polyphosphates, open-chain linear, ^{31}P NMR spectra anal. chemical shifts, effect of pH and protonation 7−68353
purple membrane, abrupt onset of large scale nonproton ion release by increasing pH or ionic strength 7−100820
purple membrane, flash spectroscopy 7−93661
pyridines, substituted, protonated, acidity consts. in acetonitrile-water 7−93301
2-(2-pyridylazo)-5-diethylaminophenol, resonance Raman spectra 7−106167
rainfall pH in Venezuelan savannah 7−139727
rainfall pH rel. to meteorological parameters in N Quebec 7−93581
rainwater at Urawa, Japan, pH and chemical composition *(Japanese)* 7−107493
renal proximal tubule, pH, solute conc., cellular regulation, kinetic transport model 7−93689
ribonuclease T1, pH time-resolved fluoresc., pH and substrate analogue binding study 7−100806
soil, cations mobility, pH and Cl^- conc. effects study 7−108105
soil pH measurement as introduction to quantitative anal. 7−108104
steel, austenitic stainless, crevice corrosion in NaCl solns., pH obs. 7−93145
steel, austenitic stainless, SCC, fluid flow effect of variable pH solns. 7−138880
steel, C, pitting corrosion, Al cation induction mechanism in NaCl soln. 7−71376
steel, unalloyed, erosion-corrosion rate estimation in alkalised boiler feedwater 7−113787
tricarbocyanine dyes, triplet state yield and photosensitisation of singlet O_2 *(French)* 7−117027
U^{6+} hydrolysis in $NaNO_3$ soln. 7−106867
N Wales, rural site rain pH 7−139171
Al alloy 6061 crevice corrosion in chloride solns., AC impedence studies 7−144603
Al brass, corrosion products in Na_2SO_4 solns. containing chlorides 7−86400
Al, corrosion resist. in chloride media, impedance obs. 7−71385
Al, electrochemical behaviour in NaCl soln., impedance obs. 7−93335
Al-Zn-Mg, crevice corrosion in NaCl solns., pH obs. 7−93145

pH continued
Co complexes, dioxygen bridged, dinuclear, cyclic voltammetric obs. 7−113954
Co plated films, crystallographic orientation and mag. props., effect of pH 7−84563
$CrSi_2$:Fe powder, slip casting, sintering, thermoelec. props. *(Japanese)* 7−77902
Cu and patina, reaction with simulated rain 7−113763
Cu, electroless plating, surface layer pH 7−138699
Cu passivation in acid medium 7−108109
Cu-O-based high T_c supercond., prep. by coprecipitation method 7−113499
(Fe, Mn)WO_4, wolframite, spherical agglomeration of particles from dispersion 7−93468
Fe, pure, pitting and repassivation in simulated concrete solns. 7−71386
Fe-Ni, electrochemical corrosion in acidic sulphide solns. *(German)* 7−78380
Fe-Ni, electrodeposition from sulphate solns. 7−77848
H-bonded complexes, triple bonds, ab initio methods 7−129561
HBr, acidity scale, ab initio MO calcs. 7−135832
HCl, acidity scale, ab initio MO calcs. 7−135832
I, time-dependent partitioning, γ-ray effects, LWR core accident appl. 7−78525
KCl-KH_2PO_4-H_3PO_4 mixtures, aq., quaternary diffusion 7−84340
α-$LiIO_3$ crystal growth from soln., pH influence on habit 7−137285
Ni powder, adsorption of PO_4 ions, anal. using radiotracer technique 7−91920
Ni-Cd, anomalous electrocodeposition from sulphate solns. *(Japanese)* 7−77849
Ni-Cr-Fe alloys, anodic dissolution behaviour in sulphur containing solutions 7−138882
Ni-Cr(-Mo) based alloys, HLW canister appl., corrosion resist. 7−103205
Ni-S amorphous alloy film, electroplating, struct. 7−86070
PON glasses, corrosion in water and humid air 7−119387
Pb-Sn, electrodeposition from sulphamate soln. 7−144320
$PbCrO_4$ illuminated system, periodic precipitation, multiple stability and pH dependence 7−139033
PbO-TiO_2 system, sol-gel processing, pH and temp. effects 7−71114
$^{99}Tc^m$(Sn)MDP reaction mixture, effect of Sn(IV) on mean size of $^{99}Tc^m$-containing constituents, neutral pH 7−93926

pH control
acidified surface water liming techniques, consequences and costs 7−106938
Beaver Valley PWR, on-line monitoring of secondary-cycle chemistry with morpholine 7−141214

pH factor *see pH*

pH measurement
acid rain monitor with solenoid-operated drainage valve 7−93607
chemical hardness, empirical eval. 7−86693
enzyme modified pH sensitive ion-selective device 7−100671
fibre optic pH sensing devices 7−75141
fibre optic sensor design, with rapid-response 7−97156
fogwater collectors for chem. anal. and water content determ. 7−127486
ISFET temperature characteristics, theory and expt. verification 7−100669
micro ISFET for biomedical research 7−101152
microcomputer appl., specific ion meas. 7−144765
precipitation pH electrometric determ., theory and practice 7−94451
α-ribazole-3′-phosphate, detached cobalamins nucleotide, ^{13}C NMR study 7−119723
soil pH measurement as introduction to quantitative anal. 7−108104
thick-film hybrid pH sensors 7−126526

phase angle meters *see phase meters*

phase conjugation (optical) *see optical phase conjugation*

phase-contrast microscopy *see microscopy*

phase control
LEP accelerator, RF synchronisation using feedback phase control system 7−116728

phase diagrams
see also phase equilibrium; phase transformations
$A^{III}B^V$-Si(Ge) eutectics, composition and temp. eutectic point determ. 7−111857
Abelian lattice Higgs model, phase diagrams, Gribov copies 7−121335
acetonitrile-halocarbons, solid-liquid phase equilibr., phase diagrams, heat of fusion 7−76360
activity calculation from phase diagram involving intermediate cpd. using entropy of form. 7−76453
alloys, binary, phase diagram calc., statistical physics methods 7−106486
alloys, glass forming ability rel. to metallurgical parameters 7−83730
ammonium hydrogen oxalate semihydrate, phase diagram, Raman and Brillouin scatt. 7−85732
amorphous binary alloys, comp. range determ., atomic size difference depend. 7−69863
ANNNI at low temp., rigorous results 7−76351
ANNNI model at low temperatures, phase diagram 7−73278
β-(BEDT-TTF)$_2I_3$, direct detect. of supercond. β-1.5-β-8 phase transition 7−99308
β-(BEDT-TTF)$_2I_3$, phase stability, DTA studies 7−118058
β-(BEDT-TTF)$_2I_3$, supercond., temperature-stress phase diagram 7−85173
binary BCC alloy, second Hessian determinant for tricritical point determ. 7−84195
binary mixtures of polar and nonpolar compounds, reentrant liq. cryst. phases, mean field theory 7−76401
blue-phase liquid crystals, chiral-racemic phase diagrams 7−97918
bone, cattle, phases at elevated temp., prosthetic implant appl. 7−79135
boson gas, 1D, localized-superfluid transition, electron gas analogy 7−105435
caesium pentadecafluorooctanoate-water system, lyotropic mesomorphism, phase diagram 7−142560
carboboride hardened steel phase composition calc. 7−86127
carbonate systems, binary rhombohedral, theoretical anal. of cation ordering 7−124441
chiral clock model, low temp. renormalisation study 7−105874
chiral-nonchiral liq. cryst. mixture, blue phases, phase diagram determ. 7−91803
chloromethylsilane-pyridazine (pyrazine) phase diagrams, thermodynamic functions *(German)* 7−91776

phase diagrams continued
classical lattice, low-temp. phase diagrams, order-by-order construction, convex sets 7−120988
colloids, phase diagrams, free energy calcs. 7−91770
computer uses in metal science *(Chinese)* 7−125937
confined lattice gas, prewetting and capillary condensation 7−73269
crystal with inclusions, temp. gradient melting *(Chinese)* 7−131274
4-cyano-4′-(2″-methylbutyl)-biphenyl mixtures, blue phase, elec. field induced phase diagrams 7−118095
diastereoisomeric salts, optical resolution optimisation, phase diagram role 7−142955
diluted Ising model, mean field renormalization group with reaction field 7−102342
dimyristoylphosphatidylglycerol dispersion in H_2O, lipid bilayer form., equilib. phase diag. investig. 7−93663
dynamical systems with mode-locking and chaos, phase diagrams 7−73225
elastoplastic media, nucleation, thermodynamic theory 7−69857
electron gas, 1D, localized-delocalized transition, renormalization group anal. 7−105435
ethane, p-T phase diagram, NMR study 7−84249
ethylene, phase diagram up to 10 kbar, DSC studies 7−91762
FCC based phase diagram near triple point 7−76350
first-order phase transitions, mean field methods and stability limits 7−121034
four-component systems, calc. of isotherms of spinodal 7−106489
gas-fluid system, metastable and unstable state decay, mechanisms and open problems 7−84196
graphite with adsorbed tetrafluoromethane, multilayer phase diagram 7−70081
graphite-K intercalation cpd., $C_{24}K$, P-T phase diagram, basal plane resistivity meas. 7−105006
hard sphere mixtures, freezing, density functional theory 7−104960
hexafluorobenzene-naphthalene-type cpd. mixture, excess enthalpies 7−76412
high temperature superconductors, conf., Anaheim, CA, USA (April 1987) 7−108049
II-VI pseudo-binary semiconductors, atomic bonding and thermodynamic props. 7−111445
incommensurate phase, 2D model phase diagram, mol. dynamics simulation 7−118055
incommensurate systems, analyticity breaking of wave functions, fractal phase diagram 7−105358
information system, algorithms and software 7−67293
Ising model, phase diagram of spin glasses 7−112836
Ising model on half-infinite lattice, wetting and layering transitions 7−70030
Ising model with third neighbour interactions on Cayley tree, phase diagrams 7−80663
Ising triangular lattice-gas model, Monte Carlo studies 7−120993
isostructural solids, binary A_xB_{1-x} phase diagrams, chem. and elastic interaction effects 7−84191
isostructural system transitions 7−131268
Langmuir monolayers, polar molecules, phase transitions study 7−91970
lattice spin models, analyticity of low-temp. phase diagrams, Pirogov-Sinai diagrams 7−120987
lipid-water multilayer, films, X-ray scattering studies 7−111370
liquid, tensile instability, single branched isochore, thermodynamic behaviour study 7−76256
liquid cryst., mixtures, phase diagram, intermediate phase form., dipole-dipole correl. and geometric factors 7−84261
liquid crystal polymers, phase diagrams and screening effects 7−137561
liquid-vapour coexistence region, spatial struct. in Lennard-Jones fluid 7−124439
MBBA, phase diagram 7−111883
metal cryst., twinning plane superconductivity, (H,T) phase diagram meas. 7−105800
metal hydrides, properties and applications, conf., Maubuisson, France (May 1986) 7−80151
metal hydrides obtained by low temp. H implantation, structural, vibr. and electronic props. 7−83674
metal hydrides-H, P-C-T data, semiempirical equation 7−104953
metal surface, chemisorption, lattice-gas model, review 7−124716
metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
methanol-carbon tetrachloride, liq. mixture, eqn. of state, lattice model 7−111847
microemulsion, interfacial tensions, phase diagram and Hamiltonian, phenomenological model 7−84451
microinclusions closed packed in elastic matrix, melting 7−137524
molecular cryst. dynamics, conf., Grenoble, France (June-July 1986) 7−128193
molten salt, liquid-solid phase diagram, density functional calculation, charged-hard-spheres model 7−76361
multicomponent systems, kinetic phase diagrams 7−124452
nematic liq, cryst. mixtures, switching transition in external mag. field, mol. field theory calcs. 7−91802
nitride ceramics, phase relationships 7−144376
nonconvex interactions and the occurrence of modulated phases 7−84194
oil-water-surfactant mixtures, micro-emulsions, Ising lattice gas model 7−106837
one-dimensional polycrystal growth model, isothermal peritectic solidification 7−144387
ordered ternary phases of semiconductor alloys, first principles calculations 7−105015
organic mixed stack charge transfer cryst., phase diagrams and optical props. 7−84206
organic molecular alloys, phase diagrams 7−111829
phase fraction-composition-temperature charts, from binary and ternary phase diagrams 7−69859
plastic crystals, binary diagrams, excess enthalpy *(French)* 7−137520
plastic crystals, melting and random fields 7−124436
poly-n-hexyl isocyanate, semirigid, in 1-chloronaphthalene, mesophase form. 7−91442
polyethylene oxide-water system, phase anal. *(Russian)* 7−84228
polymer surfactants, phase behaviour of binary mixture monolayers 7−124067
polypropylene-polystyrene blends, coaxial phase struct., flow *(Russian)* 7−83280
polystyrene, semidilute solns., coexistence curve 7−91766
potassium laurate-1-decanol-D_2O-brucine sulphate-ferrofluid cholesteric lyotropic mesophase, phase diagram 7−83660

phase diagrams continued
propane, phase diagram up to 10 kbar, DSC studies 7−91762
propanol, coexistence curve diameter temp. depend. near critical point, scaling eqn. approx. *(Russian)* 7−67267
pseudobinary solid soln., liquidus surface props. 7−84216
PVC-polyacrylate, miscibility, thermodynamic and phase behaviour 7−91824
PVC-polyurethane blends, phase separation, amorphous struct. 7−113558
rare earth binary systems, phase diagrams, correlation with periodic table 7−71153
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth hydrides, autoclave system 7−95605
Rochelle salt-ammonium Rochelle salt, solid soln., Raman spectra 7−132257
scattering phase functions, Henyey-Greenstein approx. 7−84187
semiconductor epitaxial layers, growth, by solid solution cooling method 7−105311
semiconductor tetrahedrally bonded alloys, theory of ordering 7−104952
separation, dynamics 7−84281
sodium bis(2-ethylhexyl) sulfosuccinate, (Aerosol-OT)-oil-brine systems, phase behavior, surfactants, hydrocarbons 7−144763
spatially modulated phases, domain-wall interactions anal. 7−124438
stability criteria for phases under irradiation 7−117968
steel, NbCN solubility, thermodynamic calc. 7−86128
substitutional alloys, binary, ground state phase stability diagrams, segregation and order 7−111818
succinonitrile-neopentyl alcohol, eutectic mixture, solidification 7−117847
symposium on statistical mechanics of phase transitions, Trebon, Czechoslovakia, (Sept. 1986) 7−120693
synthesis and characterisation of AB_2X_4 derived layered cpds. 7−105054
ternary, calc. with binary data 7−132562
ternary oxide systems, interrelationship of intermediate phases 7−106488
ternary semiconductors, II-VI-V_2 and I-III-VI_2 cpds., early work 7−124859
tetramethylammonium tetrahalogenometallate (II), solid soln. single crystals, phase transitions 7−124471
Th-Ag system 7−144365
(Ti,Hf,Zr)Be ternary alloys, glass forming range prediction 7−83734
transition metal selenides, $(M'_xM_{1-x})_3Se_4$, (M,M′=3d transition metal), phase diagrams 7−113526
Triton X-114-H_2O, lamellar phase to isotropic liq. transition, phase diagram determ., DSC anal. 7−111871
truxene derivatives, disc-like mesogens, phase diagrams, dilatometric and thermobarometric studies 7−98445
TTF-p-chloranil single cryst., neutral-ionic phase transition 7−84255
two-phase coherent solids, phase equilib. 7−132580
uric acid-NaOH-HCl-water system, computed phase diagrams, dissolution and precip. 7−126476
water thermal conductivity calc. in critical region 7−69995
water-sodium bis(2-ethylhexyl)sulphosuccinate-undecane, cond., percolation transition, temp. and salinity effect 7−98533
weakly interacting particle dispersions, phase separation 7−93384
Wigner crystal of a screened-Coulomb-interaction colloidal system in two dimensions 7−100626
Z(q) spin model, 2D, mean-field-like variational and renormalization group anal., phase diagram 7−128473
Zircaloy-2 and 4, precip. comp. rel. to heat treatment 7−86182
Ag-As-Se system, glasses, formation, thermal behaviour 7−69605
Ag-Au, alloy phase stability, electronic theory 7−70181
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, self-organisation obs. 7−70112
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, structure and phase composition obs. 7−71152
Ag-Sn, peritectic solidification, nonequilib. γ-phase form., homogenisation kinetics 7−113524
$AgTa_xNb_{1-x}O_3$, solid solns., phase transitions, X-ray diffr. study 7−76390
$Ag_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
Al-Ag-Zn multicomponent systems, compositional instabilities, phase separation 7−105055
Al-Cr-Ni system, phase equilib. at 1423 K 7−132582
Al-Cu-Mg-Si, thermodynamics, unidirectional solidification 7−77979
Al-Fe-Si, direct chill casting, intermetallic phase form., TEM and EDAX 7−86155
Al-Fe(Mn)(Ni)(Si)(Ti), thermodynamics props., reviews 7−80197
Al-Gd alloys, rapidly solidified, microstruct. obs. and thermal stability 7−138737
Al-Ge binary alloy systems at high press. 7−100183
Al-Li alloys, specific Young's modulus and phase diagram, rapid solidification processing effects 7−100279
Al-Mn, quasicrystalline-amorphous structural transition, temp. and radiation dose depend. calcs. 7−124100
Al-Si binary alloy systems at high press. 7−100183
Al-Zn-Sn, phase diagram, isothermal diffusion in ternary system 7−100187
Al-Zr-V phase diagram calc. *(Korean)* 7−132577
$AlAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
AlGaAs solid soln., liquid-phase epitaxy, solubility 7−105030
AlGaInP, miscibility gaps in phase diagrams 7−131317
As-Ge-Te, ternary system, peritectic decomposition *(French)* 7−132588
As_2Te_3-GeTe, stable and metastable phases *(French)* 7−132587
Au-An, phase diagram, peritectic reactions 7−144373
Au-AuSn-Pb partial ternary system, constitution 7−144371
Au-Si mixture films, oxidation behaviour, appl. for integrated circuits 7−113735
Au-Ti(Zr)(V)(Nb) thin film interactions, RBS and X-ray diffr. studies 7−69991
Ba-Ag, phase diagram, cryst. struct., thermal anal., metallography, X-ray diffr. 7−77940
Ba-La system, phase diagram 7−106481
$BaMoO_4$-$Ce_2(MoO_4)_3$ system, synthesis, physicochemical props. 7−98006
BaO-RuO_2-Al_2O_3 system, Ba-poor cpds. at 1300°C 7−69897
BaO-TiO_2-Nb_2O_5 phase diagram, cryst. chem. and struct. studies 7−83904
$BaTiO_3$-$Nd_2Ti_2O_7$ pseudobinary system, X-ray phase and thermal analyses and electrophysical characteristics 7−91764
Bi-containing Fe garnet thick films, LPE 7−76701
Bi_2O_3-B_2O_3-ZnO ternary system, phase equilibria 7−84232

phase diagrams continued
Bi_2O_3-PbO cathode materials for Li batteries, X-ray crystallographic and thermodynamic studies *(French)* 7−69675
Bi_2WO_6-Bi_2MoO_6, phase diagram, crystalline phases, electrophysical props. 7−92967
CO_2-H_2O-NaCl, phase behaviour meas. 7−111821
CO_2-SO_2-H_2O, phase behaviour meas. 7−111821
Ca-Al-Si-S-O-C, cemented carbides, sintering, atmospheric and impurity effects 7−92949
$CaCl_2$-$EuCl_2$ solid soln., phase charactn. by X-ray powder diffr. 7−143020
$CaCl_2$-$SrCl_2$ solid soln., phase charactn. by X-ray powder diffr. 7−143020
$CaMgSi_2O_6$-$NaFeSi_2O_6$-$NaFeGe_2O_6$-$CaMgGe_2O_6$ systems, phase equilibria studies 7−100194
CaO-MgO-Fe_2O_3-Al_2O_3-Cr_2O_3-SiO_2 system, phase comp. and compatibility 7−77959
$CaTiO_3$-$SrTiO_3$, phase diagram 7−106494
Cd-Pb binary alloy systems at high press. 7−100183
Cd-Pb-Zn system, calc. of liq. miscibility gap 7−132563
Ce-H_2, peritectic temp. 7−100196
$CeAl_2$, Kondo cpd., pressure-temperature phase diagram, high press. X-ray diffr. and elec. resist. meas. 7−85288
$CeLaNi_{5-x}Al_x$, changes in hydrogeneration props. induced by thermal cycling 7−100257
$Ce(PO_3)_3$-$RbPO_3$ system, composition diagrams, X-ray, thermal and IR anal. *(Japanese)* 7−124448
$Ce_{1-x}Th_x$, mixed valence phase, determ. 7−98946
Co island films, FCC to HP transition, phase diagram 7−124155
Co, thermodynamic props., critical evaluation, mag. contribution 7−131335
$CoCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
Cr-Ni-Cu, laser mixed Cr-Ni films on Cu, microstruct. studies 7−70039
Cr-Si system, thermodynamic props., 953 to 1133 K 7−119243
CrB-FeB, phase diagram, magnetovolume effect 7−85399
Cu-Ag (Au), alloy phase stability, electronic theory 7−70181
Cu-Au disorder phase, thermodynamic props., phenomenological calc. 7−84293
Cu-Cr system, phase diagram, thermodynamic characts, 7−144372
Cu-Cr-Sn system, isothermal phase diagrams of Cu-rich corner 7−113522
Cu-Fe-Sn ternary system, phase diagram *(Chinese)* 7−132560
Cu-In system, solid-liq. equilib. on Cu-rich side of phase diagram, DTA obs. *(German)* 7−100193
Cu-NI system, thermodynamic evaluation 7−126086
Cu-Ru-Ni, effect of Ni addition on Cu-Ru system, phase diagrams, physicochemical anal. 7−100184
Cu-Si system, phase equilib., thermodynamic assessment 7−132565
Cu-Sn-Ti-Ni system, struct. form. mechanism in sintering, contact interaction of Ti-Ni and Cu-Sn 7−119200
$CuInS_2$ phase diagram, allotropic transitions, DTA and X-ray diffr. studies 7−118093
$(CuInTe_2)_{1-x}(MnTe)_x$ diluted mag. system, phase relationships 7−124451
CuO-Y_2O_3-BaO phase diagram, resistivity and superconductivity distributions 7−105745
CuTi-NiTi quasi-binary eutectic system phase diagram 7−106485
$Cu_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
D, high density, thermodynamic props. and thermal cond. 7−69931
Dy_2O_3-Y_2O_3, solid solutions, 1300-2450°C 7−92965
Er-El system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
$ErFe_2H_x$ phase diagram, structural and magnetic props., neutron diffr. study *(French)* 7−83902
F_2, high pressure study, phase diagram, Raman spectra 7−137540
Fe-C-N ternary phase diagram, phase boundaries of single-phase ε- and γ'-fields 7−92958
Fe-Ga (26.9 at%), ω-like phase, struct., electron microscopy 7−83857
Fe-Ge, BCC system, miscibility gap rel. to ordering 7−132579
Fe-N system, new assessment of phase diagram 7−132564
Fe-Nb-O, changing O partial press., 1200°C 7−132589
Fe-Ni-Cr phase diagram, thermodynamic anal. and calc. 7−100188
Fe-Ni-S system, thermodynamic props., phase equilib., 700-900°C, thermogravimetry 7−119241
Fe-Ni-W-C, phase diagram assessment 7−77952
Fe-Ni-W-C, phase diagram calc., bonded WC tool comp. selection 7−132568
Fe-Ni-W-C phase diagram at 1273 K, diffusion-couples heat treatment, Gibbs energy anal. 7−132567
Fe-Pb phase diagram, solubility-temp. relationship *(Chinese)* 7−132559
Fe-Si system, thermodynamic anal. and formulation of A2/B2/DO3 atomic ordering energy 7−138733
$Fe_{79.5}B_{12}Si_{8.5}$ amorphous alloy, temper embrittlement, compositional depend. 7−86357
$Fe_{1-x}Co_xS$, phase relations and ageing effects 7−77955
$FeCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
Fe_yO, solid wustite thermodynamic props., subdomain stability boundaries, numerical results *(French)* 7−124555
$Fe_{3-x}Pt_{1+x}$ ordered alloys comp. and temp. depend. elec. resist. study 7−105528
α-FeSi solid soln.-Zn vapour system, phase relations, diffusion paths 7−77950
$FeTiH_x$ and $FeTi_{1.15}H_x$, hydriding behaviour, ease of activation, β-phase skipping 7−98469
Ga-Sn-Sb, composition diagrams of GaSb-Sn and GaSb-SnSb, 985-600 K 7−106491
GaAs, MBE, surface phase diagrams, appls. 7−71017
GaAs, metallisation, phase equilibria, thermodynamic anal. 7−111822
GaP single crysts., intrinsic point defects 7−98120
$(GaSb)_{1-x}Ge_{2x}$ semicond. alloy, struct., electronic and thermodynamic props., role of correlations 7−118396
Gd-Co-P system, phase equilib. diagram, X-ray diffr. study 7−100195
Gd-Si system, thermodynamic props. of $GdSi_2$ 7−77945
$Gd(MoO_4)_3$, ferroelastic-ferroelec. phase transition, phase boundary obs. 7−124485
Gd_2O_3-BaO-CuO system, subsolidus phase relationships and high T_c superconductivity 7−144375
Gd_2O_3-Y_2O_3, rel. to thermal stability of polymorphic modifications 7−92964
Ge-Se system, liquid-vapour equilibria, mixture boiling point method 7−104970
phase diagrams continued
Ge-Sn(Pb)-Te phase diagram, GeTe-SnTe and GeTe-PbTe sections 7−106487
Ge_xSi_{1-x} system, low temp. phase diagram, solid solubility comp. depend. under press. 7−76395
H-He mixtures, fluid-fluid, fluid-solid and three-phase equilibria up to 75 kbar 7−84204
H_2O ice, high-press. low-temp. modification XII obs. 7−84250
He, dense, equation of state, three-body exchange interactions 7−105165
^{3}He, liquid, partially spin-polarised, phase transitions and phase diagrams 7−137650
^{3}He, liquid, phase diagram in presence of Hubbard interaction 7−70017
Hf-Nb-Ge system, isothermal cross-section 7−144369
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7−119247
Hg-Tl binary alloy systems at high press. 7−100183
$Hg_tPb_{1-t}Se_xTe_{(1-x)}$, quasiternary system, thermodynamic props. 7−91844
HgTe-Bi system, constitution diagram 7−92968
Ho-Tl system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
InAs, MBE, surface phase diagrams, appls. 7−71017
$InAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
InGaAsP, LPE growth on GaAs substrates 7−124779
InGaAsP on GaAs, phase diagram and LPE 7−100131
InP, native sulphide films, In-P-S phase diagram *(French)* 7−126345
InPAsSb 7−131317
K, equation of state anomaly in the 500 kbar regime 7−84180
KCl-KBr-TeO_2, phase diagram, thermographic effects *(Russian)* 7−111830
KF-B_2O_3-K_2MoO_4 system, liquidus surface, melting point meas. 7−111832
KF-B_2O_3-Li_2MoO_4 system, liquidus surface, melting point meas. 7−111832
KF-B_2O_3-Na_2MoO_4 system, liquidus surface, melting point meas. 7−111832
$K_2RhH_2OCl_5$ thermal transforms., differential-thermal and X-ray diffr. phase anals. 7−86587
Kf-B_2O_3-MoO_3 system, liquidus surface melting point meas. 7−111832
LaH_2, peritectic temp. 7−100196
$LaNi_5H_3$, pressure-composition isotherm meas., X-ray diffr. study 7−84202
La_2O_3-Y_2O_3, solid solutions, phase equilibrium 7−92963
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic transition 7−111852
$La_{2-x}Sr_xCuO_4$, structural phase diagram, X-ray study 7−119252
$LiAlH_4$ ($LiAlD_4$), comparative study γ high press. phase *(French)* 7−69898
LiCl-$BaCl_2$-$SrCl_2$ system, phase diagram, meas. and calc. 7−138734
LiF-PbF_2, fusion blanket material, T release props., phase diagram 7−129413
LiF-PbF_2 system, phase diagram, TG-DTA methods 7−86137
$Li_{1+x}Ge_{2-x}Al_xP_3O_{17}$, phase relationships and elec. conductivity *(Chinese)* 7−112321
LiH_x ordered spins, phase diagrams at positive temp. 7−105887
$LiKSO_4$, high-pressure transition and phase diagram *(Chinese)* 7−111767
$Li_{0.9}Mg_{0.1}$, martensitic transform. temp., press. depend. study 7−84128
Li_xMoO_2, struct., phase diagram and electrochemistry, in situ X-ray diffr. and electrochemical studies 7−83927
$Li_xMo_6S_8$, Chevrel phases, ^{7}Li NMR obs. 7−112975
$Li_xMo_6Se_8$, Chevrel phases, ^{7}Li NMR obs. 7−112975
$LiNbO_3$, phase diagram under anisotropic compression, ESR studies 7−137519
$LiTaO_3$, phase diagram under anisotropic compression, ESR studies 7−137519
$MnCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
Mn_xTe_{1-x}, dilute alloys, mag. susceptibility and phase diagram 7−99421
N_2, melting curves at high temps. and pressures 7−124456
ND_4DSeO_4, structures, X-ray diffraction study 7−142716
NH_3-H_2O phase diagram at high-press., and planetary satellite implications 7−120290
NH_3-H_2O system at high press., appl. to Titan ocean 7−120307
NH_4Br, high press. phase diagram, thermal cond. studies 7−111825
$NH_4Cl_{1-x}Br_x$ solid solns., spin-glass-type phase 7−99464
NH_4HSeO_4, structures, X-ray diffraction study 7−142716
Na_3AlF_6/Na_2SO_4 system, phase diagram and ionic conductivity *(German)* 7−111955
NaCl-oil-Aerosol-OT systems, phase behavior, surfactants, hydrocarbons 7−144763
$Na_xMo_6S_{8-y}I_y$ ($Se_{8-y}I_y$), Chevrel phases, electrochemical, structural and physical props. 7−76090
$NaNbO_3$ solid solns., Krainik's classification according to dielectric props. 7−70721
Na_2O-La_2O_3-Y_2O_3-P_2O_5, glass crystallisation, phase equilibria 7−84263
Na_3PO_4-Na_2SO_4, solid electrolytes, cond., phase diagrams, lattice parameters 7−131359
Na_2SO_4-Li_2CO_3 system, elec. cond., comp. depend. studies 7−84384
$Na_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
Nb-Ge alloys, drop tube processed, metastable structs. 7−119192
Nb-Ge-H-Cl system, thermodynamic equilib. anal. 7−98389
Nb-H system, EFG, PAC study 7−85493
Nb-Si, rapid solidification, microstruct., phase analysis 7−86153
Nb-Ta-H, phase equilibria calc., first principle, model and empirical methods 7−104988
Nb-Y alloys, effective pair interactions, density functional theory supercell total energy calcs. 7−84710
Nd high press. FCC to double HCP phase transition, elec. resist. meas. 7−98439
Nd-Fe-B permanent magnets, mag. props. and prep., review 7−112864
Nd-Zn, alloying behaviour, phase diagrams 7−77941
Nd_2O_3-P_2O_5 system, phase equilibrium 7−119248
Ni-Al, Al^+ ion implanted Ni, elevated temp. microstruct. stability 7−144363
Ni-Al, ion implantation, equilib. phase diagram, conc. profiles, Auger spectra, IR emissivity obs. 7−106483
Ni-Al alloys, effective pair interactions, density functional theory supercell total energy calcs. 7−84710
Ni-Al system, mixing energy, calc. by method of model electron density functional 7−143017
Ni-Al-Mo system, phase diagram, 1300 to 2000°C 7−100179

phase diagrams continued
Ni-Al-Mo system, phase equilib. for Ni-NiAl-Mo comp. range 7−106482
Ni-Cr-Sc phase diagram, 1100 to 1800°C 7−86129
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-Mo magnetic superlattice prep. and structural props. study 7−124726
Ni-P and Ni-P-C systems, phase form., melting point, eutectics and peritectics, polymorphic transform. temp. 7−119244
Ni-TiC-MC, M=Zr, Hf, Nb or Ta, phase equilib. 7−100180
Ni-W-C system, thermodynamic evaluation, sublattice model 7−77951
$NiCr_{2-x}Ga_xSe_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
Np-O system, phase relationships 7−86140
O_2 physisorbed layer on graphite, solidification, susceptibility studies 7−124696
O_2 physisorbed monolayers on graphite surface, density-temp. phase diagram, LEED study 7−124698
Pb-Ag-Bi alloy, liq., excess Gibbs energies from boundary binary systems data 7−144370
Pb-S system, thermodynamic anal. and phase diagram calc. 7−77957
$Pb_{1-x}Ba_xNb_2O_6$ ferroelectric tungsten bronze crystals, dielectric and piezoelectric preps. 7−125592
$Pb(Co_{1/2}W_{1/2})O_3$, ceramic, phase transition, effect of hydrostatic press. 7−132591
$Pb_{1-x}Sn_xTe$, Bridgman-grown single crysts., precip. study by TEM 7−91818
$PbZr_{1-x}(Fe_{0.5}Nb_{0.5})_xO_3$, piezoceramic solid solns., phase diagram, electrophysical props. 7−85541
Pd-Se system, phase relations, superconductivity 7−113519
Pr-Co-B ternary phase diagram, Co rich portion 7−144366
Pr-Co-Ni ternary system, phase diagram 7−119238
Pr-Fe binary system, phase diagram *(Chinese)* 7−132561
Pr-Fe-B ternary system, X-ray diffraction and thermal anal. 7−113525
Pr-H_2, peritectic temp. 7−100196
Pt-Al system, thin film, phase formation and dissociation 7−131370
Pt-Al(Ga) phase diagrams with emphasis an polymorphism of Pt_3Al and Pt_3Ga 7−126085
Pt-Ge phase diagram, reinvestig. 7−100191
Pu-H, equilib. and structural props. 7−104954
$Rb_{1-x}(NH_4)_xD_2PO_4$, NMR in random fields, spin-glass-like transition 7−77421
RbI-AgI-CsI, phase diagram, DTA and X-ray investig. *(Russian)* 7−111831
SO_2-H_2O, phase behaviour meas. 7−111821
SeO_2-V_2O_5 glass system 7−111414
Si, crystalline, amorphous and liq., phase diagram studies 7−118059
Sm-Ga-S, SmS-Ga_2S_3 section, ternary compounds 7−71155
Sm_2O_3-Y_2O_3, rel. to thermal stability of polymorphic modifications 7−92964
SnI_2-AgI system, elec. conductivity of solid phases 7−143087
$Sn_2P_2(Se_xS_{1-x})_6$, ferroelectric phase transition splitting, phenomenological anal. 7−125636
$(Sn_xPb_{1-x})_2P_2(S_ySe_{1-y})_6$ ferroelectrics, soft phonon spectrum, phase diagram, Raman spectra study 7−132261
SnSe-Bi, solid solutions, thermo-EMF, elec. cond. rel. to density 7−92960
SnSe-Nd_2Se_3, congruent melting compounds 7−71156
SnSe-Pr_2Se_3, congruent melting compounds 7−71156
SnTe-CdSe, section of ternary reciprocal system 7−71157
SnTe-Ni_3Te_2, interaction, temp. depend. of thermoEMF 7−86138
$SrCl_2$-$EuCl_2(Cl_3)$ systems, preparation and phase characterisation 7−86136
SrO-GeO_2 system, time-temp.-transform. diagram *(Japanese)* 7−132592
SrO-TiO_2-Ga_2O_3, phase diagram, crystallographic and leaching study 7−71158
$TaSi_2$-WSi_2, solid solutions, phase diagrams and resistivities 7−111823
$TbFe_2H_x$ phase diagram, structural and magnetic props., neutron diffr. study *(French)* 7−83902
$Te_{90}Ge_{10}$, phase transformation kinetics, laser power, pulse width, laser-induced phase change cycling 7−104819
$2TeO_2.V_2O_5$-$Li_2O.V_2O_5$-$2TeO_2$ system, phase diagram and IR spectrum 7−77956
$Te_{80}Sn_{20}$, phase transformation kinetics, laser power, pulse width, laser-induced phase change cycling 7−104819
Ti, lattice stability, heat capacity, transform. enthalpy 7−84315
Ti-Al-Zr-W system, phase equilib. 7−86131
Ti-Au-Al ternary system, phase relationships at 775 K 7−119239
Ti-H system, thermodynamic anal. 7−131334
Ti-N system, phase diagram and homogeneity ranges, neutron diffr. obs. *(Russian)* 7−124445
Ti-O system, ordering and phase relationships in TiO existence area 7−77958
Ti-V-H system, struct., phase diagram, H solubility, band struct. 7−77946
Tl-Sb-Se, quasi-binary sections 7−106492
$(TlCl)_x(TlI)_{1-x}$, mass spectrometry and thermodynamics 7−76439
Tl_2Se-$CuGaSe_2$⇄$TlGaSe_2$+CuTlSe reciprocal system, phase diagram 7−92966
U-Si phase diagram, U_3Si fuel appl. *(German)* 7−129222
$U(Pt_{1-x}Pd_x)_3$ heavy-fermion alloys, superconductivity and antiferromagnetism, phase diagram determ. 7−112790
$U_{1-x}Th_xBe_{13}$, $(0.02\ll x\ll 0.06)$ phase diagram, specific heat, critical field 7−77149
V-Ni-Cr system, diffusion couples and equilibrated alloys 7−144367
V-T, phase boundaries, 100-473 K 7−105044
$(V_{1-x}Cr_x)_2O_3$, electron localisation in correlated band, metal-insulator transition and heavy Fermi liq. behaviour, thermodynamic theory 7−124868
W (110), adsorbed Na, repulsive dipole phase diagram 7−112072
WC based cemented carbide systems, sintering, binder comp., phase equilib., mech. props. 7−71151
Y-Ba-Cu-O high T_c supercond., new phase obs., struct. and symm., electron diffr. and microscopy 7−117872
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7−117873
Y-Ba-Cu-O high T_c supercond. phase diagram and struct. charactn., comp. and sintering conditions depend. 7−117888
Y-Ba-Cu-O high T_c supercond., phase equilibria and cryst. Chem. 7−119245
Y-Ba-Cu-O high T_c supercond. system, 950°C subsolidus phase diagram 7−119246
Y-Ba-Cu-O high T_c supercond., mixed and single phase ceramics, X-ray diffr. and EPMA studies 7−119250
phase diagrams continued
Y-Ba-Cu-O high T_c supercond. ceramic, phase diagram determ. 7−119251
Y-Ba-Cu-O system, high T_c superconductivity, phase diagram 7−118612
Y-H(D) solid soln., long and short-range ordering 7−84303
$YBa_2Cu_3O_y$, high T_c supercond., 90 K supercond., critical O conc., phase diagrams 7−142994
Yb-Tl system, phase diagram and mag. props. 7−144368
YbI_2-RbI system, phase diagrams and struct. investig. 7−91765
Zn-As binary alloy systems at high press. 7−100183
Zn-In system, liq. immiscibility and associated monotectic reaction 7−124524
ZrO_2-Al_2O_3-SiO_2 system, rapidly quenched, tetragonal ZrO_2-glass structs. form. 7−119231
ZrO_2-ZrF_4 system, solid phases *(French)* 7−106495
ZrO_3-Y_2O_3 system, phase diagram and microstructures 7−138735

phase diagrams, magnetic *see magnetic transitions*

phase equilibrium
see also phase diagrams; phase transformations; solutions
acetonitrile-halocarbons, solid-liquid phase equilibr., phase diagrams, heat of fusion 7−76360
adsorbates, zero-order desorption in phase equilib. 7−143222
alcohol-water systems containing dissolved salt, vap.-liq. equilib. 7−142967
alloys, comparison of structs. prod. by ion implantation and rapid solidification 7−92923
amorphous binary alloys, comp. range determ., atomic size difference depend. 7−69863
austenite-martensite phase transform. equilib., internal variable models 7−84233
benzene adsorbed on activated C, fixed-bed adsorpt. cycles anal. 7−113975
benzene-cyclohexane system, solid-liquid phase equilibria, high press. 7−131269
binary mixtures, phase separation and critical phenomena 7−142969
bromobenzene, derived thermodynamic data, high press. 7−142943
carbonate systems, binary rhombohedral, theoretical anal. of cation ordering 7−124441
catanionic surfactant-water systems, phase equilib. 7−111826
coherent solids, inapplicability of Gibb's phase rule 7−124553
condensation kinetics in cooled gases 7−91780
continuous phases stability, finite amplitude perturbations effect 7−86126
continuous-contact separation processes, simulation, unsteady-state absorpt. 7−124515
crystal-melt boundary instability, surface tension effects, critical wavelength calcs. *(Japanese)* 7−118053
CVD, thermodynamic model *(Polish)* 7−137587
density dependent mixing rules for fluid phase equilibria calcs. 7−124434
N,N-dimethylacetamide-tetrachloromethane, solid-liquid phase equilibria 7−76359
dimyristoylphosphatidylglycerol dispersion in H_2O, lipid bilayer form., equilib. phase diag. investig. 7−93663
3,6-dioxaoctane-n-heptane, vapour-liquid equilibr. 7−91778
equilibrium phases, conc. calc., from liquidus and solidus surfaces model 7−84175
equilibrium theory for complete adiabatic adsorption cycles 7−113975
ethane, adsorpt. equilib. meas. by volumetric apparatus 7−118072
ethane, two-phase liq. equilib. with hydrate 7−124468
ethane surface tension and capillary const. meas. in liq.-vapour coexistence range *(Russian)* 7−112025
ethane-n-heptadecane (n-octadecane), tricrit. phenomena determ. 7−84183
ethane-pentacosane, three-phase equilibr. 7−84185
ethane-tetracosane, phase equilibr., meas. and calcs. 7−91771
ethanol-water-$CaCl_2$, vapour-liq. equilib. at 25°C 7−111846
ethylene adsorpt. equilib. meas. by volumetric apparatus 7−118072
ethylene-methyacrylate mixtures, phase behaviour under high press. 7−100550
ethylene-polyethylene mixtures, phase equilibria, calc. methods comparison *(German)* 7−111819
Eu-Ga-Co(Ni) system ternary, phases with $BaZn_5$ struct. 7−131096
fatty acids, long-chain, solid-liquid phase relations in organic solvents 7−124454
Fe-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
filled tetrahedral compounds, electronic struct. and stability 7−124861
fluid confined between walls, solvation forces, phase equilibr. 7−104971
fluid phase equilibria at high press., density depend. mixing rules for calc. 7−98387
fluid phase stability and equations of state 7−124424
fluids, phase coexistence, Monte Carlo simulation in new ensemble 7−124435
four-component solid soln. epitaxial layers, lattice period stabilisation effect 7−105324
four-component systems, calc. of isotherms of spinodal 7−106489
Hastelloys and Inconels, weld metal, solidification microstruct., PHACOMP calcs. 7−77971
heterophase system with arbitrary interaction between phases, equilibrium equations 7−84182
n-hexadecane-n-hexafluorobenzene(-benzene), vapour-liquid equilib., 323.15 K 7−124462
hierarchical random surfaces 7−120959
high-energy media, physicochemical aspects, thermodynamics 7−111910
highly polar complex mixtures, phase equilib. calcs. using Peng-Robinson eqn. of state and van der Waals mixing rules 7−69853
ice, nucleation in porous silica, neutron diffr. studies 7−131294
III-V cpds., solid-liquid equilibria, stress effects, appl. to LPE 7−131270
independent components and phase rule 7−76354
industrial use of phase equilibria, prediction model based on thermodynamic perturbation theory 7−124433
intermetallic compound, dihedral angles, grain boundary and solid-liq. interfacial tension 7−118200
isopropanol-H_2O-CO_2 mixtures, three- and four-phase equilibria at elevated press., comp., molar vol. and critical points 7−76365
lattice gas, phase equilib., distrib. fns. 7−73240
lattice stabilities, new method of describing 7−111820
liquid systems with compound-forming tendencies and miscibility gap, appl. of Hoch-Arpshofen model 7−137564
metal-H, phase equilibria calc., first principle, model and empirical methods 7−104988

phase equilibrium continued
metals, close-packed, structural transitions and phase stability, review 7−76380
metastable, general description *(Russian)* 7−124450
metastable region, scaling theory parametric eqn. 7−111815
methane=n-pentane mixtures, vapour-liq. equilib. meas. at high press. and temps. 7−98417
methane, adsorpt. equilib. meas. by volumetric apparatus 7−118072
methane-2,2-dimethylbutane-2,3-dimethylbutane, tricrit. phenomena meas. 7−84184
methanol-ethanol-$CaCl_2$, vapour-liq. equilib. at 25°C 7−111846
methanol-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7−124465
methanol-methane $(H_2)(N_2)(CO)(CO_2)$ mixtures, isothermal phase equilibr. 7−84225
mixed phase systems, struct. and phase contents, EXAFS studies 7−106307
mixed solvent electrolyte solns., activity coefficients 7−98499
mixtures, compositions and molar vols. of three or more equilib. phases at elevated press. 7−91763
multicentre Lennard-Jones mols., tetrahedral and octahedral model fluids, thermodynamic perturbation theory 7−69852
multicomponent systems, simplified phase equilibrium eqns. 7−98386
multiphase isenthalpic and isentropic flash algorithms 7−76367
(n)heptane-1-chlorobutane, vapour-liq. equilibr., error-in-variables model 7−84221
(n)heptane-n-propanol-1-chlorobutane, vapour-liq. equilibr., error-in-variables model 7−84221
nematogenic aromatic block copolymers, phase equilib. 7−86183
nonconvex interactions and the occurrence of modulated phases 7−84194
oxide ceramic superconds., development, review 7−118603
paraffinic crude oils, swelling factors and bubble points, impurity effects 7−124443
partially miscible liquid system equilibrium, computation by total Gibbs energy minimisation *(Chinese)* 7−98514
n-pentane-ethanol., vapour-liquid equilib. 7−98416
phase fraction-composition-temperature charts, from binary and ternary phase diagrams 7−69859
polar mixtures, vapour-liq. equilibria calcs. with mixing rule using ASOG group-contrib method 7−76366
polydisperse fluids, flash calculations, variational approach 7−124463
polymers, compatibility of coils and rods bearing flexible side chains 7−84290
polypropylene and PET mixtures, mechanical props. and permeability 7−137265
polystyrene, high-filled, thermodynamics of interphase interactions *(Russian)* 7−84325
propane, adsorpt. equilib. meas. by volumetric apparatus 7−118072
propane, two-phase liq. equilib. with hydrate 7−124468
PVC-polyurethane blends, phase separation, amorphous struct. 7−113558
quinary systems, phase behaviour, tracing the three-phase body 7−84203
rare earth cpds., R_3MoO_7, R=La, Pr, Nd, Sm, Eu-Ho, prep., cryst. chem. props., phase equilib. 7−91503
rod-like systems, elongational flow effect on isotropic-nematic phase transform. 7−105016
sialons, α' and β', form. and prep., role of Nd_2O_3 as additive 7−77897
α'-sialons, Y, prep. and charactn. 7−126076
sodium dodecyl sulphate/hexylamine/water/heptane system, lamellar liquid crystal phases 7−131308
solubility, supercritical, decorated lattice gas model 7−140631
static equilibrium apparatus for vapour-liq. equilib. meas. 7−98417
steel, austenitic stainless, phase comp., fusion reactor first wall appl., liq. Li compatibility 7−141264
steel, magnetron sputtered on Cu, structure and phase structure, TEM study *(Chinese)* 7−76688
steel, martensitic-austenitic, austenite stabilisation 7−78081
steel, stainless, dual phase, corrosion resist., phase transform., microstruct. 7−78343
steel, stainless, martensitic, rapidly solidified and ion implanted, phase stability 7−76355
SYNROC-FA ceramic waste, leaching, phase analysis and microstruct. 7−81721
ternary, quaternary and larger systems, appl. of Hoch-Arpshofen model 7−137517
ternary intermetallic phases, triple defect. struct., thermodynamic props. 7−77949
ternary systems, R function, calc. and appl. 7−137518
ternary thermodynamic properties, prediction using new soln. model 7−137590
n-tetradecane-n-hexafluorobenzene(-benzene), vapour-liquid equilib., 323.15 K 7−124462
thermodynamic properties, ternary, prediction by appl. of R function 7−131330
thermodynamic study of an associated soln. model for liq. alloys 7−131331
(Ti,Hf,Zr)Be ternary alloys, glass forming range prediction 7−83734
two-phase coherent solids, phase equilib. 7−132580
two-phase system, interfacial region, Gibbs eqn. 7−98374
ultradisperse systems, high-energy media, physicochemical aspects, thermodynamics 7−111910
water-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7−124465
water-soap-alcohol system, phase equilib., thermodynamic model 7−69862
Ag-Sn, liq., thermodynamic props. 7−143053
Ag-Sn, peritectic solidification, nonequilib. γ-phase form., homogenisation kinetics 7−113524
$AgGaS_2(Se_2)$, chalcopyrite, crystal growth, nonlinear IR appl. 7−68783
AgI superionic conductor, phases, phase transitions and excitons, diffuse reflectance spectra studies 7−118091
Al, magnetron sputtered on Cu, structure and phase structure, TEM study *(Chinese)* 7−76688
Al-Co (26 wt.%), melt spun, decagonal phase, TEM obs. 7−83856
Al-Cu (1.7 at.%), direct ageing between reported GP zone solvi 7−119278
Al-Cu-Mg-Si, thermodynamics, unidirectional solidification 7−77979
Al-Fe-Mn, nature of $FeAl_3$-liquid-$(FeMn)Al_6$ reaction 7−86135
Al-Fe-Si, direct chill casting, intermetallic phase form., TEM and EDAX 7−86155
Al-Ge alloy films, metastable phase prod. and transform. by rapid crystn. and annealing treatments 7−75991
Al-Ge(Ni)(Be), rapidly solidified, microstruct. 7−93000

phase equilibrium continued
Al-Hf-Si (3, 0.3 wt.%), rapidly solidified, phase decomp. during ageing 7−92996
Al-Li-Cu, T_2 phase, combined X-ray and electron diffr. study 7−113520
Al-Mg, melt spun, metastable phase, TEM and DSC obs. 7−113523
Al-Mg system, new metastable phase 7−77953
Al-Mn, melt spinning, electron beam surface melting, icosahedral and decagonal phase form. 7−77972
Al-Mn system, phase equilib., stable and metastable 7−86134
Al-Pb, liquid dispersions, coarsening 7−84272
Al-Ti-B, rapidly quenched, microstruct. 7−119263
Al-Zn, phase separation kinetics, SAXS and TEM study 7−113515
Al-Zn (29 at.), α/β interfacial energy, DSC meas. 7−144374
Al-Zn-Ag, early stage precip., anomalous X-ray scatt. 7−144401
Al-Zn-Mg system, phase equilib. in Al corner 7−132573
$AlAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
Al_2O_3-Cr_2O_3 and $FeAl_2O_4$-$FeCr_2O_4$ solid solns., phase relations at 1823 K 7−132585
Al_2O_3-ZrO_2 system, phase relations under various melt cooling conditions *(Russian)* 7−124446
Ar_{13} clusters, melting and freezing, microcanonical simulations 7−104959
Au-An, phase diagram, peritectic reactions 7−144373
Au-Mg system, metastable, formed by Au ion implantation 7−106484
$BaAl_2O_4$-$BaGa_2O_4$, solid solution formation, high and low temp. regions 7−106490
BaO-TiO_2-Nb_2O_5 system, phase equilibria, cryst. chem. and struct. 7−111486
Be-Fe, technical purity, Fe containing phases, Mossbauer studies 7−142954
Bi-S systems, thermodynamic anal. by associated soln. model 7−132584
CO_2-H_2O-NaCl, phase behaviour meas. 7−111821
CO_2-SO_2-H_2O, phase behaviour meas. 7−111821
CS_2SO_4-$Li_2SO_4(Na_2SO_4)(K_2SO_4)$, phase equilibr. thermodynamics 7−76413
Ca-Ga-Ni(Co) system ternary, phases with $BaZn_5$ struct. 7−131096
$CaMgSi_2O_6$-$NaFeSi_2O_6$-$NaFeGe_2O_6$-$CaMgGe_2O_6$ systems, phase equilibria studies 7−100194
CaO-MgO-Fe_2O_3-Al_2O_3-Cr_2O_3-SiO_2 system, phase comp. and compatibility 7−77959
CdF_2-LiF-AlF_3-PbF_2 glasses, phase stability 7−131044
$Cd_{1-x}Mn_xTe$ semimag. semicond., band struct. and phase stability 7−124860
β-(Co,Ni)Ga, ternary B2 phases with triple defects, thermodynamic props. 7−76456
Co-Bi, electrodeposited, struct. and changes occurring during annealing 7−86226
Co-C-Si, rapidly quenched, nonequilib. phases 7−113521
Co-Hf-Mo-Nb system, phase equilib., glass form. *(German)* 7−137260
Cr-C amorphous alloys sputtered, form. and crystn. 7−83754
Cr-C system, thermodynamic props. 7−137589
Cr-Fe system, phase equilib. and thermodynamic props. 7−113518
Cu, de-alloyed porous residue, cellular morphology 7−132581
Cu-Au-Ni system, tetragonality of $L1_0$-type phase region, annealing temp. depend. 7−69660
Cu-Bi, electrodeposited, struct. and changes occurring during annealing 7−86226
Cu-Cr-Sn system, isothermal phase diagrams of Cu-rich corner 7−113522
Cu-Fe-Ni, liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-Hf system, reaction diffusion, intermetallic phase form. *(Japanese)* 7−91903
Cu-In system, solid-liq. equilib. on Cu-rich side of phase diagram, DTA obs. *(German)* 7−100193
Cu-In-Se ternary system, phase relations 7−111824
Cu-Mg-Al(Zn), liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-Ni-Sn, liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-P thin films, obs. of non-equilib. HCP phase 7−131095
Cu-simple metal binary amorphous alloys, universal behaviour and description as new Hume-Rothery phase 7−91469
Cu-Sn thin films, obs. of non-equilib. HCP phase 7−131095
Cu-Sn-Ti-Ni system, struct. form. mechanism in sintering, contact interaction of Ti-Ni and Cu-Sn 7−119200
Cu-Zn-Al, Cu-Zn, martensite and equilib. phases stability and transforms 7−78008
CuO-MgO system, thermodynamic activities using solid-state galvanic cell 7−111912
Dy_2O_3-Y_2O_3, solid solutions, 1300-2450°C 7−92965
Er-Ba-Cu-O high T_c supercond., metamorphic phases and transition temperatures 7−118637
Er-El system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
$ErFe_2$-H(D), pressure-composition-temp. data, thermodynamic props. 7−106493
Fe-Ag-Al(Ce), Al and Ce distrib. between Ag and Fe, effect of Ca *(Chinese)* 7−71148
Fe-Al-Ti, phase relations, transform. temps., microstruct. 7−92959
Fe-C system, C solubilities in Fe at elevated temps., anal. by statistical thermodynamics 7−98475
Fe-C system, double eutectic equilibrium corroboration 7−126100
Fe-C-Si system, Fe-rich corner, stable and metastable equilib. 7−132566
Fe-Cr system, thermodynamic description and phase relationships 7−113516
Fe-Cr system, thermodynamic description and phase relationships 7−113517
Fe-Cr-C-Nb system, white cast Fe, phase equilib., solidification and solid-state phase transforms. 7−132578
Fe-Cr-Co-Mo, high coercivity, phase equilib. characts. *(Russian)* 7−142953
Fe-Cr-Co(-Mo)(-W)(-Nb), stratification process, thermodynamic study *(Russian)* 7−125386
Fe-Cr-Mn(-Ni), neutron irrad., void swelling, phase stability 7−86132
Fe-Cr-Ni, complex liq. alloys, N solubility 7−76418
Fe-Cr-Ni, complex liq. alloys, N solubility, effect of Ti 7−76419
Fe-Cr-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
Fe-Cr-S system, phase relations and spinel-monoclinic transition 7−119242
Fe-Ga (26.9 at%), ω-like phase, struct., electron microscopy 7−83857
Fe-Ge, BCC system, miscibility gap rel. to ordering 7−132579

phase equilibrium continued
Fe-Mn, neutron irrad., void swelling, phase stability 7−86132
Fe-Mn system, thermochem. and phase equilib. data 7−131333
Fe-N-Ce(Y), interaction of N with Ce or Y in liq. Fe, thermodynamic study *(Chinese)* 7−131329
Fe-Nb-O, changing O partial press., 1200°C 7−132589
Fe-Ni Invar, metastable modulated state, supermoment dynamics, Mossbauer spectrum study, review 7−70529
γ-Fe-Ni-C, interaction of Ni with C, temp. depend. 7−77943
Fe-Ni-C system, thermodynamic evaluation 7−137588
Fe-Ni-Cr, γ′ strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7−105959
Fe-Ni-Cr based alloy, ion beam induced stable phase, formation at expense of metastable phase 7−138767
Fe-Ni-N system, with up to 30 wt.% Ni, N activity and solubility 7−126083
Fe-Ni-S system, thermodynamic props., phase equilib., 700-900°C, thermogravimetry 7−119241
Fe-Si-B, rapidly solidified, microstruct. and phase comp. 7−131041
Fe-W-C system, thermodynamic evaluation 7−86133
FeNdB-based permanent magnets phase comp., atom probe FIM study 7−132576
Fe_yO, solid wustite thermodynamic props., subdomain stability boundaries, numerical results *(French)* 7−124555
α-FeSi solid soln.,-Zn vapour system, phase relations, diffusion paths 7−77950
Ga-Ag system, low Ag conc. range, phase equilib. 7−132572
GaAs:Fe single crystals, LEC grown, phase analysis; ferromag. props. 7−86179
Gd-Co-P system, phase equilib. diagram, X-ray diffr. study 7−100195
Gd_2O_3-Y_2O_3, rel. to thermal stability of polymorphic modifications 7−92964
Ge-Se system, liquid-vapour equilibria, mixture boiling point method 7−104970
H_2O-methane-NaCl($CaCl_2$), fluid phase equilibria, to 800 K and 250 MPa 7−124442
^3He-^4He solid solutions, phases and structures, X-ray diffr. meas. 7−124632
Hf-Nb-Ni-Ta system, phase equilib., glass form. *(German)* 7−137260
HfC, refractories, phase relationships, survey 7−92971
HfN, refractories, phase relationships, survey 7−92971
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7−119247
Hg-Ga-S system, liquidus surface, crystallisation fields and precipitation *(Russian)* 7−124444
Ho-Tl system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
In-Bi, solidified from highly undercooled liq. at atm. press., high press. phase form. 7−77986
$InAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
$In_xGa_{1-x}As$, VPE, hydride method, equilib analysis, ternary comp. 7−132481
Kr-ethane system, vapour-liquid equilib. 7−137532
La-Ni-Ga system ternary, phases with $BaZn_5$ struct. 7−131096
$LaNi_5$-MNi_5, M=Pr, Ce, Nd, phase rel. and H adsorpt. props. *(Chinese)* 7−71149
La_2O_3-NiO-ZrO_2 system, phase relations, materials prep. and elec. props. *(Russian)* 7−124447
La_2O_3-Y_2O_3, solid solutions, phase equilibrium 7−92963
Li-LiH system, phase equilib., thermodynamic calc., 450-1200 K *(German)* 7−77948
Li_2CO_3-Ta_2O_5, reaction mechanism, solid phase sintering, liberation of CO_2 7−86075
$LiNbO_3$, reduction, disorder, phase separation 7−71159
Li_2O-SiO_2 glasses, crystn. kinetics, effect of comp. and nucleating agent 7−142597
Mg-Ag-In-Cd system, solubility of element in Mg 7−100182
Mg-Bi alloys, mag. susceptibility 7−85257
N_2-CO mixtures, excess molar enthalpies determ. 7−98506
Na-O-H system, phase relations for reactions of H_2 with Na_2O between 500 and 900°C 7−69861
NaCl-H_2O, critical behaviour at 380°C 7−76344
$NaFeO_2$-SiO_2, silica-containing ferrite phases, phase equilibria 7−132590
Na_2O-B_2O_3-SiO_2 glass, phase separation, chemical durability 7−113737
Na_2O-B_2O_3-SiO_2 glasses, phase separation, elec. cond., TEM obs. *(Japanese)* 7−132629
Na_2O-La_2O_3-Y_2O_3-P_2O_5, glass crystallisation, phase equilibria 7−84263
Nb-C system, phase equilibr., crystallographic and thermodynamic data, review 7−77942
Nb-Ge-H-Cl system, thermodynamic equilib. anal. 7−98389
Nb-O system, phase comp. and struct. investig. 7−132570
Nb-Si, rapid solidification, microstruct., phase analysis 7−86153
Nb-Sn (Al)(Ge)(Si), metastable, phase transforms. 7−93008
Nb-Ta-H, phase equilibria calc., first principle, model and empirical methods 7−104988
m-$Nb(Rh_{0.75}Pd_{0.25})_3$, prep. by rapid solidification processing, long-period close-packed phase of $PuGa_3$ type 7−119266
Nd-Fe-B hot-pressed and die-upset magnets, microstruct., electron microscopy studies 7−131322
$Nd(Co_{1-x}M_x)_5$ M=Ni, Cu, Al, struct. and phase equilibria 7−118078
Nd_2O_3-P_2O_5 system, phase equilibrium 7−119248
Ni:Si, ion implantation, phase stability rel. to radiation damage, 25-650°C 7−104867
Ni-Al-W system, cast, phase equilib. 7−132569
Ni-base multicomponent alloys, solidification range, approx. methods of prediction 7−100201
Ni-Bi, electrodeposited, struct. and changes occurring during annealing 7−86226
Ni-C-Si, rapidly quenched, nonequilib. phases 7−113521
Ni-Co-Cr-Al-Y-Ta coatings, low press. plasma sprayed, oxidation, 850°C *(French)* 7−86466
Ni-Cr-Al-Mo system, intermetallic cpd. precip. 7−144411
Ni-Cr-Fe (15, 10 wt.%), S solubility and diffusion, thermodynamic studies 7−76449
Ni-Fe-La system, phase equilib. and H absorpt. *(Chinese)* 7−144364
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-P and Ni-P-C systems, phase form., melting point, eutectics and peritectics, polymorphic transform. temp. 7−119244
Ni-W-C system, thermodynamic evaluation, sublattice model 7−77951
Np-O system, phase relationships 7−86140
Pb-Mg-Bi system, Pb-rich corner, crystn. studies 7−77944

phase equilibrium continued
PbTe-CrTe, quasibinary system, temp. depend. of CrTe solubility 7−92961
PbTe-Ga_2Te_3 system, $PbGa_6Te_{10}$ phase existence, X-ray and thermal anal. *(Japanese)* 7−124449
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$-$PbTiO_3$ system, dielec. and ferroelec. props., phase relations 7−70713
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$ system, ceramic prep., phase relations, dielec. props. 7−92599
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$SrTiO_3$-$PbTiO_3$ system, phase relations, dielec. and piezoelec. props. 7−92598
Pd-Ru-In system, struct. and props. 7−132574
Pu-H, equilib. and structural props. 7−104954
$PuMB_2$ (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
SO_2 in polar organic solvents, vapour-liq. equilibria 7−98413
SO_2-H_2O, phase behaviour meas. 7−111821
Si-Al-O-N system, Al solubility 7−84285
Si-B system, thermodynamic data for borides, optimisation 7−131332
Si-C-O system, thermodynamics, relevance to SiC and Si prod. 7−143051
α-Si_3N_4, Y-containing, 2D solid soln. form. 7−86139
Si_3N_4-ZrO_2 system, phase reactions, influence of atm. 7−77954
$SmNi_2$ Laves compound, H-induced amorphisation 7−76001
Sm_2O_3-Y_2O_3, rel. to thermal stability of polymorphic modifications 7−92964
Sn, tilt boundary migration in vicinity of grain boundary phase transition *(Russian)* 7−111960
SnTe-CdSe, section of ternary reciprocal system 7−71157
SnTe-Ni_3Te_2, interaction, temp. depend. of thermoEMF 7−86138
SrO-GeO_2 system, time-temp.-transform. diagram *(Japanese)* 7−132592
Ta-C-Cl system, solid-gas equilibria., thermodynamic anal. of isothermal chemical transport 7−111849
$ThMB_2$ (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
Ti alloy, phase transitions exam. in single crysts. using X-ray diffr. method 7−132862
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7−86283
Ti-Al-V solution-treated alloy, microstruct. charact. 7−138747
Ti-N system, phase equilibria, metastable phases 7−119249
Ti-Ni-Mo system, phase equilib. investig. at 1200°C 7−86130
Ti-O system, ordering and phase relationships in TiO existence area 7−77958
TiH system, phase transformations at high press. 7−86166
$U_{1-x}Ce_xO_{2-x}$, two-phase behaviour, cryst. struct., neutron powder diffr. studies 7−111497
UMB_2 (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
V-Ga alloys, rapidly solidified, microstruct. and phase transform. 7−119265
V-Si system, vaporization thermo-dynamics in V-rich region, high temp. Knudsen cell mass spectrometry 7−111845
WC based cemented carbide systems, sintering, binder comp., phase equilib., mech. props. 7−71151
Y-Ba-Cu-O high T_c, supercond., multiphase mixtures and transition temp. 7−118631
Y-Ba-Cu-O high T_c supercond., phase identification, X-ray meas. 7−98392
Y-Ba-Cu-O high T_c supercond., polymorph phase relations, X-ray studies 7−111827
Y-Ba-Cu-O high T_c supercond., metamorphic phase characterisation 7−111828
Y-Ba-Cu-O high T_c supercond., transition temp., conc. ratio and prep. effects 7−112559
Y-Ba-Cu-O high T_c supercond., phase relationships and compatibilities 7−118056
Y-Ba-Cu-O high T_c supercond., nonstoichiometric phase, press. and temp. depend. studies 7−118112
Y-Ba-Cu-O high T_c supercond., phase equilibria and cryst. Chem. 7−119245
Y-Fe-Mo system, phase equilibria 7−100185
Y_2MoO_7, prep., cryst. chem. props., phase equilib. 7−91503
YbH_x trihydride, prep. without H overpressure, X-ray diffr. studies 7−69860
Zn-based systems, thermodynamic props. and phase equilib., applicability of various formalisms 7−138732
ZrC-ZrN, solid solutions formation simulation 7−92962
ZrO_2, MgO partially stabilised, eutectoid decomp. 7−132586
ZrO_2, pure and CaO stabilised, liq. mix synthesis, phase analysis 7−119216
ZrO_2-Al_2O_3-SiO_2-TiO_2, toughened mullite ceramic composites, sintering, microstruct., phase comp. 7−77930
ZrO_2-Cr_2O_3 system, prep., mag. props. rel. to struct. and comp. 7−113497

phase equilibrium diagrams *see phase diagrams*

phase-locked loops
lasers, Pointing alignment by orthogonal phase-lock feedback loops 7−75012
polarography, AC, higher harmonic, phase-locked loop generation of reference square waves 7−93405
RF accelerating voltage shaper for ring injector, initial-frequency generator 7−129483
shear-wave impedance meas. of liquid samples, in MHz region 7−95611
HCN lasers, plasma beat frequency stabilization by phased locked loop 7−123996
InGaAsP-InP diode lasers, 1.3 μm, wide-waveguide interferometric phase-locked arrays 7−82607

phase measurement
beam-reversal phase-shift meas., cavity phase difference behaviour in NBS-6 7−108574
coherent light phase meas. by zero fringe integration method *(Japanese)* 7−73413
eddy current testing, phase meas. of higher harmonics, using full-wave phase meter 7−144661
electric vector measurement, amplitude and phase meas., using compound modulated scatterer system 7−121146
interferometry using polarisation component phase shifters 7−121218
laser pickups, compact disc, wavefront meas. using phase measuring radial shear interferometer 7−116000
optical phase measurement, digital interferometry with tunable laser diode 7−73409

phase measurement continued
phase detection technique using ultrasonic transducers, undergraduate demonstrations 7−120728
torquemeter, phase-measuring, electronic system for calibration and testing *(Polish)* 7−67303
phase meters
calibration of phase meters with linear response characteristic 7−121155
eddy current testing, phase meas. of higher harmonics, using full-wave phase meter 7−144661
phase modulation
see also phase shift keying
Fabry-Perot phase modulator, high freq., using KDP cryst. 7−103954
fiber optic gyroscope, phase-modulated, coherent backscatter 7−75155
fibre optic interferometers, phase modulation 7−82816
III-V semiconductors, electro-optic modulation at microwave freqs. 7−136499
images recording by interferometric method in IR band 7−89251
interferometer, sinusoidal phase modulating using integrating-bucket method 7−108634
optical fibres, nonlinear, single-mode, picosecond steps and dark pulses 7−110590
optical phase modulator using electric-field sensitive fibre with coaxial electrodes 7−123230
optical waveguides, soliton formation, influence of regular phase modulation 7−141984
phase-modulated holography for detection of phase and absorpt. gratings 7−103774
single-mode optical piezoceramic phase modulator, anal. 7−123189
two-level resonant medium, phase modulation and parametric broadening of pulse spectrum 7−97065
wavefront determination in optical reception system with multichannel phase modulation 7−141801
GaAs-GaAlAs system, electro-optic modulation at microwave freqs. 7−136499
GaInAs-InP, phase and amplitude modulation by free carriers injection at 10.6 μm 7−136500
$LiNbO_3$:Ti integrated optic strip waveguide phase modulator driven by SAW 7−82767
ZnO bulk wave transducer struct. for acousto-optic phase modulation of single-mode fibres 7−123390
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984
phase modulation, optical *see optical modulation; phase modulation*
phase regulation *see phase control*
phase shift circuits *see phase shifters*
phase shift keying
1/f-type FM noise, impact on coherent optical communications 7−141855
optical correlators, time-integrating coherent differential demodulation 7−82496
optical PSK heterodyne expt., 100 Mbit/s, using travelling wave laser amplifier 7−68900
phase shift microphones *see microphones*
phase shifters
gyroscope, fibre optic, closed loop, electronics subsystem 7−123262
interferometry using polarisation component phase shifters 7−121218
phase transfer function *see optical transfer function*
phase transformations
see also commensurate-incommensurate transformations; critical fluctuations; crystallisation; glass transition (glasses); heat of transformation; isothermal transformations; liquid crystal phase transformations; liquid-liquid transformations; liquid-vapour transformations; phase diagrams; phase equilibrium; solid-liquid transformations; solid-state phase transformations; solid-vapour transformations; spinodal decomposition; vaporisation
alkyl polyoxyethylene micellar solutions cloud curve phase separation, perturbation theory, Flory-Huggins theory, low critical volume fractions 7−143039
amorphous alloys decomposition, X-ray scattering meas., heating apparatus 7−124040
asymmetric q-state Potts model, phase transitions, breakdown of mean-field theory 7−121000
axisymmetric bodies, phase transition in 1D lattice 7−73260
binary gas-liquid systems, three-state lattice gas model 7−108431
branched polymers on fractal lattices, asymptotic props., recursion relations study 7−80672
catastrophe theory appl. *(Japanese)* 7−95533
CDW, nonequilibrium phase transition to time-depend. probability density 7−70223
coherence, chaos, and broken symmetry in classical, many-body dynamical systems 7−95484
condensed matter physics conference, Stockholm, Sweden (March 1986) 7−72705
conf., Boston, MA, USA (Aug. 1986) 7−80158
conference on fluctuations and stochastic phenomena in condensed matter, Barcelona, Spain (May 1986) 7−134359
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
confined lattice gas, prewetting and capillary condensation 7−73269
coolant R12, isentropic expansion study *(German)* 7−91280
coordinated biological motion, nonequilibrium phase transitions 7−145123
cosmology, mag. monopole abundance from first-order GUT phase transition of early Universe 7−107986
Coulomb systems, quantum statistics, thermodynamic functions and phase transitions 7−80600
coupled rotators 2D system, phase transform., Lyapunov charact. exponents 7−121031
critical phenomena, catastrophe theory *(Japanese)* 7−115948
critical phenomena and phase transitions, book 7−95111
critical phenomena and phase transitions, book 7−134379
crossover scaling for moments in multifractal systems 7−120954
dilute systems, order transmission 7−76348
dipalmitoylphosphatidylcholine bilayers, phase transitions, X-ray studies 7−76378
discrete cubic model, Monte Carlo renormalisation group study, superconformal invariance 7−134689
discrete self-trapping eqn., chaos-order transition, Lyapunov exponents anal. 7−121041
disordered systems, phase transitions and critical phenomena, perturbative treatment 7−121039
phase transformations continued
disordered systems, random energy model, power law relaxation 7−98376
driven systems, instabilities, bifurcations and symm. anal., Landau phase transition theory 7−73301
elastic-viscoplastic medium, phase transitions of the first kind 7−136709
external dichotomous noise, driving nonequilibrium transitions, stationary probability density, Stratonovich model 7−120947
Feigenbaum cascade, phase transform. analogy 7−134649
ferromagnetic lattice systems, decomposition property and equilibrium states 7−89138
finite size effects on phase transitions 7−124430
first order phase transition, multiscale analysis, renormalisation group appl. 7−84197
first-order phase transitions, mean field methods and stability limits 7−121034
first-order phase transitions, thermodynamics of finite systems 7−128511
flat lipid membranes, phys.-chem. characts. during a phase transition 7−144986
Friedmann cosmologies, symmetry changes assoc. with transitions 7−101968
gas mixtures, structural phase transitions in a laser radiation field 7−75737
gradient theory for fluid in bounded container 7−80711
Grassmann mean spherical model 7−115947
hard cyclic hexamers, 2D system, elastic props., Monte Carlo calcs. 7−123469
heat conduction with phase change, finite-difference methods 7−110773
heat transfer bibliography of Japanese works 1985-86 7−72746
heavy ion collisions, hadron quark-gluon plasma phase transition anal. 7−109083
heavy ion-nucleus collisions, high energy, α-particle transverse momentum distrib. meas., possible hadron-quark matter transition *(Chinese)* 7−102897
hierarchical and fractal lattices, universality 7−140642
hierarchical barrier array system, particle diffusion, dynamical transition calcs. 7−121033
hierarchical systems, mode condensation and phase transitions 7−102367
Higgs' model, on SU(2) lattice, changes in Higgs' phase transition with temperature 7−108760
ice, physics and chemistry, conf., Grenoble, France (Sept. 1986) 7−95079
impurity system critical thermodynamics, phase transitions, fluctuating field interaction effects *(Russian)* 7−89180
Ising model, 2D frustrated, universality class 7−80668
Ising model, kinetic phase transitions, tricritical point 7−121030
Ising model, time evolution and damage spreading, Monte Carlo simulation 7−120974
Ising model on random planar lattice, phase transition structure, critical exponents 7−89151
Ising systems, compressible, renormalisation group study 7−140632
N-isopropylacrylamide, ionised gels, volume-phase transitions 7−119586
Josephson junctions, Bloch oscills. and dissipative phase transitions 7−105860
Josephson-tunnel-junction arrays at zero and full frustration, phase transitions 7−99354
Kauffman cellular automata, 3D, fractal dimension of damage at phase transition 7−80655
lattice gases, 2D, struct. factors and surface phase transitions 7−142656
lattice gauge theory, phase transition anal. using microcanonical ensemble 7−89367
lattice hard core particle model with pure excluded volume interactions, clusters, geometrical factors 7−120968
lattice QCD, first-order chiral phase transition, asymptotic scaling violation 7−89450
lattice QCD, pure gluon deconfinement, latent heat 7−95845
lipid bilayer membrane, permeability during phase transition, intermolecular Ca bridges 7−126773
lipid bilayers, phase transitions, Raman and calorimetric obs. 7−71674
massive quark matter phase transition, quark potential model anal. 7−141010
metals and alloys, high-purity, phase transform. features *(Chinese)* 7−126081
mitochondrial membranes, physicochem. props., DSC anal. *(Japanese)* 7−100829
modelling based on concept of mechanics 7−67262
molecular cryst. dynamics, conf., Grenoble, France (June-July 1986) 7−128193
multicritical susceptibility sum rules of N-phase system 7−67264
multifractal phase transitions in thermodynamic formalism 7−95532
nonequilibrium critical phenomena in one-component reaction-diffusion systems 7−128514
nonequilibrium phase transition, entropy decrease during excitation of sustained oscillations 7−134707
nonlinear Fokker-Planck eqn., stable nonequilibrium probability density and phase transition in thermodynamic limit 7−73290
organic monomolecular layers, struct., phase transitions *(Japanese)* 7−76697
Ostwald ripening, dynamics of fluctuations 7−104949
percolation theory, dimensionality characteristics and geometrical critical exponents, review 7−128494
phosphatidylcholine membrane, phase transitions, polarizing microscopy study 7−100818
phosphatidylethanolamine membrane, phase transitions, polarizing microscopy study 7−100818
polyarylate-polyethylene oxide block copolymers, relax. transitions near microphase separation boundary *(Russian)* 7−90914
polymer, crosslinked, graph represent. and topological gelation criterion 7−97984
polymer chain dynamics, struct. and chem. transformations effects *(Russian)* 7−82408
polymer gels, kinetics of phase transition 7−84205
polymer mixture, Flory-Huggins lattice model, crit. props. 7−108432
polypeptide, β-form-random coil transition in solution 7−71667
Potts model, 2D, first-order phase transition, existence of false ground states, Monte Carlo anal. 7−89152
Potts model, 3D, 3-state, multilattice microcanonical simulation 7−120996
Potts model, two-dimens., approx. theory of first-order phase transitions 7−108457
QCD, lattice SU(N) at finite temp. and density, strong coupling limit, phase transition 7−89447

phase transformations continued
QCD phase transition, ultrarelativistic nuclear collisions, dilepton transverse momentum distrib. 7−89579
QCD phase transitions, renormalization group anal. for SU_n, n=2, 3, 4 gauge theory 7−95854
quantum phase transitions, quenched disorder effects, renormalisation group approach 7−121038
quantum statistical models, completely integrable, critical exponents 7−134648
quark deconfinement at finite temp., MIT bag model anal. 7−108855
random Boolean networks, transition between frozen and chaotic behaviour, forcing functions 7−73215
random field Ising models, second order phase transitions and tricritical points 7−70576
random field model, scaling relations 7−76347
self-oscillators, randomly interacting, population dynamics, tractable models without frustration 7−89131
Sierpinski carpets, lacunarity and universality 7−80664
skeletonization, fluctuating mean-field approximations and coherent anomalies in critical phenomena 7−77308
small spherical particles, surface atom redistribution 7−104951
smectic-A mesophase, hard rod lattice model *(Russian)* 7−111387
Smoluchowski's coagulation eqn., possible occurrence of instantaneous gelation 7−106836
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
spin glasses, nonsymmetric, dynamical phase transition 7−143810
spinodals and catastrophes 7−124437
spontaneous symmetry breaking, second order phase transition, everyday geometric model 7−102051
stationary nonequilibrium states and phase transitions, statistical mechanics framework 7−134712
statistical model of extended hadrons, phase transitions critical behaviour, exponential growing mass spectrum 7−116139
stellar core collapse, physics of baryonic-to-hyperonic transition 7−88375
superconductive wires, random Josephson networks, spin-glass-like transition 7−105846
superstrings and multidimensional cosmology, phase transitions 7−101983
supersymmetric Kosterlitz-Thouless phase transition, critical exponent classification 7−67510
surface phase transitions, dynamics and struct. evolution 7−124439
surface phenomena, reflection electron microscopy studies 7−95682
symposium on statistical mechanics of phase transitions, Trebon, Czechoslovakia, (Sept. 1986) 7−120693
topological defect dynamics in first-order phase transitions 7−137516
transactions to chaos in external periodic field 7−73196
two-component model, exactly soluble model of phase transition with cubic anisotropy 7−102369
two-dimensional Ising model, generalised Gaussian model with randomness, replica method exactness, crit. renormalisation 7−80666
two-level atoms interacting with quantized radiation field, equilib. thermodynamics 7−128510
viscoelasticity, nonlinear, ID, admissibility and stability 7−90965
Z(q) spin model, 2D, mean-field-like variational and renormalization group anal., phase transitions 7−128473
CsAu liq. ionic alloy, metal-nonmetal transition and electrical cond. review 7−131607
He II, supercurrent flow, healing, nonlocal theory 7−105167
^{3}He, liquid, partially spin-polarised, phase transitions and phase diagrams 7−137650
^{3}He, superfluid, quantized vortices and vortex-core transition, review 7−143129
Mo (011) with adsorbed Ag layers, phase transition, condensate-2D gas 7−84528
Mo (011) with adsorbed Cu layers, phase transition, condensate-2D gas 7−84528
Nb-Ta superlattice, critical behaviour of H, in situ X-ray scattering study 7−137727
SiO_2 gel, struct. determ. by X-ray diffr., gel to glass conversion 7−93394
Zr_2NiH_x, H diffusion, NMR studies 7−85463

phase transitions *see phase transformations*

phased arrays (antenna) *see antenna phased arrays*

phased locked oscillators *see parametric oscillators*

phasons
ferroelectric, exact solution of fluctuon, classical approx. *(Russian)* 7−113099
ferroelectrics, ultrasonic study of incommensurate transitions 7−125628
incommensurate crystal phases, statics and dynamics 7−118086
incommensurate dielectrics, linear cryst. acoustics, piezoelectricity, appl. to $BaMnF_4$ 7−98357
insulating media, thermoelectric effects near a phase transition 7−143495
noncodimensional phases, defect-induced ferroelastic and ferroelec. props. 7−125626
pentagonal quasicrysts., linear elasticity theory, dislocation interaction energy calcs. 7−118004
quartz, incommensurate phase and α-β transition, low freq. light scatt. obs. *(Japanese)* 7−119014
quartz-type crysts., triple-k incommensurate phase, amplitudon and phason spectra, IR and Raman scatt. activity calcs. 7−111817
Al-Li-Cu, icosahedral quasicrystals, peak shape obs. 7−124171
Al-Mn, icosahedral quasicrystals, peak shape obs. 7−124171
$Cd_2Nb_2O_7$, Raman soft mode damping, thermal hysteresis of dielectric const. 7−125589
2H-$TaSe_2$, incommensurate CDW phase eigenmode freqs., McMillan-Landau theory calcs. 7−118088
2H-$TaSe_2$, orthorhombic stripe incommensurate CDW phase, phasons, amplitudons, McMillan-Landau theory calcs. 7−118468

phi mesons
ϕ, resonance parameters, QCD sum rule anal. 7−89451
$\phi \rightarrow K_S K_L$, CP and CPT violation in the K^0-$\bar{K}^0$ system 7−89393
$\phi \rightarrow \pi^+\pi^-$, decay probability, interference phase 7−81177

philosophical aspects
accommodation of seemingly antithetical views, a novel theoretical tool 7−115723
Anthropic Principle, metaphysical presuppositions 7−95175
Anthropic Principle and cosmological probabilistic phase transitions 7−95174
anthropic Universe theory 7−134423
Big Bang, philosophical analysis 7−95171
capillarity, rel. to epistemology of physics 7−72753
conf., Liege, Belgium July 1986 7−108037

philosophical aspects continued
consciousness and memory 7−108133
cosmological models, different approaches 7−95172
electromagnetic induction, teaching, historical approach 7−72752
entropy and energy, appl. to model of social change 7−88817
Goethe's rejection of Newton's Opticks, Bezold-Brucke phenomenon 7−134421
Kepler's laws of planetary motion before and after Newton's Principia 7−134424
light, wave versus particle interpretations, 19th century methodologies 7−140412
light as an expression of mental activity 7−134422
medicine in relation to technology, a challenge for physicians 7−80282
methodological imperfection and formalizations of scientific activity 7−95170
neo-Gibbsian equilib. thermodynamics, basic struct., philosophical methodological problems 7−88816
neutral weak current experiments, philosophical perspective 7−134426
Newton's 'Principia Mathematica Philosophia' and Planck's elementary constants *(German)* 7−88814
passion, action and time as masks of information 7−95176
philosophy of science, book 7−72763
physical theories, nature and dimensionality 7−66890
physics and religious, humanist view 7−140411
proportion in Newton's Principia, applied mathematics 7−134425
theoretical physics, meaning and abilities *(German)* 7−88815
time and creation, self-referential modelling, Big Bang appl. 7−95173

phonographs *see gramophones*

phonon bottleneck *see phonons*

phonon-defect interactions
see also lattice localised modes
dislocation drag mechanisms, review 7−76128
doped displacive ferroelectrics, lattice viscosity 7−104925
isotropic anharmonic crysts., dislocation-phonon scatt. calcs. 7−76337
nonequilibrium phonons in semicond. and insulator crystals, book 7−66842
XY_8 and XY_6 para-elastic tunnelling systems, ground state energy and self-trapping transition 7−131261
Al single cryst., self-interstitial resonant vibrational modes, diffuse inelastic neutron scatt. study 7−98126
He, solid, phonon thermal cond. 7−105178
ZrO_2, polycrystalline ceramics, thermal diffusivity and cond., sp. ht. 7−98591

phonon dispersion relations
acoustic phonons, collinear and quasi-collinear spontaneous decay 7−91742
alkali halide crystals, covalency effects on NaCl type crystals phonon dispersion relations 7−111795
alkaline earth oxides, lattice dynamics of pot.-induced breathing model, phonon dispersion 7−91746
t-butyl cyanide, disordered phase, cooperative dynamics 7−142940
d^1-d^2 impurity pair, Jahn-Teller states 7−131595
electron gas, interatomic interactions, total energy calc., effective medium theory 7−118398
ferroelectric cpds., dynamical properties, polarisability model calcs. 7−85548
glasses, phonon spectral diffusion 7−142939
Group VI B metals, phonon dispersion curves 7−124415
lattice dynamics calcs., UNISOFT program package appls. 7−84152
methane crystals, dynamical props., rotation-translation coupling effects 7−83799
trans-polyacetylene, doped solid and soln. doping and photo-induced IR spectra 7−99853
semiconductor superlattice, semi-infinite, electron-phonon interactions 7−137813
semiconductor superlattices, Raman scattering from phonons 7−85692
TCNQ salts, TEA(TCNQ)$_2$ and MNEB(TCNQ)$_2$, lattice dynamics, inelastic neutron scatt. 7−91743
thin crysts., polariton dispersion and refractive index, Green's function method calcs. *(Russian)* 7−84161
toluene, phonon dispersion, single relaxation mechanism 7−84150
transition metals, BCC, phonon dispersion curves, Finnis-Sinclair pot. calc. 7−118045
Al, lattice sp. ht., press. depend., ab initio calc. 7−124546
Ar, modified Morse potential function, lattice dynamics 7−131253
As, structural stability, phonon dispersion 7−137488
Au (111), reconstructed surface, inelastic scatt. of He atoms 7−85935
$BaTiO_3$, lattice dynamics, ferroelectricity and Raman spectrum in cubic phase 7−119001
$CaCO_3$ mol. calcite crysts., lattice dynamics 7−104932
$CaSO_4$, anhydrite, theoretical lattice dynamics model and phonon dispersion meas. 7−69846
$CeCu_2Si_2$ heavy fermion superconductor, phonon density of states, comparison with $LaCu_2Si_2$ 7−69845
Cr, phonon dispersion curves using modified general tensor force model 7−84158
Cr phonon dispersion curves 7−124415
Cs_2NaRBr_6(R=Dy, Ho, Tm), rare earth bromo-elpasolites, soft rotary mode and structural phase transition 7−142987
Cu (100), adsorbed S, surface phonon dispersion, inelastic electron scatt. obs. 7−143175
γ-Fe, FCC, lattice dynamics, elastic consts. and sp. ht. 7−104933
Fe, phonon dispersion curves, lattice dynamics calcs. 7−84154
$Fe_{1-x}Cu_xCr_2S_4$ mag. semicond., plasmon-phonon spectra 7−124414
$FePX_3$ (X=S,Se) antiferromag. crysts., Raman scatt. 7−113187
GaAs (110), phonon dispersion relations, inelastic He atom scatt. studies 7−137687
GaAs-AlAs, superlattices, confined optic phonons, annealing effects, Raman obs. 7−85694
GaAs-AlAs superlattices, coupled mode stop bands of acoustic phonons 7−70062
^{4}He superfluid, specific ht. and phonon dispersion from elementary excitation spectrum in ring diagram approx. 7−91909
In, axially symmetric force model, inconsistencies 7−137486
KCN, lattice dynamics 7−142932
$KCl_{0.5}Br_{0.5}$, mixed crystals, lattice vibrations 7−137487
$K_{0.5}Rb_{0.5}Cl$, mixed crystals, lattice vibrations 7−137487
$KZnF_3$, heat capacity and lattice dynamics 7−111794
$La_{2-x}(Ba,Sr)_xCuO_4$, high T_c supercond., electron-phonon interaction 7−118700

phonon dispersion relations continued
$LaCu_2Si_2$, phonon density of states, comparison with $CeCu_2Si_2$ 7−69845
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon dispersion curves 7−104935
$LiNbO_3$, Raman spectra and directional dispersion 7−70805
$LiNbO_3$, Raman spectra, directional dispersion of phonons 7−138462
$LiTaO_3$, Raman spectra and directional dispersion 7−70805
$LiTaO_3$, Raman spectra, directional dispersion of phonons 7−138462
$MgCO_3$ mol. calcite crysts., lattice dynamics 7−104932
$MgSiO_4$, forsterite, phonon dispersion relations, inelastic neutron scatt. studies 7−137491
Mo, body forces, elastic consts., phonon dispersion 7−69844
Mo, phonon dispersion curves using modified general tensor force model 7−84158
Mo, phonon dispersion curves 7−124415
α-N_2, molecular crystal, lattice dynamics, Kohin type potential *(Japanese)* 7−111791
$NaBrO_3$, acoustic activity, degeneracy splitting with neutron scatt. 7−104918
NaCN, cryst., Raman spectrum 7−70815
Nb_3Sb, phonon dispersion relations, angular force model 7−142931
P, black, lattice dynamics, electron-lattice interaction 7−124418
Pt (111), with adsorbed O, adsorbate induced Rayleigh phonon gap 7−76588
Si:H-SiN_x:H, amorphous superlattices, phonon stop bands 7−124673
Si-SiO_2 amorphous superlattices, phonon stop bands 7−124673
$Sm_{0.75}Y_{0.25}S$, mixed-valence cpd., phonon dispersion curves 7−118046
$Sm_{1-x}Y_xS$, intermediate-valence, phonon dispersion relations, breathing-shell alloy model 7−137484
γ-$Sn_{0.8}In_{0.2}$, lattice dynamics, electron-phonon interactions 7−142936
SnTe, ferroelectric props., shell-model study using renormalised harmonic approximation 7−84153
Th, relaxations due to vacancy, formation energy, binding energy of divacancy, calcs. 7−76119
W (001), surface phonon instabilities and electronic surface states 7−84478
W, body forces, elastic consts., phonon dispersion 7−69844
W, phonon dispersion curves using modified general tensor force model 7−84158
W, phonon dispersion curves 7−124415
$YBa_2Cu_3O_x$, perovskite superconductor, phonon spectra 7−104930
$ZnCo_3$ mol. calcite crysts., lattice dynamics 7−104932
ZrO_2-$YO_{1.5}$, superionic conductor, defect-induced Raman spectra 7−99857

phonon drag
degenerate semimetals, phonon drag thermoelec. power sign anisotropy, diffusion-size effect calcs. 7−76988
dislocation electron drag, applied magnetic field effects *(Russian)* 7−124268
electron systems, 2D and 3D, nonequilibrium phonon drag effect study 7−104941
high T_c superconducting oxides, status report 7−118663
metals, phonon drag magnetothermal EMF in open Fermi surface *(Russian)* 7−76897
quasi-two-dimensional electrons coupled to 3D phonons, phonon drag contrib. to thermopower, appl. to GaAs-AlGaAs heterojunctions 7−92083
quasi-two-dimensional electrons coupled to 3D phonons, thermopower, phonon drag contrib. 7−92082
semiconductor heterojunction, 2D electron gas low temp. thermopower calcs. 7−105601
semiconductors, nonequilibrium phonons, thermal size galvanomag. effects 7−76979
Bi-Sb alloys, thermoelec. power anisotropy in quantising mag. field 7−137969
$Cu_{1.8}Mo_6S_{8-y}Te_y(Se_y)$, Chevrel cpds., electron-phonon interaction and thermopower nonlinearities 7−84952
$La_{1.85}Sr_{0.15}CuO_4$, elec. resist., Hall effect and thermoelec. power meas. in normal and supercond. states 7−105790
Si inversion layers, thermopower 7−131795

phonon-electron interactions *see electron-phonon interactions*

phonon-exciton interactions
alkali halides, exciton-phonon interaction *(Chinese)* 7−112186
γ-cyclopropyl-bis(1,2,3′-trimethyl-indolenine-2-yl) pentamethinium tetrafluoroborate, mol. cryst., exciton-phonon coupling study 7−92074
1,1′-diethyl-2, 2′-cyanine iodide, mol. cryst., exciton-phonon coupling study 7−92074
mixed valence doped superconducting semiconductors, excitonic theory 7−118694
molecules, triplet exciton ESR line shapes, local exciton-phonon interaction temp. depend. calc. 7−99554
nonequilibrium phonons in semicond. and insulator crystals, book 7−66842
one-dimensional phonon-exciton system, energy and absorpt. spectra 7−112195
polar crystal slab, exciton-phonon weak coupling system 7−124872
semiconductor crystal, excitonic absorption band under uniaxial pressure, temp. dynamics *(Russian)* 7−118984
soliton, dynamics in cyclic discrete chains, numerical study *(Russian)* 7−80455
TCNQ, mol. cryst., exciton-phonon coupling study 7−92074
AgBr, exciton dynamics, ps reson. Raman scatt. spectra anal. 7−85748
AgCl, exciton dynamics, ps reson. Raman scatt. spectra anal. 7−85748
B_2O_3, phonon ringing, anharmonicity effects 7−137493
CO_2, solid, Fermi diad, time-resolved CARS studies *(Japanese)* 7−132289
CdS, one and two LO phonon luminesc. lines, temp. depend. of half-widths 7−77627
CdSe, monocryst., interacting exciton gas dynamics 7−143363
$CsPbI_3$, excitonic states, absorption, reflection, luminescence spectra *(Russian)* 7−119047
Cu_2O, phonon hot spot, exciton-phonon lumin. spectrum 7−132319
GaAs quantum wells, quasi-2D excitons, phonon sideband, absorpt. spectral characts. 7−85775
GaAs/$Al_{0.32}Ga_{0.68}As$, single quantum well, phonon mode resonant mixing 7−143593
GaAs/AlAs short-period superlattice, localized indirect excitons, optical props. 7−138502
GaAs-$Al_xGa_{1-x}As$ superlattice reson. Raman scatt., impurity-induced Frohlich-interaction scatt. 7−138453
GaAs-AlAs, superlattice, excitons and phonons in quantum wells, reson. Raman obs. 7−85696
$In_xGa_{1-x}As$-InP quantum wells, exciton-LO phonon interactions 7−85067

phonon-exciton interactions continued
InI, optical props. in the fundamental absorption edge region 7−85765
Si, free exciton transport properties, time-of-flight investig. 7−85819
TlI, orthorhombic, multiple LO phonon scatt. 7−125736

phonon-impurity interactions
see also lattice localised modes
anharmonic crystals with substitutional impurities, self-consistent theory 7−142922
classical impurity diffusion on a lattice, perturbation theory anal. 7−124583
crystal impurity centres, local vibr. interaction, no-phonon line profiles 7−137479
disordered alloys, phonons radiated by moving dislocations 7−142938
doped displacive ferroelectrics, lattice viscosity 7−104925
impurity centres, inhomogeneous distrib. function, dual synchronous scanning obs. 7−142819
impurity migration in crystals, quantum theory 7−118161
impurity oscillator excitation by nonequilib. lattice phonons, implications for impurity diffusion in crysts. *(Russian)* 7−69842
isotope shift of phonon mode coupled to tunnelling system 7−111784
nonequilibrium phonons in semicond. and insulator crystals, book 7−66842
optical dephasing of impurities by phonons, pseudolocal phonons microscopic model 7−111793
polar crystals, electron-phonon coupling effect on surface donor state, variational calc. 7−104942
polar semiconductors, LO phonon bound to neutral impurities 7−137490
ruby:Cr^{3+}, inelastic reson. scatt. of 10^{12} THz acoustic phonons by exchange coupled impurity ion distant pairs 7−111786
semiconductor, II-VI and III-V type, transition metal impurities, review 7−98867
semiconductors, interstitial defect dynamic props., impurity vibrations, Green's function calcs. 7−142937
Cr^{3+} pair in cubic crystal, zero-phonon splitting, vibronic reduction 7−92128
$CuInX_2$ (X=Se,Te), thermal conductivity data 7−124609
GaAs surface, heavily doped material, symm. forbidden LO phonon Raman scatt. 7−132285
GaAs: Cr, plastically deformed, dislocations, thermal conductivity meas. 7−98595
KCl:Li^+, IR and Raman spectra, anomalous isotope shift, spin-phonon system 7−111784
KCl:$Tl^0(Ga^0)(In^0)$, impurity centre vibrational props. resonant Raman scatt. study 7−113198
$KTaO_3$:Li, impurities interaction via phonon field 7−111798
Si:B,Li(P), impurity-induced local vibr. modes, local densities of states recursion method calcs. 7−84166
Te, acceptor de-excitation two-phonon processes, interf. reson. 7−98361
$(Y_{1-x}Lu_x)_3Al_5O_{12}$, resonance phonon-impurity scatt. 7−76317

phonon-magnon interactions
paramagnons, effects in proximity sandwich 7−70488
$Cd_{1-x}Mn_xF_2$ mixed cryst., two-magnon and phonon Raman scatt. study 7−85717
$FePS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
$Ni_{1+2x}Fe_{2-3x}Sb_xO_4$, spinel ferrite, sp. ht., thermal conductivity and thermal diffusivity 7−92433
$NiPS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
O_2, solid, mag. and phonon props. in external mag. fields *(Japanese)* 7−131255
$SmRh_4B_4$ antiferromag. supercond., reentrant behaviour, microscopic mechanisms, Ginzburg-Landau approach 7−105816

phonon-phonon interactions
see also Umklapp process
classical impurity diffusion on a lattice, perturbation theory anal. 7−124583
damping of a two-photon spectrum with cubic anharmonicity 7−104938
diamond, Fano resonances, temp. depend. oscillatory photoconductivity, IR absorpt. spectrum 7−92661
inert gas solids, self-trapped excitons adiabatic pot. surface, tunnelling 7−137802
molecular crysts., two-phonon bound states, vibr. relax. *(Japanese)* 7−131259
semiconductor polariton-phonon scatt., macrofilled upper branch polariton mode *(Russian)* 7−124878
semiconductors, amorphous, multiphonon hopping conduction 7−76926
spinless quasiparticle-phonon interactions, many phonon processes 7−111788
1,2,4,5-tetrabromobenzene, crystals, anharmonicity, piezomodulated Raman spectroscopy studies 7−138456
thin crystal optic phonon-polariton scattering *(Russian)* 7−124879
AlN single crysts., intrinsic thermal cond. by phonons, temp. depend. study 7−118180
B_2O_3, phonon ringing, anharmonicity effects 7−137493
$Bi_4Ge_3O_{12}$ single crysts., first-order vibrs., multiphonon absorpt., IR spectra study 7−84163
CO, low temp. lattice vibrs., far IR absorpt. spectra *(Russian)* 7−76321
CO_2, solid, Fermi diad, time-resolved CARS studies *(Japanese)* 7−132289
$Ca(OH)_2$:O_2^-, Raman electron spin-lattice relax. rate calcs 7−143908
GaSb, reson. Raman scatt. by LO phonons near $E_0+\Delta_0$ gap 7−125746
KF, thermal conductivity and thermal diffusivity, press. range 0 to 3.8 GPa 7−70001
Li_2SO_4, monoclinic, low-temp. behaviour of Li modes, polarized Raman spectra 7−99851
$LiYF_4$:Er^{3+}, paramagnetic relaxation time, defect concentration depend. 7−132133
N_2-CO, low temp. lattice vibrs., far IR absorpt. spectra *(Russian)* 7−76321
Si:O, C, impurity interaction with multiphonon IR absorpt. bands at low temps. 7−113231
SiO_2 glass, IR absorpt. edge due to multiphonon absorpt., polariton theory 7−99775
Te, acceptor de-excitation two-phonon processes, interf. reson. 7−98361
YAG, phonon-phonon interaction, microwave US wave attenuation 7−84140
Zr, BCC high temp. phase, phonon-phonon coupling 7−98367

phonon-plasmon interactions
double heterostructures, coupled intra- and inter-subband plasmon-phonon modes 7−85030
$Al_{0.22}Ga_{0.78}As$, reactive ion etching damage, Raman study 7−126350

phonon-plasmon interactions continued
$Al_xGa_{1-x}As$:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
$Fe_{1-x}Cu_xCr_2S_4$ mag. semicond., plasmon-phonon spectra 7−124414
GaAs, ion-implanted and neutron-transmutation doped, rapid thermal annealing, Raman studies 7−111598
GaAs, Raman scattering from damped plasmon-phonon modes 7−99838
GaAs, reactive ion etching damage, Raman study 7−126350
GaAs:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
InP, photoexcited phonon-plasmon modes, time resolved Raman scatt. spectra 7−70779
n-ZnSe, plasmon-LO-phonon coupled modes, Raman scatt. 7−113185

phonon softening *see soft modes*

phonons
see also crystal surface and interface vibrations; electron-phonon interactions; lattice phonons; phonon-defect interactions; phonon dispersion relations; phonon-exciton interactions; phonon-impurity interactions; phonon-magnon interactions; phonon-phonon interactions; phonon-plasmon interactions; spin-phonon interactions; tunnelling spectra; tunnelling spectroscopy; vibrational states in disordered systems
biphonons in linear anharmonic chains *(German)* 7−91739
CDW, incommensurate, Thirring model interpretation 7−70222
collective mode damping, dynamical aspects of phonon-phonon coupling 7−89552
conference on phonon physics, Budapest, Hungary (Aug. 1985) 7−72722
damped harmonic oscillator, quantum relaxation process, dressed particle description 7−89032
heavy nuclei, spherical and weakly deformed, parametrization for phonon octupole states 7−140975
hyper-Raman scattering by vibrational excitations in crystals, glasses and liquids 7−106177
phonon reservoirs, relax., thermal equilib. approach stochastic theory 7−128433
proteins, α-helical, phonons and solitary waves 7−93636
theory and expts., book 7−80187
transport in phonon systems, book 7−72740
Al-Mn, oriented icosahedral, phason strain field, X-ray diffraction study 7−104639
He, dense, equation of state, three-body exchange interactions 7−105165
^{4}He, liquid, oscillator dynamical correlation and elementary excitations, memory fn. approach 7−111995
^{4}He, liquid, phonon excitation, quantum lattice model 7−143123
^{4}He, superfluid, coherent states and symmetry breaking 7−98602

phosphate glasses
for iron and vanadium phosphate semiconducting glasses see amorphous semiconductors
see also phosphosilicate glasses
CoBa fluorophosphate spin-glass, acoustic suscept. calcs. 7−112923
one-element dosimetry systems, energy depend. 7−87192
water addition effects on struct. charact., US vel. obs. 7−69827
AgI-Ag_2O-V_2O_5-P_2O_5, vitreous electrolytes, glass form. and elec. cond. 7−131362
B_2O_3-P_2O_5-SiO_2 borophosphosilicate glass, LPCVD from organic reactants 7−113410
BaO−ZnO−P_2O_5, coordination numbers suggested by elastic props. 7−113595
$Ba(PO_3)_2$-BaF_2-AlF_3 glasses, struct., NMR obs. 7−104578
$Ba(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578
CaO-P_2O_5 glass, water content effect on absorption, dispersion phenomena 7−125666
$Ca(PO_3)_2$ glass ceramic, orientation degree rel. to additives and directional crystallisation temp. 7−86151
Cu^+:fluorophosphate glass, site depend. fluoresc. 7−138514
CuO-P_2O_5 glasses, AC conductivity 7−143471
FeO-P_2O_5-MgO glasses, polaronic hopping conduction, AC mechanism 7−84889
Fe_2O_3-P_2O_5 glasses, elec. props., internal friction *(Japanese)* 7−132195
K_2O-Al_2O_3-P_2O_5-TiO_2, crystallisation tendency, effects of TiO_2 additions 7−97948
$LiLa_{1-x}Nd_xP_4O_{12}$ glasses, Nd spatial distrib., Raman and kinetic luminesc. spectroscopy 7−76010
$LiLa_{1-x}Nd_xYb_yP_4O_{12}$ glass, fluorescence kinetics and $Nd^{3+}\rightarrow Yb^{3+}$ energy transfer 7−70873
Li_2O-Ag_2O-B_2O_3-P_2O_5 glasses, ionic cond. comp. depend., mixed cationic effect obs. 7−118153
Li_2O-P_2O_5-CaO-Al_2O_3-Nd_2O_3 phosphate glass, low temp. homogeneous linewidths 7−99914
Li_2O-P_2O_5-VO_2, noncrystalline, elec. props. and mag. resonance *(Chinese)* 7−112406
$LiPO_3$-glass, structural relaxation 7−124509
Mo-P-O vitreous system, IR absorpt. spectra, composition depend 7−92659
MoO_3-P_2O_5 glass, US vel., temp. depend., 4-600 K, anelastic and elastic effects 7−76304
$(MoO_3)_x(P_2O_5)_{1-x}$ phosphate glasses, elastic behaviour and vibr. anharmonicity 7−104945
Na-P-O-N glasses, prep., N dissolution kinetics, softening temp., thermal expansion, refractive index, microhardness 7−93016
Na_2O-La_2O_3-Y_2O_3-P_2O_5, glass crystallisation, phase equilibria 7−84263
Na_2O-MO-P_2O_5 glasses (M=Mg, Ca, Sr, Ba), N dissolution in melts, thermal expansion, refractive index 7−93013
Na_2O-P_2O_5-RuO_2 phosphate glass 7−85421
Na_2O-P_2O_5-TiO_2 phosphate glass, optical and spectromagnetical props., ESR and visible-UV absorpt. investig. 7−85421
$NaPO_3$-glass, structural relaxation 7−124509
Nd^{3+}: phosphate glass laser, contribution of UV absorpt. to laser power 7−90621
P_2O_5-GeO_2 glass, internal friction, network struct. 7−93049
P_2O_5-Nb_2O_5-TiO_2-Fe_2O_3 semicond. glasses, struct. and props. 7−83718
P_2O_5-Sb_2O_3 glass, internal friction, network struct. 7−93049
P_2O_5-TeO_2 glass, internal friction, network struct. 7−93049
P_2O_5-V_2O_5 glass, internal friction, network struct. 7−93049
P_2O_5-BaO-ZnO-Na_2O-$Na_2U_2O_7$ VG-13 glass, high resolution nuclear-track-recording detector 7−74375
PON glasses, corrosion in water and humid air 7−119387
PbF_2-MnF_2-$Pb(PO_3)_2$ glassy system, ion conduction and cond. maxima 7−137620
SiO_2-GeO_2-P_2O_5:Nd^{3+} doped optical fibres, prep., optical props. 7−92734

phosphate glasses continued
SnF_2-SnO-PbF_2-P_2O_5 glass containing acridine dyes, nonlinear optical props. 7−123124
V_2O_5-P_2O_5, semiconducting glass, optical absorption *(Korean)* 7−85771
V_2O_5-P_2O_5 glasses, polaronic hopping conduction, AC mechanism 7−84889
V_2O_5-P_2O_5-Bi_2O_3 glass, conductivity minimum 7−137927
V_2O_5-P_2O_5-Sb_2O_3 glass, conductivity minimum 7−137927
Yb-Er glass:Cr^{3+}, sensitisation in amplification regime, luminesc. 7−85816
$Zn(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578

phospholipid bilayers *see lipid bilayers*

phosphorescence
see also fluorescent screens; MIDP; phosphors
alkaline phosphatase, phosphoresc. quenching by O_2 and NO, rel. to protein struct. inflexibility 7−133218
9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7−68400
9, 10-anthraquinone, fine struct., Dushinsky effect, phosphoresc. spectrum 7−129776
aromatic cpds, liq. soln., triplet excimer phosphoresc., review 7−68404
aromatic molecules, heavy atom perturbers in rigid solns., kinetics of excited states 7−96775
aromatic molecules, intersystem crossing quantum yield, determ. using external perturber molecules 7−92731
1,2-benzanthracene, geometry, fine struct. fluoresc. and phosphoresc. *(German)* 7−90267
benzene, ground state, harmonic force field 7−136028
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7−116977
benzo[*a*]pyrene−DNP adducts, phosphoresc. 7−109976
benzo[f]quinoline, solid-surface luminesc. anal., calib. curves 7−92713
2,2′-bipyridine, phosphoresc. and ODMR meas. 7−82250
1-bromo-4-chloronaphthalene, triplet-triplet energy transfer, double reson. and laser line narrowing obs. 7−112997
caffeine in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7−85831
α-chloroanthraquinones, lowest excited triplet states, EPR ODMR and phosphoresc. spectra study 7−106010
chloroanthraquinones, triplet states, visible absorpt. and phosphoresc. spectra anal. 7−103521
chlorophyll phosphorescence in cells of marine algae, excitation spectra at −196°C 7−139231
chlorophyll-like molecules, triplet state quenching kinetics, back electron transfer 7−136001
chromium(III) polypyridyls, doublet state, phosphoresc. decay time 7−68395
decay curve shape, kinetic parameters 7−85847
dibenzo[f,h]quinoxaline, phosphoresc., external heavy-atom effect 7−117003
1,4dibromonaphthalene-pyrene mixed crystals, conc. effect on delayed fluoresc. emissions 7−113281
dichlorobenzene-dibromobenzene mixed cryst., nondiffusive triplet energy transport 7−132328
2,3-dichloroquinoxaline, in calcinated Vycor glass emission and excitation spectra, surface-adsorbate interaction, phosphorescence lifetimes, Bronsted acid sites 7−141626
2,3-dimethylanthracene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
2,3-dimethylnaphthalene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
p-N-N-dimethylnitroaniline in ethanol, excitation depend. fluoresc. to phosphoresc. ratio 7−74699
diphenylchlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
dipyridotetraazapentalene, photooxidation, fluoresc. and phosphoresc. spectra 7−82268
fibre-optic sensors, blood CO_2 level monitoring using phosphoresc. changes in dyes 7−127055
2,3,6,7,10,11-hexa-n-hexyloxytriphenylene, thermotropic columnar phases, time resolved luminesc. 7−99897
ketones, triplet state, matrix interactions phosphoresc. kinetics 7−68390
2-methoxy-9,10-anthraquinone, electronic excitation energy localisation, phosphoresc. study 7−68400
molecular crystals, fluorescent and phosphorescent, effect of temperature on mechanoluminescence intensity 7−77667
naphthalene, triplet excimers, conform. and phosphoresc., radiative and nonradiative decay rates 7−82267
naphthalene and related cpds., excimer phosphoresc. 7−122598
organic scintillators with short phosphoresc., VUV excitation *(Russian)* 7−144098
palladium etioporphyrin, triplet state, conc. quenching, phosphoresc. study 7−68397
phenanthrene-tetrachlorophthalic anhydride charge-transfer cryst., struct., luminesc. 7−106262
phenmedipham, fluoresc. and phosphoresc., quantum yields *(French)* 7−82277
phenyldichlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
poly(N-(vinyloxy)carbonyl)carbazole and its monomeric analogue, triplet exciton processes, laser pulse-probe study 7−93347
poly(phenyl methyl silane), photolysed, photoluminesc. growth obs. 7−99920
polynuclear aromatic containing hydrocarbon fuels that permeate glove materials, meas. by room temp. phosphoresc. 7−87410
polystyrene: 4-bromo-4′-chlorobenzophenone films, mol. aggregation, phosphoresc. spectra 7−99918
protein phosphorescence at room temp., prevalence 7−119729
4H-pyran-4-thione in solns., phosphoresc., quantum yields and triplet lifetimes 7−96767
pyrido(2,3-b)pyrazine, $^3n\pi^*$ triplet state optical and mag. props. 7−90257
pyromellitic dianhydride-phenanthrene, charge transfer cryst., delayed fluoresc. study 7−77616
silica, fused, O_2^- emission band in phosphorescence and photoluminescence 7−125795
trans-stilbene, internal rot., phosphoresc. excitation and stimulated emission spectroscopy 7−68440
tetrachlorophthalic anhydride-hexamethylbenzene, fluoresc., phosphoresc. and delayed fluoresc. 7−138496

phosphorescence continued
sym-tetrachloropyrazine, distorted lowest excited triplet state, phosphoresc., ODMR and ODNQR investig. 7—135981
tetramethylcyclobutane-1,3-dithione crystal, defect trap phosphoresc. spectra and lifetimes 7—144095
N,N,N′,N′-tetramethylphenylene diamine, electron transfer, phosphorescence emission decay, reacting distance, excited states 7—135989
theophylline in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7—85831
thiophenes, polycyclic aromatic, mol. struct., phosphoresc. study 7—122608
1,3,3-trimethyl-6′-nitro-spiro(indoline-2,2′-[2H-1]benzopyran), open, phosphoresc. polaris. 7—77655
triphenylcarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7—103561
xanthone, polarised UV and phosphoresc. spectra 7—74700
CaS:Cu(Ce), temp.-depend. photoluminesc. and phosphoresc. decay studied using N_2-pulsed laser 7—113256
CrO_4^{2-} in H_2O, time resolved quenched phosphoresc. detection using paired-ion reversed phase liq. chromatography 7—119696
GdF_3:Yb^{3+}, Er^{3+} phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7—85791
KCl:Tl^+, moments of A-absorpt. and A_T emission bands, hydrostatic press. effects 7—132304
$NaNO_2$, pure and doped, sensitized luminesc., stationary spectra 7—99934
O_2 phosphorescence quantum yield in benzene solvent, IR spectra 7—116954
phenanthrene in low temp. alcohol glasses, quenching of fluorescence and phosphorescence 7—99912
Rh^{3+} complex, rhodium(III) tris(bipyridine), phosphoresc. and ODMR meas. 7—82250
SiO_2:Na, SiO_4/Na centre, thermoluminescence and phosphorescence studies 7—125817
YAG:Nd^{3+} X-ray excited phosphoresc. kinetics model *(Russian)* 7—70911
YF_3:Yb^{3+}, Er^{3+} phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7—85791
$ZnSiO_4$:Mn,Ga phosphorescence, quantum efficiency and photolum. fatiguing studies 7—85820

phosphorescence microwave double resonance *see PMDR*

phosphorescence microwave photoexcitation spectroscopy *see PMDR*

phosphors
see also fluorescent screens; luminescence
alkali halide crystallophosphors, energy transfer by luminescence centres 7—132345
alkali metal halide cryst., cathodoluminors, local self-activation and quenching effects 7—70918
alkaline earth sulphide phosphors, doped with Ce and Sm, thermally stimulated luminesc. 7—144133
borate glass, Tb^{3+} activated, phosphor, degradation under cathode ray excitation 7—92727
degradation under cathode ray excitation 7—92727
detector for X-ray spectroscopy, energy resolution 7—116770
film charactn. meas., vacuum UV, using multichannel detector 7—138480
glass, activated by Eu^{3+}, Sm^{3+} and Tb^{3+}, spectral-luminescence props. 7—99900
ionising radiation and luminescent detectors, conf., Tallin, USSR (April 1985) 7—128172
luminophores, cascade multiplication of electronic excitations 7—132321
luminophores, gaseous, atomic sources of optical photons 7—129645
materials for electroluminescent thin films 7—77657
photostimulable phosphors for computed radiographic imaging 7—87163
photostimulable phosphur film, appl. to X-ray diffr. studies *(Japanese)* 7—104493
physical models, review 7—77645
rare earth chalcogenides, $RGa_2S_4(Se_4)$:Nd^{3+} *(Russian)* 7—125770
rare earth crystal phosphors, atomic sources of optical photons 7—129645
sulphates and sulphides, X-ray luminescence using synchrotron radiation 7—132323
thermographic phosphors, bibliography on temp. dependencies 7—80218
X-ray luminescence, quenching and enhancement by elec. field pulses 7—132310
X-ray phosphors, development, parameters, future outlook 7—77647
Al_2O_3:Mg,Y TLD phosphor, dosimetric charact. 7—93953
(Ba, Ca, Sr)S:Cu,Bi phosphors for TLD 7—93957
(Ba, Ca)S:Cu phosphors for TLD 7—93957
BaFBr:Eu, X-ray phosphors for computerised radiography, photostimulated luminescence kinetics 7—70870
$BaMg_2Al_{16}O_{27}$:Eu^{2+}, narrow-band phosphor 7—106400
$BaRb_9O_{16}$:Ce^{3+} (Tb^{3+}) (R=La, Gd, Ce), luminescence props. 7—70891
CaF_2:Mn TLD phosphor, dosimetric charact. 7—93953
CaF_2:Mn(Ce)(Mn,Ce), dosimetry phosphor, optical absorpt., thermolum. 7—87235
CaF_2-AlF_3:Mn^{2+}, cathode and X-ray luminescence, long afterglow phosphors *(Japanese)* 7—125771
$Ca_{10}(PO_4)_6F_2$ crystal as fluorescent lamp phosphor, colour centre studies 7—111553
CaS:Ce phosphor, thermoluminescent UV, X-ray and γ-ray dosimeter 7—81742
CaS:Cu(Ce), temp.-depend. photoluminesc. and phosphoresc. decay studied using N_2-pulsed laser 7—113256
CaS:Mn, activated phosphor, electroluminesc. 7—119054
$CaSO_4$ thermoluminescent phosphors for radiation dosimetry, comparative study 7—71891
$CaSO_4$:Dy, EPR of defect centres, thermolum. models, dosimetry appl. 7—85425
$CaSO_4$:Dy, production techniques, effect on characteristics *(Russian)* 7—68143
$CaSO_4$:Dy phosphor, TLD glow curves, radiation exposure estimation 7—119862
$CaSO_4$:Dy TLD, Na removal during polycryst. growth 7—145250
Er^{3+} in polycrystalline matrix, photoluminescence quantum output 7—125801
Gd sensitised phosphors, energy transfer processes 7—70871
GdF_3:Yb^{3+}, Er^{3+}, phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7—85791
$K_2Ca_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7—138523
KCl phosphor, excitation and emission spectra 7—138470
$K_2Mg_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7—138523

phosphors continued
$LaMgAl_{11}O_9$, laser and phosphor host, cryst. struct., thermal expansion determ. 7—84327
LaOBr, luminescence props., impurity effects 7—132324
LaOBr:Eu,Tb, phosphors, thermoluminescence, capture centres 7—132352
LiF:Mg,Ti, alpha particle thermolum. dose response, microdosimetric track interaction model 7—87239
LiF:Mg,Ti TLD phosphor, dosimetric charact. 7—93953
MgB_4O_7:Dy TLD phosphor, dosimetric charact. 7—93953
MgO:Ce(Eu), temp. depend. of luminescence emission 7—77652
MgS:Eu,Sm phosphors for TLD 7—93957
NaCl, TLD props. 7—87228
NaCl:Sr, 340, 380 K glow peaks 7—138519
NaI(Tl) hardened phosphor crysts., surface struct., etching studies 7—98639
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7—136466
Ru complexes, $Ru(bpy)_3^{2+}$, temp. and mag. field depend. in luminesc. 7—70856
$Sr_2Al_6O_{11}$:Eu, phosphor, degradation under cathode ray excitation 7—92727
SrO:Bi^{3+} phosphor, photolum. and excitation spectra 7—85817
UO_2^{2+}:$SrSO_4$ phosphor, gamma-irrad., thermally stimulated free radical reactions, EPR and CIDNP 7—77428
YAG:Ce, ionising particle tracks, activator effects 7—129517
YAG:Ce phosphor powders, prep. 7—71102
YF_3:Yb,Er IR-to-visible conversion phosphor for fibre-optic temp. sensor *(Japanese)* 7—110582
YF_3:Yb^{3+}, Er^{3+}, phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7—85791
$Y_3Ga_5O_{12}$:Ce^{3+}, luminescence properties 7—132332
Y_2O_2S:Eu,Tb, phosphors, thermoluminescence, capture centres 7—132352
Y_2SiO_5:Ce, phosphor, degradation under cathode ray excitation 7—92727
$Y_{0.77}Yb_{0.20}Er_{0.03}F_3$ IR to visible conversion phosphors, cryst. growth by two-step firing *(Japanese)* 7—85970
Yb^{3+} in polycrystalline matrix, photoluminescence quantum output 7—125801
$Zn_{1-x}Cd_xS$ phosphor powders, surface recombination mediation by Pd microislands 7—113259
ZnO phosphors, cathodoluminesc. 7—85852
ZnS, alternating current electroluminophors, $Cu_{2-x}S$ surface elemental composition 7—70038
ZnS, Auger-type energy transfer 7—70323
ZnS, doped phosphor, thermoelectroluminesc. study 7—85850
ZnS:Tb, F electroluminescent thin films, RF magnetron sputtered, annealing effects 7—99939
ZnS:Tb,F thin films, electron-beam evaporated and RF magnetron sputtered, electroluminesc. 7—125809
ZnS:Tb,F thin-film electroluminescent devices, Tb-F emission centres 7—113290
$(ZnS)_{1-x}(CdS)_x$:Cu, Yb, Co luminophor for near IR detection 7—70866
Zn_2SiO_4:Mn, phosphor, degradation under cathode ray excitation 7—92727

phosphorus
see also nuclei with .....
activation characts. for diffusion in Si 7—143097
amorphous, highly disordered elemental semiconductors, DC electrical conductivity 7—131646
amorphous, initial photolum. decay rates 7—144125
amorphous, red, time-resolved photoluminescence studies 7—144112
amorphous, time-resolved photoluminescence 7—85799
atom, photoexcited Kα X-ray satellites spectra 7—135873
atom, photoionisation, autoionisation struct. obs. between fine struct. limits 7—122473
black, lattice dynamics, electron-lattice interaction 7—124418
black, low freq. surface dynamics, Brillouin scatt. 7—84473
black, melting curve 7—131275
chemisorbed on Fe (001), bonding systematics 7—70083
determination, water anal. methods, review 7—133141
dimer, total and orbital energies and multipole moments, LCAO HF STO calcs. 7—81919
GaAs:Si^+, p^+, electrical activation using laser beam annealing 7—131174
grain boundary segregation, in Fe and steels, effect of Ti, Nb, Mo and V alloying elements 7—138748
inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bombardment 7—90372
Lake Sobygaard, Denmark, recovery after P loading reduction 7—87733
molecule, STF HF wave fns. calc. 7—81995
molecule, STF HF wavefunctions 7—129588
molecules, mag. susceptibility and NMR chemical shift tensors 7—116988
negative atomic ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7—109792
red, oxidation in air 7—93130
segregation, variation with grain boundary orientation 7—137576
simple cubic metal, electronic band struct. and T_c calcs. 7—137794
simple cubic phase stability under press., local density functional calcs. 7—118090
TGS:P, charge compensation, pyroelec. props. enhancement, ESR study 7—92610
TGSe:alanine, P, growth and pyroelec. props. 7—92612
transmutation doping of monocrystalline Si by neutron beams 7—91658
$Cd_{1-x}Mn_xTe$:P,As, elec. and optical props. studies 7—131658
$CuInS_2$:P, defect struct., molecularity and stoichiometry anal. 7—124251
$CuInS_2$:P, defects and nonstoichiometry 7—117921
GaAs:P^+, damage caused by ion implantation, role of impurity type 7—142804
GaAs:Si,P, co-implanted, activation efficiency enhancement 7—98191
Ge-Si:P, disorder, bound exciton photoluminescence studies 7—70859
$Hg_{1-x}Cd_xTe$:P,As,Sb,Bi LPE films, impurity incorporation, elec. activity and distrib. coeff., Hall meas. 7—70128
InP:P, ion implanted, radiation defects, photoluminesc., photocond. spectra 7—104854
LiF:Mg, Cu, P TLD materials, props 7—93951
LiF:Mg,Cu,P, TLD chips, dosimetric charact. 7—87229
$LiNbO_3$:P, metaphosphate ion distrib., electron probe anal. 7—131168
P II UV interstellar lines and oscillator strengths 7—88569
P_4, NMR shielding consts., ab initio coupled HF calcs. 7—74677
^{31}P topical NMR spectroscopy, human organ study appl. 7—87132
^{32}P, aqueous, dosimetry after soft tissue infiltration following intravenous administration 7—71873
^{32}P radiotherapy, effect of tissue inhomogeneity on β distrib. 7—71883

phosphorus continued
Si:Al,P, interstitial interactions, Al-P emitter push effect 7−111644
a-Si:As, donor states, local disorder effects 7−124929
Si:As(B)(P), MeV implantation profiles 7−111615
Si:B,P, impurity-induced local vibr. modes, local densities of states recursion method calcs. 7−84166
Si:B/Si:P bilayered crystals, free exciton capture 7−70203
Si:$B^+(P^+)(As^+)$, MeV implantation 7−111614
Si:B(P)(Ga), MeV implants, range distrib. 7−111617
Si:Co, P, impurity solubility, diffusion and ion pairing at 700°C 7−111970
Si:Co,P, impurity distrib. after P diffusion gettering, Mossbauer spectra study 7−111640
a-Si:H, dangling-bond recombination and photoconductivity 7−84981
a-Si:H, P(N) films, photoinduced absorption and conductivity 7−99774
a-Si:H,B/a-$Si_{1-x}C_x$:H,P multilayers, persistent photoconductivity, doping effects 7−77003
a-Si:H,P, doped and undoped, steady-state transport under nonequilibrium conditions 7−84977
a-Si:H,P, drift mobility of steady-state photocarriers 7−137986
a-Si:H,P, energy levels of dangling bond centres, photocapacitance transient spectroscopy 7−131589
Si:H,P, heavily doped films, microcrystallisation 7−126010
a-Si:H,P, high temp. drift mobility and cond. meas. 7−143469
a-Si:H,P, light-induced changes, ENDOR-detected ESR study 7−143928
a-Si:H,P, photo-CVD grown, doping-induced defects 7−124928
a-Si:H,P, thermally and optically induced metastabilities, EPR obs. 7−124931
a-Si:H,P, thin films, deposition by microwave electron-cyclotron-resonance plasma discharge, elec and optical props. 7−77845
a-Si:H,P films, elec. resist. thickness depend., admittance meas. on Schottky diodes 7−84873
a-Si:H,P films, optical and electrical props. 7−85871
Si:H,P plasma CVD coatings with $(SiH_2)_n$ groups, doping, cond., optical gap control 7−98750
a-Si:H,P plasma enhanced CVD films, elec. props., RTA effects 7−131816
a-Si:H,P thin films, low energy ion doping technique 7−124342
Si:In, P, acceptor-donor atom pair form., PAC study 7−113042
Si:In,P, defect-impurity interactions, PAC technique meas. 7−76199
Si:O,B,P, Czochralski grown, nucleation of O precipitates 7−124316
Si:P, bipolar technology, misfit dislocation generation during diffusion processes 7−124278
Si:P, compensation tuning study of metal-insulator transition 7−143352
Si:P, coupled exciton tunnel dissociation in elec. field 7−143364
Si:P, defect interactions during P diffusion, model calcs. 7−84011
Si:P, dislocation loops, effect of free surface and interface on thermal annealing 7−142784
Si:P, electrically active defect profiles, photoelectrochem. method 7−137360
Si:P, electron irrad. defect annealing, IR absorpt. spectra study 7−98256
Si:P, γ-irradiated, carrier mobility and density 7−70304
Si:P, H_2^+ LPCVD coatings, polycryst., implanted, resist. and grain boundary chem. 7−143649
Si:P, high energy implantation, electronic stopping and range profile calcs. 7−76182
Si:P, implantation effect on defect anneal kinetics 7−117951
Si:P, implanted impurity distrib. after pulsed electron annealing 7−131169
Si:P, impurity steady-state solubility 7−124312
Si:P, impurity-defect reactions, DLT study 7−98915
Si:P, ion implantation during MBE growth 7−142809
Si:P, ion implanted, lattice defects study 7−98182
Si:P, ion-implanted, impurity-defect complexes, obs. by perturbed angular correlation method 7−98228
n-Si:P, low temp. electron irrad. damage, annealing study 7−84035
Si:P, mag. susceptibility across the metal-insulator transition 7−112734
Si:P, n-type, AC cond. below metal-insulator transition 7−143529
Si:P, n-type, type-1 thermal donor, ESR study, electron irradiation 7−106022
Si:P, n-type , Fermi level shift, conduction inversion, radiation effects 7−143393
Si:P, O, O-related defects, doping and annealing effects 7−98227
Si:P, photolum. technique calibration, impurity conc., Fourier transform spectroscopy 7−85824
Si:P, point defect generation during P diffusion, conc. above solid solubility 7−142766
Si:P, polycrystalline films, ion implanted and laser annealed, elec. props. 7−85146
Si:P, positron lifetime meas., thermal stability of P-vacancy pairs 7−70935
Si:P, proton stimulated diffusion of P implants 7−131364
Si:P, RAD growth, doping induced dislocations, TEM obs. *(French)* 7−111560
Si:P, SHG, total freq. with refl., cryst. struct. randomisation 7−90713
Si:P, S(Se)(Te), chalcogen double donors, hydrogen neutralisation 7−131572
Si:P, selective optical electron pumping, intervalley scatt. at impurity centres 7−137843
Si:P, shallow donors, influence of quenching 7−71328
Si:P, shallow levels, virtual level field ionisation spectroscopy 7−143402
Si:P, spin dephasing time due to weak scatt. processes 7−105932
Si:P, spin dynamics across the metal-insulator transition 7−112944
Si:P, spin localization, ^{31}P NMR studies 7−137864
Si:P, thermal donor defects, passivation by H_2 plasma exposure 7−70234
Si:P, transmutation doped, minority carrier lifetime, annealing effects 7−84923
Si:P,As, impurity-bound exciton recomb., radiative decay obs. 7−98819
Si:P,As double donor system, metal-insulator transition, Mott-Hubbard picture 7−137799
Si:P,As(Sb), double donors, metal-nonmetal transition 7−105403
Si:P,B, B diffusion in inert and oxidising ambients 7−105138
Si:P,B, metal-insulator transition, DC elec. transport props. 7−143528
Si:P,C,H, polycrystalline, impurity-defect interactions, overview 7−124321
a-Si:P,H, hole trap transport parameters charactn. 7−92195
Si:P amorphous films, bias effects on preparation in triode glow discharge 7−126028
Si:P bolometer, heat pulse detection 7−73352
Si:P CVD layers, lateral solid-phase epitaxial growth by ion implantation 7−106401
Si:P epitaxial layers, laws of doping *(Chinese)* 7−131492

phosphorus continued
a-Si:P evaporated films, ion implanted, localised defect density of states determ., dose depend. 7−76829
Si:P film, simultaneous deposition and doping by LPCVD, model of growth rate nonuniformity 7−132484
Si:P films, CVD, crystallographic and elec. props. charactn. 7−138676
Si:P films, prep. by low press. CVD of PH_3 and Si_2H_6 7−100114
Si:P heavily doped semiconds., low temp. cond., bent band model calcs. 7−124992
Si:P ion implanted polycryst. solar cells, comparison of excimer laser and thermal annealing 7−71618
Si:P nanocrystalline thin films, dark elec. cond. meas., depend. on structural props. and substrate bias 7−99229
Si:P p^+nn^+ structs., investigation of impurity states by tunnel spectroscopy 7−143566
Si:P single crysts., high energy ion implantation and annealing effects study 7−76169
Si:P/Ti interface disilicide form., growth rate dopant conc. depend., depth profiling, sheet resist. and TEM studies 7−118173
Si:P^+, channelled and random implanted ion profiles, Monte Carlo simulation 7−137422
Si:P^+, hot implant induced hexagonal phase 7−76166
Si:P^+, ion implanted and layer annealed, defect evolution, light scatt. study 7−142831
Si:P^+ amorphous layer, ion assisted epitaxial regrowth, orientation and doping effects study 7−84052
Si:P^+ implantation self annealing and ion beam assisted recrystn. studies 7−84053
SiC:P, cubic thin films, ion implanted, CVD grown, photolum. studies 7−77629
a-$Si_{1-x}C_x$:H,P films, ESR and IR studies 7−85427
$Si_{1-x}Ge_x$:P, EPR study, hyperfine interaction, influence of uniaxial press. 7−143907
SiO_2:As, P, impurity atomic states, XPS studies 7−137379
SiO_2:Ce,P glasses, prep., codoping effects on absorption and fluorescence props. 7−71046
SiO_2-Si:P,B, thermal nitridation of SiO_2, effect on Si interstitial conc. 7−131140
SiP, implantation-amorphised, recrystallisation rate during rapid thermal annealing 7−105308
SiP polycryst. films, conductivity and Hall meas., intergranular pot. fluctuation effects 7−143648
a-Si:H,P-(quinone-hydroquinone), liquid Schottky barrier, C-V and surface photovoltage meas. 7−77039
$TaSi_2$:P, ion implanted, dopant diffusion into Si, SIMS anal. and elec. charactn. 7−143113
ZnS:Al, P, ion implanted defects, photoluminesc. spectra before and after implantation 7−92710

phosphorus alloys
see also phosphorus compounds
$Fe_{70}Cr_{10}P_{13}C_7$ amorphous strip, surface composition, AES studies 7−124648
H_2 blistering and bubble form. 7−76223
transition metal-P alloys, nature of bonding 7−131081
Co-Ni-Mn-Re-P film, perp. magnetised, prep. by electroless plating, undercoating layer effect *(Japanese)* 7−92898
Co-Ni-P amorphous films, electrodeposition, chem. comp. and mag. props. 7−99527
Co-Ni-Re-P electroless thin films for mag. recording appls., perp. coercivity, thickness depend. 7−112870
Co-P, amorphous, shear modulus reversible relaxation 7−142879
Co-P amorphous alloys, structural relax. and decomp., SAXS study 7−104559
Co-P amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
Co-P amorphous films, electrodeposition, chem. comp. and mag. props. 7−99527
Co-P films, amorphous, stabilisation of stripe domain struct. *(Russian)* 7−105989
CoP, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
$Co_{1-x}P_x$, amorphous, electrodeposited, structural relax., elec. resist., SAXS 7−105520
$Co_{1-x}P_x$, amorphous, structural evolution, enthalpic study 7−124101
$Co_{81}P_{19}$, amorphous, localization correlation effect, pot. for struct. modelling *(Chinese)* 7−97922
$Co_{83}P_{17}$, amorphous alloys, electrodeposited in mag. field, struct. 7−104565
Cu-Ni-P amorphous alloys, stress relax. studies *(Russian)* 7−100270
Cu-P, single crysts., dynamic recrystn. 7−126144
Cu-P thin films, obs. of non-equilib. HCP phase 7−131095
Cu-Zr-P rapidly quenched glassy alloys, corrosion resistance, effect of P 7−86489
Cu_3P, ion source, alloy fabrication and mass spectroscopy anal., test bed system 7−134889
CuP(Be), candidate gravitational wave detector materials, low temp. Q value meas. *(Chinese)* 7−89101
$(Fe,Mn)_{80}P_{20}$, amorphous alloy, crystallisation, time-resolved neutron thermodiffractometry 7−142630
Fe-C-P alloys, quench aging process, effect of P 7−86193
Fe-Cr-Mo-P-C alloys, vitrification by laser surface melting treatment 7−86487
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7−83746
Fe-Cr-P-C amorphous alloy wires, fatigue strength and corrosion resistance 7−91716
Fe-Cr-P-C amorphous alloys, interaction between electrochem. parameter and comp. 7−106661
Fe-Cr-P-C amorphous ribbons, magnetic texture, curvature and structural relax. during annealing 7−70582
Fe-Ni-P, amorphous magnet, crystallisation kinetics 7−111393
Fe-Ni-P-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Fe-P, effect of P on electronic struct. of Fe, Mossbauer spectra study 7−70180
Fe-P, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
Fe-P alloys, acid corrosion in H_2SO_4 and HCl; solns. 7−93204
Fe-P amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687

phosphorus alloys continued
Fe-P-C system, powders prepared by water atomisation, comp. effect on glass-forming regions 7—132527
Fe-Ti-P rapidly quenched glassy alloys, corrosion resistance, effect of P 7—86489
$Fe_{70}Cr_{10}P_{13}C_7$, amorphous alloys, struct., effect of prod. conditions 7—131042
$Fe_{72}Cr_8P_{14}C_6$ metallic glasses, acoustic emission studies 7—78451
$Fe_{72.5}Cr_{6.5}P_{13.2}C_{7.8}$, amorphous metallic ribbon, struct. relax. during annealing 7—117828
$Fe_{80-x}Cr_x(PC)_{20}$, low temp. resist. and thermoelec. power 7—137894
$(Fe_xCr_{1-x})_{75}P_{15}C_{10}$, amorphous, reentrant spin glass props. 7—112811
$Fe_{74.7}Cr_{3.8}P_{8.7}C_{10.7}Si_{1.9}$, melt spun amorphous ribbons, mag. props. 7—132076
$(Fe_{100-x}Mn_x)_{75}P_{15}C_{10}$ amorphous cpd., mag. field sensor, cryogenic appls., Hall signal probe 7—89231
FeNiBAl amorphous alloys near critical comp., low field reversible DC magnetisation meas. 7—70591
$Fe_{40}Ni_{40}B_{20-x}P_x$, amorphous struct., X-ray RDF 7—83764
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ amorphous ribbon alloy, laser radiation enhancement of corrosion resistance 7—71369
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, internal friction, creep, annealing effect *(Japanese)* 7—93059
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ metallic glass, inhomogeneous deform., bending meas. 7—98319
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, cold rolling, struct. relax., Young's modulus, internal friction 7—106569
$Fe_{40}Ni_{40}P_{20}$, amorphous alloys, thermally embrittled, restoration of ductility under neutron irrad. 7—78092
$Fe_{40}Ni_{40}P_{20}$, $Fe_{40}Ni_{40}B_{20}$, metallic glasses, struct. relax. kinetics, calorimetric and resistometric studies 7—97976
$Fe_{50}Ni_{40}P_{10}$, pulsed laser annealing, study using *(Russian)* 7—91462
FeNiPB metallic glass ribbons, domain wall surface energy, complex impedance meas. 7—118820
$(Fe_{1-x}Ni_x)_{80}P_{14}B_6$, amorphous alloys, crystn. free energy changes 7—76028
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy sheets, spray quenching, warm rolling, surface smoothing and densification 7—86090
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, fracture mechanics for embrittlement 7—86356
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, struct. regularities of deformation and fracture 7—86363
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, annealed, struct. study 7—91463
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, spin waves at 77 K, inelastic neutron scatt. study 7—92419
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloys crystn. product, interlamellar spacing var. 7—97960
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous, dissolved H mobility, induced mag. anisotropy 7—104589
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous ferromagnet, spin dynamics, neutron scattering 7—105903
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous ribbon, ferromag., domain struct., neutron depolarisation studies 7—118819
$Fe_{40}Ni_{40}P_{14}B_6$, elec. resistance, effect of pressure to 120 kbar 7—143429
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, crystn. kinetics under isothermal and nonisothermal conditions 7—76027
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass, initial oxidation, Auger electron spectra and ion sputtering studies 7—86484
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glasses, isothermal reversible relax., calorimetric investig. 7—97975
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, domain wall motion reproducibility 7—132054
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, creep, structural relax., wear, plastic flow model 7—86295
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, interlamellar spacing variation 7—142631
$Fe_{40}Ni_{40}P_{14}B_6$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7—92929
$Fe_7Ni_{73}P_{14}B_6$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7—112815
$(Fe_xNi_{1-x})_{80}(P_yB_{1-y})_{20}$, ferromag. glassy ribbons, small angle neutron scatt., domain wall struct. 7—99414
$(Fe_{0.16}Ni_{0.84})_{75}P_{16}B_6Al_3$, conc. spin glass, spin relax. 7—112932
$Fe_{12}Ni_{63}P_{16}B_6Al_3$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7—112815
$(Fe_xNi_{1-x})_{75}P_{16}B_6Al_3$, x=0.06, 0.1, thermal magnetic fluctuations in metallic spin glasses 7—105931
$Fe_{0.78}P_{0.22}$, amorphous, vibrational spectra, inelastic neutron scatt. 7—98370
$Fe_{100-x}P_x$, amorphous, surface crystn., Mossbauer studies 7—76018
$Fe_{80}P_{13}C_7$, amorphous, crystallisation, struct. relax kinetics, elongation, elec. resist. 7—104563
$Fe_{80}Si_6B_xP_{14-x}$, amorphous alloys, magnetostriction, soft mag. props. *(Korean)* 7—138279
$Fe_{80}Si_xP_{20-x}$ amorphous alloys, crystn. *(Korean)* 7—131046
$Fed_{100-x}P_x$, rapidly quenched alloys, Mossbauer effect studies 7—113038
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7—112742
MnP itinerant-electron ferromagnet, paramag. neutron scatt. cross section meas. 7—112776
MoRhP amorphous alloys, NMR studies and superconductivity 7—99313
Ni-Cr-P-B, amorphous surface alloys on mild steel, laser processing, corrosion resist. 7—138875
Ni-P, amorphous, electrodeposited, elastic props., struct. relax. 7—106567
Ni-P, amorphous alloy, electrodeposition of homogeneous flat foils 7—144316
Ni-P, amorphous alloys, densities of stakes, effects of medium-range order 7—143307
Ni-P, electrodeposited, amorphous and microcrystalline, microstruct. 7—83706
Ni-P, electroless deposits, corrosion in aerated NaCl soln. 7—144620
Ni-P, metallic glasses, electronic structure 7—92056
Ni-P, microcrystalline and amorphous, thermal expansion and structural relax. 7—84331
Ni-P amorphous alloys, chemical passivity 7—71365
Ni-P amorphous alloys, electrodeposition, foil thickness, comp. rel. to current density 7—138698
Ni-P amorphous coatings, form., role of excitonic-like states in autocatalytic processes 7—93380
Ni-P amorphous electrodeposits, Hall effect meas. 7—98987
Ni-P and Ni-P-C systems, phase form., melting point, eutectics and peritectics, polymorphic transform. temp. 7—119244

phosphorus alloys continued
Ni-P and Ni-W-P, undercoating layers for prep. of electroless Co alloy films *(Japanese)* 7—92898
Ni-P electroless deposited coatings, activation and coating study using TEM and electron diffraction 7—132508
Ni-P electroplated film contact resistance, adhesion and hardness 7—105663
Ni-P films, electrodeposited, amorphous, crystn. *(Chinese)* 7—131039
Ni-P glass, Avrami exponent for crystn. 7—142645
Ni-P layer deposition from heterogeneous oxidoreduction 7—100140
Ni-P underlayer for mag. recording, M-H curve slope-intercept anal., heat treatment effects 7—105980
Ni-P/PTFE, electroless deposited composite coatings, lubricating props. 7—144562
Ni-P/Sn interface, Ni_3Sn_4 form. kinetics and struct. 7—111977
Ni-P-B, amorphous wires, melt spinning, bending strength, thermal stability rel. to alloy additions 7—93065
Ni-P-B metallic glasses, melt quenched, crystallisation, elec. transport props 7—83758
Ni-P-Cu chemically deposited coatings, heat treatment effects on struct. *(Russian)* 7—143288
Ni-Pd-P amorphous particles, prep. by melt ejection into stirred water, hardness and thermal stability 7—86086
Ni-Ta-P, Ni-Cr-P, Ni-Mo-P amorphous alloys, corrosion in hot conc. H_3PO_4 7—138873
Ni-Ta-P amorphous alloy corrosion resistance obs. *(Japanese)* 7—119428
NiCoP single layer, flat lozenge-type domain dynamics 7—132051
$Ni_{44}Fe_{32}Cr_{11}P_8B_5$ sputter deposited on stainless steel, electrochem. and XPS study 7—113797
NiP alloys, electrodeposited, crystn., in situ electron diffr. investig. 7—83703
NiP-NiCoP amorphous magnetic film, compositionally modulated, prep. and magnetic props. 7—138291
$Ni_{100-x}P_x$ alloys, amorphous, electroless, struct. relax., crystallisation, anelasticity meas. 7—137242
Ni_2P sputtered film as ohmic contact and diffusion barrier 7—105705
$Ni_{80}P_{20}$, amorphous alloys, electrodeposited in mag. field, struct. 7—104565
$Ni_{80}P_{20}$, metallic glass, atomic struct., isotropic substitution neutron diffr. technique 7—83769
$Ni_{80}P_{20}$ metallic glasses, interatomic pair potentials 7—137258
$Ni_{81.5}P_xB_{18.5-x}$ amorphous and liq. alloys, mag. props. study 7—118768
$Ni_{81}P_{19}C$ metallic glass, crystallisation characterisation 7—111397
Pd-Ni-P, metallic glasses, electronic structure 7—92056
Pd-Ni-P metallic glasses, He solubility, method of determ. in solid and melts 7—91828
Pd-P based liq. metal ion sources 7—73467
$Pd_{40}Ni_{40}P_{20}$ metallic glass, glass transition temp., determ. by low freq. internal friction meas. 7—137562
$Pd_{48}Ni_{32}P_{20}$, metallic glasses, mech. relax., glass transition, internal friction 7—106564
$Pt_{58.4}Ni_{14.6}P_{27}$, metallic glasses, mech. relax., glass transition, internal friction 7—106564
$Ti_{62}Cu_{33}P_5$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7—144615
$Ti_{60}Ni_{36}P_4$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7—144615
UCu_2P_2, cryst. struct., X-ray diffr. study 7—76081
$(Zr_{0.5}Ni_{0.5})_{100-x}$ P_x metallic glasses, magnetisation, ^{31}P NMR study 7—112762

phosphorus compounds
see also phosphate glasses; phosphorus alloys; phosphosilicate glasses
alkali halides: PO_2^- centres, photostimulated reorientations 7—137275
betalomonosovite cryst. struct., X-ray diffr. meas. and refinement 7—124205
glassy polymer coatings, role of F_2 in gas phase synthesis 7—77847
inorganic phosphates, cryst. and glassy, magic-angle spinning ^{31}P NMR investig. 7—132148
intercalation compounds of black P, synthesis and charact. 7—84806
metaphosphate coacervate glass, low temp. cured, Raman obs. 7—85720
oxyacids, conjugate bases and neutral radicals, ab initio calcs. 7—109733
phosphate schlamms, pipe flow and rheological behaviour charactn. *(French)* 7—75671
radical cations, form. by radiation chemistry, electronic struct., ESR spectra anal. 7—68369
tricoordinated, electronic and stereochem. struct., $\delta^{31}P$ chem. shift 7—103541
$AlCl_3$-$POCl_3$ system, molten, vap. press. determ. 7—111841
As-P-S glassy chalcogenide semiconds., photoinduced paramagnetic centres, ESR study 7—143896
FeCrCPSi metallic glass, Curie temp. determ., quench rate effects on structural state, DSC study *(French)* 7—99458
$FePX_3$ (X=S,Se) antiferromag. crysts., Raman scatt. 7—113187
H_3PO isomers, H^+ transfer, ab initio STO calcs. 7—93272
H_3PO_4 acid fuel cell, hybrid cell type, charact. *(Japanese)* 7—114094
$Li\text{-}Cu_4O(PO_4)_2$ cells for long-life low-rate appls., performance 7—126581
$Na_2O\text{-}P_2O_5\text{-}RuO_2$ phosphate glass 7—85421
$Na_2O\text{-}P_2O_5\text{-}TiO_2$ phosphate glass, optical and spectromagnetical props., ESR and visible-UV absorpt. investig. 7—85421
$Nd_2O_3\text{-}P_2O_5$ system, phase equilibrium 7—119248
P_2, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7—74416
P_2Cl_4, kinetic, pot., Coriolis coupling and centrifugal distortion consts. 7—68186
PF radical, $X^3\Sigma^-$ state, IR absorpt. spectrum 7—90118
PF_n cpds., ^{31}P NMR shieldings, coupled HF calcs. 7—89935
PFO_3^{2-}, ^{19}F and ^{31}P NMR, transverse nucl. spin relax. 7—109945
PH, H_2 decomposition barriers and pathways, ab initio calcs. 7—68190
PH, radical, ground $X^3\Sigma^-$ state, FTIR vibr.-rot. spectrum 7—82098
PH_2 radical, microwave spectrum 7—122507
PH_2^-, vertical electron affinities calc. using direct versus indirect many-body methods 7—109696
PH_3, depression in flame at. spectrometry 7—86692
PH_3, dipole moment, Coriolis interaction, laser Stark spectra 7—122586
PH_3, electronic energy, fragment anal. 7—81928
PH_3, one-electron props., HF limit basis sets 7—89988
PH_3, potential constant calcs., parametric representation method 7—109864
PH_3 pyrolysis, effect on morphology and growth rate of InP grown by hydride VPE 7—71051

phosphorus compounds continued
PH_3, second-order mag. parameters and mag. isoscreening lines 7−103409
PH_3-HF complexes, H-bonded, vibr. freqs. and intensities, ab initio calcs. 7−129564
PH_3-O_3, photolysis products, FTIR spectra 7−74594
PH_3+O, flash photolysis, rate const. meas. 7−132954
PH_4^+, SCF proton densities HF calcs. 7−103371
PH_{B_3} equilibr. geometric config., reson. stark effect 7−129758
P_4H^{2+} compounds, decomposition pot. hypersurface, MNDO calcs. 7−109769
PHO_3^{2-}, struct. and dynamics, longit. NMR relax. study 7−141605
PH_3O, structure and electronic structure, basis set effects 7−141432
P_2I_4, kinetic, pot., Coriolis coupling and centrifugal distortion consts. 7−68186
PN, $A^1\Pi$-$X^1\Sigma^+$ bands, rot. anal., perturbation studies 7−141560
PN radical, VUV spectra 7−141598
PN, total and orbital energies and multipole moments, LCAO HF STO calcs. 7−81919
P_3N_3, vacuum deposition preparation for nuclear target 7−109568
PO in interstellar medium, chem. and spectral characts. 7−128003
PO_3^-, bonding, ab initio calcs. 7−129560
PO_4^{3-}, ^{31}P NMR shieldings, coupled HF calcs. 7−89935
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7−136466
P_2O_5-GeO_2-SiO_2 optical fibre preform, parameters distrib. along radius 7−136467
$P_2O_6^{4-}$, bond props., kinetic consts. method calcs. 7−81916
P_4O_{10}-H_2O, gas phase synthesis, of P-containing glassy polymer coatings 7−77847
$POCl_3$:$SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
$POCl_3$-$SnCl_4$:Pr^{3+}, electronic relax. of $^3P_0$ and $^1D_2$ states of Pr^{3+} 7−70875
POF_3 mol. IR absorpt. spectra, ν_4 band anal. *(French)* 7−109896
PON glasses, corrosion in water and humid air 7−119387
POX_3, (X=F, Cl, Br), spectra-structure correls 7−82088
PS radicals, chemiluminesc. study 7−119532
P_4S_3, intermolecular bonding, phonons, Raman spectra 7−85627
$PSCl_3$+Cs(K) reactions, PS chemiluminesc. study 7−119532
PSX_3 (X=F, Cl, Br), spectra-structure correls 7−82088
P_4Se_{10} amorphous thin films, photoinduced changes in optical and struct. props. 7−132362
PX_3, (X=F, Cl, Br, I), spectra-structure correls 7−82088
$Sn_2P_2(S_xSe_{1-x})_6$ uniaxial ferroelectrics; critical behaviour near Lifshitz point 7−118961
$Sn_2P_2Se_{6-x}S_x$ evaporated thin films optical consts. near ferroelec. transition 7−85869
$Sn_2P_2(Se_xS_{1-x})_6$, ferroelectric phase transition splitting, phenomenological anal. 7−125636
Tl_3PSe_4, single crystal, growth and characterisation 7−132444
$UCuP_2$, prep. and cryst. struct. 7−98075
a-V_2O_5(-P_2O_5) cathodes for Li secondary cells, electrochemical behaviour 7−133072
ZrO_2-P_2O_5 based ceramics, solid soln., thermal expansion, microcracking, Ta_2O_5 and Nb_2O_5 additions 7−143055

phosphosilicate glasses
borophosphosilicate glasses, chemical and electron microprobe anal. 7−144771
chemical and electron microprobe anal. 7−144771
pyrolytic films, polarisation processes 7−143958
B_2O_3-P_2O_5-SiO_2 borophosphosilicate glass films, anal. by inductively coupled plasma atomic emission spectroscopy 7−142599
B_2O_3-P_2O_5-SiO_2 glasses, dopant conc., FTIR spectroscopy anal. 7−83726
B_2O_5-P_2O_5-SiO_2, borophosphosilicate glass films, low pressure CVD using miscible liquid precursors 7−71050
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7−136466
P_2O_5-GeO_2-SiO_2 optical fibre preform, parameters distrib. along radius 7−136467
ZnO-SiO_2-B_2O_3-P_2O_5 glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845

photoacoustic effect
2 MHz photoacoustic meas. technique 7−82979
8CB, liquid crystal, phase transitions, photoacoustic study 7−131309
8CB nematic and smectic A liq. cryst., phase transitions, photoacoustic detection 7−105017
acoustic subsystem, nonlinear-optical deformation and smoothing of semiconductor surfaces by short laser pulses 7−142828
alkali metal halides, F-centre photoacoustic signals, comment and reply 7−76307
convergent acoustic waves, laser generation, appl. to materials evaluation 7−123374
Doppler heterodyne interferometry for laser-in/laser-out subsurface photoacoustic imaging 7−123369
electrochemical interfaces, optical props., SHG and photoacoustic anal. 7−78515
emission from materials melting under laser irrad. 7−111665
laser driven acoustic instabilities in materials with strain-dependent dielectric constants 7−97258
leaves, photosynthesis, energy storage and gas exchange, photoacoustic investig. 7−71711
low optical absorption, determ. by optoacoustic method 7−142135
metal surfaces, laser irrad., SAW and EM wave combined excitation 7−131412
metallic thin films, acoustic pulse generation using laser pulses, detect. by transient piezoreflectance meas. 7−111776
microscopy, two-dimensional Hadamard transform appl. 7−123372
non-porous solids in presence of volatile liquids, photoacoustic signal enhancement 7−91730
optical meas. of acoustic and photoacoustic effects 7−123373
photocarrier injection efficiencies in double layered organic photoconductors, photoacoustic meas. 7−143522
photoconducting piezoelectric, acoustic wave excitation during optical recording and erasure *(Japanese)* 7−131246
photorefractive crystals, acoustic wave photogeneration on a holographic grating 7−97249
polybis-(p-toluene sulphonate) single crystal, phase transition at low temp., photoacoustic effect study *(Chinese)* 7−118075
polymer foils, thermal diffusivity, photoacoustic meas. 7−108547
polymer high-modulus fibres, laser generation of ultrasound for Young's modulus meas. 7−76310

photoacoustic effect continued
polymers, thermal parameters, meas. by photoacoustic technique 7−131245
resonant photoacoustic cell, calibration by thermoacoustic method *(Korean)* 7−136660
SAW interferometer, high sensitivity detector for phase modulated photoacoustics 7−90900
self-induced light diffraction by surface acoustic waves 7−82994
semiconductors, free carrier light absorption calcs. 7−131241
semiconductors, optoacoustic interaction and acoustic beam wavefront reversal 7−68927
signal enhancement for gas microphone and piezoelec. detect. technique 7−90891
stray-light correction in photoacoustic measurements of solid samples 7−130494
vascular tissue ablation by laser beams, time resolved photoacoustic studies 7−87131
volatile liquids for photoacoustic signal enhancement, theory 7−91729
$Ca(NO_3)_2$-KNO_3, freq. depend. specific heat near glass transition, photoacoustic effect meas. 7−91804
CdS, photocond. piezoelec., optical generation of sound 7−84144
GaAs, undoped semi-insulating, deep level symmetry, ballistic phonon transmission studies 7−137848
$KTaO_3$, sound velocity photoinduced changes in external elec. field 7−104919
SbSI, sound velocity photoinduced changes in external elec. field 7−104919
Si, Rayleigh waves, nonlinear optical excitation 7−112050
Si solar cell, intrinsic energy conversion efficiency and quantum efficiency, photoacoustic determ. 7−71608
$SrTiO_3$, sound velocity photoinduced changes in external elec. field 7−104919
Ta_2O_5 single-layer films, localisation of optical absorption losses 7−77671
TiO_2 single-layer films, localisation of optical absorption losses 7−77671
ZrO_2 single-layer films, localisation of optical absorption losses 7−77671

photoacoustic spectra
acridine dyes adsorbed layers, Silufol plates substrate, luminesc. spectra, temp. depend. 7−106265
atmosphere, H_2O vapour absorption, 8 to 14 μm, laser photoacoustic spectroscopy 7−87900
cellulous diacetate, adsorbed on Ag, vibrational modes *(Chinese)* 7−98668
close-packed absorbing spheres, photoacoustic meas. of absorption *(German)* 7−110240
3,3′-diethyloxadicarbocyanine iodide, laser dye, laser induced optoacoustic study 7−78464
2,3-dimethylbenzonitriles, near ultraviolet absorpt. spectra 7−122502
ethylene, intracavity and extracavity photoacoustic reson. spectroscopy 7−90107
graphite limiter in tokamaks, plasma interaction, photoacoustic anal. 7−69364
iodomethane-d_0(d_3), photoacoustic spectrometer for nonradiative relaxation detection 7−102538
liquid surface film analysis by pulsed laser photoacoustic spectroscopy 7−92755
methylene chloride-d_1, C−H and C−D interbond coupling, photoacoustic spectrosc. 7−122572
near-surface analysis and depth profiling by FT-IR photoacoustic spectroscopy 7−142912
optical films, spectral props., photoacoustic studies 7−92756
oxazine 1 perchlorate, absolute fluoresc. quantum yield meas. with photoacoustic spectroscopy *(Chinese)* 7−103559
PVA bilayer film, photoacoustic spectra phase angles 7−91731
rare earth pentaphosphates, photoacoustic spectra 7−123357
rhodamine B, adsorbed on silica, depth profile, photoacoustic spectrosc. obs. 7−124681
semiconductors, energy band gap, photoacoustic determ. 7−84677
trihalomethanes, CH stretch-bend coupling consts., FTIR and photoacoustic spectra 7−103491
trimethylamine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
trimethylarsine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
trimethylphosphine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
AlGaN/GaN, photoacoustic spectra meas. 7−76312
C, photoacoustic spectra meas. 7−76312
CS_2, symm. and bending modes, energy exchange rate const. 7−136653
Ca_2AlFeO_5, surface comp., electron and optoacoustic spectroscopy 7−105201
$Ca_3Al_2O_6$, surface comp., electron and optoacoustic spectroscopy 7−105201
CdS fine particles, photoacoustic and luminescence spectra 7−70887
$CePO_4$:V_2O_5, photoacoustic absorption spectrum of VO^{2+} 7−98352
$Cs_6H_2(W_3O_{10})_4$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
$CuGaS_2$:Zn, off-stoichiometry, optical studies 7−124542
$CuInSe_2$ film, amorphous, deposition, conductivity and energy gap 7−137928
GaAs, semi-insulating, nonradiative recombination lifetimes, photoacoustic study 7−70889
GaAs:Si layers, Si ion implanted, photoacoustic optical and thermal characterisation 7−111777
GaN, photoacoustic spectra meas. 7−76312
GaP, photoacoustic spectra meas. 7−76312
HCN clusters, free jet spectrosc. by coherent Raman spectrosc. 7−82420
$HfSe_2(S_2)$ electronic struct. determ. photoacoustic saturation spectra study 7−91736
Hg, $^3P_1$-$^1S_0$ fluoresc. quenching, rel. to photoacoustic amplitude 7−68247
$La_{1.8}Sr_{0.2}CuO_4$ sintered high T_c supercond. props., resistivity and photoacoustic meas. 7−118683
$Na_4H_2(H_2(W_3O_{10})_4)$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
Ni particles, ultrafine, oxidation, appl. of Fourier transform. IR photoacoustic spectroscopy 7−113775
Ni-Co alloy thin films, spin wave reson. obs. 7−106033
$Pb_3V_2O_8$:Cu^{2+}, undoped and doped, struct., EPR, DSC, photoacoustic spectrum 7−125530
$Ru_3(CO)_{12}$, vibr., Fourier transform IR, photoacoustic and Raman spectra 7−132272

photoacoustic spectra continued
S_2O, visible absorption spectrum spectrographic techniques, laser optoacoustic techniques 7−122558
$Se_{1-x}Sb_x$ semiconducting glasses, optical energy gap meas., photoacoustic studies 7−144001
$Se_{1-x}Te_x$ semiconducting glasses, optical energy gap meas., photoacoustic studies 7−144001
Si layers, Si ion implanted, photoacoustic optical and thermal characterisation 7−111777
Si solar cells, photoacoustic charactn. 7−119660
Si:BF_2^+ ion-implanted wafers, depth profiling with photoacoustic technique 7−83984
a-Si:H, optical absorption edge 7−125669
a-Si:H/a-SiN_x:H amorphous superlattice films, photoacoustic spectra 7−85764
$(V_2O_5)_x(PbO)_{100-x}$, pure and Fe_2O_3 doped semiconducting glass, photoacoustic absorpt. spectra studies 7−142915
XeCl laser ablation of polymers and biological tissue, optical pulse duration, photoacoustic spectra study 7−113964
ZrS_2 electronic struct. determ. photoacoustic saturation spectra study 7−91736

photoacoustic spectroscopy
see also photoacoustic spectra
bilayer PVA films, boundary layer determ. by photoacoustic signals phase angles *(Korean)* 7−142918
calibration of photoacoustic cells, based on transfer function meas. 7−102539
Doppler-free laser optoacoustic signals, theoretical anal. 7−80913
egg white, US spectroscopy using plano-concave resonator method *(Japanese)* 7−126913
HLW disposal, laser photoacoustic spectroscopy for trace level detection of actinides in groundwater 7−96386
interferometric microphone for optoacoustic spectroscopy 7−95658
intracavity photoacoustic resonance spectroscopy of C_2H_4 7−90107
laser calorimetric spectroscopy on flows 7−130803
layered imaging of photoacoustic microscopy by phase selecting 7−95656
optoacoustic gas analyzer for NO, NO_2, NH_3, C_2H_4, and saturated hydrocarbon pollutants 7−114159
optoacoustic investigation of the optical and acoustical properties of crystals 7−128662
organic dye monolayer on sapphire, laser irrad. heat deposition, fluoresc. yields meas., photoacoustic spectra 7−116012
organic dyes, methanol soln., laser irrad. heat deposition, fluoresc. yields meas., photoacoustic spectra 7−116012
pulsed laser generation and detection of photoacoustic waves *(Korean)* 7−84142
radiation dosimetry by photoacoustic spectrometry 7−87220
resonant cell for study of liquids 7−134854
semiconductors, appl. of photoacoustic spectroscopy 7−76312
semiconductors, energy-level struct. determ. using superconducting photorelaxation spectroscopy *(Japanese)* 7−76734
signal enhancement for gas microphone and piezoelec. detect. technique 7−90891
solid surface, fast photoacoustic probing 7−123371
spectrometer with automatic data acquisition *(Czech)* 7−128672
spectrum analyser for plasma diagnostics 7−130934
standard, C black equivalents 7−95657
surface adsorbate structure, pulsed laser optoacoustic spectrosc. 7−116011
two photon, laser-based, construction for nonradiative relaxation detection 7−102538
X-ray photoacoustics for material inhomogeneities imaging 7−121317
CdS acoustic domain injection generator *(Japanese)* 7−140752
I_2, vibrational spectrum, single- and two-photon absorpt., laser photoacoustic spectroscopy 7−141589

photobleaching *see optical saturable absorption*

photocapacitance
see also photodielectric effect
deep levels, optical admittance spectroscopy 7−112228
EL2 defect, configuration-coordinate model 7−137850
photocapacitance images of metal-dielectric-semiconductor structures in a scanning optical microscope 7−108711
Schottky barrier nonideal structures, photocapacitance kinetics, tunnelling effects 7−77038
n-CdTe electrodeposited thin films, defect levels 7−112521
GaAs, EL2 defect, optical transitions via excited state, configuration coordinate model 7−98885
p-GaAs, EL2 electron trap, double donor state 7−131583
GaAs, EL2 ground state, energy position, determ. 7−98886
n-GaAs electrode in aq. electrolyte, photoinduced capacitance peaks, e-h recomb. model anal. 7−99120
GaAs epitaxial layers, elec. and optical measurements during chem. etching 7−138084
GaAs, plastically deformed, EL2 defect metastability 7−131585
GaAs, site symmetry of the EL2 centre, 7−124267
n-GaAs/electrolyte interface, photocapacitance obs. 7−112389
$In_{0.53}Ga_{0.47}As/InP$, p-p heterojunction, trap detection by C-V, I-V and photocapacitance obs. 7−112465
InP, 3d transition ions, absolute photo-ionisation cross section spectra *(French)* 7−131582
Si:Au, donor and acceptor levels, optical and elec. props. *(Chinese)* 7−105450
a-Si:H, photocapacitance characts., light-induced changes 7−143504
a-Si:H films, time-of-flight signal, effects of sample capacitance and light intensity 7−84978
p-Si:O wafers, AC surface photovoltage, saturation due to photocapacitances 7−99123
Si:Pt, donor centres, photoionisation cross-sections 7−112230
ZnSe, electrochem. photocapacitance, photoelectrochem. etching 7−125039

photocatalysis *see catalysis*

photocathodes
see also photoemission
glow discharge tube, IR photoelectric emission on cathode surface *(Chinese)* 7−106356
IR efficient detection by two-step upconversion 7−110453
multialkali photocathodes, optical and photoemission spectra 7−85960
photomultiplier with local photocathode illumination, amplitude distrib. of single electron pulses 7−102522
CsBr microchannel plates, soft X-ray detection efficiency 7−96476
CsI microchannel plates, soft X-ray detection efficiency 7−96476

photocathodes continued
CsI photocathodes in MCP detectors, quantum efficiencies 7−136598
Cs_3Sb photocathode, pulse-laser-irradiated photoelectron source 7−108697
Cu_xS-CdS p-n junction photocathode in a wet solar cell, quantum efficiency meas. 7−114112
GaAlAs heterostruct. devices, research at RSRE, control of interface props. 7−112480
GaAs, photoemission under negative electron affinity 7−92824
H_2 production from photoelectrochemical cells, electrode matching theory 7−106934
Na_2KSb, optical and photoemission spectra 7−85960
Pd-Ag-O-Cs photocathodes, photoemission characts. under star illum. *(Chinese)* 7−77753
(Rb, Cs)Na_2KSb photocathode with improved photosensitivity and green-red response *(Chinese)* 7−77748
Sb-Na-K-Cs photocathodes, photoemission characts. under star illum. *(Chinese)* 7−77753
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
UO_2 photocathode for 14 MeV neutron streak camera 7−96318
W needle, photofield emission in the ps regime 7−77763

photocells *see photoelectric cells*

photochemical energy conversion *see chemical energy conversion*

photochemistry
see also photochromism; photodissociation; photoelectrochemical cells; photolysis; photosynthesis
aceanthrenones, isomeric, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
9-acetylanthracene, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
acridine-fluorene mixed cryst. photochemical H-transfer, cryst. constraints 7−106806
adsorbate structure, pulsed laser optoacoustic spectrosc. 7−116011
adsorbed atom, influence of laser irradiation on surface chemistry 7−78547
alkali naphtholates, emission and absorpt. props., solvent effect 7−113959
amorphous As and Ge chalcogenides, photodoping as radiation enhanced solid state reaction 7−126468
9-anthracenecarboxylic acid, assoc. with TiO_2, triplet-triplet energy transfer 7−93368
anthraquinone, photoreduction, free radical prod., product yield-detected ESR 7−103545
anthraquinone derivatives, photochem., time-resolved reson. Raman spectrosc. obs. 7−68311
anthraquinone-2, 6-disulphonate, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7−82192
atmosphere, detailed photochemical air pollution models, computational feasibility 7−114145
atmosphere, inertio-gravity waves, effects of O_3 photochemistry and radiative heating 7−79501
atmosphere, modified NO_x+O_3 photolytic cycle 7−93592
azulene, saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750
bacteriorhodopsin, kinetic studies, reson. Raman spectra 7−78777
bacteriorhodopsin, photochemical cycle, ps time-resolved reson, Raman spectra anal. 7−86915
bacteriorhodopsin, pS conformational intermediates during photocycle, vibr. Raman spectra study 7−68485
$BaTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
benzene+ethylene, meta photocycloaddition, semi-empirical calcs. 7−113912
benzylidenephthalides, indan-diones, photoinduced isomerisation, UV fluoresc. spectra 7−96729
biradicals, photochemistry, mag. field effects *(Japanese)* 7−78524
2-bromoethanol, in Ar matrix, IR photolysis, quantum yield distrib. 7−86648
chemical dynamics, laser appls., conf., Los Angeles, CA, USA (Jan. 1987) 7−128182
(2-chlorophenyl)carbene, matrix isolated, oxidation, chemiluminesc. 7−100578
chloroplast, photosystem I, persistent hole burning, electron-phonon coupling 7−78520
condensed medium, electron phototransfer theory 7−86649
conference, Liblice, Czechoslovakia (Oct. 1986) 7−72719
conversion and storage of solar energy, conf., Paris, France (July 1986) 7−102003
crystal microbalance, absolute laser photodeposition rate meas. 7−119160
9-cyanoanthracene-dimer crysts. solid-state photoreactions, ESR and visible-UV spectra 7−144733
cyclobutyl acetate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclopropane, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cytosine, photoexcited states, electronic struct., CNDO/S3 calcs. 7−68218
1,4-diazabicyclo[2.2.2]octane, Rydberg state, fluoresc. obs. 7−96778
1,2-dichloroethylene, laser-induced interconversion, GPED anal. 7−132950
3,3′-diethyloxadicarbocyanine iodide, laser dye, laser induced optoacoustic study 7−78464
trans-3,3-dimethyl-1-(2-naphthyl)-1-butene, photoisomerisation in presence of electron acceptors, mag. field effects 7−93265
p-dimethylaminobenzonitrile, soln., photoisomerisation dynamics, polarity depend. barriers 7−93268
dinitrotoluenes, solns., picosec. transient absorpt. 7−68331
diphenylpolyenes, picosecond photophysics, excited-state conformational changes 7−96717
disulphide radical anions, photochem. electron detachment reaction 7−100537
doped solid systems, photochemistry and spectroscopy, zero-phonon lines props. *(Russian)* 7−106219
duroquinone, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7−82192
electron-transfer photoreaction, energy storage, optimal conditions 7−126469
EM energy within dielectric spheres, appl. to atmospheric photochemistry 7−129980
erythrocyte ghosts, struct. photomodification by long wave UV light and psoralen 7−93822
ethene+iodotrifluoromethane, CO_2 laser induced telomerisation study 7−78528
ethyl 3-cyclohexene-1-carboxylate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526

photochemistry continued
film processing using three baths *(Russian)* 7−128697
fluorobutanes, bichromophonic, IR laser chemistry, absolute and relative rate coeffs. 7−100594
hole-burning reactions, rate const. determ., fluoresc. 7−78518
ion concentration meas., capacitance bridge detector and signal lock for ion cyclotron resonance spectrometry 7−128710
isobacteriochlorin in n-octane crystal, photochemical hole-burning spectroscopy, Stark effect 7−82723
isomerisation reactions, zero-barrier, nonequilib. solvation dynamics effects 7−100519
Jablonski diagrams, review 7−110304
Jupiter atmosphere, HCN and chromophore form. 7−88174
keto sulfides, triplet, intramol. charge-transfer interactions investig. 7−113883
magnesium tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539
menadione, photoreduction, free radical prod., product yield-detected ESR 7−103545
mesosphere, O_3 photochemistry, SME obs. anal. 7−94529
O-methylacetophenone and related cpds., photochemistry, ESR study 7−119540
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7−82185
N-(methylpyrolidinone)$_2H^+PW_{12}O_{40}^{3-}$, photochem., picosec. spectrosc. 7−126461
N-(w-(p-nitrophenoxy)alkyl)anilines, photochemistry, mag. field effects, hyperfine coupling 7−78517
nonlinear organic materials, new, prospects 7−82731
optical storage, wavelength-multiplexed-recording materials, Japanese research 7−110493
organic low temperature glasses, struct. relax. and hole burning 7−142649
oxetane, chemiluminesc. reaction, IR multiphoton activation study 7−78527
ozonosphere, sensitivity to Cl perturbations, modelling 7−139688
1-phenylazo-2-naphthols, photoisomerisation 7−106789
phenylchlorocarbene, matrix isolated, oxidation, chemiluminesc. 7−100578
phenylethynyldisilanes, photochemical and photophysical props., intramol. charge transfer emission 7−93346
photo-induced struct. changes, theory 7−85559
photo-induced structure changes 7−144730
photogeneration of cationic initiators by donor-acceptor interactions 7−139021
photoinduced deposition of thin films 7−100111
photoinduced electron transfer reactions, low-field CIDNP study 7−113870
photoisomerisation, extended Kramers equation 7−139029
photopolymer morphology 7−139024
photoreaction quantum yield at molecular two-quantum excitation 7−93349
photoreaction with photoproduct filtering effect, quantum efficiency, light adaptation of purple membrane 7−93680
phytochrome, absorpt. spectra and phototransformation quantum yield, temp. depend. study 7−78756
pinacyanol, photoisomerisation, time-resolved reson. CARS 7−129719
PMMA, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
poly(N-(vinyloxy)carbonyl)carbazole and its monomeric analogue, triplet exciton processes, laser pulse-probe study 7−93347
poly(N-vinylcarbazole), nonlinear photochemistry, ablation behaviour 7−93341
poly (3-methyl thiophene) film with aq. electrolyte contact, impedance and electrorefl. spectra, polaron transition obs. 7−99797
poly-3-methylthiophene, reduced photoelectrochemistry and electroreflectance in aqueous electrolyte 7−144020
polydiacetylene, chemically modified soluble, absorption spectra 7−82407
polystyrene, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
2-propanol+CuO reaction, IR multiphoton activation study 7−78527
pyrrole, photoelectrochemical polymerisation on TiO_2, appl. to conducting pattern generation 7−100551
radical pairs, photochemistry, mag. field effects *(Japanese)* 7−78524
rare earth alloys, R_2Co_7 intermetallic cpds., photo-induced hydride formation 7−119541
all-trans and 9-cis-retinal, triplet state, configuration relax., picosecond time-resolved absorpt. spectra 7−74650
semiconductor formation and charactn. on lipid bilayer membranes 7−105204
semiconductor photochemistry, industrial aspects 7−105615
semiconductor photoelectrochemistry, opportunities and problems 7−106810
solar photothermochemistry for fuels and chemicals production 7−144904
trans-stilbene, gas and liq. phase photoisomerisation, transition state theory 7−93285
t-stilbene, intramol. vibr. redistrib., time-resolved fluoresc. spectra, photochem. timing meas. 7−117055
stratosphere O_3 changes, prod. and destruction chemistry and pollution effects 7−145650
stratosphere photochemistry, implications of breaking planetary waves 7−127433
synthetic bilayer membranes, rel. to photochem. energy conversion 7−106918
tetracene in alcohol glass, tunnelling dynamics, photophysical hole burning system anal. 7−97098
tetraethyleneglycol diacrylate, photopolymerisation, thermal and mechanical anal. 7−119529
tetramethyl-p-phenylenediamine, solns., photoionisation, solvent effects, reson., Raman spectra anal. 7−82195
time-resolved CARs, appls. to photophys. and photochem. 7−80902
tobacco mosaic virus RNA ability to self-assemble with virus protein, UV inactivation 7−93821
triple cell for spectral, photophysical and photochemical experiments 7−108548
unimolecular reactions, coherent radiative control, 3D calcs. 7−126427
vitamin B_1, fluorescent derivatives, photophys. and photochem. props. 7−100813
xanthene dyes, photochem., anionic micelle characterisation 7−119544
zinc tetrakis(4-sulphonatophenyl)porphyrin, photooxidation, ESR and ENDOR study 7−119539
AgBr microcrystals, size effect on spectral absorpt. of photochem. colouring centres 7−77613

photochemistry continued
As_2S_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
As_2Se_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
BCl_3+H_2S isotope selective reactions, CO_2 laser induced vibr. excitation effects 7−78529
C-rich circumstellar shells, photochemistry and mol. ions 7−120367
$CO+H_2$, photochemical reaction rates, matrix isolated spectra 7−100596
CS_2, laser excitation, energy relax., probe beam deflection meas. 7−91279
$CaTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
CdO semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
CdS electrodes, photocorrosion, anal. by photoelectron spectra 7−71400
n-CdS, photoelectrochemical kinetics of hydroquinone oxidation 7−99192
CdSe, photoelectrodes, current-voltage characts. determ. 7−71496
CdSe photolum., evidence for selective etching of donor states 7−125797
CdTe, crystallographic effects on photoelectrochemical etching 7−119462
CdTe films, photoelectrochemical deposition 7−71092
CdTe:Tl, deep acceptors, elec. activity *(Russian)* 7−124907
Cl_2-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125
ClF-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125
CsI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
Fe^{III} to Fe^{II} in presence of oxalic acid, photoreduction in thin layers, form. of spatial dissipative structs. 7−100593
$Fe(CO_5)$, adsorbed on Ag (110), UV-induced photochem. 7−119560
n-GaAs electrode in aq. electrolyte, photoinduced capacitance peaks, e-h recomb. model anal. 7−99120
n-GaAs, high resolution photoelectrochem. etching using scanning electrochemical tunnelling microscope 7−106724
H_2O_2 interaction of Ag with humates and other species, gel permeation chromatography anal. 7−100654
H_2S and D_2S, photoabsorpt. and fluoresc. spectroscopy 7−82253
HfO_2 ion implanted films, photoelectrochemical investigations of disorder 7−104789
In_2O_3 semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
KBr:Se^{2-}, F centers, photochemical prod. 7−124261
NO_2 in atm., photodissociation rate coeff. determ., use of UV radiometers 7−94447
NO_2 photolysis rate over central Johannesburg 7−93578
NO_2-N_2O_4, laser excitation, energy relax., probe beam deflection meas. 7−91279
Na atmospheric layer, theoretical review, laser-radar meas. 7−79726
NaCl, laser fragmentation investig. 7−119537
NaI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
O_3 chemistry with chlorofluorocarbons, Antarctica ozone hole 7−108092
PbS, photosensitive layers, formation, depth conc. profiles 7−77831
$PbTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
Pt surface, ammonia oxidation, laser initiation 7−78540
S_2 photochemistry and interstellar grains in comets 7−94753
a-Si:H, elec., optical and doping props. 7−76953
Si:P, electrically active defect profiles, photoelectrochem. method 7−137360
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
n-$SrTiO_3$ amorphous sputtered thin films, electronic processes, optical and photoelectrochem. props. 7−144141
$SrTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
Te thin films, photo-oxidized photoconduction 7−85005
Ti plate, self-sustaining exothermic reaction, multipulse light initiation 7−106813
TiO_2 colloid, conduction band electron reduction of acceptor relay species 7−93369
TiO_2 films, n-type semicond., sol-gel prep., photoelectrochemical props. 7−131710
TiO_2 ion implanted films, photoelectrochemical investigations of disorder 7−104789
W films, excimer laser initiated CVD growth on SiO_2 and Si substrates, phys. props. 7−118297
WO_3 film-acidic H_2O electrolyte contact, photoelectrolysis solar cell potentiality determ. 7−143287
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
$Xe_2^+Cl^-$, cooperative photogeneration in Cl_2/Xe solutions, stimulated emission and gain meas. 7−78516
$Zn_2Mo_3O_8$, metal cluster oxide cpd., single cryst., photoelectrochem. obs. 7−86635
ZnSe, electrochem. photocapacitance, photoelectrochem. etching 7−125039

photochromism
amorphous and vitreous materials, excitation relaxation processes, photoluminescence and photodarkening 7−85797
borosilicate glasses, photochromism model 7−132216
chalcogenide glass optical fibre losses, low temp. photoinduced changes 7−136571
chalcogenide glasses, laser-induced optical anisotropy and photodarkening 7−85572
chiral photochromic solutions, light propag. 7−96940
4-(2′,4′-dinitrobenzyl)pyridine, time resolved resonance Raman studies 7−85637
2,4-dinitrobenzyl carbanion, photochem. prod., absorpt. spectra, solvent effect 7−99879
fulgides, bistable optical switching and logic elements, single-wavelength illum. 7−82682
glass, photochromic, rate eqn. considering thermal and optical regeneration 7−106107
indolinospironaphthoxazine derivatives, photochromic effect, time-resolved spectra 7−129784
photo-induced struct. changes, theory 7−85559
photo-induced structure changes 7−144730
polydiacetylene, conjugated polymer, photochromism and photoinduced bond-struct. change 7−138472
polydiacetylenes, electronic phase-transition, spectroscopic meas. 7−70730
N-salicylidene-2-thenylamines, solid state photochromism and thermochromism 7−85557

photochromism continued
tetrahydrophenanthridine hydroxynitrostyrils. absorpt, spectra 7—141568
Ag halide photochromic glass, laser radiation propag. 7—125658
$Bi_{12}SiO_{20}$:Ni(Cr), optical absorpt. studies 7—85781
$Bi_{12}SiO_{20}$ single crystals, optical transmission, relaxation 7—92701
CaF_2:Ce, photo-reversible charge-transfer processes and thermoluminescence 7—85858
CuCl-NaCl photochromic glasses, light-sensitive phases 7—70728
$Gd_3(ScGa)_2Ga_3O_{12}$:Nd,Cr lasers with photochromic centers 7—82575
n-$SrTiO_3$, Prussian Blue films, photochromism, spectroscopic and electrochem. studies 7—70836

photoconducting devices
see also photoconductive cells; photodiodes; phototransistors
bistable semiconductor lasers, cascadable optical triggering scheme using photoconductors 7—90638
compound semiconductor photoconductive materials and devices *(Japanese)* 7—125048
longitudinal detector photoconductive gain determ. 7—116007
GaAlAs resonant tunnelling superlattice, 10 μm IR detector using intersubband absorpt. 7—89258
GaAs epitaxial struct. surface-depleted photoconductors 7—105611
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7—86035
HgCdTe photoconductive detectors, CO_2 laser applications 7—110394

photoconducting materials
see also photoconductivity
charge transport meas. in high resistivity materials, xerographic discharge techniques 7—124982
compound semiconductor photoconductive materials and devices *(Japanese)* 7—125048
organic photoreceptor for electrophotography, sensitivity eval. *(Japanese)* 7—84972
organic photoreceptor materials for electronic photography *(Japanese)* 7—99110
poly-N-epoxypropylcarbazole, electrophotographic layers, photodischarge kinetics 7—82734
poly-N-vinylcarbazole, drift mobility enhancement by adding pyrazoline derivatives *(Japanese)* 7—84970
time-varying photoEMF in a nonuniformly illum. photoconductor 7—84999
TMPD in methylcyclohexane, photocond. kinetics with pulsed laser ionisation 7—92224
$Bi_{12}SiO_{20}$ crystals, phase volume gratings, polarisation properties for two transverse configurations 7—130310
CdS, air-sintered pellets, surface occurrence of impurity phases 7—86500
CdS, interaction of longit. and transverse acoustoelectric domains under acoustic instability conditions 7—70361
CdS, photocond. piezoelec., optical generation of sound 7—84144
CdSe, electrophotographic sensitivity holographic information recording 7—82515
CdTe-nematic liq. cryst., light-induced orientational effects study 7—85006
HgCdTe photoconductors, 1/f noise at 0.1 eV 7—84975
Sb_2S_3 film, space-charge limited cond., dark cond. temp. depend., trap density 7—131817
Se-Te:Cl, electrophotographic props. 7—110492
Se-Te-Sb:Cl alloys, electrophotographic props. *(Japanese)* 7—84969
$Se_{1-x}Te_x$, amorphous photoreceptor films, thermal and mech. props. of single and double layers 7—84606
a-Si:H photoreceptors, a-C:H protective coatings 7—97110
ZnCdS:Ag/CdSSe:Cu mixed systems, photoconductivity and dark conductivity 7—137983
ZnSe, annealed in presence of Zn metal and air, photocond. rise and decay 7—112397

photoconductive cells
No entries

photoconductivity
see also photoconducting devices; photoconducting materials
7X Si, p-n junction electrodes, photocurrent stability, decomposition potentials 7—70410
absolute negative photoconductivity, microscopic theory 7—105626
aluminium phthalocyanine thin films, photoelec. props. *(Japanese)* 7—84971
amorphous As and Ge chalcogenides, photodoping as radiation enhanced solid state reaction 7—126468
amorphous insulators, electron transport, statistical thermodynamics 7—92207
amorphous semiconductors, density of localised electron states, determ. from transient photocurrent 7—98934
amorphous semiconductors superlattices, modulation doped, carrier motion under static elec. field *(Chinese)* 7—105674
anodic thin films, on metal electrodes, photocurrent spectrosc. 7—112390
anthracene, photoconductivity, elec. field dependence, effect of contacts 7—70348
aromatic hydrocarbon thin films, laser-induced photocond. study 7—143507
$Au/Pb_2CrO_5/SnO_2$ struct., contact barriers, photoconducting characts. and band struct. studies 7—92299
biased quantum wells, ultrashort elect. pulse generation by virtual population screening 7—138032
bilayer film containing chromophores, elec. cond. 7—99128
conjugated polymers, 1D exciton diffusion 7—118369
cryocrystals resistance meas. in diamond-anvil cell to 70 GPa 7—102456
deep levels, optical admittance spectroscopy 7—112228
degenerate semiconductor, photoexcited, saturation effect 7—77011
diamond, Fano resonances, temp. depend. oscillatory photoconductivity, IR absorpt. spectrum 7—92661
disordered semiconductors with negative U-centres, steady-state photocond. 7—105607
donor-acceptor complex, electron affinity photostimulated change, coulomb-bound charges separation 7—70354
dye aggregate-semiconductor interface, exciton migration and chemical reactions 7—98816
electron gas, 2D, photoconductivity in strong mag. field 7—105609
extrinsic systems, chaotic dynamics 7—105617
ferroelectrics, photogalvanic effects, hopping model calcs. 7—125040
gallium phthalocyanine thin films, photoelec. props. *(Japanese)* 7—84971
I-III-VI_2 semiconductors, transition metal impurities, optical spectra studies 7—124926

photoconductivity continued
II-VI compounds as light-sensitive barriers in Josephson tunnel junctions 7—76993
III-V semiconductors, anodic oxide film form., optical and photoelec. props. *(Russian)* 7—125822
indium phthalocyanine thin films, photoelec. props. *(Japanese)* 7—84971
inhomogeneous semicond., nonequilibrium carriers distrib., photocond. *(Hungarian)* 7—131664
IV-VI semiconductor epitaxial films, for IR detector technology 7—132471
LBIC photocurrent, effects of finite dimensions, 2D anal. 7—105624
longitudinally localized optical carrier injection for femtosecond transport studies 7—92234
low temp. props., conference, Moscow, USSR (May 1986) 7—102010
methylbixin crystals, charge carrier transport, photoconductivity decay 7—84992
methylpropylpolysilane, photocond. 7—112391
microwave photoconductivity meas., high sensitivity apparatus for Ag halide meas. *(Japanese)* 7—128686
n-type semiconductor, minority carrier diffusion length meas. by photoelectro-chemical method 7—137951
4-nitro-4'-aminodiphenyl layers, amorphous, photoelec. and photodielec. props. 7—84988
optically induced charge in photoconducting materials, light absorpt., capture by traps 7—70352
p-n junction solar cells, saturation photocurrent and photovoltage calcs. 7—106905
p-n junctions, current parameters, meas. by optical beam excitation, scan vel. effect 7—118562
pentacene crystals, optical release of carriers 7—131705
photo-deep-levels Fourier spectroscopy for deep-levels analysing apparatus *(Japanese)* 7—128666
photocarrier injection efficiencies in double layered organic photoconductors, photoacoustic meas. 7—143522
photopinning of interlayer domain walls, many-valley semiconductors under multivalued anisotropy conditions 7—131704
phthalocyanine films, organic photoconductors for near IR region 7—143514
phthalocyanine thin films, elec. and optical props. 7—99234
piezoelectric, acoustic wave excitation during optical recording and erasure *(Japanese)* 7—131246
polar semiconductors, dynamical conductivity in IR from impurity scatt. 7—125050
poly(p-phenylene vinylene) film, anisotropic photoconductivity 7—92230
poly-N-epoxypropylcarbazole, amorphous semiconductor, charge carrier mobility 7—84994
poly-N-vinylcarbazole, amorphous semiconductor, charge carrier mobility 7—84994
poly-p-phenylene vinylene films, photoconductivity, carrier transport meas., depend. on heat treatment temp. 7—70359
poly-p-xylene films, electronic props., polymerisation effects 7—112398
polyacetylene, near IR absorption and pulsed photocond. 7—99870
trans-polyacetylene, photocond., polarons and solitons 7—84998
trans-polyacetylene, transient photoconductivity, temp. depend. 7—70358
polydiacetylene-bis-p-toluene sulphonate, fast transient photocond. 7—112401
polyethylene, excitation by visible light 7—99121
polyimide, photoconduction anisotropy rel. to mol. orientation 7—99117
polymers, conducting, synthetic metal superlattices 7—105664
trans-polyphenylacetylene films, electron currents, temp. and field depend. 7—99127
polypropylene films, finely dispersed Au loaded, cond. props. 7—85135
polysilanes, π-bonded, photocarrier generation and transport 7—84997
polythiophene:BF_4^- film, conducting polymer, elec. and optical props. of polaronic states 7—77403
porphyrin, monolayer assemblies, excitation with dye laser, transient photocurrents 7—92223
pyrene in non-polar hydrocarbon solvents, slow conductivity signals from pulsed laser irradiation 7—137978
rare gas fluids, electronic excitations 7—124825
rhodium(I) aryldiisocyanide polymers and oligomers, photocond. 7—125049
Schottky barrier structures, quantum efficiency of photocurrent 7—77042
Schottky diodes, photocurrent polariton peak, optical const. effects 7—105659
semiconductor, light pulse propagation 7—92201
semiconductor, photoexcited, with inhomogeneous carrier distrib., fast carrier dynamics 7—90504
semiconductor, with surface states, generation-recombination noise 7—84925
semiconductor island film, nonlinear photoeffect under pulsed illumination 7—77119
semiconductor polarimetric photodetectors, prep. principles, photopleochromism, review 7—113123
semiconductor wafer with differing surface recomb. vels., minority carrier continuity eqn. *(Chinese)* 7—125009
semiconductors, amorphous, germinate recombination kinetics 7—84921
semiconductors, donor-acceptor pairs, hopping conduction and luminescence relax. 7—105564
semiconductors, extrinsic, double source optical absorpt., spectral photocond. meas., deep impurity levels pop. effects 7—132300
semiconductors, longitudinal extrinsic photoconductors, signal and noise currents, background-limited regime 7—70350
semiconductors, optical beam induced current images, scan speed dependence 7—77002
semiconductors, optical detection of mag. resonance, conf., Kiev, USSR (May 1985) 7—134343
semiconductors, photoconductivity, nonlinear light transmission, optical absorpt. saturation 7—118534
semiconductors, photoconductivity in relaxation case systems 7—105621
semiconductors, photovoltage and photocurrent, relax. case 7—105622
single crystals, photocond., nucl. radiation and ultrasound influence 7—131711
surface current detection during light reflection from a diffraction grating 7—143516
TMPD in methylcyclohexane, photocond. kinetics with pulsed laser ionisation 7—92224
transparent ferroelectric ceramics, photorefraction and formation of holographic gratings 7—143977
TTF-p-chloranil single cryst., neutral-ionic phase transition 7—84255

photoconductivity continued
Ag halide exposure, abrupt reduction of photoconductivity *(Japanese)* 7−128690
Ag-GaAs, surface polariton excitation, photoresponse influence 7−112198
$AgGaSe_2$ thin films, optical props. 7−99962
$AgGaSe_2$-Al Schottky barrier diodes, thin film, elec. characts. 7−105658
n-$AgInSe_2$ vacuum evaporation and semicond. props. study 7−119154
$Al_{0.3}Ga_{0.7}As$, metal-insulator transition, fine-tuning, persistent photocond. 7−124865
$Al_xGa_{1-x}As$ crystals, surface photocurrent due to optical electron orientation 7−137982
$Al_xGa_{1-x}As$, press. induced effects on phonons and gap states 7−142926
$Al_xGa_{1-x}As$:Te, uniaxial stress effect on photoconductivity 7−131700
Al_2O_3:Cr, ruby, impurity absorpt. spectra zero-phonon lines and anomalous photoelec. props. studies *(Russian)* 7−105608
As_2Se_3, photoluminescence, thermalisation of excited carriers, band states 7−125792
As_2Se_3:Ni(Bi), vitreous, photoelectric props. 7−77001
As_2Se_3-Sb_2Se_3 two-layer glassy semiconductor structs., injection sensibilisation of photoeffect 7−84985
As_2Se_x, chalcogenide glassy semiconductors, electronic processes on surface, photoexcitation 7−84986
$Bi_{12}GeO_{20}$, bulk photovoltaic current, displacement component determ., Hall meas. *(Japanese)* 7−118529
$Bi_{12}GeO_{20}$, photoelectret state kinetics 7−85531
$Bi_{12}GeO_{20}$ photorefractive sillenite cryst., deep electron trap effects 7−98859
n-$Bi_{1-x}Sb_x$, photoelectromagnetic effects meas. using computer controlled spectral studies 7−77006
$Bi_{12}SiO_{20}$ single cryst., photocond. relax. studies 7−125047
$Bi_{12}SiO_{20}$-$Bi_{12}GeO_{20}$ crysts., photoconductive and photorefractive props., high diffr. efficiency meas. 7−125044
$CdCr_2Se_4$, ferromag. semiconductors, picosecond conductivity 7−143509
p-$CdCr_2Se_4$, photoelectrochemical behaviour studies 7−118540
$CdGaInS_4$ layered crystals, photoconductivity sensitising centres 7−99122
$CdGaInS_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$Cd_4GeS_6(Se_6)$ solid soln., physicochem. and photoelec. props. *(Japanese)* 7−125046
$Cd_xHg_{1-x}Te$, photoconductivity, energy band parameters, influence of surface treatment 7−112395
$CdIn_2S_4$, slow recomb. centres, optical quenching 7−143478
p-$Cd_{1-x}Mn_xTe$, deep electron traps 7−76805
$Cd_{1-x}Mn_xTe$, shallow energy surface states 7−70371
$Cd_{1-x}Mn_xTe$, temp. depend. photocond., photolum. and UPS studies 7−85794
$Cd_xPd_{1-x}S$ polycrystalline films, photosensitivity, reversible transition between sensitive-insensitive states 7−112394
CdS, air-sintered pellets, surface occurrence of impurity phases 7−86500
CdS amorphous monolayer and multilayer structures, persistent photocond. 7−84987
CdS crystallites, electronic processes 7−70327
CdS film prep. and props., solar energy converter appls. 7−144278
CdS, luminescence and photocond., ultrasound-stimulated changes 7−76302
CdS, photoconductivity at high press. 7−92219
CdS, photosensitive crystals, chaotic and complex regular dynamics of temp.-electric instability 7−105610
CdS:In amorphous films, elec., photoelec. and optical props, 7−85873
CdSE single crysts., photocond. fatigue obs. under IR illumination, tunnelling model calcs. *(Russian)* 7−77010
CdS_xSe_{1-x}, photostimulated dissociation of donor-acceptor pairs 7−131702
CdSe, film, photocurrent, saturation and negative differential resistance 7−99119
n-CdSe films, traps and minority-carrier diffusion length 7−131818
CdSe, photoconductivity, optical absorpt. saturation 7−131701
CdSe thin films, electrodeposition from diethylene glycol+tri-n-butylphosphine selenide 7−106449
CdSe thin films, photoconducting props., annealing effects 7−118599
CdSe/ice interface, photoelec. phenomena 7−99210
CdTe, persistent cyclotron reson. and photocond. obs., charge separation model 7−84637
CdTe, pure and Cl,Cu doped defect and impurity levels, γ irrad. effects, TSC and PICTS studies 7−105484
CdTe:Cr, photo-ESR and photoconductivity studies, photoionisation of Cr ions 7−99564
CdTe-$Cd_xHg_{1-x}Te$ heterostructures, electrical and photoconducting props. 7−85000
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crysts., optical and elec. props. study 7−118542
$Cu_{1-x}Ag_xIn_3S_8$ solid soln., struct., elec. and optical props., comp. depend. study 7−118109
$CuFeO_2$:Mg(Sn), photoconductivity, band edge positions, optical transitions 7−84990
$CuGa_{1-x}In_xS_2$, photoelectric props. 7−125055
$CuGaIn_{1-x}Se_2$ single crystals, props. for photovoltaic appls. 7−131707
$CuGaSe_2$, photocond. at room temp. 7−84989
$CuGaSe_2$, photoconductivity, valence band struct. 7−125054
CuI photocathodes, dye-sensitised, photocurrent quantum efficiency 7−99194
$CuInS_2$, photoconduction, strongly sublinear depend. on excitation strength 7−84967
$CuInS_{2y}Se_{2-2y}$ single crystals, props. for photovoltaic appls. 7−131707
$CuInSe_2$ thin films and devices, effect of stoichiometry and O_2 on elec. characts. 7−131819
$CuInSe_2$, type conversion on deposition of CdS, appl. for solar cells 7−125118
EuO, ferromag. semiconductors, picosecond conductivity 7−143509
γ-FeP_4, cryst. growth from vapour, photosensitive semicond. props. 7−84995
GaAlAs:Sn, highly doped, resonant DX centres under hydrostatic press. in mag. field 7−112245
$Ga_{1-x}Al_xAs$:Si variable gap p-n structures, expansion of spectral photosensitivity by reradiation 7−137987
GaAs direct subpicosecond meas. of carrier mobility of photoexcited electrons 7−92232
GaAs doping superlattices, tunable electroabsorption 7−92639
GaAs, EL2 defect metastability, TSC, photocond. meas. 7−92097
GaAs, EL2 metastability, photodissociation model, obs. of EL2 props. 7−98884
GaAs epitaxial struct. surface-depleted photoconductors 7−105611

photoconductivity continued
GaAs, hot photoexcited electron relaxation, Monte Carlo investigation 7−92233
n-GaAs, intensity modulated photocurrent spectroscopy 7−112388
GaAs nipi doping superlattice, electrolum., tunable absorpt. 7−138517
GaAs, optically enhanced photocurrent, photo-Hall study 7−131709
GaAs p^+-i-n^+ submicron struct., photoexcited charge carrier instability 7−99182
GaAs, photoconductive scanning tunnelling microscopy obs. 7−77009
GaAs photoexcited electrons, carrier mobility, direct subpicosec. meas. 7−118494
GaAs, press. induced effects on phonons and gap states 7−142926
GaAs, semi-insulating, optically induced long lifetime photocond. 7−99125
GaAs, semi-insulating, transient photocurrents, photo-deep-level Fourier spectroscopy 7−70241
GaAs, semi-insulating, trapping dynamics, frequency-dependent photoconductivity 7−92228
GaAs semi-insulating crysts., extrinsic photocond. characts., low temp. enhancement effect 7−105613
GaAs, semiinsulating illuminated layers, transport parameters 7−92229
GaAs:Au, surface, photoconductivity, photovoltage, effects of vacuum thermal treatment 7−77004
GaAs:Cr, impurity levels, two-source photoconductivity meas. 7−76819
GaAs:Cr, semi-insulating, EL2 photoquenching props., photocond. meas. 7−112244
GaAs:Cr photocond. and photolum. spectra, anisotropically etched surface microrelief effects *(Russian)* 7−137989
GaAs:Si,Be, Esaki-Tsu type doping superlattice, realisation 7−125102
n-GaAs:Si,Sn,Dx centre, mobility, free electron density 7−131578
GaAs:Si-$Al_xGa_{1-x}As$ heterostructures, illuminated, conduction props., expt. 7−112460
GaAs:V, semi-insulating, impurity energy level scheme, photocond. meas. at 4.2 K 7−105487
GaAs/$Al_xGa_{1-x}As$ heterostructures, illuminated, conduction props., theory 7−112461
GaAs/$Al_xGa_{1-x}As$ modulation doped superlattices, 2D electron density 7−99184
GaAs/$Al_xGa_{1-x}As$ multiple quantum wells, transition energies and oscillator strengths 7−118573
GaAs/AlGaAs modulation doped heterostructure interface, neutron irradiation effects on electron transport 7−143562
GaAs/electrolyte interface, photoresponse 7−112486
GaAs/$Ga_{0.77}Al_{0.23}As$ heterojunction, energy gap in condensed phase 7−77075
GaAs-$Al_xGa_{1-x}As$, modulation doped, mobility enhancement 7−138026
GaAs-$Al_xGa_{1-x}As$ heterojunction, 2D electron gas, microwave photoresistivity and fractional quantum Hall effect 7−125036
GaAs-$Al_xGa_{1-x}As$ heterostructures, photoexcited carriers 7−138041
GaAs-$Al_xGa_{1-x}As$ multiple quantum wells, excited states, monolayer fluctuations, photocurrent and reflection spectra 7−84690
GaAs-$Al_xGa_{1-x}As$ quantum wells, excitonic transitions, optically excited transport 7−137988
GaAs-AlAs quantum wells and super-lattices, photoconductivity and photoreflectance 7−143520
GaAs-AlGaAs graded gap superlattice, Bloch transport of electrons and holes 7−125103
GaAs-AlGaAs MQW structs., MOVPE-grown, quantum confined Stark shifts 7−138421
GaAs-AlGaAs modulation doped quantum well structs., spectral photoconductivity 7−118527
GaAs-AlGaAs modulation doped heterostruct., photoexcited quantum Hall behaviour 7−131685
GaAs-$Ga_{0.8}Al_{0.2}As$ double heterostruct., N-shaped I-V charact., electroabsorpt., photocurrent 7−143563
GaAs-GaAlAs quantum wells, external electric field, optical spectroscopy 7−85833
GaAs-GaAlAs quantum wells, interband photocond., magneto-optics study 7−138437
GaAs-GaAsP strained-layer superlattices, picosecond relax. of hot carrier distrib. 7−137943
$GaAs_{1-x-y}Sb_xP_y$ epitaxial layers, direct obs. of high resist. regions 7−85150
GaInAs-InP heterojunction, two-dimensional hole gas 7−131775
GaInAs-InP quantum wells, photolum. quenching, electric field depend. exciton energy 7−144093
$Ga_{0.47}In_{0.53}As$-InP, quantum well photodiode, photocurrent step-like struct. 7−143603
$Ga_{0.47}In_{0.53}As$-InP epitaxial superlattices, absorpt., photolum. and photocurrent spectra 7−70384
$Ga_{0.47}In_{0.53}As$-InP quantum wells and superlattices, CBE growth, TEM, IR absorpt., photocond. and photolum. characts. 7−126023
GaP (111), surface photovoltage spectroscopy 7−77036
GaP:Fe p-i-n^+ structs., photoelec. props. 7−77062
GaP-H_2SO_4 electrolyte contact, electron diffusion length, determ. by photocurrent meas. 7−125120
GaSe:Co single crystals, hole traps, optical absorpt. and photocond. spectra, TSC meas. 7−99091
Ga_2Se_3:Fe, optical absorption, photocond., temp. coeff. *(Korean)* 7−84996
Ge, Auger recombination of free holes at shallow acceptors 7−70325
Ge current instabilities and e-h plasma stratification during photocarrier exclusion 7−137980
Ge, dangling bonds in dislocation core, evidence from photocond. meas. under high press. 7−98172
p-Ge, multiphoton nonlinear absorption at submillimeter wavelengths 7−118982
Ge photoconductors, chaotic dynamics 7−105616
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
$Ge_{22}Se_{78}$, amorphous thin films, photocurrent anomalous decay 7−92225
$Ge_{22}Se_{78}Bi(Sb)(Te)_x$ chalcogenide amorphous thin films, photocond. studies 7−85003
H_2 production from photoelectrochemical cells, electrode matching theory 7−106934
HfO_2 ion implanted films, photoelectrochemical investigations of disorder 7−104789
$HgCr_2Se_4$, ferromag. semiconductors, picosecond conductivity 7−143509
HgI_2, dielectric and electrical props., effect of visible light intensity 7−99637
HgI_2, photoelectronic props. 7−112396

photoconductivity continued
HgMnTe, acceptor binding energy, photoconductivity and magnetoconductivity meas. *(German)* 7−124927
HgMnTe, exchange splitting of shallow acceptor, photocond. and transmission meas. 7−76803
In cluster in NaA zeolite, photocond. and luminescence studies 7−125772
$In_xAl_{1-x}As$/InP epitaxial heterostruct., deep trap levels and DX-like centres, photocond. study 7−137844
$InAs_{1-x}P_x$, far IR magneto-optic props. under hydrostatic press. 7−118990
$InAs_xSb_{1-x}$, narrow gap semicond., optical, magneto-optical and transport studies 7−138088
InGaAs-InP MQW structs., atmospheric-pressure MOCVD grown, exciton electroabsorpt. at room temp. 7−92640
InGaAs-InP quantum wells, VPE grown, quantum-confined Stark effect 7−84785
InGaAsP/GaAs heterojunction diode defect distrib., light-beam-induced current method study 7−118577
InP, electron transport, press. depend. 7−112371
InP, nonintentionally doped and P(Ar) ion implanted, radiation defects, photoluminesc., photocond. spectra 7−104854
InP time-resolved far IR photocurrent response, impact excitation and bottleneck effects 7−70355
InP:Fe^{2+}, impurity state photoionisation cross section spectrum, photocond. meas. 7−105472
InP:R, resonant laser photoelectric magnetospectroscopy of shallow donors 7−138428
InP:Sn,S neutron transmutation doping, photothermal ionisation photocond. studies 7−124300
InP-KCl electrolyte junction, interfacial defects, photolum. and photocond. studies 7−112485
InSb cyclotron-phonon resonance with phonon absorption 7−125051
InSb, oscillations in optical and transport coeffs., optical methods combined with mag. resonance 7−138429
InSb, photoconductivity, surface photovoltage, deep bulk levels 7−77005
p-InSb, recombinational props., resistivity and photosensitivity, thermal treatment effects *(Russian)* 7−137958
InSb:Zn, Cr, deep l-c centres, photocond. spectra, elec. props. 7−112226
InSe, 2D defects, effect on transport and phototransport props. 7−105593
InSe amorphous thin films, optical absorpt., photoconductivity 7−105625
$In_{1-x}Tl_xTe$ solid soln., transport effects, percolation 7−70333
KCl, three- and four-photon excitation of nonequilibrium carriers in broad-band crystals 7−143517
$KNbO_3$, anisotropic self-diffraction 7−117157
La_2CuO_4 high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137985
$LiNbO_3$ crysts., light-induced photogalvanic and photorefractive changes, hologram recording appls. 7−125041
$LiNbO_3$ polycrystalline films on Si substrates, elec. and photoelec. props. 7−99131
$LiNbO_3$:MgO,Nd, miniature CW and active internally Q-switched lasers 7−68683
$Mg_xCd_{1-x}Se$, recomb. processes under conditions of maximum charge transfer between local centres 7−84916
$Mg_{0.2}Cd_{0.8}Te$ solid soln., laser irradiation, effect on electrophysical props. 7−99114
$Mn_xCd_{1-x}Te$ single crystals, props. for photovoltaic appls. 7−131707
NaCl, three- and four-photon excitation of nonequilibrium carriers in broad-band crystals 7−143517
Ni-ZnSe-Ge structures, photoelec. props. 7−105620
$NiCl_2(Br_2)(I_2)$, photocond. and energy gap 7−99126
Pb_2CrO_5 thin film, photoconductivity, crystal orientation depend. 7−99108
$Pb_{1-x}Hg_xTe$, composition depend. of optical and elec. characts. 7−76997
$Pb_2P_2S_6$ ferroelec. crysts., band gap, photocond., luminesc. and absorpt. meas. 7−85565
PbS photosensitive polycryst. films, temp. functions of basic parameters 7−70436
PbS-PbSe superlattice, magnetotransport and photoconductivity, mag. fields to 8 Tesla 7−131776
PbSe, chemically deposited film, thermal annealing effects on photoconductive behaviour 7−137979
PbSe polycryst. layers, carrier mobility and photocond., adsorbed O effects *(Russian)* 7−99235
PbSe, polycrystalline films, residual conductivity, surface state effects 7−85144
$Pb_{0.76}Sn_{0.24}Te$:Cd single crystals, photoconductivity, long wavelength IR spectrum 7−70349
PbTe doping superlattices, photoconductive response 7−118526
PbTe epitaxial layers, photocond. kinetics 7−84973
PbTe vapour deposited films, frozen photocond. temp. depend. obs. 7−105623
PbTe:Ga single crystals, high resist., impurity photocond. band studies 7−76996
Pt complex, $Pt(en)_2\ Pt(en)_2I_2\ (ClO_4)_4$, halogen bridged, photocond. studies 7−99129
Se, excited carrier thermalisation, photocond. and photoluminescence obs. 7−125792
Se, hexagonal single crystal, inhomogeneities, elec. and photoelectrical props. 7−92221
a-Se:Cl films, transient photocond. probing of negative bulk space charge evolution 7−143521
$a\text{-Se/Cd}_xSe_{1-x}$ multilayer films, preparation and optoelectronic props. 7−125985
Se-based amorphous insulators 7−99118
Si amorphous film, dangling bond passivation by gas adsorpt. 7−71419
a-Si films, density of states distribution, photoconductivity meas. 7−84626
a-Si films, transport props. investigation by fast transient techniques 7−84886
Si III hole semimetal, Hall effect and low-temp. resist. meas. 7−137962
Si IV hexagonal semicond., Hall effect and low-temp. resist. meas. 7−137962
a-Si, low-temp. steady-state photocond. studies 7−118537
Si, minority carrier lifetime meas. methods for solar grade crystalline semiconductors *(Japanese)* 7−118498
a-Si p-i-n junction solar cells, localised states and trapped carrier distribs. after light soaking 7−144822
Si p-p^+ junction, heating of holes by CO_2 laser radiation, photoresponse 7−99113
Si, photoconductivity spectra of heat treated materials, electrodeless method 7−84993

photoconductivity continued
Si, polycrystalline, barrier height and minority carrier capture cross-sections, plasma annealing effect 7−125007
n-Si, porous surface layers, form. props., effects of anodic polaris, conditions 7−112125
Si solar cells, short-circuit current depend. on angle of incident radiation 7−71620
Si wafer, anal. of laser pulse interaction, bulk lifetime and surface recomb. vel. determ. 7−118536
Si:Au, deep acceptor, $P_{1/2}$ resonant states and Fano resonances 7−98924
Si:Au, donor and acceptor levels, optical and elec. props. *(Chinese)* 7−105450
Si:Au, photoconductivity oscillations, chaos 7−70356
Si:Au, steady-state photoconductivity, optical charge transfer 7−118532
Si:Au, transient negative photoconductivity 7−112387
Si:B, impurity photoconductivity, relax. kinetics, A^+ centres, A_2^+ complexes 7−118531
Si:B(P) amorphous films, bias effects on preparation in triode glow discharge 7−126028
Si:Ga, ion implanted, high resolution spectral photocond. meas. 7−92220
a-Si:H, Al glow discharge films, optical and elec. props. 7−84584
α-Si:H, carrier mobility-lifetime estimates from transient and steady-state photocond. meas. 7−118507
a-Si:H, const. photocurrent method, determ. of density of localised states 7−105493
a-Si:H, dangling bonds and metastability, expts. and models, review *(French)* 7−131592
a-Si:H, dangling-bond recombination and photoconductivity 7−84981
a-Si:H, deep localised states of D-centres originating from dangling bonds 7−84772
a-Si:H, density of states determ. 7−70157
a-Si:H, doped, photoinduced change in localised state density near cond. band 7−137862
a-Si:H, doped and undoped, density of states 7−84623
a-Si:H, dual-beam-modulated photocond., response-time and drift-mobility meas. 7−112399
a-Si:H, gap state density distrib., light-induced effects 7−137790
a-Si:H, gap states distribution, photoconductivity meas. 7−84625
a-Si:H, glow discharge deposition, equilib. temp., related defects 7−131466
a-Si:H, IR stimulated current 7−85004
A-Si:H, light induced effects on charge carrier generation and decay 7−143503
a-Si:H, light-induced creation of defects, influence of mech. stress, photocond. study 7−118539
a-Si:H, n-type, transient photoconductivity 7−118538
a-Si:H, persistent photoconductivity, thermal equilibration model 7−131713
a-Si:H, photoconductivity, absorpt. in defective region 7−131703
a-Si:H, photodegradation under long-time repeated light exposure 7−143505
a-Si:H, photofield-effect current, illumination flux depend. 7−84980
a-Si:H, recombination mechanisms of photogenerated carriers 7−84976
a-Si:H, space charge limited currents under light illumination 7−84979
a-Si:H, steady state photoconductivity, sensitization and recombination centres 7−105606
a-Si:H, sub-band-gap absorption coeff. and density of states, constant photocond. method 7−105614
a-Si:H, sub-bandgap optical absorpt. and light-induced defects 7−144086
a-Si:H, transient photocurrent meas., weak electron-multiphonon coupling 7−84698
a-Si:H, trapped nonequilibrium carriers, two-beam photoconductivity 7−84774
a-Si:H,B, heavily doped, anomalous substrate and annealing temp. depend., appl. for solar cells 7−76998
a-Si:H,B(P)-(quinone-hydroquinone), liquid Schottky barrier, charact. 7−77039
$a\text{-Si:H,F-SiGe}_x\text{:H,F}$ modulated structs., material design, photoconductivity 7−132494
$Si\text{:H,F-SiGe}_x\text{:H,F}$ stacked amorphous multilayers, prep. and props. *(Japanese)* 7−118530
a-Si:H,P, doped and undoped, steady-state transport under nonequilibrium conditions 7−84977
a-Si:H,P, drift mobility of steady-state photocarriers 7−137986
Si:H amorphous thin-film solar cell production by CVD 7−113424
a-Si:H based single and multilayers, persistent photoconductivity 7−131712
a-Si:H doping modulated superlattices, persistent photocond., field enhanced cond. obs. 7−70400
a-Si:H film, transient phototransport mechanism study 7−92222
a-Si:H films, catalytic CVD growth 7−71059
a-Si:H films, coaxial-line-type microwave plasma CVD growth *(Japanese)* 7−71079
a-Si:H films, density of states and photoconductivity 7−84629
a-Si:H films, electron cyclotron resonance microwave plasma CVD, photodiode appl. 7−86050
a-Si:H films, evaporated, elec. props., hydrogenation effects 7−70360
α-Si:H films, ion implanted with Cr(Co)(Ni)(Ar), photoconductivity and optical props. 7−85002
a-Si:H films, laser induced CVD, photovoltaic devices and material props. 7−132492
a-Si:H films, light-induced degradation and thermal recovery, rate equations 7−143513
a-Si:H films, microwave electron-cyclotron-resonance plasma CVD 7−100104
a-Si:H films, photocond. degradation and annealing characts. 7−143512
α-Si:H films, photoconductivity, kinetics of broken bond formation 7−143508
a-Si:H films, reversible struct. changes, prolonged illumination, annealing 7−98734
a-Si:H films, role of H, IR spectral anal. 7−98730
a-Si:H films, surface and bulk defect densities, photothermal and photoconductive determ. 7−105492
a-Si:H films, time-of-flight signal, effects of sample capacitance and light intensity 7−84978
a-Si:H image sensors, physical props. 7−84983
a-Si:H layers, transient photocurrents, effect of morphology 7−84982
a-Si:H nipi doping superlattices, persistent photoconductivity, carrier recomb. kinetics 7−131714
a-Si:H p-i-n solar cells, O-contaminated, light-induced degradation 7−144829

photoconductivity continued
a-Si:H solar cells and modules, long term stability 7−133095
a-Si:H thin film surface cell structs., band bending, optical, elec. and photoelec. props. 7−131801
a-Si:H:F thin films, glow discharge deposition from fluorinated silanes, characterisation 7−132493
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, persistent photoconductivity, doping effects 7−77003
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, undoped, persistent photoconductivity 7−84968
a-Si:H/a-SiN_x:H multilayer films, plasma deposition, persistent photoconductivity 7−76999
a-Si:H/a-SiN_x:H multilayer structures, steady-state photomodulation spectroscopy 7−118592
a-Si:H/c-Si heterojunction, optoelectrical props., imaging device appl. 7−112456
a-Si:H/p-Si junctions, dark current and spectral response 7−77086
a-Si:H-Pt, Schottky diode, photoelectric characteristics 7−85048
a-Si:H-a-SiN_x:H layered structures, persistent photocond., internal stress effects 7−105693
a-Si:H(H,P) films, optical and electrical props. 7−85871
Si:O light induced mobility transition, photo-Hall effect meas. 7−112409
Si:P, transmutation doped, minority carrier lifetime, annealing effects 7−84923
a-Si:P,H, hole trap transport parameters charactn. 7−92195
Si-on-sapphire films, picosec. photocarrier relax. time temp. depend. meas. 7−143511
a-SiC:F(H) films, prep. by magnetron sputtering, props. 7−112400
a-SiC:H, glow discharge deposited, evidence for microstructure, IR adsorption peak 7−132283
a-SiC:H, transient photocurrent meas., weak electron-multiphonon coupling 7−84698
a-SiC:H films, charge storage in deep traps 7−84922
a-SiC:H magnetron sputtering, H effects on film props. 7−92866
a-SiC:H thin films, magnetron sputtering using methane *(Japanese)* 7−92887
a-$Si_{1-x}C_x$:H films, XPS and ESR charactn. *(Japanese)* 7−124748
a-Si_xC_{1-x}:H films, field effect under illumination *(Chinese)* 7−112386
$Si_{1-x}C_xH_{2-y}$, semicond. polymer, electronic, optical and struct. props. 7−99961
a-SiGe:H, transient photocurrent meas., weak electron-multiphonon coupling 7−84698
a-SiGe:H,F, light-induced defect generation, electronic and optical props. 7−143502
a-SiGe:H,F films, minority carrier diffusion length after light or proton irrad. 7−143476
a-SiGe:H films, CVD using microwave-excited plasma 7−100106
a-$Si_{1-x}Ge_x$:H alloys, temp. depend. photocond. and light-induced defects 7−131708
a-Si_xGe_{1-x}:H,F films, band potential, optoelectrical props. 7−70353
a-SiN_x:H-a-Si:H multilayers, carrier transport, picosecond time-of-flight studies 7−138034
a-SiN_x:H-a-Si:H superlattices, transfer doping, electron trapping, effect of a-SiN_x:H comp. 7−99212
SnO_2 tunnel electrode-dye solution interface, acceptor state density distrib. meas. *(Japanese)* 7−131781
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
$SrTiO_3$ doped and undoped ceramic anodes, photoeffects study 7−84991
$SrTiO_3$, light scatt., effect of photocarrier generating light 7−125757
Ta_2O_5 anodic films, low temp. photoconductivity 7−99238
Te thin films, photo-oxidized photoconduction 7−85005
TiO_2 films, n-type semicond., sol-gel prep., photoelectrochemical props. 7−131710
TiO_2 ion implanted films, photoelectrochemical investigations of disorder 7−104789
n-TiO_2, laser-induced photopot. meas. with or without current doubling reagent 7−99109
TiO_{2-x}, thin oxide coatings on Ti, photopolarisation studies 7−105612
$TlInSe_2$:Li intercalation cpd., elec. and photoelec. props. *(Japanese)* 7−124984
$TlSbS_2$ photoelectrodes, photoconductivity measured at the solid-electrolyte interface 7−70411
Tl_2SnS_3 crystals, growth, photoelectric props. 7−85992
$Y_{3-x}Ba_xCu_3O_{9-y}$ high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
YCu_2O_x high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
YIG:Ca, Ge epitaxial films, elec. props., excitation effects 7−125154
$Zn_xCd_{1-x}S$ layers, photoelec. and optical props. 7−105619
$Zn_xCd_{1-x}Se$ single crystals, energy spectrum of local centres, elec. charcts. 7−112357
$ZnIn_2S_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$ZnIn_2S_4$ single cryst., SiO_x antirefl. coating designed for increased photocurrent 7−123158
ZnO films, chemical deposition from aqueous solutions 7−113460
n-ZnO, laser-induced photopot. meas. with or without current doubling reagent 7−99109
ZnS band-to-band impact ionisation rate, Schottky diode photocurrent multiplication meas. 7−143473
ZnSe, annealed in presence of Zn metal and air, photocond. rise and decay 7−112397
p-ZnSe, point defects on photocond. spectra 7−112402
ZnSe, polycrystalline electrodes, electrosynthesis, photoelectroactivity 7−70357

photoconductors *see photoconducting materials*

photocopying
see also electrophotography
color image scanning and printing technology *(Japanese)* 7−89291
ocular hazards from Xe flashlamps 7−139313
photoreceptor materials for PPC *(Japanese)* 7−99111

photocurrent *see photoconductivity; photoemission*

photodarkening *see photochromism*

photodetectors
acousto-optic signal processing, photodetectors, review 7−80878
basic principles of photodetectors 7−73427
book 7−88756
bullet speed meas. using photogate timer 7−134404
coherent lightwave communications, receiver modelling 7−90833
currents fand fields, num. study 7−128651
EM noise resistant, for fibre-optic communication 7−136603
fibre light guide, uninterrupted radiation detection, demonstration *(Russian)* 7−123214
fibre optic appls., reliability considerations, conf., Cambridge, MA, USA (Sept. 1986) 7−140366
fibre-optic balanced heterodyne detection, excess-noise suppression 7−73418
field appl. of coherent optical communication systems 7−90834
fluophotorefractometric detector, FFR-01 for meas. on liquids 7−114041
fluorescence detection with picosecond time resolution, high sensitivity 7−102527
Geiger mode APD for very low light levels laser ranging, expt. eval. 7−75021
goniophotometer, automated moving arm, for measuring the spatial distribution of light sources 7−121183
heterodyne detection, tilt and offset effects 7−67388
HF optical communications, conf., Cambridge, Ma, USA (Sept. 1986) 7−88739
laser radiation with fluctuating phase, coherent detection 7−102520
lightwave device technology for communications 7−110559
linear arrays, alignment methods 7−73420
longitudinal detector photoconductive gain determ. 7−116007
microchannel plate intensified multichannel detectors, gain variation correction 7−73429
MOS photodetector, position sensitive, using lateral photovoltaic effect 7−67389
nonlinearity meas. in optical radiation detectors, by light addition 7−102518
optical data processing systems, photodetector develops. *(Russian)* 7−73419
optical fibre, sources and detectors., conf., Cannes, France (Nov. 1985) 7−66822
optical fibre communication, rise-time meas. 7−102526
optical fibre loss meas. system, detector selection for production testing 7−130379
p.A and d.E interactions unification in photodetector theory 7−96970
photodiode arrays with image convertors, weak pulsed signals recording appl. 7−108664
photodiode matrix system, radiation energy density distrib. meas. over laser beam cross section 7−130215
photointegrator, high-precision SNR calc. 7−128656
photon formalism for IR photodetector, extension and appl. 7−89261
photon-limited laser pulses, arrival time estimate in presence of shot and speckle noise 7−103864
photopolarimeter, in-line light-saving and fibre optic analog 7−134837
photoresistor interface to microcomputer, light-level meter appl. 7−121083
picosecond accumulated photon echoes, high-frequency heterodyned detection 7−123125
pinhole/occulter facility on mast on Space Shuttle, optical detection of modal oscillation *(Portuguese)* 7−134136
polarimeters, integrated, based on anisotropic photodetectors 7−134836
pulsed laser beam parameters meas. cct., biological appl. 7−82661
pulsed signal reception systems having avalanche photodiodes, optimisation 7−102521
quantum open-systems theory approach to photodetection 7−110306
response, difference from transient input-signal charact. *(Russian)* 7−80876
sampled photodetector based on FEU-83 photomultiplier 7−67392
scintillation-photodetector systems, pulse height distribs. 7−74345
self-scanning photodiode array for optical diffr. pattern meas. 7−134399
semiconductor polarimetric photodetectors, prep. principles, photopleochromism, review 7−113123
single-electron recording of light flow, reliability 7−121187
SNR, light intensity correlations effect 7−128657
TEGFET based baseband photoreceiver, sensitivity improvement with low-temp. operation 7−68895
thermoelectrically cooled, for 0.8 to 2.5 μm band, astronomy appl. 7−102524
time-of-flight distance sensor for industrial appls. 7−80735
wavefront sensors, principles of construction based on Talbot effect 7−140744
Al-Al_2O_3-Al(Ag), planar tunnel junction photodetectors, electromag. resonance enhanced photoabsorption 7−73417
AlGaAs laser for tunable superselective radiation detector 7−108663
CO_2 laser parameter meas. with pyroelectric detector 7−110428
(Cd, Hg)Te, photoelectromagnetic detectors for middle and far IR 7−89262
CdTe-CdS heterosystem, rear-barrier photoelectric transducer, preparation and props. *(Russian)* 7−95649
$Ga_{0.96}Al_{0.04}Sb$ junctions, LPE grown, 1.55 μm photodetection props. *(French)* 7−131756
GaAs monolithically integrated photoreceiver with large gain-bandwidth product for 800 nm wavelength 7−97174
GaAs Schottky photodiode and FET association, planar monolithic integrated photoreceiver 7−95651
GaInAs photodiode, monolithic integrating of InP inverted rib waveguide 7−136616
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
GaP-$GaAs_{0.35}P_{0.65}$, optical interference filter, photodiode, single-crystal integration 7−140747
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
Ge, APDs for 1.3 μm monomode appl. 7−73422
Ge, point-contact warm carrier device for CO_2 laser detection 7−95650
H metastable state meas. using Stark effect-based photodetector 7−82009
HgCdTe high temperature detectors for CO_2 laser beam control and heterodyne detection 7−73426
HgCdTe intermediate temperature detector for 10.6 micron heterodyne rangefinder 7−75028
HgCdTe photoconductive detectors, CO_2 laser applications 7−110394
HgCdTe photodiodes for heterodyne appls. 7−73425
InGaAs 8 GHz low-noise p-i-n photodiode for GaAs FET optical receiver 7−68896
InGaAs-InP, lattice matched heterostructure, metallorganic VPE, for high speed photodetectors 7−140746
InP/InGaAsP heterojunction photodiodes for 1-1.6 μm high bit rate communications 7−73421

photodetectors continued
p-InP/n-InGaAsP/n-InP heterojunction waveguide photodetectors 7−89263
Nb based light-sensitive planar interferometers 7−128652
Si HV solar cells for solar radiation sensor 7−78630
Si photodetectors, filtered, absolute, spectra irradiance scales 7−108618
Y-Ba-Cu-O high T_c supercond. weak link, light detection appls. 7−121224

photodielectric effect
4-nitro-4'-aminodiphenyl layers, amorphous, photoelec. and photodielec. props. 7−84988
CdTe thin films, photodielectric props. 7−85001

photodiffusion effects *see Dember effect*

photodiodes
see also avalanche photodiodes
arrays with image convertors, weak pulsed signals recording appl. 7−108664
dye lasers wavelength stabilisation, interferometric fringe detection 7−103811
impedance matched fibre optic transceivers for microwave signal transmission 7−90831
$InAs_ySb_{1-y}$/GaInAsSb/GaSb struct., LPE growth, charactn. and IR photodiode appl. 7−92895
laser Doppler anemometry for velocity meas., semiconductor devices appl. *(German)* 7−140675
LBIC photocurrent, effects of finite dimensions, 2D anal. 7−105624
matrix system, radiation energy density distrib. meas. over laser beam cross section 7−130215
optical fibre loss meas. system, detector selection for production testing 7−130379
photointegrator, high-precision SNR calc. 7−128656
photovoltaics in a single dimension 7−139117
PIN junctions, optical bistability model 7−123063
pulsed laser beam parameters meas. cct., biological appl. 7−82661
Reticon detector, fibre optic illumination, noise improvements 7−139929
self-scanning photodiode array for optical diffr. pattern meas. 7−134399
Shpolskii and fluoresc. line-narrowing spectroscopy, photodiode array detection 7−128664
solar radiation measurement, Si photodiode rotating shadowband pyranometer, empirical radiometric correction for 7−134028
temperature meas. using optical fibres and photodiodes *(German)* 7−80787
X-ray detector, digital, high-resolution, utilising a $CdWO_4$ scintillator array and a photodiode array 7−101064
(Ga,Al)As-GaAs, semiconductor scintillator, nuclear particle and X-ray detector 7−141403
Ga-Al-In-As ternary and quaternary alloy compositions, MBE growth and device appl. 7−77810
GaAlAs heterostruct. devices, research at RSRE, control of interface props. 7−112480
GaAs monolithically integrated photoreceiver with large gain-bandwidth product for 800 nm wavelength 7−97174
GaAs Schottky photodiode and FET association, planar monolithic integrated photoreceiver 7−95651
GaAs-$Al_xGa_{1-x}As$ quantum wells, excitonic transitions, optically excited transport 7−137988
GaInAs photodiode, monolithic integrating of InP inverted rib waveguide 7−136616
$Ga_{0.47}In_{0.53}As$-InP, quantum well photodiode, photocurrent step-like struct. 7−143603
GaP-$GaAs_{0.35}P_{0.65}$, optical interference filter, photodiode, single-crystal integration 7−140747
GaSb p-n junction photodiodes grown by vacuum chemical epitaxy 7−92026
HgCdTe high temperature detectors for CO_2 laser beam control and heterodyne detection 7−73426
HgCdTe intermediate temperature detector for 10.6 micron heterodyne rangefinder 7−75028
HgCdTe photodiodes for heterodyne appls. 7−73425
$InAs_{1-x-y}Sb_xP_y$ epitaxial diode structs., electrophysical and photoelectric props. 7−99112
InGaAlAs-InP monolithic integrated ridge waveguide photodiodes, MBE grown, 1.55 μm operation 7−104036
InGaAs 8 GHz low-noise p-i-n photodiode for GaAs FET optical receiver 7−68896
InGaAs/InP p-i-n photodiodes for microwave fibre links, high-speed self passivated 7−97173
InGaAs-InP, lattice matched heterostructure, metallorganic VPE, for high speed photodetectors 7−140746
$In_{0.53}Ga_{0.47}As$ p-i-n photodiodes, meas. of hole velocity 7−92218
InP/InGaAsP heterojunction photodiodes for 1-1.6 μm high bit rate communications 7−73421
Si photodiode appl. to IR Raman spectroscopy 7−108679
Si photodiode radiometry compared with Australian radiometric scale 7−108617
Si, quantum efficiency and spectral responsivity self-calibration 7−121192
a-Si:H films, electron cyclotron resonance microwave plasma CVD, photodiode appl. 7−86050

photodisintegration
see also deuteron photodisintegration; photofission
Al(γ,X), photodisintegration by coherent and incoherent bremsstrahlung from high energy electrons 7−67801
$^3H(\gamma,n)$, electromagnetic observables, separable pot. formalism 7−128952
$^3He(\gamma,X)$, photon absorption mechanism in Δ resonance region 7−67796
$^3He(\vec{\gamma},p)$, 90-350 MeV, cross section asymmetry in two particle photodisintegration 7−67799
$^3He(\gamma,p)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^3He(\vec{\gamma},p)^2H$, nucleon-nucleon interaction and meson exchange current, Faddeev wave fns. 7−121792
$^6Li(\gamma,pd)^3H$, direct mechanism and low-energy peak of p spectrum 7−96054
$^7Li(\gamma,X)$, photodisintegration channel cross sections in giant resonance region 7−135298
$^{23}Na(\gamma,X\gamma')$ partial nucleon channels, dipole giant resonance decay, integrated partial cross sections, photoabsorption 7−116381
S(γ,X), photodisintegration by coherent and incoherent bremsstrahlung from high energy electrons 7−67801
Si(γ,X), photodisintegration by coherent and incoherent bremsstrahlung from high energy electrons 7−67801
^{232}Th, half-life measurement of ^{225}Th, ^{226}Th, ^{223}Ac and ^{226}Ac products 7−116345

photodissociation
see also molecular photodissociation
cyanogen photolysis, Ar-cyanogen flow, CN UV fluoresc. spectra anal. 7−96718
negative metal cluster ions, mass-selected, photodissoc., photodetachment, and small mol. desorpt. rate 7−132957
$Cd_xHg_{1-x}Te$, photo-assisted epitaxy, UV laser source 7−132497
CdMnTe, photoassisted MBE 7−132472
CdTe:In(Sb), thin films, photoassisted MBE, substitutional doping 7−132472
H_2S in interstellar grain mantles, UV photolysis and S_2 formation in comets 7−120320
HgTe, photo-assisted epitaxy, 200°C 7−132497
I photodissociation laser, resonance transition line, Ar buffer gas press. broadening *(Korean)* 7−82544
KBr:Ag, Na, activator photodissociation, colour centre generation *(Russian)* 7−83952
photodissociation 1 GW laser amplifier system *(Korean)* 7−82545
XeCl laser ablation of polymers and biological tissue, optical pulse duration, photoacoustic spectra study 7−113964

photodissociation lasers *see chemical lasers*

photodissociation of molecules *see molecular photodissociation*

photoelasticity
see also mechanical birefringence
ankle joint, 3D stress distribution, scattered-light polarizer photoelasticity 7−71769
aragonite, photoelastic consts. determ. from Raman intensity anal. of calcite 7−70741
Araldite, photoelastic, stress freezing obs. 7−90950
axisymmetric stress distrib., integrated photoelasticity method 7−97463
beams, orthotropic, centrally loaded, transmission photoelasticity 7−123560
biaxial loading, dynamic crack curving and branching 7−123526
cholesteric liquid crystal, cubic blue phases, electric field effects, Landau model 7−124094
elastooptic coeff. of transparent meas., using optical heterodyne method 7−138420
fibre optic catheter-tip sensor based on photoelastic effect 7−133501
fibre optic photoelastic press. sensor with fibre-loss compensation 7−68867
fibre optic polarisation modulator using photoelastic effect 7−130338
holographic photoelasticity, anal. using matrix method for unpolarized light *(Chinese)* 7−122813
modulator for mid-IR range down to 33 μm 7−140727
optical fibres, single-mode, deformation under static longitudinal stress 7−123224
pin-joined metal-composite, contact interaction problem 7−69074
pipe tee, photoelastic assessment of finite element anal. 7−123559
plate, surface-flawed, subjected to cylindrical bending, scattered-light anal. 7−110849
polycarbonate, favourable residual stresses, meas. 7−110887
stress intensity factor, K_I, orthotropic, use of photoelasticity 7−123557
stress intensity factor determ. from photoelastic isochromatic fringe patterns 7−97462
stress intensity factors for interacting cracks 7−110847
stress intensity factors for near edge cracks by digital image analysis 7−110846
viscoelastic behavior of opto-mech. props., appl. to viscoelastic fracture studies 7−75486
wave front problem in dynamic photoelasticity 7−90938
whole-field image processing method for photocarrier fringe pattern *(Chinese)* 7−123562
Al plate, fracture toughness determ., photoelastic coating method 7−100465
As_2Se_3 glassy films, SAW propag. vel. and elastic consts., photo-induced variations study *(Russian)* 7−85593
$Ba_2NaNb_5O_{15}$ crysts., incommensurate phase, optical birefringence temp. depend. study *(Russian)* 7−70740
CaGaGe garnet, elastic and photoelastic props. 7−131210
GaSe, lattice dynamics, photoelasticity, Raman scatt., optical suscept., high press. studies 7−98364
$PbCl_2$ crysts., photoelastic props. at 10.6 μm 7−70744
SbSI single crysts., photodeform. temp. depend. and pyroelec. charge meas. 7−69808
Si ribbons, prep. and thermal residual stress anal. *(French)* 7−125962
Si-Ge_xSi_{1-x}, Raman scattering in Fibonacci superlattices 7−99186
SiO_2-core single-mode fibres, refractive indices, residual stress effects 7−97138

photoelectrets
4-nitro-4'-aminodiphenyl layers, amorphous, photoelec. and photodielec. props. 7−84988
$Bi_{12}GeO_{20}$, photoelectret state kinetics 7−85531
$Bi_{12}GeO_{20}$ photoelectrets, photo- and thermo-stimulated depolarisation study 7−132188
$Bi_{12}GeO_{20}$-nematic liq. cryst., data storage and reconstruction 7−132189
$Bi_{12}SiO_{20}$ crystals, photoelectret state, X-ray irradiation effects study 7−99652
$Bi_{12}SiO_{20}$, induced impurity photoelectret state 7−70696
$Bi_{12}SiO_{20}$, induced impurity photoelectret state, spectral depend. 7−77453
$Nd_3Ga_5O_{12}$, photo- and thermodepolarisation 7−113068
PbO-CdO electrets, selective photo-depolarization 7−138379

photoelectric cells
see also photoconductive cells; photovoltaic cells
AlGaAs heterostructure photocell, wide-gap window, hot photocarrier 7−85076

photoelectric devices
see also image sensors; photocathodes; photoconducting devices; phototubes
gas-filled photoelectric detector for Mossbauer radiation meas. 7−109656
interferometer for inspecting surface shape of large optical components 7−128643
optron converter of small displacements having coaxially arranged emitter and photoreceiver 7−108540
picosecond optoelectronic switches 7−75003

photoelectric devices continued
transparent ferroelectric ceramics, composition, structure and requirements for production 7−143975
viscosity meas. of liquids, using photoelectric device and capillary method 7−111130
a-$Se_{1-x}Te_x$-Se double layer xerographic photoreceptors, carrier drift mobility 7−105572
Si solar cells, effect of attitude on solar energy received *(Italian)* 7−93503

photoelectric effects *see photoelectricity*

photoelectric electron emission *see photoemission*

photoelectric emission *see photoemission*

photoelectric tubes *see phototubes*

photoelectricity
see also Dember effect; photocapacitance; photoconductivity; photodielectric effect; photoelectrets; photoelectromagnetic effects; photoemission; photoionisation; photorefractive effect; photovoltaic effects
atomic relativistic photoionisation cross sections, analytical determ. 7−141540
band-tail absorption and recombination times, photo Hall meas. 7−125017
chalcogenide glasses, photoelectronic properties, changes induced by chemical doping, irradiation and thermal history 7−143523
direct gap polar semiconds. under continuous laser illum., nonequilibr. thermodynamic state 7−84961
metal-Langmuir Blodgett film interfaces, photoelectrical studies 7−99204
metals, laser-controlled isothermal oxidation method based on internal photoelectric effect 7−132823
relativistic explanation of the photoelectric effect 7−76995
relaxation semiconductor, photoinduced random field 7−92121
rocks, photoelectric index, Monte Carlo simul. and exptl. meas. 7−107405
semiconductor surface electronic topography study, combined photoacoustoelec. method 7−92243
semiconductors, ferroelectric phase transition, photoinduced changes 7−85549
semiconductors, negative dynamic resistance induced by optical radiation 7−125052
semiconductors, photon drag of electrons 7−85007
Si polycrystalline p-n junctions, photoelec. props., tunnelling and noise, grain boundary struct. effects *(Russian)* 7−85096
p-$Al_xGa_{1-x}As$-p-GaAs-n-GaAs heterostructures, electric and photoelectric characts. 7−112453
a-AsSe films, light induced reversible drift mobility effect 7−77000
$CdCr_rSe_4$ ferromag. semicond., carrier relax. via mag. interactions, photogenerated carrier recomb. time 7−112368
$Cd_xHg_{1-x}Te$ crysts., gamma irrad. effects study *(Russian)* 7−111669
$Cd_xHg_{1-x}Te$ photoelec. props., local surface deform. effects study *(Russian)* 7−99130
CdTe-CdS, pn heterojunction, photoelectric props. 7−105673
CdTe-CdTe-CdS film, p-n-n struct., no-load voltage, spectral distrib. 7−99115
$CsBiS_2$, $CsBiSe_2$, $CsBi_3S_5$, electrophysical and photoelectric props. 7−99052
GaAs, electron-hole interactions and high-field photoexcited electron transport, Monte Carlo calcs. 7−105575
GaAs, IR study of persistent carriers generated during EL2 defect bleaching 7−99840
n-GaAs/Au tunnel junctions photo-resistive effect during plasma refl. of laser light 7−70413
$GaAs_{1-x}P_xCu_{2-y}S$ heterojunction solar cells, photoelectric characts. 7−114104
$Gd_3Ga_5O_{12}$ garnets, photoelectrical props., thermal annealing and electron irrad. effects *(Russian)* 7−125053
Ge-GeO_2 structures, charge transfer processes, ns and ps light pulses effects 7−92305
Ge-Si solid solution single crystal solar cells, photoelectric props. 7−78632
InGaAsP films, dense e-h plasma, time-resolved photolum. studies 7−70896
In_2O_3-InP surface barrier structs., photoelectric props. 7−92226
$KBiS_2$, $KBiSe_2$, KBi_3S_5, electrophysical and photoelectric props. 7−99052
$LiBiS_2$, $LiBiSe_2$, $LiBi_3S_5$, electrophysical and photoelectric props. 7−99052
$NaBiS_2$, $NaBiSe_2$, $NaBi_3S_5$, electrophysical and photoelectric props. 7−99052
$Nd_3Ga_5O_{12}$ garnets, photoelectrical props., thermal annealing and electron irrad. effects *(Russian)* 7−125053
PbTe:Ga single crysts., nonequilib. carriers and current instability relax. time meas. *(Russian)* 7−84928
$RbBiS_2$, $RbBiSe_2$, $RbBi_3S_5$, electrophysical and photoelectric props. 7−99052
Sb thin film, transverse photon drag detect. of FIR radiation by free carriers 7−108659
Si, polycrystalline, elec. and photoelectric props., effect of heat treatment *(Russian)* 7−125045
a-Si:H photosensitive devices, DC magnetron sputtering, photoelectric props. 7−84984
$Sm_3Ga_5O_{12}$ garnets, photoelectrical props., thermal annealing and electron irrad. effects *(Russian)* 7−125053
n-SnO_2-n-$CdGeP_2$:In isotypic heterojunction, photoelectric props. 7−131763
$Zn_{1-x}Cd_xS$ thin films, prep. by MOCVD, struct. and optoelectronic props. 7−119166

photoelectrochemical cells
see also solar cells
hydroxyaluminium phthalocyanine photoelectrochem. cells, phthalic acid treatment 7−106913
phenosafranin-amine photoelectrochemical cell, photovoltages 7−126635
rhodamine, photoelectrochemical cells, electrodic dye layers effects 7−86638
sintered glass membrane type 7−84974
solar cells, optical losses calc. and meas. 7−71627
solar energy storage through photoelectrochem. cells 7−106914
XPS characterization and photoelectrochemical behaviour of $(TiVAl)O_2$ film 7−86807
Pt/SiO_2/n-Si photoelectrodes in I and Br aq. solns., elec. props. and thermal oxide growth 7−100585
n-:CdS/$Fe(CN)_6^{4-/3-}$ photoelectrochemical cell, overlayer formation and stability 7−71626
AgInSe, photoelectrochemical cells, photovoltaic activity 7−126637
p-$CdCr_2Se_4$, photoelectrochemical behaviour studies 7−118540

photoelectrochemical cells continued
CdS, electrodeposition using nonaqueous triphenylstibine sulphide, photoelectrochem appls. 7−86067
CdS photoanodes with thin polymer films, photoelectrolytical cells, photocurrent meas. 7−143519
CdS thin film photoanode production for photoelectrochemical cells using electrodeposition 7−144315
Cd(Se,Te), photoelectrochemical solar cell, efficiency insensitive to light variations 7−93511
CdSe films, electrodeposition, in situ optical reflectance study, appl. for solar photoelectrochemical cells 7−144314
$CdSe_{1-x}Te_x$, thin film photoelectrochemical solar cells, electrochem. energy storage 7−106911
n-$CuInS_2(Se_2)$ aqueous polysulphide (polyiodide) photoelectrochem. cells, solution composition effects 7−100736
CuS/CuCNS dye-sensitised heterojunction photoelectrochem. cell, quantum efficiency 7−100737
n-GaAs electrodes, metal treated, H_2 evolution reaction 7−86806
GaAs films, electro-co-deposited, photoelectrochemical solar cell fabrication 7−92900
n-GaAs, photoelectrochemical electrodes (Os^{3+} modified) for solar cells with 15% efficiency 7−93510
H_2 production from photoelectrochemical cells, electrode matching theory 7−106934
$MoSe_xTe_{2-x}$ electrodes for photoelectrochem. solar cells, valence and conduction bands 7−85101
$Ps_3(PS_4)_2$, PdPS, PdP_2 and PdS, semiconducting cpds., photoelectrochem. props. 7−105702
Pt/oxide/n-Si electrolyte-MIS photoelectrochem. Cells, non-native oxide deposition 7−71624
p-Si/NH_3+KI/NH_3+K/Pt photoelectrochemical cell, supra-band-edge reaction 7−106912
SnO_2 photoelectrochemical cells, rhodamine B sensitised, doping effects 7−93513
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
TiO_2 thin film photoelectrochem. cells, quantum efficiency for back or front side refl. 7−86808
TiO_2-based photoelectrodes in photoelectrochemical cells, O_2 evolution and performance 7−93512
TiO_2-Pt composite electrodes by dispersion plating, photoelectrochem. behaviour *(Japanese)* 7−86639
WO_3 film-acidic H_2O electrolyte contact, photoelectrolysis solar cell potentiality determ. 7−143287
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
Zn_3P_2 vacuum evaporated films, appl. photoelectrochemical solar cells 7−126636
n-1ZrS_2, photoelectrochemistry in aqueous solutions 7−71625

photoelectrochemistry *see electrochemistry; photochemistry*

photoelectromagnetic effects
relaxation semiconductors, photogalvanic effect 7−143515
semiconductors, PEM effect and appls. 7−131706
semiconductors, photomagnetoelectric effect, nonlinear props. *(Chinese)* 7−118525
n-$Bi_{1-x}Sb_x$, photoelectromagnetic effects meas. using computer controlled spectral studies 7−77006
(CdHg)Te photoelectromag. detectors, lin. operation range, thermal and photon effects 7−102519
$Hg_{0.8}Cd_{0.2}Te$, far infrared thermomodulation and cyclotron resonance *(German)* 7−125056

photoelectron multipliers *see photomultipliers*

photoelectron spectra
see also Auger effect; photoemission; ultraviolet photoelectron spectra; X-ray photoelectron spectra
acetylene, ungerade excited states, vibr., photoelectron spectra 7−122611
actinide containing systems, photoelectron spectra, review 7−77754
adsorption on Cu (111), SEXAFS and photoelectron diffr. studies 7−92002
adsorption on GaAs (110), effect on surface props. 7−131435
atomic photoionisation cross sections, many-body calcs. 7−122480
atomic response to intense fs UV radiation study 7−141543
atoms, above-threshold ionisation, pondermotive pot. effect 7−96622
atoms, closed-shell, photoionis. cross sections and photoelectron angular distrib. meas., ESSR investig. 7−135898
atoms, photoelectron spectrum in near-threshold photoionisation 7−103445
benzazulenes, He(I) photoelectron spectra 7−103576
benzene, high resolution zero kinetic energy photoelectron spectroscopy and ionisation pot. 7−90270
benzenethiol adsorbed on Cu (110), angle resolved polarisation dependent photoemission spectra 7−90272
benzo[3,4]cyclobuta[1,2-b]quinoxaline, ionisation pot., photoelectron spectra 7−96792
borinine, struct., vibr., ab initio MNDO STO calcs. 7−89967
bromomethane, core excited, photoionis. decay 7−136020
chemical bond formation, core and valence atomic orbitals 7−122733
chloromethyl ether, ionis. pot. and intramol. charge transfer, photoelectron spectra 7−68409
clusters supported on Kr layers, photoemission studies 7−125918
conjugated carbonyl acetylene compounds, He(I) photoelectron spectra 7−90271
cyclobuta[1,2-b:3,4-b′]diquinoxaline, ionisation pot., photoelectron spectra 7−96792
cyclobutene and its syn- and anti-dimers, UV-photoelectron spectra, ab initio CI calcs. 7−109802
dimethyl mercury, valence and Hg 5d levels, photoelectron spectra 7−122610
dimolybdenum tetraacetate, metal-metal distortions for metal-metal orbital electronic ionisations and excitations 7−68406
1, 2-dithiete, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
dithioglyoxal, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
effective photon model of intensity−dependent photon energy and intensity−independent models 7−122476
electronic spectroscopies at adsorbate covered surfaces, theoretical aspects 7−125931
energy shifts due to the ponderomotive potential 7−141536

photoelectron spectra continued
Eu, 5p edge optical absorpt. spectra determ., electron emission processes study 7−144181
field ionisation, phase space averaging method appl. 7−90057
fluorotoluenes, He I and He II photoelectron spectra, vibr. anal. 7−117022
heterocyclic molecules, polyatomic, PNDO method, spectroscopic parametrization 7−122358
heterocyclic ring chain polymers, electronic struct. 7−98788
heterogeneous surfaces, characterisation using photoemission techniques 7−125933
high-temperature superconductors, recent Dutch laboratory results 7−131874
inert gases, photoelectrons near threshold for double escape, ang. distribs. 7−122471
iodomethane, core excited, photoionis. decay 7−136020
laser-induced autoionization and photoelectron spectrum *(Chinese)* 7−90048
lipid layers, photoelectron spectra, surface adsorption 7−93637
many-body effects in the electron spectroscopies of incompletely filled bands 7−77703
metal and alloy electronic structure, conf., Johnsbach, Germany (Apr. 86) 7−128195
metals, local excitations, photoemission spectra 7−131531
metals, spectrometric anal. with spark discharges in Ar, burn spot phenomenon study *(German)* 7−133009
methane, photoionisation, angle-resolved photoelectron spectra 7−136008
methane-d_4, molecular beam photoelectron spectrum, vibr. fine struct. 7−90269
methyl alkyl ethers, ionis. pot. and intramol. charge transfer, photoelectron spectra 7−68409
methyl bromide, molecular resonances, autoionisation, photoelectron spectra study 7−141633
methyl iodide, molecular resonances, autoionisation, photoelectron spectra study 7−141633
modulation theory of above-threshold ionization 7−68265
multialkali photocathodes, optical and photoemission spectra 7−85960
multiphoton ionisation, photoelectron spectrum 7−96617
multiphoton ionisation, strong electromag. field effect, electron energy spectra, approx. method calcs. *(Swedish)* 7−122470
organic solids, electronic struct., photoemission study 7−125926
oriented molecules, photoelectron ang. distrib. with defined spin polarisation 7−68408
overlap amplitudes calc. 7−109996
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
parametrization of the cross-sections of photon absorption and scattering 7−74530
phosphatidylcholines, photoelectron spectra, lowest ionisation energy band 7−86910
photoelectron diffr. data, fixed geometry, scanned photon energy, anal. 7−92838
plasmon satellites, photoemission, coupled-channel Schrodinger eqn. 7−125924
polarised electron emission, interaction with solid surface, M-24 apparatus 7−138585
polyatomic mols., photoionisation theory 7−136007
polyenes, valence ionisations, non-Koopmans' effect, photoelectron spectra 7−117021
propenal, He(I) photoelectron spectra and MO calcs. 7−103573
propenoyl halides, He(I) photoelectron spectra and MO calcs. 7−103573
pulse-shape-induced phenomena in photodetachment 7−74529
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
rare earth mixed-valence cpds., electronic struct., giant resonances, PES study 7−143334
rare earth monochalcogenides, nonmetallic, electron spectrum 7−84674
rare gas adsorbates, electronic resonances, spin-resolved electron spectroscopy 7−106370
resonantly enhanced multiphoton ionisation-PES, photoionisation and photodissoc. study 7−74716
solid surfaces, angle-resolved photoelectron spectra using synchrotron radiation *(Japanese)* 7−77762
surface (001), surface state band, deformations due to roughening and misorientation 7−85035
surface (110), photoemission, calc. 7−119112
surface (110), yield photoemission study 7−70969
ternary semimagnetic semicond., electronic props., photoemission survey 7−138599
tetrachloromethane, photoionisation, angle-resolved photoelectron spectra 7−136008
tetrafluoromethane, photoionisation, angle-resolved photoelectron spectra 7−136008
tetramethyl stannane, photoelectron study using synchrotron radiation 7−82278
time-resolved spectra, measurement in submicrosecond region of weak emission *(Japanese)* 7−102536
transition metal glasses, containing Hf or Y, electronic struct. 7−92054
transition metal oxides, localised 3p excitations, EELS and photoelectron spectra studies 7−106325
transition metals, 3d, valence-band photoemission, absence of two-electron resonances 7−125911
transition metals, localised 3p excitations, EELS and photoelectron spectra studies 7−106325
transition metals, N-shell core-level widths, photoelectron spectroscopy studies 7−124902
triatomic molecules, autoionis. resons. 7−90288
two discrete states, stability against radiative decay and photoelectron spectra 7−103448
U intermetallic compounds, 5f-band width and resonant photoemission 7−138604
ultrathin films, wide-gap semiconductor, effect of size quantisation of photoemission 7−85951
unstable molecular ions, photoelectron spectrosc. 7−68407
UV-multiphoton fragmentation, mass and photoelectron studies 7−122650
$[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
$[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
Ag (110), Xe adsorption on low and high work function metals 7−131419
Ag/Si (111) interface, bonding characteristics identified by energy dependence of the photoionisation cross section 7−70100

photoelectron spectra continued
Ag-Sn, amorphous alloys, density of states of Fermi energy, struct.-induced min., influence of noble-metal content 7−92058
Ag_xTaS_2, intercalated cpd., photoemission studies 7−77761
Al, nearly free electron metals, photoemission spectra 7−138607
Al photoelectron spectra background removal, electron scatt. cross-sections from REELS data 7−92832
Al/a-Si:H interface, energy band struct., voltage depend. internal photoemission study 7−85942
Al-InSb (110) interface, exchange reaction clustering and surface segregation 7−138601
Al-Sb interface form., struct., electronic states, photoelectron spectra study 7−106363
Ar, 3s photoelectron satellite spectrum, fine struct. 7−74526
Ar, 3s satellite spectrum at 77-120 eV photon energy 7−82056
Ar, double ionisation, threshold behaviour 7−74537
Ar, photoionisation, post-collision interaction, photoelectron spectra calc. *(Swedish)* 7−122469
Ar, spin-orbit components, partial photoionisation cross sections 7−103444
Ar valence electron double excitation satellites from high energy PES 7−82057
Ar^+ and Ar_2^+, thermal energy charge-transfer reactions, rate coeffs. 7−113896
As adsorbed overlayer on Si(100)-2×1, surface state bands, angle-resolved photoelectron spectra 7−125072
Au-Sm-GaAs (110) interface, chemical trapping and modification, photoemission study 7−138602
AuCu dil. alloys, electronic structure study using Cooper minima effects and resonant photoemission 7−76757
AuNi dil. alloys, electronic structure study using Cooper minima effects and resonant photoemission 7−76757
Ba, excited states, electron correlation, PES anal. 7−90065
$Ba_2YCu_3O_{7-x}$, high-temp. supercond., plasma and UV optical transition studies 7−113327
$Ba_2YCu_3O_{7+x}$, high T_c supercond., photoemission resonances 7−113346
Be, nearly free electron metals, photoemission spectra 7−138607
benzene-Ar complex, zero kinetic energy photoelectron spectra, ionisation energy determ. 7−96789
Bi overlayers on Ni (110), 5d binding energies and branching ratios, photoelectron spectra studies 7−85947
Br, resonant multiphoton ionisation photoelectron spectra study 7−117030
Br_2 resonant multiphoton ionisation photoelectron spectra study 7−117030
BrCN, vibronic mixing, photoelectron spectra 7−136009
CO, core-hole photoelectron satellites 7−90275
CO, photoemission and Auger decay, autoionisation transition intensities 7−74708
CS_2, valence satellites, double ionisation continua, photoelectron spectra 7−136004
Ca salts, aqs. solns., He(I) photoelectron spectra 7−77750
$CaCO_3$, calcite, struct. and chemical changes, effects of mechanical activation 7−86195
Cd photoelectric cross sections at 22.2, 59.6 and 88.8 keV 7−74531
$Cd_{1-x}Mn_xTe$, Mn 3d states in photoelectron spectra, electronic struct., parametrised tight-binding model 7−92833
$Cd_{1-x}Mn_xTe$, Mn-derived partial density of states 7−70159
Ce mixed valence cpds., thermodynamic and PES parameters, Anderson model study 7−143333
Ce, outer level excitations hybridisation, PES, IPES, Anderson single impurity model calcs. 7−144248
Ce overlayer on Si (111), chemical bonding 7−125915
Ce-based systems, narrow band f-electron materials, photoelectron spectra 7−106358
$CeCu_2$, resonant photoemission, partial density of states 7−125906
$CeCu_6$, outer level excitations hybridisation, PES, IPES, Anderson single impurity model calcs. 7−144248
$CeCu_2Si_2$, resonant photoemission, partial density of states 7−125906
CeH_x low temp. sp. ht. and photoelectron spectra meas. 7−84313
CeN, outer level excitations hybridisation, PES, IPES, Anderson single impurity model calcs. 7−144248
Co thin epitaxial FCC films on Cu, ferromagnetism obs. by spin-polarised photoemission 7−77385
Co-Si interface form., struct., high resolution core level photoelectron spectra study 7−105297
CoF_2, photoelectron spectra anal., Green's fn. method, CNDO-UHF calcs. 7−141464
CoH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
$Cr(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
CrH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
Cs, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Cu (001), adsorption of S, surface geometry, angle resolved photoemission extended fine struct. 7−98692
Cu (001), single crystal spectra meas., using wave-vector imaging photoelectron spectrometer 7−128723
Cu oxides, high T_c superconductors, electronic struct. 7−119113
Cu-Hf interface, solid-state reaction, photoemission study 7−91904
Cu-Sn, amorphous alloys, density of states of Fermi energy, struct.-induced min., influence of noble-metal content 7−92058
Cu-Y, amorphous, electronic struct., photoemission and inverse photoemission studies *(French)* 7−100018
Cu-Y amorphous alloys, sputtered, electronic struct. as deduced by optical and electron spectroscopy 7−92057
CuF_2, photoelectron spectra anal., Green's fn. method, CNDO-UHF calcs. 7−141464
$CuMSe_2$ (M=In,Ga), thin films, ESCA study, appl. for solar cells, segregation influence 7−125934
Cu_xNi_{1-x} (110), Cu surface segregation, ion scatt. spectra and photoemission of adsorbed Xe studies 7−92836
DCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
Eu, photoemission, photo-excitation and decay processes 7−106375
Fe epitaxial FCC film on Cu (001), magnetism, spin polarised photoelectron emission 7−105985
$Fe:N_2^+$, ion beam implantation, struct., Auger electron and photoelectron spectra 7−132383
Fe_3Pt (001) Invar, ordered spin-resolved angle-depend. photoemission study 7−119108
GaAs (110), epitaxial growth of Fe, electronic struct. and interface formation 7−70146

photoelectron spectra continued
GaAs (110), interaction of ionised hydrogen, comparison with atomic hydrogen 7−100462
GaAs, EL2 deep level, sub band-gap surface photovoltage spectra 7−100003
GaAs, passivation in $N_2(H_2)$ multipolar plasmas, photoemission study *(French)* 7−132836
GaAs photocathodes, photoemission under negative electron affinity 7−92824
GaAs, photoemission from quasi-ID structs. of wide gap semiconductors with rectangular cross sections 7−132409
GaAs surface, H_2S adsorption, chemical shifts and surface core-level shifts 7−144244
a-GaAs:H, O_2 adsorption, photoelectron spectroscopy 7−138582
GaAs-Au, picosecond temporal resolution photoemissive sampling 7−125903
GaAs-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
GaAs-GaAlAs superlattices, photoemission and photolum. studies 7−77767
GaAs-Y interface chemistry, Schottky barrier formation 7−85046
GaAs(110), comparative uptake kinetics of N_2O and O_2 chemisorption 7−131447
GaP-Si, electron affinity rule, photoemission tests 7−138600
Ge (111), adsorption and growth of Ag and Au, photoelectron spectra, RHEED 7−85945
Ge clean cylinder, orientation depend. surface dipole and Fermi-level position 7−70979
Ge surface, H_2O adsorption, AES and photoelectron spectra studies 7−143228
a-Ge:As^+, ion implanted, valence band density of states 7−84628
$GeCl_4$, photoionisation, angle-resolved photoelectron spectra 7−136008
H, two-colour ionisation with intense LF field 7−116921
H_2, photoionisation, photoelectron spectra angular distrib. asymmetry parameter 7−109997
H_2 photoionisation dynamics, vibr. and rot. branching ratios 7−141631
H_2, Rydberg states, photoionisation, photoelectron spectra 7−122612
HBr, core excited, photoionis. decay 7−136020
HCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
HI, core excited, photoionis. decay 7−136020
H_2O (D_2O), excited state, ionic geometries, Franck-Condon analysis 7−110008
H_2S, excited state, ionic geometries, Franck-Condon analysis 7−110008
HX, X=Br,I, molecular resonances, autoionisation, photoelectron spectra study 7−141633
He, electron scattering cross sections at low electron energies using photoelectron source 7−122711
$He+H_2^+$, cross sections, vibr. state depend., threshold photoelectron/photoion coincidence study 7−100514
$Hf_xTi_{1-x}Se$, photoemission and transport studies 7−85943
HgCdTe-Ti interfacial reactions, $TiTe_x$ form., Hg and Cd depletion, photoelectron spectra study 7−118279
ICN, vibronic mixing, photoelectron spectra 7−136009
In adsorbed overlayer on Si (111), surface state bands, angle-resolved photoelectron spectra 7−125072
In photoelectric cross sections at 22.2, 59.6 and 88.8 keV 7−74531
InP surfaces, sputter-etched, photoemission study 7−126328
InSb-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
Ir (111), photofield emission from surface states 7−106366
K, nearly free electron metals, photoemission spectra 7−138607
Kr, 3d→np autoionis. reson., photoemission investig., photoelectron spectra 7−103440
$La_{1.8}Sr_{0.2}CuO_4$, peroxide and Cu^{1+} species, photoemission study 7−131894
Mg, nearly free electron metals, photoemission spectra 7−138607
Mg, picosecond laser pulses, photoelectron emission 7−74538
Mo (100), photofield emission from surface states 7−106366
$Mo(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
MoX_2 (X=Se,S), electronic struct., band struct. calcs., photoelectron spectra 7−84675
N containing saturated organic compounds, photoelectron spectra 7−110003
N_2, core-hole photoelectron satellites 7−90275
N_2, photoelectron spectra, vibr. branching ratios, photoionisation cross section 7−82279
N_2, photoionisation, photoelectron ang. distrib. meas. 7−136005
NH_3, inner and outer valence shells, photoelectron spectra 7−129788
NH_3, Jahn-Teller effect, vibr. struct., PES 7−103578
NH_2BBr_2, unstable substituted, photoelectron spectra 7−109765
NH_2BCl_2, unstable substituted, photoelectron spectra 7−109765
NH_2BF_2, unstable substituted, photoelectron spectra 7−109765
NH_2BH_2, unstable substituted, photoelectron spectra 7−109765
NO, autoionis. in photoionis. spectra 7−110021
NO, $D^2\sigma^+$ state, rot. branching, resonant enhanced photoionisation 7−129799
NO, gas inner valence electrons photionis., photoelectron spectra 7−109995
NO, resonance enhanced multiphoton ionisation, rot. transitions, PES anal. 7−90291
N_2O, excited states, ionic geometries, Franck-Condon anal. 7−110007
N_2O, photoionisation, photoelectron asymmetry parameters, shape reson. 7−129800
Na, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Na, nearly free electron metals, photoemission spectra 7−138607
Na, photoemission spectra calc. 7−77764
Na_2KSb, optical and photoemission spectra 7−85960
NbN-based compounds, zone struct. *(Russian)* 7−124852
NbO, photoelectron spectra, bands, ionisation energies, HES calcs. 7−141624
$Nd_3Ga_5O_{12}$, photo- and thermodepolarisation 7−113068
Ne, electron scattering cross sections at low electron energies using photoelectron source 7−122711
Ni (001) with adsorbed S (Se), core level photoelectron diffraction 7−144229
Ni (100), CO and H co-adsorption, vibrational spectroscopy and photoemission 7−105262
Ni (110), CO adsorption, two-dimensional π-d bands, direct observation 7−131727
photoelectron spectra continued
Ni (110)c(2×2) ferromag., with chemisorbed S, spin resolved photoemission 7−132411
Ni surface, (110) (1×2)-H reconstructed, angle-resolved photoemission at 80 K 7−125912
NiF_2, photoelectron spectra anal., Green's fn. method, CNDO-UHF calcs. 7−141464
NiH^-, electronic struct., photodetachment, photoelectron spectra 7−122613
NiI_2, resonant photoemission 7−138603
NiO, mixed electronic states, mag. moments, XANES study 7−144180
Ni_xTiS_2 intercalation cpds., photoemission studies 7−125905
NiX_2, X=F,Cl,Br,I, mixed electronic states, mag. moments, XANES study 7−144180
OCS, photoionisation, threshold reson. features in outer-valence shell partial cross sections 7−90284
Pb monolayers on Ge (111), photo-emission study of valence band 7−125914
Pb overlayers on Ni (110), 5d binding energies and branching ratios, photoelectron spectra studies 7−85947
Pd electronic struct., photoelectron spectra, hydride form. appls. 7−85940
Pd-U-Si glassy alloys, electronic struct., photoelectron spectra 7−98791
Pd-Y, amorphous, electronic struct., photoemission and inverse photoemission studies *(French)* 7−100018
Pd_n+CO, electronic struct, pseudopot. CI calcs., relationship between surface and organometallic chemistry 7−113901
Pd_2Si film on Si (100), struct. props., scanning tunnelling microscopy and PES studies 7−76648
Pt overlayers on NB (110), electronic struct., chemisorption of CO, surface struct., photoelectron spectra, LEED, AES studies 7−99146
Pt-Re (111) thin films, adsorbed Xe photoemission, AES, XPS and work function studies 7−137760
Pt(111), pyridine adsorption, angle resolved PES studies 7−132417
Rb, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
S overlayer on Ge (111), surface struct. determ. by angle-resolved photoemission fine struct. 7−91985
$SO_2(SO_2^+)$, geometry, dynamics, supersonic molecular beam photoelectron spectra 7−136003
Sb adsorbed overlayer on GaAs(110)-1×1, surface state bands, angle-resolved photoelectron spectra 7−125072
Sb-GaAs(110) interface, influence of annealing, PES study 7−125919
Si (100), O_2 adsorption, roughness effect of dangling bond band 7−144240
Si (111), adsorption and growth of Ag, photoelectron spectra, RHEED 7−85945
Si (111)-Ga, surface core level shifts 7−125927
Si (111)$\sqrt{3}\times\sqrt{3}$-Ag surface, photoelectron spectra, surface and core-level shifts 7−85949
Si:B, H, surface layer swelling on H implantation at different doping concentrations 7−124350
a-Si:H, electronic struct. calcs. 7−84652
a-Si:H-SiO_x:H, ultrathin layers, photoemission spectroscopy 7−125909
$SiCl_4$, photoionisation, angle-resolved photoelectron spectra 7−136008
$Si_2H_4^n$ (n=0 or +), ground state surfaces, SCF and CI calcs. 7−109811
SiO_2, adsorption of glycine amino acids, photoelectron spectroscopy 7−106374
SiO_2, quartz, struct. and chemical changes, effects of mechanical activation 7−86195
TaO, photoelectron spectra, bands, ionisation energies, HES calcs. 7−141624
TiN, substoichiometric, (100) surface, angle-resolved photoemission, vacancy-induced state 7−125913
$Tl_xV_6S_8$, low temp. phase transition, PES study 7−98430
U compounds, heavy fermion systems, electronic struct., giant resonances, PES study 7−143334
U-based systems, narrow band f-electron materials, photoelectron spectra 7−106358
UO_2 (111), valence-band photoemission near 5d reson. photon energy 7−92831
W (100), photofield emission from surface states 7−106366
$W(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
WSe_2, electronic struct., band struct. calcs., photoelectron spectra 7−84675
W(001), low energy photoelectron diffr. study, single scatt. model 7−132416
Xe, above threshold ionisation, photoelectron ang. distrib. 7−103450
Xe, photoionisation, post-collision interaction, photoelectron spectra calc. *(Swedish)* 7−122469
Xe, three-photon excitation, autoionisation, fine struct., photoelectron spectra 7−90274
Xe_2, photoelectron spectra obtained by resonantly enhanced multiphoton ionisation 7−110000
XeF_2, valence level cross sections, photoelectron spectra 7−129789
$YBa_2Cu_3O_{6+x}$ 7−143710
Yb, 5p edge optical absorpt. spectra determ., electron emission processes study 7−144181
Yb, photoemission, photo-excitation and decay processes 7−106375
YbP, 3d core level photoemission spectra 7−138583
ZnSe-Ge, electron affinity rule, photoemission tests 7−138600
Zr electronic struct., photoelectron spectra, hydride form. appls. 7−85940
Zr-Pd alloys, electronic struct., photoelectron spectra, hydride form. appl. 7−85940

photoelectron spectroscopy
angular resolved photoemission spectrometer, using toroidal magnetic deflector 7−128725
compound tube for resonant photoelectron and Auger electron appearance potential spectroscopy *(Chinese)* 7−126516
core-level binding-energy shifts at surfaces and in solids, photoelectron spectroscopy obs., review 7−113353
data reduction scheme for channel-plate detectors 7−68141
electronics and microelectronics appls. 7−121307
glow discharge effects obs. in polytetrafluoroethylene polymers 7−95689
high-speed processes, narrow-band spectra photoemission method 7−121301
metals, spectrometric anal. with spark discharges in Ar, burn spot phenomenon study *(German)* 7−133009
organic molecular solids, dynamic effects in VUV and X-ray photoelectron spectra 7−125923
organic solids, electronic struct., photoemission study 7−125926

photoelectron spectroscopy continued
PEPIPICO triple coincidence technique, for 3-body dissoc. dynamics obs. 7−134896
photofragment alignment, (1+1) circular dichroism in photoelectron ang. distrib. obs. 7−110041
time-of-arrival photoelectron correlator 7−128678
wave-vector imaging photoelectron spectrometer 7−128723
Ag overlayer on Cu (001), 3D valence band struct. development, ARPES obs. 7−125068
n-GaAs surface-state density meas. by photoemission quantum-yield spectroscopy, apparatus 7−67436
InSb-CdTe heterojunctions, interface characterisation and MBE growth *(Polish)* 7−132475

photoemission
see also photoelectron spectra; photoemissive devices
acetylene, dynamic screening effect, local field description 7−129804
adsorbate layers, surface photoionis. processes, time evol. 7−137997
adsorbate-surface interactions, local models 7−131417
atom, photoabsorption, linear response method calcs. 7−109840
conference, Lund, Sweden (Aug. 1986) 7−120698
Eu, 5p edge optical absorpt. spectra determ., electron emission processes study 7−144181
formate species on Cu (110), struct. and electronic energy levels study 7−105651
giant resonance phenomena in condensed matter 7−144246
glow discharge tube, IR photoelectric emission on cathode surface *(Chinese)* 7−106356
image potential states, two-photon photoemission and optical SHG studies 7−106373
intermetallic cpds., electronic struct. and bonding, photoelectron spectra studies 7−106380
Kapton, secondary electron and photo-emission, electron yields and escape depths 7−113323
magnetic and nonmagnetic solids, spin polarised electron emission 7−132403
metal corrugated surfaces, image states, photoemission and STM appls. 7−99148
metal electrodes, laser-pulse electron photoemission kinetics 7−70972
metal hydrides, electronic struct. and bonding, photoelectron spectra studies 7−106380
metal optics near the plasma freq., book 7−80188
metal-semiconductor random heterostructures, Cu, Ag, Au embedded particles, microstructures for IR detection 7−132290
metals, spectrometric anal. with spark discharges in Ar, burn spot phenomenon study *(German)* 7−133009
minerals and mols., quantum mechanical studies of Si−O and Si−F bonds 7−131085
organic molecular solids, dynamic effects in VUV and X-ray photoelectron spectra 7−125923
organic solids, electronic struct., photoemission study 7−125926
organic solids, UV photoemission study 7−125925
paraffin hydrocarbon, high energy electron transport 7−84907
photoelectron counting distrib. computation by numerical contour integration 7−138587
plasmon satellites, photoemission, coupled-channel Schrodinger eqn. 7−125924
rare earth insulating systems, f-electron photoemission spectra calcs. 7−113343
rare earth mixed-valence cpds., electronic struct., giant resonances, PES study 7−143334
rare earth systems, 4f photoemission, f-d Coulomb interaction and Abrikosov-Suhl resonance 7−77755
rare gas solids, electron pair photoemission 7−144243
semi-infinite cryst. solid, photoemission, wave vector selection rule 7−100011
semiconductors, photoemission with X-ray standing waves, electron transport problem 7−100006
solid-solid interfaces, spectroscopic anal. of electron states *(French)* 7−112417
Teflon, secondary electron and photo-emission, electron yields and escape depths 7−113323
transition metals and compounds, localised excitations, XPS 7−125921
X-ray spectral research, conf., Ustinov, USSR (Sept. 1985) 7−120686
Ag, gamma-ray photoelec. cross sections, 43-152 keV 7−96607
Ag-Cs_2O thin films, optical props, Ag content effect *(Chinese)* 7−99949
Al, gamma-ray photoelec. cross sections, 43-152 keV 7−96607
Al-Zn-Mg-Cu, superplastic deform., photoemission electron microscopy 7−113823
AlO_x oxidised thin films, photoemission EXAFS studies 7−144171
As, rhombohedral, electronic band struct., angle resolved photoemission studies 7−98797
As, rhombohedral, valence band structure, angle-resolved photoemission investig. 7−119110
Au, gamma-ray photoelec. cross sections, 43-152 keV 7−96607
Au-Cu ordered surface alloy, atomic and electronic struct., LEED and photoemission meas. 7−84462
BaF_2 (111), photoemission and laser-induced ion desorption, multiphoton processes 7−106369
Be clean polycryst. surface, work function, Cs coverage depend., photoemission meas. 7−105660
Ce mixed valence cpds., thermodynamic and PES parameters, Anderson model study 7−143333
Ce, outer level excitations hybridisation, PES, IPES, Anderson single impurity model calcs. 7−144248
$CeAl_2$, heavy electron state, photoemission evidence 7−85946
$CeCu_6$, outer level excitations hybridisation, PES, IPES, Anderson single impurity model calcs. 7−144248
CeN, outer level excitations hybridisation, PES, IPES, Anderson single impurity model calcs. 7−144248
$CeSi_2$, Kondo resonance, high temp. collapse, UV photoemission meas. 7−113347
Cr surface ferromagnetism, electron spectrum asymm., surface toroidal current ordering 7−77241
Cu, gamma-ray photoelec. cross sections, 43-152 keV 7−96607
CuNi sandwich struct., X-ray photoelectron spectroscopy, Auger electron diffraction, multiple scattering 7−138606
Cu_xRh_{1-x} alloy, mag. and electronic props. 7−105387
Eu, reson. photoemission, open-shell and solid state effects 7−144231
Fe, BCC, photoemission, inverse photoemission, fluctuations, exactly soluble many-body cluster model 7−100013

photoemission continued
Fe epitaxial film on Ag (001), mag. and electronic props., spin-polarised photoemission study 7−112913
Fe epitaxial layers on W, spin-resolved photoemission obs. 7−112889
Fe on Cu (100), closely-lying energy states, magneto-optic and photoemission meas. 7−143875
Fe_3O_4 film, sputtered with Ar^+, surface magnetism changes, photoelectron meas., 7−138295
GaAlAsSb, alloy for 2 to 4 μm laser diodes 7−97014
n-GaAs, intensity modulated photocurrent spectroscopy 7−112388
GaAs passivation in N multipolar plasma, photoemission study 7−119469
GaAs surfaces, optically orientated electron spin precession, photoemission study *(German)* 7−85961
GaAs:H (110) surface; filled and empty states, EELS and photoemission studies 7−143544
n-GaAs/Al Schottky diodes, surface plasma-enhanced internal photoemission 7−118550
GaAs-Ti (Cr), interface movement, temperature dependent reaction 7−124732
$GeSe_2$:Ag, cryst. and amorphous, electronic struct., photoemission and optical spectra studies 7−105398
InAsSb, alloy for 2 to 4 μm, laser diodes 7−97014
InP (110), adsorbed Cs, catalytic oxidation, photoemission studies 7−93221
Kr, 3d→np autoionis. reson., photoemission investig., photoelectron spectra 7−103440
La insulating compounds 7−77694
LaB_6(110), thermionic and threshold photoemission energy distribs. 7−119114
LaPd, inner shell photoemission and photoabsorption spectra, many body effects 7−77694
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., electronic struct., photoemission meas. 7−99271
$La_{2-x}Sr_xCuO_4$ high T_c supercond., photoemission studies 7−92839
MoS_2, angle resolved photoemission and electronic band structure 7−138609
$NaCrS_2$, core level photoemission and photoelectron diffr., mag. interactions 7−144232
NiAs, valence band density of states, photoemission data and LMTO calc. 7−98771
O adsorbed layer on Cu (111), two-photon photoemission from adsorbate-induced states 7−77765
Pb, gamma-ray photoelec. cross sections, 43-152 keV 7−96607
Pd (111), band struct., angle-resolved two-photon photoemission spectra study 7−144236
Pd-Ag-O-Cs photocathodes, photoemission characts. under star illum. *(Chinese)* 7−77753
Pt, gamma-ray photoelec. cross sections, 43-152 keV 7−96607
Pt/acetonitrile interface with redox couples, inverse photoemission spectrosc. 7−132405
(Rb, Cs)Na_2KSb photocathode with improved photosensitivity and green-red response *(Chinese)* 7−77748
Ru (001), coadsorption of O and K, K−O cpds., form. study 7−124690
Ru-Cu surface, physisorpt. of Xe, photoemission obs. 7−100010
S adlayer on Ge (100)(2×1), LEED, AES and photoemission surface core level spectra studies 7−106364
Sb-Na-K-Cs photocathodes, photoemission characts. under star illum. *(Chinese)* 7−77753
Se, photoexcited electron spectrum, post collision interaction effect 7−70978
Si (100), adsorbed Cs and Na, catalytic oxidation, photoemission studies 7−93221
Si (100) 2×1, Cs or Na overlayers adsorbed O_2 electronic props., photoemission spectra studies 7−113344
Si (111), benzene adsorption, valence and core states, photoemission obs. 7−118248
Si (111), NH_3 adsorption, high resolution EELS study 7−124695
Si, X-ray multiwave diffraction, secondary radiation yield, angular depend. 7−77752
Si: As (111) surface, As terminated, electronic and atomic struct., passivation 7−98651
a-Si:H-Au, Schottky barriers, barrier height temp. dependence 7−125075
Si/CaF_2 interface, bonding and struct., photoemission studies 7−105295
a-Si_xGe_{1-x}:H,F films, band potential, optoelectrical props. 7−70353
α-SiN_x:H, cond. band edge, localised p-like states, reson. photoemission obs. 7−119109
SiO_2 dielec. surface, hot electron emission into vacuum 7−113348
Th_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
Ti-Al-V (6,4 wt.%), superplastic deform., photoemission electron microscopy 7−113823
$TiSe_2$, photoemission spectra, final-state effects 7−144233
U compounds, heavy fermion systems, electronic struct., giant resonances, PES study 7−143334
$U_xY_{1-x}Al_2$ heavy fermion alloys, single-site effects, resonant photoemission studies 7−138605
U_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
W (110) and (111), photofield emission energy distrib., band struct. effects 7−92842
W (211), photofield emission, band struct. anal. 7−119116
W, Coulomb scatt. effects in field and photofield emission 7−92841
W needle, photofield emission in the ps regime 7−77763
W, photofield emitted electron yield determ. 7−113345
Xe (111), valence and conduction bands, spin-polarised photoemission studies 7−118549
Xe, physisorbed multilayers, valence levels, ionization energies 7−112424
Xe, structural phases, VUV photoemission study 7−122615
Y (0001), angle resolved UV photoemission, surface state effects 7−92840
$YBa_2Cu_3O_7$ high T_c supercond., valence band and O(1s) region photoemission studies 7−144241
$YBa_2Cu_3O_x$ high T_c supercond. and semicond. samples, electronic struct., stoichiometry effects 7−143342
$Y_1Ba_2Cu_3O_7$ high T_c superconductor, valence electronic struct. study 7−143341
Yb, 5p edge optical absorpt. spectra determ., electron emission processes study 7−144181
Zn, gamma-ray photoelec. cross sections, 43-152 keV 7−96607

photoemission, inverse *see inverse photoemission spectroscopy*
photoemission spectra *see photoelectron spectra*
photoemissive devices
see also photocathodes; photoemission
No entries
photoemissivity *see photoemission*
photofission
conference, Gaussig, Germany, Nov. 1985 7−72725
^{108}Ag(δ,f), 1-5.5 GeV, cross section meas. 7−129123
^{79}Br(δ,f), 1-5.5 GeV, cross section meas. 7−129123
(δ,f), λ 0.8-1.8 GeV, intermediate nuclei, cross section meas. 7−129123
^{237}Np(γ,taf), 12, 15, 20 MeV, t, α emission probability meas. 7−73812
^{242}Pu(γ,taf), 12, 15, 20 MeV, t, α emission probability meas. 7−73812
^{232}Th(α,f), 12, 20 MeV, bremsstrahlung induced, gamma ray spectrometry and energy correlation meas. 7−73811
^{232}Th(γ,f), 5-11 MeV, cross section meas. 7−116530
^{232}Th(γ,f), cross section meas. below 10 MeV 7−109145
^{A}U(γ,taf), A=233, 235, 12, 15, 20 MeV, t, α emission probability meas. 7−73812
^{238}U(γ,f), 5-11 MeV, cross section meas. 7−116530
^{238}U(γ,f), cross section meas., 5-10 MeV 7−109146
photoflash lamps *see flash lamps*
photogalvanic cells *see photoelectrochemical cells*
photogalvanic effects *see photoconductivity; photovoltaic effects*
photogalvanic spectra *see optogalvanic spectra*
photogalvanic spectroscopy *see optogalvanic spectroscopy*
photoglow tubes *see phototubes*
photogrammetry
absolute orientation closed-form soln. using unit quaternions 7−67406
advanced alternating frame technology (VISIDEP-TM system), appl. to 3-D remote sensing 7−107576
aerial photographs interpretation, appl. of knowledge-based image understanding systems 7−101573
ankle kinematics described by stereophotogrammetry and modelling 7−114340
anthropometric study of hands appl. 7−133521
anti-vignetting technique for super wide field of view mosaicked images used in pilot training 7−68572
Automap system, for map production from photogrammetric data, software interface design 7−119935
biological cell, diffr. pattern analysis through opt. density data acquisition 7−114588
biostereometrics, conf., Cannes, France (Dec. 1985) 7−95084
biostereometrics, transform. of irregularly sampled data points into regular grid, surface interpolation, smoothing 7−114536
Black Hills, South Dakota, anal. of large format camera images for topographic and thematic mapping 7−114609
cerebral blood vessels, 3D represent. using photogrammetry and computer graphics 7−114479
cerebral probe implantation method, spatial viewing, simulator using floating line concept 7−114551
close-range moire photogrammetry, curvature and strain variations processing 7−89294
conference, Baltimore, Maryland, USA (March-April 1987) 7−128190
control densification and mapping, by combined method 7−133541
data logger, COORDIMETER-H and MTU 5300/P type deck 7−121254
digital, on advanced data and picture transformation system, ADAPTS 7−121261
digital 7−79606
digital elevation data banks, accuracy 7−119932
digital elevation models, quality control of photogrammetrically sampled models 7−101179
digital monoplotting technique, exptl. appl. to orbital radar imagery 7−94055
Digital Photogrammetry System, stereo-push-broom scanner system characts. 7−101557
digital three-line imagery processing, appl. of generalised model for combined point determ. 7−145310
facial data, equipment for photogrammetric acquisition 7−101040
geological mapping, appl. of Spacelab data for structural interpretations 7−94456
in-reactor inspection, photographic and photogrammetric techniques 7−129298
ISIPS, interactive satellite image processing system, hardware and software 7−79677
knee bones measurements using close-range photogrammetry 7−114590
knee joint movements during gait, photogrammetric assessment using cinephotography and direct linear transform 7−114446
lake surface water flow measurement method using aerial photography 7−134019
large format camera data, appl. to print positioning and mapping 7−114608
Large Format Camera on Space Shuttle, accuracy for control extension 7−119934
lenses, aerial, image quality evaluation 7−122860
lightweight camera rig for photogrammetry, design and performance 7−101542
medical applications 7−114447
Metric Camera Mission-1 on Spacelab, results 7−134021
movements analysis, human, biostereometric study, IR strobophotogrammetry 7−101038
multi-point matching using least-squares technique, for evaluation of 3-D models 7−133544
multiple outlier detection in multi-parametric models 7−133543
network design, covariance matrix theory and limiting error propagation 7−119933
nuclear power plant as-built efforts, photogrammetry appl. 7−129157
nuclear power plants, photogrammetry applications for safety related components 7−128698
off-line compilation of stereo models, appl. of digital image correl. 7−145311
orbital radar imagery, exptl. app. of digital monoplotting technique 7−94055
parallax bar heighting, accuracy anal. via numerical simulation 7−101178
radarclinometry, line integral approach 7−94457
review of photogrammetry 7−133545
sea ice, floe melting rates, determ. method involving airborne photogrammetry 7−133717
photogrammetry continued
segmental body volumes and inertial props. eval. with photogrammetry, gait analysis in handicapped patients 7−114445
sequential estimation procedure with improved efficiency 7−133542
STAR-1 SAR data and digital terrain mapping 7−107563
structural geology, technique for correction of oblique photographs 7−71954
tablet digitizers for analytical work, study of accuracy of method 7−133540
terrain digital models automatic generation from satellite images 7−101498
Thompson Symposium, University of Birmingham, England (April 1986) 7−95082
tilted photograph projective transformation to tilt-free focused images, eqns. 7−133536
topographic mapping from SPOT imagery, practical aspects 7−101180
topographic mapping using remote sensing satellite (SPOT), accuracy of automatic parallax meas. 7−72161
topography mapping by stereo imaging, digital image correlation errors 7−72160
topography mapping from SIR-B stereo radar images 7−107562
trachea model dynamic deform. mapping by grating projection technique 7−100951
walking stance phase, tibia-calcaneus and plantar arch angles, strobophotogrammetric meas. *(French)* 7−87059
zoom lens application for non-metric photogrammetry, optical distortions anal. 7−94054
photographic applications
see also photolithography; remote sensing
astrometry, search for systematic errors in photographic meas. of visual binaries 7−88500
automated fringe measurement in speckle photography 7−102498
biological cell, diffr. pattern analysis through opt. density data acquisition 7−114588
biostereometrics, transform. of irregularly sampled data points into regular grid, surface interpolation, smoothing 7−114536
birefringence measurements by double speckle photography 7−67380
body motion measurement, photographic and electronic techniques appl. *(Japanese)* 7−87406
cervical cell smears, correlative exam. by opt. and scanning electron microscopy, photographic grid system 7−87399
collapsing cavitation bubble, impulsive pressure, water microjet effect 7−97588
corneal endothelium, alternative photographic technique with conventional photo slitlamp 7−93852
cosmic rays composition meas., light attenuators for plastic scintillation detectors 7−139934
crystal growth from aq.- soln., holographic phase contrast microphotography appl. 7−113365
flow visualisation using real-time TV speckle interferometer 7−104363
fundus image processing system for early detection of glaucoma 7−79056
granulometric study of pyroclastics, discriminate top hat transformation and algorithm of erosion 7−94514
high-speed camera control system at LLNL hydrodynamic test facilities 7−95667
in-reactor inspection, photographic and photogrammetric techniques 7−129298
light-pulse generator for recording electrical signals, using Kerr cells 7−121089
material sensitivity increasing by strong electric field for signal recording from oscilloscope screen 7−67410
motion tracking and analysis systems, state of art 7−95557
moving targets automatic tracking in three dimensions 7−95670
multi-aperture white light speckle photography, applications 7−73454
ocular fundus, contour photography, automated image processing algorithm eval. 7−114448
polyetheretherketone, single particle impacts and erosion 7−78274
polystyrene spheres, monodisperse, deionised suspensions, microscopic obs. of crystallites 7−114003
pulsed laser shadow photography appl. to ballistic investigations 7−95669
remote sensing, interpretation of aerial photographs, by knowledge-based image understanding systems 7−101573
retinal oximetry using fundus photographs, vessel absorpt. profiles anal. 7−71844
segmental body volumes and inertial props. eval. with photogrammetry, gait analysis in handicapped patients 7−114445
stereometric measurement system for quantification of object forms 7−101041
stereoscopic white-light speckle photography for in-plane surface displacements meas. 7−67407
stratospheric balloon UV detectors, design and S/N ratio *(Spanish)* 7−88108
time-lapse photography conversion to 4D holograms, meteorological appl. 7−127553
TV speckle interferometer with photographic storage appl. to displacement and vibration detection 7−102507
videography principles and appls. 7−100952
Viking satellite equipment and auroral data processing *(Swedish)* 7−127629
visualisation of alloy streams in centrifuge melt spinning by stroboscopic photography 7−132596
working control system for space-time characteristics of industrial IR lasers 7−130142
photographic developers *see photographic materials*
photographic development *see photographic process*
photographic emulsions
Callier coefficient, influencing factors, discussion 7−108685
colorization using ImageWise video digitizer 7−134864
dry Ag recording materials, new capabilities 7−134868
Fujicolor Intermediate film, FCI 35 mm type 8213 and 16 mm type 8223, development *(Hungarian)* 7−102552
gelatin conformation in photographic layers *(Hungarian)* 7−140771
Kodak 103a-O, 103a-D, and IIIa-J, forming gas hypersensitization tests 7−89285
Kodak emulsions, N baking effects on quantum efficiency and signal-to-noise ratio 7−140769
Kodak IIIa-F and 103a-E hypersensitizing 7−89287
KODAK T-grain emulsions in color films *(Japanese)* 7−128688
Kodak Technical Pan Film 2415, hypersensitization tests 7−89286

photographic emulsions continued
latent image formation, limitations on choice of subsequent conc. process model 7—121251
Lith process, material quality and meas. problem, halftone dot quality determ. method 7—121252
Lith process, material quality and meas. problem, sensitometric props. of Lith type materials 7—121253
quantum sensitivity, size of grains producing dye image in a coupler starved format 7—128683
transmission density meas. considerations 7—134867
Ag halide exposure, abrupt reduction of photoconductivity *(Japanese)* 7—128690
Ag halide precipitation coalescence processes 7—139018
Ag halide systems, development trends *(Japanese)* 7—128691
Ag halides, holographic photomaterials, light scatt. study 7—122879
AgBr crystals in gelatin soln., Ostwald ripening 7—137288
AgBr emulsion dissociation charactn., stopped-flow turbidity 7—139025
AgBr emulsions, interference phenomena 7—121256
AgBr layers, evaporated, developed Ag cluster distrib. 7—139019
AgBr microcrystal, Rothstein effect, electron polarisation model *(Japanese)* 7—128699
AgBr monodisperse emulsion, granularity of magenta-dye image 7—139049
AgBr photographic emulsion, seven different kinds of crystal forms 7—139048

photographic filters *see optical filters*

photographic lenses
see also aberrations
aerial, image quality evaluation 7—122860
Bronica GS-1 lenses and prism viewfinders, review 7—95662
Canon Eos 650, automatic focusing 7—73447
design, using optical aberrations as damping term *(Korean)* 7—82746
KEP17 motion picture camera lenses, control unit *(Russian)* 7—128696
Nikon F-301 camera with auto-focus and single-lens reflex *(Japanese)* 7—108681
Pentax Zoom-70, evaluation 7—134863
perspective control in macrophotography with extended depth of field *(Japanese)* 7—80920
radioactivity, eyepiece appl. warning 7—88109
stretchable concave mirrors 7—117287
TV camera lenses, specification and testing 7—136479
TV camera lenses with integrated digital control electronics *(French)* 7—130402
TV cameras, primer for lighting directors 7—141958
TV zoom lens, optics primer 7—121247
Vario-Sonnar, f/1.8, large aperture zoom lens for 16 mm motion picture cameras 7—121259
zoom lenses, optical distortions rel. to photogrammetric appls. 7—94054

photographic light sources *see light sources; photography*

photographic material sensitivity
colour image scanner, design method using spectral sensitivities of tri-color separation optics *(Japanese)* 7—97171
dye image B/W negative films, image quality advantage *(Japanese)* 7—67405
emulsion, quantum sensitivity, size of grains producing dye image in a coupler starved format 7—128683
film electric field distrib. calc. 7—67409
granular noise reduction of high-sensitive film, opt. filtering technique 7—73473
heat-sensitive layers development for elec. discharge method of surface flaw detection 7—71446
historical black-and-white negative duplication 7—73451
hypersensitised emulsions, spectral sensitivities *(Japanese)* 7—73461
increasing sensitivity by strong electric field for signal recording from oscilloscope screen 7—67410
IR presensitization photography, role of sensitizing dyes 7—128693
Kodak 103a-O, 103a-D, and IIIa-J, forming gas hypersensitization tests 7—89285
Kodak IIIa-F and 103a-E hypersensitizing 7—89287
Kodak Technical Pan Film 2415, hypersensitization tests 7—89286
latent image form., physical parameters 7—139026
latent image formation, limitations on choice of subsequent conc. process model 7—121251
Lith process, material quality and meas. problem, halftone dot quality determ. method 7—121252
Lith process, material quality and meas. problem, sensitometric props. of Lith type materials 7—121253
microfilm image stability, residual thiosulphate ion effect 7—78521
organic photoreceptor for electrophotography, sensitivity eval. *(Japanese)* 7—84972
Ag halide sensitivity limits, w.r.t. development efficiency *(Japanese)* 7—128692
AgBr evaporated layer, response to soft X-ray irradiation 7—128684
AgBr films, sensitivity centres and latent image centres, created and visualised in vacuum 7—108683
AgBr layers, evaporated, developed Ag cluster distrib. 7—139019

photographic materials
see also photographic emulsions
blackening curves of negative photomaterials, l-transform. and l-appl. 7—71504
classification of X-ray films for industrial radiography 7—93240
color developers, ion exchangers for regeneration *(Russian)* 7—132955
colour photographic dyes, photo-fading reactions *(Japanese)* 7—128687
dry silver recording materials, new capabilities 7—108687
Eastman colour high speed daylight negative film 5297 and 7297 7—140770
films, black and white, ageing investig. *(Spanish)* 7—121257
heat-sensitive layers development for elec. discharge method of surface flaw detection 7—71446
Kodacolor Gold films, comparison 7—80915
noise-equivalent performance parameters of photographic systems 7—80918
photopolymer compositions, camera-speed, appls. to lithographic plates and films 7—134865
photopolymer compositions, camera-speed, development chemistry and materials preparation 7—139023
photopolymer compositions, camera-speed, introduction and principles 7—139022
photopolymerisation, conf., Atlantic City, NJ, USA (May 1985) 7—134347
Polaroid professional chrome film, evaluation 7—121246
PVC, chlorinated, thin film, photoimaging, spectroscopic study *(Chinese)* 7—90736
RCA HRLBR image generator for tactical application 7—108688
recycling of black and white and colour developers *(German)* 7—132952
reprographic toner, IR internal refl. spectroscopy applic. to characteris. 7—114030
spectral corrections to optical-density measurements 7—102487
Ag halide *(Japanese)* 7—128621
Ag halide grains, microwave photoconductivity meas., high sensitivity apparatus *(Japanese)* 7—128686
AgBr crystal development kinetics *(Hungarian)* 7—73453

photographic process
see also photochemistry
3-bath photochemical film processing *(Russian)* 7—121266
automatic temperature control of developing solution in processing machines *(Russian)* 7—108691
blackening curves of negative photomaterials, l-transform. and l-appl. 7—71504
Callier coefficient, influencing factors, discussion 7—108685
dye image stability, oxidative deamination influence 7—78522
film processing using three baths *(Russian)* 7—128697
historical black-and-white negative duplication 7—73451
hologram recording using pulsed dye laser, feasibility 7—90542
IR presensitisation photography, preliminary model 7—108686
Kirlian photography as a type of plasma photography 7—128685
latent image form., physical parameters 7—139026
latent image formation, limitations on choice of subsequent conc. process model 7—121251
latent subimage, detection with light latensification 7—108682
Lith process, material quality and meas. problem, halftone dot quality determ. method 7—121252
Lith process, material quality and meas. problem, sensitometric props. of Lith type materials 7—121253
microfilm image stability, residual thiosulphate ion effect 7—78521
non-silver leader production of release prints *(Russian)* 7—73460
optical correction of one-dimensional periodic distortions in film printer *(Russian)* 7—108689
phase holograms, scattering and diffraction efficiency, influence of developer composition 7—82511
photopolymer compositions, camera-speed, appls. to lithographic plates and films 7—134865
photopolymer compositions, camera-speed, development chemistry and materials preparation 7—139023
photopolymer compositions, camera-speed, introduction and principles 7—139022
photopolymerisation, conf., Atlantic City, NJ, USA (May 1985) 7—134347
photopolymerisation imaging system, high-speed 7—139020
physical development, MQ and PQ synergism *(Japanese)* 7—80919
recycling of black and white and colour developers *(German)* 7—132952
Ag halide surface, effect on adsorbed Ag clusters, quantum chemical calcs. 7—118274
AgBr emulsion dissociation charactn., stopped-flow turbidity 7—139025
AgBr films, sensitivity centres and latent image centres, created and visualised in vacuum 7—108683
AgBr layers, evaporated, developed Ag cluster distrib. 7—139019
AgBr monodisperse emulsion, granularity of magenta-dye image 7—139049
Pt and Pd printing, investig. 7—108684

photographic recording media *see photographic materials*

photographic techniques *see photography*

photography
see also cinematography; colour photography; electrophotography; microphotography; photographic applications; photographic lenses; photographic materials; photographic process; radiography; streak photography
AIS-2 automated meter for spectra recorded on photographic plates 7—67296
analytical plotter attachment for Reflex Microscope 7—95646
astrometric plate constants, use of quaternions 7—72317
astronomical long-exposure photography of fast-moving objects, appl. of slow-motion crosshair drive 7—79841
blackening curves of negative photomaterials, l-transform. and l-appl. 7—71504
brass specimen, crack tip displacements, speckle photography anal. 7—91015
Bronica GS-1 accessories, review 7—95663
continuous tone and textual images storage *(Japanese)* 7—129997
deep sea photography, use of Canadian perspective grid 7—94455
electron density profile meas. in Z-pinch by holographic interferometry 7—69312
electronic imaging conf., Arlington, VA, USA (Oct. 1986) 7—134348
exposition nonuniformity correction by electronically controlled mask, Earth remote research appl. *(Czech)* 7—89292
film equip. quality indices evaluation *(Russian)* 7—80924
flashes, evaluation using ocular exposure thresholds 7—139314
frame counter for photographic recording attachments 7—134870
image degradation theory, introduction 7—136214
Kiso 105-cm Schmidt plates (Nos. 4901-5350), plate information 7—145831
Kiso Observatory 105 cm Schmidt telescope, automatic guiding for photography *(Japanese)* 7—79838
luminescent photography, principles 7—73449
medical electronics, Kirlian photography, developments 7—139395
metal halogen lamp power supply unit for photographic lighting *(Russian)* 7—108690
MHD stability, in PF-150 and PF-360 devices, photography, interferometry and Faraday rot. meas. 7—69350
Nikon F-301 camera with auto-focus and single-lens reflex *(Japanese)* 7—108681
PDS 2020 GMS, computer-controlled microdensitometer for large photographic plates *(Japanese)* 7—73462
perspective control in macrophotography with extended depth of field *(Japanese)* 7—80920
plasma focus structure by neutron pinhole camera 7—69471
polystyrene, particle size limit on Kratky camera 7—74847
power supply for slide projectors *(German)* 7—95664
speckle interferometry, multiplexing methods 7—95643

photography continued
strobe light for high speed photography/videography, Cu vapour laser appl. 7−73455
structural geology, technique for correction of oblique photographs 7−71954
Taylor's photographic triplet, Petzval sum *(Spanish)* 7−67408
Visagraph eye-movement recording system 7−133502
X-ray and ion emission, pinhole camera photographs meas., plasma focus optimisation 7−69475
xy-coordinates meas. system with TV camera, for astron. plates *(Japanese)* 7−79844
Z-pinch dynamics in high-current diode investig. 7−69443
D^+ emission from plasma focus discharge, intensity and energy spectrum 7−69473
Xe flash tubes, controlled intensification of output 7−121262

photoionisation
^{139}La, detection in presence of ^{138}Ba, reson. multiphoton ionisation mass spectra 7−93461
acetaldehyde, multiphoton ionisation dynamics *(Chinese)* 7−90283
acetone, fragmentation by excitation in O K edge region 7−82298
acetylene, ungerade excited states, vibr., photoelectron spectra 7−122611
actinides, laser induced photoionis., photoelectron spectroscopy 7−90076
actinides, trace amounts detection, reson. multiphoton ionisation and TOFMS anal. 7−90066
active galactic nuclei, photoionisation models for line and continuum emission from accretion disks 7−115579
adiabatic theory of multiphoton ionisation, ionisation of isolated level 7−116926
adsorbate layers, surface photoionis. processes, time evol. 7−137997
alkylamine clusters, H-bonded, photoionis. mass spectrosc. 7−136115
alkylbenzenes, vibr. excited triplet lifetimes, 2-colour photoionis. obs. 7−117011
allyl radicals, gas phase, vibronic spectrum, multiphoton ionis. 7−135909
amide groups, two-photon ionisation in UV, ionic fragmentation patterns 7−129798
2-aminopyridine, van der Waals and H-bonded systems, structs., excited state dynamics 7−136031
aniline, two-color photoionis. spectra 7−110018
aniline, UV laser-induced surface ionis., TOF mass spectra 7−92786
anthracene, in liq. methylcyclohexane, electron-ion pair geminate recomb. kinetics 7−90444
arene molybdenum tricarbonyls, multiphoton dissoc./ionis., intramol. vibr. relax. effect 7−129822
aromatic molecules, microsolvation, spectroscopic investig. 7−129823
atomic ions, tunnel ionis. in EM field 7−74544
atomic photoionisation cross sections, many-body calcs. 7−122480
atomic relativistic photoionisation cross sections, analytical determ. 7−141540
atomic resonance ionisation mass spectrometry review 7−93456
atomic response to intense fs UV radiation study 7−141543
atomic two electron resonances, Wannier wave fns. study 7−96508
atomic vapour laser isotope separation, reson. ionisation, atomic parameters meas. 7−90067
atoms, above-threshold ionisation, final-state effects 7−96619
atoms, above-threshold ionisation, pondermotive pot. effect 7−96622
atoms, above-threshold-ionisation electron spectra, polarisation depend. 7−96623
atoms, classically stochastic many-photon absorpt. processes, scaling 7−74525
atoms, closed-shell, photoionis. cross sections and photoelectron angular distrib. meas., ESSR investig. 7−135898
atoms, coherent excitation and photoionisation of Rydberg states using ps laser pulses 7−90060
atoms, Daresbury Synchrotron Radiation source expts. 7−90056
atoms, doubly excited states, multiphoton excitation, electron correls. 7−96560
atoms, electron pair threshold escape 7−74527
atoms, isotope analysis, reson. ionisation mass spectrometry and laser-induced fluoresc. 7−93460
atoms, magnetoelectric susceptibilities 7−103451
atoms, multiphoton ionisation, photoelectron spectrum 7−96617
atoms, multiphoton ionisation and laser-induced virtual states study 7−90058
atoms, multiphoton ionisation by intense laser fields 7−96615
atoms, multiple excitation and ionisation by strong lasers 7−96628
atoms, multiple-electron perturbations, nonperturbative techniques 7−96625
atoms, multiply excited states, multiphoton excitation 7−96627
atoms, nonlinear ionisation in laser beam, evaporating model for highly charged ions form. 7−129674
atoms, photoelectron spectrum in near-threshold photoionisation 7−103445
atoms, photon absorption in low-freq. field. multiple ionisation 7−141548
atoms, strong-field laser ionisation, FEM study 7−96620
benzene, high resolution zero kinetic energy photoelectron spectroscopy and ionisation pot. 7−90270
benzene, multiphoton ionis., spatial distrib. influence anal. 7−103607
benzene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
benzene, photoionisation spectra, adiabatic ionisation energy determ. 7−103590
benzene-HCl van der Waals complex, dissociative photoionis. 7−96799
biomolecules, pulsed laser desorpt., reson. two-photon ionis. detect. 7−117028
biomolecules, reson. 2-photon ionis. using laser desorpt., mass spectrometry 7−106970
bromomethane, core excited, photoionis. decay 7−136020
bromomethane, multiphoton ionis. investig. 7−90303
chemical analysis, reson. ionisation spectroscopy, medical and biological appls. 7−94042
close coupling wave fns., oscill. strengths and photoionisation cross sections, PHOTUC computer code 7−135881
clusters, laser vaporisation photoionisation dynamics, abundance patterns 7−141730
complex atoms, tunnel ionis. in EM field 7−74544
conference, Swansea, Wales (Sept. 1986) 7−88744
conference, Uzhgorod, USSR (Sept. 1985) 7−120684
cycloheptatrienes, fast internal conversions investigated by multiphoton ionisation 7−96797

photoionisation continued
diatomic molecules, shape resonances, giant atomic resonances comparison study 7−141634
diffuse discharge switching characts., photodetachment effects 7−97810
N,N-dimethyl-acetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7−90294
1,4-dioxane ions, photodissoc., 7−119538
2,5-diphenylfuran molecules, gaseous phase, photophysical parameters 7−82272
dry air, low pressure, laser-induced breakdown, electron density, CO_2 interferometry meas. 7−104433
electron spectrometer for photoionisation studies, high-resolution threshold 7−80947
energy shifts due to the ponderomotive potential 7−141536
ethylbenzene $Cr(CO)_3$, multiphoton dissoc./ionis., collisional effects 7−96811
exotic atoms, search using sputter-initiated reson. ionisation spectroscopy 7−90453
exponentially decaying pulse, bound-free coupling problem 7−96633
fluoranthene in tetramethylsilane, multiphoton ionisation study 7−82292
formaldehyde-$d_0(d_2)$, Rydberg states, multiphoton ionis. 7−90286
Galactic halo, photoionisation models from ionising radiation field anal. 7−88583
halobenzonitrites, photoionisation spectra, adiabatic ionisation energy determ. 7−103590
halogen ions, negative, photodetachment cross sections, relativistic RPA calcs. 7−74533
heavy elements, L-shell photoionisation, election correls. 7−122478
2,4-hexadiyne, laser multiphoton ionis. dissoc. mechanism 7−110024
high-intensity laser processes, conf. Quebec City, Que., Canada (June 1986) 7−72715
hollow-cathode discharges, laser photoionis., galvanic detect. 7−124021
inert gas, multiphoton ionisation, electron energy spectrum 7−74540
inert gas atom, multiphoton ionisation, electron energy distrib. 7−68260
inert gas halide lasers, high pressure X-ray preionisation study 7−68614
inert gas mixtures, third harmonic generation, optical consts., multiphoton ionisation meas. 7−122648
inert gases, hollow cathode discharge, optogalvanic spectra investig. 7−90026
inert gases, UV multiphoton electron spectroscopy 7−96630
inert gases in meteorites, reson. ionisation mass spectroscopy 7−93451
interstellar polycyclic aromatic hydrocarbons (PAH), contrib. of photoionisation to H I gas heating 7−120533
iodomethane, core excited, photoionis. decay 7−136020
iodomethane, photodissoc., multiphoton ionis. detect. 7−117034
ion counting technique for studying multiphoton ionization processes of mols. 7−90304
ion-surface impact, desorbed material, multiphoton reson. ionisation-TOF mass spectra anal. 7−92820
isomers, REMPI mass spectra 7−74717
lanthanides, laser induced photoionis., photoelectron spectroscopy 7−90076
laser enhanced ionisation spectroscopy with high press. liq. chromatography 7−144779
laser microprobe mass analysis, increased sensitivity using reson. 2-photon ionis 7−102566
laser photoionization system for high resolution spectroscopy appl. 7−95655
laser-induced autoionization and photoelectron spectrum *(Chinese)* 7−90048
laser-stimulated ion desorption in a strong electric field 7−139035
lasers appl. to atom ionisation *(French)* 7−109844
light ions, extreme UV absorpt. spectra 7−74497
linear molecule photoelectron ang. distribs. calc., PEAD computer code 7−136013
liquid, solvent binding energy shifts, self-consistent reaction field approach 7−113339
long-lived Stark states detected at a positive energy 7−82040
Markarian 52, starburst-nucleus galaxy, photoionisation model for emission line profiles 7−140282
methane, photoionisation, angle-resolved photoelectron spectra 7−136008
methane clusters, ion-molecule reactions initiated by photoionisation 7−113897
methane-NO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
methanol clusters, multiphoton ionis., reaction channels var. 7−110051
N-methylacetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7−90294
$(methylamine)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
methylbenzyl alcohol, isomers, REMPI mass spectra 7−74717
$N\text{-}(methylformamide)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
modulation theory of above-threshold ionization 7−68265
molecular clusters, photoionisation mass spectrometry using synchrotron radiation, review 7−90474
molecules, adsorbed on thin metal films, pulsed UV laser ionis. 7−136018
molecules, large involatile, reson. ionisation, TOF mass spectrometry anal. 7−90293
multilevel systems, resonant excitation, AC Stark splitting, peak asymmetry 7−141520
multiphoton ionisation, strong electromag. field effect, electron energy spectra, approx. method calcs. *(Swedish)* 7−122470
multiquantum ionisation and tunnelling in stochastic fields 7−103453
N-level atomic system, strong-field ionisation, power depend., continuum coupling and laser interactions 7−82059
nonlinear atom ionisation, collective processes 7−74539
nonlinear photoprocesses in diatomic molecules, review 7−136027
paraxylene clusters, reson. enhanced multiphoton ionisation study 7−90292
PEPIPICO triple coincidence technique, for 3-body dissoc. dynamics obs. 7−134896
phenetole, two-color photoionis. spectra 7−110018
phenol, two-color photoionis. spectra 7−110018
phenylacetylene, clusters, reson. enhanced multiphoton ionisation study 7−90292
photoemission, conf., Lund, Sweden (Aug. 1986) conference, Lund, Sweden (Aug. 1986) 7−120698
photosensitive monolayers, bilayer membranes and polymers 7−106809
PKS 1614+051A, intergalactic gas cloud near distant quasar, photoionisation model 7−128117

photoionisation continued
PMMA, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
polyatomic mols., photoionisation theory 7−136007
polyenes, valence ionisations, non-Koopmans' effect, photoelectron spectra 7−117021
polystyrene, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
pyrazine, jet-cooled, two-colour fluoresc., multiphoton ionisation spectra 7−90244
pyrazine highly excited Rydberg states, autoionis. 7−96570
pyrene in non-polar hydrocarbon solvents, slow conductivity signals from pulsed laser irradiation 7−137978
pyrimidine, 3*s* Rydberg state, multiphoton ionis. spectra 7−82307
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
radio galaxies, emission-line activity rel. to photoionisation models 7−107960
radio galaxies nuclei, influence of relativistic electrons on photoionised gas cloud 7−139897
Raman spectroscopy, high resolution, using double reson. techniques 7−80898
refractory metal atom multiphoton ionisation, laser-evaporated pulsed atomic beams *(Chinese)* 7−103441
resonance ionization spectroscopy, appl. to trace element detection *(German)* 7−129677
resonance-enhanced multiphoton ionization for diagnosis of a weakly ionized plasma 7−130932
resonances and photoionisation cross sections, complex coord. method, matrix element extrapolation 7−103412
resonant multiphoton ionisation spectroscopy, of reversals 7−122472
resonant phenomena, role in adiabatic theory of multiphoton ionisation 7−116927
resonantly enhanced multiphoton ionisation-PES, photoionisation and photodissoc. study 7−74716
Rydberg atoms, collisional and microwave ionisation, diffusion, Fokker-Planck eqn. 7−68261
Rydberg series, autoionising, spectral line shapes 7−141485
Seyfert galaxies dynamical model for narrow-line region 7−134307
short-lived isotopes, on-line reson. ionisation mass spectra anal. 7−90072
SN 1987A in LMC, circumstellar shell photoionisation model for UV emission-line spectrum 7−134257
sputter initiated reson. ionisation spectroscopy review 7−92821
stellar atmosphere opacities determ., astrophys. and fusion appls. 7−115230
symmetric top mol., Coriolis coupling effect on time-resolved two-photon ionisation 7−141632
synchrotron radiation inner-shell photoionization of atomic and molecular gases 7−96632
tetrachloromethane, photoionisation, angle-resolved photoelectron spectra 7−136008
tetrafluoromethane, photoionisation, angle-resolved photoelectron spectra 7−136008
tetramethyl lead, Pb^+ production following 5d core photoionisation as revealed by coincidence expt. 7−82296
tetramethyl stannane, photoelectron study using synchrotron radiation 7−82278
tetramethyl-p-phenylenediamine, solns., photoionisation, solvent effects, reson., Raman spectra anal. 7−82195
three-body systems, Coulomb interaction, threshold laws 7−135835
TMPD in methylcyclohexane, photocond. kinetics with pulsed laser ionisation 7−92224
trace element anal., laser reson. ionisation spectrometer 7−93457
transition metal clusters, photoionisation threshold, H_2 chemisorpt. effect 7−96900
trifluoroethylene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
trifluoroiodomethane; multiphoton ionis. investig. 7−90303
trimethylamine, excited state, ionis. and internal conversion, photoelectron spectra 7−74710
tropone, decarbonylation, time depend. mass spectra, breakdown graphs 7−93273
4U 0900−40 (HD 77581), massive X-ray binary, wind photoionisation rel. to rapid vars. of P Cyg lines 7−120502
unimolecular ion decay kinetics, reson.-enhanced multiphoton ionisation mass spectra anal. 7−90300
univalent anions, in solns., photoionisation, inner-sphere nucl. reorganisation, solvation model 7−110028
van der Waals clusters, supersonic expansion, photoionisation spectroscopy 7−110166
vinylchloride, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
XUV laser spectrometer, pulsed dye lasers, dichroic mirrors photoion yield, cooled target, applications 7−140763
Xylene isomers, multiphoton reson. ionisation spectra anal. 7−90181
III Zw 77, Seyfert 1 galaxy, photoionisation model for UV and optical emission-line spectrum 7−128057
Al laser-produced plasma, coronal region, radiative preheat, X-ray generation 7−69396
Al plasma, surface localised, production by dye laser pulse and pulsed quartz lamp 7−69400
Al, Rydberg states, laser photoionisation spectroscopy 7−67401
AlAr, mass-resolved reson.-enhanced multiphoton ionis. 7−110020
AlH^+ and AlD^+ cation radicals, in Ar matrices, ESR, generation by reactive laser sputtering 7−90222
Ar, double ionisation, threshold behaviour 7−74537
Ar, inner-shell photoionisation, post-collision interaction, quantum calcs. 7−90055
Ar, nonreson. multiphoton ionis., electron correl. effects 7−135899
Ar, photoionis. yield spectra 7−109846
Ar, photoionisation, post-collision interaction, photoelectron spectra calc. *(Swedish)* 7−122469
Ar, photoionisation cross section calcs. 7−122466
Ar, spin-orbit components, partial photoionisation cross sections 7−103444
Ar, two-photon reson. spectra 7−116925
Au, desorption and multiphoton ionisation scheme, appl. in isotope anal. 7−90064
Au resonant ionization using synchronized laser pulses 7−122474
Ba, 3-photon ionis., triplet state 2-photon intermediate resons. excitation 7−74541
Ba, correlation interaction energy, photoionisation, density functional theory study *(Swedish)* 7−122367
Ba, double Rydberg states, excitation and anal. 7−96626
Ba, electronic excitation, effective local pots., many-body theory 7−74728
Ba, excited states, electron correlation, PES anal. 7−90065
Ba, isotope relative abundance, double-reson. ionisation mass spectra 7−93458
Ba, resonance ionisation mass spectra lineshapes, optical pumping effect 7−90059
Ba, resonant multiphoton ionisation, multichannel quantum defect parametrisation 7−141667
Ba^+, ion Rydberg states, laser-microwave ionisation mass spectroscopy 7−68235
Be ions, XUV absorpt. spectrosc. 7−109829
Bi, photoabsorpt. spectrum and photoionis. cross section meas. 7−109828
Br, photoionis. cross-section determ. 7−110017
Br, resonant multiphoton ionisation photoelectron spectra study 7−117030
Br_2, resonant multiphoton ionisation photoelectron spectra study 7−117030
C isoelectronic sequence, L-subshell photoionis. cross sections calc. 7−103447
C, resonant multiphoton ionis., photoelectron angular distribs. calc. 7−103443
CO adsorbed on Ni, mol. shape resonance, inverse photoemission obs. 7−99967
CO laser, X-ray preionised TEA, characts. 7−122921
CO, photofragment from HNCO, internal state distrib. 7−126465
CO, resonant multiphoton ionis. cross-sections determ. 7−90305
CO_2 supersonic jet, multiphoton absorpt. laser-induced fluoresc. 7−117006
CO^+, $X\ ^2\Sigma^+$ and $A\ ^2\Pi$, photoionis. cross sections meas., vibr. motion effects 7−117029
CS_2, autoionisation, fluoresc. polarisation study 7−82293
CS_2, multiphoton spectra, fragmentation, photodissociation, photoionisation photolysis 7−141639
CS_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
Ca, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
Ca, multiphoton ionisation probabilities study 7−82294
Ca, partial photoionis. cross sections and reson. struct. determ. 7−141541
Ca^+, absolute photoionisation cross section meas. 7−82053
Ca^+, autoionisation states energies calc., config. superposition method *(Swedish)* 7−122368
CoF_2, photoelectron spectra anal., Green's fn. method, CNDO-UHF calcs. 7−141464
$Cr(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
Cs atoms, photoabsorption spectra of 3D-electrons 7−82031
Cs, discrete and continuous spectra, oscillator-strength distrib. 7−103435
Cs, excited state and ionisation energies, UV excitation spectra anal. 7−103422
Cs, multiphoton ionisation cross sections 7−110026
Cs, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Cs, nonreson. multiphoton ionis., electron correl. effects 7−135899
Cs, vap., multiphoton ionis. spectra 7−90306
Cu, photoionisation cross section calcs. 7−122466
CuF_2, photoelectron spectra anal., Green's fn. method, CNDO-UHF calcs. 7−141464
^{64}Cu, selective photoionisation in presence of $^{63,65}Cu$ 7−125867
D_2, photoionisation, vibr. resolved, cross sections, Franck-Condon factors 7−122627
DCl, resonantly-enhanced UV two-photon spectra 7−96810
Eu, photoionisation cross section near 4d4f reson. calc. by many-body perturbation theory 7−116919
Eu, reson. photoemission, open-shell and solid state effects 7−144231
Fr Rydberg levels, laser photoionisation resonance spectroscopy 7−141486
Ga $4s4p^2$ config., lifetimes and relative transition intensities, two-step laser ionisation study 7−141527
Ga, reson. ionis. spectrometric anal. 7−93467
Ga, Rydberg states, laser photoionisation spectroscopy 7−67401
GaAs, EL2 ground state, energy position, determ. 7−98886
Gd, quasi-reson. ionis. mass spectra 7−90073
Ge clean cylinder, orientation depend. surface dipole and Fermi-level position 7−70979
$GeCl_4$, photoionisation, angle-resolved photoelectron spectra 7−136008
H above-threshold ionisation, diagonal vs. off-diagonal continuum-continuum couplings 7−141537
H, at. nonlinear susceptibilities at frequencies above ionisation threshold 7−68266
H excited parabolic states, photoionisation spectrum threshold resonance props., Stark effect study 7−141522
H, highly excited atom, microwave ionisation probability calcs. 7−116851
H II regions, appl. of photoionisation models to M101 radial abundance gradient 7−95009
H in H_2-O_2-N_2 flames, conc. meas. by photoionisation controlled-loss spectroscopy 7−139006
H, multiphoton and above-threshold ionisation, nonperturbative treatments 7−96616
H, multiphoton ionis., photoelectron angular distribs., determ. 7−129676
H, multiphoton ionisation, Monte Carlo treatment 7−96618
H, multiphoton ionisation, dressed-state perturbation theory 7−96621
H, multiphoton ionisation in methane pyrolysis 7−71477
H, photoionisation, continuum-state selectivity in Stark fields by charge-shape tuning 7−68382
H, photoionisation spectrum in strong DC elec. field 7−141539
H, stochastic ionisation, static field effects 7−116920
H, two-colour ionisation with intense LF field 7−116921
H^-, one- and two-photon ionisation, spherical δ-shell pot. 7−74534
H^+ production, benzene resonant multiphoton ionisation in visible 7−129803
H_2, double photoionisation, electronic correl. model test 7−122628
H_2, Franck-Condon regions, double-reson. multiphoton ionisation 7−90231
H_2, isotopic species detection, reson. multiphoton ionisation technique anal. 7−90290
H_2, photoionisation, photoelectron spectra angular distrib. asymmetry parameter 7−109997
H_2, photoionisation, vibr. resolved, cross sections, Franck-Condon factors 7−122627
H_2 photoionisation dynamics, vibr. and rot. branching ratios 7−141631
H_2, Rydberg states, photoionisation, photoelectron spectra 7−122612

photoionisation continued
H_3, $3p^2A''_2$ metastable state, tot. scatt., surface ionis. and photionis. 7−103588
HBr, core excited, photoionis. decay 7−136020
HBr, photodissoc. kinetic and internal energy distribs. determ. 7−122644
HBr, photoionis. spectrum, freq.-tripled laser radiation meas. 7−110025
HCO radical, ground and excited states, laser induced fluoresc. and multiphoton ionis. spectra 7−129781
HCl, inner valence ionis., UPS 7−82280
HCl, ion-pair and Rydberg states, multiphoton ionis. laser spectrum 7−90302
HCl mass resolved resonantly enhanced multiphoton ionis. spectra 7−110050
HCl, resonantly-enhanced UV two-photon spectra 7−96810
HF valence photoionisation with synchrotron radiation 7−122626
HI, core excited, photoionis. decay 7−136020
HI, multiphoton multiple ionisation, laser 7−141547
$(H_2O)_m(Ar)_n$, H-bonded, photoionis. and fragmentation 7−122624
$H_2O(D_2O)$, sensitive quantum state selective detection by (2+1) reson. enhanced multiphoton ionisation 7−117032
H_2S, photoexcitation and ionisation HF calcs. 7−68189
H_2S, vac. UV and REMPI spectra 7−82306
H_2Se, photoionis. photoelectron spectra meas. 7−90268
He, ionisation by photons and electrons, autoionisation state appearance 7−122468
He, metastable states, two-photon ionisation 7−135895
He, twin photoionisation, 3 particle Coulomb interaction in final state 7−90287
He-like systems, resonant photoionisation, diagonalisation approximation, excitation energies, close-coupling calculations 7−135901
Hg, atomic vapour laser isotope separation, atomic parameters study 7−90068
Hg, photoelectron spectra, ang. distrib. parameter 7−74535
Hg, photoionisation cross section calcs. 7−122466
^{197}Hg, nuclear isomer separation using reson. multiphoton ionisation technique 7−90070
I_2, rotationally and vibr. cooled, multiphoton ionisation mass spectroscopy 7−110022
In, excited state collisional ionisation in flame 7−122475
In, Rydberg states, laser photoionisation spectroscopy 7−67401
InSb, photoionisation of shallow magnetodonors 7−92102
K clusters, photoionisation, neutral and ionic cluster stabilities 7−129916
K, discrete and continuous spectra, oscillator-strength distrib. 7−103435
K, isoelectronic sequence ions, excited-state photoionisation and radiative recombination 7−122481
K, nonreson. multiphoton ionis., electron correl. effects 7−135899
Kr, above-threshold ionis. processes 7−103449
Kr, above-threshold ionization with elliptically polarized light 7−122479
Kr atom counting, reson. ionisation-TOF mass spectra anal. 7−93453
Kr, autoionising levels, optogalvanic double-reson. spectra, config. interaction anal. 7−103354
Kr, electronic excitation, effective local pots., many-body theory 7−74728
Kr, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
Kr, laser isotope anal. technique using ion storage ring 7−93455
Kr, photoionis. yield spectra 7−109846
Kr, photoionisation cross section calcs. 7−122466
Kr, third-harmonic generation and multiphoton ionis. obs. 7−110019
Kr, three-photon excitation and multiphoton ionis., reson. self-broadening lines meas. 7−116911
Kr, two-photon reson. spectra 7−116925
Kr_2, gerade states, reson. enhanced multiphoton ionisation 7−141630
KrNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
Li, discrete and continuous spectra, oscillator-strength distrib. 7−103435
Li, excited state, in air-acetylene flame, laser enhanced ionis. and laser induced photoionis. yields determ. 7−90295
Li, Rydberg states in flames, Stark struct. obs. by laser-enhanced ionis. 7−74474
Li^+, ionisation by photons and electrons, autoionisation state appearance 7−122468
Li_xNa_{n-x}, photoionis. mass spectra 7−68501
Lu, isotope ratio meas., reson. ionisation mass spectrometry 7−90063
Mg, $^1P_1$ resonances photoionisation cross sections 7−135896
Mg atoms, three-photon ionisation using XeCl excimer laser 7−141535
Mg, excited states, collisional processes, multiphoton ionisation and reson. fluoresc. investig. 7−90032
Mg K_α X-ray satellite spectrum following photon excitation 7−74532
Mg, photoionisation cross sections 7−109843
Mg, three-photon ionisation using XeCl excimer laser 7−74543
Mo, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
Mo first ionisation potential meas. by double-resonance field-ionisation spectroscopy 7−109845
$Mo(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
N, REMPI detect. 7−129673
N_2, multielectron dissociative ionis., femtosecond dynamics 7−110027
N_2, photoelectron spectra, vibr. branching ratios, photoionisation cross section 7−82279
N_2, photoionisation, photoelectron ang. distrib. meas. 7−136005
N_2, total and dissociative photoionis. cross sections meas. 7−103587
N_2, two-colour double resonant multiphoton ionis., and laser-induced fluoresc. 7−110023
N_2, XUV laser multiphoton ionisation 7−140763
N_2+CO, rovibronic energy transfer, laser REMPI spectroscopy investig. 7−129850
NH_3, valence ionisation, photoelectron branching ratios 7−110016
$NH_3(ND_3)$, rot. consts., multiphoton ionisation spectra 7−117031
NO, autoionis. in photoionis. spectra 7−110021
NO, $D^2\sigma^+$ state, rot. branching, resonant enhanced photoionisation 7−129799
NO, gas inner valence electrons photionis., photoelectron spectra 7−109995
NO, resonance enhanced multiphoton ionisation, rot. transitions, PES anal. 7−90291
NO, Rydberg series, double reson. multiphoton ionisation, quantum defect anal. 7−68375
NO_2 photodissoc., photofragments, ang. distribs. 7−86654
NO_2 photodissociation. photofragments angular distrib. meas., multiphoton ionisation technique *(Japanese)* 7−119546
NO_2, two-photon dissoc., photofragments, ang. distribs. 7−86653

photoionisation continued
N_2O, photoionisation, photoelectron asymmetry parameters, shape reson. 7−129800
Na, discrete and continuous spectra, oscillator-strength distrib. 7−103435
Na, excited state, in air-acetylene flame, laser enhanced ionis. and laser induced photoionis. yields determ. 7−90295
Na, K-photoionisation, rearrangement of electronic shells and multiplet effects *(German)* 7−129670
Na, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Na, resonant multiphoton ionisation and competing processes study 7−90071
Na_2, photoionization in DC electric field, evidence for field-induced rotational autoionization 7−68412
Na_3, vibr. ground-state level, two-photon ionisation spectrum 7−110052
Na_x^+ clusters, ionisation induced unimol. dissoc., photoionisation 7−90475
NaCl clusters, multiphoton stimulated desorption, magic numbers anal. 7−119559
NaK, $C(3)^1\Sigma^+$ state, laser-induced fluoresc. and two-photon ionis. spectroscopy 7−129801
Nb, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
Nb first ionisation potential meas. by double-resonance field-ionisation spectroscopy 7−109845
Nb_x (x=1-15) clusters, reactivity with benzene, photoionis. TOF mass spectra detect. 7−132971
Nd, reson. ionis. spectroscopy, laser bandwidth effects 7−90075
Nd, vapour, resonance ionisation spectroscopy, laser bandwidth effects 7−82029
Ne core electron shake-up spectra, autoionizing resonances obs. 7−109842
NiF_2, photoelectron spectra anal., Green's fn. method, CNDO-UHF calcs. 7−141464
O_2, photoionisation in O_2-N_2 microwave discharge 7−124010
O_2, two photon reson. enhanced multiphoton ionisation spectroscopy 7−129819
O_2^+, $B^2\Sigma_g^-$ state, photoionis. cross section 7−82290
OCS, photoionisation, threshold reson. features in outer-valence shell partial cross sections 7−90284
Os, isotope abundance, reson. ionisation mass spectroscopy study 7−86697
Os, isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
P, photoionisation, autoionisation struct. obs. between fine struct. limits 7−122473
Pb clusters, laser vaporisation photoionisation dynamics, abundance patterns 7−141730
Pb, excited state collisional ionisation in flame 7−122475
Pb, low-energy autoionising states, DF and CI calcs. 7−116878
Pb-Sb alloys, vaporisation and photoionis., cluster ions form. 7−69877
Rb, discrete and continuous spectra, oscillator-strength distrib. 7−103435
Rb, multiphoton ionisation cross sections 7−110026
Rb, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Rb vapour, laser-induced resonance ionisation, multiphoton and collisional ionisation 7−141534
Re, isotope abundance, reson. ionisation mass spectroscopy study 7−86697
Re, isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
S, photoabsorpt. spectrum, photoionisation cross section 7−74528
SF_6, inner valence levels, photoionisation partial cross section and asymmetry parameters 7−74715
SF_6, props. of streamers and streamer channels 7−69300
SO_2, core-level photoionisation, asymmetry parameter, VUV absorpt. spectra 7−135964
Si clusters, photoionisation mass spectrum, ionising laser intensity depend. 7−110170
Si, critical analysis of soft X-ray cross section data 7−77695
Si, multiphoton ionisation, UV fluoresc. spectra anal. 7−96585
$SiCl_4$, photoionisation, angle-resolved photoelectron spectra 7−136008
^{141}Sm and ^{164}Tm nuclear isomers, laser separation and resonance photoionisation spectroscopy 7−67726
Sn-Bi alloys, vaporisation and photoionis., cluster ions form. 7−69877
Sr, 3-photon ionis., triplet state 2-photon intermediate resons. excitation 7−74541
Sr, autoionising states and AC Stark shifts, multiphoton ionisation spectra anal. 7−90061
Sr, ionisation in air-acetylene flame by reson. laser excitation 7−122464
Sr, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
Sr laser induced ionisation in air-acetylene flame, near-resonance effects 7−90054
Sr laser-induced ionisation, equilibr., ICP study 7−122707
Sr, multiphoton ionis. by ps laser light, electron spectrosc. obs. 7−74542
Sr plasma, superelastic collisional excitation, one- and two-photon laser pumping 7−68263
Sr, Rydberg and autoionising series, reson. multiphoton photoionisation spectra anal. 7−90069
Sr^+, absolute photoionisation cross section meas. 7−103446
Tc, isotope ratio meas., reson. ionisation mass spectrometry 7−90063
Tc, trace amounts detection, reson. multiphoton ionisation and TOFMS anal. 7−90066
Tm, autoionisation states, laser photoionis. spectrosc. 7−116918
Tm, Rydberg and autoionisation states investigated by three step laser excitation and electric field ionisation method 7−90289
^{164}Tm and ^{141}Sm nuclear isomers, laser separation and resonance photoionisation spectroscopy 7−67726
U, autoionising transition cross section determ. through laser induced photoionis. 7−90074
U, critical analysis of soft X-ray cross section data 7−77695
U, three-step photoionisation 7−135894
UM_{n_2}, electronic struct., reson. photoemission meas. 7−96790
$VOCl_3$, resonance-enhanced multiphoton ionis., mass spectrometric detect. 7−103586
$W(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
Xe, above threshold ionisation, photoelectron ang. distrib. 7−103450
Xe, above-threshold ionis. processes 7−103449
Xe, above-threshold ionisation with subpicosecond laser pulses, shifts and broadenings 7−135897
Xe, above-threshold ionization with elliptically polarized light 7−122479
Xe atoms, photoabsorption spectra of 3D-electrons 7−82031
Xe clusters, electron impact, multiphoton ionisation studies 7−96901

photoionisation continued
Xe, electronic excitation, effective local pots., many-body theory 7−74728
Xe, fifth harmonic prod. and photon reson., multiphoton ionisation spectra 7−122477
Xe, inner-shell photoionisation, post-collision interaction, quantum calcs. 7−90055
Xe, multiphoton ionisation, screening effects, RPA anal. 7−103442
Xe, multiphoton multielectron ionisation, many-electron dynamics 7−96629
Xe, multiphoton multiple ionisation, laser 7−141547
Xe, multiple charged ion creation by intense laser 7−96631
Xe, nonreson. multiphoton ionis., electron correl. effects 7−135899
Xe, photoionisation, post-collision interaction, photoelectron spectra calc. *(Swedish)* 7−122469
Xe, photoionisation cross section calcs. 7−122466
Xe, photon-excited Coster-Kronig decay, vanishing post-collision interaction 7−90034
Xe, resonantly enhanced multiphoton ionisation photoelectron ang. distrib. 7−96624
Xe, Rydberg atoms, time domain effects, UV spectrosc. 7−141538
Xe, three-photon excitation, autoionisation, fine struct., photoelectron spectra 7−90274
Xe, three-photon excitation and multiphoton ionis., reson. self-broadening lines meas. 7−116911
Xe, trace amounts detect., reson. ionisation-TOF mass spectra anal. 7−93452
Xe_2, photoelectron spectra obtained by resonantly enhanced multiphoton ionisation 7−110000
XeCl excimer laser, phototriggering using UV or X-rays 7−141845
XeNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
Yb, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
Yb, isotope detect., reson. multiphoton spectroscopy with thermionic diode detect. 7−90062
Zr, first ionis. pots., reson. ionis. TOF mass spectra 7−90080

photoisomerisation *see photochemistry*

photolithography
see also masks; photoresists; X-ray lithography
multiple aspheric systems for lithography of VLSI circuits 7−90745
optical scale manufacture, process engineering aspects 7−136629
optical waveguides, multimode GRIN strip, fabricated in glass by ion exchange 7−103982
phase conjunction phenomenon appls. *(Czech)* 7−136449
photopolymer compositions, camera-speed, appls. to lithographic plates and films 7−134865
planar focusing lens for reflection-mode acoustic microscope 7−123395
As_2S_3:Ag submicron resolution optical grid, Ag photodiffusion study 7−105120
Au mercaptoterpene metallopolymer thin films, photolytic decomp. by UV direct laser writing 7−126463
$LiNbO_3$:Ti waveguide mode control via fingering of Ti strips 7−136530
NbN-MgO-NbN sputter deposited superconductor-insulator junctions, insulator interface effects 7−125268
NbN-Nb/PbSb Josephson tunnel junction prep. in single vac. cycle 7−143719
Si, p^+-n-n^+ solar cells with AM1 efficiency of 19.5%, excimer laser processing and oxide passivation 7−86795
Si solar cells fabrication using glow-discharge implantation, thermal annealing and oxide passivation 7−71603

photoluminescence
see also fluorescence; phosphorescence
A^2B^6, luminescent ceramic, edge radiation spectra 7−106213
AgI-mordenite inclusion cpd., photoinduced effects 7−144105
alkali halides, excitons, free and self-localised, luminescence studies 7−132320
alkali halides, photostimulated recombination luminescence, F-centres *(Russian)* 7−113268
alkali metal halide:In^+, kinetics of luminesc. and excited absorption *(Russian)* 7−85807
alkaline earth sulphide phosphors, doped with Ce and Sm, thermally stimulated luminesc. 7−144133
7-alkylaminocoumarines, substituted, spectral-luminescence props. and participation in intermol. interactions, amino group fixation effects 7−125773
amorphous and vitreous materials, excitation relaxation processes, photoluminescence and photodarkening 7−85797
amorphous materials, universal distrib. fn. of relaxation 7−119045
anthracene, cryst., charge carrier recombination. delayed fluoresc. 7−85788
archaeological mineral samples, optical dating using an Ar ion laser 7−87960
chalcogenide glasses, photoluminescence, temp. depend. 7−77634
chalcogenide glasses, photoluminescence and photoinduced optical anisotropy, polarisation memory 7−144131
diamond, luminescence of optical centres, ion implanted rare earth and transition elements 7−99929
9,10-dichloroanthracene, cryst. press. effect on luminesc. 7−77617
dichlorobenzene-dibromobenzene mixed cryst., nondiffusive triplet energy transport 7−132328
dislocation-induced optical centres modification under tangential stress, photolum. study 7−144011
disordered solids, photoexcitation by ultrafast light pulses 7−85798
DMSO:Dy^{3+},Ho^{3+}, diffusion-limited energy transfer 7−106245
donor-acceptor molecules, energy transfer process effect on luminesc. and photoexcitation 7−68401
dosimetry, individual monitoring systems, international intercomparisons, ICRU dose quantities 7−87184
dye solution, refractive index, spectral depend. 7−113106
fibre optics for low temp. and high magnetic fields 7−140759
fluoride glasses, transition metal doped, luminescence 7−106259
fluorozirconate glass:Eu^{3+}, site selection spectroscopy studies 7−99824
graphite, laser sputtering, fluorescence anal. 7−106251
haematoporphyrin and derivatives, laser fluorescence spectra and singlet oxygen quantum yields *(Chinese)* 7−86912
hopping disordered systems with electrical bias, photoluminescence 7−85800
ice, UV stimulated luminescence, temp. depend. 7−99919
II-VI semiconductors, luminescence of optical centres, ion implanted rare earth and transition elements 7−99929

photoluminescence continued
III-V quantum well structs., high carrier densities, photolum. studies 7−106270
III-V quantum wells, photoluminescence under hydrostatic press. *(French)* 7−132334
III-V semiconductor layers and devices, metalorganic CVD growth on Si using strained superlattices 7−86057
III-V semiconductors, anodic oxide film form., optical and photoelec. props. *(Russian)* 7−125822
III-V semiconductors, luminescence of optical centres, ion implanted rare earth and transition elements 7−99929
III-V semiconductors, optical and electrical properties 7−131586
III-V semiconductors, radiative recombination, reemission, quantum efficiency and lifetimes 7−85842
III-V semiconductors, transition metal photoluminescence 7−106247
$InAs_ySb_{1-y}$/GaInAsSb/GaSb struct., LPE growth, charactn. and IR photodiode appl. 7−92895
ionising radiation and luminescent detectors, conf., Tallin, USSR (April 1985) 7−128172
isobutylene, photocatalytic oxidation, impurity centers 7−126482
lamellar solids, excited state props. 7−70881
laser-material interaction, resolution investig. *(Chinese)* 7−91649
luminophores, cascade multiplication of electronic excitations 7−132321
luminophores, gaseous, atomic sources of optical photons 7−129645
metallic thin film system, optical emission from coupled surface plasmons 7−106252
molecular excitons, bistability, computer modelling 7−112189
multilayer III-V semiconductors, MOVPE of multilayer structures 7−105683
muscle, contracting, striated, use of laser-stimulated luminesc. to meas. X-ray diffr. 7−145303
perylene in n-octane and n-heptane, admixtures, nonphonon line shift in luminescence spectra 7−144123
poly(p-phenylene vinylene), correlation between conjugation length and nonradiative relaxation rate 7−83780
poly(phenyl methyl silane), photolysed, photoluminesc. growth obs. 7−99920
poly-3-methylthiophene, resonance Raman scatt., vibr. freqs. 7−77561
polyacetylene, neutral and electrochemically doped, secondary radiation emission 7−70906
polydiphenylenediphenylvinylene, photoluminescence study 7−70908
polyparaphenylene, crystalline, optical excitation study 7−70907
polyphenylenevinylene, photoluminescence, photoinduced absorpt. studies 7−70908
polythiophene, photoexcitation spectroscopy, ODMR 7−70897
polythiophene, photoluminescence and optically detected mag. resonance studies 7−77653
pyridinium oxazole dye laser salts, stability 7−117192
pyromellitic dianhydride-phenanthrene, charge transfer cryst., delayed fluoresc. study 7−77616
quantum heterostructures, interband lumin., anal. 7−132313
quantum wells, photolum. efficiency, oscillatory variation 7−85837
quartz, polymorphic α-β transform. under neutron irrad., spectral studies 7−104847
quartz, synthetic, vac. UV radiation induced defects, optical adsorpt., photoluminesc. and thermoluminesc. meas. 7−119043
quartz, time-resolved photoluminescence 7−70900
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
radiophotoluminescence dosimetry, UV excitation method 7−87227
radiophotoluminescent glass dosimeter systems using pulsed laser UV excitation 7−87226
radiophotoluminescent glass reader, dosimetry appl. 7−87225
rare earth chalcogenides, $RGa_2S_4(Se_4):Nd^{3+}$ *(Russian)* 7−125770
rare earth crystal phosphors, atomic sources of optical photons 7−129645
ruby:Cr^{3+}, inelastic reson. scatt. of 10^{12} THz acoustic phonons by exchange coupled impurity ion distant pairs 7−111786
ruby, shock compression by mag. fields, luminescence-antiluminescence meas. 7−142909
semiconductor, nuclear spin system, optical cooling 7−85843
semiconductor relaxation processes, dynamics of test pulse 7−144102
semiconductor-electrolyte interfaces, time-resolved response to illumination pulses 7−99191
semiconductors, electron-hole radiative recombination in strong EM wave field 7−106264
semiconductors, hot electron luminescence and optical orientation of electron and nuclear spins 7−85841
silica, fused, O_2^- emission band in phosphorescence and photoluminescence 7−125795
subpicosecond luminescence spectroscopy using sum freq. generation 7−95654
sulphates and sulphides, X-ray luminescence using synchrotron radiation 7−132323
surface characterisation using excited-state luminesc. 7−70033
tetraphenylporphyrin ultrathin film, luminesc. quenching, depend. on SnO_2 substrate conductivity 7−106254
two-dimensional electron gas, density of states, photoluminesc. studies 7−131516
X-ray luminescence, quenching and enhancement by elec. field pulses 7−132310
Ag-HfO_2/SiO_2-Ag struct., metal film boundary influence on luminesc. intensity 7−85840
AgBr, time resolved luminescence spectra at high density excitations 7−125779
AgBr:I, light emission from impurity states, conventional and coherent phonon descriptions 7−77640
AgBr:I, optically excited, immersed in He bath, heat transfer rate determ. 7−138489
AgCl, high temp. photolum., high photoexcitation rates 7−70865
(Al,Ga)As-GaAs heterostructures grown by MBE with growth interruption, photolum. 7−70869
AlAs-GaAs superlattices, thin-layered, resonant Raman scatt. 7−113165
AlAs-GaAs thin layer superlattices, photorefl. and low temp. photolum. 7−70922
$(AlAs)_m(GaAs)_m$ superlattices, ultrathin-layer, MBE growth 7−100074
$(AlAs)_m(GaAs)_n$ ultra-thin superlattices, Raman scatt. and photoluminescence meas. *(Japanese)* 7−85662
AlF_3-YF_3-GdF_3-CaF_2-SrF_4-BaF_2-$NaXF_6$, X=P, As, glasses, time-resolved lumin. and decay charactS. 7−70878
AlGaAs - GaAs:Si, MOCVD produced heterostructure lasers, power and temp. performance 7−82567

photoluminescence continued
AlGaAs, high quality, quantum wells, low temp. MBE growth, mobility and photolum. obs. 7−71022
AlGaAs, MBE growth, C impurity conc., photoluminesc. spectra 7−112115
AlGaAs, MBE growth, photoluminesc. spectra 7−143280
AlGaAs MBE growth on lenticular GaAs substrates, surface morphology and photolum. props. 7−124797
AlGaAs, photolum. near Γ-X crossover, optical transitions 7−132335
AlGaAs quantum wells, photoluminescence switching in elec. field 7−138495
AlGaAs, single heterostruct. LEDs, props., struct. characterisation 7−76645
AlGaAs:C films grown on GaAs substrates, C incorporation in MOCVD growth 7−100090
AlGaAs:Mn layers and AlGaAs/GaAs:Mn quantum wells, luminescence 7−70904
AlGaAs:Si, MOCVD grown, donor-cation vacancy complex, photoluminesc. study 7−98224
AlGaAs/GaAs interface, interdiffusion in quantum well 7−124603
AlGaAs/GaAs quantum wells, OMCVD grown, carrier confinement and luminescent props. 7−131750
AlGaAs/GaAs:Mn quantum wells and AlGaAs:Mn layers, luminescence 7−70904
AlGaAs-GaAs heterostructure on GaAs (110), MBE growth and props. 7−71026
AlGaAs-GaAs heterostructures, MBE growth with interruption at interfaces, optical props. 7−143272
AlGaAs-GaAs single quantum wells, MBE, photolum. 7−70868
AlGaAs-GaAs single quantum wells, migration-enhanced epitaxy, photolum. study 7−119033
AlGaAs-GaAs surface emitting laser, epitaxial Fabry-Perot resonator with AlGaAs-AlAs quarter-wave reflectors 7−90609
AlGaAs-GaAs:Se(Mg) quantum well heterostructs., doping effects, thermal annealing and photolum. meas. 7−143573
$Al_xGa_{1-x}As$, band edge, depend. on composition, absolute meas. of x 7−144201
n-$Al_xGa_{1-x}As$ epitaxial layers, photoluminesc., electron irrad. effects *(Russian)* 7−77650
$Al_xGa_{1-x}As$ layers, high-sensitivity sampling technique for luminesc. time constant meas. 7−144099
$Al_xGa_{1-x}As$, MBE layer, photoluminescence *(Korean)* 7−92735
$Al_xGa_{1-x}As$ MBE layers, energy gap, Al conc. depend., photoluminesc. meas. 7−138507
$Al_xGa_{1-x}As$ MOVPE growth and charactn. 7−126007
$Al_xGa_{1-x}As$, mixed crystal amalgamation bands, mobility edge luminescence 7−125778
$Al_xGa_{1-x}As$, VPE, halide transport reactor, optoelectronic device appls. 7−100080
$Al_xGa_{1-x}As$:Ge, LPE, photoluminescence *(Korean)* 7−85812
$Al_xGa_{1-x}As$:Si MBE films on GaAs(511) substrates, low temp. photoluminesc. 7−125782
$Al_xGa_{1-x}As$:Sn, epitaxial layer, photoluminescence *(Korean)* 7−144118
n-$Al_xGa_{1-x}As$/GaAs MQW heterostructs., interband magneto-photolum. spectra study 7−138435
$Al_xGa_{1-x}As$-GaAs quantum wells, excitonic transition photolum. linewidth, elec. field effect model 7−132237
$Al_xGa_{1-x}As$-GaAs-$Al_xGa_{1-x}As$ heterostructs., selectively doped, lumin. 7−113250
$Al_xGa_{1-x}Sb$, LPE grown, acceptor and defect levels, photoluminesc. spectra 7−113283
AlInAs-GaInAs quantum wells, optical spectra, atomic scale struct. 7−138508
$Al_{0.48}In_{0.52}As$ epitaxial layers on InP, Raman and photolum. spectral studies 7−106198
$Al_xIn_{1-x}P$ epilayers, organometallic VPE grown, optical props. 7−77668
α-Al_2O_3, colour centre optical props., luminescence in visible and IR spectra *(Russian)* 7−144127
As-Ge-Se chalcogenide glasses, photoluminescence, chem. etching effects 7−85803
As_2S_3, amorphous, electron stimulated changes in photolum. 7−132308
As_2S_3, glassy chalcogenides, pressure-structural and optical studies 7−83716
As_2Se_3, crystalline and amorphous, triplet excited states 7−70899
As_2Se_3 single crysts., photoluminesc., emission and excitation spectra, 4.2 to 20 K *(Japanese)* 7−125768
As_2Se_3, thermalisation of excited carriers, band states 7−125792
Au island film, laser radiation interaction, photoluminescence and electroluminescence obs. 7−125866
$BaEr_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$Ba_{1-x}Eu_xMgF_4$, Eu^{2+} lumin. study 7−85806
BaFBr:Eu, X-ray phosphors for computerised radiography, photostimulated luminescence kinetics 7−70870
BaFCl:Eu crystals, luminescence and electron transfer 7−113272
$BaHo_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$BaLaGa_3O_7$:Nd single crystals, spectroscopic studies 7−85796
$Ba_3LaM_3O_{12}$:Eu^{3+} (M=Ta, Nb), struct. of lumin. centres 7−99922
$BaMgF_4$:Ce^{3+}(Eu^{2+}), lumin. under X-ray excitation 7−144110
$BaMgF_4$-Eu^{2+}, Eu^{2+} line emission, conc. and temp. depend. 7−144109
$Ba_3(PO_4)_2$:Tb(Ce), luminesc., second phase form. 7−70890
$BaRB_9O_{16}$:Eu^{2+}(Eu^{3+}) (R=La,Gd,Y), luminescence 7−113273
$BeAl_2O_4$:Ti^{3+}, lasing and optical props. 7−97018
BeO, optical props. of F-centre 7−113278
$Bi_{12}GeO_{20}$:Nd^{3+}, energy transfer, sensitised luminesc. study 7−125788
$Bi_4Ge_3O_{12}$:Cd(In), photolum. studies of doped and undoped crysts. 7−99903
$Bi_{12}SiO_{20}$:Nd^{3+}, energy transfer, sensitised luminesc. study 7−125788
CaF_2:Tm detectors, radiation induced thermoluminescence 7−77664
$Ca_2Ga_2SiO_7$:Nd^{3+}, gehlenite, crystal struct., spectral luminesc. and stimulated emission 7−106237
$Ca_3(Nb, Ga)_2Ga_3O_{12}$:Nd^{3+}, cation-deficient garnet, spectral luminesc. props. 7−106236
CaS:Cu(Ce), temp.-depend. photoluminesc. and phosphoresc. decay studied using N_2-pulsed laser 7−113256
CdF_2 film, X-ray luminesc. *(Japanese)* 7−132337
CdF_2:$MnCl_2$, film, X-ray luminesc. *(Japanese)* 7−132337
$Cd_{1-x}Fe_xSe$ dilute mag. semicond., Van Vleck paramagnetism, photolum. study 7−85238

photoluminescence continued
$CdGaInS_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$CdGa_2Se_4$ localised levels and recomb. props., photolum. spectra study 7−118400
$CdInGaS_4$, photoluminescence props. 7−125805
$CdIn_2S_4$ single crysts., fundamental absorpt. edge and photolum. temp. depend. studies 7−119052
$CdIn_2S_4$ single crysts., optical gain, photolum. meas. 7−132326
$CdIn_2S_4$, time resolved photolum. 7−106232
$CdIn_2Se_4$, photolum., radiative recomb. at local centres 7−106235
CdMn Te, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$Cd_{1-x}Mn_xSe$, magnetically mixed semiconductor, spin optical orientation 7−138490
$Cd_{1-x}Mn_xSe(Te)$, magnetic polaron form. dynamics, picosec. photolum, study 7−99433
CdMnTe, synthesis by implantation of Mn into CdTe 7−91611
$Cd_{1-x}Mn_xTe$, mixed crystal amalgamation bands, mobility edge luminescence 7−125778
$Cd_{1-x}Mn_xTe$, photoluminescence, temp., pressure depend. 7−144116
$Cd_{1-x}Mn_xTe$, semimagnetic semiconductor, transient luminescence, automatic picosecond single-photon-counting spectroscopy *(Japanese)* 7−108670
$Cd_{1-x}Mn_xTe$, temp. depend. photocond., photolum. and UPS studies 7−85794
$Cd_{1-x}Mn_xTe$:P,As, elec. and optical props. studies 7−131658
$Cd_{1-x}Mn_xTe$-CdTe superlattices, UV excited photolum., Raman scatt. 7−85787
CdS, *M* and *P* band photoluminescence, pulse shapes *(Russian)* 7−119046
CdS, adsorption of rhodamine B dye, optical absorption, luminesc. 7−76616
CdS, bound excitons, electron-phonon interactions, luminesc. spectra 7−113254
CdS crysts., electron-hole plasma excitation spectra 7−98813
CdS electron-hole dynamics picosec. luminesc. studies 7−85845
CdS, excitonic surface polaritons, luminescence 7−113241
CdS fine particles, photoacoustic and luminescence spectra 7−70887
CdS, luminescence and photocond., ultrasound-stimulated changes 7−76302
CdS, one and two LO phonon luminesc. lines, temp. depend. of half-widths 7−77627
CdS/Al_2O_3, epitaxial films, exciton photoluminesc. distrib. 7−113285
CdSE, reson, Raman scatt. from defects, polarised luminesc. spectra 7−106180
CdS(Se), M and P luminesc. bands, Bi-exciton annihilation 7−132329
$CdS_{1-x}Se_x$ disordered crysts., luminesc., absorpt., refl. and gain spectra 7−106263
$CdS_{1-x}Se_x$ solid solution, kinetics of localised exciton formation 7−144121
CdS_xSe_{1-x}, excitons localised by disorder, picosecond lumin. 7−92729
CdSe, deep centre luminescence, thermal extinction 7−92721
CdSe, electron-hole plasma, hot electrons, phonons, photolum. study *(German)* 7−132336
CdSe, exciton luminescence, lux-intensity charact. 7−77626
CdSe, I_S luminesc. line behaviour 7−70861
CdSe, monocryst., interacting exciton gas dynamics 7−143363
CdSe photolum., evidence for selective etching of donor states 7−125797
CdSe single crystals, dense exciton gas depth of penetration, optical studies 7−70199
$CdSe_xTe_{1-x}$ films, deep centres, luminesc. temp. quenching mechanisms 7−70909
$CdSiAs_2$, vacancy defects, luminescent props. 7−92722
CdTe, epitaxial layers on GaAs, selective etching and photolum. 7−126331
CdTe, ion implanted, rapid thermal annealing, photoluminesc. spectrum 7−117944
CdTe, laser-beam heating and high-temperature luminescence 7−117970
CdTe, low temp. LPE from Hg solvent, photolum., X-ray diffr. 7−113454
CdTe, MBE grown, deep-level photoluminescence spectroscopy 7−113260
CdTe, proton implantation induced defects, photoluminescence obs. 7−98274
CdTe, substrate, growth and characterisation, modified horizontal Bridgman technique 7−132442
CdTe:Al on GaAs, MBE growth and Al doping, struct. optical and elec. props. 7−77820
CdTe:As layers, growth by organometallic VPE 7−92878
CdTe:Cl, growth, elec., and optical props. *(Korean)* 7−143398
CdTe:Cl, photoluminescence charact. *(Japanese)* 7−85809
CdTe:Zn, growth by gradient freeze method solid-liquid interface shape 7−132443
CdTe-GaAs heterostructures, MOCVD grown, elastic strains, lattice mismatch 7−118277
$CeCl_3$, in soln., $^2D(5d)$ excited state, stimulated absorpt. and luminesc. study 7−125790
Cr complex, tris-(μ-hydroxo)-bis-[(1,4,7-trimethyl-1,4,7-triazacyclononane) Cr(III)] triperchlorate, exchange interactions, optical spectra, EHT calcs. 7−96548
CsBr cryst., electron irrad., F-centre and self-localised excitation form. 7−98147
$CsCdBr_3$:Nd^{3+}, de-excitation processes of optically excited Nd^{3+} pairs 7−77635
$Cs_3Cr_2Br_9$ optical and Zeeman spectroscopy studies 7−106150
$Cs_2NaHo_{0.99}Er_{0.01}Cl_6$, energy transfer, luminesc. and UV absorpt. study 7−92724
Cs_2NaMBr_6:Sb^{3+}, lumin. of Sb^{3+} ions 7−77638
Cs_2NaSbX_6 (X=Cl, Br), delocalised excited state transition, luminesc. spectra 7−119034
$CsPbI_3$, excitonic states, absorption, reflection, luminescence spectra *(Russian)* 7−119047
Cu, surface, laser-excited luminesc. spectra 7−77651
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crysts., optical and elec. props. study 7−118542
$Cu_{1-x}Ag_xIn_5S_8$ solid soln., struct., elec. and optical props., comp. depend. study 7−118109
CuCl, proton irrad., radiation defects, exciton luminescence studies 7−137418
$CuGaIn_{1-x}Se_2$ single crystals, props. for photovoltaic appls. 7−131707
$CuGaS_2$, lumin. kinetics of donor-acceptor pairs 7−119036
$CuGaS_2$:Zn, off-stoichiometry, optical studies 7−124542
$CuInS_2$:P, defect struct., molecularity and stoichiometry anal. 7−124251
$CuInS_2$:P, defects and nonstoichiometry 7−117921

photoluminescence continued
$CuInS_{2y}Se_{2-2y}$ single crystals, props. for photovoltaic appls. 7−131707
Cu_2O, exciton gas, quantum saturation 7−131552
Cu_2O, phonon hot spot, exciton-phonon lumin. spectrum 7−132319
Er^{3+} in polycrystalline matrix, photoluminescence quantum output 7−125801
$ErCl_3$, soln. in $GaCl_3$-$SOCl_2$, Er^{3+} luminesc. spectra 7−119049
Eu^{2+} complexes with crown ethers, luminescence, solvent and temp. effects 7−70872
GaAlAs:Zn, variband semiconductor, spin echo 7−138491
$Ga_{1-x}Al_xAs$, pressure induced effects on phonons and gap states *(Japanese)* 7−98928
GaAs asymmetric double quantum well laser diode, lasing wavelength 7−123027
GaAs, band-gap photolum., degradation 7−92715
GaAs, deep impurity levels, luminescence transient obs. 7−106250
GaAs deep level luminesc. zero-phonon line obs. 7−113275
GaAs, deep levels, radiative recomb. mechanism, photoluminesc. studies up to 3 GPa 7−99931
GaAs, direct bandgap material, nondestructive evaluation using scanning laser photolum. imaging technique 7−106267
GaAs, donor identification in bulk and epitaxial samples, photoluminesc. studies in high mag. fields 7−98917
GaAs electron-hole dynamics picosec. luminesc. studies 7−85845
GaAs epitaxial films, growth and characterisation 7−84603
GaAs epitaxial films, growth by thermal decomposition, charact. *(Russian)* 7−106435
GaAs epitaxial layers on Si, growth, props. and applications to FETs and LEDs 7−86034
GaAs epitaxial layers on Si substrates, high volume production growth 7−86059
GaAs films, MBE on Si, structural and optical props. 7−84599
GaAs films on Si, photoluminescence and photoluminescence excitation spectra 7−85846
GaAs, hot carrier energy relaxation, photoluminescence study 7−125005
GaAs, hot electron-hole plasma cooling, carrier lifetime influence 7−99107
GaAs, hot photoexcited e-h plasma, photolum. studies 7−137975
GaAs, hot photoluminescence 7−85844
GaAs, ion implanted layers, photoluminescence, Hall effect 7−92739
p-GaAs, LEC grown, double acceptor states, optical and Hall meas. *(Chinese)* 7−105452
GaAs, LPE growth, deoxygenation of Ga solvent 7−137754
GaAs layer, MBE on (100)-oriented Si substrate, preheating effect, charactn. 7−113394
GaAs liquid encapsulated Czochralski crysts., reversible elec. props., dopant and optical props. studies 7−70365
GaAs, luminescence, above band-gap excitation 7−132330
GaAs, MBE, acceptor conc., Hall mobility, photolum. 7−77113
GaAs, MBE grown, very high purity, free exciton photoluminesc. and magnetophotoluminescence spectra 7−144115
GaAs, MBE growth on Si substrate, elec. and optical props. 7−144289
GaAs, MBE on Si, rapid thermal annealing, APD fabrication 7−143283
GaAs MBE on SiO_x and photolum. props. study 7−131479
GaAs, MOCVD growth on Si substrates, stresses and strains 7−100107
GaAs, MOCVD growth using trimethylgallium and diethylarsine 7−92881
GaAs MOVPE layers, optical characts. 7−132360
GaAs on Si and SOS substrates, organometallic VPE for microwave appls., expt. charactn. 7−84582
GaAs, polariton lumin. 7−70862
GaAs, pressure induced effects on phonons and gap states *(Japanese)* 7−98928
GaAs, pure and In-doped, elec. props., residual acceptor effects, photolum. and IR absorpt. meas. 7−124922
GaAs quantum wells with extended monolayer flat regions, photolum. studies 7−106269
GaAs, radiative recombination of EL2 level 7−125781
GaAs, spin paramagnetism of photoelectrons 7−113255
GaAs, subpicosecond luminescence spectroscopy using sum freq. generation 7−95654
GaAs substrate charactn. by photoluminesc. topography *(Japanese)* 7−125791
GaAs, surface recombination centers, photo production, near band edge photolum. 7−77614
GaAs uniaxially stressed crysts., L-valley splitting and intervalley scatt., hot photolum. spectra 7−85825
GaAs, vapour levitation epitaxial layers, optical characterisation 7−106266
GaAs, very high purity MBE layer, free exciton dominated photoluminesc., magnetophotoluminescence spectra 7−106260
GaAs wafers, near IR transmission and photolum. topography techniques, homogeneity study 7−106268
GaAs:C, H passivation of C acceptors, photolum., Hall effect studies 7−138483
GaAs:Cr, Cr^{2a+} luminescence, hydrostatic press. depend. 7−106248
GaAs:Cr, impurity out-diffusion, luminescence study 7−98580
GaAs:Cr,Si, close contact rapid thermal annealing, coimplantation and autocompensation studies 7−71220
GaAs:Cr,Te, luminescence at 0.844 eV, Zeeman spectra studies 7−106249
GaAs:Cr photocond. and photolum. spectra, anisotropically etched surface microrelief effects *(Russian)* 7−137989
GaAs:Cr^{2+}, trigonal centre ^5E excited state, photoluminesc. anal. 7−137857
GaAs:Cu, crystal softening due to deep Cu Jahn-Teller centres 7−76263
GaAs:Cu, deep Jahn-Teller centres binding two holes, impurity photolum., adiabatic pots. 7−132314
GaAs:Cu, Jahn-Teller centres, impurity photolum. deformation pot. consts., charge state 7−132315
GaAs:Er, Er doping during LPE growth, photoluminesc. study 7−113257
GaAs:Er MBE layer, photolum. excitation meas., impurity states and transitions 7−106239
GaAs:H, shallow impurity neutralisation by H plasma treatment, photolum. study 7−112241
GaAs:In, As_{Ga}-related photoluminescence, plastic deform. effects 7−119040
GaAs:In, MBE, photolum. 7−77813
GaAs:In MBE layers, elec. props. and photolum. studies 7−77111
GaAs:Se^+,Zn^+, donor-acceptor pair emission, photolum. spectra study 7−77649

photoluminescence continued
GaAs:Si, donor neutralisation, H_2 plasma exposure 7−112220
GaAs:Si, electron traps, rapid thermal processing 7−118502
GaAs:Si, microdefects noncontact obs. by photothermal radiation and photoluminescence microscopy 7−124275
GaAs:Si,Be, Esaki-Tsu type doping superlattice, realisation 7−125102
GaAs:Si,P, co-implanted, activation efficiency enhancement 7−98191
GaAs:Si epitaxial films, fast electron irrad., luminescence props. 7−77621
GaAs:Si/AlAs superlattices, donor levels, elec. and photolum. props., substrate temp. depend. study 7−143576
GaAs:Si/AlGaAs quantum wells, heavily doped, emission props., selective doping effects 7−125783
GaAs:Si-AlGaAs quantum wells, 2D electron gas, photolum. study 7−85836
GaAs:Si(Cr) wafers, semi-insulating, spatial distrib. of point defects and complexes, photoluminesc. study 7−98918
GaAs:Si(In,Si), Czochralski crystals, ion-implanted, amphoteric doping 7−137382
GaAs:Sn MBE grown in hydrogen presence, DLTS and photolum. 7−70239
GaAs:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
GaAs:Zn, impurity local atomic struct., photolum. and fluoresc. EXAFS studies 7−76148
GaAs:Zn(Mg)(C), epitaxial CVD films, acceptor impurities, Hall effect and photolum. studies 7−98856
$GaAs/Al_{0.32}Ga_{0.68}As$, single quantum well, phonon mode resonant mixing 7−143593
$GaAs/Al_xGa_{1-x}As$ multiple quantum well struct., high press. study 7−105675
$GaAs/Al_xGa_{1-x}As$ MBE quantum wells, elec. field-induced photolum. props. study 7−125774
$GaAs/Al_xGa_{1-x}As(100)$ quantum well structs., MBE, RHEED, photolum., computer simulation 7−70093
GaAs/AlGaAs MQW structs., photolum. and energy loss rates under high density excitation 7−144103
GaAs/AlGaAs quantum well structures, electron-hole dynamics picosec. luminesc. studies 7−85845
GaAs/AlGaAs superlattices, magneto-photolum. spectra studies 7−138436
GaAs/AlGaAs superlattices, high-sensitivity sampling technique for luminesc. time constant meas. 7−144099
$GaAs/Ga_{1-x}Al_xAs$ quantum wells, hot carrier nonequilib. cooling, transient photolum. study 7−105579
GaAs/GaAlAs quantum well photolum. polarisation, variational calcs. 7−106253
GaAs/Ge composite layer growth on Si and SiO_2/Si substrates 7−84601
GaAs/n-AlGaAs, modulation doped heterostruct., low temp. photoluminescence *(Chinese)* 7−99167
GaAs/Si, acceptor and excitonic features, stress effects, photolum. study 7−125691
$GaAs-Al_{0.33}Ga_{0.67}As$ single quantum well interfaces, MBE grown, photoluminesc., RHEED dynamics studies 7−112093
$GaAs-Al_xGa_{1-x}As$ MQW, photoreflectance modulation mechanisms 7−70839
$GaAs-Al_xGa_{1-x}As$ MQW, photoluminescence in high mag. fields 7−70898
$GaAs-Al_xGa_{1-x}As$ modulation-doped quantum well, band gap renormalisation, electron density depend. 7−85083
$GaAs-Al_xGa_{1-x}As$ quantum wells grown by interrupted, uninterrupted MBE, interface struct. atomistic models 7−70124
$GaAs-Al_xGa_{1-x}As$ quantum wells, high press. study, low temp. 7−138509
$GaAs-Al_xGa_{1-x}As$ quantum wells, MBE, RHEED, disorder, interfacial step distrib., lumin. studies 7−138513
$GaAs-Al_xGa_{1-x}As$ superlattices, barrier doublets, optical transitions 7−92717
$GaAs-Al_xGa_{1-x}As$ single heterojunction, photolum. from 2D electrons 7−138510
GaAs-AlAs MQW, photoluminesc. study 7−77618
GaAs-AlAs short period superlattices, direct to indirect gap transition, optical evidence 7−85070
GaAs-AlGaAs, etch and etch stop reactions in dichlorodifluoromethane plasma 7−119463
GaAs-AlGaAs, single quantum well lasers, different confinement structs., carrier trapping 7−125767
GaAs-AlGaAs graded gap superlattice, Bloch transport of electrons and holes 7−125103
GaAs-AlGaAs heterointerfaces, growth by flow-rate modulation epitaxy, improved flatness 7−92004
GaAs-AlGaAs interface, near band gap lumin. 7−106230
GaAs-AlGaAs MQW heterostructure transitions to confined states of split-off band 7−118568
GaAs-AlGaAs MQW waveguide structs. optical props. 7−138512
GaAs-AlGaAs modulation doped MQWs, high press. photolum. props. 7−138511
GaAs-AlGaAs multiple quantum wells, 2D and 3D magnetoluminescence meas. 7−106231
GaAs-AlGaAs multiple quantum wells, stimulated emission, ultrafast absorpt. recovery 7−113216
GaAs-AlGaAs quantum wells, radiative recomb. coeff. of free carriers, temp. depend. 7−113245
GaAs-AlGaAs quantum wells, optical characterisation, photolum. studies 7−113287
GaAs-AlGaAs quantum wells, thermalisation of hot carriers 7−138050
GaAs-AlGaAs quantum-well struct., atomistic nature of heterointerfaces, rel. to photolum. 7−138498
$GaAs-Ga_{1-x}Al_xAs$ MQW heterostruct., photoluminescence 7−138485
$GaAs-Ga_{(1-x)}Al_xAs$, superlattices, exciton binding energy using photoluminescence 7−124870
GaAs-GaAlAs, energy relax. phenomena, elec. and optical studies 7−131772
GaAs-GaAlAs, growth and interface characterisation 7−98747
GaAs-GaAlAs heterojunction with modulated doping, 2D electron-hole system, lumin. study 7−132317
GaAs-GaAlAs MQW structs., photoluminesc. excitonic props. and temp. behaviour *(Chinese)* 7−106233
GaAs-GaAlAs modulation doped quantum wells, Landau levels, magnetolumin. 7−85835
GaAs-GaAlAs quantum wells, external electric field, optical spectroscopy 7−85833
GaAs-GaAlAs quantum wells, Stark shifts, photoluminesc. study 7−106138

photoluminescence continued
GaAs-GaAlAs superlattices, photoemission and photolum. studies 7−77767
GaAs-GaAsP strained-layer superlattices, picosecond relax. of hot carrier distrib. 7−137943
GaAs-$In_xAl_{1-x}As$, indirect bandgap superlattices, transport data interpretation 7−143601
GaAs-Si, MBE grown, photolum. microscopy 7−137735
GaAs(AlGaAs) multiple quantum well structs., excitonic radiative recomb., photolum. temp. characts. studies 7−77085
$GaAs_{1-x}P_x$:N, impurity bound excitons, reson. excitation, photoluminesc. spectra 7−92740
$GaAs_{1-x}P_x$:N,Zn mixed crysts., radiative recombination 7−70901
$GaAs_{0.5}Sb_{0.5}$-InP, MBE growth, low temp. optical characterisation 7−105303
GaInAs, MOCVD gas mixing device, photolum. obs. of comp. uniformity 7−138672
GaInAs, residual dislocations, photoluminesc. studies 7−99930
GaInAs:Mg, grown by organometallic VPE, detection of defects 7−132496
GaInAs/AlInAs multiple quantum wells, carrier cooling, photoluminescence obs. 7−138030
GaInAs/InP quantum well photolum. polarisation, variational calcs. 7−106253
GaInAs-AlInAs single quantum wells, MBE growth, photoluminesc. charactn. 7−112124
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
GaInAs-InP quantum wells, photolum. quenching, electric field depend. exciton energy 7−144093
$Ga_{0.47}In_{0.53}As$:Mg(Hg), photolum. studies 7−85827
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$, multi quantum well structs., excitonic recombination rel. to barrier config., photolum. 7−70094
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ MQW struct., e-h plasma cooling, time-resolved photolum. meas. 7−125095
$Ga_{0.47}In_{0.53}As$-$In_{0.52}Al_{0.48}As$, hot carrier-phonon interaction, photolum. studies 7−85828
$Ga_{0.47}In_{0.53}As$-InP epitaxial superlattices, absorpt., photolum. and photocurrent spectra 7−70384
$Ga_{0.47}In_{0.53}As$-InP multiple quantum wells, optical studies of excitons 7−113244
$Ga_{0.47}In_{0.53}As$-InP quantum wells and superlattices, CBE growth, TEM, IR absorpt., photocond. and photolum. charactn. 7−126023
$Ga_{1-x}In_xAs$, MBE growth on Si substrate, characterisation 7−71033
GaInAs(P)-InP, MOCVD growth, characterisation and applications *(Polish)* 7−132498
$Ga_{0.5}In_{0.5}P$-GaAs(001), metalorganic VPE grown, existence of ordered state, relation to band gap 7−76652
GaN single-crystal films, MOVPE growth, luminescent props. 7−113405
GaN:Cd(Zn), time-resolved spectroscopy 7−99907
GaP, deep impurity levels, luminescence transient obs. 7−106250
GaP single cryst., polarised photoluminescence and thermoluminescence 7−77661
GaP:Li,Cu(Zn), IR photoluminesc., ODMR study 7−113000
GaP:N, laser-induced surface defects, influence on photolum. 7−144100
GaP:N layers, determ. of N conc., lumin. study 7−85786
GaP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
GaP:V, impurity states, optical studies 7−113238
GaS (X=S,Se), layered crystals, high temp. electron-hole liquid, photolum. studies *(German)* 7−131555
GaSb, MBE grown, spectroscopic studies of shallow defects 7−77631
GaSb, radiation defects, deep levels 7−70242
GaSb, spin relax. of photoexcited holes in spin-orbit-split valence band 7−99933
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
GaSb-AlSb multi quantum well structures, direct-indirect cross-over, time resolved spectroscopy 7−85074
GaSb-AlSb quantum wells, optical transitions, omission spectra 7−85832
GaSe, anal. of excitonic Mott transition 7−70903
GaSe crysts., relaxation characts., spontaneous and stimulated luminesc., 7−99904
GaSe, dynamics of excitons localised by stacking disorder, photoluminescence study 7−70202
GaSe, exciton-exciton scatt., picosec.-laser-excited photolum. studies 7−124873
GaSe, layered semiconductor, high-temp. electron-hole liquid 7−76778
GaSe, ultrafast shock wave generation by laser pulses, photoluminesc. study 7−111667
Gd sensitised phosphors, energy transfer processes 7−70871
$Gd_3Ga_5O_{12}$ single crystals, UV lumin. study 7−132318
$Gd_2(SiO_4)O:Eu^{3+}$, site selectively excited lumin. 7−70880
Ge epitaxial films, growth and characterisation 7−84603
Ge, ultra-pure, shallow and deep levels 7−105489
Ge-S, amorphous, photo-induced effects 7−143910
Ge-Se chalcogenide glass, fatigued photolum., dark recovery of fatigued centres 7−143412
Ge-Si:P, disorder, bound exciton photoluminescence studies 7−70859
GeS_2, glassy chalcogenides, pressure-structural and optical studies 7−83716
a-Ge_xSe_{1-x} system, photoluminescence transients 7−85802
a-$Ge_{1-x}Si_x$:H, photoluminescence bands 7−119042
$H_{0.5}Cu_{0.5}Zr_2(PO_4)_3$, hydrogenated Cu(I) Nasicon-type phosphate 7−144117
HgCdTe, phys. props., handbook of datareviews 7−134373
α-HgI_2 cryst., photoluminescence spectra obs. 7−138488
HgI_2 crystal growth and its properties of photoluminescence *(Korean)* 7−85811
HgI_2, polariton nonequilibrium Bose condensation, resonance laser radiation induced *(Russian)* 7−112199
HgTe-CdTe superlattices, photoluminesc. 7−138492
I_2, secondary emission time behaviour, Raman scatt. and luminesc. study 7−82181
In cluster in NaA zeolite, photocond. and luminescence studies 7−125772
$In_{0.52}Al_{0.48}As$, MBE growth and charactn. 7−143281
$In_{0.52}Al_{0.48}As$-InP, MBE grown, nonrandom alloying 7−76651
InAs-GaAs strained-layer superlattices, HRTEM, X-ray diffr. and photolum. meas. 7−70095
$InBO_3$:rare earths, X-ray luminescence studies 7−132325

photoluminescence continued
$In_{0.53}(Ga_xAl_{1-x})_{0.47}As$ layers, MBE growth, photoluminesc. charactn., optointegrated device appls. 7−144288
$In_{1-x-y}Ga_xAl_yAs$, MBE growth and charactn. 7−143281
InGaAs strained layer superlattices, MBE grown, 1.6-2 μm photoluminesc. efficiency 7−77834
InGaAs/GaAs stained layer superlattice, MBE, photolum. 7−77813
InGaAs/InAlAs quantum wells, MBE, photolum. 7−77813
InGaAs/InP quantum well, luminescence spectra, many body edge singularity 7−106256
InGaAs-GaAs, selectively doped strained quantum well struct., magnetotransport, lumin. meas. 7−105670
InGaAs-GaAs strained superlattices, photolum. 7−77630
InGaAs-GaAsP strained layer superlattices, growth and characterisation 7−118304
InGaAs-InP, MQW structs. grown by metalorganic MBE, excitons, high temp. obs. 7−92070
InGaAs-InP, VPE grown, X-ray diffr., SIMS and photolum. characterisation 7−131480
InGaAs-InP heterostruct., carrier diffusion and trapping, optical time-of-flight meas. 7−138482
InGaAs-InP quantum well structs., electron-hole plasma, photolum. studies 7−85834
InGaAs-InP quantum well structs., thermal stability, growth by gas source MBE 7−86219
InGaAs-InP quantum wells, luminescence linewidths, free-carrier effects 7−113247
$In_{0.53}Ga_{0.47}As$/InP quantum wells, interwell-exciton transfer, optical detection 7−92716
$In_xGa_{1-x}As$, In content, photoluminescence and neutron activation anal. 7−106241
$In_xGa_{1-x}As$-GaAs n-n heterojunction epilayers, MBE growth and charactn. 7−143587
$In_xGa_{1-x}As$-$In_xAl_{1-x}As$ MQWs and GaAs, MBE growth, lumin. 7−124739
$In_xGa_{1-x}As$-InP quantum wells, exciton-LO phonon interactions 7−85067
InGaAsP films, dense e-h plasma, time-resolved photolum. studies 7−70896
InGaAsP, LPE growth on $GaAs_{1-y}P_y$ substrates 7−100135
InGaAsP/GaAs (001) LPE layers, photoluminesc. spectra 7−125784
InGaAsP/GaAs heterojunction diode defect distrib., light-beam-induced current method study 7−118577
InGaAsP/InP, quality control, defect detection by IR luminesc. microscopy 7−113846
InGaAsP-GaAs double heterostructures, LPE grown, 40-300 Å active region thicknesses, quantum size effects, photoluminesc. spectra 7−113252
InGaAsP-GaAs quantum well separate confinement DH laser, prep. by LPE, λ=0.79 μm, injection luminesc. obs. 7−110354
InGaAsP-InP heterostructs., LPE, photolum. spectra, quantum size effects 7−132316
InGaAsP-InP quantum wells, photoluminescence 7−144106
$In_{1-x}Ga_xAs_yP_{1-y}$ grown by LPE 7−70386
$In_xGa_{1-x}As_ySb_{1-y}$ MBE on GaSb (100), room temp. IR photolum. study 7−70129
InGaP/GaAs LPE layer system, photoluminescence, lattice mismatch effects 7−113267
$In_{0.49}Ga_{0.5}P$-$In_{0.13}Ga_{0.87}As_{0.74}P_{0.26}$-$In_{0.49}Ga_{0.51}P$ heterostructs., laser LPE formed, photolum. study 7−99901
$In_{1-x}Ga_xP$ alloys, 3d-transition metal related photoluminescence 7−70888
InP 1.35 eV defect donor photolum. band study 7−132327
InP, donor-related complexes localisation energy obs., photolum. meas. under hydrostatic press. 7−124911
InP doping superlattices, MOCVD growth, optical props. 7−144114
InP, electron irrad. defects, low temp. photolum. study 7−98251
InP grown by LPS 7−70386
InP, heat-treated, photoluminesc. 7−99908
InP, heteroepitaxial growth on Si by low pressure MOCVD 7−106425
InP, ion implanted and rapid halogen lamp annealed, deep levels 7−98861
InP, low press. metalorganic VPE growth using trimethylindium-trimethylphosphine adduct source 7−113441
InP, MBE using low-energy P^+ ion beam, elec. and optical props. 7−77812
InP n^+-p-p^+ struct. solar cells, OMVPE growth 7−86796
InP, nonintentionally doped and P(Ar) ion implanted, radiation defects, photoluminesc., photocond. spectra 7−104854
InP, radiative surface states, photolum., XPS studies 7−77023
InP, restoration of luminescence properties by pulsed laser beam 7−138505
InP, semi-insulating behaviour after annealing in P, photoluminesc., ODMR studies 7−99139
InP, spin relax. of photoexcited holes in spin-orbit-split valence band 7−99933
InP, surface characterisation during processing, photolum. study 7−78387
InP, vapour levitation epitaxial layers, optical characterisation 7−106266
InP:Er, ion implanted, nondiffusion and 1.54 μm luminescence 7−106234
InP:Mg, grown by organometallic VPE, detection of defects 7−132496
InP:Mg, MOVPE grown, photolum, data 7−99910
InP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
InP:Yb, growth by metalorganic CVD, photolum. 7−86040
InP:Yb, MOCVD growth, elec. and optical charactn. 7−125159
InP-$Ga_xIn_{1-x}P$, surface quantum wells 7−118559
InP-KCl electrolyte junction, interfacial defects, photolum. and photocond. studies 7−112485
InP(:S)(:Sn), photoluminescence study 7−99921
$InP_{1-x}As_x$:Fe, photolum. study 7−99928
InSe cathodes, Li intercalated, electron and phonon aspects 7−133058
InSe, containing stacking faults, exciton photoluminesc. spectra, X-ray diffr. studies 7−113253
InSe, electron-hole liquid, temporal evolution of density 7−70863
InSe layered crystals, high temp. electron-hole liquid, photolum. studies *(German)* 7−131555
γ-InSe, luminescence in indirect transition region *(Russian)* 7−144128
KBr, four-photon absorpt. cross section, 532 nm 7−138501
KCl, lifetime of excited F-centre, temp. depend. struct. 7−92730
KCl:N, impurity centre, photoluminescence studies 7−77642
KCl:Pb cryst., IR luminesc. study 7−85815
KCl:S^{2-}, F-centre formation by photoconversion 7−113263

photoluminescence continued
KCl:Sr, Pb, optical spectroscopy of Pb^{2+}, detection of Sr precipitates 7−70945
KCl:Tl^{+}, moments of A-absorpt. and A_T emission bands, hydrostatic press. effects 7−132304
KI:Sn^{2+}, doped S^2 ions, emission spectrum fine struct. 7−132296
KI:Tl, roentgenoluminescence, rel. to powder dispersity degree *(Russian)* 7−85808
KMF_7 (M=Ta, Nb), crystal struct., lumin. studies 7−83894
$KTaO_3$ single cryst. photoluminescence 7−113264
LaOBr, luminescence props., impurity effects 7−132324
$La_{1-x}Pr_xOCl$, luminesces. conc. quenching of Pr^{3+} ion 7−113265
$La_3TaO_4Cl_6$, luminescence props. 7−77644
LiF:Mg,Ti,O, thermostimulated luminescence and photoluminescence 7−132351
LiF(TLD-100), luminescence dose depend. second order kinetics 7−119037
$LuBO_3$:rare earths, X-ray luminescence studies 7−132325
$Lu_2(SiO_4)O:Eu^{3+}$, site selectively excited lumin. 7−70880
$MgBr_2.6H_2O:Pb^{2+}(Pb^{2+},Mn^{2+})$, photoluminescence 7−85830
$Mg_xCd_{1-x}Se$, recomb. processes under conditions of maximum charge transfer between local centres 7−84916
$Mg_{0.2}Cd_{0.8}Te$ solid solns., laser irradiation, effect on electrophysical props. 7−99114
MgF_2 irrad. crysts., X-ray luminescence studies 7−132322
MgF_2 irradiated crystals, luminesc. on synchrotron excitation 7−132331
MgO crystal, colour centres, luminesc., irrad. by high energy particles *(Russian)* 7−142776
MgO, thermochemically reduced, electron trapping, luminescence studies 7−92197
MgO:Be, electron irrad., detect. of $F_A{}^{+}$(Be) centres, photoluminescence spectra 7−70237
MgO:Li, impurity effects on deuteron diffusion and photolum. 7−105136
MgO:Ni, heat-treated, photolum. 7−132333
MgO:Ni(Co)(Cr)(Pr), laser-excited luminesc. and absorpt. spectra studies 7−125764
MgO:X (X=Al, Be), colour centres, luminesc., irrad. by high energy particles *(Russian)* 7−142776
$MgO(Al_2O_3)_n$:Fe, crystallographic environments, absorpt. and photoluminesc. spectra 7−113225
MgS:Ce,Sm dosimeters using optically stimulated luminescence 7−93945
$MgWO_4.2H_2O$, luminesc. study 7−113271
$Mn_xCd_{1-x}Te$ single crystals, props. for photovoltaic appls. 7−131707
$MnCl(Br)(I)_2$ photolum. and absorpt. spectra temp. depend. study 7−85823
$MnF_2:Er^{3+}$ 7−85818
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth, photolum. in mag. field 7−76681
$NaBi(MoO_4)_2$, scheelite, luminescence 7−106246
NaCl:Eu crystals, ageing, precip., photolum., TSC, mech. response 7−69913
NaCl:N, impurity centre, photoluminescence studies 7−77642
NaCl:Tl, impurity states, photoluminesc. study *(Russian)* 7−85838
NaF:$Ca^{2+}(Mg^{2+})(Mn^{2+})$ crystals containing $F_2{}^{+}$-like centres, lasing features, absorpt. and luminesc. bands 7−97020
NaF:Mg, excited $F_2{}^{+}$− and M−centres, lifetime studies 7−106257
NaI crysts., self-localised excitons, luminescence studies 7−137800
$Na_3In_2Li_3F_{12}$:Cr garnet, photolum., high press. effects 7−144126
$NaNO_2$, sensitized lumin., time-resolved studies 7−113279
$NaNO_2:KNO_2$, sensitized lumin., time-resolved studies 7−113279
$NdAl_3(BO_3)_4$, pulsed laser performance, luminesc. conc. quenching effect rel. to struct. characts. 7−74933
Ne, pure and doped, self-trapped exciton luminesc., time-resolved study 7−106274
P, amorphous, red, time-resolved photoluminescence studies 7−144112
P, amorphous, time-resolved photoluminescence 7−85799
a-P, initial photolum. decay rates 7−144125
$POCl_3:SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
$POCl_3$-$SnCl_4:Pr^{3+}$, electronic relax. of $^3P_0$ and $^1D_2$ states of Pr^{3+} 7−70875
$PbBr_2$, lumin. under two-photon excitation *(Russian)* 7−106261
PbI_2, 2H-polytype, bound excitons, photoluminesc. excitation rate effect, refl. spectra 7−77628
PbI_2, exciton luminescence, lux-intensity characts. 7−77626
PbI_2-2H crystals reflectance and photoluminescence, polariton theory *(Russian)* 7−144129
$Pb_{1-x}Mn_xTe$, band struct. in high mag. fields, magneto-optical methods 7−132246
$Pb_{1-x}Sn_xTe$, stressed quantum well epitaxial films, photolum. 7−113251
PbTe, band struct. in high mag. fields, magneto-optical methods 7−132246
PbTe:Ag, elec. props. and photoluminesc. 7−105557
$RbAg_4I_5$, coloured single crysts., superionic conductor, photolum. study 7−144101
$RbAg_3I_4$ superionic crysts., photolum. and excitation spectra temp. depend. 7−77624
RbBr:Ag^{-}, two photon absorpt. of Ag^{-} centres, luminesc. obs. 7−138497
RbI crystals, radiational creation of α,I pairs *(Russian)* 7−142773
$RbMnF_3:Nd^{3+}$, nonradiative energy transfer without lifetime quenching 7−85818
$RbMn_xMg_{1-x}F_3$, nonradiative energy transfer without lifetime quenching 7−85818
Ru complex, absorpt. and luminesc. spectra, Zeeman effect, zero-phonon lines 7−99898
Ru complexes, $Ru(bpy)_3{}^{2+}$, temp. and mag. field depend. in luminesc. 7−70856
Se, excited carrier thermalisation, photocond. and photoluminescence obs. 7−125792
Se, glassy chalcogenides, pressure-structural and optical studies 7−83716
Si, Czochralski annealed, second isoelectronic multiexciton centre 7−113284
Si, free exciton transport properties, time-of-flight investig. 7−85819
Si, gamma-ray irrad., defect annealing elec. resist. and photoluminescence studies 7−98240
Si, ion beam etching, noble gas defect threshold energy, photoluminesc. study 7−126353
Si, ion implanted, dislocation structure, form. by scanning laser radiation, photoluminesc. obs. 7−76208
p-Si MOS structures, radiative recombination spectra, of 2D electrons 7−131802

photoluminescence continued
Si, optically detected cyclotron resonance 7−118862
Si, photoluminescence from widely dissociated straight partial dislocations 7−99924
Si, reactive ion etching prod. defects, photoluminesc. study 7−99145
Si thermal donor related luminescence lines, time resolved studies 7−99927
Si:B/Si:P bilayered crystals, free exciton capture 7−70203
Si:B(Al)(Ga)(In), O-rich, photoluminesc. studies 7−92733
Si:B(P)(Al), photolum. technique calibration, impurity conc., Fourier transform spectroscopy 7−85824
Si:Be, C, far IR absorption and near IR excitation spectroscopy of isoelectronic bound excitons 7−113200
Si:C, subthreshold electron irrad. damage, defect complexes, photolum. study 7−98257
Si:C,O, defect identification by photolum. 7−125804
Si:Cu, impurity levels, DLTS and photolum. studies 7−143396
Si:Ga, photolum. studies of Ga-related defects 7−99923
a-Si:H, dangling bonds and metastability, expts. and models, review *(French)* 7−131592
a-Si:H, light induced metastable defects, ODMR meas. at 2 K 7−143934
α-Si:H, near-boundary fields, structural characts. and props. 7−91453
a-Si:H, recombination mechanisms of photogenerated carriers 7−84976
a-Si:H,P, photo-CVD grown, doping-induced defects 7−124928
a-Si:H films, low-energy photolum. peak 7−85790
Si:H single crysts., hydrogenation-induced defects studies 7−111542
a-Si:H/a-$Si_{1-x}N_x$:H superlattices and a-$Si_{1-x}N_x$:H films, electron-hole recombination processes 7−70905
Si:He(Ne)(Ar)(Kr)(Xe), implanted, photoluminesc. defects, uniaxial stress study 7−99932
Si:N, implanted, photoluminesc. spectra 7−92712
Si:N,C, photolum. study of defects, N-C interactions 7−125794
Si:O, new thermal donors form., photolum. and EPR studies 7−98909
Si:O,C, Czochralski-grown, donor formation 7−84004
Si:O,C, inhomogeneous thermal donor distrib., photolum. and Hall effect meas. 7−98907
SiC, neutron irradiated 6H polytype, thermal stability of D_1 defect lumin., influence of growth conditions 7−99902
SiC:B(Al)(P) cubic thin films, ion implanted, CVD grown, photolum. studies 7−77629
SiC:H epitaxial films, high temp. luminesc. 7−119035
a-$Si_{1-x}C_x$:H, glow discharge deposited films, ESR and photoluminescence 7−125536
a-$Si_{1-x}C_x$:H films, photolum. study 7−85821
$Si_{1-x}C_xH_{2-y}$, semicond. polymer, electronic, optical and struct. props. 7−99961
a-$Si_{1-x}N_x$:H films and a-Si:H/a-$Si_{1-x}N_x$:H superlattices, electron-hole recombination processes 7−70905
SiO_2, amorphous, thermally grown and crystalline quartz, time-resolved photoluminescence 7−70900
SiO_2 optical fibre sensitivity to radiation, radioluminescence and ESR *(Polish)* 7−68888
SiO_2, plasma enhanced LPCVD on Si and InP, growth and in situ luminesc. charactn. 7−113408
$SiO_2:Eu^{2+}(Yb^{2+})$, vitreous, luminescence props. 7−70857
SiO_2:GeO_2 fibres prepared by VAD 7−136596
$SiO_2:Yb^{3+}$, Er^{3+} optical fibres, multiphoton effects 7−90819
$SrCl_2$:Ce single crysts., photoluminesc. and absorpt. spectra 7−70894
SrO:Bi^{3+} phosphor, photolum. and excitation spectra 7−85817
$Sr_3(PO_4)_2$:Tb(Ce), luminesc., second phase form. 7−70890
TlBr, luminescence of direct- and indirect-gap electron-hole plasma 7−85829
YAG:Ce phosphor powders, prep. 7−71102
YAG:Cr^{3+}, high-energy levels, luminesc. and UV absorpt. spectra 7−125789
YAG:Nd high temp. fluoresc. lifetime investig. 7−92736
$YAlO_3:Ho^{3+}$, orthorhombic crystal, lumin., stimulated emission 7−113228
YBO_3:rare earths, X-ray luminescence studies 7−132325
YF_3:Yb,Er IR-to-visible conversion phosphor for fibre-optic temp. sensor *(Japanese)* 7−110582
YOCl:Eu, cryogenic lumin. studies, YOF and PbFCl polymorphs 7−70876
YPO_4, tunnelling recombination and luminesc. 7−113286
$YPO_4:Eu^{3+}(AsO_4{}^{4-})$, tunnelling recombination and luminesc. 7−113286
$Y_2(SiO_4)O:Eu^{3+}$, site selectively excited lumin. 7−70880
Yb^{3+} in polycrystalline matrix, photoluminescence quantum output 7−125801
Yb-Er glass:Cr^{3+}, sensitisation in amplification regime, luminesc. 7−85816
$Zn_xCd_{1-x}S$ layers, photoelec. and optical props. 7−105619
$Zn_xCd_{1-x}Se$ single crystals, energy spectrum of local centres, elec. characts. 7−112357
$ZnIn_2S_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$Zn_{1-x}Mn_xS$, low energy emission bands, time resolved spectroscopy study 7−138504
ZnMnSe, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
$Zn_{1-x}Mn_xTe$, localised excitations, press. and temp. depend. 7−85826
ZnO, electron irrad., photoluminescence obs. 7−92714
ZnO pure and Li-doped crysts., exciton centre activation by laser excitation, photolum. study 7−77623
ZnO:Tb films, spray pyrolysis and photoluminesc. props. 7−100054
ZnO-Na_2O-B_2O_3-SiO_2:$CdSe_xS_{1-x}$, quantum confinement effects of impurity microcrysts., optical props. study 7−106224
ZnO-SnO_2 mixtures, heat treatment, struct., elec. cond., green luminesc. 7−86228
ZnS, electron irradiation, near infrared emissions and optical absorption from F^{+} centres 7−137411
ZnS lattice, three-centre Auger-type nonradiative recomb. mech. 7−138499
ZnS:Al, Cu(P)(Ar)(N), ion implanted defects, photoluminesc. spectra before and after implantation 7−92710
ZnS:Al, self-activated photolum., quantum efficiency 7−70854
ZnS:Ce(Eu)(Tb)(Tm) thin films, growth and characts. 7−70130
ZnS:Mn phosphor, photo and cathodoluminescence spectra *(Korean)* 7−85813
ZnS:R, rare earth ion excitation, energy transfer mechanism 7−70855

photoluminescence continued
ZnS:Sm^{3+}, crystals and films, site-selective 4f-4f excitation of electrolum. centres 7−85822
ZnS:Tm crystals, donor-type centres 7−84758
ZnS:Tm^{3+}, emission spectra, dissolution of 4f-4f transitions in phonon sidebands 7−92738
ZnS:transition metal, impurity-induced nonradiative recomb. processes, EPR study 7−112364
ZnS(Se), metalorganic MBE growth 7−131476
ZnS_xSe_{1-x} epitaxial films, vapour-grown, thermodynamic anal. and luminescent props. 7−144303
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048
ZnSe, film quality in MBE growth, beam pressure ratio effect, optical and elec. props. 7−76684
ZnSe films, low pressure MOVPE growth 7−92880
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe, growth by the Markov-Davydov method, hole conductivity, luminescence props. 7−77783
ZnSe, high purity, low press. VPE growth, luminesc. props. 7−71066
ZnSe single cryst., new emission band in near band edge region 7−92741
ZnSe, strong absorption domain instability, laser irrad. expt. 7−125799
ZnSe:Ag, strongly lattice coupled luminesc. transition, temp. broadening 7−92711
ZnSe:As(Au)(Tl) single crysts., solvent growth, morphology, photolum. 7−144254
ZnSe:Cr^+, lumin. of Cr^+ centre 7−138503
ZnSe:I, effect of impurity on edge photoluminescence 7−106238
ZnSe-(ZnMn)Se superlattices, exciton lumin., electric field induced shifts 7−138481
ZnSe-ZnS_xSe_{1-x}, strained-layer superlattices, quantum confinement, strain effects 7−113246
ZnSe-ZnTe, exciton self-trapping, low intensity luminescence studies 7−84688
ZnSe-ZnTe strained-layer superlattice, growth and charactn., photolum. and TEM obs. 7−76682
$ZnSe_{1-y}S_y$, ($0 \leq y \leq 0.25$), MOVPE layers, room temp. photolum. 7−125769
$ZnSe_{1-y}Te_y$ solid solns., composition depend. shift of band gap, lumin. study 7−132312
$ZnSe_{1-x}Te_x$ solid solns., photoluminescence and exciton reflection spectra 7−138487
ZnSe−ZnS strained-layer superlattices, metallorganic MBE growth 7−132465
$ZnSiO_4$:Mn,Ga phosphorescence, quantum efficiency and photolum. fatiguing studies 7−85820
Zn_2SiO_4:Mn^{2+}, UV induced luminesc., temp. depend. *(German)* 7−92742
ZnTe, proton implantation induced defects, photoluminescence obs. 7−98274
ZnTe-ZnSe strained layer superlattices, resonant Raman scatt. and photoluminesc. 7−144051
ZrF_4, cryst., photolum. and absorpt. 7−99906
ZrF_4-based glasses, photolum. and absorpt. 7−99906
ZrF_4-NdF_3-FeF_3 glass fibres, photolum. studies 7−125785
$Zr(MoO_4)_2$, high-temperature phase, luminescence 7−99916
ZrO_2-Y_2O_3:Ni(Co)(Cr)(Pr), laser-excited luminesc. and absorpt. spectra studies 7−125764

photolysis
see also photodissociation
acetone, photoreduction, CIDEP and relax., Heisenberg spin exchange investig. 7−116997
acetylene, photolysis, CCH radical ν_3 band, IR spectra study 7−109885
alkenes, matrix isolated, contact-charge-transfer bands and photochem. reactions, UV-vis. absorpt. spectra 7−82208
alkyl radicals, Ar and O_2 matrices, IR spectra 7−74595
alkylperoxy radicals, Ar and O_2 matrices, IR spectra 7−74595
anthraquinone, laser photolysis, photoreduction, time-resolved spectra, charge transfer, polarisation, hydrogen transfer, solvents 7−141608
9,10-anthraqunone, sulphonated derivatives, photophysics, photochemistry, emission and absorption spectra, photolysis, kinetics, transient species, states 7−144729
azide-phenolic resin composite film, thermolysis, photolysis and appl. as antirefl. layer in resist 7−100534
azomethane, excimer laser photolysis product yields and mechanism 7−71509
2-bromoethanol, in Ar matrix, IR photolysis, quantum yield distrib. 7−86648
butylbenzene-$d_0(d_3)(d_9)$, photodissoc., isotope effects 7−103595
colour photographic dyes, photo-fading reactions *(Japanese)* 7−128687
1,3-cyclohexadiene, femtosec. photochem. ring opening, reson. Raman obs. 7−74619
2,4-dinitrobenzyl carbanion, photochem. prod., absorpt. spectra, solvent effect 7−99879
dipyridotetraazapentalene, photooxidation, fluoresc. and phosphoresc. spectra 7−82268
enzymic cofactors, and photochem.-induced transients, UV reson. Raman spectrosc. 7−133223
eosin in aqs. micellar dispersions, flash photolysis 7−86646
ethidium bromide, DNA intercalated, laser flash photolysis, methylviologen effects 7−133225
ethyl radicals, matrix IR spectra and UV photolysis 7−116971
ethylbenzene-$d_0(d_2)(d_7)(d_{10})$, photodissoc., isotope effects 7−103595
ethylperoxy, radicals, matrix IR spectra and UV photolysis 7−116971
flash photolysis, conf., London, England (July 1986) 7−66814
flavins, one-electron oxidation, flush photolysis and pulse radiolysis obs. 7−71480
fluorescence photobleaching recovery, delayed, implications for cell membrane system studies 7−94028
formic acid, laser photolysis, OH quantum yield determ. 7−119542
free radicals, flash photolysis, IR region 7−71506
halogenated hydrocarbons, heterogeneous photolysis, implications for Antarctic O_3 depletion 7−120071
2-(2′-hydroxyphenyl)benzothiazole, nitro-derivatives, photophys., photochem., solvent effects 7−117012
ketones, cyclic aliphatic, photolysis, biradical reactions, CIDNP field depend. 7−68343
laser flash photolysis spectrometer, computer controlled 7−140758
laser photolysis studies of photolabile samples, using optical multichannel analyser, noise reduction 7−106815

photolysis continued
laser photolysis system for meas. of transient species absorpt. spectra *(Japanese)* 7−115987
laser-induced deposition of thin films study 7−71068
liquid surface, convective struct. form. under laser radiation, holographic interferometry 7−130684
methyl bromide, adsorpt. on LiF, photodissoc., photoreaction and photodesorpt. 7−124684
methyl groups, vibr. deactivation, laser photolysis and IR fluoresc. 7−110089
methylacetylene, photocatalytic hydrogenation on TiO_2 catalyst, size effect 7−139030
2-methylfuran, photoisomerism to 3-methylfuran SINDO1 calcs. 7−89963
multichannel analyser controller for nanosecond flash photo meas. 7−106814
nematic mixtures, near-UV photostability 7−77488
nitroalkane, UV photolysis, OH radical form. and detect. 7−86576
nitromethane, laser-induced photolysis, photofragments fluoresc. spectra anal. 7−129727
organic impurities in water, photooxidation using thin TiO_2 film 7−113961
phenacyl phenyl sulphone in micellar soln., photodecomposition, mag. field effects 7−113958
phenylbenzothiazole derivatives, photophysics, photochem., solvent effects 7−116943
phosphonates, photolysis products, mass-spectrometry 7−126470
photoinduced electron transfer reactions, triplet state 7−113957
photosensitive monolayers, bilayer membranes and polymers 7−106809
picosecond flash photolysis apparatus, appl. to photosynthesis 7−71505
poly(phenyl methyl silane), photolysed, photoluminesc. growth obs. 7−99920
polypropylene, isotactic, solid phase photooxidation, photoinitiator efficiency *(Russian)* 7−113963
pyrene-pyromellitic anhydride solns., charge recomb. dynamics, picosec laser spectrosc. obs. 7−68291
rhodopsin transduction mechanism, FTIR studies, review 7−119728
salicylideneaniline, nitro-derivatives, photophys., photochem., solvent effects 7−117012
salicylideneaniline, photophysics, photochem., solvent effects 7−116943
semiquinones, flash photolysis and pulse radiolysis, rel. to cancer induction and therapy 7−71507
singlet-singlet and triplet-triplet transfer and excitation kinetics, rate const. determ. 7−119494
solar thermal/photolytic destruction of hazardous organic wastes 7−144728
solar-electric water purification using photocatalytic oxidation 7−100754
stilbene, in alkane and alcohol solns., rot. diffusion 7−69947
toluene-$d_0(d_3)(d_5)(d_8)$, photodissoc., isotope effects 7−103595
TpT3, struct. and biological significance, rel. to DNA and Dewar pyrimidinones 7−106975
(2,4,6-trimethylbenzoyl)diphenylphosphine oxide, micellar soln., photodecomp. in mag. field 7−129814
tyrosine, persulphate oxidised, chemiluminesc. and Raman spectrosc. charact. 7−122541
uranyl complex, volatile, natural abundance, thermal stability and selective photodissoc. 7−90446
uranyl formate monohydrate, laser-induced photodecomposition, appl. to U isotope separation 7−106788
water, liq., nature and struct. investig. 7−69571
Au mercaptoterpene metallopolymer thin films, photolytic decomp. by UV direct laser writing 7−126463
Br_2-O_3, complex form., photochemistry, IR spectra 7−82105
BrCN, photolysis, 193-266 nm 7−113960
Q-Cd_3P_2, colloidal, aq. soln., flash photolysis, optical absorpt. meas. 7−113167
Cl^-, radiation and quantum yield in water-chlorobenzene (carbon tetrachloride) systems 7−71511
Co(III) amine complexes, laser excitation, aquation and H-D exchange 7−139027
$FNCl_2$, flash photolysis, absorpt. band systems 7−96683
Fe II complexes, light-induced excited spin state trapping, IR spectra 7−85624
$Fe(CO)_5$, adsorbed on Si (111), laser interaction mechanisms, HREELS, TDS and AES investig. 7−91974
$Fe(CO)_5$, photolysis, mol. beam study 7−68439
H+N_2O, photochem. and BAC-MP4 calcs. 7−113886
H_2 generation, photoassisted, using separately supported Pt and CdS 7−114133
H_2O photolysis, catalysis using $SrTiO_3$ ultrafine powders 7−106459
H_2O, photolysis, H_2 evolution photosensitised, using TiO_2 particles on colloidal SiO_2 7−132953
H_2O_2 photolysis, OH radicals rot. distrib., laser-induced fluoresc. study 7−68333
ICN, photodissoc. dynamics, CN $X^2\Sigma^+$ fine struct. population 7−122634
ICl, laser photolysis, 530 nm, time-resolved LMR obs. 7−122576
IF,($B^3\Pi$), excimer laser photolysis, decay times, emission spectra, ultraviolet spectra 7−139017
IF excited to $B^3\Pi_{0+}$ by collisions with N_2 metastables 7−96831
KI, photo-induced defect form., picosecond laserphotolysis 7−131180
LiF, photodissoc., photoreaction and photodesorpt. 7−124684
$Mo(CO)_6$, adsorbed on Si (111), laser interaction mechanisms, HREELS, TDS and AES investig. 7−91974
N_2 laser flash photolysis using dye fluorescence as a monitoring source 7−128668
NCl_3, photolysis, spectra, time profiles 7−139028
NH_3-acetylene mixtures, photolysis in Jovian atm. 7−88174
NO_x+O_3 photolytic cycle in atmosphere, modified version 7−93592
NaOH, aq. soln. and coating, TiO_2: NiO catalyst, photocatalytic decomposition study 7−71523
$Ni(CO)_4$, photolytic reaction, linear combination of GTO-Xα method 7−93354
O+PH_3, flash photolysis, rate const. meas. 7−132954
O_2 UV photolysis, O_3 formation and isotopic fractionation 7−126462
O_3, mass-independent isotopic fractionation in nonadiabatic molecular collisions 7−103597
O_3, UV photolysis dynamics 7−90163
OH+methyl mercaptan-d_0(-d_3), reaction kinetics 7−119519
PH_3-O_3, photolysis products, FTIR spectra 7−74594
Ru complex, tris-(1,4,5,8-tetraazaphenanthrene) hydroquinone, photolysis and photopotentials 7−113962
$SiBr_4$, flash photolysis prod. $SiBr_2$ 7−129732

photolysis continued
$W(CO)_6$, adsorbed on Si (111), laser interaction mechanisms, HREELS, TDS and AES investig. 7−91974
Zn complexes, tetranapthoporphines, triplet-triplet absorpt. spectra 7−109874
Zn photodeposition rates from diethylzinc 7−71515
photomagnetic effect
magnetic semiconductors, magnons, photostimulated amplification 7−143780
semiconductors, light induced magnetisation, spin polarisation 7−105964
$CdCr_2Se_4$, photoferromagnetic effect, nonstoichiometry effects 7−92406
$Cd_{0.8}Mn_{0.2}Te$ dilute mag. semicond., integrated mag. spectroscopy obs. 7−125450
$ErCrO_3$, pulsed laser irradiation-induced antiferromag. to weak ferromag. transition study 7−77288
$FeBO_3$:Ho crystals, mag. resonance, photoinduced change 7−77445
$FeBO_3$:Ni, easy phase magnet, photoinduced superstructure 7−143772
$FeBO_3$:Ni, photoinduced modulated state, temp. behaviour 7−143771
α-Fe_2O_3:Co,Si single crystal, photomag. effect 7−112924
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7−85304
Ge, n-type, photomagnetic effect, mag. resonance oscillations 7−132123
InSb, oscillations in optical and transport coeffs., optical methods combined with mag. resonance 7−138429
Si 7−118887
YIG, domain struct., photoinduced mag. inhomogeneities 7−112848
YIG film, bulk spin wave-light waveguide interaction obs. *(Polish)* 7−138301
YIG photoinduced change in magnetostriction 7−143893
YIG: H_2^+ thin film, surface spin-wave modes photoinduced mag. anisotropy effect relax., FMR obs. 7−112897
YIG:Si, elec. relaxation processes and photomag. props., thermostimulated depolarisation study *(Russian)* 7−125606
YIG:Si single crysts., photoinduced magnetisation reversal mechanism and threshold studies *(Russian)* 7−99550
photomagnetoelectric effects *see photoelectromagnetic effects*
photometers
see also photometry; spectrophotometers
calibration characts. determ. 7−121184
computerised microscope photometer 7−102511
FIA 05 flow injection analyser and first experiences with its operation *(Czech)* 7−126517
goniophotometer, automated moving arm, for measuring the spatial distribution of light sources 7−121183
IR photometer for atm. aerosol studies 7−127540
Multichannel Astrometric Photometer and atmospheric limitations in the measurement of relative positions 7−134131
multichannel multicolour photometer, appl. to high time resolution photometry 7−79840
NDIR, nondispersive error model, for difference meas. of CO_2 in air *(German)* 7−67370
NDIR photometer for micrometeorological CO_2-profile meas. *(German)* 7−139815
photomultiplier electron characts. determ., pulse photometers appl. 7−102523
retinal reflex photometer for remote sensing of eye disorders 7−93877
scattering photometer for measuring scattering cross sections of droplets and ice crystals 7−79675
telephotometer, two-channel optoelectronic 7−102493
Yunnan Observatory No. 1 CCD system, precision for stellar photometry and observable magnitudes *(Chinese)* 7−101688
photometric light sources
No entries
photometry
see also brightness; colorimetry; densitometry; spectrophotometry; stellar photometry
1986 DA and 1986 EB, M class asteroids in near Earth population 7−72348
A2175, A2256, A2384, nearby Abell clusters, galaxies luminosity and spatial distribs. 7−80111
Abell 777 and 910, distant galaxy clusters, BV photometry from 6-m telescope plates 7−134313
active galaxies, UBVRI photometry 7−88606
airglow, minimum cross-entropy inversion of satellite photometer data 7−115133
702 Alauda, photoelectric five-colour photometry 7−79862
1862 Apollo, photoelectric lightcurves and rotation 7−145864
Arp 148, luminous merging galaxies, near-IR study 7−107954
Arp 220, nucleus IR photometric characts. 7−101920
artificial satellites, specular refls. obs. rel. to source of optical transient events 7−127681
asteroid magnitudes, definition of two photometric parameters 7−107736
asteroids, lightcurves of 26 large rapidly rotating bodies 7−145863
asteroids, photoelectric photometry and taxonomic classifications of radar target objects 7−134171
asteroids, photoelectric photometry of 17 objects 7−139953
asteroids, photoelectric V photometry of 17 objects, pole determs. 7−115280
asteroids, rotational properties and light curves for seven objects (94, 107, 197, 201, 360, 451, 511, 702) 7−72346
asteroids, slope parameters and absolute magnitudes 7−72347
asteroids, UBVRI photometry, spectral depend. of negative branch depth *(Russian)* 7−139955
astronomical photometry, appl. of information theory 7−115252
astronomical photometry, BASIC program for detector response estimation 7−115249
aurora, O II emission, satellite-borne obs. 7−145747
AWM 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
binary galaxies, mass-light ratios determ., radial vel. and spectral data anal. 7−128076
binary galaxies, photoelectric BV photometry 7−128075
3C 273, quasar, radio to X-ray continuum emission and temporal vars. 7−101949
3C 326.1, radiogalaxy, ionised gas detect. 7−140288
3C 33, radio galaxy, optical spectra index in south radio lobe 7−140254
3C 33, radiogalaxy, SW radio lobe optical spectroscopy and photometry 7−95037
3C 368, high-redshift radio galaxy and optical obs. rel. to merger and starburst 7−120585
3C 66A, BL Lac object, X-ray and optical brightness trends 7−101898
photometry continued
catastrophe theory anal. of optical resolution 7−129995
cD galaxies in clusters, surface brightness distrib. rel. to globular clusters surface density 7−107913
cell image anal. instruments, spatial and photometric resolution and calibration requirements 7−139412
cell suspensions, photometric method for O_2 consumption meas. 7−71938
Charon, constraints on diameter from IRAS obs. 7−107749
clusters of galaxies, alignment of member galaxies, photometric anal. 7−120629
P/Comet Arend-Rigaux (1984 XXI), dust characts., visible and IR obs. 7−72369
P/Comet Arend-Rigaux (1984 XXI), VJHK photometry of nucleus 7−134180
comet Bennett (1970 II), neck-line structure model for anomalous structs. in dust tail 7−101730
P/Comet Brooks 2 (1987m), total visual magnitude estimates (1987 August 30 to September 20) 7−145887
P/Comet Encke, CCD photometry and brightness var. 7−127766
P/Comet Giacobini-Zinner (1985 XIII), 300-1000 nm spectrophotometry 7−127767
P/Comet Giacobini-Zinner (1985 XIII), CCD filter photometry 7−88281
P/Comet Giacobini-Zinner (1985 XIII), periodic light var. and nucleus rot. 7−88305
P/Comet Halley (1982i); near-nucleus CCD imaging 7−115315
P/Comet Halley (1982i), 0.5 to 23 μm temporal devel., dust characts. 7−94721
P/Comet Halley (1982i), 16 to 30 μm obs. and dust features 7−94724
P/Comet Halley (1982i), 1981-6 visual brightness behaviour 7−88307
P/Comet Halley (1982i), 300-1000 nm spectrophotometry 7−127767
P/Comet Halley (1982i), 5 to 9 μm obs. and dust characts. 7−94725
P/Comet Halley (1982i), airborne photometry (40-160 μm) 7−94722
P/Comet Halley (1982i), BI obs. from Catania Observatory 7−107768
P/Comet Halley (1982i), brightness var., ground-based narrow-band photometric obs. 7−94707
P/Comet Halley (1982i), CCD filter photometry 7−88281
P/Comet Halley (1982i), CCD obs. with Giotto HMC and IHW filters from South Africa 7−115314
P/Comet Halley (1982i), dust and multiaperture airborne IR obs. 7−94726
P/Comet Halley (1982i), dust characts. and 20 to 65 μm spectrophotometry 7−94723
P/Comet Halley (1982i), grains scatt. props. 7−88313
P/Comet Halley (1982i), inner coma maps from multi-position absolute spectrophotometry 7−94804
P/Comet Halley (1982i), International Comet Quarterly photometric archive 7−107765
P/Comet Halley (1982i), IR photometric meas. and dust characts. 7−107775
P/Comet Halley (1982i), IR photometry before perihelion 7−72359
P/Comet Halley (1982i), IR polarisation and colour characts. 7−94718
P/Comet Halley (1982i), multi-observatory pre- and post-perihelion photometry 7−88274
P/Comet Halley (1982i), nucleus spin period, brightness var. obs. 7−88304
P/Comet Halley (1982i), obs. of rapid brightness changes (January 1986) 7−94692
P/Comet Halley (1982i), periodic light var. and nucleus rot. 7−88305
P/Comet Halley (1982i), photoelectric photometry at Yunnan (1986 March-April) *(Chinese)* 7−120317
P/Comet Halley (1982i), photoelectric photometry from Mauna Kea 7−94823
P/Comet Halley (1982i), photographic photometry of coma (April 1985 to May 1986) 7−127780
P/Comet Halley (1982i), photometry at Catania Observatory 7−88296
P/Comet Halley (1982i), post-perihelion strip photometry from Brazil 7−88279
P/Comet Halley (1982i), pre-perihelion CN and C_3 emission band photometry 7−94757
P/Comet Halley (1982i), pre-perihelion IR and optical photometry *(Russian)* 7−72374
P/Comet Halley (1982i), pre-perihelion photometry in near-IR 7−79880
P/Comet Halley (1982i), total visual magnitude 7−107767
p/Comet Halley (1982i), total visual magnitude estimates (1987 February 22 to March 22) 7−79876
P/Comet Halley (1982i), total visual magnitude estimates (1987 April 25 to 27) 7−88202
P/Comet Halley (1982i), total visual magnitude estimates (1987 April 30 to May 29) 7−115303
P/Comet Halley (1982i), UKIRT IR obs. programme 7−94717
P/ Comet Halley (1982i), Vega TV expt., photometry of nucleus and coma 7−88323
/Comet Halley (1982i), visual light curve, observational factors 7−88306
P/Comet Halley (1982i) UV spectrum evolution (1985 September to 1986 July) 7−88250
Comet IRAS-Araki-Alcock (1983 VII), 1983 May 9-10 event, spectrophotometric obs. 7−94690
Comet IRAS-Araki-Alcock (1983 VIII), distrib. of dust and gaseous images near nucleus from images and spectra 7−72360
P/Comet Neujmin 1 (1984 XIX), visible and IR characts. 7−72369
Comet Nishikawa-Takamizawa-Tago (1987c), total visual magnitude estimates (1987 March 27 and 30) 7−88188
Comet Nishikawa-Takamizawa-Tago (1987c), total visual magnitude estimates (1987 April 26 and May 1) 7−88201
Comet West (1976 VI), Coma dust grains characts. and reddening 7−127771
Comet Wilson (1986l), photometric characts. and emissions of various species 7−94695
comets, active and extinct, spectrophotometric props. and relation to dark asteroids 7−88165
comets, International Comet Quarterly photometric archive 7−107765
comets, magnitude distribs. for short-period and long-period comets 7−94708
comets, surface brightness profiles anal. 7−127768
computer graphics, realistic imagery, experimental evaluation 7−68565
contrib. to UV continuum of Herbig-Haro objects (HH1 and HH2) 7−128013
P/Corner Schwassmann-Wachmann 1, outbursts obs. (1979 to 1986) *(French)* 7−139963
3CR galaxies, Hubble diagram construction using 2.2 μm magnitudes 7−101959

photometry continued
R CrA reflection nebula (NGC 6729), rapid vars. in surface brightness 7−80076
crystal optical axis of uniaxial precious stones determ. by polarised-light microscope, photometry, microprocessor control 7−95645
Cyg A, internal reddening determ. from meas. of Paschen-α 7−120613
dark asteroids, spectrophotometric props. and relation to active comets and extinct comets 7−88165
depth map determination using dual photometric stereo 7−90524
diffraction-grating scaling energy (average power) measuring converter for laser photometry 7−130308
dwarf elliptical galaxies in Virgo cluster, photographic surface photometry 7−134297
1E 0116.3−0116, X-ray bright early-type galaxy, optical and X-ray obs. 7−120599
early-type galaxies, star form. and IR emission characts. 7−140292
electron and ion impact excitation, appl. to VUV radiometric transfer standard 7−122424
elliptical galaxies, CCD surface photometry 7−95027
elliptical galaxies, distance determ., use of photometric and kinematic data 7−80092
elliptical galaxies, IR studies of optically selected sample 7−95010
elliptical galaxies, isophotes shapes rel. to radio emission 7−101896
elliptical galaxies, low luminosity, brightness profiles rel. to H I distrib. and kinematics 7−101934
elliptical galaxies, rapidly rotating, photometric detect. of weak galactic disks 7−72607
elliptical galaxies, spectroscopy and photometry rel. to large-scale streaming motion in local Universe 7−115587
elliptical galaxies, V−R colours at high redshift rel to bimodal star form. 7−140287
emission nebulae, VBLUW photometry 7−80065
ESO 217-G09, peculiar galaxy, CCD photometry and dynamics 7−140255
ESO 495-G21 (=He 2-10), starburst galaxy, photometric and spectroscopic study 7−134298
F40 type fluorescent luminaires, factors affecting performance 7−108620
8 Flora, rot. period and heliocentric longit. of pole from photometric obs. (July-November 1984) 7−127760
Fornax elliptical galaxies, halo light distrib. compared with globular clusters space distrib. 7−120587
galactic nuclei, continuous and absorpt.-line spectra anal. for 164 objects 7−140261
galactic nuclei, IR characts. of nuclei of normal galaxies 7−72608
galaxies, ang. correl. function determ. as function of magnitude 7−115611
galaxies, depend. of Tully-Fisher relation on morphological type 7−95007
galaxies, deprojection of de Vaucouleurs $r^{1/4}$ brightness profile 7−80080
galaxies, $H_{-0.5}$ magnitudes and stellar populations rel. to radio continuum emission 7−120612
galaxies, relative contribs. of bulges and disks to Universe luminosity density 7−146082
galaxies, UV photometry rel. to star form. rates 7−120577
galaxies active nuclei, optical luminosity function of quasars and low-luminosity active nuclei 7−146083
galaxies in Bootes void region, magnitudes from Case low-dispersion northern sky survey 7−101704
galaxies in cluster Klemola 22, magnitudes and radial vels. from obs. with OPTOPUS 7−115581
galaxies in Hercules supercluster, basic data for 220 galaxies (in CGCG field 108) 7−115609
galaxies in Hercules supercluster, photometry and H I obs. rel. to distance and Hubble const. 7−115610
galaxies of Hercules supercluster, effect of Malmquist bias on distance determ. from Tully-Fisher relation 7−120620
galaxies with UV excesses, seventh Kiso survey 7−134149
galaxy cluster assoc. with QSO PG 1613-65 (Mkn 876), gr-photometry and redshifts 7−146102
galaxy clusters, deprojection of de Vaucouleurs $r^{1/4}$ brightness profile 7−80080
gamma-ray burst sources, photographic density profiles of suspected optical counterparts 7−107981
GBS 0526−66, ESO obs. during 1984-85 Burst Watch Campaign 7−80129
GBS 0526−66, gamma-ray burst source, detect. of possible optical burst 7−80127
GGD 27 IRS, new IR refl. nebula, K-band polarimetric mapping 7−94978
P/Giacobini-Zinner (1985 XIII), photometric meas. from La Palma 7−94759
globular clusters, concentric aperture UBVRI photoelectric photometry rel. to structural parameters and luminosities 7−72555
globular clusters in M31 (Andromeda galaxy), photoelectric UBV photometry *(Russian)* 7−146095
gloss, evaluation of appearance attribute 7−121043
Haro 2, nE blue compact dwarf galaxy, star form. characts., surface brightness and colour distrib. 7−95014
Herbig-Haro objects, CCD images rel. to mass outflows from young stars 7−115253
Hercules galaxies, catalogue construction from Palomar Sky Survey plates using Minnesota Automated Plate Scanner 7−101703
532 Herculina, UBV lightcurves, pole orientation, and model 7−115281
heterochromatic brightness matching, models 7−121044
HH 24, optical linear polarisation studies and relation to IR source (SSV 63) 7−128032
HH 52/53/54, high-latit. Herbig-Haro objects, CCD photometry and H_2 emission maps 7−134285
HH 57, optical linear polarisation studies 7−128027
high temperature gas analysis for continuous extractive measurement *(German)* 7−126530
high-redshift giant elliptical galaxies, colour evolution determ. from IR and visual obs. 7−120595
Humason 1-2, Type I planetary nebula, imaging photometry and spectroscopic obs. 7−134288
IC 4296 (PKS 1333−33), radiogalaxy, spectroscopy, X-ray imaging, IR and surface photometry obs. 7−95013
in-orbit scientific calibration of Hipparcos 7−127721
interstellar molecular clouds, IRAS obs. rel. to dust temps. and gas column densities 7−128031
IRAS 00521-7054, unusually warm Seyfert 2 galaxy, ER energy distrib. and optical spectrum 7−115590
IRAS 13349+2438, IR-loud quasar, optical, IR and radio obs. 7−88668
photometry continued
IRAS 23060+0505, highly obscured active galaxy, optical spectra and IR photometry 7−128071
IRAS fields in Draco mol. cloud region, optical survey 7−115627
IRAS galaxies, photometric and redshift study of flux-limited sample 7−128058
IRAS galaxies in Bootes void area, 60-μm luminosity function from redshift survey 7−146084
IRAS point sources in Virgo cluster region, IR-optical study 7−128125
IRAS sources, very deep survey at north ecliptic pole (l=97°, b=30°) 7−95049
IRAS sources, very deep survey rel. to evolution of starburst galaxies 7−128072
IRAS sources at high galactic latits., luminosity functions at 25, 60 and 100 μm and optical-IR luminosities correl. 7−128126
BL Lac, polarimetric and photometric obs. 7−146079
BL Lac, power spectrum of optical polarisation vars. 7−101938
BL Lac, search for short-term optical light vars. *(Russian)* 7−72625
BL Lac objects, optical variability of seven objects (1980 to 1986) 7−72593
BL Lac objects, polarisation characts. var. with wavelength, continuum spectral shape and evolution 7−128077
LDN 134, dark mol. cloud photometry use as reference in search for extragalactic background light 7−95052
AP Lib (PKS 1514-24), BL Lac object, photometric anal. and decomposition 7−140296
Lunar eclipse, 1986 October 17, obs. by geostationary weather satellite GOES 7−134116
M31, spiral galaxy, multi-colour photographic surface photometry 7−115585
M31 (Andromeda Galaxy), obs. of IR emission from interstellar dust 7−120578
M43, far-IR obs. of dust re-radiation 7−101886
M82, nucleus IR emission and star form. characts. 7−140271
M86, elliptical galaxy, optical distortion due to star form from cooling gas 7−88637
M87, high-resolution optical imaging of galaxy core 7−88641
Markarian 231, Seyfert 1.5 galaxy, high resolution U-band surface photometry 7−134312
Markarian 297, precise positions and BR photometry of bright knots 7−140253
Markarian 421, BL Lac object, simultaneous multifreq. obs. (December 1984 to January 1985) 7−128059
Markarian 421, optical var. and nucleus characts. 7−115605
Markarian 421, photometry of BL Lac object, underlying galaxy 7−140303
Markarian 71, H II region complex in NGC 2366 irregular galaxy, spectrophotometric obs. 7−146080
Markarian starburst galaxies, far-IR luminosities for individual galaxies 7−101940
MGC 4881, elliptical galaxy in Coma Cluster, dimensionless Mg index gradient determ. 7−107953
MKW 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
moire topograms, ordinary, photometric ordering 7−116001
myelokaryocyte DNA, cytophotometry after a single exposure to SHF-radiation of low intensity *(Russian)* 7−133366
narrow emission line active galaxies, UV to IR continuum characts. 7−72627
NGC 1433, ringed barred spiral, UBVRI surface photometry and Hα kinematics 7−80103
NGC 1566, Seyfert 1 galaxy, recurrent outbursts obs. in broad-line region 7−88612
NGC 2242, newly-discovered planetary nebula, photometry and spectrum 7−115542
NGC 2242, newly-discovered planetary nebulae, IRAS fluxes 7−72579
NGC 2261/R Mon system, polarimetry of nebula and faint jetlike feature to southwest 7−107932
NGC 2623, luminous merging galaxies, near-IR study 7−107954
NGC 3783, Seyfert galaxy, nucleus photometric characts. and struct. 7−72601
NGC 4261 (=3C 270), elliptical galaxy, VRI photometry rel. to dust lane detect. 7−72590
NGC 4874, giant D galaxy, globular cluster system obs. 7−120609
NGC 4874 and 4889, supergiant elliptical galaxies, globular star clusters characts. 7−120608
NGC 5090-5091 (PKS 1318−43), interacting galaxies, optical spectrum and photometry 7−88613
NGC 5548, Seyfert I galaxy, nucleus optical and UV spectral characts. 7−72631
NGC 604, giant H II region, spectrophotometry and abundances determ. 7−94985
NGC 6300, ringed barred spiral galaxy, kinematics and surface photometry 7−128073
NGC 6853 (Dumbbell Nebula), IRAS obs. 7−115545
NGC 7531, ringed nonbarred spiral galaxy, surface photometry and ionised gas kinematics 7−115592
NGC 7662, planetary nebula, ionisation struct. 7−88574
NGC 936, SB0 galaxy, pattern speed 7−101921
normal galaxies, UV props. 7−140258
optical component flaws, specification and measurement 7−75174
optical flash background light curves and flash rates from two-telescope study 7−72641
optical measurement applications and trends *(Japanese)* 7−121188
optical surface inspection, subjective versus objective methods 7−104070
optically violent variable quasars, polarisation characts. var. with wavelength, continuum spectral shape and evolution 7−128077
201 Penelope, photoelectric five-colour photometry 7−79862
Perseus optical flasher, status from optical monitoring 7−140312
PG 1211+143, quasar, spectral energy distrib. rel. to origin of X-ray-UV excess 7−115622
Pic A, radio galaxy, obs. of bright optical synchrotron counterpart of western radio hot spot 7−101935
PKS 1614+051, galaxy at redshift of 3.215, imaging and spectroscopic obs. 7−120586
PKS 1614+051A, intergalactic gas cloud near distant quasar, photometric obs. 7−128117
PKS 1614+051C,D,E, galaxies near distant quasar, photometric obs. 7−128117
planetary nebulae, catalogue and spectrophotometric survey 7−127743
planetary nebulae, CCD imaging and 2D spectrophotometry 7−140248

photometry continued
planetary nebulae, obs. of 3.3 μm and 3.4 μm emission features 7−134286
planetary nebulae in southern hemisphere, photometric and spectrophotometric obs. 7−140211
planetary nebulae of low surface brightness, obs. in −33°≤δ≤17° zone 7−120546
planetary nebulae of low surface brightness, obs. on Palomar Observatory Sky Survey (POSS) 7−120545
Pleiades reflection nebulae, IRAS surface brightness maps 7−115548
Pluto-Charon mutual events 7−145873
Pluto-Charon system, constraints on diameters from IRAS obs. 7−107749
Pluto-Charon system, mutual eclipses photometry rel. to physical parameters determ. 7−101727
PN 0345+499, 2212+657, senile nearby planetary nebulae, implications for local PN population 7−115543
polar-ring galaxies, dark halo shape 7−120589
psychophysical system based on cone excitations 7−80842
16 Psysche, photoelectric five-colour photometry 7−79862
Q 133494+2438, radio-quiet quasar, detect at 1300 μm wavelength 7−134315
QSO 1409+732, faint high-redshift quasar, spectrophotometry rel. to quasars surface density 7−107978
quasars, far-IR properties of optically selected QSOs 7−88669
quasars, Hubble diagram construction using 154.8 nm magnitudes 7−101959
quasars, luminosity depend. of X-ray/IR emission ratio 7−128110
quasars, optical spectral indices from (B−V) colour indices 7−120637
quasars, optically selected, with z≥3, redshifts and r-magnitudes 7−128114
quasars in Palomar-Green survey, optical-IR continuum energy distribs. 7−115624
quasars in Second Byurakan Survey, discovery, spectral and photometric meas. *(Russian)* 7−72652
quasars of CFHT survey, redshift and magnitudes rel. to space distrib. 7−101952
quasi-stellar objects, new optical catalogue 7−79850
radio galaxies in poor galaxy groups, VLA 20 cm survey and CCD photometry 7−146099
radio galaxies surface photometry rel. to radio, optical and clustering props. 7−88633
radio sources in first Molonglo deep survey, optical identifications and magnitude estimates 7−128105
radiometry, modular approach 7−140730
ring galaxies, optical and IRAS obs. rel. to star form. rates 7−72611
sampling technique for luminesc. time constant meas. 7−144099
Saturn rings, features characts. from Voyager photopolarimeter stellar occultation 7−115291
Seyfert 1 galaxies, IR photometry rel. to dust-modified standard continuum model 7−107951
Seyfert galaxies, far-IR fluxes rel. to star form. 7−72610
Seyfert galaxies, H II regions, element abundances 7−140277
Seyfert galaxies, surface brightness distrib., multiaperture photometry meas. 7−72580
Seyfert galaxies, surface brightness distrib. 7−128036
Shapley 1346−30, cluster of galaxies, members CCD surface photometry 7−88645
Shapley 8 galaxy custer, photometry and red shifts rel. to dynamics 7−88654
SN 1986G in NGC 5128, photometry, light echo effect 7−120475
solar collector reflective and black chrome, photometric methods for refractive indices determ. *(French)* 7−106926
solar electron corona, polarisation brightness obs. rel. to radial var. of differential rot. 7−107800
southern galaxies, UBVRI photoelectric photometry 7−72595
spectra irradiance scales based on filtered absolute Si photodetectors 7−108618
SPIRAL−Surface Photometry Interactive Reduction and Analysis Library 7−94664
spiral galaxies, dust distrib., use of surface photometry 7−120604
spiral galaxies, IRAS obs. of starburst and nonactive galaxies 7−120601
spiral galaxies, light and mass distrib., illum. profiles and rot. curves 7−101915
spiral galaxies, rot. curves and luminosity profiles rel. to halo parameters 7−115578
spiral galaxies, systematics of Tully-Fisher relation in B, V system 7−120579
spiral galaxies, Tully-Fisher relation, error reduction using CCD I-band surface photometry 7−101927
SSCV 140, nebulous star, optical linear polarisation studies 7−128032
star clusters in LMC, UV obs. by IUE 7−115532
starburst galaxies, constraints on evolution from very deep IRAS survey 7−128072
surface objects orientation determ., vision system appl. 7−74885
thin film characterisation via ellipsometric methods 7−121197
units, explanation 7−121042
375 Ursula, large C-type asteroid, rot. and var. 7−139952
VDU comfort and safety, visual fatigue and relative visibility meas. *(Japanese)* 7−126812
Vesta, flattening, pole position, and albedo features from photometric data 7−134170
Virgo cluster spiral galaxies, far-IR luminosities 7−101940
VV 32, ring galaxy, CCD photometry rel. to star form. 7−72589
young star clusters in M31, integrated UBVR photometry rel. to ages and luminosity function 7−95031
H II galaxy giving rise to z=0.3930 absorpt. system in QSO 1209+107, photometry and spectrum 7−80118
$Hg_{1-x}Cd_xTe$ based anodic oxide layers, chemical anal. using photometric method 7−114026
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734

photomultiplier tubes *see photomultipliers*

photomultipliers
1P28A side-window type, pulsing-off circuit 7−80888
Anger scintillation camera automatic tuning, review 7−107236
atmospheric aerosol distrib. measurement by laser radar with photomultiplier noise, accuracy improvement *(Japanese)* 7−72202
calibration for Cherenkov spectra meas. 7−109621
counting efficiency and voltage stabilization for high counting rates 7−96471
dynode statistics for Monte Carlo simulation of photomultiplier resolution 7−74344
electrostatic potential distrib. determ. 7−102453
FEU-49, NaI(Tl) scintillation spectrometer stability at high count rates 7−81846
FEU-83, amplitude distrib. of single electron pulses determ. 7−102522
FEU-84-3, electron characts. determ., pulse photometers appl. 7−102523
fibre scintillators coupled to a multianode photomultiplier as a high rate tracking detector 7−68134
gain instability and stabilisation 7−103333
gas filled photomultiplier, photocathode and grid performance 7−116781
Hamamatsu R 1564U microchannel plate photomultiplier, time resolution performance 7−74347
impulsive densitometer with synchronous conversion of pulse trains 7−108619
PET, high resolution detector blocks 7−145230
photon counting appl. of FEU-112 photomultiplier 7−108626
position sensitive multianode photomultiplier for low light level events 7−74352
preamplifier-discriminator IC for photomultipliers 7−68148
sampled photodetector based on FEU-83 photomultiplier 7−67392
simultaneous subnanosecond timing information and 2D spatial information from imaging photomultiplier tubes 7−140757
standard source for certifying low-level radiation detectors 7−102492
temperature coefficients determ. using photon counting technique 7−74349
time-resolved spectra, measurement in submicrosecond region of weak emission *(Japanese)* 7−102536

photon correlation spectroscopy
acoustic fields, periodic, photon correlation spectroscopic measurements 7−97235
carbonic anhydrase B, bovine, fluoresc. correl. spectroscopy, rot. diffusion 7−119722
α-crystallin proteins, colloidal dispersion dynamics, photon correl. spectroscopy study 7−114167
dynamic light scattering, correlation techniques 7−90521
emission spectrum, determination of characterising parameters, by photon correlation and multichannel analyser 7−121235
fluorescence correlation spectroscopy, separation of nonorientational and rotational contributions 7−73435
hexyloxycyanobiphenyl-octyloxycyanobiphenyl mixtures, nematic-smectic A transition, light scatt. study 7−84259
laser cross-correlation spectrometer based on Kh6-4 correlator 7−121236
methanol, thermal diffusivity, photon correl. spectroscopy 7−76464
microprocessor-based photon correlator for intensity fluctuation studies 7−73432
minicomputer-based photon correlator and counter 7−80895
polymethacrylic acid, semidilute solns., dynamic light scatt. investig. 7−92696
simultaneous subnanosecond timing information and 2D spatial information from imaging photomultiplier tubes 7−140757
sodium oleate-potassium oleate micellar solns., photon correlation spectroscopy 7−71541
statistical props. of visible laser diodes 7−102544
structure function processing of scattered laser light 7−102537
time-of-arrival photoelectron correlator 7−128678
toluene, thermal diffusivity, photon correl. spectroscopy 7−76464
two-atom resonance fluorescence, photon correlations, finite bandwidth excitation effect 7−129648

photon counting
astronomical photometry, multichannel multicolour photometer for high time resolution obs. 7−79840
bandpass photon detector with high efficiency for inverse photoemission spectroscopy 7−80848
chromium(III) polypyridyls, doublet state, phosphoresc. decay time 7−68395
computer-controlled picosecond single-photon-counting spectroscopy *(Japanese)* 7−108670
detection in time-resolved imaging mode, imaging recentring and selection 7−101689
detector for Doppler temp. meas. in magnetically confined plasmas 7−83545
distributed fibre optic temp. sensor using Raman anti-Stokes OTDR and single photon counting detect. 7−90797
dye solution, fluoresc. profiles calc. 7−90253
FEU-112 photomultiplier appl. 7−108626
fluorescence rejection in Raman spectroscopy, using dye laser and gated photon counting 7−80894
free-electron laser, photon statistics and squeezing 7−82592
generalised Jaynes-Cummings models, interaction between two-level atom and single mode 7−68607
high speed photography, videography and photonics, conf., San Diego, CA, USA (Aug. 1986) 7−95086
hodoscopic hadron and photon scintillation calorimeters, radial distrib. of shower energy release 7−81903
homodyne and heterodyne detection, quantum theory 7−136239
Image Photon Counting System, performance anal. and quest for high accuracy 7−94662
inertial quantum counter, noise immunity as time interval meter 7−130028
intensity fluctuation distrib. from photon counting distribs., Poisson transform inversion 7−82517
invariant pattern recognition using quantum-limited images 7−130013
laser Doppler velocimetry, low cost photon statistics technique 7−69292
laser radiation transmitted by turbulent atm., statistics 7−72152
Michelson interferometer using squeezed-state light source, photon counting error 7−120835
microchannel plates system for photons and particles counting 7−121296
microchannel-plate position sensitive detectors for UV astronomy 7−72306
minicomputer-based photon correlator and counter 7−80895
multichannel dynamic light-scattering system for bacterial motility meas. 7−126700
multiphoton processes, photon number quantum fluctuations dynamics 7−68596
multiplexed single-photon instrument for routine measurement of time-resolved fluorescence anisotropy 7−82393
near-VUV Doppler monochromator using a multi-anode microchannel plate detector 7−110545

photon counting continued
number-phase minimum-uncertainty states, quantum nondemolition meas. with Kerr medium 7−110311
path-integrated refractive turbulence irradiance scintillations, probability density 7−68560
photoelectron converter, astronomical telescope appl. 7−115245
photomultiplier temperature coefficients determ. using photon counting technique 7−74349
photomultiplier with local photocathode illumination, amplitude distrib. of single electron pulses 7−102522
poly(N-vinylcarbazole), films, excimer dynamics, photon counting meas. 7−118292
polyethylene films, low-density, light emission under DC field 7−99937
position sensitive multianode photomultiplier for low light level events 7−74352
quantum open-systems theory approach to photodetection 7−110306
resonance fluorescence, correlations between successively emitted photons 7−110309
second-order statistics of integrated intensities 7−103783
semiconductor laser, constant current driven, obs. of amplitude squeezing 7−74924
shot-noise light with arbitrary spectrum, approx. photocounting statistics 7−141821
simultaneous subnanosecond timing information and 2D spatial information from imaging photomultiplier tubes 7−140757
single-clipped correlation and the Bell polynomials 7−90532
single-electron recording of light flow, reliability 7−121187
small particle detection in liq., by light scatt., photon distrib. *(Japanese)* 7−129977
SNR of photon counter, effect of timer 7−108625
sodium salicylate, luminesc., VUV, X-ray and β particle excited, time depend. 7−113262
statistical props. of visible laser diodes 7−102544
streak camera characterisation, with tandem micro-channel plates 7−95668
structure function processing of scattered laser light 7−102537
two-level atom, sub-Poisson field statistics, Jaynes-Cummings model 7−96966
two-peaked spectrum, generating function anal. 7−110305
ultraviolet inverse photoemission, instrumental aspects 7−125844
KI:Sn^{2+}, doped S^{2-} ions, emission spectrum fine struct. 7−132296
Kr excimer, form. and decay, photon counting investig. 7−90347
OH radicals in flame, absolute density meas. by time-resolved laser-induced fluorescence 7−71493

photon-deuteron interactions
see also photon-deuteron scattering
$\gamma d \rightarrow \pi^0 d$, differential cross-section, effect of double scatt. term 7−81210

photon-deuteron scattering
see also photon-deuteron interactions
No entries

photon echo
coherent spectroscopy and light echo, conf., Kharkov, USSR (Oct. 1985) 7−120685
condensed mediums, investig. using polarisation echo method, review 7−123297
cyclotron ion-photon echo formation, anal. 7−136453
diffraction influence on photon echo signal form. 7−141949
glasses, doped, organic and inorganic, optical dephasing times studies, coherent transient photon-echo technique, review 7−75079
glasses, impurity optical linewidths and photon echo decays, stochastic model anal. 7−75081
glasses, optical transition, homogeneous line broadening, review 7−75075
holography based on photochemically stored light echo 7−122876
imaginary echo in a gas in a Doppler expanded transition 7−123122
information processing appl. 7−122850
long-lived light echo and its application 7−123121
multilevel resonant systems, echo signals, temporal and correlation props. 7−117278
nonlinear spectroscopy using Raman scattering 7−121229
picosecond accumulated photon echoes, high-frequency heterodyned detection 7−123125
polarisation spectroscopy of gaseous media using photon echo, review 7−121230
pseudoisocyanine bromide, J-bands, photon echo and hole burning investig. 7−103904
pulse formation through scanning optical coherent spectroscopy 7−121231
resorufin, in ethanol glass, linewidths, photon echo and hole-burning results 7−110479
resorufin, in glycerol glass, photon echo and hole burning, temp. depend. 7−129796
resorufin in ethanol glass, linewidths, phases, relaxation processes 7−136451
ultrashort optical pulse propag., numerical modeling and precise results, review 7−123120
Cs vapour, synchronised quantum beat echoes using diode laser light 7−97096
$LaF_3:Pr^{3+}$, image storage and phase conjugation for backward-stimulated echo 7−96944
$LaF_3:Pr^{3+}$, image storage and phase conjugation using backward-stimulated echoes 7−122855
$LaF_3:Pr^{3+}$ long lived conjugate optical echo 7−123116
Tl, orientation relax time of $^3P_{3/2}$ level, modified stimulated photon echo 7−122407
Yb vapour, modified stimulated photon echo in longitudinal mag. field 7−90730

photon-hadron interactions
see also photon-hadron scattering; photon-nucleon interactions
$\gamma^*\pi \rightarrow \pi$, total α_s correction in perturbative QCD 7−67587
π photoproduction from a baryon unitary theory in chiral bag model 7−121520

photon-hadron scattering
see also photon-hadron interactions
No entries

photon interactions *see photon-deuteron interactions; photon-hadron interactions; photon-lepton interactions; photon-nucleus reactions; photon-photon interactions*

photon-lepton interactions
see also photon-lepton scattering
$e^{\pm}\gamma \rightarrow e^{\pm}\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
$\gamma e^{\pm} \rightarrow W^{\pm}\upsilon$, effect of W electric dipole moment, CP- violation obs. 7−135091

photon-lepton scattering
see also photon-lepton interactions
γe scattering, final photon polarization calcs. 7−135093

photon-nucleon interactions
see also photon-nucleon scattering; photon-proton interactions
αN, 90 GeV, ψ and ψ' photoprod., inelastic cross section 7−73657
γ N→X, polarisation phenomena structure function formalism 7−135136
γN→charm, total cross-sections, photon-gluon fusion model 7−81205
$\gamma N \rightarrow D^0$, D^+, F^+, analysis of initial data 7−67627
$\gamma N \rightarrow \Delta(1232)$, E2/M1 ratio in relativistic three quark model 7−135141
$\gamma N \rightarrow \pi N$, spin-$^3/_2$ particle propagator contribs. 7−128901
$\gamma N \rightarrow \pi N$, u-channel $\Delta(1232)$ exchange model with crossing symm. 7−135140
$\gamma N \rightarrow \pi X$, chiral bag model anal. 7−128902
$\gamma N \rightarrow \psi X$, gluon struct. fn., small-x behaviour 7−102753
$\gamma_v N \rightarrow \Delta$, longit. and scalar multipole calcs., nonrelativistic quark shell model anal., colour magnetism 7−73658

photon-nucleon scattering
see also photon-nucleon interactions; photon-proton scattering
No entries

photon-nucleus reactions
for inelastic photon-nucleus scattering, see "photon-nucleus scattering"
see also photodisintegration; photon-deuteron interactions; photon-nucleon interactions
1p shell nuclei, electric dipole resonances from photonuclear cross section anal. 7−102852
computerized information system for nuclear physics 7−68184
cross sections, quasi-monochromatic photon spectrum shape, white X radiation comparison 7−121786
cross sections and mass attenuation coeffs., empirical eqns. *(Japanese)* 7−89891
hadron photoabsorption cross sections in nucleon resonance photoexcitation energy range 7−102862
higher-order processes in the photon-nucleus interaction 7−73750
synchrotron appl. for studying electron-nuclear and photonuclear reactions 7−109553
Z=92 DWBA calculation of pair production cross-section for 10.0 MeV photons 7−73752
$^{12}C(\gamma,\pi^0)$, 138-146 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
(γ,n), photoerosion of nuclei in quasar emission-line regions 7−120642
(γ,N) reactions, differential cross sections, RPA approach 7−116384
(γ,p), photoerosion of nuclei in quasar emission-line regions 7−120642
$^6Li(\gamma,\pi^0)$, 138.5-146.5 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
$^{108}Ag(\delta,X)$, 1-5.5 GeV, fragmentation, cross section meas. 7−129123
$^{10}B(\gamma,xn)$, 8.44-24.5 MeV, cross section meas., El-giant resonance region study 7−129018
$^{11}B(\gamma,^3H\gamma')$, reaction mechanism, photon energy spectrum 7−81369
$^7Be(\gamma,X)$, photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
$^9Be(\gamma,X)$, 100-250 MeV, X=^{3}He, α, cross sections, quadrupole excitation contributions 7−121807
$^9Be(\gamma,p)$, cross section meas. in $\Delta(1232)$ region 7−121788
$^9Be(\gamma,pn(p))$, cross section meas. in $\Delta(1232)$ region 7−121788
$^{79}Br(\delta,X)$, 1-5.5 GeV, fragmentation, cross section meas. 7−129123
$^{12}C(\gamma,n)^{11}C$, cross-section meas. 7−121794
$^{12}C(\gamma,pd)^9Be$, 80 MeV, cross sections, angular distribs., energy correlations *(Russian)* 7−116379
$^{12}C(\gamma,K)$, relativistic impulse approx. using Dirac single particle wave fns. 7−102860
$^{12}C(\gamma,X)$, 100-250 MeV, X=^{3}He, α, cross sections, quadrupole excitation contributions 7−121807
$^{12}C(\gamma,n)^{11}C$, total activity and relative radiolysis prod. yields, nuclear medicine appl. 7−133451
$^{12}C(\gamma,np)$, 80-130 MeV, correlated n-p pair meas. 7−116386
$^{12}C(\gamma,p)$, cross section meas. in $\Delta(1232)$ region 7−121788
$^{12}C(\gamma,p)$, E_γ=60 and 70 MeV, high energy resolution study 7−135302
$^{12}C(\gamma,pd)^9Be$, angular pd correlations 7−121787
$^{12}C(\gamma,pn(p))$, cross section meas. in $\Delta(1232)$ region 7−121788
$^{12}C(\gamma,\pi^0)$, 130-155 MeV, near threshold prod. cross section meas. 7−121798
$^{13}C(\gamma,\pi^-)^{13}N$, axial current form factor in the time-like region 7−109142
$^{40}Ca(\gamma,X)Ar$, giant dipole resonance, partial decay channels 7−67798
$^{40}Ca(\gamma,p_i)$, 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
$^{48}Ca(\gamma,n)$, cross section meas., isospin components and statistical decay model 7−129017
$^{48}Ca(\gamma,p)$, cross section meas., isospin components and statistical decay model 7−129017
$Cd(\gamma,n)$, 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
$^{53}Cr(\gamma,n)$, threshold cross section meas., level densities and radiative strength fn. 7−116387
$^ACu(\gamma,X)$, A=63,65 spallation reactions, spatial distrib. of radionuclides 7−109143
$Cu(\gamma,X)$, cross-sections for photospallation 7−81370
^AEr, (γ,X), A=162, 166, γ-absorption cross sections, comparison with dynamical strength functions 7−67695
(γ,e^+e^-), coherent production in nuclear electroweak field, P violating asymmetry 7−102859
(γ,X), few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
(γ,xn), E1 giant reson. cross sections anal., appl. of $^{181}Ta(e,xn)$ results 7−135301
$^1H(\gamma,p)$, cross section meas. in $\Delta(1232)$ region 7−121788
$^1H(\gamma,pn(p))$, cross section meas. in $\Delta(1232)$ region 7−121788
$^2H(\gamma,n)$, 4-18 MeV, relative ang. distrib. meas. 7−116378
$^2H(\gamma,p)$, cross section meas. in $\Delta(1232)$ region 7−121788
$^2H(\gamma,pn(p))$, cross section meas. in $\Delta(1232)$ region 7−121788
$^2H(\gamma,pn)$, deuteron struct., gauge invariance in covariant approach *(Russian)* 7−121521

photon-nucleus reactions continued
$^2H(\gamma,\pi^0)^2H$, 500-800 MeV, differential cross section, double scattering, dibaryon resonance contribution 7−141040
$^3H(\gamma,X)$, low-energy reactions and three-body calcs. 7−67795
$^3H(\gamma,\pi)$, elastic photoproduction in Δ(1232) resonance region 7−135299
$^3He(\gamma,X)$, low-energy reactions and three-body calcs. 7−67795
$^3He(\vec{\gamma},p)$, cross sections, asymmetry coeff. and electromagnetic current conservation 7−121796
$^3He(\gamma,pn)$, correlations and exchange currents in few-body systems 7−67773
$^3He(\gamma,\pi^+)^3H$, differential cross-sections, pion-nucleus coupling constant 7−81371
$^3He(\gamma,\pi)$, elastic photoproduction in Δ(1232) resonance region 7−135299
$^3He(\gamma,\pi)$, photon absorption mechanism in Δ resonance region 7−67796
$^3He(\gamma\rightarrow,p)$, $E_\gamma>50$ MeV, differential cross section calcs., giant resonance region 7−121795
$^4He(\gamma,pn)^2H$ nucleon momentum distributions and quasideuteron correlations, quasi-^3He decay 7−121784
$^4He(\gamma,pnn)$, disintegration study using LADON photon beam 7−67794
^6He (γ,X), photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
$^{127}I(\gamma,n)^{126}I$, 9.72 MeV, excited states and Q value meas., neutron spectro anal. 7−73701
$^{39}K(\gamma,N)$, semidirect giant dipole resonance decay characts., partial photonuclear channels 7−135296
$^7Li(\gamma,X)$, photodisintegration channel cross sections in giant resonance region 7−135298
^ALi (γ,X), A=6,7, photospallation, microscopic studies including collective and cluster degrees of freedom 7−121785
$^ALi(\gamma,t)$, A=6,7, two-cluster direct mechanism, shell model and cluster model calcs. 7−135297
$^{14}N(\gamma,n)$, 12.5-15.5 MeV, absolute cross section meas. 7−81366
$^{14}N(\gamma,n)^{13}N$, total activity and relative radiolysis prod. yields, nuclear medicine appl. 7−133451
$^{14}N(\gamma,\pi^+)$, Cohen-Kurath wave functions anal. 7−67807
$^ANi(\gamma,X)$, A=58,60-62,64, 4.5 GeV expts. 7−89567
$^{16}O(\gamma,n)^{15}O$, total activity and relative radiolysis prod. yields, nuclear medicine appl. 7−133451
$^{16}O(\gamma,p_i)$, 40-400 MeV, medium energy diffr. cross sections, mean-field description, knockout model 7−135300
$^{16}O(\gamma,\pi^\pm)$, 200-350 MeV, π spectra and cross section determ. 7−129016
$^{208}Pb(\gamma,X)$, photoabsorption cross section, collective and quasi-deuteron contribs. 7−102861
Pb(γ,n), 20-30 MeV, forward-backward neutron asymmetry meas. excitation energy calcs. for E2 isovector resonance 7−67797
$^{141}Pr(\gamma,p)$, zero-range approximation limits, anal. power, sensitivity to force range 7−116383
$^{32}S(\gamma,p\gamma')$, 32 MeV, partial photonucleon cross sections, semidirect processes photoabsorption, giant dipole resonances 7−116380
$^{232}Th(\gamma,X)$, 18-28 MeV, ^{24}Ne emission cross sections, cluster mechanism 7−67800
$^{232}Th(\gamma,n)$, cross section meas. below 10 MeV 7−109145
$^{238}U(\gamma,n)$, cross section meas. and a multiplicity, 5-10 MeV 7−109146
$U(\gamma,e^+e^-)$, electron pair production in DWBA calc. 7−129019

photon-nucleus scattering
see also photon-deuteron scattering; photon-nucleon scattering
Compton scattering and pion number in nuclei 7−96053
cross sections and mass attenuation coeffs., empirical eqns. *(Japanese)* 7−89891
Delbruck scattering up to 10^4 MeV, predicted props. 7−128827
gamma-ray scattering by deformed nuclei 7−73751
(γ,γ'), heavy nuclei, E1 strength in giant dipole resonance, nuclear structure effects 7−116385
Al(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
$^{209}Bi(\gamma,\gamma')$, exchange currents in El strength and orbital g-factor 7−116279
^{12}C (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
$^{40}Ca(\gamma,\gamma)$, 9.60-9.86 MeV, level widths between 9.5 and 10.5 MeV 7−67723
$^{111}Cd(\gamma,\gamma')$, photoactivation to $^{111}Cd^m$, decay scheme 7−141015
Cu(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
$^ADy(\gamma,\gamma')$, A=160,162,164, photoexcitation of low-lying collective states 7−109108
Fe(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
$^2H(\gamma,\gamma')$, narrow dibaryon formation 7−121791
$^{113}In(\gamma,\gamma')$, photoactivation of isomeric levels 7−73753
^{16}O, (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
$^{16}O(\gamma,\gamma)$, differential cross section meas. in giant dipole resonance region 7−116377
Pb(γ,γ), coherent scatt. cross section, relativistic HF model comparison *(Chinese)* 7−116376
$^{87}Sr(\gamma,\gamma')$, photoactivation of isomeric levels 7−73753
$^{181}Ta(\gamma,\gamma')$, isomeric state excitation by white radiation, 3.55 MeV activation level detection 7−135295

photon-phonon excitations *see polaritons*

photon-photon interactions
see also photon-photon scattering
charm production in γγ collisions, studies at PETRA 7−102686
ECFA Workshop on LEP 200, Aachen, Germany, (Sept.-Oct, 1986) 7−140381
pair production at TeV and PeV energies inside SN 1987A supernova 7−139870
radiative corrections to two-photon processes 7−73655
$\gamma^*\gamma^*\rightarrow\pi^0$, total α_s correction in perturbative QCD 7−67587
$\gamma\gamma\rightarrow$ resonances, glueball spectroscopy at PEP 7−102648
$\gamma\gamma\rightarrow e^+e^-$, $\mu^+\mu^-$, 2-photon contrib. to pair production in heavy-ion collisions 7−95960
$\gamma\gamma\rightarrow\gamma X$, possibility of expt. investigation of QCD pomeron 7−67678
$\gamma\gamma\rightarrow h$, meson formation, event topology, review 7−67680
$\gamma\gamma\rightarrow l\bar{l}$, light pseudoscalar particle excitation during lepton pair formation 7−102786
$\gamma\gamma\rightarrow\pi^+\pi^-$, pion pair production and yield near threshold at DCI collider 7−128929
$\gamma\gamma\rightarrow\pi\pi$, low energy cross section, QED Born amplitude comparison 7−89536
$\gamma\gamma\rightarrow\pi\pi$, low energy cross section and QED Born amplitude 7−116208
$\gamma\gamma\rightarrow\bar{q}q$, local duality and the semi-classical approximation 7−140839

photon-photon interactions continued
$\gamma\gamma\rightarrow VX$, $V=\rho^0$, ω, φ, possibility of expt. investigation of QCD pomeron 7−67678
$\gamma\gamma\rightarrow$vector mesons, possibility of expt. investigation of QCD pomeron 7−67678
$Q^2\bar{Q}^2$ (1480) evidence in p̄n and γγ studies 7−102765
γγ physics at LEP 200, resonance excitation, meson period., structure functions 7−140971
$\gamma\gamma^*\rightarrow\bar{K}K\pi$, X(1420) exotic quark-gluon hybrid obs. 7−81265

photon-photon scattering
see also photon-photon interactions
$\gamma\gamma\rightarrow\gamma\gamma$, finiteness and gauge invariance in SU(2)×U(1) model 7−81264

photon polarisation
No entries

photon production
Cosmological implications of conformal symmetry breaking 7−95071
heavy-ion collisions, γ-ray production, high energy, n-p bremsstrahlung interpretation 7−121901
heavy-ion collisions, intermediate energies, Boltzmann-Uehling-Uhlenbeck eqn. model anal. 7−141098
heavy-ion reactions, pion and photon production 7−121951
tagged quasimonochromatic photon prod. in the acceleration of relativistic ^7Li nuclei 7−68105
vector meson radiative decays, v^2/c^2 corrections to widths 7−135132
$A^-_2(1320)\rightarrow\eta\pi^-$ ($\eta\rightarrow\gamma\gamma$), exptl. search, π^-p,0.5-3.5 GeV/c study 7−140929
$e^+e^-\rightarrow$ nγ, n=3,4, polarization amplitudes, cross section calcs. 7−116156
$e^+e^-\rightarrow$ single photon+X, 29 GeV, SLAC PEP ASP detector search 7−95883
$e^+e^-\rightarrow$ sparticles ($\tilde{\gamma}$, $\tilde{\nu}$, $\tilde{e}$, $\tilde{W}$), search at PETRA, QED comparison 7−121526
$e^+e^-\rightarrow e^+e^-\gamma$, radiative Bhabha scatt. for single photon config. 7−89489
$e^+e^-\rightarrow\gamma\gamma$, radiative correction calcs. in standard Su(2)×U(1) theory 7−73638
$e^+e^-\rightarrow\nu\bar{\nu}\gamma$, exact anal., helicity amplitude calcs. 7−140917
$e^+e^-\rightarrow$scalar fermions, $\tilde{\gamma}$, $\tilde{W}$, $\tilde{Z}$, cross section calcs. 7−89493
$G\rightarrow\gamma\tilde{g}$, $g\tilde{g}$, light-element yields, early universe 7−101965
$K_{S(L)}\rightarrow\gamma\gamma_b$ chiral SU(3)×SU(3) anal. 7−95912
$K^-p\rightarrow\Lambda\gamma\pi^0_b$ kaonic atom decay, polarized Λ production 7−89519
$\mu^-p\rightarrow n\nu\gamma$, Δ(1232) effects on capture rate 7−89511
$pp\rightarrow\gamma X$, 300 GeV/c, cross section meas. 7−116200
$\bar{p}p\rightarrow\gamma X$, 63 GeV, soft-photon production, direct component limits 7−67676
$pp\rightarrow\gamma$+away-side jet, $\sqrt{s}=63$ GeV, gluon distrib. determ. 7−95954
$pp\rightarrow\gamma\gamma$, $\pi^0\pi^0$, cross sections, perturbative QCD anal. 7−89532
π^-p, 0.5-3.5 GeV/c, $A_2^-(1320)\rightarrow\eta\pi^-$ ($\eta\rightarrow\gamma\gamma$) search 7−140929
$\pi^-p\rightarrow\gamma X$, 300 GeV/c, cross section, rapidity distrib. meas. 7−116200
$\pi^-p\rightarrow\pi^-p\gamma$, 300 MeV/c, cross section meas. 7−67650
$\pi^+p\rightarrow\pi^+p\gamma$, amplitude anal. 7−67649
$\pi^+p\rightarrow\gamma X$, 300 GeV/c, cross section meas. 7−116200
$^{12}C(p,p\pi\gamma)$, 10 GeV/c invariant inclusive cross section meas., reaction props. 7−121847
$^{12}C(\pi^-,\gamma X)$, 4 GeV/c, inclusive characts. of γ-rays 7−67880
$e^+e^-\rightarrow\gamma\gamma\gamma\gamma$, observation of QED process, cross section, energy spectra 7−95884

photon-proton interactions
see also photon-proton scattering
$\gamma^*p\rightarrow\rho p$, exclusive ρ prod. in deep inelastic scatt., pomeron approach 7−73656
$\gamma p\rightarrow\bar{c}c+X$, charm photoproduction momentum distributions, lattice contributions using Hamiltonian QCD 7−116186
$\gamma p\rightarrow\eta\omega p$, 25-50 GeV, ηω mass spectrum anal., obs. of peak 7−95915
$\gamma p\rightarrow\eta p$, diffractive photoproduction, mass spectrum interference effects 7−81166
$\gamma p\rightarrow\gamma X$, open charm prod., perturbative QCD approach 7−81207
$\gamma p\rightarrow K^+\Lambda$, low-energy, coupling constants, effective lagrangian approach 7−135152
$\gamma p\rightarrow K^+\Lambda^0$, pseudovector versus pseudoscalar theory, diagrammatic techniques, coupling constants 7−116185
$\gamma p\rightarrow X$, 20 GeV, forward charge asymmetry 7−116182
$\gamma p\rightarrow X$, hadron cascades, vector meson dominance and Monte Carlo dual multistring 7−108924
$\gamma p\rightarrow A_1^+n$, mass and width determ. 7−81211
$p\gamma\rightarrow b_1\pi p$, diffractive photoproduction and mass spectrum of hybrid states 7−81202

photon-proton scattering
see also photon-proton interactions
No entries

photon scattering *see photon-deuteron scattering; photon-hadron scattering; photon-lepton scattering; photon-nucleus scattering; photon-photon scattering*

photon transport theory
anisotropic scattering media, photon transport, Boltzmann-Fokker-Planck equation anal. 7−128503
deep penetration of gamma rays, fluorescence effect, transport calcs. 0.03-0.5 MeV 7−129181
external gamma exposure, dose-rate conversion factors using Monte Carlo transport code 7−74213
gamma radiation shielding by European houses, Monte Carlo photon transport code study 7−74214
gamma-ray streaming through pipes, total dose meas., semiempirical formula 7−96135
inverse Monte Carlo method in photon beam physics 7−73294
low-Z materials, gamma-ray buildup factors, discrete ordinates, point Monte Carlo methods 7−129180
multigroup radiation integrals, evaluation using polylogarithm-based methods 7−89163
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
sphere, photon absorption, use of stratified sampling, Monte Carlo appl. 7−102359
stationary linear integrodifferential Boltzmann eqn. 7−73293
Be, gamma-ray buildup factors, discrete ordinates, point Monte Carlo methods 7−129180

photons
see also cosmic ray photons; gamma-rays; light; photon transport theory; X-rays
curved space-time behaviour, astronomical implications 7−115635
nonlinear QED, photon splitting in plane-wave field 7−135016

photons continued
scalar lattice QED, photon and bosonium masses, compact U(1) lattice gauge theory 7−121419
structure function, sensitivity to QCD scale parameter 7−140940
structure function and optimised perturbation theories 7−81188
structure function meas. and QCD tests 7−102703
structure function meas. in ee→eeX 7−81193
Veneziano model photon, massless, loop anal. 7−89478
Weyl graviton-photon system, appl. of SU(2,2) representations 7−67516
$e^-e^+ \rightarrow X$, photino mass limits determ. 7−108928
$\gamma \rightarrow \pi^+\pi^-\pi^0$, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$\tilde{\gamma}$ lower bound on mass, constraints from superlight gravitino 7−108835
$\gamma\gamma$ physics at LEP 200, resonance excitation, meson period., structure functions 7−140971

photonuclear reactions *see photon-nucleus reactions*

photophoresis
No entries

photoplasticity
anthracene crysts., mech. props., photoplastic and photomemory effects studies 7−131214
SbSI single crysts., photodeform. temp. depend. and pyroelec. charge meas. 7−69808

photorefractive effect
anisotropic Bragg diffraction in photorefractive crystals 7−129976
conference, Erice, Italy (July 1986) 7−140376
crystals, acoustic wave photogeneration on a holographic grating 7−97249
crystals, optical generation and explosive instability due to circular photovoltaic effect 7−82708
cubic crystals, photorefractive two-beam coupling 7−144021
diode laser arrays, coupling with photorefractive passive phase conjugate mirrors 7−110414
dynamic frequency plane image correlator based on photorefractive nondegenerate four wave mixing 7−110283
electro-optical materials for optical electronics *(Spanish)* 7−117280
equivalent circuit for spatial variations 7−138397
light amplification, nonlinear theory 7−132217
light photoinduced scatt. by photoelec. parameters fluctuations 7−125657
materials, props. and appls. 7−132221
mode scrambled optical beams, phase conjugation, spatial recovery, interbeam temporal information exchange 7−110472
optical oscillators with photorefractive gain 7−130262
optical processing using photorefr. materials 7−82736
optical signal processing appls. 7−130014
oscillator, double-colour-pumped, image colour conversion 7−136434
phase conjugate mirrors as thresholding elements for optical associative memories 7−90724
phase conjugation, photorefractive, new appls. 7−110475
phase retrieval algorithm, optical implementation using photorefractive phase conjugate mirror 7−90519
photorefractive acoustoelectro-optic correlator 7−130005
real-time holographic recording, active stabilization 7−90545
running waves in photorefractive crystals, absolute instability *(Russian)* 7−82694
self Bragg matched beam steering using double colour pumped photorefractive oscillator 7−130208
transparent ferroelectric ceramics, photorefraction and formation of holographic gratings 7−143977
two-wave mixing with applied RF fields photorefractive two-wave mixing with applied RF fields 7−123062
volume hologram formation in photorefractive crystals 7−130027
wave mixing, spatial light modulation, filtering effects 7−68791
As_2Se_3 amorphous films, photoabsorption and photorefractive effect under pulsed excitation 7−113304
As_2Se_3 glassy films, photoabsorption and photorefraction under pulsed excitation 7−106118
$Ba_{2-x}Sr_xK_{1-y}Na_yNb_5O_{15}$ photorefractive crystals, development and modification 7−113141
$BaTiO_3$, influence of Fe on electrooptic effect and photorefractive props., holographic appl. 7−118988
$BaTiO_3$, mutually incoherent beam coupling, anal. 7−117273
$BaTiO_3$ nonlinear phase conjugation, coherent coupling of pulsed dye oscillators 7−90721
$BaTiO_3$, photoinduced scatt., linear response approx. 7−92643
$BaTiO_3$, photorefractive effect, ferroelectric polarisation reversal 7−68755
$BaTiO_3$, photorefractive cryst., beam coupling 7−68756
$BaTiO_3$, photorefractive phase conjugation, dancing modes and frequency shifts 7−75073
$BaTiO_3$ photorefractive materials for optical processing 7−82736
$BaTiO_3$ photorefractive crystals, intensity-depend. absorpt. coeff. 7−143999
$BaTiO_3$, physics of photorefractive effect 7−132222
$BaTiO_3$, picosecond photorefractive effect 7−118987
$BaTiO_3$, self-oscillation using multimode laser 7−117271
$BaTiO_3$, self-pumped, self-pulsation and incoherent beam coupling effects 7−132223
$BaTiO_3$:Fe, photorefractive props. and electrooptic coeffs., holographic efficiency 7−90552
$Bi_{12}GeO_{20}$ crystals, photorefractive effect due to holes, optical evidence 7−77513
$Bi_{12}GeO_{20}$ photorefractive materials for optical processing 7−82736
$Bi_{12}GeO_{20}$ photorefractive sillenite cryst., deep electron trap effects 7−98859
$Bi_{12}Ge(Si)O_{20}$ sillenite crysts. photorefractive props., photoinduced space charge and elec. field distrib. evolution study 7−125043
$Bi_{12}SiO_{20}$ crystal, photorefractive optically active, two-beam coupling, polarisation influence in diffusion regime 7−122817
$Bi_{12}SiO_{20}$ cubic photorefractive cryst., time-depend. holographic current meas. and calcs. 7−74886
$Bi_{12}SiO_{20}$ monocrystals, anisotropic props. of volume holographic gratings 7−90540
$Bi_{12}SiO_{20}$, moving photorefractive gratings, applications 7−130309
$Bi_{12}SiO_{20}$ PRIZ space-time light modulator, pulsed readout of image 7−75107
$Bi_{12}SiO_{20}$ photorefractive materials for optical processing 7−82736
$Bi_{12}SiO_{20}$ photorefractive crystal, spatially multiplexed phase conjugate imaging and processing 7−110260
$Bi_{12}SiO_{20}$ photorefractive crystals, amplification of high bandwidth signals through two-wave mixing 7−110435

photorefractive effect continued
$Bi_{12}SiO_{20}$ photorefractive signal dynamic response, temp. depend. study 7−143992
$Bi_{12}SiO_{20}$ type crystals, photorefractive diffraction, efficiency and polarisation characts. 7−125682
$Bi_{12}SiO_{20}$-$Bi_{12}GeO_{20}$ crysts., photoconductive and photorefractive props., high diffr. efficiency meas. 7−125044
$Bi_{12}TiO_{20}$, gyrotropic photorefractive crystals, energy exchange between light waves 7−82693
CdS, self-induced changes in refractive index at λ=532 nm 7−130267
GaAs crystals, spatial light modulation by beam coupling 7−141979
GaAs, photorefractive, enhanced beam coupling modulation using polarization props. 7−125693
GaAs:Cr, photorefractive, two-wave mixing gain meas., moving grating technique 7−130240
GaAs:Cr photorefractive two-wave mixing with applied RF fields 7−123062
$KNbO_3$ photorefractive materials for optical processing 7−82736
$KNbO_3$ single crysts., growth and doping, dielec. and optical props. 7−99739
$KTa_{1-x}Nb_xO_3$:Fe, Cr, dielectric photorefractive effect 7−92626
$LiNbO_3$ crystals, four-wave cross-scattering of light 7−82709
$LiNbO_3$ crysts., light-induced photogalvanic and photorefractive changes, hologram recording appls. 7−125041
$LiNbO_3$, photorefractive effect mechanism, birefr. meas. 7−77504
$LiNbO_3$ photorefractive crystals, strong optical nonlinearities 7−136397
$LiNbO_3$:Cu crystals, photorefractive, anisotropic scattering, comment and reply 7−132238
$LiNbO_3$:Fe, photoinduced scatt., linear response approx. 7−92643
$LiNbO_3$:Fe, X-ray irrad., optical props. and ESR spectra 7−113121
$LiNbO_3$:Fe holographic gratings, erasure kinetics and spectral depend. 7−96954
$LiNbO_3$:Mg, anisotropic self-diffraction 7−113109
$LiNbO_3$:Ti channel waveguides, z-axis oriented, optical damage effects 7−90791
$LiNbO_3$:Ti waveguides, planar, photorefraction 7−90788
$LiNb(Ta)O_3$ crysts., photorefraction props., hologram self-enhancement studies 7−125042
$LiTaO_3$ photorefractive crystals, strong optical nonlinearities 7−136397
$LiTaO_3$:Cu crystals, photorefractive, anisotropic scattering, comment and reply 7−132238
$PbTiO_3$, photoinduced change in birefringence, near walls of opposed domains 7−132232
a-$Se_{75}Ge_{25}$ obliquely deposited thin films, photo-induced optical effects *(Korean)* 7−132365
Si, coherent wave mixing, ps pulse amplification 7−103881
$Sr_{1-x}Ba_xNb_2O_6$ photorefractive crystals, development and modification 7−113141
$Sr_{1-x}Ba_xNb_2O_6$, photorefractive props. 7−118968

photoresistors
IR detector with frequency output 7−121226
microcomputer interface to photoresistor, light-level meter appl 7−121083
CdS photoresistor for insolation meas., correlation with wind speed 7−72127
InP:Fe short photoresistors, photoconductivity kinetics, loss of nonequilib plasma, electric field 7−112393
PbS, thermoelectrically cooled photodetector for 0.8 to 2.5 μm band 7−102524

photoresists
see also electron resists
aqueous processible liquid resists 7−134866
AZ111 photoresist, implanted ion profiles, dose and energy depend 7−91474
AZ-1350 positive photoresist, holographic grating fabrication 7−136237
azide-phenolic resin composite film, thermolysis, photolysis and appl. as antirefl. layer in resist 7−100534
Bragg gratings as beam splitters and beam reflectors for integrated optical systems 7−90837
contrast enhancement material for G-line exposure 7−80921
DFB lasers, λ/4 phase-shifted corrugations fabrication using positive and negative photoresists 7−82650
polybutadiene dielectrics, cyclized, thermal and mech. props. *(French)* 7−124561
polyimide high resolution ion implantation masks, thin film surface morphology and dielec. props. study 7−69723
positive, development, rate equation 7−67404
Ga-Sb-Se films, obliquely deposited, negative resist behaviour 7−116015
Ni-Co diffraction grating deposition from sulphamate electrolyte *(German)* 7−82872

photosphere
acoustic (*p*-mode) oscillations, evidence for absorpt. by sunspots 7−140022
active region magnetic field, nonpotential features obs. 7−115336
active regions, determ. of vel. and mag. fields 7−79907
active regions, Hα morphology of fine struct. 7−127806
background magnetic field, Hα maps rel. to solar activity distrib 7−127805
cellular convective flows, contrib. to mag. coronal heating 7−134203
convection patterns, search for giant convection elements using mag. tracers 7−140023
electric current systems in active regions 7−145922
energy balance modification due to H nonthermal excitation and ionisations 7−79903
Evershed effect rel. to photospheric line equivalent width 7−140032
facular models, H line profiles in visible and IR 7−140027
flux tubes modelling 7−139902
full-disk, velocity meas., search for p-mode freq. changes (1980 to 1985) 7−101750
full-disk Doppler images, appl. to determ. of depth and latit. depend. of solar rot. 7−101755
giant convective rolls causing modulation of solar differential rotation 7−134205
global circulation currents from solar-limb temperature variations 7−127813
global horizontal circulation, determ. from background mag. fields distrib 7−140025
granulation and magnetic field structures 7−127790
granulation contrast determ. 7−120345
granulation power spectra, determ. from speckle interferometry 7−94835

photosphere continued
Hα flare kernels and peaks of observed longitudinal elec. current densities 7−127830
lanthanide content 7−88338
latitudinal temperature variations, effects of turbulent heat transport in rotating convective envelopes *(Russian)* 7−145918
long-period mass vel. oscills. search 7−145930
magnetic and velocity structure adjacent to solar active regions 7−140004
magnetic fields, optical polarisation meas. at sensitivity of parts in ten million 7−79933
magnetic flux evolution, spurious var. assoc. with sunspot group decay 7−101753
magnetic flux tube oscillations, mode classification and wave propag. in magnetically-structured medium 7−140031
NOAA 4263 active region, flare and filament activation in distorted mag. field configuration 7−115353
oscillations, study using electrooptic Fabry-Perot filter in spectrophotometer 7−120276
oscillations phase shifts, obs. using diode arrays 7−79910
photographic features, mean lifetime determ. method 7−79845
plages spectra, Ca II H and K line indices and appl. to stellar plages spectra 7−115339
plages spectra, Hα line indices rel. to stellar plages spectra 7−115340
polar magnetic fields, simulations during sunspot cycle 21 (1976 to 1984) 7−107798
polarity neutral lines distrib. rel. to coronal mag. structures. 7−134209
quiet Sun regions, mag. field meas. from line-ratio method 7−127807
rotation elements (i and Ω), determ from recurrent single sunspots 7−72378
solar constant changes due to sunspots and faculae 7−79926
solar constant due to sunspots and faculae 7−79925
solar wind speed projected to photosphere and corona 3D mag. field 7−107790
spectra of Ti I and Cr I, LTE anal. evidence for non-LTE in excitation 7−120346
spectral changes in photosphere and chromosphere, solar cycle 21 observations 7−79929
spectral line asymmetries, amplification by rotation 7−101757
spectral lines equivalent widths, quality anal. of Moore, Minnaert and Houtgast data 7−107797
spectral lines variations, 1976 to 1985, implications for solar luminosity vars. 7−115338
steady flows spectrum determ., appl. of spherical harmonic anal. technique 7−107795
sunspot areas, appl. to solar cycle and stellar activity cycles anal. 7−115380
sunspot image analysis, automatic log spectrum restoration of atmospheric seeing 7−72316
sunspots, umbral oscills. obs. in Mg II k-line 7−107799
sunspots and faculae, 1985 AD observations at Istanbul University Observatory 7−127821
turbulent velocities from weak CN lines 7−88336
velocity fluctuation, small-scale, in solar atmosphere, height gradient determ. 7−139998
Ca II line profile disturbances, appl. of nonlinear inversion method 7−94837
^{3}He abundance determ. from flare 2.223 MeV γ-ray line obs. 7−140019
K I 769.9 nm resonance line, centre-limb var. of line asymmetries and shifts with granulation and oscills. 7−107796

photosynthesis
akinete germination in blue-green alga, photoregulation *(German)* 7−93684
bacteria, photosynthetic, reaction yield detected mag. reson. spectra 7−78803
bacterial, primary events 7−71678
bacterial photosynthetic reaction centers, bacteriochlorophyll electron transfer mechanism study 7−71710
bacterial reaction centres, effects of nuclear spin polarisation on reaction dynamics 7−100792
bacterial reaction centres, special pair triplet states, localisation and charge transfer character 7−114209
bacteriochlorophylls, photosynthetic reaction centres, ground-state interactions, reson. Raman spectra 7−78760
biomodels and artificial models 7−106982
chlorophyll, fluoresc. decay kinetics rel. to P starvation of chlorella cells 7−107001
chlorophyll a and chlorophyll a dihydrate dimers in water/acetone mixtures, dipole-dipole transfer 7−114211
chlorophyll-carotenoid complexes, Photosystem I photosynthesis model 7−71679
chloroplasts, lettuce, photosynthesis, time-resolved fluoresc. obs. 7−71680
energy, efficiencies 7−71621
energy conversion, biological methods, commercial prospects 7−106916
flash photolysis, conf., London, England (July 1986) 7−66814
green alga, novel mechanism for regulating excitation of photosystem II 7−107008
industrial appls. of solar energy 7−106908
leaves, photosynthesis, energy storage and gas exchange, photoacoustic investig. 7−71711
light harvesting chlorophyll complex, picosec. dynamics, detergent effects 7−71681
membrane, photon, exciton, electron, elec. field and H^+ cooperation 7−106808
phospholipid vesicular membranes containing structural proteins, photoinduced electron transfer 7−86926
photoreaction with photoproduct filtering effect, quantum efficiency, light adaptation of purple membrane 7−93680
photosystem II O_2 evolving system, origin of multiline and g=4.1 EPR signals 7−93674
phytoflagellate periodic activity, freq. regulation rel. to photosystem I 7−139228
picosecond flash photolysis apparatus, appl. to photosynthesis 7−71505
pigment-protein complex of photosystem 1, cyanobacteria Spirulina platensis, photo-induced spectra of circular dichroism 7−106971
plant leaf subcellular organelles, flow cytometry, light scatt. and fluoresc. obs. 7−93679
porphyrin-quinone, electron transfer, friction effect two reaction coordinate case 7−93284
porphyrin-quinone mols. as photosynthesis model, fluoresc. lifetimes rel. to effects of exothermicity on electron transfer rate 7−106980

photosynthesis continued
porphyrins, synthetic, light-harvesting complex 7−114165
primary leaves, photosynthetic active pigments, light influence *(German)* 7−93686
primary leaves, photosynthetic active pigments, temp. influence *(German)* 7−93685
radical pairs, spin-correlated, photosynthetic reactions, EPR study 7−133220
reaction centres of photosynthesising bacterium Rhodopseudomonas shaeroides, hole burning spectroscopy obs. 7−139230
reaction centres of photosystems 1 and 2 in barley leaves, ratio, light intensity and spectral comp. effect 7−107005
reaction centres of R. Sphaeroides, activationless recombination, primary electron transfer mechanism 7−100828
Rhodopseudomonas virdis, reaction centre chromophores, singlet spectra, CNDO/S calcs. 7−119718
rye caryopses germination, depend. on temp., light and antibiotics *(German)* 7−93687
sodium borohydride treated reaction centres from Rhodobacter sphaeroides R26, optical spectra, exciton theory appl. 7−114210
solar energy capture and storage, biological and biomimetic systems 7−106917
tetraphenylporphyrin-polypeptide complexes, model photosynthetic system, fluoresc. props. 7−129766
transpiration rate meas. method *(Japanese)* 7−145304
CO_2+H_2O isotope exchange, contrib. to latit. var. in ^{18}O conc. in atmospheric CO_2 7−107491
Mn, in photosystem II, struct. and function in H_2O oxidation 7−106981

photothermal conversion
see also solar absorber-convertors
dye solutions for solar convertors, figure of merit correlation for photothermal capability 7−144906
hybrid solar energy conversion systems, liq. and thin-film filters 7−86827
isopropanol, photoassisted thermal decomp. in fluidised bed 7−144689
methanol, photoassisted thermal decomp. in fluidised bed 7−144689
solar photothermal conversion, metal-dielectric layers absorption spectra in 0.5 to 2.0 μm range 7−71635
solar photothermochemistry for fuels and chemicals production 7−144904
solar thermal research status conf., Golden, CO, USA (Feb. 1986) 7−140353
$KPbI_3$-Al(Au)(Ni)(Cu)(glass), vacuum deposited films for photothermal conversion 7−85585
$(PbS)_{1-x}$-$(CdS)_x$ solution growth composite selective surfaces for photothermal conversion 7−126648
SnO_2:F,Na films, optical and elec. props., influence of aging and impurities, appl. as spectrally selective layer, solar energy conversion 7−144146

photothermal effects
benzophenone melting transition, opto-thermal transient emission radiometry 7−91854
energy transfer mechanisms in optothermal detectors 7−89216
interferometric high-sensitivity laser probe for photothermal measurements 7−128636
ion implants, thermal wave monitoring 7−117956
optothermal detection methods *(Czech)* 7−134733
photothermal spectroscopy review 7−95659
polyvinylidene fluoride, ferroelec., poling, space charge effects 7−113066
radiometric microscopy for characterising thermal struct. of materials 7−121115
semiconductors, photothermally stimulated excitation 7−118499
solid surface deformation by intensity modulated laser beam 7−124331
sub-surface defects, thermal-wave detect. and charactn. 7−93238
surface deformation of solids with pulsed laser excitation 7−124330
thin films, thermal properties, contactless study method 7−131376
As-S amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7−130282
As-Se amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7−130282
Au laser-induced CVD kinetics on alumina substrate 7−119158
CdS, induced absorber, coexisting oscill. modes and optical chaos in hybrid ring cavity 7−96969
CdS, induced absorber in hybrid ring resonator, self-oscillations 7−68758
CdSe, electrophotographic sensitivity holographic information recording 7−82515
He-Ne laser intracavity photothermal beam deflection densitometer 7−102490
InP:Sn,S neutron transmutation doping, photothermal ionisation photocond. studies 7−124300
a-$Se_{75}Ge_{25}$ obliquely deposited thin films, photo-induced optical effects *(Korean)* 7−132365
Si, ion implanted, thermal wave meas. 7−117958
Si thin films, optical excitation of nonequilib. acoustic phonons, heat pulses 7−137636
Si wafer ion implant damage, relaxation at room temp. 7−117959
Si:As, ion implanted, secondary defects, thermal wave studies 7−124303
a-Si:H films, surface and bulk defect densities, photothermal and photoconductive determ. 7−105492
ThF_4 optical thin films, synergistic radiation effects, photothermal effects 7−99959

photothermal imaging *see photothermal effects*

photothermal spectroscopy
see also photothermal effects
coating thickness determ. using photothermal heating 7−121071
Fourier transform IR photothermal beam deflection spectroscopy, sample handling 7−80912
Hadamard transform photothermal deflection imaging, resolution, dynamic range 7−102402
IR dispersive photothermal beam deflection spectroscopy 7−89281
laser calorimetric spectroscopy on flows 7−130803
light scattering material, photothermal detection by light interferometry 7−95640
liquid chromatography, photothermal deflection detector, thermal lensing system comparison 7−128571
open-ended cell for in vivo measurements 7−108673
photocaloric spectroscopy of excited state absorption and fluorescence quantum efficiency in fluorescent material 7−80892
photodisplacement imaging using single laser for excitation and imaging 7−95641
photothermal spectroscopy review 7−95659
solids submerged in liquids, FT-IR photothermal beam reflection spectrosc. 7−73442

photothermal spectroscopy continued
$Cd_{1-x}Zn_xS$ films, low absorpt. coeffs., photothermal deflection spectroscopy 7−77673
GaAs:Si, donor neutralisation, H_2 plasma exposure 7−112220
GaAs:Si, microdefects noncontact obs. by photothermal radiation and photoluminescence microscopy 7−124275
a-Si, characterisation by photothermal deflection spectroscopy *(Japanese)* 7−70774
Si, low energy Ar ion etching damage charactn. 7−126351
Si, shallow thermal donor annealing props., photothermal ionisation spectra study 7−98910
a-Si:H, sub-bandgap optical absorpt. and light-induced defects 7−144086
a-SiGe:H,F, light-induced defect generation, electronic and optical props. 7−143502
$a\text{-}Si_xN_yH_z$, angular distortions, exponential absorpt. edge 7−119009

phototransistors
pyrometer applications and wavelength ranges *(Swedish)* 7−121130

phototubes
see also photocathodes; photomultipliers
No entries

photovoltaic cells
see also solar cells
bifacial albedo-collecting photovoltaic panels, incident radiation estimation 7−71607
concentrators, two-stage photovoltaic with dielectric second stages, optics 7−82753
ITO/p-Si solar cells using conductive polymer 7−86783
lens-type holographic concentrators for photovoltaic modules 7−100696
luminescent solar concentrators, operation 7−86754
n-type polyacetylene junctions, photovoltaic effect 7−92278
polythiophene derivatives-GaAs based electronic structures and devices 7−92277
product design, solar electric devices 7−133041
pyramidally textured surfaces, light trapping props., solar cell and photovoltaic energy conversion appls. 7−118966
reliability overview highlighting design, analysis and test tool issues 7−126612
science and appls. of amorphous materials 7−83682
semiconductor photochemistry, industrial aspects 7−105615
thin film cells develop. *(German)* 7−100719
Al/porphyrin/Au Schottky barrier cells, exciton diffusion lengths and apparent barrier widths 7−105653
CdHgTe photovoltaic IR detector, efficient coupling to CCD devices 7−80879
$GaAs_{1-x}P_x\text{-}Cu_{1.8}S$ hetero-photovoltaic cells props. study 7−86793
Ge photovoltaic cells based on isotype junction, temp. characts. 7−99116
Ge-Si alloys, breaking of the efficiency-stability-production barrier 7−126616
$In_{2-x}Sn_xO_{3-y}$/p-InSe/Au solar cells, elec. and photovoltaic props. 7−139111
$In_{2-x}Sn_xO_{3-y}$/Si photovoltaic junction solar cells 7−119664
a-Si, breaking of the efficiency-stability-production barrier 7−126616
Si, dendritic web, and solar photovoltaic cell technology 7−114113
Si HV photovoltaic cell with controllable spectral sensitivity 7−86792
Si photovoltaic convertor using Nd laser radiation, parametric study 7−133105
Si, polycrystalline, photovoltaic cells characts. study 7−100724
Si, ribbon polycrystalline, photovoltaic cells exptl. study 7−86794
a-Si:H, charactn. by surface photovoltage and C-V meas. using liquid Schottky barriers *(Japanese)* 7−118528
a-Si:H, laser induced Al diffusion, photovoltaic device appls. 7−137622
a-Si:H films, laser induced CVD, photovoltaic devices and material props. 7−132492
TiO_2-Se thin film solar cells, fabrication and charactn. 7−93502

photovoltaic effects
see also Dember effect
aluminium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
biased quantum wells, ultrashort elect. pulse generation by virtual population screening 7−138032
ferroelectrics, photogalvanic effects, hopping model calcs. 7−125040
gallium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
indium phthalocyanine thin films, photoelec. props. *(Japanese)* 7−84971
MOS photodetector, position sensitive, using lateral photovoltaic effect 7−67389
noncentrosymmetric cryst., optical rectification polarisation and coherent photovoltaic current 7−137981
noncentrosymmetric crystals, photogalvanic effects 7−85008
optical rectification effect, generalised formula 7−90682
p-n junction solar cells, saturation photocurrent and photovoltage calcs. 7−106905
p-n semiconductor junctions, photovoltaic effect in hot current carriers *(Russian)* 7−99174
photoexcited semiconds., recomb.-stimulated synergetic photovoltaic aftereffects 7−105618
photorefractive crysts., optical generation and explosive instability due to circular photovoltaic effect 7−82708
photorefractive media, light photoinduced scatt. by photoelec. parameters fluctuations 7−125657
photosemiconductor-nematic liq. crystal system, intrinsic optical bistability study 7−118541
poly(4-(N,N-diphenylamino-)phenyl methylmethacrylate), electrochemical doping, rectification and photovoltaic props. 7−69631
n-type polyacetylene junctions, photovoltaic effect 7−92278
polyvinylidene fluoride films, electrophotographic process 7−73448
riboflavin-diethanolamine system, photogalvanic effect 7−77008
semiconductor formation and charactn. on lipid bilayer membranes 7−105204
semiconductor surface photovoltage study apparatus with bimorphous piezoelectric Kelvin probe 7−67348
silicon phthalocyanine Langmuir-Blodgett film Schottky barriers and MIS structures, photoelec. props. 7−99162
ternary materials for photovoltaic appls., deposition and characterisation 7−126633
transparent ferroelectric ceramics, photorefraction and formation of holographic gratings 7−143977
Ag halide *(Japanese)* 7−128621
AgInSe, photoelectrochemical cells, photovoltaic activity 7−126637
As_xSe_{100-x} chalcogenide glasses, relaxation of photosensitised metastable capture centres 7−131587

photovoltaic effects continued
$Bi_{12}GeO_{20}$, piezoelec., circular bulk photovoltaic current, mag. field effects 7−112392
CdSe films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7−105641
CdSe surface voltage barrier and surface charge, temp. depend. 7−76994
CdTe films, vacuum-deposited, photovoltaic effect 7−125157
CdTe vacuum-deposited films, anomalous photovoltaic effects study 7−143510
CdTe:Ag film, absorption admixture field, anomalous photovoltaic effect 7−99124
$CuGa_{1-x}In_xS_2$, photoelectric props. 7−125055
$CuInSe_2$ prep. by electrodeposition and selenisation, solar cell appls. 7−119180
$CuInSe_2$, selective electrochemical etching, influence on photovoltaic performance 7−126356
Cu_2SnS_3 thin films, photovoltaic characts. 7−143518
n-GaAs, minority carrier diffusion lengths, surface photovoltage studies 7−118504
GaAs, solar cell degradation model for low-energy proton impact 7−144876
GaAs:Au, surface, photoconductivity, photovoltage, effects of vacuum thermal treatment 7−77004
GaAs-Al, ballistic barrier photoEMF 7−118535
GaSb surfaces, O_2 sorption, work function and photovoltage measurements 7−125073
$Hg_{1-x}Mn_xTe$ p-n junctions, characts. 7−77055
InP (110)-Ag (Al) Schottky contacts, effect of Sb interlayers 7−131784
InP n^+-p-p^+ struct. solar cells, OMVPE growth 7−86796
InSb, photoconductivity, surface photovoltage, deep bulk levels 7−77005
In_xSe_{1-x} thin films, elec. and photovoltaic props. study 7−138085
β-LiAl fast mixed conductor, photovoltaic effects study 7−137614
$LiNbO_3$ 3m point group cryst., nonlinear optical props. due to spatially oscillating photovoltaic currents 7−123087
$LiNbO_3$ crysts., light-induced photogalvanic and photorefractive changes, hologram recording appls. 7−125041
$LiNbO_3$, photorefractive effect mechanism, birefr. meas. 7−77504
$LiNbO_3$:Cu crystals, photorefractive, anisotropic scattering, comment and reply 7−132238
$LiNbO_3$:Fe, X-ray irrad., optical props. and ESR spectra 7−113121
$LiNbO_3$:Fe cryst., optical damage effect in polarised light *(Chinese)* 7−132227
$LiNbO_3$:Fe(Ni)(Cr)(Cu), pulsed photovoltaic effects at high excitation rates 7−70351
$LiNb(Ta)O_3$ crysts., photorefraction props., hologram self-enhancement studies 7−125042
$LiTaO_3$:Cu crystals, photorefractive, anisotropic scattering, comment and reply 7−132238
PbS-Si heterojunction, intermediate layer I-V characts. 7−77064
Sb_2S_3 amorphous condensates, two-phase system, p-n heterojunctions, photovoltage studies *(Russian)* 7−92231
n-Si electrode, Pt, island coated, photovoltage generation 7−114097
Si foils, shaped cryst. growth by, ramp assisted casting technique, photovoltaic props. 7−92852
Si MIS photovoltaic junctions, defects due to low voltage sputter deposition, charact. 7−84595
Si, polycrystalline, growth and solar cell props. *(French)* 7−125958
Si, polycrystalline, model of photovoltaic props. depend. on effective diffusion length 7−77007
Si polycrystalline solar cells, 3D modelling 7−126624
Si, Polyx photovoltaic technology, progress and prospects 7−125957
Si sheet, grown by spin method, rel. between solar cell efficiencies and cryst. struct. 7−86001
Si solar cells, polycrystalline, base doping concentration modelling, grain boundaries effect 7−78643
a-Si thin films and solar cells, light-induced effect 7−144826
Si wafers, denuded zone charact. 7−124318
n-Si wafers, oxidised, surface charge and interface trap densities, AC surface photovoltages 7−85116
a-Si:H, charactn. by surface photovoltage and C-V meas. using liquid Schottky barriers *(Japanese)* 7−118528
a-Si:H films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7−105641
a-Si:H MIS structures, field effect study 7−85115
a-Si:H thin films, diffusion lengths, surface photovoltage studies 7−118500
p-Si:O wafers, AC surface photovoltage, saturation due to photocapacitances 7−99123
$a\text{-}Si_xGe_{1-x}$:H,F films, band potential, optoelectrical props. 7−70353
SiO_2-Si system, contact pot. and surface photovoltage kinetics, Kelvin method 7−99207

photovoltaic generators, solar *see photovoltaic cells; solar cells*

photovoltaic power systems
alternative and renewable energy sources conf., Reading, England (April 1987) 7−72735
applications, review 7−106888
array sizing for electrical needs, Yemeni 7−119657
bifacial cylindrical compound parabolic concentrators, truncation effects 7−133038
collector system assembly, construction and performance *(Romanian)* 7−114081
design criteria for solar energy systems 7−78659
energy production and costs, influence of solar cells *(Finnish)* 7−100728
generators in space, 5th European Symposium, The Hague/Scheveningen, Netherlands (Sept.-Oct. 1986) 7−140377
hybrid solar energy conversion systems, liq. and thin-film filters 7−86827
hybrid solar systems using solar thermal, photovoltaics and wind energy 7−71575
large solar power systems, generic approach to shading effect of collectors 7−133037
product design, solar electric devices 7−133041
row to row Shadow effect in solar power systems 7−119689
solar cells for mountain chalet energy supply *(German)* 7−100716
three level photovoltaic sub-array, optimised struct., simulation program 7−71617
H_2, photovoltaic, prod. for remote communities in Northern latitudes 7−86840
Si photovoltaic convertor using Nd laser radiation, parametric study 7−133105

phthalocyanines *see organic compounds*

physical chemistry
see also chemical analysis; chemical equilibrium; chemical reactions; chemical structure; crystal chemistry; electrochemistry; nuclear chemistry; pH; photochemistry; radiation chemistry; radiochemistry; solvated electrons; surface chemistry; thermochemistry
micellar solns., physical chemistry, NMR methods 7−71543
solid state chemistry, conf., Karlovy Vary, Czechoslovakia (Oct. 1986) 7−80171

physical data, collections of *see collections of physical data*

physical instrumentation control
crystal optical axis of uniaxial precious stones determ. by polarised-light microscope, photometry, microprocessor control 7−95645
data acquisition and control of physical expt., modular system 7−128546
dilatometric system for glass, 20-900°C range 7−128528
electron microscopes, Philips series, low dose microscopy facilitation 7−128718
electron spectrometer data acquisition and control system 7−67434
Finnigan MAT 90 automated magnetic sector mass spectrometer 7−67414
force vectorballistocardiograph, computer-based, design and eval. 7−119879
goniophotometer, automated moving arm, for measuring the spatial distribution of light sources 7−121183
grid control for electron guns in electroionization lasers 7−136359
gyroscope, fibre optic, closed loop, electronics subsystem 7−123262
gyroscope, passive ring laser in very high finesse cavity, laser feedback control system 7−123034
interferometric dilatometers, Elektronika computer controlled system 7−128527
ion source gas flow control system 7−121293
laser electro-optic shutter control, w.r.t. luminance level of active medium 7−136360
laser radiated power regulation 7−121093
laser surgery, CO_2 beam modelling and integrated computer-based control problem soln. 7−71840
lasers, Pointing alignment by orthogonal phase-lock feedback loops 7−75012
Michelson interferometer, fibre optic, remote polarisation control 7−68866
microscope focusing automation, microprocessor-controlled system 7−128648
minicomputer-based photon correlator and counter 7−80895
Moore Observatory 21-inch telescope, computer control and guiding system 7−134138
Mossbauer spectrometer motion controller 7−108730
multichannel analyser controller for nanosecond flash photo meas. 7−106814
NMR spectrometers, microcomputer controlled mag. field parameters *(Czech)* 7−134822
optical system, phased array, technique for aligning and phasing of multiple apertures 7−110505
photon correlator, microprocessor controlled, for intensity fluctuation studies 7−73432
potentiometric stripping analysis instrument, multifunctional, with single board computer *(Chinese)* 7−78564
Prepamatic−a machine for the fully automatic preparation of metallographic specimens *(German, English)* 7−132859
pulsed amperometric detector system, microcomputer controlled, appl. to organic hydroxy compounds 7−67397
quadrupole mass spectrometer with online signal processing 7−134876
seismometer with automatic horizontal position control system 7−145709
semiautomated PVT facility for fluids and fluid mixtures 7−95567
SpectrAA-20 automated atomic absorpt. spectrophotometer 7−67366
SQUID magnetometer, RF, for biomag. field detection, digital control unit 7−79122
streaker air sampler with programmable controller 7−87942
telescope, Jena-made 2 m reflecting, with microcomputerised control system 7−127725
telescope, Jena-made 800 mm reflecting, with electronic control system 7−127726
telescope sidereal drive corrector 7−88116
tracer gas flow-proportional admixture device in lung function studies 7−119888
ultrasonic deformation measurement system, computer controlled 7−82953
wavefront-distortion correcting mirror, deformation control *(Russian)* 7−110496
working control system for space-time characteristics of industrial IR lasers 7−130142
X-ray lithographic mask alignment using moire signals in refl. 7−116038

physical metallurgy *see metallurgy*

physical optics
3D space-filling data, display and perception 7−126825
colour physical and chemical mechanisms, 15 causes 7−74837
curved surfaces backscattering, physical optics correction 7−110203
full wave solutions for rough surface scatt. and depolarisation 7−117127
Gaussian beams are fundamentally different from free-space modes 7−68548
light, weak localization 7−82880
LOGO, dynamic modelling for physics teaching 7−108125
nonlinear phase asymmetry and self-bending of light 7−110482
scattering by conducting strip with periodic edge 7−136137
surface optics, Green-function formalism 7−82457

physics
see also physics computing
classical, theory 7−80273
condensed matter physics, nonlinearity, conf., Los Alamos, USA (May 1986) 7−134366
condensed-matter physics through the 1990's, book 7−108051
conference, Vilnius, USSR (Oct. 1984) 7−80155
history, resource letter 7−128235
instruction, mathematical modeling approach 7−102041
mathematics and physics since 1800 7−80280
publication output and citation anal., 1978-80 7−140401
research fields in physics, research in progress and personnel, book 7−108057
scientists and electrical engineers, reading expectations 7−80144
textbooks used to teach physics in classrooms 7−80220

physics computing
see also computerised instrumentation; spectroscopy computing
3D C black chain structure reconstruction using automated stereographic technique 7−78415
3D elliptic BVPs, boundary integral approach 7−140450
3081/E systems, UA1 data anal. 7−135815
acoustic emission point source location on thin spherical shell 7−104076
acoustic wave propagation, modified eqn. approach to 4th-order method construction 7−90864
acoustics, 2-room model, statistical energy analysis appls. *(German)* 7−117401
acoustics, number theory appls. *(Japanese)* 7−117416
ACP multiprocessor system, software development 7−135814
ACP multiprocessor system at Fermilab 7−135813
ADAMO database management system, use within ALEPH 7−135810
adaptive algorithm for unification of measurement results 7−140652
$AlCl_3$-NaCl molten mixture molecular dynamics, computer simulation *(Japanese)* 7−130999
ALEPH, software development using structured techniques 7−135807
amorphous metals, conc. binary, chem. short-range order 7−97968
amorphous metals, simulation of multi-level systems 7−104553
angle-ply laminates, edge effects, nonlinear anal. 7−83031
array processor with emulator for lattice gauge theory simulations 7−134918
astronomical image reconstruction using space slit aperture telescope 7−115251
atmospheric modelling studies, IR and MM transmission comparison using computer models 7−101474
automatic display of backscattered ion spectra 7−92810
axisymmetric accretion flows between thin Keplerian disc and a non-rotating star 7−107712
barrier sound insertion loss calcs. using programmable calculators 7−123332
Bayard-Alpert gauge, zig-zag modulation wave, anal. 7−134787
BCC metals with n-body interatomic potentials, point-defect and stacking fault props. 7−76117
biological systems, quantum chemistry, statistical mechanics, fluid dynamics, supercomputer calcs. 7−133189
biperiodic buncher structure for Frascati linac, field computations and meas. 7−68123
Boltzmann eqn., simulation methods 7−91276
buses for high energy physics, data acquisition appls. 7−109681
cadmium levels in environment, Micro-Dynamo computer model 7−133164
CAI, Physics Lab Help Ware, software package 7−108120
CAI design requirements and costs of developing educational software 7−88764
CAMAC crate controllers, 8086-based, for Fermilab expt. E-704 7−68181
Cauchy relations for central-force random networks 7−137441
CCFUS code, fusion cross sections in heavy ion reactions, coupled-channel calc. 7−135344
ceramic, advanced, photon CT scanning applic. for flaw, crack and density gradients exam. 7−144679
CERN, U_A1 3D graphics analysis system 7−135800
CERN school of computing, Renesse, Netherlands (Sept. 1986) 7−108005
chaotic dynamical systems as automata 7−104240
charged particle optics, conference. Albuquerque, NM, USA (May 1986) 7−128177
charged particles in EM fields, software package dealing with particle motion 7−88774
charged systems with periodic boundary conditions, computer simulation and Ewald sum 7−142687
chemical physics, parallel program struct. using supercomputers 7−108209
chemical vapour deposition, solid film thickness simul. using 3D computer formulae 7−132490
CHEMICS, automated struct. elucidation system 7−81912
Clifford multiplication tables, multivector method and CLTB code 7−95179
closed hierarchical information systems in physics described in the language of graph theory and applications of information theory constructs 7−80276
coincidence method, $4\pi\beta-\gamma$, extrapolation curves calc., computer code 7−96481
complex restricted systems, thermodynamic eqns., computer derivation 7−89174
computational fluid dynamics, selected topics and mathematical techniques 7−140454
computational techniques for grain-orientation determinations using surface traces of crystal planes of any indices 7−113818
computer system for scanning tunneling microscope automation 7−83608
computers and the design of ion beam optical systems 7−103729
contact, elastic, discretized problems, soln. using linear programming 7−83128
control charting with Lotus 1-2-3 7−102391
convection, high consistency order in 3D, parallel computation 7−117608
COSY 5.0 code, corpuscular optical systems, transfer matrix calcs. 7−129496
crack propagation in linear elastic solids, moving finite elements appl. 7−83099
CRAZS code, two-body nuclear reactions involving zero spin particles, reaction amplitude 7−135343
crystal, relativistic particle trajectory and radiation spectra modelling, radiation polarization props. 7−124355
crystal optical axis of uniaxial precious stones determ. by polarised-light microscope, photometry, microprocessor control 7−95645
crystallography, STRUCTURE TIDY computer program for data standardisation 7−83582
crystallography data treatment programs, transportability 7−67298
D0 detector, 100 MBS, 8 bit data acquisition and zero suppression system 7−68183
D0 software development, use of structured analysis/structured design methods 7−135808
DANDE code, nuclear reactor core neutronics and depletion analysis 7−73832
data acquisition systems for high energy physics expts. 7−103345
data driven parallelism in experimental high energy physics applications 7−135812
decay curves, convolutionally distorted, eval. method 7−117025

physics computing continued
deformation texture development, evaluation of effect of initial texture 7−78053
DELPHI barrel electromagnetic calorimeter flash ADC based digitizer 7−81853
DELPHI interactive anal., TANAGRA buffer processor 7−135806
dense suspension rheology, computer simulations appls. 7−93383
design using structured analysis/structured design methodology 7−109684
deterministic modelling of states of ions and atoms 7−129540
digital X-ray compositional mapping with standard map corrections for wavelength dispersive spectrometer defocusing 7−132993
dilute gas, fluctuating hydrodynamics, computer simulation and Landau-Lifshitz formalism 7−72993
DIRIGE program for anal. of diatomic molecule vibration-rotation eigenvalue problem 7−141552
Doppler heterodyne interferometry for laser-in/laser-out subsurface photoacoustic imaging 7−123369
DWB87 code, cubic materials, harmonic Debye-Waller B factors, shell model 7−137501
EDDA program for energy dispersive powder diffraction spectra 7−137150
educational software for physics teaching, buyer's guide 7−88798
EDWAVE code for vibrationally inelastic collisional cross sections calcs. in atom+diatomic molecules collisions 7−141658
eigenvalue sensitivity theory, appl. to linear system design 7−75277
EIV axisymmetric plasma equilib. code for compact torus 7−97774
elastic and viscoelastic media, wave-dynamics problem, num. soln. using ES-1055 matrix processor *(Russian)* 7−136901
electrocrystallisation, nucleation and growth kinetics 7−112132
electron beam analysis in 3-D boundary-fitted coordinate system 7−141777
electron diffraction pattern simulation, new method, algorithm 7−83600
electron high intensity beams, application of particle-in-cell codes 7−141378
electron microscope image simulation and electron diffr. anal., EMS software package 7−67297
electron microscopy, information recovery in missing ang. data cases, convex projections method in three-dimens. 7−95684
electron optical systems, field calculations, computer simulation 7−141779
electron optics, aberration structure using CAD 7−141778
electron scatt. from individual defects in crystals, computer simulation 7−98183
electron scattering, Mott cross-sections, FORTRAN 88 Monte Carlo program 7−77717
electron spectroscopy, computational aspects 7−89307
electrostatic field solutions on PC spreadsheets 7−110190
electrostatic problems, Laplace's eqn. soln. using spreadsheets 7−134395
ellipsometric error analysis FORTRAN program 7−67273
EM scattering by anisotropic materials 7−68523
emulsion chambers, electron-photon showers, Monte Carlo simulation 7−109615
engineering physics, integration of CDC physics coursewave 7−88763
enzymatic reactions, computer simulation 7−133194
epitaxial growth, quality optimisation by supercomputer simulations 7−124741
Eurocom 2 microcomputer and interface system for an ESR spectrometer 7−128608
fast filtered backpropagation algorithm for ultrasound tomography 7−82958
FASTBUS diagnosis, expert system 7−135795
FASTBUS intersegment processor 7−68169
FASTBUS module, Aleph event builder 7−68168
FASTBUS readout processor, MC68020 based for time projection chamber 7−68167
fatigue life prediction, fluctuating stress signal, detection of arbitrary peak and troughs 7−144657
fibre reinforced composite articles, transversely reinforced, monolithic integrity, design algorithm 7−142232
FIRESTAR 2 computer program, X-ray powder diffr. meas. evaluation 7−75944
flows with shocks, computer anal., review, book contrib. 7−97576
fluid flow, computational 7−117688
Fokker-Planck equation, relativistic, num. soln. using TWODEPEP finite element library 7−142492
front ends for large detector system, fast signal calibration 7−81907
front-end data processing in the SLD data acquisition system 7−109680
Gaussian beam optical system analysis by microcomputer with artificial intelligence 7−110527
general relativity, metrics, Killing tensor components using computer algebra system SHEEP 7−140559
GEOCALC, curvature tensor calcs., Schwarzschild appl. 7−95183
geometrical phase transitions, microcomputer program appl. 7−120737
GIOS-BEAMTRACE code for intense ion beams, props. of optical systems 7−129498
GLANC code for determining wire current in ionizing radiation environment, development 7−83403
glass radwaste form. leaching behavior, diffusion model and LEACH code 7−74088
glass-molten salt ternary ionic system, computer simulation of uphill diffusion by ion exchange *(Japanese)* 7−92951
grain boundaries, structural multiplicity, dynamical simulation 7−131157
graphical editor program, interactive anal. program for high energy physics data 7−135805
hadronic atoms, automatic gridpoint method, momentum space solns. of Coulomb plus strong interaction bound states 7−136096
HAMILTON program solution of Hamiltonian equations of motion in particle optics 7−129494
harmonic oscillators, energy perturbation series, hypervirial eqns. calc., microcomputer method appl. 7−120739
heat conduction, 2D modelling 7−123435
heat conduction, nonlinear transient problems, boundary element anal. 7−123431
heat transfer, software packages for solving two-point boundary value problems 7−110963
heat transfer and fluid flow using colocated variables, finite-element method 7−123574
heat transfer and fluid flow using colocated variables, finite-element method 7−123575
heavy atom detection, IBM DP system *(German)* 7−141710
heavy ion collisions, fragmentation, computer simulation 7−141089

physics computing continued
high current spallation facility, sky-and groundshine phenomena, radiological quantities 7−87181
high energy accelerators, perspectives for experimental apparatus, seminar, San Minato, Italy (May 1986) 7−108021
high energy physics, integration of personal computers 7−135802
high energy physics, numerical and computational methods 7−102784
high energy physics, overview of programming languages 7−135809
high energy physics appl., standard model conf., Stanford, CA, USA, July 1986 7−102016
high energy physics computing, conference, Asilomar, CA, USA (Feb. 1987) 7−134338
high energy physics expts., database systems 7−135811
high energy physics networking, a CERN perspective 7−135797
high energy physics networking in US, status 7−135796
high energy physics research, computing facilities 7−135792
high energy physics supercomputing, pattern recognition and Monte Carlo calcs. 7−135799
high speed photography, videography and photonics, conf., San Diego, CA, USA (Aug. 1986) 7−95086
high-field superconductors, computer modelling of mag. flux primarily by grain boundaries 7−138162
hinged column, stability under intermediate load with one end restrained to move axially 7−83081
holographic interferometry, automated data reduction system, hardware and software 7−96958
IBM-PC based FASTBUS development system 7−68178
image current and charges, deflection at beam scraper, TBCI code anal. 7−68084
image processing system for electron linac beam diagnosis 7−68082
impedance spectroscopy data anal., complex nonlinear least squares fitting program 7−115977
interactive data anal., personal workstations 7−135803
interactive data-exchange scheme for a semiautomatic data-acquisition system in nuclear research 7−68185
ion optics computing, high accuracy 7−80937
ion source parameters, basics of ion sources in basic, computer program 7−96425
ion sputtering profiling process, computer simulation *(Chinese)* 7−70955
ionisation chambers, position sensitive, offline data anal. program *(Chinese)* 7−109645
Ising spin exchange simulations on the MPP 7−92455
JADE jet-chamber, multichannel flash-ADC system, parallel data analysis 7−68174
Joint Institute for Nuclear Research publication image 7−80274
joint probability distributions of normalised struct. factors, computer aided derivation 7−137290
KEK 2.5 GeV linac, phase control system 7−68081
kinematic fluid and MHD eqns., stability and accuracy of EPIC algorithms 7−97474
KWIKDOSE code for spent fuel shipping casks, shielding methods for versatility eval. 7−109529
laboratory, microcomputer applications 7−115718
laminated anisotropic elastoplastic material, finite element anal. 7−83060
LAN in nuclear physics expts. 7−108532
large dense generalised eigenvalue problem solutions on Cray X-MP/24 7−80399
large detectors, software design 7−135734
large scale MCSCF wave fns., efficient optimisation with restricted step algorithm 7−116823
lattice dynamics calcs., UNISOFT program package appls. 7−84152
lattice QCD, large scale computing 7−102697
lattice QCD, large scale simulations using supercomputers 7−135018
linear accelerator design calculations, use of IBM-PC 7−68056
liquid crystals, hard-core models, computer simulation 7−104534
liquid scintillation counting efficiency for electron-capture nuclides, VIASKL computer program calcs. 7−96461
liquids, static properties, Monte Carlo FORTRAN 200 program for CYBER 205 7−142548
logic software for physics class 7−88796
LUCIFER program for high p_T photoprod., QED and QCD Compton processes, meson prod. 7−140889
LWR, fission product transport in dry primary circuit under severe accident 7−89636
macromolecular crystallography, cryst. orientation and X-ray pattern prediction routines 7−137158
macromolecular solvation, computer calc. of free energies 7−119706
magnetic tunable frustration in a system with purely antiferromagnetic interactions 7−85223
Manda-Lab, compact multiprocessor system for heavy ion physics detector tests 7−68179
MBE artificially layered struct., automatic process control 7−138663
metal matrix computer simulation of strength with reaction layer at interface 7−100360
metal science uses of computers *(Chinese)* 7−125937
metallic glasses, metal-metalloid, crystn. statistics 7−76014
metallographic images, phase particle classification using shape descriptors 7−78404
metallographic images, region classification using texture descriptors 7−78403
metallographic images, segmentation techniques for localisation of microstruct. regions 7−78402
metallurgical testing, information management system 7−138918
metals, self-ion irrad., displacement cascade damage, computer simulation *(Japanese)* 7−131192
microcomputer based control system for the TAMU K-500 cyclotron 7−89818
microcomputer graphics and the teaching of numerical analysis 7−95163
microcomputer programme for optical design 7−75095
Mindlin plate, rectangular, elastic buckling, mixed boundary conditions 7−83082
modified heat bath method suitable for Monte Carlo simulations on vector and parallel processors 7−121486
modular architectures for on-line systems at CERN 7−109683
molecular crystal, orientationally disordered phases, large amplitude motions 7−142666
molecular crystals, intermolecular potentials, computer simulation studies 7−142695
molecular distance matrix, algorithm construction 7−116808
molecular dynamics, biophysical applications 7−106954
molecular excitons, bistability, computer modelling 7−112189

physics computing continued
molecular flow through two tubes with different diameter, transmission probabilities computing 7−137013
molecular interactions, geometry optimisation, simulated annealing approach 7−100522
molecular muffin-tin pot. and electron density, Xα-scatt. wave calcs. 7−109764
molecular neutron small angle scatt. data anal., computer programme 7−74783
molecular space-filling model program, SPACFIL, speed enhancements 7−122732
molecular structure visualisation using IMAGE interactive computer program 7−97849
monomer-dimer system, 2D, computationally intractable problem 7−134697
Monte Carlo electron-transport calculations for clinical beams using energy grouping 7−101052
Monte Carlo EM cascade shower simulation code EGS4V, vectorisation 7−135798
Moody chart on computer 7−69089
multi-exponential function fitting program for the analysis of the positron annihilation life spectrum *(Chinese)* 7−113310
multidetector array for γ-ray spectroscopy, data acquisition system 7−109678
multiprocessors for high energy physics, review 7−135793
multispin Monte Carlo algorithms, random number generator, implementation on Cray-1 vector computer 7−134698
Navier-Stokes code, parallelisation for ICL DAP 7−69084
Navier-Stokes computer miniNode, 2D nonsteady viscous flow simulation 7−104237
Navier-Stokes eqns., Reynolds averaged, soln. in general curvilinear coordinates, appl. to vehicular dynamics 7−97483
networking and parallel processing, high energy physics applications 7−103344
neutron activation analysis, Monte Carlo program for solid angle effect on reproducibility of exptl. set-up 7−100642
neutron powder diffraction, ATALANTA multicomponent pulsed diffr. anal. code 7−69547
neutron quasi-elastic time-of-flight studies, data anal. 7−69558
neutron scattering, SIP program for count rate and resolution evaluation 7−69557
neutron scattering data analysis, conf., Chilton, England (March 1986) 7−66834
neutron time-of-flight powder diffr., IPNS Reitveld anal. software package 7−69546
neutron triple-axis spectrometer data, scatt. function determ., computer routines 7−69559
Newman-Penrose formalism, Maple package for calculations 7−95415
Ni thin films, quenching effects in pulsed heat treatment 7−71215
nonlinear transient thermal problems, hybrid transfinite element methodology 7−123621
nonuniform linear acceleration, computer simulation 7−88795
NOVA code, axisymmetric toroidal plasma MHD stability anal. 7−117749
nuclear physics, world publication output, research fronts and cited papers 7−80275
nuclear power systems symposium, Washington, DC, USA (Oct. 1986) 7−66813
nuclear reaction fragmentation, computer simulations, semiclassical model 7−67834
nuclear reactions, mean free path meas., data processing method *(Chinese)* 7−103343
nuclear reactions with polarised particles, anal. using computer programs 7−89566
nuclear spectral data, digital processing 7−141405
nuclear struct. information, ENSDF data bank *(French)* 7−80206
oil-water dispersion, particle size distrib. meas. using image processing 7−126489
on-line data acquisition system based on Norsk-Data ND-560 computer for VECC 7−109679
optical coating laboratories, IBM PC use for maximizing production 7−104069
optical computer interfacing 7−88797
optical microscopic cell image sequences, motion vectors determ. 7−94037
optical microscopic imaging systems, three-dimens. object represent. 7−89257
optical multilayer coating design programs 7−103931
optical system, phased array, technique for aligning and phasing of multiple apertures 7−110505
optical system, synthetic aperture, phase algorithms and control software, mini- and microcomputer implementation 7−110502
optical system design using desktop computers 7−103923
optical thin film coatings, versatile software package for CAD 7−103934
optical thin film software algorithms 7−103935
Orion I graphics workstation for multivariate data anal. 7−135801
ORTH program for orthogonal polynomials using in heavy ion-nucleus calcs. 7−141062
paging system design computer program 7−110705
parallel Monte Carlo calcs. with many microcomputers 7−134457
particle accelerators, computer programs, beam dynamics and EM field appl. 7−81792
particle beam ellipsoid, effects of dipole magnet inhomogeneities using RAYTRACE code 7−129501
particle track fitting using constrained nonlinear least squares method and CNFIT program 7−140440
particle tracking for 3D fluid flow predictions, computer program 7−69088
particle tracking in solenoid channels using TRACK2D code, ICF appls. 7−81785
PASCO harmonic motion apparatus, interface to computer 7−120730
Patterson search method, full-symmetry, automated process 7−97848
PDP-11 CAMAC programming, modular multiuser approach 7−81908
PEAD code, linear molecule photoelectron ang. distribs. calc. 7−136013
pendulums, underdamped motion study using videotaping 7−108088
personal computing in mainframe environment, SLAC installation 7−135804
PERTURB, algebraic manipulation program for classical perturbation theory 7−128330
phase diagram information system, algorithms and software 7−67293
photonuclear reactions, computerised information system 7−68184
physics computing continued
photoresistor interface to microcomputer, light-level meter appl. 7−121083
PHOTUC close coupling wave fns., oscill. strengths and photoionisation cross sections 7−135881
physics teaching, using PROLOG and models of reasoning 7−115710
picture processing techniques for interpreting experimental data, using AI methods 7−140680
piezoelectric semiconductors, acoustoelectric current noise, computer study 7−85010
piezoelectric structure anal., three-dimensional finite elements formulation 7−125615
PIXE spectra anal. program PCRACE for use on IBM PC/XT 7−93416
planar rotator model on triangular lattice, high temp. expansion via Schwinger-Dyson eqns. 7−95486
plasma, alpha particle effects, automated computational tool develop. 7−104373
plastic zone formation in steel 7−71423
plate and shell dynamics, nonlinear problems soln. method 7−110832
plate bending analysis, efficient quadrilateral element, symbolic manipulation package MACSYMA 7−97316
plates, bimodulus thick circular and annular, axisymmetric free vibration 7−83088
Poisson's eqn. in multiregion bodies, implicit boundary-integral method 7−108477
polarised light compensator measurements, evaluation using computers 7−108656
polycrystalline structure reconstruction, combinatorial optimisation appl. 7−69532
polymer chains, study using numerical simulations 7−103698
polymers, oriented crystalline, X-ray diffraction photographs, computer-based methods 7−97859
porous media, quantitative image, analysis, genus and pore map software 7−87934
porous media, quantitative image analysis, specific genus, cubic lattice models 7−87935
portable multichannel analyser, single chip microcontroller based 7−109660
practical physics course, automation facilities 7−66882
processing, automated system 7−67382
programming, use for teaching on physics course 7−88801
PROTEAN knowledge-based system for deriving protein struct. from constraints 7−74797
protein and nucleic acid sequence database searching: a suitable case for parallel processing 7−141729
proteins, conformational energy function hessian calc. algorithm 7−119710
proteins, X-ray diffr. data collection and online integration system 7−101154
PYTHIA version 4.8, Lund Monte Carlo method for hadron-hadron collisions 7−135154
quantum chemical software package for molecular properties calcs. 7−141419
quantum physics, computer model of Schrodinger eqn. for demonstrations 7−108119
quantum spin systems, fast algorithm for 1D Monte Carlo simulations 7−99386
Racah coefficients, parallel computation using transputers 7−135819
radiation detectors, upgrading using Commodore 64 7−88803
radioactive material transport in FRG, risk assessment with INTERTRAN 7−74230
radioactive waste shallow land burial, COSMOS-S/D code complex 7−89737
rare earth alloys, $R_2Fe_{14}B$, polycrystalline, computer simulation of spin reorientations 7−99465
RAYTRACE program for ion optics magnet systems and beam transport study 7−129497
reactor multi-group criticality safety code, KENO IV, vectorisation 7−89604
reactor physics codes, adaption to microcomputers 7−96170
real-space computer based symm. algebra 7−76069
REDUCE-aided quantum electrodynamics *(Japanese)* 7−108839
refrigeration units, neutral gas absorption, BASIC-2 listing to compute enthalpy/mass fraction diagram of NH_3/H_2 gas mixture 7−97683
road transport noise in built-up areas, computer model 7−93597
rotating disk assemblies, performance evaluation by automated transient testing method 7−104262
rotation experiment, computerized, for error study 7−88800
scanning proton probe using external beam, on-line expt. control and data acquisition 7−126500
scanning tunneling microscope computer automation 7−83609
scanning tunnelling microscopy images, noise characts. and digital filtering 7−117788
shell, circular cylindrical, free vibr. anal. 7−83087
shell, curved 3D finite elements for heat conduction 7−82996
shell structures, nonlinear anal. by flat triangular shell element 7−80401
short fibre and particulate filled polymers, elastic props., finite difference computer model 7−113591
silicate glasses, dissolution modelling by ETCH Monte Carlo code, radwaste appl. 7−103261
single-domain triaxial particle magnetisation analysis *(Russian)* 7−143851
single-mode optical fibres, CAD calc. method *(French)* 7−130343
SLD large solenoid detector, data acquisition system 7−68170
solid of revolution with cutouts breaching axial symmetry, stress and strain state analysis 7−110793
solid-fluid interfaces, mol. dynamics simulation of wetting and drying 7−118199
solids, transformations, computer simulation techniques 7−111861
sound's speed measurement using computers in school context 7−89202
space group symmetry, computer derivation using MISSYM computer program 7−98024
spectral methods in fluid dynamics, book contrib. 7−97509
spin systems, high speed algorithm for Monte Carlo simulation *(Japanese)* 7−85233
SPLIT program for Lie algebra decomposition into direct sums 7−140414
statistical mechanics, computer complexity theory application 7−80591
statistical physics, special purpose computer appl. 7−89104
steel, decarburising, effect of heating characts., thermodynamic anal. 7−132646
stray radiation analysis, interactive graphical CAD integrated tool 7−122821

physics computing continued
stress intensity factors analysis in crack problems, boundary-elements method *(Japanese)* 7−69062
structure factor correction program, ABSORB, FORTRAN 7−83583
supercritical wing theory, computer codes 7−130736
supernova simulations, computational and numerical problems 7−107872
surface chemical analysis standard data transfer format 7−128549
symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
synthetic aperture optical system, multiline focal plane phase measurement, algorithm 7−110512
systems analysis of absorbing media, filter design calcs. 7−103738
TART code for gamma-ray emission from materials pulsed with 14-MeV neutrons 7−109530
TAUMOL code, adsorbed molecule on crystal surface, renormalised electron scatt. matrix 7−137165
TCAPM fission cross section meas., CAMAC data acquisition system and data anal. 7−81909
TEAPOT, thin-element accelerator program for optics and tracking 7−141383
TEAPOT tracking code, Lie algebraic maps and invariants 7−141382
thermal analysis, application software trends 7−95579
thermal/structural modelling, transfinite element methodology 7−83019
thermistor probe construction, microcomputer attachment 7−115958
thermodynamics, computer-aided 7−67259
thin film growth, computer simulation 7−137751
third-order nonlinear susceptibility, spatial symm. forms generated by computer program 7−68744
three dimensional reconstruction of objects by direct Fourier method, restoration by method of convex projections 7−133526
p-toluic acid, polycryst., zero-field NMR, correl. H^+ jumps effect 7−99587
tool software for use by high school physics teacher 7−88794
Topaz detector, data acquisition system, timing for distribution and interrupt control 7−68176
Topaz time projection chamber, signal processing 7−68175
torsional braid analyser develop. 7−67302
TPSPM code, shortest-path method, physical scatt. matrix determ. from ambiguous solns. 7−134962
transient problems in computational fluid dynamics, adaptive finite element scheme 7−83150
TRIUMF, data acquisition and analysis system, use of structural analysis and design 7−68171
TRIUMF, VAX-based CAMAC data acquisition and analysis system 7−68177
Tschebyshev optical filter design 7−103946
turbulence, nonMarkovian covariance evolution eqns., soln. 7−104254
TWISTER program for QCD high p_T scatt. processes 7−140888
two glider ultrasonic ranging module interface for the Apple IIe 7−120724
two-dimensional perfect crystals, nucleation of fracture, computer modelling 7−111754
two-group neutron diffusion, 1D, soln. of problems using MIXAGE code 7−141124
type II superconductors, computer simulation of correlation length in chaotic approach 7−131943
type-II superconductors, computer simulation of pinning and theory of collective pinning 7−131944
undergraduate physics experiments 7−88799
undergraduate physics teaching support 7−102060
urban road traffic noise, computer simulation model 7−142093
Urban traffic noise prediction under interrupted flow conditions, computer model 7−90877
US testing, computer based modelling of test arrangements *(German)* 7−86542
vacuum systems CAD and computer-aided analysis 7−134464
vacuum systems numerical modelling, using electronic cct. analysis tools 7−134463
vectorized multigrid fluid flow calculations on a Cray X-MP/48 7−136780
vibrations, eigenvalue sensitivity calcs. for linear systems 7−75276
video data acquisition system for scintillating glass target data recording 7−68182
VM/CMS in the HEP community (HEPVM) 7−135794
VME data acquisition system, UA1 application 7−109682
VMEbus interface for spectroscopy ADCs 7−116806
vortex dynamics, computational in two and three dimensions 7−130713
Walsh transform application to nuclear spectral data anal., GAMWAL code 7−109096
Wien filter first-order transformation matrix derivation 7−141374
X-ray imaging on Varennes Tokamak, image reconstruction techniques for computed tomography 7−117761
X-ray phase analysis methods in systems with high microabsorpt. effects 7−111305
X-ray powder pattern indexing, optimisation appls. 7−97851
X-ray spectral microanalysis, automated quantitative stereometric anal. programs 7−126512
ZTRAN code anal. of electron, bremsstrahlung and gamma ray beams in multi-layer media 7−91679
ZX-Spectrum microcomputer 7−103755
(p,X), fragmentation, computer simulation 7−141089
As_3Se_2, amorphous, computer-assisted modelling of photostructural transformations 7−104569
Cd_xTe, ionic electrodeposition, computer simulation of quasi-rest potentials 7−100133
^{59}Co NMR spectra, personal computer database construction *(Japanese)* 7−143919
Cu electroplating, stress meas. aided by PC 7−126359
Fe, deep penetration problems, point kernel versus radiation transport, spent fuel cask appl. 7−109528
GaAs VPE growth process, computer aided modelling 7−138669
^{76}Ge neutrinoless double β-decay, on-line data acquisition system *(Spanish)* 7−109677
H-like ions in plasma, COLRAD program for level population density calcs. 7−96569
InSb MIS structures, capacitance-voltage characteristics, deep bulk level effects, computer simulation 7−143631
Si, crystal ribbon growth, stress-free, numerical simulation 7−85989
Si-B system, thermodynamic data for borides, optimisation 7−131332
a-Si_xN_{1-x}:H layers, H depth profiles and impurity contents, elastic recoil detection and RBS 7−83681

physics computing continued
SiO_2, vitreous, continuous random network model, computer simulation 7−83677
Ti alloys, martensitic transformations, computer simulation *(Chinese)* 7−71180
TiNi, martensitic transformations, computer simulation *(Chinese)* 7−71179
VSi_2, sputter behaviour, computer simulation *(German)* 7−144223

physics fundamentals
see also classical field theory; complementarity; elementary particles; fundamental law tests; mechanics; quantum field theory; quantum theory; relativity; thermodynamics; units (measurement)
Aharonov-Bohm effect, modified Coulomb scattering, locality of EM interactions 7−134561
Anthropic Principle and cosmological probabilistic phase transitions 7−95174
atomic and nuclear physics, fundamental principles 7−67065
Bell's theorem, locality, reflection and wave-particle duality 7−128321
black hole as gravitational lens 7−102049
causal structure and conformal geometry of Lorentzian manifold *(Russian)* 7−102162
causality, multiple scattering in random media, comments 7−140618
constants, units, empirical values and quantum standards *(German)* 7−128231
cosmic string, straight, gravitational effects, appl. to quasar and galaxy images 7−102044
cosmo-physical principle of increasing order, derivation from Second Law of Thermodynamics *(French)* 7−102363
cosmological constant, influence on orbit of Pluto 7−139960
de Broglie waves, dislocated, geometrical structure 7−89018
empirical reality, empirical causality, and the measurement problem 7−115820
entropy, application to black holes and other scientific issues 7−89179
EPR paradox, zigzagging causality model criticism 7−128317
ether, experimental detection 7−88961
gravitational Poynting vector and energy transfer 7−80259
light, wave versus particle interpretations, 19th century methodologies 7−140412
Maxwell's demon, operation in low entropy system 7−80258
neutron interferometry, long wavelength, fundamental quantum expts. 7−67089
neutron interferometry, status, review of fundamental expts. 7−67088
Newton's 'Principia Mathematica Philosophia' and Planck's elementary constants *(German)* 7−88814
Newtonian gravitational const. 7−120747
nuclear science, challenges and opportunities *(Czech)* 7−140972
physical constants theory *(Rumanian)* 7−81089
quantum action at a distance, EPR constraints, causality and Sutherland paradox 7−128316
quantum theory, many-worlds and relative states interpretations, quantum Zeno paradox 7−134562
relativistic quantum mechanics, trajectories and causal phase-space approach 7−115821
relativistic quantum systems, Einstein causality violation 7−108307
Silvertooth experiment for expt. detection of ether 7−88962
similarity theory and the ether, historical perspective 7−140406
tachyon kinematics and causality 7−80409
theoretical physics, meaning and abilities *(German)* 7−88815
thermodynamics, application to synergetics and life phenomena 7−89178
time arrow in quantum theory 7−89025
undergraduate physics problems, book 7−128208
Hg, higher excited states meas. using Franck-Hertz expt. 7−80261

physiological models
see also brain models; neurophysiology; physiology
acoustical-electrical analogies applied to the ear 7−145082
aerosol particle deposition in human lung, computational model 7−93793
ametropia, model for retinal shape changes 7−78846
angular stabilization of man in space, semicircular canals and otolith organ interaction model 7−107263
anisotropic soft tissues, US propag., linear elastic theory appl. 7−87091
ankle kinematics described by stereophotogrammetry and modelling 7−114340
aortic valve mechanics, dog obs. and finite element modelling 7−87079
apparent motion impression anal. using retina model response *(Japanese)* 7−119766
arterial pressure short-term regulation dynamics, freq. depend. and arterial compliance role 7−107141
arterial pressure short-term regulation in cat, dynamic model 7−107140
articular cartilage, biphasic indentation, theoretical anal. 7−133347
ATP compartmentation in skeletal and cardiac muscles, anal. using ^{31}P NMR saturation transfer 7−100791
atrioventricular nodal conduction, one-dimensional model 7−114241
auditory nerve representation as a front-end for speech recognition in a noisy environment 7−114269
auditory neural networks, influence of temporal context on random field response 7−114293
auditory system parallel model 7−114268
average soft-tissue and bone models for use in radiation dosimetry 7−139361
baroreflex regulation of haemodynamics, math. model 7−78938
bilinear neuron model, dynamical props. of synaptic membrane *(Japanese)* 7−107023
binocular stereo vision system using eye and neuron model 7−86961
biomagnetism: source models 7−93786
blood, filtration of mixed suspensions, theoretical modelling 7−71772
blood perfusion for NMR studies, statistical hydrodynamical model 7−145124
blood plasma of patients with Down's syndrome, computer modelling of ESR spectra 7−126713
bones, long, wave propag. characts. rel. to osteoporosis diagnosis 7−114331
breathing mechanics, exptl. conditions influence on parameter estimation, sensitivity analysis approach 7−107143
cardiac action potential propagation, discontinuous nature, model 7−86942
cardiac action pots., computer simulation routine 7−133261
cardiac cells, transmembrane pot. distrib., periodic core-cond. model, closed form soln. using asymptotic anal. 7−126802
cardiac fibre, single, resistive discontinuities effect on waveshape and vel., computer model 7−119761

physiological models continued
cardiac myofibre, multicomponent 7−107122
cardiac propagation, effect of junctional discontinuities 7−86943
cardiac Purkinje fiber model, phase resetting 7−126786
cardiac R-R interval patterns during sleep: a Markov chain approach 7−86879
cardiac replacement and assist devices, appl. of mech. and math. simulators 7−86878
cardiac tissue, 2D anisotropic bisyncytia, elec. and mag. fields, model calcs. 7−93702
cardiomyocyte, isolated, math. model of activation waves propag. 7−144999
cardiovascular interactions−a simulation package to help learning 7−126865
cardiovascular model sensitivity analysis with limited feedback 7−106955
cardiovascular system simulation, general problems *(Italian)* 7−78710
cardiovascular system simulation and identification, CADCS techniques appl. 7−86877
carotid artery bifurcation, human: numerical and expt. anal. of flow field in 2D model 7−114329
cartilage electromechanics: continuum model of cartilage electrokinetics and correl. with expts. 7−107136
cat eardrum finite element model, damped freq. response calcs. 7−133314
cell adhesion to surfaces, receptor-mediated, dynamic model 7−139233
cell survival model with saturable repair after irrad. 7−79004
chaotic autowaves in excitable media with diffusion, modelling 7−126685
choking phenomena in a lung-like model 7−114343
cochlear power flux as an indicator of mechanical activity 7−145078
cochlear preprocessing computer model 7−86992
colonic electrical activity, computer models and mode anal. 7−126794
colonic motility, math. methods in anal., rel. to elec. and mech. activity 7−126684
colour discrimination in honeybees, model of photoreceptor physiology 7−126822
corneal stroma and articular cartilage, kinetics of chem. induced nonequilib. swelling, electromech. model 7−114351
coronary circulation dynamics in an ischaemic bed during coronary sinus occlusion 7−87073
coronary diastolic pressure-flow relationship, smooth muscle tone absence study 7−78932
cortical bone, simple constitutive model 7−126889
crayfish stretch receptor organs, action potential discharges, excitatory interaction model testing 7−133329
CT, 3D internal structures modelling, appl. using CAD technique 7−114480
cuff electrode nerve stimulation, 2-part model 7−101131
dialysis modelling: requirements for clinical appl. 7−127038
dipalmitoyl lecithin, model multilamellar struct., neutron diffr. 7−106989
DNA, internucleosome regions, length rel. to chromatin fibrils conformation 7−139194
DNA, simulation of double-stranded branch point migration 7−93617
DNA denaturation, n^{th} order matrix, maximum eigenvalue calc. 7−144944
dopamine receptor density, human caudate D2, quantification by PET, model review 7−145005
E. coli ribosome, approaches to a 3D model 7−86928
ECG, freq.-wavenumber inverse model 7−86881
ECG inverse problem soln. using nonlinear torso model 7−100860
educational tools, medical research models 7−95164
EEG/MEG single dipole source estimation, influence of model parameters 7−86947
electrical impedance plethysmography in peripheral blood flow, analytical model 7−119877
electromechanical potentials in cortical bone, continuum approach 7−87053
electronystagmogram description by means of stochastic difference models 7−126813
electrotonus in multicompartment neuron models, numerical anal. by LADDER computer program 7−86951
EMG, description using math. model for single joint movements 7−126800
EMG, signal modelling and processing by spectral anal. 7−93725
EMG, statistical modelling for computer-aided diagnosis 7−101120
EMG interference pattern, quantitative model 7−100873
epidermal horny layer, human, elec. props. and water transport 7−126799
erector spinae model, anatomically detailed, effects on L4/L5 disc compression and shear 7−107133
erythrocyte containing fluids, flow characts. through pores, math. model 7−71773
expert system for fluid dynamics model of pulmonary circulation 7−114374
eye mechanism model for vertical movements 7−100900
eye movement control by working memory load 7−114251
femoropatellar joint 3D model for analysis at large knee bending angles *(Japanese)* 7−78945
finite-difference EM deposition/thermoregulatory model: comparison between theory and meas. 7−126721
flagellate motor of bacteria, movement rel. to medium viscosity 7−107003
flapping wing, hydrodynamic forces meas. 7−91147
flow resistance of curved femoral artery flow models of man for steady flow 7−114352
fluid filled void loaded in compression, emanating cracks: bone-implant interface 7−114348
fractal dimensional physiology 7−139176
gait reaction reconstruction and a heel strike algorithm 7−126887
gastrointestinal myoelectric activity, computer models 7−126793
hand kinematics, interactive 3D simulation 7−126895
head/neck dynamics, numerical advances in gross-motion simulations 7−145136
head/neck/upper-torso replica, human: response to dynamic loading, analytical/numerical model 7−114328
heart, 3-compartment parabolic model, differential admittance distribution and total admittance-volume relationship 7−86960
heart, left ventricle volume, model for accurate calc. based on radiographic images 7−126688
heart muscle cells, spontaneous wave-like contractions, expt. and mathematical model 7−144995
heart rate control rel. to respiratory sinus arrhythmia, math. modelling and computer simulation 7−100848
helical and flat periodic autowaves in an active medium 7−126798
physiological models continued
hemoperfusion, extracorporeal, one-component single pore model 7−106956
HF ventilation, gas exchange system dynamics anal. 7−87040
HF ventilation, role of proper freq. selection 7−100970
Hodgkin-Huxley model, possible regime of packet activity 7−126784
human body models inhomogeneous cylindrical type, thermal radiation anal. at UHF freqs. 7−126724
human locomotion and the spinal engine 7−107145
human motor self-paced path control task optimisation model 7−126866
human movement dynamic modelling 7−78940
human vision smallest channel prediction 7−71738
human visual system for moving images model base 7−145073
hyperthermia, limited temp. obs. to predict complete temp. fields 7−106988
hyperthermia, whole body thermal model of man 7−93655
hypothermia, pathophysiology, book contrib. 7−106987
immune response, interaction of energy synthesis/consumption processes 7−71713
inhaled diesel automobile exhaust particles, young humans, mathematical model utilisation 7−139300
interphase cell death, math. model, biophys. justification and generalisation *(Russian)* 7−114416
intervertebral disc, human, mech. model 7−145116
intestinal electrical activity, tubular struct. of H-H oscillators 7−100886
intestinal microcirculation, math. models 7−126857
intracranial fluid dynamics, quasi-steady-state compartmental model 7−71806
involuntary eye movements, control system model 7−126811
ion channels, dynamics and modelling 7−100825
ion transport through nerves and tissues, review 7−114230
isolated digit recognition expts. with cochlear model 7−107083
laser beam modelling in surgery, integrated computer-based control problem soln. 7−71840
lateral geniculate nucleus neurons, spectrally-opponent, responses to chromatic and achromatic light stimuli 7−107048
left ventricle, dynamic twisting, computer study 7−87041
left ventricle ischaemia and infarction, mech. model for simulation 7−107142
leg joints under elec. stimulation 7−100875
lipid bilayers, dynamics of 1D domain struct. at phase separation 7−106994
liver, mouse, paramagnetic centres conc. rhythms, mathematical models of synchronised auto-oscillations 7−126855
locomotor apparatus, musculo-skeletal system, math. model 7−145111
locomotor coordination in rock lobster, leg coupling simulation 7−107106
lung, interstitial distrib. of changed macromols. in dogs, kinetic model 7−139244
lung dose from radioactive environment, model rel. to air activity fluctuations 7−71877
lung elasticity, cellular model 7−145130
lung haemodynamics, cat, exptl. and model predictions comparison 7−100940
lung parameters dynamic estimation 7−100965
lung transvascular fluid and protein transport models 7−139295
lungs, mech. props. during artificial ventilation, exponential model-based estimation 7−100967
mammalian respiratory system simulation models 7−78939
mammalian thermoregulation, dynamics and circadian component 7−78782
manual material handling jobs, simulation models of metabolic energy 7−119796
mass transport in series arrays of membranes with solute flow, simulation 7−71708
mechanical-reflex oscillator model for hand tremor 7−100958
membranes, resonance amplification of external influences 7−144990
mitochondrial chemiosmosis, simulation using SPICE 7−126771
monophasic action pot. and ECG, ventricular fibrillation time-series anal., rabbit and dog obs. 7−86958
multijoint limb, movement control model 7−107104
muscle, simulated human, temp. profile due to US heating 7−71829
muscle-joint system model comparison 7−133180
musculo-skeletal systems, math. models 7−145110
musculotendon model, dimensionless 7−100959
myocardial anisotropy effects on the ECG, simulation 7−93710
myocardial contractility mechanism anal., math. models 7−78937
myocardial contractility regulation by system of energy transport, math. model 7−78711
nerve action, electromech. theory of permeability, Ising model of protein sites 7−86949
nerve fibre, unmyelinated, extracellular pot. changes resulting from propag. vel. alterations and action pot. duration 7−145004
neural pattern generator with coupled nonlinear oscillators, gait generation appl. 7−86937
neuromotor control model incorporating the stretch reflex 7−100847
neuromuscular system modelling using non-invasive experimental methods 7−114227
neurophysiology, cond. vel. distribs. of normal and pathological fibres in the same nerve 7−100846
nonstationary point process analysis by time-dependent correlation and recurrence time functions 7−93612
oscillator, topological patterns of synchronization 7−119703
pacemaker and nonpacemaker cells, response patterns, math. model 7−100877
passive dendritic tree transient potential response determ., continuous cable method 7−107018
perception, neuronal models, flip-flops between states with strange attractors, statistical properties 7−133179
periodic breathing in infants: a model study 7−114311
peripheral astigmatism in real eyes, schematic modelling 7−133274
peripheral tissue heat transfer, theoretical model using bioheat eqn. of Weinbaum and Jiji 7−114199
phospholipid monolayers, at air-water interfaces, phase transitions 7−114174
phototransduction model explaining prolonged depolarising after potential phenomenon 7−100901
pitch process models, comparative evaluation in vocal tremor detect. 7−126847
placental lobule, isolated perfused human, viability parameters calc. 7−126867
pleura, possible role in lung mechs. 7−126888

physiological models continued
postural control, human, parameter estimation of model 7−114365
premature ventricular contractions, modelling rate and response to lidocaine infusion 7−133259
prosthetic heart valve, cage-ball, numerical study of turbulent blood flow using a boundary-fitted coordinate system 7−71932
prosthetic heart valve, disk-type, numerical model for nonNewtonian blood flow 7−78918
pulmonary circulation, gas exchange process model incorporating axial diffusion 7−86934
quantal response multifraction expts., fitting the linear-quadratic model 7−133377
radionuclide kinetics in the human body, math. simulation 7−144945
reaction kinetic parameters for ion transport from steady-state current-voltage curves 7−93703
real-time speech synthesis model, estimation of articulatory trajectories by Kalman filtering 7−90888
receptor cells, stimulant meas. mechanism model 7−107002
renal proximal tubule, pH, solute conc., cellular regulation, kinetic transport model 7−93689
respiratory control system using volterra series based model reference adaptive control *(Japanese)* 7−87069
respiratory dynamics, surface tension influence 7−100968
respiratory heat transfer, finite difference analysis 7−100816
respiratory system impedances in dogs, lumped linear element models 7−107109
respired soluble gas uptake modelling 7−100966
retinal, trans-cis isomerisation and ion translocation mechanism in halorhodopsin 7−86933
retinal adaptation to light, math. and cybernetic model of elec. responses of photoreceptor cells *(French)* 7−139256
retinal function with parallel architecture and integrated space-time filtering 7−93740
segmental body volumes and inertial props. eval. with photogrammetry, gait analysis in handicapped patients 7−114445
sensible heat transfer across animal hair coat boundary layer 7−119731
shoulder, human, elements of biomech. model 7−71800
soft connective tissue, constitutive model for mech. behaviour 7−114371
soft connective tissues, constitutive model for mech. behaviour 7−133346
soft tissue, computer model of acoustic wave scatt. 7−93841
speech production modelling, direct registration of articulatory movements vs. acoustic anal. 7−107097
spherical charged layered membrane, electrostatic free energy and spontaneous curvature, erythrocyte appl. 7−71705
spheroidal human model, near-field absorpt. characts. in resonance freq. range 7−126911
spinal column, human, dynamics of loading and breaking of elements, modelling scheme 7−71807
spine, asymmetrically loaded, anal. by continuum beam model 7−126886
spirometry, mathematical model 7−114306
static work: simple model to link haemodynamics, fatigue and endurance 7−107137
stretch reflex loop model, stability and parameter studies 7−126789
subglottal formant analysis 7−78906
surface EMG signal adaptive modelling and classification 7−87335
synchrony suppression in complex stimulus responses of a biophysical model of the cochlea 7−114276
tail, rat, math. circulation model for blood-flow/heat-loss relationship 7−133356
thermoregulation, math. model for postnatal development 7−126743
tissue viscoelasticity, algorithms of evaluation of Fung's relaxation function parameters 7−107121
torso extension method, accuracy for anisotropic anal., ECG appl. 7−86880
total artificial heart, microcomputer-based self-tuning PI control system 7−119901
trachea, collapsing shape and transmural press.-area 7−114361
track structure in biological models, rel. to heavy ion effects in long term manned space flights 7−145152
transvascular exchange of fluid and plasma proteins 7−126860
tumour blood flow from thermal clearance curves, discussion of math. model 7−144975
tumour regression due to microwave hyperthermia and chemotherapy, math. model *(Spanish)* 7−144980
ventricular depolarisation and repolarisation processes and body surface pots., 3D simulation 7−114239
ventricular elastance and resistance after decreasing flow 7−87071
ventricular surface activation pattern rel. to body surface pot. distrib. pattern 7−71725
vestibulo-ocular reflex, progress toward a multiple input model 7−100933
vibratory model of human body 7−145133
visual cognitive functions model and inversion of sensory processing by feedback pathways 7−145031
visual perception, local geometry representation based on partial derivatives 7−133301
visual performance model for alphanumeric reading under commercial lighting 7−107066
visual simulation, how the eye sees real world and simulator 7−93765
visual system, mammalian self-organising neural network model 7−126815
visual system model, human, cosine transform coding appl. 7−93728
visually guided reach movement model, eye-hand coordination, reaction time calc. 7−114254
vocal tract fluid flow, finite element model 7−114309
vocal tract model for speech synthesis, real-time processing capability 7−90887
vocal tract simulation: implementation of continuous variations of the length in a Kelly-Lochbaum model, effects of area function spatial sampling 7−114292
voltage-sensitive Ca^{2+} channel, mol. organisation of ion-transporting pathways 7−100884
CO diffusing capacity of the lung, modelling approach to estimation 7−114222
Na ion channel gating, phys. model 7−119751
Na^{+} conductance change in nerve, phys. mechanism: electron transfer model 7−78817
UO_2 natural, airborne exposure, ICRP Publication 30 lung model-based predictions rel. to measured bioassay data 7−139380

physiological optics *see vision*

physiology
see also blood; haemodynamics; hearing; neurophysiology; physiological models; speech; vision
cardiopulmonary physiology at high gravity, effects of water immersion 7−71788
coding of images by the retina 7−93739
Coleoptera on Spitsbergen, physiological adaptations to low temp. and short activity period 7−78787
digital sound, physiological meas. and devices 7−136659
electric shock, physiological hazard boundary values determ. *(Polish)* 7−71730
exertion, extreme, effects 7−119790
fibre optic sensors of physiological parameters 7−136588
hormetic effects of ionising radiation, review 7−100985
hyperbaric environment, phys. and physiology, rel. to diving 7−145107
hypothermia, pathophysiology, book contrib. 7−106987
hypothermia physiology, improved technique for study 7−127060
meteorology temp.-humidity index for uncomfortable summer weather 7−133911
photoreceptors, lamprey retina, types immunoreactive to rod- or cone-specific antibodies 7−139258
physical principles of physiological phenomena, literature guide 7−66859
Spacelab D1 mission, human perceptual and physiological adaptation to weightlessness 7−79099

physisorption *see adsorption; sorption*

PI control *see two-term control*

pi mesons *see pions*

pick-up reactions
heavy ion-nucleus reactions, two-particle excitation process, collective pair transfer, sum rules 7−116462
$^{12}C(d,{}^{6}Li)^{8}Be$, vector and tensor analysing powers 7−109190
$^{50}Cr(n,2n)^{49}Cr$, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
$^{52}Cr(n,2n)$, 14.2-18.2 MeV, cross sections, excitation fn. meas. 7−67815
$^{73}Ge(d,{}^{3}He)^{72}Ga$, 25 meV, ^{72}Ga level anal. 7−67727
$^{165}Ho({}^{3}He,d)$, continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
$^{144}Nd(p,\alpha)$, mechanism and ang. distrib., pick-up and knock-on theories 7−116417
$^{58}Ni(\alpha,d)$, continuum spectrum, contrib. from breakup-pickup-fusion reactions 7−135337
$^{16}O(d,{}^{6}Li)^{12}C$ 7−109190
$^{208}Pb({}^{17}O,{}^{18}O)^{207}Pb$, 78 MeV, cross section meas., multistep effects 7−73783
$^{A}Sn({}^{58}Ni, X)$, A=even 116-124, subbarrier transfer reactions, cross sections, 1N pick-up 7−135357
$^{120}Sn({}^{7}Li,{}^{8}Li)$, tensor analyzing power meas., coupled channel anal. 7−116472
$^{235}U({}^{58}Ni, {}^{59}Ni)$, 325 MeV, ^{234}U high spin state population and γ transitions 7−95969
$^{A}Zr(n,\alpha)$, A=90,91, α-spectra meas., pick-up and knock-on theories 7−116418

pick-up tubes, television *see television camera tubes*

pick-ups
focusing grating for integrated optical-disk pickup devices 7−123182
laser pickups, compact disc, wavefront meas. using phase measuring radial shear interferometer 7−116000

pickups *see pick-ups*

picture processing
see also computer vision; computerised picture processing; pattern recognition
2D image depth information extraction from focus 7−68584
2D neighborhood operator using single channel acousto-optical cell 7−82492
3D boundary detection algorithm, medical scanner and seismic images appl. 7−87975
3D underwater imaging method based on synthetic aperture image holography using acoustic lens *(Japanese)* 7−110657
acousto-optic triple product processor and its applications 7−117148
active aperture synthesis in observation of objects via distorting media 7−136221
analogue input unit for picture processing *(Czech)* 7−103754
artefact reduction in dual-radionuclide subtraction studies 7−87169
astronomical images restoration, automatic log spectrum restoration of atmospheric seeing 7−72316
astronomical imaging by Space Telescope, resolution improvement by roll deconvolution of data 7−79846
astronomical plates image reconstruction, digitisation 7−139942
astronomical speckle masking, image reconstruction by cross triple correlation 7−101693
averaging using adaptive 2D least mean square filter 7−103749
Bayesian image processing in 2D, appl. 7−144943
binarisation procedure generating 2D pulse density modulation 7−110258
binary images, morphological transformations by hybrid optical-electronic methods 7−74873
Boolean random functions, simulation, texture analysis *(French)* 7−117146
centroid location of nonoverlapping objects 7−136209
chest X-ray images texture anal., automatic diagnosis of pneumoconiosis 7−114487
chromosome analysis system using knowledge based image anal. 7−79169
chronotomography: a new approach to high speed frame recording 7−96947
CLEAN algorithm and objective functions minimisation 7−127736
coded aperture images, energy-resolved time-resolved with URA tagging 7−139935
coherent optical image correlation system, behaviour of binary spatial light modulators 7−82772
colour image processing for elimination of fibre structure 7−68580
colour image retrieval from black and white transparencies using partially coherent speckle 7−110271
P/Comet Halley (1982i), coma variations from spectra and image digitization 7−94769
P/Comet Halley (1982i), Vega TV expt., image processing techniques 7−88321
correlator, updatable, optimisation 7−110267
depth reconstruction in stereopsis 7−114266
difference detection by colour mixing using holographic lenses 7−74857

picture processing continued
differentiating spatial light modulator based on nematic liquid crystal, for optical preprocessing and pattern recognition 7−130317
digital color image restoration 7−90534
digital image processing for sidescan sonar data analysis 7−97203
digital moire-effect processing of holographic interferograms 7−128542
digitizer system comparison with coherent and incoherent light 7−117147
ductile fracture of solids, image processing methods 7−117552
dynamic frequency plane image correlator based on photorefractive nondegenerate four wave mixing 7−110283
echocardiographic ventricular images, semiautomated border tracking 7−145162
electro-optical imaging systems integration, conf., Los Angeles, CA, USA (Jan. 1987) 7−134355
electron microscopy, information recovery in missing ang. data cases, convex projections method in three-dimens. 7−95684
electronic sector scanning sonars, stabilisation 7−97199
ferroelectric liquid crystals, optical computing and image processing appls. 7−110263
fibres, multimode, image distortion and restoration by polarisation-preserving phase conjugation 7−117151
fish scale age charactn. using optical Fourier transforms 7−122835
flow meas., multicomponent using correlation method 7−104366
geometric moments from Hartley transform intensities 7−82498
geometrical optics, diffraction tomography transform and inverse 7−129969
hardcopy output of reconstructed imagery 7−136231
holographic interferometry, digital fringe processing, flow visualisation appl. 7−102502
holographic interferometry, problems in resolving 4-D character of turbulence, image and data processing 7−122849
holography, overview of history, current and future applications *(German)* 7−82512
Hotelling trace criterion for feature enhancement 7−141809
human body motion anal. using region based approach 7−126894
hybrid identification scheme for image and blur parameters 7−90535
hybrid image processing, conf., Orlando, FL, USA (Apr. 1986) 7−72713
hybrid method for determ. rel. displacement between images 7−96943
image anal., random textures models, microstructure modelling *(French)* 7−118113
image analysis, γ-γ′ microstructure morphology in Ni base superalloys *(French)* 7−119276
image analysis, carbides morphology in low C sheet steel *(French)* 7−119288
image analysis, cellular macrostructure of eutectic alloys *(French)* 7−119257
image analysis, dendritic arrays in Ni base superalloys *(French)* 7−119256
image analysis, dendritic solidification *(French)* 7−119255
image analysis, math. morphology, review *(French)* 7−117143
image analysis, microstructure of sintered W-Ni-Fe *(French)* 7−119190
image analysis, nuclei in tissue sections of non-Hodgkin's lymphomas *(French)* 7−119746
image analysis, pattern recognition, in human cytogenetics *(French)* 7−119913
image analysis, plane coordinance function, crystallographic stacking *(French)* 7−117145
image analysis, polar coordinates, anisotropy of grain struct. *(French)* 7−119289
image analysis, quality control of Al alloys, for can production *(French)* 7−119291
image analysis, quantitative fractography *(French)* 7−119477
image analysis, rat liver, during experimental carcinogenesis *(French)* 7−119749
image analysis, sperm motility appl. *(French)* 7−119748
image and optical disk recording, laser specification 7−75016
image primitives selection for general purpose visual processing 7−86981
image processing, edge enhancement, Laplace operators *(French)* 7−117144
image processing system for electron linac beam diagnosis 7−68082
image reconstruction from its autocorrelation 7−122846
image restoration by spatial filter design 7−94508
image segmentation by colour coding method 7−141810
image sequence analysis of complex physical objects: nonlinear small scale water surface waves 7−117621
image sequences, theoretical foundation 7−90537
image synthesis, three-dimens., with lenticular screens 7−110276
incoherent light optical processing and holography appls. 7−117154
interferometric fringe patterns interpretation *(German)* 7−140742
inverse filter transfer function optimisation in blurred image restoration with incoherent light 7−90531
inverse problems of optics 7−103766
ion microscopy, high sensitivity, material science research 7−95674
IR meteorological satellite image analysis using fractal dimension and lower-order statistics 7−139741
IR speckle interferometry image reconstruction techniques in astronomy 7−107850
ISIPS, interactive satellite image processing system, hardware and software 7−79677
iterative algorithms, recovering Fourier magnitude from phase, blind deconvolution, computational examples 7−136224
iterative algorithms, recovery of complex images from Fourier magnitude, computational anal. 7−136223
iterative image restoration with ringing reduction 7−90536
land surface imaging, optimum band-ratio triplets selection 7−72162
Landsat data classification, watershed algorithm approach 7−115097
Landsat image data, information content anal. for data compression 7−127503
Landsat multispectral scanner data, digital and photographic enhancements for geological features discrimination 7−87923
Landsat-4 multispectral scanner and thematic mapper data classification accuracy, expts. 7−79713
laser imaging and digital electronics, systems approach 7−117252
laser magneto-optic microscope for optical imaging of magnetic domain dynamics 7−108655
left ventricle, 3D reconstruction using X-ray, US and NMR images 7−87340
left ventricular image processing: X-ray, US and NMR appl. 7−139396
limited view angle projection data for image reconstruction 7−107245
line segments in 2D image, efficient constant false alarm rate detection 7−110286

picture processing continued
liquid crystal light valve, as component in real time optical image processing system 7−122861
liquid crystal TV spatial light modulator, distortion correction with real-time joint transform correlator 7−136446
local distortion conditions, image analysis 7−122844
local spectrum display, pseudocoloring approach 7−122839
low level visual processing, retinal function with parallel architecture and integrated space-time filtering 7−93740
maximum entropy analysis of coded images 7−110259
medical image processing, conf., Cannes, France (Dec. 85) 7−88736
medical image processing, visual perception role 7−93990
medical radiographs, scatter-glare correction using a convolution algorithm with variable weighting 7−133430
microchannel spatial light modulator under white-light illumination, operating characts. and appls. 7−136489
microchannel spatial light modulator with white light processing 7−136495
mirror double phase conjugate, optical information processing appls. 7−110264
moire fringe suppression in half-tone images 7−90526
moire topograms, automated contour ordering 7−121213
morphological optics and hypotheses role in image analysis 7−96942
motion blur compensation of CCD endoscope images by colour deviation method 7−90529
motion-blurred image processing 7−96948
moving holes, size meas. using spatial filtering 7−73323
multiple grey level objects, image reconstruction from projections 7−74870
neural network models for the mechanism of pattern information processing *(Japanese)* 7−93696
noisy images of finite objects, size variation range determ. 7−130006
nonlinear pictorial feedback systems, chaos and cooperation 7−136229
Nova laser, image processing and automatic alignment 7−74967
nuclear fuel pellets, remote visual inspection with fiber optics and video image processing 7−67920
object motion constraint equation under space-varying or time-varying illumination 7−82480
object phase distributions detection by optical differentiation operations *(Japanese)* 7−110255
ocean technology electronics, conf., Edinburgh, Scotland (March 1987) 7−95103
optical image angular periodicities determ., one-dimens. invariant functions applic. 7−141806
optical image subtraction techniques review 7−74874
optical interferometry in space, ESA workshop, Granada, Spain (June 1987) 7−134370
optical microscopic cell image sequences, motion vectors determ. 7−94037
optical microscopic imaging systems, three-dimens. object present. 7−89257
optical systems cascade diffr. under partially coherent illumination 7−129972
optical testing and metrology, conf., Quebec City, Canada (June 1986) 7−115684
optical/digital hybrid image processing *(Japanese)* 7−122851
panchromatic and multispectral imagery from dual resolution satellite sensors, combination 7−127615
partial deconvolution and spectral extrapolation with limited field 7−90525
particle image velocimetry, directional ambiguity removal using holographic image separation 7−104360
pattern recognition, image processing and perimetric sampling 7−130004
phase conjunction phenomenon appls. *(Czech)* 7−136449
phase retrieval algorithm, optical implementation 7−90519
phase retrieval algorithm based on analogy for image processing 7−68579
photogrammetry, off-line compilation of stereo models using digital image correl. 7−145311
photogrammetry, processing of digital three-line imagery using generalised model for combined point determ. 7−145310
preprocessing using liquid crystal televisions 7−110254
pseudocolour coding method using sensitive plate 7−74866
pseudocolour equidensities encoding using combined Ronchi gratings *(Chinese)* 7−90523
quality improvement by modification of laser recording beam 7−90517
radar imagery interpretation using secondary image products 7−101582
radio interferometry, weak objects imaging in conditions of poor phase stability 7−120280
radio sources, max. entropy method for polarised images deconvolution 7−101696
radiolabelled-antibody imaging, subtracted images thresholding method 7−139352
real minimum ray marking and skeletonizing of images *(German)* 7−103762
real-time optical line detection using computer generated holographic elements 7−130003
reconstruction by stimulated backscattering through two-lens system 7−110284
reflection display of rainbow holograms 7−122867
remote sensing, instrument-induced spatial crosstalk deconvolution algorithm 7−79685
remote sensing, surface features extraction from multispectral imagery 7−101574
remote-sensing, image representation via symmetrical components 7−107575
remotely sensed multispectral image data, pot. information content comparisons, approach based on sensor system specifications 7−101555
restoration in singular vector space by convex projections method 7−82474
restoration of limited-data seismic tomography images 7−115105
retinal images, feature-based registration 7−145263
SAR appls., conf., Frascati Italy (Sept. 1986) 7−80180
SAR data for agriculture and forestry 7−87984
SAR image reconstruction algorithm with complex phase correction *(Japanese)* 7−145720
SAR imagery, geological feature enhancement 7−87983
satellite image processing, detection of linear networks 7−87976
scanning optical microscopy, lock-in technique for depth profiling and magneto-optical Kerr effect imaging 7−108657
scanning tunnelling microscopy data, restoration of blurred images 7−83612
scintigrams, noninterventional background corrections 7−107241

picture processing continued
Seasat SAR and Landsat TM data, merging process 7−107561
SEM, microprobe image anal., metallurgical appl. *(French)* 7−119478
shape from darkness method, surface information extraction from dynamic shadows 7−119770
sintered materials, neck meas., automatic image analyser *(French)* 7−119189
SIR-B ocean-wave enhancement with fast Fourier transform techniques 7−134002
skeletal radiographs, system performance and image quality eval. using information spectra *(Japanese)* 7−126999
speckle images, Erlangen-bispectral processing 7−74871
speckle masking, appl. to optical long-baseline interferometry and aperture synthesis 7−101695
speckle photography fringe anal., fast transforms, comparison 7−103756
spiral structures, growth coeff. determ. by spatial spectrum method 7−72318
SPOT imagery, processing techniques for topographic mapping 7−101180
staring-mode cameras, design considerations 7−134849
stereo angiograms, 3D reconstruction of cerebral arteries 7−87176
surface inference from boundaries 7−114267
tomographic image reconstruction, additive background noise 7−68568
transform image coding 7−136230
transformation of image positions, rotations, and sizes into shift parameters 7−90518
two-dimensional holographic topograms, quantitative deciphering 7−128541
ultrasonic B-scan imaging system, Wiener filtering for resolution improvement 7−75235
Vander Lugt correlator, appl. to industrial inspection 7−74878
variance-stabilising transforms for image-signal-dependent Rayleigh and other Weibull noise sources 7−110253
vector nature of light use in imagery and image processing 7−117155
Very Large Array and VLBA radiotelescopes, construction and image processing developments 7−88119
wear, optical profilometry study using 3D image processing *(French)* 7−95543
weather radar reflectivity images, spatial and temporal anal. 7−114987
white-light optical signal processing, colour image processing 7−110282
X-ray tomographic image reconstruction, geometry-free technique using convex projections 7−128731
zero crossings and spatiotemporal interpolation, 2D soln. 7−119768
$Bi_{12}SiO_{20}$ photorefractive crystal, spatially multiplexed phase conjugate imaging and processing 7−110260
$Bi_{12}SiO_{20}$ real time intensity inversion by four wave mixing 7−122852
Gabor dynamic volume phase holograms, contrast inversion 7−130019
Si V-groove structure geometry obs. by SEM, sensors appl. 7−130992

PID control *see three-term control*

piecewise-linear techniques
Stefan problem, error anal. of enthalpy method 7−68979

piezo-magneto-optical effects *see magneto-optical effects; piezo-optical effects*

piezo-optical effects
see also piezoreflectance
cholesteric liquid crystals, optical rotation, wavelength modulation 7−113120
deuteronaphthalene, isotopic mixed crystals, hydrostatically compressed, quasi-resonance 7−138479
diamond:N, defects, vibronic struct., UV absorpt. spectrum meas. 7−106226
dislocation-induced optical centres modification under tangential stress, photolum. study 7−144011
elastooptic coeff. of transparent meas., using optical heterodyne method 7−138420
ferroelastic transitions, high resolution X-ray powder diffr. studies 7−111863
II-IV-V_2 cpds., birefr., gyrotropy charact. 7−113122
II-IV-V_2 semicond. cpds., electron energy spectrum, kinetic and optical props., uniform press. effect 7−112179
photoconducting piezoelectric, acoustic wave excitation during optical recording and erasure *(Japanese)* 7−131246
semiconductor crystal, excitonic absorption band under uniaxial pressure, temp. dynamics *(Russian)* 7−118984
squaric acid, Brillouin scatt. under uniaxial stresses 7−85752
TGS: alanine, monocryst. piezooptical props. 7−92638
$Al_xGa_{1-x}As$, press. induced effects on phonons and gap states 7−142926
AlSb, phonons, piezo-Raman studies 7−132235
AmI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$Ba_2NaNb_5O_{15}$ crysts., incommensurate phase, optical birefringence temp. depend. study *(Russian)* 7−70740
$Cd_{1-x}Mn_xTe$, phase transition, high-press. Raman scatt. obs. 7−85687
$Cd_{1-x}Mn_xTe$, photoluminescence, temp., pressure depend. 7−144116
$CdSnAs_2$, electron energy spectrum, kinetic and optical props., uniform press. effect 7−112179
CmI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
Dy_2S_3, elastic, piezoelectric and piezooptic props. 7−131203
GaAs, direct and indirect optical absorption, press. depend 7−138419
GaAs, EL2 defect symm., stress-induced absorpt. band splitting anal. 7−124913
n-GaAs, encapsulated with Si_3N_4 films, Raman spectra, stress-induced spectral changes 7−70766
GaAs modulation doped quantum well structs., valence band mixing, polarized luminesc. obs., uniaxial stress effects study 7−77079
GaAs/Si, acceptor and excitonic features, stress effects, photolum. study 7−125691
GaAs-$Al_xGa_{1-x}As$ quantum well structs., piezomodulated electronic spectra 7−77508
GaAs-$Al_xGa_{1-x}As$ quantum-well structures, MBE grown, Be acceptor Raman scatt. 7−70765
GdI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
InP cubic semicond., excitons and polaritons, reflectivity spectrum study, stress, press., and mag. field effects 7−112187
$KH_{2(1-x)}D_{2x}PO_4$, piezo-optical props. *(Russian)* 7−125689
KH_2PO_4 Pockels cell electrooptic light modulator, piezooptic transients 7−130312
LaI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201

piezo-optical effects continued
$LiNbO_3$:MgO,Nd, miniature CW and active internally Q-switched lasers 7−68683
$LiYF_4:Tm^{3+}$ cryst., electron-deform. interaction, press.-induced linear dichroism meas. 7−70743
Mn^{2+} impurity systems, zero-field splitting, uniaxial stress effects 7−112271
Pt^{II}-Pt^{IV} mixed valence complex, quasi-one-dimens. soliton-to-band optical absorption 7−106205
PuI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
Si, electron irradiated, 3942 cm^{-1} optical band 7−85782
Si, uniaxially deformed crystals, indirect absorpt. edge 7−99793
Si:He(Ne)(Ar)(Kr)(Xe), implanted, photoluminesc. defects, uniaxial stress study 7−99932
Tl_4PbCl_6 single cryst. acousto-optical and elasto-optical props. 7−113130
ZnTe, press. depend. of lowest direct absorption edge 7−70840

piezoelectric devices
see also crystal resonators; piezoelectric transducers
bimorph piezoelectric disks for scanning tunnelling microscope 7−128721
focused acoustic wave channelizer, architecture and performance 7−82990
laser-beam deflector for adaptive optics 7−123178
monolithic US phased array, US transmission, time domain modelling 7−123387
piezoceramic position detector *(German)* 7−101683
positioners for linear motions *(German)* 7−73325
single-mode optical piezoceramic phase modulator, anal. 7−123189
snow, fracture mechanics under field conditions 7−139658
stress gauge for dynamic stress meas. in soil and rock mediums *(Chinese)* 7−127479
surface photovoltage study apparatus with bimorphous piezoelectric Kelvin probe 7−67348
PZT ceramic etched piezoelectric structures 7−100411
$PbTiO_3$ thin films, c-axis oriented, piezoelectricity, bulk wave resonator charact. 7−113079

piezoelectric effects *see piezoelectricity*

piezoelectric materials
see also piezoelectric semiconductors; piezoelectric thin films; piezoelectricity
ceramic, crack growth resist. analysis 7−100365
ceramic, piezoelectric and electrostrictive for STM 7−83610
ceramic composite, effective props. theory 7−77470
ceramic composite piezoelecs. for US transducers 7−92605
ceramic-epoxy composites, acoustic wave propag., Bloch theory, numerical anal. 7−98358
ceramic-polymer composites for US biomedical transducers 7−92606
ceramic-polymer fired composites 7−99695
ceramic/methacrylic copolymer emulsion composite piezoelectric paints 7−99693
ceramics, piezoelectric and dielectric, mech. integrity 7−126247
ceramics, piezoelectric charge coeff. and mech. quality factor determ. using electric-line theory *(Japanese)* 7−125617
composite materials, elastic and piezoelec. props. *(Japanese)* 7−143970
composites for US transducers, KLM transmission-line model 7−90909
ferroelectric ceramics, activation and relax. of charges 7−99661
form invariant constitutive relations for transversely isotropic piezoelectric materials 7−117368
ice, pseudopiezoelectric effects 7−99684
molecular crystals, fluorescent and phosphorescent, effect of temperature on mechanoluminescence intensity 7−77667
oriented polymer films, thickness compliance determ. method 7−83139
$PbTiO_3$ powder prep. for flexible 0-3 piezoelec. composite 7−100166
PBZT ceramic, ultrasonic characterization of elastic and piezoelectric props. 7−131244
piezoceramics, radiation resistance in reactor environment, electrical props., core sensing element material 7−77464
polyethylene-ferroelectric ceramic composites, pyroelec, and piezoelec. props. *(Russian)* 7−85540
polymer electrets, piezoelectric, electron-beam poling 7−138376
polymer insulators, carrier injection, space charge, and elec. breakdown 7−125607
polymer-ceramic composite piezoelectric materials *(Korean)* 7−99683
polymers, ferroelectricity, piezoelectricity and pyroelectricity 7−125613
polymers, piezoelectricity and pyroelectricity, bibliography, 1985-6 7−120718
polymers, properties and applications 7−77465
polymers, props. and appls. *(Japanese)* 7−77468
polyvinylidene fluoride, β-phase form from melt induced by quenching, film morphology 7−112136
polyvinylidene fluoride, elec. power output per unit vol. and mech. to elec. conversion efficiency 7−99716
polyvinylidene fluoride, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713
polyvinylidene fluoride, highly oriented, primary and secondary pyroelec. 7−92609
polyvinylidene fluoride, piezo-, pyro- and ferroelectric props., review 7−132202
polyvinylidene fluoride, piezoelec., NMR studies, review 7−112963
polyvinylidene fluoride, piezoelec. effect, X-ray study 7−99718
polyvinylidene fluoride film, mag. polaris., press. effects 7−105947
polyvinylidene fluoride films, mech. and piezoelec. behaviour 7−99687
polyvinylidene fluoride films, piezoelectric, pyroelectric and ferroelectric props., conf. (Dusseldorf, Germany, Oct. 1984) 7−128168
polyvinylidene fluoride films, struct. changes in elec. fields 7−124122
polyvinylidene fluoride for hydrophone appls., mech. and piezoelec. props. 7−99714
polyvinylidene fluoride-ferroelectric ceramic composites, pyroelec, and piezoelec. props. *(Russian)* 7−85540
polyvinylidene fluoride/PMMA blends, oriented, PMMA effect on morphology and $\alpha \rightarrow \beta$ transition 7−112135
polyvinylidine fluoride films, elec. field induced gas emission 7−98676
powders, investig. using polarisation echo method, review 7−123297
PZT piezoceramics, depend. between stability and anisotropy, orientational polarization 7−118950
quartz, synthetic, ultrasonic characterization of elastic and piezoelectric props. 7−131244
quartz single crystal, surface props. rel. to chemico-mechanical polishing 7−132774
saccharide composites, cryst. struct. and piezoelec. props. 7−99715

piezoelectric materials continued
sillenite structure piezoelectrics, bulk acoustic wave control using electric field, anisotropy 7−82970
sinusoidally corrugated surface, SAW reflection coefficient calculation 7−142074
tartaric acid composites, complex piezoelec. response 7−99688
thin piezoelectric plates, asymptotic anal. *(French)* 7−92601
vinylidene cyanide-methyl methacrylate copolymer, microstruct., ^{13}C NMR spectra 7−116993
vinylidene fluoride-trifluoroethylene copolymers, dielec., piezoelec., and pyroelec. props. 7−99717
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713
vinylidene fluoride-trifluoroethylene copolymers, piezoelec. props. and temp. stability 7−99719
Ag_3SbS_3, broad phase transition near T∼150 K, permitt., US meas. 7−69888
AlN epitaxial layers on R-plane sapphire, origin of $(1\bar{2}16)$-orientation 7−124750
AlN thin films by RF reactive sputtering 7−92871
$(Ba,M)TiO_3$ ceramics (M=Ca,Y), microstruct. rel. to processing conditions 7−98487
$BaO-SrO-SiO_2-TiO_2$ system glass-ceramics, piezoelec. props. and microstruct. 7−99703
$Ba_2Si_2TiO_8$ piezoelectric glass-ceramics as low temperature-coefficient SAW substrate materials 7−99694
$BaTiO_3$ piezoceramics, dielec. const., ageing behaviour 7−92575
$Bi_{12}GeO_{20}$ cubic piezoelec. crysts., backward Lamb's waves dispersion eqns. calcs. and meas. *(Russian)* 7−84474
$Bi_{12}GeO_{20}$, piezoelec., circular bulk photovoltaic current, mag. field effects 7−112392
$Bi_{12}MO_{20}$ (M=Ge, Si, Ti, Zn), dielec., elastic and piezoelec. props. 7−69798
$Bi_4MTi_4O_{15}$ (M=Ca, Sr, Ba, Pb) ceramics, piezoelec. and ferroelec. props. 7−92604
$Bi_{4-x}Pb_xTi_{3-x}Nb_xO_{12}$ grain-oriented ceramics, piezoelec. props. 7−99705
$Bi_4Ti_3O_{12}$ ceramics, grain-oriented fabrication and dielec. props. 7−99699
$Bi_4Ti_3O_{12}$ grain orientation ceramics prep. by cold uniaxial pressing method, props. 7−125610
$Bi_{12}XO_{20}$ (X=Ge, Si), single crystals, internal friction associated with electronic state 7−132205
$Gd_2(MoO_4)_3$, elec. field-induced phase transitions, D-E hysteresis loop obs. 7−76388
KH_2PO_4, domain freezing, dielectric dispersion 7−113097
$KNbO_3$:Sm, crystal growth and stress-induced piezoelec. voltage meas. 7−99712
$Li_2B_4O_7$, crystal growth, piezoelec., dielec., elastic, and acoustic props. 7−99711
$LiGaO_2$, thermal expansion coeffs., temp. depend., 298 to 1113 K 7−84330
Li_2GeO_3, elastic, dielectric and piezoelectric constants, thermal expansion, 62-600 K 7−84085
$LiNbO_3$ waveguides, annealed proton-exchanged, surface wave studies 7−90792
$LiNbO_3$, Y-Z, SAW propagation, bifurcation and chaos 7−91954
PLZT diffr. grating, electrically controllable, piezoelec. strain meas. by He-Ne laser 7−143968
PZT, AC assisted poling, piezoelec. response 7−70709
PZT ceramic etched piezoelectric structures 7−100411
PZT ceramic-air composites for hydrostatic sensing 7−99691
PZT ceramics, low temp. dielec., piezoelec., and elastic props. 7−99701
PZT ceramics, morphotropic phase boundary comp., SEM, TEM, and X-ray diffr. study 7−91800
PZT piezoceramics, modified, dielec., piezoelec., and SAW props. 7−99710
PZT solid-porous-solid sandwich composite broadband US transducer 7−90910
PZT:Ba piezoceramic, US investig. of elastic and piezoelec. const., time variation 7−132880
PZT-epoxy composites for US transducer appls., acoustic props. 7−98359
PZT-polyethylene composites, prep. and piezoelec. props. 7−99697
PZT-polymer composite piezoelec. materials for medical US imaging transducers 7−99690
PZT-silicone rubber composites, dielec. and piezoelec. props., stress stability 7−99689
$(Pb,Ca)TiO_3$ ceramics, electromech. props. 7−99702
$(Pb_{1-x}Ba_x)_2NaNb_5O_{15}$ ceramic, piezoelectric props., press. along polarisation direction 7−113082
$(Pb_{1-x}Ba_x)_{2.5-y}Na_{2y}Nb_5O_{15}$, ceramic, piezoelectric props., in morphotropic region 7−106088
$PbBi_2Nb_2O_9$ ferroelectric ceramics, grain-oriented, processing, microstruct. and elec. props. 7−99736
$(PbBi)(TiFeMn)O_3$/polymer composites, piezoelec. response, hydrophone appls. 7−113081
$(Pb_{1-x}Bi_x)(Ti_{1-x}(Fe_{1-y}Mn_y)_x)O_3$-polymer composites, hydrostatic piezoelec. response 7−99698
$Pb_5Ge_3O_{11}$, elastic, piezoelec. props., US vel. meas. *(Korean)* 7−92602
$(PbLa)Nb_2O_6$ ferroelectric ceramics, grain-oriented, processing, microstruct. and elec. props. 7−99736
$Pb(Mg_{1/3}Nb_{2/3})O_3-Pb(Co_{1/3}Nb_{2/3})O_3-PbTiO_3-PbZrO_3$ ceramics, piezoelec. props. and microstruct. 7−99707
$Pb_{1-x}(NaBi)_{x/2}Bi_4Ti_4O_{15}$ grain-oriented ceramics, piezoelec. props. 7−99705
$PbNb_2O_6$ modified piezoceramics, coprecipitation prep., electromech. props. 7−99704
$PbNb_2O_6$ piezoceramics for US transducer design, prep. and charactn. 7−99709
$Pb(Ti,Mn)O_3$ and $(Pb,Ba)(Ti,Mn)O_3$ PTC and NTC effects 7−131649
$PbTiO_3$, modified ceramics, anisotropic piezoelec. props. 7−92600
$PbTiO_3$ modified piezoceramics, coprecipitation prep., electromech. props. 7−99704
$PbTiO_3$ piezoceramics for US transducer design, prep. and charactn. 7−99709
$PbTiO_3$ powder, coprecipitated, piezoelec. composite prep. 7−92936
$PbTiO_3$:Sm(Ca) ceramics, electromech. coupling anisotropy 7−99700
$PbTiO_3$-based piezoceramics, processing and transducer appls. 7−99721
$PbTiO_3$-polymer composites, poling study, dielec. and piezoelec. props. 7−99692
$PbTiO_3$-polymer composites, poling behaviour 7−99696
$PbZn_{0.33}Nb_{0.67}O_3-PbTiO_3$ solid solns., sol-gel processing 7−100168

piezoelectric materials continued
$Pb(Zn_{1/3}Nb_{2/3})O_3-BaTiO_3$ system, ceramic prep., phase relations, dielec. props. 7−92599
$Pb(Zn_{1/3}Nb_{2/3})O_3-BaTiO_3-PbTiO_3$ ceramic electrostrictors for micropositioner appls. 7−99722
$Pb(Zn_{1/3}Nb_{2/3})O_3$-based ceramics, perovskite phase stability 7−98440
$Pb(Zn_{1/3}Nb_{2/3})O_3-PbTiO_3-BatiO_3$ ceramics, dielec. and piezoelec. props. 7−99706
$Pb(Zn_{1/3}Nb_{2/3})O_3-PbTiO_3$ ceramics, synthesis and piezoelec. props. 7−99708
$Pb(Zn_{1/3}Nb_{2/3})O_3-SrTiO_3-PbTiO_3$ system, phase relations, dielec. and piezoelec. props. 7−92598
$PbZrO_3TiO_3$-polymer, fired 0-3 composites, prep. and piezoelectric props. 7−126077
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed cryst., polarisation fluctuations, Brillouin spectra obs. 7−125760

piezoelectric oscillations
lossy structs., intrinsic charactn., automatic method 7−99723
quartz monocrystal, X-ray diffraction, controlled pumping by piezooscillations 7−138385

piezoelectric resonators *see crystal resonators*

piezoelectric semiconductor materials *see piezoelectric semiconductors*

piezoelectric semiconductors
(111) growth axis, nonlinear optical response 7−136401
acoustoelectric current noise, computer study 7−85010
acoustoelectric interactions, transverse electric field 7−99132
electron-phonon interaction nonlinear response 7−137809
film on nonpiezoelectric substrate, piezoelectric modulus meas. 7−134809
II-IV-V_2 semicond. cpds., radiation defects, survey 7−111648
layered structure, liquid-filled, acoustoelectrical interaction 7−92235
multilayered piezoelectric semiconductors, SAW propagation, acoustoelectric interaction 7−85011
US wave amplitude, dependence on crystal conductivity 7−77467
$Bi_{12}GeO_{20}$, bulk photovoltaic current, displacement component determ., Hall meas. *(Japanese)* 7−118529
$Bi_{12}SiO_{20}$, induced impurity photoelectret state 7−70696
CdS, photocond. piezoelec., optical generation of sound 7−84144
CdS-ZnO, transverse acoustic waves in piezoelectric superlattices 7−77061
CdSe heteroepitaxial films deposited on cryst. and amorphous substrates by hot-wall technique, struct. obs. 7−70132
CdTe, bound piezopolaron ground and excited state energy calcs. 7−118377
GaAs (100)-cut, SAW slowness surface meas. 7−124666
GaAs-AlAs piezoelectric superlattices, transverse elastic waves, propagation along symmetry directions 7−105224
$Ge_{0.2}Si_{0.8}$-Si (001) heterostructure, coherently strained, piezoelec. effect 7−143579
InSb, compensated, US absorpt., impurity breakdown effect, mag. field depend. 7−99133
InSb, piezoelectric semiconductors, acoustic second-harmonic generation, coupling mechanisms 7−84700
PZT piezoceramics, modified, bulk resist., temp. depend 7−99068
$PbZrO_3-(K_{1/2}Bi_{1/2})ArO_3$, piezoelectric ceramics, monomorph characteristics 7−143969
Si as mechanical material, device appls., review 7−124369
ZnO bulk wave transducer struct. for acousto-optic phase modulation of single-mode fibres 7−123390
ZnO films, RF sputter deposition on GaAs substrates, piezoelec. props. 7−125981
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984
ZnO/Si layered piezoelec.-semicond. struct., acoustoelectronic bistability phenomena 7−112405
ZnO-Si, piezoelectric-semiconductor structs., multistability of acoustoelectronic interaction 7−131718
ZnS(Se)(Te), bound piezopolaron ground and excited state energy calcs. 7−118377

piezoelectric thin films
meter for piezoelectric modulus determ., of piezoelectric film on nonpiezoelectric substrate 7−134809
polyvinylidene fluoride, bioriented piezo-electric films 7−132203
polyvinylidene fluoride piezoelectric film uses and advantages 7−99686
vinylidene fluoride-trifluoroethylene copolymer thin films, electromech. props., US transducer fabrication 7−117430
AlN films, C-axis oriented, high rate prep. by reactive sputtering 7−92863
PLZT piezoelectric films, epitaxial growth and appls. 7−99720
PZT piezoelectric films, epitaxial growth and appls. 7−99720
$PbTiO_3$ piezoelectric films, epitaxial growth and appls. 7−99720
$PbTiO_3$ thin films, c-axis oriented, piezoelectricity 7−113079
Ta_2O_5 thin films, sputter deposition, struct., piezoelec. and SAW props. studies 7−106406
ZnO films, RF sputter deposition on GaAs substrates, piezoelec. props. 7−125981
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984

piezoelectric transducers
3 MHz pulse ceramic transducers, design, construction and experimental investigation 7−110746
acoustic accelerometers using piezoelectric crystals 7−82984
acoustic sensor using piezoelectric cable 7−123385
acoustic surface wave sensors for pressure, temp., force and acceleration *(Czech)* 7−121100
AE, improved locations 7−138933
bimorph-driven *x-y-z* translation stage for scanned image microscopy 7−80872
broad-band driving of echographic arrays using 10 ns-500 V efficient pulse generators 7−110734
ceramic composite piezoelecs. for US transducers 7−92605
ceramic hollow cylinder, vibration props. 7−142139
ceramic transducers, spatial field characts. optimisation 7−123427
ceramics, fractured piezoelectric elements for broadband US composite transducers 7−126075
ceramics, piezoelectric charge coeff. and mech. quality factor determ. using electric-line theory *(Japanese)* 7−125617
circuit model of a piezoelectric transformer 7−97251
composite transduces for US diagnostic appls. 7−97252
demountable piezoelectric transducer holder for use at low temperatures 7−102400

piezoelectric transducers continued
force transducers, charge readout algorithm 7−95578
gas flow control system for ion source 7−121293
HF piezoelectric resonators and transducers 7−97254
micrometric positioning appls. *(Italian)* 7−128524
modular ultrasound equipment with piezoceramic transducers for semiconductor structure cleaning 7−75238
modulators, acousto-optic, for single mode fibres, design and performance 7−123188
nonuniformly poled spherical shell piezoelectric transducers 7−110742
optical detection of transient mech. displacements 7−121072
optical fibre switch using piezoelectric actuated evanescent-wave directional fibre coupler 7−82859
phase shift interferometry, effect of piezoelectric transducer nonlinearity 7−108638
piezoceramic acoustic transducers development *(Czech)* 7−90907
piezoceramic transducers, internal defect detection, NDT method 7−95572
piezoceramic-polymer composites for US biomedical transducers 7−92606
piezoresistance gauges, dynamically loaded, resistive hysteresis 7−102398
polarisation state control using linearly birefringent monomode optical fibre and piezoelectric transducers 7−123237
polyvinylidene fluoride, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713
polyvinylidene fluoride, piezoelectric coaxial cable 7−123384
polyvinylidene fluoride, piezoelectric foil electroacoustic transducers, stability 7−130500
polyvinylidene fluoride foils for flow measurements in aerodynamics 7−130799
polyvinylidene fluoride for hydrophone appls., mech. and piezoelec. props. 7−99714
polyvinylidene fluoride piezoelec. transducers for US dosimetry appls. 7−97255
polyvinylidene fluoride piezoelectric foils for measurement of arterial pressure pulse 7−133490
polyvinylidene fluoride piezoelectric sensors for robot gripper control system 7−123377
polyvinylidene fluoride receiving array for US field measurements 7−130492
polyvinylidene fluoride shock wave sensors 7−128557
polyvinylidene fluoride transducer arrays for Braille cell appls. 7−101147
polyvinylidene fluoride US transducers 7−130499
pressure monitor for continuous positive airway pressure systems 7−87348
probes for momentum and kinetic energy of drops meas. 7−123807
PVDF transducers, transient pressure fields 7−123417
range finding and surface characterization using high-frequency air transducers 7−82983
relative humidity measurements using a coated piezoelectric quartz crystal sensor 7−121136
remote-controlled calibration device for displacement transducers 7−80771
representation theorem of H^p functions *(Chinese)* 7−123412
saddle-like bending-mode vibrator device *(Japanese)* 7−68973
sensors and instruments based on new materials 7−121091
soft body contact compliance meas. using piezoelec. transducer *(Japanese)* 7−79105
sonar transducer, radiating flexural shell, FEM analysis of acoustic behaviour 7−117433
stepped horns dimensions effect on vibrator performance *(Chinese)* 7−97248
submillimetre wave resonators, low-mode, for piezoelec. surface excitation of sound 7−110740
ultrasonic piezomagnetic 2-window transducers, resonant freq. design *(Polish)* 7−110744
ultrasound process units design 7−136650
ultrasound technical units, economy improvements 7−75237
US, composite piezoelectric eval. 7−90909
US array design, 3D equivalent circuit for tall parallelepiped piezoelectric 7−123419
US composite transducer calibration 7−123423
US radiation coupling for noncoaxial alignment and unequal size transmitter and receiver *(Japanese)* 7−123409
vinylidene fluoride-trifluoroethylene copolymer thin films, electromech. props., US transducer fabrication 7−117430
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713
wideband underwater transducer arrays with single acoustic matching plate 7−123318
wideband US transmitting transducer with piezoelectric layered ring *(Chinese)* 7−75236
Cu-epoxy one-dimensional composite, acoustic wave transmission 7−123389
$LiNbO_3$ piezoelectric IDT, admittance calcs. *(French)* 7−104121
$LiNbO_3$ plates, ferroelec. domain inversion, appl. to piezoelec. devices 7−125653
PZT ceramic-air composites for hydrostatic sensing 7−99691
PZT flow-through transducers; testing techniques for sonochemistry 7−97247
PZT monolithic multilayer piezoelectric ceramic transducers 7−97253
PZT solid-porous-solid sandwich composite broadband US transducer 7−90910
PZT-epoxy composites for US transducer appls., acoustic props. 7−98359
PZT-polymer composite piezoelec. materials for medical US imaging transducers 7−99690
$PbTiO_3$-based piezoceramics, processing and transducer appls. 7−99721
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$-$PbTiO_3$ ceramic electrostrictors for micropositioner appls. 7−99722
Si piezoresistive absolute pressure sensor, design and realisation *(Slovenian)* 7−80764
Si spacecraft solar cell US welding equipment 7−144843
ZnO bulk wave transducer struct. for acousto-optic phase modulation of single-mode fibres 7−123390
ZnO multilayer thin film acoustic transducers for microwave freqs. 7−123420
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984

piezoelectricity
see also electrostriction; piezoelectric devices; piezoelectric materials; piezoelectric oscillations
Bleustein-Gulyaev wave diffr. at periodic struct. of shallow grooves of piezoelec. Cryst. 7−76584
Bleustein-Gulyaev wave diffr. by piezoelec. cryst. surface imperfections 7−76583
cellulosic materials, piezoelec. response to cantilever bending 7−114310
ceramic composite, effective props. theory 7−77470
composite materials multilayered struct., elastic, piezoelectric and dielectric constants calc. 7−125616
conference, Dresden, Germany, Feb. 1986 *(German)* 7−140475
crystal plates, high freq. vibrations, two-dimensional theory 7−70710
cylinders, piezoceramic, axisymmetric waves, refined theory 7−117521
displacement wave interaction with curvilinear longit. shear cracks in piezoelectric medium 7−75460
ferroelectric applications, conf., Bethlehem, PA, USA (June 1986) 7−88741
ferroelectric ceramics, tetragonally distorted, 90°-domain well relax. 7−125646
ferroelectric domain layer mode, theoretical anal. *(Japanese)* 7−125654
Gulyaev-Bleustein shear SAW in piezoelectric media 7−76587
human tissues and systems as pyroelectric detectors and transducers 7−100864
hydrostatic piezoresistive effect meas. as function of temp., computer-controlled system 7−128596
incommensurate dielectrics, linear cryst. acoustics, piezoelectricity, appl. to $BaMnF_4$ 7−98357
infinite piezoelectric rod, propag. of disturbances by randomly moving heat source 7−83004
ionic crystals with fluorite struct., antipiezoelectricity, macroscopic quadrupole moment distrib. 7−106089
layered piezoelectric-semiconductor structs., nonlinear acoustoelec. effects at high surface wave intensities 7−70055
lossy structs., intrinsic charactn., automatic method 7−99723
multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
negative and infinite stiffness in a system of piezoelec. elements 7−83044
nitrilotriacetic acid monoclinic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
nondestructive inspection methods and development trends 7−100483
phonon imaging, acoustic symmetry 7−118042
photoconducting piezoelectric, acoustic wave excitation during optical recording and erasure *(Japanese)* 7−131246
piecewise-homogeneous structures with piezoceramic matrices 7−99685
piezoelectric-semiconductor struct., acoustoelectric interactions in refl. bulk waves 7−125059
PVDF, structure, piezoelectric props., film development, sensor appl. *(German)* 7−143971
α-quartz, struct., props., energy, crystal chemical modelling 7−83836
quasihydrostatic meas. of piezoelec. coeff. 7−95621
reflected bulk acoustic waves, in piezoelectric/semiconductor structure, amplification and convolution 7−130444
rocks containing quartz, piezoelectric texture rel. to stress state 7−133664
semiconductor-piezoelectric layered struct., acoustoelectronic interactions 7−105629
shells, piezoceramic free vibrations 7−97395
shells, piezoelectric, variational formulation 7−97306
solids of revolution under harmonic loading, problems of thermoelectroviscoelasticity 7−92603
structure anal., three-dimensional finite elements formulation 7−125615
substrate with in-depth direction inhomogeneity, coupled EM-SAW anal. 7−143169
superlattices, dynamics, shear horizontal waves, effective medium approx. 7−105223
tetrahedral crystals, calc. of anharmonic props. by bonding orbital method 7−142873
thermopiezoelectricity, linear, uniqueness theorem, stress discontinuities on layered media surfaces 7−132201
thermopiezoelectricity, linear uniqueness theorem, boundary conditions 7−132200
transverse elastic waves, propagation along symmetry directions 7−105224
zirconium di-alkali metal di(nitrilotriacetate) dihydrate orthorhombic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
α-$AlPO_4$, berlinite, longitudinally vibrating crystal elements, temp. stability 7−125612
$BaMnF_4$ antiferroelec. short range order, microstructural modification and phase transitions 7−85543
$BaTiO_3$ poled ceramics, ferroelec. domain layer mode 7−118962
CdS, quasi-ID semiconducting structs., ohmic mobility, acoustic and piezoelectric phonon scatt. 7−84896
Dy_2S_3, elastic, piezoelectric and piezooptic props. 7−131203
GaAs, quasi-ID semiconducting structs., ohmic mobility, acoustic and piezoelectric phonon scatt. 7−84896
GaAs semiconductor quantum wells, lattice scatt. mobility of 2D electron gas 7−92275
GaAs:Cu, deep Jahn-Teller centres binding two holes, impurity photolum., adiabatic pots. 7−132314
$Gd_2(MoO_4)_3$, acoustical emission by switching 7−132204
Ge, mixed conduction region, press. effects 7−70363
Ge, piezoresistance, mobility anisotropy, deformation potentials of valence band 7−106087
Ge, piezothermoelectric power tensor, symmetry 7−143494
InP, high purity, electron mobility, compensation ratios, FIR magnetoabsorption spectrum 7−118480
p-InSb, low temp. magnetocond., ultrasonic vel. study 7−76984
KH_2PO_4, piezoelectric and pyroelectric effects in KDP family 7−99680
KH_2PO_4, piezoelectric resonator, influence of polarising field 7−99681
$K_{2+x}Li_xPb_{4-x}Nb_{10}O_{30}$ solid soln. ceramic, struct., dielec., piezoelec. and ferroelec. transition props. 7−83880
$La_3Ga_5SiO_{14}$ single crystals, temp. depend. of elastic props. 7−69799
$LiNbO_3$, nonlinear constants determ. *(Japanese)* 7−125618
NH_4Cl, dispersion and spontaneous current phenomena 7−77446
PLZT-silicone rubber porous ceramic composites, dielec. and piezoelec. props. study 7−125587
PZT-type ceramics, piezoelec. props. development anal. 7−125611
$Pb_{1-x}Ba_xNb_2O_6$ ferroelectric tungsten bronze crystals, dielectric and piezoelectric preps. 7−125592
$(PbCaCoWTi)O_3$ ceramics, electromechanical anisotropy mechanisms 7−125614

piezoelectricity continued
$(PbSmTMn)O_3$ ceramics, electromechanical anisotropy mechanisms 7−125614
$(Pb_{1-x}Sr_x)_2NaNb_5O_{15}$ ceramic, piezoelectric props. 7−113083
$PbZr_{1-x}(Fe_{0.5}Nb_{0.5})_xO_3$, piezoceramic solid solns., phase diagram, electrophysical props. 7−85541
Rb_2ZnCl_4, ferroelec., incommensurate phase, permitt., anomalous thermal hysteresis under uniaxial deform. 7−77483
Si, piezothermoelectric power tensor, symmetry 7−143494
Si:B crystalline and polycrystalline films, piezoresistive props. 7−85539
ZnO-Si struct., acoustic layer mode propag., nonlinear electroelastic effect *(Japanese)* 7−124670

piezooptical effects *see piezo-optical effects*

piezoreflectance
metallic thin films, acoustic pulse generation using laser pulses, detect. by transient piezoreflectance meas. 7−111776
Pt complex, $(Pt(en)_2)(Pt(en)_2Cl_2)(ClO_4)_4$, (en=ethylenediamine), 1D band struct., uniaxial stress effects 7−84634

piezoresistance
heterogeneous composites, piezoresistance 7−112328
$Al_xGa_{1-x}As$:Te, uniaxial stress effect on photoconductivity 7−131700
GaAs, electron irrad. defects, elec. and tensoelec. studies 7−111673
p-HgCdMnTe bicrystals, quantum Hall effect and magnetoresistance under hydrostatic press. 7−76977
$Hg_{1-x}Cd_xTe$, voltage depend. plasticity 7−69811
Se, glassy oxygenated, elec. resist., effect of high press. 7−85017
Si, shear piezoresistance coefficients, graphical representation 7−124987
$TaSe_3$, thermoelec. power and elastoresistance 7−84843
Yb foil gauges in fused silica matrix, piezoresist. response under shock loading to 45 kbar 7−69078
$Zr_{1-x}Cu_x$, glassy, strain induced conductivity anisotropy 7−98962
$Zr_{1-x}Ni_x$, glassy, strain induced conductivity anisotropy 7−98962

piezoresistive devices *see piezoelectric devices*

piles (nuclear fission) *see fission reactors*

pinch effect
2T-40M, asymmetric mag. flux generation, m=1 activity, edge phenomena 7−130909
θ pinch device, current sheet, mag. island form. 7−111275
axisymmetric reversed-field pinch configurations with global invariants 7−130902
axisymmetric Z-pinch, 2D electron vortices 7−83510
boundary determination of plasma pinch from mag. meas. data 7−111292
charged particle streams, macroscopic stability 7−69337
collapse and pinch phase of plasma-focus discharge, plasma sheath radiation investig. 7−69439
cool electron beam steady flows 7−130853
current-carrying plasma pinches, necking down of sausages 7−83507
cylindrical pinch, Hall current fluid, MHD eqns. 7−111200
dense Z-pinch as fusion reactor, breeding and radiation damage considerations 7−122204
electron beams, limiting current density 7−142490
electron density profile meas. in Z-pinch by holographic interferometry 7−69312
ETA BETA II reversed field pinch oscills., mag. field profile meas. 7−75789
Eta Beta II RFP, D_2 pellet injector 7−122161
field reversed configuration, fusion plasma physics considerations 7−68009
field reversed configuration parameters, low-freq. stability investig. 7−91358
field-reversed config., lower hybrid drift fluctuations, CO_2 heterodyne scatt. study 7−97732
field-reversed configs., anomalous transport study 7−111183
field-reversed configs., radial transport code 7−123963
field-reversed configuration, magnetic island generation in nonuniform mag. field 7−130903
finite β reversed field pinch, relax. process, simulation study 7−83513
FRX-C field-reversed configs., radial transport code 7−123963
gas-puff implosions, axial nonuniformities meas. 7−97773
HBTX1B torus, design 7−135586
Hiroshima Torus-1, MHD activity and peripheral plasma electrostatic charact. *(Japanese)* 7−137105
Hiroshima Torus-1, reversed field pinch expts., plasma-wall interaction causing impurity activity *(Japanese)* 7−137104
hollow gas-puff z pinch, electron beam preionisation, stability enhancement 7−69375
ideal magnetohydrodynamics book 7−134382
internal magnetic fluctuations in HBTX1A revised field pinch, mag. probe investig. 7−75863
ion-beam and X-ray emission struct. from PF-360 facility 7−69472
JET Tokamak, turbulence, heating, fluctuation meas. 7−111231
linear Z-pinch, multiply charged ion source in $\lambda<0.1$ nm region 7−130922
magnetic field obs. in low press. spark 7−69516
micropinch, high temp. and superdense, radiative collapse model 7−69442
multipoint Thomson scattering system for the EXTRAP Z-pinch experiment 7−111271
OHTE reversed field pinch, operation with graphite walls 7−69406
particle beam fusion and its related problems 7−68003
particle emission and pinch struct., PF discharges 7−69320
pellet injection on the ZT-40M reversed field pinch 7−130915
pellet refuelling of the ZT-40M reversed field pinch 7−123945
pinch phase-thermonuclear reaction, extreme energy conc. in plasma focus devices 7−69437
plasma circuit breakers, double layers form. and growth 7−69372
plasma MHD turbulent shear flows, subgrid modeling 7−83443
plasma parameters determ., IR and FIR laser polarimetry appl. 7−117762
plasma physics, conf., Oxford, England (July 1986) 7−66820
poloidal field appl. in dense plasma focus 7−69436
POSEIDON, plasma focus efficiency improvement diagnostics 7−69434
reflectometry density meas., mode mixing influence in reversed field pinch 7−83423
relativistic Z pinch, macroscopic stability and electromagnetic collapse 7−83525
reversed field config. formation using toroidal magnetic fields *(Korean)* 7−137118
reversed field pinch, current driven drift waves, finite β_e effects 7−111224
reversed field pinch, enhanced dynamo contribution to resistivity 7−123946

pinch effect continued
reversed field pinch, Hall dynamo model 7−75865
reversed field pinch, high valve pinch parameter discharges, MHD activity anal. 7−97783
reversed field pinch, ion press. gradient driven turbulence 7−111232
reversed field pinch, nonlinear coupling effects on relaxation process 7−123941
reversed field pinch, oscillating-current, quasistatic 2D MHD equilibrium calcs. 7−83514
reversed field pinch, turbulence, theory *(Japanese)* 7−142491
reversed field pinch configuration transport, Monte Carlo simulation 7−97786
reversed field pinch operation 7−91377
reversed field pinch plasma, impurity influx enhancement due to dynamo action 7−83512
reversed field pinch plasma diagnostics, beam probing system 7−83546
reversed field pinch STP-3(M), plasma flow 7−123955
reversed field pinch without conducting shell, instability 7−75783
reversed field pinches, current and heat flux, electron density control 7−69409
reversed field pinches, ion temp.-gradient-driven drift mode, field-aligned current effects 7−97785
reversed field pinches, loop voltage model 7−83519
reversed-field pinch, anomalous current penetration and oscill. current drive 7−137114
reversed-field pinch, mag. topology of helical Ohmic steady states 7−91354
reversed-field pinches, MHD equilibr. profile form. 7−137058
RFP, nonresonant current driven mode, nonlinear phenomena 7−97725
RFX, exptl. results, design and construction 7−122088
RFX control and monitoring system, structure 7−122174
RFX linear stability anal., particle simulation 7−142460
RFX magnetic field configuration, field errors 7−135587
sausage instability simulation in Z-pinch at plasma sheath motion stage 7−69351
self-organization and plasma dynamo in a reversed field pinch 7−97776
Separatrix Test Equipment reversed field pinch, mag. field config. 7−75856
soft X-ray measurement from STP-3(M) reversed-field pinch plasma 7−97793
soft X-ray source for X-ray lithography 7−75895
SPEED 1 plasma focus, pinch form. and emission characts. 7−69438
STP-3(M) reversed field pinch, equilibr. study 7−97787
stratification of the anode plasma in a high-current diode with a current pinch 7−83421
thermonuclear neutron emission anisotropy in Z-pinch 7−69441
thermonuclear neutron emission from the inhomogeneous Z-pinch investig. 7−69321
theta pinch, implosion phase, plowed plasma, shift to back of current sheath 7−137113
theta pinch, linear stability anal., particle simulation 7−142460
theta pinch, lower hybrid drift instability, RF suppression 7−97731
theta pinch, poloidally rot. spheromak generation 7−137116
theta pinch high-beta stellarator, equilibr. study 7−142489
TITAN, reversed field pinch reactor, plant design 7−122200
Tokapole II device, reversed toroidal field, equilibr. study 7−123965
toroidal reversed field pinch, stability, equilibrium 7−137106
TPE-1RM15 reversed field pinch experiment, design and construction 7−135588
vacuum spark, low-inductance, spectroscopic source 7−117769
Z pinch, plasma form. and equilibr. 7−137115
Z-pinch, equilibr. states, emission and thermal cond. *(German)* 7−137110
Z-pinch, noncircular, MHD stability, free boundary modes viscous damping 7−97734
Z-pinch and plasma focus research, conf., Warsaw, Poland (Sept. 1985) 7−66828
Z-pinch dynamics in high-current diode investig. 7−69443
Z-pinch equilibria, MHD instabilities at elliptic mag. stagnation line, Hall effect 7−130907
Z-pinch expt., solid D_2 fibre extruder appl. 7−80803
Z-pinch physics, driver influence 7−69445
Z-pinch plasma lens for high energy particle beams 7−103315
Z-pinch theory, appl. to pulse technology 7−69444
Z-pinch with pulsed gas admission 7−137117
Z-pinches, appls., review 7−69429
Z-pinches, m=1 small wavelength modes, press. anisotropy effect 7−104444
ZT-40M reversed-field pinch D and impurity fluxes, collector probe meas. 7−69407
C IV, population inversions in recombining theta-pinch plasma 7−141533
Cu exploding wire, Z pinch prod. diagnostics study 7−123928
D^+ emission from plasma focus discharge, intensity and energy spectrum 7−69473
D-T plasma, steady state solution to a field reversed configuration 7−123942
He Z-inch plasma, CO_2 laser-heated, soft X-ray emission meas. 7−130914
Kr ions, XXIV-XXVII in gas puff Z-pinch 7−96587
Na Z-pinch plasma, spectroscopic anal. for X-ray-laser pumping efficiency 7−117751
Ne discharge, Z-pinch AGAT image-converter camera diagnostics 7−123932
Ne gas puff Z-pinch implosions on Proto-II accelerator investig. 7−69440
Ne II spectral lines in pinch discharge, Stark widths and shifts 7−75885
Ti X, θ-pinch plasma, electron-impact excitation, spectral line intensities study 7−91286

pincushion distortion *see aberrations*

Piobert lines *see Luders bands*

pion-baryon interactions
see also pion-baryon scattering; pion-hyperon interactions; pion-nucleon interactions
$\pi^+\Delta^\circ(\Delta^+)\rightarrow\pi^{++}(\Delta^+)$, reaction mechanism for (π^+,π^-) process 7−116529

pion-baryon scattering
see also pion-baryon interactions; pion-hyperon scattering; pion-nucleon scattering
No entries

pion decay
bag model with broken chiral symm., decay constant calcs. 7−95861

pion decay continued
solar flare, 1982 June 3, origin of pion-decay gamma-ray emission 7−127798
$\pi\to e\nu$, limits on generation mixing for massive neutrinos 7−95893
$\pi\to e\nu/\mu\nu$, branching ratio precision meas. 7−95894
$\pi^0\to\tilde{\gamma}\tilde{\gamma}(\gamma\tilde{\gamma}\tilde{\gamma})$, light photino search, branching ratios 7−116179
$\pi^+\to e^+\nu e^+e^-(e^+\nu\phi)$ 7−95905
$\pi^+\to\mu^+\nu$, search for admixtures of massive neutrinos 7−95892
$\pi^+\to\nu e^+$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
$\pi^0\to e^+e^-$, forbidden processes, interactions beyond standard model 7−95905
$\pi^0\to\lambda_\gamma\bar{\lambda}_\gamma$, branching fraction for missing energy 7−102733

pion-hyperon interactions
see also pion-hyperon scattering
No entries

pion-hyperon scattering
see also pion-baryon interactions
No entries

pion interactions *see meson-meson interactions; pion-baryon interactions; pion-nucleus reactions; pion-pion interactions*

pion-nucleon interactions
see also pion-nucleon scattering; pion-proton interactions
$\pi N\to\eta N$, chiral SU(3) cloudy bag model anal., quark structure identification with N(1535), N(1650), N(1440) 7−95938
$\pi N\to\psi X$, 252 GeV, longitudinal pol. 7−121546
$\pi N\to\rho^-X$, 200 GeV, ρ^- radiative width meas. 7−116177
πN S-wave resonances, cryptoexotic $q^4\bar{q}$ states in compound bag model 7−135149
$\pi N\to S^*X$, structure from nuclear production expts. 7−128919
$\pi^-N\to$ charm, A-dependence of cross-section 7−128916
$\pi^-N\to B\bar{B}X$, cross-section, χ_F distrib. 7−81250
$\pi^-N\to\tilde{g}X$, 350 GeV/c, $\tilde{g}$ production and decay search 7−89529
π^-N in emulsion, 350 GeV/c, double associated prod. of charmed particles 7−81248
π^-N interactions, massive Drell-Yan pairs prod., optimized perturbative QCD 7−81239
$\pi^-N\to\mu^+\mu^-X$, 140, 286 GeV, nuclear effects on nucleon structure functions 7−135123
$\pi^-N\to\mu^+\mu^-X$, 140, 286 GeV, nuclear depend. of P_T distrib. of massive muon pairs 7−135161
$\pi^-N\to\mu^+\mu^-X$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
$\pi^-N\to\rho^0\pi^-X$, direct obs. of $\pi_2(1680)$ 7−121541
$\pi^-N\to X$, kinematic variables and associative multiplicities, correlation characts. 7−95941
$\pi^+N\to\pi^\pm X$, 5-5000 TeV, inclusive spectra, Feynman scaling violation, pomeron showers 7−116205
$\pi^\pm N\to\pi^+X$, invariant cross-sections 7−81237

pion-nucleon scattering
see also pion-nucleon interactions; pion-proton scattering
scattering lengths, rel. to pionic H and D 1s level shifts 7−96893
πN, chiral symmetry, unitarity, chiral quark models, free approx., cloudy bag model 7−135150
πN bremsstrahlung and Δ electromagnetic moments, model anal. 7−67651
$\pi N\to\pi N$, spin-$^3/_2$ particle propagator contribs. 7−128901
πN scattering, role of three-body unitarity 7−67652
πN scattering, σ-term interpretation, S-wave scatt. length and range parameter 7−135151
πN scattering lengths, s-wave parameters 7−81236

pion-nucleus reactions
for inelastic pion-nucleus scattering, see "pion-nucleus scattering"
see also pion-nucleon interactions
high energy cosmic rays, hadronic component, inelastic cross sections, cascade model 7−116524
isoscalar pion-nucleus interaction from pionic atoms 7−81451
nuclear matter equation of state, determ, from pion yield data, ID shock wave model 7−109088
nuclear structure probe 7−121964
strong interactions and optical pot. construction, appl. of pionic atoms 7−110146
$(\pi,3\pi)$, 40 GeV/c, phase shifts, partial nuclear amplitudes, inelastic-screening effects 7−116525
(π^-,α^3HeX), α-, ^{3}He multiplicities, comparison with (p,α^3HeX) data 7−109179
(π,γ), sum rule anal. for 1p shell nuclei 7−102919
(π^-,γ), light nuclei, capture from mesic atoms, current algebra model 7−121954
$(\pi^\pm,p)$ 120,145 MeV, on A=12-58, discrete final state excitation, diff. cross sections. 7−96115
(π^-,π^0), delta production on complex nuclei 7−109236
(π^+,π^-), delta-hole approach 7−135373
$(\pi^\pm,\pi^\mp)$, mass depend. of double charge exchange on A=44-118 7−81453
$(\pi^-,\pi^-\pi^0)$, 40 GeV, $\gamma\to3\pi$ chiral anomaly study 7−116522
$(\pi^+,\pi^+\pi^-)$, on semimagic even-even nuclei, shell model calcs. 7−135377
(π,X), light nuclei, Δ_{33} resonance region, reaction mechanisms 7−135374
(π,X), many-body absorption processes in Δ isobar region 7−109240
(π,X), optical potential, density matrix dependence of Pauli corrections *(Chinese)* 7−102917
(π^-,X), 340 GeV/c emulsion interactions, cluster formation 7−121955
(π^-,X), correlations of cumulative protons and deuterons, azimuthal correls. 7−67842
$(\pi^\pm,X)$, 60, 65 MeV, on A=12-90, total reaction cross sections, use in optical anals. 7−121960
$(\pi\to,\pi^0)$, giant resonance isospin energy splittings in hydrodynamic model 7−135289
π^- absorption, α-cluster absorptions 7−129113
$Ag(\pi^-,\pi^-p)$, 170 MeV, integrated cross section, angular distribs., energy and momentum spectra, nucleon charge exchange *(German)* 7−129114
$^{197}Au(\pi,X)$, 100, 180, 300 MeV, spallation recoil meas., two-step velocity vector model comparisons 7−121957
$^{197}Au(\pi,f)$, fission fragments, light charged particle spectrum meas., cross-sections 7−67883
$Be(\pi^-,\phi X)$, cross section meas. at 85 GeV/c 7−116520
$Br(\pi^-,\pi^-p)$, 170 MeV, integrated cross section, angular distribs., energy and momentum spectra, nucleon charge exchange *(German)* 7−129114
$^{12}C(\pi^-,ppp)$, 5 GeV/c, multibaryon resonance search 7−135379
$^{12}C(\pi^-,\gamma X)$, 4 GeV/c, inclusive characts. of γ-rays 7−67880

pion-nucleus reactions continued
$^{12}C(\pi^-,\gamma)$, capture from mesic atoms, current algebra model 7−121954
$^{12}C(\pi^+,K^+)$, hypernuclear state production, cross section calcs. 7−67879
$^{12}C(\pi^+,3p)X$, E=355,375,405 MeV/c, $\Delta(1232)$ region, proton spectra, quasi-free scatt. broad structure 7−135375
$^{12}C(\pi^+,\pi^-)$, 50-120 MeV, excitation function and ang. distrib. for double charge exchange 7−96116
$^{14}C(\pi^+,\pi^-)$, 50 MeV, pionic atom search 7−109241
$^{14}C(\pi^+,\pi^-)^{14}O$, impulse approx. model 7−129110
$^{48}Ca(\pi^+,\pi^-)$ double isobaric analog state transition, cross section meas., and optical pot. comparison 7−81458
$C(\pi,X)$, 5 GeV/c, noninvariant distributions, longitudinal and transverse momenta, scaling in the mean 7−116523
$C(\pi,X)$, pseudorapidity meas. and fireball model 7−96058
$C(\pi^-,X)$, four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203
$C(\pi^-,X)$, kinematic variables and associative multiplicities, correlation characts. 7−95941
$C(\pi,2\pi)$, multistep processes 7−96118
$C(\pi,xp)$, search for Δ bound states 7−81454
$Cu(\pi,X)$, pseudorapidity meas. and fireball model 7−96058
$^{56}Fe(\pi^+,K^+)$, hypernuclear state production, cross section calcs. 7−67879
$^{56}Fe(\pi^+,\pi^-)^{56}Ni$, forward angle cross sections 7−109239
$^2H(\pi,X)$, 0 to 300 MeV, coupled nucleon-nucleon system, low-type eqns. 7−81450
$^2H(\pi,np)$, vector anal. power calc. near 3,3 resonance, relativistic Fadeev theory anal. 7−121956
$^2H(\pi^-,\mu^+\mu^-X)$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
$^2H(\pi^-,\gamma nn)$, charge asymmetry and nn scatt. parameters 7−129111
^3He, π absorption on 3 nucleons, doorway model with πNN intermediate resonance 7−116521
$^3He(\pi,\pi'p)X$, quasi-free scattering and multistep processes cross section meas. 7−81452
$^3He(\pi,X)$, few-body system study 7−67876
$^3He(\pi^-,\eta)^3H$, 680 MeV/c, η-meson prod. cross section 7−89583
$^3He(\pi^-,\gamma)$, capture from mesic atoms, current algebra model 7−121954
$^3He(\pi^\pm,X)$, 3-nucleon absorption 7−121962
$^3He(\pi^\pm,X)$, >65 MeV, quasi-free π absorption, reaction mechs. 7−121961
$^4He(\pi^-,\pi^+)4n$, tetraneutron bound state 7−73799
$^AHe(\pi,X)$, A=3,4, intermediate energies, theoretical and exptl. review 7−109234
$He(\pi,X)$, Los Alamos expts. 7−67820
$He(\pi,dN)N$, quasifree-nucleon absorption mode obs. 7−96117
$^{165}Ho(\pi,f)$, fission fragments, light charged particle spectrum meas., cross-sections 7−67883
$^{165}Ho(\pi^+,\pi^0)$, isobaric analog state excitation 7−81455
$H(\pi,X)$, Los Alamos expts. 7−67820
$^6Li(\pi,\pi d)X$, triple differential cross-section meas. 7−96120
$^6Li(\pi^-,\gamma)$, capture from mesic atoms, current algebra model 7−121954
$^7Li(\pi^+,e^+p)^6Li$, 380 MeV, cross section, nucleon-cluster, shell model calcs. 7−121959
$^{14}N(\pi^-,\gamma)$, capture from mesic atoms, current algebra model 7−121954
$^AO(\pi^+,\pi^-)$, A=16, 18, energy depend. of ang. distrib. 7−102918
$^{16}O(\pi^+,\pi^+\pi^-)$, 280 MeV, energy- and angle-integrated cross section, coincidence meas. 7−135378
$^{16}O(\pi^+,\pi^+\pi^-)$, shell model amplitude calcs. 7−135377
$^{16}O(\pi^+,2p)^{14}N$, 60 MeV, quasi-deuteron mechanism, distorted wave calcs. 7−67877
$^{16}O(\pi^+,2p)^{14}N$, spectroscopic aspects 7−96121
$^{208}Pb(\pi^+,K^+)$, hypernuclear state production, cross section calcs. 7−67879
$Pb(\pi,X)$, fission fragments, light charged particle spectrum meas., cross-sections 7−67883
$Pb(\pi,X)$, pseudorapidity meas. and fireball model 7−96058
(π^+,π^-), $\pi^+\Delta^0(\Delta^+)\to\pi^{++}(\Delta^+)$ reaction mechanism study 7−116529
$U(\pi,f)$, fission fragments, light charged particle spectrum meas., cross-sections 7−67883
$W(\pi^-,\mu^+\mu^-X)$, nuclear effects in high mass Drell-Yan pair prod., parton model 7−135157
$^{132}Xe(\pi^-,X)$, 3-5 GeV/c $\pi^\circ\pi^\circ$ interference obs., pion emission volume size 7−116528
$Xe(\pi,X)$, 2.34-9 GeV/c, nucleon emission intensity, reaction mech. 7−116526

pion-nucleus scattering
see also pion-nucleon scattering
$^2H(\pi,\pi)$, 134 MeV, tensor observables meas. in elastic scatt. 7−121963
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
crossing symmetric self-consistent πN t matrix 7−81457
nuclear structure probe 7−121964
spin excitation modes, expt. and theoretical predictions, review 7−73745
(π,π'), resonance region study 7−109132
(π,π'), well-deformed nuclei, eikonal and π-nucleus optical model calcs., inclusion of virtual excitations *(Chinese)* 7−102857
$^ASi(\pi,\pi')$, A=28, 30, 50 MeV, diff. cross sections, angular distrib., optical model anal. 7−67878
$^{12}C(X,X')$, X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844
$^{12}C(\pi,\pi')$, 100-291 meV, diff. cross sections, ang. distribs., DWIA anal. 7−121958
$^{12}C(\pi,\pi\gamma)^{12}C$, angular correlations in Δ-resonance region 7−96119
$^{12}C(\pi^+,\pi^+)$, excitation function meas., optical model calcs. 7−109238
$^{13}C(\pi,\pi')$, $2\hbar\omega$ structure in ^{13}C, anal. using inelastic scatt. 7−116392
$^{52}Cr(\pi,\pi)$, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
$^AFe(\pi,\pi)$, A=54, 56, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
$^2H(\pi,\pi)$, 0 to 300 MeV, coupled nucleon-nucleon system, low-type eqns. 7−81450
$^2H(\pi,\pi)$, coupled channel quasipotential model, string energy dependence of anal. power 7−81225
$^2H(\pi,\pi)$, few-body system study 7−67876
$^2H(\pi,\pi)$, relativistic Faddeev theory of πNN system 7−121754
$^2H(\pi,\pi)$ discrepancies resolution using short range ΔN interaction 7−102809
$^2H(\pi^-,\pi^-)$, 1.75-3.1 GeV/c, backward scatt., differential cross section 7−96114

pion-nucleus scattering continued
^{3}He (π,π), 20-65 MeV, diff. cross section and anal. powers from microscopic wavefunctions 7−129108
^{3}He(π, π')X, quasi-free scattering and multistep processes cross section meas. 7−81452
^{4}He(π,π'), 180 MeV, nuclear isospin mixing in ^{4}He 7−116382
^{A}He(π, $\pi(\pi^-)$), intermediate energies, theoretical and exptl. review 7−109234
^{A}He(π,π), A = 3,4, cross sections and ang. distrib., 300-475 MeV 7−109235
He(π,π), Los Alamos expts. 7−67820
H(π,π), Los Alamos expts. 7−67820
^{39}K($\pi^{\pm}$, $\pi^{\pm}$'), 180 MeV, n and p contribs. to excited states, ang. distribs. 7−116527
^{39}K($\pi^{\pm}$,$\pi^{\pm}$)^{39}K, inelastic scatt., neutron and proton matrix elements for transitions 7−129112
^{26}Mg(π, π'), cross sections and matrix elements for 2^+ transitions 7−81333
^{22}Ne(π, π'), cross sections and matrix elements for 2^+ transitions 7−81333
^{58}Ni(π,π), pionic atom anomalies study using optical pot. 7−102921
^{16}O($_1\pi^+,\pi^+$)^{16}O, excitation function meas., optical model calcs. 7−109238
^{18}O(π, π'), cross sections and matrix elements for 2^+ transitions 7−81333
^{18}O(π,π'), DWIA and coupled channels anal. using shell model transition densities 7−102920
^{208}Pb (X,X'), X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844
(π,π'), pion physics at the meson factories 7−89856
^{34}S(π, π'), cross sections and matrix elements for 2^+ transitions 7−81333
^{30}Si(π, π'), cross sections and matrix elements for 2^+ transitions 7−81333
^{152}Sm(π,π'), 180 MeV, eikonal and π-nucleus optical model anal., exptl. comparisons *(Chinese)* 7−102857
^{118}Sn(π,π')^{118}Sn, collective excitations, neutron-proton transition compositions 7−109237
^{A}Ti(π, π), A=48, 50, multipole matrix elements and differential cross section meas., DWIA anal. 7−81456
^{90}Zr(π,π')^{90}Zr, collective excitations, neutron-proton transition compositions 7−109237

pion-pion interactions
see also pion-pion scattering
No entries

pion-pion scattering
see also pion-pion interactions
$\pi\pi$ scattering, Chiral lagrangians, predictive power; renormalisation effects, quark and baryon loop duality 7−134976
$\pi\pi$ scattering, ρ wave amplitude calcs. in pion form factor model 7−67634

pion production
Bose-Einstein correlations, Monte Carlo methods for event generation 7−102707
heavy ion collisions, intermediate/high energies, EM processes 7−116517
heavy-ion reaction model with friction, pion and photon bremsstrahlung 7−121925
heavy-ion reactions, pion and photon production 7−121951
high energy heavy ion collisions, π reabsorption effect on π spectra 7−81436
large p_T π photoproduction processes, higher-twist contrib. extraction 7−128903
momenta difference, angular distribution for identical pions, source region shape 7−116138
multiparticle production in high energy collisions, massless pions and pion condensation 7−89524
nucleus-nucleus collisions at high energy, pion prod. and nucl. eqn. of state 7−121923
photoproduction from a baryon unitary theory in chiral bag model 7−121520
photoproduction in Δ-channel, dynamical model 7−128900
relativistic heavy ion collisions, π emission, deconfinement transition, hydrodynamical eqns. 7−141063
solar flare, 1982 June 3, origin of pion-decay gamma-ray emission 7−127798
$A^-_2(1320)\rightarrow\eta\pi^-$ ($\eta\rightarrow\gamma\gamma$), exptl. search, π^-p,0.5-3.5 GeV/c study 7−140929
(α,πX), GeV energies, differences between proton, neutron nuclear distns. 7−67814
$C(1480)\rightarrow\phi\pi^0$, mass and width determ., π^-p→Cn, 32.5 GeV meas. 7−89498
^{12}C(γ,π^0), 138-146 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
$D\rightarrow\eta\pi\pi$, meson spectrum, s$\bar{s}$-dominant quark composition 7−135111
$D\rightarrow K\bar{K}\pi$, meson spectrum, s$\bar{s}$-dominant quark composition 7−135111
$D^0\rightarrow K^-\pi^+$, lifetime meas. at $\sqrt{s}$ = 10.58 GeV 7−121498
$D^+\rightarrow K^-\pi^+\pi^+$, lifetime meas. at $\sqrt{s}$ = 10.58 GeV 7−121498
$D_s^+\rightarrow 0\pi^+$, lifetime meas. at $\sqrt{s}$ = 10.58 GeV 7−121498
$E\rightarrow K\bar{K}\pi$, meson spectrum, s$\bar{s}$-dominant quark composition 7−135111
$e^-e^+\rightarrow\pi^+\pi^-$, inelastic effects and $\rho'(1250)$ inequivalence, form factor anal. 7−121522
$e^+e^-\rightarrow\omega\rightarrow\pi^+\pi^-\pi^0$, ω-meson total width meas 7−89512
$e^+e^-\rightarrow\pi^+\pi^-$, $\rho'(1250)$, $\rho''(1600)$ anal. using pion form factor model 7−67634
$ep\rightarrow e'n\pi^+$, π^+ threshold prod. study *(French)* 7−81212
ep→eπeX, energy losses, angular distributions 7−81209
eπ→eπX, energy losses, angular distributions 7−81209
$\eta(\eta')\rightarrow\pi^+\pi^-\gamma$, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$f(1270)\rightarrow\pi^+\pi^-$, branching ratio meas., polarization structure 7−89508
$\gamma\rightarrow 3\pi$, chiral anomaly study for ($\pi^-,\pi^-\pi^0$), 40 GeV, coupling constant meas. 7−116522
$\gamma\rightarrow\pi^+\pi^-\pi^0$, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$\gamma\gamma\rightarrow\pi^+\pi^-$, pion pair production and yield near threshold at DCI collider 7−128929
$\gamma\gamma\rightarrow\pi\pi$, low energy cross section, QED Born amplitude comparison 7−89536
$\gamma\gamma\rightarrow\pi\pi$, low energy cross section and QED Born amplitude 7−116208
$\gamma N\rightarrow\pi N$, spin-$^3/_2$ particle propagator contribs. 7−128901
$\gamma N\rightarrow\pi N$, u-channel $\Delta(1232)$ exchange model with crossing symm. 7−135140
$\gamma N\rightarrow\pi X$, chiral bag model anal. 7−128902

pion production continued
(K^-,π^+), Σ-hypernuclear production, resonant and quasi-free mechanisms, shell model anal. 7−129109
$K\rightarrow 3\pi$, CP violation in Kobayashi-Maskawa model 7−128882
$K_s\rightarrow\pi\pi_L$, chiral bag model anal. 7−108916
$K^0\rightarrow\pi^+\pi^-$, $\Delta S=1$, lattice weak matrix element calcs. 7−128881
$K^0_L\rightarrow\pi^+\pi^-\pi^0$, CP violation study 7−102738
$K^+\rightarrow\pi^+\pi^0\gamma$, six-quark Kobayashi-Maskawa model of CP violation 7−135110
K_{e4}, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$K^-p\rightarrow\bar{K}^0\pi^+\pi^-n$, strange meson resonances obs. 7−135153
$K^-p\rightarrow\Lambda\gamma\pi^0$, kaonic atom decay, polarized Λ production 7−89519
$K^+p\rightarrow X$, inclusive π^0 production, interpretation in terms of quark-parton models 7−102779
^{6}Li(γ,π^0), 138.5-146.5 MeV, total cross sections near threshold, calcs. using plane-wave impulse approx. *(German)* 7−129020
(N,πX), GeV energies, differences between proton, neutron nuclear distns. 7−67814
(N,X) interaction at 70 GeV, pion energy distrib., fireball states 7−129030
$NN\rightarrow NN(\pi d)(\pi NN)$, intermediate energies, effects of πd channel coupling on other channels 7−67643
$np\rightarrow\pi^-pp_s$, differential and total cross-sections 7−95935
$\nu p\rightarrow\mu^-p\pi^+$, angular distribution in neutrino-induced single pion production processes 7−102752
$\bar{\nu}p\rightarrow\mu^+p\pi^-$, angular distribution in neutrino-induced single pion production processes 7−102752
(p,π^-), high spin states, anal. using (p,π^-) in sd-shell nuclei 7−67693
$\tilde{p}(\bar{q}qg)\rightarrow\rho\pi,K^*K,\pi\gamma,\eta\pi,\eta'\pi$, QCD sum rule anal. 7−95855
pN→πX, 300 GeV/c, low momenta (<220 MeV/c) π-yield meas. 7−102769
$\bar{p}p\rightarrow 2\pi^0(\pi^0\gamma)(2\gamma)$, branching ratio determ. 7−102766
$\tilde{p}p$ (pp), higher twist subprocess testing, contribs. to cross sections 7−128910
$\bar{p}p$ collisions, E=24.3 GeV, π^0 and η inclusive production cross sections 7−128917
$pp\rightarrow d\pi^+(pp\pi^0)$, s-wave πN-amplitude, threshold pion formation 7−81230
$pp\rightarrow\gamma\gamma$, $\pi^0\pi^0$, cross sections, perturbative QCD anal. 7−89532
$pp\rightarrow pp\ K_L^0K_L^{\pm}\pi^{\mp}$, centrally produced, spin-parity anal. 7−81242
$pp\rightarrow pp\ K_L^0K^-\pi^+\pi^-$, centrally produced, cross-sections 7−81243
$\bar{p}p\rightarrow p\pi^+n$, density-matrix elements and single-spin correlations 7−81228
$pp\rightarrow\pi^-K^-pX$ (π^+K^+pX), cross section meas., parton model comparison 7−108945
$pp\rightarrow\pi^0X$, 300 GeV/c, cross section meas. at large transverse momentum, parton-model comparisons 7−116201
$\bar{p}p\rightarrow\pi^+\pi^-$, 158-275 MeV/c, total cross section meas. 7−135146
$pp\rightarrow\pi X$, 360 GeV/c, inclusive pion distributions, model comparisons 7−140966
$\bar{p}p\rightarrow\pi X$, N mass determ. from temperatures 7−95920
$\bar{p}p\rightarrow$Vo pairs, strange particle correlations study for K_s^0, Λ and π prod. 7−140964
$pp\rightarrow X$, inclusive π^0 production, interpretation in terms of quark-parton models 7−102779
($\pi^-,\pi^-\pi^0$), 40 GeV, $\gamma\rightarrow 3\pi$ chiral anomaly study 7−116522
$\pi^-N\rightarrow\rho^0\pi^-X$, direct obs. of $\pi_2(1680)$ 7−121541
$\pi^+\Omega^-$(bound state)$\rightarrow\Lambda^0K^-\pi^+$, Coulomb disintegration cross section, decay rate calcs. *(Chinese)* 7−102785
$\pi p\rightarrow\pi^0X$, 300 GeV/c, cross section meas. at large transverse momentum, parton-model comparisons 7−116201
π^-p, 0.5-3.5 GeV/c, $A_2^-(1320)\rightarrow\eta\pi^-$ ($\eta\rightarrow\gamma\gamma$) search 7−140929
π^-p, 360 GeV/c, inclusive π^0 and η^0 prod., cross sections ratio 7−95955
$\pi^-p\rightarrow\pi X$, 5 GeV/c, positive π correlations in multiple prod. 7−95940
$\pi^+p\rightarrow\pi^+K^+K^-\pi^+\pi^-p$, centrally produced, cross-sections 7−81243
$\pi^+p\rightarrow\pi^+p\ K_L^0\ K_L^0\pi^+\pi^-$, centrally produced, spin-parity anal. 7−81242
$\pi^+p\rightarrow\pi^+\pi^+\pi^-\pi^0p$, 16 GeV/c, g(1729) production, cross section, mass, width determ. 7−67664
$\pi^+p\rightarrow X$, inclusive π^0 production, interpretation in terms of quark-parton models 7−102779
$\pi\pi$ final states, Bose-Einstein correlations 7−102763
$\psi\rightarrow\gamma\pi^+\pi^-$, branching ratio meas. 7−89508
$\psi\rightarrow\omega\pi^+\pi^-$, theoretical approach to enhancement at low $\pi\pi$ masses 7−95899
$\rho\rightarrow 2\pi$, width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
$\tau\rightarrow 5\pi^{\pm}+\pi^0\nu_\tau$, branching ratio meas. 7−108919
$\tau\rightarrow 5\pi^{\pm}\nu_\tau$, branching ratio meas. 7−108919
$\tau\rightarrow 7\pi^{\pm}+\nu_\tau n\gamma$, branching ratio meas. 7−108919
$\tau^+\rightarrow\pi^-\nu_\tau$, $K^-\nu_\tau$, sensitivity to mirror-lepton mixing, anal. 7−116169
$\tau^+\rightarrow\pi^+\eta\bar{\nu}_\tau$, branching ratio meas. 7−95904
$\theta(1720)\rightarrow\pi^+\pi^-$, branching ratio meas., $\theta(1720)$ spin determ., polarization structure 7−89508
$\Upsilon(2S)\rightarrow\Upsilon(1S)\pi^+\pi^-(\mu^+\mu^-)(\eta)$, branching ratio meas. 7−140930
(^{12}C,X), on emulsion, pion and proton production in forward and backward hemisphere 7−135350
^{12}C(α,π), 200, 400, 600, 800 A.MeV, $\pi^{\pm}$ multiplicity meas. 7−116451
^{12}C(γ,π^0), 130-155 MeV, near threshold prod. cross section meas. 7−121798
^{13}C(γ,π^-)^{13}N, axial current form factor in the time-like region 7−109142
C(n,X), 4.2 GeV/c, secondary π^- average multiplicities, momenta and ang. characts. 7−67841
^{69}Cu(α,π), 200, 400, 600, 800 A.MeV, $\pi^{\pm}$ multiplicity meas. 7−116451
^{2}H(d,π^0)^{4}He, 0.8 GeV, charge symmetry breaking cross sections 7−109191
^{2}H(γ,π^0)^{2}H, 500-800 MeV, differential cross section, double scattering, dibaryon resonance contribution 7−141040
^{2}H(p,π^+), coherent prod., three-body mechanisms 7−141047
^{139}La(^{139}La,πX), 138, 183, 246 MeV/nucleon, energy and angular depend. meas. 7−109222
NN→πd, inelastic threshold effects, coupled channel quasipotential model 7−81225
^{14}N(γ,π^+), Cohen-Kurath wave functions anal. 7−67807
^{16}O($\gamma,\pi^{\pm}$), 200-350 MeV, π spectra and cross section determ. 7−129016
^{208}Pb(α,π), 200, 400, 600, 800 A.MeV, $\pi^{\pm}$ multiplicity meas. 7−116451
Ta(n,X), 4.2 GeV/c, secondary π^- average multiplicities, momenta and ang. characts. 7−67841
^{232}Th(^{16}O,X), 95 MeV/nucleon, subthreshold pion prod. study 7−81447

pion-proton inclusive interactions
$\pi p\rightarrow X$, exotic baryon resonance prod. 7−95881

pion-proton inclusive interactions continued
$\pi p \rightarrow X$, single-particle spectra in soft hadron-hadron interactions and two-component cascade model 7−102780
$\pi^- p$, 360 GeV/c, inclusive π^0 and η^0 prod., cross sections ratio 7−95955
$\pi^- p \rightarrow D^0 X$, inclusive cross section meas. 7−95953
$\pi^- p \rightarrow \pi^0 X$, cross section meas. in high x region 7−67670
$\pi^- p \rightarrow \pi X$, 5 GeV/c, positive π correlations in multiple prod. 7−95940
$\pi^- p \rightarrow X$, four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203
$\pi^+ p \rightarrow \pi^+ p X^0$, baryon-antibaryon pair prod. in central region at 85 GeV/c 7−108946
$\pi^+ p \rightarrow X$, inclusive π^0 production, interpretation in terms of quark-parton models 7−102779

pion-proton interactions
see also pion-proton inclusive interactions; pion-proton scattering
G(1590) scalar resonance, exotic nature, hadronic decays, mass spectra in $\pi^- p$ and $K^- p$ 7−116166
$\pi p \rightarrow \pi^0 X$, 300 GeV/c, cross section meas. at large transverse momentum, parton-model comparisons 7−116201
$\pi^- p$, 0.5-3.5 GeV/c, $A_2^-(1320) \rightarrow \eta\pi^-$ ($\eta \rightarrow \gamma\gamma$) search 7−140929
$\pi^- p \rightarrow 0^{++}$ (1750)$\rightarrow\eta\eta$, 38 GeV/c obs. 7−81238
$\pi^- p \rightarrow a_2 N$, production enhancement 7−81234
$\pi^- p \rightarrow C(1480)n$, $C \rightarrow \phi\pi^0$, 32.5 GeV, cross section, mass and width determ. 7−89498
$\pi^- p \rightarrow \eta(\eta')n$, 8.06 GeV, differential cross sections *(Japanese)* 7−89518
$\pi^- p \rightarrow \eta n$, $\sqrt{s}<1600$ MeV, polarisation calc., πN phase shift anals. 7−95958
$\pi^- \vec{p} \rightarrow \eta n$, polarization parameter meas. at 40 GeV/c 7−108939
$\pi^- p \rightarrow \gamma X$, 300 GeV/c, cross section, rapidity distrib. meas. 7−116200
$\pi^- p \rightarrow \pi^- p\gamma$, 300 MeV/c, cross section meas. 7−67650
$\pi^- p \rightarrow \pi^- p\gamma$, amplitude anal. 7−67649
$\pi^- p \rightarrow \pi^0 n$, charge exchange reactions, up to 200 GeV/c, modified coherent drop model 7−128914
$\pi^- p \rightarrow \pi^0 n$, precision meas. of $\pi^- \cdot \pi^0$ mass difference 7−95939
$\pi^+ p$, 250 GeV/c, rapidity dependence of multiplicities 7−67665
$\pi^+ p \rightarrow \gamma X$, 300 GeV/c, cross section meas. 7−116200
$\pi^+ p \rightarrow \pi^+ K^+ K^- \pi^+ \pi^- p$, centrally produced, cross-sections 7−81243
$\pi^+ p \rightarrow \pi^+ p\, K_1^0\, K^\pm \pi^\mp$, centrally produced, spin-parity anal. 7−81242
$\pi^+ p \rightarrow \pi^+ \pi^+ \pi^- \pi^0 p$, 16 GeV/c, g(1729) production, cross section, mass, width determ. 7−67664
$\pi^+ p \rightarrow X$, search for anomalous particles in high-energy hadron-proton interactions 7−102776

pion-proton scattering
see also pion-proton interactions
$\pi^- p \rightarrow \pi^- p$, backward scatt. at 8 at 12 GeV/c 7−67642
$\pi^- p \rightarrow \pi^- p$, elastic scatt., differential cross-section meas. 7−81235
$\pi^+ p$ elastic cross section meas. at 250 GeV/c 7−73670
$\pi^+ p \rightarrow \pi^+ p$, elastic scatt., differential cross-section meas. 7−81235
$\bar{\Pi} p$ elastic scatt., 200 GeV/c, form factor, Chou-Yang model error 7−116194

pion scattering *see meson-meson scattering; pion-baryon scattering; pion-nucleus scattering; pion-pion scattering*

pions
ϵ'/ϵ isospin breaking contribs., π^0-η-η' mixing and QED Penguin operators 7−116106
π lagrangian and skyrmion masses 7−116088
baryon self energies due to pion-quark coupling 7−102680
chiral and fluid dynamics, pion field description, Dirac sea quark distrib. fn. 7−128965
chiral SU(6)⊗SU(6) symmetry breaking and the pseudoscalar meson masses 7−81059
distribution amplitude, lattice calcs. of the second moment 7−95832
finite temperature changes of π and σ characters in QCD 7−73603
form factor in instanton-vacuum model, structure function, spontaneous chiral invariance breaking 7−116175
glueball condensate vacuum, dynamical pions and kaons, time independent/dependent fields, massive quarks 7−128836
glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
lattice QCD, topological excitation, U(1) problem, quark and meson propagators, Atiyah-Singer index 7−121444
mass formula calc. in lattice gauge theory 7−116042
neutron stars, supernova, hyperon and pion role, neutron star matter eqn. of state 7−127939
QCD, pion effective Lagrangian and soliton physics 7−89431
relativistic constituent quark model, distribution amplitude 7−95839
π electromagnetic form factor meas., root mean square charge radius calcs. 7−67623
π-ρ-ω-A_1 system, baryons as solitons, hedgehog mass, baryon phenomenology 7−73529
π^-, RMS charge radii systematics, values for quark core, Coulomb displacement values 7−116245
π^--π^0 mass difference from $\pi^- p \rightarrow \pi^0 n$ 7−95939
π^- form factor and radius from $\pi^- p$ elastic scatt. data 7−135122

pipe diffusion *see diffusion in solids*

pipe flow
see also channel flow
acoustic flow measurement processes *(German)* 7−97659
active attenuation of noise radiated by small duct outlets 7−117397
air compressible stream in duct, heat transfer effect 7−75543
air flow in flat duct, drag due to perpendicular jets study 7−83341
air-mineral oil system, two-phase downflow, flow patterns 7−91200
air-solid flow through return bends, press. loss study 7−91202
air-water flow in horizontal pipe, press. drop meas. 7−142352
air-water flow patterns, horizontal pipes, pipe diameter effect 7−123755
air-water horizontal two-phase flow, wall press. fluctuations 7−142353
air-water interface in horizontal tube, behaviour after step change of air flow 7−75650
air-water mixture, laminar pipe flow, coupled heat transfer calcs., statistical narrow-band model 7−75562
angular distribution of flux at the exit of cylindrical tubes 7−137012
annular pipe, exact anal. of unsteady convective diffusion 7−83358
attractor dimension for turbulent pipe flow 7−123761
axially rotating pipe, laminarisation of turbulent flow in inlet region 7−91139
boiling front propag. in vertical superheated liq. column 7−98415
boiling of underheated liquid with forced motion study 7−136984
boundary conditions, traction and pressure imposed, in finite element flow anal. 7−108250
boundary layer separation prevention using Prandtl's revised theory in convergent-divergent duct 7−83170
break frequencies downstream of a constriction in a cylindrical tube 7−87058
buoyancy driven flows, 3D, in tilted cylinders, numerical solns., exptl. results 7−117668
capillary annular flows, fluid films instability and breakup 7−75672
capillary flow in circulatory system, wall permeability investig. 7−114312
cellular pattern evolution in mixed convection, bifurcation phenomena 7−83222
chemically nonequilibrium turbulent pipe flow, heat and mass transfer, eigenvalue problem *(Russian)* 7−104357
circular cylinder, unsteady flow of a dusty fluid, flux and drag 7−97632
circular ducts, momentum, energy and mass transfer 7−117671
circular pipe, laminar to turbulent transition, inlet velocity profile effects 7−97492
circular pipe, turbulent flow, algebraic design eqn. for combining, parallel and reverse flow manifolds 7−91227
circular pipe flow, laminar-turbulent transition, turbulent spot growth *(Japanese)* 7−117673
circular pipe flow, time variation of inlet concentration, mass transfer equation 7−75677
circular tube, unsteady flow of a power-law fluid, numerical simulation *(Chinese)* 7−91171
circular tube laminar flow, vel. and temp. distribs., orthogonal collocation method *(Japanese)* 7−83355
circular tube nonsteady turbulent heat transfer calc. allowing for heat flow in wall 7−117607
cocurrent vertical two-phase nonboiling flows, heat transfer 7−123708
collapsible tube, self-excited and resonant oscillation of air flow 7−104349
combined forced and natural convection heat transfer for upward flow in a uniformly heated, vertical pipe 7−69147
compressible fluid, unsteady and transient flow in pipelines, review 7−83343
concentric non-Newtonian fluids stability in circular pipe flow 7−69222
condenser tubes, horizontal, fin spacing and drainage strips effects 7−69268
condensing vapour in tubes, heat transfer 7−136968
conical element system, gas flow, Monte Carlo calcs. 7−117676
conjugate heat transfer in tubes with radiating outer surfaces 7−123629
controlled stress rheometer and pulsatile pipe flow apparatus, combined steady and oscillatory stress mode 7−75720
creeping viscous flow by sphere in circular tube, analytical soln. 7−117675
critical two-phase flow through pipes 7−104343
curved pipe, unsteady viscous flow, Taylor-Gortler instability, WKBJ perturbation soln. 7−142265
curved pipes, fully developed laminar flow 7−130795
cylinders in flow, convective heat transfer, wall effects 7−97514
cylindrical enclosure for gas/soot mixture, radiative and convective transfer 7−111118
cylindrical shells containing fluid flows with developing boundary layer, dynamics investig. 7−142288
developing entrance flow, marching control vol. FEM 7−83338
diffuse layer formation at circular pipe entrance *(French)* 7−142381
diffuser flow, plate control, appl. to electrostatic precipitator design 7−130802
disperse system turbulent liq. flow in pipelines, bubble size study 7−111065
double-pipe heat exchanger coupled to flat-plate solar collector, transient anal. 7−71636
duct flow, appl. of conductometric method, auxiliary electrodes 7−91236
ducts, cross-shaped cross-section, turbulent flow and heat transfer 7−69267
dusty gas flow through metallic/insulating pipes, static electrification study *(French)* 7−142382
eddy viscosity model for near-wall region 7−75532
elastic pipe, curved, pulsatile flow of viscous fluid, blood flow appl. 7−133357
elliptical finned tubes, compact banks, press. loss and mean heat transfer *(Russian)* 7−142308
entropy maximizing principle, appls. to flow regime prediction 7−95528
entry flow in heated curved pipes 7−137006
erythrocytes distribution in microcirculatory cell 7−144996
evaporator tube, heat transfer determ. taking account of 2D heat conduction in tube material *(German)* 7−69177
finned tube bundles, heat transfer during condensation, irrigation density influence 7−83219
flat duct with corrugated, perforated longitudinal baffle, hydraulic drag study 7−83340
flow between coaxial longitudinally corrugated cylinders, heat exchange, waves 7−117670
flow intake acoustic characts. 7−110749
flow network models, computational efficiency and accuracy 7−69266
flow-induced vibrations of a circular cylinder concentrically accommodated in a pipe *(German)* 7−104201
fluid, power-law, abrupt contraction, entrance pressure losses, finite element anal. 7−97635
fluid-containing pipes, stability problem, fluid velocity distribs. effects 7−97636
forced convection heat transfer in doubly connected ducts 7−130686
forced convection heat transfer in smooth tubes roughened by helically coiled ribbons 7−136848
forced convection in heated pipe, boiling crisis 7−136842
free convection of air in horizontal tubes *(Spanish)* 7−83202
freezing, around buried pipe, approx. 3D soln. 7−69875
fully developed, prod. using perforated plates, flowmeter meas. accuracy 7−97655
fully developed flow in a curved pipe of arbitrary curvature ratio 7−123757
gas flow in pipe, calc. method comparison 7−117672
gas flow velocity distrib. meas. system using nonlinear effects of ultrasonics *(Japanese)* 7−142411
gas motion, fluctuating, in small-diameter tubes, time-averaged press. 7−91261
gas suspension in pipe, swirling flow, heat transfer 7−111096
gas-liquid flow in channel with rod bundle, hydraulic resistance, turbulators effect 7−136819
gas-liquid flow through pipe bends 7−111069

pipe flow continued
gas-liquid stratified flow in horizontal pipe, wall and interfacial shear stress 7−91188
gas-particle flow in pipes, mixing length model 7−91203
gas-solid pipe flow, laser anemometry study *(French)* 7−91265
gas/liquid pipe flow, press. drop correl. 7−104330
granular bulk materials flow, noise of granular mass, meas. by acoustic method 7−75221
groundwater filtration flow in pipe drain, approximate soln. *(Russian)* 7−97616
gyratory flow of steady incompressible viscous fluid in circular channel, analytical study *(French)* 7−75590
heat pipes, start-up dynamics from frozen or chilled state 7−142306
heat transfer coefficient evaluation in periodically corrugated channels, num. model 7−117602
heat transfer in hydromagnetic flow in rotating straight pipe 7−137005
heat transfer intensification in duct flow of heat carriers 7−104267
heptane, subcooled boiling and convective heat transfer in annulus 7−69167
heptane, subcooled boiling and convective heat transfer in annulus 7−69168
horizontal, concentric tube annulus, mixed convection heat transfer for transitional flow conditions 7−110953
horizontal flow boiling of pure and mixed refrigerants 7−110957
horizontal heat exchanger tubes, condensate run-off 7−83346
horizontal pipe, critical vel. calc. for maintaining solids in suspension 7−142354
horizontal tube arrays in fluidised beds, local heat transfer coeff. 7−69165
horizontal tube bundles, flow pattern and heat transfer of evaporating two phase flow *(Japanese)* 7−130708
hot-wire technique for simultaneous measurement of instantaneous velocities in 3D flows 7−111132
human blood, tube flow at near zero shear 7−126862
hydrodynamics, student laboratory exercise 7−108113
in-cylinder gas flow, double-spark method meas. *(Japanese)* 7−97666
incompressible flows, two- and three-dimensional, use of simple continuous pressure elements 7−111127
incompressible fluid flow, nonlinear stability study 7−91080
incompressible fluid flow in cylindrical channel, mechanical values, Navier-Stokes eqns. soln. *(Russian)* 7−123766
incompressible pipe flow, matrix methods *(Spanish)* 7−97634
incompressible pulsatile flow of particle suspension in rigid tube, iterative soln. 7−142376
incompressible stabilised turbulent flow through square ducts 7−69113
incompressible stokes eqn. for circular pipe, stationary solns. 7−104350
incompressible turbulent flow, pipe contraction press. loss coeff. 7−130667
internal turbulent flows with longitudinal pressure gradients, heat exchange and friction 7−117598
inverted annular flow film boiling; convective heat-transfer coeffs. study 7−97607
isothermal-walled circular tube, turbulent heat transfer 7−123760
laminar flow, heat transfer in tapered passage 7−83217
laminar flow development in square duct 7−69210
laminar flow in circular triangle cross-section *(German)* 7−123765
laminar flow in curved tube, rectangular cross-section, bifurcation study 7−136792
laminar mixed convection in ducts, nonuniform heating effects, num. study 7−110980
laminar natural convection, between horizontal isothermal concentric cylinders 7−69092
laminar natural convection in nonuniformly heated annular fluid layer 7−130631
liquid entry flow rate stability in tapered leaking elastic tube 7−93789
liquid flow in prismatic tubes convective-diffusion, limiting soln. 7−142378
liquid foams, flowing in pipes, visco-elastic aspects appl. 7−91190
liquid metal film pull-down annular flow by heat flux regulator 7−91222
liquid-gas foams, bubble size distrib. in pipe flow 7−130772
local heat transfer in turbulent flow around pipe bend 7−110973
long pipe with wall friction, expansion wave problem at rupture point 7−111009
magnetic fluids, hydrodynamics, sedimentation, US propag. and pipe flow 7−75685
magnetic fluids, water-based, pipe flow characts. 7−75674
magnetohydrodynamic pipe flow of incompressible viscous electrically conducting fluid, Green's function methods 7−75680
mass accommodation coefficients from penetration measurements in laminar tube flow 7−97626
mass flowmeter using pulsating source and sensitive manometer *(Japanese)* 7−142414
Maxwell fluid, flow through sudden contraction, num. simulation 7−91234
melting around buried pipe, approx. 3D soln. 7−69875
membrane operation, mass transfer under turbulent cross flow 7−86674
methane, explosive vaporisation, discharge from ducts 7−136973
MHD devices, laminar flow in spiral channels model 7−123772
micelles, drag reducing, small angle neutron scatt. expts., conformation 7−69228
mixed convection in cylindrical annuli, laminar flow patterns, num. investig. 7−69146
molecular flow through two tubes with different diameter, transmission probabilities computing 7−137013
multi-phase flow, conf., The Hague, Netherlands (May 1987) 7−95096
multicomponent pipe flow meas., imaging technique 7−130815
multilayer flow, of two immiscible liqs., Poiseuille flow stability, Navier-Stokes eqn. solns. 7−69248
multiphase pipe flow, exptl. study 7−142380
multizone physical vapor transport, thermal and solutal convection, 2D model 7−98017
natural circulation flow in bent loop with U-shaped type cooler, stability anal. 7−83185
natural convection, in stratified fluid between cylinders, flow model investig. 7−117600
natural convection from a uniform heat flux horizontal cylinder at moderate Rayleigh numbers 7−117601
natural convection loop, fluid temp. meas. 7−123631
Navier-Stokes eqns., Reynolds averaged, soln. in general curvilinear coordinates, appl. to vehicular dynamics 7−97483
noise, pipe flow turbulence effects *(German)* 7−82930

pipe flow continued
non-Newtonian fluid flow through coiled tubes, momentum and heat transfer 7−123689
non-Newtonian fluid mechanics, book 7−108067
non-Newtonian fluids, viscous, heat transfer and press. drop in turbulent flow through rectangular passages 7−123691
non-Newtonian turbulent flow in circular ducts. friction factor, explicit eqn. *(German)* 7−104311
non-rigid tubes, unsteady inelastic flows, spectral and expt. approx. *(French)* 7−75678
non-stationary Navier-Stokes equations, numerical soln., viscous incompressible fluid *(German)* 7−123764
nonlinear stability conditions of ideal incompressible liq., functional construction 7−69106
nonlinear viscoelastic fluids through circular pipes, unsteady shear flow 7−75679
nonNewtonian flow through rigid wall tapered tubes, press. losses, blood flow appl. 7−126861
nonNewtonian fluid, laminar flow heat transfer in porous annulus, quasi-linearisation calcs. 7−130747
nonuniformly heated pipe flow, dryout, velocity profile model anal., reactor appl. *(German)* 7−109364
numerical spectral method for flows through anevrisms 7−130623
Oldroyd-type fluid, flow through sinusoidally corrugated tube, boundary element method simulation 7−91175
one-component two-phase bubbly flow, shocks, transient press. profiles 7−75649
opposing vertical pipe flow, linear stability anal. 7−97525
ostwaldian unsteady flow in non-rigid pipe, resolution *(French)* 7−91225
particulate phases in turbulent tube flow, state and transport anal. 7−111082
passive solute dispersion in laminar pipe flow, closure model *(French)* 7−123718
peristaltic flow, entrainment, nonlinear effects 7−69262
peristaltic pipe flow, analytic soln. 7−123759
phosphate schlamms, pipe flow and rheological behaviour charactn. *(French)* 7−75671
pipeline system design and fluid pumping computer programs 7−91226
planar induction pump, two-dimens. flow, numerical model 7−123775
plasticating extruder flow in cylindrical shear gap, anal. and calc. *(German)* 7−142385
polymer solutions, entry flow problem study review 7−91174
polymer solutions, turbulent flow in tubes, friction reduction, mathematical model *(Russian)* 7−97501
polymer solutions, viscoelastic turbulent pipe flows, heat eddy diffusivity 7−97520
power law fluids in circular ducts, laminar flow 7−69096
power transformer cooling radiators, heat-exchange element heat transfer 7−97512
power-law fluid laminar flow in curved pipes, boundary layer approx. 7−75623
power-law fluids, laminar flow in curved pipes anal. 7−75622
pressure pulse propag. in water-filled metal tubes 7−136933
pressure transients in pipelines, centre implicit method appl. 7−91229
pulsatile blood flow through arterioles, vascular deformability effect anal. 7−145126
pulsatile pipe flow, turbulent slug and vel. field in inlet region 7−97633
reciprocating plate columns, axial mixing and scale-up 7−123750
red mud slurry, rheological props. and flow characteristics 7−104347
reflooding, multifield model appl. 7−111117
rod bundles, equiv. annular channel, unsteady-state convective heat transfer study 7−97518
rotating fluid, differentially heated from below, spatial oscills. onset 7−91140
rough circular pipes, laminar flow anal. *(French)* 7−142383
roughness element effects on insulated wall for heat transfer 7−110975
saturated flow boiling in tubes and annuli, general correl. 7−83206
secondary flow for transverse and axial slots, hole press. problem 7−142384
secondary flow pattern in straight tube, visualisation study 7−111134
secondary flow patterns in curved pipe, visualisation study 7−111135
self-averaging Pitot tubes design for flow meas. 7−123799
silicone transducer for gas flow meas. *(Swedish)* 7−83369
single-phase natural circulation in a tilted square loop 7−123630
slurry flow, horizontal pipes 7−123754
slurry pipeline flow, local solid concs., cond. probe meas. 7−97608
small sphere mobility in finite circular cylinder of viscous fluid 7−130794
snap-off of gas bubbles in smoothly constricted noncircular capillaries 7−117669
solid particle-gas system, turbulence, local phenomenological props. 7−83306
solid-liquid systems for transportation of solids, flow behaviour *(German)* 7−83319
solid-liquid two-phase flow, turbulence, laser Doppler velocimeter *(Japanese)* 7−97665
solidification blockage for laminar pipe flow, critical conditions 7−98396
solids, suspended, hydraulic transport in horizontal pipeline, press. gradients calcs. 7−91224
soliton propagation in fluid-filled pipe, mathematical model 7−69271
sound radiation from single and annular stream nozzles, with modal decomposition of in-duct acoustic power 7−75241
square curved, laminar flow of non-Newtonian fluids, resist. coeff. 7−104346
square ducts, turbulent flow parameters study 7−83342
steady entry flow in a curved pipe, laser-Doppler vel. meas. 7−83350
steam, film condensation on horizontal finned tubes, fin spacing effect 7−69169
steam-water coolant circulation loop, pressure loss, coolant props. charge study 7−97599
steam-water stratified flow in horizontal pipe, phase and vel. distrib. 7−91228
straight circular pipe, oscillatory water flow study 7−104345
straight circular pipe, pulsating flow in entrance region 7−117677
stratified cocurrent two-phase flow in horizontal tubes, condensation heat transfer 7−130763
stratified gas-liquid flow, downwardly inclined pipes 7−123756
subcooled liquid, in circular tube, forced turbulent flow film boiling 7−69122
sudden expansion flow in ducts, reattachment region heat transfer 7−110950

pipe flow continued
superconducting magnet DC pump system, magnetohydrodynamic aspects 7−117678
supersonic turbulent flow development in square duct 7−104302
swirling flow effect on flowmeters 7−130806
tapered fluid lines, transient response to press. or flow rate change 7−75669
temperature meas., low-drift cct. for instantaneous, local meas. 7−97654
thermodynamic optimisation of convective heat transfer through duct 7−75558
thermogravitational and thermocapillary convection heat transfer in concentric and eccentric horizontal, cylindrical annuli filled with two immiscible fluids 7−69143
thermohydraulic performance of bundles of twisted oval tubes, operating in crossflow 7−117594
thermosyphon tubes, open and circular, flow visualisation, heat transfer anal. 7−97516
three-dimensional steady streaming in a uniform tube with an oscillating elliptical cross-section 7−91232
three-point-pressure method for measuring the gas-flow rate through a conducting pipe *(Japanese)* 7−142405
toroidal loop, natural convection, Grashof number effect, 3D anal. 7−75551
transient gas flow in pipelines, finite element anal. 7−97630
transient wave propagation in fluid-filled tube 7−104196
transition boundaries, high-viscosity liquids, pipe length effect 7−123704
transition Reynolds number regime heat transfer downstream of abrupt expansion 7−110972
transitional gas flow in circular tube, press. loss and heat transfer 7−110951
tube, arc-shaped turbulence promoters, heat transfer augmentation 7−69120
tube, twisted-tape insert, thermally developing laminar flow, heat transfer anal. 7−75521
tube banks with oval shaped tubes, momentum and heat transport *(German)* 7−69269
tube bundles in cross-flow, heat transfer rate, row number and turbulence intensity influence *(German)* 7−69270
tubes with fixed nonspherical packing, steady-state air flow 7−83328
turbulence fluctuating vels. determ. 7−69126
turbulent, fully developed flow in eccentric annulus momentum and heat transfer 7−69119
turbulent axisymmetric jets flowing into closed tubes, numerical study 7−75644
turbulent bubbly two-phase flow, turbulence struct. and phase distrib. meas. 7−97606
turbulent bursts, spots and slugs in a generalized Ginzburg-Landau equation 7−80428
turbulent duct flow, wall shear stress fluctuations, scaling study 7−69124
turbulent flow, structure parameters, spin effect, radially induced vortices *(German)* 7−123762
turbulent fluids, pipe flow, heat transfer investig. 7−69141
turbulent forced convection duct flow, evaporative mass transfer 7−75549
turbulent jet in confined cocurrent pipe flow 7−136955
turbulent pipe flow, coherent structures 7−130661
turbulent shear duct flow, eddy viscosity models 7−91101
turbulent swirling flow in straight pipe, modified k-ε model 7−91138
turbulent two-component vertical bubbly flow, skin friction and heat transfer anal. 7−97503
turbulent two-phase suspension flow in vertical pipe, flow struct. 7−91198
twisted tubes in heat exchanger, vortex structure of flow 7−83221
two-phase annular mist flow in vertical pipes, mechanistic model 7−130767
two-phase flow, gas-liquid and liquid-solid, in vertical pipe, volumetric fractions of each phase 7−83318
two-phase flow in vertical heated tube, two-dimens. model 7−97603
two-phase flow in vertical heated tubes, two-dimens. model calcs. 7−97604
two-phase mixture unsteady flow in heated duct, appl. to reactor coolant 7−109338
two-phase vertical upward flow patterns, transition criteria study 7−97605
underground pipes, freezing over dynamics 7−145530
unsteady flow in bent pipes, press. losses *(Japanese)* 7−111114
unsteady flow rate and velocity, meas. using differential press. in pipe 7−91267
unsteady flow rate meas., using centreline vel. in circular pipe 7−130809
unsteady mixed convection along a thin long vertical cylinder 7−104261
unsteady thermal entrance heat transfer of laminar duct flows with wall suction and injection 7−111113
US meas., using clamp-on Rayleigh wave transducers 7−123802
vapor flow analysis in a double-walled concentric heat pipe, num. investig. 7−83353
velocity profiles at exit of circular tubes 7−91223
vertical heat pipe, fully-developed flow study 7−97491
viscoelastic fluid, pipe flow, hyperbolicity and flow transition study 7−83351
viscous compressible vapour in thermal tube 7−123669
viscous fluid inside surface of revolution, axisymmetric motion 7−123653
vortex breakdown, spiral type, of swirling flow in pipe, expt. investig. 7−117616
vortices, axisymmetric breakdown in rotating conical pipes 7−75589
wall to liquid mass transfer and hydrodynamics of two-phase Couette-Taylor-Poiseuille flow *(French)* 7−111068
water, boiling heat transfer, N_2 dissolution effect 7−136837
water distribution flow networks, finite-element anal. 7−91060
water-steam (air), two-phase flow in horizontal pipe, press. drop, void fraction 7−91201
well-aquifier system, response to slug testing, numerical solution 7−127291
wet steam flow, unheated horizontal pipes, hydraulic drag eqn. 7−83309
wet steam flow in pipe and annulus, holographic diagnostics 7−136967
wet steam in pipes, nonequilibr. slug flow diagnostics and struct. 7−137004
Ar explosive vaporisation, discharge from ducts 7−136973
$Ar^+ + O_2$, flow tube parameters effect on reaction rate consts. 7−86584
He, supercritical ascending flow in tubes, oscills., heat transfer 7−142305
^{4}He superfluid flowing through narrow channel, temp. distrib. 7−70013
N_2 gas, vibrationally excited, steady pipe flow, kinetic theory 7−136931

pipeline processing
confocal laser scanning microscope data, 3D display using vector representation 7−134848
human vision simulation, super-resolution performance 7−93762
image filtering and enhancement using human perception props. 7−126830
pyramidal pipelines for spatial analysis of geoscience map data, considerations 7−145320
sea floor, geophysical prospecting, pipeline architecture of prediction algorithm 7−101223

pitch detection *see acoustic variables measurement*

PIXE *see ion microprobe analysis; X-ray chemical analysis*

PLA *see integrated logic circuits*

planet Mercury *see Mercury (planet)*

planetaria
planetarium projector, 'Space Voyager' equipment and computer system 7−79853

planetary atmospheres
acoustic gravity waves, nonlin. eqn. 7−82907
Alfven waves in planetary magnetospheres, and space plasmas, analytical model 7−72288
aurora and airglow emissions modelling 7−79857
auroral magnetospheres radio emission 7−79856
bimolecular ion-molecule reactions 7−101676
comparative magnetospheres 7−88154
diffuse reflection problem, radiation transfer in sphere with internal source 7−72272
exospheres, density radial depend., nonlinear Boltzmann equation soln. 7−79858
inverse radiative transfer with delta-Eddington phase function, unknown coefficients estimation 7−72275
Io Alfven wave wake due to movement through magnetosphere 7−72288
Io atmosphere and plasma and neutral torus, volcanic control 7−145871
ion pick-up by solar wind, role of quasi-parallel bow-shock 7−94627
ionospheres of outer planets, review 7−88172
Jupiter, aurora UV emissions observed by Voyager 7−94686
Jupiter, Great Red Spot, isolated eddy or modon models, book contrib. 7−101678
Jupiter, HCN and chromophore form. 7−88174
Jupiter, Io plasma torus electrons, Voyager 1 obs. 7−107742
Jupiter, magnetosheath dayside ion distributions 7−115284
Jupiter, magnetosphere corotating convection model 7−101724
Jupiter, magnetosphere plasma-Io interaction, sputtering by keV ions, appl. to Io-Jupiter magnetospheric plasma interaction 7−120269
Jupiter, magnetospheric particle absorpt. by Io 7−94687
Jupiter, magnetospheric plasma sputtering of Io atm. 7−120301
Jupiter, magnetotail lobes, low-freq. EM radiation polarization 7−107741
Jupiter, mesoscale waves as probe of deep atm. 7−79865
Jupiter, multilayer clouds modelling 7−88169
Jupiter, photographic and visual obs. during 1984 apparition 7−101725
Jupiter, radio-emission at various freq., source extent and solar wind effects 7−127761
Jupiter, standing acoustic waves 7−120302
Jupiter, surface features obs. during 1983 apparition 7−79866
Jupiter, theory of faint features in H_2 $S_0(0)$ line observed by Voyager IRIS mission 7−134173
Jupiter, troposphere, moist convection and H_2O abundance 7−120303
Jupiter and Galileo mission 7−115289
Jupiter magnetosphere, contrib. of S ions to UV absorpt. band on Europa 7−134174
Jupiter magnetosphere, corotation lag limit on H_2O mass loss rate from Io 7−145867
Jupiter magnetosphere, high freq. limit and visibility of decametric radio emission 7−94685
Jupiter magnetosphere, Io plasma torus rel. to source of narrow-band kilometric radiation 7−107743
Jupiter magnetosphere, IUE detect. of O I and S I emissions near Io 7−139957
Jupiter magnetosphere, localisation of decametre emission sources on mag. field lines 7−79864
Jupiter magnetosphere, O and S ions in Io plasma torus 7−115285
Jupiter magnetosphere plasma depletions, due to transport and solar wind interaction 7−107740
laser activity, solar excited effects 7−103805
magnetosphere particle sweeping by planetary satellites, for offset dipole field case 7−72343
magnetospheres, charged particle motion in dipole and uniform magnetic fields 7−145774
magnetospheres, radio windows 7−115178
magnetospheres, solar wind influence on non-thermal planetary radio emission 7−79793
magnetospheres by source-surface model 7−101633
magnetospheres of outer planets, review 7−127762
magnetospheres of outer planets, Voyager explorations 7−88173
Mars, climate, water and morphological features 7−72344
Mars, geomorphology and subsurface volatiles, conference Houston, Texas (March 1986) 7−134369
Mars, Hadley circulation predictions from viscous model compared with obs. 7−134164
Mars, magnetosphere plasma flow and influence on neutral atmos. evolution 7−107735
Mars, mass fractionation in hydrodynamic escape 7−120289
Mars, mean seasonal daily insolation at surface during global dust storms, oblateness effect 7−127756
Mars, meteorology analysis 7−107734
Mars, Olympus cloud during 1982, optical thickness 7−139951
Mars, outgassing of water, amount lost in history of planet 7−72345
Mars, regolith Ca/Si ratio, evidence for carbonates and early climate 7−120295
Mars, use of balloons in exploration 7−134106
Mars, white clouds and yellow clouds obs. during 1984 opposition 7−101716
mass fractionation in hydrodynamic escape 7−120289
Mercury, solar wind-magnetosphere interactions leading to VLF emissions and surface heating 7−107732
methane pairs, 50 to 300 K collision-induced rototranslational absorpt. spectra, astron. appl. 7−135930
methane-d_1, self-, N_2- and H_2-broadened linewidths in ν_6 fundamental, diode laser meas. 7−68410
multilayered atmospheres, light scatt., Milne problem 7−72265

planetary atmospheres continued
Neptune, 8-14 and 17-23 μm spectral features 7−120312
optical efficiency of lightning 7−127750
Pluto, atm. characts 7−145873
Pluto, evidence for atmosphere from IRAS obs. 7−107749
Pluto, methane atmosphere model for methane absorption vars. in optical spectrum 7−134178
radiative transfer, adding method for multiple scattering calcs. for polarised light 7−145809
radiative transfer, unified treatment of polarised light emerging from homogeneous plane-parallel atmosphere 7−145808
research in 1983-6 period, review 7−115269
Rossby solitons, natural vortices of Jovian Great Red Spot type investigation 7−139913
rotating dynamical regimes in general circulation model 7−133823
Saturn, detect. of CO 4.7 μm vibr.-rot band 7−88175
Saturn, flyby magnetic field meas. of magnetosphere 7−107746
Saturn, magnetosheath dayside ion distributions 7−115284
Saturn, magnetosphere particle interaction with shepherd satellite of ring G 7−72351
Saturn, magnetospheric extinction during stellar occultation 7−139959
Saturn, rings effect on atm. upper boundary insolation 7−127763
terrestrial planets, volatile inventories, review 7−115268
thermal convection in rotating shear flow, time-dependent 3D numerical model 7−79821
torus types 7−145847
Uranus, 8-14 and 17-23 μm spectral features 7−120312
Uranus, atm. struct. and Raman scatt. Lyman α emission 7−120309
Uranus, atmosphere structure models and (3-0) H_2 quadrupole line profiles 7−120313
Uranus, internal structure models and rot. rate, implications for planetary accretion 7−120314
Uranus, magnetosphere, low-energy plasma observations by Voyager 2 7−107748
Uranus, radiative-convective dynamical model of seasonal meridional energy balance and thermal struct. 7−88176
Uranus, stratospheric temp. profile from stellar occultation obs. (1982 April 22) 7−88177
Uranus, Voyager-2 encounter, results for mag. field., atm., rot. and heat source 7−79867
Uranus electroglow, effect of magnetospheric charge exchange 7−88179
Uranus magnetosphere, kilometric radiation beaming obs. and implications for planetary mag. field 7−120308
Uranus magnetosphere, review 7−115298
Venus, compressional ULF foreshock boundary, Pioneer Venus Orbiter obs. 7−94629
Venus, dark hemisphere, ground-based IR obs. of cloud patterns 7−115273
Venus, ionosphere, frequency functions of nightside ion densities 7−127753
Venus, ionosphere (magnetized), 1D time-depend. model 7−127754
Venus, ionosphere dynamics, 2D spectral model 7−107733
Venus, ionosphere magnetisation, response to solar wind dynamic press. meas. 7−120237
Venus, modified model for ionosphere dynamics 7−134160
Venus, night-time ionosphere, radiotransillumination data from Venera-15 and -16 satellites 7−101715
Venus, review 7−115275
Venus, rotating dynamical regimes in general circulation model 7−133823
Venus, solar tides, analytical calc. method 7−94680
Venus, solar wind interaction, effect of hot O corona 7−120236
Venus, solar wind interaction model 7−127672
Venus, solar wind mag. field penetration of atm. 7−120235
Venus, superrotation induced by gravity waves critical-level absorpt. 7−145857
Venus, tides in atmos. 7−101712
Venus, water vapour profile from Vega-1 and Vega-2 meas. 7−88159
Venus, wave-like patterns 7−127755
Venus, windblown grains and surface physical and chemical modification 7−115274
Venus, zonal winds near cloud top level, circulation-tide interaction model 7−115272
Venus, zonal winds near cloud top level, equatorial wind speed model 7−115271
Venus ionopause, effects of hot O ions flux on solar wind flow *(German)* 7−134161
Venus night-time ionosphere, form. conditions from radio transillumination data 7−120294
Venus-solar wind interaction 7−115276
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287

planetary magnetism
auroral magnetospheres radio emission 7−79856
comparative magnetospheres 7−88154
dynamo model, calc. of self-consistent spherical dynamos 7−145818
Jupiter, localisation of decametre emission sources on mag. field lines 7−79864
Jupiter, magnetospheric plasma sputtering of Io atm. 7−120301
Jupiter, ring dust grains, dynamics in gravity and mag. fields 7−94651
Jupiter magnetosphere, high freq. limit and visibility of decametric radio emission 7−94685
Jupiter magnetosphere, Io plasma torus rel. to source of narrow-band kilometric radiation 7−107743
magnetospheres, radio windows 7−115178
magnetospheres of outer planets, Voyager explorations 7−88173
Mars, evolution with water-saturated mantle solidus rel. to absence of mag. field 7−88161
Mercury, magnetic field described by dynamo model 7−88155
Moon, magnetic field of enhanced strength antipodal to impact basins 7−145844
rotating bodies, neutral, polarisation and magnetisation 7−79825
Uranus, kilometric radiation beaming obs. and implications for planetary mag. field 7−120308
Uranus, Voyager-2 encounter, results for mag. field., atm., rot. and heat source 7−79867
Venus, intrinsic magnetic field, upper limit 7−94681
Venus, ionosphere (magnetized), 1D time-depend. model 7−127754
Venus, ionosphere magnetisation, response to solar wind dynamic press. meas. 7−120237

planetary magnetism continued
Venus, solar wind interaction, magnetosheath mag. field var. 7−120236
Venus, solar wind interaction model 7−127672

planetary nebulae
623+71, cataclysmic binary surrounded by bow-shock-like emission nebula 7−140071
AS 201 as evolved central star of planetary nebula 7−107842
atlas of CCD pictures 7−145838
bipolar planetary nebulae, origin model *(French)* 7−120536
catalogue and spectrophotometric survey 7−127743
CCD imaging and 2D spectrophotometry 7−140248
central stars, He diffusion in stellar outer layers 7−115372
central stars, mass distrib. and evolutionary scheme 7−88390
classification of planetary nebulae 7−146061
double-shell planetary nebulae, origin, anal. of NGC 2392 *(French)* 7−94984
Egg Nebula, bipolar protoplanetary nebula, CO aperture synthesis obs. 7−88573
electron densities and temps. determ. 7−140228
electron temperatures from C II and III flux ratios 7−88576
electron temperatures rel. to ionization level or excitation 7−88575
emission measure and temp. distrib., SHF and UHF obs. 7−128019
evolution, central star effects, model-obs. comparison 7−80062
evolution, influence of central star evol. 7−80061
faint and misclassified planetary nebulae, classification clarification, spectral obs. 7−88558
formation, evolution of 3 $M_\odot$ initial mass star through planetary nebula stage 7−88372
Humason 1-2, Type I planetary nebula, imaging photometry and spectroscopic obs. 7−134288
in IC 1613, discoveries from objective-prism survey of emission-line objects 7−72328
IC 418, H I absorpt. and emission detect. 7−101881
IC 418, simultaneous spectroscopic and photometric obs. of variable central star (HD 35914) 7−115386
IR spectra, obs. of 3.3 μm and 3.4 μm emission features 7−134286
IRAS 18059-3211 (Gomez's Hamburger), spectra, polarimetry and photometry rel. to planetary nebulae form. model 7−128124
IRAS observations of newly classified planetary nebulae 7−88559
K3-26, anomalous emission-line intensity ratios obs. *(Russian)* 7−107942
LMC planetary nebulae, kinematics and ages 7−115600
local planetary nebula population, implications of obs. of two senile nearby planetary nebulae 7−115543
low-surface-brightness planetary nebulae, obs. in $-33° \leq \delta \leq 17°$ zone 7−120546
low-surface-brightness planetary nebulae, obs. on Palomar Observatory Sky Survey (POSS) 7−120545
LT-5, giant star in triple system as nucleus, orbital characts. 7−120386
in M31 rel. to dynamics of outer disk and halo 7−128063
in M33, discoveries from objective-prism survey of emission-line objects 7−72328
Magellanic Cloud planetary nebulae, new evolutionary relationships 7−120560
Magellanic Clouds planetary nebulae, masses determ. using [O II] doublet ratio electron densities 7−107941
NGC 2242, newly-discovered planetary nebula, emission-line fluxes and O/H ratio 7−72579
NGC 2242, newly-discovered planetary nebula, photometry and spectrum 7−115542
NGC 2346, obs. and models of eclipse of central star (AGK3-0°965) 7−115387
NGC 2440, planetary nebular central star, spectra and parameters 7−88419
NGC 3918, abundances and plasma characts., spectral obs. 7−120552
NGC 40, IUE obs. of nucleus 7−120541
NGC 6720, Ring Nebula in Lyra, filamentary structures in halo 7−101880
NGC 6853 (Dumbbell Nebula), IRAS obs. 7−115545
NGC 7027, cyclopropenylidene detect. 7−127994
NGC 7662, ionisation struct. 7−88574
PK 215 +3°1, central star eclipse characts. (1981 to 1986) 7−101857
PK 75+35°1, peculiar planetary nebulae, UV spectrum 7−101892
PN 0345+499, 2212+657, senile nearby planetary nebulae, implications for local PN population 7−115543
pre-planetary nebulae, CO obs. characts. 7−72406
protoplanetary nebulae, importance of mag. fields for nebula struct. *(French)* 7−120548
V348 Sgr, visual magnitude estimates (1987 June-July) 7−145979
V348 Sgr, WC11 planetary nebula central star, photometric obs. 7−115461
shapes, role of wind interactions with shell 7−94995
southern planetary nebulae, photometric and spectrophotometric obs. 7−140211
spectral characteristics for C, N. and O *(Swedish)* 7−128025
SwSt 1, young planetary nebula with central WC10 star, spectrophotometry and spectroscopy obs. 7−128029
type II planetary nebulae, Ne, Ar and Cl abundances rel. to Galaxy radial abundance gradients 7−72565
VBLUW photometry 7−80065
in young elliptical galaxies, contrib to evolution of clumpy interstellar gas 7−140206
C III 190.9 nm/Si III 189.2 nm ratio as planetary nebula-symbiotic star diagnostic 7−139940
H characts., UHF obs. 7−120553
He II 468.6 nm/Hβ intensity ratio and nuclei mass 7−140203
He II radiation field meas. in planetary nebulae through Bowen fluoresc. 7−115559
Ne II-VII emission-line spectra, dielectronic recomb. coeffs. at low temps. 7−79818
OH emitting planetary nebulae, two new discoveries 7−101878

planetary rings
arc systems, confinement by satellites Lindblad resonances 7−107699
celestial mechanics, unsolved problems 7−72257
colliding bodies systems in gravit. field, impact vel., inelasticity and sizes distrib. 7−127711
collision mechanics and the structure of planetary ring edges 7−145845
collisional dynamics, new orbits and systematic effects of two-solid-body collisions in Keplerian orbits 7−134119
collisional evolution of rotating cloud of particles 7−120268

planetary rings continued
evolution of small solar system bodies, conference, Varenna, Italy (August 1985) 7−140373
Jupiter, particles and struct. characts. 7−120300
Jupiter, ring dust grains, dynamics in gravity and mag. fields 7−94651
Neptune, occultations of stars, diffr. effects 7−127686
Neptune, possible ring system from re-analysis of MKE 31 occultation 7−72356
Neptune stellar occultation on 22 June 1987, stellar diameter and secondary minima 7−120310
resonant disk-satellite interaction, ang. momentum transfer 7−88101
Saturn, 1984-5 apparition, visual and photographic obs. 7−107744
Saturn, aperture synthesis obs. of planet and rings at 2.7 mm wavelength 7−134175
Saturn, B-ring spokes, dynamical constraint on particulate sizes 7−120306
Saturn, collisional evolution of rotating nonidentical particles system 7−134118
Saturn, ice needles, instability development 7−72292
Saturn, ring features characts. from Voyager photopolarimeter stellar occultation 7−115291
Saturn, ring G, upper size limit to shepherd satellites 7−72351
Saturn, ring lifetime constraints from CO obs. in Saturn's atmosphere 7−88175
Saturn, rings age and micrometeorite erosion model 7−120341
Saturn, rings effect on atm. upper boundary insolation 7−127763
Saturn, rotating particles collisions, numerical simulations 7−120268
Saturn extinction clouds at 19 R_s, structure 7−139959
Saturn ring A, Voyager obs. of azimuthal brightness vars. 7−115292
Uranus, 1982 May 1 occultation of KME 15 at Mount Stromlo Observatory, rings and atm. characts. 7−120311
Uranus, occultations of stars, diffr. effects 7−127686
Uranus, resonance nature, shepherd satellite effects 7−145874
Uranus, ring profile fits from stellar occultation obs. (1982 April 22) 7−88177
Uranus, rings resonance with satellites, Voyager-2 obs. *(Russian)* 7−88180
Uranus, rings shepherding, role of 1986 U 7 and 1986 U 8 satellites 7−72355
Uranus, shepherding kinematics, role of 1986 U 7 and 1986 U 8 satellites 7−72354
Uranus, Voyager UVS and Earth-based IR stellar occultation obs. 7−134176
Uranus system, review 7−115298

planetary satellite atmospheres
Io, corotation lag limit on H_2O mass loss rate 7−145867
Io, IUE detect. of O I and S I emissions 7−139957
Io, magnetospheric plasma sputtering of atm. 7−120301
Io, SO_2 condensation and sublimation 7−94688
Io atmosphere and plasma and neutral torus, volcanic control 7−145871
Io plasma torus, contrib. of S ions to UV absorpt. band on Europa 7−134174
Io plasma torus, O and S ion abundances 7−115285
Io plasma torus, relation to source of narrow-band kilometric radiation 7−107743
Io plasma torus electrons, Voyager 1 obs. 7−107742
Io-magnetospheric plasma interaction, role of S sputtering by keV ions 7−120269
optical efficiency of lightning 7−127750
Titan, concepts for atmospheric aerosols collection 7−101684
Titan, H_2CN^++HCN clustering reaction rate consts. meas. 7−138976
Titan, methane origin modelling 7−120307
Titan, rotating dynamical regimes in general circulation model 7−133823
Titan atmosphere, gas chromatographic instrumentation for anal. of aerosols and gases 7−101685
torus types 7−145847
Triton, chemical processes in atmosphere and surface 7−145872
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287

planetary satellites
see also Moon; planetary satellite atmospheres
1986 U 7 and 1986 U 8, role in rings 7−72354
Ariel, geological terrain and crater freq. 7−101729
asteroid satellites absence from CCD imaging survey 7−145865
celestial mechanics, unsolved problems 7−72257
Charon, constraints on diameter from IRAS obs. 7−107749
Charon, physical parameters determ. from mutual eclipses obs. in Pluto-Charon system 7−101727
Charon occultation by Pluto (4 April 1987), spectra and methane absorpt. features 7−115295
cratering, appl. of low-temp. ice laboratory impact expts. 7−120267
Dione, planar satellite orbits in 2:1 reson., chaos and secular var. 7−115290
Europa, temporal and spatial characts. of 260 to 320 nm absorpt. band from IUE obs. 7−134174
evolution of small solar system bodies, conference, Varenna, Italy (August 1985) 7−140373
Galilean icy satellites, visible and IR reflectance spectral anal. 7−120305
Galilean satellites: evolutionary paths in deep resonance 7−145868
Galilean satellites, observational evidence for secular changes in mean motions 7−101723
Galilean satellites, occultation obs. catalogue 7−88168
Ganymede, craters distrib. and morphology 7−145866
Ganymede, thermal evolution of differentiated interior and implications for surface features 7−88171
geodesy, progress report (1983 to 1986) 7−134158
Hyperion, corrections to orbital theory 7−139958
Hyperion (Saturn VII), expansion of disturbing force-function for high-eccentricity librations 7−145803
icy satellites, contrib. of radiogenic heating to internal crystallisation and surface activity 7−145879
icy satellites, finite element models of non-Newtonian relaxation of impact craters 7−101726
icy satellites interiors, lab. study of ice I_h inelastic props. 7−111742
impact cratering record, Voyager 2 results at Uranus and implications for origin of impacting objects 7−134179
Io, corotation lag limit on H_2O mass loss rate 7−145867
Io, localisation of assoc. sources of Jupiter decametric radio emission 7−79864
Io, magnetospheric particle absorpt. by Io 7−94687

planetary satellites continued
Io, SO_2 adsorption onto satellite surface 7−115286
Io, sputtering of S by MeV He ions 7−145870
Io, subsidence of topographic features 7−145869
Io, thermal history 7−120304
Io atmosphere and plasma and neutral torus, volcanic control 7−145871
Io plasma torus, O and S ion abundances 7−115285
Jupiter, Galilean satellites, water ice thermal segregation 7−115283
Jupiter, review of Galilean satellites 7−115288
Jupiter satellite system, crater characts. rel. to Uranus system 7−127765
magnetosphere particle sweeping by planetary satellites, for offset dipole field case 7−72343
Martian satellites, surface comp. determ. via gamma-ray spectrometry 7−120283
methane ice, erosion by energetic ions 7−115294
Miranda, astrometric CCD obs. (1981 to 1985) 7−107747
Miranda, warming during chaotic rotation 7−120315
Miranda (satellite of Uranus), voyager 2 observations 7−88178
negative polarisation props. of scatt. light, spectral depend. *(Russian)* 7−127718
Neptune, rotation and mass characts. rel. to satellite mass and revolution characts. *(French)* 7−134177
Neptune stellar occultation on 22 June 1987, stellar diameter and secondary minima 7−120310
neutron emission due to cosmic ray bombardment, for planet without atmosphere 7−127751
Pluto-Charon mutual events 7−145873
Pluto-Charon system, speckle interferometric obs. (1983 July 8 to 15) 7−72352
resonant disk-satellite interaction, ang. momentum transfer 7−88101
Saturn, review of satellites 7−115288
Saturn, shepherd satellites to ring G, upper limit to satellite size 7−72351
Saturn satellite system, crater characts. rel. to Uranus system 7−127765
shepherd satellites, confinement of planetary arcs by Lindblad resonances 7−107699
solar system, chaotic behaviour 7−139892
solar system satellites, props, and internal structs. 7−127749
torus types 7−145847
Triton, chemical processes in atmosphere and surface 7−145872
Trojan asteroids as former satellites of Jupiter 7−88083
Uranus, occurrence of central peak craters 7−127765
Uranus, rings resonance with satellites, Voyager-2 obs. *(Russian)* 7−88180
Uranus, rings shepherding, role of 1986 U 7 and 1986 U 8 satellites 7−72355
Uranus, shepherd satellite effects on rings, resonances 7−145874
Uranus, small satellite orbits, for 1985U1 and 1986U1 to U9 7−101728
Uranus, Voyager-2 data, implications for solar system struct. and origin 7−115297
Uranus, Voyager-2 results 7−120316
Uranus satellites, cratering records from Voyager 2 obs. rel. to origin of impacting objects 7−134179
Uranus satellites, eccentricities and longitudes of pericentre, semi-analytical soln. 7−127764
Uranus system, review 7−115298
NH_3-H_2O phase diagram at high-press., and planetary satellite implications 7−120290

planetoids *see asteroids*

planets
see also asteroids; Earth; Jupiter; Mars; Mercury (planet); Neptune; planetary satellites; Pluto; Saturn; solar nebula; Uranus; Venus
accretion timescales and protoplanetary disk structure 7−115266
accretion tori stability, non-linear evol. to discrete planets 7−88105
annual review of Earth and planetary sciences, 1987, book 7−115697
areal vel. derivation 7−128221
asteroid close encounters, probability distribs. of resultant orbital elements 7−88166
Barnard's star, planetary system status report 7−127865
Carlsberg meridian catalogue−La Palma, Volume 2 (book) 7−66853
celestial mechanics, unsolved problems 7−72256
celestial mechanics, unsolved problems 7−72257
cometary impacts, collision probabilities and cratering rates 7−120291
cratering, appl. of low-temp. ice laboratory impact expts. 7−120267
extrasolar planetary systems, small-scale struct. of circumstellar gas of HL Tau and R Mon 7−88403
extrasolar planets detect. use of cyclotron maser emission obs. 7−88126
formation, local condensations in collisional discs 7−72339
formation, orbital migration of protoplanets due to tidal interaction with protoplanetary disk 7−88137
formation, physics of resonant disk-satellite interaction rel. to planetesimal accretion 7−88101
formation of Sun and planets (book) 7−88751
geodesy, progress report (1983 to 1986) 7−134158
heat flow limits on monopole and axion fluxes 7−72342
impact cratering record, Voyager 2 results at Uranus and implications for origin of impacting objects 7−134179
impact rate due to extra-solar Oort cloud encounters 7−88529
laboratory experimentation in planetary geology, reviews 7−115270
light and plasma effects on comets and planets, laser simulation *(German)* 7−134124
mapping of surface by satellite, shape-from-shading algorithm 7−101702
mass-radius-density relations 7−145842
meteorite cratering, point source assumption and coupling parameter theory 7−120023
methane ice, erosion by energetic ions 7−115294
motion of outer planets, LONGSTOP project 7−120287
neutron emission due to cosmic ray bombardment, for planet without atmosphere 7−127751
Newtonian gravity testing in space using small scale planetary system 7−89103
orbit semi-major axis changes during accumulation process 7−145840
perihelion advance of the planets in the gravitational field of the charged Sun 7−72264
β-Pictoris, possible planetary system formation, IR obs. *(French)* 7−94877
planetary science, 1983-6 review 7−115267
polytropic configurations, physical characts. of N-dimensional radially-symmetric polytropes 7−127695
potential expansion convergence improvement, use of series in Chebyshev polynomials 7−127731
protoplanetary disk formation, effects of accretion onto disk 7−88136

planets continued
protoplanets, self-regulating growth 7−145841
resonance capture and evolution 7−145846
rotation, contrib. of planetesimal collisions in solar nebula 7−134154
satellites of solar system, props, and internal structs. 7−127749
shergottite parent body, core form. and comparison with Earth 7−101740
solar system, chaotic behaviour 7−139892
spin rates rel. to solar pulsation 160-min period 7−88359
surface characts. determ. from meas. of refl. cosmic radio waves 7−134145
surface chemical mapping, neutron-induced gamma-ray spectroscopy 7−101699
terrestrial planets, magmatism early evol. 7−120288
terrestrial planets, volatile inventories, review 7−115268
thermal convection in planetary interiors, analytical formulation for spherical body 7−134121
Titius-Bode law for planet distances in solar system, gravitational explanation 7−101667
topographic mapping, appl. of line integral approach to radarclinometry 7−94457
CO clathrate hydrate in outer planets, implications of laboratory meas. 7−139911

planimeters *see area measurement*

plants (industrial) *see industrial plants*

plants (power) *see power plants*

plasma
see also electromagnetic wave propagation in plasma; plasma-beam interactions; plasma boundary layers; plasma impurities; plasmons; relativistic plasmas; solid-state plasma
accreting neutron star with isothermal atmosphere, infalling plasma stopping mechanisms 7−107885
acoustic waves, interactions with mag. and internal modes 7−111006
active galactic nuclei, pair prod. and Compton scatt., γ-ray and X-ray emission 7−140276
active galactic nuclei, radiation from relativistic beams interaction with interstellar gas 7−101937
AMPTE solar wind ion releases, shocklike electrostatic noise characts. 7−94628
astrophysical, 2D time-depend. MHD eqns. soln. by method of characts. 7−104387
astrophysical, Alfven mode damping in stochastic fluid 7−88095
astrophysical, appl. of Landau damping theory to isotropic star cluster 7−88550
astrophysical, charged particles stochastic energisation by plasma waves 7−94648
astrophysical, charging of dust particles in plasma 7−107719
astrophysical, critical ionisation vel. interaction 7−83412
astrophysical, double layer form. conditions 7−120217
astrophysical, double layer form. leading to crit. velocity phenomenon 7−117727
astrophysical, double layers, hydrodynamic anal. 7−117731
astrophysical, effect of density discontinuity on Alfven internal gravity waves 7−94646
astrophysical, electron impact transition rate coeffs. for H I as function of electron temp. 7−139898
astrophysical, electron scintillation in gravitationally-lensed images of radio sources 7−107975
astrophysical, finite dust cloud in finite plasma, charging, pot. and instabilities 7−94652
astrophysical, finite Larmor radius effects on Rayleigh-Taylor instability of dusty magnetised plasma 7−94644
astrophysical, helicity conservation laws for fluids and plasmas 7−139906
astrophysical, influence of relativistic electrons on photoionised gas cloud 7−139897
astrophysical, interaction with gravimagnetic rotators 7−94643
astrophysical, longit.-wave spectrum, dispersion relation 7−83451
astrophysical, mag. field-line reconnection processes for skewed mag. fields 7−127692
astrophysical, magnetic reorientation and the spontaneous formation of tangential discontinuities in deformed magnetic fields 7−139903
astrophysical, magneto-gravit. stability of self-gravitating plasma with thermal cond. and finite Larmour radius 7−127702
astrophysical, mean equilib. charges of energetic ions after passing through hot plasma 7−123908
astrophysical, MHD surface waves reson. absorpt. 7−72279
astrophysical, mildly relativistic shocks, mag. fields and synchrotron radiation 7−137082
astrophysical, nonlinear radiative condensation in sheared mag. field 7−139909
astrophysical, nonlinear self-regulation of cosmic ray accel. at shocks 7−88047
astrophysical, radiative Gaunt factors evaluation for complex ions 7−94654
astrophysical, resonant Raman-cyclotron scatt. in very strong mag. fields 7−139901
astrophysical, soft X-ray photons Comptonisation in optically thin hot plasma 7−79824
astrophysical, steady-state shock acceleration of cosmic rays 7−72229
astrophysical, toroidal Alfven solitons 7−88063
astrophysical collisionless plasma, quasiperpendicular shock wave interaction 7−137083
astrophysical electron density diagnostics using C III, O V, F VI and Ne VII line emissions 7−115224
astrophysics, magnetic vortex tubes 7−72284
aurora, superthermal electron spectrum 7−87997
auroral circuit models, transport and double layers 7−117737
auroral double layers, particle simulation 7−117736
auroral ionosphere, VLF hiss meas. in auroral arc 7−134057
auroral phenomena, laboratory-produced plasma structures 7−72213
auroral plasma, current sheet-driven plasma processes 7−72221
auroral plasma processes, elec. fields, waves and particles simulation 7−88025
auroral precipitation, assoc. double layers 7−120194
ball lightning, gasdynamics calcs. 7−120112
ball lightning in vortex filament field, eqns. of motion 7−120113
bow shock, obs. and modelling of diffusive shock accel. 7−139859
bow shock, upstream backstreaming electron distrib. function 7−94580
3C 234, radiogalaxy, lobes dynamics 7−72618
circumsolar plasma, frequency shift accompanying radio waves propagation 7−79938

plasma continued
P/Comet Giacobini-Zinner(1985 XIII), magnetotail characts., ICE meas. 7−88246
P/Comet Giacobini-Zinner (1984 XIII), ICE obs. of magnetotail and solar wind interaction 7−79891
P/Comet Giacobini-Zinner (1985 XIII), electron and H_2O^+ column densities 7−72361
P/Comet Giacobini-Zinner (1985 XIII), gasdynamic interpretation of ICE plasma meas. 7−94691
P/Comet Giacobini-Zinner (1985 XIII), plasma interaction with solar wind plasma 7−88071
P/Comet Giacobini-Zinner (1985 XIII), plasma wave phenomena, ICE obs. 7−88220
P/Comet Giacobini-Zinner (1985 XIII), solar wind interaction, gasdynamic interpretation 7−88245
P/Comet Halley (1982), cometopause region plasma characts. 7−88230
P/Comet Halley (1982), pre-shock region, ions stochastic Fermi accel. 7−88240
P/Comet Halley (1982i), bow shock, cometary H_2O group ions obs. 7−88247
P/Comet Halley (1982i), close environment ion temp. and flow props. 7−88232
P/Comet Halley (1982i), cold heavy ions comp. and flow parameters radial var. 7−88227
P/Comet Halley (1982i), coma gas and ions, expansion vel. and temp. 7−88223
P/Comet Halley (1982i), coma mag. field fine struct., effects of plasma irregularities 7−88225
P/Comet Halley (1982i), coma region plasma obs. (by Vega-2) 7−79893
P/Comet Halley (1982i), cometosheath plasma characts., Vega obs. 7−88221
P/Comet Halley (1982i), contact surface, mag. field and plasma characts. 7−88235
P/Comet Halley (1982i), dust impact effects recorded by Vega APV-N plasma wave instruments 7−107769
P/Comet Halley (1982i), energetic particles and mag. field environment 7−107758
P/Comet Halley (1982i), energetic pick-up ions outside bow shock, Vega-1 meas. 7−88215
P/Comet Halley (1982i), Giotto DIDSY-IPM instrument performance 7−115205
P/Comet Halley (1982i), Giotto energetic electron fluxes 7−88244
P/Comet Halley (1982i), Giotto meas. of cometary and solar wind plasma at cometary bow shock 7−107756
P/Comet Halley (1982i), Giotto neutral mass spectrometer meas. of thermal ions 7−94807
P/Comet Halley (1982i), Giotto PICCA instrument meas. of heavy ions comp. and flow characts. 7−88228
P/Comet Halley (1982i), heavy energetic far upstream ions, obs. by ICE 7−88214
P/Comet Halley (1982i), hot ions inside contact surface, Giotto obs. 7−88229
P/Comet Halley (1982i), inner coma plasma waves, Vega APV-N expt. meas. 7−79892
P/Comet Halley (1982i), inner ionosphere modelling 7−88234
P/Comet Halley (1982i), ion flow vel. and temp. outside contact surface 7−88233
P/Comet Halley (1982i), ion pick up-mass loading process obs. by Suisei 7−88242
P/Comet Halley (1982i), ionospheric contact surface, ion pile-up region characts. 7−88231
P/Comet Halley (1982i), ions distrib. and flow 7−88224
P/Comet Halley (1982i), ions meas. by Vega PUMA instruments, mass resolution and sensitivity 7−107697
P/Comet Halley (1982i), long-period hydromagnetic waves assoc. with O^+ or H_2O^+, Sakigake obs. 7−88236
P/Comet Halley (1982i), mag. pile-up region and cavity boundaries, Giotto meas. 7−79884
P/Comet Halley (1982i), MHD model 7−79885
P/Comet Halley (1982i), near-comet bow shock, fine struct., plasma wave obs. 7−88237
P/Comet Halley (1982i), nucleus rot. and tail dynamics 7−79887
P/Comet Halley (1982i), outer coma, low-energy cometary ions, ang. and energy distrib. 7−88222
P/Comet Halley (1982i), outer coma cometary ions, comp. and dynamics obs. 7−88213
P/Comet Halley (1982i), overview of results from spacecraft encounters 7−101738
P/Comet Halley (1982i), plasma and particle meas. by Vega probes *(Hungarian)* 7−115310
P/Comet Halley (1982i), plasma characts. observed by Suisei 7−79889
P/Comet Halley (1982i), plasma electron component meas. by Vega-2 spacecraft 7−88226
P/Comet Halley (1982i), plasma interaction with solar wind plasma 7−88071
P/Comet Halley (1982i), plasma structures, solar wind effects 7−79886
PComet Halley (1982i), plasma wave phenomena, ICE obs. 7−88220
P/Comet Halley (1982i), plasma-solar wind interaction, Giotto implanted ion spectrometer meas. 7−139924
P/Comet Halley (1982i), protons picked up by solar wind, Giotto obs. 7−79882
P/Comet Halley (1982i), solar wind flow through bow shock 7−88239
P/Comet Halley (1982i), solar wind interaction, gasdynamic interpretation 7−88245
P/Comet Halley (1982i), solar wind interaction, Giotto obs. 7−79883
P/Comet Halley (1982i), solar wind interaction, spacecraft obs. 7−94712
P/Comet Halley (1982i), solar wind ions in coma, charge exchange 7−88243
P/ Comet Halley (1982i), solar wind mass loading 7−120235
P/Comet Halley (1982i), tail disconnection events, narrow-band filter obs. 7−79888
P/Comet Halley (1982i), upstream region, foreshock and bowshock wave characts. 7−88238
P/Comet Halley (1982i), upstream solar wind plasma characts., Giotto meas. 7−79800
P/Comet Halley (1982i), waves in mag. field and solar wind flow outside bowshock 7−88241
P/Comet Halley (1982i) and comets, conf., Heidelberg, Germany (1986 October) 7−72721
P/Comet Halley (1982i) and Giotto ion mass spectrometer 7−139886

plasma continued
P/Comet Halley (1982i) cometosheath, auroral model for electron fluxes and plasma waves during Vega 2 encounter 7−134183
P/Comet Halley (1982i) environment, results from plasma wave analyser (APV-V) on board Vega spacecraft *(French)* 7−120324
P/Comet Halley (1982i)-solar wind interaction region, Giotto electron obs. 7−79890
comets, plasma-solar wind interaction 7−79881
comets, solar wind interaction, plasma struct. investig. 7−72375
cosmic physics, space research effects 7−72281
cosmic ray, shock, interaction with long-wavelength compressive wave 7−127655
cosmic ray shocks, short-wavelength compressive instabilities, heat conduction 7−127654
Crab Nebula, electron transport models 7−140229
CW 1103+254, AM Her star, cyclotron line emitting region characts. and J-band polarisation 7−127949
V448 Cyg, eclipsing binary, atm. electron density determ. 7−127946
D-region, electron density distrib. use for mesosphere parameters determ. 7−115121
double layers and circuits in astrophysics 7−72286
double layers and plasma-wave resistivity in extragalactic jets: cavity formation and radio-wave emission 7−120271
downward moving double layers in presence of negative ions on auroral field lines 7−123872
E-region, auroral, electrostatic plasma wave propagation, wavelength depend. 7−94557
E-region, layer produced by proton precipitation, electron density meas. 7−115151
E-region, radar auroral heights and Doppler velocities at 398 MHz 7−94554
E-region parameters temporal changes during eclipses due to neutral wind var. 7−88004
Earth bow shock, nonlinear MHD waves generation by reflected H^+ 7−115183
ejection from nuclei of spiral galaxies, arm formation 7−72617
electromagnetic ram action of the plasma focus as a paradigm for the generation of cosmic rays and the gigantic jets in active galaxies 7−72293
electrostatic double layers, charged particle acceleration 7−72231
eruptive processes in magnetospheric and solar physics 7−145819
evening sector auroral oval, plasma convection 7−94544
extragalactic electron-positron jets from γ-ray beams 7−72586
extragalactic plasma evolution 7−72282
extragalactic radio sources, particle accel., synchrotron losses role in spectrum determ. 7−72647
F_2-layer, wave perturbations due to ground explosions 7−79752
F-region, ion velocity field kinematic props. determ. using multiple freq. incoherent scatt. technique 7−94487
F-region, polar cap convection 7−139850
F-region, total electron content at low latitudes, day-to-day variability 7−145749
F-region daytime trough, technique for obs. on macroscopic scale 7−94486
field-aligned currents in MHD waves, effect of finite Larmor radius, appl. to magnetosphere-ionosphere coupling 7−91308
finite elements, physics applications, summer school, Lausanne, Switzerland (Sept. 1986) 7−134339
finite Hamiltonian systems with integrable mean field, kinetic eqn. 7−88554
flux transfer events, field and flow perturbations outside reconnected field line region, magnetospheric appl. 7−79787
galaxy formation from plasma 7−72285
gamma-ray bursters at cosmological distances, radiation from electron-positron plasma 7−88680
Giotto 3D positive ion analyser 7−139888
Giotto electron plasma expt. 7−139884
Giotto EPONA lightweight energetic particle detector 7−139923
Giotto heavy ion analyser PICCA 7−139887
group Doppler effect in anisotropic plasmas 7−145813
heliosphere boundary determ., cosmic ray characts. anal. 7−115260
heliosphere collisionless shocks (book) 7−115698
heliosphere interface, elastic-collisional coupling between protons and He of interstellar origin 7−80064
HH 46/47, radiating gas characts., narrowband imaging 7−146065
hollow H II regions, mechanism for wind energy dissipation and diffuse X-ray emission 7−94977
incoherent scatter meas., modulation principle 7−134024
intergalactic plasma 7−72616
intergalactic plasma and background X-ray emission 7−101925
interplanetary scintillation obs. of flat-spectrum sources at 102.5 MHz, scintillation components characts. *(Russian)* 7−128107
interplanetary shock wave due to 1979 August 18 solar flare, scintillation obs. 7−88067
interplanetary shock waves and cosmic ray fluctuations power spectra var. 7−88048
interplanetary shocks, near-Earth and Pioneer Venus obs. 7−94630
interstellar MHD shocks, chemical test for ambipolar diffusion 7−134294
interstellar molecular cloud cores, effect of ambipolar diffusion on mag. braking 7−88578
interstellar plasma inhomogeneities spectrum determ from pulsar fluxes slow var. *(Russian)* 7−88601
interstellar radiowave scatt. matter, galactic distrib. 7−128047
Io plasma torus, corotation lag limit on H_2O mass loss rate 7−145867
Io plasma torus electrons, Voyager 1 obs. 7−107742
ionosphere, 3D plasma cloud evolution in crossed E×B fields 7−145769
ionosphere, auroral, double layers evol. in H plasma 7−120204
ionosphere, auroral, upward flowing ion beams, number flux−energy correl. 7−139849
ionosphere, auroral electron fluxes rel. to longitudinal currents and optical emissions 7−88003
ionosphere, auroral irregularities, Doppler spectra meas. at large mag. aspect angles 7−101628
ionosphere, collision frequency determ. from Ne(h) profiles 7−101620
ionosphere, disturbances due to ground explosions, incoherent scatt. meas. 7−79758
ionosphere, drift during 1984/85 winter 7−115145
ionosphere, effect of density discontinuity on Alfven internal gravity waves 7−94646
ionosphere, electron density distrib. effect on radiowaves propag. 7−79742
ionosphere, electron density var. due to ground-based explosions 7−79756

plasma continued
ionosphere, EM field of loop antenna in cold multicomponent magnetically active plasma *(German)* 7−134061
ionosphere, enhanced current flow through plasma cloud by induction of plasma turbulence 7−134109
ionosphere, explosion-induced perturbations, amplitude var. of oblique sounding signals 7−79755
ionosphere, field solution for oscillating dipole in anisotropic plasma medium 7−127633
ionosphere, high-latitude plasma blobs, interchange instability 7−94555
ionosphere, incoherent scatter radar use for ion-neutral collision freq. meas. 7−87950
ionosphere, long discrete echoes observed in low elec. field regions equatorwards of electrojet 7−79769
ionosphere, nonuniformities struct., determ. from radiowave scatt. 7−79741
ionosphere, O^+ heating by shear Alfven waves 7−115150
ionosphere, obs. of nonlinear Alfven waves assoc. with auroral particles 7−88010
ionosphere, perturbations due to ground-based explosions, effect on radiowave propagation 7−79757
ionosphere, perturbations due to ground-based explosions, implications for radiowave propag. 7−79754
ionosphere, perturbations due to ground-level industrial explosion 7−79761
ionosphere, plasma effects on spherical satellite 7−94537
ionosphere, spatially 2D system of transport eqns., numerical soln. 7−79740
ionosphere, SPINEX-2, electron-content meas. 7−107610
ionosphere, ULF waves generated by motion of F-region artificially created cloud 7−97748
ionosphere and magnetosphere, double layers in plasmas, conf., Huntsville, AL, USA (Mar. 1986) 7−115677
ionosphere magnetoplasma, inhomogeneous cold rot. convective cell. Alfven vortices 7−111194
ionosphere perturbation due to industrial explosions, effect on HF propag. 7−79753
ionosphere plasma perturbations, review of triggering lower atm. large-scale events 7−79750
ionosphere total electron content, nighttime enhancements, latitudinal var. 7−94559
ionosphere-magnetosphere region plasma interactions, role of mag. field *(German)* 7−115160
Jupiter, electrons at 1 AU during 1978 to 1984, propag. in solar wind 7−88062
Jupiter, magnetospheric plasma sputtering of Io atm. 7−120301
laboratory plasma, C III, O V, F VI and Ne VII line emissions compared with theory and astrophysical obs. 7−115224
lightning, plasma channels Doppler radar obs. 7−107565
magnetised, ponderomotive effects 7−83455
magnetopause, appl. of unsteady Petschek reconnection 7−94605
magnetosheath lion roars generation, effects of electron dynamics assoc. with mirror waves 7−94582
magnetosphere, Alfven waves excited by ionospheric acoustic waves of surface explosion origin 7−79760
magnetosphere, analytic mag. field model with dipole field and tail field components 7−94578
magnetosphere, ballistic plasma wave processes, satellite expts. 7−145790
magnetosphere, distant plasmasheet, mag. field fluctuations and plasma dynamics 7−88043
magnetosphere, double layer form. conditions 7−120217
magnetosphere, drift wave low-freq. instability effect on Hall conductivity 7−145812
magnetosphere, effect of He^+ temp. and thermal anisotropy on EM ion cyclotron instability 7−134089
magnetosphere, electron energy deposition in mesosphere and thermosphere 7−115152
magnetosphere, electrostatic H cyclotron waves decay to ion acoustic modes on auroral field lines 7−94592
magnetosphere, electrostatic waves at electron gyrofrequency 7−145787
magnetosphere, EM wave propag., approx. theory 7−111240
magnetosphere, finite β, theory and obs. of Alfven solitons 7−139865
magnetosphere, global convection elec. field and current 7−115155
magnetosphere, high-latitude electron fluxes distrib. 7−72226
magnetosphere, intense electrostatic hiss bands obs. from source regions of AKR 7−120214
magnetosphere, internal gravity waves propag. in plasma layer 7−88028
magnetosphere, ionosphere as adequate plasma source 7−115149
magnetosphere, ions of ionospheric origin, trajectories 7−115173
magnetosphere, longitudinal electric field on auroral lines of force, role of plasma mag. refl. and electrons inertia 7−79779
magnetosphere, motion of small-scale Alfven waves packet in mid-latit. plasmasphere 7−120216
magnetosphere, oblique whistler mode waves guided along magnetic field lines 7−145775
magnetosphere, plasma mass density var. effect. on Pc 3 eigenfrequencies 7−94593
magnetosphere, plasma obs. (from Dynamics Explorer 1) 7−94586
magnetosphere, plasmasheet boundary layer, broadband turbulence convective growth 7−94595
magnetosphere, reconnection-associated nonstationary phenomena in magnetopause tail region *(German)* 7−134092
magnetosphere, results from APL Mag. Field Expt. on Viking satellite programme 7−88041
magnetosphere, standing Alfven wave model for P_{SC} 5 pulsations 7−88029
magnetosphere, topology of magnetotail field lines and current lines 7−72220
magnetosphere, transverse elec. currents theory in auroral region *(German)* 7−134091
magnetosphere circulating cyclotron maser and pulsed VLF emissions 7−79776
magnetosphere double layer form. in magnetically confined plasma 7−117733
magnetosphere plasma sheet, ion composition at various geomagnetic and solar activity 7−139863
magnetosphere thermal plasma physics, conf., Toulouse, France (June-July 1986) 7−72690
magnetosphere-ionosphere coupling, double layer effects 7−120218
magnetosphere-ionosphere interactions and near-Earth plasma 7−72215

plasma continued
magnetospheric electron bursts precipitated by lightning, spectral struct. 7−94545
magnetospheric plasma of a pulsar, props. investig. 7−120485
magnetospheric tail reconnection and plasma acceleration 7−145786
magnetotail, plasma distrib. 1979 March 31 and April 1 during substorms 7−94585
magnetotail, plasma structures energy storage and destabilisation 7−115169
magnetotail current layer, substorm mechanism, gyroviscous model 7−115177
magnetotail lobe (200 to 238 Re) characts. during quiet solar wind conditions 7−88042
magnetotail lobes, filamentary structures 7−94583
magnetotail observations during a substorm 7−79786
magnetotail plasma ions, investig. using energy-angular-mass spectrometer 7−115168
magnetotail theory 7−115180
MASSA experiment, explosion acoustic wave in atm. and ionosphere 7−79751
matter, universe and plasma, hypothesis of impossibility of identical individual particles *(Rumanian)* 7−80277
meteor track, anisotropy of parameters assoc. with mol. processes in atmosphere 7−87989
molecular clouds-H II regions neutral interfaces, S II and C II layers characts. 7−128004
Ne IX, emission line ratios, electron excitation rates and plasma characts., solar appl. 7−140012
neutron star atmosphere, electron cyclotron resonance instability of magnetised photosphere 7−94938
neutron star polar cap accretion, radiation gas dynamics 7−72496
NGC 3918, planetary nebula and central star abundances and plasma characts., spectral obs. 7−120552
NGC 5506, edge-on Seyfert galaxy, hot plasma hubble model for radio loop 7−115588
planetary magnetospheres, comparative anal. 7−88154
planetary nebulae, electron densities and temps. determ. 7−140228
plasmasphere, drift wave instability anal. 7−127642
plasmasphere, minor ion populations calcs. 7−115148
polar ionosphere, MHD slow shock model and polar wind 7−101623
polar wind stability (3000 km to 10 Earth radii) 7−94606
Population III stars, explosions and heating of surrounding material 7−146052
pregalactic matter, secondary ionisation dynamics 7−72658
pregalactic plasma nonequilibrium ionisation and background radiation anisotropy decrease *(Russian)* 7−88694
Project MASSA, lower atm.-ionosphere-magnetosphere relationships during seismoacoustic events 7−79607
pulsar magnetosphere, electrodynamics and plasma props., self-consistent model 7−134265
pulsar magnetospheres, current sheets contrib. to radio emission 7−94933
pulsar magnetospheres, tearing instability 7−120483
quasars emission-line regions, anomalous heating by nonthermal radio radiation 7−95046
quasi-parallel shocks upstream and downstream MHD fluctuations 7−94625
radiation of ultrarelativistic particles in turbulent plasma 7−107704
ray tracing, 3D, in magnetosphere, electrostatic cyclotron harmonic waves and Z mode EM waves 7−134094
resonant Alfven waves on auroral field lines 7−91309
ring current dynamics anal. 7−79777
Seyfert galaxies, electron densities and temps. determ. 7−140228
solar corona, Alfven waves model for soft X-ray pulsations 7−134204
solar corona, electron acceleration by electron cyclotron harmonic wave 7−127789
solar corona, mag. heating theory 7−134203
solar corona, plasma at ion oscills. model for fluctuations of Type I radio noise storms *(Russian)* 7−145915
solar coronal loop, plasma parameters estimate from fibre burst obs. 7−115351
solar flares, effect of electron energy and ang. distrib. on anisotropy ratio of hard X-ray emission 7−115352
solar flares, gyrosynchrotron microwave radiation from dense magnetoactive plasma 7−145904
solar flares, microwave emission obs. from electron beams 7−79911
solar flares, plasma temp. determ. from X-ray spectral line ratios 7−115335
solar flares, quasi-linear relaxation and bremsstrahlung of thick-target electron beams 7−79909
solar flares, stabilising effect of transverse mag. field in current sheets *(Russian)* 7−145917
solar plasma, drift wave low-freq. instability effect on Hall conductivity 7−145812
solar transition region, depression of radio emission flux of unresolved fine structures *(Russian)* 7−145916
solar wind, effects of hot O ions flux on flow over Venus *(German)* 7−134161
solar wind, energetic ions acceleration by quasiperpendicular shock 7−72243
solar wind, He^{2+}/H^{+} temp. ratio in slow wind regions 7−134103
solar wind, ion pick-up from planetary atm., role of quasi-parallel bow shock 7−94627
solar wind, kinematic parameters of protons and α-particles as function of wind vel. *(German)* 7−134104
solar wind, laser simulation of plasma effects on comets and plasma *(German)* 7−134124
solar wind, MHD waves assoc. with pick-up ions 7−120266
solar wind, nonlinear wave-wave interactions and type III bursts 7−94840
solar wind, outflow vel. causing line excitation by chromospheric-transition region radiation in nearby line 7−107787
solar wind, particle transport in mag. field, effect of MHD turbulence 7−88066
solar wind, press. effect on solar cosmic ray flux in magnetosphere 7−72226
solar wind, protons and heavy ions behaviour, Prognoz 7, 8 investig. 7−120232
solar wind, shear Alfven wave, reson. mode conversion appl. to plasma heating 7−104389
solar wind 7−120233
solar wind 3D scintillation structures modelling 7−88070
plasma continued
solar wind bump-in-tail driven Langmuir waves during type III emission 7−134105
solar wind model with power spectrum of Alfvenic fluctuations 7−127677
solar wind plasma dynamics simulation for AMPTE expt. 7−94626
solar wind plasma interaction with Periodic Comet Halley (1982i) plasma and Periodic Comet Giacobini-Zinner (1985 XIII) 7−88071
solar wind proton temperature characts. 7−79799
solar wind shock, cosmic rays accel. 7−88056
solar wind stream structure at large heliocentric distances, Pioneer obs. 7−94624
solar wind turbulence modelling using radio occultation meas. 7−139877
solar wind-comet interactions, LF plasma turbulence and instabilities excitation 7−127697
solar wind-magnetosphere interaction, geomagnetic disturbances (for minima of solar cycles 13 to 20) 7−94614
space, ring antennas reson. cones, pondermotive force 7−83491
space and astrophysical, plasma-maser effects 7−115232
space plasma, strong double layer, general Bohm and Langmuir conditions 7−72287
space plasmas, plasma environment during charge-neutral beam injection 7−134123
space plasmas, plasma environment during electron beam injection 7−134122
Spacelab-2 plasma depletion expt. obs. of galactic background radio emission 7−94667
spherically-symmetrical solar wind-like plasma systems, theoretical non-Maxwellian particle vel. distrib. functions 7−104383
stars, continuum and line radiation polarisation, processes 7−120261
stars, magnetogasdynamic cylindrical shock wave model in an optically thin atmosphere 7−145811
stellar atmosphere, thermal-convective instability of MHD-composite plasma with finite Larmor radius 7−127841
stellar atmospheres, temp. stratification and emission measures of transition layers and coronae 7−120379
stellar coronae, comparison of X-ray emission obs. by Einstein and EXOSAT 7−120385
stellar interiors, effect of electron screening on thermonuclear reaction rates *(Russian)* 7−145820
stellar plasmas, partially ionised, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
Stockert's chimney − a galactic fountain 7−146068
Sun, 1980 November 12 17.00 UT flare, SMM obs. and hydrodynamic modelling 7−72381
Sun, ^{3}He-rich solar flares, Si and Fe mean ionic charge 7−127791
Sun, active prominence, plasma and spectral characts. *(Japanese)* 7−79940
Sun, active region loops, heating and cooling processes 7−145908
Sun, Al XII, line ratios sensitive to electron temp. and density 7−127719
Sun, Alfven wave dissipation in atm. 7−139907
Sun, atm., MHD waves generation 7−104388
Sun, atm. acoustic waves transform. to slow magnetosonic waves, role of mag. field 7−127693
Sun, atmosphere, jump conditions across thin mag. flux tube shock front 7−115219
Sun, atmosphere, MHD wave transition 7−134220
Sun, atmospheric plasma nonlinear evol. 7−107709
Sun, compressive waves propag. through fibril mag. fields 7−140009
Sun, compressive waves scatt. from slab of mag. flux tubes 7−140008
Sun, corona, magnetic mirror effect on beams of subrelativistic electrons, radio emission evidence 7−140016
Sun, corona activity, implications of force-free magnetic fields topology 7−72380
Sun, coronal loop, field aligned elec. field due to force-free mag. field decay and particle accel. 7−134212
Sun, coronal loop flare models, explosive chromospheric instability 7−127814
Sun, coronal loops, plasma and mag. field characts. 7−107788
Sun, coronal loops, resistive stability to perturbations with short wavelength across mag. field 7−145925
Sun, coronal loops, thermal stability, nonlinear diffusion asymptotics 7−115332
Sun, coronal loops and arcades, MHD waves characts. 7−145825
Sun, coronal mass ejection (1980 September 1) vel. field 7−94846
Sun, cylindrical plasma, MHD instabilities realistic energy eqn. 7−111192
Sun, dynamic evolution of transition zone plasma 7−88353
Sun, erupting prominence, EUV Skylab obs. 7−94843
Sun, flare electrons stochastic accel. 7−134213
Sun, flare X-ray characts., Hinotori obs. review 7−107793
Sun, flares, impulsive phase, nonthermal energy distributions determ. from Fe XXV and Fe XXIV lines obs. 7−140018
Sun, flares, nonthermal excitation and ionisation of H, effects on temp. min. region 7−79903
Sun, flares beam-heated models, collisional and return current heating functions 7−127699
Sun, flaring corona, electron beams stability 7−145926
Sun, forced current sheets, struct. and dissipation, appl. for coronal heating and flares 7−127707
Sun, incompressible MHD surface waves, nonlinear characts., appl. 7−127708
Sun, interior processes (book) 7−80189
Sun, loop flare models, nonlocal thermal conduction 7−127815
Sun, mag. flux tube model, in stratified atm. 7−127812
Sun, magnetic arches, evolution, projected charact. method anal. 7−115333
Sun, magnetohydrodynamic modes of a periodic magnetic medium 7−145823
Sun, nonstochastic prompt proton acceleration by fast magnetosonic shocks in the solar plasma 7−88089
Sun, physical processes (book) 7−80191
Sun, prominence, 2D magnetohydrostatic model 7−145924
Sun, quiet, small scale motions above conc. mag. regions 7−127827
Sun, slow sausage waves in mag. tube 7−145824
Sun, sunspots, magnetic fields and vel. gradients determ. method 7−145836
Sun, tearing mode instability above sunspots *(Chinese)* 7−101748
Sun, transition region and coronal response to heating rate perturbations 7−140014
Sun, turbulence as a contributor to intermediate energy storage during solar flares 7−88090

plasma continued
Sun, type II radio bursts, assoc. Langmuir waves free energy source charact. 7−115345
sunspots development, role of mag. diffusion instability *(Chinese)* 7−107785
young supernova remnants, effect of hot plasma radiation on radio emission *(Russian)* 7−72578
SwSt 1, young planetary nebula, electron density and temp. 7−128029
three-parameter electrostatic spectrometer, space plasma obs. 7−95606
Vega 1 and 2 PLAZMAG-1 plasma analysers charact. 7−79810
Vega-1,2 and Giotto, dust and gas impacts inducing secondary electron emission 7−107696
Venus, night-time ionosphere, radiotransillumination data from Venera-15 and -16 satellites 7−101715
Venus, solar wind interaction, effect of hot O corona 7−120236
Venus, solar wind mass loading 7−120235
Venus night-time ionosphere, form. conditions from radio transillumination data 7−120294
Westward-travelling surge, time evolution on ionospheric time scale 7−79768
X-ray binary stars, IR emission, plasma mechanism *(Russian)* 7−72539
e^+e^- bremsstrahlung in thermal plasma, analytical functions 7−101669
Ar, RF inductively coupled plasma, large volume, high density 7−97700
C plasma, amplification in UV range 7−130845
Cd vapour plasma, light emission and recombination *(Chinese)* 7−91299
Fe VII, relative emission line strength in astrophysical plasmas 7−139894
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287

plasma accelerators *see collective accelerators*

plasma applications
see also plasma arc spraying; plasma deposition; plasma devices
acetylene, production by pyrolysis in chemical plasma reactor 7−100510
cavity with single exhauster, fluid motion by electro-thermally ablated gas press. 7−69478
ceramic sinter powders, synthesis using high temp. plasma reactors *(German)* 7−138712
DC arc excitation as radiation sources for optical emission spectroscopy 7−91385
DC plasma for at. emission spectrosc., simplex optimisation 7−89269
electricity, direct conversion from plasma thermal energy, self-organization process 7−139119
ethylene, production by pyrolysis in chemical plasma reactor 7−100510
explosives ignition, semiconductor bridge plasma generator 7−139011
formed-ferrite flash plasma light source for gas laser appls. 7−75841
furnaces, appl. in plasma melting for metallurgical treatment *(German)* 7−138704
gaseous reductant and synthesis gas manufacture using arc plasma processes *(German)* 7−137133
gasified coal as fuel in turbogenerators, KATEK power system optimisation *(Russian)* 7−104466
generator of ultrasmall particles 7−124001
glass beads, impact phenomena using plasma gun, vels. depend. 7−124002
glow discharges reactive, cleaning of X-ray optical surfaces appl. 7−102574
HF Plasma 401 unit for tools hardening 7−100413
hot and cold plasma, technology, charact., generation and appls. *(German)* 7−137092
ICP-mass spectrometry, concomitant element effect on nonspectroscopic interferences 7−121292
inductively coupled plasma devices for spectrography *(German)* 7−106874
inductively coupled plasma spectroscopies 7−93437
laser-produced plasma X-ray sources, appls. 7−73491
low energy plasma physics technology review 7−142513
medium for high-energy particle acceleration *(French)* 7−129462
metals in solids, direct determ. by laser ablation DC Ar plasma emission spectrometry 7−114060
mirror analyser/quadrupole mass spectrometer for plasma processes 7−137128
narrow-gap point-to-plane corona with high velocity flows for chemical agent detoxification 7−75911
optical elements, glow discharge cleaning of C contamination 7−75172
plasma nitriding and plasma nitrocarburising, surface heat treatment using DC plasma, plant description *(German)* 7−138884
plasma production, appl. in chemical process industry *(German)* 7−137094
polymer surface treatment by low-temp. plasma *(French)* 7−132782
power converters with series reactances, EMC of high power HV plasma arc load *(Russian)* 7−104469
refractory carbide powders, plasma metallising 7−126043
soft X-ray source for X-ray lithography 7−75895
spacecraft surface charge control, using hollow cathode plasma source 7−102458
spontaneous X-ray emission from laser-heated plasmas 7−73489
steel, austenitic stainless, surface props., effect of plasma nitriding temp. 7−119444
steel, surface phase transforms. under pulsed effect of high-press. plasma 7−71361
surface modification processes, HF nonequilib. discharge, theoretical exam. and special features of appl. 7−138885
surface treatment of materials with elec. arc of two-jet plasma torch 7−138861
thin film production by plasma, conf., Japan (Nov. 1986) *(Japanese)* 7−142516
tool steel hardening in high temp. HF induction plasma 7−78311
transition metal carbides, powder spheroidisation in low temp. plasma 7−86102
tunable two-frequency FEL using Pelletron as driver for plasma beatwave accelerator 7−74947
vacuum-arc centrifuge, scaling of rotation and isotope separation 7−137135
AlN powders, prep. by N plasma-molten Al reaction *(Japanese)* 7−113507
Al_2O_3-SnO_2 composite plasma-synthesized powders 7−113510
Ar jet, treatment of heat-resisting ceramics 7−138866
C surfaces, modification in cold plasma 7−130878
^{252}Cf plasma desorption mass spectrometry, advances and appls. 7−116019
^{252}Cf plasma desorption time of flight mass spectrometer for high mass studies 7−116018
Fe, cast, white, plasma-arc surface hardening 7−78350

plasma applications continued
Fe, ion nitriding, nitride form. and growth 7−132810
H^+ ion plasma laser, far-UV, amplification factors of transitions, analytical theory 7−136275
H_2-$SiCl_4$, inductively coupled plasma, reaction mechanism studied by mass spectrometry 7−106869
Mg plasma columns, isotope separation in a vacuum arc centrifuge 7−96887
N_2, soln. from arc plasma into liq. Fe, arc current effect 7−104465
NO_x and SO_x removal from combustion gases by pulse-induced plasma chemical process 7−75896
O_2, isotope fractionation, mass-independent, in microwave plasma 7−136082
O_3, production by surface and glow discharges at cryogenic temps. 7−75912
Si, plasmochem. etching through two-layer mask 7−138909
Si powder, ultra-fine, prod. by arc plasma method 7−106472
α-SiC powders, plasma exposure, surface morphology 7−71335
SiC powders, prep. by RF plasma *(Japanese)* 7−119222
Si_3N_4 powders, prep. by RF plasma *(Japanese)* 7−119222
TaN, cubic, form. with plasma jet *(Japanese)* 7−119223
$TaSi_2$, low-temperature plasma anodization, RBS studies 7−113770
TiN, phase comp. change of Ti films when processed by N plasma *(Russian)* 7−126029
U, production using plasma torch 7−96228
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble layers, magnetisation, plasma exposure effects 7−112881
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble films, plasma exposure effect on mag. props. 7−112882

plasma arc sprayed coatings
adhesive strength of gas-thermal coatings to substrate, probabilistic eval. method 7−78294
coatings for machine components to adapt surface properties to suit environments 7−71008
industrial scale coating deposition, equipment and facilities *(German)* 7−138648
metallography, SEM technique *(German, English)* 7−132860
powder coatings, adhesion and gas permeability, effect of modulation of plasma arc. 7−125965
powders, plasma deposition, powder distrib. in plasma jet *(French)* 7−86018
solid body and plasma spray coating thermal cond. meas. apparatus 7−142154
steel, low C, substrates, plasma-sprayed spinel coatings, corrosion in chloride melts at 710°C 7−126324
thermal barrier coatings, current status overview 7−77796
thickness and subsurface defect detection, thermal wave interferometry 7−100495
Co-Cr-Mo alloy, Stellite 21 coatings on steel, damage kinetics in thermal fatigue *(French)* 7−119427
Co-Cr-W/steel surface alloys, laser processed, microstruct. and wear 7−119459
Cr_3C_2-based composite coatings, self-lubricating, comp. optimisation for use up to 760°C 7−78247
Cr_2O_3 hard coatings on Al or steel substrates 7−126301
Fe-R-B alloys (R=rare earth), melt spun and plasma sprayed, mag. props. microstruct. 7−132085
Mo contact coatings, deposited from vacuum arc discharge plasma, cryst. struct. and mech. erosion 7−86060
Ni based hard surfacing alloys, underwater plasma spraying, microstruct., mech. props. 7−77798
Ni-Al coatings, plasma sprayed, bend testing, AE obs. 7−78227
Ni-Co-Cr-Al-Y-Ta coatings, low press. plasma sprayed, oxidation, 850°C *(French)* 7−86466
Ni-Co-Cr-Al-Y-Ta protective coatings on mech. props. of Ni-base superalloys CMSX-2 and Cotac 784 7−86275
Ni-Cr based plasma coatings on steel, corrosion in molten electrolytes 7−119438
Ni-Cr powders, plasma spheroidisation and cladding 7−144330
Ni-Cr-Si-B coatings, plasma sprayed, adhesion, struct., comp, microhardness rel. to laser treatment 7−144269
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7−77799
NiCoCrAlY coatings, plasma-sprayed, stress rupture and creep behaviour 7−71389
PZT plasma-sprayed films, cryst. struct. determ. 7−124776
Si, electron beam recrystallisation of plasma sprayed substrates 7−124336
SiC whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
Si_3N_4 whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
TiC coating, plasma spraying, density, deposition efficiency, particle size distrib. 7−138651
$TiC:H_n^+$ (He^+), irradiation effects, SEM and TEM investig. 7−76153
WC-Co hard coatings on Al or steel substrates 7−126301
WSi_2, plasma sprayed coatings, corrosion and oxidation resist. 7−78372
Y-Ba-Cu-O, supercond. coatings, plasma sprayed, transition temp. above 77 K 7−112565
Y-Ba-Cu-O high T_c supercond. plasma powder sprayed coating props. 7−119133
Y-Ba-Cu-O high T_c supercond. large area plasma spray deposited thick films props. 7−119134
ZrN coatings, plasma spraying, controlled N_2 atmosphere, struct., hardness, thermal expansion 7−71383
ZrO_2, porous ceramic, plasma sprayed, particulate erosion, mech. props., struct. 7−78269
ZrO_2, stabilised coatings, supersonic plasma spraying, morphology, computer aided analysis 7−77797
ZrO_2−Yb_2O_3, plasma-sprayed coatings, thermal barrier appl. 7−106403

plasma arc spraying
centrifugal force utilisation in gas-thermal coating 7−78293
ceramics, plasma processing appl., review *(Japanese)* 7−113503
coatings for machine components to adapt surface properties to suit environments 7−71008
industrial scale coating deposition, equipment and facilities *(German)* 7−138648
modulated plasma arc shock wave generation 7−124003
powders, plasma deposition, powder distrib. in plasma jet *(French)* 7−86018
thermal spray powders, retesting schemes 7−77800

plasma arc spraying continued
$BaPb_{1-x}Bi_xO_3$, ultrafine powders prepared by spray-ICP technique 7−106460
Ni based hard surfacing alloys, underwater plasma spraying, microstruct., mech. props. 7−77798
TiC coating, plasma spraying, density, deposition efficiency, particle size distrib. 7−138651
$YBa_2Cu_3O_x$ plasma and hypersonic flame powder spraying prep. and props. 7−119132
ZrO_2, stabilised coatings, supersonic plasma spraying, morphology, computer aided analysis 7−77797

plasma ashing *see sputter etching*

plasma-beam interactions
see also electromagnetic wave propagation in plasma
accelerators, beam loading, particle-in-cell simulations 7−104462
ASDEX discharges, neutral particle injection, stability anal. 7−111225
ASDEX divertor tokamak, plasma-wall interaction, impurity release 7−69366
beam-ion confinement meas. during beam-driven instabilities in Tokamak 7−130910
beam-plasma system, instability development, regular external field and noise effect 7−130866
boundary layer, fast primary electrons effects 7−130881
bounded plasma, ion-beam instabilities, electrostatic wave excitation 7−123910
charge-neutral beams injection into space plasmas, ambient plasma environment response 7−134123
conference on heavy ion inertial fusion, Washington, DC, USA, (May (186) 7−66807
D-T plasma with injected beams, distrib. and α particle prod., coupled model eqns. 7−104375
dielectric Cerenkov amplifiers using relativistic electron beams, high-current effects 7−83493
diffusion of a plasma subject to neutral beam injection 7−83429
electric field spectra beyond strong-turbulence regime in relativistic beam-plasma interaction 7−117738
electron beam gas focusing dynamics 7−123909
electron beam injection into ionosphere and magnetosphere plasmas, space charge effects 7−115159
electron beam injection into space plasmas, ambient plasma environment response 7−134122
electron beam injection into symmetrically open plasma system, oscillation localisation *(Russian)* 7−142474
electron beam propag. in plasma filled waveguide 7−83499
electron beam relax., plateau states 7−91337
electron beam stimulation of wear-rib plasmons 7−83476
electron beam-mag. field interaction in laser plasma 7−123912
electron beam-plasma interaction, unstable modes, perturbation anal. 7−75834
electron beam-plasma system, cross-field electron thermal conductivity 7−83431
electron beams, relativistic fluid eqns. 7−91362
electron hole Mach number limit in bounded-beam plasma, Poisson eqn. soln. 7−75836
electron-cyclotron reson. plasma, particle motion, wave propag. eqn., relativistic effects 7−83415
electrostatic wave dispersion in beam-plasma system immersed in inhomogeneous mag. field 7−123913
excitation in bounded beam-plasma system, nonlinear theory 7−123866
excitation of intense longitudinal waves in a plasma by electron bunches 7−97757
filamentation instability of ion beams in magnetoactive plasma *(Russian)* 7−117739
Hamiltonian system, expression for change in adiabatic invariant 7−83411
heavy ion beam transport and interaction with ICF targets, NORCLA code 7−81682
heavy ion beam-plasma interaction experiments at GSI, ICF appls. 7−81683
heavy ion ICF, beam-plasma interactions 7−67964
heavy ions, charge state and energy deposition in plasma, ICF appls. 7−81681
Heliotron-E, Fe atom meas. by laser-induced fluoresc. spectroscopy 7−69452
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454
hollow gas-puff z pinch, electron beam preionisation, stability enhancement 7−69375
inertial confinement fusion, heavy ion driven, review 7−104423
inhomogeneous plasma penetrated by beam, longitudinal beam amplification 7−97756
ion beam, modulated, stimulation of wave propagation 7−83498
ion beam-plasma system, ion wave reflection by bipolar type electrode *(Japanese)* 7−137065
ion beam-plasma system, two-stream and filamentation instabilities 7−123911
JET, hot ion regime, α particle heating study 7−104428
JFT-2M tokamak, confinement and fuelling during additional heating phase 7−69417
laser created plasma, charge state evol. and energy losses in beam-plasma interaction 7−81680
light ion beam, rotating and propagating, lin. stabilities, inertial confinement fusion appl. 7−130885
magnetosonic shock wave plasma heating through resonant ion acceleration 7−97746
magnetosphere, broadband electrostatic noise generation in plasma sheet 7−107668
magnetospheric plasma of a pulsar, props. investig. 7−120485
mean equilibrium charges of energetic ions after passing through hot plasma 7−123908
modulational instability of waves on electron beam in isotropic plasma *(Hungarian)* 7−130882
nonlinear absorption of intense microwave pulses 7−117742
particle beam fusion and its related problems 7−68003
PDX tokamak, beam ion loss to the inside during a fishbone instability 7−97727
Pierce instability of hot electron beam, dynamics 7−111246
plasma instability-weak warm electron beam interactions, mode coupling effect meas., quasilinear description 7−75835
positron deposition in plasmas by positronium beam ionization and transport of positrons in Tokamak plasmas 7−97760

plasma-beam interactions continued
relativistic electron beam focusing calcs. and simulation 7−103727
relativistic electron beam induced plasma current, meas. 7−130883
relativistic electron beam propagation, current enhancement obs. 7−97758
relativistic electron beam-plasma interactions, targets, Langmuir probe investig. 7−97805
relativistic electron beams, propagation in nonconducting vacuum drift tube and through plasma source 7−109559
resonant absorption in sharply bounded overdense plasma 7−117710
slipping instability of electron beam in drift tube, anal. 7−130884
solitary surface waves in plasma slabs 7−83453
SPAC-VII toroidal device, relativistic electron rings 7−130916
SPQR-II beam-phase interaction expt. for ion beams 7−81684
stimulated scattering of a plasma wave by a relativistic electron beam 7−83495
subharmonic waves in ion beam-plasma system, low freq. fluctuations *(Japanese)* 7−137064
surface waves excitation, modulated electron beam, plasma boundary incident 7−130876
TFTR, ohmic and neutral beam heating, global particle recycling 7−69415
TFTR discharges, ohmic and neutral-beam heated, impurity transport 7−69421
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
tokamak, ASDEX, neutral particle beam injection, charge exchange excited line radiation 7−83496
tokamak equilibr. and stability press. anisotropy effect 7−142486
Tokamaks, MHD ballooning modes, energetic particles sloshing effects 7−97759
wakefield accelerator, driving electron beam stability 7−104421
wakefield accelerator, ion beam excitation of ion plasma waves simulation 7−104422
wakefield accelerator, nonlinear plasma oscills., relativistic electron beam excitation 7−104420
wakefield accelerator expt. simulation 7−104461
wave reabsorption in the quasilinear relaxation of fast particles in a plasma 7−83494
whistler mode excitation by artificially injected electron beam in ionosphere plasma *(Russian)* 7−72218
Z-pinch plasma lens for high energy particle beams 7−103315
Al thin slabs, proton stopping, numerical simulations 7−69376
D-T plasma, fast α-particle energy deposition, angular dispersion term effect 7−83497
H_2, dissociation rate near cathode in low temp. plasma 7−83579
Na particle-beam-induced atomic plasmas, analytic kinetic model 7−130880
Xe_2^* excimer fluorescence from charged particle excitation, sensitivity anal. 7−69306

plasma boundary layers
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
core-boundary layer plasma transport in Tokamaks, simulation 7−75870
current flow in weakly ionised boundary layer, nonlinear regimes stability 7−97711
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
edge region diagnostics and transport in the TEXT tokamak 7−75828
fast primary electrons effects 7−130881
gas laser tube with hyperboloid of revolution boundary, electron density distrib. calcs. 7−68618
high recycling divertor edge layer, radially continuous 2-chamber model 7−75770
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
impurities, spatial distribution in boundary layer of DITE 7−75850
limiter discharger, plasma performance, self-consistent plasma-wall interaction model 7−75822
magnetosphere, broadband electrostatic noise generation in plasma sheet 7−107668
magnetospheric turbulence spectrum, fund. harmonics, anomalous particle fluxes effects 7−101636
MHD equilibria, minimum energy states 7−111204
MHD generator channel, boundary layer arc 7−139121
parameter evolution during ion Bernstein wave heating, edge effects 7−75796
reversed field pinches, current and heat flux, electron density control 7−69409
RF discharge in EM wave fields, elementary dissipative structs. 7−124008
scrape-off layer, boundary layer theory 7−75775
scrape-off layer in TCA tokamak, Alfven wave heating study, Langmuir probe diagnostics 7−75832
scrape-off layers, generated by pump limiter and ergodic mag. limiter, impurity control 7−75855
scrape-off region of pump limiters, plasma transport, 2D modelling 7−75769
sheath boundary, Maxwellian source, warm-ion integral plasma eqn. 7−91336
sheath pot. in tokamak edge plasma using retarding field analyser 7−75826
TCA tokamak, mag. and density fluctuations, probe meas. 7−111280
TEXTOR, impurity sources, emission spectroscopy 7−69419
TFTR edge turbulence meas., Langmuir probes, D-alpha imaging, microwave scatt. and mag. pickup loops 7−75830
TFTR movable limiter and first wall particle inventories calcs. 7−75806
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
TMX-U tandem mirror, edge plasma ICRH effects 7−69405
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
tokamak plasma, profile consistency, nonlocal transport 7−111181
tokamak plasma, rot. effect on kink instability *(German)* 7−137079
TOSCA tokamak, turbulent transport, diagnostics 7−111184
wall sheath effects on transport 7−137089
ZT-40M reversed-field pinch D and impurity fluxes, collector probe meas. 7−69407
H_β line profile, glass-to-plasma boundary layers influence 7−83484

plasma collision processes
see also plasma transport processes; plasma-wall interactions
acetylene, synthesis in H plasma jet, thermodynamic models 7−97697
acetylene, thermal plasma prod., equilib. calcs. 7−130831
afterglow plasma, electron energy distrib, fn., kinetic eqn. soln. 7−117785
air plasma, low temp., effective number of electron collisions 7−75799
alkali plasmas, effective electron-atom interactions and virial coeffs. 7−142438
alpha particle effects, automated computational tool develop. 7−104373
arcs, density and temp. profiles, CW laser scatt. 7−111295
astrophysical environments, internal structure, atomic processes investig. 7−91285
atom-ion collisions, conf., College Station, TX, USA (Nov. 1986) 7−120697
atomic particles collisions in two-phase medium, molecular dynamics calc. 7−142470
ballistic phenomena due to plasma wave, collision effect 7−75787
basic processes in glow discharge plasmas 7−104480
bounded plasma, ion-beam instabilities, electrostatic wave excitation 7−123910
bumpy tori, wave damping, quasilinear heating, radial transport 7−111249
collision-dominated RF plasma, electron kinetics, self-consistent treatment 7−130829
collisional relax., Boltzmann integral, Fokker-Planck approx. failure 7−111160
P/Comet Halley (1982i), plasma and particle meas. by Vega probes *(Hungarian)* 7−115310
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
critical ionisation vel. interaction, turbulent heating and threshold condition 7−83412
diamagnetic plasma, expanding clouds slowing effectiveness of mag. field 7−117717
electron plasma in strong mag. field, many-particle adiabatic invariant 7−142496
electron plasmas, like-particle collisions, cross-mag. field transport 7−111162
electron scattering on Coulomb cut-off pot., quasiclassical and classical cross-sections 7−75758
electron-cyclotron reson. plasma, particle motion, wave propag. eqn., relativistic effects 7−83415
electron-ion collisions, reson. effects, conf., Nagoya, Japan (Sept. 1986) 7−72730
electron-ion plasma, low-freq. density fluctuations, collisional enhancement 7−83420
equilibrium current local effect on tearing mode stability 7−142458
expanding inhomogeneous plasmas, elec. fields and double layers, hydrodynamic anal. 7−69323
field-reversed config., lower hybrid drift fluctuations, CO_2 heterodyne scatt. study 7−97732
finite dust cloud in infinite plasma, charging, pot. and instabilities, astrophysical appl. 7−94652
finite Hamiltonian systems with integrable mean field, kinetic eqn. 7−88554
fluorescent lamp plasma, microwave interactions, density shift meas. using cavity reson. method 7−108086
fusion reaction rates, mag. field effects 7−122074
glow discharge in air, attachment instability onset, num. simulation 7−117773
hose and sausage instabilities in relativistic electron beams, variable collision freq. effects 7−130919
hot dense plasma radiative processes 7−123840
hybrid simulation of ion beams in background plasma 7−83529
impure plasma with arbitrary toroidal rot., transport calcs. 7−91297
impurity influx behaviour in JET tokamak, visible spectra anal. 7−75848
infinite plasma-wall sheath model, recombination, wall reflection and ambipolar diffusion effects 7−97753
intense relativistic electron beam ring with large self-magnetic energy, current decay 7−91350
interaction of particles with cavitons in plasma *(Chinese)* 7−97706
ion drift self-alignment, collisional relax. anisotropy 7−111174
ion excitation by electrons, excitation cross-sections, Coulomb-Born approx. 7−142436
ionic reactions in thermal plasmas 7−69307
ionised plasma flow near electrodes, method for solving Crook's self-consistent eqn. 7−123865
isothermal collisional plasma, low freq. waves 7−137076
JET, D-D plasma, ^{3}He and ^{3}H ions burn up meas. 7−104374
JET, ICRF heating sawtooth behaviour, 15 MeV $^1H^+$ emission spectra anal. 7−104429
JET plasma, Ne-like and adjacent ion recombination 7−75862
JIPP-T-II-U Tokamak, diagnostics using time-resolved Ti^{20+} X-ray spectra 7−123987
kinetic electromag. modes and quasilin. transport, collisional effects 7−91321
kinetics direct statistical simulation, collision integral *(German)* 7−137123
laser produced plasma, mag. field struct., collisional effects, dispersion relation 7−111161
magnetically confined collisional plasma, diffusion, nonlinear eqns. 7−111177
magnetospheric turbulence spectrum, fund. harmonics, anomalous particle fluxes effects 7−101636
mean equilibrium charges of energetic ions after passing through hot plasma 7−123908
microwave cavity measurements of density and collision frequency in decaying plasmas 7−123982
multiply, charged ions, level inversion in plasma conditions, light amplification by stimulated XUV emission 7−91332
multiply charged impurities, charge-changing collisions role in active-beam diagnostics 7−91284
neutral transport in plasmas with velocity dependent charge exchange collision frequency 7−91298
nonequilibrium plasma, temp. meas. using spectral line shapes 7−97789
nonlocal thermal equilibrium plasmas, ionis. balance and L-shell spectroscopy 7−137127
nonuniform plasma in mag. field. LF oscills. *(German)* 7−137067
one-component plasma, electronic screening effects, ion-sound and-plasma modes calcs. 7−111211
organic dielectric with evaporated thin electrodes, chem. processes during elec. breakdown 7−99671

plasma collision processes continued
parametric plasma heating, electron acceleration, ionisation 7−69377
partially ionised plasma, RF heating, ion vel. distrib. 7−69378
particle simulation of electromag. phenomena, Fourier-space iterative technique calcs. 7−69449
plasma turbulence, collisional statistical model 7−137081
poloidal electric field generated by electron cyclotron heating in a collisional tokamak plasma 7−91345
polystyrene thin films, growth mechanism using plasma polymerisation *(Korean)* 7−144716
positive column, plasma density gradients determ. 7−117770
positron deposition in plasmas by positronium beam ionization and transport of positrons in Tokamak plasmas 7−97760
radiative transfer and collisional rate eqns., self-consistent solns. *(German)* 7−130841
reacting plasma, strongly coupled, partially ionized, scatt. theory methods 7−130835
resonance-enhanced multiphoton ionization for diagnosis of a weakly ionized plasma 7−130932
RF molecular plasmas, electron energy distrib. functions, role of second kind collisions 7−75757
runaway electrons, kinetic theory 7−69308
similarity solution of two coupled reaction-diffusion rate equations 7−69304
soliton collision, energy radiation, perturbed nonlinear Schrodinger eqn 7−123870
SPAC-VII toroidal device, relativistic electron rings 7−130916
statistical mechanics of partially-ionised stellar plasmas, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
stellarator, ripple transport, hybrid Monte Carlo simulation 7−142485
tandem mirror, central cell density, electrostatic end plugging 7−142487
tandem mirrors, electron distrib. and confinement instability study 7−142484
tearing mode instability devel. in config. with sheared mag. field, collision aspects 7−117712
test ion cross-field transport in quiet plasma 7−142444
TEXT, Ar XII-XVI ionisation and recombination rates, time resolved spectroscopy 7−123988
TMX-U tandem mirror, edge plasma ICRH effects 7−69405
Tokamak Alfven waves, α-particle driven instabilities 7−97730
tokamak plasma, α particle effects study 7−104425
tokamak plasma, equilibr. and collisional transport 7−111182
tokamak plasmas, α particle effects, conf., Aspenasgarden, Sweden (June 1986) 7−102009
Tokamak reactor design, α particle effects study 7−103180
tokamaks, α particle transport processes study 7−104372
toroidal fusion plasmas, basic physical processes, conf., Varenna, Italy (Aug.-Sept., 1985) 7−115673
toroidal plasmas, transport and the bootstrap current 7−137055
transport phenomena in laser created plasma with non-Maxwellian electronic distribution 7−69305
turbulence, wave dipole emission, matrix element calcs. *(German)* 7−137078
viscosity, distrib. function tensor moments in mag. field 7−83410
volumetric discharge, nanosec., spectral anal. 7−117781
weakly ionised plasma, thermostress flow study 7−69322
weakly ionised plasmas, electron-velocity distrib. fns., perturbation expansion 7−142437
Weibel instability, collisional effects 7−83459
Al plasma, laser-produced, thermal transport models, X-ray meas 7−69462
Al XI, laser produced plasma, population inversion, ab initio spectra 7−69392
Ar excited level excitation and quenching by perfluorocyclobutane in glow discharge 7−122434
Ar inductively coupled plasma, collision cross sections, transport coeffs *(Chinese)* 7−117704
Ar inductively coupled plasma, impurities spatial distribs. study 7−130834
Ar, nonequilibrium plasma, collisional-radiative coeffs. 7−69303
Ar, plasmas, low-press., electron energy distrib., effect of collisions of various kinds 7−83413
Ar surface wave discharge, medium pressure, expts. and energy balance 7−142528
Ar^{10+} plasma, dielectronic recombination rate coeffs. 7−97695
Ar^{16+}, He-like, from Alcator-C tokamak, ground-state transitions, radial profiles 7−97801
CO laser during periodic pulse electroionisation excitation, chemical composition change 7−86634
CO_2 TEA laser discharge plasma, mol. decomposition and contaminants 7−139010
Cd I and II, laser transition, spontaneous emission in plasma 7−103806
Co_2 discharge plasma, dissociative and three-body electron-ion recomb 7−117772
Cs^+-electron recombination in presence of N_2, O_2 and CO_2 7−111163
D+D plasma, single α particle orbit calc. study 7−104371
Fe XVIII in tokamak plasmas, electrons density sensitive line ratios 7−123854
Fe^{18+}, plasma, dielectronic recombination rate coeffs. 7−97695
H like ions, impact excitation by H^+ and electrons, fine struct. levels 7−103666
H optically thick plasma, laser pulse propag., collisional radiative model 7−91331
H, two-temperature nonequilibr. plasmas, atom-atom inelastic collisions 7−123841
H-D plasma, Balmer α transitions, visible spectra, ion dynamic effects 7−129640
H-like in dense plasma, reson. contrib. to excitation cross section 7−97694
H^++H(He), electron capture differential cross sections 7−122682
HCN, thermal plasma prod., equilib. calcs. 7−130831
H_2CN^++HCN clustering reaction rate consts., appl. to plasmas and atm of Titan 7−138976
He inductively coupled plasma, energy transfer, ionisation processes, heavy inert gas atoms effect 7−130830
He, nonequilibrium discharge plasma, bremsstrahlung and line radiation diagnostics 7−69461
He plasma, ion impact excitation, appl. to VUV radiometric transfer standard 7−122424
He-Cd expanding plasma, Cd ion excitation 7−75760

plasma collision processes continued
He-Cu discharge, endoergic and reson. charge transfer excitation 7−129861
Kr^{28+}, plasma, dielectronic recombination rate coeffs. 7−97695
LiHe, electric discharge plasma, excited states form., pot. energy curves, MCSCF calcs. 7−89943
Mo^{34+}, plasma, dielectronic recombination rate coeffs. 7−97695
N_2, nonequilib. flow, non-Maxwell energy distrib. 7−69329
N_2, oxidation in nonequilib. weakly ionised plasma, temp. effects, numerical model 7−144686
NH_3, thermal plasma prod., equilib. calcs. 7−130831
Ne discharge, electron distrib. function kinetic eqns. soln. 7−69498
Ne-like ion plasma in tokamaks, ion recombination coeff. study 7−97696
O_2, plasmas, low-press., electron energy distrib., effect of collisions of various kinds 7−83413
O_2^- ions in nonequilib. plasma, form. and breakup, electric field effects 7−83414
S XIV, laser produced plasma, population inversion, ab initio spectra 7−69392
SiC, thermal plasma prod., equilib. calcs. 7−130831
Si_3N_4, powders, thermal plasma prod., synthetic routes survey 7−130832
Si_3N_4, thermal plasma prod., equilib. calcs. 7−130831
Sr plasma, superelastic collisional excitation, one- and two-photon laser pumping 7−68263
Sr^+, ion recombination, ionisation equilibr., ICP study 7−122707
TP-D plasma source discharge mechanism, numerical simulation 7−96428
Ti X, θ-pinch plasma, electron-impact excitation, spectral line intensities study 7−91286
TiC, thermal plasma prod., equilib. calcs. 7−130831
W and Al_2O_3 particles injected into thermal plasma reactor, heating and movement *(Chinese)* 7−91335
Xe, diffuse and contracted discharges, plasma decay rate 7−69496
Xe_2^* excimer fluorescence from charged particle excitation, sensitivity anal. 7−69306

plasma confinement
see also magnetic traps; pinch effect; plasma focus; plasma impurities; plasma-wall interactions
AAEC rotamak, equilib. config., props. determ. 7−75886
Alfven surface waves, dispersive and stability characts. along plasma column 7−97736
Alfven wave heating in TCA tokamak, density rise 7−91291
algorithms and problems for solutions of some physics problems 7−115699
anomalous energy transport, tokamak transport code simulations with drift wave models 7−69315
anomalous inward particle flux in tokamaks due to a thermoelectric-type effect 7−69314
antenna optimization for Alfven wave heating 7−75838
Applied-B ion diode, impedance behaviour, analytic model 7−69477
ASDEX, LF fluctuations, IR laser scatt. 7−111171
ASDEX, low energy neutral particle fluxes, TOF method 7−69412
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
ASDEX, tokamak, neutral particle beam injection, charge exchange excited line radiation 7−83496
ASDEX discharge, C and O impurities, radiation losses, VUV diagnostics 7−91366
ASDEX discharges, neutral particle injection, stability anal. 7−111225
ASDEX divertor, pellet and gas puff refuelling, recycling study 7−69411
ASDEX divertor tokamak, plasma-wall interaction, impurity release 7−69366
asymmetric power spectra of density fluctuations, far-IR obs. in JIPP T-IIU 7−123878
ATF, design and capabilities 7−69403
atomic systems, confined at very high temp., energy loss of fast particles 7−83522
Auburn torsatron, magnetic surface mapping with emissive of filament technique 7−83543
axisymmetric MHD spheromak equilibria in parabolic coordinates 7−117750
ballooning mode RF stabilisation in tokamaks 7−111212
ballooning modes, energetic particle stabilisation in tokamaks 7−123938
ballooning tearing mode self-excitation and instability in toroidal mag. confinement 7−83467
beam-ion confinement meas. during beam-driven instabilities in Tokamak 7−130910
beta enhancement of tokamak plasma with nearly circular cross-section 7−75786
beta limit and localized ballooning mode stability in Doublet III 7−123876
boundary value problems with external currents in stellarators 7−123947
bounded magnetoplasma, EM wave propag. 7−104415
burn control of an ignited Cat-D tokamak by compression-decompression and fuel injection 7−122068
CASTOR tokamak, convective losses during current initiation 7−97778
CASTOR Tokamak, radiative power losses, density depend. study 7−117705
catalysed-D tandem mirror reactor, central cell plasma performance calcs. 7−67985
compact ignition Tokamak, physics aspects study 7−103181
compact tori, α-particle confinement 7−123930
compact torsatron reactor confinement and engineering aspects 7−69404
conference, Cargese, France (July 1986) 7−108034
current diffusion in TEXT, poloidal mag. field diffusion equation 7−74067
cyclic tokamak operation in the WT-2 device, LH current drive 7−123939
cylindrical plasma, sheared equilib. flows, MHD instabilities 7−123862
DIII-D tokamak, ICRF reson. cavity launcher coupling anal. 7−111256
discharge plasma confinement in cusped ion thruster, analytical model 7−91378
DITE limiters, wall loading, Monte Carlo neutral particle transport code 7−69365
DITE tokamak, gas puffed impurities toroidal dispersal 7−69414
divertor function in H-mode onset, and H-mode operation with island divertor 7−75854
divertor tokamak, matrix transfer function analysis applied to feedback control system 7−74069
double layer form. in magnetically confined plasma in magnetosphere 7−117733

plasma confinement continued
Doublet III, H-mode outside divertor, NBI heating efficiency 7−97777
Drakon confinement system in MHD approx., equilib. and plasma loss 7−83509
drift cyclotron loss-cone instabilities in an inhomogeneous magnetic field 7−83449
EBT, confinement, fluctuations and electric field effects 7−91355
EBT particle and energy confinement times, Monte Carlo estimates 7−91357
edge and boundary modes, magnetic line reconnection and flux merging 7−104385
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
edge region diagnostics and transport in the TEXT tokamak 7−75828
EIV axisymmetric plasma equilib. code for compact torus 7−97774
electron cyclotron current drive expts. on WT-2, theoretical comparison 7−91343
electron cyclotron heating in ATF torsatron 7−69383
electron cyclotron resonance heating in plasmas, parametric instabilities 7−83504
electron energy distrib. by cyclotron radiation into Tokamak plasmas investig. 7−75864
electron plasmas, like-particle collisions, cross-mag. field transport 7−111162
electron temperature meas. by X-ray absorber foil method on TFTR 7−91319
electron temperature meas. errors using Langmuir probe in mag. field 7−83422
electrostatic drift wave turbulence, numerical simulation 7−111223
electrostatic ion temp. gradient driven drift modes, dispersion relation 7−123859
energy relaxation by the tail anisotropy instability during lower hybrid current rise 7−123847
entropy principle for Tokamak profiles 7−111259
equilibrium simulation in Tokamak 7−135547
erosion-redeposition and impurity transport in the scrape-off layer of the FT tokamak 7−75819
EUV impurity measurements on the TEXTOR Tokamak 7−111276
fast-wave current drive, polarisation converted coupler 7−111245
Fermionic plasma confinement in pot. barrier, exchange effect 7−83524
field reversed configuration parameters, low-freq. stability investig. 7−91358
field-reversed config., lower hybrid drift fluctuations, CO_2 heterodyne scatt. study 7−97732
field-reversed configs., anomalous transport study 7−111183
finite-β ion mixing mode in sheared magnetic geometry 7−91323
force balance equations for massless plasma in tokamak 7−91353
Frascati Tokamak plasma, 14 MeV neutron emission meas. by activation techniques 7−75858
free boundary kink mode shrinkage in tokamak, MHD calcs. 7−123956
FTU device, design 7−122086
fuel pellet injection, m=1, n=1 oscillations in tokamak 7−123944
fusion high field magnets, poloidal and toroidal currents, integrated system 7−74025
generalized moments for low-frequency modes in tokamaks and their application to drift and ballooning instabilities 7−104390
global confinement, fluctuations, transport study 7−111188
heat transport in partially stochastic tokamak magnetic fields 7−111261
Heliotron-E, Balmer alpha laser fluoresc. spectroscopy 7−69453
Heliotron-E, Fe atom meas. by laser-induced fluoresc. spectroscopy 7−69452
Heliotron-E, H retention, thermal desorption and nucl. reaction anal. 7−69455
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454
Heliotron-E device, pump limiter study 7−69410
high beta tokamaks, scaling laws for design 7−74070
high-current magnetically compressed discharge, radiation dynamics 7−137131
high-energy pulsed-laser-generated shock waves form a metallic surface *(French)* 7−97745
highly-ionised atoms, spectral lines, fusion plasma diagnostics 7−111274
Hiroshima Torus-1, MHD activity and peripheral plasma electrostatic charact. *(Japanese)* 7−137105
Hiroshima Torus-1, reversed field pinch expts., plasma-wall interaction causing impurity activity *(Japanese)* 7−137104
HL-1 Tokamak, wall conditioning 7−75816
homeostasis in plasma confinement 7−97788
hot plasma confinement in stellarator type toroidal traps 7−75844
ICF, target, liq. D-T in SiO_2 aerogel foam, opacity, shrinkage 7−96311
ICF, target acceleration with heavy-ion beams 7−135549
ICF first walls, pulsed stress loading 7−68006
ICRF fundamental minority heating in inhomogeneous tokamak plasmas 7−91342
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
ICRF heating of large tokamaks, coupler impedance calcs. 7−123940
ideal magnetohydrodynamics book 7−134382
ideal MHD β-limit, benchmark calcs. 7−89722
ideal-fluid plasmas, Hall MHD conservation laws, Lyapunov stability 7−111197
impurity, deposition on ALT-1 limiter heads in TEXTOR 7−75851
impurity generation due to non-thermal electrons and its control by external bias 7−111257
impurity influx behaviour in JET tokamak, visible spectra anal. 7−75848
inertial confinement fusion, heavy ion driven, review 7−104423
inertial confinement fusion driver and reactor for space power plants 7−68010
inertial confinement fusion research in Germany 7−130900
intense relativistic electron beam ring with large self-magnetic energy, current decay 7−91350
internal magnetic fluctuations in HBTX1A revised field pinch, mag. probe investig. 7−75863
ion-beam driven fusion targets, energy deposition study 7−130913
JET, additional heating data, comparison with model scale invariance forms, MHD 7−129402
JET, D-D plasma, ^3He and ^3H ions burn up meas. 7−104374
JET, heat pulse propagation studies, heat diffusivity model 7−96321
JET, hot ion regime, α particle heating study 7−104428
JET, ICRF heating sawtooth behaviour, 15 MeV $^1H^+$ emission spectra anal. 7−104429

plasma confinement continued
JET, ignition conditions, confinement, performance, overview *(French)* 7−141268
JET, isotope exchange expt. modelling 7−69416
JET, mag. fluctuations and confinement, anomalous transport 7−111265
JET, magnet power supplies and plasma control systems 7−74029
JET, operational results and implications for reactors 7−122076
JET, plans for current profile control 7−123972
JET, plasma behaviour, initial results, impact on fusion development 7−123971
JET, plasma confinement and heating 7−96320
JET plasma, Ne-like and adjacent ion recombination 7−75862
JET Tokamak, plasma confinement and heating 7−69430
JET Tokamak, turbulence, heating, fluctuation meas. 7−111231
JET tokamak test reactor, plasma confinement *(Dutch)* 7−123936
JFT-2M, H-mode phenomena during ICRF heating 7−130906
JFT-2M, H-mode transition, electron cyclotron emission, peripheral electron temp. 7−97704
JFT-2M tokamak, confinement and fuelling during additional heating phase 7−69417
JT-60 project, overview 7−89707
kinetic Alfven waves, nonlinearly driven tearing instabilities 7−137072
kinetic electromag. modes and quasilin. transport, collisional effects 7−91321
kinetic theory of anomalous transport processes in tokamaks 7−91296
kink and tearing mode stability in tokamaks 7−75782
L-2 stellarator, ECRH, Gaussian beam form. and transport 7−69379
L-mode plasma in tokamaks, scaling of incremental energy confinement time 7−69433
local ion temperature gradient in PLT, fission product meas. 7−69317
localizability of a toroidal burning plasma in the pressure-position space 7−123952
low-Z impurities in TEXTOR, origin investig. 7−75852
low-energy neutral particle analyser for plasma expts. 7−80926
lower hybrid current driven plasmas in Alcator C, energy confinement studies 7−69384
lower hybrid heating and current drive, numerical modeling 7−83500
lower hybrid heating in tokamaks, saturation of parametric instabilities 7−69338
lower hybrid-driven plasma, selective electron-cyclotron heating at down-shifted freq. 7−111248
lower-hybrid current-drive density limit cause, simple model, mode coalescence condition 7−137097
magnetic configuration control, harmonic anal. in stellarators 7−123937
magnetic cusp systems, nonadiabatic confinement, ion and electron temp. 7−83511
magnetic field line equations, Hamiltonian formulation, orthogonal curvilinear coord. systems 7−142442
magnetic fusion devices, equilibr. mag. fields, particle transport 7−111264
magnetic reorientation and the spontaneous formation of tangential discontinuities in deformed magnetic fields 7−139903
magnetically confined plasma, EM wave current drive, elec. field effects 7−111260
magnetically insulated ion diodes, anode plasma ionisation due to sheath heating 7−69381
magnetised plasma, longit. dielectric const., toroidal effects *(German)* 7−137112
magnetoelectrostatic confinement in tandem mirror geometry 7−123960
magnetofluid, confined turbulent relax. to force-free state 7−111195
magnetoplasma, magnetoelectrostatic confinement at negative pots. 7−104440
magnetoplasma confinement augmentation by E×B drift fields 7−69431
metal deposition on low-Z samples during ECR and glow discharge cleaning in TEXTOR 7−75812
metal impurities, in ion and electron drift distribs., for TEXTOR discharges 7−75879
MHD plasma in cylindrical geometry, Fourier decomposed operator, magnetic axis 7−111203
MHD stability analysis for the Big Dee upgrade of the Doublet III tokamak 7−123948
micropinch, high temp. and superdense, radiative collapse model 7−69442
microwave scattering from electron diamagnetic drift waves, spectral broadening 7−123953
mirror plasma, flute modes stabilisation, finite Larmor radius and surface effects 7−97728
mirror plasma, MHD stability, end-plate pot. control study 7−97784
mirror plasma, rigid mode ballooning instability, resistive effects 7−97729
mirror-confined hot-electron plasma, generation and control of high transient elec. potentials 7−75861
neoclassical transport coefficients for finite-aspect-ratio and beam-shaped tokamak plasmas 7−83428
neutral beam heated and ohmically heated plasma, X-ray pulse height anal. 7−142512
neutral beam heating in JT-60, energy confinement and profile characteristics 7−123970
neutral beam injection, charge exchange meas. of MHD activity 7−123950
neutron yield during H neutral beam injection in Doublet III 7−123951
nonlinear absorption of intense microwave pulses 7−117742
ohmically heated divertor discharges with gas and pellet fuelling in ASDEX 7−91341
open system, plasma equilib. investig. 7−117747
open-ended reactors, α particle dynamics study 7−104426
parametric instabilities in lower hybrid frequency range in FT tokamak 7−91320
partially ionised plasma, RF heating, ion vel. distrib. 7−69378
PBX, divertor region, emitted power meas. 7−75877
PBX, impurity accumulation, diffusion coeff., diagnostics 7−69420
pellet deposition in TFTR, neutron and hard X-ray meas. 7−69460
plasma, tandem multipole, plasma parameter meas. 7−69464
plasma column, confinement, Troesch's problem 7−75866
plasma parameters determ., IR and FIR laser polarimetry appl. 7−117762
plasma physics, conf., Oxford, England (July 1986) 7−66820
PLT, particle transport and confinement, density depend. 7−69413
PLT tokamak plasma, impurities, time-resolved X-ray spectra 7−97790
poloidal divertor neutraliser geometry, scrape-off plasma temperature and density 7−75853
poloidal divertor separatrix, stochasticity 7−83520
poloidal electric field generated by electron cyclotron heating in a collisional tokamak plasma 7−91345
plasma confinement continued
poloidally asymmetric electrostatic potentials in closed line bumpy toroids 7−91356
positron deposition in plasmas by positronium beam ionization and transport of positrons in Tokamak plasmas 7−97760
probe wake study in DITE tokamak using spatially scanning Langmuir probe 7−75802
pure-electron plasma confinement, nonlinear collective processes 7−123961
quasi-steady-state current drive with pulsed radiofrequency sources 7−123918
radial structure of magnetic perturbations in tokamaks 7−123957
radial transport simulation in CT-6B tokamak during gas puffing 7−83426
Reacting Plasma Experiment, confined α-particle diagnostics 7−75882
reactor-size inertial fusion targets ignition and burn propag., 3 temp simulation 7−130908
reflectometry density meas., mode mixing influence in reversed field pinch 7−83423
relativistic electron beam ring, electron energy increase by major radius compression 7−91352
relaxation to force-free states 7−123853
reversed field pinch, high valve pinch parameter discharges, MHD activity anal. 7−97783
reversed field pinch, ion press. gradient driven turbulence 7−111232
reversed field pinch configuration transport, Monte Carlo simulation 7−97786
reversed field pinch operation 7−91377
reversed field pinches, ion temp.-gradient-driven drift mode, field-aligned current effects 7−97785
reversed-field pinch, mag. topology of helical Ohmic steady states 7−91354
RFP, nonresonant current driven mode, nonlinear phenomena 7−97725
RFX, exptl. results, design and construction 7−122088
ring-stabilised devices, α particle dynamics effects 7−104406
rotamak discharges, low power long duration 7−75779
rotamak plasma, magnetohydrodynamic equilibrium models 7−75774
rotamak plasmas, power balance models 7−109472
rotational transform meas. at Tokamak axis 7−111213
sausage instability simulation in Z-pinch at plasma sheath motion stage 7−69351
sawtooth activity effects on poloidal mag. flux and energy balance in tokamak 7−123954
sawtooth oscillations in Joule heating plasma 7−123895
Separatrix Test Equipment reversed field pinch, mag. field config 7−75856
sheath pot. in tokamak edge plasma using retarding field analyser 7−75826
single null divertor discharges, characteristics of pellet and neutral beam heating 7−91347
SPAC-VI toroidal device, relativistic electron beam ring, X-ray bremsstrahlung 7−130917
SPAC-VII toroidal device, relativistic electron rings 7−130916
spark discharge species trajectories, mag. confinement and control 7−83555
spheromak MHD equilib. and stability, boundary-field curvilinear coordinate system 7−130901
spheromak plasma, magnetic field, turbulent transfer rate 7−117753
spheromak tilt mode, line-tying effects, passive stabilisation study 7−69428
spheromak tilt mode, line-tying effects 7−69408
stellarators, finite press. ballooning mode stability 7−142456
stellarators, ripple transport, Fokker-Planck eqn. soln. 7−123845
stochastic stability of a plasma torus 7−69344
STOR-1M device, stable AC tokamak discharges 7−97779
structurally invariant plasmas, MHD stability in mag. confinement 7−130905
T-10 tokamak plasma, energy confinement during electron cyclotron heating *(German)* 7−137107
Tandem mirror reactor thermal barriers, alpha particle-induced instabilities 7−104405
tandem mirrors, electron distrib. and confinement instability study 7−142484
tandem mirrors sustained by high-voltage direct current 7−123919
TBR-1 plasma column cross-section shape diagnostic system 7−137130
TCA tokamak, mag. and density fluctuations, probe meas. 7−111280
TCV tokamak, equilibrium and axisymmetric stability 7−137119
temporal evolution of the decaying spheromak in the CTCC-I experiment 7−123858
TEXT, Ar XII-XVI ionisation and recombination rates, time resolved spectroscopy 7−123988
TEXT, density, plasma current, toroidal field, recycling meas. 7−69418
TEXT confinement, particle transport and electrostatic turbulence Langmuir probe study 7−130904
TEXT tokamak, fluctuations and transport meas. 7−111185
TEXTOR, impurity sources, emission spectroscopy 7−69419
TEXTOR Tokamak, Langmuir probe meas. during ALT-I pump limiter expt. 7−97803
TFR, heating, LF turbulence, density fluctuations 7−111263
TFR, internal disruptions, electron density fluctuations, microwave scatt 7−111186
TFTR, α particle heating and diagnostics study 7−104427
TFTR, electron temp. profile shape study 7−142441
TFTR, ohmic and neutral beam heating, global particle recycling 7−69415
TFTR discharges, ohmic and neutral-beam heated, impurity transport 7−69421
thermal ionisation phase during plasma form. in TM-1-MH Tokamak 7−123914
thermonuclear fusion research, recent topics *(Japanese)* 7−103169
theta pinch, lower hybrid drift instability, RF suppression 7−97731
theta pinch, poloidally rot. spheromak generation 7−137116
theta pinch high-beta stellarator, equilibr. study 7−142489
Thorello, toroidal magnetised plasma, diagnostics eval. 7−75860
TNT-A tokamak, ion Bernstein waves, ray trajectories and damping 7−83515
tokamak, Alcator C, plasma current ramp up and Ohmic-heating transformer recharging 7−83518
Tokamak, directly launched ion Bernstein waves study, excitation, propagation and absorption 7−137098
tokamak, high β, plasma form. and equilibr. 7−137115

plasma confinement continued
tokamak, lower hybrid current drive, waveguide coupling 7−75801
tokamak, MHD equilibrium profile 7−83521
Tokamak, neutral beam heated, limiter discharges, improved confinement 7−123921
tokamak, sawtooth oscillation, temperature rise phase, electron heat conduction coeffs. 7−123935
Tokamak Alfven waves, α-particle driven instabilities 7−97730
tokamak ballooning stability, α particle prop. effects study 7−104401
Tokamak edge plasma, resistivity-gradient driven turbulence, impurity dynamics effects 7−97741
tokamak equilibr. and stability press. anisotropy effect 7−142486
tokamak equilibrium, MHD and stability calcs. 7−111199
tokamak impurity diffusion at grill mouth due to lower hybrid heating 7−117706
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
Tokamak m=1 convection cell, sawtooth activity, resistive MHD simulations 7−97782
Tokamak m=1 mode, nonlinear evolution, stochasticity anal. 7−97781
tokamak physics, overview 7−122078
tokamak plasma, α particle effects study 7−104425
tokamak plasma, α particle interactions with regular and irregular structures 7−104402
tokamak plasma, banana drift motion, Maxwellian distrib. distortion 7−69401
tokamak plasma, canonical and limiting profiles *(German)* 7−137111
tokamak plasma, eddy currents in nonperiodic vacuum vessel induced by axisymmetric plasma motion 7−75847
tokamak plasma, equilibr. and collisional transport 7−111182
tokamak plasma, gun-injected plasma trapping 7−142515
tokamak plasma, limiting β, ideal MHD stability 7−83440
tokamak plasma, lower hybrid wave absorpt., diffraction effects calcs. 7−83468
tokamak plasma, mag. field-line reconnection, particle and energy transport 7−123856
tokamak plasma, obliquely propagating extraordinary wave, second-harmonic layers 7−123967
tokamak plasma, profile consistency, nonlocal transport 7−111181
tokamak plasma, rot. effect on kink instability *(German)* 7−137079
tokamak plasma, sawteeth, electron temp. oscills. 7−123962
Tokamak plasma, self-organisation of temp. and current-density distribs. 7−123933
tokamak plasma, tearing mode interactions, reduced MHD modelling 7−142459
tokamak plasma, X-ray emission processes, diagnostic appl. 7−75859
Tokamak plasma heating by wave damping, review 7−97765
tokamak plasmas, α particle effects, conf., Aspenasgarden, Sweden (June 1986) 7−102009
Tokamak plasmas, microturbulence, density fluctuation spectrum 7−75843
tokamak plasmas, transport study using positrons 7−111189
tokamak plasmas, turbulent density fluctuations study 7−111262
tokamak plasmas, X-ray emission investig. review 7−137129
tokamak reactor, neoclassical alpha particle energy flux 7−141266
Tokamak reactor design, α particle effects study 7−103180
tokamak simulation, hydrodynamic and MHD eqns. 7−111202
tokamak with graphite wall and limiter, effective charge state 7−123929
tokamaks, α particle transport processes study 7−104372
tokamaks, anomalous current penetration and oscill. current drive 7−137114
tokamaks, burn temp. control and stabilisation study 7−104407
tokamaks, electrostatic and EM turbulence, anomalous transport study 7−111179
tokamaks, EM fluctuation diagnostics 7−111282
tokamaks, finite press. ballooning mode stability 7−142456
tokamaks, ICRH and confinement degradation 7−122082
Tokamaks, MHD ballooning modes, energetic particles sloshing effects 7−97759
tokamaks, MHD equilibr. profile form. 7−137058
tokamaks, peripheral plasma states 7−75846
tokamaks, plasma-graphite limiter interaction, photoacoustic anal. 7−69364
tokamaks, sawtooth phenomenon study 7−142447
tokamaks, turbulent transport theory and simulation, review 7−117754
tokamaks and mirrors, kinetic instabilities, α particle transport effects 7−104404
Tokamaks edge plasma study 7−123959
Tokapole II device, reversed toroidal field, equilibr. study 7−123965
toroidal confinement, anomalous transport, scaling laws, invariance principles 7−111180
toroidal confinement, turbulence microtearing modes 7−111222
toroidal devices, diamagnetic coil design for plasma diamagnetism meas. 7−75888
toroidal fusion plasmas, basic physical processes, conf., Varenna, Italy (Aug.-Sept., 1985) 7−115673
toroidal geometry, stability of ideal and resistive internal kink modes 7−130860
toroidal mag. confinement plasma, vortex soliton form. 7−123855
toroidal magnetic confinement, expt.-theory comparison, energy transport and instabilities 7−83526
toroidal magnetic confinement fusion device, mag. field lines struct., Hamiltonian stochasticity 7−130918
toroidal magnetic traps, hot plasma physics and CTR problem 7−75845
toroidal plasma, axisymmetric, MHD stability anal. using NOVA code 7−117749
toroidal plasma, linear stability anal., particle simulation 7−142460
toroidal plasma with resistivity viscosity and Hall current, linear stability anal. 7−97775
toroidal plasmas, nonaxisymmetric, neoclassical fluxes in plateau regime 7−69425
toroidal reversed field pinch, stability, equilibrium 7−137106
toroidal rotation and momentum transport 7−123969
toroidal stellarator, HF AC inductive heating 7−117752
toroidal stellarators, electromag. radiation propag. near electron cyclotron freq. 3-D ray tracing approach 7−69355
toroidal systems, axisymmetric, local Alfven reson. 7−123931
toroidally rot. tokamak plasmas, ion transport 7−142443
TOSCA tokamak, density fluctuations, far forward laser scatt. 7−111243
TOSCA tokamak, turbulent transport, diagnostics 7−111184
triplasmatron sources for broad and reactive ion beams 7−69432

plasma confinement continued
triton burnup in FT tokamak, neutron emission meas. 7−123984
Tuman-3 Tokamak, pulsed gas puffing system, plasma density control 7−135575
turbulent transport processes energetics in Tokamaks, kinetic description 7−75795
V-20 torsatron, internal disruptions, MHD activity 7−69402
vacuum spark, low-inductance, spectroscopic source 7−117769
Versator II tokamak, lower-hybrid current drive, particle confinement 7−123966
vertical plasma position, stability limit of feedback control in tokamaks 7−123875
wakefield accelerator, driving electron beam stability 7−104421
wall conditioning in JT-60 7−75818
wall sheath effects on transport 7−137089
wave reabsorption in the quasilinear relaxation of fast particles in a plasma 7−83494
Z-pinch, noncircular, MHD stability, free boundary modes viscous damping 7−97734
Z-pinch dynamics in high-current diode investig. 7−69443
Z-pinch physics, driver influence 7−69445
Z-pinch plasma lens for high energy particle beams 7−103315
Z-pinch theory, appl. to pulse technology 7−69444
Z-pinches, appls., review 7−69429
ZT-40M reversed-field pinch D and impurity fluxes, collector probe meas. 7−69407
Ar^{16+}, He-like, from Alcator-C tokamak, ground-state transitions, radial profiles 7−97801
Be-like ions, transition in TEXT, emission spectra line intensity ratios 7−83541
C IV, population inversions in recombining theta-pinch plasma 7−141533
C impurity flux in limiter shadow of TEXTOR 7−75766
Cr gettering in ISX-B, improvement of plasma performance 7−74066
D-T spin polarised fuel in high gain ICF targets 7−122071
D-T wetted foam, direct drive cryogenic ICF capsules 7−89720
H_2 recycling, effects in 1D divertor model 7−111255
HCN lasers, plasma beat frequency stabilization by phased locked loop 7−123996
^3H pellet injection into hot ion mode ^2H plasma in tokamak 7−69386
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
He Z-inch plasma, CO_2 laser-heated, soft X-ray emission meas. 7−130914
^3He transport in TFTR, time evolution 7−123983
$^3He(d,p\alpha)$, 14.6 MeV, fast ion burn up in D plasmas, proton spectra meas. 7−73818
Ne-like ion plasma in tokamaks, ion recombination coeff. study 7−97696
Ni, He-like, satellite spectra, wavelength and line intensities determ., obs. in TFTR 7−96593
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287
Se emission lines, Tokamak Fusion Test Reactor 7−130924
Ti X, θ-pinch plasma, electron-impact excitation, spectral line intensities study 7−91286
Zn-like ions in PLT tokamak, intercombination line study 7−117760

plasma containment *see plasma confinement*

plasma density
2T-40M, asymmetric mag. flux generation, m=1 activity, edge phenomena 7−130909
AAEC rotamak, equilib. config., props. determ. 7−75886
afterglow plasma, electron energy distrib, fn., kinetic eqn. soln. 7−117785
air, nonequilibrium microwave discharge, gasdynamic propag. 7−69497
air at atmospheric press., long continuous laser spark, emission spectrum 7−97827
Alfven wave heating in TCA tokamak, density rise 7−91291
alpha-particle diagnostics by pellet injection 7−75883
anisotropic velocity distributions relax., Fokker-Planck calcs. 7−137051
arc cathode erosion and redeposition in He, Ar, and SF_6, gas press. depend. 7−69522
arc cathode spot characterisation 7−69521
arcs, density and temp. profiles, CW laser scatt. 7−111295
ASDEX, LF fluctuations, IR laser scatt. 7−111171
ASDEX, low energy neutral particle fluxes, TOF method 7−69412
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
atom acceleration by inverse bremsstrahlung 7−103456
beat wave acceleration, increasing density, enhanced saturation amplitude 7−104395
beat-wave accelerator, microwave drive study 7−104396
bucket plasma ion source 7−122277
CASTOR Tokamak, radiative power losses, density depend. study 7−117705
cathodic voltage drop in a non-self-sustained discharge, num. investig. 7−75910
central mass and current density measurements in Tokamaks using the discrete Alfven wave spectrum 7−83469
collision-dominated RF plasma, electron kinetics, self-consistent treatment 7−130829
collisionless plasma in strong mag. field, transport eqns. 7−69313
column sustained by EM surface wave, model *(Portuguese)* 7−123894
compact ignition Tokamak, physics aspects study 7−103181
conference, Cargese, France (July 1986) 7−108034
constricted type plasma source, pl. density and electron temp. enhancements 7−97763
control by partial pressure gauge using ion backscattering principle 7−134790
currentless high-β plasmas in Heliotron E, density fluctuations 7−123949
cyclotron heating, associated nonlin. plasma density flows 7−117740
cylindrical plasmas, elec. field profiles in ion cyclotron range of freqs. 7−111208
D-T plasma with injected beams, distrib. and α particle prod., coupled model eqns. 7−104375
dense plasmas, complete spectral series as diagnostic tool 7−69459
density drift in TEXTOR with a graphite pumped limiter 7−68002
diode, magnetically insulated, electron diffusion, leakage currents, Fokker-Planck eqn. soln. 7−97815
Doublet III, electron cyclotron heating in overdense plasma 7−130888
Doublet III tokamak, pellet fuelled discharges, penetration and ablation 7−130887

plasma density continued
drift cyclotron loss cone unstable mode characts. depend. on plasma density 7−69343
dry air, low pressure, laser-induced breakdown, electron density, CO_2 interferometry meas. 7−104433
dust particles charging in plasma for various plasma characts., astrophysical appl. 7−107719
Earth bow shock, nonlinear MHD waves generation by reflected H^+ 7−115183
EBT, confinement, fluctuations and electric field effects 7−91355
EBT particle and energy confinement times, Monte Carlo estimates 7−91357
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
edge region diagnostics and transport in the TEXT tokamak 7−75828
electrical conductivity, self energy and vertex corrections, linear response theory 7−137054
electrically floating obstacle in supersonic flow, near wake self-similar pot. 7−69327
electromagnetic wave propag., relativistic self-focusing study 7−104412
electron beat-excited plasma waves, electrostatic mode coupling study 7−104392
electron Bernstein waves, beam-driven, nonlocal theory 7−91322
electron density, fluctuations during MHD activity, laser study 7−69326
electron density diagnostics by Fe XXII line intensity ratio 7−142504
electron density measurement of MHD combustion plasmas with a far-infrared laser 7−137050
electron density profile meas. in Z-pinch by holographic interferometry 7−69312
electron temperature and density profiles in tokamak TJ-1 by Thompson scattering *(Spanish)* 7−83532
electron-ion plasma, low-freq. density fluctuations, collisional enhancement 7−83420
elongated high-temp. dense plasma prod. by laser heating in capillary discharge 7−97772
EM wave propag. quasisteady mag. field generation, density profile deform. effect 7−83485
entropy principle for Tokamak profiles 7−111259
expanding plasma, laser light reflection 7−75798
expanding plasma with steepened density profile, plasma-wave excitation 7−117713
extraordinary mode microwave reflectometry, Petula-B Tokamak electron density profile determ. 7−83547
far-IR Michelson interferometer for Tokamak electron density meas., using computer-generated reference fringes 7−83538
filamentation instability of ion beams in magnetoactive plasma *(Russian)* 7−117739
finite dust cloud in infinite plasma, charging, pot. and instabilities, astrophysical appl. 7−94652
fluctuations induced by nonlinear Alfven waves 7−83419
fluorescent lamp plasma, microwave interactions, density shift meas. using cavity reson. method 7−108086
foam targets, Raman scatt. study using 0.35 μm laser beam 7−69397
fuel pellet injection, m=1, n=1 oscillations in tokamak 7−123944
g-mode driven transport and resistive drift waves based on scale invariance 7−83456
gas discharge laser diagnostics, density, temp. and level population distrib. *(German)* 7−130940
gas laser tube with hyperboloid of revolution boundary, electron density distrib. calcs. 7−68618
gas target plasma, laser-heated, ion-density fluctuations, Thomson scatt. 7−69398
global confinement, fluctuations, transport study 7−111188
glow discharges, cathode regions study 7−137147
Heliotron E currentless plasmas, transport anal. of injected impurities, density depend. 7−130836
Heliotron-E, Balmer alpha laser fluoresc. spectroscopy 7−69453
Heliotron-E, Fe atom meas. by laser-induced fluoresc. spectroscopy 7−69452
Heliotron-E, H retention, thermal desorption and nucl. reaction anal. 7−69455
high-sensitivity laser plasma interferometry 7−123977
high-voltage discharge, anode sheath rot. instability 7−83558
Hiroshima Torus-1, MHD activity and peripheral plasma electrostatic charact. *(Japanese)* 7−137105
hollow gas-puff z pinch, electron beam preionisation, stability enhancement 7−69375
hot dense plasma radiative processes 7−123840
hot electron energies reduction 7−142481
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
impurity influx behaviour in JET tokamak, visible spectra anal. 7−75848
incoherent laser scattering from a magnetised plasma 7−111241
inhomogeneous plasma, oscillating two-stream instability, density gradient effect calcs. 7−91311
inverse scattering problem for 3D plasma wave equation 7−91294
ion acoustic soliton, critical negative ion density, difference eqn. soln. *(Japanese)* 7−75791
ion cyclotron drift waves, controlled radial density distributions 7−83457
ionisation-superheating instability in self-maintained discharge, self-similar solns. 7−69348
JET, evolution, present status and prospects 7−74027
JET, hot ion regime, α particle heating study 7−104428
JET, ICRF heating, plasma edge modification and impurity prod. by antenna phasing 7−129401
JET, plasma behaviour, initial results, impact on fusion development 7−123971
JET, plasma confinement and heating 7−96320
JET, prospects for α-particle heating in hot ion regime 7−103200
JET development program, technical aspects 7−122093
JET wall concepts and density control 7−122095
JFT-2M, H-mode phenomena during ICRF heating 7−130906
JFT-2M tokamak, confinement and fuelling during additional heating phase 7−69417
JFT-2M tokamak, electron heating and current drive by fast waves, numerical study 7−69390
Langmuir probe, thermal evolution and plasma characteristics hysteresis, num. soln. *(French)* 7−75873
large Larmor radius effects on density perturbations in magnetised plasma 7−83470
plasma density continued
laser beam divergence caused gradients in the electron density in a continuous optical discharge 7−117724
laser fluorescence spectroscopy at Balmer α, diagnostic appl. to large devices *(Japanese)* 7−111269
laser plasma, low temp., optical harmonic generation 7−136437
laser plasmas, harmonic space and time resolved struct. and density profile 7−90711
laser pulse self-trapping, plasma fibre accelerator appl. 7−104413
laser-irradiated plasma, stimulated Raman scatt., ion mobility influence 7−69359
layer, overdense, warm, surface-wave-induced high transparency to EM wave 7−137085
low-density multicomponent plasma, thermodynamics, virial expansion 7−137053
lower-hybrid current-drive density limit cause, simple model, mode coalescence condition 7−137097
magnetic field meas. in laser produced plasmas, fully automated anal., phase-amplitude imaging 7−104447
magnetic multipole plasma, electron energy distrib. meas. 7−117700
magnetically insulated ion diodes, anode plasma ionisation due to sheath heating 7−69381
magnetised plasma, ring antennas reson. cones, pondermotive force 7−83491
magnetised plasma, turbulence diagnostics, collective scatt. and optical probing 7−111281
measurement of density fluctuations, homodyne small-angle scattering technique using CO_2 laser 7−142506
MHD, double adiabatic relax. and stability study 7−91303
micropinch, high temp. and superdense, radiative collapse model 7−69442
microwave cavity measurements of density and collision frequency in decaying plasmas 7−123982
microwave discharge, nonequilib. in p-polarised electromag. waves, density and layer thickness determ. 7−117771
microwave plasma generation, travelling wave gas discharges sustained by EM waves *(Polish)* 7−111251
microwave reflectometer for plasma density profile meas. on JET 7−83539
microwave reflectometry to measure the electron plasma density in tokamak TJ-1 *(Spanish)* 7−83531
microwave scattering from electron diamagnetic drift waves, spectral broadening 7−123953
multicomponent plasma with electromagnetic interactions, Liouville eqn. for phase space density 7−123842
multipoint Thomson scattering system for the EXTRAP Z-pinch experiment 7−111271
multipolar discharges, ion acoustic instability and plasma uniformity 7−91326
neutral beam heated and ohmically heated plasma, X-ray pulse height anal. 7−142512
neutral beam heating in JT-60, energy confinement and profile characteristics 7−123970
nonlinear lower-hybrid oscills. calcs. in high-density plasma *(Russian)* 7−83477
nonlocal thermal equilibrium plasmas, ionis. balance and L-shell spectroscopy 7−137127
nonuniform plasma in mag. field. LF oscills. *(German)* 7−137067
nylon plasma, ablation-stabilised arcs, transport and thermodynamic props. 7−111297
ohmically heated divertor discharges with gas and pellet fuelling in ASDEX 7−91341
OHTE reversed field pinch, operation with graphite walls 7−69406
open-ended reactors, α particle dynamics study 7−104426
parametric instabilities in lower hybrid frequency range in FT tokamak 7−91320
parametric plasma heating, electron acceleration, ionisation 7−69377
partially absorbing plasmas, components temp. and density, single-wavelength interferometry 7−130937
pellet refuelling of the ZT-40M reversed field pinch 7−123945
Penning discharge with thermocathode, radial plasma density profile calcs. *(Russian)* 7−83425
plasma column development in the CO_2 laser-heated solenoid 7−137103
plasma parameters determ., IR and FIR laser polarimetry appl. 7−117762
plasma sheath evolution in plasma focus device final stages, diagnostic investig. 7−69373
PLT, particle transport and confinement, density depend. 7−69413
polarisation charge layers, electrostatic particle simulation code 7−142497
poloidal asymmetries in the scrape-off layer plasma of the Alcator C tokamak 7−69309
poloidal divertor neutraliser geometry, scrape-off plasma temperature and density 7−75853
poloidal field appl. in dense plasma focus 7−69436
positive column, plasma density gradients determ. 7−117770
potential double layers in triple plasma device, laboratory investig. 7−117735
pulsed discharge plasma in electrolyte, electron temp. and density determ. 7−75899
radial transport simulation in CT-6B tokamak during gas puffing 7−83426
railgun firings involving mag. flux probes, expt. results 7−97808
rare earth plasmas, laser generated, EUV spectra study 7−142482
rarefied gas, Bennet distrib. transform. 7−75867
reflectometry density meas., mode mixing influence in reversed field pinch 7−83423
relativistic electron beam-plasma interactions, targets, Langmuir probe investig. 7−97805
relativistically intense laser light pulse self-focusing 7−69360
reversed field pinch, enhanced dynamo contribution to resistivity 7−123946
reversed field pinch plasma, impurity influx enhancement due to dynamo action 7−83512
reversed field pinches, current and heat flux, electron density control 7−69409
RF discharges, diagnostic techniques and appls., particle concentration meas. 7−130976
RF generated plasma, elec. meas. using driven electrostatic probe 7−117758
RF magnetron plasmas, turbulence-induced anomalous currents 7−83567
RF molecular plasmas, electron energy distrib. functions, role of second kind collisions 7−75757

plasma density continued
RFX, exptl. results, design and construction 7−122088
scrape-off layer, boundary layer theory 7−75775
single null divertor discharges, characteristics of pellet and neutral beam heating 7−91347
Space Shuttle Orbiter, passive vehicle charging and potential expt. 7−127683
space-potential and density fluctuations in the ISX-B tokamak 7−142445
sputtered, atom transport in gas discharge plasma, density calc. 7−117709
stellarator reactors, convective equilib. and mixing-length theory 7−97713
stimulated Raman scatt. in inhomogeneous density plasma, stimulated Brillouin scatt. effects 7−97752
STOR-1M device, stable AC tokamak discharges 7−97779
stratification of the anode plasma in a high-current diode with a current pinch 7−83421
supersonic flowing plasma, density determ. by electrostatic double probes 7−83424
surface wave discharge in a conical tube 7−117780
surface waves, reson. effect on props. *(German)* 7−137066
T-10 tokamak plasma, energy confinement during electron cyclotron heating *(German)* 7−137107
tandem mirror, central cell density, electrostatic end plugging 7−142487
tandem mirror central cell, rot., drift modes 7−69426
Tandem mirror reactor thermal barriers, alpha particle-induced instabilities 7−104405
tandem mirrors, electron distrib. and confinement instability study 7−142484
test ion cross-field transport in quiet plasma 7−142444
TEXT, biased limiter expts. 7−67998
TEXT, density, plasma current, toroidal field, recycling meas. 7−69418
TEXT, intra-island scoop limiter expt. tests 7−67999
TEXT confinement, particle transport and electrostatic turbulence, Langmuir probe study 7−130904
TEXT edge turbulence and density fluctuations, far IR laser scatt. and Langmuir probe study 7−130873
TEXT tokamak, fluctuations and transport meas. 7−111185
TEXTOR Tokamak, Langmuir probe meas. during ALT-I pump limiter expt. 7−97803
TFR, heating, LF turbulence, density fluctuations 7−111263
TFTR, high temp. plasmas, neutral beam injection 7−74073
TFTR discharges, impurity behaviour 7−130929
TFTR edge turbulence meas., Langmuir probes, D-alpha imaging, microwave scatt. and mag. pickup loops 7−75830
TFTR movable limiter and first wall particle inventories calcs. 7−75806
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
Thorello, toroidal magnetised plasma, diagnostics eval. 7−75860
TMX-U tandem mirror, edge plasma ICRH effects 7−69405
Tokamak, directly launched ion Bernstein waves study, excitation, propagation and absorption 7−137098
tokamak, lower hybrid current drive, waveguide coupling 7−75801
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
tokamak plasma, gun-injected plasma trapping 7−142515
Tokamak plasma, self-organisation of temp. and current-density distribs. 7−123933
Tokamak plasmas, microturbulence, density fluctuation spectrum 7−75843
tokamak plasmas, turbulent density fluctuations study 7−111262
tokamaks, electrostatic and EM turbulence, anomalous transport study 7−111179
tokamaks, EM fluctuation diagnostics 7−111282
tokamaks, sawtooth phenomenon study 7−142447
toroidal stellarator, HF AC inductive heating 7−117752
toroidal stellarators, electromag. radiation propag. near electron cyclotron freq. 3-D ray tracing approach 7−69355
TOSCA tokamak, density fluctuations, far forward laser scatt. 7−111243
Tuman-3 Tokamak, pulsed gas puffing system, plasma density control 7−135575
vacuum arc plasma centrifuge for element and isotope separation 7−69491
wakefield accelerator, nonlinear plasma oscills., relativistic electron beam excitation 7−104420
wakefield accelerator expt. simulation 7−104461
whistler propagation in axisymmetric magnetic tubes 7−115171
X-ray source, laser prod. plasma, radiative characts., conversion efficiency 7−123925
Z-pinch dynamics in high-current diode investig. 7−69443
Z-pinches, appls., review 7−69429
Al laser-produced plasma, coronal region, radiative preheat, X-ray generation 7−69396
Al plasma, surface localised, production by dye laser pulse and pulsed quartz lamp 7−69400
Al plasmas, laser-produced, UV-visible spectroscopy 7−117743
Ar glow discharge, instability in presence of negative ions 7−123883
Ar inductively coupled plasma, impurities spatial distribs. study 7−130834
Ar jet, ionisation by microwave field, self-oscills. anal. 7−83407
Ar microwave-induced plasma, electron density study 7−142440
Ar plasma, H_α broadening and shift meas. 7−111167
Ar, plasmas, low-press., electron energy distrib., effect of collisions of various kinds 7−83413
Ar, pulsed-discharge plasma, metastable Ar^+ density, laser induced fluorescence study 7−75761
Ar, RF generated plasma, electron energy distrib. functions 7−117759
Ar, RF inductively coupled plasma, large volume, high density 7−97700
Ba plasma, relativistic electron beam propagation, current enhancement obs. 7−97758
Ba^+ plasma, local density, temporal evolution, Rayleigh scattering meas. 7−97703
Br plasma laser produced, temp., ionisation balance form L X-ray spectra 7−104450
Cu I and II, plasma jet, Stark width meas. 7−90037
Cu split-foil plasma, laser vaporised, electron density, hydrodynamic simulations 7−130896
Fe XVIII in tokamak plasmas, electrons density sensitive line ratios 7−123854
H, density and temp. distrib. near discharge chamber wall 7−83417
H like ions, impact excitation by H^+ and electrons, fine struct. levels 7−103666
H plasma, tandem multipole, plasma parameter meas. 7−69464
H plasma generation for beat wave expts., multiphoton ionisation, electron density anal. 7−104432
H, two-temperature nonequilibr. plasmas, atom-atom inelastic collisions 7−123841
H-D plasma, Balmer α transitions, visible spectra, ion dynamic effects 7−129640
H_β line profile, glass-to-plasma boundary layers influence 7−83484
$H_2B_4O_7$ plasma, ablation-stabilised arcs, transport and thermodynamic props. 7−111297
$H_2CN^+ + HCN$ clustering reaction rate consts., appl. to plasmas and atm. of Titan 7−138976
^2H, high density, sp.ht., resistivity, thermal cond., sound vel. and viscosity calc. 7−103183
He, hollow-cathode discharge, electron energy distrib. function 7−104482
He microwave-induced plasma, electron density study 7−142440
He, nonequilibrium discharge plasma, bremsstrahlung and line radiation diagnostics 7−69461
He plasma, prod. by arc stabilised by axial mag. field *(French)* 7−91338
He plasma, prod. near ceramic surfaces, temp. and electron density distrib. 7−75872
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
He-Cd expanding plasma, Cd ion excitation 7−75760
He-Cd laser discharge, density, spectral line intensity 7−130930
^3He transport in TFTR, time evolution 7−123983
Hg, arc plasma, current and electron density under transverse mag. field 7−69493
K and Cs seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628
Kr, hollow cathode discharge, Stark shift, optogalvanic spectra 7−129633
N plasma, high temp., absorpt. cross sections 7−130843
Na plasma, electron density radial profiles derived from Stark broadening 7−111165
Na Z-pinch plasma, spectroscopic anal. for X-ray-laser pumping efficiency 7−117751
O_2, plasma subject to alternating electric field, electron density and temp. 7−75759
O_2, plasmas, low-press., electron energy distrib., effect of collisions of various kinds 7−83413
O_2^- ions in nonequilib. plasma, form. and breakup, electric field effects 7−83414
O_2-N_2 microwave discharge, plasma halo form. 7−124010
S, hydrogenic and He-like, diagnostic tracer, X-ray emission spectral determ. of plasma parameters 7−96594
SF_6-N_2 mixtures, decay of wall stabilised arcs 7−69502
Ti X, θ-pinch plasma, electron-impact excitation, spectral line intensities study 7−91286
Xe, diffuse and contracted discharges, plasma decay rate 7−69496

plasma deposited coatings
borosilicide coatings, interaction with Nb alloy, X-ray exam. 7−138686
cathodic arc deposition advancements 7−113450
copper acetylacetonate thin films, plasma-polymerised, elec. props. 7−126020
diamond thin film MIS structures, SCL current 7−112523
diamond thin films, DC plasma CVD growth 7−112112
graphite fibres and films, highly conductive, intercalated with AsF_5, synthesis and preps. 7−86054
metals, layer structure, from low temp. pulsed plasma 7−76704
polymer films, deposition by plasma polymerisation, review 7−138689
polymer films, plasma-polymerised, for liquid crystal alignment 7−69586
protective coating deposition using plasma sputtering, status and devel. trends *(German)* 7−138654
semiconductors, layer structure, from low temp. pulsed plasma 7−76704
steel, austenitic stainless, SiO_2 coatings, plasma assisted vapour deposition, carburisation prevention 7−86463
thin film production by plasma, conf., Japan (Nov. 1986) *(Japanese)* 7−142516
Al-SiN:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7−138089
Al-SiON:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7−138089
AlN coatings, plasma enhanced CVD on graphite substrates 7−71074
BN film preparation and props. *(Czech)* 7−106432
Bi_2O_3 films, prep. by reactive evaporation and activated reactive evaporation, X-ray diffr. studies 7−100119
C coatings influence on window materials in fusion-experimental devices 7−70134
C diamond-like film preparation and props. *(Czech)* 7−106432
C films, glow discharge deposited, H recycle and isotope exchange study 7−75805
C films, hard, friction and wear behaviour 7−78249
C thin film, plasma deposited, film props. and coating conditions correl. 7−70133
a−C:H films, inhomogeneous bonding, XPS, NMR, and nuclear resonant studies 7−92028
a-C:H films, prep. by plasma deposition, struct., optical and elec. props. *(Chinese)* 7−131494
a-C:H protective coatings for a-Si:H photoreceptors 7−97110
$C_{1-x}Sn_x$:H, amorphous films, sputter-assisted plasma chemical deposited, structural and optical props. 7−125838
Cr, amorphous phase form. during ion-plasma deposition *(Russian)* 7−144271
Fe-R-B alloys (R=rare earth), melt spun and plasma sprayed, mag. props. microstruct. 7−132085
GaAs-Si_3N_4, plasma deposited encapsulation layers 7−113341
HfV_2 films, ion-plasma deposition, annealing, supercond., struct. *(Russian)* 7−137750
Nb laser plasma deposited superconducting thin films, T_c determ., film thickness and deposition conditions depend. 7−118641
Nb-N thin films, amorphous and cryst., struct., electron microdiffr. studies *(Russian)* 7−70108
a-Si films, transport props. investigation by fast transient techniques 7−84886
Si, microcrystalline, nucleation, in situ spectroscopic ellipsometry study 7−118052
Si:B(P) amorphous films, bias effects on preparation in triode glow discharge 7−126028

plasma deposited coatings continued
a-Si:F films, deposition by flow discharge, magnetron and diode sputtering, NMR and IR studies 7−138333
a-Si:H, Al glow discharge films, optical and elec. props. 7−84584
a-Si:H, dangling-bond recombination and photoconductivity 7−84981
a-Si:H, Fe films, ^{57}Fe impurity states, Mossbauer spectra 7−70677
a-Si:H, thin film deposition, plasma excitation freq. influence 7−131496
a-Si:H,BL(P) thin films, deposition by microwave electron-cyclotron-resonance plasma discharge, elec. and optical props. 7−77845
a-Si:H,C(N) films, glow discharge deposited, composition, thermal stability 7−131501
Si:H,P, heavily doped films, microcrystallisation 7−126010
a-Si:H and a-SiO_2 plasma deposited films, thermal expansion and elastic props. 7−91846
a-Si:H films, electron cyclotron resonance microwave plasma CVD, photodiode appl. 7−86050
a-Si:H films, glow-discharge deposited, frequency-dependent conductivity 7−76952
a-Si:H films, low temp. cond. and Staebler-Wronski effect *(Chinese)* 7−105555
a-Si:H films, optical and elec. props., film thickness effects 7−106133
a-Si:H films, positron-lifetime studies 7−132373
a-Si:H films, role of H, IR spectral anal. 7−98730
a-Si:H films, structural disorder, Raman scatt. investig. 7−118993
a-Si:H films, thickness, homogeneity and optical props. 7−70923
a-Si:H glow discharge films, electron transport, source gas species depend. 7−99065
a-Si:H photoreceptor film, dark discharge props. study 7−143647
a-Si:H/c-Si heterojunction, optoelectrical props., imaging device appl. 7−112456
SiBN amorphous films, plasma-enhanced CVD, dielec. props. 7−100102
SiC coating formation by pyrolysis in HF glow discharge 7−78363
SiC film prep. by electron cyclotron resonance plasma CVD, grain structure anal. using electron microscopy *(Japanese)* 7−132476
a-SiC:H, glow discharge deposited, evidence for microstructure, IR adsorption peak 7−132283
a-SiC:H,B, elec. and optical props., substrate temp. depend. *(Korean)* 7−137936
a-$Si_{1-x}C_x$:H, glow discharge deposited films, ESR and photoluminescence 7−125536
a-$Si_{1-x}C_x$:H films, photolum. study 7−85821
$Si_{1-x}C_xH_{2-y}$, semicond. polymer, electronic, optical and struct. props. 7−99961
SiH,B(P) plasma CVD coatings with $(SiH_2)_n$ groups, doping, cond., optical gap control 7−98750
a-$SiN_{1.4}$:H/a-Si:H band offset and electronic struct., AES, XPS and IPES studies 7−92300
SiN_x:H amorphous films, optical props. 7−144140
SiN_x:H amorphous thin films, small polaron transport, I-V meas. 7−84894
a-SiN_x:H bonding and electronic structs., AES, XPS and optical meas. 7−92029
Si_3N_4 film, gradient field plasma CVD 7−130928
Si_3N_4 films deposited by ECR plasma CVD, properties *(Japanese)* 7−137765
Si_3N_4 plasma-enhanced CVD films in $Si/SiO_2/Si_3N_4$ system, ESCA/AES analysis 7−131483
Si_3N_4, plasma-enhanced deposited on Si (100), ion bombardment-induced mechanical stress meas. 7−71007
Si_3N_4 thin films, plasma enhanced CVD, influence of deposition parameters on props. *(Slovenian)* 7−86041
SiO_2 coatings, vapour deposited, laser-pulsed, corrosion protection 7−92890
SiO_2 films, plasma-deposited, stability, stress and IR measurements 7−113418
SiO_2, prep. from plasma enhanced CVD of SiH_4-NO_2 mixtures 7−86056
SiO_2 thin films, plasma enhanced CVD, influence of deposition parameters on props. *(Slovenian)* 7−86041
SiO_x films, plasma-deposited, bond strain effects 7−126019
SiO_xN_y films, plasma processing studies 7−132462
$Si_3O_3N_2$, plasma-enhanced deposited on Si (100), ion bombardment-induced mechanical stress meas. 7−71007
$SiO_xN_yH_z$ films, plasma deposited, EPR struct. study 7−143249
SiO_xNy thin films, plasma enhanced CVD, deposition rate and props. depend. on N_2O conc. *(Slovenian)* 7−86042
TiN, vacuum plasma condensates, special features of substruct. 7−86028

plasma deposition
cathodic arc deposition advancements 7−113450
cathodic arc deposition technology 7−71084
ceramics, plasma processing appl., review *(Japanese)* 7−113503
CVD, LSI manufacturing appls. *(Japanese)* 7−138671
diamond, microwave plasma growth under low press., particle struct., substrate adhesion 7−113411
diamond films, large area CVD from magneto-microwave plasma 7−132486
diamond powder particle nucleation in RF methane plasma, struct. 7−98009
diamond thin films, DC plasma CVD growth 7−112112
film growth and erosion processes, plasma processing technologies, ion bombardment effects 7−70151
fluorinated monomers, plasma-polymerised thin films, deposition and etching in RF discharge 7−113402
graphite fibres and films, highly conductive, intercalated with AsF_5, synthesis and preps. 7−86054
graphite film, plasma CVD and props. 7−86055
ion beam techniques in thin film deposition 7−100067
ion bombardment, low-energy, during film deposition, effects on microstruct. and microchem. 7−100056
low-temperature RF plasma anodisation and deposition 7−93213
magnetically enhanced plasma deposition and etching 7−100118
metals, layer structure, from low temp. pulsed plasma 7−76704
methane, RF plasma, etching and deposition phenomena 7−71341
methyl methacrylate, plasma-polymerised, electron beam resist fabrication 7−119164
negative ion source neutral and ionized alkali metal bombardment type 7−67432
optical fiber manufacturing process, microwave plasma appl. 7−130403
optical fibre fabrication techniques 7−130401
optical fibre preforms prepared by plasma-impulse-CVD 7−68921

plasma deposition continued
optical fibres for telecommunication, plasma CVD process for large scale prod. 7−68917
photovoltaic advanced R&D, conf., Denver, CO, USA (May 1986) 7−128184
plasma polymerisation, comparison of microwave and lower freq. discharges 7−113440
plasma/parylene polymer deposition, laboratory reactor, biomedical device encapsulation appl. 7−114522
protective coating deposition using plasma sputtering, status and trends *(German)* 7−138654
RF multipolar plasma for broad and reactive ion beams 7−69388
semiconductor technology, plasma stimulated deposition 7−71080
semiconductor thin film deposition in photovoltaics manufacture, safety considerations 7−86019
semiconductors, layer structure, from low temp. pulsed plasma 7−76704
thin film deposition, use of ion beams, review 7−70150
thin film production by plasma, conf., Japan (Nov. 1986) *(Japanese)* 7−142516
N-vinylcarbazole, polymerization, thin film preparation and struct. charge acts. 7−100548
AlN coatings, plasma enhanced CVD on graphite substrates 7−71074
AlN plasma assisted reactive evaporation, elec. props. studies 7−106442
Ar-SiH_x discharges, optical emission spectroscopy, appl. for thin film deposition 7−83536
B-Si-Ge alloys, super-assisted-plasma CVD 7−86052
BN films, preparation by RF bias sputtering and plasma decomposition 7−100115
C, amorphous films, preparation by RF bias sputtering and plasma decomposition 7−100115
C, diamond-like, deposition in microwave discharge, effect of H as dilution gas 7−71085
a-C, film, semiconducting props., growth rate, low temp. plasma 7−100094
C films, glow discharge deposited, H recycle and isotope exchange study 7−75805
a-C:H, IR coatings, structural studies 7−132500
C-Si-O(B) thin films, plasma CVD, X-ray mask substrate appl 7−100105
GaN:Zn, low temp. growth using ECR plasma excited MO-VPE *(Japanese)* 7−138666
q-Ge:H films, RF glow-discharge deposition, ellipsometry study 7−113404
GeH_4, plasma CVD, RF discharges, spectroscopic diagnostics 7−113403
Ge_3N_4 amorphous films, indirect-plasma enhanced CVD growth 7−106429
HfV_2 films, ion-plasma deposition, annealing, supercond., struct. *(Russian)* 7−137750
Mo films, plasma-enhanced CVD 7−71078
Nb vacuum deposition on Cu and Fe substrates using an atmospheric press. inductively coupled plasma 7−144280
Si, amorphous films, deposition from $SiCl_4$ glow discharges 7−144296
Si, epitaxial films, plasma CVD growth at low temps. 7−126015
Si, epitaxial growth, low temp., by plasma-enhanced CVD *(Japanese)* 7−138682
Si films, laser plasma CVD growth *(Chinese)* 7−113399
Si, microcrystalline films, plasma deposition 7−144295
a-Si p-i-n solar cell stability, deposition rate effects 7−144830
Si, plasma CVD growth, effect of substrate temp. *(Chinese)* 7−76650
a-Si thin film, deposition from microwave plasma 7−126012
Si:B(P) amorphous films, bias effects on preparation in triode glow discharge 7−126028
a-Si:C, N, H films, plasma deposited, struct. characterisation by gas evolution, IR absorpt. 7−143258
a-Si:H, glow discharge deposition, equilib. temp., related defects 7−131466
a-Si:H, glow discharge SiH_4 decomposition, reactive species incorporation 7−138683
a-Si:H, growth processes in plasma CVD *(Japanese)* 7−118317
a-Si:H film growth, gas and surface processes 7−132491
a-Si:H films, coaxial-line-type microwave plasma CVD growth *(Japanese)* 7−71079
a-Si:H films, growth in inductive coupling glow discharge reactor 7−113416
a-Si:H films, microwave electron-cyclotron-resonance plasma CVD 7−100104
a-Si:H films, microwave-excited plasma CVD from SiH_4 7−144302
a-Si:H films, plasma deposited, electronic struct. 7−76747
a-Si:H films, RF glow discharge deposited, optical props. 7−119163
a-Si:H films, RF glow-discharge deposition, ellipsometry study 7−113404
a-Si:H solar cells, continuous-mode fabrication on polyimide substrate 7−133100
a-Si:H solar cells, deposition rate, effects of discharge parameters from pure SiH_4 plasma 7−119170
a-Si:H solar cells, improvements in disilane plasma deposition 7−133102
a-Si:H solar cells, prep. by Hg sensitised photo-CVD of disilane 7−133101
a-Si:H:F thin films, glow discharge deposition from fluorinated silanes, characterisation 7−132493
a-Si:H/a-SiN_x:H multilayer films, plasma deposition, persistent photoconductivity 7−76999
SiC coating formation by pyrolysis in HF glow discharge 7−78363
SiC film prep. by electron cyclotron resonance plasma CVD, grain structure anal. using electron microscopy *(Japanese)* 7−132476
a-SiGe:H films, CVD using microwave-excited plasma 7−100106
a-SiGe:H solar cells, prep. by Hg sensitised photo-CVD of disilane 7−133101
SiH_4, plasma CVD, RF discharges, spectroscopic diagnostics 7−113403
SiH_4-Ar glow discharge, SiH radical profile control 7−97822
SiN films, ECR plasma CVD growth, N_2 ions and radicals effect 7−100108
SiN films, fabrication by double tubed coaxial line type microwave plasma CVD 7−113420
SiN films fabrication, coaxial-line microwave plasma CVD system 7−100093
p-SiN:F, low temp. plasma deposition, elec. props., bonding and stability 7−132480
SiN:F films, plasma-enhanced CVD growth, elec. and optical props 7−84589
Si_3N_4 film, gradient field plasma CVD 7−130928
Si_3N_4 plasma-enhanced CVD films in $Si/SiO_2/Si_3N_4$ system, ESCA/AES analysis 7−131483

plasma deposition continued
Si_3N_4 powder, plasma arc synthesis, hardness struct., fracture toughness *(Japanese)* 7−113505
Si_3N_4 thin films, plasma CVD synthesis in HF planar reactor *(Russian)* 7−77842
Si_3N_4 thin films, plasma enhanced CVD, influence of deposition parameters on props. *(Slovenian)* 7−86041
SiO_2, afterglow CVD prep., chem. and phys. props. 7−100112
SiO_2 needles, growth induced by positive corona discharging 7−124772
SiO_2 plastic clad fibres, axial lateral plasma deposition for single and multimode fibres 7−68919
SiO_2 thin films, plasma enhanced CVD, influence of deposition parameters on props. *(Slovenian)* 7−86041
SiO_2-InP MIS struct., slow insulator state conc. reduction using plasma-enhanced CVD 7−143625
Sn island film growth kinetics 7−124762
TiN films plasma-enhanced CVD from $TiCl_4$-N_2-H_2 gas mixtures 7−113425
TiNx, plasma deposition parameters, Auger spectra, thin films 7−144293
W films, abnormal-glow-discharge deposition 7−92879
W, plasma-enhanced CVD on Si substrate 7−126005
Y_2O_3 vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7−144280
ZnSe, low temperature plasma-assisted epitaxial growth 7−126013

plasma devices
see also magnetohydrodynamic convertors; plasma diodes; plasma focus; plasma guns; plasma switches; stellarators; Tokamak devices
arcs, density and temp. profiles, CW laser scatt. 7−111295
bucket plasma ion source 7−122277
centrifuge, continuous operation 7−97813
centrifuge, isotropic enrichment 7−104459
crossed EM field system, ion reson. motion, discharges *(Japanese)* 7−130966
dielectric Cerenkov amplifiers using relativistic electron beams, high-current effects 7−83493
discharge plasma confinement in cusped ion thruster, analytical model 7−91378
double layer form. mechanisms in triple plasma devices 7−117728
double layers in plasmas, conf., Huntsville, AL, USA (Mar. 1986) 7−115677
double layers in triple plasma device, dynamical props. 7−117734
EHD converter, corona recharging study 7−91255
electrodynamic valve for pulsed gas admission 7−104467
explosive plasma generator, high-speed air jets investig. 7−104439
field-reversed configs., tilt stability, two-fluid model 7−69481
filament ion source, ion beam production 7−122279
furnaces, appl. in plasma melting for metallurgical treatment *(German)* 7−138704
Heliotron-E, Balmer alpha laser fluoresc. spectroscopy 7−69453
Heliotron-E, H retention, thermal desorption and nucl. reaction anal. 7−69455
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454
Heliotron-E device, pump limiter study 7−69410
ICRF heating in ICP torches study 7−97820
inductively coupled plasma devices for spectrography *(German)* 7−106874
ion-ion beam instability, LF electrostatic turbulence 7−123897
laser plasma switch for pulse variation 7−130168
low energy plasma physics technology review 7−142513
partial pressure gauge using ion backscattering principle, for He and D_2 7−134790
PBFA II, light ion beam fusion research progress 7−68005
PEGASUS drive, multi-megawatt nuclear electric propulsion system for spacecraft 7−67899
plasma armature in electromag. launcher, mag. flux contrib. 7−97818
plasma current breaker for microsecond energy input into an inductive storage bank 7−117766
potential double layers in triple plasma device, laboratory investig. 7−117735
relativistic backward ware oscillators at low currents, starting conditions 7−83554
relativistic Langmuir waves, detuning in beat-wave accelerator 7−91363
reversed field pinch operation 7−91377
ROPTOR, production of rotating plasma torus *(Japanese)* 7−111288
surface treatment of materials with elec. arc of two-jet plasma torch 7−138861
three-phase AC plasma technology for melting scrap and heating molten steel *(German)* 7−83552
torch, high pressure, inductively coupled 7−123997
torch for industrial implementation *(French)* 7−130948
torches, perform. and operating characts. *(German)* 7−137093
toroidal plasma devices, glow discharge cleaning, microwave spectroscopy monitor 7−69423
TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
vacuum arc plasma centrifuge for element and isotope separation 7−69491
Z-pinch physics, driver influence 7−69445
Z-pinch with pulsed gas admission 7−137117
Cu cathode erosion in plasma torches, polyatomic gas in Ar, conc. effect 7−130839
Cu-Li alloys, plasma-flux elevated temp. sputtering, plasma emission spectroscopy 7−75874
H^- (D^-), volume produced ion source using sheet plasma *(Japanese)* 7−89823
H^- plasma device, negative ion production 7−122278
H_2-N_2 plasma torch, $SiCl_4$ pyrolysis and reaction products 7−100511
Mg plasma columns, isotope separation in a vacuum arc centrifuge 7−96887
NaF capillary-discharge plasma, implosion for X-ray laser expts. 7−91372
Nd laser spectrum narrowing with plasma mirror 7−141874
Rb-He magnetometers, characts. for geophysics *(Russian)* 7−79625
Si, refining and nitriding processes using plasma techniques 7−97819
TiC coating layers on graphite PDX wall armor tiles, surface damage and redeposition investig. 7−67990

plasma diagnostic techniques
see also plasma probes
α particle diagnostics using (α, n) and (α, γ) reactions 7−104453
acousto-optic spectrum analyser 7−130934

plasma diagnostic techniques continued
active beam diagnostics, highly charged impurities effect on ion temp. 7−142500
alpha particles pitch angle distrib., radiation-hardened wall detector 7−104454
AMBAL apparatus, magnetic field meas., direction of magnetic lines of force determ. 7−121164
ASDEX, electronics for data preparation and diagnostics control 7−122169
ASDEX-Upgrade, AMOS/D data acquisition system, diagnostic subsystems, communications network 7−122176
Auburn torsatron, magnetic surface mapping with emissive of filament technique 7−83543
cylindrical discharge, optically thick reson. line, excited state density determ. 7−97795
density fluctuations determ., homodyne small-angle scattering technique using CO_2 laser 7−142506
diamagnetic loop, frequency compensation using digital data acquisition 7−111270
electric current meas. by Faraday rotation in single-mode fibre 7−111268
electron density, determ. using C III, O V, F VI and Ne VII line emissions 7−115224
electron density diagnostics by Fe XXII line intensity ratio 7−142504
electron energy analysis in presence of trapped electrons 7−97796
energy distribution function meas. apparatus *(Japanese)* 7−111291
extraordinary mode microwave reflectometry, Petula-B Tokamak electron density profile determ. 7−83547
Fabry-Perot interferometer, spectral line profile meas. 7−95635
fusion plasmas, charge exchange spectroscopy appl. 7−104451
fusion reactor shielding, radiation streaming through small penetrations, parametric study 7−103195
Giotto 3D positive ion analyser 7−139888
Giotto electron plasma expt. 7−139884
Giotto EPONA lightweight energetic particle detector, data monitoring 7−139923
Giotto heavy ion analyser PICCA 7−139887
Giotto implanted ion spectrometer characts. 7−139924
Giotto ion mass spectrometer 7−139886
HAIFA multichannel modular spectroscopic diagnostic 7−123991
high resolution spectrometer design for ultra-high temp. plasma diagnosis 7−111272
high-sensitivity laser plasma interferometry 7−123977
inverse Abel transform, iterative method of computation 7−75871
ion temp. meas. based on neutral beam scattering, comment on discrepancies 7−123993
ion temp. meas. based on neutral beam scattering 7−123992
JET Fast Transfer Diagnostic system, installation and commissioning 7−122182
JET neutral particle analyser 7−96457
JIPP-T-II-U Tokamak, diagnostics using time-resolved Ti^{20+} X-ray spectra 7−123987
laser fluorescence spectroscopy at Balmer α, diagnostic appl. to large devices *(Japanese)* 7−111269
laser-induced fluorescence with freq. tripling into VUV, H and C densities and vel. distrib. meas. 7−109833
local temperature, meas. without Abel inversion 7−142511
logging multichannel averager with 25 ns resolution 7−95554
low-energy neutral particle analyser for plasma expts. 7−80926
magnetic field meas. in laser produced plasmas, fully automated anal., phase-amplitude imaging 7−104447
mathematical problems of active corpuscular plasma diagnosis 7−104458
metal-film bolometer for plasma diagnostics 7−97797
MHD combustion gas plasma, 2-D laser-induced fluorescence detection system 7−142510
microwave cavity measurements of density and collision frequency in decaying plasmas 7−123982
microwave reflectometer for plasma density profile meas. on JET 7−83539
microwave reflectometry to measure the electron plasma density in tokamak TJ-1 *(Spanish)* 7−83531
mirror analyser/quadrupole mass spectrometer for plasma processes 7−137128
nonequilibrium plasma, temp. meas. using spectral line shapes 7−97789
partial pressure gauge using ion backscattering principle 7−134790
PHEBUS, laser facility for ICF research, design and plasma diagnostics 7−122092
photon counting detector for Doppler temp. meas. in magnetically confined plasmas 7−83545
pinhole camera for monochromatic X-ray imaging of plasma 7−83540
POSEIDON, plasma focus efficiency improvement diagnostics 7−69434
potential measurement using Wien filter type heavy ion beam probe system 7−97800
pulsed currents meas. in MA/MHz range, using differentiating meas. coils 7−128595
pulsed source design and construction for dense plasma diagnostics 7−142475
radiative transmission coefficient meas., double-beam interferometric technique *(Japanese)* 7−128647
refractive fringe diagnostic of ruby laser produced plasma, using N_2 laser 7−83537
resonance-enhanced multiphoton ionization for diagnosis of a weakly ionized plasma 7−130932
soft X-ray imaging by solid-state TV camera 7−80960
soft X-ray measurement in imploding plasmas using crystal spectrograph 7−80952
spectroscopic, with oscillating electric fields 7−123979
spectroscopy, reduction problem soln. 7−123985
TBR-1 plasma column cross-section shape diagnostic system 7−137130
TEXTOR, fast signal acquisition system for the Lyman-α diagnostic 7−122178
TFTR, diagnostic neutral beam for active charge-exchange meas., simulation 7−74039
TFTR neutral beam injectors, multiple track Doppler-shift spectroscopy 7−130933
Tokamak, directly launched ion Bernstein waves study, excitation, propagation and absorption 7−137098
Tokamak plasma diagnostics, using duo-multichannel soft X-ray spectrometer 7−142509
torus magnetic field meas., by rapid-frequency-scan laser spectroscopy 7−142507
transient plasma analysis, by fast, laser deflection system 7−142508

plasma diagnostic techniques continued
VUV spectrometers, in situ absolute calibration 7−97792
X-ray diode, high-speed simple design 7−104457
X-ray imaging on Varennes Tokamak, image reconstruction techniques for computed tomography 7−117761
X-ray mirror, Wolter type-I, imaging characteristics for laser plasma diagnostics 7−108718
Ar, RF generated plasma, electron energy distrib. functions 7−117759
D-T fusion, T anal. and meas. using mass spectrometry, ionization gauge and secondary electron multiplier 7−130941
He impurities in plasma near wall, laser reson. fluoresc. 7−123978
Li, neutral beam production, high temp. plasma probing appl. 7−80933
Ne discharge, Z-pinch AGAT image-converter camera diagnostics 7−123932

plasma diagnostics
see also plasma density; plasma diagnostic techniques; plasma diagnostics by laser beam; plasma temperature
α particle diagnostics using (α, n) and (α, γ) reactions 7−104453
AAEC rotamak, equilib. config., props. determ. 7−75886
AC arc with metal halide impurities, plasma component vol. redistrib. 7−83559
air, plasma, thermodynamic props. Calc. 7−69310
air afterglow cond. meas. following electron beam excitation 7−117779
air at atmospheric press., long continuous laser spark, emission spectrum 7−97827
Alfven surface waves, dispersive and stability characts. along plasma column 7−97736
alpha-particle diagnostics by pellet injection 7−75883
arc plasma, triplet lines, intensity current and mag. field depend., visible spectra 7−137126
arcs, column mobility study *(French)* 7−83575
arcs, magnetic diagnosis of low voltage cut-off *(French)* 7−83574
ASDEX, low energy neutral particle fluxes, TOF method 7−69412
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
ASDEX discharge, C and O impurities, radiation losses, VUV diagnostics 7−91366
atomic and ionic fluoresc. dip spectroscopy study 7−133010
atomic charge exchange and fusion diagnostics 7−96846
atomic data for highly charged ions, X-ray laser design, ICF appl. 7−96316
boundary determination of plasma pinch from mag. meas. data 7−111292
bulk discharge, UV preionisation near threshold voltage 7−142524
CASTOR Tokamak, radiative power losses, density depend. study 7−117705
central mass and current density measurements in Tokamaks using the discrete Alfven wave spectrum 7−83469
coaxial gas-puff plasma gun, high-energy photon spectra 7−111287
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
constricted type plasma source, pl. density and electron temp. enhancements 7−97763
continuum radiation dynamics of low-voltage spark-discharge plasma 7−83488
current profile determ. by heavy-ion beam probing 7−69450
cylindrical shock wave production by sliding discharge device 7−83483
dense plasmas, complete spectral series as diagnostic tool 7−69459
density drift in TEXTOR with a graphite pumped limiter 7−68002
depth profiling experiments on JET wall samples, Auger spectroscopy anal. 7−69368
deuteron beam ion and electron emission characts. from plasma focus devices 7−69474
diffuse discharges, optogalvanic diagnostics in the cathode fall region *(German)* 7−130977
discharges, CARS diagnostics 7−83550
DITE tokamak, gas puffed impurities toroidal dispersal 7−69414
divertor plasmas, parametric anal. 7−75880
drift cyclotron loss cone unstable mode characts. depend. on plasma density 7−69343
EBT particle and energy confinement times, Monte Carlo estimates 7−91357
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
edge region diagnostics and transport in the TEXT tokamak 7−75828
electric microfield distrib., reference hypernetted chain eqn. 7−117702
electrode material flow into discharge gap, spectral emission in vacuum spark discharge 7−142471
electrode operating regimes in high-power electric arc plasma generators 7−117783
electromagnetic wave scattering in plasma, eikonal approximation 7−83490
electron beam in system with electrodes, nonlinear stationary states and stability 7−83535
electron density measurement of MHD combustion plasmas with a far-infrared laser 7−137050
electron density profile meas. in Z-pinch by holographic interferometry 7−69312
electron plasma waves, steepening, in stimulated Raman backscattering 7−123885
electron temperature and density profiles in tokamak TJ-1 by Thompson scattering *(Spanish)* 7−83532
electron temperature meas. by X-ray absorber foil method on TFTR 7−91319
electron temperature meas. errors using Langmuir probe in mag. field 7−83422
electron-ion collisions, reson. effects, conf., Nagoya, Japan (Sept. 1986) 7−72730
electropositive gas, longitudinal discharge model in supersonic flow 7−124031
electrostatic ion-cyclotron instability and potential relaxation instability excited by a ring-button electrode 7−75887
emission spectroscopy, local emission coeffs. and parameters, optically thin case *(German)* 7−130938
ETA BETA II reversed field pinch oscills., mag. field profile meas. 7−75789
EUV impurity measurements on the TEXTOR Tokamak 7−111276
field-reversed config., lower hybrid drift fluctuations, CO_2 heterodyne scatt. study 7−97732
Frascati Torus, time resolved neutron yield meas. for plasma parameter determ. 7−74071

plasma diagnostics continued
fuel pellet injection, m=1, n=1 oscillations in tokamak 7−123944
fusion neutron sources at POSEIDON plasma focus, time resolved neutron spectra 7−97804
GAMMA 10 tandem mirror, electron temp. meas. by electron cyclotron emission 7−111258
gas discharge plasma, jumps in parameters, experimental confirmation 7−83542
gas target plasma, laser-heated, ion-density fluctuations, Thomson scatt 7−69398
gas-puff implosions, axial nonuniformities meas. 7−97773
gases, high-press., long-lived plasma created by impulsive UV radiation 7−123995
glow discharge, anode current structures dynamics 7−117775
glow discharge carbonisation in JET, probe anal. by Auger spectroscopy 7−69457
glycerine levitated aerosol drops, time-resolved spectroscopy of laser produced plasma 7−104381
graphite, erosion and deposition in JET wall surfaces, SIMS anal 7−75809
Heliotron-E, H retention, thermal desorption and nucl. reaction anal 7−69455
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454
high memory electron acceleration by electrostatic waves 7−137075
high resolution diagnostics of laser-produced Al and Si plasmas 7−75839
high resolution spectrometer design for ultra-high temp. plasma diagnosis 7−111272
high Z plasma, short wavelength laser produced, dynamics, energy flow 7−117745
high-current magnetically compressed discharge, radiation dynamics 7−137131
highly-ionised atoms, spectral lines, fusion plasma diagnostics 7−111274
hot dense plasma radiative processes 7−123840
hot plasmas, magnetically confined, edge diagnostics 7−117763
ICF core imaging, computed tomography using URA coded aperture cameras 7−91369
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
impurity influx behaviour in JET tokamak, visible spectra anal. 7−75848
impurity transport in TCA-Tokamak, integral collection probes investig 7−69422
inhomogeneous plasmas, self-reversed emission lines, lifetime and broadening, diagnostics appls. *(German)* 7−130939
intense lithium ion beam diagnostic using the inverse nuclear reaction D(^{7}Li, n)^{8}Be 7−89830
internal magnetic fluctuations in HBTX1A revised field pinch, mag. probe investig. 7−75863
inverted diode, magnetically insulated, short-circuiting dynamics 7−123999
ion acoustic plasma waves, laser induced anisotropy 7−83465
ion composition and energy distrib. studies *(Russian)* 7−83548
ion-beam and X-ray emission struct. from PF-360 facility 7−69472
JET, α-particle diagnostics, progress report Dec. 1985-June 1986 7−103199
JET, D-D plasma, ^{3}He and ^{3}H ions burn up meas. 7−104374
JET, ICRF heating sawtooth behaviour, 15 MeV $^1H^+$ emission spectra anal. 7−104429
JET diagnostic systems, engineering aspects 7−74034
JET plasma, emission of ions out of ionisation balance, impurities 7−104445
JET plasma, Ne-like and adjacent ion recombination 7−75862
jet slot discharges with volatile wall, spectrosc. investig. 7−142517
JET Tokamak, turbulence, heating, fluctuation meas. 7−111231
JFT-2M, H-mode transition, electron cyclotron emission, peripheral electron temp. 7−97704
JIPP T-IIU tokamak, ICRF heating, radiation loss and impurity abundance, spectroscopic and bolometric meas. 7−75837
JIPP-T-II-U Tokamak, diagnostics using time-resolved Ti^{20+} X-ray spectra 7−123987
JT-60 diagnostic instrumentation system 7−91365
laser created plasma, charge state evol. and energy losses in beam-plasma interaction 7−81680
laser plasma, *[2ω_0]* harmonic emission struct., bandwidth effects, soliton generation theory 7−97749
laser plasma, electron temp., X-ray emission spectra 7−83533
laser plasma, X-ray emission spectra, atomic number depend. 7−104434
laser plasmas, second harmonic time resolved spectrum, fine struct *(Chinese)* 7−117756
laser plasmas, X-ray emission spectra study 7−103424
laser produced plasma, super-soft X-ray emission *(Chinese)* 7−130923
laser-fusion plasma, diagnostics on basis of products of secondary fusion reactions 7−83534
laser-produced plasma, continuous optical discharges and spectroscopic appls. *(German)* 7−130899
light impurities in TFTR plasmas, production and scaling 7−75849
light scattering, fundamental aspects and diagnostic appls. 7−130847
linear Z-pinch, multiply charged ion source in λ<0.1 nm region 7−130922
LISA, rF heating by cylindrical plasma waveguide modes 7−137099
long-scale-length plasmas, laser coupling, hydrodynamic phenomena 7−117744
low density plasma, J-line to H-like resonance line ratio, Z-dependence 7−96590
low voltage switch arcs, interferometric plasma diagnostics 7−97821
low-pressure discharge, positive column, at. gas injection effect on elec and thermal characts. 7−111298
low-Z-fusion relevant materials, fluoresc. spectroscopy 7−75810
lower hybrid wave driven plasma current, radial distrib. in JFT-2M Tokamak 7−91312
Mach-Zehnder interferometry at framing rates of 10.5-21 GHz 7−108637
magnetic multipole plasma, electron energy distrib. meas. 7−117700
magnetic plasma traps, radiation dynamics questions 7−123934
magnetised plasma, electrostatic turbulence, conditional sampling 7−111236
magnetised plasma, turbulence diagnostics, collective scatt. and optical probing 7−111281
magnetoplasma, magnetoelectrostatic confinement at negative pots 7−104440
metal redistrib., JET vessel wall surface anal. 7−69369
MHD plants, U-25, decomposition of oxides of nitrogen 7−124004

plasma diagnostics continued
MHD stability, in PF-150 and PF-360 devices, photography, interferometry and Faraday rot. meas. 7—69350
micropinch, high temp. and superdense, radiative collapse model 7—69442
microwave discharges, high-power, supercooled plasma 7—142522
microwave-induced plasmas, spatial emission props., easily ionised elements effect 7—142499
multiple stimulated Brillouin backscattering, optical turbulence 7—117266
multiply charged impurities, charge-changing collisions role in active-beam diagnostics 7—91284
negative plasma glows, dynamics of double layer formed in transition region 7—124020
neutral atom time of flight anal. 7—123974
neutral beam diagnostics for α-particle plasma 7—69451
neutral beam heated and ohmically heated plasma, X-ray pulse height anal. 7—142512
neutron energy spectra, meas. in plasma focus, time resolution 7—69469
neutron spectrometers, fusion plasma diagnostics systems 7—89721
neutron time measurements for PF-360 device 7—69435
neutron-flux spectrum, for plasma focus devices, solid state track recorders appl. 7—69466
noncircular cross-section plasma, random transformations appl. *(Chinese)* 7—111267
nonequilibrium plasma, temp. meas. using spectral line shapes 7—97789
nonlinear spectroscopy of excited atoms, molecular cases, and plasma 7—134853
nonlocal thermal equilibrium plasmas, ionis. balance and L-shell spectroscopy 7—137127
OHTE reversed field pinch, operation with graphite walls 7—69406
optical breakdown near solid surface, spectral investig. 7—75756
particle emission and pinch struct., PF discharges 7—69320
PBX, divertor region, emitted power meas. 7—75877
PBX, impurity accumulation, diffusion coeff., diagnostics 7—69420
pellet deposition in TFTR, neutron and hard X-ray meas. 7—69460
PF-discharge parameters, electrode geometry influence 7—69487
Phobos spacecraft plasma spectrometer with solar power generator 7—145828
plasma column development in the CO_2 laser-heated solenoid 7—137103
plasma focus anode, dynamic temp. meas. 7—69468
plasma focus discharge, insulator influence, expt. investig. 7—69488
plasma focus structure by neutron pinhole camera 7—69471
plasma jet igniters, pulsed, H distrib. study 7—83551
plasma layer in plasma focus, schlieren diagnostics 7—69467
plasma line radiation, laser plasma, expanding, optical characteristics 7—130844
plasma parameters determ., IR and FIR laser polarimetry appl. 7—117762
plasma physics, conf., Lucas Heights, NSW, Australia (Feb. 1987) 7—80175
plasma sheath evolution in plasma focus device final stages, diagnostic investig. 7—69373
plasma-ion broadening, spectral line asymmetry 7—142505
PLT, particle transport and confinement, density depend. 7—69413
PLT tokamak plasma, impurities, time-resolved X-ray spectra 7—97790
POSEIDON, plasma focus efficiency improvement diagnostics 7—69434
probe wake study in DITE tokamak using spatially scanning Langmuir probe 7—75802
proton spectrometer for energy spectra under ICRF heating in JET 7—91371
pulsed discharge, temp. determ. from asymmetrically self reversed spectral lines 7—124032
pulsed discharge plasma in electrolyte, electron temp. and density determ. 7—75899
pulsed jet, flow and press. transients 7—130943
pulsed microwave discharge in waveguide, parameters meas., cond. method 7—91384
pumping potential wells meas. 7—117730
radial electron thermal diffusivities, turbulent heating pulse in TORTUR tokamak 7—97715
railgun firings involving mag. flux probes, expt. results 7—97808
rare earth metal vacuum spark, X-ray emission quasicontinuum band 7—123986
rare earth plasmas, laser generated, EUV spectra study 7—142482
rarefied gas, Bennet distrib. transform. 7—75867
Reacting Plasma Experiment, confined α-particle diagnostics 7—75882
reflectometry density meas., mode mixing influence in reversed field pinch 7—83423
relativistic electron beam induced plasma current, meas. 7—130883
relativistic electron beam ring, electron energy increase by major radius compression, hard X-ray spectrum meas. 7—91352
reversed field pinch, enhanced dynamo contribution to resistivity 7—123946
reversed field pinches, current and heat flux, electron density control 7—69409
RF discharge, LF, sheath pot., probe diagnostics 7—137139
RF discharge, low press. capacitive, electron vel. anisotropy 7—69510
RF generated plasma, elec. meas. using driven electrostatic probe 7—117758
RF magnetron plasmas, turbulence-induced anomalous currents 7—83567
rotational transform meas. at Tokamak axis 7—111213
Rydberg states, props. and appl. to electrical discharge meas. *(German)* 7—129625
sausage instability simulation in Z-pinch at plasma sheath motion stage 7—69351
scrape-off layer in TCA tokamak, Alfven wave heating study, Langmuir probe diagnostics 7—75832
sheath pot. in tokamak edge plasma using retarding field analyser 7—75826
soft X-ray measurement from STP-3(M) reversed-field pinch plasma 7—97793
soft X-ray spectrum meas. using X-ray diode array 7—91370
SPAC-VI toroidal device, relativistic electron beam ring, X-ray bremsstrahlung 7—130917
SPAC-VII toroidal device, relativistic electron rings 7—130916
space potential meas. method with high time resolution *(Japanese)* 7—111277
Space Shuttle Orbiter, passive vehicle charging and potential expt. 7—127683
spectroscopy, Abel inversion method, data smoothing effects 7—123976
SPEED 1 plasma focus, pinch form. and emission characts. 7—69438
plasma diagnostics continued
spontaneous magnetic field detection in Del'fin 1 laser plasma device *(Hungarian)* 7—130897
sputtered, atom transport in gas discharge plasma, density calc. 7—117709
stellar plasmas, partially ionised, Planck-Larkin partition function, polarisation shifts and optical spectra 7—139905
stellarator L-2, electron cyclotron heating, microwave radiation, Raman scatt. 7—97761
stimulated raman scattering in a nearly resonant density ripple 7—83438
stratification of the anode plasma in a high-current diode with a current pinch 7—83421
supersonic flowing plasma, density determ. by electrostatic double probes 7—83424
suprathermal IR emission and bidirectional electron beams at the plasma focus, meas. 7—69319
TBR-1 plasma column cross-section shape diagnostic system 7—137130
TCA tokamak, mag. and density fluctuations, probe meas. 7—111280
test ion cross-field transport in quiet plasma 7—142444
tetrafluoromethane plasma etching and diagnostics characts. study using elec. probe method *(Korean)* 7—86498
TEXT, Ar XII-XVI ionisation and recombination rates, time resolved spectroscopy 7—123988
TEXT, biased limiter expts. 7—67998
TEXT, density, plasma current, toroidal field, recycling meas. 7—69418
TEXT, intra-island scoop limiter expt. tests 7—67999
TEXT confinement, particle transport and electrostatic turbulence, Langmuir probe study 7—130904
TEXT tokamak, fluctuations and transport meas. 7—111185
TEXTOR, impurity sources, emission spectroscopy 7—69419
TEXTOR Tokamak, Langmuir probe meas. during ALT-I pump limiter expt. 7—97803
TFR, internal disruptions, electron density fluctuations, microwave scatt. 7—111186
TFTR, α particle heating and diagnostics study 7—104427
TFTR, electron temp. profile shape study 7—142441
TFTR, ohmic and neutral beam heating, global particle recycling 7—69415
TFTR discharges, impurity behaviour 7—130929
TFTR discharges, ohmic and neutral-beam heated, impurity transport 7—69421
TFTR edge turbulence meas., Langmuir probes, D-alpha imaging, microwave scatt. and mag. pickup loops 7—75830
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7—75829
thermonuclear neutron emission anisotropy in Z-pinch 7—69441
thermonuclear neutron emission from the inhomogeneous Z-pinch investig. 7—69321
theta pinch, poloidally rot. spheromak generation 7—137116
theta pinch high-beta stellarator, equilibr. study 7—142489
Thorello, toroidal magnetised plasma, diagnostics eval. 7—75860
TMX-U tandem mirror, edge plasma ICRH effects 7—69405
tokamak, ASDEX, neutral particle beam injection, charge exchange excited line radiation 7—83496
tokamak, high β, plasma form. and equilibr. 7—137115
Tokamak limiter scrape-off layer study using a Mach number probe 7—75833
tokamak peripheral plasma, oscillating elec. fields spectroscopic method obs. and anal. 7—83466
tokamak plasma, X-ray emission processes, diagnostic appl. 7—75859
tokamak plasmas, α particle effects, conf., Aspenasgarden, Sweden (June 1986) 7—102009
tokamak plasmas, transport study using positrons 7—111189
tokamak plasmas, X-ray emission investig. review 7—137129
tokamak T-15, near wall plasma diagnostics, surface anal. station 7—130936
tokamak with graphite wall and limiter, effective charge state 7—123929
tokamaks, electrostatic and EM turbulence, anomalous transport study 7—111179
tokamaks, EM fluctuation diagnostics 7—111282
Tokapole II device, reversed toroidal field, equilibr. study 7—123965
toroidal devices, diamagnetic coil design for plasma diamagnetism meas. 7—75888
toroidal electrostatic analyser for space research, expt. tests 7—88077
toroidal plasma devices, glow discharge cleaning, microwave spectroscopy monitor 7—69423
TOSCA tokamak, turbulent transport, diagnostics 7—111184
triton burnup in FT tokamak, neutron emission meas. 7—123984
turbulent plasma, interferometric microwave measurements of plasma concentration 7—123994
vacuum technology and ion physics, conf., Debrecen, Hungary (Oct. 1985) 7—115686
volumetric discharge, nanosec., spectral anal. 7—117781
wall probes current-voltage characts., study in TEXTOR tokamak, secondary electron emission effects 7—75803
X-ray and ion emission, pinhole camera photographs meas., plasma focus optimisation 7—69475
X-ray characterization of picosecond laser plasmas 7—130931
X-ray conversion efficiency for KrF laser produced plasma meas. 7—91367
X-ray source, laser prod. plasma, radiative characts., conversion efficiency 7—123925
X-ray source, miniature, based on vac., discharge 7—67454
X-ray spectra of e^+e^- bremsstrahlung in thermal plasma, analytical functions 7—101669
Z-pinch dynamics in high-current diode investig. 7—69443
ZT-40M reversed-field pinch D and impurity fluxes, collector probe meas. 7—69407
Ag plasma, thin film capacitive discharge, early time spectral features study 7—142483
Al Li-like ions in recombining hot plasmas, soft X-ray amplification 7—91300
Al plasma, laser-produced, thermal transport models, X-ray meas. 7—69462
Al plasma, surface localised, production by dye laser pulse and pulsed quartz lamp 7—69400
Al XI, laser produced plasma, population inversion, ab initio spectra 7—69392
Ar discharge, anode-type double layers in nonuniform mag. field 7—137091
Ar glow discharge, instability in presence of negative ions 7—123883

plasma diagnostics continued
Ar jet, ionisation by microwave field, self-oscills. anal. 7−83407
Ar jet heated in plasmatron, boundary gas blowoff 7−142514
Ar, microwave discharge, high press., emission profile width and shift 7−69503
Ar microwave-induced plasma, electron density study 7−142440
Ar plasma, H_α broadening and shift meas. 7−111167
Ar plasma, Langmuir probe and optical emission spectrosc. obs. 7−137132
Ar^{16+}, He-like, from Alcator-C tokamak, ground-state transitions, radial profiles 7−97801
Ar-He gas mixtures, Grimm-type glow discharge plasma, emission spectrosc. 7−91368
Ar-SiH_4 discharges, optical emission spectroscopy 7−83536
BCl_3, RF discharge, photodetachment and Stark effect 7−97844
Ba plasma, laser prod., opacity effects on near reson. Rayleigh scatt. 7−97794
Be I, II, laser produced plasma, inner-shell photoabsorpt. spectra 7−135872
Be laser produced plasma, UV emission meas. 7−104382
Be limiter surface composition in UNITOR, RBS, PIXE, AES and SEM/EIXE anal. 7−67989
Be recombining laser plasma emission spectra obs. for Ni-C multilayer X-ray mirror, spectral characts. meas. 7−125843
Be-like ions, transition in TEXT, emission spectra line intensity ratios 7−83541
Br plasma laser produced, temp., ionisation balance form L X-ray spectra 7−104450
C ablation plasma, ionisation and radiation dynamics 7−130886
C coatings influence on window materials in fusion-experimental devices 7−70134
C IV, population inversions in recombining theta-pinch plasma 7−141533
C laser-produced plasma, mag. field meas. using Zeeman effect 7−142480
CO_2, distrib. between vibr.-rot. levels in glow discharge, pulsed diode laser spectroscopy 7−141575
CO_2-N_2-He mixture, volume to spark discharge transition, electrooptic meas. 7−137146
Ca XX, Lyman α reson. lines in high-temp. plasmas, unresolved dielectronic satellite lines 7−122419
Cl conc. meas. in plasma etching reactor, IR and optical actinometry 7−142501
Cl conc. meas. in plasma etching reactor, predictive model 7−142502
Co XVII-Co XXV, laser-produced plasma, X-ray emission spectrum meas. 7−111273
Co XX, magnetic-dipole transition in ground configuration 7−96888
Cs diode, ion trapping in cathode pot. well and its influence on breakdown 7−83549
Cs discharge plasma, microwave oscills. spectrum 7−124011
Cu exploding wire, Z pinch prod. diagnostics study 7−123928
Cu I and II, plasma jet, Stark width meas. 7−90037
Cu ions, XXII to XXV, spectra and energy levels 7−96588
Cu laser produced plasma, enhancement of keV X-ray emission by weak prepulse laser 7−111190
Cu-Li alloys, plasma-flux elevated temp. sputtering, plasma emission spectroscopy 7−75874
D plasma, D_β line central struct. in low-pass T-tube 7−123975
D^+ emission from plasma focus discharge, intensity and energy spectrum 7−69473
D-T plasma, α particle diagnostics study 7−104452
D_2 plasma focus, neutron energy spectrum, time resolved meas. 7−69470
F_2, arcs, low-current strength, optical spectrum 7−111296
Fe II, level populations in hollow cathode discharge 7−130956
Fe^{n+} (n=23, 24, 25), K X-ray wavelengths and transition probabilities 7−95120
H like ions, impact excitation by H^+ and electrons, fine struct. levels 7−103666
H plasma, Coulomb radiators, intra-stark spectroscopy *(German)* 7−137125
H, plasma, oscillator strength density, one-particle pot. approx. 7−122452
H plasma, tandem multipole, plasma parameter meas. 7−69464
H plasmas, ion acoustic wave dispersion relations and diagnostic appls. 7−123893
H, retention in JET limiters, nucl. reaction techniques and laser induced mass anal. 7−69456
H^- ion source, H_2 rovibr. population, CARS time-resolved meas. 7−82161
h^- production in pulsed power diode at 10 GW 7−135717
H-like ions in plasma, COLRAD program for level population density calcs. 7−96569
H_2 discharge, RF low press., Doppler broadened H_α lineshapes 7−104473
H_2, dissociation rate near cathode in low temp. plasma 7−83579
H_2-$SiCl_4$, inductively coupled plasma, reaction mechanism studied by mass spectrometry 7−106869
H_β line profile, glass-to-plasma boundary layers influence 7−83484
H(D), retention in JET wall samples, surface layer meas. 7−69367
He, annular ICP, generated in low gas flow torch, characterisation 7−93434
He, axisymmetric arcjet, compressible laminar flow, press. meas. 7−69476
He, hollow-cathode discharge, electron energy distrib. function 7−104482
He inductively coupled plasma, energy transfer, ionisation processes, heavy inert gas atoms effect 7−130830
He microwave-induced plasma, electron density study 7−142440
He, nonequilibrium discharge plasma, bremsstrahlung and line radiation diagnostics 7−69461
He plasma, ion impact excitation, appl. to VUV radiometric transfer standard 7−122424
He plasma, prod. by arc stabilised by axial mag. field *(French)* 7−91338
He plasma, prod. near ceramic surfaces, temp. and electron density distrib. 7−75872
He plasma, surface wave sustained, spatial emission props., spectroscopy appl. 7−142498
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
He Z-inch plasma, CO_2 laser-heated, soft X-ray emission meas. 7−130914
He-Cd laser discharge, density, spectral line intensity 7−130930
He-like ions, vacuum-spark hot point, X-ray emission 7−124017
He-like ions in vacuum spark, Lamb shift study 7−123980
He-N_2 plasma, N triplet state population 7−141518
He-Ne discharge plasma oscill., optogalvanic spectrum characts. *(Chinese)* 7−129635
^{3}He transport in TFTR, time evolution 7−123983
^{3}He(d,pα), 14.6 MeV, fast ion burn up in D plasmas, proton spectra meas. 7−73818
Hg, arc discharge, self-reversed emission lines, lifetime and broadening, diagnostics appls. *(German)* 7−130939
K plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
K-Ar plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
Kr ions, XXIV-XXVII in gas puff Z-pinch 7−96587
Li^- ions, volume production in small multicusp ion source, appl. for plasma diagnostics 7−137124
MnI sextet relative oscillator strengths meas. 7−74514
Mo XV, Ni-like 4s-4p transitions and energy levels 7−103522
N plasma, high temp., absorpt. cross sections 7−130843
N_2, afterglow cond. meas. following electron beam excitation 7−117779
N_2, nonequilib. flow, non-Maxwell energy distrib. 7−69329
N_2, RF discharge, vibr. anal., spectroscopic charactn. 7−83556
N_2, rot., vibr. and electronic excitation in ICP 7−122675
N_2, spatially resolved rot. and vibr. temps. in ICP 7−121122
N_2^+ plasma, A-X system, UV electronic absorpt. spectra 7−123981
N_2-CO, post discharge, vibr. anal., spectroscopic charactn. 7−83556
N_2(N_2−CO), beam-driven discharges, heating studied by interferometric method 7−97825
Na cylindrical plasma, electron temperature measurements, effects of inhomogeneities, optical depth and finite bandwidth 7−123843
Na, Z-pinch plasma, spectroscopic anal. for X-ray-laser pumping efficiency 7−117751
Nb XIV, Ni-like 4s-4p transitions and energy levels 7−103522
Ne gas puff Z-pinch implosions on Proto-II accelerator investig. 7−69440
Ne II spectral lines in pinch discharge, Stark widths and shifts 7−75885
Ni, Al-ZZ 7−97802
Ni, He-like, satellite spectra, wavelength and line intensities determ., obs. in TFTR 7−96593
O_2 plasma, Langmuir probe and optical emission spectrosc. obs. 7−137132
O_2-N_2 microwave discharge, plasma halo form. 7−124010
OH radical, 306.4 nm emission in reduced pressure ICPs 7−122561
S, hydrogenic and He-like, diagnostic tracer, X-ray emission spectral determ. of plasma parameters 7−96594
S VII-XIV spectra, wavelengths, oscill. strengths and energy levels 7−109825
S XIV, laser produced plasma, population inversion, ab initio spectra 7−69392
SF_6, arc plasma, continuum radiation study 7−74536
SF_6 circuit-breaker rotating arc spectrum *(French)* 7−130961
SF_6 expanding-gaps and rotating-arc circuit breaker optical diagnostics *(French)* 7−130963
SF_6 under arcing or partial discharge conditions, electric breakdown products 7−97846
Se emission lines, Tokamak Fusion Test Reactor 7−130924
Si_3N_4 film, gradient field plasma CVD 7−130928
Ti plasma, He-like, time resolved spectra 7−69465
U plasma, oscillator strengths, emission spectrum 7−97842
W alloys, sputtering, redeposition and plasma impurity reduction in mag. fusion devices 7−74049
Xe III, short-wavelength fluoresc., time-resolved meas. 7−141519
Zn-like ions in PLT tokamak, intercombination line study 7−117760
Zr XIII, Ni-like 4s-4p transitions and energy levels 7−103522

plasma diagnostics by laser beam
arcs, density and temp. profiles, CW laser scatt. 7−111295
arcs, radial temperature distributions, spectroscopic measurements 7−97838
ASDEX, LF fluctuations, IR laser scatt. 7−111171
asymmetric power spectra of density fluctuations, far-IR obs. in JIPP T-IIU 7−123878
electron density fluctuations during MHD activity, laser study 7−69326
gas discharge laser diagnostics, density, temp. and level population distrib. *(German)* 7−130940
glass, laser heating, nonequilibrium emission 7−69399
Heliotron-E, Balmer alpha laser fluoresc. spectroscopy 7−69453
Heliotron-E, Fe atom meas. by laser-induced fluoresc. spectroscopy 7−69452
high-sensitivity laser plasma interferometry 7−123977
hollow gas-puff *z* pinch, electron beam preionisation, stability enhancement 7−69375
hot plasmas, magnetically confined, edge diagnostics 7−117763
ion acoustic plasma waves, laser induced anisotropy 7−83465
ion acoustic waves, generation of subharmonics and higher harmonics using CO_2 laser 7−142462
ion-laser plasma, nonlinear resonances, Coulomb broadening 7−117764
laser plasma plane layer, radiation study 7−104416
laser-plasma detection by UHF electrical current production 7−111278
magnetic field meas. in laser produced plasmas, fully automated anal., phase-amplitude imaging 7−104447
multipoint Thomson scattering system for the EXTRAP *Z*-pinch experiment 7−111271
partially absorbing plasmas, components temp. and density, single-wavelength interferometry 7−130937
photothermal radiometric imaging of semiconductors 7−70343
plasma sheath evolution in plasma focus device final stages, diagnostic investig. 7−69373
polarisation spectroscopy of high-frequency discharge plasma 7−104449
population and alignment decay consts. separation, plasma discharge cross sections 7−104455
RF discharges, diagnostic techniques and appls. 7−130976
saturation spectroscopy 7−111279
stimulated Brillouin-scattering measurements from temporally and spatially incoherent laser irradiated plasmas 7−136435
stochastic particle acceleration in an electrostatic wave 7−83464
temperature measurement from self-reversed spectral lines 7−104448
TEXT edge turbulence and density fluctuations, far IR laser scatt. and Langmuir probe study 7−130873
TOSCA tokamak, density fluctuations, far forward laser scatt. 7−111243
Al plasmas, laser-produced, UV-visible spectroscopy 7−117743
Ar ions, temp. and velocity meas. using Ar ion laser 7−123989

plasma diagnostics by laser beam continued
Ar, pulsed-discharge plasma, metastable Ar^+ density, laser induced fluorescence study 7−75761
Ba^+, depolarisation of near-resonance Rayleigh scattering 7−130925
Ba^+ plasma, local density, temporal evolution, Rayleigh scattering meas. 7−97703
Cu exploding wire, high power elec. discharge prod., stratified struct. in high press. gases 7−104436
GeH_4, plasma CVD, RF discharges, spectroscopic diagnostics 7−113403
H plasma, Doppler-free polarisation spectrum, plasma opacity effects 7−142503
H plasma, laser-induced fluorescence and Doppler-free polarisation spectra 7−69458
HCN lasers, plasma beat frequency stabilization by phased locked loop 7−123996
He, glow discharge, elec. field profile, Rydberg state Stark spectroscopy 7−111299
He positive column, pulsed optogalvanic signal decay mechanism 7−75884
Hg_1 low press. discharges, novel laser diagnostics 7−91364
N_2^+ emission band, partially resolved, for temperature diagnostics 7−97791
Na plasma, electron density radial profiles derived from Stark broadening 7−111165
SiH_4, plasma CVD, RF discharges, spectroscopic diagnostics 7−113403
Sr^+, ion recombination, ionisation equilibr., ICP study 7−122707

plasma diodes
air, plasmatron, energy conversion efficiency 7−111284
air arc discharge plasma in plasmatron temp., external acoustic field influence 7−111285
Applied-*B* ion diodes, impedance control 7−130945
Applied-B ion diode, impedance behaviour, analytic model 7−69477
circuit breakers, double layers form. and growth 7−69372
cryogenic flashover ion sources, anode plasma form. 7−67433
electric arc in plasmotron channel, flow, two-mode model 7−142526
erosion switch, polarity effect 7−117765
generator of ultrasmall particles 7−124001
high voltage applied-B ion diodes design and simulation for inertial confinement fusion 7−104441
inductive storage-plasma erosion switch system parameters *(Russian)* 7−117767
inductively coupled plasma devices for spectrography *(German)* 7−106874
inverted diode, magnetically insulated, short-circuiting dynamics 7−123999
ion beam diodes, intense, charge flow and plasma behaviour 7−69490
magnetically insulated, anode plasma ionisation due to sheath heating 7−69381
magnetically insulated diode, electron diffusion, leakage currents, Fokker-Planck eqn. soln. 7−97815
magnetically insulated electron flow in cylindrical thermionic diode 7−83553
magnetically insulated ion diode, ion motion direction and electron flux study 7−97814
magnetically insulated ion diode, ion transverse-velocity distribution 7−116736
Pierce diode, oscillatory nonlinear electron flow, cold fluid eqns., α depend. 7−97816
pinching electron beams, limiting current density 7−142490
plasmotrons with gas-mag. arc stabilisation, characts. meas. 7−137137
point pinch diode, ion beam flux of adsorbed gases and metallic anode materials 7−111289
single phase A/C plasmatrons *(Polish)* 7−69479
stratification of the anode plasma in a high-current diode with a current pinch 7−83421
thermionic diode collector, gas filled, work function determ. 7−93517
Ar jet heated in plasmatron, boundary gas blowoff 7−142514
Cs diode, ion trapping in cathode pot. well and its influence on breakdown 7−83549
H^- beam form. in reflex systems diagnostic study 7−122276

plasma etching *see sputter etching*

plasma filled waveguides
boundary corrugated parallel plate waveguide filled with uniaxial warm drifting plasma, EM wave propag. 7−104414
cylindrical plasma-loaded waveguide, ion-acoustic solitons 7−83492
dielectric Cerenkov amplifiers using relativistic electron beams, high-current effects 7−83493
electron beam propag. in plasma filled waveguide 7−83499
electron plasma waves, self-interaction in planar plasma-filled waveguide 7−75781
fast-wave current drive, polarisation converted coupler 7−111245
guided propagation of Alfven and ion-ion hybrid waves in Z-ion species plasma 7−111215
magnetospheric ducts, whistler wave propag. 7−142467
pulsed microwave discharge in waveguide, parameters meas., cond. method 7−91384
second harmonic emission from an underdense laser-produced plasma and filamentation 7−91302
solid-plasma circular waveguide, wave propag. 7−142469
tokamak, lower hybrid current drive, waveguide coupling 7−75801
transversally magnetised plasma waveguide, EM wave interaction 7−142468

plasma flow
see also plasma focus; plasma magnetohydrodynamics
air, plasmatron, energy conversion efficiency 7−111284
cathode spot plasma, expansion in vacuum arc discharges 7−130852
cavity with single exhauster, fluid motion by electro-thermally ablated gas press. 7−69478
charged particle counterstreaming beams, two-stream instability in convergent geometry 7−69342
cool electron beam steady flows 7−130853
critical ionisation vel. interaction, turbulent heating and threshold condition 7−83412
cyclotron heating, associated nonlin. plasma density flows 7−117740
diode, magnetically insulated, ion motion direction and electron flux study 7−97814
dipole drift vortices, nonlinear dynamics study 7−83442
divertor plasmas, analytic model for flow reversal, impurity transport appl. 7−130850
drift in lower ionosphere during 1984/85 winter 7−115145
EHD converter, corona recharging study 7−91255

plasma flow continued
electric arc in plasmotron channel, flow, two-mode model 7−142526
electrically floating obstacle in supersonic flow, near wake self-similar pot. 7−69327
electromagnetic wave scattering spectrum in turbulent plasma flow 7−117721
electron hole Mach number limit in bounded-beam plasma, Poisson eqn. soln. 7−75836
expanding inhomogeneous plasmas, elec. fields and double layers, hydrodynamic anal. 7−69323
expanding plasma with steepened density profile, plasma-wave excitation 7−117713
helicity conservation laws for fluids and plasmas, theory 7−139906
heliosphere collisionless shocks (book) 7−115698
Heliotron-E device, pump limiter study 7−69410
high recycling divertor edge layer, radially continuous 2-chamber model 7−75770
inhomogeneous plasma, condensation of Alfven waves into vortices 7−69347
inhomogeneous plasma, rot., global vortex pattern, finite ion Larmor radius 7−123896
ion beam diodes, intense, charge flow and plasma behaviour 7−69490
ion-ion beam instability, LF electrostatic turbulence 7−123897
ionised plasma flow near electrodes, method for solving Crook's self-consistent eqn. 7−123865
ionosphere, subsonic plasma flows, bi-Maxwellian and Maxwellian transport eqns. comparison 7−115154
jet, pulsed, flow structures 7−130946
jetting, plasma flow, laser irradiated planar thin foil targets 7−97769
laser-sustained plasma in forced Ar convective flow 7−130848
low-pressure discharge, positive column, at. gas injection effect on elec. and thermal characts. 7−111298
magnetic-electron-drift vortex mode decay 7−123863
magnetised plasmas, current gradient driven flute vortices 7−123860
magnetoplasma, inhomogeneous cold rot. convective cell. Alfven vortices 7−111194
magnetotail current layer, substorm mechanism, gyroviscous model 7−115177
MHD-steam commercial scale power plants, math. model for performance comparison 7−93515
narrow-gap point-to-plane corona with high velocity flows for chemical agent detoxification 7−75911
negative energy vortices in inhomogeneous plasma 7−97716
nonisothermic plasma, dispersion hydrodynamics, soliton shock wave fronts and self-similar discontinuities 7−117711
nonuniform plasma, mag. vortices 7−111198
plasma-dust fluid, finite Larmor-radius effects on Rayleigh-Taylor instability 7−94644
probe wake study in DITE tokamak using spatially scanning Langmuir probe 7−75802
pulsed jet, flow and press. transients 7−130943
radiation overcooling of bulk-ionised multiply charged ion plasma 7−123915
rarefied gas, Bennet distrib. transform. 7−75867
resistive interchange modes, influence of equilib. flow 7−104384
reversed field pinch, turbulence, theory *(Japanese)* 7−142491
reversed field pinch STP-3(M), plasma flow 7−123955
scrape-off layer, boundary layer theory 7−75775
self-gravitating plasma flow through porous medium, magneto-gravit. stability anal. 7−127702
small spheres in thermal plasma flows, Nusselt no. correls. for heat transfer 7−104386
solitary vortices in plasmas 7−97724
supersonic plasma flow, interaction of conducting object, ion deflection 7−111193
symmetric flows in two-fluid electromagnetic gasdynamics 7−83527
tandem mirror central cell, rot., drift modes 7−69426
thermal plasma jet reactors and multiparticle injection, simulation calcs. 7−69448
theta pinch, poloidally rot. spheromak generation 7−137116
three-component plasmas, vortex struct. 7−69354
Tokamak for nuclear fusion expt., computerised control *(German)* 7−130942
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
tokamak plasma, equilibr. and collisional transport 7−111182
tool steel hardening in high temp. HF induction plasma 7−78311
toroidal mag. confinement plasma, vortex soliton form. 7−123855
toroidal rotation and momentum transport 7−123969
vacuum-arc centrifuge, scaling of rotation and isotope separation 7−137135
vortices and solitons in plasmas, nonlinear wave eqn. review 7−130849
warm ion collisionless plasma, generalised Bohm criterion appl. to Emmert's soln. 7−123907
weakly ionised plasma, thermostress flow study 7−69322
Au coated plastic targets, KrF laser irradiation, energy transport 7−130894
C discharge plasma impulsive flow, barrier interaction, stimulated emission 7−142531
F_2, arcs, low-current strength, optical spectrum 7−111296
H_2S, dissoc. in capacitive RF discharge 7−69512
He, axisymmetric arcjet, compressible laminar flow, press. meas. 7−69476
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
N arc, 2 kA DC, in supersonic nozzle, conservation eqns. solved 7−83566
N_2, nonequilib. flow, non-Maxwell energy distrib. 7−69329

plasma focus
anode, dynamic temp. meas. 7−69468
charge particle beam characteristics, prod. by plasma focus 7−69489
collapse and pinch phase of plasma-focus discharge, plasma sheath radiation investig. 7−69439
current sheath formation in PF-360 device with preliminary discharge 7−69374
deuteron beam ion and electron emission characts. from plasma focus devices 7−69474
discharge, insulator influence, expt. investig. 7−69488
electromagnetic ram action of the plasma focus as a paradigm for the generation of cosmic rays and the gigantic jets in active galaxies 7−72293
fast ion kinetics and fusion reactor mechanism 7−91344

plasma focus continued
fusion neutron sources at POSEIDON plasma focus, time resolved neutron spectra 7−97804
ion and neutron source design 7−69483
ion-beam and X-ray emission struct. from PF-360 facility 7−69472
medium for high-energy particle acceleration *(French)* 7−129462
MHD stability, in PF-150 and PF-360 devices, photography, interferometry and Faraday rot. meas. 7−69350
neutron energy spectra, meas. in plasma focus, time resolution 7−69469
neutron pinhole camera investig. of plasma focus struct. 7−69471
neutron time measurements for PF-360 device 7−69435
neutron yield of plasma focus device, nonlin. damping resistors influence 7−69482
neutron-flux spectrum, for plasma focus devices, solid state track recorders appl. 7−69466
particle emission and pinch struct., PF discharges 7−69320
PF-discharge parameters, electrode geometry influence 7−69487
pinch phase-thermonuclear reaction, extreme energy conc. in plasma focus devices 7−69437
Plamya installation construction, expt. investigs. 7−69485
plasma layer in plasma focus, schlieren diagnostics 7−69467
plasma sheath evolution in plasma focus device final stages, diagnostic investig. 7−69373
poloidal field appl. in dense plasma focus 7−69436
POSEIDON, plasma focus efficiency improvement diagnostics 7−69434
radio frequency signals produced in plasma-focus devices 7−69484
soft X-ray measurement in imploding plasmas using crystal spectrograph 7−80952
SPEED 1 plasma focus, pinch form. and emission characts. 7−69438
SPEED 2 plasma focus, power input and sheath form. 7−69486
suprathermal IR emission and bidirectional electron beams at the plasma focus, meas. 7−69319
X-ray and ion emission, pinhole camera photographs meas., plasma focus optimisation 7−69475
Z-pinch, equilibr. states, emission and thermal cond. *(German)* 7−137110
Z-pinch and plasma focus research, conf., Warsaw, Poland (Sept. 1985) 7−66828
D^+ emission from plasma focus discharge, intensity and energy spectrum 7−69473
D_2, neutron energy spectrum, time resolved meas. 7−69470

plasma generation *see plasma production*

plasma guns
coaxial gas-puff plasma gun, high-energy photon spectra 7−111287
EM railguns, explosive-mag. generator study 7−97812
glass beads, impact phenomena using plasma gun, vels. depend. 7−124002
puff-gas coaxial-injected electromagnetic coaxial plasma gun 7−111286
tokamak plasma, gun-injected plasma trapping 7−142515

plasma heating
see also plasma focus; plasma production and heating by laser beam
air, nonequilibrium microwave discharge, gasdynamic propag. 7−69497
Alfven wave dissipation in corona, energy deposition 7−139907
Alfven wave heating, study of scrape-off layer in TCA tokamak 7−75832
Alfven wave heating in TCA tokamak, density rise 7−91291
Alfven waves, high-phase rel. compressional, heating and current drive 7−123920
anomalous inward particle flux in tokamaks due to a thermoelectric-type effect 7−69314
antenna optimization for Alfven wave heating 7−75838
ASDEX, LF fluctuations, IR laser scatt. 7−111171
ASDEX and W VII-A ICRF long-pulse heating, development and testing of components 7−135593
ASDEX divertor tokamak, plasma-wall interaction, impurity release 7−69366
ASDEX ICRF antennae in their uncooled and cooled versions 7−122136
ASDEX ICRH, RF performance and calcs. 7−122137
ASDEX long-pulse neutral injection system design, development, performance 7−122084
ASDEX Upgrade, long-pulse neutral injection system design, development, performance 7−122084
Atoll confinement system, electrostatically plugged ring cusp. dicotron instability *(German)* 7−137109
auxiliary heated tokamaks, temp. profile and transport scaling modelling, JET appl. 7−103201
bumpy tori, wave damping, quasilinear heating, radial transport 7−111249
cold ion-ion hybrid resonance, numerical modelling for ICRF heating 7−142477
compact ignition Tokamak, physics aspects study 7−103181
COMPASS tokamak, ECRH system 7−135594
compressible force free plasma, resistive-heating instability 7−137073
conf. on fusion technology, Avignon, France, Sept. 1986 7−120706
current diffusion in TEXT, poloidal mag. field diffusion equation 7−74067
cyclic tokamak operation in the WT-2 device, LH current drive 7−123939
cyclotron heating, associated nonlin. plasma density flows 7−117740
cylindrical plasma, MHD instabilities realistic energy eqn. 7−111192
cylindrical plasmas, elec. field profiles in ion cyclotron range of freqs. 7−111208
DIII-D tokamak, ICRF reson. cavity launcher coupling anal. 7−111256
DITE tokamak, ECRH system 7−135594
DITE tokamak, gas puffed impurities toroidal dispersal 7−69414
Doublet III, electron cyclotron heating in overdense plasma 7−130888
Doublet III, H-mode outside divertor, NBI heating efficiency 7−97777
Doublet III tokamak, pellet fuelled discharges, penetration and ablation 7−130887
ECR plasma, electron temp. anisotropy 7−123844
ECRH and lower-hybrid current drive, trapped electron effect 7−137096
ECRH systems for fusion plasmas, technical aspects 7−122081
ECRH with multi-reflection and mode conversion, ray-tracing study 7−83501
electron beam-plasma system, cross-field electron thermal conductivity 7−83431
electron cyclotron and lower hybrid current drive in tokamak plasmas, cross effect 7−97764
electron cyclotron current drive expts. on WT-2, theoretical comparison 7−91343
electron cyclotron heating in ATF torsatron 7−69383
electron cyclotron resonance heating in plasmas, parametric instabilities 7−83504

plasma heating continued
electron-cyclotron heating, MHD activity increase 7−83475
energy confinement in JET ohmically heated plasmas 7−111178
field generating thermal instability in laser-prod. plasmas, laser flux effects 7−130861
field reversed configuration, fusion plasma physics considerations 7−68009
Fokker-Planck equation, relativistic, RF heating problem soln. using num. technique 7−142492
FTU LHRH system, technological problems 7−122131
fusion plasma high-freq. wave heating, parametric instability investig. 7−75777
gas fuelling and mag. field configuration in Tara central cell 7−74068
global confinement, fluctuations, transport study 7−111188
Heliotron-E, Fe atom meas. by laser-induced fluoresc. spectroscopy 7−69452
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454
high frequency emissions from crit. vel. rot. plasma 7−130846
high temperature plasma, prod. apparatus description *(German)* 7−137093
high-energy electron prod., microwave-plasma interactions study 7−104464
hydrodynamic computer codes, interaction of charged particle with fusion material 7−135600
ICRF current drive in fusion reactors, 2D Fokker-Planck anal. code 7−81714
ICRF fundamental minority heating in inhomogeneous tokamak plasmas 7−91342
ICRF heating in ICP torches study 7−97820
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
ICRF heating of large tokamaks, coupler impedance calcs. 7−123940
ICRF heating using inductive antennas 7−111244
ICRF second harmonic plasma heating, mode conversion, hybrid code simulation 7−69391
ICRF wave coupling and optimization of a dielectric-filled waveguide launcher 7−137100
ICRH, distortion of ion velocity distribs. 7−123917
ICRH in fusion plasmas, results and RF device limitations and improvements 7−122082
impact fusion target dynamics, numerical studies 7−67977
impurity generation due to non-thermal electrons and its control by external bias 7−111257
ion acoustic turbulence and heating of resonant ions 7−97739
ion acoustic turbulence electron heating in simulated low Mach number shocks 7−137080
ion beam-plasma system, two-stream and filamentation instabilities 7−123911
ion distributions, distorted by ICRH in Tokamak plasma, anisotropic anal. 7−123851
ion heating by lower hybrid waves associated with a parametric instability of a plasma in an RF field 7−117741
ion heating by nonlinear Landau damping of ion Bernstein waves 7−130889
ion-beam driven fusion targets, energy deposition study 7−130913
JET, additional heating data, comparison with model scale invariance forms, MHD 7−129402
JET, evolution, present status and prospects 7−74027
JET, heat pulse propagation studies, heat diffusivity model 7−96321
JET, hot ion regime, α particle heating study 7−104428
JET, ICRF heating, plasma edge modification and impurity prod. by antenna phasing 7−129401
JET, ICRF heating sawtooth behaviour, 15 MeV $^1H^+$ emission spectra anal. 7−104429
JET, ICRF power plant, operation and development 7−122098
JET, neutral beam injection and RF heating systems, power supplies 7−74031
JET, neutral beam injection system; performance predictions and expts. 7−74032
JET, operational results and implications for reactors 7−122076
JET, plans for current profile control 7−123972
JET, plasma behaviour, initial results, impact on fusion development 7−123971
JET, plasma confinement and heating 7−96320
JET, prospects for α-particle heating in hot ion regime 7−103200
JET, RF heating system using ICRF 7−74033
JET development program, technical aspects 7−122093
JET ICRF antennae, water cooled electrostatic screens, design and manufacture 7−122138
JET Tokamak, plasma confinement and heating 7−69430
JET Tokamak, turbulence, heating, fluctuation meas. 7−111231
JFT-2M, energy confinement improvement during ICRF heating 7−74076
JFT-2M, H-mode phenomena during ICRF heating 7−130906
JFT-2M tokamak, confinement and fuelling during additional heating phase 7−69417
JFT-2M tokamak, electron heating and current drive by fast waves, numerical study 7−69390
JFT-2M tokamak, high-power mm-wave transmitter 7−135596
JIPP T-IIU tokamak, ICRF heating, radiation loss and impurity abundance, spectroscopic and bolometric meas. 7−75837
JT-60 ICRF launching system, impedance matching and power test 7−81713
JT-60 mag. fusion devices, high-power RF heating system design 7−135571
JT-60 neutral beam injection system 7−91339
JT-60 project, overview 7−89707
JT-60 RF heating system 7−91340
L-2 stellarator, ECRH, Gaussian beam form. and transport 7−69379
L-mode plasma in tokamaks, scaling of incremental energy confinement time 7−69433
laser electron accelerators, axially fed, plasma waves 7−74269
LISA, rF heating by cylindrical plasma waveguide modes 7−137099
lower hybrid current drive experiments in the HT-6M tokamak 7−142476
lower hybrid current driven plasmas in Alcator C, energy confinement studies 7−69384
lower hybrid heating and current drive, numerical modeling 7−83500
lower hybrid heating in tokamaks, saturation of parametric instabilities 7−69338
lower hybrid-driven plasma, selective electron-cyclotron heating at downshifted freq. 7−111248
lower-hybrid current-drive density limit cause, simple model, mode coalescence condition 7−137097

plasma heating continued
magnetic islands dynamics, tearing mode instability, self-consistent nonlinear theory 7−83441
magnetically confined collisional plasma, diffusion, nonlinear eqns. 7−111177
magnetically insulated ion diodes, anode plasma ionisation due to sheath heating 7−69381
magnetised plasma, longit. dielectric const., toroidal effects *(German)* 7−137112
magnetised plasmas, EM waves parametric instabilities, dispersion relations 7−142451
magnetoactive plasma, turbulent conductivity 7−69318
magnetosonic shock wave plasma heating through resonant ion acceleration 7−97746
melting process, appl. in metallurgical treatment using plasma furnaces *(German)* 7−138704
microwave fields, gas discharges and plasma heating *(German)* 7−91381
microwave heating, parametric reflection of pump wave, fast-electron generation limitation 7−123888
microwave resonant plasma heating, electron temperature, surface explosion 7−69382
microwave-induced plasmas, spatial emission props., easily ionised elements effect 7−142499
minimum-B mirror plasma, hot-electron equilibrium 7−104443
minority ion heating current drive, num. investig. 7−91346
neutral beam heated and ohmically heated plasma, X-ray pulse height anal. 7−142512
neutral beam heating in JT-60, energy confinement and profile characteristics 7−123970
neutral beam injection, charge exchange meas. of MHD activity 7−123950
neutron yield during H neutral beam injection in Doublet III 7−123951
nonlinear absorption of intense microwave pulses 7−117742
ohmically heated divertor discharges with gas and pellet fuelling in ASDEX 7−91341
open-ended reactors, α particle dynamics study 7−104426
parameter evolution during ion Bernstein wave heating, edge effects 7−75796
parametric plasma heating, electron acceleration, ionisation 7−69377
partially ionised plasma, RF heating, ion vel. distrib. 7−69378
particle reflection and plasma heating by a laminar magnetosonic shock wave 7−75842
pellet refuelling of the ZT-40M reversed field pinch 7−123945
PLT, particle transport and confinement, density depend. 7−69413
poloidal electric field generated by electron cyclotron heating in a collisional tokamak plasma 7−91345
powder heating in RF inductively coupled plasma under dense loading conditions, mathematical model 7−69370
profile of current driven by lower hybrid waves in tokamaks *(Chinese)* 7−97717
pulse REB generation system 7−97766
pulsed superconducting magnets, partially stabilised for ohmic heating *(Japanese)* 7−126661
quasi-steady-state current drive with pulsed radiofrequency sources 7−123918
quasilinear electron heating by electrostatic electron cyclotron harmonic waves 7−123916
radial electron thermal diffusivities, turbulent heating pulse in TORTUR tokamak 7−97715
reversed field pinches, current and heat flux, electron density control 7−69409
RF current drive in weakly ionised plasma 7−69385
RF generated plasma, elec. meas. using driven electrostatic probe 7−117758
ridge waveguide slot antenna, unified anal. in 3D space and time 7−135548
second harmonic electron cyclotron reson. heating, asymmetric current-supporting electron vel. distrib. effect 7−83503
shear Alfven wave, reson. mode conversion, appl. to plasma heating in solar wind 7−104389
shock waves of subcritical quasi-perpendicular type, plasma heating due to instabilities 7−107654
single null divertor discharges, characteristics of pellet and neutral beam heating 7−91347
small spheres in thermal plasma flows, Nusselt no. correls. for heat transfer 7−104386
SNUT-79 tokamak neutral beam injection heating *(Korean)* 7−83502
solar corona, heating by resonant absorption of Alfven waves 7−127796
steady-state current discharge, ion acoustic turbulence, heating, anomalous transport 7−83481
stellarator L-2, electron cyclotron heating, microwave radiation, Raman scatt. 7−97761
stellarator L-2, plasma radiation and electron energy balance 7−83508
stochastic particle acceleration in an electrostatic wave 7−83464
stochastic web and diffusion of particles in a magnetic field 7−104379
supercritical oblique collisionless shock propag., electron and ion dynamics 7−83506
T-10 tokamak plasma, energy confinement during electron cyclotron heating *(German)* 7−137107
tandem mirror, central cell density, electrostatic end plugging 7−142487
tandem mirror reactor with octopole and wall stabilization 7−89719
tandem mirrors, electron distrib. and confinement instability study 7−142484
tandem mirrors sustained by high-voltage direct current 7−123919
TEXTOR tokamak, ICRH antenna array anal., generator matching study 7−69380
TEXTOR tokamak, ICRH system compatible with ALT-II 7−135595
TFR, 600 kW ECRH installation, two years operating experience 7−122135
TFR, heating, LF turbulence, density fluctuations 7−111263
TFR tokamak, ECRH transmission system 7−135598
TFTR, α particle heating and diagnostics study 7−104427
TFTR, high temp. plasmas, neutral beam injection 7−74073
TFTR, ohmic and neutral beam heating, global particle recycling 7−69415
TFTR discharges, ohmic and neutral-beam heated, impurity transport 7−69421
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
three-phase AC plasma technology for melting scrap and heating molten steel *(German)* 7−83552
plasma heating continued
TJ-II heliac, design and ECRH heating system 7−135589
TMX-U tandem mirror, edge plasma ICRH effects 7−69405
TNT-A tokamak, ion Bernstein waves, ray trajectories and damping 7−83515
tokamak, Alcator C, plasma current ramp up and Ohmic-heating transformer recharging 7−83518
Tokamak, directly launched ion Bernstein waves study, excitation, propagation and absorption 7−137098
tokamak, heating and current drive by lower hybrid waves, technical aspects 7−122083
Tokamak, neutral beam heated, limiter discharges, improved confinement 7−123921
Tokamak, wave damping plasma heating, review 7−97765
tokamak fusion reactors, continuous current drive operation, review 7−69387
Tokamak heating systems, progress in ICRF heating technology 7−135597
tokamak impurity diffusion at grill mouth due to lower hybrid heating 7−117706
tokamak plasma, α particle effects study 7−104425
tokamak plasma, obliquely propagating extraordinary wave, second-harmonic layers 7−123967
Tokamak T-15, gyrotron plasma heating, supercond. magnet systems investig. 7−74079
tokamaks, anomalous current penetration and oscill. current drive 7−137114
tokamaks, electrostatic and EM turbulence, anomalous transport study 7−111179
tokamaks, ICRF current drive by using antenna phase control 7−96313
Tore Supra, ICRH, high power tetrode design 7−122142
Tore Supra, ICRH heating at 120 MHz, ridged waveguide design 7−122132
Tore Supra lower hybrid transmitter 7−122134
Tore-Supra, 3.7 GHz 500 kW klystron 7−122133
toroidal stellarator, HF AC inductive heating 7−117752
toroidal systems, axisymmetric, local Alfven reson. 7−123931
turbulent transport processes energetics in Tokamaks, kinetic description 7−75795
two-ion species plasma propagation and heating due to ion-Bernstein wave 7−111218
W VII-AS stellarator, 70 GHz/1 MW long pulse ECRH system 7−122141
Wendelstein VII-AS, long-pulse neutral injection system design, development, performance 7−122084
Ar microwave-induced plasma, electron density study 7−142440
Ar, RF generated plasma, electron energy distrib. functions 7−117759
D based fuel cycle ignition of high β system 7−96324
D-T plasma, fast α-particle energy deposition, Fokker-Planck eqn. semianalytical soln. 7−96312
D-T plasma, steady state solution to a field reversed configuration 7−123942
D-T wetted foam, direct drive cryogenic ICF capsules 7−89720
DT ignitor/DD fuel pellets, burn dynamics, effect of neutron heating, ICF appl. 7−96314
H_2, low-pressure, heating in microwave discharge 7−104430
^3H pellet injection into hot ion mode ^2H plasma in tokamak 7−69386
He microwave-induced plasma, electron density study 7−142440
He plasma, surface wave sustained, spatial emission props., spectroscopy appl. 7−142498
^3He-D plasma, minority ion heating current drive, num. investig. 7−91346
$N_2(N_2-CO)$, beam-driven discharges, heating studied by interferometric method 7−97825
Ti plasma, He-like, time resolved spectra 7−69465
TiC coating layers on graphite PDX wall armor tiles, surface damage and redeposition investig. 7−67990

plasma impurities
see also plasma-wall interactions
AC arc with metal halide impurities, plasma component vol. redistrib. 7−83559
active beam diagnostics, highly charged impurities effect on ion temp. 7−142500
air-Cu plasma, composition and concl. *(French)* 7−83434
ASDEX, low energy neutral particle fluxes, TOF method 7−69412
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
ASDEX discharge, C and O impurities, radiation losses, VUV diagnostics 7−91366
ASDEX divertor tokamak, plasma-wall interaction, impurity release 7−69366
coaxial gas-puff plasma gun, high-energy photon spectra 7−111287
deposition on ALT-1 limiter heads in TEXTOR 7−75851
DITE tokamak, gas puffed impurities toroidal dispersal 7−69414
divertor plasmas, analytic model for flow reversal, impurity transport appl. 7−130850
edge plasma of limiter tokamak, two-zone model for wall-released impurities transport 7−104380
electron temperature meas. by X-ray absorber foil method on TFTR 7−91319
erosion-redeposition and impurity transport in the scrape-off layer of the FT tokamak 7−75819
EUV impurity measurements on the TEXTOR Tokamak 7−111276
exhaust purification system, process concept 7−122102
fuel pellet injection, m=1, n=1 oscillations in tokamak 7−123944
generation due to non-thermal electrons and its control by external bias 7−111257
glow discharge carbonisation in JET, probe anal. by Auger spectroscopy 7−69457
graphite, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
graphite erosion and deposition in JET wall surfaces, SIMS anal. 7−75809
heavy impurity fluxes in scrape-off layer of TEXTOR, pump limiter effects 7−75878
Heliotron E currentless plasmas, transport anal. of injected impurities, density depend. 7−130836
Heliotron-E, Fe atom meas. by laser-induced fluoresc. spectroscopy 7−69452
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454

plasma impurities continued
high resolution spectrometer design for ultra-high temp. plasma diagnosis 7−111272
Hiroshima Torus-1, reversed field pinch expts., plasma-wall interaction causing impurity activity *(Japanese)* 7−137104
impure plasma with arbitrary toroidal rot., transport calcs. 7−91297
influx behaviour in JET tokamak, visible spectra anal. 7−75848
JET, evolution, present status and prospects 7−74027
JET, ICRF heating, plasma edge modification and impurity prod. by antenna phasing 7−129401
JET plasma, emission of ions out of ionisation balance, impurities 7−104445
JET plasma, Ne-like and adjacent ion recombination 7−75862
JIPP T-IIU tokamak, ICRF heating, radiation loss and impurity abundance, spectroscopic and bolometric meas. 7−75837
JIPP-T-II-U Tokamak, diagnostics using time-resolved Ti^{20+} X-ray spectra 7−123987
JT-60, impurity transport studies 7−74074
JT-60 ohmically heated discharge, plasma-wall interaction, discharge cleaning 7−97754
light impurities in TFTR plasmas, production and scaling 7−75849
limiter discharger, plasma performance, self-consistent plasma-wall interaction model 7−75822
limiters, metallic contamination anal. in JET 7−69424
low-Z impurities in TEXTOR, origin investig. 7−75852
low-Z-fusion relevant materials, fluoresc. spectroscopy 7−75810
magnetosonic shock wave plasma heating through resonant ion acceleration 7−97746
metal impurities, in ion and electron drift distribs., for TEXTOR discharges 7−75879
microwave-induced plasmas, spatial emission props., easily ionised elements effect 7−142499
minority ion heating current drive, num. investig. 7−91346
multilayer targets, use to inject trace elements 7−97767
multiply charged impurities, charge-changing collisions role in active-beam diagnostics 7−91284
neutral beam heated and ohmically heated plasma, X-ray pulse height anal. 7−142512
outgassing in ISX and TFRT, Cr gettering residual effects 7−74046
PBX, impurity accumulation, diffusion coeff., diagnostics 7−69420
PLT, particle transport and confinement, density depend. 7−69413
PLT tokamak plasma, impurities, time-resolved X-ray spectra 7−97790
powder heating in RF inductively coupled plasma under dense loading conditions, mathematical model 7−69370
recycling at the JET limiters 7−75811
recycling effects, collector probe technique obs. 7−75875
reversed field pinch, enhanced dynamo contribution to resistivity 7−123946
reversed field pinch plasma, impurity influx enhancement due to dynamo action 7−83512
reversed field pinch STP-3(M), plasma flow 7−123955
scrape-off layer, fluctuations and transport, limiter effects 7−67997
scrape-off layers, generated by pump limiter and ergodic mag. limiter, impurity control 7−75855
space-potential and density fluctuations in the ISX-B tokamak 7−142445
spatial distribution in boundary layer of DITE 7−75850
steel, austenitic stainless, vacuum wall, H isotope exchange under RF glow discharge conditions 7−75804
temporal evolution of the decaying spheromak in the CTCC-I experiment 7−123858
TEXT, biased limiter expts. 7−67998
TEXTOR, impurity sources, emission spectroscopy 7−69419
TFR graphite tiles, metal coverage effect on plasma impurity content 7−75817
TFTR discharges, impurity behaviour 7−130929
TFTR discharges, ohmic and neutral-beam heated, impurity transport 7−69421
TFTR-conditioned graphite: laboratory testing of properties affecting Tokamak operations 7−67992
three-component plasmas, vortex struct. 7−69354
tokamak, ASDEX, neutral particle beam injection, charge exchange excited line radiation 7−83496
tokamak, high β, plasma form. and equilibr. 7−137115
Tokamak edge plasma, resistivity-gradient driven turbulence, impurity dynamics effects 7−97741
Tokamak impurity influx reduction, limiter geometry optimisation 7−75823
tokamak plasmas, X-ray emission investig. review 7−137129
tokamak T-15, near wall plasma diagnostics, surface anal. station 7−130936
tokamak with graphite wall and limiter, effective charge state 7−123929
toroidal plasma devices, glow discharge cleaning, microwave spectroscopy monitor 7−69423
transport, 2-D calcs. for high recycling divertor 7−75767
transport in TCA-Tokamak, integral collection probes investig. 7−69422
ZT-40M reversed-field pinch D and impurity fluxes, collector probe meas. 7−69407
Ar inductively coupled plasma, impurities spatial distribs. study 7−130834
Ar^{10+} plasma, dielectronic recombination rate coeffs. 7−97695
Ar^{16+}, He-like, from Alcator-C tokamak, ground-state transitions, radial profiles 7−97801
Be release and transport in UNITOR tokamak 7−75768
C impurity flux in limiter shadow of TEXTOR 7−75766
a-C:H films, chem. erosion by H impact, atomic and ion beam techniques meas. 7−77727
$C+O_2^+(O_2)$, crit. irradiation dose determ. appl. to impurity flux in fusion machine meas. 7−74052
Cr gettering in ISX-B, improvement of plasma performance 7−74066
Fe^{18+}, plasma, dielectronic recombination rate coeffs. 7−97695
H^+ implantation, sputtering and surface redeposition, local mixing model 7−74048
H_2 recycling, effects in 1D divertor model 7−111255
He impurities in plasma near wall, laser reson. fluoresc. 7−123978
He inductively coupled plasma, energy transfer, ionisation processes, heavy inert gas atoms effect 7−130830
^{3}He-D plasma, minority ion heating current drive, num. investig. 7−91346
Hg arc at high press. in presence of metal halides, axial impurity separation 7−124029
Kr^{28+}, plasma, dielectronic recombination rate coeffs. 7−97695
plasma impurities continued
Mo^{34+}, plasma, dielectronic recombination rate coeffs. 7−97695
Ti layers in continuous current tokamak, removal 7−75821
W alloys, sputtering, redeposition and plasma impurity reduction in mag. fusion devices 7−74049
W, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728

plasma in solids *see solid-state plasma*

plasma instability
see also plasma oscillations
AC generation using superheating plasma instability 7−137136
Alfven internal gravity waves, effect of density discontinuity on stability characts. 7−94646
Alfven ion-cyclotron mode stability, dispersion relation 7−111210
anomalous energy transport, tokamak transport code simulations with drift wave models 7−69315
arcs, helical mag. instability, linear time depend. perturbation theory 7−124018
arcs, helical mag. instability study 7−124019
artificially excited Langmuir waves, ionospheric propagation 7−134067
ASDEX discharges, neutral particle injection, stability anal. 7−111225
asymmetric power spectra of density fluctuations, far-IR obs. in JIPP T-IIU 7−123878
Atoll confinement system, electrostatically plugged ring cusp. dicotron instability *(German)* 7−137109
auroral double layers, particle simulation 7−117736
auroral electrojet irregularities, quasilinear theory 7−115147
axisymmetric mirror with an internal hoop, MHD stability 7−91351
axisymmetric plasma column, stabilisation of MHD modes 7−75776
ballooning mode RF stabilisation in tokamaks 7−111212
ballooning modes, energetic particle stabilisation in tokamaks 7−123938
ballooning tearing mode self-excitation and instability in toroidal mag. confinement 7−83467
beam instability and Langmuir waves in electron foreshock 7−94581
beam-ion confinement meas. during beam-driven instabilities in Tokamak 7−130910
beam-plasma system, instability development, regular external field and noise effect 7−130866
beat wave accelerator, plasma wave modulational instability 7−109546
beat-wave accelerator, microwave drive study 7−104396
beta enhancement of tokamak plasma with nearly circular cross-section 7−75786
beta limit and localized ballooning mode stability in Doublet III 7−123876
BGK structures as quasi-particles 7−69345
bootstrap current and sawtooth activity in tokamaks 7−130833
boundary corrugated parallel plate waveguide filled with uniaxial warm drifting plasma, EM wave propag. 7−104414
bounded magnetoplasma, EM wave propag. 7−104415
bounded plasma, ion-beam instabilities, electrostatic wave excitation 7−123910
burn control of an ignited Cat-D tokamak by compression-decompression and fuel injection 7−122068
charge particle beam characteristics, prod. by plasma focus 7−69489
charged particle counterstreaming beams, two-stream instability in convergent geometry 7−69342
charged particle streams, macroscopic stability 7−69337
circulating cyclotron maser and magnetospheric pulsed VLF emissions 7−79776
cold magnetized plasma, solitary waves 7−104397
collective modes and generalized transport coefficients for a dense one-component plasma in a magnetic field 7−75773
collisionless plasma, electron temp. gradient driven mode stability 7−111209
collisionless plasma, ion temp. gradient driven modes, finite beta effects 7−142453
P/Comet Halley (1982i), Vega magnetic meas. of mirror instability 7−127773
compressible force free plasma, resistive-heating instability 7−137073
compressible plasma, finite Larmor radius and Hall effects on thermal instability 7−142463
continuous optical discharge, stability in atm. air flow 7−75905
critical ionisation vel. interaction, turbulent heating and threshold condition 7−83412
current driven drift waves, finite β_e effects 7−111224
current-carrying plasma pinches, necking down of sausages 7−83507
currentless high-β plasmas in Heliotron E, density fluctuations 7−123949
cyclic q-profile evolution during internal disruptions in Tokamaks 7−97737
cylindrical plasma, MHD instabilities realistic energy eqn. 7−111192
cylindrical plasma, sheared equilib. flows, MHD instabilities 7−123862
cylindrical plasmas, elec. field profiles in ion cyclotron range of freqs. 7−111208
decay instabilities of LF electrostatic modified electron acoustic waves excited by EM waves 7−83489
density perturbations in magnetised plasma, large Larmor radius effects 7−83470
diamagnetic plasma, expanding clouds slowing effectiveness of mag. field 7−117717
diamagnetic stability limit for a hot particle annulus in a plasma 7−83461
dispersion props. and stability in random elec. field *(Russian)* 7−83479
double layer form. mechanisms in triple plasma devices 7−117728
double layer simulation and transport in discrete arcs, auroral circuit model 7−117737
double layers, 1D, lin. Vlasov stability, analytical study 7−117732
double layers and plasma-wave resistivity in extragalactic jets: cavity formation and radio-wave emission 7−120271
double layers in assoc. with auroral precipitation 7−120194
drift cyclotron loss cone dispersion rel. in cylindrical geometry, nonlocal effects 7−83460
drift cyclotron loss cone unstable mode characts. depend. on plasma density 7−69343
drift cyclotron loss-cone instabilities in an inhomogeneous magnetic field 7−83449
drift wave instability in plasmasphere, ion acoustic wave growth rate 7−127642
drift wave low-freq. instability effect on Hall conductivity 7−145812
EBT, confinement, fluctuations and electric field effects 7−91355

plasma instability continued
ECRH with multi-reflection and mode conversion, ray-tracing study 7−83501
electric arcs, gas stream stabilised, math. modelling and MHD eqn. derivation *(Russian)* 7−142523
electromagnetic beam modes driven by anisotropic electron streams 7−104398
electromagnetic field algorithm for 2D implicit plasma simulation 7−117755
electron beam in system with electrodes, nonlinear stationary states and stability 7−83535
electron beam injection into symmetrically open plasma system, oscillation localisation *(Russian)* 7−142474
electron beam propag. in plasma filled waveguide 7−83499
electron beam-plasma interaction, unstable modes, perturbation anal. 7−75834
electron beat-excited plasma waves, electrostatic mode coupling study 7−104392
electron Bernstein waves, beam-driven, nonlocal theory 7−91322
electron cyclotron current drive efficiency for top-launched extraordinary mode in Tokamak 7−111175
electron cyclotron resonance heating in plasmas, parametric instabilities 7−83504
electron cyclotron resonance instability, occurrence in neutron stars magnetised photospheres 7−94938
electron density, fluctuations during MHD activity, laser study 7−69326
electron density profile meas. in Z-pinch by holographic interferometry 7−69312
electron temperature meas. by X-ray absorber foil method on TFTR 7−91319
electrostatic ion cyclotron and ion-ion hybrid wave instabilities 7−142450
electrostatic ion temp. gradient driven drift modes, dispersion relation 7−123859
electrostatic ion-cyclotron instability and potential relaxation instability excited by a ring-button electrode 7−75887
EM ion cyclotron instability in magnetosphere, effect of He^+ temp. and thermal anisotropy 7−134089
energy relaxation by the tail anisotropy instability during lower hybrid current rise 7−123847
equilibrium current local effect on tearing mode stability 7−142458
excitation at solar wind-comet interaction regions 7−127697
explosive instabilities in mirrors, density dependent flute mode 7−123958
field generating thermal instability in laser-prod. plasmas, laser flux effects 7−130861
field reversed configuration, fusion plasma physics considerations 7−68009
field reversed configuration parameters, low-freq. stability investig. 7−91358
field-reversed config., lower hybrid drift fluctuations, CO_2 heterodyne scatt. study 7−97732
filamentation instability of ion beams in magnetoactive plasma *(Russian)* 7−117739
finite dust cloud in infinite plasma, charging, pot. and instabilities, astrophysical appl. 7−94652
finite press. plasma in ripply toroidal magnetic traps, Mercia modes stability *(Russian)* 7−111221
finite-β ion mixing mode in sheared magnetic geometry 7−91323
finite-press. plasma in closed mag. confinement system, nonlocal quasiflute modes, MHD stability 7−83445
free boundary kink mode shrinkage in tokamak, MHD calcs. 7−123956
fusion plasma high-freq. wave heating, parametric instability investig. 7−75777
g-mode driven transport and resistive drift waves based on scale invariance 7−83456
gas discharge, inhomogeneity prop., ambipolar drift vel. *(German)* 7−137069
gas laser discharge, spatially homogeneous oscillations 7−83578
generalized moments for low-frequency modes in tokamaks and their application to drift and ballooning instabilities 7−104390
global Alfven modes excitation by trapped α particles 7−104403
glow discharge in air, attachment instability onset, num. simulation 7−117773
Hamiltonian systems, nonlinear stability, energy-Casimir method 7−137062
heliosphere collisionless shocks (book) 7−115698
high beta mirror plasma partially enclosed by conducting wall, MHD stabilization 7−69325
high beta tokamaks, scaling laws for design 7−74070
high n ballooning modes, accessibility to second stability regime 7−69339
high-β plasma in Uragan-3 torsatron, relax. oscills. 7−111214
high-current magnetically compressed discharge, radiation dynamics 7−137131
high-temperature plasma, hydrodynamic beam instability, nonlinear theory 7−130867
high-voltage discharge, anode sheath rot. instability 7−83558
hollow gas-puff z pinch, electron beam preionisation, stability enhancement 7−69375
homogeneous plasma, stimulated Raman scatt., nonlinear evolution 7−123903
hose and sausage instabilities in relativistic electron beams, variable collision freq. effects 7−130919
hot particle drift reversed system, stabilisation to LF modes 7−142452
ICRF second harmonic plasma heating, mode conversion, hybrid code simulation 7−69391
ideal magnetohydrodynamics book 7−134382
ideal-fluid plasmas, Hall MHD conservation laws, Lyapunov stability 7−111197
inhomogeneous magnetised plasma, two mode conversion *(Chinese)* 7−111205
inhomogeneous magnetoactive plasma, beat disturbances, stimulated coherent EM wave scatt. *(Russian)* 7−69363
inhomogeneous plasma, drift convective modes instability and saturation 7−111207
inhomogeneous plasma, oscillating two-stream instability, density gradient effect calcs. 7−91311
inhomogeneous plasma, rot., global vortex pattern, finite ion Larmor radius 7−123896
inhomogeneous plasma, turbulence, struct., transport, localised fluctuations 7−111233
interaction of waves during a decay instability 7−69336
plasma instability continued
interchange instability in high-latitude plasma blobs, ionospheric appl. 7−94555
interchange mode turbulence, nonlinear stability, spectrum cascade processes 7−111227
internal magnetic fluctuations in HBTX1A revised field pinch, mag. probe investig. 7−75863
interpenetrating plasma streams bounded by mag. field, instability *(German)* 7−137068
ion acceleration during EM radiation interactions, parametric instabilities 7−83474
ion acoustic fluctuations near instability threshold, quasilinear theory 7−69333
ion acoustic turbulence electron heating in simulated low Mach number shocks 7−137080
ion beam-plasma system, two-stream and filamentation instabilities 7−123911
ion Bernstein waves, kinetic theory of stabilisation of interchange model 7−75784
ion heating by lower hybrid waves associated with a parametric instability of a plasma in an RF field 7−117741
ion source, plasma-sheath oscillations and chaos *(Chinese)* 7−97755
ion source plasma instability, routes to chaos in the plasma sheath *(Chinese)* 7−96414
ion-beam driven fusion targets, energy deposition study 7−130913
ion-ion acoustic instability in Vlasov plasma, num. solns. 7−91313
ion-ion beam instability, LF electrostatic turbulence 7−123897
ionisation-superheating instability in self-maintained discharge, self-similar solns. 7−69348
ionosphere, 3D plasma cloud evolution in crossed E×B fields 7−145769
ionosphere, auroral, double layers evol. in H plasma 7−120204
JFT-2M, H-mode phenomena during ICRF heating 7−130906
Kelvin-Helmholtz instabilities in UMIST linear quadrupole 7−123890
Kelvin-Helmholtz instability, in ionosphere 7−145766
kinetic Alfven waves, nonlinearly driven tearing instabilities 7−137072
kinetic electromag. modes and quasilin. transport, collisional effects 7−91321
kinetic theory of anomalous transport processes in tokamaks 7−91296
kink and tearing mode stability in tokamaks 7−75782
Langmuir soliton stability, investig. by catastrophe theory 7−83473
Langmuir turbulence models, num. comparison 7−83482
Langmuir wave instability in pulsar magnetospheres, influence of mag. field inhomogeneity on growth rate 7−127933
laser produced plasma, mag. field struct., collisional effects, dispersion relation 7−111161
laser-sustained plasma, temp. distrib., Hamilton-Jacobi eqn. in homogeneous windfield 7−117746
linear sheet tearing mode and mag. reconnection, solar appl. 7−127707
Liouville theorem and accurate plasma simulation 7−83454
LISA, rF heating by cylindrical plasma waveguide modes 7−137099
localizability of a toroidal burning plasma in the pressure-position space 7−123952
low frequency fast Alfven modes of plasma column loaded in a sheath helix 7−111217
lower hybrid heating in tokamaks, saturation of parametric instabilities 7−69338
lower-hybrid current drive, anomalous Doppler instability 7−123880
magnetic diffusion instability role in sunspots devel. *(Chinese)* 7−107785
magnetic field line reconnection 7−83447
magnetic field obs. in low press. spark 7−69516
magnetic islands dynamics, tearing mode instability, self-consistent nonlinear theory 7−83441
magnetic plasma traps, radiation dynamics questions 7−123934
magnetic quadrupole, intermediate-frequency flute modes 7−137070
magnetic reorientation and the spontaneous formation of tangential discontinuities in deformed magnetic fields 7−139903
magnetic surface wave instabilities 7−123881
magnetic-electron-drift vortex mode decay 7−123863
magnetised plasma, cubic response tensor, covariant forward scatt. approach 7−75778
magnetised plasma, filamentation instability 7−69341
magnetised plasmas, current gradient driven flute vortices 7−123860
magnetised plasmas, EM waves parametric instabilities, dispersion relations 7−142451
magnetised plasmas, force-free equilib. linear stability 7−142457
magnetized plasma, low freq. instabilities, study using gyrokinetic particle simulation model 7−142494
magnetogravitational stability of self-gravitating plasma, effects of thermal cond. and finite Larmour radius 7−127702
magnetomodulational perturbation, marginally stable, long time behaviour 7−75780
magnetosphere, broadband electrostatic noise generation in plasma sheet 7−107668
magnetospheric plasma of a pulsar, props. investig. 7−120485
magnetostatic equilibria, 2D, plasma MHD, energy principle, stability 7−130854
magnetotail, 2D model stability analysis 7−107667
major tokamak disruption in cylindrical plasma 7−91310
matter, universe and plasma, hypothesis of impossibility of identical individual particles *(Rumanian)* 7−80277
MHD, double adiabatic relax. and stability study 7−91303
MHD, ideal linear stability problem, finite element anal. 7−137057
MHD instability, effects on nuclear explosion-induced lightning seen on IVY-MIKE 7−114921
MHD stability, in PF-150 and PF-360 devices, photography, interferometry and Faraday rot. meas. 7−69350
MHD stability analysis for the Big Dee upgrade of the Doublet III tokamak 7−123948
micropinch, high temp. and superdense, radiative collapse model 7−69442
microwave scattering from electron diamagnetic drift waves, spectral broadening 7−123953
mirror plasma, flute modes stabilisation, finite Larmor radius and surface effects 7−97728
mirror plasma, MHD stability, end-plate pot. control study 7−97784
mirror plasma, rigid mode ballooning instability, resistive effects 7−97729
modulational instability of waves on electron beam in isotropic plasma *(Hungarian)* 7−130882
multipolar discharges, ion acoustic instability and plasma uniformity 7−91326
non-linear Rayleigh-Taylor instability in (spherical) laser accelerated targets 7−83471

plasma instability continued
nonisothermic plasma, dispersion hydrodynamics, soliton shock wave fronts and self-similar discontinuities 7−117711
nonlinear cold plasma waves in high-frequency limit, Lyapunov's stability 7−83462
nonlinear evolution of a wave packet propagating along a hot magneto-plasma column 7−91316
nonlinear ion acoustic plasma waves, marginal instability state, modulational instability of carrier 7−142449
nonlinear ion-acoustic waves and solitons, self-focusing, num. simulations 7−91315
nonlinear plasma phenomena due to non-reson. current-driven mode, num. simulation 7−69349
nonneutral plasmas, streamlined Darwin simulation 7−83530
nonuniform plasma in mag. field. LF oscills. *(German)* 7−137067
one-component plasma, electronic screening effects, ion-sound and-plasma modes calcs. 7−111211
one-component plasma in external field mode coupling contrib. to transverse transport coeffs. 7−75771
parametric excitation of magnetic electron drift vortex modes by Langmuir waves 7−91324
parametric instabilities in lower hybrid frequency range in FT tokamak 7−91320
parametric plasma heating, electron acceleration, ionisation 7−69377
parametric reflection of pump wave, fast-electron generation limitation 7−123888
particle confinement and adiabatic invariance, mirror mag. trap 7−137077
particle simulation of electromag. phenomena, Fourier-space iterative technique calcs. 7−69449
passive stabilization of axisymmetric modes in an elongated tokamak 7−123877
PBX, post-disruptive plasma loss modelling, transport and loss of stability 7−97726
PDX tokamak, beam ion loss to the inside during a fishbone instability 7−97727
Penning discharge, rot. plasma, ion-ion two-stream instability 7−97828
Penning discharge with thermocathode, radial plasma density profile calcs. *(Russian)* 7−83425
Pierce diode, oscillatory nonlinear electron flow, cold fluid eqns., α depend. 7−97816
Pierce instability of hot electron beam, dynamics 7−111246
plasma edge microinstability with up-down asymmetry 7−75785
plasma physics, conf., Lucas Heights, NSW, Australia (Feb. 1987) 7−80175
plasma-maser effect in weakly nonstationary medium with nonsteady ion-sound turbulence 7−75794
potential double layers in triple plasma device, laboratory investig. 7−117735
pre-disruption MHD activity in the LT-4 tokamak 7−123943
pulsed jet, flow and press. transients 7−130943
pure-electron plasma confinement, nonlinear collective processes 7−123961
radial structure of magnetic perturbations in tokamaks 7−123957
radiation-driven thermally unstable planar fluid, nonlinear evolution, solar atm. appl. 7−107709
Rayleigh-Taylor hydromagnetic instability in cylindrical plasmas, potential flow model 7−130855
Rayleigh-Taylor instability of dusty magnetised plasma, finite Larmor radius effects 7−94644
Reacting Plasma Experiment, confined α-particle diagnostics 7−75882
reflectometry density meas., mode mixing influence in reversed field pinch 7−83423
relativistic electron flow in diode, extraordinary-mode stability props., local anal. 7−91314
relativistic plasma, drift effects, kinetic description 7−91360
relativistic plasma, EM wave modulational instability 7−117723
relativistic plasmas, drift instabilities, kinetic theory 7−91361
relativistic plasmas, electron whistler and cyclotron maser instabilities, arbitrary energy anisotropy 7−130920
relativistic Z pinch, macroscopic stability and electromagnetic collapse 7−83525
resistive ballooning modes and the second region of stability 7−111216
resistive helical mode instability of a current carrying plasma column with a free boundary *(Chinese)* 7−91306
resistive interchange modes, influence of equilib. flow 7−104384
reversed field config. formation using toroidal magnetic fields *(Korean)* 7−137118
reversed field pinch, Hall dynamo model 7−75865
reversed field pinch operation 7−91377
reversed field pinch without conducting shell, instability 7−75783
reversed field pinches, ion temp.-gradient-driven drift mode, field-aligned current effects 7−97785
RF stabilisation of universal drift mode based on plasma-maser theory 7−69346
RF stabilization of mirror plasma, variable eigenmode excitation effects 7−123968
ring-stabilised devices, α particle dynamics effects 7−104406
rotating plasma, ionisation instability 7−130856
rotational transform meas. at Tokamak axis 7−111213
saturated island width in tokamak with external helical perturbation 7−123871
saturated tearing modes, turbulence and transport study 7−111226
sausage instability simulation in Z-pinch at plasma sheath motion stage 7−69351
sawtooth activity effects on poloidal mag. flux and energy balance in tokamak 7−123954
sawtooth oscillations in Joule heating plasma 7−123895
secondary instability problems in hydrodynamics and plasmas 7−123592
self-consistent average electric field effects on dissipative plasma-beam instability 7−130872
shear Alfven wave, reson. mode conversion 7−104389
sheared config. with helical mag. axis, local and ballooning instabilities 7−137071
sheath with periodic forced oscillations 7−123879
shock waves of subcritical quasi-perpendicular type, plasma heating due to instabilities 7−107654
skin currents and internal kink in tokomaks 7−91325
slipping instability of electron beam in drift tube, anal. 7−130884
slow sausage waves in mag. tube, solar appl. 7−145824
plasma instability continued
solar mass ejections with gravitation, linear MHD instability analysis 7−120361
solar quiescent prominences, 2D magnetostatic plasma equilibria, stability analysis 7−120358
space-potential and density fluctuations in the ISX-B tokamak 7−142445
spheromak tilt mode, line-tying effects, passive stabilisation study 7−69428
spheromak tilt mode, line-tying effects 7−69408
spontaneous arc breaking mechanisms, time-resolved spectroscopic obs. *(French)* 7−130964
stationary spectra of magnetic plasma excitations *(Russian)* 7−142465
steady state electron beam stability, solar appl. 7−145926
stellarator, currentless, two-fluid lin. stability investig. 7−83523
stellarator reactors, convective equilib. and mixing-length theory 7−97713
stochastic stability of a plasma torus 7−69344
stratified layer of gravitating partially ionised plasma, stability 7−123868
structurally invariant plasmas, MHD stability in mag. confinement 7−130905
Sun, coronal loops, resistive stability to perturbations with short wavelength across mag. field 7−145925
surface waves in highly nonisothermal plasma, parametric excitation, nonlinear theory 7−97720
tandem mirror, quadrupole MHD stabiliser, stability margin *(German)* 7−137108
tandem mirror central cell, rot., drift modes 7−69426
Tandem mirror reactor thermal barriers, alpha particle-induced instabilities 7−104405
tandem mirror reactor with octopole and wall stabilization 7−89719
tandem mirrors, electron distrib. and confinement instability study 7−142484
tandem mirrors, hot-electron stabilised, MHD stability 7−123964
tandem mirrors, trapped particle mode anchor stabilisation 7−69427
TCV tokamak, equilibrium and axisymmetric stability 7−137119
tearing instability in pulsar magnetospheres 7−120483
tearing instability of solar flares current sheets, stabilizing effect of transverse mag. field *(Russian)* 7−145917
tearing mode instability above sunspots *(Chinese)* 7−101748
tearing mode instability devel. in config. with sheared mag. field, collision aspects 7−117712
tearing modes in presence of an anomalous electron viscosity 7−104400
temporal evolution of the decaying spheromak in the CTCC-I experiment 7−123858
TEXT, Ar XII-XVI ionisation and recombination rates, time resolved spectroscopy 7−123988
TFR, internal disruptions, electron density fluctuations, microwave scatt. 7−111186
thermal-convective instability of MHD-composite plasma in stellar atmosphere, effect of finite Larmor radius 7−127841
theta pinch, lower hybrid drift instability, RF suppression 7−97731
tokamak, nonlinear evolution of free-boundary kink mode, MHD calcs., plasma shrinkage 7−83480
Tokamak Alfven waves, α-particle driven instabilities 7−97730
tokamak ballooning stability, α particle prop. effects study 7−104401
Tokamak current profiles in MHD stable regime 7−83433
Tokamak edge plasma, resistivity-gradient driven turbulence, impurity dynamics effects 7−97741
tokamak equilibr. and stability press. anisotropy effect 7−142486
tokamak equilibrium, MHD and stability calcs. 7−111199
tokamak impurity diffusion at grill mouth due to lower hybrid heating 7−117706
Tokamak m=1 convection cell, sawtooth activity, resistive MHD simulations 7−97782
Tokamak m=1 mode, nonlinear evolution, stochasticity anal. 7−97781
tokamak plasma, α particle effects study 7−104425
tokamak plasma, α particle interactions with regular and irregular structures 7−104402
tokamak plasma, banana drift motion, Maxwellian distrib. distortion 7−69401
tokamak plasma, eddy currents in nonperiodic vacuum vessel induced by axisymmetric plasma motion 7−75847
tokamak plasma, limiting β, ideal MHD stability 7−83440
tokamak plasma, rot. effect on kink instability *(German)* 7−137079
tokamak plasma, sawteeth, electron temp. oscills. 7−123962
tokamak plasma, tearing mode interactions, reduced MHD modelling 7−142459
tokamak plasmas, α particle effects, conf., Aspenasgarden, Sweden (June 1986) 7−102009
Tokamak rapid sawtooth crashes, mechanism 7−137074
tokamak simulation, hydrodynamic and MHD eqns. 7−111202
tokamaks, burn temp. control and stabilisation study 7−104407
Tokamaks, MHD ballooning modes, energetic particles sloshing effects 7−97759
tokamaks, sawtooth phenomenon study 7−142447
tokamaks and mirrors, kinetic instabilities, α particle transport effects 7−104404
TORIUT-6, ultra low q equilib. obs. 7−130851
toroidal confinement, anomalous transport, scaling laws, invariance principles 7−111180
toroidal confinement, turbulence microtearing modes 7−111222
toroidal equilibr., finite press. ballooning mode stability 7−142456
toroidal geometry, stability of ideal and resistive internal kink modes 7−130860
toroidal magnetic confinement, expt.-theory comparison, energy transport and instabilities 7−83526
toroidal plasma, axisymmetric, MHD stability anal. using NOVA code 7−117749
toroidal plasma, linear stability anal., particle simulation 7−142460
toroidal plasma with resistivity viscosity and Hall current, linear stability anal. 7−97775
toroidal reversed field pinch, stability, equilibrium 7−137106
toroidal systems continuous spectrum, ballooning and Alfven mode calcs. 7−130862
TOSCA tokamak, turbulent transport, diagnostics 7−111184
two-electron temperature plasma, stimulated Raman scatt. 7−75797
unmagnetised collisionless plasma, electron/electron acoustic instability 7−142455
vacuum arcs, low current behaviour and current dropping 7−130969
vertical plasma position, stability limit of feedback control in tokamaks 7−123875
viscous resistive magnetic reconnection 7−130859

lasma instability continued
wakefield accelerator, driving electron beam stability 7−104421
warm beam plasma turbulence, mode coupling effects 7−111235
weak warm electron beam interactions, mode coupling effect meas., quasi-linear description 7−75835
Weibel instability, collisional effects 7−83459
Weibel instability in relativistic, anisotropic plasma 7−130864
whistler mode excitation by artificially injected electron beam in ionosphere plasma *(Russian)* 7−72218
whistler wave, collisionless plasma, side-band instabilities study 7−91307
Z-pinch, equilibr. states, emission and thermal cond. *(German)* 7−137110
Z-pinch, noncircular, MHD stability, free boundary modes viscous damping 7−97734
Z-pinch equilibria, MHD instabilities at elliptic mag. stagnation line, Hall effect 7−130907
Z-pinches, m=1 small wavelength modes, press. anisotropy effect 7−104444
Ar glow discharge, instability in presence of negative ions 7−123883
CO-N_2 mixture, non self-sustained discharge study 7−137145
D-H-O plasma, ion cyclotron modes, near perpendicular propag. 7−130865
HCN lasers, plasma beat frequency stabilization by phased locked loop 7−123996
SF_6, pulsed high-voltage discharge, electrodes dielectric barriers stability effects 7−130967
Xe, ionisationally unstable, MHD braking, discontinuity appearance 7−69331

lasma interactions *see plasma collision processes*

lasma jets
air, shock wave form. by supersonic plasma jet, interferometric study 7−97571
body EM acceleration, force acting on movable connector 7−91374
cathode spot plasma, expansion in vacuum arc discharges 7−130852
current-carrying plasma pinches, necking down of sausages 7−83507
DC arc excitation as radiation sources for optical emission spectroscopy 7−91385
double layers and plasma-wave resistivity in extragalactic jets: cavity formation and radio-wave emission 7−120271
explosive plasma generator, high-speed air jets investig. 7−104439
magnetic reconnection nonlinear growth in tearing-type field geometry 7−123861
MHD solitons, appl. to extragalactic jets 7−139902
pulsed, flow structures 7−130946
pulsed igniters, H distrib. study 7−83551
pulsed jet, flow and press. transients 7−130943
relativistic Z pinch, macroscopic stability and electromagnetic collapse 7−83525
slot discharges with volatile wall, spectrosc. investig. 7−142517
surface temp. meas. of particles under thermal plasma conditions, using two-colour pyrometer 7−108563
temperature and velocity profiles, modeling 7−130947
thermal plasma jet reactors and multiparticle injection, simulation calcs. 7−69448
vacuum arc, erosion plasma jet spatial distrib. study 7−69511
wind instabillity and helical perturbations of magnetized relativistic jets 7−104319
Ar jet, treatment of heat-resisting ceramics 7−138866
Ar jet heated in plasmatron, boundary gas blowoff 7−142514
Cu I and II, plasma jet, Stark width meas. 7−90037
H plasma jet, acetylene synthesis, thermodynamic models 7−97697
He, axisymmetric arcjet, compressible laminar flow, press. meas. 7−69476

lasma magnetohydrodynamics
2-D laser-induced fluorescence detection system 7−142510
2D time-depend. MHD eqns. soln. by method of charact. 7−104387
3D resistive MHD equations, soln. using semi-implicit algorithm 7−91349
AAEC rotamak, equilib. config., props. determ. 7−75886
AC generation using superheating plasma instability 7−137136
Alfven engines, plasma probe for Get-Away Tether Expt. to design electrodynamic model *(Portuguese)* 7−134113
Alfven vortices in a strongly magnetized electron-positron plasma 7−83448
Alfven wave antenna optimization, role of equilib. current, drift induced Hall effect 7−130858
algorithms and problems for solutions of some physics problems 7−115699
ASDEX discharges, neutral particle injection, stability anal. 7−111225
asymmetric power spectra of density fluctuations, far-IR obs. in JIPP T-IIU 7−123878
axial magnetic field generation in laser-produced plasma by turbulent dynamo 7−91304
axisymmetric MHD equilibria with isothermal toroidal mass flow. var. calcs. 7−123864
axisymmetric MHD spheromak equilibria in parabolic coordinates 7−117750
axisymmetric mirror with an internal hoop, MHD stability 7−91351
axisymmetric plasma column, stabilisation of MHD modes 7−75776
axisymmetric Z-pinch, 2D electron vortices 7−83510
ballooning modes, energetic particle stabilisation in tokamaks 7−123938
beta limit and localized ballooning mode stability in Doublet III 7−123876
boundary value problems with external currents in stellarators 7−123947
central mass and current density measurements in Tokamaks using the discrete Alfven wave spectrum 7−83469
charged particle trajectories relationship with mag. field lines 7−111187
cold magnetized plasma, solitary waves 7−104397
cold plasma streams, cross-field propag. 7−137059
collisional plasma, viscosity, distrib. function tensor moments in mag. field 7−83410
collisionless plasma flow interactions, magnetic laminar mechanism obs. 7−111191
collisionless plasma in strong mag. field, transport eqns. 7−69313
compressible plasma, finite Larmor radius and Hall effects on thermal instability 7−142463
compressive waves propag. through fibril mag. fields, solar appl. 7−140008
compressive waves propag. through fibril mag. fields, solar appl. 7−140009
conference, Orsay, France (June 1985) 7−108029
current and temperature profiles in JET, MHD processes 7−91293
currentless high-β plasmas in Heliotron E, density fluctuations 7−123949

plasma magnetohydrodynamics continued
cylindrical geometry, plasma confinement, Fourier decomposed operator, magnetic axis 7−111203
cylindrical pinch, Hall current fluid, MHD eqns. 7−111200
cylindrical plasma, MHD instabilities realistic energy eqn. 7−111192
cylindrical plasma, sheared equilib. flows, MHD instabilities 7−123862
cylindrical plasmas, elec. field profiles in ion cyclotron range of freqs. 7−111208
diamagnetic stability limit for a hot particle annulus in a plasma 7−83461
double adiabatic relax. and stability study 7−91303
Drakon confinement system in MHD approx., equilib. and plasma loss 7−83509
edge and boundary modes, magnetic line reconnection and flux merging 7−104385
electric arcs, gas stream stabilised, math. modelling and MHD eqn. derivation *(Russian)* 7−142523
electricity, direct conversion from plasma thermal energy, self-organization process 7−139119
electron Bernstein wave dispersion, relativistic and EM effects, ordinary models 7−123873
electron Bernstein wave dispersion, relativistic and EM effects, extraordinary modes 7−123874
electron density, fluctuations during MHD activity, laser study 7−69326
electron plasma in strong mag. field, many-particle adiabatic invariant 7−142496
electron-cyclotron heating, MHD activity increase 7−83475
electrostatic wave dispersion in beam-plasma system immersed in inhomogeneous mag. field 7−123913
electrostatic wave propag. in mag. field, charged particle dynamics 7−83450
equilibria, minimum energy states 7−111204
equilibrium current local effect on tearing mode stability 7−142458
field-reversed configs., radial transport code 7−123963
finite β reversed field pinch, relax. process, simulation study 7−83513
finite elements, physics applications, summer school, Lausanne, Switzerland (Sept. 1986) 7−134339
finite-press. plasma in closed mag. confinement system, nonlocal quasiflute modes, MHD stability 7−83445
fluctuation spectra, generalised Hamiltonians, functional integration and statistics 7−111170
flux transfer events, field and flow perturbations outside reconnected field line region, magnetospheric appl. 7−79787
forced current sheets produced by global MHD forces, equilib. struct. and mag. reconnection, solar appl. 7−127707
free boundary kink mode shrinkage in tokamak, MHD calcs. 7−123956
fully nonlinear MHD equations soln., numerical method 7−115333
generator, nonuniform flow, mag. field orientation *(Romanian)* 7−139123
gyrokinetic particle simulation model 7−142494
Hall magnetohydrodynamics and its applications to laboratory and cosmic plasma 7−69324
helicity conservation laws for fluids and plasmas, theory 7−139906
heliosphere collisionless shocks (book) 7−115698
high beta mirror plasma partially enclosed by conducting wall, MHD stabilization 7−69325
high-temperature plasma, hydrodynamic beam instability, nonlinear theory 7−130867
Hiroshima Torus-1, MHD activity and peripheral plasma electrostatic charact. *(Japanese)* 7−137105
hot particle drift reversed system, stabilisation to LF modes 7−142452
hydrodynamic computer codes, interaction of charged particle with fusion material 7−135600
ideal linear stability problem, finite element anal. 7−137057
ideal magnetohydrodynamics book 7−134382
ideal MHD β-limit, benchmark calcs. 7−89722
ideal-fluid plasmas, Hall MHD conservation laws, Lyapunov stability 7−111197
incompressible MHD surface waves, nonlinear charact., appl. to solar atm. 7−127708
infinite uniform plasmas, linear waves 7−117715
inhomogeneous plasma slab, ideal compressible MHD 7−111201
interpenetrating plasma streams bounded by mag. field, instability *(German)* 7−137068
interstellar electron density fluctuations, turbulent stationary structures 7−88589
ion-gyroradius plasmas, viscosity effects on equilibr. 7−142446
JET, additional heating data, comparison with model scale invariance forms, MHD 7−129402
jets, MHD solitons 7−139902
laser produced plasma, mag. field struct., collisional effects, dispersion relation 7−111161
linear MHD instability analysis of solar mass ejections with gravitation 7−120361
low-frequency waves emission in moving plasma in mag. field 7−97722
magnetic configuration control, harmonic anal. in stellarators 7−123937
magnetic field line reconnection 7−83447
magnetic field obs. in low press. spark 7−69516
magnetic field rot., unipolar induction effect 7−69332
magnetic field-line reconnection processes for skewed mag. fields, astrophysical plasma appl. 7−127692
magnetic islands dynamics, tearing mode instability, self-consistent nonlinear theory 7−83441
magnetic reconnection induced by perturbation on boundaries 7−83444
magnetic reconnection nonlinear growth in tearing-type field geometry 7−123861
magnetic reorientation and the spontaneous formation of tangential discontinuities in deformed magnetic fields 7−139903
magnetised plasmas, force-free equilib. linear stability 7−142457
magnetofluid, confined turbulent relax. to force-free state 7−111195
magnetogasdynamic cylindrical shock wave model in an optically thin atmosphere, stellar appl. 7−145811
magnetoplasma with two ion species, formation of electron acoustic double layers 7−83446
magnetosphere-ionosphere coupling, field-aligned current generation in MHD plasma 7−145771
magnetostatic equilibria, 2D, plasma MHD, energy principle, stability 7−130854
MHD combustion chamber, plasma flow and mixing simulation of lignite gasification products 7−91305
MHD-steam commercial scale power plants, math. model for performance comparison 7−93515

plasma magnetohydrodynamics continued
mildly relativistic shocks, mag. fields and synchrotron radiation 7−137082
mirror plasma, flute modes stabilisation, finite Larmor radius and surface effects 7−97728
mirror plasma, MHD stability, end-plate pot. control study 7−97784
mirror plasma, rigid mode ballooning instability, resistive effects 7−97729
MPD thrusters, cathode erosion 7−130877
neutral beam injection, charge exchange meas. of MHD activity 7−123950
nonlinear Alfven waves in the magnetosphere 7−115170
nonstationary MHD eqns., 2D, similarity solutions, Lie algebra and conservation laws 7−140432
nonstochastic prompt proton acceleration by fast magnetosonic shocks in the solar plasma 7−88089
nonuniform plasma in mag. field. LF oscills. *(German)* 7−137067
one-component plasma in external field mode coupling contrib. to transverse transport coeffs. 7−75771
one-component plasma in uniform magnetic field, time-dependent correlations 7−111196
open confinement system, plasma equilib. investig. 7−117747
oscillations of mag. periodic medium, solar appl. 7−145823
particle simulation of electromag. phenomena, Fourier-space iterative technique calcs. 7−69449
passive advection transport by inhomogeneous turbulence, upper bounds 7−142466
passive stabilization of axisymmetric modes in an elongated tokamak 7−123877
PDX tokamak, beam ion loss to the inside during a fishbone instability 7−97727
PEGASUS drive, multi-megawatt nuclear electric propulsion system for spacecraft 7−67899
plasma column, cylindrical, rot. mag. field current drive, azimuthal field effect 7−123857
plasma column development in the CO_2 laser-heated solenoid 7−137103
plasma modeling conf., Nagoya, Japan (Sept. 1985) 7−115693
plasma physics, conf., Lucas Heights, NSW, Australia (Feb. 1987) 7−80175
plasma/surface interface modelling using ID MHD code, tokamak appl. 7−103187
plasmadynamic discharges, radiating, erosion-type magnetoplasma compressor, numerical simulation 7−142521
polarisation charge layers, electrostatic particle simulation code 7−142497
poloidal mode coupling for poloidal mag. fields, solar appl. 7−145825
pre-disruption MHD activity in the LT-4 tokamak 7−123943
quasi-parallel interplanetary shocks, upstream and downstream MHD fluctuations 7−94625
quasilongitudinal propagation of narrow beams of nonlinear magnetohydrodynamic waves 7−111206
R-tokamak, second phase design and stability anal. 7−74060
Rayleigh-Taylor hydromagnetic instability in cylindrical plasmas, potential flow model 7−130855
Rayleigh-Taylor instability of dusty magnetised plasma, finite Larmor radius effects 7−94644
relativistic oblique magnetohydrodynamic shocks anal. 7−91330
relativistic Z pinch, macroscopic stability and electromagnetic collapse 7−83525
reversed field pinch, Hall dynamo model 7−75865
reversed field pinch, nonlinear coupling effects on relaxation process 7−123941
reversed field pinch, oscillating-current, quasistatic 2D MHD equilibrium calcs. 7−83514
reversed field pinch configuration transport, Monte Carlo simulation 7−97786
reversed field pinch without conducting shell, instability 7−75783
rotamak plasma, magnetohydrodynamic equilibrium models 7−75774
rotamak plasmas, power balance models 7−109472
sawtooth activity effects on poloidal mag. flux and energy balance in tokamak 7−123954
self-gravitating plasma flow through porous medium, magneto-gravit. stability anal. 7−127702
sheared config. with helical mag. axis, local and ballooning instabilities 7−137071
slow sausage waves in mag. tube, solar appl. 7−145824
solar quiescent prominences, 2D magnetostatic plasma equilibria, stability analysis 7−120358
solar wind, collisionless plasma, quasiperpendicular shock wave interaction 7−137083
solar wind, particle transport in mag. field, effect of MHD turbulence 7−88066
solar wind 7−120233
spherically-symmetrical solar wind-like plasma systems, theoretical non-Maxwellian particle vel. distrib. functions 7−104383
spheromak MHD equilib. and stability, boundary-field curvilinear coordinate system 7−130901
spheromak plasma, magnetic field, turbulent transfer rate 7−117753
spheromak tilt mode, line-tying effects, passive stabilisation study 7−69428
spheromak tilt mode, line-tying effects 7−69408
stability, in PF-150 and PF-360 devices, photography, interferometry and Faraday rot. meas. 7−69350
stability analysis for the Big Dee upgrade of the Doublet III tokamak 7−123948
stratified atm., mag. flux tube model 7−127812
structurally invariant plasmas, MHD stability in mag. confinement 7−130905
Sun, atm. acoustic waves transform. to slow magnetosonic waves, role of mag. field 7−127693
Sun, corona activity, implications of force-free magnetic fields topology 7−72380
Sun, coronal loops, resistive stability to perturbations with short wavelength across mag. field 7−145925
Sun, prominence, 2D magnetohydrostatic model 7−145924
sunspots development, role of mag. diffusion instability *(Chinese)* 7−107785
surface waves reson. absorpt. 7−72279
tandem mirror, quadrupole MHD stabiliser, stability margin *(German)* 7−137108
tandem mirrors, hot-electron stabilised, MHD stability 7−123964
TCV tokamak, equilibrium and axisymmetric stability 7−137119
tearing instability in pulsar magnetospheres 7−120483
plasma magnetohydrodynamics continued
tearing mode instability devel. in config. with sheared mag. field, collision aspects 7−117712
tearing modes in presence of an anomalous electron viscosity 7−104400
temporal evolution of the decaying spheromak in the CTCC-I experiment 7−123858
theta pinch high-beta stellarator, equilibr. study 7−142489
thin mag. flux tube shock front, jump conditions, solar atm. appl. 7−115219
tokamak, MHD equilibrium profile 7−83521
tokamak, nonlinear evolution of free-boundary kink mode, MHD calcs., plasma shrinkage 7−83480
Tokamak current profiles in MHD stable regime 7−83433
tokamak equilibr. and stability press. anisotropy effect 7−142486
tokamak equilibrium, MHD and stability calcs. 7−111199
Tokamak m=1 convection cell, sawtooth activity, resistive MHD simulations 7−97782
Tokamak m=1 mode, nonlinear evolution, stochasticity anal. 7−97781
tokamak plasma, α particle effects study 7−104425
tokamak plasma, limiting β, ideal MHD stability 7−83440
tokamak plasma, mag. field-line reconnection, particle and energy transport 7−123856
tokamak plasma, tearing mode interactions, reduced MHD modelling 7−142459
tokamak simulation, hydrodynamic and MHD eqns. 7−111202
tokamaks, anomalous current penetration and oscill. current drive 7−137114
Tokamaks, MHD ballooning modes, energetic particles sloshing effects 7−97759
Tokapole II device, reversed toroidal field, equilibr. study 7−123965
TORIUT-6, ultra low q equilib. obs. 7−130851
toroidal boundary problems in plasma physics 7−69330
toroidal devices, diamagnetic coil design for plasma diamagnetism meas. 7−75888
toroidal equilibr., finite press. ballooning mode stability 7−142456
toroidal plasma, axisymmetric, MHD stability anal. using NOVA code 7−117749
toroidal plasma, MHD equilibr. profile form. 7−137058
toroidal plasma with resistivity viscosity and Hall current, linear stability anal. 7−97775
toroidal stellarator, HF AC inductive heating 7−117752
turbulence, strong mag. field dynamics 7−117716
turbulent magnetic diffusion and mag. field reversal 7−130874
turbulent shear flows, subgrid modeling 7−83443
unsteady Petschek reconnection with propagating shock waves, magnetopause appl. 7−94605
V-20 torsatron, internal disruptions, MHD activity 7−69402
warm plasma, Alfvenic turbulence, MHD oscills. 7−111228
waves generation by turbulent motion in stratified medium, solar appl. 7−104388
wind instabillity and helical perturbations of magnetized relativistic jets 7−104319
Z-pinch, noncircular, MHD stability, free boundary modes viscous damping 7−97734
Z-pinch equilibria, MHD instabilities at elliptic mag. stagnation line, Hall effect 7−130907
Z-pinches, m=1 small wavelength modes, press. anisotropy effect 7−104444
Hg, arc plasma, current and electron density under transverse mag. field 7−69493
K and Cs seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628
Xe, ionisationally unstable, MHD braking, discontinuity appearance 7−69331

plasma measurement techniques *see plasma diagnostic techniques*

plasma oscillations
see also plasma waves
acoustic collapse effect on collisionless shock wave struct. 7−130870
anisotropic limited plasma, oscillations, in weak gravitational wave field *(Russian)* 7−111220
Atoll confinement system, electrostatically plugged ring cusp. dicotron instability *(German)* 7−137109
cyclic q-profile evolution during internal disruptions in Tokamaks 7−97737
dispersion props. and stability in random elec. field *(Russian)* 7−83479
double layers, driving mechanisms 7−117729
double layers, hydrodynamic anal. 7−117731
electromagnetic wave propag., relativistic self-focusing study 7−104412
electron beam gas focusing dynamics 7−123909
electron beam injection into symmetrically open plasma system, oscillation localisation *(Russian)* 7−142474
electron plasma perturbations, kinetically derived Vlasov-Poisson wave eqns. 7−91289
ETA BETA II reversed field pinch oscills., mag. field profile meas. 7−75789
explosive instabilities in mirrors, density dependent flute mode 7−123958
fluid, Rayleigh scatt. by microparticle surface-enhanced density fluctuations 7−129985
fuel pellet injection, m=1, n=1 oscillations in tokamak 7−123944
gas laser discharge, spatially homogeneous oscillations 7−83578
high-β plasma in Uragan-3 torsatron, relax. oscills. 7−111214
high-density plasma, nonlinear lower-hybrid oscills. calcs. *(Russian)* 7−83477
high-temperature plasma, hydrodynamic beam instability, nonlinear theory 7−130867
inhomogeneous plasma, intense EM beam self-focusing 7−123900
inhomogeneous plasma, oscillating two-stream instability, density gradient effect calcs. 7−91311
instability in sheath with periodic forced oscillations 7−123879
ion source, plasma-sheath oscillations and chaos *(Chinese)* 7−97755
JET, plasma behaviour, initial results, impact on fusion development 7−123971
kinetic effects in a nonsteady plasma 7−97701
Langmuir oscills. in electron source vicinity *(Russian)* 7−83478
magnetic field line reconnection 7−83447
magnetised plasma, ponderomotive effects 7−83455
metallic particles in infinite dielec. medium, surface plasma oscills. spectrum *(Russian)* 7−84616
MHD modes of periodic mag. medium, solar appl. 7−145823

asma oscillations continued
neutral beam injection, charge exchange meas. of MHD activity 7−123950
nonequilibrium plasma, nonlinear electrodynamics, path expansion technique 7−130871
nonlinear Langmuir oscillations in nonuniform plasma, high speed electron generation 7−104410
nonlinear oscillations in a warm plasma 7−91327
nonlinear plasma phenomena due to non-reson. current-driven mode, num. simulation 7−69349
nonuniform plasma in mag. field. LF oscills. *(German)* 7−137067
one-component plasma in uniform magnetic field, time-dependent correlations 7−111196
Pierce diode, oscillatory nonlinear electron flow, cold fluid eqns., α depend. 7−97816
polarisation charge layers, electrostatic particle simulation code 7−142497
pre-disruption MHD activity in the LT-4 tokamak 7−123943
proton spectrometer for energy spectra under ICRF heating in JET 7−91371
relaxation oscillations in solar coronal loops, contrib. to fluctuations of Type I radio noise storms *(Russian)* 7−145915
reversed field pinch, high valve pinch parameter discharges, MHD activity anal. 7−97783
RFP, nonresonant current driven mode, nonlinear phenomena 7−97725
rotamak discharges, low power long duration 7−75779
sawtooth oscillations in Joule heating plasma 7−123895
TEXT, Ar XII-XVI ionisation and recombination rates, time resolved spectroscopy 7−123988
tokamak, nonlinear evolution of free-boundary kink mode, MHD calcs., plasma shrinkage 7−83480
tokamak, sawtooth oscillation, temperature rise phase, electron heat conduction coeffs. 7−123935
tokamak peripheral plasma, oscillating elec. fields spectroscopic method obs. and anal. 7−83466
tokamak plasma, sawteeth, electron temp. oscills. 7−123962
TOSCA tokamak, density fluctuations, far forward laser scatt. 7−111243
V-20 torsatron, internal disruptions, MHD activity 7−69402
Vlasov-Poisson structures, perturbations, exact solns. 7−117701
wakefield accelerator, nonlinear plasma oscills., relativistic electron beam excitation 7−104420
warm plasma, Alfvenic turbulence, MHD oscills. 7−111228
Cs discharge plasma, microwave oscills. spectrum 7−124011
H plasma, Coulomb radiators, intra-stark spectroscopy *(German)* 7−137125
He-Ne discharge plasma oscill., optogalvanic spectrum characts. *(Chinese)* 7−129635
K plasma, nonequilibr. decaying, electromotive force chaotic oscills. 7−104408

lasma probes
see also Langmuir probes
2T-40M, asymmetric mag. flux generation, m=1 activity, edge phenomena 7−130909
Alfven engines, plasma probe for Get-Away Tether Expt. to design electrodynamic model *(Portuguese)* 7−134113
axisymmetric mirror with an internal hoop, MHD stability 7−91351
collective ion acceleration, ion beam probe diagnostics and time-resolved mass spectrosc. 7−129460
current sheet, mag. island form. 7−111275
double electric probes appl. to plasma double layer obs. 7−75881
double probe with organic thin film coating, ion current in RF discharge plasma 7−97798
electrostatic probe technique for RF plasma 7−130927
flux meas. in shadow of scoop limiter on T-10 tokamak, probe meas. 7−75876
glow discharge carbonisation in JET, probe anal. by Auger spectroscopy 7−69457
heavy impurity fluxes in scrape-off layer of TEXTOR, pump limiter effects 7−75878
heavy ion beam probe energy analyzer for measurements of plasma potential fluctuations 7−83544
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454
Hiroshima Torus-1, MHD activity and peripheral plasma electrostatic charact. *(Japanese)* 7−137105
hollow gas-puff z pinch, electron beam preionisation, stability enhancement 7−69375
impurities, spatial distribution in boundary layer of DITE 7−75850
impurity recycling effects, collector probe technique obs. 7−75875
impurity transport in TCA-Tokamak, integral collection probes investig. 7−69422
in situ calibration of electrical double probes in magnetized plasmas 7−104456
internal magnetic fluctuations in HBTX1A revised field pinch, mag. probe investig. 7−75863
ion sheath probe, capacitance diagnostic method 7−97799
magnetised plasma, local particle diffusion coeff. meas. 7−130935
Maryland spheromak diagnostics, broadband calibration for magnetic probes 7−123990
metal impurities, in ion and electron drift distribs., for TEXTOR discharges 7−75879
plasma sheath evolution in plasma focus device final stages, diagnostic investig. 7−69373
railgun firings involving mag. flux probes, expt. results 7−97808
reversed field pinch plasma diagnostics, beam probing system 7−83546
RF discharge, LF, sheath pot., probe diagnostics 7−137139
RF generated plasma, elec. meas. using driven electrostatic probe 7−117758
secondary electron emission-capacitive probe for potential measurements of plasma with hot electrons 7−117757
solar array, plasma electron collection by PIX-II, computer simulation 7−71610
space potential meas. method with high time resolution *(Japanese)* 7−111277
supersonic flowing plasma, density determ. by electrostatic double probes 7−83424
TCA tokamak, mag. and density fluctuations, probe meas. 7−111280
Thorello, toroidal magnetised plasma, diagnostics eval. 7−75860
tokamak, high β, plasma form. and equilibr. 7−137115
Tokapole II device, reversed toroidal field, equilibr. study 7−123965
ZT-40M reversed-field pinch D and impurity fluxes, collector probe meas. 7−69407

plasma probes continued
C impurity flux in limiter shadow of TEXTOR 7−75766
He, hollow-cathode discharge, electron energy distrib. function 7−104482
K and Cs seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628

plasma production
see also exploding wires and foils; plasma production and heating by laser beam
air, low temp. plasma prod. by HF elec. field 7−142525
cavity with single exhauster, fluid motion by electro-thermally ablated gas press. 7−69478
centrifugal pellet injector with direct solid D_2 feed 7−81712
constricted type plasma source, pl. density and electron temp. enhancements 7−97763
Coulomb gas, 2D, dynamic characterization of dielectric-plasma transition 7−84727
current pulse generator for arc discharge, plasma production appl. 7−123922
dense plasmas, pulsed prod. in high press. metal vapours 7−83505
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
electrode operating regimes in high-power electric arc plasma generators 7−117783
electroerosion source of low-temperature plasma with increased stable operating life 7−123924
electrostatic reflex plasma source as a plasma bridge neutralizer 7−69389
explosive plasma generator, high-speed air jets investig. 7−104439
formed ferrite source, discharge props. 7−142478
high temperature plasma, prod. apparatus description *(German)* 7−137093
high-current magnetically compressed discharge, radiation dynamics 7−137131
hot and cold plasma, technology, characts., generation and appls. *(German)* 7−137092
ICRF heating in ICP torches study 7−97820
industrial plasma generators, develop., operation and appls. *(German)* 7−137094
ion beam prod. in reflex triode with external plasma source at anode 7−97762
ion-beam driven fusion targets, energy deposition study 7−130913
low-pressure source of nonequilibrium plasma 7−123923
magnetic multipole plasma source, primary electron orbits, 3D computer simulation 7−69447
magnetic reconnection induced by perturbation on boundaries 7−83444
microwave discharges, high-power, supercooled plasma 7−142522
microwave plasma generation, travelling wave gas discharges sustained by EM waves *(Polish)* 7−111251
microwave-induced plasmas, spatial emission props., easily ionised elements effect 7−142499
multipole confinement and magnetic filter for high proton yield plasma source 7−130890
neutral injector prototype for Tore-Supra 7−137121
numerical modeling of physical processes in a microwave plasma generator 7−83416
optical breakdown near solid surface, spectral investig. 7−75756
precursor form. due to multiwire liner collapse 7−111250
pulsed source design and construction for dense plasma diagnostics 7−142475
radiation overcooling of bulk-ionised multiply charged ion plasma 7−123915
RF multipolar plasma for broad and reactive ion beams 7−69388
spark, low-voltage, discharge plasma, ionisation front propagation 7−83570
steel, austenitic stainless, vacuum wall, H isotope exchange under RF glow discharge conditions 7−75804
surface wave sustained plasma, HF discharge parameters, radiative processes and similarity relations *(German)* 7−130891
surface wave sustained plasma, HF field, processes and modeling *(German)* 7−130892
thermal ionisation phase during plasma form. in TM-1-MH Tokamak 7−123914
theta-discharge, plasma generation 7−111247
Thorello, toroidal magnetised plasma, diagnostics eval. 7−75860
TMX-U tandem mirror expt., central cell fueling, low-energy beams development 7−142479
Tokamak for nuclear fusion expt., computerised control *(German)* 7−130942
transmission lines, magnetically insulated, energy losses due to microparticles 7−104424
Z-pinch dynamics in high-current diode investig. 7−69443
Ag plasma, thin film capacitive discharge, early time spectral features study 7−142483
Ar jet, ionisation by microwave field, self-oscills. anal. 7−83407
Ar microwave-induced plasma, electron density study 7−142440
Ar, RF inductively coupled plasma, large volume, high density 7−97700
Ar-air gaseous mixture, unipolar breakdown, propag. velocity meas. 7−117697
AsH_3, miniature hydride generator with microwave induced plasma-atomic emission spectrometry study 7−133014
C ablation plasma, ionisation and radiation dynamics 7−130886
$CO-N_2$ mixture, non self-sustained discharge study 7−137145
$Cs-H_2$ mixture, low-voltage discharge 7−75908
Cu exploding wire, high power elec. discharge prod., stratified struct. in high press. gases 7−104436
H ions, charge exchange cross sections, plasma prod. and neutralization in gas neutralizers 7−141363
H^0, charge exchange cross sections, plasma prod. and neutralization in gas neutralizers 7−141363
He microwave-induced plasma, electron density study 7−142440
He plasma, prod. by arc stabilised by axial mag. field *(French)* 7−91338
He plasma, prod. near ceramic surfaces, temp. and electron density distrib. 7−75872
He plasma, surface wave sustained, spatial emission props., spectroscopy appl. 7−142498
He-Xe-HCl mixture, X-ray induced self-sustaining volume discharge, large interelectrode spacing 7−75907
Li-LD wires, exploding, hybrid reactions 7−104438
N_2 gas, low-energy electron beam propag., plasma generation 7−137095
Na particle-beam-induced atomic plasmas, analytic kinetic model 7−130880

plasma production continued
PbH_4, miniature hydride generator with microwave induced plasma-atomic emission spectrometry study 7−133014
SbH_3, miniature hydride generator with microwave induced plasma-atomic emission spectrometry study 7−133014
SnH_4, miniature hydride generator with microwave induced plasma-atomic emission spectrometry study 7−133014
TP-D plasma source discharge mechanism, numerical simulation 7−96428

plasma production and heating by laser beam
aerosol medium, collective optical breakdown, threshold characts. 7−97771
aerosols, optical breakdown under pulsed CO_2 laser radiation 7−90667
axial magnetic field generation in laser-produced plasma by turbulent dynamo 7−91304
comets and planets, light and plasma effects, laser simulation *(German)* 7−134124
conference, lasers and electro-optics, Baltimore, MD, USA (April-May 1987) 7−120705
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
diamagnetic plasma, expanding clouds slowing effectiveness of mag. field 7−117717
double layers, hydrodynamic anal. 7−117731
dry air, low pressure, laser-induced breakdown, electron density, CO_2 interferometry meas. 7−104433
elongated high-temp. dense plasma prod. by laser heating in capillary discharge 7−97772
fast particle production in laser plasma, Sokol expts 7−104417
fast-electron spectrum formation, plasma resonance field multiple interaction 7−130893
field generating thermal instability in laser-prod. plasmas, laser flux effects 7−130861
foam targets, Raman scatt. study using 0.35 μm laser beam 7−69397
gas target plasma, laser-heated, ion-density fluctuations, Thomson scatt. 7−69398
gases, laser-induced breakdown, spherical particles effect 7−69302
glass, laser heating, nonequilibrium emission 7−69399
glycerine levitated aerosol drops, time-resolved spectroscopy of laser produced plasma 7−104381
harmonic space and time resolved struct. and density profile of laser plasmas 7−90711
high resolution diagnostics of laser-produced Al and Si plasmas 7−75839
high Z plasma, short wavelength laser produced, dynamics, energy flow 7−117745
high-energy pulsed-laser-generated shock waves form a metallic surface *(French)* 7−97745
hot electron energies reduction 7−142481
ICF, target acceleration with heavy-ion beams 7−135549
ICF reactor, target design form laser system 7−122202
irradiation of metal surface, laser plasma production and detection 7−137101
JET plasma, Ne-like and adjacent ion recombination 7−75862
jetting, plasma flow, laser irradiated planar thin foil targets 7−97769
laser created plasma, charge state evol. and energy losses in beam-plasma interaction 7−81680
laser fusion for plasma production *(German)* 7−141269
laser plasma, electron temp., X-ray emission spectra 7−83533
laser plasma, expanding, optical characteristics 7−130844
laser plasma, low temp., optical harmonic generation 7−136437
laser plasma, X-ray emission spectra, atomic number depend. 7−104434
laser plasmas, second harmonic time resolved spectrum, fine struct. *(Chinese)* 7−117756
laser produced plasma, mag. field struct., collisional effects, dispersion relation 7−111161
laser self focusing enhanced by relativistic electron motion in laser plasma 7−69357
laser self-focusing in plasma 7−69356
laser thermonuclear fusion by inertial confinement *(French)* 7−81709
laser-induced plasma, propagation velocity inside and outside transparent droplet 7−137102
laser-plasma detection 7−137101
laser-plasma detection by UHF electrical current production 7−111278
laser-produced-plasma VUV continuum source 7−80910
laser-sustained plasma in forced Ar convective flow 7−130848
Li-like ions in recombining hot plasmas, soft X-ray amplification 7−91300
line focus geometry for X-ray laser research 7−103916
long-scale-length plasmas, laser coupling, hydrodynamic phenomena 7−117744
low temperature, phase conjugation in stimulated Brillouin scatt. 7−136448
magnetic field meas. in laser produced plasmas, fully automated anal., phase-amplitude imaging 7−104447
magnetised plasma, filamentation instability 7−69341
metal surface, plasma prod. by intense short pulse from Nd laser 7−97768
metals in solid samples, laser ablation sample introduction for plasma emission spectroscopy 7−71544
multilayer targets, use to inject trace elements 7−97767
optical discharge, continuous, in converging beam, 2D linearised model 7−97770
parametric excitation of magnetic electron drift vortex modes by Langmuir waves 7−91324
photoionisation lasers pumped by broadband soft X-ray flux from laser-produced plasmas 7−90587
plasma column development in the CO_2 laser-heated solenoid 7−137103
point radiographic source, generation using laser pulses 7−140782
production mechanisms, characteristics and optical props. *(German)* 7−130899
pulsed magnetic field produced by CO_2 laser 7−140718
radiometric standard sources for vacuum UV and soft X-ray range 7−89248
rare earth plasmas, laser generated, EUV spectra study 7−142482
Rayleigh-Taylor instability growth rate in laser beam targets 7−111253
ruby laser produced plasma, refractive fringe diagnostic using N_2 laser 7−83537
second harmonic emission from an underdense laser-produced plasma and filamentation 7−91302

plasma production and heating by laser beam continued
self-focusing in plasma corona of spherical targets 7−69393
shock multiplexing implosion, high thermonuclear neutron yield 7−69394
soft X-ray contact microscopy of biological specimens using plasma source produced with lab. sized laser 7−79165
soft X-ray source for X-ray lithography 7−75895
solid sample analysis, laser ablation ICP-MS 7−93464
spark, underdense plasma prod., laser beam self-focusing 7−104435
spontaneous current generated from laser plasma *(Chinese)* 7−91348
spontaneous magnetic field detection in Del'fin 1 laser plasma device *(Hungarian)* 7−130897
stimulated Brillouin-scattering measurements from temporally and spatially incoherent laser irradiated plasmas 7−136435
super-soft X-ray emission from laser produced plasma *(Chinese)* 7−130923
temperature distribution, Hamilton-Jacobi eqn. in homogeneous windfield 7−117746
thermalisation of laser light in Au cavity 7−104431
thin coated foils, soft X-ray amplification, obs. exploding foil plasma 7−104437
three-halves harmonic spectra 7−123926
Weibel magnetic mode amplification in laser plasma 7−91328
X-ray characterization of picosecond laser plasmas 7−130931
X-ray conversion efficiency for KrF laser produced plasma meas. 7−91367
X-ray emission spectra study 7−103424
X-ray source, laser prod. plasma, radiative characts., conversion efficiency 7−123925
X-ray sources for microlithography created by laser radiation at $\lambda=0.26$ μm 7−67447
Al alloy sample, laser induced plasma prod. and charactn. for atomic spectrometry 7−100640
Al laser-produced plasma, coronal region, radiative preheat, X-ray generation 7−69396
Al plasma, laser-produced, thermal transport models, X-ray meas. 7−69462
Al plasma, surface localised, production by dye laser pulse and pulsed quartz lamp 7−69400
Al plasmas, laser-produced, UV-visible spectroscopy 7−117743
Al XI, laser produced plasma, population inversion, ab initio spectra 7−69392
Au coated plastic targets, KrF laser irradiation, energy transport 7−130894
B IV, 2121′ dielectronic satellite lines, width and electron-produced shift anal. 7−129656
Ba plasma, laser prod., opacity effects on near reson. Rayleigh scatt. 7−97794
Ba^+, depolarisation of near-resonance Rayleigh scattering 7−130925
Ba^+ plasma, local density, temporal evolution, Rayleigh scattering meas. 7−97703
BaF_2, dielectric, surface damage and plasma form. thresholds 7−130898
Be I, II, laser produced plasma, inner-shell photoabsorpt. spectra 7−135872
Be laser produced plasma, UV emission meas. 7−104382
Be plasma, CO_2 laser production in double-cusp magnetic container 7−75857
Br plasma laser produced, temp., ionisation balance form L X-ray spectra 7−104450
C ablation plasma, laser hole boring, emission spectra study 7−68244
C laser-produced plasma, mag. field meas. using Zeeman effect 7−142480
C VI in plasma XUV gain, model calcs. 7−91301
CO_2 laser produced plasma, study of arc channel formation 7−123927
CaF_2, dielectric, surface damage and plasma form. thresholds 7−130898
Co XVII-Co XXV, laser-produced plasma, X-ray emission spectrum meas. 7−111273
Cu laser produced plasma, enhancement of keV X-ray emission by weak prepulse laser 7−111190
Cu plasma surface coupling of 10.6 μm laser radiation 7−130895
Cu split-foil plasma, laser vaporised, electron density, hydrodynamic simulations 7−130896
Cu XX plasmas, X-ray lasing 7−90585
Cu^{19+} neonlike plasma, soft X-ray lasing at 195 to 285 Å 7−136281
GaAs, dielectric, surface damage and plasma form. thresholds 7−130898
Ge^{22+} neonlike plasma, soft X-ray lasing at 195 to 285 Å 7−136281
H plasma, laser-beam self-modulation, diffr. effects, paraxial wave eqn. 7−97751
H, plasma generation for beat wave expts., multiphoton ionisation, electron density anal. 7−104432
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
He Z-inch plasma, CO_2 laser-heated, soft X-ray emission meas. 7−130914
KCl, dielectric, surface damage and plasma form. thresholds 7−130898
Na plasma, electron density radial profiles derived from Stark broadening 7−111165
NaCl, dielectric, surface damage and plasma form. thresholds 7−130898
Nd:glass four-channel laser for spherical plasma compression 7−69395
S, hydrogenic and He-like, diagnostic tracer, X-ray emission spectral determ. of plasma parameters 7−96594
S XIV, laser produced plasma, population inversion, ab initio spectra 7−69392
Si, dielectric, surface damage and plasma form. thresholds 7−130898
W, subpicosecond laser-produced plasma, soft X-ray emission 7−111252
Xe III, fluorescence, short-wavelength from X-ray excited ions, time-resolved meas. in laser prod. plasma 7−141519
Zn-like ions in PLT tokamak, intercombination line study 7−117760

plasma sheaths
see also plasma confinement
AAEC rotamak, equilib. config., props. determ. 7−75886
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
auroral double layers, particle simulation 7−117736
charge particle beam characteristics, prod. by plasma focus 7−69489
circuit breakers, double layers form. and growth 7−69372
collapse and pinch phase of plasma-focus discharge, plasma sheath radiation investig. 7−69439
current driven weak double layers form. obs. 7−117726
current sheath formation in PF-360 device with preliminary discharge 7−69374

asma sheaths continued
double layer form. conditions in magnetosphere 7−120217
double layer form. in magnetically confined plasma in magnetosphere 7−117733
double layer form. leading to crit. velocity phenomenon 7−117727
double layer form. mechanisms in triple plasma devices 7−117728
double layer simulation and transport in discrete arcs, auroral circuit model 7−117737
double layers, 1D, lin. Vlasov stability, analytical study 7−117732
double layers, driving mechanisms 7−117729
double layers, hydrodynamic anal. 7−117731
double layers, shocklike modified Korteweg-de Vries soliton form. 7−142473
double layers and plasma-wave resistivity in extragalactic jets: cavity formation and radio-wave emission 7−120271
double layers in assoc. with auroral precipitation 7−120194
double layers in plasmas, conf., Huntsville, AL, USA (Mar. 1986) 7−115677
double layers in triple plasma device, dynamical props. 7−117734
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
edge region diagnostics and transport in the TEXT tokamak 7−75828
erosion switch, polarity effect 7−117765
evolution in plasma focus device final stages, diagnostic investig. 7−69373
expanding inhomogeneous plasmas, elec. fields and double layers, hydrodynamic anal. 7−69323
graphite surface, secondary-electron emission in H_2^+ plasma 7−138558
high-voltage discharge, anode sheath rot. instability 7−83558
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
ID magnetised double layers with finite thickness, intrinsic resonances 7−83463
infinite plasma-wall sheath model, recombination, wall reflection and ambipolar diffusion effects 7−97753
instability in sheath with periodic forced oscillations 7−123879
ion matrix sheaths for cylindrical and spherical electrodes, thickness, pot. profiles 7−142472
ion phase-space vortices and their relation to small amplitude double-layers 7−117718
ion sheath probe, capacitance diagnostic method 7−97799
ion source, plasma-sheath oscillations and chaos *(Chinese)* 7−97755
ion source plasma instability, routes to chaos in the plasma sheath *(Chinese)* 7−96414
ionosphere, auroral, double layers evol. in H plasma 7−120204
low Earth orbit plasma anomalous interaction with solar array modules 7−144859
low frequency fast Alfven modes of plasma column loaded in a sheath helix 7−111217
magnetically insulated ion diodes, anode plasma ionisation due to sheath heating 7−69381
magnetosphere-ionosphere coupling, double layer effects 7−120218
Maxwellian source, warm-ion integral plasma eqn. 7−91336
mirror plasma, MHD stability, end-plate pot. control study 7−97784
negative plasma glows, dynamics of double layer formed in transition region 7−124020
plasma focus discharge, insulator influence, expt. investig. 7−69488
plasma layer in plasma focus, schlieren diagnostics 7−69467
POSEIDON, plasma focus efficiency improvement diagnostics 7−69434
potential double layers in triple plasma device, laboratory investig. 7−117735
potential in tokamak edge plasma using retarding field analyser 7−75826
presheaths, collisional, asymptotically correct calcs. 7−130879
pumping potential wells meas. 7−117730
RF discharge, electron impact excitation, fluid model simulation 7−130952
RF discharge, LF, sheath pot., probe diagnostics 7−137139
RF discharges at frequencies above ionic plasma frequency, model 7−91379
RF generated plasma, elec. meas. using driven electrostatic probe 7−117758
sausage instability simulation in Z-pinch at plasma sheath motion stage 7−69351
scrape-off layer in TCA tokamak, Alfven wave heating study, Langmuir probe diagnostics 7−75832
small amplitude ion acoustic double layers in multispecies unmagnetised plasma 7−75824
space potential meas. method with high time resolution *(Japanese)* 7−111277
SPEED 2 plasma focus, power input and sheath form. 7−69486
spheromak tilt mode, line-tying effects 7−69408
supersonic plasma flow, interaction of conducting object, ion deflection 7−111193
TFTR edge turbulence meas., Langmuir probes, D-alpha imaging, microwave scatt. and mag. pickup loops 7−75830
TFTR movable limiter and first wall particle inventories calcs. 7−75806
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
thermionic converter, emitter sheath ion reflection and trapped ion effect 7−111283
theta pinch, implosion phase, plowed plasma, shift to back of current sheath 7−137113
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
wall probes current-voltage characts., study in TEXTOR tokamak, secondary electron emission effects 7−75803
wall sheath effects on transport 7−137089
warm ion collisionless plasma, generalised Bohm criterion appl. to Emmert's soln. 7−123907
weak compressive ion acoustic double layers in presence of negative ions on the auroral field lines 7−123872
Z-pinch and plasma focus research, conf., Warsaw, Poland (Sept. 1985) 7−66828
Ar discharge, anode-type double layers in nonuniform mag. field 7−137091
Cs discharge plasma, microwave oscills. spectrum 7−124011
H^- ion source, surface conversion type, using heavy ion impact 7−73465
H_2, dissociation rate near cathode in low temp. plasma 7−83579

lasma shock waves
acoustic collapse effect on collisionless shock wave struct. 7−130870

plasma shock waves continued
backstreaming particles from shock in magnetised plasma, distrib. function 7−94580
collisionless plasma, quasiperpendicular shock wave interaction 7−137083
cometary bow wave, ICE analysis of P/Comet Giacobini-Zinner (1985 XIII) 7−94816
cosmic ray, shock, interaction with long-wavelength compressive wave 7−127655
cosmic ray shocks, short-wavelength compressive instabilities, heat conduction 7−127654
cylindrical shock wave production by sliding discharge device 7−83483
double layers, shocklike modified Korteweg-de Vries soliton form. 7−142473
heating through supercritical oblique collisionless shock propag., electron and ion dynamics 7−83506
heliosphere collisionless shocks (book) 7−115698
high-energy pulsed-laser-generated shock waves form a metallic surface *(French)* 7−97745
ion acoustic turbulence electron heating in simulated low Mach number shocks 7−137080
jet, pulsed, flow structures 7−130946
jump conditions across thin mag. flux tube shock front, solar atm. appl. 7−115219
laser-induced plasma, propagation velocity inside and outside transparent droplet 7−137102
magnetic field noncoplanarity within fast collisionless shocks 7−94579
magnetic reconnection nonlinear growth in tearing-type field geometry 7−123861
magnetogasdynamic cylindrical shock wave model in an optically thin atmosphere, stellar appl. 7−145811
magnetoplasma with two ion species, formation of electron acoustic double layers 7−83446
magnetosonic shock wave plasma heating through resonant ion acceleration 7−97746
mildly relativistic shocks, mag. fields and synchrotron radiation 7−137082
modulated plasma arc shock wave generation 7−124003
nonisothermic plasma, dispersion hydrodynamics, soliton shock wave fronts and self-similar discontinuities 7−117711
nonlinear Alfven waves in the magnetosphere 7−115170
nonlinear transmission line, cusp solitons, shock waves and envelope solitons, evol. eqn. 7−102178
particle reflection and plasma heating by a laminar magnetosonic shock wave 7−75842
plasma parallel plate accelerator, time development of shock wave 7−97744
positive column, plasma density gradients determ. 7−117770
relativistic oblique magnetohydrodynamic shocks anal. 7−91330
relativistic shocks, hydrodynamical constraints on cosmic-ray accel. 7−139868
simulation of perpendicular collisionless supercritical viscous nonresistive shock 7−130921
subcritical quasi-perpendicular shocks, plasma heating due to instabilities 7−107654
unsteady Petschek reconnection with propagating shock waves, magnetopause appl. 7−94605
Al laser-produced plasma, coronal region, radiative preheat, X-ray generation 7−69396
Bi dense plasma, shock compression and adiabatic decompression of solid and porous samples 7−84127
N_2, gas, vibr. excited, weak shock wave propag. 7−83274
Xe, ionisationally unstable, MHD braking, discontinuity appearance 7−69331

plasma simulation
accelerators, beam loading, particle-in-cell simulations 7−104462
Alfven waves of kinetic type, macroscale particle simulation 7−142448
auroral double layers, particle simulation 7−117736
catalysed-D tandem mirror reactor, central cell plasma performance calcs. 7−67985
classical one-component plasma, surface properties, Monte Carlo simulations 7−142495
collisionless plasma, quasiperpendicular shock wave interaction 7−137083
column sustained by EM surface wave, model *(Portuguese)* 7−123894
core-boundary layer plasma transport in Tokamaks, simulation 7−75870
diffusion of a plasma subject to neutral beam injection 7−83429
divertor plasmas, analytic model for flow reversal, impurity transport appl. 7−130850
double layer simulation and transport in discrete arcs, auroral circuit model 7−117737
drift waves, nonlinear 2D, evolution numerical simulation 7−123869
EIV axisymmetric plasma equilib. code for compact torus 7−97774
electromagnetic direct implicit plasma simulation 7−142493
electromagnetic field algorithm for 2D implicit plasma simulation 7−117755
electron beam injection into ionosphere and magnetosphere plasmas, space charge effects 7−115159
electron beat-excited plasma waves, electrostatic mode coupling study 7−104392
electron cyclotron current drive efficiency for top-launched extraordinary mode in Tokamak 7−111175
electron plasma in strong mag. field, many-particle adiabatic invariant 7−142496
electrostatic drift wave turbulence, numerical simulation 7−111223
equilibrium simulation in Tokamak 7−135547
finite β reversed field pinch, relax. process, simulation study 7−83513
fluorescent lamp plasma simulation while considering elec. wiring *(German)* 7−75869
fluorescent lamp plasmas, computer modelling 7−75868
global confinement, fluctuations, transport study 7−111188
glow discharge in air, attachment instability onset, num. simulation 7−117773
gyrokinetic particle simulation model 7−142494
heating through supercritical oblique collisionless shock propag., electron and ion dynamics 7−83506
high voltage applied-B ion diodes design and simulation for inertial confinement fusion 7−104441
hybrid simulation of ion beams in background plasma 7−83529
hydrodynamic computer codes, interaction of charged particle with fusion material 7−135600
ion acoustic turbulence electron heating in simulated low Mach number shocks 7−137080

plasma simulation continued
ion-beam driven fusion targets, energy deposition study 7−130913
kinetics direct statistical simulation, collision integral *(German)* 7−137123
laser-irradiated plasma, stimulated Raman scatt., ion mobility influence 7−69359
Liouville theorem and accurate plasma simulation 7−83454
low Earth orbit plasma anomalous interaction with solar array modules 7−144859
lower hybrid heating and current drive, numerical modeling 7−83500
magnetic multipole plasma source, primary electron orbits, 3D computer simulation 7−69447
magnetic reconnection nonlinear growth in tearing-type field geometry 7−123861
MHD, ideal linear stability problem, finite element anal. 7−137057
MHD combustion chamber, plasma flow and mixing simulation of lignite gasification products 7−91305
multidimensional particle codes, modeling of space and lab plasmas 7−69446
nonlinear plasma phenomena due to non-reson. current-driven mode, num. simulation 7−69349
nonneutral plasmas, streamlined Darwin simulation 7−83530
optical efficiency of lightning in planetary atmospheres 7−127750
particle simulation of electromag. phenomena, Fourier-space iterative technique calcs. 7−69449
plasma modeling conf., Nagoya, Japan (Sept. 1985) 7−115693
plasma transport problems, finite difference and simulation methods, comparisons 7−104446
plasmadynamic discharges, radiating, erosion-type magnetoplasma compressor, numerical simulation 7−142521
polarisation charge layers, electrostatic particle simulation code 7−142497
potential form. and thermal insulation between different temp. plasmas 7−91290
radiation-driven thermally unstable planar fluid, nonlinear evolution, solar atm. appl. 7−107709
reactor-size inertial fusion targets ignition and burn propag., 3 temp. simulation 7−130908
relativistic electron beam focusing calcs. and simulation 7−103727
reversed field pinch, nonlinear coupling effects on relaxation process 7−123941
reversed field pinches, current and heat flux, electron density control 7−69409
rotamak plasmas, power balance models 7−109472
rotating-arc circuit breaker radial stability model *(French)* 7−130962
sausage instability simulation in Z-pinch at plasma sheath motion stage 7−69351
scrape-off region of pump limiters, plasma transport, 2D modelling 7−75769
shock, perpendicular, collisionless, supercritical, viscous, nonresistive 7−130921
stellarator, ripple transport, hybrid Monte Carlo simulation 7−142485
stimulated Raman scatt. in inhomogeneous density plasma, stimulated Brillouin scatt. effects 7−97752
TCV tokamak, startup simulation, resistive MHD calcs. 7−137119
thermal plasma jet reactors and multiparticle injection, simulation calcs. 7−69448
theta pinch, implosion phase, plowed plasma, shift to back of current sheath 7−137113
tokamak, high β, plasma form. and equilibr. 7−137115
Tokamak m=1 convection cell, sawtooth activity, resistive MHD simulations 7−97782
tokamak plasma, tearing mode interactions, reduced MHD modelling 7−142459
tokamak simulation, hydrodynamic and MHD eqns. 7−111202
tokamaks, turbulent transport theory and simulation, review 7−117754
toroidal geometry, stability of ideal and resistive internal kink modes 7−130860
toroidal plasma, linear stability anal., particle simulation 7−142460
Townsend discharges, spatial nonuniformity at low pressure 7−111294
two-ion species plasma propagation and heating due to ion-Bernstein wave 7−111218
wakefield accelerator, ion beam excitation of ion plasma waves simulation 7−104422
wakefield accelerator expt. simulation 7−104461
Weibel instability, collisional effects 7−83459
Z-pinch, equilibr. states, emission and thermal cond. *(German)* 7−137110
Al plasma, laser-produced, thermal transport models, X-ray meas. 7−69462
Al thin slabs, proton stopping, numerical simulations 7−69376
Cu split-foil plasma, laser vaporised, electron density, hydrodynamic simulations 7−130896
D-T spin polarised fuel in high gain ICF targets 7−122071
N_2 glow self-sustaining discharge with multisection cathode, spatial struct. dynamics 7−124009
$N_2(N_2-CO)$, beam-driven discharges, heating studied by interferometric method 7−97825
SF_6 expanding-gaps and rotating-arc circuit breaker optical diagnostics *(French)* 7−130963
TP-D plasma source discharge mechanism, numerical simulation 7−96428

plasma sprayed coatings *see plasma arc sprayed coatings*

plasma spraying *see plasma arc spraying*

plasma switches
diffuse discharge switching characts., photodetachment effects 7−97810
dynamic reflectivity switching of IR lasers 7−141914
erosion opening switch, high voltage, high power operation 7−97811
erosion opening switch operation at long cond. times 7−69492
erosion switch, polarity effect 7−117765
inductive storage-plasma erosion switch system parameters *(Russian)* 7−117767
plane plasma channel form. during optical breakdown, switching appls. 7−111290
pulse-operated gas-dynamic gate 7−102576

plasma temperature
AAEC rotamak, equilib. config., props. determ. 7−75886
active beam diagnostics, highly charged impurities effect on ion temp. 7−142500
air, nonequilibrium microwave discharge, gasdynamic propag. 7−69497
air arc discharge plasma in plasmatron temp., external acoustic field influence 7−111285
air at atmospheric press., long continuous laser spark, emission spectrum 7−97827

plasma temperature continued
air plasma, low temp., effective number of electron collisions 7−75799
anomalous energy transport, tokamak transport code simulations with drift wave models 7−69315
arcs, density and temp. profiles, CW laser scatt. 7−111295
arcs, radial temperature distributions, spectroscopic measurements 7−97838
auxiliary heated tokamaks, temp. profile and transport scaling modelling, JET appl. 7−103201
beat-wave generation, electron plasma waves plasmons and electromag. cascading study 7−104394
bootstrap current and sawtooth activity in tokamaks 7−130833
boundary corrugated parallel plate waveguide filled with uniaxial warm drifting plasma, EM wave propag. 7−104414
catalysed-D tandem mirror reactor, central cell plasma performance calcs. 7−67985
collisionless plasma, electron temp. gradient driven mode stability 7−111209
collisionless plasma, ion temp. gradient driven modes, finite beta effects 7−142453
collisionless plasma, quasiperpendicular shock wave interaction 7−137083
collisionless plasma in strong mag. field, transport eqns. 7−69313
constricted type plasma source, pl. density and electron temp. enhancements 7−97763
current and temperature profiles in JET, MHD processes 7−91293
current flow in weakly ionised boundary layer, nonlinear regimes stability 7−97711
cylindrical plasmas, elec. field profiles in ion cyclotron range of freqs. 7−111208
discharge lamps, high pressure, radiation transport processes and temp. distrib. 7−130971
DITE limiters, wall loading, Monte Carlo neutral particle transport code 7−69365
double layers, driving mechanisms 7−117729
Doublet III, electron cyclotron heating in overdense plasma 7−130888
Doublet III tokamak, pellet fuelled discharges, penetration and ablation 7−130887
dust particles charging in plasma for various plasma characts., astrophysical appl. 7−107719
ECR plasma, electron temp. anisotropy 7−123844
edge region diagnostics and transport in the TEXT tokamak 7−75828
electricity, direct conversion from plasma thermal energy, self-organization process 7−139119
electron cyclotron waves, parallel-propagating, thermal effects 7−91318
electron temperature and density profiles in tokamak TJ-1 by Thompson scattering *(Spanish)* 7−83532
electron temperature meas. by X-ray absorber foil method on TFTR 7−91319
electron temperature meas. errors using Langmuir probe in mag. field 7−83422
electrostatic ion temp. gradient driven drift modes, dispersion relation 7−123859
elongated high-temp. dense plasma prod. by laser heating in capillary discharge 7−97772
entropy principle for Tokamak profiles 7−111259
expanding plasma, laser light reflection 7−75798
Fermionic plasma confinement in pot. barrier, exchange effect 7−83524
finite-β ion mixing mode in sheared magnetic geometry 7−91323
FTU device, design 7−122086
fuel pellet injection, m=1, n=1 oscillations in tokamak 7−123944
GAMMA 10 tandem mirror, electron temp. meas. by electron cyclotron emission 7−111258
gas discharge laser diagnostics, density, temp. and level population distrib. *(German)* 7−130940
global confinement, fluctuations, transport study 7−111188
high pressure discharges, transient phenomena and discharge parameters 7−130970
high resolution spectrometer design for ultra-high temp. plasma diagnosis 7−111272
high-temperature plasma, hydrodynamic beam instability, nonlinear theory 7−130867
highly-ionised atoms, spectral lines, fusion plasma diagnostics 7−111274
Hiroshima Torus-1, MHD activity and peripheral plasma electrostatic charact. *(Japanese)* 7−137105
hot and cold plasma, technology, characts., generation and appls. *(German)* 7−137092
hot dense plasma radiative processes 7−123840
hot electron energies reduction 7−142481
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
inert gas plasmas, electron temps. calcs. in low electric fields *(Japanese)* 7−130840
ion temp. meas. based on neutral beam scattering, comment on discrepancies 7−123993
ion temp. meas. based on neutral beam scattering 7−123992
ion-acoustic solitons in warm 2-ion plasma, ionic temp. effects 7−97738
ion-ion acoustic instability in Vlasov plasma, num. solns. 7−91313
ionisation-superheating instability in self-maintained discharge, self-similar solns. 7−69348
JET, evolution, present status and prospects 7−74027
JET, hot ion regime, α particle heating study 7−104428
JET, ICRF heating, plasma edge modification and impurity prod. by antenna phasing 7−129401
JET, plasma behaviour, initial results, impact on fusion development 7−123971
JET, plasma confinement and heating 7−96320
JET, prospects for α-particle heating in hot ion regime 7−103200
JFT-2M, H-mode transition, electron cyclotron emission, peripheral electron temp. 7−97704
JFT-2M tokamak, electron heating and current drive by fast waves, numerical study 7−69390
JIPP T-IIU tokamak, ICRF heating, radiation loss and impurity abundance, spectroscopic and bolometric meas. 7−75837
JIPP-T-II-U Tokamak, diagnostics using time-resolved Ti^{20+} X-ray spectra 7−123987
Langmuir probe, thermal evolution and plasma characteristics hysteresis, num. soln. *(French)* 7−75873
Langmuir probe and optical emission spectrosc. obs. 7−137132
laser plasma, electron temp., X-ray emission spectra 7−83533
laser produced plasma, three-halves harmonic spectra 7−123926

plasma temperature continued
laser-sustained plasma, temp. distrib., Hamilton-Jacobi eqn. in homogeneous windfield 7−117746
local ion temperature gradient in PLT, fission product meas. 7−69317
local temperature, meas. without Abel inversion 7−142511
magnetic cusp systems, nonadiabatic confinement, ion and electron temp. 7−83511
magnetosonic waves, nonlin., oblique propag. 7−91317
measurement from self-reversed spectral lines 7−104448
MHD, double adiabatic relax. and stability study 7−91303
MHD, T-layer formation and stabilisation conditions, magnetogasdynamic eqns., MHD generator appl. 7−137061
micropinch, high temp. and superdense, radiative collapse model 7−69442
microwave resonant plasma heating, electron temperature, surface explosion 7−69382
mirror plasma, rigid mode ballooning instability, resistive effects 7−97729
multipoint Thomson scattering system for the EXTRAP Z-pinch experiment 7−111271
neutral beam heated and ohmically heated plasma, X-ray pulse height anal. 7−142512
neutral beam heating in JT-60, energy confinement and profile characteristics 7−123970
nonequilibrium plasma, temp. meas. using spectral line shapes 7−97789
nonlinear evolution of a wave packet propagating along a hot magnetoplasma column 7−91316
nonlocal thermal equilibrium plasmas, ionis. balance and L-shell spectroscopy 7−137127
O_2, plasma, electrical cond., electron temp. and ionis. degree depend. 7−91282
OHTE reversed field pinch, operation with graphite walls 7−69406
open-ended reactors, α particle dynamics study 7−104426
parameter evolution during ion Bernstein wave heating, edge effects 7−75796
partially absorbing plasmas, components temp. and density, single-wavelength interferometry 7−130937
plasma column development in the CO_2 laser-heated solenoid 7−137103
plasma focus anode, dynamic temp. meas. 7−69468
plasma sheath evolution in plasma focus device final stages, diagnostic investig. 7−69373
PLT, particle transport and confinement, density depend. 7−69413
poloidal asymmetries in the scrape-off layer plasma of the Alcator C tokamak 7−69309
poloidal divertor neutraliser geometry, scrape-off plasma temperature and density 7−75853
potential form. and thermal insulation between different temp. plasmas 7−91290
production apparatus for high temperature plasma *(German)* 7−137093
pulsed discharge, temp. determ. from asymmetrically self reversed spectral lines 7−124032
pulsed discharge plasma in electrolyte, electron temp. and density determ. 7−75899
radial electron thermal diffusivities, turbulent heating pulse in TORTUR tokamak 7−97715
radiation overcooling of bulk-ionised multiply charged ion plasma 7−123915
radiation-driven thermally unstable planar fluid, nonlinear evolution, solar atm. appl. 7−107709
relativistic collisionless plasma, ion acoustic solitary waves, ion temp. effect 7−123973
relativistic electron beam-plasma interactions, targets, Langmuir probe investig. 7−97805
resistive helical mode instability of a current carrying plasma column with a free boundary *(Chinese)* 7−91306
reversed field pinches, ion temp.-gradient-driven drift mode, field-aligned current effects 7−97785
RF generated plasma, elec. meas. using driven electrostatic probe 7−117758
RFX, exptl. results, design and construction 7−122088
sheath pot. in tokamak edge plasma using retarding field analyser 7−75826
stellarator reactors, convective equilib. and mixing-length theory 7−97713
surface wave discharge in a conical tube 7−117780
T-10 tokamak plasma, energy confinement during electron cyclotron heating *(German)* 7−137107
tandem mirror, central cell density, electrostatic end plugging 7−142487
tandem mirrors, electron distrib. and confinement instability study 7−142484
TEXT, intra-island scoop limiter expt. tests 7−67999
TEXTOR Tokamak, Langmuir probe meas. during ALT-I pump limiter expt. 7−97803
TFTR, electron temp. profile shape study 7−142441
TFTR, high temp. plasmas, neutral beam injection 7−74073
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
thermionic converter, emitter sheath ion reflection and trapped ion effect 7−111283
Thorello, toroidal magnetised plasma, diagnostics eval. 7−75860
TMX-U tandem mirror, edge plasma ICRH effects 7−69405
tokamak ballooning stability, α particle prop. effects study 7−104401
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
Tokamak $m \approx 1$ convection cell, sawtooth activity, resistive MHD simulations 7−97782
tokamak plasma, banana drift motion, Maxwellian distrib. distortion 7−69401
tokamak plasma, gun-injected plasma trapping 7−142515
tokamak plasma, sawteeth, electron temp. oscills. 7−123962
Tokamak plasma, self-organisation of temp. and current-density distribs. 7−123933
Tokamak plasma heating by wave damping, review 7−97765
Tokamak plasmas, microturbulence, density fluctuation spectrum 7−75843
tokamak plasmas, X-ray emission investig. review 7−137129
tokamaks, burn temp. control and stabilisation study 7−104407
tokamaks, electrostatic and EM turbulence, anomalous transport study 7−111179
tokamaks, sawtooth phenomenon study 7−142447
toroidal confinement, anomalous transport, scaling laws, invariance principles 7−111180
toroidal stellarator, HF AC inductive heating 7−117752
plasma temperature continued
toroidal stellarators, electromag. radiation propag. near electron cyclotron freq. 3-D ray tracing approach 7−69355
two-electron temperature plasma, stimulated Raman scatt. 7−75797
V-20 torsatron, internal disruptions, MHD activity 7−69402
wall probes current-voltage characts., study in TEXTOR tokamak, secondary electron emission effects 7−75803
wall sheath effects on transport 7−137089
weakly-coupled plasma, longit. diffusion coeff. and temp. relaxation time 7−97707
X-ray characterization of picosecond laser plasmas 7−130931
X-ray source, laser prod. plasma, radiative characts., conversion efficiency 7−123925
Z-pinches, appls., review 7−69429
ZT-40M reversed-field pinch D and impurity fluxes, collector probe meas. 7−69407
Al laser-produced plasma, coronal region, radiative preheat, X-ray generation 7−69396
Al plasmas, laser-produced, UV-visible spectroscopy 7−117743
Ar inductively coupled plasma, impurities spatial distribs. study 7−130834
Ar inductively coupled plasma, analyte species excitation temp. meas. using atomic emission spectra 7−133012
Ar ions, temp. and velocity meas. using Ar ion laser 7−123989
Br plasma laser produced, temp., ionisation balance form L X-ray spectra 7−104450
C ablation plasma, laser hole boring, emission spectra study 7−68244
CO-N_2 mixture, non self-sustained discharge study 7−137145
CO_2 lasers, high pulse repetition frequency for use in manufacture, output power prediction 7−82678
Cd spark-recombination laser, electron temp. in plasma 7−96979
Cu I and II, plasma jet, Stark width meas. 7−90037
Cu split-foil plasma, laser vaporised, electron density, hydrodynamic simulations 7−130896
Fe XVIII in tokamak plasmas, electrons density sensitive line ratios 7−123854
H, density and temp. distrib. near discharge chamber wall 7−83417
H plasma, tandem multipole, plasma parameter meas. 7−69464
H plasma generation for beat wave expts., multiphoton ionisation, electron density anal. 7−104432
H, two-temperature nonequilibr. plasmas, atom-atom inelastic collisions 7−123841
H-D plasma, Balmer α transitions, visible spectra, ion dynamic effects 7−129640
H_2, plasma, electrical cond., electron temp. and ionis. degree depend. 7−91282
H_β line profile, glass-to-plasma boundary layers influence 7−83484
He inductively coupled plasma, energy transfer, ionisation processes, heavy inert gas atoms effect 7−130830
He, longitudinal flow, discharge parameters, metastable states effects 7−124030
He plasma, prod. by arc stabilised by axial mag. field *(French)* 7−91338
He plasma, prod. near ceramic surfaces, temp. and electron density distrib. 7−75872
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
He-Cd expanding plasma, Cd ion excitation 7−75760
K and Cs seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628
K plasma, magnetic field effect on heat transfer, expt. study *(Russian)* 7−97708
K plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
K-Ar plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
N, active, microwave-induced afterglow, excitation temps. 7−124007
N plasma, high temp., absorpt. cross sections 7−130843
N_2, oxidation in nonequilib. weakly ionised plasma, temp. effects, numerical model 7−144686
N_2^+ emission band, partially resolved, for temperature diagnostics 7−97791
Na cylindrical plasma, electron temperature measurements, effects of inhomogeneities, optical depth and finite bandwidth 7−123843
Na Z-pinch plasma, spectroscopic anal. for X-ray-laser pumping efficiency 7−117751
Ne II spectral lines in pinch discharge, Stark widths and shifts 7−75885
O_2 plasma, Langmuir probe and optical emission spectrosc. obs. 7−137132
O_2, plasma subject to alternating electric field, electron density and temp. 7−75759
O_2^- ions in nonequilib. plasma, form. and breakup, electric field effects 7−83414
SF_6-N_2 mixtures, decay of wall stabilised arcs 7−69502
Ti plasma, He-like, time resolved spectra 7−69465
Ti X, θ-pinch plasma, electron-impact excitation, spectral line intensities study 7−91286
U plasma, oscillator strengths, emission spectrum 7−97842
W alloys, sputtering, redeposition and plasma impurity reduction in mag. fusion devices 7−74049
Xe, diffuse and contracted discharges, plasma decay rate 7−69496
Zn-like ions in PLT tokamak, intercombination line study 7−117760

plasma theory
see also Debye-Huckel theory
1D time dependent potentials, rational functions of momentum as invariants, basic theory 7−67057
air, plasma, thermodynamic props. Calc. 7−69310
air plasma, low temp., effective number of electron collisions 7−75799
air-Cu plasma, composition and concl. *(French)* 7−83434
alpha particle effects, automated computational tool develop. 7−104373
anisotropic velocity distributions relax., Fokker-Planck calcs. 7−137051
anomalous Doppler reson., classical single-particle dynamics 7−137086
auxiliary heated tokamaks, temp. profile and transport scaling modelling, JET appl. 7−103201
bumpy tori, wave damping, quasilinear heating, radial transport 7−111249
Cauchy problem of flux function eqns., projection-iteration method calc. *(Chinese)* 7−97698
charged particle in EM field, gauge-invariant Hamiltonian 7−122804
charged particle trajectories relationship with mag. field lines 7−111187

plasma theory continued
cold ion-ion hybrid resonance, numerical modelling for ICRF heating 7−142477
collisional relax., Boltzmann integral, Fokker-Planck approx. failure 7−111160
collisionless cold plasma, solitons 7−69328
collisionless cold plasma, two-dimens. hydrodynamic model, soliton solns. 7−104378
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
crossed EM field system, ion reson. motion, discharges *(Japanese)* 7−130966
D-T plasma with injected beams, distrib. and α particle prod., coupled model eqns. 7−104375
dense one-component plasma in mag. field, velocity autocorrelation function, long-time behaviour 7−111173
dense plasmas, thermodynamics, transport coeffs. and dynamic correlations, review 7−83430
dipole oscillator in an anisotropic medium, EM fields 7−90481
disk-shaped one-component plasma, shape dependence of dielectric susceptibility 7−73182
disordered systems of small metal particles, collective optical resonances 7−90508
drift cyclotron loss cone dispersion rel. in cylindrical geometry, nonlocal effects 7−83460
edge and boundary modes, magnetic line reconnection and flux merging 7−104385
edge plasma of limiter tokamak, two-zone model for wall-released impurities transport 7−104380
electric microfield distrib., reference hypernetted chain eqn. 7−117702
electrical conductivity, self energy and vertex corrections, linear response theory 7−137054
electricity, direct conversion from plasma thermal energy, self-organization process 7−139119
electromagnetic beam modes driven by anisotropic electron streams 7−104398
electromagnetic waves in hot magnetised plasma, local power absorpt. density formulation 7−75763
electron-cyclotron heating, MHD activity increase 7−83475
electrons in external fields, generalised coherent states, appl. to pot. scatt. 7−122807
energy confinement in JET ohmically heated plasmas 7−111178
envelope solitons, stability properties 7−95363
equilibria in an ellipsoidal co-ordinate system 7−97780
field solution for oscillating dipole in anisotropic plasma medium, inverse Fourier transform. anal. 7−127633
fluctuation spectra, generalised Hamiltonians, functional integration and statistics 7−111170
force-free magnetic field, $\nabla\times a = ka$ model 7−67043
generalised plasma in 1D, partition function evaluation 7−91287
group Doppler effect in anisotropic plasmas 7−145813
Hamiltonian system, expression for change in adiabatic invariant 7−83411
Hamiltonian systems, nonlinear stability, energy-Casimir method 7−137062
high frequency emissions from crit. vel. rot. plasma 7−130846
high-temperature plasma, hydrodynamic beam instability, nonlinear theory 7−130867
homeostasis in plasma confinement 7−97788
hot and cold plasma, technology, characts., generation and appls. *(German)* 7−137092
hot dense plasma, elec. resistivity calcs. 7−117708
inert gas plasma, low-temperature, ionisation kinetics 7−104376
inert gas plasmas, electron temps. calcs. in low electric fields *(Japanese)* 7−130840
inhomogeneous magnetised plasma, two mode conversion *(Chinese)* 7−111205
inhomogeneous plasma slab, ideal compressible MHD 7−111201
interaction of particles with cavitons in plasma *(Chinese)* 7−97706
inverse scattering problem for 3D plasma wave equation 7−91294
ion acceleration during EM radiation interactions, parametric instabilities 7−83474
ion cyclotron drift waves, controlled radial density distributions 7−83457
ion-ion acoustic instability in Vlasov plasma, num. solns. 7−91313
ionisation-superheating instability in self-maintained discharge, self-similar solns. 7−69348
ionised plasma flow near electrodes, method for solving Crook's self-consistent eqn. 7−123865
JFT-2M tokamak, electron heating and current drive by fast waves, numerical study 7−69390
kinetic effects in a nonsteady plasma 7−97701
kinetics direct statistical simulation, collision integral *(German)* 7−137123
Langmuir and ion-acoustic waves, collisional damping, coupled nonlin. Schrodinger eqn. derivation 7−75788
Langmuir soliton stability, investig. by catastrophe theory 7−83473
Langmuir turbulence models, num. comparison 7−83482
Langmuir waves, self-focusing and anisotropic collapse, inverse scattering method 7−117714
laser plasmas, stimulated scatt. theory 7−69358
light scattering, fundamental aspects and diagnostic appls. 7−130847
low-density multicomponent plasma, thermodynamics, virial expansion 7−137053
Lyman-α reson. scatt. in electrostatic field 7−111237
magnetic field line equations, Hamiltonian formulation, orthogonal curvilinear coord. systems 7−142442
magnetic quadrupole, intermediate-frequency flute modes 7−137070
magnetically confined plasma, EM wave current drive, elec. field effects 7−111260
magnetised plasma, longit. dielectric const., toroidal effects *(German)* 7−137112
magneto-turbulent plasma, charged particles relative spatial diffusion, global anal. 7−97709
magnetoactive absorbing plasma, EM wave reflection from parabolic layer 7−130875
magnetoplasma confinement augmentation by E×B drift fields 7−69431
matter, universe and plasma, hypothesis of impossibility of identical individual particles *(Rumanian)* 7−80277
MHD equations, 3D, resistive, soln. using semi-implicit algorithm 7−91349
modified convective cells in plasmas coupled eqns. 7−91295
multicomponent gases, appl. of hydrodynamic eqns. to ICF 7−75741
plasma theory continued
multicomponent plasma with electromagnetic interactions, kinetic props., BBGKY hierarchy 7−123842
multispecies Maxwellian plasma, Fokker-Planck eqn. soln. for high energy ions 7−130837
neutral atom transport, 2D finite element multigroup diffusion theory 7−117707
neutral transport in plasmas with velocity dependent charge exchange collision frequency 7−91298
nonisothermic plasma, dispersion hydrodynamics, soliton shock wave fronts and self-similar discontinuities 7−117711
nonlinear electron dynamics, in coherent wave packet, Fokker-Planck description 7−123891
nonlinear eqns., rescaling methods 7−111176
nonlinear ion-acoustic waves and solitons, self-focusing, num. simulations 7−91315
nonlinear kinetic Fokker-Planck eqn. soln. *(Russian)* 7−83391
nonlinear optical processes, Kramers-Kronig relation 7−110446
nonlinear three-wave interaction projection operator techniques 7−111219
nonuniform plasmas, RF wave current driving, kinetic theory *(Chinese)* 7−111164
nonuniformly magnetized inhomogeneous plasma, dielectric tensor operator and electromagnetic perturbations 7−97702
numerical modeling of physical processes in a microwave plasma generator 7−83416
one component 2D plasma, sum rules and perfect screening conditions 7−75762
one-component plasma, transition from monotonic to oscillatory decay of correlations 7−111169
one-component plasma, two-dimens., direct correlation fn. at $\Gamma=2$ 7−91288
one-component plasma in external field mode coupling contrib. to transverse transport coeffs. 7−75771
one-component plasma in uniform magnetic field, time-dependent correlations 7−111196
optical discharge, continuous, in converging beam, 2D linearised model 7−97770
passive advection transport by inhomogeneous turbulence, upper bounds 7−142466
phase space-Lagrangian action principle, generalised L-χ theorem 7−123884
plasma column, confinement, Troesch's problem 7−75866
plasma kinetic theory, nonMarkovian investig. 7−83418
plasmon$\rightarrow\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
pulsed plasma discharge, chaotic behaviour and period doubling 7−137052
radial inhomogeneities, local parameters reconstruction method 7−111166
radiative Gaunt factors evaluation for complex ions, numerical methods 7−94654
radio wave propagation in a plasma with highly anisotropic moving irregularities 7−111239
rarefied gas, Bennet distrib. transform. 7−75867
Rayleigh-Taylor hydromagnetic instability in cylindrical plasmas, potential flow model 7−130855
reacting plasma, strongly coupled, partially ionized, scatt. theory methods 7−130835
realistic reflection model for plasma edge calcs. 7−75807
relativistic plasma, drift effects, kinetic description 7−91360
relativistic plasma kinetic theory with self-consistent Maxwell field, canonical-dissipative formulation 7−83528
resistive helical mode instability of a current carrying plasma column with a free boundary *(Chinese)* 7−91306
resistive interchange modes, influence of equilib. flow 7−104384
resonant absorption in a plasma step profile 7−83439
reversed field pinch, oscillating-current, quasistatic 2D MHD equilibrium calcs. 7−83514
rotating plasma, ionisation instability 7−130856
rotating plasma in vacuum arc centrifuge, steady-state behaviour 7−97743
rotation equilibria of rigidly rotating, fully ionised plasma column 7−97740
runaway electrons, kinetic theory 7−69308
Schrodinger equation, solitary wave soln., appl. to plasmas turbulence 7−75793
single-particle motion, ponderomotive force effect 7−122805
sinh-Poisson eqn., vortex equilib. states, exact solns. 7−108389
soft X-ray photons Comptonisation in optically thin hot plasma 7−79824
solitons and instantons, operator quantization 7−115696
spherically-symmetrical solar wind-like plasma systems, theoretical non-Maxwellian particle vel. distrib. functions 7−104383
stationary spectra of magnetic plasma excitations *(Russian)* 7−142465
statistical mechanics of partially-ionised stellar plasmas, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
statistical plasma physics, conf., Nagoya, Japan (Feb. 1986) 7−66836
STP-3(M) reversed field pinch, equilibr. study 7−97787
surface wave sustained plasma, HF field, processes and modeling *(German)* 7−130892
three pole approximations for the plasma dispersion function 7−97705
tokamak, sawtooth oscillation, temperature rise phase, electron heat conduction coeffs. 7−123935
tokamak physics, overview 7−122078
tokamak plasma, banana drift motion, Maxwellian distrib. distortion 7−69401
tokamak plasma, X-ray emission processes, diagnostic appl. 7−75859
tokamaks, turbulent transport theory and simulation, review 7−117754
toroidal magnetic confinement, expt.-theory comparison, energy transport and instabilities 7−83526
toroidal magnetic confinement fusion device, mag. field lines struct., Hamiltonian stochasticity 7−130918
toroidal plasmas, nonaxisymmetric, neoclassical fluxes in plateau regime 7−69425
toroidal plasmas, transport and the bootstrap current 7−137055
turbulence expansion, Zakharov eqns., kinetic theory derivation 7−111168
turbulent magnetised plasma, quasilin. renormalisation theory 7−97742
two-component plasma, strongly coupled, transport props. 7−123846
Vlasov eqn., convergence rate of particle method *(Russian)* 7−91292
Vlasov eqn., second invariant determ. 7−75764
Vlasov-Poisson system, existence and uniqueness theorem 7−137056
vortices and solitons in plasmas, nonlinear wave eqn. review 7−130849
warm electron plasma, nonlinear wave dynamics 7−69334

plasma theory continued
wave-particle interactions, reson. Lie transform theory 7−104377
weakly ionised plasmas, electron-velocity distrib. fns., perturbation expansion 7−142437
weakly ionized plasma in continuous field, thermodynamic props., dissipative mech. *(French)* 7−142439
X-ray lasers, population inversions in highly ionised plasma 7−110340
Z-pinch theory, appl. to pulse technology 7−69444
Ar discharge, electron distrib. fn., excited state effects for discharge and post-discharge conditions 7−97824
C VI in plasma XUV gain, model calcs. 7−91301
CO, RF plasma, Boltzmann eqn., time-depend. Soln. 7−69311
D+D plasma, single α particle orbit calc. study 7−104371
H plasmas, ion acoustic wave dispersion relations and diagnostic appls. 7−123893
H, sorbed on Ni, reemission, coeff. calc. at fusion operating conditions 7−75808
H_2, RF plasma, Boltzmann eqn., time-depend. Soln. 7−69311
He, RF plasma, Boltzmann eqn., time-depend. Soln. 7−69311
He-like ions in dense plasmas, energy eigenfunctions 7−128347
Ne discharge, electron distrib. function kinetic eqns. soln. 7−69498
SF_6 plasma, standard thermodynamic fn. calcs. for diatomic components. 7−97699

plasma thermocouples *see plasma devices; thermocouples*

plasma torches *see plasma devices*

plasma transport processes
see also Vlasov equation
2XIIB magnetic mirror, particle gyration, gyrofrequency shift 7−123849
air afterglow cond. meas. following electron beam excitation 7−117779
air-Cu plasma, composition and concl. *(French)* 7−83434
Alfven waves, high-phase rel. compressional, heating and current drive 7−123920
ambipolar diffusion, effect on mag. braking of interstellar mol. cloud cores 7−88578
ambipolar diffusion in interstellar MHD shocks, chemical test 7−134294
ambipolar diffusion in ionised meteor track anisotropy of parameters assoc. with mol. processes 7−87989
anomalous energy transport, tokamak transport code simulations with drift wave models 7−69315
anomalous inward particle flux in tokamaks due to a thermoelectric-type effect 7−69314
arc cathode spot characterisation 7−69521
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
ASDEX divertor, pellet and gas puff refuelling, recycling study 7−69411
auxiliary heated tokamaks, temp. profile and transport scaling modelling, JET appl. 7−103201
axisymmetric toroidal plasma with RF wave source in Pfirsch-Schluter regime, transport theory 7−123848
beat-wave accelerator, Langmuir waves, temporal energy cascading study 7−104393
beat-wave generation, electron plasma waves plasmons and electromag. cascading study 7−104394
bootstrap current and sawtooth activity in tokamaks 7−130833
bumpy tori, wave damping, quasilinear heating, radial transport 7−111249
CASTOR Tokamak, radiative power losses, density depend. study 7−117705
charged particle diffusion in turbulent magnetoplasmas 7−123850
charged particle in mag. field vlasov eqn. soln. *(Russian)* 7−83437
charged particle trajectories relationship with mag. field lines 7−111187
charged particles stochastic energisation by plasma waves 7−94648
collective modes and generalized transport coefficients for a dense one-component plasma in a magnetic field 7−75773
collisional plasma, viscosity, distrib. function tensor moments in mag. field 7−83410
collisionless cold plasma, two-dimens. hydrodynamic model, soliton solns. 7−104378
collisionless plasma, electron temp. gradient driven mode stability 7−111209
collisionless plasma in strong mag. field, transport eqns. 7−69313
compact ignition Tokamak, physics aspects study 7−103181
compact tori, α-particle confinement 7−123930
compressible force free plasma, resistive-heating instability 7−137073
compressible plasma, finite Larmor radius and Hall effects on thermal instability 7−142463
conference, Cargese, France (July 1986) 7−108034
conference, Orsay, France (June 1985) 7−108029
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
core-boundary layer plasma transport in Tokamaks, simulation 7−75870
current diffusion in TEXT, poloidal mag. field diffusion equation 7−74067
current flow in weakly ionised boundary layer, nonlinear regimes stability 7−97711
current profile determ. by heavy-ion beam probing 7−69450
current sheet, mag. island form. 7−111275
cylindrical pinch, Hall current fluid, MHD eqns. 7−111200
cylindrical plasma, MHD instabilities realistic energy eqn. 7−111192
D-T plasma with injected beams, distrib. and α particle prod., coupled model eqns. 7−104375
dense one-component plasma in mag. field, velocity autocorrelation function, long-time behaviour 7−111173
dense plasmas, thermodynamics, transport coeffs. and dynamic correlations, review 7−83430
diffusion of a plasma subject to neutral beam injection 7−83429
diode, magnetically insulated, electron diffusion, leakage currents, Fokker-Planck eqn. soln. 7−97815
diode, magnetically insulated, ion motion direction and electron flux study 7−97814
discharge lamps, energy balance, radiation emission and absorption processes *(German)* 7−130972
discharge lamps, high pressure, radiation transport processes and temp. distrib. 7−130971
discharge plasmas, radiative processes, local thermodynamic equilib. *(German)* 7−130842
DITE limiters, wall loading, Monte Carlo neutral particle transport code 7−69365
DITE tokamak, gas puffed impurities toroidal dispersal 7−69414

plasma transport processes continued
divertor function in H-mode onset, and H-mode operation with island divertor 7−75854
divertor plasmas, analytic model for flow reversal, impurity transport appl. 7−130850
divertor plasmas, parametric anal. 7−75880
double layer form. conditions in magnetosphere 7−120217
double layer form. in magnetically confined plasma in magnetosphere 7−117733
double layer simulation and transport in discrete arcs, auroral circuit model 7−117737
double layers in triple plasma device, dynamical props. 7−117734
Drakon confinement system in MHD approx., equilib. and plasma loss 7−83509
drift wave low-freq. instability effect on Hall conductivity 7−145812
EBT, local power loss, convective contribs. 7−142488
ECRH and lower-hybrid current drive, trapped electron effect 7−137096
edge plasma of limiter tokamak, two-zone model for wall-released impurities transport 7−104380
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
edge region diagnostics and transport in the TEXT tokamak 7−75828
electrical conductivity, self energy and vertex corrections, linear response theory 7−137054
electromagnetic wave propag., relativistic self-focusing study 7−104412
electron acceleration in strong microwave fields 7−83435
electron and ion orbits in rotamak fields 7−91283
electron beam-plasma system, cross-field electron thermal conductivity 7−83431
electron beat-excited plasma waves, electrostatic mode coupling study 7−104392
electron cyclotron and lower hybrid current drive in tokamak plasmas, cross effect 7−97764
electron cyclotron current drive efficiency for top-launched extraordinary mode in Tokamak 7−111175
electron diffusion in Tokamaks due to EM fluctuations 7−123852
electron diffusion in weakly ionised plasma, effects of autoionisation states of negative ions 7−97710
electron plasmas, like-particle collisions, cross-mag. field transport 7−111162
electron-positron plasma accelerator, cyclotron autoreson. and laser radiation excitation 7−104463
electrons beat wave acceleration, Eulerian fluid model 7−104391
electrostatic drift wave turbulence, numerical simulation 7−111223
energy confinement in JET ohmically heated plasmas 7−111178
energy relaxation by the tail anisotropy instability during lower hybrid current rise 7−123847
erosion-redeposition and impurity transport in the scrape-off layer of the FT tokamak 7−75819
ETA BETA II reversed field pinch oscills., mag. field profile meas. 7−75789
fast ion kinetics and fusion reactor mechanism in plasma focus 7−91344
fast-wave current drive, polarisation converted coupler 7−111245
field generating thermal instability in laser-prod. plasmas, laser flux effects 7−130861
field-reversed configs., anomalous transport study 7−111183
field-reversed configs., radial transport code 7−123963
finite difference and simulation methods in plasma transport problems, comparisons 7−104446
flux meas. in shadow of scoop limiter on T-10 tokamak, probe meas. 7−75876
force balance equations for massless plasma in tokamak 7−91353
fully ionised plasma at low frequencies, electrical conductivity 7−83432
fully ionized plasma, transport props. semiclassical and quantum anal. 7−73282
fusion plasma, Boltzmann eqn. soln. using analytic, Monte Carlo and num. methods 7−74036
g-mode driven transport and resistive drift waves based on scale invariance 7−83456
gas discharge, inhomogeneity prop., ambipolar drift vel. *(German)* 7−137069
global confinement, fluctuations, transport study 7−111188
glow discharge positive column, current depend. on electron temp. and distrib. 7−83573
glow discharges, cathode regions study 7−137147
heat transport in partially stochastic tokamak magnetic fields 7−111261
heavy impurity fluxes in scrape-off layer of TEXTOR, pump limiter effects 7−75878
Heliotron E currentless plasmas, transport anal. of injected impurities, density depend. 7−130836
high recycling divertor edge layer, radially continuous 2-chamber model 7−75770
high Z plasma, short wavelength laser produced, dynamics, energy flow 7−117745
homeostasis in plasma confinement 7−97788
hot dense plasma, elec. resistivity calcs. 7−117708
hydrodynamic computer codes, interaction of charged particle with fusion material 7−135600
impure plasma with arbitrary toroidal rot., transport calcs. 7−91297
impurities, spatial distribution in boundary layer of DITE 7−75850
impurity influx behaviour in JET tokamak, visible spectra anal. 7−75848
impurity transport, 2-D calcs. for high recycling divertor 7−75767
impurity transport in TCA-Tokamak, integral collection probes investig. 7−69422
inert gas plasmas, electron temps. calcs. in low electric fields *(Japanese)* 7−130840
infinite plasma-wall sheath model, recombination, wall reflection and ambipolar diffusion effects 7−97753
inhomogeneous plasma, drift convective modes instability and saturation 7−111207
inhomogeneous plasma, turbulence, struct., transport, localised fluctuations 7−111233
interaction of particles with cavitons in plasma *(Chinese)* 7−97706
ion acoustic turbulence and heating of resonant ions 7−97739
ion beam diodes, intense, charge flow and plasma behaviour 7−69490
ion Bernstein waves, kinetic theory of stabilisation of interchange model 7−75784
ion distributions, distorted by ICRH in Tokamak plasma, anisotropic anal. 7−123851
ion drift self-alignment, collisional relax. anisotropy 7−111174
ion press. gradient driven turbulence 7−111232

plasma transport processes continued
ion-cyclotron waves absorpt. by drifting electrons 7−97733
ion-laser plasma, nonlinear resonances, Coulomb broadening 7−117764
ionosphere, 3D plasma cloud evolution in crossed E×B fields 7−145769
JET, isotope exchange expt. modelling 7−69416
JET, mag. fluctuations and confinement, anomalous transport 7−111265
JET plasma, Ne-like and adjacent ion recombination 7−75862
JET Tokamak, turbulence, heating, fluctuation meas. 7−111231
kinetic electromag. modes and quasilin. transport, collisional effects 7−91321
kinetic theory of anomalous transport processes in tokamaks 7−91296
kinetics direct statistical simulation, collision integral *(German)* 7−137123
L-2 stellarator, ECRH, Gaussian beam form. and transport 7−69379
Langmuir probe, thermal evolution and plasma characteristics hysteresis, num. soln. *(French)* 7−75873
laser created plasma with non Maxwellian electronic distrib., transport phenomena 7−69305
laser produced plasma, mag. field struct., collisional effects, dispersion relation 7−111161
laser pulse self-trapping, plasma fibre accelerator appl. 7−104413
laser-irradiated plasma, stimulated Raman scatt., ion mobility influence 7−69359
laser-sustained plasma, temp. distrib., Hamilton-Jacobi eqn. in homogeneous windfield 7−117746
local ion temperature gradient in PLT, fission product meas. 7−69317
local thermal equilib., molecular spectral intensities and line broadening 7−129793
long-scale-length plasmas, laser coupling, hydrodynamic phenomena 7−117744
lower hybrid current driven plasmas in Alcator C, energy confinement studies 7−69384
lower hybrid-driven plasma, selective electron-cyclotron heating at down-shifted freq. 7−111248
lower-hybrid current drive, anomalous Doppler instability 7−123880
magnetic dynamo in axisymmetric configuration with anomalous viscosity *(Russian)* 7−83436
magnetic fusion devices, equilibr. mag. fields, particle transport 7−111264
magnetic reconnection nonlinear growth in tearing-type field geometry 7−123861
magnetically confined collisional plasma, diffusion, nonlinear eqns. 7−111177
magnetically confined plasma, EM wave current drive, elec. field effects 7−111260
magnetised plasma, electrostatic turbulence, conditional sampling 7−111236
magnetised plasmas, current gradient driven flute vortices 7−123860
magneto-turbulent plasma, charged particles relative spatial diffusion, global anal. 7−97709
magnetoactive plasma, turbulent conductivity 7−69318
magnetoplasma, inhomogeneous cold rot. convective cell. Alfven vortices 7−111194
magnetotail, 2D model stability analysis 7−107667
metal vapour, arcs, current conducting channel near cathode, diffusion dominated phenomenon 7−75900
metal vapour, vacuum arcs, cathode plasma, electric cond. 7−75901
MHD, T-layer formation and stabilisation conditions, magnetogasdynamic eqns., MHD generator appl. 7−137061
MHD equilibria, minimum energy states 7−111204
minority ion heating current drive, num. investig. 7−91346
modified convective cells in plasmas coupled eqns. 7−91295
multispecies Maxwellian plasma, Fokker-Planck eqn. soln. for high energy ions 7−130837
negative charge carriers, investig. using volt-amp characts. of negative corona discharge 7−117777
neoclassical transport coefficients for finite-aspect-ratio and beam-shaped tokamak plasmas 7−83428
neutral atom transport, 2D finite element multigroup diffusion theory 7−117707
neutral atom transport, application of diffusion theory 7−69316
neutral transport in plasmas with velocity dependent charge exchange collision frequency 7−91298
neutron yield during H neutral beam injection in Doublet III 7−123951
nonlinear electrical conductivity for a strongly coupled plasma 7−130838
nonlinear eqns., rescaling methods 7−111176
nylon plasma, ablation-stabilised arcs, transport and thermodynamic props. 7−111297
one-component plasma, electronic screening effects, ion-sound and-plasma modes calcs. 7−111211
one-component plasma in external field mode coupling contrib. to transverse transport coeffs. 7−75771
open-ended reactors, α particle dynamics study 7−104426
passive advection transport by inhomogeneous turbulence, upper bounds 7−142466
PBX, impurity accumulation, diffusion coeff., diagnostics 7−69420
PBX, post-disruptive plasma loss modelling, transport and loss of stability 7−97726
Penning discharge with thermocathode, radial plasma density profile calcs. *(Russian)* 7−83425
Pierce diode, oscillatory nonlinear electron flow, cold fluid eqns., α depend. 7−97816
plasma armature in electromag. launcher, mag. flux contrib. 7−97818
plasma column, cylindrical, rot. mag. field current drive, azimuthal field effect 7−123857
plasma heating and particle refl. by a laminar magnetosonic shock wave 7−75842
PLT, particle transport and confinement, density depend. 7−69413
poloidal asymmetries in the scrape-off layer plasma of the Alcator C tokamak 7−69309
positron deposition in plasmas by positronium beam ionization and transport of positrons in Tokamak plasmas 7−97760
potential form. and thermal insulation between different temp. plasmas 7−91290
pulsed microwave discharge in waveguide, parameters meas., cond. method 7−91384
pure-electron plasma confinement, nonlinear collective processes 7−123961
radial electron thermal diffusivities, turbulent heating pulse in TORTUR tokamak 7−97715
radial fluxes due to resonant electrons in lower-hybrid current drive tokamak 7−97714
plasma transport processes continued
radial transport simulation in CT-6B tokamak during gas puffing 7−83426
radiation transport in presence of ionisation, stochastic wave-kinetic theory 7−139855
radiative transfer and collisional rate eqns., self-consistent solns. *(German)* 7−130841
reactor-size inertial fusion targets ignition and burn propag., 3 temp. simulation 7−130908
realistic reflection model for plasma edge calcs. 7−75807
relaxation to force-free states 7−123853
resistive ballooning modes and the second region of stability 7−111216
resistive interchange modes, influence of equilib. flow 7−104384
resistive press.-gradient-driven turbulence 7−111229
resonant particle diffusion tensor for HF EM mode propag. 7−137087
reversed field pinch, high valve pinch parameter discharges, MHD activity anal. 7−97783
reversed field pinch configuration transport, Monte Carlo simulation 7−97786
reversed field pinches, ion temp.-gradient-driven drift mode, field-aligned current effects 7−97785
RF discharge, low press. capacitive, electron vel. anisotropy 7−69510
RF discharge in EM wave fields, elementary dissipative structs. 7−124008
RF discharges, diagnostic techniques and appls., kinetic parameters meas. 7−130976
RF magnetron plasmas, turbulence-induced anomalous currents 7−83567
RFP, nonresonant current driven mode, nonlinear phenomena 7−97725
ring-stabilised devices, α particle dynamics effects 7−104406
rotamak plasmas, power balance models 7−109472
saturated tearing modes, turbulence and transport study 7−111226
sawtooth oscillations in Joule heating plasma 7−123895
scrape-off layer, fluctuations and transport, limiter effects 7−67997
scrape-off region of pump limiters, plasma transport, 2D modelling 7−75769
second harmonic electron cyclotron breakdown in stellarators 7−122072
sheath pot. in tokamak edge plasma using retarding field analyser 7−75826
similarity solution of two coupled reaction-diffusion rate equations 7−69304
solitary vortices in plasmas 7−97724
space-potential and density fluctuations in the ISX-B tokamak 7−142445
sputtered, atom transport in gas discharge plasma, density calc. 7−117709
statistical mechanics of partially-ionised stellar plasmas, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
steady-state current discharge, ion acoustic turbulence, heating, anomalous transport 7−83481
stellarator, ripple transport, hybrid Monte Carlo simulation 7−142485
stellarator L-2, plasma radiation and electron energy balance 7−83508
stellarator reactors, convective equilib. and mixing-length theory 7−97713
stellarators, ripple transport, Fokker-Planck eqn. soln. 7−123845
stellarators, ripple transport, unified theory 7−97712
stepped leader random walk model 7−115901
stochastic particle acceleration in an electrostatic wave 7−83464
stochastic web and diffusion of particles in a magnetic field 7−104379
structurally invariant plasmas, MHD stability in mag. confinement 7−130905
surface wave sustained plasma, HF discharge parameters, radiative processes and similarity relations *(German)* 7−130891
surface wave sustained plasma, HF field, processes and modeling *(German)* 7−130892
T-10 tokamak plasma, energy confinement during electron cyclotron heating *(German)* 7−137107
tandem mirror, central cell density, electrostatic end plugging 7−142487
tandem mirror, quadrupole MHD stabiliser, stability margin *(German)* 7−137108
Tandem mirror reactor thermal barriers, alpha particle-induced instabilities 7−104405
test ion cross-field transport in quiet plasma 7−142444
TEXT confinement, particle transport and electrostatic turbulence, Langmuir probe study 7−130904
TEXT tokamak, fluctuations and transport meas. 7−111185
TFR, internal disruptions, electron density fluctuations, microwave scatt. 7−111186
TFTR discharges, impurity behaviour 7−130929
TFTR discharges, ohmic and neutral-beam heated, impurity transport 7−69421
TFTR movable limiter and first wall particle inventories calcs. 7−75806
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
TIBER II, two fluid plasma transport modelling, JET/TFTR comparisons 7−103185
tokamak, sawtooth oscillation, temperature rise phase, electron heat conduction coeffs. 7−123935
tokamak ballooning stability, α particle prop. effects study 7−104401
Tokamak current profiles in MHD stable regime 7−83433
tokamak impurity diffusion at grill mouth due to lower hybrid heating 7−117706
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
tokamak plasma, α particle effects study 7−104425
tokamak plasma, canonical and limiting profiles *(German)* 7−137111
tokamak plasma, equilibr. and collisional transport 7−111182
tokamak plasma, mag. field-line reconnection, particle and energy transport 7−123856
tokamak plasma, profile consistency, nonlocal transport 7−111181
Tokamak plasma, self-organisation of temp. and current-density distribs. 7−123933
tokamak plasmas, α particle effects, conf., Aspenasgarden, Sweden (June 1986) 7−102009
tokamak plasmas, transport study using positrons 7−111189
tokamak with graphite wall and limiter, effective charge state 7−123929
tokamaks, α particle transport processes study 7−104372
tokamaks, anomalous current penetration and oscill. current drive 7−137114
tokamaks, burn temp. control and stabilisation study 7−104407
tokamaks, electrostatic and EM turbulence, anomalous transport study 7−111179
tokamaks, peripheral plasma states 7−75846
tokamaks, sawtooth phenomenon study 7−142447

plasma transport processes continued
tokamaks, turbulent transport theory and simulation, review 7−117754
tokamaks and mirrors, kinetic instabilities, α particle transport effects 7−104404
toroidal confinement, anomalous transport, scaling laws, invariance principles 7−111180
toroidal fusion plasmas, basic physical processes, conf., Varenna, Italy (Aug.-Sept., 1985) 7−115673
toroidal mag. confinement plasma, vortex soliton form. 7−123855
toroidal magnetic confinement, expt.-theory comparison, energy transport and instabilities 7−83526
toroidal plasma, MHD equilibr. profile form. 7−137058
toroidal plasmas, transport and the bootstrap current 7−137055
toroidal rotation and momentum transport 7−123969
toroidal stellarator, HF AC inductive heating 7−117752
toroidally rot. tokamak plasmas, ion transport 7−142443
TOSCA tokamak, turbulent transport, diagnostics 7−111184
trapping rates in thermal barriers of tandem mirrors 7−75772
turbulent magnetic diffusion and mag. field reversal 7−130874
turbulent transport processes energetics in Tokamaks, kinetic description 7−75795
two-component plasma, strongly coupled, transport props. 7−123846
unmagnetised collisionless plasma, electron/electron acoustic instability 7−142455
Versator II tokamak, lower-hybrid current drive, particle confinement 7−123966
viscous resistive magnetic reconnection 7−130859
Vlasov-Maxwell eqns. in 1D, Cauchy problem 7−83427
vortex motion in ion pressure gradient driven drift wave turbulence 7−123898
wakefield accelerator, driving electron beam stability 7−104421
wakefield accelerator, ion beam excitation of ion plasma waves simulation 7−104422
wakefield accelerator, nonlinear plasma oscills., relativistic electron beam excitation 7−104420
wakefield accelerator expt. simulation 7−104461
wall probes current-voltage characts., study in TEXTOR tokamak, secondary electron emission effects 7−75803
wall sheath effects on transport 7−137089
weakly ionised plasma, thermostress flow study 7−69322
weakly-coupled plasma, longit. diffusion coeff. and temp. relaxation time 7−97707
Weibel magnetic mode amplification in laser plasma 7−91328
Z-pinch, equilibr. states, emission and thermal cond. *(German)* 7−137110
Z-pinch, noncircular, MHD stability, free boundary modes viscous damping 7−97734
Al laser-produced plasma, coronal region, radiative preheat, X-ray generation 7−69396
Al plasma, laser-produced, thermal transport models, X-ray meas. 7−69462
Ar inductively coupled plasma, collision cross sections, transport coeffs. *(Chinese)* 7−117704
Ar jet, ionisation by microwave field, self-oscills. anal. 7−83407
Ar, nonequilibrium plasma, collisional-radiative coeffs. 7−69303
Au coated plastic targets, KrF laser irradiation, energy transport 7−130894
Ba plasma, relativistic electron beam propagation, current enhancement obs. 7−97758
Be release and transport in UNITOR tokamak 7−75768
C impurity flux in limiter shadow of TEXTOR 7−75766
Cs^+-electron recombination in presence of N_2, O_2 and CO_2 7−111163
Cu cathode erosion in plasma torches, polyatomic gas in Ar, conc. effect 7−130839
D-T plasma, steady state solution to a field reversed configuration 7−123942
H, density and temp. distrib. near discharge chamber wall 7−83417
$H_2B_4O_7$ plasma, ablation-stabilised arcs, transport and thermodynamic props. 7−111297
^3H pellet injection into hot ion mode ^2H plasma in tokamak 7−69386
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
^3He-D plasma, minority ion heating current drive, num. investig. 7−91346
^3He transport in TFTR, time evolution 7−123983
Hg, arc plasma, current and electron density under transverse mag. field 7−69493
Hg arc plasma, triplet lines, intensity current and mag. field depend., visible spectra 7−137126
K and Cs seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628
K plasma, magnetic field effect on heat transfer, expt. study *(Russian)* 7−97708
K plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
K-Ar plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
$LaMgAl_{11}O_9$, laser and phosphor host, cryst. struct., thermal expansion determ. 7−84327
LiHe, electric discharge plasma, excited states form., pot. energy curves, MCSCF calcs. 7−89943
Mg plasma columns, isotope separation in a vacuum arc centrifuge 7−96887
N, ageing under ozonizer excitation, periodicity in discharge current and Joshi effect 7−83572
N_2, afterglow cond. meas. following electron beam excitation 7−117779
Na, high pressure arcs, energy balance, radiation transport and line broadening 7−130974
Ne discharge, electron distrib. function kinetic eqns. soln. 7−69498
Ni, Al-ZZ 7−97802
SF_6-N_2 mixtures, decay of wall stabilised arcs 7−69502
TP-D plasma source discharge mechanism, numerical simulation 7−96428
Xe afterglow, pot. drop, electron energy distrib. 7−69495
Xe arcs, CW, electrical characts., moderate current 7−97831

plasma turbulence
Alfven wave antenna optimization, role of equilib. current, rotational transform 7−130858
axial magnetic field generation in laser-produced plasma by turbulent dynamo 7−91304
axisymmetric Z-pinch, 2D electron vortices 7−83510
charged particle diffusion in turbulent magnetoplasmas 7−123850

plasma turbulence continued
collisional statistical model 7−137081
collisionless plasma in strong mag. field, transport eqns. 7−69313
conference, Cargese, France (July 1986) 7−108034
critical ionisation vel. interaction, turbulent heating and threshold condition 7−83412
diamagnetic plasma, expanding clouds slowing effectiveness of mag. field 7−117717
dipole drift vortices, nonlinear dynamics study 7−83442
double layer form. mechanisms in triple plasma devices 7−117728
drift vortices, Hasegawa-Mima eqn., exact soln. class 7−142461
drift-wave dynamics, coherent structs. 7−111234
edge region diagnostics and transport in the TEXT tokamak 7−75828
electric arc in plasmotron channel, flow, two-mode model 7−142526
electric field spectra beyond strong-turbulence regime in relativistic beam-plasma interaction 7−117738
electromagnetic wave scattering spectrum in turbulent plasma flow 7−117721
electrostatic drift wave turbulence, numerical simulation 7−111223
electrostatic plasma turbulence model for studying energy transfer in coherent wave interactions 7−69353
field generating thermal instability in laser-prod. plasmas, laser flux effects 7−130861
g-mode driven transport and resistive drift waves based on scale invariance 7−83456
gas target plasma, laser-heated, ion-density fluctuations, Thomson scatt. 7−69398
high frequency emissions from crit. vel. rot. plasma 7−130846
high-voltage discharge, anode sheath rot. instability 7−83558
ID magnetised double layers with finite thickness, intrinsic resonances 7−83463
impure plasma with arbitrary toroidal rot., transport calcs. 7−91297
inhomogeneous plasma, rot., global vortex pattern, finite ion Larmor radius 7−123896
inhomogeneous plasma, turbulence, struct., transport, localised fluctuations 7−111233
interchange mode turbulence, nonlinear stability, spectrum cascade processes 7−111227
interferometric microwave measurements of plasma concentration 7−123994
interplanetary plasma turbulence, ISEE 1 and 2 propagation expts. 7−120231
interstellar electron density fluctuations, turbulent stationary structures 7−88589
ion acoustic fluctuations near instability threshold, quasilinear theory 7−69333
ion acoustic turbulence, induced, in ionosphere, appl. to enhanced current flow generation 7−134109
ion acoustic turbulence and heating of resonant ions 7−97739
ion acoustic turbulence electron heating in simulated low Mach number shocks 7−137080
ion phase-space vortices and their relation to small amplitude double-layers 7−117718
ion press. gradient driven turbulence 7−111232
ion-ion beam instability, LF electrostatic turbulence 7−123897
JET, mag. fluctuations and confinement, anomalous transport 7−111265
JET Tokamak, turbulence, heating, fluctuation meas. 7−111231
Langmuir turbulence models, num. comparison 7−83482
LF turbulence at solar wind-comet interaction regions 7−127697
local Alfven reson., plasma rot. effect meas. *(Russian)* 7−111230
magnetic diffusion and mag. field reversal 7−130874
magnetised plasma, cubic response tensor, covariant forward scatt. approach 7−75778
magnetised plasma, electrostatic turbulence, conditional sampling 7−111236
magnetised plasma, quasilin. renormalisation theory 7−97742
magnetised plasma, turbulence diagnostics, collective scatt. and optical probing 7−111281
magneto-turbulent plasma, charged particles relative spatial diffusion, global anal. 7−97709
magnetofluid, confined turbulent relax. to force-free state 7−111195
magnetomodulational perturbation, marginally stable, long time behaviour 7−75780
magnetoplasma, inhomogeneous cold rot. convective cell. Alfven vortices 7−111194
magnetosphere-ionosphere coupling, double layer effects 7−120218
magnetosphere-ionosphere coupling, field-aligned current generation in MHD plasma 7−145771
magnetospheric turbulence spectrum, fund. harmonics, anomalous particle fluxes effects 7−101636
MHD waves generation by turbulent motion in stratified medium, solar appl. 7−104388
mixing length theory and saturated turbulence 7−75792
modulational instability of waves on electron beam in isotropic plasma *(Hungarian)* 7−130882
nonequilibrium plasma, nonlinear electrodynamics, path expansion technique 7−130871
parametric plasma heating, electron acceleration, ionisation 7−69377
passive advection transport by inhomogeneous turbulence, upper bounds 7−142466
Penning discharge, rot. plasma, ion-ion two-stream instability 7−97828
plasma jets, temperature and velocity profiles, modeling 7−130947
plasma MHD turbulent shear flows, subgrid modeling 7−83443
plasma-maser effect in weakly nonstationary medium with nonsteady ion-sound turbulence 7−75794
quasilinear electron heating by electrostatic electron cyclotron harmonic waves 7−123916
radial electron thermal diffusivities, turbulent heating pulse in TORTUR tokamak 7−97715
radiation of ultrarelativistic particles in turbulent plasma 7−107704
radiation transport in presence of ionisation, stochastic wave-kinetic theory 7−139855
radiation-driven thermally unstable planar fluid, nonlinear evolution, solar atm. appl. 7−107709
Reacting Plasma Experiment, confined α-particle diagnostics 7−75882
renormalized turbulence theory, method of moments *(Russian)* 7−117720
resistive press.-gradient-driven turbulence 7−111229
reversed field pinch, turbulence, theory *(Japanese)* 7−142491
RF magnetron plasmas, turbulence-induced anomalous currents 7−83567
rotating plasma in vacuum arc centrifuge, steady-state behaviour 7−97743

plasma turbulence continued
rotation equilibria of rigidly rotating, fully ionised plasma column 7−97740
saturated tearing modes, turbulence and transport study 7−111226
Schrodinger equation, solitary wave soln., appl. to plasmas turbulence 7−75793
scrape-off layer, fluctuations and transport, limiter effects 7−67997
scrape-off layer in TCA tokamak, Alfven wave heating study, Langmuir probe diagnostics 7−75832
solar wind, particle transport in mag. field, effect of MHD turbulence 7−88066
solar wind plasma turbulence and hydrodynamic waves by ideal MHD eqns. theory 7−127673
spheromak plasma, magnetic field, turbulent transfer rate 7−117753
statistical plasma physics, conf., Nagoya, Japan (Feb. 1986) 7−66836
steady-state current discharge, ion acoustic turbulence, heating, anomalous transport 7−83481
strong mag. field dynamics 7−117716
TEXT, biased limiter expts. 7−67998
TEXT confinement, particle transport and electrostatic turbulence, Langmuir probe study 7−130904
TEXT edge turbulence and density fluctuations, far IR laser scatt. and Langmuir probe study 7−130873
TFR, heating, LF turbulence, density fluctuations 7−111263
TFR, internal disruptions, electron density fluctuations, microwave scatt. 7−111186
TFTR edge turbulence meas., Langmuir probes, D-alpha imaging, microwave scatt. and mag. pickup loops 7−75830
thermal plasma jet reactors and multiparticle injection, simulation calcs. 7−69448
three-component plasmas, vortex struct. 7−69354
Tokamak edge plasma, resistivity-gradient driven turbulence, impurity dynamics effects 7−97741
tokamak microturbulence, high density ion mode 7−117719
tokamak plasma, α particle interactions with regular and irregular structures 7−104402
tokamak plasma, internal disruptions, turbulence *(French)* 7−69352
tokamak plasma, profile consistency, nonlocal transport 7−111181
tokamak plasma, rot. effect on kink instability *(German)* 7−137079
Tokamak plasmas, microturbulence, density fluctuation spectrum 7−75843
tokamak plasmas, turbulent density fluctuations study 7−111262
tokamaks, electrostatic and EM turbulence, anomalous transport study 7−111179
tokamaks, turbulent transport theory and simulation, review 7−117754
toroidal Alfven solitons in a space plasma 7−88063
toroidal confinement, anomalous transport, scaling laws, invariance principles 7−111180
toroidal confinement, turbulence microtearing modes 7−111222
toroidally rot. tokamak plasmas, ion transport 7−142443
TOSCA tokamak, turbulent transport, diagnostics 7−111184
transport processes energetics in Tokamaks, kinetic description 7−75795
vortex motion in ion pressure gradient driven drift wave turbulence 7−123898
vortices in an anisotropic plasma 7−123882
warm beam plasma turbulence, mode coupling effects 7−111235
warm plasma, Alfvenic turbulence, MHD oscills. 7−111228
wave dipole emission, matrix element calcs. *(German)* 7−137078
Zakharov eqns., kinetic theory derivation 7−111168
Ar glow discharge, instability in presence of negative ions 7−123883
K plasma, nonequilibr. decaying, electromotive force chaotic oscills. 7−104408
O, ionospheric, acceleration to magnetosphere, cyclotron reson. with broad-band EM turbulence modelling 7−120207

plasma vortices *see plasma flow*

plasma-wall interactions
see also plasma impurities
ASDEX, low energy neutral particle fluxes, TOF method 7−69412
ASDEX, scrape-off layer density profile, parametric eqns., Li-beam diagnostic 7−75825
ASDEX divertor tokamak, plasma-wall interaction, impurity release 7−69366
atomic particles collisions in two-phase medium, molecular dynamics calc. 7−142470
basic processes in glow discharge plasmas 7−104480
Canadian research on fusion reactor materials, review 7−141309
carbonization layers, props. relevant to plasma-surface interaction 7−104419
conversion electron Mossbauer spectroscopy, plasma induced surface modification anal. 7−106068
depth profiling experiments on JET wall samples, Auger spectroscopy anal. 7−69368
DITE limiters, wall loading, Monte Carlo neutral particle transport code 7−69365
edge plasma of limiter tokamak, two-zone model for wall-released impurities transport 7−104380
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
electrode material flow into discharge gap, spectral emission in vacuum spark discharge 7−142471
erosion-redeposition and impurity transport in the scrape-off layer of the FT tokamak 7−75819
first wall materials, structural defects and material fatigue 7−96325
fusion device, erosion and deposition in-situ meas. tech. 7−67987
glow discharge, energy transfer to solid surface 7−117778
graphite, desorption of H and hydrocarbons, effect of H and Ar^+ beam bombardment 7−76602
graphite, surface modification by H bombardment 7−104418
graphite erosion and deposition in JET wall surfaces, SIMS anal. 7−75809
graphite surface, secondary-electron emission in H_2^+ plasma 7−138558
Heliotron-E, Fe atom meas. by laser-induced fluoresc. spectroscopy 7−69452
Heliotron-E device, impurity flux, in-situ surface probe anal. 7−69454
Heliotron-E device, pump limiter study 7−69410
high fluence He irrad., surface deformation 7−119394
Hiroshima Torus-1, reversed field pinch expts., plasma-wall interaction causing impurity activity *(Japanese)* 7−137104
HL-1 Tokamak, wall conditioning 7−75816

plasma-wall interactions continued
HV solar array-plasma interaction and albedo flux, in-orbit expts. 7−144883
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
impurity recycling at the JET limiters 7−75811
infinite plasma-wall sheath model, recombination, wall reflection and ambipolar diffusion effects 7−97753
JET, ICRF heating, plasma edge modification and impurity prod. by antenna phasing 7−129401
JFT-2M tokamak, Taylor, glow and ECR discharges, cleaning effects 7−75892
JIPP T-IIU tokamak, wall material sputter deposition on limiter 7−67988
JT-60 ohmically heated discharge, plasma-wall interaction, discharge cleaning 7−97754
limiter discharger, plasma performance, self-consistent plasma-wall interaction model 7−75822
limiter erosion and deposition in T-10 tokamak 7−103174
limiters, metallic contamination anal. in JET 7−69424
low Earth orbit plasma anomalous interaction with solar array modules 7−144859
low-Z-fusion relevant materials, fluoresc. spectroscopy 7−75810
materials surface modification by plasma bombardment 7−106692
metal, H conc. with atomic and mol. flux impact, surface depend. 7−77720
metal deposition on low-Z samples during ECR and glow discharge cleaning in TEXTOR 7−75812
metal deposition on to limiter and liner of tokamaks distrib. after long-term operation 7−75815
metal redistrib., JET vessel wall surface anal. 7−69369
metal-electron flux system, parameter-oscillation mechanism 7−98245
mirror plasma, flute modes stabilisation, finite Larmor radius and surface effects 7−97728
mirror plasma, rigid mode ballooning instability, resistive effects 7−97729
MPD thrusters, cathode erosion 7−130877
OHTE reversed field pinch, operation with graphite walls 7−69406
penetration through barrier in various temp. conditions 7−123906
PLT, particle transport and confinement, density depend. 7−69413
polyethylene films treated by corona discharge, wetting hysteresis *(French)* 7−117725
reactive etching of materials for microelectronics, fusion, space technologies 7−106649
realistic reflection model for plasma edge calcs. 7−75807
reversed field pinch plasma, impurity influx enhancement due to dynamo action 7−83512
reversed field pinches, current and heat flux, electron density control 7−69409
runaway electrons, activation and damage on FT limiter 7−75820
scrape-off layer, fluctuations and transport, limiter effects 7−67997
scrape-off layer in TCA tokamak, Alfven wave heating study, Langmuir probe diagnostics 7−75832
secondary electron emission effects on current-voltage characts. of wall probes 7−75803
steel, austenitic stainless, effect of C ion displacement damage on D permeation 7−76493
steel, austenitic stainless, vacuum wall, H isotope exchange under RF glow discharge conditions 7−75804
steel, H capture in swelling in first wall of fusion reactor 7−122064
surface modification by plasma interaction, conf., Princeton, NJ, USA (May 1986) 7−102004
surface modifications, coating preparations, by plasma and thermal processes 7−106650
TCA tokamak, mag. and density fluctuations, probe meas. 7−111280
TEXT, density, plasma current, toroidal field, recycling meas. 7−69418
TEXT, intra-island scoop limiter expt. tests 7−67999
TEXTOR, C layer carbonisation and surface modification by Tokamak discharge 7−75814
TEXTOR, films deposited by wall carbonisation, characterisation 7−75813
TEXTOR, impurity sources, emission spectroscopy 7−69419
TEXTOR Tokamak, Langmuir probe meas. during ALT-I pump limiter expt. 7−97803
TFR graphite tiles, metal coverage effect on plasma impurity content 7−75817
TFTR movable limiter and first wall particle inventories calcs. 7−75806
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
Tokamak impurity influx reduction, limiter geometry optimisation 7−75823
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
tokamak T-15, near wall plasma diagnostics, surface anal. station 7−130936
tokamak with graphite wall and limiter, effective charge state 7−123929
tokamaks, plasma-graphite limiter interaction, photoacoustic anal. 7−69364
wall conditioning in JT-60 7−75818
wall sheath effects on transport 7−137089
warm ion collisionless plasma, generalised Bohm criterion appl. to Emmert's soln. 7−123907
Z-pinch plasma lens for high energy particle beams 7−103315
Ar jet, treatment of heat resisting ceramics 7−138866
Be limiter surface composition in UNITOR, RBS, PIXE, AES and SEM/EIXE anal. 7−67989
C discharge plasma impulsive flow, barrier interaction, stimulated emission 7−142531
C film on wall of JIPP-T-IIU tokamak, H, D content 7−103179
C films, glow discharge deposited, H recycle and isotope exchange study 7−75805
C surfaces, modification in cold plasma 7−130878
a-C:H films, chem. erosion by H impact, atomic and ion beam techniques meas. 7−77727
Cu-Li, high flux plasma sputtering yield, temp. and composition yield 7−106337
Cu-Li, sputtering temp. depend. 7−106338
D+D plasma, single α particle orbit calc. study 7−104371
H, density and temp. distrib. near discharge chamber wall 7−83417
H pumping during plasma-graphite interaction 7−137090
H, sorbed on Ni, reemission, coeff. calc. at fusion operating conditions 7−75808
H^- ion source, surface conversion type, using heavy ion impact 7−73465

plasma-wall interactions continued
H_2 recycling, effects in 1D divertor model 7−111255
H(D), retention in JET wall samples, surface layer meas. 7−69367
He impurities in plasma near wall, laser reson. fluoresc. 7−123978
Li-Pb, liquid eutectic alloy, solubility and diffusivity of ^1H and D 7−135603
NH_3, plasma chemical synthesis, wall surface effect 7−69371
Ni, D plasma-driven permeation study, Auger electron spectrometry surface anal. 7−76492
SiC coated graphite limiter in Alcator C, redeposition of plasma eroded material 7−103175
Ti layers in continuous current tokamak, removal 7−75821
TiC coating layers on graphite PDX wall armor tiles, surface damage and redeposition investig. 7−67990
V-Cr-Ti, D permeation and reemission rates meas. in fusion power device 7−74045

plasma waveguides *see plasma filled waveguides*

plasma waves
see also magnetohydrodynamic waves; plasma oscillations; plasma shock waves
2D time-depend. MHD eqns. soln. by method of characts. 7−104387
2XIIB magnetic mirror, particle gyration, gyrofrequency shift 7−123849
accelerators, beam loading, particle-in-cell simulations 7−104462
acoustic, interactions with mag. and internal modes 7−111006
acoustic collapse effect on collisionless shock wave struct. 7−130870
acoustic waves convective growth in plasma-sheet boundary layer 7−94595
Alfven internal gravity waves, effect of density discontinuity on stability characts. 7−94646
Alfven ion-cyclotron mode stability, dispersion relation 7−111210
Alfven surface waves, dispersive and stability characts. along plasma column 7−97736
Alfven vortices in a strongly magnetized electron-positron plasma 7−83448
Alfven wave antenna optimization, role of equilib. current 7−130858
Alfven wave dissipation in the solar atmosphere 7−139907
Alfven waves, high-phase rel. compressional, heating and current drive 7−123920
Alfven waves, simulation of amplitude-modulated circularly modified waves 7−134079
Alfven waves in planetary magnetospheres, and space plasmas, analytical model 7−72288
Alfven waves of kinetic type, macroscale particle simulation 7−142448
amplification current generation with rise in EM wave field 7−104409
anomalous Doppler reson., classical single-particle dynamics 7−137086
antenna optimization for Alfven wave heating 7−75838
artificially excited Langmuir waves, ionospheric propagation 7−134067
ballistic phenomena due to plasma wave, collision effect 7−75787
beat wave acceleration, increasing density, enhanced saturation amplitude 7−104395
beat wave accelerator, plasma wave modulational instability 7−109546
beat-wave accelerator, Langmuir waves, temporal energy cascading study 7−104393
beat-wave accelerator, microwave drive study 7−104396
beat-wave generation, electron plasma waves plasmons and electromag. cascading study 7−104394
bounded magnetoplasma, EM wave propag. 7−104415
bounded plasma, ion-beam instabilities, electrostatic wave excitation 7−123910
bump-in-tail driven Langmuir waves during type III emission in solar wind 7−134105
bumpy tori, wave damping, quasilinear heating, radial transport 7−111249
central mass and current density measurements in Tokamaks using the discrete Alfven wave spectrum 7−83469
charged particles stochastic energisation by plasma waves 7−94648
cold ion-ion hybrid resonance, numerical modelling for ICRF heating 7−142477
cold magnetized plasma, solitary waves 7−104397
collisionless plasma, nonlinear wave dynamics and helicon excitation 7−97719
P/Comet Giacobini-Zinner (1985 XIII), ICE magnetosonic wave obs. 7−94815
P/Comet Halley (1982i), ELF waves in plasma regions, Vega meas. 7−94810
P/Comet Halley (1982i), upstream waves of cometary origin, Giotto meas. 7−94813
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
coupled system of Langmuir and transverse waves, soliton behaviour *(Chinese)* 7−97718
current driven drift waves, finite β_e effects 7−111224
cylindrical plasmas, elec. field profiles in ion cyclotron range of freqs. 7−111208
density fluctuations induced by nonlinear Alfven waves 7−83419
DIII-D tokamak, ICRF reson. cavity launcher coupling anal. 7−111256
dipole drift vortices, nonlinear dynamics study 7−83442
doppler effect for higher harmonics in an inhomogeneous moving plasma 7−97721
double layer simulation and transport in discrete arcs, auroral circuit model 7−117737
double layers, hydrodynamic anal. 7−117731
double layers and plasma-wave resistivity in extragalactic jets: cavity formation and radio-wave emission 7−120271
double layers in assoc. with auroral precipitation 7−120194
dressed Langmuir solitons 7−142454
drift cyclotron loss cone dispersion rel. in cylindrical geometry, nonlocal effects 7−83460
drift cyclotron loss cone unstable mode characts. depend. on plasma density 7−69343
drift cyclotron loss-cone instabilities in an inhomogeneous magnetic field 7−83449
drift vortices, Hasegawa-Mima eqn., exact soln. class 7−142461
drift wave and MHD wave excitation by electron-cyclotron heating 7−83475
drift waves, nonlinear 2D, evolution numerical simulation 7−123869
echo-like nonlocal effect due to parallel magnetic inhomogeneity 7−83472
ECRH and lower-hybrid current drive, trapped electron effect 7−137096
electromagnetic field algorithm for 2D implicit plasma simulation 7−117755

plasma waves continued
electromagnetic wave propag., relativistic self-focusing study 7−104412
electromagnetic waves in hot magnetised plasma, local power absorpt. density formulation 7−75763
electron beam-plasma interaction, unstable modes, perturbation anal. 7−75834
electron beat-excited plasma waves, electrostatic mode coupling study 7−104392
electron Bernstein wave dispersion, relativistic and EM effects, ordinary models 7−123873
electron Bernstein wave dispersion, relativistic and EM effects, extraordinary modes 7−123874
electron Bernstein waves, beam-driven, nonlocal theory 7−91322
electron cyclotron waves, parallel-propagating, thermal effects 7−91318
electron plasma waves, self-interaction in planar plasma-filled waveguide 7−75781
electron plasma waves, steepening, in stimulated Raman backscattering 7−123885
electron-cyclotron reson. plasma, particle motion, wave propag. eqn., relativistic effects 7−83415
electron-positron plasma accelerator, cyclotron autoreson. and laser radiation excitation 7−104463
electrons beat wave acceleration, Eulerian fluid model 7−104391
electrostatic drift wave turbulence, numerical simulation 7−111223
electrostatic H cyclotron waves decay to ion acoustic modes on auroral field lines 7−94592
electrostatic ion cyclotron and ion-ion hybrid wave instabilities 7−142450
electrostatic plasma turbulence model for studying energy transfer in coherent wave interactions 7−69353
electrostatic plasma wave propagation, wavelength depend. in auroral E-region 7−94557
electrostatic wave dispersion in beam-plasma system immersed in inhomogeneous mag. field 7−123913
electrostatic wave propag. in mag. field, charged particle dynamics 7−83450
electrostatic waves at electron gyrofrequency in magnetosphere 7−145787
enhanced electron stochasticity from electrostatic waves in a sheared magnetic field 7−83458
envelope solitons, stability properties 7−95363
excitation at solar wind-comet interaction regions 7−127697
excitation in bounded beam-plasma system, nonlinear theory 7−123866
excitation of intense longitudinal waves in a plasma by electron bunches 7−97757
expanding inhomogeneous plasmas, elec. fields and double layers, hydrodynamic anal. 7−69323
expanding plasma with steepened density profile, plasma-wave excitation 7−117713
field-aligned currents in MHD waves, effect of finite Larmor radius, appl. to magnetosphere-ionosphere coupling 7−91308
fluorescent lamp plasma, microwave interactions, density shift meas. using cavity reson. method 7−108086
foam targets, Raman scatt. study using 0.35 μm laser beam 7−69397
fusion plasma high-freq. wave heating, parametric instability investig. 7−75777
g-mode driven transport and resistive drift waves based on scale invariance 7−83456
gas discharge, inhomogeneity prop., ambipolar drift vel. *(German)* 7−137069
Gaussian laser beam propag., two-plasmon decay 7−111238
generalized moments for low-frequency modes in tokamaks and their application to drift and ballooning instabilities 7−104390
growth rate for electron plasma waves in magnetised plasma, solar appl. 7−145926
guided propagation of Alfven and ion-ion hybrid waves in Z-ion species plasma 7−111215
Hamiltonian system, expression for change in adiabatic invariant 7−83411
high memory electron acceleration by electrostatic waves 7−137075
high-energy electron prod., microwave-plasma interactions study 7−104464
homogeneous plasma, stimulated Raman scatt., nonlinear evolution 7−123903
hot degenerate plasma, longit.-wave spectrum, dispersion relation 7−83451
hot particle drift reversed system, stabilisation to LF modes 7−142452
ICRF heating of large tokamaks, coupler impedance calcs. 7−123940
ICRF heating using inductive antennas 7−111244
ICRF second harmonic plasma heating, mode conversion, hybrid code simulation 7−69391
incompressible MHD surface waves, nonlinear characts., appl. to solar atm. 7−127708
infinite uniform plasmas, linear waves 7−117715
inhomogeneous magnetised plasma, two mode conversion *(Chinese)* 7−111205
inhomogeneous plasma, condensation of Alfven waves into vortices 7−69347
inhomogeneous plasma, rot., global vortex pattern, finite ion Larmor radius 7−123896
inhomogeneous plasma penetrated by beam, longitudinal beam amplification 7−97756
instability of one-dimensional drift solitons with allowance for the vector nonlinearity 7−104411
interaction of particles with cavitons in plasma *(Chinese)* 7−97706
interaction of waves during a decay instability 7−69336
internal gravity waves, propag. in magnetosphere plasma layer 7−88028
inverse scattering problem for 3D plasma wave equation 7−91294
ion acoustic double layer in weakly relativistic plasma 7−130863
ion acoustic fluctuations near instability threshold, quasilinear theory 7−69333
ion acoustic plasma waves, laser induced anisotropy 7−83465
ion acoustic soliton, critical negative ion density, difference eqn. soln. *(Japanese)* 7−75791
ion acoustic turbulence and heating of resonant ions 7−97739
ion acoustic waves, generation of subharmonics and higher harmonics using CO_2 laser 7−142462
ion acoustic waves in plasmasphere, excitation by drift wave instability 7−127642
ion beam, modulated, stimulation of wave propagation 7−83498
ion beam-plasma system, ion wave reflection by bipolar type electrode *(Japanese)* 7−137065

plasma waves continued
ion Bernstein waves, kinetic theory of stabilisation of interchange model 7−75784
ion cyclotron drift waves, controlled radial density distributions 7−83457
ion heating by lower hybrid waves associated with a parametric instability of a plasma in an RF field 7−117741
ion heating by nonlinear Landau damping of ion Bernstein waves 7−130889
ion-acoustic solitons, propag. into weak localised transverse mag. field 7−123886
ion-acoustic solitons, propag. into weak localized longit. mag. field 7−123887
ion-acoustic solitons in a cylindrical plasma-loaded waveguide 7−83492
ion-acoustic solitons in warm 2-ion plasma, ionic temp. effects 7−97738
ion-cyclotron waves absorpt. by drifting electrons 7−97733
isothermal collisional plasma, low freq. waves 7−137076
jets, MHD solitons 7−139902
JFT-2M tokamak, electron heating and current drive by fast waves, numerical study 7−69390
kinetic Alfven waves, nonlinearly driven tearing instabilities 7−137072
kinetic effects in a nonsteady plasma 7−97701
L-2 stellarator, ECRH, Gaussian beam form. and transport 7−69379
Langmuir and ion-acoustic waves, collisional damping, coupled nonlin. Schrodinger eqn. derivation 7−75788
Langmuir oscills. in electron source vicinity *(Russian)* 7−83478
Langmuir soliton stability, investig. by catastrophe theory 7−83473
Langmuir turbulence models, num. comparison 7−83482
Langmuir waves, modulationally unstable, in relativistic plasma, limitations in spectrum 7−91329
Langmuir waves, self-focusing and anisotropic collapse, inverse scattering method 7−117714
Langmuir waves in electron foreshock, theory 7−94581
large amplitude plasma waves, excitation in plasma-filled open resonator 7−123889
laser electron accelerators, axially fed, plasma waves 7−74269
laser particle accelerators 7−74267
laser pulse self-trapping, plasma fibre accelerator appl. 7−104413
laser wiggler beat wave in a plasma, rel. to electron acceleration 7−75790
laser-irradiated plasma, stimulated Raman scatt., ion mobility influence 7−69359
LF electrostatic modified electron acoustic waves, excitation by EM waves, auroral ionosphere appl. 7−83489
linear propagation in homogeneous medium 7−137063
LISA, rF heating by cylindrical plasma waveguide modes 7−137099
local Alfven reson., plasma rot. effect meas. *(Russian)* 7−111230
local cavity resonances of fast Alfven waves 7−69340
longitudinal secondary wave conversion, obliquely incident on ionisation front 7−69335
longitudinal waves excitation in pulsar magnetospheres, influence of mag. field inhomogeneity 7−127933
low-frequency waves emission in moving plasma in mag. field 7−97722
lower hybrid wave driven plasma current, radial distrib. in JFT-2M Tokamak 7−91312
lower hybrid-driven plasma, selective electron-cyclotron heating at down-shifted freq. 7−111248
lower-hybrid current drive, anomalous Doppler instability 7−123880
lower-hybrid current-drive density limit cause, simple model, mode coalescence condition 7−137097
magnetic quadrupole, intermediate-frequency flute modes 7−137070
magnetic surface wave instabilities 7−123881
magnetic-electron-drift vortex mode decay 7−123863
magnetically insulated electron flow in cylindrical thermionic diode 7−83553
magnetised plasma, longit. dielectric const., toroidal effects *(German)* 7−137112
magnetoactive plasma, turbulent conductivity 7−69318
magnetoactive plasmas, drift waves, dynamics 7−104399
magnetosonic waves, nonlin., oblique propag. 7−91317
magnetosphere, ballistic plasma wave processes, satellite expts. 7−145790
magnetosphere, finite β, theory and obs. of Alfven solitons 7−139865
magnetosphere-ionosphere coupling, double layer effects 7−120218
magnetospheric plasma of a pulsar, props. investig. 7−120485
medium for high-energy particle acceleration *(French)* 7−129462
MHD modes of periodic mag. medium, solar appl. 7−145823
MHD waves assoc. with pick-up ions in solar wind 7−120266
MHD waves generation by turbulent motion in stratified medium, solar appl. 7−104388
mode conversion and wave damping for perpendicular propag., global wave treatment 7−123892
mode coupling in astrophysical and space plasmas 7−115232
modulational instability of waves on electron beam in isotropic plasma *(Hungarian)* 7−130882
multipolar discharges, ion acoustic instability and plasma uniformity 7−91326
nonequilibrium plasma, nonlinear electrodynamics, path expansion technique 7−130871
nonlinear absorption of intense microwave pulses 7−117742
nonlinear cold plasma waves in high-frequency limit, Lyapunov's stability 7−83462
nonlinear conversion of normal waves in an inhomogeneous magnetized plasma 7−97723
nonlinear electron dynamics, in coherent wave packet, Fokker-Planck description 7−123891
nonlinear evolution of a wave packet propagating along a hot magneto-plasma column 7−91316
nonlinear ion acoustic plasma waves, marginal instability state, modulational instability of carrier 7−142449
nonlinear ion-acoustic waves and solitons, self-focusing, num. simulations 7−91315
nonlinear Langmuir oscillations in nonuniform plasma, high speed electron generation 7−104410
nonlinear responses of dispersive media 7−95360
nonlinear three-wave interaction projection operator techniques 7−111219
nonlinear wave-wave interactions in solar wind, and type III bursts 7−94840
nonstationary pondermotive force, amplification current 7−142464
nonuniformly magnetized inhomogeneous plasma, dielectric tensor operator and electromagnetic perturbations 7−97702
ordinary wave conversion in inhomogeneous magnetised plasma 7−83452
parameter evolution during ion Bernstein wave heating, edge effects 7−75796
plasma waves continued
parametric excitation of magnetic electron drift vortex modes by Langmuir waves 7−91324
parametric plasma heating, electron acceleration, ionisation 7−69377
partially ionised plasma, RF heating, ion vel. distrib. 7−69378
particle simulation of electromag. phenomena, Fourier-space iterative technique calcs. 7−69449
phase conjugate reflection of electromagnetic waves, flow-wave interaction 7−137084
plasma physics, conf., Lucas Heights, NSW, Australia (Feb. 1987) 7−80175
plasma-maser effect in weakly nonstationary medium with nonsteady ion-sound turbulence 7−75794
polarisation charge layers, electrostatic particle simulation code 7−142497
poloidal mode coupling for poloidal mag. fields, solar appl. 7−145825
profile of current driven by lower hybrid waves in tokamaks *(Chinese)* 7−97717
pure-electron plasma confinement, nonlinear collective processes 7−123961
quasilinear electron heating by electrostatic electron cyclotron harmonic waves 7−123916
quasilinear relaxation of fast particles in plasma, wave reabsorption 7−83494
quasilongitudinal propagation of narrow beams of nonlinear magnetohydrodynamic waves 7−111206
ray tracing, 3D, in magnetosphere, electrostatic cyclotron harmonic waves and Z mode EM waves 7−134094
reflection stationary mode of s-polarized EM wave, electrosonic wave formation 7−130869
relativistic collisionless plasma, ion acoustic solitary waves, ion temp. effect 7−123973
relativistic Langmuir waves, detuning in beat-wave accelerator 7−91363
relativistic plasmas, electron whistler and cyclotron maser instabilities, arbitrary energy anisotropy 7−130920
relativistic plasmas, ion-acoustic solitary waves, pseudopotential approach 7−137122
renormalized turbulence theory, method of moments *(Russian)* 7−117720
resonant Alfven waves on auroral field lines 7−91309
resonant beat wave electron acceleration 7−74268
RF stabilisation of universal drift mode based on plasma-maser theory 7−69346
RF stabilization of mirror plasma, variable eigenmode excitation effects 7−123968
RF wave current driving, kinetic theory *(Chinese)* 7−111164
rippled plasma, Raman backscattering, contrib. to half-harmonic splitting 7−123904
Schrodinger equation, solitary wave soln., appl. to plasmas turbulence 7−75793
scrape-off layer in TCA tokamak, Alfven wave heating study, Langmuir probe diagnostics 7−75832
shear Alfven wave, reson. mode conversion 7−104389
slow sausage waves in mag. tube, solar appl. 7−145824
solar wind, electron cyclotron harmonic waves, AMPTE-IRM plasma wave expt. 7−107687
solar wind, nonlinear wave decay processes, AMPTE IRM plasma wave expt. obs. 7−107688
solar wind plasma turbulence and hydrodynamic waves by ideal MHD eqns. theory 7−127673
solitary surface waves in plasma slabs 7−83453
solitary vortices in plasmas 7−97724
soliton collision, energy radiation, perturbed nonlinear Schrodinger eqn. 7−123870
stationary electrosonic p-polarized waves in a nonisothermal plasma 7−130868
statistical plasma physics, conf., Nagoya, Japan (Feb. 1986) 7−66836
stellarator L-2, electron cyclotron heating, microwave radiation, Raman scatt. 7−97761
stochastic electron acceleration in obliquely propagating electromagnetic waves 7−91334
stochastic particle acceleration in an electrostatic wave 7−83464
stochastic web and diffusion of particles in a magnetic field 7−104379
subharmonic waves in ion beam-plasma system, low freq. fluctuations *(Japanese)* 7−137064
Sun, atm. acoustic waves transform. to slow magnetosonic waves, role of mag. field 7−127693
Sun, atmosphere, MHD wave transition 7−134220
supersonic plasma flow, interaction of conducting object, ion deflection 7−111193
surface plasma wave solitons 7−123867
surface wave discharge in a conical tube 7−117780
surface wave sustained plasma, HF discharge parameters, radiative processes and similarity relations *(German)* 7−130891
surface wave sustained plasma, HF field, processes and modeling *(German)* 7−130892
surface waves, reson. effect on props. *(German)* 7−137066
surface waves in highly nonisothermal plasma, parametric excitation, nonlinear theory 7−97720
tandem mirror central cell, rot., drift modes 7−69426
theta pinch, lower hybrid drift instability, RF suppression 7−97731
Thorello, toroidal magnetised plasma, diagnostics eval. 7−75860
TMX-U tandem mirror, edge plasma ICRH effects 7−69405
TNT-A tokamak, ion Bernstein waves, ray trajectories and damping 7−83515
tokamak, Alcator C, plasma current ramp up and Ohmic-heating transformer recharging 7−83518
Tokamak, directly launched ion Bernstein waves study, excitation, propagation and absorption 7−137098
tokamak, heating and current drive by lower hybrid waves, technical aspects 7−122083
tokamak, ion Bernstein wave propagation, magnetic probe obs. 7−130857
tokamak, lower hybrid current drive, waveguide coupling 7−75801
tokamak fusion reactors, continuous current drive operation, review 7−69387
tokamak impurity diffusion at grill mouth due to lower hybrid heating 7−117706
tokamak microturbulence, high density ion mode 7−117719
tokamak plasma, α particle interactions with regular and irregular structures 7−104402
tokamak plasma, lower hybrid wave absorpt., diffraction effects calcs. 7−83468

plasma waves continued
tokamak plasma, obliquely propagating extraordinary wave, second-harmonic layers 7−123967
tokamak plasma, tearing mode interactions, reduced MHD modelling 7−142459
tokamaks, turbulent transport theory and simulation, review 7−117754
toroidal Alfven solitons in a space plasma 7−88063
toroidal mag. confinement plasma, vortex soliton form. 7−123855
toroidal systems continuous spectrum, ballooning and Alfven mode calcs. 7−130862
turbulence, wave dipole emission, matrix element calcs. *(German)* 7−137078
turbulence expansion, Zakharov eqns., kinetic theory derivation 7−111168
turbulent drift-wave dynamics, coherent structs. 7−111234
two-dimensional Langmuir collapse and 2D Langmuir cavitons 7−97735
two-ion species plasma propagation and heating due to ion-Bernstein wave 7−111218
unmagnetised collisionless plasma, electron/electron acoustic instability 7−142455
Versator II tokamak, lower-hybrid current drive, particle confinement 7−123966
vortices and solitons in plasmas, nonlinear wave eqn. review 7−130849
vortices in an anisotropic plasma 7−123882
wakefield accelerator, ion beam excitation of ion plasma waves simulation 7−104422
warm beam plasma turbulence, mode coupling effects 7−111235
warm electron plasma, nonlinear wave dynamics 7−69334
weak compressive ion acoustic double layers in presence of negative ions on the auroral field lines 7−123872
Weibel instability in relativistic, anisotropic plasma 7−130864
Weibel magnetic mode amplification in laser plasma 7−91328
whistler wave, collisionless plasma, side-band instabilities study 7−91307
D-H-O plasma, ion cyclotron modes, near perpendicular propag. 7−130865
H plasma, Coulomb radiators, intra-stark spectroscopy *(German)* 7−137125
H plasmas, ion acoustic wave dispersion relations and diagnostic appls. 7−123893
He plasma, surface wave sustained, spatial emission props., spectroscopy appl. 7−142498
Ne, positive column, ionisation waves, mode transition in nonuniform mag. field 7−75898

plasmatrons *see plasma diodes*

plasmoids *see plasma*

plasmon-phonon interactions *see phonon-plasmon interactions*

plasmons
see also phonon-plasmon interactions; solid-state plasma; surface plasmons
beat-wave generation, electron plasma waves plasmons and electromag. cascading study 7−104394
β-(BEDT-TTF)$_2$I$_2$Br(AuI$_2$), IR and far IR polarised reflectance spectra studies 7−77563
α-(BEDT-TTF)$_2$I$_3$, quasi-2D metal, light scatt. by plasmons 7−77530
(BEDT-TTF)$_2$XI$_2$ salts, X=Au, Br, electronic struct., props., polarised IR reflectance spectra 7−113189
benzoic acid adsorbed on Ag, SERS in attenuated-total-refl. geometry 7−125748
bulk plasmon excitation by fast electrons, intensity angular depend. 7−112213
conducting superlattices, optical props., plasma wave effects calcs. 7−144004
conductors with magnetic impurity electron states, light inelastic scatt. 7−113146
conversion-electron line shapes, effects of plasmon excitations in condensed media 7−124892
Coulomb gas, 2D, dynamic characterization of dielectric-plasma transition 7−84727
damping, local and resonance impurity electron state effects 7−143382
double plasmon oscillations during X-ray emission 7−84728
EM waves and electrons, mutual drag 7−84966
Gaussian laser beam propag., two-plasmon decay 7−111238
heavy fermion systems, density fluctuations, long range Coulomb interaction 7−105440
high T_c superconductors, role of acoustic plasmons 7−118644
high T_c superconductors, soft plasmon theory 7−138114
high temperature supercond., plasmon models 7−112620
laser electron accelerators, axially fed, plasma waves 7−74269
laser produced plasma, three-halves harmonic spectra 7−123926
layered electron gas, interacting electron lifetime and effective mass, dynamical RPA calcs. 7−137830
light metal hydrides, plasmon spectra, EELS meas. 7−137828
liquid metal, dielectric function, mean free path effects 7−137829
localisation distance, plasmons excited by high energy electrons, calc., appl. for EELS in electron microscopy 7−98853
localized collective oscillations in inhomogeneous electron systems 7−112209
low dimensional superconductors, critical temps., high T_c 7−105786
low-dimensional materials, high T_c superconductivity mechanisms 7−118692
metallic superlattices, EELS, electron scatt. by folded longitudinal plasmons, jellium model calcs. 7−144193
metals, plasma oscillation-dislocation interactions *(Russian)* 7−98846
metals, plasmon dispersion coeff., electron effective mass evaluation 7−105439
metals, plasmon oscills., analytical expression for total number of participating electrons 7−70229
metals and alloys, plasmon loss function, relaxation time 7−124900
molecular system asymmetric Fano profile distortions above metallic grating surface 7−74712
periodic laser-induced CVD, plasmon dispersion rel. on rough surface 7−138677
plasma beat-wave accelerator, Langmuir waves, temporal energy cascading study 7−104393
plasma superconductivity in a 2-D electron system 7−70347
semiconductor infinite superlattice, plasmon polariton dispersion and damping 7−137807
semiconductor plasma gain spectra, lineshape theory of plasmon-phonon sidebands 7−99913
semiconductor superlattice, high mobility, Raman spectra, constant current effect 7−92654

plasmons continued
semiconductor superlattices, plasmon dispersion relations 7−143387
semiconductor surface, magnetoplasma surface waves, generation by moving charges *(Russian)* 7−118524
type I superlattice, dynamic cond. magnetoplasma reson., memory function MHD anal. 7−138061
Al thin film, coherent double-plasmon excitation study 7−125037
Al$_x$Ga$_{1-x}$As-AlAs-GaAs:Si selectively doped MQW heterostructs., electron mobility, influence of AlAs spacer 7−92263
Au$_{18}$Ag$_{20}$, colloidal, plasmon freq. obs., UV-vis spectra 7−113221
Ba$_2$YCu$_3$O$_7$ high T_c supercond., electronic struct., XPS meas. 7−98799
Ba$_2$YCu$_3$O$_{7-x}$, high-temp. supercond., plasma and UV optical transition studies 7−113327
D-T alloy, formation rate of muonic molecules 7−122742
GaAs, free carrier absorpt., two-photon ionised impurity-plasmon processes 7−85562
GaAs, free electron absorpt. 7−70757
GaAs-Al$_x$Ga$_{1-x}$As quantum-well superlattice, high-frequency resistivity, temp. depend. 7−70401
GaAs-AlGaAs heterostructs., 2D systems, inelastic light scatt. in high mag. fields 7−138438
GaAs-Ga$_{1-x}$Al$_x$As:Si superlattices, MBE, plasmons, Raman scatt. obs. 7−70764
He liquid, coupled plasmon-ripplon modes, Wigner crystal *(Japanese)* 7−98607
Hg$_{1-x}$Cd$_x$Te, free-carrier absorpt., photon-ionised impurity-plasmon processes 7−132275
InP, photoexcited phonon-plasmon modes, time resolved Raman scatt. spectra 7−70779
La-Ba(Sr)-Cu-O high temp. supercond., plasmons 7−105814
La$_{2-x}$(BaSr)$_x$CuO$_4$ high Tc supercond., e-e correl. and scatt., band overlap in two-band model 7−118647
La$_2$NiO$_4$, nonstoichiometric, 2D plasmon, IR reflectivity study 7−113188
(La$_{1-x}$Sr$_x$)$_2$CuO$_{4-y}$ high T_c supercond., electronic struct., photoemission meas. 7−99271
Ru (001), Na adsorption and coadsorption with O, EELS study, electronic excitations 7−98700
TiH$_2$, hydridation of Ti, AES and EELS studies 7−106314
Y-Ba(Sr)-Cu-O high temp. supercond., plasmons 7−105814
ZnO e-h plasma, nonequilib. long-wavelength plasmons, radiative props. 7−143499
n-ZnSe, plasmon-LO-phonon coupled modes, Raman scatt. 7−113185
ZnSiAs$_2$, polycrystalline films, volume plasmon dispersion 7−84726
ZnSnAs$_2$, polycrystalline films, volume plasmon dispersion 7−84726

plastic afterflow *see recovery-creep*

plastic crystals
acetonitrile-halocarbons, solid-liquid phase equilibr., phase diagrams, heat of fusion 7−76360
adamantane, high temp. phase, mol. rotational processes 7−142668
bicyclooctene, plastic phase, muon probe investig. 7−85508
binary diagrams, excess enthalpy *(French)* 7−137520
n-butane, condensed phase, mol. dynamics simulation, plastic transition 7−137179
1-cyano-adamantane, glassy and plastic phases, reorientations, local order 7−142659
cyanoadamantane glassy plastic phase, glass-like transition and annealing *(French)* 7−143015
5,6-dioxycarbonyl(2.2.1)bicyclohept-2-ene, phase transition, temp. depend., plastic crystal phase form. 7−137542
ethanes, hexasubstituted, large amplitude motions and phase transitions 7−142933
HCP lattice, hindered rot. of impurity diatomic mols. *(Russian)* 7−76043
liquid/solid phase, sound vel. meas. *(German)* 7−84131
methylammonium nitrate, N-deuterated, single cryst., Raman spectra 7−132273
molecular crystals, microscopic hamiltonian for phase diagram 7−124436
neopentane-d, plastic cryst., orientational disorder, neutron elastic scatt. obs. 7−83796
norbornene, plastic phase, muon probe investig. 7−85508
ODIC phase, correlation functions, molecular dynamics simulation 7−104599
1,1,2-trichlorotrifluoroethane, matrix isolation vibr., conform., IR spectra 7−82109
two-dimensional rotator phase, mol. dynamics computation 7−142667
Li(N$_2$H$_5$)SO$_4$, pure and doped single cryst., DC cond. and dielec. props., phase transition 7−113076
P$_4$S$_3$, intermolecular bonding, phonons, Raman spectra 7−85627

plastic deformation
see also Bauschinger effect; buckling; creep; ductility; elastoplasticity; kink bands; Luders bands; necking; plastic flow; serrated yielding; shape memory effects; slip; superplasticity
alkali halides, plastic deformation, dislocation dynamics and fast elec. props. 7−98305
alloy, two-phase, with plastic matrix, struct. parameters of strength 7−126200
alloys, $L1_2$ superstructure, deforming stress, double peak in temp. depend. *(Russian)* 7−78102
alloys, two-phase, interfacial stresses prod. by pile-up of discrete edge dislocations 7−111557
alloys, with $L1_2$ superstructure, thermal hardening, phenomenological theory *(Russian)* 7−91702
amorphous alloys, consolidated, strengthening mechanisms 7−113644
anharmonic atom chain, fluctuation rupture, collective effects influence 7−98326
anisotropic hardening law using internal time concept 7−136713
anisotropic laminated plates under biaxial normal and shear loads, stability and strain 7−97361
antisymmetric angle-ply plastic plates under distributed load, analytic treatment *(German)* 7−104184
BCC derivative structs., twinning 7−131156
beams, thin-walled box, warping and distortion, asymptotic solns. 7−123492
beams and plates under combined loading, dynamic inelastic response 7−123494
α-brass, cold rolled, plastic strain carried by shear bands 7−86296
α-brass, plastic zone size measurement by critical grain growth method 7−100315
CANDU LOCA, fuel element-pressure tube contact anal. using MINI-SMARTT 7−81612

plastic deformation continued
composite, elastic-plastic materials, thermal expansion, stress-strain relations 7−83077
composites, metal matrix, deform., moire interferometry investig. 7−123558
cracked finite width material, image force modified dislocation distribution 7−76125
crystal, crack vertex plastic strain growth in antiplanar shearing 7−76291
crystal, planar defects and dislocations in low-symmetry phase *(Russian)* 7−142778
crystallites, distorted, aggregate X-ray diffraction profile study 7−144436
crystals at low temps., plastically deformed, amplitude depend. ultrasonic attenuation, yield stress 7−142913
crystals with high Peierls barrier, nonconservative dislocation motion in brittle fracture zone 7−131151
cyclic deform., dislocation free zones at grain boundaries and free surfaces 7−83966
cylindrical shell subject to axial or radial temp. gradient plastic strain concentration factors for fatigue anal. 7−142236
cylindrical specimens with V-shaped notch, residual stresses determ. *(German)* 7−130556
damage summation for thermal fatigue, creep and low cycle fatigue 7−111762
deformation texture development, evaluation of effect of initial texture 7−78053
dense moire fringe fields, strain distribs., micro-meas. and multiplied moire fringes *(Chinese)* 7−89250
dissimilar material interface, dislocation mass transfer under plastic deformation 7−98303
ductile material, shear strength, effect on plane shock wave propag. 7−76297
ductile materials, shear band bifurcation *(Chinese)* 7−90990
elastic-plastic cross-sectional interference fits, joining operation effect on stress *(German)* 7−104182
elastic-plastic indentation hardness and indentation fracture toughness, inclusion core model 7−84111
elastic-plastic materials, constitutive relations for finite deformation with strain induced anisotropy 7−136722
endochronic model with neutral loading 7−134491
epoxide polymers, network, glassy state props. rel. to activation parameters for deformation *(Russian)* 7−111748
eutectic alloy, directionally crystallised, plastic deformation 7−126196
eutectic composites, lamellar, directionally solidified, elastic-plastic anal. 7−76279
fatigue crack propagation, slow, and plastic deform. near crack tip, effect of grain size 7−71291
fatigued FCC metals, deform. stages in stabilised loading cycle 7−98302
FCC crystals, cyclic deformation, dislocation mechanisms and steady states 7−76124
FCC crystals, work hardening, deform. band form. 7−76280
FCC derivative structs., twinning 7−131156
FCC metals, hot rolling deform., recrystallisation textures 7−100252
$Fe_{70}Cr_{10}P_{13}C_7$ amorphous strip, surface composition, AES studies 7−124648
finite inelastic deform., constitutive theory 7−117487
flawed thin shell structures, virtual crack extension method for energy release rate 7−104171
frames, plane, algorithm for shakedown anal. 7−83070
freshwater ice, fatigue behaviour, cyclic loading, porosity and crack growth 7−111759
glass fibre reinforced polyester SMC composite, deform. and fracture under multiaxial loading 7−86260
granular materials, energy dissipation and vel. discontinuities 7−94204
graphite, polycrystalline, reversed plastic deform., AE characts. 7−86270
graphite particle reinforced Al-Ni, cast, deform. into wires 7−126203
Haasen-Kelly effect type deformation phenomena, analytical description 7−75346
hard-body surface asperities, 2D model, contracting process 7−91952
hardening materials under complex loading 7−136710
hardening models, functional representation *(German)* 7−104179
heated disc with rotational symmetry, elastic-plastic deformation *(German)* 7−75358
heterogeneous and solid-phase reactions, seminar, Zenigorod, USSR (May 1985) 7−134344
heterophase materials, ground surface, residual stresses, X-ray diffraction 7−86292
hubs, elastic-plastic deformation of interference fits with supercritical overdimensions *(German)* 7−104176
hydraulic bulge test on linear strain-rate-hardening material, anal. *(Japanese)* 7−113815
ice, dielectric props., plastic straining and sample prep. effects 7−99667
ice, high press crystalline phases II, III and V, inelastic props., deform experiments 7−111741
ice I_h, low temp. high press. inelastic props., appl. to icy satellite interiors 7−111742
ice single cryst., dielec. props., plastic straining effects 7−99666
ice single cryst. plastic deform., dislocation mechanisms study 7−111571
ice single crysts., dislocation glide, synchrotron radiation X-ray topography study 7−111572
impact deformation of metals obs., apparatus for rate up to 10^4 sec^{-1} 7−104230
impact fracture toughness *(Japanese)* 7−100349
Inconel X-750, Ni-base superalloy, plastically strained, high-misfit, dislocation-precip. interaction during coarsening 7−78024
ionic crystals, plastic deformation, yield stress, statistical anal. 7−98309
J-integral invariance in plastic deform., three point bending 7−110866
large elastoplastic deformations under high press., theory development 7−110812
material fracture, small punch test, deform. process, recrystallisation etch method, plastic analysis 7−71427
metal, acoustic emission theory of plastic deform. 7−111745
metal, deform. mechanisms, pulsed mag. field effect at low temps., induced eddy currents 7−77393
metal, structurally inhomogeneous, microplastic to macroplastic deformation transition 7−113636
metal, yield stress dependence on surface layer thickness 7−78370
metal flow, plane strain, within specified plastic boundaries, FEA 7−142184
metal working, adiabatic heat lines 7−119309
metal-polymer plates, two-layer, stress-strain state under cyclical loading 7−78109
plastic deformation continued
metallic glasses, plastic deformation, microscopic mechanism 7−144478
metallic glasses, plasticity at high temp. rel. to crystn. stability *(Russian)* 7−142888
metallic porous systems, microstruct. form. rel. to pressing and sintering conditions 7−71112
metals, dynamic deform., elastic precursor propag., shortwave method anal. 7−98304
metals, electron scatt. by kinks on dislocation line 7−70283
metals, FCC, plane strain deform., texture softening and strain instability 7−144427
metals, FCC, shear band angles 7−119283
metals, plasticity rel. to limit formability 7−132665
metals, quasi-brittle, effect of gas adsorption on resistance to cracking 7−137448
metals, thermal mechanism of unstable plastic deform. *(Russian)* 7−111738
metals, thermodynamics of plastic deformation 7−118022
metals and alloys, strain sensitivity coeff. of resist., theory 7−124962
metals and single-phase alloys, plastic deform. to high strains, simple phenomenological expressions 7−98310
metals elastoplastic creep behaviour, constitutive eqns. 7−69813
micro-indentation tester, time depend. probe plasticity *(German)* 7−78408
Mode I crack propag. in deform. theory material asymptotic anal. 7−117543
non-proportional loading and linear elastic relief, extension of 2D model *(German)* 7−136702
nonclassical continuum mechanics, symposium, Durham, England (July 1986) 7−134367
nonequilibrium systems, patterns, defects, microstructures, conf., Austin, TX, USA (March 1986) 7−115691
nonsymmetric dynamic contact, cylindrical solids, failure anal. 7−104223
nonuniform plastic deformation and the Portevin-le Chatelier effect 7−118023
organoplastic, unidirectionally reinforced, thermal and moisture ageing effect on deform. and failure, mechanolum. obs. 7−71248
panels, stiffened, crack arrest characts., effects of shear and plasticity 7−97423
PEEK thin films, melt-spun, plastic deform. 7−76712
periodically nonhomogeneous structure, limit load calc. *(French)* 7−123484
PET, oriented, amorphous, struct. deform. *(Russian)* 7−84100
PET film, elec. cond., press. effect 7−85014
x-phthalocyanine crystals, dislocation array, TEM obs. 7−76131
plastic material erosion by gas-particle flow, surface instability, mathematical model 7−69107
plate, impulsively loaded, large displacements calc. methods 7−110811
plate, porous transtropic with strain hardening base, plastic state eqn. 7−104169
plate with circular hole, exact soln. to elastic-plastic problem under linear hardening law 7−97334
plates, circular with transverse shear, dynamic plastic response 7−75357
plates, composite, flexure, shear deform. theory 7−130551
plates, plastic shearing, nonlinear constitutive relation 7−83075
plates, yield line analysis 7−117477
PMMA, microscopic deform. under uniaxial tensile stress, radiation and impurity effects *(Japanese)* 7−98316
polar glacier ice, creep rate controlling processes and deform. mechanism study 7−114817
poly N,N′-bis(phenoxyphenyl)-pyromellitimide, deform., smectic ordering, X-ray scatt. 7−86274
poly p-phenylene benzobisthiazole films, deform., temp. and strain rate depend. 7−86264
trans-1,4-poly-1,3-pentadiene, cryst., isotactic, stress-induced conform. transitions 7−91472
polycrystal, active slip systems in plastic deform., intermediary Sachs-Taylor models *(French)* 7−118020
polycrystalline materials, inelastic processes within the range of high deformation velocities *(German)* 7−104175
polycrystalline materials, scale effect of plastic props. 7−98312
polycrystalline metals, plastically deformed, surface glide traces, probability anal. 7−86509
polyester, cross-linked, neat and glass-bead-filled, water absorbance, effect of tension 7−78292
polyethylene, low density, deform. re. to mol. wt. distrib. 7−113627
polyethylene blends, mixing, morphology, rheology, mech. props. 7−126197
polyethylene terephthalate, crystallisation, strain and secondary relax. transition *(Russian)* 7−137454
polyethylenes, mech. props., struct. and morphological factors 7−71244
polymer, critical strain to dead bend, fibril length estimation 7−131217
polymers, cryst., fracture and toughness 7−132743
polymers, fibre self-reinforced, plastic deformation rel. to needle crystal morphology 7−86263
polymers, large-strain deform. prediction 7−132682
polypropylene, isotactic, highly disperse struct. form. by deform., annealing effect *(Russian)* 7−113640
polypropylene, isotactic, mechanics of equibiaxial hydrostatic deform. 7−113629
polypropylene, isotactic, uniaxial stretching deform., Ramon spectra studies *(French)* 7−85641
polypropylene, stress whitened, chloroform transport 7−76495
polypropylene, syndiotactic, thermophysical props. 7−98593
polypropylene films, contoured, orientational stretching *(Russian)* 7−138799
polystyrene and poly 2,6-dimethyl-1,4-phenylene oxide blends, diffuse shear band zone props. 7−137452
polystyrene-acrylonitrile-polycarbonate blends, phase separated thin films, shear yielding, crazes 7−132675
porous, unequally strong and anisotropic media, applied theories of plasticity 7−75345
porous powder materials, deform. anisotropy, of mech. props. in uniaxial compression 7−106585
powder bonding under thermoplastic deform. 7−144325
powder mixtures, regular, macrodislocational mechanism of deform. 7−77860
pseudoelastic single crysts., elastic interactions between martensite variants 7−100277
PTFE, γ-irradiated, single point deform. and abrasion 7−86366
PVC, plastic deform. by crazing, effect of temp. and specimen size *(Japanese)* 7−100295

plastic deformation continued
PVC, plasticized, mol. mobility, deform. effects *(Russian)* 7−137453
PVC-S under fluctuating load, mech. behaviour *(German)* 7−86300
rigid ring embedded in thin anisotropic plate, under uniform tension, plastic stresses 7−136717
rods, metal-composite, deformation 7−97343
rough surface microasperity, plastic deform. study 7−136764
scaling relation of expt. curves 7−136719
semiconductor defects, conf., Paris, France (Aug. 1986) 7−95080
shear band development incorporating heat conduction, anal. 7−90985
sheet materials, full strain curves construction method, specimen design 7−126367
shell, cylindrical, fibre reinforced composites, vibr. and damping anal. 7−104192
shell, cylindrical, shallow, of nonlinear material, elastoplastic bending exptl. investig. method 7−110810
shell, cylindrical, stress-strain state during heat treatment 7−113587
shells, laminated, lateral compression in static problems 7−110808
shells, nonhomogeneous, cylindrical and spherical, elastic-plastic deformation 7−75350
shells, thin-walled cylindrical, dynamic failure 7−75359
shells with curvilinear openings, elastoplastic axially asymmetric deformation 7−97341
short-base strain gauge for measurement of circumferential deformations 7−104231
sintered powder metals, forming process, anal. by FEM 7−97330
solid solutions, binary metallic, annealed, plastic deformed and neutron irradiated, local order 7−144431
sphere, hollow, elastic-plastic deform. under loading conditions, response eqns. 7−117455
spherical container, impulsive loading, dynamic elasto-viscoplastic soln. 7−90982
spherical steel reactor containments, HCDA, failure under excessive internal pressure 7−73990
steel, alloy, impact fracture toughness *(Japanese)* 7−100349
steel, alloy Ni-Cr, ageing kinetics, strong plastic deform. effects *(Russian)* 7−78104
steel, armour, microstruct. transform. induced by adiabatic shearing 7−86247
steel, austenitic, high Mn, explosion hardened, residual stress distrib. rel. to repeated impact loading *(Japanese)* 7−93035
steel, austenitic, mech. behaviour with respect to elastic-plastic wave propag. 7−78137
steel, austenitic, stainless, piping system, instability of circumferential growth of through-wall crack, procedure for determ. of criterion 7−91035
steel, austenitic alloy, fracture, plastic deform. and ageing effects *(Russian)* 7−138817
steel, austenitic Mn, Hadfield's work hardening, deform. twinning 7−113569
steel, austenitic stainless, deformation, theory of mobile dislocation density 7−69712
steel, austenitic stainless, fatigue crack propag. and plastic deform. near crack tip, effect of grain size *(Chinese)* 7−71264
steel, austenitic stainless, H transport diving plastic deform. 7−113608
steel, austenitic stainless, low cycle fatigue rel. to plastic deform., 4.2 K 7−113703
steel, austenitic stainless, notched, plastic zone form., digital image processing 7−71423
steel, austenitic stainless, piping system, instability of circumferential growth of through-wall crack, procedure for determ. criterion 7−91034
steel, austenitic stainless, recrystallisation annealing, plastic props., twin boundaries 7−132667
steel, austenitic stainless, strain induced austenite transform., temp. history effect 7−119271
steel, austenitic stainless, strain induced martensite form., surface struct., Mossbauer spectra 7−86174
steel, C, buckling behaviour, effect of Bauschinger effect 7−126185
steel, C, deform. distrib. after bending 7−86258
steel, C, microplastic to macroplastic deformation transition 7−113636
steel, C, uniaxial tensile test, heat generation model 7−132679
steel, Ca-containing, effect of Ba on mech. props 7−106596
steel, cold and hot rolled, shear band form. at high strain rates, temp. profile meas. 7−113571
steel, Cr, pearlitic transform. kinetics and pearlite morphology, effect of austenite state 7−86223
steel, Cr-Mn-Si, cold brittleness, unstable austenitic struct., Si content effect 7−78203
steel, Cr-Mo-Si, work hardening, effect of strain rate and microstruct. 7−126145
steel, creep and tensile tests at high temp., uniform deforms. determ. 7−132869
steel, deformation and fracture resistance comparison in independ/. temp. and mech. loading and Coffin method 7−132863
steel, deformation induced heating during tensile testing 7−132681
steel, dual phase, deform., modified Crussard-Jaoul analysis 7−126176
steel, dual phase, deform. characts. of retained and transformed ferrite 7−93066
steel, dual phase, fatigue and crack closure behaviour, effect of phase continuity 7−144545
steel, equilibrium with H_2 gas *(German)* 7−78135
steel, eutectoid, isothermal pearlitic transform., plastic deform. *(French)* 7−86165
steel, eutectoid cylinder, cooling, internal stresses, transform. plasticity 7−132603
steel, ferritic stainless, high temp. mech. twinning, plastic deform. mechanisms 7−117938
steel, frictional contact zone embrittlement, S and Cl effect *(Russian)* 7−144561
steel, high C, wires, drawing at elevated temp., cementite spheroidization 7−113616
steel, high Mn, wear resist., influence of Mn and C contents 7−86365
steel, HSLA, precip. behaviour in specimens containing Mo, Al and trace amounts of Ti 7−78011
steel, low alloy, low C, chem. microheterogeneity 7−106513
steel, low alloy, quench and temper hardening, static indentation process analysis 7−113698
steel, low alloy dual phase, intercritical annealing, retained austenite mech. stability rel. to microstruct. 7−71183
steel, low alloyed, struct. form. and mech. props., effect of deform. and subsequent cooling processes 7−100245

plastic deformation continued
steel, low C, ferrite-martensite struct., crack resist. *(Russian)* 7−100330
steel, low C, plane strain hot rolling finite element study 7−132652
steel, low C, textured, X-ray stress determ. using compliances calc. 7−132641
steel, low C sheet, tempering, recrystallisation texture, plastic anisotropy 7−144441
steel, maraging, $\alpha \rightarrow \gamma$ transform., effect of deform. 7−106506
steel, medium C, continuous cooling transform., austenite deform. effect 7−138802
steel, metastable Cr-Mn austenite, slow fracture and martensitic transform. obs. *(Japanese)* 7−119334
steel, microalloyed, changes in austenite grain struct. due to multiple hot deform. 7−132692
steel, mild, annealed, cusps and vertices on yield surface 7−137455
steel, mild, microscopic shear bands at Luders fronts 7−86297
steel, Mn, Hadfield, thermomech. treatment, deform temp., wear resist. *(German)* 7−119299
steel, Mn, metastable austenite, friction induced martensitic transform., abrasive wear resist. 7−78277
steel, Mn-Cr-Si, dual-phase, tensile stress-strain anal. 7−126190
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7−86187
steel, Ni, dual phase, electrical resistivity 7−124965
steel, Ni, induced martensitic transform. in metastable austenite matrix 7−126112
steel, Ni-Cr-Mo, carburised-quenched, transform. plasticity, simulation method *(Japanese)* 7−78114
steel, Ni-Mo, plastic deform., H diffusion and trapping 7−113605
steel, recrystallisation during laser heating, plastic deform. effects *(Russian)* 7−138757
steel, rotor, surface plastic deform. effect on fatigue crack initiation 7−78369
steel, stainless, cavitation-corrosion resistance, preliminary cold deform. effect 7−78352
steel, stainless, Cr-Mn type, low-cycle fatigue at low temp. 7−78218
steel, stainless, fracture toughness at 76 K, effect of prior deform. 7−119372
steel, stainless, physical and chemical props., effects of rapid solidification 7−86163
steel, stainless, strain induced austenite transform. 7−132612
steel, structural, struct. and mech. props., effect of rolling temp. *(Russian)* 7−93041
steel, ultra high strength, deform. characts. and fracture 7−78107
steel, welded joint strength in mech. and thermal cyclic loading, stress concentrators effect 7−113716
steel and cast Fe, wear resistance improvement by surface plastic deform. 7−138847
steel clad Cu, compacts, rolling textures 7−78047
steel hollow structural section members subject to cold bending, deforms. 7−71206
steel plate, pierced by cylindrical striker, impulse of forces 7−123550
steel plates, quenching in polyalkylene glycol, thermal stress and strain generation 7−113583
steels low alloy and low C, fractography study 7−106597
strain bursts in fatigue experiments 7−118030
strain criteria in fracture mechanics 7−75421
stress-strain curves, description with Hooke's straight line, yield horizontal and strengthening clothoid *(German)* 7−132693
structural elements under cyclic loads, modelling nonuniform nonsteady thermal stress states 7−75462
structural material behaviour under nonproportional loading, struct. model approach 7−75348
structural materials, fatigue strength, freq. depend., microplastic deform. role 7−78216
synchrotron radiation topography appl. to single crystal dynamic processes 7−91562
synergistic effects in the plastic deformation and destruction of crystals 7−137451
tensile testing, deform.-induced heating, numerical method 7−69007
thermally activated processes, energy expression of microstruct. 7−118024
thermo-mechanical analysis of dry sliding systems 7−110877
thermomechanical finite element formulation of an elastoplastic material law in the deformation phase *(German)* 7−104183
thin shells undergoing small strains and large rotations, nonlinear anal. 7−97350
torsion tests, high-speed, direct temp. meas. 7−119371
triple grain junction, grain boundary sliding 7−76142
trusses, kinematic hardening 7−97329
two-body abrasive wear model, plastic deform. localisation 7−136765
two-dimensional perfect crystals, nucleation of fracture, computer modelling 7−111754
Udimet 500, Ni-based superalloy, low cycle fatigue, strain rate effects and assoc. deform. mode 7−144534
uniqueness of solns. in generalised plasticity at infinitesimal deformation 7−80411
vinylidene fluoride-tetrafluoroethylene copolymer films, uniaxial stretching, acoustic obs. *(Russian)* 7−138798
viscoelastic body, inverted jet form, strength effects 7−130568
viscoplastic approx. to Hart's constitutive law for inelastic deformation 7−130554
viscous and plastic deformation, theory 7−98311
Zircaloy fuel sheaths, strain axial variations in CANDU-600 LOCA 7−96290
Zircaloy-2 plates SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
Zircaloy-4 PWR fuel cladding material, out-of-file test for yielding behaviour 7−132848
Zircaloy-4 sheets, cold-rolled, evidence of pyramidal slip mode 7−69711
Ag, polycrystalline, deform., shear bands, cellular dislocation systems 7−132666
Ag, polycrystalline, plastic deform., dynamic recovery 7−144434
AgCl:NaCl, slip mode transition temp. range shift study 7−118017
$Ag_xCu_{1-x}I$ solid solution thin films, exciton spectrum features 7−131549
Al alloys, formability, microstructural effects, strain localisation, fracture 7−78118
Al, annealed, AE during deform. *(Russian)* 7−91735
Al bicrystals, tensile deform., {111} twist grain boundary recrystallisation 7−132653
Al crystal plastic deformation under complex constraint in simple traction *(French)* 7−111746

plastic deformation continued
Al, deformed to very large steady-state creep strains, dislocation microstruct. 7−100305
Al films, electrical noise associated with dislocations and plastic flow, review 7−77017
Al, magnetoresistance, influence of low temp. plastic deformation *(Russian)* 7−105532
Al, periodic structural changes and rotational plastic deform. *(Russian)* 7−137446
Al, response behaviour of internal friction to freq. and strain rates during plastic deformation *(Chinese)* 7−91721
Al single crystal, stretching deformation, sound emission studies *(Russian)* 7−100282
Al single crystals and bicrystals, cutting mechanism, plastic anisotropy *(Japanese)* 7−78111
Al single crysts., quenched, plastic deform., slip bands, dislocation loops *(Japanese)* 7−100289
Al, strained at 4.2 K, energy loss, anisotropy, magnetoresistance and recovery 7−137901
Al, transient creep mechanism, high temp. 7−138796
Al, tricrystal, triple grain junction, grain boundary sliding 7−76142
Al-Be-Mg alloy, two-phase, with plastic matrix, struct. parameters of strength 7−126200
Al-Cu-Mg, AE monitoring in interrupted tensile tests at room temp. 7−100297
Al-Fe-Ce, rapidly solidified, isothermal annealing, dispersed particle coarsening rel. to plastic deform. 7−93064
Al-Fe-Ce (8.4, 3.6 wt.%), rapid solidification, high temp. deform. 7−100308
Al-Fe-Mn, microplastic surface deform. 7−78094
Al-Fe-Si, commercial, high temp. deform. 7−78124
Al-Li, rapid solidification, physical metallurgy review 7−113533
Al-Li-Ti(Zr)(Hf), duplex precip. hardening, struct., mech. props. 7−138755
Al-Mg (3 wt.%), rolled single crysts., microstruct., shear band form. 7−113606
Al-Mg sheet samples, microcrack accumulation due to uniaxial stretching *(Russian)* 7−100332
Al-Mg-Si, compact specimens, plastic zone determ. 7−138794
Al-Mn-C (30, 0.8 wt.%), hot deformability, influence of microstruct. 7−113642
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Si (15 wt.%), hypereutectic, high press. crystn. struct., mech. props. *(Russian)* 7−144391
Al-Zn (1 wt.%), deformed at room temp., AE study 7−78117
Al-Zn-Mg, fatigue crack closure in vacuum, crack-surface roughness effects *(French)* 7−100369
AlLi, unstable fatigue behaviour in plastic range *(French)* 7−100324
Al_2O_3 ceramics, prep. from high purity powders, mech. props. 7−86099
Al_2O_3 fibre reinforced AgCl composites, ionic cond., plastic deform. 7−69969
Al_2O_3, stored energy from irrad. and mechanical deformation 7−141283
B fibre reinforced Al alloy, deform. of tensile coupon with central slot 7−119310
$BaO.6Fe_2O_3$, polycryst. ferrite, hot extrusion processing, microstruct. change *(Japanese)* 7−126202
Be foil, plastic deform. characts. during cold rolling 7−106531
Be single crystals, deformed by prismatic slip, dislocation struct. 7−111562
Be single crysts., critical resolved shear stress for prismatic slip, TEM obs. 7−132660
$Bi_2Te_{3-x}Se_x$:$CdCl_2$, impurity behaviour during recrystallisation 7−91698
C fibre reinforced plastic, tapered laminated plate, nonlinear analysis under uniform inplane load 7−132669
C fibre reinforced plastic, thermal deformation and strength at high temp. 7−138789
$Cd_{0.66}Hg_{0.34}Te$, plasticity, TEM obs. of dislocations 7−98161
CdS conductivity anisotropy, edge prismatic dislocation effects 7−143463
Ce, high press. γ to α phase transform. 7−71177
Ce-Gd, shape change during $\gamma \rightleftarrows \alpha$ and $\gamma \rightleftarrows \beta$ transforms. *(Russian)* 7−126105
Ce-Se, shape change during $\gamma \rightleftarrows \alpha$ and $\gamma \rightleftarrows \beta$ transforms. *(Russian)* 7−126105
Co-Ni-Ti-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Co-TaC, microstruct. of different struct. transforms. induced by rapid quenching 7−92992
$Co_{74}Fe_6B_{20}$ amorphous alloy, plastic deform., acoustic emission anal. 7−106584
$Co_{74}Fe_6B_{20}$ metallic glasses, acoustic emission studies 7−78451
$Co_{70}Fe_5Si_{15}B_{20}$ metallic glasses, acoustic emission studies 7−78451
$Co_{75}Fe_5Si_{15}B_{10}$ amorphous alloy, plastically deformed, stress relax. and microhardness *(Russian)* 7−126159
CoPt, struct., mag. and mech. props., deformation and annealing effects *(Russian)* 7−144466
Cu clad steel, compacts, rolling textures 7−78047
Cu, deformed by shock waves, recrystn. 7−132637
Cu, electrical resist./shear strain relationship, effect of tensile stress and stacking fault energy 7−112292
Cu, FCC, cyclic deformation, dislocation mechanisms and steady states 7−76124
Cu, high purity, tension, compression or torsion deform. texture, recrystallisation temp., flow strength *(German)* 7−100321
Cu, highly deformed, mech. props., math.-statistical study 7−106535
Cu, impact fatigue strength, cyclic creep plastic deform. *(Japanese)* 7−144529
Cu, Ni mass transfer during shock wave passage, residual deform. effect *(Russian)* 7−143105
Cu, periodic structural changes and rotational plastic deform. *(Russian)* 7−137446
Cu, plastic deform., propag. with depth, acoustic emission study *(Russian)* 7−111739
Cu, plasticity, 2D strain cycling 7−86298
Cu, polycrystalline, cyclic loading, transient response to strain rate changes 7−144484
Cu, powder compacts, sintering, shrinkage eqn. 7−71110
Cu, pure, cold rolled, nucleation of recrystallisation, TEM obs. 7−86217
Cu, textured tubing, small strain biaxial yield, cryst. slip modelling 7−86282
Cu, tricrystal, triple grain junction, grain boundary sliding 7−76142
Cu-Al crystals, mech. twinning mechanisms, stacking fault energy, slip 7−76143
plastic deformation continued
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7−78009
Cu-Al(Zn), electrical resist./shear strain relationship, effect of tensile stress and stacking fault energy 7−112292
Cu-Be base spring alloys, microplastic deform. resist., effect of microalloying 7−86259
Cu-Ce alloys, dislocation glide, in situ TEM study 7−83959
Cu-Nb multifilamentary composites, critical current density meas., strain effects 7−92395
Cu-Ni (12.5, 27 wt.%), rolling texture development 7−100249
Cu-Ni-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Cu-Ni-Sn single cryst. yield stress asymmetry *(Russian)* 7−138780
Cu-Pd, plastic deformation and nucleation, mobile dislocations *(Russian)* 7−71236
Cu-Zn alloy, distorted crystallites, aggregate X-ray diffraction profile study 7−144436
Cu-Zn-Al, Cu-Zn, martensite and equilib. phases stability and transforms 7−78008
Cu-Zn-Al (25.3, 2.9 wt.%), high temp. shape change, deform. temp. depend. *(Japanese)* 7−126175
β-Cu-Zn-Al shape memory alloys, martensitic transform. cycles, effect of plastic deform. 7−113554
Cu-Zr-Mg-Ni-Si, microalloyed, elec. resist. recovery, after low temp. deform. 7−100287
CuIn dilute alloy, lattice defect trapping at ^{111}In atoms, PAC studies 7−91635
CuZnAl, coil spring reversible shape memory actuators, biased reversion and cycling induced degradation 7−100311
Fe foils, annealed and plastically deformed, Mossbauer effect 7−138355
Fe, porous, deform. heterogeneity during static tensile testing 7−119322
Fe, pure polycrystals, low temp. embrittlement by low energy He^+ ions *(Japanese)* 7−138812
Fe, single crystals, plastically deformed, mag. props. 7−112856
Fe sputtered films, lattice expansion and contraction due to H charging 7−124778
Fe-Mn, toughness rel. to microstruct. 7−132739
Fe-Mn-Al, mag. struct. investig. 7−86373
Fe-Ni, press. induced BCC-FCC phase transition *(Russian)* 7−142976
Fe-Ni-Al alloy, prior plastic deform. influence on thermal-martensitic-transform. 7−86171
Fe-Ni-Cr, γ' strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7−105959
Fe-Si (3 wt.%) alloy, deformed H impregnated, corrosion-electrochem. behaviour in H_2SO_4 electrolyte 7−144591
Fe-Si (3 wt.%) single crystals, H induced cleavage cracking under mode 2 loading 7−78159
Fe-Si alloy, hot rolled, texture changes due to deformation and heat treatment *(Russian)* 7−78060
$Fe_{100-x}B_x$ metallic glasses, mechanical props. 7−86360
$Fe_{72}Cr_8P_{14}C_6$ metallic glasses, acoustic emission studies 7−78451
$(Fe_{100-x}M_x)_{0.83}B_{17}$ (M=Ni, Co, Mn, Cr, Mo, W) metallic glasses, mechanical props. 7−86360
$Fe_{40}Ni_{40}B_{20}$ metallic glass, homogeneous deform., stress relax. meas. 7−98319
FeSi, transformer steel, heat loss mag. macrostruct. 7−113611
GaAs, dislocation substructure and plasticity below 400°C as function of doping 7−98158
GaAs, plastically deformed, dislocation struct. 7−98157
GaAs, plastically deformed, EPR spectra 7−99578
GaAs, plastically deformed, EL2 defect metastability 7−131585
GaAs, semi-insulating, partial dislocation mobility under high stress 7−98162
GaAs: Cr, plastically deformed, dislocations, thermal conductivity meas. 7−98595
GaAs:In, As_{Ga}-related photoluminescence, plastic deform. effects 7−119040
GaAs:In, high temp. plastic deform., TEM obs. of dislocations 7−98159
GaAsSbP-GaAs structures, plastically deformed, mismatch dislocations 7−137740
Ge, dislocations, review 7−76129
Ge, plastically deformed, EPR spectra 7−99578
Ge single crysts. diamag. suscept. meas., plastic deform effects study 7−112735
Ge whisker crystals, relax. of stresses 7−112155
InP:S, single crysts., thermal activation of deform. 7−98307
InP:Zn,S, deform., dislocation generation and movement 7−131215
InSb, dislocation mobility on load reversal 7−105150
KBr, plastically deformed prior to gamma irrad., F-centre annealing, thermolum. studies 7−85857
KBr(:Ba^{2+}), microhardness and plastic deformation 7−104900
KCl crystals, transformation of energy traps, plastic deformation, thermolum. studies 7−113293
KCl crysts., low temp. heat capacity, internal stress effects *(Russian)* 7−76429
β-LiAl, mech. props., comp. depend., defect struct. 7−144483
LiF crystals, charging of crack edges, work done in fracture 7−69816
LiF crystals, plastic deform. at high temps. 7−137450
LiF crysts., low temp. heat capacity, internal stress effects *(Russian)* 7−76429
LiF, neutron irrad. effect on plasticity and strength characts. 7−104846
LiF stressed crysts., F_2^+ centres, γ-ray irrad. and compression effects 7−131147
LiF-LiF:Mg layer crystals, plastic props. 7−131213
βLiIn, defect, struct., mech. props. 7−144482
Li_2O polycrystals, deform., 700-950°C 7−84095
MgO single crysts., cyclic deform., recovery process, TEM obs. 7−86207
MgO, stored energy from irrad. and mechanical deformation 7−141283
MgO:Ni crystals, plastically deformed, metallic colloids formation 7−113236
MnO, high temp. deform. 7−78093
Mo alloys, deformed by upsetting, struct. and dislocation substruct. 7−86257
Mo alloys, deformed by upsetting, texture 7−106534
Mo alloys, particle strengthening, deform. mechanisms 7−71240
Mo, internal friction on microplastic deform. in brittle-plastic transition range 7−106555
NaCl crystals, impact attrition study 7−91708
NaCl, γ-irrad., comminution of colloidal Na particles during plastic deform. 7−104829
NaI(Tl) hardened phosphor crysts., surface struct., etching studies 7−98639

plastic deformation continued
Nb, alpha-irradiated and deformed, positron annihilation studies 7−76225
Nb-H system, hydride precip., X-ray diffr. study 7−84284
Nb-Mo-H system, hydride precip., X-ray diffr. study 7−84284
Nb-Ti fibres, short sample training behaviour, 4.2 K 7−86376
Nb-V, H embrittlement, dislocation substructure, deform. twinning 7−78181
Nb-V foils, tensile deform., dislocation substruct., H embrittlement 7−78113
Nb_2O_5 thin films less than 1 μm, hardness testing 7−100478
Nb_3Sn multifilamentary supercond. composites, tensile strength, elongation, fracture 7−106582
Ni, FCC, fatigue, stabilised loading cycle, deformation stages 7−106593
Ni, H transport diving plastic deform. 7−113608
Ni, lattice vacancies introduced by electron irrad., quenching and cyclic deformation 7−91574
Ni, pure, primary creep, expt. and theory 7−113601
Ni thin films less than 1 μm, hardness testing 7−100478
Ni, uniaxial deformation, dislocation struct. and mech. props. *(Russian)* 7−144467
Ni-B thin films less than 1 μm, hardness testing 7−100478
Ni-base superalloy, GH99, antiphase domain boundary energy of γ'-$Ni_3(Al,Ti)$ particles and strengthening contrib. *(Chinese)* 7−144425
Ni-Co, electrodeposited, tensile props. rel. to heat treatment 7−71254
Ni-Co-Cr superalloy, GH49, coarse grain form. after critical deform. *(Chinese)* 7−144464
Ni-Mn (2 wt.%) polycrystals, plastic deform., annealing, island grains form. 7−78043
Ni-Ta-Cr, single cryst. superalloy, yielding and deform., 20-1093°C 7−71251
Ni-Ti, shape memory effect, stepwise phase transform. *(German)* 7−100224
$Ni_{75}Al_{25-c}Mn_c$ solid solns., mag. props., plastic deform. effects 7−70621
NiO, point defects and high-temp deformation 7−69812
Pd, deformed, anomalous H solubility 7−124522
Pd-Co dilute alloys, ferromag. transition obs. 7−132019
Pd-Fe dilute alloys, ferromag. transition obs. 7−132019
Si, dislocation-induced optical centres modification under tangential stress, photolum. study 7−144011
Si, dislocations, review 7−76129
Si intense ion irrad.-initiated plastic deform. and thermal stresses study 7−117986
Si, plastically deformed, defects classification 7−99576
Si, plastically deformed, EPR spectra 7−99578
Si, plastically deformed, pentavacancies, EPR studies 7−106021
Si sheet growth, transverse temp. field nonuniformity effects on stress 7−83809
Si single crysts. diamag. suscept. meas., plastic deform. effects study 7−112735
SiAlON ceramics, amorphous second phase controlled crystn., microstruct., mech. props. 7−132620
SiC particle reinforced Al-Zn-Mg composite, thermal cycling induced internal stresses, plastic deform. 7−132687
Sn high purity single crysts., low-temp. plasticity, Peierls relief *(Russian)* 7−78106
Sn single cryst., β-phase, plastic deformation anisotropy *(Russian)* 7−71237
Sn-PB eutectic alloy, fine-grained, creep and const. speed compression 7−126187
Ta sputtered films, lattice expansion and contraction due to H charging 7−124778
Ti adiabatic shear, critical loading parameters 7−78142
β-Ti alloy, adiabatic shearing at high strain rate *(Chinese)* 7−78098
Ti alloy VT16, strain rate effect on plastic deform. resist. 7−113638
Ti alloys, martensitic transformation induced by plastic deformation, multistage, nature *(Russian)* 7−104982
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7−86283
Ti alloys, wrought, annealing temp. effect on resist. to low levels of plastic deform. 7−126152
Ti, commercial quenched at high cooling rates, effect of plastic deform. on strength 7−100285
Ti, cyclic deform., 3D shape of loop patches 7−86278
Ti, sponge, energy characts. of dynamic densification 7−77879
Ti sputtered films, lattice expansion and contraction due to H charging 7−124778
Ti-Al (7.5 wt.%), deform. mode rel. to injected He 7−119316
Ti-Al alloy, α-phase, deform. and failure in strong mag. fields, 293 to 4.2 K range 7−93052
Ti-Al-Mo-Cr two-phase alloy, struct. after deformation and annealing *(Russian)* 7−71235
Ti-Al-Nb, as-cast and deformed samples, dislocations 7−124274
Ti-Al-V, optimising conditions for deform. in order to increase mech. props. 7−106541
Ti-Al-V (6,4 wt.%), strain reduced hydride, crack propag., TEM obs. 7−78221
Ti-Mn, fracture surfaces during tensile separation, investig. of unusual features caused by adiabatic shear 7−144551
Ti-Mo (30 wt.%), plastic deform. in BCC alloys induced by H conc. gradients 7−113632
Ti-Nb alloys, cold deform. mechanisms 7−86256
TiAl single crystals, deform. at 77 K, dislocation struct. 7−83963
Ti_3Al, as-cast and deformed samples, dislocations 7−124274
TiB_2, high temp. deform., Hall-Petch relation, TiC precip. effect 7−113615
TiN coating, sputter ion plating, internal stress, microstruct. 7−138658
V, soluble and nonsoluble implanted atoms, lattice site occupation, dose effects 7−131170
V_3Si, plastically deformed, lattice defects, positron annihilation study 7−106298
W alloy, W-2, dynamic response, determ. by commercial manganin stress gauges 7−144472
W, deformation, elec. resist. recovery, grain boundary recrystallisation 7−144433
WC-Co, deform., crack nucleation, slip transfer, plastic incompatibility 7−86250
Y, hot shortness 7−86319
Zn, single crysts., kink form. when basic slip is suppressed *(Russian)* 7−91701
Zn-Cu single crysts., hardening, deform, conditions 7−71201
plastic deformation continued
ZnS:Cu, deformation lumin., crystals with moving charged dislocations 7−70864
ZnSe-GaAs (100), plastic deformation in MBE grown ZnSe layers 7−76668
Zr, cyclic deform., 3D shape of loop patches 7−86278
Zr plates, SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
α-Zr, strain rate sensitivity, effect of dynamic strain ageing 7−113625
α-Zr, texture form. due to rolling *(Russian)* 7−144428
Zr-Fe system, heat treatment, plastic deform., phase transform. 7−71176
Zr-Nb (2.5 wt.%) alloy, pilgered cold-worked press. tube, in-reactor deform. 7−96186
ZrO_2 polycrystals, fine grained, high temp. deform., TEM obs. 7−126178

plastic flow
see also ductility; Luders bands; necking; rheology
anisotropic media, plastic flow theory, determining relationships 7−75347
borosilicate glass, plastic flow under heavy ion bombardment 7−131211
brass, grain size distrib., strain hardening exponent variation 7−138758
collective modes in a viscoelastic medium, transformation 7−83074
composite sheets, stainless steel-Cu-stainless steel, fabrication and tensile behaviour *(Korean)* 7−78063
composite with hardening components, plasticity law 7−97336
crystals, unstable plastic flow, Luders-Chernov bands *(Russian)* 7−137447
diamond, critical shear stress, fracture and deform., bending tests obs. *(Japanese)* 7−118018
ductile failure, effect of porosity distrib. 7−142900
elastoplastic high-velocity flows, nonisothermal instability 7−76281
endochronic plasticity, basic props. of plastic flow and failure 7−75336
fatigue life prediction in bending from axial fatigue information 7−83103
glycerin, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7−142189
hydraulic bulge test on linear strain-rate-hardening material, anal. *(Japanese)* 7−113815
intergranular cavity growth models, limitations 7−83976
intermetallic compounds, melting temp., density, strength, cryst. struct., stiffness 7−111833
J_2-flow theory for large scale computation 7−104188
large elastoplastic deformations under high press., theory development 7−110812
line contact, rolling and sliding, cumulative plastic flow 7−117486
localisation in elastic-plastic material developing from stress-free surface 7−90977
metals, dislocations, book 7−72738
metals, electrical noise associated with dislocations and plastic flow, review 7−77017
metals, plastic flow during rolling, limitations of kinematic models 7−106540
metals, sheet, crystallographic texture, anisotropic yield surfaces and forming limits 7−113572
metals, viscoplastic flow during flat rolling 7−106539
metals and single-phase alloys, plastic deform. to high strains, simple phenomenological expressions 7−98310
multiaxial cyclic problems, anal. with anisotropic hardening model 7−104165
nonstationary flow, eqn. soln. 7−76282
nonuniform plastic deformation and the Portevin-le Chatelier effect 7−118023
oxide dispersion strengthened materials, elimination of threshold stress for creep by thermal cycling 7−132691
plane-strain ideal plastic deformations, closed form solutions 7−123483
plane-stress anisotropic plasticity, stress conc. problems 7−97333
plate, infinite, thermo-plastic stability 7−83076
plate-rod impact at very high speed, anal. 7−91040
plates, anisotropic laminar, with defects on interfaces, breaking resist. 7−75452
plates, rectangular, uniaxial compression with unloaded edges clamped, stability in elastoplastic range 7−117497
polycrystals, mech. props., importance of grain size effects 7−69713
porous, unequally strong and anisotropic media, applied theories of plasticity 7−75345
powder compacts, unequal sized particles, hot isostatic pressing, densification mechanism maps 7−71105
quasibrittle fracture, ductile crack growth model 7−97450
shear at high strain rates, instability and localisation of plastic flow 7−69009
shear band form. during plane strain extension, geometric models of internal shape change 7−91700
shear localisation in rate and temp. depend. solids, FEM anal. 7−90984
solid, viscoplastic, steady shearing 7−110803
steel, austenitic stainless, dynamic testing of large specimens, yield/flow stress meas., exptl. techniques 7−126195
steel., austenitic stainless, stable, N strengthening 7−113563
steel, dual-phase, cyclic deform. effects of morphology and strength of martensite 7−100300
steel, ferritic, directional strain softening 7−78040
steel, prestrained, plastic shearing 7−132688
steel, stainless, fracture toughness at 76 K, effect of prior deform. 7−119372
steel, strain hardening and heat treatment effect on uniform tensile strain and strain hardening coeff. 7−126194
steel cylindrical storage ampule, dynamic pressure conditions, walls final temp. meas. 7−97286
steel sheet, flow behaviour, effects of cold rolling 7−132671
strain ageing, dynamic, review 7−71207
styrene-acrylamide copolymer particles, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7−142189
tensile testing, deform.-induced heating, numerical method 7−69007
torsion, flow localisation, effect of material imperfections 7−98314
void-containing metals, lin. elasticity and rigid-plasticity 7−84092
Ag-Fe, ductile two-phase alloys, strengthening prediction model for high strains 7−132642
AgCl, cryst., slip bands and strain hardening, temp. depend. 7−126139
Al, grain size distrib., strain hardening exponent variation 7−138758
Al, proton irrad., tensile props. 7−71258
Al-Cu-Fe, 2219, two-stage microplastic surface deform. 7−86249
Al-Cu-Mg, 2024, high temp. flow behaviour, charactn. and modelling 7−78122
Al-Mg sheet, thermal and strain rate softening during necking and shear band form. 7−126193

plastic flow continued
Al-Mg-Zr (10, 0.1 wt.%), warm rolling, superplastic flow, microstruct. 7−144481
Al-Si, thin film metallisations, mech. props. and microstructure 7−124786
Al-Zn-Mg, age hardened, fracture, deform., H enhanced dislocation mobility 7−132661
Al-Zn-Mg, Guinier-Preston zones and onset strain of serrated flow 7−144487
Al_2O_3, sintering, plastic flow, TEM obs. 7−77899
Al_2O_3, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7−142189
B fibre reinforced Al alloy, orthotropic elastic-plastic material, charactn. in nonlinear range 7−144473
$Be_3Al_2(SiO_3)_6$ beryl, Knoop microhardness determ. of slip systems 7−131218
C fibre reinforced nylon 6 composite, creep rel. to low cycle fatigue 7−106578
Cd, flow stress under hydrostatic press., effect of grain size *(Japanese)* 7−106583
$Co_{80}Nb_{14}B_6$, $Co_{84}Nb_{10}B_6$ metallic glasses, martensite transform., plasticity, internal friction 7−106574
Co_3Ti single crysts., plastic flow under compression, temp., orientation and comp. depend. 7−119307
Cu, flow stress 7−144463
Cu, grain size distrib., strain hardening exponent variation 7−138758
Cu, hot compression, recovery and recrystallisation during stress relax. 7−119281
Cu, polycrystalline, deform. texture development, model predictions 7−138793
Cu-Al single crystals, strain softening and plastic flow instability 7−78097
Cu-Nb, ductile two-phase alloys, strengthening prediction model for high strains 7−132642
Cu-Nb composite, heavily cold-worked, strength and microstruct. charactn. 7−144459
Fe-Al, prep., tensile and fracture props. 7−86285
Fe-Co-Si-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Fe-Ni-P-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
$Fe_{78}B_{13}Si_9$ amorphous alloy, viscous flow meas. near T_g under continuous heating 7−98321
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, creep, structural relax., wear, plastic flow model 7−86295
$LaS_{1.4}$, tensile strength and struct. 7−98306
$(Mg,Fe)_2SiO_4$, olivine, creep, press, depend. 7−84101
Mg alloy, dynamic recrystallisation, hardening and plasticity *(Russian)* 7−100244
MgF_2, grain growth enhancement of bend strength on hot pressing 7−113624
MgO single crystal, aspect ratio effect on compression 7−131216
NaCl crystals, compression, deform. and fracture anal. 7−91697
NaCl, single crysts., dynamic recovery during compression testing at elevated temps. 7−124378
Nb alloys with ultradisperse nonmetallic phase particles, microstruct. of reorientation bands *(Russian)* 7−105058
Ni, flow stress, effects of cathodically charged H 7−78095
Ni-base superalloy compacts, coarse-grained, modelling of plastic flow under isothermal forging 7−113609
Ni-C, flow stress, effects of cathodically charged H 7−78095
Ni-Co-Al, flow stress, γ′ particles, Co content effect 7−78133
Ni-Nb metallic glasses, creep, free vol. annihilation and relax., isothermal dilatometry meas. 7−98324
$Ni_3(Al,Nb)$ single crystals, cyclic deform. at ambient and elevated temps. 7−144503
$Ni_3(Al,Nb)$ single crystals, fatigued at ambient and elevated temps, dislocation struct. 7−144504
$Ni_3(Al,Ti)$ single crysts., flow stress rel. to strain rate *(Japanese)* 7−100290
$Ni_3(Al, Ti)$ single crysts., high temp. yielding *(Japanese)* 7−126173
NiAl, Ni_3Al, plasticity anomaly 7−100284
Ni_3Al, in situ straining in TEM 7−113602
Ni_3Ga single crystals, plastic flow asymm. 7−113610
Pd-Si metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Si web crystal growth, plastic deform. analysis 7−84093
SiC whisker reinforced Al alloys, hot working behaviour 7−78070
SiO_2, natural amethyst, Brazil twins, X-ray study 7−124286
Ti, substitutional solid soln. hardening, screw dislocation motion 7−132633
Ti, textured sheets, deform. behaviour in uniaxial tensile test, effect of twinning 7−144500
TiC single crystals, state variable analysis of inelastic deform. 7−113612
α-U, anisotropic polycrystals. internal stress superplasticity 7−86288
V, supercond., strained at 4.2 K, crit. fields and defect struct. *(Russian)* 7−92386
Zn, anisotropic polycrystals. internal stress superplasticity 7−86288
Zn-Al eutectic alloy superplastic, circular-die hydraulic bulge deformation *(Japanese)* 7−110802
Zn-Al-Mg textured sheet, flow stress, influence of grain size and loading direction *(German)* 7−126204

plastic strain *see plastic deformation*

plastic theory *see plasticity*

plasticity
see also elastoplasticity; photoplasticity; superplasticity
anisotropic hardening law using internal time concept 7−136713
anisotropic medium, problem of two plastic and heterogeneous inclusions 7−123453
antisymmetric angle-ply plastic plates under distributed load, analytic treatment *(German)* 7−104184
beams, plastic axially constrained, dynamic response to blast loads 7−75337
bifurcation and post-bifurcation analysis in plasticity and brittle fracture 7−110804
boundary value problems, thermoviscoplasticity, solutions with allowance for creep damage 7−110806
Bree cylinder, alternating plasticity at surfaces subjected to in-phase and out-of-phase loading 7−97339
colloids, rheological props., nonequilib. process linear Onsager theory 7−114006

plasticity continued
composite with hardening components, plasticity law 7−97336
concrete, damage-plastic loading surface model 7−91703
cyclic, rate-dependent behaviour, random barriers theory 7−75327
cylinder, orthotropic, rotating, elastic-plastic and creep transition 7−75351
cylinder, thick-walled, dynamic loading, thermoviscoplasticity by finite elements 7−90980
cylinder-rough plate contact width and compliance asperity deform. 7−69077
drum-type crop shear, cutting mechanism, computer-aided grid circle analyser study *(Japanese)* 7−78080
effective absolutely stable algorithm for numerical solution of thermoviscoelasticity and thermoviscoplasticity problems 7−104170
elastohydrodynamic lubrication, viscoplastic and viscoelastic models 7−142240
elemental semiconductors, dislocation structures/dynamics and plasticity 7−142780
endochronic model with neutral loading 7−134491
fibre-reinforced composites, Dugdale crack model applicability 7−97452
finite element analysis, plasticity computations 7−123476
flash temperature at plastic contact points 7−142239
growing crack in perfect plasticity, tip asymptotic solns. with strong discontinuity *(French)* 7−97404
Haasen-Kelly effect type deformation phenomena, analytical description 7−75346
HTGR graphite components, elastic-plastic fracture toughness 7−141179
Inconel 718, expt. comparison of several current viscoplastic models at elevated temp. 7−119324
internal time theory using Mandel's director concept and isotropic/kinematic hardening theory 7−90976
layered solids, plastics, necking modes initiation 7−123490
limit loads of heterogeneous and homogenized structures, comparison *(French)* 7−123485
local phase transition around a cavity in a solid 7−84257
lubricant flow in bearing curved gap, pseudo-plastic variable consistency effects *(German)* 7−142342
metallic polycrystals under complex loading paths, plasticity 7−90975
metals, plasticity rel. to limit formability 7−132665
nonradial loading paths, Prandtl-Reuss incremental flow 7−75352
orthotropic cylinder under internal pressure, elastic-plastic transition 7−80419
periodically nonhomogeneous structure, limit load calc. *(French)* 7−123484
phenomenological theory, foundations and methods *(German)* 7−104168
phosphate schlamms, pipe flow and rheological behaviour charactn. *(French)* 7−75671
plane-stress anisotropic plasticity, stress conc. problems 7−97333
plate, porous transtropic with strain hardening base, plastic state eqn. 7−104169
plates, plastic, possible combinations of optimal designs 7−75338
plates, rigid viscoplastic circular, dynamical loading effects *(Polish)* 7−130559
polycrystal plasticity, Lin model, 2D finite element anal. 7−90974
polycrystalline materials, inelastic processes within the range of high deformation velocities *(German)* 7−104175
polycrystals, textured, yield surfaces, analytical approach 7−76272
polystyrene transient swelling, iodohexane sorption, case-II diffusion regime 7−118164
porous, unequally strong and anisotropic media, applied theories of plasticity 7−75345
PVC, antiplasticisation phenomena, strain rate and temp. effects 7−130612
review of past developments, current activities, future directions 7−136718
sandwich structures under changing temp. distribs., plastic zone expansion *(German)* 7−104181
scaling relation of expt. curves 7−136719
semiconductors, III-V, dislocation structures/dynamics and plasticity 7−142780
shape rolling of angle anal. by energy method using finite element division 7−130558
shells, cylindrical, rigid-plastic, optimal design in post-yield range 7−104166
smeared cracking, plasticity, creep, and thermal loading, unified approach 7−110839
solid, viscoplastic, steady shearing 7−110803
sphere, layered, from finite set of materials, optimisation of mass 7−68988
spherical container, impulsive loading, dynamic elasto-viscoplastic soln. 7−90982
steel, Fe-Ni-Mn, structure and mech. props., carbide intermetallic strengthening *(Russian)* 7−78103
steel, stainless, plastic zone form. studied by digital image processing 7−93054
steel, thermoplasticity, asymptotic stability when $t\to\infty$ *(German)* 7−138800
stress-strain relations in plasticity with non-associated laws, anal. 7−123482
subcritical, critical, and supercritical directions of loading in plasticity 7−75341
textured polycrystals, yield locus calc. using Taylor and relaxed Taylor theory 7−76278
theory, one-velocity dislocation flow, eqns. 7−97351
thermoplastic rubbers, melt transition temp., hard segment size influence 7−69806
transverse radial shear waves at boundary between domains of plasticity and elasticity 7−91003
two-dimensional spatial problems, eqns. props., small parameter method 7−136721
uniqueness of solns. in generalised plasticity at infinitesimal deformation 7−80411
viscoplastic material modelling with overstress *(German)* 7−104180
viscoplastic sandwich-type continuous beams, dynamic calc. using Green's functions *(German)* 7−104172
viscoplastic solids, onset of shear localisation 7−130557
viscoplasticity, adaptive FEM for class of evolution problems 7−123481
void-containing metals, lin. elasticity and rigid-plasticity 7−84092
von Mises kinematic hardening model, stress rate and Lagrangian formulation of finite strain plasticity 7−75334
yield functions, singular, integration of plasticity equations 7−123479

plasticity continued
Al, plastic behaviour at low and medium temps., phenomenological study 7−86248
Cr-CrO_2 two-phase materials, condensate struct. and plasticity maximum study 7−142884
Cu, plasticity, 2D strain cycling 7−86298
$Hg_{1-x}Cd_xTe$, voltage depend. plasticity 7−69811
LiF crysts., mechanical props., neutron small dose effect studies 7−69769
Ni-Si-B amorphous and crystallised alloys, wear behaviour study, embrittlement and ductility 7−91718
NiAl, Ni_3Al, plasticity anomaly 7−100284
Si web type ribbon growth, dislocation dynamics 7−83965
ZnP_2, α- and β-crystals, anisotropy of microhardness, density of defects 7−91710

plastics
see also carbon fibre reinforced plastics; glass fibre reinforced plastics; polymers
adhesion theory from thermodynamic-chemical viewpoint *(German)* 7−132905
aramide-fibre unidirectional organoplastic, tensile strength, matrix props. effects 7−142883
bars, vibro-acoustic emission 7−144668
birefringent optical materials, preparation 7−97103
celluloid tube, softened, creep deform. under nonproportional variable stresses 7−75326
deformation, large-strain, prediction 7−132682
electrically conducting plastics for battery electrodes *(German)* 7−119634
epoxy binder-polyheteroarylene fibre organoplastic, compressive strength, fibre content depend. study 7−142882
fatigue testing results, one-eqn. analytical description *(Polish)* 7−86526
fibre sheet dye laser with wide tuning range 7−110345
film solar air and water heaters, thermal performance 7−119686
film thickness measurement using angle-scanning laser interferometer 7−80868
flexible web, sputter coating processes *(German)* 7−77801
foam plastic, tough, relax. props. in compression, macrostruct. effect 7−71246
foam-plastics, phys. charact. features of deform. kinetics 7−86281
hardening process of microplastics, rheokinetic investig. 7−144360
kaolin powder-paraffin oil mixture, wall slip rel. determ. by three gap method 7−69091
lens coatings evaluation by abrasion tester 7−90750
NDT using Compton scattered X-rays *(German)* 7−138946
new materials, state of the art *(Spanish)* 7−119117
ophthalmic lenses, coating evaluation 7−90751
ophthalmic lenses, vacuum coated, abrasion testing 7−90752
optical disc bow measurement with optical head 7−136767
optical fibre materials 7−136463
optical plastic clad silica fibres to single-mode, axial lateral plasma deposition 7−68919
plastics/ice, kinetic friction, vibration effect 7−113731
Plexiglass, thermal neutron diffusion 7−131191
Plexiglass refractive index determ. using nonlinear inverse scattering algorithms 7−136138
polycarbonate thermoplastic, J-integral as fracture criterion 7−113680
polyethylene-based irrad. reticulated material for electrotechnical industry *(Romanian)* 7−111421
polyurethane foam baffles in cryostat necks, necessity, He evap. rate expts. 7−73360
polyvinylidene fluoride piezoelectric film uses and advantages 7−99686
pulse REB generation system 7−97766
PVC, chlorinated, thin film, photoimaging, spectroscopic study *(Chinese)* 7−90736
space materials, conf., Seattle, USA (Oct. 1986) 7−66837
speed of deformation effects on stress *(German)* 7−104186
substrates for a-Si solar cells, continuous fabrication on polymer substrates 7−126615
thermoplastic products, tensile impact tests, life time estimation *(German)* 7−138920
thermoplastics, cold drawing mechanics, large deform. strain hardening modulus 7−119319
thermoplastics, weathered, plastic fracture 7−84116
thermosets, unfilled, fracture surface charact. 7−132745
transparent plastics with surface conductivity, fabrication and charact. 7−85040
vickers hardness and depth hardness under load *(German)* 7−113821

plate tectonics *see tectonics*

plates (anodes) *see anodes*

plating (electroplating) *see electroplating*

platinum
see also nuclei with .....
adsorbed CO layers on TiO_2-supported Pt, transmission IR spectra, combination bands obs. 7−90124
atom, $K\alpha_2/K\alpha_1$ X-ray intensity ratio meas. 7−109832
bond length determ., EXAFS method 7−132376
catalyst, alumina-supported, adsorbed CO, Fourier transform IR spectra study 7−105277
catalyst, C and CO oxidation, statistical energy partitioning 7−119561
catalyst, O_2 activity, electrochemical measurements using solid electrolyte potentiometry *(German)* 7−100591
chemisorption, of O_2, on (111) surface, vibr. energy relax. 7−135933
clusters, struct. study using differential anomalous X-ray scatt. 7−71525
coatings on stainless steel, appl. in weak current sliding contacts 7−71313
colloidal, catalysis of Ir(II) complex and methylviologen radicals decay 7−139040
conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
conductive polymer electrodes for neural prosthetic applications 7−79143
cosmic spherules containing Pt, marine sediment incrustations in French Polynesia *(French)* 7−120022
crystallites on graphite, catalysts, X-ray diffr. evidence of preferential orientation 7−118218
current and temp., nonlinear oscills., sp. ht. determ. 7−98993
determination, investigation, graphite furnace technique 7−126496
diffusion in MOS struct., effect on elec. props. 7−112495
electrode, adsorbed near-monolayer CO, IR reflection-adsorpt. spectra 7−99813
electrode, oxidation of CN^- and OCN^-, IR spectra 7−93370
electrode, SO_4^{2-} adsorpt., mol. vibro, IR spectra 7−98679
electrode properties for extracochlear elec. stimulation of deaf 7−119902
platinum continued
electrode surfaces, preferred orientation, fast square wave potential perturbations 7−106803
electrode surfaces with different preferred crystallographic orientations, scanning tunnelling microscopy 7−91946
electrode to form poly-p-phenylene, conducting, formed from anodic oxidation of biphenyl in aprotic solvents 7−125967
electrodes, acrylonitrile polymer film coated, adhesion and corrosion inhibitor props. 7−138872
epitaxial deposition on Au (001), inverse photoemission study 7−132367
FCC, self-diffusion, monovacancy and divacancy contributions 7−76478
film, thickness-depend. cond. 7−143642
foil, L-shell photoionisation, election correls. 7−122478
free surface impurities segregation, XPS obs. 7−106355
gamma-ray photoelec. cross sections, 43-152 keV 7−96607
gates in MOS structures, NH_3-sensitive 7−121098
hot wire gas sensor, with positive ion emission 7−100668
laser surface melted, defects, PAC studies 7−137364
magnetic ordering and supercond. at microkelvin temps. *(German)* 7−112567
meteorite Ru, Re, Os, Pt, Au contents, for 41 iron meteorites 7−127786
multimicroelectrode for neural impulse meas., fabricated by Si dry etching 7−114569
overlayers on Nb (110), electronic struct., chemisorption of CO, surface struct., photoelectron spectra, LEED, AES studies 7−99146
overlayers on W(100), N_2 chemisorption 7−131445
particles, CO, H_2 and NO temperature programmed desorpt., particle size depend. study 7−143203
particles on γ-Al_2O_3 support, struct., TEM and STEM studies 7−137672
particles supported on a TiO_2/Ti plate, scanning tunnelling microscopy 7−91406
phonon electrical resist., relativistic calcs. 7−137912
pionic atoms, X-ray spectra study of level widths and shifts 7−110146
printing, investig. 7−108684
reflective surface, solar concentrator materials development 7−71580
resistance temp. detectors, processing conditions effects 7−128578
resistance thermometer, discontinuity meas. in dt/dt_{68} at 630.74°C in IPTS-68 7−89221
resistance thermometer, portable microprocessor-based thermocouple and RTD simulator 7−102409
resistance thermometers, stability, 13-273 K 7−80786
single cryst. surface reconstructions, FIM obs. 7−143148
single crystal electrode, CO adsorpt. 7−98671
small particles, synthesis and characterisation, chemical reduction of H_2PtCl_6, chloroplatinic acid 7−86082
small supported crystals, growth in 400 keV electron microscope 7−100024
sorption, of CO, oxidation, mol. beam IR emission spectrosc. 7−144759
sputter coating of cytoskeletons for electron microscopy 7−127065
strained overlayers on W(100), struct. aspects 7−131446
substrate, Be film, secondary electron spectra K-shell ionisation lines intensity, elastic scatt. effects *(Russian)* 7−70950
supported, photoassisted H_2 generation with separately supported CdS 7−114133
supported catalyst particle surface morphology, heat treatment effects, TEM study 7−105215
surface, (100), catalytic oxidation of CO, kinetic oscills. appl. 7−113986
surface, (100), H_2 adsorbate induced surface reconstruction, effect on TDS 7−84512
surface, (100), H_2O chemisorption , precursor states and adatom mobility *(Chinese)* 7−112056
surface, (111), absorbed CO, vibrational line shapes, IR emission spectroscopy 7−144063
surface, (111), adsorbed benzene, mol. distortion, angle resolved UPS study 7−82281
surface, (111), adsorbed OH, HREELS charactn. of H_2O form. intermediate 7−86669
surface, (111), co-adsorbed CO and H, repulsive adsorbate interactions, island formation 7−105265
surface, (111), coadsorption of CN and K, TDS study 7−84511
surface, (111), ethylene adsorption and decomposition, K co-adsorption effects, AES, LEED, TPD and EELS studies 7−143184
surface, (111), ethylene and ethylidyne laser-driven thermal reactions, mass spectral investig. 7−113979
surface, (111), ketene adsorption, surface chemistry, HREELS and TPD studies 7−105270
surface, (111), ketene adsorption, surface chemistry, TPD and SIMS studies 7−105269
surface, (111), with adsorbed O, adsorbate induced Rayleigh phonon gap 7−76588
surface, (111) adsorbed CO, C=O stretch vibration, IR emission study 7−106187
surface, adsorption of CO and O_2, effect of alkali metal coverage 7−143205
surface, ammonia oxidation, laser initiation 7−78540
surface, CO(NO) adsorption, laser-induced desorption studies 7−143187
surface, CO chemisorption, indirect interactions and thermal desorpt. model calcs. 7−143180
surface, electrochem. activated, nm topography, scanning tunnelling microscopic obs. 7−91933
surface, stepped, CO orientation, NEXAFS studies 7−105274
surface (011) elastic props. and reconstruction calcs. 7−143167
surface (100), adsorbate covered, nucleation and growth, STM obs. 7−76625
surface (100), ethylene adsorption, evidence for vinylidene formation 7−131444
surface (110), surface reconstruction, movement of atoms 7−84466
surface (110) 1×2, adsorbed CO oxidation, reaction dynamics 7−144750
surface (110) with chemisorbed CO, tilting of CO molecules, molecular orbital study 7−131437
surface (110)-(1×2), reconstructed surface struct. determ. using ion backscatt. 7−143149
surface (110)-(1×2) 7−137701
surface (111), adsorbed CO, He and H_2 diffuse scatt. studies 7−144218
surface (111), adsorbed CO mols., He atom scatt., differential cross sections meas. 7−119087
surface (111), adsorbed N-methylpyrrole, orientation and dissociation of adsorbed molecules, NEXAFS study 7−99979
surface (111), adsorbed pyrrole, orientation and dissociation of adsorbed molecules, NEXAFS study 7−99979

platinum continued
surface (111), chemisorbed O_2 bond length and orientation, near-edge EXAFS study 7−112081
surface (111), chemisorption of methyl halides, HREELS and temp. programmed desorption study 7−98695
surface (111), CO adsorption/desorption, molecular beam study using pulse shape anal. 7−84520
surface (111), CO and K coadsorption, static SIMS and temp. programmed desorption study 7−124714
surface (111), CO scatt., electron-hole pair and phonon excitation study 7−144202
surface (111), coadsorption of HF and H_2O, surface H_3O^+ identification 7−91999
surface (111), electrochemical H adsorpt. and recomb. reactions, prechemisorbed S effects 7−143211
surface (111), ethylidyne form., IR spectra studies 7−144756
surface (111), K-covered, stabilisation of adsorbed H_2 by K 7−131441
surface (111), Kr layer, incommensurate to high-order commensurate transition 7−118249
surface (111), NO_2 molecular adsorption, IR vibr. spectra, temp. programmed desorption 7−98702
surface (111), pyridine adsorption, angle resolved PES studies 7−132417
surface (111), struct.-property relations for surface processes at metal/soln. interface 7−143158
surface (111) and polycrystalline foils, dynamics of OH desorption 7−98701
surface (111) with adsorbed CO, vibr. lineshape, theoretical study 7−119015
surface (111) with adsorbed ethylene, adatom conc., determ. by elastic recoil detection anal. 7−84517
surface (111) with adsorbed ethylidene, adatom conc., determ. by elastic recoil detection anal. 7−84517
surface (111) with coadsorbed benzene and CO, LEED intensity anal. 7−84526
surface (111) with coadsorbed CO and K, inverse photoemission, comment 7−119062
surface (111) with H monolayer, bonding and vibration 7−84480
surface (111) with physisorbed Xe, less than monolayer coverage, molecular dynamics study 7−91998
surface (111) with physisorbed Xe monolayer, symmetry breaking commensurate-incommensurate transition 7−91995
surface (III), Xe incommensurate layers, struct., symm., and rotational epitaxy, high resolution He diffr. study 7−105258
surface reconstruction, atomic steps and atomic structs., direct FIM obs. 7−143151
surface texture, heavy Kr ion bombard., ion reflection analysis 7−105205
surface with Cl_2 layer, Cl^- dissociative attachment in electron stimulated desorpt. 7−138557
surfaces, vapour phase corrosion inhibitors interaction, ellipsometry 7−119456
surfaces (100), (111), and (210), adsorption of thiophene 7−85957
surfaces (100), (111) and (210), adsorption of tetrahydrothiophene 7−85957
surfaces (100) and (110), surface energy and surface core level shifts 7−118228
surfaces (111) and (110), CO, ethyne and ethene adsorbate orientation, polar angle X-ray photoelectron diffr. study 7−143209
TGS:Pt, ferroelec., cryst. growth and domain struct. 7−125643
thermal vacancies, positron lifetime meas. 7−91570
thin-film resistance thermometer development and manufacture *(Swedish)* 7−121119
total gamma ray cross section meas. using high resolution detector 7−125574
Pt/SiO_2/n-Si photoelectrodes in I and Br aq. solns., elec. props. and thermal oxide growth 7−100585
Al-Pt, void formation in Al films, cpd. formation 7−131467
α-Al_2O_3/Pt interface, bonding, MO theory 7−105299
GaAs:Pt, hole trap suppression by Pt diffusion 7−84766
GaAs-Pt, interfacial structures, compositions and reaction morphologies, TEM and RBS studies 7−98716
Gd:Pt, hyperfine mag. field, IPAC anal. 7−118424
H_2O adsorption with K, work function changes, molecular orientation 7−105260
Pt, L-subshell ionization probabilities in very asymmetric ion-atom collisions 7−90368
Pt:TiO_2 catalysts, high-temp. reduction, Pt-Ti alloy form. 7−71479
Pt:TiO(FeO)(ZnO)(Fe), CO adsorpt., MO calcs. 7−76607
Pt/acetonitrile interface with redox couples, inverse photoemission spectrosc. 7−132405
Pt/CeO_2, desorpt. of $CO(CO_2)$, sorbate oxidation 7−112073
Pt/oxide/n-Si electrolyte-MIS photoelectrochem. Cells, non-native oxide deposition 7−71624
Pt/Rene N4 superalloy interface, ion beam mixing, RBS/AES studies 7−111696
Pt/Si interface, heat treatment form., XPS investigation 7−131460
Pt/Si:As interface, silicide form. by ion mixing 7−76240
Pt/Si:H-Ge:H Schottky barrier with amorphous superlattice, junction props. 7−70378
Pt/SiO_2 catalysts, use in CO oxidation, integrated kinetic modelling and transient FTIR studies 7−126421
Pt/Si(Si:As), interface, growth kinetics and microstructure of Pt_2Si and PtSi 7−76698
Pt-Al interface, ion induced aluminide form. 7−84403
Pt-Al system, thin film, phase formation and dissociation 7−131370
Pt-Al_2O_3 cermet thin films 7−125676
Pt-Al_2O_3 cermets, optical props., mean field theory and scaling laws 7−85573
Pt-Al_2O_3 interface, XPS study, deposited Pt particles on α-Al_2O_3 7−100015
Pt-Ar-O_2 layer system O^- electron simulated desorption 7−124702
Pt-Au, empty interface state, inverse photoemission study 7−132367
Pt-Au-Si, thin film reactions, selectively enhanced silicide formation 7−137629
Pt-C anode catalyst for negative electrode of Ni-H_2 battery in aerospace system 7−78625
Pt-GaAs Schottky contacts, elec. characterisation 7−92250
Pt-Ir thin film thermocouple, high-temp., with fast time response 7−95593
Pt-MBe_{13} (M=La,Ce,Yb,U), point-contact spectra 7−77050
Pt-Re (111) thin films, adsorbed Xe photoemission, AES, XPS and work function studies 7−137760
platinum continued
Pt-Si contacts, interfacial PtSi formation, P diffusion and defect modification 7−124605
Pt-Si reaction, silicide formation, elec. meas. 7−99195
Pt-SiO_2, adsorpt. of NO, IR obs. 7−135941
Pt-Ta multilayer system, struct. stabilities 7−124730
$^{193}Pt^m$, Auger emitter, restricted dose mean LET calcs. 7−93931
n-Si electrode, Pt, island coated, photovoltage generation 7−114097
a-Si:H,Pt films, impurity diffusion studies 7−84392
a-Si:H-Pt, Schottky diode, photoelectric characteristics 7−85048
Si:Pt, deep levels, electron irrad. effects *(Chinese)* 7−76807
Si:Pt, defect-dopant reactions in surface regions *(German)* 7−104808
Si:Pt, diffusion mechanisms and thermal equilib. defects, review 7−98568
Si:Pt, donor centres, photoionisation cross-sections 7−112230
Si:Pt, impurity energy levels, uniaxial stress and hydrostatic press. depend. 7−105474
Si:Pt, O_2 transition metal solubility, O precipitate effects 7−98476
Si:Pt, p^+n diodes, emission rate, trap conc., accurate determ. methods 7−118411
Si:Pt radiation resistant diode detectors, minority carrier lifetime 7−81884
SnO_2:Pt, gas sensing props., dopant effect *(Japanese)* 7−80773
TeO_2:Pt, paramag. Pt centres study 7−132131
TiO_2-Pt composite electrodes by dispersion plating, photoelectrochem. behaviour *(Japanese)* 7−86639
WC:Pt substrates, catalytic activity modified by ion implantation and ion beam mixing 7−93379

platinum alloys
see also platinum compounds
rare earth alloys, $RPtGe_2$, R=Ce-Nd,Tm, cryst. struct., X-ray diffr. anal. *(French)* 7−76080
Ag-Pt/ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
$CaPtGe_2$, cryst. struct., X-ray diffr. anal. *(French)* 7−76080
$Ce_{1-y}La_yNi_{1-x}Pt_x$ dense Kondo ferromagnet, magnetisation and elec. resist., substitution effects 7−70522
$CeNi_{0.8}Pt_{0.2}$, dense Kondo ferromagnet, mag. props. 7−77249
$CePd_{3-x}Pt_x$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
CePt, Kondo ferromagnet, electrical resistivity under pressure 7−84811
CePtSi, heavy fermion cpd., meg. and elec. props. 7−98982
$CePt_2Si_2$, Kondo lattice cpd., specific heat and high pressure effects 7−70553
Co-Pt films for mag. recording, magnetostriction 7−99537
CoPt polytwin systems, $L1_0$ type ordering, mag. domain structs., Kerr effect study *(Russian)* 7−105949
CoPt, struct., mag. and mech. props., deformation and annealing effects *(Russian)* 7−144466
Cu-Pt/ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
EuPtGa, cryst. struct., X-ray powder diffr. study 7−91526
EuXGa, X=Pd,Pt, mag. and Mossbauer study 7−118898
FePt polytwin crysts., mag. domain struct. and magnetisation reversal *(Russian)* 7−99487
FePt polytwin systems, $L1_0$ type ordering, mag. domain structs., Kerr effect study *(Russian)* 7−105949
Fe_3Pt (001) Invar, ordered spin-resolved angle-depend. photoemission study 7−119108
Fe_3Pt Invar, high to low spin state transition 7−99457
$Fe_{3-x}Pt_{1+x}$ ordered alloys comp. and temp. depend. elec. resist. study 7−105528
$Fe_{83}Pt_{2.6}B_{14.4}$ glassy alloys, low temperature resist. and thermoelec. power *(Russian)* 7−137888
Gd-Pt, enthalpy of form. of intermetallic phases 7−100189
LaPt, electrical resistivity under pressure 7−84811
$Mn_xFe_{1-x}Pt_3$, Hall effect, mag. fields up to 15 T, mag. transition *(Russian)* 7−105533
Ni-Nb-Pt, amorphous surface alloys on Nb, laser processed electrodes 7−137397
Ni-Pt single crystal alloys, multilayer segregation 7−105214
Pd-Pt solid solutions, H solubility, composition depend. *(Russian)* 7−76410
$(Pd_xPt_{1-x})_3Fe$ reentrant spin glass, magnetisation and Mossbauer studies 7−112800
Pt-Al (Ga) phase diagrams with emphasis an polymorphism of Pt_3Al and Pt_3Ga 7−126085
Pt-Au alloy electrodes, surface comp. determ. in alkaline medium 7−106858
Pt-Au cluster, H chemisorption, EHT calcs. 7−110162
Pt-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
Pt-Er melts, viscosity study 7−105091
Pt-Fe, impurity dynamical props. from anharmonic recoilless fractions 7−98372
Pt-Ge, liq. alloys, thermodynamic behaviour 7−77947
Pt-Ge phase diagram, reinvestig. 7−100191
Pt-Ir electrode properties for extracochlear elec. stimulation of deaf 7−119902
Pt-Mn-Sb RF sputtered films, magneto-optical props. 7−144042
Pt-Mo thermocouple for VHTR in-core temp. meas., high-temp. characteristics 7−135456
Pt-Ni, surface sandwich segregation, mean field approach 7−105210
Pt-Pd, mutual diffusion coeffs., comp. depend., X-ray microanalysis *(Russian)* 7−111940
Pt-Pd, mutual diffusion coeffs., X-ray microanal. results *(Russian)* 7−137610
Pt-Pd and Pt-Ru bimetal catalysts for C electrodes in fuel cells for O_2 reduction 7−93501
Pt-Rh (111) and (100) surfaces, plasma induced erosion 7−113780
Pt-Rh alloys, grain boundary embrittlement *(Russian)* 7−106595
Pt-Rh model automotive exhaust control catalysts, EXAFS, STEM and XRD characterisation 7−100678
Pt-Si, glassy alloys, dielec. functions and optical conductivity 7−99791
Pt-Ti alloys, form. by high-temp. reduction of Pt:TiO_2 catalyst 7−71479
$PtAl_2$-NiAl coatings, ductile-brittle transition temp. 7−86334
$Pt_{58}B_{42}$, ion source, alloy fabrication and mass spectroscopy anal., test bed system 7−134889
$Pt_{72}B_{28}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
PtCo, dil. alloy, mag. environment model of ferromagnetism 7−125332
PtCo order-disorder system, anomalous mag. effects 7−132068

platinum alloys continued
Pt_3Co, ion irrad. damage profiles, atomic resolution field ion microscopy studies 7—104868
Pt_3Co ion irrad. ordered alloys, self-interstitial uncorrel. long range migration, FIM obs. 7—98128
$Pt_{99}Co_1$, nuclear spin-lattice relaxation 7—118884
Pt_3Mn 3D metallic ferromagnet, forbidden magnons, polarised neutron studies 7—125350
PtMnSb thin films, RF sputtered, optical, mag. props., Kerr magneto-optical effect meas. 7—118841
PtMnSb/NiMnSb multilayer films, preparation and magneto-optical Kerr effect 7—138431
PtNi, ordering, role of spin-orbit interactions 7—142992
PtNi, system of interacting Kondo moments, mag. props. 7—105885
$Pt_{0.5}Ni_{0.5}$ (110), surface sandwich segregation, multilayer relax., LEED meas. 7—105207
$Pt_{58.4}Ni_{14.6}P_{27}$, metallic glasses, mech. relax., glass transition, internal friction 7—106564
$Pt_{60}Re_{40}$ alloy, low press. O adsorption induced Re segregation, SIMS and Auger effect study 7—98697
PtRh:S alloys, surface segregation, cosegregation with S impurities, composition depth profiles 7—119100
PtSi on Si and Si:As, growth kinetics and microstructure 7—76698
PtSi thin films and wires, weak localisation, magnetoresistance 7—84828
PtSi thin wires, localisation and electron-electron interaction effects 7—125152
PtSi-Si (111) interface and epitaxial growth of PtSi and Si (111), electron microscopy 7—76643
Pt_2Si on Si and Si:As, growth kinetics and microstructure 7—76698
Pt_xTi, ordering phenomena, electron diffr., high resolution electron microscopy 7—138740
Pt_xV, ordering phenomena, electron diffr., high resolution electron microscopy 7—138740
RPt_2In (R=Gd,Tb, Y, Dy, Ho) cryst. struct. studies 7—69655
RPt_2Sn (R=Tb, Y, Tm) cryst. struct. studies 7—69655
RhPt-Pt thermocouples, discontinuity meas. in dt/dt_{68} at 630.74°C in IPTS-68 7—89221
$ThPt_3$, valence level photoelectron spectra 7—106362
U-Pt system, point contact expts. 7—77048
UGaPt, mag. behaviour studies 7—77298
UPt_3, anisotropic singlet state supercond. 7—77127
UPt_3, anisotropic supercond., AC susceptibility studies 7—77173
UPt_3, anomalous Hall effect 7—98985
UPt_3 compressibility and high press. behaviour, X-ray diffr. study 7—69824
UPt_3, Fermi surface within local-density approx. 7—98783
UPt_3 heavy fermion cpd., unconventional s-wave superconductivity 7—112664
UPt_3, heavy fermion metal anal. of anomalous US attenuation 7—77158
UPt_3, heavy fermion superconductivity and magnetic props. 7—70472
UPt_3 heavy fermion superconductor, antiferromag. spin fluctuations, inelastic magnetic neutron scatt. studies review 7—70534
UPt_3, heavy fermion supercond., sp. ht. under press. 7—77155
UPt_3, heavy fermion superconductor, Raman scatt. from spin fluctuations and phonons 7—92675
UPt_3, heavy fermion supercond., US attenuation, phase study 7—99336
UPt_3, heavy fermion supercond., ^{195}Pt Knight shift 7—112666
UPt_3, heavy fermion supercond., point contact spectra 7—131923
UPt_3 heavy fermion system, high field elastic const. meas. 7—69802
UPt_3, heavy fermion system, Hall effect 7—70288
UPt_3, heavy fermion system, high press. magnetisation studies 7—77355
UPt_3 heavy fermion systems, induced-interaction model, review 7—92040
UPt_3 heavy fermion systems, magnetoacoustic effects obs., comment 7—137783
UPt_3, heavy fermions supercond., mass renormalisations 7—118688
UPt_3, longitudinal sound meas. in a mag. field 7—112672
UPt_3 longitudinal ultrasonic attenuation peak, heating phenomenon, large Gruneisen parameters 7—69835
UPt_3, low temp. transport props., single component Fermi liquid theory 7—137897
UPt_3, neutron scattering studies of heavy fermion systems 7—112747
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7—69927
UPt_3, resistivity T^2 term mag. field depend. study 7—70281
UPt_3 single cryst., heavy quasiparticle obs., de Haas-van Alphen oscills. study 7—70170
UPt_3 single crysts., electronic struct., low energy optical reflectivity meas. 7—70173
UPt_3, specific heat, pressure depend. 7—69926
UPt_3, supercond., transverse sound in mag. field 7—99335
UPt_3 superconducting props., cryst. symmetry effects 7—92387
UPt_3, XPS spectra, single site approx. calcs. 7—77757
UPt_5, valence level photoelectron spectra 7—106362
U_2PtC_2 heavy fermion system, coherent-state Hall effect and elec. resist. 7—143437
$U(Pt_{0.95}Pd_{0.05})_3$, mag. order 7—77350
$U(Pt_{1-x}Pd_x)_3$ heavy-fermion alloys, superconductivity and antiferromagnetism, phase diagram determ. 7—112790
$U(Pt_{1-x}Pd_x)_3$ pseudobinary heavy fermion systems, sp. ht., resist. and mag. suscept. meas. 7—69929
UPt_2Si_2, cryst. elec. field effects, mag. props. 7—85260
V_3Pt, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7—76333
W-Pt dilute alloys, excess resistivity and thermopower, temp. depend. 7—105545
$YPtGe_2$, cryst. struct., X-ray diffr. anal. *(French)* 7—76080
$YbPt_3$ and Yb_3Pt_5, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7—77254

platinum compounds
see also platinum alloys
carboxylates, gaseous phase, electron impact mass spectrometry 7—74778
chain compounds, 1D, commensurate Peierls struct., elec. cond. studies 7—99035
complex, $(Pt(en)_2)(Pt(en)_2Cl_2)(ClO_4)_4$, (en=ethylenediamine), 1D band struct., uniaxial stress effects 7—84634
minerals, composition, X-ray spectral microanal. 7—126510
$[Pt(NH_3)_4][PtX_2(NH_3)_4](HSO_4)_4$, X=Br,Cl, valence fluctuations and negative thermal expansion 7—84334
$BaPtR_2O_5$ (R=Sm, Gd), single cryst. X-ray anal., cryst. struct. *(German)* 7—69669

platinum compounds continued
$Ca_2Pt_3O_8$ hydrothermal synthesis and structural charactn., X-ray and neutron diffr. 7—83909
$Co_{1.5}Pt_{0.5}Ta_6PtSe_{16}$ quaternary layered cpd., structural charactn. 7—142724
Pb_2PtO_4, cryst. struct. determ. 7—83898
$PdPt(C_2S_2O_2)_2$ bimetallic 1D polymer, synthesis and physical props. 7—99038
cis-Pt (diamine)(ascorbate) complexes, soln. chem., NMR investig. 7—129742
Pt complex, aminopolycarboxylate, ^1H and ^{13}C NMR 7—90214
Pt complex, bis(pyridinium)hexachloro-platinate, phase transform., X-ray and ^{35}Cl NQR study 7—124228
Pt complex, $Pt(en)_2\ Pt(en)_2I_2\ (ClO_4)_4$, halogen bridged, photocond. studies 7—99129
Pt complex, resonance Raman study, ν_1 band struct. 7—85616
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7—105548
Pt complexes, $M(II)PtCl_6.6H_2O$, NQR freq., temp. depend. 7—106056
Pt complexes, $Pt(en)_2\ Pt(en)_2X_2\ (ClO_4)_4$ (X=Br and Cl), charge transfer excitons 7—98817
Pt complexes, tetranuclear, reson. Raman spectrosc. 7—82145
Pt^{2+} complexes, Magnus-type salts, single-cryst optical absorpt. spectra 7—77605
Pt-ethene complex, IR and Raman spectra, valence force field force constants 7—99861
Pt^{II}-Pt^{IV} mixed valence complex, quasi-one-dimens. soliton-to-band optical absorption 7—106205
$(Pt_3(CO)_6)_n^{2-}$, visible spectra, press. shifts 7—96711
Pt(II) complexes, bromo-bridged, cleavage kinetics, solvent effects 7—138989
Pt(II) complexes, trans-actions, semiempirical CNDO calcs. 7—109772
PtN^-, autodetachment dynamics and spectrosc. 7—122500
$Pt_6(NH_3)_{14}Cl_{10}X_4$ (X=ClO_4, BF_4, PF_6) synthesis and elec. cond. 7—99036
PtSi, ellipsometry and struct. studies 7—138404
PtSi Schottky-barrier IR focal plane array, spectroscopic appl. 7—68892
PtSi/n-Si:H Schottky barrier height variation by ion implantation 7—76180
Pt_4Si polycrystalline layers, optical props. 7—125832
$Rb_3(H_3O)_{0.2}Pt(CN)_4(O_3SOHOSO_3)_{0.5}.0.8H_2O$, 1D platinum chain cpd., conductivity and thermopower 7—131623

pleochroism
see also dichroism
dyes in liq. cryst. copolymers, transform. on heating 7—83662
semiconductor polarimetric photodetectors, prep. principles, photopleochromism, review 7—113123

plexiglas *see plastics*

PLL *see phase-locked loops*

plotters
analytical plotter attachment for Reflex Microscope 7—95646

plugs (electric) *see electric connectors*

Pluto
Charon occultation by Pluto (4 April 1987), spectra and methane absorpt. features 7—115295
diameter, constraints from IRAS obs. 7—107749
eclipse events in Pluto-Charon system, photometric obs. rel. to physical parameters determ. 7—101727
methane absorption vars. in optical spectrum, methane frost plus gas model 7—134178
mutual events with Charon 7—145873
orbital irregularities, contrib. of nonzero cosmological constant 7—139960
speckle interferometric observations of Pluto and Charon, (1983 July 8 to 15) 7—72352

plutonium
see also nuclei with .....
see also fission of plutonium
accountancy tanks, liquid mass meas. 7—109425
AE from low temp. phase transform. 7—106509
air transportable package development 7—74153
assay experience using portable K-edge densitometer 7—103143
assay using liquid scintillator neutron coincidence counter 7—103141
band struct., relativistic spin-polarised KKR Green's function calc. 7—76756
dating Pu samples, comparative method test 7—81536
electronic struct., relativistic spin polarised densities, scatt. theory formulation 7—105371
electroreoxidation during purification cycle, ROXI cell test *(German)* 7—129219
environmental distrib. determ. by thermal ionization mass spectrometry 7—103297
fallout Pu, ingestion intake in Japan 7—71902
FCC cryst., mag. moments, fully relativistic spin-polarised Dirac theory 7—76732
fissile material quantitative anal., prompt spontaneous fission gamma meas. *(Russian)* 7—116605
GASSY program for γ-ray spectra calcs., nuclear fuel appl. *(German)* 7—129220
geochemistry for radwaste disposal and containment 7—103274
high precision assay, 1-10 mg level, experience with ceric oxidation, ferrous reduction and dichromate titration method 7—119615
high precision assay, automatic titrator 7—119614
isotopic abundances, high resolution γ-spectroscopy, safeguards appl. 7—103146
isotopic composition meas. improvements using calibration samples for γ-spectroscopy 7—103145
isotopic ratio and abundances by X-ray and γ-ray spectrometry assay 7—103142
isotopic ratios and abundances, high resolution γ-spectrometry, nuclear safeguards appl. 7—103147
isotopic ratios determ. from PWR spent fuel burnup, BURN code 7—73861
lung cancer rel. to Pu exposure 7—100994
magnetic fusion materials production reactor, T and Pu prod., economic anal. 7—89713
magnetic fusion production reactor, design and anal. 7—89717
mass spectroscopic anal., sensitivity enhancement techniques 7—126518
metallic, qualified air transport packaging 7—74248
nuclear fuel, world market, conf., Brugge, Belgium, Oct. 1986 7—108047

plutonium continued
nuclear fuel anal., glove box line design and construction *(Czech)* 7−141334
nuclear fuel cycle alternatives, disposal, storage or reprocessing 7−109517
nuclear fuel recycling industry in Europe 7−109330
nuclear materials safeguards, Pu assay, mass spectrometer tests 7−116025
radiolytically induced oxidation reactions of actinide ions in concentrated salt solutions 7−106716
radionuclide contamination of tourist property and estimated inhalation of visitors to Kiev after Chernobyl accident 7−133484
remobilisation from estuarine sediments, Esk estuary, UK 7−144925
sample mass determ. by neutron coincidence counting *(French)* 7−103139
solutions, laser-induced fluoresc. in inductively coupled plasma nuclear fuel reprocessing analytical control appl. 7−144767
source neutron multiplicity distrib. meas. by nondestructive assay, numerical procedures 7−103140
spent fuel solution, α-activity meas., Pu assay 7−119617
spent fuel solution, Pu assay, comparison of isotope dilution methods using α-, mass spectrometry *(Russian)* 7−119618
spent fuel solutions, U, Pu isotopic dilution assay, resin bed and multi-isotopic tracer technique appl. *(French)* 7−119616
thermal recycling for LWR MOX fuel fabrication 7−129204
transportation, packaging design 7−74240
transportation, SAFPAK and SAFKEG high integrity packages 7−74147
transportation risks, comparative literature survey 7−74229
water reactor fuel, props. and recycling *(French)* 7−116618
^{238,239,240}Pu, in sediments, isolation and γ-particle spectrometric determ. 7−93602
Pu arc spectra, isotope shifts meas. *(French)* 7−141502
PuS(Se)(Te) relativistic semicond., band struct. calcs. 7−92068
PuSm geochemistry, exptl. study rel. to thermodynamics of trace element partitioning 7−94139
^{A}Pu, A=238-240 migration in soil 7−126664
^{A}Pu, A=238-40, radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
^{A}Pu, A=239, 240, air concs. and pot. radiation doses to humans after aircraft accident in Palomares, Spain 7−93967
^{A}Pu, A=239, 240, fallout, concs. in tissues of Japanese who died during 1980-4 7−79096
^{A}Pu, A=239,240, fallout in marine samples, mass spectrometric determ. 7−144926
^{A}Pu, A=239,240 low-level conc. distrib. in Beagle tissues 7−87257
^{238}Pu deposition from RTG in postulated Space Shuttle accident, orange tree retention, fruit contamination 7−133483
^{238}Pu, genetic damage induction in germ cells of male mice *(Russian)* 7−133383
^{239}Pu, behavioural and biological effects after intramuscular injection in rats *(Russian)* 7−114429
^{239}Pu fuel storage safety, neutron spectral reactivity comparison 7−103007
^{239}Pu incorporated in animals, effects on lifetime *(Russian)* 7−114427
^{239}Pu induced myeloid leukaemia and osteosarcoma in female CBA mice 7−78988

plutonium alloys
Pu-Ga, AE from low temp. phase transform. 7−106509
Pu-Ga (1 wt.%), oxidation in N_2-5.5%O_2 atm. 7−78324
$PuMB_2$ (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
Pu_5Rh_4 and related cpds., cryst. structures, X-ray diffr. study 7−104637
PuSb correlated actinide system, mag. props., cryst. field splitting and resonant f-band scatt. calcs. 7−112254

plutonium compounds
see also plutonium alloys
mixed oxide nuclear fuel, thermal behaviour, porosity and microfissure effects *(German)* 7−129191
monochalcogenide pseudobinary single crystals, magnetism 7−105894
monopnictide pseudobinary single crystals, magnetism 7−105894
Pu-H, equilib. and structural props. 7−104954
PuBi, mag. ordering, phase diagram, neutron diffr. study 7−77282
PuC, dissolution for chemical quality control 7−129206
PuF_6, vibronic band fine struct. high resol. visible spectra 7−122557
PuI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$Pu(NO_3)_4$, mass transfer rate coeffs. meas., reprocessing appl. 7−73871
$Pu(No_3)_4$ soln. storage at Rocky Flats, shielded annular tank 7−103022
PuO_2 -UO_2 MOX fuel fabrication processes and post-irradiation examination 7−116578
PuO_2 MOX fuel, world market, conf., Brugge, Belgium, Oct. 1986 7−108047
PuO_2 packaging system for air transport 7−74246
PuO_2-UO_2, French Mox fuel fabrication program 7−81530
PuO_2-UO_2, LWR fuel fabrication, remote handling device implementation 7−116617
PuO_2-UO_2, LWR Mox fuel fabrication 7−81545
PuO_2-UO_2, MOX fuel, gel microsphere fabrication 7−116577
PuO_2-UO_2, MOX fuel concepts for LWRs 7−116585
PuO_2-UO_2, mixed oxide nuclear fuel, thermal behaviour, porosity and microfissure effects *(German)* 7−129191
PuO_2-UO_2, nuclear fuel recycling, technical and economic aspects 7−109328
PuO_2-UO_2 MOX fuel fabrication, economics and performance study 7−116619
PuO_2-UO_2 mixed oxide fuel system for Fast Flux Test Facility 7−102998
PuO_2-UO_2 water reactor fuel development, conf., Stockholm, Sweden, Sept. 1986 7−115690
PuS, equations of state, self-consistent energy band calcs. 7−76765
PuSb, hybridising system, anisotropic mag. behaviour 7−77242
PuSb, valency, neutron scatt. study 7−104623
$PuSb_{1-x}Te_x$, elec. resist., Hall effect meas. 7−76938
$PuSb_{1-x}Te_x$, X=0-0.4, hyperfine field, mag. props., ^{121}Sb Mossbauer spectra 7−77436
PuSe, equations of state, self-consistent energy band calcs. 7−76765
PuTe, equations of state, self-consistent energy band calcs. 7−76765
PuTe, valency, neutron scatt. study 7−104623
$^{238}Pu(NO_3)_4$ intratracheally administered to rabbits, metabolism kinetics and biological effect *(Russian)* 7−133392
$^{239}PuO_2$, interaction with cigarette smoke in the mouse lung 7−114402
$^{239}PuO_2$ monodisperse aerosols inhaled by dogs, dosimetry of ^{239}Pu 7−101093
U-Pu-O, O to metal ratio, X-ray diffraction 7−124190
$(U_{0.8}Pu_{0.2})O_{2-x}$, chemical diffusion of O, 1400°C *(French)* 7−96184

PMDR
1-bromo-4-chloronaphthalene, triplet-triplet energy transfer, double reson. and laser line narrowing obs. 7−112997
CaO, O vacancy defects in phosphorescent spin quartet state, ODMR studies 7−138354

PMOS integrated circuits *see field effect integrated circuits*

PMOS transistors *see insulated gate field effect transistors*

PMPS *see PMDR*

PMR *see proton magnetic resonance*

PMR imaging (biomedical) *see biomedical NMR*

pneumodynamics
see also lung
abdominal expiratory muscle, length-tension relationship, effect of emphysema 7−107021
active and passive respiratory mechs. in anaesthetised dogs 7−71787
aerosol particle deposition in human lung, computational model 7−93793
aerosols, ultrafine, deposition in human respiratory tract 7−126856
airway blood flow, effect of cold and warm dry air hyperventilation 7−107112
airway reactivity and lung mechanics in lambs, age effect 7−100941
alveolar liquid pressure in excised dog lung lobes, micropuncture meas. 7−107118
alveolar surface tension and lung vol. effects on pulmonary vascular resistance 7−126879
alveoli in rat lung, 3D reconstruction for press.-vol. relationships determ. 7−126872
applied potential tomography, appls. in respiratory medicine 7−87294
bedside monitoring system for mech. ventilation: SIVA 7−101136
breathing mechanics, exptl. conditions influence on parameter estimation, sensitivity analysis approach 7−107143
breathing pattern and lung vol. changes during exercise and CO_2 inhalation in humans 7−126875
bronchial blood flow, effects of airway press. 7−107113
bronchoconstriction, lung vol. dependence of maximal flow density dependence 7−107116
cardio-respiratory systems of children, functional parameter factor anal. 7−79119
central-airway flow resistance, reversible and irreversible components 7−145134
choking phenomena in a lung-like model 7−114343
chromic bronchitis, functional spectrum 7−100969
closed loop control of blood pressure, ventilation and anesthesia delivery 7−114549
constant-flow ventilation in pigs 7−100949
contractile response in resistance airways, effect of resting smooth muscle length 7−107020
crackles in excised normal canine lungs, prod. mechanism obs. 7−78925
diabetic Bio-Breeding/Worcester Wistar rats, lung mechs. and connective tissue proteins 7−126871
diaphragmatic work of breathing in premature human infants 7−126870
diffusion-related differences in pulmonary elimination of inert gases 7−78927
dynamic estimation of lung parameters 7−100965
EEG-sinus arrhythmia relation in man, computer spotted 7−100878
endotracheal tubes, press. losses: preformed vs. straight tubes 7−79104
flow-volume curve configuration changes with bronchoconstriction and bronchodilation 7−100950
foetal breathing, anal. in real time using a microprocessor 7−127054
forced expiratory flow in infants, effect of compression press. 7−71786
heart rate control rel. to respiratory sinus arrhythmia, math. modelling and computer simulation 7−100848
HF intermittent mandatory ventilation method for respiratory weaning 7−101137
HF jet ventilation in rabbits, mean airway press. and mean alveolar press. 7−71778
HF oscillations, heterogeneity of mean alveolar press. 7−114320
HF ventilation, gas exchange system dynamics anal. 7−87040
HF ventilation, nonuniformity of canine lung washout 7−87048
HF ventilation, role of proper freq. selection 7−100970
HF ventilation in dogs, effects of mean airway press. on gas transport 7−71793
hyperinflation and abdominal press. equalisation, effect on diaphragmatic action 7−126881
incentive inspirometers for following pulmonary function by self-meas. at home, evaluation 7−71912
inhaled diesel automobile exhaust particles, young humans, mathematical model utilisation 7−139300
inspiratory inhibitory elec. pontine stimulus, temporal changes in effectiveness 7−126807
inspiratory muscles, pliometric activity: maximal press.-flow curves 7−114322
limiting exhalation flow rate rel. to lung vol. 7−71775
loaded breathing, effort perception: effect of inspiratory muscle fatigue 7−114298
lung flow limitation for exhaled sounds 7−133352
lung volume change perception by high-level quadriplegics 7−107100
mammalian respiratory system simulation models 7−78939
maximal expiratory flow, positive effort depend. 7−107117
mechanical properties of lungs during artificial ventilation, exponential model-based estimation 7−100967
mechanical respiration, weaning method 7−101135
mechanical ventilation, rapid, in rabbits with saline-lavaged lungs, pulmonary mechs. obs. 7−87049
monotonic transients, general method for describing and extrapolating, respiratory mechs. appl. 7−71804
nasal passage cast, baboon, airflow characts. obs. 7−71794
nose, role in resistive load detect. 7−71765
obstruction index calc. from tracheal breath sounds 7−100971
oscillatory breathing patterns in full term neonates, incidence and temporal characts. 7−100972
parenchymal expansion variability effect on gas mixing 7−107115
periodic breathing in infants: a model study 7−114311
peripheral air-space deposition of inhaled particles, human variation 7−126877
phrenic motor axons in rat, firing props. and hypercapnic responses 7−100842
pleura, possible role in lung mechs. 7−126888
pneumothorax, rapidly evacuating prolonged, in rabbits, haemodynamic effects 7−107111

pneumodynamics continued
positive end-expiratory press., effects on hepatic blood flow and performance 7−126869
pressure monitor for continuous positive airway pressure systems 7−87348
pressure-volume behaviour of upper airway, dog obs. 7−78922
pressure-volume relationship of lungs under cyclic compression and expansion, rabbit obs. 7−145135
pulmonary resistance partitioning during bronchoconstriction in dog, vol. history effects 7−107119
respiratory control system using volterra series based model reference adaptive control *(Japanese)* 7−87069
respiratory dynamics, surface tension influence 7−100968
respiratory dynamics and instrumentation *(Japanese)* 7−87407
respiratory flowmeter, pulsed diagonal-beam US 7−79020
respiratory heat transfer, finite difference analysis 7−100816
respiratory inductive plethysmograph, accuracy during loaded breathing 7−107285
respiratory load-compensating mechanisms in muscular dystrophy 7−126880
respiratory mechanics, non-invasive measurement in ICU patients 7−87046
respiratory mechanics in men following a deep air dive 7−71783
respiratory mechanics of cats, freq. depend. effects of hypercapnia 7−107110
respiratory phase detection and delay determination for breath-by-breath analysis 7−107286
respiratory resistance, determ. by flow interruption, effect of valve closure time 7−71805
respiratory resistance with histamine challenge, single-breath and forced oscill. obs. on dogs 7−78920
respiratory system impedances in dogs, lumped linear element models 7−107109
respiratory volume perception through nose and mouth, noninvasive obs. 7−71764
respired soluble gas uptake modelling 7−100966
rib cage and abdominal restriction, effect on total respiratory resistance and reactance 7−71790
speech breathing, age effects 7−145122
spirometer system, pointer volume, for respiratory tests 7−87325
spirometry, mathematical model 7−114306
thoracic gas vol., meas. by LF ambient press. changes 7−114324
thoracic pressure and nasal patency 7−114314
thoracic volumes quantification by three-dimens. imaging 7−107234
thoracoabdominal breathing patterns, effect on inspiratory effort sensation 7−126882
tracer gas flow-proportional admixture device in lung function studies 7−119888
trachea, collapsing shape and transmural press.-area 7−114361
trachea model dynamic deform. mapping by grating projection technique 7−100951
tracheal deformation during forced expiration 7−114362
tracheoesophageal voice prod., aerodynamic and myoelastic contrib. 7−145092
upper airway dilating forces during wakefulness and sleep in dogs 7−100945
upper and central airways, steady pressure-flow relationship 7−87045
ventilation, estimation from body surface meas. in unrestrained subjects 7−78924
ventilation control during progressive exercise, effect of inspiratory resistive loading 7−114316
ventilation maldistribution during tidal breathing, effect of breath holding 7−100942
ventilatory and blood gas dynamics at onset and offset of exercise in the pony 7−114317
ventilatory responses to sustained hypoxia in normal adults 7−78921
whole body plethysmograph: its use in adults and newborn infants 7−101109
O_2 consumption algorithms, propag. of meas. errors 7−119886

PNO calculations
No entries

Pockels effect
wideband HV meas system 7−140710
GeSi-Si strained layer superlattices, second order optical suscept., Pockels coeff. calcs. 7−118975

Pockels readout optical modulator *see electro-optical devices; optical modulation*

point contact spectroscopy
elementary excitations study in valence fluctuation and heavy fermion systems 7−77047
phonons, theory and expts., book 7−80187
rare earths and actinides, anomalous, conf., Grenoble, France, (July 1986) 7−72697
technique and physics background 7−92252
Ag, electron-phonon interaction, point-contact spectroscopy 7−84705
Al-In heterojunctions, point contact spectroscopy study 7−70382
Au point contacts, nonequilib. phonon relax. kinetics *(Russian)* 7−91955
CeB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
Cu, ballistic temperature point-contact spectroscopy at 0.7 K 7−70216
Cu point contacts, nonequilib. phonon relax. kinetics *(Russian)* 7−91955
LaB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electron tunnelling of thin films 7−99353
$La_{1-8}Sr_{0.2}CuO_4$, high T_c superconductor, point-contact spectroscopy study *(Russian)* 7−99249
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, point-contact tunnelling obs. 7−99352
Pt-MBe_{13} (M=La,Ce,Yb,U), point-contact spectra 7−77050
Re-Zn (Cu) heterocontacts, point contact spectroscopy in normal and superconducting states *(Russian)* 7−112436
Ru, phonons and electron-phonon interactions, point-contact and neutron spectroscopy studies 7−70381
SmB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
Ta homocontact, electron-phonon interactions, point contact spectroscopy studies *(Russian)* 7−112438
Ta-Au heterocontact, electron-phonon interactions, point contact spectroscopy studies *(Russian)* 7−112438
Ta-Cu heterocontact, electron-phonon interactions, point contact spectroscopy studies *(Russian)* 7−112438
ThIrSi, superconducting energy gap meas. 7−77167
α-$ThSi_2$, superconducting energy gap meas. 7−77167
TiS_2 crystal, layered, point-contact spectroscopy 7−112206
U-Pt system, point contact expts. 7−77048
UBe_{13}, heavy fermion supercond., point contact spectra 7−131923
UIr_2Si_2, heavy fermion system 7−77167
UPt_3, heavy fermion supercond., point contact spectra 7−131923
Y-Ba-Cu-O high T_c supercond., point-contact electron tunnelling 7−105851
Y-Ba-Cu-O high T_c supercond., macroscopic quantum phenomena 7−105854
YB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049

point contacts
see also point contact spectroscopy
metal point contacts, flicker noise and electron-phonon interaction calcs. *(Russian)* 7−112437
transverse magnetoresistance oscillations 7−143559
Al-Al_2O_3-Te thin film struct., I-V characts., effect of top electrode, test needle *(French)* 7−105720
Au point contacts, nonequilib. phonon relax. kinetics *(Russian)* 7−91955
Au, point-contact spectrum, Fermi surface calc. *(Russian)* 7−98781
β-(BEDT-TTF)$_2$X crystals, (X=I_3IAuI), electron-phonon coupling and supercond. gap 7−131926
Ba-Y-Cu-O ceramics, high T_c superconductors, AC Josephson effect, point contacts 7−99346
BaTmCuO high T_c ceramic superconductor point contacts, AC Josephson effect RF power depend. 7−118723
BaYCuO high T_c ceramic superconductor point contacts, AC Josephson effect RF power depend. 7−118723
Bi-Cu point contacts, magnetoresist. meas., elastic scatt. length estimation *(Russian)* 7−112440
Bi-Cu point contacts magnetoresist., Shubnikov-de Haas effect obs. *(Russian)* 7−112439
Cu point contacts, nonequilib. phonon relax. kinetics *(Russian)* 7−91955
ErBaCuO-Nb high T_c supercond. point contacts, AC Josephson effect freq. depend. study 7−125271
GaAs, point contacts, ballistic charge carrier transport 7−84911
Ge, point-contact warm carrier device for CO_2 laser detection 7−95650
La_2CuO_4:Sr, point contact, AC Josephson effect obs. 7−99343
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond. in S-c-N point contacts, critical current density *(Russian)* 7−125286
Nb point contact Josephson junction for DC voltage unit standard 7−105857
Si point contact concentrator solar cells 7−71622
Si, point contacts, ballistic charge carrier transport 7−84911
Si point-contact solar cells, operation and performance description 7−126610
W-Ni point contact diode, far infrared harmonic generation and mixing 7−82703
Y-Ba-Cu-O, high T_c supercond., single-phase, point-contact characts. 7−112722
Y-Ba-Cu-O high T_c oxide superconductors, Josephson effects obs. *(Japanese)* 7−138157
Y-Ba-Cu-O high T_c supercond. point contacts, AC Josephson effect 7−112679
Y-Ba-Cu-O high T_c supercond., zero resistance temp. and AC Josephson effect 7−118633
YBaCuO-Nb high T_c supercond. point contacts, AC Josephson effect freq. depend. study 7−125271
$YBa_2Cu_3O_7$-PbSn point contact junctions, AC-Josephson effect 7−112705

point defect scattering
used for carrier scattering by point defects
No entries

point defects
see also colour centres; interstitials; point defect scattering; vacancies (crystal)
actinide cpds., thermodynamic and structural props. rel. to bonding 7−104626
alloys, electron irradiation, dislocation loop kinetics 7−98155
alloys, noncrystalline, point defects study by high temp. mass transport expts. 7−105093
bicrystals, grain boundary atomic struct., electron microscopy obs. 7−124287
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
crack, slender, evolution under diffusion mass transfer 7−110856
crystal-impurity system, radiation defects, damage rate and annealing 7−91643
crystalline solids, atomic transport via point defects, phenomenological coeffs. calcs. 7−98554
diamond: N, faceted void like defects 7−91577
dielectric crystals, electron emission accompanying stress fracture 7−118028
dielectric crystals, quadrupole spin-lattice interactions, role of point defects 7−132159
disordered alloys, short-range order, electron-microscope imaging 7−91401
displacement-induced point defect conc. and flux fluctuations, cascade diffusion theory 7−104814
elastic anisotropic interaction, flux of point defects to a void, α-irradiated material *(Russian)* 7−104753
energetic displacement cascades and radiation effects 7−104811
entropy of formation and migration, at high temp., computer simulation 7−69699
fatigue crack initiation, role of point defects 7−124389
ferrimagnetic garnet epilayers, stress-strain distrib. around implantation boundaries, elastic models, continuum approx. calcs. 7−124379
ferrite, automatic disaccommodation measuring system 7−128600
fracture processes, effects of irrad. and segregation 7−69747
ice:HCl, point defects, elec. characteristics 7−98118
ice, Ih phase, orientational defects, ab initio mol. quantum mechanics calcs. 7−98117
III-V semiconductor cpds., defects, positron studies 7−144160
III-V semiconductors, point defect electronic props., tight binding investigation 7−137855
incommensurate phase, 2D model phase diagram, mol. dynamics simulation 7−118055
incompressible elastic media, radiation process 7−142906
interaction between arrays of line source dilatant centers near free surfaces 7−76200

point defects continued
intermetallic compounds, cryst. to amorphous transition under electron irrad., review 7−131189
ionic cryst. surface layer, steady state theory 7−98641
ionic crystals, shock compression, space charge generation mechanism 7−104911
long range elastic interaction near second-order phase transitions 7−137361
metallic glasses point defects and atomic diffusion, review 7−98558
metals, BCC, dislocation-point defect interactions and phase form. *(Russian)* 7−69736
metals, BCC, effect of dislocations on microplasticity *(Russian)* 7−69710
metals, BCC radiation damage, point defect models 7−91642
metals, FCC, deformed, point defect trapping obs. by PAC technique 7−104733
metals, FCC, interaction mechanisms between dislocations and point defects 7−104801
metals, irradiated, new phase nuclei, point defect instability *(Russian)* 7−98458
metals, primary rad. damage caused by high-energy particles, struct. 7−84016
metals, pure, oxidation behaviour, role of point defects in oxide scales, review 7−86457
metals and alloys, neutron irrad. cascade damage point defect processes 7−104849
metals and alloys, point defects, conf., Berlin, Germany (Sept. 1986) 7−88731
migration rates by mol. dynamics simulation 7−104754
model binary transition metal alloys, effective pair interaction calcs., coordination number effects, density of states approximations 7−84716
nonlinear screening, stability of solutions 7−70221
one-dimensional system, soliton scatt. from a point defect, nonlinear Schrodinger eqn. *(Russian)* 7−92079
oxide interfaces, stabilisation by defects and impurities 7−112105
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
quartz, polymorphic α-β transform. under neutron irrad., spectral studies 7−104847
radiation point defect absorption by edge dislocations, preference factor 7−142779
semiconductor cpds., point defect density, impurity solubility, thermodynamical evaluation 7−131145
semiconductor single crystals, dislocation mobility and elec. activity, influence of point defects 7−124323
semiconductors, optical beam induced current images, scan speed dependence 7−77002
semiconductors, point defect charactn. using optically detected mag. reson. methods, review 7−112999
steel, austenitic stainless, electron irrad. in HVEM, creep and microstructure 7−69765
thermomechanical breakaway of dislocations from pinning point defects, amplitude depend. internal friction 7−91724
transition metal monoxides, point defect agglomeration, XANES studies 7−137365
two-body Coulomb-like interactions in incompressible media 7−91563
wurtzite type cryst., surface point defects, local density of vibr. states determ., Bethe-Peierls approx. 7−105227
Ag electron irradiated, point defect precipitation at dislocations, HVEM obs. 7−98249
Al, cold worked, recovery spectrum 7−105527
Al_2O_3:$He^+(Zn^+)(In^+)(Pb^+)$, ion implanted, lattice damage and impurity distributions 7−91607
$Al_2O_3(Cr_2O_3)_x(Fe_2O_3)_y$ solid solns., thermal cond., comp. depend. study 7−105160
$AlPO_4$ α-berlinite, TEM obs. of lattice defects and water precip. 7−142786
AuAg concentrated alloys, point defect props., short range ordering 7−104907
C stripper foil, failure under ion beam bombardment, model 7−84047
Cd, hexagonal, implanted ^{112}Sn isomers, electric quadrupole interaction, radiation damage *(Chinese)* 7−111682
$Cd_xHg_{1-x}Te$ crysts., thermoactivated dislocation migration, stoichiometry and interaction effects *(Russian)* 7−111645
$Cd_xHg_{1-x}Te$, interaction of point defects caused by irradiation 7−84012
$CdIn_2O_4$ sputtered films, scatt. of charge carriers 7−77117
$Cd_{1-x}Mn_xTe$:P,As, elec. and optical props. studies 7−131658
CdS conductivity anisotropy, edge prismatic dislocation effects 7−143463
CdS single crystal, deformed, photomagnetodielectric effect, loss angle meas. 7−85533
CdTe, native antistructural point defects 7−91580
Co-Al(Ga), point defects, ab initio electronic struct. calcs. 7−84749
Co-Ga B2 ordered alloys, vacancy and antistruct. atom conc. and diffusion, NMR study 7−105105
CoAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
CoGa, antisite defects, electronic struct., LMTO method, magnetism 7−98922
CoO, high defect content, elec. cond., defect interactions 7−70319
cu, FCC, elastic field effects of dislocations on equilibrium configurations of self-interstitials 7−142763
Cu, single crystals, fatigued, elec. resist. 7−84113
Cu thin films, elec. resist. during isochronal annealing, thickness depend. *(Russian)* 7−99221
Cu-Zr-Mg-Ni-Si, microalloyed, elec. resist. recovery, after low temp. deform. 7−100287
$(EuLu)_3(FeGa)_5O_{12}$:Ca films, induced mag. anisotropy 7−85383
α-Fe, irradiation softening and mobile dislocation interaction with Frenkel pairs 7−104803
Fe, nitride precipitate dissolution by low-dose neutron irrad. 7−118108
α-Fe, radiation point defect instability zones near edge dislocation 7−117966
Fe-Al thin films, low temp. phase form. by ion beam mixing, amorphisation and chem. disorder effects 7−84057
Fe-Cr-Ni based austenitic alloys, element radial redistrib. under HVEM electron irrad. 7−104844
FeAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
Fe_yO, solid wustite thermodynamic props., subdomain stability boundaries, numerical results *(French)* 7−124555
GaAs (100), space charge, electron energy loss studies 7−118551
n-GaAs, As anti-site formation by electron irradiation 7−76213
point defects continued
GaAs, dislocations and point defects, microelectronics technology 7−98169
GaAs, EL2 defect config., atomic model 7−70244
GaAs, EL2 defect symm., stress-induced absorpt. band splitting anal. 7−124913
GaAs, ion bombarded, defects, annealing effects, Raman studies 7−138465
GaAs, LEC, crystal orientation effect on dislocation form. 7−137284
GaAs, neutron irrad. and annealed crysts., antisite defects, IR absorpt. spectra meas. 7−98264
GaAs, neutron irrad. damage, ion channelling and ESR studies 7−84040
GaAs, nonstoichiometric defects 7−142770
GaAs, resonant Raman scatt. at point defects, theoretical description 7−99839
GaAs, site symmetry of the EL2 centre, 7−124267
GaAs:In, As_{Ga}-related photoluminescence, plastic deform. effects 7−119040
GaAs:In, LEC grown, near band edge and deep level related luminesc. images near dislocations 7−138486
GaAs:Si(Cr) wafers, semi-insulating, spatial distrib. of point defects and complexes, photoluminesc. study 7−98918
GaP single cryst., polarised photoluminescence and thermoluminescence 7−77661
GaP single crysts., intrinsic point defects 7−98120
Ge, elec. cond. under effect of laser pulse shock wave effects, ionisation effects and residual changes 7−124395
InP, semi-insulating behaviour after annealing in P, photoluminesc., ODMR studies 7−99139
InSb, dislocation mobility on load reversal 7−105150
$LiNbO_3$, defect chemistry 7−91579
(Mg,Ni)O, internal reduction, effect of NiO conc. gradient 7−76421
MnO, high defect content, elec. cond., defect interactions 7−70319
NaCl, defect control by light diffr. effects on US vibrs. *(Russian)* 7−85594
NbN-based compounds, zone struct. *(Russian)* 7−124852
Ni, ion irrad., point defect-sink interactions, self-diffusion meas. 7−104804
Ni, oxidation kinetics, point defects diffusion 7−106697
Ni-Al thin films, low temp. phase form. by ion beam mixing, amorphisation and chem. disorder effects 7−84057
NiAl, antisite defects, electronic struct., LMTO method, magnetism 7−98922
NiAl films, low temp. amorphisation by intracascade processes 7−104872
Ni_3Al, appl. of embedded atom method 7−69697
NiO, point defects and high-temp deformation 7−69812
$NiSi_2$-Si, thin epitaxial layers, cond. and mobility 7−138076
Pb-S system, thermodynamic anal. and phase diagram calc. 7−77957
$PbMoO_4$ single cryst., electrophys. and optical props., point defect interaction effects 7−84013
Pt-Si contacts, interfacial PtSi formation, P diffusion and defect modification 7−124605
Si, amorphous surface layer form. by ion bombardment, crystallisation 7−84457
Si, film edge induced dislocation, nucleation role of point defects 7−98170
Si, plastically deformed, defects classification 7−99576
Si, point defects, electronic structure calcs. 7−104730
Si, process-induced point defects, EPR study 7−126354
Si, radiation defects after high energy e, γ and n irradiation *(Czech)* 7−124332
Si single crysts., clusters of point defects, study using gamma-ray diffraction 7−98119
Si, swirl defect form. thermodynamics and kinetics *(German)* 7−111554
Si transient defect kinetics during oxidation and dopant diffusion phenomena 7−111968
Si:Co,P, impurity distrib. after P diffusion gettering, Mossbauer spectra study 7−111640
Si:He^+, ion implantation induced damage structure 7−76165
Si:O,C, point defects influence on intrinsic gettering 7−111590
Si:P^+ implantation self annealing and ion beam assisted recrystn. studies 7−84053
Si/SiO_2 interface, in MOS struct., EPR obs. 7−112949
SiC, native defects, electronic struct. calcs., cluster recursion method 7−98920
SiO_2, amorphous, ion implantation and gas exposure influence obs. 7−98210
SiO_2 films, on Si, paramag. point defects, generation by electron injection and ionising radiation 7−111555
SiO_2 optical glasses, physics and appls. *(Russian)* 7−110491
SiO_2, pure and Ge-doped optical fibres, E′ centre thermodynamic props., drawing conditions depend., EPR study 7−98146
SnO_2, electronic struct. of O vacancies 7−143547
TiO_2 (110), electronic struct. of O vacancies 7−143547
TiO_2:Cr, electrical conductivity, isothermal variations, comparison of doping concentration *(French)* 7−92169
W, defect-sensitive props. *(German)* 7−124245
p-ZnSe, point defects on photocond. spectra 7−112402
$ZnSnAs_2$ semicond. crysts., interatomic interaction dynamics, phase transition, intrinsic point defect formation 7−137539
$ZrSiO_4$, natural zircon, radiation induced lattice defects obs. at atomic resolution 7−76118

point groups *see crystal atomic structure; crystal symmetry*

point to point radio links *see radio links*

Poiseuille flow
boundary conditions, traction and pressure imposed, in finite element flow anal. 7−108250
circular pipe, laminar to turbulent transition, inlet velocity profile effects 7−97492
concentric non-Newtonian fluids stability in circular pipe flow 7−69222
creeping flow around circular cylinder in Poiseuille and Couette flows 7−136789
fluid elements deformation behind an advancing flow front 7−110908
gas lubrication is high Λ region, Reynolds equation, numerical anal. 7−130605
Maxwell fluid, flow through sudden contraction, num. simulation 7−91234
micropolar fluid, flow between porous walls of different permeability, numerical soln. 7−91215

Poiseuille flow continued
multilayer flow, of two immiscible liqs., Poiseuille flow stability, Navier-Stokes eqn. solns. 7−69248
plane Poiseuille flow near neutral state, Landau const. 7−83354
plane three-layer, viscosity and density stratification 7−130796
shear dispersion, asymptotic conc. distrib., tilted Gaussian model 7−142249
shear flow transition, Ginzburg-Landau eqn. soln. 7−117674
sphere near wall in viscous incompressible flow, drag and lateral forces calc. 7−111119
superposed fluids, stability and flow development, finite element anal. 7−97629
turbulent flow in a channel, bifurcation model 7−123753
turbulent spots, wave struct. investig. 7−91233
viscoelastic fluid, pipe flow, hyperbolicity and flow transition study 7−83351
viscous fluid inside surface of revolution, axisymmetric motion 7−123653
wall to liquid mass transfer and hydrodynamics of two-phase Couette-Taylor-Poiseuille flow *(French)* 7−111068

Poisson ratio
2D sheets with regular arrays of non-circular holes, elastic moduli calc. 7−117461
alloys, two-phase, interfacial stresses prod. by pile-up of discrete edge dislocations 7−111557
coal measure rocks from Sydney Basin, New South Wales, elastic props. 7−120008
compact tension specimens, boundary element anal., straight and curved crack fronts 7−136747
disordered solids, cell model and elastic moduli, low temp. limit 7−111732
disordered solids, elastic consts., temp. depend. 7−111733
Earth lower mantle, Poisson ratio and composition from seismic wave vels. 7−119985
epoxy resin composites, mech. props., effects of SiO_2 powder or glass beads *(Japanese)* 7−126165
foam structures with negative Poisson ratio 7−113600
graphite fibre reinforced epoxy, hygral and mech. props., effect of voids 7−100272
graphite fibre reinforced epoxy, prep. from pristine and Br intercalated fibres, mech. and elec. props. 7−144451
half-space with variable Poisson ratio, contact problem 7−75475
hard-sphere cryst., elastic consts., density functional theory 7−124375
inhomogeneous media in polar coordinates, 2D inverse problem of elasticity theory 7−67019
polycrystalline semiconducting compounds, elastic moduli, temp. and press. derivatives 7−98296
polymer, dispersively filled, nonideal adhesive bond effect on elastic props. 7−71232
polypropylene, $CaCO_3$ filled, mech. props. 7−113592
powder materials, sintered, form. and densification 7−138703
short fibre reinforced polypropylene, interfacial shear stress rel. to fibre orientation 7−106577
X-ray measurement of triaxial stresses, Poisson's ratio and stress-free lattice spacing 7−142244
$BaO-ZnO-P_2O_5$ glasses, coordination numbers suggested by elastic props. 7−113595
$Co_{84}Nb_{10}B_6$ metallic glass, fully-crystallised, elastic moduli, yield stress and ductility 7−71227
Fe complex, $[Fe(2\text{-pic-}ND_2)_3]Cl_2.EtoD$, spin crossover system, Lamb-Mossbauer f-factor, press. depend. 7−77430
In_4Se_3 single cryst., elastic props. study 7−84120
Si_3N_4 based materials, hot compaction, elastic props. rel. to porosity 7−106561
TeO_2-WO_3, binary tellurite glasses, elastic behaviour under press. 7−111731
TeO_2-$ZnCl_2$, binary tellurite glasses, elastic behaviour under press. 7−111731
U-Ti (0.75 wt.%), depleted, determ. of dynamic elastic moduli as function of temp. by piezoelec. US composite oscillator technique 7−113596
USb (Se) single crystal, elastic props. 7−76269

polar cap absorption *see ionospheric electromagnetic wave propagation*

polar semiconductor materials *see polar semiconductors*

polar semiconductors
see also ferroelectric semiconductors; piezoelectric semiconductors
collective excitations in superlattice structs., electron energy loss, sensitivity to outermost layer 7−85911
direct gap polar semiconds. under continuous laser illum., nonequilibr. thermodynamic state 7−84961
dynamical conductivity in IR from impurity scatt. 7−125050
hot electron plasma, influence of recombination centres on relaxation process 7−137956
hot phonons in polar semiconductors, Monte Carlo algorithm 7−92077
LO phonon modes bound to neutral impurities 7−137490
surfaces, ab initio theory, appl. to GaAs (111) (2×2) reconstructions 7−124677
thermalisation, cooling processes in dense photogenerated plasma, screening, phonon heating 7−84910
GaAs (-1-1-1), (2×2) reconstructions, related phase transitions, ab initio theory 7−124678
GaAs (111), (2×2) reconstructions, ab initio theory 7−124677
GaAs, transient conductivity of nonequilib. carriers excited by subpicosecond optical pulses, calc. 7−125038
ZnO surfaces, O Auger signal, calibration 7−119076

polarimeters
see also polarimetry
coherent optical fibre systems, polarisation control 7−110579
Faraday multipass rotator for use in high accuracy polarimetric or ellipsometric devices 7−128628
fibre optic polarimetric strain sensor, extended range 7−136570
fibre-optic magnetometer, closed loop, AC current measurement using Faraday effect 7−75151
integrated, based on anisotropic photodetectors 7−134836
mm-wave network analyser-based scatterometer for remote sensing 7−107573
Mott low-energy polarisation analyser, UHV compatible 7−141408
multifrequency polarimetric SAR for remote sensing 7−107572
neutron polarimeter consisting of cylindrical liquid and plastic scintillators 7−109676
photopolarimeter, in-line light-saving and fibre optic analog 7−134837
point and distributed polarimetric optical-fibre sensors 7−123205

polarimeters continued
SNR of one- and two-channel halfwave plate polarimeters 7−115991
two-crystal Compton γ-ray polarimeters, performance optimisation 7−116805
C multifoil with multiwire proportional chambers and plastic scintillators 7−109675

polarimetry
see also ellipsometry; polarimeters
beam splitters using uniaxial crystals, effects on polarimetry and imagery 7−101681
Brewster-angle reflection polarizers, angular sensitivity 7−123167
chiral 1,3-diols+$B(OH)_4^-$, polarimetric, circular dichroism and ^{11}B NMR investig. 7−82219
P/Comet Halley (1982i), polarimetric obs. (1985 September-1986 January) 7−94754
electromagnetic radiation polarizer based on a quasi-one-dimensional conductor 7−128630
fibre optics polarimetry techniques and appls. 7−75154
high-pressure chamber for polarisation studies of solids 7−121196
imaging radar polarimetry from wave synthesis in remote sensing 7−107571
Mott low-energy polarisation analyser, UHV compatible 7−141408
radio sources, Faraday rot. meas. rel. to hot interstellar gas detect. in globular clusters *(Russian)* 7−72554
radio sources, max. entropy method for polarised images deconvolution 7−101696
semiconductor polarimetric photodetectors, prep. principles, photopleochromism, review 7−113123
Na, atomic vapour, excited levels, relaxation times, polarimetric study 7−74477

polarisability
see also atomic polarisability; molecular polarisability
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7−77499
bond polarisability anisotropy, sign ambiguity resolution 7−83838
crystals, polarisability and induced light scatt., Raman spectra anal. 7−85744
electrical polarizability of small apertures: analytical approach 7−96927
ferroelectric cpds., dynamical properties, polarisability model calcs. 7−85548
graphite, polarisability components, re-evaluation from optical data 7−83842
lipid membranes, hydratation interaction and nonlocal polarisability 7−119745
minerals, refractive index determ., point-dipole model calcs., chem. substitution effects 7−77500
multipolar response of small metallic spheres, nonlocal theory 7−98849
polar fluids, dielectric response and solvation, molecular theory 7−125604
sapphire surface, Au particle, polarisability and transmittance 7−105264
static dielec. matrices, ab initio pseudopotential density functional approach, appl. to semicond. and insulators 7−84723
truncated sphere on substrate, polarisability 7−77457
n electric polarizability and RMS radius determ. from $^{209}Bi(n,n')$, quark cloudy bag model comparisons 7−121508
AgBr microcrystal, Rothstein effect, electron polarisation model *(Japanese)* 7−128699
β-AgI, disordered solid, polarisability and induced light scatt., Raman spectra anal. 7−85744
AgI-AgBr-CuI solid solns., ionic cond., comp. depend., 25-300°C 7−69971
$BaTiO_3$, electronic polarisation with repulsion effects, polarisable point-ion model 7−85542
$Ge_{1-x}Sn_xSe_2$ glasses, phase separation 7−83724
Ne-H liq. mixtures, dielec. consts. meas. *(Russian)* 7−77447
PbO optical glass, Kerr const. and struct. relax. 7−99798

polarisation
see also beta-ray polarisation; deuteron polarisation; dielectric polarisation; electromagnetic wave polarisation; electron spin polarisation; gamma-ray polarisation; neutron polarisation; nuclear polarisation; photon polarisation; polarisation in elementary particle interactions; polarisation in elementary particle scattering; polarisation in nuclear reactions and scattering; proton polarisation
cellulose nitrate detectors, α-induced polarisation, effect on LET and track form. *(Spanish)* 7−141392
Earth EM field, E-field perpendicular polarisation response of two thin sheets in horizontally stratified half-space 7−127085
electron synchrotrons, polarisation and spin kinetics in stationary mag. field 7−116763
excited levels, two-step excitation by short broadline pulses 7−141529
gas lasers, active medium, polarisation, reson. radiation capture effect 7−90596
inverse hook method, AC Stark interaction 7−130145
linear polarisation of γ-rays elastically scattered from atoms 7−74519
neutron source, POLKA 7−122299
passive metals, corrosion kinetics, linear polaris. technique 7−93167
photofragments, light emission, classical model, quantum results interpretation 7−129780
polarization slaving mechanisms in vectorial bistable lasers 7−75036
proton synchrotrons, polarisation and spin kinetics in stationary mag. field 7−116763
quantum and classical electrons, one-dimens. infinite pot. well, static electric field 7−102053
scattering of polarised atoms, azimuthal asymmetry and S-matrix parameters anal. 7−90330
seismic waves, polarisation characts. of converted PS waves reflected from boundaries disturbed by fault systems 7−71968
semiconductor thin films, acoustic quantum waves, polaris. effects *(Russian)* 7−111782
storage rings, radiative polarisation of electrons and positrons 7−89822
vacuum polarisation eqn. of state in QED 7−89423
X-ray quasimonoenergetic polarised radiation, generation at medium energies 7−122275
X-rays excited by accelerated ions in crystals 7−108726
Al, electrochemical behaviour in NaCl soln., impedance obs. 7−93335
Ba+N_2O, chemiluminesc. reaction, mol. stereochem. dynamics 7−144709
Cd-Ni alloy electrodeposition from acetate baths with superimposed AC 7−132503
Fe^{2+}/Fe^{3+} redox system, study using DC linear polarisation and impedance techniques 7−93490
^2H, polarised target using spin relaxation of polarised potassium atoms 7−109575

polarisation continued
^{3}He liquid, Raman scatt., polarisation study 7−76525
^{3}He polarised gas target, spin relaxation study 7−109586
^{23}Na beam source, spin polarisation using double-resonance technique 7−109580
Na two-photon change in picosecond pulse polarization 7−90079

polarisation in elementary particle interactions
conf., Gaithersburg Maryland, USA, Nov. 1983 7−66838
heavy $Q\bar{Q}$ production in hadron colliders, polarisation density matrix, W^+W^- prod. 7−95852
high energy particle physics, spin phenomena effects 7−73677
LEP/SLC precision measurements, virtual very heavy top effects, virtual corrections 7−140864
$\vec{n}\rightarrow H+\bar{\nu}_e$, H=hydrogen, relativistic bound-state Bethe-Salpeter anal. 7−121502
tagged photons, bremsstrahlung cross section anal, review 7−67792
$d\vec{\gamma}\rightarrow pn$, polarization meas. for E_γ=0.7-1.0 GeV 7−95913
e^+e^-, very high energies, Higgs prod., longitudinally pol. vector boson scatt. 7−108907
$e^+e^-\rightarrow$ $n\gamma$, n=3,4, polarization amplitudes, cross section calcs. 7−116156
e^+e^- annihilation, photon pol., quantum correlations, non-locality and EPR paradox 7−102727
$e^+e^-\rightarrow$hadron asymmetries, strong interaction effects 7−81216
$e^+e^-\rightarrow$hadrons, longitudinal polarisation asymmetry meas. 7−102757
$e^+e^-\rightarrow X$, heavy quark influence on polarisation asymmetry 7−95917
$\vec{e}\vec{N}\rightarrow e'X$, deep-inelastic process, sum rules and axial anomaly 7−121519
$e^-N\rightarrow e^-X$, polarisation phenomena structure function formalism 7−135136
$\vec{e}^{\pm}\vec{N}\rightarrow e'N$, spin asymmetry effects 7−116183
$\gamma N\rightarrow X$, polarisation phenomena structure function formalism 7−135136
$K_L\rightarrow\mu\bar{\mu}$, gluino induced effects on strangeness-changing neutral currents, μ-polarization asymmetry 7−95890
$K^-p\rightarrow\Lambda\gamma\pi^0$, kaonic atom decay, polarized Λ production 7−89519
$\vec{n}$ decay, beta-asymmetry meas. for g_A/g_V determ. 7−67619
$\vec{n}\rightarrow pe\bar{\nu}_e$, triple correlation coefficient meas. and T invariance 7−67620
$np\rightarrow d\gamma$ reaction and amplitudes, polarisation, theory testing 7−128907
$\nu(\bar{\nu})N$ charged current interactions in Ne, spin alignment of ρ^0 produced 7−81168
pN inclusive scattering at high-energy, hyperon polarization, final state interactions 7−135160
$pN\rightarrow\Lambda X$, 28.5 GeV/c, Λ polarization meas. 7−121543
$pN\rightarrow\Sigma^0X$, 28.5 GeV/c, Σ^0 polarization meas. 7−121543
$pN\rightarrow\Sigma^0(\Lambda^0)X$, 28.5 GeV/c, Σ^0/Λ^0 cross section ratio, effects on pol. meas. 7−128921
$pp\rightarrow$dibaryon (2.7 GeV/c^2), $\Delta\sigma_L$ cross section anal., correlation with six-quark structure models 7−89515
$pp\rightarrow d\pi^+$, 447, 515, 580 MeV, tensor and vector polarization meas. 7−95928
$\vec{p}p\rightarrow\vec{\Lambda}\Lambda$, $\sqrt{s}$=14.6, 25.5 MeV, cross sections, diff. cross sections, $\vec{\Lambda}$, Λ polarization meas. 7−95931
$\vec{p}\vec{p}\rightarrow pn\pi^+$, spin dependent observables meas., scatt. amplitudes 7−95934
$\vec{p}\vec{p}\rightarrow pp\pi^o$, spin dependent observables meas., scatt. amplitudes 7−95934
$\vec{p}p\rightarrow p\vec{\pi}^+n$, density-matrix elements and single-spin correlations 7−81228
$\vec{p}\vec{p}\rightarrow\pi^+d$, spin dependent observables meas., scatt. amplitudes 7−95934
$\pi N\rightarrow\psi X$, 252 GeV, longitudinal pol. 7−121546
$\pi^-p\rightarrow\eta n$, $\sqrt{s}$<1600 MeV, polarisation calc., πN phase shift anals. 7−95958
$\pi^-\vec{p}\rightarrow\eta n$, polarization parameter meas. at 40 GeV/c 7−108939
e^+e^- at LEP 200 energies, compositeness investigation, polarisation as anal. tool 7−140924
$e^+e^-\rightarrow\gamma\gamma\gamma$, photon linear polarisations *(Chinese)* 7−121548
$e^+e^-\rightarrow\nu\bar{\nu}\gamma$, neutrino counting for polarised and unpolarised e^-, kinematical configs. 7−89487
$e^+e^-\rightarrow W^+W^-$, standard model test at LEP 200, W helicity, beam pol. effects 7−140921

polarisation in elementary particle scattering
intermediate bosons, longitudinally polarized, scatt. in symm. breaking sector, low energy theorems 7−135004
tagged photons, bremsstrahlung cross section anal, review 7−67792
$\vec{d}p\rightarrow\vec{d}p$, stability of angular extrapolation methods for determining the deuteron asymptotic *D*-state to *S*-state ratio 7−109189
$ed\rightarrow ed$, form factors and polarisation 7−81204
$e^-\mu\rightarrow e^-\mu$, polarised scatt., electromagnetic corrections, Lorentz-invariant form 7−116155
γe scattering, final photon polarization calcs. 7−135093
$\vec{n}d$ elastic scatt., 10-14 MeV, vector anal. power comparison to calcs. 7−96047
$\vec{n}p$ free forward elastic scatt., 400 to 1100 MeV, cross section and analyzing power meas. 7−121534
$\vec{n}\vec{p}$ inelastic scattering, O.63-1.08 GeV, spin dependent total cross section difference meas. 7−95930
$\vec{n}p\rightarrow np$, 25 MeV, analyzing power meas. 7−121533
$np\rightarrow np$, analysing power meas. at SATURNE II 7−81224
$\vec{n}\vec{p}\rightarrow np$, isoscalar part of interaction 7−95936
$\vec{n}p$ scattering, 17-50 MeV, analyzing power, cross section and spin correlation meas. 7−121532
np scattering, analyzing power and charge symm. violation, one-boson exchange model 7−121530
$\vec{p}p$, parity nonconservation, 45 MeV, precision meas. 7−81229
pp elastic scattering, polarization t-dependence at all energies 7−95927
$\vec{p}p\rightarrow pp'$, bremsstrahlung expt. 7−67641
$\pi\vec{d}\rightarrow\pi d$, T_{22} tensor analysing power meas. 7−95924
$\pi\vec{d}\rightarrow\pi d$, tensor analyzing power meas. 7−102767
^{114}Cd(n,n′γ), $2_3^+\rightarrow 2_1^+$ transition, multipole mixing parameter determ. 7−135318
$\vec{p}p\rightarrow pp$, cross section, parity-violating helicity depend. 7−108935

polarisation in nuclear reactions and scattering
^{2}H(π, π), 134 MeV, tensor observables meas. in elastic scatt. 7−121963
conference on hadronic few-body systems, Rome, Italy (Oct. 1986) 7−66812
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
few-nucleon systems, polarization meas. for A=4-6 7−67776
nuclear reactions with polarised particles, anal. using computer programs 7−89566
oriented nuclei, fundamental symmetries, book contrib. 7−96049
oriented nuclei nuclear reactions, book contrib. 7−96050

polarisation in nuclear reactions and scattering continued
quark-gluon plasma prod. in heavy ion collisions, particle pol. as signal 7−81428
spin-dependent inversion method 7−121759
tagged photons, bremsstrahlung cross section anal, review 7−67792
tensor interaction in polarised heavy-ion scatt., partial-wave expansions 7−81423
tidal symmetry in nuclear reactions, cross sections for polarised projectiles 7−73749
(d,2p), intermediate energies, d tensor polarisations, spin dependence of cross sections 7−109187
($\vec{d}$,d), 52MeV, elastic scatt. in rainbow region. scatt. pot. features 7−96080
($\vec{d}$, $\vec{d}$), 56-700 MeV, d virtual breakup effects on elastic and inelastic scatt., CC anal. 7−102891
($\vec{d}$,$\vec{d}$), eikonal approx. for elastic scatt. 7−121863
($\vec{n}$,γ), P violation, review 7−67717
($\vec{n}$,$\vec{n}$), on A=112-126, 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
($\vec{n}$,n′γ), nuclear orientation, polarization density matrix anal. 7−121831
(p,n), to continuum states, cross sections, analysing powers, DWBA calc. 7−102872
(p,p), 65<E_p<200 MeV,. folding model potential anal., cross sections, analyzing powers spin rotation parameters 7−67837
(p,p′), 1 GeV, differential cross section angular distrib., nuclear transition densities anal. 7−121827
($\vec{p}$,p′), 20 MeV, anal. power angular distrib., nuclear transition densities anal. 7−121827
(p,p′), medium energies, $0^+\rightarrow 0^-$ transitions relativistic impulse approx. 7−67835
(p,p′), to continuum states, cross sections, analysing powers, DWBA calc. 7−102872
$^{27}\vec{A}$l($\vec{n}$, n), spin-spin interaction and optical pot. 7−121850
^{27}Al(n,n),($\vec{n}$,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{A}Ar(d,d), A=36, 40, differential cross sections and reorientation effects 7−81404
^{40}Ar($\vec{d}$,p), 20 MeV, cross sections and anal. powers, ^{41}Ar levels and J^π assignments, DWBA anal. 7−116286
^{11}B(p,p′)$_{\frac{1}{2}}$ analysing power excitation functions, coupled channel model calcs., ^{12}C resonances 7−129041
^{11}B(p,p′), 4-10 MeV, analyzing power calcs., coupled-channels anal. 7−116415
^{9}Be($\vec{p}$, d), analyzing power meas. of inclusive spectra 7−121833
^{209}Bi($\vec{^3}$H, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{209}Bi($\vec{d}$, ^{3}He), particle-hole transitions, differential cross section meas. 7−129055
Br (n,n′), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412
^{A}C($\vec{p}$,n)^{A}N, A=12,13,14 differential cross-sections and analysing powers 7−129042
^{12}C (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
^{12}C(d,^{2}He), 650 MeV, 2 GeV, energy spectra and tensor anal. power meas. 7−135293
^{12}C($\vec{d}$,^{6}Li)^{8}Be, vector and tensor analysing powers 7−109190
^{12}C(n,n′γ), linear and circular γ-ray polarization calcs. 7−96074
^{12}C(n,n), 15.6-16.5 MeV, ^{13}C resonance search at 20 MeV using anal. power meas. 7−96044
^{12}C($\vec{p}$,$\vec{p}$′)^{12}C, deformed spin-orbit potential, cross-sections and analysing powers 7−121851
^{13}C(d,p), 13 MeV, ^{14}C levels anal. 7−95990
^{13}C(p, d), with subsequent decay to ground state, tensor polarisation, DWBA calcs. 7−135327
^{A}Ca($\vec{p}$,p′), A=40, 48, cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{A}Ca(p,p), A=40,48, 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{40}Ca(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{40}Ca(^{3}He, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{40}Ca($\vec{d}$, d), 52 MeV, model independent optical pots., virtual breakup 7−121862
^{40}Ca($\vec{d}$,X), X=t, ^{3}He, 20 MeV, D-state effect, finite range DWBA, anal. powers 7−116434
^{40}Ca($\vec{d}$,α), 20 MeV, α-particle D-state, DWBA anal., d+d cluster expansion 7−116433
^{40}Ca($\vec{e}$,e′), low momentum transfer $\vec{e}$ induced nucleon emission, giant resonance decay 7−135307
^{40}Ca($\vec{\mu}^-$,$\nu\gamma$), coeff. of asymmetry, γ ang. distrib. and circular pol. 7−129022
^{40}Ca($\vec{p}$, p), 30.3 MeV, CC-inversion approach to pol. pots. 7−121780
^{40}Ca($\vec{p}$,p′), cross sections and analyzing power meas. 7−102880
^{40}Ca(p,p), 0.497-1 GeV, elastic and inelastic, polarisation characteristics 7−67840
^{40}Ca(p,p), differential cross sections, polarisations, giant resonances *(Russian)* 7−121843
^{54}Ca(^{3}He, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
(γ,e^+e^-), coherent production in nuclear electroweak field, P violating asymmetry 7−102859
^{1}H($\vec{d}$,^{2}He), 650 MeV, 2 GeV, energy spectra and tensor anal. power meas. 7−135293
^{1}H($\vec{d}$,d)^{1}H, elastic scatt., analysing power meas. 7−73778
^{1}H($\vec{d}$,d)^{1}H, stability of angular extrapolation methods for determining the deuteron asymptotic *D*-state to *S*-state ratio 7−109189
^{1}H($\vec{d}$,γ), tensor analyzing power and D-state effects 7−109192
^{1}H($\vec{n}$, n), 477 MeV, anal. powers, isospin violating charge symmetry breaking 7−121849
^{1}H($\vec{n}$,γ), 6.0, 13.43 MeV, anal. power for n-p radiative capture 7−81389
^{1}H($\vec{n}$,γ), intermediate energy, meson exchange and relativistic correction effects 7−121842
^{1}H($\vec{p}$,p′γ), bremsstrahlung expt. 7−67641
^{2}H($\vec{N}$,N)^{2}H, meson theoretical NN interaction predictions 7−67812
^{2}H($\vec{N}$,$\vec{d}$), E_N=10 MeV, vector-to-vector spin transfer coeffs., Paris NN potential anal. 7−67829
^{2}H($\vec{N}$,$\vec{d}$)N, meson theoretical NN interaction predictions 7−67812
^{2}H($\vec{d}$,γ)^{4}He, low energies, ^{4}He D-state effects 7−116435
^{2}H($\vec{d}$,n)^{3}He, 80,120,160,200,460,1000 keV, vector analyzing power meas. 7−129060

polarisation in nuclear reactions and scattering continued
^{2}H(d,p)^{3}H, 80,120,160,200,460,1000 keV, vector analyzing power meas. 7−129060
^{2}H(ē,e'n), nonrelativistic description, final state interactions and neutron electric form factor 7−121811
^{2}H(e,e'n), polarization effects and subnuclear degrees of freedom 7−67793
^{2}H(e,e'n), tensor polarized, nucleon emission asymmetry 7−81373
^{2}H(ē,e'p)n, disintegration determ. *(Russian)* 7−109153
^{2}H(γ,n), polarization effects and subnuclear degrees of freedom 7−67793
^{2}H(γ,n), polarization meas. for E_γ=0.7-1.0 GeV 7−95913
^{2}H(γ,pn), above π threshold, coupled channel anal. with Δ degrees of freedom 7−102858
^{2}H(γ̄,pn), photodisintegration by elliptically pol. γ-rays, ang. distribs. 7−81368
^{2}H(n̄, n), 10-14 MeV, vector anal. power comparison to calcs. 7−96047
^{2}H(n,γ)^{3}H, polarisation correlations 7−81380
^{2}H(n̄,n'), low-energy scatt. by local pot., Faddeev calcs. and t matrices 7−67819
^{2}H(p̄, p̄), 500, 800 MeV, proton spin observable meas. 7−141050
^{2}H(p̄,X), Coulomb modified Faddeev calculations of low-energy P-D observables 7−67813
^{2}H(p,γ)^{3}He, polarisation correlations 7−81380
^{2}H(p̄,n̄p), polarization transfer coeff., precision meas. 7−109174
^{2}H(p̄,n̄p), quasielastic scatt., 223-492 MeV, spin transfer parameters meas. 7−121854
^{2}H(p̄,p), 65 MeV, depolarisation parameter meas. 7−96048
^{2}H(π,np), vector anal. power calc. near 3,3 resonance, relativistic Fadeev theory anal. 7−121956
^{2}H(π,π), coupled channel quasipotential model, string energy dependence of anal. power 7−81225
^{3}He(α,α), analyzing power, ang. and energy depend. 7−96086
^{A}H(d,γ), A=1,2, tensor polarized reactions, D-state effects 7−67848
(^{3}He,^{3}He), polarised elastic scatt., microscopic spin-orbit potentials 7−81411
^{3}He (π,π), 20-65 MeV, diff. cross section and anal. powers from microscopic wavefunctions 7−129108
^{3}He(d,p), 1.0-13.0 MeV, cross section and analyzing power meas. 7−116436
^{3}He(γ̄,p), 90-350 MeV, cross section asymmetry in two particle photodisintegration 7−67799
^{3}He(γ̄,p), cross sections, asymmetry coeff. and electromagnetic current conservation 7−121796
^{3}He(γ̄,p)^{2}H, nucleon-nucleon interaction and meson exchange current, Faddeev wave fns. 7−121792
^{3}He(γ→,p), E_γ>50 MeV, differential cross section calcs., giant resonance region 7−121795
^{3}He(p̄,pd), ang. distrib. and analyzing power in final state interaction region 7−67823
^{4}He(d,^{3}He), 35, 45 MeV, diff. cross section and anal. power ang. distribs., asymptotic normalisation 7−116373
^{4}He(p,p), 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{A}Ir(t,α)$^{A-1}$Os, A=191,193 implications for supersymmetry tests 7−129058
k(n,n'), neutron polarisation, parity nonconservation on passage of thermal neutrons through KBr 7−116412
^{6}Li(α, γ), laser polarized target, reaction cross section meas. 7−135386
^{6}Li(p,pd)^{4}He, 0.5-1.0 GeV, deuteron production mechanism, tensor polarization calcs., ^{6}Li αnp model 7−121846
^{A}Li(γ,t), A=6,7, two-cluster direct mechanism, polarization characts., struct. model calcs. 7−135297
^{24}Mg(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{26}Mg(d,d), differential cross sections and reorientation effects 7−81404
^{58}Ni(d,d)^{58}Ni 79 MeV elastic scatt., cross section and polarisation characts. anal. *(Russian)* 7−81406
^{A}Ne(d,d), A=20, 22, differential cross sections and reorientation effects 7−81404
^{58}Ni(d,^{3}He)^{57}Co, strong fragmentation of $1d_{5/2}$ hole strength 7−116430
^{58}Ni(d,d), coupled discretized continuum channels methods 7−67849
^{58}Ni(dd)^{58}Ni, nuclear rainbow regime, saturation of analysing powers 7−121864
^{58}Ni(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{16}O, (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
^{16}O(d̄,^{6}Li)^{12}C 7−109190
^{16}O(d̄,d), 200, 400, 700 MeV, cross sections, analyzing power meas., optical model anal. 7−73779
^{16}O(ē,e'X), 130 MeV, fifth structure function, HF and RPA calcs. 7−121808
^{16}O(ē,e'X), low momentum transfer ē induced nucleon emission, giant resonance decay 7−135307
^{16}O($\bar{\mu}^{-}$,νγ), coeff. of asymmetry, γ ang. distrib. and circular pol. 7−129022
^{16}O(p̄, nπ^{+})^{16}O, DWBA calculation using Dirac equation 7−135324
^{A}Pb(^{3}He, ^{3}He), A=207, 208, 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{208}Pb(d̄, α), differential cross sections and analyzing powers, E_d=22 MeV 7−141056
^{208}Pb(n̄,n̄), 2.7 MeV, polarization anal. power meas., optical model comparisons *(Chinese)* 7−96059
^{208}Pb(p̄,p'), cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{208}Pb(p,p), 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{208}Pb(p̄,p̄), spin observables at 290 MeV 7−67827
^{208}Pb(p̄,t), 22 MeV, reaction mechanism and struct. depend., expt. and DWBA calcs. 7−135328
^{208}Pd(d̄,d), coupled discretized continuum channels methods 7−67849
^{141}Pr(γ,p), zero-range approximation limits, anal. power, sensitivity to force range 7−116383
^{A}S(d̄,d), A=32, 34, differential cross sections and reorientation effects 7−81404
^{32}S(n,n),(n̄,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{36}S(d̄,p), 20 MeV, cross sections and anal. powers, ^{37}S levels and J$^{\pi}$ assignments, DWBA anal. 7−116286
^{A}Se(p,p) A=78, 80, 82, energy ≤6 MeV, polarization, cross sections, OP parameters. isobaric analog states 7−121816
^{A}Si(d̄, p), A=29, 30, 12.3 MeV, differential cross sections and analyzing powers 7−116426

polarisation in nuclear reactions and scattering continued
^{28}Si(^{16}O,X), compound nucleus level-density depend. imaginary pot., polarization effects 7−135215
^{28}Si(d̄,d), differential cross sections and reorientation effects 7−81404
^{28}Si(n,n),(n̄,n), 14-40 MeV, cross sections, optical model anal. 7−96067
^{A}Sn(p,p'), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{A}Sn(p,p), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{116}Sn(d,p)^{117}Sn, 79 MeV, l=0 reaction mechanism, cross sections, proton polarization and anal. powers 7−129056
^{116}Sn(d,p)^{117}Sn, 79 MeV, effects of far-side dominance on j-dependence of reaction 7−129057
^{116}Sn(e,e')^{116}Sn, core polarisation in stretched spin states 7−81402
^{116}Sn(p,p')^{116}Sn, core polarisation in stretched spin states 7−81402
^{120}Sn(^{7}Li,^{6}Li), tensor analyzing power meas., coupled channel anal. 7−116472
^{120}Sn(^{7}Li,^{7}Li), coupled channels effects, numerical results from unified semiquantal description 7−81435
^{120}Sn(^{7}Li,^{8}Li), tensor analyzing power meas., coupled channel anal. 7−116472
^{46}Ti(p̄,p'), 65 MeV, low energy octupole resonance, excitation strength and state distrib. 7−81361
^{48}Ti(^{23}Na,X), fusion, coupled channels effects, numerical results from unified semiquantal description 7−81435
^{205}Tl(d̄,^{3}He)^{204}Hg, 52 MeV, 3s proton shell occupancy, cross sections, anal. powers, spectroscopic factors 7−129061
^{51}V(p̄,p'), spin transfer meas. in M1 region 7−81387
^{89}Y(^{3}He, ^{3}He), 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{A}Zr(^{3}He, ^{3}He), A=90, 91, 33 MeV, vector analyzing power, nearside-farside anal. 7−129063
^{90}Zr(d̄, α), differential cross sections and analyzing powers, E_d=22 MeV 7−141056
^{90}Zr(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365
^{90}Zr(p̄,p'), cross sections and analyzing power, DWBA and optical model calcs. 7−102878

polariscopes *see polarimeters*

polaritons
anisotropic film on ferromagnetic substrate, magnetic polaritons 7−125511
anthracene, surface exciton polariton, guided wave mode 7−125780
benzene, liq., polaritons, stimulated Raman scatt. induced anti-Stokes Raman scatt. 7−70773
Brillouin scatt. of intense polariton waves 7−70831
channeled surface polariton, reflection from a boundary line 7−76781
Cherenkov radiation, microscopic theory *(Russian)* 7−141742
γ-cyclopropyl-bis(1,2,3'-trimethyl-indolenine-2-yl) pentamethinium tetrafluoroborate, mol. cryst., exciton-phonon coupling study 7−92074
1,1'-diethyl-2, 2'-cyanine iodide, mol. cryst., exciton-phonon coupling study 7−92074
EM wave plasmon surface polariton fields vs. TIR evanescent waves 7−137806
excitonic polaritons, electron-hole amplitude, Stahl's model 7−84696
Fresnel coefficients for anisotropic media with gain or loss 7−110236
hot phonon polaritons, hyper-Raman light scatt. 7−113196
light diffraction with surface-polariton resonances on bigrating, perturbation theory 7−82458
light scattering by thin films with a grating surface 7−141788
light scattering from randomly rough surface, localisation effects 7−110243
linear layered struct., TE hyperbolic surface wave propag. 7−137999
liquid layers bound to Au surface supporting surface plasmon-polariton 7−137668
magnetic reststrahlen-bands caused by magnon-polaritons in uniaxial ferrites 7−112212
metal optical constants determ. by surface polariton excitation using attenuated total reflection *(German)* 7−113306
metals, laser irrad., small scale surface relief, polariton mechanisms 7−105211
nematic liquid crystal, surface director reorientation 7−91425
nonlocal theory of nonlinear optical effects at an interface 7−82695
nonreciprocal surface waves in magnetic systems, review 7−118789
organic liquids, generation of excited vibrational states during stimulated Raman scattering 7−90707
phase-matched SHG of surface polariton along Ag layer on slab optical waveguide 7−123084
picosecond spectrochronography of pure and impurity crystals secondary radiation 7−128659
piezoelectric substrate with in-depth direction inhomogeneity, coupled EM-SAW anal. 7−143169
polariton-Stokes wave anharmonic coupling on slab, stimulated Raman spectra 7−82718
quartz, surface polariton dispersion determ., effective refractive index meas., interference method 7−85564
Raman scattering of guided waves by polaritons in piezoelectric slab-waveguides *(German)* 7−90714
Schottky diodes, photocurrent polariton peak, optical const. effects 7−105659
semiconducting multilayered materials, polariton struct. and spectral reflectance 7−76782
semiconductor films, inhomogeneous polariton scatt. ny dielec. const. fluctuations 7−124877
semiconductor infinite superlattice, plasmon polariton dispersion and damping 7−137807
semiconductor polariton-phonon scatt., macrofilled upper branch polariton mode *(Russian)* 7−124878
semiconductor quasiperiodic superlattices, interface polariton modes 7−124875
semiconductor superlattices, charge density excitations dispersion relation calcs. 7−143574
semiconductor superlattices, finite, polariton damping 7−70207
semiconductor superlattices, plasmon polaritons, dispersion and damping props. 7−143596
semiconductor superlattices, Raman scattering from phonons 7−85692
semiconductor surface, excitonic resonances, coherent wave approach calcs. 7−77021
semiconductor thin films in the Faraday config., magnetoplasma modes 7−98820

polaritons continued
semiconductors, optical interband processes, phonon-assisted 7−84706
SERS, polariton based description, local field and chemisorption effects study 7−77568
superlattices, surface polaritons, attenuated total refl. 7−131556
superlattices, transverse elastic waves, free electrons and polaritons, dispersion relations 7−98824
surface plasmon polaritons excitation, in attenuated total reflection arrangements, electromagnetic field distribution *(German)* 7−105415
TCNQ, mol. cryst., exciton-phonon coupling study 7−92074
thin crystal optic phonon-polariton scattering *(Russian)* 7−124879
thin crysts., polariton dispersion and refractive index, Green's function method calcs. *(Russian)* 7−84161
thin films, nonlinear surface polaritons, TM modes 7−132364
22-tricosenoic acid, thin Langmuir-Blodgett films, surface plasmon-polaritons study 7−84590
truncated superlattices, surface magnetoplasmon polariton mode calcs. 7−124876
uniaxial crystals, polariton modes in superlattices 7−76316
Ag substrate, coupled to Ag or dielec. sphere, optical response, surface plasmon polariton excitation 7−106160
Ag-GaAs, surface polariton excitation, photoresponse influence 7−112198
Al/insulator/Au light-emitting tunnel junction, two-mode radiation studies 7−143635
Al-Al_2O_3-Ag tunnel junctions, surface plasmons, optical detection 7−105725
Au thin film/fluid interface, surface plasmon-polariton studies 7−138532
CdS, attenuated total reflectivity, calc., wave vector linear band splitting 7−138405
CdS, exciton polariton damping dispersion 7−98823
CdS, excitonic surface polaritons, luminescence 7−113241
CdS(Se), M and P luminesc. bands, Bi-exciton annihilation 7−132329
CuCl, nonlinear refr. index due to induced exciton-biexciton transition, time evolution 7−70737
GaAs, polariton lumin. 7−70862
GaAs-AlAs superlattice, IR reflectivity and EELS 7−77714
GaAs-AlAs superlattice; polariton modes, free charges localised at interfaces 7−137808
GaAs-GaP semi-infinite superlattice, surface phonon polaritons 7−76783
GaP crystal, Raman scatt. by surface polaritons, polarisation props. 7−125745
HgI_2, polariton nonequilibrium Bose condensation, resonance laser radiation induced *(Russian)* 7−112199
InP cubic semicond., excitons and polaritons, reflectivity spectrum study, stress, press., and mag. field effects 7−112187
KI crysts., free exciton edge luminesc., polariton effects study 7−98814
LiIO crystal, oblique polaritons, CARS method study 7−85718
MgO (200), laser-induced phonon-polariton coupling with X-rays, Bragg case 7−98821
MgO (200), laser-induced phonon-polariton coupling with X-rays, Laue case 7−98822
NH_4Cl, ν_4-polariton propag., CARS meas. 7−85707
NH_4Cl, picosec. phonon-polariton pulses, propag. and dephasing *(Japanese)* 7−131249
$Pb_5Ge_3O_{11}$ ferroelec. cryst., polariton dispersion, phonon freqs. and damping, IR refl. meas. 7−76320
PbI_2-2H crystals reflectance and photoluminescence, polariton theory *(Russian)* 7−144129
RbI crysts., free exciton edge luminesc., polariton effects study 7−98814
SiC (220), laser-induced phonon-polariton coupling with X-rays, Bragg case 7−98821
SiC (220), laser-induced phonon-polariton coupling with X-rays, Laue case 7−98822
SiO_2 glass, IR absorpt. edge due to multiphonon absorpt., polariton theory 7−99775
SiO_2 quartz, optical props., influence of thermal annealing after $N^+(O^+)$ ion implantation 7−106130
SiO_2, quartz/fused silica, N and O implanted, IR reflection props. 7−138440
SnO_x, artificial dielectric films on crystalline quartz, optical props. 7−125839
ZnS_xSe_{1-x}, polariton Fermi reson., IR spectra *(Russian)* 7−84697
polarization in elementary particle interactions *see polarisation in elementary particle interactions*
polarization in elementary particle scattering *see polarisation in elementary particle scattering*
polarographs *see polarography*
polarography
see also voltammetry (chemical analysis)
AC, charging current elimination using peak sampling 7−114042
AC, higher harmonic, phase-locked loop generation of reference squared waves 7−93405
^{64}Cu produced by Szilard-Chalmers reactions, polarographic quantification of specific activity 7−101076
Ge-ALC, anal. of polarographic adsorptive complex waves 7−106861
polarons
see also small polaron conduction
^4He liq. surface, 2D Wigner cryst., ripplonic polaron DC magnetocond. calcs. 7−76518
acoustical polaron in three dimensions, impedance function calc. 7−98830
alloys, electron-polaron effects in compounds with an unstable *f*-shell 7−143374
amorphous semiconductors, band edge conduction 7−131647
bipolaron condensation induced by doping of CDW systems 7−92081
bipolaron system, 1D, with random pots., superconductivity, competition with CDWs 7−112617
bound polarons, second-order energy shifts 7−70213
condensed matter physics conference, Stockholm, Sweden (March 1986) 7−72705
conducting polymers, broken charge conjugation symmetry model, kink and polaron solns. 7−76785
coupled electron-phonon system in 1D deformable continuum, inverse scatt. method 7−131560
cyclotron resonance spectrum of 2D polarons 7−76788
deformation pot. polaron system, cyclotron reson. lineshape calcs. 7−92080
diatomic polymer, polaron optical absorpt., symm. effects, continuum limit calcs. 7−99786
diluted magnetic semiconductors, mag. polarons, phenomenological theory 7−131563
polarons continued
disordered electronic systems, electron mobility, polaron form., hopping-to-band transitions 7−137923
dynamical many-polaron systems, 1D, field-theoretical approach 7−118381
effective mass, functional integral approach to statistical mechanical model 7−98826
electron in a quantised elastic continuum localisation, density of states 7−124881
electron-fluctuating distortion interaction in the new high T_c superconductors 7−85168
ferroelectric medium with nonlocal polarisability, impurity electron state 7−76784
finite crystals, polaron states, binding energy maximum 7−84707
flicker noise generated by random walk of interface electrons 7−105635
Frohlich continuum polaron Hamiltonian, polaron ground state energy, coupling const. 7−137810
Frohlich magneto-polaron free energy in 2D, weak-coupling expansion 7−105426
Frohlich polaron, 2D, energy-momentum dispersion relation 7−98827
ground state energy in mag. field, variational model calcs. 7−98828
heavy-electron materials, electronic polaron effects 7−112203
high T_c superconductors, electron pairing by cooperation of superexchange and polaron effects 7−118690
high T_c superconductors, LO strong coupling superconductivity theory 7−138116
insulator, S-matrix formalism for particles interacting with phonon fields, coherent state representation 7−70220
ionic crystal, electron in phonon field, effective Hamiltonian, ground state energy calcs. 7−118375
metallic glasses, sound absorption, two-level systems relaxation 7−118040
metals, Migdal theorem violation for strongly coupled electron-phonon system 7−143373
mixed valence as a polaronic effect 7−84795
mixed valent states, strong electron-phonon interactions 7−124947
molecular, functional integral first-loop correction eval. 7−98831
multidimensional polaron, perturbation theory 7−92084
negative magnetoresistance determ., mag. semiconductors with narrow degenerate conduction bands 7−143481
non-crystalline materials, conduction, book 7−102036
nonlinear dimer, solitons, energy transfer and self-trapping 7−143376
nonmetallic crystals, bipolarons, binding energy 7−143375
nonoptical polaron systems, formal phase transitions, proof of nonexistence 7−105418
one-dimensional large optic polaron, small oscillation theory 7−118379
optical polaron systems, formal phase transitions, proof of nonexistence 7−105417
orbitally oriented crystals, spinels and perovskites, elec. props., electron-deformation-interaction 7−143424
paramagnetic semiconductors, metal-insulator transition, influence of s-d exchange interaction 7−76776
perturbation theory anal. of energy using Feynman diagrams 7−76793
polar crystal slab, excitons, binding energy 7−143366
polar crysts., interface polarons in strong mag. fields 7−105419
poly(3-methylthiophene), electrochemically doped, transient polaron occurrence 7−92087
poly(p-perfluorophenylene), K-doped, conducting polymer, EPR study 7−106014
poly (3-methyl thiophene) film with aq. electrolyte contact, impedance and electrorefl. spectra, polaron transition obs. 7−99797
poly-1,4-dithianaphthalene, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
poly-3-methylthiophene, optical spectra and electronic struct. 7−77562
poly-p-phenylene(-d), donor- and acceptor-doped, temp. depend. electron spin echo studies 7−70641
polyacetylene, degeneracy of solitons and polarons for translation between nearest neighbour sites 7−92086
polyacetylene, electron-phonon coupling and disorder 7−105416
polyacetylene, model Hamiltonian discrete symmetries and selection rules 7−70215
trans-polyacetylene, nanosecond time-resolved photoinduced absorption 7−77545
polyacetylene, neutral and electrochemically doped, secondary radiation emission 7−70906
trans-polyacetylene, photocond., polarons and solitons 7−84998
trans-polyacetylene, polaron mobility 7−84703
cis-polyacetylene films, doping with metal hexafluorides, conductivity, ESR and ENDOR studies 7−131625
polyalkylthiophene films, conducting, electrochem. prep. 7−78513
polyaniline, defect states 7−70219
polyaniline, emeraldine base form, insulator to metal transition on protonation 7−70193
polyaniline, insulator-to-metal transition 7−112184
polyaniline conducting polymer, doping and elec. props. 7−76912
polyaniline films, spectroelectrochemistry, display and battery appl. 7−93338
polymers, cond., with different 3D mag. ordering, instability of polarons and bipolarons 7−92085
polymers, conducting, synthetic metal superlattices 7−105664
polymers, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polymers, quasi-one-dimensional conductors, bipolaron lattice theory 7−98998
polyparaphenylene, crystalline, optical excitation study 7−70907
polyphenylenesulphide, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polyphenylenevinylene, IR and visible absorpt. spectra, doping effects 7−70796
polyphenylenevinylene, photoluminescence, photoinduced absorpt. studies 7−70908
polypyrrole, bipolaron state due to doubly charged anion dopant 7−76792
polypyrrole, conducting polymer, ESR study of polarons and bipolarons 7−76791
polypyrrole, lightly doped, frequency dependent conductivity 7−137907
polypyrrole films, conducting, transport props. charact. 7−76870
polyselenophene electrochemically grown films, comp., surface morphology and elec. cond. temp. depend. studies 7−118481
polythiophene:BF_4^- film, conducting polymer, elec. and optical props. of polaronic states 7−77403
polythiophene:I_2 conducting polymer, radiation induced effect 7−91654

polarons continued
polythiophene, bipolaron state due to doubly charged anion dopant 7−76792
polythiophene, doped, polarons and bipolarons 7−118383
polythiophene, resonant Raman scatt. photoinduced absorption studies 7−77560
polythiophenes, doped, polarons and bipolarons 7−76789
polythiophenes, electrochemical polymerisation, optical props. 7−78492
polyyne infinite linear C chain, defect states, dynamics, photoexcitation and coherent anharmonicity 7−143448
quartz: Ge, bound small-polaron optical absorption 7−106225
resonant behaviour in crossed mag. and elec. fields, Green's function calcs. 7−98829
self-energy and effective mass in N dimensions 7−70214
semiconductors, defect reactions, optical nuclear polarisation and spin-depend. recomb. techniques 7−112996
semiconductors, excitons and electronic polarisation 7−105414
semiconductors, wurtzite, acceptor-associated bound mag. polaron, cryst.-field model 7−118380
semimagnetic semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
semimagnetic semiconductors, magneto-optical studies, Warsaw 7−132247
strong-coupled polarons in a magnetic field 7−118378
superconductivity in the generalized periodic Anderson model with strong local attraction 7−118696
surface optical polarons, mag. field effects 7−137814
tetrahedrally bonded, model, polarons and bipolaron study 7−76787
triplet bipolaronic system, ferromagnetism and supercond. coexistence *(Chinese)* 7−98825
two dimensional hydrogenic donor ground state, polaron and nonparabolicity effects, variational calcs. 7−112221
two-component boson-fermion plasma, permittivity calcs. 7−99643
two-dimensional, cyclotron resonance freq., fourth order perturbation calc. 7−105420
two-dimensional, ground state energy Feynman theory anal. 7−105421
two-dimensional polaron, variational treatment 7−143371
two-level system with nonlinear coupling 7−84619
Weyl formalism and quantum stochastic processes 7−67188
XY_8 and XY_6 para-elastic tunnelling systems, ground state energy and self-trapping transition 7−131261
AgBr(Cl), polarons, cyclotron resonance studies 7−84704
AgCl, polarons, cyclotron reson. study 7−124882
$Ag_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
β-$Ag_xV_2O_5$, phase transition and bipolaron form. 7−137548
AlGaAs-GaAs, resonant polaron effects cyclotron resonance energy calcs. *(German)* 7−124883
$B_{1-x}C_x$, small bipolaron formation and hopping 7−70314
$B_{11}C$ icosahedra, bipolaron hopping 7−124880
Ba-La-Cu-O, high T_c superconductivity model 7−105817
Ba-La-Cu-O, high T_c superconductivity, mechanism 7−138093
(Cd,Mn)Se; Raman scattering at low temp. and high magnetic fields 7−140759
$CdCr_2Se_4$, mag. semiconductors with narrow degenerate conduction bands, negative magnetoresistance determ. 7−143481
$Cd_{1-x}Mn_xSe(Te)$, magnetic polaron form. dynamics, picosec. photolum, study 7−99433
$Cd_{1-x}Mn_xTe$, mixed crystal amalgamation bands, mobility edge luminescence 7−125778
CdTe, bound piezopolaron ground and excited state energy calcs. 7−118377
$Cu_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
EuTe, degenerate magnetic semiconductors, crystallisation of dense magnetic polarons 7−125367
GaAs, conduction electrons at high magnetic fields *(German)* 7−124863
GaAs, resonant polaron effects cyclotron resonance energy calcs. *(German)* 7−124883
GaAs-$Ga_{1-x}Al_xAs$ heterostruct., quasi-2D electron gas, electron-phonon interaction effects calcs. 7−98832
GaAs-$Ga_{1-x}Al_xAs$ quantum wells, excitons, polaron effects 7−105689
$Gd_{3-x}S_4$, degenerate magnetic semiconductors, crystallisation of dense magnetic polarons 7−125367
Ge-Se-Sb, amorphous films, temperature dependence of AC and DC conductivity 7−137935
He film, liq., surface polaron states in uniform mag. field 7−105164
He liquid film on solid substrate, surface electrons, RPA calcs. 7−118192
^{3}He, solid, mag. polarons 7−70025
n-$Hg_{0.8}Cd_{0.2}Te$-anodic oxide film, resonant 2D magnetopolarons in accumulation layers 7−131803
InAs-GaSb quantum well system, optical phonon-electron interactions 7−105422
InSb, magnetopolarons in inversion layers 7−77102
KBr, molten liq., picosecond recomb. dynamics of electrons 7−77602
KCl molten liq., picosecond recomb. dynamics of electrons 7−77602
La-(Ba, Sr, Ca)-Cu-O systems, high T_c supercond., bipolaron superconductivity 7−138115
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., monovalent Cu-induced O 2p valence band holes 7−124856
$La_{2-x}Ba_x(Sr_x)CuO_4$, high-T_c superconductors, hybridisation-induced wide-band bipolaron model 7−105780
La_2CuO_4, doped high T_c superconductor, cooperative bipolaron tunnelling 7−99279
La_2CuO_x high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137985
$Li_{1+x}Ti_{2-x}O_4$:V, paramag. suscept. meas. 7−131986
$MnFe_2O_4$, electrical properties at the Neel temp. 7−125032
$Na_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
a-Se film, AC and DC cond., optical transmittance *(Korean)* 7−92317
a-Si:H, deep localised states of D-centres originating from dangling bonds 7−84772
a-Si_3N_4, multiphonon capture, memory effect and radiative transitions, Si-Si defect effects, polaron model calcs. 7−85779
SiO_2 thin films, ballistic electron transport 7−105741
SmS semiconducting single crysts., resist. and thermoelec. power meas. 7−76939
Sr-La-Cu-O, high T_c superconductivity model 7−105817
V_2O_5-P_2O_5-Bi_2O_3 glass, conductivity minimum 7−137927
V_2O_5-P_2O_5-Sb_2O_3 glass, conductivity minimum 7−137927

polarons continued
$Y_{3-x}Ba_xCu_3O_{9-y}$ high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
YCu_2O_z high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
ZnS(Se)(Te), bound piezopolaron ground and excited state energy calcs. 7−118377
ZnSe single crysts., heavy hole cyclotron resonance, polaron effective mass 7−70171

poles and towers
Electricite de France transmission network, tower maintenance and protection against corrosion 7−86486
NDT eval., speed of sound meas. and spectral anal. of sonic waves 7−97245

poles and zeros
closed surface, B-spline approx. 7−66991
eigenstructure of a regular matrix polynomial, computing algorithm for zeros 7−115739
Epstein zeta functions, zeros along critical line 7−72828
geology, pole rotation, computer-assisted, FORTRAN 77 program 7−115026
Ising model, partition fn./susceptibility singularities anal. 7−134696
KdV equation, complex, blow-up, numerical anal. of eigenvalue collisions 7−134541
Lindelof functions, zero approx., computer method 7−88902
partition function temperature zeros of 2D Ising model on anisotropic triangular lattice 7−73253
polynomials with and without gaps, zero location 7−66903
zeros of arbitrary polynomials as eigenvalues of simple matrices 7−120761

poling *see dielectric polarisation*

polishing
see also electrolytic polishing
automated aspheric polishing machine 7−90853
BWR station power resin condensate polishing plant for waste reduction *(German)* 7−116711
dental polishing of teeth, erosion meas. using SEM stereoscopic technique 7−80944
lacquer polishing of X-ray optics 7−90841
lenses, aspherical, fabrication, flexible manufacturing system 7−117364
metallic surface, ductile, treatment with polisher with embedded abrasive, relationships governing wear 7−86413
microcomputer controlled polishing machine for very smooth and deep aspherical surfaces 7−110610
optical components, US precision cleaning prior to and after vacuum coating 7−104067
optical glass, grinding with diamond tools, subsurface damage depth rel. to surface roughness 7−117355
optical materials, float polishing 7−68908
planar surface fabrication, using calibrating tool *(Czech)* 7−104057
Prepamatic−a machine for the fully automatic preparation of metallographic specimens *(German, English)* 7−132859
quartz single crystal, surface props. rel. to chemico-mechanical polishing 7−132774
steel, Al (low conc.), metallographic anal. by optical emission spectrometry *(Japanese)* 7−71562
steel, clad, surface condition of cladding layer influence on local corrosion 7−144596
steel, Cr-Mo-V, warm rolled, spheroidize annealed, microporosity, insoluble carbides, metallographic polishing 7−78410
steel, friction and transfer behaviour of graphite *(French)* 7−106629
steel, high speed, quantitative metallography by SEM 7−78416
X-ray mirror, grazing incidence, manufacture 7−90852
Al alloys with different types of coatings, fatigue resist. 7−113783
Al-Ti-B, grain refining wires, metallographic prep. *(German, English)* 7−86529
CdS, polished surface, struct., emissivity and annealing dynamics 7−77775
$CdTe_{0.95}Se_{0.05}$ prepared surfaces, for bulk struct. X-ray charactn. 7−126333
Cu, polished surface, effect of vacuum annealing on topography 7−78368
Cu, soft alloys, metallographic prep. of structural defects, pores, crack form. during heat treatment *(German, English)* 7−71430
Cu-Zn, diffusion induced recrystn., nucleation 7−100251
Cu-Zr, polished surface, effect of vacuum annealing on topography 7−78368
Fe, cast, lower bainitic nodular, austempered foils, polishing, TEM obs. 7−78071
GaAs (001), chemomechanical polishing in aq. solns., STM images 7−106717
GaAs wafers, low press. polishing 7−126340
InP ultra-flat substrates produced by chemo-mechanical polishing 7−100457
InP wafers, polishing processes, damaged layer evaluation, X-ray diffr. studies 7−106722
$LINbO_3$ boules, polishing and lapping for testing by SHG 7−126270
Pb salt, lasers, long-wavelength, LPE growth 7−74929
$PbMoO_4$ crystals, chemical etching 7−93129
Si MIS capacitors, polish damage, gate oxide integrity, minority carrier lifetime 7−138066
Si surfaces, oxidation, dislocation generation at cracks 7−86495
TiN coatings, surface struct. changes during diamond burnishing 7−86414

politics
Brookhaven spent nuclear fuel, legal, political and operational problems involved in transportation 7−74105
radioactive materials transport in Europe, role of EEC 7−74099

pollution
see also air pollution; pollution detection and control; radioactive pollution; water pollution
health problems, effect on engineering education 7−100761
house basement, infiltration of pollutants due to soil gas migration 7−119695
Japan, noise abatement in planning of road route around Tokyo *(Japanese)* 7−86863
Main, USA, forest floor debris and soil trace metal contents 7−133139
orbital debris, effects on orbiting spacecraft orientation 7−88073
smelter waste tip metal pollution, wind dispersal and soil conc. 7−119699
snow cover, transport of soluble solids to and from the soil 7−107447

pollution continued
space debris and implications for satellite damage 7−139175
thunderstorms causing vertical transport of pollutants 7−87876
pollution detection and control
see also air pollution detection and control; remote sensing; water pollution detection and control
Chernobyl accident, radioactive contamination in Lake Constance region, Austria *(German)* 7−114135
environmental analysis, accuracy investig. 7−86872
environmental radiation surveillance, radiochemical and instrumental methods 7−106953
environmental samples, multielemental anal. 7−93559
environmentally important radioactive nuclides, resonant ionis. mass spectroscopy detect. 7−93611
Johnston Atoll, transuranium-element-contaminated soil cleanup 7−106943
measuring nets for environmental protection *(German)* 7−133173
SICAD cartographic software for forest damage data processing 7−71659
soil, transuranic decontamination, radiation monitoring 7−106944
trace element monitoring with atomic absorption spectroscopy 7−71559
polonium
see also nuclei with .....
Bickford Pond, Massachusetts, USA, ^{210}Po, ^{210}Pb biogeochemical mass balance 7−127288
lake ^{210}Po, ^{210}Pb biogeochemical mass balance for oligotrophic lake 7−127288
Bi-Po impurity system, elec. field gradient, press. depend., TDPAC studies 7−113012
^{210}Pa partitioning in waste streams of coal fired utilities 7−87253
^{210}Po and ^{210}Pb, plant accumulation and plant/soil conc. ratios within a U mining and milling operation 7−133482
^{218}Po, unattached, in Ar gas, electrical and diffusive props., Rn concs. 7−97682
polonium compounds
No entries
polyelectrolytes *see electrolytes; polymers*
polygonisation *see recovery*
polymer alloys *see polymer blends*
polymer blends
acrylic acid-methacrylic acid copolymers, aq. soln., conform. behaviour 7−97891
acrylonitrile-butadiene random copolymer, particle size distrib. prediction 7−117834
aromatic-aliphatic epoxy mixtures, crosslinked, struct.-props., rels. 7−91483
azo dye attached polymer, nonlinear optical props. 7−136425
birefringence free, chain orientation, intrinsic anisotropy 7−125683
bisphenol-A polycarbonate-PMMA blends, miscibility, DSC obs. 7−132622
block copolymer and Benard pattern formation, computationally efficient modelling 7−104591
block copolymers, crossover anal. using renormalisation group methods 7−83777
block copolymers, microphase separation theory, fluctuation effects 7−111339
block copolymers, solid, low-freq. acoustic parameters, prep. conditions effects *(Russian)* 7−90913
butadiene-styrene rubber-polyethylene imine, dielec. relax. and elec. cond., phase separation effects *(Russian)* 7−113078
cellulose-polyacrylonitrile blend films, struct. from N,N-dimethylacetamide-LiCl solns. 7−111430
comb block copolymers, radiation effects 7−91645
compatibility of coils and rods bearing flexible side chains 7−84290
conductive polymers, post polymerisation processing 7−91485
copoly(γ-stearyl-L-glutamate-γ-methyl-L-glutamate), circular dichroism meas. 7−82239
copolymers with spiropyran side groups containing pleochroic dyes, transformation on heating 7−83662
diblock copolymer molecules, conform. props. 7−110152
diblock copolymers, homogeneous disordered phase, shear flow 7−136942
diblock copolymers, superstructures, composition-concentration diagrams *(Russian)* 7−137273
diepoxide-diamine network polymers, glass transition temp. investig. 7−76406
dimethyl phosphonomethyl methylsiloxane dimethylsiloxane copolymers, preparation and props. 7−122759
dimethylsiloxane-ethylene oxide copolymer network, elec. cond., ^{23}Na NMR study 7−99590
dynamical theory of polymer melt morphology 7−110156
eicosane-poly(1-octadecene-co-maleic anhydride) blend, crystallisation, props. investig. 7−76033
engineering applications of high-performance polymers 7−71144
epoxidised natural rubber-PVC blends, compatibility investig. 7−84296
epoxies, amine-crosslinked, H-bonding, IR spectra 7−117103
epoxy resin, with glassy second component, impact-modified 7−113676
epoxy-furan resin modified with thermoplastic polymers, coatings, antifriction and adhesive props. 7−71316
epoxy-polyethersulfone, dual phase blend, fracture toughness, miscibility 7−86332
epoxy-polyethylene oxide-salt complexes, ionic conducting interpenetrating networks, synthesis, mech. props. 7−86125
ethylene copolymers, elec. breakdown 7−99674
ethylene-1-alkene copolymers, dynamic mech. props. 7−86239
ethylene-α-olefine copolymers, spin-diffusion relax., ^{1}H and ^{13}C NMR 7−92531
ethylene-polyethylene mixtures, phase equilibria, calc. methods comparison *(German)* 7−111819
ethylene-propylene copolymers, glass transition temp., microtacticity effects *(Russian)* 7−83794
ethylene-propylene copolymers, thermal oxidation, chemiluminesc. and IR spectra 7−96897
ethylene-propylene homo- and copolymerisation with Cr catalyst system 7−113920
ethylene-vinyl acetate copolymers, chlorinated, ^{13}C-NMR 7−92518
ethylene-vinyl chloride copolymers, struct., IR spectra analysis 7−85633
gelatin, grafting of ethylene oxide, ^{13}C NMR spectra study 7−113922
glass transition, theory 7−137563
interdiffusion of flexible, entangled, polymers *(French)* 7−144714
isobutylene polymers and copolymers, compatibility with polyorganosiloxanes *(Russian)* 7−83793
polymer blends continued
laminar morphology, structure and props. 7−137269
late-stage kinetics of phase-separating polymer blend 7−142651
liquid crystalline copolyester, morphology and rheology 7−137196
mean-field and Ising critical behaviour 7−84192
methacrylate resins, urethane modified, fracture toughness 7−138834
methacrylic copolymer emulsion/ceramic composite piezoelectric paints 7−99693
1-methacryloyl-oxybenzoyl-phenylene-4-anisoate-styrene copolymer, dielec. relax., liq. cryst. state *(Russian)* 7−92592
miscible, prep. from two cryst. polymers, thermodynamic polymer-polymer interaction determ. 7−84289
mixture, Flory-Huggins lattice model, crit. props. 7−108432
mixtures, drag reduction, shear stability study 7−97582
mixtures, phase separation kinetics 7−69917
mono-N-(3-dimethylaminopropyl)amide copolymers, aq. solns., viscosity *(Russian)* 7−137607
multicomponent blends, low temp. microtoming for SEM investigations of structure 7−104595
multilayer thermoplastic composite sheets, tensile props. 7−106576
multiphase polymers, small angle neutron scatt. 7−131057
mutual diffusion, fast macromol. control 7−118141
nematogenic aromatic block copolymers, phase equilib. 7−86183
organic polymeric conductors, substitutional alloys elec. cond. 7−71486
organotin polymers, copolymerisation parameters study 7−113925
Pebax copolymer, molecular relax parameters, thermally stimulated current technique 7−70326
perfluoropolyether fluids, viscosity, temp. and press. depend. 7−69957
PET, drawing behaviour 7−71255
PET-p-oxybenzoate copolyester, fibre spinning from nematic melt, effect of thermal history 7−86123
phenyl benzoate liquid crystalline polymer blends and copolymers, struct., X-ray diffr. exam. 7−111344
photopolymerisable recording materials, resolution *(Russian)* 7−82735
PMMA copolymers, irrad.-induced degradation and sensitivity, resist appls. 7−142835
PMMA-high density polyethylene blends, sorption and diffusion of low-mol. cpds. *(Russian)* 7−98709
PMMA-poly(styrene-acrylonitrile) blend, chain entanglement and melt viscosity meas. 7−117104
PMMA-polybutylmethacrylate blend, filled, thermodynamic interaction, filler and prehistory effects *(Russian)* 7−137594
PMMA-polycarbonate blends, morphology and props. 7−124117
PMMA-polyethylene oxide blends in soln., compatibility, mol. wt., laser light scatt., viscometry 7−69914
PMMA-polystyrene-co-acrylonitrile blends, miscibility window, laser light scatt. obs. 7−91825
PMMA/PMAA films, plasma modified, multitechnique surface spectroscopic studies 7−70041
poly(butene-1)-ethylene-propylene blends, phys. charactn. 7−76032
poly(ether sulphone)-poly(dimethylsiloxane) alternating block copolymers, Pt-catalysed hydrosilylation study 7−113923
poly(ethylene oxide), grafted on silica, effect of grafting ratio on chain conformation *(French)* 7−110154
poly(ethylene terephthalate-co-p-oxybenzoate), nematic, fibre form. 7−77935
poly(phenylmethylsiloxane)-poly(styrene) mixture, static struct. factor, mutual diffusion coeff., light scatt. meas. 7−91859
poly(styrene-g-ethylene oxide) copolymer, anionic synthesis, mol. wt., composition and struct. charactn. 7−117108
poly(sulphone-ethylene oxide) block copolymer soln., self-diffusion coeff. determ. 7−118142
poly(vinyl acetate-co-N-vinyl 2-pyrrolidone)-poly2-ethylhexyl acrylate-co-acrylic acid blend, compatibility and microstruct., IR spectra 7−117107
poly-vinylidene fluoride copolymer poled guest/host composite for freq. doubling and waveguiding structs. 7−103909
polyacrylate-phenoxy blends, exchange reactions, phys. and mechanical behaviour 7−75491
polyacrylic acid-polyethylene carriers, with metal complexes, struct., mol. mobility *(Russian)* 7−97903
polyamide-rubber phase blend, chemically modified, compatibility, thermal and mech. props. *(French)* 7−97982
polyaniline, soluble, synthesis and elec. props. of graft copolymer 7−105052
polyarylate-polyethylene oxide block copolymers, relax. transitions near microphase separation boundary *(Russian)* 7−90914
polybutadiene-methylstyrene copolymers, relax. transitions, mech. relax. obs. *(Russian)* 7−111766
polybutylene terephthalate-liq. cryst. polyester blend, phase transitions, crystn., DSC obs. 7−124501
polycarbonate phenoxy blends, physical behaviour, interchange reactions in melt-processing conditions 7−77936
polycarbonate-phenoxy blends, mech. behaviour, influence of level of interchange reactions 7−113513
polycarbonate-styrene acrylonitrile copolymer blends, injection moulding, props. and morphology 7−137266
polycarbonate/ABS blends, props. 7−137267
polydimethylsiloxane-polymethacrylic acid, interpenetrating networks, swollen struct. study 7−91470
polyester resin, acrylate modified, radioluminesc. meas. 7−99946
polyethylene, brominated, crystallisable, location of comonomer units 7−91481
polyethylene, high- and low-density, blends, isothermal elongation at const. stretching rate 7−78085
polyethylene, low density/high density blends, mech. and flow props. 7−137268
polyethylene, sepiolite filled, mech. and morphological props., effect of filler-polymer interface 7−78127
polyethylene, thermal stabilisation with lignosulphate, rheological props. 7−92954
polyethylene, two-phase extensional flow, fibrous crystals form. 7−97902
polyethylene and crosslinked elastomer combined dispersion, struct. correl. with phys., and mech. props. 7−71233
polyethylene blends, mixing, morphology, rheology, mech. props. 7−126197
polyethylene copolymers, cross-fractionation according to copolymer comp. and mol. wt. 7−83781
polyethylene mixtures, dynamic viscoelastic props., mol. nature of temp. transitions 7−71231
polyethylene oxide-PMMA blends, nonisothermal crystallisation 7−69870

polymer blends continued
polyethylene-(ethyl-vinyl acetate copolymer) interface, elec. props. 7—125609
polyethylene-EPDM rubber binary blends, dynamic mech. behaviour 7—78087
polyethylene-ethyl acrylate, film, adhesion rel. to grafting *(French)* 7—105236
polyethylene-isotactic polypropylene blends, epitaxial relationship, diffr. pattern analysis 7—83784
polyethylene-mineral-bitumen binder mixture, compression strength, elasticity modulus and adhesion *(French)* 7—124119
polyethylene-PAA copolymers, radiation grafted, small angle neutron scatt. obs. *(Russian)* 7—97996
polyolefin films, methacrylic acid photografted chains location 7—142652
polyorganosiloxanes, network, synthesis *(Russian)* 7—139004
polypropylene - EPDM rubber binary blends, dynamic mech. behaviour 7—78087
polypropylene and PET mixtures, mechanical props. and permeability 7—137265
polypropylene block copolymers and elastomer blends, dynamic mech. props., morphology 7—119303
polypropylene with ethylene-propylene copolymer blends, melt compatibility 7—75967
polypropylene-EPDM rubber-polyethylene ternary blends, dynamic mech. behaviour and struct. 7—78088
polypropylene-ethylene-vinyl acetate copolymer blends, tensile impact strength 7—138823
polypropylene-polystyrene blends, coaxial phase struct., flow *(Russian)* 7—83280
polystyrene, polybutadiene toughened, yield stress, rubber particle size effect 7—106573
polystyrene, toughened, containing block, graded block and randomised butadiene-styrene copolymers 7—69621
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective solvent effects 7—93310
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective binary solvent-effects 7—93311
polystyrene and poly 2,6-dimethyl-1,4-phenylene oxide blends, diffuse shear band zone props. 7—137452
polystyrene based crosslinked resins, swelling and deswelling, hysteresis-like behaviour 7—93126
polystyrene blends, complex moduli evaluation 7—69580
polystyrene-acrylonitrile-polycarbonate blends, phase separated thin films, shear yielding, crazes 7—132675
polystyrene-ethylene-propylene-diene rubber blends, compatibility studied using ultrasonic method 7—124121
polystyrene-PMMA blend, filled, thermodynamic interaction, filler and prehistory effects *(Russian)* 7—137594
polystyrene-poly(vinyl methyl ether) mixtures, phase separation, conc. prob. distrib. function by direct image anal. 7—124129
polystyrene-polybutadiene blends, conc. fluctuations, small angle X-ray scatt. anal. 7—117832
polystyrene-polydimethylphenylene oxide, intermolecular interaction, crack healing study 7—117833
polystyrene-polydimethylsiloxane mixture, soln., light scatt. investig. 7—85756
polystyrene-polyisoprene-polystyrene triblock copolymer, order-disorder transition, rheological obs. 7—126102
polystyrene-polymaleic anhydride copolymer, coil-globule transition, self-quenching rates 7—96895
polystyrene-polyvinylmethylether, intermolecular interaction, crack healing study 7—117833
polystyrene/polymethyl methacrylate, deuterated, intermol. polarisation transfer, CPMAS NMR spectroscopy 7—111428
polystyrene/polyvinyl methyl ether, deuterated, intermol. polarisation transfer, CPMAS NMR spectroscopy 7—111428
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7—93320
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7—93321
polyurethane-polystyrene-co-styrene sulphonic acid. H^+ transfer, NMR obs. 7—90217
polyurethane-styrene ionomeric blends, ionic interactions, Fourier transform IR spectra 7—70770
polyvinylidene chloride films with trans-polyacetylene conjugated segments, optical props. 7—92761
polyvinylidene fluoride-PMMA blend films, Brillouin scatt., elastic consts., stretch ratio, temp. depend. 7—70827
polyvinylidene fluoride-PMMA blends, melt viscosity, chain entanglement 7—69956
polyvinylidene fluoride-polymethyl methacrylate, soln. mixed blends, dielectric and struct. props. 7—132181
polyvinylidene fluoride-trifluoroethylene copolymers, far IR spectra, dielec. props., phase transitions 7—126101
polyvinylidene fluoride/PMMA blends, oriented, PMMA effect on morphology and $\alpha \rightarrow \beta$ transition 7—112135
β-propiolactone-polyethylene glycol copolymers, synthesis and characterisation 7—93323
n-propyl methyl-isopropyl methyl silane copolymer, laser ablation props. 7—131179
propylene-ethylene block copolymers, cryst., fracture and toughness 7—132743
PVC-copolyester elastomer blends, abrasive wear resist., SEM obs. 7—132765
PVC-polyacrylate, miscibility, thermodynamic and phase behaviour 7—91824
PVC-polyurethane blends, phase separation, amorphous struct. 7—113558
PVC/polyepichlorohydrin, mixing, free energy *(French)* 7—124120
PVDF-PMMA, crystal-amorphous interphase, SAXS and dielec. relax. obs. 7—69618
random copolyether, thermotropic props., mol. weight influence 7—124500
reinforced, polystyrene and thermotropic liquid crystal polymer 7—137271
rubber-polyethylene, rheological behaviour and extrudate morphology 7—92953
silicone polycarbonate copolymers, O_3 permeability meas. 7—142428
styrene-2,2,6, 6-tetramethylpiperidinylmethacrylate copolymer miscibility 7—98457
styrene-acrylamide copolymer particles, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7—142189
styrene-acrylic acid copolymer, aq. soln., Fourier transform-IR spectra 7—131005
polymer blends continued
styrene-acrylonitrile copolymer, IR spectra, temp. depend. 7—141726
styrene-butadiene-styrene block copolymer, viscoelastic behaviour, decomposition of mechanical spectra 7—75964
styrene-divinylbenzene copolymer, macroporous, adsorpt. of dissolved organic cpds., from water 7—112078
styrene-hydrogenated butadiene-styrene triblock copolymer, chain conform., small angle neutron scatt. 7—69614
styrene-isoprene-styrene block copolymers, thermally stimulated polarisation currents, effect of thermal expansion 7—85528
styrene-polybutadiene copolymerisation, phase struct. form., regularities *(Russian)* 7—93326
supermolecular structure, vibr. spectra obs. 7—74796
symmetric polymers mixtures, lattice model, Flory-Huggins mean-field theory, Monte Carlo test 7—97986
tetramethyl-p-silphenylenesiloxane-dimethylsiloxane block and graft copolymers, selective permeable membranes 7—69622
thermoplastic elastomers for cable and wire insulation, viscosity fn. 7—104593
thermoplastics, rubber toughened, fast fracture rel. to UV exposure and ageing 7—113741
tropical wood-polymer composite, gamma irradiation, compression failure model 7—98313
vinylidene cyanide-methyl methacrylate copolymer, microstruct., ^{13}C NMR spectra 7—116993
vinylidene fluoride copolymer fluoroelastomers, composition, sequence distrib., ^{19}F NMR obs. 7—70655
vinylidene fluoride-tetrafluoroethylene copolymer films, uniaxial stretching, acoustic obs. *(Russian)* 7—138798
vinylidene fluoride-trifluoroethylene copolymer, high press. ferroelectric phase transition *(Japanese)* 7—76299
vinylidene fluoride-trifluoroethylene copolymer, Raman modes, ferroelec.-paraelec. transition 7—85734
vinylidene fluoride-trifluoroethylene copolymers, dielec., piezoelec., and pyroelec. props. 7—99717
vinylidene fluoride-trifluoroethylene copolymers, equilib. polarisation, calc. using iteration method 7—125599
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7—99713
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. phase transition, struct. study 7—99763
vinylidene fluoride-trifluoroethylene copolymers, piezoelec. props. and temp. stability 7—99719
vinylidene fluoride-trifluoroethylene copolymers, struct., morphology, wide-line NMR obs. 7—92520
vinylidene fluoride-trifluoroethylene ferroelec. copolymers, electron irrad. and annealing effects 7—143978
vinylidene-fluoride terpolymer fluoroelastomers, composition, sequence distrib., ^{19}F NMR obs. 7—70655
wood components, ^{1}H T_1 and T_2 relax. times, ^{13}C CP/MAS NMR obs. 7—106045
wood composites, radiation-induced, gas permeability and polymer loading correl. 7—98242
Si/VDF-TFE copolymer interface, corona injection, field coupling and induced inversion studies 7—105715

polymer coatings *see polymer films*

polymer crystal structure *see polymer structure*

polymer fibres
aromatic polyimides, chain conform. and rigidity investig. *(Russian)* 7—83790
calcium alginate fibres, blood coagulation and dispersal *(Russian)* 7—100633
capron fibres, sorption of acrylonitrile, heat of sorption meas. *(Russian)* 7—84532
compressive strength, tensile recoil meas. 7—78399
crazing and acoustic emission, fibril form. investig. 7—142897
critical strain to dead bend, fibril length estimation 7—131217
engineering applications of high-performance polymers 7—71144
entropic elasticity problem 7—76265
high-modulus fibres, laser generation of ultrasound for Young's modulus meas. 7—76310
Kevlar 29 yarns, epoxy impregnated, twist effects on mech. behaviour 7—119314
Kevlar 49, chem. impurities, characterisation 7—71561
Kevlar aramid fibres, tensile strength variability, modified weakest link model 7—86262
mixtures, drag reduction, shear stability study 7—97582
morphological heterogeneity, SAXS 7—69610
near-surface analysis and depth profiling by FT-IR photoacoustic spectroscopy 7—142912
nylon 6 fibres, spin oriented, macromolecular order, WAXS 7—69612
nylon fibres, composite struct., mech. props. prediction 7—86291
oriented, nonlinear viscoelasticity in high-rate tension 7—78091
oriented fibre forming polymers, acoustic-optical criteria of orientation ordering analysis 7—137264
PET, aminolytic product characterisation 7—71560
PET-p-oxybenzoate copolyester, fibre spinning from nematic melt, effect of thermal history 7—86123
plastic fibre dye laser charact. *(Japanese)* 7—122945
poly(ethylene terephthalate-co-p-oxybenzoate), nematic, fibre form. 7—77935
poly(p-phenylene benzobisthiazole) high-modulus fibres, laser generation of ultrasound for Young's modulus meas. 7—76310
poly-p-phenylene-terephthalamide, fibres, synthesis by growth packing mechanism 7—86124
polycaprolactam fibres and fibrous composites, discrete strength spectrum role in fracture 7—71282
polycarbosilane, oxidation curing mechanism by solid-state ^{29}Si high-resolution NMR 7—119528
polyester fibres, composite struct., mech. props. prediction 7—86291
polyester fibres, crystallisation kinetics, Raman spectrosc. meas. 7—85733
polyester fibres LF spectra, Raman spectroscopy appl. 7—89266
polyethylene, γ-irrad., thermolum. glow peak at 158°C 7—132353
polyethylene, linear, electron irrad., rubber elastic behaviour, mol. entanglements, contrib. 7—84099
polyethylene, two-phase extensional flow, fibrous crystals form. 7—97902
polyethylene fibres, adhesion to epoxy resin, pull out test, surface treatment effect 7—144576
polyethylene fibres, gel-spun, morphology and ultimate props. 7—92955

polymer fibres continued
polyethylene fibres, high performance, die-free spinning prod. method 7−119235
polyethylene fibres, highly drawn, electron irrad., struct., mech. props. 7−132677
polyethylene structures, swell drawing mfg. 7−119236
polyethylenes, highly drawn, tensile strength rel. to mol. wt., Flory model 7−144475
polypropylene fibres, optical anisotropy, draw ratio influence 7−118977
polypropylene fibres, struct. and props., high-mol. polyethylene oxide effects *(Russian)* 7−97994
polypropylene monofilaments, highly drawn, creep and recovery 7−86265
polystyrene, devolatilization, scanning electron microscope investig. 7−117795
polystyrene, viscoelastic, fibre spinning 7−119233
rods nonlinearly elastic, necking deformations, existence and stability 7−90966
scintillation fibres light yield dependence on refractive index of sheath, calc. and obs. 7−109652
viscoelastic, fibre spinning 7−119233

polymer filaments *see polymer fibres*

polymer films
see also dielectric thin films; insulating thin films
acrylonitrile/metal interface system, surface modification appls. *(French)* 7−113761
adhesive compositions and reinforced polymer coatings based on them, damping props. 7−78371
antifriction coatings for friction assemblies operating under conditions of intense thermal action 7−71314
bilayer PVA films, boundary layer determ. by photoacoustic signals phase angles *(Korean)* 7−142918
butadiene-acrylonitrile films, conduction, heat treatment and UV irradiation effects 7−105577
butadiene-acrylonitrile films, conduction, heat treatment and UV irradiation effects 7−105578
cellulose-polyacrylonitrile blend films, struct. from N,N-dimethylacetamide-LiCl solns. 7−111430
chord intercepts in the two-dimensional cell model 7−111426
coated optical fibres, mechanical reliability considerations 7−142027
conducting electrode, in situ resist. meas. 7−108579
conference, Dresden, Germany, Feb. 1986 *(German)* 7−140475
conjugated sulphide polymers, synthesis and electroconductivities 7−100175
copper acetylacetonate thin films, plasma-polymerised, elec. props. 7−126020
copper phthalocyanine polymer film, form. by double source evaporation 7−100174
deposition by plasma polymerisation, review 7−138689
dye-polymer layer, laser-induced fluid motion, optical data storage 7−130207
electroactive, in thin layers, potential appl. in gas sensor 7−89210
electrodes, bipolar polymeric arrangements 7−78511
electron irradiation induced conductivity, time and space depend., trapezoid model 7−84919
epoxy-acrylate resin, primary coating charactn. for optical fibre 7−68871
epoxy-furan resin modified with thermoplastic polymers, coatings, antifriction and adhesive props. 7−71316
etch rate under far-UV radiation, direct and accurate meas. 7−78283
excimer laser etching of polymeric resists, wavelength depend. 7−93122
fluorescent emission from solns. at surface of polymer thin-film waveguides 7−132307
fluorinated monomers, plasma-polymerised thin films, deposition and etching in RF discharge 7−113402
formvar on CdS photoanodes in photoelectrolytical cells, protective coating 7−143519
friction coefficient, thickness depend. 7−100393
growth instability in diffusion controlled polymerization 7−78482
heterocyclic polymer composite conducting films, prep. and elec. props. 7−76909
IR scattering dispersion filters of air-crystal type *(Czech)* 7−123175
IR thermometer for medical use based on pyroelec. polymer film 7−114457
Kapton films, laser ablation, shock and cooling waves, obs. 7−138857
laser marking, optical data storage appl. 7−110485
laser marking, pit form., thermal expansion and flow model, optical disc appl. 7−124123
lattice polymer melt-vac. interface, Monte Carlo studies 7−118306
LDPE films, charge trapping and cond., modification by additives 7−84917
liquid crystal droplet-polymer light control film, struct., optical and thermal props. 7−123133
liquid crystal droplet-polymer light control film, struct. and optical props. 7−123132
liquid crystal films, polymer-dispersed, contrast ratios meas. 7−70746
main-chain liquid crystal polymer, solidification, elec. fields, surfaces and mesophase ageing effects 7−91480
membranes, liquid permeability investig. *(Russian)* 7−100616
methyl methacrylate, plasma-polymerised, electron beam resist fabrication 7−119164
multimode fibre lightguide power diffusion, influence of microbends and polymer coatings *(Russian)* 7−75165
Nafion-coated membranes, with incorporated tetramethyltetraselenafulvalene, electrochem. behaviour 7−113950
nonlinear optical props. 7−68754
optical third-harmonic generation from polydiacetylene thin films deposited by vacuum evaporation 7−97074
optical waveguide polarisers with a-Si:H film clad 7−110574
organic pigments in polymer films, plane polarised light absorption study 7−132361
organic polymeric conductors, substitutional alloys elec. cond. 7−71486
organosilane thin films, laser photoablation 7−93120
oriented, thickness compliance determ. method 7−83139
PEEK thin films, melt-spun, plastic deform. 7−76712
PET, amorphous, yield behaviour, activated rate theory approach 7−86267
PET, film dosimeter system for high dose meas. of ionising radiation 7−68031
PET, oriented, relax. props. *(Russian)* 7−84124
PET dielec., crystallinity, elec. ageing effects *(Russian)* 7−111433
PET film, elec. cond., press. effect 7−85014

polymer films continued
PET film, fluoresc. depolaris. of chromophores in adhesive 7−96773
PET films, high-energy in implantation 7−83782
PET films, ionic space charge thermocurrent meas. 7−92581
photographic heat-sensitive layers development for elec. discharge method of surface flaw detection 7−71446
photosensitive monolayers, bilayer membranes and polymers 7−106809
phtalocyaninatoaluminium fluoride films, I ion implanted, elec. props. 7−105738
phthalocyanines, polymeric, ion implementation, effect on optical props., DC cond. 7−83789
with planar macromolecular orientation, transmission IR band shapes 7−113208
plasma polymerisation, comparison of microwave and lower freq. discharges 7−113440
plasma-polymerised films for liquid crystal alignment 7−69586
plasma/parylene polymer deposition, laboratory reactor, biomedical device encapsulation appl. 7−114522
plastic film thickness measurement using angle-scanning laser interferometer 7−80868
PMMA film, plasma etching by low-temp. carbon tetrafluoride-O_2 discharge plasma 7−71343
PMMA film dissolution and swelling behaviour in solvent/nonsolvent mixtures, in situ ellipsometric charactn. 7−124520
PMMA film with zinc-tetrabenzoporphyrin donors and chloroform acceptors, spectral hole burning 7−68795
PMMA films, doped, optical waveguiding, refractive index pattern 7−99787
PMMA films, plasma-modified, multitechnique surface spectroscopic studies 7−70040
PMMA films, supported, mech. props. determ., double bending beam technique 7−124377
PMMA light guides, fabrication by photo-induced self-condensation 7−103991
PMMA-PTFE thin film sandwich struct., depth profile meas., dynamic fast atom bombard. mass spectra 7−70089
PMMA/PMAA films, plasma modified, multitechnique surface spectroscopic studies 7−70041
poly(3-benzylthiophene) films, electrochem. doping, cond. meas. 7−118467
poly(3-butylthiophene) films, electrochem. doping, cond. meas. 7−118467
poly(3-methylthiophene) film as cathode-active material in nonaqueous secondary batteries 7−114092
poly(3-methylthiophene) films, ordering processes, NEXAFS obs. 7−125850
poly(4-vinylpyridine), adsorption on Ag electrode, SERS monitoring study 7−77577
poly(acrylic acid) films, thermal behaviour 7−70104
poly(ethylene terephthalate) films, thermo-mechanical anal. *(Japanese)* 7−98743
poly(fluoroaluminium phthalocyanine), electroactive, in thin layers, potential appl. in gas sensor 7−89210
poly(methylthiophene), electrochemical grating on Pt electrodes, ellipsometry study 7−100556
poly(MMA-co-t-BMA), electron resist., electron beam sensitivity and chain scission efficiency 7−106807
poly(N-vinylcarbazole), films, excimer dynamics, photon counting meas. 7−118292
poly(N-vinylcarbazole), nonlinear photochemistry, ablation behaviour 7−93341
poly(p-phenylene vinylene), films, highly drawn, molecular orientation and conductivity 7−111432
poly(p-phenylene vinylene), synthesis, doping and elec. cond. 7−99000
poly(p-phenylene vinylene) film, anisotropic photoconductivity 7−92230
poly(phenyl methyl silane), photolysed, photoluminesc. growth obs. 7−99920
poly(phenylene sulphide) films, ion irrad., spectroscopic anal. 7−99852
poly(vinyl alcohol) film containing methyl viologen as a highly sensitive dosimeter 7−98243
poly(vinyl pyrrolidone) films between Al electrodes, elec. cond. mechanism 7−99082
poly(vinylidine fluoride) films, β-phase, Raman intensities and mode assignments *(French)* 7−85638
poly (3-methyl thiophene) film with aq. electrolyte contact, impedance and electrorefl. spectra, polaron transition obs. 7−99797
poly p-phenylene benzobisthiazole films, deform., temp. and strain rate depend. 7−86264
poly-3 methylthiophene based transport conducting composites, one-step fabrication, rel. to props. 7−100557
poly-3-methylthiophene, reduced photoelectrochemistry and electroreflectance in aqueous electrolyte 7−144020
poly-3-methylthiophene, resonance Raman scatt., vibr. freqs. 7−77561
poly-4,4′-oxydiphenylene pyromellitimide films, unoriented, temp.-time effects on structurisation *(Russian)* 7−85680
poly-4-BCMU film, time-resolved and freq. domain coherent Raman scatt. study 7−137261
poly-4-BCMU monolayer film, third harmonic generation study 7−137262
poly-N-epoxypropylcarbazole, electrophotographic layers, photodischarge kinetics 7−82734
poly-p-phenylene, conducting, formed from anodic oxidation of biphenyl in aprotic solvents, electrochemistry and props. 7−125967
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond., band gap, IR absorpt. spectra 7−71499
poly-p-phenylene vinylene films, photoconductivity, carrier transport meas., depend. on heat treatment temp. 7−70359
poly-p-phenylene vinylidene thin films, optical third harmonic generation study 7−141930
poly-p-xylene films, electronic props., polymerisation effects 7−112398
poly-vinylidene fluoride copolymer poled guest/host composite for freq. doubling and waveguiding structs. 7−103909
polyacetylene:alkali metal films, Raman spectra studies 7−70793
polyacetylene:I films, struct., doping level depend. 7−69628
polyacetylene, Durham, conformational defects, IR and Raman studies 7−69624
trans-polyacetylene, nanosecond time-resolved photoinduced absorption 7−77545
polyacetylene, reversible doping with I_2 in gas phase 7−92314
polyacetylene electrodes for all-plastic battery 7−71596

olymer films continued
polyacetylene films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
cis-polyacetylene films, doping with metal hexafluorides, conductivity, ESR and ENDOR studies 7−131625
polyacetylene films, ion implanted, elec. props. 7−124986
trans-polyacetylene films, mag. props. at low temps. 7−143754
polyacetylene films, structural props. determ. from X-ray fibre patterns 7−69625
polyacetylene films prepare by oriented precursor route, structural characterisation 7−69626
n-type polyacetylene junctions, photovoltaic effect 7−92278
polyacrylonitrile, film and powder, thermooxidative degradation laser irrad. effects *(Russian)* 7−113914
polyalkylthiophene films, conducting, electrochem. prep. 7−78513
polyamide thin films, adhesive interaction investig. 7−70140
polyamide-6, dielec., crystallinity, elec. ageing effects *(Russian)* 7−111433
polyaniline films, spectroelectrochemistry, display and battery appl. 7−93338
polyanthracene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
polyazulene, electrochemically formed, appl. to secondary battery 7−114090
polyazulene film, electrochemical, EPR and optical props. 7−70629
polybutadiene dielectrics, cyclized, thermal and mech. props. *(French)* 7−124561
polycarbazole: BF_4^-, X-ray photoelectron spectra studies 7−77769
polycarbonate films, reticulate doped, effective content of cryst. charge transfer complex, vel. to elec. cond. 7−97992
polycarbonate films, sorption and diffusion of CO_2 and methane 7−98459
polycarbonate stacked film star coupler 7−110594
polydiacetylene, conjugated polymer, photochromism and photoinduced bond-struct. change 7−138472
polydiacetylene films, synthesised by ion beam induced polymerisation of diacetylene, electrical and optical props. 7−93318
polydiacetylenes, electronic phase-transition, spectroscopic meas. 7−70730
polyester, dimpled, Al coated, insulation for TOPAZ supercond. solenoid cryostat 7−74303
polyether ether ketone films, dielec. and cond. props. 7−85532
polyethylene, γ-irradiated, linear low density, carrier traps. TSC study 7−92320
polyethylene, coatings, electron beam treatment, struct., friction and wear props. 7−71310
polyethylene, dielec., crystallinity, elec. ageing effects *(Russian)* 7−111433
polyethylene, excitation by visible light 7−99121
polyethylene blown films, orientation and props., processing conditions effect 7−69796
polyethylene film, highly elongated, surface potential decay and residual voltage 7−70697
polyethylene film, post-radiation grafting of styrene, polystyrene distrib. *(Russian)* 7−86652
polyethylene films, absorpt. of hydrocarbon vapours, thermodynamics 7−118239
polyethylene films, ion-implanted, with Ag island film substrate, SERS spectra anal. 7−77581
polyethylene films, low-density, light emission under DC field 7−99937
polyethylene films treated by corona discharge, wetting hysteresis *(French)* 7−117725
polyethylene terephthalate films, DC electrical cond. 7−112525
polyethylene terephthalate films, direct fluorination 7−93377
polyethylene terephthalate foil, slowing dynamics in Xe, mass determ. *(Polish)* 7−136928
polyethylene terephthalate foils, conductivity induced by high electron beam current densities 7−105740
polyethylene-PAA copolymers, radiation grafted, small angle neutron scatt. obs. *(Russian)* 7−97996
polyfluorocarbon, conducting polymeric thin films, cathodic electropolymerisation 7−132935
polyimide:$Ar^+(Cu^+)(Zn^+)$ films, ion-implanted, structure and morphology 7−91938
polyimide, laser ablation, photofragment attenuation 7−93119
polyimide film, Ag interlayer sintering and charactn., laser writing appl. 7−119187
polyimide film, in situ meas. of residual stress, Young's modulus and ultimate strain 7−124371
polyimide film, surface activation with strong bases 7−113747
polyimide films, Au containing, surface anal. 7−118208
polyimide films, ion implanted, density enhancement 7−91669
polyimide films, low field elec. cond. 7−70441
polyimide films, mech. relax., prehistories effects *(Russian)* 7−98338
polyimide films, supported, mech. props. determ., double bending beam technique 7−124377
polyimide films, surface characterisation, high resolution EELS studies 7−143141
polyimide high resolution ion implantation masks, thin film surface morphology and dielec. props. study 7−69723
polyindene film, electrochemical, EPR and optical props. 7−70629
polymeric osmium-polypyridine complex, films, ion mobility and electron transport 7−92237
polymethylmethacrylate-hemicyanine Langmuir-Blodgett films, multilayered, enhanced SHG 7−75060
polymethylphenylsilylene, hole transport, hopping mechanism 7−99064
polynaphthylene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
polyolefin films, methacrylic acid photografted chains location 7−142652
polyolefines, conducting, reticulate doped with cryst. charge-transfer complexes, prep. and elec. props, 7−84839
polyoxadiazole, pyrolytic, elec. props. 7−84804
polyparaphenylene films, electropolymerised, optical props. 7−70841
polyphenyl quinoxaline films, mech. relax., prehistories effects *(Russian)* 7−98338
trans-polyphenylacetylene films, electron currents, temp. and field depend. 7−99127
polyphenylene vinylene films, doped, metallic cond., polarised IR spectra, dichroic ratio meas. 7−70274
polyphenylene vinylene films, EPR and ENDOR studies 7−70628
polyphenylenesulphide film, doped, cond. mechanism, electronic struct., XPS, IR spectra, NMR, CNDO calc. 7−70983
polyphenylenevinylene, IR and visible absorpt. spectra, doping effects 7−70796

polymer films continued
polyphenylenevinylene films prepare by oriented precursor route, structural characterisation 7−69626
polypropylene film casting, heat cond. calcs., multizonal integral method 7−113529
polypropylene films, contoured, orientational stretching *(Russian)* 7−138799
polypropylene films, dielectric absorpt., additive effects 7−118947
polypropylene films, finely dispersed Au loaded, cond. props. 7−85135
polypropylene films, negative resistance charact. *(Korean)* 7−143475
polypropylene thick films, thermally stimulated current and charge decay studies 7−92582
polypropylene-PMMA thin film composites, refl.-absorpt. IR spectra, TEM, chem. labelling 7−71546
polypyrene: BF_4^-, X-ray photoelectron spectra studies 7−77769
polypyrrole, electric conductivity meas., appl. as source mount in $4\pi\beta$ counting 7−135698
polypyrrole, electrochemically formed anodes, appl. in Li secondary cells 7−133076
polypyrrole, neutral and doped, isotopic substituted derivatives, Raman obs. 7−85739
polypyrrole based conducting polymers, electronic struct., EELS study 7−76749
polypyrrole composite films, elec. cond. and transmittance 7−98960
polypyrrole containing ferrous cyanide anions, synthesis and spectroscopic charact. 7−77559
polypyrrole copolymers, phys. and elec. props. 7−76872
polypyrrole film, electrochemically prepared, mech. props., temp. dependence 7−111747
polypyrrole film cathode in secondary cell, electrochem. behaviour in $LiClO_4$-propylene carbonate 7−86781
polypyrrole film form. and modification on Pt electrodes cyclic voltammetry 7−100555
polypyrrole film on Hg electrode, growth, elec. cond. and struct. 7−78512
polypyrrole films, AC impedance anal. 7−76874
polypyrrole films, anodic deposition from aqueous electrolytes, anion doping and elec. props. 7−71089
polypyrrole films, conducting, transport props. charact. 7−76870
polypyrrole films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polypyrrole films, elec. cond., effect of organic dopants 7−76873
polypyrrole films, electrochemical polymerisation in aqueous solutions 7−113927
polypyrrole films, electrochemically polymerised, struct., elec. props. 7−77934
polypyrrole films, highly conducting, synthesis and Mossbauer spectroscopy charact. 7−78483
polypyrrole films grown on surface of polyvinyl alcohol-$FeCl_3$ complex 7−78485
polypyrrole poly-p-styrene sulphonate films, cond., freq. and temp. response 7−92185
polypyrrole poly-p-styrenesulphonate salts, films, DC cond. 7−84848
polypyrrole prepared by electrochemical polymerisation of α-bipyrrole, synthesis and props. 7−78484
polypyrrole salts, chemistry and conductivity 7−76868
polypyrrole-Fe complex system, film and powder synthesis, Mossbauer and IR spectra charactn. 7−118999
polypyrrole-PVC conducting polymer alloy film, anisotropic conductivity 7−92163
polypyrrole/Li battery, PF_6^- anion effects 7−71595
polypyrrole/Li rechargeable cells, capacity and self-discharge 7−78626
polypyrrole/polythiophene p-n junction diode, electrochemical fabrication 7−93325
polyselenophene electrochemically grown films, comp., surface morphology and elec. cond. temp. depend. studies 7−118481
polystryene, thermalisation and trapping of electrons 7−99087
polystyrene: 4-bromo-4′-chlorobenzophenone films, mol. aggregation, phosphoresc. spectra 7−99918
polystyrene, adsorption on Ag electrode, SERS monitoring study 7−77577
polystyrene, adsorption on Ag surface, kinetics meas. by surface plasmon oscillations 7−98706
polystyrene films, ion implanted, density enhancement 7−91669
polystyrene films, sorption and diffusion of CO_2 and methane 7−98459
polystyrene thin films, growth mechanism using plasma polymerisation *(Korean)* 7−144716
polystyrene-acrylonitrile-polycarbonate blends, phase separated thin films, shear yielding, crazes 7−132675
polystyrenesulfonic acid films, TSC analysis 7−132194
polythienylpyrrole, electrolytic polymerisation and struct. props. 7−78493
polythiophene: $FeCl_4$ films, synthesis and elec. props. 7−76907
polythiophene:BF_4^- film, conducting polymer, elec. and optical props. of polaronic states 7−77403
polythiophene:I_2 conducting polymer, radiation induced effect 7−91654
polythiophene, elec. cond. and vibr. key bands, IR and Raman spectra anal. 7−76905
polythiophene conducting polymers, struct. and electronic struct. 7−76040
polythiophene derivatives, conducting polymers, fusibility 7−131273
polythiophene film, degradation by doping-undoping cycles 7−78491
polythiophene films, electrochemical polymerisation under ultrasonic fields 7−78489
polythiophene/n-GaAs organic-on-inorganic p-n heterojunction, realisation and charactn. 7−85058
polythiophene/polyvinylchloride conducting polymer alloy films, redox props. 7−106797
polythiophenes, doped, polarons and bipolarons 7−76789
polythiophenes, electrochemical polymerisation, optical props. 7−78492
polythiophenes, optical, electrical and structural props. 7−76042
polytrifluorochloroethylene coatings, electron beam treatment, struct., friction and wear props. 7−71310
polyvinyl alcohol sizing removal from C fibres, XPS 7−78297
polyvinyl butyral films, leucomalachite green doped, steady state cond., glass transition 7−77019
polyvinylalcohol thin films, electrical conductivity and breakdown strength 7−92321
polyvinylidene chloride films with trans-polyacetylene conjugated segments, optical props. 7−92761
polyvinylidene fluoride, β-phase form from melt induced by quenching, film morphology 7−112136
polyvinylidene fluoride, bioriented piezo-electric films 7−132203
polyvinylidene fluoride, piezoelec. effect, X-ray study 7−99718

polymer films continued
polyvinylidene fluoride, pyroelectric and relaxation phenomena, thermal current anal. 7−138387
polyvinylidene fluoride, simultaneous pyroelectric and relaxation currents meas. 7−80814
polyvinylidene fluoride, thermal expansion rel. to glass transition temp. 7−84333
polyvinylidene fluoride film, mag. polaris., press. effects 7−105947
polyvinylidene fluoride films, electrophotographic process 7−73448
polyvinylidene fluoride films, mech. and piezoelec. behaviour 7−99687
polyvinylidene fluoride films, piezoelectric, pyroelectric and ferroelectric props., conf. (Dusseldorf, Germany, Oct. 1984) 7−128168
polyvinylidene fluoride films, soln. cast, dielec. props. struct. 7−106086
polyvinylidene fluoride films, struct. changes in elec. fields 7−124122
polyvinylidene fluoride piezoelectric film uses and advantages 7−99686
polyvinylidene fluoride US transducers 7−130499
polyvinylidene fluoride-PMMA blend films, Brillouin scatt., elastic consts., stretch ratio, temp. depend. 7−70827
polyvinylidene fluoride/PMMA blends, oriented, PMMA effect on morphology and $\alpha \rightarrow \beta$ transition 7−112135
polyvinylidine fluoride, increase in crystallinity by electron beam irrad. 7−84032
polyvinylidine fluoride films, elec. field induced gas emission 7−98676
positron annihilation behaviour in several corrosion protective polymeric coatings 7−85887
PTFE coatings, electron beam treatment, struct., friction and wear props. 7−71310
PTFE electret films, deep surface traps generation for charge carriers 7−131667
PVA bilayer film, photoacoustic spectra phase angles 7−91731
PVC, chlorinated, thin film, photoimaging, spectroscopic study *(Chinese)* 7−90736
PVC films, corona-charged, current transients 7−138378
PVDF, structure, piezoelectric props., film development, sensor appl. *(German)* 7−143971
pyrrole, photoelectrochemical polymerisation on TiO_2, appl. to conducting pattern generation 7−100551
pyrrole fused systems, conducting polymers, electrochem. props. 7−106798
pyrrole in aqueous solns., electrochemical polymerisation and conductivity 7−78486
semipermeable membranes, casting in microgravity 7−119232
silvered materials, specular reflectance props. 7−125678
solution film, small bending perturbations, propag. 7−105197
sorption, oscillatory, buoyancy correction method 7−118240
specular transmittance, optical inhomogeneities effect 7−125835
styrene films containing Au particles, ESCA and TEM study 7−106795
thickness coating on metallic substrate, albedo thickness gauging 7−71439
thickness of coating on metallic components, contactless inspection in prod. line 7−71445
thin organic polymer film growth, ellipsometric investig. 7−98727
N-vinylcarbazole, polymerization, thin film preparation and struct. characts. 7−100548
vinylidene fluoride-tetrafluoroethylene copolymer films, uniaxial stretching, acoustic obs. *(Russian)* 7−138798
vinylidene fluoride-trifluoroethylene copolymer thin films, electromech. props., US transducer fabrication 7−117430
vinylidene fluoride/trifluoroethylene copolymer film, SHG of pulsed YAG laser 7−68780
XLPE, thermally stimulated surface pot. meas. using temp. gradient, trapped carrier polarity 7−125601
Ag, colloidal, in stretched polyvinyl alcohol films, lin. dichroism 7−132256
Ag electroless deposition as interlayer within polymer films 7−86066
Au mercaptoterpene metallopolymer thin films, photolytic decomp. by UV direct laser writing 7−126463
C_8 aromatic isomer mixtures, separation by pervaporation through polymer films 7−78544
Li-$LiBF_4$-poly(2,5-pyrrolylene) secondary cell current and energy efficiencies 7−119641
Li-$LiClO_4$-poly(2,5-thienylene) secondary cell current and energy efficiencies 7−119641
LiI-PEO mixture polymer electrolyte film, ionic cond., comp. and temp. depend. studies 7−84386
Pt electrodes, acrylonitrile polymer film coated, adhesion and corrosion inhibitor props. 7−138872
Zn-ZnI_2-polyaniline battery charge storage and energy efficiency obs. 7−119640
Zn-Zn$(Cl,Br)_2$-polyaniline battery charge storage and cycling obs. 7−119639

polymer melt structure *see liquid structure; polymer melts*

polymer melts
2D, asymptotic high-mol. weight behaviour 7−69575
block copolymers, microphase separation theory, fluctuation effects 7−111339
conference on fluctuations and stochastic phenomena in condensed matter, Barcelona, Spain (May 1986) 7−134359
constitutive equations 7−75500
dense cubic lattice multichain systems, long time dynamic props., Monte Carlo study 7−117796
diblock copolymers, homogeneous disordered phase, shear flow 7−136942
diffusion, reptation and tube renewal mechanism, expt. and numerical simulation 7−75499
dynamical theory of polymer melt morphology 7−110156
dynamics using neutron spin-echo 7−90454
entry flow problem study review 7−91174
epoxy resin, fracture toughness, viscosity rel. to glycidyl compound additions *(Japanese)* 7−78192
extrusion processes, boundary-element simulation 7−91048
kinetic theory, bead-spring rings with hydrodynamic interaction approach 7−137190
lattice polymer melt-vac. interface, Monte Carlo studies 7−118306
linear polymer chains, struct., equilib. theory, reference interaction site model approach 7−137185
monodisperse, flexible, linear and nonlinear viscoelasticity, unified mol. theories 7−75497
phenyl benzoate liquid crystalline polymer blends and copolymers, struct., X-ray diffr. exam. 7−111344
poly(dimethyl siloxane), viscoelastic props., meas. using capillary and cone-and-plate rheometers, mol. parameters effect 7−75495

polymer melts continued
poly(ethylene terephthalate), viscoelastic props., meas. using capillary and cone-and-plate rheometers, mol. parameters effect 7−75495
poly(propylene glycol), low mol. wt., hypersonic props., mol. wt. depend. 7−104520
polyacrylate-phenoxy blends, exchange reactions, phys. and mechanical behaviour 7−75491
polyamide 6-6, viscoelastic props., meas. using capillary and cone-and-plate rheometers, mol. parameters effect 7−75495
polybutadiene melts, crystallisation, size mismatch effects, small angle neutron scatt. 7−69611
polydecamethylene terephthaloyl-bis-4-oxybenzoate melt, rheological props., deform. effects *(Russian)* 7−91053
polyethylene, high- and low-density, blends, isothermal elongation at const. stretching rate 7−78085
polyethylene, low density, sharkskin defect studied using flow birefringence and roughness meas. 7−75494
polyethylene, low density/high density blends, mech. and flow props. 7−137268
polyethylene, molten, GLC anal. 7−78565
polyethylene, step shear, step biaxial extension and steady uniaxial extension deform. 7−142245
polyethylene, two-phase extensional flow, fibrous crystals form. 7−97902
polyethylene melts, glass and C fibre filled, transient shear flow props. 7−69581
polyethylene melts, shear, biaxial and uniaxial extensions, constitutive eqns. comparison 7−130615
polyethylene polydisperse melts, nonlinear viscoelastic behaviour 7−75498
polymer melts, glass-forming, Kauzmann temp. estimation 7−118134
polymer melts and solutions, conformation tensor rheological models 7−75501
polypropylene, negative birefringence spherulites, melt memory obs. 7−71212
polypropylene with ethylene-propylene copolymer blends, melt compatibility 7−75967
polystyrene, devolatilization, scanning electron microscope investig. 7−117795
polystyrene, mica filled, viscoelastic melt, void content, reduction during mixing 7−76422
polystyrene, mol. interactions, viscosity eqn. parameters 7−118146
polystyrene, step shear, step biaxial extension and steady uniaxial extension deform. 7−142245
polystyrene, viscoelastic, fibre spinning 7−119233
polystyrene blends, complex moduli evaluation 7−69580
polyurethane reinforced reaction injection moulding, rheology of glass-filled polyol slurries and polymeric isocyanates 7−92956
polyvinylidene fluoride-PMMA blends, melt viscosity, chain entanglement 7−69956
probe polymer in matrix of different degrees of polymerisation, cubic lattice Monte Carlo dynamics 7−117797
rheological characteristics measurement, vibr. rheometer 7−75729
rheological props. via nonequilibrium molecular dynamics 7−75502
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7−92953
space filling and entanglements 7−75961
statistical mechanics description 7−137201
Stefan problem in polymer processing 7−75625
styrene-butadiene-styrene block copolymer, viscoelastic behaviour, decomposition of mechanical spectra 7−75964
thermoplastic elastomers for cable and wire insulation, viscosity fn. 7−104593
thermoplastic rubbers, melt transition temp., hard segment size influence 7−69806
visco-anelastic description 7−75505
viscoelastic, fibre spinning 7−119233
viscoelasticity, conference, Grenoble, France (Jan. 1986) 7−72698
viscoelasticity 7−75496
viscoelasticity in flow geometries 7−142344
viscometric flow, rational theory appl. 7−142343
viscosity equation derivation 7−118145

polymer mixtures *see polymer blends*

polymer solid structure *see polymer structure*

polymer solution structure *see liquid structure; polymer solutions*

polymer solutions
acrylic acid-methacrylic acid copolymers, aq. soln., conform. behaviour 7−97891
anisotropic equilibrium conformations, electric field effect, thermodynamic model 7−75962
anisotropic hydrodynamic drag, elastic dumbbell and reptating chain model 7−137186
bisphenol A polycarbonate, in solvent mixture, conform. transitions 7−91420
butyl rubber solutions, viscosity, thermodynamic props. at low temps. *(Russian)* 7−84349
calcium alginate fibres, blood coagulation and dispersal *(Russian)* 7−100633
carboxylic polyelectrolyte solns., heat capacity meas. 7−131325
cavitation bubbles, moving solid wall proximity effect on dynamics 7−123693
cellulose triacetate, acetic acid solns., macromol. conform. changes, temp. effects *(Russian)* 7−82410
chains, dil. solns., hierarchy of models 7−136109
comb-like polymers, solns., temp.-conc. diagram of state *(Russian)* 7−137198
compatibility of coils and rods bearing flexible side chains 7−84290
concentrated high-polymer solutions, struct., flow parameters depend. 7−137200
converging flow, polymer additive effect calc. 7−91173
correlation functions and spurious singularities in n=0 field theory 7−83641
dilute, linear and ring-shaped polymers, rheological behaviour, ring closure effects 7−110894
dilute, theta conditions, generalised Zimm model approach 7−91416
dilute and semidilute solutions, lattice magnetic analog, lattice animals and percolation 7−80669
dilute polymer solution, channel flow, shear wall effects, Gaussian dumbbell model calcs. 7−111038
dilute solutions, cross over effects, characteristic numbers 7−142554
discrete Gaussian chains, Huggins coeff., dynamical multiple scatt. theory 7−110150

olymer solutions continued
discrete Gaussian chains, Huggins coeff., dynamical multiple scatt. theory 7−110151
dry spreading 7−76552
dynamic scattering factor for labeled molecules of a Gaussian chain 7−117801
dynamics, effect of topological constraints 7−69582
dynamics, theory, book 7−115705
dynamics using neutron spin-echo 7−90454
entry flow problem study review 7−91174
extensional viscosity, rheometer meas., Trouton ratios anal. 7−98542
extensional viscosity meas. 7−130808
film, small bending perturbations, propag. 7−105197
flexible macromolecules, dil. soln., config., nonequilibr. statistics 7−90458
flexible polymers in dilute solution, scaling theory of drag reduction 7−83278
flexible polymers in Newtonian fluid, nonlinear dumbbell model 7−69219
Flory-Huggins theory modification for non-polar and slightly polar solvents 7−124068
fractals, in solns., swollen and condensed states 7−131010
fracture, steady and transient elongational flows 7−91419
furcellarane, solns., rheological props. *(Russian)* 7−110901
gaseous solute solubility in polymers; solute-polymer interactions anal. 7−111899
Gaussian chains, dynamical intrinsic viscosity, bead-spring model 7−90457
gel, polystyrene latex spheres in polyacrylamide soln., particle movement and pore-size distrib., quasielastic light scatt. study 7−124128
hydrodynamic radius, Kirkwood-Riseman model, renormalisation group method 7−124071
hydrodynamic screening and diffusion in entangled polymer solutions 7−104519
hydroxypropyl cellulose, pyrene labelled, aq. soln. excimer form. 7−136110
interpolymer associations, enhanced drag reduction study 7−83276
intrinsic viscosity for a polymer chain with self-avoiding interactions 7−84347
intrinsic viscosity of a Gaussian chain, Green-Kubo formalism calc. 7−76469
N-isopropylacrylamide gels in mixed solvents, reentrant vol.-phase transition 7−69885
isotactic polystyrene, persistence-length enhancement caused by physical gelation, neutron scatt. evidence 7−83785
Kerr effect, mol. mass relation 7−118985
kinetic theory, bead-spring rings with hydrodynamic interaction approach 7−137190
latex particles in suspensions, colloid crysts., 2D Fourier anal. 7−106834
lattice model, self- and mutually-avoiding polymer chains 7−91415
methyl cellulose-sodium dodecyl sulphate complex, aq. soln., viscometric obs. 7−69952
micellelike spherical aggregates of polymeric surfactants in dilute soln., stability study 7−137184
microisotropic structure, mol. mass and backbone rigidity *(Russian)* 7−83642
mono-N-(3-dimethylaminopropyl)amide copolymers, aq. solns., viscosity *(Russian)* 7−137607
natural convection from horizontal wires 7−69159
non-Newtonian fluids, laminar flow in square curved pipes, resist. coeff. 7−104346
nonamer model, struct., dynamics, solvent effects, generalised Langevin eqn. soln. 7−91414
phase separation kinetics 7−69917
pipe flow, drag reducing behaviour, surface roughness effects study 7−111039
PMMA, aq. soln., compact coil→random coil conformational transition investig. 7−117098
PMMA, water sorption, crosslinks effects 7−70085
PMMA, water sorption, mol. wt. effects 7−70084
PMMA film dissolution and swelling behaviour in solvent/nonsolvent mixtures, in situ ellipsometric charactn. 7−124520
PMMA-polyethylene oxide blends in soln., compatibility, mol. wt., laser light scatt., viscometry 7−69914
poly(2,2-propane-bis(4-phenylthiocarbonate)), soln. props. and chain flexibility 7−124066
poly(di-poly(propylene glycol) itaconate)-salt mixtures, ionic conductivity 7−98534
poly(dimethyl siloxanes), lin., sedimentation coeffs., intrinsic viscosities and mol. wt. meas. 7−117106
poly(dimethyldiallylammonium chloride), soln. props. determ. 7−96898
poly(ethylene oxide), non-Newtonian power-law fluids, diffusivities, electrochem. determ. 7−142262
poly(ethylene oxide) semidilute solns., decoration with sodium dodecyl sulphate surfactant micelles, neutron scatt. study 7−83636
poly(methacrylic acid), phase separation behaviour in organic theta solvent, viscosity and light scatt. meas. 7−111345
poly(sulphone-ethylene oxide) block copolymer soln., self-diffusion coeff. determ. 7−118142
poly 3-alkylthienylene. solns., thermochromism and solvatochromism, chain conform. 7−85611
poly L-lysine hydrobromide in aq. methanol, elec. birefr. helix-coil transition region 7−85600
poly-γ-benzyl-L-glutamate, solns., liq. crystn. struct. *(Russian)* 7−97904
poly-n-hexyl isocyanate, semirigid, in 1-chloronaphthalene, mesophase form. 7−91442
poly-N-vinyloxycarbonyl carbazole, dipole moment associated with side group, dielectric meas. 7−70698
polyacenaphthylene, soln., unperturbed dimensions and chain conform. obs. 7−97890
trans-polyacetylene, doped solid and soln. doping and photo-induced IR spectra 7−99853
polyacetylenes, soluble, reson. Raman spectra, depolarisation ratio dispersion 7−85737
polyacrylamide, hydrodynamic effectiveness and stability, macromolecules conformation effect 7−83275
polyacrylamide aq. soln. turbulent flow, press. drop 7−97580
polyacylamide, soln., electrical-discharge cavities, dynamics *(Russian)* 7−97578
polyalkylstyrene, soln., intrinsic viscosity, temp. depend. *(Russian)* 7−98543
polyamidobenzimidazoles, props., unit struct., rel. to monomer asymmetry *(Russian)* 7−91489

polymer solutions continued
polybutylmethacrylate solns., ultrahigh mol. wt. conformational characts. 7−83639
polydiacetylenes, electronic phase-transition, spectroscopic meas. 7−70730
polydimethylsiloxane, dil. solns., hierarchy of models 7−136109
polyelectrolyte chain, adsorpt. on charged planar membrane 7−118235
polyelectrolyte solution, 2D, form factor under strong screening conditions, Monte Carlo simulations 7−97892
polyelectrolyte solutions, anomalous viscosity 7−84348
polyelectrolyte solutions, electrophoretic mobility study using Doppler velocimetry in electric fields 7−144727
polyelectrolytes, mean square size, analogy with polaron problem 7−104517
polyethylene, crystallisation and liq.-liq. phase separation in binary systems 7−69871
polyethylene, dil. solns., hierarchy of models 7−136109
polyisobutylene, thermophys. props., gas chromatographic meas. 7−69577
polymer chain, conformation at θ' point, statistics, connection to external perimeter of percolation cluster 7−69574
polymer chain geometry near theta-point, regularisation 7−82399
polymer melts and solutions, conformation tensor rheological models 7−75501
polymer mixtures, dil. soln., crossover anal. using renormalisation group methods 7−83777
polymer-surfactant aq. solns., solubilisation equilib., Raman spectrosc. obs. 7−70802
polymeric systems, space filling and entanglements 7−75961
polymethacrylic acid, semidilute solns., dynamic light scatt. investig. 7−92696
polymethacrylic acid, slat-free semidilute solns., small angle scatt. 7−69576
polymethylsiloxane, soln., electrical-discharge cavities, dynamics *(Russian)* 7−97578
trans-polypiperylene, solns., struct., optical and hydrodynamic obs. *(Russian)* 7−97905
polypropylene, isotactic, dil. solns., hierarchy of models 7−136109
polystyrene, colloid spheres, struct., Debye-screening length role microscopic exam. 7−91418
polystyrene, cyclohexane soln., crit. surface adsorpt., ellipticity coeff. meas. 7−111340
polystyrene, dichloromethane solns., excimer emission, optical anisotropy 7−77503
polystyrene, high-impact, thermophys. props., gas chromatographic meas. 7−69577
polystyrene, in cosolvent mixtures, fluoresc. 7−70902
polystyrene, isotactic, dil. solns., hierarchy of models 7−136109
polystyrene, semidilute solns., coexistence curve 7−91766
polystyrene, soln., intrinsic viscosity, temp. depend. *(Russian)* 7−98543
polystyrene, solns., Mark-Houwink-Sakurada consts. calcs. 7−91826
polystyrene, spin labeled crosslinked, double modulation EPR study, molecular-motion 7−125526
polystyrene, star-shaped, intrinsic viscosities, temp. and solvent effects 7−69578
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective solvent effects 7−93310
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective binary solvent-effects 7−93311
polystyrene in cyclopentane, dil. soln. props., viscosity, mol. wt., light scatt., virial coeff. 7−69573
polystyrene ionomers soln., conform. relax. in extensional flow field, solvent quality, conc. depend. 7−124073
polystyrene latex spheres deionised suspension, structural relax. time meas. 7−137189
polystyrene particles in ferrofluid composite, props. at MM wave freqs., mag. absorpt. 7−125864
polystyrene solutions, dil., in extensional flows, birefringence and flow modification 7−75719
polystyrene solutions, fluctuations, ultrasonic absorpt. spectra 7−137187
polystyrene sulphonate, solns., dynamic props. and struct., cond. and viscosity meas. 7−84346
polystyrene type spheres in aqs. and aqs. methanol suspensions, sedimentation equilib., struct. obs. 7−71532
polystyrene-deuterocyclohexane system, behaviour near crit. ply separation point *(Russian)* 7−137521
polystyrene-polydimethylsiloxane mixture, soln., light scatt. investig. 7−85756
polystyrene-toluene solns., tracer diffusion near glass transition, forced Rayleigh scatt. 7−113210
polystyrene-tri-m-tolyl phosphate, solns., tracer diffusion near glass transition, forced Rayleigh scatt. 7−113210
polystyrenes, 12-arm star, diffusion in poly(vinyl methyl ether) solns., light scatt. anal. 7−111931
polythiophene, doped, polarons and bipolarons 7−118383
polythiophene derivatives, solutions, optical props. 7−138403
polytitanosiloxanes, prep. of SiO_2-TiO_2 fibres 7−92947
polyurethane latex particles, in nonaq. solns., diffusiophoresis 7−76467
polyvinyl acetate-toluene, solns., tracer diffusion near glass transition, forced Rayleigh scatt. 7−113210
polyvinyl alcohol, soln., electrical-discharge cavities, dynamics *(Russian)* 7−97578
polyvinylidene fluoride-polymethyl methacrylate, soln. mixed blends, dielectric and struct. props. 7−132181
2,2-propane diyl-bis(4-hydroxyphenyl) polyformal, spin relax. and local motion, temp. and conc. depend. 7−117102
PVC, antiplasticisation phenomena, strain rate and temp. effects 7−130612
PVC soln. gel form., light scatt. and birefringence study 7−118983
relaxation oscillators, hydrodynamic interaction eqn. 7−75629
Reynolds stress meas. in turbulent channel flow with polyethylene oxide additives 7−83200
rheological characteristics measurement, vibr. rheometer 7−75729
rheometer for concentrated polymer solutions containing volatile solvents 7−117686
rigid, Kerr effect, mol. mass depend. *(Russian)* 7−113105
ring polymer, translational diffusion const., renormalisation group anal. 7−117802
self-avoiding polymer chain in 2D, exact contact crit. exponents 7−97900
self-avoiding tethered surfaces of fractional dimension, ε-expansion 7−120972
semidilute, in theta domain, renormalisation group study 7−117798
semiflexible and branched, conformation, Flory approx. anal. 7−117799

polymer solutions continued
silica suspension, polyacrylamide soln., flocculation, rheological behaviour study 7−114009
sol-gel transition, thermodynamic theory 7−91843
solvent interactions, RISM integral eqn. soln. 7−96568
squeezing flow between spherical surface and flat plate 7−75621
star polymers, collective relaxation, neutron spin-echo study 7−111343
stress relaxation, diff. constitutive eqns., convected derivatives 7−110895
structural changes during elongation 7−75960
styrene-acrylic acid copolymer, aq. soln., Fourier transform-IR spectra 7−131005
styrene-butadiene rubber, thermophys. props., gas chromatographic meas. 7−69577
surfactants, phase behaviour of binary mixture monolayers 7−124067
synthetic polymers in soln. excimer form., time-resolved fluoresc. 7−90455
threshold type shear thickening 7−69579
trapped polymer chain in random porous medium, Monte Carlo simulations 7−136994
turbulent flow, wall vel. gradient fluctuations 7−142345
turbulent flow in tubes, friction reduction, mathematical model *(Russian)* 7−97501
vinyl aromatic polymer soln., intramol. triplet exciton migration model 7−70195
viscoelastic response 7−69080
viscoelastic turbulent pipe flows, heat eddy diffusivity 7−97520
viscoelasticity, conference, Grenoble, France (Jan. 1986) 7−72698
viscoelasticity 7−75496
water-N-methyl-2-pyrrolidone-polyethersulphone, membrane form., component mobility anal. 7−118140
xanthan gum in corn syrup, viscometry, viscous and elastic contributions 7−75509
KCl-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999
K_2SO_4-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999

polymer structure
acrylamide-N,N'-methylene-bis-acrylamide in aqs. soln., crosslinking polymerisation at 22°C 7−126451
acrylic polymers, with phenyl benzoate side groups, mesophase obs. *(Russian)* 7−137199
adhesion, contemporary theory review 7−138954
adsorbed polymers and node-avoiding Levy flights 7−82402
alumina polymers, equilibrium structure and rigidity 7−86620
amylose nitrates, repeat unit heterogeneity, ^{13}C NMR spectrosc. obs. *(Russian)* 7−112972
aromatic polyimides, chain conform. and rigidity investig. *(Russian)* 7−83790
aromatic-aliphatic epoxy mixtures, crosslinked, struct.-props. rels. 7−91483
bisphenol A polycarbonate, intermolecular order, neutron scatt. 7−117838
blends, intermolecular interaction, crack healing study 7−117833
blends, laminar morphology, structure and props. 7−137269
butadiene, polymerisation, supported Ziegler-Natta Co catalyst activity study 7−113924
1,3-butadiyne in deoxycholic acid and apocholic acid canals, inclusion polymerisation, struct., elec. and optical props. 7−86623
cellulose, amorphous, struct., X-ray scatt. 7−117836
cellulose nitrates, substituted, ^{13}C NMR obs. *(Russian)* 7−112971
cellulose triacetate, solid state, ^{13}C NMR chem. shifts determ. 7−92528
cellulose-polyacrylonitrile blend films, struct. from N,N-dimethylacetamide-LiCl solns. 7−111430
chain arrangement, domino model 7−117839
chain folding, phys. mechanisms 7−76035
chord intercepts in the two-dimensional cell model 7−111426
composite polymers, short-range coherence length below conductive percolation threshold 7−131726
conducting polymers from heteroaromatic bicyclic compounds, synthesis and physico-chemical charact. 7−78487
conductive polymers, post polymerisation processing 7−91485
copolyimides, crosslinkable, struct. props. correl. 7−76034
copper acetylacetonate thin films, plasma-polymerised, elec. props. 7−126020
critical strain to dead bend, fibril length estimation 7−131217
crosslinked, graph represent. and topological gelation criterion 7−97984
defects, positron annihilation studies 7−144164
diacetylenes, polymerisation in the frozen state by UV or high energy beam irradiation 7−71491
diblock copolymers, superstructures, composition-concentration diagrams *(Russian)* 7−137273
diffusion near absorbing fractals, harmonic measure exponents 7−76036
dimethyl-bis-(hexacosan-2,4-diinoyl)oxaethyl ammonium bromide monolayer, crystn. domain growth 7−124118
elastomers, relaxational props. during network formation, meas. method *(Russian)* 7−83645
electret forming polymers, struct. and physical props. 7−97993
epoxide amine network polymers, glass transition rel. to crosslinking 7−111888
epoxide polymers, network, glassy state props. rel. to activation parameters for deformation *(Russian)* 7−111748
epoxide polymers, sorption, diffusion and adhesional struct. rel. to topological struct. *(Russian)* 7−97995
epoxy binders, elasticity type effect on viscoelastic props. 7−138774
epoxy network, cure characterisation by fluoresc. of trans-diaminostilbene 7−90262
epoxy resin, fracture toughness, viscosity rel. to glycidyl compound additions *(Japanese)* 7−78192
epoxy resin, with glassy second component, impact-modified 7−113676
epoxy-polyethersulfone, dual phase blend, fracture toughness, miscibility 7−86332
epoxy-polyethylene oxide-salt complexes, ionic conducting interpenetrating networks, synthesis, mech. props. 7−86125
anti-7-ethylbicyclo[2.2.1]hept-2-ene ring-opened polymer form., mechanism and microstruct. 7−122755
ethylene-propylene copolymers, glass transition temp., microtacticity effects *(Russian)* 7−83794
ethylene-vinyl acetate copolymers, chlorinated, ^{13}C-NMR 7−92518
ethylene-vinyl chloride copolymers, struct., IR spectra analysis 7−85633
fibre, entropic elasticity problem 7−76265
fibre reinforced polyphenylene sulphide, injected moulded, fracture toughness, microstruct. details and effect of testing conditions 7−78184

polymer structure continued
fibre self-reinforced, plastic deformation rel. to needle crystal morphology 7−86263
fibres, synthesis by growth packing mechanism 7−86124
foam plastic, tough, relax. props. in compression, macrostruct. effect 7−71246
Fourier transform IR spectroscopy appls. 7−131059
gas sorption and transport, antiplasticization effect, free vol. interpretation 7−84498
gel, polystyrene latex spheres in polyacrylamide soln., particle movement and pore-size distrib., quasielastic light scatt. study 7−124128
glassy polymers, structural changes, thermal anal. and mechanical tests 7−98451
growth instability in diffusion controlled polymerization 7−78482
hierarchical structure in polymeric materials 7−111431
insulating materials, bonding and structure, tutorial 7−111304
isotactic polystyrene, persistence-length enhancement caused by physical gelation, neutron scatt. evidence 7−83785
latex particles, seeded, emulsion polymerised, morphology, small-angle neutron scatt. obs. 7−91482
main-chain liquid crystal polymer, solidification, elec. fields, surfaces and mesophase ageing effects 7−91480
morphological changes due to transport phenomena, continuous and discontinuous models 7−111420
multiphase polymers, small angle neutron scatt. 7−131057
natural abundance ^{13}C spin exchange study 7−70663
nylon 6 fibres, spin oriented, macromolecular order, WAXS 7−69612
nylon fibres, composite struct., mech. props. prediction 7−86291
nylon-2/6, morphology and cryst. struct. X-ray diffr. and electron microsc. obs. 7−69619
nylons, cryst. struct. 7−69609
oligoester acrylate based network polymer, microheterogeneous struct., light scatt. obs. *(Russian)* 7−91486
organosilicon elastomers, vulcanizates and copolymers, phenyl-containing substituent effects *(Russian)* 7−111434
oriented fibre forming polymers, acoustic-optical criteria of orientation ordering analysis 7−137264
Pebax copolymer, molecular relax parameters, thermally stimulated current technique 7−70326
PEEK thin films, melt-spun, plastic deform. 7−76712
PET, amorphous and semicrystalline, small and intermediate angle neutron scatt. 7−69615
PET, fatigue decohesion, struct. aspects *(Polish)* 7−138808
PET, intrinsic birefringence rel. to morphology 7−83786
PET, sp. ht. meas., 0.4-15 K 7−118126
PET films, dielec., crystallinity, elec. ageing effects *(Russian)* 7−111433
PET films, high-energy in implantation 7−83782
ploybutadiene-dihalocarbene adducts, 2D NMR study 7−91471
PMMA-polycarbonate blends, morphology and props. 7−124117
PMMA-PTFE thin film sandwich struct., depth profile meas., dynamic fast atom bombard. mass spectra 7−70089
poly(4-(N,N-diphenylamino-)phenyl methylmethacrylate), electrochemical doping, rectification and photovoltaic props. 7−69631
poly(4-methyl-pentene-1), uniaxially drawn, struct., thermal expansion 7−117841
poly(butene-1)-ethylene-propylene blends, phys. charactn. 7−76032
poly(ether sulphone)-poly(dimethylsiloxane) alternating block copolymers, Pt-catalysed hydrosilylation study 7−113923
poly(p-phenylene vinylene), correlation between conjugation length and nonradiative relaxation rate 7−83780
poly(phenylene sulphide) films, ion irrad., spectroscopic anal. 7−99852
poly(vinylidene fluoride), mol. defect role on struct. and phase transform. 7−97989
poly(vinylidene fluoride-trifluoroethylene), cryst., ferroelectric switching investig. 7−92617
poly ϵ-caprolactone, crystn. kinetics and morphology 7−124127
poly L-alanine, struct., heat treatment effect, DTA, X-ray diffr., IR spectra 7−111427
poly N,N'-bis(phenoxyphenyl)-pyromellitimide, deform., smectic ordering, X-ray scatt. 7−86274
poly p-phenylene benzobisthiazole films, deform., temp. and strain rate depend. 7−86264
trans-1,4-poly-1,3-pentadiene, cryst., isotactic, stress-induced conform. transitions 7−91472
poly-4,4'-oxydiphenylene pyromellitimide films, unoriented, temp.-time effects on structurisation *(Russian)* 7−85680
poly-γ-benzyl-L-glutamate, solns., liq. crystn. struct. *(Russian)* 7−97904
poly-N-5-n-alkyloxycarbonyl-n-pentyl maleimides, γ-transition, functional group effects 7−90461
poly-N-benzyldiphenylaminomethane, struct. characters., RDF analysis of X-ray diffr. patterns 7−69608
poly-p-phenylene, vibr. spectra rel. to stereochemical struct. 7−68482
poly-p-phenylenes, heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
poly-peri-naphthalene fibre, 1D graphite polymer, morphology and polymerisation mech. 7−86625
polyacenaphthylene, soln., unperturbed dimensions and chain conform. obs. 7−97890
polyacenic materials, pristine and heavily doped, ESR studies 7−112930
polyacetylene:alkali metal films, Raman spectra studies 7−70793
polyacetylene:I films, struct., doping level depend. 7−69628
polyacetylene:I stretched system, polarised resonant Raman scatt. studies 7−70795
polyacetylene:Na, Raman and EPR spectra studies 7−70792
polyacetylene, cis- and trans-, morphology control by epitaxial polymerisation 7−69623
polyacetylene, cis- and trans-, Raman spectra using 1064 nm and 532 nm laser light 7−70794
polyacetylene, Durham, conformational defects, IR and Raman studies 7−69624
polyacetylene, Durham form., order-disorder, elec. cond., struct. 7−97988
trans-polyacetylene, fully oriented, polarised reson. Raman scatt. 7−85736
polyacetylene, heavy alkali metal doping, X-ray diffr. and EPR spectroscopy 7−69629
polyacetylene, I or Br doped, polarised X-ray absorption spectra 7−70941
polyacetylene, IBr or ICl doped, local-structure determ. by X-ray absorption spectroscopy 7−69627
trans-polyacetylene, oriented, undoped and I doped, polarised resonant Raman spectra 7−70784
polyacetylene, supersymmetric treatment of random disorder in continuum model 7−118417

polymer structure continued
polyacetylene, synthesis, precursor polymer struct. 7−97987
polyacetylene, WCl_6-doped, photoelectron spectroscopy 7−70980
polyacetylene films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polyacetylene films, structural props. determ. from X-ray fibre patterns 7−69625
polyacetylene films prepare by oriented precursor route, structural characterisation 7−69626
trans-polyacetylene intercalation cpds., chain dimens., charge transfer effects, X-ray diffr. anal. 7−137263
polyacrylic acid-polyethylene carriers, with metal complexes, struct., mol. mobility *(Russian)* 7−97903
polyacrylic acid-polyethylene imine, polyelectrolyte gels, crosslinked, struct., props. *(Russian)* 7−93398
polyacrylonitrile, swelling, struct. changes, wide-angle X-ray scatt. obs. 7−91479
polyalkylacrylate, lamellar polymer, defects, high resolution electron microscopy 7−69633
polyamide 12, dielectric relaxations, TSC investig. 7−118938
polyamide-6 films, dielec., crystallinity, elec. ageing effects *(Russian)* 7−111433
polyamide-rubber phase blend, chemically modified, compatibility, thermal and mech. props. *(French)* 7−97982
polyamidobenzimidazoles, props., unit struct., rel. to monomer asymmetry *(Russian)* 7−91489
polyamines, synthesis and struct. 7−71487
polyaniline, aniline black, molecular conformations 7−110157
polyaniline, formation reaction and structure 7−71490
polyaniline, molecular conformation and optical spectra, CNDO/S3 calcs. 7−99887
polyaniline, Raman and IR spectra determ. of struct. 7−70797
polyaniline, redox chemistry 7−71489
polyaniline, soluble, synthesis and elec. props. 7−105052
polyaniline, struct. and synthesis 7−69630
polyaniline, vibr. spectra, Raman studies 7−98369
polyaniline and substituted derivatives, electronic struct. 7−68483
polyarenemethines, synthesis, doping, struct., conductivity meas. 7−71146
polyarylate-polyethylene oxide block copolymers, relax. transitions near microphase separation boundary *(Russian)* 7−90914
polyarylene ether ketones, crosslinking, crystn. kinetics 7−124126
polybisphenoxyphosphazene, crystal modifications, electron microscopy 7−111425
polybutadiene, crystallisation, size mismatch effects, small angle neutron scatt. 7−69611
polybutadiene, mol. mass. correl. with microstruct. *(Russian)* 7−83791
polycarbosilane fibre, oxidation curing mechanism by solid-state ^{29}Si high-resolution NMR 7−119528
polydiacetylene:I_2, electrical props. 7−70296
polydiacetylene, poly(4BCMU), struct. and disorder 7−69632
polydiacetylene chain π-radical electron, electronic states, config. model and continuum model 7−118351
polydiacetylene crystal, electronic struct. and photo-induced struct. change 7−112172
polydiacetylene oligomers, short-chain, radical electron configurations, optical excitations 7−138471
polydiacetylenes, cryst. struct., thermal studies 7−97990
polydiethylsiloxane, cryst. and mol. struct., models *(Russian)* 7−83792
polydimethylsiloxane-polymethacrylic acid, interpenetrating networks, swollen struct. study 7−91470
polydipropylsiloxane, cryst. and mol. struct., models *(Russian)* 7−83792
polyester fibres, composite struct., mech. props. prediction 7−86291
polyetheretherketone, crystal texture 7−111423
polyethylene, 2D cryst. growth, step positions fluctuations anal. 7−124145
polyethylene, brominated, crystallisable, location of comonomer units 7−91481
polyethylene, high density, abrasive wear resist. depend. on mol. characts. 7−100397
polyethylene, high density, $CaCO_3$ filler, stress relax. and creep study 7−100275
polyethylene, hydroxyl introduction, dielectric relax. investig. 7−118942
polyethylene, isothermally crystallised bulk, chain inclination angle determ. 7−131055
polyethylene, linear, crosslinked in melts, morphology 7−91476
polyethylene, linear, natural abundance ^{13}C spin exchange study 7−70663
polyethylene, low-density, crystallinity, γ-irrad. effects 7−91653
polyethylene, melt crystallised, morphological partitioning of chain ends and methyl branches, NMR obs. 7−124125
polyethylene, perfectly ordered and oriented, theoretical strength, weak-link chain defects influence 7−83787
polyethylene, sheets, mech. props., radiation cross-linking effects 7−91484
polyethylene, static fatigue fracture, morphological anal. 7−86331
polyethylene, struct. change with temp., ^{13}C NMR study 7−104596
polyethylene, wide-angle X-ray scatt. profile anal. 7−117837
polyethylene and crosslinked elastomer combined dispersion, struct. correl. with phys., and mech. props. 7−71233
polyethylene blends, mixing, morphology, rheology, mech. props. 7−126197
polyethylene chains containing defects, longit. acoustic mode freqs. 7−84170
polyethylene copolymers, cross-fractionation according to copolymer comp. and mol. wt. 7−83781
polyethylene fibres, gel-spun, morphology and ultimate props. 7−92955
polyethylene fibres, highly drawn, electron irrad., struct., mech. props. 7−132677
polyethylene films, dielec., crystallinity, elec. ageing effects *(Russian)* 7−111433
polyethylene mixtures, dynamic viscoelastic props., mol. nature of temp. transitions 7−71231
polyethylene relaxation thermodynamics, rate theory 7−97983
polyethylene-isotactic polypropylene blends, epitaxial relationship, diffr. pattern analysis 7−83784
polyethylene-PAA copolymers, radiation grafted, small angle neutron scatt. obs. *(Russian)* 7−97996
polyethylenes, irradiation- and peroxide-crosslinked, struct. and tensile behaviour 7−78398
polyethylenes, linear, low density, branch content and distrib., crystallinity 7−91477
polyethylenes, mech. props., struct. and morphological factors 7−71244
polyglutamic acid, conform., X-ray, IR and ^{13}C CP/MAS NMR obs. 7−92524

polymer structure continued
polyimide:$Ar^+(Cu^+)(Zn^+)$ films, ion-implanted, structure and morphology 7−91938
polyimide, thermal prop. and radiation resistance, acid dianhydride chem. struct. effect 7−97991
polyisobutylene networks, swelling, reinforcement generation in situ, stress-strain isotherms 7−131058
cis-1,4-polyisoprene, deformed networks, orientation of dissolved rigid rods 7−91478
cis-polyisoprene, mech. relax., rel. to struct. relax. *(Russian)* 7−91488
trans-1, 4-polyisoprene single crystals, certain unusual habits 7−83779
polymer blends, birefringence free, chain orientation, intrinsic anisotropy 7−125683
polymer blends with liquid crystalline copolyester, morphology and rheology 7−137196
polymer mixture, Flory-Huggins lattice model, crit. props. 7−108432
polymer solutions, microisotropic structure, mol. mass and backbone rigidity *(Russian)* 7−83642
polymers, electronic props., MO-based and valence effective Hamiltonian study 7−118352
polymers, wide-angle X-ray scatt. profile anal. 7−117837
polymetacyclophane, polyconjugated system, synthesis, struct. and elec. props. 7−86624
polyolefines, conducting, reticulate doped with cryst. charge-transfer complexes, prep. and elec. props, 7−84839
polyorganosiloxanes, cyclolinear, macromol. flexibility and conform. *(Russian)* 7−136111
polyorganosiloxanes, sulphonated, struct., thermal and hydrothermal stabilities, NMR obs. 7−85447
polyoxetanes, solid-state ^{13}C NMR, chain conform. effects 7−92521
polyoxyethylene, conform., IR spectra calc. normal-mode anal. 7−74794
polyoxyethylene methyl-n-alkyl ethers, morphology, X-ray and Raman scatt. 7−111422
polyoxymethylene, hexagonal cryst., struct. modification, IR and X-ray obs. 7−69620
polyoxymethylene ^{13}C NMR spectra, chemical shift, electronic structure, solid state, tight-binding calcs. conformation 7−143317
polyoxypropylene-spaced liquid crystal polyesters, layer order obs. *(Russian)* 7−83644
polyparaphenylene, crystalline, optical excitation study 7−70907
polyphenylene oxide, gas sorption and permeability rel. to antiplasticization 7−84497
polyphenylenesulphide, crystal texture 7−111423
polyphenylenesulphide film, doped, cond. mechanism, electronic struct., XPS, IR spectra, NMR, CNDO calc. 7−70983
polyphenylenevinylene films prepare by oriented precursor route, structural characterisation 7−69626
polyphenylmethylsiloxanes, linear and cyclic, neutron scatt. obs. 7−69617
trans-polypiperylene, solns., struct., optical and hydrodynamic obs. *(Russian)* 7−97905
polypropylene, isotactic, proton beam modification 7−117984
polypropylene, isotactic, structurization near solid surface *(Russian)* 7−91487
polypropylene, oriented, crystalline and noncrystalline molecular orientation, IR dichroism 7−69613
polypropylene, transcrystalline layers, struct., mech. props. 7−119234
polypropylene block copolymers and elastomer blends, dynamic mech. props., morphology 7−119303
polypropylene fibres, struct. and props., high-mol. polyethylene oxide effects *(Russian)* 7−97994
polypropylene monofilaments, highly drawn, creep and recovery 7−86265
polypropylene-EPDM rubber-polyethylene ternary blends, dynamic mech. behaviour and struct. 7−78088
polypyrrole bromide, conducting, local struct., X-ray absorption spectra 7−76038
polypyrrole film on Hg electrode, growth, elec. cond. and struct. 7−78512
polypyrrole films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polypyrrole films, electrochemically polymerised, struct., elec. props. 7−77934
polystyrene, crit. struct. defect size and shape *(Russian)* 7−86199
polystyrene, dichloromethane solns., excimer emission, optical anisotropy 7−77503
polystyrene, fatigue, craze fibril deform. and microstruct. 7−126218
polystyrene, high temp. crazes, low angle electron diffr. 7−126217
polystyrene, ion bombarded, molecular weight distribution and solubility changes 7−91667
polystyrene, monodisperse atactic, dynamic mech. props., time-temp. superposition 7−113597
polystyrene, partially sulphonated, ionomer, fatigue rel. to ionic aggregates 7−86346
polystyrene, polybutadiene toughened, yield stress, rubber particle size effect 7−106573
polystyrene, toughened, containing block, graded block and randomised butadiene-styrene copolymers 7−69621
polystyrene and poly 2,6-dimethyl-1,4-phenylene oxide blends, diffuse shear band zone props. 7−137452
polystyrene-polybutadiene blends, conc. fluctuations, small angle X-ray scatt. anal. 7−117832
polysulfone, gas sorption rel. to antiplasticization, thermal and mech. props. 7−84496
polythienylpyrrole, electrolytic polymerisation and struct. props. 7−78493
polythiophene conducting polymers, struct. and electronic struct. 7−76040
polythiophenes, heterosubstituted narrow gap semicond., energy gap and bond length alternation 7−105395
polythiophenes, optical, electrical and structural props. 7−76042
polythiophenes, structure, ^{13}C NMR and Fourier transform IR studies 7−76041
polyurethane, segmented, organic solvent sorption and diffusion 7−76496
polyurethane anionomers, glass transition and mechanical props. 7−143010
polyurethane elastomers, aliphatic, performance props. 7−137270
polyurethane-styrene ionomeric blends, ionic interactions, Fourier transform IR spectra 7−70770
polyurethanes, struct., props., flexible segments comp. effects *(Russian)* 7−137272
polyvinylidene chloride films with trans-polyacetylene conjugated segments, optical props. 7−92761
polyvinylidene fluoride, β-phase form from melt induced by quenching, film morphology 7−112136
polyvinylidene fluoride, cryst., ferroelectric switching investig. 7−92617

polymer structure continued
polyvinylidene fluoride, piezoelec. effect, X-ray study 7−99718
polyvinylidene fluoride, voided, influence of microvoids 7−111424
polyvinylidene fluoride films, soln. cast, dielec. props. struct. 7−106086
polyvinylidene fluoride films, struct. changes in elec. fields 7−124122
polyvinylidene fluoride-polymethyl methacrylate, soln. mixed blends, dielectric and struct. props. 7−132181
polyvinylidene fluoride/PMMA blends, oriented, PMMA effect on morphology and $\alpha \rightarrow \beta$ transition 7−112135
polyvinylmethyldialkoxysilanes, struct., ^{13}C NMR *(Russian)* 7−85452
PTFE, γ-irrad., thermal expansion, 80-340 K, crystallinity 7−131340
PTFE with low degree of filling, struct. and mech. props. 7−78255
PVC, struct. and props., X-ray diffr. 7−119320
PVC-copolyester elastomer blends, abrasive wear resist., SEM obs. 7−132765
PVC-polyurethane blends, phase separation, amorphous struct. 7−113558
PVDF, crystal-amorphous interphase, SAXS and dielec. relax. obs. 7−69618
PVDF, structure, piezoelectric props., film development, sensor appl. *(German)* 7−143971
PVDF-PMMA, crystal-amorphous interphase, SAXS and dielec. relax. obs. 7−69618
rigidity moduli determination from monomer chem. struct. 7−69804
rubber, crosslinked, uniaxial extension, true stress representation 7−78086
rubber, natural, γ-irradiation cross-linked, solid-state ^{13}C NMR obs. 7−106805
rubber, natural and synthetic, cold crystallisation, chain microstruct. effects 7−92522
rubber friction against metal, surface changes, temp.-time method of recording 7−93114
rubber toughened epoxy resin dual-phase system, struct. and mech. props. 7−100356
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7−92953
rubber-reinforced polymer, crit. struct. defect size and shape *(Russian)* 7−86199
S_0 parameter, temp. invariance 7−131061
solid polymers, 2D NMR spectroscopy study of struct. and props. *(German)* 7−132143
solid polymers, NMR spectroscopy, 51st physics conference, Berlin, Germany (March 1987) *(German)* 7−128179
speciality polymers, conf., Baltimore, MD, USA (Aug. 1986) 7−95083
styrene-hydrogenated butadiene-styrene triblock copolymer, chain conform., small angle neutron scatt. 7−69614
surface analysis using mass spectrometry 7−93443
symmetric polymers mixtures, lattice model, Flory-Huggins mean-field theory, Monte Carlo test 7−97986
system of oriented fibrils, SAXS modelling 7−124124
terpolymer systems network characts. math. modelling 7−69616
tetramethyl-p-silphenylenesiloxane-dimethylsiloxane block and graft copolymers, selective permeable membranes 7−69622
tetrathiolate-based polymers, $[M(C_2S_4)]_n$, conductive molecular complexes, synthesis, properties and structure 7−99310
torsional braid analyser develop. 7−67302
N-vinylcarbazole, polymerization, thin film preparation and struct. characts. 7−100548
vinylidene fluoride copolymer fluoroelastomers, composition, sequence distrib., ^{19}F NMR obs. 7−70655
vinylidene fluoride-tetrafluoroethylene copolymer films, uniaxial stretching, acoustic obs. *(Russian)* 7−138798
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. phase transition, struct. study 7−99763
vinylidene fluoride-trifluoroethylene copolymers, struct., morphology, wide-line NMR obs. 7−92520
vinylidene-fluoride terpolymer fluoroelastomers, composition, sequence distrib., ^{19}F NMR obs. 7−70655
water treeing rel. to morphology and microstruct. 7−99675
H_2O-oligo(ethylene oxide) eutectic system, light microscopy investig. 7−76376

polymerisation
acrylamide, adsorbed on Ag colloids, polymerisation, SERS 7−144056
acrylamide-N,N[1]-methylene-bis-acrylamide in aqs. soln., crosslinking polymerisation at 22°C 7−126451
acrylic acid, polymerisation on Ag colloids surfaces, SERS spectra anal. 7−74798
acrylic-melamine resin coatings, rheology during thermal curing, viscosity meas. 7−130616
age-length distribution functions for radical polymerisation 7−93316
alkenes, polymerisation kinetics on zeolites 7−139038
alumina polymers, equilibrium structure and rigidity 7−86620
aniline, electrochemical polymerisation 7−71488
black lipid membranes, polymerisation and influence on ion transport 7−86923
butadiene, polymerisation, supported Ziegler-Natta Co catalyst activity study 7−113924
1,3-butadiyne in deoxycholic acid and apocholic acid canals, inclusion polymerisation, struct., elec. and optical props. 7−86623
chemically reactive liquids, kinetics 7−86567
conducting polymers from heteroaromatic bicyclic compounds, synthesis and physico-chemical charact. 7−78487
copper acetylacetonate thin films, plasma-polymerised, elec. props. 7−126020
copper phthalocyanine polymer film, form. by double source evaporation 7−100174
diacetylene crystal, irradiated, inherent phase transition and polymerisation mech. 7−86622
diacetylene films, ion beam induced polymerisation 7−93318
diacetylene Langmuir-Blodgett films, polymerisation, vapour treatments 7−100553
diacetylenes, polymerisation in the frozen state by UV or high energy beam irradiation 7−71491
diepoxide-diamine network polymers, glass transition temp. investig. 7−76406
epoxy resins, 1,4-anhydroerythritol based, kinetics, branching determ. 7−93322
epoxy/acid anhydride resin curing accel. using metal salts 7−106796
equilibrium polymerization in a solvent, Bethe lattice soln. 7−73257
anti-7-ethylbicyclo[2.2.1]hept-2-ene ring-opened polymer form., mechanism and microstruct. 7−122755

polymerisation continued
ethylene glycol, polymerisation effect on mol. polarizability and diamagnetic suscept., refractive index method 7−113926
ethylene-methyacrylate mixtures, phase behaviour under high press. 7−100550
ethylene-propylene homo- and copolymerisation with Cr catalyst system 7−113920
f-functional monomer, Smoluchowski-type coagulation eqn. for polymerization with substitution effect 7−100549
film and powder synthesis, Mossbauer and IR spectra charactn. 7−118999
fluorinated monomers, plasma-polymerised thin films, deposition and etching in RF discharge 7−113402
gas phase polymerisation, cloud chambers meas., mathematical models study 7−126455
gas separation membranes using a plasma polymerization method 7−86676
gelatin, grafting of ethylene oxide, ^{13}C NMR spectra study 7−113922
growth instability in diffusion controlled polymerization 7−78482
heteroarylene vinylene units, five-membered, semiconductors, polymerisation and doping 7−76958
heterocyclic polymer composite conducting films, prep. and elec. props. 7−76909
hologram recording, biphotonic polymerisation with CW lasers in near IR 7−141815
imaging system, high-speed 7−139020
interdiffusion of flexible, entangled, polymers *(French)* 7−144714
kinetics, appl. of Z-transform inversion 7−86618
latex particles, seeded, emulsion polymerised, morphology, small-angle neutron scatt. obs. 7−91482
methane ice, polymerisation and erosion by energetic ions 7−115294
methyl methacrylate, homopolymerisation, multiple-component initiator technique study 7−113921
methyl methacrylate, plasma-polymerised, electron beam resist fabrication 7−119164
methylmethacrylate, continuous flow emulsion polymerisation, reactor start up procedures effect 7−126448
Nafion-conducting polymer hybrids, anisotropic electronic conduction 7−92239
nonterminated, using polyfunctional initiators, mol. mass characts. calcs. *(Russian)* 7−100558
organotin polymers, copolymerisation parameters study 7−113925
phenyl glycidylether+imidazoles, epoxide cure kinetics study, radiochemical anal. 7−113919
phenyl thiazyl compounds: synthesis and electrical conductivity 7−100552
phospholipid bilayer membrane, synthesis and polymerisation *(Japanese)* 7−126756
photo-polymerisation, photo-induced structure changes 7−144730
photogeneration of cationic initiators by donor-acceptor interactions 7−139021
photopolymer compositions, camera-speed, appls. to lithographic plates and films 7−134865
photopolymer compositions, camera-speed, development chemistry and materials preparation 7−139023
photopolymer compositions, camera-speed, introduction and principles 7−139022
photopolymer morphology 7−139024
photopolymerisation, conf., Atlantic City, NJ, USA (May 1985) 7−134347
plasma polymerisation, comparison of microwave and lower freq. discharges 7−113440
plasma-polymerised films for liquid crystal alignment 7−69586
PMMA, intramol. charge transfer fluoresc. as mobility probe 7−90263
poly(ether sulphone)-poly(dimethylsiloxane) alternating block copolymers, Pt-catalysed hydrosilylation study 7−113923
poly(ethylene glycols), 5-fluorouracil-capped, synthesis and antitumor activities 7−144715
poly(ethylenimine) containing nucleic acid pendants, synthesis 7−126457
poly(methylthiophene), electrochemical grating on Pt electrodes, ellipsometry study 7−100556
poly-2, 2′-dithienyl-5,5′ diylvinylene, prep. and elec. cond. props 7−76908
poly-3 methylthiophene based transport conducting composites, one-step fabrication, rel. to props. 7−100557
poly-p-phenylene, conducting, formed from anodic oxidation of biphenyl in aprotic solvents, electrochemistry and props. 7−125967
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond., band gap, IR absorpt. spectra 7−71499
poly-p-xylene films, electronic props., polymerisation effects 7−112398
poly-peri-naphthalene fibre, 1D graphite polymer, morphology and polymerisation mech. 7−86625
polyacene, prep., elec. cond. and IR spectra 7−84852
polyacetylene, cis- and trans-, morphology control by epitaxial polymerisation 7−69623
polyalkylthiophene films, conducting, electrochem. prep. 7−78513
polyamic acid derivatives of poly(4-aminophthalic) anhydride, synthesis 7−126449
polyamines, synthesis and struct. 7−71487
polyaniline, formation reaction and structure 7−71490
polyaniline, soluble, synthesis and elec. props. 7−105052
polyaniline synthesis for use in Li secondary cells 7−133077
polyanthracene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
polyconjugated systems for intrinsically conductive polymers, elec. props. and synthesis 7−86610
polydiacetylene, acceptor-type, synthesis and electric conduction 7−71492
polyester resins, unsaturated, and composite technology for elec. engng., appl. of ionised radiation *(Romanian)* 7−113918
polyethylene, composite form., stretching, strain, thermodynamic anal. *(Russian)* 7−100176
polyfluorocarbon, conducting polymeric thin films, cathodic electropolymerisation 7−132935
polymer films, deposition by plasma polymerisation, review 7−138689
polymetacyclophane, polyconjugated system, synthesis, struct. and elec. props. 7−86624
polymethyl methacrylate, radiation induced crosslinking *(Chinese)* 7−93319
polymyrcenes, hydroxy functionalised, form., appl. as rubber-toughening agents in glassy polyurethanes 7−86621

polymerisation continued
polynaphthylene films, prep. by electrochemical polymerisation, elec. cond. 7−71498
polyorganosiloxanes, network, synthesis *(Russian)* 7−139004
polyphenylacetylene polymerised with ferric acetylacetonate/triethylammonium catalyst, ESR spectra 7−70646
polypyrrole composite films, elec. cond. and transmittance 7−98960
polypyrrole film form. and modification on Pt electrodes cyclic voltammetry 7−100555
polypyrrole films, electrochemical polymerisation in aqueous solutions 7−113927
polypyrrole films, electrochemically polymerised, struct., elec. props. 7−77934
polypyrrole films, highly conducting, synthesis and Mossbauer spectroscopy charact. 7−78483
polypyrrole films grown on surface of polyvinyl alcohol-$FeCl_3$ complex 7−78485
polypyrrole prepared by electrochemical polymerisation of α-bipyrrole, synthesis and props. 7−78484
polypyrrole/polythiophene p-n junction diode, electrochemical fabrication 7−93325
polyrotaxane, form., urethane macrorings conform. effects 7−106799
polystyrene, toughened, containing block, graded block and randomised butadiene-styrene copolymers 7−69621
polystyrene thin films, growth mechanism using plasma polymerisation *(Korean)* 7−144716
polythienylpyrrole, electrolytic polymerisation and struct. props. 7−78493
polythiophene, elec. cond. and vibr. key bands, IR and Raman spectra anal. 7−76905
polythiophene electroconducting polymers, synthesis method 7−78490
polythiophene films, electrochemical polymerisation under ultrasonic fields 7−78489
polythiophene/polyvinylchloride conducting polymer alloy films, redox props. 7−106797
polythiophenes, conducting, enhancement of mean conjugation length 7−78488
polythiophenes, electrochemical polymerisation, optical props. 7−78492
polyureas, polymerisation, IR spectra, thermal anal. and glass transition temp. meas. 7−125737
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93320
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93321
polyurethane elastomers prepolymers, IR, ^1H and ^{13}C NMR spectra 7−92508
polyurethanes, polymerisation, IR spectra, thermal anal. and glass transition temp. meas. 7−125737
probe polymer in matrix of different degrees of polymerisation, cubic lattice Monte Carlo dynamics 7−117797
β-propiolactone-polyethylene glycol copolymers, synthesis and characterisation 7−93323
pyrrole fused systems, conducting polymers, electrochem. props. 7−106798
pyrrole in aqueous solns., electrochemical polymerisation and conductivity 7−78486
radical polymerisation, heterogeneous catalysis of chain transfer, simulation 7−93317
resin temperature control during polymerisation, tissue embedding technique 7−79162
RNA synthesis, replication-mutation systems struct. and dynamics 7−78720
sol/gel polymerisation, NMR 7−86619
styrene, homogeneous gas phase thermal polymerisation, diffusion cloud chamber meas. 7−126456
styrene, polymerisation in laminar flow tubular reactor, heat and mass transfer 7−119527
styrene, post-radiation grafting on to polyethylene film, polystyrene distrib. *(Russian)* 7−86652
styrene films containing Au particles, ESCA and TEM study 7−106795
styrene-polybutadiene copolymerisation, phase struct. form., regularities *(Russian)* 7−93326
tetraethyleneglycol diacrylate, photopolymerisation, thermal and mechanical anal. 7−119529
tetraethylorthosilicate, initial stages of hydrolysis and polymerisation, Raman studies 7−138448
tetrafluoroethylene, low-temp. radiation-induced postpolymerisation, kinetics *(Russian)* 7−86626
tetramethylenes, substituted, bonding and polymerisation mechanism 7−132934
thin organic polymer film growth, ellipsometric investig. 7−98727
urethane macrorings; conform. effects on polyrotaxane form. 7−106799
N-vinylcarbazole, polymerization, thin film preparation and struct. characts. 7−100548
4-vinylpyridine copolymerised with styrene in benzene soln., ^1H NMR and ^{13}C NMR spectra *(French)* 7−126450
Al_2O_3-SiO_2, amorphous, chemical polymerisation form., phase transformations, X-ray diffr. and SEM studies 7−105000
S, polymeric liquid, viscosity 7−126454
S_8, chemically reactive liquids, kinetics 7−86567
ZrO_2, hydrated, polymerisation during dehydration 7−93390

polymers
see also carbon fibre reinforced plastics; elastomers; filled polymers; glass fibre reinforced plastics; glass transition (polymers); liquid crystal polymers; plastics; polymer blends; polymer fibres; polymer films; polymer melts; polymer solutions; polymer structure; rubber
3D C black chain structure reconstruction using automated stereographic technique 7−78415
4-butoxycarbonylmethylurethane polydiacetylene, ultrafast resonant optical Kerr effect 7−123130
acrylamide-N,N[1]-methylene-bis-acrylamide in aqs. soln., crosslinking polymerisation at 22°C 7−126451
acrylic resin bar, hydro-magnetic grinding using mag. fluid-abrasive grain system 7−78289
acrylic-melamine resin coatings, rheology during thermal curing, viscosity meas. 7−130616
adhesion, conf., Williamsburg, VA, USA (Feb. 1987) 7−134346
adsorbed on spherical particles, effects on fluid dynamics 7−91204
adsorption of H_2, O_2 and CO, ab initio HF calcs. 7−78538
advanced materials technology, conf., Anaheim, USA (Apr. 1987) 7−134368
polymers continued
aliphatic-aromatic polysulphides, thermal decomp., mass spectrometric obs. 7−86607
alkaline earth polystyrenesulphonates, aq. solns., entropies, enthalpies and free enthalpies 7−137591
alkyd polyester paints, air-cured, ^{13}C solid-state NMR, T_1 meas. 7−118886
alkyd resins, adsorpt. on organic pigments, IR spectra determ. 7−70074
allyl resin homopolymer, plastic lens coatings evaluation by abrasion tester 7−90750
aluminium polyfluorophthalocyanine, conducting polymer, chem. doping with $IF_5(MoF_6)(WF_6)$ *(French)* 7−112310
amorphous, torsional pendulum with sustained selfoscills. *(German)* 7−80403
amorphous polymers and copolymers, transition states 7−131314
Araldite B, high speed fracture expts., appl. of dynamic numerical soln. 7−71270
aromatic hydrocarbons, cyclic polymers, density of states, polynomial characts. 7−131513
aromatic polysulphones, mech. relax. electron beam irrad. 7−69764
AZ111 photoresist, implanted ion profiles, dose and energy depend. 7−91474
biopolymers, nonlinear optical and electro-optical properties 7−141928
bisphenol A polycarbonate, intermolecular order, neutron scatt. 7−117838
bisphenol-A diglycidyl ether epoxy resin, particle size distrib. prediction 7−117834
bisphenol-A polycarbonate, anelastic response, birefringence obs. 7−86240
branched mols., Monte Carlo simulation 7−129910
branched polymers attached in a wedge geometry, critical exponent evaluation 7−108435
branched polymers on fractal lattices, asymptotic props., recursion relations study 7−80672
brittle fracture in surface-active media, failure statistics and bond recomb. at crack tips 7−144567
butadiene, polymerisation, supported Ziegler-Natta Co catalyst activity study 7−113924
camphor-polystyrene solid solutions, dielectric props. at microwave freqs. 7−106078
cellulose, amorphous, struct., X-ray scatt. 7−117836
cellulose, natural abundance ^{13}C spin exchange study 7−70663
cellulose, NMR spectrosc. with magic spinning, review *(Japanese)* 7−132147
cellulose acetate, mech. props., temp. characteristics *(Japanese)* 7−137458
cellulose acetate membranes, retention of polyethylene glycols, protein effects 7−93375
cellulose acetate membranes, reverse osmosis separation appls. 7−126480
cellulose acetates, membrane, absorpt, of N-alkylpyridinium chlorides from solns. 7−112076
cellulose triacetate dosimeter 7−68030
chain, configurational statistics in external field 7−103701
chain arrangement, domino model 7−117839
chain configuration, atomic mean square separation, Flory exponent in Gaussian approx. 7−136106
chain dynamics, struct. and chem. transformations effects *(Russian)* 7−82408
chain folding, phys. mechanisms 7−76035
chain geometry, renormalisation group method investig. 7−82400
chain in array of obstacles 7−67245
chain per dimensions, intermol. overlaps, conc. depend. 7−117099
chain segments, density distrib. near nonadsorbing wall 7−82401
chains, inhomogeneous, statistical weights for primary structs. 7−122754
chains, rot. isomeric state, excluded vol. effects 7−82405
chains, study using numerical simulations 7−103698
chelate polymers, electrical cond. meas. 7−76989
chemical sensor, using polymer materials as sensitive elements 7−128567
cladding for silica optical fibres, γ-irrad., transmission losses 7−68881
coagulation eqn. general soln. 7−71485
coated surfaces, interaction forces 7−91964
composite polymer materials, automated meas. of coeff. of linear thermal expansion 7−140661
composite polymer positive electrodes in solid-state Li secondary batteries 7−144815
composites, friction and wear *(German)* 7−78278
composites, PZT-polymer, dielectric relax. studies 7−99660
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
conducting, broken charge conjugation symmetry model, kink and polaron solns. 7−76785
conducting, surface pot. decay meas., doping effect 7−70275
conducting, synthetic metal superlattices 7−105664
conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
conducting, with different 3D mag. ordering, instability of polarons and bipolarons 7−92085
conducting polymers, appl. in electronic and optoelectronic devices 7−97106
conducting polymers, charging capacitive effect, rel. to electrochemical doping 7−76869
conducting polymers, ion beam modification 7−91677
conducting polymers from heteroaromatic bicyclic compounds, synthesis and physico-chemical charact. 7−78487
conducting polymers with anthracene repeating units and single bonds 7−76904
conductive polymer electrodes, electroactive, appl. to nonaqueous secondary batteries, review 7−93494
conductive polymer electrodes for neural prosthetic applications 7−79143
conductive polymers, heat pulse technique for evaluation 7−98598
conductive polymers based on graphite, thermal prop. change, effect of surfactants 7−98599
conductivity polymers with conjugated bonds, H_2^+ ion implantation, effect on elec. cond. 7−83788
conjugated, kink excitations 7−137816
conjugated π-systems, linear and cyclic, Huckel theory 7−131521
conjugated organic polymers, nonlin. susceptibilities, tight-binding calcs. 7−103373
conjugated polymers, electronic struct., role of conformational disorder 7−84654
conjugated sulphide polymers, synthesis and electroconductivities 7−100175
crack acceleration, depend. on dynamic stress intensity factor 7−123528
crack resistance, hydrostatic press. depend., investig. method 7−78432

polymers continued
creep regularities and criterion of permissible creep 7—138790
crosslinked, graph represent. and topological gelation criterion 7—97984
crumpling transition in polymerized membranes 7—111429
cycloalkanes, chain folding and mesomorphic states DSC anal. 7—117105
defects, positron annihilation studies 7—144164
deformation, large-strain, prediction 7—132682
diacetylenes, anisotropic heat conduction 7—84408
diatomic, polaron optical absorpt., symm. effects, continuum limit calcs. 7—99786
dilaton formation, activation energy and incubation time, fracture studies 7—98292
dimethyl-bis-(hexacosan-2,4-diinoyl)oxaethyl ammonium bromide monolayer, crystn. domain growth 7—124118
directed and undirected branched polymers, lattice models, exact results 7—80684
directed polymer scaling in random media 7—104592
DNA, melting nucleation defect, H bond vibr. fluctuations anal. 7—71671
drift-diffusion model for absorption and resorption currents 7—99155
elastic polymers, crosslinked, ^2H NMR lineshape model 7—85449
elasticity, molecular scale 7—84089
electrets, high charge density, production 7—113069
electrets, piezoelectric, electron-beam poling 7—138376
electrical cond., electronic and optical device appl. 7—97105
electron beam irrad. under a load, mech. props. 7—104834
electron beam penetration and energy dissipation 7—69792
electron correlation, bond alternation 7—131570
electronic properties, MO-based mol. mechanics calcs. 7—129909
electronic props., MO-based and valence effective Hamiltonian study 7—118352
engineering applications of high-performance polymers 7—71144
epoxide amine network polymers, glass transition rel. to crosslinking 7—111888
epoxide resin, mol. mobility, octadecylamine effects, PMR obs. *(Russian)* 7—99591
epoxide resins, monomer content and hardener effect on thermomech. props. 7—71243
epoxy based, heat treatment effect on residual stresses and strength props. 7—138769
epoxy binders, elasticity type effect on viscoelastic props. 7—138774
epoxy binders, viscoelastic behaviour mechanisms 7—138773
epoxy matrices, residual stresses and physicomech. props, in tension and compression 7—71245
epoxy matrix and composite, thermal sonic anal. 7—100177
epoxy resin, exptl. study of low-temp. long-time relax. 7—111907
epoxy resin, fracture toughness, viscosity rel. to glycidyl compound additions *(Japanese)* 7—78192
epoxy resin, nonlinear creep rel. to ageing, moisture and temp. 7—113628
epoxy resin, torsional fatigue props. *(Japanese)* 7—93085
epoxy resin in cylindrical mould, cure process, kinetic and thermal parameters effect 7—126453
epoxy resin monomer, PMR assignment 7—92519
epoxy resins, 1,4-anhydroerythritol based, kinetics, branching determ. 7—93322
epoxy resins, rheological props. meas. using ultrasound 7—123358
epoxy-glass insulation for ASDEX upgrade TF coils, mechanical props. 7—135635
epoxy-isocyanate resins, network polymers, as insulating materials 7—104594
epoxy-PZT composites, interfacial adhesion determ., surface treatments and mechanical testing 7—100504
epoxy/acid anhydride resin curing accel. using metal salts 7—106796
ethylene-styrene copolymer, insulating material, breakdown strength 7—70703
ethylene-vinyl acetate copolymer, elec. conduction, space charge effects 7—131653
exciton diffusion, 1D, in conjugated polymers 7—118369
extrudate swell, non-isothermal non-Newtonian, mixed boundary element and finite element method 7—110900
fatigue lifetime inversions, shear and craze competition in subcrit. fatigue crack growth 7—132744
ferroelectric applications, conf., Bethlehem, PA, USA (June 1986) 7—88741
ferroelectricity, piezoelectricity and pyroelectricity 7—125613
ferromagnetism, model 7—99384
fibre self-reinforced, plastic deformation rel. to needle crystal morphology 7—86263
flax cellulose nitrate, mol. conform., diffusion-sedimentation anal. and viscometric obs. *(Russian)* 7—82409
flexible, conjugated, absorpt. spectra in weak-disorder limit 7—136104
flexural creep test, appl. and limitations 7—78414
fluorinated, optical props. *(Japanese)* 7—103911
fluorinated epoxy resins for durable optical adhesive 7—119488
foam-plastics, phys. charact. features of deform. kinetics 7—86281
foils, thermal diffusivity, photoacoustic meas. 7—108547
folded and extended chain crysts., nucleation, unified theory 7—117852
Fourier transform IR microspectroscopy appl. 7—89282
Fourier transform IR spectroscopy appls. 7—131059
fracture experiments, high speed, appl. of dynamic numerical soln. 7—71270
fracture toughness meas., evaluation of short rod technique 7—86512
gas phase polymerisation, cloud chambers meas., mathematical models study 7—126455
gas sorption and transport, antiplasticization effect, free vol. interpretation 7—84498
gel solar pond, design, optimisation 7—126650
gels, kinetics of phase transition 7—84205
gels, mechanical instability at phase transition 7—71539
glass transition temp., calorimetric determ. *(Russian)* 7—84267
glasses, stress-strain relationship 7—84097
glassy polymers, solvent sorption, free boundary problem 7—84507
glassy polymers, stress relax. modulus and creep compliance interconnection formulae 7—98323
glossy, dynamic fracture instability, US fractography study 7—132741
hardening process of microplastics, rheokinetic investig. 7—144360
heat relaxational processes, temp. waves method appls. *(Russian)* 7—84410
helical S chains torsional pot., ab initio cryst. orbital calcs. 7—96506
heteroarylene vinylene units, five-membered, semiconductors, polymerisation and doping 7—76958
polymers continued
heteroatomic ladder polymers, nonlinear optical activity, elec. cond., mag. reson. techniques 7—99607
heterocyclic conducting polymers, electrochemical doping effects on electrical and optical properties 7—124972
heterocyclic ring chain polymers, electronic struct. 7—98788
hexafluorodianhydride-oxydianiline polyimide, XPS anal. 7—106360
homopolymer, saturated tetrahedrally bonded, model, polarons and bipolaron study 7—76787
hydrophilic, biocompatibility definition and control for contact lenses 7—94021
hydrostatic piezoresistive effect meas. as function of temp., computer-controlled system 7—128596
impact testing, high-speed, with penetration, comparative tests, review 7—78420
inhomogeneous polymer chains, ensemble of primary structures, statistics 7—122757
inorganic contamination, trace anal. to prevent corrosion 7—106653
insulator-electrode interface, high voltage breakdown *(French)* 7—106083
insulators, carrier injection, space charge, and elec. breakdown 7—125607
insulators, nonequilib. charge carrier transport, stochastic description 7—124981
interactions with water and suitability for use as electrical insulators 7—118253
ion beam induced chemical changes, SIMS studies 7—86651
ionic conductors, factors influencing conductivity *(Chinese)* 7—98546
ionomeric comb, glass transition relations 7—76408
isobutylene polymers and copolymers, compatibility with polyorganosiloxanes *(Russian)* 7—83793
isotropic and anisotropic, nonlinear creep and long-term strength prediction 7—100309
Kapton, secondary electron and photo-emission, electron yields and escape depths 7—113323
Kapton, X-radiation-induced conductivity meas. 7—131637
Kapton-H surface morphology development by sputter etching 7—144578
laser induced ablation, thermal nature 7—106794
laser pyrolysis 7—117971
LDPE, space charge polarisation in divergent AC field, role of atmospheric gases 7—125608
linear polymers, thermal depolymerisation, model 7—144702
liquid, nonisothermal flow in channel under pulsating press. gradient 7—97581
liquids, viscoelasticity, constitutive eqns. 7—130613
macromolecular dynamics, simulation, random constraint cage 7—103700
macromolecule diffusion, automatic diffusometer for study 7—68480
macromolecules, solid, unbranched, heat capacities calc. 7—118128
magadiite-polyacrylonitrile intercalation compound, prep. and conversion to SiC 7—119228
magadiite-polyacrylonitrile intercalation compound, Si_3N_4 form. by carbothermic reduction 7—119229
magnetic polymer design, radical mol. clusters, intramol. effective exchange integrals, ab initio GMO calcs. 7—74804
matrix, oriented, melting of low-molecular cpds. in micropores *(Russian)* 7—137595
matrix, relax. phenomena, tautomeric complex with H^+ transfer 7—92669
mechanical and elec. relax., time-temperature superposition principle and scaling behaviour 7—113590
mechanical behaviour nonlinearities, types and mechanisms *(Russian)* 7—98330
metal phthalocyanine sheet polymers, mag. susceptibility, electrical cond., X-ray diffr. 7—76949
metal-polymer interface, model systems *(French)* 7—105292
metal-polymer plates, two-layer, stress-strain state under cyclical loading 7—78109
metal/polymer contacts, charge transfer 7—99165
metalloporphyrin polymers of Fe, Ru and O_5 octaethylporphyrin, electrochemical, optical and cond. studies 7—143421
methacrylate resins, urethane modified, fracture toughness 7—138834
methyl methacrylate, homopolymerisation, multiple-component initiator technique study 7—113921
methylpropylpolysilane, photocond. 7—112391
micro-size polyacrylamide gel electrophoresis system 7—145301
mixture of polymers on square lattices 7—91475
molecular solids, surface electronic and vibr. studies 7—77027
Mooney-Rivlin C_2 constant, correl. with no. of chain atoms between entanglements 7—82404
Mylar, D^+ implantation, CO_2 evolution curve 7—98209
Mylar, X-radiation-induced conductivity meas. 7—131637
Nafion-Ag microcomposite membrane; O_2-N_2 separation 7—119569
Nafion-conducting polymer hybrids, anisotropic electronic conduction 7—92239
nematic comb-like polymers, order parameters, theory 7—75972
NMR analysis, computerized model fitting 7—78568
nonlinear characterisation of long-term behaviour 7—118033
nonlinear organic materials, new, prospects 7—82731
nonylbenzo-hexaquinone/Li cells, redox mechanism and cycling behaviour 7—126595
nylon, stress cracking in aq. salt soln., nylon-salt interactions 7—113739
nylon, stress cracking in aq. salt soln., stress-rupture behaviour 7—113738
nylon, stress cracking in aq. salt solns., craze-growth kinetics 7—113743
nylon, toughened, fracture toughness meas., J-integral method 7—113819
nylon 12 filled with $KTiO_3$ whiskers as optical fibre secondary jacketing material *(Japanese)* 7—117342
nylon plasma, ablation-stabilised arcs, transport and thermodynamic props. 7—111297
nylons, cryst. struct. 7—69609
Nystatin antibiotic in phospholipid bilayer membranes, fluoresc. props. 7—100809
one-dimensional conjugated polymers, electron-electron correlations 7—124896
optical disc substrate, moulding compounds, minimal birefringence 7—77506
optical fibre development, loss mechanisms and fabrication 7—90799
optical fibre materials 7—136463
optical fibre materials and props., conf., Boston, MA, USA (Dec. 1986) 7—134364
optical storage, conductive polymers as active media 7—110490
optical storage, erasable bilayer dye-polymer medium 7—110489
optical transition, homogeneous line broadening, review 7—75075
optical waveguides, efficient grating coupler fabrication by reactive ion beam etching 7—117302

polymers continued
organic polymer batteries, critical aspects 7−93497
organopolysilane, electronic struct., LCAO calcs. 7−98789
orientationally ordered materials, second-order nonlinear-optical processes 7−123058
oriented, nonlinear viscoelasticity in high-rate tension 7−78091
oriented crystalline, X-ray diffraction photographs, computer-based methods 7−97859
palladium poly-yne, third-order optical nonlinearity 7−97086
paraffin hydrocarbon, high energy electron transport 7−84907
particle collision with rigid barrier 7−136760
particle counter for rapid determination of size distributions 7−134716
PEBAX, polyether-polyamide copolymer, anelastic, dielectric props. 7−118941
PEEK matrix and composite, thermal sonic anal. 7−100177
permutation groups, character tables computation 7−96899
Perspex rods, paraboloidal-ended, explosively loaded in air and salt water, fracturing 7−71274
PET, amorphous and semicrystalline, small and intermediate angle neutron scatt. 7−69615
PET, charge carrier mobility, pass time method meas. *(Russian)* 7−84929
PET, CO_2 induced crystn., X-ray diffr. and IR spectra study 7−117840
PET, fatigue decohesion, struct. aspects *(Polish)* 7−138808
PET, intrinsic birefringence rel. to morphology 7−83786
PET, one parameter kinetic model for physical aging *(Spanish)* 7−142650
PET, oriented, amorphous, struct. deform. *(Russian)* 7−84100
PET, sp. ht. meas., 0.4-15 K 7−118126
PET substrates, vacuum evaporation of Al films texture anal. 7−113398
PET surface reactivity modification by low energy ion bombardment 7−93378
phase Hamiltonian in periodically modulated systems 7−69937
phenyl glycidylether+imidazoles, epoxide cure kinetics study, radiochemical anal. 7−113919
phenyl thiazyl compounds: synthesis and electrical conductivity 7−100552
phenyl-containing polymers, conducting, UPS meas. 7−70982
phenylon C4, polyamide, water diffusion and sorption *(Russian)* 7−137625
photopolymerisable recording materials, resolution *(Russian)* 7−82735
phthalocyaninato stacked bridged metal complexes, synthesis and elec. cond. 7−99026
phthalocyaninatoiron (II) and -ruthenium (II) bridged cpds., I_2 doping 7−131626
piezoelectric and pyroelectric polymers, props. and appls. *(Japanese)* 7−77468
piezoelectric polymers, properties and applications 7−77465
piezoelectricity and pyroelectricity, of polymers, bibliography, 1985-6 7−120718
pigmented particles, triboelectric charging 7−112435
plastic solutions for ice crystal replication 7−128551
plastic substrates, electroplated coatings *(German)* 7−92901
ploybutadiene-dihalocarbene adducts, 2D NMR study 7−91471
Pluronic F-68, adsorbed layers, rheological props., nonpolar phase effects 7−112079
PMMA, acoustic emission signals propag., theoretical expt. study 7−124669
PMMA, amorphous solids, thermal conductivity above the plateau 7−98596
PMMA, and related polymers, β-relax. origins, mol. mechanics calcs. 7−84123
PMMA, brittle plates, edge cracking and spalling 7−83098
PMMA, chain entanglements, fracture behaviour investig. 7−118026
PMMA, complex refractive indexes, specular reflection IR spectra 7−85574
PMMA, craze fibrils stiffness and struct., interferometry meas. 7−113740
PMMA, craze initiation in n-alkanes 7−132777
PMMA, creep and creep rupture, reduced variable relationship 7−126179
PMMA, crit. stress intensity factor determ. improved expt. method 7−136769
PMMA, dielectric loss measurement method at microwave freqs. 7−121147
PMMA, elastic modulus meas. by impact testing *(Russian)* 7−111737
PMMA, elec. fluctuations, heat treatment effects *(Russian)* 7−99101
PMMA, electron beam irrad., Kerr electro-optic field mapping meas. 7−99795
PMMA, electron resists evaluation, mass loss meas. 7−100595
PMMA, environmental stress crazing, in methanol. mol. props. effects 7−93125
PMMA, fracture energy meas. 7−132858
PMMA, fracture toughness, temp. depend., variation at T_g 7−132734
PMMA, fracture toughness meas., evaluation of short rod technique 7−86512
PMMA, gamma irrad., thermal expansion coeff., IR spectra 7−118138
PMMA, high speed fracture expts., appl. of dynamic numerical soln. 7−71270
PMMA, intramol. charge transfer fluoresc. as mobility probe 7−90263
PMMA, ion beam induced chemical changes, SIMS studies 7−86651
PMMA, irrad. by 8 MeV electrons, depth-dose profiles 7−101085
PMMA, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
PMMA, laser damage mechanism 7−69757
PMMA, laser damage threshold, Abel inversion of knife-edge data from radially symmetric pulsed laser beams 7−117246
PMMA, long-term creep prediction from short-term tests 7−138806
PMMA, microscopic deform. under uniaxial tensile stress, radiation and impurity effects *(Japanese)* 7−98316
PMMA, molecular motions studied by spin-probe and spin-label techniques 7−82231
PMMA, oriented, yield and thermoelastic props. 7−69810
PMMA, rubber toughened, fatigue crack propag., accel. following step increase in load amplitude 7−78171
PMMA, side group rot. motion, mol. mechanics obs. 7−82406
PMMA, toughened, fatigue crack growth, effect of load history 7−119354
PMMA, ultralow dose effects in ion-beam induced grafting 7−93351
PMMA bars, residual stress determ. by fracture mechanical relations *(German)* 7−86523
PMMA stereocomplex membranes, charged, salt permeability maxima 7−113992
PMMA temp. distrib meas. using holographic interferometry 7−80857
poly(1,4-dimethylene-trans-cyclohexyl suberate), semicryst., mech. hysteresis and adhesion meas. 7−118015

polymers continued
poly(2-hydroxyethyl methacrylate) in mixed water-alcohol solvents, conformational props. 7−74795
poly(2-hydroxyethyl methacrylate) microparticles, crosslinked struct. determ. 7−117831
poly(2-vinyl)pyridine, Auger spectra, localisation effects 7−82288
poly(3-methylthiophene), electrochemically doped, transient polaron occurrence 7−92087
poly(4,4′-triphenylamine), cyclic voltammetric, spectroscopic and ESR meas. 7−70317
poly(4-(N,N-diphenylamino-)phenyl methylmethacrylate), electrochemical doping, rectification and photovoltaic props. 7−69631
poly(4-methyl-pentene-1), uniaxially drawn, struct., thermal expansion 7−117841
poly(4-vinylpyridine), conformational anal. and IR spectra 7−68481
poly(bisphenol-A carbonate), positron annihilation lifetime studies 7−138543
poly(di-p-alkoxyphenyl itaconate)s, glass transitions and relax. obs. 7−124508
poly(ethylene glycols), 5-fluorouracil-capped, synthesis and antitumor activities 7−144715
poly(ethylene oxide)-LiX electrolytes, (X=I or CF_3SO_3) ionic transport parameters, potentiometric meas. 7−119635
poly(ethylene oxide)/$PbBr_2(I_2)(Cl_2)$ complexes, polymeric ionic conductors 7−69970
poly(ethylenimine) containing nucleic acid pendants, NMR and UV spectra 7−122758
poly(ethylenimine) containing nucleic acid pendants, synthesis 7−126457
poly(isopropyl methacrylate) with methacrylic or acrylic acid, dielectric and IR meas. 7−131056
poly(methoxy-substituted phenyl methacrylate), dielectric relax. meas. 7−132191
poly(p-perfluorophenylene), K-doped, conducting polymer, EPR study 7−106014
poly(p-phenylene), struct., study of biphenyl components 7−103387
poly(p-phenylene pentadienylene) and model cpd., H^+abstraction, elec. cond. 7−100554
poly(p-phenylene vinylene), correlation between conjugation length and nonradiative relaxation rate 7−83780
poly(paraphenylene vinylene), electronic struct., visible and UV spectra, INDO and PPP calcs. 7−137774
poly(phenyl methacrylate), dielectric relax. meas. 7−132191
poly(phenylethynylcopper), k-band ESR investig. 7−109954
poly(propylene glycol), low mol. wt., hypersonic props., mol. wt. depend. 7−104520
poly(ribonucleic acids), vibr. circular dichroism meas. 7−109966
poly(vinyl acetate), dielectric relax. near glass transition temp., coupling model 7−138382
poly(vinyl acetate), equation of state 7−118051
poly(vinyl acetate), glassy state, dielectric relax. meas. 7−132190
poly(vinyl acetate), spin-labelled, ESR spectra 7−125538
poly(vinyl acetate), swollen gel, elastic moduli meas. 7−118016
poly(vinyl acetate) spin probes rot. diffusion, ESR 7−92504
poly(vinylidene fluoride), mol. defect role on struct. and phase transform. 7−97989
poly(vinylidenefluoride-trifluorethylene) ferroelectric copolymers, phase transition, spectroscopic study in submillimetre region 7−118956
poly ϵ-caprolactone, crystn. kinetics and morphology 7−124127
poly L-alanine, struct., heat treatment effect, DTA, X-ray diffr., IR spectra 7−111427
poly N,N′-bis(phenoxyphenyl)-pyromellitimide, deform., smectic ordering, X-ray scatt. 7−86274
trans-1,4-poly-1,3-pentadiene, cryst., isotactic, stress-induced conform. transitions 7−91472
poly-1,4-dithianaphthalene, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
poly-2,6-dimethyl-1,4,-phenylene oxide, miscibility with styrene-tetramethylpiperidinyl methacrylate copolymers 7−98457
poly-2, 2′-dithienyl-5,5′ diylvinylene, prep. and elec. cond. props 7−76908
poly-2-vinylpyridine-I_2/Li battery, rate limiting mechanism, component morphologies, SEM study 7−71592
poly-2-vinylpyridine-I_2/Li battery, rate limiting mechanism, impedance spectroscopy 7−71593
poly-3 methylthiophene, conductivity, charge and size dopant effects 7−70295
poly-3-(2-alkanesulphonate)thiophenes, conducting polymers, self-doping 7−105551
poly-3-methylthiophene, optical spectra and electronic struct. 7−77562
poly-4-methyl-pentene-1, uniaxial draw by solid-state coextrusion 7−93043
poly-ϵN-methacryloyl-L-lysine, spectrosc. obs. 7−90183
poly-L-ornithine, dye binding, conform. transition and induced circular dichroism 7−103699
poly-N-5-n-alkyloxycarbonyl-n-pentyl maleimides, γ-transition, functional group effects 7−90461
poly-N-benzyldiphenylaminomethane, struct. characters., RDF analysis of X-ray diffr. patterns 7−69608
poly-N-epoxypropylcarbazole, amorphous semiconductor, charge carrier mobility 7−84994
poly-N-vinylcarbazole, amorphous semiconductor, charge carrier mobility 7−84994
poly-N-vinylcarbazole, drift mobility enhancement by adding pyrazoline derivatives *(Japanese)* 7−84970
poly-p-phenylene, vibr. spectra rel. to stereochemical struct. 7−68482
poly-p-phenylene(-d), donor- and acceptor-doped, temp. depend. electron spin echo studies 7−70641
poly-p-phenylene sulphide, conducting, UPS meas. 7−70982
poly-p-phenylene vinylene, conducting, UPS meas. 7−70982
poly-p-phenylene vinylene, thermal generation mechanism 7−93324
poly-p-phenylenes, heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
polyacene, prep., elec. cond. and IR spectra 7−84852
polyacenic materials, elec. cond. and thermoelectric power 7−84954
polyacenic materials, pristine and heavily doped, ESR studies 7−112930
polyacenic semiconductive material, in situ doped, ESR study 7−85431
polyacenic semiconductor based battery 7−93498
polyacenoquinones, dielec. spectroscopy studies 7−99653
polyacetal, torsional fatigue props. *(Japanese)* 7−93085
polyacetylene: I, high elec. cond. in doped polymer 7−112337
polyacetylene:I, doped and undoped, muon spin rotation and relax. 7−70688

polymers continued
polyacetylene:I, optical props. and valence to conduction band transition 7−70790
polyacetylene:I stretched system, polarised resonant Raman scatt. studies 7−70795
polyacetylene:Li(Na), semicond.-metal transition, ESR studies 7−98810
polyacetylene:Na, incommensurate-commensurate and order-disorder transformations 7−105007
polyacetylene:Na, Raman and EPR spectra studies 7−70792
polyacetylene:SO_3, EPR study 7−70639
trans-polyacetylene, amplitude and phase modes, reson. Raman scatt. and induced IR activity 7−138451
trans-polyacetylene, anisotropic defect photogeneration, interchain effects 7−106132
trans-polyacetylene, bond conjugation defects, ENDOR study 7−99605
polyacetylene, bond-charge repulsion, extended Hubbard model 7−105432
polyacetylene, bound states around dopants 7−137860
polyacetylene, cis- and trans-, morphology control by epitaxial polymerisation 7−69623
polyacetylene, cis- and trans-, photogenerated solitons, IR-active vibrs. 7−70788
polyacetylene, cis- and trans-, Raman spectra using 1064 nm and 532 nm laser light 7−70794
polyacetylene, cis- and trans-, transport props., mol. wt. depend. 7−99039
polyacetylene, conducting, charge fluxes and electron delocalisation, IR intensities anal. 7−70251
trans polyacetylene, conducting polymer, synthesis and elec. props. 7−124970
polyacetylene, Coulomb and pinning effects on soliton-related phonon modes 7−137499
polyacetylene, degeneracy of solitons and polarons for translation between nearest neighbour sites 7−92086
polyacetylene, doped, electrochemical reaction with acetonitrile electrolytic soln., battery appl. 7−93339
polyacetylene, doped, XPS, Coulomb interaction effects 7−100017
trans-polyacetylene, doped solid and soln. doping and photo-induced IR spectra 7−99853
polyacetylene, Durham form., order-disorder, elec. cond., struct. 7−97988
polyacetylene, electron-phonon coupling and disorder 7−105416
polyacetylene, freq. depend. of third order optical susceptibility 7−141941
trans-polyacetylene, fully oriented, polarised reson. Raman scatt. 7−85736
polyacetylene, ground state with off-diagonal random disorder 7−137778
polyacetylene, heavily-doped, transition to a gapless Peierls insulator 7−70367
trans-polyacetylene, interchain photogeneration of charged solitons 7−105423
trans-polyacetylene, interchain solitonic excitons, IR absorption 7−118370
trans-polyacetylene, IR, Raman and neutron spectra, vibr. state density 7−110155
polyacetylene, longit. dielec. function calc. 7−124897
polyacetylene, $MoCl_5$ doped, photoelectron spectroscopy 7−70981
polyacetylene, model Hamiltonian discrete symmetries and selection rules 7−70215
polyacetylene, near IR absorption and pulsed photocond. 7−99870
polyacetylene, neutral and electrochemically doped, secondary radiation emission 7−70906
t-polyacetylene, neutral soliton dynamics, temp. depend. 7−70218
trans-polyacetylene, NMR obs. of temp. depend. spin-lattice relax. 7−138339
polyacetylene, nonlinear optical activity, elec. cond., mag. reson. techniques 7−99607
polyacetylene, ordered and disordered 1D crysts., mol. dynamics 7−142934
trans-polyacetylene, oriented, undoped and I doped, polarised resonant Raman spectra 7−70784
polyacetylene, oxidative deterioration, control by localised energy levels 7−71339
polyacetylene, phonons and soliton diffusion 7−137817
trans-polyacetylene, photocond., polarons and solitons 7−84998
trans-polyacetylene, photoinduced IR spectra, lattice dynamical calcs. 7−70789
polyacetylene, picosec. Raman transients obs. 7−85735
trans-polyacetylene, polaron mobility 7−84703
polyacetylene, segmented, transport and mag. props. 7−70273
polyacetylene, self-consistent electronic struct., π electrons 7−76731
polyacetylene, soliton config. effects of localized modes 7−137498
trans-polyacetylene, soliton localised electron states 7−143390
polyacetylene, soliton pinning, multiple-quantum spin coherence obs. 7−137811
polyacetylene, soliton spin density, ENDOR 7−70217
polyacetylene, soliton wave function, ENDOR studies 7−125557
polyacetylene, statistical mechanical model, existence and uniqueness of Gibbs states 7−73181
polyacetylene, supersymmetric treatment of random disorder in continuum model 7−118417
polyacetylene, synthesis, precursor polymer struct. 7−97987
trans-polyacetylene, transient photoconductivity, temp. depend. 7−70358
polyacetylene, vibr. and soliton dynamics 7−69849
polyacetylene, WCl_6 doping, XPS and NAA studies 7−106379
polyacetylene, WCl_6-doped, photoelectron spectroscopy 7−70980
polyacetylene batteries, scaling up and problems 7−93499
polyacetylene battery with unsymmetrical tetraalkyl ammonium salt 7−93495
polyacetylene cathode, impedance in electrolytic solns. of Li secondary cell 7−133075
polyacetylene chains, analytical energy gradients, PPP Hamiltonian 7−129912
trans-polyacetylene chains, soliton states, electron correls. effects 7−105424
polyacetylene copolymers, Raman and photoinduced IR absorption spectra 7−70791
trans-polyacetylene dimerisation, local density functional calcs. and the band-gap problem 7−112167
polyacetylene doped chain, charged soliton conduction 7−99037
trans-polyacetylene electronic props., self-consistent linear combination of Gaussian orbitals method 7−105399
trans-polyacetylene intercalation cpds., chain dimens., charge transfer effects, X-ray diffr. anal. 7−137263
polyacetylene Peierls electron-phonon system with half-filled band, decoupling of charge and spin density waves 7−84699

polymers continued
trans-polyacetylene picosecond time-resolved absorption in the mid-infrared by seeded optical parametric generation 7−138396
polyacetylene/Li solid-state battery 7−126596
polyacetylenes, μSR studies 7−118931
polyacetylenes, electronic struct., INDO/S framework, ^{13}C NMR chem. shift 7−110158
polyacetylenes, I-doped substituted, Raman and far-IR vibr. spectra 7−144047
polyacetylenes, soliton kinetic props., continuum model calcs. 7−112202
polyacrylamide, adsorbed on Ag colloids, SERS 7−144056
polyacrylamide, UV irrad., gas-free radical reaction, EPR obs. 7−92492
polyacrylate deuterons, relax., counterion influence 7−82217
polyacrylic acid, adsorpt. on Aerosil, cation effects investig. 7−70076
polyacrylonitrile, film and powder, thermooxidative degradation laser irrad. effects *(Russian)* 7−113914
polyalkylacrylate, lamellar polymer, defects, high resolution electron microscopy 7−69633
polyamide, fatigue resist. coeff. rel. to long exposure time *(German)* 7−86339
polyamide 12, dielectric relaxations, TSC investig. 7−118938
polyamide acid, rheological props. and mol. mass, thermal imidization effects *(Russian)* 7−91052
polyamides, acid dissolution, membrane form., charact. 7−119572
polyamides, aliphatic, heat ageing, physical and mech. props. changes *(Russian)* 7−97997
polyamides, cryst. lattice, thermal expansion obs. *(Russian)* 7−111921
polyamides, rigid-rod, solubility, mol. factors influence 7−98474
polyaniline, ab initio HF energy band struct. calcs. 7−116820
polyaniline, charge and conductivity, potential-pH diagrams 7−112314
polyaniline, defect states 7−70219
polyaniline, electrochemistry and appl. to rechargeable batteries 7−71502
polyaniline, emeraldine base form, insulator to metal transition on protonation 7−70193
polyaniline, fibrous, appl. as positive active material in Li secondary cells 7−133078
polyaniline, insulator-to-metal transition 7−112184
polyaniline, molecular conformation and optical spectra, CNDO/S3 calcs. 7−99887
polyaniline, NMR and transport props., water vapour pressure dependence 7−70656
polyaniline, redox chemistry 7−71489
polyaniline, spectroelectrochemical expts. 7−71500
polyaniline, vibr. spectra, Raman studies 7−98369
polyaniline and substituted derivatives, electronic struct. 7−68483
polyaniline anode in $LiClO_4$/propylene carbonate electrolyte, electrochemical props. 7−71501
polyaniline conducting polymer, doping and elec. props. 7−76912
polyaniline on ITO/p-Si, solar cells using conductive polymer 7−86783
polyaniline synthesis for use in Li secondary cells 7−133077
polyanilines, photoelectron spectroscopy relevant to chemical and electronic struct. 7−70984
polyarenemethines, synthesis, doping, struct., conductivity meas. 7−71146
polyarylene ether, glass transition temp., acoustic meas. 7−123404
polyarylene ether ketones, crosslinking, crystn. kinetics 7−124126
polyarylene metalosulphides, thermal degradation, vibr. spectrosc. obs. *(Russian)* 7−86617
polybis-(p-toluene sulphonate) single crystal, phase transition at low temp., photoacoustic effect study *(Chinese)* 7−118075
polybisphenoxyphosphazene, crystal modifications, electron microscopy 7−111425
polybutadiene, crystallisation, size mismatch effects, small angle neutron scatt. 7−69611
polybutadiene, relax. transitions, mech. relax. obs. *(Russian)* 7−111766
polybutadienes, halato telechelic, cond. and thermally stimulated processes 7−99655
polybutylene terephthalate, high temp. large-strain behaviour 7−132683
polycarbonate: TDP, single-trap-controlled transient hopping, time-of-flight meas. 7−118486
polycarbonate, alcohol-assisted craze growth kinetics 7−119391
polycarbonate, doped with triphenyl methane and xanthene dyes, thermolum. 7−132355
polycarbonate, favourable residual stresses, meas. 7−110887
polycarbonate, fracture energy meas. 7−132858
polycarbonate, fracture toughness meas., evaluation of short rod technique 7−86512
polycarbonate, high temp. large-strain behaviour 7−132683
polycarbonate, torsional fatigue props. *(Japanese)* 7−93085
polycarbonate bars, notched, ductile and brittle fracture conditions 7−91712
polycarbonate microporous membranes, apparent ionic diffusion coeffs. of LiCl and $MgCl_2$ electrolytes 7−106829
polycarbonate substrate for magneto-optical disc, optical anisotropy effect on CNR 7−77507
polycarbonate substrates for magneto-optical disks 7−110287
polycarbonate surface props., adhesion of yeast cells 7−106643
polycarbonate thermoplastic, J-integral as fracture criterion 7−113680
polyconjugated systems for intrinsically conductive polymers, elec. props. and synthesis 7−86610
polycumulenes, equilibrium geometry and electric polarisability, ab initio calc. 7−122357
polydiacetylene:I_2, electrical props. 7−70296
polydiacetylene, acceptor-type, synthesis and electric conduction 7−71492
polydiacetylene, bromination and bromination products, ESR 7−70631
polydiacetylene, chemically modified soluble, absorption spectra 7−82407
polydiacetylene, photoinduced structural changes *(Japanese)* 7−98237
polydiacetylene, urethane substituted, solid-state phase transitions 7−142991
polydiacetylene, urethane-substituted, elec. props. 7−84851
polydiacetylene crystal, electronic struct. and photo-induced struct. change 7−112172
polydiacetylene nonlinear optical response of excitons confined to one dimension 7−110444
polydiacetylene oligomers, short-chain, radical electron configurations, optical excitations 7−138471
polydiacetylene single crystal, pulsed ESR meas. of photoexcited triplet-soliton pairs 7−70624
polydiacetylene single crystals, transient negative and positive reflectance changes 7−85776
polydiacetylene-bis-p-toluene sulphonate, fast transient photocond. 7−112401

polymers continued
polydiacetylene-pTS relaxation dynamics, transient gratings, singlet and triplet excitons 7—135958
polydiacetylenes, cryst. struct., thermal studies 7—97990
polydiacetylenes, electronic phase-transition, spectroscopic meas. 7—70730
polydiacetylenes, excited-state dynamics and temporally resolved nonresonant nonlinear-optical processes 7—123060
polydiacetylenes, nonlinear spectroscopy 7—82715
polydiacetylenes, substituted, electronic struct., role of conformational disorder 7—84654
polydichloro-p-xylylene electrets, surface potential isothermal discharge 7—143957
polydimethacrylates, cross-linked, depolymerisation kinetics 7—139000
polydimethyl siloxane, O_2 concentration meas. using fluoresc. quenching, biomedical sensor appl. 7—78579
polydimethylsilane, conducting, UPS meas. 7—70982
polydimethylsiloxane, solid-gas mass transfer meas. by swollen polymer method 7—75261
polydimethylsiloxane, viscosity, effects of press. and temp. 7—69955
polydimethylsiloxanes, cyclic and linear, low temp. props., viscometric and calorimetric obs. 7—89225
m-polydiphenylcarbene, ferromag. props., periodic Kondo-Hubbard model calcs. 7—77201
m-polydiphenylcarbene, quasi-one dimens. ferromagnet, HF and Hubbard approxs. 7—99394
m-polydiphenylcarbene quasi-1D ferromagnet, periodic Kondo-Hubbard model calcs. 7—77200
polydiphenylenediphenylvinylene, photoluminescence study 7—70908
polyene linear chain, Hartree-Fock eigenvalues, instability numbers *(Russian)* 7—143451
polyenes, synthesis with electron donor and electron acceptor groups 7—71145
polyepoxy matrices DGEBA-DDM and DGEBA-IPD: mech. props. and biocompatibility 7—145275
polyester, cross-linked, neat and glass-bead-filled, water absorbance, effect of tension 7—78292
polyester resins, unsaturated, and composite technology for elec. engng., appl. of ionised radiation *(Romanian)* 7—113918
polyester-urethane-TiO_2 composite viscoelastic behaviour 7—137439
polyestercarbonate, n 7—132744
polyesters, linear, aliphatic, heat capacities 7—91836
polyether complex with Li salt, amorphous electrolytic conduction 7—143091
polyether urethane urea, albuminated, lectin immobilised, tissue compatibility 7—114554
polyether-polyurethane-$LiClO_4$ networks, ionic cond. mechanism 7—133066
polyetheretherketone, crystal texture 7—111423
polyetheretherketone, single particle impacts and erosion 7—78274
polyetheretherketone matrices, crystallisation kinetics 7—76037
polyetherimide, high temp. large-strain behaviour 7—132683
polyetherketone, crystal texture 7—111423
polyethers, gas phase protonation, combined ab initio quantum mechanical and mol. mechanical method appl. 7—74423
polyethylene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7—75078
polyethylene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7—70673
polyethylene, AC elec., ageing phenomena, thermally stimulated discharge current meas. 7—85529
polyethylene, acoustic emission signals propag., theoretical expt. study 7—124669
polyethylene, C KVV Auger line shape, satellite identification 7—125870
polyethylene, composite form., stretching, strain, thermodynamic anal. *(Russian)* 7—100176
polyethylene, crack growth rel. to crazing 7—113675
polyethylene, cryst., fracture and toughness 7—132743
polyethylene, disordered chain mols., Raman spectra 7—90464
polyethylene, double torsion testing of high velocity crack resistance 7—86511
polyethylene, ductile-brittle fracture transition study 7—119357
polyethylene, electron irrad. and thermal treatment effects on optical props. *(Russian)* 7—99790
polyethylene, extended chain crystals, thermoluminesc. 7—132357
polyethylene, fluorinated, XPS, ab initio study using model systems 7—122327
polyethylene, friction characts., effect of air irrad. 7—132762
polyethylene, high and low density, Gruneisen and thermoelastic coeffs. at high hydrostatic press. 7—106557
polyethylene, high density, abrasive wear resist. depend. on mol. characts. 7—100397
polyethylene, high density, fatigue crack growth, effect of load history 7—119354
polyethylene, high density, fatigue crack propag. anal. 7—119356
polyethylene, high density, influence of thermal treatment on micromechanical props. *(French)* 7—100265
polyethylene, high-density, effect of ageing on creep tests *(German)* 7—86299
polyethylene, high-density, nonlinear creep and long-term strength prediction 7—100309
polyethylene, high-density, static and dynamic fatigue crack growth rates, comparison 7—113663
polyethylene, high-pressure differential thermal analysis/dilatometric apparatus based on an Instron capillary rheometer 7—102407
polyethylene, irradiated, radiation oxidised layer thickness evaluation *(Russian)* 7—139031
polyethylene, isothermally crystallised bulk, chain inclination angle determ. 7—131055
polyethylene, K-shell excitation spectra, C—H resonance identification 7—138545
polyethylene, lin., hydrostatically extruded, mechanical preps. meas. 7—104889
polyethylene, linear, natural abundance ^{13}C spin exchange study 7—70663
polyethylene, low density, deform. re. to mol. wt. distrib. 7—113627
polyethylene, low density, I_2-doped, reversal TSC *(Japanese)* 7—112365
polyethylene, maximally stretched, high density, mol. mobility and fracture processes *(Russian)* 7—86355
polyethylene, melt crystallised, morphological partitioning of chain ends and methyl branches, NMR obs. 7—124125
polyethylene, opacity coefficients, Thomas-Fermi model anal. 7—106115
polyethylene, oriented, acoustic mode struct. 7—82135

polymers continued
polyethylene, perfectly ordered and oriented, theoretical strength, weak-link chain defects influence 7—83787
polyethylene, radiation crosslinking, mol. weight distrib. effect 7—122762
polyethylene, semi-cryst., epitaxial crystn. and interfaces 7—83778
polyethylene, semicryst., solid state extrusion 7—78079
polyethylene, sheets, mech. props., radiation cross-linking effects 7—91484
polyethylene, single crysts., IR defect modes 7—92670
polyethylene, solid, cross polarisation, sample spinning effect 7—90207
polyethylene, solid particle impact, erosion and deformation 7—93107
polyethylene, static fatigue fracture, morphological anal. 7—86331
polyethylene, stretched, solvent for polarised optical spectrosc. 7—108668
polyethylene, struct. change with temp., ^{13}C NMR study 7—104596
polyethylene, tensile and melt flow meas., antioxidants influence 7—142869
polyethylene, tensile and melt flow meas., UV stabilisers influence 7—142870
polyethylene, thermal oxidation, chemiluminesc. and IR spectra 7—96897
polyethylene, thermal stabilisation with lignosulphate, rheological props. 7—92954
polyethylene, tubular flow-induced crystn., mol. wt. fractionation 7—83783
polyethylene, ultra high mol. wt., bio-composite advanced material research and development, artificial hip joint appl. 7—133506
polyethylene, Vickers hardness indentations depth meas. by interference microscopy 7—113820
polyethylene, wide-angle X-ray scatt. profile anal. 7—117837
polyethylene and CR-39 fast neutron dosimeter, dosimetric efficiency 7—103336
polyethylene and CR-39 fast neutron dosimeter, emitted proton flux characts. 7—103335
polyethylene chain, thermal conductivity 7—105161
polyethylene chains containing defects, longit. acoustic mode freqs. 7—84170
polyethylene dielectric structures under gamma radiation, electrical conductivity, surface charge influence 7—138005
polyethylene glycols, retention on cellulose acetate membranes, protein effects 7—93375
polyethylene oxide lithium trifluoromethane sulphonate complex as electrolyte for Li/Nb_2O_5 cell 7—93485
polyethylene oxide-KSCN complexes, morphology and ion cond. meas. 7—124587
polyethylene oxide-water system, phase anal. *(Russian)* 7—84228
polyethylene protective-filtering materials, pore struct. and filtration characts. *(Russian)* 7—100404
polyethylene relaxation thermodynamics, rate theory 7—97983
polyethylene surfaces, conform. signature, valence XPS, ab initio STO calcs. 7—92825
polyethylene terephthalate, crystallisation, strain and secondary relax. transition *(Russian)* 7—137454
polyethylene terephthalate, mol. wt. distrib., gelpermeation chromatography 7—122756
polyethylene terephthalate, XeCl laser ablation, effect of optical pulse duration, photoacoustic spectra study 7—113964
polyethylene thermal diffusivity meas. using modified Angstrom method 7—102406
polyethylene twins, growth kinetics, nucleation and growth processes 7—98018
polyethylene-Fe interface, ion-beam mixing, conversion electron Mossbauer study 7—124345
polyethylene/Ti-Al-V tribological couple, wear behaviour, effect of metal surface prep. and N implantation 7—79139
polyethyleneglycol, monolayers on water/air interface, kinetic study *(German)* 7—98617
polyethylenes, highly drawn, tensile strength rel. to mol. wt., Flory model 7—144475
polyethylenes, irradiation- and peroxide-crosslinked, struct. and tensile behaviour 7—78398
polyethylenes, mech. props., struct. and morphological factors 7—71244
polyfluoroacetylenes, electronic structure and conduction props. 7—112165
polyimide, Al-Cu film adhesion, electromagnetic tensile test 7—71462
polyimide, condensation polymer, Co_3O_4 doped, elec. and spectroscopic props. 7—70308
polyimide, large area microwave plasma etching 7—119388
polyimide, laser etched, electrostatic collection of debris 7—136118
polyimide, macromol, rigidity and cryst. lattice elasticity *(Russian)* 7—82411
polyimide, photoconduction anisotropy rel. to mol. orientation 7—99117
polyimide, pyrolysed, elec. cond., ESR study 7—99001
polyimide, XeCl laser ablation, effect of optical pulse duration, photoacoustic spectra study 7—113964
polyimide planar optical waveguides, fabrication 7—103988
polyimide substrates for continuous-mode fabrication of a-Si:H solar cells 7—133100
polyimide surface, ion bombardment induced decomposition, XPS and direct recoil spectrometry 7—106328
polyimide-Cu(Cr) interface, struct. and chemistry, PES studies 7—144228
polyimidesulfone adhesive, fracture evaluation 7—78175
polyisonaphtothiophene, conjugated organic polymer, electronic struct. 7—143315
polyisoprene, oxidative-degradative processes, mech. stress effects *(Russian)* 7—113915
trans-1, 4-polyisoprene single crystals, certain unusual habits 7—83779
polyisothianaphthene, electrochromic switching of optical props. 7—70747
polylactide fixation plates and screws, mech. and biological behaviour 7—114564
polymer coil-globule transition by real space renormalisation 7—108434
polymer-alkali metal salt complexes, solid electrolytes, struct. design to increase ionic cond. 7—98576
polymer-ceramic composite piezoelectric materials *(Korean)* 7—99683
polymer-piezoceramic composites for US biomedical transducers 7—92606
polymeric glasses, secondary relax. and glass transition 7—97985
polymeric materials with Al-PET-Cu structure, short-circuit current in high temp. region *(Korean)* 7—138071
polymetacyclophane, polyconjugated system, synthesis, struct. and elec. props. 7—86624
polymethacrylic acid, linear, interaction with lysozyme in soln., polarised luminesc. obs. *(Russian)* 7—85839
polymethine dyes, S_1-state deactivation, time resolved fluoresc. and absorpt. investig. 7—103572
polymethyl methacrylate, glass transition temp., acoustic meas. 7—123404

polymers continued
polymethyl methacrylate, radiation induced crosslinking *(Chinese)* 7−93319
polymethylmethacrylate: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polymethylpentenesulphone, complex refractive indexes, specular reflection IR spectra 7−85574
polymethylphenylsiloxanes, viscosity, effects of press. and temp. 7−69955
polymyrcenes, hydroxy functionalised, form., appl. as rubber-toughening agents in glassy polyurethanes 7−86621
polymyxin B, double-quantum filtered COSY expts., decoupling, excitation, NMR 7−67357
polynorbornene, double bonds ^{13}C NMR 7−118881
polyolefin electron-beam cross-linking using cross-linking reinforcing agents 7−106816
polyolefin insulation oxidative degradation due to surface influences 7−106652
polyolefin-steel adhesion-bonded joints, localisation of cohesion failure front 7−78454
polyoxyethylene n-hexadecyl ethers, longit. acoustic modes, perturbed elastic rod model appls. 7−110153
polyoxyethylenes, longit. acoustic modes, perturbed elastic rod model appls. 7−110153
polyoxymethylene, γ-irrad., thermal expansion coeff. meas. 7−91847
polyoxymethylene ^{13}C NMR spectra, chemical shift, electronic structure, solid state, tight-binding calcs. conformation 7−143317
polyoxymethylene (polymerised formaldehyde), Giotto detect. in Periodic Comet Halley (1982i) 7−139982
polyoxymethylene (polymerised formaldehyde), Giotto identification in Periodic Comet Halley (1982i) 7−139983
polyparaphenylene, conducting, charge fluxes and electron delocalisation, IR intensities anal. 7−70251
polyparaphenylene, crystalline, optical excitation study 7−70907
polyperfluoropropylene oxide, complex refractive indexes, specular reflection IR spectra 7−85574
polyperylene and poly(p-phenylene), substituted polymers with metallic props., design 7−131522
polyphenylacetylene polymerised with ferric acetylacetonate/triethylammonium catalyst, ESR spectra 7−70646
polyphenylene oxide, gas sorption and permeability rel. to antiplasticization 7−84497
polyphenylene oxide, laser irrad., dynamic thermal field creation in surface layers, chem. transform. 7−137400
polyphenylene sulphide and C fibre composite, friction and wear in unlubricated conditions 7−126262
polyphenylene sulphide and C fibre composite, friction and wear with water lubrication 7−126263
polyphenylenesulphide, acceptor doped, conducting, transport mechanism, EPR, mag. susceptibility meas. 7−70630
polyphenylenesulphide, crystal texture 7−111423
polyphenylenevinylene, conducting, charge fluxes and electron delocalisation, IR intensities anal. 7−70251
polyphenylenevinylene, photoluminescence, photoinduced absorpt. studies 7−70908
polyphenyline benzobisthiazole, ion implanted, conducting, Raman obs. 7−85738
polyphenylquinoxaline base antifriction self-lubricating plastic, surface layer props. and struct. rel. to friction temp. 7−71307
polyphosphates, open-chain linear, ^{31}P NMR spectra anal. chemical shifts, effect of pH and protonation 7−68353
polyphosphazenes, struct., thermodynamic, thermal behaviour 7−117835
polypropylene, ^{1}H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
polypropylene, cryst., fracture and toughness 7−132743
polypropylene, drawn, anisotropic thermal expansion 7−69939
polypropylene, hard and elastic, SAXS *(German)* 7−137247
polypropylene, isotactic, highly disperse struct. form. by deform., annealing effect *(Russian)* 7−113640
polypropylene, isotactic, highly oriented, melting, rel. to stretching multiplicity *(Russian)* 7−91775
polypropylene, isotactic, mechanics of equibiaxial hydrostatic deform. 7−113629
polypropylene, isotactic, proton beam modification 7−117984
polypropylene, isotactic, solid phase photooxidation, photoinitiator efficiency *(Russian)* 7−113963
polypropylene, isotactic, uniaxial stretching deform., Ramon spectra studies *(French)* 7−85641
polypropylene, oriented, crystalline and noncrystalline molecular orientation, IR dichroism 7−69613
β-polypropylene, premelting and recrystallisation behaviour 7−118068
polypropylene, semicryst., solid state extrusion 7−78079
polypropylene, stress whitened, chloroform transport 7−76495
polypropylene, syndiotactic, thermophysical props. 7−98593
polypropylene, thermal oxidation, chemiluminesc. and IR spectra 7−96897
polypropylene, transcrystalline layers, struct., mech. props. 7−119234
polypropylene transient absorpt. currents and surface leakage, impurity ion conduction 7−113077
polypyromellitinide, complex refractive indexes, specular reflection IR spectra 7−85574
polypyrrole, bipolaron state due to doubly charged anion dopant 7−76792
polypyrrole, conducting polymer, ESR study of polarons and bipolarons 7−76791
polypyrrole, conducting polymer, synthesis and elec. props. 7−124970
polypyrrole, lightly doped, frequency dependent conductivity 7−137907
polypyrrole bromide, conducting, local struct., X-ray absorption spectra 7−76038
polypyrrole conducting polymer electrodes, capacitive and noncapacitive charge 7−100701
polypyrrole-polyelectrolyte composite membrane, charge-controllable 7−100592
polypyrrole-polyethylene oxide composite electrode for Li rechargeable cell, cycling behaviour 7−139104
polypyrroles, elec. cond. and thermoelec. power 7−76871
polyrotaxane, form., urethane macrorings conform. effects 7−106799
polysilanes, π-bonded, photocarrier generation and transport 7−84997
polysiloxanes, cross-linked stationary phases, n-alkane sorption mechanism, thermodynamics investig. 7−113978
polysiloxanes, US and hypersonic dispersion 7−84135
polystyrene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polymers continued
polystyrene, γ-irrad., thermal expansion coeff. 7−104832
polystyrene, charge carrier mobility, pass time method meas. *(Russian)* 7−84929
polystyrene, complex refractive indexes, specular reflection IR spectra 7−85574
polystyrene, dielectric loss measurement method at microwave freqs. 7−121147
polystyrene, electron traps, activation energy distribs., thermally stimulated luminesc. anal. 7−84918
polystyrene, fatigue, craze fibril deform. and microstruct. 7−126218
polystyrene, fatigue crack layer propag., theoretical analysis 7−132713
polystyrene, fracture toughness meas., evaluation of short rod technique 7−86512
polystyrene, high temp. crazes, low angle electron diffr. 7−126217
polystyrene, iodohexane impurity sorption and steady-state diffusion front motion, case-II diffusion regime 7−118165
polystyrene, ion bombarded, molecular weight distribution and solubility changes 7−91667
polystyrene, irradiation reticulated, electrotechnical industry appl. *(Romanian)* 7−111421
polystyrene, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
polystyrene, linear chains, Monte Carlo calcs. and neutron scatt. obs. 7−90462
polystyrene, low temp. thermal cond. 7−124607
polystyrene, modified as candidate material for solidification of tritiated waste 7−122214
polystyrene, monodisperse atactic, dynamic mech. props., time-temp. superposition 7−113597
polystyrene, partially sulphonated, ionomer, fatigue rel. to ionic aggregates 7−86346
polystyrene, particle size limit on Kratky camera 7−74847
polystyrene, radiography, X-ray scatt., coupled electron/photon Monte Carlo calcs. 7−78447
polystyrene, radiolysis, charged particle prod., photoradiation processes 7−71513
polystyrene, single edge notched, fatigue crack layer propag., crazing zone obs. 7−132712
polystyrene absorbed-dose-rate calorimeter 7−89784
polystyrene gel, induced by ion and electron bombardment, XPS study 7−93397
polystyrene gels, Brillouin scatt. study 7−113213
polystyrene latex, radiation passage, bleaching phenomenon 7−117277
polystyrene microspheres, colloidal suspension, collective effects, density fluctuation dynamics, inelastic light scatt. anal. 7−106835
polystyrene recovery voltage in capacitor dielec. absorpt. and equiv. cct. 7−99654
polystyrene scintillators, stabilising influence of ionising radiation on excitation energy transfer 7−103332
polystyrene spheres, monodisperse, deionised suspensions, microscopic obs. of crystallites 7−114003
polystyrene spun-on waveguide, efficient grating coupler fabrication by reactive ion beam etching 7−117302
polystyrene transient swelling, iodohexane sorption, case-II diffusion regime 7−118164
polystyrene-PVA double layered shells for ICF, microencapsulation technique 7−135567
polystyrenes, surface analysis using mass spectrometry 7−93443
polysulfone, gas sorption rel. to antiplasticization, thermal and mech. props. 7−84496
polysulphone, fracture toughness meas., evaluation of short rod technique 7−86512
polysulphone, glass transition temp., acoustic meas. 7−123404
polysulphone, synthesis, NMR and rheological study 7−119530
polytetrafluoroethylene membranes, pore charaets., Monte Carlo method 7−142365
polytetrafluoroethylene polymers, glow discharge effects obs. 7−95689
polythiazole, semicond. polymer having heteroatom in conduction pathway, DC cond. meas. 7−76959
polythiophene: BF_4^-, Pauli and Curie susceptibility, ESR/WMR meas. 7−77203
polythiophene, bipolaron state due to doubly charged anion dopant 7−76792
polythiophene, photoexcitation spectroscopy, ODMR 7−70897
polythiophene, photoluminescence and optically detected mag. resonance studies 7−77653
polythiophene, processible, environmentally stable and highly conducting forms 7−76911
polythiophene, resonant Raman scatt. photoinduced absorption studies 7−77560
polythiophene derivatives-GaAs based electronic structures and devices 7−92277
polythiophene electroconducting polymers, synthesis method 7−78490
polythiophenes, conducting, enhancement of mean conjugation length 7−78488
polythiophenes, heterosubstituted narrow gap semicond., energy gap and bond length alternation 7−105395
polythiophenes, structure, ^{13}C NMR and Fourier transform IR studies 7−76041
polyureas, polymerisation, IR spectra, thermal anal. and glass transition temp. meas. 7−125737
polyurethane acetals, mol. struct., hydrolytic stability *(Russian)* 7−113913
polyurethane acrylate, coloured with nickel dithiobenzyl complex, as laser passive Q-switch 7−97046
polyurethane anionomers, glass transition and mechanical props. 7−143010
polyurethane foams, rigid, preparation for nonflammable water-resistant coatings *(French)* 7−100173
polyurethane foams, sand propag. calcs. using Biot theory *(French)* 7−104080
polyurethane network, rubber toughened, composite materials 7−84096
polyurethanes, dynamical mechanical, thermal and electrical props. 7−69795
polyurethanes, polymerisation, IR spectra, thermal anal. and glass transition temp. meas. 7−125737
polyvinyl acetate, vol. change and nonlinearly thermoviscoelastic constitution 7−131235
polyvinyl alcohol, complex refractive indexes, specular reflection IR spectra 7−85574

polymers continued
polyvinyl alcohol—$FeCl_3$ complex growth of polypyrrole films on surface 7—78485
polyvinyl alcohol membrane, swollen with aq. solns. of nonvolatile cpds., $O_2(N_2)$ permeability 7—119565
polyvinyl alcohol shells for ICF expts. 7—135565
polyvinyl butyral, corrosion lifetime, relative humidity, ageing correl., elec. resist. obs. 7—93124
polyvinyl phenolic GE-7031 varnish, air dried sample, thermal diffusivity meas. 7—118179
polyvinylferrocene electrode-active material for polymer batteries 7—100712
polyvinylidene fluoride, conformational and struct. changes during polarisation hysteresis 7—106103
polyvinylidene fluoride, elec. power output per unit vol. and mech. to elec. conversion efficiency 7—99716
polyvinylidene fluoride, ferroelec., poling, space charge effects 7—113066
polyvinylidene fluoride, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7—99713
polyvinylidene fluoride, ferroelectric polymer, nonlinear dielectricity 7—125651
polyvinylidene fluoride, high energy O ion irradiation, electronic and struct. modification 7—91668
polyvinylidene fluoride, highly oriented, primary and secondary pyroelec. 7—92609
polyvinylidene fluoride, passive IR detector 7—128650
polyvinylidene fluoride, piezo-, pyro- and ferroelectric props., review 7—132202
polyvinylidene fluoride, piezoelec., NMR studies, review 7—112963
polyvinylidene fluoride, piezoelectric coaxial cable 7—123384
polyvinylidene fluoride, piezoelectric foil electroacoustic transducers, stability 7—130500
polyvinylidene fluoride, switching characts., electrostatic interaction effects 7—113095
polyvinylidene fluoride, thermally stimulated depolarisation current, dipolar interaction 7—113070
polyvinylidene fluoride, voided, influence of microvoids 7—111424
polyvinylidene fluoride foils for flow measurements in aerodynamics 7—130799
polyvinylidene fluoride for hydrophone appls., mech. and piezoelec. props. 7—99714
polyvinylidene fluoride piezoelec. transducers for US dosimetry appls. 7—97255
polyvinylidene fluoride piezoelectric cable in acoustic sensor 7—123385
polyvinylidene fluoride piezoelectric foils for measurement of arterial pressure pulse 7—133490
polyvinylidene fluoride receiving array for US field measurements 7—130492
polyvinylidene fluoride shock wave sensors 7—128557
polyvinylidene fluoride transducer arrays for Braille cell appls. 7—101147
polyvinylidene fluoride/$BaTiO_3$ composite, hysteresis behaviour 7—70725
polyvinylidene fluoride/$BaTiO_3$ composite, temp. and freq. depend. of dielec. props 7—70724
polyvinylidenefluoride, melting, electron irrad., DSC obs. 7—69872
porphyrins, water-soluble, reactivity, polymer binding effects 7—119521
propylene carbonate electrolyte, appl. in Li secondary cells 7—133077
proton-conducting polymer blends, differential scanning calorimetry and complex admittance analysis 7—126525
PTFE, γ-irrad., thermal expansion, 80-340 K, crystallinity 7—131340
PTFE, γ-irradiated, single point deform. and abrasion 7—86366
PTFE, dye-tagged latexes, transient electrofluorescence study 7—92745
PTFE, semicryst., solid state extrusion 7—78079
PTFE based textile structures, tribotechnical props. 7—138848
PTFE latex particles, fluoresc., polarised components, appl. to optical switches 7—99935
PTFE substrates, metallisation by ion plating of Cu 7—106654
PVC, internal stress determ., modified transient dip test 7—106729
PVC, physical props., rel. to elec. fluctuations, temp. depend. *(Russian)* 7—99102
PVC, plastic deform. by crazing, effect of temp. and specimen size *(Japanese)* 7—100295
PVC, plasticized, glass transition, Brillouin spectra 7—85755
PVC, plasticized, mol. mobility, deform. effects *(Russian)* 7—137453
PVC, struct. and props., X-ray diffr. 7—119320
PVC plastisols, viscosity depend. on temp. and time 7—131349
PVC-S under fluctuating load, mech. behaviour *(German)* 7—86300
PVDF, X-radiation-induced conductivity meas. 7—131637
PVDF electret, thermal stimulated current characts. due to space charge *(Korean)* 7—143961
PVDF transducers, transient pressure fields 7—123417
pyropolymer, highly conductive, from polyoxadiazole 7—84803
pyropolymers, semiconducting, hopping conduction, metal-insulator transition 7—112183
quasi-one-dimensional conductors, bipolaron lattice theory 7—98998
radiation cured polyester compositions containing metal-properties, softening temp., creep current resistance, dielectric loss and permittivity meas. 7—124335
radioactive waste forms, γ-radiation effects, mechanical props. and gas prod. 7—96327
regular comb polymers, conformational props. 7—82403
reoxan, holographic gratings recording using copropagating beams 7—68589
resin temperature control during polymerisation, tissue embedding technique 7—79162
resins, crosslinked, uptake of metal ions from aq. H_2SO_4 7—92523
review of polymer science 7—131060
rhodium(I) aryldiisocyanide polymers and oligomers, photocond. 7—125049
rigidity moduli determination from monomer chem. struct. 7—69804
ring polymer, Brownian dynamics simulation, error anal. 7—136108
rough surfaces contacting through a polymer layer 7—71306
semiconducting, fast response nonlinear optical phenomena 7—136424
semicrystalline, solid state extrusion 7—78079
semiinfinite O(n) systems, bulk tricritical point, continuum model 7—137506
sheet, tethered surfaces, equilib. conformations and dynamics, renormalisation and Monte Carlo methods 7—95498
shock absorbing characteristics of high polymers *(Japanese)* 7—113816
silicons coating, solar concentrator materials development 7—71580
silvered polymer reflectors for solar energy concentrators 7—144789
SIMS, neutral and ion beam, of non-conducting materials 7—85936
small intrinsic bandgap systems, mol. engineering, theory 7—143323
sodium cellulose sulphate-water system, phase transform., calorimetry 7—118097
solid, multiaxial nonlinear viscoelasticity 7—118034
solid polymers, 2D NMR spectroscopy study of struct. and props. *(German)* 7—132143
solids, UV photoemission study 7—125925
sorption of water obs., quartz-crystal microbalance apparatus appl. 7—137708
speciality polymers, conf., Baltimore, MD, USA (Aug. 1986) 7—95083
spectrochemical analysis using the near-IR, appl. to polymers 7—108112
spectroscopic methods in the polymer industry 7—114019
spherical particles, radiation absorpt., effect of imaginary part of refr. index 7—113119
strength of two coupled anharmonic chains of atoms, time depend. 7—84107
styrene, homogeneous gas phase thermal polymerisation, diffusion cloud chamber meas. 7—126456
superexchange interaction, mag. props. 7—85278
surface, wetting hysteresis, rel. to polar nature of substrate *(French)* 7—112012
surface ageing estimation from change of contact angle 7—113748
surface charging by electron irrad., secondary emission yield determ. 7—85052
surface energy estimation by contact angle methods 7—137692
surface treatment by low-temp. plasma *(French)* 7—132782
surface-active agents effect on Cu powder produced by autoclave method 7—77878
symmetry, phase transition, n=0 limit 7—112829
Teflon, FAB-MS spectra, peak pattern development with increasing bombarding dose 7—119594
Teflon, secondary electron and photo-emission, electron yields and escape depths 7—113323
Teflon FEP with saturable deep traps, corona charged, electron transport 7—76971
Teflon vacuum surface flashover voltage meas., electrode geometry effects study 7—104471
Teflon-Cu adhesion, enhancement by presputtering prior to Cu deposition 7—119487
teichoic acids, model cpds., conform. transitions anal. 7—96896
templates for small mol. chains, mol. struct. calc. method 7—96576
terpolymer systems network characts. math. modelling 7—69616
testing, complex, reverser design 7—78439
thermal ageing tests, end-point transformations *(German)* 7—93234
thermal parameters, meas. by photoacoustic technique 7—131245
thermoacoustic and nonlinear props. 7—124400
thermoacoustical parameter calcs. 7—131238
thermodynamic properties, van der Waals and Tonks models 7—84322
thermoforming, free and constrained inflation of elastic membrane, axisymm. problems 7—97340
thermoplastics, cold drawing mechanics, large deform. strain hardening modulus 7—119319
thermosets, unfilled, fracture surface characts. 7—132745
thermotropic poly(1,4-phenylene-2,5-dialkoxy terephthalate), layered mesophase 7—137223
theta point props., residual interactions effects, higher moments, three-parameter model 7—136107
theta polymer, adsorption on attracting wall, mean field and multicritical behaviour 7—131424
thiophene oligomer: I_2, electrical and spectroscopic props. 7—76906
transport phenomena, continuous and discontinuous models 7—111420
trapping, Pauli master equation soln. via Lanczos algorithm 7—110149
s-triaminobenzene based polymers, synthesis, ferromag. interactions 7—126041
tricritical exponents, Θ point in two dimensions 7—137512
vinylidene cyanide/vinyl acetate copolymer, SHG using pulsed Nd:YAG laser 7—136432
vinylidene fluoride/trifluoroethylene copolymers, ferroelectric switching 7—99755
4-vinylpyridine copolymerised with styrene in benzene soln., ^1H NMR and ^{13}C NMR spectra *(French)* 7—126450
viscoelastic, vibr. attenuation, freq. depend., model 7—69012
viscoelastic and ageing characts. 7—118032
viscoelastic properties, nonlinear, determ. using Fourier transform. mech. anal. 7—118035
viscosity meas. using precision capillary viscometer 7—130810
vitrification temp. determ. using dilatometer 7—143008
water tree growth mechanism, role of ions 7—99672
water tree inhibition using barbituric acid derivatives 7—99673
water treeing rel. to morphology and microstruct. 7—99675
wide-angle X-ray scatt. profile anal. 7—117837
Ba ferrite-polymer composite, Mossbauer and mag. studies 7—125443
$BaTiO_3$-polyvinylidene fluoride composite, resistivity behaviour 7—112318
Cu^{2+}-poly(riboadenylic acid) interaction, NMR investig. 7—90211
HCN polymers in dark nucleus of P/Comet Halley 7—88319
H_2O-oligo(ethylene oxide) eutectic system, light microscopy investig. 7—76376
In/polypyrrole Schottky barrier formation 7—92296
Li secondary cells, electrode kinetics in poly(ethylene oxide)-based electrolytes 7—133065
Li secondary cells, structure-conductivity relationship in polymer electrolytes 7—133085
Li-organic electrolyte batteries, electro-chemical stability of heterocyclic semicond. polymers as cathode-active materials 7—93496
Li-$SOCl_2$ cells, voltage delay reduction, polymers with chlorine substituent groups 7—126575
$LiCF_3SO_3$-polyethylene oxide complex, electrolytes formed with low mol. wt. polyethylene glycol, ionic conductivity 7—98564
Ni-P/PTFE, electroless deposited composite coatings, lubricating props. 7—144562
PLZT-silicone rubber porous ceramic composites, dielec. and piezoelec. props. study 7—125587
$PbZrO_3TiO_3$-polymer, fired 0-3 composites, prep. and piezoelectric props. 7—126077

polymorphic transformations
see also displacive transformations; order-disorder transformations; reverse martensitic transformations
actinide metals and cpds., press. induced structural behaviour 7—104989
benzene, cryst., static equilibr. struct. at negative press. 7—104724

polymorphic transformations continued
diacetamide, polymorphic transformation, reaction path model *(Japanese)* 7−131078
diamantane, second-phase decoration of dislocations, melting and polymorphic transformations 7−117927
diamond, reaction sintering using Fe-Ti solvent catalyst, vickers microhardness 7−113484
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7−125752
mag. and dynamic props. in external mag. fields *(Japanese)* 7−131255
metals, close-packed, structural transitions and phase stability, review 7−76380
nonequilibrium process in 1D planes stress wave kinetics 7−76296
orthosilicates, polymorphic transformations, volume-structure-entropy relations 7−124470
x-phthalocyanine crystals, dislocation array, TEM obs. 7−76131
quartz, incommensurate phase and α-β transition, low freq. light scatt. obs. *(Japanese)* 7−119014
quartz, polymorphic α-β transform. under neutron irrad., spectral studies 7−104847
steel, low alloy, low C, chem. microheterogeneity 7−106513
steel, low-C, struct. and conc. features of $\delta(\alpha)\rightarrow\gamma$ transform. *(Chinese)* 7−126106
steel, recrystallisation during laser heating, plastic deform. effects *(Russian)* 7−138757
ternary Friauf-Laves alloys, long period structs. and phase transitions, comment and reply 7−137300
ternary tetrahedral compounds, struct. distortions and polymorphic behaviour 7−124156
(tetramethylammonium)$ZnCl_{1.8}Br_{2.2}$, cryst. struct. at 198 K and 293 K, X-ray diffr. 7−111519
transformation toughening, mechanics 7−113547
vibrating crystals and vibrating mols., ultrafast time-resolved spectroscopy of struct. phase transitions 7−110469
Ag_2HgI_4, elec. cond., α-β transition, prep. technique effect 7−105114
AgI, first-order phase transitions, defect conc. independ., model-free theory 7−124492
Al-Ag, phase transform. mechanism, surface relief obs. 7−132608
Al-Zr-V, dil-alloy, precip., Ostwald ripening cubic to tetragonal transform. 7−78023
AmI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$BaAl_2O_4$-$BaGa_2O_4$, solid solution formation, high and low temp. regions 7−106490
$BaMoO_4$-$Ce_2(MoO_4)_3$ system, synthesis, physicochemical props. 7−98006
$BaTb_2Mn_2O_7$, synthesis, cryst. struct., orthorhombic to tetragonal phase transition 7−69896
$BaTiO_3$ ceramics, phase transitions, grain size effects 7−106102
$BaTiO_3$, cubic-tetragonal transition, high resolution X-ray diffr. study 7−104619
$BaTiO_3$, ferroelec. transitions, isotope effects 7−113102
$Ba_2YCu_{3-x}O_{7-y}$, orthorhombic single cryst. supercond., twinning, polymorphic transform., X-ray diffr. study 7−98175
$Ba_2YCu_3O_{7-x}$, high T_c supercond., twinning 7−142794
$Ba_2YCu_3O_{7-x}$, orthorhombic-tetragonal transform., thermal expansion coeff., X-ray powder diffr. study 7−98432
$Ba_2YCu_3O_x$ high T_c supercond., high temp. resistivity meas., O content depend. 7−137919
Bi_2O_3-B_2O_3-ZnO ternary system, phase equilibria 7−84232
$CaFe_xSi_2O_8(OH)$ ilvaite mixed valence single cryst., electron delocalisation and magnetic props. 7−76853
Ce, α-γ transition, simplified band model calcs. 7−76383
Ce mixed valence system, nonlinear f-electron hopping-induced valence fluctuations model calcs., γ-α phase transition 7−76846
CmI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
Co alloys, polymorphic transformation, formation of 1D disordered structures with long-range correlation 7−76392
Co, FCC and HCP phases, stress exponents 7−144496
Co island films, FCC to HP transition, phase diagram 7−124155
Co, polycrystalline, work function variations with temp. and phase transforms 7−85047
Co-Al-C, quenched, polymorphic transform., 1D disordered long period struct. 7−144393
Co-C, thermal instability of α-phase formed during β to α polymorphic transform. *(Russian)* 7−93006
Co-Sb films and foils, ion implanted, amorphous phase form., RBS, TEM studies 7−84061
Co-Te films and foils, ion implanted, amorphous phase form., RBS, TEM studies 7−84061
$Co(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$CoCr_2S_4$, production by hot pressing, props. 7−77855
$CoMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
$(Cr_xFe_{1-x})VO_4$, solid solns., struct. 7−83896
$CsCaCl_3$:Gd^{3+}, S^{2-}, cubic-tetragonal phase transition, EPR of Gd^{3+}-S^{2-} pair 7−92501
Cs_2NaRBr_6(R=Dy, Ho, Tm), rare earth bromo-elpasolites, soft rotary mode and structural phase transition 7−142987
Cu-In-Al, elec. props., struct., phase transform., internal friction, In inclusions 7−76881
Cu-Te crystals, solid state growth and transform. 7−113380
$CuInS_2$ phase diagram, allotropic transitions, DTA and X-ray diffr. studies 7−118093
Fe particles, alpha-gamma reversible transformations 7−126103
Fe-Al-Mo-Ti-Si, DO_3 superlattice transition temp. rel. to comp. 7−113546
Fe-Al-Ti, phase relations, transform. temps., microstruct. 7−92959
Fe-Cr-S system, phase relations and spinel-monoclinic transition 7−119242
Fe-Ni-Cr, γ' strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7−105959
$Fe_{78}B_{13}Si_9$, amorphous to crystalline transformation 7−142636
$Fe_{82}B_{12}Si_6$, amorphous to crystalline transformation 7−142636
$Fe_{81}B_{13.5}Si_{3.5}C_2$, Metglas 2605 SC, crystallisation kinetics 7−142634
$FeMoO_4$, elec. transport props., small polaron motion, α-β transition region 7−131638
$Fe_{40}Ni_{40}B_{20}$, metallic glass, crystallisation, influence of Mo and Si 7−142628
$Fe_{3-x}Pt_{1+x}$ ordered alloys comp. and temp. depend. elec. resist. study 7−105528
polymorphic transformations continued
GdI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
Gd_2O_3-Y_2O_3, phase equilibria, rel. to thermal stability of polymorphic modifications 7−92964
^3He-^4He solid mixtures, phase separation 7−124631
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7−119247
$Hg(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$HgMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
In-Tl, electronic struct. in vicinity of face centred tetragonal-FCC transition, positron annihilation study *(Russian)* 7−112174
$(KCN)_{0.7}(KBr)_{0.3}$ mixed cryst. struct. and transforms., neutron powder diffr. study 7−142735
KPO_3-$Sm(PO_3)_3$, polymorphs, formation of $KSm(PO_3)_4$ *(French)* 7−131298
LaI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., cryst. struct. above and below polymorphic T_c 7−98030
$LaYO_3$, new modification 7−131104
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7−100160
$Li_3Fe_2(PO_4)_3$, monoclinic modification 7−83969
$LiIO_3$ powder α to γ to β phase transitions, neutron thermodifraction study 7−84248
MV_2O_6, M=Mg,Ca,Mn,Co,Ni,Cu,Zn,Cd, polymorphism, X-ray and DTA studies 7−142683
MgF_2-ScF_3 system, high press. phases 7−91789
$MgMn_{2-x}V_xO_4$, structural and dielectric props. 7−92570
$MgSiO_3$, enstatite, polymorphism, review 7−113543
NH_4HSeO_4, identification of new cryst. phase, polymorphic transform., NMR spectra 7−98029
NH_4MnCl_3, lattice and NH_4 modes, Raman spectra above and below cryst. phase transition 7−99854
$Na(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$NaFeO_2$-SiO_2, silica-containing ferrite phases, phase equilibria 7−132590
$NaMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
Nb-C system, phase equilibr., crystallographic and thermodynamic data, review 7−77942
Nb_2O_5, amorphisation and phase transform. by fine grinding 7−113545
Nd high press. FCC to double HCP phase transition, elec. resist. meas. 7−98439
Ni-Cr (45 wt.%), precip., invariant line strain model 7−119272
Ni-P and Ni-P-C systems, phase form., melting point, eutectics and peritectics, polymorphic transform. temp. 7−119244
Ni-Ti, phase transform., in situ TEM obs. 7−77997
Np-H, P-C-T studies, 0.0005 to 70 bar 7−105042
PZT ceramics, morphotropic phase boundary comp., SEM, TEM, and X-ray diffr. study 7−91800
PZT solid solution system, second order transition region, phenomenological theory 7−99759
$Pb_{1-x}Ba_xNb_2O_6$ single crystals, Czochralski growth and dielec. props. 7−92578
PbI_2, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$PbTiO_3$-$BatiO_3$ ceramics, dielec. and piezoelec. props. 7−99706
Pd:H system, diffusivity, microstruct., galvanostatic permeation meas. 7−84358
Pu, AE from low temp. phase transform. 7−106509
Pu-Ga, AE from low temp. phase transform. 7−106509
PuI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$RbCaF_3$, ^{19}F NMR chemical shift meas., shielding anisotropy anal. 7−112983
$RbCaF_3$, crit. fluctuations, high resolution X-ray scatt. study 7−142988
$RbCaF_3$, crit. fluctuations, analysis of expt. results 7−142989
$RbNO_3$, polymorphism, heat capacity, 83 to 483 K, calorimetric obs. 7−104986
ReO_3, high press. polymorphic phases 7−118079
β-SiC, Al_2O_3 and C additions effect on phase transform, during sintering 7−132542
SiC, nonequilib. phase transitions induced by thermomechanical treatment, obs. 7−131289
SiC:B, hot pressed, sintered, β to α phase transform., feather form. 7−86167
Si_3N_4 powder, sinterability, rel. to BeO addition, microstruct. *(Japanese)* 7−71119
Si_3N_4, sintered, α to β transform., flexural strength, density *(Japanese)* 7−132694
SiO_2 refractories, tridymite to cristobalite transform. below 1470°C 7−106508
Sm_2O_3-Y_2O_3, phase equilibria, rel. to thermal stability of polymorphic modifications 7−92964
Sn, β- to α-phase transition at low temp., electron microscopic study 7−76400
α-Sn form. by chem. sputtering of β-Sn target in H_2 plasma 7−92870
$SrTiO_3$ cryst., band struct. change during cubic-tetragonal transition, two-photon absorpt. spectra 7−118360
Ta_2O_5, hot pressing, $\beta\rightarrow\alpha$ phase transition 7−93003
TaS_2, polymorphic transition, CDWs 7−111870
TeO_2, polymorphism and compression at high pressure 7−142682
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7−86283
Ti, spectral emissivity meas., polymorphic transformations effect 7−137599
Ti-Mo-Cr, rolled sheets, texture and struct., β to α transform. 7−144432
Ti-Ni-Fe (44, 1 wt.%), phase transform., internal friction, elec. resist., 190-300 K 7−86169
TiH system, phase transformations at high press. 7−86166
TiI_4, spectral emissivity meas., polymorphic transformations effect 7−137599
$TiSi_2$ amorphous thin films on Si and SiO_2 substrates, phase transformations, X-ray diffr., elec. resist., TEM 7−70114
Y-Ba-Cu-O high T_c supercond., Cu-O bond-stretching vibrs., Raman and IR absorpt. spectra 7−111790
Y-Ba-Cu-O high T_c supercond., orthorhombic to tetragonal transition, thermogravimetric and X-ray diffr. studies 7−118083

polymorphic transformations continued
Y-Ba-Cu-O high T_c supercond., cryst. struct., transforms. and transport props. 7−118629
$YBa_2Cu_3O_7$, orthorhombic-tetragonal phase transition, X-ray powder diffr. study 7−117857
$Zn(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$ZnMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
Zr-Fe, glass forming ability, crystallisation 7−142632
Zr-Fe system, heat treatment, plastic deform., phase transform. 7−71176
Zr-Ni, glass forming ability, crystallisation 7−142632
Zr_3Fe, polymorphic crystallisation, in $Zr_{76}Fe_{24}$ amorphous ribbons 7−142629

polymorphism
see also crystal structure; isomorphism; polymorphic transformations
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7−77499
allotropes and polymorphs study 7−108097
allotropy, martensitic $\alpha \rightarrow \epsilon$ transform. energetics investig. 7−142981
binary mixtures of polar and nonpolar compounds, reentrant liq. cryst. phases, mean field theory 7−76401
4-hexyloxy-4′-cyanobiphenyl-4-octyloxy-4′-cyanobiphenyl liq. cryst., elastic consts. 7−104887
MBBA, phase diagram 7−111883
poly(vinylidene fluoride), mol. defect role on struct. and phase transform. 7−97989
polytypes and polytypism, struct. variations in minerals, ceramics and alloys 7−104703
rare earth germanates, $R_2Ge_2O_7$, R=La-Lu, structural relations, cryst. data, phase transitions 7−76088
stearic acid, B form crysts. micropolytype structs., Raman microprobe obs. 7−99827
stearic acid, twinned crystal form. 7−124281
structure determination of polytypes 7−124130
ternary tetrahedral compounds, struct. distortions and polymorphic behaviour 7−124156
tricyclophosphates $KM^{II}P_3O_9$ where M^{II}=Mg, Ca, Co, Mn, Zn, Cd), Raman and IR spectra 7−85664
Al-Ge binary alloy systems at high press. 7−100183
Al-Si binary alloy systems at high press. 7−100183
Al_2O_3-AlN, long period polytypoid structs., fluctuations during sintering 7−69690
$Ba_2YCu_3O_{7-x}$, high T_c superconductor, cryst. struct., Rietveld refinement 7−98088
Ca_3GeO_5, cryst. struct. of two modifications 7−104706
$CaSiO_4$, high-pressure polymorphism 7−91725
Cd-Pb binary alloy systems at high press. 7−100183
$CdBr_2$, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
CdI_2, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
CdSe film, preferential growth of sphalerite or wurtzite struct. by gas-solid process 7−144307
Fe, amorphous, pure, polymorphism, mag. hyperfine field study 7−113023
γ-FeP_4, cryst. growth from vapour, photosensitive semicond. props. 7−84995
Ge, macrostresses created by metal-semiconductor transitions, metastable phases 7−142978
Hg-Tl binary alloy systems at high press. 7−100183
InSe, containing stacking faults, exciton photoluminesc. spectra, X-ray diffr. studies 7−113253
$K_3Co(CN)_6$, 20r polytype, incommensurate struct., NQR linewidth, low temp. 7−70669
$K_3Co(CN)_6$, crysts., press.-induced phase transition, Raman scatt. obs. 7−84237
$KFe^{2+}Fe^{3+}(PO_4)_2$, cryst. struct., homeotypy with $Fe^{2+}{}_3(H_2O)(PO_4)_2$, X-ray diffr. study 7−104683
Li_4GeO_4-based ionic conducting systems, cryst. struct. and electrophys. props. studies 7−124210
$MgSiO_3$, enstatite, polymorphism, review 7−113543
Mg_2SiO_4, β- and γ-forms, Raman spectra 7−125714
MnO_2:Rb, polymorphs, hydrothermal synthesis and IR spectra 7−113363
Nb-N thin films, amorphous and cryst., struct., electron microdiffr. studies *(Russian)* 7−70108
$NbPO_5$, allotropic, preparation lattice parameters *(French)* 7−91533
NbS_xSe_{2-x}, prep. and struct. 7−77781
$NdTaO_4$, cryst. struct., new modification in rare earth tantalates, X-ray diffr. study 7−104681
$Nd_{0.33}TaO_3$, new polymorphic modification of $NdTa_3O_9$, cryst. struct., X-ray diffr. study 7−104682
PbI_2, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
Pt-Al(Ga) phase diagrams with emphasis an polymorphism of Pt_3Al and Pt_3Ga 7−126085
$RbCaF_3$, ^{19}F NMR chemical shift meas., shielding anisotropy anal. 7−112983
Si, macrostresses created by metal-semiconductor transitions, metastable phases 7−142978
SiC, 6H and 3C polytypes heteroepitaxial CVD, Raman spectra study 7−119148
SiC epitaxial layers, grown by temp. gradient zone melting, morphology 7−124752
SiC polytypes, structures and bonding, ab initio MO calcs. 7−98076
SiC polytypes, thermal expansion anisotropy 7−131337
SiC, polytypes in aggregations, Raman spectra *(Russian)* 7−113205
SiC, polytypic struct., electron probe microanalysis 7−76101
SnO_2 epitaxially grown thin films, cryst. struct. considerations 7−84593
$TaPO_5$, allotropic, preparation lattice parameters *(French)* 7−91533
TeO_2, polymorphism and compression at high pressure 7−142682
TiO_2, polymorphs, struct.-electronic rels., powder neutron diffraction obs. 7−131105
$Ti_{6.9}S_9$, crystal struct., unit cells 7−98073
$Ti_{8.2}S_{11}$, crystal struct., unit cells 7−98073
Y-Ba-Cu-O high T_c supercond., polymorph phase relations, X-ray studies 7−111827
YOCl:Eu, cryogenic lumin. studies, YOF and PbFCl polymorphs 7−70876
Zn-As binary alloy systems at high press. 7−100183
ZrO_2, polymorphic mixtures, X-ray diffr. 7−111473

polynomials
see also splines (mathematics)
2D Navier-Stokes equations, Chebyshev spectral approx. 7−75515
adaptive polynomials, appl. for real-time data editing for CLASS radiosonde system 7−115064
analogue precision linear iser for thermocouples 7−80780
approximation of point by point given rotation-symmetrical aspherics *(German)* 7−140444
BC_p type differential hypergeometric system *(French)* 7−95276
beam elements undergoing forced vibrations, performance improvement 7−123500
beam-mass-beam systems, pseudo-force approximation applied to nonlinear dynamic contacts and viscoelastic damping 7−110878
binomial polynomials, determinant sequence in lattice path counting 7−80294
bounded point evaluations for nonminimal measures 7−66901
Chebyshev polynomials, orthogonal rational functions on a semi-infinite interval 7−80333
chordal quadratic systems 7−66908
continuous Hahn polynomials and the Heisenberg algebra 7−72781
creep crack growth kinetics, temp. depend., calc.-exptl. engng. method 7−97451
deficient polynomial systems, numerical solution 7−88946
differential-difference equation and hypergeometric polynomial soln. 7−108202
eigenstructure of a regular matrix polynomial, computing algorithm for zeros 7−115739
electrostatic field model, algebraic eqn. soln. 7−96918
Feynman graphs, negative dimensional integrals, analytic extensions, polynomial integrals, finite series summing 7−116066
finite groups, polynomial identities and characters. 7−128241
flow network models, computational efficiency and accuracy 7−69266
Fréchet derivative of matrix functions 7−115731
generalised eigenvalue problems, homotopy method 7−115729
generalized eigenvalue problem and acoustic surface wave computations 7−136637
Hamiltonian systems, equilibria linear stability boundaries calcs. 7−128252
harmonic polynomials, hyperspherical expansion method in many-body theory 7−128367
heteroatomic molecular graphs, eigenvalues, characteristic polynomial calcs. 7−103347
hypergeometric orthogonal polynomials, integral evaluation 7−134443
integrable mappings and Lie algebras *(Russian)* 7−81039
integrals, uniform asymptotic expansions and associated polynomials 7−102116
intermediate coefficient functions of the polynomial product approximation, differentiability props. *(Chinese)* 7−72853
inverse cubic polynomial formula for rational numbers 7−134429
irreducible invariants of fourth-order tensors 7−66905
Jacobi polynomials and Selberg integrals 7−80398
Jordan form of a binomial coefficient matrix over Z_p 7−95210
KdV-invariant polynomial functionals, one-dimensional torus, isospectral polynomial functionals 7−140419
KdV-type bilinear eqns. passing Hirota's three-soliton condition 7−140465
kinetic, appl. to steady-state dependences of reaction rate 7−138960
Laguerre polynomial series, generalised Pade approximants 7−120764
Laguerre polynomials, q-analogues of certain operational formulae 7−108138
Laguerre polynomials of a matrix argument *(French)* 7−66912
Lanczos polynomials, explicit formula in terms of matrix eigenvalues 7−95189
Legendre polynomial expansion coefficients, alternative form 7−80291
Legendre polynomial expansion of thermodynamic props. of binary solns. 7−76454
linear systems of eqns. with indefinite or non-Hermitian matrices, orthogonal polynomials, iterative soln. 7−95195
linear systems with weakly cyclic Jacobi matrices of index p, over- and underrelaxation 7−115727
LNIDIF program for numerical interpolation with 1st and 2nd order differentiation 7−140427
local field transformation, algorithm *(Russian)* 7−108137
Lyapunov exponent and bounds for the Hausdorff dimension of Julia sets of polynomial maps 7−121029
Macdonald's root system-Dyson conjecture, G_2 case, proof 7−108142
Markov inequalities 7−80308
multivariable hypergeometric orthogonal polynomials and hypergeometric series in U(n), Whipple's transformation 7−80309
negative dimensional integration, path integrals, fermionic equivalence, harmonic oscillators, Parisi-Sourlas supersymmetry 7−115838
nonsymmetric linear systems in the complex plane, least squares methods 7−72936
ORTH program for orthogonal polynomials using in heavy ion-nucleus calcs. 7−141062
pencil of matrices with complex entries, characteristic polynomials and curves 7−72794
phase diagram information system, algorithms and software 7−67293
plates, C^0 quadrilateral elements, transverse shear representation 7−130552
plates, nine-node degenerated elements, covariant shear strains interpolation 7−123477
quadrature sums for p^{th} powers of polynomials 7−80310
quasi-prismatic bodies, FEM anal. using Chebyshev polynomials 7−128285
Racah coefficients, polynomials, recurrence relation, Biedenharn-Elliot identity 7−128338
rainfall estimation using polynomial method 7−101538
real square root computation for a real matrix 7−95197
recursive digital filters, stabilisation method 7−127507
root extraction iterative algorithm *(Russian)* 7−66895
Rudin-Shapiro pairs, algebraic struct., Salam's external problem on polynomials *(French)* 7−66893
second invariants, direct search methods, review 7−66955
Sextic polynomial, explicit Galois resolvents calc. 7−88821
shells, cylindrical, free vibration analysis using FEM with Hermitian polynomial 7−123499
side-looking radar for remote sensing, imaging geometry and errors 7−133947
single-clipped correlation and the Bell polynomials 7−90532
SU(3) theory, transformation matrix, polynomial anal. 7−134969
swirling flow effect on flowmeters 7−130806

polynomials continued
symbolic algebraic manipulation method for kinetics of complex reactions 7−126408
symmetrical group representation multiplicity, partition numbering problem 7−95220
tensor bosons, symmetric and antisymmetric Heisenberg-Weyl algebras 7−140832
tensor polynomial failure criterion, strength parameters determ. 7−128287
term-rank, permanent, and rook-polynomial preservers 7−95207
truncated polynomial rings over fields of characteristic two, algebraic K_3 group 7−72786
unbounded brittle body with circular opening, crack form. on compressing, Fourier series of Legendre polynomials 7−75461
weighted Sobolev spaces, props. and appl. to Chebyshev collocation *(French)* 7−66925
zero location for polynomials with and without gaps 7−66903

polytypism *see polymorphism*

Pomeranchuk poles and trajectories
elastic hadron diffraction phenomenology, review, dipole pomerons 7−67637
hadron collisions, gluon dominance and Pomeranchuk trajectory 7−95880
hadron multiplicity, spectra, Froissart cross sections, for future energies 10^3-10^5 GeV 7−116204
interacting Pomerons, total cross-sections and diffraction scatt. 7−73632
particle production diffractive component in dual multistring fragmentation model 7−73631
Pomeron exchange, preasymptotic corrections 7−73633
string theory, effective interacting field, Reggeon-Pomeron vertex 7−81157
vacuum structure and diffraction scattering, Pomeron props. 7−140838
$\gamma^*p \rightarrow \rho p$, exclusive ρ prod. in deep inelastic scatt., pomeron approach 7−73656
$\gamma\gamma \rightarrow \gamma X$, possibility of expt. investigation of QCD pomeron 7−67678
$\gamma\gamma \rightarrow VX$, $V=\rho^0$, ω, ϕ, possibility of expt. investigation of QCD pomeron 7−67678
$\gamma\gamma \rightarrow$vector mesons, possibility of expt. investigation of QCD pomeron 7−67678
lp, deep inelastic scatt., structure fn. calcs., pomerons 7−121518
Λ P-wave spin-orbit mass splitting, quark potential model, meson spectroscopy, nuclear forces 7−109048
$pN \rightarrow pX(\pi X)$, 10^3-10^9 GeV, scaling violation in quasieikonal model for supercritical pomeron 7−73544
$pp \rightarrow$heavy flavour particles, delayed thresholds Pomeron structure and dual parton model 7−116191
$\pi^+N \rightarrow \pi^{\pm}X$, 5-5000 TeV, inclusive spectra, Feynman scaling violation, pomeron showers 7−116205

Pomerons *see Pomeranchuk poles and trajectories*

Pontryagin maximum principle *see maximum principle*

Poole-Frenkel effect
insulating films, electronic cond., book contrib. 7−105743
poly(vinyl pyrrolidone) films between Al electrodes, elec. cond. mechanism 7−99082
polypropylene films, finely dispersed Au loaded, cond. props. 7−85135
semiconductors, field enhanced generation mechanisms 7−105590
AlN plasma assisted reactive evaporation, elec. props. studies 7−106442
GaAs-plasma oxide interface, electron states, small signal charge transient spectra study 7−125133
$Ge_4Se_{6-x}Te_x$, amorphous films and bulk glasses, conductivity, field dependence 7−125004
HgI_2, elec. and dielec. props., high field effects 7−105576
Si:B, interstitial negative-U defect levels, optical DLTS obs. 7−124912
TiO_x films, thermally oxidised, threshold conduction switching 7−131808
ZnTe, vac. evaporated films, electrical cond. meas. 7−118598

popcorn noise *see random noise*

population inversion
see also laser theory; lasers; stimulated emission
adiabatic elimination procedure for lasers with slow relaxation of population inversion 7−136255
bimethylpyrichrominium ion, protonated, adiabatic proton transfer, reaction kinetics, electronic excitation, fluorescent state, population inversion 7−144694
t-butyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
gapless semiconds., population inversion by optical interband pumping *(Polish)* 7−137955
inversion production by Penning reaction, electron beam pumping 7−136269
molecules, explosive absorption 7−136016
multimode laser with modulated inversion, numerical anal. 7−117172
multiply, charged ions, level inversion in plasma conditions, light amplification by stimulated XUV emission 7−91332
optical adiabatic rapid passage with phase relaxation 7−110312
periodic layered structured laser using electro-luminescent excitation 7−141832
photoionisation lasers pumped by broadband soft X-ray flux from laser-produced plasmas 7−90587
resonator-free amplification of spontaneous radiation under recombination pumping conditions 7−122893
squeezed-state generation by the normal modes of a coupled system 7−122897
superradiance pulse, inhomogeneous line broadening 7−103788
three-level system, interaction with nonlinear propag. of picosec. laser system 7−123081
VUV radiation, coherent sources 7−82716
X-ray laser research expt. progress 7−74896
X-ray lasers, population inversions in highly ionised plasma 7−110340
Al Li-like ions in recombining hot plasmas, soft X-ray amplification 7−91300
Al XI, laser produced plasma, population inversion, ab initio spectra 7−69392
Al_2OSiO_4-Fe^{3+} complex, maser characts. investig. 7−130038
C IV, population inversions in recombining theta-pinch plasma 7−141533
Ge hot hole inter-subband transitions for tunable far-IR laser 7−74934
He plasma, TPD-I device, optimum conditions study for VUV coherent lasing action 7−75840
He-Ar gas lasers pumped by optical breakdown, inversion mechanisms 7−117180
He-Cd capillary glow discharge, population inversion, spectroscopic study 7−96982
He-Xe gas lasers pumped by optical breakdown, inversion mechanisms 7−117180
InSb, population inversion, anomalous Voigt effect *(German)* 7−125710
methyl thionitrite, photodissoc., two-photon laser-induced fluoresc. 7−110033
N_2 CARS, broadband, pump-induced population changes 7−123105
N_2, gas, rot. levels, inverted distrib. form. probability calc. 7−68411
Nd glass laser, inversion dumping and amplification dynamics of ns pulses *(German)* 7−130122
Ne I excited by discharge with hard component, inversion and stimulated emission due to 585.3 nm transition 7−96978
Ne laser at 585.3 nm, inversion mechanism 7−110320
S XIV, laser produced plasma, population inversion, ab initio spectra 7−69392

porosity
see also porous materials
alloys, crystallisation defects, porosity, cavities, form. mechanisms 7−142754
alloys, oxidation, review of key principles 7−119419
brass, dezincification in sea water, porosity, microstruct. 7−126319
brittle solids, Young's modulus, porosity depend. model based on crack opening displacement 7−142876
bronze-ferrochrome composite, comp. and prod. conditions effect on mech. and tribotech. props. 7−78267
ceramics, structural, tailoring of thermal transport props. and thermal shock resist. 7−78243
determination, on basis of kinematic microhardness test 7−86510
ferrites, structure form. and gas evolution in vac. liq. phase sintering 7−106476
filter cake geometry effect 7−100685
glass, porous sintered, colloidal SiO_2 content nonuniformity *(Japanese)* 7−132557
gradient index antireflection coating, deposition using ultrastruct. processing 7−100052
graphite fibre reinforced epoxy composites, US wave propag. microstructure effect *(Japanese)* 7−124410
heat pipe, porous surface, liq. evap. heat transfer study 7−98410
infiltration kinetics of capillary-porous solids by melts, investig. method 7−77859
metallic porous systems, microstruct. form. rel. to pressing and sintering conditions 7−71112
oil-bearing media, porosity, linear elasticity appl. *(Norwegian)* 7−139782
plate, porous transtropic with strain hardening base, plastic state eqn. 7−104169
polyethylene protective-filtering materials, pore struct. and filtration charact. *(Russian)* 7−100404
pore lattice as dissipative structure 7−84022
porous media physics and chemistry, conf., Ridgefield, CT, USA (Oct. 1986) 7−108008
porous powder materials,. deform. anisotropy, of mech. props. in uniaxial compression 7−106585
powders, randomly packed, X-ray intensity microabsorption 7−91391
protective and thermal barrier coatings, NDE of thickness, adhesion, porosity 7−126379
protonic solid-electrolyte fuel cell gas phase relations 7−119644
Raschig-ring bed porosity and press. drop determ. *(German)* 7−75668
rock porosity and subsidence history, FORTRAN 77 programs 7−145674
rocks, deformation effects on porosity and permeability 7−94206
SEM investig. 7−111321
silica synthetic materials, porosity 7−111902
sorption isotherm meas. using computer-aided microgravimetric method 7−137712
sound wave reflection in porous media, limit angle variation *(Spanish)* 7−87911
steel, Cr-Mo, high temp. oxidation, layered oxide struct. 7−106696
steel, Cr-Mo-V, warm rolled, spheroidize annealed, microporosity, insoluble carbides, metallographic polishing 7−78410
steel, Fe-G type, sintered, infiltration kinetics by Cu-Fe melts 7−77859
steel, high speed, fatigue rel. to powder metallurgy 7−126233
subglacial till beneath Ice Stream B, Antarctica, porosity from seismic travel times 7−145540
two-phase refractory powder mixtures, densification behaviour during sintering 7−77926
ultrafiltration membranes, pore size determ. by solute sieving 7−119571
X-ray tomography for mass fraction profiling, appl. to porous silica boules 7−121074
Zircaloy-2, reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
Ag electroplated Cu leadframes, porosity meas. by electrographic printing 7−138701
Al alloys, tensile props. and anisotropy, double ligament test method 7−132851
Al-Cu, full mould cast, struct. and porosity 7−144382
Al-Si (7 wt.%) castings, tensile props. rel. to porosity 7−78119
Al_2O_3 ceramics, high purity, hardness, microstruct. depend. 7−86306
Al_2O_3 layered-granular ceramic, porosity and fracture props., prep. conditions depend. study 7−86320
Al_2O_3 powder, hot pressing, annealing, struct., density, porosity 7−86108
α-Al_2O_3 powder compacts, sintering, pore struct. agglomerates effect 7−132535
α-Al_2O_3, structural evolution from gel 7−113487
Al_2O_3-SiO_2, mullite, silicate melt corrosion, microstruct. 7−86378
Al_2O_3-ZrO_2 powder, characts. rel. to synthesis chemistry 7−106474
$BaTiO_3$ commercial powder, centrifugation and fast firing 7−100167
BeO, dynamics of compaction and growth, rel. to presence of Fe_2O_3 7−71101
C, activated, surface, microporosity development, air or CO_2 gasification effect and hydrocarbon adsorpt. 7−91977
C fibre reinforced C/TiC matrix composites, prep, compression props. 7−78101
C-C composites, elastic anisotropy during fabrication process 7−126166
C-C composites, US attenuation and porosity determ. 7−126398
$CaCO_3$ granules, thermal dissoc., porosity and density change study 7−100528
Cu, soft alloys, metallographic prep. of structural defects, pores, crack form. during heat treatment *(German, English)* 7−71430
Cu-Sn abrasive composite, elec. discharge sintering, struct., mech, props. 7−106465

porosity continued
Cu-Sn-ferrochromium system, vol. shrinkage accompanying sintering 7−77874
Fe, Armco, brittle dynamic fracture, constitutive modelling 7−93068
Fe, porous, deform. heterogeneity during static tensile testing 7−119322
Fe, pure, sintered, unlubricated wear rel. to porosity 7−71325
Fe-Cu, liq. phase sintering, pore filling, entrapped inert gas effect 7−77870
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7−100160
Li_2O polycrystals, deform., 700-950°C 7−84095
MgO compacts, creep-sintering, microstruct. 7−113482
$MgO-MgCl_2$ (1 wt.%), sintering, grain cuboidization, Kr adsorpt. isotherms 7−100157
$Mn_{1-x}Zn_xFe_xO_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7−77912
Mo LPCVD films, microstruct. charactn. 7−118330
$Na_2O-B_2O_3-Al_2O_3-Ta_2O_5$ glass ceramic, heat treatment, sintering, leaching, struct., porosity 7−71141
$Nb_{0.8}Ti_{0.2}$, ion implanted He porosity and supercond. props. *(Russian)* 7−99243
Ni based hard surfacing alloys, underwater plasma spraying, microstruct., mech. props. 7−77798
Ni:He films; ion implantation, porosity, dislocation struct. 7−142803
Ni/Au metallisation layers, porosity 7−118311
$Ni-Al_2O_3$, vacuum condensates, struct. and porosity, 1170 K 7−84564
$Ni-Al_2O_3$ system, vacuum condensates, struct., porosity rel. to annealing time 7−132460
NiAl powders, recrystallised struct., failure rel. to porosity 7−106621
Ni_3Al, directional solidification, process parameters charactn. 7−119259
NiO powder, prep., grain boundary diffusion 7−106471
Pb-acid battery, behaviour of C black in positive electrodes 7−119638
Si, anodisation for porous Si formation, dissolution reaction effect on porous Si density 7−113808
Si_3N_4 based materials, hot compaction, elastic props. rel. to porosity 7−106561
Si_3N_4, elastic modulus-porosity relationship 7−113594
Si_3N_4, reaction bonded, processing 7−71129
Si_3N_4, reaction sintering, porous struct. 7−77910
Si_3N_4-based ceramics, hot pressed, hardness 7−78155
Si_3N_4-SiC composite materials, hot isostatic pressing, sintering, density, fracture toughness 7−132534
Ti films, evaporated, oxidation, surface struct. 7−113776
TiC-TiB_2 two-phase powder mixtures, densification behaviour during sintering 7−77926
TiC-TiNi hard alloy with B addition, inelastic props. determ. by US pulsed method 7−78090
$(UCe)O_2$ pellets, sol-gel microsphere pelletization process, porosity, density microstruct. 7−77906
UO_2, densification at low burn-up 7−81525
UO_2 fuel pellets, sintered, fracture toughness, fracture surface energy, Vickers hardness 7−78186
UO_2-PuO_2, mixed oxide nuclear fuel, thermal behaviour, porosity and microfissure effects *(German)* 7−129191
W-Cu finely divided mixture, kinetic of densification and growth of refractory phase grain in sintering 7−119198
$ZnAl_xFe_{2-x}O_4$ ferrite, elec. cond. and physical props. rel. to Al content 7−118483
Zr-Nb (2.5 wt.%), reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
ZrN coatings, plasma spraying, controlled N_2 atmosphere, struct., hardness, thermal expansion 7−71383
ZrO_2, porous ceramic, plasma sprayed, particulate erosion, mech. props., struct. 7−78269

porous materials
see also flow through porous media
2D sheets with regular arrays of non-circular holes, elastic moduli calc. 7−117461
alloys, solidification, pore form. mechanism 7−106503
aluminosilicates, energetics and thermodynamics 7−111909
anisotropic porous media, effective diffusivity tensor, symmetry props. 7−91219
annulus, thin horizontal porous, natural convection study 7−97270
bicontinuous struct., scatt. props. 7−114015
binary liquid in porous medium, random-field transition 7−104977
brine-saturated, low freq. AC hopping cond., empirical scaling law 7−118487
cellular glass, prep. from quartz-porphyrite sands 7−113511
cement, macrodefect-free, latex modified, effect on props. 7−106606
characteristic pore sizes and transport in porous media 7−95519
clay and pillared clay catalysts, charact. 7−138336
consolidated, permeability, temp. effects 7−130785
controlled-morphology pore arrays, prod. 7−144326
convection, rectangular porous cavity, boundary layer regime, Brinkman model 7−97269
ductile failure, effect of porosity distrib. 7−142900
ductile rupture modes, anal. at crack tip 7−69057
elastic moduli rel. to microstructure 7−126162
elastic-plastic solid, porous, fracture toughness determ. 7−110855
ferrites, structure form. and gas evolution in vac. liq. phase sintering 7−106476
fibrous, dynamic strength props. 7−78209
finite inelastic deform., constitutive theory 7−117487
flow in medium composed of blocks, boundary integral eqns. method 7−140441
fluid mass sources and point forces in linear elastic diffusive solids 7−90959
fluid percolation transport through inhomogeneous composite medium 7−136992
fluid-saturated porous medium, motion description *(Polish)* 7−123451
fluids, self-diffusion in microporous solids, Enskog's kinetic theory calcs. 7−137600
fractal surfaces and elec. transport 7−108475
fractal systems, small angle neutron scatt. methods 7−69554
freshwater ice, fatigue behaviour, cyclic loading, porosity and crack growth 7−111759
gas bubble nucleus in porous heterophase medium, dynamics 7−104335
gas-saturated porous media, eqns. of mechanics 7−95344
gel, polystyrene latex spheres in polyacrylamide soln., particle movement and pore-size distrib., quasielastic light scatt. study 7−124128

porous materials continued
glass, porous sintered, colloidal SiO_2 content nonuniformity *(Japanese)* 7−132557
glass rod containing n-hexane-n-perfluorohexane liq. crit. mixture, phase separation, light scatt. study 7−76379
granular materials, flow, frictional-collisional constitutive relations 7−75492
granular materials, saturated and unsaturated, effective thermal cond., effective continuous media approx. 7−110767
granular materials with metal filler, thermal cond. calc. 7−110768
graphite, porous struct., changes during neutron irrad. 7−84037
groundwater in irrigated soil layer, impermeable inclusion effect 7−69260
heat and mass transfer in unsaturated porous materials with heat source 7−97521
heat transfer, temp. field influence estimation 7−117662
horizontal layer, nonuniformally heated fluid stability, fluid pumping in rocks appl. 7−142372
HTGR graphite cylinder, chemical reactions and diffusion with massive air ingress 7−109373
humid porous materials, drying by forced convection using hot air *(French)* 7−130693
immiscible displacements, statistical anal. modes 7−111088
immiscible fluid displacement, wettability influence models 7−111087
infiltration kinetics of capillary-porous solids by melts, investig. method 7−77859
interface shape dynamics for non-Newtonian fluids under gravity and interfacial tension 7−137704
isotropic porous solid, acoustic waves propag. parameters, energy density, volume fraction effects 7−137472
isotropic porous solid, acoustic waves velocity, volume fraction effects 7−137471
metal-H_2 system, vol. fraction of solid H_2 in metal pores, internal friction *(Russian)* 7−76531
metallic porous systems, microstruct. form. rel. to pressing and sintering conditions 7−71112
microstructure of disordered media, charact., unified approach 7−98484
miscible flows, stable and unstable, acoustical technique studies 7−111089
molecular sieves, sorption energetics, surface curvature effects 7−113980
molten carbonate fuel cells, Ni microporous anode layer stability *(Japanese)* 7−133087
montmorillonite, microporous sorbents, prep., adsorpt. props. 7−76611
naphthalene, dissolving in supercrit. CO_2, mass transfer resistance meas. 7−118099
natural convection from vertical plate to high permeability porous media 7−110757
natural convection in shallow, porous cavity, Brinkman model calcs. 7−110756
natural convection in tilted rectangular porous material, num. soln. 7−97271
non-Newtonian fluid flow, in porous-permeable medium 7−111041
nuclear fuels, ceramic, stable open porosity, simplified model 7−73855
partially penetrable spheres, random array, fluid permeability bounds calc. 7−91218
permeability, mag. resonance probes 7−83334
physics and chemistry, conf., Ridgefield, CT, USA (Oct. 1986) 7−108008
pillared clay Fischer-Tropsch catalyst, dispersed Ru, STEM studies 7−100615
plasticity theories of porous, unequally strong and anisotropic media 7−75345
plate, porous transtropic with strain hardening base, plastic state eqn. 7−104169
polyacrylonitrile fibrous canvas-polyethylene gauze system, thermal math. model of filter materials prep. 7−71147
polycarbonate microporous membranes, apparent ionic diffusion coeffs. of LiCl and $MgCl_2$ electrolytes 7−106829
polycrystalline ceramics, magnetisation processes, perpendicular stress effects study 7−106006
polyether urethane urea, albuminated, lectin immobilised, tissue compatibility 7−114554
polymer matrix, oriented, melting of low-molecular cpds. in micropores *(Russian)* 7−137595
polypropylene, isotactic, highly disperse struct. form. by deform., annealing effect *(Russian)* 7−113640
poroelasticity and wave propag., Biot's theory extensions 7−111727
potassium aluminate+natural clays, sintered mixtures, mechanical strength 7−93075
powder metallurgy components, porosity inspection using laser beams 7−71453
powders, deform. anisotropy, of mech. props. in uniaxial compression 7−106585
Raschig-ring bed porosity and press. drop determ. *(German)* 7−75668
sandstone, quantitative image analysis, genus and pore map software 7−87934
sandstone, quantitative image analysis, specific genus, cubic lattice models 7−87935
sandstone rock, thin-slice chemical shift imaging of oil and water 7−132140
sedimentary rocks, morphology 7−114697
sedimentary rocks, porosity and brittle-ductile transition 7−114701
sedimentary rocks, T1−permeability correlations 7−114699
shock waves, 1D impact, optimal control 7−76300
shock waves, converging, conical, reaction in porous specimens 7−104912
silica synthetic materials, porosity 7−111902
sintered glass porous materials of variable compaction, tracer dispersion meas. 7−130788
soil, irrigated, impermeable layer underlay, systematic drainage study 7−145532
sol-gel glasses, porous, chemistry and physics 7−126078
sol-gel glasses, studies of supercooled O_2 liquids and solids 7−98406
spheres, uniform, bidisperse mixtures, Knudsen diffusion 7−123713
sprayed coatings, hot gas, form. on powder materials 7−71334
stagnant bed of solid particles, heat cond. model 7−110753
steel, C, sintered, pulsed laser treatment, effect on struct. and props. 7−93194
steel, Fe-G type, sintered, infiltration kinetics by Cu-Fe melts 7−77859
steel fibres, dynamic strength props. 7−78209
steels, sintered, secondary porosity and its effect on product quality and consistency 7−144340
styrene-divinylbenzene copolymer, macroporous, adsorpt. of dissolved organic cpds., from water 7−112078

porous materials continued
sublimation of semi-infinite porous medium, convection effects study 7−98422
surface embedded in porous medium, boiling heat transfer 7−130695
thermal conduction model accounting for inclusion shape and orientation 7−75243
three layer wall, internal cooling and surface heating, heat transfer study 7−136673
three-phase porous materials, thermal diffusivity meas. 7−84409
Ti-Cu, state of sintering, diffusion microstructure *(Japanese)* 7−126045
transport properties, probing using superfluid ^{4}He sound propagation 7−111991
travelling combustion waves, solns. of two-point free-boundary problem 7−139008
tube wave as Biot slow wave 7−110748
unsaturated fly ash landfill moisture content and pressure potential instrument evaluation 7−114160
Al and alloys, porosity, automatic US mapping in semifinished and finished products 7−126377
Al_2O_3 aerogels, unusually high pore vol. synthesis variables 7−113488
α-Al_2O_3, extrudate structure and strength, formulation effect 7−92902
Al_2O_3 humidity sensor, elec. props., surface conduction mechanisms 7−102419
Al_2O_3, porous ceramics, electrolyte saturated, dielec. anomaly 7−133667
α-Al_2O_3 powder compacts, sintering, pore struct. agglomerates effect 7−132535
Bi dense plasma, shock compression and adiabatic decompression of solid and porous samples 7−84127
C porous cathode passivation in Li-$SOCl_2$ cells 7−133067
C, pulse chemical vapour infiltration of TiN 7−71099
CdO, pore structure, preparation method effects *(Russian)* 7−124536
CoO, pore structure, preparation method effects *(Russian)* 7−124536
$Cu_{3+\delta}Mo_6S_{7.9}$ thin film cathodes for rechargeable Li batteries 7−133074
Fe, cast, grey, pearlitic, fatigue damage accumulation 7−78170
Fe, porous, deform. heterogeneity during static tensile testing 7−119322
Fe-C compacts, struct. changes during sintering *(Korean)* 7−77866
Fe-Mo-B, sintering and mech. props. 7−92919
La-Sr-Cu-O high T_c supercond., Hall coeff. studies 7−92209
$La_{0.85}M_{0.15}CoO_3$ (M=Ca,Ba,Ce), porous struct. rel. to prep. method 7−71123
$LaMO_3$ (M=Fe,Co,Ni,Cr), porous struct. rel. to prep. method 7−71123
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7−100160
MgO, sintering, pores surface area and vol. 7−100159
Mo, irradiated, He-saturated, form. and growth of gas-filled pores during annealing *(Russian)* 7−111537
Mo-Ni, liq. phase sintering, liq-grain mixture flow and isolated pore elimination during early stages *(Korean)* 7−138705
Na_2O-B_2O_3-Al_2O_3-Ta_2O_5 glass ceramic, heat treatment, sintering, leaching, struct., porosity 7−71141
Ni, ultrafine powders, sintering, elastic modulus, elec. resist., contact phenomena 7−71111
Ni-Mn-O thermistors, form. and elec. props., X-ray diffr., SEM and AES studies 7−92176
NiO, pore structure, preparation method effects *(Russian)* 7−124536
PLZT-silicone rubber porous ceramic composites, dielec. and piezoelec. props. study 7−125587
$PbTiO_3$, sol-gel derived, struct. control of monolithic gels 7−113489
Si, porous, anodised, direct evaporation of noble metals 7−143285
n-Si, porous surface layers, form. props., effects of anodic polaris, conditions 7−112125
Si, specific surface, effects of anodic reaction and high temp. annealing 7−93222
p-Si substrates, oxide layer form. kinetics from porous surface layer 7−144635
a-Si:H/a-SiO_x:H microporous superlattices, confinement and fluoresc. of aromatic mols. 7−122609
Si_3N_4 based materials, hot compaction, elastic props. rel. to porosity 7−106561
Si_3N_4, reaction sintering, porous struct. 7−77910
Si_3N_4-based materials, hot-pressed, charactn. by microhardness meas. 7−113671
SiO_2, porous glass and vitreous struct., X-ray diffr. 7−104566
SiO_2 porous silica boules, mass fraction profiling based on X-ray tomography 7−121074
TiO_2-SiO_2 glass-ceramic, porous, thermal and chem. props. 7−113742
W-Cu, infiltration of liq. in sintered W 7−92921
WC-Ni/Fe-Cr-C, infiltrated alloys, wear resist. 7−132555
ZnO, porous, varistor props. 7−99053
ZrO_2, porous ceramic, plasma sprayed, particulate erosion, mech. props., struct. 7−78269

porous media *see porous materials*

porphyrins *see organic compounds*

portability, software *see software portability*

Portevin-Le Chatelier effect *see serrated yielding*

posistors
No entries

position control
see also attitude control
astronomical ten metre telescope, mirror segment alignment control system analysis 7−79839
atmospheric laser radar target area accurate positioning *(Japanese)* 7−79691
Aurora KrF laser system, PAC-MAN alignment control using random noise 7−110332
coxa-trochanter joint in stick insect Carausius morosus, feedback control system properties 7−93700
coxo-trochanteral feedback loop in stick insect Carausius moroses, role of depressor trochanteral motoneurones 7−93699
cryogenic positioner using DC torque motor 7−67329
dentistry, alignment inclinometer in tooth prep. 7−119896
elasmobranch eye movement, vestibulo-ocular reflex with no head movement 7−93737
housefly's landing response, visual trigger 7−93757
Kiso Observatory 105 cm Schmidt telescope, automatic guiding for photography *(Japanese)* 7−79838
leg step motion, control and learning model 7−133339
manipulator and end-effector interacting with environment, dynamic anal. 7−108225
micropositioning equipment for optical laboratories *(Czech)* 7−121088

position control continued
multijoint limb, movement control model 7−107104
myoelectric control of upper limb prostheses, response time and control accuracy 7−107312
piezoelectric positioners for linear motions *(German)* 7−73325
prosthesis, microcomputer-controlled, position proprioception 7−107313
servo for vibrationally isolated tables 7−121096
space vehicles, analytical dispersion anal. of orbital manoeuvres strategy 7−139879
spacecraft orbital motion, control in vicinity of collinear libration centre in restricted elliptical three-body problem 7−120243
stick insect walking, timing and shaping influences on motor output 7−133340
submersible ROVs in offshore oil industry, sonar positioning methods 7−134010
subsea positioning and control in hydrocarbons exploration, use of transponder network 7−75199
superconducting torquer for Infrared Satellite Observatory camera 7−67328
symmetric running with single and double support, in robots and animals, anal. 7−114354
telescope, Jena-made 2 m reflecting, with microcomputerised control system 7−127725
telescope, Jena-made 800 mm reflecting, with electronic control system 7−127726
trajectory planning in continuous-path applications, differential-geometry relations 7−120785
translation mechanisms for physical instruments, design and assessment 7−128552
X-ray lithographic mask alignment using moire signals in refl. 7−116038
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$-$PbTiO_3$ ceramic electrostrictors for micropositioner appls. 7−99722

position finding *see navigation*

position measurement
absolute orientation closed-form soln. using unit quaternions 7−67406
balloon-borne radiometer, attitude determ., use of two-sided limb scanning 7−127682
dentistry, alignment inclinometer in tooth prep. 7−119896
eye and head movement meas. of small animals using mag. field search coil system 7−87403
fibre optic sensors *(Italian)* 7−97150
inset motion, on-line analysis with microcomputer 7−87401
line-like object, 3D position meas. using defocusing of imaging system *(Japanese)* 7−128538
magnetic system for finite position Hall effect sensor *(Russian)* 7−80742
MOS photodetector, position sensitive, using lateral photovoltaic effect 7−67389
motion monitoring, using light as tool 7−140674
optical position transducer, simple, low-cost design 7−108538
optical sensors and transducers *(Danish)* 7−128525
pinhole/occulter facility on mast on Space Shuttle, optical detection of modal oscillation *(Portuguese)* 7−134136
polyhedron, 3D position and orientation meas. using multiple binary images 7−82508
RAFOS neutrally buoyant subsurface float, acoustic tracking, data acquisition and telemetry 7−133971
sensor array and linear-period-modulated signal for position and velocity finding *(Japanese)* 7−142134
transducer, inductive with transverse excitation *(German)* 7−80740
ultrasonic presence sensors with wide range and high local resolution 7−82982
xy-coordinates meas. system with TV camera, for astron. plates *(Japanese)* 7−79844

position sensitive particle detectors
see also bubble chambers; cloud chambers; spark chambers
anode wire aging meas. and possible remedies 7−74356
CCDs as position sensitive particle detectors 7−109640
CDF vertex time projection chamber, prototype flash ADC system 7−135742
Cherenkov ring imaging detector, prototype tests at SLD expt. 7−74359
compact X-ray generator for the bench test of a resistive plastic tube position detector 7−80953
CR-39 detectors, electrochemically etched, passive fast-neutron spectrometer 7−135760
CR-39 plastic track detector, response dependence on registration temp. *(Chinese)* 7−89875
CRID/RICH detectors, wire aging of hydrocarbon gases with TMAE additions 7−74357
CUSB-II, BGO calorimeter, design, status 7−68159
data reduction scheme for channel-plate detectors 7−68141
DELPHI barrel electromagnetic calorimeter flash ADC based digitizer 7−81853
Delphi time projection chamber, contiguity trigger 7−109663
development for accelerator beam control 7−81862
digital X-ray imaging system using MWPC 7−135745
drift chamber, 2D, construction and performance *(Chinese)* 7−122305
drift chamber, 2D, delay-line read-out *(Chinese)* 7−122306
drift chamber in DELPHI expt., variable drift velocity study 7−74369
drift chamber track finding and fitting, vectorisation 7−135735
drift chambers for D0, waveform digitizers 7−109662
drift chambers for SPES4 spectrometer 7−109612
drift chambers with long drift paths, pulse shape simulation 7−135740
drift-tube counters and readout electronics of VENUS muon detector 7−139932
EAS array, cosmic ray muon identification, new method 7−127733
electrodeless drift chambers for accelerator expts. 7−81866
electron impact ionisation channel spin symmetry meas. with position sensitive detector 7−67435
escape-gated two chamber proportional counter for Auger electron and X-ray meas. 7−116789
FASTBUS readout processor, MC68020 based for time projection chamber 7−68167
FRAMM spectrometer, vertex detector geometrical reconstruction program 7−74380
gas scintillation drift chambers with wave shifter read-out for hard X-ray astronomy 7−72307
hadron calorimeters, segmentation 7−81899
Hamamatsu R 1564U microchannel plate photomultiplier, time resolution performance 7−74347

position sensitive particle detectors continued
high density lead glass tubing projection chamber, operation and appl. 7−74363
high energy accelerators, perspectives for experimental apparatus, seminar, San Minato, Italy (May 1986) 7−108021
High-density Projection Chamber EM calorimeter, charge transmission props. 7−81900
interline transfer imaging CCD as position sensitive detector 7−116786
ionisation chambers, position sensitive, offline data anal. program *(Chinese)* 7−109645
JADE vertex detector at PETRA, meas. of short-live particles 7−96477
Kratky block-collimation small-angle X-ray diffractometer for synchrotron radiation 7−121316
LEP fastbus data acquisition system calibration system for MWPC *(Spanish)* 7−81906
MCP detector for ions and neutrals, absolute efficiency 7−81860
microchannel plate detector using delay line readout anode 7−116784
microchannel plate electron multipliers, resistance variation with temp. and voltage 7−116790
microchannel plate limited imaging with ultra-thin wedge and strip anodes 7−74348
microchannel plates system for photons and particles counting 7−121296
microchannel-plate position sensitive detectors for UV astronomy 7−72306
mini drift chamber, characteristics 7−135754
multianode photomultiplier for low light level events 7−74352
multicell drift chambers, performance and construction 7−96478
multitube drift chamber for LHC or SSC 7−109636
multiwire detector, unidimensional, development and image resolution 7−74351
multiwire drift chamber, charged particle track simulation, reson. multi-photon ionisation technique 7−89879
multiwire proportional chambers, gain reduction due to space charge 7−74343
multiwire proportional counter with spherical drift chamber for protein crystallography with X-rays and gamma-rays 7−109610
muon detector for multi-TeV collider experiments 7−68160
MWPC for high flux beam monitoring, design and performance 7−96464
MWPCs, automatic wire-winding machine 7−135737
neutron counting using 3-detectors for PET agent yield prediction 7−81855
OPAL vertex detector with stereo wires, track fitting 7−135753
optical, proportional, continuously operating avalanche chamber 7−116780
photomultiplier, readout of optical scintillation fibres 7−135750
plastic scintillating fibers for track detection 7−74371
plastic streamer tubes, induced readout characteristics *(Chinese)* 7−103327
polymer foils, spark counting of particle tracks, neutron flux, spectrometry meas. 7−74335
proportional counter, characteristics 7−89861
proportional counter, elimination of end effect, ^{14}C activity meas. 7−135785
proportional counter, multistep design, performance, X-ray astronomy appl. 7−115234
proportional counter, partially resistive anode wire, characteristics 7−89884
proportional drift tube, accurate two-dimensional readout using time division and vernier pads 7−81872
proportional drift tube time resolution improvement, use of pulse trailing edge 7−129521
proportional wire chambers, extended parametrization of gas amplification 7−141395
radial semiconductor drift chambers, step noise effects on energy resolution 7−81871
rectangular drift tube for muon identifier 7−109648
resistive wire proportional detectors for Q3D mag. spectrograph 7−116782
resonance tensiometer for multiwire chambers *(Spanish)* 7−81852
scintillating fibre detector, high resolution, performance 7−122315
semiconductor counters, two-dimensional position sensitive detector, correlation technique 7−116777
semiconductor detectors, experimental nuclear physics appl. 7−74382
single-wire drift tubes, response to variations in wire diameter and gas filling 7−96468
SLC energy spectrum monitor using synchrotron radiation 7−68119
time-to-amplitude convertor for electroluminescent drift chamber 7−129529
Topaz detector, data acquisition system, timing for distribution and interrupt control 7−68176
Topaz time projection chamber, signal processing 7−68175
TOPAZ-TPC cosmic ray test 7−68136
trigger drift chamber for the upgraded Mark II detector at PEP 7−81865
UA1 central detector at present and future luminosity (ACOL) 7−109635
wire chamber aging, anode material depend. 7−74355
wire chambers, effects of end plates on resolution 7−109613
wire chambers, independent readout system 7−109624
wire chambers as transition radiation detector for cosmic ray muons 7−74367
wire gaseous coordinate detectors and their applications in biomedical research 7−89863
wireless time projection chamber, prototype testing 7−74358
X-ray attenuation factors meas. in gaseous Xe, using drift chamber 7−83409
X-ray position detectors for dynamic diffraction studies *(Japanese)* 7−117787
Al drift-tube counters in VENUS, Monte Carlo simulations of delta ray effects 7−139933
Ar, liquid time projection chamber, large scale purification system 7−116779
BaF_2-TMAE detector for PET appl. 7−79117
$Bi_4Ge_3O_{12}$ detector array, response to 0.5-21 MeV photons *(Chinese)* 7−103328
CsI(Na) scintillation plate with high spatial resolution 7−74341
(Ga,Al)As-GaAs, semiconductor scintillator, nuclear particle and X-ray detector 7−141403
Si counter array, construction and performance in UA2 7−109639
Si microstrip counter with VLSI readout for DELPHI microvertex detector 7−74370
Si microstrip detector as ALEPH minivertex detector 7−109638
position sensitive particle detectors continued
Si strip detector, γ-ray polarisation, energy and direction meas. 7−141397
Si strip particle detector IC *(Norwegian)* 7−74337
Xe, high pressure time projection chamber, design and construction 7−135741
Xe-He gas scintillator for low energy isotope imaging 7−74342
positioning *see position control*
positive column
see also glow discharges
gas discharge, positive column, isotope separation 7−97826
glow discharge in air, attachment instability onset, num. simulation 7−117773
glow discharge positive column, current depend. on electron temp. and distrib. 7−83573
glow discharges, cathode regions study 7−137147
low-pressure discharge, positive column, at. gas injection effect on elec. and thermal characts. 7−111298
plasma density gradients determ. 7−117770
H positive column thyratrons, recovery processes 7−97823
He lasers, hollow cathode, longitudinal discharges, plasma parameters 7−96977
He, longitudinal flow, discharge parameters, metastable states effects 7−124030
He positive column, pulsed optogalvanic signal decay mechanism 7−75884
He-Cd capillary glow discharge, population inversion, spectroscopic study 7−96982
He-Cd laser discharge, density, spectral line intensity 7−130930
O glow discharge, pot. fall produced by moving space-charge dipole layer 7−104470
SF_6, glow discharges, diffuse and constricted 7−97834
positive feedback *see feedback*
positive ray sources *see ion sources*
positive rays *see ion beams*
positive temperature coefficient thermistors *see thermistors*
positons *see positrons*
positron annihilation *see electron-positron interactions*
positron annihilation in liquids and solids
acetylcholine chloride positron annihilation angular correls., temp. dependence of narrow component intensity 7−139199
Al, quenched, annealing, defect studies, positron lifetime and PAC meas. 7−98225
alcohol-water mixtures, positron annihilation and compressibility studies 7−92776
alkali metal halides, positron annihilation from F-centres 7−70934
alloys, amorphous, intrinsic defects, positron annihilation studies 7−83701
alloys, mechanical props. and struct. modifications w.r.t. pulsed ion beam effects 7−117988
angular correlation instrument for 1D spectra *(Chinese)* 7−89311
animal lenses, age induced changes 7−145024
applications, review 7−73485
chalcogenide glasses, positron annihilation study of defects and microheterogeneity 7−77681
elastomers, structure microdefects 7−142653
EM interaction of ultrarelativistic particles with crystal target *(French)* 7−91687
epoxy, transition metal ions, effects on positron annihilation 7−125845
fatigue defect detection in structural alloys using positron annihilation 7−71440
graphite, electron momentum distribution, angular correlation of positron annihilation 7−144157
III-V semiconductor compounds, irradiation induced defects, review 7−142843
III-V semiconductor cpds., defects, positron studies 7−144160
low energy monoenergetic positron beams from electron linacs 7−132369
low energy positron production, conf., Giessen, Germany (Sept. 1986) 7−128166
metallurgical defects, positron annihilation trapping models, review 7−138542
metals, dissimilar, positronium time of flight spectroscopy 7−99986
metals, electron irrad., vacancy-impurity interactions, positron annihilation studies 7−91567
metals, positron annihilation at a vacancy, analytical models 7−119065
metals, void positron annihilation lifetime spectrum, density functional formalism *(Chinese)* 7−85888
metals and alloys, high power ion beam modified, struct. anal. methods 7−117985
metals and alloys, void and vacancy cluster nucleation processes 7−98129
metals nanocrystalline, struct., positron annihilation studies 7−98034
methanol-cyclohexane mixtures, positron annihilation in vicinity of critical soln. point 7−113309
molecular solids, defects, positron studies 7−142757
multi-exponential function fitting program for the analysis of the positron annihilation life spectrum *(Chinese)* 7−113310
nanocrystalline materials, atomic struct. study 7−142675
naphthalene, contact density and hyperfine splitting of positronium 7−74787
Permalloy, order-disorder transitions, recovery of electron irradiated Fe-Ni alloys 7−104993
photon splitting in strong EM field, possibility of obs. in single crystals 7−77683
poly(bisphenol-A carbonate), positron annihilation lifetime studies 7−138543
polymers, defect studies 7−144164
positron annihilation behaviour in several corrosion protective polymeric coatings 7−85887
pulsed slow positron beam lifetime measurements 7−144162
quartz cryst., positron annihilation, Doppler broadening-ang. distrib. correl. obs. 7−106297
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
rare earth cpds., RMo_6S_8 (R=La, Gd, Yb, Ho), Chevrel phase, microstructures, positron lifetimes 7−144166
semiconductors, diamond-like, positron annihilation gamma photons, angular distribs. 7−77680
semiconductors and insulators, defects and impurities, positron mobility meas. 7−142760
silica aerogel, positron annihilation, Doppler broadening-ang. distrib. correl. obs. 7−106297

positron annihilation in liquids and solids continued
slow positron source at Stuttgart pelletron accel. 7−129485
solids, defects, positron annihilation studies 7−137363
steel, eutectoid, post thermomechanical treatment transform. struct. of ferrite in pearlite 7−100218
steel, Fe-Cr, martensitic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, Fe-Ni-Cr, ferritic, radiation enhanced phase transition, influence of vacancies 7−104745
submicron metal films, positron annihilation γ-rays distrib. 7−144167
transition metal-metalloid based metallic glasses, physical props. rel. to processing conditions 7−113534
transition metals, 4d, enhancement factor of positron annihilation with d-like electrons. 7−106296
vertical positron beam for low-temperature surface studies 7−128711
Ag, electron momentum density distribs. 7−76760
Ag, positron annihilation rate enhancement 7−138541
Ag, thermal vacancies, positron lifetime meas. 7−91570
Ag-Na_3AlF_6, angular correlation studies 7−144163
Al, annealed and electron irrad., vacancy props., positron lifetime meas. 7−142768
Al, ion beam irradiated, high power beam, increased microhardness and positron annihilation 7−76243
Al, ion implanted with H and He, annealing, positron lifetime studies 7−92775
Al, proton and neutron irrad., vacancy-gas agglomerates 7−98261
Al, proton irrad., damage and defect recovery, positron lifetime spectra, 20-500 K 7−84072
Al, stage III annealing, positron annihilation studies 7−99969
Al, vacancies, positron lifetime spectroscopy and trapping 7−92771
Al, vacancy clustering, PAC, channelling and positron annihilation studies 7−98130
Al/Al_2O_3 multilayer system, annihilation photon angular correlation 7−92777
Al-Mn-Si alloys, cryst., quasicryst. and amorphous, positron annihilation study 7−77682
AlIn, quenched, annealing, defect studies, positron lifetime and PAC meas. 7−98225
As-Ge-X:Pb(Cu), glasses, (X=S, Se, Te), electrical and structural props. 7−83711
Au electron irrad. dilute alloys, vacancy clustering, impurity effects, positron lifetime studies 7−91636
Au, positron lifetime, quenched-in vacancies and stacking faults 7−92772
Au, quenched and deformed, recovery behaviour, positron studies 7−92773
Au, thermal vacancies, positron lifetime meas. 7−91570
Au-Co dilute alloys, vacancy-solute interactions, elec. resist. and positron lifetime studies 7−91637
BaF_2, three-photon positron annihilation studies 7−144165
Bi-Sn(Te) dil. alloys, electron irradiated, vacancy recovery, positron lifetime meas. 7−104839
Cd, positron lifetime, quenched-in vacancies and stacking faults 7−92772
CdTe, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
Co alloys, positron-defect interactions arising during multilayer struct. form. *(Russian)* 7−124289
^{58}Co slow positron beams for probing surface struct. disorders 7−132370
Cu ion beam irradiated, increased wear resistance, positron annihilation 7−142854
Cu, positron annihilation rate enhancement 7−138541
Cu, stage III annealing, positron annihilation studies 7−99969
Cu, thermal vacancies, positron lifetime meas. 7−91570
Cu, vacancy clustering, PAC, channelling and positron annihilation studies 7−98130
Cu-Al-Mn martensite, positron annihilation study 7−126118
Cu-Kr (3 at.%), solid Kr bubbles positron annihilation study, 80-940 K 7−85889
CuAu, vacancy props., positron annihilation studies 7−104741
Cu_3Au, vacancy props., positron annihilation studies 7−104741
$Cu_{91}Ge_9$ disordered alloys, electronic struct., positron annihilation study 7−124838
CuIn alloy, positron annihilation, effect of vacancies and precipitation 7−106299
CuIn dilute alloys, vacancies and precipitation, positron lifetime studies 7−91576
$Cu_xMo_6Se_{7.6}$, Chevrel phase, microstructures, positron lifetimes 7−144166
Fe dilute alloys, electron irrad., vacancy clustering, impurity effects 7−98226
α-Fe, multi-exponential function fitting program for the analysis of the positron annihilation life spectrum *(Chinese)* 7−113310
Fe, positron annihilation studies, Bhabha scatt. 7−132374
α-Fe, vacancy migration and form., positron annihilation studies 7−91572
Fe-Cr-Ni FCC alloys, point defects study 7−104744
Fe-H, neutron irrad., impurity-defect interactions, positron annihilation spectra 7−84015
FeAl ordered BCC alloys, vacancy form. and conc., positron annihilation studies 7−104747
$Fe_{1-x}Co_x$ alloys, positron annihilation studies, Bhabha scatt. 7−132374
$Fe_{1-x}Co_x$, electronic struct., polarised positron annihilation study 7−92059
$Fe_{14}(NdDy)_2B$ permanent magnet alloy, thermal treatment effects, positron annihilation study 7−132372
GaAs, nonstoichiometric defects 7−142770
GaAs, vacancy defects in as-grown and electron irradiated GaAs, positron annihilation study 7−99971
GaP:S, defects 7−142759
$Hg_{0.8}Cd_{0.2}Te$, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
HgTe, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
In-Tl, electronic struct. in vicinity of face centred tetragonal-FCC transition, positron annihilation study *(Russian)* 7−112174
K-intercalated graphite, quasi two-dimens. positronium formation 7−118418
KCl:Ca^{2+}, positron lifetime measurements 7−70933
KCl:Sr^{2+}, positron lifetime measurements 7−70933
$KNbO_3$ single crysts., RF heating Czochralski growth, colour centres, positron annihilation 7−113374
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., positron annihilation Doppler broadened lineshape study 7−119064
positron annihilation in liquids and solids continued
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., O vacancy behaviour, positron annihilation, O diffusion 7−142769
LiCl-LiF-B_2O_3 fast ionic conductor, positron annihilation study *(Chinese)* 7−91872
α-$LiIO_3$, annihilation photons ang. distrib. anisotropy 7−92770
$LiNbO_3$-Fe_2O_3, amorphous, struct 7−83676
MgO, surface, time of flight spectroscopy of positronium emission 7−99988
MgO:Al crystals, spinel precipitates positron lifetime and analytical electron microscopy studies 7−118103
Mo (110) surface, defect interactions with positrons 7−113311
Mo, H in vacancies, positron lifetime meas. 7−104799
Mo single crysts., electron irrad., vacancy defects, positron studies 7−98137
Mo, vacancy formation, positron lifetime meas. 7−91573
NaCl, three-photon positron annihilation studies 7−144165
NaF, three-photon positron annihilation studies 7−144165
Nb, alpha-irradiated and deformed, positron annihilation studies 7−76225
$Nb_{50}Mo_{50}$, Fermi surface parameters, positron annihilation study 7−98782
Ni binary alloys, cold rolled, impurity-induced vacancy clustering, positron annihilation study 7−106300
Ni, H in vacancies, positron lifetime meas. 7−104799
Ni, quenched vacancy migration, positron studies 7−91877
Ni ultradisperse particles, positron diffusion coeff. determ. 7−69959
Ni-Al intermetallic cpds., vacancy diffusion mechanism, DSC and positron annihilation studies 7−105104
Ni-Si (Ge)(Sb), dilute electron irrad. alloys, void nucleation, solute atom effects 7−91591
NiAl ordered BCC alloys, vacancy form. and conc., positron annihilation studies 7−104747
Ni_3Al polycrystalline alloys, positron annihilation spectroscopy of vacancies 7−106303
$Ni_{78-x}Cr_xSi_{10}B_{12}$ metallic glasses, positron annihilation, crystalline embryos model of struct. 7−132368
O_2 film, on graphite, identification of para-positronium production 7−125846
Pb, positronium emission 7−85890
Pd, electron momentum density distribs. 7−76760
Pt, thermal vacancies, positron lifetime meas. 7−91570
Rh, electron momentum density distribs. 7−76760
$(SN)_x$, positron annihilation Doppler broadening study 7−92778
Sb, electron irrad., vacancies, positron annihilation studies 7−92774
Se trigonal crysts., positron annihilation Doppler line broadening meas. 7−77684
Si, defects, high temp. positron annihilation studies 7−99970
Si, defects and O impurities, positron studies 7−144161
Si, ion-implantation induced vacancy profiling using slow positron beams 7−111677
Cz-Si:B, defect characteristics, doping and annealing depend. 7−142758
a-Si:H, positron lifetime meas. interpretation 7−132371
a-Si:H, positron lifetimes, comment 7−99968
a-Si:H films, positron annihilation, annealing effect study 7−106304
a-Si:H films, positron-lifetime studies 7−132373
Si:O, P(B), O-related defects, doping and annealing effects 7−98227
Si:P, positron lifetime meas., thermal stability of P-vacancy pairs 7−70935
SiO_2, quartz surface, time of flight spectroscopy of positronium emission 7−99988
Sm-Co permanent magnets, ordering process, positron annihilation studies 7−92769
$Ti_{70}Ni_{25}Si_5$, metallic glass, electron phenomena before and after crystallisation 7−125847
Tl_2Cl_6, mixed valence, cond. and positron annihilation lifetime meas., effect of crushing crysts. 7−112280
V-Fe:H, effect of H absorption on electronic and structural props. 7−105394
$V_{1-y}Fe_yH_x$ alloys, 3d-like electron localisation and charge transfer 7−76822
V_3Si, plastically deformed, lattice defects, positron annihilation study 7−106298
W, vacancy formation, positron lifetime meas. 7−91573
Y-Ba-Cu-O high T_c supercond., positron annihilation Doppler broadened lineshape study 7−119064
YBaCuO, high T_c ceramic supercond., positron annihilation study 7−144158
$YBa_2Cu_3O_{6+\delta}$ high T_c supercond., positron annihilation lifetime and Doppler broadening energy spectra 7−144159
Zn, 2D ang. correlation of positron annihilation radiation 7−106301
$ZnGeP_2$, electron radiation effects during isochronous annealing 7−142842
ZnS-Al_2O_3 multilayer structures, profiling with monoenergetic positrons 7−85891
Zr-Sn, electron irradiated, influence of Sn additions on recovery, positron annihilation study 7−106302
Zr_xFe_{1-x}, amorphous, crystallisation, positron annihilation, Mossbauer spectra 7−97965

positron emission tomography *see radioisotope scanning and imaging*

positron scattering *see electron-electron scattering; electron-nucleon scattering; electron-nucleus scattering; electron spectra; hadron electroproduction; secondary emission*

positron scattering (atoms) *see atomic electron impact excitation; atomic electron impact ionisation; elastic scattering of electrons by atoms and molecules*

positron scattering (molecules) *see elastic scattering of electrons by atoms and molecules; molecular electron impact dissociation; molecular electron impact excitation; molecular electron impact ionisation*

positron states
alkali metal halides, positron annihilation from F-centres 7−70934
ionic crystals, momentum distrib. of delocalised positronium 7−98936
positronium formation with surface electrons, energy and ang. distrib. calcs. 7−92248
surface-ejected positronium 2D momentum distrib. calcs. 7−124933
Al (100), positron deformation pot. and work function temp. depend. 7−112430
CdTe, electronic struct. and positron states at vacancies 7−98879
GaAs, electronic struct. and positron states at vacancies 7−98879
K-intercalated graphite, quasi two-dimens. positronium formation 7−118418

positron states continued
Mo, positron diffusion, epithermal positron effects and implantation profile 7−105137
Pb, positronium emission 7−85890
Si, electronic struct. and positron states at vacancies 7−98879
a-Si:H, positron lifetimes, comment 7−99968

positronium
see also electron pairs
angle-resolved positronium emission spectroscopy study of Al (100) 7−77026
atom, 2^3S_1-2^3P_J fine-structure splittings 7−103694
covariant two-body equation, Moller and Breit pots. 7−122771
decay, proposed quantum mech. test 7−80490
electron-positron state, resonant, in central field 7−74501
excited-state, scatt. from mols. 7−117048
formation, by high-energy position impact on atoms 7−129881
formation by photon capture in pulsar mag. fields, implications for polar gap models 7−72493
formation from Li and Na atoms, differential and total cross sections, pseudopots. appl. 7−103692
formation with surface electrons, energy and ang. distrib. calcs. 7−92248
galactic centre region, positronium fraction 7−140275
ionic crystals, momentum distrib. of delocalised positronium 7−98936
low energy electron scatt. 7−136102
low energy positron beams from linear, atomic physics appl., review 7−129866
metals, dissimilar, positronium time of flight spectroscopy 7−99986
metals nanocrystalline, struct., positron annihilation studies 7−98034
molecular solids, defects, positron studies 7−142757
naphthalene, contact density and hyperfine splitting of positronium 7−74787
orthopositronium decay rate, precision meas. 7−117093
positronium-glycine complex form., N-substituted phenyl glycine rate consts. and basicities relationship 7−113967
Ps_2 molecule, s state four body (or quasi-four-body) molecule existence, quantum mechanical treatment 7−135839
o-Ps, pick-off annihilation rates meas. microwave-induced changes 7−129905
relativistic elementary atoms, interaction with matter, general formulas 7−136098
relativistic elementary atoms, interaction with matter, numerical results 7−136099
SN 1987A in LMC, possibility of positronium detect. 7−80004
spectra, covariant two-body equations, QED 7−90452
spin-polarized low-energy positron beams and their applications 7−129904
surface-ejected positronium 2D momentum distrib. calcs. 7−124933
surfaces, positronium form., quantum theory 7−112422
ultrarelativistic positronium atoms, probability of passage through matter, inelastic screening *(German)* 7−129906
$e^+e^-\rightarrow$axion+γ, axion mass limits from orthopositronium decay 7−74786
H_2, positron annihilation and positronium form., density depend. 7−82381
K-intercalated graphite, quasi two-dimens. positronium formation 7−118418
MgO, surface, time of flight spectroscopy of positronium emission 7−99988
O_2 film, on graphite, identification of para-positronium production 7−125846
SiO_2, quartz surface, time of flight spectroscopy of positronium emission 7−99988

positrons
see also electron pairs; electrons
anomalous magnetic moments, expt. for precise comparison at relativistic energies with e^- 7−81186
g factor meas., comparison to electron 7−116174
positron-He total scatt. cross section partitioning determ. 7−136070
ultrarelativistic, anomalous mag. moment depend. on energy and field strength 7−95909
$\tilde{e}^{\pm}\rightarrow e^{\pm}$+light neutralino, cross section calcs. 7−95887

potassium
see also nuclei with .....
adsorbed on Ag (110), empty electronic states, inverse photoemission studies 7−85032
adsorption, on Si (111), metallisation effect 7−112082
adsorption on Ru(001), thermal desorption, work fn. and EELS studies 7−131442
adsorption with H_2O, on Pt (111), work function changes, molecular orientation 7−105260
atom, discrete and continuous spectra, oscillator-strength distrib. 7−103435
atom, elastic scatt., differential cross section determ. 7−68458
atom, elastic scatt. by HBr, Lennard-Jones pots. calcs. 7−141648
atom, electron and positron scatt. cross section 7−74773
atom, electron and positron scatt. cross sections, core-corrected modified Glauber approx. calc. 7−129873
atom, fine-struct. mixing cross-sections excited to higher $nP_1/_2$ states 7−141493
atom, photoexcited Kα X-ray satellites spectra 7−135873
atom, refractive index spectrum in resonant optical field 7−129641
atom, satellite two-electron radiative transitions due to relaxation effects 7−68255
atom, Stark broadening by electron, H^+ and Ar II impact 7−129652
atom, wavefront reversal in six-photon wave interaction investig. 7−109850
atom-ion scatt., cross sections, resonant charge exchange *(Russian)* 7−122681
atom-NH_3 complexes, IR spectra in solid Ar matrix 7−74582
atoms, elastic electron scatt., differential cross sections, modified Glauber approx. calcs. 7−129869
atoms, nonreson. multiphoton ionis., electron correl. effects 7−135899
atoms, quasimetastable levels, emission spectra 7−74504
CDW, search by high resolution neutron diffr. 7−124886
CDW state, periodic struct., helicon wave propag. 7−118522
CDWs in single crystal, search by synchrotron X-rays 7−124887
cluster, orbital energies, shell structs., ionis. pots., HMO calcs. 7−81986
coadsorbed with CO on Pt(111), inverse photoemission, comment 7−119062
coadsorption with CO on Al (100), CO decomposition temp. depend. study 7−91975

potassium continued
coadsorption with CO on Pt (111), static SIMS and temp. programmed desorption study 7−124714
coadsorption with K on Pt (111), TDS study 7−84511
coadsorption with O on Ru (001 K−O cpds., form. study 7−124690
coverage on Pt(111), stabilisation of H_2 adsorption 7−131441
coverage on Rh surface, effect on interaction of NO 7−143206
critical point data using Hoch-Arpshofen method 7−67266
distribution in Precambrian domes 7−94144
equation of state anomaly in the 500 kbar regime 7−84180
helicon wave studies, Hall effect and magnetoresist. meas. 7−76992
inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bombardment 7−90372
insulin-secreting pancreatic islet cells, K channel dynamics, bioelec. activity 7−100837
ion scattering from caesiated W(110), neutralisation, local work fn. effects 7−119101
ISFET using M_2O-Al_2O_3-SiO_2 glass plate 7−93404
isoelectronic sequence ions, excited-state photoionisation and radiative recombination 7−122481
Kr-Rb pumping lamps 7−110363
liquid-isothermal compressibility, pair pot., direct correl. function 7−76259
longitudinal magnetoresist., domain struct. effects calcs. 7−124967
mesosphere K chemistry, seasonal behaviour anal. and comparison with Na 7−115129
molecule, excited, fluoresc. spectra obs. 7−109988
monolayer on Si (100), inverse photoemission study 7−144152
nearly free electron metals, photoemission spectra 7−138607
on-line, real-time alkali monitor for process stream analysis 7−144781
overlayer, on Cu (001), interfacial structural transitions *(Japanese)* 7−76642
plasma, magnetic field effect on heat transfer, expt. study *(Russian)* 7−97708
plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
plasma, nonequilibr. decaying, electromotive force chaotic oscills. 7−104408
poly-p-phenylenes, heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
polyacetylene:K, X-ray diffr. and EPR spectroscopy 7−69629
portable γ-ray spectrometer for K, U and Th cone. assaying counting statistics 7−120146
radioactive, estimation method in rocks using gamma ray spectrometry 7−79664
resonance effect in two photon absorption using intraresonator laser spectroscopy 7−109849
Salamanca, Spain, meteorological effects on elemental concentration of atmospheric aerosols *(Spanish)* 7−144928
screw dislocation core, stationary and resonance states, contrib. to electrical resistivity 7−76126
seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628
p-sexiphenylene-p-quinquephenylene solid solns., heavily doped with K, elec. cond., effect of chain length and structural order 7−70316
single cryst., direct EM ultrasound generation, mag. field and polarisation depend. meas. 7−124404
specific activities, dose rates 7−74207
thin wires elec. resist., effect of normal electron-electron scatt. 7−105524
Valladolid, Spain, atmospheric particulate material, behavior and seasonal variation *(Spanish)* 7−144927
Venus, rocks at Vega-1 and 2 landing sites, U, Th and K abundances 7−101713
$BaCl_2$:K^+, solid electrolyte charact., dopant effect *(Japanese)* 7−84378
$BaSO_4$:K^+, micro-Raman spectral investig. 7−85636
CO-K interactions, coadsorbed on Cu (100), EELS, TDS and work fn. investig. 7−119080
Ca^{2+}-dependent K^+ currents in Drosophila muscle 7−100881
Ca_2:$Gd^{3+}K^+$ electron spin echo envelope modulation 7−118858
CaF_2:K^+, F_{2A} oscillator strengths 7−138478
CsCl(Br)(I):CN,K crysts., impurity defect complex IR absorpt. spectra study 7−99848
Ge:K, impurity diffusion, conductivity and distrib. studies 7−112336
He-K, XUV laser radiation generation by stimulated Raman scattering 7−90697
K and CO coadsorption on Ni, inverse-photoemission studies 7−138536
K clusters, photoionisation, neutral and ionic cluster stabilities 7−129916
K I, high resolution subvalence p-shell absorpt. spectrum 7−103425
K^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
K^-, doubly excited states, energy and widths, diagonalisation method calcs. *(Swedish)* 7−122402
K^+ activities in isolated retinae and horizontal cells of cyprinid fish 7−86967
K^+ channel gating in squid neurons, requirement for external Ca^{2+} 7−119762
K^+ channels, A-type, Drosophila neurons and myotubes, obs. revealing 2 distinct types 7−119754
K^+ channels in squid axon membrane, SITS as an opener 7−100883
K^+ cotransport and pump systems, relative cold resistance in ground squirrel and guinea pig kidney cultures 7−126777
K^+ currents, very slowly activating, in Xenopus oocytes injected with rat uterine RNA 7−133258
K^+, low permeability in cold-stored erythrocytes, metabolic regulation 7−126780
K^+, multi-barrelled channels in renal tubules 7−106999
K^+ passive transport in sarcolemmal vesicles of myocardial cells, membrane pot. effect 7−86931
K^+ uptake by E. coli grown in aerobic conditions 7−144998
K-Ar plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
K-intercalated graphite, quasi two-dimens. positronium formation 7−118418
K-KCl dilute solns., localisation, hopping, diffusion of electrons 7−131590
K-Rb mixture, Hornbeck-Molnar ionis. 7−141651
K^+-doped borosilicate glass monomode ring coupler, fabrication 7−103984
$K+(Cl_2)_n$, charge transfer collisions, cluster product collision energy depend. 7−82336
$K+H^-(D^-)$, charge transfer and electron detachment cross sections 7−74753
$K+I_2$, electron transfer mechanism 7−110069

potassium continued
K+K, atomic and molecular ion prod. cross sections calc. 7−122665
K+N_2O, absolute rate const., time-resolved atomic reson. absorpt. spectroscopy 7−100561
K+Ne(Ar), differential cross section, left/right asymmetry 7−141656
K+nitromethane, energy loss and angular meas. 7−141654
K+O_2+N_2, third-order rate const., temp. depend., time-resolved atomic reson. absorpt. spectroscopy 7−100644
K+$PSCl_3$ reactions, PS chemiluminesc. study 7−119532
K+perfluoromethylcyclohexane, low energy electron attachment 7−136056
k+Rb, atomic and molecular ion prod. cross sections calc. 7−122665
K+Rb, Penning ionis., exchange and direct mechanisms 7−141665
K+trichlorotrifluoroethane, electron attachment investig. 7−90329
K^++Ne, aligned autoionising state, ejected electron spectra 7−74749
K_2+K+inert gas atoms, deactivation total cross section determ. 7−82328
k_n^m (n=2 to 9, m=0 or +), metal clusters, geometry and stability, HMO calcs. 7−81985
K^+He(Ne) collisions, ionisation, charge exchange, stripping 7−103640
^{40}K, activity concs. and temporal vars. in surface air, Munich, Germany 7−145631
^{40}K, behaviour of radionuclides in annual ring of sugi *(Japanese)* 7−79097
^{40}K, radionuclide content of and ^{222}Rn emanation from building materials made from phosphate industry waste prods. 7−139379
Na-K mixture, heteronuclear atom collisions, energy pooling processes 7−110082
Na+K heteronuclear energy pooling collisions 7−122670
Si:K, impurity diffusion, conductivity and distrib. studies 7−112336
SrF_2:K^+, F_{2A} oscillator strengths 7−138478

potassium alloys
K-Cs, viscosity and density 7−143074
K-Cs(Rb)(Na) alloy interfaces, adhesive energies, density functional theory anal. 7−92094
K-Pb alloys, heat capacity, anomalous temp. depend. 7−118121
K-Pb liq. alloy struct. factor determ. neutron diffr. meas. 7−83651
K-Rb, thermodynamic props. and lattice dynamics *(Russian)* 7−137482
KCs, glassification temps. 7−143009
K_xMg, small clusters, stability and magic numbers 7−141731
K_4Pb_4, struct., neutron diffr. meas. 7−131108
Na-K, liquid-isothermal compressibility, pair pot., direct correl. function 7−76259
Na-K-Cs, viscosity and density 7−143074
NaK, $C(3)^1\Sigma^+$ state, laser-induced fluoresc. and two-photon ionis. spectroscopy 7−129801
NaKCs, glassification temps. 7−143009
Sb-Na-K-Cs photocathodes, photoemission characts. under star illum. *(Chinese)* 7−77753
W-K powder, particle size and internal strain meas., X-ray methods study 7−100147

potassium compounds
see also potassium alloys; Rochelle salt
0 7−124292
acid phthalate, pyroelectric props., temp. depend. 7−92607
aluminate+natural clays, sintered mixtures, mechanical strength 7−93075
alunite, water containing, optical, thermal and X-ray characterisation 7−69663
anthracene-potassium complex cryst., electroluminescence props. *(Japanese)* 7−132342
bis (1,2-cyclobutanedione 3,4-dithiolato) palladate, interstack interactions and crystal structure 7−76096
n-butanoate, heat capacities and thermodynamic props. 7−76444
ceramics:Cr, time resolved spectroscopy, emission lifetimes 7−99881
core-excited, spectra, Ar^+ bombardment effects 7−132398
cryst., H bonded, OH stretching band shape anal., H^+ dynamics 7−70826
dipotassium zirconium di(nitrilotriacetate) dihydrate orthorhombic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
double sulphates, langbeinite structure, electronic spectra 7−113227
feldspar melts with additives, wetting, viscosity, behaviour during heat treatment 7−98536
graphite intercalation compound with K-benzene, structure 7−111515
graphite-K, intercalation compounds, hydrogen storage, isotopic H-D exchange 7−93545
5-hexenoate, conformational change on micellisation, vibr. spectra 7−82067
hydrogen (2R, 3R)-tartrate, least squares absolute struct. refinement, effect of absorpt. correction, data region, stability const. and neglect of light atoms 7−75937
hydrogen diformate, cryst., electron density, ab initio MO-LCAO-SCF calcs. 7−91553
ice: KOH, XI-1_h transition, high press. calorimetry study 7−91791
intercalation compound with C and H, electronic structure, resist. and thermoelec. power 7−124952
intercalation compound with graphite, C_8K, electronic structure and 3D Fermi surface 7−124839
intercalation compound with graphite, search for low temp. staging transitions and phase separation 7−84241
intercalation cpd., with graphite, $C_{24}K$, P-T phase diagram, basal plane resistivity meas. 7−105006
intercalation cpd. with graphite, normal and hydrided, optical reflectivity studies 7−125670
intercalation cpd. with NH_3 and graphite, NMR study of charge transfer 7−85458
intercalation cpds. with graphite, press. induced staging transitions and stage disorder 7−98435
K_2SO_4:BF_4^-, X-ray irrad., FSO_2 radical, ESR and ENDOR study 7−92551
K_x Li_{1-x} NbO_3, high melting ionic solid glasses, twin roller quenching technique and prep. 7−144355
KAuS(Se), material prep. and cryst. struct. *(German)* 7−69668
laurate-1-decanol-D_2O micellar cholesteric liq. cryst. solns., microscopic textures, phase transitions 7−124088
mica mineral fracture, generation of X-ray spectra w.r.t. vacuum sparks 7−125842
β-Na_2O-K_2O-Al_2O_3, thermodynamics of mixing 7−76416
oxalate monohydrate, single cryst., exchanging systems, NMR lineshape anal. 7−90206
4-pentenoate, conformational change on micellisation, vibr. spectra 7−82067

potassium compounds continued
polyethylene oxide-KSCN complexes, morphology and ion cond. meas. 7−124587
potassium hydrogen 3,4-furandicarboxylate, intramol. H bond, vibr. spectra 7−99866
potassium hydrogen cyclobutane 1,1-dicarboxylate, vibr. spectra and H bonding 7−99865
potassium lanthanide tungstates, polarised IR and Raman spectra 7−85665
ternary molybdates, electrophysical props. 7−111946
tetrahydrofuran clathrate hydrate: KOH, phase transition, sp. ht. meas. 7−91798
AgI−KI mixture, convection in cylindrical thermal diffusion cell, 3D numerical study 7−130703
$AlK(SO_4)_2.12H_2O$, potash alum, precipitation in foam column 7−85978
Al_2O-Si_2O-K_2O mixture, F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
β/β''-Al_2O_3-K_2O-Na_2O polycrysts. synthesis, sintering and spray drying 7−144351
Al_2SiO_5, kyanite, monochromatic thermoluminescence glow curve, glow peak study 7−138521
(α-)$KCrF_4$ magnetic struct., ordered frustration, powder neutron diffr. obs. 7−70526
$Ba_{1-x}K_xTi_{1-x}Mg_xO_{3-3x}F_{3x}$ solid soln. ceramics, dielec. and pyroelec. props. study *(French)* 7−125598
$Ba_{2-x}Sr_xK_{1-y}Na_yNb_5O_{15}$ photorefractive crystals, development and modification 7−113141
C_8K, graphite intercalation cpd., supercond. of high-press. phases 7−105806
Ca-K nitrate glass, amorphous solids, thermal conductivity above the plateau 7−98596
$Ca(NO_3)_2$-KNO_3, freq. depend. specific heat near glass transition, photoacoustic effect meas. 7−91804
$CdK(SO_4)_2.6H_2O$:Ni^{2+}, single crystals, electronic absorption spectra 7−113229
$C_8kH_{2/3}$, H chemisorbed intercalation cpd., metallic electronic state, ^1H NMR study 7−138341
$CoK_2P_4O_{12}.5H_2O$, dehydration, crystal struct., IR spectra *(French)* 7−131119
$CuK_4(P_3O_9)_2.4H_2O$, cryst. struct., X-ray diffr. study 7−98053
$DyKMo_2O_8$, cooperative Jahn-Teller effect, antiferrodistortive structural phase transition, Raman and IR spectra 7−118444
$DyKMo_2O_8$, cooperative Jahn-Teller system, antiferrodistortive structural phase transition, mag. field depend. 7−118445
Ga_2O_3-GeO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
Ga_2O_3-SiO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
Ga_2O_3-TiO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
$Hk_2Ti_5NbO_{14}.H_2O$, topotactic dehydration to $K_4Ti_{10}Nb_2O_{27}$ 7−111487
(K,Na)$AlSi_3O_8$ feldspars, (010)[001] dislocation fine struct., TEM, planar defect structural models 7−83960
K borate glasses, density related to atomic arrangement 7−124110
K complex, K^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
K-KCl dilute solns., localisation, hopping, diffusion of electrons 7−131590
K-NH_{-3} metal-ammonia solns. intercalated with graphite, scatt. studies 7−142742
$KAlF_4$ premartensitic phase, neutron and X-ray scatt. 7−142983
$KAlGeO_4$, cryst. struct. refinement 7−76102
$K(AlGeO_4)$, cryst. struct., X-ray diffr. study 7−104680
$KAl(SO_4)_2.12H_2O$, (111) face, crystal growth kinetics of the two-step model 7−85982
$KAl(SO_4)_2.12H_2O$ in water and aqueous H_2SO_4, viscometric studies 7−91865
$KAl(SO_4)_2.12H_2O$, alum crystals, EPR of Cr^{3+} 7−132130
$KAl(SO_4)_2.12D_2O$:CrO_4^{3-}, single crystal, EPR study 7−85426
$KAlSi_3O_8$, microcline, feldspar, kinetics and emission spectra of thermoluminescence 7−106278
$KAl_{0.33}W_{1.67}O_6$, defective pyrochlores, superionic conductivity 7−84380
K_2AmCl_5, cryst. growth from soln., struct., X-ray diffr. study 7−91505
$K_2B_4O_7.4H_2O$, NQR lines, intensity 7−143926
$K_{1-x}Bi_xO_xF_{1+2x-2x}$ solid solution, elec. props. *(French)* 7−105115
$KBiS_2$, $KBiSe_2$, KBi_3S_5, electrophysical and photoelectric props. 7−99052
KBr, F centres, soft X ray irradiated, UV-visible meas. of optical absorpt. band 7−80248
KBr, four-photon absorpt. cross section, 532 nm 7−138501
KBr, irradiated, interaction between colour centres and dislocations 7−111643
KBr, laser radiation effect on colour centres 7−69700
KBr, molten liq., picosecond recomb. dynamics of electrons 7−77602
KBr, plastically deformed prior to gamma irrad., F-centre annealing, thermolum. studies 7−85857
KBr, point defect formation by synchrotron radiation 7−104828
KBr, ps electron pulse irrad., F-centre generation 7−76211
KBr pure and CU-doped crysts., holographic recording using colour centre F→X transforms *(Russian)* 7−82516
KBr, radiation point defects, electron microscope and optical study *(Russian)* 7−142772
KBr:Ag, Na, activator photodissociation, colour centre generation *(Russian)* 7−83952
KBr:Ba^{2+} single crystals, quenched, annealing and aging studies 7−71224
KBr:Ca, quenching, microhardness rel. to impurity doping 7−76284
KBr:Ca^{2+}, light scatt. cross-sections of Ca^{2+} and the Ca-cation vacancy complex 7−70829
KBr:Eu single crystals, hardening, yield stress meas., temp. and impurity conc. depend 7−91704
KBr:In, low energy exciton production, exposure to UV irradiation, F- and In^{2+}-centres *(Russian)* 7−112191
KBr:MnO_4^-, matrix isolated vibr. spectra, IR and Raman selection rules anal. 7−108108
KBr:MnO_4^- cryst., resonant Raman scatt. excitation spectra 7−85659
KBr:NH_3D^+, rotational levels and tunnelling levels 7−76046
KBr:NH_4^+, impurity ion rot. states, neutron scatt. intensities calcs. 7−83797
KBr:SH^-, phonon sidebands 7−137489
KBr:Se^{2-}, F centers, photochemical prod. 7−124261
KBr:SeH^-, phonon sidebands 7−137489
KBr:Sn crystal, A_T emission of $Sn^{2+}v_c^-$ centres, effect of mag. field *(Russian)* 7−142775
KBr:$Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
KBr-AgBr, molten mixtures, densities and molar excess vols. 7−91691

potassium compounds continued
KBr-LiCl, excess internal press. and intermol. interactions eval. 7−110062
KBr_2, optical crystals, dielectric props. at submillimeter wavelengths 7−132215
KBr(:Ba^{2+}), microhardness and plastic deformation 7−104900
$(KBr)_{0.36}(KCN)_{0.64}$ mixed crysts., history effects, domains, and glass form. studies 7−84243
$(KBr)_{1-x}(KCN)_x$, specific heat meas., phase and glass transitions 7−131326
KCN, cohesive and anharmonic props., temp. depend. 7−104627
KCN, cryst., Raman spectrum 7−70816
KCN, lattice dynamics 7−142932
KCN, permutation-inversion symmetry groups, optical props. 7−124212
$(KCN)_{0.7}(KBr)_{0.3}$ mixed cryst. struct. and transforms., neutron powder diffr. study 7−142735
$K_2Ca_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7−138523
$K_2Cd_2(SO_4)_3$, optical activity, birefringence near ferroelastic transition *(Russian)* 7−125685
$K_2Cd(SO_4)_2.6H_2O:Cu^{2+}$, EPR study 7−138316
KCl (100) surfaces, growth spirals, step vel. meas., molecular beam method 7−83815
KCl, aq. soln., mol. dynamics study 7−75968
KCl CO_2 laser optics, Japanese National program 7−82633
KCl coatings, influence on surface sensitivity of Joshi effect 7−142519
KCl, crack growth under electron beam irradiation 7−131221
KCl, cryst., brittle fracture, electron beam mean threshold depend. 7−131226
KCl cryst. evaporation in AC and DC fields, pot. gradient, temp. and surface diffusion 7−137535
KCl, crystallisation kinetics from aqueous solutions at 30°C 7−83803
KCl crystals, diffusion of interstitial particles at high densities of electrons and holes 7−69987
KCl crystals, effect of defects on sound propag. 7−131243
KCl, crystals, interstitial impurity ions, polaris. pot. *(Russian)* 7−111593
KCl crystals, transformation of energy traps, plastic deformation, thermolum. studies 7−113293
KCl crysts., low temp. heat capacity, internal stress effects *(Russian)* 7−76429
KCl, dielectric, surface damage and plasma form. thresholds 7−130898
KCl, dislocation jumping motions, heat treatment effects 7−76136
KCl, elasticity and anharmonicity at high temps. 7−131207
KCl F centre resonant secondary emission polarisation correl., picosec. time-resolved spectra 7−106244
KCl, F_A-centres, polarisation hologram writing, self-induced dichroism effects 7−141817
KCl, F_H,H pair creation mechanisms *(Russian)* 7−143354
KCl, glycerol solutions, conductance, Fuoss paired ion model 7−84343
KCl, Gruneisen parameters, press. dependence 7−76335
KCl, in $H_2O(D_2O)$, solvent isotope effect on K^+ and Cl^- mobilities 7−74473
KCl, irradiated, interaction between colour centres and dislocations 7−111643
KCl, laser radiation effect on colour centres 7−69700
KCl, lifetime of excited F-centre, temp. depend. struct. 7−92730
KCl, melt, prep. of $Bi_4Ti_3O_{12}$ 7−92848
KCl, microcrack nucleation kinetics, light scatt. study, acoustic phonons 7−131222
KCl molten liq., picosecond recomb. dynamics of electrons 7−77602
KCl, muonium depolarisation, spin dynamics at room temp. 7−113049
KCl, optical crystals, dielectric props. at submillimeter wavelengths 7−132215
KCl phosphor, excitation and emission spectra 7−138470
KCl, point defect formation by synchrotron radiation 7−104828
KCl, pure X-irradiated crysts., thermolum. and optical absorpt. spectra studies 7−125813
KCl, radiation damage dynamics, external field effect, computer simulations 7−104857
KCl, refractive index, thermal effects caused by the electron-phonon interaction 7−70736
KCl sample, K isotopic ratio, use of pencil thermoemission ion source, mass spectra anal. 7−86695
KCl single crysts., fast edge dislocation charge and polarisation meas. under controlled deform. 7−69708
KCl solution, diffusiophoresis, migration velocity, zeta potential, concentration gradient, electrophoresis, chemiphoresis, hard sphere theory 7−143064
KCl surface, electrostatic potential calcs. 7−131428
KCl, surface charging during fast cleavage, dislocation mechanism 7−131223
KCl, surface treatment, effect on vacuum deposition of phthalocyanine *(Japanese)* 7−77829
KCl, three- and four-photon excitation of nonequilibrium carriers in broad-band crystals 7−143517
KCl two-photon spectra, extension to vacuum UV, using synchrotron radiation 7−128679
KCl, XANES analysis, multiple scattering study 7−138550
KCl: Li^+, low temp. heat capacity and thermal expansion meas. 7−84309
KCl:Ca, Z-centre form., ionic diffusion model study 7−124262
KCl:Ca powders, γ-irradiated, Z_1 centres growth, particle size depend. 7−76209
KCl:Ca^{2+}, dislocation charge, temp. and impurity dependences 7−76132
KCl:Ca^{2+}, positron lifetime measurements 7−70933
KCl:Cu, local phase transitions with S state impurities 7−137538
KCl:Ge, ODMR studies 7−138351
KCl:Li, F_A centres, reorientation 7−76120
KCl:Li, self-induced polarisation change in resonant radiation 7−138476
KCl:Li crystals, F_AII centres prepared by electrolytic colouration, lasing 7−97023
KCl:Li crysts., self-induced light polarisation oscills. 7−75039
KCl:Li^+, F_A defect mode dynamics, resonant Raman scatt. study 7−70776
KCl:Li^+, IR and Raman spectra, anomalous isotope shift, spin-phonon system 7−111784
KCl:Mn^{2+} crysts., impurity ESR obs. in regular environment 7−70632
KCl:N, impurity centre, photoluminescence studies 7−77642
KCl:NO_2, nonequilib. phonon propagation, strong resonance scatt. at impurities *(Russian)* 7−106228
KCl:Na, electronic excitation localised near Na ion *(Russian)* 7−143391
KCl:Na^+,O_2^- F_2^+-like centre laser operation in 1.7 to 2.2 μm range 7−68652

potassium compounds continued
KCl:O_2^-, superfluorescence-amplified spontaneous emission transition, transition dipole dephasing rate 7−136250
KCl:Pb, X-ray induced relax. bands, ionic thermocurrents 7−143964
KCl:Pb,Mn^{2+}, Mn^{2+} orange emission, fluoresc. intensity meas. 7−77639
KCl:Pb cryst., IR luminesc. study 7−85815
KCl:Pb crystals, F-centres, influence of Pb^{2+} ions 7−99905
KCl:Pb^+, hyperfine field interaction calc. 7−118441
KCl:S, X-irradiated single crysts., thermolum. and optical absorpt. spectra studies 7−125814
KCl:S^{2-}, F-centre formation by photoconversion 7−113263
KCl:Sm^{2+}, defect aggregation kinetics, site-selective laser spectroscopy study 7−69918
KCl:Sr, Pb, optical spectroscopy of Pb^{2+}, detection of Sr precipitates 7−70945
KCl:Sr^{2+}, positron lifetime measurements 7−70933
KCl:$SrCl_2$ crystal, solid-phase impurity reactions initiated by heat treatment 7−137386
KCl:$SrCl_2$ crystals, solid-phase reactions initiated by heat treatment at surface 7−137378
KCl:Tl, excited states, absorpt. bands study 7−119031
KCl:Tl, hyperfine field interaction calc. 7−118441
KCl:Tl, upper excited states, visible spectra 7−70850
KCl:Tl gamma irradiated single crysts., colour centre absorpt. and luminesc. bands *(Russian)* 7−83954
KCl:Tl with $Tl^0V_a^+$ centres, lasing, passive laser gate use *(German)* 7−130126
KCl:$Tl^0(Ga^0)(In^0)$, impurity centre vibrational props. resonant Raman scatt. study 7−113198
KCl:Tl^+, moments of A-absorpt. and A_T emission bands, hydrostatic press. effects 7−132304
KCl:$Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
KCl-$BaCl_2$-$PbCl_2$ sintered mixtures as solid electrolytes, charact. *(Japanese)* 7−111942
KCl-$BiCl_3$ mixtures, molar enthalpy of mixing, high-temp. calorimetry determ. 7−118104
KCl-CuCl laser mixture, performance 7−130072
KCl-KBr mixed crystal system, dielectric props. 7−77452
KCl-KBr-TeO_2, phase diagram, thermographic effects *(Russian)* 7−111830
KCl-KH_2PO_4-H_3PO_4 mixtures, aq., quaternary diffusion 7−84340
KCl-LiBr, excess internal press. and intermol. interactions eval. 7−110062
KCl-NaCl concentrated mixed crysts., ionic cond. temp. depend. meas. 7−76483
KCl-NaCl mixed crystals, second order elastic consts. C_{11} and C_{44} meas. 7−124372
KCl-NaI, excess internal press. and intermol. interactions eval. 7−110062
KCl-$PbCl_2$ solid soln. system, X-ray diffr. study of interdiffusion 7−137633
KCl-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999
KCl-sucrose, diffusion-convection system, stability anal. 7−76466
KCl-X(X=Br,I), F_H,H pair creation mechanisms *(Russian)* 7−143354
KCl(Br):M^{2+}, M=Mg,Ca,Sr,Ba,Mn,Cd,Pb, ionic cryst., vacancy-impurity complexes, dipole moment calcs. 7−137394
KCl(Br):Tl, colour centre dynamics and electronic props., reson. Raman scatt. study 7−106179
$KCl_{0.5}Br_{0.5}$, mixed crystals, lattice vibrations 7−137487
$KCl_{1-x}Br_x:Eu^{2+}$ mixed crysts., EPR ionic thermocurrent, optical absorpt. and emission spectra meas. 7−124292
$KClO_4$, Raman data, latent space group symmetry in vibr. spectra 7−92657
KCl−CsCl mixed crystals, struct. phase transitions 7−137547
$K_3Co(CN)_6$, 20r polytype, incommensurate struct., NQR linewidth, low temp. 7−70669
$K_3Co(CN)_6$, crysts., press.-induced phase transition, Raman scatt. obs. 7−84237
$KCoF_3$, orbitally unquenched mag. system, correlated effective field theory 7−118806
$K_3Cr(CN)_6$, monoclinic, phase transform., Raman spectra 7−132274
$K_2Cr_2O_7$, cryst. growth from aq. solns., growth morphology 7−91518
$K_2CuCl.2(H,D)_2O$, IR and Raman spectra, vibr. modes, assignment and coupling of water librations 7−82141
$K_3Cu_2(P_2O_7)H(P_2O_7)$, triclinic cryst. struct. 7−124179
$K_3Cu_8S_6$, CDW's X-ray scatt. study 7−98835
$K_2Cu_xZn_{1-x}F_4$, dilute 2D Heisenberg ferromagnet, linear optical birefringence 7−144010
$KD_{2x}H_{2(1-x)}PO_4$ crystals, temp. dispersion of quarter-wave voltage meas., simple compensation cct. 7−85597
$(KDP)_{1-x}(NaDP)_x$, mixed crystal, ferroelectric transition *(Korean)* 7−143982
KD_2PO_4, accurate struct. parameters, compilation 7−98060
KD_2PO_4, cryst., refractive index dispersion, harmonic generation study 7−82705
KD_2PO_4, elastooptic coeff. of transparent meas., using optical heterodyne method 7−138420
KD_2PO_4, high-average power harmonic generation 7−90700
KD_2PO_4, monoclinic crystal, phase transition 7−131288
KD_2PO_4 nonlinear, crystals refractive index meas. 7−125667
KD_2PO_4, paraelectric phase, acousto-optical props. 7−113127
KD_2PO_4, single domain state, lattice dynamics, Raman spectra 7−99817
KD_2PO_4:SeO_4^{3-}, pretransitional excitations in paraelec. phase, EPR study 7−99761
KD_2PO_4:Tl^{2+}, paraelectric hyperfine couplings and ferroelec. symm. signals, EPR study 7−99572
KD_2PO_4-type ferroelectrics, Debye relaxation time 7−138388
$KD_3(SeO_3)_2$, order-disorder phase transitions microscopic theory 7−131284
$KEu(WO_4)_2$, RF hole burning with inhomogeneously broadened Raman heterodyne signals 7−85488
KF, crystals, interstitial impurity ions, polaris. pot. *(Russian)* 7−111593
KF, thermal conductivity and thermal diffusivity, press. range 0 to 3.8 GPa 7−70001
KF-B_2O_3-K_2MoO_4 system, liquidus surface, melting point meas. 7−111832
KF-B_2O_3-Li_2MoO_4 system, liquidus surface, melting point meas. 7−111832
KF-B_2O_3-Na_2MoO_4 system, liquidus surface, melting point meas. 7−111832
K_2FPO_3, vibrational spectra and normal coordinate anal. 7−129709

potassium compounds continued
$K_2FeF_5.H_2O$, low temp. Mossbauer spectra study 7−113029
$KFe^{2+}Fe^{3+}(PO_4)_2$, cryst. struct., homeotypy with $Fe^{2+}{}_3(H_2O)(PO_4)_2$, X-ray diffr. study 7−104683
$KGaO_2$, solid electrolytes, elec. props., struct. 7−105108
$K_xGa_{16+x}Ti_{16-x}O_{56}$, ionic conductor, cryst. structure, ID tunnels 7−104671
$KGdNb_6Cl_{18}$, cryst. struct., X-ray diffr. study *(French)* 7−98051
$KGdWO_3:Nd^{3+}$, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
KH, Franck-Condon factors, laser-induced fluoresc. intensity 7−96786
$KH_3(SeO_3)_2$, ferroelastic, X-irradiated, electron spin relax. study 7−112945
KH_2ASO_4 nonlinear, crystals refractive index meas. 7−125667
$K_3(HAl_2Si_4O_{13})$, lithosite, cryst. struct., X-ray diffr. studies 7−137335
$KHCO_3$-H_2O, binary and ternary mutual diffusion coeffs. meas. at 25°C 7−76465
$KH_{2(1-x)}D_{2x}PO_4$, piezo-optical props. *(Russian)* 7−125689
$K(H_{1-x}D_x)_2PO_4$, ferroelec. phase transition studied by IR spectroscopy 7−118958
$KH_2(D_2)PO_4$ noncentrosymmetric crysts., quadratic electrooptic effect meas. by harmonic anal. 7−85599
KHF_2, polycryst., NMR spin-echo sequence effects 7−118890
KHF_2, zero field NQR and low-field NMR 7−90203
KH_2O_4 crysts., pyramidal and prismatic growth, computer simulation model 7−98001
$K_2HPCr_2O_{10}$ visible and reson. Raman obs. 7−70767
KH_2PO_4, accurate struct. parameters, compilation 7−98060
KH_2PO_4 and isomorphs, electro-optical, linear and nonlinear optical props., devices, research areas, review 7−110484
KH_2PO_4 and $K(H_{1-x}D_x)_2PO_4$, low-frequency phonon modes, IR reflectivity study 7−84151
KH_2PO_4, central mode, dynamical light scatt. study 7−111809
KH_2PO_4 coated glass fibre optical coupler modulator 7−136545
KH_2PO_4, cross section enlargement by splicing techniques 7−144251
KH_2PO_4 cryst., domain form., optical and X-ray studies 7−77485
KH_2PO_4, cryst. growth 7−100028
KH_2PO_4 crystal, high frequency Fabry-Perot phase modulator 7−103954
KH_2PO_4 crystal, phase boundaries and twinning domain walls struct. 7−143026
KH_2PO_4 crystal frequency doubling for 160 fs XeCl amplifier system 7−122926
KH_2PO_4, crystal growth from the melt 7−100039
KH_2PO_4 crystals, growth and dissolution in stagnant solutions, conc. boundary layers 7−83801
KH_2PO_4 crystals, laser damage threshold, microbe detection by chromogenic limulus test 7−98235
KH_2PO_4 crysts., boiling soln. growth, X-ray topography 7−100029
KH_2PO_4, discovery of ferroelectric props., historical account 7−95168
KH_2PO_4, domain freezing, dielectric dispersion 7−113097
KH_2PO_4, domains 7−99766
KH_2PO_4, early studies by neutron diffr. 7−99743
KH_2PO_4, ferroelec. phase transition mechanism, soft mode, Raman spectra 7−111810
KH_2PO_4, ferroelectric phase transition, Slater-Takagi model 7−143981
KH_2PO_4 group, lateral motion of domain boundaries 7−99767
KH_2PO_4 group crystals, domain struct. dynamics, electrophysical props. 7−99768
KH_2PO_4, growth from aqueous soln., temp. depend. of maximum growth rate, calc. 7−85980
KH_2PO_4, KD_2PO_4, two-step upconversion for efficient IR detect. 7−110453
KH_2PO_4, laser damage threshold at 1.053 μm *(Japanese)* 7−98238
KH_2PO_4, longitudinal and transverse dielectric consts., KDP-type ferro- and antiferroelectrics 7−99640
KH_2PO_4, melts, low freq. Raman spectra 7−70823
KH_2PO_4, mol. aspect of ferroelectricity, cryst. props. 7−113086
KH_2PO_4 nonlinear, crystals refractive index meas. 7−125667
KH_2PO_4, nucleation and growth behaviour from degassed, undegassed aq. solns. 7−138628
KH_2PO_4, paraelectric phase, orientationally disordered anion sublattice, vibr. spectra 7−111785
KH_2PO_4, piezoelectric and pyroelectric effects in KDP family 7−99680
KH_2PO_4, piezoelectric resonator, influence of polarising field 7−99681
KH_2PO_4 Pockels cell electrooptic light modulator, piezooptic transients 7−130312
KH_2PO_4, polarised below 123 K, thermally stimulated electron emission 7−106080
KH_2PO_4, press. depend. of static and dynamic props., KDP and related crystals 7−99747
KH_2PO_4 single crystal growth for optical harmonic generation, seed cryst. 7−98003
KH_2PO_4 single crysts. for high power harmonic generation, growth by temp. decrease method *(Japanese)* 7−113370
KH_2PO_4 single crystal growth, mother liquor purification 7−113371
KH_2PO_4 single crystals, growth by temp. reduction under diffusion transport 7−124137
KH_2PO_4, single crystal growth by means of thermoelectric cooler 7−138623
KH_2PO_4, single domain state, lattice dynamics, Raman spectra 7−99817
KH_2PO_4, sp. ht. props. near transition temp. and at low temps. 7−99746
KH_2PO_4, structural studies of KDP and isomorphs, transition, neutron and X-ray diffr. 7−99744
KH_2PO_4, thermal and dielectric props. at low temp. 7−70692
KH_2PO_4, transverse and longitudinal mode damping, temp. depend. 7−131263
KH_2PO_4 type crystals, order-disorder models, review 7−113092
KH_2PO_4 type ferroelectrics, local freezing in Ising model, mean field theory 7−112839
KH_2PO_4 type ferroelectrics, proton tunnelling model, review 7−113093
KH_2PO_4 type mixed ferroelec.-antiferroelec. crystals, proton glass phase, tunnelling 7−113087
$KH_2PO_4:{}^{57}Fe^{3+}$, isomer shift, quadrupole split, Mossbauer study 7−143936
$KH_2PO_4:Hg^+$, superhyperfine interactions, EPR study 7−99570
$KH_2PO_4:MoO_4^{2-}$ single cryst., elec. cond. and dielec. loss obs., proton defect mechanism 7−70714
$KH_2PO_4:MoO_4^{3-}$ single crysts., ferroelec. transitions, EPR study 7−106028
KH_2PO_4:Rb nonlinear, crystals refractive index meas. 7−125667

potassium compounds continued
$KH_2PO_4:Tl^{2+}$, paraelectric hyperfine couplings and ferroelec. symm. signals, EPR study 7−99572
KH_2PO_4-KD_2PO_4 mixed cryst. optical waveguide grown on {101} plane of KD_2PO_4 cryst., charact. 7−97135
KH_2PO_4-$NH_4H_2PO_4$ mixed single crysts., gel growth and X-ray studies 7−69638
KH_2PO_4-type 7−138388
KH_2PO_4-type cpds., paraelec.-ferroelec. transition mechanism 7−143988
KH_2PO_4-type crystals, US expts., review 7−111778
KH_2PO_4-type crystals, mag. reson. studies, review 7−112927
KH_2PO_4-type crystals, ferroelec., vibr. modes, IR spectra, review 7−113170
KH_2PO_4-type crystals, phase transition, negative evidence for proton-tunnelling mechanism 7−143985
KH_2PO_4-type ferroelectrics, proton order-disorder, Slater theory and Ising model in transverse tunnelling field, review 7−113094
KH_2PO_4-type mixed crystals, phys. props., review 7−111892
K_2HPO_4, coherent γ-ray scatt. for density characterisation 7−78573
$KHSO_4.KH_2PO_4$ single crystal., struct., Raman spectra study 7−138443
$KH_3(SeO_3)_2$, order-disorder phase transitions microscopic theory 7−131284
K_2HfF_6, cryst. struct. refinement 7−69680
KI crysts., free exciton edge luminesc., polariton effects study 7−98814
KI effect on phenanthrene and chrysene fluoresc. quenching in methanol-ethanol solns. 7−122600
KI, Gruneisen parameters, press. dependence 7−76335
KI, photo-induced defect form., picosecond laserphotolysis 7−131180
KI, thin crystals, excitonic structures 7−85157
KI:Cl, IR active gap modes 7−131251
$KI:OH^-$, press. induced preferred orientation transition, microscopic models 7−111642
$KI:Sn^{2+}$, doped S^2 ions, emission spectrum fine struct. 7−132296
KI:Tl, roentgenoluminescence, rel. to powder dispersity degree *(Russian)* 7−85808
$KI:Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
KI-AgI, molten mixtures, densities and molar excess vols. 7−91691
KIO_3 single crystal, growth morphology and structure 7−83926
α-KIO_3HIO_3, ferroelectricity disappearance under hydrostatic pressure 7−132209
$K_x(KCl)_{1-x}$, struct., reference pot. examination by Percus-Yevick approx. 7−124074
$K_{2+x}Li_xPb_{4-x}Nb_{10}O_{30}$ solid soln. ceramic, struct., dielec., piezoelec. and ferroelec. transition props. 7−83880
$KLiSO_4$, high temp. superlattice and incommensurate phases, Raman spectra study 7−125721
$KLiSO_4$, low temp. Raman spectra study 7−92673
$KLiSO_4$, press. induced phase transitions 7−69901
$KLiSO_4$, twin domains and twin boundaries optical, pyroelectric and X-ray topographic studies 7−83968
$KLiSO_4:Tl^{2+}$ phase transitions, ESR temp. depend. study 7−124482
$K_{1-x}Li_xTaO_3$, cluster glass and domain state props., phase boundary 7−113090
$K_{1-x}Li_xTaO_3$ cryst., low-freq. permittivity, amplitude depend. 7−70693
$K_{1-x}Li_xTaO_3$, pure and Li doped, sp. ht. meas., temp. depend., phase transition 7−76430
KMF_3, M=Mn, Co, Ni, superexchange interaction, Madelung correction effect calcs. 7−143782
KMF_7 (M=Ta, Nb), crystal struct., lumin. studies 7−83894
$KMgF_3:Cr^+$, equilib. Cr^+-F^+ distance determ. 7−84746
$KMgF_3$:Ni, X-ray irrad., tetragonal impurity ions, EPR study 7−70634
$K_2Mg_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7−138523
$K_2Mg(SO_4)_2.6H_2O$, IR and polarized Raman spectra 7−77547
$K_2MnCl_4.2H_2O$, mag. transitions 7−99451
$KMnF_3$, R-point instability, Crit. exponents 7−142985
$KMnO_4$, soft fluorescent X-ray emission spectra, energy sites and relative intensities 7−109926
$K_{0.3}MnO$ CDW cpd., low temp. cond. noise obs. 7−99143
$K_2Mn_xZn_{1-x}F_4$, dil. antiferromagnet, break-up of long range order, zero mag. field 7−112749
$K_3Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
$K_{0.3}MoO_3$, 1D conductor, sine-Gordon type equations, intermittent oscillations *(Japanese)* 7−80641
$K_{0.3}MoO_3$ blue bronze, Frohlich, supercond. sliding CDW without damping 7−124890
$K_{0.3}MoO_3$ blue bronzes, distortion wave vector, X-ray scatt. meas. 7−111511
$K_{0.3}MoO_3$, CDW, field-activated relax., characteristic times 7−84711
$K_{0.3}MoO_3$, CDW material, cond. and low freq. damping 7−98843
$K_{0.3}MoO_3$, CDW state, dielectric losses, temp. depend. 7−99668
$K_{0.3}MoO_3$, current-field relation of CDW near depinning threshold 7−84841
$K_{0.3}MoO_3$ DC-driven CDW system, intermittent voltage jumps, numerical simulation 7−76796
$K_{0.3}MoO_3$, depinning threshold, CDW transient response, critical divergence 7−118466
$K_{0.3}MoO_3$, electron-irradiated, hysteresis and memory effects 7−76902
$K_{0.3}MoO_3$, metastable CDW state, superlattice peak width, X-ray diffr. study 7−143449
$K_{0.3}MoO_3$, Peierls insulating state, low freq. struct. excitations, neutron studies 7−98366
$K_{0.3}MoO_3$:Fe, CDW state, Mossbauer studies 7−118928
$K_{0.3}MoO_3$:W(Rb), 1D conductor, CDW transport and struct. props. 7−99031
K_3MoO_3:Fe, CDW state, EPR, Mossbauer and UPS studies 7−98842
K_xMoO_3 blue bronze, CDW transport, sp. ht. and ion channelling 7−99030
K_xMoO_3, catalytic reaction of propylene 7−132969
$K_4Mo_8P_{12}O_{52}$ crysts., layer and tunnel structs. studies 7−142726
$K(NH_3)_{4.3}C_{24}$, ^1H NMR, ^{14}N quadrupolar coupling, ^1H chemical shift, mol. orientation 7−92526
$K(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
$K_{1-x}(NH_4)_xH_2PO_4$ mixed crysts., dielec. const. and elastic compliance, comp. depend., phase transitions 7−77450
KNO_2, matrix isolated, struct., isotope effects, IR spectra 7−82091
KNO_2-KNO_3 mixed salt, effect on short range order in water 7−69794
KNO_3, central component in Raman spectrum 7−119002
KNO_3, crystallisation under diffusive and convective conditions 7−117846

potassium compounds continued
KNO_3 in agar gel, CO^{2+} tracer diffusion coeffs. meas. and calc. 7−98531
KNO_3, melts, and binary mixtures, effective Debye temp. 7−91754
KNO_3 thin films, ferroelec. phase III, Raman spectra obs. 7−99960
KNO_3 vapour pressure, Langmuir free vaporisation method 7−131280
KNO_3-$Ca(NO_3)_2$, molten, internal cation mobilities 7−124576
KNO_3-$LiNO_3$, molten system, internal cation mobility 7−124575
KNO_3-$NaNO_3$ system, contact fusion in centrifugal force field 7−98399
$KN6O_3$, ferroelectric thin-film memories, switching kinetics 7−125650
$KN6WO_6$, defective pyrochlores, superionic conductivity 7−84380
K_2NaCrF_6, fluoroelpasoliths, crystal structures *(German)* 7−104696
$K_{0.5}Na_{0.5}NbO_3$, dielectric props., phase transitions, press. effects 7−125629
$K_3Na(SO_4)_2$, ESR of SO_4^- centres 7−85430
$KNa_5(TeO_6)$, cryst. struct. determ. *(German)* 7−98068
$KNbF_6$, struct. transforms., NMR relax. investig. 7−70666
$KNbO_3$, anisotropic self-diffraction 7−117157
$KNbO_3$ crystals, noncritically phase-matched sum freq. generation, image up-conversion 7−75053
$KNbO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
$KNbO_3$, ferroelectric crystals, surface phase transition, second optical harmonic 7−123109
$KNbO_3$ photorefractive materials for optical processing 7−82736
$KNbO_3$, polycrystalline, low freq. inelastic opalescence 7−125761
$KNbO_3$ single crysts., growth and doping, dielec. and optical props. 7−99739
$KNbO_3$ single crysts., RF heating Czochralski growth, colour centres, positron annihilation 7−113374
$KNbO_3$, structural phase transitions, hyper-Raman scattering *(Japanese)* 7−99858
$KNbO_3$:Sm, crystal growth and stress-induced piezoelec. voltage meas. 7−99712
$K_3Nb_7O_{19}$, cryst. struct., shear, high resolution electron microscopy, X-ray powder diffr. obs. 7−111457
$K_xNb_8Se_8$, prep. by molten salt ion exchange and ternary element insertion 7−83819
$KNbUO_6$ single cryst. growth from melt and struct. determ. *(French)* 7−83903
$KNdP_4O_{12}$ laser oscillation, tunable CW 7−117212
$KNdP_4O_{12}$:Pr^{3+}, inhomogeneous broadening and energy transfer 7−106242
$K_3NdSi_2O_7$, hexagonal cryst. struct., mini laser material 7−124181
$KNiAsO_4$, mica analogue, ion-exchange reactions and phys. props. studies 7−144700
$KNiF_3$, electron structure calc. 7−98800
$KO_{1/2}$-GeO_2-SnO_2 glass, struct. and T_g, SnO_2 substitution, Raman spectra *(Japanese)* 7−91464
K_2O-Al_2O_3-B_2O_3:Fe_2O_3(CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7−104830
K_2O-Al_2O_3-P_2O_5-TiO_2, crystallisation tendency, effects of TiO_2 additions 7−97948
K_2O-Al_2O_3-SiO_2, feldspar, growth twinning mechanisms 7−104762
K_2O-Al_2O_3-SiO_2 glass plate pNa and pK ISFETs 7−93404
K_2O-Al_2O_3-SiO_6 feldspar crysts., twin boundary laws, reciprocal space partitions and symm. 7−98173
K_2O-B_2O_3:Fe_2O_3 (CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7−104830
K_2O-FE_2O_3 ferrite, powder prep., ionic cond. 7−138710
K_2O-Ga_2O_3-SiO_2 glass, durability in HNO_3 rel. to comp. and struct. 7−93132
K_2O-MgO-TiO_2, phases in region of hollandite crystn., cryst. chem., elec. cond. meas. 7−98388
K_2O-PbO-B_2O_3 glass, optical absorpt. spectra of VO_2^+ ions, bonding mode of Pb atoms *(Japanese)* 7−70842
K_2O-SiO_2, glass-forming melts, cation diffusion 7−69944
K_2O-SiO_2 glass, pulse irrad., optical absorpt. spectra, electron centres 7−132306
K_2O-SiO_2 glasses, ionic diffusion and frequency dependent conductivity 7−76486
K_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
KOH, concentrated aqueous Zn^{2+} solutions, structure, Raman and ^{67}Zn studies 7−97896
KOH, high-temperature Stark and radiofrequency-microwave double-resonance microwave spectrometer 7−103688
KOH, nucl. quadrupole struct., RF-microwave double reson., Stark modulated 7−135979
KOH-H_2O mixtures, chem. equilib. *(French)* 7−119555
KOH-H_2O systems, thermochem. characts. *(French)* 7−119554
KOH-NbS_2, intercalated H_2O, NMR spectra 7−106041
$K_2O.6TiO_2$ whisker reinforced Al, prep. and characteris., strength improvement 7−71113
K_2OsCl_6, struct., temp. depend. 7−104978
K_2OsCl_6, structural phase transition, hydrostatic pressure effect, ^{35}Cl NQR meas. 7−91786
$K_3PCr_4O_{16}$, IR and Raman spectra, vibr. bands 7−113171
$(KPO_3)_n$, glass, low freq. Raman spectra 7−70823
KPO_3-$Sm(PO_3)_3$, polymorphs, formation of $KSm(PO_3)_4$ *(French)* 7−131298
KPO_2F_2, IR spectrum and normal coord. treatment 7−74580
$K_4P_4O_{12}$.Te$(OH)_6.2H_2O$, monoclinic cryst. struct. 7−124183
$KPbI_3$-Al(Au)(Ni)(Cu)(glass), vacuum deposited films for photothermal conversion 7−85585
$K(Pd(S_2C_2(CN)_2)_2).H_2O$, preparation, structure and elec. props. 7−99008
$KR(WO_4)_2$ (R=Gd, Y, Er), optical properties 7−106116
$K_{1-x}Rb_xC_{24}$ intercalation compound, composition modulation, struct. phase transitions 7−69679
$K_{0.5}Rb_{0.5}Cl$, mixed crystals, lattice vibrations 7−137487
$K_{0.95}Rb_{0.05}Cl$:NCO^-, mol. impurity centre, ultrasonic excitation, IR absorption spectra 7−132301
$K_2RhH_2OCl_5$ thermal transforms., differential-thermal and X-ray diffr. phase anals. 7−86587
K_2RuCl_6, X-ray absorption-edge structures 7−99977
KSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
KSCN, complexation by dibenzo-30-crown-10, ^{39}K NMR obs. 7−90215
KSCN, X-ray scatt. struct. study 7−124201
K_2SO_4, aq. solns., cryst. growth kinetics *(German)* 7−111436
K_2SO_4, batch crystallisation and solid-liquid separation 7−91500
K_2SO_4 crysts., twin boundary laws, reciprocal space partitions and symm. 7−98173
potassium compounds continued
K_2SO_4, pure and Sm_2O_3 or Dy_2O_3 doped, annealed and recrystallised, thermally stimulated exoelectron emission glow curves 7−77774
K_2SO_4, refractive index changes at ferroelastic transition point 7−125665
K_2SO_4-Cs_2SO_4, phase equilibr. thermodynamics 7−76413
K_2SO_4-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7−113999
K_2SO_4-$ZnSO_4$:Pr(Nd)(Er)(Tm) glass, spectral studies 7−70883
$K_2S_2O_8$ single cryst., $S_2O_8^{2-}$ ion internal modes, Raman spectra studies 7−85640
K_3Sb, chemoepitaxy, reactive diffusion product 7−98732
K_3Sb, tetrahedral, electronic struct. and total energy calcs. 7−98801
$KSbF_6$, rhombohedral cryst., Raman spectra high-press. behaviour study 7−85711
$KSc(MoO_4)_2$:Li, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
K_2SeO_4 crysts., improper ferroelectric, spontaneous polarisation temp. depend. in phase transition region 7−70718
K_2SeO_4, incommensurate, discommensuration effect on X-ray diffr., superspace method anal. 7−131113
$K_2Si_4O_9$ glass, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
KSnAs(Sb) cryst. struct., puckered hexagonal nets, X-ray powder diffr. study 7−83912
$K_2SnCl_6(Br_6)$, host precipitates for trace analysis of heavy metal ions by laser excited fluorescence 7−86698
K_2So_4, aqueous soln., diffusional interaction, diaphragm 7−143067
KT:Tl, crystallophosphors, energy transfer by luminescence centres 7−132345
$KTaF_6$, struct. transforms., NMR relax. investig. 7−70666
$KTa_{0.68}Nb_{0.32}O_3$, dielectric props., phase transitions, press. effects 7−125629
$KTa_{0.92}Nb_{0.08}O_3$, low freq. dielec. response, temp. depend. meas. 7−138371
$KTa_{1-x}Nb_xO_3$ ceramic discs, prep. by sol-gel processing and hot pressing 7−100170
$KTa_{1-x}Nb_xO_3$ powders, prep. by sol-gel technique from metal alkoxides 7−100169
$KTa_{1-x}Nb_xO_3$:Fe, Cr, dielectric photorefractive effect 7−92626
$KTaO_3$, 4 K Raman scatt., temp depend. 7−144072
$KTaO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
$KTaO_3$, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
$KTaO_3$ single cryst. photoluminescence 7−113264
$KTaO_3$, sound velocity photoinduced changes in external elec. field 7−104919
$KTaO_3$:Li, dipolar-glass-like system, limit of ergodicity 7−143959
$KTaO_3$:Li, impurities interaction via phonon field 7−111798
$KTaO_3$:Na, soft modes and pyroelectricity, Raman scatt. spectra meas. 7−125749
$KTaO_3$:Nb(Li)(Na), RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
$K_4Ti_{10}N_2O_{27}$, prep. by topotactic dehydration of $HK_2Ti_5NbO_{14}.H_2O$, struct., electron and X-ray studies 7−111487
$KTiO_3$ whisker filled nylon 12 as optical fibre secondary jacketing material *(Japanese)* 7−117342
$K_2Ti_6O_{13}$, attempted fibre form. by flux methods 7−85986
$KTiOPO_4$ crystal, frequency doubling of laser radiation 7−123098
$KTiOPO_4$, flux-grown, SHG and accurate index of refr. meas. 7−110448
$KTiOPO_4$, high press. Raman study, press. induced phase transitions 7−92674
$KTiOPO_4$ high-temp. soln. growth, viscosity and density of solns. 7−100032
$KTiOPO_4$, KTP, long pulse SHG 7−75057
$KTiOPO_4$ optical waveguides, fabrication and characterisation 7−90776
$KTiOPO_4$ optically biaxial cryst., SHG of light from AIG-Nd^{3+} laser 7−123100
$KTiOPO_4$ SHG crystals, hydrothermal growth technique 7−77786
$KTiOPO_4$, second harmonic generation with noncritical matching 7−136436
$KTiOPO_4$, single cryst., IR reflectivity spectrum 7−119003
$KTiPO_4$ frequency doubling for Nd:YAG laser 7−122987
$KTi_{0.5}W_{1.5}O_6$, defective pyrochlores, superionic conductivity 7−84380
K_4UO_5 single crysts., struct. determ. coordination number calcs. *(German)* 7−124223
$K_9U_6O_{22.5}$, cryst. struct., ^{237}Np Mossbauer spectra, isotypic Np phases *(French)* 7−98070
KVO_3, heat capacity meas. 7−118124
KVO_3, polycryst. fundamentals and external mode, Raman obs. 7−132264
KVO_3, solid-state battery formation with $NaVO_3$ 7−86773
$K_{2-x}V_{8+2x}O_{16+x}$, hollandites, high press. synthesis and cryst. struct. *(German)* 7−76105
$K_4V_2O_7.2H_2O$, cryst. struct., X-ray diffr. study *(German)* 7−111464
$KWNb_2O_9$, hexagonal bronze, domain patterns, electron microscopic studies 7−125645
$K_2W_4O_{13}$, ionic conductivity 7−111957
K_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
$K_xWO_{3+x/2}$-IrO_2 complementary electrochromic windows, optical switching 7−123134
KX (X=Br, Cl), radiation defects, accumulation, density of pulsed electron beam 7−142839
KX (X=I, Cl, Br), ionic crystals, influence of UV radiation on crack formation 7−131224
KY_3F_{10}:Ce^{3+}(Yb^{3+}), spin-lattice relax., EPR spectra, Raman scatt. 7−70636
$KY(MoO_4)_2$, IR and Raman spectra, normal coordinate anal., pot. energy distrib. 7−109890
K_2ZnCl_4, anomalous thermal hysteresis, birefringence study 7−69891
K_2ZnCl_4, low freq. internal friction near ferroelastic transition 7−124394
$KZnF_3$, heat capacity and lattice dynamics 7−111794
$KZnF_3$:Cr^{3+} laser quasicontinuous operation, tuning 785 to 865 nm 7−97022
$K_4Zn(MoO_4)_3$, ferroelastic phase transition, struct. changes 7−124481
$KZrF_5.H_2O$, cryst, struct. determ. 7−69681
$K_x[Ga_{2+x}Ti_{2-x}O_7]$ struct. determ. 7−83869
KaAlF$_4$, martensitic transform., monochromatic Laue X-ray scatt. obs. 7−84234
Kf-B_2O_3-MoO_3 system, liquidus surface melting point meas. 7−111832
kMnF_3, tetragonal phase, domain volume distrib. 7−76424

potassium compounds continued
$Kr_2Pb_4Nb_{10}O_{30}$, formation reactions, thermogravimetric and X-ray diffr. studies 7−126432
$LaCl_3$-KCl mixture, molten, molar vol., surface tension 7−124645
$(La_{1-x}K_x)_2CuO_4$ high T_c supercond., IR absorption spectra studies 7−92665
Li-amorphous V_2O_5-P_2O_5 secondary batteries, ethylene carborate/ether solvent 7−133083
$LiKSO_4$ crystal, structure refinement of twinned crystal data 7−83973
$LiKSO_4$, high-pressure transition and phase diagram *(Chinese)* 7−111767
$LiKSO_4$, low temp. phase transitions, mol. vibr., Raman spectra anal. 7−85713
$LiKSO_4$, phase transitions, Brillouin scatt. study 7−92697
$LiKSO_4$, structural phase transitions, EPR using SO_4^- probe 7−76385
$LiKSO_4$, translational and rotational dynamics, computer simulation 7−124132
$LiKSO_4$:Cr, EPR of SO_4^- and CrO_4^{3-} centres, low temp. phase transition 7−70640
$LiKSO_4$:Cu^{2+} single cryst., phase transitions, EPR studies 7−106017
$LiKSO_4$:NH_3^+, low temp. phase transitions, EPR study 7−131303
$LiNO_3$-KNO_2-H_2O based melts, vapour press. meas. 7−98391
$LiNO_3$-KNO_3-H_2O based melts, vapour press. meas. 7−98391
$((NH_4)_{1-x}K_x)_2SO_4$, ferroelec. cryst., birefringence, temp. depend. *(Japanese)* 7−132233
$((NH_4)_{1-x}K_x)_2SO_4$ crystals, struct. changes 7−91796
Na-K β- and β''-aluminas, cryst. struct. and electric modulus studies 7−83929
NaCl-KBr mixtures, aq., densities and apparent molar vols. calcs. 7−104883
NaCl-KCl, multicomponent diffusion, solvation effect 7−113940
NaCl-KCl mixtures, crystallisation driving force, NaCl effects 7−69637
$NaKSO_4$ crystals, fast neutron irrad., elec. cond. 7−111679
$NaNO_3$:KNO_2, sensitized lumin., time-resolved studies 7−113279
β''-Na_2O-K_2O-Al_2O_3, mixed alkali, elec. conductivity 7−76487
$\beta'(\beta'')$-Na_2O-K_2O-Al_2O_3, mixed-phase aluminas, structural determ. 7−142739
Na_2O-K_2O-Nb_2O_5-SiO_2 glasses, crystn., phase decomp., permittivity and electro-optic effects 7−83710
$Na_2O-P_2O_5-B_2O_3$ system liq. mixtures, enthalpy of mixing, calorimetry meas. 7−98480
$NiK_2P_4O_{12}.5H_2O$, dehydration, crystal struct., IR spectra *(French)* 7−131119
(Pb,K,La)Nb_2O_6 ceramics, dielec. and ferroelec. props. 7−99651
$Pb_2KNb_5O_{15}$-$Ba_2NaNb_5O_{15}$($Sr_2NaNb_5O_{15}$) ceramics, struct. and ferroelec. props. 7−99760
$PbZrO_3$-$(K_{1/2}Bi_{1/2})ArO_3$, piezoelectric ceramics, monomorph characteristics 7−143969
(Rb, Cs)Na_2KSb photocathode with improved photosensitivity and green-red response *(Chinese)* 7−77748
$Rb_{2(1-x)}K_{2x}ZnCl_4$, polarisation reversal, switching time meas. 7−143984
Rb_2NaFeF_6 ($KFeF_6$), fluoroelpasoliths, crystal structures *(German)* 7−104696
SiO_2-B_2O_3-K_2O ternary glass forming system, props. and chemical composition relationship 7−136465
$ZnCl_2$-KBr glass, estimation of IR absorpt. by molecular dynamics 7−138445

potential dividers *see voltage dividers*

potential energy curves and surfaces of molecules
for Morse curves see Morse potential
see also molecular vibration
acetic acid, unimolecular pyrolysis mechanisms, ab initio quantum chem. calcs. 7−126426
acetonitrile, hydrolysis, ab initio calcs. 7−113902
N-acetyl N′-methyl serine amide, struct., ab initio geometry refinement 7−129584
α-acetyl-α,α-dimethylmethyl cations, pot. energy hypersurface, MNDO calcs. 7−116853
acetylene, gas phase X-ray emission spectra, SCF and restricted HF calcs. anal. 7−141599
alkali metal atom-inert gas atom dimer, interaction, pot. curves 7−122416
alkali metal diatomic molecules, ground state reduced pot. curves and dissoc. energy estimation 7−109821
alkali metal-halogens, mutual neutralisation and chemiionisation, UB calcs. 7−89972
γ-aminobutyric acid and inhibitors of restricted conform., electrostatic pot. maps, biological activity, CNDO STO calcs. 7−78732
anisoles, in-plane vibrs., valence force field, normal coordinate anal., pot. energy distrib. 7−109857
benzaldehyde, geometry, barrier height, STO calcs. 7−129582
benzene, anharmonic effects in radiationless vibronic energy relaxation 7−109852
benzene, CH stretch overtones, intramol. vibr. relax. 7−82065
benzene, excited states, exponentially generated wave functions, SAC-CI study 7−129613
benzene, ground state, harmonic force field 7−136028
benzene, radiationless decay rate consts., excess-energy depend. 7−129762
carbonyl ylides, dynamic stability, ab initio MCSCF calcs. 7−89952
3-chlorocyclopropene and its deuterated modifications, IR and Raman spectra, vibr. anal. 7−96682
coupled excited electronic states, reson. Raman scatt. cross sections, time depend. 7−90157
trans-crotyl alcohol, high resolution microwave spectrum, torsional pot. energy surfaces 7−122514
curve construction in quantum chemical calcs., stylised scanning 7−109822
cyclopentadienylcobalt, $^1A_1$ state, electronic struct., ab initio LCAO-MO SCF calcs. 7−68208
diabatic energy surfaces and wave fns., permutation operation 7−90014
diatomic molecules and ions, two centre fns., universal basis 7−122323
diatomic mols., electronic energy levels matrix isolation and gas phase spectra 7−82074
diatomic mols., photoabsorpt. cross section, pot. curves 7−129692
dication fragmentations, unusually late transition structures, ab initio MO calcs. 7−96500
difluoroethanes, semiempirical pot. energy surface for reactions 7−113865
2,3-dilithiopropene, ab initio calcs. 7−89932
dimethylnitramine, CH stretching modes, vibr. relax. 7−90087
α,ω-diphenylopolyenes, lowest excited state, CARS spectra 7−90167
ethylamino ion, fragmentation and isomerisation, MNDO calcs. 7−68216

potential energy curves and surfaces of molecules continued
excited states, nonradiatively coupled, photodissoc., time-domain formulation 7−103600
(formaldehyde.H.NH_3)$^+$ complexes, covalent and H-bonded assoc., pot. energy profile, ab initio MO calcs. 7−81921
(formamide.H.OH_2)$^+$ complexes, covalent and H-bonded assoc., pot. energy profile, ab initio MO calcs. 7−81921
α-D-glucose, conformational studies, mol. dynamics simulations, pot. energy surfaces 7−68193
H_3PO, ground state pot. energy surface 7−90016
2,4-hexadiyne, laser multiphoton ionis. dissoc. mechanism 7−110024
hydrocarbon dications, stability, spectroscopic constants and thermodynamic functions 7−96520
hydrogen diformiate complex, active site model for aspartyl proteinases, ab initio calcs. 7−81960
hydrogen isocyanate, photodissoc., CO internal state distrib. 7−126465
hydrogen isocyanate, photodissoc., NH rot. state distrib. 7−126466
intramolecular motion, pot. surface, functional sensitivity anal. 7−90317
ions, pot. energy surfaces calcs. 7−68227
isoprene, excited state struct. and dynamics, reson. Raman intensities 7−90145
ketene, photodissoc., pot. energy surfaces 7−122413
methane, protonated, struct., vibr., ab initio MO calcs. 7−96558
methyl acetate, radical cation, isomerisation, dissoc., ab initio MO study 7−100531
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7−82185
methylidyne, $X^2\Pi$ state, vibr.-rot. emission spectrum 7−90090
molecular interactions, CNDO study, short-range repulsive forces correction 7−141465
molecular pairs, correl. energy eval., semiempirical quantum-chem. CNDO-CMP SCF calc. 7−109812
molecules, generalised pot. surface nucl. motion inclusion 7−129627
nitromethane, fragmentation dynamics, quantum mechanical close coupling calcs. 7−82301
nonadiabatic collisions, potential structure, curve crossing theory 7−129842
orbital localisation, optimisation, direct search 7−122322
parathion, electronic isodensity surface plots with gradient color encoding, INDO calcs. 7−74444
peptides, α-helical, electrostatic interactions role in stabilisation, spin-spin coupling studies 7−86897
phosphocreatine, electronic isodensity surface plots with gradient color encoding, INDO calcs. 7−74444
photofragmentation, pot. surfaces, exit-channel dynamics 7−122637
polyatomic molecules, normal vibr. freqs., MINDO/3 calcs. 7−109867
pot. energy surfaces 7−122413
pyrazine, radiationless decay rate consts., excess-energy depend. 7−129762
T-shaped an der Waals complexes, spectrosc. props. and empirical pot. energy surfaces 7−68424
T-shaped van der Waals complexes, spectrosc. props., pot. energy surfaces 7−68423
12,4,5-tetrafluorobenzene, S_1 state Q_{11} butterfly motion, vibronic coupling 7−135912
s-tetrazine, photodissoc., ab initio calcs., pot. energy hypersurfaces, radiationless transitions 7−68416
3-thio-2-propenals, S substituted, conform. pot. energy surfaces 7−93269
transition states, vibrational frequencies, energy path potentials 7−138969
triatomic molecule, photodissoc. dynamics, rot. reflection dynamics 7−122636
trifluoroethyl cation, structs., stabilities, ab initio MO calcs. 7−89903
tropolone, tunnelling dynamics, fluctuations, stochastic Liouville eqn. 7−129626
tropone, decarbonylation, time depend. mass spectra, breakdown graphs 7−93273
two electron atoms, molecular description 7−117041
unimolecular dissoc. rates, semiclassical anal. of quantum reson. lifetimes 7−71467
valence bond method for pot. surfaces calcs. *(French)* 7−141468
vibrational potential energy surfaces, determ. by Raman and IR spectra 7−74487
vibrational spectrum. intensity distrib. calcs. 7−109855
vinyl cation, structs. and energies obtained using ab initio MO theory 7−109697
ylides, gas phase struct., ab initio MO calcs. 7−116863
ylidions, gas phase struct., ab initio MO calcs. 7−116863
AgH, potential energy curves, bond lengths, relativistic ab initio CI calcs. 7−122379
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
$ArCO_2$, van der Waals mol., spectrosc. props. and empirical pot. energy surfaces 7−68424
ArHCl, potential surface secondary min., lowest Σ bending vibr., microwave spectra 7−90105
AsH, low-lying states pot. energy curves, radiative transitions, multireference CI calcs. *(French)* 7−89973
Au_3 cluster, low-lying states and pot. energy surfaces, CASSCF/CI calcs. 7−109795
BF, charge density and dipole moment, variational cellular method calcs. 7−116850
B_2H_6, optimized virtual orbital space for high-level correlated calculations 7−116864
BrH-NH_3 (methylamine), H-bonded complexes, pot. surface, H^+ transfer, ab initio SCF calcs. 7−89976
C_2, $A^1\Pi_u$ state lifetime, dipole transition moment, CI calcs. 7−81988
C_2, electronic states, pot. energy curves, SCF calcs. 7−103361
C_2, metastable state, high-press. bands investig. 7−82017
C_2^-, electronic states, pot. energy curves, SCF calcs. 7−103361
$C_4H_9^+$, energy hypersurface, isomerisation MINDO calcs. 7−81980
C_2N_2, predissoc., photofragment vibr. distribs., ab initio MCHF pot. energy surface calc. 7−90344
CNe^{n+} (n=1 to 4), pot. curves, extended MCSCF calcs. 7−96516
CO, charge density and dipole moment, variational cellular method calcs. 7−116850
CO, low lying states, pot. energy curves, dipole moments, multiconfig. SCF calcs. 7−116866
CO^+, semiempirical pot. curves, MS-Xα theory 7−81973
CO_2, vibr. transitions, Einstein coeffs. calcs. 7−122492
$(CO)_2^+$, photodissoc., ground ^2B_u and excited ^2B_g pot. energy surfaces calc. 7−110045

potential energy curves and surfaces of molecules continued
CS_2, charge density and dipole moment, variational cellular method calcs. 7−116850
CX^{2+}, X=F, Cl, charge separation reactions, mass-analysed ion kinetic energy spectra 7−144684
C_2* radical formation by IR multiphoton dissociation of chlorodifluoromethane *(Chinese)* 7−110029
CdHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
$Cl+Cl_2$, pot. energy surfaces, topography, spin-orbit interaction 7−110072
ClF_k, geometrical and electronic struct., ab initio calcs. 7−81957
Co_2, photodissoc., Wigner method test 7−103601
Cu complex, (nitrito)bis(2,2′-bipyridyl)Cu(II) nitrate, cryst. struct., X-ray diffr. 7−91552
DCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
$F+H_2$, pot. energy surface, Schrodinger eqn. soln. using random walk method 7−119502
F_2, Hartree-Fock dissoc. 7−93314
F_2^n (n=+ or 0), Rydberg states, pot. energy curves, CI calcs. 7−109790
H_2, $^3\Sigma_u^+$ states, pot. energy curves, CI calcs. 7−89992
H_2^+, molecular description of two-electron atoms 7−96578
H_3, ground and lowest excited state pot. energy surface, Sorbie-Murrell calcs. 7−90018
H_3, pot. energy surface, triangular plot 7−122412
H_3, pot. surfaces and nonadiabatic coupling, double many-body expansion 7−103357
H_3^+, pot. energy hypersurface, ab initio SCF CI calcs. 7−89996
H_6^+, ground state structure, ab initio UHF and MP2 pot. energy surface calcs. 7−109716
HCO^-, photoelectron spectra simulation, ab initio CI calcs. 7−68225
HCl^{2+}, pot. curves, CASSCF-CI method 7−68228
HD immersed in He and H_2 gas, line shape cross sections calc. using electronic pot. energy surfaces 7−129790
HF, charge density and dipole moment, variational cellular method calcs. 7−116850
$HF-H_2O-NH_3$ system, H-bonded dimers, pot. energy curves, SCF calcs., counterpoise corrections 7−129552
HF+Li, rot. energy transfer, kinematic effects 7−90337
$HLiH^-$ ion, in $X^1\Sigma_g^+$ state, 3D pot. energy and electric dipole moment surfaces, ab initio calcs. 7−116821
HNC-HCN, isomerisation, intramol. energy transfer, quasiclassical calcs. 7−86591
HO_2 pot. energy surface, triangular plot 7−122412
HO_2 radical, pot. energy function calcs. 7−82019
H_2O, dimer, struct. and vibr. spectroscopy. quantum simulation 7−96909
H_2O, photodissoc., Wigner method test 7−103601
H_2O^{2+}, dissoc., singlet and triplet state pot. energy surfaces calc. 7−122366
H_2O-H^-, interaction, quantum-chem. calcs. 7−68240
H_2O_2, optimized virtual orbital space for high-level correlated calculations 7−116864
H_2O_2, photodissociation, ps photofragment spectroscopy study 7−113966
HX, X=Br,I, ionised species, ground state, relativistic and correlation effects, valence SCF-CI calcs. 7−116870
H^*_4 cluster, stability, pot. energy surfaces, MRD-CI method and basis set calcs. 7−74467
He_2^+, $^2\Sigma_g^+$ excited states, pot. energy curves, adiabatic calcs. 7−109787
HgH_2, pot. energy surfaces calcs. 7−74485
HgNe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
I_2, $D(0_u^+)$ ion pair state, optical-optical double reson. obs. 7−109965
ICN, dissociation, transition states, real-time fs probing spectroscopy 7−135960
I_2M clusters, photodissoc. nonadiabatic transitions 7−93353
InCl, C^1Pi state, pot. curve calcs. 7−135868
K complex, K^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
K_2, rovibrational transitions, Doppler-free polarisation spectroscopy, visible spectra anal. 7−109916
$KY(MoO_4)_2$, IR and Raman spectra, normal coordinate anal., pot. energy distrib. 7−109890
$KrCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
$KrHe^+$, electronic states props. and pot. energy curves, relativistic CI calcs. 7−116860
Li complex, Li^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
Li_2, Is core electron ionisation, hole localisation and broken symmetry, SCF, CI and CEPA calcs. 7−89980
Li_2, $E^1\Sigma_g^+$ shelf, optical double reson. 7−122579
Li_2, lowest-lying states, electronic transition dipole moment fns. calc. 7−81931
Li_2, resonant vibrational excitation, simple model 7−129891
Li_3^+, breath mode. vibr., Raman spectrum, ab initio model 7−96709
LiH, electron correl., extended geminal model 7−96556
LiHe, electric discharge plasma, excited states form., pot. energy curves, MCSCF calcs. 7−89943
MgHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
N_2, excited states, bond fns., MRD-CI calcs. 7−109791
N_2, resonant vibrational excitation, simple model 7−129891
N_2^+ semiempirical pot. curves, MS-Xα theory 7−81973
N_2-Ne(Ar), pot. energy surfaces, HF SCF calcs., dispersion coeffs. 7−96577
NCNO, photodissociation, microcanonical state-to-state rates, ps photofragment spectroscopy 7−113965
NH_3, dissociation, pot. energy surface, ab initio MCSCF calcs. 7−103359
NH_3, potential energy surfaces and IR spectra, CASSCF and CEPA calcs. 7−103358
NH_4 complex, NH_4^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
N_2H_2, ground state pot. energy surface, MC SCF wave fn. calc. 7−109819
NH_3BH^{2+}, pot. energy surfaces, ab initio calcs. 7−109820
$NH_4(NH_3)_n$, Rydberg radicals, structs., correl. diagrams 7−90008
NO_2, photodissoc., predissoc. mechanism, rot. prop. distribs. eval. 7−110034
N_2O^+, photodissoc. rot. and angular distribs. calc. 7−110037
Na complex, Na^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
Na vapour, transport props., second virial coeffs., Hulburt-Hirschfelder pot. calcs. 7−123827
Na_2, binding energy and pot. energy curve, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
potential energy curves and surfaces of molecules continued
Na_2, perturbation facilitated optical-optical double reson. spectroscopy, hyperfine splittings, struct. 7−96753
$NeCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
Ni_3, low-lying states, pot. surface SCF-contracted CI calcs. 7−89997
O_2, pot. energy curve and spectroscopic consts., CARS photofragment spectra 7−82134
O_2, UV photoabsorpt. cross-section, pot. curves 7−129735
O_2^+, $c^4\Sigma_u^-$ state, predissoc., isotope effect 7−110047
O_3, centrifugal distortions, ab initio pot. energy hypersurfaces 7−129566
O_3, electronic states, pot. energy surfaces, UV continuum, ab initio calcs. 7−96515
O_3, Hartley absorpt. band, reson. Raman spectra, time depend. anal. 7−122548
O_3, nonbending, eigenvalues determ. Moller-Plesset perturbation calc. 7−96561
PH, radical, ground $X^3\Sigma^-$ state, FTIR vibr.-rot. spectrum 7−82098
RbH, $X^1\Sigma^+$ and $A^1\Sigma^+$ states, potential energy curves, probability density distributions 7−122418
S_2, effective valence shell Hamiltonian, electronic struct. and bond length depend. 7−81929
ScH_2, electronic states and pot. energy surfaces, CAS SCF and second-order CI calcs. 7−96551
SiF systems bond energies, generalised VB and CI calcs. appl. to Si etching 7−122365
SiF^+ (SiF), electronic states, CI calcs. 7−74462
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
SiH, π^2 mol., struct., pot. energy curve, ab initio HFR-MO-LCAO-SCF-CI method 7−103390
SiH_2, low-lying states, pot. energy surfaces and dynamical props., 2D MCSCF/6-31G** calcs. 7−116893
$Si_2H_4^n$ (n=0 or +), ground state surfaces, SCF and CI calcs. 7−109811
Te_2 transitions, potential energy curves and Franck-Condon factors *(Spanish)* 7−122621
TeH, electron states, relativistic CI calcs. 7−89991
Xe_2, photoelectron spectra obtained by resonantly enhanced multiphoton ionisation 7−110000
$XeCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
$Xe_2^+Cl^-$, in Xe matrix, UV emission spectra 7−90184

potential energy functions
see also Lennard-Jones potential; molecular vibration; Morse potential; muffin-tin potential
alkali cyanides, molecular crystals, intermolecular potentials, computer simulation studies 7−142695
alkali ion-inert gas pots., Coulomb and exchange energies 7−103614
alkali metal, atoms, core states, multiphoton transition probabilities, model pot. calcs. 7−68269
alkali metal atom-inert gas atom dimer, interaction, pot. curves 7−122416
n-alkanes, torsional and CCC bend frequencies, crystal analyzer spectrosc. 7−136079
alloys, ordered $L1_2$ type, screw superdislocation Peierls stresses *(Russian)* 7−98149
aromatic molecules, microsolvation, spectroscopic investig. 7−129823
atom-atom interaction pots., crossed mol. beam study 7−141647
atom-diatom, interaction pots., crossed mol. beam study 7−141647
atom-ion collisions, repulsive potentials study *(Japanese)* 7−82321
atomic bound states for Coulomb pot. perturbed by barrier pot. 7−103612
atomic collisions and spectra, book 7−95123
atomic ground-state electron densities, one-body external pots. 7−96574
atomic many-electron problem, g-Hartree mean-field, QED anal. 7−122387
atoms, charge distrib., dynamical correl. 7−68223
atoms, energy levels, modified Coulomb pots., semiclassical derivation 7−74393
atoms, ground-state energy, Thomas-Fermi model 7−103393
atoms, relativistic many-electron Hamiltonians study 7−141453
atoms, strong Coulomb interactions, continuum distorted wave theory 7−122658
atoms, Z=1-92, Dirac-HFS screening function 7−122349
benzene, cryst., static equilibr. struct. at negative press. 7−104724
benzene-H_2O liq.-liq. interface, Monte Carlo simulation 7−83634
benzenes, liq. and solid, vibr. props., mol. dynamics simulation 7−91740
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
bicyclo[1.1.0]tetraarsane, mol. struct. isomers, ab initio calcs. 7−81963
biphenyl, incommensurate phase transition model calcs. 7−142949
biphenyl incommensurate phase II, stripe-like modulation calcs. 7−142950
biphenyl phase transitions, press. effects study 7−142951
carbonyl sulphide mol. cryst., intermol. pot. functions *(Japanese)* 7−131256
Cartesian internal coordinates, stationary paints, translation, rotation, Hessian, algorithms, potential energy surfaces 7−141551
3-chloropropanal, gas phase data, conformational energies and struct. 7−117069
3-chloropropanoyl chloride, gas phase data, conformational energies and struct. 7−117069
closed shell atoms, dipole, quadrupole contributions to dispersion energy 7−136033
colloidal aggregates, short-range struct., Brownian dynamics simulation 7−68427
crystal violet, liq. torsional dynamics on barrierless pots. 7−109924
cyclobutane-$d_0(d_8)$, struct. and puckering pot., gas electron diffr. and IR spectra 7−103493
cyclopropene, empirical pot. function 7−90017
diatom+atom collisions, diatom dissoc. and recomb. rate consts., collinear classical trajectory study 7−100513
diatomic+diatomic, VV energy transfer, rate const. comparison 7−68435
diatomic mols., photoabsorpt. cross section, pot. curves 7−129692
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7−109876
N,N-dimethylhydroxylamine, normal vibr., IR spectra *(German)* 7−90132
1,4-dioxadiene, MINDO/3 vibr. obs., canonic quadratic force field calcs. 7−103460
diphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
double well potential used for H-bonded ferroelecs., props. 7−106091
effective local pot., density amplitude 7−129567
electron capture, third Born approx. effects anal. 7−103650
electron pair correlation in atoms and mols. review 7−89979
electronic excitations, effective local pots., many-body theory 7−76722

potential energy functions continued
electronic structure calculations, multiple-scattering solution of Schrodinger's equation for potentials of general shape 7−105370
electrons scattering from screened atomic pots., classical bremsstrahlung, num. calc. 7−117081
ethyldifluorophosphine-$BH_3(BD_3)$ 7−68312
fluoro vinyl radical isomers, vibr. anal., ab initio calcs. *(French)* 7−96533
fluoromethane-d_2(-d_3) isolated CH chromophore, spectra calcs. 7−135919
force constants, fragmentary method determ. 7−74563
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342
formamide, liq., mol. dynamics simulations, test particle model pot. 7−91417
gas, nearest-neighbour lattice, revised scaling variables, thermodynamic perturbation theory calcs. 7−104368
gas mixtures, binary, two-fluid Chapman-Enskog theory 7−123830
β-D-glucose dinitrates, vibr. spectra calcs., site localisation and substitution effects study 7−103474
graphite surface, noble gas atom adsorption pot., three-body contrib. 7−98693
halogen substituted acetaldehyde, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogen substituted ketones, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogenocyanoacetylene, pot. and mol. consts. eval., vibr. anal. 7−103463
1,3,5-hexatriene, scaled quantum mechanical force field, vibr. anal., ab initio HF calcs. 7−96534
identical nuclei systems, conical intersections for Born-Oppenheimer electronic wave fns. 7−74418
imines, model cpd. for force field pot. energy function optimisation 7−103615
interatomic potential calcs. using maximum entropy principle, in condensed matter 7−137303
interatomic potentials, scattering integral, approximate solution 7−110057
intermolecular potentials, ab initio MO calcs. 7−74725
ion-water clusters, free energy changes calc. using nonadditive pots. and Monte Carlo method 7−118130
isopropyl radical, struct. and internal rot. barriers, pot. fns. calc. 7−74726
isoquinoline van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
Lac repressor headpiece structure, NMR, restrained mol. dynamics calcs 7−133191
lattice fluids, particle distrib. function, Ornstein-Zernike eqn. 7−97880
linear polyatomic fluids, integral eqn., thermodynamic props. 7−91408
lipid bilayer membrane, gel state, vertical motion and steric effects, analytical and Monte Carlo calcs. 7−78794
liquid solutions, effective pair pots. at McMillan-Mayer level 7−104504
liquids, Raman spectra, interaction-induced and local fields effects study 7−82169
macromolecules, deformation, mol. mechs., quadratic approx. 7−117100
many-body Coulombic interaction, Rayleigh-Schrodinger perturbation theory, diagrammatic method 7−96818
meso-molecule inside normal mol., form. cross section theory 7−122741
metalloproteins, mol. mechanics calcs., empirical pot. function 7−78717
metals, HCP, vacancies and small vacancy clusters, computer simulation studies 7−98133
methane, positron scatt. cross sections, complex optical pot. calcs. 7−103675
methyl fluoride-$d_0(d_2)$, vibr. energy levels, ab initio pot. function 7−90091
molecular bonds, relativistic changes, Hellmann-Feynman force method calcs. 7−122350
molecular crystals, intermolecular potentials, computer simulation studies 7−142695
molecular crysts., two-phonon bound states, vibr. relax. *(Japanese)* 7−131259
molecular electrostatic pot., multipole expansion technique, STO calcs. 7−74405
molecular harmonic potential fn., isotopic centrifugal distortion consts. based calcs. 7−117038
molecular harmonic vibrations, force consts. calcs., rectilinear internal valence coords. 7−122490
molecular interactions, geometry optimisation, simulated annealing approach 7−100522
molecular liquids, mol. mass distrib. effect on mass and momentum transport 7−105087
molecules, effective core pot. parameters, SCF, CASSCF and CI calcs. 7−74461
molecules, Gaussian approximation for temp. depend. of continuous electronic spectra 7−136010
Morse potential, use in bond length and local mode freq. relationship 7−90315
multicharge ions, quantum defects and dispersion phases, relativistic quantum defect method calcs. *(Swedish)* 7−122334
nematic liquids, curvature elasticity, density functional theory, Berne-Pechukas pair pot. models 7−83664
nitroacetylene derivatives, electrostatic potentials and rel. bond strengths 7−129829
nitrosoacetylene, derivatives, electrostatic potentials and rel. bond strengths 7−129829
2-norbornyl cation, stabilisation energies, solvent models role 7−139003
nucleic acid bases, electrostatic pots., dipole pot. mapping approach 7−129908
nucleophilic addition reactions, carbonyl group, steric effects 7−126446
organophosphorus cpds., conform. anal. by gas phase Raman spectrosc. 7−74640
oximes, model cpd. for force field pot. energy function optimisation 7−103615
n-pentane, spherical shell pot., equivalent eqns. method calcs. 7−129827
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7−96762
phenanthrene, crysts., elastic consts., lattice dynamical calc. 7−118009
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7−90191
plates, rectangular orthotropic, efficient large deflection analysis by direct energy minimisation 7−123459
polar fluids liquid-vapour interface, struct. and surface tension, integro-diff. eqn. and perturbation theory 7−76547
polarisable gas, potential of average force between two ions 7−103609
polyatomic molecules, bond and mol. polarisabilities 7−82016
polyatomic mols., adiabatic pot., dynamic instability, virial theorem 7−74439
potential energy functions continued
polymer solutions, solvent interactions, RISM integral eqn. soln. 7−96568
polymers, helical S chains torsional pot., ab initio cryst. orbital calcs. 7−96506
propadienone, microwave spectra, rot.-vibr. anal., double-minimum v_{12} pot. function, semirigid bender anal. 7−96649
pyridazine van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
rotation-vibration Hamiltonian, kinetic energy contrib. to pot. energy 7−82068
Schrodinger equation, integral form, solution in momentum space 7−117040
semiconductors, extended interstitial lattice distortion, valence force potentials 7−98140
silica polymorphs, bond, pot. functions, struct. and elastic props., ab initio quantum mechanical calcs. 7−76072
silicates, bond, pot. functions, struct. and elastic props., ab initio quantum mechanical calcs. 7−76072
sodium p-nitrobenzoate trihydrate crystal, deform. directions, atom-atom pots. calcs. 7−117909
solids, transformations, computer simulation techniques 7−111861
tetrafluoromethane-He(Ne), diffusion coeffs. and thermal diffusion factors 7−91278
thioformaldehyde, vibrs., Green's fn. anal. 7−74551
transition metal clusters, struct. props. from empirical interatomic pot. scheme, size depend. 7−110173
transition metal hydrides positive ions, spectroscopic parameters and dissoc. energies, CI calcs. 7−116869
transition metals, body-centred cubic, improved N-body semi-empirical pot. model calcs. 7−137504
triatomic mols., kinetic anharmonicity electron diffr. and spectroscopy anal. 7−103661
triphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
two-electron atom, Hamiltonian, one-dimens. limit. 7−116822
two-photon two-level media, multiwave mixing, quantum theory 7−96965
vapour-liquid critical point, site-site Ornstein-Zernike eqn., hypernetted chain approx. 7−97877
water, intramolecular model potentials 7−110061
water, pseudopotential for condensed phase simulation 7−91413
water oligomer populations, gas-phase, press. enhancement, RRHO MCY-B/EPEN computation study 7−74806
XY_5 trigonal-bipyramid mols. force consts., effective nucl. charge model 7−96820
dtμ molecule, intermolecular and internuclear effective potentials 7−122747
Al clusters, electronic struct., perturbed electron droplet model 7−103707
Al, solid-liquid interface, microscopic struct., quasi-static model 7−104966
Al_3, electronic and geometrical struct., ab initio MCSCF calcs. 7−96499
$AlCl_3$, struct. and vibr. freqs., gas-phase diffr. 7−68284
Ar, Coulomb and exchange terms in interatomic pots. 7−129833
Ar, elastic positron scatt. differential cross sections, absorpt. effects 7−117073
Ar liquid, struct. factor, three-body forces 7−104514
Ar, microwave discharge, high press., emission profile width and shift 7−69503
Ba, electronic excitation, effective local pots., many-body theory 7−74728
Br_2, ion-pair state investigated by state-selective spectroscopy using sequential two-photon transitions 7−96714
CO, Dunham coeffs. calc., recurrence relations 7−129830
CO_2, ground state, pot. energy functions 7−96816
CO_2, integral eqn., thermodynamic props. 7−91408
CO_2, optical lattice phonons, bandwidths, anharmonic freq. shifts, intermol. pots. calcs. 7−142929
CO_2, solid, anharmonic lattice dynamics *(Japanese)* 7−131257
CO_2-$CO(N_2)$, intermolecular pots., vibr., IR absorpt. spectra 7−82120
CS_2, ground state, pot. energy functions 7−96816
Ca^+, autoionisation states energies calc., config. superposition method *(Swedish)* 7−122368
Ca-He, ^1P to ^3P transitions, integral cross sections and alignment effects 7−90358
CaO, ab initio and semiempirical pseudopots. 7−116891
Cl_2 liquid, Price and Stone pot., Monte Carlo simulation 7−97883
$Co(NH_3)_6(PF_6)_2$, solid state free rot. levels, neutron scatt. spectra 7−103468
Cs isoelectronic series, collapse region oscillator strengths, valence-core electron exchange, model pot. calcs. 7−116846
Cs, parity nonconserving electric dipole transition amplitudes, Dirac-H-F calcs. 7−89949
Cu-Al alloys, interatomic potential calcs. using maximum entropy principle 7−137303
D_2, collision-induced polarised and depolarised Raman scatt. 7−82179
D_2 solid, complex form. in D_3^+ presence, Monte Carlo simulation 7−91662
F^- mobility in He, ab initio calcs., interaction pot. 7−123837
GaF_3, struct. and vibr. freqs., gas-phase diffr. 7−68284
H, one dimens. struct., Schrodinger, Klein-Gordon and Dirac eqns. 7−102043
H, transfer reactions in solution 7−113909
H^-, one- and two-photon ionisation, spherical δ-shell pot. 7−74534
H^+, transfer reactions in solution 7−113909
H-like ions, electron capture, excited state autoionisation, electron spectra anal. 7−90401
H+H_2, reactive system, three-dimens. n-channel coupling scheme 7−113863
H+H^+, electron capture, third Born approx. calc. 7−103649
H_2, collision-induced polarised and depolarised Raman scatt. 7−82179
H_2, depolarized Raman scatt. at low temps. study 7−82178
H_2, double minimum EF state tunnelling resonances, isotopic species, ab initio pots. calcs. 7−122336
H_2, solid, diffusion Monte Carlo simulation 7−98603
H_2^+, in arbitrary mag. field, pot. energies of first few electronic states, wave functions anal. 7−122390
H_2-Ne(Ar)(Kr)(Xe), mixtures, diffusion coeffs. and thermal diffusion factors meas. 7−84337
HBr, Dunham coeffs. calc., recurrence relations 7−129830
HCN-BM_3, M=F, Cl, C−N bond stretch force consts., MNDO calcs. 7−96546
HCl, Dunham coeffs. calc., recurrence relations 7−129830
HCl, IR transitions, vibr.-rot. matrix elements 7−135913
HF+HF, energy transfer, pot. energy hypersurface 7−122663

potential energy functions continued
$(HF)_2$, dispersion and induction energy damping functions calcs. 7−82315
H_2F_2 potential, many-body expansion, long-range electrostatic contributions 7−96817
HO_2 potential, many-body expansion, long-range electrostatic contributions 7−96817
HO_2 radical, pot. energy function calcs. 7−82019
H_2O, liq., fall transient accel., decoupling and nonlin. effects 7−97897
H_2O, vibr. effect on second virial coeffs. 7−136030
$(H_2O)_n$ clusters, geometries, energies, electrostatic props. 7−103706
$H_2O^+Fe^{2+}(Fe^{3+})$ ions, ab initio pair pots., molecular dynamics calcs. 7−71474
HONO, torsional pot., ab initio SCF MO calcs. 7−110060
HX, X=Br,I, ionised species, ground state, relativistic and correlation effects, valence SCF-CI calcs. 7−116870
He adsorbed on Ne-plated graphite, spectral and thermodynamic props. 7−105251
He atom differential cross sections meas. for scatt. from adsorbed CO mols. on Pt(111) surface 7−119087
He, ground state, localisation, state-independent pots. 7−68188
He-like atoms, ^1S states, Coulomb pot. exact wave fns. expansion 7−89915
He-like ions, electron capture, excited state autoionisation, electron spectra anal. 7−90401
He+Ar(acetylene) (CO_2) (OCS), differential cross section meas., anisotropic pot. meas. 7−129855
He+H_2, collision-induced rototranslational spectra, anisotropic interaction effects 7−110078
He+H_2^+, reactive and nonreactive transition probabilities, scatt. resons. 7−110065
He+N_2, transport collision integrals of intermol. pair pot. 7−122657
He+Ne^{q+}, electron capture, ang. distrib. study 7−96864
He_2 adiabatic potential curve, excitations, van der Waals wells, vibrational energy levels 7−136029
He_2, dispersion and exchange-dispersion-energies, explicitly correl. Gaussian geminals 7−96815
He_2, dispersion and induction energy damping functions calcs. 7−82315
He_2, ground state pot., spectral intensity anal. 7−82312
He_2 interaction energy, HF calcs., exchange-perturbation expansion 7−129550
He_2, pot. energy fn. determ. by differential cross section inversion 7−90313
He_2^{2+}, scaling adiabatic pot. functions 7−122659
Hg, low-lying states, model pot. CI calcs. 7−68229
I_2+He, vibr. energy transfer investig. 7−110088
K complex, K^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
K^-, doubly excited states, energy and widths, diagonalisation method calcs. *(Swedish)* 7−122402
$K_x(KCl)_{1-x}$, struct., reference pot. examination by Percus-Yevick approx. 7−124074
Kr, Coulomb and exchange terms in interatomic pots. 7−129833
Kr, electron/positron elastic scatt., model pot. calcs. 7−110108
Kr, electronic excitation, effective local pots., many-body theory 7−74728
Kr, liquid, struct. factor, three-body forces 7−104514
Li complex, Li^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
Li^-, doubly excited states, energy and widths, diagonalisation method calcs. *(Swedish)* 7−122402
Mo, interatomic potential calcs. using maximum entropy principle 7−137303
N_2, crystal, intermol. pots., high pressure Raman spectra anal. 7−85746
N_2, lig., perturbation theory for studying thermodynamic props. 7−124554
N_2, solid, anharmonic lattice dynamics *(Japanese)* 7−131257
N_2, solid, intermol. pots., internal modes and p-V curve *(Japanese)* 7−131248
N_2-Ar mixture, spontaneous polarised vibr. Raman scatt. study 7−96700
N_2F_2, mol. consts. calc. by force field study 7−103464
NH_2 radical, valence states, VB diatomics in mols. calcs. 7−109783
NH_4 complex, NH_4^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
NH_4^+ cpds., rotational pot. function derivation 7−91493
NH_4^+, rot. pot. functions in cryst. fields 7−91492
N_2H_2-$H_0(d_2)$, mol. consts. calc. by force field study 7−103464
$N_2O_2^{2-}$, mol. consts. calc. by force field study 7−103464
Na complex, Na^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
Na D line collisional broadening in Na-Xe arcs 7−135882
Na halides, cryst., phase transform., interionic. pot. 7−104980
Na vapour, transport props., second virial coeffs., Hulburt-Hirschfelder pot. calcs. 7−123827
Na^-, charge distrib., model core pot., variation method 7−68206
Na^-, doubly excited states, energy and widths, diagonalisation method calcs. *(Swedish)* 7−122402
Na+inert gas systems, half collisions, depolarisation and fine struct. effects 7−74736
Na_2, $B^1\Pi_u$ state, pot. energy barrier, rot.-vibr. energies 7−90311
NaCl surface, adsorbed symmetric top mol., self-consistent interaction pot. 7−105246
NaF, CI pot. fn. calc. 7−74465
NaF:Cu^+, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
NaH, $^1\Sigma$ ground state, Dunham coeffs. determ., far-IR spectrum 7−74591
Ne, Coulomb and exchange terms in interatomic pots. 7−129833
Ne-like ions, excited state autoionisation, electron spectra anal. 7−90401
Ne+He, nonadiabatic and radiative transitions, interatomic interactions 7−129857
Ne_2, dispersion and induction energy damping functions calcs. 7−82315
Ni_3, low-lying states, pot. surface SCF-contracted CI calcs. 7−89997
O+HCl, cross sections, reagent rot. effect 7−71466
O_2^+, direct dissociative recomb., cross section windows, Morse pot. curves 7−78461
OCS, ground state, pot. energy functions 7−96816
Ru complex, tris-(1,4,5,8-tetraazaphenanthrene) hydroquinone, photolysis and photopotentials 7−113962
S containing molecules, first derivatives of SCF energies, basis set depend. Rys polynomial method 7−116826
Sc to Hg, valence orbitals, model pot., sd-MP set 7−103367
Sc to Hg, valence orbitals, model pots., spd-MP set 7−103368

potential energy functions continued
Si (111) surface, adatom diffusion and adatom-ledge interaction, semiempirical pot. energy function 7−143179
Si (111) surface, kink-site form. energies using semiempirical pot. energy function 7−143176
Si, thermal oxidation, simulation 7−138913
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, adlayers 7−105293
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, microvoids 7−105294
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
Si_xO_y small cluster equilib. configs., semi-empirical pot. energy function, Monte Carlo simulations 7−74803
Si(111), long range ledge-ledge interactions, surface stress tensor 7−118217
Th, phonon spectrum, (Sd)-f hybridisation contrib. 7−111796
Tl, parity nonconserving electric dipole transition amplitudes, Dirac-H-F calcs. 7−89949
TlX, X=H, H^+, H_3, props. , relativistic and correlation effects, pseudopot. calcs. 7−122383
W, deformation pot., Fermi surface data anal. *(Russian)* 7−70167
Xe, Coulomb and exchange terms in interatomic pots. 7−129833
Xe electronic excitation, effective local pots., many-body theory 7−74728
Xe, high press. eqn. of state, interatomic pots. 7−69855
Xe, slow electron elastic scatt., quasirelativistic calcs. 7−122381
Xe_2m repulsive interaction pot., extended SCF calcs. 7−109754

potential energy surfaces for collision processes
aliphatic amino acids, interactions, ab initio pair potentials 7−89931
atom+diatom, reactivity, reactant rot. effect 7−86598
atom-diatom collinear inelastic scattering, pot. surface, functional sensitivity anal. 7−90317
atom-ion charge exchange collisions, Coulomb interaction pots. study 7−122691
atomic and molecular processes in gases, book 7−95122
atomic scattering matrix, Sturmian representation, Coulomb plus Yukawa pot. 7−90318
barrierless reactions, solution, relaxation rates fractional viscosity dependence, non-steady-state dynamics 7−122593
barrierless reactions in soln., relax. rate, temp. depend. 7−132912
chemically reactive liquids, kinetics 7−86567
free radical+olefin, addition free radical polarity effects 7−126445
heavy atom+ion collisions, K-shell ionisation, gauge invariance, binding and polarisation effects 7−122677
inert gas atoms, metastable states, inelastic collisions study 7−82329
least-squares surface, rel. to Celles-Darling hyperspherical coordinates 7−74729
methoxy radical, (A^2A_1) state, collisional quenching 7−109990
methyl formate anion + OH^-, pot. surfaces, MINDO/3 method 7−86613
methyl oxalate anion + OH^-, pot. surfaces, MINDO/3 method 7−86613
molecular exciplex form. in gas phase, pot. curve crossing 7−106767
molecule-surface collisions, intramolecular dynamics, excitation of internal vibr. modes 7−117042
Mu+H_2, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
nonadiabatically coupled electronic quantum states, energy redistrib. dynamics 7−90319
nucleophilic substitution S_N2 reaction, pot. surface, nonempirical calcs. 7−78480
polyatomic system, oscillating near collinear reaction surface, isomorphic hamiltonian 7−74402
resonances, mathematical anal. 7−102218
rotational rainbow at large scatt. angles, anal. model 7−141660
target fragmentation in low energy collisions, Jost matrices method anal. 7−82319
transition struct., diabatic surface formalism, VB and SCF calcs. 7−132908
valence bond method for pot. surfaces calcs. *(French)* 7−141468
Be ethylene, exciplexes, triplet state, reaction hypersurfaces 7−68236
C^{3+}+Li, electron capture, pot. energy calcs., VB calcs. 7−122688
Ca+HF, 3D two-config. pot. energy surface 7−106766
Ca+HF, chemical insertion mechanism investig. 7−106775
Cl+HCl, partial cross section oscillatory behaviour 7−113864
Cl+HCl, pot. energy surface, topography, spin-orbit interaction calcs. 7−110071
Cs+H_2 reaction cross section, atomic fine-struct. depend. 7−119495
D+H_2, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
DF+H(D), exchange and translational-vibr. energy transfer reactions, quasiclassical trajectory calcs. 7−106780
F+DBr, D transfer reaction, pot. energy surface white spot 7−126436
F+F_2, pot. energy surfaces, topography, spin-orbit interaction 7−110072
F+H_2, pot. energy surface in saddle point vicinity, higher order correl. effects estimation 7−68429
F+HF, pot. energy surface, topography, spin-orbit interaction calcs. 7−110071
Fe^{2+}H, charge-transfer recomb. rate coeffs. calcs., Landau-Zener approx. 7−82349
H, positron scatt., N=2 positronium and N=3 H resonances investig. 7−82372
H-bonded complexes, triple bonds, ab initio methods 7−129561
H+$F_2(Cl_2)$, pot. energy surfaces, topography, spin-orbit interaction calcs. 7−110070
H+H_2, reactivity, reactant rot. effect 7−86598
H+$H_2(D_2)$, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
H+NO, inelastic scatt., rot. vibr. energy transfer, classical trajectory study 7−90343
H^++H_2, complex form. cross sections determ., isotope effects 7−90321
H_2+H, cross section estimation, quantum distorted wave Born calcs. 7−74732
H_2+H_2, nonspherical interaction potential rel. to faint features in $S_0(0)$ line in Jovian atmosphere 7−134173
H_2+I(Cu)(Br)(F), atom transfer reactions, pot. energy surface construction 7−106771
H_3^++ CO protonation process and formyl ion formation 7−138965
HF+HF, collision on realistic pot. energy surface, rot. energy transfer calcs. 7−117052
HF+HF, energy transfer, pot. energy hypersurface 7−122663

potential energy surfaces for collision processes continued
HF+HF, rot. energy transfer, large-scale close coupling calcs. 7−129852
HF+H(D), exchange and translational-vibr. energy transfer reactions, quasiclassical trajectory calcs. 7−106780
He-Li^+, mobility of Li^+ at high E/N values 7−111150
He-N_2, gas mixture, thermal cond., effective collision cross-sections determ. 7−83400
He+C^{4+}(N^{4+})(N^{5+})(O^{5+}), electron capture cross sections meas., classical over-barrier model study 7−90405
He+H_2, autoionising system, non-adiabatic coupling, pot. energy surface investig. 7−110063
He+H_2^+, reactive and nonreactive transition probabilities, scatt. resons. 7−110065
He+Li_2 interaction, SCF and MP2 methods 7−141649
He^++He, excitation cross-sections, function, prob. curve crossing 7−141664
Hg+H_2(HD), rot. state distribs. on model pot. surfaces, lack of leaving-atom isotope effects 7−132911
I+HI, partial cross section oscillatory behaviour 7−113864
I_2, vibrational excitation in surface collisions, pot. energy surface anal. 7−92795
Kr+O_2^+, vibr. relax. mechanisms, computational evidence 7−113875
Li^++Li^+ charge exchange, ab initio, SCF and CI calcs. 7−103642
Li^++N_2, vibr. relax., modified Landau-Teller model 7−136039
Mg+H_2(HD), rot. state distribs. on model pot. surfaces, lack of leaving-atom isotope effects 7−132911
Mu+Hd, reaction rate const., abstraction and exchange contribs. 7−78468
N+N_2*, deactivation, classical trajectory calcs. on LEPS surface 7−68446
N+O_2→NO+O, pot. surfaces, CASSCF/CI calcs. 7−106783
NH_2+NO, rate const., semiclassical trajectory calcs. 7−100517
NH_3+H_2, rot. excitation, ab initio pot. energy surface calc. 7−68438
Na+inert gas atoms collisions, fine struct. pop. and depolarisation mechanism study 7−141662
Ne+F^+, pot. energy curves calc. 7−103622
Ni^{2+}H, charge-transfer recomb. rate coeffs. calcs., Landau-Zener approx. 7−82349
O+H_2, quantum mechanical reaction probabilities calc. 7−138974
O+HCl, cross sections, reagent rot. effect 7−71466
O+HI, chemical exchange reactions, quasiclassical trajectory calcs. 7−113869
O+N_2→NO+N, pot. surfaces, CASSCF/CI calcs. 7−106783
O^{6+}+He, electron capture, travelling MO method calcs. 7−82342
OH^{2+}, collisions with atoms, pot. energy curves 7−117043
OH^{3+}, collisions with atoms, pot. energy curves 7−117043
OH+p-H_2, rot. excitation and pot. energy charcts. 7−90359
Si^++H_2, pot. energy surface, ab initio HF calcs. 7−96494
Zn+H_2(HD), rot. state distribs. on model pot. surfaces, lack of leaving-atom isotope effects 7−132911

potential models (elementary particles) *see elementary particle interaction models*

potential scattering
$\mathcal{L}^2$ methods convergence appl. 7−89022
Aharonov-Bohm effect, modified Coulomb scattering 7−134561
analytic scattering length and critical constants for potential scattering 7−128370
black hole normal mode frequencies, WKB anal. of pot. barrier scatt. 7−102249
Block equations and the Korteweg-de Vries hierarchy 7−120843
charged particle scattering with energy/angular momentum/coupling constant relation, inverse problem 7−134574
complex potential, one-turning-point scatt. problem, phase shift calc. 7−108308
conference on quantum field theory and math. physics, Bechyne, Czechoslovakia, (June 86) 7−80147
continued fraction method for amplitude density 7−80502
Coulomb effects in quasi-free scattering, breakup reactions appl., PWIA 7−96037
distribution of poles for scattering on the real line 7−128331
electrons in external fields, generalised coherent states, appl. to pot. scatt. 7−122807
EM field influenced pot. scatt., integrability of Hamiltonian system 7−102219
Faddeev equation for local pots., analytical continuation in complex energy plane 7−67056
geometric theory for quantum scatt. with group symm. 7−115833
geometry, new quantum numbers calc. 7−115841
Heisenberg relation, entropic formulation in scatt. theory 7−80487
inhomogeneous layer, scatt. of wave packets, inverse problem 7−120839
inverse scattering intertwinning methods study 7−102194
inverse scattering problem in 3D, characterisation of scatt. data 7−120844
large dimension expansion, nonperturbative approach 7−121762
low-energy scattering theory for Coulomb plus long-range potentials 7−81351
low-frequency approx., pot. and electron-atom scatt. appl. 7−136065
1/fnoise, Handel's quantum theory objections 7−128351
non-Euclidean wave eqn. on a hyperbolic manifold, scatt. theory 7−140498
nondiffractive quantum many-particle scatt., Bethe Ansatz, generalised Yang-Baxter eqns. 7−108266
nonlocal interaction, nonsymmetric, equivalent potentials 7−81353
nonrelativistic scattering theory, global and Eisenbud-Wigner time delay 7−108276
nonspherical-symmetric inverse scattering problem in spheroidal coordinates 7−73739
off-shell extension function, configuration-space study, Reid soft core pot. 7−141031
one-body and many-body Coulomb scatt., charged particle emission and detection sources 7−67052
optical potential scatt., separable expansion method soln. 7−115819
parity dependent potential, scattering semi-classical treatment 7−67067
particle ensemble incident on ID finite-range potential, statistical parameters, pure states 7−108288
particle ensemble incident on ID finite-range potential, statistical parameters, localized states 7−108289
particle motion, in Coulomb field 7−80499
particle motion in Coulomb plus Aharonov-Bohm potential 7−140537
particle scattering by long-range mag. fields 7−108267

potential scattering continued
particle-matter interactions, generalisation of Levinson's theorem 7−89024
quantum mechanical Coulomb scattering, classical limit 7−80484
quantum mechanical scattering, computer simulation *(Korean)* 7−80491
quantum mechanical scattering, mathematical theory review 7−140485
quantum mechanical time evolution for Coulomb potentials 7−80461
quantum scattering calcs. 7−102196
resonances, localisation, appl. to model pots. 7−102195
resonant potential scattering in an intense low-frequency laser field 7−120856
Schrodinger equation, integral form, solution in momentum space 7−117040
Schrodinger equation, scatter matrix for short range and Coulomb potentials 7−80489
Schrodinger equation, scattering solution, Monte Carlo method calcs. 7−102210
Schrodinger equation explicit scattering solutions for one-dimens. 7−95401
Schrodinger operator, location of resonances in semiclassical limit, resonance free domains 7−128332
Schrodinger operator with Coulomb pot., zeroth-order trace formula in 3D space 7−134577
Schrodinger operators, total scatt. cross-sections, semi-classical estimates for resolvents 7−128312
Schwarzschild black hole normal modes, WKB approach, pot., scatt. 7−102250
singularities of classical potential scattering, Cantor set struct., deflection fn., unstable periodic orbits. 7−140555
three-body scattering near thresholds 7−128355
transmission coefficient for waves and particles through long random barriers 7−102217
two-body theory, scatt. operator and on-shell amplitude calcs. 7−128373
two-centre phase shifts, modified JWKB method 7−67070
wave packets, transmission and reflection times for scatt. off tunnelling barriers 7−89008
(p,p'), optical potential scatt., Schrodinger eqn. soln. using enhanced Numerov algorithm 7−140496
InP, heavily doped, electron mobility due to potential fluctuation scatt. 7−137941

potentials (bioelectric) *see bioelectric potentials*

potentials (electric) *see electric potential*

potentiometers
see also voltage measurement
AC measuring techniques for applications in precision resistance thermometry *(German)* 7−73347
Seebeck coeff. determ. of thermoelectric materials 7−80813

Potts model *see lattice theory and statistics*

powder cores
$Fe_{78}B_{13}Si_9$ glassy metal powder cores, mag. props. 7−85365
$Fe_{78}B_{16}Si_5C$, composite amorphous powder cores, prep. and mag. props. 7−132081
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7−132081

powder metallurgy
aerosol particles prep. and props., review 7−92911
amorphous metal alloy powders, chemically produced precursors 7−113473
amorphous powder, mechanically alloyed, form. and consolidation 7−113474
bronze-ferrochrome composite, comp. and prod. conditions effect on mech. and tribotech. props. 7−78267
components, electroimpact compaction 7−113469
components, porosity inspection using laser beams 7−71453
developed by powder metallurgy, high temp. strength and corrosion resist. props., review 7−92927
fine metallic particulate, production by chill block casting techniques 7−113468
flame sprayed coatings on P/M materials, developments 7−119437
glass formation by mech. alloying 7−113472
hot isostatic pressing, modelling, new formulation using random variables 7−144324
Inconel 718 powder, dynamically-compacted, heat-treatment response 7−86208
Inconel MA 6000 powder, dispersion strengthened Ni-base superalloy, charactn. 7−100154
infiltration kinetics of capillary-porous solids by melts, investig. method 7−77859
intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7−126170
macrodislocational mechanism of deformation of regular powder structures 7−77860
metallic glass, comminution mechanisms of amorphous alloys, effects on mag. charcts. 7−77873
metallic porous systems, microstruct. form. rel. to pressing and sintering conditions 7−71112
molten metal atomisation using Coanda effect nozzles 7−113470
particle size assessment with allowance for particle shape 7−77858
powder bonding under thermoplastic deform. 7−144325
rapid solidification, process technology for new materials and products 7−77885
rapid solidification technology, development scope and trends 7−77862
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
rapidly solidified alloys, conf., Boston, MA, USA (Dec. 1986) 7−108040
refractory metals, activated sintering using Pt group metal activators 7−132522
sintered powder materials, form. and densification 7−138703
sintering of metal powders, motive force and kinetics of diffusion processes *(Russian)* 7−92916
spherical metal powder production by rotating electrode process 7−126046
steel, austenitic stainless, sintered composites, props. rel. to Y_2O_3 addition 7−113683
steel, C, high-strength, with hereditary fine cryst. struct., vibrogrinding effect on Fe powder struct. parameters 7−77876
steel, carbon, high-strength, powder particle struct. defectiveness effect on graphite dissolving during sintering 7−119199
steel, Fe-G type, sintered, infiltration kinetics by Cu-Fe melts 7−77859
steel, hard facing, thermal sprayed powder coatings, adhesion, hardness, wear resist. 7−106702

powder metallurgy continued
steel, high speed, effects of Al, Ti and Si on struct. and hardness props. 7—126228
steel, high speed, fatigue rel. to powder metallurgy 7—126233
steel, high-speed, P/M, elasticity modulus temp. depend., rel. to struct. 7—126160
steel, maraging, 18% Ni, consolidated by hot isostatic pressing, microstruct. and mech. props. 7—144341
steel, melt extracted fibres and particulate, prod., props., and appls. 7—92934
steel, normalised, powder metallurgy, fatigue behaviour, effect of hot repressing 7—144549
steel, powdered, C introduction method effect on mech. props. 7—77875
steel, rapidly solidified particulate, sintering, consolidation and struct. studies 7—92917
steel, stainless, duplex, sintered, mech. props. rel. to Si addition and σ phase precip. 7—126198
steel, stainless and heat resist., hot isostatic pressing and powder metallurgy production technology 7—119193
steel, tool, high speed, T6, directly sintered and wrought, strength, toughness and stiffness 7—100358
steel, tool, joining by cold sintering, heat treatment, transverse rapture strength, hardness, grain growth 7—126403
steels, sintered, secondary porosity and its effect on product quality and consistency 7—144340
stellites, wear resistant, development by liq. phase sintering 7—92920
superalloys, dispersion-stabilised, alternative approaches to processing 7—86084
superalloys, hot isostatic pressing and powder metallurgy production technology 7—119193
technology at Krupp 7—77883
thermal spray powders, retesting schemes 7—77800
Al alloys, high-strength, powder metallurgy, SCC behaviour 7—71379
Al powder, segregation free, prod. by US gas atomisation 7—92925
Al powder, sintering characts., effects of oxidation 7—144339
Al powder particles, thinning for TEM obs. 7—78409
Al, solidification, undercooling 7—126095
Al-Cu alloy powder rapidly solidified by rotating water atomisation, hot extrusion and struct. study 7—92928
Al-Cu powder compacts, particle size effect on vol. changes during liq. phase sintering 7—119197
Al-Cu-Li-Mg-Zr, superplastic forming, cavitation 7—86277
Al-Cu-Mg alloy, rapidly solidified, quench sensitivity 7—132528
Al-Fe alloy, heat-resistant, compact semiproducts prep. from powders obtained by rapid solidification of melt 7—77880
Al-Li-Cu-Mg-Zr alloy powders, rapidly solidified, gas-atomised solidification microstructs. 7—86150
Al-Mg-Mn alloy powder, rapidly solidified, partitionless struct. obs. 7—71164
Al-Mg-Mn alloy powders, rapidly solidified, microstruct. charactn. 7—86156
Al-Mn-Si (10, 2.5 wt.%), dispersion hardened, powder metallurgy, yield stress, fatigue props. 7—138804
Al-Pb P/M produced materials, comparative tribotech. props. 7—78264
Al-Si alloy powder rapidly solidified by rotating water atomisation, hot extrusion and struct. study 7—92928
Al-transition metal alloys, rapid solidification, microstruct. characts. 7—113537
Al-Zn-Mg, with and without SiC reinforcement, high strength, powder metallurgy, superplasticity 7—100303
AlCuMg rapidly solidified powder prodn. by optimised gas atomisation, microstruct. study 7—92930
CO_2 laser beam fused powder cladding of alloy substrate 7—113791
Co, fine powder electrodeposition from chloride solns., Na ions effect 7—77877
$Co_{70.3}F_{4.7}Si_{15}B_{10}$ amorphous alloy powders, mag. props. and dynamic compaction, cavitation method 7—92933
Cr_3C_2-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7—93110
Cu alloy, sintered precipitation hardening, prep. and characteris. 7—78038
Cu based powder composites, tribotech. characts. in high-speed friction 7—78262
Cu, powder compacts, sintering, shrinkage eqn. 7—71110
Cu powder pellet recovery, kinetics and thermodynamics 7—138707
Cu, produced by autoclave method, surface-active agents effect on props. 7—77878
Cu-Nb-Sn, amorphous alloy prep. by mech. alloying of elemental powders 7—144331
Cu-Sn powder compacts, sintering, Sn melt flow, porosity, comp. inhomogeneity 7—119201
Cu-Sn-Ti-Ni system, struct. form. mechanism in sintering, contact interaction of Ti-Ni and Cu-Sn 7—119200
Cu-Sn-ferrochromium system, vol. shrinkage accompanying sintering 7—77874
CuNb binary and Ti-alloyed superconds., fabrication by hot extrusion and high-field props. study 7—132516
Er, nanocrystalline, prep., mag. transitions, suscept. meas. 7—125478
Fe compacts, low temp. sintering *(Korean)* 7—132526
Fe, fine particles, morphology, porous texture, mag. props, haematite reduction prep. 7—77868
Fe, vibrogrinding effect on fine struct. parameters 7—77876
Fe-Al, prep., tensile and fracture props. 7—86285
Fe-B-Si and Fe-P-C systems, powders prepared by water atomisation, comp. effect on glass-forming regions 7—132527
Fe-base amorphous alloys, struct., effect of prod. conditions 7—131042
Fe-based amorphous and cryst. materials, produced by spark erosion, microstruct. and props., effect of quench rate 7—119202
Fe-CrC powder mixture, sintering, shrinkage, microstruct., hardness, bending strength, impact toughness, comp. depend. 7—106620
Fe-Cu (8 wt.%) powders, sponge cementation, sintering, microstruct., SEM obs. 7—132529
Fe-Fe_2Ti system, transient liq. phase sintering, strength, elongation 7—77864
Fe-Mo-B, sintering and mech. props. 7—92919
Fe-Zr glasses, mechanically alloyed, Mossbauer effect 7—132172
$Fe_{79}B_{16}Si_5$, amorphous alloy, shock consolidated powder, mag. props. rel. to compression rate 7—112855
$Fe_{78}B_{16}Si_5C$, composite amorphous powder cores, prep. and mag. props. 7—132081
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7—132081

powder metallurgy continued
α-Fe_2O_3 particles, reduction to ultrafine Fe particles for mag. meas. 7—125480
Ge-Si, composite powders, mechanical alloying; SEM and X-ray obs. 7—77882
Mg-base alloys, rapid solidification, current status 7—126090
Mo alloys, powder metallurgically produced, high-temperature creep 7—93053
Mo-Ni, liq. phase sintering, liq-grain mixture flow and isolated pore elimination during early stages *(Korean)* 7—138705
Nb-Ge (25 at.%), mechanical alloying, microstruct. evolution 7—132530
Nb(Al,Ge), laser and electron beam processing of superconductors 7—131175
Nb_3Al, laser and electron beam processing of superconductors 7—131175
Nb_3Al wires, powder metallurgy processed, supercond. props. 7—131936
$Nb_3Al_{1-x}Ge_x$ composite tape fabrication by laser irrad. powder metallurgy process, supercond. props. study 7—132514
Nb_3Ga, laser and electron beam processing of superconductors 7—131175
Nb_3Sn binary and Ti-alloyed superconds., fabrication by hot extrusion and high-field props. study 7—132516
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7—131973
Nb_3Sn powder, prep., supercond. critical temp. 7—106462
Nb_3Sn-Ta_3Sn multifilamentary wires powder metallurgy 7—131880
Nb_3Sn(Ti) superconductor for 21 Tesla fields, powder metallurgy 7—131955
Nd-Fe-B magnets, sintered, hardness and thermal expansion, temp. depend. *(Chinese)* 7—132702
Nd-Fe-B magnets, texture, anal. on basis of easy growth axis determ. of $Nd_2Fe_{14}B$ single crystals 7—132078
$Nd_2Fe_{14}B$, permanent magnet production, hydrogen decrepitation process 7—92914
Ni powder, prep. from basic salt precursors 7—106463
Ni, ultrafine powders, sintering, elastic modulus, elec. resist., contact phenomena 7—71111
Ni-Al, amorphous alloy formation under shock-wave loading 7—77856
Ni-base superalloy compacts, coarse-grained, modelling of plastic flow under isothermal forging 7—113609
Ni-Co-Cr, powder metallurgy, hot extrusion, stable struct. form., superductility 7—126049
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7—71250
Ni-Cr powders, plasma spheroidisation and cladding 7—144330
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7—77799
Ni-Pd-P amorphous particles, prep. by melt ejection into stirred water, hardness and thermal stability 7—86086
Ni-Si-B alloy, amorphous ribbon and powder compaction, densification and bonding 7—92932
Ni-Ti mechanically alloyed amorphous powder, thin foil prep. and TEM obs. of amorphisation 7—144332
Ni-Zr, powder, amorphization by mechanical alloying, X-ray, SEM, microprobe compositional anal. 7—106461
Ni-Zr amorphous alloys, synthesis by mechanic alloying of $Ni_{11}Zr_9$/$NiZr_2$ mixtures 7—97923
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7—126110
Ni_3Al-B, polycryst., high cycle fatigue 7—119360
Ni_xNb_{x-1}, amorphisation by mechanical alloying 7—124102
SiC whisker reinforced ZrO_2-toughened ceramics, fabrication and mech props. 7—78240
SiC whisker reinforced Si_2N_4, fabrication and props. 7—78241
$Sm_2(Co, Fe, Cu, Zr)_{17}$, permanent magnet production, hydrogen decrepitation process 7—92914
$SmCo_5$, permanent magnet production, hydrogen decrepitation process 7—92914
$SmCo_5$ powder magnet, mag. struct. and texture state influence 7—77381
Ti, sponge, energy characts. of dynamic densification 7—77879
Ti-Al-V alloy, for porous-coated implant devices, post-sintering treatment effect on mech. props. 7—86254
Ti-Al-V-Sn, rapidly solidified, consolidation by hot pressing 7—86083
Ti-base alloys, rapid solidification, current status 7—126090
Ti-Ni composite powders, state of sintering by eutectic reaction *(Japanese)* 7—138706
Ti-transition metal alloys, mechanically alloyed, glass form. 7—142643
Ti-Y-Y_2O_3, oxide-dispersion hardened alloys, prep. by rotating electrode process 7—77869
TiAl, rapidly solidified, microstruct. development 7—86158
TiC-steel-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7—93110
TiNi, powdered, inert additions effect on superelastic behavior 7—119196
W powder, carburisation kinetics, diffusion model 7—132544
W powder, particle size rel. to oxide phase precursor 7—132523
W-Cu, infiltration of liq. in sintered W 7—92921
W-Cu finely divided mixture, kinetic of densification and growth of refractory phase grain in sintering 7—119198
W-Cu powder mixtures, liq. phase sintering, densification localisation, structural inhomogeneity 7—106464
W-Cu pseudoalloy, sintered, failure features rel. to processing conditions 7—78208
W-Mo powder compacts, green strength of interface, Re addition effect 7—78108
W-Ni, sintering, liq. phase and solid-state, influence of dislocation density 7—92922
W-Ni powder compact, sinterability rel. to Ni chemical state 7—100156
W-Ni powder compact, sintering, microstruct., densification mechanism 7—144342
W-Ni-Fe, sintered materials, liq. phase, microstructure, image anal. *(French)* 7—119190
W-Re alloys prep. by powder metallurgy, Re distrib. 7—86177
WC powders, microstruct. study 7—100155
WC powders, microstruct., X-ray diffr. and SEM study *(Chinese)* 7—132532
WC-Co, sintering, grain growth rel. to inhomogeneous milling 7—71136
WC-Co cemented alloys with B as sintering additive 7—132554

powder sprayed coatings
100 kV electrostatic power supplies for paint and powder coating technique 7—86394
flame sprayed coatings on P/M materials, developments 7—119437
plasma deposition, powder distrib. in plasma jet *(French)* 7—86018

powder sprayed coatings continued
plasma powder coatings, adhesion and gas permeability, effect of modulation of plasma arc. 7−125965
steel, hard facing, thermal sprayed powder coatings, adhesion, hardness, wear resist. 7−106702
$Fe_{40}Ni_{40}P_{14}B_6$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7−92929
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7−77799
$Ni_{75}Si_8B_{17}$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7−92929
TiC coating, plasma spraying, density, deposition efficiency, particle size distrib. 7−138651
Y-Ba-Cu-O, supercond. coatings, plasma sprayed, transition temp. above 77 K 7−112565
Y-Ba-Cu-O high T_c supercond. plasma powder sprayed coating props. 7−119133
Y-Ba-Cu-O high T_c supercond. large area plasma spray deposited thick films props. 7−119134
ZrO_2, stabilised coatings, supersonic plasma spraying, morphology, computer aided analysis 7−77797

powder spraying
detonation spraying of protective coatings, review 7−144270
flame sprayed coatings on P/M materials, developments 7−119437
plasma deposition, powder distrib. in plasma jet *(French)* 7−86018
steel, powdered, C introduction method effect on mech. props. 7−77875
supercritical solns., rapid expansion, powders and film production 7−106402
thermal spray powders, retesting schemes 7−77800
Al-Cu-Mg alloy, rapidly solidified, quench sensitivity 7−132528
$BaPb_{1-x}Bi_xO_3$, ultrafine powders prepared by spray-ICP technique 7−106460
Fe-B-Si and Fe-P-C systems, powders prepared by water atomisation, comp. effect on glass-forming regions 7−132527
TiC coating, plasma spraying, density, deposition efficiency, particle size distrib. 7−138651
$YBa_2Cu_3O_x$ plasma and hypersonic flame powder spraying prep. and props. 7−119132
ZrO_2, stabilised coatings, supersonic plasma spraying, morphology, computer aided analysis 7−77797

powder techniques *see powder technology*

powder technology
see also densification; hot pressing; powder metallurgy; powder spraying; sintering
autohesion and limiting shear resistance rel. to temp., particle size and press. 7−77861
binary rare earth fluoride oxides, prep., comp., struct., and elec. cond. study 7−84387
β-$Ca_3(PO_4)_2$ bioceramics, sintering with $Na_4P_2O_7.10H_2O$, biological compatibility obs. 7−113490
ceramic, sinter powders, synthesis using high temp. plasma reactors *(German)* 7−138712
ceramic superconducting powder prep. by freeze-drying 7−119184
ceramic superconductors, powder processing for microstructural control 7−119183
ceramics, crystalline, single phase, structural superplasticity 7−132668
ceramics, green body strength theory 7−86308
ceramics, N, coarsening and densification kinetics during heat treatment 7−138718
ceramics, N, prep. and densification from oxides 7−138724
ceramics, N-containing, high temp. props., influence of secondary phases *(French)* 7−71259
ceramics, non-oxide, conf., Limerick, Ireland (Jul. 1985) 7−134361
ceramics, plasma processing appl., review *(Japanese)* 7−113503
ceramics processing, organic dispersants 7−86101
compacts, unequal sized particles, hot isostatic pressing, densification mechanism maps 7−71105
diamond formation from natural graphite, pretreatment and solvent-catalyst 7−84126
diamond powder, dynamic consolidation into polycrystalline diamond 7−126042
EHD atomisation for fine powder production 7−86073
ferrites, structure form. and gas evolution in vac. liq. phase sintering 7−106476
flow, discrete particle-wall interactions 7−91036
fluidised bed granulation, batch and continuous, kinetics and mechanism 7−91209
glass powder, solidification by hydrothermal hot-pressing technique 7−71172
high-power US appl. using multiple transducers and vibr. systems 7−123383
hot isostatic pressing technology, review 7−92905
laser synthesis of ultrafine powders 7−132533
metallo-organic compounds, synthesis, for production of metal oxide powders and films 7−71106
mixing rate instrumentation system *(Japanese)* 7−113465
montmorillonite pressed pellets, prep. depend. props. rel. to optical consts. meas. in FIR 7−92627
mullite-zirconia composites, obtained by reaction sintering, microstruct. development 7−86117
mullite-zirconia composites and mullite, prep. and mech. props. 7−86118
optical fibre manufacture for LAN, powder process use *(German)* 7−142050
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
particle size assessment with allowance for particle shape 7−77858
$PbTiO_3$ powder prep. for flexible 0-3 piezoelec. composite 7−100166
Permalloy-Fe_3O_4 composite, hydrothermal reaction sintering *(Japanese)* 7−71137
plasma powder coatings, adhesion and gas permeability, effect of modulation of plasma arc. 7−125965
powder coatings, wear resistance rel. to electrocontact bonding temp. 7−71309
rapid solidification technology, development scope and trends 7−77862
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
refractory carbide powders, plasma metallising 7−126043
refractory metal nitrides, combustion synthesis theoretical analysis 7−71115
powder technology continued
seed particle growth by silane pyrolysis, runaway nucleation in aerosol reactors 7−71047
sialon and syalon powders, prod., props. and appls. 7−138722
sialon ceramics, prep., reaction sequences 7−138723
sialon ceramics, prep. from low-cost raw materials 7−138725
α'-β'-sialon composites, form., reaction mechanisms 7−77918
β'-sialon powders, derived from aluminosilicate minerals, densification behaviour 7−138726
sialons, α' and β', form. and prep., role of Nd_2O_3 as additive 7−77897
sialons, α- and β-phase, sintering, effect of N_2 gas press. *(Japanese)* 7−126065
sialons, materials development study 7−138717
α'-sialons, Y, prep. and charactn. 7−126076
spark erosion for rapidly quenched fine powder production 7−100152
tablet compaction, computer-aided anal. and design 7−92907
transition metal carbides, powder spheroidisation in low temp. plasma 7−86102
transition metal nitrides, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7−71120
two-phase refractory powder mixtures, densification behaviour during sintering 7−77926
whisker reinforced ceramics, processing methods 7−77921
zirconia-mullite composites, reaction sintered with MgO and CaO additions, TEM study 7−132556
ZrO_2-CaO system with tetragonal ZrO_2 polycrystals 7−132513
Ag_2HgI_4, elec. cond., α-β transition, prep. technique effect 7−105114
AlN powders, prep. by N plasma-molten Al reaction *(Japanese)* 7−113507
AlN, synthesis by nitridation of floating Al particles in N_2 gas *(Japanese)* 7−126072
Al_2O_3 ceramic, crack resistance rel. to struct. development 7−113704
Al_2O_3 ceramics, prep. from high purity powders, mech. props. 7−86099
Al_2O_3 compact prep. by sol-gel processing, drying and sintering 7−113496
Al_2O_3, high purity, powder processing, CO_2 laser heating 7−71130
Al_2O_3, hydrated, synthesis by homogeneous precip. method *(Japanese)* 7−132551
Al_2O_3, liquid phase sintering, densification rel. to additives 7−126059
Al_2O_3 powder, hot pressing, annealing, struct., density, porosity 7−86108
Al_2O_3 powder, transition, ultrafine spherical particles, high temp. characts. 7−132541
Al_2O_3 powder compacts, densification, effect of sintering temp. 7−100161
α-Al_2O_3 powder compacts, sintering, pore struct. agglomerates effect 7−132535
γ-Al_2O_3, prep. of ultrafine spherical particles by burning of Al powder 7−126069
Al_2O_3, sintering, plastic flow, TEM obs. 7−77899
β/β''-Al_2O_3-K_2O-Na_2O polycrysts. synthesis, sintering and spray drying 7−144351
Al_2O_3-SnO_2 composite plasma-synthesized powders 7−113510
Al_2O_3-ZrC composites, pressure sintered, mech. props. 7−86119
Al_2O_3-ZrO_2 composite ceramic, prep. by polymer soln. precip. 7−86113
Al_2O_3-ZrO_2 powder, characts. rel. to synthesis chemistry 7−106474
ArF_4, high purity powders, CVD synthesis *(Japanese)* 7−113509
B powders, laser induced vapour phase synthesis 7−71116
BN powders, cubic, shock compaction, grain size, microhardness, density 7−86107
B_2O_3-SiO_2, monodisperse particle processing 7−106470
BaB_6-LaB_6 solid soln. based thick films, powder dispersion effect on electrophys. props. 7−77927
$BaFe_{12}O_{19}$, ferrite, prep. by liq. mix technique, charactn. 7−86111
$BaFe_{12}O_{19}$ ferrite powder magnets, struct. form. in variable and const. fields 7−132540
$BaFe_{12}O_{19}$, isotropic, microstruct. improvement using colloidal filtration route 7−71117
$BaTiO_3$ ceramics, (111) twin form. 7−142791
$BaTiO_3$ ceramics, synthesis by alkoxide method, comparison of $Ba(OH)_2$, BaO and Ba as starting materials 7−100163
$BaTiO_3$ commercial powder, centrifugation and fast firing 7−100167
$BaTiO_3$, high purity, microstruct. and props., effects of prep. and stoichiometry 7−125590
$BaTiO_3$, prep. by decomposition of metallo-organic compounds 7−71106
$Ba_2YCu_3O_{7-x}$, high T_c supercond., processing-property relations 7−119213
$Ba_2YCu_3O_{9-\delta}$ high T_c supercond., ceramic processing methods 7−119205
$BaZnGeO_4$, powder calcination, phase transitions, DTA, dielec. meas., X-ray diffr., SEM obs. 7−126107
Bi molybdates, synthesis, electrophysical props. 7−99135
$Ca_4Fe_2Ti_2O_{11}$, perovskite-type cpd., synthesis, charactn. by X-ray diffr., electron microscopy 7−111483
$CaTiO_3$ powders, prep. by hydrothermal method, props. of sintered ceramics 7−77857
$Cd_{1-x}Mn_xTe_x$, polycrystalline powder, stress effect of grinding 7−106458
Co_2O_3, Al_2O_3 coated composite powders, synthesis by homogeneous precip. method *(Japanese)* 7−132551
CrO_2 particles for magnetic recording, improved prep. method 7−86105
$CrSi_2$:Fe powder, slip casting, sintering, thermoelec. props. *(Japanese)* 7−77902
Cu-O based high T_c superconductors, practical preparation methods 7−143729
γ-Fe_2O_3 powder, starting faults in spinel struct., anomalous X-ray line broadening 7−111585
Fe_2O_3-Y_2O_3 system, alkoxy derived oxide phases 7−77904
Gd_2O_3, sintering behaviour, effect of CeO_2 additions 7−92945
K_2O-FE_2O_3 ferrite, powder prep., ionic cond. 7−138710
$KTa_{1-x}Nb_xO_3$ ceramic discs, prep. by sol-gel processing and hot pressing 7−100170
$KTa_{1-x}Nb_xO_3$ powders, prep. by sol-gel technique from metal alkoxides 7−100169
$La_3Ba_3Cu_6O_{14+x}$, $LaSrCu_2O_{6+x}$ and $La_{2-x}Sr_xCuO_{4-x/2+y}$, mixed-valence capacitor electrodes, co-sintering with $BaTiO_3$ and dielec. props. 7−99773
$La_2Sn_2O_7$ powder, synthesis from amorphous complex colloid 7−132545
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ceramic processing methods 7−119205
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., shock-induced chemical synthesis 7−119220
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high T_c supercond., O role in prep. 7−132539
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7−100160

powder technology continued
γ_{II}-$Li_{3.4}Si_{0.4}V_{0.6}O_4$, sintering, ionic cond. *(Japanese)* 7—132548
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., charact. 7—132546
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., sintering, struct., mech. props. 7—132547
MgF_2, grain growth enhancement of bend strength on hot pressing 7—113624
MgO compacts, creep-sintering, microstruct. 7—113482
MgO, obtained from sea water, sintering, effects of additives 7—138714
MgO powder, comminution, dissolution in HCl rel. to dislocation density 7—111898
MnZn ferrite power, molten salt synthesis, EM shielding appls. 7—77900
$Mn_{1-x}Zn_xFe_xO_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7—77912
MoS_2, consolidation by hot isostatic pressing 7—113493
Nb-Al superconductors, Nb_3Al phase form. by powder process, critical current density 7—131960
NbN-AlN system, sintered composites, elec. cond. rel. to dispersion of initial components 7—77928
$Nd_{15}Fe_{77}B_8$ powder, prep. by mechanical alloying and solid-state reaction, mag. props. 7—113466
Ni-Zn ferrites with additives, for magnetic heads use 7—132538
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7—144350
NiO powder, prep., grain boundary diffusion 7—106471
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ based dielec. ceramics, sintered, microstruct. inhomogeneity 7—92941
$PbMo_6S_8$ cold powder metallurgy processed superconducting wires with Nb sheaths 7—113467
$PbTiO_3$ powder, coprecipitated, piezoelec. composite prep. 7—92936
$PbTiO_3$, prep. by decomposition of metallo-organic compounds 7—71106
$PbZrO_3TiO_3$-polymer, fired 0-3 composites, prep. and piezoelectric props. 7—126077
Si powder, ultra-fine, prod. by arc plasma method 7—106472
Si reinforced Si_3N_4; whisker or particle, fracture toughness and strength 7—78150
Si-C-O-N, oxynitride ceramics, dense, low cost, microstruct. 7—77894
β-SiC, Al_2O_3 and C additions effect on phase transform, during sintering 7—132542
SiC, for elec. heater prod., elec. resist. control method 7—86115
SiC, hot pressed, fracture toughness rel. to grain boundary oxidation 7—144518
SiC powder, form. by laser heated vapour phase reactions 7—113506
β-SiC powder, mechanochem. effect on sintering behaviour *(Japanese)* 7—92946
SiC powders, hot isostatic pressing sintering without additives *(Japanese)* 7—126063
SiC powders, prep. by RF plasma *(Japanese)* 7—119222
β-SiC powders, solid combustion synthesis 7—144328
SiC powders, ultrafine, prep. by pyrolysis of tetramethyldisilane *(Japanese)* 7—119226
SiC, pressureless sintering mechanism 7—86114
SiC whisker reinforced Al_2O_3, sintered, fabrication 7—77916
SiC whisker reinforced Si_3N_4 and Al_2O_3 ceramic matrix composites, struct. rel. to processing 7—77922
SiC whisker reinforced Al_2O_3, processing and creep performance 7—78099
SiC-Si_3N_4 system, composite particles prep. by vapour reaction method *(Japanese)* 7—113504
Si_3N_4 based materials, hot compaction, elastic props. rel. to porosity 7—106561
Si_3N_4 ceramics, sintered with MgO/Nd_2O_3 mixed additions, microstruct. development 7—138720
Si_3N_4, explosively shocked compacts, effect of shock press. *(Japanese)* 7—138715
Si_3N_4 powder, dynamic compaction, density, microhardness 7—86106
Si_3N_4 powder, plasma arc synthesis, hardness struct., fracture toughness *(Japanese)* 7—113505
Si_3N_4 powder, sinterability, rel. to BeO addition, microstruct. *(Japanese)* 7—71119
Si_3N_4 powder compacts. microstruct. development and characts. rel. to mech. props. 7—138721
Si_3N_4 powders, fabricated by different processing conditions, influence of impurities on high temp. props. of sintered material 7—77898
Si_3N_4 powders, hot isostatic pressing sintering without additives *(Japanese)* 7—126064
Si_3N_4 powders, oxidised without additives, very high press. hot pressing *(Japanese)* 7—126066
Si_3N_4 powders, prep. by RF plasma *(Japanese)* 7—119222
Si_3N_4 powders, prep. from SiO_2, effects of NH_3 and NaF *(Japanese)* 7—126073
Si_3N_4 powders, prep. methods 7—77913
Si_3N_4 powders, vapour phase reaction prep., crystallisation, hot pressing, mech. props. *(Japanese)* 7—113508
Si_3N_4 powders sinterability and charactn. of sintered material 7—138719
Si_3N_4, prep. by reaction sintering of submicrometer Si powder 7—92942
Si_3N_4, pressureless sintered with magnesia-neodymia additions, densification and transform. kinetics 7—77896
Si_3N_4, reaction bonded, processing 7—71129
Si_3N_4, sinterability in hot isostatic pressing without additives, influence of O content *(Japanese)* 7—71125
Si_3N_4, sintered, α to β transform., flexural strength, density *(Japanese)* 7—132694
Si_3N_4, sintered under gas press., LF Raman spectra, lattice modes, long-range order 7—113179
Si_3N_4-Al cermet, prep. and densification 7—77919
Si_3N_4-based ceramics, sintering and props. 7—138727
Si_3N_4-Y_2O_3, reaction-bonded with yttria sintering aid, grain boundary phases 7—119217
SiO_2 fine powders, prep. from polysilicic acid esters *(Japanese)* 7—71124
SiO_2-Fe_2O_3 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7—71126
SiO_2-ZrO_2 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7—71126
$SrTiO_3$, large cryst.-sized powder, molten salt synthesis 7—113483
$SrTiO_3$ ultrafine powders, hydrothermal preparation and catalysis of water photolysis 7—106459
Ta_2WO_8, $Ta_{30}W_2O_{81}$, polycryst. ceramic prep., low thermal expansion 7—143057
TiB_2 particle reinforced SiC, hot-pressed, mech. props. and oxidation behaviour 7—78147
TiB_2 particle reinforced SiC, microstruct. and material props. 7—78148

powder technology continued
TiB_2 powders, laser induced vapour phase synthesis 7—71116
TiB_2-TaB_2-CoB hot pressed bodies from fine powders, transverse rupture strength *(Japanese)* 7—93099
TiC produced by melting of TiO_2+C charge, microstruct. and strength 7—77911
TiC-TiB_2 two-phase powder mixtures, densification behaviour during sintering 7—77926
TiN, high-temp. synthesis from nitriding of Ti and TiH_x powders, struct. of particles 7—119221
TiO_2 ceramics, synthesis from isopropoxide, laser-driven pyrolysis 7—100164
TiO_2 particles, prep. by wire exploding method *(Japanese)* 7—126071
TiO_2 powder form. by hydrothermal oxidation 7—126061
$(UCe)O_2$ pellets, sol-gel microsphere pelletization process, porosity, density microstruct. 7—77906
W-B system, form. of borides by solid state reaction between W and B powders 7—144349
WB, synthesis and reaction sintering *(Japanese)* 7—126068
(WC-Co)-SiC composite, densification kinetics in hot pressing 7—77925
Y-Ba-Cu-O ceramics, high T_c supercond., processing study 7—119211
Y-Ba-Cu-O high T_c supercond. ceramic wire prod., powder-in-tube process and props. 7—119208
Y-Ba-Cu-O high temp supercond., metal composite monoliths, shock-compression fabrication 7—126057
YAG ceramics, mech. props. rel. to process parameters 7—86100
YAG ceramics, prep., microstruct., mech. and optical props. 7—138713
YAG:Ce phosphor powders, prep. 7—71102
$Y_{1.2}Ba_{0.8}CuO_{4-y}$, high T_c supercond., O role in prep. 7—132539
ZnO powder form. by hydrothermal oxidation 7—126061
ZrO_2, MgO partially stabilised, gel-derived, phase transforms. 7—77996
ZrO_2, MgO partially stabilised, milling, cast microstruct., sinterability 7—100158
ZrO_2 powders, monodisperse fine particles, processing, thermal analysis 7—132536
ZrO_2, tetragonal polycrysts., Y_2O_3-containing, prep. and props. 7—86097
ZrO_2, ultrafine powder synthesis 7—113494
ZrO_2, Y_2O_3, tetragonal polycrystalline powders, sinterability 7—144344
ZrO_2, Y_2O_3 partially stabilised, sintered and hot-pressed, mech. props. and microstruct. 7—106469
ZrO_2, Y_2O_3 partially stabilized powders, effect of spray pyrolysis conditions *(Japanese)* 7—119227
ZrO_2, Y_2O_3 stabilised ultrafine powders, crystallinity, surface texture rel. to prep. and thermal treatment 7—76564
ZrO_2-Y_2O_3 stabilised, prep. from freeze-dried coprecipitated hydroxides, mech. props. and crit. grain size 7—92939
ZrO_2(-CaO), sintering with calcia in very low O_2 partial press. 7—86110

powders
see also densification; granular structure; particle size; powder sprayed coatings; powder spraying; sintering
Al_2O_3-TiO_2, sintering, effects of excess on microstructure and props. of Al_2TiO_5 7—71131
antifriction powder materials, tribotechnical props. determ., standard method 7—106732
autohesion and limiting shear resistance rel. to temp., particle size and press. 7—77861
brittle materials temp. rise in rotating friction mill 7—144559
ceramic powders, morphology 7—92906
composite powders, densification behaviour, constrained network model 7—71103
contact surface area, rel. to interaction of mixtures 7—86074
CrO_2 tape particles, switching field distrib., rel. to time depend. magnetisation 7—85376
diamond powder particle nucleation in RF methane plasma, struct. 7—98009
disordered semicond. system, polycryst. powders and film, elec. cond., grain barrier effects under particle adsorpt. 7—105567
ferrites, long-term memory, mag. field, temp. and annealing effects 7—112921
film and powder synthesis, Mossbauer and IR spectra charactn. 7—118999
grain-size analysis for a conducting powder in a planar capacitor 7—121057
loosely compacted powder, flow characts., variable relative humidity, bulk density determ. 7—92908
macrodislocational mechanism of deformation of regular powder structures 7—77860
metal powders, porous, explosive-driven mag. flux cumulation by shock-wave propagation 7—115979
mullite-zirconia ceramics, slip casting 7—86098
particle size assessment with allowance for particle shape 7—77858
particulate technology, conf., Manchester, England, (April 1987) 7—88727
piezoelectric powders, investig. using polarisation echo method, review 7—123297
plane strain, friction bonds model of shear 7—92909
porous powder materials,. deform. anisotropy, of mech. props. in uniaxial compression 7—106585
randomly packed, X-ray intensity microabsorption 7—91391
rare earth-Ba-Cu-O high T_c supercond. powder fabrication and critical temp. determ. 7—118624
reflectance spectra of terrestrial, lunar and meteoritic powders and frosts, 92 to 1800 nm 7—87615
semiconductors, energy band gap, photoacoustic determ. 7—84677
sintered polydisperse system, dimensional effect in percolation processes 7—76864
sintering, initial stage kinetics 7—86079
sintering rate, particle size distrib. effects, comment 7—119185
sintering rate, particle size distrib. effects, reply to comment 7—119186
specific surface areas, meas. apparatus 7—121056
sprayed coatings, hot gas, form. on powder materials 7—71334
surface films and powders, Fourier transform IR spectra using metal light pipe 7—132990
surface films and powders, metal light pipe Fourier-transform IR spectroscopy theory 7—132989
X-ray phase analysis methods in systems with high microabsorpt. effects 7—111305
Al powder particles, thinning for TEM obs. 7—78409
AlN powders, prep. by N plasma-molten Al reaction *(Japanese)* 7—113507

powders continued
AlN, ultra-fine powder, hydrated surface, ^1H NMR study 7−99588
Al_2O_3, sintering, plastic flow, TEM obs. 7−77899
Al_2O_3, surface energy determ. from elasticity meas. 7−131415
ArF_4, high purity powders, CVD synthesis *(Japanese)* 7−113509
B, crystalline powders, oxidation, DTA and TGA studies 7−106720
B powders, laser induced vapour phase synthesis 7−71116
C/SiO_2-gel powder mixtures, elec. and. meas., time depend. DC resistance 7−70368
C/SiO_2-gel powder mixtures, elec. conduction meas., press. depend. 7−70369
$Cd(OH)_2$, pyrolysis, time resolved X-ray diffr. study by synchrotron radiation 7−114034
CrO_2:Fe powders, thermal stabilisation, effect on mag. and struct. props. 7−85373
Cu Ni, solid solution, small particles, radial distrib. of elements 7−91943
$DyBa_2Cu_3O_{7-x}$ high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
Fe powder, X-ray microbeam stress meas., fatigue crack tip residual stress *(Japanese)* 7−144652
Fe-C-Cr-Ni-Si rapidly quenched alloys, solidification struct. 7−144388
Fe-rare earth-B powder oxidation during permanent magnet prep., DSC study 7−132804
γ-Fe_2O_3 powder, starting faults in spinel struct., anomalous X-ray line broadening 7−111585
γ-Fe_2O_3 powders, particle perfection influence on mag. props. 7−85374
γ-Fe_2O_3 powders for mag. recording, surface props. 7−84482
α-Fe_2O_3-SnO_2 fine particles, residual surface SO_4^{2-} ions 7−104670
FeTi activated powders, H absorption, Mossbauer spectra studies 7−118272
KCl:Ca powders, γ-irradiated, Z_1 centres growth, particle size depend. 7−76209
K_2O-FE_2O_3 ferrite, powder prep., ionic cond. 7−138710
Mg-Ag-Sn(In) powders, local X-ray spectral anal. 7−126507
MgO-graphite, two-phase powder system, thermal cond. 7−69996
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
$Na_6Al_6Si_6O_{24}$-NaI powder compaction kinetics study 7−86076
Nb vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7−144280
Ni powder, prep. from basic salt precursors 7−106463
Ni ultradisperse powders, mag. props. and struct. 7−125472
Ni-Mo-Cr-B rapidly solidified alloys, wear and corrosion resist and mech. props., microstruct. effects 7−91719
Ni-Zr, amorphization by mechanical alloying, X-ray, SEM, microprobe compositional anal. 7−106461
NiAl powders, recrystallised struct., failure rel. to porosity 7−106621
$Ni_3Fe_{0.7}Nb_{0.3}$, Permalloy, K-state, annealing, struct., neutron diffr. study, elec. resist. meas. *(Russian)* 7−112295
Si, laser synthesised, processing of reaction bonded Si_3N_4 7−71129
SiC, for elec. heater prod., elec. resist. control method 7−86115
SiC powder, form. by laser heated vapour phase reactions 7−113506
α-SiC powders, plasma exposure, surface morphology 7−71335
Si_3N_4, hydrothermal oxidation 7−144571
Si_3N_4 powder, dynamic compaction, density, microhardness 7−86106
Si_3N_4 powder, plasma arc synthesis, hardness struct., fracture toughness *(Japanese)* 7−113505
Si_3N_4 powders, vapour phase reaction prep., crystallisation, hot pressing, mech. props. *(Japanese)* 7−113508
SiO_2, surface energy determ. from elasticity meas. 7−131415
TiB_2, powders, laser induced vapour phase synthesis 7−71116
TiN, high-temp. synthesis from nitriding of Ti and TiH_x powders, struct. of particles 7−119221
TiO_2, surface energy determ. from elasticity meas. 7−131415
W fine struct. parameters determ. by harmonic analysis of X-ray diffr. lines 7−78427
Y-Ba-Cu-O high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
YCo_3, electron spin resonance and magnetocrystalline anisotropy 7−99565
Y_2O_3 vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7−144280
$Zn_{1-x}Cd_xS$ phosphor powders, surface recombination mediation by Pd microislands 7−113259
ZnO-graphite, two-phase powder system, thermal cond. 7−69996
ZrO_2, surface energy determ. from elasticity meas. 7−131415
ZrO_2, Y_2O_3, tetragonal polycrystalline powders, sinterability 7−144344
ZrO_2, Y_2O_3 stabilised ultrafine powders, crystallinity, surface texture rel. to prep. and thermal treatment 7−76564

power amplifiers
US imaging, RF power amplifier and coupling ccts. design 7−68953

power cables
see also power overhead lines; superconducting cables; underground cables
cathodic corrosion protection of underground power cables, influencing possibilities *(German)* 7−113767
Jupiter-Settlement Point cable across Straits of Florida, voltages rel. to tides 7−94289
SLAC linear collider, modulator system and power supply 7−81762

power combiners (microwave) *see waveguide components*

power control
see also load regulation
laser radiated power regulation 7−121093
LWR nuclear power stations, power control *(German)* 7−109336
MR reactor, loop system with gas control of power production 7−73880
peak load auxiliary energy consumption elimination for passive solar residences 7−144908
CO_2 laser beam diagnostics and control 7−136391

power convertors
electric power supply for field apparatus, stabilizing voltage converter 7−145713
FTU power supply system, final design 7−122151
RFX power supply, protection and switching system 7−122143
series reactances, EMC of high power HV plasma arc load *(Russian)* 7−104469
Tokamak fusion reactor coil power supply with power convertors 7−89704
water-cooled magnet power source and cooling system 7−102460

power distribution networks *see distribution networks*

power dividers (waveguides) *see waveguide components*

power engineering computing *see electrical engineering computing*

power factor correction
Romanian national grid, connection of wind farms *(Romanian)* 7−114069

power factor measurement
No entries

power factor meters *see power factor measurement*

power factor Q *see Q-factor*

power generation, electric *see electric power generation*

power generators, electric *see electric generators*

power lines *see power cables*

power measurement
see also wattmeters
10 GHz band power standard, dry type calorimeter *(Japanese)* 7−67345
AK-512 black and white enamel coatings on Al substrate, emissive power investigation 7−113768
electrosurgery power output meter 7−114546
fiber optic microwave power probe 7−67349
fibre optic calorimeter/interferometer for CO_2 laser power meas. 7−110577
fibre optic microwave power sensor using GRIN multimode silica fibre 7−123223
fibre optics, power measurements, accuracy 7−68859
flow-through meter for the average power and energy of industrial laser installations 7−130141
gradient calorimeter for measuring the energy parameters of optical radiation 7−121126
interference recording of laser radiation 7−97054
laser beam, meter for relative distrib. of power density 7−130210
laser radiation, wide-aperture meas. facility, sensitivity study 7−103855
laser radiation power meas., working standard for 0.48 and 10.6 μm 7−123044
optical power measurement with integrated optical waveguide refractometer *(German)* 7−136624
solar cells characts. meas. 7−86797
spatial profiling of laser beams, 2D energy distrib. determ. 7−82662
surface EM losses meas. in superconductors, using calorimeter 7−134820
CO_2 industrial laser energy meas. using differential calorimeter 7−121125
CO_2 laser parameter meas. with pyroelectric detector 7−110428
CO_2 pulsed laser-emission at 10.6 μm, operating energy meas. standard 7−130217
Mo, vapour form. by electron beam irradiation energy deposition, electron microprobe anal. 7−76212

power networks *see distribution networks; transmission networks*

power overhead lines
see also power cables; power transmission
750 kV transmission line effects on human body 7−139307
Aeolian vibrations of overhead conductors, statistical methods 7−69032
biophysiological effects of electric fields near HV overhead lines *(French)* 7−93799
leaves, RLC parameters and aerial characts., interaction with EHV lines, radio and TV stations 7−100862
steel, natural gas pipelines, protection from corrosion dangerous voltages from overhead lines *(Danish)* 7−126294
wind direction and intensity simulation *(Croatian)* 7−93587

power overhead transmission lines *see power overhead lines*

power packs *see power supplies to apparatus*

power plants
see also magnetohydrodynamic power plants; solar power; space vehicle power plants; wind power plants
air pollution dispersion control code for power plant emission in urban areas 7−101468
American Power Conference 48th Annual Meeting, Chicago, IL, USA (April 1986) 7−115687
atomic emission spectrometry with inductively coupled plasma *(German)* 7−139073
binary-cycle geothermal power plant simulator-analyser 7−114077
BWR pressure vessel life extension 7−129359
CESA-I solar central receiver computer simulation, power plant operation 7−100755
Chernobyl nucl. power plant accident *(Hungarian)* 7−116662
Chernobyl plant comparison with Zwentendorf *(German)* 7−96280
coal gasification and electricity production, integrated gasification combined cycle plant *(Dutch)* 7−144898
coal gasification for electric utility industry 7−106919
coal phased gasification combined cycle plants 7−106920
coal quality engng. anal. to aid purchasing decisions for New York power plants 7−133026
combined cycle technology and future applications, coal gasification combined cycle 7−71630
computer integrated system for improved productivity in plant engineering 7−129159
electrochemical corrosion of carbon steel and stainless steel in flow of demineralised water 7−126322
EPRI nuclear plant life extension program overview 7−129358
French nuclear power program 7−133054
IDERS, interactive design of energy recovery systems 7−91112
nuclear, Angra 1 power plant probabilistic safety assessment, event-tree anal. 7−67955
nuclear, simulator qualification using the EPRI methodology 7−135416
nuclear and fossil power plants, flaw detection and assessment 7−129189
nuclear operations personnel computer based training 7−129268
nuclear plant feedwater treatment *(German)* 7−96245
nuclear plants, reactor vessels dosimetry *(Hungarian)* 7−109272
nuclear plants process instrumentation, micro electronic surveillance and calibration techniques 7−129267
nuclear power plant, spare parts classification and procurement program 7−129351
nuclear power plant as-built efforts, photogrammetry appl. 7−129157
nuclear power plant component decontamination by ice-blasting *(Japanese)* 7−129446
nuclear power plant life extension, sampling programs of reevaluation 7−129357
nuclear power plant operator errors during simulator training 7−74014
nuclear power plant operator training simulator, Grafenrheinfeld PWR plant 7−81473

power plants continued
nuclear power plant piping systems, seismic restraint reduction approach 7−129161
nuclear power plant simulation and reactor safety 7−122055
nuclear power plants, epoxy coating penetration by contaminants 7−129362
nuclear power plants, safety-related piping system, snubber reduction 7−129361
nuclear power plants, seismic requalification advancements 7−129363
Paks nuclear plant consistence gauges of hermetic spaces measured for overpressure *(Hungarian)* 7−109369
Paks nuclear power plant, semi-axial water cooling pumps starting, partial immersion of running wheels *(Hungarian)* 7−109337
plasma-gasified coal as fuel in turbogenerators, KATEK power system optimisation *(Russian)* 7−104466
PRISM, passively safe, economic and testable advanced power reactor 7−129155
PWR, Westinghouse, cold shutdown capability, safety-grade and fire hazards, simulation 7−122060
PWR power plant chemistry control, computer assisted data trending and problem assessment 7−129364
radioactive pollution, relative population exposures from coal-fired and nuclear power plants in India 7−119863
refuse pyrolysis for organic waste disposal and power generation at Goldshofe 7−93306
River Bend Station Unit-1, nucl. construction project, planning and scheduling 7−129158
simulation, real-time, conservation eqn. appl. 7−123729
steel heat exchanger protection by enamel against corrosion and gamma radiation 7−126323
training simulator fidelity 7−135417
utility boiler system temp. meas. by acoustic wave velocity digital signal processing 7−123410
waste stream pollution monitoring using EPRI developed study 7−133174
welded joint physical props., production technology develop. *(Russian)* 7−93048
Westinghouse plant license/life extension program 7−129356
Westinghouse PWR power plant design 7−129156
H_3PO_4 fuel cell power plant control and instrumentation systems 7−119645
SO_2/NO_x wet removal from flue gas, reverse osmosis of wash waters 7−139157

power station computer control
automated system for recording abnormal situations in an automatic power plant *(Russian)* 7−81561
BWR, advanced nuclear predictor, power distribution control 7−96241
BWR plants, NUCAMM-80 advanced control and instrumentation system 7−129259
diagnostic aid−success path monitor for complex transients 7−103132
Forsmark-3 reactor, control room design 7−96143
French 900/1300 MW nuclear plants, standardization of instrumentation and control structure 7−135523
French N4 PWRs, entirely computerised control room 7−103039
Grohnde Power Station: process computer prevents water pollution and ensures efficient operation 7−133140
KWU PWRs, provision of optimum operating information in control rooms 7−103040
Monticello nuclear power plant feedwater control, fault-tolerant digital system *(Japanese)* 7−135489
nuclear plants, safety parameter display system, critical signal validation 7−109405
Promaster computerised process control for nuclear power plants 7−116638
PWR boron conc. control by real-time expert system PMS-2 7−73938
PWRs, Japanese annunciator system for control room, accident conditions 7−135481
PWRs, Paluel, 1300 MWe, external core meas. *(French)* 7−73936
Super Phenix fast breeder plant, emergency systems training simulators 7−67906
VVER-1000 reactor, axial energy distrib. control in manoeuvring mode *(Russian)* 7−129224
Westinghouse advanced control room for nuclear plants, engineering human factors 7−103038

power station control
see also power station computer control
AGR scatter plugs, control model validation by distortion technique 7−96146
LWR nuclear power stations, power control *(German)* 7−109336
nuclear power stations, quantitative analysis of dynamic simulation models for control 7−96145
Paks (Hungary) nuclear power plant measurement and control circuits *(Hungarian)* 7−116629
Perry Nuclear Power Plant, instrumentation and control, performance improvement program 7−129261
ultrasonic flowmeter for power station boiler *(Japanese)* 7−68962
vortex amplifier characts., multivalued region elimination 7−103079
VVER 440 reactor unit control and safety protection system *(Hungarian)* 7−81579
H_3PO_4 fuel cell power plant control and instrumentation systems 7−119645

power stations
see also combined cycle power stations; energy resources; geothermal power stations; hydroelectric power stations; nuclear power stations; power plants; solar power stations; steam power stations; tidal power stations
American Power Conference 48th Annual Meeting, Chicago, IL, USA (April 1986) 7−115687
fossil power plant components, nondestructive evaluation, 1986 EPRI summary 7−132901
Riedersbach II power station, noise reduction in 160 MW block *(German)* 7−142098
thermal power station NO emission, power system scheduling method 7−71661

power supplies to apparatus
see also cells (electric); power plants; power supply circuits; prosthetic power supplies
100 kV electrostatic power supplies for paint and powder coating technique 7−86394
ASDEX Upgrade ohmic heating circuit 7−122155
ASDEX Upgrade power supply system 7−122154

power supplies to apparatus continued
COMPASS poloidal field power supply system 7−122144
conf. on fusion technology, Avignon, France, Sept. 1986 7−120706
DC thyristor switching elements for fusion experiments 7−122153
digital DC stepped voltage supply for voltammetry 7−132996
DITE/COMPASS tokamaks, power supplies 7−135594
electric power supply for field apparatus, stabilizing voltage converter 7−145713
EPR spectrometers with AFC, power supply of klystron oscillator 7−121179
FTU power supply system, final design 7−122151
high-speed superconducting foil breakers 7−121150
JET, electromagnetic system, development 7−122094
JET, high voltage grid interface, operational requirements 7−122147
JET, ICRF power plant, operation and development 7−122098
JET, magnet power supplies and plasma control systems 7−74029
JET, neutral beam injection and RF heating systems, power supplies 7−74031
JET magnet power supplies, operation, reliability, improvements 7−122149
JET neutral injection 160 kV transmission lines, snubbers, SF6 tower 7−122158
JET neutral injectors, power supply and protection system 7−122157
JET poloidal field power supplies, development to nominal flux swing capability 7−122146
JFT-2M tokamak, high-power mm-wave transmitter, power supply 7−135596
JT-60 power supply operational experience 7−122152
JT-60 tokamak power supplies 7−89710
laser power supplies, smaller, better 7−141878
LEP injection system, high tension burst pulse generator 7−74298
linear accelerator power supply using unipolar rotary pulse generator 7−81763
magnetic-discharge pump, power supply overload protection 7−121137
Marx generator for multiple beam expt. MBE4 7−74275
NET, poloidal field coil power supply 7−135592
Phobos spacecraft plasma spectrometer with solar power generator 7−145828
plasma gas heaters, power supply description *(German)* 7−137093
pulse power supplies for injection lasers 7−130177
pulsed gas lasers, compact regulated 5 kW power supply 7−123023
regulated supply for He-Ne/$^{127}I_2$ laser 7−110373
RFX power supply, protection and switching system 7−122143
See-Through Amorton, for translucent amorphous silicon solar cell 7−126601
SLAC linear collider, modulator system and power supply 7−81762
TEXTOR ACCEL power supply operation on neutral injection test stand 7−122145
TEXTOR neutral injector power supply system for ion source 7−122156
TFTR neutral ion beam source, power supply arc modulator for system protection 7−81841
TFTR power supplies, sequential control 7−122150
three-phase AC plasma technology for melting scrap and heating molten steel *(German)* 7−83552
Tokamak de Varennes, technical overview and electrical design 7−141303
Tokamak fusion reactor coil power supply with power convertors 7−89704
Tore Supra poloidal field system power supplies 7−122148
water-cooled magnet power source and cooling system 7−102460
CO_2 laser with rapid pumping rate, influence on power supply stability by discharge elec. characts. *(Russian)* 7−117230
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118
Na-S battery with ceramic electrolyte for electric vehicles *(German)* 7−139100

power supply, emergency *see emergency power supply*

power supply circuits
see also power supplies to apparatus
controller for pulse generator thyristors of betatron 7−134729
electric power supply for field apparatus, stabilizing voltage converter 7−145713
flash lamp power supplies for laser pumping 7−110371
metal halogen lamp power supply unit for photographic lighting *(Russian)* 7−108690
NET, poloidal field coil power supply 7−135592
plasma current breaker for microsecond energy input into an inductive storage bank 7−117766
slide projectors power supply *(German)* 7−95664
vacuum arcs, low-current behaviour and current chopping 7−130969

power supply industry *see electricity supply industry*

power supply systems *see power systems*

power system analysis computing
simulation, real-time, conservation eqn. appl. 7−123729
spacecraft solar array electrical and thermal behaviour, dynamic modelling approach 7−144877

power system CAD
nuclear power plant as-built efforts, photogrammetry appl. 7−129157

power system computer aided analysis *see power system analysis computing*

power system computer aided design *see power system CAD*

power system protection
see also lightning protection; overcurrent protection
RFX power supply, protection and switching system 7−122143
US east coast lightning detection network, magnetic direction finding network 7−127336
VVER 440 reactor unit control and safety protection system *(Hungarian)* 7−81579

power systems
see also distribution networks; photovoltaic power systems; transmission networks
American Power Conference 48th Annual Meeting, Chicago, IL, USA (April 1986) 7−115687
plasma-gasified coal as fuel in turbogenerators, KATEK power system optimisation *(Russian)* 7−104466
scheduling method to satisfy NO emission and power supply probability 7−71661

power transformers
15 to 200 MVA power transformers, ultrasound testing for insulation faults 7−97234

power transformers continued
cooling radiators, heat-exchange element heat transfer 7−97512
cooling system, calc. of forced directed oil-circulation rate through ducts 7−117564
Cu winding strength improvement by cold working 7−100250
power transmission
see also distribution networks; transmission networks
DITE/COMPASS tokamaks, microwave power transmission system 7−135594
Norwegian hydroelectric power development 7−126545
solar pumped laser technology options for space power transmission 7−71579
TFR tokamak, ECRH transmission system 7−135598
power transmission lines
see also power overhead lines
60 Hz elec. field exposure from electric blankets, comparison with transmission line field 7−87084
ice deposit roughness effects, droplet collection efficiency *(French)* 7−133786
JET neutral injection 160 kV transmission lines, snubbers, SF6 tower 7−122158
JFT-2M tokamak, high-power mm-wave transmitter, transmission lines 7−135596
power transmission networks *see transmission networks*
power utilisation
see also domestic appliances; drives; environmental engineering; heating; refrigeration; transportation
energy conservation and supply, economic comparison 7−78587
PPP calculations
cyclopentadienyl cations, excited states, polarisability, CI and PPP calcs. *(French)* 7−116872
metalloporphyrins, SCF perturbation calcs., oxidation and ionis. calcs. 7−103380
naphthalenes, substituted, electronic spectra, PPP calcs. 7−89968
3-phenylpyrazolo(4,3-c)pyridine and derivatives, struct., ^1H and ^{13}C NMR anal., CNDO/2 and PPP calcs. 7−109944
poly(paraphenylene vinylene), electronic struct., visible and UV spectra, INDO and PPP calcs. 7−137774
polyacetylene, Peierls-PPP-model appl. *(German)* 7−129603
polyacetylene chains, analytical energy gradients, PPP Hamiltonian 7−129912
trans-polyacetylene chains, soliton states, electron correls. effects 7−105424
polyene chains, bond-length alternation electron correl., PPP model 7−74451
polymethine dyes, asymmetric, electron density distrib., HMO, PPP and CNDO/2 calcs. 7−74452
quinones, MCD, PPP wave fns. and CNDO calcs. 7−90237
1-vinylimidazole, geometry, quantum chemical calcs. 7−109778
1-vinylpyrazole, geometry, quantum chemical calcs. 7−109778
C_{60} mol., geometrical struct. and UV spectrum, PPP CI MO calcs. 7−109780
praseodymium
see also nuclei with .....
elastic props., electronic transitions at pressures up to 84 kbar 7−131232
high pressure bandstruct. and electronic props. 7−105388
polycrystals, high-field magnetisation meas., cryst. field effect calcs. 7−118829
pressure-induced s-d transition, valence changes 7−105445
self-consistent band struct. under press 7−143330
$Ba_4Na_2Nb_{10}O_{30}:Pr^{3+}$, ferroelectric ceramics, modified, dielec. behaviour 7−85520
$BiLiF_4:Pr^{3+}$, impurity energy level scheme, polarised absorpt. and emission spectra 7−92118
$Cs_2NaYX_6:Pr^{3+}$, X=Cl, Br, $4f^2$ energy parameters, cryst. field parameters 7−70257
$KNdP_4O_{12}:Pr^{3+}$, inhomogeneous broadening and energy transfer 7−106242
K_2SO_4-$ZnSO_4$:Pr glass, spectral studies 7−70883
$LaCl_3:Er^{3+}(Pr^{3+})$, orbitally correlated crystal field parametrisation calc. 7−105497
$LaCl_3$:Pr, fluorescence line narrowing, competitive technique to EPR 7−70885
$LaF_3:Pr^{3+}$, image storage and phase conjugation for backward-stimulated echo 7−96944
$LaF_3:Pr^{3+}$, image storage and phase conjugation using backward-stimulated echoes 7−122855
$LaF_3:Pr^{3+}$ long lived conjugate optical echo 7−123116
$LiLuF_4:Pr^{3+}$ tetragonal crysts., impurity ion luminesc., absorpt. and stimulated emission props. 7−85793
$LiNH_4SO_4:Pr^{3+}$, single cryst., IR and UV spectra 7−70845
Li_2SO_4-$ZnSO_4$:Pr, glasses, spectral studies 7−70849
MgO:Pr, laser-excited luminesc. and absorpt. spectra studies 7−125764
Na_2SO_4-$ZnSO_4$:Pr, glasses, spectral studies 7−70849
$POCl_3$-$SnCl_4:Pr^{3+}$, electronic relax. of $^3P_0$ and $^1D_2$ states of Pr^{3+} 7−70875
Pr^{3+}, two-photon absorpt. amplitudes, electron correlation effects calc. 7−96562
PrO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
$SrF_2:Pr^{3+}$, D^-, spectral hole burning due to deuteron tunneling 7−141950
ZrO_2-Y_2O_3:Pr, laser-excited luminesc. and absorpt. spectra studies 7−125764
praseodymium alloys
Ag-Pr binary liquid alloys, thermodynamic props. 7−118132
Co-Pr, amorphous mag. props. 7−132000
Ho-Pr alloys, resistivity, temp. depend. 7−76884
$(Nd_{1-x}Pr_x)_2Fe_{14}B$, first-order mag. transition 7−99448
Pr-Co-B ternary phase diagram, Co rich portion 7−144366
Pr-Co-Ni ternary system, phase diagram 7−119238
Pr-Fe binary system, phase diagram *(Chinese)* 7−132561
Pr-Fe-B ternary system, X-ray diffraction and thermal anal. 7−113525
$PrAl_2$, thermal expansion, X-ray studies 7−131339
$PrCo_4B$ mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
$Pr_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Pr_3Co_2Sn_7$, cryst. struct., mag. suscept., elec. resist. and thermopower meas. *(Russian)* 7−98048
$PrCu_6$, de Haas-van Alphen effects and transport props. 7−70162
praseodymium alloys continued
$PrCu_6$, freq. depend. complex susceptibility, nuclear mag. ordering transition 7−85302
$PrCu_6$, low temp. monoclinic form, neutron diffraction study 7−124168
$Pr_2Fe_{14}B$, domain struct., domain wall energy 7−118818
$Pr_2Fe_{14}B$, magnetic anisotropy, cryst. elec. field model calcs. 7−125374
$Pr_2Fe_{14}B$, permanent magnet, mag. struct. study using μSR technique 7−113052
$Pr_2Fe_{14}B$, positive muon spectroscopy 7−132178
$Pr_2Fe_{14}B$ single cryst., first order magnetisation processes 7−92465
$Pr_2Fe_{14-x-y}Co_xAl_yB$, mag. props. and cryst. struct. 7−138216
$Pr_2(Fe_{1-x}Co_x)_{14}B$, mag. anisotropy study 7−99439
$Pr_2Fe_{12-x}Mn_xCo_2B$, mag. props. Mn substitution effects 7−138219
$PrIn_3$, singlet ground state, mag. resist., cryst. field effects 7−92166
$PrNi_5$ paramagnetic enhancement factor meas., local mag. suscept. at ^{140}Ce probe nuclei, TDPAC meas. 7−77221
$PrNi_5$ polycryst. high-field magnetisation meas., cryst. field effect calcs. 7−118828
$PrNi_5$, quadrupole scatt., elec. resistivity 7−112274
PrT_4B, T=Fe, Co, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
praseodymium compounds
see also praseodymium alloys
BaO-Fe_2O_3-Pr_6O_{11}, electron struct. and props., effect of Pr ions *(Russian)* 7−124211
Bi-Gd-Pr-Ga garnet films, domain wall oscills., magneto-optical anal. 7−132110
$La_{1-x}Pr_xOCl$, luminesces. conc. quenching of Pr^{3+} ion 7−113265
$(La_{1-x}Pr_x)_{2-y}(SrBa)_yCuO_4$ high T_c supercond. behaviour systematics 7−118646
$(La_{1-y}Pr_y)_{2-x}(SrBa)_xCuO_4$ high T_c supercond., comp. and unit cell parameters w.r.t. T_c 7−143670
$La_{1.85-x}Pr_xSr_{0.15}CuO_4$ high T_c supercond., sharp-line lanthanide fluorescence obs. 7−113261
Pr complex, $((C_4H_9)_4N)_3(Pr(NCS)_6)$, crystal struct. 7−91554
Pr-H_2, phase diagram, peritectic temp. 7−100196
Pr-O, phase composition rel. to optical absorption, degree of oxidation 7−99884
$PrBa_2Cu_3O_{6+x}$, possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
$PrBr_3(Cl_3)$ single and polycrysts., 7−124197
$PrCl_3$, melting, liq. molar vols. 7−124461
$PrCo_{12}B_6$ mag. props. studies 7−99418
$PrD_{1.95}$, separation of cryst. field levels and phonons, inelastic polarised neutron scatt. anal. 7−84781
PrD_2, cryst. field levels and phonons, polarised neutron scatt. anal. 7−124934
PrD_{2+x} magnetic ordering, site occupancy and comp. depend., neutron diffr. study 7−85246
PrF_3, CARS, obs. of resonances 7−70781
$Pr_2Fe_{14-x}Si_xB$ compounds, struct. and mag. props. 7−138278
Pr_xGaSe, layer struct., mag. suscept. meas. 7−112733
$Pr_2H_3(PO_4)_3$, acid monophosphates, crystal structures 7−104657
$Pr(NO_3)_36H_2O$, complexes in alcohols, IR and UV-visible spectra 7−82117
$PrNi_5H_x$, hydrides, cryst. struct. determ. 7−98069
PrO_2, giant resonances, X-ray spectra, line resolution study 7−141601
PrO_2, localised and extended f states in 3d X-ray absorpt. spectra 7−144176
PrO_2, specific valence, X-ray absorption spectra studies 7−76841
PrO_x, mixed valent, X-ray absorption spectra studies 7−92140
Pr_2O_3 based glass as scintillator for high energy physics expts. 7−68138
Pr_2O_3, photon- and electron-stimulated desorpt. study 7−143235
Pr_6O_{11}, film, struct., optical props. 7−105312
Pr_2O_2S, oxidation to $Pr_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
$PrRh_4B_4$ high press. prep. and superconducting props. 7−143657
$Pr(Ru, Os)_2B_2$, cryst. struct. determ. 7−83897
$Pr_{2-x}(SrBa)_xCuO_4$ high T_c supercond. behaviour systematics 7−118646
$Pr_{1/3}UO_2PO_4$, lamellar solids, excited state props. 7−70881
$SnSe$-Pr_2Se_3, phase diagram, congruent melting compounds 7−71156
$Tl_2InPrTe_4$, X-ray diffr. and electrophysical investigation 7−91535
$Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$, high T_c supercond., electronic effects on superconductivity 7−118640
$Y_{3-x}Pr_xFe_5O_{12}$, transferred hyperfine interaction, NMR studies 7−112262
$(YbPr)_3(FeGa)_5O_{12}$, dielec. and mag. tensors, permeability, at optical freq. 7−85355
pre-main-sequence stars
accretion disks, viscosity prescription for self-gravitating disk 7−88103
Ae/Be stars, obs. of rapid narrow-band photometric variability *(Russian)* 7−145999
anisotropic radiation fields, prod. by scatt. in thick accretion disks 7−72278
AS 353A, T Tau star assoc. with HH 32, spectrophotometry 7−101784
AB Aur, Herbig Ae star, Hα line form. in wind 7−79967
AB Aur, Herbig Ae star, short-term vars. obs. ion Ca II K line 7−88400
AB Aur, Herbig pre-main sequence star, wind rot. modulation, C IV and Mg II obs. 7−127855
RW Aur, T Tau star, Balmer-line and photometric vars. obs. 7−127863
B335, Bok globule, struct. and dynamics rel. to central protostar 7−88564
bipolar flows, magneto-gravit. stability of self-gravitating plasma flow through porous medium 7−127702
bipolar molecular outflow sources, obs. in NH_3 lines *(Japanese)* 7−140213
bipolar outflow sources, accel. and collimation, role of mag. fields 7−128028
bipolar outflows from young stars, morphology and kinematics of dense gas in star form regions 7−88567
in Bok globules, contrib. to globule thermal IR emission 7−140225
Boomerang Nebula, bipolar refl. nebula, Herbig-Haro emission detect. 7−80069
Brun 276, T Tau star, IR photometric obs. 7−101783
PV Cep, assoc. bipolar refl. nebula, Herbig-Haro emission detect. 7−80069
EK Cep, detached eclipsing binary, evidence for pre-main-sequence secondary component 7−115520
PV Cep, T Tau star, assoc. counterfan obs. 7−72562
circumstellar shells, wind-driven, comets form. model 7−88203

pre-main-sequence stars continued
Z CMa, Herbig Ae-Be star, resolution at near-IR wavelengths rel. to scatt. dusty disk model 7—134226
contrib. to UV continuum of Herbig-Haro objects (HH1 and HH2) 7—128013
R CrA, spectrum vars. rel. to rapid vars. of assoc. refl. nebula (NGC 6729) 7—80076
R CrA star formation region, HH objects and visible stars obs. 7—107915
V645 Cyg, assoc. high-vel. gas, CO mapping 7—94865
in Draco molecular cloud, optical survey of IRAS point sources fields 7—115627
elongated nebular structures near stars, jets or projection effects 7—115561
GGD 27 IRS 2, polarimetric mapping of assoc. IR refl. nebula (zz) 7—94978
HD 200775, Herbig Be star, interstellar extinction and polarimetric props. 7—115375
HD 200775, Herbig Be star, obs. of rapid spectral, photometric and polarimetric vars. *(Russian)* 7—72425
HDE 283572, X-ray emission from G-type pre-main-sequence star 7—107821
Herbig Ae/Be stars, Balmer line profiles from envelope 7—72431
Herbig Ae/Be stars, line form. in wind 7—79967
Herbig Ae/Be stars, polarimetry and shell characts. *(Russian)* 7—88421
Herbig Ae/Be stars, UBVRI polarisation meas. *(Russian)* 7—145958
Herbig-Haro objects, interstellar bow shock emission profiles 7—94979
Herbig-Haro objects, radiative bow shock models rel. to spectral line profiles 7—128012
Herbig-Haro objects exciting stars, IRAS obs. 7—127742
Herbig-Haro objects in NGC 2023, photographs, spectra, and line profiles 7—120563
HH1-HH2 exciting star, NH_3 obs. rel. to stellar wind-mol. cloud interaction 7—101872
HH 100 in Corona Australis, optical linear polarization study 7—146077
HH 1 and 2 region in Orion, IRAS obs. 7—107919
HH 24, optical linear polarisation studies and relation to IR source (SSV 63) 7—128032
HH 46, 47A, 47B, Herbig-Haro object and connecting filament, T Tau star jet model for dynamical struct. 7—88598
HH 46-47, obs. of NH_3 emission assoc. with exciting star 7—80077
HH 46/47, radiating gas characts., narrowband imaging 7—146065
HH 52/53/54, high-latit. Herbig-Haro objects, CCD photometry and H_2 emission maps 7—134285
HH 57 IRS FU Ori star, implications of linear polarisation obs. of assoc. Herbig-Haro object 7—128027
HH 7 to 11 complex of Herbig-Haro objects, velocity field and struct. 7—101883
IC 4628, nearby dense compact globule and embedded star obs. 7—94989
IRAS 16293—2422, high vel. mol. outflow source, evidence for infall 7—88415
IRAS 16293—2422, source mass characts. and evolutionary status 7—94974
IRAS 16293—422 (L1689N), mol. obs. rel to misalignment between bipolar overflow and mag. field 7—140227
IRAS point sources around dense molecular clouds, spatial distrib. and spectral evolution 7—120532
IRAS sources 19520+2759 and 01133+6434, pre-main sequence stars in mol. clouds, CO mapping 7—72656
IRAS sources in and near dense cores, stellar nature and obs. 7—140323
irregular variable stars, colour characts. 7—145962
jets, CCD imaging, long slit spectroscopy and data interpretation 7—140060
L1551-IRS 5, CS obs. rel. to existence of rotating mol. disk 7—140235
L1551-IRS 5, millimetre and submillimetre mol. line obs. of SW outflow lobe 7—120530
LDN 1551, bipolar outflow, CO mapping, evidence for expanding accelerated shell 7—140062
LDN 1642, high galactic latitude dark cloud, star form. characts. 7—127995
LHα 25(=Walker 90), young star, broad-band spectral energy distrib., evidence for circumstellar disk 7—127870
low-luminosity embedded sources and their environments, IR, THF and EHF obs. 7—107826
low-luminosity outflow sources, IR line and radio continuum obs. 7—128011
low-luminosity young stellar objects, excess IR H line emission 7—72419
low-mass pre-main sequence stars, circumstellar dust IR emission modelling 7—107825
luminous protostellar regions, sub-mm CO line study of warm dense gas 7—128008
RU Lup, RW Aur star, mag. field characts., spectral obs. 7—127867
M17 star form. region, embedded B-type star obs. 7—80066
magnetic activity in pre-main-sequence stars, contrib. of fossil mag. fields 7—127866
mass outflows from young stars, atlas of CCD images of Herbig-Haro objects 7—115253
mass-accreting stars, pre-main-sequence evolution of polytropic model 7—140045
massive pre-main-sequence stars in southern galactic plane, new IR detects. 7—101768
massive protostars, conditions for accretion inflow and star form. 7—145940
molecular bipolar flow sources, OH emission and absorpt. obs. 7—101882
molecular outflow source 1.5′ south of Orion-KL, evidence from SiO obs. 7—128021
R Mon, small-scale struct. of circumstellar gas from CO obs. 7—88403
in Mon OB1 molecular cloud, search for high-vel. gas assoc. with pre-main-sequence stars 7—88592
R Mon/NGC 2261 system, polarimetry of nebula and faint jetlike feature to southwest 7—107932
naked T Tau stars, low-mass pre-main sequence unveiled, photometric and spectroscopic obs. 7—72428
NGC 1333, mol. cloud., assoc. IR sources obs. and nature 7—94988
NGC 7538, H II region assoc. mol. cloud, mol. outflows near IR sources 7—80074
ρ Oph dark cloud, radio-emitting young star search 7—101884
in ρ Oph dark cloud complex, Hα emission-line survey 7—134290
NU Ori, M43 exciting star, contrib. to heating of dust in M43 and Orion Ridge 7—101886
YY Ori, radial vel. calc. 7—145951
Ori B mol. outflow, HCO^+ mapping and search for H_2S 7—94987

pre-main-sequence stars continued
FU Ori stars, circumstellar matter, modification and erosion by wind particles 7—94861
FU Ori stars, imaging and spectra of assoc. ring-shaped nebulae 7—80078
Orion Nebula region, radio emission possibly due to winds from low-mass pre-main sequence stars 7—120632
Orion population stars, V photometric search for periodicities 7—134228
preplanetary nebulae, possible mass distribs. 7—88528
primordial stars, pre-main-sequence evolution 7—88543
protoplanetary disks, orbital migration of protoplanets due to tidal interaction 7—88137
protostar, bipolar jets in funnel formed along accretion tori rot. axis 7—79963
protostars, emergent spectral energy distrib., rot. effects 7—94868
protostars formation in rot. interstellar clouds, collapse and fragmentation with nonuniform initial conditions 7—140042
protostellar accretion disks, observational appearance 7—127844
RCW 108, IR obs. of active star formation site 7—107918
RCW 19 field, survey for Hα-emission line stars 7—139947
RCW 34 exciting star (Vel R2 25a), evidence for pre-main-sequence status from optical and IR obs. 7—120383
Serpens-SVS 20, new young binary IR source, IR photometry, polarimetry and spectra 7—120526
Sgr B2, NH_3 hot cores and protostellar material dispersal 7—128009
Sh2-106 IRS 4, compact dust disk characts. 7—72574
Sh2-140, mol. cloud protostellar cluster, IR sources spectral distrib. 7—94972
SSCV 140, nebulous star, optical linear polarisation studies 7—128032
submillimetre compact sources in dark clouds L1551 and B335, CO obs. of mol. counterparts 7—120529
Sugano's object in Orion association, 1970 and 1986 brightening 7—115383
HL and XZ Tau, assoc. high vel. gas, CO mapping 7—94865
HL Tau, small-scale struct. of circumstellar gas from CO and continuum obs. 7—88403
RY Tau, T Tau star, Hα obs. during high brightness epochs *(Russian)* 7—72424
DR Tau, YY Ori star, UBV photometric characts. *(Russian)* 7—72423
T Tau stars, axial inclinations 7—140065
T Tau stars, contrib. of accretion disks to spectral and photometric characts. 7—72428
T Tau stars, general characts. determ. from spectral meas. 7—140056
T Tau stars, linear polarisation rel. to jets and circumstellar dust distrib. 7—140054
T Tau stars, near-simultaneous UV and optical spectrophotometry 7—88411
T Tau stars, polarimetry and shell characts. *(Russian)* 7—88421
T Tau stars, rotational and radial vels. 7—88410
T Tau stars, simultaneous spectroscopic and photometric obs. of four stars 7—134233
T Tau stars, spectral form of IR excess component 7—79965
Taurus-Auriga region, pre-main sequence stars with Ca II emission, rot. and radial vel. meas. 7—107817
WW Vul, Herbig Ae-type star, Hα emission vars. at max. luminosity 7—140067
young IR sources, linear polarisation rel. to jets and circumstellar dust distrib. 7—140054
young stellar objects, spectral evolution 7—72420
H_2O maser emission search in IRAS stars 7—72655

preamplifiers
charge-sensitive preamplifier with drain feedback for X-ray spectrometer 7—122317
Gbit/s tuned optical receivers, noise performance 7—82855
large detector capacitances, transformer ratio for low noise preamplifiers 7—109661
PET, ultralow noise charge sensitive preamplifier 7—71921
photomultiplier preamplifier-discriminator IC 7—68148
TEGFET based baseband photoreceiver, sensitivity improvement with low-temp. operation 7—68895
transformer-tuned front-ends, heterodyne optical receivers 7—117344
X-ray spectrometry, hybrid preamplifier, ultralow noise, low power 7—67443
GaAs 8 GHz low-noise FET preamplifier for InGaAs p-i-n photodiode optical receiver 7—68896

precession, Earth *see Earth rotation*

precipitation
microstructural process and features only
see also Guinier-Preston zones; segregation; Widmanstatten structure
2D particle coarsening boundary-integral simulation method 7—102355
alkali halides, divalent impurities, matrix phase and precipitated phase coherence, geometric model 7—131320
alloys, phase microstructure, evolution during irrad. 7—69744
Bainite, three definitions comparison 7—132605
α-brass/Hg, liquid metal embrittlement, dissolution-precipitation-mechanism 7—93093
dislocation-free, precipitation form., cooperative bimodular mechanism 7—118100
elastic field interaction of point defects with spherical sinks under irradiation 7—69737
ferritic alloys, irrad., dimensional stability, strength, toughness, fusion reactor appl. 7—103170
garnets, Fe^+ ion implantations 7—91612
grain boundary precipitation, effect on stability of extrinsic grain boundary dislocations 7—144422
grain boundary struct. during post-recrystn. anneals, influence of strong grain boundary pinning by particles 7—111578
H_2 blistering and bubble form. 7—76223
ice precipitates in glassy LiCl, ice I_c struct. and I_c-I_h transitions 7—131112
IN 718, direct aged Ni-base superalloy, microstruct. charactn. and elemental partitioning 7—126122
Incoloy 904, magneto-acoustic and Barkhausen emission from domain-wall interactions with precipitates 7—112920
Inconel 600, neutron irrad., microstruct., precip., swelling 7—84039
Inconel 718, creep rate rel. to γ'' precip. size 7—86279
Inconel 718, Ni-base superalloy, steady-state creep deform. 7—86276
Inconel X-750, MC particles growth on stacking faults and dislocations 7—78025
Inconel X-750, Ni-base superalloy, plastically strained, high-misfit, dislocation-precip. interaction during coarsening 7—78024

precipitation continued
Invar films, magneto-optical and mag. props. 7−113147
metal surface, ion implantation induced surface hardening, precipitation on bulk defects 7−93195
metal-coating system, elec. cond. method for thermal stability investig. 7−93228
metals, BCC, dislocation-point defect interactions and phase form. *(Russian)* 7−69736
metals, irradiated, new phase nuclei, point defect instability *(Russian)* 7−98458
model diffusion and precipitation of gas-in-solid 7−84394
Nimonic PE16, Ni-base superalloy, coarsening of intergranular Γ′ 7−100230
Nimonic PE 16, Ni-base superalloy, precip., quantitative anal. 7−100238
nucleation under time-dependent supersaturation 7−84188
Ostwald ripening, correlations, diffusive interactions effect 7−124526
phase stability under irradiation, disordering, diffusion, segregation and precipitation 7−104815
radioactive used fuel, effect of precipitation on radionuclide vaults release in geological 7−89780
shape evolution under applied stress, thermodynamics and kinetics 7−86188
solid solution breakdown, secondary ion mass spectrometry using cluster ions 7−124519
solid solutions, supersaturated, discontinuous precipitation *(Russian)* 7−78016
stability criteria for phases under irradiation 7−117968
steel, alloy, dendritic precipitate morphology *(Russian)* 7−78017
steel, alloy Ni-Cr, ageing kinetics, strong plastic deform. effects *(Russian)* 7−78104
steel, austenite-ferrite stainless, formation kinetics of σ-phase, precipitation 7−71195
steel, austenitic, Cr-Ni, P solubility, effect of Cr 7−100225
steel, austenitic, high Ni-Cr, γ′-precipitation kinetics, small angle neutron scatt. 7−86190
steel, austenitic alloy, fracture, plastic deform. and ageing effects *(Russian)* 7−138817
steel, austenitic stainless, aged, pitting corrosion rel. to secondary phase precip. 7−126280
steel, austenitic stainless, AGR fuel cladding, G-phase form. and effect on creep props. 7−144474
steel, austenitic stainless, B in $M_{23}X_6$ precipitates, identification by EELS 7−86180
steel, austenitic stainless, carbide precipitates, electron microscopy study *(Chinese)* 7−78013
steel, austenitic stainless, corrosion pitting behaviour, effect of carbide precip. *(Korean)* 7−78317
steel, austenitic stainless, creep, precip. formation 7−132626
steel, austenitic stainless, creep characts. rel. to ion implanted He and H saturation 7−113635
steel, austenitic stainless, electron irrad., soln-annealed, void form. and precip. rel. to Ti, Zr and V addition 7−84031
steel, austenitic stainless, extrinsic grain boundary dislocation stability effect of grain boundary precip. 7−83979
steel, austenitic stainless, G-phase formation during ageing 7−71193
steel, austenitic stainless, grain boundary segregation, electrochemical sensitisation kinetics, N additions effect 7−78304
steel, austenitic stainless, grain boundary segregation of P and S, effect on intergranular corrosion in Huey test 7−100231
steel, austenitic stainless, grain growth kinetics of σ phase during ageing *(Japanese)* 7−106547
steel, austenitic stainless, high N, microstruct. and mech. props., influence of annealing temp. 7−86351
steel, austenitic stainless, ion irrad., mech. props. and microstructure 7−69778
steel, austenitic stainless, long term stress relax., carbide precip., residual stress *(Japanese)* 7−93050
steel, austenitic stainless, nitrided, micrograin struct., Auger electron microprobe obs. 7−100438
steel, austenitic-ferrite, N-containing, carbonitride precip. and δ-decomp. kinetics 7−126137
steel, austenitic-ferritic stainless, high Mo content, precip. behaviour *(German)* 7−144423
steel, austenitic-ferritic stainless, high strength, corrosion behaviour effect of Mo *(German)* 7−144619
steel, B ion implantation, grain boundary segregation, SIMS 7−104776
steel, C, NDE using acoustic and mag. Barkhausen signals, effect of carbide precip. and hardness 7−113838
steel, carbides coarsening simulation method 7−86186
steel, cooling from solidification, intergranular sulphide precip. 7−93019
steel, Cr-Ni-Mo type, for fast neutron reactors, crack resist. in carburisation in Na 7−144593
steel, decarburised, grain size measurement using magnetic and acoustic Barkhausen noise 7−126121
steel, dual phase, fatigue crack growth rel. to second phase particles 7−78198
steel, Fe-Cr, martensitic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, Fe-Ni-Cr, ferritic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, hardened, Cr and Mn effect on structurally free ferrite amount 7−126136
steel, high strength, cast, intergranular layers, amorphous inclusions 7−144385
steel, HSLA, combined TEM and opt. metallographic study of microstruct. after welding 7−86516
steel, HSLA, precip. behaviour in specimens containing Mo, Al and trace amounts of Ti 7−78011
steel, HSLA, Ti containing, precipitates, thermal stability 7−144414
steel, HSLA, VC coarsening kinetics 7−126123
steel, low alloy, austenite decomp., crystallography of carbide precip. and transform. interfaces 7−144412
steel, low alloy, ultra high strength, martensite-austenite and bainite struct. *(Chinese)* 7−78002
steel, low C, Al-killed, carbide precip. and texture development, effect of coiling temp. *(Korean)* 7−132638
steel, low C, P-containing, cold rolled, annealed, recrystallisation texture rel. to Mn content 7−132640
steel, maraging, Ni_3Ti precip. sequence 7−132625
steel, maraging, Ni, delayed failure and precip. 7−93023
steel, microalloy, ordered NbC precip. *(Chinese)* 7−144403
steel, microalloyed, Al or Nb containing, hot ductility rel. to precip. 7−144491
steel, microalloyed, ferritic-martensitic, struct. and mech. props., effect of heat treatment 7−126181
steel, mild, mech. prop. and substruct. changes with US loading 7−100437
steel, Mn-Al, austenitic, carbide analysis after heat treatment schedules 7−126129
steel, Mn-Cr, carbide precipitation and reversible temper brittleness *(Russian)* 7−138746
steel, Nb microalloyed austenite, precip., comp., thermomech. processing 7−78021
steel, Nb-V microalloyed, austenite recrysts. 7−86211
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7−86187
steel, Pd modified low alloy, microstruct., SCC, H induced cracking 7−93022
steel, solidification, dendritic segregation, non-metallic inclusions form. 7−144383
steel, stainless, Cr-Ni type, with 4% Si, development for highly oxidising conditions 7−93182
steel, stainless, duplex, sintered, mech. props. rel. to Si addition and σ phase precip. 7−126198
steel, stainless, fine scale microstruct., APFIM and analytical electron microscopy obs. 7−138772
steel, stainless, homogenised, ageing, precip. distrib. 7−132650
steel, stainless, martensitic, fusion reactor grade, additions effect on mech. props. and struct. 7−71225
steel, stainless, Mo, tempering, carbide form. and growth, TEM obs. 7−113581
steel, stainless, neutron irrad., microstruct., precip., swelling 7−84039
steel, V, hardening due to non-pearlitic eutectoid transform., anal. *(Polish)* 7−138754
two-phase coherent solids, phase equilib. 7−132580
Zircaloy-2 and 4, precip. comp. rel. to heat treatment 7−86182
AL-Cu, fatigued, containing shearable precipitates, behaviour of persistent slip bands 7−111569
Ag electron irradiated, point defect precipitation at dislocations, HVEM obs. 7−98249
Ag_5MnAl, Silmanal, vibr. damping capacity, heat treatment effects *(Russian)* 7−138763
Al alloys, extrinsic grain boundary dislocation stability effect of grain boundary precip. 7−83979
Al alloys, nonlinearity parameters vs. vol. fraction of second phase precipitates *(Japanese)* 7−124408
Al, microstructure var. caused by He generation rate and other irrad. parameters 7−69771
Al-Ag, high resolution electron microscopy of small precipitates 7−144418
Al-Ag alloys, precipitate plate growth mechanisms study 7−137569
Al-Al_3Ni, directionally solidified fibrous eutectic, coarsening, analytical description 7−100229
Al-Cu, coarsening, obs. of coalescence 7−100236
Al-Cu-Mg, 2024, high temp. flow behaviour, charactn. and modelling 7−78122
Al-Cu-Mg, ageing S′-phase precipitate crystallography and morphology, TEM study 7−86191
Al-Cu-Mg alloy, rapidly solidified, quench sensitivity 7−132528
Al-Cu-Mg-Ag, precipitates nucleation and growth 7−144413
Al-Cu-Mn (4.5, 2 wt.%), directional solidification, dispersed intermetallic phase coarsening 7−132624
Al-Fe, deform., precip. 298-698 K 7−78141
Al-Fe-Ce, rapidly solidified, isothermal annealing, dispersed particle coarsening rel. to plastic deform. 7−93064
Al-Fe-Mo-Si, rapidly solidified and heat treated, precipitate identification 7−132628
Al-Fe-Ni rapidly solidified alloys, microstruct. and mechanical props. at elevated temps. 7−86194
Al-Ge, deform. precip., grain size, 298-598 K 7−78140
Al-Kr, Kr ion implanted in Al films, precipitation, phase stability of Kr in cavities 7−106519
Al-Li, rapid solidification, physical metallurgy review 7−113533
Al-li (1.8 wt.%), thermomech. treatment, fatigue, deform. bands, dislocation struct. *(Japanese)* 7−93081
Al-li alloys, precipitation dynamics, Ostwald ripening, TEM study 7−71194
Al-Li-Cu, aged, cryst. struct. and stability of T_1 precipitates 7−78020
Al-Li-Cu-Mg, corrosion rel. to comp. and microstruct. 7−126292
Al-Li-Cu-Zr, T_1-Al_2CuLi plates, electron diffr. study 7−78034
Al-Li-Cu-Zr alloy, microstruct. and SCC relationship 7−144611
Al-Mg, air heating, internal oxidation, spinel phase precip. 7−106516
Al-Mg, high temp. ageing, DSC study 7−138768
Al-Mg alloys, intergranular SCC, Mg grain boundary segregation 7−86398
Al-Mn, Al-Mn-Cu and Al-Zn-Mg-Cu-Mn powder alloys, supersaturated solid soln. decomp. kinetics 7−126128
Al-Mn-Si (10, 2.5 wt.%), dispersion hardened, powder metallurgy, yield stress, fatigue props. 7−138804
Al-Pb, coarsening kinetics 7−71196
Al-Si, cast, isothermal heat treatment, Si particle growth 7−78069
Al-Si, deform., precip. 298-698 K 7−78141
Al-Si, precip. kinetics. and relax. of precip. induced stresses 7−78033
Al-Si-Sr, elec. resist. rel. to Sr content, Si precip., eutectic microstruct. 7−131614
Al-Zn (18.9 at.%) cellular dissoln. kinetics 7−119275
Al-Zn (30 wt.%), ageing, phase dissolution kinetics 7−132616
Al-Zn (30 wt.%), cellular precipitates dissolution 7−78014
Al-Zn (6.8 at.%), HCP phase precip., electron microscopy 7−119273
Al-Zn alloys, electron irrad.-induced precipitation and solute atom redistrib. study 7−105049
Al-Zn dilute alloys, homogeneous precipitate nucleation upper limit temp. determ. 7−98456
Al-Zn-Ag, early stage precip., anomalous X-ray scatt. 7−144401
Al-Zn-Mg, high-purity 7075, H embrittlement, microstruct. effects 7−144506
Al-Zn-Mg, powder metallurgy, pitting corrosion, secondary phase precip., microstruct. 7−126282
Al-Zn-Mg-Cu, microstruct. and props., effect of retrogression and reageing *(Chinese)* 7−132663
Al-Zn-Mg-Cu, SCC, grain boundary precip. *(German)* 7−119458

precipitation continued
Al-Zr-V, dil-alloy, precip., Ostwald ripening cubic to tetragonal transform. 7−78023
Al-Zr-V, rapidly solidified, coarsening of $L1_2$ structured $Al_3(Zr_xV_{1-x})$ precipitates 7−126130
$Al_{91}Mn_5B_5$, rapid solidification, quasi-crystalline precipitates with icosahedral morphology 7−78031
α-Al_2O_3:Fe^+, sapphire, ion implantation effects 7−91609
Al_2O_3-SiO_2-ZrO_2, amorphous, rapid quenching, crystallisation, lattice parameters, phase separation *(Japanese)* 7−131036
α-Al_2O_3, corundum, irradiation with high energy O and C ions, electron microscopy 7−142846
BaO-B_2O_3-TiO_2 glasses, crystallisation for glass ceramics 7−104573
Cd-Cu, rapidly quenched, icosahedral, new cryst. and glassy phases, TEM obs. 7−83859
Co-Fe-Nb, special mag. alloys, phase anal. and precip. kinetics 7−100248
Co-Ni-Cr superalloy, relax. internal friction peak of C *(Chinese)* 7−71226
Co-TaC, microstruct. of different struct. transforms. induced by rapid quenching 7−92992
Co-Ti-Nb (3 2 wt.%), dil. ternary alloy, discontinuous precip. 7−144408
Cr-CrO_2 two-phase materials, condensate struct. and plasticity maximum study 7−142884
Cu based shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7−126109
Cu:Xe impurity bubble evolution, TEM study *(French)* 7−131137
Cu-Al-Be, Be solubility in $CuAl_2$ 7−93020
Cu-Al-Ni-Ti shape memory alloys, grain refined, X-phase struct. and comp. 7−86192
Cu-Be, irradiation induced phase precipitation and interstitial transport 7−104994
Cu-Co, coherent precipitates, X-ray diffuse scatt. studies 7−138752
Cu-Co alloys, Co precipitates, small-angle neutron scatt. and X-ray diffr. studies 7−138753
Cu-Co alloys, precipitation dynamics, Ostwald ripening, TEM study 7−71194
Cu-Cr, rapidly solidified, microstruct. and mech. props. 7−144379
Cu-Cr bronze, aging, solid soln. decomp. 7−78026
Cu-Fe-Sn alloys, γ-Fe particle precip. *(Polish)* 7−138745
Cu-Mg (3.5 wt.%), ageing, decomp., equilib. phase form., TEM obs. 7−113559
CuCl, photoactivated defect-induced dielec. anomalies 7−113073
CuCl-NaCl photochromic glasses, light-sensitive phases 7−70728
CuIn alloy, positron annihilation, effect of vacancies and precipitation 7−106299
CuIn dilute alloys, vacancies and precipitation, positron lifetime studies 7−91576
Cu_2MnAl, Curie temp. meas., press. depend. *(Russian)* 7−138229
$Cu_{2-x}Se$, Cu diffusive mobility and precipitation, obs. of comp. changes under press. 7−137574
Dy-Tb-Fe, microstruct., mag. props. and precipitates 7−71221
Fe alloys, liq., free energy of rare earth nitride form. 7−76455
Fe, cast, dual phase, fatigue crack growth rel. to second phase particles 7−78198
Fe, cast, ductile, fracture and tensile props. rel. to heat treatment 7−78220
Fe, cast, graphite nucleation, growth and morphology 7−86181
Fe, cast, white, wear-resistant, Cr and V effect on struct. and props. 7−126253
Fe high fluence N implantation, computer simulation studies 7−76162
Fe, nitride precipitate dissolution by low-dose neutron irrad. 7−118108
Fe, white cast, hot forged, graphitisation 7−144444
Fe-Al (40 at.%), rapidly quenched by melt spinning, brittle low temp. fracture 7−100376
Fe-Al bilayers, ion beam induced at. mixing, RBS, TEM, SIMS, resist. meas. 7−84069
Fe-Al-C permanent mag. alloys, structural characterisation 7−78065
Fe-Al-Mn-Cr, morphology of A12 α-Mn precip. 7−144420
Fe-based metallic glasses, H implantation damage, precipitation 7−142850
Fe-C-P alloys, quench aging process, effect of P 7−86193
Fe-Co-Cr system, highly coercive, struct., phase transform. 7−144392
Fe-Cr, carburization corrosion, carbide phase precip. 7−86441
Fe-Cr, ferritic alloys, irrad. and alloy elements effect 7−86196
Fe-Cr, spinodal decomp. during ageing, nucleus internal field, Mossbauer spectra *(Japanese)* 7−100228
Fe-Cr-Mn-C alloy laser clad, evolution of microstructure 7−86482
Fe-Cr-Mo, ferritic steel, solute-precipitate interactions, energy dispersive X-ray spectra study 7−106520
Fe-Cr-Ti-Mo, ferritic, creep, precip., strengthening intermetallic phase, high temp. appls 7−138803
Fe-Cu-C, procutectoid cementite precip., Cu effect 7−78022
Fe-Cu(-Ni)(-P), precip. of Cu particles in ferrite matrix 7−78019
Fe-N, α'-$Fe_{16}N_2$ and γ''-Fe_4N precip., TEM study 7−78010
Fe-N-He system, ion implanted and α-particle irrad., precipitate form. 7−78027
Fe-Ni-Al-Ti semi-hard mag. alloy, precipitation phases during tempering *(Chinese)* 7−126119
Fe-Ni-Cr, austenitic, ageing, low temp. mag. props. rel. to precipitated γ' phase particles *(Japanese)* 7−105958
Fe-Ni-Si-Cu-C, Cu precip. and solubility 7−100226
Fe-Ni-Ti, aging alloy, martensite to austenite transform. 7−106507
Fe-Ti alloys, Ti carbonitride precipitated grain inclusions, elemental distrib. studies 7−86178
Fe-W-Ni, struct., phase composition and precipitates *(Russian)* 7−71189
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ devitrified metallic glass, fine particle superparamagnetic props. 7−143860
$Fe_{3+x}Ga_{1-x}$ off-stoichiometric alloys, DO_3-type ordering and phase separation *(Japanese)* 7−137537
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, H_2 blistering and bubble form. 7−76223
$Fe_8Si_xB_{19-x}$, metallic glasses, transform. behaviour study by SAXS 7−83740
$Fe_{99.5}V_{0.5}$ alloys, internal oxidation and precipitation, spin echo and Mossbauer studies 7−144617
GaAs:Fe single crystals, LEC grown, phase analysis; ferromag. props. 7−86179
GaAs:In semi-insulating cryst., precipitates, TEM study 7−124529
GaAs:Sn, heavily implanted, annealing effects 7−98195
Ge-Sn(Pb)-Te phase diagram, GeTe-SnTe and GeTe-PbTe sections 7−106487
$Ge_{1-x}Sn_xSe_2$ glasses, phase separation 7−83724
precipitation continued
Hg-Ga-S system, liquidus surface, crystallisation fields and precipitation *(Russian)* 7−124444
In-GaAs, reaction, influence of InAs-GaAs miscibility gap 7−143025
KBr:Ba^{2+} single crystals, quenched, annealing and aging studies 7−71224
KBr:Eu single crystals, hardening, yield stress meas., temp. and impurity conc. depend 7−91704
KCl:S, X-irradiated single crysts., thermolum. and optical absorpt. spectra studies 7−125814
KCl:Sr, Pb, optical spectroscopy of Pb^{2+}, detection of Sr precipitates 7−70945
La-Sr-Cu-O, high-T_c superconductor, X-ray diffraction study 7−124230
LiF:Na, ion beam modification of embedded Na precipitates, optical absorption obs. 7−91670
Li_2O-Al_2O_3-SiO_2, crystallisation, sintering of glass powder, effects TiO_2 additions 7−106478
(Mg,Ni)O, internal reduction, effect of NiO conc. gradient 7−76421
Mg-Al-rare earth alloys, H interaction, electron microscopy and X-ray study 7−106514
Mg-Er solid soln., precipitation, elec. and mech. meas. *(Russian)* 7−71190
MgO:Al crystals, spinel precipitates positron lifetime and analytical electron microscopy studies 7−118103
MgO:Fe^{3+}, impurity precipitation, electron irradiation 7−69767
MgO:Na, ion beam mixing-induced phase modification 7−76236
MgO:Ni, heat-treated, photolum. 7−132333
MgO:Ni crystals, heat treated, TEM obs. 7−76409
MgO-ZrO_2 partially stabilised zirconia, microstruct. changes during aging 7−100267
Mn-Ge-misch metal alloys, Invar characts., machinability *(Japanese)* 7−76460
Mn-Zn ferrite single crysts., haematite second phase form., SEM and TEM obs. 7−113561
Mo alloys, particle strengthening, deform. mechanisms 7−71240
Mo, cold worked single crystal, He trapping, TEM study 7−78048
Mo-Ni, discontinuous precip., crit. test for coherency strain as driving force 7−119274
Mo-Ni alloys, instability of solid-liq. interface induced by diffusional coherency strain 7−113471
NaCl:Eu crystals, ageing, precip., photolum., TSC, mech. response 7−69913
NaCl:Mn^{2+}, mag. transition, Suzuki phase, sp. ht. meas. 7−112823
NaCl:Sr^{2+}, Eu^{2+}, 407 nm emission band, X-ray diffr. identification of secondary phase 7−85804
Nb-H system, hydride precip., X-ray diffr. study 7−84284
Nb-Mo-H system, hydride precip., X-ray diffr. study 7−84284
Nb-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Nb-Ti (46.5 wt.%), precip. at low strains, two-phase region, critical current rel. to heat treatment 7−131316
Nb-Ti alloys, nanometer scale structs., development, influence on supercond. critical current density 7−131949
Nb-Ti alloys, superconductivity and structural instability study 7−105008
NdDyFeBNb sintered magnets, microstruct., precipitation and coercivity, electron microscopy studies 7−69912
Ni base superalloys, high temp. corrosion in nuclear process heat He, η' carbide form. 7−86444
Ni based superalloy, γ' precipitates, dislocation shearing 7−100235
Ni based superalloys, unconstrained, morphological evolution, γ/γ' interface *(French)* 7−144417
Ni, grain size measurement using magnetic and acoustic Barkhausen noise 7−126121
Ni superalloys, γ-γ' microstructure morphology, automatic image anal. *(French)* 7−119276
Ni/Ni_3Al joints, high press. welding, precip., phase charact. *(French)* 7−84543
Ni-Al, amorphous alloy formation under shock-wave loading 7−77856
Ni-Al, γ'(Ni_3Al) precip. under proton irrad. during ageing 7−84045
Ni-Al, high resolution electron microscopy of small precipitates 7−144418
β-Ni-Al-Ta, second phase precipitates struct. 7−78030
Ni-Be (12 at.%), β-phase precip. morphology, atom probe FIM 7−144419
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7−71250
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
Ni-Cr (25 wt.%), carburisation kinetics, internal precip., computer based description 7−86442
Ni-Cr (45 wt.%), precip., invariant line strain model 7−119272
Ni-Cr-Al-Mo system, intermetallic cpd. precip. 7−144411
Ni-Cr-Co superalloy, grain boundary splitting as primary recrystallisation nucleation mechanism 7−106537
Ni-Cr-Mo-Fe-W, precipitated phase formation, effect of precipitates on corrosion resistance *(Chinese)* 7−132621
Ni-Cr-Th_2 alloy, cold worked, dispersion hardened, proton irrad., creep, microstruct. 7−100293
Ni-Fe-Cr-Al-Hf, laser clad alloys, microstruct. rel. to Hf solubility 7−119395
Ni-Ti, thermal cycling, precip., martensitic transform. 7−113560
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7−113553
Ni-W-Co superalloy, β-phase precip. 7−86185
Ni_3Al-B-Fe, microstructs. and mech. props., influence of Fe additions 7−144492
Ni_3Fe, radiation damage, Mossbauer investig. 7−131195
Pb, surface layer struct. of Pb^+ implanted Si (111), after high temp. treatment 7−84461
Pb-Au supersaturated solid solns., Au diffusion coeffs. during precipitation 7−105102
Pb-Sn (5 wt.%), discontinuous precip., low undercooling instability in cellular mechanism 7−78032
PbI_2, disordered microcryst. prod. from colloidal suspension, Raman obs. 7−85721
$Pb_{1-x}Sn_xTe$, Bridgman-grown single crysts., precip. study by TEM 7−91818
Pd-T, ^3He precipitation, bubbles, swelling 7−91821
Si crystals, O-free, butterfly-type intrinsic gettering defect centres study 7−111540
Si, Czochralski grown, nucleation of O precipitates 7−124316
Si, Czochralski-grown, plate-like O precipitates, struct. 7−125953
Si, dissolution of transition metal precipitates by rapid thermal processing 7−71219
Si, nucleation of oxide precips., high temp. annealing 7−144406
Si, precipitate form. during solid-phase epitaxial growth 7−124757

precipitation continued
Si single crystal, plane-like precipitate, X-ray topographic study *(Chinese)* 7−111889
Si surfaces, oxidation, dislocation generation at cracks 7−86495
Si, twin boundaries, electronic properties, heat treatment effects *(French)* 7−124918
Si wafers, denuded zone charact. 7−124318
Si:As, implant electrical activation and transient enhanced diffusion during rapid thermal annealing 7−84398
Si:As, implanted, growth mechanism of dislocation loops 7−98156
Si:B,O,C wafers, O precipitation, preannealing and impurity conc. effects 7−98477
Si:C,O,Fe precipitation of O and C, effect of Fe *(Chinese)* 7−105032
Si:Cu,N, precipitation of N, rel. to etch pit formation 7−111901
Si:O, elec. resistivity, O precipitation effects 7−112326
Si:O, Fe(Cr)(Pt), transition metal solubility, O precipitate effects 7−98476
Si:O, ion implanted wafers, annealing stacking faults form., SiO_2 precipitates dissolution 7−111587
Si:O, oxide precipitates in ion-implanted Si, morphologies, TEM study 7−98221
Si:O, precipitation behaviour and control 7−84298
Si:O, precipitation of O and O related donor formation, review 7−124530
Si:O, SiO_2 precipitates, electron microdiffraction studies 7−118102
Si:O,C, heat treated, deep level defects, DLTS studies 7−105485
Si:O,C, point defects influence on intrinsic gettering 7−111590
Si:O wafers, precipitation testing 7−84299
Si:P, point defect generation during P diffusion, conc. above solid solubility 7−142766
Si:P, RAD growth, doping induced dislocations, TEM obs. *(French)* 7−111560
Si:Pb, implanted, IR transient annealing, lattice disorder and impurity distrib. *(Chinese)* 7−104821
Si/SiO_2 interface of SiO_2 precipitates in Si, defects, EPR obs. 7−112954
SiC-AlN ceramics, modulated structs. 7−132619
SiO_2 thin buried layers in Si, ion beam synthesis 7−69724
SiO_2-Si:Fe interface, catastrophic oxide breakdown, impurity behaviour effects 7−143624
SiO_2-WSi_2-Si structure, dopant redistrib. modelling 7−91628
Sm-Co sputtered polycryst. films, mag. props. 7−112877
Sn-Pb solder, Cu_6Sn_5 whisker precipitates, mech. props. 7−119311
$SnMo_{6-x}Nb_x(Ta_x)S_{8-y}$, superconductivity and struct. *(Russian)* 7−99245
Sr-La-Cu-O system, prep. by coprecipitation, supercond. props. 7−99292
Ta-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Ti alloys, beta phase, metastable precipitation during isothermal ageing *(Russian)* 7−78018
Ti-Al (4 wt.%) alloy, phase comp. change under nonequil. stress field 7−126127
Ti-Al-Cr-Mo VT3-1 alloy, lamellar struct. parameters effect on mech. props. *(Chinese)* 7−126225
Ti-Al-Sn-Zr-Mo-Si, Ti-6242s, ion irrad., phase transform. 7−69775
β-Ti-Al-V, α precip., obs. of superledges formed on sideplates 7−144421
Ti-Al-V (6, 4 wt.%), H induced cracking rel. to microstruct. *(Japanese)* 7−119346
Ti-Al-V (6,4 wt.%), Al ion irrad., rad-induced precip. 7−69776
Ti-Al-Zr-Mo-Si, low cycle fatigue rel. to silicide precip. 7−100371
Ti-Al-Zr-Mo-Si-based alloys, α_2 phase precipitation and embrittlement *(Russian)* 7−144405
Ti-Mo, anodic dissolution in H_2SO_4, ageing, ω-phase form. effect 7−126283
Ti-Ni, temp. spectra of internal friction and shear modulus, effect of pre-annealings 7−100278
Ti-Ni (52 at.%), aged, Ti_2Ni_3 precipitates, phase transform. 7−100232
Ti-Ni (5.5 wt.%), rapidly solidified microstruct. and precip. 7−93001
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
Ti-V-Cr-Al (13,11,3 wt.%), cold working, ageing, ductility and strength 7−78041
TiAl, crystn., heat treatment, struct., phase comp. 7−144440
TiB_2, high temp. deform., Hall-Petch relation, TiC precip. effect 7−113615
$Ti_{80}Nb_{10}V_{10}$, temp. coeff. of resist., β-phase decomp. effect 7−106517
TiNi, shape memory alloys, near-equiatomic, precip. processes, TEM studies 7−144410
V, soluble and nonsoluble implanted atoms, lattice site occupation, dose effects 7−131170
V-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
W-Ni-Fe (7, 3 wt.%), heavy alloys, mech. props., influence of heat treatment *(German)* 7−100320
Xe bubbles in Si and Al matrices, press., lattice parameters and solid-fluid phase transforms. 7−84018
Y-Ba-Cu-O system, high T_c supercond., microstruct. study of phases 7−117939
YIG microcrystal crystallisation in a borate glass, EPR and magnetisation meas. 7−97931
Zn-Al based alloys, solid-state reactions 7−77994
Zr alloys 7−86436
ZrO_2, (MgO, Y_2O_3) partially stabilised, tetragonal ZrO_2 precip. morphology 7−93014
ZrO_2, CaO partially stabilised, isothermal ageing, precip. coarsening kinetics 7−93015
ZrO_2:Cr_2O_3, Y_2O_3 stabilised, elec. cond., comp. and temp. depend. 7−105110
ZrO_2-MgO (Y_2O_3) partially stabilised zirconia, coherent precipitates, HREM studies 7−100237
ZrO_2-SiO_2 system, sol-gel prep., precip. ZrO_2 transform., fracture toughness *(Japanese)* 7−132614

precipitation, electrostatic *see electrostatic precipitators; precipitation (physical chemistry)*

precipitation (atmospheric) *see atmospheric precipitation*

precipitation (physical chemistry)
for precipitation within solid systems (microstructural changes) see precipitation
see also coagulation; crystal growth from solution; flocculation
flash crystalliser evaluation for geothermal brine scaling control 7−133034
heavy metal ions, host precipitates for trace anal. by laser excited fluorescence 7−86698
inorganic precipitates, morphology, gel growth, homogeneous soln. precip. 7−113369

precipitation (physical chemistry) continued
Liesegang phenomenon, transmission line matrix modelling 7−113973
sodium acid urate, precip. from electrolyte solns., chem. pot. diagram 7−126474
uric acid dihydrate, precip. diagrams and solubility 7−126475
uric acid-NaOH-HCl-water system, computed phase diagrams, dissolutio and precip. 7−126476
Ag halide precipitation coalescence processes 7−139018
$AgBrO_3$, precipitation in oscill. Belousov-Zhabotinsky system 7−138995
$AlK(SO_4)_2.12H_2O$, potash alum, precipitation in foam column 7−85978
AlN, from Al-Cl-N-H-Ar, thermodynamic model 7−100599
Al_2O_3, hydrated, synthesis by homogeneous precip. method *(Japanes* 7−132551
Al_2O_3-ZrO_2 composite ceramic, prep. by polymer soln. precip. 7−86113
B_2O_3-SiO_2, monodisperse particle processing 7−106470
Co_2O_3, Al_2O_3 coated composite powders, synthesis by homogeneous preci method *(Japanese)* 7−132551
$CrFe_2O_4$, colloidal ferrites, preparation and mag. props. 7−77358
Cu-O based high T_c superconductors, practical preparation metho 7−143729
Cu-O-based high T_c supercond., prep. by coprecipitation metho 7−113499
Fe_3O_4 particle dispersed polymer film, precip. prep., mag. recording app 7−126031
K_2SO_4, batch crystallisation and solid-liquid separation 7−91500
$Ni(OH)_2$-$Fe(OH)_3$, coprecipitation, during thermal dehydration 7−10015
$PbCrO_4$ illuminated system, periodic precipitation, multiple stability ar pH dependence 7−139033
$PbCrO_4$, light induced periodic precip. and cryst. growth in 2D gel medi 7−85981
$PbTiO_3$ powder, coprecipitated, piezoelec. composite prep. 7−92936
$Sr_2Zn_2Fe_{28}O_{46}$, hexagonal ferrite, mag. and Mossbauer study 7−112853
V_2O_5-MgO oxidative dehydrogenation catalysts, synthesis metho 7−113462
Y-Ba-Cu-O high T_c supercond., coprecipitation and solid diffusion metho prep. 7−113500
ZrO_2-Y_2O_3, YSZ powders, homogeneous precipitation and sinterin 7−144329
ZrO_2-Y_2O_3 stabilised, prep. from freeze-dried coprecipitated hydroxide mech. props. and crit. grain size 7−92939

precipitation ageing *see precipitation hardening*

precipitation annealing *see precipitation hardening*

precipitation hardening
brass, special, wear, alloying effects, metallography 7−113732
Incoloy 800, γ' hardening, low cycle fatigue, creep, slip bands, micro struct. 7−106527
Inconel 713C, rapidly quenched using twin-roll technique, aging behavio 7−93031
Inconel 718, environmentally assisted cracking, microstruct. effe 7−78309
Inconel 718, Ni-base superalloy, steady-state creep deform. 7−86276
Inconel MA 6000, oxide dispersion strengthened superalloy, cyclic cree lower stress level effect 7−132680
Inconel X-750, Ni-base superalloy, plastically strained, high-misfit, di location-precip. interaction during coarsening 7−78024
Invar, thermal expansion and mech. props., effects of P and S 7−113626
metal surface, ion implantation induced surface hardening, precipitatio on bulk defects 7−93195
Nichrome, Nb alloyed, heat treatment effect on strength and tribotec props. 7−78265
Nimonic PE 16, Ni-base superalloy, precip., quantitative anal. 7−100238
Rene 95, Ni-base superalloy, rapidly quenched, phase form. during ageir 7−93032
room and elevated temp. mech. behaviour, additions influence 7−100243
steel, austenitic stainless, fatigue, proton irrad., precip. hardening, stra amplitude and temp. effect 7−113721
steel, austenitic-ferrite, N-containing, carbonitride precip. and δ-decom kinetics 7−126137
steel, Cr-Mo-V, precip. hardening, bainite brittleness, effect of Ni and M additions 7−100337
steel, hardened, Cr and Mn effect on structurally free ferrite amou 7−126136
steel, low alloyed, struct. form. and mech. props., effect of deform. ar subsequent cooling processes 7−100245
steel, maraging, 18% Ni, consolidated by hot isostatic pressing, micro struct. and mech. props. 7−144341
steel, maraging, Ni, ageing struct. anal. *(Chinese)* 7−78036
steel, maraging, Ni, delayed failure and precip. 7−93023
steel, martensite ageing, hardened, redistribs. of alloying elements durir rapid heating, effect of Mn *(Russian)* 7−93029
steel, microalloyed, ferritic-martensitic, struct. and mech. props., effect heat treatment 7−126181
steel, Mn, bainitic, thermomechanical treatment, mech. props., micro struct. *(Polish)* 7−71267
steel, Mn-Al, austenitic, carbide analysis after heat treatment schedul 7−126129
steel, Ni-Ti, hardening, precip., wear resist. rel. to cooling rate 7−78257
steel, stainless, precipitation hardened, impact toughness, grain bounda segregation, cooling rate 7−132750
steel, structural, thermochem. treatment effect on wear resist. 7−78348
steel, W-Cr-V, bearing, N ion implantation, wear, friction, hardnes surface struct. 7−119378
Al alloys, formability, microstructural effects, strain localisation, fractu 7−78118
Al alloys, supersaturated, decomp. and hardening behaviour 7−126120
Al alloys, wrought, anisotropy, texture and microstruct. contrib. 7−8620
Al-base alloys, age hardening, effect of US vib. 7−132632
Al-Cr-Fe, vapour quenched, tensile props. rel. to microstruct. and com 7−119306
Al-Cr-Zr, Al-rich solid solns. extended by rapid solidification, ageir behaviour 7−93034
Al-Cu, age-hardenable, zone form. kinetics, influence of rapid solidifica tion 7−100210
Al-Cu (3.76 wt.%), rheocast, hardening, effect of ageing temp. 7−12613
Al-Cu-Mg, precip. strengthening, Bauschinger effect 7−86280
Al-Cu-Si, 2014, commercial, rapid quenching 7−86201
Al-Fe, deform., precip. 298-698 K 7−78141
Al-Gd, rapidly solidified, microstruct. and props. 7−93033
Al-Ge, deform. precip., grain size, 298-598 K 7−78140

precipitation hardening continued
Al-Li (2.85 wt.%), solid soln., decomp. after hardening under high press. 7−106524
Al-Li alloy, binary, fatigue props., solution treated and aged conditions 7−100386
Al-Li-Cu-Mg-Zr alloy, yield stress, temp. and strain rate depend. 7−138797
Al-Li-Mn, elastic modulus, effect of ageing 7−113593
Al-Li-Ti(Zr)(Hf), duplex precip. hardening, struct., mech. props. 7−138755
Al-Mg-Si, age hardened, tensile props. and anisotropy, double ligament test method 7−132851
Al-Mg-Si, soln. treated, cyclic strain induced precip. 7−144402
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Si, deform., precip. 298-698 K 7−78141
Al-Zn-Mg, age hardened, fracture, deform., H enhanced dislocation mobility 7−132661
Al-Zn-Mg, age hardened, tensile props. and anisotropy, double ligament test method 7−132851
Co based superalloys, strengthening mechanisms, hot corrosion resist., gas turbine appls. 7−86461
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7−113577
Co-Fe-Nb, special mag. alloys, 7−126133
Cu alloy, sintered precipitation hardening, prep. and characteris. 7−78038
Cu-Cr, rapidly solidified, microstruct. and mech. props. 7−144379
Cu-Cr-Sn, age hardening kinetics rel. to Sn addition *(Japanese)* 7−106525
Cu-Mg (3.5 wt.%), ageing, decomp., equilib. phase form., TEM obs. 7−113559
Fe, cast, diffusion impregnation with Cr and Al, coating struct. and props. 7−78349
Fe-Cr-Ni-Co superalloy, Refractoloy 26, microstruct. and mech. props., effects of Co *(Chinese)* 7−144424
Fe-Cr-Ti-Mo, ferritic, creep, precip., strengthening intermetallic phase, high temp. appls 7−138803
Fe-Cu(-Ni)(-P), precip. of Cu particles in ferrite matrix 7−78019
Fe-Ni-Cr, γ' strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7−105959
Fe-Ni-Cr-Ti alloy, welded joints, heat treatment and HAZ props. 7−78074
Fe-Si-Al-TiC, Sendust, precip. strengthening 7−132630
Mo alloys, particle strengthening, deform. mechanisms 7−71240
NaCl:Eu crystals, ageing, precip., photolum., TSC, mech. response 7−69913
Ni base superalloys, γ' precip. hardening, SCC resist. in high temp. water *(Japanese)* 7−93173
Ni-base superalloy, GH99, antiphase domain boundary energy of γ'-$Ni_3(Al,Ti)$ particles and strengthening contrib. *(Chinese)* 7−144425
Ni-base superalloy, single cryst., yield stress, effect of ageing 7−113630
Ni-Co-Al, flow stress, γ' particles, Co content effect 7−78133
Ni-Co-Cr, powder metallurgy, hot extrusion, stable struct. form., superductility 7−126049
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7−71250
Ni-Cr-W superalloy, grain boundary precip. strengthening, nuclear heat exchanger appl. 7−106526
Ni-Cr-W-Ti-Al superalloy, γ' precip. strengthened, alloy design *(Korean)* 7−78037
Ni-TaC based eutectic composite, ageing, fatigue life rel. to test freq. 7−132697
Ni-W-Co superalloy, β-phase precip. 7−86185
SiAlON ceramics, amorphous second phase controlled crystn., microstruct., mech. props. 7−132620
Ti, electroerosion, high-energy impulse-discharge, in nitrogen, electrode surface effects 7−132814
Ti-Sn-La, rapidly solidified, second phase coarsening 7−93024
Ti-V-Cr-Al (13,11,3 wt.%), cold working, ageing, ductility and strength 7−78041
Ti-V-Cr-Al (13,11,3 wt.%), fracture behaviour study with in-situ obs. of SEM and AE simultaneous meas. *(Japanese)* 7−78152
Ti-V-Cr-Al alloy, metallurgical condition effect on creep behaviour at 650°C 7−119313

prediction theory *see filtering and prediction theory*
predissociation of molecules *see molecular predissociation*
preferred orientation *see texture*
prerotation *see rotation*
presentation, technical *see technical presentation*
presintering *see sintering*
pressing, hot *see hot pressing*

pressure
see also atmospheric pressure and density; high-pressure phenomena and effects; radiation pressure; vapour pressure
fluid pressure, Mayer fugacity series, exponent universality study 7−124065
hypersonic flow over multistage cones, heat transfer study 7−97565
inhomogeneous fluid, pressure tensor, Irving-Kirkwood formula transformation 7−97884
jets, turbulent, static press.−vel. field 7−111047
seismic wave sources, spectral props. of oscillating gas bubble press. *(Spanish)* 7−133592
steel cylindrical storage ampule, dynamic pressure conditions, walls final temp. meas. 7−97286
D_2O, internal press., calc. procedure 7−111721
H_2O, internal press., calc. procedure 7−111721
KBr-LiCl, excess internal press. and intermol. interactions eval. 7−110062
KCl-LiBr, excess internal press. and intermol. interactions eval. 7−110062
KCl-NaI, excess internal press. and intermol. interactions eval. 7−110062
SO_2, liquid-vapour coexistence line, Lennard-Jones pot., reference interaction site model study 7−142553

pressure, atmospheric *see atmospheric pressure and density*

pressure control
see also vacuum control
anti-gravity suit, synchronised, pulsating, for acceleration protection, microcomputer control 7−107264
arterial pressure and cardiac output, control in anaesthetised dogs by adaptive multivariable drug delivery 7−133343
arterial pressure short-term regulation dynamics, freq. depend. and arterial compliance role 7−107141
arterial pressure short-term regulation in cat, dynamic model 7−107140
laminar proportional amplifiers, mathematical model of input characteristics 7−91070
pulmonary oedema treatment chamber temp. and pressure control improvements 7−119892
semiautomated PVT facility for fluids and fluid mixtures 7−95567
vortex amplifier characts., multivalued region elimination 7−103079

pressure measurement
see also vacuum measurement; vapour pressure measurement
acoustic surface wave sensors for pressure, temp., force and acceleration *(Czech)* 7−121100
aerospace simulation facilities instrumentation, Conf., Williamsburg, VA, USA (June 1987) 7−120708
air-water flow in horizontal pipe, press. drop meas. 7−142352
air-water horizontal two-phase flow, wall press. fluctuations 7−142353
aortic stenosis and Doppler US: in vitro studies of press. gradient determ. 7−107178
arterial blood press. and elastic props., noninvasive meas. using photoelec. plethysmography 7−139393
atmosphere pressure measurements, resolution improvement method 7−127570
balances, converging channel applied to piston-cylinder systems, theory 7−142407
blood pressure, direct meas., significance of reference 7−93974
blood pressure direct measurement, significance of reference 7−101103
blood pressure meas. technique for portable artificial heart drive system 7−71930
blood pressure measurement instrument ABM-II/A *(German)* 7−114517
calibration up to 5.5 Mbar under hydrostatic and nonhydrostatic conditions *(Chinese)* 7−89187
compensation convertor from small pressure differences meas. *(German)* 7−73331
condensation nuclei, expansion counter, size distribution effect on pressure 7−136975
dead weight pressure calibration instruments, test procedure 7−80760
diamond anvil cell apparatus, using ruby fluorescence scale 7−80810
diastolic pressure determination by phase discrimination 7−87271
digital measured value processing sensor for press. and temp. *(German)* 7−128555
digital pressure gauge for static and slowly varying pressure meas. 7−121094
electrode kinetics determ., pressure-pulse method 7−126410
fibre optic catheter-tip sensor based on photoelastic effect 7−133501
fibre optic photoelastic press. sensor with fibre-loss compensation 7−68867
fibre optic pressure sensor using deformable lens 7−75142
fibre optic sensors, developments and appls., review *(Italian)* 7−90805
Francis-type pump turbine, unstable S-shape charact. meas. using laser velocimetry 7−97668
gas motion, fluctuating, in small-diameter tubes, time-averaged press. 7−91261
gauge pressures generation using twin pressure balances 7−89195
high pressure gauge, secondary standard, using AuCr spin-glass alloy 7−121143
high-pressure meas., thermal energy based apparatus 7−80726
hydrostatic pressure measurements with multimode optical fibers 7−124364
hypersonic vehicles, surface press. distrib. meas. using mag. tape 7−83377
implanted intracranial press. monitoring, Monte Carlo technique for signal level detect. 7−119874
industrial pressure meas., history 7−140659
interferometric fibre-optic hydrogen sensor 7−82813
intracranial pressure monitoring by waveform analysis 7−107278
leak testing, automatic differential pressure method *(German)* 7−121053
long-term accuracy, stress relaxation characts. expt. *(Japanese)* 7−128568
mining digital dilatometer *(Polish)* 7−72199
nuclear material solutions, material mass determ. using pressure meas., safeguards appl. *(French)* 7−109320
ocean pressure fluctuation gauge for use in deep-sea 7−133979
oesophageal manometry, computer-aided: prospects and problems 7−114529
optical fibre displacement sensor, studies 7−75131
optical waveguide pressure sensor, metal-clad 7−104053
optimisation of dynamic press. meas. systems 7−89192
parallel tube-manifold system for dynamic press. meas. optimisation 7−89193
partial pressure gauge using ion backscattering principle, for He and D_2 7−134790
pneumatic intracranial pressure transducer, design and accuracy analysis 7−145267
prosthetic limb socket press., meas. technique 7−119905
solids, suspended, hydraulic transport in horizontal pipeline, press. gradients calcs. 7−91224
spin-glass materials for high-pressure sensors 7−95573
standard instruments for pressure meas. 7−140658
standards up to 500 MPa using pressure transducers 7−89226
superhard materials, explosive form. by liner impact, shock wave front press. calcs. 7−89191
telemetry of moving biological objects, possibilities and problems *(German)* 7−79154
thermoelectric vacuum gauge, pressure meas. accuracy increase 7−134796
trailing flap, attached flow, asymmetric wake, press. and vel. characts. 7−136863
transonic flow, pressure meas. of airfoils using digital holographic interferometry 7−97662
transonic tunnel, pressure fluctuation measurements with passive shock/boundary-layer control 7−91158
tubing system for fluctuating press. meas. 7−89194
twin-wire resistance-probe water manometer characts. 7−95542
unsteady flow rate and velocity, meas. using differential press. in pipe 7−91267
AlGaAs semiconductor impulsive pressure sensor 7−73318
PZT ceramic-air composites for hydrostatic sensing 7−99691
SF_6 circuit-breaker rotating arc spectrum *(French)* 7−130961
Si based sensors, conf., London, England (Dec. 1986) 7−95099
Si micro-transducer for differential pressure 7−95575
Si pressure sensors, design and temp. compensation cct. *(German)* 7−108535

pressure measurement continued
Si vibrating cylinder transducer for pressure meas. about 1 atm. 7−140660
$UO_2(NO_3)_2.6H_2O$ solution, density meas., safeguards appl. *(French)* 7−109320
W lamp, press. and temp. profiles CARS meas. 7−80900

pressure sintering *see sintering*

pressure transducers
bleed-type pressure sensor, pressure, velocity and temp. sensitivities determ 7−121095
blood pressure, direct meas., significance of reference 7−93974
bonded foil strain gauge pressure transducer 7−80778
calibration and performance of capacitance diaphragm gauges 7−121049
compensation convertor from small pressure differences meas. *(German)* 7−73331
condensation nuclei, expansion counter, size distribution effect on pressure 7−136975
diaphragm pressure sensors, resonant, freq. charact. *(Chinese)* 7−73328
differential pressure flowmeter transducer using ceramic material *(German)* 7−97656
fibre optic catheter-tip sensor based on photoelastic effect 7−133501
fibre optic pressure transducer, high temp., design and charactn. 7−123221
fibre optic pressure transducers, microbending principle 7−67300
fibre optic sensors *(Italian)* 7−97150
fibre optic sensors sensitive to normal pressure and shear stress 7−136589
fibre-linked interferometric pressure sensor 7−142034
hypersonic vehicles, surface press. distrib. meas. using mag. tape 7−83377
industrial pressure meas., history 7−140659
level meas. difficulties and transducer develop. *(Swedish)* 7−121054
long-term accuracy, stress relaxation charact. expt. *(Japanese)* 7−128568
measurement standards up to 500 MPa using pressure transducers 7−89226
miniature pressure sensors and their temperature compensation 7−121099
ocean pressure fluctuation gauge for use in deep-sea 7−133979
optimisation of dynamic press. meas. systems 7−89192
parallel tube-manifold system for dynamic press. meas. optimisation 7−89193
piezoresistive pressure monitor for continuous positive airway pressure systems 7−87348
pneumatic intracranial pressure transducer, design and accuracy analysis 7−145267
polyvinylidene fluoride piezoelectric foils for measurement of arterial pressure pulse 7−133490
polyvinylidene fluoride transducer arrays for Braille cell appls. 7−101147
quartz crystal pressure sensor using optical fibre and frustrated-total-internal-reflection readout technique 7−123236
radiosonde pressure sensor performance: evaluation using tracking radars 7−139795
self-supporting Manganin pressure gauge, hydrostatic pressure limit of n-pentane/iso-pentane mixture determ. 7−128561
Siemens KPY pressure sensors, calibration at liquid He temps. 7−108534
solid-state capacitive pressure transducers, review 7−73332
spinning-rotor gauge, low pressure standards, calibration, report 7−80725
spirometer system, pointer volume, for respiratory tests 7−87325
stability requirements, anal. *(German)* 7−73335
standard instruments for pressure meas. 7−140658
standard up to 500 MPa, using strain gauge 7−95570
Swedish micromechanical engineering developments *(Swedish)* 7−127019
thick film force (pressure) sensors fabrication 7−128565
transverse voltage type, sensitivity, geometric effect *(Chinese)* 7−121090
tubing system for fluctuating press. meas. 7−89194
tuning fork resonator transducers 7−67301
unsaturated fly ash landfill moisture content and pressure potential instrument evaluation 7−114160
vacuum, meas. and process control 7−140706
wind-pressure meas. on full-scale structures, transducer development 7−73330
Si cantilever appl., 1 to 1000 bar range appl. 7−95576
Si integrated pressure sensor using p-well CMOS process, design, fabrication and charact. 7−80766
Si micro-transducer for differential pressure 7−95575
Si piezoresistive absolute pressure sensor, design and realisation *(Slovenian)* 7−80764
Si pressure sensor, four-terminal, at centre of diaphragm 7−128564
Si pressure sensors, design and temp. compensation cct. *(German)* 7−108535
Si vibrating cylinder transducer for pressure meas. about 1 atm. 7−140660

pressure vessels
ADINA and nonlinear FEA, conf. Cambridge, MA, USA, (June 1987) 7−101995
allowable stresses for earthquake and wind loads 7−68991
BWR, fill level control, ultrasonic technique *(German)* 7−129374
BWR pressure vessel, acoustic emission testing during hydraulic pressurization 7−122005
BWR pressure vessel life extension 7−129359
BWR pressure vessel segment, flaw density meas., NDT 7−89670
circular nozzle corner crack, 3-D elastic anal. 7−69063
cylinders, semi-elliptical flaw, failure assessment diagram approach 7−67917
cylindrical, Bauschinger effect of reverse yield stress reduction on radial crack growth 7−69814
dished shell heads, asymptotic solutions 7−68993
elastic-plastic calc. of fracture mechanical behaviour with fluid structure interaction pressure vessel precracked 7−104207
fillet welds under bending and shear 7−69000
fracture mechanics and plastic collapse *(German)* 7−110864
glass fibre reinforced plastic dewar with spherical bottom for SQUID-magnetoencephalography system, mech. performance 7−79123
half-pipe heating channels, stress analysis 7−68992
HTR 500 550 MW high-temp. reactor, safety and operation 7−116660
HTR-500, concrete containment vessel, safety test *(German)* 7−109459
layered pressure vessel wall, heat conduction 7−68977
leakage localization, correlation anal. of narrow-band signals *(German)* 7−106749
LWB pressure vessels, radiation damage dosimetry, exptl. methods *(German)* 7−129447
LWR reinforced concrete containment model, 1/6 scale, design and construction aspects 7−129160
materials testing, acoustic emission anal. *(German)* 7−102990
multilaminate, design innovation and strength 7−126131
NDT of steel reactor pressure vessel, reliability study 7−89667
nuclear materials testing and safety, conf., Stuttgart, Germany (Oct. 1986) 7−120695
nuclear plants, reactor vessels dosimetry *(Hungarian)* 7−109272
PWR containment, limiting strength determ., self-resonant frequencies *(German)* 7−109301
PWR pressure vessel controls *(Czech)* 7−81528
PWR pressure vessel dosimetry, H.B. Robinson-2 reactor, LEPRICON anal. 7−129451
PWR vessel safety injection nozzle welds, ultrasonic flaw sizing 7−129172
reactor pressure vessel head, deformation anal. using holographic interferometry 7−122049
reactor pressure vessels, acoustic emission anal. appl. to hydraulic testing *(German)* 7−102991
reactor pressure vessels, ultrasonic apparatus developments for in-service inspection 7−122050
recertification, stress analysis 7−71198
Shippingport Station Decommissioning Project, barge transportation of pressure vessel 7−103154
spherical, filament-wound, viscoelastic/damage modelling 7−104167
steel, austenitic stainless, reactor vessel cladding, surface cracks anal., pressurised thermal shock accident 7−89671
steel, Cr-Ni-Mo-V, low cycle fatigue, cyclic creep in multiaxial stress state 7−86348
steel, crack-arrest study, fracture criteria, viscoplastic anal. 7−93101
steel, Mo-Ni, for reactor pressure vessels, segregation behaviour under neutron irradiation *(German)* 7−135439
steel, Ni-Mo-Cr, LWR pressure vessel, underclad cracking, grain boundary segregation 7−100377
steel, No-Mo, pressure vessel, micromechanical modelling of fracture toughness 7−113651
steel, pressure vessel, irradiation embrittlement and postirradiation annealing study 7−89621
steel pressure vessel, pressurised thermal shock expt. with low ductile-tearing resistance material 7−93237
steel reactor pressure vessel, ductile-brittle transition, fine-scale separational events study 7−89620
steel specimens, fatigue crack growth study in PWR environments 7−89669
VVER reactor pressure vessels, service life, resistance to brittle failure 7−103094
Cr-Mo steels, tempering to reduce liquid metal embrittlement in fusion reactor materials 7−67979
Cr-Ni-Mo steel metallurgy for VVER-1000 reactor manufacture 7−135424

primary cells
electrode couples and electrolytes, factors affecting choice *(French)* 7−126571
miniature primary batteries with alkaline electrolyte for feeding electronic devices *(Polish)* 7−139099
solid state battery formation of sodium vanadate and potassium vanadate 7−86773
solid-state batteries function in high-temperature environments 7−126570
$/Nb_2O_5$ cell employing polyethylene oxide lithium trifluoromethane sulphonate complex as electrolyte 7−93485
Cd standard cells, temp. charact. of cells normalised at 0°C *(Japanese)* 7−67274
Li batteries, electrodes, electrolytes, performance and charact. conf., Kyoto, Japan (May 1986) 7−120692
Li battery as portable power, recent developments 7−78623
Li battery headers, ambient temperature, glass corrosion 7−100704
Li cells, $(CF)_n$ and $(C_2F)_n$ electrodes discharge charact. 7−126578
Li cells, $(CF)_n$ fibres as cathode, discharge charact. 7−126579
Li cells, a-Cr_3O_8 cathode material, charge/discharge charact. 7−126587
Li cells, Li passivation kinetics in SO_2 electrolytes using AC impedance technique 7−126573
Li cells, TiO_2 cathode, Li diffusion coefficient 7−126583
Li power supplies *(Czech)* 7−126588
Li primary batteries, research and develop. work in China 7−126586
Li/CF_x cells using activated carbon fibre, electrochem. characteristics 7−106898
Li/NH_4NO_3-$LiNO_3$-amide cell room-temp. discharge charact. with Ag salt cathodes 7−71588
Li/$SOCl_2$ cells, chemical reactions, kinetics and thermodynamics 7−71589
Li/$SOCl_2$ small chemical current sources compared with other primary cells 7−78624
Li-$(C_xF)_n$ nonaqueous cell, C_xF_n electrode, overpotential and discharge reaction 7−126577
Li-AgV_2O_x cells, heat dissipation during storage and low-rate discharge 7−133068
Li-CF_x primary batteries, reliability 7−114085
Li-$Cu_4O(PO_4)_2$ cells for long-life low-rate appls., performance 7−126581
Li-CuO cells, effect of $CuFeS_2$ on battery performance 7−126582
Li-graphitic oxide cells, influence of electrolyte and cathode composition 7−126580
Li-I_2 cells with poly(2-vinylpyridine) iodide cathode additive, long-term discharge charact. 7−126585
Li-MnO_2 cells, impedance anal. 7−126584
Li-MnO_2 cells containing CF_x or C_2F in the cathode 7−100703
Li-MnO_2-CF_x hybrid cathode jellyroll cells, performance charact. 7−93487
Li-Nb_2O_5 cell, non-aqueous, electrochemistry of L-Nb_2O_5 7−93486
Li-SO_2 batteries, start-up times at low temp. 7−133069
Li-SO_2 high reliability long-life cells 7−126572
Li-$SOCl_2$ cells, in situ micro-Raman study of discharge products 7−126576
Li-$SOCl_2$ cells, LiCl solid electrolyte layers, growth on Li electrode 7−126574
Li-$SOCl_2$ cells, passivation of porous C cathodes 7−133067
Li-$SOCl_2$ cells, voltage delay reduction, polymers with chlorine substituent groups 7−126575
Li-$SOCl_2$ primary cylindrical cells, high rate, thermal modeling 7−100702
Mn alkaline cell impedance spectrum interpretation 7−86774
Mn alkaline cell impedance correl. with short-circuit current behaviour 7−86775

primary cells continued
Mn alkaline cell impedance correl. with high-rate pulse discharge capacity 7−86776
Zn-MnO_2 Polapulse battery for Polaroid camera 7−144810
primary cosmic radiation *see primary cosmic rays*
primary cosmic rays
see also galactic cosmic rays; solar cosmic ray particles
antiproton-proton flux ratio at top of Earth's atmosphere, asymptotic limit 7−94620
EAS simulations, inferred primary cosmic ray composition 7−115192
EAS study of 10^{15} eV γ quanta 7−120226
energy spectrum meas., range 2.9×10^{14}-4.0×10^{15} eV *(Chinese)* 7−107679
extraterrestrial neutrino flux, upper limit determ. 7−107681
galactic disk primary cosmic ray photons (10^{13}-10^{14} eV), search for excess 7−101642
high-energy particles (up to 10^{15} eV), research methods and problems 7−72233
proton composition determ. from obs. of atm. cosmic rays 7−101648
protons, contrib. to cosmogenic nuclides prod. in extraterrestrial objects 7−101652
secondary charged particles, ang. distrib., appl. to primary direction determ. 7−139873
printed circuit boards *see printed circuits*
printed circuit manufacture
solution flow in through-holes of printed circuit panels, panel movement effects 7−130782
Cu layers, electroplated, mechanical props. rel. to annealing and ageing *(Polish)* 7−113827
printed circuits
see also printed circuit manufacture
CAMAC crate controllers, 8086-based, for Fermilab expt. E-704 7−68181
Ag electromigration suppression effect 2,4-diamino-6-vinyl-s-triazine compounds 7−91856
Sn electrodeposits, whisker growth inhibition for electronic appls. 7−144319
printed wiring boards *see printed circuits*
printers
see also ink jet printers; laser printers
dry silver recording materials, new capabilities 7−108687
RCA HRLBR image generator for tactical application 7−108688
time marker for a printer, calorimetric transducers certification appl. 7−102376
printing
color image scanning and printing technology *(Japanese)* 7−89291
prismatic dislocations
CdS conductivity anisotropy, edge prismatic dislocation effects 7−143463
GaAs, plastically deformed, dislocation struct. 7−98157
LiF, neutron irradiated crystals, dislocations, etching studies 7−131148
prisms (optical) *see optical prisms*
privacy of data *see data privacy*
probability
see also game theory; Monte Carlo methods; queueing theory; random processes; statistics
acoustic noise SNR, probabilistic evaluation method 7−75204
air pollution, meandering plume conc. prediction 7−133168
Bayesian estimation, nonlinearly interacting stochastic variables, partial obs. method 7−89124
best approximation of probability measures *(French)* 7−72921
charged-particle identification by energy release meas. in thick scintillator 7−81902
composite quantum systems, joint probability distrib. 7−115823
degenerate diffusions, unique ergodicity 7−95524
density-free convergence properties of various estimators of entropy 7−134708
diagnostic test performance, criterion-free parameter-free distrib.-independ. index, appl. to glaucoma visual data 7−93983
discrete-time maps with arbitrary monotonic fn. operator, probability density distrib. 7−115754
dispersive ordering and truncated distributions *(French)* 7−95283
Durbin-Watson correlation test, probability calc. 7−115769
dynamic flow meas., observations statistical props. for proving meters 7−91271
edge length properties of random Voronoi polygons 7−113825
failure probability and scattering of strength of smooth test bars *(German)* 7−93235
fatigue crack growth, Markov models 7−130590
fatigue crack growth, short, intermittent, statistical model 7−83106
fatigue crack growth models, probability density fn. of Markov process 7−84117
fatigue criterion, max. normal stress, appl. to random triaxial stress state 7−91715
fibre reinforced composite, unidirectional hybrid, fracture in tension, probability analysis 7−75458
fibre reinforced composites, hybrid, unidirectional, strength probability 7−117539
finite queue behaviour with batch Poisson inputs and synchronous servers, routing and buffer sharing effect 7−95285
fracture of brittle particles in ductile matrix 7−69818
gas-thermal coating, adhesive strength to substrate, probabilistic eval. method 7−78294
general signed-rank statistic, second order linearity 7−80391
global irradiance probability density model, hourly total on arbitrarily orientated planes 7−145654
global optimisation of real-valued function on R^n using diffusion and simulated annealing 7−102358
gravitational lensing of quasars by foreground galaxies, amplification probability distrib. and number density enhancement 7−115621
homogeneous tree, Cauchy laws for ends *(French)* 7−66892
information-theoretic description of EM fields in complex environments 7−122787
intensity fluctuations in atmospheric laser propagation, amplifier saturation effects 7−107508
ion implantation in amorphous targets, Monte Carlo simulation model 7−142590
iterated logarithm for order statistics *(French)* 7−66981
laser radiation transmitted by turbulent atm., statistics 7−72152
probability continued
lattice gauge theory, SU(N), correlation fn. calcs. from probability densities 7−140785
leg, human, probabilistic estimation of impact strength under dynamic loading 7−87065
lifetime prediction for static load situations of ceramics 7−86515
lightning, impulsive radiation in USW band 7−101451
likelihood ratio of two ARMA processes, log-normality *(French)* 7−66982
lognormal and gamma distribs. testing, percentage point estimates 7−88929
LPI techniques in the underwater acoustic channel 7−75200
minicomputer-based photon correlator and counter 7−80895
molecular flow through two tubes with different diameter, transmission probabilities computing 7−137013
multiport homodyning, quantum theory 7−103782
multistep reactions, probability flow 7−140621
nonlinear oscillators, quantifying chaos with amplitude probability density function 7−90928
optical homodyne and heterodyne detection, quantum theory 7−136239
optimal algorithms for linear problems with Gaussian measures 7−66984
photoelectron counting, second-order statistics of integrated intensities 7−103783
photoelectron counting distrib. computation by numerical contour integration 7−138587
polymer, crosslinked, graph represent. and topological gelation criterion 7−97984
power system scheduling method to satisfy NO emission and power supply probability 7−71661
PWR risk appraisal, source term reassessment 7−67952
quasirandomness and k^{-d} spectra of several objects 7−88930
random processes, periodically correlated, interpolation of estimates of probability characts. 7−128435
random walk in 2D, exact probability distrib. 7−73212
random walk processes on networks, probability distrib. fns., analytic method 7−134661
reactor coolant pump motor failure rates, prediction using probabilistic techniques 7−129253
seismology, use of data from similar regions for earthquakes magnitudes exceedance rate probability distrib. determ. 7−145340
short fibre composites, fibre-dominated, strength, probabilistic aspects 7−111760
short fibre composites, fibre-dominated, strength, probabilistic aspects 7−111761
sonar, range resolution, optimal sequences for detection using a matched filter binary integrator 7−104091
sound field, logarithmic least mean square estimation 7−110666
square integrable Hilbert-valued martingales, stochastic integration *(French)* 7−72920
Stokes parameters, statistics 7−136195
superluminal radio sources, probability approach to ballistic models 7−128103
tensor products and probability weights, quantum theoretical appl. 7−95391
triangulation ranging, time delay meas. errors modelling by conditional beta density functions 7−123341
VVER-type assemblies, probability model of flow area blockage under accident conditions 7−129314
wear, composite materials by abrasive particle stream, prediction by statistical probability methods 7−131229

probes
see also electron probes; muon probes; plasma probes
bias probe meas. of electric fields, assessment and improvement 7−80755
cerebral probe implantation method, spatial viewing, simulator using floating line concept 7−114551
contact profile meters, sensor tips control, gauge marks fabrication *(Slovak)* 7−121065
directional sensitivity of unplated slanted-wire probes 7−97663
electrochemical wall shear probes, freq. response in pulse flow 7−111116
electrostatic potential measurement, fixed probe method 7−89230
fiber optic microwave power probe 7−67349
fluidised bed, solids distrib., fibre optic probe study 7−111086
four-wire vorticity probe, meas. in shear flow, critical anal. 7−142415
hot wire anemometer for meas. in boundary layers and wakes 7−123818
hot-wire measuring technique, static nonlinear effects 7−142418
hot-wire probe for turbulent boundary layer vortical struct. 7−142416
hot-wire technique for simultaneous measurement of instantaneous velocities in 3D flows 7−111132
LOGO, science laboratory appls. for students 7−134405
micro ISFET for biomedical research 7−101152
microprobes for Raman and fluoresc. microspectrometry 7−89275
monopole probes for in situ permittivity meas., coaxial line excited 7−121153
NMR magnetometer with low-noise limited oscillator 7−95627
noncontacting optical probe with optical microscope and dual chopper 7−95569
nondestructive resistivity meas. of III-V semiconductors, using four-point probe meter 7−121154
open-ended coaxial-line probe, appl. in dielectric meas. 7−121145
phased array element acousto-electric response meas., diffr. effects 7−123426
photoresistor interface to microcomputer, light-level meter appl. 7−121083
piezoelectric, momentum and kinetic energy of drops meas. 7−123807
pulsed NMR probe-monitoring system 7−102484
remotely controlled crossed coils NMR probe 7−95628
RF EM fields, environmental monitoring for human safety, radiation probe configs. 7−93964
Sea-Bird temp. and cond. probes, dynamic response calibration 7−127545
solid surface, fast photoacoustic probing 7−123371
stenosis determ. in turbulent blood flow using dual-transducer pulsed Doppler US system *(Japanese)* 7−126965
surface process probe, molecular beams 7−144758
tetrafluoromethane plasma etching and diagnostics characts. study using elec. probe method *(Korean)* 7−86498
three-dimensional axisymmetric eddy-current probe coil with ferrite core 7−128601
toroidal ferromagnetic probes, theory and expt. *(Czech)* 7−95626
twin-wire resistance-probe water manometer characts. 7−95542
vorticity measurement using probes based on MHD principle 7−142396

probes continued
$Cd_xHg_{1-x}Te$ Hall probes, for magnetic studies of Nb_3Sn superconductors 7−73377
He leak detection, coaxial probe 7−115971
problem oriented languages *see high level languages*
procedure oriented languages *see high level languages*
process computer control
see also direct digital control
control and meas. of vacuum 7−140706
dialogue system for process planning of prismatic parts 7−123288
EXTRA, real-time knowledge-based alarm system for industrial process control in PWR nuclear power plant 7−103149
MBE artificially layered struct., automatic process control 7−138663
nuclear reactor control rooms, expert systems as intelligent operator aids 7−81910
optical fibre production microprocessor control system *(Czech)* 7−136628
optical thickness monitoring fully automated system for thin film prod. 7−104064
Cr laminate electroplating with microprocessor control 7−119176
process control
see also process computer control
automatic temperature control of developing solution in processing machines *(Russian)* 7−108691
chemical processes, constrained, multivariable, on-line optimisation 7−78458
chemical reactions, optimal regulator control, inverse problem 7−78459
displacement sensors and shaft angle encoder 7−80743
fibre optic extrinsic sensors using micromachined Si 7−82853
fibre optics in control and process engineering, colloquium, London, England (March 1987) 7−80179
fission reactor fuel reprocessing, multipurpose analyser *(Japanese)* 7−122020
on-line mass spectrometry for process analysis 7−100638
optical fibres for sensors, design and fabrication 7−82851
optical spectroscopy, electrolytic conductivity measurement and online process chromatography for online process control 7−100647
subbituminous coal and lignite chemical structure and liquefaction reactivity 7−78589
NH_4NO_3 production, feedforward control of prilling 7−106772
process heating *see electric heating*
Procopiu effect
No entries
product control *see quality control*
production
this heading is restricted to industrial production
see also assembling; manufacture; quality control; reliability
property function for product development 7−133024
production control
see also process control; quality control
nuclear plant piping support system development *(Japanese)* 7−89594
permanent magnet castings, thermomag. treatment regimes optimisation 7−77872
production schedules *see production control*
production testing
AE of graphite with stress concentration *(Japanese)* 7−113847
Decracktor for online surface crack detection of continuously cast hot slabs 7−100482
NDT methods, mech. and EM, review *(Italian)* 7−86534
optical fibre loss meas. system, detector selection for production testing 7−130379
piezoceramic transducers, internal defect detection, NDT method 7−95572
Pt resistance temp. detectors, processing conditions effects 7−128578
program correctness proving *see programming theory*
program listings *see complete computer programs*
program loading techniques *see data handling*
program saving techniques *see data handling*
program testing
algorithms and problems for solutions of some physics problems 7−115699
programmable controllers
for applications, see relevant control application e.g. chemical industry; control of specific variables
see also control systems; programmed control
multi-stage programmable temperature ramp generator for ceramics fabrication 7−128560
streaker air sampler with programmable controller 7−87942
TEXTOR neutral beam injectors, control system 7−122171
programmable logic arrays *see integrated logic circuits*
programmable read-only-memory *see PROM*
programmed control
see also process control; production control
Apple II microcomputer-based programmable temperature controller 7−80767
multi-stage programmable temperature ramp generator for ceramics fabrication 7−128560
testing machine with programmable loading 7−132872
third-generation implanted pacemaker design *(Polish)* 7−145286
programmer training *see training*
programming
see also computer software; logic programming; parallel programming; program testing; systems analysis
animation techniques in microbiological experiments simulation 7−115715
EXOSAT onboard reprogrammability 7−145801
object oriented programming in expert systems, DENVAD, for identifying depositional environment structure 7−79711
physics course, use of programming for teaching 7−88801
Siracus, expert system for ultrasonic nondestructive testing 7−106752
stepwise refinement, example of hearing-testing program *(German)* 7−133495
programming, geometric *see geometric programming*
programming, mathematical *see mathematical programming*
programming languages
CERN school of computing, Renesse, Netherlands (Sept. 1986) 7−108005
programming theory
see also computational geometry
algorithms and problems for solutions of some physics problem 7−115699
programs (computer listings) *see complete computer programs*
project engineering
see also design engineering; electromagnetic compatibility; quality con trol; reliability; scheduling
BWR 540 MW power plant pipe replacement project 7−122026
India, Loktak (Manipur) lake hydroelectric project 7−126548
Meager Creek (British Columbia) geothermal project 7−106884
Thailand hydroelectric power projects, costs and problems 7−126544
Turkish hydroelectric power development 7−126546
projectiles
see also ballistics; missiles; rockets
expendable instrumentation modules pneumatic orbital launchin 7−79811
motion, demonstration 7−95160
motion, maxima problems 7−128220
railgun recoil and relativity 7−128279
projectors (optical) *see optical projectors*
PROLOG
see also PROLOG listings
mass spectral peak interpretation using PROLOG program 7−93435
physics teaching, using PROLOG and models of reasoning 7−115710
PROLOG listings
IR spectrometry, teaching program in LISP and PROLOG 7−80272
PROM
optical write-once phase-change recording in GaSb 7−103771
promethium
see also nuclei with .....
elemental abundance in galactic cosmic rays, appl. as cosmic-ray cloc 7−139871
promethium alloys
No entries
promethium compounds
see also promethium alloys
No entries
prominences (solar) *see solar prominences*
propagation, wave *see wave propagation*
proportional + derivative control *see two-term control*
proportional + integral + differential control *see three-term control*
proportional + integral control *see two-term control*
proportional control
microcalorimeter, gas-solution, heat binding curves determ. 7−80793
proportional counters
see also position sensitive particle detectors
4π(PC)-γ coincidence counting, source efficiency variation for extrapola tion method 7−116797
air proportional counters, water and ethanol vapour effects 7−81868
anode wire aging meas. and possible remedies 7−74356
cathode metal selection, w.r.t. ^{238}U contamination 7−129525
CDF forward/backward hadron calorimeter using proportional tube 7−68131
CDF vertex time projection chamber, prototype flash ADC syster 7−135742
Cherenkov ring imaging detector, prototype tests at SLD expt. 7−74359
CRID/RICH detectors, wire aging of hydrocarbon gases with TMA additions 7−74357
DELPHI barrel electromagnetic calorimeter flash ADC based digitize 7−81853
Delphi time projection chamber, contiguity trigger 7−109663
digital X-ray imaging system using MWPC 7−135745
discriminator for proportional drift detector 7−109665
drift chamber, 2D, construction and performance *(Chinese)* 7−122305
drift chamber, 2D, delay-line read-out *(Chinese)* 7−122306
drift chamber in DELPHI expt., variable drift velocity study 7−74369
drift chamber track finding and fitting, vectorisation 7−135735
drift chambers for D0, waveform digitizers 7−109662
drift chambers for SPES4 spectrometer 7−109612
drift chambers with long drift paths, pulse shape simulation 7−135740
drift tube, accurate two-dimensional readout using time division an vernier pads 7−81872
drift tube time resolution improvement, use of pulse trailing edg 7−129521
drift-tube counters and readout electronics of VENUS muon detecto 7−139932
energy-sensitive counters for γ dose-rate meas. 7−68024
escape-gated two chamber proportional counter for Auger electron an X-ray meas. 7−116789
FASTBUS readout processor, MC68020 based for time projectio chamber 7−68167
FRAMM spectrometer, vertex detector geometrical reconstruction pro gram 7−74380
gas mixtures, Monte Carlo calcs. of electron transport 7−109618
gas scintillation drift chambers with wave shifter read-out for hard X-ra astronomy 7−72307
gas scintillation proportional counter for the X-ray astronomy satellit SAX 7−72308
hadron calorimeter with proportional tubes and pad readout 7−68132
high density lead glass tubing projection chamber, operation and app 7−74363
high energy accelerators, perspectives for experimental apparatus, semina San Minato, Italy (May 1986) 7−108021
high rate proportional chamber, operation and appls. 7−68135
High-density Projection Chamber, production process and calibratio 7−109627
High-density Projection Chamber EM calorimeter, charge transmissio props. 7−81900
hodoscopic module for ANI expt. complex 7−129522
JADE vertex detector at PETRA, meas. of short-live particles 7−96477
LEP fastbus data acquisition system calibration system for MWPC *(Spar ish)* 7−81906
low background telescope system for $^{12}C(n,\alpha)$ meas. 7−81891
low-background β-counting system, calibration, environmental samplin appl. 7−103331
low-temperature proportional counters, recent developments 7−74364

proportional counters continued
microdosimetric radiation protection instruments, intercomparison, n and γ detection 7−68033
mini drift chamber, characteristics 7−135754
multicell drift chambers, performance and construction 7−96478
multistep proportional counter, performance, X-ray astronomy appl. 7−115234
multitube drift chamber for LHC or SSC 7−109636
multiwire drift chamber, charged particle track simulation, reson. multiphoton ionisation technique 7−89879
multiwire gas proportional counter for soft X-ray position detection 7−103339
multiwire proportional chambers, gain reduction due to space charge 7−74343
multiwire proportional counter with spherical drift chamber for protein crystallography with X-rays and gamma-rays 7−109610
MWPC for high flux beam monitoring, design and performance 7−96464
MWPCs, automatic wire-winding machine 7−135737
OPAL vertex detector with stereo wires, track fitting 7−135753
optical, proportional, continuously operating avalanche chamber 7−116780
Penning mixtures in cylindrical proportional counter, quenching 7−109609
position sensitive counter, characteristics 7−89861
position sensitive counter, partially resistive anode wire, characteristics 7−89884
position sensitive multiwire detector, unidimensional, development and image resolution 7−74351
position-sensitive, elimination of end effect, ^{14}C activity meas. 7−135785
positron emission tomograph simulation, high spatial resolution, based on multiwire proportional chambers, imaging capabilities 7−145213
quality factor determ. using proportional counter microdosimeters 7−74219
radial semiconductor drift chambers, step noise effects on energy resolution 7−81871
rectangular drift tube for muon identifier 7−109648
resistive wire proportional detectors for Q3D mag. spectrograph 7−116782
resonance tensiometer for multiwire chambers *(Spanish)* 7−81852
scintillation proportional chamber, high-press. gas, detect. efficiency 7−71859
single-wire drift tubes, response to variations in wire diameter and gas filling 7−96468
time-to-amplitude convertor for electroluminescent drift chamber 7−129529
Topaz detector, data acquisition system, timing for distribution and interrupt control 7−68176
Topaz time projection chamber, signal processing 7−68175
tubes design with 30 mm diameter 7−81880
two-dimensional automated X-ray detector for diffraction experiments 7−109653
UA1 central detector at present and future luminosity (ACOL) 7−109635
wire chamber aging, anode material depend. 7−74355
wire chambers, effects of end plates on resolution 7−109613
wire chambers, extended parametrization of gas amplification 7−141395
wire chambers as transition radiation detector for cosmic ray muons 7−74367
wire gaseous coordinate detectors and their applications in biomedical research 7−89863
wireless time projection chamber, prototype testing 7−74358
X-ray attenuation factors meas. in gaseous Xe, using drift chamber 7−83409
Al drift-tube counters in VENUS, Monte Carlo simulations of delta ray effects 7−139933
Ar, liquid time projection chamber, large scale purification system 7−116779
BF_3 proportional chambers, calibration and use in Frascati Torus 7−74071
BaF_2-TMAE detector for PET appl. 7−79117
^{14}C gas-proportional-counting method, appl. of pulse-shape discrimination 7−135769
He proportional tubes, mag. monopole search 7−81877
U calorimeter with proportional chamber readout, Monte Carlo simulation study 7−74374
Xe, high pressure time projection chamber, design and construction 7−135741

proprioception *see mechanoception*

propulsion
see also aerospace propulsion; electric propulsion
cavity with single exhauster, fluid motion by electro-thermally ablated gas press. 7−69478

prospecting (geophysical) *see geophysical prospecting*

prosthetic power supplies
batteries for artificial hearts 7−71934
heart, elec. artificial, testing and characterising a portable power source 7−87373
neurological prosthesis power supply: inductive RF link with improved performance 7−114555

prosthetics
see also artificial limbs; artificial organs; handicapped aids; orthotics; sensory aids
above-knee, swing phase design, simulation 7−133513
aortic valve prostheses, mech., 3D visualisation of axial vel. profiles downstream 7−107311
artificial heart valves hydrodynamics, photochromatic visual representation study 7−101142
artificial hip joint, research and development of advanced bio-composite materials 7−133506
auditory prostheses: implantable and vibrotactile devices 7−107309
auditory prosthesis, inductive RF link 7−107316
bileaflet mechanical heart valves, in vitro pulsatile flow visualisation studies 7−87382
biocompatibility testing of materials and devices for cardiovascular use 7−79142
biomaterials, coupling cell factors on anatomical substitutes with proclivity for cell lining 7−87384
biomedical engineering conf., Fort Worth, TX, USA (Nov. 1986) 7−80184
bone, cattle, phases at elevated temp., prosthetic implant appl. 7−79135

prosthetics continued
bone cement, load-carrying capacity 7−114563
β-$Ca_3(PO_4)_2$ bioceramics, sintering with $Na_4P_2O_7.10H_2O$, biological compatibility obs. 7−113490
caged-ball heart valve, numerical study of turbulent blood flow using a boundary-fitted coordinate system 7−71932
cardiac valve prosthesis, Duromedics, in vivo performance obs. 7−87383
cochlear implant, system design 7−107310
cochlear implant devices for the profoundly hearing impaired 7−107308
cochlear implant patients, matching acoustical props. of speech with elec. stimulation freq. boundaries 7−127044
cochlear prostheses rel. to elec. stimuli encoding on the VIIIth nerve 7−107074
cochlear prosthesis, multi-channel, computer-assisted fitting 7−133512
conductive polymer electrodes for neural prosthetic applications 7−79143
CT, 3D internal structures modelling, appl. using CAD technique 7−114480
dental porcelain powders, ^{238}U and dose induced in oral mucosa 7−139384
dental prostheses, mag. devices appl. 7−114562
femoral prosthetic stem, elastic, mech. evaluation 7−71931
femoral stem prostheses, press-fit, strains and micromotions 7−133507
fluid filled void loaded in compression, emanating cracks: bone-implant interface 7−114348
hand function control, neuroprosthesis implementation, example of effective teamwork 7−79146
heart valve, disk-type, numerical model for nonNewtonian blood flow 7−78918
heart valve prosthesis, malfunction diagnosis by radionuclide regurgitant index 7−87175
heart valve sounds, approach for anal. 7−87125
heart valves, energy loss, theoretical evaluation 7−79132
heart valves, in vitro study of Bjork-Shiley monostrut and Duromedic types 7−79133
heart valves, in vitro testing methods 7−87380
heart valves, laboratory testing methods and results 7−107306
heart valves, mech. bileaflet vs. titling disc, hydrodynamic advantages and disadvantages 7−107307
heart valves, pulse duplicator model for testing 7−87381
heart valves, pulse duplicator system design, computer simulation 7−114558
hip prostheses, anatomic, fatigue props. of cast and heat treated Ti-6Al-4V alloy 7−145276
ion beam applications 7−79138
joint replacement design, computer-aided draughting system 7−145277
knee endoprosthesis design rel. to gliding index minimisation 7−145117
knee replacement, load transfer evaluation, test methodology 7−133514
labial-doubles-recognition method for substitution hearing aid 7−93778
mechanical heart valves, comparison of 5 valves in pulse duplicator system with flexible vessels 7−79129
multielectrode neurological prostheses for restoration of motor function, develops. 7−87368
neuroprostheses, open and closed-loop control of functional neuromuscular stimulation hand grasp 7−101149
orthopaedic applications of C fibres 7−79130
orthopaedic biomaterials, emerging issues 7−79144
pericardial bioprosthetic leaflets, QC method for mech. props. 7−87385
polyepoxy matrices DGEBA-DDM and DGEBA-IPD: mech. props. and biocompatibility 7−145275
polyether urethane urea, albuminated, lectin immobilised, tissue compatibility 7−114554
polylactide fixation plates and screws, mech. and biological behaviour 7−114564
polymeric materials, hierarchical struct. 7−111431
rehabilitation R&D progress reports (1986) 7−94023
speech prosthesis system for laryngectomees using 'electropalatograph' and a small keyboard 7−101140
systems for the disabled, conf., London, England (Mar. 1987) 7−80178
teeth, sputtered metal films for preventing dental caries 7−79137
velopharyngeal function in speakers with cleft palate with and without prostheses 7−107094
ventricular tachyarrhythmias, treatment using implanted devices 7−79145
vibrotactile skin stimulation based wearable multi-channel auditory prosthesis *(German, English)* 7−87363
Al_2O_3 ceramics, surgical implant appl., hardness, microstruct. depend. 7−86306
C/graphite fibre reinforced PMMA for implant fixed-dental bridges 7−87366
Ti alloys, ion implantation, medical appl. 7−104788
Ti alloys, ion implantation, wear, fatigue and oxidation resist., biomaterial appls. 7−138902
Ti-Al-V alloy, for porous-coated implant devices, post-sintering treatment effect on mech. props. 7−86254
Ti-Al-V/polyethylene tribological couple, wear behaviour, effect of metal surface prep. and N implantation 7−79139

protactinium
see also nuclei with .....
No entries

protactinium compounds
No entries

protection
see also alarm systems; corrosion protection; power system protection; protective coatings; radiation protection; safety
JET neutral injectors, power supply and protection system 7−122157
measuring instruments, explosion-proof pressurized housings *(Polish)* 7−67299
measuring nets for environmental protection *(German)* 7−133173
radiation therapy accelerators, elec. and mech. safety, TRS 86 standard 7−114494
TFTR neutral ion beam source, power supply arc modulator for system protection 7−81841
UHV valve protection system for National Synchrotron Light Source 7−134749
wind protection for microphones *(German)* 7−130498

protection of software, legal *see industrial property*

protective coatings
see also corrosion protective coatings; wear resistant coatings
adhesive compositions and reinforced polymer coatings based on them, damping props. 7−78371

protective coatings continued
boride diffusion coatings, operational charact. improvement by laser treatment 7−100448
conformal coating of PC boards for enhancement of environmental resistance 7−113736
detonation gun spraying, review 7−144270
electrical characteristics on metals 7−125162
epoxy coatings in nuclear power plants, penetration by contaminants 7−129362
epoxy-acrylate resin, primary coating charactn. for optical fibre 7−68871
first wall C coating, H conc. effects 7−135553
glass-based, to protect GeTe, PbTe, PbSe, from sublimation *(Russian)* 7−113810
ICRH antenna Faraday shields, sputtering, RF waves effect 7−135554
impurity, deposition on ALT-1 limiter heads in TEXTOR 7−75851
JAERI research on wall material development, surface technology 7−135555
magneto-optical disc storage using polycarbonate substrates 7−110287
magneto-optical discs, amorphous C dielectric coatings 7−110288
mechanical properties, ultra low load Vickers hardness meas. in SEM 7−106735
metal-coating system, elec. cond. method for thermal stability investig. 7−93228
mirror protection using transparent lacquers 7−75100
NDE of thickness, adhesion, porosity 7−126379
optical fibre coating requirements and developments 7−68870
optical fibre primary coating charactn., thermomech. props. 7−68871
plasma sputtering for protective coatings, status and devel. trends *(German)* 7−138654
plastic lens coatings evaluation by abrasion tester 7−90750
plastic ophthalmic lenses, coating evaluation 7−90751
plastic ophthalmic lenses, vacuum coated, abrasion testing 7−90752
polymer-coated optical fibres, mechanical reliability considerations 7−142027
polyurethane foams, rigid, preparation for nonflammable water-resistant coatings *(French)* 7−100173
polyvinyl alcohol sizing removal from C fibres, XPS 7−78297
reflective and refractive solar concentrator materials development 7−71580
silicone optical fibre coatings, UV curable 7−136592
steel, austenitic stainless, silicide coatings for carburization protection 7−86465
steel, austenitic stainless, SiO_2 coatings, plasma assisted vapour deposition, carburisation prevention 7−86463
steel, diffusion coating form. process 7−138903
surface alloy production by laser irrad. *(French)* 7−93184
surface modification by plasma interaction, conf., Princeton, NJ, USA (May 1986) 7−102004
surface modifications, coating preparations, by plasma and thermal processes 7−106650
TEXTOR, films deposited by wall carbonisation, characterisation 7−75813
thermal barrier ceramic oxide coatings, survivability 7−86389
thermal barrier coatings, current status overview 7−77796
Al coated optical fibres, mech. and optical props. 7−68878
Al-Zn, electrodeposition on steel substrates from organic electrolytes *(French)* 7−144309
AlN coatings, plasma enhanced CVD on graphite substrates 7−71074
BN coating films, prep. using simultaneous ion implantation and vapour deposition, characterisation 7−92033
Bi protective coating on Cu, fracture kinetics 7−113700
C coating, in situ in JIPP T-IIU Tokamak 7−75893
C coating films produced by ECR plasmas 7−135552
C coatings, ion impact effect in double plasma device 7−106340
C coatings from voltage assisted arc for nuclear targets 7−109579
C film on wall of JIPP-T-IIU tokamak, H, D content 7−103179
C first wall coating, simulation expt. 7−122112
a-C:H protective coatings for a-Si:H photoreceptors 7−97110
Cr_2O_3, laser deposited on austenitic stainless steel, creep strength enhancement 7−138778
Cu-Ni-Cr, multilayer electroplated coatings, NDT methods and devices 7−132893
Fe, diffusion coating form. process 7−138903
Fe-Cr, diffusion aluminide coating 7−78377
$KTiO_3$ whisker filled nylon 12 as optical fibre secondary jacketing material *(Japanese)* 7−117342
Li-Ti-Cu, composites, sputtering and redistribution behaviour in tokamak environment 7−135563
Ni-Al ion beam mixed surface films on Ni, effect on slip band distribution and morphology 7−76274
SiC coated graphite limiter in Alcator C, redeposition of plasma eroded material 7−103175
SiC coating formation by pyrolysis in HF glow discharge 7−78363
TiC, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
TiC coatings, D ion bombardment, thermal cycling, fatigue, comp. analysis 7−84046
TiN based protective films production with use of cylindrical low energy ion gun and charact. 7−71040
TiN, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
VBe_{12}, sputtering and redistribution behaviour in tokamak environment 7−135563
ZrC and ZrO_2 protective coatings, ESCA, SEM and EDAX studies 7−106704
ZrO_2 thermal barrier coating on Ni base superalloy, durability rel. to bond coating *(Korean)* 7−132776

proteins
see also gelatin
2D gel electrophoresis images comparison, algorithm design and implementation 7−71945
2D NOE spectra, simplification by ^{13}C labelling 7−78755
acetylcholinesterase, free and erythrocyte membrane-bound, comparative study on therapeutic US effects 7−126920
acrosomal protein, elec. responses induced in eggs similar to those induced by sperm 7−126769
ACTH, dynamics, fluoresc. anisotropies and lifetimes determ. 7−129767
actin, crosslinking, network connectivity and crit. gel point, probabilistic theory 7−114186
actin/α-actinin gels, mech. props. rel. to deform. rate 7−71809

proteins continued
acyl carrier protein, valine and leucine side-chain proton reson. assig ment, 2D RELAY 7−126718
adsorbed on Ag electrodes and hydrosols, enhanced combination scatt spectra 7−126711
albumin, bovine, nonequilib. facilitated CO_2 transport 7−86930
albumin, secondary struct., FT IR spectrometric obs. 7−86908
albumin, struct and activity, hydration effects, integrated optics and Raman spectra study 7−68496
albumin flux, transendothelial, evidence against asymmetric transpo 7−100834
albumin flux barriers permeability in lungs of sheep resuscitated fro haemorrhagic shock 7−100835
alkaline phosphatase, phosphoresc. quenching by O_2 and NO, rel. protein struct. inflexibility 7−133218
alpha-helix, solitons, anal. 7−78719
amino acid assignments, millimolar solutes, inhomogeneous part elimin tion of PMR spectra 7−71941
amino acid residues in proteins, aq. soln., homonucl. relayed coheren transfer expts. 7−82222
amino acid sequences in proteins, multivariate statistical anal. 7−114178
amino acids, identification using UV reson. Raman excitation profil 7−68323
antibody-protein binding mechanisms 7−133197
antifreeze glycoprotein, ice growth in supercooled solns. 7−119739
apolipoprotein A-1-dimyristoylphosphatidylcholine recombinants, bounda lipids, Raman obs. 7−71694
aqueous solutions, fluctuations in intensity of light scatt. 7−144965
assemblages, intrinsic defect states 7−144961
atom coordinates calculation from incomplete and incorrect distance da 7−78741
bacteriophage, fd, coat protein, backbone dynamics, solid-state and so ^{15}N NMR spectra 7−71687
bacteriophage λ tail length, determ. by protein ruler 7−93628
bacteriophage Pf1 coat flexibility, struct. temp. depend., dynamic lig scatt. study 7−78746
bacteriorhodopsin, deionized form, electrooptic study 7−144991
bacteriorhodopsin, FTIR obs. of water induced conform. chang 7−93638
bacteriorhodopsin, glucose-embedded and frozen-hydrated purple me brane, difference Fourier anal. 7−144957
bacteriorhodopsin, kinetic studies, reson. Raman spectra 7−78777
bacteriorhodopsin, photochemical cycle, ps time-resolved reson, Ram spectra anal. 7−86915
bacteriorhodopsin, pS conformational intermediates during photocyc vibr. Raman spectra study 7−68485
bacteriorhodopsin aggregation state in lipid vesicles, rel. to large sca nonproton ion release 7−133245
bacteriorhodopsin as a light-driven proton pump, Halobacterium halobiu pH obs. 7−93675
biochemical applications of Fourier transform infrared spectrosco 7−71675
biological molecules, design and computer simulation 7−133193
biomembrane transport, quantum mechanical model 7−93693
bleomycin, DNA degradation, ^{18}O incorporation into glycolic ac 7−106976
blood, diagnostic method using astronomical software 7−79120
blood plasma protein water protons, NMR relax. in animals in expt. car nogenesis 7−144966
blood plasma proteinases, inhibitors at early stages of acute radiati sickness of monkeys *(Russian)* 7−133390
blood serum, high density lipoproteins, crystn. effects 7−139181
bovine pancreatic trypsin inhibitor, sidechain rotational isomerisation, s vent effect, dynamic simulation 7−93618
bovine serum albumin, α-helix coil content, heat denaturation, Four transform IR spectra 7−141727
brain microtubules, flow orientation obs, by linear dichroism 7−86932
brush border intestinal enzymes after multiple daily fractionati 7−93823
bungarotoxin, struct., multistep modeling using crystal coords. and X-r diffr. data 7−78735
calmodulin-binding peptides, fluoresc. props. rel. to α-helical periodic 7−126720
carbonic anhydrase B, microcalorimetric study of heat of denaturi 7−144972
carbonmonoxy haemoglobin, photolysed, local haeme environme dehydration effects, reson. Raman spectra 7−78774
cardiac cells, cultured, new-born rat, large conductance single chlori permeable channels 7−93706
casein hydration, TSDC studies 7−139184
T-catalase, 3-D struct. 7−104710
CCD-based X-ray detector for protein crystallography 7−79156
cerebrum, rat, effect of prenatal X-irrad. on chemical components DNA and DNA-protein crosslinks 7−93826
ceruloplasmin, trigonal cryst. struct., rot. function, X-ray diffr. study w 6 Å resolution 7−106967
chiral protein-nonpolar solvent interaction, thermodynamic behavi 7−110010
chlorophyll, fluoresc. decay kinetics rel. to P starvation of chlorella ce 7−107001
chlorophyllide in apomyoglobin, nonphotochemical hole burning in prot matrix 7−71677
chromatin superstructure and condensation mechanism, X-ray soln. sca and hydrodynamic obs. 7−133202
chymotrypsin, enzyme activity and conform., pH and pressure effec Raman spectra study 7−68498
chymotrypsin cryst., enzyme interaction with substrate, Raman microsco study 7−92688
clustered proteins, fractal structures, laser scatt. study *(Korean)* 7−1449
coenzyme B_{12}, base-off form, soln. behaviour, 2-dimens. NMR 7−74671
coenzyme F_{430}, nickel hydrocorphinoids, structural changes, Raman sp troscopy 7−133196
collagen, inelastic neutron scatt. study of LF vibr. modes 7−126717
collagen alignment in ligaments, Fourier domain directional filteri method for anal. 7−127052
collagen membranes, diffusivity of ^{125}I-labelled macromols: diffusi mechanism and adsorpt. effect 7−114200
collagen of marine invertebrates, X-ray diffr. obs. 7−126704
collagen peptides, high resolution ^{13}C NMR spectra 7−139202
combinatorial optimisation using simulated annealing, protein folding ap 7−133198

proteins continued
conference, Marineland, FL, USA (Mar. 1986) 7—72693
conformation, secondary struct., reference intensity profiles method, Amide I and III bands, IR Raman spectra anal. 7—68493
conformation prediction by energy minimisation, build up procedure, revised algorithms 7—144955
conformational anal., rel. to protein folding, mol. recognition and mol. design 7—133203
conformational energy function hessian calc. algorithm 7—119710
conformational relaxation of a protein globule after rapid local perturbation 7—144950
connective tissue proteins and lung mechs. in diabetic Bio-Breeding/Worcester Wistar rats 7—126871
coordinate X-ray diffractometer for high resolution studies 7—80949
crambin, crystallographic *R* factor refinement by molecular dynamics 7—86906
crystal structure, soln. with model obtained from NMR interproton distance restraints 7—114182
crystal structures, least squares refinement program 7—139187
α-crystallin proteins, colloidal dispersion dynamics, photon correl. spectroscopy study 7—114167
α-crystallin proteins, colloidal dispersion struct., small angle X-ray scatt. study 7—114175
crystallins, α-, β- and γ-, bovine, refr. increments obs. 7—145025
crystals, negatively stained 2D, electron-irradiation induced flattening 7—133215
cyanomethaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7—78779
cytochrome C, directional deposition, reductive and physiological activity *(Japanese)* 7—78737
cytochrome c, horse and tuna, ferric forms, proton hyperfine resonance assignments using the nuclear Overhauser effect 7—133219
cytochrome c, lineshape anal., reson. Raman spectra 7—78762
cytochrome C, spin and REDOX equilib. at Ag electrode/electrolyte interface, SERS spectra anal. 7—78778
cytochrome c, tunnelling disorder mode, reson. Raman spectra 7—78775
cytochrome c in surfactant inverted micelles, conform., redox props. 7—126691
cytochrome c oxidase, catalytic intermediates, reson. Raman spectra 7—78761
cytochrome C oxidase, crystalline membranous struct., electron density profile, electron microscopy and X-ray diffr. study 7—78744
cytochrome complexes, stretching vibrs. correl., Raman spectra 7—78767
cytochrome $P450_{cam}$, bound dioxygen, reson. Raman detect. 7—78769
cytochrome P-450, cerebral, quantitative meas. by second derivative spectrophotometry 7—145300
cytochrome P-450 metabolism, organometallic aspects 7—93620
cytochrome-c, quasi-elastic light scatt., reson. enhancement 7—78773
cytochrome-c anomalous reson. enhanced quasielastic light scatt. 7—133224
dehydrogenase activity in tissues of Microtus oeconomus, influence of chronic exposure to γ-radiation *(Russian)* 7—133385
deoxyhemoglobin soln., sp. ht. temp. depend. meas. 7—144947
diffusion, conc. dependence, free vol. diffusion theory 7—133184
digital signal analysis for protein design 7—100805
dihydrofolate reductases, trimethoprim ligand binding 7—133192
dipolar dielec. relax., thermally stimulated depolarisation studies 7—99665
displacement current in biological membranes due to proton motion on light excitation 7—133249
DNA, structures and interactions with proteins, UV reson. Raman spectrosc. 7—71692
DNA-protein cross-links, form. mechanism on γ-irrad. of chromatin in water solns. *(Russian)* 7—93648
DNA-protein crosslinks, induction in hypoxic cells by X-rays, possible contrib to cell lethality 7—93682
DNA-protein interactions, ^{15}N-labelled P22 c2 repressor for NMR studies 7—133187
dose-survival relationship following rat kidney irrad., influence of protein nutrition 7—79011
effect on retention of polyethylene glycols on cellulose acetate membranes 7—93375
egg cells, mouse, late division kinetics rel. to protein synthesis after X-irrad. 7—133371
egg white, US spectroscopy using plano-concave resonator method *(Japanese)* 7—126913
elastase complex with β-lactam inhibitor, crystallographic study at 1.84 Å resolution 7—93629
elastin, model chains, thermoelastic props. 7—87066
elastoidin, mode of fracture rel. to strain rate 7—133350
electron density, maximum entropy calc. with native and single isomorphous replacement data 7—139190
electron tunneling through covalent and noncovalent pathways 7—86885
electron tunnelling paths, quantum path integral Monte Carlo method 7—126702
electrostatic interaction modelling in globular protein function 7—78721
electrostatic interactions role in stabilisation of α-helical peptides 7—86897
enzymatic changes, early, in healing mandibular periosteum and bone, irrad. effect, histochem. study on rats 7—78978
enzyme, diffusion of substrate to active site, computer simulations 7—126701
enzyme electrode-based glucose sensor, long-term in vitro operation 7—127028
enzyme induction with regulated diffusion, chaotic dynamics 7—114162
enzyme inhibitor, evaluation of intrinsic binding energy from a H_2 bonding group 7—78722
Enzyme Investigations, CAI/simulation package for Apple II series 7—115716
enzyme-immobilising membrane, solid state biosensors using thin-film electrodes 7—127029
enzymes, NMR studies review 7—100814
enzymes, UV inactivation rel. to form. and reactions of free radicals of proteins 7—145154
epidermal growth factor, human, soln. struct. obs. 7—114179
erythrocyte ghosts, struct. photomodification by long wave UV light and psoralen 7—93822
erythrocyte Na^+/K^+ ATPase, human, temp.-specific inhibition by 2450 MHz microwave radiation 7—93808
erythrocyte superoxide dismutase, bovine, anion binding, nucl. relax., ^1H NMR 7—119724
proteins continued
erythrocytes, microwave irrad. effects: temp. and O_2 depend. of protein shedding 7—93810
F_1-ATPase complex and ATP synthesis on illum. with visible light, EPR obs. 7—139201
F-actin and microtubule suspensions as indeterminate fluids 7—114341
F-actin filaments of normal and athyreotic heart myocardium, structural parameters 7—106960
F-actin solutions, nonideality of vol. flows and phase transitions in response to osmotic stress 7—93619
ferredoxin II from Desulfovibrio gigas containing Fe_3S_4 cluster, Mossbauer spectra 7—144971
ferrocytochrome c, ^{57}Fe NMR chem. shift anisotropy meas. 7—109936
fibroblast protein synthesis, freq. dependence of elec. field modulation 7—126909
fibronectin, pulmonary, quantitative alterations following X-irrad., mouse obs. 7—79008
filamentous bacteriophage fd, interactions between DNA and coat protein in struct. and assembly 7—100795
flavoprotein intermediates, reson. Raman spectra study 7—68487
flavoproteins on Ag colloid, SERS 7—99821
fluorescence anisotropy decay, resolution enhancement, anisotropic rots. and protein dynamics appl. 7—93635
fluorescence decay, interpretation using continuous lifetime distribs. 7—100807
fluorescence photobleaching recovery, delayed, implications for cell membrane system studies 7—94028
furylacrylolyl chromophore, active site environment, UV reson. and IR difference Raman spectra anal. 7—68490
g-factor tensor anisotropy, ESR spectra 7—103702
gap junctions and development 7—93692
gelatin gel, surface layers struct., electron microscopy obs. 7—144951
genetic engineering for protein engng. *(Japanese)* 7—133523
glass-like properties 7—86907
globular, antiparallel β structure, spatial motifs 7—93625
globular, Raman spectra, automated recording system 7—78758
α-globulin, secondary struct., FT IR spectrometric obs. 7—86908
glucagon, dynamics, fluoresc. anisotropies and lifetimes determ. 7—129767
glucose-6-phosphate dehydrogenase and adenosine triphosphate in CaNT mouse tumour, effect of X-irrad. 7—101013
glycine, peptide plane and side chains orientation, ^{13}C-^{15}N dipole-dipole couplings, NMR meas. 7—126719
glycogen phosphorylase b, ms X-ray diffr. and electron density map from Laue photographs 7—139208
gramicidin, induced H_{II} phase change in phospholipid bilayer, ^2H and ^{31}P NMR meas. 7—74660
haeme proteins, Ni-reconstituted, axial coordination, Raman difference and transient spectra 7—78766
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7—78759
haemoglobin Glycera, ligand dissoc. rates correl., reson. Raman spectra 7—78768
haemoglobins, monomeric, stretching vibrs., reson. Raman spectra 7—78765
haemoglobins, oxygenation and deoxygenation, reson. Raman study 7—78724
heat-stress proteins of rat lung endothelial and mammary adenocarcinoma cells 7—93659
horseradish peroxidase, catalytic intermediates, reson. Raman spectra 7—78761
horseradish peroxidase, electronic and mol. struct., PMR and NOE study 7—68478
horseradish peroxidase, stretching vibrs. correl., Raman spectra 7—78767
horseradish peroxidase intermediates, time-resolved Raman spectra 7—78763
immunoglobulins, aggregation kinetics, light scatt. obs. 7—78718
iodothyronine, ^{60}Co-gamma irradiation, IR and UV spectra 7—92699
iodotyrosines, ^{60}Co-gamma irradiation, IR and UV spectra 7—92699
α-keratin, horn, stiffness, struct., water effect, Voigt estimate 7—107139
Lac repressor headpiece structure, NMR, restrained mol. dynamics calcs 7—133191
Lac repressor-lac operator complexes, soln. X-ray scatt. and electrophoretic obs. 7—93627
α-lactalbumin, bovine, tyrosine group behaviour, Raman effect 7—144953
β-lactamase from Staphylococcus aureus PC1 at 2.5 Å resolution 7—119716
L-lactate oxidase-old yellow enzyme interaction, reson. inverse Raman study 7—133226
β-lactoglobin, solns., ultrafiltration protein assoc. effects 7—119705
laminin, pulmonary, quantitative alterations following X-irrad., mouse obs. 7—79008
lenses, human, protein characts., in vivo studies by laser light scatt. spectroscopy *(Japanese)* 7—78841
leucine, fast ion induced erosion, electronic stopping power depend. 7—119809
ligand-enzyme binding electrostatic effects 7—114168
lipid bilayer polypeptide interactions, mol. dynamics simulation 7—119741
lipid bilayers, planar, gating processes of channels induced by colicin A, C-terminal fragment and colidin E_1 7—93705
lipoprotein flux rates between plasma and arterial intima in vivo in man, quantification method 7—93896
lipoproteins, high-density, struct. in arterial and venous blood in myocardial infarct 7—87298
α-loctalbumin, tyrosine doublet intensity ratio, pH and Co^{2+} conc. effects, IR Raman spectra anal. 7—68491
long-range cooperative site binding at linear lattice, model development 7—93631
long-range couplings, double quantum spectrosc. detect. 7—78754
lung cells, Chinese hamster, hyperthermia-induced inhibition of respiration and mitochondrial protein denaturation 7—93656
lysosomal proteinase activity in the small intestine and liver of irrad. animals affected by heat *(Russian)* 7—133239
lysozyme, aq. solns., H bonding, low freq. Raman spectra study 7—68319
lysozyme, classical Raman tensor, four channel divided cell technique, Raman spectra anal. 7—68494
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7—68492
lysozyme, deuterated matrix, 1 H clusters, dynamic nuclear polarisation, NMR anal. 7—79152
lysozyme, hen egg white, 2D heteronuclear chem. shift correl. 7—68479
lysozyme, interaction with linear polyelectrolyte in soln., polarised luminesc. obs. *(Russian)* 7—85839

proteins continued
lysozyme, lytic activity towards M. lysodeikticus, electrostatic interactions anal., electrophoresis meas. 7−78804
lysozyme, struct.-activity relationship, iodination effect, IR Raman spectra anal. 7−68495
lysozyme in buffer solns., thermal inactivation 7−126689
macromolecular crystals, overall anisotropy in diffr. 7−78726
macromolecular dynamics simulations, interpretation of expts. 7−133190
macromolecule mol. wt. or chain length meas. using computer-controlled digitising tablet and gel electrophoresis of proteins or nucleic acids 7−133520
masses, possible existence of a system of specific values 7−139182
melanoprotein granules in pigmented epithelium of the eye, Fe^{2+} ions binding, γ-resonance spectroscopy obs. 7−126692
membrane protein, struct. derived from rot. diffusion study 7−78731
membrane protein layer, thickness rel. to surface charges density 7−144989
membrane proteins, lateral interactions, implications for gap junctions organisation 7−139221
membrane proteins, lateral interactions, valid estimates based on freeze-fracture electron microscopy 7−139220
membrane proteins, native, conformational dynamics, Mossbauer spectroscopy study 7−144993
membrane sheet suspensions containing proteins, differential absorption flattening, sonication effect 7−93660
metalloproteins, g-strain effect, EPR spectra simulation 7−106977
metalloproteins, mol. mechanics calcs., empirical pot. function 7−78717
micro-size polyacrylamide gel electrophoresis system 7−145301
microchondrial actin like, tryptophan fluoresc. spectra 7−126712
molecular envelope, calc. using reciprocal space method with Wang algorithm 7−78727
molecular graphics, appl. of algebraic topology 7−144958
molecular stability rel. to struct. *(Japanese)* 7−133205
muscle proteins from rat hindquarters, increased catabolism as a manifestation of radiation myopathy 7−126937
Myelin, interaction forces meas. 7−93668
myelin membranes, vibr. spectra and struct. 7−119742
myeloperoxidase, human leucocyte, oxidation state, pH depend., Raman difference spectroscopy 7−93616
myoglobin, Aplysia limacina, tryptophans, fluoresc. decay, energy transfer 7−93634
myoglobin, binding to Xe, free energy, mol. dynamics simulation 7−133195
myoglobin, ligand bonding geometry, distal histidine role, XANES method meas. 7−78747
myoglobin, lineshape anal., reson. Raman spectra 7−78762
myoglobin, mol. dynamics anal., rel. to multiple conformational states of proteins 7−86904
myoglobin, photodissoc., reson. Raman spectra 7−78764
myoglobin, secondary struct., FT IR spectrometric obs. 7−86908
myoglobin structural transitions, degrees of freedom, algorithmic methods, reaction paths 7−138956
myohaemerythrun, location of FE and S atoms from anomalous scatt. meas. 7−86894
myosin and myosin rod, threads, struct. study of gels 7−100797
myosin ATPase, activity in aq. sucrose solns., viscosity effect 7−126690
myosin filaments, 1-headed, sliding movement of single actin filaments 7−86889
myosin heads in oriented synthetic filaments, diffuse X-ray scatt. obs. 7−100808
nerve action, electromech. theory of permeability, Ising model of protein sites 7−86949
netropsin, binding with kinky DNA, conform. anal. 7−78736
neuroblasts, genetically differing thermosensitivity, heart shock protein expression *(Russian)* 7−144978
nitridomanganese protoporphyrin, form., triple bond detect., reson. Raman spectra 7−78770
4-nitrocatechol-enzyme complexes, reson. Raman spectra study 7−68486
nitrogenase MoFe protein, struct., X-ray diff. studies 7−139197
nitrosyl manganese(II) piperidine protoporphyrin dimethyl ester, isotope substitution, reson. Raman spectra 7−78771
nitrosyl manganese haemoglobin, isotope substitution, reson. Raman spectra 7−78771
nitrosyl manganese myoglobin, isotope substitution, reson. Raman spectra 7−78771
NMR fingerprinting in H_2O soln., 2-dimens. longit. 2-spin-order technique 7−74792
nucleic acid and protein database sequence searching, parallel processing 7−141729
octanoyl-acyl carrier protein, leucine spin system, RELAY expt., strong coupling effects 7−82223
oligomeric proteins, accessible surface area and stability 7−133210
oxyhaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7−78779
oxyhaemoglobin, adsorbed on colloidal Ag, surface enhanced reson. Raman obs. 7−93644
pancratic elastase, porcine, and acetyl-alanine-proline-alanine complex, mol. dynamics simulation 7−144946
pancreatic elastase, porcine, mol. dynamics calcs., inhibitor design 7−119711
pancreatic trypsin inhibitor, bovine, mutants lacking cysteines 14 and 38, proper folding 7−114183
papain, enzyme-substrate complex intermediates, UV Raman reson. spectra study 7−68489
papain enzyme-substrate intermediate, UV Raman spectra obs. 7−106964
peptide chain structure parameters, bond angles and conformational angles from the Cambridge Structural Database 7−86895
phonons and solitary waves in α-helical proteins 7−93636
phospholipid vesicular membranes containing structural proteins, photoinduced electron transfer 7−86926
phosphorescence at room temp., prevalence 7−119729
photoreaction with photoproduct filtering effect, quantum efficiency, light adaptation of purple membrane 7−93680
pigment-protein complex of photosystem 1, cyanobacteria Spirulina platensis, photo-induced spectra of circular dichroism 7−106971
plasma membrane protein glycosylation; effect of a pulsed EM field 7−78954
polypeptide, β-form-random coil transition in solution 7−71667
polypeptide chains, short natural, in water solns., α-helical conformation, review 7−114173
polyproline, cis-trans isomerism, UV reson. Raman spectra 7−106974
proteins continued
polytripeptide, collagen like, trihelical struct. stability rel. to bound wate 7−126703
PROTEAN knowledge-based system for deriving protein struct. from con straints 7−74797
protein-inhibitor complex, binding free energy relative change cal 7−78723
protein-solvent system, electrostatic pot., numerical calcs., self consister boundary method 7−106958
protein-steroid interactions, 3-keto-steroids in aq. soln., protein bindin fluoresc. study 7−78748
proteinases associated with the nuclear matrix of rat hepatocytes, postir rad. activation *(Russian)* 7−133378
proteinkinase, Ca^{2+} phospholipid depend., of rat brain grey substanc props. after X-irrad. *(Russian)* 7−93832
proteinoid microspheres, metabolism (book) 7−108052
purple acid phosphatase, optical, EPR, Mossbauer and reson. Raman spec tra, and mag. suscept. meas. 7−116995
Raman spectroscopy, biomedical appls. to mol. and cellular system 7−107329
Raman spectroscopy, conference, Eugene, OR, USA (Sept. 1986 7−72726
reaction centre protein of purple bacteria Rhodopseudomonas spheroide secondary struct. 7−106959
renin inhibitor-aspartic proteinase complexes, high resolution X-ray anal 7−114191
reorientational motion determ. by fluoresc. anisotropy decay, interpre complexities 7−114166
retinal, trans-cis isomerisation and ion translocation mechanism in halo hodopsin 7−86933
retinal-binding protein from squid retina, isolation and charact 7−100902
rhodopsin, retinal rod outer segment suspension absorpt. spectra, siev effect role 7−78855
rhodopsin absorption coeffs., spectral distrib. rel. to action spectrum human rod vision 7−145046
rhodopsin in isolated amphibian retina, factors affecting regeneratio 7−100904
rhodopsin in rod outer segments, self-screening, rat obs. 7−145045
rhodopsin rel. to retinal sensitivity in human infants 7−86972
rhodopsin structure, review 7−119714
rhodopsin transduction mechanism, FTIR studies, review 7−119728
rhodopsins, retinal chromophore struct. determ., reson. Raman spectr 7−78776
ribonuclease A, cis-trans isomerism, UV reson. Raman spectra 7−106974
ribonuclease A, disulphide linkage, circular dichroism, CNDO/S an INDO/S calcs. *(German)* 7−90463
ribonuclease T1, pH time-resolved fluoresc., pH and substrate analogu binding study 7−100806
ribonuclease T_1, freq. domain obs. of fluoresc. lifetime 7−139203
ribonuclease T_1, native and mutant, artificial enzyme-struct.-function rela tionship and protein engng. *(Japanese)* 7−133208
ribosomal protein IF-2, substrate-triggered intermol. interactions, neutro diffr. evidence 7−133185
ribulose-1,5-bisphosphate carboxylase-oxygenase, small-angle X-ray scat obs. of quaternary struct. 7−86898
ricin B chain, struct. and evolution 7−86901
sarcoplasmic reticulum, fragmented, elec. activity rel. to water-organ phase interface 7−126796
secondary struct. Raman reference intensity profiles 7−129911
serum albumin, monolayers, 2D press. equilib. and dynamic isotherm 7−70072
silk, struct. and thermal props. *(Japanese)* 7−100800
silk fibroins biosynthesis in silkworms, NMR obs. 7−114190
small-angle X-ray diffraction, uses of polychromatic synchrotron radiatio 7−104486
solvent environments incorporation into reson. Raman calcs. 7−93623
spectrin-actin assembly, modulation by erythrocyte adducin 7−126768
spinach ribulose bisphosphate carboxylase, cryst. struct., 1D disorde 7−139188
spinach superoxide dismutase cryst., distinction between Cu^{2+} and Zn^{2} ions using anomalous dispersion and tunable synchrotron radiatio 7−114187
structure, 3D, rel. to protein engng. *(Japanese)* 7−133207
structure and interactions, sequential NMR assignments and isotop labelling 7−93639
structure predicting, BASIC program 7−106961
sulphated glycoproteins, longit. flow in endolymphatic space of ra 7−86996
Synechococcus lividus, changes in protein content during growth phas under chronic λ-irrad. 7−78980
tetraphenylporphyrin-polypeptide complexes, model photosynthetic systen fluoresc. props. 7−129766
thermitase, X-ray structural investigation at 2.5 Å resolution 7−106966
thermolysin-inhibitor complexes, structs. of 2 complexes that differ by single H_2 bond 7−78739
thymidine kinase in mouse bone marrow cells, in vivo enzyme control by mag. field 7−133359
thymidylate synthase, atomic struct.: target for rational drug desig 7−86905
tobacco mosaic virus RNA ability to self-assemble with virus protein, U inactivation 7−93821
transferrin hydration obs. using Mossbauer spectroscopy 7−133222
transition metal chromophore as sensitive tag for proteins 7−144970
transvascular exchange of fluid and plasma proteins 7−126860
tropomyosin and troponin co-crysts., X-ray struct. at 17 Å resolutio 7−71669
tryptophan and tyrosine side chains, vibr. modes, IR Raman spectr normal coordinate calcs. 7−68497
tryptophan in apocytochrome c, fluoresc. quenching dynamics, ro isomerism study 7−78745
tryptophan residue proteins, fluoresc. lifetime distribs. rel. to conform interconversion 7−93633
tryptophan-2,3-dioxygenase, stretching vibrs. correl., Raman spectr 7−78767
viruses, spherical, structural analyses, viral coat proteins 7−78738
vitamin B_{12} coenzyme, cryst. and mol. struct., neutron and X-ray refin ment 7−114172
X-ray diffr. data collection and online integration system 7−101154
X-ray structure analysis and protein engng. *(Japanese)* 7−133206

proteins continued
Co^{2+} reconstituted horse liver alcohol dehydrogenase, single cryst., spectra 7−144968
Cu metalloproteins, Raman spectra 7−71700
Fe-S proteins, isotopic species, reson. Raman spectra study 7−68488
H_2O-protein interaction, NMR relax. investig. 7−90219
^{181}Hf labelled rat serum transferrin, metal-binding configuration, temp. depend. 7−126708
^{181}Hf-labelled transferrin, human and rat serum comparison, TDPAC study 7−126695
Hg-protein-ligand complexes, ^{81}Br NMR spectra study 7−141728

protocols
user-oriented survey for astronomers 7−72319

proton absorption
No entries

proton accelerators
see also cosmotrons
Alvarez proton linac, design studies 7−81760
antiproton gravitational acceleration meas. at CERN LEAR facility 7−96410
Beijing 35 MeV proton linac, design, construction, beam tests *(Chinese)* 7−103303
CERN $\bar{p}$ accumulator ring and ACOL, design 7−81814
CERN $\bar{p}p$ collider complex, RF systems 7−81773
CERN $p\bar{p}$ project 7−81771
CERN SPS, vacuum chambers in composite material 7−135703
compact proton linac for positron tomography 7−74286
duoplasmatron ion source of 35 MeV proton accelerator, O_2-impregnated Ni-matrix cathode 7−135705
Eindhoven proton microbeam, beam parameter improvements 7−89812
EM antiproton traps, storage, cooling, gravitational accel. meas. 7−96437
European Hadron Facility, equipment and expts. 7−103311
hadronic internuclear cascade penetration into matter, radiation shielding for accelerators 7−103284
HERA proton storage ring, cold yoke superconducting dipole magnet config. 7−129481
high intensity proton synchrotrons and the EHF project 7−74300
high-energy proton accelerators, Moyer model approximations for point and extended beam losses 7−109563
hospital based synchrotron for proton radiation therapy, scaling rules 7−93914
induction linac, intense proton beam transport by solenoid lenses, ICF 7−81753
LHC at CERN, status of studies 7−122266
medical applications 7−89819
personal dosimetry in a mixed field of high-energy muons and neutrons 7−129445
PS-booster, coherent betatron oscillation accompanying the extraction bump orbit 7−122263
storage rings, applications of particle tracking 7−116764
synchrotron, induced radioactivity and relation to beam losses 7−109585
synchrotron, space charge effects, tune shifts and resonances 7−81797
synchrotron, superconducting secondary beam line 7−109584
synchrotrons, polarisation and spin kinetics in stationary mag. field 7−116763
TALL, RFQ linac, beam test using protons, ICF appls. 7−81752
TARN-2 heavy ion acceleration and cooling ring for ICF expts. 7−67966
UCLA Neutron Therapy Facility 7−93913
ultrahigh vacuum systems for storage rings and accelerators 7−81769
e^-e^+ and $p\bar{p}$ colliders, relative merits, advantages/disadvantages vis-a-vis fixed target machines 7−109548

proton affinity
cyanoacetylene, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
cycloalkanones, H^+ affinity, ring size effect, MINDO/3 calc. 7−81983
deprotonation enthalpies and proton affinities, AM1 semiempirical MO calcs. 7−68191
diacetylene, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
1-hydroxy-1,2,3-triazole, prototropy, UV photoelectron spectrosc. obs. 7−96793
4-hydroxyl-4-methyl-2-pentanone, proton affinity determ. 7−74484
4-methyl-3-penten-2-one, proton affinity determ. 7−74484
2-propyl ethanoate, proton affinity determ. 7−74484
C_2N_2, proton affinity, mass spectrometric meas., heat of form., ab initio calcs. 7−71556
H_2P_2, protonation, ab initio calcs. 7−86578

proton angular distribution
see also proton spectra
$^{11}B(\alpha,p)^{14}C$, 118 MeV, proton angular distrib., DWBA anal., ^{14}C energy level study 7−121617
$^{12}C(X,X')$, X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844
$^{12}C(\gamma,pd)^9Be$, angular pd correlations 7−121787
$^6Li(^6Li,p)^{11}B$, 2-16 MeV, excitation fns., angular distrib., shell model anal., fusion implications 7−102906
^{208}Pb (X,X'), X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844

proton beam effects *see proton effects*

proton belt *see radiation belts*

proton decay
colour triplets, elimination using Wilson-line mechanism, SUSY $SU(3)\times SU(2)\times U(1)^n$ models construction 7−121400
experimental tests of proton decay 7−95818
Fermi-like corrections in nuclei 7−95902
fermion-monopole interaction, baryon number violation 7−135116
fundamental particle physics without accelerators 7−73110
nuclear physics, world publication output, research fronts and cited papers 7−80275
Planck length in p lifetime determ. 7−121501
rapid decay through Yukawa couplings 7−108903
$p\rightarrow e^+\pi^o$, relativistic SU(5) model anal., B-S eqn. based 7−135117

proton detection and measurement
average energy meas. by two-cone and differential Cherenkov methods 7−129520
charged-particle identification by energy release meas. in thick scintillator 7−81902
differential proton spectra meas. on Space Shuttle, thermoluminescent dosimetry system 7−96483

proton detection and measurement continued
LR 115 track etch dosimeters, α-particle and neutron-induced proton detection 7−103337
plastic scintillator telescope, proton detection efficiency function 7−135765
stopping power ratios for protons and helium ions in water and tissue equivalent media 7−141333
n lifetime determination by trapped proton counting technique 7−68164
n lifetime measurements using in-beam techniques 7−68165
NaI(Tl) scintillation detector, proton registration efficiency calc. 7−109655
Si, response to ^1H and ^4He ions 7−89871

proton-deuteron interactions
see also proton-deuteron scattering
No entries

proton-deuteron scattering
see also proton-deuteron interactions
elastic, differential cross section, multiple-scattering theory, inelastic screening, 3 TeV prediction 7−116195
$dp\rightarrow dp$, stability of angular extrapolation methods for determining the deuteron asymptotic *D*-state to *S*-state ratio 7−109189
$pd\rightarrow pd$ energy elastic scatt., total and differential cross section calcs. *(Russian)* 7−81231

proton effects
atomic effects of electrons and protons at low energies 7−74770
beam-induced pressure gradients in the early phase of proton-heated solar flares 7−88352
chromosomes, Chinese hamster, effect of secondary radiation from 70 GeV protons and γ-quanta *(Russian)* 7−133394
dilute alloys, radiation induced solute transport 7−91881
elementary semiconductors, radiation-enhanced diffusion, microkinetic theory 7−105118
eye, human, light flashes induced by weak proton beams via Cherenkov radiation *(Russian)* 7−114431
metallic thin films, proton induced K-shell X-ray cross sections 7−144183
SOS, ion implanted, laser beam annealing, channelling and sheet resist. meas. 7−84025
steel, austenitic stainless, fatigue, proton irrad., precip. hardening, strain amplitude and temp. effect 7−113721
, Si, ion implantation by $^1H(^2H)$, random and channelling depth distributions 7−111701
AgMgSi, proton irrad., microstructure, mech. props. 7−69780
Al, inelastic proton collisions, charge states, first-principles calcs. 7−106342
Al, microstructure var. caused by He generation rate and other irrad. parameters 7−69771
Al, proton and neutron irrad., vacancy-gas agglomerates 7−98261
Al, proton irrad., damage and defect recovery, positron lifetime spectra, 20-500 K 7−84072
Al, proton irrad., tensile props. 7−71258
AlMg, proton irrad., microstructure, mech. props. 7−69780
α-Al_2O_3 proton induced defect formation 7−98267
Au, amorphous film, proton scattering, computer simulation 7−92814
Au, electronic stopping of proton at intermediate energies 7−104882
Au, ionis. cross sections, Coulomb deflection effects 7−111684
Au, proton irrad., instability zone of radiation defects 7−104853
Au thin foils, 200-400 keV proton scatt. and stopping, role of single collisions 7−92812
C ablation plasma, ionisation and radiation dynamics 7−130886
C foil, sputtered atoms by proton impact, Auger electrons 7−85918
Cd, proton irrad., correlated damage TDPAC studies 7−106067
CdTe, proton implantation induced defects, photoluminescence obs. 7−98274
Cu, proton irrad., instability zone of radiation defects 7−104853
Cu, proton irradiated, periodic (001) defect walls 7−98273
Cu-Ni-Fe, irradiation induced phase decomp. and diffusive atom transport 7−104994
Cu-Ni-fe (46, 4 at.%), 2 MeV proton irrad., decomp., small angle neutron scatt. 7−137425
CuCl, proton irrad., radiation defects, exciton luminescence studies 7−137418
$Cu_{50}Ti_{50}$, amorphous, melt spun, radiation damage, short range ordering, elec. resist. 7−104845
Er, ionis. cross sections, Coulomb deflection effects 7−111684
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, domain wall motion reproducibility 7−132054
GaAs, ion implantation by $^1H(^2H)$, random and channelling depth distributions 7−111701
GaAs, proton implanted, damage structs., cross sectional TEM studies 7−137427
GaAs, solar cell degradation model for low-energy proton impact 7−144876
GaAs solar cell proton damage energy-dependence and combined-radiation effects 7−144890
Ge, proton irrad., instability zone of radiation defects 7−104853
$H^+ + H_2$, singly differential cross-sections for secondary electrons prod. 7−75755
$Hg_{1-x}Cd_xTe$ crystals, H^+ irradiated, electrophysical props. 7−70330
InP solar cell radiation resistance after 10 MeV proton irrad. 7−144888
InP-CdS heterophotovoltaic cells, damage caused by proton irradiation 7−86789
$LiIO_3$, combined channelling study in an electrostatic field, ionic cond. 7−131198
Mo, radiation damage by protons and α-particles, TEM obs. 7−142845
Nb, low temp. proton irrad. defect recovery, internal friction study 7−98272
Nb_3Ir, A15 superconductor, radiation damaged, weak localisation 7−105783
Ni, proton irradiated, periodic (001) defect walls 7−98273
Ni-Al, $\gamma'(Ni_3Al)$ precip. under proton irrad. during ageing 7−84045
Ni-Cr-Th_2 alloy, cold worked, dispersion hardened, proton irrad., creep, microstruct. 7−100293
Ni-Si alloys, radiation-induced grain boundary segregation, mechanical props. study 7−104876
Ni_3Fe, radiation damage, Mossbauer investig. 7−131195
S compounds, proton bombardment, mol. effects determ. 7−98271
Si bifacial solar cell modelling for degradation by space particle irradiation 7−144881
Si, divacancies, spectral studies 7−70847
Si, divacancy study, neutron, proton and deuteron irradiated 7−98914

proton effects continued
Si, ion-implantation induced vacancy profiling using slow positron beams 7−111677
Si, laser annealed, In-vacancy interaction, PAC meas. 7−91641
Si, proton irrad., instability zone of radiation defects 7−104853
Si thin membranes, channelling transmission of protons 7−69790
Si:H^+, high-energy proton irradiated, energy deposition 7−117991
Si:P, proton stimulated diffusion of P implants 7−131364
a-SiGe:H,F films, minority carrier diffusion length after light or proton irrad. 7−143476
Sm, ionis. cross sections, Coulomb deflection effects 7−111684
SnTe (001), specular reflection of MeV protons, energy losses 7−84078
SnTe (001) surface, specularly reflected light ions, energy losses 7−124358
Ta, low temp. proton irrad. defect recovery, internal friction study 7−98272
TiO_2 bombarded with protons and deuterons, ion implantation effects 7−91613
α-U, spallation target material for SNS, proton irradiated, thermostresses, thermal cycling effects 7−131196
W, H^+-beam bombardment, thermal shock tests 7−113662
W, proton channelling, RBS, Coulomb excitation and X-ray prod. 7−124361
Y, proton, deuteron and α-particle beam straggling, energy loss and stopping power meas. 7−117999
Yb, proton-induced ionisation, L-shell X-ray prodn. cross-sections meas. 7−141514
ZnTe, proton implantation induced defects, photoluminescence obs. 7−98274
Zr and its alloys, radiation damage, review 7−137404

proton electric moment
constraints from TlF hyperfine struct. 7−136092

proton exchange *see ion exchange*

proton excited X-ray emission *see ion microprobe analysis*

proton induced X-ray emission *see ion microprobe analysis; X-ray chemical analysis*

proton interactions *see proton-deuteron interactions; proton-nucleus reactions; proton-proton interactions*

proton magnetic moment
QD and pion corrections, chiral bag model, anomalous quark moments 7−128894

proton magnetic resonance
acetone, nematic phase, ^{1}H NMR spectra, two-dimens. correl. technique 7−70651
acetonitrile, dil. spin I=3/2 powder, rot. isomerism, Zeeman and dipolar coherences, PMR spectra 7−68357
acrylamide-N,N^1-methylene-bis-acrylamide in aqs. soln., crosslinking polymerisation at 22°C 7−126451
acyl carrier protein, valine and leucine side-chain proton reson. assignment, 2D RELAY 7−126718
aldono-1,4-lactones, PWR and NMR, ab initio MO calcs., conformational studies 7−141426
alkyd polyester paints, air-cured, ^{13}C solid-state NMR, T_1 meas. 7−118886
3-alkyl-7-methyl-3,7-diazabicyclo[3.3.1]nonan-9-ones, conformation, ^{1}H and ^{13}C NMR 7−68359
amino acid assignments, millimolar solutes, inhomogeneous part elimination of PMR spectra 7−71941
2′,5′-anhydroarabinosylcytosine, struct. and conform., X-ray, ^{1}H and ^{13}C NMR anal. 7−98103
anisole, solns., proton-proton couplings and chem. shifts meas. 7−122566
aryl ethers, in alkaloids, conform. preferences, ^{1}H spin-lattice relax. obs. 7−82214
N-arylcarbamates-DDQ (TCNQ), charge-transfer complexes, ^{1}H-NMR spectra 7−74755
azetidine, pyramidal inversion barrier, PMR and ab initio MO calcs. 7−109713
β-(BEDT-TTF)$_2$I$_3$, high-and low-T_c superconducting phases study 7−77141
β-(BEDT-TTF)$_2$I$_3$, organic supercond., nuclear mag. relax. 7−70475
β-(BEDT-TTF)$_2$I$_3$, supercond., electronic props., PMR anal. 7−85474
benzalazine derivatives, H-bond, geometry, CNDO/2 and MNDO, UV, IR and ^{1}H NMR 7−81979
benzenamine-4-(9-anthryl)-N,N-dimethyl related cpds., synthesis, spectroscopic props. 7−90265
benzene, nematic phase, ^{1}H NMR spectra, two-dimens. correl. technique 7−70651
benzene, solid, slow molecular motion, nuclear magnetic relax. studies 7−106053
benzenes, substituted, nonpolar, elec. quadrupole reaction field, NMR solvent shifts 7−109940
benzodithiepin, and derivatives, conform. dynamics, ^{1}H and ^{13}C NMR 7−82212
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
N-benzylideneaniline derivatives conformation, substituent effects, UV and ^{1}H NMR spectra 7−74654
5-(m-benzyloxybenzyl)-1-[(1,3-dihydroxy-2-propoxy)methyl]uracil, X-ray and ^{1}H NMR anal. 7−76109
biological systems, spectral shifting technique for ^{12}C-^{1}H and ^{13}C-^{1}H metabolite relax. rates 7−114577
biphenyl incommensurate phase III excitations and transitions, proton spin reson. and relax. meas. 7−111867
bisphenol-A polycarbonate glass, ^{1}H and ^{13}C spin-lattice relax., chemical shift anisotropy line shape collapse 7−106044
blood plasma protein water protons, NMR relax. in animals in expt. carcinogenesis 7−144966
brain, cat, in vivo PMR spectra, depth-pulse spectral editing 7−71684
p-bromo-p-n-hexyloxybenzylidene aniline, smectic B phase, mol. dynamics, PMR relax. meas. 7−137228
carnosine, ^{1}H and ^{13}C NMR investig. 7−85454
catalysts, homogeneous, high-press. probe for NMR obs. 7−73389
cellular level phenomena, spectroscopic nuclear spin resonance 7−114223
2-p-chlorophenyl-4-hydroxy-6-oxo-1, 3-thiazine, crystal struct., X-ray, UV, IR and PMR spectra 7−111527
chlorpropamide, and tablets, PMR spectrometric determ. 7−100673
coenzyme B_{12}, base-off form, soln. behaviour, 2-dimens. NMR 7−74671
copper diformate tetrahydrate, 2D Heisenberg antiferromagnet, spontaneous staggered magnetisation, PMR study 7−105899

proton magnetic resonance continued
copper diformate-urea-D_2O complex, 2D Heisenberg antiferromagnet, spontaneous staggered magnetisation, PMR study 7−105899
copper phthalocyanine, 1D Heisenberg magnet, proton spin-lattice relax. rate meas. 7−85343
4-cyano-4′-n-pentyl-d_{11}-biphenyl, nematic liq. cryst., ^{1}H spin-lattice relax., inter- and intram. contrib. study 7−92532
cyclopropane, r_α-struct., vibr.-rot. correl., NMR study 7−68361
2′-deoxy-3′,5′-di-O-acetyl adenosine, mol. conform., cryst. struct., PMR obs. 7−98104
2-deoxy-D-ribose, enthalpies of combustion and form. ^{13}C and ^{1}H NMR 7−93359
deoxycholate, methyl group dynamics, double quantum filtered NMR relax. obs. 7−141609
desacylguayulin A, stereochem., NMR investig. 7−96744
desertomycin, antibiotic, mol. struct., 2D NMR investig. 7−68345
2,4-di(2-pyrenyl)pentane, diastereoisomers, conformer anal., excimer form., PMR obs. 7−129750
di(tetramethylammonium) tetraiodo cadmate, mol. dynamics, PMR study 7−92538
2,3-dibromothiophene, 2D NMR, heteronuclear chemical shift correl., virtual one-bond coupling effects 7−125560
dibutyl sulphoxide, solns., structural transition temp., PMR and light scatt. intensity meas. 7−90201
1,1-dicyanoethylene, substituted, electronic struct., conform. mobility, NMR and PMR 7−74684
diethyl sulphoxide, solns., structural transition temp., PMR and light scatt. intensity meas. 7−90201
2,3-dihydro-1,4-diazepine derivatives, struct. and tautomeric forms, ^{1}H and ^{13}C NMR spectra anal. 7−74663
4,6-dinitrobenzofurazan, bis(dimethylamino)naphthalene adduct, PMR obs. 7−96731
4,6-dinitrobenzofuroxan, bis(dimethylamino)naphthalene adduct, PMR obs. 7−96731
5,6-dioxycarbonyl(2.2.1)bicyclohept-2-ene, phase transition, temp. depend., plastic crystal phase form. 7−137542
diphenylsulphurdiimides, ^{1}H NMR, conformational studies 7−109943
disordered systems, proton NMR, hopping rate distrib. effects 7−132154
diterpenoid alkaloids, struct. elucidation, ^{13}C NMR spectra 7−90188
DMSO, solns., structural transition temp., PMR and light scatt. intensity meas. 7−90201
enkephalin analogs, rigidity imparted to backbone conformation by D-amino acid residues, ^{1}H NMR obs. 7−78729
enol ethers, in alkaloids, conform. preferences, ^{1}H spin-lattice relax. obs. 7−82214
epoxide resin, mol. mobility, octadecylamine effects, PMR obs. *(Russian)* 7−99591
epoxy resin monomer, PMR assignment 7−92519
erythrocyte superoxide dismutase, bovine, anion binding, nucl. relax., ^{1}H NMR 7−119724
ethane, solid, proton spin relax. at high press., reorientational models 7−70665
ethane-bisporphyrins, covalently linked, electronic excitation energy transfer 7−141455
ethchlorvynol, ^{1}H NMR spectral simplification using lanthanide shift reagents 7−74683
1-ethoxy-4-chlorobenzene dissolved in nematic liquid crystal, conformation and orientational order 7−122570
ethylbenzene, struct. and internal rot. in solns., PMR and MO investig. 7−103532
ethylene-α-olefine copolymers, spin-diffusion relax., ^{1}H and ^{13}C NMR 7−92531
(fluoroanthene)$_2$PF$_6$ radical cation salt, mag. reson. on cond. electrons 7−85487
(fluoroanthenyl)$_2$X conductors, EPR, NMR studies 7−85439
homonuclear coupling const., pure phase NMR subspectra 7−67354
homonuclear editing method for ^{13}C-^{1}H and ^{12}C-^{1}H signals 7−122565
horseradish peroxidase, electronic and mol. struct., PMR and NOE study 7−68478
human leg, volume selected ^{1}H NMR spectra, surface coil reception technique appl. 7−107199
p-hydroxybenzoic acid, solid, intramol. motion, PMR investig. 7−74667
1-hydroxymethylquinolizidines, epimers, conformational anal., IR, NMR and PMR spectra 7−90108
lactate, living tissue metabolism, DANTE pulse for PMR 7−71682
lysozyme, hen egg white, 2D heteronuclear chem. shift correl. 7−68479
melamine-formaldehyde adducts, charactn. by NMR, UV spectra and chromatography 7−93402
metal complexes of 3-phenyl-4-acetyl-5-isoxazolone, synthesis, struct., IR and PMR spectra 7−99859
methane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
3-methoxy-1,3,4,5-tetrahydro-2-benzoxepin, anomeric effects, NMR investig. 7−90198
methyl acrylate, 2D NMR, heteronuclear chemical shift correl., virtual one-bond coupling effects 7−125560
methyl thienyl ketone oxime, struct., PMR 7−68364
3-methyl-2-penten-4-yn-1-ol, E and Z isomers, self-assoc. parameters determ., PMR spectra 7−113917
3-methyl-1-penten-4-yn-3-ol, E and Z isomers, self-assoc. parameters determ., PMR spectra 7−113917
N-methylacetamide and H_2O in carbon tetrachloride solution, interaction, PMR study 7−92527
methylphenanthrenes, methyl reorientation, ^{1}H spin-lattice relax. study 7−112987
molecular and liq. crysts., proton magnetic relax. investig. 7−106048
molecular electronics, intramolecular p-n junction, polarised N−O bond, PMR study 7−99168
muricin aglycone and related pregnene derivatives, ^{13}C and ^{1}H NMR study 7−90192
$Na_x(NH_3)_y(MoS_2)$, layered intercalation cpds., ^{1}H NMR obs. 7−112976
natrolite, orthorhombic struct., Peikov anal. 7−112980
$(NH_4)_2$ N_2H_6 $(ClO_4)_4$, ^{1}H relax. times, temp. and freq. depend. study 7−103536
norbornenyl systems, ^{2}H/^{1}H NMR isotope effect on ^{13}C chem. shift, linear correls. 7−68346
nucleic acid bases, protonation, ^{1}H and ^{13}C NMR and UV investig. 7−74662
nucleic acids, 1H NMR spectra; chemical exchange rates and Overhauser effects calc. 7−106978
octahydroindoles, 2D NMR 7−96745

roton magnetic resonance continued
organosulphur-FeOCl intercalation compounds, spectroscopic and mag. props. 7−144050
organotungsten hydrides, cryst. and mol. structs., ^{1}H NMR obs. 7−69691
2,2,4,4,6-pentacyanocyclohexenamine, cryst. struct. and vibr., spectrosc. obs. 7−98102
peptide β-turn conform., Pro-Asp and -Asn dipeptides study, IR, ^{1}H NMR and X-ray diffr. spectra 7−78750
$(perylene)_2(AsF_6)(PF_6)CH_2Cl_2$ quasi-1D organic metal, NMR studies 7−85459
3-phenyl-4-benzoyl-s-isoxazolone, metal(II) complexes, synthesis, structure, IR spectral studies 7−125755
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7−90191
N-(1-phenylethyl)-Δ^4-thiazoline-2-thiones, and analogues, conform. anal. 7−74670
3-phenylpyrazolo(4,3-c)pyridine and derivatives, struct., ^{1}H and ^{13}C NMR anal., CNDO/2 and PPP calcs. 7−109944
phthalocyaninato-copper(II)iodide, mag. transitions and embedded local moments 7−99459
poly(γ-benzyl-L-glutamate), lyotropic, mol. motion, PMR obs. 7−92539
poly(ethylene oxide), grafted on silica, effect of grafting ratio on chain conformation *(French)* 7−110154
polyurethane elastomers prepolymers, IR, ^{1}H and ^{13}C NMR spectra 7−92508
polyurethane-polystyrene-co-styrene sulphonic acid. H^+ transfer, NMR obs. 7−90217
porous media permeability, mag. resonance probes 7−83334
proflavine-dinucleotide complexes, eq. solns., PMR obs. 7−141607
β-propiolactone-polyethylene glycol copolymers, synthesis and characterisation 7−93323
proteins, NMR fingerprinting in H_2O soln., 2-dimens. longit. 2-spin-order technique 7−74792
pyrazolines, and salts, ^{15}N NMR spectrosc. 7−96746
pyrene, excimer form. in crown ether surfactant micelles 7−109816
pyridine, binding to γ-Al_2O_3, surface site distribs. ^{15}N and ^{1}H NMR 7−92512
pyridine, orientation in nematic liq. cryst., nucl. relax., ^{1}H NMR study 7−90193
pyridinium compounds, quaternary, cation radicals, spectrosc. investig. *(German)* 7−96743
N-(2-pyridyl)thioacetamide, PMR, Raman and IR spectra meas. 7−74676
N-(2-pyridyl)thioformamide, PMR, Raman and IR spectra meas. 7−74676
relaxation time and proton density images in NMR imaging *(Japanese)* 7−108611
renal proximal tubules, suspended, diffusional water permeability in cell membranes, ^{1}H NMR obs. 7−93691
retinyl Schiff bases, 2-photon, ^{13}C and 2D ^{1}H NMR 7−90199
D-ribose, enthalpies of combustion and form. ^{13}C and ^{1}H NMR 7−93359
rod- and disk-like solutes in nematic liq. crystal 5CB, orientational order, PMR and DNMR 7−74665
rubber, natural, microstructure and hydrobromination, NMR spectra 7−116994
rubber, natural and synthetic, cold crystallisation, chain microstruct. effects 7−92522
silica gel, chem. shift anisotropy, ^{1}H NMR *(German)* 7−92530
spin-lattice relaxation time measurement, instrumentation problems in MRI *(French)* 7−93864
striated muscle, rat, water phases as determined by T_2 proton NMR relax. times 7−139207
sulfocationite membranes, perfluorinated, mol. mobility of H_2O, H^+ mag. relax 7−135972
teicoplanin A_2, structural anal., two-dimens. PMR and NOE spectra 7−71685
tetra-n-butylammonium bistrifluoroacetate, organic solvent solns., IR and PMR spectra 7−96738
tetrabutylammonium iodide, polycryst., mol. reorientation, spin-lattice relax. times meas. 7−76049
1,1,3,3,-tetracyanopropane, cryst. struct. and vibr., spectrosc. obs. 7−98102
tetramethylammonium tetrabromoplatinate(II), cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tetrahalopalladate(II) cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tribromocadmate, NMR study, proton relax. 7−85469
1,2-tetramethylene-3-methylcyclooctatetraene, preparation, cyclooctatetraene ring flattening by annulation, PMR investig. 7−119500
tetramethylsilane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
tetraselenotetracene iodomercurate, quasi-1D conductor, mag. props., ESR study *(German)* 7−132156
thymidine phenyl cyclic 3′,5′-monophosphate diastereomers, PMR and X-ray obs. 7−141603
tiaprofenic acid, ^{1}H and ^{13}C NMR 7−96747
$(TMTSF)_2ClO_4$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2ClO_4$, supercond. state, proton spin-lattice relax. rate meas. 7−85194
$(TMTSF)_2PF_6$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2PF_6$, supercond., electronic props., PMR anal. 7−85474
N,N′N″-trialkyl-1,3,5-benzenetricarboxamides, liq. cryst. phases 7−75982
tris(trimethylammonium)nonachlordiantimonate (III), mol. dynamics, PMR studies 7−85473
trimethylammonium tetrachlorozincate polycryst., low temp. high press. PMR phase transition studies 7−112970
1,2-trimethylene-3-methylcyclooctatetraene, preparation, cyclooctatetraene ring flattening by annulation, PMR investig. 7−119500
$(TTF)_6CuBr_4$ and $(TTF)_2CuCl_2$, proton magnetic relaxation studies 7−106051
TTF-p-chloranil, neutral-ionic transition, ^{1}H-NMR and EPR studies 7−84256
vinylidene fluoride-trifluoroethylene copolymers, struct., morphology, wide-line NMR obs. 7−92520
4-vinylpyridine copolymerised with styrene in benzene soln., ^{1}H NMR and ^{13}C NMR spectra *(French)* 7−126450
Al halides, o-nitrophenol complexes, NMR spectra 7−109948
$AlCl_3$, basic, heat capacities and PMR *(German)* 7−69298

proton magnetic resonance continued
$Al(H_2PO_4)_3$ catalysts, surface hydroxyl, groups, PMR and catalytic activity studies 7−132965
AlN, ultra-fine powder, hydrated surface, ^{1}H NMR study 7−99588
B halides, o-nitrophenol complexes, NMR spectra 7−109948
Ca^{2+} complex, $[Ca(EGTA)]^{2-}$, struct., PMR chem. shift meas. 7−118879
$Ca(OH)_2{:}O_2^-$, proton spin-lattice relax. and dynamic nuclear polarisation meas. 7−143931
Cd^{2+} complex, $[Cd(EGTA)]^{2-}$, struct., PMR chem. shift meas. 7−118879
$CeO_2.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
$C_8kH_{2/3}$, H chemisorbed intercalation cpd., metallic electronic state, ^{1}H NMR study 7−138341
Co (II) complexes in aqueous-organic solvent mixtures, PMR spectra anal. 7−109949
Cr complex, tris(acetylacetonato)chromium(III), dilute chloroform solns., ^{1}H spin relax. anal. 7−116990
$Cs(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
$EuLiH_3$, paramag. and ferromag. states, PMR spectra 7−99585
Ga halides, o-nitrophenol complexes, NMR spectra 7−109948
GdH_3, paramag. state, PMR linewidths and shifts meas. 7−99586
H adsorbed on SiO_2-supported Rh, ^{1}H NMR spectra 7−112059
H intercalation cpds., PMR and neutron diffr. obs. 7−112974
$H_2Sb_4O_{11}.3H_2O$, motions, 4-163 K, wide-line PMR spectra 7−112979
^{1}H and ^{31}P NMR, simultaneous in vivo meas. using balanced-matched double-tuned probe 7−71942
$HfV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175
$K(NH_3)_{4.3}C_{24}$, ^{1}H NMR, ^{14}N quadrupolar coupling, ^{1}H chemical shift, mol. orientation 7−92526
$K(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
LaH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
Li-methylamine system, PMR 7−116992
$Li_x(NH_3)_y(MoS_2)$, layered intercalation cpds., ^{1}H NMR obs. 7−112976
Mg-Ni-H system. H diffusion, phase characteristics, PMR study 7−85444
NH_4ClO_4, NMR spin lattice relax. time temp. depend. meas 7−92537
$(NH_4)_4Fe(CN)_6.H_2O$, high pressure proton NMR studies, diffusion obs. 7−106037
$Na_2(FeCN_5)NO.2H_2O$, H_2O mol. flipping motions, PMR spin-lattice relax. time meas. 7−85472
$Nb_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
Ni (II) complexes in aqueous-organic solvent mixtures, PMR spectra anal. 7−109949
$Ni^{2+}(H_2O)_6$, paramag. ^{1}H NMR 7−103540
Ni(II) ion, aq. soln., proton spin-lattice relax. rates 7−129745
$Ni_{35}Ti_{65}$, amorphous, H diffusion, NMR relax. rates 7−105145
Pd complex, aminopolycarboxylate, ^{1}H and ^{13}C NMR 7−90214
Pt complex, aminopolycarboxylate, ^{1}H and ^{13}C NMR 7−90214
$Rb(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
ScF_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
ScH_x, HCP, H diffusive hopping, proton and ^{45}Sc NMR obs. 7−124585
Si:H, amorphous and amorphous microcrystalline mixed phases, ^{29}Si NMR 7−85448
$Ta_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
$TiCoH_x$, struct., electronic props., comparison with $TiFeH_x$, X-ray diffr., PMR meas. 7−98772
$TiFeH_x$, struct., electronic props., comparison with $TiCoH_x$, X-ray diffr., PMR meas. 7−98772
TiH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
$V_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
$YH_{0.2}$, PMR search for evidence of H pairing 7−85460
YH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
ZrH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
Zr_2NiH_x, H diffusion, NMR studies 7−85463
Zr_2PdH_x, phase comp., cryst. struct. X-ray diffr. PMR studies 7−83891
$ZrV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175

proton magnetic resonance imaging (biomedical) *see biomedical NMR*

proton-nucleus reactions
for inelastic proton-nucleus scattering, see "proton-nucleus scattering"
see also neutron-proton interactions; proton-proton interactions; proton radiative capture
$^{90}Zr(p,\alpha)$, 18 meV, alpha-energy spectra meas., shell and odd-even effects anal., knock-out model calcs. 7−67833
cluster production at 400 GeV/c 7−121542
cosmic ray protons in supernova remnants, limits on hadron production by young pulsars 7−134095
negative binomial multiplexity distributions, intranuclear cascade, distribution shape 7−129053
review of major trends 7−121855
Λ production from p̄ annihilation in nuclei 7−109091
(p,2p), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
(p, α), on A=27-232 nuclei, thermalisation process in inclusive reactions, hot source model 7−67818
(p,α^{3}HeX), 62 MeV, α-, ^{3}He multiplicities, comparison with (π^-,α^{3}HeX) data 7−109179
(p,d), 100-200 MeV, continuum spectrum study 7−121620
(p,f), coincident fragment angular correlations, various nuclei 7−73814
(p, ^{3}He), on A=27-232 nuclei, thermalisation process in inclusive reactions, hot source model 7−67818
(p,n), 100-200 MeV, continuum spectrum study 7−121620
(p, n), as probe of β-decay strength 7−121832
(p, n), giant resonance isospin energy splittings in hydrodynamic model 7−135289
(p,n), P,Si,S,Mg target preparation *(Japanese)* 7−81822
(p,n), to continuum states, cross sections, analysing powers, DWBA calc. 7−102872
(p,n) reaction and the NN force, review 7−121627
(p,pd), 670 MeV, in 1p-shell nuclei, quasi-elastic fast deuteron ejection, shell anal. 7−121821
(p,pd), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
(p,pN), on A=6-16 nuclei, t-matrix approx. with distorted waves 7−121825
(p,pX), cluster knock-out, on A=6-16 nuclei, t-matrix approx. with distorted waves 7−121825
(p,px), quasifree knockout, cluster struct. meas., DWIA calcs. 7−121841
(p,π^-), high spin states, anal. using (p,π^-) in sd-shell nuclei 7−67693
(p,π^+), cross sections, shell model calcs. 7−102881

proton-nucleus reactions continued
(p,t), 100-200 MeV, continuum spectrum study 7−121620
(p,X), 400 GeV, transverse energy distribs., folding model 7−135330
(p̄, X), annihilation in light nuclei, quark-gluon plasma droplet, meson spectra 7−141054
(p,X), fragmentation, computer simulations, semiclassical model 7−67834
(p,X), fragmentation, computer simulation 7−141089
(p,X), GeV region, nucleon emission process 7−116526
(p̄,X), interactions and annihilation, antiprotonic atom formation, fast particle emission 7−129033
(p̄, X), low energy annihilation studies at LEAR 7−128911
(p̄,x), low energy antiproton physics at LEAR 7−89513
(p̄,X), review of experimental situation 7−73774
(p,xn), systematics of neutron emission spectra 7−73764
p̄ annihilation at rest, nucleus excitation and deexcitation 7−135325
pN→ΛX, 28.5 GeV/c, Λ polarization meas. 7−121543
pN→Σ⁰X, 28.5 GeV/c, Σ⁰ polarization meas. 7−121543
Ag (p̄,X), 1.4 GeV/c, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
^{107}Ag(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
^{107}Ag(p,α), 18 meV, alpha-energy spectra meas., shell and odd-even effects anal., knock-out model calcs. 7−67833
Ag(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
Ag(p̄,X), 300-1400 MeV/c, charged particle multiplicity, negative binomial anal. 7−129031
Ag(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
^{27}Al(p,X), 360 GeV/c, multiparticle production expt. 7−140956
^{A}Ar(p,n), A=90,91,92,94, preequilibrium model anal. 7−129044
Ar(p,X), multiplicity distributions of produced particles and energy loss in proton-nucleus collisions at 200 GeV/c *(Chinese)* 7−102871
^{197}Au(A,X), A=p, ^{4}He, ^{20}Ne, coincidence meas. and fragmentation 7−141071
^{197}Au(p,X), 360 GeV/c, multiparticle production expt. 7−140956
^{197}Au(p,f), 1 GeV, kinematic characteristics of fragments, influence of nucleon emission *(German)* 7−129121
^{11}B (p,n)^{11}C, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{11}B(p,3α), 22-1100 keV, cross sections, kinematically complete coincidence measurements, astrophysical S(E) factor 7−121848
^{9}Be(p̄, d), analyzing power meas. of inclusive spectra 7−121833
^{9}Be(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
Be(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
^{209}Bi (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{209}Bi(p̄,f), delayed fission, lifetime meas., evidence for hypernuclear decay 7−135384
^{79}Br(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
Br(p̄,X), 1.4 GeV/c, multiplicity scaling of emitted medium energy protons in emulsion 7−96103
Br(p̄,X), 300-1400 MeV/c, charged particle multiplicity, negative binomial anal. 7−129031
^{A}C(p̄,n)^{A}N, A=12,13,14 differential cross-sections and analysing powers 7−129042
^{A}C(p,π⁺), A=12, 13, cross sections, shell model calcs. 7−102881
^{12}C (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{12}C(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
^{12}C(p,X), 4.2 GeV/c/N, proton emission region size from two-proton correls. 7−141055
^{12}C(p,n), 35, 40 MeV, ^{12}N low-lying states study, DWBA anal. 7−102873
^{12}C(p̄,n̄)X, cascade model calcs. 7−109168
^{12}C(p̄,p̄), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{12}C(p,pπγ), 10 GeV/c invariant inclusive cross section meas., reaction props. 7−121847
^{13}C(p, d), with subsequent decay to ground state, tensor polarisation, DWBA calcs. 7−135327
^{13}C(p, n)^{13}N, isovector ΔJ^π=0⁻ transition study 7−81386
^{13}C(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
^{13}C(p,n)^{13}N, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{A}Ca(p̄,π⁻)$^{A+1}$Ti, A=42,48 cross-sections and analysing power ang. distrib. meas. 7−109170
^{40}Ca(p̄,p̄), E=47,179 MeV, scatt. amplitude, fit with Glauber model, degree of accuracy 7−135321
^{42}Ca(p,n)^{42}Sc 160 MeV, missing Gamow-Teller strength, microscopic anal. 7−89570
^{48}Ca(p,n), 200 MeV, Ikeda sum rules for Gamow-Teller transitions 7−109165
^{14}Cd(p,t), intruder-ground state mixing 7−102836
C(p,X), four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203
C(p,X), pseudorapidity meas. and fireball model 7−96058
^{52}Cr(p,n), ^{52}Mn isomer excitation fn. meas., statistical model comparison 7−116411
^{63}Cu(p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{69}Cu(p,X), fragment charge distributions, statistical model anal. 7−109182
Cu(p,X), pseudorapidity meas. and fireball model 7−96058
Cu(p,Xn), 100 MeV, neutron yield meas. 7−73758
Fe(p,Xn), 100 MeV, neutron yield meas. 7−73758
^{2}H (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{2}H(p̄,X), Coulomb modified Faddeev calculations of low-energy P-D observables 7−67813
^{2}H(p,γ)^{3}μHe 7−96130
^{2}H(p̄,n̄p), polarization transfer coeff., precision meas. 7−109174
^{2}H(p̄,n̄p), quasielastic scatt., 223-492 MeV, spin transfer parameters meas. 7−121854
^{2}H(p,π⁺), coherent prod., three-body mechanisms 7−141047
^{2}He(p̄,X) 180 MeV, break-up cross-section meas., Glauber model predictions 7−141051
^{3}He(p,X), 1.2 GeV, evidence for narrow isovector nonstrange dibaryons 7−135316
^{3}He(p,np), 2.5 and 5.0 GeV/c, ^{3}He→ppn nuclear vertex fn. determination 7−135320
proton-nucleus reactions continued
^{3}He(p̄,pd), ang. distrib. and analyzing power in final state interactio region 7−67823
^{3}He(p,π⁺), microscopic mechanism 7−102868
^{4}He(p̄,X), 192.8, 306.2, 607.7 MeV/c, determ. of σ(p̄n)/σ(p̄p) 7−102764
^{4}He(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
He(p,X), Los Alamos expts. 7−67820
^{180}Hf(p,n), excitation cross section determ. for ^{180m}Ta 7−121614
H(p,X), Los Alamos expts. 7−67820
^{127}I, Coulomb-excitation transition studies 7−109098
Ir(p,f), prod. cross sections and isotope distrib. meas. 7−96126
^{84}Kr(p,X), fragment charge distributions, statistical model ana 7−109182
Kr(p, X), isotope distrib. of medium-sized nuclei, statistical multifrag mentation model anal. 7−121837
^{139}La(p,2n), level scheme study of ^{138}Ce 7−135250
La(p,X), 800 GeV, thick-target recoil props. of deep spallation and frag mentation products 7−129034
^{6}Li (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{6}Li(p,^{3}He)^{4}He, 149-463 keV, CR-39 anal. *(Korean)* 7−81381
^{6}Li(p,Δ⁺⁺)^{6}He, quark-quark spin-isospin interaction, DWBA ana 7−67844
^{6}Li(p,pd)^{4}He, 0.5-1.0 GeV, deuteron production mechanism, tenso polarization calcs., ^{6}Li αnp model 7−121846
^{7}Li(p,d), 18.6 MeV, spectroscopic factors and vertex constants, DWBA anal., diff. cross section 7−67718
^{A}Li(p,2p), A=6, 7, t-matrix approximation, quasielastic nucleon scatterin and core polarization, intranucleon wave fns. *(German)* 7−129049
^{A}Li(p,pn), A=6, 7, t-matrix approximation, quasielastic nucleon scatterin and core polarization, intranucleon wave fns. *(German)* 7−129049
Lu(p,X), 800 GeV, thick-target recoil props. of deep spallation and frag mentation products 7−129034
^{26}Mg(p,n), Gamow-Teller strength and isospin channel fractionation, she model comparison 7−116409
^{26}Mg(p,n)^{26}Al, cross-section and ang. distrib. meas. 7−102875
^{26}Mg(p,n)^{26}Al, stretched state excitations 7−109181
^{A}Mo(p,α), A=92,94,96,98,100, 18 meV, alpha-energy spectra meas., she and odd-even effects anal., knock-out model calcs. 7−67833
^{A}Mo(p,n), A=92,94,95,96,97,98,100 preequilibrium model ana 7−129044
^{A}N(p, n)^{A}O, A=14, 15 isovector ΔJ^π=0⁻ transition study 7−81386
^{14}N(p,α)^{11}C, recoil charged particle induced reactions, yields, averag cross-sections 7−89571
^{23}Na(p,^{12}C)^{12}C, 11-18 MeV, possible new 2⁺ resonances in ^{12}C+^{12} system 7−116364
^{93}Nb(p,α), 18 meV, alpha-energy spectra meas., shell and odd-even effect anal., knock-out model calcs. 7−67833
^{144}Nd(p,α), mechanism and ang. distrib., pick-up and knock-on theorie 7−116417
^{20}Ne (p̄,K⁰X), 607 MeV/c, prod. cross section meas. 7−141049
^{20}Ne(p̄,Δ⁰X), 607 MeV/c, prod. cross section meas. 7−141049
^{20}Ne(p̄,X), low energies, σ(p̄n)/σ(p̄p) values, Glauber model 7−116423
^{58}Ni(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance an transitions 7−81365
^{16}O(p̄, nπ⁺)^{16}O, DWBA calculation using Dirac equation 7−135324
^{16}O(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ra lines by excitation and spallation 7−81388
^{16}O(p,4αp), 50 MeV, cross section meas., ^{5}Li and ^{8}Be formation cros section 7−121826
^{16}O(p,α)^{13}N, recoil charged particle induced reactions, yields, averag cross-sections 7−89571
^{16}O(p,n), 0⁺→0⁻ spin excitation mode transitions, distorted wave calc 7−121823
^{16}O(p,n), 35, 40 MeV, ^{16}F low-lying states study, DWBA anal. 7−10287
^{16}O(p̄,p̄), E=47,179 MeV, scatt. amplitude, fit with Glauber mode degree of accuracy 7−135321
^{18}O(p,α), 40.9 MeV, ^{15}N levels, J^π, form factors and spectroscopic factor DWBA anal. 7−102805
^{18}O(p,n)^{18}F, recoil charged particle induced reactions, yields, averag cross-sections 7−89571
(p,d), antisymmetrisation corrections in approx. three-body mod 7−81403
(p,X), correlations of cumulative protons and deuterons, azimuthal correl 7−67842
(p,X), hadron prod. at forward angles, single scatt. model study 7−8957
(p,X), hadronic charm prod., QCD calcs. 7−102699
^{A}Pb(p,xn), A=204,206-8, E_p=25.5 MeV, preequilibrium neutron emi sion, shell effects, double shell closure 7−141052
^{208}Pb (p̄, p)X, knock-out reactions, search for p̄-nucleus states 7−135322
^{208}Pb(p,X), model of transverse energy production in high energ nucleus-nucleus collisions 7−135326
^{208}Pb(p,n)^{208}Bi, 200 MeV., neutron spectra, DWIA, finite fermi syste anal. 7−121845
^{208}Pb(p̄,t), 22 MeV, reaction mechanism and struct. depend., expt. an DWBA calcs. 7−135328
^{208}Pb(p,t)^{206}Pb, two-particle pairing excitations 7−116362
Pb(p, X), Fragments transverse energy distrib., no-plasma model ana 7−89525
Pb(p,X), n correlations at 7.5 GeV/c 7−96069
Pb(p,X), nuclei and neutron emission from spallation, radwaste tran mutation appl. 7−109489
Pb(p,X), pseudorapidity meas. and fireball model 7−96058
Pb(p, X), transverse energy production in proton-nucleus and nucleu nucleus collisions 7−95950
^{106}Pd(p,α), 18 meV, alpha-energy spectra meas., shell and odd-even effect anal., knock-out model calcs. 7−67833
^{110}Pd(p,n), preequilibrium model anal. 7−129044
^{103}Rh(p,nγ), 2.8-4.6 MeV, gamma-ray meas., ^{103}Pd level anal. 7−67691
^{A}Ru, A=99,101, B(E2) values, Coulomb excitation 7−109099
^{102}Ru(p,2n)^{101}Rh, 13, 18, 23 MeV, high and low spin states in ^{101}R 7−89543
^{152}Sm(p,4n), E_p=26-39 MeV, ^{149}Eu energy levels study 7−121553
Ta(p,X), four-dimens., hadron jets, multiple particle prod., relativistical invariant approach 7−116203
^{159}Tb(p,X), 800 GeV, thick-target recoil props. of deep spallation an fragmentation products 7−129034
^{232}Th(p,f), 1 GeV, kinematic characteristics of fragments, influence nucleon emission *(German)* 7−129121
Th(p,Xn), 100 MeV, neutron yield meas. 7−73758
^{A}U(p,f), A=235, 238, E_p=1-4 MeV, anomalous behaviour of fission cros section 7−81462

proton-nucleus reactions continued
^{A}U(p,fission), A=235, 236, 238 pulse-height and time of flight spectroscopy 7−121973
^{238}U(p,X), 11.5 GeV, coincidence meas. and fragmentation 7−141071
^{238}U(p,f), 1 GeV, kinematic characteristics of fragments, influence of nucleon emission *(German)* 7−129121
^{238}U(p̄,x), hypernuclei production probability 7−121978
U(p,X), nuclei and neutron emission from spallation, radwaste transmutation appl. 7−109489
U(p,X), spallation cross-sections 7−81398
^{184}W(p,f), 1 GeV, kinematic characteristics of fragments, influence of nucleon emission *(German)* 7−129121
^{132}Xe(p,X), 1-20 GeV, fragment energy spectra meas., two distinct fragment production mechanisms 7−141070
^{132}Xe(p,X), fragment charge distributions, statistical model anal. 7−109182
Xe(p,X), 1-19 GeV, light fragment prod., diff. cross sections, binary process 7−96068
Xe(p,X), multiplicity distributions of produced particles and energy loss in proton-nucleus collisions at 200 GeV/c *(Chinese)* 7−102871
Xe(p,X), secondary fragment charge dispersion, statistical multifragmentation model 7−141048
^{176}Yb(p,3nγ)^{174}Lu, 18.3, 20.7, 22.7 MeV, ^{174}Lu level study 7−102792
^{90}Zr(p̄,n), 80 MeV, transverse pol. transfer coeffs., spin-flip resonance and transitions 7−81365

proton-nucleus scattering
see also neutron-proton scattering; proton-proton scattering
^{50}Cr(p,p′), 6.05 MeV, resonance props., elastic, inelastic scatt. 7−121830
conference, 9th Biennial Studies of Nuclear Physics, Aussois, France (March 1987) 7−80182
intermediate energy inelastic scatt. by spin 0 nuclei, spin-orbit interaction effects calcs. *(Russian)* 7−81395
nonlocality, microscopic optical model calcs. 7−102879
oriented nuclei nuclear reactions, book contrib. 7−96050
review of major trends 7−121855
spin excitation modes, expt. and theoretical predictions, review 7−73745
^{12}C(p,p′), anal. using relativistic impulse approx. with exchange 7−67836
(p̄, p̄), 180 MeV, spin effects in closed-shell nuclei, Glauber mult. scatt. anal. 7−67843
(p,p), 65<E_p<200 MeV,. folding model potential anal., cross sections, analyzing powers spin rotation parameters 7−67837
(p,p), A=23-110, E_p~6 MeV, threshold isotopic effect, contrib. to scatt. from compound nucleus, stat. anal. 7−121819
(p,p), correlation effects in relativistic impulse approx. treatment 7−109169
(p̄,p), microscopic optical model anal. 7−135323
(p,p), relativistic dynamical effects, interpretation 7−109171
(p,p), relativistic scatt., Dirac equation with optical potential 7−121857
(p,p′), 1 GeV, differential cross section angular distrib., nuclear transition densities anal. 7−121827
(p,p′), 100-200 MeV, continuum spectrum study 7−121620
(p̄,p′), 20 MeV, anal. power angular distrib., nuclear transition densities anal. 7−121827
(p,p′), cross section and r.m.s radii calcs., nuclear surface oscillation effects, diffractional model anal. 7−135315
(p,p′), exciton model, multi-step energy correl., double-differential cross sections calcs. *(Chinese)* 7−116367
(p,p′), medium energies, $0^+ \rightarrow 0^-$ transitions relativistic impulse approx. 7−67835
(p,p′), tensor potentials and linearly velocity-dependent potentials with a Lorentz-Lorenz correction 7−73706
(p,p′), to continuum states, cross sections, analysing powers, DWBA calc. 7−102872
(p,X), N*(1470) formation, quasi-elastic forward scatt. in two-nucleon cluster, anal. 7−121828
pN→heavy flavours, QCD anal. 7−67677
p̄N scattering in nucleus, Pauli principle and anisotropy 7−81394
^{27}Al (p,p′), E_p=200 MeV, exciton model reformulation to include energy-momentum coupling 7−129032
Al(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{11}B(p,p^1)$_1$, analysing power excitation functions, coupled channel model calcs., ^{12}C resonances 7−129041
^{11}B(p,p′), 4-10 MeV, analyzing power calcs., coupled-channels anal. 7−116415
^{12}C (p, p′)^{12}C, correlation function symmetry, PWIA for 1^+ states 7−96070
^{12}C (p, p), relativistic microscopic calcs. and spin observables 7−81392
^{12}C(X,X′), X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844
^{12}C(p̄,p̄′)^{12}C, deformed spin-orbit potential, cross-sections and analysing powers 7−121851
^{12}C(p,p), reaction time meas. for ^{13}N resonant state lifetime study 7−135274
^{13}C(e,e′), 2hω structure in ^{13}C, anal. using inelastic scatt. 7−116392
^{A}Ca(p, p), A=40, 48, relativistic microscopic calcs. and spin observables 7−81392
^{A}Ca(p̄,p′), A=40, 48, cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{A}Ca(p,p), A=40,48, 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{40}Ca(N,N), N=p or n, 11-48 MeV, diff. cross sections, optical anal. 7−67816
^{40}Ca(p̄, p), 30.3 MeV, CC-inversion approach to pol. pots. 7−121780
^{40}Ca(p,p′), 319 MeV, spin-flip probabilities meas. 7−109172
^{40}Ca(p̄,p′), cross sections and analyzing power meas. 7−102880
^{40}Ca(p,p′)^{40}Ca, fine structure of resonance 7−129045
^{40}Ca(p̄,p), 0.497-1 GeV, elastic and inelastic, polarisation characteristics 7−67840
^{40}Ca(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual NN̄ processes, relativistic correction 7−81385
^{40}Ca(p,p), differential cross sections, polarisations, giant resonances *(Russian)* 7−121843
^{40}Ca(p,p)^{40}Ca, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
C(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{50}Cr(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{53}Cr(p,p)^{53}Cr, optical potential at low and medium energies 7−67838
Cu(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{19}F(p,p), 2-3.5 MeV, T=1 isobaric analogue states in ^{20}Ne 7−109040

proton-nucleus scattering continued
^{54}Fe(p,p′γ), 3.88-4.8 MeV, γ-angular distrib., spectra, $d_{5/2}$ isobaric analogue state in ^{55}Co 7−67785
^{70}Ge(p,p′), intermediate structure of ^{71}As 7−67725
^{1}H(p,p′γ), bremsstrahlung, off-shell aspects of NN force 7−67736
^{1}H(p̄,p′γ), bremsstrahlung expt. 7−67641
^{2}H(p̄, p̄), 500, 800 MeV, proton spin observable meas. 7−141050
^{2}H(p,p′), Δ^0 isobar, quasifree prod. at 3.88 GeV/c 7−102877
^{2}H(p,p′), scattering length correlation with binding energy, two-body model anal. 7−67832
^{2}H(p,p), 1 GeV, cumulative processes, isobar role, kinematically forbidden region, intranuclear cascade method 7−121820
^{2}H(p̄,p), 65 MeV, depolarisation parameter meas. 7−96048
^{2}H(p,p), differential cross section, multiple-scattering theory, inelastic screening, 3 TeV prediction 7−116195
^{3}He(p,p), Glauber multiple scattering theory anal. 7−109164
^{4}He(p,p′)^{4}He, nuclear responses to isoscalar spin-dependent excitations 7−116414
^{4}He(p,p), cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
^{4}He(p,p), mirror scattering cross sections and phase shifts *(Chinese)* 7−96061
^{4}He(p,p), phase shifts and differential cross section calcs. *(Chinese)* 7−96066
^{4}He(p,p)^{4}He, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
He(p,p), Los Alamos expts. 7−67820
H(p,p), Los Alamos expts. 7−67820
^{A}Li(p,p′), A=6,7, continuum spectra near breakup threshold 7−67824
^{A}Li(p,p′); A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
^{26}Mg(p,p), 5.5-17.5 MeV, optical potential description, compound nucleus scatt., OP parameters 7−121815
^{26}Mg(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{1}Mo(p,p^1), A=94, 96, 100, strong coupling effects, semimicroscopic description, angular distrib. and cross sections 7−121818
^{A}Mo,(p,p), A=94, 96, 100, 25-6 MeV, strong coupling effects, semimicroscopic description, angular distrib. and cross sections 7−121818
^{A}Mo(p, p′), A=94, 96, 100, 25.6 MeV, level energies, DWBA and coupled channels anal. 7−116406
^{A}Mo(p,p), A=94,96,100, elastic, inelastic scatt., coupled channel anal. *(Russian)* 7−109175
^{A}Ne(p,p′)^{14}Ne, A=20, 22, excitation of 1^+ and 2^- states 7−73762
^{58}Ni(p,p′), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073
^{64}Ni(p,p), phenomenological optical pot., energy depend. of radius 7−135270
^{A}O(p,p′), 201 MeV, A=16, 18, spin-flip transitions excited by forward inelastic scatt. 7−81296
^{A}O(p,p), 11-60 MeV, A=16, 17, coupled channel variational method appl. 7−102884
^{16}O(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{16}O(p,p′), $0^+ \rightarrow 0^-$ spin excitation mode transitions, distorted wave calcs. 7−121823
^{16}O(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual NN̄ processes, relativistic correction 7−81385
(p,p′), 6-15 MeV, resonances, nonstatistical nature 7−109159
(p,p′), spin response, finite geometry and absorption effects 7−73769
^{208}PG(p,p), 800 MeV, nonrelativistic multiple scatt. theory, virtual NN̄ processes, relativistic correction 7−81385
^{208}Pb (X,X′), X=p, π, 4.5, 7.5 GeV/c and 1.5-3, 5 GeV, p, d, π ang. distrib. irregularities near 180° 7−121844
^{208}Pb(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{208}Pb(p,p^1), 200, 400 MeV collective DWBA analysis, low lying states, n to p multipole matrix elements 7−108959
^{208}Pb(p,p′), 318 MeV, cross sections, high spin state meas., DWIA anal. 7−67688
^{208}Pb(p,p′), 45 MeV, 1^+ state excitation, isoscalar character and tensor correls. importance 7−81299
^{208}Pb(p̄,p′), cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{208}Pb(p,p′), deformation length and matrix elements, collective DWBA formalism 7−102882
^{208}Pb(p,p), 3-4.6 MeV, colour van der Waals interaction study 7−128970
^{208}Pb(p,p), 500 MeV, cross sections, anal. powers, spin rotation parameters, relativistic anal. *(Chinese)* 7−102869
^{208}Pb(p,p), 800 MeV, relativistic impulse approximation in an additive potential model 7−121839
^{208}Pb(p̄,p̄), spin observables at 290 MeV 7−67827
^{208}Pb(p,p)^{208}Pb, relativistic optical potential and Dirac equation study *(Chinese)* 7−102870
^{196}Pt(p,p′)^{196}Pt, coupled channel formalism 7−109167
^{32}S(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317
^{A}Se(p,p) A=78, 80, 82, energy ≤6 MeV, polarization, cross sections, OP parameters. isobaric analog states 7−121816
^{A}Si(p,p), A=28,30, resonance scatt. anal. *(Russian)* 7−109176
^{28}Si(p,p), E_p<15 MeV, optical pot. parameters, direct and resonant process interference 7−135317
^{A}Sn(p,p′), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{A}Sn(p,p), A=116,120,124, cross sections and analyzing powers, coupled-channel formalism 7−116410
^{116}Sn(p,p′)^{116}Sn, core polarisation in stretched spin states 7−81402
^{46}Ti(p̄,p′), 65 MeV, low energy octupole resonance, excitation strength and state distrib. 7−81361
^{50}Ti(p,p), resonance scatt. anal. *(Russian)* 7−109176
^{51}V(p̄,p′), spin transfer meas. in M1 region 7−81387
^{A}Zn(p,p′)^{A}Zn, A=64, 66 inelastic scatt., excitation energies and ang. distribs. 7−73760
^{A}Zn(p,p′)^{A}Zn, A=68,70, spectroscopy, comparison of low-lying states 7−73761
^{90}Zr(p, p), relativistic microscopic calcs. and spin observables 7−81392
^{90}Zr(p,X), sub-Coulomb energies, radiative capture, elastic and inelastic scatt., cross sections 7−81390
^{90}Zr(p,p′), 200 MeV, 0^- state excitation, resonance and transitions, DWIA calc. 7−67696
^{90}Zr(p̄,p′), cross sections and analyzing power, DWBA and optical model calcs. 7−102878
^{90}Zr(p,p′), phonon states in spherical nuclei, quasiparticle-phonon model description 7−96073

proton polarisation
beam, energy modulations associated with polarisation reversal 7−81828
European Hadron Facility, equipment and expts. 7−103311
lysozyme, deuterated matrix, 1 H clusters, dynamic nuclear polarisation, NMR anal. 7−79152
pulsed high-intensity source of polarized protons 7−81824
self-polarization of protons in storage rings 7−81825

proton production
μp deep inelastic scatt., pp, p̄p and p̄p̄ prod. 280 GeV, Lund fragmentation model predictions 7−135139
(^{12}C,X), on emulsion, pion and proton production in forward and backward hemisphere 7−135350
^{12}C(α,xpX), 4.2 GeV/N, two-proton correls., proton emission region dimensions 7−67854

proton-proton inclusive interactions
CERN, history from 1940s to 1960s, book 7−108054
charm hadroproduction at 400 GeV/c and 800 GeV/c 7−102782
charmonium→γγ, direct obs. in p̄p, partial width meas. for η_c and χ regions 7−81196
cosmic ray interactions, ultrahigh energy, unitarity bounds on diffraction 7−135171
double-meson inclusive interaction in baryon fragmentation region, anal. 7−140957
E_6 neutral gauge boson detection through lepton pairs at hadron colliders 7−89408
hadron multiplicity, spectra, Froissart cross sections, for future energies 10^3-10^5 GeV 7−116204
spin 3/2 lepton prod., cross sections and coupling in composite model 7−135164
SSC, search for Higgs boson 7−74294
UA1 and UA2 results, standard model conf., Stanford, CA, USA, July 1986 7−102016
p̄→X, directional dependence of Bose-Einstein correlations 7−81249
pN inclusive scattering at high-energy, hyperon polarization, final state interactions 7−135160
pp, 250, 360, 800 GeV/c, inelastic and nondiffractive multiplicity distribs., universal description 7−128927
p̄p, 32 GeV/c, jetlike structure of final hadronic states, collective variables, e^+e^- data comparison *(German)* 7−128924
pp, 360 GeV/c, neutral strange particle correls., rapidity gap distribs., ang. distribs. 7−95956
pp, 40 TeV, Higgs identification in Z^0 pair prod. 7−128915
pp, 400 GeV/c, inclusive D and D̄ prod., differential cross sections 7−95949
p̄p, 540 GeV, multiplicity distribs. and bremsstrahlung analogy 7−128922
p̄p, experimental mass, mixing angle bounds on $\tilde{Z}^0$ ($Sp_L(8)\times U(1)$ prediction) 7−108942
p̄p, heavy quark prod. in order α_s^3, one loop corrections, cross sections on partonic level 7−95957
pp, ISR energies, branching, geometrical scaling and KNO scaling 7−128923
p̄p, SPS energies, extended gauge symmetry as a possible source of exotic events 7−67674
p̄p, unified physical picture for multiplicity distrib. 7−121544
p̄p→ muons, dimuons (heavy flavour production), cross sections, perturbative QCD anal. 7−140961
p̄p → gaugino pair, production rate calcs. 7−89528
p̄p and pp high energy total cross section and ρ-value fits 7−89530
p̄p annihilation, hadron spectroscopy 7−73675
p̄p→b-quarks, $\sqrt{s}$=630 GeV, cross sections, lowest-order perturbative QCD calcs. 7−108941
p̄p collider, high luminosity charm and beauty physics 7−73676
p̄p collisions, 540 GeV, Giovannini-Van Hove model, forward-backward correl., clan decay distribs. 7−121540
p̄p collisions, E=24.3 GeV, π^0 and η inclusive production cross sections 7−128917
p̄p collisions, probability distribs. in the pure birth process 7−95948
p̄p collisions, search for (B-L) gauge boson, standard model anal. 7−116197
p̄p collisions, UA(5) high energy simulation program 7−135156
p̄p collisions, W transverse momentum distrib., at CERN collider, high-order QCD calculations, di-jet system 7−135162
p̄p→$\chi_{1,2}$→γψ→γe$^+$e$^-$, angular distribs., χ radiative transitions 7−135107
p̄p→D, three-cluster model for multiplicity distribs. in pseudorapidity intervals 7−102775
p̄p→D$_p$X, D=new quark, cross sections, D signatures 7−140962
pp→e$^+$X, prompt e$^+$ prod. at low transverse momentum, multiplicity depend. 7−135159
pp→η′X, high p_T prompt prod., higher twist mechanism and parton scatt. 7−135158
p̄p→fX, 32 GeV/c, topological and differential cross section meas. 7−95951
pp→γX, 300 GeV/c, cross section meas. 7−116200
p̄p→γX, 63 GeV, soft-photon production, direct component limits 7−67676
p̄p→γZ^{0}X, γZ^0 production and new physics in the TeV region 7−108925
pp→γ+away-side jet, $\sqrt{s}$=63 GeV, gluon distrib. determ. 7−95954
pp→γγ, $\pi^0\pi^0$, cross sections, perturbative QCD anal. 7−89532
pp→hadrons+X, 360 GeV/c, p_T distribs., quark-diquark fragmentation model anal. 7−140965
p̄p→jets, low transverse energy, multiplicity distrib. 7−81253
p̄p→jets, solid angle anal. of large transverse energy events, comparison with QCD 7−121547
pp→l^-j^+, forward-backward asymmetries, (γ^*,Z^{0*}) production effects 7−108940
pp→LL̄+X, heavy lepton prod. from WW fusion, exact cross section calc. 7−89527
pp→λX, 360 GeV/c inclusive hyperon prod. in target fragmentation region, triple Regge anal. 7−81254
pp→mesons+baryons, 360 GeV/c, quark-diquark fragmentation mechanism, parton model comparisons 7−81255
p̄p→$\mu^+\mu^-$X, beauty prod. and semileptonic decay 7−81245
p̄p→μμX, perturbative QCD calcs. 7−95801
p̄p→p̄X, single diffraction dissociation cross section at 546 GeV 7−73672
pp→ppX^0, baryon-antibaryon pair prod. in central region at 85 GeV/c 7−108946
p̄p(pp)→ vector mesons, fusion recombination model anal. 7−135167
pp(p̄p)→X, four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203

proton-proton inclusive interactions continued
pp→π^-K$^-$p̄X (π^+K$^+$pX), cross section meas., parton model comparis 7−108945
pp→π^0X, 300 GeV/c, cross section meas. at large transverse momentu parton-model comparisons 7−116201
pp→πX, 360 GeV/c, inclusive pion distributions, model comparisc 7−140966
p̄p→ψX, ψ-hadroproduction, signals for B→ψX and χ→ψγ 7−73671
p̄p→ρ^0X, 32 GeV/c, topological and differential cross section me 7−95951
p̄p→S*X, 32 GeV/c, topological and differential cross section me 7−95951
p̄p→Σ$^\pm$X, inclusive and semi-inclusive cross-sections, differential distri 7−81256
p̄p→t̄t, heavy top production, prod. cross section and decays, W bos pair prod. 7−140963
p̄p→t̄tX, t quark mass determ. in hadron colliders 7−135165
p̄p→Vo pairs, strange particle correlations study for K_s^0, Λ and π pr 7−140964
p̄p→W, Z, light neutrons, t-quark mass limits, standard model compa sons 7−95947
pp→$\tilde{W}_i\tilde{W}_j$, $\tilde{W}_i\tilde{Z}_j$, $\tilde{Z}_i\tilde{Z}_j$, 40 TeV, production rate calcs. 7−116202
pp→WW(ZZ)→H, Higgs production anal. at TeV, multi-TeV energ 7−89488
pp→WZ, luminosity fns. for W$^\pm$ and Z^0 initial processes 7−140951
p̄p→w̄+X(z̄+X), first order supersymmetric QCD corrections to rapidi massless partons 7−135168
p̄p→W+2 jets, large p_T W prod., standard model processes, 0.6-2.0 T calc. 7−116198
p̄p→X, annihilation mechanisms in quark models 7−67669
pp→X, anomalous baryon number nonconservation 7−102773
pp→X, directional dependence of Bose-Einstein correlations 7−81249
p̄p→X, Glauber-Velasco model 7−102771
pp→X, hadronic charm prod. QCD calcs. 7−102699
pp→X, inclusive π^0 production, interpretation in terms of quark-part models 7−102779
p̄p→X, minimum bias data, hard scatt. effects 7−81259
p̄p→X, ratio of baryon to meson in high energy hadronic react *(Chinese)* 7−102772
pp→X, search for anomalous particles in high-energy hadron-proton in ractions 7−102776
p̄p→X, secondary hadron transverse momenta correlations 7−95952
p̄p→X, semi-inclusive p_T distrib., two-temperature model anal. 7−10894
pp→X, single-particle spectra in soft hadron-hadron interactions a two-component cascade model 7−102780
p̄p→X, UA1 results for large missing transverse energy events 7−10278
p̄p→X, W and Z production, comparison with standard model 7−89535
pp→ZZ+X, contrib. from gg interactions, box diagram calcs. 7−13516
pp→ZZ+X, invariant mass distrib. at supercollider energies 7−116199
p̄p→Z(W)X, production cross-sections and momentum distribs. 7−1215
Z′ neutral gauge boson, evidence from UA1 W-jet-jet events? 7−81246
PP, ISR energies, gluon scatt. and fragmentation in high p_T interacti 7−73673
p̄p annihilation, W and Z^0 discovery, comparison with standard mo *(Polish)* 7−67672
p̄p collisions, fireballs, stochastic decay, limiting fragmentation 7−81244
pp→X, double parton scatt. at 63 GeV 7−81260
p̄p→X, multiple prod. and multiplicity distrib., Monte Carlo simulat model 7−89533
p̄p→X, particle generation mechanisms 7−67673
p̄p→X, space-time development of transverse expansion of hadronic flu hydrodynamical model 7−89534

proton-proton interactions
see also proton-proton inclusive interactions; proton-proton scattering
CERN p̄p project 7−81771
conf., Sandhamn, Sweden, June 1986 7−95109
dynamics in CERN ISR energy range 7−67645
hadronic multiplicity distributions, statistical description 7−121524
p(p̄)p, high energy multiplicity distns. 7−67657
p̄p, 200, 900 GeV, cross section ratio meas. 7−67658
pp, 250 GeV/c, rapidity dependence of multiplicities 7−67665
pp, 360 GeV/c, quark-diquark fragmentation anal., LUND model te 7−67659
p̄p, $\sqrt{s}$=200, 900 GeV, forward-backward multiplicity correlati 7−67666
p̄p, generalized non-scaling multiplicity distribution 7−89520
p̄p, N_c bounds, exptl. review 7−107996
p̄p, nondiffractive process, multiplicity distns., statistical model anal., r of gluon-gluon interactions 7−67667
p̄p, scaling breakdown, exptl. anal. 7−67653
p̄p, σ(p̄n)/σ(p̄p) determ. from ^{4}He(p̄,X) data 7−102764
pp, transverse momenta in minimum bias events, dual parton model ar 7−67660
p̄p→2π^0(π^{0}γ)(2γ), branching ratio determ. 7−102766
p̄p (pp), higher twist subprocess testing, contribs. to cross secti 7−128910
pp (p̄p)→X, QCD tests 7−102703
p̄p annihilation, 180-600 MeV/c, cross sections, potential model ar 7−95929
p̄p→b̄b, cross section calcs. 7−67663
pp→charm particles, data review 7−67661
p̄p collider results and detectors, W, Z and heavy flavour phys 7−95945
pp→dibaryon (2.7 GeV/c^2), $\Delta\sigma_L$ cross section anal., correlation with s quark structure models 7−89515
pp→dπ$^+$, 447, 515, 580 MeV, tensor and vector polarization me 7−95928
pp→dπ$^+$(ppπ^0), s-wave πN-amplitude, threshold pion formation 7−812
p̄p exclusive reactions 32 GeV leading (anti)proton properties, statisti model of independent particle emission 7−116196
pp→heavy flavour particles, delayed thresholds Pomeron structure a dual parton model 7−116191
p̄p→K$^+$K$^-$, 1.3-1.5 GeV/c, ξ(2230) narrow resonance search, invari masses 7−140954
p̄p→K$^+$K$^-$, ξ(2.2) formation search 7−95932
p̄p→ΛΛ, $\sqrt{s}$=14.6, 25.5 MeV, cross sections, diff. cross sections, Λ, polarization meas. 7−95931
p̄p→$\mu^+\mu^-$, tagging of heavy flavours, b̄b cross section calcs. 7−67663
p̄p→ñn, 180-600 MeV/c, cross sections, potential model anal. 7−95929
p̄p→ñn, differential cross-section meas. 7−121529

proton-proton interactions continued
$\bar{p}p \rightarrow pX$, pseudorapidity distn., dual parton model comparisons 7−67662
$\bar{p}p \rightarrow pn\pi^+$, spin dependent observables meas., scatt. amplitudes 7−95934
$pp \rightarrow pp\ K_1^0 K^{\pm}\pi^{\mp}$, centrally produced, spin-parity anal. 7−81242
$pp \rightarrow pp\ K^+K^-\pi^+\pi^-$, centrally produced, cross-sections 7−81243
pp($\bar{p}\bar{p}$), massive Drell-Yan pairs prod., optimized perturbative QCD 7−81239
$\bar{p}p(pp) \rightarrow Z\gamma$, test of compositeness 7−121539
$\bar{p}\bar{p} \rightarrow pp\pi^o$, spin dependent observables meas., scatt. amplitudes 7−95934
$\bar{p}p \rightarrow p\pi^+n$, density-matrix elements and single-spin correlations 7−81228
$\bar{p}p \rightarrow$pseudoscalar mesons, protonium annihilation, threshold helicity amplitude anal. 7−74789
$\bar{p}\bar{p} \rightarrow \pi^+d$, spin dependent observables meas., scatt. amplitudes 7−95934
$pp \rightarrow \pi^+d$, unitary model of πNN dynamics 7−67640
$pp \rightarrow \pi^+pn$, unitary model of πNN dynamics 7−67640
$\bar{p}p \rightarrow \pi^+\pi^-$, 158-275 MeV/c, total cross section meas. 7−135146
$\bar{p}p \rightarrow \pi^+\pi^-$, backward scatt. at 8 at 12 GeV/c 7−67642
$\bar{p}p \rightarrow \pi X$, N mass determ. from temperatures 7−95920
$\bar{p}p$ total cross sections, E≤420 MeV/c, cross section structure, narrow resonance strength 7−128908
$pp \rightarrow X$, 360 GeV/c, in Al/Au, multiparticle production expt., Monte Carlo comparisons 7−140956
$\bar{p}p \rightarrow X$, cross-sections at low momenta, range of nuclear force 7−121535
$\bar{p}p \rightarrow X$, low energy annihilation studies at LEAR 7−128911
$\bar{p}p \rightarrow y\bar{y}$, hyperon-antihyperon transition pot. in quark model 7−128913
W^+W^- pair production via fusion, 40 TeV, effective-gauge-boson approx., invariant mass distrib. 7−128912
$\bar{p}p \rightarrow J/\psi$, mass meas. 7−81223

proton-proton scattering
see also proton-proton interactions
aerosol source identification by PIXE and PESA 7−87941
elastic scattering, asymmetry and double-spin-flip amplitude 7−67644
parity nonconservation, 45 MeV, precision meas. 7−81229
pp, 970 MeV, solns. of phase shift anal. 7−67646
$\bar{p}p$ elastic scatt., odderon amplitude, dynamical origin 7−108936
pp elastic scatt., wide range of angles, T-matrix expression 7−81226
$\bar{p}p$ elastic scattering, 180-600 MeV/c, cross sections, potential model anal. 7−95929
$\bar{p}p$ elastic scattering, 22.4 GeV/c, diffr. cross section meas., total cross sections 7−121538
pp elastic scattering, polarization t-dependence at all energies 7−95927
$\bar{p}p$ elastic small-angle scatt. at low momentum, high statistics meas., uncertainties 7−135145
$\bar{p}p \rightarrow \bar{p}p$, 546, 630 GeV, t-distribution anal. 7−67662
$\bar{p}p \rightarrow \bar{p}p$, backward scatt. at 8 at 12 GeV/c 7−67642
$pp \rightarrow pp$, elastic scatt., complicated kinematic range 7−140953
$\bar{p}p \rightarrow \bar{p}p$, elastic scatt., differential cross-sections 7−81227
$pp \rightarrow pp$, elastic scatt., spin dependent observables 7−81232
$pp \rightarrow pp$, P-odd two-pion potentials and scatt. asymmetry at low energy 7−73667
$pp \rightarrow pp$, unitary model of πNN dynamics 7−67640
$\bar{p}p \rightarrow pp'$, bremsstrahlung expt. 7−67641
$pp \rightarrow pp'\gamma$, bremsstrahlung, off-shell aspects 7−67736
pp($\bar{p}\bar{p}$) elastic scatt., high energy, nucleon valence core model anal. 7−108937
$pp \rightarrow pp\gamma$, 730 MeV, bremsstrahlung cross sections, soft-photon and Feshbach-Yennie calcs. 7−121528
pp scattering, 6 GeV/c, evidence of short-range repulsive spin-orbit components 7−89516
$\bar{p}p$, forward scatt., 0-200 MeV/c, real and imaginary scatt. amp. ratio near $\bar{p}n$ threshold 7−95933
$\bar{p}p \rightarrow pp$, cross section, parity-violating helicity depend. 7−108935

proton radiative capture
collective processes, shell effects on radial coupling, direct-semidirect model 7−102876
light nuclide radiative capture, microscopic studies including collective and cluster degrees of freedom 7−121785
$^{27}Al(p,\gamma)$, 15.234 MeV level in ^{28}Si, radiative decay 7−109110
$^{27}Al(p,\gamma)$, 25 MeV, ^{28}Si level lifetimes *(Chinese)* 7−109112
$^{27}Al(p,\gamma)^{28}Si$, 1588 and 2044 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
$^{12}C(p,\gamma)^{13}N$, recoil charged particle induced reactions, yields, average cross-sections 7−89571
$^{40}Ca(p,\gamma)$, resonance strengths, excitation energies and γ-ray branching ratios 7−109162
$^{142}Ce(p,\ \gamma\gamma)$, isoscalar and isovector quadrupole resonance effects in $p\gamma\gamma$ ang. correls. 7−67784
$^{19}F(p,\gamma)$, 1.35, 4.15 MeV, T=1 isobaric analogue states in ^{20}Ne 7−109040
$^{56}Fe(p,\gamma)$, 1.6, 1.64 MeV, ^{57}Co 1377 keV level lifetime 7−67765
$^{2}H(p,\gamma)$, intermediate energy, meson exchange and relativistic correction effects 7−121842
$^{2}H(p,\gamma)^{3}He$, polarisation correlations 7−81380
$^{39}K(p,\gamma)$, 1.3-1.6 MeV, ^{40}Ca level widths between 9.5 and 10.5 MeV 7−67723
$^{6}Li(p,\gamma)^{7}Be$, ang. distribs. meas. to ground and first excited states 7−109155
^{25}Mg (p,γ), ang. distrib., ^{26}Al 7290 keV resonance state study 7−135256
$^{25}Mg(P,\gamma)$ at stellar energies, astrophysical aspects, ^{26}Al abundance 7−107813
$^{13}N(p,\gamma)$, stellar energies, microscopic coupled channel approach, cross section 7−73759
$^{14}N(p,\gamma)$, 0.2−3.6 MeV, stellar reaction rate and H burning in massive stars 7−107812
$^{14}N(p,\gamma)^{15}O$, 7.56 MeV resonance, nuclear bremsstrahlung potential model anal. 7−109178
$^{22}Ne(p,\gamma)^{23}Na$ in H-burning stars, Na core enrichment *(Russian)* 7−140046
$^{16}O(p,\gamma)$, E1 transition, giant dipole resonance and strongly collective core excitations 7−121710
$^{45}Sc(p,\gamma)^{46}Ti$, 1026, 1047 and 1377 keV, decay schemes, angular distribution of gamma rays, resonance spin 7−116360
$^{29}Si(p,\gamma)$, 1.3-2.1 MeV, ^{30}P level lifetimes and transition strengths 7−121715
$^{49}Ti(p,\gamma)^{48}V$, profiling technique for Ti implantation into Fe and Ni 7−141046
$^{89}Y(p,\gamma)^{90}Zr$, giant dipole resonances, cross-section meas. 7−102874

proton radiative capture continued
$^{64}Zn(p,\gamma)^{65}Ga$, 1.1-2.1 MeV, γ-angular distrib. meas. single level, decay prop. anal. 7−73736
$^{90}Zr(p,X)$, sub-Coulomb energies, radiative capture, elastic and inelastic scatt., cross sections 7−81390

proton scattering *see proton-deuteron scattering; proton-nucleus scattering; proton-proton scattering*

proton spectra
high-energy heavy-ion collisions, space-time picture, scaling properties 7−109214
inclusive proton spectra, connection with reaction dynamics, hydrodynamical model anal. 7−121924
JET, D-D plasma, ^3He and ^3H ions burn up meas. 7−104374
JET, ICRF heating sawtooth behaviour, 15 MeV $^1H^+$ emission spectra anal. 7−104429
$^{12}C(\pi^-, ppp)$, 5 GeV/c, multibaryon resonance search 7−135379
$^{12}C(\pi^+,3p)X$, E=355,375,405 MeV/c, $\Delta(1232)$ region, proton spectra, quasi-free scatt. broad structure 7−135375
^{65}Ge, β^+ decay, Gamow-Teller strength meas., level anal. 7−73736
$^{3}He(d,p\alpha)$, 14.6 MeV, fast ion burn up in D plasmas, proton spectra meas. 7−73818
$^{6}Li(\gamma,pd)^{3}H$, direct mechanism and low-energy peak of p spectrum 7−96054
$^{48}Mn \rightarrow {}^{48}Cr$, β^+ decay, half-life, proton and gamma spectra meas, ^{48}Cr level scheme 7−102840
$^{60}Ni(^{58}Ni, pX)$, inclusive proton spectra, multiple-source analysis, equilibrium, deep-inelastic, pre equilibrium processes 7−129097

proton-surface impact *see ion-surface impact*

protonium *see protons*

protonosphere *see upper atmosphere*

protons
see also cosmic ray protons; delayed protons; proton decay
antiproton gravitational acceleration meas. at CERN LEAR facility 7−96410
binding energy as quarkonium system in the statistical model 7−73612
electric dipole photoabsorpt sum rules in constituent quark model, nucleon struct. 7−67592
electromagnetic form factors, bag model with Woods-Saxon confining pot. 7−116171
EM antiproton traps, storage, cooling, gravitational accel. meas. 7−96437
gluon structure fn. determ. in $pp \rightarrow \gamma$+away-side jet, $\sqrt{s}$=63 GeV 7−95954
RMS charge radii systematics, values for quark core, Coulomb displacement values 7−116245
Skyrme model, electromagnetic n-p mass difference calcs. 7−95906
solar wind, kinematic parameters of protons and α-particles as function of wind vel. *(German)* 7−134104
solar wind protons, collisional heating of interstellar He atoms in heliosphere 7−101653
strange quark content and chiral symmetry breaking, model anal. 7−102640
tachyonic approach to hadrons, p, n and Δ, beta decay 7−135087
$U(2)_v$ Yang-Mills approach to skyrmions with vector mesons, nucleon EM props. 7−128763
wave function from lattice gauge theories 7−80987
$p \rightarrow e^+\pi^o$, relativistic SU(5) model anal., B-S eqn. based 7−135117
p-n mass comparisons in nuclei, colour dielectric model anal. 7−67582
$\bar{p}p$ exclusive reactions 32 GeV leading (anti)proton properties, statistical model of independent particle emission 7−116196

proximity effect
Al_xO_{1-x} superconducting film, proximity coupling of SAWs, expt. study 7−131916
contacts, pair pot., tunnelling density of states, self-consistent calcs. 7−99349
Josephson junctions, physical effects and applications, conf., Torino, Italy (Sept. 1985) 7−102018
multilayers, Josephson and proximity-coupled, upper critical fields 7−138147
paramagnons, effects in proximity sandwich 7−70488
sandwich, with nonmag. localised states, specific heat jump 7−70490
superconducting thin films, proximity effect and thermodynamic props. 7−112639
superconductor-insulator-normal metal proximity junctions near T_c, temp. depend. of critical Josephson current 7−85201
thick supercond. plate, heat capacity and proximity effect 7−125246
twinning-plane superconductivity, review 7−143683
Al superconducting thin film/magnetic insulator contact, density of states, Zeeman splitting, spin polarised tunnelling studies 7−131915
Al/rare earth oxide interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
Cu-Nb(NbTi) interface, proximity-effect-induced superconductivity at millikelvin temperatures 7−77166
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
Nb-Al-AlO_x-Nb Josephson junction characts., fabrication process and conditions effects 7−105844
Nb-Ti two-phase composite superconds., critical temp. suppression, proximity effects study 7−131830
Si superconducting FET, critical current induced by proximity effect, carrier conc. depend. 7−105850
Ta/UBe_{13}, negative s-wave proximity effect obs., comment and response 7−112700
Tc/Ta-TaO_x-Pb tunnel junction, energy gap and coupling strength, proximity electron tunnelling study 7−118732
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
UBe_{13}, triplet pairing, proximity Josephson effect meas. 7−112683
V/Ag multilayered films with artificial superstruct., prep and supercond. 7−112677
V-Ag multilayered structures, proximity coupled, upper crit. field meas. 7−99372
V-Ag multilayered superconductors, mag. field penetration depth, material parameters 7−105828
ZrN films and tunnel junctions, struct. and physical props. 7−131917
ZrN/I/Pb tunnel struct., energy gap, proximity effect, T_c and I-V characts. meas. 7−70482

pseudobinary semiconductors *see II-VI semiconductors; III-V semiconductors; III-VI semiconductors; IV-VI semiconductors; semiconductor materials*

pseudopotential methods
alkali metals, liq., long-wavelength limit of structure factor, one-component plasma model 7−131013
binary alloys, liquid structure, pseudopot. theory anal. 7−83653
crystalline solids and surfaces, struct. energies, pseudopot. approaches 7−131084
d-state metals, cohesion at high press. 7−104628
diamond, band gaps, press. coeffs. 7−92061
diamond, ground state and electronic props., first principles calc. 7−92062
diamond, screening response in static dielec. matrix, density functional approach with ab initio pseudopotentials 7−84724
Feshbach resonant energies and widths, pseudopot. approach 7−135862
filled tetrahedral compounds, electronic struct. and stability 7−124861
free electron model for inelastic collisions between neutral atomic particles and Rydberg atoms 7−103638
grain boundary structure ab initio determination by simulated quenching 7−117936
graphite-hexagonal diamond transformation, total energy studies 7−105005
III-V semiconductor ternary alloys, mixing enthalpies, pseudopotential method 7−84292
III-V semiconductor zinc-blende systems, high press. phases and phase transformations 7−105004
inhomogeneous liquid metals, surface props., calc., variational perturbation theory 7−105182
jellium/hard sphere electrolyte interface model 7−100580
linear response in solids, Green's function approach 7−104923
liquid metals, surface tension, nonlocal pseudopot. calc. 7−76546
metallic glasses, thermoelec. power, electron-phonon interactions, appl. to $Mg_{64}Al_{18}Ga_{18}$ 7−70293
metals, density-dependent pair potentials and the compressibility problem 7−76273
metals, mode pseudopot. calcs., binding energy, resistivity and paramag. suscept. determ. 7−76724
metals, point defect formation energies, pseudopot. theory 7−124253
metals, solid and liq., interatomic forces, pseudopotential transferability 7−137203
metals, stacking fault interaction with nonspherical Fermi surface *(Russian)* 7−98179
metals, trivacancy migration energies and point defect interactions 7−91630
metals, vacancy and divacancy migration, positron effects 7−91876
molecular bonds, relativistic changes, Hellmann-Feynman force method calcs. 7−122350
multicomponent metallic solns., interaction parameters, theoretical eqn. *(Japanese)* 7−76415
polar semiconductor surfaces, ab initio theory, appl. to GaAs (111) (2×2) reconstructions 7−124677
positronium formation from Li and Na atoms, differential and total cross sections, pseudopots. appl. 7−103692
quasicrystalline metals, electronic props., pseudopot. methods 7−143314
random zinc blende semicond. alloys, total energy, spectral density, non-muffin tin formalism 7−98854
semiconductor alloys, mixing enthalpies, delta lattice parameter model 7−137568
semiconductor heterojunctions, valence band offsets, ab initio pseudopot. calcs. 7−77054
semiconductor interfaces, band offset model calcs. 7−105687
semiconductors, electronic levels, intervalley scatt., shallow-deep instabilities 7−137847
semiconductors, first-principles pseudopotential total-energy calcs. 7−143389
semiconductors, glassy, electroconductivity, pseudopotential model 7−84885
semiconductors, valence electron density change at impurity centre 7−92101
simple liquid metals and alloys, thermodynamic theory 7−105070
static dielec. matrices, ab initio pseudopotential density functional approach, appl. to semicond. and insulators 7−84723
superlattices of stacking faults, electron energy, pseudopotential approx. *(Russian)* 7−142799
transition metal alloys, interatomic interaction problem, pseudopotential method 7−105442
water, pseudopotential for condensed phase simulation 7−91413
Ag halide surface, effect on adsorbed Ag clusters, quantum chemical calcs. 7−118274
AgO_2, geometrical isomers, SCF, CI and pseudopot. calcs. 7−68226
Al, lattice sp. ht., press. depend., ab initio calc. 7−124546
Al, static struct. props., prediction from press. and total energy 7−142697
Al surface, lattice relax., self-consistent linear-electronic-response approach 7−84485
Al, surface phonons, first principles calc. 7−143172
$Al_{1-x}Ga_xAs$, energy struct., CPA calcs. 7−76736
$Al_{1-x}Ga_xSb$, energy struct., CPA calcs. 7−76736
AlN with Cu overlayers, electronic struct. determ. 7−124823
As, rhombohedral, electronic band struct., angle resolved photoemission studies 7−98797
As, structural stability, phonon dispersion 7−137488
Ba, lattice mechanical props., pseudopotential theory calcs. 7−111448
$Bi_{1-x}Sb_x$ alloys and constituent metals, pseudopotential band struct. calc. 7−84658
Ca, lattice mechanical props., pseudopotential theory calcs. 7−111448
$CdIn_2Se_4$ structural props., local-density-functional total energy calcs. 7−117908
CdTe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
CdTe-HgTe ultrathin semicond. superlattice structs., thermodynamic instability, total energy pseudopot. calcs. 7−76644
Ce systems, band structs., f-f and f-d pseudopot. model 7−76766
$CeOs_2$, nonmagnetic phase, f structures, density of states, band struct. calc. 7−92045
Cu, electronic struct., bulk structural props., mixed-basis pseudopotential method, real-space formulation 7−84657
Cu, liquid, resistivity, temp. depend. 7−143431
Cu, vacancy complexes, form. energies, struct., computer simulation study 7−111545

pseudopotential methods continued
Cu-Au system, residual electrical resistivity, temp. depend., pseudopotential approx. 7−84819
CuCl, semiempirical band struct. and partial density of states 7−84635
Cu_3Ti, phase changes, X-ray diff. and pseudopots. investig. 7−142980
Fe, phonon dispersion curves, lattice dynamics calcs. 7−84154
Fe, vacancy complexes, form. energies, struct., computer simulation study 7−111545
FeCO, molecular props., ab initio molecular orbital calcs. 7−74404
Ga liq. metal, electronic transport props., Harrison's pseudopot. technique calcs. 7−76878
GaAs (-1-1-1), (2×2) reconstructions, related phase transitions, ab initio theory 7−124678
GaAs (110), surface geometry, determ. using total energy and force methods 7−91950
GaAs, energy band struct. by empirical pseudopotential method *(Korean)* 7−84661
GaAs/AlAs [001] superlattices, band-edge states 7−99171
$GaAs-Al_xGa_{1-x}As$ (001) superlattice, zone folding and subband dispersions 7−138022
GaAs-AlAs, superlattice bandstruct., determ. using wave fn. matching technique 7−85088
GaAs-AlAs superlattices, self-consistent electronic props. 7−85082
GaAs-AlAs superlattices, band offsets and zone-folding 7−85091
GaAs-AlAs thin superlattices, confined states, self-consistent pseudopot study 7−125097
GaAs-AlAs ultrathin semicond. superlattice structs., thermodynamic instability, total energy pseudopot. calcs. 7−76644
GaAs-AlGaAs heterojunction, press. effects on tunnelling current 7−131758
$GaAs-Ga_{1-x}Al_xAs$ superlattices, momentum-mixing-induced enhancement of band nonparabolicity 7−138028
$(GaAs)_{1-x}(Ge_2)_x$, disordered, mixing enthalpies, pseudopotential calcs 7−124523
GaInAs-InP superlattices, band struct., self-consistent pseudopotential method 7−112473
GaP (110) with Sb overlayer, bonding and surface electronic struct 7−118260
Ge, energy band struct. by empirical pseudopotential method *(Korean)* 7−84661
Ge, screening response in static dielec. matrix, density functional approach with ab initio pseudopotentials 7−84724
HF(Cl)(Br), solid, electronic and dynamic props. under press. 7−124490
^{4}He, liq., maximum overlap Jastrow wave function 7−98605
HgTe/CdHgTe superlattices, anomalous confinement effects, pseudopot calcs. 7−105688
InAs-GaAs monolayer superlattice, electronic struct., self-consistent pseudopot. calc. 7−138025
La_2CuO_4, orthorhombic, pure and doped, electronic struct., rel to superconductivity 7−137777
Li-Na liquid alloy, partial structure factors 7−104528
LiCl, screening response in static dielec. matrix, density functional approach with ab initio pseudopotentials 7−84724
MG-Ho alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
Mg-Tb alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
$MgIn_2S_4$ spinel, structural props., ab initio total energy approach calcs 7−117907
Na, optical conductivity, pseudopot. method calcs. *(Russian)* 7−99777
O^{6+}+He, electron capture, travelling MO method calcs. 7−82342
P simple cubic phase stability under press., local density functional calcs 7−118090
Rb, liq., struct., self-diffusion, at 315 K, pseudopotential effect 7−117805
Ru (0001) surface, struct. props. calc. 7−70045
Si (111) $\sqrt{3}\times\sqrt{3}$, Al, Ga and In adatoms, empty surface states and adatom geometries, IPES study 7−112421
Si (111) with Ge monolayers, π-bonded chain struct., calc. 7−84640
Si, amorphous, band gap origin 7−137791
Si, energy band struct. by empirical pseudopotential method *(Korean)* 7−84661
Si, ground state and electronic props., first principles calc. 7−92062
Si, hexagonal site self-interstitial impurity state, pseudopot. electronic struct. calcs. 7−76806
Si, phonon freqs., ab initio calcs. using small at. clusters 7−91744
Si, screening response in static dielec. matrix, density functional approach with ab initio pseudopotentials 7−84724
Si: As (111) surface, As terminated, electronic and atomic struct., passivation 7−98651
$Si-Si_{0.5}Ge_{0.5}$ superlattices, strain induced confinement 7−125090
SiC structural and high-press. props., ab initio pseudopot. study 7−104688
SiO_2, nonlocal pseudopotentials in molecular dynamical density functional theory 7−137835
SnH_4, Mossbauer isomer shift calibration, pseudopot. and α SW calcs 7−109762
SnX_4 (X=F, Cl, Br, I), Mossbauer isomer shift calibration, pseudopot and α SW calcs. 7−109762
Sr, BCC, lattice dynamics, pseudopotential approach 7−137485
Sr, lattice mechanical props., pseudopotential theory calcs. 7−111448
tetramethyl tin, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
TlX, X=H, H^+, H_2, props. , relativistic and correlation effects, pseudopot. calcs. 7−122383
$ZnIn_2(S_xSe_{1-x})_4$ mixed crystals, optical and electronic props. 7−106151
ZnS, two-photon absorpt., calc. by empirical pseudopotential method 7−99776
ZnSe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340

pseudoternary semiconductors *see ternary semiconductors*

psi mesons
bound $\bar{c}c$ systems, spectroscopy 7−102685
charmed mesons in a simple two-step potential model, mass spectra and decay widths investig. 7−73634
charmonium radiative decays, relativistic treatment and heavy-quark approximation 7−116178
decays, momentum dependent effects 7−135098
dual parton model, charm prod. calcs. 7−95862
glueball candidate status, Mark III results 7−102737
heavy quarkonium, phenomenological pot. and decay props. 7−81132

psi mesons continued
spectroscopy, energy levels, decay widths and E1 transition rates 7−73598
αN, 90 GeV, ψ and ψ' photoprod., inelastic cross section 7−73657
γN→ψX, gluon struct. fn., small-x behaviour 7−102753
$\gamma p \rightarrow c\bar{c}+X$, charm photoproduction momentum distributions, lattice contributions using Hamiltonian QCD 7−116186
J/Ψ radiative decays, production of pseudoscalar glueballs 7−81195
lN→ψX, gluon struct. fn., small-x behaviour 7−102753
$N \rightarrow \Delta$ transition form factor and anomalous Ψ-decays into octet-decuplet baryon-antibaryon pairs 7−73653
$\bar{p}p \rightarrow \psi X$, ψ-hadroproduction, signals for B→ψX and $\chi \rightarrow \psi\gamma$ 7−73671
πN→ψX, 252 GeV, longitudinal pol. 7−121546
$\psi \rightarrow B\bar{B}$, quark mass effects for baryon-antibaryon system 7−89497
ψ→baryons, SU(2) and SU(3) violation 7−135102
$\psi \rightarrow \gamma K^+K^-$, branching ratio meas. 7−89508
$\psi \rightarrow \gamma\omega\omega$, pseudoscalar $\omega\omega$ prod. at threshold, bump in mass distrib. 7−116159
$\psi \rightarrow \gamma\pi^+\pi^-$, branching ratio meas. 7−89508
$\Psi \rightarrow \gamma\theta(1690)$, glueballs and helicity amplitudes, $(TM1)^2$ and $(TE1)^2$ perturbative calcs. 7−135100
$\psi \rightarrow K\bar{K}\pi\omega(\phi)$, ang. distrib., J^P assignments 7−121500
ψ momentum distrib. and formation in presence of quark-gluon plasma 7−121684
$\psi \rightarrow \omega\pi^+\pi^-$, theoretical approach to enhancement at low $\pi\pi$ masses 7−95899
$\psi \rightarrow p\bar{p}(\Lambda\bar{\Lambda})(\Sigma^0\bar{\Sigma}^0)$, ang. distribs. and branching ratios 7−135101
$\psi(\psi') \rightarrow \rho\pi$, $K^*\bar{K}$, exclusive charmonium decays 7−135112
$\psi \rightarrow \xi X$, $\xi(2230)$ status, Mark III results 7−102737
$\Psi' \rightarrow \Psi\pi^0$, isospin nonconserving processes, light quark mass ratios 7−108913
T'→TH, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
$\Psi \rightarrow \omega K\bar{K}\pi$, X(1420) exotic quark-gluon hybrid obs. 7−81265
QQ potential model from QCD and data anal., $c\bar{c}$, $b\bar{b}$ and $t\bar{t}$ masses and decays *(Chinese)* 7−121441
PSK *see phase shift keying*
psychological optics *see vision*
psychology
auditory psychophysical tuning curves, recovery following noise exposure 7−87024
cognition, human, effect of NMR imaging 7−93873
dreaming, electrophysiological evidence, human cerebral pots. associated with rapid eye movements during REM sleep 7−100893
educational, literature analysis 7−140402
evoked potentials and stages of information processing: methods of analysis 7−114229
graphs, humans' perception and interpretation 7−126827
HDTV standard setting using psychophysical bases 7−86983
hearing, adaptive psychophysical procedures *(Japanese)* 7−107077
hearing, profile analysis resolution bandwidth experiments 7−133318
hearing, sound characts. modelling *(Japanese)* 7−107076
mathematics education and technology 7−108114
mental health assessment, speech technology eval. 7−114295
microwave exposed rats, 0.5 mW/cm^2 at 2450 MHz, behavioural effects 7−93807
microwave irradiation and psychoactive drug actions, review 7−87097
motor neuronal network simulation 7−114224
multidimensional evaluation method for the psychological effects of pure tones at low and infrasonic frequencies 7−114382
musical acoustics, psychometric evaluation studies *(Japanese)* 7−104110
perceptual organization of complex-tone sequences: a tradeoff between pitch and timbre? 7−145076
power law hypothesis in the thermodynamics-like theory of annoyance 7−100924
psychoacoustic theory, recent trends *(Japanese)* 7−107075
psychometric noise evaluation *(Japanese)* 7−104097
room acoustics, psychometric studies *(Japanese)* 7−104098
selective attention, human auditory steady-state evoked pots. 7−100914
synthetic sounds quantitative anal. of similarities between data using MDS-kNN 7−82947
text understanding, fuzzy logic description 7−139242
voice quality, psychometric evaluation *(Japanese)* 7−107085
psychology computing *see psychology*
PTC thermistors *see thermistors*
pulsars
see also neutron stars
apparent intensity slow var. as interstellar propag. effects 7−107938
binary pulsars, mass-losing runaway star model for Kepler's supernova progenitor 7−146074
binary pulsars, proper motion effects on timing 7−94935
binary pulsars, spin and orbital periods anal. 7−72506
binary pulsars and general relativity *(French)* 7−145821
characteristic times and ages 7−146015
in composite supernovae remnants, initial rot. periods 7−101889
Crab Nebula and Pulsar, gamma-ray fluxes in 10^{13} to 10^{14} eV range 7−134321
CTB 80, SNR, detect of pulsar-like emission, SHF and UHF obs. 7−140141
current sheets in pulsar magnetosphere, contrib. to radio emission 7−94933
dipole moment decay, ohmic dissipation in crust 7−146019
dispersion distortion removal from pulsar radio signals, wide-bandwidth signal processor design 7−88124
drift and gravitational collapse 7−101834
drift motion relative to supernova remnant, acceleration mechanism during stellar collapse 7−146018
drifting subpulse phenomenon observed in three pulsars with triple profiles 7−140139
fast pulsar candidate in globular cluster M28, VLA obs. 7−127935
fast timing experiments for NASA Space Station 7−79826
flux slow variations and interstellar plasma inhomogeneities spectrum *(Russian)* 7−88601
Galactic centre pulsar, EM cascades in pulsar magnetosphere as model for position prod. 7−101936
gamma-ray pulsars, curvature synchrotron radiation model 7−146105
glitches, implications for strange stars 7−107868
hadronic cosmic ray prod. by young pulsars, limits from cosmic Li, Be and B abundances 7−134095
JPL pulsar timing obs., excess phase noise meas. 7−115489
luminosity decay of radio pulsars, evidence from (P,Ṗ) diagram 7−140138
pulsars continued
M28, millisecond pulsar discovered in globular star cluster 7−115491
magnetic dipole-rotation axes angle determ. methods 7−72490
magnetic fields evolution, time var. in mag. obliquity 7−140144
magnetosphere, electrodynamics and plasma props., self-consistent model 7−134265
magnetosphere, model return currents, radiative drag effects, modified Euler eqn. calcs. 7−101835
magnetospheres, computer simulation of particle acceleration 7−107881
magnetospheres, cross-field particles and energy transport 7−83448
magnetospheres, influence of mag. field inhomogeneity on longit. waves excitation 7−127933
magnetospheres, tearing instability 7−120483
magnetospheric plasma of a pulsar, props. investig. 7−120485
microstructure phase struct., freq. independence 7−88490
millisecond pulsar in M28 globular star cluster, discovery by Jodrell Bank telescope 7−115491
millisecond pulsars, rotation and evolutionary characts. 7−80021
millisecond pulsars in globular clusters, rot. var. due to neighbouring stars dynamics 7−88556
nonradial g-mode pulsations, slow-motion formalism 7−80024
NP 0532, Crab pulsar, 26.3 MHz flux density determ. from lunar occultation obs. 7−134296
NP 0532 (Crab pulsar), X-ray emission obs. by Astron automatic station 7−140221
photon capture in pulsar mag. fields, implications for polar gap models 7−72493
PSR 0042−735 in SMC, discovery and parameters at 610 MHz 7−134262
PSR 0355+54, massive glitch in an old pulsar 7−88491
PSR 0531+21, gravitational radiation, cryogenic detector in CRAB III expt. 7−73158
PSR 0531+21, relativistic explanation of the pulsar drift 7−80023
PSR 0531+21 (Crab pulsar), high-energy gamma-ray emission anal. 7−72491
PSR 0531+21 (Crab pulsar), secular decrease in optical luminosity 7−107882
PSR 053+21, VHE γ-ray emission characts. 7−115492
PSR 0540−69, 50 ms LMC pulsar, optical colours, polarimetry, and timing meas. 7−107882
PSR 0809+74, single pulse intensity fluctuations obs. rel. to multipole mag. field of freq. dependence pulse profile *(Russian)* 7−72495
PSR 0818−13, subpulse drift rate var. 7−134264
PSR 0820+02, binary pulsar, orbital parameters and excess phase noise in JPL timing obs. 7−115489
PSR 0833−45 (Vela pulsar), very high energy gamma rays obs. 7−115488
PSR 0834+06, orthogonal polarisation modes 7−120484
PSR 0834+06, PSR 1919+21, decametre-wavelength obs. 7−107884
PSR 1055−52, EXOSAT obs. and temp. determ. 7−127934
PSR 1821-24, millisecond pulsar in globular cluster M28, discovery and pulse period 7−140145
PSR 1913+16, binary pulsar, contrib. of self-energy losses to orbital period decrease 7−72492
PSR 1913+16, binary pulsar, new constraints on progenitor masses 7−88489
PSR 1913+16, binary pulsar, post-Newtonian dynamics and gravitational radiation 7−80022
PSR 1913+16, binary pulsar, strong-field point-particle limit and equations of motion 7−127937
PSR 1929+10, search for X-ray emission using EXOSAT 7−94931
PSR 1937+21, millisecond pulsar, improved pulse timing using real-time coherent dedispersion 7−107883
PSR 1951+32, 1408 MHz parameter determ. 7−140142
PSR 1951+32, negative search for pulsar infrared pulsations 7−127936
PSR 1951+32 in SNR CTB 80, discovery and UHF obs. 7−134263
PSR 2111+46, origin of extremely high space vel. 7−115490
pulse broadening by interstellar matter, galactic distrib. 7−128047
pulse characteristics at 24 GHz pulse profiles and energies meas. 7−94932
pulse width spectral behaviour, meas. at Culgoora circular array 7−146017
radio luminosity growth in later stages, statistical anal. 7−94936
simultaneous two-freq. obs. *(Russian)* 7−72494
single radio pulsars, birthrate and initial spin periods 7−140140
SN 1987A in LMC, central pulsar theory and predictions 7−115482
SN 1987A in LMC, contrib. of pulsar to predicted X-ray, UV and IR spectra 7−140121
SN 1987A in LMC, relativistic jet from central pulsar 7−120480
spatial distribution of pulsars in Galaxy, implications for nature of gamma-ray sources 7−140143
statistical distributions of periods, mag. field strengths, ages, and galactic plane heights, relation to pulsars origin 7−115487
in supernova remnants, influence of rot. energy loss rate and age on remnant evolution 7−140218
supernova-pulsars, apparent spatial coincidence, evidence for stellar evolution 7−146016
timing noise, constraints on string-dominated universe 7−120664
two-beam model, appl. to triplicity of pulse profiles and orthogonal polarisation modes 7−94934
pulsatile flow
see also peristaltic flow
aneurysm, axisymmetrical, paths of fluid particles, finite element calcs. 7−87057
arterial stenosis, steady and pulsating flow in an artificial model *(German)* 7−78919
bileaflet mechanical heart valves, in vitro pulsatile flow visualisation studies 7−87382
blood flow, peripheral, elec. impedance plethysmography, analytical model 7−119877
blood flow meas. *(Japanese)* 7−119794
blood through arterioles, vascular deformability effect anal. 7−145126
carotid bifurcation, model, laser Doppler obs. of pulsatile flow 7−107126
cerebrospinal-fluid pulsatile flow demonstration using MR phase imaging 7−93860
controlled stress rheometer and pulsatile pipe flow apparatus, combined steady and oscillatory stress mode 7−75720
electrochemical wall shear probes, freq. response in pulse flow 7−111116
femoral artery branch model, fluid particle motion and Lagrangian vels. for pulsatile flow 7−114353

pulsatile flow continued
incompressible pulsatile flow of particle suspension in rigid tube, iterative soln. 7−142376
laminar flow, separation and wake 7−137014
liquid entry flow rate stability in tapered leaking elastic tube 7−93789
MHD flow with mixed boundary conditions calcs. 7−123777
non-rigid tubes, unsteady inelastic flows, spectral and expt. approx. *(French)* 7−75678
pipe, curved, elastic, pulsatile flow of viscous fluid, wave propagation, blood flow appl. 7−133357
pipe flow, turbulent slug and vel. field in inlet region 7−97633
pipe flow meas. using pulsating source and sensitive manometer *(Japanese)* 7−142414
porous annulus, pulsatile flow at small Reynold's number 7−97631
prosthetic heart valves, in vitro study of Bjork-Shiley monostrut and Duromedic types 7−79133
straight circular pipe, pulsating flow in entrance region 7−117677
trickle beds, pulsing flow, mathematical modeling 7−111104
wavy channels, oscillatory flow, mass transfer and flow characts. study 7−111107

pulse amplifiers
optical pulse amplification in picosecond range in single mode fibres 7−68748

pulse amplitude analysers *see pulse height analysers*

pulse amplitude modulation
optical pulse amplification in picosecond range in single mode fibres 7−68748

pulse analysers
see also pulse height analysers
shape discriminator design 7−74383
ultrasound parameters meas. in clinical practice, electronic analogue digital pulse analyser 7−101019

pulse circuits
see also coincidence circuits; digital circuits; modulators; pulse amplifiers; pulse generators; pulse shaping circuits
correlator of periodic exponential pulses, nonstationary spectroscopy of deep levels 7−128593
pulser circuit for speed of light meas. 7−134402

pulse-code modulation
InGaAsP laser, gain-switched, picosecond dynamics 7−122970

pulse generators
arc discharge, plasma production appl. 7−123922
broad-band driving of echographic arrays using 10 ns-500 V efficient pulse generators 7−110734
controller for pulse generator thyristors of betatron 7−134729
electroacoustic pulse source for high-resolution seismic explorations 7−127617
HV compact regulated 5 kW power supply for gas lasers 7−123023
HV generator of variable nanosecond pulses, for explosive electron emission study 7−108702
injection and switchout scheme for multipass laser amplifiers 7−82596
LEP injection system, high tension burst pulse generator 7−74298
light-pulse generator for recording electrical signals, using Kerr cells 7−121089
linear accelerator power supply using unipolar rotary pulse generator 7−81763
Marx generator for multiple beam expt. MBE4 7−74275
microsecond square HV pulses generation for high-current electron accelerators 7−129530
optical, stable pulsations of semiconductor lasers by optoelectronic feedback with avalanche photodiodes 7−82652
paired nanosecond current pulses generator for laser diodes 7−130146
PBFA II, light ion beam fusion research progress 7−68005
power supplies for injection lasers 7−130177
programmable frequency divider, Fourier NMR spectrometer appl. *(Czech)* 7−128618
pulse REB generation system 7−97766
self-adjustable pre-event pulse generator for shock wave experiments 7−140711
stroboscopic pulse generator for holographic interferometry 7−108645
US wideband transceiver using HV MOSFET pulse generator *(Spanish)* 7−90898
Nd^{3+}:YAG laser, Q-switched short light pulses generation 7−110419

pulse height analysers
charge division position sensing, ratio-to-digital convertor 7−68153
emission spectrum, determination of characterising parameters, by photon correlation and multichannel analyser 7−121235
fast multichannel scaler, dwell time and dead time 7−68154
intelligent multichannel analyzer for stability supervision of pulse height spectra 7−116795
laser photolysis studies of photolabile samples, using optical multichannel analyser, noise reduction 7−106815
microcomputer interface for amplitude analyzer 7−81894
multichannel analyser controller for nanosecond flash photo meas. 7−106814
multichannel analyser interfacing to Elektronika-1001 minicomputer 7−129527
peak pileup effects correction using periodic and random pulse generators 7−81893
portable multichannel analyser, single chip microcontroller based 7−109660
real-time multitasking multiuser nuclear system for clinical applics. 7−114467
HgI detectors, pulse filtering 7−68152

pulse motors *see stepping motors*

pulse oscillators *see pulse generators*

pulse position modulation
direct-detection optical communication systems, symbol and frame synchronisation 7−68571

pulse shaping circuits
Fabry-Perot interferometer, picosecond pulse reshaping 7−134845
HV modulating pulses shaper for laser control 7−110372
wing-suppressed IR sampling, technique 7−90717
^{14}C gas-proportional-counting method, appl. of pulse-shape discrimination 7−135769

pulse transformers
large capacitance detectors, dependence of transformer ratio on the shaper weighting function in transformer-coupled low noise preamplifiers 7−141404
SLAC linear collider, modulator system and power supply 7−81762

pulse width modulation
extensometry, telemetry appl. *(Spanish)* 7−80732

pulsed power supplies *see power supplies to apparatus*

pumped-storage power stations
storage and discharge ponds, pumped storage power plants, flow modelling 7−136777

pumping *see pumps*

pumping (optical) *see optical pumping*

pumping plants
pipeline system design and fluid pumping computer programs 7−91226
Sahelian wind pump characteristics rel. to Weibull wind speed statistics 7−78599

pumping stations *see pumping plants*

pumps
see also vacuum pumps
air-lift systems, heat transfer 7−123708
artificial heart design with integrated elec. motor 7−107315
artificial implantable heart pump with electrical control *(French)* 7−71933
Atara piston bubble cannon mixer, hydrodynamics 7−121087
balloon pump, intra-aortic, indirect meas. of stroke vol., drive system design 7−87322
centrifugal conduction pump, turbulence characts. *(Romanian)* 7−137031
fountain effect pumps, loss mechanisms 7−67317
fountain effect pumps for circulating pressurised superfluid ^4He 7−67316
fountain effect-based thermodynamic cycles and related changes of state 7−67318
Francis-type pump turbine, unstable S-shape charact. meas. using laser velocimetry 7−97668
hydrocyclone apparatus for investigation of hydrobrasive wear 7−73338
induction pump, 3D flow in spiral channel 7−91256
inductive MHD pump, ID turbulent flow model *(Romanian)* 7−137032
JT-60, divertor pumping system, operation in ohmically heated divertor discharges 7−135581
miniature centrifugal pump for an automatic liquid nitrogen filling system 7−80799
Paks nuclear power plant, semi-axial water cooling pumps starting, partial immersion of running wheels *(Hungarian)* 7−109337
pipe flow, matrix methods *(Spanish)* 7−97634
planar induction pump, two-dimens. flow, numerical model 7−123775
radial flow pump impellers, shrouded and unshrouded, laser velocimeter meas. 7−97667
reactor coolant pump motor failure rates, prediction using probabilistic techniques 7−129253
SNR-300, fabrication of intermediate heat exchangers, steam generators and Na pumps 7−135470
solar energy technology advances, heating, agricultural and photovoltaic appls., book 7−66849
superconducting magnet DC pump system, magnetohydrodynamic aspects 7−117678
vertical induction machines for nuclear plant cooling water pumps *(Czech)* 7−116628
water hybrid collector, solar pump powered, flow rate control and performance 7−78668
^4He, superfluid, turbulent flow in superfilters, fountain effect pump limitations 7−67311
T pumping through iron membrane, selective technique *(German)* 7−129404
T recovery from $Li_{17}Pb_{83}$ by pumping, bubble nucleation effects 7−122185

purification, crystal *see crystal purification*

Purkinje effect *see vision*

push pull microphones *see microphones*

PWB *see printed circuits*

PWM *see pulse width modulation*

pylons *see poles and towers*

pyroelectric devices
ADTGSP crystal for pyroelectric detector, optimum cut direction *(Chinese)* 7−99725
detectors, adaptive noise cancellation appl. 7−108660
ferroelectric applications, conf., Bethlehem, PA, USA (June 1986) 7−88741
ferroelectric IR detection and imaging 7−89264
IR detector, modulation type 7−121223
IR thermometer for medical use based on pyroelec. polymer film 7−114457
material and detectors, IR science and technology, conf., Wuxi, Jiangsu, China (Nov. 1986) *(Chinese)* 7−95073
optothermal detectors, energy transfer mechanisms to pyroelement 7−89216
polyvinylidene fluoride, passive IR detector 7−128650
pyrooptic converter, device sensitivity estimations 7−121222
type II detectors 7−73416
CO_2 laser parameter meas. with pyroelectric detector 7−110428

pyroelectricity
aluminomethylammonium alum decahydrate, isostructural ordering, dielectric and pyroelectric props. meas. 7−92608
p-bromobenzonitrile, single cryst., pyroelectric props. dielectric meas. 7−106079
m-chloronitrobenzene, single cryst., pyroelectric props. dielectric meas. 7−106079
dimethylammoniumnonachlorodiantimonate, ferroelectric single crystal, pyroelectric properties 7−132206
1,6-bis(2,4dinitrophenoxy)-2,4-hexadiyne single crysts., pyroelec. and dielec. props. 7−99729
ferroelectric applications, conf., Bethlehem, PA, USA (June 1986) 7−88741
ferroelectric ceramics, activation and relax. of charges 7−99661
ferroelectric liquid crystals, performance parameter meas. methods, review 7−92615
human tissues and systems as pyroelectric detectors and transducers 7−100864

pyroelectricity continued
incommensurate dielectrics, linear cryst. acoustics, piezoelectricity, appl. to $BaMnF_4$ 7−98357
iron phthalocyanine systems, electrical cond. and pyroelectric effect 7−77471
Langmuir-Blodgett films, pyroelectric behaviour, polar chromophores 7−125620
nitrilotriacetic acid monoclinic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
p-nitrobenzonitrile, single cryst., pyroelectric props. dielectric meas. 7−106079
organisms, spontaneous polarisation and pyroelec. behavior 7−114237
polyethylene-ferroelectric ceramic composites, pyroelec, and piezoelec. props. *(Russian)* 7−85540
polymers, ferroelectricity, piezoelectricity and pyroelectricity 7−125613
polymers, piezoelectricity and pyroelectricity, bibliography, 1985-6 7−120718
polymers, props. and appls. *(Japanese)* 7−77468
polyvinylidene fluoride, highly oriented, primary and secondary pyroelec. 7−92609
polyvinylidene fluoride, piezo-, pyro- and ferroelectric props., review 7−132202
polyvinylidene fluoride, pyroelectric and relaxation phenomena, thermal current anal. 7−138387
polyvinylidene fluoride, simultaneous pyroelectric and relaxation currents meas. 7−80814
polyvinylidene fluoride films, electrophotographic process 7−73448
polyvinylidene fluoride films, piezoelectric, pyroelectric and ferroelectric props., conf. (Dusseldorf, Germany, Oct. 1984) 7−128168
potassium acid phthalate, pyroelectric props., temp. depend. 7−92607
rubidium acid phthalate, pyroelectric props., temp. depend. 7−92607
spontaneous polarisation anomalies of ferroelectrics and linear pyroelectrics 7−132185
TGS:As(Cr)(P), charge compensation, pyroelec. props. enhancement, ESR study 7−92610
TGS, conversion into pyroelec. by doping with chiral substitutes 7−92611
TGS, ferroelectric, domains and imperfections investig. 7−125641
TGS crysts., aniline family doped, growth, pyroelec. props. 7−100034
TGSe:alanine, P, growth and pyroelec. props. 7−92612
H-thiourea, phase transitions under elec. field 7−118957
tri(methylammonium)diantimony nonabromide single crysts., dielec. and pyroelec. props. 7−99728
ω-tricosenoic acid-docosylamine ultrathin superlattices, pyroelec. effect 7−92613
triglycine sulphate ferroelec. material, low-freq. permittivity dispersion, linear electrocaloric effects 7−70694
vinylidene fluoride-trifluoroethylene copolymers, dielec., piezoelec., and pyroelec. props. 7−99717
zirconium di-alkali metal di(nitrilotriacetate) dihydrate orthorhombic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
$AgTaO_3$, structural phase transitions, Raman scatt., X-ray diffr. and dielectric meas. 7−76386
$BaBiO_3$ ceramic, anomalies in dielectric props. 7−143972
$Ba_{1-x}M_xTi_{1-x}Mg_xO_{3-3x}F_{3x}$, M=Na, K, solid soln. ceramics, dielec. and pyroelec. props. study *(French)* 7−125598
Bi_2WO_6-Bi_2MoO_6, phase diagram, crystalline phases, electrophysical props. 7−92967
$(Cd_{0.83}Pb_{0.17})_2Nb_2O_7$, ferroelec. transition, dielectric and electrothermal measurements 7−125638
Fe_3O_4 magnetite, thermal and dielectric props. near Verwey transition 7−132027
KH_2PO_4 group crystals, domain struct. dynamics, electrophysical props. 7−99768
KH_2PO_4, piezoelectric and pyroelectric effects in KDP family 7−99680
$KLiSO_4$, twin domains and twin boundaries optical, pyroelectric and X-ray topographic studies 7−83968
$K_{1-x}(NH_4)_xH_2PO_4$ mixed crysts., dielec. const. and elastic compliance, comp. depend., phase transitions 7−77450
$KTa_{1-x}Nb_xO_3$ ceramic discs, prep. by sol-gel processing and hot pressing 7−100170
$KTaO_3$:Na, soft modes and pyroelectricity, Raman scatt. spectra meas. 7−125749
$LINbO_3$, tertiary pyroelectric effect 7−99727
$LiNH_4SO_4$, phase transition mechanism, doping effect, ionic cond., dielec. meas. 7−106100
$LiNbO_3$ crysts., optical anomalies, tertiary pyroelec. effect, thermal stress model anal. 7−125656
$LiNbO_3$, room temp. ferroelec. microdomain reversal, SEM obs. 7−118963
$LiTaO_3$, tertiary pyroelectric effect 7−99727
PLZT ceramics, pyroelec. props. by dynamic method 7−125619
PLZT, hot-pressed, pyroelectric characts., appl. for IR detectors 7−113084
PZT epitaxial films, sputter deposited, dielec., ferroelec. and pyroelec. props. 7−100064
$Pb_{1-x}Ba_xNb_2O_6$ ferroelectric tungsten bronze crystals, dielectric and piezoelectric preps. 7−125592
$Pb_{1-x}Sn_xZrO_3TiO_3$, spatial distrib. of polarisation and space charge, meas. by laser intensity modulation method 7−125600
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$0.1PbTiO_3$ single crysts., growth, dielec., and pyroelec props. 7−99730
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$BaTiO_3$-$PbTiO_3$ ceramic electrostrictors for micropositioner appls. 7−99722
$PbZrO_3$ single crysts., pyroelec. and dielec. props., transient phase study 7−99751
SbSBr, crit. exponents determ., ferroelectric 7−125640
SbSI single crysts., photodeform. temp. depend. and pyroelec. charge meas. 7−69808
$Sr_{1-x}Ba_xNb_2O_6$ ferroelectric ceramics, doped, elec. cond. and dielec. props. 7−92186
$UO_2(NO_3)_2.6H_2O$, pyroelec. single crysts., phase transitions, Raman spectrosc. obs. 7−70807

pyrolysis
acetylene, production by pyrolysis in chemical plasma reactor 7−100510
aliphatic-aromatic polysulphides, thermal decomp., mass spectrometric obs. 7−86607
atomisation in graphite furnace, purge gas O_2 content effect, AAS anal. 7−100547
azide-phenolic resin composite film, thermolysis, photolysis and appl. as antirefl. layer in resist 7−100534
carbamates, thermal stability, struct. effects, quantum-chem. MINDO/3 calcs. 7−109776
crystal microbalance, absolute laser photodeposition rate meas. 7−119160
9-cyanoanthracene-dimer crysts. solid-state photoreactions, ESR and visible-UV spectra 7−144733
decane, pyrolysis in chemical plasma reactor 7−100510
dimethyl methylphosphonate, adsorbed on oxidised Fe surface, effect of coadsorbed water, TPD, AES studies 7−71522
diorganotin carbohydrates, thermal behaviour, ^{119}Sn Mossbauer and IR spectra 7−90129
dysprosium tartrate hydrate, gel grown, characteris. and thermal behaviour 7−111525
ethylene, production by pyrolysis in chemical plasma reactor 7−100510
ethylenediammonium vanadate, preparation, crystal struct. and thermal decomposition 7−104721
fission reactor nitrin coolant, kinetics of irreversible radiation and thermal decomposition *(Russian)* 7−103065
fluidised-bed pyrolysis for low-S coal-based fuel production 7−78590
formic acid, unimol. pyrolysis mechanisms, ab initio calcs. 7−93281
glycine, thermal decomposition on solid surfaces, mol. beam studies 7−100613
graphite film, prep. by pyrolysis of polymers, phys. props. 7−86611
graphite oxidation products, thermal decomposition, DSC studies 7−106648
hexane, pyrolysis in chemical plasma reactor 7−100510
hydrocarbons, nucleation in pyrolysis, thermodynamic-potential minimisation 7−106773
III-V semiconductors, high temperature properties, Raman scattering studies 7−92653
isopropanol, photoassisted thermal decomp. in fluidised bed 7−144689
laser-induced deposition of thin films study 7−71068
Lurgi-Ruhrgas coal pyrolysis process tests for utility boiler fuel 7−133030
metallo-organic compounds, prep. by decomposition of metallo-organic compounds 7−71106
methane, pyrolysis, at. H, multiphoton ionis. 7−71477
methanol, photoassisted thermal decomp. in fluidised bed 7−144689
optical storage, conductive polymers as active media 7−110490
organometallic compounds, oxidising pyrolysis, formation of WO_3 and Nb_2O_5 amorphous films 7−75999
oscillating travelling waves at thermal decomposition reactions 7−93261
poly-p-phenylene vinylene, thermal generation mechanism 7−93324
poly-p-xylene films, electronic props., polymerisation effects 7−112398
polyacenic materials, pristine and heavily doped, ESR studies 7−112930
polyacrylonitrile, film and powder, thermooxidative degradation laser irrad. effects *(Russian)* 7−113914
polyarylene metalosulphides, thermal degradation, vibr. spectrosc. obs. *(Russian)* 7−86617
polyimide, pyrolysed, elec. cond., ESR study 7−99001
polymers, laser pyrolysis 7−117971
polynuclear coordination compounds, thermal decomp., $NiFe_2O_4$ synthesis 7−132543
polyoxadiazole, pyrolytic, elec. props., rel to high temp. heat treatment 7−84804
polythiophenes, structure, ^{13}C NMR and Fourier transform IR studies 7−76041
polytitanosiloxanes, prep. of SiO_2-TiO_2 fibres 7−92947
radioactive waste, continuous pyrohydrolysis volume reduction system 7−96367
rare earth ultraphosphates, RP_5O_{14}, decomposition-rate constants 7−86586
refuse pyrolysis for organic waste disposal and power generation at Goldshofe 7−93306
seed particle growth by silane pyrolysis, runaway nucleation in aerosol reactors 7−71047
semiconductor film preparation by spray pyrolysis for solar cells, review 7−100055
spent cation exchange resins, functional sulphonic acid group effects on pyrolysis 7−81725
tetranitramines, bicyclo and spiro forms, thermal decomp. 7−71481
thermal decomposition of energetic materials, press. effects 7−100524
thermoprotective material, two-layer, pyrolysis, porous reacting body model anal. 7−100525
trimethylgallium and triethylgallium, pyrolysis reactions during MOCVD growth 7−100110
uranyl complex, volatile, natural abundance, thermal stability and selective photodissoc. 7−90446
velocity interferometry in shock tubes and shock tunnels 7−123812
B_2H_6, oxidation, matrix isolation study, IR spectra 7−116970
BN, B_4C, form. by pyrolysis of condensation prod. of boric acid and ethanolamines 7−119230
C, conductive spin-cast films from polyacrylonitrile 7−112119
CO thermocatalytic decomp. with Fe catalyst, gas-phase growth of C microfibres 7−119182
$CaCO_3$ granules, thermal dissoc., porosity and density change study 7−100528
$CaSO_4$, thermal dissociation in vacuum, influence of Al_2O_3 on reaction kinetics 7−113881
$Cd(OH)_2$ powders, pyrolysis, time resolved X-ray diffr. study by synchrotron radiation 7−114034
CdS-Te system, film deposition, cothermolysis of chelates of Cd(Te) organometallic cpds. 7−113401
$CsHSeO_3.2H_2SeO_3$, cryst. struct., thermal behavior, IR absorpt. spectrum 7−111485
$Cu_xCo_{3-x}O_4$, surface composition of polycrystalline spinel obtained by thermal decomposition 7−70970
Er_7S_{13}, tensimetric study 7−91783
Fe (110), ethylene and acetylene adsorption, Auger spectra studies 7−118271
Fe electron beam deposited films, catalytic growth rate enhancement, decomposition of $Fe(CO)_5$ 7−86027
GaAs epitaxial films, growth by thermal decomposition, characts. *(Russian)* 7−106435
H_2S, thermal decomp. over V_2S_3 or MoS_2 in reactors 7−86583
$HK_2Ti_4NbO_{14}.H_2O$, topotactic dehydration to $K_4Ti_{10}Nb_2O_{27}$ 7−111487
$K_2RhH_2OCl_5$ thermal transforms., differential-thermal and X-ray diffr. phase anals. 7−86587
$Mg_8SiW_9O_{37}.24.5H_2O$ trigonal struct., topotactic relations and thermal dehydration 7−142723
Mo (111), chemisorbed thiophene, decomposition, vibr. characterisation 7−100614

pyrolysis continued
$(NH_4)_2AmCl_5$, pyrolysis, prod. of $AmCl_3$ 7−91505
$(NH_4)_xMgP_yO_z$ system, heat treatment products, IR and X-ray diffr. obs. *(Japanese)* 7−126431
NH_4ReO_4, decomposition, production of Re(VII) oxide catalyst on silica 7−139043
$Nb_2Te_2O_9$, cryst. growth, struct., IR spectra, pyrolysis studies 7−83920
PH_3 pyrolysis, effect on morphology and growth rate of InP grown by hydride VPE 7−71051
SF_6, pyrolysis and oxidation, thermochemical data 7−80193
Si, polycrystalline layer growth during pyrolysis, kinetics and mechanism *(Russian)* 7−125939
a-Si:H,C(N) films, glow discharge deposited, composition, thermal stability 7−131501
SiC powders, ultrafine, prep. by pyrolysis of tetramethyldisilane *(Japanese)* 7−119226
SiC-C fibres, synthesis of precursors by co-pyrolysis of polysilane and pitch *(Japanese)* 7−119225
$SiCl_4$, pyrolysis in N_2-H_2 plasma 7−100511
SiH_4 pyrolysis, gaseous reactions, numerical study 7−100538
SiH_4, pyrolysis study 7−93295
Si_xN_y films, tensimetric investigation 7−86616
$(SmO)_2Te$, thermodynamics of vaporisation and form. 7−78473
$Sr(OG)_2$, pyrolysis in vacuum, thermal and emission processes 7−100530
$Ta_2Te_2O_9$, cryst. growth, struct., IR spectra, pyrolysis studies 7−83920
$Te(OH)_6.2NH_2CH_2COOH.H_2O$, thermal and vibr. props. 7−69840
TiO_2 ceramics, synthesis from isopropoxide, laser-driven pyrolysis 7−100164
V_2O_5-MgO oxidative dehydrogenation catalysts, synthesis methods 7−113462
ZrO_2, Y_2O_3 partially stabilized powders, effect of spray pyrolysis conditions *(Japanese)* 7−119227

pyromagnetic effects *see magnetocaloric effects*

pyrometers
see also temperature measurement
applications and wavelength ranges *(Swedish)* 7−121130
industrial hot-wire pyrometers, calibration and testing *(German)* 7−73351
IR radiation pyrometers, development using optical fibres *(Japanese)* 7−102414
noncontact temp. and emission props. determ. *(German)* 7−102410
optical pyrometry systems, one and two-colour, transient response 7−108564
selection of IR pyrometers *(Spanish)* 7−89259
Smotrich-4P and 5P digital pyrometers *(Russian)* 7−80795
total-radiation radiometers and pyrometers study 7−95592
tri-modal broadband pyrometer, temperature meas. during Al processing 7−108562
two-colour, surface temp. meas. of particles under thermal plasma conditions 7−108563

Q *see Q-factor*

Q-factor
ceramics, piezoelectric charge coeff. and mech. quality factor determ. using electric-line theory *(Japanese)* 7−125617
mechanical resonator, high-Q, for remote mech. excitation, temp. meas. appl. 7−123381
$AlPO_4$ crystals with high Q-factor, growth and props., bulk wave device appl. 7−119121
$Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics with ultra-low loss at microwave frequencies 7−92593
NbN-NbO_x-Pb Josephson junctions, AC props. 7−132448

Q-meters
MIS structure RF capacitance stabilisation, using Q-meter 7−102454

Q power factor *see Q-factor*

Q-switching
see also lasers
acousto-optic Q-switches, characts. and appls. 7−117241
dye-cell Q-switch, characts. and appls. 7−117243
electro-optic Q-switches, characts. and appls. 7−117242
injection heterostructure laser, Q-switched, picosecond pulses 7−103850
laser electro-optic shutter control, w.r.t. luminance level of active medium 7−136360
modulator, vacuum-tube, for Q-switching in solid-state lasers 7−68830
passive *Q* switch with an activated absorber, CO_2 laser pulse control 7−97047
picosecond laser pulses, generation using Q self-switching 7−110418
polymer passive *Q* switch used in Nd^{3+}:YAG lasers 7−97046
ruby, laser, with passively switched electrooptical shutter, ultrashort pulse form. dynamics 7−117210
ruby laser, passive shutter based on LiF cryst. with F_2^+ colour centres 7−117245
solid state lasers, short pulse generation by novel passive Q-switching technique 7−130203
CO_2 laser, CW, low power, high frequency modulation using semiconductor laser 7−136264
CO_2 laser with intracavity absorber, Q-switching and bistability 7−97043
CO_2 two-frequency laser, delay control between pulses by passive Q-switch 7−97049
InGaAsP-InP ridge-waveguide stripe structure bistable DH laser, expt. characts. *(Chinese)* 7−74920
$LiF:F_2^-$ colour centre Q-switch, use with Nd:YAG laser 7−117207
$Nd,Cr:Gd_3Sc_2Al_3O_{12}$ laser hosts, spectroscopic and laser props. 7−74939
$Nd,Cr:Gd_3Sc_2Ga_3O_{12}$ flashlamp-pumped laser, performance and characteris. 7−74940
$Nd,Cr:Gd_3(ScGa)_2Ga_3O_{12}$ lasers with photochromic centers 7−82575
$Nd,Cr:Gd_3(ScGa)_2Ga_3O_{12}$ laser with prism-resonator and polarisation coupling 7−82576
$Nd,MgO:LiNbO_3$ miniature CW and active internally Q-switched lasers 7−68683
Nd^{3+} doped fibre laser 7−82571
Nd:$LiYF_4$ laser, Cs filter resonant operation 7−82657
Nd:$LiYF_4$ laser, flash-lamp-pumped acousto-optically Q-switched, intracavity doubling of 0.527 μm output 7−123098
Nd:SiO_2 monomode fibre laser, Q-switching, mode locking and tunable operation around 0.9 μm 7−103847
Nd:YAG CW mode locked lasers, operating specifications 7−74976
Nd:YAG CW mode locked Q-switched laser pump for cavity dumped dye laser 7−74977
Nd:YAG laser, breakdown of biological structures, study using ns pulses 7−71818

Q-switching continued
Nd:YAG oscillator in Q-switched TEM_{00} mode, birefringence compensation in polarization coupled lasers 7−117206
Nd:$YAlO_3$ perovskite picosec. laser, temporal characts. study 7−103822
Nd^{3+}:YAG laser, Q-switched short light pulses generation 7−110419
Nd^{3+}:YAG laser with unstable resonator, short giant radiation pulse form., bleachable dye Q-switch 7−97048
YAG laser, cavity dumped Q-switched mode-locked, efficient operation 7−97050

QAM *see amplitude modulation*

QC *see quality control*

QCD *see colour model*

QCD plasma *see nuclear matter*

QED *see quantum electrodynamics*

quadratic programming
elastic-plastic stress analysis using quadratic programming *(Japanese)* 7−136714

quadrature (numerical) *see integration*

quadrature amplitude modulation *see amplitude modulation*

quadrupole crystal field interactions *see crystal hyperfine field interactions*

quadrupole lenses *see electron lenses; electrostatic lenses; magnetic lenses*

quadrupole mass analysers and filters *see mass spectrometer components and accessories*

quadrupole moments
see also atomic electric moment; molecular moments; nuclear electric moment; nuclear quadrupole resonance
atomic quadrupole moment with total spin j=1/2, hyperfine struct., exotic atoms 7−82394
benzene ring, ^2H quadrupole echo NMR spectra, lineshape calcs. for multiaxis rot. 7−68355
n-chlorodifluoromethanimine, isotopic species, struct. quadrupole coupling consts., microwave spectra 7−122513
correlated molecular and cumulative atomic multipole moments 7−116827
cyclohexane+$He^+(C)(N^+)$, reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
electric quadrupole-mag. dipole moments, relationship 7−116271
α-D-glucose-1-d_1, C-^2H bond, ^2H quadrupole coupling const., NMR spectra 7−118873
hexafluorobenzene+$He^+(C)(N^+)$, reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
molecular electronic and spin props., orbital relax. effects, ab initio coupled cluster method calcs. 7−116825
nuclear quadrupole interactions signature in continuous phase transitions 7−118452
organotin compounds, solid, high resolution ^{119}Sn NMR spectra 7−138337
$BaO-Fe_2O_3$ glass, roller quenching prep., heat treatment, crystallisation, EPR, Mossbauer spectra *(Japanese)* 7−69604
Bi hyperfine components, 648 nm, Faraday effect collisional broadening 7−129650
Fe-B metallic glasses, Mossbauer spectra, hyperfine parameters correls. 7−99630
Fe-Co-B glasses, short range order, comp. depend. props. 7−97966
Fe_xZr_{100-x}, amorphous, Mossbauer spectra, isomer shift, quadrupole splitting, conc. depend. 7−99629
He, dipole-quadrupole hyperpolarisability, ab initio HF and Moller-Plesset calcs. 7−135854
^4He, 2^3S excited state, quadrupole moment calc. 7−82046
Lu compounds, nuclear quadrupole and hexadecapole interaction 7−85481
$MgBr_2.6H_2O$, ^{25}Mg NQR spectra study 7−68352
$MgCl_2.6H_2O$, ^{25}Mg NQR spectra study 7−68352
MgF_2, ^{25}Mg NQR spectra study 7−68352
$MgNO_3.6H_2O$, ^{25}Mg NQR spectra study 7−68352
N_2, crystal, intermol. pots., high pressure Raman spectra anal. 7−85746
^{14}N, hyperfine struct. after ion-surface interaction, quantum beat study 7−116883

quality control
see also reliability
$^{99}Tc^m$-diagnostic agents, radiochemical purity, comparison of chromatographic quality control procedures 7−93401
AGN 1 spent fuel transport cask, quality assurance aspects of fabrication and transport 7−74226
CANDU fuel QA/QC technology in Korea 7−96232
ceramics for heat engines, development, QA procedures 7−104888
colour discriminator, optical self-adaptive 7−73402
Decracktor for online surface crack detection of continuously cast hot slabs 7−100482
digital image processing techniques and appls. 7−110257
eddy current instrument construction, impedance method appl. 7−132891
fibre reinforced composites, interlaminar shear strength, improved quality acceptance procedure 7−132840
Florida Power and Light Company, quality improvement program 7−106897
food quality control and studies on human nutrition by mass spectrometric and nuclear magnetic resonance isotope ratio determination 7−86734
gamma camera performance assessment using an orthohole test pattern 7−107242
geologic radioactive waste repositories, IOCRF60.2 regulation, designers interpretation 7−103226
groundwater contamination, quality assurance in computer simulations 7−86843
III-V wafers, substrate imperfections, laser scattering tomography *(French)* 7−115988
image reconstruction techniques for computed tomography from sparse data 7−117761
IR spectroscopy appls. 7−100637
Konrad repository, W. Germany, waste package quality control 7−141324
laser applications in manufacturing, conf., Los Angeles, USA (Jan. 86) 7−80159
meteorological parameters derived from Meteosat imagery, automatic quality control 7−145656
national and international nuclear industry-related QA standards 7−74013
nuclear fuel element cans, flaw detection, automated eddy current installation 7−67908
nuclear fuel transportation in Brazil, regulatory role of CNEN in quality assurance 7−74101
nuclear material packaging manufacture, quality assurance, spent fuel casks 7−74109

quality control continued
nuclear power plant information management system, quality assurance 7−106894
nuclear power stations, quality assurance techniques 7−106893
pericardial bioprosthetic leaflets, QC method for mech. props. 7−87385
plastic film thickness measurement using angle-scanning laser interferometer 7−80868
radioactive materials, Type A packaging, compliance with regulations 7−74224
radioactive waste packaging, quality assurance 7−74222
Rank Taylor Hobson Talyrond 300 roundness and surface meas. system 7−108521
single crystals, US quality control for acoustoelectronic appls. 7−132887
solar cell welding, Indian Space Res. Organisation technology 7−144868
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
spent nuclear fuel solutions, anal. using isotope dilution mass spectrometry, quality assurance and IAEA implications 7−119613
SSC superferric magnets, critical props. meas. monitoring 7−129472
steel components, heat treatment quality inspection using remagnetisation losses 7−71449
Type B spent fuel flasks, quality assurance 7−74107
Vogtle Electric Generating Plant Unit 1 Readiness Review Program 7−103120
Al alloys, for can production, image anal. *(French)* 7−119291
CO_2 laser optics, high-power, quality control 7−82634
GaAs, semi-insulating, high-sensitivity microanalysis of impurities using multielement doped GaAs standard samples 7−100646
Pt resistance temp. detectors, processing conditions effects 7−128578
Si thin solar cell welding and assembly methods and environmental tests 7−144865
TiN, thin hard coatings on tool steel, thickness, adhesion, microhardness QC 7−138925

quality factor *see Q-factor*

quanticule theory of chemical binding *see bonds (chemical)*

quantisation
σ-model, gauged 4D, canonical quantisation 7−73492
adatom near solid surfaces, reson. fluoresc. 7−74505
antisymmetric tensor gauge theories, unitarity 7−95747
Bose-Fermi systems, relativistic, with first class constraints, operator quantization 7−115848
bosonic field theories, instantons in stochastic quantisation 7−102625
bosonic ground state wave fn., Hankel-Hadamard moments anal. 7−120852
bosonic string, gauge transformation parameters and BRST hamiltonian quantization 7−95869
bosonic string theory, one-loop quantization, scaling behaviour and asymptotic freedom 7−108905
BRST quantization in Siegel gauge, free closed bosonic string field theory 7−134937
canonical action-angle formalism for quantized nonlinear fields 7−89327
canonical approach to quantum gravity 7−128411
canonical coordinate transforms., entropy and quantisation 7−89047
canonical quantisation formalism 7−95370
canonical quantisation of gravity, operator constraints, renormalisability 7−67153
cartan domain BD I (q=2), quantisation, operators on the light cone 7−89330
Casimir effect, the gauge problem and seagull terms 7−128748
causal order and quantisation for quantised fields with and without particle interpretation 7−67480
chiral gauge theories, 2D quantization and current algebra 7−95766
chiral gauge theories, canonical quantisation, anomalies and Weyl modes 7−128770
chiral Schwinger model, gauge invariance via Dirac brackets 7−121386
classical and quantum theories, correspondence and quantization 7−128333
continuum Euclidean Yang-Mills field theory, stochastic quantisation 7−73500
coupled-channel equation, multi-dimensional, semi-classical quantization 7−116350
covariant gauge QCD, Lagrange density, canonical quantisation formalism 7−121436
covariant quantization and the three-reggeon vertex, light cone string field theory 7−108892
D-dimensional spheres, path integral quantisation, Hamiltonian operators from Faddeev-Senjanovic formula 7−120832
damped harmonic oscillator, quantisation using canonical transformation 7−140493
deformational quantization and the index 7−120838
Dirac dyons, charge quantization condition, gauge theoretical fibre bundle anal. 7−128749
Dirac equation in 7−128736
Dirac monopole mass scale, Born-Infeld electromag. theory 7−116080
Dirac quantisation of supersymmetry field theory, component fields consistency 7−134982
Dirac quantisation rule, mass and dual mass, gravitational magnetic monopoles 7−140574
disordered fermions, stochastic quantisation approach 7−102212
dissipative force, quadratic in vel., wave eqn. 7−120824
Dolbeault-Kostant complex theory from spectral geometry point of view 7−102213
elementary particle mass quantization with micrononcausal structures 7−73522
extended objects, local Heisenberg field quantisation, semiclassical approx. 7−134953
Fermi field, stochastic quantisation, fermions as solitons 7−67475
fermion quantization in soliton field, implementation of gauge transformations 7−67471
fermion-gauge field interacting theory, stochastically quantized in odd N, renormalization 7−116057
fermionic string, Tomonaga-Dirac-Schwinger formulation 7−135077
fermionic strings, twisted and extended, BRST quantization, O(2) and SU(2) strings, ghost systems 7−121478
free bosonic string, gauged BRST symmetry from iterated Noether procedure 7−108881
free field theories with local gauge invariance, BRST quantisation of classical actions 7−73533
free massless scalar field on Riemann surface, thermal event horizon, boson operator formalism 7−134931

quantisation continued
gauge field quantisation by Dirac-Bergmann Hamiltonian constraint formulation 7−102577
gauge invariant bosonic string quantization 7−95866
gauge theories with nilpotent generators 7−140823
gauge theory with scalar condensate, canonical quantisation and spontaneous symm. breaking 7−140787
general relativity, newtonian limit, universal master equation for the gravitational violation of quantum mechanics 7−73068
generalised Langevin eqn., chiral anomaly, stochastic derivation, fermion field, vector current conservation 7−128787
generalised QED_3, conductivity quantisation by topological struct. of energy-momentum space 7−89427
generalized Bergman kernels and geometric quantization 7−73028
geodesic symmetries and invariant star products on Kahler symmetric spaces, quantization anal. 7−115834
Glashow-Weinberg-Salam model, variational approach 7−102649
gluon fields, second quantisation in harmonic current confinement, glueball candidates 7−121435
gravitomagnetic poles and the quantisation of frequency 7−107994
Green-Schwarz superstring, covariant, first-quantized BRST charge, BRST Hamiltonian anal. 7−128802
Green-Schwarz superstring, quantisation 7−134612
harmonic oscillators, 3-dimensional, isotropic, dynamical symmetry and quantisation 7−108278
hidden supersymmetry, equivalence of stochastic quantisation to field theory 7−108800
infinite-dimensional pseudodifferential operators, algebra, Hamiltonian quantisation *(Russian)* 7−80462
IOSp(D,2|2) symmetry from the BRST quantization of the relativistic spinning particle 7−81050
lattice field theory, soliton quantisation, Euclidean Green fn. methods 7−134912
lattice gauge theory, stochastic quantisation of Wilson fermions 7−134936
local field theories, nonstandard canonical quantisation 7−140786
Maxwell's equations in a vacuum, geometric prequantisation 7−80457
metallic superlattices, EELS, electron scatt. by folded longitudinal plasmons, jellium model calcs. 7−144193
Minkowski stochastic quantisation, thermal equilib. and Fokker-Planck distrib. 7−73232
multi-dimensional coupled channel eqn., semiclassical quantisation 7−89039
multidimensional systems, algebraic quantisation using classical perturbation theory 7−115824
N=2 relaxed hypermultiplet superspace quantization, real compensator superfield, Yang-Mills multiplet 7−140806
non-abelian chiral theory in two dimens., consistent quantisation, SU(N) gauge model 7−134979
non-Abelian gauge field theory, background field method in stochastic quantization 7−108767
nonAbelian gauge field theory and Feynman rules, canonical quantisation and Lorentz condition 7−121320
nonAbelian gauge theory, canonical quantization in A_0=0 gauge 7−116085
noncompact σ models, quantisation procedures 7−116052
nonlinear parabolic stochastic differential eqns. with noise, stochastic quantisation 7−89116
open bosonic string, BRST quantisation 7−95877
operator regularization and one-loop Green's fns., background field quantisation 7−108780
Parisi-Klauder algorithm for complex actions in stochastic quantisation 7−140538
parity-violating anomalies from stochastic quantization 7−116094
path integral quantum cosmology, Robertson-Walker scalar field models 7−72679
periodic trajectories for a two-dimensional nonintegrable Hamiltonian 7−140601
PERTURB, algebraic manipulation program for classical perturbation theory 7−128330
physical parameters and dynamical variables quantisation, wavefunction single-valuedness classical system discretisation 7−108279
Poisson-bracket algebra for the scattering data of a nonultralocal field theory with soliton solutions 7−102585
Polyakov string theory, stochastic quantization and random surface approach 7−108885
quantised Hall effect, normal and fractional, review of expts. and theories 7−125024
quantum cosmology, gauge invariant, path integral quantization of minisuperspace models 7−115652
quantum Gravity and Schrodinger Equations on Orbifolds, intrinsic and extrinsic quantization 7−115881
quantum oscillator, nonlinear, Liouville equation 7−89026
quantum simplicial gravity, cosmological constant, preliminary results 7−67157
relativistic quantum mechanics, trajectories and causal phase-space approach, stochastic quantization 7−115821
resonant dynamics, classical, quantum mechanical and semiclassical representations 7−108283
scalar and vector fields inside cosmological event horizon, quantisation, Hawking effect appl. 7−102273
scalar field theory in curved Einstein space, variational approach 7−108733
Schrodinger equation with repulsive potential, quantisation formula 7−120873
Schwinger's action principle quantization, Dirac quantisation equivalence, Lagrange undetermined multipliers 7−134959
semiclassical quantisation, adiabatic invariants and classical chaos 7−134571
semiclassical quantization rule in SUSY quantum mechanics, exactness 7−89036
sine-Gordon solitons, energy emission, quasi-classical quantization and stochastic decay 7−115807
single-point gravity Hamiltonian system, group-theoretical quantisation 7−115883
solitons, fermion-induced spin, collective rot. motion quantisation, vacuum fluctuations 7−121346
solitons and instantons, operator quantization 7−115696
solvable quantum field theories and polynomial conserved quantities for the quantum nonlinear Schrodinger equation 7−80506
Sommerfeld-Epstein quantisation condition 7−73013

quantisation continued
sparticle with N=1,2 supersymmetry, quantization with irreducible constraints 7−95780
stationary perturbation theory, expansion, irreducible tensorial operators 7−108263
stochastic quantisation, Parisi-Wu approach, quantum field theory, string theory, QED, review 7−140822
stochastic quantisation, regularisation and renormalisation 7−73053
stochastic quantisation, symmetries and Ward identities 7−102596
stochastic quantisation and Killing symmetries of random systems 7−80623
stochastic quantisation of spin 3/2 field *(Chinese)* 7−102587
stochastic quantisation of system under constraints, phase space formulation 7−120874
stochastic quantization in general relativity 7−67160
string fields, Brink-Di Vecchia-Howe-Polyakov action quantisation 7−135076
string theories, covariantly quantized, physical state conditions 7−73622
string theory, Becchi-Rouet-Stora-Tyutin quantization of superconformal theories 7−67607
strings, quantum kinematics and quantisation 7−135066
strings and canonical quantisation method 7−80252
SU(2) gauge theory, functional stochastic quantisation 7−116054
supergravity, (1,0), superfield quantization and the background field method 7−73137
superparticle in light-cone harmonic superspace, Dirac quantization 7−67513
superparticle theory, covariant quantisation, S-matrix 7−73573
superstrings, total action, critical dimensionality and low-energy limit, review 7−140911
supersymmetric σ models, Euclidean superfield quantisation and noise in superinstanton eqns. 7−67492
supersymmetric nonlinear σ-model on Riemannian manifold in superspace, Dirac quantisation 7−73547
supersymmetric theory quantisation, quantum hamiltonian ambiguities, σ-model and SU(2) Yang Mills theory appls. 7−140836
symplectic reduction, BBS cohomology, and infinite-dimensional Clifford algebras 7−108810
topological aspects of quantum theory, quantisation, manifolds 7−140486
topological quantization of mass in extended gauge theories with a monopole 7−89361
two dimensional nonabelian gauge theories, anomalies, chiral couplings to massless fermions 7−116068
vector field theory, Minkowski stochastic quantisation appl. 7−108803
vector quantisation in speech coding, review 7−104108
Virasoro algebra anomalies and deformations of string theories 7−102271
Wess-Zumino action and canonical quantization 7−116061
Wess-Zumino Lagrangian, anomaly-free quantisation, group manifold strings 7−80995
Yang-Mills theory, quantisation in $A_0=0$ gauge, functional integration method 7−102629
Yang-Mills theory, stochastic quantisation, gauge-fixing parameter dependence, equilibrium limit, gluon-selfenergy 7−121362
p-Ge, hot holes long wavelength IR stimulated emission spectra, Landau quantisation 7−125753
H_2O, normal and local mode dynamics, anal. based on periodic orbits 7−116828

quantisation (communications) *see analogue-digital conversion*

quantised Hall effect *see quantum Hall effect*

quantitative analysis *see chemical analysis*

quantum beat spectra
delayed-choice experiments in quantum interference 7−141823
diphenyl sulphide-paraterphenyl radical ion pair recomb. fluoresc. kinetics, quantum beats induction 7−100521
excited levels, two-step excitation by short broadline pulses 7−141529
large molecules, total fluorescence, quantum beats obs. 7−135991
organic molecules, photoexcited, oscillatory femtosecond relax. 7−90281
pyrimidine, supersonic jet, mag. field effects on fluoresc. polarisation 7−90243
three-level system, quantum beats theory in optical transmission correl. and pump probe meas. 7−68474
CS_2, $\tilde{V}^1B_2$ state, fluoresc. and Zeeman quantum beat spectra 7−90240
$^{57}FeBO_3$, antiferromagnetic, collective nuclear excitation, nuclear Bragg scatt. 7−119067
MgO, $B^1\Sigma^+$ and $X^1\Sigma^+$ states, electric dipole moments, Stark quantum-beat spectra 7−68379
^{14}N, hyperfine struct. after ion-surface interaction, quantum beat study 7−116883
Rb, magnetic-dipole and electric-quadrupole interaction constants 7−141516
XeCl, stimulated emission, quantum beats obs. 7−110014
YIG:^{57}Fe, nuclear Bragg scattering of synchrotron radiation pulses in a single-reflection geometry 7−119066

quantum beat spectroscopy
No entries

quantum chemistry
see also chemical reactions; orbital calculation methods; perturbation theory; potential energy surfaces for collision processes; pseudopotential methods; quantum statistical mechanics; quantum theory; reaction kinetics; wave functions
artificial boundary conditions in quantum chem. models *(German)* 7−89892
fermion many-body theory, unitary group formulation 7−109707
generator state approach 7−109705
kinetic energy density, charactn. for central fields by total and s-state Slater sums 7−103346
many-body problems, freeon single unitary group formulation 7−109706
unitary group in quantum chem., book 7−66855

quantum chromodynamics *see colour model*

quantum counters *see photon counting*

quantum crystals *see quantum solids*

quantum electrodynamics
see also electromagnetism
γ_5 anomaly, nonlocality source, unitary microcausal theory, massive vector field interactions with fermions 7−128775
ϵ'/ϵ isospin breaking contribs., π^0-η-η' mixing and QED Penguin operators 7−116106
adsorbed molecular pair polarisability, QED 7−76612

quantum electrodynamics continued
anomalies and a possible solution of problems of zero-charge and infra-red instability 7−121431
anomalous positron peaks in heavy ion collisions 7−95827
atomic and molecular excited states, conf., Fuji-Yoshida, Japan (Aug. 1986) 7−140351
atomic many-electron problem, g-Hartree mean-field, QED anal. 7−122387
atomic orbitals calc., g-Hartree method study 7−96555
atomic spectra frequency shifts, QED thermodynamics 7−68253
atomic spectra QED freq. shift, thermodynamics 7−68254
axion limits from nuclear decays in heavy ion reactions 7−96094
axion production by electromagnetic fields 7−121415
axon electrodynamics, appls. 7−89425
black hole, particle creation as a consequence of the Casimir effect 7−140149
bound state QED, fully covariant two-body equation 7−89426
BRST invariance, generation from singleton field theory 7−95822
Casimir effect, radiative corrections at nonzero temps. 7−95826
Casimir effect, real time, free field approximation, electromagnetic field strength tensor, boundary conditions. 7−128826
Casimir effect investig. 7−80225
Casimir force between plate and straight line, massless scalar conformal field 7−140874
causal propagators in the renormalisation program of quantum field theory 7−80970
causality violation, compton scattering of light, partial wave analysis 7−140876
charged particle in mag. field vlasov eqn. soln. *(Russian)* 7−83437
charged particle in uniform magnetic field, conservation law anomalies 7−121422
chiral molecules, permanent moments effect, differential multiphoton absorpt. 7−103606
chiral symmetry at finite temperatures and densities in (2+1)-dimensional QED 7−95823
compact lattice QED with light fermions, first order transition 7−135015
compact scalar QED, confined and free charges, order parameters, U(1) lattice Higg's model 7−121418
Compton scatt. in intense laser field, QED 7−116114
conference, 9th Biennial Studies of Nuclear Physics, Aussois, France (March 1987) 7−80182
conformally invariant model in terms of operator product expansions 7−95821
cooperative mean-frequency absorption, two-beam two-photon process 7−82305
Coulomb gauge relativistic invariance and field transformations 7−121417
degenerate systems, algebraic structs., indefinite metric, scalar boson, gauge EM appls. 7−73498
Delbruck scattering up to 10^4 MeV, predicted props. 7−128827
Dirac monopole mass scale, Born-Infeld electromag. theory 7−116080
dynamical chiral breaking and mass generation 7−81094
electrically charged mass point in field of rotating mag. dipole, acceleration boundary 7−67552
electron mass, magnetic moment and correlation lengths in thermo-field dynamics 7−81100
electron radiation reaction in mag. field, QED 7−108841
electron self energy in strong mag. fields, mass operator representation 7−81092
electron self-energy and nonperturbative S-matrix theory 7−134963
electrons, photon emission in radiation dominated universe 7−95442
exact ee and ep cross sections in superstrong magnetic fields 7−81093
fermion particle in 1+1 dimension chiral model, constraint condition on wave function 7−102671
fermion-boson axial electrodynamics, 2D, fermion number nonconservation and fermionic matter critical density 7−73540
Feynman-Dyson algebras, time-ordered operators 7−108836
fine-structure constant and the latest advances in quantum electrodynamics 7−102378
finite QED, chiral symmetry breaking 7−81098
finite-Q cavity electrodynamics, dynamical and statistical aspects 7−82525
finite-temperature and -density renormalisation, effect, radiative corrections 7−108844
fundamental particle physics without accelerators 7−73110
fundamental principles 7−67065
gauge field quantisation by Dirac-Bergmann Hamiltonian constraint formulation 7−102577
gauge-independent Wigner functions, radiation reaction inclusion 7−81095
generalised QED_3, conductivity quantisation by topological struct. of energy-momentum space 7−89427
harmonically bound electron in standard dipole model, zero damping versus infinite volume 7−67553
heavy ion collisions, relativistic Coulomb excitation and fission, QED description 7−141060
Hohenberg-Kohn theorem, relativistic extension 7−108845
hybrid Monte Carlo, numerical simulation of lattice field theory, molecular dynamics/Langevin algorithm 7−134939
identical phase space constraint structure of QED_3 with or without Chern-Simons term 7−102675
induced fractional spin and statistics in 3D 7−67558
infraparticle picture, Poincare covariant asymptotic sectors 7−108840
intermolecular coupling, change in chiroptical props. 7−73587
irreversibility, organization, and self-organization in quantum electrodynamics 7−108838
Kaluza-Klein theory, nonlinear electrodynamics *(French)* 7−89073
lattice field theory, soliton quantisation, magnetic monopoles in U(1) QED model 7−134912
lattice QED, compact, confinement and vacuum structure 7−140873
lattice QED, even and odd critical exponents 7−81097
light cone expansion in gauge field theories, QED appls. 7−108837
linearly accelerated system, electrodynamics 7−67557
Lorentz invariant radiation, energy spectrum, Doppler effect and aberration 7−80260
M-shell additional vacancy, L-shell X-ray energy shift 7−82008
masers, single-atom, QED test 7−117168
massive boson, Weizsacker-Williams approx. 7−102672
massless non-abelian gauge theories, helicity amplitudes for multiple bremsstrahlung 7−116115
massless QED in 3D, large-N expansion 7−95824

uantum electrodynamics continued
microscopic causality violation, compton scattering of light, semiclassical model 7−140875
molecular resonant excitation transfer, QED study 7−90310
multicharge ions, autoionisation states decay, QED method calcs. 7−122462
multiphoton pair creation 7−102674
N=2 superelectrodynamics with D term, potential, infinitely degenerate vacuum, gauge symmetry breaking 7−128829
neutrino electrodynamics and possible consequences for solar neutrinos 7−102676
nonlinear QED, photon splitting in plane-wave field 7−135016
nonlocal lattice fermion formulation, avoidance of doubling problem, photon self-energy, ghost states 7−116072
nonrelativistic QED, gauge invariant formulation 7−89040
nonrelativistic QED, lamb shift 7−102673
operator regularization and one-loop Green's fns., background field quantisation 7−108780
particle in magnetic field, removing ambiguities 7−102670
particle physics concepts, QED, QCD, unification, hadronic spectroscopy, book 7−108062
perturbative chiral anomaly in the light cone gauge 7−67527
photon channelling in aligned crystal, QED 7−81101
photon sector at high temp. in two spatial dimens. 7−67555
photon splitting in fields of crystalline axes and planes 7−89430
photon splitting in strong EM field, possibility of obs. in single crystals 7−77683
physical constants theory *(Rumanian)* 7−81089
plasma effects of gauge theories, QED and QCD in one-loop approx. *(Chinese)* 7−102588
quantum electrodynamic processes in electrical engineering circuits, review 7−67559
radiation interaction with matter, remarks on conventional formulation 7−73589
radiation-molecule interactions, mol. QED, book 7−134377
radiative Bhabha scattering for singly tagged and untagged configurations 7−108842
radiative corrections to Casimir pressure at finite temp. 7−67554
Rebbi's lattice fermion proposal, perturbative analysis, vacuum polarization, anomaly, spectrum doubling 7−116073
REDUCE-aided quantum electrodynamics *(Japanese)* 7−108839
relativistic charged bosons in magnetic field, wave fns. and matrix elements 7−140801
relativistic electron, radiative corrections to equivalent photon spectrum 7−73655
relativistic energy density functionals, Hartree-Fock limit, relativistic TFDW-model 7−129575
relativistic spectrum of a two-meson bound state in scalar electrodynamics 7−89428
relativistic spinless particle in EM field, nonrelativistic limit 7−128744
relativistic Thomas-Fermi-Dirac-Weizsacker model, field theoretical approach 7−108843
renormalisation and radiative corrections at finite temp. 7−89424
renormalization-group β-fns., four-loop corrections, minimal subtraction, momentum subtraction schemes 7−140872
Rydberg states, QED level shifts between conducting planes 7−68258
scalar electrodynamics, one-loop contribs., to effective pot. gauge invariance 7−81096
scalar electrodynamics in three dimensions with topological mass terms 7−134950
scalar lattice QED, photon and bosonium masses, compact U(1) lattice gauge theory 7−121419
scalar mesons near point sources, field energy densities time depend. 7−121420
Schrodinger picture in field representation *(German)* 7−89429
Schwinger model, long-range dynamics broken symmetries, Coulomb gauge, chiral symmetry breaking 7−140804
self-energy operator for an electron in an external Coulomb potential 7−67556
single-atom QED in cavity, school of coherent optics, Ustron, Poland (Sept. 1985) 7−66804
soliton-antisoliton pair prod. in strong external fields, sine-Gordon theory, generator-coordinate method 7−121374
source methods in finite-temperature gauge fields 7−67466
spontaneous emission in cavities, self-energy 7−121421
spontaneous pair creation, QED external field approximation 7−73588
stimulated emission by external sources in relativistic quantum field theory 7−89328
stochastic quantisation, Parisi-Wu approach, quantum field theory, string theory, QED, review 7−140822
strong coupling QED, vacuum struct., chiral symm. breaking 7−128828
strongly bound state, one-particle wave eqn. soln. 7−128830
superconducting cosmic strings, electrodynamics 7−121474
supersymmetric chiral nonabelian gauge theories, effective zero-mode Hamiltonian 7−89348
supersymmetric electrodynamics, vacuum, SUSY restoration, chiral superfield fluctuations 7−67529
supersymmetric QED, constant field strength effective Lagrangian in 2+1 dimensional space-time 7−135014
supersymmetric QED, gauge invariant formulation 7−128824
supersymmetric QED, one-loop supercurrent anomalies, path-integral calcs. 7−89392
supersymmetric QED, perturbation corrections to effective zero-mode hamiltonian 7−116113
supersymmetric systems, Casimir stress in plane geometry 7−89395
synchrotron radiation in strong mag. fields, radiative transition rates 7−145815
thermal props. and confinement in 2+1 dimens. 7−95825
transition radiation theory, quantum corrections, electron or monopole crossing metal surface *(Chinese)* 7−121416
two-loop Gell-Man-Low function, operator product expansion and calc. 7−67501
U(1) lattice gauge theory, phase struct. and Migdal-Kadanoff renormalisation 7−102592
uncertainty relation for charged particle in constant mag. field 7−80265
Universe homogeneity at the time of a GUT phase transition 7−88716
vacuum chirality, QED anomaly, ring laser expt. possibility 7−108846
vacuum energy as sum over zero point energies 7−121423
vacuum polarisation, spinor field a_3 coeff. calc. by proper time expansion method 7−73062
vacuum polarisation eqn. of state in QED 7−89423

quantum electrodynamics continued
vacuum polarization by Coulomb centre and magnetic field, Coulomb's law modification 7−121801
vacuum polarization potential for finite nuclear charge distrib. *(Russian)* 7−140877
vacuum struct. in chiral supersymmetric QED 7−67560
$e^-e^+ \to \mu^-\mu^+$, cross section and charge asymmetry, 38.3-46.8 GeV 7−102728
$e^+e^- \to$ sparticles ($\tilde{\gamma}$, $\tilde{\nu}$, $\tilde{e}$, $\tilde{W}$), search at PETRA, QED comparison 7−121526
e^+e^- Bhabha scattering resonance near 1.8 MeV/c 7−128876
$e^+e^- \to e^+e^-\mu^+\mu^-$, $\sqrt{s}$=14-46.78 GeV, α^4 QED test 7−135089
e^+e^- interactions, strong and electroweak props. of quarks 7−135012
$e^+e^- \to \nu\bar{\nu}\gamma$, QED one-loop radiative corrections to neutrino counting reaction 7−121489
e^+e^- pair creation by photon aligned with Ge (110) direction 7−98288
$\gamma\gamma \to \pi\pi$, low energy cross section, QED Born amplitude comparison 7−89536
$\gamma\gamma \to \pi\pi$, low energy cross section and QED Born amplitude 7−116208
$\mu^\pm h^\pm$ scattering, low momentum transfer theorems, fourth order electromagnetic coupling, QED test 7−108923
ν, induced electric charge in dispersive medium 7−81190
t 7−67612
Z resonance shape, second-order QED radiative corrections 7−73590
$e^+e^- \to \gamma\gamma\gamma\gamma$, observation of QED process, cross section, energy spectra 7−95884
$e^\pm h^\pm$ scattering, low momentum transfer theorems, fourth order electromagnetic coupling, QED test 7−108923
H atom, ground state, shell struct. of EM energy density 7−81940
H atom, quantum electrodynamic level shifts between parallel conducting planes 7−68257
H, electronic structure and Doppler-free laser spectroscopy 7−129629
H ground state as a zero-point-fluctuation-determined state 7−103377
H, Lamb shift, radiative-recoil contribs. and proton mass corrections 7−141524
H-like atom in bosonised QED 7−81099
^{3}He, superfluid A-phase, dynamic orbital ang. momentum, effective action 7−98610
Kr^{26+}, transition energy meas., relativistic and QED effects 7−68233
Li-like ions, 2-20 to 100, energy levels, radiative shifts, vacuum polarisation *(Swedish)* 7−122394
PbTe-type bulk semiconductor, bound states, anomalous currents and induced charge on domain wall 7−112217
($\bar{Q}Q$) leptonic decay rates, wave function divergence cancellation, QED version 7−128880
U^{90+}, QED test using Lamb shift meas. 7−122456

quantum electronics *see quantum optics*

quantum field theory
see also axiomatic field theory; Bethe-Salpeter equation; dispersion relations; gauge field theory; meson field theory; nonlinear field theory; quantisation; quantum field theory of elastic scattering; quantum field theory of interactions; Reggeon field theory; relativistic quantum field theory; renormalisation; scaling phenomena; Schwinger source theory; unified field theories
(1+1) dimensional field theory, renormalisation, correspondence principle and Coleman theorem 7−134913
2D scalar field theory, tunneling at finite temperature 7−89357
A_0-0 gauge, Feynman rules, longitudinal propagator calcs. 7−95734
anti-de Sitter supersymmetry, radiative mass term generation 7−67490
Ashkin-Teller multipoint correlation fns., critical, conformal scalar field on the hyperelliptic curve 7−128484
asymptotic completeness and multiparticle structure in field theories 7−89320
asymptotic freedom beyond perturbation theory 7−67503
asymptotic operator expansions, coeff. fns. in minimal subtraction scheme 7−67591
atomic many-electron problem, g-Hartree mean-field, QED anal. 7−122387
atoms, many-electron, radiative transition matrix elements, field theory approach 7−122352
block spin construction of ondelettes, Lemarie functions 7−121323
Bose-Fermi equivalence on the two-dimensional torus for simply-laced groups 7−108772
bosonic field theories, instantons in stochastic quantisation 7−102625
bosonic string field theory surface terms in the cubic action 7−121482
bound state equations, radiation quanta, nonperturbative approx., QCD gauge invariant states 7−108744
bound states in quantum field theory and coherent states 7−81019
BRS invariance of the Witten type vertex 7−108875
Casimir effect, real time, free field approximation, electromagnetic field strength tensor, boundary conditions. 7−128826
Casimir effect in conformal field theories 7−95749
Casimir force between plate and straight line, massless scalar conformal field 7−140874
causal order and quantisation for quantised fields with and without particle interpretation 7−67480
causal propagators in the renormalisation program of quantum field theory 7−80970
chiral bosonisation on a Riemann surface, correlation functions, ghost systems 7−81049
chiral Schwinger model, gauge invariance 7−121386
classical adiabatic holonomy and its canonical structure, Berry's phase, Hannay's angle 7−80505
classical adiabatic holonomy in a Grassmannian system, Berry's phase classical analogue 7−80504
closed bosonic string, superadditive time coordinate, ringlike domain moduli on world sheet 7−135081
closed strings, OSP(1,1|2) and Parisi-Sourlas supersymmetry, nonAbelian OSP(1,1|2) generators 7−135085
closed-string interactions, Witten open-string field theory analogy, 3-string interaction vertex 7−135082
cluster expansions, Mayer, high temp. Gaussian 7−67191
conf., Liege, Belgium July 1986 7−108037
conference, critical phenomena, random systems, gauge theories, Les Houches, France, (Aug.-Sept. 1984) 7−66826
conference, Les Houches, France, June 1983 7−80169
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
conference on quantum field theory and math. physics, Bechyne, Czechoslovakia, (June 86) 7−80147

quantum field theory continued
conformal symmetry and multicritical points in two-dimensional quantum field theory 7−73546
conformal transformations on OSp[D+1,3|2], unification of Lorentz and BRST symm. 7−140811
conformally invariant model with Gursey term, instanton and meron solns. 7−121379
conformally invariant quantum fields in homogeneous isotropic spacetimes, quantum effects 7−115658
covariant quantization and the three-reggeon vertex, light cone string field theory 7−108892
critical Ising-type models, composite fields and null vectors 7−108748
crossover phenomena and criticality in quantum systems with random fields, renormalisation group study 7−121040
DeWitt monopole particle detectors for thermal states in static space-times 7−89376
Dirac magnetic monopole, explanation for nonexistence 7−116082
Dirac quantisation of supersymmetry field theory, component fields consistency 7−134982
dual Peierls brackets for strings, Virasoro algebra, open and closed bosonic strings 7−135084
effective potential, boundary conditions in path-integral formulation 7−95751
elementary particle mass quantization with micrononcausal structures 7−73522
evaluation map in anomaly calcs. 7−134910
exceptional modular invariant $A_1^{(1)}$ partition function realization 7−67484
fermionic condensate, influence of space-time topology in four-fermion interaction model 7−89435
fermionic free fields, massless, covariant anal. 7−89358
finite quantum field theories and supersymmetry 7−134920
finite temperature field theory from stochastic mechanics 7−81008
finite temperature perturbation calcs. 7−134916
first order phase transitions in a sector of fixed charge 7−121358
free fermion theory, two dimensional, isomorphism with σ-model, proof of inequivalence for Sp(N)×Sp(1), N>1 7−73510
free massless scalar field on Riemann surface, thermal event horizon, boson operator formalism 7−134931
functional determinants on Riemann surfaces 7−108768
functional measure in curved spacetime 7−108779
gauge invariant bosonic string quantization 7−95866
generalised QED_3, conductivity quantisation by topological struct. of energy-momentum space 7−89427
geometrical methods in the quantum theory of fields and strings 7−108891
ground state energy perturbation series, large order estimates 7−95397
hidden supersymmetry, equivalence of stochastic quantisation to field theory 7−108800
Higgs potential minimization, no-go theorems 7−95756
high-temperature expansions in continuum quantum field theory 7−73537
history of quantum field theory, 1938-52 7−80281
infinite component local fields, alternative to string theories 7−134940
interacting string, covariant field theory 7−108895
internal symmetry with nonnegative spectrum, locality props. of generators 7−116090
invariant differential operators on symmetric spaces with restricted root system, eigenfunctions 7−67478
invariant light front perturbation theory 7−128778
Knizhnik-Zamolodchikov equations, generalisation 7−121378
lagrangian procedures for higher order field equations 7−134951
large rectangular random matrices 7−140607
Lie-isotopic lifting of conventional Lagrangian densities for some field models 7−102584
light-front two-body equation, bound state soln. 7−116086
linear chiral soliton model, Goldberger-Treiman relation and axial vector coupling constant 7−140809
local Atiyah-Singer index theorem 7−67085
local field theories, nonstandard canonical quantisation 7−140786
local field theory, phase struct. and vacuum stability, 1/N expansion 7−108805
local preparability of states and the split property in quantum field theory 7−108754
logarithmic approximations to polynomial Lagrangeans 7−108795
long-range dynamics and symmetry breaking, algebraic dynamics and math. structs. 7−73553
massive pseudoscalar mesons, quark spectrum asymm. and effective Lagrangian 7−135035
massive spin-2 particles, limiting Lagrangian formalism 7−108746
massless particle in 2D, observer's definition 7−67461
massless quarks in nonAbelian chromomagnetic field, effective Lagrangian 7−73599
massless scalar field, Casimir effect and vacuum stability in rotating spacetimes 7−108778
massless scalar field coupled to gravitation, power series soln. and cosmological constant 7−115867
metastable vacuum, particle-induced decay, decay probability, catalysis by mass, extension to dimensions >2 7−116083
minimal transverse operators in string field theory 7−102708
N=1 super-Wess-Zumino model, operator algebra 7−67483
N=2 superconformal algebra, character formula of c<1 unitary representation 7−108802
N=2 superconformal field theories, modular invariance, central charge character formulae 7−134978
N=2 superconformal invariance in 2D field theories 7−89352
new approaches to selected topics, book 7−95770
Noether theorem, convergence of local charges and continuity properties of W^*-inclusions 7−89326
non-abelian chiral theory in two dimens., consistent quantisation, SU(N) gauge model 7−134979
nonequilibrium entropy in N-particle systems and quantum field theory 7−115943
nonequilibrium processes, thermofield dynamics formalism 7−120934
nonequilibrium thermo field dynamics, framework and props. 7−73538
nonequilibrium thermo field dynamics, structure 7−73539
nonperturbative S-matrix theory and electron self-energy 7−134963
nonprimitive crystals, quantum field theory of lattice dynamics and melting 7−111783
nonsimple groups, free fermions and WZW theories 7−102634
nuclearity condition for massless fields 7−108753
nucleon, effective lagrangian and static props., N-ρ-π system 7−81006
quantum field theory continued
O(N) model with several coupling constants, phase transitions, chiral symm. breaking 7−134955
objective interpretations of quantum mechanics and the possibility of a deterministic limit 7−102198
octonion spinor field, nonassociative theory, props. and interactions 7−140797
operator field equations, finite difference methods 7−116058
operator product expansion in supersymmetric scalar field theories 7−81047
operator regularization of Green's functions 7−134948
order parameter fluctuations and spontaneous breaking of translational invariance 7−108809
OSp(1,1|2) string field theory with the world-sheet metric 7−121467
parafermionic field theories, modular invariant partition functions 7−128751
parallel transport in determinant line bundle 7−121322
Parisi-Klauder algorithm for complex actions in stochastic quantisation 7−140538
particle on a circle, θ-dependent energy, ground state energy 7−102620
perturbation theory to higher order, 1/n expansion 7−95409
Poisson-bracket algebra for the scattering data of a nonultralocal field theory with soliton solutions 7−102585
pseudo-unitary representations in finite dimensional complex vector space 7−80967
QCD, transport coefficients in high and low temp. limits 7−89434
QED, radiative corrections to Casimir pressure at finite temp. 7−67554
quadratic divergences in dimensional-regularization finite quantum field theories 7−128757
quantum string theory as integrable analytic geometry 7−108894
quaternion fields, Fock representation and quantum mechanics 7−95760
real-time fermion thermal field theories 7−81012
reheating in the higher-derivative inflationary models 7−120668
relativistic nuclear many-body problem, quantum field theoretic techniques 7−121765
renormalisation counterterms in curved space-times of arbitrary dimensionality, linear dependence 7−89332
renormalization group and cocycles 7−121357
replica field theory with broken replica symm., one-loop effective pot. 7−128768
scalar field theory, renormalisation, form factors, resummations 7−67507
Schrodinger field, first order, stress tensor symmetrization and spin-orbit coupling 7−67498
self-coupled scalar field, particle creation, appl. to inflationary cosmology 7−102623
self-coupled scalar field theory on a finite element in (d+1) dimens. 7−108771
self-dual Z(N) spin systems, finite-size scaling and conformal invariance 7−121329
Skyrme model, effective Lagrangian field theory of QCD 7−73591
solid state, quantum field theory renormalization 7−76718
solvable quantum field theories and polynomial conserved quantities for the quantum nonlinear Schrodinger equation 7−80506
source methods in finite-temperature gauge fields 7−67466
spacetime approach to quantum field theory 7−81033
spin 1/2 nonequilibrium systems, closed time path Green's fn. and thermofield dynamics formalisms 7−121382
spin-statistics connection and anomalous dimens. at short distance 7−140791
states with particle invariant content under Bogoliubov transformation 7−128739
stochastic quantisation, Parisi-Wu approach, quantum field theory, string theory, QED, review 7−140822
stochastic quantisation of spin 3/2 field *(Chinese)* 7−102587
stochastically quantized non-Abelian field theory, radiation corrections and supersymmetry 7−121380
string sheet field eqns. soln., Hamilton-Jacobi formulation, closed circular string 7−135067
string theory, effective actions and variational methods 7−128738
strongly coupled quarks in standard model, Yukawa couplings, linear σ model 7−135003
superconformal and super Kac-Moody invariant quantum field theories in two dimensions 7−81000
superconformal field theory, 2D, geometric anal. 7−134954
superconformal models, modular invariance, constraints anal. 7−73509
superfield operator regularization, one-particle irreducible Green's fns. 7−108781
superspace, canonical quantisation formalism 7−95370
supersymmetric Kosterlitz-Thouless phase transition, critical exponent classification 7−67510
supersymmetric nonAbelian chiral anomaly, noncovariant heat kernel calcs. 7−89345
supersymmetric systems, bound state potentials at arbitrary energy 7−121391
supersymmetry, canonical formulation, auxiliary field disappearance, Hamiltonian formalism 7−116092
supersymmetry algebra for massive free fields 7−89383
supersymmetry between interacting fermions 7−95746
symmetric spaces, conformal subalgebra, Lie algebra 7−108765
symmetry conserving linear chiral soliton model for N and Δ 7−95762
temperature, periodicity and horizons 7−134625
tensor bosons, symmetric and antisymmetric Heisenberg-Weyl algebras 7−140832
thermal equilibrium of quantum fields, hydrodynamical picture 7−89339
thermofield dynamics, nonequilibrium processes and dissipative effects 7−121383
thermofield dynamics, path-ordered formalism and nonequilibrium phenomena 7−108741
three-string vertices related by conformal transforms, rel. between open string field theories 7−95871
time evolution automorphisms in generalized mean-field theories 7−95721
two-dimensional Fujikawa and perturbative anomalies, relationship 7−116064
U(p,q), harmonic series irreducible representations, unitary operator coherent states 7−67520
universal structure of local algebras 7−108738
vacuum amplitudes and correlation fns. for Z_N orbifold 7−102602
vacuum energy as sum over zero point energies 7−121423
vacuum fermionic charge, bosonization method and background field config. 7−67493
vector field theory, Minkowski stochastic quantisation appl. 7−108803

uantum field theory continued
vertex operators in the conformal field theory on P^1 and monodromy representations of the braid group 7−108752
vertex operators in the Polyakov path integral 7−108773
Vilkovisky-DeWitt effective action, appl. to Yang-Mills theories 7−116062
vortices on the string world sheet and constraints on toral compactification 7−102722
Wess-Zumino consistency conditions for chiral SU(L)×SU(L), abnormal parity solutions 7−108735
Wess-Zumino model, one-loop pot. and supersymmetry renormalisation 7−81029
Wess-Zumino model, one-loop supercurrent anomalies, path-integral calcs. 7−89392
Wightman functional, integral representation 7−67467
Wilson's differential eqn., derivation, series solns., convergence of Mayer expansions 7−134462
Wilson loops, cusp singularities, anomalous dimension, perturbation expansion in Minkowski space, cusp angle 7−116084
Z(N) model, supersymmetric, factorizable, S-matrix 7−121385

uantum field theory of elastic scattering
see also elementary particle scattering; relativistic scattering theory
nondiffractive quantum many-particle scatt., Bethe Ansatz, generalised Yang-Baxter eqns. 7−108266
renormalisable theory, variational operator Pade approximants method 7−128791

uantum field theory of gravitation
see also elementary particle gravitational interactions; gravitons; supergravity
β functions, equivalence with massless bosonic string field equations, bosonic nonlinear-model 7−116149
σ-model, supersymmetric, gravitational β function, four-loop corrections, effective action, string amplitudes 7−108790
ϕ coupling, implications for initial singularity and inflationary universe 7−95443
Aharonov-Bohm effect, gravitational analogue in 3 and 4 dimens. 7−95437
anisotropic inflation, instability of scalar field 7−102262
anomalies in quantum gravity 7−80567
anti-Higgs effect in two-dimensional gauge theories 7−128412
back reaction calcs. for quantum fields in curved spacetime with arbitrary coupling 7−89096
baryogenesis and heavy quarks, nonequilibrium condition 7−80560
BCMN quantum gravity, unitarity and causality, black holes 7−67156
Bianchi type III minisuperspace model, singularities in quantum cosmology 7−102276
Bianchi type IX and VIII spacetimes, propagation amplitude in homogeneous quantum cosmology 7−107993
big bang, processes and theories 7−101961
black hole, particle creation as a consequence of the Casimir effect 7−140149
black hole evaporation, quantum field effects in flat spacetime 7−127943
black hole formation, d-dimensional, in de Sitter spacetime, instability, quantum gravity anal. 7−127942
black hole interior, wave function, minisuperspace model anal. 7−115500
black holes, quantum properties, closed string calcs. 7−115499
black holes and Planck's constant 7−134268
bosonization in a two-dimensional Riemann-Cartan geometry 7−89092
Brans-Dicke theory with variable cosmological term, primordial nucleosynthesis 7−115634
canonical approach to quantum gravity 7−128411
canonical formalism for minimal surfaces, string theory for general relativity 7−67104
canonical quantisation of gravity, operator constraints, renormalisability 7−67153
charged black hole, spectral props., Klein-Gordon solns., Hawking radiation 7−72503
classical action at a distance theories which contain a cutoff 7−67472
classical and quantum field theoretical aspects of gravitation 7−120915
closed string field theory, general relativity with non-abelian geometry 7−89091
coherence that allows non-simply connected manifolds 7−134624
cold universe, inflationary fluctuations, entropy generation and baryogenesis 7−134331
compactified superstrings, pure gauge sector 7−120906
complex potentials for coupled gravitational and electromagnetic perturbations 7−128400
complex scalar field in general relativity, nontopological soliton solns., mini-soliton stars 7−102241
conf., Burdwan, India, Dec. 1985 7−115694
conf., Liege, Belgium July 1986 7−108037
conference, Les Houches, France, June 1983 7−80169
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
conformal gravity in d=2, appl. to string theory 7−89088
convariant Klein-Gordon eqn. on Schwarzschild metric, asymptotic behaviour 7−95424
correspondence principle constraints on quantum gravity 7−134622
cosmic homogeneity and radiation energy density problems, quantum gravitation anal. 7−115656
cosmic string, straight, gravitational effects, appl. to quasar and galaxy images 7−102044
cosmic strings, semiclassical gravitational effects 7−89093
cosmological gravitation fields, quantum field theory of mutually interacting particles 7−72684
Cosmological implications of conformal symmetry breaking 7−95071
cosmological model, open, isotropic, for early universe, quantum effects 7−128150
cosmological models with GUT phase transition, bulk viscosity and inflation 7−115663
cosmological particle creation and spontaneous entropy generation, statistical subdynamics anal. 7−89095
cosmological temperature origin and time, universe wave function anal. 7−115654
cosmology, isotropic homogeneous, singularity problem, gauge gravitational theory framework 7−94640
cosmology, Lie admissible structure 7−107997
cosmology, onset of time and temperature 7−140339
cosmology, wave function and effective action, covariant loop expansion 7−140344

quantum field theory of gravitation continued
covariant Schrodinger formalism and application to accelerated observers 7−67154
d=2 euclidean gravity, supersymmetric Regge calculus 7−134619
d=6 Einstein-Yang-Mills theory, spectrum and symmetry breaking, quotient of manifolds by discrete groups 7−67166
D^0-$\bar{D}^0$ mixing in superstring-inspired E_6 models 7−95436
de Sitter quantum gravity, critical behavior on hypercubic lattice, SO(5) symmetry breaking 7−115882
de Sitter space, massless minimally coupled scalar field, Fock vacuum states 7−102278
deformed internal space, self-consistent soln., massless scalar fields minimally coupled to gravity 7−120908
dilatons, coupling strengths and constraints, appl. to cosmological constant problem 7−140584
Dirac and Weyl fermion determinants 7−102266
Dirac quantisation rule, mass and dual mass, gravitational magnetic monopoles 7−140574
dynamic neutralization of cosmological constant, closed membrane quantum creation 7−140343
dynamical inflationary phase transition in early universe, nonequilibrium model 7−67148
E_6 superstring models, simple discrete symmetries 7−134613
$E_8 \times E_8'$ heterotic string, coset spaces as alternatives to Calabi-Yau spaces in the presence of gaugino condensation 7−140577
early Kaluza-Klein Universe, existence of massive relics 7−89087
early universe, inflation and Planck era, soln. using unified models 7−115653
early Universe, inflation from higher dimens. 7−108369
early Universe, symm. breaking phase transitions, quantum field theoretic description 7−120916
Eddington's number, strong interactions nonminimally coupled to gravitation 7−108361
effective action asymptotical behaviour in higher derivative gravity 7−116045
Efinger model for nonlinear quantum theory of gravitation, general soln. 7−89089
$Eg \times Eg'$ heterotic strings, compactification for realistic string model and technicolor 7−128402
Einstein−Maxwell eqns., assoc. plane-symmetric metrics study 7−80538
Einstein action from self-interaction in curved background 7−128408
Einstein invariant gauge theory of gravitation 7−108364
Einstein-Maxwell equations, colliding waves with time-like singularities 7−73112
Einstein-Yang-Mills theory, spontaneous compactification to non-symmetric coset spaces 7−128398
electron-positron lattice, gravitation as result of short-range repulsion 7−116081
electrons, photon emission in radiation dominated universe 7−95442
energy-momentum tensor, time-like killing vector, stress-energy tensor, Schwarzschild black hole 7−120666
Euclidean gravity, d=2, nonperturbative, existence of bosonic quantum gravity 7−67137
Euler invariant-type higher derivative gravity, mass spectrum of $M_4 \times S^D$ soln. 7−80568
evaporating black hole, unitarity and Planck mass stable particles 7−102247
evaporating black hole space-times and the back reaction 7−73130
false-vacuum bubbles and localized inflation in Minkowski space 7−89094
feeble intermediate range forces and gravity 7−67164
fermion soliton stars and black holes, nontopological solns. in general relativity 7−102243
finite temperature and density effects in higher dimensions with and without compactifications 7−120910
flavour mixing in the presence of a fourth down quark, E_6 superstring model 7−102267
four-dimensional superstrings, factorisation and multiloop modular invariance constraints for closed strings 7−108340
functional determinants and effective action for conformal scalar and spinor fields in an external gravitational field 7−73129
fundamental particle physics without accelerators 7−73110
gauge approach to gravity, nonmetricity and torsion 7−67152
gauge theories on compact 4-manifolds, topology 7−67463
Gauss-Codazzi-Ricci equations, general relativity, analogy with Kaluza-Klein theory 7−115860
general relativity, newtonian limit, universal master equation for the gravitational violation of quantum mechanics 7−73068
generalised Kaluza-Klein equations, Lagrangian 7−102254
geodesic focusing, energy conditions and singularities 7−67146
global gravitational anomalies and smooth 11-manifolds 7−102272
Goldstone-type gravitation with Poincare translation gauge fields, space-time symm. breaking 7−140585
grand quantum gravitation concept 7−108370
gravitational potential, quantum corrections and gravitational collapse 7−115657
gravitational stability of local strings 7−120914
graviton propagator evaluation in de Sitter space 7−134620
graviton propagator in homogeneous and isotropic space-times 7−89090
Green-Schwarz superstring, quantisation 7−134612
Hadamard Regularization in curved spacetime 7−89097
hadronic mechanics, workshop, Patras, Greece (Aug. 1986) 7−128169
Hartle-Hawking wavefunction f... homogeneous-isotropic universe 7−88709
Hawking effect, quantum covariant Klein-Gordon eqn. on Schwarzschild spacetime 7−73132
Hawking effect in de-Sitter space-time, particle production probability calcs. 7−88496
Hawking-Unruh effect in Rindler manifold of arbitrary dimension 7−89098
heterotic superstring model, geometrical struct. in even dimens. 7−73142
heterotic superstrings, finiteness 7−80551
Higgs sector of superstring models, nondetermination of mass upper bound 7−80561
Higgs vacuum in gravitational theory 7−73128
higher derivative gravity, new variable formalism, SU(2) gauge invariant form, O(4) field variables 7−128415
higher dimensional theories, stability of compactified vacuum 7−80541
higher dimensional unification, dimensional reduction by isometry 7−80542
higher-derivative interactions of higher-spin gauge fields 7−128407
indefinite metric and positive probabilities in particle physics 7−73583

quantum field theory of gravitation continued
inflation and flatness in Hawking's state of the Universe 7−72681
inflationary Universe, evolution of perturbations 7−101979
inflationary Universe, origin in a quantum event 7−72675
inflationary Universe. self-consistent explanations 7−146117
inhomogeneous cosmological models, no hair theorem and de Sitter soln. 7−115664
initial conditions and quantum cosmology 7−115649
isometric compactifications 7−108332
Kaluza theory in 8D, origin of SO_3 spinors 7−67135
Kaluza-Klein cosmologies, phase space classification 7−95427
Kaluza-Klein cosmology, unstable solutions above five dimensions 7−140345
Kaluza-Klein cosmology with double compactification, spontaneous symm. breaking by Higgs fields 7−108362
Kaluza-Klein cosmology with Lovelock lagrangian, field eqns. and curvature tensor 7−108363
Kaluza-Klein electromagnetism, charge quantisation without superheavy masses 7−134602
Kaluza-Klein theory, consistent ansatz 7−67141
Kaluza-Klein theory, nonlinear electrodynamics *(French)* 7−89073
Kaluza-Klein theory, smooth oscillating cosmological solution 7−80540
Kaluza-Klein theory, $SU(3)\times SU(2)\times U(1)$ from CP^2 coset space 7−73117
Kaluza-Klein theory, truncation of 4D spectrum of states to finite subsector 7−73135
Killing approximation for vacuum and thermal stress-energy tensor in static space-times 7−115885
lattice field theory, matter-gravity coupling, chiral fermion spectrum degeneracy 7−134935
lattice gravity as spontaneously broken gauge theory of local Poincare group 7−134934
lepton flavour non-conservation, heterotic superstring inspired standard model 7−80553
leptoquarks, superstring models, production in e-p colliders 7−128404
Lie admissible formulation of quantum gravity 7−128416
light front dynamics of the gravitini superfields 7−67161
local O(2,1)-invariant two-dimens. gravit. interacting with scalar matter fields 7−102277
Marcel Grossmann meeting on general relativity, Rome, Italy (June 1985) 7−66831
massive particle fields with integer fields, energy momentum tensor 7−120911
massless high spin (s>2) fields, noncontradictory gravitational interaction 7−95444
massless higher-spin fields (s>2), gravitational interactions 7−95828
matter field quantum fluctuations back reaction on space-time config., Brans-Dicke theory, quantum gravity anal. 7−102270
minisuperspace approximation of quantum cosmology, extension to infinite dimensions 7−72676
multiloop closed superstring amplitudes, cancellation of leading divergence 7−80544
multiloop modular invariance and the cosmological constant 7−120904
multitemporal relativistic particle mechanics, gauge theory without gauge-fixings 7−67158
N=1, d=4 supergravity, scalar pot. struct., appl. to superstring theory 7−80555
N=2 superconformal algebras, unitarizable highest weight modules 7−80543
neutrino masses in superstring models with E_6 singlets 7−80559
nonperturbative conformal quantum gravity 7−128410
nonsingular cosmological models with torsion determined by vacuum polarization of quantum fields 7−88722
nonsupersymmetric heterotic strings, toroidal compactification 7−108345
nonsymmetric nonAbelian Kaluza-Klein theory, spinor fields in minimal coupling scheme 7−108336
null hypersurfaces, junction conditions 7−67145
NUT-Kerr-Newman spacetime, thermal particle creation 7−72500
object fall rate in gravitation field 7−88777
open superstring theory, effective lagrangian in zero-slope limit 7−108878
operational definition of space-time events, limitations 7−128409
parity-violating anomalies from stochastic quantization 7−116094
path integral quantum cosmology, Robertson-Walker scalar field models 7−72679
path-integral and operator formalism in quantum gravity 7−80569
Planck epoch, density fluctuations 7−115655
Planck mass. role in nonconventional ideas 7−67150
primordial black hole, wave function in $S^1\times S^2$ topology 7−73109
propagators for massive vector fields in anti-de Sitter space-time using Stueckelberg's Lagrangian 7−80566
QFT in de Sitter space, antipodal identification and elliptic inflation 7−108373
quantum black holes 7−101840
quantum cosmology, black hole formation, Universe wave function 7−72687
quantum cosmology, gauge invariant, path integral quantization of minisuperspace models 7−115652
quantum cosmology 7−80571
quantum cosmology and recollapse in minisuperspace models 7−88715
quantum cosmology and Wick rotation 7−115651
quantum cosmology with fermions 7−115650
quantum effects in background gravitational fields 7−108372
quantum field theory and the antipodal identification of black-holes 7−67147
quantum field theory in curved spacetime Bogolubov transformations and detector responses 7−115887
quantum fluctuations and inflation, inflation field 7−107992
quantum gravity and boundary conditions for wave fn. of universe 7−108371
quantum gravity and particle physics 7−73125
quantum Gravity and Schrodinger Equations on Orbifolds 7−115881
quantum gravity and topological/global aspects of quantum gravity 7−80521
quantum simplicial gravity, cosmological constant, preliminary results 7−67157
quantum space-time, tensor analysis and curvature, Einstein eqn. 7−95441
quark mixing, radioactive corrections scheme, superstring inspired model 7−80554
R^2 inflationary cosmology, oscillations and reheating 7−115662
$R+T^2+R^2$ theory, extra gauge symm. in weak field approx. 7−102275
quantum field theory of gravitation continued
Regge calculus, three-plus-one formalism, inflationary universe appl. 7−73136
Regge lattices, cone subdivision, renormalisation group approach to quantum gravity 7−67159
regular effective action of gauge field theory and quantum gravity 7−115884
relativistic astrophysics, conf., Bogota, Columbia (1984 February) 7−120712
Riemann space-time, local quantum statistics 7−80601
Rindler condensate, ground state in an accelerated frame 7−67155
Robertson-Walker universes, spatially flat, evolution equation for expectation value 7−140331
Robertson-Walker universes with statically bounded expansion laws, decay of massive particles 7−134327
rotating massive body, gravitational Aharonov-Bohm effect 7−120912
Salam-Sezgin cosmology, classical and quantum solutions 7−88706
scalar and vector fields inside cosmological event horizon, quantisation, Hawking effect appl. 7−102273
scalar soliton stars and black holes, nontopological solns. in general relativity 7−102242
scalar-tensor theory for induced gravity 7−89076
Schwarzschild black holes, quasi-normal mode determ. 7−73101
semi-classical Einstein equations, constant curvature solns., graviton and topology contrib. 7−128414
semiclassical cosmological models, Einstein, de Sitter and Minkowskian solns. 7−72686
semiclassical cosmology with a scalar field 7−120671
semiclassical gravity theory, concept of time, cosmological temp. origin 7−115637
semiclassical quantum gravity, exact soln. in two dimens. 7−73134
simplicial quantum gravity 7−67149
simplicial quantum gravity and unruly topology 7−67151
simplicial quantum gravity in 1D, semilocality props. 7−108366
single-point gravity Hamiltonian system, group-theoretical quantisation 7−115883
singularity in general cosmological scenario, quantum effects 7−95068
soliton star formation, nontopological solns. in general relativity 7−102240
source methods in finite-temperature gauge fields 7−67466
space-time as a causal set 7−134626
space-time compactification induced by nonlinear sigma models, gauge fields and submersions 7−95425
spinless field theory, functional representation for de Sitter space isometries 7−95440
spinorial analysis and physical properties of fermions 7−108365
spontaneous compactification, classical stability 7−108368
stability conditions for scalar field nonminimally coupled to gravity 7−73127
static distorted black holes, geometrical invariant expression of vacuum polarization effects 7−73133
Stephenson-Kilmister-Yang theory, dynamics, SO(3,1) gauge theories, Hamiltonian form 7−120913
stochastic quantization in general relativity 7−67160
string theory, Hawking-Unruh effect, reparametrization invariance analytic mappings 7−134623
strong gravitation and models of particles 7−73126
strong gravity cosmology, asymptotic freedom characteristic for hadrons 7−72685
strongly trapped points and the cosmic censorship hypothesis 7−88713
superconducting cosmic strings, dynamics 7−108002
superheavy grand unified magnetic monopoles in cosmic rays 7−80562
superspace spinning string spectres, isomorphism between potentials and ghost fields 7−89079
superspace Yang-Mills and gravitational systems, Witten index 7−128413
superstring compactification, space-time supersymmetry in large radius expansion 7−108344
superstring flax, unidexterous superspace 7−120905
superstring inspired models, gauge symmetry breaking 7−102264
superstring models, supersymmetry breaking in observable sector 7−102263
superstring models challenged by rare processes 7−140578
superstring theories, compactification, low energy phenomenology 7−67140
superstring theory, covariant BRST theory 7−89075
superstring theory, incorporating symmetry 7−108343
superstring theory, pregeometry 7−102265
superstring theory, review of recent developments 7−140575
superstring thermodynamics 7−88100
superstring-inspired $SU(3)\times SU(2)\times (U(1))^2$ models with SO(10) unification 7−128403
superstrings, 10D, quantum cosmology, evolution, dynamics and coupling constants 7−134621
superstrings, multiloop closed amplitudes, leading divergences cancellation 7−80552
superstrings, nonperturbative effects in sigma model 7−108342
superstrings, type II amplitude finiteness 7−80550
superstrings and the unification of forces and particles 7−67139
supersymmetric Born-Infeld Lagrangian in d=4, appl. to supergravity and superstrings 7−80556
supersymmetric quantum mechanics, index theorem for arbitrary Lorentz irreps 7−102638
Teichmuller deformations of super Riemann surfaces 7−95435
temperature, periodicity and horizons 7−134625
topological geon properties, Morse theory, Lorentzian structs. decays 7−134618
topological mass in three dimensional gravity 7−134617
two-dimensional non-Abelian bosonization in the presence of external gauge fields and gravity 7−121344
type I superstring theory, finiteness of parity-odd N-point functions 7−108346
type II superstrings, gravitons and dilatons, background black hole solns. 7−108367
type-I superstrings, Polyakov path integral formalism 7−115872
ultraviolet divergences of gravity theories 7−67162
Universe, $\Omega<1$, mechanisms to produce closure study 7−88701
universe horizon size, uncertainty principle, expansion factor, time derivative, Hubble size 7−146119
Universe wave fn., effective gravit. action with matter fields correction 7−115880

uantum field theory of gravitation continued
Unruh effect and reducibility of the representation of the commutation relations 7−73049
very early cosmologies with irreversibility and the monopole dominance 7−67144
Virasoro algebra anomalies and deformations of string theories 7−102271
viscous fluid universe interacting with scalar field, solns. 7−89067
Weyl gravity theory, asymptotic effective action, renormalisable theories, asymptote calculation with SU(2) field interaction 7−115886
Yang-Mills-Higgs fields, pre-inflationary stage in homogeneous anisotropic model 7−108374
Yukawa-type potential besides Newtonian potential in Poincare gauge theory of gravitation 7−102274
$\lambda\phi^4$ theory and scalar electrodynamics, effective action with torsion in de Sitter space 7−89070
$\lambda\phi^4$ theory in de Sitter space, one-loop effective pot. 7−102600
τ lepton, general relativity consideration 7−89081

uantum field theory of interactions
see also elementary particle coupling constants; elementary particle interactions; Feynman diagrams; quantum electrodynamics; quantum field theory of gravitation; quantum field theory of strong interactions; quantum field theory of weak interactions; vertex functions
$\lambda\phi^4$ theory in curved spacetime, one-loop effective action in interacting quantum field-theory 7−81010
cosmological gravitation fields, quantum field theory of mutually interacting particles 7−72684
spinning nucleon in scalar field, eqns. of motion 7−134952
vertex constant, limitation in dispersion approach 7−89517

uantum field theory of strong interactions
see also elementary particle strong interactions; Lee model
σ-model, supersymmetric, gravitational β function, four-loop corrections, effective action 7−108790
nonlinear O(N+1) σ-model, BRS renormalisation, characterisation 7−108759
spontaneously broken quintet baryon model for strong interactions 7−95720

uantum field theory of weak interactions
see also elementary particle weak interactions
No entries

uantum fluids
see also boson systems; fermion systems; liquid helium; spin polarised atomic hydrogen
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
D_2 fluid, local ordering near liq.-gas critical point, vibrational Raman spectrum fine struct. obs. 7−76512

uantum generators (optical) *see lasers*

uantum Hall effect
2D electrons, fractional quantum Hall effect and sp. ht. 7−98494
adiabatic phase holonomy and quantized Hall conductance 7−67186
adiabatic theorems, quantum Hall effect appl. 7−92205
basic theories and appl. *(Italian)* 7−76978
boundary potential distribution and source-sink resistance quantization in the Hall state 7−125015
condensed matter physics, open problems 7−76717
cooperative ring exchange and the fractional quantum Hall effect 7−137961
current distrib. and electrical pot. calcs. 7−84948
discovery, historical notes 7−102073
disordered 2D system, thermoelec. effects in quantum Hall regime 7−131694
disordered 2D systems, Anderson localisation study 7−143305
dynamic current oscillations, upper limit, exptl. search 7−143487
electron fluid and quasihole props., 2D model calcs. 7−105597
electron gas, 2D, quantum Hall effect, scatt. approach 7−131679
electron gas, 2D, quantum mechanical Hall effect 7−131680
electron gas, synergism in crossed fields, Hall conductance appl. 7−143381
electron gas in strong mag. fields, channel geometry 7−137819
energy cusps, incompressibility, fractional quantum Hall effect 7−84943
explanation and impact on electrical metrology 7−67350
finite cylinder in perpendicular mag. field, Kubo cond. and integer quantum Hall effect 7−105599
finite-temperature transition for the fractional quantized Hall effect 7−118515
fractional, BCS theory and Ginzburg-Landau eqn. anal. 7−105595
fractional, correl. ground state 7−92208
fractional, spin-reversed quasiparticles 7−105596
fractional, theory 7−92211
fractional charges in the quantized Hall effect, anal. 7−137960
fractional effect system, canonical description, Bohr-Sommerfeld quantisation 7−131673
fractional quantum Hall regime, CDW states 7−118388
fractionally quantised Hall effect, electron and quasiparticle density of states 7−70224
frequency and temp.-depend. cond. 7−131681
high field fractional quantum Hall effect research using dilution refrigerators and superconducting/hybrid magnets 7−67331
high precision measurements at national institutes 7−131687
impedance standard upgrading *(Swedish)* 7−121046
integer, topological explanation 7−105598
integer quantisation of static Hall conductivity, microscopic theory 7−84941
integral quantum Hall effect, instanton soln., quantum fluctuations in non-linear σ model 7−125016
integral quantum Hall effect, multielectron state, perturbation theory treatment 7−143489
localisation and interaction in disordered metals and doped semiconductors, Summer School, St. Andrews, Scotland (July-Aug. 1986) 7−108004
localised electron states on lattices, tight-binding model calcs. 7−84942
localization length and inverse participation ratio of two dimensional electron in the quantized Hall effect 7−70339
lowest Landau level, perturbational calc. of quantum Hall conductivity 7−92213
metal and alloy electronic structure, conf., Johnsbach, Germany (Apr. 86) 7−128195
MIS struct., boundary pot. anomalies under Hall quantisation conditions 7−85121
MIS structs., quantized Hall resistance, effect of current in channel on charge *(German)* 7−131797

quantum Hall effect continued
MOSFET, quantum Hall effect, thermoelec. power effects 7−125132
multilayer III-V semiconductors, MOVPE of multilayer structures 7−105683
networks, quantum conductance 7−105507
normal and fractional, review of expts. and theories 7−125024
off-diagonal long-range order, oblique confinement and the fractional quantum Hall effect 7−105594
Planck constant meas. 7−102380
quantisation of hall resistance 7−112369
quantized Hall resistance, relation to fundamental constants 7−84932
resistance plateaus and magnetoresist. minima 7−131682
review, gauge invariance explanation 7−76976
self-localisation of mobile electrons 7−84945
semiconductor superlattices, helicon waves under quantum Hall effect conditions 7−138038
semiconductor superlattices undamped helicon, low-freq. EM wave spectrum calcs. 7−84962
semiconductors, conference, Copenhagen, Denmark (Aug. 1986) 7−102008
semiconductors, high magnetic field effects, conf., Wurzburg, Germany (Aug. 1986) 7−128198
semiconductors, solid-state physics, book 7−102027
SQUID galvanometer for quantum Hall resistance meas. 7−108572
superlattices, RF quantum Hall effect, helicon wave propag. 7−125019
theory of quantum Hall effect with realistic boundary conditions 7−70337
two-dimensional electron gas, quantum Hall effect, percolation approach 7−131676
two-dimensional systems, quantum Hall effect and localisation in Landau levels 7−131674
winding number and flow diagram 7−131678
AlGaAs-GaAs, modulation-doped heterojunction, organometallic VPE for microwave appls., expt. charactn. 7−84582
AlGaAs-GaAs heterostructure on GaAs (110), MBE growth and props. 7−71026
Bi bicrystals, galvanomagnetic effects in quantising mag. fields 7−84936
CdTe-HgTe, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
GaAs gated heterostructure, mag. field depend. of gate voltage and current in the quantum Hall regime 7−85079
GaAs/AlGaAs heterostruct., 2D electron gas density of states determ. at fractional filling factors 7−137825
GaAs/AlGaAs heterostructs., fractional quantum Hall effect, activation energy study 7−137966
p-GaAs/AlGaAs heterostructs., low temp. fractional quantum Hall effect 7−137967
GaAs/AlGaAs heterostruct., edge currents in integral quantum Hall effect 7−143595
GaAs-(GaAl)As heterojunctions, p-type, transport props. in high mag. fields 7−131774
GaAs-$Al_xGa_{1-x}As$ heterojunction, 2D electron gas, microwave photoresistivity and fractional quantum Hall effect 7−125036
GaAs-AlGaAs heterostructs., 1D wires, high mobility, quantum transport, mag. field and temp. depend. 7−125021
GaAs-AlGaAs heterostruct., high freq. cond. in quantum Hall effect regime 7−131699
GaAs-AlGaAs heterostruct., repulsive/attractive math. centres effect on magnetotransport 7−143594
GaAs-AlGaAs interface, edge magnetoplasmons under quantum Hall effect conditions 7−99187
GaAs-AlGaAs modulation doped heterostruct., photoexcited quantum Hall behaviour 7−131685
GaAs-$Ga_xAl_{1-x}As$ heterostructs., quantum Hall effect, fractional filling factors up to 4.2 K 7−137968
GaAs-$Ga_xAl_{1-x}As$ heterojunction, 2D electron gas, high press. transport props. 7−138055
GaAs-GaAlAs heterojunction, fractional quantum Hall effect study 7−137965
GaInAs-AlInAs, 2D electron gas, magnetotransport meas., hydrostatic press. 7−138056
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
GaSb/InAs/GaSb quantum wells, electronic states and quantum Hall effect 7−125091
GaSb-InAs, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
GaSb-InAs-GaSb, 2D electron-hole system, magnetotransport meas., hydrostatic press. 7−138056
p-HgCdMnTe bicrystals, quantum Hall effect and magnetoresistance under hydrostatic press. 7−76977
p-$Hg_{0.75}Cd_{0.23}Mn_{0.02}Te$ bicrystals, quantum Hall effect 7−131686
InGaAs-InP, scaling of the integral quantum Hall effect 7−131675
$In_{0.53}Ga_{0.47}As$-InP epitaxial single quantum wells, electronic props. 7−77057
$NbSe_3$, magnetoresistance and Hall effect, oscillatory behaviour 7−84822
Si MIS structs., 2D nonlinear electron system, filamentation of Hall current, quantising mag. field *(German)* 7−131798
Si MIS structs., Coulomb energy spectrum gaps under fractional quantum Hall effect 7−138016
Si MIS structure, flow of current between adjacent inversion layers in a quantizing magnetic field 7−70425
Si MOS structs., fractional quantum Hall effect study 7−137964

quantum mechanics *see quantum theory*

quantum numbers *see quantum theory*

quantum optics
see also nonlinear optics
amplifiers and attenuators, rigged-reservoir response, general theory 7−122890
anharmonic oscillator, higher-order squeezing of coherent light 7−96971
atom-field interactions, chaotic dynamics horseshoe-shaped maps 7−117166
atomic cavity modified spontaneous emission, transient theory 7−96968
atomic many-photon processes, squeezed light participation 7−141826
atomic medium with degenerate transition's, self-induced transparency in presence of strong mag. field 7−123128
beam splitter, quantum description 7−97121
beam splitters, relation between input and output states 7−123168
Berry's phase, polarised light interference 7−103731
bistability, chaos and noise effects 7−136418

quantum optics continued
bistability, polarisation switching, two-level atoms with lower-level degeneracy 7−136411
bistability in bad cavity limit, master equation solutions 7−110441
bistable solitons and optical switching 7−130231
Bose-Fermi coupled oscillator system, interaction with coherent radiation, dynamics 7−74895
channel capacity increase in light-wave communication system by photon-number squeezed light 7−110314
coherent light interaction, thermodynamic aspects discussion 7−74894
coherent trapping of populations in a three-level two-mode model with multiphoton transitions 7−74548
collective resonance fluorescence, violation of Cauchy-Schwarz inequality 7−122435
conference, quantum electronics, Baltimore, MD, USA (April-May 1987) 7−128191
cooperative quantum jumps with two atoms 7−141828
counter-rotating terms in interaction Hamiltonian, laser rate eqns. method 7−130041
delayed-choice experiments in quantum interference 7−141823
dispersive optical bistability, quantum tunnelling 7−68757
electromagnetic field, quantised, radiation loss inclusion, optical cavity model 7−103780
electron current, quantum modulation in laser light field 7−68542
electron intensity correlation interferometry, quantum optical features 7−82522
essential states in the relativistic theory of electron-photon interactions 7−96964
Fabry-Perot interferometer appl. to length meas., quantum theory 7−89252
Fermi-Dirac and Bose-Einstein distributions and the interaction of light with matter 7−95137
fibres, supershort pulse self-interaction, computer simulation using inverse scatt. method 7−110583
field operators, commutation relations and correl. functions *(German)* 7−90562
finite-Q cavity electrodynamics, dynamical and statistical aspects 7−82525
four-level three-mode system, operator soln. dynamics 7−141822
four-wave mixer in nonlinear regime, quantum behaviour 7−117164
four-wave mixing, quantum effects of atom-cavity interaction 7−110308
fractional photons, squeezed and coherent states 7−68605
fundamental principles 7−67065
generalized Holstein-Primakoff squeezed states for SU(n) 7−81055
GRIN media, optical path integrals for propagation 7−129967
IEICE National Convention, Keio, Japan (March 1987) 7−108028
imaginary echo in a gas in a Doppler expanded transition 7−123122
integral representations in quantum optics, origin 7−115895
interferometer shot noise, lack of limit of sensitivity *(German)* 7−103784
interferometers, active and passive, equivalence due to cavity losses 7−140741
IR radiative corrections to scatt. cross sections 7−74472
isotropic coupled oscillators, 2D, time depend., appl. to quantum optics 7−102208
Jablonski diagrams, review 7−110304
Jaynes-Cummings model, semiclassical, non-chaotic behaviour 7−68608
Jaynes-Cummings model in presence of damped Fock-state radiation field 7−110310
Josephson junction, quantum electronics expts. 7−131906
kicked quantized cavity mode, open-systems-theory approach 7−122895
laser driven N-level quantum systems with SU(2) dynamic symmetry 7−130031
light polarisation, propagation in optical fiber, phase rot. investig. 7−117138
linear dielectric, quantum-mech. formalism of light propag. 7−103736
localised light waves, covariant phase-space representation 7−141827
macroscopically distinguishable quantum states generated via nonlinear birefringence 7−68606
many-atom spontaneous emission, damped cavity 7−122888
Maxwell's equations from geometrical optics 7−117137
Maxwell-Bloch equations, testing Painleve property 7−82524
modulation theory of above-threshold ionization 7−68265
molecules, EM fields interaction, field energy densities time depend. 7−121420
Morse oscillator, dynamic Stark splitting 7−122442
multi-spin systems, phase difference operators 7−110307
multiatom squeezed states 7−82518
multilevel atoms, optical pressure force of two-frequency laser radiation 7−90044
multilevel quantum system, relax. process, radiation interaction 7−122894
multilevel systems, serial and parallel configs. 7−96967
multiple higher harmonic generation, squeezing 7−122884
multiport homodyning, quantum theory 7−103782
N-level atom and N−1 modes, statistical aspects and interaction with squeezed light 7−68599
N-level atom interaction with N-1 modes, solvable model with detuning and multiphotons 7−82519
nonclassical correlation between light beams in a Jaynes-Cummings-type model system 7−141819
nondegenerate optical parametric oscillator, generation of twin photon beams 7−123085
nonGaussian multiphoton squeezed states 7−68604
nonhomogeneous medium, optical propag. studied using algebraic method 7−68602
nonlinear pulse propagation in monomode waveguide 7−90781
nonMarkov model of cavity radiation, antibunched and sub-Poissonian statistics 7−90554
number-phase minimum-uncertainty states, quantum nondemolition meas. with Kerr medium 7−110311
optical bistability, dispersion relations, nonlinear response function 7−90561
optical fibres, nonlinear interactions and quantum optics 7−130380
p.A and d.E interactions unification in photodetector theory 7−96970
parametric amplifier, squeezing in the dynamics 7−68787
phase fluctuations of coherent light interacting with anharmonic oscillator 7−130033
phase modulation, precision meas. in optical interferometer beyond shot-noise limit 7−122898
photon amplification, coherence props. 7−130030
photon localisation in quasiperiodic media, expt. probe 7−110313
photon localisation in time domain 7−77490
quantum optics continued
photon statistics in collective double optical resonant process 7−103786
polychromatic scattering, radiation transfer, nonlinear problem 7−75041
population inversion in optical adiabatic rapid passage with phase relaxation 7−110312
probe absorption by an atom in a strong finite-linewidth laser field 7−74524
pulse-shape-induced phenomena in photodetachment 7−74529
quantum-Fokker-Planck equation for dispersive optical bistability, soln. 7−82689
quasicontinuum photoexcitation, rates and recurrences 7−122403
resonance fluorescence from an atom in a squeezed vacuum 7−122431
rigged-reservoir response, effects of squeezed vacuum 7−122891
rigged-reservoir response, multiatom squeezed states 7−122892
school of coherent optics, Ustron, Poland (Sept. 1985) 7−66804
spatial dissipative structures in passive optical systems 7−97070
spontaneous emission squeezing 7−136249
squeeze operators, normally ordered form, coherent-state representation 7−90558
squeezed light, generating and detecting short-duration pulses 7−82526
squeezed quantum fluctuations and noise limits in amplifiers and attenuators 7−136244
squeezed state photon distrib. showing oscillations, and interferences in phase space 7−82521
squeezed states, chaotic tunnelling in double-well pot., fractal anal. 7−74483
squeezed states, cross correl. detection 7−117165
squeezed states, explanation and detection *(German)* 7−103785
squeezed states, parametric amplification producing k-photon correls. 7−68601
squeezed states, quantum mechanics 7−136243
squeezed states, stable, quadratic Hamiltonian, time depend. invariant 7−130029
squeezed states and quantum scaling evolution 7−136238
squeezed states and the quantum noise of measurement 7−141825
squeezed states of light, phase props. 7−130034
squeezed vacuum in the detection of macroscopically distinguishable quantum states 7−89030
squeezed-light generation in a medium governed by the nonlinear Schrodinger equation 7−90556
squeezed-state generation by the normal modes of a coupled system 7−122897
squeezing, antibunching and sub-Poissonian behaviour, statistical study 7−74890
squeezing, general criterion 7−68597
squeezing and antibunching in phase-matched many-atom resonance fluorescence 7−136242
squeezing and sub-Poisson statistics in three-mode interactions 7−136245
squeezing and superposition states 7−141824
squeezing in mixture of two modes interacting with strongly driven two-level atoms 7−82523
squeezing in output of high gain atomic light amplifier 7−74893
squeezing in SHG 7−136246
squeezing of field amplitude square in SHG 7−90555
squeezing of quantum solitons 7−103787
SU(2) and SU(1,1) time-ordering theorems and Bloch-type equations 7−74892
sub-Poissonian light generation by all-optical mechanism 7−141820
sub-Poissonian photon statistics and higher-order squeezing in light amplifier with input binomial states 7−136247
subPoissonian light observation in parametric downconversion 7−97084
three-level atom, light scattering, quantum theory 7−90553
three-level atom in interaction with two modes, time evolution 7−122889
three-level system, interaction with nonlinear propag. of picosec. laser system 7−123081
time independent Hamiltonian operators, propagator residue decompositions 7−122896
two photon absorption from strong coherent beam, squeezing 7−96963
two-level atom, nonlinear response theory 7−90560
two-level atom, time depend. pulses in quantum optics, optical double reson. and reson. fluoresc. spectra 7−122887
two-level atomic medium, nondegenerate multiwave mixing, quantum theory 7−90557
two-level atoms, cavity field mode optical bistability quantum fluctuations study 7−90684
two-level atoms, spontaneous emission is detuned damped cavity 7−96962
two-level resonant medium, phase modulation and parametric broadening of pulse spectrum 7−97065
two-level system, quantum theory of stimulated Raman scattering, time-depend. spectrum 7−103891
two-level system coupled to boson mode, ground state struct. and prop. 7−95399
two-level systems, interconnected, in resonant EM field 7−74891
two-photon absorption, unsaturated, squeezing, analytical formulae 7−136240
two-photon laser oscillation process *(Chinese)* 7−130040
two-photon system, polarisation states 7−130032
two-photon two-level media, multiwave mixing, quantum theory 7−96965
uncertainty relations for light waves and the concept of photons 7−68603
undamped two-level atoms driven by a coherent electromagnetic wave 7−130035
unimolecular multiphoton dissociation with UV absorpt., quantum statistics 7−110046
Wigner-function description of quantum noise in interferometers 7−136241
$BaTiO_3$ self pumped phase conjugate mirror, deterministic chaos 7−82720
CdS, induced absorber, coexisting oscill. modes and optical chaos in hybrid ring cavity 7−96969
Na filled Fabry-Perot cavity, transmission properties 7−136412
Na vapour, forward four-wave mixing, squeezed noise obs. 7−68598

quantum solids
see also solid helium; solid hydrogen
anharmonic solids, excitation spectrum, anal., absence of gap 7−105177
crystal growth dynamics, interface mobility, energy dissipation and temp. depend. kinetics 7−118194
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722

quantum statistical mechanics
see also jellium; many-body problems; quantum fluids; quantum solids; quantum theories of fluid structure
amorphous metal-H system, internal friction and relax. strength 7−142907
asymptotically normal dynamical semigroups, definition and characterization, return to equilibrium 7−120931
Boltzmann statistics of quantum friction 7−102296
Bose gas, nonideal, ensemble equivalence problem 7−134647
Bose-Einstein condensation and thermodynamic pot. in compactified spaces 7−108396
Bose-Einstein condensation in an external potential 7−95463
Bose-Fermi coupled oscillator system, interaction with coherent radiation, dynamics 7−74895
boson-fermion equivalence and stochastic calculus 7−80595
chaos, spectral fluctuations and zeta functions 7−95461
charge boson gas in an homogeneous magnetic field, critical field value 7−80599
completely integrable models, 1D, critical exponents 7−134648
conjugate pair of representations in chaos and quantum mechanics 7−120929
constrained N-particle systems, Hamiltonians 7−89107
correlation function for a quantum oscillator in a low-temperature heat bath 7−108395
Coulomb systems, quantum statistics, thermodynamic functions and phase transitions 7−80600
Coulomb systems, solutions of Hartree-Fock equations 7−67183
D-dimensional ideal quantum gases, time depend, behaviour 7−67184
degenerate quasirelativistic electron gas, thermodynamic potential 7−95458
dense fluids, partition function estimation by micro-potential method 7−140598
Dicke maser model, quantum version of balance equation 7−134643
eigenvalue sums, geometric props. and chaotic motion in quantum billiard geometry 7−120853
electron gas, synergism in crossed fields, nonequilibrium statistical mech. framework 7−143381
electron intensity correlation interferometry, quantum optical features 7−82522
energy-level statistics, bright state relax., Hamiltonians ensemble 7−134646
entropy, connection with parametrised time 7−115898
Euclidean quantum mechanics 7−108393
Fermi gas, ideal, spin interaction 7−134644
fermion ensembles that show statistical bunching 7−140597
fully ionized plasma, transport props. semiclassical and quantum anal. 7−73282
Hamiltonian systems with an odd Poisson bracket 7−73192
ideal 2D incompressible fluid, θ statistics and quantum point vortices 7−67185
indistinguishable particle systems, integral representations in quantum optics, origin 7−115895
inhomogeneous electron gas, quantum density, local oscillator approx. 7−128434
integrability−chaos transition region, level spacings, distrib. of quantum Hamiltonian 7−108391
Jaynes-Cummings model, exactly solvable nonlinear generalisations 7−120930
KAM theorem, K-type mixing behaviour 7−120928
Lanczos-like hamiltonian matrix, quantum systems with common density of levels 7−115897
Langevin equation for Brownian particle coupled to heat bath 7−95460
Malthus-Verhulst model, exact solutions of Fokker-Planck equation 7−89112
many-body scattering amplitudes at low energies, existence and analyticity 7−80594
many-body Wick theorems, thermodynamical and Green function theorems 7−67189
Minkowski stochastic quantisation, thermal equilib. and Fokker-Planck distrib. 7−73232
molecular dynamics simulation of statistical mech. systems, Summer School, Varenna, Italy, (July-Aug. 1985) 7−66805
molecular electron density, one-body pot., Schrodinger eqn. soln. 7−73021
N-level system under Gauss noise, relaxation 7−73189
nonequilibrium entropy in N-particle systems and quantum field theory 7−115943
nonequilibrium processes, thermofield dynamics formalism 7−120934
nonlinear electron distribution around heavy charged particle 7−92089
nonlinear resonance with account of relaxation processes 7−80598
occupation number fluctuations influence on Frohlich model of nonthermal excitation 7−115896
ordered *-semirings and generating functionals *(Russian)* 7−73187
phase space measure, entropy of response of system to probe 7−120927
phase transitions, quenched disorder effects, renormalisation group approach 7−121038
phonon reservoirs, relax., thermal equilib. approach stochastic theory 7−128433
polyacetylene, stochastic adaptation of microcanonical simulation method 7−89111
quantum spin systems, appl. of thermofield quantum Monte Carlo method 7−67187
quantum theory of phase relaxation 7−95459
quasi-particles and Brownian quasi-particles 7−128430
reacting plasma, strongly coupled, partially ionized, scatt. theory methods 7−130835
relation to classical statistical mechanics, high temp. limit 7−89108
relativistic Calogero-Moser systems, complete integrability 7−89109
relativistic Fermi gas in a nonuniform velocity field 7−67190
Riemann space-time, local quantum statistics 7−80601
scalar product, symmetrised correlation function, recurrence relations 7−102293
scale-invariant systems, integrable, long-range stiffness of spectral fluctuations 7−80615
Schrodinger model, nonlinear, continuum limit of anisotropic Heisenberg model 7−143751
self-dual Z(N) spin systems, finite-size scaling and conformal invariance 7−121329
series representations, grand potential 7−115893
series representations, particle energy averages and thermodynamic props. 7−115894
quantum statistical mechanics continued
solitons, statistical mechanics, mass shift and entropy at finite temp. 7−116078
spin 1/2 nonequilibrium systems, closed time path Green's fn. and thermofield dynamics formalisms 7−121382
stellar plasmas, partially ionised, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
symmetrical group representation multiplicity, partition numbering problem 7−95220
temperature, periodicity and horizons 7−134625
thermodynamic quantum lattice system, KMS condition and stability props. 7−115942
Thirring-sine-Gordon model, thermodynamics, Bethe ansatz variational anal. 7−128431
two-dimensional lattice with one-dimensional randomness 7−80674
two-level atoms interacting with quantized radiation field, equilib. thermodynamics 7−128510
virtual levels of n-particle systems 7−73191
wave function probability space, appl. of entropy maximization technique 7−95457
Weyl formalism and quantum stochastic processes 7−67188
H, spin polarised, Bose-Einstein condensation in dynamic trap 7−108392
quantum statistics *see quantum statistical mechanics*
quantum statistics of many-particle systems *see quantum statistical mechanics*
quantum theories of fluid structure
see also liquid theory; quantum fluids
No entries
quantum theory
see also Clebsch-Gordan coefficients; complementarity; correspondence principle; indeterminancy; perturbation theory; quantisation; quantum field theory; Schrodinger equation; spin hamiltonians; wave mechanics
1D quantum systems, SU(2) dynamical symmetry, exact solvability 7−128353
1D time dependent potentials, rational functions of momentum as invariants, basic theory 7−67057
1D time dependent potentials, rational functions of momentum as invariants, 2- and 3-resonance cases 7−67058
AC driven damped sine-Gordon system, phase pulling and breather instability 7−134570
acceptability of relativity and atomic theory before quantum mechanics 7−72968
action at a distance, EPR constraints, causality and Sutherland paradox 7−128316
adiabatic quantum phase, topological investigation, non-trivial gauge bundles, homotopically non-trivial mappings 7−120837
adiabatic theorems, quantum Hall effect appl. 7−92205
adiabaticity, quantum mech. and thermodynamical 7−102066
Aharonov-Bohm effect, gravitational analogue in 3 and 4 dimens. 7−95437
Aharonov-Bohm effect, modified Coulomb scattering 7−134561
Aharonov-Bohm effect 7−140533
Aharonov-Bohm quantum billiard, circular, spectral sum rules 7−73020
Aharonov-Bohm scatt., angular momentum conservation 7−120861
Aharonov-Bohm scatt. wavefunctions, single valuedness 7−120860
Aharonov-Bohm scattering, relativistic correction, Lorentz contraction factor, Dirac eqn. 7−108280
alkali metals atomic Rydberg states 7−82014
altered quantum Ising chain, conformal structure 7−108443
Anderson localisation, Schrodinger difference operator in 1D 7−98765
angular momentum, semiclassical treatment for fixed modulus and z-component, single-particle propagator 7−128975
anharmonic oscillator, quantised, time evolution, spin analogue 7−67083
antiunitary symmetries and energy levels statistics 7−128361
Ashkin-Teller model, partition function derivation, second magnetic exponent 7−108298
Ashkin-Teller quantum chain, operator content, boundary conditions compatible with torus 7−108291
Ashkin-Teller quantum chain, superconformal and Zamolodchikov-Fateev invariance 7−108290
atom, Yukawa pot. in momentum space, eigenfunctions analytical behaviour 7−134557
atomic statistical model, energy correction 7−116807
atomic system, soluble quantum map with continuous spectrum 7−96488
atoms, perturbation theory progression, quantum angular momentum theory graphical methods *(Swedish)* 7−120847
barrier transmission coefficients in anharmonic symmetrical potentials 7−73031
basic states of disordered structures, limit theorem 7−80472
Bell's inequalities for Rydberg atoms 7−140509
Bell's inequality for C*-algebras 7−80486
Bell's inequality violation 7−67069
Bell's theorem, locality, reflection and wave-particle duality 7−128321
Bell's theorem, quantum mechs., relativity 7−128210
Bell-type inequality to distinguish between 2-body and 3-body nonseparability 7−115842
Berry's phase, geometrical considerations for two-level system 7−80507
Berry phase for spins and helicities, direct calc. 7−140499
Bertrand's paradox and Bell's inequalities 7−102201
black body radiation fluctuations, interpretation 7−80496
Bloch oscillations in uniform electric and magnetic field, tight-binding method, Landau subbands 7−108300
Block equations and the Korteweg-de Vries hierarchy 7−120843
Blume-Capel quantum chain, operator content 7−67225
Boltzmann statistics of quantum friction 7−102296
book, exercises in quantum mechanics 7−66845
Bose-Fermi systems, relativistic, with first class constraints, operator quantization 7−115848
bound electron in EM field, energy shift, gauge invariance 7−128334
Brownian motion of quantum oscillator, thermofield dynamics formalism 7−120934
Buttiker-Landauer characteristic barrier interaction times, arbitrary barriers 7−140544
Buttinker-Landauer charact. barrier interaction times, arbitrary point in barrier 7−140545
Calogero-Moser system, canonical transformation and semiclassical limit *(French)* 7−67049
caustic, exact propagator, correspondence limits 7−120864
chaology, energy level statistics 7−134572
chaos, correlation props. of real symmetric random matrix 7−140619

quantum theory continued
chaotic atomic systems, quantum meas. as dissipation 7−102302
chaotic quantum systems, classical, spectral fluctuations 7−128359
chaotic system in generalised Husimi representation 7−80627
charged particle interactions in few-body systems, quantum mechanical scatt. theory, review 7−128368
charged scalar boson, relativistic quantum mech. w.r.t. observer's past light cone 7−115830
chargeless spinning particle in periodic mag. field, quantum mechanics 7−95143
classical adiabatic holonomy and its canonical structure, Berry's phase, Hannay's angle 7−80505
classical adiabatic holonomy in a Grassmannian system, Berry's phase classical analogue 7−80504
classical and quantum dynamics, group foundations, struct. classification and globalisation 7−120795
classical and quantum theories, correspondence and quantization 7−128333
classical diffusion in random media, relation with quantum localisation 7−102189
classical Fourier amplitudes as quantum matrix elements 7−95395
classical limit of the quantum mechanical wave packet 7−102203
classical resonance overlapping and quantum avoided crossings 7−120958
classically chaotic Hamiltonian system, eigenfunctions, qualitative props. 7−140620
coherence destruction in quantum systems with dissipation 7−131740
cold surface-atom sticking or elastic scatt., quantum gettering theory calcs. 7−85922
compatibility of observables represented by positive operator-valued measures 7−140500
complementarity principle, origins 7−115722
complementary observables, joint measurements 7−134553
complementary observables and uncertainty relations 7−115843
complex molecules, electronic transitions four photon spectroscopy, stationary methods theory 7−82308
complex quantum systems, random-matrix theory 7−128360
composite quantum systems, joint probability distrib. 7−115823
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
conditional expectation values in quantum mechanics 7−108274
conf. on quantum chaos and statistical nuclear physics, Cuernavaca, Mexico, Jan, 1986 7−128188
conference, critical phenomena, random systems, gauge theories, Les Houches, France, (Aug.-Sept. 1984) 7−66826
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
conservation law anomalies, charged particle in uniform magnetic field 7−121422
contextual theories, locality, realism and ontic chance 7−128318
continuity equation and Hamiltonian formalism in quantum mechanics 7−89017
convergence of nuclear and correlation operators in Hilbert space 7−115835
Copenhagen interpretation, anal. of proposed crucial test 7−80490
Coulomb Green's function, harmonic oscillator 7−128329
Coulomb plus linear potential bound-state problem, Hill determinant anal. 7−80482
Coulomb problem in nonrelativistic scatt. theory 7−67066
Coulomb scattering, classical limit 7−80484
Coulomb systems, Fluctuation-Dissipation theorems 7−128428
Coulomb systems, monotonicity and concavity, eigenvalues, excitons and biexcitons 7−95386
crossover phenomena and criticality in quantum systems with random fields, renormalisation group study 7−121040
cyclic geometrical quantum phases, group theory, atomic physics 7−140510
D-dimensional spheres, path integral quantisation, Hamiltonian operators from Faddeev-Senjanovic formula 7−120832
damped anharmonic oscillator spectral behaviour 7−128322
de Broglie waves, dislocated, geometrical structure 7−89018
deformed absorbing crysts., reflectivity, QM calcs., extended version 7−138407
deformed crystals, channelling, quantum theory 7−111717
deformed ensembles, energy level fluctuations, random matrix methods 7−140547
degenerate energy levels, multidimensional tunnelling, instanton method 7−115846
delayed-choice experiments in quantum interference 7−141823
diffeomorphism groups and quantized vortex filaments 7−95352
differential topological networks, nonadditive scattering invariants in classical mechanics, quantum theory 7−140507
dilation analytic methods and complex scaling, many body problems 7−128369
Dirac Hamiltonians, eigenfunction decay and point spectrum 7−73025
discrete mechanics, difference equations and conservation laws 7−95310
discrete time quantum mechanics, spin systems, quantum field theory solns. 7−116074
dispersive optical bistability, quantum tunnelling 7−68757
dissipative free particle in harmonic bath, quantum dynamics 7−140530
dissipative quantum tunnelling, temp. effects, Brownian motion approach 7−134581
dissipative standard maps, quantum effects in steady state 7−140490
dissipative two-state system, dynamics, functional integral approach, review 7−67080
double potential well containing 1D particle, Euclidean Feynman integrals, nonlocal problem 7−95406
double tensor operators, commutation relations, Hermitian conjugation 7−108312
doubly anharmonic coupled oscillators 7−128324
dynamic mass generation, gauge boson mass, fermion mass, Abelian vector, quarks, perturbation calcs. 7−140916
dynamical chaos localisation in quantum systems 7−120938
dynamical critical points, classical to quantal behaviour temporal crossover 7−115945
dynamical maps and nonnegative phase-space distribution functions in quantum mechanics 7−67071
dynamical systems, irreversible deterministic evolution, axiomatic approach 7−140494
dynamics, chaotic systems 7−141481
dynamics of four particles in hyerspherical coordinates classical quantum Hamiltonians 7−89013
quantum theory continued
dynamics of quantum dissipative system, duality between coordinate and quasimomentum spaces 7−80494
effective classical potential, Monte Carlo simulation calc. 7−102185
effective generating functions for quantum canonical transformations 7−67077
effective Hamiltonian theory: an intermediate representation method for the wave operator calculation 7−108269
Efimov effect in a four-body system 7−140491
eigenvalue sums, geometric props. and chaotic motion in quantum billiard geometry 7−120853
Eilers-Horst theorem generalisation for quantum logic 7−134555
Einstein-Podolsky-Rosen paradox, curious gedanken example using CP nonconservation 7−128342
Einstein-Podolsky-Rosen paradox, separable hidden variables theory 7−89010
Einstein-Rosen expts., communication and non-communication 7−128341
electric Aharonov-Bohm effect, and conservation laws 7−67072
electron as a radiating and spinning dynamical system and discrete internal quantum systems 7−73042
electron field-emission beam, electron antibunching obs. 7−89029
electron motion, rel. to nonlocality 7−108297
electron storage rings, Unruh effect and quantum fluctuations 7−74317
empirical reality, empirical causality, and the measurement problem 7−115820
energy level upper and lower bounds, variational functionals 7−116908
entropy, connection with parametrised time 7−115898
EPR paradox, zigzagging causality model criticism 7−128317
EPR type expts., enhanced photon detection, exptl. study 7−140520
ergodicity and the semiclassical limit *(French)* 7−73019
ergodicity in quantum measure algebra 7−140548
escape energy of particle delocalised by time periodic potential 7−140525
exponential-cosine-screened Coulomb pot., Schrodinger eqn., 1/N expansion 7−128350
Fermi pseudopotentials, narrow resonances, Yagi-Uda antenna array analog 7−120833
fermion antibunching, gravitationally induced quantum interference effects 7−120859
fermion many-body theory, unitary group formulation 7−109707
fermionic integration, Grassmann algebras and functional integrals 7−128315
ferroelectrics via random field fluctuations, destruction of long range order 7−113088
few body scattering and bound state problems in momentum space 7−128362
Feynman path integral, discrete-time approx. 7−134566
Feynman path integral, formulation as path integral of determinants using time transformation 7−80518
finite elements, physics applications, summer school, Lausanne, Switzerland (Sept. 1986) 7−134339
finite quantum mechanics, canonical transformations on finite phase space *(French)* 7−67048
finite tilted quantum well, approx. methods anal. 7−80263
foundations since Bell inequalities 7−134390
four-body equations in momentum space, multichannel quantum scatt. theory 7−128365
fractal characteristics of classically chaotic quantum systems 7−95479
fractional parentage coefficients for $(11/2)^6$ shell, antisymmetric states with J=0, 2, 3, 4, 5, 6 7−89011
free energy for harmonically bound fermions in a magnetic field 7−67064
free Laplacian with attractive boundary conditions 7−128311
free relativistic spinning particle, Berry's phase in rel. theory 7−80503
fundamental concepts 7−89040
fundamental constants, units, empirical values and quantum standards *(German)* 7−128231
fundamental principles 7−67065
fuzzy measurement, on conjugate observables, representation of observed trajectory of macroscopic body 7−108299
Gelfand-Levitan eqns. for multicomponent nonlinear Schrodinger eqn. 7−140529
generalized Bergman kernels and geometric quantization 7−73028
generalized Morse oscillator in the SO(4,2) dynamical group scheme 7−73030
generator state approach 7−109705
geodesic symmetries and invariant star products on Kahler symmetric spaces, quantization anal. 7−115834
GHz noise, quantum mechanical source 7−89042
Gleason's theorem, anal. for n-finite signed measures 7−95393
gravitational phase-shift of a neutron wave-packet 7−115889
ground state energy perturbation series, large order estimates 7−95397
group representations arising from Lorentz conformal geometry 7−140497
group theoretic approach to disordered systems 7−128447
H atom sticking and inelastic scatt. on metal surfaces, electron-hole pair excitations, quantum effects 7−85923
hadronic mechanics, open problems 7−128327
hadronic mechanics, workshop, Patras, Greece (Aug. 1986) 7−128169
Hahn-Jordan decomposition for Gleason measures 7−108282
Hamiltonian with BC_p symmetry, integrals of motion, radial parts of invariant operators *(French)* 7−102191
harmonic oscillator, damped, dressed-particle description 7−102211
harmonic oscillator, damped driven, exact evaluation of propagator and wave function 7−67053
harmonic oscillator, relaxation processes, consistent description 7−73044
harmonic oscillator, symmetries and supersymmetries 7−80477
harmonic oscillator integrals, closed formulation, hypervirial theorem and parameter differentiation 7−80473
harmonic oscillator problem, linear and action angle coord. props., eigenvalue spectrum 7−128319
harmonic oscillators, energy perturbation series, hypervirial eqns. calc., microcomputer method appl. 7−120739
harmonic polynomials, hyperspherical expansion method in many-body theory 7−128367
harmony principle, developments in the years 1918-23 *(Danish)* 7−66887
Heisenberg inequality and the complex field in quantum mechanics 7−140501
Hellmann-Feynman theorem, generalisation to Gamow states 7−128337
higher derivatives of velocity and quantum theory 7−128344
Hulthen potential, shifted 1/N expansion, comparison with Pade approximation calc., eigenvalues and eigenfunctions 7−128339
hydrated electron struct., quantum simulation 7−86659
hydrogenic atoms, probability distrib., classical limits 7−88773

quantum theory continued
hydrogenic quasirelativistic and Dirac wavefunctions, r^q matrix elements 7−134563
incoherent tunneling in a double well 7−134568
inelastic scatt. amplitude, use of classical trajectory calcs. 7−80520
infinite quantum systems, broken symm. and generation of observables, algebraic description 7−95390
integral representations by means of coherent states derived from de Finetti's theorem 7−120840
integro-differential equations, Heisenberg-Weyl dynamical algebra of invariants 7−95394
interacting particles, influence of box size on ground state energy 7−120919
intramolecular dynamics problem, probability amplitudes, LF expansion 7−103613
invariant differential operators on symmetric spaces with restricted root system, eigenfunctions 7−67478
Ising chain, finite size scaling and universality 7−67236
isolated many-body system, correction terms to $\lambda^2 t$ limit of van Hove 7−67078
isoperimetric problems, some identities 7−80586
Jauch-Piron states in quantum logic 7−102214
KAM theorem, generalization to quantum systems 7−120834
KDV flows, geometry 7−95396
kicked quantum systems, symmetry versus degree of level repulsion 7−67082
kicked rotator, kinetic energy destructive and nondestructive meas. models 7−108273
kicked rotator model, quantum limitations of chaos 7−140551
kicked top, quantum chaos, beat phenomena and broad-band eigenmode excitation 7−134580
kinetics, extension beyond mechanics 7−134548
Kovalevskaya top, generalization 7−128270
Kustaanheimo-Steifel transformation, constraint anal., functional approach 7−95375
lattice statistical systems, quantum inverse methods 7−73263
light as an expression of mental activity 7−134422
linear mol. chain, soliton states, thermal fluctuations effects, quantum theory *(Russian)* 7−82015
linear oscillators, wave function description 7−95379
linearly accelerated system, electrodynamics 7−128280
LMG model, three-level, spectral fluctuations 7−128467
local Atiyah-Singer index theorem 7−67085
local ergodicity as a probe for chaos in quantum systems: application to the Henon-Heiles system 7−73200
locality violations, in correlation meas. with beam splitter 7−102206
logic, linear algebra in the von Neumann theory 7−89020
long range correlations in quantum spectra and classical periodic orbits 7−80630
long-range dynamics and symmetry breaking, algebraic dynamics and math. structs. 7−73553
ls coupling in scalar potential, ls level splitting, ultrarelativistic limit, Thomas precession 7−128356
macromolecular chain with thermal oscillations, exciton parameter temp. depend. eval., quantum theory *(Russian)* 7−68484
macroscopic level 7−134582
many-body problems, freeon single unitary group formulation 7−109706
many-worlds and relative states interpretations, quantum Zeno paradox 7−134562
many-worlds interpretation 7−120733
Markovian description and quantum mechanics, consistency 7−80497
massless spinning particles in arbitrary space-time dimensions, generalised Pauli-Lubanski vector 7−80515
material particles, inner physical properties 7−128345
matter, universe and plasma, hypothesis of impossibility of identical individual particles *(Rumanian)* 7−80277
measurement, overdamped and amplifying meters 7−120866
measurement noise in Michelson interferometer using squeezed-state light source 7−120835
measurement process interpretation *(German)* 7−89046
measurement theory, continuous mode 7−120845
measurement theory with ang. momentum conservation, Wigner-Araki-Yanase theorem 7−140482
measurements, observability of wavefunction collapse 7−80492
metal rings, Aharonov-Bohm effect, non-ensemble averaged quantum transport 7−84818
metal-electrolyte interface double layer, microscopic quantum theory including solvent struct. 7−125077
metallic environment, light-particle diffusion, random walk model, quantum mech. calcs. 7−84356
metallic small particles, EM props., quantum mechanical approach 7−124893
metamorphosis and duality between quantum systems 7−108310
metastable state, decay width and shift of a quasistationary state 7−120871
metastable state decay by quantum tunnelling, WKB expansion 7−80513
modified quantum mechanics, soln. for particle trajectories 7−120858
modified wave operators $W_J^{\pm}$ and $W_D^{\pm}$, relations 7−140543
molecular Kramers degeneracy and non-Abelian adiabatic phase factors 7−120870
Monte Carlo path integration in real time via complex coordinates 7−120850
Morse-Feshbach oscillator, differential geometric props. 7−128328
$Mu+H_2$, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
multi-spin systems, phase difference operators 7−110307
multidimensional harmonic oscillators, collisions, inelastic transitions 7−73055
multiparticle quantum systems, localized states with small relative energies 7−120848
multiple harmonic oscillator zeta functions 7−67063
multistable quantum systems, microscopic level information processing 7−95400
N-body quantum system, spinless, nonrelativistic, time evolution operator anal. 7−140511
N-level system coupled to bosonic degree of freedom, soln. of eigenvalue problem 7−80478
narrowly avoided crossings, degeneracy in quantum systems 7−73036
neutron interference experiments and quantum measurement theory 7−89038
quantum theory continued
neutron interferometry, implications from causal interpretation of the Pauli equation 7−128326
neutron interferometry, influence of mirrors on spinor propag. 7−89313
neutron interferometry, quantum pot. approach to spin superposition 7−89031
new approaches to selected topics, book 7−95770
non-abelian path integrals and generalised quantum mechanics in the external field of the 't Hooft-Polyakov monopole 7−89034
non-classical struct. of vacuum 7−140521
nonAbelian Aharonov-Bohm effect, Feynman pseudo-classical path integrals 7−108294
nonabelian Berry's phase effect accidental degeneracy and ang. momentum 7−134560
noncanonical commutation relations 7−140492
noncanonical harmonic and anharmonic oscillator in high-energy physics 7−102706
nonHermitian operators, localization, and fermion number conservation 7−89021
nonlinear coupled oscillators, classical reson., Fermi reson. and canonical transformations 7−115825
nonlinear optical mixing, higher order susceptibility, comparative anal. 7−90693
nonlinear systems, Weyl correspondence rule, Moyal bracket, symplectic transitive group actions 7−140516
nonlocalism, intuitive form 7−102202
nonnegative distribution function in relativistic quantum mechanics 7−67079
nonorthogonal states, differentiation 7−140522
nonrelativistic many body theory, charges and symm. breaking without locality, review 7−128741
nonrelativistic scattering theory, global and Eisenbud-Wigner time delay 7−108276
nonrelativistic Schrodinger eqn., bound state and Faddeev problems, spline expansion technique 7−128364
nonself-adjoint general matrix eigenvalue problem 7−80467
norm ideals, several inequalities 7−108272
numerical methods for quantum many body theory 7−115845
nutation caused by a change in relaxation rate 7−140540
objective interpretations of quantum mechanics and the possibility of a deterministic limit 7−102198
octic oscillator, ground state energy, maximum entropy summation of divergent perturbation series 7−80471
one-body density matrix, time evolution, comparison of TDHF and ATDHF approximations *(Spanish)* 7−73012
orthodox interpretation acceptance *(Spanish)* 7−140542
parameter identification in quantum mech., filtering theory appl. 7−140504
parameter identification using stochastic mechanics, filtering theory appl. 7−140503
Partial *-algebras of closed operators and commutants, bicommutants and commutants 7−95374
partial *-algebras of closed operators and commutants, general structure 7−95373
particle beams, longitudinal coherence lengths meas., coherent wave-packet structure 7−134569
particle Brownian motion in periodic pot., perturbation expansion calcs. 7−108402
particle capture in slowly varying periodic pot., asymptotic theory 7−102216
particle ensemble incident on ID finite-range potential, statistical parameters, pure states 7−108288
particle ensemble incident on ID finite-range potential, statistical parameters, localized states 7−108289
particle in a square well with a δ-function perturbation 7−80238
particle in fermionic environment, quantum dynamics 7−102298
particle in infinite square well pot., quantum chaos, resonance overlap 7−140552
particle in magnetic field, removing ambiguities 7−102670
particle in random pot., multifractal wave fn. at localization threshold 7−134701
particle motion in Coulomb plus Aharonov-Bohm potential 7−140537
particle motion in elliptical boxes, semiclassical study 7−80476
particle physics concepts, basic theories, book 7−108061
particle quantum mechanical motion, classical trajectory, Ehrenfest theorem 7−134392
path integral on Poincare upper half plane and Liouville quantum mechanics 7−140526
path-integral formulation of quantum mechanics, classical limit in density matrix terms 7−80231
Paul Dirac, a book of tributes 7−66846
periodically perturbed rotor, quantum dynamics, localization phenomena 7−140549
periodically pulsed system, quantum chaos, underlying integrability study 7−108306
perturbation theory to higher order, 1/n expansion 7−95409
phase change during a cyclic quantum evolution 7−80510
phase shifts and bound states in one-dimensional problems 7−66877
phase space formulation and Schrodinger mechanics 7−108311
physical constants theory *(Rumanian)* 7−81089
physical continuum modelling 7−89009
physical systems, level density, Lanczos-type Hamiltonians 7−120867
Pitovsky model and complementarity 7−80498
point group symmetry adaptation in Clifford algebra unitary group approach 7−108281
polygonal box, ground-state energy of particle, n^{-1} expansion, first correction 7−140513
positive operator valued measures, definition of product 7−73017
potential barrier, transfer matrix and transmission coeff. calc., perturbative anal. 7−128336
potential scattering, /1/f/noise, Handel's quantum theory objections 7−128351
preparation-measurement physical expts. and computation 7−95392
primordial black hole, wave function in $S^1 \times S^2$ topology 7−73109
probability theory and quantum mechanics, sum of two bell-shaped curves can be sinusoidal 7−115836
prolate and oblate potentials, phase-space organisations, classical, semiclassical and quantum results 7−140986
proposition calculus in quantum mechanics *(French)* 7−95385
Ps_2 molecule, s state four body (or quasi-four-body) molecule existence, quantum mechanical treatment 7−135839

quantum theory continued
pure states, time evolution, Hilbert space representation, information topology 7−120841
Q-model in high energy physics 7−128325
quantisation, manifolds, topology, localisation, configuration spaces, imprimitivity, Borel kinematics 7−140486
quantum and classical mechanical systems, transition point, deterministically defined 7−80511
quantum chaos, modelling using Rieman's zeta function 7−128358
quantum dynamical systems in condensed medium and strong external field, kinetic equations 7−73050
quantum dynamics, apparent randomness 7−128352
quantum dynamics, Monte Carlo theory 7−120849
quantum dynamics in fermionic environment, influence functional anal. 7−108296
quantum logics and Hilbert space, minimal supports 7−120842
quantum mechanical noise in interferometer, intrinsic versus meas. uncertainties, grav. waves 7−115891
quantum mechanical scattering, mathematical theory review 7−140485
quantum mechanical time evolution for Coulomb potentials 7−80461
quantum mechanics, degeneracy removal 7−120743
quantum potential, on-off switching and fringe visibility change in interference expts. 7−67051
quantum system weakly coupled to heat bath, equilib. path-integral formalism 7−80501
quantum thermodynamic of nonequilibrium, Onsager reciprocity and dispersion-dissipation relations 7−89175
quantum unstable systems, short-time behaviour 7−80516
quartic potential, energy eigenvalues, chaotic and fluctuation props. 7−140546
quasi *-algebra valued quantized fields 7−73058
quasiclassical energy levels, covariance and symmetry props. 7−120863
quaternion fields, Fock representation and quantum mechanics 7−95760
quaternion quantum mechanical treatment of an electron in a magnetic field 7−120732
Rabi oscills. under quasiperiodic perturbation, nonchaotic motion 7−73221
radiationally damped harmonic oscillator, coherent states 7−128323
real measurements, domain of meas. and range of apparatus 7−115837
real quantum cybernetics 7−89033
realism, compatibility with quantum mech. 7−128320
rearrangement collisions in the presence of a laser field 7−141652
relativistic dynamics for spin-0 and spin 1/2 particles 7−73046
relativistic pair equation, and related fundamental problems 7−120872
relativistic quantum mechanical system, bound state, Lorentz contraction 7−108228
relativistic quantum mechanics, spectral theory for unitary operators on a quaternionic Hilbert space 7−134559
relativistic quantum mechanics, trajectories and causal phase-space approach 7−115821
relativistic quantum systems, Einstein causality violation 7−108307
relativistic quantum theory, nonperturbative methods for square root kinetic energy operators 7−80468
relativistic waves in five dimensions, Klein (1926) paper 7−73124
resonant tori, Maslov indices 7−80509
rotation operators in quantum mechanics 7−140483
rotor, algebraic realisation in terms of SU(3)→SO(3) algebra 7−95398
scale invariant systems, spectral statistics 7−128466
scale-invariant systems, integrable, long-range stiffness of spectral fluctuations 7−80615
scattering, coordinate and momentum space, computer simulation *(Korean)* 7−80491
scattering geometry 7−115841
scattering theory, inverse problem formulation 7−95408
Schrodinger operator with Coulomb pot., zeroth-order trace formula in 3D space 7−134577
Schrodinger operator with long-range potential, analog of Levinson's formula 7−73054
Schrodinger operators, total scatt. cross-sections, semi-classical estimates for resolvents 7−128312
Schwinger action principle, space-time transformation technique 7−128343
second law of thermodynamics, entropy of meas. and erasure, quantum theory 7−108496
semiclassical propagation and time-dependent density functional theory, time-dependent integrals 7−128976
semiclassical quantization rule in SUSY quantum mechanics, exactness 7−89036
shape resonances for class of Schrodinger operators 7−89015
simulated emissions by external sources in the field of quantum-mechanical potentials 7−134554
simultaneity, quantum theory and special relativity *(Danish)* 7−88960
single mode optical fibre laser transmission, dynamics of deterministic chaos 7−136232
Sp(2n), generalized 9-j symbols 7−140512
spectral lines in astrophysics *(French)* 7−88370
spectral properties of a quantum particle in a hierarchical pot. 7−67087
sphere interactions in quantum mechanics, exactly solvable models, Schrodinger Hamiltonians, δ-sphere model 7−140515
spin 1/2 particles, Wigner distribution 7−108286
spin-1/2 particle, spin Cartesian components 7−80508
spin-correlation function of photon pairs emitted in atomic cascade expts., limit of asymmetric local theory 7−89035
squeezed states, explanation and detection *(German)* 7−103785
squeezed vacuum in the detection of macroscopically distinguishable quantum states 7−89030
statistical interpretation and hidden variables problem 7−95389
Stern-Gerlach apparatus theory, wave function for spin-1/2 atom 7−108275
stochastic mechanics, unified treatment of microscopic and macroscopic domains, macroscopic limit 7−120857
stochastic processes on fibre bundles 7−67084
stochastic Wigner-Weisskopf atom, quantum stochastic calculus, dilation scheme, two-level atom. 7−140508
superconducting glasses and other impure supercond. phases, quantum theory calcs. 7−143692
supersymmetric potential calcs., in 1D quantum mechanics 7−67075
supersymmetric quantum mechanics, degree of Nicolai map 7−134558
supersymmetric quantum mechanics, Hamiltonian spectra and inverse scatt. problem 7−134578
quantum theory continued
supersymmetric quantum mechanics, index theorem for arbitrary Lorentz irreps 7−102638
supersymmetric quantum mechanics, spectral shift function and Fredholm determinants 7−80485
supersymmetric quantum mechanics in flat space, stochastic representation of arbitrary fermion sectors 7−73039
supersymmetric systems, bound state potentials at arbitrary energy 7−121391
supersymmetry inspired higher order WKB approx. 7−140528
SUSY quantum mechanics, Witten index, axial anomaly and Krein's spectral shift fn. 7−108287
symmetric double well potential, real time dynamics of quantum mech. particle 7−128340
Symmetric Local hidden variable theories, atomic cascade experimental test, Bell inequalities 7−120868
symmetries and abstract groups, quantum logic 7−115822
tensor products and probability weights, quantum theoretical appl. 7−95391
three particles with δ-function interactions, adiabatic effective pots. 7−120862
three-body problem, modification of hyperspherical coordinates 7−95388
three-body problem, separable expansion techniques 7−128972
three-body problems, scatt. and bound states, continued fractions methods 7−128363
three-body system, internal motions, complex vector bundle theory 7−115829
three-body t-matrix, separable expansion methods 7−128372
time arrow in quantum theory 7−89025
time dependent propagator for a quantum mech. particle, closed form expression 7−73035
time discreteness, EPR probe study 7−128346
time-dependent harmonic oscillators and squeezed states 7−102192
time-dependent quantum model, quasi-energy eigenvalues, localized to extended state transition 7−140550
time-distributed measurements, quantum mechanical formulation 7−89037
time-independent adiabatic switching in quantum mechanics 7−80466
Toda systems and Lax pairs 7−67047
topological and global aspects of quantum theory 7−80521
toroidal coordinates for a three-body problem 7−140519
transition amplitude spaces, connection to alternative quantum theoretical approaches 7−67055
transmission coefficient for waves and particles through long random barriers 7−102217
trilinear commutation relations, coord. space realization 7−115828
Trotter-formula for the time evolution of quasi-periodic quantum system 7−134579
tunnel model, current calcs., nonequilib. formulation and thermal Green's fn. techniques 7−95407
two-body l-wave resonance, truncated Gamow fns. and exponential decay law 7−73015
two-level system, long-term response to applied elec. fields 7−89012
two-level system, multimode electric field appl. effect 7−102183
two-level system, noninteracting-blip approx. 7−80512
two-level system, quasi-energies and wave fns., Mathiew eqn., operator method soln. *(Swedish)* 7−120846
two-level system coupled to boson mode, ground state struct. and prop. 7−95399
two-mode laser, nonreson., with coupled transitions, quantum theory 7−122906
two-state atom near partially reflecting walls, quantum theory 7−120865
two-state system kicked quasiperiodically by external force, quantum chaos 7−67074
uncertainty relation for charged particle in constant mag. field 7−80265
Unruh effect and reducibility of the representation of the commutation relations 7−73049
unsharp particle-wave duality in a photon split-beam experiment 7−134552
vacuum polarisation by Coulomb field and strong mag. field, Uehling's correction 7−96513
van der Waals molecules, fine-struct. electronic predissoc. quantum-mechanical model 7−110039
variational procedure for eigenvalues 7−108295
visuality in quantum theory 7−140534
wave functions, optimisation of parameterised perturbative approx. 7−120855
Wigner's function, new derivation 7−89019
Wigner oscillators, diamagnetism, mag. moment, mag. susceptibility 7−131985
Wigner-function formulation of finite-state quantum mechanics 7−108265
WKBJ approximation, solns. of diff. eqns. in standard form 7−73027
Zel'dovich effect in quantum mechanics, hadronic atom and mesomolecule appls. 7−89028
B decay, CP nonconservation, quaternionic quantum mechanics anal. 7−108915
D decay, CP nonconservation, quaternionic quantum mechanics anal. 7−108915
e^+e^- annihilation, photon pol., quantum correlations, non-locality and EPR paradox 7−102727
Ag cylindrical films, Aharonov-Bohm effect, weak localisation, magnetoresist. meas. 7−118595
Ar_n clusters, quantum mechanical model 7−103352
Ba^{2+}, $5p^6 \rightarrow 5p^5nl$ (J=1) Rydberg series, photoabsorpt., multichannel quantum-defect theory approach 7−141526
C_{60} cluster, symmetry, quantum chem. calcs. 7−89911
Ca-He, ^1P to ^3P transitions, integral cross sections and alignment effects 7−90358
D atom sticking and inelastic scatt. on metal surfaces, electron-hole pair excitations, quantum effects 7−85923
$D+H_2$, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
Ge_2, complete active space MCSCF and CI calcs., spectroscopic props. 7−96559
H atom, energy levels, perturbation and stochastic geometry 7−134564
H atom, exact treatment of Coulomb systems in Feynman integral formalism and parabolic coordinates *(French)* 7−89027
H atom, phase space theory, Hamiltonian, harmonic oscillator anal. 7−73029
H, excitation-ionisation spectra, Balmer spectrum, EBK-method, quasi-Landau resonances 7−135866

quantum theory continued
H ground state as a zero-point-fluctuation-determined state 7−103377
H, magnetised, highly excited, quantum dynamics 7−141481
$H+H_2(D_2)$, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
$H+He^{2+}$, asymmetric charge exchange in a strong static magnetic field 7−82338
H_2, four body (or quasi four body) molecule existence, quantum mechanical treatment 7−135839
HF+Li, reaction probabilities and cross sections, quantum dynamics, bending corrected rotating nonlin. model 7−113888
Kr_n clusters, quantum mechanical model 7−103352
Li_2 Rydberg states, polarisation labelling spectroscopy, quantum defect 7−74469
N_2, rot.-diffr. scatt. of model corrugated surface, calcs. using close coupling wave packet method 7−68437
N_2O^+, photodissoc. rot. and angular distribs. calc. 7−110037
$O+H_2$, quantum mechanical reaction probabilities calc. 7−138974
OCS, phase space bottlenecks, quantum and classical intramolecular dynamics 7−90312
Xe_n clusters, quantum mechanical model 7−103352
XeI_2, van der Waals mol., quantum mechanical model 7−103352

quantum theory of light *see quantum electrodynamics*

quantum theory of many-body problems *see many-body problems*

quantum well lasers *see semiconductor junction lasers*

quantum wells *see semiconductor junctions; semiconductor superlattices*

quark confinement
Abelian Higgs model, 2D, area law decay for fractionally charged Wilson loops 7−108734
bag formation constraints from the scalar sector 7−108869
bag formation in the presence of vector mesons 7−81109
bag model of hadron struct., review 7−128862
bag model with broken chiral symm. 7−95861
bag model with harmonic pot., centre of mass separation for Dirac eqn. 7−121454
bag skin effect for Friedberg-Lee model 7−95843
baryon magnetic moment, QD and pion corrections, chiral bag model, anomalous quark moments 7−128894
baryon properties, anal. using chiral bag plus skyrmion hybrid model and generator coord. method 7−89453
baryon resonances, interpretation as bound three-quark states coupled to meson field 7−95764
baryon-baryon interaction potential, hidden colour channel, lattice QCD anal. 7−116131
cavity QCD, interacting many-gluon systems in the MIT bag model 7−121457
charmed mesons in a simple two-step potential model, mass spectra and decay widths investig. 7−73634
charmed particles, decay 7−67585
chiral bag model struct. fns., scaling and Regge behaviour 7−121455
chromomagnetic background field at high temp., effective Lagrangian calc. for pure Yang-Mills theory, obs. of deconfining phase transition 7−67579
color degrees of freedom in nuclear physics 7−73728
colour confinement and the superconvergence relation 7−121428
colour-dielectric model, soliton bags, numerical anal., nucleon props. 7−116137
coloured states in quasiconfinement models 7−73595
compact scalar QED, confined and free charges, order parameters, U(1) lattice Higg's model 7−121418
composite gluons and effective nonabelian gluon dynamics in a unified spinor-isospinor preon field model 7−73582
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
constituent quark mass and confinement size in nuclei 7−121453
Coulomb plus linear potential bound-state problem, Hill determinant anal. 7−80482
covariant gauge QCD, Lagrange density, canonical quantisation formalism 7−121436
current-constituent quark transition, quark-interaction potential anal. 7−135022
deconfinement transition in anisotropic matter, quark-gluon plasma 7−102702
deconfinement transition in SU(3) with heavy dynamical quarks, mean field anal. 7−108850
dia-electric medium, hypothetical model of quark confinement 7−108851
Dirac fermions, covariant shell model with harmonic forces, analytic soln. 7−135051
EMC effect, nucleon confinement conditions, nuclear forces 7−121605
extended objects, local Heisenberg field quantisation, semiclassical approx. 7−134953
extended Skyrmion model from quark flavour dynamics, effective chiral meson Lagrangian 7−121458
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
finite size effects and twisted boundary conditions, glueball correlation 7−89436
finite temperature QCD, lattice Monte Carlo studies, deconfinement 7−108852
flux tubes in SU(2) lattice gauge theory, string tension 7−102615
glueball, 0^{++}, asymptotic scaling of mass and lattice QCD β-fn. 7−95856
glueball calculations with the t expansion, SU(3) lattice gauge theory 7−81108
glueball condensate vacuum, dynamical pions and kaons, time independent/dependent fields, massive quarks 7−128836
glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
glueball mass estimate, gluon bound state waved fns., Bethe-Salpeter eqns., QCD sum rules method 7−135038
glueball masses as a test of the $1/N$ expansion 7−89440
glueballs, structure study and search *(German)* 7−121425
gluon condensate calc., SU(2) lattice gauge theory anal. *(Chinese)* 7−102689
gluon condensate calcs. in QCD IR region 7−135049
gluon confinement model using colour super current, glueball state calcs. 7−140886
gluon exchange corrections in chiral bag model, perturbative QCD calc. 7−128833
gluon fields, second quantisation in harmonic current confinement, glueball candidates 7−121435

quark confinement continued
gluon magnetic mass contrib. to thermodynamic potential QCD plasma 7−140879
gluon plasma in SU(2) Yang Mills theory, confinement static correlation length calcs. 7−95844
gluon polarization anal. from χ_c decay product angular distributions 7−135114
gluon streams, confinement, classical current model 7−81125
gluon structure fn. determ. in $pp\rightarrow\gamma+$away-side jet, $\sqrt{s}=63$ GeV 7−95954
gluons, TASSO expts. with PETRA, direct evidence 7−128839
hadron matter, velocity of sound, confined and deconfined phases, thermodynamical description 7−135056
hadron strong van der Waals forces due to confining potentials 7−89432
hadron-hadron interaction, quark degrees of freedom, potential description, interaction parameters in bag region 7−116193
hadronic quark cluster, colour singlet states, group theoretical representation 7−135024
hadronization model, geometric interpretation 7−140878
heavy baryon isospin multiplets, mass splittings in chiral bag model 7−102682
heavy ion collisions, ultrarelativistic, deconfinement transition in fragmentation region, two-fluid hydrodynamic model anal. 7−102904
heavy $Q\bar{Q}$ production in hadron colliders, polarisation density matrix, W^+W^- prod. 7−95852
heavy quark spectroscopy and decay 7−102685
heavy quark systems, phenomenology 7−102696
heavy quarkonia, prod. from gluons, helicity amplitudes in perturbative QCD 7−135028
heavy quarkonium, phenomenological pot. and decay props. 7−81132
hierarchical chiral symmetries and quark mass matrix 7−67526
hydrodynamic flows in expanding quark-gluon plasmas, head-on nucleus-nucleus collision 7−128854
intermediate energy studies of quark and lepton flavour mixing 7−73561
lattice Abelian Higgs model, mean field anal. of confined, Coulomb and Higgs phases 7−81028
lattice gauge theories, confinement and bound states, stat. mech. methods 7−80983
lattice gauge theory, spin-spin and spin-orbit potential, SU(2) and SU(3) colour groups 7−73602
lattice QCD, chromoflux distrib. in presence of static $q\bar{q}$ pair 7−135026
lattice QCD, glueball masses and string tension 7−116124
lattice QCD, pure gluon deconfinement, latent heat 7−95845
lattice QCD, scaling and universality for string tension 7−73527
lattice regularized quenched QCD, Kogut-Susskind quark condensate calcs. 7−140884
leptonic mass spectrum calculation in rel. BS model 7−102651
light front QCD, stringy confinement of light quarks, condensates, Regge trajectories 7−116125
light meson systems, QCD and quark condensate values 7−89443
light quarks confined to a box, energy levels, SU(N) quantum mech. anal. 7−95847
local colour gauge invariance in naive nonrelativistic quark model 7−121448
low-energy QCD, quantum hadrodynamics, relativistic coupled nucleon-meson field theory 7−81119
low-lying baryonic states, few-body problems in strong interactions 7−67735
Lund model, coherent description 7−67567
massless QCD, infrared singularity and struct. fn. of transverse gluon propagator 7−102691
meson-meson interaction with a flip-flop model for quark confinement 7−128844
MIT bag model wave fn., Peierls-Yoccoz projected, deep inelastic struct. fn. calcs. 7−135055
mixed phase matter, dynamical hadronization transition and hydrodynamical stability 7−95838
multiquark model calcs. of nuclear props. 7−95997
n-jet production, approx. for 6-gluon scatt. amplitude, extension to n-gluons 7−116126
nonAbelian gauge dynamics, slowly moving fermions, gauge invariant potential, gluon exchange 7−128776
nonAbelian lattice gauge theory, string tension, tunneling and deconfinement 7−102607
nonperturbative vacuum props., dynamical chiral symm. breaking and quark mass 7−108860
nontopological soliton bag model, hadron wave fns., first order corrections 7−128857
nuclear binding and quark confinement, colour dielectric model anal. 7−67582
nuclear colour van der Waals interaction 7−128970
nuclear constituents, expt. signatures for quark behaviour 7−67755
nuclear shell model, compatibility with nuclear bag models 7−121640
nucleon octet, magnetic moments in chiral pot. model 7−73650
octet baryons, weak-current form factors, volume-type cloudy bag model 7−81134
octet nucleons, independent quark model in relativistic logarithmic pot. 7−73608
P-matrix methods for quark compound bag model 7−67589
P-wave baryons, MIT bag model, Fiebig-Schwesinger description, mass and excitation energies 7−108867
parton-parton scattering, soft gluon radiation 7−81105
pure SU(2) gauge theory, low lying energies up to 5 glueball masses 7−121396
QCD, dual superconductor model, confinement prediction 7−102688
QCD, nonperturbative confinement, improved treatment of Schoenmaker's eqn. 7−67572
QCD, quark current bosonization 7−95849
QCD, quark zero modes and deconfinement transition 7−95848
QCD, toroidal solutions, models for hadrons and confined gluon rings 7−135034
QCD, vacuum non-perturbative condensate structure, gluon condensation parameter, quasiparticle excited states 7−128842
QCD confinement and CP violation, geometrical symmetry breaking 7−67575
QCD effective chiral Lagrangian and condensates 7−116130
QCD ground state, coherent state representation, gluon condensate in QCD vacuum 7−128838
QCD ground state, colour confinement and essential instability 7−102692
QCD ground state, gluon condensate in SU(2) model, vacuum state upper bound 7−128849

quark confinement continued
QCD on lattice, confinement mechanisms, Kogut-Susskind and Wilson fermion quark vacuum, anal. 7−135025
QCD phase transitions, renormalization group anal. for SU_n, n=2, 3, 4 gauge theory 7−95854
QCD plasma in mean field limit, quark transport eqns., non-equilibrium truncation scheme 7−108858
QCD vacuum, strange $q\bar{q}$ pair condensates, partial chiral symm. restoration 7−135029
QED, thermal props. and confinement in 2+1 dimens. 7−95825
quark and gluon confinement, IR behaviour in gluodynamics 7−108859
quark and gluon propagators in perturbative QCD, infrared asymptotic behaviour 7−128855
quark deconfinement at finite temp., MIT bag model anal. 7−108855
quark propagator, nonperturbative approach in the covariant transverse gauge 7−81127
quark state masses, calc. in chiral bag model 7−140897
quark-gluon degrees of freedom in nuclei 7−73709
quark-gluon plasma, signature and hadronization mechanism 7−135244
quark-gluon plasma, SU(3)-multiplet sources at phase transition, QCD lattice approx., 7−121447
quark-gluon plasma formation in relativistic heavy ion collisions, review *(Polish)* 7−67756
quark-gluon plasma hydrodynamics, ultrarelativistic heavy ion collisions, maximum energy density 7−121430
quark-gluon plasma prod. in heavy ion collisions, particle pol. as signal 7−81428
quarkonia energy levels, potential form influence 7−140887
quarkonia systems, spin-independent and spin-dependent interactions, confining interactions 7−135032
quarkonium spectroscopy with QCD vacuum polarization correction 7−73598
quarks at the ends of open strings, group theory 7−95858
quasiboson approximation for an interacting many-gluon system 7−128832
relativistic bubble dynamics, cosmic inflation and hadronic bags 7−120670
relativistic hydrodynamics and quark-gluon plasma hadronization, shock stability criterion 7−81111
relativistic quarks in 1D periodic struct., band condition, transfer matrix method 7−102704
Roper resonance, colour dielectric model, adapted RPA calcs. 7−81107
scalar and vector confinement in 3q and 6q systems 7−108865
self penguin approach to $\Delta I=1/2$ rule, critique of Shabalin's method 7−81118
semiclassical string-bag model, quark deconfinement, effective static quark-quark colour potential 7−121434
semileptonic weak decays, recoil corrected bag model calcs. 7−108870
six quark states, mass estimates using pairing energy contribution 7−128858
soliton bag model, centre of mass corrections 7−81137
Steiner tree associated with three quarks 7−121451
strange baryons, anal. using Coulomb-like plus exponent-type confinement potential *(Chinese)* 7−95842
strange dibaryons, expt. searches and bag model calcs. 7−67588
strange matter, self-bound quark matter model 7−135238
strange probes of the nucleus, quark confinement and meson exchange 7−121965
strange quark mass and vacuum condensate, SVZ sum rules 7−95851
string tension, spontaneous generation, deconfinement transition, membrane model anal. 7−95846
string theory, GUT, QCD and Ising model appls. 7−108900
strongly coupled quarks in standard model, Yukawa couplings, linear σ model 7−135003
strongly interacting Higgs sector, right-handed charged currents in quark sector, weak K decay 7−134928
structure of a gluon string 7−102723
SU(2) gauge theory, finite temp. phase transition, Monte Carlo renormalisation group study 7−95750
SU(2) lattice gauge theory, gluon condensate calcs. 7−102605
SU(2) lattice gauge theory, vacuum state in 2+1 dimens. 7−128753
SU(3) gluon thermodynamics on Euclidean lattices, transport coeffs., thermal Green's functions method 7−81120
SU(N) gauge theories with fermions, distinguishing confining and deconfining phases 7−81014
SU (2) and SU (3) lattice gauge theory, phase transitions, Wilson action, rel. to continuum confinement 7−108789
SU (2) lattice gauge theory, coupling <1, glueball mass, Monte Carlo variational study 7−140817
symmetry conserving linear chiral soliton model for N and Δ 7−95762
technicolor theories, chiral hierarchies from slowly running couplings, dynamical mass, fermion condensate 7−121445
tensor glueball decay, flavour independence hypothesis 7−73642
topological chiral bags in a baryonic environment 7−128990
transverse gauge field excitation confinement in asymptotically free theories, gluon confinement 7−135031
ultrarelativistic heavy-ion collisions and the quark-gluon plasma 7−121948
ultrarelativistic nuclear collisions, dilepton emission and multiplicity correl., deconfinement phase transition 7−116317
unification of fundamental interactions, conf., Marstrand, Sweden (June 1986) 7−108023
Yang-Mills theory, stochastic quantisation, gauge-fixing parameter dependence, equilibrium limit, gluon-selfenergy 7−121362
$B^0 \rightarrow D^{0*}\gamma$, probe for short-distance QCD corrections 7−128895
B_d^0-$\bar{B}_d^0$ oscillations and t quark mass, ARGUS data and standard theoretical anal. 7−140858
(e,e′), chiral bag model description of nuclear matter, struct. fns. 7−121692
$e^+e^- \rightarrow \tilde{q}q$, quark confinement and hadronization effects, parton model low energy deviation 7−140948
$G \rightarrow \eta\eta(\eta\eta')(\eta'\eta')(K^+K^-)$, glueball decays, anti-selection rule 7−140933
$\tilde{g} \rightarrow$hadrons, production and decay search, $\pi^-N \rightarrow \tilde{g}X$, 350 GeV/c 7−89529
$\gamma N \rightarrow \pi X$, chiral bag model anal. 7−128902
$hh \rightarrow X$, gluon jets and confinement 7−140959
ι(1460) glueball candidate, mixing study in chiral symm. breaking framework 7−81131
ι meson, prod., decay and mixing models, quark-glue coupling 7−135043
$K \rightarrow \pi\pi$, chiral bag model anal. 7−108916
quark confinement continued
$\bar{K}N$ scattering predictions in SU(3)×SU(3) generalisation of cloudy bag model 7−121537
$K^-p \rightarrow \Lambda\gamma$, branching ratios calcs., MIT bag model with chiral symm restoration 7−121537
$K^-p \rightarrow \Sigma^0\gamma$, branching ratios calcs., MIT bag model with chiral symm restoration 7−121537
N_s, strange-quark sea, constraints on nonperturbative componen 7−102700
N electric form factor, core motion effects, bag model anal. 7−108922
n electric polarizability and RMS radius determ. from $^{209}Bi(n,n')$, quark cloudy bag model comparisons 7−121508
N electromagnetic form factors, bag model with Woods-Saxon confining pot. 7−116171
N electromagnetic props., Dirac equation soln. for quarks confined in Woods-Saxon pot. 7−121512
N models, axial vector coupling constant and relativistic quark confinement 7−121456
N resonance current, bag model anal. 7−121450
NN correlations in non-relativistic quark model, six-quark bags, momentum distributions, non-NN components 7−109047
NN interaction, colour nucleon cluster calcs. with one-gluon exchange 7−121438
NN interaction, colour SU(3) gauge invariance, constituent quark model calcs. 7−108866
NN interaction in quark model with quark-antiquark excitations 7−67573
NN spin orbit interaction, two-gluon exchange diagrams contribs 7−121626
$(\bar{p}, X)$, annihilation in light nuclei, quark-gluon plasma droplet, meson spectra 7−141054
p, strange quark content and chiral symmetry breaking, hybrid chiral bag model anal. 7−102640
p binding energy as quarkonium system in the statistical model 7−73612
$pp \rightarrow$dibaryon (2.7 GeV/c^2), $\Delta\sigma_L$ cross section anal., correlation with six quark structure models 7−89515
$\pi N \rightarrow \eta N$, chiral SU(3) cloudy bag model anal., quark structure identification with N(1535), N(1650), N(1440) 7−95938
πN S-wave resonances, cryptoexotic $q^4\bar{q}$ states in compound bag model 7−135149
πN scattering, chiral symmetry, unitarity, chiral quark models, free approx., cloudy bag model 7−135150
$\Psi \rightarrow \gamma\theta(1690)$, glueballs and helicity amplitudes, $(TM1)^2$ and (TE1) perturbative calcs. 7−135100
ψ meson spectroscopy, quark correlation study at Mark III 7−102737
$\bar{q}q$, relativistic model Hamiltonian in two-particle Dirac eqn. 7−135033
$\bar{q}q$ bound state, variational calcs., integral eqn. comparison 7−128366
$\bar{Q}Q$ dielectric confinement, dielectric vacuum model, energy spin dependence 7−128837
$\bar{q}q$ spectra momentum space integral eqns., soln. with confining potentials eigenstate calcs. 7−89439
U(3.105) exotic state, (Λp̄+pions), M-baryonium, colour Casimir factor in string tension 7−73607
$\Upsilon(1^1P_1)$, mass and QCD scale parameter, asymptotic behaviour 7−135044
η(1275), radial excitation mixing 7−108861
ι(1440), radial excitation mixing 7−108861
$^6Li(p,\Delta^{++})^6He$, quark-quark spin-isospin interaction, DWBA anal 7−67844
N_s, deep inelastic scatt. structure function calc., bag model anal 7−116176
PP, ISR energies, gluon scatt. and fragmentation in high p_T interaction 7−73673
π photoproduction from a baryon unitary theory in chiral bag mode 7−121520

quark matter *see nuclear matter*

quark models
see also colour model
ϵ'/ϵ value from lattice calc. of weak Hamiltonian matrix element 7−116105
$|\Delta I| = 1/2$ rule, consequences for ϵ'/ϵ and B and D decays 7−128883
bag model, topological chiral solitons, ω meson role 7−116136
bag model of hadron struct., review 7−128862
bag model with broken chiral symm. 7−95861
bag model with harmonic pot., centre of mass separation for Dirac eqn 7−121454
bag skin effect for Friedberg-Lee model 7−95843
baryogenesis and heavy quarks, nonequilibrium condition 7−80560
baryon magnetic moment, QD and pion corrections, chiral bag model anomalous quark moments 7−128894
baryon magnetic moment using quark effective mass modificatio 7−121507
baryon resonances, interpretation as bound three-quark states coupled t meson field 7−95764
baryon rich hadronic gas, redistribution of strangeness 7−95834
baryon self energies due to pion-quark coupling 7−102680
baryon spectrum, composite particle representation for quark-diquar system 7−116153
baryon structure, effective chiral field theories, Skyrme model 7−81115
baryons, diquark structure, three body calcs. 7−81114
baryons, static props. in SU(3) Skyrme model 7−121429
charmed mesons in a simple two-step potential model, mass spectra ar decay widths investig. 7−73634
charmed particles, decay 7−67585
charmonium radiative decays, relativistic treatment and heavy-qua approximation 7−116178
chiral σ-model with quarks, B=2 configs. 7−108756
chiral bag model struct. fns., scaling and Regge behaviour 7−121455
chiral soliton quark models, non-hedgehog ansatz and ω-meson r 7−140898
conference, 9th Biennial Studies of Nuclear Physics, Aussois, Fran (March 1987) 7−80182
conference on few body physics models and methods, Lisbon, Portu (Oct. 1986) 7−128197
constituent quark mass and confinement size in nuclei 7−121453
constituent quarks in inelastic cross section, average charged multiplici additive quark model 7−135170
Coulomb plus linear potential, induced logarithmic behaviour and s dependence 7−81021
current-constituent quark transition, quark-interaction potential ar 7−135022

uark models continued
deconfinement transition in SU(3) with heavy dynamical quarks, mean field anal. 7−108850
dense quark or fermionic matter at zero temp., fermionic correlations 7−81323
dibaryon isodoublets with S=−3, quark model anal. 7−135045
Dirac fermions, covariant shell model with harmonic forces, analytic soln. 7−135051
Dirac sea effects on finite solitons, mass shift, polarisation effects, Friedberg-Lee appl. 7−108758
electric dipole photoabsorpt sum rules in constituent quark model, nucleon struct. 7−67592
EMC effect, valon model and low-x behaviour 7−81187
equivalent local NN pot. in quark model *(Russian)* 7−140880
exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
extended objects, local Heisenberg field quantisation, semiclassical approx. 7−134953
extended quantum kinematics as an origin of internal symmetries and flavors 7−81053
extended Skyrmion model from quark flavour dynamics, effective chiral meson Lagrangian 7−121458
fermion mass matrix, permutation symmetry S_4, Kobayashi-Maskawa matrix elements 7−108823
few-body systems conf., Tokyo, Japan, Aug. 1986 7−66819
Feynman-x distribution of D mesons produced in hadronic collisions 7−128861
flavour mixing in the presence of a fourth down quark, E_6 superstring model 7−102267
fourth-generation quark masses and Fritzsch mass matrices from Abelian family symmetry 7−102681
Fritzsch-type mass matrices and the Wolfenstein parametrization of quark mixing 7−121452
glueball calculations with the t expansion, SU(3) lattice gauge theory 7−81108
glueball masses as a test of the $1/N$ expansion 7−89440
glueballs, structure study and search *(German)* 7−121425
gluon fields, second quantisation in harmonic current confinement, glueball candidates 7−121435
hadron matter, velocity of sound, confined and deconfined phases, thermodynamical description 7−135056
hadron physics at intermediate energy physics, conf., Folgaria, Italy (Feb. 1986) 7−72727
hadron valence constituents exclusive struct. functions 7−81138
hadron wave functions, quark model 7−73600
hadron-hadron collisions, charged particle mean multiplicities for hard and soft processes, quasinuclear quark model 7−67632
hadron-hadron interaction, quark degrees of freedom, potential description, interaction parameters in bag region 7−116193
hadronic spectrum of the quark plasma 7−121376
hadronization model, geometric interpretation 7−140878
hadronization universality in baryon diffraction dissociation and the relationship to hadron internal structure 7−67568
heavy baryon isospin multiplets, mass splittings in chiral bag model 7−102682
heavy fermions, effective Lagrangean, nonlinear realisation 7−121410
heavy ion collisions, ultrarelativistic, energy flow, additive quark and wounded nucleon models 7−109129
heavy quark spectroscopy and decay 7−102685
heavy quarkonia, binding energy levels *(Chinese)* 7−102698
Hermitian quark mass matrices, systematic anal., Kobayashi-Maskawa mixing 7−128860
hierarchical chiral symmetries and quark mass matrix 7−67526
Kobayashi-Maskawa matrix, renormalisation group anal. 7−102684
large p_T π photoproduction processes, higher-twist contrib. extraction 7−128903
large-N baryons in two flavour Nambu-Jona-Lasinio-type model 7−95840
lattice Abelian Higgs model, mean field anal. of confined, Coulomb and Higgs phases 7−81028
lattice QCD, chiral-symmetry-breaking, phase transitions, fermion flavour and lattice spacing effects 7−108857
LEP/SLC precision measurements, virtual very heavy top effects, virtual corrections 7−140864
low-lying baryonic states, few-body problems in strong interactions 7−67735
majorons and quarks, limits from Γ_Z/Γ_W 7−116135
mass and mixing matrices with nonhermitian basis under S_N symm. 7−81102
mass matrices, flavour mixing quark hierarchical families, Kobayashi-Maskawa matrix, t-quark current mass 7−128859
massive quark matter phase transition, quark potential model anal. 7−141010
MIT bag model wave fn., Peierls-Yoccoz projected, deep inelastic struct. fn. calcs. 7−135055
mixed phase matter, dynamical hadronization transition and hydrodynamical stability 7−95838
model parameter sensitivity to non-rel. hamiltonian hypothesis 7−135054
multiquark model calcs. of nuclear props. 7−95997
nonrelativistic quark model of hadron struct. 7−108864
nontopological soliton bag model, hadron wave fns., first order corrections 7−128857
nuclear spin-isospin excitations, intensity distrib., and valence quark model sum rules 7−121724
nuclear structure, quark effects 7−89539
nucleon, gluon distribution function from muon production of J/ψ and EMC effect *(Chinese)* 7−102677
nucleon compositeness and relativistic phenomena in nuclear physics 7−121757
nucleon form factors in relativistic quark model with chiral symmetry 7−108847
nucleon octet, magnetic moments in chiral pot. model 7−73650
octet baryon mag. moment, quark model with SU(3) term 7−121511
octet nucleons, independent quark model in relativistic logarithmic pot. 7−73608
octet-baryon magnetic moments, SU(3) (flavour)-tensor, degree of freedom, isospin symmetry 7−128892
P-matrix methods for quark compound bag model 7−67589
pion chiral and fluid dynamics, pion field description, Dirac sea quark distrib. fn. 7−128965
pion reactions and scatt., nuclear structure probe 7−121964

quark models continued
pseudoscalar meson form factors, SU(3) breaking mechanism, constituent quark model 7−135121
pseudoscalar mesons, quark mass lower bounds from struct. characts. 7−81128
quark cluster model anal. of hyperon-nucleon and hyperon-hyperon interactions 7−73668
quark mass estimation from pseudoscalar and vector mesons 7−67561
quark mass matrices, special forms, phenomenological constraints 7−95859
quark mass matrices structure 7−67594
quark mixing, radioactive corrections scheme, superstring inspired model 7−80554
quark self-energy due to a quark-pion interaction *(Chinese)* 7−121449
quark-gluon string model, inclusive spectra on nuclear targets, production mechanism sensitivity 7−129050
quarkonium, reduced wave function at the origin, asymptotic expansion 7−67593
quarkonium radiative decay, relativistic effects in Higgs boson prod., nonrelativistic quark model 7−128897
quarks at the ends of open strings, group theory 7−95858
Regge trajectories in the quark model 7−67569
relativistic constituent quark model, distribution amplitude 7−95839
relativistic hydrodynamics and quark-gluon plasma hadronization, shock stability criterion 7−81111
relativistic quark-diquark model, hadron spectroscopy 7−73594
relativistic quarks in 1D periodic struct., band condition, transfer matrix method 7−102704
relativistic three-quark system in light-front formalism 7−135017
repulsive core between fermion clusters, relative distance ambiguity, effective potential 7−135058
RMS charge radii systematics, values for quark core, Coulomb displacement values 7−116245
Roper resonance in naive quark model with monopolar collective excitation 7−121775
scalar and vector confinement in 3q and 6q systems 7−108865
semileptonic neutrino scatt. experiment analysis, MS and on-shell renormalisation schemes 7−95889
semileptonic weak decays, recoil corrected bag model calcs. 7−108870
six quark states, mass estimates using pairing energy contribution 7−128858
Skyrme model, effective Lagrangian field theory of QCD 7−73591
Skyrme-type quark model, g_A value using chiral $SU_2 \times SU_2$ symmetry, skyrmions 7−116132
soliton bag model, centre of mass corrections 7−81137
spin-orbit coupling in the string model, meson spectrum 7−67609
spontaneous pair creation, flavour dependence 7−81113
standard model, quark family mixing and reduction of couplings 7−128799
standard six-quark model, $|\varepsilon'/\varepsilon|$ implications, K_L-K_S mass difference, CP-nonconservation 7−67538
strange condensate realignment in relativistic heavy ion collisions 7−116316
strange dibaryons, expt. searches and bag model calcs. 7−67588
strange matter, self-bound quark matter model 7−135238
string theory on Z-orbifold, Yukawa couplings and quark-lepton mass matrices 7−67601
$SU(2)_L \times U(1)_Y \times SU(n)_{family}$, Cabibbo angle and meson masses, charge-commutation-rel. approach 7−128819
SU(5) model, CP invariance breakdown, Fritzsch matrices, Kobayashi-Maskawa angles calculation 7−116112
SU(6) broken quark-diquark model, baryon masses and mag. moments, charmed baryon masses 7−81133
superheavy quarkonium production and decays, Higgs-boson signal 7−102679
symmetry conserving linear chiral soliton model for N and Δ 7−95762
technicolor composite standard model of quarks 7−140900
top quark mass, Kobayashi-Moskawa matrix elements 7−140892
ultra-heavy quarks in rare decays 7−102731
ultrarelativistic heavy-ion collisions and the quark-gluon plasma 7−121948
unequal mass quarkonium spectra in a consistent quark model 7−89452
vector and pseudoscalar meson nonet masses, quark loop model framework 7−95860
vector and pseudoscalar mesons, mass formula in constituent quark model 7−81130
B decays, four-generation effects and quark mixing parametrization 7−135104
$B \to De\bar{\nu}$, weak mixing angles from semileptonic decays in quark model, comment 7−81171
$B \to K\mu^+\mu^-$, branching ratio and light Higgs, three- and four-generation models 7−140927
b-quark interaction model, superstring alternative 7−116119
$(b\bar{b})$, non-null probability of quark tunnelling 7−128831
$(c\bar{c})$, non-null probability of quark tunnelling 7−128831
$D^0 \to K^0\bar{K}^0$, weak decay mechanism, hadronic final-state interactions, branching ratio quark diagrams 7−135106
$D_s^+ \to \rho^0\pi^+$, decay search, evidence for quark annihilation 7−135108
(e,e'), chiral bag model description of nuclear matter, struct. fns. 7−121692
(e,e'), meson and quark degrees of freedom 7−121814
ed→ed, microscopic meson quark cluster model 7−135135
ed→X, deep inelastic scatt., light front solution 7−67626
e^+e^- annihilation, ^{280} GeV, comparison with μp final state hadrons, Lund model 7−135143
e^+e^- annihilation, charged particle mean multiplicities for hard and soft processes, quasinuclear quark model 7−67632
e^+e^- interactions, strong and electroweak props. of quarks 7−135012
$e^+e^- \to \mu^+\mu^-$, extra Z's from E_6, exotic physics in heavy quarkonium decays 7−128818
$e^+e^- \to \nu_e\bar{\nu}_e H^0$, 0.1-4 TeV, Higgs-boson prod., heavy-quark effect, bremsstrahlung effect, superheavy quarks 7−128875
eN→hX, nuclear effects, quark-cluster model, production ratios, opposite and same sign hadrons 7−128899
$e^-p \to \Delta^0\nu_e$, Δ (1232) prod. via charge-changing weak currents, form factors, quark wave function 7−81213
$e^+p \to \Delta^{++}\bar{\nu}_e$, Δ (1232) prod. via charge-changing weak currents, form factors, quark wave function 7−81213
γ decays, momentum dependent effects 7−135098
γ scattering, narrow dibaryon formation 7−121791
γN→charm, total cross-sections, photon-gluon fusion model 7−81205

quark models continued
$\gamma N \rightarrow \Delta(1232)$, E2/M1 ratio in relativistic three quark model 7−135141
$\gamma_v N \rightarrow \Delta$, longit. and scalar multipole calcs., nonrelativistic quark shell model anal., colour magnetism 7−73658
$K \rightarrow 3\pi$, CP violation in Kobayashi-Maskawa model 7−128882
$K \rightarrow \pi\pi$, chiral bag model anal. 7−108916
$K \rightarrow \pi\pi$, $\Delta I=1/2$ rule, effective Hamiltonian approach, long distance approach to penguin diagrams 7−121495
K structure function, rescaling, valon model anal. 7−116172
$K^0 - \bar{K}^0$, matrix element calculation, chiral quark-loop model, B-factor, K^+ decay amplitude 7−116167
$K^+ \rightarrow \pi^+\pi^0\gamma$, six-quark Kobayashi-Maskawa model of CP violation 7−135110
$K^\pm \rightarrow \pi^\pm\gamma\gamma$, meson self-energy effects in chiral theory 7−108914
KN, total cross-sections, law of growth, sea constituents, valence quarks 7−116192
$\bar{K}N$ scattering predictions in SU(3)×SU(3) generalisation of cloudy bag model 7−121537
$Kp \rightarrow X$, single-particle spectra in soft hadron-hadron interactions and two-component cascade model 7−102780
$K^-p \rightarrow \Lambda\gamma$, branching ratios calcs., MIT bag model with chiral symm. restoration 7−121537
$K^-p \rightarrow \Sigma\gamma$, branching ratios calcs., MIT bag model with chiral symm. restoration 7−121537
K^+p, 32 GeV, one/two particle, transverse momentum distrib., azimuthal correlations, Lund quark model 7−128925
Λ P-wave spin-orbit mass splitting, quark potential model, meson spectroscopy, nuclear forces 7−109048
Λ_b, Σ_b and Σ_b^* beautiful baryons, mass range from pot. models 7−73635
ΛN interaction, nonrelativistic quark cluster model with gluon and meson exchange 7−121536
μp deep inelastic scatt., pp, $\bar{p}p$ and $\bar{p}\bar{p}$ prod. 280 GeV, Lund fragmentation model predictions 7−135139
μp interactions, 280 GeV, comparison with e^+e^- annihilation final state hadrons, Lund model 7−135143
n electric polarizability and RMS radius determ. from $^{209}Bi(n,n')$, quark cloudy bag model comparisons 7−121508
N electromagnetic form factors, bag model with Woods-Saxon confining pot. 7−116171
N electromagnetic properties, pionic corrections, light cone wave fn., valence quark config. 7−135120
N electromagnetic props., Dirac equation soln. for quarks confined in Woods-Saxon pot. 7−121512
NN, total cross-sections, law of growth, sea constituents, valence quarks 7−116192
NN correlations in non-relativistic quark model, six-quark bags, momentum distributions, non-NN components 7−109047
NN interaction, colour SU(3) gauge invariance, constituent quark model calcs. 7−108866
NN interaction in quark model with quark-antiquark excitations 7−67573
NN interactions, quark model description with flavour SU(6) wave functions 7−67577
NN processes, six-quark basis states from parity eigenfunctions 7−128969
NN system, quantum numbers of six-quark states in nuclei 7−81316
$\nu N \rightarrow \mu\mu X$, dimuon prod., nucleon strange quark content 7−73640
p, strange quark content and chiral symmetry breaking,, quark model anal. 7−102640
p binding energy as quarkonium system in the statistical model 7−73612
pN, 70 GeV, high p_T hadron production, formation lengths, parton absorption cross sections 7−116206
pN in nuclei, subthreshold K^+ prod. on multiquark configs., coloured string dynamics 7−67647
$pN \rightarrow X$, 400 GeV/c, large transverse energy prod., wounded nucleon and additive quark model interpretation 7−135155
$\bar{p}p$, SPS energies, extended gauge symmetry as a possible source of exotic events 7−67674
$\bar{p}p$ (pp), higher twist subprocess testing, contribs. to cross sections 7−128910
$pp \rightarrow$hadrons+X, 360 GeV/c, p_T distribs., quark-diquark fragmentation model anal. 7−140965
pp($\bar{p}p$) elastic scatt., high energy, nucleon valence core model anal. 7−108937
$\bar{p}p(pp) \rightarrow$ vector mesons, fusion recombination model anal. 7−135167
pp($\bar{p}p$)→X, four-dimens., hadron jets, multiple particle prod., relativistically invariant approach 7−116203
$\bar{p}p \rightarrow X$, annihilation mechanisms in quark models 7−67669
$\bar{p}p \rightarrow X$, ratio of baryon to meson in high energy hadronic reaction *(Chinese)* 7−102772
$\bar{p}p \rightarrow X$, semi-inclusive p_T distrib., two-temperature model anal. 7−108947
$pp \rightarrow X$, single-particle spectra in soft hadron-hadron interactions and two-component cascade model 7−102780
$\bar{p}p \rightarrow y\bar{y}$, hyperon-antihyperon transition pot. in quark model 7−128913
πN, total cross-sections, law of growth, sea constituents, valence quarks 7−116192
πN S-wave resonances, cryptoexotic $q^4\bar{q}$ states in compound bag model 7−135149
πN scattering, chiral symmetry, unitarity, chiral quark models, free approx., cloudy bag model 7−135150
$\pi p \rightarrow X$, single-particle spectra in soft hadron-hadron interactions and two-component cascade model 7−102780
$(\pi^+\pi^-)$ atom, binding energy, wave function and lifetime from virton-quark model 7−68476
ψ meson spectroscopy, quark correlation study at Mark III 7−102737
$\bar{q}q$ bound states, full and reduced Salpeter eqn. 7−135050
$\bar{q}q$ potential and spin-spin interaction 7−121426
$qq\bar{q}$ model with charm and colour for inclusive processes, sum rule cross section predictions 7−116116
$qq\bar{q}\bar{q}$ candidate states, empirical basis 7−81110
$Qqqqq$, possibility of stable multiquark baryons, chromomagnetic interaction 7−135041
ΣiN interaction, nonrelativistic quark cluster model with gluon and meson exchange 7−121536
$\bar{\Xi}$ abundance in quark-gluon plasma, $\bar{\Lambda}$ longitudinal polarisation obs. 7−95835
$Z^0 \rightarrow P^0P^+P^-$, technion production, Wess-Zumino type effective action 7−140937
η(1275), radial excitation mixing 7−108861
^2H, radial excitations and bound state wave fn., RGM and nonrelativistic quark model calcs. 7−121591
^2H(e, e), quark cluster effects on the electromagnetic struct. fns. 7−81374
^3H, charge form factor, multiquark compound states 7−109057

quark models continued
$^4He(\alpha, X)$, ultrarelativistic, energy flow, additive quark and wounded nucleon models 7−109129
$^4He(\alpha,\alpha)$, cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
$^4He(p,p)$, cross sections from quark model for nucleus-nucleus collisions and Glauber theory 7−81414
ι(1440), radial excitation mixing 7−108861
$^6Li(p,\Delta^{++})^6He$, quark-quark spin-isospin interaction, DWBA anal. 7−67844
NN interactions short-range part, equivalent local potentials, energy and channel mixing dependence, quark model 7−135053
π-q interaction, perturbative treatment, variational approach to chiral quark models 7−89454
$\pi^- d \rightarrow \pi^- d$, 1.75-3.1 GeV/c, backward scatt., differential cross section 7−96114
$qq\bar{q}\bar{q}$ states, masses in Beth-Salpeter model 7−95723
$SN \rightarrow SN^*$, cross sections for neutral and charged currents, quark model calcs. 7−140925
X(1420), exotic quark-gluon hybrid obs. in γγ scatt. and Ψ decay 7−81265

quark-parton model *see parton model; quark models*

quarks
see also quark confinement; quark models
baryon magnetic moment, QD and pion corrections, chiral bag model anomalous quark moments 7−128894
baryon self energies due to pion-quark coupling 7−102680
charm decays, theoretical description 7−102787
Chiral lagrangians, predictive power; renormalisation effects, quark and baryon loop duality 7−134976
cosmological quark-hadron transition, effects of neutrino flow dominance 7−101960
dynamic mass generation, gauge boson mass, fermion mass, Abelian vector, quarks, perturbation calcs. 7−140916
dynamical quark mass, gauge independence, supersymmetric QCD 7−95833
dynamical quark mass, gauge independence 7−140891
E_6 superstring model with exotic quarks, CP violation 7−73577
E_6 superstring models, lepton-number nonconservation, lepton-fermion quark-fermion mixing 7−121401
electric dipole moment and induced θ term, Kobayashi-Maskawa model 7−95908
electroweak interaction model with SU(2)×SU(2)×U(1) symm., quark and lepton masses 7−102653
exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
flavour problem, role of superstrings in resolution 7−95820
form factor nonleading IR behaviour, Wilson loops 7−116084
four quark condensate and L=1 mesons in QCD sum rules 7−67580
fourth-generation quark masses and Fritzsch mass matrices from Abelian family symmetry 7−102681
fractionally charged particle search in matter, technique, results 7−116040
Fritzsch-type mass matrices and the Wolfenstein parametrization of quark mixing 7−121452
GUTs, U(1) generation symmetry, quark, lepton and neutrino masses and mixings, mirror particles 7−140851
heavy quark decay, numerical results for QCD corrections 7−135052
heavy quark fragmentation studies at PETRA 7−102686
heavy quark lifetimes, PEP study 7−102648
heavy quarks, effects on weak-interaction parameters, two-loop corrections 7−67542
Hermitian quark mass matrices, systematic anal., Kobayashi-Maskawa mixing 7−128860
hierarchical mass spectrum and flavour mixing 7−95785
intermediate energy studies of quark and lepton flavour mixing 7−73561
lattice QCD, topological excitation, U(1) problem, quark and meson propagators, Atiyah-Singer index 7−121444
lattice QCD with internal fermion loops, quark and hadron masses, valence and sea quarks 7−135037
light quark mass ratios from $\eta \rightarrow 3\pi^0$ and $\Psi' \rightarrow \Psi\pi^0$ decays 7−108913
light quarks confined to a box, energy levels, SU(N) quantum mech. anal. 7−95847
linear plus Coulomb pot., meson masses and classification schemes, QCD calcs. 7−89446
majorons and quarks, limits from Γ_Z/Γ_W 7−116135
mass bounds from struct. characts. of pseudoscalar mesons 7−81128
mass determination from pseudoscalar two-point fns. 7−89443
mass estimation from pseudoscalar and vector mesons 7−67561
mass matrices, flavour mixing quark hierarchical families, Kobayashi-Maskawa matrix, t-quark current mass 7−128859
mass matrices structure 7−67594
mass matrix, general form 7−116118
mass predictions in nonperturbative grant unification 7−95812
masses, see-saw mechanism, SU(2)×SU(2)×U(1) electroweak model 7−135002
masses and angles, standard model anal. 7−102665
mixing phenomena, charm and beauty decays and CP violations 7−121398
particle physics concepts, basic theories, book 7−108061
preon models, chiral, with SU(N) metacolour, SU(5), SO(10) quark-lepton predictions 7−108871
propagator calcs. on large lattices, algorithms 7−88949
QCD, diffractive dissociation on nuclei, leading log approx., wave fn. penetration, dissociation cross section 7−128856
QCD, dynamical symmetry breaking, quark masses, decay const., renormalisation group corrections, meson masses 7−135039
QCD, light quark masses from local duality, chiral Lagrangian realization 7−67571
QCD, toroidal solutions, models for hadrons and confined gluon rings 7−135034
QCD evolution equations, quark mass effects, heavy quark distribution functions 7−67586
quark family mixing and reduction of couplings 7−128799
quark masses and hierarchies, electroweak symmetry breaking, SU(7)×SU(7) chiral preon model 7−95815
quark self-energy due to a quark-pion interaction *(Chinese)* 7−121449
quark-lepton mass matrices in superstring inspired models, radiative corrections 7−95794

quarks continued
quarkonium physics, new leptons and quarks, exotic particles form LEP 200 expts. 7−140952
standard electroweak model, quark mixing matrix measurables as invariant fns. of mass matrices 7−73571
strange quark mass and vacuum condensate, SVZ sum rules 7−95851
SU(2) average plaquette energy, effect of virtual quark loops 7−116121
superstring spectroscopy, dynamics and particle internal struct. 7−102724
top and Higgs mass from cancellation conditions 7−73584
top quark, ultra-heavy, ansatz for mass 7−121443
top quark mass, Kobayashi-Moskawa matrix elements 7−140892
top quark mass, R-parity breaking in minimal supergravity 7−89099
valence quark radius calcs. from pp, 360 GeV/c and LUND model 7−67659
weak mixing angle anal. for three or four quark generations 7−81266
b→5γ, four-generation model, QCD corrections, branching ratios, top-quark mass, B→K*γ appl. 7−135131
B→K*γ, squark and gluino mass constraints, spontaneously broken minimal supergravity 7−135103
b-lifetime measurement, systematics 7−135788
e^+e^- annihilation, ^{280} GeV, comparison with μp final state hadrons, Lund model 7−135143
e^+e^-→bb, 29 GeV, lifetime of hadrons containing b-quark 7−140949
ep→Eh+X, heavy E_6 fermions prod., $SU(2)_I$ gauge group 7−135138
g and q mass limits from UA1 expts. 7−102781
μp interactions, 280 GeV, comparison with e^+e^- annihilation final state hadrons, Lund model 7−135143
p̄p, heavy quark prod. in order α_s^3, one loop corrections, cross sections on partonic level 7−95957
p̄p→t̄t, heavy top production, prod. cross section and decays, W boson pair prod. 7−140963
q̃→qZ̃, qW̃, qg̃, gluino detection at hadron supercolliders 7−116202
q_t mass upper bound, from SU(3)×SU(2)×U(1) N=1 supergravity model 7−128805
q_t mass upper bound, minimal SU(5) model 7−128806
t quark mass and B_d^0-$\bar{B}_d^0$ oscillations, ARGUS data and standard theoretical anal. 7−140858
t quark mass bound from B_d-$\bar{B}_d$ mixing data and standard model 7−140857
t quark mass determ. from p̄p→t̄tX in hadron colliders 7−135165
t quark mass estimates from B_d^0-$\bar{B}_d^0$ mixing meas. 7−135007
t-quark mass limits in p̄p→W, Z, standard model comparisons 7−95947
$\tilde{\tau}_1$, top squark prod. and decay at e^+e^- colliders 7−128905
T→γX, search for light gluinos 7−73643
N, deep inelastic scatt. structure function calc., bag model anal., role of spectator quarks 7−116176
(^{16}O,X), 4.5 GeV/c/N, anomalon and fractional charge fragment search 7−67872
t→b decay rate, four generation SU(2)×U(1) model 7−140856

quartz
α-form, isotopic species, IR and Raman obs. 7−119000
α-phase, E_i centre and O vacancy charge states, MINDO calcs. in cluster simulation 7−105478
α-phase, electrogyration and electro-optical coeffs., simultaneous meas., HAUP method 7−125699
α-phase, electron struct., CNDO SCF quantum. chemical calcs. 7−70185
α-phase, electronic struct., periodic HF calc. 7−105393
acoustic phonon lifetime calcs. 7−69841
alpha phase, vibr. modes, high press. Raman scatt. study 7−111811
amethyst, Brazil twins, X-ray study 7−124286
balanced adsorption quartz hygrometer 7−80806
ceramics, heat treatment, thermal and mech. props. 7−78077
chiral structures study, optical isomers interaction energy and discrimination 7−98056
crystal, naturally shocked, Raman microprobe spectra 7−70821
crystal, positron annihilation, Doppler broadening-ang. distrib. correl. obs. 7−106297
crystal microbalance, absolute laser photodeposition rate meas. 7−119160
crystal plates, high freq. vibrations, two-dimensional theory 7−70710
crystal pressure sensor using optical fibre and frustrated-total-internal-reflection readout technique 7−123236
crystal resonator, Au-plated, ^{4}He film wetting 7−91914
crystal thin-film thickness monitor and growth rate meter 7−67278
crystalline, optical absorpt. and luminesc. centres, struct. 7−144130
crystals, induced growth striations, X-ray plane wave topographs 7−83804
discommensuration lattice, formation kinetics 7−69900
discommensuration lattice, struct., defects, reconstruction process 7−111860
dissolution kinetics in HF-HCl mixtures 7−143018
dye coverages on quartz substrates, conc. depend. orientation studied by SHG 7−124693
electrodiffusion of ions in α-quartz 7−69975
EPR imaging, longit. relax., T_1 selectivity, inversion-recovery 3-pulse sequence technique 7−74686
fibre optic temp. sensor 7−141999
fused, intrinsic optical breakdown using laser beams 7−76203
fused quartz US velocity meas., temp. coeff. determ. near room temp. 7−142133
glass, microdefects, rel. to stimulated Raman scatt. of optical fibres *(Japanese)* 7−132287
glass ceramic with unidirectional heating, state transform. temp. 7−137597
glass joints made by optical contact, stress state, design and service factors effect on strength 7−75173
glasses excited by light of 200 to 800 nm wavelength, thermoluminesc. 7−138522
heat capacities, 340-1000 K, revised values for thermodynamic props. 7−124543
heliostats and parabolic concentrators, performance of transparent fused quartz and 96% silica glass 7−144793
incommensurate phase, high voltage electron microscopy obs. *(Japanese)* 7−117905
incommensurate phase, low freq. modes, Raman and Brillouin obs. 7−70819
incommensurate phase and α-β transition, low freq. light scatt. obs. *(Japanese)* 7−119014
incommensurate transitions 7−124493
ion implanted with N, O, IR reflection props. 7−138440
IR spectra, including weak bands 7−72014

quartz continued
monocrystal, double modulation of X-rays by surface acoustic waves 7−138414
monocrystal, synchrotron radiation modulation by acoustical oscillations 7−138417
monocrystal, X-ray diffraction, controlled pumping by piezooscillations 7−138385
monocrystal, X-ray diffraction by surface acoustic waves 7−138415
monocrystalline surfaces, roughness characterisation 7−84469
Mossbauer radiation monochromatization by coherent US oscillations 7−138359
multimode fibres, stimulated Raman scattering components, influence of stimulated Brillouin scattering 7−130369
neutron diffraction, acoustic oscillation effects 7−137476
optical dating of archaeological mineral samples using an Ar ion laser 7−87960
optical fiber preform collapse process, identification 7−90807
optical fibres, thermochromism in luminous and solar radiation transmission 7−117323
optical properties, artificial dielectric films on crystalline quartz 7−125839
optical strength at 248 and 193 nm 7−69756
petrofabric analysis, correction and verification of spherical electron channelling pattern map 7−79378
photoluminescence, time-resolved 7−70900
piezoelectric textures of quartz bearing rocks, rel. to stress state 7−133664
polymorphic α-β transform. under neutron irrad., spectral studies 7−104847
quartz: Al(Li)(Si), cryst., optical absorpt. and luminesc. centres, struct. 7−144130
quartz: Ge, bound small-polaron optical absorption 7−106225
quartz:Ge cryst. resonators, radiation effects, anelastic loss spectrum 7−104833
α-quartz, struct., props., energy, crystal chemical modelling 7−83836
refractive index effects produced by ion implantation 7−92632
refractive index studies of quartz 7−106121
relaxation ultrasonic attenuation, two-level systems in neutron irradiated quartz, influence of heat treatment 7−84143
rocks, rough surfaces under normal stress, contact area growth 7−120011
SAW quartz cryst. cuts with low stress and temp. sensitivity, theoretical study 7−90868
sensor of film thickness, sensitivity 7−102399
shell on fibre-optical waveguide, removal by HF, effect on props. *(Russian)* 7−117333
shocked quartz in Cretaceous-Tertiary boundary clays, evidence for global distrib. 7−120021
single cryst., relaxation function and dielec. const. 7−113075
single crystal, surface props. rel. to chemico-mechanical polishing 7−132774
single crystals, synthetic and natural, cleavage 7−142903
single-mode fibres, elliptically polarised light waves 7−117334
solubility in water, enhancement due to complexing by organic compounds 7−87622
struct. and chemical changes, effects of mechanical activation 7−86195
surface, aqueous wetting films on quartz, transition region with adjacent meniscus 7−105184
surface, collisions with rovibrationally excited fluoromethane, surface light-induced drift 7−122674
surface, time of flight spectroscopy of positronium emission 7−99988
surface, virus particle adsorption, spatial distrib. and long-range interactions 7−139185
surface crimping mechanism under laser irrad. 7−131173
surface polariton dispersion determ., effective refractive index meas., interference method 7−85564
surface wave reflection by arrays of reflecting grooves, variational anal. *(Japanese)* 7−117371
surface wave slowness curve meas. using acoustic microscope 7−123394
surface with adsorbed coumarin 504, vibrational spectroscopy by infrared-visible sum frequency generation 7−70785
suspensions, in univalent-univalent electrolyte solns., elec. cond. 7−78554
synthetic, ultrasonic characterization of elastic and piezoelectric props. 7−131244
synthetic, vac. UV radiation induced defects, optical adsorpt., photoluminesc. and thermoluminesc. meas. 7−119043
synthetic cryst., phonon viscosity meas., acoustic attenuation surfaces determ. 7−69833
thermoluminescence, defect dynamics, predose effect 7−113294
thermoluminescent spectra glow peak, activation energy determ. method 7−85855
tridymite single crystals, reconstructive high temp. transformation to cristobalite 7−69903
twinning, effect of neutron and gamma irradiation 7−69715
X-cut, electrical conductance and capacitance meas. 7−118155
X-ray diffr. angles determ. by FFT 7−75926
X-ray irradiated α-quartz, elec. props 7−70701
Al-quartz gratings, surface transverse wave propag. *(Japanese)* 7−117426
Al_2O_3-SiO_2, mechanical activation of reaction, wet grinding, aluminosilicic acid 7−92940
SiO_2 quartz, optical props., influence of thermal annealing after $N^+(O^+)$ ion implantation 7−106130
SiO_2:Al(Ge)(Fe) quartz, radiational and thermal stability of cryst. struct., depend. on impurity content 7−98220
SiO_2:Fe^{3+}, EPR cryst.-field parameters, Newman superposition model 7−143902
SiO_2:Ge optical fibre loss increase due to H_2 and long-term loss stability 7−90800
SiO_2:Na, SiO_4/Na centre, thermoluminescence and phosphorescence studies 7−125817
substrate for ZnS:Mn thin films, electrolum. characts. and struct. of films 7−138516

quartz resonators *see crystal resonators*

quasars
0954+658, extreme scatt. events caused by compact structs. in interstellar medium 7−88661
1146+111B,C, possible gravitational lens, critical examination 7−80119
1928+738, optical and radio astrometry 7−72649
1928+738, superluminal quasar with large-scale radio struct., 20 cm and 49 cm mapping 7−115623

quasars continued
2000−330, Lyman α lines number density, distrib. in red shift and equivalent width 7−95042
2016+112, triple radio source, gravit. lens models 7−107974
2016+112 lens system, spectroscopy of assoc. extranuclear line-emitting regions 7−134316
absorption line forest and cosmologies with unstable dark matter 7−134318
absorption-line spectra, contrib. of H I and H_2 behind radiative intergalactic shocks 7−128053
accreting black hole model, stabilisation of nonaxisymmetric instabilities in rotating flow 7−127714
accretion disks in active galactic nuclei, line and continuum radiation outer disks 7−115579
active sources, spectra from near-simultaneous obs. from 20 cm to 1400 Å 7−88664
automated spectral analysis use for separation of quasars from stars 7−127740
axionic laser formation, quasar model 7−107979
black hole accretion disk infall, energy from black hole by Penrose process 7−120643
black holes, minimum-energy stable circular geodesics rel. to quasar energetics *(Russian)* 7−72502
blazars, radio obs. of four selected objects 7−134308
brightness variations, astronomical constraints on string-dominated universe 7−120664
broad absorption line QSOs, spectrophotometry 7−128113
broad emission-line regions, effects of electron scatt. opacity on line profiles 7−88667
broad-absorption-line quasar candidates discovered in the CFHT/MMT QSO survey 7−134317
broad-line regions, accretion disk characts. 7−72651
3C 273, hard X-ray obs. 7−140318
3C 273, morphological evolution at 10.7 GHz 7−120641
3C 273, near-IR spectra rel. to interstellar reddening problem 7−120600
3C 273, radio to X-ray continuum emission and temporal vars. 7−101949
3C 273, upper limit to neutrino flux 7−107681
3C 273, X-ray emission assoc. with jet, Einstein HRI obs. 7−80120
3C 273 A, not spot spectrum 7−72647
3C 275.1, detection of surrounding gas cloud 7−88666
3C 345, appl. of spatial stability anal. to relativistic radio jet 7−127705
3C 345, superluminal quasar, VLBI obs. rel. to compact radio source evolution 7−88665
3C 380, MERLIN polarisation obs. rel. to jet-interstellar gas interaction 7−88670
4C 39.25, multiepoch VLBI obs. of superluminal motion amid stationary struct. 7−101954
4C 39.25, superluminal source without well-defined core, multifrequency VLBI obs. 7−140321
3C 454.3, peculiar vars. in radio struct. after outburst 7−134319
4 C 55.27, identification of intervening galaxy responsible for Mg II absorpt. 7−146103
candidates, spectral characts., red shifts and identification 7−72648
central power source, black hole and supermassive star models 7−146091
chronometric cosmology, source counts 7−101967
classification of active galaxies, prospect of unified phenomenology 7−134311
clustering, anal. of ROE/ESO large-scale AQD survey 7−128122
clustering and large-scale struct. form., statistical anal. 7−95048
compact radio sources, results of frequent flux density monitoring at 24 GHz 7−120631
conf., Burdwan, India, Dec. 1985 7−115694
conference, Bogota, Columbia (1984 February) 7−120712
dynamical heating of stars as fuel for active nuclei 7−80098
edge-brightened double radio sources, radio jets widths 7−88659
EM jets, self-collimated, from magnetised accretion disks, accretion power transport 7−107710
EM radiation bursts, particle accel. in jets and superconducting cosmic string loops as power source 7−88671
emission-line and continuum variations, implications for assoc. with SS 433 phenomenon 7−140263
emission-line regions, anomalous heating by nonthermal radio radiation 7−95046
emission-line regions, nuclide photoerosion 7−120642
extragalactic electron-positron jets from γ-ray beams 7−72586
extragalactic magnetic fields 7−80109
faint high-redshift quasars, surface density from obs. of QSO 1409+732 (z=3.56) 7−107978
far-IR properties of optically selected QSOs, results from IRAS obs. 7−88669
flat-spectrum radio sources from S5 survey, VLBI investigations of complete source sample 7−72643
gravitational lens phenomena, geometrical optics theory *(German)* 7−134128
gravitational lenses, imaging procedure for images positions, shapes and luminosities determ. 7−72269
gravitational lenses, local Populations III black hole remnants as lensing objects 7−115497
gravitational lensing, effects of decay of dark matter 7−120640
gravitational lensing, thick transparent lens theory 7−120262
gravitational lensing 7−101677
gravitational lensing and correlation functions *(Chinese)* 7−107976
gravitational lensing and strings 7−102044
gravitational lensing by ensemble of isothermal galaxies 7−127709
gravitational lensing by foreground galaxies, amplification cross sections and apparent number density enhancement 7−115620
gravitational lensing by foreground galaxies, amplification probability distrib. and number density enhancement 7−115621
gravitational mirages, spectroscopic search among close pairs of blue objects 7−95002
gravitationally lensed quasar images, intensity ratios as dark matter probe 7−80091
high-red shift quasars, location using low-resolution spectra 7−94670
high-redshift quasar cutoff, implications for chronometric cosmology 7−128115
high-redshift quasars, X-ray props. from Einstein obs., and optical spectra 7−101951
host galaxies, radio continuum emission obs. 7−72596
Hubble diagram construction using 154.8 nm magnitudes 7−101959
imaging spectroscopy of five QSOs, detect. of host galaxy absorpt. features 7−72650
quasars continued
intermediate-redshift quasars, UV spectra 7−101953
introductory special relativity teaching using quasars 7−66860
IRAS 00275−2859, discovery of second IR-luminous quasar 7−115625
IRAS 13349+2438, IR-loud quasar, optical, IR and radio obs. 7−88668
IRAS obs. anal. 7−95041
jets production in active nuclei, swirling hydrodynamic jets in viscou accretion flows 7−72276
light echoes from supergalactic disks, model for giant arcs in galaxy clust ers 7−140305
light-echo model for luminous arcs in clusters, geometrical and astrophysi cal aspects 7−140306
low frequency variable radio sources, statistical anal. of multifreq. obs 7−72642
low-red shift quasars, IUE characts. 7−95043
luminosity function, evolution with redshift 7−128120
luminosity function alteration due to gravit. lensing in foreground galaxie 7−120605
luminosity function determination, new derivation of Lynden-Bell method 7−94669
luminosity-surface brightness depend. *(Polish)* 7−128109
magnetic fields in extragalactic jets 7−80097
mass outflows around BAL QSOs and line profile formation 7−95039
MC3 2032+107, blazar, red shift, spectra, jet characts. and radio emis sion features 7−101913
mid-IR and far-IR var. study 7−95019
Mrk 205, assoc. with NGC 4319, disturbed spiral galaxy 7−140279
Mrk 205, evidence for link with NGC 4319 spiral galaxy 7−140280
multiply images, gravitational lens models 7−72298
NRAO 140, 180 mm VLBI obs. during and after LF outburst 7−140319
nuclei evolution, models without stellar evolution 7−101926
nuclei X-ray/UV emission *(Chinese)* 7−101894
number counts, effects of finite source size on amplification bias by gravi lensing 7−128116
optical catalogue of quasi-stellar objects 7−79850
optical luminosity function of quasars and low-luminosity active galacti nuclei, determ. from flux-limited survey 7−146083
optical spectral indices, determ. from (B−V) colour indices 7−120637
optical variability, effects of changes in intervening medium 7−95040
optically selected quasars, radio luminosity function 7−120638
optically selected quasars with z>3, redshifts and r-magnitude 7−128114
optically violent variable quasars, polarisation characts. var. wit wavelength, continuum spectral shape and evolution 7−128077
origin as cannibalistic galaxies *(French)* 7−128123
OX 169, X-ray var. 7−140324
Palomar-Green survey quasars, optical-IR continuum energy distrib 7−115624
PG 1115+08, triple quasar, gravitational mirage hypothesis 7−80123
PG 1211+143, X-ray spectrum rel. to origin of X-ray-UV exces 7−115622
PG 1613+65 (Mkn 876), low-redshift quasar, assoc. galaxy cluster detec and interacting galaxy model 7−146102
PHL 957, line of sight H_2 and CO characts. 7−128111
photoionizing continuum origin 7−80099
PKS 0528−250, Ni II and Cr II absorpt. systems nature 7−140289
PKS 1614+051, imaging and spectroscopic obs. of companion galaxy (a redshift of 3.215) 7−120586
PKS 1614+051 (z=3.21), distrib. of gas and galaxies around quasa 7−128117
PKS 2020−370, H I absorpt. due to foreground galaxy (Klemola 31A 7−140320
PKS 2208−137, blazar, red shift, spectra, jet characts. and radio emissio features 7−101913
plasma universe evolution 7−72282
precise optical positions for strong radio sources south of δ=+5°, result 7−80115
PSK 2000−330, high redshift absorbing clouds characts., spectral ob 7−140281
Q1232+134, multiple redshifts and spectral characts. 7−88672
Q 0046−293, 4.01 redshift quasar characts. *(French)* 7−80121
Q 0405−123 and Q 1202+281, emission lines var. in UV 7−72653
Q 0957+561, double quasar, mass determ. for lensing galaxy 7−95004
Q 0957+561 A,B, UV light curve anal. and Hubble const. determ 7−72654
Q 1327−206, QSO-galaxy pair, absorpt. line systems anal. rel. to exter of low-ionisation galactic haloes 7−120636
Q 133494+2438, radio-quiet quasar, detect at 1300 μm wavelengt 7−134315
QSO 0954+658, intensity variation due to Milky Way plasma cloud 7−128033
QSO 1209+107, obs. of H II galaxy giving rise to z=0.3930 absorp system 7−80118
QSO 1303+308, complex absorption spectrum of BAL object 7−128112
QSO 1331+170, C I absorpt. lines obs. rel. to microwave backgroun temperature (at z=1.776) 7−88690
QSO 1409+732, faint high-redshift quasar, spectrophotometry rel. t quasars surface density 7−107978
QSO 1510-089, mm continuum emission outburst 7−80122
QSO 2000-330 and 2126-158, C IV, Si III and C I absorpt. line mea 7−120639
radio sources in first Molonglo deep survey, optical identifications i declination −20° region 7−128105
radio-selected quasars, beaming models rel. is X-ray, optical and radi props. 7−95045
redshift distrib., selection effects of slitless spectroscopy *(Chines* 7−120279
relativistic beams interaction with interstellar gas, radiative processe 7−101937
relativistic electron bumps stabilisation, implications for radio bursts deca time 7−115616
Sculptor Group, bright quasars conc. 7−95044
Second Byurakan Survey objects, quasars discovery, spectral and photome tric obs. *(Russian)* 7−72652
Second Byurakan survey of northern sky, spectral meas. 7−146104
space distribution of faint quasars, determ, from CFHT survey 7−10195
spacetime distribution w.r.t. cosmological redshift, modified mod 7−140317
spacetime distribution w.r.t. cosmological redshift, theoretical mod 7−140316
spatial clustering, red shift survey 7−128121

quasars continued
spectral characteristics, uniqueness rel. to gravitational lens candidates 7−95047
spectral energy distributions, determ. between 0.1 and 100 microns 7−88614
spectrophotometry and intergalactic H I number density upper limit 7−120614
spherical synchrotron-self-Compton process in active nuclei 7−88619
superluminal radio sources, probability approach to ballistic models 7−128103
TOL 1037−271, TOL 1038−272, absorption spectra anal. 7−128118
TOL 1037−27/1038−27, QSO pair, absorption spectra anal. 7−128119
two-temperature accretion flow onto black hole, pair production effects 7−101839
UM 679, field evidence for string loops 7−139910
UV continua of very high redshift quasars, effect of Lyman-alpha forest 7−88662
UV radiation, contrib. to integrated diffuse far-UV radiation field 7−107977
variable radiosources with superluminal VLBI components, precessing jets model 7−140315
X-ray astronomy (book) 7−88759
X-ray luminosity, joint depend. on radio and optical lumin. 7−101950
X-ray luminosity and variability timescale in active galactic nuclei, statistical significance of correl. 7−134310
X-ray luminosity evolution, implications for cosmic X-ray background 7−88663
X-ray/IR emission ratio, luminosity depend. 7−128110

quasi-one-dimensional conductors *see one-dimensional conductivity*

quasi-particles
see also excitons; helicons; magnons; phonons; plasmons; polaritons; polarons; ripplons; rotons; solitons
anisotropic superconductors, reson. impurity scatt., effects of phase shifts and particle hole asymmetry 7−112670
d-wave superconductivity, Anderson model instability, slave-boson exchange pairing mechanism 7−70467
dilatons, subcritical and transcritical types 7−95356
disordered interacting electron system near metal-insulator transition, thermal conductivity and diffusion calcs. 7−136678
disordered systems, electronic transport props., Green function theory 7−98954
Fermi liquid, normal, finite lifetime of quasi-particles 7−105169
ferroelectric, exact solution of fluctuon, classical approx. *(Russian)* 7−113099
granular films, supercond. onset and quantum-phase fluctuations, effect of quasiparticle tunnelling 7−99338
granular films, superconducting state, quasiparticle tunnelling 7−105843
harmonic oscillators, fluctuation-dissipation phenomena, appls. of coherent paired state, Lie group SU(1,1) 7−140517
heavy, in d and f electron systems, dHvA effect 7−124836
heavy fermion metals, conductivity calcs. from model transport eqn. 7−143458
heavy fermion superconductors, collective modes, hydrodynamic description 7−112640
heavy fermions, low-Q spin fluctuation effects 7−137653
Hubbard model, quasi-particle spectrum 7−98769
integral quantum Hall effect, instanton soln., quantum fluctuations in non-linear σ model 7−125016
interacting disordered systems, metal-insulator transition, scaling theory 7−118366
Josephson function arrays, quantum effects and dissipation by quasiparticle tunnelling 7−143725
Josephson junctions, Bloch oscills. and dissipative phase transitions 7−105860
Josephson tunnel contacts, quantum effects 7−125262
Kondo lattice, fluctuations, dissipation, resistance model 7−76920
layered electron gas, interacting electron lifetime and effective mass, dynamical RPA calcs. 7−137830
linear mol. chain, soliton states, thermal fluctuations effects, quantum theory *(Russian)* 7−82015
macromolecular chain with thermal oscillations, exciton parameter temp. depend. eval., quantum theory *(Russian)* 7−68484
macroscopic resonances in planar geometry, free-particle system, resonance frequencies and widths 7−121774
magnetically ordered material, heavy electron form. 7−77186
metallic density electron liquid, effective mass of quasi-particle 7−105376
nonmagnetic Kondo lattices, electronic and supercond. props. 7−124975
off-diagonal disordered crysts., impurity band delocalised states 7−98932
organic quasi-1D conductors, quantised field-induced SDW ordering 7−99473
Peierls semicond., charge density wave phase slip centre dynamics calcs., microscopic theory 7−118392
plasma, BGK structures as quasi-particles 7−69345
plasmon satellites, photoemission, coupled-channel Schrodinger eqn. 7−125924
QCD, vacuum non-perturbative condensate structure, gluon condensation parameter, quasiparticle excited states 7−128842
quantum Hall effect, electron fluid and quasihole props., 2D model calcs. 7−105597
quantum Hall effect, fractional, spin-reversed quasiparticles 7−105596
s-f model, spectral density approach for quasiparticle excitations 7−105875
S-matrix formalism for particles interacting with phonon fields, coherent state representation 7−70220
semiconductors, antiferromagnetic 4f systems, many-body effects 7−85235
semiconductors, quasiparticle band structure, exchange and correlation effects 7−137795
spinless quasiparticle-phonon interactions, many phonon processes 7−111788
superconducting films, non-Josephson energy generation, quasi-particle transport and struct. effects *(Russian)* 7−77164
superconducting pressure-sensitive systems, new form of pair interaction in superconductivity 7−112622
superconducting tunnel junction with nonequilibrium quasiparticle distrib. function, absolute negative resist. 7−99355
superconducting weak links, quasiparticle injected, RF response 7−85199
superconductor tunnelling junctions, nonequilibrium phenomena, electron-electron interaction effects calcs. *(Russian)* 7−112680
supersonic jet, turbulent mixing layer, quasiparticle detection and size determ. 7−83293

quasi-particles continued
TMTSF compounds, Bechgaard salts, field induced SDWs in presence of normal impurities 7−70551
two-band superconductors, cross-over effects, quasi-particle description 7−85186
weakly bound states energy, total momentum depend. calcs. *(Russian)* 7−76511
Al superconducting thin film/magnetic insulator contact, density of states, Zeeman splitting, spin polarised tunnelling studies 7−131915
AlAs quasi-particle energy band struct. calcs. 7−112180
As overlayer on Ge(111), surface states many-body calc. 7−85033
$CeCu_6$, heavy-fermion system, magnetic response, momentum dependence 7−143761
Cu, ballistic temperature point-contact spectroscopy at 0.7 K 7−70216
EuO quasiparticle electronic spectrum. density functions theory, dynamical corrections 7−98804
EuO quasiparticle electronic spectrum, density functional theory, temp. depend. and dynamical corrections 7−98805
GaAs quasi-particle energy band struct. calcs. 7−112180
^{3}He, A-phase superfluid, ion mobility anisotropy and superfluid energy gap 7−143126
^{3}He dilute solns. in superfluid ^{4}He, transverse acoustic impedance 7−70021
^{3}He, liq., quasi-particle interaction, momentum dependent scatt. amplitude model 7−111996
^{3}He, liq., quasiparticle interaction 7−84435
^{3}He-^{4}He dilute soln. effective viscosity, ^{3}He quasiparticle-surface momentum transfer 7−137655
^{3}He-^{4}He mixtures, dilute, mK molar heat capacity meas. 7−143130
La-Sr-Cu-O highT_c supercond., energy gap, electron tunnelling meas. 7−92377
Li, quasiparticle band structs., deter. 7−131532
$(Li_{0.65}Na_{0.35})_{0.9}Mo_6O_{17}$ single cryst., superconductivity, electron tunnelling study 7−112703
Na, quasiparticle band structs., deter. 7−131532
^{A}Pt, A=189, 191, 193, quadrupole coherent states, quasiparticle coupling to collective core, particle-core coupling model 7−121573
Ta-Cu-Ta Josephson sandwiches, thermoelec. phenomena study *(Russian)* 7−112306
$TiBe_2$, low temp. transport props., single component Fermi liquid theory 7−137897
U heavy fermion cpds., mean-boson field theory 7−112159
UPt_3, low temp. transport props., single component Fermi liquid theory 7−137897
UPt_3 single cryst., heavy quasiparticle obs., de Haas-van Alphen oscills. study 7−70170
UPt_3 single crysts., electronic struct., low energy optical reflectivity meas. 7−70173
Y-Ba-Cu-O high T_c supercond., quasi-particle excitations, light scatt. temp. depend. obs. 7−144082

quasi-stellar objects *see quasars*

quasi-stellar sources *see quasars*

quasicrystals
1D quasi-periodic lattices, electronic states, tight binding Fibonacci model calcs. 7−76735
2D Penrose pattern, stability, mol. dynamics study 7−104611
2D quasicrystallographic lattices, classification, 46-fold symmetry 7−104614
Al-transition metal alloys, energetics of icosahedral phase stability 7−104640
alloys, 1D model using Lennard-Jones interatomic pot. 7−111450
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
amorphous systems, quasicrystalline structural diffusion 7−69597
atomic order, determ. 7−104554
binary processes, inflation, deflation and self-similarity, appl. to diatomic quasicrystals 7−72926
cholesteric blue phase III, quasicrystalline ordering, NMR spectrum 7−117809
completely integrable models in quasicrystals 7−91491
condensed matter physics conference, Stockholm, Sweden (March 1986) 7−72705
critical electronic wave functions, exact calc. of fractal measures 7−137768
cubic to icosahedral order, continuous rotation 7−137307
cylindrical solids, symmetrical intersections 7−76055
decagonal, forbidden tenfold symmetry, synthesis, characterisation, struct. modelling 7−142677
energy spectrum and conductance of a two-dimensional quasicrystal 7−105364
equilibrium structure alloy phase icosahedral relationship 7−142676
evidence for existence, Penrose tiling in 3-dimens. 7−142678
facet formation in bond-oriented glasses and quasicrystals 7−137245
Fibonacci lattices, anomalous elec. cond., perturbation theory calcs. 7−112290
formation, long-range orientation and translational quasiperiodicity 7−83831
frustration effects, one-dimensional example 7−85326
hard sphere model for Hendricks-Teller type quasicrystals 7−111438
icosahedral and decagonal reciprocal lattices, quasicrystallography 7−83830
icosahedral crystals, symmetry and topology 7−76064
icosahedral order, model 7−142681
icosahedral polytope, melting and vibrs. 7−131271
icosahedral quasicrystals, classification *(French)* 7−91512
icosohedral structs., mag. moments, Curie temp., anisotropy and domain walls 7−131996
incommensurate structure with no average lattice a 1D quasicrystal 7−76045
metallic alloys, origins of long-range ordering 7−83832
metals, electronic props., pseudopot. methods 7−143314
nonperiodic tessellation with eightfold rot. symm. 7−76062
one dimensional, multi-fractal spectra and wave functions 7−98773
one-dimensional, electron spectrum calcs. 7−105369
one-dimensional, electronic props., Fibonacci lattice, on-site model calcs., fluctuation effects 7−84636
one-dimensional quasicrystalline and incommensurate systems, energy spectral props. 7−92625
ordering models, statistical physics, physical props., atomic and electronic structs., review 7−111389

quasicrystals continued
patterns in systems with competing incommensurate lengths 7−117815
Penrose lattice, 2D, band struct. in uniform mag. field 7−98774
Penrose tiling lattice, electronic props. in a mag. field 7−84621
pentagonal, linear elasticity theory, dislocation interaction energy calcs. 7−118004
pentagonal quasiperiodic patterns, disclinations in quasicrystals 7−98026
physical rotational symmetry and minimal tensorial rank 7−117854
polyhedra of three quasilattices associated with the icosahedral group 7−137293
pseudocrystals with fivefold symmetry, review 7−91517
quasi-lattice Ising modes, renormalisation groups 7−128487
quasi-periodicity, expt. techniques 7−137277
quasicrystalline state study 7−137311
spatial correlations 7−83827
tilings with fivefold symmetry, diffraction patterns 7−91400
transition metal-Si rapidly solidified alloys, 3D modulated struct., quasicryst. form. 7−117868
twinning mechanism in quasicrystals *(French)* 7−142790
AL-Si-Mn, melt spun, icosahedral and glassy phases, form., struct., X-ray scatt., TEM studies 7−97958
$Ag_{15}Mg_{35}Al_{50}$, TEM and X-ray diffr. studies 7−124170
Al-based icosahedral phases, contrast variation effects on neutron diffraction patterns 7−83846
Al-Co (26 wt.%), melt spun, decagonal phase, TEM obs. 7−83856
Al-Cr, rapidly quenched, icosahedral quasicrystal form., thermal stability, elec. resist. 7−113580
Al-Cr quasicrystal film form., RF sputtering, investig. 7−137762
Al-Cr quasicrystalline alloys, neutron diffractometry, contrast variation technique, icosahedral phase 7−142588
Al-Cr-Si quasicrystals, with high Si conc., formed by rapid quenching, thermal and elec. props. 7−100200
Al-Cu-Li alloy, quenched, macroscopic quasicrystals 7−111451
Al-Cu-Li icosahedral struct., X-ray absorption fine struct. meas. 7−111452
Al-Cu-Li system, mech. props. of large quasicrystals 7−106619
Al-Cu-Li system, solidification of quasicryst. phase 7−119258
Al-Fe multilayered films, ion beam mixing, icosahedral quasicrystal phase form, electron diffr. 7−84566
Al-Fe quasicrystalline alloy, neutron diffractometry, contrast variation technique, icosahedral phase 7−142588
Al-Fe rapidly cooled alloys decagonal quasicrystal and tenfold twins 7−104763
Al-Fe-Ce alloy, rapidly cooled, icosahedral phase 7−104636
Al-ge-Cr(Mn), quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al-Li-Cu, icosahedral phase, growth morphology rel. to solidification 7−111395
Al-Li-Cu, icosahedral quasicrystals, peak shape obs. 7−124171
Al-Li-Cu alloy, icosahedral quasicrystal, single crystal X-ray diffr. 7−137315
Al-Li-Cu icosahedral crysts., struct. and Penrose tiling 7−83855
Al-Mn, continuous rotation from cubic to icosahedral order 7−137307
Al-Mn, icosahedral and crystalline phases, extended energy loss study using parallel recording 7−131099
Al-Mn, icosahedral and related phases, form. by ion beam mixing 7−84064
Al-Mn, icosahedral phase, structural relationship with quasicrystalline phases 7−142591
Al-Mn, icosahedral quasicrystals, peak shape obs. 7−124171
Al-Mn, melt spinning, electron beam surface melting, icosahedral and decagonal phase form. 7−77972
Al-Mn, oriented icosahedral, phason strain field, X-ray diffraction study 7−104639
Al-Mn, quasicrystalline phases, melting temps. 7−111835
Al-Mn, quasicrystalline-amorphous structural transition, temp. and radiation dose depend. calcs. 7−124100
Al-Mn (14 at.%), rapidly solidified droplets, icosahedral quasicrystals and glass form. 7−131052
Al-Mn (15 wt.%), melt spun ribbons, icosahedral phase crystallisation rel. to annealing rate 7−83696
Al-Mn (27 wt.%) ribbons, rapid solidification, microstruct., crystallisation 7−77969
Al-Mn alloy, icosahedral particles electron microscopy obs. 7−98043
Al-Mn alloy, icosahedral quasicrystal morphology, electron microscopic investigation 7−142706
Al-Mn alloys, quasicrystal formation and thermal stability, I-phase, T-phase transform. 7−143028
Al-Mn icosahedral and hexagonal Al_4Mn alloys, NMR lines obs., magnetism 7−112968
Al-Mn icosahedral films, vapour deposition and struct. 7−118313
Al-Mn icosahedral phase form. by ion beam mixing and interdiffusion in interdigitated layers 7−104861
Al-Mn metastable crystalline, quasicrystalline and amorphous thin films, vapour deposition synthesis 7−143286
Al-Mn quasicrystal, single-phase, enhanced electronic Hall coefficient 7−143433
Al-Mn quasicrystal with 5-fold symmetry *(Japanese)* 7−76063
Al-Mn quasicrystalline alloy, neutron diffractometry, contrast variation technique, icosahedral phase 7−142588
Al-Mn quasicrystalline alloy studies, by STEM 7−142707
Al-Mn quasicrystals, electron microscopy, image contrast calc. 7−76085
Al-Mn quasicrystals, mag. moment and spin glass behaviour 7−77304
Al-Mn quasicrystals, struct., computer simulation studies 7−83699
Al-Mn rapidly quenched alloy, X-ray diffraction study of icosahedral phase 7−142698
Al-Mn-Fe, noncrystallographic alloy phases, Fe and Mn sites, EXAFS study 7−85897
Al-Mn-Fe alloy, quasicrystalline phase ageing, phase natural struct. 7−144443
Al-Mn-Fe-Si, noncrystallographic alloy phases, Fe and Mn sites, EXAFS study 7−85897
Al-Mn-Si alloys, cryst., quasicryst. and amorphous, positron annihilation study 7−77682
Al-Mn-Si alloys, quasicrystals, comparative electron microscopic study with Mg-Al-Zn alloys 7−137316
Al-Mn-Si icosahedral alloys, NMR lines obs., magnetism 7−112968
Al-Mn-Si icosahedral quasicrystal, dislocations, HREM studies 7−69704
Al-Mn(-Si), icosahedral, sputter deposition 7−100066
Al-Mn(-Si) quasicrystals, convergent-beam electron diffraction *(Japanese)* 7−98047

quasicrystals continued
Al-Ru icosahedral phase form. by ion beam mixing and interdiffusion in interdigitated layers 7−104861
Al-Si-Cr(Mn), quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al_6Co, rapidly solidified, decagonal phase, TEM studies 7−142704
Al_4Cu_9, rapidly solidified pot. quasicrystal farming alloys, struct. investigations 7−142705
Al_6CuLi_3, free-surface solidification, habit, point-group symmetry 7−69866
Al_6CuLi_3, quasi crystal, X-ray diffraction studies 7−124173
$Al_{52.4}Cu_{12.6}Mg_{35}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
Al_6CuMg_4, endothermic quasicrystalline-crystalline transition, electron microscopic and DSC studies 7−111868
Al_6CuMg_4, endothermic quasicryst.-cryst. phase transition 7−131301
$Al_{80}Fe_{20}$ quasicryst. phase formed by ion mixing, grain size and struct. study 7−117820
AlLiCu quasicrystalline Hume Rothery alloy, electronic and cryst, struct. studies *(French)* 7−131028
AlLiCu, T_2 phase, phase transition under heat treatment 7−137319
$Al_{86}M_{14}$, M=transition metal, icosahedral and ordered alloys, stability, electron state density 7−131100
Al_6Mn, Al_4Mn, and $Al_{12}Mn$ polycrystals, NMR powder patterns, rel. to quasiperiodic materials 7−85457
$Al_{78}Mn_{22}$ quasicrystalline decagonal alloys, low temp. sp. heat and magnetic meas. 7−77310
$Al_{79.5}Mn_{20.5}$, decagonal metastable phase, struct. as Penrose-type lattice, electron and X-ray diffr. 7−83852
$Al_{84}Mn_{16}$, icosahedral, sp. ht., comparison with related crystalline phases 7−105064
$Al_{86}Mn_{14}$ alloy, quasicrystalline phases 7−98040
$Al_{86}Mn_{14}$, quasicryst. and cryst., EELS of microscopic regions 7−77712
$Al_{86}Mn_{14}$, quasicrystal or cubic crystal structure 7−111454
$Al_{86}Mn_{14}$ quasicrystalline alloy, EPR study, spherical harmonics, icosahedral crystal field 7−143903
$Al_{86}Mn_{14}$ quasicrystals, struct- and crystallisation, DSC obs. 7−97937
$Al_{91}Mn_5B_5$, rapid solidification, quasi-crystalline precipitates with icosahedral morphology 7−78031
$Al_7(Mn_{1-x}Fe_x)_2$, decagonal, X-ray diffr. and Mossbauer spectroscopy 7−69658
AlMnSi quasicrystals, disorder, X-ray diffr. and TEM studies 7−142709
$Al_{72}Mn_{22}Si_6$ rapidly quenched quasicrystalline alloy, fracture process obs. 7−142902
$Al_{60}Si_{20}Cr_{20}$, new quasicryst., form. and struct. 7−83858
$Al_{85}Si_1Mn_{14}$ quasicrysts., thermal transform. to conventional crysts., two-step mechanism 7−105002
$Al_{20.2}Zn_{40.3}Mg_{39.5}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
Au_{13} icosahedral clusters, SCF Dirac scatt. wave calcs. 7−96912
$AuLi_3Al_6$, TEM and X-ray diffr. studies 7−124170
Cd-Cu, rapidly quenched, icosahedral, new cryst. and glassy phases, TEM obs. 7−83859
Co-Er, metastable phases, icosahedral symmetry and magnetism 7−131037
Cu_5Zn_8, rapidly solidified pot. quasicrystal farming alloys, struct. investigations 7−142705
$Fe_{81}B_{19}$ metallic glass, struct., neutron diffr., quasi-crystalline model 7−97961
$Ga_{16}Mg_{32}Zn_{52}$, new quasicryst., form. and struct. 7−83858
$Ga_{16}Mg_{32}Zn_{52}$, TEM and X-ray diffr. studies 7−124170
Li-Cu-Al large-grain quasicrystals, obs. of dislocationlike images 7−117929
Mg-Al-Zn, icosahedral alloy, resist., mag. suscept., comp. depend. 7−131608
Mg-Al-Zn alloys, quasicrystals, comparative electron microscopic study with Al-Mn-Si alloys 7−137316
$Mg_{32}Al_{49}$, rapidly solidified pot. quasicrystal farming alloys, struct. investigations 7−142705
$Mg_{32}(Al_{1-x}Zn_x)_{49}$ icosahedral alloy, elec. resist. temp. and mag. field depend. meas. 7−84815
Mg_4CuAl_6, rapidly solidified pot. quasicrystal farming alloys, struct. investigations 7−142705
Ni-Cr, dodecagonal quasicrystal, description by projection method 7−76084
NiCr crystal structure, similarity to quasi-periodic tilings 7−83826
$(Ni_{65}Fe_{35})_{77}B_{23}$ metallic glass, struct., neutron diffr., quasi-crystalline model 7−97961
Pb-Bi system, directionally solidified, icosahedral phase 7−86157
Pd-U-Si icosahedral alloys, low temp. thermal cond. meas. 7−70276
$Pd_{58.8}Si_{20.6}U_{20.6}$, icosahedral and glassy, low-energy modes, neutron inelastic scatt. 7−118048
$Pd_{58.8}U_{20.6}Si_{20.6}$ icosahedral alloy, quasicrystallinity 7−104638
$Rb_{0.60}Na_{6.25}Ga_{20.02}$ synthesis and X-ray diffr. cryst. struct. determ. 7−83854
V-Ni-Si, rapidly solidified, two-dimensional quasicrystal with eightfold rotational symmetry 7−137317
$Zn_{17}Li_{32}Al_{51}$, TEM and X-ray diffr. studies 7−124170

quasimolecules
1-cyanonaphthalene-triethylamine van der Waals complex, exciplex form., fluoresc. study 7−82264
benzene, van der Waals cluster, vibronic struct. 7−96911
benzene-HCl van der Waals complex, dissociative photoionis. 7−96799
benzene-He van der Waals mol., intramolecular vibr. energy relax. 7−90298
carbon tetrachloride cluster, electron attachment, mass spectroscopy 7−82334
cooperative mean-frequency absorption, two-beam two-photon process 7−82305
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
cyanoanthracene-2,5-dimethyl-2,4-hexadiene, fluoresc. excitation spectra 7−103557
diatomic quasimolecules, diabatic mol. orbital correl. 7−103370
2,5-diphenylfuran-alkane complexes and related cpds., fluoresc. excitation spectra 7−82247
direct reactions, role in multiparticle and quasimolecular state investigations 7−135346
inert gas quasimolecules, heteronuclear, excited state terms 7−90316
methyl cyanide cluster, electron attachment, mass spectroscopy 7−82334

quasimolecules continued
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
pseudo-molecule formation, determ. of collisional phase variation *(French)* 7−90323
van der Waals complexes, diamagnetic susceptibilities, second moments, promolecule model 7−81951
van der Waals molecule predissoc., reson. energies and widths, $\mathcal{L}^2$ golden rule method calc. 7−103596
van der Waals molecules, fine-struct. electronic predissoc. quantum-mechanical model 7−110039
van der Waals mols. vibr. predissoc. and prereaction, collinear quantal study 7−122645
ArHF, clusters, struct. and dynamics, IR absorp. spectra 7−129923
BF_3-Ar(CO)(N_2), van der Waals complexes, induced dipole moments 7−68199
$BeHe^{4+}$, quasimol., autoionising states, Feshbach-type calc. 7−103589
CO_2 trimer, van der Waals species sub-Doppler IR spectra 7−122519
$(H_2)_2$ van der Waals complex, multireference CI calcs. 7−89982
HF-N_2O(formaldehyde), van der Waals complexes, induced dipole moments 7−68199
$(H_2S)_2$, ionisation energies, MBPT calcs. 7−74403
He-CO, van der Waals complex, rot. predissoc. investig. 7−117033
He-N_2, van der Waals complex, rot. predissoc. investig. 7−117033
He-O_2, van der Waals complex, rot. predissoc. investig. 7−117033
HeI_2, van der Waals fragmentation, periodically forced oscillator model 7−132922
$(NO)_2$+O, crossed beam investig., chemiluminesc. detect. 7−110095
(^{14}N,^{6}Li), direct reactions, role in multiparticle and quasimolecular state investigations 7−135346
(^{14}N,d), direct reactions, role in multiparticle and quasimolecular state investigations 7−135346
Na-Xe, spin exchange, efficiencies of various buffer gases 7−68381
$NaHe^+$ quasimolecule, $^1\Sigma$ and $^3\Sigma$ states, energies and radial couplings 7−81966
$NeCl_2$, van der Waals mol., laser-induced fluoresc. excitation spectra 7−96776
OCS-Ar(Kr)(Ne), supersonic mol. beam, Fourier transform microwave spectra 7−129699
XeI_2, van der Waals mol., quantum mechanical model 7−103352

quench hardening
steel, Cr-Mo, sintered, microstruct., hardness 7−86087
steel, Cr-Mo-V, microstruct. and mech. props. 7−144493
steel, Cr-W-Mn, grain refining, toughness strengthening by high temp. quench and tempering *(Chinese)* 7−78061
steel, dual-phase, martensite hardenability of austenite, effect of C content and microalloying 7−93028
steel, hardenability, austenitic grain size, heat treatment parameters 7−132649
steel, high C, martensitic substruct. and transform. cracking *(Chinese)* 7−71200
steel, low alloy, quench and temper hardening, static indentation process analysis 7−113698
steel, maraging, variation in elastic modulus during quenching and ageing 7−86236
steel, martensitic, Ni-Cr-Mo, microstruct., effect of intercritical heat treatment *(Chinese)* 7−144507
steel, martensitic stainless, erosion-corrosion susceptibility, vibratory cavitation in corrosive media 7−132769
steel, Ni-Cr-Mo, microstruct. and tensile props., effect of quench rate 7−71253
steel, quenched plates, stress-strain generation, effect of surface condition 7−100299
steel components, surface hardening quality inspection, resist. of mag. states of two-layer ferromag. to mag. fields 7−71450
Fe, cast, nodular, quenched martensite struct., self-tempering 7−86222
Fe cast, surface laser quench hardening 7−106528
Fe-Ni-Cr-Ti alloy, welded joints, heat treatment and HAZ props. 7−78074

quenching (optical) *see radiation quenching*

quenching (thermal)
see also melt spinning; quench hardening; splat cooling
Al, quenched, annealing, defect studies, positron lifetime and PAC meas. 7−98225
alkali glasses, rapidly quenched, ionic conduction, mixed alkali effect 7−124589
Alloy 718, crack growth during quenching 7−93071
alloys, glass forming ability rel. to metallurgical parameters 7−83730
alloys, rapidly quenched, phase struct. and microstruct. 7−92979
alloys, rapidly solidified, mechanical props. and potential applications 7−86302
alloys, rapidly solidified, orientational and translational correlations, macroscopic continuum elastic theory calcs. 7−83834
ammonium hydrogen tartrate single crysts., microhardness, annealing and quenching effects 7−98325
amorphous alloys, melt spinning, crystallisation, theoretical analysis 7−83733
bone, cattle, phases at elevated temp., prosthetic implant appl. 7−79135
continuous symm. quenched systems, anomalous time correlations 7−84190
eutectic alloys, solidification, spinodal decomp. and glass transition during quenching from liq. phase 7−98409
FCC metals, rapidly quenched, lattice defects 7−92986
galvinoxyl radical mixed crystals and hydrogalvinoxyl cpd., diamag.-paramag. phase transition, thermodynamic props. 7−138239
high melting ionic solid glasses, twin roller quenching technique and prep. 7−144355
laminar flames, quenching distance by burner 7−78496
magnetic materials prepared by rapid solidification, review 7−86093
metallic glasses, crystallisation kinetics 7−83739
metallic glasses, rapid quenching form. 7−100171
metals and alloys, liq., undercooling produced by rapid quenching 7−77981
metals and alloys, void and vacancy cluster nucleation processes 7−98129
metastable material prep. by laser irrad. 7−76205
Ni thin films, quenching effects in pulsed heat treatment 7−71215
plates, thin glass, stress-optimal loading in radiant heat transfer 7−117533
PMMA, elec. fluctuations, heat treatment effects *(Russian)* 7−99101
PMMA, long-term creep prediction from short-term tests 7−138806

quenching (thermal) continued
polymer processing, Stefan problem 7−75625
polystyrene-polybutadiene blends, conc. fluctuations, small angle X-ray scatt. anal. 7−117832
polyvinylidene fluoride, β-phase form from melt induced by quenching, film morphology 7−112136
power technology, spark erosion for rapidly quenched fine powder production 7−100152
rapidly solidified alloys, conf., Boston, MA, USA (Dec. 1986) 7−108040
rapidly solidified materials, review 7−86092
rare earth titanates, $R_2Ti_2O_7$ and R_2TiO_5, R=La-Lu, structural disordering on quenching, Raman spectra 7−99820
Shimadzu gas pressure quenching vacuum furnace PHG series *(Japanese)* 7−67307
soft mag. amorphous materials prepared by rapid solidification, review 7−86093
steel, alloy, fatigue crack closure, effect of microstruct., wake plasticity and fast cooling 7−113667
steel, austenitic, corrosion cracking resist. and struct. *(Russian)* 7−100414
steel, austenitic and ferritic, crack growth during quenching 7−93071
steel, Cr-Mo, low-C, heat treatment effect on machining characts. *(Chinese)* 7−126153
steel, Cr-Mo-V, precip. hardening, bainite brittleness, effect of Ni and Mn additions 7−100337
steel, die, quenching and tempering temp. effect on mech. props. and struct. *(Chinese)* 7−126151
steel, dual-phase, mech. props., bainite effect 7−100318
steel, eutectoid cylinder, cooling, internal stresses, transform. plasticity 7−132603
steel, HSLA, dual-phase, microstruct. and mech. behaviour 7−126221
steel, HSLA, Ti containing, precipitates, thermal stability 7−144414
steel, low alloy, A533B, slow bend tests, fracture induced AE 7−144669
steel, low alloy, Hg and H embrittlement comparison 7−113649
steel, low alloy dual phase, intercritical annealing, retained austenite mech. stability rel. to microstruct. 7−71183
steel, low C, ferrite-martensite struct., crack resist. *(Russian)* 7−100330
steel, low C, quenched, isothermal ageing, Mn-C dipole form. rel. to Si content, elec. resist. *(Japanese)* 7−78062
steel, low C, quenching, austenitisation, struct., props. 7−144439
steel, martensite-bainite, low C, weldable, improvement of mech. props. 7−100335
steel, melt extracted fibres and particulate, prod., props., and appls. 7−92934
steel, Mn-Al, austenitic, carbide analysis after heat treatment schedules 7−126129
steel, Mo-W high-speed, fracture toughness, retained austenite effect 7−100381
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7−86187
steel, Ni, dual phase, electrical resistivity 7−124965
steel, Ni-Cr-Mo, carburised-quenched, transform. plasticity, simulation method *(Japanese)* 7−78114
steel, Ni-Cr-Mo, ultra-high strength, H assisted fracture, loading mode effect 7−86311
steel, Ni-Cr-Mo-W, effect of quenching and tempering on props. 7−132645
steel, nitrided parts, partial cooling and repeated heating in hardening effect on struct. and props. 7−126306
steel, nonmetallic inclusions, changes under effect of laser rad. and quenching 7−71213
steel, quenched and tempered, fatigue crack propag. under periodic overstressing *(Japanese)* 7−119345
steel, quenching with laser and electron beams, calc. of temp. and thermal stresses 7−71216
steel, recrystallisation during laser heating, plastic deform. effects *(Russian)* 7−138757
steel, stainless, weld filler metal, rapidly quenched, implications for rapid solidification processes 7−92989
steel, tool, high-speed, heat treatment with continuous laser rad. with various power density distrib. 7−71214
steel plates, quenching in polyalkylene glycol, thermal stress and strain generation 7−113583
transplutonium metals, β-form, atomic vol. studies 7−76075
type I superconductors, nonuniform state relax. *(Russian)* 7−92356
ultrahigh vacuum quenching for vacancy cluster formation *(Japanese)* 7−138762
Ag_5MnAl, Silmanal, vibr. damping capacity, heat treatment effects *(Russian)* 7−138763
Al alloys, structurally disordered, RMS displacements 7−142610
Al single crysts., quenched, plastic deform., slip bands, dislocation loops *(Japanese)* 7−100289
Al-Cr, rapidly quenched, icosahedral quasicrystal form., thermal stability, elec. resist. 7−113580
Al-Cr-Fe, vapour quenched, Young's modulus, comp., microstruct. 7−119301
Al-Cr-Fe, vapour quenched, tensile props. rel. to microstruct. and comp. 7−119306
Al-Cu, age-hardenable, zone form. kinetics, influence of rapid solidification 7−100210
Al-Cu, structurally disordered, RMS displacements 7−142610
Al-Cu (1.7 at.%), direct ageing between reported GP zone solvi 7−119278
Al-Cu-Li alloy, quenched, macroscopic quasicrystals 7−111451
Al-Cu-Mg alloy, rapidly solidified, quench sensitivity 7−132528
Al-Cu-Mg-Si, thermodynamics, unidirectional solidification 7−77979
Al-Cu-Si, 2014, commercial, rapid quenching 7−86201
Al-ge-Cr(Mn), quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al-Li-Cu-Mg, quenched in vacancies, annealing, elec. resist. obs. 7−119298
Al-Li-Cu-Mg, soln, treated, quenched, grain boundary solute segregation, Auger spectra 7−100234
Al-Si, precip. kinetics. and relax. of precip. induced stresses 7−78033
Al-Si eutectic alloy, Si cryst. growth, effect of twinning 7−77980
Al-Si-Cr(Mn), quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al-Zn-Mg, quenched-in dislocation loops 7−100268
AlIn, quenched, annealing, defect studies, positron lifetime and PAC meas. 7−98225
Al_2O_3-SiO_2-ZrO_2, amorphous, rapid quenching, crystallisation, lattice parameters, phase separation *(Japanese)* 7−131036

quenching (thermal) continued
Al_2O_3-ZrO_2 system, phase relations under various melt cooling conditions *(Russian)* 7−124446
$Al_2(TiO_3)_3$-mullite composite, thermal shock resist *(Japanese)* 7−71299
Au, vacancy formation, migration energy *(Korean)* 7−84813
Au-Ag, vacancy formation, migration energy *(Korean)* 7−84813
Au-Ag alloys, electron irradiated, kinetics of SRO formation, resistivity change 7−104738
Au-Cu, vacancy formation, migration energy *(Korean)* 7−84813
BaO-Fe_2O_3 glass, roller quenching prep., heat treatment, crystallisation, EPR, Mossbauer spectra *(Japanese)* 7−69604
$Ba_2YCu_3O_{7-x}$, rapidly quenched high T_c supercond., X-ray studies 7−117870
Bi-Te, alloy production, ultrafast quenching of melt 7−71001
CO-transition metal alloys, cryst. struct., FCC-HP phase transition effects *(Russian)* 7−137313
$Ca_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
$Cd_xHg_{1-x}Te$ crystals, growth using accelerated crucible rotation, quenching obs. 7−113375
Co-Al-C, quenched, polymorphic transform., 1D disordered long period struct. 7−144393
Co-C, martensitic transform., X-ray diffr. 7−144398
Co-Si-B-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
Co-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
$Co_{50}Al_{50}$ alloy films, ordered and disordered, optical props. and ferromagnetism *(Russian)* 7−77669
$Co_{80}Nb_8B_{12}$, rapidly quenched alloy, magnetostriction, depend, on quenching rate, struct. relax. and temp. 7−112917
$Co_{75}Sn_{25-x}As_x(In_z)(Sb_x)$, struct., and struct. transformations, alloying addition effects 7−104641
Cr, amorphous, microstruct., computer expt. 7−111394
Cu-Al-Ni, single cryst., stress-induced martensitic transform. and assoc. pseudoelasticity, effect of heat treatment 7−93011
Cu-Al-Ni alloy ribbon, reversible colour change assoc. with phase transform. 7−78066
Cu-In system, solid-liq. equilib. on Cu-rich side of phase diagram, DTA obs. *(German)* 7−100193
Cu-Mn (20 at.%), ordering and solute segregation to dislocations 7−86184
Cu-Mn-Al, high temp. coeff. of elec. resist., comp. effect *(Japanese)* 7−98979
Cu-Sn liquid rapidly quenched alloys, shape memory effects 7−86301
Cu-Sn(Al)(Zn) alloys, rapidly quenched shape memory alloys 7−86162
Cu-Ti-Zr, Cu-Ti alloys, glass form., competing cryst. structures 7−83738
Cu-Zn-Al, shape memory effects, effect of martensite ordering 7−144486
$Cu_{99.2}Fe_{0.8}$ rapidly quenched alloys, change of mag. props. with heat treatment 7−71329
CuIn dilute alloys, vacancies and precipitation, positron lifetime studies 7−91576
Er-Ba-Cu-O high T_c supercond., metamorphic phases and transition temperatures 7−118637
$ErBa_2Cu_3O_y$ high T_c ceramic supercond., O deficiency, quenching study 7−124538
Fe alloys, corrosion behaviour, structural parameters *(German)* 7−78383
Fe alloys, metastable cryst. and amorphous, prod. by vapour quenching 7−92924
Fe-Al-C permanent mag. alloys, structural characterisation 7−78065
Fe-B amorphous alloys, liq.-quenched, struct. study by Mossbauer spectroscopy and high resoln. electron microscopy 7−76022
Fe-B based metallic glasses, glass transition and crystn. temp., effect of quenching rate 7−76016
Fe-C-Cr-Ni-Si rapidly quenched alloys, solidification struct. 7−144388
Fe-C-P alloys, quench aging process, effect of P 7−86193
Fe-Co-Mo-Cr, damping capacity, mech. and mag. props., corrosion resist. *(Japanese)* 7−106556
Fe-Hf amorphous alloys, Curie temp. shift under hydrostatic press. 7−85299
Fe-Mn, toughness rel. to microstruct. 7−132739
Fe-Nd-B, prepared by rapid solidification, review 7−86093
Fe-Ni alloys, martensitic transform., effect of austenite ordering *(Chinese)* 7−71178
Fe-Ni based 7−86090
Fe-P-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
Fe-Si (4.6 to 6.5 wt.%), solidification process in roller quenching method 7−77989
Fe-Si-Al Sendust alloy ribbons, mag. props., heat treatment effects 7−100399
Fe-Si-B amorphous alloy mag. props. temp. depend. meas. 7−99506
Fe-Ti amorphous and crystalline alloys, elec. and mag. props. 7−84820
Fe-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
$Fe_{80}B_{20}$, amorphous alloy, quench disordered, struct. relaxation under isothermal annealing 7−142620
$Fe_{80.5}Bi_{12}Si_{4.5}C_3$ amorphous alloy ribbon, mag. props., substrate temp. effects 7−100401
$(FeCoNi)_{78}Si_{10}B_{12}$ amorphous alloys, magnetic anisotropy studies 7−99442
$Fe_{78}Cr_2B_{12}Si_8$, amorphous, quenched, annealed, ferromag. reson. 7−112962
$Fe_{40}Ni_{40}B_{20}$, amorphous, quenched, annealed, struct., neutron diffr. 7−83770
$Fe_{40}Ni_{40}P_{14}B_6$, metallic glass, crystn. kinetics under isothermal and nonisothermal conditions 7−76027
$Fe_{40}Ni_{40}P_{14}B_6$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7−92929
FePd, quenched, order-disorder transform. kinetics, microstructure, annealing *(Russian)* 7−113542
$Fe_{1-x}Ti_x$, amorphous alloys, prod. by vap. quenching, thermal stability 7−83671
GaAs, carrier mobility change after quenching and fast electron irradiation 7−76981
Ge-Sn(Pb)(In), rapidly quenched, unusual elec. resist characts. 7−70335
Ho_4Co_3 bulk amorphous alloy, rapid quenching and mag. props. 7−85298
KBr:Ca, quenching, microhardness rel. to impurity doping 7−76284
KCl:S, X-irradiated single crysts., thermolum. and optical absorpt. spectra studies 7−125814
KCl:Sr, Pb, optical spectroscopy of Pb^{2+}, detection of Sr precipitates 7−70945
quenching (thermal) continued
$LiNbO_3$, transparent amorphous films, prep. by ultrafast quenching 7−106457
Li_4SiO_4-Li_3BO_3 glasses, rapidly quenched, Raman spectra studies 7−106176
Li_4SiO_4-Li_3BO_3 glasses, rapidly quenched, mixed anion effect in cond. 7−131363
MgF_2-ScF_3 system, high press. phases 7−91789
Mn-Al-B melt-spun alloys, mag. props. *(Japanese)* 7−125464
Mo single crystals, low temp. fracture, quenching effect 7−113723
$Nb_3(Al,Ge)$ prepared by continuous rapid quenching, high-field superconducting props. 7−77183
$Nb_3(Al,Si)$ prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3Al prepared by continuous rapid quenching, high-field superconducting props. 7−77183
$Nb_3Al_{1-x}Ge_x(Si_x)$ supercond. tape prep. by continuous liquid quenching method 7−132517
NdFeB permanent magnets, coercivity, comp. and heat treatment depend. 7−143853
Ni, lattice vacancies introduced by electron irrad., quenching and cyclic deformation 7−91574
Ni thin films, vacancy redistrib. on quenching 7−98116
Ni-Al intermetallic cpds., vacancy diffusion mechanism, DSC and positron annihilation studies 7−105104
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
Ni-P-B metallic glasses, melt quenched, crystallisation, elec. transport props 7−83758
Ni-Ti, rapidly quenched shape memory alloys 7−86162
Ni-Ti-B glassy alloys, crystn. kinetics and mechanism rel. to eutectic comp. 7−131038
Ni-Zr metallic glasses, props. rel. to melt temp. and quench rate 7−83766
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7−126110
Ni_3Al-B-Fe, microstructs. and mech. props., influence of Fe additions 7−144492
Ni_3C metastable formation during laser irrad. 7−92847
$Ni_{75}Si_8B_{17}$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7−92929
Pb-Se, amorphous ribbon, prep., characterisation 7−144356
Pb-Tl alloy (30 wt.%), upward solidification, thermosolutal convection-induced morphologies of solid-liq. interface 7−100198
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
$Pd_{80}Si_{20}$, amorphous, liq. quenched, cold rolled, SAXS obs. 7−126147
Si, dissolution of transition metal precipitates by rapid thermal processing 7−71219
a-Si:H,P(As), thermally and optically induced metastabilities, EPR obs. 7−124931
Si:O, thermal donors, generation kinetics at 430°C 7−111638
Si:P, shallow donors, influence of quenching 7−71328
TaN, cubic, form. with plasma jet *(Japanese)* 7−119223
Te-Ge-Pb chalcogenide glasses, struct. relaxation, enthalpy changes, DSC study 7−142622
Ti alloys, beta phase, metastable precipitation during isothermal ageing *(Russian)* 7−78018
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7−86283
Ti, commercial quenched at high cooling rates, effect of plastic deform. on strength 7−100285
Ti-Al-V (6, 4 wt.%), H induced cracking rel. to microstruct. *(Japanese)* 7−119346
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7−100307
Ti-Mo alloy, as-quenched omega-phase, structure, HREM studies 7−124169
Ti-Mo-Cr, rolled sheets, texture and struct., β to α transform. 7−144432
Ti-V-Cr-Al alloy, metallurgical condition effect on creep behaviour at 650°C 7−119313
$Ti_{80}Nb_{10}V_{10}$, temp. coeff. of resist., β-phase decomp. effect 7−106517
TiO_2-Al ceramic, electrical conductivity after quenching 7−92180
V_2O_5-Bi_2O_3 glasses, prep. and charactn. 7−111411
W, high temperature vacancy migration enthalpy 7−91575
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567
WO_3-R_2O_3, transparent amorphous films, prep. by ultrafast quenching 7−106457
Y-Ba-Cu-O high T_c supercond., orthorhombic struct., prep. and props. 7−105771
Y-Ba-Cu-O high T_c supercond. transition props., quench temp. depend. studies 7−105772
Y-Ba-Cu-O high T_c supercond., cryst. struct. and supercond. props. 7−111489
Y-Ba-Cu-O high T_c supercond., polymorph phase relations, X-ray studies 7−111827
Y-Ba-Cu-O high T_c supercond., cryst. struct., transforms. and transport props. 7−118629
Y-Ba-Cu-O high T_c supercond., zero resistance temp. and AC Josephson effect 7−118633
Y-Ba-Cu-O high T_c supercond., crystalline phases in melt quenched and annealed samples 7−125189
$YBa_2Cu_3O_{7-\delta}$, high temp. supercond., interrelation of struct., dimensionality and superconductivity 7−131837
$YBa_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$YBa_2Cu_3O_{9-x}$, relationship between processing, struct. and high T_c supercond. props. 7−118670
$YH_x(D_x)$ solid solns., defect study 7−98219
Y_2TiO_5, structural disordering on quenching, Raman spectra 7−99820
$Y_2Ti_2O_7$, structural disordering on quenching, Raman spectra 7−99820
$Yb_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
ZnSe:Ar, molten, props., composition of crystallisation 7−76358
Zr-Ti, struct. after quenching and tempering *(Russian)* 7−71218
ZrN_yH_z, solid solutions, order-disorder phase transformations 7−69892
ZrO_2-Y_2O_3, rapidly quenched, cubic to tetragonal transform., effect of external stress 7−86170

queueing theory
finite queue behaviour with batch Poisson inputs and synchronous servers, routing and buffer sharing effect 7−95285
queueing model with simultaneous service discipline 7−72919

queuing theory *see queueing theory*
R and D management *see research and development management*
R-centres
$Zn_xCd_{1-x}S$ layers, photoelec. and optical props. 7—105619
R waves *see Rayleigh waves*
Racah coefficients *see angular momentum theory*
radar
see also Doppler effect; optical radar
imaging in random media, atmospheric influences 7—139762
remote sensing, operational use *(Dutch)* 7—134031
sensor array, wavenumber estimation using asymptotic statistics 7—110640
radar altimeters *see radioaltimeters*
radar antennas
Chilbolton dual-polarised radar, new developments 7—94417
meteorological radar method, antenna sidelobe effects on multiple-parameter measurements 7—133985
USW active receiving radar antenna for salt deposit location *(German)* 7—115094
radar applications
10 GHz scatterometer for remote sensing 7—107574
35 GHz radar for cloud obs. 7—127522
50 MHz radar wind profilers 7—115021
1986 International Geoscience and Remote Sensing Symposium, conf., Zurich, Switzerland (1986 September) 7—95093
acousto-optic spectrum analyser for laser radar applications 7—75029
active-passive radar, convective clouds integral characts. determ. 7—127519
ageostrophic wind and upper troposphere divergence 7—133872
Airborne Doppler lidar for wind meas., error evaluation 7—127573
Airborne Oceanographic Lidar for ocean waves meas. capabilities, comparison with Surface Contour Radar 7—134000
altimeter techniques for high spatial resolution meas. 7—107588
atmosphere, folded radial vel. rectification to Cartesian space 7—127580
atmosphere eddy dissipation rates determ. from Doppler vel. spatial spectra and Doppler spectrum widths 7—115058
atmosphere use of alternating horizontal and vertical co-polarisation meas. 7—127528
atmosphere-searching laser radar, appls. *(Japanese)* 7—103863
atmospheric aerosol distrib. measurement by laser radar with photomultiplier noise, accuracy improvement *(Japanese)* 7—72202
atmospheric turbulence determ. in mesosphere, radar method 7—101518
atmospheric turbulence meas., contamination by insects 7—127523
bathymetry, meas. by Seasat SAR and Skylab photographs, comparison 7—107586
Chilbolton dual-polarised radar, new developments 7—94417
cloud entrainment meas. using dual-polarization radar and chaff 7—115075
cloud observations using 94 GHz Doppler radar 7—115074
cloud physics, VHF/UHF radar combination appl. 7—114868
Colorado wind profilers at 50, 405 and 915 GHz, altitude coverage 7—133972
conical scannings with two Doppler radars for dynamics assoc. with stratiform precipitation meas. 7—133973
continuous wave Doppler lidar meas. of wind magnitude and direction 7—127520
convective rain volume estimation using area-time-integral radar technique 7—133989
convective storms, Doppler radar sampling limitations 7—127548
convective storms, polarization radar studies of precipitation development 7—127438
deep convective storms, vertical vels., multiple-Doppler radar meas. accuracy 7—114871
digital rain maps from radar, knowledge acquisition for automatic interpretation 7—139818
Doppler radar obs. of atm. phenomena 7—107565
dual polarisation S-band radar for rainfall obs. 7—101562
dual-Doppler lidar measurement of winds in the JAWS experiment 7—127529
dual-Doppler radar use in atm. science 7—127549
E-region, radar auroral heights and Doppler velocities at 398 MHz 7—94554
Earth Observing System, SAR evolution and development 7—115202
ERS-1 nonSAR instruments, processing 7—145721
F-region, ion velocity field kinematic props. determ. using multiple freq. incoherent scatt. technique 7—94487
FM-CW microwave system for snow stratigraphy 7—101561
Fram Strait marginal ice zone, ice and ocean characts. 7—133769
geological remote sensing by radar, discrimination of lava flows from sedimentary rocks 7—79659
Geosat, radar altimeter characts. and results 7—107587
graupel melting studies in convective storms, multiparameter radar meas. 7—79670
gust front characteristics as detected by Doppler radar 7—145700
gust fronts, automatic detect-by radar 7—127575
hail detection in Colorado convective storms, use of multiparameter radar meas. 7—79671
HF ground-wave radar remote meas. of Celtic Sea ocean wave and current, NURWEC 2 project 7—101611
HF radar, wave and current sensing 7—101606
HF radar sea echo interpretation, role of second-order shallow water hydrodynamic coupling coeff. 7—107591
High Plains convective clouds, USA, characts. of radar first echoes 7—94393
high pulse rate lidar boundary layer dynamics meas. via aerosol and smoke obs. 7—127521
Hurricane Alicia (1983), inner core vel. and precipitation struct., airborne Dopper radar meas 7—145606
Hurricane Irene (1981) rainband, struct. and radar reflectivity 7—87858
Hurricane Josephine 1984, ocean swell age and source 7—133746
hydrology, radar reflectivity-rain rate relationships in Brazil 7—133988
hydrometer obs. in light stratiform precipitation 7—127439
Illinois, United States, radar echo studies for weather modification expts. 7—133849
imaging radar polarimetry from wave synthesis in remote sensing 7—107571
incoherent scatter meas., modulation principle 7—134024
incoherent scatter radar use for ion-neutral collision freq. meas. 7—87950
ionosphere, long discrete echoes Doppler spectrum obs. 7—79769
radar applications continued
Kaweah River basin, California, winter orographic cloud seeding radar characts. 7—133936
Kern River basin, California, cloud seeding and radar obs. 7—133935
land altimetry systems evaluation 7—107334
Landsat cloud images and precipitation radar echoes *(Japanese)* 7—107481
laser cloud mapper and its applications 7—75030
laser radar technology, conf., Quebec City, Que., Canada (June 1986) 7—72714
LIDAR, fluorescence, land and sea remote sensing appls. 7—75033
lidar in-space technology expt. from space shuttle 7—75031
M- and S-matrix weather-radar meas., anal. and appl. 7—94418
marginal ice zone, ice conc. estimates, comparison of active-passive microwave sensors 7—101565
marine pollution detection, discrimination between crude oil spills and monomolecular sea slicks by airborne remote sensors 7—114803
mesocyclones and tornadic vortex signatures real-time automated detect. 7—127371
mesocyclonic shear automatic detection using Doppler radar 7—127554
mesopause, summer, background winds and waves struct., bistatic radar obs. 7—139809
mesopause region gravity waves over Adelaide, Australia, MF radar meas. 7—127625
meteor trails, radar obs. rel. to anisotropy of parameters assoc. with mol. processes 7—87989
meteorological radar method, antenna sidelobe effects on multiple-parameter measurements 7—133985
meteorological radar theory, theory of excess bias measurement 7—127588
meteors, radar obs. and detect. rates at different freq. 7—115250
microwave obs. of sea ice and iceberg 7—87980
microwave pulse Doppler radar for wind meas. *(Japanese)* 7—107475
microwave remote sensing of snow-covered sea ice 7—101329
mm-wave network analyser-based scatterometer for remote sensing 7—107573
monogenic function range resolution radar 7—139489
multifrequency polarimetric SAR for remote sensing 7—107572
nadir-looking radar for simultaneous ocean cross section and rainfall meas. 7—115055
NEXRAD advanced weather radar network siting 7—72211
nondivergent environmental winds, single Doppler vel. signature interpretation 7—127578
ocean directional wave spectra, approaches for comparing remote and in-situ meas. 7—133995
ocean internal wave currents, estimation from SAR and IR scatterometer imagery 7—107434
ocean internal wave surface patterns, airborne SAR imagery analysis 7—114800
ocean nearshore tidal and residual circulation, fine struct., HF radar obs. 7—127267
ocean short wavelength fetch-limited wind waves, directional spreading 7—127270
ocean surface current measurement method, using interferometric radar method 7—134015
ocean surface object detection, problem of optimal discrimination in presence of receiver noise 7—87948
ocean wave directional spectra, aircraft remote sensing 7—133996
ocean wave Doppler radar remote sensing, airborne method for wave directions 7—94472
ocean wave parameter remote sensing method, using dual-radar system 7—127513
ocean wave remote sensing, radar Bragg scatt., simulation using wire wave sensor 7—139799
ocean wave remote sensing by radar, method for nonlinear wave parameters 7—94471
ocean waves, multilook images processing by SAR 7—101316
ocean waves energy spectra estimation from SAR imagery 7—133998
ocean waves energy spectra estimation using radar ocean wave spectrometer 7—133999
oceanography, Ocean Surface Current Radar (OSCR) vector meas. on inner continental shelf 7—94243
oil slick detection, appl. of side-looking airborne radar 7—114805
oil spill detection and analysis, results from radar and microwave radiometry 7—114806
optoelectronic fog detectors with continuous sinusoidal modulation, signal backscatter *(Polish)* 7—94510
photogrammetry, digital monoplotting expt. from orbital radar imagery 7—94055
precipitation associated with lightning, Doppler spectra transient changes 7—139689
radio acoustic sounding system, atmospheric wind and temp. meas., range limitation *(Japanese)* 7—79689
radiosonde pressure sensor performance: evaluation using tracking radars 7—139795
rain cell model, propagation appls., expt. background 7—114851
rain measurements, reduction of errors due to melting snow 7—127579
rain patterns, automatic extraction, collection and description for modelling 7—114852
raindrop size distrib. determ. from VHF Doppler radar spectra 7—115081
raindrop velocity, altitude adjustment for Doppler radar analysis 7—127363
remote sensing, results from SLAR mode of dual-mode radar with very low PRF 7—115098
remote sensing by radar, X-band SAR and SIR-C radar systems 7—101665
remote sensing by SAR radar, new satellite instrumentation for land observation 7—101666
remote sensing by satellite radar, SAR systems future requirements 7—101664
remote sensing of Earth surface from satellite, Doppler FM rate theory 7—139789
remote sensing of land and sea, requirement for ground truth studies 7—139788
river flood flow forecasting using microcomputer graphics and radar imagery 7—145557
salt deposit prospecting and mining, ultra short wave radar application *(German)* 7—115094
SAR appls., conf., Frascati Italy (Sept. 1986) 7—80180
SAR data for agriculture and forestry 7—87984
SAR data products simulation 7—87982
SAR for snow and glacier monitoring system 7—87981

radar applications continued
SAR image reconstruction algorithm with complex phase correction *(Japanese)* 7—145720
satellite radar altimetry methods, technique for radar pulse return averaging 7—115045
satellite tracking by radar, general relativity and the radar delay effect *(German)* 7—79693
scanning lidar bathymeter for water depth measurement 7—79368
sea ice, SAR automated remote sensing 7—101566
sea ice, surface roughness meas. *(Japanese)* 7—107428
sea surface backscatter, meas. at extremely low grazing angle by C-band Doppler radar 7—107438
sea wave measurements using ship radar, directional wave spectrum determ. 7—107437
Seasat microwave altimeter meas. of ocean gravity wave equilib.-range spectral behaviour 7—107590
Seasat SAR and Landsat TM data, merging process 7—107561
secondary image products for radar imagery interpretation 7—101582
short surface wave propag. on longer gravity waves 7—87662
side-looking radar for remote sensing, imaging geometry and errors 7—133947
SIR-B data use for ocean wave spectra estimation 7—134001
SIR-B ocean-wave enhancement with fast Fourier transform techniques 7—134002
SIR-B SAR, case study of Agulhas Current, extreme waves and wave-current interactions 7—133747
SIRIO satellite and radar data for raindrop size estimation 7—114850
SIRIO SHF experiment, radar simulation and bistatic link, rain scatter interference results 7—114853
spaceborne distributed aperture-coherent array processing technology in remote sensing 7—107569
spaceborne imaging radar for the 1990s 7—133997
spaceborne modest resolution radars for remote sensing 7—107570
spaceborne remote sensing, conf., Baltimore, USA (April 1986) 7—128175
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7—134003
Spectrasat radar ocean-wave spectrometer, design and operation 7—134004
Spectrasat radioaltimeter/SAR instrument design and processing of data 7—134005
Spectrasat system, design for ocean waves meas., assoc. communications and ground support 7—134110
STAR-1 SAR data and digital terrain mapping 7—107563
storm over England and Wales, 1986 November 20-21, Meteosat and radar rainfall imagery interpretation 7—79524
storms, radar reflectivity and surface rainfall correlation 7—145643
sub-polar glaciers in Spitsbergen, airborne radio echo sounding 7—72116
Surface Contour Radar, wave meas. capabilities, comparison with the Airborne Oceanographic Lidar 7—134000
Surface Contour Radar for wave meas., capabilities comparison with Airborne Oceanographic Lidar 7—134000
surface ship wakes at sea, anal. of synthetic aperture radar imagery 7—107436
thunderstorms, lightning location rel. to storm struct. in supercell storm and multicell storm 7—114922
topography mapping from SIR-B stereo radar images 7—107562
triple-Doppler radar use for convective storms obs. 7—127550
tropical convective clouds, radar echo zones vertical profiles *(Russian)* 7—101386
tropopause height determination, VHF radar method 7—127591
tropopause height determination, VHF radar methods 7—127599
turbulence profile determ. method for atmospheric boundary layer 7—127597
Venus, geology of S Ishtar Terra and Guinevere and Sedna Planitiae from Arecibo radar images 7—134159
Venus, relief and geology of north polar region from radar survey 7—88158
vertical air vels. from VHF Doppler radar spectra 7—115081
VHF Doppler radar spectra use for vertical air vel. and drop size distrib. 7—133967
wave meas. at sea using radar *(German)* 7—139808
weather Doppler radar for snowfall obs. *(Japanese)* 7—114925
weather radar reflectivity images, spatial and temporal anal. 7—114987
weather radar systems, sensitivity 7—133974
West Africa, tropical squall line, thermodynamic and kinematic struct., dual Doppler radar obs. 7—127420
wind, comparison of meas. by radar and Navaid windfinding systems 7—127585
wind profiling techniques using radar, accuracy 7—139794
wind shear detection at low altitude using Doppler radar 7—133986
wind shear recognition using Doppler radar 7—115072
CO_2 laser radars, optical resonator design 7—75027

radar clutter
dual polarisation scattering matrix radar rain backscatter meas. eval. in X and Q bands 7—94410

radar cross-sections
first echoes of convective clouds in High Plains, characts. 7—94393
Kaweah River basin, California, winter orographic cloud seeding radar characts. 7—133936
Landsat cloud images and precipitation radar echoes *(Japanese)* 7—107481
laser radar cross section of Earth atmosphere objects, theory and numerical results 7—79599
SAR data for agriculture and forestry 7—87984
SAR data products simulation 7—87982
tropical convective clouds, radar echo zones vertical profiles *(Russian)* 7—101386
weather radar reflectivity images, spatial and temporal anal. 7—114987
weather radar systems, sensitivity, signal processing effects 7—133974

radar echo areas *see radar cross-sections*

radar equipment
1986 International Geoscience and Remote Sensing Symposium, conf., Zurich, Switzerland (1986 September) 7—95093
DFVLR side-looking airborne radar, appl. to marine oil slicks detect. 7—114805
ERS-1 altimeter, automatic tracking mode switching algorithm 7—101663
ERS-1 radar altimeter, performance, calibration, and data validation 7—101662
ERS-1 satellite, development status of payload instruments 7—101660

radar equipment continued
ERS-1 sensors, ESA approach for calibration and performance verification 7—101491
ERS-1 wind scatterometer, on-ground verification and in-orbit performance prediction 7—101661
ERS-1 wind scatterometer design 7—101584
ERS-1 wind scatterometer system simulator, ground processing design 7—101585
radar scatterometers, appl. to X-band and L-band backscatter meas. of agricultural crops, forest stands, and single trees 7—107583
satellite radar altimetry methods, technique for radar pulse return averaging 7—115045
ship's radar, appl. to ocean waves directional spectrum meas. 7—107437
spaceborne radar scatterometer system configuration, from NASA, simulation on NROSS 7—115119
USW active receiving radar antenna for salt deposit location *(German)* 7—115094

radar interference
see also radar clutter
microwave SAR degradation effects of rain 7—114991

radar measurement
Airborne Doppler lidar for wind meas., error evaluation 7—127573
atmosphere, folded radial vel. rectification to Cartesian space 7—127580
atmosphere eddy dissipation rates determ. from Doppler vel. spatial spectra and Doppler spectrum widths 7—115058
atmosphere precipitation remote sensing, anal. of dual-wavelength surface reference radar techniques 7—127500
atmospheric temperature and wind profile, acoustic, wavefront anal. 7—94523
BMRC Australian Monsoon Experiment (AMEX), background, objectives and operations 7—79491
Chilbolton dual-polarised radar, new developments 7—94417
directional wave spectra, approaches for comparing remote and in-situ meas. 7—133995
dual-Doppler lidar measurement of winds in the JAWS experiment 7—127529
forest stands, L-band radar backscatter modelling 7—127502
geophysical prospecting, microprocessor-based data acquisition system for borehole radar 7—127477
gust fronts, automatic detect-by radar 7—127575
hailstones, simulated, radar technique for meas. of rot. props. of falling oblate ice spheroids 7—127569
HF ground-wave radar remote meas. of Celtic Sea ocean wave and current, NURWEC 2 project 7—101611
interference detection and correction applied to *D* region incoherent scatter radar power spectral measurements 7—101546
M- and S-matrix weather-radar meas., anal. and appl. 7—94418
mesocyclonic shear automatic detection using Doppler radar 7—127554
meteorological radar theory, theory of excess bias measurement 7—127588
microwave pulse Doppler radar for wind meas. *(Japanese)* 7—107475
ocean internal wave parameters estimation, appl. of backscattered radio signals *(Russian)* 7—145489
ocean wave directional spectra, aircraft remote sensing 7—133996
peak-detecting laser radars, performance anal. 7—75022
precipitation intensity measurement, appl. of radar data for planning of artificial augmentation of precip. 7—139706
propagation-differential phase shift determ. from sequential orthogonal linear polarisation radar meas. 7—127528
radarclinometry, line integral approach 7—94457
rain cell model, propagation appls., expt. background 7—114851
rain data analysis, functional box-counting and multiple elliptical dimensions for radar data 7—114979
rain patterns, automatic extraction, collection and description for modelling 7—114852
remote sensing, high-speed image processing system based on custom VLSI for DSP 7—115116
remote sensing, ISAR as new concept for high-precision digital SAR processing 7—115115
remote sensing, performance, calibration, and data validation of ERS-1 radar altimeter 7—101662
remote sensing, realtime SAR processor for C and X-band appls. 7—115114
remote sensing, SAR-580 data processing method in Japan 7—115113
remote sensing, very fast SAR signal processor for ERS-1 and Radarsat 7—115117
remote sensing, X-band and L-band backscatter meas. of agricultural crops, forest stands, and single trees 7—107583
remote sensing of continental cumulus clouds, obs. of echoes from seeded and nonseeded clouds 7—145628
SAR data for agriculture and forestry 7—87984
SAR imagery of ocean bottom topography, results from improved model 7—107580
SAR observations of ocean wave refr. patterns, improved method for water depth determ. 7—107581
SAR radar data correl., appl. of knowledge based processing system 7—79710
satellite radar altimetry methods, technique for radar pulse return averaging 7—115045
sea bottom radar imaging, implications of surface currents obs. at Nantucket Shoals 7—107435
sea ice monitoring, microwave backscatter coeffs. of artificially-grown first-year ice 7—101330
sea ice monitoring, operational SAR data collection and dissemination plans for ERS-1 data in Canada 7—101331
sea ice sensing, shipborne interface system (STAR-VUE) for tactical ice navigation 7—115118
sea surface scatterometry, radar scattering and equilibr. ranges in wind-generated waves 7—114739
single Doppler velocity signature interpretation of nondivergent environmental winds 7—127578
SIRIO SHF experiment, radar simulation and bistatic link, rain scatter interference results 7—114853
soil moisture sensing, parameterisation of effect of surface roughness on microwave emission 7—127218
Spectrasat radar ocean-wave spectrometer, design and operation 7—134004
tropical convective clouds, radar echo zones vertical profiles *(Russian)* 7—101386
tropical station, disdrometer dropsize meas., rainfall parameters 7—79485
turbulence profile determination method, using Doppler radar 7—127597

adar measurement continued
weather Doppler radar for snowfall obs. *(Japanese)* 7—114925
Na atmospheric layer, theoretical review, laser-radar meas. 7—79726

adar stations
automatic meteor track radar system and station design *(Russian)* 7—79687

adar systems
35 GHz radar for cloud obs. 7—127522
aerospace applications, conf., Vail, CO, USA (Feb. 1987) 7—108042
airborne SAR imagery analysis, ocean internal wave surface patterns 7—114800
atmosphere eddy dissipation rates determ. from Doppler vel. spatial spectra and Doppler spectrum widths 7—115058
atmospheric temperature and wind profile, acoustic, wavefront anal. 7—94523
borehole radar, microprocessor-based data acquisition system 7—127477
Chilbolton dual-polarised radar, new developments 7—94417
Colorado wind profilers at 50, 405 and 915 GHz, altitude coverage 7—133972
conical scannings with two Doppler radars for dynamics assoc. with stratiform precipitation meas. 7—133973
Earth Observing System, SAR evolution and development 7—115202
eigenvectors and high resolution 7—97227
HF ground-wave radar remote meas. of Celtic Sea ocean wave and current, NURWEC 2 project 7—101611
HF radar, wave and current sensing 7—101606
imaging radar polarisation signatures 7—134023
M- and S-matrix weather-radar meas., anal. and appl. 7—94418
meteors, radar obs. and detect. rates at different freq. 7—115250
microwave obs. of sea ice and iceberg 7—87980
microwave pulse Doppler radar for wind meas. *(Japanese)* 7—107475
mm-wave network analyser-based scatterometer for remote sensing 7—107573
modest resolution radars, spaceborne for remote sensing 7—107570
nadir-looking radar for simultaneous ocean cross section and rainfall meas. 7—115055
ocean surface current measurement method, using interferometric radar method 7—134015
Ocean Surface Current Radar (OSCR), appl. to vector meas. on inner continental shelf 7—94243
ocean waves, multilook images processing by SAR 7—101316
rain patterns, automatic extraction, collection and description for modelling 7—114852
real aperture radars, airborne, appl. to discrimination between crude oil spills and monomolecular sea slicks 7—114803
remote sensing, results from SLAR mode of dual-mode radar with very low PRF 7—115098
remote sensing by radar, X-band SAR and SIR-C radar systems 7—101665
remote sensing by SAR radar, new satellite instrumentation for land observation 7—101666
remote sensing by satellite radar, SAR systems future requirements 7—101664
SAR appls., conf., Frascati Italy (Sept. 1986) 7—80180
SAR data for agriculture and forestry 7—87984
SAR data products simulation 7—87982
SAR for snow and glacier monitoring system 7—87981
SAR imagery, geological feature enhancement 7—87983
SAR radar data, knowledge based processing system 7—79710
sea ice data downlink, shipborne interface system (STAR-VUE) for tactical ice navigation 7—115118
SIR-B ocean-wave enhancement with fast Fourier transform techniques 7—134002
spaceborne distributed aperture-coherent array processing technology in remote sensing 7—107569
spaceborne imaging radar for the 1990s 7—133997
spaceborne radar scatterometer system configuration, from NASA, simulation on NROSS 7—115119
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7—134003
Spectrasat radar ocean-wave spectrometer, design and operation 7—134004
turbulence profile determination method, using Doppler radar 7—127597
weather Doppler radar for snowfall obs. *(Japanese)* 7—114925
weather radar systems, sensitivity 7—133974

adar telescopes *see radiotelescopes*

adar theory
atmospheric temperature and wind profile, acoustic, wavefront anal. 7—94523
bistatic power scattering matrix props. for stable object in characteristic orthogonal polarisation basis 7—141768
dual polarisation scattering matrix radar rain backscatter meas. eval. in X and Q bands 7—94410
full wave solutions for rough surface scatt. and depolarisation 7—117127
geometrical inversion for a scattering curve 7—80522
imaging radar polarisation signatures 7—134023
laser radar cross section of Earth atmosphere objects, theory and numerical results 7—79599
M- and S-matrix weather-radar meas., anal. and appl. 7—94418
matched-filter envelope detector deflection performance for a correlated phase channel 7—123311
meteorological radar theory, theory of excess bias measurement 7—127588
monogenic function range resolution radar 7—139489
nanosecond pulse propagation, pulse compression due to O_2 absorpt. lines 7—127356
optoelectronic fog detectors with continuous sinusoidal modulation, signal backscatter *(Polish)* 7—94510
passive localization algorithm and its accuracy analysis 7—123339
peak-detecting laser radars, performance anal. 7—75022
plane with discontinuities, raised source, propagation and scatt. anal., ground-wave radar appl. 7—110213
propagation-differential phase shift determ. from sequential orthogonal linear polarisation radar meas. 7—127528
raindrop velocity, altitude adjustment for Doppler radar analysis 7—127363
SAR appls., conf., Frascati Italy (Sept. 1986) 7—80180
SAR imagery, geological feature enhancement 7—87983
satellite radar altimetry methods, technique for radar pulse return averaging 7—115045

radar theory continued
satellite tracking by radar, general relativity and the radar delay effect *(German)* 7—79693
sea surface scatterometry, radar scattering and equilibr. ranges in wind-generated waves 7—114739
side-looking radar for remote sensing, imaging geometry and errors 7—133947
triangulation ranging, time delay meas. errors modelling by conditional beta density functions 7—123341
tropical station, disdrometer dropsize meas., rainfall parameters 7—79485
weather radar interlaced scanning strategy 7—115087
weather radar systems, sensitivity, signal processing effects 7—133974

radiance *see brightness*

radiation
see also atmospheric radiation; beta-rays; cathode rays; cosmic background radiation; electromagnetic waves; heat radiation; radiation effects; radiative transfer; stellar radiation
plasma column, confinement, Troesch's problem 7—75866
Ti, spectral emissivity meas., polymorphic transformations effect 7—137599
TiI_4, spectral emissivity meas., polymorphic transformations effect 7—137599

radiation belts
burst precipitation in nighttime slot region 7—107627
electron acceleration in Earth's radiation belts 7—101635
electron-positron component, meas. with Mariya spectrometer 7—101647
inner radiation belt protons, low-altitude dose meas. 7—114507
ions of ionospheric origin, trajectories 7—115173
outer radiation belt electrons, low-altitude dose meas. 7—114507
precipitated protons passage through atm. 7—88002
precipitation of ions from magnetopause current sheet 7—115174
relativistic electron flux, intensity vars. at orbit of geostationary satellite *(German)* 7—134093
review of recent research 7—127649
South Atlantic Anomaly, fluxes of electrons with E>10 MeV and protons with E=400 to 1200 MeV *(German)* 7—134060
storm-time ring current, energetic neutral atom image 7—127640

radiation biology *see biological effects of radiation*

radiation chemistry
see also chemical effects of nuclear reactions and scattering; photolysis; radiochemistry; radiolysis
alkane radical cations, in hydrocarbon matrices, γ-irrad., ESR and electronic spectra 7—109959
boiling water reactor, H injection, rel. to radiation chemistry 7—89632
conference, Marianske Lazne, Czechoslovakia, (1986) 7—66824
cyanamide, ionising radiation effects, radical form., ESR study 7—78519
diacetylene crystal, irradiated, inherent phase transition and polymerisation mech. 7—86622
diacetylene films, ion beam induced polymerisation 7—93318
diacetylenes, polymerisation in the frozen state by UV or high energy beam irradiation 7—71491
dimethyl cyanamide, ionising radiation effects, radical form., ESR study 7—78519
isopolymolybdates in glassy aqueous solutions, radiation reduction 7—106812
isopolytungstates in glassy aqueous solutions, radiation reduction 7—106812
layered phosphates, modification by low-energy ion bombardment, chemical factors 7—93307
methane, solid deuterated, delayed emission of H_2 from ion bombardment 7—93350
phosphonates, photolysis products, mass-spectrometry 7—126470
PMMA, electron resists evaluation, mass loss meas. 7—100595
PMMA, ultralow dose effects in ion-beam induced grafting 7—93351
poly(MMA-co-t-BMA), electron resist., electron beam sensitivity and chain scission efficiency 7—106807
polyatomic molecules, dissoc. attachment and radiation chem. stability 7—93348
polyethylene, irradiated, radiation oxidised layer thickness evaluation *(Russian)* 7—139031
polyethylene film, post-radiation grafting of styrene, polystyrene distrib. *(Russian)* 7—86652
polymers, ion beam induced chemical changes, SIMS studies 7—86651
polyolefin electron-beam cross-linking using cross-linking reinforcing agents 7—106816
polyphenylene oxide, laser irrad., dynamic thermal field creation in surface layers, chem. transform. 7—137400
polystyrene, ion bombarded, molecular weight distribution and solubility changes 7—91667
polystyrene gel, induced by ion and electron bombardment, XPS study 7—93397
polyvinylidene fluoride, high energy O ion irradiation, electronic and struct. modification 7—91668
radwaste, near-field modelling of chemical and transport processes 7—103269
rubber, natural, γ-irradiation cross-linked, solid-state ^{13}C NMR obs. 7—106805
saccharides, γ-irradiated, subjected to post-irradiation ultrasonic treatment, lyoluminescence obs. 7—144132
tetracosane-tetracosane-d_{50}, solid, γ-irrad., isotope exchange study 7—126467
tetrafluoroethylene, low-temp. radiation-induced postpolymerisation, kinetics *(Russian)* 7—86626
water, org. impurities destruction methods, UV illuminated TiO_2 and ^{60}Co γ-ray methods 7—100765
Cu, dissolution in radiation environments 7—106715
Na_2O-SiO_2 glass, radiation damage and annealing for radwaste 7—103267
P radical cations, form. by radiation chemistry, electronic struct., ESR spectra anal. 7—68369
SiO_2:H, doping by ion beam enhanced hydration 7—91451
T form. and chemical behaviour in molten LiF-BeF_2 mixture 7—81710

radiation counters *see counters*

radiation damage *see radiation effects*

radiation decontamination
ALARA philosophy to respiratory protection for TMI cleanup 7—103294
brickwork and rendered surfaces, radioactive decontamination *(German)* 7—135682
BWR, decontamination of recirculation/water cleanup systems 7—135517

radiation decontamination continued
Can-Decon dilute chemical decontamination process tests 7−73995
Candeco process for decontamination of reactor heat transport systems 7−135518
Chernobyl accident, fallout, radiation decontamination of lorry and particle anal. *(German)* 7−109458
conference on nuclear power plant operation, Chicago, USA, Aug. 1987 7−134357
Douglas Point reactor, decontamination of heat transport system, brief results 7−135518
Hermes isotope separation facility, cleaning up alpha contamination 7−135677
Johnston Atoll, transuranium-element-contaminated soil cleanup 7−106943
LWR, selected decontamination methods, effectiveness and safety aspects 7−89678
LWR chemical decontamination using the CAN-DECON process, corrosion data 7−74015
LWR films, chemical decontamination, mass transfer model 7−129452
LWR radiation field control, recent developments 7−67953
Muhleberg BWR, chemical decontamination of recirculation loops *(German)* 7−116720
nuclear plant decontamination methods and their development, Paks appl. *(Hungarian)* 7−81580
nuclear power plant component decontamination by ice-blasting *(Japanese)* 7−129446
nuclear power plant out-of-core radiation reduction 7−89786
nuclear power stations, CORD process chemical system decontamination 7−135519
nuclear power stations, electrochemical decontamination process 7−135519
Pickering Units 1/2, decontamination of heat transport system, brief results 7−135518
reactor fueling machine, dose reduction following chemical decontamination 7−135679
reactor fuelling machines, decontamination using oxalic peroxide gluconic solution 7−96400
residual waters, depollution on ceramic materials 7−89732
reusable metallic radwaste, decontamination procedures *(German)* 7−135673
selection criteria and requirements for floors in nuclear plants *(German)* 7−74206
shutting-down and disposal of nuclear plants *(German)* 7−141262
soil, transuranic decontamination, radiation monitoring 7−106944
TMI 2, auxiliary and fuel handling buildings, Kelly Decontamination System 7−103166
TMI 2, dose reduction in support of defueling 7−103165
TMI-2, post-accident chemical decontamination processes 7−74023
TMI-2 protective coatings, contamination and decontamination experience 7−129456

radiation detection and measurement
see also alpha-particle detection and measurement; beta-ray detection and measurement; coincidence techniques; electron detection and measurement; gamma-ray detection and measurement; hyperon detection and measurement; meson detection and measurement; muon detection and measurement; neutrino detection and measurement; neutron detection and measurement; particle detectors; proton detection and measurement; radioactivity measurement
algorithm for portable survey instrument 7−68025
averaged Quittner methods for peak area computation *(Chinese)* 7−89888
background radioactivity in a salt mine in Remolinos *(Spanish)* 7−81895
CDF forward/backward hadron calorimeter using proportional tubes 7−68131
Commodore 64 for upgrading radiation detectors 7−88803
confidence levels, Bayesian instead of classical approach 7−109669
cylindrical particle detectors, algorithms for scatt. radiation forcing 7−122319
electromagnetic cascade production in lead by 2.5 GeV bremsstrahlung 7−129531
electron dose determination by ethanol-monochlorobenzene dosimeter 7−68028
environmental radiation meas., instrumentation and techniques 7−107551
environmental radiation surveillance, radiochemical and instrumental methods 7−106953
external bremsstrahlung production in thick target material 7−77678
fibre scintillators coupled to a multianode photomultiplier as a high rate tracking detector 7−68134
fission cross sections, determ. using fragment angular distribution meas. by jump spark counter technique 7−74384
fission track method, automatic meas. for uranium exploration *(Chinese)* 7−109646
flexible nuclear counter for an introductory physics laboratory 7−80257
folded radiation spectrum, numerical method for soln. of Fredholm integral eqn. 7−74386
gas-discharge detectors for diagnosis of meas. apparatus, use of corona discharge 7−109649
hadron calorimeter with proportional tubes and pad readout 7−68132
high rate proportional chamber, operation and appls. 7−68135
hodoscopic hadron and photon scintillation calorimeters, radial distrib. of shower energy release 7−81903
ionising radiation meas. and standards, health and safety aspects 7−101095
large detector capacitances, transformer ratio for low noise preamplifiers 7−109661
low background telescope system for $^{12}C(n,\alpha)$ meas. 7−81891
MCP detector for ions and neutrals, absolute efficiency 7−81860
micro correlations propagation to macro correlations 7−109671
microchannel plates system for photons and particles counting 7−121296
Omega Spectrometer ring imaging Cherenkov detector, detector modifications and event anal. 7−68130
pattern recognition in high-energy physics 7−96486
PETRA, short-lived particle meas., detectors and anal. techniques 7−135788
photon field reconstruction, whole-energy spectrum method 7−122318
polystyrene absorbed-dose-rate calorimeter 7−89784
primary cosmic rays, energy spectrum meas., range 2.9×10^{14}-4.0×10^{15} eV, Cherenkov radiation meas. *(Chinese)* 7−107679
radiometric calorimeters, use in glovebox environment 7−103342
recent developments in γ-ray and charged particle detectors 7−89868

radiation detection and measurement continued
simple gas transport system used in the decay study of short lived nucl *(Chinese)* 7−89872
superconducting grain based radiation detector 7−129535
supermassive charged particle detection, extremely slow proton electroni excitation 7−129534
TCAPM fission cross section meas., CAMAC data acquisition system an data anal. 7−81909
telescope coincidence and ang. correlation expts., numerical method fo G-factor calcs. 7−109668
TOPAZ barrel calorimeter, performance test 7−81859
unfolding of spectra, iterative methods 7−109672
vertex detection and tracking at future accelerators, vertex reconstructio 7−96485
weighted averaging of equivalent data points, covariance matri 7−109670
(n,f), 8.5-19 MeV, associated particle identification in TCAPM cross se tion meas. 7−81905
$^{59}Co(^{3}He,d)$, inclusive of spectra, influence of detector geometry o breakup observables 7−121875
^{3}H-in-water monitoring, current status 7−81610
Pb-liquid Ar calorimeter for FNAL E653, design, operation, ana 7−68133
T measurement using liquid scintillation spectrometer *(Czech)* 7−116800

radiation detectors *see particle detectors*

radiation dosimetry *see dosimetry*

radiation effects
see also acoustic wave effects; alpha-particle effects; beta-ray effect biological effects of radiation; deuteron effects; electron beam effect gamma-ray effects; hyperon effects; ion beam effects; irradiation induce creep; laser beam effects; meson effects; neutron effects; proton effect radiation chemistry; radiation hardening; voids (solid); X-ray effects
accelerator techniques to study irrad. damage 7−73826
accelerators in research and industry, conf., Denton, TX, USA (No 1986) 7−88733
adsorption-irradiation processing, radiolysis in the adsorbed state app 7−93352
alloys, irradiated, interstitial diffusion of metallic solutes 7−91880
alloys, irradiation induced effects 7−69746
alloys, microstructural evolution in fusion reactor environments 7−68007
alloys, ordered, low-temperature radiation damage, kinetics 7−142824
alloys, phase microstructure, evolution during irrad. 7−69744
alloys, radiation-induced structural instability, spatial ordering 7−76114
amides, UV irrad., gas-free radical reaction, EPR obs. 7−92492
anatase, hydrated, UV irrad., EPR obs. 7−138314
anode wire aging meas. and possible remedies 7−74356
bimolecular reaction kinetics in condensed media with irradiation, statist cal theory 7−100512
borosilicate glasses, photochromism model 7−132216
ceramic, metamict, heavily irradiated, stored energy 7−142822
chalcogenide glasses, photoelectronic properties, changes induced by chem ical doping, irradiation and thermal history 7−143523
chalcogenide glasses, photoinduced changes in struct., optical and mec props. 7−142823
comb block copolymers, radiation effects 7−91645
comet nucleus, radiation formation of non-volatile crust 7−88318
conf. on fusion technology, Avignon, France, Sept. 1986 7−120706
crystal-impurity system, radiation defects, damage rate and annealin 7−91643
dimensional changes in solids, in situ meas. by capacitance dilatomet 7−121070
dislocation loops, radiation-induced generation by inclusions 7−137391
dislocation structure, irradiated, spatial instability 7−105146
dislocations, book 7−72738
disordered materials, radiation shake mechanism 7−84351
displacement-induced point defect conc. and flux fluctuations, cascade di fusion theory 7−104814
elastic field interaction of point defects with spherical sinks under irradi tion 7−69737
embrittlement due to He, irrad. induced mechanisms 7−69745
energetic displacement cascades and radiation effects 7−104811
ferritic alloys, irrad., dimensional stability, strength, toughness, fusio reactor appl. 7−103170
fracture processes, effects of irrad. and segregation 7−69747
freely-migrating defect production during irradiation 7−104812
gas (polytropic), concentric shock wave, radiation effects *(Polis* 7−130742
glass, refractive index gradient form. by light radiation 7−77496
graphite, irradiation, annealing, struct., physical props. 7−142821
hard ionising radiation effects on KLR-1.1 glass, linear expansion coef standard 7−121063
heterogeneous and solid-phase reactions, seminar, Zenigorod, USSR (Ma 1985) 7−134344
HLW management, Japanese safety research from April 1985 to Marc 1986 7−81733
II-IV-V_2 semicond. cpds., radiation defects, survey 7−111648
imbalanced vacancies, relaxation process, mutual diffusion investi 7−91578
impure crystals, irrad., periodic dissipative defect struct. form. 7−76112
intense vaporisation, concentrated energy flux screening, instabiliti 7−137533
interface perturbations, during phase transitions, effects of inten monochromatic radiation 7−76364
ionic crystals, strength, induced anisotropy 7−124382
irradiated materials, crack tip stress intensity factor rel. to voids, bubbl and microcracks 7−106609
liquid inclusions in irradiated crystal, spontaneous migration 7−124602
low index surfaces, field emission parameters, combined field and phot field emission method 7−106387
LWB pressure vessels, radiation damage dosimetry, exptl. methods *(Ge man)* 7−129447
mechanical props. rel. to microstructure under fusion irrad. condition workshop, Ebeltoft, Denmark (June-July 1985) 7−66823
metallic alloys, radiation amorphisation, point defect introduction an migration, mol. dynamics simulation 7−104816
metallic glasses, formation, methods and techniques 7−143011
metals, BCC radiation damage, point defect models 7−91642
metals, cubic, formation and evolution of dislocation structures durin irradiation 7−76201
metals, irradiated, 1/f noise due to 1D-migrating defects 7−98125

radiation effects continued
metals, irradiated, new phase nuclei, point defect instability *(Russian)* 7−98458
metals, irradiation in stressed state, point defect conc. in void vicinity 7−142764
metals, primary rad. damage caused by high-energy particles, struct. 7−84016
metals and alloys, cascade collapse to vacancy loops 7−104813
metals and alloys, He embrittlement mechanism 7−126238
metals and alloys, point defects, conf., Berlin, Germany (Sept. 1986) 7−88731
microelectronics and microdosimetry 7−91644
mirrors, smooth, damage documentation, scatterometer appl. 7−141963
multi-layer media, bremsstrahlung energy deposition, ZTRAN code anal., exptl. comparisons 7−91679
nematic mixtures, near-UV photostability 7−77488
noncrystalline solids, irradiation induced processes, mechanisms and kinetics 7−69749
nuclear component safety, strain gauge meas., radiation effects *(German)* 7−135498
optical fibres, ionising-radiation hardness, testing and standards 7−123258
optics in adverse environments, conf., Albuquerque, NM, USA (Feb. 1987) 7−102023
oriented single crysts., photon stimulated pair prodn. calcs. 7−111647
phase stability under irradiation, disordering, diffusion, segregation and precipitation 7−104815
photo-induced struct. changes, theory 7−85559
photostimulated surface reconstruction, oscillatory effects 7−70050
PMMA, radiation-induced charge effects in insulation 7−70705
polyacrylamide, UV irrad., gas-free radical reaction, EPR obs. 7−92492
pore lattice as dissipative structure 7−84022
primary knock-on atom spectrum, importance for rad. damage simulation 7−69741
processing, dosimetry appls. 7−68027
pulsed irrad., effect on microstructural evolution 7−69748
quartz, synthetic, vac. UV radiation induced defects, optical adsorpt., photoluminesc. and thermoluminesc. meas. 7−119043
Rabbit capsule, irradiation and design techniques 7−89857
radioactive waste, crystal chemical incorporation in ceramics, valence, location, radiation damage, hydrothermal durability 7−135659
Raman spectra, at reversible photostimulated transformations *(Russian)* 7−119018
rectangular enclosures, radiation induced convection analysis 7−137038
relativistic particle multiple scatt. in external mag. fields 7−98230
ruby:Cr^{3+}, colour centre charge modification under UV irrad. *(Russian)* 7−124266
semiconductor defects, conf., Paris, France (Aug. 1986) 7−95080
semiconductor interface structures, surface enhanced radiation ordering 7−104809
semiconductor surface barrier structures, getter mechanism of defects 7−125115
semiconductor-metal system, photodoping process modelling, three-layer struct. and optical consts. *(Russian)* 7−137384
semiconductors, amorphous, conference, Balatonszeplak, Hungary (Sept. 1986) 7−80153
semiconductors, disordered, radiation resistance mechanism, immediate defect effects 7−124106
semiconductors, photostimulated lattice defect clustering induced by interaction with recomb. centres 7−104810
semiconductors and nonmetals, radiation physics, conf., Tashkent, USSR (Oct. 1984) 7−101997
semiconductors with defects, implanted ion conc. profiles, radiation-induced redistribution 7−83998
Si irradiated crysts., defect triplet centres, spin-depend. photocond. and optical nuclei polarisation study 7−98818
solid surfaces, radiation 7−69750
stability criteria for phases under irradiation 7−117968
steel, austenitic and martensitic, irradiation effect on tensile and impact parameters 7−141280
steel, austenitic stainless, fatigue and crack growth props. for fusion appls. 7−71286
steel, Cr-Mo-V(-Ni), reactor press. vessel, delayed fracture, influence of H 7−138838
steel, pearlitic, irrad., residual elec. resist., recovery following annealing *(Russian)* 7−112294
steel, stainless, irrad., residual elec. resist., recovery following annealing *(Russian)* 7−112294
swelling, analytical equations develop. 7−69752
Tsuruga BWR fuel, post-irradiation exam. at JAERI, creep and swelling tests *(Japanese)* 7−96180
$YBa_2Cu_3O_{9-x}$, AC Josephson effect obs. 7−99343
Ag-Se-S(Te) chalcogenide glasses, selective solubility 7−105048
AgCl-Ag thin films, light induced periodic structures 7−124763
Al-Mn, quasicrystalline-amorphous structural transition, temp. and radiation dose depend. calcs. 7−124100
As-S (Se) amorphous chalcogenide films, mech. props., photoinduced changes 7−84607
As-S system, bond distribution 7−76008
As-S vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
As-Se vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
a-As_2S_3, glassy, relationship between photodarkening and ESR 7−143899
As_2S_3:Ag submicron resolution optical grid, Ag photodiffusion study 7−105120
a-As_2S_3/metal structure, photodissolution processes 7−84286
As_2S_3-Zn, photostimulated change in Zn deposition rate 7−100077
As_2S_x:Ag, photoenhanced dissolution and diffusion 7−84393
As_2Se_3 glassy films, SAW propag. vel. and elastic consts., photo-induced variations study *(Russian)* 7−85593
As_2Se_2, amorphous, computer-assisted modelling of photostructural transformations 7−104569
$(Ba,Cs)_xAl_{2x}Ti_{8-x}O_{16}$ synthetic hollandite, ^{137}Cs immobilisation, radiation damage effects following β decay 7−142841
CO adsorbed on Ru(001), comparison of neutral to ionic photodesorption in valence region 7−118244
$Cd_xHg_{1-x}Te$, interaction of point defects caused by irradiation 7−84012
Cr-Ni-Mo steel metallurgy for VVER-1000 reactor manufacture 7−135424
CsI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516

radiation effects continued
Cu_3Au FCC alloys, recovery stages after high energy irradiation, ordering through vacancies, interstitials and crowdions 7−104737
α-Fe, radiation point defect instability zones near edge dislocation 7−117966
Fe_xO_y, radiation promoted dissolution in mineral acids 7−69919
GaAs, EL2 quenching behaviour, IR transmission images 7−99841
GaAs, electron and heavy particle bombardment induced defects, electron hopping model calcs. 7−99060
GaAs, IR study of persistent carriers generated during EL2 defect bleaching 7−99840
Ge, electron capture by real surface, low temp. irradiation conditions 7−143540
Ge-S, amorphous, photo-induced effects 7−143910
H impurity quasi-molecule prethreshold irrad.-stimulated diffusion in metals *(Russian)* 7−111973
He flux to grain boundaries during irrad. 7−111649
KX (X=I, Cl, Br), ionic crystals, influence of UV radiation on crack formation 7−131224
La_2CuO_4:Sr, point contact, AC Josephson effect obs. 7−99343
Li based ceramics for fusion blanket appls., irradiation tests, T releases 7−89727
LiF, ionic crystals, influence of UV radiation on crack formation 7−131224
MgB_4O_7:Dy, UV response, γ-ray dose estimation using phototransferred thermoluminescence technique 7−92749
MgF_2 irrad. crysts., X-ray luminescence studies 7−132322
Mo, irradiated, He-saturated, form. and growth of gas-filled pores during annealing *(Russian)* 7−111537
NaCl, ionic crystals, influence of UV radiation on crack formation 7−131224
NaCl:H, UV-stimulated lattice destruction and defect form. study *(Russian)* 7−69751
NaI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
NaOH-CaO glass detector, fission fragment track annealing activation energy models 7−74376
Ni_4Mo, irrad. induced metastable phase form. 7−84021
P_4Se_{10} amorphous thin films, photoinduced changes in optical and struct. props. 7−132362
Se, amorphous films, light-induced structural transformations 7−124324
a-Si and alloys, materials and device stability, conf., Palo Alto, CA, USA (Jan. 1987) 7−140350
Si, defects, structural changes, oscillatory reaction 7−142820
a-Si p-i-n junction solar cells, localised states and trapped carrier distribs. after light soaking 7−144822
a-Si p-i-n solar cell stability, deposition rate effects 7−144830
Si, radiative melting, surface roughness and SiO_2 effects 7−104961
a-Si solar cells, stability anal. under illum. 7−144827
a-Si thin films and solar cells, light-induced effect 7−144826
Si:C, radiation damage levels 7−98144
a-Si:H, light induced defects, thermal and laser annealing 7−84017
A-Si:H, light induced effects on charge carrier generation and decay 7−143503
a-Si:H, light-induced deep defect generation 7−143409
a-Si:H, light-induced defect creation, examination using junction-capacitance methods 7−118416
a-Si:H, light-induced metastable changes in donor and acceptor levels 7−143407
a-Si:H, photocapacitance characts., light-induced changes 7−143504
a-Si:H, photodegradation under long-time repeated light exposure 7−143505
a-Si:H, sub-bandgap optical absorpt. and light-induced defects 7−144086
a-Si:H and a a-Si:H,P, light-induced changes, ENDOR-detected ESR study 7−143928
Si:H films, amorphous and microcryst., photoinduced density of states variation, DLTS study 7−143408
a-Si:H films, photocond. degradation and annealing characts. 7−143512
a-Si:H films, reversible struct. changes, prolonged illumination, annealing 7−98734
a-Si:H multijunction solar cells, stability and performance 7−144824
a-Si:H p-i-n devices, kinetics of light-induced defects, effects of drift carrier transport 7−144821
a-Si:H p-i-n solar cells, light soaking behaviour 7−144831
a-Si:H p-i-n solar cells, O-contaminated, light-induced degradation 7−144829
a-Si:H p-i-n solar cells, photo-CVD prep., light-induced degradation 7−144828
a-Si:H solar cells, high efficiency, light induced degradation and struct. 7−144823
a-Si:H solar cells, reversible light-induced changes 7−144820
a-Si:H sputtered films, metastable defect generation by light soaking and electron irrad. 7−142837
Si:Sn, O, C, irradiated, optical band at 3942 cm^{-1} 7−99842
Si-SiO_2 metal structs., radiation damaged, interface trap peaks 7−125127
Si-SiO_2 structures, UV effects of Ar plasma 7−105717
Si-SiO_x MOS, structs., RF-annealing, impurity activation and trap annealing, TSC meas. *(Russian)* 7−138068
a-SiC:H solar cells, high efficiency, light induced degradation and struct. 7−144823
a-SiGe:H,F, light-induced defect generation, electronic and optical props. 7−143502
a-SiGe:H,F films, minority carrier diffusion length after light or proton irrad. 7−143476
a-SiGe:H solar cells, high efficiency, light induced degradation and struct. 7−144823
a-Si_3N_4:H, stable photoinduced paramag. defects, ESR study 7−138326
SiO_2 films, on Si, paramag. point defects, generation by electron injection and ionising radiation 7−111555
SiO_2 glasses, selective generation of oriented defects, EPR studies 7−83723
SiO_2 optical fibre sensitivity to radiation, radioluminescence and ESR *(Polish)* 7−68888
SiO_2 thin films, low temp. growth by double excitation photo-CVD 7−113414
SiO_2 thin films, photo-induced CVD growth using D lamps, annealing effects 7−113415
SiO_2-Si interface, irrad. prod. surface states, annealing 7−104856
TaS_3 orthorhombic, Peierls transition, cryst. defect effects 7−98811
$Te_2O_7H_6$ mol. cluster model of $V_o^{\cdot}$ centre, RHF-SCF electronic struct. calcs. 7−117113

radiation effects continued
Ti-base alloys, composite superconductors, phys. props., design and fabrication, book 7−108055
YIG:H_2^+ thin films, ion implanted, surface spin wave modes, photoinduced effect 7−112959
Zr alloy, oxidation and hydriding under irradiation, corrosion in LWRs, PNL results 7−113794
$ZrSiO_4$, natural zircon, radiation induced lattice defects obs. at atomic resolution 7−76118
radiation embrittlement *see embrittlement; radiation hardening*
radiation hardening
embrittlement, correlation between test and power reactor Charpy data 7−89622
ferritic alloys, irrad., dimensional stability, strength, toughness, fusion reactor appl. 7−103170
image fibres, radiation resistant, photobleaching effect, expt. study 7−82844
metals and alloys, He embrittlement mechanism 7−126238
Microplex circuits, radiation hardening and annealing tests 7−78035
RPI linac radiation application 7−89803
steel, austenite transformation on high-speed and laser heating 7−86172
steel, austenitic and martensitic, irradiation effect on tensile and impact parameters 7−141280
steel, austenitic stainless, neutron irrad., long term thermal cycling resist., strength and ductility 7−113701
steel, laser-processed, behaviour of silica inclusions 7−78364
steel, low C, heat hardening by pulse-periodic laser radiation 7−100259
steel, martensitic stainless, neutron irrad., effect on mech. props. 7−71257
steel, mild, mech. prop. and substruct. changes with US loading 7−100437
steel, reactor pressure vessel, irradiation embrittlement and postirradiation annealing study 7−89621
steel plates, laser heat processing, computational simulation 7−138890
steel tools, high speed, laser hardening *(Chinese)* 7−91648
Fe-Cr, ferritic alloys, irrad. and alloy elements effect 7−86196
Mo, ion bombard. with He, irradiation hardening, microstructure depth profiles 7−71287
Nb, neutron irrad., mech. props. *(Japanese)* 7−93060
Nb-V, neutron irrad., mech. props. *(Japanese)* 7−93060
Ni-Si alloys, radiation-induced grain boundary segregation, mechanical props. study 7−104876
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
radiation hardening (electronics)
microelectronics and microdosimetry 7−91644
nuclear electrical equipment qualification *(French)* 7−109372
nuclear power systems, radiation-hardened microelectronics 7−103043
Shepherd Model 81-22 Co-60 irradiator, dose enhancement effects, gamma spectra meas. 7−108717
SOS, epitaxial growth, book chapter 7−102034
BeO TLDs use for high-dose dosimetry in radiation hardness testing 7−89783
GaAs, effect of radioactive environment on space solar cells 7−126611
InP based solar cell power/mass ratio and end-of-life efficiency for space use 7−144867
InP, effect of radioactive environment on space solar cells 7−126611
InP solar cell radiation resistance after 10 MeV proton irrad. 7−144888
radiation injuries *see biological effects of radiation*
radiation monitoring
see also dosimetry
airborne gamma doses, on-line monitoring using ionisation chamber system 7−116717
ALARA philosophy to respiratory protection for TMI cleanup 7−103294
area environmental monitoring capabilities at ORNL 7−68022
automatic remote monitoring system for nuclear reactors in Bavaria 7−109522
Baden-Wuerttemberg region, FRG, radioactive fallout from Chernobyl accident *(German)* 7−133488
CANDU spent fuel, $^{137}Cs/Xe$, and $^{129}I/Xe$ release ratios, fuel-sheath gap leaching in groundwater 7−129426
Caorso power plant, neutron flux meas. at vessel boundary 7−129450
Chernobyl, health risks and consequences in Europe 7−96276
Chernobyl, origin, effects and medical problems 7−96275
Chernobyl accident, γ-spectrometric exam. of emitted hot particles 7−129455
Chernobyl accident, ARAC system use for source term and global transport determ. 7−68020
Chernobyl accident, radioactive contamination in Lake Constance region, Austria *(German)* 7−114135
Chernobyl accident, source term and radiological consequences 7−103103
Chernobyl fallout, β-activity monitoring *(German)* 7−122223
Chernobyl fallout meas. in Sweden 7−68021
Chernobyl reactor accident, radiation exposure in Federal Republic of Germany *(German)* 7−116714
Chernobyl reactor accident, radioactive contamination meas. at Hiroshima *(Japanese)* 7−139156
Chernobyl reactor accident, radionuclide release conditions estimation, nuclide mixture anal. 7−129286
conf., Karlsruhe, Germany, June 1987 *(German)* 7−108039
cosmic ray ionisation in lower atmosphere, dose rate meas. using ionisation chamber 7−88058
country-wide environmental radiation monitoring using thermoluminescence dosemeters 7−96394
CRNL employees, mortality, cancerous deaths 7−89790
Czechoslovak nuclear power plants, radiation protection 7−81739
detection algorithm for portable survey instrument 7−68025
dosimetry, conf., Oxford, England (Aug. 1986) 7−80167
electron accelerators, beam dosimetry, power meas. 7−74309
environmental assessment models, human ingestion and inhalation rate predictions 7−101096
environmental gamma ray exposure rates meas. comparison between EML and JAERI method 7−103293
environmental monitoring after Chernobyl reactor accident, meas. by British Nuclear Fuels plc 7−93551
environmental radiation meas., instrumentation and techniques 7−107551
environmental samples, alpha-spectrometry 7−93600
environmentally important radioactive nuclides, resonant ionis. mass spectroscopy detect. 7−93611
exposure detection limits for nuclear power station operation, environmental TLD obs. 7−129444
radiation monitoring continued
extremity dosemeter monitoring service using Vinten dosimeter 7−87203
fallout beta-activity over Munich, Germany, 1981-6, Chernobyl accident nuclear test effects 7−129448
food imports to Saudi Arabia, radiation monitoring following Chernoby 7−103299
Geiger counter, low-background β-counting system, calibration, environmental sampling appl. 7−103331
generic assessments of plant/soil radioisotope concentration ratio 7−101097
high natural background radiation levels at Cox's Bazar, Bangladesh TLD meas. 7−96395
human body, trace radioactivity distrib. meas. using γ-ray spectr 7−71897
imported foodstuffs, radiation monitoring in Saudi Arabia 7−103300
in-situ environmental γ-monitoring using Ge(Li) spectrometry 7−133481
indoor cosmic radiation ionisation intensity and natural radiation meas 7−107255
ion-implanted semiconductor γ radiation detector used for the purposes o radiation monitoring *(Chinese)* 7−89874
ionisation chambers, thermal stability for SUZ fast reactors 7−122025
Jordan van der Graaff accelerator, neutron skyshine and safety leve 7−74262
JOYO LMFBR, neutron dose and spectra, measurements and evaluation 7−129305
laser output safety interlocking prior to optical fibre burnback 7−79093
leak detection by dew-point meas. in ventilation systems, thermodynami principles *(German)* 7−129375
lifetime lung cancer risks induced by environmental radon 7−103295
lorry, radiation contaminated, decontamination meas. *(German)* 7−10945
LWR MOX fuel fabrication, remote handling device implementation radiological aspects 7−116617
LWR radiation field control, recent developments 7−67953
LWRs, reliability of leak detection systems 7−89666
measurements of radiation and radioactivity in nuclear power plants *(Ger man)* 7−74208
medical in vivo prompt γ-activation anal., radiation safety evaluatio *(Chinese)* 7−71885
mixed n-γ fields, dosimetry in relation to individual monitoring *(Czech* 7−96391
neutrino radiation monitoring of reactor power, safeguards app 7−122063
neutron personnel dosimetry and use of higher dose equivalents in CSSI *(German)* 7−81740
Niagara Falls Storage Site, waste containment structure, monitorin system 7−96356
noble gas monitoring system with automatic background subtraction *(Ger man)* 7−68018
Norway, γ-radiation meas. in Th-rich area 7−107254
Norwegian dwellings, indoor γ-radiation during 1st 3 months after Cher nobyl accident 7−101092
nuclear power plants, energy distrib. determ. of complex γ-spectra *(Ger man)* 7−81741
nuclear power systems symposium, Washington, DC, USA (Oct. 1986 7−66813
PATHWAY-II code for radiological environmental pathways ana 7−96399
personal dosimetry systems, reliability, technical merit, economic factor 7−87182
personal monitoring for external sources of beta and low energy photo radiations 7−145254
plastic scintillator whole body contamination monitors, effect of elevate background 7−71896
proportional counter, low-background β-counting system, calibration, envi ronmental sampling appl. 7−103331
PWR ex-core neutron noise analysis 7−67929
PWR pressure vessel dosimetry, H.B. Robinson-2 reactor, LEPRICON anal. 7−129451
RF EM fields, environmental monitoring for human safety, ANSI stan dards compliance 7−93963
RF EM fields, environmental monitoring for human safety, radiatio probe configs. 7−93964
RF radiation occupational exposure, dosimetry measurements and method 7−101086
Savannah River Laboratory Underground Counting Facility, environmen tal sample examination 7−103296
Shippingport Station Decommissioning Project, quality assurance progran 7−103156
Shippingport Station Decommissioning Project, sampling plan for uncondi tional release of materials 7−103155
soil, transuranic decontamination, radiation monitoring 7−106944
spent CANDU fuel bundles, Cerenkov radiation meas., safeguards app 7−122017
spent fuel assemblies, high resolution gamma spectrometry meas., develop ments 7−116719
spent fuel monitoring using irradiated assembly counter, safeguards app *(Russian)* 7−122216
super-hydrogen bomb test explosion, March 1954, γ-ray spectrum of radi oactive dust 7−74082
Taiwan, occupational exposures, radiation risk calcs. *(Chinese)* 7−145253
Taiwan highways, exposure rates 7−139145
thermoluminescence and photolum. dosimetry, individual monitorin systems, international intercomparisons, ICRU dose quantities 7−87184
THTR, radioactivity emission monitoring *(German)* 7−109536
TLD personnel monitoring, ICRU 39 quantities appl. 7−87183
transuranic aerosol meas. system, preliminary results 7−68023
transuranic elements, environmental distrib. determ. by thermal ionizatio mass spectrometry 7−103297
tritiated water vapour, detection in air using tunable diode lase 7−109526
TVO power plants, Finland, reasons for low collective dose 7−141337
UV-11, Cherenkov radiation monitoring device, safeguards appl., desig 7−122225
V-1 nuclear plant, neutron field and dose equivalent meas. *(Russian* 7−81738
wind field calcs. for environmental radioactivity evaluation, iterativ methods *(Japanese)* 7−81736
γ-monitoring in mixed radiation fields 7−135678
^{10}B, concentration in rat blood, autoradiography, neutron capture therap appl. 7−133479
$CaSO_4$:Dy base TLD, personnel monitoring, performance tests 7−87190

radiation monitoring continued
$CaSO_4$:Dy Teflon dosemeters for environmental monitoring, computerised glow curve anal. 7−96393
^{137}Cs remobilization in Steel Creek system following L-Reactor restart 7−103298
^{3}H monitoring near nuclear power station during operation 7−93569
^{3}H, on-line monitoring in air in HWR 7−116718
$^{3}H_2$, safe handling and storage 7−109525
$^{127,129}I$, environmental samples, neutron activation anal., chem. and nucl. interferences 7−119869
^{129}I continuous monitor, initial operating experience *(German)* 7−129457
Rn, indoor conc. meas. using LR-115 plastic track detector 7−119868
^{A}Rn, A=220, 222 decay products in air, concentration determ. 7−126669
^{106}Ru, aqueous solns., radioassay Cherenkov counting technique, colour quenching effects 7−116716
$^{82}Sr/^{82}Rb$ generator elution profiles, radioassay and dosimetry 7−101084
T isotopic enrichment for analytical and production purposes *(Rumanian)* 7−81749
T measurement using liquid scintillation spectrometer *(Czech)* 7−116800
T monitoring by liquid scintillation counting, Scotch tape method 7−103283
U mining, radiation protection standards, conf., London, England, Sept. 1986 7−80181

radiation monitors *see radiation monitoring*

radiation patterns, antenna *see antenna radiation patterns*

radiation pressure
see also acoustic streaming
atom acceleration by inverse bremsstrahlung 7−103456
atomic beam deflection by standing light wave 7−129667
atomic beams, isotope separation by laser deflection 7−82388
atomic dipole moments moving in a medium, spontaneous radiative alignment 7−68272
atomic ions, trapped, laser spectroscopy review 7−135890
atomic vapor, light-induced drift, general diffusion eqn. 7−141530
atoms, resonance radiation cooling 7−82049
cataclysmic variables, dust grains expulsion from white dwarf by radiation pressure 7−120431
cylindrical particle in sound field, radiation force 7−97190
fluoromethane gas molecules, light induced isotope separation 7−129892
gas state, light-induced drift of atoms and molecules, cell wall role 7−97693
Geminid meteoroid stream, dispersal by radiative effects 7−94829
generalised photogravitational restricted three-body problem, existence of libration points 7−72258
IR radiation drag by hole current. *(Russian)* 7−119075
laser cooling and trapping atoms 7−110137
light induced drift effect *(Dutch)* 7−90501
Michelson interferometer with squeezed-state light source, radiation pressure error 7−120835
multilevel atoms, optical pressure force of two-frequency laser radiation 7−90044
neutrino radiation pressure in refracting media 7−89890
neutron stars, electron cyclotron resonance instability of magnetised photosphere 7−94938
photogravitational three-body problem, nonstationary solns. 7−73175
photogravitational three-body problem, stability of triangular libration points *(Russian)* 7−107700
protostellar cocoons, radiative forces on dust rel. to accretion inflow and form. of massive stars 7−145940
quantum optics, school of coherent optics, Ustron, Poland (Sept. 1985) 7−66804
reflection of atomic beam from optical field gradient 7−141550
retention times for atoms in standing wave resonant field 7−141549
solar radiation, effect on artificial satellites rot. 7−120240
solar radiation pressure, effect on motion and stability of two interconnected satellites 7−72254
sphere, water-suspended homogeneous, trapped by focused laser beam, scatt. laser beam forward far-field pattern 7−74841
surface current detection during light reflection from a diffraction grating 7−143516
TEM_{01}^{*} mode laser beam, radiation force, on homogeneous sphere and single-layered sphere *(Korean)* 7−136381
three-body problem, photogravitational case soln. 7−127689
Na atomic beam, photodeflection ang. distrib. 7−122433
Na atomic beam, single-state, prep. by optical pumping and radiative deflection 7−129900
Na laser excited atoms, light induced drift in absence of wall adsorption 7−135889
Na vapour, light induced diffusion pulling into light beam 7−104367
Na-Ar(Ne)(Xe) mixtures, radiation trapping, line broadening, fluoresc. obs. 7−82034
Na-inert gas mixture, light-induced drift velocities 7−109841
Na_2 photoinduced drift in He *(German)* 7−130821
Rb-Ar mixture, optical piston due to light induced drift, fine structure, hyperfine structure depend. 7−135891

radiation protection
see also radiation monitoring
aerosol filters for nuclear power stations, TiO_2 method for testing segregation *(German)* 7−139173
aerosols, heavy mechanical loading of filters *(German)* 7−139172
AGN 1 spent fuel transport cask, quality assurance aspects of fabrication and transport 7−74226
air detritiation systems for fusion facilities based on CANDU developments 7−122224
ALARA, appl. to nuclear power station operation 7−96304
ALARA, philosophy and practice 7−96302
ALARA, reducing exposure through the use of photographic and electronic surveillance 7−129326
ALARA, Sellafield Nov. 1983 incident 7−74209
ALARA cost/benefit analysis at Union Electric Company using the ARP/AI methodology 7−129327
ALARA philosophy to respiratory protection for TMI cleanup 7−103294
ALARA program, effective dose optimization 7−129325
ALARP principle, appl. to power station design 7−96179
algin sequestration studies for radionuclide contaminants, prophylactic agent 7−109532
American Nuclear Society, Conference, Dallas, TX, USA (June 1987) 7−102014
ANSI N14.5 leak test standard for radioactive material packages, revision 7−74256

radiation protection continued
backfill formulations for a nuclear waste disposal vault 7−109501
biological bases for radiation protection standards and implications for policy 7−114501
Breeder Spent Fuel Handling and Transportation Program of US DOE 7−74149
BWR piping passivation, prefilming using air oxidation, radiation buildup control 7−109394
BWR recirculation piping, radiation buildup control, ^{60}Co prevention 7−109393
Byron Nuclear Power Station, Duty Health Physicist Programme, radiation protection 7−135529
CANDU, design criterion using ALARA principles 7−129145
cask performance and interface specifications for spent LWR fuel shipment 7−74150
CASKETSS code for radioactive material packaging thermal and struct. anals. 7−74253
Castor series transport casks for radioactive materials, manufacturing experience 7−74251
Chernobyl fallout, β-activity monitoring *(German)* 7−122223
clay-based grouts in simulated rock fractures, erosion, radwaste repository appl. 7−109500
Clinac-20 linear accelerator, radiation safety survey 7−119866
commercial spent reactor fuel, rail transport in USA 7−109495
concrete, neutron attenuation curves using various radiation protection quantities 7−96396
concrete storage and transport cask for spent pebble bed reactor fuel 7−74144
conf., Davos, Switzerland, June 1986 7−72723
conf., London, England, Sept. 1986 7−95108
conference on 90 yrs of X-rays, London, England (Nov. 1985) 7−108014
conference on nuclear power after Sizewell B, London, England (Sept. 1987) 7−140375
conference on nuclear power plant operation, Chicago, USA, Aug. 1987 7−134357
cornea, human, solar UV irrad. calc. rel. to required sunglass lens transmittances 7−93962
criticality codes for large arrays of fissile material packages, validation exercise 7−74108
CRNL employees, mortality, cancerous deaths 7−89790
CRNL tritium laboratory for pure T_2 packaging 7−81719
cylindrical human model, shield effect of cylindrical mesh 7−87241
Czechoslovak nuclear power plants, radiation protection 7−81739
Daya Bay PWR power plant, radiological consideration of plant siting 7−89645
defective LWR spent fuel transportation, radioactivity leakage, double containment system 7−74252
DHLW cask, hypothetical accident condition loads with initial pressure 7−74188
DHLW truck shipping cask, design verification 7−74182
electron accelerators, radiation shielding, technicoeconomic evaluation 7−122219
electron microscopes, Philips series, low dose microscopy facilitation 7−128718
energy discriminating TLD system 7−87188
environmental impact of nuclear waste transportation, analytical methodology 7−74118
environmentally important radioactive nuclides, resonant ionis. mass spectroscopy detect. 7−93611
exposure buildup factors of high-energy gamma rays for water, concrete, iron, and lead 7−74221
eye safety protection for field use of laser rangefinders 7−93961
failed PWR fuel transport, R62 package appl., water radiolysis parametric expts. *(French)* 7−74198
fallout sheltering feasibility model for USA 7−87242
field laser hazard calculations 7−71895
fission reactor, biological shield demolition, simulation *(German)* 7−135543
flask containing irradiated LWR fuel, thermal response following loss of coolant water 7−74179
Fusion Experimental Reactor, radiation streaming through narrow gaps 7−81711
gamma radiation shielding by European houses, Monte Carlo photon transport code study 7−74214
gamma-ray emission from materials pulsed with 14-MeV neutrons, TART code 7−109530
Geiger-Muller tubes, energy compensated, suitability for meas. of X-radiation transmitted through shielding 7−68149
German nuclear power station risk study, phase B, radiation protection modelling and preventive measures *(German)* 7−109457
glove box line design and construction for Pu and U-Pu nucl. fuel anal. *(Czech)* 7−141334
Health Physics Society 32nd annual meeting, conf., Salt Lake City, UT, USA (July 1987) 7−115674
heavy ion biological effects rel. to radiation protection in space, conf., Toulouse, France (June-July 1986) 7−140349
HEPA filters, aerosol collection, lab. tests and math. model 7−109533
HEPA filters, performance under severe shock transients, structural limits *(Japanese)* 7−96269
high current spallation facility, sky-and groundshine phenomena, radiological quantities 7−87181
high natural background radiation levels at Cox's Bazar, Bangladesh, TLD meas. 7−96395
history, early protection and radiological physics 7−108128
HLW and spent fuel packagings, design, safety anal. and tests 7−74152
HLW and spent fuel transportation casks, US DOE acquisition programme status 7−141314
HLW transportation in UK, flask design 7−74164
holographic optical configurations for eye protection against lasers 7−119865
hospital solid radioactive waste disposal, radiological safety and materials handling procedures *(German)* 7−129421
HTR, material transported in recirculation zone, radioactive dust, safety considerations *(German)* 7−116692
inhaled natural radioisotopes, radiation exposure *(German)* 7−133399
ionising radiation meas. and standards, health and safety aspects 7−101095
irradiated CANDU fuel transport cask, design and testing 7−109494
irradiated fuel transport casks, thermomechanical tests and studies *(French)* 7−74197
JET, tritium safety programme, releases, exposures and waste 7−81715

radiation protection continued
JOYO LMFBR, neutron dose and spectra, measurements and evaluations 7−129305
Krsko nuclear power plant, operating experience 7−109343
laser output safety interlocking prior to optical fibre burnback 7−79093
laser protective eye wear, safety aspects 7−114502
laser protective filters for visible and IR 7−87247
laser safety, Austrian legislation 7−87246
laser safety standards and protective measures in USA 7−87101
lasers in medicine, safety precautions *(German)* 7−114500
lifetime lung cancer risks induced by environmental radon 7−103295
low-level radioactive waste, proposed management procedure for Italian facilities 7−96375
LR56 Type B(U)F package for liquid radwaste effluents, design and mock-up tests *(French)* 7−74159
LWR, selected decontamination methods, effectiveness and safety aspects 7−89678
LWR HLW and spent fuel, long-term radiotoxicity, MOX and burn-up extension impacts 7−74093
LWR MOX fuel fabrication, remote handling device implementation, radiological aspects 7−116617
LWR power plants, HEPA air cleaning filters, development and appls. 7−129297
LWR radiation field control, recent developments 7−67953
LWR spent fuel packagings, internal arrangement design for casks 7−74161
marble attenuation characteristics for diagnostic X rays 7−87243
medical in vivo prompt γ-activation anal., radiation safety evaluation *(Chinese)* 7−71885
microdosimetric radiation protection instruments, intercomparison, n and γ detection 7−68033
micronucleus assay in radiation protection, status, review 7−94026
Muhleberg BWR, chemical decontamination of recirculation loops *(German)* 7−116720
multipurpose container construction for transporting radioactive materials 7−74158
neutron bubble detector for dose meas. in critical assembly 7−89788
neutron-activated reactor parts, shallow land burial, near-field releases at ORNL 7−103245
NRU research reactor, safety review of effluent heat recovery project 7−89662
nuclear industry, worker attitudes to radiation protection 7−141336
nuclear material packages, mixing and nuclear criticality safety 7−74225
nuclear material packaging manufacture, quality assurance, spent fuel casks 7−74109
nuclear materials, high temperature testing of structurally damaged impact and puncture package protection systems 7−74185
nuclear materials cask analysis, phase change models 7−74192
nuclear materials cask design specifications, evaluation using CAPSIZE program 7−74193
nuclear materials casks, target hardness comparisons 7−74191
nuclear materials transportation, risk 7−141335
nuclear materials transportation systems, shock and vibration road simulator tests 7−74187
nuclear materials transportation systems, thermal benchmarking 7−74184
nuclear plants, worker exposure and radiation protection, technical and financial eval. *(French)* 7−96397
nuclear power plant out-of-core radiation reduction 7−89786
nuclear power plant outages, ALARA health physics support 7−129324
nuclear power plant radiation safety *(Russian)* 7−133480
nuclear power plants, energy distrib. determ. of complex γ-spectra *(German)* 7−81741
nuclear power systems symposium, Washington, DC, USA (Oct. 1986) 7−66813
NuPac 125-B rail cask, design and scale model testing 7−74190
occupational exposure minimisation at Finnish nuclear power plants 7−135681
occupational radiation protection policy, ICRP doses, ALARA 7−89791
Ontario Hydro radiation protection programme for nuclear plants 7−135528
Ontario Hydro Research Division tritium handling system 7−81716
Ontario Hydro tritiated heavy water transportation package 7−74250
packaging, high-speed impact test 7−74180
Palisades nuclear power plant, employee involvement in radiological work practice upgrading 7−135530
photon absorptiometry of hydrocarbons, total mass attenuation coeffs. 7−96390
photon interaction cross sections and mass attenuation coeffs., empirical eqns. *(Japanese)* 7−89891
political economy of physical risk 7−74212
post-Chernobyl lessons and experiences, ALARA principles in radiation protection *(Croatian)* 7−129453
probabilistic aspects of inadvertent radiation exposure 7−74210
PWR, Combustion Engineering design, radiation fields through mid-1985 7−89650
radiation exposures in UK from transport of Tc generators and ILW 7−74232
radiation therapy, safety of electron accelerators, 1981 standard 7−114503
radioactive material packages with 2 containment barriers, radioactive gas release calcs. *(French)* 7−74254
radioactive material packagings, leak test methods, review of standardization and requirements 7−74223
radioactive material transport casks, damage due to barge collisions, engineering assessment 7−74238
radioactive material transport in FRG, R & D work, spent fuel casks 7−74115
radioactive material transport in FRG, risk assessment with INTERTRAN 7−74230
radioactive material transport packagings, safety factors under severe fire conditions *(French)* 7−74228
radioactive material transportation, projected environmental impacts 7−89744
radioactive material transportation, risks and regulations *(French)* 7−96398
radioactive material transportation to 1st US repository site, projected environmental impacts 7−74117
radioactive materials, transport by road, eval. of accident probabilities *(French)* 7−74231
radioactive materials, Type A packaging, compliance with regulations 7−74224
radiation protection continued
radioactive materials transport, IAEA class 7 requirements and Type B(U) packages 7−74102
radioactive materials transport, methodologies for radiological impact assessment 7−74233
radioactive materials transport in Japan, safety research 7−74114
radioactive materials transportation in USA, federal, state and local activities 7−74227
radioactive waste cask handling system, use of robotics 7−74183
radioactive waste disposal, radiological protection criteria 7−89756
radioactive waste packaging, quality assurance 7−74222
radioisotope disposal in municipal waste systems, radiological impact 7−89760
radiological impact of transport accidents and incidents in UK over 20 year period 7−74234
radiometric calorimeters, use in glovebox environment 7−103342
radiopharmaceutical solution preparation, dose reduction to workers by simple shielding equipment *(Japanese)* 7−87248
radiotherapy, shielding design for the ceiling of a 6-MV accelerator in an existing facility 7−93960
RAMPAC radioactive materials packaging database 7−109534
RBMK-reactor description and Chernobyl accident scenario 7−109370
reactor decommissioning, thermal cutting under water and ensuing radiological effects *(German)* 7−135542
reactor decommissioning waste transport in UK, preliminary risk assessment 7−74116
reprocessing wastes, transport criteria 7−74160
RF EM field exposure standards 7−87244
RF safety standard, ANSI, rationale and some problems 7−87245
risk estimates comparison, life-table methods 7−133478
rubber neutron shields for radwaste packaging, expt. props. and Monte Carlo calcs. 7−74243
sand-bentonite buffer for nuclear waste containment, strength and volume change characts. 7−109499
selection criteria and requirements for floors in nuclear plants *(German)* 7−74206
self-assessment program for Commonwealth Edison Company 7−129329
seminar on understanding Chernobyl, London, England (Sept. 1986) 7−88747
Sequoyah Nuclear Plant thimble tube ejection, radiation protection aspects 7−68019
shallow depth radwaste repository, backfill materials eval. for ILW and LLW disposal 7−109502
shielded containers for reactor waste sea transport system 7−74242
shielding of medical X and γ rays by NCRP Report No.49 methods, general soln. 7−93959
shipping cask development for chopped nuclear fuel transportation 7−74151
shipping casks under accident conditions, thermal analysis computer code Q/TRAN 7−74181
SNM transport system, safety anal., USA DOE/PNC joint programme 7−74112
spent CANDU fuel, road, rail and water transportation system 7−109496
spent fuel shipping casks, shielding methods for versatility eval., KWIK DOSE code 7−109529
spent fuel storage and transportation experience for the Idaho National Engineering Laboratory 7−109498
spent fuel transport flask finned surface, fire testing of intumescent coating 7−74196
spent fuel transport in the USSR, experience and regulations for safety and personnel protection *(Russian)* 7−74130
spent fuel transport packaging, maintenance experience 7−74165
spent LWR fuel, response to extreme environments, releases from cask accident 7−74258
spent LWR fuel shipping cask, database for hypothetical sabotage attack 7−74202
spent nuclear fuel dry shipping/storage casks, fuel pin surface temps 7−74194
spent nuclear fuel flasks, thermal anal., use of FLUFF fin heat transfer code 7−74195
spent nuclear fuel packages, comparison of nodular cast Fe and forged C steel 7−74205
spent nuclear fuel shipping cask design using depleted U shielding 7−74244
spent nuclear fuel shipping casks, microcomputer based thermal and impact code system 7−74199
spent nuclear fuel shipping containers, impact anals., static and dynamic FEA comparison 7−74201
spent nuclear fuel transport, safety in 'real' accidents, flask anal 7−74111
spent nuclear fuel transport cask, 100 ton class, demonstration test for accidents 7−74113
spent nuclear fuel transportation cask design, fracture mechanics approach 7−74203
THTR spent fuel, handling and transport system 7−74163
TMI-2 fuel debris, transportation to INEL 7−74162
TMI-2 protective coatings, contamination and decontamination experience 7−129456
TN-24P PWR spent-fuel storage cask, testing and analyses 7−109492
TN-8L and TN-9 spent fuel shipping casks, experience 7−74154
transport packaging and shroud for irradiated monitoring assemblies from the Creys-Malville fast reactor *(French)* 7−74245
transuranic waste transportation tracking system 7−109497
tritiated water vapour, detection in air using tunable diode laser 7−109526
TRUPACT-I, containment anal. 7−74189
TRUPACT-I, TRU waste package transporter, containment, H_2 buildup hypothetical accidents 7−74204
TRUPACT-I transuranic transporter, impact, puncture and thermal testing 7−74186
Type B(U) radioactive material packages, fracture safety philosophies effects 7−74257
Type B packages, radiological limits in IAEA transport regulations, spent fuel 7−74236
Type B spent fuel flasks, quality assurance 7−74107
UK hospitals, accuracy of surface-contamination meas., 1986 survey 7−139377
UK nuclear power programme, radiation protection aspects 7−141338
US Nuclear Regulatory Commission safety goals 7−109391

radiation protection continued
USA DOT Specification 6M radioactive fissile material package, nuclear criticality safety reeval. 7−74247
used UF_6 shipping packages, testing and eval. of Model 30B cylinders 7−74255
Vermont Yankee and Monticello BWRs, radiation build-up factors comparison 7−103133
vitrified high level radwaste, transport and storage cask development 7−74142
Wackersdorf nuclear fuel reprocessing plant, safety considerations *(German)* 7−116625
Wackersdorf nuclear reprocessing plant, failure anal., radiological effects, counter measures *(German)* 7−116626
ZFA filtering unit for nuclear power engineering 7−116715
Am radiation sources, dosimetry studies for brachytherapy 7−145243
CO_3^{3-} radicals, spectroscopy for personal dosimetry 7−109527
CsCl radioactive source capsules, Beneficial Uses Shipping System cask 7−74241
Fe, deep penetration problems, point kernel versus radiation transport, spent fuel cask appl. 7−109528
Gd_2O_2S:Tb, filter for oral panoramic radiology, patient dose reduction, image quality 7−71894
H_2 gas generation in radioactive waste packages 7−74200
^3H, on-line monitoring in air in HWR 7−116718
^{129}I disposal, radiation dose reduction by isotopic dilution 7−96360
LiF thermoluminescence dosimeter powder, decay characteristic of γ-ray dose in TRIGA core 7−109524
Na, neutron cross-section validation, integral meas. adjustment, radiation penetration accuracies 7−129284
Pu, air transportable package development 7−74153
Pu, metallic, qualified air transport packaging 7−74248
Pu tissue content of members of general public 7−74211
Pu transportation, packaging design 7−74240
Pu transportation, SAFPAK and SAFKEG high integrity packages 7−74147
Pu transportation risks, comparative literature survey 7−74229
PuO_2 packaging system for air transport 7−74246
SrF_2 radioactive source capsules, Beneficial Uses Shipping System cask 7−74241
T production sources *(Rumanian)* 7−81748
U mill tailings pile stabilization, UMTRA Project 7−96370
U mining, radiation protection standards, conf., London, England, Sept. 1986 7−80181
U, mining experience and radiological protection 7−81750
U mining experience in Canada, radiation protection standards 7−87249
U transportation, SAFPAK and SAFKEG high integrity packages 7−74147
UF_6 in transport accidents, radiological and chemical risks 7−74235
UF_6 transport container, extra fire tests in Japan, numerical anal. comparison 7−73878
UF_6 transport overpacks, specification 21PF-1, update and insulation testing 7−74249

radiation quenching
acridinium, fluorescence quenching by Pb^{2+}, Hg^{2+}, Cu^{2+}, Ag^+ and H_2S, fluorescence quenching 7−82276
air-filled gap spark discharge, IR radiation screening, brightness meas. 7−117786
alkali metal halide cryst., cathodoluminors, local self-activation and quenching effects 7−70918
alkaline earth metals:Cr^{3+}, optical props., absorpt. and emission spectra 7−92723
alkaline phosphatase, phosphoresc. quenching by O_2 and NO, rel. to protein struct. inflexibility 7−133218
anthracene, fluoresc. quenching in alcohols and water-alcohol mixtures 7−117016
aromatic hydrocarbons, excited state quenching, Xe heavy atom effect 7−68237
aromatic hydrocarbons, triplet states quenching by tertiary amines 7−68392
atoms, transition array quenching through config. mixing 7−82042
1,2-benzanthracene + carbon tetrabromide, fluoresc., collisional quenching studied by freq. domain fluorometry 7−96765
benzophenone, triplet, quenching rate const. determ. 7−96780
9,10-bis(phenylethynyl)anthracenes, excimer form., fluoresc. quenching 7−82274
bromobenzene cations, photoexcited, collisional relax. meas. 7−110036
carbazole-anthracene, Langmuir-Blodgett monolayer films, excitation energy transfer 7−74701
chlorophyll a and chlorophyll a dihydrate dimers in water/acetone mixtures, dipole-dipole transfer 7−114211
chlorophyll-like molecules, triplet state quenching kinetics, back electron transfer 7−136001
chrysene fluorescence quenching by KI in methanol-ethanol solns. 7−122600
colloids, amphiphilic, aq. solns., dynamic struct. and cooperative transfer of excitation energy 7−126487
concentration dependent fluorescence quenching with ionic reactants, calc. 7−82265
concentration self-quenching by statistical traps, Forster rate orientation factor 7−82255
9-cyanoanthracene, fluoresc. quenching 7−68394
β-cyclodextrin-indole inclusion complex, absorpt. and fluoresc. spectra 7−103569
4-N,N-dimethylaminobenzonitrile, dual luminesc., quenching by H_2O 7−103558
diphenylpolyene solns., fluoresc. amplification and light quenching 7−129778
dye molecules, adsorbed on vesicle surface, excitation energy transfer 7−118242
ethidium bromide, DNA intercalated, laser flash photolysis, methylviologen effects 7−133225
fluorescence, self-quenching by statistical traps, Monte Carlo simulations 7−82258
germinate radical pairs, spin-inverted electron transfer, energy gap depend. 7−135837
homotryptophan derivatives, fluoresc. lifetime distribs. 7−117007
indole, fluoresc. quenching, transient effects, freq. domain fluorometric meas. 7−109992
inert gas hydride excimers, binding energies, bound-free UV fluoresc. spectra anal. 7−96723

radiation quenching continued
keto sulfides, triplet, intramol. charge-transfer interactions investig. 7−113883
3-keto-steroids, aq. soln., protein binding, mol. fluoresc. study 7−78748
ketones, triplet state, matrix interactions phosphoresc. kinetics 7−68390
liquids, fluoresc. quenching, conc. gradient model 7−82248
methoxy radical, (A^2A_1) state, collisional quenching 7−109990
9-methylanthracene, fluoresc. quenching by cyclooctatetraene in aq. micellar solvent 7−90261
methylthio radical, laser-induced fluoresc., vibr. relax. and electronic quenching 7−68391
organic dye molecules, monolayers, luminescence and excitation energy transfer 7−144107
organic dye molecules, monolayers, luminescence and excitation energy transfer 7−144108
organic dyes, energy transfer in methanol, fluoresc. quenching 7−96785
organic liquid scintillator, energy transfer and quenching, effect of dil. and temp. 7−132341
oxazine 1 perchlorate, absolute fluoresc. quantum yield meas. with photoacoustic spectroscopy *(Chinese)* 7−103559
oxonine, electron-transfer quenching radical pair prod., time-resolved recomb. investig. in W/O microemulsion 7−106769
palladium etioporphyrin, triplet state, conc. quenching, phosphoresc. study 7−68397
phenanthrene fluorescence quenching by KI in methanol-ethanol solns. 7−122600
polystyrene-polymaleic anhydride copolymer, coil-globule transition, self-quenching rates 7−96895
porphyrins, synthetic, light-harvesting complex 7−114165
pyridine adsorbed layer on Ag-Pd films, SERS spectra, electromag. quenching and enhancement study 7−77575
quartz thermoluminescent spectra glow peak, activation energy determ. method 7−85855
rare earth complexes with pyrene tetrasulphonate, energy deactivation study 7−125787
riboflavin-indole complexes, mol. associations, spectroscopic study 7−86609
self-quenching of luminesc. by statistical traps 7−82257
solvent mixture of different polarities, dielectric enrichment, exciplexes, mol. fluoresc. anal. 7−68389
surface characterisation using excited-state luminesc. 7−70033
tetraphenylporphyrin ultrathin film, luminesc. quenching, depend. on SnO_2 substrate conductivity 7−106254
time-dependent transfer rate parameters, convolution kinetics and differential eqns. 7−74696
triethylammonium tetrakis(dibenzoylmethanato) europate, cryst. disorder and triboluminesc. 7−106280
trifluorohalomethanes $+N_2$, visible spectra, collisional quenching rate consts. 7−96713
3,5,7-trimethoxyflavone, fluoresc. quenching by halide and pseudohalide ions 7−122592
tryptophan in apocytochrome c, fluoresc. quenching dynamics, rot. isomerism study 7−78745
X-ray luminescence, quenching and enhancement by elec. field pulses 7−132310
xylenols, fluorescence quenching of excited states due to H bonding with triethylamine 7−82266
Ar + tetrafluoromethane, RF discharge, at. excited level quenching 7−129647
Ar excited level excitation and quenching by perfluorocyclobutane in glow discharge 7−122434
Ar, excited state collisional quenching, pulse radiolysis 7−68403
Ar, liq., α particles and fission fragments, scintillation and ionis. yields meas. 7−92743
Ar_2, excimer, excited state collisional quenching, pulse radiolysis 7−68403
$BaEr_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$BaHo_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
Br_2, laser-excited, collision-induced dissoc., rate const. meas. 7−103598
BrNO+Br 7−90345
CH, collisional quenching cross sections meas. at 1300 K, meas. using pyrolysis/laser fluoresc. technique 7−74694
CN, rot. state population, even-odd alternation quenching, optical double reson. 7−129753
$Ca_{1-x}Y(La)_xF_{2+x}:Sm^{2+}$ mixed crysts., impurity optical props. and nonradiative decay studies 7−77637
$CdF_2:Cr^{3+}$, optical props., absorpt. and emission spectra 7−92723
$CdSe_xTe_{1-x}$ films, deep centres, luminesc. temp. quenching mechanisms 7−70909
CrO_4^{2-} in H_2O, time resolved quenched phosphoresc. detection using paired-ion reversed phase liq. chromatography 7−119696
$Cs_2NaHo_{0.99}Er_{0.01}Cl_6$, energy transfer, luminesc. and UV absorpt. study 7−92724
Cu monolayer and film, with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
Eu^{3+}, fluoresc. quenching in alcohols and water-alcohol mixtures 7−117016
Ga, excited state, collisional quenching, branching ratio determ. 7−103428
GaAs, radiative recombination of EL2 level 7−125781
GaAs:Cr, semi-insulating, EL2 photoquenching props., photocond. meas. 7−112244
GaAs-GaAlAs quantum wells, Stark shifts, photoluminesc. study 7−106138
He+inert gas atoms, ionisation studied using kinetic plasma spectroscopy method, quenching rate const. 7−117045
Hg, $^3P_1$-$^1S_0$ fluoresc. quenching, rel. to photoacoustic amplitude 7−68247
Hg halides, photodissociation, spectroscopy, kinetics and laser effects 7−141839
$Hg+CO_2$, vibr. product state distribs., diode laser probing 7−90356
InGaAs doped single modulation quantum well, electron density transition, absorption spectra 7−144144
$K+I_2$, electron transfer mechanism 7−110069
$KNdP_4O_{12}:Pr^{3+}$, inhomogeneous broadening and energy transfer 7−106242
$La_{1-x}Pr_xOCl$, luminesces. conc. quenching of Pr^{3+} ion 7−113265
$LiLa_{1-x}Nd_xP_4O_{12}$ glasses, Nd spatial distrib., Raman and kinetic luminesc. spectroscopy 7−76010
$LiLa_{1-x}Nd_yYb_yP_4O_{12}$ glass, fluorescence kinetics and $Nd^{3+}\rightarrow Yb^{3+}$ energy transfer 7−70873

radiation quenching continued
$LiNaY_2F_8:Tb^{3+}$, luminescence *(French)* 7−106258
$LiY_{1-x}Er_xF_4$, cross-relax. transitions, luminesc. self-quenching 7−85814
$Mg_xCd_{1-x}Se$, recomb. processes under conditions of maximum charge transfer between local centres 7−84916
N+He(Ne)(Ar)(Kr)(Xe)(N_2), $3p^4D^0$ state, radiative lifetime and quenching 7−90327
N_2, excited singlet state, quenching rate const. 7−122619
N_2, quenching rate const. by H 7−117005
NF_2 ($b^1\Sigma^+$) quenching rate consts. meas. in flowing afterglows 7−135997
NO, in inert gas matrix, emission, diffusion-controlled quenching 7−135984
NS+He(H_2)(N_2)(O_2)(SF_6)(N_2O)(CO_2)(NH_3)(methane), $B^2\Pi$ state, collisional quenching and energy transfer rate const. meas. 7−103630
Na-HCl, reactive quenching, pot. energy surfaces, MCSCF/CI wave fns. calc. 7−93253
Na+I_2, electron transfer mechanism 7−110069
$NdAl_3(BO_3)_4$, pulsed laser performance, luminesc. conc. quenching effect rel. to struct. characts. 7−74933
Ne+He, nonadiabatic and radiative transitions, interatomic interactions 7−129857
O_2 concentration meas. using fluoresc. quenching, biomedical sensor appl. 7−78579
O_2, excited singlet state, collisional relax., temp. depend. 7−122672
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
O_2+NO charge transfer reaction $O_2(b^1\Sigma_g^+)$ vibr. distrib., role in aurora and nightglow 7−79735
OH, collisional quenching and energy transfer meas. 7−129782
OH radicals in flame, absolute density meas. by time-resolved laser-induced fluorescence 7−71493
RbI crystals, radiational creation of α,I pairs *(Russian)* 7−142773
Ru (0001), with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
SF_6, vibr. relax. rate consts. meas. 7−110084
Sr II, $4D_{3/2}$ and $4D_{5/2}$ metastable states, lifetimes 7−74492
Xe III, short-wavelength fluoresc., time-resolved meas. 7−141519
XeF pumped with excimer radiation, kinetics of formation and quenching 7−68398
Xe_2F^* pumped with excimer radiation, kinetics of formation and quenching 7−68398
Yb-Er glass:Cr^{3+}, sensitisation in amplification regime, luminesc. 7−85816
ZnO, electron irrad., photoluminescence obs. 7−92714
$Zr(MoO_4)_2$, high-temperature phase, luminescence 7−99916

radiation therapy
see also laser applications in medicine
3D imaging applications to surgical and radiation therapy planning 7−114482
accelerator beam current and scatt. prod. 7−133444
accelerators in research and industry, conf., Denton, TX, USA (Nov. 1986) 7−88733
antidepressant and circadian phase-shifting effects of light 7−87102
automatic digital contrast enhancement of radiotherapy films 7−145206
automation and computer control of accelerators 7−114492
bioactiometry in man, conservative IR laser therapy action on neuromuscular system *(German)* 7−114439
biophysical applications of ionizing radiation for health preservation, current advances 7−79078
brachytherapy, CT body stereotaxic system for placement of needle arrays 7−107231
brachytherapy, optimisation of radioactivity distrib. 7−133472
brachytherapy planning, spreadsheet program 7−145205
brain metastases, stereotactic percutaneous single dose irrad. with a linear accelerator 7−119841
brain tumours: US window to perform scanned, focused US hyperthermia treatments 7−101014
breast carcinoma treatment with interstitial implants, dose-vol. relationships and complications 7−145241
breast radiotherapy, clinical dosimetry based on imaging with CT simulator 7−133475
cancer therapy, use of heat, invasive, noninvasive 7−78791
cancer treatment, Ar dye laser system 7−107204
Clinac-20 linear accelerator, radiation safety survey 7−119866
coagulation effects of pulsed and CW Nd:YAG laser, comparative study 7−107165
computerised clinical electron beam dosimetry model 7−133469
computerised planning systems, implementation of random positioning error as a result of fractionation 7−71862
conference on 90 yrs of X-rays, London, England (Nov. 1985) 7−108014
conformation therapy, treated areas and volumes shape control equipment and methods 7−114491
contact probes for the Nd:YAG laser 7−79048
CT, radiotherapeutic, with scanned photon beams 7−107229
Czechoslovak hyperthermia cancer treatment systems, technical aspects 7−139403
deep seated eccentricity located tumours, heating with an annular phased array system 7−107193
dose buildup for obliquely incident photon beams 7−133464
dose distribution display techniques in radiation therapy 7−107260
dose distribution of electron pencil beam, meas. using background subtraction 7−133465
dose-time factors optimisation for a tumour and multiple associated normal tissues 7−119857
dosimeters for radiotherapy, calibration against secondary standard dosimeters: an anomalous result 7−145246
dosimetry, air-cavity inhomogeneity effects for ^{60}Co, 6-, and 10 Mv X-ray beams 7−71884
dosimetry, broad beam and narrow beam attenuation in Lipowitz's metal 7−71860
dosimetry and quality specification of high energy photon beams 7−79087
dosimetry relative electron beam meas.: scaling depths in clear polystyrene to equiv. depths in water 7−133466
dual photon energy linear accelerator dosimetry 7−101088
E- and H-plane lens applicator for deep and localised microwave hyperthermia 7−139401
electron accelerators, elec. and mech. safety, TRS 86 standard 7−114494
electron accelerators, radiation safety, 1981 standard 7−114503
electron beam depth dose parametrisation 7−119858
electron beam output factors of a 25 MeV linear accelerator, parameterisation 7−133445
radiation therapy continued
electron beams as prod. by accelerators with scanning beams and diaphragm collimators, in-air scatt. 7−145209
electron beams of linear accelerator with energy of 8 to 17.5 MeV, absorbed dose distrib. *(Russian)* 7−127009
electron dosimetry, determ. of 3 parameters describing uncollimated beam in air 7−71887
electron therapy, description of uncollimated beam by a directional pencil beam model 7−71888
electron transport calculations for clinical beams, Monte Carlo program using energy grouping 7−101052
EM energy, diagnostic and therapeutic appls. 7−87135
EM heating using controllable microwave troughguide applicator for cancer treatment 7−127035
EM hyperthermia, temp. meas. technique using refl. method 7−107211
EM hyperthermia of intracavitary malignant tumours, rod radiators *(Russian)* 7−79039
EM hyperthermia of malignant neoplasms, set of devices *(Russian)* 7−79040
endocavitory treatment system dosimetry 7−101087
external beam radiotherapy, on-line meas. of field placement errors 7−87156
fast neutron therapy field, spectral energy measurements 7−79088
fast-neutron therapy, static multileaf collimator 7−101071
ferromagnetic thermoseed materials for tumor hyperthermia 7−107189
fibre optic techniques in medicine and biology, endoscopy, diagnostics and power transmission 7−79041
HF techniques, deep heating with annular phased array 7−107218
historical review of therapeutic uses of X-rays 7−108129
hospital based synchrotron for proton radiation therapy, scaling rules 7−93914
hyperthermia, externally induced EM, microwave techniques and applicators 7−107217
hyperthermia, fractionated, combined with irrad. in mice, comparison of schedules 7−133235
hyperthermia, limited temp. obs. to predict complete temp. fields 7−106988
hyperthermia, local RF capacitive: thermal profiles and tumour response 7−133237
hyperthermia, localised, power deposition patterns determ. steady-state anal. 7−114197
hyperthermia, specific absorpt. rates in simulated tissue media for a 10×10 cm 915 MHz waveguide applicator 7−133410
hyperthermia, therapeutic, induced by EM waves in thermal permanent state, theory *(French)* 7−86920
hyperthermia applicator, coil and waveguide combined 7−107225
hyperthermia heating equipment, 430 MHz, using lens applicator 7−107212
hyperthermia treatment, EM energy transmission increase between media by interposition of adapting layers 7−106986
hyperthermia treatment equipment, feedback control and optimisation, present status and future needs 7−107221
hyperthermia treatment of cancer, comparison of microwave interstitial antennas 7−107215
hyperthermia using miniannular phased array, expt. charactn. 7−133409
hyperthermic applicators, angled dual compact array 7−114441
inductive applicators for EM hyperthermia 7−87138
intersection of shaped radiation beams with arbitrary image sections 7−107228
interstitial EM applicator/temperature probes 7−107214
interstitial microwave applicator design and calibration technique 7−107216
interstitials hyperthermia, RF low current field and microwave, comparative thermal dosimetry 7−107164
intratumoural light distrib. in an expt. mouse tumour irrad. by a diffuse-light irradiator 7−127007
isoeffective doses in radiation therapy *(Russian)* 7−127008
laser, dye, flashlamp-pumped, selection action in medical applics. 7−119828
laser applications in medicine 7−79061
laser in ophthalmology, state of the art and future prospects *(Italian)* 7−145171
leukaemia, in vitro radiation survival curves, implications for optimal scheduling of total-body irrad. 7−71849
linac X-ray beam flattening filter, semianalytical method for design 7−101062
linear accelerator, high-energy, fault logic circuit modification for selectively coded, large-field wedges 7−101068
linear accelerators, effect of collimator backscatt. radiation on photon output 7−101069
low dose cis-Pt/radiotherapy after local tumour preradiation 7−127001
lung density, CT meas., patient posn. role, total body irrad. value 7−145207
lung tumour, prediction of response to treatment, use of dynamic roentgenometry *(Russian)* 7−71861
macular degeneration, senile, and neovascular membrane, laser photocoagulation treatment *(Italian)* 7−145169
malignant cervical tumours, prediction of response to irrad. *(Russian)* 7−79077
mammary tumour, mouse, US induced necrosis 7−100975
mediastinal and thoracic viscera, dog, response to intraoperative radiation therapy 7−119807
megavoltage accelerators for radiotherapy, conf., London, England (May 1987) 7−108044
megavoltage photon beam dose reduction with retracted tissue compensators 7−145245
microstrip-microslot multiapplicator for microwave hyperthermia and radiometry 7−107226
microwave diathermy, elec. impedance tomography for thermal monitoring of hyperthermia treatment 7−87351
microwave hyperthermia, equipment requirements 7−71847
microwave hyperthermia for cancer therapy 7−114440
microwave hyperthermia of tumours, deep seated recurrent or metastatic, thermal washout rate, temp. and tissue type correl. 7−144974
microwave interstitial antenna, helical, for local hyperthermia, performance characts. 7−101035
microwave irradiated tissue, temp. distrib. perturbation due to metallic thermometers 7−133238
muscle, simulated human, temp. profile due to US heating 7−71829
MV portal films using computed radiographic imaging with photostimulable phosphors 7−133434

radiation therapy continued
neonatal phototherapy for hyperbilirubinemia treatment, effective methods and computer model 7−107210
neutron beam therapy, skin-sparing effects of filtering materials 7−133446
neutron therapy and dosimetry at the UCLA Neutron Therapy Facility 7−93912
NMR imaging, 3D, for cancer radiotherapy *(French)* 7−93888
oncologic hyperthermia, local RF, microwave radiometry monitoring and associated radiotherapy 7−114456
optical fibre coupled CO_2 laser for medical use 7−79054
optical fibre technology in medicine 7−79055
optical fibres in medicine and biology, conf., San Diego, CA, USA (Aug. 1985) 7−72708
optimisation, complication probabilities assessment from dose-vol. histograms 7−107230
oropharyngeal tumour proliferating activity as a prognostic criterion *(Russian)* 7−79076
parametric imaging for the optimization of radiotherapy treatment plans 7−107261
photon beams from linacs radiation therapy, appl., quality improvements 7−94013
photon dose perturbations due to small inhomogeneities 7−71880
planning, 3D, display of organs and isodoses as shaded 3D objects 7−107233
planning, 3D use of FFTs for dose distribs. calc. for irregular fields 7−71879
planning, extended net fractional depth dose, correction for inhomogeneities 7−71881
planning, ray-tracing approach to primary component dose calcs. 7−107250
portal film contrast enhancement technique, quantitative evaluation 7−133427
proton accelerator for medical applications 7−89819
pulmonary damage, acute, radiation-induced: clinical study on response to fractionated radiotherapy 7−119804
pulsed concentrated irradiation with solar light used in medicine, technical-economic indices 7−87134
pulsed EM fields, interactions with biological materials 7−114451
radiobiological prerequisites for predicting the reaction of tumours to radiation *(Russian)* 7−71822
radionuclide medical uses, absorbed dose calcs. *(Russian)* 7−87180
radiotherapy, charact. parameters of 6-22 MeV electron beams from a 25 MeV linear accelerator 7−101070
renal calculi, destruction by external shock-waves using Dornier lithotripter 7−87111
retinoblastoma, improved external beam radiotherapy for treatment 7−126998
RF hyperthermia applicator, 10-1000 MHz operation, lightweight design, biomedical appls. 7−145190
RF irradiation of human body for hyperthermic therapy, temp. distrib. study 7−126996
RF techniques, inductive and capacitive deep heating 7−107219
robot-controlled microwave hyperthermia system, non-invasive IR thermometry 7−107222
rotation therapy using X-rays, treatment planning optimisation 7−145203
scanned intensity modulated focused ultrasound system for tumour margin heating 7−107183
Sheffield stereotactic radiosurgery unit: phys. characts. and principles of operation 7−139354
shielding block mounting with double-stick tape 7−107232
shielding design for the ceiling of a 6-MV accelerator in an existing facility 7−93960
simulator, virtual 7−93897
skin, total irrad. with scanning beam electron accelerator, dosimetric study 7−133462
squamous cell carcinoma of base of tongue, time-dose relationships for local tumour control 7−145240
stereotactic brain implants, planning algorithm 7−145204
surface area-dose rate quantification and display 7−107246
surface mold using ^{192}Ir seeds 7−79073
teletherapy beam charact.: the first second 7−133443
testing jig for sealed beam monitors 7−107243
thermal dosimetry based on radiometry in multilayered media during microwave hyperthermia treatment 7−107213
thymic irradiation in infancy, comparative study of thyroid abnormalities rel. to untreated siblings 7−114413
tissue volume ablation in deep seated brain sites, focused US system 7−126988
total-body irrad., improved dosimetry 7−71869
transmission cord blocks, practical aspects 7−133435
treatment planning, rel to correction for lung density 7−119840
tumour blood flow in humans, response to local hyperthermia induced by 915 MHz microwaves. 7−107108
tumour cells, human, max. recovery pot. and clinical outcome in radiotherapy prediction 7−145156
tumour heating, localised, noninvasive, ideal penetration limits determ. 7−144982
tumour perfusion during microwave hyperthermia, tissue thermal props. meas. 7−107166
tumour regression due to microwave hyperthermia and chemotherapy, math. model *(Spanish)* 7−144980
UCLA Neutron Therapy Facility 7−93913
UHF diathermia system with distance-sensitive applicators, power and freq. control 7−145191
UHF local hyperthermia system using indirectly cooled water-loaded waveguide applicator at 432 MHz 7−71838
ultrasound hyperthermia, scanned focused, physical parameters evaluation, blood perfusion rate effect 7−107185
US, hyperthermia, apparatus and technical auxiliaries *(Russian)* 7−79021
US hyperthermia, temp. distrib., nonlinear propag. and tissue interfaces effect 7−126984
US hyperthermia applicator, multi-element, with independent element control 7−114434
US hyperthermia temp. monitoring technique 7−126985
US system incorporating real-time US scanning 7−126986
US tumour treatment, acoustic field synthesis by sector-vortex array 7−126983
Varian Clinac 1800 linear accelerator, characts. of 6 MV photon beam 7−71882
radiation therapy continued
Varian Clinic 2500 linear accelerator, dosimetry of 24 MV X-rays 7−101089
whole body treatment techniques using electrons 7−114493
worldwide medical radiation use, analytical modelling: X-ray, nuclear medicine and radiotherapy appl. 7−71850
Am radiation sources, dosimetry studies for brachytherapy 7−145243
B neutron capture therapy, accelerator neutron source for brain tumour treatment 7−114486
$^{10}B(n,\alpha)^7Li$ reaction in cells and tissue, Monte Carlo simulation of biological effect and implication for B neutron capture therapy 7−126942
^{60}Co radiotherapy beam, Monte Carlo simulation 7−133436
^{60}Co radiotherapy unit primary beam, restricted dose mean LET obs. 7−93958
^{125}I brachytherapy seeds, Monte Carlo simulation of dose distrib. around 7−133467
^{125}I implants, dose distrib. due to anisotropic radiation emission and unknown seed orientation 7−101091
^{125}I, Model 6702 seeds, dose distribs. in water 7−145242
^{32}P, aqueous, dosimetry after soft tissue infiltration following intravenous administration 7−71873
^{32}P radiotherapy, effect of tissue inhomogeneity on β distrib. 7−71883
^{145}Sm: source for brachytherapy 7−133452
^{89}Sr, radionuclide therapy: dosimetric study using impulse response function anal. 7−119856
radiationless transitions *see nonradiative transitions*
radiative corrections
"radiative corrections" is distinguished in use from "electromagnetic corrections" by application to atomic and molecular spectra
see also electromagnetic corrections; radiative shifts
electron capture, relativistic radiative cross-sections, strong-pot. Born calcs. 7−122698
IR radiative corrections to scatt. cross sections 7−74472
H, Lamb shift, radiative-recoil contribs. and proton mass corrections 7−141524
He-like ions, transition wavelengths, $(2p2p)^3P$ states to $(1s2p)^3P$ states 7−82027
radiative decays *see electromagnetic decays; nuclear energy level transitions*
radiative lifetimes
1-cyanonaphthalene-triethylamine van der Waals complex, exciplex form., fluoresc. study 7−82264
ABA-type molecules, local and hyperspherical vibr. resons., lifetimes determ. 7−90088
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
ACTH, dynamics, fluoresc. anisotropies and lifetimes determ. 7−129767
adiabatic- and sudden-perturbation limits for the non-adiabatic transitions between two quasistationary states 7−122620
alkali metal, atoms, core states, multiphoton transition probabilities, model pot. calcs. 7−68269
alkali metal atoms, quasimetastable levels, emission spectra 7−74504
alkali naphtholates, emission and absorpt. props., solvent effect 7−113959
alkali-like ions, lifetime and hyperfine spectra meas. 7−116912
alkylbenzenes, vibr. excited triplet lifetimes, 2-colour photoionis. obs. 7−117011
1-aminoalkyl-2-naphthols, excited state H^+ transfer, fluoresc. study 7−90256
p-aminophenylthiyl free radical, extinction coeff. and radiative lifetime estimation 7−129729
p-(9-anthryl)-N,N-dimethylaniline derivatives, complex excited state relax., fluoresc. lifetime distribs. 7−117013
atom, coherent trapping of populations in a three-level two-mode model with multiphoton transitions 7−74548
atom and ion Rydberg states, radiative lifetime estimation possibility *(German)* 7−129661
atom concentrations, determ. by reson. radiation capture 7−114058
atom-ion collisions, unified at.- and mol.-orbital matching method study 7−109704
atomic dipole radiative transitions with $\Delta l=3$ 7−82024
atomic excitation by inner-shell vacancy production 7−122455
atomic transition rates, nearby dielectric sphere effects 7−122446
atoms, energy spectra, radiational lifetime correl. 7−122330
atoms, intensity factors for the $1s2l2l'$-$1s^22l''$ lines 7−122453
atoms, many-electron, radiative transition matrix elements, field theory approach 7−122352
atoms, transition array quenching through config. mixing 7−82042
bacteria, live, primary fluoresc., steady-state and decay characts. 7−86909
bacteriochlorophyll α, pheophytin substitute fluoresc. spectra, critical energy transfer distances calc. 7−106983
1,2-benzanthracene, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
benzene, $^1B_{2u}$ level, vibr. ang. momentum fluoresc. lifetimes study 7−82263
benzene-He van der Waals mol., intramolecular vibr. energy relax. 7−90298
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7−116977
benzo[a]pyrene, fluoresc., decay lifetime meas. 7−68393
benzo[f]quinoline, solid-surface luminesc. anal., calib. curves 7−92713
Brownian particle motion in system with absorbing boundaries 7−120948
chalcone ketyl radical anions, fluoresc. spectra and lifetimes 7−135987
chlorophyll a and photochlorophyll in frozen solns., fluoresc.-detected triplet kinetics study 7−100812
chromium(III) polypyridyls, doublet state, phosphoresc. decay time 7−68395
close coupling wave fns., oscill. strengths and photoionisation cross sections, PHOTUC computer code 7−135881
collisional redistribution beyond the medium-coupling limit 7−109834
cometary diatomic molecules, spectral features and calcs. 7−122556
concentration dependent fluorescence quenching with ionic reactants, calc. 7−82265
concentration-modulated absorption spectroscopy, CW lasers appl. 7−103478
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
coronene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
Coster-Kronig transition probability for L_2-L_3 and Z=54 7−68256
crystals, laser-excited fluorescence of Nd^{3+} 7−122439
p-cyano-N,N-dimethylaniline, intramolecular excited state charge transfer, fluoresc. 7−135995

radiative lifetimes continued
cyanogen-HF binary complex, ν, vibr. fundamental investig. 7−135932
β-cyclodextrin-indole inclusion complex, absorpt. and fluoresc. spectra 7−103569
cyclohexane, positive charge carrier prod., lifetimes, accumulated dose effect 7−110005
trans-decalin, positive charge carrier prod., lifetimes, accumulated dose effect 7−110005
decay curves, convolutionally distorted, eval. method 7−117025
diamond, neutral vacancy, cathodoluminesc. decay time studies 7−92747
diatomic molecule gas, vibrational relaxation, harmonic oscillator approx. 7−141659
dibenzo[f,h]quinoxaline, phosphoresc., external heavy-atom effect 7−117003
2,3-dichloroquinoxaline, in calcinated Vycor glass emission and excitation spectra, surface-adsorbate interaction, phosphorescence lifetimes, Bronsted acid sites 7−141626
3,3′- diethyl-6,6′-diphenyl-9-enthyloxacarbocyanine iodine, time-resolved fluoresc. spectra, solvent depend. 7−82252
p-difluorobenzene, vibr. levels, lifetimes, SEP-SVLF spectra 7−74702
4-2′-(dimethylamino)-6′-naphthoylcyclohexanecarboxylic acid, dynamic fluoresc. study 7−117009
4-N-N-dimethylaminobenzonitrile, jet-cooled, dispersed fluoresc. spectra and lifetimes 7−109980
l,n-diphenyl-l,n-diyls, substituted, UV spectral lifetimes, substituent and solvent effects 7−82204
2,5-diphenyloxazole, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
dipyridotetraazapentalene, photooxidation, fluoresc. and phosphoresc. spectra 7−82268
donor-acceptor compounds, intramol. charge transfer, dielectric relax. effect 7−117064
donor-acceptor systems, electron transfer through intramol. bridges 7−74695
donor-acceptor systems, fluoresc. energy transfer, diffusion limit criteria 7−90456
dye IR lasers, synchronously pumped, pulse parameter anal. 7−130088
dye molecules, isolated, adsorbed on organic single crysts., site-dependent fluoresc. lifetimes 7−82271
eosin Y, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
ethidium bromide, alcohol-water soln. fluoresc. study 7−99909
excitonic gratings, decay time, diffusion and fluoresc. reabsorption effects, phenomenological theory 7−131554
extinction laser spectroscopic technique, meas. of level positions, oscillator strengths and autoionising linewidths 7−102542
Fe XVIII, $1s^22s^22p^{52}P_{1/2}{}^0$-$^2P_{3/2}{}^0$ fine struct. transition, elec. quadrupole and mag. dipole transition probabilities 7−68230
ferrocene, T_1 state, quantum yield determ. 7−103518
fluorescein, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
fluorozirconate glass:Eu^{3+}, site selection spectroscopy studies 7−99824
formaldehyde, dissoc. rates and reson., quantum mech. calcs., comparison with RRKM and exact models 7−71468
glucagon, dynamics, fluoresc. anisotropies and lifetimes determ. 7−129767
heavy ion-atom collisions, inner-shell vacancies prod., electron capture, X-ray spectra anal. 7−109831
Hg arc plasma, triplet lines, intensity current and mag. field depend., visible spectra 7−137126
homotryptophan derivatives, fluoresc. lifetime distribs. 7−117007
hydrogenic ions, relativistic and quasirelativistic line strengths 7−103437
ice, electron irrad., luminescence emission obs. 7−99942
III-V semiconductor heterostructures, intrinsic radiative transitions, time consts. 7−77620
III-V semiconductors, radiative recombination, reemission, quantum efficiency and lifetimes 7−85842
indoles, ^1L_a state, fluoresc. and electronic spectra 7−82269
inert gas hydride excimers, binding energies, bound-free UV fluoresc. spectra anal. 7−96723
inhomogeneous plasmas, self-reversed emission lines, lifetime and broadening, diagnostics appls. *(German)* 7−130939
isokinetic relationship, unimolecular reaction systems, steady state solutions, vibrational spectra, liquid and gas phase reaction sites 7−144682
keto sulfides, triplet, intramol. charge-transfer interactions investig. 7−113883
laser excitation of ion beams for atomic spectroscopy 7−82050
laser plasma, X-ray emission spectra, atomic number depend. 7−104434
light harvesting chlorophyll complex, picosec. dynamics, detergent effects 7−71681
linear molecule photoelectron ang. distribs. calc., PEAD computer code 7−136013
macromolecules, fluorescence energy transfer, donor-to-acceptor distance distrib., freq.-domain fluoresc. spectra 7−139204
many-electron atoms, confluent levels, transition probabilities 7−122444
methanal beam, rot. transitions in pulsed strong field 7−129680
methane-d_3, transition probabilities calc. 7−96795
methyl cation+NH_3, binary reaction and ternary assoc., rate coeffs. 7−132924
1-methyl indole, in polar and nonpolar solvents, fluoresc. decays 7−117010
methylene anion, excited states, photodetachment, radiative decay lifetimes ab initio calcs. 7−90285
methylene cation, $^2A_1$ electronic state, nonadiabatic transition probabilities, avoided crossings 7−103584
molecular collisions, radiative transitions induced by short laser pulses 7−122622
molecular fluorescence, decay kinetics, excited states quasi-continuum approach 7−96769
molecules, differential cross section, adiabatic approx. 7−82385
molecules, generalised pot. surface nucl. motion inclusion 7−129627
naphthalene, triplet excimers, conform. and phosphoresc., radiative and nonradiative decay rates 7−82267
naphthalene-benzophenone system, nonradiative triplet-doublet energy transfer meas. 7−109913
naphthalenes, substituted, radiationless processes, vibronic level fluoresc. lifetimes 7−129769
α-naphthylphenyloxazole, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
Nile blue, ethanol soln., nonlin. receptivity, nonMarkovian model 7−90180
radiative lifetimes continued
nondiabatic coupling, quantum exponential model, asymptotic anal. 7−90042
oxazine dyes, US mol. jet, luminesc. and visible-UV spectra 7−68402
oxazine-18, ethanol soln., nonlin. receptivity, nonMarkovian model 7−90180
palladium etioporphyrin, triplet state, conc. quenching, phosphoresc. study 7−68397
perturbed atomic states, lifetime depend. 7−122445
phenanthrene, short-lived S_2-state, transient photophysical hole burning studies 7−130274
phenanthrene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
pinacyanol, photoisomerisation, time-resolved reson. CARS 7−129719
planetary nebulae, spectral characteristics for C, N and O *(Swedish)* 7−128025
PMMA, intramol. charge transfer fluoresc. as mobility probe 7−90263
poly(phenyl methyl silane), photolysed, photoluminesc. growth obs. 7−99920
polydiacetylene single crystal, pulsed ESR meas. of photoexcited triplet-soliton pairs 7−70624
polydiacetylene-pTS relaxation dynamics, transient gratings, singlet and triplet excitons 7−135958
polymethine dyes, S_1-state deactivation, time resolved fluoresc. and absorpt. investig. 7−103572
polymethine dyes, struct. parameters, fluoresc. lifetimes and quantum yields 7−90266
pseudoisocyanine bromide, J-bands, photon echo and hole burning investig. 7−103904
4H-pyran-4-thione in solns., phosphoresc., quantum yields and triplet lifetimes 7−96767
pyrazine, $^1B_{3u}$ state, fluoresc. quantum yield 7−90251
pyrazine, $^1B_{3u}$ state, high resolution lifetime meas. of perturbed $J'=0$ levels 7−82254
pyrene, excited singlet states in soln., quantum yields, fluoresc. spectra 7−122605
pyrene, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrene methyl cholesterol adduct, membrane heterogeneity investig., fluoresc. associative spectra 7−90250
pyrene-pyromellitic anhydride solns., charge recomb. dynamics, picosec laser spectrosc. obs. 7−68291
rhodamine 6G solns., energy accumulation, luminesc. study 7−129777
rhodamine 6G solns., sub-ns fluoresc. lifetimes eval. by phase plane method *(Chinese)* 7−141627
rhodamine B and rhodamine 6G, adsorbed on XAD-2 and XAD-4 resins, fluoresc. spectra and lifetimes, use in fibre-optic sensors 7−74693
rubrene, soln., triplet states, thermally activated intersystem crossing 7−68405
rubrene ditertbutyl, substituted, triplet excitons, mag. reson., fluoresc. 7−70893
Scheibe-aggregates of pseudoisocyanine in soln. and molecular monolayers, fluoresc. lifetimes 7−117004
semiconductors, donor-acceptor pairs, hopping conduction and, luminescence relax. 7−105564
semiconductors with double-hump nonparabolic band structures, magneto-optics, appl. to Cd-Sb 7−125706
short-lived isotopes, on-line reson. ionisation mass spectra anal. 7−90072
solvent mixture of different polarities, dielectric enrichment, exciplexes, mol. fluoresc. anal. 7−68389
p-terphenyl, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
tetracene, soln., triplet states, thermally activated intersystem crossing 7−68405
tetramethylcyclobutane-1,3-dithione crystal, defect trap phosphoresc. spectra and lifetimes 7−144095
2,2,6,6-tetramethylpiperidine radical, solvation of Li^+, complex form., ^7Li NMR study 7−93264
thiophenes, polycyclic aromatic, mol. struct., phosphoresc. study 7−122608
three-state atoms, radiative transitions study 7−103414
three-state model, driven by two laser beams 7−122651
transition metal carbonyl complexes, vibrational energy lifetimes meas., picosecond-IR sat.-recovery expts. 7−74577
(2,4,6-trimethylbenzoyl)diphenylphosphine oxide, micellar soln., photodecomp. in mag. field 7−129814
triplet intermediates, spin-orbit coupling, mag. field effects 7−109951
tris(tetrabutyl ammonium) europium hexathiocyanate, IR, Raman and fluoresc. spectra 7−116969
tryptophan and its derivatives in soln., nonexponential fluoresc. decay, conformational states, lifetimes 7−90259
tryptophan in apocytochrome c, fluoresc. quenching dynamics, rot. isomerism study 7−78745
unimolecular dissoc. rates, semiclassical anal. of quantum reson. lifetimes 7−71467
van der Waals molecules, fine-struct. electronic predissoc. quantum-mechanical model 7−110039
vitamin B_1, fluorescent derivatives, photophys. and photochem. props. 7−100813
xanthene dyes, photochem., anionic micelle characterisation 7−119544
xanthene dyes, US mol. jet, luminesc. and visible-UV spectra 7−68402
xanthione-d_0(-d_4)(-d_6)(-d_8), radiationless decay, D isotope effect 7−135986
XY_2+XY_2, collinear collisions, vibr. energy transfer, quantum calcs. 7−110086
Al II, 266.9 nm intersystem line transition probability 7−90033
Al isoelectronic sequence, transition probability determ., review 7−109839
Al XI, laser produced plasma, population inversion, ab initio spectra 7−69392
AlCl, $A'\pi$ state, radiative lifetime determ. 7−109981
AlGaAs quantum wells, photoluminescence switching in elec. field 7−138495
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
AlO, Ar matrix isolated, vibr. relax., IR-optical double reson. 7−82235
Al_2O_3:Cr^{3+} time-resolved excited-state electronic Raman spectrum 7−85615
Ar, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Ar^{8+}, energy levels, effective interaction radiative consts. 7−82044

adiative lifetimes continued
Ar_n^+ clusters, evaporative lifetime, kinetic energy, binding energy determ. 7−122764
AsH, low-lying states pot. energy curves, radiative transitions, multireference CI calcs. *(French)* 7−89973
B isoelectronic sequence, 1s vacancy states, Auger and radiative decay rates, CI and relativistic effects 7−103407
B isoelectronic sequence, electric dipole oscillator strengths and radiative lifetime, LS-coupling calcs. 7−135880
B^+, excited state lifetime, beam-foil spectr. multiconfig. HF calcs. 7−81942
BH, $A^1\pi$ state, transition moment and radioactive lifetime calc. 7−110004
Ba, nonradiative transition probabilities relativistic calc. 7−68249
Ba, resonance level, transition probabilities, emission spectra 7−82045
$BaBr_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$BaHo_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$BaLaGa_3O_7$:Nd single crystals, spectroscopic studies 7−85796
$BeAl_2O_4:Ti^{3+}$, lasing and optical props. 7−97018
Br_2, laser-excited, collision-induced dissoc., rate const. meas. 7−103598
C^{3+}, lowest quartet states transitions, UV beam-foil spectra anal. 7−141503
C-like ions, level populations, radiative lifetimes and line intensity ratios calcs. 7−74455
$C^{5+}+H_2$, electron capture induced K-LL Auger transitions, post-collision line broadening 7−110073
C_2, $A^1\Pi_u$ state lifetime, dipole transition moment, CI calcs. 7−81988
CH radical, $C^2\Sigma^+-X^2\Pi$ system, transition probabilities, laser induced fluoresc. 7−96781
CH^+, isotopic species, vibr.-rot. transition probabilities, electric dipole moment fn. calcs. 7−96504
CO_2 automated tunable stabilized laser spectrometer for molecular studies 7−108677
CO_2, vibr. transitions, Einstein coeffs. calcs. 7−122492
$(CO_2)_n^+$ clusters, evaporative lifetime, kinetic energy, binding energy determ. 7−122764
CS_2, V^1B_2 state, fluoresc. and Zeeman quantum beat spectra 7−90240
CS_2, V^1B_2 state, fluoresc., mag. field effects 7−96766
Ca, $4snf\,^1F_3$ states, radiation lifetime meas. 7−103434
Ca I, radiative decay anisotropy in elec. field 7−103431
Ca III, Ar-like, radiative lifetimes, spectra 7−122451
Ca ions, charge transfer collisions, reson. transfer and excitation, X-ray spectra 7−122428
Q-Cd_3P_2, colloidal, aq. soln., flash photolysis, optical absorpt. meas. 7−113167
Cl^{7+}, energy levels, effective interaction radiative consts. 7−82044
Cs, satellite two-electron radiative transitions due to relaxation effects 7−68255
Cs^++Kr, autoionising state excitation, lifetime, electron spectra 7−117060
Cs_2, optically excited levels, mag. field effects, reson. fluoresc. study 7−129772
Cs_2NaSbX_6 (X=Cl, Br), delocalised excited state transition, luminesc. spectra 7−119034
$Cs_2NaScCl_6:As^{3+}$, luminescence spectra, Jahn-Teller effect, spin-orbit coupling 7−138484
Cu, two step excitation, radiative lifetimes, UV spectra anal. 7−116901
CuBr, excited states, lifetime meas., identification 7−136011
CuI, excited states, lifetime meas., identification 7−136011
DCN-DF, vibr. predissoc. fundamentals, rovibr. anal. 7−82299
^{160}Dy, 6^+ state, life time deduction from transition probabilities 7−96020
Eu I, radiative lifetimes, time resolved fluoresc. decay 7−103430
F VII, quartet spectra, wavelengths, transition probabilities and lifetimes 7−74441
F_2^n (n=+ or 0), Rydberg states, pot. energy curves, CI calcs. 7−109790
Fe^{n+} (n=23, 24, 25), K X-ray wavelengths and transition probabilities 7−95120
Ga $4s4p^2$ config., lifetimes and relative transition intensities, two-step laser ionisation study 7−141527
Ga, excited state, collisional quenching, branching ratio determ. 7−103428
Ga, K emission bands and X-ray emission spectra meas. 7−141508
GaAs, deep impurity levels, luminescence transient obs. 7−106250
GaAs free excitons, radiative lifetimes and giant oscillator strengths determ. 7−105410
GaAs:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
GaAs-AlAs superlattices, electronic struct., folding effects 7−118571
GaI, isoelectronic series, $3p^N$ and $4p^N$ configs., forbidden lines, transition probabilities, HFR SCF calcs. 7−89998
GaP, deep impurity levels, luminescence transient obs. 7−106250
GaP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
H, 21 cm hyperfine level lifetime, Zeno effect on galactic H content 7−68252
H ion, radiative transition probabilities, Biedenharn transformation, Dirac eqn. soln. in Coulomb field *(German)* 7−129662
H+H (He) (H_2O), excitation transfer studied with Fabry-Perot interferometer, fine struct. 7−119514
$H+H_2$, reactive mol. scatt., functional sensitivity anal. 7−106776
H_2, Lyman and Werner band systems, rot. coupling effect on emission probabilities 7−129737
H_2, two-photon absorptivities, CI expansion technique calc. 7−74722
H_2-$d_0(d_1)$ scatt. from Ag (111) surface, close coupling wave packet method appl. 7−106331
H_2O, dissoc., hyperspherical reson. lifetimes eval. 7−90276
He, Rydberg states, radiative lifetime estimation possibility *(German)* 7−129661
$He+C^{5+}$, electron capture induced K-LL Auger transitions, post-collision line broadening 7−110073
$He+H_2^+$, reactive and nonreactive transition probabilities, scatt. resons. 7−110065
He_2, ground state pot., spectral intensity anal. 7−82312
^4He, 2^3S excited state, quadrupole moment calc. 7−82046
Hg, 6s6p state, in Xe, spectrosc. and kinetics 7−89907
Hg, atomic vapour laser isotope separation, atomic parameters study 7−90068
Hg halides, photodissociation, spectroscopy, kinetics and laser effects 7−141839

radiative lifetimes continued
Hg, low pressure discharge, radiative lifetimes and optogalvanic effect 7−129671
Hg, metastable state, electron impact excitation fn. meas. 7−68463
(hydroxyphenyl)benzotriazoles, internally H bonded, spectrosc. and kinetic investig. 7−82202
I_2, fluoresc. intensities, lifetimes, electronic transition moments 7−96784
I_2, Ω doubling in 1_g state, electronic transition moments 7−96522
IF, low-lying electronic states, matrix isolated, fluoresc. study 7−141616
InP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
K, satellite two-electron radiative transitions due to relaxation effects 7−68255
Kr, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Kr III, mean-life meas. using beam foil technique 7−122485
Kr^+, 5p levels, radiative lifetimes 7−96842
$La_{1-x}Pr_xOCl$, luminesces. conc. quenching of Pr^{3+} ion 7−113265
Li, excited state, in air-acetylene flame, laser enhanced ionis. and laser induced photoionis. yields determ. 7−90295
Li^0 to Si^{11+}, $1s2p^2\,^4P$ states, lifetimes determ. 7−90043
Li-like ions, energies and relativistic radiative transition rates, MC Dirac-Fock calcs. 7−135883
Li-like ions, metastable state, lifetime, relativistic DF calcs. 7−116910
Li-like ions, radiative and Auger decay channels following electron capture 7−90028
Li+He, collision-induced transitions, orientation and alignment anal. 7−90386
LiF, fluoresc. emission spectra study using synchrotron radiation 7−113277
LiH, isotopic species, vibr. levels lifetimes, UV fluoresc. spectra 7−141591
$MgF_2:Co^{2+}$, Ni^{2+}, Mn^{2+} crystals, absorption and luminescence spectra 7−106255
MgO, $B^1\Sigma^+$ and $X^1\Sigma^+$ states, electric dipole moments, Stark quantum-beat spectra 7−68379
N+He(Ne)(Ar)(Kr)(Xe)(N_2), $3p^4D^0$ state, radiative lifetime and quenching 7−90327
N_2, excited singlet state, quenching rate const. 7−122619
NCNO, jet-cooled, radiative and nonradiative processes 7−135985
NCl_3, photolysis, spectra, time profiles 7−139028
NH, $A\,^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
NH_3, jet cooled, UV absorpt. spectra, isotope shifts 7−103529
NH_3, rot.-vibr. dynamics, reson. Raman scatt. spectra 7−90158
$NH_3+NH_3(N_2)$, vibr. relax. rate and lifetimes meas. 7−110087
NO, $B^2\Pi$ and $C^2\Pi$ states, rot. levels, fluoresc. lifetimes 7−109982
NO_2, laser-excitation, polarisation inversion study 7−103585
Na, excited state, in air-acetylene flame, laser enhanced ionis. and laser induced photoionis. yields determ. 7−90295
Na+Ar, radiative transitions induced by short laser pulses 7−122622
Na+He, collision induced S-P transitions, P state orientation and alignment, propensity rules 7−90385
Na_2, electron scatt., rot. transitions, differential cross sections calc. 7−129887
$NaF:Cu^+$, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
NaF:Mg, excited F_2^+− and M−centres, lifetime studies 7−106257
Nb ions, charge transfer collisions, reson. transfer and excitation, X-ray spectra 7−122428
Nd^{3+} complexes, acetate complexes, excited state lifetimes, fluoresc. study 7−68386
Nd^{3+}:β″-Al_2O_3-Na_2O laser, single pass gain 7−82582
Nd^{3+}:YAG, $^4F_{5/2}$ and $^2H2_{9/2}$ levels, radiative decay probabilities *(Japanese)* 7−130129
Ne, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Ne, pure and doped, self-trapped exciton luminesc., time-resolved study 7−106274
Ne+inert gas depolarising collisions, $2p_4$ level broadening and radiative lifetime, Hanle signal obs. *(German)* 7−129660
$NeBr_2$, ground electronic state, vibr. predissoc. lifetime meas. 7−110035
$NeCl_2$, van der Waals mol., laser-induced fluoresc. excitation spectra 7−96776
Ni II, radiative lifetimes, time-resolved laser-induced fluoresc. 7−122436
Ni XVII, low-lying levels, lifetimes, beam-foil spectra 7−74496
O VI, quartet spectra, wavelengths, transition probabilities and lifetimes 7−74441
O_2, atom recomb., homogeneous and heterogeneous, $a^1\Delta g$ state, reaction rate const. meas., appl. to nightglow 7−78460
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
O_2, nightglow triplet emissions, vibr. levels attitude distribution 7−79732
O_2+NO charge transfer reaction $O_2(b^1\Sigma_g^+)$ vibr. distrib., role in aurora and nightglow 7−79735
O_3, strong laser field absorpt., vibr.-rot. transitions, IR spectra study 7−74605
OD, Lamb dip spectra obs. in mol. beam 7−135858
OH radicals, in flames, $A^2Z^+-X^2\Pi_i$ transition probabilities, laser-induced fluoresc. 7−122597
OH, two-photon absorptivities, CI expansion technique calc. 7−74722
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
$POCl_3$:$SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
$Pr(NO_3)_3 6H_2O$, complexes in alcohols, IR and UV-visible spectra 7−82117
Rb^++Ar, autoionising state excitation, lifetime, electron spectra 7−117060
S XIV, laser produced plasma, population inversion, ab initio spectra 7−69392
S^{10+}, radiative rates and collision strengths, configuration calcs. 7−116875
Si^{12+}, doubly excited, atomic parameters, Hartree-Fock-Slater model calcs. 7−116876
SiCl, Lamb dip spectra obs. in mol. beam 7−135858
SiF^+ (SiF), electronic states, CI calcs. 7−74462
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
SiH_2, rovibronic levels, lifetimes, visible fluoresc. spectra anal. 7−103519
SiH_2, rovibronic levels, quantal fluctuations in fluoresc. lifetimes 7−103564
Sn III and IV, energy level lifetimes, beam-foil meas. 7−90040

radiative lifetimes continued
Sr II, $4D_{3/2}$ and $4D_{5/2}$ metastable states, lifetimes 7−74492
Sr^{q+} excited states, X-ray spectra anal. 7−141512
TbF_3, fluoresc. dynamics, effect of ferromag. order 7−113276
^{130}Te, spectral intensities of laser-induced fluoresc. 7−122604
Ti X, θ-pinch plasma, electron-impact excitation, spectral line intensities study 7−91286
Ti^+, $z^4D_{5/2}{}^0$ level, lifetime meas. 7−129649
Ti^{9+}, lifetime determ. beam-foil investig. 7−129664
TiO transition rates for β, δ, φ, γ′, γ, and α systems 7−82282
Tm, Ne matrix isolated, spectral and temporal characts. 7−68245
U^{90+}, QED test using Lamb shift meas. 7−122456
Xe, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Xe III, short-wavelength fluoresc., time-resolved meas. 7−141519
$Xe+C^{3+}$, electron capture induced K-LL Auger transitions, post-collision line broadening 7−110073
XeF ground state kinetics analysis rel. to laser performance 7−117182
YAG:Nd high temp. fluoresc. lifetime investig. 7−92736
YAG:Ti, optical transitions 7−85795
$Y_3Ga_5O_{12}:Ce^{3+}$, luminescence properties 7−132332
Yb, 6snd $^1D_2$ and 6sns $^1S_0$ states, config. interaction, radiative lifetimes meas. 7−129615
Zn isoelectronic series, excited states, VUV spectra anal. 7−141501
Zn, K emission bands and X-ray emission spectra meas. 7−141508
$ZnO:Co^{2+}$, saturation spectroscopy and fluorescence 7−99926
ZrF_6-BaF_2-LaF_3-AlF_3:Ni^{2+}, Co^{2+}, Mn^{2+} glass, absorption and luminescence spectra 7−106255

radiative shifts
CuI isoelectronic series, $3d^94s^2\ ^2D$ term, fine struct., relativistic HF calcs. 7−68204
Li-like ions, 2-20 to 100, energy levels, radiative shifts, vacuum polarisation *(Swedish)* 7−122394

radiative transfer
absorbed flux densities for scatt. material with diffuse or collimated flux 7−130517
absorbing medium with strongly anisotropic scatt., light propag. theory 7−68553
thick accretion disks, anisotropic radiation fields prod. by electron scatt. 7−72278
accretive operators theory, appl. to radiative transfer equations 7−80708
aerosols, conc. and size distrib. function, vertical distrib. over tropics 7−139758
arbitrary, absorbing, isotropically scatt., finite medium, nondiffuse radiation, integral eqns. soln. 7−117439
atmosphere, cloud-radiation interactions anal. using 3D nephanalysis and Earth radiation budget data bases 7−115010
atmosphere, effects of multiple scatt. on atmospheric correction algorithm for Nimbus-7 Coastal Zone Colour Scanner 7−115005
atmosphere, modelling of outgoing long-wave radiation in presence of broken clouds 7−115009
atmosphere, radiative cooling and frost form. on surfaces with different thermal emittance 7−114809
atmosphere, sensitivity of mean radiative fluxes to vars. of broken cloudiness parameters *(Russian)* 7−145593
atmosphere, spatial power spectra of cloud fields rel. to transfer by broken cloud 7−114912
atmosphere few-level radiative convective model, climatic effects of aerosols and minor atm. components *(Russian)* 7−101480
atmospheric inhomogeneous nonisothermal precipitation, simulation and statistical retrieval 7−101407
atmospheric water vapour, integral transmission function, solar radiation models 7−87905
AB Aur, Herbig Ae star, Hα line form. in wind 7−79967
binary stars, radiative equilib. eqn. numerical soln. 7−107909
black holes, effects of electron-positron pair opacity on spherical accretion luminosity 7−120488
Bok globules, thermal IR emission models 7−140225
circumstellar shells, spectral line profiles from moving spherical shells 7−145934
close binary stars, evolution and radiative transfer characts. 7−127950
cloud-radiation feedback, Meteorological Office participation in First ISCCP Regional Experiment (FIRE) 7−127476
clouds, microwave radiometers meas. for liquid water and precipitable water vapour determ. 7−127335
clouds, radiative transfer models of appearance of obscured city lights in satellite images 7−115011
clouds, radiative transfer rel. to ceilometer signals and pilot optical ceiling 7−115008
cometary atmospheres, effects of solar radiation transfer on dusty gas outflow from nucleus *(Russian)* 7−107757
cometary dust comae, single and multiple light scatt. 7−134184
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
cosmic background radiation, polarisation in magnetic Bianchi type II cosmologies 7−115632
cylindrical astronomical maser models, polarisation due to mag. fields 7−127706
deciduous hardwood canopy, directional light scatt. props. during winter 7−127505
dense high-temperature stellar plasma, relativistic free-free Gaunt factor 7−115228
diffuse interstellar clouds, H_2 line transfer rel. to physical conditions and mol. abundances 7−115555
diffuse reflection problem, radiation transfer in sphere with internal source 7−72272
discharge lamps, high pressure, radiation transport processes and temp. distrib. 7−130971
discharge plasmas, radiative processes, local thermodynamic equilib. *(German)* 7−130842
early-type stars, gas accel. due to ensemble of spectral lines 7−115362
excited atoms, transport and reson. line transfer, self-consistent solns. 7−82011
Fleck's equation, diffusion approx. and random walk method of soln. 7−80695
fluidised beds, radiative heat transfer, temp. and particle size depend. study 7−111093
Fredholm integral eqns. with displacement kernels, radiative transfer appl. 7−128495
radiative transfer continued
freons, IR absorbing gas, appl. for transparent thermal insulation 7−142152
fusion reactors, radiative transfer in statistically heterogeneous mixtures 7−81685
general integral operator for radiative transfer problems, general theorems 7−72274
geocorona, Hα nightglow intensity distribs. and line profiles from multiple scatt. theory 7−134045
Grand Canyon, United States, visibility, Monte Carlo radiative transfer modelling 7−94427
HD 50896, WN5 star, empirical model for line and continuum form. 7−101802
AM Her stars, electron scatt. effects on intensity and polarisation of cyclotron emission regions 7−115452
high-level clouds, emissivity, fractional cover and cloud top temp. determ. 7−133991
homogeneous medium, inverse light scatt. problem, P_1 approx. 7−96939
hypergiant stars eruptions, opaque wind model for relation between apparent temp. and mass loss rate 7−120440
interstellar molecular clouds, CO lines form. in turbulent vel. field with finite correl. length 7−101874
interstellar molecular clouds, physical and kinematic model for line emission transfer 7−88581
interstellar molecular clouds, radiation transport, two-dimens. disk geometry, quasi-diffusion method 7−120270
interstellar photodissociation regions and mol. clouds, role of far-IR radiation field in line excitation and cooling 7−146076
inverse radiative transfer with delta-Eddington phase function, unknown coefficients estimation 7−72275
IRC+10216, C star, circumstellar dust opacity from optical-IR photometry 7−101796
IRC+10216 (CW Leo), radiative transfer and photochemistry of C_2H and CN in circumstellar shell 7−101790
isotropic scatt., absorpt. coeffs. *(Russian)* 7−80710
laminar boundary layer, radiation absorpt. effects on transient free convection currents 7−94645
laser beam propagation, layered atmosphere, multiple scattering anal. 7−79598
line formation in finite slabs, resonance polarization 7−101668
linear-anisotropically scattering slab, reflectivity and transmissivity, effect of single scatt. albedo stepwise var. 7−121010
liquid-drop radiator, transient radiative cooling, separation of variables soln. 7−110764
magnetogasdynamics, self similar flow with radiative heat transfer, shock effects 7−69280
mesosphere, radiative transfer scheme for 3D dynamical model 7−127472
metals, absorptivity, integral hemispherical, electrical resistivity meas. 7−130518
microwave background, anisotropy calc. from transfer function (between z=2000 and z=800) 7−146106
miniature globe thermometer for mean radiant temp. estimation and comfort modelling 7−93588
multilayered atmospheres, light scatt., Milne problem 7−72265
multiply scattered radiation field, time correl. function 7−68555
neutrino flows in collapsing stars: a two-fluid model 7−88469
neutron star atmospheres, Fe features form. in cooling spectrum of X-ray bursts 7−134274
neutron stars, coupled neutrino-photon transport eqns. rel. to neutrino-driven stellar winds 7−88493
nonlinear, anal. of Monte Carlo method 7−115934
nonlinear resonance scattering problem, absorpt. and emission line profiles 7−127690
oceans, two-stream irradiance model for deep waters 7−114714
one-dimensional stochastic medium, radiation transfer 7−89161
partial redistribution problem, line emission profile and line source function determ. 7−115226
particle escape probability for an inhomogeneous medium 7−121011
photon entropy density balance eqn. for nonequilibrium system 7−73295
planetary atmospheres, adding method for multiple scattering calcs. for polarised light 7−145809
planetary atmospheres, unified treatment of polarised light emerging from homogeneous plane-parallel atmosphere 7−145808
plasma, light scattering, fundamental aspects and diagnostic appls. 7−130847
plasma, radiative transfer and collisional rate eqns., self-consistent solns. *(German)* 7−130841
plasma radiation transport, stochastic wave-kinetic theory 7−139855
point coating, heat transfer effect study 7−97275
point source in an infinite stochastic medium 7−72266
polychromatic scattering, radiation transfer, nonlinear problem 7−75041
propyne, IR absorbing gas, appl. for transparent thermal insulation 7−142152
protostellar cocoons, radiative forces on dust rel. to accretion inflow and form. of massive stars 7−145940
ρ Pup, δ Sct star, continuum and line opacities rel. to spectrum vars. during pulsation cycle 7−134253
quasar emission-line regions, radio waves anomalous absorpt. rel. to plasma heating 7−95046
quasars, effects of electron scatt. opacity in broad emission-line regions 7−88667
radiative acceleration instability, growth rate and appl. to V1343 Aql. (SS 433) 7−139899
radio sources, astronomical, electron scintillation in gravitationally-lensed images 7−107975
random medium, statistical radiative transfer, Monte Carlo method *(Russian)* 7−103746
relativistic radiation gas dynamics, eqns. in tetrad form for astrophysical appls. 7−127696
resonant line photons transfer in spherically accelerating envelopes 7−120260
resonant Raman-cyclotron scatt. in very strong mag. fields, transition probabilities and cross sections 7−139901
resonator-free amplification of spontaneous radiation under recombination pumping conditions 7−122893
Saturn rings, normal optical depth determ. from 2.7-mm aperture synthesis obs. 7−134175
scattering medium bounded by transparent solid plates, radiative transfer problem soln. by P_LT_N method 7−130519
SN 1987A in LMC, contrib. of line blocking to computed UV spectra 7−140118

diative transfer continued
solar absorption line formation depth and contrib. functions 7−88337
solar chromosphere, spicule model in middle chromosphere from eclipse data anal. 7−79908
solar collectors, radiative property of absorbing materials and its collection efficiency 7−71647
solar flare plasma, H I and He I line profiles in near-IR spectra 7−127804
solar interior, effect of ion correls. on free-free opacities 7−139904
solar quiescent prominence, semi-empirical transfer models 7−79912
solar quiescent prominences, 1-D models of H I spectrum form. with standard partial redistrib. 7−145905
spectral line formation in expanding spherical medium, effects of dust scatt. 7−120368
spectral line formation in stellar model atmospheres, implications for accuracy of element abundances 7−127834
stars, continuum and line radiation polarisation, processes 7−120261
stars, line-driven winds, instabilities, wave propag. for pure line absorpt. case 7−94858
stars, multidimensional radiative transfer in stratified atm. 7−139896
stars, stratified atmospheres, radiative cooling by LTE and non-LTE spectral lines 7−79945
stationary transfer, N-generalisations of P_W algorithms *(Russian)* 7−121020
stellar atmospheres, time-dependent calcs. of X-ray and γ-ray emission reprocessing 7−107898
stellar interiors, effect of ion correls. on free-free opacities 7−139904
stellar plasmas, partially ionised, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
stellar winds, aberration and advection effects in plane-parallel medium in motion 7−139900
stellar winds, polarisation of light scattered from winds of early-type stars 7−140041
stellar winds, SEI method for spectral line profile calc. in spherically symmetric winds 7−115365
stellar winds, statistical equilib. calcs. for H to Zn in radiation-driven winds 7−145933
stellar winds, UV line profiles modelling for early-type stars in SMC 7−134225
stratosphere, diabatic circulation determ. using radiative transfer model 7−127385
stratosphere, radiative transfer scheme for 3D dynamical model 7−127472
sunlight heating rate in water vapour bands 7−87902
supernova remnants, dynamic models and spectra of radiative shocks 7−127715
supernovae, Type I, He II Lyman photons scatt. rel. to lowered energy for echo model 7−107869
three-dimensional bodies in supersonic flow, radiative heat fluxes anal. 7−97531
transient conductive and radiative transfer in a planar layer with Arrhenius heat generation 7−83000
trapped resonance radiation transfer in finite absorbing medium, exact soln. of time-depend. eqn. 7−127701
two-level atoms, reson. line form., stochastic depth depend. of Planck fn. 7−82048
Uranus atmosphere, radiative-convective dynamical model of seasonal meridional energy balance and thermal struct. 7−88176
vertically inhomogeneous scattering media, Green's functions for radiative transfer eqns. *(Russian)* 7−145663
volcanic aerosols, effect on stratospheric radiance at 8 to 13 μm wavelength 7−120122
BW Vul, β Cep star, continuum opacity vars. rel. to changes in photospheric spectrum 7−140094
white dwarfs, accreting, LTE model atmospheres rel. to soft X-ray-EUV spectra 7−94874
WN-type stars, radiative transfer rel. to modelling of extended atmospheres 7−101801
Wolf-Rayet stars, He II synthetic spectra, grid of models 7−79968
X-ray binaries, smearing of beaming pattern by isotropic cloud rel. to nonpulsing sources 7−88509
X-ray binary stars, effect of electron scatt. cloud on X-ray oscills. produced by beaming 7−127971
X-ray burst sources, non-LTE radiation-driven wind models in bursting neutron stars 7−101841
X-ray sources, astronomical, transfer effects assoc. with first-order Compton pair cascades 7−120646
SF_6, IR absorbing gas, appl. for transparent thermal insulation 7−142152
radicals, free *see free radicals*
radio applications
see also radio direction-finding; radiocommunication; radionavigation
hurricane data collection by amateur radio 7−139780
radio broadcasting
multichannel sound signal level indicator 7−90899
radio direction finders *see radio direction-finding*
radio direction-finding
GPS, codeless dual-band, three-coordinate positioning within 1 part in 10 million 7−79188
GPS, differential mode, hydrographic surveys 7−79707
GPS for high precision geodetic surveys, highlights and problem areas 7−79189
GPS ionospheric time delay algorithm for single frequency users, design and characteris. 7−79772
GPS ionospheric time delay algorithm for single-frequency users, eval. 7−79771
GPS position fix using single frequency reception, ionospheric propagation delay *(Japanese)* 7−101622
GPS relative geodesy, ionosphere effects 7−79709
GPS user equipment, relativity correction 7−73317
GPS-based geodesy in California, Mexico and the Caribbean 7−79708
radio links
see also microwave links; radiocommunication
atmospheric gravity waves and ionospheric propagation at middle latitudes 7−94571
auditory prosthesis, inductive RF link 7−107316
HF field strengths and max. usable frequencies, day-to-day variability 7−94568
multichannel radio biotelemetric system design 7−79106
multipath propagation for broadband methods *(German)* 7−133810
radio HF field strength prediction, microcomputer program 7−94574
radio links continued
tropospheric refractivity meter for radiocommunication links 7−145688
worst month rain statistics, theory and expt. 7−101450
radio networks
hurricane data collection 7−139780
radio receivers
see also superheterodyne receivers
digital integration of envelope-detected noise 7−67367
radioastronomical microwave detector (210-230 GHz), cooled low-noise receiver *(French)* 7−72314
superconductor-insulator-superconductor heterodyne receiver at 230 GHz, low-noise design for radioastronomical appls. 7−134132
NbN based superconductor-insulator-superconductor junction, heterodyne mixing expts., for radiotelescopes 7−120277
radio reception
see also atmospherics
HF signal quality records, central Europe, foF2 departure index relevance 7−107640
radio reception quality *see radio reception*
radio relay systems *see radio links*
radio studios
All India Radio broadcast studio acoustic design 7−75206
radio systems
19 GHz precipitation scatter expt. 7−107500
CLASS radiosonde system, appl. of adaptive polynomials for real-time data editing 7−115064
radio transceivers *see transceivers*
radio transmitters
see also radiosondes
temperature meas. transmitters, design 7−115963
radioactive age determination *see radioactive dating*
radioactive chemical analysis
For applications of radioactivity to chemical analysis, see chemical analysis by nuclear reactions and scattering
see also neutron activation analysis; radiochemistry
fissile material mass meas. in input accountability tank of ITREC reprocessing plant, tracer technique 7−109322
fuel reprocessing, isotope dilution anal. of input samples, automatic system, design, safeguards appl. 7−122022
fuel reprocessing, multipurpose analyser *(Japanese)* 7−122020
isotope dilution, sub- and super-equivalence method, anal. errors 7−119604
K-edge densitometer, installation at Dounreay reprocessing plant, safeguards appl. 7−109324
marine sediments, photon activation anal., internal standard model 7−119603
nuclear fuel reprocessing, U/Pu concentration determ., safeguards appl. 7−109326
nuclear reference materials, characterization using controlled potential coulometry 7−116604
phenyl glycidylether+imidazoles, epoxide cure kinetics study, radiochemical anal. 7−113919
$Pu(NO_3)_4$ holding tanks, volumetric calibration, isotope dilution mass spectrometric anal. 7−109321
review of methods based on nuclei principles *(Italian)* 7−86688
spent fuel solution, Pu assay, comparison of isotope dilution methods using α-, mass spectrometry *(Russian)* 7−119618
spent fuel solutions, U, Pu isotopic dilution assay, resin bed and multi-isotopic tracer technique appl. *(French)* 7−119616
spent nuclear fuel solutions, anal. using isotope dilution mass spectrometry, quality assurance and IAEA implications 7−119613
U/Pu mixed solutions, assay using gamma-ray densitometer 7−114061
^{238,239,240}Pu, in sediments, isolation and γ-particle spectrometric determ. 7−93602
Ag neutron activation anal. in biological materials, accuracy study 7−101156
H_2O, interaction of Ag with humates and other species, gel permeation chromatography anal. 7−100654
Na samples, radioactive, morphology and elemental composition determ., SEM, X-ray spectroscopy *(German)* 7−133020
$Pb_xSn_{1-x}Te$, impurity detection, neutron activation anal., extraction chromotographic separation 7−100655
Pu assay, 1-10 mg level, experience with ceric oxidation, ferrous reduction and dichromate titration method 7−119615
Pu assay in spent fuel soln., isotope dilution α, mass spectrometric determ. 7−119617
Pu, high precision assay using automatic titrator 7−119614
^{A}Sr, A=89, 90, determ. in WWER reactor primary coolant, method *(German)* 7−103032
T concentration determ., optimised cell for liquid scintillation radiometer 7−106871
U/Pu concentration determ. using K-edge densitometry, reprocessing output verification 7−109325
U/Pu input verification in nuclear fuel reprocessing, field demonstration of X-ray densitometer 7−109323
radioactive dating
accelerator mass spectrometry, graphite target preparation for radiocarbon dating 7−134884
S Africa, continental crust evolution, Nd isotopic anal. 7−127138
Apollo 16 melt rocks and Imbrium Basin ages 7−145843
Arabian Shield ophiolites and Late Proterozoic microplate accretion 7−139565
Archaean Talga-Talga Subgroup, Pilbara Block, Australia, age and mantle evolution, Sm-Nd obs. 7−145375
Arctic Ocean, ventilation rate of deep ocean basins from ^{14}C data 7−114733
E Atlantic deep water, renewal rates estimation by inversion of ^{14}C data 7−94273
carbonaceous material, uranium-series age, experimental procedures and results 7−101535
E-Cordillera, Central Peruvian Andes, granitoids, K-Ar radiochronological data *(French)* 7−94176
dating Pu samples, comparative method test 7−81536
Delaware Basin, USA, radiometric dating of ochoan evaporites, radwaste disposal 7−103278
fault gouges, radioactive dating in E alps 7−114667
Fish Canyon tuff zircons, age standard for fission track dating 7−94506
fission track dating of apatite, study of thermal annealing process 7−94217

radioactive dating continued
groundwater U isotope dating method, using U in mineral deposits 7−94453
ion microprobe U-Th-Pb dating of lower crust 7−145378
lake sediment dating by radioisotope method, using ^{210}Pb, ^{137}Cs, ^{7}Be 7−115030
middle Okinawa Trough, central grabens region, petrochemistry and dating 7−79314
Late Pleistocene alluvial deposits near Sydney, Australia, comparison of thermoluminesc. and ^{14}C age determs. 7−127156
E Pyrenees, hot spring water ^{14}C ages *(French)* 7−94320
Sabaloka, Sudan, evidence for pan-African continental margin, granulites dating anal. 7−145419
sediments containing fossil teeth, ESR spectroscopy dating method 7−127483
Senya Fault, Akita Prefecture, Japan, Holocene activities and near surface struct. *(Japanese)* 7−79337
thermoluminescence dating method for archaeology and geology 7−127484
thermoluminescence dating method for glaciolacustrine sediments of Pleistocene age 7−101504
zircons, radiogenic, nucleogenic and fissiogenic noble gases characts. 7−145374
^{39}Ar/^{40}Ar dating of Sanbagawa metamorphic belt, Skikoku, SW Japan *(French)* 7−127134
^{14}C gas-proportional-counting method, appl. of pulse-shape discrimination 7−135769
^{41}Ca dating of Pleistocene samples, implications of ^{41}Ca concs. in terrestrial materials 7−119987

radioactive decay periods
see also beta-decay
Geiger-Nutall law for isobaric nuclides, exptl. comparisons 7−121741
plasma focus neutrons for half-life meas. 7−68103
quantum unstable systems, short-time behaviour 7−80516
spontaneous fission lifetime, effect of dissipative coupling of fission degree of freedom 7−81460
^{A}Ac, A=223, 226, measurement of products from photodisintegration of ^{232}Th 7−116345
^{33}Ar β^+ decay, half-life, ^{33}Cl giant Gamow-Teller resonance, delayed proton and γ emissions 7−141027
^{48}Ca→^{48}Ti, $2\nu\beta\beta$ process, half-life calcs., two-nucleon mechanism, shell model anal. 7−73734
^{111}Cd^{m}, half-lives and gamma transitions 7−96025
^{116}Cd, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{252}Cf→^{48}Ca+X, $T_{1/2}(\alpha)T_{1/2}(^{48}Ca)$ upper limit meas., low mass fission product search 7−73808
^{53}Co$_g$, beta-decay study, half-life meas., beta recoil effect technique 7−116342
^{160}Dy, 6^+ state, life time deduction from transition probabilities 7−96020
^{162}Eu, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{230}Fr β-decay, half-life, ^{230}Ra collective states; bands, J^π, and transitions 7−73682
^{76}Ge, double β decay study, Majorana ν mass limits 7−116339
^{3}H, half-life determ. and Gamow-Teller transition rate 7−67767
^{113}In^{m}, half-lives and gamma transitions 7−96025
^{115}In^{m}, half-lives and gamma transitions 7−96025
^{48}Mn→^{48}Cr, β^+ decay, half-life, proton and gamma spectra meas, ^{48}Cr level scheme 7−102840
^{A}Nd, A=153,154,155,156, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{155}Nd, identification and activity meas. 7−81339
^{65}Ni, γ-emission probability meas., activity, spectra and half-life determ. 7−135254
^{238}Np, fission time, shadow method 7−67884
^{182}Pb, α-decay identification and half-life meas. in ^{147}Sm(^{40}Ca,X) 7−102847
^{A}Pm, A=143-145, β^+ decay half-lives rel. to appl. as cosmic ray clock 7−139871
^{A}Pm, A=156,157,158, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{153}Pr, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{241}Pu, half-life review 7−116344
Ra isotopes, half-life calcs. for spontaneous ^{14}C emission 7−121747
^{A}Ra, A=205, 207, isomeric states, new α-emitter observation 7−81348
^{82}Rb, β^+ decay scheme study 7−96029
^{82}Rb, half-life determ. 7−96027
^{A}Rn, A=219, 220, 222, half-life calcs. for spontaneous ^{14}C emission 7−121747
^{A}Sm, A=159,160, beta-decay half-life meas., ^{252}Cf spontaneous fission expt. 7−141109
^{140}Sm β^+-decay, half-life, ^{140}Pm levels, J^π and transitions 7−67698
^{146}Sm and other N=84 isotones, alpha decay half-life and energy, subshell closure 7−129006
^{124}Sn, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260
^{82}Sr, half-life determ. by high resolution γ-ray spectrometry 7−96028
^{82}Sr, half-life meas. by γ-ray spectrometry 7−96029
^{A}Tc, A=95-99, β^+ decay half-lives rel. to appl. as cosmic ray clock 7−139871
^{A}Th, A=225, 226, measurement of products from photodisintegration of ^{232}Th 7−116345
^{150}Tm, decay props., half-life meas. 7−67766
^{A}U, A=233, 234, α-decay, heavy ion emission and cold fission, half-life spectrum 7−135385
^{233}U→^{24}Ne+X, radiochemical decay search using gamma-ray spectrometer, half light limit 7−67769
^{235}U(n,f), disintegration rates for fission product chains, reactor appls. 7−96124
^{238}U(n,f), fission product yield meas., γ-ray emission and half-lives 7−109247
^{136}Xe, double beta decay, half lines *(Hungarian)* 7−129004
^{A}Zr, A=94, 96, double beta decay half-life limits to excited states in daughter nuclei, lower limits 7−135260

radioactive decay schemes
see also beta-decay; nuclear energy levels
heavy nuclei, nucleon cluster formation and cluster radioactivity 7−109125
two-particle decay, nonrelativistic model, reduced resolvent, centre of mass motion, coupling constant 7−140969
^{14}C, radioactivity, even-odd effect, superasymmetric fission model 7−135294
^{252}Cf, spontaneous π emission from ground state, expt. evidence 7−96036
^{252}Cf→^{48}Ca+X, $T_{1/2}(\alpha)T_{1/2}(^{48}Ca)$ upper limit meas., low mass fission product search 7−73808
^{147}Dy, fine structure of β-decay strength functions 7−141029
^{150}Er, decay props. 7−67766
$^{4}H_\Lambda$→π^-+^{4}He, microscopic theory of four particle hypernuclei 7−67760
^{5}He→d+p, nuclear vertex consts., determ. from charged particle reactions 7−116429
^{4}He→t+p, nuclear vertex consts., determ. from charged particle reactions 7−116429
^{A}Li, A=7, 8, neutron decay of excited nuclear states from Ag(^{14}N,X) 7−121745
^{91}Nb^{m}, electron capture decay meas., K-conversion coeff. 7−121718
^{100}Nb→^{100}Mo, 3-s isomer decay scheme, γ-spectra, γ-γ coincidence meas., level lifetime determ. 7−109123
^{24}Ne, radioactivity, even-odd effect, superasymmetric fission model 7−135294
^{231}Pa, ^{24}Na radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{A}Pm, A=132, 134, β decay, gamma-ray spectra of neutron-deficient isotopes, systematic trends 7−129005
^{A}Pr, A=130, 132, β-decay, gamma-ray spectra of neutron-deficient isotopes, systematic trends 7−129005
Ra isotopes, half-life calcs. for spontaneous ^{14}C emission 7−121747
Ra nuclei, ^{14}C emission decay, decay width microscopic calc. 7−73738
^{A}Ra, A=222-224, ^{14}C emission, fragmentation anal. 7−67768
^{A}Ra, A=222-6, ^{14}C radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{223}Ra, alpha-particle-^{14}C ion radioactivity branching ratio determ. 7−102846
^{A}Rn, A=219, 220, 222, half-life calcs. for spontaneous ^{14}C emission 7−121747
^{146}Sm and other N=84 isotones, alpha decay half-life and energy, subshell closure 7−129006
^{158}Tb→^{158}Gd, electron capture, decay scheme, ν_e mass refinement 7−121723
^{230}Th, ^{24}Na radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{150}Tm, decay props., half-life meas. 7−67766
^{A}U, A=232, 233, ^{24}Na radioactivity, superasymmetric fission model for deformed nuclei 7−96035
^{232}U→^{24}Ne+X, fragmentation anal. 7−67768
^{233}U→^{24}Ne+X, radiochemical decay search using gamma-ray spectrometer, half light limit 7−67769

radioactive lifetimes *see radioactive decay periods*

radioactive pollution
^{131}I, elimination in meadow voles, whole-body γ-spectrometry obs. 7−93970
advection dispersion migration of radionuclides through two-layered geologic media 7−74086
aerosol filters for nuclear power stations, TiO_2 method for testing segregation *(German)* 7−139173
aerosols, heavy mechanical loading of filters *(German)* 7−139172
air detritiation systems for fusion facilities based on CANDU developments 7−122224
ALARA, Sellafield Nov. 1983 incident 7−74209
annual effective dose equivalents near nuclear power stations under meteorological dispersion conditions 7−103288
Athens, Greece, small atm. ions conc. due to Chernobyl accident 7−139167
atmosphere, summertime smoke injection during nuclear war, response of upper ocean 7−86853
atmospheric radionuclide transport, probabilistic accident effect estimates *(German)* 7−114151
Baden-Wuerttemberg region, FRG, radioactive fallout from Chernobyl accident *(German)* 7−133488
Belgium, Chernobyl radionuclides deposition in forest 7−133152
biomedical solid radwaste, incineration dose assessment, deregulation proposal 7−87254
Canadian Nuclear Society annual conference, Toronto, Ont., Canada, (June 1986) 7−88743
CANDU spent fuel, ^{137}Cs/Xe, and ^{129}I/Xe release ratios, fuel-sheath gap leaching in groundwater 7−129426
centerline γ absorbed dose rate due to continuous Gaussian plume, estimation approx. 7−133458
Chernobyl, fallout deposition at Monaco 7−139162
Chernobyl, health risks and consequences in Europe 7−96276
Chernobyl, origin, effects and medical problems 7−96275
Chernobyl, radioactive fallout in Denmark, effects *(Danish)* 7−93965
Chernobyl accident, γ-spectrometric exam. of emitted hot particles 7−129455
Chernobyl accident, circumstances and consequences, USSR/UK safety standards 7−103074
Chernobyl accident, environmental and human health effects *(Japanese)* 7−79095
Chernobyl accident, Hungarian population irradiation and pollution *(Hungarian)* 7−126662
Chernobyl accident, plume dose and release rates using SPEEDI code 7−81606
Chernobyl accident, radioactive contamination in Lake Constance region, Austria *(German)* 7−114135
Chernobyl accident, scenario and pollution in FRG *(German)* 7−109390
Chernobyl accident, source term and radiological consequences 7−103103
Chernobyl accident, UK point of view, reactor design, modifications, environmental consequences 7−103134
Chernobyl fallout, β-activity monitoring *(German)* 7−122223
Chernobyl reactor accident, Hiroshima fallout obs. 7−79094
Chernobyl reactor accident, radioactive contamination meas. at Hiroshima *(Japanese)* 7−139156
Chernobyl reactor accident, radionuclide release conditions estimation, nuclide mixture anal. 7−129286
Cluff Lake uranium mine, radionuclide and heavy metal concs. in water, sediments and biota 7−114504
conf., Davos, Switzerland, June 1986 7−72723

dioactive pollution continued
conference on radioactive waste management, Winnipeg, Canada, Sept. 1986 7−95091
W Cumbria, England, environmental monitoring by British Nuclear Fuels plc after Chernobyl reactor accident 7−93551
dry casks for spent nuclear fuel storage, environmental impacts, licensing and costs 7−129428
environmental gamma ray exposure rates meas. comparison between EML and JAERI method 7−103293
environmental radiation surveillance, radiochemical and instrumental methods 7−106953
environmental radioactivity effect in Toyama of Chernobyl accident *(Japanese)* 7−139386
environmental radioactivity meas., historical perspectives 7−106941
environmentally important radioactive nuclides, resonant ionis. mass spectroscopy detect. 7−93611
Esk estuary, UK, Pu remobilisation from estuarine sediments 7−144925
fallout beta-activity over Munich, Germany, 1981-6, Chernobyl accident, nuclear test effects 7−129448
fission products from Chernobyl reactor accident, internal exposure of Japanese travellers 7−119864
fission reactor accidents, atmospheric modelling, non-stochastic biological damage estimates *(German)* 7−114506
fission reactor accidents, atmospheric modelling and stochastic somatic damage estimates *(German)* 7−114152
fusion reactor accidents, experimental determination of the kinetic conversion rate of gaseous tritium into HTO 7−135628
fusion reactors, future environmental effects 7−126663
geologic repository, radionuclide transport from multiple-patch source into planar fracture 7−103228
graphite dust emission from AVR, cold gas fitter tests *(German)* 7−109300
Health Physics Society 32nd annual meeting, conf., Salt Lake City, UT, USA (July 1987) 7−115674
HTR-100, water circulation accidents, fission product release calcs. *(German)* 7−109462
Johnston Atoll, transuranium-element-contaminated soil cleanup 7−106943
lorry, radiation contaminated, decontamination meas. *(German)* 7−109458
natural radionuclides partitioning in waste streams of coal fired utilities 7−87253
noble gas components determ. in nucl. power plant gas samples *(Hungarian)* 7−119867
Norway, fall-out pattern after Chernobyl accident estimated from soil samples, ^{134}Cs and ^{137}Cs meas. 7−106942
nuclear accidents, computer modelling, uncertainty and sensitivity calcs., activity distrib. and body dosage estimates *(German)* 7−114505
nuclear explosion, battle field fallout prediction model of US Army 7−133154
nuclear reactor plumes, concentration of γ-ray radionuclides, quantitative meas. using Ge detector 7−114147
nuclear waste packages in repository, radionuclide transport 7−103230
particle and solution phase depth distributions of transuranics and ^{55}Fe in the North Pacific 7−78691
peat, vertical migration of I, Tc, Np, groundwater anal. 7−100763
radioactive material transport in FRG, risk assessment with INTERTRAN 7−74230
radioactive waste management, role of optimization techniques in assessment of practicable environmental options 7−100762
radioactive waste shallow land burial, COSMOS-S/D code complex 7−89737
radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
radionuclide transport in alpine Rhone watershed 7−139158
radionuclides in fallout over Niigata City, following Chernobyl *(Japanese)* 7−139385
radionuclides in NW Atlantic 7−139146
RBMK-reactor description and Chernobyl accident scenario 7−109370
relative population exposures from coal-fired and nuclear power plants in India 7−119863
residual waters, depollution on ceramic materials 7−89732
rock-groundwater system, radionuclide migration, sorption−liquid/solid ratio effects study 7−119698
Sellafield effluent dispersion model for North Sea and adjacent waters 7−120038
shear dust separator in nuclear fuel reprocessing plant, dissolver off-gas treatment *(German)* 7−129212
soil, transuranic decontamination, radiation monitoring 7−106944
solid radwastes from nuclear power plants, effects on the environment *(French)* 7−139387
Solway Firth coast, northern shoreline, airborne radioactivity from Sellafield 7−139161
transport mechanisms, physical dispersion models 7−133158
tritiated water vapour, detection in air using tunable diode laser 7−109526
UK hospitals, accuracy of surface-contamination meas., 1986 survey 7−139377
$^{238,239,240}Pu$, in sediments, isolation and γ-particle spectrometric determ. 7−93602
^{14}C emission rates from PHWR, at Kota, India 7−129420
^{14}C, hand contamination at radioisotope lab. of a medical school 7−79098
^{60}Co, comparative uptake from sea water and tissue distrib. in marine mollusks 7−139381
^{137}Cs body burdens in Norwegian Lapps, 1965-83 7−71901
^{137}Cs concentration meas. in the Douro/Tejo rivers, Portugal 7−139150
HTO formation from atmospheric releases from fusion reactors 7−135623
^{3}H, hand contamination at radioisotope lab. of a medical school 7−79098
^{3}H monitoring near nuclear power station during operation 7−93569
^{3}H, pine needle concentrations in Japan, environmental sources 7−93568
$^{127,129}I$, environmental samples, neutron activation anal., chem. and nucl. interferences 7−119869
I_2, disproportionation reactions in basic solns., Raman spectrosc. obs., rel. to nucl. safety 7−74018
^{131}I, radioactive fallout in Taiwan following Chernobyl accident 7−78687
^{85}Kr atmospheric distribution, simulation with general circulation model 7−139163
^{85}Kr in stratosphere, vertical profile 7−126674
Np transfer from seawater for sediments and organisms 7−78692
^{237}Np, English Channel, French coast, meas. and analysis techniques 7−139149

radioactive pollution continued
^{210}Pb and ^{210}Po, plant accumulation and plant/soil conc. ratios within a U mining and milling operation 7−133482
Pu, distrib. in surface soil from Piemonte region, Italy 7−78688
Pu exposure rel. to lung cancer 7−100994
Pu in sea sediments, α-track meas. using cellulose nitrate films 7−93554
^{A}Pu, A=238-240 migration in soil 7−126664
^{A}Pu, A=239, 240, air concs. and pot. radiation doses to humans after aircraft accident in Palomares, Spain 7−93967
^{A}Pu, A=239, 240, fallout, concs. in tissues of Japanese who died during 1980-4 7−79096
^{A}Pu, A=239,240, fallout in marine samples, mass spectrometric determ. 7−144926
^{238}Pu deposition from RTG in postulated Space Shuttle accident, orange tree retention, fruit contamination 7−133483
$^{239}PuO_2$ monodisperse aerosols inhaled by dogs, dosimetry of ^{239}Pu 7−101093
^{226}Ra and ^{210}Pb concentrations in terrestrial and wetland plants on U mill tailings in Canada 7−93972
^{226}Ra contents of U mill tailings, particle size fractions 7−87252
^{226}Ra in soil gas, correl. with ^{222}Rn inside adjacent houses 7−71900
Rn and Tn progeny in Canadian U mine, unattached fractions, errors in meas. using wire screen methods 7−145255
Rn daughters deposited in the lung, radiation dose computation rel. to phys. state and straggling 7−145244
^{A}Rn, A=220, 222, daughters, indoor and outdoor, Hong Kong population, annual dose 7−133487
^{A}Rn, A=220, 222 decay products in air, concentration determ. 7−126669
^{222}Rn conc. in N Carolina public water supplies, system size effect, geologic and hydrologic variables 7−71899
^{222}Rn emanation coeff. for coal fly ash grains, release model 7−87251
^{222}Rn emanation coeffs. of U mill tailings, particle size fractions 7−87252
^{222}Rn, exhalation determ. from atmospheric concentration profile *(Spanish)* 7−114141
^{222}Rn in drinking water rel. to age-dependent lung doses 7−71875
^{222}Rn, indoor air conc. in US housing, potable water source 7−87250
^{222}Rn, indoor ventilation rates in the cellar room of a New Jersey dwelling 7−133486
^{A}Sr, A=89,90, distrib in Slovenia, Yugoslavia after Chernobyl accident 7−78689
^{90}Sr, determ. in water in Austria after Chernobyl accident 7−122221
T concentrations in groundwater, meas. in Naka Terrace, Ibaraki Prefecture, Japan 7−94327
T dispersion in the atmosphere, computer code 7−87259
T isotopic enrichment for analytical and production purposes *(Rumanian)* 7−81749
T production sources *(Rumanian)* 7−81748
Te, fission product release in severe LWR accident 7−74011
U mill tailings remedial action project, USA 7−96347
U mine-tailings material, wind-generated suspension of particulate matter from tailings disposal area 7−101378
^{238}U in dental porcelain powders and dose induced in oral mucosa 7−139384

radioactive sources
see also radioisotopes
beta sources, thin layer, absolute activity meas. using 4π counter 7−81839
industrial irradiation process, X-ray and γ-ray source comparisons 7−89310
low energy β-sources for radiography 7−114495
polymer backing material, electric. conductivity meas., 4πβ counting appl. 7−135698
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
radioactive ion beams available at on-line mass separators 7−134891
sealed sources, leak test methods, review of standardization and requirements 7−74223
self-scattering in gamma ray sources used in Compton scattering experiments 7−109567
γ-ray sources, volume effect in radiometrical determs. *(Romanian)* 7−141386
Am dosimetry studies for brachytherapy 7−145243
^{241}Am radioisotope preioniser, design concepts for excimer laser systems 7−123026
^{241}Am decay, 59.5 keV gamma-emission probability meas., disintegration rates 7−135783
^{14}C, preparation for large area sources for document imaging 7−109574
^{14}C standardization using liquid-scintillation coincidence counting technique 7−135787
^{109}Cd, solution, absolute activity meas., low energy γ-ray region *(Korean)* 7−135706
^{A}Cf, A=249,252, radionuclide source holder with sealing door 7−81816
^{137}Cs, calibration source for BWR fuel burnup evaluation 7−109293
^{137}Cs Compton scatt. γ-ray source *(Japanese)* 7−135721
^{137}Cs source, gamma radiation dose rate meas. and calibration 7−119861
^{3}H, preparation for large area sources for document imaging 7−109574
Ni-U alloys, U determ. by selective precipitation and α-counting 7−109285
Ni-U fission product source, preparation and characterisation for Super Phenix 7−109284
^{63}Ni, preparation for large area sources for document imaging 7−109574
^{210}Pb target, electrodeposition on carbon film 7−109576
^{145}Sm: source for brachytherapy 7−133452
^{90}Sr in aqueous soln., separation using adsorption column, activity determ. *(Chinese)* 7−141381

radioactive tracers
blood platelet survival mean time, isotope labelled, different formulae evaluation 7−93676
cerebral blow flow measurement techniques, review 7−114466
chlorobenzene-benzene (1-propanol) mixtures, $^{37}Cl(n,\gamma)^{38}Cl$ effects 7−93355
cyclotron produced radionuclides for nuclear cardiology 7−93928
cis-diamminedichloroplatinum (II), preparation and use as radioactive tracer 7−87179
dosimetric consequences of interstitial extravasation following intravenous administration of a radiopharmaceutical 7−133453
ice sheet accumulation and ablation, measurement technique using cosmogenic radionuclides 7−115090
kidney, effective renal plasma flow calc., prep. of quantitative standards 7−93908
labelled molecules and research *(French)* 7−93895

radioactive tracers continued
leukocyte labelling with ^{99m}Tc by phagocytic engulfment, factors affecting and optimal technique development 7−79084
leukocytes, human, isolation and labelling with ^{99m}Tc 7−79083
nuclear wet steam turbine expansion curve determ. by radioactive tracer meas. of moisture *(Croatian)* 7−67943
radiopharmaceutical solution preparation, dose reduction to workers by simple shielding equipment *(Japanese)* 7−87248
solute transport across liquid-liquid interfaces, capillary tube method 7−105252
tumour scintigraphic agents, synthesis and characterization 7−133450
xanthomonas oryzae ^{14}C tracer method *(Chinese)* 7−114497
^{65}Zn oral absorption meas. in clinical practice, simple blood sample method 7−101056
^{A}Bi, A=205,206, cyclotron prod. for clinical appl. 7−93925
CrO_4^{-} ions, adsorption on CrO_4 powder, radiotracer technique 7−118229
$H^{14}CO_3^{-}$, in aqueous solution, effect of diffusion on transport through porous media *(French)* 7−117660
^{3}H-labelled gas, radioactivity meas. using proportional counter, elimination of end effect 7−89884
^{3}H-labelled methane, radioactivity meas. 7−89861
^{3}H-selegine, preparation and purification *(Chinese)* 7−114496
^{111}In binding to monoclonal antibodies, bifunctional chelates study using perturbed angular correlation spectroscopy 7−79085
$^{81}Kr^{m}$ generators, production using ZrP, medical diagnostic appl. 7−133449
^{15}O production, current methodology 7−133448
^{81}Rb generators, production using ZrP, medical diagnostic appl. 7−133449
Se, radioisotope prod. from irradiated RbBr, electrolytic separation, tracer appls. 7−119854
T, displacement during river water infiltration to groundwater 7−127311
THO, in aqueous solution, effect of diffusion on transport through porous media *(French)* 7−117660
^{99}Tc measurement in LLW using $^{99}Tc^{m}$ as a tracer 7−103203
$^{99}Tc^{m}$-urokinase, activity meas. *(Chinese)* 7−114498
^{99m}Tc DTPA, radiation absorbed dose obs. 7−133460
^{99m}Tc-pyrophosphate, bone and acute myocardial imaging agent study 7−119844
Zn purification by vacuum distillation, efficiency monitoring using radiotracer technique 7−119195

radioactive waste
see also fission reactor materials; fusion reactor materials; materials handling; radioactivity; waste disposal
acceptance conditions for long term disposal of vitrified waste 7−103206
actinide-doped nuclear waste glass, leaching in tuff-dominated system 7−103252
advection dispersion migration of radionuclides through two-layered geologic media 7−74086
AGN 1 spent fuel transport cask, quality assurance aspects of fabrication and transport 7−74226
ALARA concept, practical applications 7−96306
ALARA considerations and radioactive waste disposal in the UK 7−96389
American Nuclear Society, Conference, Dallas, TX, USA (June 1987) 7−102014
annual worldwide shipments of radioactive material, estimate 7−74120
Asse salt mine, radwaste disposal, U and Cs dissolving, containers *(German)* 7−129433
backfill formulations for a nuclear waste disposal vault 7−109501
barge transportation of Type B quantities of radioactive materials 7−74103
basalt-synthetic groundwater system, Tc behaviour as function of temp. and initial O content, radwaste appls. 7−103270
bentonite-based packing, role in limiting radionuclide releases from HLW repository 7−74084
biomedical solid radwaste, incineration dose assessment, deregulation proposal 7−87254
bitumen radwaste forms, biodegradation 7−103248
bitumenous products evaluations *(Czech)* 7−74087
bituminisation, model concentrates *(Czech)* 7−68013
bituminisation, radiation stability *(Czech)* 7−68015
bituminisation, safety aspects for various wastes *(German)* 7−129436
bituminizing liquid radwaste from Leningrad Nuclear Power Plant 7−122208
Bombay harbour bay, particle size distrib. in bottom sediments rel. to radionuclides distrib. 7−139586
Breeder Spent Fuel Handling and Transportation Program of US DOE 7−74149
Brookhaven spent nuclear fuel, legal, political and operational problems involved in transportation 7−74105
Browns Ferry Nuclear Plant, liq. radwaste in-leakage reduction 7−129184
Bruce Nuclear Power Development Waste Operations Site-2, construction, safety and cost anal. 7−96352
BS method for T-bearing water solidification *(German)* 7−129439
BWR primary system, water chemistry of crud concentration suppressed reactor 7−89612
BWR station power resin condensate polishing plant for waste reduction *(German)* 7−116711
Canadian nuclear fuel waste management program, status 7−96341
Canadian Nuclear Society annual conference, Toronto, Ont., Canada, (June 1986) 7−88743
Canadian nuclear waste management programme, ideology, risk and public consultation 7−109506
Canadian U mill tailings, risk assessment 7−109513
CANDU fuel, effect of fuel power on leaching of Cs and I 7−96202
CANDU irradiated fuel, behaviour under dry conditions 7−96199
CANDU irradiated fuel, Canadian experimental dry storage program 7−96201
CANDU irradiated fuel, design considerations for water pool storage 7−96200
CANDU spent fuel, ^{137}Cs/Xe, and ^{129}I/Xe release ratios, fuel-sheath gap leaching in groundwater 7−129426
CANDU spent fuel, commercial applications of dry storage technology 7−96204
canisters in repository conditions, localised corrosion eval. 7−103239
cask analysis, phase change models 7−74192
cask design specifications, evaluation using CAPSIZE program 7−74193
cask drop test from greater than 9 m 7−74171
cask handling system, use of robotics 7−74183
radioactive waste continued
cask performance and interface specifications for spent LWR fuel shipment 7−74150
casks, target hardness comparisons 7−74191
cement matrices, solubility modelling, implications for LLW immobilisation 7−103242
cement-based radwaste forms, pore soln. composition effect on Cs leachability 7−103240
cement-glass packages containing Na_3BO_3 from PWR power plants, stability, solidification technique 7−129427
cement-glass radwaste package containing $Na_2B_4O_7$, leaching studies for PWR waste 7−103247
cemented waste forms, corrosion studies of mild steel drums 7−122212
Central Electricity Generating Board flask test project 7−74177
central storage of used fuel, computer modeling 7−89749
ceramic radioactive waste forms, Cs and Sr leachability 7−135669
Chalk River area seismicity, implications for LLW disposal facility siting 7−89781
China, spent fuel and HLW, treatment and disposal 7−109519
Cigar Lake analog study for underground nuclear fuel disposal vaults 7−96363
CLAB, spent fuel intermediate storage facility, remote-handling experience 7−129423
clay buffer material for radwaste disposal, French clays 7−103282
clay-based grouts in simulated rock fractures, erosion, radwaste repository appl. 7−109500
combustible radioactive waste, Ontario Hydro incineration system 7−96366
commercial spent reactor fuel, rail transport in USA 7−109495
concrete cask for storage, transportation and disposal, design, tests 7−96357
concrete radwaste forms in groundwater, attenuation of Pu, Am, Cs and Sr mobility 7−103244
concrete storage and transport cask for spent pebble bed reactor fuel 7−74144
conf., Davos, Switzerland, June 1986 7−72723
conf., London, England, Sept. 1986 7−95108
conf. on nuclear materials safeguards, Vienna, Austria, Nov. 1986 7−108038
conference on nuclear power plant operation, Chicago, USA, Aug. 1987 7−134357
conference on radioactive waste management, Winnipeg, Canada, Sept. 1986 7−95091
container stack filling, simulation 7−122209
containers, transient and steady-state radionuclide transport 7−96222
containers in bentonite-based materials, pressures from surroundings, designs 7−109504
contaminated HLW sites, telemetry system for melt depth monitoring during in situ vitrification 7−103219
continuous pyrohydrolysis volume reduction system 7−96367
corrosion behaviour of radwaste container materials in Grande Ronde basalt groundwater 7−106713
creep response of rock salt around long excavations at waste isolation pilot plant facility 7−116705
criticality codes for large arrays of fissile material packages, validation exercise 7−74108
decommissioning waste, on-site burial, preliminary dose assessment 7−89759
defective LWR spent fuel transportation, radioactivity leakage, double containment system 7−74252
defence borosilicate nuclear waste glass, surface layer formation, reaction product leaching 7−74090
Delaware Basin, USA, radiometric dating of ochoan evaporites, radwaste disposal 7−103278
DHLW cask, hypothetical accident condition loads with initial pressure 7−74188
DHLW truck shipping cask, design verification 7−74182
disposal, legal prerequisites, W. Germany 7−141320
disposal, probabilistic safety assessment, interface model development 7−96365
disposal, proposition for encouragement of acceptance of sites 7−116710
disposal, radiological protection criteria 7−89756
disposal, technical issues for LLW and ILW 7−109521
disposal and management, fuel market conf., Brugge, Belgium, Oct. 1986 7−108047
disposal considerations to remove harmful effects 7−89733
disposal in fractured granite, in situ expts. 7−89738
disposal in granite in Finland, borehole testing 7−94511
disposal in Lac du Bonnet granite, URL shaft displacements 7−94213
disposal in plutonic rock 7−135674
disposal options in the United Kingdom 7−81728
disposal studies at Dutch Energy Research Centre *(Dutch)* 7−126535
DOT 6M container, particulate release under hypothetical accident conditions 7−74174
drop testing at the Oak Ridge National Laboratory 7−74173
dry casks for spent nuclear fuel storage, environmental impacts, licensing and costs 7−129428
dry spent nuclear fuel storage, licensing update 7−141317
Dry-Cap spent fuel storage and transport cask 7−74157
Duke Power Company spent fuel storage and transportation experience 7−109491
DWPF radwaste canister sections, large scale leach testing of glass 7−103257
environmental impact of nuclear waste transportation, analytical methodology 7−74118
environmental protection by final disposal of waste, lithosphere repositories, human effects 7−129422
environmentally important radioactive nuclides, resonant ionis. mass spectroscopy detect. 7−93611
failed PWR fuel transport, R62 package appl., water radiolysis parametric expts. *(French)* 7−74198
feldspar-radionuclide interactions, surface chemistry 7−100617
final disposal of LLW and MLW in Finland 7−81730
final disposal project status in FRG *(German)* 7−96330
final disposal sites, long term safety anals., groundwater flows *(German)* 7−96338
finite cylindrical radwaste form, diffusional release of single component material 7−135658
fixation in cement matrix, phase characterisation studies 7−89746
flask containing irradiated LWR fuel, thermal response following loss of coolant water 7−74179

radioactive waste continued
French nuclear fuel cycle industry in 1986 *(French)* 7−89615
fuel waste disposal container, welding and inspection 7−89770
fuel waste immobilisation containers, hydrothermal dissolution of nonmetallic materials 7−89772
fuel waste management program, geological results 7−89739
fusion reactor structural materials, waste disposal classifications, D-T and D-^{3}He reactor appl. 7−103232
gas permeation through elastomeric O-ring seals 7−74170
gaseous effluents from nuclear power plants, effects on the air *(French)* 7−139168
Geode two-step crystallisation and cementation process for radwaste volume reduction 7−135666
geologic waste repositories, IOCRF60.2 regulation, designers interpretation 7−103226
German management strategies for radwaste, radionuclide treatment and disposal *(German)* 7−89734
glaciation modelling in nuclear fuel waste disposal assessments 7−96362
glass, groundwater chemistry in saturated tuff environment 7−103263
glass radwaste form. leaching behavior, diffusion model and LEACH code 7−74088
glasses, diffusion-based leaching models, nuclear waste fixation 7−105096
glassy topopah spring tuff, zeolitization under hydrothermal conditions, radwaste disposal 7−103275
Gorleben mine, geological reconnaissance for radwaste repository *(German)* 7−96339
Gorleben mine, reconnaissance studies for radwaste disposal, status in 1986 *(German)* 7−96331
groundwater, radiolysis and bicarbonate chemistry, generalised model 7−103268
HADES project for radioactive waste disposal in deep clay 7−96349
Hanford Vitrification Plant performance, effects of feed process variables 7−103217
Hanford waste storage site, thermal and mechanical props. of basalt 7−94215
Hanford Waste Vitrification Plant, ceramic melter process rates, effects of slurry solids conc. 7−103218
heat transfer boundary conditions in pool fires 7−74176
high level waste in borosilicate glass, ORIGEN-S model for n source spectra 7−103207
high temperature testing of structurally damaged impact and puncture package protection systems 7−74185
high-temperature slagging incineration *(French)* 7−74085
HLLW tank storage research in UK and FRG, probabilistic safety anal. *(German)* 7−116713
HLLW vitrification at Sellafield 7−135662
HLW, crystal chemical incorporation in ceramics, valence, location, radiation damage, hydrothermal durability 7−135659
HLW, long-term performance of waste packaging materials 7−96378
HLW, materials interactions relating to long-term geologic disposal of nuclear waste glass 7−96381
HLW, natural analogue appls. to long-term behaviour prediction of waste forms 7−96382
HLW, package long-term performance, development, application and validation of models 7−96379
HLW, transport of U and Tc in unsaturated tuffs 7−103271
HLW and spent fuel packagings, design, safety anal. and tests 7−74152
HLW and spent fuel transportation casks, US DOE acquisition programme status 7−141314
HLW borosilicate glass corrosion in the presence of steel corrosion products 7−103253
HLW composite waste forms, monazite and zirconium phosphate-type, simulated waste leach rates 7−116708
HLW disposal, laser photoacoustic spectroscopy for trace level detection of actinides in groundwater 7−96386
HLW disposal, test programme in boreholes in Swiss sediment-covered crystalline rocks 7−109515
HLW disposal in the Asse salt mine, expt. testing *(German)* 7−96335
HLW forms, standard test methods for compliance testing in waste acceptance process 7−103255
HLW from LWR fuel reprocessing, powder-technology based vitrification *(German)* 7−129434
HLW geological disposal, bentonite clay as buffer material, chemical species 7−74089
HLW glass, Cs contamination of air in canister 7−96328
HLW glass, leaching behaviour 7−141329
HLW glass, thermal shock resistance, overview 7−74095
HLW management, global database strategy for public engineering decision making 7−96380
HLW management, Japanese safety research from April 1985 to March 1986 7−81733
HLW package licensing considerations 7−96377
HLW repository, temp. distrib. calcs., 3D numerical model *(German)* 7−129442
HLW transportation in UK, flask design 7−74164
HLW vitrification plant at Tarapur, India, semi-continuous pot-glass process 7−135663
hospital solid radioactive waste disposal, radiological safety and materials handling procedures *(German)* 7−129421
HTR fuel element graphite, permeability to ^{99}Tc, ^{137}Cs and ^{237}Np, spent fuel repository implications 7−135422
HTR-100, water circulation accidents, fission product release calcs. *(German)* 7−109462
hydrated Portland cement in radwaste repositories, pore-water chemistry modelling 7−103241
hydrous metal oxide ion exchangers, ion-exchange property and thermal stability 7−135661
IAEA safeguards, future developments 7−109310
IAEA Safety Series No.6 regulations for waste transportation 7−74261
ILW, liquids and solids, encapsulation in cement at Dounreay 7−135664
ILW and LLW, disposal in rock caverns 7−96350
ILW and LLW, liquids and sludges, solidification in bitumen at Tokai-Mura plant 7−135667
ILW and LLW disposal in clay/till deposits 7−96355
ILW canisters in concrete, math. model of uniform corrosion of steel 7−74096
immobilisation, implications of leaching studies of natural and synthetic titanites 7−94221
immobilization process development 7−81729
immobilized intermediate level wastes, mechanical props. 7−73873
immobilized radioactive waste transportation, safety regulations 7−74146
radioactive waste continued
IRAD flexible probe sonic extensometer eval. for radwaste repository testing 7−109516
irradiated CANDU fuel, storage in dry and moist air 7−89776
irradiated CANDU fuel transport cask, design and testing 7−109494
irradiated fuel transport casks, thermomechanical tests and studies *(French)* 7−74197
isolation in continental clays 7−116706
Japanese HLW isolation program, geological aspects 7−96353
JET, tritium safety programme, releases, exposures and waste 7−81715
Konrad radwaste repository, preliminary waste acceptance requirements 7−89736
Konrad radwaste repository, safety anal. and waste product requirements *(German)* 7−96333
Konrad radwaste repository, technical design *(German)* 7−96332
Konrad repository, W. Germany, disposal criteria 7−141319
Konrad repository, W. Germany, preliminary waste acceptance requirements 7−141321
Konrad repository, W. Germany, safety analysis 7−141322
Konrad repository, W. Germany, waste package quality control 7−141324
Konrad repository, W. Germany, waste package receival procedures and emplacement monitoring, vehicle/building shielding 7−141326
Konrad repository W. Germany, low heat generating wastes, disposability 7−141323
Konrad waste repository, W. Germany, complying with conditions for ultimate storage 7−141325
Kuosheng spent fuel pools, shielding anal. of reracking and rod consolidation options 7−141327
Lac du Bonnet granite props. rel. to waste disposal 7−94212
leached borosilicate glasses, structural changes 7−103262
liquid and gaseous radwaste from nuclear power plants, French regulations *(French)* 7−135671
liquid radwaste from RBMK, physicochemical foundations of bituminisation 7−122207
liquid radwaste tanks, characterization of airborne radionuclide particulates 7−103208
liquid scintillation cocktails, alkylbenzene and detergent based, performance comparisons for disposal 7−132958
liquid waste reduction by LEAR group 7−103224
LLW, development of waste volume minimization program at FP&L 7−103222
LLW, disposal in simulated peat bog repositories 7−103214
LLW, immobilization of neutralized cladding-removal waste in a cement-based grout 7−89747
LLW, in-plant treatment by electrodialysis 7−109488
LLW, MLW, HLW and spent fuel management in Spain 7−81731
LLW, NRC perspectives on alternative disposal methods 7−103211
LLW, transport from Taiwan to off-shore repository 7−89745
LLW, updated scaling factors for radionuclide contents 7−103234
LLW and ILW disposal, backfill materials 7−89735
LLW and ILW repository in Finland, performance anal. for Olkiluoto site 7−103246
LLW and ILW shallow land burial at CRNL, hydrogeological studies 7−141328
LLW disposal, engineered sorbent barriers 7−103213
LLW disposal, optimum alternative site/technology combination determ. 7−135670
LLW disposal, public acceptance 7−103210
LLW disposal at Duke Power nuclear stations 7−103221
LLW disposal facilities, long-term concrete degradation mechanisms 7−103212
LLW disposal facility siting in Canada, social considerations 7−109510
LLW production by Ontario-Hydro, control developments 7−103223
LLW repositories, impact of transportation considerations 7−89741
LLW shallow land burial, chemical aspects, UK research programme 7−103243
long term evolution, PRA modelling 7−89763
long-term management options for Ontario Hydro 7−96376
low-level radioactive waste, proposed management procedure for Italian facilities 7−96375
low-level radioactive waste management in Canada 7−96374
LR56 Type B(U)F package for liquid radwaste effluents, design and mock-up tests *(French)* 7−74159
LWR HLW and spent fuel, long-term radiotoxicity, MOX and burn-up extension impacts 7−74093
LWR spent fuel packagings, internal arrangement design for casks 7−74161
management practices in the Federal Republic of Germany 7−129430
management program, treatment and behaviour of waste forms 7−81727
management systems anal., systematic approach 7−89782
medium-level radioactive waste water corrosion and release mechanism of cement matrix 7−129425
metal matrices for nuclear fuel waste disposal 7−89769
metal-matrix corrosion studies in Canadian shield granitic groundwaters for radwaste 7−100455
metals and alloys, solidification, finite element modelling, nuclear waste disposal appl. 7−132599
metamict minerals, natural annealing of alpha-recoil damage 7−103265
microwave heating furnace system for radioactive waste disposal, 3D anal. of EM fields 7−122210
Midwest Volume Reduction Facility for supercompaction of dry active waste 7−103225
MLW and spent HTGR fuel elements, test disposal in the Asse salt mine *(German)* 7−96336
MLW waste casks, calorimetric meas. of nuclear heat sources *(German)* 7−129435
MOSTRAM cast Fe vessels for radioactive waste storage *(German)* 7−129440
Mostram systems for collection, transportation and storage of radwaste 7−74143
MOTIF finite-element thermohydrogeological code for Canadian nucl. waste management 7−96359
multicomponent systems at 200°C, effect of cement on performance 7−89748
multipurpose container construction for transporting radioactive materials 7−74158
near-field modelling of chemical and transport processes 7−103269
neutron-activated reactor parts, shallow land burial, near-field releases at ORNL 7−103245
Niagara Falls Storage Site, waste containment structure, development 7−96356

radioactive waste continued
nuclear fuel cycle facilities, appl. of IAEA safeguards to radioactive wastes *(Russian)* 7−116624
nuclear fuel disposal containers, casting development 7−141312
nuclear fuel waste, behaviour in saline groundwater 7−96341
nuclear fuel waste disposal, confidence bounds on dose empirical cumulative distrib. function 7−81732
nuclear fuel waste disposal assessment, nonlinear chemical sorption isotherms for repository 7−122213
nuclear material packaging manufacture, quality assurance, spent fuel casks 7−74109
nuclear materials from reprocessing facilities, transportation experience 7−74133
nuclear safeguards, advanced materials control and accountancy systems 7−141232
nuclear waste forms, leachability,matrix effects *(Czech)* 7−96329
nuclear waste glass, H speciation in hydrated layers after leaching 7−103260
nuclear waste glass, leaching, chemistry and kinetics 7−103256
nuclear waste glass performance, Fe corrosion products effects modelling 7−103254
nuclear waste management, symposium, Boston, MA, USA (Dec. 1986) 7−95101
nuclear waste packages, radionuclide release, sorption and decay effects 7−103229
nuclear waste packages in repository, radionuclide transport 7−103230
nuclear waste research and management, transport implications, Swiss perspective 7−74097
NUHOMS spent-fuel storage demonstration at the Robinson NPS 7−109493
NuPac 125-B rail cask, design and scale model testing 7−74190
OECD countries, waste management, national programmes and joint activities 7−96343
Ontario public's opinion about nuclear fuel waste management 7−109508
package components, effects of gamma radiolysis 7−103264
packaging, high-speed impact test 7−74180
packaging materials, corrosion research *(German)* 7−129441
packaging of low and intermediate level waste, quality assurance 7−74222
packagings, leak test methods, review of standardization and requirements 7−74223
Paks nuclear power plant, laser surveillance system for spent fuel elements *(German)* 7−129372
passive cooling system for storage of highly active waste solns. *(German)* 7−68012
penetrator telemetry for high-level nuclear waste sea burial 7−96388
polymer matrix radioactive waste forms, γ-radiation effects, mechanical props. and gas prod. 7−96327
pool type long term spent fuel storage facilities, design, engineering and safeguards *(Russian)* 7−103237
PRA, application of variance reduction techniques 7−89764
public consultation and the Canadian Nuclear Fuel Waste Management Program 7−109507
PWR radioactive wastes and waste heat, effect on water environment *(French)* 7−139153
PWR spent fuel assemblies, ION-1 Fork meas. 7−116599
pyrochlores radwaste form, X-ray absorption spectroscopy, α-recoil damage 7−103266
Rabbit Lake, Canada, open pit tailing disposal system 7−96348
radiation exposures in UK from transport of Tc generators and ILW 7−74232
radioactive material in transit stores at port depots, accidents and operational/regulatory aspects 7−74125
radioactive material packages under vehicle accident conditions, tie-down systems 7−74100
radioactive material transport, evaluation of dose received by workers and general public *(French)* 7−74239
radioactive material transport casks, damage due to barge collisions, engineering assessment 7−74238
radioactive material transport in FRG, R & D work, spent fuel casks 7−74115
radioactive material transport in FRG, risk assessment with INTERTRAN 7−74230
radioactive material transportation to 1st US repository site, projected environmental impacts 7−74117
radioactive material Type A packages, costs and effectiveness of safety measures for road tunnel transit 7−74127
radioactive materials transport in India, experience in regulation 7−74106
radioactive materials transport in Italy, data bank 7−74128
radioactive materials transport in Japan, safety research 7−74114
radioactive particle, raster electron micrography anal. *(German)* 7−109458
radiocolloid formation in radionuclide migration, waste management study 7−96361
radioisotope disposal in municipal waste systems, radiological impacts 7−89760
radiological impact of transport accidents and incidents in UK over 20 year period 7−74234
radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
radionuclide migration, convection-dispersion eqns., response function 7−74083
radionuclide migration in fractured granite 7−101299
radionuclide transport by concentrated brine in porous medium, radwaste disposal 7−103277
RAMPAC radioactive materials packaging database 7−109534
reactor decommissioning waste transport in UK, preliminary risk assessment 7−74116
repository hydraulic compression of shaft backfill at the backfill/rock interface [radwaste repositories] 7−109505
reprocessing wastes, transport criteria 7−74160
residual waters, depollution on ceramic materials 7−89732
resin/sludge radioactive wastes, gross α-activity determ. *(Chinese)* 7−135668
reusable metallic radwaste, decontamination procedures *(German)* 7−135673
rock salt, moisture movement simulation for deep bore radwaste repository design *(German)* 7−129442
Salt Lake City UMTRA Project, geotechnical and construction considerations 7−96372
salt mine storage of MLW and spent HTR fuel elements, underground expts. *(German)* 7−129432
radioactive waste continued
saltstone vaults for radwaste from processed spent nuclear fuel 7−103215
sand-bentonite buffer for nuclear waste containment, strength and vol change characts. 7−109499
sealed nuclear waste containers, H_2 conc. calc. methodology 7−103233
self-assessment program for Commonwealth Edison Company 7−129329
Sellafield ion exchange effluent plant for radioactive waste treatmen 7−81547
shallow depth radwaste repository, backfill materials eval. for ILW an LLW disposal 7−109502
shallow land burial, COSMOS-S/D code complex 7−89737
shallow land burial, COSMOS-S/D safety assessment code 7−89762
shallow land burial, safety anal. USNRC model overview *(Croatian* 7−74092
shallow land burial facility, safety and cost assessments 7−89750
shielded containers for reactor waste sea transport system 7−74242
shipping cask development for chopped nuclear fuel transportatio 7−74151
shipping casks under accident conditions, thermal analysis computer cod Q/TRAN 7−74181
shock-absorbing packaging materials for radwaste transport 7−74166
shutting-down and disposal of nuclear plants *(German)* 7−141262
silicate glasses, dissolution modelling by ETCH Monte Carlo code, rad waste appl. 7−103261
simulated HLW glass, continuous flow leach testings in groundwater an ionised water 7−109487
SNM transport system, safety anal., USA DOE/PNC joint programm 7−74112
socio-ethical aspects of radwaste management in Canada 7−109511
solid radwaste characterization at Surry and North Anna power station 7−103005
solid radwaste characterization for volume reduction suitability stud 7−129431
solid radwastes from nuclear power plants, effects on the environmen *(French)* 7−139387
solution chemical treatment at VVER-440 nuclear power plants *(Hun garian)* 7−116707
Solway Firth coast, northern shoreline, airborne radioactivity from Sellaf ield 7−139161
space nucl. reactors, post-operational disposal 7−68017
spent CANDU fuel, road, rail and water transportation system 7−109496
spent CANDU fuel bundles, Cerenkov radiation meas., safeguards appl 7−122017
spent cation exchange resins, functional sulphonic acid group effects o pyrolysis 7−81725
spent fuel, long term storage and final disposal, facility characts. an safeguards 7−103236
spent fuel, radioactive materials transportation in USA, federal, state an local activities 7−74227
spent fuel, solid characterisation from hydrothermal tests 7−96385
spent fuel, uranium release comparison with unirradiated UO_2 in sal brine 7−96223
spent fuel and borosilicate radwaste glass, multicomponent systems tests a 200°C 7−103249
spent fuel and waste management, conf., London, England, Sept. 198 7−80181
spent fuel and waste management, international approach 7−81734
spent fuel assemblies, high resolution gamma spectrometry meas., develop ments 7−116719
spent fuel assemblies in a dry cask, heat transfer from WWER fue 7−74110
spent fuel conditioning, pilot plant at Gorleben, Germany 7−81726
spent fuel costs, SCALE code anal. 7−74178
spent fuel disposal in West Germany, overview 7−96345
spent fuel dissolution in natural groundwater 7−96221
spent fuel dry cask storage program at the Idaho National Engineerin Laboratory 7−141315
spent fuel element transportation and storage containers, Ni platin 7−74145
spent fuel in tuff repository, ^{14}C release from waste packages 7−96387
spent fuel monitoring using irradiated assembly counter, safeguards appl *(Russian)* 7−122216
spent fuel rail shipping campaign in the USA 7−74129
spent fuel shipping casks, shielding methods for versatility eval., KWIK DOSE code 7−109529
spent fuel solution, α-activity meas., Pu assay 7−119617
spent fuel solution, Pu assay, comparison of isotope dilution methods usin α-, mass spectrometry *(Russian)* 7−119618
spent fuel solutions, U, Pu isotopic dilution assay, resin bed and multi isotopic tracer technique appl. *(French)* 7−119616
spent fuel solutions, X-ray fluorescence analysis 7−78562
spent fuel storage and transportation experience for the Idaho Nationa Engineering Laboratory 7−109498
spent fuel transport, industrial, technical, safety and economic aspect 7−74124
spent fuel transport flask finned surface, fire testing of intumescent coat ing 7−74196
spent fuel transport from Loviisa power plant to the USSR 7−74123
spent fuel transport in the USSR, experience and regulations for safet and personnel protection *(Russian)* 7−74130
spent fuel transport packaging, maintenance experience 7−74165
spent fuel transportation by rail in the USA 7−74132
spent fuel waste form, long-term performance assessment under repositor disposal conditions 7−96383
spent LWR fuel, response to extreme environments, releases from cas accident 7−74258
spent LWR fuel shipping cask, database for hypothetical sabotage atta 7−74202
spent nuclear fuel, above-ground dry storage in concrete canisters, saf guards 7−141318
spent nuclear fuel dry shipping/storage casks, fuel pin surface temp 7−74194
spent nuclear fuel elements, safeguards aspects of intermediate and fin storage *(German)* 7−129371
spent nuclear fuel flasks, thermal anal., use of FLUFF fin heat transf code 7−74195
spent nuclear fuel packages, comparison of nodular cast Fe and forged steel 7−74205
spent nuclear fuel pools laser surveillance system 7−122215

radioactive waste continued
spent nuclear fuel shipping cask design using depleted U shielding 7—74244
spent nuclear fuel shipping casks, microcomputer based thermal and impact code system 7—74199
spent nuclear fuel shipping containers, impact anals., static and dynamic FEA comparison 7—74201
spent nuclear fuel shipping vessel, dose rate distribs., on-board expts. and anal. 7—74237
spent nuclear fuel solutions, anal. using isotope dilution mass spectrometry, quality assurance and IAEA implications 7—119613
spent nuclear fuel transport, safety in 'real' accidents, flask anal. 7—74111
spent nuclear fuel transport cask, 100 ton class, demonstration test for accidents 7—74113
spent nuclear fuel transportation cask design, fracture mechanics approach 7—74203
spent reactor fuel, direct disposal, overview of ongoing activities *(German)* 7—96337
SRL-165 glass radwaste form, integrated testing, diffusion and surface dissolution 7—103251
SRL-165 radwaste glass, transport and reaction kinetics at glass/soln. interface, leaching 7—103259
steel, C, localised corrosion of radwaste containers in granitic repository 7—100453
steel, C, pitting corrosion, statistical distribs., use for radwaste disposal 7—100451
steel, C, stress corrosion cracking in simulated radwaste salt repository environments 7—100481
steel, cast, corrosion tests for basalt repository 7—100452
steel, corrosion model for nuclear waste containers 7—106712
steel, radioactive contaminated scrap, recovery and recycling at nucl. installations *(German)* 7—129437
steel barrels for rad. waste, corrosion resistance *(Czech)* 7—68014
storage, safety assessment for double-barrier in-ground container 7—89761
storage and management *(German)* 7—96340
storage container design for T-bearing water disposal *(German)* 7—129438
Super-Phenix fuel elements and absorber rods, transport and storage container development *(French)* 7—74141
Sweden, spent fuel and radioactive waste management 7—109520
Swedish nuclear waste glasses, leachability rel. to comp., SIMS obs. 7—109490
Swedish radioactive waste management program, update 7—96346
Swedish spent fuel sea transportation system 7—74131
Swiss projects for the final disposal of radioactive wastes *(German)* 7—96334
Synroc, thermal expansion, 20-1100°C 7—81722
SYNROC demonstration plant, simulated HLW disposal 7—89771
Synroc-C, evaluation as second generation radioactive waste form 7—89773
SYNROC-FA ceramic waste, leaching, phase analysis and microstruct. 7—81721
synthetic basalt groundwater, irreversibility of Se(VI)/Se(IV) redox couple 7—103273
system analysis for radwaste management, decision-making framework for LLW and MLW 7—89730
THTR spent fuel, handling and transport system 7—74163
THTR-300, safeguards concept, monitoring and logging system 7—103135
TMI-2 core, preparations to transport, receive and store 7—89742
TMI-2 core debris, chemical and radiochemical anal. of radionuclide release rates 7—74091
TMI-2 fuel debris, transportation to INEL 7—74162
TN-1300 transport/storage cask performance 7—74169
TN-24 spent fuel cask, design and demonstration under active conditions 7—74155
TN-24P PWR spent-fuel storage cask, testing and analyses 7—109492
TN-8L and TN-9 spent fuel shipping casks, experience 7—74154
TN-BRP and TN-REG spent fuel transport/storage casks, design and fabrication 7—74156
Tokai reprocessing plant, real time accounting system for spent fuel 7—122021
transport of nuclear wastes and spent fuel in Switzerland 7—74098
transport of radioactive materials in Europe, role of EEC 7—74099
transport packaging and shroud for irradiated monitoring assemblies from the Creys-Malville fast reactor *(French)* 7—74245
transportation, IAEA class 7 requirements and Type B(U) packages 7—74102
transportation, projected environmental impacts 7—89744
transportation accidents, historical summary 7—89743
transportation by sea, design of special-purpose vessels 7—74148
transportation considerations in selecting a nuclear waste repository 7—74175
transportation experience in the USA 7—74126
transportation impact on systems decisions 7—74172
transportation systems, shock and vibration road simulator tests 7—74187
transportation systems, thermal benchmarking 7—74184
transuranic waste transportation tracking system 7—109497
treatment facility at Tokai-2 BWR 7—135665
tritiated waste solidification in polystyrene and cement, tritium release rates 7—122214
tritiated water absorbed on molecular sieve 5A, radiolytic gas prod. 7—81723
TRU waste disposal by spallation reaction transmutation 7—109489
TRUPACT-I, containment anal. 7—74189
TRUPACT-I, TRU waste package transporter, containment, H_2 buildup, hypothetical accidents 7—74204
TRUPACT-I transuranic transporter, impact, puncture and thermal testing 7—74186
Type A packaging, compliance with regulations 7—74224
Type B packages, radiological limits in IAEA transport regulations, spent fuel 7—74236
UK radioactive waste disposal sites, development 7—96354
UK radioactive waste management 7—96344
UK waste management policy 7—141330
UK waste management programme, conf. on nuclear power, London, England (Sept. 1987) 7—140375
underground radioactive waste disposal facility, probabilistic risk assessment 7—96364
United States nuclear waste policy act and monitored retrievable storage 7—109518
uranium mill tailings in western USA, governmental control 7—109509

radioactive waste continued
US geologic repository program, status 7—96342
USA, commercial waste programme, appl. of IAEA regulations 7—74260
USA DOT Specification 6M radioactive fissile material package, nuclear criticality safety reeval. 7—74247
used CANDU fuel, corrosion deposits fission products study 7—96358
used fuel, effect of precipitation on radionuclide vaults release in geological 7—89780
used fuel disposal centre study, plan and specifications 7—89751
vitrification system for radioactive defense waste 7—103216
vitrified high level radwaste, transport and storage cask development 7—74142
vitrified HLW, thermal behaviour and temp. distribs. model 7—74094
vitrified radwaste, statistical approach to leaching resistivity *(Czech)* 7—122211
volume reduction program at Brunswick plant 7—129429
WADCOM II nuclear waste disposal cost model for borehole and generic package concepts 7—103204
waste disposal vault with leakage, radionuclide inventory calcs. 7—103227
Waste Isolation Pilot Plant, overpack design and functional requirements 7—96368
waste management, role of optimization techniques in assessment of practicable environmental options 7—100762
waste management systems integration, considerations and programmes in USA 7—141313
waste package interactions in BWIP, tracer-injection hydrothermal technique 7—103250
West Germany, amounts of radioactive waste in 1985 *(German)* 7—68016
West Valley above ground disposal site, design and performance assessment 7—96351
West Valley radwaste glass, aqueous phase composition effects on leach behaviour 7—103258
Westinghouse at-reactor fuel consolidation programme, fuel repairs 7—141316
WWER spent fuel assemblies, storage facility, safeguards aspects 7—103235
WWER-440 spent fuel, actinide isotope content and neutron emission, safeguards appl. 7—116596
WWER-440 spent fuel, neutron emission study *(Czech)* 7—81472
WWER-440 spent fuel, nondestructive assay using gamma and neutron meas. 7—116597
WWER-440 spent fuel, specific neutron yield calcs. *(Russian)* 7—116595
WWER-440 spent fuel assemblies, quantitative evaluation of passive neutron assay 7—116598
Yucca Mountain nuclear waste repository, seismic design strategy 7—103209
Am (III) colloid generation in groundwater, migration behaviour 7—103276
B de-entrainment by evaporation in radwaste treatment 7—81720
B_2O_3-SiO_2 supercooled melt, U^{6+} diffusion, appl. for nuclear waste glasses 7—131345
B_2O_3-SiO_2-Na_2O-Cs_2O-Rb_2O, waste glasses, diffusion of ^{83}Rb and ^{84}Rb tracers 7—135660
^{14}C emission rates from PHWR, at Kota, India 7—129420
Cs immobilisation in pollucite structure by hydrothermal hot-pressing 7—81724
Cs^+ and I^- diffusion in compacted bentonite-based materials, radwaste repository appl. 7—109503
^{137}Cs immobilisation in $Cs_2Ti_5O_{11}$, electron microscopy charactn. 7—142728
^{137}Cs safe immobilisation in synthetic hollandite-type phases, radiation damage effects 7—142841
Cu, corrosion behaviour for HLW disposal containers 7—93209
Cu, corrosion model for nuclear waste containers 7—106712
Cu, dissolution in radiation environments 7—106715
Cu-based materials, corrosion behaviour for waste containers 7—106714
Fe, deep penetration problems, point kernel versus radiation transport, spent fuel cask appl. 7—109528
Fe-Cr alloys, statistics of pit initiation: analysis of current transients during passive film breakdown, radwaste appls. 7—100454
H_2 gas generation in radioactive waste packages 7—74200
^3H, storage and transportation 7—89740
^{129}I disposal, radiation dose reduction by isotopic dilution 7—96360
^{85}Kr, decay to Rb, corrosion and embrittlement of stainless steel storage cylinders 7—86424
^{99}Mo, leakage tests in liq. waste containment system 7—74167
^{99}Mo recovery from uranium fission products 7—103220
Na-bentonite, strontium and cesium diffusivities 7—103281
Na-bentonite, thermally induced alteration, radwaste disposal 7—103280
Na-bentonite-groundwater interactions, buffer material in radwaste repository 7—103279
NaCl microcrystalline powder, colloid formation, waste disposal 7—111552
Na_2O-SiO_2 glass, radiation damage and annealing for radwaste 7—103267
Ni-based superalloys, localised corrosion in chlorine environments 7—93208
Ni-Cr(-Mo) based alloys, HLW canister appl., corrosion resist. 7—103205
Np, extraction from HLW using di-isodecyl phosphoric acid 7—89731
Pu, fuel cycle alternatives, disposal, storage or reprocessing 7—109517
Pu, geochemistry for radwaste disposal and containment 7—103274
Pu in sea sediments, α-track meas. using cellulose nitrate films 7—93554
Pu transportation, SAFPAK and SAFKEG high integrity packages 7—74147
Pu transportation risks, comparative literature survey 7—74229
^{226}Ra and ^{210}Pb concentrations in terrestrial and wetland plants on U mill tailings in Canada 7—93972
^{106}Ru, aqueous solns., radioassay Cherenkov counting technique, colour quenching effects 7—116716
$^{106}RuO_4$ vapour, sorption on natural tuff with mordenite admixture *(Czech)* 7—116709
T isotopic enrichment for analytical and production purposes *(Rumanian)* 7—81749
T production sources *(Rumanian)* 7—81748
T waste management system 7—96369
T_2O transport packages, polyurethane foam filled, impact anal. 7—74168
Tc, geochemistry for radwaste disposal and containment 7—103274
^{99}Tc measurement in LLW using $^{99}Tc^m$ as a tracer 7—103203
Ti, corrosion resistance for nuclear fuel waste disposal conditions 7—89774

radioactive waste continued
TiO_2 fibres, hydrated, cryst., immobilisation of rare earth metal ions from aq. soln. 7−135672
U evaporation-thermal denitration process for solidification and storage 7−129424
U mill tailings, acidification and radionuclide leaching 7−89767
U mill tailings, environmental benefits from regulatory compliance 7−89753
U mill tailings, management of wastes in vicinity of mill 7−89754
U mill tailings, PRA of long-term environmental effects 7−89765
U mill tailings, stabilization of former processing sites, UMTRA project 7−96371
U mill tailings area at Rabbit Lake, cost-benefit anal. of decommissioning options 7−96373
U mill tailings pile stabilization, UMTRA Project 7−96370
U mill tailings piles, criteria for remedial work 7−89755
U mill tailings remedial action project, USA 7−96347
U mine and mill waste management systems, licensing process 7−89752
U mines and mills, decommissioning 7−89758
U mining in Saskatchewan, environmental regulation 7−89757
U spent fuel, isotopic composition determ., fission product gamma-spectrometry meas. 7−82389
U tailings, disposal facilities, seepage and transport modelling 7−89766
U tailings, research into long-term environmental effects in Canada 7−109512
U tailings management and waste water control at Key Lake, Canada 7−109514
U transport with variable temp. and oxidation potential 7−103272
U transportation, SAFPAK and SAFKEG high integrity packages 7−74147
U wastes, CHINTEX model for environmental impact 7−89768
U-oxides, chemistry of colloids in groundwater environment 7−89779
UO_2, amorphous, solubility and mononuclear hydrolysis consts. 7−96384
UO_2, radiation induced dissolution 7−96220
UO_2 spent fuel, oxidation in groundwater products 7−96219
UO_2, unirradiated, solubility in granitic groundwater 7−89778
UO_2, used CANDU fuel, effect of radiolysis of water on oxidation 7−89777
UO_2 used fuel, aqueous solutions in contact, modelling of alpha radiolysis 7−89775
^{235}U content in samples, γ-ray spectra meas. and Monte Carlo simulation *(German)* 7−103014
$ZrSiO_4$, zircon, alpha-decay fracturing and crystalline-metamict state transitions 7−124352

radioactivity
see also alpha decay; atmospheric radioactivity; beta-decay; radioactive decay periods; radioactive decay schemes; radioactive sources; radioactive tracers; radioactivity measurement; radiochemistry; spontaneous fission
Bickford Pond, Massachusetts, USA, ^{210}Po, ^{210}Pb biogeochemical mass balance 7−127288
brachytherapy, optimisation of radioactivity distrib. 7−133472
building materials, possible standards of natural radioactivity 7−127015
cometary nuclei, radiogenic heating by ^{26}Al and implications for time of form. 7−145879
conf., Kharkov, USSR, April 1986 7−120688
delayed desorption of radioactive atomic nuclei for surface studies 7−131430
f-decay, spontaneous fragment emission by heavy nuclei, mechanism 7−121743
groundwater of N Carolina, USA, ^{226}Ra and ^{222}Rn levels 7−87256
house basement, Rn gas infiltration due to soil gas migration 7−119695
Karym volcano, Kamchatka, volcanic gas Rn concs. rel. to volcanic activity 7−133636
lake ^{210}Po, ^{210}Pb biogeochemical mass balance for oligotrophic lake 7−127288
lignite deposits (uraniferous) at Serres Graben, N Greece, depositional sedimentary model 7−79335
Maine, basement heat flow and radioactivity 7−94142
Norway and Sweden, Precambrian crust radiogenic heat production 7−94143
photographic lenses as eyepieces, radioactivity warning 7−88109
Precambrian domes, radioelement vertical distrib. and heat production 7−94144
seawater and suspended sediment particles, Th scavenging and vertical flux 7−72104
spontaneous nuclear decay A>4 particle emission shell model anal. 7−121744
Trivandrum district of Kerala, India, natural radioactivity of ground 7−127153
^{12}C-emission natural radioactivity, anal. 7−121746
^{134}CS, efficiency fn. determ., $4\pi\beta$-γ coincidence counting meas. 7−135781
^{24}Ne-emission natural radioactivity, anal. 7−121746
^{56}Ni in exploding Wolf-Rayet stars, contrib. of radioactive decay to supernova light curve 7−127916
^{A}Ra, A=226,228, conc. in struverite, γ activity meas. 7−87258

radioactivity measurement
see also radioactivity measuring apparatus
amang samples, radioactive equilib. determ. 7−89880
background radiation meas. for PIXE experiment operation, van de Graaff accelerator area *(Japanese)* 7−135685
background radioactivity in a salt mine in Remolinos *(Spanish)* 7−81895
Bayesian method on the low activity measurements 7−81896
beta sources, thin-layer, using two-chamber 4π counter 7−81839
Chernobyl accident, radioactive contamination in Lake Constance region, Austria *(German)* 7−114135
Chernobyl reactor accident, radiation exposure in Federal Republic of Germany *(German)* 7−116714
Chernobyl reactor accident, radioactive contamination meas. at Hiroshima *(Japanese)* 7−139156
coincidence counting correction formula 7−89885
conference on radionuclide metrology, Rome, Italy, June 1987 7−134336
cusum technique for drift detection during counting 7−89882
environmental samples, alpha-spectrometry 7−93600
gamma-ray sum-peak counting, instrumental corrections of peak areas 7−96480
high natural background radiation levels at Cox's Bazar, Bangladesh, TLD meas. 7−96395
ileal function combined test using whole-body counter, ^{75}Se-HCAT and ^{58}Co-B_{12}, critical analysis of accuracy 7−101055

radioactivity measurement continued
ionization chamber, electronics system and γ-ray radionuclide activity meas. 7−135770
kidney, effective renal plasma flow calc., prep. of quantitative standards 7−93908
lipoprotein flux rates between plasma and arterial intima in vivo in man, quantification method 7−93896
liquid-scintillation spectrometry and pulse-shape anal., simultaneous β-α activity counting 7−135786
measurements of radiation and radioactivity in nuclear power plants *(German)* 7−74208
Microcalorimeter for tritium activity meas., design 7−135784
Norwegian dwellings, indoor γ-radiation during 1st 3 months after Chernobyl accident 7−101092
plasma focus neutrons for half-life meas. 7−68103
R-tokamak, site evaluation and environmental considerations 7−74065
resin/sludge radioactive wastes, gross α-activity determ. *(Chinese)* 7−135668
THTR, radioactivity emission monitoring *(German)* 7−109536
^{65}Zn oral absorption meas. in clinical practice, simple blood sample method 7−101056
^{241}Am decay, 59.5 keV gamma-emission probability meas., disintegration rates 7−135783
^{14}C activity meas. using position sensitive proportional counter 7−135785
^{14}C gas-proportional-counting method, appl. of pulse-shape discrimination 7−135769
^{14}C standard, radioactivity concentration meas., using $4\pi\beta$-γ coincidence, internal gas counting techniques 7−89188
^{109}Cd standardization by 4πe-X coincidence method, activity determ. 7−135779
^{109}Cd standardization using 4π(LS)e-x method 7−135778
^{60}Co, activity meas., test of $4\pi\beta$-γ coincidence system 7−135766
^{59}Fe, efficiency fn. determ., $4\pi\beta$-γ coincidence counting meas. 7−135781
^{67}Ga standardization by live-timed 4πe-γ anti-coincidence counting 7−135780
^{3}H-in-water monitoring, current status 7−81610
^{3}H-labelled gas, radioactivity meas. using proportional counter, elimination of end effect 7−89884
^{3}H-labelled methane, radioactivity meas. 7−89861
^{125}I standardization, activity meas., photon-photon coincidence counting and efficiency extrapolation 7−135775
^{65}Ni, γ-emission probability meas., activity, spectra and half-life determ. 7−135254
Rn environmental activity concentration meas. with electret diffusion chamber 7−103292
Rn, indoor conc. meas. using LR-115 plastic track detector 7−119868
^{106}Ru, aqueous solns., radioassay Cherenkov counting technique, colour quenching effects 7−116716
^{90}Sr, determ. in water in Austria after Chernobyl accident 7−122221
^{90}Sr in aqueous soln., separation using adsorption column, activity determ. *(Chinese)* 7−141381
^{201}Tl standardization using $4\pi\beta$-γ coincidence method, two-dimensional extrapolation 7−135777
^{127}Xe, activity meas. using 4π-γ detector 7−135776

radioactivity measuring apparatus
Geiger counter, low-background β-counting system, calibration, environmental sampling appl. 7−103331
proportional counter, low-background β-counting system, calibration, environmental sampling appl. 7−103331
^{125}I, continuous meas. using liquid scintillation counter 7−116798
^{129}I continuous monitor, initial operating experience *(German)* 7−129457

radioactivity protection *see radiation protection*

radioaltimeters
see also aircraft instrumentation; radionavigation
ERS-1 altimeter, automatic tracking mode switching algorithm 7−101663
ERS-1 altimeter, ionospheric correction calcs. 7−94563
ERS-1 nonSAR instruments, processing 7−145721
ERS-1 radar altimeter, performance, calibration, and data validation 7−101662
Geosat, radar altimeter characts. and results 7−107587
land altimetry systems evaluation 7−107334
radar ocean wave spectrometer characts. 7−134004
satellite altimeter tracking systems 7−107589
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7−134003
Spectrasat radioaltimeter/SAR instrument design and processing of data 7−134005
techniques for high spatial resolution meas. 7−107588

radioastronomical observations
see also radiosources (astronomical)
1401−33, very-low-brightness relic radiogalaxy characts. 7−107957
1928+738, quasar, optical and radio astrometry 7−72649
1928+738, superluminal quasar with large-scale radio struct., 20 cm and 49 cm mapping 7−115623
Abell 2218, VLA 6 cm limits on Sunyaev-Zel'dovich effect 7−128100
Abell 2319, galaxy cluster, mag. field excess determ. from rot. measures and X-ray emission 7−80114
Abell 98, 115, 160, 278 and 568, clusters of galaxies, first ranked galaxies obs. 7−115582
active galaxies, SHF and UHF obs. of X-ray selected objects 7−146093
EU And, C star, H_2O maser obs. as evidence of nearby O-rich circumstellar shell 7−127896
R Aqr, subarc second continuum at 20 mm and SiO spectral obs 7−88442
η Aquarids, particle populations characts. and radar obs. 7−107777
Ara OB1 region, interstellar H I and CO obs. rel. to stellar assoc. form. by energetic event 7−72547
Arp 299 (IC 694-NEC 3690), interacting galaxy pair, compact mol. gas struct. determ. from CO obs. 7−80100
asteroids, radar astrometry of near-Earth objects 7−134165
B2 0800+24, narrow-angle tail radio galaxy, struct., radio and visible obs. 7−140278
B2 survey faint radiogalaxies, SHF obs. *(Russian)* 7−128087
B335, Bok globule, struct. and dynamics from CO and HCO^+ isotropic obs. 7−88564
B335 dark clouds, CO obs. of mol. counterparts of submillimetre compact sources 7−120529
BG 2107 + 49, morphology of peculiar galactic radiosource 7−140202
binary galaxies, evidence for dark matter from H I obs. 7−101907

adioastronomical observations continued
bipolar molecular outflow sources, obs. in NH_3 lines *(Japanese)* 7−140213
blazars, radio obs. of four selected objects 7−134308
Bok globules in southern hemisphere, rot. vels. from ^{12}CO (J=1-0) obs. 7−88595
3C 111, lobe-dominated radio galaxy, structural vars. in compact central component 7−101909
3C 234, radiogalaxy, spectral ageing characts. 7−72618
3C 273, quasar, morphological evolution at 10.7 GHz 7−120641
3C 326.1, radiogalaxy, Lyman-α emission and detect. of 100 kpc cloud of ionised gas 7−140288
3C 345, superluminal quasar, VLBI obs. rel. to compact radio source evolution 7−88665
3C 368, high-redshift radio galaxy and optical obs. rel. to merger and starburst 7−120585
3C 380, quaser, MERLIN polarisation obs. rel. to jet-interstellar gas interaction 7−88670
4C 39.25, quasar, multiepoch VLBI obs. of superluminal motion amid stationary struct. 7−101954
4C 39.25, quasar, superluminal source without well-defined core, multifrequency VLBI obs. 7−140321
3C 454.3, quasar, peculiar vars. in radio struct. after outburst 7−134319
3C 58, SNR, radio flux density increase 7−72573
3 C of broad-line radiogalaxy 7−128104
6C sources, extended, nature and UHF obs. 7−88660
Cancer Cluster, 1.4 GHz continuum sources, VLA obs. 7−128099
Cas A, C recomb. lines due to line-of-sight mol. clouds *(Russian)* 7−72577
Cas A, supernova remnant, evidence for cyclic variability of radio spectrum 7−140219
Cas A, VLA resolution of compact radio knots 7−107933
Cas A supernova remnant, radio observations of ejecta expansion details 7−115558
centimetre-wavelength flicker of extragalactic radio sources, galactic latit. depend. 7−80070
Cep A outflow, THF CO obs. 7−80059
UV Cet, flare star, dynamic spectra of microwave flares 7−88464
UV Cet, SHF and UHF flaring characts. 7−72447
circumsolar plasma, frequency shift accompanying radio waves propagation 7−79938
circumstellar metal oxides and chlorides, EHF search 7−127998
CIT 6, C-rich circumstellar envelope, HCN maser emission obs. 7−101947
classical novae, radio survey 7−134251
AC Cnc, first radio detection at 6 cm wavelength 7−120445
FK Com, rapidly rotating variable star, radio emission obs. 7−88425
Coma galaxy cluster, diffuse radio emission obs. 7−140307
P/Comet Giacobini-Zinner (1985 XII), electron and H_2O^+ column densities 7−88288
P/Comet Giacobini-Zinner (1985 XIII), 1.667 GHz OH line obs. 7−134181
P/Comet Giacobini-Zinner (1985 XIII), mm search for parent molecules 7−88257
P/Comet Giacobini-Zinner (1985 XIII), mol. obs. in EHF range 7−120318
P/Comet Halley, (1982i), OH absorpt. of Galactic background radio sources 7−115300
P/Comet Halley (1982i), 1.667 GHz OH line monitoring 7−94772
P/Comet Halley (1982i), 1.667 GHz OH line obs. 7−72362
P/Comet Halley (1982i), astrometry, tail activity, and 10.5 GHz continuum emission 7−94775
P/Comet Halley (1982i), Chinese observations 7−94788
P/Comet Halley (1982i), HCN prod., EHF obs. 7−88300
P/Comet Halley (1982i), mm search for parent molecules 7−88257
P/Comet Halley (1982i), mol. obs. in EHF range 7−120318
P/Comet Halley (1982i), OH 18 cm monitoring 7−88302
P/Comet Halley (1982i), OH post-perihelion monitoring 7−88303
P/Comet Halley (1982i), OH UHF obs. 7−88301
P/Comet Halley (1982i), VLA OH imaging 7−88267
P/Comet Halley (1982i), VLA search for 2-cm continuum radiation 7−145888
P/Comet Halley (1982i), water and propynenitrile mm wave emission *(Russian)* 7−139981
P/Comet Halley (1982i) 10.7 GHz continuum obs. 7−94773
P/Comet Halley (1982i) Arecibo OH line obs. 7−94774
Comet Wilson (1986l), total visual magnitude estimates (1987 June 3 to 18) and HCN obs. and prod. 7−115306
compact galaxy groups, H I content rel. to dynamical evolution 7−95035
compact submillimetre sources in dark clouds L1551 and B335, CO obs. of mol. counterparts 7−120529
cosmic microwave background, anisotropy limits from 'Relikt' expt. data *(Russian)* 7−107985
cosmic microwave background radiation spectrum, long-wavelength meas. 7−140326
3CR classical double radiosources, lobes, electrons spectral ages and mean speeds 7−72644
Crab Nebula, lunar occultation obs. at metre and decametre wavelengths 7−134296
CRL 2688, CO J=1-0 line obs. of bipolar nebula 7−107921
CTB 80, SNR, detect of pulsar-like emission, SHF and UHF obs. 7−140141
RS CVn type stars, radio polarization and spectral props. 7−101848
cyclopropenylidene-d_1, in L1498 interstellar molecular cloud 7−101891
V645 Cyg, assoc. high-vel. gas, CO mapping 7−94865
P Cyg, extended radio emission obs. 7−120419
Cyg X-3, radio flux density vars. (1982-5) 7−88521
Cyg X-3, radio outburst and relativistic expansion 7−88519
dark clouds, CO line obs. of 18 southern objects *(Chinese)* 7−120524
dark nebulae in Perseus, Taurus, and Auriga, CO survey 7−115556
diffuse galactic emission and 3 K large scale anisotropy 7−80135
DR 21, H II region, C radio recomb. lines obs. of adjoining mol. cloud neutral interface 7−72564
AG Dra, radio structure at 6 cm wavelength 7−120445
4=CQ Dra (M3 III+cataclysmic binary), variable radio emission obs. 7−79979
dust complexes assoc. with H II regions, 230.1 GHz continuum spectra 7−128010
dwarf galaxies, radio continuum survey at 1400 MHz completed 7−94997
dwarf irregular galaxies in Virgo cluster area, H I detect. survey 7−95017
radioastronomical observations continued
dwarf novae outbursts, multi-wavelength obs. of 33 objects 7−115404
1E 1751+7046, FK Com candidate nature and obs. 7−127880
Egg Nebula, bipolar protoplanetary nebula, CO aperture synthesis obs. 7−88573
elliptical galaxies, low luminosity, H I distrib. and kinematics 7−101934
elliptical radiogalaxies, linear size evolution, direct determ. 7−128084
evolved stars, SiO maser emission and IR continuum 7−79973
extended radio sources from 2695 MHz Effelsberg galactic plane survey, multifreq. radio continuum obs. 7−120630
extragalactic compact radio sources, results of frequent flux density monitoring at 24 GHz 7−120631
extragalactic edge-brightened double radio sources, radio jets widths 7−88659
extragalactic low frequency variable sources, statistical anal. of multifreq. obs. 7−72642
extragalactic radio sources, refractive scintillation through galactic disk 7−80071
extragalactic radio sources, SHF and EHF emission spectra 7−88658
extragalactic sources, extreme scatt. events caused by compact structs. in interstellar medium 7−88661
faint radiosources, flux density meas. at 2.7 and 4.75 GHz 7−140313
far-IR galaxies with radio cores, properties 7−128042
fast pulsar candidate in globular cluster M28, VLA obs. 7−127935
filaments of galaxies, search for assoc. intergalactic H I 7−101945
flare complex in distorted mag. field configuration, Hα and total radio flux obs. 7−115353
flat-spectrum radio sources from S5 survey, VLBI investigations of complete source sample 7−72643
flat-spectrum sources at 102.5 MHz, interplanetary scintillation obs. *(Russian)* 7−128107
G0.9+0.1, composite supernovae remnant, multifreq. radio obs. 7−101889
G10.6−0.4, ultracompact H II region, temp. and density struct. of collapsing mol. cloud core 7−146071
G159.1+3.3, mol. cloud envelope, methylidyne radical obs. 7−146064
G333.6−0.2, assoc. high-vel. gas 7−94986
G34.3+0.2, G45.07+0.13, ultracompact H II regions, H76α obs. rel. to sources rot. and expansion 7−94981
G34.3+0.2, molecular cloud, NH_3 obs. 7−127997
G5.27-0.90, nature and mapping at 843 MHz 7−72646
G5.4-1.2, SNR, 843 MHz map characts. 7−72646
G 2.4+1.4, filamentary optical nebular nature, SHF obs. 7−72645
galactic background radio emission, Spacelab-2 plasma depletion expt. obs. 7−94667
galactic center arc, thermal components spatial and kinematic struct. 7−115575
Galactic centre, ^{13}CO emission survey within 2° of centre 7−115553
Galactic centre, aperture-synthesis HCN obs. of circumnuclear mol. ring 7−128015
galactic centre, mag. field struct., polarimetric obs. 7−107943
Galactic centre, pulsating decametric radio source obs. rel. to rotating supermassive black hole model 7−115607
galactic centre arc, CS mapping 7−115574
galactic centre region, 86 GHz aperture synthesis obs. 7−115568
galactic centre region, CO latitude survey 7−94980
galactic centre region, radio lobes characts., 80 MHz obs. 7−115576
galactic centre ring, CS emission obs. 7−115537
galactic centre rotating mol. ring., EHF obs. 7−115564
galactic centres, 1.3 mm continuum emission 7−146089
galactic circumnuclear ring, HCN distrib. 7−115536
galactic Faraday rotation small-scale var. 7−95023
galactic H I mapping (l=333.5°, b=−0.3°) 7−94986
Galactic nucleus, hot ionised gas structs. *(French)* 7−134306
galactic plane, linear polarisation survey of area $4.9° \leq l \leq 7.6°$ $(-1.5° \leq b \leq 1.5°)$ 7−120583
galactic plane variable radio sources, two-epoch VLA obs. 7−107973
galactic radioemission at 37 GHz, spaceborne survey *(Russian)* 7−140328
galaxies, circumnuclear H_2O masers in active nuclei 7−88620
galaxies, comparison of radio luminosities of isolated single and double galaxies 7−128037
galaxies, depend. of Tully-Fisher relation on morphological type 7−95007
galaxies, interstellar magnetic fields, polarized radio continuum emission studies 7−72571
galaxies, lenticular and early type, H I obs. 7−115583
galaxies, local radio lumin. function at 843 MHz 7−72621
galaxies, observational correl. between radio and far-IR emission 7−120584
galaxies, radio continuum obs. of nearby objects 7−128083
galaxies between Local and Hydra/Centaurus Superclusters, H I survey and radial vels. 7−88607
galaxies in Hercules supercluster, photometry and H I obs. rel. to distance and Hubble const. 7−115610
galaxies in region of Cancer cluster, large-scale distrib. from H I spectra 7−120621
Galaxy, H I structure from 21 in line obs. *(Russian)* 7−140301
Galaxy, region inferior to Sun, H kinematics and physical parameters 7−101904
GBS 0526−66, gamma-ray burst source, search for radio pulses 7−80128
Giacobinid meteor shower, 1985 October 8 max., Onsala radar obs. 7−88328
Giacobinid stream activity (October 1985), radar obs. 7−107778
giant molecular cloud cores in Orion, W49 and W51, $C^{18}O$ line mapping and 1300 μm continuum 7−140230
globules and dark clouds, CO obs. 7−72569
HB 3 (G132.6+1.5), 408 MHz obs. of shell SNR 7−134291
HD 32918, active chromosphere K2 III star, obs. of intense long-lasting radio flare 7−120400
Heiles' Cloud 2, turbulence struct., ^{13}CO obs. anal. 7−72568
Heiles Cloud 2, physical and chemical state from CO and formyl ion obs. 7−101873
HH1-HH2 molecular cloud, NH_3 inversion lines obs. 7−101872
HH 46-47, obs. of NH_3 emission assoc. with exciting star 7−80077
IC 2476 (B2 0924+30), possible relic radio galaxy, 151 MHz obs. 7−128080
IC 342, spiral galaxy, HH_3 obs. rel. to hot gas in galactic nucleus 7−88624
IC 348 molecular cloud, clumps detect. in NH_3, ^{13}CO and $C^{18}O$ obs. 7−72558
IC 418, planetary nebula, H I absorpt. and emission detect. 7−101881
IC 443, SNR shock-mol. cloud interaction, mol. line obs. 7−72559

radioastronomical observations continued
IC 4553, VLA obs. of H I in peculiar galaxy 7−80096
IC 4553 (Arp 220), megamaser galaxy, OH 18 cm emission obs. 7−128056
IC 711, further obs. of longest head-tail galaxy 7−134299
704 Interamnia, detect. of λ=2 cm emission 7−88164
intergalactic H I clouds, search in Perseus void 7−120582
interplanetary shock wave due to 1979 August 18 solar flare, scintillation obs. 7−88067
interplanetary type III storms, footpoints 7−127676
interstellar acetone, quadruplet lines detect. in Sgr B2 mol. cloud 7−120534
interstellar C II region between hot ionised region S64 and cold mol. cloud G28.74+3.52, C recomb. lines obs. 7−115544
interstellar compact mol. clouds in IRAS Print Source Catalogue, HCO^+ survey 7−134292
interstellar D I, new search for 92 cm line 7−115554
interstellar dark clouds, IRAS and CO obs. rel. to filamentary struct. *(Japanese)* 7−140216
interstellar dark clouds in front of globular clusters, OH and CH emission obs. 7−120531
interstellar H I towards α Ori, struct. 7−107824
interstellar HDO, obs. in hot mol. cloud cores (Orion-KL and NGC 7538-IRS 1) 7−134287
interstellar HDO emission in Orion-KL region, aperture synthesis maps 7−140236
interstellar metal oxides and chlorides, EHF search 7−127998
interstellar molecular clouds, detect. near supernova remnants in outer Galaxy 7−88582
interstellar molecular clouds, relationship to Gould belt from optical and CO obs. 7−107928
interstellar molecular clouds and cloud cores in inner Galaxy, CO obs. 7−101705
interstellar molecular clouds in Carina spiral arm, large-scale props. of mol. gas from CO obs. 7−107929
interstellar Na, search at 170 mm 7−107924
interstellar NH_3 obs. of IR cirrus and galactic halo 7−120537
interstellar NH_3 Southern Hemisphere survey 7−115560
interstellar OCS obs. and OC_3S search, EHF and SHF obs. 7−107937
interstellar OH outflows in star-forming regions, 18-cm obs. 7−146072
interstellar plasma clouds responsible for quasar intensity variations 7−128033
IRAS 09371+1212, icy evolved mass-losing star with unique IR spectrum, CO(1-0) line obs. 7−101955
IRAS 1211+03, radio studies of ultraluminous galaxy 7−88628
IRAS 1525+3609, OH megamaser discovery 7−80124
IRAS 16293−2422 parent cloud, physical conditions, CS obs. anal. 7−94974
IRAS 16293-2422, pre-main sequences star, high vel. mol. outflow source, evidence for infall, CS obs. 7−88415
IRAS 18385−0512, associated very bright H_2O maser 7−120645
IRAS C stars, obs. of assoc. CO and HCN sources 7−120408
IRAS sources 19520+2759 and 01133+6434, pre-main sequence stars in mol. clouds, CO mapping 7−72656
IRAS stars, search for H_2O maser emission 7−72655
IRC+10216, C star, detect. of C_2S and C_3S 7−120414
IRC+10216, C star, vibrationally-excited butadiynyl (C_4H) as source of new mm-wave doublets 7−134234
IRC+10216, star, 1,3,5-hexatriyne radical obs. 7−120538
IRC+10216 (CW Leo), C_2H and CN mapping in circumstellar shell rel. to photochemical model 7−101790
IRC+10216 (CW Leo), C star, detect. of circumstellar NaCl, AlCl, KCl and perhaps AlF 7−140051
IRC+10216 (CW Leo), detect. of vibrationally excited CS in circumstellar shell 7−140073
IRC+10216 (CW Leo), possible detect. of hexatriynyl radical (C_6H) in mm-wave spectrum 7−79969
IRC+10216 (CW Leo), upper limit to H I emission 7−107824
Jupiter, localisation of Io and non-Io sources of decametre emission 7−79864
Jupiter, S-bursts and vertex bursts, acousto-optical radio spectrograph obs. 7−72350
Jupiter, zone-belt structure, VLA maps of radio emission 7−88170
Jupiter decametric radio emission, high freq. limit and visibility of non-Io and Io-depend. emission 7−94685
Jupiter narrow-band kilometric radiation, Voyager obs. rel. to source in Io plasma torus 7−107743
Klemola 31A, spiral galaxy, H I absorpt. of background quasar (PKS 2020−370) emission 7−140320
L1551, L1455 dark clouds, CO obs. of mol. counterparts of submillimetre compact sources 7−120529
L1551, millimetre and submillimetre mol. line obs. of SW outflow lobe 7−120530
L1551-IRS 5, pre-main-sequence star, CS obs. rel. to existence of rotating mol. disk 7−140235
L1689N, dense mol. cloud core, mol. obs. rel. to misalignment between bipolar overflow and mag. field 7−140227
late-type maser emission stars, visible and radio astrometry 7−115617
LDN 1551, bipolar outflow, CO mapping, evidence for expanding accelerated shell 7−140062
LMC, 45 MHz emission mapping rel. to symmetric but warped struct. 7−101908
low-luminosity embedded sources and their environments, IR, THF and EHF obs. 7−107826
low-luminosity outflow sources, IR line and radio continuum obs. 7−128011
low-luminosity radiogalaxies, jets characts., VLA obs. 7−128043
LS I+61°303, variable radio star, assoc. extended radio emission nature, UHF obs. 7−128102
luminous protostellar regions, sub-mm CO line study of warm dense gas 7−128008
Lupus molecular cloud 150-200 pc above galactic plane, CO obs. 7−107925
Lynds 204 dark cloud complex, CO and polarisation obs. rel. to mag. field controlled evolution 7−94982
Lyrid meteor shower, radar observations of shower activity 7−79896
M1-92, bipolar nebula, OH 1667 MHz maser line profile interpretation 7−88594
M28, millisecond pulsar discovered in globular star cluster 7−115491
M31, CO, H_2 and H I distrib. obs. 7−107969
M31, radiosources at 5 GHz, high-resolution obs. 7−88603
radioastronomical observations continued
M33, multifrequency radio continuum survey 7−88605
M51, mol. gas spiral struct. determ. from CO obs. 7−140283
M82, CO obs. of starburst nucleus 7−72612
M-type Mira variables, single, visible light curve shape and H_2O 13.5 mm line detect. 7−127876
Magellanic Clouds, bridge region, H I profiles 7−115602
Magellanic Clouds region, 2.3 GHz radio continuum map 7−107729
Markarian 206, IR and radio emission from blue dwarf galaxy 7−88623
Markarian 348 (=NGC 262), optical and radio obs. of tidally disrupted galaxy 7−115606
Markarian 421, simultaneous multifreq. obs. of BL Lac object 7−101930
MCG 5-14-18, elliptical galaxy, 92 cm VLBI struct. and radio spectrum 7−95011
meteors, mass distrib. of overdense echoes rel. to dynamics and evolution of five meteor streams 7−139987
meteors, radar obs. and detect. rates at different freq. 7−115250
meteors at high altitude, 2 MHz radar observations 7−88326
At and AU Mic, SHF and UHF flaring characts. 7−72447
microwave background at 12 mm, temp. determ. 7−80133
microwave background fluctuations, sensitive meas. in northern sky 7−88692
molecular bipolar flow sources, OH emission and absorpt. obs. 7−101882
molecular cloud cores, formaldehyde multi-transitional study 7−140223
molecular clouds, magnetic field strengths from OH lines Zeeman effect 7−120543
molecular clouds, mass, lumin. and line width relations, CO survey data anal. 7−140234
R Mon, pre-main-sequence star, small-scale struct. of circumstellar gas from CO obs. 7−88403
Mon OB1 molecular cloud, unbiased survey for high-vel. gas 7−88592
MSH 10−53, SNR interacting with molecular clouds, CO obs. 7−88579
narrow-angle tail radio sources in Abell clusters, tail orientations rel. to galaxy orbits distrib. 7−120597
nearby stars, search for planets and substellar companions cyclotron maser emission 7−88126
NGC 1058, spiral galaxy, 20 cm map rel. to location of supernova SN 1961V *(Russian)* 7−72488
NGC 1068, Seyfert 2 galaxy, CO obs. of mol. cloud ring 7−80101
NGC 1265, narrow-angle tail radio galaxy, astrophysical implications of multifreq. VLA obs. 7−120596
NGC 2264, CO and NH_3 radiowave detection of cone 7−120542
NGC 2787, lenticular galaxy, H I distrib. from WSRT obs. 7−80081
NGC 3073, dwarf S0 galaxy, H I obs. rel. to ram press. stripping by gas from companion galaxy (NGC 3079) 7−115591
NGC 3448, amorphous galaxy, continuum radio emission and discovery of starburst-assoc. radio sources population 7−101918
NGC 3628, interacting edge-on galaxy, CO central component, compact radio and IR source positions anal. 7−72585
NGC 3628, spiral galaxy in Leo Triplet, VLA obs. of H I absorpt. 7−107955
NGC 4013, edge-on spiral galaxy, obs. of prodigious H I warp 7−140297
NGC 4418, active-nucleus galaxy, OH megamaser detect. and characts. 7−88631
NGC 4449, star formation in Magellanic irregular galaxy 7−128068
NGC 4472−UGC 7636 galaxies region, interacting H I detect. 7−120610
NGC 4874, Coma cluster elliptical galaxy, high-resolution radio obs. 7−140251
NGC 4945, H I study with two-element synthesis telescope (TEST) 7−95021
NGC 5090-5091 (PKS 1318−43), interacting galaxies, radio and optical study 7−88613
NGC 5170, spiral galaxy, disk stellar vel. dispersion, visible and H I obs. 7−101902
NGC 5506, edge-on Seyfert galaxy 7−115588
NGC 6251, radiogalaxy, nucleus intrinsically asymmetrical radio struct. 7−88626
NGC 6946, H I disk of Scd galaxy, VLA obs. 7−88621
NGC 7538, H II region assoc. mol. cloud, CS and $C^{34}S$ obs. 7−80074
NGC 7538-IRS 1, highly-excited HDO obs. 7−134287
NGC 891, edge-on galaxy, CO obs. and H_2 characts. 7−107968
NGC 891, galaxy, halo features 7−140265
Nova Vul 1984 No.2, obs. of unusual early radio outburst 7−140076
NRAO 140, quasar, 180 mm VLBI obs. during and after LF outburst 7−140319
OMC-1, SiO obs. rel. to new outflow source 1.5′ south of Orion-KL 7−128021
OMC-1 outflow, CO mapping 7−140232
Ooty lunar occultation survey of radio sources, source positions and struct. determ. 7−80116
ρ Oph dark cloud, radio-emitting young star search 7−101884
α Ori, circumstellar CO obs. 7−88428
α Ori, circumstellar H I and mass loss characts. 7−107824
Ori B mol. outflow, HCO^+ mapping and search for H_2S 7−94987
Orion Molecular Cloud, ^{13}CO surveys rel. to interaction with Orion Nebula *(Japanese)* 7−140215
Orion molecular cloud, filamentary struct. obs. from ^{13}CO map 7−80072
Orion Nebula region, nature of compact continuum sources 7−120632
Orion-KL, spectroscopic obs. of organic ring molecule cyclopropenylidene (C_3H_2) 7−115552
Orion-KL region, aperture synthesis maps of HDO emission 7−140236
Orion-KL region, highly-excited HDO obs. 7−134287
Orion-KL region, vibrationally excited HCN detect. 7−140073
S Per, OH-IR star, interferometric obs. of H_2O and OH maser emission 7−72433
Perseid meteors, Ondrejov radar hourly rates and stream cross-section 7−79895
PKS 1614+051, galaxy at redshift of 3.215, search for radio emission 7−120586
PKS 2020−370, quasar, h I absorpt. due to foreground galaxy (Klemola 31A) 7−140320
planetary nebulae, emission measure and temp. distrib., SHF and UHF obs. 7−128019
planetary nebulae H characts., UHF obs. 7−120553
planetary nebulae with OH emission, two new discoveries 7−101878
poor galaxy groups, VLA 20 cm survey 7−146099
pre-planetary nebulae, CO obs. characts. 7−72406
PSR 0042−735 in SMC, discovery and parameters at 610 MHz 7−134262
PSR 0355+54, massive glitch in an old pulsar 7−88491

adioastronomical observations continued
PSR 0809+74, single pulse intensity fluctuations obs. rel. to multipole mag. field of freq. dependence pulse profile *(Russian)* 7−72495
PSR 0818−13, subpulse drift rate var. 7−134264
PSR 0834+06, PSR 1919+21, decametre-wavelength obs. 7−107884
PSR 1821-24, millisecond pulsar in globular cluster M28, discovery and pulse period 7−140145
PSR 1913+16, binary pulsar, post-Newtonian dynamics and gravitational radiation 7−80022
PSR 1937+21, millisecond pulsar, improved pulse timing using real-time coherent dedispersion 7−107883
PSR 1951+32, 1408 MHz parameter determ. 7−140142
PSR 1951+32 in SNR CTB 80, discovery and UHF obs. 7−134263
millisecond pulsar in M28 globular star cluster, discovery by Jodrell Bank telescope 7−115491
pulsars, excess phase noise in JPL timing obs. 7−115489
pulsars, pulse characteristics at 24 GHz 7−94932
pulsars, pulse width spectral behaviour, meas. at Culgoora circular array 7−146017
pulsars, simultaneous two-freq. obs. *(Russian)* 7−72494
RX Pup, symbiotic star, wind characts. and radio emission 7−72446
Q 133494+2438, radio-quiet quasar, detect at 1300 μm wavelength 7−134315
QSO 0954+658, intensity variation due to Milky Way plasma clouds 7−128033
QSO 1510-089, mm continuum emission outburst 7−80122
quasar host galaxies, radio continuum emission obs. 7−72596
quasars, radio luminosity function of optically selected objects 7−120638
radio galaxies, correl. of radio spectra of scintillating sources with morphological type of active galaxies *(Russian)* 7−107965
radio galaxies low-luminosity, of B2 sample, VLA obs. 7−80086
S0 galaxies with polar rings, H I mapping 7−120590
S135, bright-rimmed H II region, CO obs. rel to blister model 7−115562
S201, H II region produced by ionisation front eroding mol. cloud, VLA obs. 7−134289
S54, H II region, obs. of assoc. 300 pc long thermal radio spur 7−146062
Saturn, aperture synthesis obs. of planet and rings at 2.7 mm wavelength 7−134175
Sgr A*, assoc. CO distrib. 7−115565
Sgr A*, proper motion 7−115613
Sgr A region, OH distrib. at 18 cm 7−115534
Sgr A region and extended halo, struct., and radio emission 7−115567
Sgr B2, 5 GHz excited OH lines, VLA obs. 7−72575
Sgr B2, H76α and He76α obs. 7−80068
Sgr B2, identification of new interstellar free radical CCS($^3\Sigma^-$) 7−140239
Sgr B2, NH_3 hot cores and protostellar material dispersal 7−128009
Sgr B2, spectroscopic obs. of organic ring molecule cyclopropenylidene C_3H_2 7−115552
Sgr B2 mol. cloud region, small-scale struct. and chem. differentiation 7−120551
Sgr B2 molecular cloud core, 1300 μm obs. 7−80073
Sgr B2-North H_2O maser spots, proper motion obs. use for Sun-galactic center distance determ. 7−115571
Sh 2-106, bipolar nebula, dust bar characts. and assoc. source IRS 4 nature 7−127996
SN 1986J in NGC 891, radio and optical studies 7−134256
SN 1987A in LMC, 22 GHz microwave emissions and V magnitude decline, June 1987 obs. 7−107876
SN 1987A in LMC, 22 GHz radio intensities and visual magnitudes 7−134258
SN 1987A in LMC, prompt radio burst detection 7−94930
SN 1987A in LMC, radio emission upper limits (1987 July) 7−146005
solar active region struct. at 1.35-cm wavelength from eclipse obs. (1982 December 15) 7−127809
solar corona, large-scale struct. from radio obs. using Clark Lake Radioheliograph 7−115350
solar coronal bright points, obs. at 6 cm wavelength 7−115349
solar flare, 1980 May 15, simultaneous VLA obs. at 6 and 20 cm wavelengths 7−145913
solar flux variations over time scales of solar rot. 1978 to 1982, statistical anal. 7−114913
solar kilometre-wave type III bursts, visibility function from Voyager and Earth-based obs. 7−94836
solar microwave bursts, energy parameters rel. to electron fluxes in interplanetary space 7−120353
solar microwave fluctuations, implications of coordinated 4.75 GHz obs. 7−79913
solar microwave sources, polarisation inversion obs. rel. to coronal mag. fields meas. 7−107801
solar noise storms, burst-length distrib. and burst component energy spectrum 7−127808
source counts at 6 centimetres, results to 0.1 milliJanskys 7−88657
spiral galaxies, face-on, H I survey rel to freq. of distortions in H I disks 7−115594
spiral galaxies, optical emission-line activity rel. to radio continuum power in nuclei 7−101910
spiral galaxies, radio continuum obs. of early and late-type galaxies 7−101939
spiral galaxies, relation between stellar populations and radio continuum emission 7−120612
spiral galaxies, systematics of Tully-Fisher relation in B, V system 7−120579
SS 433, ejected blobs from binary star, evolving radio struct. 7−127908
star formation regions, unbiased ^{12}CO and ^{13}CO surveys *(Japanese)* 7−140214
star-forming regions, CS obs. of morphology and kinematics of dense interstellar gas 7−88567
starburst galaxies, H I 21-cm emission survey 7−80088
stars with radio continuum emission, catalogue 7−79848
Sun, Boulder Region 4500, UHF and SHF obs. during partial eclipse 7−127797
Sun, centimetric emission, temporal variability at 10.7-cm wavelength 7−79930
Sun, compact variable sources, VLA obs. 7−88346
Sun, comparison of flare-microwave burst assoc. for post-max. periods of consecutive solar cycles 7−140026
Sun, corona, magnetic mirror effect on beams of subrelativistic electrons, radio emission evidence 7−140016
Sun, coronal loops, plasma and mag. field characts. 7−107788

radioastronomical observations continued
Sun, coronal magnetic field characts. determ. from Helios Faraday rot. meas. 7−127831
Sun, coronal streamers, propagation of type III burst-emitting electrons 7−120360
Sun, dm-spikes rel. to flare phenomena 7−79919
Sun, fibre burst obs. rel. to plasma parameters in coronal loop 7−115351
Sun, flare radio continua rel. to X-ray emission 7−79918
Sun, microbursts in 30-70 MHz range 7−88345
Sun, microwave fast absorption phenomenon obs. 7−134218
Sun, noise storm, VLA obs. 7−140017
Sun, obs. of 160-min brightness oscills. at millimetre wavelengths 7−127810
Sun, obs. of microwave emission from solar electron beams 7−79911
Sun, radio bursts, night-time reception over wide bandwidths 7−127799
Sun, type III bursts and ^{3}He-rich events 7−94615
Sun, type III bursts and nonlinear wave-wave interactions 7−94840
Sun, VLA obs. of complex gradual microwave burst at 6 cm wavelength 7−101752
Sunyaev-Zeldovich effect for galaxy clusters Abell 478 and 0016+16, EHF obs. 7−72657
supergiant OH-IR sources, narrow polarised components obs. in OH 1612 MHz maser emission 7−88417
supernova remnants, 32 GHz radio continuum obs. of plerionic remnants 7−120547
supernova remnants in outer Galaxy, CO survey for related mol. clouds 7−88582
HL and XZ Tau, assoc. high vel. gas, CO mapping 7−94865
HL Tau, pre-main-sequence star, small-scale struct. of circumstellar gas from CO and continuum obs. 7−88403
TMC-1, 1,3,5-hexatriyne radical obs. 7−120538
TMC-1, detect. of 1,3,5-hexatriyne radical, SHF and EHF obs. 7−80075
TMC-1, detect. of intense unidentified mol. lines 7−140238
TMC-1, identification of new interstellar free radical CCS($^3\Sigma^-$) 7−140239
TMC-1 identification of new C-chain molecule C_3S 7−140240
Uranus, kilometric radiation beaming obs. and implications for planetary mag. field 7−120308
Ursa Major IR cirrus, CO and H I obs. 7−140233
Venus, geology of S Ishtar Terra and Guinevere and Sedna Planitiae from Arecibo radar images 7−134159
Venus, night-time ionosphere, radiotransillumination data from Venera-15 and -16 satellites 7−101715
Venus, radio occultation obs. rel. to conditions for night-time ionosphere form. 7−120294
Venus, relief and geology of north polar region from radar survey 7−88158
RT Vir, semi-regular variable star, H_2O maser outburst obs. *(Russian)* 7−107865
VRO 42.05.01, SNR re-energising interstellar cavity 7−107935
W33 OH maser, VLBI obs. *(Russian)* 7−128108
W3, H II complex, C166α recomb. line obs. 7−80063
W3(OH), compact H II region, clumpy mol. envelope NH_3 and OH maser emission 7−72567
W3(OH), compact H II region, H42α (86 GHz) recomb. line obs. 7−128023
W48, mol. cloud-H II region interface, struct., S, C, He and H125α obs. 7−120633
W51 molecular cloud, HCO^+ obs. 7−94992
weak Leiden-Berkeley Deep-Survey (LBDS) sources, VLA high-resolution obs. 7−115615
X0142+614, soft X-ray source, search for optical and radio counterparts 7−95051
II Zw 40, IR and radio emission from blue dwarf galaxy 7−88623
C I towards ζ Oph, submm and UV characts. 7−88566
CCS($^3\Sigma^-$), interstellar, laboratory detection and astronomical identification 7−140239
CO clouds, detect. of formaldehyde 7−115546
CO towards α Ori, struct. 7−107824
CO towards H II regions and refl. nebulae, vel. anal. 7−88602
C_3S, new interstellar C-chain molecule, laboratory detect. and astronomical identification 7−140240
H I in outer Galaxy, correl. with IRAS IR cirrus 7−88591
H I sheets and supergiant H I shells in LMC, 21-cm line profiles 7−88596
H II regions, filled-aperture maps at 3.5 mm 7−88572
H II regions, radio continuum, H I, and CO surveys of Scutum ring *(Japanese)* 7−140217
H II regions, search for type I OH maser emission 7−120539
NH_3 in galactic centre mol. ring 7−115535
OH maser search at 1665 MHz between galactic longitudes 233° and 326° 7−80117
OH megamaser in external galaxies, systematic search in IRAS galaxies 7−95026
OH-IR stars, high-resolution 18 cm OH maser emission obs. 7−72439
OH-IR stars, OH maser emission mapping 7−140090
Orionids, particle populations characts. and radar obs. 7−107777

radioastronomical techniques
black disk method for absolute brightness temp. meas. 7−128134
CLEAN algorithm and objective functions minimisation 7−127736
cyclotron maser emission use for extrasolar planets and substellar companions detect. 7−88126
direct surface smoothing procedure for Fourier image reconstruction in radiophysics 7−139938
dynamic wet troposphere, radio interferometric meas. 7−101701
FX, digital spectro-correlator system for radio astronomy 7−127728
Giotto radio science expt., downlink use for cometary characts. determ. 7−139943
gravitational wave detection method, by interplanetary spacecraft Doppler tracking technique 7−134143
hot interstellar gas detection in globular clusters, radio methods *(Russian)* 7−72554
image processing 7−88119
image reconstruction in 3D Fourier domain 7−87315
Conventional Inertial Reference System, based on VLBI and Schmidt camera methods 7−139435
interferometry, weak objects imaging in conditions of poor phase stability 7−120280
ionosphere plasma artificial depletion, radio obs. below normal cutoff freq. 7−94667

radioastronomical techniques continued
ionospheric refraction correction to radio-object positions, calc. method *(Chinese)* 7−115140
mm-wave instrumentation, advances 7−139925
molecular clouds column density struct. determ. methods 7−140230
multibaseline VLBI, influence of Sagnac effect on diurnal aberration correction 7−115233
polarised images deconvolution, maximum entropy method 7−101696
radar astrometry of near-Earth asteroids 7−134165
radar obs. of meteors at different freq. 7−115250
satellite interferometry, appl. to detect. of cosmological proper motion of extragalactic radio sources 7−140314
solar coronal magnetic fields meas., appl. of inversion of polarisation of local microwave sources 7−107801
space interferometry, design and appls. of Earth-space interferometer project (Radioastron) 7−139917
superconductor-insulator-superconductor heterodyne receiver at 230 GHz, low-noise design for radioastronomical appls. 7−134132
two-position radio surveillance using cosmic radiation 7−134145

radioastronomy
see also radiofrequency cosmic radiation; radiosources (astronomical); radiotelescopes; solar radiofrequency radiation
atmosphere opacity at λ=1.1 mm, meas. at Mauna Kea Observatory, Hawaii 7−107470
Australia Telescope Project, progress report 7−139927
704 Interamnia, detect. of λ=2 cm emission 7−88164
interstellar plasma clouds responsible for quasar intensity variations 7−128033
interstellar radiowave scatt. matter, galactic distrib. 7−128047
ionospheric refraction correction to radio-object positions, calc. method *(Chinese)* 7−115140
IRAM 30-m millimetre-wave radio telescope on Pico Veleta, Spain 7−79828
Jupiter, localisation of Io and non-Io sources of decametre emission 7−79864
Jupiter, narrow-band kilometric radiation source rel to Io plasma torus 7−107743
Jupiter, radio-emission at various freq., source extent and solar wind effects 7−127761
Mercury, solar wind-magnetosphere interactions leading to VLF emissions and surface heating 7−107732
mm wave astronomy, multibeam receiver, design 7−88110
mm-wave instrumentation for radioastronomy, advances 7−139925
planets, auroral magnetospheres radio emission 7−79856
Quasat and ESA Horizon 2000 Programme 7−145800
scintillation of ionospheric, interstellar and interplanetary radiowaves, due to deep random phase screen 7−134066
solar wind turbulence modelling using radio occultation meas. 7−139877
spiral arm molecular clouds and cold H correl. 7−120554
Uranus, kilometric radiation beaming obs. and implications for planetary mag. field 7−120308
H I fine structure lines, possibility of detect. in H II regions *(Russian)* 7−107716
H_2S^+, laboratory obs. of J=1-0, K=0 transition 7−101675

radiobiology *see biological effects of ionising radiation*

radiocarbon dating *see radioactive dating*

radiochemistry
see also radioactive chemical analysis; radioactive tracers
benzene, solvated electron reaction kinetics 7−132959
CANDU fuel, characterisation by radiochemical anal. 7−96203
Delaware Basin, USA, radiometric dating of ochoan evaporites, radwaste disposal 7−103278
liquid scintillation cocktails, alkylbenzene and detergent based, performance comparisons for disposal 7−132958
marine sediments, photon activation anal., internal standard model 7−119603
nuclear waste management, symposium, Boston, MA, USA (Dec. 1986) 7−95101
phenyl glycidylether+imidazoles, epoxide cure kinetics study, radiochemical anal. 7−113919
phthalocyanine complexes, ^{7}Be chemical behaviour formed from $^{12}C(\gamma,n\alpha)$reaction 7−100598
radioactive waste solution chemical treatment at VVER-440 nuclear power plants *(Hungarian)* 7−116707
soil, Pb determination using ^{203}Pb radioisotope substoichiometric method *(Chinese)* 7−113969
TMI-2 core debris, chemical and radiochemical anal. of radionuclide release rates 7−74091
$C+HCN(O_2)(CO)(CO_2)(N_2)(NH_3)(H_2O)(SF_6)$, radioactive recoil atom reactions, review 7−106818
^{38}Cl radioisotope, specific activity determ. in hot atom reactions 7−86655
^{64}Cu, high specific activity, prep. using Szilard-Chalmers reaction 7−101077
^{64}Cu produced by Szilard-Chalmers reactions, polarographic quantification of specific activity 7−101076
OH, real-time picosecond clocking 7−119547
T form. and chemical behaviour in molten LiF-BeF_2 mixture 7−81710
^{99}Tc measurement in LLW using $^{99}Tc^m$ as a tracer 7−103203
U(VI)+tropolone reaction, extraction-spectrophotometric determ. 7−100657

radiocommunication
see also radio links; radio reception
HF communications over long distances, fading by scintillation theory 7−139843
hurricane data collection 7−139780

radiocrystallography *see X-ray crystallography*

radiofrequency amplifiers
see also preamplifiers
US imaging, RF power amplifier and coupling ccts. design 7−68953

radiofrequency and microwave spectra of diatomic inorganic molecules
see also nuclear magnetic resonance; paramagnetic resonance
optical crystals, dielectric props. at submillimeter wavelengths 7−132215
AsH_3, submillimeter wave and IR spectra, vibr. states. spectroscopic consts. 7−116947
CO J=1-0 detection of Cone Nebula (NGC 2264) 7−120542
CO J=1-0 line obs. of 18 southern dark clouds *(Chinese)* 7−120524
CO J=1-0 line obs. of CRL 2688, bipolar nebula 7−107921
CO J=7-6, 16-15 sub-mm line study of luminous protostellar regions 7−128008

radiofrequency and microwave spectra of diatomic inorganic molecules continued
CuO, microwave pure rot. transitions, detection using microwave optical double reson. 7−90104
InI, *B* 1 state, rot. and vibr. consts., microwave spectra 7−74572
LiCl, diode laser spectroscopy at elevated temp., vibr. parameters 7−96710
NH_3 (1,1) detection of Cone Nebula (NGC 2264) 7−120542
OH 1667 MHz maser line profile interpretation of M1−92 bipolar nebula 7−88594
OH 1.667 GHz line monitoring of P/Comet Halley (1982i) 7−94772
OH F=2-2 1667.359 MHz transition obs. of P/Comet Halley (1982i) 7−88267
OH J=3-2 1.667 GHz line obs. of P/Comet Giacobini-Zinner (1985 XIII) 7−134181
OH, Zeeman effect in molecular clouds, magnetic field strengths 7−120543
PO, lines meas., appl. to identifications in interstellar medium 7−128003

radiofrequency and microwave spectra of organic molecules and substances
see also nuclear magnetic resonance; paramagnetic resonance
α-angelicalactone, internal rotation, microwave spectroscopy 7−122512
acetamide, microwave spectrum, internal axis method anal. 7−82085
bicyclo(3.1.0)hexane, zero-point-average struct., ab initio geometry 7−81954
butadiynyl (C_4H), detect. of vibrationally-excited mm-wave doublets in C star (IRC+10216) 7−134234
ε-caprolactone, rot. transitions, microwave spectrosc. 7−135929
carbonyl fluoride, IR and microwave spectra, v_6 band, vibr.-rot. anal. 7−116959
1-chloro-2-butyne, barrier to internal rotation, microwave spectrum 7−122509
chloroacetonitrile, isotopic species, microwave rot. spectra, N hyperfine struct. 7−96653
chloroacetylene, C-H stretching, hyperfine props., RF spectra 7−129696
n-chlorodifluoromethanimine, isotopic species, struct. quadrupole coupling consts., microwave spectra 7−122513
N-chlorodifluoromethylenimine, struct., harmonic force field and microwave spectrum meas. 7−74570
chloroiodomethane, quadrupole coupling constant tensor, microwave spectroscopy 7−122510
trans-crotyl alcohol, high resolution microwave spectrum, torsional pot. energy surfaces 7−122514
cyanocyclobutane, microwave spectrum, ab initio structure, dipole moment 7−116950
3-cyanocyclopropene, mol. struct., microwave spectra and ab initio MO calcs. 7−109877
cyclopentanone, mol. struct., GPED and microwave spectra 7−96869
cyclopropenylidene, ab initio mol. orbital studies of low-energy metastable isomers 7−88590
cyclopropenylidene, isotopomers, mol. struct., millimeter wave spectra 7−82083
cyclopropenylidene (C_3H_2), elec. dipole moment meas. from Stark effect in microwave spectrum 7−120272
cyclopropenylidene (C_3H_2), first interstellar organic ring, laboratory and astronomical spectroscopy 7−115552
5, 6-dihydro-2H-pyran-2-one, microwave spectrum, dipole moment and conform. investig. 7−109882
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7−109876
1,2-dihydroxybenzene, microwave spectra, conformation 7−116952
1,2-dimethylhydrazine, mol. struct. and conform., GPED and microwave spectra 7−74574
1,2-dimethylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
dissolved DNA, resonant microwave absorpt. obs., hydration relax. and struct., comment 7−139209
ethenonyl radical, rot. spectra in submillimeter-wave region 7−82079
fluoroform, far IR spectrum, microwave and mm wave data, rot. and centrifugal distortion const. 7−96665
formaldehyde-HCN(DNC) dimer, angular geometry, hydrogen bond effects, rotational spectra 7−135927
formaldehyde-HF, mm wave spectrum rot., structural, ab initio and semirigid bender anal. 7−96650
formamide, conformation, microwave spectrum 7−122505
glyoxal-d_1, conformers rot. and quadrupole coupling const. microwave Fourier transform spectroscopy 7−96648
1,3,5-hexatriyene radical, fine and hyperfine struct., astron. study, EHF obs. 7−120538
hydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
iminopyruvonitrile centrifugal distortion, Stark splittings, microwave spectra, rotation, vibration 7−135925
iodomethane-d_3, rot. levels, hyperfine interactions, RF-microwave spectra 7−122515
1-iodopropane, microwave spectra, conform. and quadrupole coupling consts. determ. 7−74571
ketene, sub-millimetre wave rotational transitions 7−109875
methane, rot. and rovibr. transitions, millimeter-wave spectrum 7−82084
methanol 2_0-3_{-1}E transition masers towards galactic H II regions 7−72576
N-methlacetamide, far-IR and mm-wave spectra, dielectric anisotropy 7−85621
2-methoxy ethylamine, conform., vibr., microwave spectrum 7−96652
2-methoxyethylamine, low-lying torsionally excited states, vibr., microwave spectrum 7−82087
methyl chloride-Ar, rot. spectra using pulsed nozzle Fourier transform microwave spectrometer, internal rot. 7−90102
methyl cyanide, rot. spectra and vibr. states in freq. range 17 to 56 GHz, quadrupole struct. 7−90103
methyl cyanide-HCN, H bonded dimer, rot. spectrum and props. 7−109879
methyl fluoride, IR laser sideband and submillimeter wave spectroscopy, vibr. state, rot. transitions 7−96666
methyl formate, c-type transitions 7−135924
methyl iodide, rotational constants, microwave spectroscopy 7−122506
methyl methacrylate in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7−138380
2-methylallyl alcohol, conform. equilib. and internal H bonding, microwave spectroscopy., ab initio calcs. 7−122508
3-methylcyclohexanone, conform. and microwave spectrum 7−82086

radiofrequency and microwave spectra of organic molecules and substances continued
3-methylcyclopent-3-enone, internal rot. barrier, microwave spectrum 7−109881
methylenecyclopropene, electronic charact., microwave spectrum, struct., dipole moment 7−68294
N-methylethylenediamine, conform. and H-bonding, microwave spectrum 7−74573
methylhydrazine, nucl. quadrupole coupling tensors, microwave spectra and ab initio calcs. 7−74678
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
methylmercury chloride, gas phase, electric dipole moment and quadrupole coupling determ., microwave spectrum 7−135926
methylsilylsulfide, internal rot., struct., dipole moment and microwave spectra meas. 7−74569
1,2,3-pentatriene, internal rotation barrier, dipole moment, microwave spectra 7−135928
n-phenyl moleimide in nonpolar solvents, dielectric relax., microwave absorpt. meas. 7−138380
phenylphosphine, conformation, internal rot. and struct. studied by microwave spectroscopy 7−116948
propadienone, microwave spectra, rot.-vibr. anal., double-minimum v_{12} pot. function, semirigid bender anal. 7−96649
propiolic acid, mm-wave spectrum 7−116951
propynenitrile in P/Comet Halley (1982i), J=4-3 36 GHz emission *(Russian)* 7−139981
pyridine, gas phase, mol. struct., electron diffr., IR and microwave spectra 7−68457
silyl acetylene, $4\nu_{10}$ state, microwave spectroscopy 7−122511
1,1,2,2-tetrafluorocyclopropane, microwave spectra, elec. dipole moments and mol. struct. 7−90101
trichlorofluoromethane, microwave and mm-wave spectra, rot., centrifugal distortion and quadrupole parameters 7−96651
2,2,2- trifluoroethyl methyl ether, conformation stability and vibr. assignment, microwave, IR and Raman spectra 7−82133
γ-valerolactone, ground and vibrationally excited states, microwave spectrum 7−82082
vinylamine, inversion-torsion motion, microwave spectrum analysis 7−122504
Cu (II) aromatic hydroxyoxime homologous complexes, ESR spectra study 7−103550

radiofrequency and microwave spectra of polyatomic inorganic molecules
see also nuclear magnetic resonance; paramagnetic resonance
Ar_2-HCl trimer, struct., rot., Fourier transform microwave spectra 7−96647
ArD_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
ArH_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
ArHCl, potential surface secondary min., lowest Σ bending vibr., microwave spectra 7−90105
AsD_3, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
$AsHD_2$, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
AsH_2D, microwave spectra, struct., rot., centrifugal distortion and hyperfine consts. 7−116946
BH_2NH_2, microwave spectrum, mol. struct., rot., centrifugal distortion and nuclear quadrupole const. 7−116945
$CCS(^3\Sigma^-)$, interstellar, laboratory detection and astronomical identification 7−140239
CO_2 collision induced spectra, difference frequency source for very low optical freq. spectroscopy 7−103488
C_3S, new interstellar C-chain molecule, laboratory detect. and astronomical identification 7−140240
$CaCO_2$, optical crystals, dielectric props. at submillimeter wavelengths 7−132215
FBO, mol. struct., IR and microwave spectra 7−129698
HBF^+, rot. and centrifugal distortion const., microwave spectrum 7−82081
HBO, detection and equilib. mol. struct. by microwave spectroscopy, rot. consts. 7−82078
$(HF)_2$, $(DF)_2$, HFDF, DFHF, H-bonded complexes, microwave spectra, tunneling-rot. bands 7−116949
H_3N-HBr dimer, isotopic species, ground-state rot. distrib., Fourier-transform microwave spectra 7−103482
H_2O in P/Comet Halley (1982i), 6_{16}-5_{23} 22 GHz emission *(Russian)* 7−139981
H_2O, liq. mol. dynamics simulation and submillimeter spectra 7−97898
H_2O_2, rot. transitions, millimeter and submillimeter wave detect. 7−135914
H_2S^+, laboratory obs. of J=1-0, K=0 transition 7−101675
NH_3, avoided crossing, microwave Stark meas. 7−82080
NH_3 dimer, tunnelling-rot. energy levels classification in mol. symm. group 7−109878
OCS, J=2→3 line half-width and shift parameters *(French)* 7−129695
OCS, supersonic mol. beam, Fourier transform microwave spectra 7−129699
OCS-Ar(Kr)(Ne), supersonic mol. beam, Fourier transform microwave spectra 7−129699
OCS-HCN dimer, microwave spectra, geometry and intermol. force const. 7−109880
PH_2 radical, microwave spectrum 7−122507
SF_5Br, gas phase mol. struct., electron diffr.-microwave study 7−129697
TlF, rot. spectra, mol. consts. and break-down of Born-Oppenheimer approx. 7−90106

radiofrequency cosmic radiation
see also radioastronomy
anisotropies at mm wavelengths 7−80134
background anisotropy decrease due to pregalactic plasma nonequilibrium ionisation *(Russian)* 7−88694
correlation method use for planetary surfaces meas. 7−134145
dipole component, Relict expt. data anal. *(Russian)* 7−88693
dust antenna temp. at North Galactic pole in 200-450 μm band 7−80135
galactic background, Spacelab-2 plasma depletion expt. obs. 7−94667
galactic plane, linear polarisation survey of area $4.9° \leq l \leq 7.6°$ $(-1.5° \leq b \leq 1.5°)$ 7−120583
galactic radioemission at 37 GHz, spaceborne survey *(Russian)* 7−140328
meter-wavelength range, distributed cosmic radio radiation, brightness temp. meas. 7−128134
microwave anisotropy, general gauge-invariant analysis 7−88687

radiofrequency cosmic radiation continued
microwave anisotropy constraints on isocurvature baryon models 7−128151
microwave background, anisotropy calc. from transfer function (between z=2000 and z=800) 7−146106
microwave background, anisotropy due to interactions with galaxies and clusters of galaxies *(Russian)* 7−128136
microwave background, anisotropy limits from 'Relikt' expt. data *(Russian)* 7−107985
microwave background, constraints on 'ino' particles composing galactic haloes 7−115577
microwave background, dipole anisotropy rel. to large-scale streaming motion in local Universe 7−115587
microwave background, effect of spherical voids 7−101964
microwave background, effects of Population III explosions 7−146052
microwave background, hot spots assoc. with random Gaussian fluctuations 7−128133
microwave background, intermediate ang. scale anisotropy 7−120655
microwave background, multipole anisotropies in inflationary cosmological models 7−107983
microwave background, position towards which Galaxy moving 7−88655
microwave background, small-scale anisotropy suppression 7−72658
microwave background and starlight from Population III stars 7−146053
microwave background at 12 mm, temp. determ. 7−80133
microwave background dipole component, contrib. of primordial gravitational waves in inhomogeneous cosmology 7−128146
microwave background fluctuations, sensitive meas. in northern sky 7−88692
microwave background fluctuations, statistical props. 7−95053
microwave background radiation, temp. determ. from interstellar CN absorpt. 7−88689
microwave background radiation spectrum, long-wavelength meas. 7−140326
microwave background temperature, anisotropy in minimal isocurvature model for galaxy form. 7−120659
microwave background temperature at z=1.776, upper limit from C I absorpt. lines obs. 7−88690
microwave background temps., statistical props. of non-Gaussian random fields 7−140327
North Galactic Pole region, mag. field struct. determ. from radio background intensity ang. var. *(Russian)* 7−88644
Northern Hemisphere, galactic radio continuum emission spectral index var. 7−72622
Sunyaev-Zeldovich effect for galaxy clusters Abell 478 and 0016+16, EHF obs. 7−72657

radiofrequency heaters *see radiofrequency heating*

radiofrequency heating
ATP, cellular, extraction, microwave method 7−94029
biological effects normalisation: body mass vs. total body surface area 7−93806
capacitance RF hyperthermia, model for impedance determ. and power deposition charactn. 7−71835
capacitive RF hyperthermia, model for impedance determ. and power deposition charactn. 7−71834
Chinese hamster V-79 cells, thermal effects of 2.45 GHz microwaves on survival and viability 7−126925
dielectric, sintering in microwave field, model 7−119188
dielectric-loaded waveguides as biomedical antennas for tissue heating, energy penetration depth calc. 7−145174
EM hyperthermia, temp. meas. technique using refl. method 7−107211
Helios thirty-beam ultrasound device for deep-tumour hyperthermia, performance charactes. 7−107184
HF techniques, deep heating with annular phased array 7−107218
high-energy electron prod., microwave-plasma interactions study 7−104464
human body, interior temp. distrib., RF heating system anal. 7−133240
human body irradiation for hyperthermic therapy, temp. distrib. study 7−126996
hyperthermia, alterations in α-adrenergic and muscarinic cholinergic receptor binding in rat brain 7−78975
hyperthermia, local RF capacitive: thermal profiles and tumour response 7−133237
hyperthermia, specific absorpt. rates in simulated tissue media for a 10×10 cm 915 MHz waveguide applicator 7−133410
hyperthermia applicator, 10-1000 MHz operation, lightweight design, biomedical appls. 7−145190
hyperthermia applicator, coil and waveguide combined 7−107225
hyperthermia heating equipment, 430 MHz, using lens applicator 7−107212
hyperthermia RF techniques, inductive and capacitive deep heating 7−107219
hyperthermia treatment equipment, feedback control and optimisation, present status and future needs 7−107221
hyperthermia treatment of cancer, comparison of microwave interstitial antennas 7−107215
hyperthermia using miniannular phased array, expt. charactn. 7−133409
hyperthermic applicators, angled dual compact array 7−114441
hypothermic rhesus monkey, rewarming with EM radiation, blood enzyme levels obs. 7−93654
ICRF heating in ICP torches study 7−97820
ICRF heating in JET tokamak, boundary layer conditions, Langmuir probe diagnostics 7−75827
ICRF second harmonic plasma heating, mode conversion, hybrid code simulation 7−69391
inductive applicators for EM hyperthermia 7−87138
interstitial EM applicator/temperature probes 7−107214
interstitial microwave applicator design and calibration technique 7−107216
interstitials hyperthermia, RF low current field and microwave, comparative thermal dosimetry 7−107164
JET, ICRF heating sawtooth behaviour, 15 MeV $^1H^+$ emission spectra anal. 7−104429
JIPP T-IIU tokamak, ICRF heating, radiation loss and impurity abundance, spectroscopic and bolometric meas. 7−75837
JT-60 mag. fusion devices, high-power RF heating system design 7−135571
LISA, rF heating by cylindrical plasma waveguide modes 7−137099
medical microwave diathermy, elec. impedance tomography for thermal monitoring of hyperthermia treatment 7−87351

radiofrequency heating continued
metabolic and vasomotor responses of rhesus monkeys exposed to 225 MHz RF energy 7−78969
microstrip-microslot multiapplicator for microwave hyperthermia and radiometry 7−107226
microwave cavity applicators, single-mode or controlled multimode design 7−128581
microwave heating, sintering, design principles 7−71108
microwave heating furnace system for radioactive waste disposal, 3D anal. of EM fields 7−122210
microwave hyperthermia, equipment requirements 7−71847
microwave hyperthermia for cancer therapy 7−114440
microwave resonant plasma heating, electron temperature, surface explosion 7−69382
microwave techniques and applicators for externally induced EM hyperthermia 7−107217
microwave-induced plasmas, spatial emission props., easily ionised elements effect 7−142499
muscle, papillary, subjected to rapid temp. steps, pot. meas. using isolated microelectrode amplifier 7−107324
oncologic hyperthermia, local RF, microwave radiometry monitoring and associated radiotherapy 7−114456
parasitic loop antenna at resonance, EM heating of biological tissue 7−107162
robot-controlled microwave hyperthermia system, non-invasive IR thermometry 7−107222
sputum cell blocks preparation using microwave technique 7−79163
teratogenic effects of RF radiation induced heating, review 7−87099
thermal dosimetry based on radiometry in multilayered media during microwave hyperthermia treatment 7−107213
tissue phantom, IR camera, appl. for imaging heating effect of RF applicators 7−93863
tokamak impurity diffusion at grill mouth due to lower hybrid heating 7−117706
tumour blood flow in humans, response to local hyperthermia induced by 915 MHz microwaves. 7−107108
tumour heating, localised, noninvasive, ideal penetration limits determ. 7−144982
tumour perfusion during microwave hyperthermia, tissue thermal props. meas. 7−107166
tumours, deep seated eccentricity located, heating with an annular phased array system 7−107193
UHF diathermia system with distance-sensitive applicators, power and freq. control 7−145191
UHF local hyperthermia system using indirectly cooled water-loaded waveguide applicator at 432 MHz 7−71838
Ar microwave-induced plasma, electron density study 7−142440
He microwave-induced plasma, electron density study 7−142440
He plasma, surface wave sustained, spatial emission props., spectroscopy appl. 7−142498

radiofrequency interference
see also atmospherics; electromagnetic pulse; radar interference; whistlers
19 GHz precipitation scatter expt. 7−107500
collapse Mossbauer expts. 7−116034
lightning, impulsive radiation in USW band 7−101451
rain scatter, interference prediction 7−94416
SIRIO SHF experiment, radar simulation and bistatic link, rain scatter interference results 7−114853

radiofrequency-microwave double resonance *see magnetic double resonance*

radiofrequency spectra of diatomic inorganic molecules *see radiofrequency and microwave spectra of diatomic inorganic molecules*

radiofrequency spectra of inorganic solids
see also nuclear magnetic resonance; paramagnetic resonance
GaSe:Gd, impurity centres model, ESR and ENDOR studies 7−131160
YIG film, unusual RF behaviour study 7−113317

radiofrequency spectra of organic molecules and substances *see radiofrequency and microwave spectra of organic molecules and substances*

radiofrequency spectra of polyatomic inorganic molecules *see radiofrequency and microwave spectra of polyatomic inorganic molecules*

radiofrequency spectrometers
see also magnetic resonance spectrometers
No entries

radiofrequency spectroscopy
see also magnetic resonance spectroscopy; nuclear magnetic resonance; radiofrequency spectrometers
rapid FLASH NMR imaging, transverse coherence 7−89238

radiofrequency sputter deposition *see sputter deposition*

radiofrequency sputtered coatings *see sputtered coatings*

radiofrequency sputtering *see sputtering*

radiogalaxies
see also BL Lac-type objects
1401−33, very-low-brightness relic radiogalaxy characts. 7−107957
active nuclei, nature of central power source 7−146091
active sources, spectra from near-simultaneous obs. from 20 cm to 1400 Å 7−88664
Arp 299 (IC 694-NEC 3690), interacting galaxy pair, compact mol. gas struct. determ. from CO obs. 7−80100
B2 0800+24, narrow-angle tail radio galaxy, struct., radio and visible obs. 7−140278
B2 survey faint radiogalaxies, SHF obs. *(Russian)* 7−128087
Balmer decrement of broad-line radiogalaxies 7−107947
3C 111, lobe-dominated radio galaxy, structural vars. in compact central component 7−101909
3C 111 jet, VLBI obs. 7−128104
3C 120, broadline radiogalaxy, He I 1083 nm line detect. 7−72599
3C 234, spectral ageing characts. 7−72618
3C 324, possible gravitationally-lensed giant radio galaxy, CCD images and redshifts 7−80108
3C 326.1, Lyman-α emission and detect. of 100 kpc cloud of ionised gas 7−140288
3C 33, optical spectra index in south radio lobe 7−140254
3C 33, SW radio lobe optical spectroscopy and photometry 7−95037
3C 368, high-redshift radio galaxy and optical obs. rel. to merger and starburst 7−120585
6C sources, extended, nature and UHF obs. 7−88660
in Cancer Cluster, 1.4 GHz continuum sources, VLA obs. 7−128099
Cen A, SN 1986G, photometry, light echo effect 7−120475
Cen A, upper limit to neutrino flux 7−107681

radiogalaxies continued
Cen A (NGC 5128), interstellar polarisation meas. in dust lan 7−107962
classification of active galaxies, prospect of unified phenomenolog 7−134311
compact radio sources, results of frequent flux density monitoring at 2 GHz 7−120631
3CR galaxies, Hubble diagram construction using 2.2 μm magnitude 7−101959
3CR sources, high-redshift, V−R colours rel. to bimodal star form 7−140287
4 CT 74.17.1, jet features 7−120581
Cyg A, internal reddening determ. from meas. of Paschen-α 7−120613
Cyg A, power law X-ray emission obs. from galactic nucleus 7−107971
deep 6 cm radio source survey, optical identifications 7−101948
deep counts, luminosity function, and starburst galaxies 7−120634
1E 0116.3−0116, X-ray bright early-type galaxy, optical and X-ray obs 7−120599
edge-brightened double radio sources, radio jets widths 7−88659
elliptical galaxies, isophotes shapes rel. to radio emission 7−101896
ellipticals, linear size evolution, direct determ. 7−128084
emission-line activity in radio galaxies, implications for photoionisatio models 7−107960
ESO 495-G21 (=He 2-10), starburst galaxy, photometric and spectro scopic study 7−134298
expansion and cosmological evolution of powerful extragalactic radi sources, beam dynamics model 7−95038
extragalactic electron-positron jets from γ-ray beams 7−72586
far-IR galaxies with radio cores, properties 7−128042
first ranked galaxies in clusters Abell 98, 115, 160, 278 and 568, UHI and SHF obs. 7−115582
high-redshift giant elliptical galaxies, colour evolution determ. from IR and visual obs. 7−120595
IC 2476 (B2 0924+30), possible relic radio galaxy, 151 MHz obs 7−128080
IC 342, spiral galaxy, hot interstellar gas detect. in galactic nucleu 7−88624
IC 4296 (PKS 1333−33), spectroscopy, X-ray imaging, IR and surfac photometry obs. 7−95013
IC 4553 (Arp 220), megamaser galaxy, OH 18 cm emission obs 7−128056
IC 711, further obs. of longest head-tail galaxy 7−134299
IRAS 23060+0505, highly obscured active galaxy, optical spectra and IR photometry 7−128071
jet, MHD solitons 7−139902
jet collimation by turbulence viscosity, mean macroscopic flow derivatio 7−101932
jets hydrostatic confinement 7−120592
jets production in active nuclei, swirling hydrodynamic jets in viscou accretion flows 7−72276
low frequency variable radio sources, statistical anal. of multifreq. obs 7−72642
low-luminosity radio galaxies of B2 sample, VLA obs. 7−80086
low-luminosity radiogalaxies, jets characts., VLA obs. 7−128043
luminosity-surface brightness depend. *(Polish)* 7−128109
M81, spiral galaxy radio struct. 7−95032
M82, CO obs. of starburst nucleus 7−72612
M82, far-IR spectroscopy of star form. regions 7−107950
M82, starburst galaxy, IRAS and ground-based meas. of 11.3 μm an [Ne II] 12.8 μm line fluxes 7−72613
M87, general characts. and content 7−101924
M87, halo cooling flows 7−140274
M87, high-resolution optical imaging of galaxy core 7−88641
M87, interstellar gas heating by energetic particles 7−88636
M87 globular cluster system, dynamics and spectral obs. 7−101912
Markarian 421, BL Lac object, simultaneous multifreq. obs. (Decembe 1984 to January 1985) 7−128059
MCG 5-14-18, elliptical galaxy, 92 cm VLBI struct. and radio spectrum 7−95011
Molonglo deep survey radio sources, optical identifications in declinatio −20° region 7−128105
narrow-angle tail radio sources in Abell clusters, tail orientations rel. t galaxy orbits distrib. 7−120597
NGC 1068, Seyfert 2 galaxy, CO obs. of mol. cloud ring 7−80101
NGC 1068, Seyfert 2 galaxy, struct. in nucleus at 10 microns wavelengt 7−72609
NGC 1068, Seyfert 2 galaxy, [O III] 500.7 nm line shape rel. to centra gas cloud 7−140295
NGC 1265, narrow-angle tail radio galaxy, astrophysical implications o multifreq. VLA obs. 7−120596
NGC 1275 (Per A), obs. of fast fluctuations in emission spectrum o galactic nucleus 7−128078
NGC 2623, luminous merging galaxies, near-IR study 7−107954
NGC 2992, Seyfert galaxy, extended emission line region dynamic 7−101900
NGC 3079, active galaxy, gas outflow rel. to ram pressure stripping o companion (NGC 3073) 7−115591
NGC 3448, continuum radio emission and discovery of starburst-assoc radio sources population 7−101918
NGC 3628, interacting edge-on galaxy, CO central component, compac radio and IR source positions anal. 7−72585
NGC 4151, Seyfert galaxy, nucleus UV emission lines, predictions fro duelling wind model 7−72629
NGC 4261 (=3C 270), elliptical galaxy, VRI photometry rel. to dus lane detect. 7−72590
NGC 4319, disturbed spiral galaxy, connection with nearby quasar (Mr 205) 7−140279
NGC 4319, internal vel. characts. and evidence for link with Mrk 20 quasar 7−140280
NGC 4418, OH megamaser detect. and characts. 7−88631
NGC 4472−UGC 7636 galaxies region, interacting H I detect 7−120610
NGC 4874, Coma cluster elliptical galaxy, high-resolution radio obs 7−140251
NGC 4945, H I study with two-element synthesis telescope (TEST) 7−95021
NGC 4945, nucleus dynamics, radio and IR features 7−115601
NGC 5090-5091 (PKS 1318−43), interacting galaxies, radio and optica study 7−88613
NGC 5128(Cen A), optical photometry and spectra of Type Ia 7−140137

radiogalaxies continued
NGC 5128 (Cen A), IR photometry and spectroscopy of SN 1986G 7−120469
NGC 5128 (Cen A), obs. of complex Na absorpt. and interstellar diffuse bands 7−146001
NGC 5506, edge-on Seyfert galaxy 7−115588
NGC 6251, nucleus intrinsically asymmetrical radio struct. 7−88626
NGC 891, halo features 7−140265
NGC 891, radio halo form., explosion model, roles of disk and halo relativistic electrons *(Chinese)* 7−101893
nuclei, emission-line and continuum vars. rel. to connection with SS 433 phenomenon 7−140263
nuclei, influence of relativistic electrons on photoionised gas cloud 7−139897
Pic A, obs. of bright optical synchrotron counterpart of western radio hot spot 7−101935
PKS 1934−63, identification and nature 7−88634
plasma double layers and plasma-wave resistivity in extragalactic jets: cavity formation and radio-wave emission 7−120271
plasma universe evolution 7−72282
in poor galaxy groups, VLA 20 cm survey 7−146099
precise optical positions for strong radio sources south of $\delta = +5°$, results 7−80115
relativistic beams interaction with interstellar gas, radiative processes 7−101937
relativistic electron bumps in extragalactic radio sources, stabilisation and consequences 7−115616
rich clusters of galaxies, radio power and X-ray lumin. 7−146097
scintillating radio sources, correl. of radio spectra with morphological type of active galaxies *(Russian)* 7−107965
Seyferts in CfA sample, radio spectral props. 7−101929
spiral galaxies, comparison of radio luminosities of isolated single and double galaxies 7−128037
spiral galaxies, optical emission-line activity rel. to radio continuum power in nuclei 7−101910
spiral galaxies, radio continuum obs. of early and late-type galaxies 7−101939
superluminal radio sources, probability approach to ballistic models 7−128103
surface photometry of powerful radio galaxies, relation to radio, optical and clustering props. 7−88633
variable radiosources with superluminal VLBI components, precessing jets model 7−140315
weak Leiden-Berkeley Deep-Survey (LBDS) sources, VLA high-resolution obs. 7−115615

radiogoniometers *see goniometers*

radiography
see also diagnostic radiography; electrophotography; neutron radiography; radioisotope scanning and imaging
ceramic, advanced, photon CT scanning applic. for flaw, crack and density gradients exam. 7−144679
classification of X-ray films for industrial radiography 7−93240
coherent X-ray scatter imaging, status and outlook 7−114470
dental mineralised tissue slices, optimised microcomputer-guided quantitative microradiography 7−133531
head impact expts., use of high-speed cineradiography 7−127051
image reconstruction techniques for computed tomography from sparse data 7−117761
integral gamma-ray count backscatter instrument design, math. model, appls. 7−67449
low energy β-sources for radiography 7−114495
materials science application of lab. X-ray microscopy 7−86539
nuclear targets conference, Chalk River, Ont., Canada (Sept. 1986) 7−108020
plastic materials, NDT using Compton scattered X-rays *(German)* 7−138946
polymer coating on metallic substrate, albedo thickness gauging 7−71439
proton, solids study by radiation physics, apparatus for comprehensive meas. 7−108732
pulsed X-ray equipment, MIRA-2D, optimum regime determ. 7−71441
radiometric NDT devices, nonlinear conversion of pulses of spectrometric flaw detector 7−71438
radiotherapy, portal film contrast enhancement technique, quantitative evaluation 7−133427
radiotherapy application, MV portal films using computed radiographic imaging with photostimulable phosphors 7−133434
real-time radiography, concepts and systems 7−86540
simultaneous dynamic neutron and gamma radiography 7−126380
steel, C, computer assisted tomography scanning of H-induced cracks 7−78449
steel, Cr-Mo, H trapping, electron microscope autoradiography *(Japanese)* 7−76189
steel, stainless, type 316, NDT performance of defective butt welds 7−126392
superionic conducting materials, diffusion, autoradiography, math. anal. 7−76471
synchrotron radiation microradiography, coarsening studies of liq.-solid mixtures 7−86528
weld defects, X-ray inspection, automatic image analysis 7−71434
welds, flaw position, shape, and dimensions, nondestructive radiometric scanning technique *(German)* 7−138945
X-ray microradiography and microanalysis techniques without focusing adjustments, review *(French)* 7−67444
X-ray scatt., coupled electron/photon Monte Carlo calcs. 7−78447
X-ray scattering radiography, computer-aided, hardware and software *(Japanese)* 7−73487
Al castings, NDT using Compton scattered X-rays *(German)* 7−138946
Al_2O_3, photon CT scanning applic. for flaw, crack and density gradients exam. 7−144679
BaFBr:Eu, X-ray phosphors for computerised radiography, photostimulated luminescence kinetics 7−70870
Ce microdistribution in materials, radioassay and autoradiography studies 7−71454
Se, electroradiographic plates, DTA analysis 7−89293
U, defect inspection by X- and α-radiography 7−138940

radioisotope scanning and imaging
see also computerised tomography
accelerated positron emitter beam injection, mag. recovery, Maximum Likelihood Estimator algorithm applicability 7−145231
acquisition of gamma camera and physiological data 7−93906

radioisotope scanning and imaging continued
Anger scintillation camera automatic tuning, review 7−107236
angiocardiography, multigated interface for real time data acquisition *(Chinese)* 7−93987
artefact reduction in dual-radionuclide subtraction studies 7−87169
autoradiography, high resolution, labelled deoxyglucose 7−145297
autoradiography of ^{3}H-labelled substances using a multiwire camera, images quantitation 7−133530
body composition meas. using neutron inelastic scatt. from high repetition rate generator 7−94036
bone blood flow meas. with radioactive microspheres, non-entrapment problem 7−93791
brain energy metabolism, computerised 3D reconstruction using quantitative autoradiography and digital image processing 7−127066
cardiac left ventricular abnormality diagnosis based on radionuclide ventriculographic image anal. 7−87337
cardiac metabolism noninvasive imaging, single photon scintigraphy, positron emission tomography and NMR, book 7−108031
cardiac output and shunt determ, in vivo, nuclear medicine methods 7−93900
cardiac radionuclide volume meas., direct determ. of attenuation coeff. 7−133421
cardiac scintigrams, delineating elliptical objects, Hough transform, based method 7−79070
cardiac SPECT image, 2D polar representation *(Japanese)* 7−79080
central haemodynamics, automated assessment of state using radiocardioanalyser PKA 3-01 *(Russian)* 7−127000
central haemodynamics in patients with chronic liver diseases, radiocardiological investigation *(Russian)* 7−126893
cerebral blood flow, regional, camera system using super high sensitivity collimator for atraumatic meas. 7−133418
cerebral blood flow meas. and imaging with stable Xe and CT 7−87158
cerebral blow flow measurement techniques, review 7−114466
computerised multidimensional imaging and processing, conf., Newport Beach, USA (Apr. 86) 7−140364
cone beam SPECT, three dimens. imaging 7−145225
conference, physics and engineering of medical imaging, Maratea, Italy (Sept.-Oct. 1984) 7−108032
CT, X-ray emission and mag. reson., status survey 7−145210
cyclotron produced radionuclides for nuclear cardiology 7−93928
digital autoradiography: design, development, and evaluation of a solid-state image analyser 7−133422
digital stereotactic meas. system for cerebral metabolism evaluation using autoradiography 7−86940
dopamine receptor density, human caudate D2, quantification by PET, model review 7−145005
dose equivalent in nuclear medicine, radiation risk determ. method 7−93936
dynamic radionuclide studies, rot. to simple struct. in factor anal. 7−71864
emission CT, convergence of max. likelihood reconstruction algorithm 7−87168
emission CT, inverse Monte Carlo as a unified reconstruction algorithm 7−93902
emission tomography, image reconstruct., expectation maximization method 7−145196
emission tomography, maximum-likelihood reconstruct., noise and edge artifacts 7−145199
gamma camera performance assessment using an orthohole test pattern 7−107242
gamma counter, solid-state 48 detector, performance using solid phase total thyroxin and free thyroxin assays 7−93903
gas targets for the production of ^{15}O, ^{11}C and ^{18}F for PET studies 7−93929
gated blood pool studies, image sequence processing 7−87330
glomerular filtration rate, meas. with ^{99m}Tc DTPA: comparison of plasma clearance techniques 7−133426
glomerular filtration rate, single-sample method for estimation in children 7−133425
heart left ventricular apex, 3D medical image feature detect. using shape information 7−79067
heart valve prosthesis, malfunction diagnosis by radionuclide regurgitant index 7−87175
hepato-biliary system transport dynamics model, IDA scintigraphy 7−119851
image processing in 2D, appl. 7−144943
imaging with ionising radiations, book 7−72739
inhaled radioaerosols, biological clearance and committed dose equivalent 7−107259
interactive workstation for real-time display and manipulation of three-dimens. imaging data 7−145272
isotope diagnostics, computer aided 7−87172
isotope materials availability and services for target production at the Oak Ridge National Laboratory 7−93930
iterative image space reconstruction algorithm for emission computed tomography 7−79069
kidney, differential renal function calc. using ^{99m}Tc-DMSA, importance of using anterior and posterior views 7−139351
left ventricular aneurysm in short axis: comparison of NMR, US and ^{201}Tl SPECT images 7−139345
left ventricular end diastolic volume evaluation in equilibrium gated radionuclide cardiography 7−114463
left ventricular wall motion, quantitative anal. using emission tomography 7−87177
liver nuclear medical image processing, Hotelling trace criterion for feature enhancement 7−141809
liver volume and accumulation rate of radioactive agent, SPECT evaluation *(Japanese)* 7−139359
maximum likelihood algorithms for emission and transmission tomography 7−119834
medical body imaging, review *(Japanese)* 7−114532
medical imaging technology, recent developments *(Japanese)* 7−79118
microstructural analysis of scintigrams *(Russian)* 7−87161
mineral content determ. using single-photon absorptiometry 7−119850
modular focused collimator for SPECT brain imaging 7−145226
monitoring using noninvasive techniques 7−87110
Monte Carlo simulations, testing by expt. measured scatt. fractions and energy spectra 7−71863
multicompartmental systems, generalised conservation eqn. 7−100790
MUP-PET for studying metabolism, brain operation and drug uptake 7−145194

radioisotope scanning and imaging continued
myocardial blood flow in excised dog heart, meas. method using high resolution scintigraphy 7−94031
myocardial infarct size quantification by ^{201}Tl SPECT, comparative methods, dog obs. 7−133423
myocardial perfusion images, modelling and representation for diagnostic props. evaluation 7−71853
myocardial single photon emission CT imaging with a cardiac phantom, expt. considerations *(Japanese)* 7−145233
myocardial tomography using ^{201}Tl, optimum technique: phantom investigation 7−145208
noninterventional background corrections for scintigrams 7−107241
PET, 3D image reconstruct., review 7−145200
PET, computerised brain atlas 7−145232
PET, high resolution, modular array detectors, crystal identification 7−141402
PET, high resolution detector blocks 7−145230
PET charact., computer-simulated brain phantom 7−145201
PET instrumentation developments, review 7−145228
PET transmission scans, scattered radiation rejection technique 7−145229
POSITOLOGICA II, a whole body positron emission tomography, count rate characts. and count loss correction *(Japanese)* 7−145234
positron CT, adoption of photon time-of-flight information *(Japanese)* 7−119846
positron emission tomograph simulation, high spatial resolution, based on multiwire proportional chambers, imaging capabilities 7−145213
positron emission tomography, cardiac image, automatic anal. and quantification *(French)* 7−119843
positron emission tomography, expectation maximisation algorithm 7−79068
positron emission tomography, quantitation, effects of nonlinear parameter estimation on functional images 7−119842
positron emission tomography, standardization of labelling procedures 7−133412
positron emission tomography, stationary, fast reconstruction algorithm based on modified EM algorithm 7−119833
positron tomography for biochemical molecule activity quantification and organ metabolism investigation *(Czech)* 7−133417
positron-emission tomography, estimation algorithms for dynamic tracer studies 7−119835
production of short-lived radiopharmaceuticals for PET 7−93927
radiopharmaceuticals made at INR Rez, radionuclide purity and quality comparison *(Czech)* 7−127004
radioscintigraphy, effect of object motion on image degradation, surrogate modelling 7−114461
real-time multitasking multiuser nuclear system for clinical applics. 7−114467
renography, deconvolution analysis program 7−93898
renography deconvolution, error anal. by simulation studies 7−71865
scintigraphic images, anal. of sequences of cardiac contours by Fourier descriptors for plane closed curves 7−119839
scintigraphy, correspondence anal. appl. 7−101074
scintillation proportional chamber, high-press. gas, detect. efficiency 7−71859
single isotopic probe for gastro-esophageal reflux diagnosis in children 7−145195
single photon CT, correction of photon attenuation *(Turkish)* 7−114460
single photon emission CT, 30 display of data 7−107227
single photon emission CT, attenuation correction, automatic contour detect. 7−119836
single photon emission CT, quantitative organ visualisation 7−133424
single photon emission CT, use of cross-correl. function to detect patient motion 7−133420
single photon emission CT imaging, analytical approach to quantify uniformity artifacts 7−71858
single photon imaging at high energies with electronic collimation 7−145223
sinogram Fourier decomposition props., emission CT appl. 7−140679
SPECT, attenuation correction technique 7−119852
SPECT, discrete representation problems 7−145222
SPECT, improved reconstruction using Inverse Monte Carlo 7−145227
SPECT, modified post processing correction matrix 7−145224
SPECT brain imaging, collimator selection 7−93905
SPECT imaging, fundamentals of 180° acquisition and reconstruction 7−93904
subtracted images thresholding method for radiolabelled-antibody imaging 7−139352
three-dimensional arrays of num. data, processing and display using OCTREE encoding 7−93992
three-dimensional sinograms of time-of-flight positron emission tomograph, construction function 7−145237
thyroid, radiation dose meas. using positron emission tomography 7−71868
thyroid gland function, radioiodine method, data handling machine *(Chinese)* 7−93915
tumour scintigraphic agents, synthesis and characterization 7−133450
volume emission CT, convergence of iterative image space reconstruction algorithm 7−119838
worldwide medical radiation use, analytical modelling: X-ray, nuclear medicine and radiotherapy appl. 7−71850
^{10}B, concentration in rat blood, autoradiography, neutron capture therapy appl. 7−133479
BaF_2-TMAE detector for PET appl. 7−79117
^{14}C-whole-body autoradiograms, quantitation method using comparative densitometry 7−93894
^{131}I, diagnostic dose determ. for imaging metastatic thyroid cancer 7−93907
^{125}I implants, dose distrib. due to anisotropic radiation emission and unknown seed orientation 7−101091
NaI(Tl), scintillation detector performance for nuclear imaging 7−141401
^{226}Ra, in bone, quantitative autoradiography, meas. technique 7−71946
^{99m}Tc-pyrophosphate, bone and acute myocardial imaging agent study 7−119844

radioisotope separation *see isotope separation*

radioisotopes
see also radioisotope scanning and imaging
^{131}I, elimination in meadow voles, whole-body γ-spectrometry obs. 7−93970
^{99}Tc^{m}-diagnostic agents, radiochemical purity, comparison of chromatographic quality control procedures 7−93401

radioisotopes continued
γ- and X-ray spectral line intensities 7−81326
accelerators in research and industry, conf., Denton, TX, USA (Nov 1986) 7−88733
atmospheric release, centerline γ absorbed dose rate due to continuou Gaussian plume, estimation approx. 7−133458
bentonite-based packing, role in limiting radionuclide releases from HLV repository 7−74084
biomedical solid radwaste, incineration dose assessment, deregulation pro posal 7−87254
blood platelet survival mean time, isotope labelled, different formula evaluation 7−93676
cathode metal selection for proportional gas counter, w.r.t. ^{238}U contam ination 7−129525
cement-based radwaste forms, pore soln. composition effect on Cs lea chability 7−103240
Chernobyl accident, plume dose and release rates using SPEEDI cod 7−81606
Cluff Lake uranium mine, radionuclide and heavy metal concs. in wate sediments and biota 7−114504
coincidence method, $4\pi\beta-\gamma$, extrapolation curves calc., computer cod 7−96481
concrete radwaste forms in groundwater, attenuation of Pu, Am, Cs an Sr mobility 7−103244
convection-dispersion eqns., response function 7−74083
cyclotron produced radionuclides for nuclear cardiology 7−93928
effective dose per unit intake for adults and young people, computer data base 7−107253
gas targets for the production of ^{15}O, ^{11}C and ^{18}F for PET studie 7−93929
gaseous activation products prod. for medical purposes *(German)* 7−7186
generic assessments of plant/soil radioisotope concentration ratio 7−101097
German management strategies for radwaste, radionuclide treatment an disposal *(German)* 7−89734
isotope materials availability and services for target production at the Oa Ridge National Laboratory 7−93930
kinetics in the human body, math. simulation 7−144945
liquid radwaste tanks, characterization of airborne radionuclide particu lates 7−103208
liquid scintillation systems, β-spectroscopy, ^{90}Sr and ^{90}Y dosimetry app 7−107248
long-lived radioisotopes, activity concs. and temporal vars. in surface ai Munich, Germany 7−145631
migration in fractured granite 7−101299
natural radionuclides partitioning in waste streams of coal fired utilitie 7−87253
nuclear fuel waste disposal assessment, nonlinear chemical sorptio isotherms for repository 7−122213
nuclear targets conference, Chalk River, Ont., Canada (Sept. 1986 7−108020
1-phenylbromoethanes, substituted, racemisation and radio-Br exchang solvent effects 7−96886
portable γ-ray spectrometer for K, U and Th cone. assaying countin statistics 7−120146
positron-emitting radionuclides for nuclear medicine, photonuclear reactio prod. 7−133451
production of short-lived radiopharmaceuticals for PET 7−93927
radioactive material transport in China 7−74121
radioactive materials, low activity, transportation experience and regula ory compliance assurance 7−74122
radioactive materials transport in India, experience in regulation 7−7410
radiocolloid formation in radionuclide migration, waste management stud 7−96361
radionuclide transport in alpine Rhone watershed 7−139158
radionuclides in NW Atlantic 7−139146
radiopharmaceutical product transport in France *(French)* 7−74119
radiopharmaceuticals, hospital cyclotron-produced, guidelines for safet standards evaluation *(Japanese)* 7−107247
radiopharmaceuticals made at INR Rez, radionuclide purity and qualit comparison *(Czech)* 7−127004
reactor fuel defect characterization using radioisotope detection 7−14115
rock-groundwater system, radionuclide migration, sorption−liquid/soli ratio effects study 7−119698
skin, electron dose rate conversion factors for external exposure 7−13345
solubility in water, HTR-100 reactor fission product release study *(Ge man)* 7−109462
terrestrial γ radiation, natural background meas., 1981 to 1983, Taiwa 7−133680
TMI-2 core debris, chemical and radiochemical anal. of radionuclid release rates 7−74091
transport by concentrated brine in porous medium, radwaste disposa 7−103277
Washington continental slope, sediments, fallout and natural radionuclid cycling 7−144924
WWER-440 spent fuel, actinide isotope content and neutron emissio safeguards appl. 7−116596
WWER-440 spent fuel, specific neutron yield calcs., actinide isotopi conc. *(Russian)* 7−116595
^{241}Am and ^{226}Ra, high concs. at human bone surfaces, implications fo ICRP 30 bone dosimetry model 7−71904
^{241}Am, calibration of a dual gamma-ray scanner, total peak area metho 7−96462
^{241}Am decay, 59.5 keV gamma-emission probability meas., disintegratio rates 7−135783
^{241}Am, radionuclide export by deer mice, SE Idaho radioactive waste dis posal area 7−71898
^{241}Am-Be, spontaneous fission neutron source, fluence to dose equivalen conversion factors, microdosimetric meas. 7−119860
^{10}Be in Greenland ice and average precipitation rates 7−139644
^{A}Bi, A=205,206, cyclotron prod. for clinical appl. 7−93925
^{14}C activity meas. using position sensitive proportional counter 7−135785
^{14}C content of LWR fuel, behaviour during reprocessing *(Germa* 7−129218
^{14}C emission rates from PHWR, at Kota, India 7−129420
^{14}C, hand contamination at radioisotope lab. of a medical school 7−7909
^{14}C in E Atlantic deep water, data inversion for water mass renewal ra estimation 7−94273
^{14}C labelled 5-fluorouracils, biological radiation effects *(Japanes* 7−133397
^{14}C, preparation for large area sources for document imaging 7−109574

radioisotopes continued
^{14}C standard, radioactivity concentration meas., using $4\pi\beta$-γ coincidence, internal gas counting techniques 7−89188
^{14}C standardization using liquid-scintillation coincidence counting technique 7−135787
^{134}CS, efficiency fn. determ., $4\pi\beta$-γ coincidence counting meas. 7−135781
^{41}Ca isotope enrichment, large scale sample preparation 7−109686
^{109}Cd standardization by 4πe-X coincidence method, activity determ. 7−135779
^{109}Cd standardization using 4π(LS)e-x method 7−135778
^{109}Cd X-ray source preparation by molecular plating method *(Chinese)* 7−92891
^{A}Cf, A=249,252, radionuclide source holder with sealing door 7−81816
^{252}Cf leukemogenesis in the C57BL mouse 7−107172
^{252}Cf radiation, lethal and mutagenic effects in cultured human cells 7−126905
^{252}Cf, spontaneous fission neutron source, fluence to dose equivalent conversion factors, microdosimetric meas. 7−119860
^{38}Cl radioisotope, specific activity determ. in hot atom reactions 7−86655
^{60}Co, activity meas., test of $4\pi\beta$-γ coincidence system 7−135766
^{60}Co, comparative uptake from sea water and tissue distrib. in marine mollusks 7−139381
^{60}Co production in FFTF, ZPPR expt. anals. 7−109357
^{51}Cr, Auger emitter, restricted dose mean LET calcs. 7−93931
Cs^+ and I^- diffusion in compacted bentonite-based materials, radwaste repository appl. 7−109503
^{137}Cs, behaviour of radionuclides in annual ring of sugi *(Japanese)* 7−79097
^{137}Cs body burdens in Norwegian Lapps, 1965-83 7−71901
^{137}Cs, calibration of a dual gamma-ray scanner, total peak area method 7−96462
^{137}Cs, calibration source for BWR fuel burnup evaluation 7−109293
^{137}Cs, permeability in HTR fuel element graphite spent fuel repository implications 7−135422
^{137}Cs, radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
^{137}Cs remobilization in Steel Creek system following L-Reactor restart 7−103298
^{137}Cs source, gamma radiation dose rate meas. and calibration 7−119861
^{64}Cu atoms incorporated in cells under in vivo or in vitro conditions, differences in consequences of radioactive decay 7−126936
^{64}Cu, high specific activity, prep. using Szilard-Chalmers reaction 7−101077
^{64}Cu produced by Szilard-Chalmers reactions, polarographic quantification of specific activity 7−101076
^{55}Fe, Auger emitter, restricted dose mean LET calcs. 7−93931
^{59}Fe, efficiency fn. determ., $4\pi\beta$-γ coincidence counting meas. 7−135781
^{66}Ga, radiochemical separation for PET scanning appl. 7−119853
^{67}Ga standardization by live-timed 4πe-γ anti-coincidence counting 7−135780
^{67}Ga uptake by tumour cells, expt. evidence for probable involvement of Ca^{2+} 7−78813
^{3}H, hand contamination at radioisotope lab. of a medical school 7−79098
^{3}H labelled 5-fluorouracils, biological radiation effects *(Japanese)* 7−133397
^{3}H, on-line monitoring in air in HWR 7−116718
^{3}H, preparation for large area sources for document imaging 7−109574
$^{3}H_2$, safe handling and storage 7−109525
I, time-dependent partitioning, γ-ray effects, LWR core accident appl. 7−78525
^{127,129}I, environmental samples, neutron activation anal., chem. and nucl. interferences 7−119869
I_2, disproportionation reactions in basic solns., Raman spectrosc: obs., rel. to nucl. safety 7−74018
^{A}I, A=125, 131, dosimetric characts. after internal irrad. of animals *(Russian)* 7−145160
^{125}I, Auger electron energy distrib. in water and iodobenzene 7−76252
^{125}I brachytherapy seeds, Monte Carlo simulation of dose distrib. around 7−133467
^{125}I, continuous meas. using liquid scintillation counter 7−116798
^{125}I decay in DNA, effectiveness for strand breaking 7−126939
^{125}I implants, dose distrib. due to anisotropic radiation emission and unknown seed orientation 7−101091
^{125}I, Model 6702 seeds, dose distribs. in water 7−145242
^{125}I radiobiological effectiveness, microdosimetric interpretation and the quality factor problem 7−126938
^{125}I standardization, activity meas., photon-photon coincidence counting and efficiency extrapolation 7−135775
^{125}I: Auger-electron cascades, charge pot. and microdosimetry 7−127011
^{125}IUdR in mammalian cells, kinetics of uptake retention, and radiotoxicity: implications of Auger processes 7−78810
^{129}I continuous monitor, initial operating experience *(German)* 7−129457
^{129}I disposal, radiation dose reduction by isotopic dilution 7−96360
^{131}I, effect of high doses on bone uptake and retention of ^{90}Sr and ^{90}Y 7−126927
^{131}I, effect of high doses to thyroid gland on tumourigenicity of ^{90}Sr and ^{90}Y in mice 7−126928
^{131}I, high dose exposed mice rel. to thyroid gland C-cell destruction 7−78976
^{131}I, radioactive fallout in Taiwan following Chernobyl accident 7−78687
^{111}In binding to monoclonal antibodies, bifunctional chelates study using perturbed angular correlation spectroscopy 7−79085
^{192}Ir seed based surface mold 7−79073
K, specific activities, dose rates 7−74207
^{40}K, behaviour of radionuclides in annual ring of sugi *(Japanese)* 7−79097
^{40}K, radionuclide content of and ^{222}Rn emanation from building materials made from phosphate industry waste prods. 7−139379
$^{81}Kr^{m}$ generators, production using ZrP, medical diagnostic appl. 7−133449
^{85}Kr atmospheric distribution, simulation with general circulation model 7−139163
^{99}Mo, leakage tests in liq. waste containment system 7−74167
^{99}Mo recovery from uranium fission products 7−103220
^{63}Ni, preparation for large area sources for document imaging 7−109574
^{237}Np, English Channel, French coast, meas. and analysis techniques 7−139149
^{237}Np, permeability in HTR fuel element graphite, spent fuel repository implications 7−135422
^{15}O production, current methodology 7−133448
^{187}Os to ^{187}Re ratio, HF calcs., use in galaxy age estimation 7−73737
radioisotopes continued
^{32}P, aqueous, dosimetry after soft tissue infiltration following intravenous administration 7−71873
^{32}P detection using scintillating plastic vials 7−89883
^{32}P radiotherapy, effect of tissue inhomogeneity on β distrib. 7−71883
^{210}Po and ^{210}Pb, plant accumulation and plant/soil conc. ratios within a U mining and milling operation 7−133482
$^{193}Pt^{m}$, Auger emitter, restricted dose mean LET calcs. 7−93931
Pu and Am radionuclide contamination of tourist property and estimated inhalation of visitors to Kiev after Chernobyl accident 7−133484
Pu, fallout, ingestion intake in Japan 7−71902
Pu, remobilisation from estuarine sediments, Esk estuary, UK 7−144925
^{A}Pu, A=238-40, radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
^{A}Pu, A=239, 240, air concs. and pot. radiation doses to humans after aircraft accident in Palomares, Spain 7−93967
^{A}Pu, A=239, 240, fallout, concs. in tissues of Japanese who died during 1980-4 7−79096
^{A}Pu, A=239,240, fallout in marine samples, mass spectrometric determ. 7−144926
^{A}Pu, A=239,240 low-level conc. distrib. in Beagle tissues 7−87257
^{238}Pu deposition from RTG in postulated Space Shuttle accident, orange tree retention, fruit contamination 7−133483
^{238}Pu, genetic damage induction in germ cells of male mice *(Russian)* 7−133383
$^{238}Pu(NO_3)_4$ intratracheally administered to rabbits, metabolism kinetics and biological effect *(Russian)* 7−133392
^{239}Pu, behavioural and biological effects after intramuscular injection in rats *(Russian)* 7−114429
^{239}Pu incorporated in animals, effects on lifetime *(Russian)* 7−114427
^{239}Pu induced myeloid leukaemia and osteosarcoma in female CBA mice 7−78988
^{A}Ra, A=224, 226, prediction of relative toxicities in mouse bone by Monte Carlo techniques 7−119803
^{A}Ra, A=226, 228, radionuclide content of and ^{222}Rn emanation from building materials made from phosphate industry waste prods. 7−139379
^{A}Ra, A=226,228, conc. in struverite, γ activity meas. 7−87258
^{226}Ra, air kerma constant calc. in equilibrium with decay products 7−74218
^{226}Ra and ^{210}Pb concentrations in terrestrial and wetland plants on U mill tailings in Canada 7−93972
^{226}Ra and ^{241}Am, high concs. at human bone surfaces, implications for ICRP 30 bone dosimetry model 7−71904
^{226}Ra contents of U mill tailings, particle size fractions 7−87252
^{226}Ra, groundwater concs. in North Carolina phosphate lands 7−87256
^{226}Ra in soil gas, correl. with ^{222}Rn inside adjacent houses 7−71900
^{81}Rb generators, production using ZrP, medical diagnostic appl. 7−133449
^{82}Rb generator, eluate radioanalysis 7−101082
^{82}Rb generator for nucl. medicine appl. 7−101080
^{82}Rb, preparation using SnO_2 continuous elution generator 7−101081
^{82}Rb/^{82}Sr generator system for clinical use 7−101083
Rn and Tn progeny in Canadian U mine, unattached fractions, errors in meas. using wire screen methods 7−145255
Rn and Tn progeny mixtures in U mines, simplified method for pot. α energy determ. 7−71905
Rn atmospheric radioactivity induced fluctuation of γ-ray background spectrum *(Japanese)* 7−93971
Rn daughters, integrating thermoluminesc. personal dosimeter 7−71874
Rn daughters deposited in the lung, radiation dose computation rel. to phys. state and straggling 7−145244
Rn, indoor conc. meas. using LR-115 plastic track detector 7−119868
Rn, indoor exposure, health effects, Kuwait population, lung cancer incidence estimation 7−119871
Rn, NRPB personal dosimeter, performance 7−87206
Rn nuclear track detector using Tuffak 7−139371
Rn, pressure driven flow equation for ingress through house concrete foundation cracks 7−119870
Rn progeny levels in the atmosphere, optimising the gross α counting method 7−93968
^{A}Rn, A=220, 222, daughters, indoor and outdoor, Hong Kong population, annual dose 7−133487
^{A}Rn, A=220, 222 decay products in air, concentration determ. 7−126669
^{222}Rn, atmospheric, in tourist caves of Slovenia, Yugoslavia: conc. obs. 7−93969
^{222}Rn conc. in N Carolina public water supplies, system size effect, geologic and hydrologic variables 7−71899
^{222}Rn daughter products deposition, resulting surface radioactivity 7−93966
^{222}Rn daughters in houses, equilib. factor obs. 7−139383
^{222}Rn emanation coeff. for coal fly ash grains, release model 7−87251
^{222}Rn emanation coeffs. of U mill tailings, particle size fractions 7−87252
^{222}Rn emanation from and radionuclide content of building materials made from phosphate industry waste prods. 7−139379
^{222}Rn emanation from soil, moisture content effect 7−133485
^{222}Rn, exhalation determ. from atmospheric concentration profile *(Spanish)* 7−114141
^{222}Rn, groundwater concs. in North Carolina phosphate lands 7−87256
^{222}Rn in drinking water rel. to age-dependent lung doses 7−71875
^{222}Rn in USA public drinking water supplies, Bayesian anal. or scientific judgment of uncertainties in risk estimation 7−139378
^{222}Rn, indoor air conc. in US housing, potable water source 7−87250
^{222}Rn, indoor ventilation rates in the cellar room of a New Jersey dwelling 7−133486
^{222}Rn inside houses, correl. with ^{226}Ra in soil gas 7−71900
Se, radioisotope prod. from irradiated RbBr, electrolytic separation, tracer appls. 7−119854
^{145}Sm: source for brachytherapy 7−133452
^{A}Sr, A=89,90, distrib in Slovenia, Yugoslavia after Chernobyl accident 7−78689
^{82}Sr, preparation using SnO_2 continuous elution generator 7−101081
^{82}Sr production by cation exchange chromatography 7−101078
^{82}Sr production by RbCl irradiation and ion exchange 7−101079
^{82}Sr/^{82}Rb generator elution profiles, radioassay and dosimetry 7−101084
^{89}Sr, radionuclide therapy: dosimetric study using impulse response function anal. 7−119856
^{90}Sr and ^{90}Y, bone uptake and retention, effect of high ^{131}I doses 7−126927
^{90}Sr and ^{90}Y, tumourigenicity in mice, effect of high ^{131}I doses to thyroid gland 7−126928

radioisotopes continued
^{90}Sr, radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
T isotopic enrichment for analytical and production purposes *(Rumanian)* 7−81749
T production sources *(Rumanian)* 7−81748
^{99}TC, permeability in HTR fuel element graphite spent fuel repository implications 7−135422
^{99}Tc measurement in LLW using ^{99}Tc^{m} as a tracer 7−103203
^{99}Tc^{m}(Sn)MDP reaction mixture, effect of Sn(IV) on mean size of ^{99}Tc^{m}-containing constituents, neutral pH 7−93926
^{99m}Tc, source and dose calibrator for survey meters at 140 keV 7−71872
Th, specific activities, dose rates 7−74207
^{A}Th, A=228,230,232, concs. and activity ratios in surface air, NW Pacific 7−145632
^{201}Tl, Auger emitter, restricted dose mean LET calcs. 7−93931
^{201}Tl standardization using $4\pi\beta$-γ coincidence method, two-dimensional extrapolation 7−135777
U, human urine analysis by isotope dilution thermal ionisation mass spectrometry 7−87255
U mine, Canadian, errors in meas. of unattached fractions of Rn and Tn progeny using wire screen methods 7−145255
U, natural, conc. ratios for cattail pollen, rel. to environmental contamination 7−71903
U, specific activities, dose rates 7−74207
UO_2 natural, airborne exposure, ICRP Publication 30 lung model-based predictions rel. to measured bioassay data 7−139380
^{233}U/^{235}U/^{238}U 1/1/1 isotopic reference material, preparation 7−126050
^{238}U in dental porcelain powders and dose induced in oral mucosa 7−139384
^{238}U solutions, chem. and radiation effects on developing Misgurnus fossilis eggs *(Russian)* 7−133391
^{127}Xe, activity meas. using 4π-γ detector 7−135776
^{90}Y and ^{90}Sr, bone uptake and retention, effect of high ^{131}I doses 7−126927
^{90}Y and ^{90}Sr, tumourigenicity in mice, effect of high ^{131}I doses to thyroid gland 7−126928

radiology
see also patient diagnosis; patient treatment; radiation therapy; radiography; radioisotope scanning and imaging
Arabian Gulf states, radiological services 7−114489
cardio-vascular images, computerised processing using expert systems *(Italian)* 7−114525
exposure to radiation by radiologists possible protective effect 7−100996
Fano's and O'Connor's theorems 7−78714
history, early protection and radiological physics 7−108128
hospital automation, radiology appls. *(Italian)* 7−133496
PACS system, interactive surface display system of three-dimens. object 7−145273
RADPLANET−a functional radiology PACS and much much more 7−114544
semi-infinite and finite water phantoms, photon irrad. up to 2 MeV, electron spectra, Monte Carlo calc. 7−133419
shielding of medical X and γ rays by NCRP Report No.49 methods, general soln. 7−93959

radiolysis
aceanthrenones, isomeric, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
9-acetylanthracene, intersystem crossing quantum yield studied using pulse radiolysis and laser excitation 7−93345
adsorption-irradiation processing, radiolysis in the adsorbed state appl. 7−93352
alkyl iodides, formation in nucl. power plants 7−71512
aromatic hydrocarbons, excited state quenching, Xe heavy atom effect 7−68237
AVR, water steam circuit, radiolysis processes *(German)* 7−73941
bis-(2-hydroxy-3-t-butyl-5-methylphenyl)sulphide, UV spectra and kinetics of transients, radiolysis anal. 7−96727
chromium tris-acetylacetonates, radiation decomposition 7−106811
comets, radiolysis effects, rel. to early Earth struct., chemistry and dosimetry 7−94656
cyclohexane, liq., pulse radiolysis, radical form., time-resolved EPR meas. 7−113968
cyclohexane-benzene mixtures, radioluminesc., mag. field effect 7−90248
2,6-di-t-butyl-4-methylphenol, UV spectra and kinetics of transients, radiolysis anal. 7−96727
failed PWR fuel transport, R62 package appl., water radiolysis parametric expts. *(French)* 7−74198
flavins, one-electron oxidation, flush photolysis and pulse radiolysis obs. 7−71480
fusion reactor heat sink components, water-cooled, radiolytic corrosion 7−67983
groundwater radiolysis and bicarbonate chemistry, generalised model 7−103268
haemoglobin, human, low-temp. γ-radiolytic damage, role of struct. factor 7−144964
hydrocarbons, radiolysis singlet and triplet yields, mag. field effects in fluoresc. 7−71508
manganese tris-acetylacetonates, radiation decomposition 7−106811
3-methylpentane-carbon tetrachloride glasses and liquids, pulse radiolysis 7−119543
methylviologen radicals, decay, catalysis by colloidal Pt 7−139040
n-octadecyl-3-(3,5-di-t-butyl-4-hydroxyphenyl)-propionate, UV spectra and kinetics of transients, radiolysis anal. 7−96727
phenoxyphosphoryl xylofuranose derivative, radiolysis form. of P-centered radicals, ESR spectra anal. 7−68370
PMMA, water sorption, mol. wt. effects 7−70084
polyimide surface, ion bombardment induced decomposition, XPS and direct recoil spectrometry 7−106328
polystyrene, radiolysis, charged particle prod., photoradiation processes 7−71513
porphyrin dimers, covalently linked, hybrid, triplet state sensitisation, intramol. triplet energy transfer 7−78523
radwaste package components, effects of gamma radiolysis 7−103264
semiquinones, flash photolysis and pulse radiolysis, rel. to cancer induction and therapy 7−71507
singlet-singlet and triplet-triplet transfer and excitation kinetics, rate const. determ. 7−119494
spent fuel, uranium release comparison with unirradiated UO_2 in salt brine 7−96223

radiolysis continued
trihydroxybenzenes, aq., pulse radiolytic oxidation, time-resolved reson. Raman spectra 7−90165
tritiated water absorbed on molecular sieve 5A, radiolytic gas prod. 7−81723
TRUPACT-I, TRU waste package transporter, containment, H_2 buildup, hypothetical accidents 7−74204
twin linac pulse radiolysis system 7−89805
Am, radiolytically induced oxidation reactions of actinide ions in concentrated salt solutions 7−106716
Cl^-, radiation and quantum yield in water-chlorobenzene (carbon tetrachloride) systems 7−71511
CsI radiolysis, effects on Zr fuel can corrosion cracking under γ-radiation 7−106657
I compounds, chemical forms, radiation effects, rel. to nucl. reactor accidents 7−67954
I, time-dependent partitioning, γ-ray effects, LWR core accident appl. 7−78525
Ir(II) complex, decay, catalysis by colloidal Pt 7−139040
KI, photo-induced defect form., picosecond laserphotolysis 7−131180
LiCl, aq. soln., conc., optical absorpt. obs. of trapped electrons 7−92702
NaCl, γ-irrad., comminution of colloidal Na particles during plastic deform. 7−104829
NbC, decomposition in presence of ion irradiation in high-temp. conditions 7−144735
PbSe, semicond. colloid, corrosion, radiolysis investig. 7−93219
Pu, radiolytically induced oxidation reactions of actinide ions in concentrated salt solutions 7−106716
SO_2, removal from gases by electron beam irradiation *(Chinese)* 7−86656
TaC, decomposition in presence of ion irradiation in high-temp. conditions 7−144735
$Ta_2Cl_6(NH_3)_4$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
$Ta_2Cl_6(NH_3)_4^-$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
Tc complexes, influence of matrix physical state on ^{95m}Tc decay 7−113970
TiC, decomposition in presence of ion irradiation in high-temp. conditions 7−144735
UO_2, radiation induced dissolution 7−96220
ZnSe, semicond. colloid, corrosion, radiolysis investig. 7−93219

radiometers
see also infrared detectors; microwave detectors
airborne type visible and thermal IR radiometer, review *(Japanese)* 7−79622
balloon-borne radiometer, attitude determ., use of two-sided limb scanning 7−127682
calorimeters, use in glovebox environment 7−103342
coplanar scanning radiometers, appl. to clouds liq. water distrib. determ. 7−114864
digital integration of envelope-detected noise 7−67367
digital solar edge tracker for the Halogen Occultation Experiment 7−127609
dual waveband imaging radiometer 7−80847
Earth Observing System, moderate resolution imaging spectrometer, preliminary system concepts 7−115201
electronically steered thinned array radiometer (ESTAR) 7−101587
ERS-1 nonSAR instruments, processing 7−145721
fibre optic radiometer, performance calc. 7−80779
geological thermal emission spectrometer for geological field use 7−134020
geopotential height fluctuations, microwave radiometry 7−114988
Halogen Occultation Experiment remote sensor, design and performance 7−87954
Halogen Occultation experiment Sun sensor calibration 7−87955
high-speed spectrally scanning radiometer (SPERAD) for cloud optical props. meas. from aeroplanes 7−127530
IR radiometer for background noise investigations *(Russian)* 7−80877
IR thermography, what wavelength to choose? *(French)* 7−108549
low level infrared radiometer comparison measurements 7−80882
Marine Observation Satellite-1, visible and IR radiometer *(Japanese)* 7−79621
microwave dual-channel radiometer for atmospheric water vapour and cloud meas. 7−115083
microwave radiometer for thermal radiation, for dual polarized radiation 7−72171
miniature globe thermometer for mean radiant temp. estimation and comfort modelling 7−93588
mm-wave, spectrum analyser with SAW component 7−108571
MOS-1 multispectral electronic self-scanning radiometer, airborne verification 7−101556
MOS-1 VTIR data processing software *(Japanese)* 7−73346
multiwavelength scanning radiometer, appl. to airborne meas. of scattered radiation within clouds 7−115065
noise adding radiometer for radioastronomy 7−115239
portable diagnostic radiometer, microwave, battery-operated with on-board microprocessor and LCD display 7−87149
radiation thermometry principle, advantages and appl. 7−108555
SBUV/2 radiometer for O_3 long term var. in stratosphere meas. 7−115061
sequential filter imaging radiometer (SFIR), new instrument configuration for Earth obs. 7−101570
sHF waveguide semiconductor modulator for space radiometric systems 7−101656
site diversity measurements with radiometers at 20 and 30 GHz 7−107499
spectral radiometric meas. in O_2 5-mm wavelength line, remote determ. of atmospheric temperature 7−133961
spectroradiometer, automated two-channel 7−108623
spectroradiometer, calibration rel. to energy brightness of IR laser radiation 7−140762
spherical reference radiometers testing and study 7−80874
total-radiation radiometers and pyrometers study 7−95592
uncooled thermal receivers for optical radiation, volt-watt sensitivity comparison 7−108662
UV radiometers use for atm. NO_2 photodissociation rate determ. 7−94447
wavelength selection for indirect temp. meas. *(French)* 7−115990
T concentration determ., optimised cell for liquid scintillation radiometer 7−106871

radiometry
see also radiometers
12 GHz band, atmospheric attenuation meas. using radiometry, results for 1976-85 *(Czech)* 7−139720
AIS radiometry, anal. of data from Mono Lake, California 7−101569
astronomical photometry, BASIC program for detector response estimation 7−115249
atmospheric water vapour content meas. using IR radiometric method 7−115020
ballistics, radiation meas. equipment and methods, review 7−108624
benzophenone melting transition, opto-thermal transient emission radiometry 7−91854
candela standard in USSR, based on radiometer/black body combination 7−140656
coating nondestructive inspection methods and development trends 7−100483
cross-spectral density operator, radiance and phase-space representations 7−89249
directional beams generation using quasi-coherent optical feedback *(Czech)* 7−123139
electron storage ring as standard of spectral photon flux *(German)* 7−73315
exposition nonuniformity correction by electronically controlled mask, Earth remote research appl. *(Czech)* 7−89292
formaldehyde, endogenous level in human blood and urine determ., dimedone-^{14}C radiometric method 7−114475
generalized radiance and practical radiometry 7−73401
human body models inhomogeneous cylindrical type, thermal radiation anal. at UHF freqs. 7−126724
intracavitary hyperthermia, control by microwave thermometry *(Russian)* 7−79038
long wave IR image models, incorporation of angular emissivity effects 7−80846
luminous elements, radiant exitance calc. 7−128626
microstrip-microslot multiapplicator for microwave hyperthermia and radiometry 7−107226
microwave thermography for biomedical appls., multiprobe radiometers 7−107223
MM-wave imaging sensor produces moderate-resolution images 7−67369
multimirror optical stand for calibrating sensors of high-intensity radiant fluxes 7−108544
noncontact temp. and emission props. determ. *(German)* 7−102410
optical measurement applications and trends *(Japanese)* 7−121188
photometry, modular approach 7−140730
photothermal radiometric imaging of semiconductors 7−70343
propagation law for generalised radiance function 7−134833
quasi optical subsystem for a satellite radiometer 7−94521
radiation thermometry principle, advantages and appl. 7−108555
satellite microwave radiometry, appl. to classification of forest and surface types 7−107582
satellite microwave radiometry, appls. in Finland and Baltic Sea 7−79623
satellite sensor calibration, impact of radiance variations 7−80840
singular system anal., microwave radiometric data inversion for temperature retrieval 7−139349
soil, hydraulic properties discrimination by combined thermal IR and microwave remote sensing 7−107453
solar cell calibration, differential spectral responsivity method 7−106904
solar radiation measurement, Si photodiode rotating shadowband pyranometer, empirical radiometric correction for 7−134028
spectra irradiance scales based on filtered absolute Si photodetectors 7−108618
spectral radiation charact. meas. chamber, at high temp. 7−102494
spectral radiometric meas. in O_2 5-mm wavelength line, remote determ. of atmospheric temperature 7−133961
standard source for certifying low-level radiation detectors 7−102492
standard sources for vacuum UV and soft X-ray range 7−89248
Stokes parameters spectral dependence determ. 7−121190
synchrotron radiation use in vacuum UV spectroscopy and radiometry 7−102543
thermal dosimetry based on radiometry in multilayered media during microwave hyperthermia treatment 7−107213
thermometry sheet materials for radiometric meas. *(French)* 7−67371
thermometry when radiometer's field of view contains more than one type of material *(Japanese)* 7−73348
units, explanation 7−121042
VUV radiation detection up to 160 nm in ionisation chambers 7−81887
γ-ray sources, volume effect in radiometrical determs. *(Romanian)* 7−141386
Bi, anodic dissolution, I^- ion involvement investig. 7−111890
CO_2 laser, far distance emissivity meas. 7−97058
CdTe-Tl, alloying, solubility and diffusion studies *(Russian)* 7−124517
Mo, vapour form. by electron beam irradiation energy deposition, electron microprobe anal. 7−76212
Si photodiode, quantum efficiency and spectral responsivity self-calibration 7−121192
Si photodiode radiometry compared with Australian radiometric scale 7−108617
$(TaSe_4)_2I$, single cryst., semicond.-metal phase transition, radiometric detect. 7−80841

radiometry, ultraviolet *see photometry*

radionavigation
see also radio direction-finding
37th IAF Congress, Conf., Innsbruck, Austria (October 1986) 7−120680
acoustic surveying with sub-m accuracy 7−134006
aircraft radiolocation for coastal hydrographic surveys, Thomson-Trident system *(French)* 7−79618
atmosphere remote sensing, appl. of adaptive polynomials for real-time data editing 7−115064
differential GPS kinematic positioning, accurate, phase data use 7−72204
geodetic network observations, accuracy problems, stochastic model 7−79718
GPS, codeless dual-band, three-coordinate positioning within 1 part in 10 million 7−79188
GPS, correls. between simultaneous double difference carrier-phase obs. in multistation mode 7−94061
GPS, differential mode, hydrographic surveys 7−79707
GPS, precise positioning, measurement reduction techniques 7−79716
GPS engineering type networks, comparison with Terrameter results 7−79720

radionavigation continued
GPS for high precision geodetic surveys, highlights and problem areas 7−79189
GPS ionospheric time delay algorithm for single frequency users, design and characteris. 7−79772
GPS ionospheric time delay algorithm for single-frequency users, eval. 7−79771
GPS navigation system, civilian use 7−79714
GPS orbit determination using the double difference phase observable 7−79717
GPS position fix using single frequency reception, ionospheric propagation delay *(Japanese)* 7−101622
GPS precision levelling for LEP trilateration network 7−79719
GPS receiver technology for geodetic positioning 7−79715
GPS relative geodesy, ionosphere effects 7−79709
GPS user equipment, relativity correction 7−73317
GPS-based geodesy in California, Mexico and the Caribbean 7−79708
large particle accelerators, applied geodesy school, Geneva, Switzerland (April 1986) 7−72733
Loran-C radionavigation in contiguous USA, conductivity map for radio propagation 7−79575
Omega signals, windfinding technique improvements 7−115084
radar and Navaid windfinding systems comparison 7−127585
STAR-VUE, tactical ice navigation workstation, design criteria and system description 7−115118
Transit navy navigation satellite system, performance over E Indian coast and intermediate fixes determ. 7−139881
VLBI in interplanetary navigation *(Polish)* 7−127739

radionuclides *see radioisotopes*

radios *see radio receivers*

radiosondes
see also meteorological instruments
altitude determ. using onboard pressure sensors 7−139795
Ionospheric Sounding Satellite-b resonance spike identification for ionograms 7−87937

radiosources (astronomical)
see also BL Lac-type objects; OH-IR stars; pulsars; quasars; radiogalaxies
1928+738, superluminal quasar with large-scale radio struct., 20 cm and 49 cm mapping 7−115623
2016+112, triple radio source, gravit. lens models 7−107974
2016+112 lens system, spectroscopy of assoc. extranuclear line-emitting regions 7−134316
Abell 2319, galaxy cluster, mag. field excess determ. from rot. measures and X-ray emission 7−80114
EU And, C star, H_2O maser obs. as evidence of nearby O-rich circumstellar shell 7−127896
angular diameter-redshift relation, low-density inflationary universe evidence 7−146109
V1343 Aql (SS 433), accretion disk model for moving spectral lines 7−127891
V1343 Aql (SS 433), constraints on binary system from optical continuum spectrum obs. 7−88430
V1343 Aql (SS 433), disk-type accretion model and appl. to activity in galactic nuclei 7−140263
V1343 Aql (SS 433), dynamical model for jets precession 7−88429
V1343 Aql (SS 433), effect of radiative acceleration instability on jets struct. 7−139899
V1343 Aql (SS 433), Hα emission profiles of jets *(Russian)* 7−140109
V1343 Aql (SS 433), jets parameters determ. *(Russian)* 7−145997
V1343 Aql (SS 433), photometric study of two periodicities over seven years 7−120444
V1343 Aql (SS 433), simultaneous obs. of X-ray and optical eclipse 7−140105
V1343 Aql (SS 433) rapid photometric and spectral var. 7−127883
R Aqr, subarc second continuum at 20 mm and SiO spectral obs 7−88442
R Aqr, symbiotic Mira variable, first unambiguous X-ray detect. 7−140096
R Aqr, symbiotic star, obs. of linear polarization vars. 7−72473
Ara OB1 region, interstellar H I and CO obs. rel. to stellar assoc. form. by energetic event 7−72547
B335, Bok globule, struct. and dynamics from CO and HCO^+ isotropic obs. 7−88564
B335 dark clouds, CO obs. of mol. counterparts of submillimetre compact sources 7−120529
background sources behind globular clusters, radio obs. methods for cluster hot interstellar gas detect. *(Russian)* 7−72554
beam models, magnetised jets evol. in power-law pot. 7−101674
BG 2107 + 49, morphology of peculiar galactic radiosource 7−140202
binary galaxies, evidence for dark matter from H I obs. 7−101907
bipolar molecular outflow sources, obs. in NH_3 lines *(Japanese)* 7−140213
blazars, radio obs. of four selected objects 7−134308
Bok globules in southern hemisphere, rot. vels. from ^{12}CO (J=1-0) obs. 7−88595
3C 273, quasar, morphological evolution at 10.7 GHz 7−120641
3C 273, quasar, radio to X-ray continuum emission and temporal vars. 7−101949
3C 345, quasar, appl. of spatial stability anal. to relativistic radio jet 7−127705
3C 345, superluminal quasar, VLBI obs. rel. to compact radio source evolution 7−88665
3C 380, quaser, MERLIN polarisation obs. rel. to jet-interstellar gas interaction 7−88670
4C 39.25, quasar, multiepoch VLBI obs. of superluminal motion amid stationary struct. 7−101954
3C 454.3, quasar, peculiar vars. in radio struct. after outburst 7−134319
3C 58, SNR, radio flux density increase 7−72573
6C sources, extended, nature and UHF obs. 7−88660
Cas A, C recomb. lines due to line-of-sight mol. clouds *(Russian)* 7−72577
Cas A, SNR, physical processes and IR emission 7−107934
Cas A, supernova remnant, consistent model calcs. for complex struct. 7−140207
Cas A, supernova remnant, discovery of fast-moving N-rich ejecta 7−88565
Cas A, supernova remnant, evidence for cyclic variability of radio spectrum 7−140219
Cas A, VLA resolution of compact radio knots 7−107933

radiosources (astronomical) continued
Cas A supernova remnant, radio observations of ejecta expansion details 7−115558
cataclysmic binary stars, radio emission rel. to magnetized secondary 7−115398
centimetre-wavelength flicker of extragalactic radio sources, galactic latit. depend. 7−80070
Cep A outflow, THF CO obs. 7−80059
UV Cet, flare star, dynamic spectra of microwave flares 7−88464
UV Cet, SHF and UHF flaring characts. 7−72447
chronometric cosmology, source counts 7−101967
CIT 6, C-rich circumstellar envelope, HCN maser emission obs. 7−101947
classical novae, radio survey 7−134251
AC Cnc, first radio detection at 6 cm wavelength 7−120445
FK Com, rapidly rotating variable star, radio emission obs. 7−88425
Coma galaxy cluster, diffuse radio emission obs. 7−140307
Coma galaxy cluster, intracluster gas heating by energetic particles 7−88636
compact galaxy groups, H I content rel. to dynamical evolution 7−95035
compact sources, rapid flux var., shell model *(Chinese)* 7−107972
continuum sources beyond Cancer Cluster, 1.4 GHz VLA obs. 7−128099
cool giant stars, SiO cooling instability in circumstellar envelopes 7−120398
counts at 6 centimetres, results to 0.1 milliJanskys 7−88657
3CR classical double radiosources, lobes, electrons spectral ages and mean speeds 7−72644
Crab Nebula, emission line spectra of filaments rel. to chemical comp. 7−127991
Crab Nebula, lunar occultation obs. at metre and decametre wavelengths 7−134296
Crab Nebula and pulsar, high-energy gamma-ray emission anal. 7−72491
CTB 80, SNR, detect. of pulsar-like emission, SHF and UHF obs. 7−140141
RS CVn type stars, radio polarization and spectral props. 7−101848
CH Cyg, symbiotic star, radio jet optical confirmation and high-resolution spectra 7−120413
CH Cyg, symbiotic star, X-ray emission obs. 7−101789
P Cyg area, 71W list of point sources 7−120419
Cyg X-3, radio and IR flares modelling 7−127957
Cyg X-3, radio flux density vars. (1982-5) 7−88521
Cyg X-3, radio outburst and relativistic expansion 7−88519
Cyg X-3, underground muon search 7−120647
Cyg X-3 ultrahigh energy signal, EAS time delay 7−146051
Cygnus Loop, form. of fine struct. of emission filaments 7−127990
dark nebulae in Perseus, Taurus, and Auriga, CO survey 7−115556
deep 6 cm radio source survey, optical identifications 7−101948
deep counts, luminosity function, and starburst galaxies 7−120634
Doppler effect, superluminal separation, transverse expansion, apparent position 7−115619
double layers and circuits in astrophysics 7−72286
DR 21, H II region, C radio recomb. lines obs. of adjoining mol. cloud neutral interface 7−72564
AG Dra, radio structure at 6 cm wavelength 7−120445
4=CQ Dra (M3 III+cataclysmic binary), variable radio emission obs. 7−79979
Draco molecular cloud, IRAS 100 μm images rel. to hydrodynamic processes 7−146070
Draco molecular cloud, optical survey of nearby IRAS fields 7−115627
dwarf irregular galaxies in Virgo cluster area, H I detect. survey 7−95017
1E 1751+7046, FK Com candidate nature and obs. 7−127880
Egg Nebula, bipolar protoplanetary nebula, CO aperture synthesis obs. 7−88573
elliptical galaxies, low luminosity, H I distrib. and kinematics 7−101934
emission reflected from planet use for surface features determ. 7−134145
evolved stars, SiO maser emission and IR continuum 7−79973
extended radio sources from 2695 MHz Effelsberg galactic plane survey, multifreq. radio continuum obs. 7−120630
extragalactic, observed ang. size-flux density relation 7−115618
extragalactic 3C sources, rot. measure due to galactic foreground 7−95023
extragalactic compact radio sources, results of frequent flux density monitoring at 24 GHz 7−120631
extragalactic compact sources, VLBI positions comparison 7−120635
extragalactic decametre sources counted at 25 MHz, space distrib. parameters 7−88656
extragalactic edge-brightened double radio sources, radio jets widths 7−88659
extragalactic low frequency variable sources, statistical anal. of multifreq. obs. 7−72642
extragalactic magnetic fields 7−80109
extragalactic radio sources, cosmological proper motion 7−140314
extragalactic radio sources, proton energies rel. to radio and gamma-ray emission 7−95036
extragalactic radio sources, stabilisation and consequences of relativistic electron bumps 7−115616
extragalactic radio sources south of $\delta=+5°$, precise optical positions 7−80115
extragalactic sources, extreme scatt. events caused by compact structs. in interstellar medium 7−88661
extragalactic sources, particle accel., synchrotron losses role in spectrum determ. 7−72647
extragalactic sources, SHF and EHF emission spectra 7−88658
faint sources, flux density meas. at 2.7 and 4.75 GHz 7−140313
fast pulsar candidate in globular cluster M28, VLA obs. 7−127935
fine structure determ. appl. of Earth-space interferometer project (Radioastron) 7−139917
flat-spectrum extragalactic sources from S5 survey, VLBI investigations of complete source sample 7−72643
flat-spectrum sources at 102.5 MHz, interplanetary scintillation obs. *(Russian)* 7−128107
G0.9+0.1, composite supernovae remnant, multifreq. radio obs. 7−101889
G10.6−0.4, ultracompact H II region, temp. and density struct. of collapsing mol. cloud core 7−146071
G159.1+3.3, mol. cloud envelope, methylidyne radical obs., 7−146064
G316.8−0.0, H II region, Hα emission anal. 7−80079
G317.0+0.3, H II region, HA emission and foreground Hα emission, galactic struct. implications 7−80079
radiosources (astronomical) continued
G320.5−1.4, thermal H II region assoc. with supernova remnant MSH 15−52, implications for remnant age 7−120535
G34.3+0.2, G45.07+0.13, ultracompact H II regions, H76α obs. rel. to sources rot. and expansion 7−94981
G34.3+0.2, molecular cloud, NH_3 obs. 7−127997
G5.27-0.90, nature and mapping at 843 MHz 7−72646
G5.4-1.2, SNR, 843 MHz map characts. 7−72646
G 2.4+1.4, filamentary optical nebular nature, SHF obs. 7−72645
galactic center arc, thermal components spatial and kinematic struct. 7−115575
Galactic centre, ^{13}CO emission survey within 2° of centre 7−115553
Galactic centre, aperture-synthesis HCN obs. of circumnuclear mol. ring 7−128015
galactic centre, evidence for black hole as compact radio source 7−120571
Galactic centre, pulsating decametric radio source obs. rel. to rotating supermassive black hole model 7−115607
galactic centre arc, CS mapping 7−115574
galactic centre region, bridge connecting Sgr A to radio arc, shocked mag. jet model 7−140293
galactic centre region, radio lobes characts., 80 MHz obs. 7−115576
galactic centre region, radio structures as manifestations of mag. activity 7−115573
galactic centres, 1.3 mm continuum emission 7−146089
galactic disk, IR and radio-continuum emission features 7−101941
Galactic nucleus, hot ionised gas structs. *(French)* 7−134306
galactic plane variable radio sources, two-epoch VLA obs. 7−107973
Galactic radio sources, OH absorpt. obs. during occultations by Periodic Comet Halley (1982i) 7−115300
galaxies, comparison of radio luminosities of isolated single and double galaxies 7−128037
galaxies, observational correl. between radio and far-IR emission 7−120584
galaxies, radio continuum obs. of nearby objects 7−128083
galaxies between Local and Hydra/Centaurus Superclusters, H I survey and radial vels. 7−88607
galaxies in Hercules supercluster, photometry and H I obs. rel. to distance and Hubble const. 7−115610
galaxies in region of Cancer cluster, large-scale distrib. from H I obs. 7−120621
giant molecular cloud cores in Orion, W49 and W51, $C^{18}O$ line mapping and 1300 μm continuum 7−140230
globular clusters prediction of IR and sub-mm emission from hot interstellar gas *(Russian)* 7−72554
gravitationally-lensed images, electron scintillation 7−107975
HB 3 (G132.6+1.5), 408 MHz obs. of shell SNR 7−134291
HD 32918, active chromosphere K2 III star, obs. of intense long-lasting radio flare 7−120400
HD 50896, WN5 star, empirical model for radio emission 7−101802
Heiles Cloud 2, physical and chemical state from CO and formyl ion obs. 7−101873
HH1-HH2 molecular cloud, NH_3 inversion lines obs. 7−101872
HH 46-47, obs. of NH_3 emission assoc. with exciting star 7−80077
RW Hya, symbiotic star, radio emission from circumstellar H II region 7−127894
IC 418, planetary nebula, H I absorpt. and emission detect. 7−101881
intergalactic H I clouds, search in Perseus void 7−120582
interstellar C II region between hot ionised region S64 and cold mol. cloud G28.74+3.52, C recomb. lines obs. 7−115544
interstellar compact mol. clouds in IRAS Print Source Catalogue, HCO^+ survey 7−134292
interstellar dark clouds, IRAS and CO obs. rel. to filamentary struct. *(Japanese)* 7−140216
interstellar dark clouds in front of globular clusters, OH and CH emission obs. 7−120531
interstellar H_2O/OH masers in southern galactic plane, IR detect. of assoc. massive pre-main-sequence stars 7−101768
interstellar molecular clouds, detect. near supernova remnants in outer Galaxy 7−88582
interstellar molecular clouds, IRAS obs. rel. to dust temps. and gas column densities 7−128031
interstellar molecular clouds, Palomar Observatory Sky Survey atlas 7−115254
interstellar molecular clouds, physical and kinematic model rel. to CO spectra 7−88581
interstellar molecular clouds, relationship to Gould belt from optical and CO obs. 7−107928
interstellar molecular clouds and cloud cores in inner Galaxy, CO obs. 7−101705
interstellar molecular clouds in Carina spiral arm, large-scale props. of mol. gas from CO obs. 7−107929
interstellar OH outflows in star-forming regions, 18-cm obs. 7−146072
interstellar photodissociation regions and mol. clouds, role of far-IR radiation field in line excitation and cooling 7−146076
IRAS 09371+1212, icy evolved mass-losing star with unique IR spectrum, CO(1-0) line obs. 7−101955
IRAS 13349+2438, IR-loud quasar, optical, IR and radio obs. 7−88668
IRAS 1525+3609, OH megamaser discovery 7−80124
IRAS 18385−0512, associated very bright H_2O maser 7−120645
IRAS C stars, obs. of assoc. CO and HCN sources 7−120408
IRAS stars, search for H_2O maser emission 7−72655
IRC+10216, $^2\Pi_{1/2}$ state of 1,3,5-hexatriyne radical detect. 7−107867
IRC+10216, C star, circumstellar dust opacity from optical-IR photometry 7−101796
IRC+10216, C star, vibrationally-excited butadiynyl (C_4H) as source of new mm-wave doublets 7−134234
IRC+10216, chemical modelling of circumstellar mol. shell 7−145963
IRC+10216 (CW Leo), C_2H and CN mapping in circumstellar shell rel. to photochemical model 7−101790
IRC+10216 (CW Leo), C star, detect. of circumstellar NaCl, AlCl, KCl and perhaps AlF 7−140051
IRC+10216 (CW Leo), circumstellar shell geometry from IR speckle interferometry 7−79996
IRC+10216 (CW Leo), detect. of vibrationally excited CS in circumstellar shell 7−140073
IRC+10216 (CW Leo), possible detect. of hexatriynyl radical (C_6H) in mm-wave spectrum 7−79969
jets, spatial stability, nonaxisymmetric fundamental and refl. modes 7−101673
Jupiter, broadband kilometric radiation source 7−79863

radiosources (astronomical) continued
Jupiter, S-bursts and vertex bursts, acousto-optical radio spectrograph obs. 7−72350
L1551, L1455 dark clouds, CO obs. of mol. counterparts of submillimetre compact sources 7−120529
L1551, millimetre and submillimetre mol. line obs. of SW outflow lobe 7−120530
L1551-IRS 5, pre-main-sequence star, CS obs. rel. to existence of rotating mol. disk 7−140235
L1689N, dense mol. cloud core, mol. obs. rel. to misalignment between bipolar overflow and mag. field 7−140227
large-scale struct. (at $z \lesssim 0.5$) 7−88655
late-type maser emission stars, visible and radio astrometry 7−115617
LMC, 45 MHz emission mapping rel. to symmetric but warped struct. 7−101908
loops, spectral indices characts., within cosmic ray electrons diffusive shock accel. model 7−72622
LS I+61°303, variable radio star, assoc. extended radio emission nature, UHF obs. 7−128102
LSI+61°303, radio-emitting Be star, long-term near-IR photometry 7−120407
Lynds 204 dark cloud complex, CO and polarisation obs. rel. to mag. field controlled evolution 7−94982
M31, radiosources at 5 GHz, high-resolution obs. 7−88603
M33 field, point radiosources obs. 7−88605
M51, mol. gas spiral struct. determ. from CO obs. 7−140283
M-type Mira variables, single, visible light curve shape and H_2O 13.5 mm line detect. 7−127876
Mercury, solar wind-magnetosphere interactions leading to VLF emissions and surface heating 7−107732
E-methanol astronomical maser sources, pump mechanisms 7−127691
At and AU Mic, SHF and UHF flaring characts. 7−72447
Mira variables in interacting binaries, evolution and luminosities 7−140111
molecular bipolar flow sources, OH emission and absorpt. obs. 7−101882
molecular counterparts of submillimetre compact sources in L1551 and B335, CO obs. 7−120529
Molonglo deep survey radio sources, optical identifications in declination −20° region 7−128105
R Mon, pre-main-sequence star, small-scale struct. of circumstellar gas from CO obs. 7−88403
Mon OB1 molecular cloud, unbiased survey for high-vel. gas 7−88592
MSH 15−52, supernova remnant, discovery of thermal H II region and relation to Cir OB1 association 7−120535
NGC 1058, spiral galaxy, 20 cm map rel. to location of supernova SN 1961V *(Russian)* 7−72488
NGC 2787, lenticular galaxy, H I distrib. from WSRT obs. 7−80081
NGC 3073, dwarf S0 galaxy, H I obs. rel. to ram press. stripping by gas from companion galaxy (NGC 3079) 7−115591
NGC 3628, spiral galaxy in Leo Triplet, VLA obs. of H I absorpt. 7−107955
NGC 4013, edge-on spiral galaxy, obs. of prodigious H I warp 7−140297
NGC 7538-IRS 1, highly-excited HDO obs. 7−134287
Nova Aql 1982, photometric and spectroscopic obs. by IUE, AAT and WRST 7−140106
Nova Vul 1984 No.2, obs. of unusual early radio outburst 7−140076
OMC-1, SiO obs. rel. to new outflow source 1.5′ south of Orion-KL 7−128021
Ooty lunar occultation survey, appl. to source positions and struct. determ. 7−80116
RS Oph, recurrent nova, multi-freq. obs. of 1985 outburst 7−115425
ρ Oph dark cloud, radio-emitting young star search 7−101884
optical linear polarisation studies 7−128032
Ori B mol. outflow, HCO^+ mapping and search for H_2S 7−94987
Orion Molecular Cloud, ^{13}CO surveys rel. to interaction with Orion Nebula *(Japanese)* 7−140215
Orion Molecular Cloud, detect. of vibr.-rot. band lines of shocked CO 7−140237
Orion molecular cloud, filamentary struct. obs. from ^{13}CO map 7−80072
Orion Nebula region, nature of compact continuum sources 7−120632
Orion-KL, spectroscopic obs. of organic ring molecule cyclopropenylidene (C_3H_2) 7−115552
Orion-KL region, aperture synthesis maps of HDO emission 7−140236
Orion-KL region, highly-excited HDO obs. 7−134287
Orion-KL region, vibrationally excited HCN detect. 7−140073
PKS 1209−52, SNR, EXOSAT obs. 7−72572
planetary nebulae, emission measure and temp. distrib., SHF and UHF obs. 7−128019
polarised images deconvolution, maximum entropy method 7−101696
poor galaxy groups, VLA 20 cm survey 7−146099
powerful extragalactic radio sources, expansion and cosmological evolution 7−95038
pre-planetary nebula stars, CO emission 7−72406
RX Pup, symbiotic star, wind characts. and radio emission 7−72446
Pup A, supernova remnant, forbidden coronal Fe line images rel. to cloud evaporation and shocked cloud models 7−115551
quasars, anomalous heating of emission-line regions by nonthermal radio radiation 7−95046
quasars, beaming models rel. is X-ray, optical and radio props. 7−95045
quasars, imaging spectroscopy of five objects 7−72650
quasars, radio luminosity function of optically selected objects 7−120638
quasi-stellar objects, new optical catalogue 7−79850
RCW 86, supernova remnant, relation to Chinese guest star (AD 185) 7−127932
refractive scintillation through galactic disk 7−80071
S135, bright-rimmed H II region, CO obs. rel to blister model 7−115562
S201, H II region produced by ionisation front eroding mol. cloud, VLA obs. 7−134289
S54, H II region, obs. of assoc. 300 pc long thermal radio spur 7−146062
α Sco A, precise optical position (1982 to 1985) 7−94636
Sgr A, results from 1968 to 1970 linear occultations series 7−115208
Sgr A*, galactic center compact nonthermal radio source 7−120568
Sgr A*, position rel. to nearby IR sources 7−115541
Sgr A*, proper motion 7−115613
Sgr A* region, CO distrib. 7−115565
Sgr A circum-nuclear ring, mol. gas excitation gradient 7−115566
Sgr A region, 86 GHz obs. 7−115568
Sgr A region, C II far IR mapping 7−115538
Sgr A region, IR mapping 7−115569
Sgr A region, OH distrib. at 18 cm 7−115534
Sgr A region and extended halo, struct., and radio emission 7−115567
radiosources (astronomical) continued
Sgr A structure, dust emission and the evidence for star formation at galactic centre 7−120566
Sgr A West, Si II 34.815 μm forbidden line detect. 7−88593
Sgr A West region, gas dynamics, IR spectral obs. 7−115539
Sgr B2, 5 GHz excited OH lines, VLA obs. 7−72575
Sgr B2, detect. of foreground far-IR absorpt. by interstellar CH 7−115549
Sgr B2, E-type methanol masers 7−107916
Sgr B2, H76α and He76α obs. 7−80068
Sgr B2, identification of new interstellar free radical CCS($^3\Sigma^-$) 7−140239
Sgr B2, NH_3 hot cores and protostellar material dispersal 7−128009
Sgr B2, search for PO lines 7−128003
Sgr B2, spectroscopic obs. of organic ring molecule cyclopropenylidene C_3H_2 7−115552
Sgr B2 molecular cloud, obs. of quadruplet lines of interstellar acetone 7−120534
Sgr B2 molecular cloud core, 1300 μm obs. 7−80073
Sgr B2-North H_2O maser spots, proper motion obs. use for Sun-galactic center distance determ. 7−115571
Sh2-106, H II region, assoc. extended IR refl. nebula discovery 7−72574
Sh 2-106, bipolar nebula, dust bar characts. and assoc. source IRS 4 nature 7−127996
SMC, origin of thermal and non-thermal radio emission 7−101901
SN 1984E in NGC 3169, Type II-L supernovae, post-maximum spectrum rel. to superwind 7−80020
SN 1986J in NGC 891, radio and optical studies 7−134256
SN 1987A in LMC, 22 GHz radio intensities and visual magnitudes 7−134258
SN 1987A in LMC, prompt radio burst detection 7−94930
SN 1987A in LMC, radio emission rel. to interaction with circumstellar matter and nature of progenitor star 7−115484
southern flat-spectrum radiosources, positions and optical identifications 7−128106
spiral galaxies, face-on, H I survey rel to freq. of distortions in H I disks 7−115594
spiral galaxies, relation between stellar populations and radio continuum emission 7−120612
spiral galaxies, second-order Fermi accel. rel. to radio spectral index distribs. 7−115614
SS 433, ejected blobs from binary star, evolving radio struct. 7−127908
star formation regions, results from unbiased surveys *(Japanese)* 7−140214
star-forming regions, CS obs. of morphology and kinematics of dense interstellar gas 7−88567
starburst galaxies, H I 21-cm emission survey 7−80088
stars with radio continuum emission, catalogue 7−79848
steady relativistic fluid jets 7−94655
submillimetre-wave sources, obs. via cooled spaceborne submillimetre telescope 7−139919
superluminal radio sources, probability approach to ballistic models 7−128103
supernova remnants, 32 GHz radio continuum obs. of plerionic remnants 7−120547
young supernova remnants, effect of hot plasma radiation on radio emission *(Russian)* 7−72578
supernova remnants, middle-aged, sheet description of optical, X-ray and radio emission 7−101888
supernova remnants, optical emission stratification obs. 7−140220
supernova remnants, second-order Fermi accel. rel. to radio spectral index distribs. 7−115614
supernova remnants in LMC, model calcs. rel. to radio, IR and X-ray emission 7−72561
supernova remnants in outer Galaxy, CO survey for related mol. clouds 7−88582
supernova remnants with central pulsar, evolutionary sequence determ. 7−140218
supernovae, type Ib, binary system model with red supergiant companion 7−140119
synchrotron electrons spectra, effect of nonlinear self-regulation of cosmic ray accel. at shocks 7−88047
HL Tau, pre-main-sequence star, small-scale struct. of circumstellar gas from CO and continuum obs. 7−88403
V711 Tau, RS CVn star, radio outbursts, flux spectrum and intensity distrib. 7−80033
TMC-1, detect. of intense unidentified mol. lines 7−140238
TMC-1, identification of new interstellar free radical CCS($^3\Sigma^-$) 7−140239
TMC-1 identification of new C-chain molecule C_3S 7−140240
variable radiosources with superluminal VLBI components, precessing jets model 7−140315
RT Vir, semi-regular variable star, H_2O maser outburst obs. *(Russian)* 7−107865
VLA observations synopsis 7−79834
VRO 42.05.01, SNR re-energising interstellar cavity 7−107935
W33 OH maser, VLBI obs. *(Russian)* 7−128108
W3, H II complex, C166α recomb. line obs. 7−80063
W3(OH), compact H II region, clumpy mol. envelope NH_3 and OH maser emission 7−72567
W3(OH), compact H II region, H42α (86 GHz) recomb. line obs. 7−128023
W48, mol. cloud-H II region interface, struct., S, C, He and H125α obs. 7−120633
W51 molecular cloud, HCO^+ obs. 7−94992
weak Leiden-Berkeley Deep-Survey (LBDS) sources, VLA high-resolution obs. 7−115615
WN-type stars, He ionisation in radio-emitting region rel. to extended atmospheres modelling 7−101801
C stars, envelopes C and O isotopic abundances, CO obs. 7−140095
H I in outer Galaxy, correl. with IRAS IR cirrus 7−88591
H I sheets and supergiant H I shells in LMC, 21-cm line profiles 7−88596
H II regions, filled-aperture maps at 3.5 mm 7−88572
H II regions, possibility of detect. of H I fine-structure lines *(Russian)* 7−107716
H II regions, radio continuum, H I, and CO surveys of Scutum ring *(Japanese)* 7−140217
H II regions, search for type I OH maser emission 7−120539
H II regions and assoc. CO clouds within star form. models 7−107926
OH maser emission mapping 7−140090

radiosources (astronomical) continued
OH maser search at 1665 MHz between galactic longitudes 233° and 326° 7−80117
OH megamaser in external galaxies, systematic search in IRAS galaxies 7−95026

radiotelescopes
see also radioastronomy
125-175 GHz low-noise broadband SIS receiver 7−127722
230 GHz low noise SIS receiver 7−127723
Australia Telescope Project, progress report 7−139927
dispersion distortion removal from pulsar radio signals 7−88124
FX, digital spectro-correlator system for radio astronomy 7−127728
Gauribidanur broadband decametric radiotelescope 7−139921
interferometers, diurnal aberration and Sagnac effect 7−115233
IRAM 30-m millimetre-wave radio telescope on Pico Veleta, Spain 7−79828
James Clerk Maxwell telescope, 15 m submillimeter, chopping secondary mirror 7−139916
Japan geodetic VLBI expts., instrumentation and results 7−94494
Japan-China VLBI experiment, equipment and meas. 7−94493
Jodrell Bank Mk II radio telescope, resurfacing for higher freq. usage 7−88120
Medicina radio-astronomy station, VLBI antenna *(Italian)* 7−127720
microwave detector (210-230 GHz), cooled low-noise receiver *(French)* 7−72314
millimetre-wave interferometers, advances in instrumentation 7−139925
MM wave radiotelescope, reflector for 30 meter instrument, determ. of accuracy of reflector surface *(German, English)* 7−101686
multibeam receiver for millimetre-wave astronomy, design considerations 7−88110
noise adding radiometer 7−115239
Parkes radio telescope, 1986 drive and control system update 7−115238
Quasat and ESA Horizon 2000 Programme 7−145800
Quasat VLBI program 7−101680
Radioastron project, Earth-space interferometer, appl. to determ. of fine struct. of radio sources 7−139917
superconductor-insulator-superconductor heterodyne receiver at 230 GHz, low-noise design for radioastronomical appls. 7−134132
surface panel alignment using phase retrieval technique 7−73411
two-element synthesis telescope (TEST) 7−95021
Very Large Array and VLBA radiotelescopes, construction and image processing developments 7−88119
VLA, operation and devel. 7−139920
VLA, operations and research 7−79834
NbN based superconductor-insulator-superconductor junction, heterodyne mixing expts., for radiotelescopes 7−120277

radiotherapy *see radiation therapy*

radiowave interferometers
diurnal aberration and Sagnac effect 7−115233
Japan geodetic VLBI expts., instrumentation and results 7−94494
Japan-China VLBI experiment, equipment and meas. 7−94493
Quasat VLBI program 7−101680
Radioastron project, Earth-space interferometer, appl. to determ. of fine struct. of radio sources 7−139917
VLA, operation and devel. 7−139920

radiowave interferometry
4C 39.25, quasar, multiepoch VLBI obs. of superluminal motion amid stationary struct. 7−101954
3C 454.3, quasar, VLBI obs. rel. to vars. in radio struct. 7−134319
dynamic wet troposphere, radio interferometric meas. 7−101701
flat-spectrum radio sources from S5 survey, VLBI investigations of complete source sample 7−72643
geodetic and geophysical applications of very long baseline interferometry 7−79725
mm-wave instrumentation for radioastronomy, advances 7−139925
S Per, OH-IR star, interferometric obs. of H_2O and OH maser emission 7−72433
radio sources, interferometric obs. rel. to detect. of refr. by hot gas in globular clusters *(Russian)* 7−72554
satellite interferometry, appl. to detect. of cosmological proper motion of extragalactic radio sources 7−140314
Saturn, aperture synthesis obs. of planet and rings at 2.7 mm wavelength 7−134175
space interferometry, design and appls. of Earth-space interferometer project (Radioastron) 7−139917
VLBI analysis, software suite for Earth rotation parameters determ. 7−79694
VLBI for astrometry, geodesy and interplanetary navigation *(Polish)* 7−127739
VLBI interferometry in geodesy, review 7−133551
weak objects imaging in conditions of poor phase stability 7−120280

radiowave propagation
see also electromagnetic wave propagation
11.6 GHz satellite systems, rain attenuation, duration and rate of change, dynamic characts. 7−114849
12 GHz band, atmospheric attenuation meas. using radiometry, results for 1976-85 *(Czech)* 7−139720
19 GHz precipitation scatter expt. 7−107500
active-passive radar, convective clouds integral characts. determ. 7−127519
anisotropic stochastic ionosphere, satellite-Earth communication in polar domains 7−139854
atmosphere, vertical absorption meas. at 0.8 and 1.35 cm wavelengths 7−72201
atmospheric attenuation measurements at 19.4 and 22.235 GHz 7−94422
atmospheric emission variation measurements at 3, 0.9, and 0.33 cm wavelength 7−133892
atmospheric gravity waves, Doppler anal. of ionospheric effects on radio waves 7−94570
atmospheric gravity waves and ionospheric propagation at middle latitudes 7−94571
atmospheric remote sounding system using analogue linear FM signals 7−134025
atmospherics influence on radiocommunication, VHF to mm wave freqs. 7−87779
auroral electrojet irregularities, quasilinear theory 7−115147
Black Sea, super-long-range propagation of decimeter waves, expt. study 7−94342
Chilbolton dual-polarised radar, new developments 7−94417

radiowave propagation continued
circumsolar plasma, frequency shift accompanying radio waves propagation 7−79938
climatological studies over Indian subcontinent, advances 7−94411
CM-waves, rain attenuation characts. 7−87812
D-region, polar cap absorption event, EISCAT obs. (1984 February 16) 7−145772
D-region, radiowave propag., use for mesosphere parameters determ. 7−115121
depolarization by small-scale ionospheric inhomogeneities 7−134070
differential GPS kinematic positioning, accurate, phase data use 7−72204
dual polarisation scattering matrix radar rain backscatter meas. eval. in X and Q bands 7−94410
dust storm modelling for the calculation of attenuation and probability of fading in microwave systems 7−139738
dynamic wet troposphere, radio interferometric meas. 7−101701
Earth surface layers, coupling between two antennas separated by planar interface 7−127498
Earth-space path, rain attenuation available-time statistics 7−107498
ERS-1 altimeter, ionospheric correction calcs. 7−94563
F_2-layer, wave perturbations due to ground explosions 7−79752
F_2-layer radiopenetration frequency, hourly and monthly forecasting at low-latitude 7−94569
F-region, critical freq. var. during polar cap elec. field enhancement and 1970 February 24 substorm 7−88005
fading of long distance HF ionospheric communications, scintillation theory 7−139843
GPS ionospheric time delay algorithm for single frequency users, design and characteris. 7−79772
GPS ionospheric time delay algorithm for single-frequency users, eval. 7−79771
GPS position fix using single frequency reception, ionospheric propagation delay *(Japanese)* 7−101622
GPS relative geodesy, ionosphere effects 7−79709
HF backscatter ionogram, discrete scatterer echoes, ground distance calc. 7−107641
HF channel, combined eval. and simulation system 7−107638
HF field, tripole antenna received, meas. and anal. 7−107636
HF field strengths and max. usable frequencies, day-to-day variability 7−94568
HF ionospheric propagation, effects of industrial explosions 7−79753
HF propagation at high latitudes 7−107637
HF signal quality records, central Europe, foF2 departure index relevance 7−107640
HF sky wave paths, maximum usable frequencies, sounder updates for statistical model predictions 7−79770
HF waves reflected from F-region (receiver near transmitter), fading by scintillation theory 7−139842
HF-ground-wave propagation from a cliff-top site 7−107497
India, radiowave propagation, meteorological aspects, review 7−87776
INTELSAT's low latitude propagation experiments 7−107501
interplanetary scintillation obs. of flat-spectrum sources at 102.5 MHz, scintillation components characts. *(Russian)* 7−128107
interstellar refractive scintillation 7−107938
interstellar scintillation of pulsar fluxes, determ. of interstellar plasma characts. *(Russian)* 7−88601
ionosphere, auroral radioabsorption prediction on equatorward side of absorpt. zone 7−88022
ionosphere, communication link through E_s-layer, statistical model 7−79743
ionosphere, disturbances after ground explosion, incoherent scatt. meas. 7−79758
ionosphere, EM field of loop antenna in cold multicomponent magnetically active plasma *(German)* 7−134061
ionosphere, gravity waves generation by transient heating during high-power wave propag. 7−139835
ionosphere, irregularities due to ground-level industrial explosion 7−79761
ionosphere, low latitude electron density profile model 7−101629
ionosphere, low latitude radio absorpt. at MF and HF freqs. 7−88012
ionosphere, low latitude VLF emission, narrow freq. band characts. 7−72214
ionosphere, oblique propag., effects of electron density var. due to ground-level explosions 7−79756
ionosphere, propagation and reception of night-time solar radio bursts 7−127799
ionosphere, propagation perturbations, effect of ground-based explosions 7−79757
topside ionosphere, radio absorpt., International Reference Ionosphere based calcs. 7−101619
ionosphere, radiowaves scattering use for ionosphere nonuniformities struct. determ. 7−79741
ionosphere, riometer absorption and spectral index for precipitating electrons with exponential spectra 7−115153
ionosphere, scintillation measurements at Legon, Ghana 7−127634
ionosphere, short wavelength radiowaves, effect of principal ionospheric trough 7−79742
ionosphere, SW trajectory characts. calcs. 7−139852
ionosphere, trapped cyclotron harmonic waves, resonant time durations 7−94564
ionosphere, ULF waves generated by motion of F-region artificially created cloud 7−97748
ionosphere Spacelab-2 plasma depletion expt. obs. of galactic background radio emission 7−94667
ionospheric, research since 1930s 7−88024
ionospheric and atmos. propagation constraints in ionized and non-ionized media 7−88016
ionospheric and magnetospheric VLF radiosignals, conjugate hemisphere obs. 7−139867
ionospheric HF propag. effects observed with large aperture antenna array 7−94567
ionospheric research using satellite beacons, highlights of India research 7−88017
Ionospheric Sounding Satellite-b resonance spike identification for ionograms 7−87937
IR and MM wave propagation in arid climate, expt. studies 7−94440
Italy rainfall intensity meas., correlation props. assessment 7−94419
laminated media, UHF introscopy, radiopulse envelope synthesis 7−71444
Loran-C radionavigation in contiguous USA, conductivity map for radio propagation 7−79575
magnetosphere cavities, radio wave polarization, theory 7−115179

radiowave propagation continued
MASSA experiment, ionosphere oblique sounding signals amplitude var. 7—79755
MASSA experiment, waves due to ground explosion, effect on radio propag. 7—79751
mean ray trajectories in ionospheric layer with isotropic inhomogeneities 7—94562
meteor trail observation by radiowave scattering *(Russian)* 7—88327
meteor trail radiowave scattering, spectral broadening of monochromatic waves 7—145726
meteorological atmospheric soundings, wave refraction *(Polish)* 7—72137
microwave, rain-rate statistical modelling 7—72129
microwave atmospheric attenuation at 11 and 18 GHz obtained by dual freq. Sun tracker meas., anal. 7—120111
microwave attenuation and cross polarization in dust storms 7—101384
microwave attenuation in lower atmosphere, experimental study *(Chinese)* 7—133799
microwave communications, rainfall rate duration and intensity, statistical anal. 7—107502
microwave link rain attenuation, radiometeorological data logging and processing system for freq. over 10 GHz *(Polish)* 7—72200
microwave propagation in 13 GHz band, fadings, rain and hail effects *(Czech)* 7—114980
microwave propagation in Great Lakes area of N America, degradation due to atmos. boundary layer 7—72146
microwave propagation through ionospheric turbulence, scalar anal. validity 7—139853
microwave SAR degradation effects of rain 7—114991
microwave scattering from bare soil, modelling 7—101563
microwave scattering properties of heterogeneous two-component mixtures, appl. to soil and snow water inclusions 7—96932
microwaves and MM waves, atmospheric absorption by tails of O_2 resonances 7—72128
MM wave and IR transmission in atmos. modelling studies 7—101474
mm-waves propagating through rain, distortion calcs. 7—139740
molecular absorption and dielectric permeability of atmospheric admixture gases in the millimeter range 7—139736
multipath propagation for broadband methods *(German)* 7—133810
multipath propagation in clear air, cross-polarisation discrimination and copolarised attenuation distrib. 7—133891
multiple round-the-world signals, propag. conditions 7—88026
nighttime SHF scintillation studies using transmission from the Indian geostationary satellite 7—94573
nonlinear sidebands of two powerful waves at closely spaced frequencies in the ionosphere 7—134068
parameters prediction, comprehensive meteorologically oriented methodology, appls. beyond 10 GHz 7—114976
paths and frequency bands 7—79767
phase fluctuations of ionospheric radio signal, geometrical optics approximation 7—88009
planetary magnetospheres, radio windows, theory 7—115178
plasma, with brightly anisotropic moving irregularities 7—111239
polymer coating on metallic components, contactless inspection of thickness in prod. line 7—71445
precipitation and RF propag. expts. *(Polish)* 7—87874
radar altimetry methods from satellite, microwave delay due to H_2O vapour 7—101472
radar atmospheric studies, propagation-differential phase shift determ. from sequential linear polarisation radar meas. 7—127528
radar reflectivity-rain rate relationships in Brazil 7—133988
radioastronomy, ionospheric refraction correction to radio-object positions, calc. method *(Chinese)* 7—115140
radiowaves in ionosphere and atmosphere, phase path by geometrical optics approx. 7—120205
rain attenuation from log-normal and Wiebull raindrop-size distributions 7—101383
rain attenuation predictions for European satellite propagation experiments to 135 GHz 7—94407
rain attenuation rel. to AUSSAT link 7—145657
rain attenuation statistics prediction model, for microwave Earth-space paths 7—94409
rain cell model, propagation appls., expt. background 7—114851
rain cells, horizontal structure, data and theory for new model for propagation appls. 7—114977
rain scatter, interference prediction 7—94416
raindrop canting angles meas. 7—94412
round-the-world radio echoes when there are magnetic ionospheric disturbances 7—88027
route diversity systems, rain outage performance anal. 7—133893
satellite systems, low elevation angle, tropospheric scintillation model 7—94413
satellite-Earth links, attenuation prediction in European region 7—139679
scintillation of ionospheric, interstellar and interplanetary radiowaves, due to deep random phase screen 7—134066
scintillation spatial and temporal filtering 7—115043
short-term ionospheric forecasting, outstanding problems 7—94575
short-term statistics of rain attenuation 7—145583
SIRIO satellite, 8 years of ionospheric research 7—115016
SIRIO satellite and radar data for raindrop size estimation 7—114850
SIRIO SHF experiment, radar simulation and bistatic link, rain scatter interference results 7—114853
site diversity measurements with radiometers at 20 and 30 GHz 7—107499
slant path amplitude radio scintillations, depend. on meteorological parameters 7—94414
slanted microwave paths, influence of rain props. 7—139739
solar activity increase in 21st century, and terrestrial consequences 7—115357
solar wind 3D scintillation structures modelling 7—88070
spherical radio waves, multiscale ionosphere, parameters fluctuation 7—72217
SW propagation in polar ionosphere at high-latitude in winter 7—145757
transhorizon anomalous propagation conditions, modelling 7—94420
transillumination of the ionosphere at the limit of radio transparency 7—87964
transionospheric geostationary satellite signals, scintillation characts. *(Chinese)* 7—115142
transionospheric propagation, spectral broadening of VLF transmitter signals and sideband struct. 7—134055
transionospheric VHF signals, Faraday polarization fluctuations near mag. equator 7—145767
radiowave propagation continued
transionospheric VLF signals received by spinning satellite, spin modulation of spectrally broadened signals 7—134056
tropical environment, EM wave propagation, 1 to 300 GHz, rain induced depolarisation 7—87780
tropical station, disdrometer dropsize meas., rainfall parameters 7—79485
troposphere, microwave, refractivity gradient calcs. 7—139737
troposphere radio refractive index meas., instrumentation comparison 7—127537
tropospheric dispersion *(Spanish)* 7—145649
tropospheric multipath microwave propagation, angle of arrival and amplitude of rays determ. 7—87775
tropospheric propagation modelling, waveguide mode method 7—94421
tropospheric refractivity meter for radiocommunication links 7—145688
turbulent atmosphere, statistical characts. determ. 7—94522
undersea radiocommunication, influence of seabed on subLF radiowaves 7—133570
VHF amplitude scintillation and long period fading, for satellite beacon signal 7—107621
VHF ionospheric scintillation over Northern Europe 7—94565
VHF long distance propagation by the *Es* layer *(Japanese)* 7—101630
VHF night-time scintillation at equatorial and low latitudes, geomagnetic effects 7—94566
VHF sporadic-E propagation, ionisation patch sizes investig. 7—107639
VLF atmospherics, vertical mag. field component as influenced by Earth interior props. 7—101638
VLF wave propagation, relationship between long term phase advances in high latitude and solar energetic particle fluxes 7—115161
water vapour attenuation, meas. from 1 to 350 GHz over Indian sub continent 7—127340
worst month rain statistics, theory and expt. 7—101450
X-band Earth-space propagation, amplitude scintillation statistics 7—94408
O_2, atmospheric, nanosecond pulses compression, radiowave absorption 7—127356

radium
see also nuclei with .....
Dead Sea, ^{226}Ra and Ba conc. modelling 7—145526
Dead Sea, ^{228}Ra conc. characts. 7—145527
W Indian Ocean, ^{226}Ra profiles and oceanographic characts. 7—145523
South Atlantic Bight, ^{228}Ra distrib. and circulation characts. 7—120039
XPS 5s-5p spectra, Green's function calcs. 7—82055
Bi, liquid equilibrium distributions of Th and Ra, FBR coolant appl. 7—81527
LiCl-LiF molten salt, equilibrium distributions of Th and Ra, FBR coolant appl. 7—81527
^{A}Ra, A=224, 226, prediction of relative toxicities in mouse bone by Monte Carlo techniques 7—119803
^{A}Ra, A=226, 228 radionuclide content of and ^{222}Rn emanation from building materials made from phosphate industry waste prods. 7—139379
^{A}Ra, A=226,228, activity concs. and temporal vars. in surface air, Munich, Germany 7—145631
^{A}Ra, A=226,228, conc. in struverite, γ activity meas. 7—87258
^{226}Ra and ^{241}Am, high concs. at human bone surfaces, implications for ICRP 30 bone dosimetry model 7—71904
^{226}Ra concentrations in terrestrial and wetland plants on U mill tailings in Canada 7—93972
^{226}Ra contents of U mill tailings, particle size fractions 7—87252
^{226}Ra, groundwater concs. in North Carolina phosphate lands 7—87256
^{226}Ra, in bone, quantitative autoradiography, meas. technique 7—71946
^{226}Ra in soil gas, correl. with ^{222}Rn inside adjacent houses 7—71900
^{226}Ra partitioning in waste streams of coal fired utilities 7—87253
^{222}Rn/^{226}Ra disequilib. in sediments of Buzzards Bay, Massachusetts, implications for solute transport 7—94200

radium compounds
No entries

radium emanation *see radon*

radius measurement *see diameter measurement*

radius of curvature measurement *see curvature measurement*

radon
see also nuclei with .....
γ-ray well logging equipment, calibration using Rn soln. *(Russian)* 7—79639
airborne, measurement, precision estimation using statistical props. of nuclear source *(Romanian)* 7—144782
atmospheric radioactivity induced fluctuation of γ-ray background spectrum *(Japanese)* 7—93971
concentration in air, alpha energy spectra meas. by ionis. chamber *(Japanese)* 7—74387
concentration in air, ionis. chamber for meas. *(Japanese)* 7—74379
CR-39 track detector for environmental radon measurements 7—96465
daughter equilibrium and unattached fraction, dosimetric anal. 7—103290
daughters, integrating thermoluminesc. personal dosimeter 7—71874
daughters and lung cancer: tests of linear, no- threshold dose-response relationship 7—100995
daughters deposited in the lung, radiation dose computation rel. to phys. state and straggling 7—145244
determination in Ganges water in UP Himalayas 7—114814
environmental activity concentration meas. with electret diffusion chamber 7—103292
house basement, Rn gas infiltration due to soil gas migration 7—119695
indoor conc. meas. using LR-115 plastic track detector 7—119868
indoor exposure, health effects, Kuwait population, lung cancer incidence estimation 7—119871
Karym volcano, Kamchatka, volcanic gas Rn concs. rel. to volcanic activity 7—133636
looping variation in environmental γ-ray meas. due to atmospheric Rn daughters 7—78702
mapping, appl. to geothermal energy source location 7—79679
NRPB Rn personal dosimeter, performance 7—87206
nuclear track Rn detector using Tuffak 7—139371
pressure driven flow equation for ingress through house concrete foundation cracks 7—119870
progeny levels in the atmosphere, optimising the gross α counting method 7—93968
progeny mixtures from Rn and Tn in U mines, simplified method for pot. α energy determ. 7—71905
reactor siting, use of nuclear technology, soil Rn emanation 7—74003
solubility in selected perfluorocarbon compounds and water 7—91808
vertical subsurface transport in geogas microbubbles 7—79327

radon continued
^{218}Po, unattached, in Ar gas, electrical and diffusive props., Rn concs. 7−97682
^{A}Rn, A=220, 222, daughters, indoor and outdoor, Hong Kong population, annual dose 7−133487
^{222}Rn, atmospheric, in tourist caves of Slovenia, Yugoslavia: conc. obs. 7−93969
^{222}Rn conc. in N Carolina public water supplies, system size effect, geologic and hydrologic variables 7−71899
^{222}Rn daughter products deposition, resulting surface radioactivity 7−93966
^{222}Rn daughters in houses, equilib. factor obs. 7−139383
^{222}Rn emanation coeff. for coal fly ash grains, release model 7−87251
^{222}Rn emanation coeffs. of U mill tailings, particle size fractions 7−87252
^{222}Rn emanation from and radionuclide content of building materials made from phosphate industry waste prods. 7−139379
^{222}Rn emanation from soil, moisture content effect 7−133485
^{222}Rn, exhalation determ. from atmospheric concentration profile *(Spanish)* 7−114141
^{222}Rn, groundwater concs. in North Carolina phosphate lands 7−87256
^{222}Rn in drinking water rel. to age-dependent lung doses 7−71875
^{222}Rn in USA public drinking water supplies, Bayesian anal. or scientific judgment of uncertainties in risk estimation 7−139378
^{222}Rn, indoor air conc. in US housing, potable water source 7−87250
^{222}Rn, indoor ventilation rates in the cellar room of a New Jersey dwelling 7−133486
^{222}Rn inside houses, correl. with ^{226}Ra in soil gas 7−71900
^{222}Rn, simulator for underground migration studies 7−79678
^{222}Rn/^{226}Ra disequilib. in sediments of Buzzards Bay, Massachusetts, implications for solute transport 7−94200

radon compounds
No entries

rail traffic
see also railways
commercial spent reactor fuel, rail transport in USA 7−109495
freight train wheel design using load history and fatigue damage accumulation *(French)* 7−138844
ground vibrations due to railway trains, calcs. 7−130585
radioactive material transport in FRG, risk assessment with INTERTRAN 7−74230
radioactive material transportation to 1st US repository site, projected environmental impacts 7−74117
railroad wheel fracture, effect of brake shoe material and location *(French)* 7−138843
spent CANDU fuel, road, rail and water transportation systems 7−109496
spent fuel rail shipping campaign in the USA 7−74129
spent fuel transport in the USSR, experience and regulations for safety and personnel protection *(Russian)* 7−74130
spent fuel transportation by rail in the USA 7−74132
THTR spent fuel, handling and transport system 7−74163
TMI-2 fuel debris, transportation to INEL 7−74162
track force monitoring using acoustic signature inspection 7−97236
wheel/rail rolling noise analysis 7−130458
wheel/rail squeal and impact noise 7−123331

railguns *see electromagnetic launchers*

railroads *see railways*

railways
equipment acoustic diagnosis 7−97240
wheel/rail rolling noise, theoretical validation 7−130459

rain
11.6 GHz satellite systems, rain attenuation, duration and rate of change, dynamic characts. 7−114849
acid rain effects on soybean growth and yield, greenhouse expts. 7−114149
acid rain effects on stone monuments 7−108102
acid rain in China, USA and a remote area (Australia) 7−126677
acid rain monitor with solenoid-operated drainage valve 7−93607
acid rain producing environmental damage, coal cleaning techniques 7−79500
S Africa, rainfall climate model and application to late Quaternary 7−120115
equatorial and S Africa, rainfall variability rel. to sea surface temps. along SW African coast 7−145626
Allegheny Mt., Pennsylvania, USA, acid rain and atmos. chem. observations 7−127332
anomalies of precipitation, rel. to $\Delta A_{mk}/\Delta\theta_c$* *(Chinese)* 7−87757
Arizona monsoon precipitation freqs., diurnal vars. 7−101441
arrival rate of raindrops at the ground 7−145622
atmospheric attenuation measurements at 19.4 and 22.235 GHz 7−94422
attenuation from log-normal and Weibull raindrop size distrib. 7−101383
AUSSAT system, rain attenuation 7−145657
Australia, bushfires prediction and correl. with meteorological parameters 7−139669
E Australia, rainfall kinetic energy 7−87791
Bangalore, weekly rainfall vars. (1897-1984) 7−101419
Boulder, Colorado, effects of rain on meas. of cloud liq. water distrib. 7−114864
Boyden Observatory, South Africa, meteorological conditions (1980 to 1985) 7−87840
NE Brazil, intraseasonal vars. of rainfall and atmospheric energetics during 1979 rainy season 7−79560
British Isles, appl. of Satellite imagery to nowcasting and very short range forecasting 7−114951
canting angles of rain drops and importance for microwave propagation 7−94412
catchment rainfall estimation using polynomial method 7−101538
cells, horizontal structure, data and theory for new model for propagation appls. 7−114977
Changjiang, China, rainfall correl. with Pacific subtropical high behaviour and South China Sea surface temp. *(Chinese)* 7−72101
Chernobyl radioactive cloud, effect of rain on deposition on grass and soil in W Cumbria 7−93551
Chilbolton dual-polarised radar, new developments 7−94417
China, abnormal weather due to Mt. St. Helens eruption *(Chinese)* 7−87748
China, climate patterns and statistical evaluation of station network data 7−139745
N China, rainfall rel. to Yellow River lower reaches rainfall 7−127293
climate theory for distribution of precipitation 7−120120
cloud seeding experiment, control gauge assessment 7−115029
cloud seeding expts. in USSR, bootstrap estimates of success 7−114945
CM-waves, rain attenuation characts. 7−87812
convective rain volume estimation using area-time-integral radar technique 7−133989
Cretaceous-Tertiary boundary impacts atm. acid rain prod. and effects 7−127455
cumulus cloud and its precipitation, effect of existing stratiform cloud *(Chinese)* 7−133802
daily rainfall occurrences, statistical modelling 7−120064
development along edge of elevated mixed layer in severe storm 7−101431
Doppler radar obs. 7−107565
drop growth in clouds, liq. water content effect 7−145644
drop size distrib. determ. from VHF Doppler radar spectra 7−115081
drop size measurements at Ile Ife, Nigeria using disdrometer 7−79485
drop velocity, altitude adjustment for Doppler radar analysis 7−127363
droplet size distrib. temporal evolution, due to collisions in steady and pulsating rain 7−114892
drops, coalescence and collision-induced break up 7−114885
drought frequency 7−127408
dual polarisation S-band radar for rainfall obs. 7−101562
England and Wales, summer precipitation-temperature relationship for AD 1766 to 1980 period 7−114998
England-Wales, 1986 November 20-21, Meteosat and radar rainfall imagery interpretation 7−79524
erosion of soil in arid region (Nile Valley) 7−107415
Europe, background levels of S and N pollutants 7−127324
Europe, significant weather events for 1000 to 1800 AD period *(German)* 7−115003
extinction of visible and IR, theory and expt. comparison 7−127466
finite difference scheme for rainstorm simulation, stability and conservative property *(Japanese)* 7−139703
S Florida, heavy rain embedded microburst, assoc. features 7−145638
forest decline attributable to acidic deposition and other conditions 7−106939
Fort Wayne, Indiana, USA, precipitation chem. meas. from OSCAR high density network expt., inter-storm comparisons 7−94336
fossil fuels and acid rain studies at Dutch Energy Research Centre *(Dutch)* 7−126535
fractal dimension of rainbands over hilly terrain 7−87817
freezing of drops when coming into contact with cold substrate 7−84213
gauge for rainwater chemistry sampling 7−145672
East Germany, rainfall correl. with atmos. 500 hPa circulation 7−114986
Guyana, rainfall regimes in coastal region 7−120084
Harz Mountains, precipitation field *(German)* 7−79573
middle Huang He River area, China, July 1958 persistent rainstorm *(Chinese)* 7−133904
Hurricane Irene (1981) rainband, struct. and radar reflectivity 7−87858
Illinois, United States, radar echo studies for weather modification expts. 7−133849
Illinois, USA, rainfall frequencies and temporal changes 7−120117
India, alkaline particulate effects on pH of cloud and rain water 7−101366
central India, rainfall during break monsoon conditions 7−114938
India, summer monsoon rainfall empirical prediction 7−127421
SW India and nearby Arabian Sea, SW monsoon rainfall features 7−139683
Indian monsoon rainfall AD 1958 to 1985, rel. to tropical quasi-biennial oscill. 7−139682
Indonesian Borneo, annual rainfall rel. to soil erosion risk in tropical rain forest 7−87647
INTELSAT's low latitude propagation experiments 7−107501
intensity, models of stochastic point processes 7−79545
intensity and type determ. from GOES imagery, anal. of visible and IR data 7−79546
intensity measurement, improved design for high-resolution rain gauge 7−115068
Ishigaki and Iriomote islands, rainfall distrib. and orographic effects on low level atm. water vapour transport *(Japanese)* 7−79494
Italy rainfall intensity meas., correlation props. 7−133812
Italy rainfall intensity meas., correlation props. assessment 7−94419
Japan, 1983 July 23 storm, orographically forced upstream lifting effect on mesoscale precipitation 7−127374
Japan, extreme wind speeds for various return periods during rainfall 7−107478
Java monsoon rainfall anomalies rel. to Darwin pressure, predictability 7−133832
Jiangsu Province, China, short-range rainfall forecasting during Meiyu period *(Chinese)* 7−133805
Kazakhstan, USSR, long-range prediction of hazardous weather phenomena 7−120094
central Kenya, spatial patterns of daily rainfall (1971-9) 7−120046
large-scale convective rainfall rel. to cold cloud coverage 7−101427
lightning-associated precipitation Doppler spectra transient changes 7−139689
Lucknow, rainfall intensity rel. to urban drainage design 7−114934
Mahanadi river peak discharge due to heavy rainstorm 7−101385
maritime rainfall analysis, resolution enhancement of Nimbus-7 SMMR multichannel microwave imagery 7−115057
Markov renewal model for rainfall occurrences 7−120063
measurement instrument for drop size and fall velocity, optical pluviometer 7−133981
Meiyu frontal cloud system of China, and its precipitation *(Chinese)* 7−133897
Meiyu frontal system over Yangtze valley, China, heavy rain and echo struct. of mesoscale systems *(Chinese)* 7−133800
microwave absorpt. by rain drops, microwave cavity meas. technique 7−139797
microwave attenuation due to rain, for Earth-space path 7−107498
microwave attenuation predictions for European satellite propagation expts. to 135 GHz 7−94407
microwave attenuation statistics prediction model, for Earth-space paths 7−94409
microwave backscatter due to rain, polarized X- and Q-bands 7−94410
microwave communications, rainfall rate duration and intensity, statistical anal. 7−107502
microwave depolarisation due to rain and simultaneous ionospheric scintillation impairment at 4 GHz 7−94572

rain continued
microwave link rain attenuation, radiometeorological data logging and processing system for freq. over 10 GHz *(Polish)* 7−72200
microwave links, rain-rate statistical modelling 7−72129
microwave propagation in 13 GHz band, fadings, rain and hail effects *(Czech)* 7−114980
microwave radiances from horizontally finite precipitating clouds containing ice and liquid hydrometeors 7−114989
microwave SAR degradation effects of rain 7−114991
middle latitudes daytime rainfall meas. techniques 7−87925
mm-waves propagating through rain, distortion calcs. 7−139740
monsoon annual weather cycle, introduction 7−133909
Moscow, USSR, short-range probability forecasting of temp. and rain 7−127406
nadir-looking radar for simultaneous ocean cross section and rainfall meas. 7−115055
Nagasaki storm rainfall, July 1982, debris flow statistical investig. *(Japanese)* 7−101353
Namib Desert, Namibia, lacustrine sediments of late Pleistocene and climate 7−79475
near-IR extinction meas. with single detector system 7−115054
New York State, USA, H isotopes in rainfall, exhibiting the amount effect 7−79519
Nile River, flood records since AD 650, showing 18.6 year period 7−139660
Pacific, western and central regions, rainfall and El Nino events *(Chinese)* 7−87745
path-integrated rain rate over ocean, determ. from airborne microwave radiometer data 7−127543
person, umbrellaless, in rain, motion velocity effects 7−120740
pesticides in rainwater, meas. in NE United States 7−106946
pollutant washout and transport, analytical model 7−114146
precipitable water vapour and rainfall relationship, Narmada catchment, India 7−114862
precipitation and RF propag. expts. *(Polish)* 7−87874
precipitation index validation in African countries, using satellite data 7−87917
prediction of maximum precipitation and flooding in China *(Chinese)* 7−87753
Prescott, Arizona, USA, 1983 September 23-24 storm rainfall 7−87845
Pretoria, South Africa, $^{15}N/^{14}N$ of NO_3^- and NH_4^+ in rain 7−94339
pyruvic and formic acid conc. 7−139686
N Quebec, rainfall pH rel. to meteorological parameters 7−93581
radar measurements, reduction of errors due to melting snow 7−127579
radar rain data analysis, functional box-counting and multiple elliptical dimensions 7−114979
radar rain patterns, automatic extraction, collection and description for modelling 7−114852
radar reflectivity-rain rate relationships in Brazil 7−133988
radio link worst month rain statistics, theory and expt. 7−101450
radio wave propagation parameters prediction, comprehensive meteorologically oriented methodology, appls. beyond 10 GHz 7−114976
rainbows, secondary, in rain showers, appearance of supernumaries 7−94435
raindrop size spectrometers, corrections for horizontal drag forces effect on rain trajectories 7−127533
raindrop velocity spectrometer for drop chemistry investigations 7−127534
rainfall rates determ. from cloud radiance meas., use of pattern recognition algorithm 7−127546
raingage integration time, influence on measured rainfall-intensity distrib. functions 7−133814
rainwater sulphate determ. method 7−108106
remote sensing, anal. of dual-wavelength surface reference radar techniques 7−127500
route diversity systems, rain outage performance anal. 7−133893
Sahelian rainfall, prediction from sea surface temps. in Gulf of Guinea 7−79559
satellite-Earth links, attenuation prediction in European region 7−139679
scatter, interference prediction 7−94416
seeding of clouds to increase rainfall, Bridger Range Expt., Montana, USA 7−94368
Shanghai, China, acidity of rainfall rel. to synoptic situation *(Chinese)* 7−133903
shape of falling raindrops, model 7−145619
short-term statistics of rain attenuation 7−145583
Sichuan, China, heavy rain processes and assoc. SW vortex flow *(Chinese)* 7−72143
SIRIO satellite and radar data for raindrop size estimation 7−114850
SIRIO satellite systems performances improvement, rain presence 7−114854
SIRIO SHF experiment, radar simulation and bistatic link, rain scatter interference results 7−114853
site diversity measurements with radiometers at 20 and 30 GHz 7−107499
slanted microwave paths, influence of rain props. 7−139739
snowfall-rainfall boundary in atmosphere, width and speed of boundary 7−79570
soil erosion by raindrop impact, mathematical model and experimental study 7−127303
Sri Lanka, monsoon rainfall influenced by volcanic eruptions 7−114908
St. Louis, Missouri, USA, urban effects on precipitation 7−94366
St. Louis, USA, urban-related nocturnal rainfall anomaly 7−94374
storm events, models of spatial and temporal structure 7−72145
storm runoff, appl. to upland soil erosion model 7−87722
storms, radar reflectivity and surface rainfall correlation 7−145643
Sudan, AD 1986 wet season rainfall and agricultural production 7−133910
Switzerland, hailstorms, supercooled liquid water drops and ice characts. 7−94395
telecommunication systems, rain cell model, propagation appls., expt. background 7−114851
Texas, rain augmentation programs 7−133933
W Texas cloud seeding program, evaluation methods and results 7−133934
torrential rain area prediction method *(Chinese)* 7−87751
tropical convective clouds, radar echo zones vertical profiles *(Russian)* 7−101386
tropical environment, EM wave propagation, 1 to 300 GHz, rain induced depolarisation 7−87780
tropical meteorology, teleconnections of rainfall anomalies and Southern Oscillation, and seasonal depend. 7−94403
rain continued
Urawa, Tokyo, Japan, pH and acidity of rain water *(Japanese)* 7−107493
USA and Canada, temperature and precipitation changes, 1941 to 1980 AD 7−94423
USA Central Rockies and adjacent Great Plains, precipitation diurnal variability 7−127429
Venezuelan savannah, pH 7−139727
vortex-type heavy rain weather systems, theory *(Chinese)* 7−87755
N Wales, rural site rain pH 7−139171
water-insoluble particles in rain water over suburban area 7−133153
wet-only passive sequential fraction rain collector 7−94449
wet-only rainfall collector for acid precipitation project 7−115101
Yamuna catchment rainfall rel. to moisture transport over Delhi 7−114936
Yangtze Valley, China, heavy rain forecast using numerical diagnostic analysis 7−127415
H_2O_2 in rainwater, ^{18}O determ. method 7−93599
H_2O_2 in rainwater, contrib. to variability of surface ocean H_2O_2 7−94304
S scavenging in mesoscale model with quasi-spectral microphysics, 2D results for continental maritime clouds 7−94386
^{90}Sr, determ. in water in Austria after Chernobyl accident 7−122221

rainfall *see rain*

RAM *see random-access storage*

Raman effect *see Raman spectra*

Raman-induced Kerr effect *see optical Kerr effect*

Raman lasers
differential absorption lidars with Raman lasers for O_3 profiles meas. 7−120132
FEL, power and sideband studies 7−130133
fibre amplifier characts. for optical transmission systems 7−110451
fibre Raman amplifier pumped by high-power semicond. lasers, 1.5 μm, amplification of WDM signals 7−68674
fibre Raman laser, synchronously pumped with self-phase modulation 7−141867
fibre Raman oscillator, self-phase modulation and stimulated Raman scatt. in single mode fibre 7−103889
fibre Raman soliton laser, cross-phase modulation 7−123254
fibre Raman soliton laser pumped by Nd:YAG laser 7−68694
fibre Raman soliton laser theory 7−97037
free electron laser, electron beam velocity spread meas. *(Chinese)* 7−90623
free electron laser, Raman type, 2D model, oscill. characts. anal. 7−97024
free electron laser, Raman-type, using TM pump wave, 2D mode anal. 7−90624
free-electron laser, exptl. study 7−82594
methane waveguide Raman laser, low-threshold operation at 1.54 μm 7−103799
ring-laser, chaotic pumping, noise reduction 7−130191
synchronously pumped soliton Raman fibre ring laser, expt study 7−90617
wavelength conversion developments for remote sensing appl. 7−75066
$Ba(NO_3)_2$ laser radiation wavefront correction in pulsed operation with plane-plane resonator 7−68732
$Cr^{3+}:BeAl_2O_4$, alexandrite laser pumped tunable intracavity Raman laser 7−82626
$GaP-Al_xGa_{1-x}P$ Raman laser operation 7−122951
He-K, XUV laser radiation generation by stimulated Raman scattering 7−90697
NH_3 Raman laser amplifier, CW, 12 μm, high-power 7−90642
NH_3, tunable, 60 to 150 microns wavelength region, pumping by multiatmosphere CO_2 laser 7−130071
Ne Raman laser, CW, gain and noise characts. 7−141844
SiO_2 fibre Raman laser, UV short pulse, excimer laser pumped 7−82573

Raman scattering *see Raman spectra*

Raman spectra
see also molecular rotation; molecular vibration; Raman spectra of diatomic inorganic molecules; Raman spectra of inorganic liquids and solutions; Raman spectra of inorganic solids; Raman spectra of organic molecules and substances; Raman spectra of polyatomic inorganic molecules; Raman spectroscopy; stimulated Raman scattering; surface enhanced Raman scattering
anharmonic mols., Raman excitation profiles, semiclassical dynamics 7−90140
anisotropic aligned fluids, Raman band shape anal. and mol. inertial motion 7−68328
atomic high resolution coherence spectroscopy, optical double resonance and Raman anal. *(German)* 7−129644
bond polarisability anisotropy, sign ambiguity resolution 7−83838
cathode surface charactn. using Raman scatt. 7−126501
complex molecules, vibronic spectra and intensities in Raman spectra, review 7−141561
coupled excited electronic states, reson. Raman scatt. cross sections, time depend. 7−90157
crystals, mixed regular stack, Raman spectra, VB calcs. 7−125731
dentine, resin-reinforced, Raman microprobe study 7−132994
dielectric microspheres, levitated, Raman-Mie scatt. 7−85690
dielectric spheres, enhanced Raman scatt. 7−85691
disordered material structural correlations, Raman scatt. meas. 7−83717
disordered systems of small metal particles, collective optical resonances 7−90508
drug vials, sealed, rapid headspace anal. using multichannel Raman spectroscopy. 7−74626
excitation profiles, totally symmetric modes, vibronic coupling effects study 7−96703
fluorescence background in Raman spectroscopy, solvent effects 7−103506
fluorescence effects 7−103507
fractal structures, Raman scattering, freq. depend. 7−138457
gallstone, Raman spectrosc. identification 7−127024
gallstones, microstruct., Raman microprobe and FT-IR microsampling obs. 7−107191
gas atoms, Raman scatt., theoretical investig. 7−135869
glass-forming liquids, high resolution Raman Scatt. 7−70824
heavy fermion superconductors, s-wave pairing due to Kondo volume collapse, proposed test by resonant Raman scatt. 7−112638
hot phonon polaritons, hyper-Raman light scatt. 7−113196
impurity spectra stationary and time-depend. zero-phonon line calcs. *(Russian)* 7−106221

Raman spectra continued
incommensurate magnetic structs., Raman light scatt. tensor *(Russian)* 7−70761
insulators, ionic contributions to Raman tensor 7−123108
interfaces, Raman spectrometric obs. 7−77589
inverse scattering from liquid media, optical props. *(Russian)* 7−119017
isopolymolybdate ions, aq. acidic soln., Raman spectra, factor anal. 7−90020
isotopic molecules, vibr. Raman optical activity, freq.-weighted sum rule 7−135944
isotropic samples, Raman microspectroscopy polarisation meas. 7−132268
Langmuir-Blodgett multilayers, variable temp. Raman obs. using integrated optics techniques 7−85612
lipid bilayers, thermotropic behaviour studied using Raman spectroscopy, two-state model 7−119744
liquids, Raman spectra bandshape, H-bond strength and soln. viscosity depend. 7−82172
mechanism, scatt. of light by spin waves 7−99819
minerals with fluid inclusion, Raman spectroscopy computerised system *(French)* 7−132995
mode mixing and non-Condon coupling, temp.-depend. reson. Raman scatt., non-perturbative theory 7−92685
molecular crystals, distortion induced IR and Raman activity, vibr. dynamics 7−104926
molecular fluid, depolarised interaction induced light scatt., ab initio calcs. 7−81970
molecular transition, four-wave light scatt., non-perturbative theory 7−117035
molecules, multiphoton processes, coupled eqns. approach 7−129820
molecules, near reson. Raman scatt., oscill. detection 7−68307
monodisperse model aerosol, mol. comp. determ. 7−132981
multidimensional systems, vortical combination resonances 7−115802
multilayer thin films, mol. orientation, Raman spectrosc. obs. using integrated optics 7−77591
multimode system, Dushinsky rot. and Jahn-Teller effect, Raman excitation profiles theory 7−90001
multimode systems, reson. Raman scatt., temp. depend., many-body approach 7−91748
optical fibres, Raman scattering 7−82848
optical fibres, spontaneous Raman scatt. and polarisation mode coupling 7−142001
phonons, theory and expts., book 7−80187
polyatomic molecules, highly vibr. excited Raman spectrosc. obs. 7−82158
polyatomic mols., coherent Raman spectra reson. background 7−141585
radiated energy of electric and magnetic dipoles located inside or outside a sphere 7−110198
radiation-molecule interactions, mol. QED, book 7−134377
Raman optical activity, bond polarisability and vibronic coupling 7−141628
Raman optical activity of small molecules 7−90172
Raman spectroscopy, magneto-optical effect 7−68377
resonance Raman scattering and luminesc., freq. modulation, finite correl. time 7−140756
reverse polarized highly intense Raman transitions in Jahn-Teller and non-Jahn-Teller modes 7−74468
reversible photostimulated transformations, effect on Roman spectra *(Russian)* 7−119018
rotating molecules, time resolved CARS and CSRS, response function theory 7−90137
semiconductor, electronic interband Raman scatt. in static mag. field, nonlocal effects 7−113201
semiconductor surface layer, hyper-Raman scatt. by lattice vibrs. 7−77531
semiconductors, coherent excitations, time-resolved CARS meas. 7−85683
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
sound in sound in solids, Mossbauer spectroscopy 7−137475
surface films, in aq. environment, high temp. Raman spectrosc. 7−73440
surfaces and layered structures, Raman spectrosc. using optical waveguides and surface plasmons 7−77588
thin films, Raman spectrometric obs. 7−77589
three-level system, reson. secondary radiation, light-induced dephasing effects 7−103420
transformation of inhomogeneously broadened spectra due to frequency migration 7−96706
Uranus, atm. struct. and Raman scatt. Lyman α emission 7−120309
vibrational dephasing time meas., CSRS with incoherent light 7−90170
vibrational mode, Raman excitation profiles, inverse transform 7−90160
CO_2, electrochemical reduction, Raman spectra 7−144725
D_2+Ar(He)(D_2)(H_2)(methane), Q-branch Roman spectra line broadening meas. and rate law anal. 7−117024
D_2+CO(N_2), spectral broadening, temp. depend. 7−82156
H_2+Ar(CO)(He)(N_2), spectral broadening, temp. depend. 7−82156
Li/$SOCl_2$ cells, discharge products, in situ microRaman obs. 7−78583
N_2+N_2(HCl), spectral broadening, temp. depend. 7−82156
Na vapour, parametric four-wave mixing 7−75061

Raman spectra of diatomic inorganic molecules
conference, Eugene, OR, USA (Sept. 1986) 7−72726
D_2, collision-induced polarised and depolarised Raman scatt. 7−82179
D_2 fluid, local ordering near liq.-gas critical point, vibrational Raman spectrum fine struct. obs. 7−76512
D_2, Q branch lineshapes, Raman spectra study 7−82165
D_2, Q-branch lineshapes, pressure depend., Raman spectra anal. 7−82163
D_2, vibrational states, spontaneous Raman spectra anal. 7−82164
Fe_3O_4 surface, dissociation reactions of CO gas 7−86667
H_2, collision-induced polarised and depolarised Raman scatt. 7−82179
H_2, collision-induced Raman scatt., temp. depend. anal. 7−82171
H_2, depolarized Raman scatt. at low temps. study 7−82178
H_2, far UV reson. Raman spectroscopy 7−90174
H_2, isotopic species, vibrational states, spontaneous Raman spectra anal. 7−82164
H_2, rovib. population in H^- ion source, CARS time-resolved meas. 7−82161
H_2, vibr. overtone cross sections, ab initio calcs., Raman spectra anal. 7−81969
I_2, disproportionation reactions in basic solns., Raman spectrosc: obs., rel. to nucl. safety 7−74018
I_2, n-hexane soln., polarisation dispersion curves for reson. Raman scatt. 7−82182
I_2, n-hexane soln., vibr. struct., reson. Raman excitation profile 7−82183

Raman spectra of diatomic inorganic molecules continued
I_2, secondary emission time behaviour, Raman scatt. and luminesc. study 7−82181
N_2, collisionally-narrowed isotropic Raman spectra, strong collision model calcs. 7−82177
N_2, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
N_2, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
N_2, high resolution inverse Raman spectra, line widths, collisional contrib. 7−74621
N_2 in atmosphere, rotational Raman gain coeffs. model 7−133917
N_2, press. broadening coeff., depend. on rot. quantum number, Raman obs. 7−82157
N_2, rot. relax. fitting laws, SRS Q-branch calc. 7−109905
N_2, rotationally inelastic collision models, Q-branch Raman spectra anal. 7−68308
N_2, vibr. overtone cross sections, ab initio calcs., Raman spectra anal. 7−81969
O_2, dense fluid, Raman scatt., MDM calc. 7−82175
O_2 Q branch, high resolution CARS using injection locked dye lasers 7−82162
O_2, rot. transition, Fourier transform coherent Raman spectra 7−82130
O_2^-, formed by electron trapping on ZnO surface, CARS, obs. 7−74616
OH radical, reson. CARS spectrosc. in high-freq. discharge 7−82160
T_2, vibrational states, spontaneous Raman spectra anal. 7−82164

Raman spectra of inorganic liquids and solutions
aligned anisotropic fluids, rotational contribution to the vibrational bandshape of ordered systems 7−132250
aqueous solns., Raman band, temp. and salt conc. depend studies *(Japanese)* 7−118992
+−butanol, aq. soln., hydrophobic hydration, Raman spectra 7−132255
conference, Eugene, OR, USA (Sept. 1986) 7−72726
ethanol, aq. soln., hydrophobic hydration, Raman spectra 7−132255
ethylphosphonothioic dichloride-d_0(d_5), solid and liq., IR and Raman spectra 7−144057
hyper-Raman scattering by vibrational excitations in crystals, glasses and liquids 7−106177
interaction-induced and local fields effects study 7−82169
isopropanol, aq. soln., hydrophobic hydration, Raman spectra 7−132255
lanthanide(III) systems, ligand polarisability contrib. to electronic Raman spectra 7−125719
metal ions, divalent, aq. soln. Raman ν_1 band 7−132267
water, liq., small-amplitude, H^+ motion, coupling to density and temp. 7−85631
water, low frequency Raman scatt. spectra, laser light effects 7−113195
water, single droplets, stimulated Raman scatt. spectra 7−82717
water networks, small amplitude collective proton motions, Raman spectra features 7−99831
water-ice phase transition, anomalous Raman scatt. spectra obs. 7−142958
$AlCl_3$, conc. aq. solns., Raman active vibr. 7−92683
AlX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
CS_2, liq., vibr. and reorientational relax. 7−90354
$Ca(NO_3)_2$, high-pressure microRaman spectroscopy 7−89284
D_2 fluid, local ordering near liq.-gas critical point, vibrational Raman spectrum fine struct. obs. 7−76512
D_2O, liq., Raman spectra in translational and librational regions, depolaris. ratio 7−125740
H_2O, depolarised Rayleigh wing, Fabry-Perot spectra, temp. depend. anal. 7−70760
H_2O, liq., OH stretch vibr., computer mol. dynamics study 7−92679
H_2O, liq., Raman spectra in translational and librational regions, depolaris. ratio 7−125740
H_2O, liq., rot. dynamics, isotropic induced Raman scatt. spectra 7−90156
H_2O, liq. and supercooled, depolarised Raman scatt. spectra 7−92680
^{3}He liquid, Raman scatt., polarisation study 7−76525
^{4}He, superfluid, Raman spectra *(Japanese)* 7−76520
$Hg(CN)_2$, high-pressure microRaman spectroscopy 7−89284
InX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
$IrCl_6$, in soln. optical activity, Raman obs. 7−128670
KSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
LiCl, aq. soln., cation-anion pair, hydration number determ., Raman obs. 7−77526
LiSCN, aq., soln., vibr. and rot., Raman spectra 7−85646
Mg salts, glassy and liq., Raman spectra studies 7−106162
$MgCl_2$, conc. aq. solns., Raman active vibr. 7−92683
$Mg(ClO_4)_2$, aq. soln., ion-pairing and hydration, Raman spectra 7−92682
$Mg(ClO_4)_2$, organic solns., Raman spectra 7−92684
$Mg(ClO_4)_2$-NaSCN, organic solns., Raman spectra 7−92684
N_2, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
$NaClO_4$, aq. soln., ion-pairing and hydration, Raman spectra 7−92682
$NaNO_3$-Na_2SO_4, aq. soln., mixing processes, time resolved Raman spectra 7−92689
NaSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
O_2, phase transformations, melting and solid-solid, 120-650 K 7−113184

Raman spectra of inorganic solids
alkali halides, Raman scattering using electro-optical effect 7−70809
aragonite, photoelastic consts. determ. from Raman intensity anal. of calcite 7−70741
conductive spin-cast films from polyacrylonitrile 7−112119
conference, Eugene, OR, USA (Sept. 1986) 7−72726
cryst., H bonded, OH stretching band shape anal., H^+ dynamics 7−70826
crystals, polarisability and induced light scatt., Raman spectra anal. 7−85744
cubic semiconductor, degenerate valence bands, interband electronic Raman scatt. 7−125720
di(tetramethylammonium)$ZnCl_{4-x}Br_x$ solid solns., dielec. meas. and Raman spectroscopy 7−118954
diamond, LTO(Γ) mode, Gruneisen parameter direct determ. 7−84172
diamond films, thermal CVD using organic cpds. *(Japanese)* 7−86053
diamond thin films, synthesis by atmospheric pressure thermal CVD *(Japanese)* 7−92886
diamond thin films and particles, thermal CVD synthesis *(Japanese)* 7−132487
glass, Raman spectroscopic characterisation 7−68802

Raman spectra of inorganic solids continued
graphite, high quality, from polyoxadiazole 7−84803
graphite, Raman spectrum shape change due to exposure to D glow discharge 7−111683
graphite film, plasma CVD and props. 7−86055
graphite film, prep. by pyrolysis of polymers, phys. props. 7−86611
graphite-H_2SO_4 intercalation cpd., interband absorpt. edge, reson. Raman spectra 7−85699
graphite-H_2SO_4 intercalation cpd., staging transition, Raman scatt. meas. 7−84238
hyper-Raman scattering by vibrational excitations in crystals, glasses and liquids 7−106177
ice, high density amorphous, struct. studies, Raman spectra obs. 7−131032
ice, Ih phase, Raman scatt. tensors 7−99829
ice polymorphs, Raman vibr. spectra and cryst. struct. correlations 7−99830
II-IV-V_2 ternary semicond. cpds., lattice dynamics, chem. binding, IR absorpt. and refl. spectra, Raman scatt., rigid ion model 7−113174
III-V cpd. superlattices, internal stress, effects on thermal stability, Raman study 7−106195
III-V semiconductors, high temperature properties, Raman scattering studies 7−92653
inelastic and Raman light scatt. at interfaces 7−138466
inelastic opalescence near phase transition points 7−85587
lanthanide(III) systems, ligand polarisability contrib. to electronic Raman spectra 7−125719
lithium thallium tartrate, low temp. phase transition, critical fluctuations, Raman spectra anal. 7−85713
magnetic semiconductors, dilute, Raman scattering by mag. excitations 7−77596
magnetically mixed semiconductors, ESR and spin-dependent Raman scatt. at electron centres 7−138324
metal-ethene complexes, 7−99861
metaphosphate coacervate glass, low temp. cured, Raman obs. 7−85720
molecular crystals, dissociation under press. Raman and X-ray studies *(Japanese)* 7−132933
narrow gap semiconductor superlattices, CARS obs. 7−85698
NASICON, superionic cond. and intermediate structure 7−142743
optical fibres, Raman spectroscopic characterisation 7−68802
optical recording medium appl. 7−82728
perovskites, $A(B'B'')O_3$, B-site ordering, Raman scatt. obs. 7−106153
polar semiconductors, LO phonon bound to neutral impurities 7−137490
potassium hydrogen 3,4-furandicarboxylate, intramol. H bond, vibr. spectra 7−99866
potassium hydrogen cyclobutane 1,1-dicarboxylate, vibr. spectra and H bonding 7−99865
potassium lanthanide tungstates, polarised IR and Raman spectra 7−85665
pseudobinary semiconducting alloys, ordering observed by Raman scatt. 7−106197
quartz, cryst., naturally shocked, Raman microprobe spectra 7−70821
quartz, incommensurate phase, low freq. modes, Raman and Brillouin obs. 7−70819
quartz, incommensurate phase and α-β transition, low freq. light scatt. obs. *(Japanese)* 7−119014
α-quartz, isotopic species, IR and Raman obs. 7−119000
α-quartz, vibr. modes, high press. Raman scatt. study 7−111811
quartz glass, microdefects, rel. to stimulated Raman scatt. of optical fibres *(Japanese)* 7−132287
quartz-type crysts., triple-k incommensurate phase, amplitudon and phason spectra, IR and Raman scatt. activity calcs. 7−111817
rare earth cpds., localized electronic excitations, Raman scatt. spectra 7−85704
rare earth sesquioxides, R_2O_3, R=Pr,Nd,Sm-Tb,Ho,Tm,Yb, bonding anomalies, Raman and IR vibr. spectra 7−85628
rare earth titanates, $R_2Ti_2O_7$ and R_2TiO_5, R=La-Lu, structural disordering on quenching, Raman spectra 7−99820
Rochelle salt-ammonium Rochelle salt, solid soln., Raman spectra 7−132257
semiconductor layered structs., electronic and phonon Raman scatt. 7−106193
semiconductor superlattice, high mobility, Raman spectra, constant current effect 7−92654
semiconductor superlattices, Raman scattering from phonons 7−85692
silica, vitreous, impurity ion homogeneous optical linewidth, Raman contrib. determ., temp. depend. calcs. 7−77610
silica fibre light guide, doping additives, Raman scatt. determ. 7−114059
silicate clays, mixed layered, ion size and substrate rigidity, X-ray and Raman spectra investig. 7−83945
silicates, Raman spectra 7−132248
steel, austenitic stainless, surface studies of interaction with CsOH vapour 7−126311
ternary $A^{II}B^{III}{}_2X^{IV}{}_4$ cpds., nonmagnetic defective, struct. and lattice dynamics, review 7−124215
TGS, ferroelectric, LO-TO splittings, Raman spectra 7−99832
transition metal cpds., $MPS_3(Se_3)$, (M=Fe,Ni,Zn), spin ordering, inelastic light scatt. studies 7−143812
transition metal dichalcogenides, layered, charge density wave phase transitions, Raman spectra anal. 7−85703
water networks, small amplitude collective proton motions, Raman spectra features 7−99831
water-ice phase transition, anomalous Raman scatt. spectra obs. 7−142958
$XeF_6.AgF_3$, solid, synthesis and vibr. spectrum 7−106185
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., Raman scatt. 7−119011
zeolite ZSM-5, synthesis, struct., Raman spectrosc. obs. 7−138449
AS_2S_3 covalent clusters in zeolites, electronic and vibr. spectra 7−125723
Ag aggregates, on Ag halides and coated electrodes, SERS obs. 7−77584
Ag complex, β-alanine-$AgNO_3$, single crystal, vibr. modes, IR Raman spectra anal. 7−71689
Ag complex, of tetrahydroboratobis(triphenylphosphine), IR and Raman spectra, vibr. anal. 7−85666
Ag electrode, in electrochem. cell, SERS mechanism 7−77587
Ag films, SERS active, preparation method 7−76709
AgBr, exciton dynamics, ps reson. Raman scatt. spectra anal. 7−85748
AgCl, exciton dynamics, ps reson. Raman scatt. spectra anal. 7−85748
β-AgI, disordered solid, polarisability and induced light scatt., Raman spectra anal. 7−85744
β-AgI, resonance Raman scatt. study 7−132260

Raman spectra of inorganic solids continued
$Ag_{0.33}NbSe_2$, intercalated cpd., lattice dynamics, Raman spectra data, valence force field model 7−84162
$AgTaO_3$, structural phase transitions, Raman scatt., X-ray diffr. and dielectric meas. 7−76386
Al-GaSb interface, thin film reactions 7−86680
AlAs/GaAs heterostruct., phonon parameters, IR and Raman spectra studies 7−98666
AlAs-GaAs superlattices, thin-layered, resonant Raman scatt. 7−113165
$(AlAs)_m(GaAs)_n$ ultra-thin superlattices, Raman scatt. and photoluminescence meas. *(Japanese)* 7−85662
$Al_{0.22}Ga_{0.78}As$, reactive ion etching damage, Raman study 7−126350
$Al_xGa_{1-x}As$ nonequilibrium phonons and disorder 7−92691
$Al_xGa_{1-x}As$, phonons, Raman spectra meas. under high press. 7−85632
$Al_xGa_{1-x}As$, press. induced effects on phonons and gap states 7−142926
$Al_xGa_{1-x}As$, resonant Raman scatt. by LO phonons, alloying and interference effects 7−119007
$Al_xGa_{1-x}As$:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
$Al_xGa_{1-x}As$:Zn; impurity induced struct. disorder, Raman study 7−99845
$Al_xGa_{1-x}As$-GaAs superlattices, intermixing by pulsed laser irradiation 7−111975
$Al_{0.48}In_{0.52}As$ epitaxial layers on InP, Raman and photolum. spectral studies 7−106198
AlInP layers, characterisation by Raman spectroscopy 7−106194
$Al_xIn_{1-x}P$ epilayers, organometallic VPE grown, optical props. 7−77668
$Al_2O_3:Cr^{3+}$ time-resolved excited-state electronic Raman spectrum 7−85615
$AlPO_4$, vibr. modes, high press. Raman scatt. study 7−111811
AlSb, phonons, piezo-Raman studies 7−132235
AlX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
As_2O_3 based heavy metal oxide glasses, struct. and optical props. 7−137251
As_2S_3, bulk glass, extended defect structs., Raman obs. 7−83727
As_2S_3 glass, extended defect structures, Raman spectra, annealing effect 7−104580
As_2S_3 glass fibres, flexural stress, struct., Raman spectra 7−144470
As_2S_3, solid solns., two- and three-photon scatt., reson. Raman scatt. 7−70772
As_2Se_3 glass, low freq. Raman spectra, glass transition, extended defect model 7−104581
B-Si-Ge alloys, super-assisted-plasma CVD 7−86052
B_2O_3-CdO glasses, Raman studies 7−138447
B_2O_3-CdO-GeO_2 glasses, Raman studies 7−138447
$(B_2O_3)_{1-x-y}(Li_2O)_x(Cs_2O)_y$ glasses, Raman spectra studies 7−138446
$(B_2O_3)_{1-x-y}(Li_2O)_x(Li_2Cl_2)_y$ glasses, Raman spectra studies 7−138446
$Ba_2EuCu_3O_7$, ^{18}O isotope effect in high T_c supercond., phonon freq. Raman spectra meas. 7−105796
$BaMo_6S_8$ Chevrel phase cpd., phonon energies and symmetries, Raman study 7−132276
$Ba(NO_3)_2$ single cryst., orientational disorder and mol. reorientation, Raman spectra study 7−142655
$BaO-LaO_{1.5}-SiO_2$, glasses, struct., Raman spectra 7−77539
$BaO-YO_{1.5}-SiO_2$, glasses, struct., Raman spectra 7−77539
$Ba_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Ba_3(PS_4)_2$, Raman spectra assignments *(German)* 7−99872
$Ba_2P_2Se_6$, Raman spectra assignments *(German)* 7−99873
$BaPb_{1-x}Bi_xO_3$, metal-semiconductor transition, dimerisation model, Raman study 7−70192
$BaSO_4:K^+$, micro-Raman spectral investig. 7−85636
$BaTiO_3$, hexagonal crysts., structural and ferroelec. transitions, soft phonon modes, Raman scatt. study 7−77544
$BaTiO_3$, lattice dynamics, ferroelectricity and Raman spectrum in cubic phase 7−119001
$BaTiO_3$, Roman spectrum, line shapes of oblique phonons computation *(Korean)* 7−85647
$BaTiO_3$, structural phase transitions, hyper-Raman scattering *(Japanese)* 7−99858
$Ba_2YCu_3O_7$, ^{18}O isotope effect in high T_c supercond., phonon freq. Raman spectra meas. 7−105796
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., Raman scatt. above and below T_c 7−119022
$BeAl_2O_4:Cr^{3+}$ alexandrite crystals, spectroscopic props. 7−92728
$Bi_4Ti_3O_{12}$, Raman-active modes, pressure depend. 7−77549
Br_2 adsorbed on graphite, KBr and fused quartz, Raman spectra studies 7−85634
C films, amorphous and crystalline, Raman scatt. 7−85722
C films, Raman scattering spectra 7−125754
a-C:H diamond like films, effects of heavy ion irradiation 7−98268
C:H hard amorphous thin film on Si and Ge, Raman scatt. study 7−125727
CO_2, Fermi diad, spontaneous Raman scatt. and time resolved CARS study 7−85745
CO_2, solid, Fermi diad, time-resolved CARS studies *(Japanese)* 7−132289
$C_2O_4HNH_4.{}^1/_2H_2O$, ferroelastic transition, light scatt. 7−104990
Ca_2, matrix isolation Raman and fluoresc. spectra 7−96906
CaB_6, crystal dynamics, multichannel Raman spectra study 7−85710
$Ca_3(Nb, Ga)_2Ga_3O_{12}:Nd^{3+}$, cation-deficient garnet, spectral luminesc. props. 7−106236
$Ca_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Ca_3(PS_4)_2$, Raman spectra assignments *(German)* 7−99872
$Ca_2P_2Se_6$, Raman spectra assignments *(German)* 7−99873
CaV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
Cd-As disordered thin films, Raman scatt. 7−113203
$Cd(BrO_3)_2.2H_2O$, cryst., BrO_3^- ion dynamics, Raman spectrosc. obs. 7−70818
$CdGaInS_4$ layered cpds., asymmetries of Raman scatt. 7−106196
$CdGaInS_4$, layered crystals, fundamental absorpt. edge study 7−106214
$CdGa_2(S_xSe_{1-x})_4$, reson. Raman scatt. 7−70806
CdHgTe, disorder-induced Raman spectra, Green's function theory 7−85686
$Cd_{0.2}Hg_{0.8}Te$, Raman light scatt. near resonance in E_1 energy slot 7−113197
$Cd_{1-x}Hg_xTe$ solid solns., Raman scatt. near energy gap 7−70762
$CdIn_2S_2Se_2$, layered crystals, fundamental absorpt. edge study 7−106214
$Cd_{1-x}Mn_xF_2$ mixed cryst., two-magnon and phonon Raman scatt. study 7−85717
$Cd_{1-x}Mn_xS$, Raman scatt. from antiferromagnetically coupled Mn^{2+} ion pairs 7−92421

Raman spectra of inorganic solids continued
$Cd_{1-x}Mn_xSe$, Raman scatt. from antiferromagnetically coupled Mn^{2+} ion pairs 7−92421
$Cd_{1-x}Mn_xTe$, high press. phase transition, Raman scatt. study 7−119006
$Cd_{1-x}Mn_xTe$, phase transition, high-press. Raman scatt. obs. 7−85687
$Cd_{1-x}Mn_xTe$-CdTe superlattices, UV excited photolum., Raman scatt. 7−85787
$CdMo_6Cl_{14}(Br_{14})$ single crystals, Raman spectra obs. *(French)* 7−106163
$Cd_2Nb_2O_7$, Raman soft mode damping, thermal hysteresis of dielectric const. 7−125589
CdO-GeO_2 glasses, synthesis and struct. 7−117827
CdS, polar semicond., exciton distrib. function, secondary radiation 7−143359
CdS, solid solns., two- and three-photon scatt., reson. Raman scatt. 7−70772
CdSE, reson, Raman scatt. from defects, polarised luminesc. spectra 7−106180
CdSe, solid solns., two- and three-photon scatt., reson. Raman scatt. 7−70772
CdTe, surface modification, Raman scatt. studies 7−126341
CdTe-ZnTe superlattices, resonance Raman scattering 7−92652
CdV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
$Ce_2Mg_3(NO_3)_2.24H_2O$, spin-Raman scatt. to record ESR spectra, resonant phonon heating 7−138348
Cl_2 adsorbed on graphite, KBr and fused quartz, Raman spectra studies 7−85634
Co complexes with 1-hydroxy-9,10-anthraquinone, IR and reson. Raman spectra 7−132270
Co phthalocyanine, reson. Raman spectra in solid-state 7−85743
$CoMoO_4$, vibr. spectrum, Raman and IR obs. 7−85741
Cr_2O_3, thin film substrates, SERS obs. 7−77585
$CrSi_2$ amorphous thin films, Raman scatt. 7−113202
$CsClO_4$, Raman data, latent space group symmetry in vibr. spectra 7−92657
CsH_2PO_4, cryst., H bonded, OH stretching band shape anal., H^+ dynamics 7−70826
CsH_2PO_4 H-bonded ferroelec., hyper-Raman spectra, central mode 7−106181
$CsHSO_4$, normal and deuterated, IR and Raman vibr. spectra obs. 7−106165
$CsHSO_4$, struct. phase transitions, influence of water and thermal and mech. treatment 7−137552
$CsHSO_4$ superionic conductor, phase transition and proton cond. mechanisms, Raman scatt. study 7−125739
$CsHSO_4$, superionic protonic conductor, mechanism and proton dynamics 7−143093
Cs_2O-Nb_2O_5-Al_2O_3 glasses, struct. and props. 7−137252
$CsSbF_6$, rhombohedral cryst., Raman spectra high-press. behaviour study 7−85711
Cs_3ScF_6, high-temp. phase changes, Raman spectra study 7−85709
$CsSnCl_3$, Raman spectra, vibr. modes, phase transitions 7−138461
Cu (II) complexes with oxamic hydrazide, IR, Raman, UV and visible spectra, thermal anal. 7−99860
Cu complex, β-alanine-$CuNO_3$, single crystal, vibr. modes, IR Raman spectra anal. 7−71689
Cu complex, of tetrahydroboratobis(triphenylphosphine), IR and Raman spectra, vibr. anal. 7−85666
Cu complexes with 1-hydroxy-9,10-anthraquinone, IR and reson. Raman spectra 7−132270
Cu surface, in Cl^- soln., electrode pot., 1-phenyl-5-mercaptotetrazole effects 7−85620
$Cu_{1.8}Mo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$Cu_xMo_6S_8$, x=1.8, 3.2, Chevrel phase supercond., phonon energies and symmetries, Raman study 7−132276
CuO_2 crysts., resonance exciton-photon luminesc. and Raman scatt. obs. 7−77622
Cu_6PS_5I, superionic phase transition, dielec. and optical props. 7−69966
CuV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
D_2, solid and liq., IR and Raman spectra 7−125747
$DyKMo_2O_8$, cooperative Jahn-Teller effect, antiferrodistortive structural phase transition, Raman and IR spectra 7−118444
$DyKMo_2O_8$, cooperative Jahn-Teller system, antiferrodistortive structural phase transition, mag. field depend. 7−118445
Er-containing silicate glass, Raman spectra, Stokes and antiStokes fluoresc. 7−70822
Er_2O_3, Raman spectra, Stokes and antiStokes fluoresc. 7−70822
Eu doped glasses, 7−111800
$EuBa_2Cu_3O_{7-x}$, high T_c supercond., Raman scatt. 7−119011
$EuPd_2Si_2$ intermediate valence impurity state relax. rate model calcs. 7−76845
F_2, high pressure study, phase diagram, Raman spectra 7−137540
Fe catalyst, H activation, acetophenol hydrogenation, Raman scatt. anal. *(Russian)* 7−132963
Fe, passivity, in situ Raman spectrosc., obs. 7−77595
FeNi mixed complexes, vibr., IR and Raman spectra 7−99862
Fe_3O_4, phonon modes, Verwey transition, IR reflectivity and Raman spectra 7−85653
$FePS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
$FePX_3$ (X=S,Se) antiferromag. crysts., Raman scatt. 7−113187
$Fe_{90}Zr_{10}$ magnetic glass, hydrogenation study by Raman spectra 7−85716
$Ga_{1-x}Al_xAs$ and $Ga_{1-x}In_xAs$, Frohlich interaction, picosecond Raman studies 7−104940
$Ga_{1-x}Al_xAs$, carrier relaxation processes, sub-picosecond Raman spectra 7−132281
(GaAl)As superlattices, Raman scatt. by phonons *(Japanese)* 7−119013
$Ga_{1-x}Al_xAs$, LO-phonon $E_0+\Delta_0$ reson., Raman scatt., allowed-forbidden interference 7−85688
$Ga_{1-x}Al_xAs$, pressure induced effects on phonons and gap states *(Japanese)* 7−98928
$Ga_{1-x}Al_xAs$, resonant Raman scatt. study, ordering 7−106199
GaAs, carrier relaxation, subpicosec. Raman spectrosc. 7−85682
GaAs, carrier relaxation processes, sub-picosecond Raman spectra 7−132281
GaAs conduction band nonparabolicity, interband magnetoabsorpt. LO phonon resonant Raman scatt. 7−125707
GaAs, electron and neutron irradiated, reson. Raman study of intrinsic defect modes 7−70775
GaAs, electron-hole plasma, photoexcited, dynamics, ps. time-resolved Raman scatt. investig. 7−85684
n-GaAs, encapsulated with Si_3N_4 films, Raman spectra, stress-induced spectral changes 7−70766

Raman spectra of inorganic solids continued
GaAs epitaxial layer on Si [100] substrate, Raman study 7−125715
GaAs, epitaxially induced stress on V-grooved Si and GaAs substrates 7−124770
GaAs, hot carriers, femtosecond collision times, picosecond time-resolved light scatt. 7−113199
GaAs, ion bombarded, defects, annealing effects, Raman studies 7−138465
GaAs, ion bombarded, phonon shifts, Raman spectra meas. 7−91959
GaAs, ion-implanted and neutron-transmutation doped, rapid thermal annealing, Raman studies 7−111598
GaAs, nonequilibrium carriers and phonons, time-resolved Raman spectrosc. 7−85685
GaAs, optically excited, electron-hole plasma Raman scatt. obs. 7−85681
GaAs, photoexcited plasmas, picosecond Raman scatt., interfacial recomb. 7−125751
GaAs, pressure induced effects on phonons and gap states *(Japanese)* 7−98928
GaAs, Raman scattering from damped plasmon-phonon modes 7−99838
GaAs, reactive ion etching damage, Raman study 7−126350
GaAs, resonance Raman scatt. by optical phonons near the E_0 band gap 7−70782
GaAs, resonant Raman scatt. at point defects, theoretical description 7−99839
GaAs, resonant two phonon Raman scatts., probe for implantation damage and annealing 7−77521
GaAs surface, heavily doped material, symm. forbidden LO phonon Raman scatt. 7−132285
GaAs:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
GaAs/AlGaAs superlattices, Si-implanted, Compositional disordering by rapid thermal annealing 7−137726
$GaAs/Ga_{1-x}Al_xAs$ superlattices, Raman scatt. by longitudinal modes, linear response calcs. 7−144070
GaAs-$Al_xGa_{1-x}As$, multiple quantum well struct., expansion of electron-hole plasma 7−143602
GaAs-$Al_xGa_{1-x}As$ quantum-well structures, MBE grown, Be acceptor Raman scatt. 7−70765
GaAs-$Al_xGa_{1-x}As$ quantum wells, resonant Raman study of low-temperature exciton localisation 7−70783
GaAs-$Al_xGa_{1-x}As$ quantum wells, resonant Raman scatt. from quasi-localised excitons 7−85671
GaAs-$Al_xGa_{1-x}As$ quantum wells, light scatt. by intersubband transitions, Stark effect 7−125750
GaAs-$Al_xGa_{1-x}As$ superlattices, confined and interface phonons, mag. field enhanced Raman scatt. 7−70780
GaAs-$Al_xGa_{1-x}As$ superlattice reson. Raman scatt., impurity-induced Frohlich-interaction scatt. 7−138453
GaAs-AlAs, superlattices, confined optic phonons, annealing effects, Raman obs. 7−85694
GaAs-AlAs, superlattice, excitons and phonons in quantum wells, reson. Raman obs. 7−85696
GaAs-AlAs MOCVD superlattices, struct., diffusion, and phonon scatt., Raman studies 7−125728
GaAs-AlAs quantum wells, resonant Raman scatt. from quasi-localised excitons 7−85671
GaAs-AlAs quasiperiodic heterostructures, MBE growth, struct., electronic and vibr. props. 7−70122
GaAs-AlAs short period superlattices, interface phonon combinations and overtones, reson. Raman scatt. 7−70778
GaAs-AlAs superlattices, folded acoustical Raman line intensities, influence of supercell struct. 7−85651
GaAs-AlAs superlattices, folded acoustic phonons, reson. Raman spectra 7−85693
GaAs-AlGaAs, superlattices, optical phonons, Raman scatt. 7−85695
GaAs-AlGaAs modulation-doped quantum wells, single-particle relax. time from light scatt. spectra 7−138452
GaAs-AlGaAs superlattice, electronic density of states 7−84633
GaAs-AlGaAs superlattices, interface vibr. Raman lines 7−125829
GaAs-$Ga_{1-x}Al_xAs$ superlattices, inelastic light scatt. by collective charge density excitations 7−85654
GaAs-$Ga_{1-x}Al_xAs$:Si superlattices, MBE, plasmons, Raman scatt. obs. 7−70764
GaAs-GaAlAs MQW struct., 2D e-h plasma dynamics, time-resolved Raman scatt. meas. 7−125107
GaAs-GaAlAs superlattices, confined and interface phonons, reson. Raman scatt. 7−118225
GaAs-$In_xGa_{1-x}As$ strained-layer superlattices, Raman scatt. study of folded acoustic phonons 7−125716
GaInAs-InP quantum well structs., Raman scatt. 7−85668
GaInP layers and GaInP-GaAs superlattices, characterisation by Raman spectroscopy 7−106194
$Ga_{0.5}In_{0.5}P$-GaAs(001), metalorganic VPE grown, existence of ordered state, relation to band gap 7−76652
$Ga_xIn_{1-x}P$, resonant Raman scatt. study, ordering 7−106199
GaP crystal, Raman scatt. by surface polaritons, polarisation props. 7−125745
GaP:C,Zn(S), minority impurity electronic Raman scatt., B-line splitting obs., Jahn-Teller effect 7−77554
GaP/GaAs LPE systems, large lattice mismatch accommodation 7−112108
GaSb, reson. Raman scatt. by LO phonons near $E_0+\Delta_0$ gap 7−125746
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
GaSe, lattice dynamics, photoelasticity, Raman scatt., optical suscept., high press. studies 7−98364
GaX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
$GdBa_2Cu_3O_7$ high T_c supercond., lattice instabilities, Raman and IR spectra studies 7−144068
Ge, Raman scatt. by surface vibrs. 7−144071
Ge-C thin films, amorphous, Raman spectra *(Chinese)* 7−77527
Ge-Si alloy microstruct. fabrication by direct laser writing, comp. anal. using Raman microprobe spectra 7−119157
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
$GeBr_4$, mol. fund. and lattice vibr. modes, Raman spectra study 7−85708
GeS_2-Tl_2S glasses, identification of non-bridging S atoms 7−111413
$GeSe_2$, amorphous, laser-induced crystallisation and medium range order 7−83698

Raman spectra of inorganic solids continued
$GeSe_2$:Ag, cryst. and amorphous, electronic struct., photoemission and optical spectra studies 7−105398
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
$Ge_{1-x}Sn_x$ films, sputter deposition, ion beam collisional mixing, metastable single cryst. growth 7−113386
$Ge_{2-2x}Sn_{2x}S_3$, ternary chalcogenide, glass-forming tendency, Raman and Mossbauer obs. 7−85719
$Ge_{1-x}Sn_xSe_2$ glasses, phase separation 7−83724
H_2, solid and liq., Raman spectra 7−125747
HD, solid and liq., Raman spectra 7−125747
HDO in H_2O ice, stretching vibr., Raman spectra 7−99823
HfS_2, Raman scatt. 7−85660
$Hg_{0.83}Cd_{0.17}Te$, phonon spectra, Raman spectra obs., 10-250 K 7−85689
HgI_2, hyper-Raman and multiphoton scatt. involving biexciton states 7−85618
$Hg_x(MF_6)_2$ (M=Nb, Ta, As, Sb), intercalations into HOPG, X-ray diffr. and Raman spectra characterisation 7−137340
$HoBa_2Cu_3O_{7-x}$, high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
I_2 adsorbed on graphite, KBr and fused quartz, Raman spectra studies 7−85634
InGaAs/InP heterointerface, LPE, SIMS, Raman obs. 7−100128
$In_{0.53}Ga_{0.47}As$-InP(100) quantum wells, resonant Raman scatt. 7−85669
InP, photoexcited phonon-plasmon modes, time resolved Raman scatt. spectra 7−70779
InP, photoexcited plasmas, picosecond Raman scatt., interfacial recomb. 7−125751
$InPS_4$ cryst., vibr., pseudotensor of gyration, Raman scatt. 7−125741
InSb-CdTe heterostructures, interfacial layer form., Raman scatt. study 7−112094
InSe cathodes, Li intercalated, electron and phonon aspects 7−133058
InX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
KBr:MnO_4^-, matrix isolated vibr. spectra, IR and Raman selection rules anal. 7−108108
KBr:MnO_4^- cryst., resonant Raman scatt. excitation spectra 7−85659
KCN, cryst., Raman spectrum 7−70816
KCl F centre resonant secondary emission polarisation correl., picosec. time-resolved spectra 7−106244
KCl:Li^+, F_A defect mode dynamics, resonant Raman scatt. study 7−70776
KCl:Li^+, IR and Raman spectra, anomalous isotope shift, spin-phonon system 7−111784
KCl:$Tl^0(Ga^0)(In^0)$, impurity centre vibrational props. resonant Raman scatt. study 7−113198
KCl(Br):Tl, colour centre dynamics and electronic props., reson. Raman scatt. study 7−106179
$KClO_4$, Raman data, latent space group symmetry in vibr. spectra 7−92657
$K_3Co(CN)_6$, crysts., press.-induced phase transition, Raman scatt. obs. 7−84237
$K_3Cr(CN)_6$, monoclinic, phase transform., Raman spectra 7−132274
$(KDP)_{1-x}(NaDP)_x$, mixed crystal, ferroelectric transition *(Korean)* 7−143982
KD_2PO_4, single domain state, lattice dynamics, Raman spectra 7−99817
$K_2HPCr_2O_{10}$ visible and reson. Raman obs. 7−70767
KH_2PO_4, ferroelec. phase transition mechanism, soft mode, Raman spectra 7−111810
KH_2PO_4, melts, low freq. Raman spectra 7−70823
KH_2PO_4, single domain state, lattice dynamics, Raman spectra 7−99817
$KHSO_4.KH_2PO_4$ single crystal., struct., Raman spectra study 7−138443
$KLiSO_4$, high temp. superlattice and incommensurate phases, Raman spectra study 7−125721
$KLiSO_4$, low temp. Raman spectra study 7−92673
$KLiSO_4$, press. induced phase transitions 7−69901
$K_2Mg(SO_4)_2.6H_2O$, IR and polarized Raman spectra 7−77547
KNO_3, central component in Raman spectrum 7−119002
KNO_3 thin films, ferroelec. phase III, Raman spectra obs. 7−99960
$KNbO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
$KNbO_3$, structural phase transitions, hyper-Raman scattering *(Japanese)* 7−99858
$KO_{1/2}$-GeO_2-SnO_2 glass, struct. and T_g, SnO_2 substitution, Raman spectra *(Japanese)* 7−91464
$K_3PCr_4O_{16}$, IR and Raman spectra, vibr. bands 7−113171
$(KPO_3)_n$, glass, low freq. Raman spectra 7−70823
$K_2S_2O_8$ single cryst., $S_2O_8^{2-}$ ion internal modes, Raman spectra studies 7−85640
$KSbF_6$, rhombohedral cryst., Raman spectra high-press. behaviour study 7−85711
$KTaO_3$, 4 K Raman scatt., temp depend. 7−144072
$KTaO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
$KTaO_3$:Na, soft modes and pyroelectricity, Raman scatt. spectra meas. 7−125749
KVO_3, polycryst. fundamentals and external mode, Raman obs. 7−132264
KY_3F_{10}:Ce^{3+}(Yb^{3+}), spin-lattice relax., EPR spectra, Raman scatt. 7−70636
LaB_6, crystal dynamics, multichannel Raman spectra study 7−85710
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., IR and Raman spectra studies 7−92666
$LaNbO_4$, Raman spectra, low freq. region, press. depend. 7−77546
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. single crysts., lattice vibrs., Raman scatt. studies 7−98363
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon dispersion curves 7−104935
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon Raman scatt. studies 7−106182
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. and phonon spectrum, neutron and Raman scatt. studies *(Russian)* 7−131327
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Raman and IR study of lattice vibrs. 7−144075
Li, core electron dynamic struct. factor, momentum depend. 7−131093
$LiAlH_4$, evolution of metal-hydrogen bonds, deuteration IR and Raman spectroscopy 7−104622
Li_3AlH_6, evolution of metal-hydrogen bonds, deuteration IR and Raman spectroscopy 7−104622
$LiBGeO_4$, crystalline and glassy, vibrational spectra, Raman and IR obs. 7−118996
$LiKSO_4$, low temp. phase transitions, mol. vibr., Raman spectra anal. 7−85713
$LiLa_{1-x}Nd_xP_4O_{12}$ glasses, Nd spatial distrib., Raman and kinetic luminesc. spectroscopy 7−76010
$LiN(H_xD_{1-x})_4SO_4$, lattice vibrs., Raman spectra, 77-143 K 7−106171
$LiNbO_3$, directional dispersion of phonons 7−138462
$LiNbO_3$, Raman spectra and directional dispersion 7−70805
$LiO_{1/2}$-SnO_2-GeO_2 glass, struct. and T_g, SnO_2 substitution, Raman spectra *(Japanese)* 7−91464
Li_2SO_4, monoclinic, Li modes, low temp. behaviour 7−70804
Li_2SO_4, monoclinic, low-temp. behaviour of Li modes, polarized Raman spectra 7−99851
Li_4SiO_4-Li_3BO_3 glasses, rapidly quenched, Raman spectra studies 7−106176
$LiTaO_3$, directional dispersion of phonons 7−138462
$LiTaO_3$, Raman spectra and directional dispersion 7−70805
Lu diphthalocyanine, reson. Raman spectra in solid-state 7−85743
Mg salts, glassy and liq., Raman spectra studies 7−106162
Mg-Cl boracite, improper ferroelectric phase transition, Raman scatt. strength 7−125631
MgF_2, IR spectra, temp. depend. *(French)* 7−85630
MgO-Na_2O-B_2O_3 glasses, mid-IR and Raman investig. 7−77540
$Mg_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Mg_2P_2Se_6$, Raman spectra assignments *(German)* 7−99873
$Mg(ReO_4)_2$, magnesia-supported perrhenates, Raman and optical spectra 7−118995
Mg_2SiO_4, β- and γ-forms, Raman spectra 7−125714
MgV_2O_6, brannerite-type sample, vibr., Raman spectra 7−144055
$MnGeO_3$, pyroxene, diamond anvil cell synthesised, Raman microprobe obs. 7−70820
$MnMoO_4$, vibr. spectrum, Raman and IR obs. 7−85741
$Mn_2P_4O_{12}$, vibr., IR and Raman spectra 7−85619
$MnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
Mo_2, matrix isolation Raman and fluoresc. spectra 7−96906
a-MoS_3 thin films, fundamental energy gap, optical studies 7−99955
N_2, crystal, intermol. pots., high pressure Raman spectra anal. 7−85746
N_2, melting curves at high temps. and pressures 7−124456
ND_4ClO_4, phase transitions, laser Raman studies 7−104997
NH_3, solid, internal and external modes, Raman Scatt. studies at high press. *(Japanese)* 7−131250
NH_4AlF_4, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
NH_4CdCl_3, phase transitions, laser Raman studies 7−106175
NH_4I, vibr. mode, variable temp. Raman obs. 7−70808
NH_4MnCl_3, lattice and NH_4 modes, Raman spectra above and below cryst. phase transition 7−99854
$(NH_4)_3PCr_4O_{16}$, IR and Raman spectra, vibr. bands 7−113171
$(NH_4)_4P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$((NH_x)_{1-4}X_x)_2SO_4$, X=K,Rb,Cs, external vibration spectra 7−92677
$NaAlH_4$, evolution of metal-hydrogen bonds, deuteration IR and Raman spectroscopy 7−104622
Na_3AlH_6, evolution of metal-hydrogen bonds, deuteration IR and Raman spectroscopy 7−104622
NaCN, cryst., Raman spectrum 7−70815
Na_4TiO_4, Na_2TiO_3, $Na_8Ti_5O_{14}$, $Na_2Ti_3O_7$ and $Na_2Ti_6O_{13}$, stoichiometry and Raman spectra of titanates 7−91830
$Na_3Zr_2Si_2PO_{12}$/$Na_2Zr_4Si_{16}P_8O_{61}$, NASICON/glass composite ceramics, conductivity and microstruct. *(French)* 7−131361
$(NbSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7−85701
$(NbSe_4)_xI$, liner chain cpd., phase transitions, Raman scatt. studies 7−99869
NdB_6, cryst. electric field level scheme, Raman spectra obs. 7−92678
$NdBa_2Cu_3O_{7-x}$, high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
$NdNbO_4$, ferroelastic, Raman spectra, press., dependence 7−144054
Ni (II) complexes with oxamic hydrazide, IR, Raman, UV and visible spectra, thermal anal. 7−99860
Ni complex, bis(difluoroborondiphenylglyoximato)NiII, partial oxidation with I_2 7−100544
Ni complex, Ni(II)-octaethylporphyrin, out-of-plane deform. modes in reson. Raman spectra 7−85742
Ni complexes with 1-hydroxy-9,10-anthraquinone, IR and reson. Raman spectra 7−132270
Ni, electrochemical polarisation in H_2SO_4 soln. 7−78514
Ni-Mo-Al_2O_3 hydrogenation catalysts, Raman spectra 7−113206
NiMo alloy, electrochemical polarisation in H_2SO_4 soln. 7−78514
NiOOH, β- and γ-forms, Raman spectra rel. to Ni corrosion 7−113177
$NiPS_3$, layered cpd., antiferromag. induced Raman scatt. study 7−85705
$NiSi_2$ amorphous thin films, Raman scatt. 7−113202
O_2, ε phase, extended interactions, isotope effects, IR and Raman spectra 7−99822
O_2, phase transformations, melting and solid-solid, 120-650 K 7−113184
P_4S_3, intermolecular bonding, phonons, Raman spectra 7−85627
Pb_2, matrix isolation Raman and fluoresc. spectra 7−96906
$PbDPO_4$, lattice dynamics of the ferroelectric transition, comparison with $PbHPO_4$ 7−85546
$PbHPO_4$, lattice dynamics of the ferroelectric transition, comparison with $PbDPO_4$ 7−85546
$PbHPO_4$, lattice dynamics of para-electric phase, Raman spectrum meas. 7−131252
$PbHPO_4$, ferroelec. transition, lattice dynamics, Raman spectrum 7−111807
PbI_2, disordered microcryst. prod. from colloidal suspension, Raman obs. 7−85721
PbI_2, hyper-Raman and multiphoton scatt. involving biexciton states 7−85618
$Pb_{1-x}Mn_xTe$, band struct. in high mag. fields, magneto-optical methods 7−132246
$PbMo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$PbMo_6S_8$ Chevrel phase supercond., phonon energies and symmetries, Raman study 7−132276
PbO, matrix isolation Raman and fluoresc. spectra 7−96906
$Pb_3(PO_4)_2$, ferroelastic phase transition, Raman scatt. spectra, high press. study 7−92664
PbTe, band struct. in high mag. fields, magneto-optical methods 7−132246
Pd complex, (Pd(cyclohexanediamine)$_2$Br)Br_2, mixed valence, reson. Raman spectra 7−85740
PdRh polycrystalline foil, high temp. oxidation, XPS and Raman studies 7−138590

Raman spectra of inorganic solids continued
Pt complex, resonance Raman study, ν_1 band struct. 7−85616
Pt-ethene complex, IR and Raman spectra, valence force field force constants 7−99861
$RbAlF_4$, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
RbCl:Tl, colour centre dynamics and electronic props., reson. Raman scatt. study 7−106179
$RbClO_4$, Raman data, latent space group symmetry in vibr. spectra 7−92657
Rb_2CrCl_4, planar ferromag., magnon and phonon Raman scatt. 7−106158
RbD_2PO_4, single cryst., vibr., IR and Raman spectra 7−144061
RbI, gamma irradiated ultrapure single crystals, laser Raman spectra 7−113168
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed cryst., PO_4 tetrahedron ν_1 mode 7−76318
Rb_3ScF_6, high-temp. phase changes, Raman spectra study 7−85709
$ReF_6ReF_7MF_6MF_5$ (M=Sb,Au), mixed ion-molecule salts, preparation and stabilisation 7−104700
$Ru_3(CO)_{12}$, vibr., Fourier transform IR, photoacoustic and Raman spectra 7−132272
Sb-S-I glasses, Raman spectra, dielec. props. 7−77566
Se covalent clusters in zeolites, electronic and vibr. spectra 7−125723
a-Se, crystallisation caused by Al diffusion through Se-Al interface *(Japanese)* 7−83673
$(SeO_3)_4$, solid and vapour phases, vibr. Raman spectra 7−85667
Si, electron-hole plasma lateral expansion, picosec. time-resolved Raman study 7−112383
Si films, amorphous and crystalline, Raman scatt. 7−85722
Si, ion implanted, laser annealing, Raman scattering spectra 7−111662
Si ion implanted with focused ion beam, Raman microprobe obs. 7−111606
Si, laser annealed and ion implanted, phase transitions, Raman studies 7−119008
a-Si, structural and vibrational props. calcs., 216-atom continuous-distorted-network model 7−69848
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
Si:B,H, H passivation of B acceptors, Raman scatt. studies 7−85655
Si:B films, low pressure CVD grown, microstructure 7−106434
Si:H, amorphous, glow discharge deposited films, Raman scatt. obs. of struct. changes and SRO 7−99957
a-Si:H, amorphous superlattice, Raman scatt. 7−85697
a-Si:H,Cl films, struct. order 7−84568
a-Si:H films, structural disorder, Raman scatt. investig. 7−118993
Si:H single crysts., hydrogenation-induced defects studies 7−111542
$Si\text{-}Ge_xSi_{1-x}$, Raman scattering in Fibonacci superlattices 7−99186
$Si\text{-}Ge_xSi_{1-x}$ strained-layer superlattices, folded acoustic phonons 7−70059
$a\text{-}Si\text{-}SiO_x$ evaporated superlattices, struct. meas. 7−131477
$SiBr_4$, mol. fund. and lattice vibr. modes, Raman spectra study 7−85708
SiC, 6H and 3C polytypes heteroepitaxial CVD, Raman spectra study 7−119148
3C-SiC CVD epilayers on Si, internal stresses, Raman scatt. meas., elastic deform. theory calcs. 7−118336
SiC, polytypes in aggregations, Raman spectra *(Russian)* 7−113205
a-SiC thin films, Raman spectra *(Chinese)* 7−77527
α-SiC:Cr, ion-implanted, recrystallisation 7−71222
Si_xC_{1-x}, amorphous, phonon density of states calc., rel. to Raman and IR spectra 7−76328
$a\text{-}Si_{1-x}H_x$ films, vibrational and optical props., optical absorpt. and Raman scatt. meas. 7−125830
$a\text{-}SiN_x$:H, amorphous superlattice, Raman scatt. 7−85697
Si_3N_4, sintered under gas press., LF Raman spectra, lattice modes, long-range order 7−113179
$a\text{-}Si_xN_yH_z$, angular distortions, exponential absorpt. edge 7−119009
SiO_2 glass fibres, elongated, Raman spectra 7−97108
SiO_2, stishovite, Raman and infrared investigations 7−138463
SiO_2, vitreous, defect Raman bands, struct. model 7−85656
SiO_2, vitreous, O−O vibrs., Raman obs. 7−70825
$SiO_2\text{-}Na_2O(Cs_2O)$ glass, struct. mol. dynamics simulation 7−104576
Si_2O_5-Na, vermiculite, Raman spectra study 7−85700
Si_2O_5-Sr, vermiculite, Raman spectra study 7−85700
SiP_2O_7, cubic and monoclinic, vibrational spectra, normal coordinate anal. 7−106169
SmB_6, crystal dynamics, multichannel Raman spectra study 7−85710
$SmBa_2Cu_3O_{7-x}$, high T_c supercond., Raman scatt. 7−119011
SmSe, high press. electronic Raman scatt., $4f^6$ config. excitation meas. 7−77538
$SnBr_4$, crystn., IR and Raman spectra 7−132269
$SnBr_4$, lattice dynamics, force constant model 7−76322
$SnMo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$SnMo_6S_8$ Chevrel phase supercond., phonon energies and symmetries, Raman study 7−132276
$SnO_2(H_2O)_n$, Raman light scatt. spectra, size effects 7−119020
$Sn_2P_2(S_xSe_{1-x})_6$ uniaxial ferroelectrics; critical behaviour near Lifshitz point 7−118961
$(Sn_xPb_{1-x})_2P_2(S_ySe_{1-y})_6$ ferroelectrics, soft phonon spectrum, phase diagram, Raman spectra study 7−132261
SrB_6, crystal dynamics, multichannel Raman spectra study 7−85710
$Sr(BrO_3)_2.H_2O$, cryst., BrO_3^- ion dynamics, Raman spectrosc. obs. 7−70818
$Sr_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
n-$SrTiO_3$, Prussian Blue films, photochromism, spectroscopic and electrochem. studies 7−70836
Sr_2TiO_4, Raman active phonons, spectral meas. 7−106186
$Sr_3Ti_2O_7$, Raman active phonons, spectral meas. 7−106186
$Sr_4Ti_3O_{10}$, Raman active phonons, spectral meas. 7−106186
$(TaSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7−85701
$Tb_3Al_5O_{12}$, time resolved electronic Raman and fluoresc. spectra 7−113166
Te covalent clusters in zeolites, electronic and vibr. spectra 7−125723
$Te(OH)_6\text{-}Na_2SO_4$, vibr. IR and Raman spectra 7−113172
$Te(OH)_6\text{-}Tl_2SO_4$, vibr. IR and Raman spectra 7−113172
$ThSe_3$, electronic props., vibr. Raman spectra study 7−85715
TiO_x thin films, SERS obs. 7−77593
$TlAlF_4$, high temp. displacive phase transitions, Raman spectra anal. 7−85714
UBe^{13}, polarised light scatt. study 7−85650
$UO_2(NO_3)_2.6H_2O$, pyroelec. single crysts., phase transitions, Raman spectrosc. obs. 7−70807
UPt_3, heavy fermion superconductor, Raman scatt. from spin fluctuations and phonons 7−92675

Raman spectra of inorganic solids continued
US_3, electronic excitations, phonons, mag. ordering, Raman scatt. 7−92660
USe_3, electronic excitations, phonons, mag. ordering, Raman scatt. 7−92660
USe_3, electronic props., vibr. Raman spectra study 7−85715
UTe_3, electronic excitations, phonons, Raman scatt. 7−92660
VO_2 films, metallic phase conductivity meas., growth technique and structure effects 7−118367
WO_3, electrochromic form. of anodic film on W electrode, IR reflection and Raman spectroscopies 7−99812
WO_3 films, electrochromic behaviour, Raman spectrosc. obs. 7−77594
WO_3 powder, characteristic vibrs., force consts. and bond length, IR and Raman spectra study 7−85644
WO_3/Al_2O_3 supported system, XANES and Raman obs. 7−132375
$WO_3.xH_2O$ powder, characteristic vibrs., force consts. and bond length, IR and Raman spectra study 7−85644
Y-Ba-Cu-O, high T_c supercond., Raman study of lattice modes 7−113190
Y-Ba-Cu-O, Raman spectra of high T_c supercond. $YBa_2Cu_3O_7$ and semicond. $YBa_2Cu_3O_6$ 7−125726
Y-Ba-Cu-O high T_c supercond., Cu-O bond-stretching vibrs., Raman and IR absorpt. spectra 7−111790
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−112555
Y-Ba-Cu-O high T_c supercond., O content-transition temp. relations 7−118635
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond. single crysts., Raman scatt study 7−125738
Y-Ba-Cu-O high T_c supercond., Raman scatt. study, evidence for O vacancies 7−132277
Y-Ba-Cu-O high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
$YBa_2Cu_3O_{6+x}$, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
$YBa_2Cu_3O_7$ high T_c supercond., lattice instabilities, Raman and IR spectra studies 7−144068
$YBa_2Cu_3O_{9-\delta}$ high T_c supercond., props., microstruct. and resistive transitions 7−137578
$YBa_2Cu_3O_x$, perovskite superconductor, phonon spectra 7−104930
$YBa_2Cu_3O_y$, high T_c supercond., Raman spectrum temp. depend. 7−119010
Y_2BaCuO_5, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
Y_2BaCuO_{5-y}, green phase, lattice vibr. modes, Raman and IR spectra 7−99836
$Y_2O_3\text{-}SiO_2$ glasses, prep. by sol-gel process, IR and Raman spectra 7−85623
Y_2TiO_5, structural disordering on quenching, Raman spectra 7−99820
$Y_2Ti_2O_7$, structural disordering on quenching, Raman spectra 7−99820
YVO_4, press.-induced transition from zircon-type to scheelite-type struct., Raman study 7−142984
γ-$Zn_2Co(PO_4)_2$, vibr. and electronic spectra 7−70787
ZnF_2, IR spectra, temp. depend. *(French)* 7−85630
$ZnGaInS_4$, layered cpds., asymmetries of Raman scatt. 7−106196
$ZnIn_2S_4$ layered cpds., asymmetries of Raman scatt. 7−106196
ZnP_2, gyrotropic, Raman light scatt., spatial dispersion effects 7−99818
ZnSe epitaxial layers on GaAs substrates, misfit strain, Raman study 7−99835
n-ZnSe, plasmon-LO-phonon coupled modes, Raman scatt. 7−113185
ZnSe-GaAs heterostructure, Raman spectrum 7−138455
ZnTe, acceptors, electronic Raman scatt. 7−113182
ZnTe-ZnS strained-layer superlattices, Raman probing and lattice modes 7−99856
ZnTe-ZnSe strained layer superlattices, resonant Raman scatt. and photoluminesc. 7−144051
$ZnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
$ZrF_4\text{-}NdF_3\text{-}FeF_3$ glass fibres, photolum. studies 7−125785
ZrO_2 films, CVD from $ZrCl_4\text{-}H_2\text{-}CO_2\text{-}Ar$ gas mixture 7−100100
ZrO_2, partially stabilised, stress-induced monoclinic phase, 2D Raman obs. 7−70810
$ZrO_2\text{:}CeO_2$, phase transformations, Raman microprobe obs. 7−70811
$ZrO_2\text{:}Y_2O_3$, stress-induced transformation, zone size, Raman microprobe obs. 7−70812
$ZrO_2\text{:}Y_2O_3$ disordered cubic crysts., low freq. Raman spectra, Rayleigh wing broadening obs. 7−118994
$ZrO_2\text{-}Y_2O_3$ films, growth on GaAs (100) by pulsed laser evaporation 7−125992
$ZrO_2\text{-}YO_{1.5}$, superionic conductor, defect-induced Raman spectra 7−99857

Raman spectra of organic molecules and substances
acetanilide unconventional amide I band 7−90128
acetic acid, aq. soln., Raman spectroscopy, factor anal. and band contour resolution 7−68315
acetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
acetone UV reson. Raman enhancement cross section meas. 7−74625
acetonitrile, mols. in liq. phase, vibr. and orientational relax. 7−103516
acetonitrile, solns., vibr., Raman spectra 7−85617
acetonitrile, UV reson. Raman enhancement cross section meas. 7−74625
N-acetylproline methylamide, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
adamantanamine hydrochloride, solid, phase transition and mol. rot. investig. 7−77543
adenine compounds, mol. interactions, Raman and IR spectra studies 7−86604
adenosine residues, UV resonance Raman bands 7−106965
albumin, struct and activity, hydration effects, integrated optics and IR Raman spectra study 7−68496
aligned anisotropic fluids, rotational contribution to the vibrational band-shape of ordered systems 7−132250
alkane-urea clathrates, cryst., Raman linewidths 7−85730
alkanes, cyclic, $C_{24}\text{-}C_{288}$, vibr. spectrosc., chain folding and packing, conforms. 7−90130
alkanes, linear, $C_{24}\text{-}C_{288}$, vibr. spectrosc., chain folding and packing, conforms. 7−90130
n-alkanes, odd-numbered $C_{11}\text{-}C_{23}$, high temp. Raman studies 7−106164
alkanes, Raman active bands, motion and conform. effects 7−109911
n-alkanes, Raman trace scattering, intensity parameters 7−74646

Raman spectra of organic molecules and substances continued
alkyl xanthates, Raman spectra, vibr. anal., rot. isomerism 7—82137
alkylammonium derivatives, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7—85702
alkylenediammonium manganese tetrachloride, rotational motions and phase transitions *(Japanese)* 7—131063
n-alkyloligo(oxyethylene)s, solid-state mol. conform., Raman spectrosc. obs. 7—85731
amino acids, low frequency Raman scatt. spectra, laser light effects 7—113195
amino acids, UV reson. Raman excitation profiles study 7—68323
2-amino-4H-pyran derivatives, Raman and IR spectra 7—74645
5-aminotetrazole monohydrate, single cryst., polarised Raman and IR spectra 7—85725
ammonium hydrogen oxalate semihydrate, phase diagram, Raman and Brillouin scatt. 7—85732
ammonium nitrates, substituted, phase transitions, Raman and IR obs. 7—70817
ammonium perchlorates, substituted, phase transitions, Raman and IR obs. 7—70817
ammonium Rochelle salt, ferroelec. phase transition and Raman spectra 7—125724
amphiphile, bilayer-forming, adsorbed monolayers, polarised UV reson. Raman and absorpt. spectra 7—71698
aniline, resonance Raman depolarization ratios as a probe of excited state dephasing times 7—129714
aniline radical cation, vibr., time resolved reson. Raman spectra 7—90139
anilino radical, vibr., time resolved reson. Raman spectra 7—90139
anisotropic ordered fluids, vibrational bandshape analysis and inertial-stochastic molecular motion 7—75970
anthracene, first excited state, vibronic coupling, mol. fluoresc. and Raman spectra anal. 7—82180
anthracene, fluoresc. free Raman spectroscopy 7—92690
anthracene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7—85723
anthracene-d_{10}, cryst., external phonons, press. and temp. depend., Raman spectrosc. obs. 7—85724
anthracene-d_{10}, mol. cryst., external phonons, Raman spectrosc. obs. 7—85622
anthracene-trinitrobenzene complex, lattice vibr., polarised Raman spectra 7—70769
anthraquinone derivatives, photochem., time-resolved reson. Raman spectrosc. obs. 7—68311
anthraquinone-2, 6-disulphonate, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7—82192
apolipoprotein A-1-dimyristoylphosphatidylcholine recombinants, boundary lipids, Raman obs. 7—71694
arginine, aq, soln., UV reson. Raman spectra study 7—70800
azanaphthalenes, triplet state reson. Raman spectroscopy 7—82132
3—azidopropyne, structure, IR and Raman spectra, electron diffr. 7—122341
azo dye-cyclodextrin inclusion systems, Raman optical activity 7—106161
azoalkane, gas-phase, sequential bond cleavage, time-resolved CARS obs. 7—68309
azobenzene-containing ammonium amphiphile, aq. solns., UV resonance Raman and UV-VIS absorpt. spectra 7—132295
azulene, solvent effects, Raman excitation profiles, line broadening stochastic model calcs. 7—82190
bacteria, live, 242 nm uV reson. Raman spectra 7—107000
bacterial components, 242 nm uV reson. Raman spectra 7—107000
bacteriochlorophylls, photosynthetic reaction centres, ground-state interactions, reson. Raman spectra 7—78760
bacteriorhodopsin, kinetic studies, reson. Raman spectra 7—78777
bacteriorhodopsin, photochemical cycle, ps time-resolved reson, Raman spectra anal. 7—86915
bacteriorhodopsin, pS conformational intermediates during photocycle, vibr. Raman spectra study 7—68485
bacteriorhodopsin, reson. Raman spectra, vibr. anal. 7—109907
(BEDT-TTF)$_2$I$_3$, mol. vibrs., Raman spectra study 7—85675
α-(BEDT-TTF)$_2$I$_3$, quasi-2D metal, light scatt. by plasmons 7—77530
β-(BEDT-TTF)$_2$IAuI, superconductor, reson. Raman spectra 7—106190
(BEDT-TTF)$_2$IBr$_2$, mol. vibrs., Raman spectra study 7—85675
benzene, liq., polaritons, stimulated Raman scatt. induced anti-Stokes Raman scatt. 7—70773
benzene, liquid, Raman spectra, resonant intermolecular coupling 7—90142
benzene derivatives, electronic transitions, UV reson. Raman spectra anal. 7—82186
benzene derivatives, Raman intensity and mol. interaction investig., substituent effects 7—90152
benzene solution doped with fluorophore, fluorescence rejection in Raman spectroscopy 7—80894
benzene-d_0 (d_6), liq., isotopic dilution anal., vibr. Raman spectrum 7—90155
benzene-pyridine mixtures, liquid, Raman spectra, resonant intermolecular coupling 7—90142
benzoyl fluoride, barrier to internal rotation, force field calculations, thermodynamic functions, vibrational spectra 7—122736
bicyclo (n,1,0) alkanes with trimethylsilyl groups and alpha-chlorosilicon compounds, IR and Raman spectra *(French)* 7—96681
bicyclooctene, plastic phase, muon probe investig. 7—85508
2,2′-bipyridine in acidic media, Raman spectra, conformational behaviour 7—116976
bis(ethylenedithio)tetrathiafulvalene(-d_8), IR and Raman spectra, vibrs. assignment 7—82123
bis(trimethylsilyl)acetylene, liq. state dynamics, Raman scatt. obs. 7—92662
bromo-aliphatic acid esters, rot. isomerism, Raman and IR spectroscopic investig. 7—103486
butadiene, 2^1Ag state, UV reson. Raman spectra anal. 7—82184
butadiene iron tricarbonyl, in inert gas soln., Raman spectra 7—90176
1,3-butadiyne in deoxycholic acid and apocholic acid canals, inclusion polymerisation, struct., elec. and optical props. 7—86623
n-butane, third-order nonlinear suscept. meas., appl. in coherent anti-Stokes Raman scatt. 7—68777
butenes, isomers, electronic struct., reson. Raman spectra anal. 7—82188
butyronitrile, IR and Raman spectra, conformational and vibr. anal. 7—109892
cadmium arachidate multilayers, variable temp. Raman obs. using integrated optics techniques 7—85612

Raman spectra of organic molecules and substances continued
cadmium stearate, Langmuir-Blodgett mono- and multilayers, order, multichannel Raman spectrosc. 7—77592
cadmium stearate, Langmuir-Blodgett monolayers, order charactn., Raman spectra 7—112061
carbonmonoxy haemoglobin, photolysed, local haeme environment, dehydration effects, reson. Raman spectra 7—78774
β-carotene, reson. Raman scatt. and luminesc., excitation profiles, nonmotional narrowing effect 7—90146
β-carotene, reson. Raman scatt. cross sections 7—129723
β-carotene isomers, excited triplet-state, transient reson. Raman spectra 7—90161
carotenoids, contained in photosynthetic bacteria, Raman and IR spectra study 7—68317
5-chloro-2-pyridone, phase transition, IR, Raman and dielec. meas., NQR spectrum 7—77423
chloroaluminium phthalocyanine, thin films, Raman spectra, Davydov splitting 7—99864
p-chlorobenzamide, order-disorder phase transition, IR and Raman studies 7—142685
2-chlorobenzoxazole, tautomerism, vap. IR and UV absorpt. spectra 7—103487
3-chlorocyclopropene and its deuterated modifications, IR and Raman spectra, vibr. anal. 7—96682
chloroethylenes, π excited state struct. reson. Raman spectra anal. 7—82187
chloroform, liq., Raman spectra depolarisation ratios 7—128671
chloromethane, Rayleigh line rejection in Raman spectra 7—89273
chlorophyll, aggregation in solns., Raman excitation profile anal. 7—82191
chlorophyll, isomers, metal-substitution, Raman and IR spectra study 7—68317
chlorophyll a aggregates, electronic origins, Raman excitation profiles, resonant two-photon spectra 7—93641
chlorophyll model cpds., normal modes, reson. Raman spectra 7—116975
chromobacterial mixture, single cells, reson. Raman microprobe, detect. 7—86925
chrysene, electronic states struct., reson. Raman spectra anal. 7—82194
chymotrypsin, enzyme activity and conform., pH and pressure effects, Raman spectra study 7—68498
chymotrypsin cryst., enzyme interaction with substrate, Raman microscopy study 7—92688
cobalt phthalocyanine impregnated PTFE bonded C electrodes, CO_2 electrochemical reduction 7—144726
coenzyme F_{430}, nickel hydrocorphinoids, structural changes, Raman spectroscopy 7—133196
conference, Eugene, OR, USA (Sept. 1986) 7—72726
copper formate complexes, form. at surface, Raman spectrosc. obs. 7—74632
crystal mixtures, nonlinear line-narrowing spectroscopy 7—138441
crystal violet, Au surface, resulting complex Raman spectra study 7—74628
crystal violet chloride adsorbed layer, on transition metal surface, Raman spectra study 7—77571
CTAB, thin films adsorpt. on nonmetallic surface, SERS 7—77583
cycloalkanes, phases, vibrs. of kinks and folds 7—77586
cyclobuten-3,4-diones, halogenated, vibr. anal. 7—96694
cyclobutylgermane, conform. anal., internal rot. barriers, Raman investig. 7—74636
cyclobutylsilane, conform. anal., internal rot. barriers, Raman investig. 7—74636
1,3-cyclohexadiene, femtosec. photochem. ring opening, reson. Raman obs. 7—74619
cyclohexane—d_0(d_{12}), harmonic force field Raman scatt. intensity 7—122547
cyclopropene, empirical pot. function 7—90017
cyclopropene-1,3-d_2, vibr. spectra 7—90017
cyclopropyl-1,1-carboxamidoacetate, Raman and IR spectra 7—90149
cyclopropyl-1-cyanocarboxamide, Raman and IR spectra 7—90149
l-cystine, stretching vibr., UV reson. Raman excitation 7—129721
cytochrome c, lineshape anal., reson. Raman spectra 7—78762
cytochrome c, tunnelling disorder mode, reson. Raman spectra 7—78775
cytochrome c oxidase, catalytic intermediates, reson. Raman spectra 7—78761
cytochrome complexes, stretching vibrs. correl., Raman spectra 7—78767
cytochrome P450$_{cam}$, bound dioxygen, reson. Raman detect. 7—78769
cytochrome-c anomalous reson. enhanced quasielastic light scatt. 7—133224
DABCO, at Ag electrode, SERS, photon-driven charge transfer 7—76628
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7—125725
n-decylammonium chloride, chain dynamics, IR and Raman spectrosc. obs. 7—71699
decylammonium chloride, phase transitions, Raman and IR spectroscopy 7—84251
di-n-butylamine, Raman bands, temp. depend. intensities 7—85639
diazines in aqueous and protic solvents, electronic and vibr. spectra 7—129700
dibenzo-18-crown-6, conformations, Raman spectra 7—74637
dibenzylsulphide, FT IR and Raman spectra 7—99867
4,4′-dibromobenzophenone, press. depend. of LF Raman spectra 7—77525
dichlorodiammineplatinum-guanosine complexes, UV reson. Raman spectra, pH effects 7—68325
dicopper tetracarboxylates, thermotropic columnar mesophase, vibr. studies 7—142572
dicyanoacetylene, vibr. IR and Raman spectra 7—82128
dicyclohexyl-18-crown-6, conformations, Raman spectra 7—74637
α,α-dicyclohexyl-cyclohexanemethanol open dimers, lattice vibr. coupling, Raman and IR spectra 7—113180
dicyclopropyl ketone, conformational equilibrium, vibrational spectra 7—122538
diethylene glycol dimethyl ether-d_{14}, liq. and solid states, Raman spectra 7—68313
4,4′-difluorobenzophenone, press. depend. of LF Raman spectra 7—77525
N,N-dihydro-4,4′-bipyridinium radical cation and parent dication, reson. Raman spectra 7—144060
1,8-dihydroxyanthraquinone, cryst. ground state vibrs. assignment, Raman excitation profiles anal. 7—85747
2,5-dimethyl hexatriene, lowest excited triplet states struct., time resolved reson. Raman spectra 7—90162
dimethyl sulphoxide, vibr. spectra in different media, IR and Raman obs. 7—103505

Raman spectra of organic molecules and substances continued
2,5-dimethyl-1,3,5-hexatriene, isomers, UV absorpt. and Raman spectra 7−74624
5,6-dimethylbenzimidazole, tautomerism, vap. IR and UV absorpt. spectra 7−103487
dimethylcyclohexane, conformer populations, press. and temp. depend., Raman intensity meas. 7−74639
dimethylformamide, solns., depolarised Rayleigh wing and Raman splitting 7−90154
dimethyltelluride-d_0(-d_6), vibr. spectra and normal coord. calcs. 7−96695
dimolybdenum tetraacetate, vibr. assignments, ligand deuteration method, Raman spectra 7−82153
dimyristoyl phosphatidylcholine, lipid membranes, Raman spectra and head group hydration 7−71696
dinitrobenzenes, (o−, m− and p−), vibr. spectra and normal coord. anal. 7−74642
4-(2′,4′-dinitrobenzyl)pyridine, time resolved resonance Raman studies 7−85637
1,4-dioxane, liq., vibr. dephasing and relax. 7−96828
1,4-dioxane-oxalyl fluoride complex., cryst. struct., Raman and visible obs. 7−70763
dipalmitoylphosphatidylglycerol, vib. freq. shift, Raman spectroscopy 7−90175
diphenylacetylene, acetylenic bridge vibrs., Raman meas. 7−74638
diphenyldiacetylene, acetylenic bridge vibrs., Raman meas. 7−74638
1,5-dithiacyclooctane, cation radical and dication, Raman spectra and structs. 7−74644
DNA, B-type conformations in oligomer and salmon sperm 7−71672
DNA, conformations, sequence dependent modulation, Raman spectrosc. obs. 7−71691
DNA, structures and interactions with proteins, UV reson. Raman spectrosc. 7−71692
DNA bases, ethanol-induced conform, changes, Raman spectrosc., base stacking energies 7−71673
4-dodecyloxy-4′-cyano biphenyl thermotropic liq. cryst., vibr. IR and Raman study 7−137554
dodecyltrimethylammonium chloride, liq. cryst., chain interactions, Raman spectrosc. obs. 7−70803
durene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
duroquinone, Raman spectra, triplet state, semi-reduced form, laser pumping, transient species 7−141582
duroquinone, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7−82192
enzymic cofactors, and photochem.-induced transients, UV reson. Raman spectrosc. 7−133223
ethane, CH stretch-bend force consts., isotope shifts, Raman spectra anal. 7−103508
ethane, third-order nonlinear suscept. meas., appl. in coherent anti-States Raman scatt. 7−68777
ethanol, behaviour in various binary solns., C-H stretching vibrs., difference Raman spectroscopy 7−74622
ethanol, four-photon Raman spectroscopy using elastic scattering of pump waves 7−128673
ethyl isocyanate, vibr. spectrum, normal coord. anal., conform. stability and ab initio calcs. 7−90093
o-ethyl phenol, fundamental freqs., Raman and IR spectra 7−90136
ethyldifluorophosphine, IR and Raman spectra, conformational stability normal coord. anal. 7−96677
ethyldifluorophosphine-BH_3(BD_3) 7−68312
ethyldimethylphosphine-borane-d_0(d_3), conform. stability, normal coord. anal., IR and Raman spectra 7−109910
ethylene glycol dimethyl ether-d_{10}, liq. and solid states, Raman spectra 7−68313
ethylphosphonothioic dichloride-d_0(d_3), solid and liq., IR and Raman spectra 7−144057
2-ethynyl-1,3-butadiene, conform. vibr., IR and Raman obs. 7−96669
ethynyl-copper compounds, I_z doping 7−131167
fatty acids, premelting, IR and Raman spectra 7−99828
ferricytochrome c interactions with model phospholipid bilayers, Raman obs. 7−71695
five-membered saturated rings, intramol. dynamics in condensed phase 7−90143
flavoprotein intermediates, reson. Raman spectra study 7−68487
fluorescein, fluoresc. free Raman spectroscopy 7−92690
2-fluoro-5-chlorotoluene, laser Raman spectra 7−74618
3-fluoro-6-chlorotoluene, laser Raman spectra 7−74618
fluorocarbonylsulfenyl chloride, vibr. anal. IR and Raman spectra 7−135943
3-fluorocyclopropene-d_0(-d_3), vibr. spectra 7−96690
formaldehyde aq. solns. and oligomers, Raman spectra studies, vibrations 7−106166
furylacrylolyl chromophore, active site environment, UV reson. and IR difference Raman spectra anal. 7−68490
galactosemic cataracts, Raman spectroscopic study on rats 7−74627
glucose, aq. soln., Raman spectroscopy 7−89276
glutathione, interaction with antimicrotubular agents, Raman spectra 7−68329
α-glycine, powder, vibr. modes, far-IR Raman Fourier transform spectra anal. 7−68320
glycylproline, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7−141583
Gramicidin A, cryst. and membrane bound, vibr. spectrosc. obs. 7−71697
guanine derivatives, resonance Raman studies 7−106963
guanines, matrix isolated, tautomeric equilibria and and vibr. spectrosc. 7−68306
guanosine residues, UV resonance Raman bands 7−106965
haeme proteins, Ni-reconstituted, axial coordination, Raman difference and transient spectra 7−78766
haemoglobin, struct. and dynamics, UV reson. Raman spectra 7−78759
haemoglobin Glycera, ligand dissoc. rates correl., reson. Raman spectra 7−78768
haemoglobins, monomeric, stretching vibrs., reson. Raman spectra 7−78765
haemoglobins, oxygenation and deoxygenation, reson. Raman study 7−78724
halogenocyanophosphazenes, laser Raman spectra 7−90150
haloidmethylmethylsulphones, IR and Raman spectra, vibr. anal., conformations 7−82122
halomercuriomethanes, Raman spectra 7−82150

Raman spectra of organic molecules and substances continued
hexamethylbenzene-TCNQ, electron donor-acceptor complex, reson. Raman spectra 7−90153
hexamethylcyclotrisilazane derivatives, structs. and vibr. spectra 7−109868
hexatriene,, lowest excited triplet states struct., time resolved reson. Raman spectra 7−90162
cis-1,3,5-hexatriene, ground state vibr. assignments 7−68280
1,3,5-hexatriene, isomers, excited triplet states, time-resolved reson. Raman spectra 7−74596
high torque organic mol. liq. dynamics, reorientational correlation fn., Raman scatt. study 7−82173
HMTTeF radical salts, electric conduction and electrochemical prep. 7−84857
homogeneous molecular profiles, in optical waveguides, quantitative Raman spectrosc. meas. 7−86691
horseradish peroxidase, catalytic intermediates, reson. Raman spectra 7−78761
horseradish peroxidase, stretching vibrs. correl., Raman spectra 7−78767
horseradish peroxidase intermediates, time-resolved Raman spectra 7−78763
hydroquinone clathrates, single crysts., Raman spectra 7−106192
1-hydroxy-9,10-anthraquinone and metal complexes, IR and reson. Raman spectra 7−132270
hyper-Raman scattering by vibrational excitations in crystals, glasses and liquids 7−106177
imidazoline-2-one, Raman and IR spectra, vibr. anal., force consts. 7−96707
imidazoline-2-thione, Raman and IR spectra, vibr. anal., force consts. 7−96707
indigoid dyes, adsorbed on Ag colloids, reson. Raman and three-photon scatt. 7−122551
interplanetary dust, Raman spectra of carbonaceous phase rel. to interstellar poly cyclic aromatic hydrocarbons 7−145822
isocyanato-triphenyl(pyridine-N-oxide) tin, cryst. and mol. struct., Raman and far-IR spectra 7−92655
isoprene, excited state struct. and dynamics, reson. Raman intensities 7−90145
α-lactalbumin, bovine, tyrosine group behaviour, Raman effect 7−144953
L-lactate oxidase-old yellow enzyme interaction, reson. inverse Raman study 7−133226
Langmuir-Blodgett films 7−125825
lead carboxylate, confirm. order determ. from optical and acoustic Raman modes 7−70814
lipid bilayers, phase transitions, Raman and calorimetric obs. 7−71674
lipids, Raman active bands, motion and conform. effects 7−109911
liquids, Raman spectra, interaction-induced and local fields effects study 7−82169
α-loctalbumin, tyrosine doublet intensity ratio, pH and Co^{2+} conc. effects, IR Raman spectra anal. 7−68491
long-chain molecules with strongly absorbing chromophores, Fourier transform Raman spectra 7−141579
lysozyme, aq. solns., H bonding, low freq. Raman spectra study 7−68319
lysozyme, classical Raman tensor, four channel divided cell technique, Raman spectra anal. 7−68494
lysozyme, crystalline state, amide I band study, IR Raman spectra anal. 7−68492
lysozyme, struct.-activity relationship, iodination effect, IR Raman spectra anal. 7−68495
MBBA, nematic liq. cryst. CARS 7−92686
MBBA amorphous solid states, struct. and dynamics 7−124103
melittin-phosphatidylcholine complexes, model for lipid-protein interactions 7−71665
2-mercaptobenzothiazole, tautomerism, vap. IR and UV absorpt. spectra 7−103487
2-mercaptobenzoxazole, tautomerism, vap. IR and UV absorpt. spectra 7−103487
metallochlorin complexes, reson. Raman and IR spectral charactn. 7−78772
metallophthalocyanines, reson. Raman spectra, correl. with structs. 7−82151
meteorites, Raman spectra of carbonaceous phase rel. to interstellar poly cyclic aromatic hydrocarbons 7−145822
methane, collision-induced light scatt. spectra study 7−82166
methane, in nonpremixed flames, Raman meas., fluoresc. interference 7−96772
methane, nonppremixed flames, spontaneous Raman scatt. study 7−86627
methane-^{13}C-d_4, high resolution stimulated Raman spectrosc. 7−82159
methanesulphonate esters, mol. conforms., Raman spectrosc. obs. 7−74643
methanol, lattice vibrs., Raman spectrosc. obs. 7−85727
methanol, liquid, Raman spectra, isotropic bandwidths and freq. shifts of CH and CO modes 7−92658
L-methionine, crystalline, conform. phase transition, IR and Raman spectra, MNDO calcs. 7−124413
methoxydifluorophosphinoxide-d_0(d_3), liq. gas, solid vibr., conform., IR and Raman spectra 7−96687
N-methyl acetamide, UV reson. Raman enhancement cross section meas. 7−74625
methyl bromide, normal and deuterated, Raman and IR spectra 7−85635
methyl cyanide, vibrational spectroscopy, characterisation of mol. clusters 7−141739
methyl ethyl sulphone-d_0 (-d_1)(-d_5), vibr. spectra, rot. isomerism 7−96692
methyl fluoride, liq., ν_3 band, noncoincidence effect, Raman and IR spectra 7−106156
2-methyl-3-chloroaniline, vicinally trisubstituted, IR and Raman spectra 7−103500
2-methyl-6-chloroaniline, vicinally trisubstituted, IR and Raman spectra 7−103500
4-methyl-pyridine-d_0 (-d_7), cryst., phase transitions, mol. dynamics 7−85729
N-methylacetamide, liq., H bonding, low freq. Raman spectra study 7−68319
methylammonium nitrate, N-deuterated, single cryst., Raman spectra 7−132273
methylating agents, mol. reactivity, Raman spectra studies 7−86603
methylbenzene, α-substituted, liq., mol. reorientation, Raman spectra 7−92681
methylcyclobutane, conform. anal., internal rot. barriers, Raman investig. 7−74636
(+)-methylcyclohexanone, optical activity, Raman obs. 7−128670

Raman spectra of organic molecules and substances continued
(+)-(3R)-methylcyclohexanone, Raman optical activity meas. 7—74617
(+)-(3R)-methylcyclohexanone, Raman optical activity spectra 7—90171
methylene cyclopropane, excited state conversion to trimethylenemethane, UV reson. Raman spectra anal. 7—82185
methylene iodide, normal and deuterated cryst., Raman and far-IR spectra 7—106168
methylene iodide-d_0 (-d_2), cryst., Raman and far IR spectra 7—85728
4-methylpyridine, phase transitions, mol. mechanism 7—143002
molecular clusters, characterisation by vibrational spectroscopy 7—141739
multilayer thin films, mol. orientation, Raman spectrosc. obs. using integrated optics 7—77591
myelin membranes, vibr. spectra and struct. 7—119742
myeloperoxidase, human leucocyte, oxidation state, pH depend., Raman difference spectroscopy 7—93616
myoglobin, lineshape anal., reson. Raman spectra 7—78762
myoglobin, photodissoc., reson. Raman spectra 7—78764
naphthalene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7—85723
naphthalene, supercrit. solns. in CO_2 intermol. interactions, Raman obs. 7—74614
naphthalene-d_8, cryst., external phonons, press. and temp. depend., Raman spectrosc. obs. 7—85724
naphthalene-d_8, mol. cryst., external phonons, Raman spectrosc. obs. 7—85622
1,4-naphthoquinone, Raman spectrum, transferable valence force fields anal. 7—74647
nickel II dihydroporphyrins, normal modes, reson. Raman spectra, model for chlorophyll 7—116975
nickel phthalocyanine, low temp. reson. Raman spectra 7—132266
nickel porphyrins, axial coordination, Raman difference and transient spectra 7—78766
nickel porphyrins, noncoordinating solvents, excited state dynamics, reson. Raman spectra anal. 7—82196
nitridomanganese protoporphyrin, form., triple bond detect., reson. Raman spectra 7—78770
nitrobenzene, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7—129713
4-nitrocatechol-enzyme complexes, reson. Raman spectra study 7—68486
nitrocellulose small arms propellant methyl centralite conc. profile, Raman study 7—85643
nitromethane-d_1(d_2), cryst., methyl internal rot., neutron scatt., IR and Raman spectra 7—125730
1-nitropyrene, fluoresc. background in Raman spectroscopy, solvent effects 7—103506
nitrosyl manganese(II) piperidine protoporphyrin dimethyl ester, isotope substitution, reson. Raman spectra 7—78771
nitrosyl manganese haemoglobin, isotope substitution, reson. Raman spectra 7—78771
nitrosyl manganese myoglobin, isotope substitution, reson. Raman spectra 7—78771
n-nonadecane-n-heneicosane, solid state, Raman spectra 7—144058
nonanes, branched, Raman and IR spectra meas., normal coord. anal. 7—90147
nonsterol cholesterogens, mesomorphic phases, vibr. spectra 7—113186
norbornene, plastic phase, muon probe investig. 7—85508
nucleic acids, in viruses, struct. determ. by Raman spectrosc. 7—71690
nucleotide-acetamide complexes, laser Raman spectroscopic obs. 7—68326
octaethylporphyrins, resonance coherent Raman scatt. 7—132249
n-octylammonium chloride, chain dynamics, IR and Raman spectrosc. obs. 7—71699
N-ocyl-homooligoglycines, N-deuterated derivatives, conform. anal., IR Raman spectra study 7—70799
organic thin films on surfaces, unenhanced Raman spectrosc. 7—77590
organophosphorus cpds., conform. anal. by gas phase Raman spectrosc. 7—74640
β-oxygenated acyclic sulphoxides, configurational assignment by ^{1}H NMR and IR spectra 7—109888
oxyhaemoglobin, adsorbed on colloidal Ag, surface enhanced reson. Raman obs. 7—93644
papain, enzyme-substrate complex intermediates, UV Raman reson. spectra study 7—68489
papain enzyme-substrate intermediate, UV Raman spectra obs. 7—106964
pentachlorobenzene, normal modes, IR and Raman spectra 7—90135
2,2,4,4,6-pentacyanocyclohexenamine, cryst. struct. and vibr., spectrosc. obs. 7—98102
4-pentyl-4′-cyanobiphenyl liquid crystal film with embedded azo dye, guest-host effect 7—75984
4-n-pentyl-4′-methoxytolane, liq. cryst., dephasing, vibr. freq. correl. function 7—77597
pentylenediammonium cadmium tetrachloride, orientational conformational disorder 7—142748
peptides, conform. anal., normal coordinate calcs., IR Raman spectra study 7—68321
perylenetetracarboxylic dianhydride films, mol. organisation, spectrosc. obs. 7—106159
phenothiazine, single cryst., ferroelastic phase transition and Raman spectra 7—111851
1-phenyl-5-mercaptotetrazole, effect on corrosion of Cu, Raman spectrosc. obs. 7—85620
phenylacetylene, acetylenic bridge vibrs., Raman meas. 7—74638
phosphorodithioic acid, O,O′-dialkyl esters, rot. isomerism, Raman investig. 7—74648
phthalocyanine-$AlCl_n$ thin films, Raman spectra, Davydov splitting 7—74635
(-)-α-pinene, optical activity Raman obs. 7—128670
(-)-β-pinene, polarised Raman optical activity meas. 7—90173
poly(vinylidine fluoride) films, β-phase, Raman intensities and mode assignments *(French)* 7—85638
poly-3-methylthiophene, resonance Raman scatt., vibr. freqs. 7—77561
poly-aza chain cpds., and metal complexes, Raman and IR spectrosc. obs. 7—74613
poly-p-phenylene, vibr. spectra rel. to stereochemical struct. 7—68482
polyacetylene:alkali metal films, Raman spectra studies 7—70793
polyacetylene:I stretched system, polarised resonant Raman scatt. studies 7—70795
polyacetylene:Na, Raman and EPR spectra studies 7—70792
trans-polyacetylene, amplitude and phase modes, reson. Raman scatt. and induced IR activity 7—138451
polyacetylene, cis- and trans-, Raman spectra using 1064 nm and 532 nm laser light 7—70794
polyacetylene, Durham, conformational defects, IR and Raman studies 7—69624
trans-polyacetylene, fully oriented, polarised reson. Raman scatt. 7—85736
trans-polyacetylene, IR, Raman and neutron spectra, vibr. state density 7—110155
polyacetylene, neutral and electrochemically doped, secondary radiation emission 7—70906
trans-polyacetylene, oriented, undoped and I doped, polarised resonant Raman spectra 7—70784
polyacetylene, picosec. Raman transients obs. 7—85735
polyacetylene copolymers, Raman and photoinduced IR absorption spectra 7—70791
polyacetylenes, I-doped substituted, Raman and far-IR vibr. spectra 7—144047
polyacetylenes, soluble, reson. Raman spectra, depolarisation ratio dispersion 7—85737
polyaniline, Raman and IR spectra determ. of struct. 7—70797
polyaniline, spectroelectrochemical expts. 7—71500
polyaniline, vibr. spectra, Raman studies 7—98369
polydiacetylene, urethane substituted, solid-state phase transitions 7—142991
polyester fibres, crystallisation kinetics, Raman spectrosc. meas. 7—85733
polyester fibres LF spectra, Raman spectroscopy appl. 7—89266
polyethylene, disordered chain mols., Raman spectra 7—90464
polyethylene, electron irrad. and thermal treatment effects on optical props. *(Russian)* 7—99790
polyimide:$Ar^+(Cu^+)(Zn^+)$ films, ion-implanted, structure and morphology 7—91938
polymer-surfactant aq. solns., solubilisation equilib., Raman spectrosc. obs. 7—70802
polyoxyethylene methyl-n-alkyl ethers, morphology, X-ray and Raman scatt. 7—111422
polyparaphenylene films, electropolymerised, optical props. 7—70841
polypeptides, struct., mol. force field appl., Raman spectra anal. 7—68318
polyphenyline benzobisthiazole, ion implanted, conducting, Raman obs. 7—85738
polyproline, cis-trans isomerism, UV reson. Raman spectra 7—106974
polypropylene, isotactic, uniaxial stretching deform., Ramon spectra studies *(French)* 7—85641
polypyrrole, neutral and doped, isotopic substituted derivatives, Raman obs. 7—85739
polythiophene, elec. cond. and vibr. key bands, IR and Raman spectra anal. 7—76905
polythiophene, resonant Raman scatt. photoinduced absorption studies 7—77560
polythiophenes, optical, electrical and structural props. 7—76042
potassium 4-pentenoate, conformational change on micellisation, vibr. spectra 7—82067
potassium 5-hexenoate, conformational change on micellisation, vibr. spectra 7—82067
preparation of high-quality graphite from polyoxadiazole 7—84803
proline, peptide linkage, UV reson. Raman excitation spectra study 7—68324
prolylglycine, UV Raman spectra, vibrational excitation, bonds, selective enhancement 7—141583
propane, third-order nonlinear suscept. meas., appl. in coherent anti-States Raman scatt. 7—68777
propane-d_0(d_7)(d_8), harmonic force field, ab initio HF theory 7—141471
propane-d_0(d_7)(d_8), Raman trace scatt. intensity parameters 7—141581
protein and solvent environments incorporation into reson. Raman calcs. 7—93623
protein conform. secondary struct., reference intensity profiles method, Amide I and III bands, IR Raman spectra anal. 7—68493
proteins, globular, Raman spectra, automated recording system 7—78758
proteins, secondary struct. Raman reference intensity profiles 7—129911
proteins, tryptophan and tyrosine side chains, vibr. modes, IR Raman spectra, normal coordinate calcs. 7—68497
purple acid phosphatase, optical, EPR, Mossbauer and reson. Raman spectra, and mag. suscept. meas. 7—116995
pyrazine, rot. Raman spectrum 7—109908
pyridine, adsorbed mols., voltage-induced energy level shifting 7—74633
pyridine, adsorpt. on MoO_3 supported catalysts, Raman and X-ray diffr. study 7—98685
pyridine, aq. soln., Raman scatt. intracavity laser spectroscopy 7—70771
pyridine, liquid, Raman spectra, resonant intermolecular coupling 7—90142
pyridine carboxylic acids, isomeric species, mol. vibr., IR and Raman spectra anal. 7—135935
pyridine-methylpyridine coadsorption on Ag electrode, SERS investig. 7—74634
N-(2-pyridyl)thioacetamide, PMR, Raman and IR spectra meas. 7—74676
N-(2-pyridyl)thioformamide, PMR, Raman and IR spectra meas. 7—74676
di-2-pyridyl ketone, bridged quaternary salts, crystal struct., Raman and reson. Raman spectra 7—118998
2-(2-pyridylazo)-5-diethylaminophenol, resonance Raman spectra 7—106167
quadruply bonded dimers, mol., electronic and cryst. structs., ligand perturbations 7—74409
quinoxaline, electronic states investig., Raman excitation profile 7—82189
13-cis-retinal chromophore, vibr. anal., reson. Raman spectra 7—74623
retinol, electronic states investig., Raman excitation profile 7—82189
trans-retinylidene-N-butylamine, complexation with Lewis acids, C=N stretching freq. increase, reson. Raman spectra 7—90144
rhodamine 6G, struct. rearrangements, reson. stimulated Raman scatt. *(German)* 7—129725
rhodamine B, fluoresc. free Raman spectroscopy 7—92690
rhodopsins, retinal chromophore struct. determ., reson. Raman spectra 7—78776
ribonuclease A, cis-trans isomerism, UV reson. Raman spectra 7—106974
Rochelle salt-ammonium Rochelle salt mixtures, Raman spectra, phase transition mechanisms 7—106172
salicylic acid, metal effects on aromatic system, Raman obs. 7—82154
semibullvalene, vibr., IR and Raman obs. *(French)* 7—129715
sodium formate, crystalline and powdery thin solid films, IR and Raman spectra, intensity transfer 7—85663
Somatotropin, conform. anal., Raman spectra study 7—68322
stearic acid, B form crysts. micropolytype structs., Raman microprobe obs. 7—99827

Raman spectra of organic molecules and substances continued
sterol cholesterogens, mesomorphic phases, vibr. spectra 7−113186
trans stilbene. liq., effect of dephasing collisions on Raman polarisation 7−82170
α,α'-trans-stilbene-^{13}C, ground and excited states struct., Raman spectra anal. 7−82193
sugars, low frequency Raman scatt. spectra, laser light effects 7−113195
sulphones, organic, liq. solutions and crystal, IR and Raman spectra, vibr. spectra and conformations 7−96679
terephthalate-d_0(-d_4) ions, vibr. anal., IR and Raman spectra 7−103458
p-terphenyl, conform. anal., FTIR and Raman spectra 7−109893
1,2,4,5-tetrabromobenzene, crystals, anharmonicity, piezomodulated Raman spectroscopy studies 7−138456
1,1,3,3,-tetracyanopropane, cryst. struct. and vibr., spectrosc. obs. 7−98102
tetradesmethyl-β-carotene, reson. Raman and fluoresc. lineshapes, vibr. relax., solvation dynamics 7−74615
tetraethylorthosilicate, initial stages of hydrolysis and polymerisation, Raman studies 7−138448
tetrafluoromethane-Ar gas mixture, Rayleigh and Raman spectra 7−103514
tetralkylammonium chlorobromo ruthenate, vibr. and electronic reson. Raman spectra *(German)* 7−106189
(tetramesitylporphyrin)iron(II), oxidation mechanism, reson. Raman spectra 7−78481
tetramethyl-p-phenylenediamine, solns., photoionisation, solvent effects, reson., Raman spectra anal. 7−82195
tetramethylammonium cobalt tetrachloride, single cryst., phase transitions, laser Raman study 7−144059
1,1,3,3-tetramethylbutyl group, hydrophobic moiety of Triton X surfactants, Raman spectra 7−96705
tri-N-butylamine, Raman spectrum and gauche interactions, temp. depend. 7−96699
tribromoacetonitrile, isotope shifts, vibr. Raman spectra *(French)* 7−129718
tricyclophosphates $KM^{II}P_3O_9$ where M^{II}=Mg, Ca, Co, Mn, Zn, Cd), Raman and IR spectra 7−85664
triethylacetic acid, liq. cryst. phase transition, IR and Raman spectrosc. investig. *(Japanese)* 7−132286
triethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
triethylenediamine, polyiodides, reson. Raman spectra and X-ray struct. 7−92663
1,1,1-trifluoro-2-propanol, gas, far IR and Raman spectra, conform. stability, internal rot. barriers 7−109898
2,2,2- trifluoroethyl methyl ether, conformation stability and vibr. assignment, microwave, IR and Raman spectra 7−82133
trifluoroethylidynesulphur trifluoride, gas phase struct., nonlinear coord. 7−141571
trifluorohalomethanes, in inert gas soln., Raman spectra 7−90176
1,1,1-trifluoroisopropanol, conform. stability and low freq. vibr assignment, Raman obs. 7−74641
trihydroxybenzenes, aq., pulse radiolytic oxidation, time-resolved reson. Raman spectra 7−90165
trimethylacetic acid cyclic dimers, orientational correl. function, Raman study 7−122550
triphenylarsine, FT IR and Raman spectra 7−99867
triphenylphosphine, FT IR and Raman spectra 7−99867
triphenylstibene, FT IR and Raman spectra 7−99867
triphenyltin isochalcocyanates and adducts, IR and Raman spectra 7−92655
tris(tetrabutyl ammonium) europium hexathiocyanate, IR, Raman and fluoresc. spectra 7−116969
tryptophan-2,3-dioxygenase, stretching vibrs. correl., Raman spectra 7−78767
tyrosine, persulphate oxidised, chemiluminesc. and Raman spectrosc. charact. 7−122541
urea, cryst., N-H stretching modes, Raman and IR spectra 7−85726
uridine, Fourier transform IR and laser Raman microprobe spectra 7−132271
vibrational potential energy surfaces, determ. by Raman and IR spectra 7−74487
vinylidene fluoride-trifluoroethylene copolymer, Raman modes, ferroelec.-paraelec. transition 7−85734
water networks, small amplitude collective proton motions, Raman spectra features 7−99831
woody tissue, O_2 sensitive background, Raman spectra 7−90148
yeast alcohol dehydrogenase, Raman and Fourier transform IR study 7−86900
zeolites, form., Raman spectrosc. obs 7−70801
zinc phthalocyanine, low temp. reson. Raman spectra 7−132266
Br_2 adsorbed on porous Vycor glass, resonance Raman investig. 7−85642
C network in coal pitches, structural order, microraman investig. 7−90989
carbon tetrafluoride, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
β-carotene, ground state reson. Raman spectra, saturation and line broadening study 7−103510
Cu, corrosion, inhibiting action of benzotriazole in deaerated H_2So_4 containing ferric ions 7−93151
Cu metalloproteins, Raman spectra 7−71700
Cu mononucleotides, Raman spectra 7−71700
Cu polynucleotides, Raman spectra 7−71700
Cu(II), binding to mononucleotides, Raman spectrosc. obs. 7−68327
Cu(II) peroxide model complex of oxyhemocyanin, vibr., electronic and reson. Raman spectra 7−103528
Fe-S proteins, isotopic species, reson. Raman spectra study 7−68488
H_2 complex, H_2 phthalocyanine, Ag surface, resulting complex Raman spectra study 7−74628
HCN, vibrational spectroscopy, characterisation of mol. clusters 7−141739
I_2 adsorbed on porous Vycor glass, resonance Raman investig. 7−85642
I_2-organic complexes, Raman spectra motional narrowing 7−90151
methane, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
Mo complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
$(NH_4)_3H(SO_4)_2$, phase transitions, vibr. study 7−143001
Na-DNA, lowest optic modes, softening 7−71693
Ni complex, bis(difluoroborondiphenylglyoximato)NiII, partial oxidation with I_2 7−100544

Raman spectra of organic molecules and substances continued
Ni octaethylporphyrine, vibr. struct., picosec. CARS, excited states dynamics 7−122553
p-polyphenyls, conformational instabilities, press. depend. *(Japanese)* 7−131079
Pt complexes, tetranuclear, reson. Raman spectrosc. 7−82145
V complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
W complex, aq. soln., Raman and multinuclear NMR spectra 7−82146

Raman spectra of polyatomic inorganic molecules
conference, Eugene, OR, USA (Sept. 1986) 7−72726
inorganic complexes, microRaman spectrosc. obs. 7−82148
metal N,N-dimethylmonothio-oxamide complexes, vibr. spectra 7−96643
molecular system MOL_5^{2-} where M=Re, Tc and L=Cl, Br, modified Urey-Bradley and valence force fields 7−109887
Raman background nature *(German)* 7−68316
trifluorotrifluoromethylsilane bond lengths, fluorination effects 7−103660
water, liquid, Raman spectra, derivative anal., H-bonds 7−109909
BiX_3-GaX_3 complex, X=Cl, Br, struct. investig., vibr. Raman spectra study 7−82142
CO_2, dense fluid, Raman scatt., MDM calc. 7−82175
CO_2 fluid, S_1 Raman band, pot, and polarisability model study 7−82167
CO_2, supracritical fluid, three-body-like Raman spectra 7−129722
CS_2, dense fluid, Raman scatt., MDM calc. 7−82175
ClO_4^-, UV reson. Raman enhancement cross section meas. 7−74625
ClO_n^- anions, aq. solns., absolute Raman intensities and EOPs 7−82147
Co complex Co(II) protoporphyrin IX dimethyl ester, reson. Raman spectra 7−82152
Cu complex, Cu(II) protoporphyrin IX dimethyl ester, reson. Raman spectra 7−82152
$CuCl_2.2(H,D)_2O$, IR and Raman spectra, vibr. modes, assignment and coupling of water librations 7−82141
Ga_xCl_y, vibr. freq., Raman spectra *(French)* 7−129716
Ga_xCl_y, vibr. modes Raman spectroscopy quantitative anal. *(French)* 7−129717
HCN clusters, free jet spectrosc. by coherent Raman spectrosc. 7−82420
HIO_3, Raman spectra 7−122542
H_2O, UV reson. Raman enhancement cross section meas. 7−74625
H_2O vapour, nonequilibr. dispersed two-phase flow, Raman scatt. 7−129720
$H_2O+N_2(O_2)(Ar)$, rot.-vibr. lines, collisional self-broadening, semiclassical theory 7−129791
H_2S, gaseous and liq., rot. Raman scatt. study 7−82168
Hg $(CN)_2$, micro-Raman spectra, diamond anvil cell-micro Raman spectrometer system 7−144048
$I^-.SO_2$, solvated ion, prereson. Raman effect 7−82149
$K_2CuCl.2(H,D)_2O$, IR and Raman spectra, vibr. modes, assignment and coupling of water librations 7−82141
K_2FPO_3, vibrational spectra and normal coordinate anal. 7−129709
$KY(MoO_4)_2$, IR and Raman spectra, normal coordinate anal., pot. energy distrib. 7−109890
Li_3^+, breath mode. vibr., Raman spectrum, ab initio model 7−96709
$LiNO_3$ in DMSO soln., IR and Raman spectra, ion pairing and solvation depend. on soln. temp. 7−82095
$Mo_2Cl_8^{4-}$, reson. Raman spectra, simulation 7−82144
N_2-Ar mixture, spontaneous polarised vibr. Raman scatt. study 7−96700
NH_3, reson. hyper-Raman scatt. spectra 7−109906
NH_3, rot.-vibr. dynamics, reson. Raman scatt. spectra 7−90158
NH_3-d_0(d_3), vibr. transitions, reson. Raman spectra 7−90159
NO_3, UV reson. Raman enhancement cross section meas. 7−74625
Ni complex, Ni(II) protoporphyrin IX dimethyl ester, reson. Raman spectra 7−82152
O_3, Hartley absorpt. band, reson. Raman spectra, time depend. anal. 7−122548
Pd(II) complexes, planar monosubstituted oxamides, vibrational spectra 7−122536
$Re_2Cl_8^{2-}$, $\delta\delta^*$ excited electronic state, time-resolved reson. Raman spectra 7−82143
$Re_2Cl_8^{4-}$, reson. Raman spectra, simulation 7−82144
$SCN^-.SO_2$, solvated ion, prereson. Raman effect 7−82149
SF_6, IR multiphoton excitation dynamics study, Raman spectra meas. 7−74597
SO_4, UV reson. Raman enhancement cross section meas. 7−74625
$SbBr_3$-$AlBr_3$ complex, struct. investig., vibr. Raman spectra study 7−82142
SbX_3-GaX_3 complex, X=Cl, Br, struct. investig., vibr. Raman spectra study 7−82142
$(SeO_3)_4$, solid and vapour phases, vibr. Raman spectra 7−85667
Zn complex, Zn octaethylchlorin, deuterated species, unstable anionic forms, reson. Raman scatt. spectra study 7−103515
Zn complex, Zn(II) protoporphyrin IX dimethyl ester, reson. Raman spectra 7−82152

Raman spectroscopy
see also Raman lasers; Raman spectra
artifacts, in natural Raman optical activity, Stokes-Mueller treatment 7−80887
ASTM E 13.08 committee, overview of activities 7−89277
biomedical applications to mol. and cellular systems 7−107329
BOXCAR detection, basis and use in analytical spectrometry 7−67396
CARS, noise characteristics with single- and multimode lasers 7−110449
combustion diagnostics, CARS appls. 7−86631
combustion measurements using high-resolution coherent Raman spectroscopy 7−80905
combustion system surfaces, reaction monitoring using Raman scatt. 7−113936
conference, Eugene, OR, USA (Sept. 1986) 7−72726
diamond anvil cell for high-pressure microRaman spectroscopy 7−89284
distributed fibre optic temp. sensor using Raman anti-Stokes OTDR and single photon counting detect. 7−90797
double-resonance techniques for high-resolution Raman-spectroscopy 7−80898
drug vials, sealed, rapid headspace anal. using multichannel Raman spectroscopy. 7−74626
dual broadband approaches to vibrational and pure rotational CARS spectra 7−80899
far UV reson. Raman spectroscopy 7−90174
fibre optics for Raman scattering at low temp. and high magnetic fields 7−140759
fibres, frequency-doubling processes, anal. using Raman spectroscopy 7−136563
fluorescence free FT-Raman spectroscopy in the near infrared 7−89283

Raman spectroscopy continued
fluorescence free Raman spectroscopy 7—92690
fluorescence rejection, using dye laser and gated photon counting 7—80894
four-photon Raman spectroscopy using elastic scattering of pump waves 7—128673
frequency shift, Raman spectroscopy, difference and Fourier transform methods 7—90175
Hadamard transform Rama, spectrosc., near IR region 7—121241
high pressure phase transitions, Raman spectra and X-ray studies 7—111310
induced Raman scattering ionization spectroscopy, methods, review 7—134852
infrared and Raman spectroscopy appls. in industry 7—93439
instrumental and methodical developments in Raman spectroscopy 7—93448
intracavity laser Raman microscopy technique for enzyme-substrate interactions 7—92688
IR Raman spectroscopy with semiconductor devices for excitation and detection 7—108679
isotropic and anisotropic samples in polarized Raman microspectroscopy 7—89274
laser material diagnostics, conf., Albuquerque, NM, USA (Feb. 1987) 7—102022
laser Raman spectroscopy, computer interfaces *(Korean)* 7—140766
light element analysis from Raman lines on SPARK-1 spectrometer 7—133019
low frequency CARS spectroscopy 7—80909
microprobes for Raman and fluoresc. microspectrometry 7—89275
mixing devices for time-resolved Raman spectroscopy 7—89272
mixing times and concentrations, time-resolved Raman spectroscopy obs. 7—102546
multichannel Raman optical activity spectrometer 7—128670
nonlinear spectroscopy using Raman scattering 7—121229
optical activity meas. 7—74617
optical waveguides, homogeneous molecular profiles, quantitative Raman spectrosc. meas. 7—80885
picosecond active Raman-scattering spectroscopy of biological objects 7—145289
picosecond time-resolved reaction intermediates in photochemical cycle investig. 7—86915
Pockel cell computer controlled switching device for Raman spectroscopy 7—128671
polyester fibres LF spectra 7—89266
quantitative UV resonance Raman spectroscopy using KrF excimer laser 7—102532
Raman optical activity, instrumental advances 7—89271
Rayleigh line rejection filter for Raman spectrometers 7—89273
remote and in situ Raman spectroscopy using optical fibres 7—89276
rotational CARS spectra, generation using multiple 3 colour scheme 7—80908
spherical void electrodynamic levitator 7—140760
stimulated Raman spectroscopy, high resolution, mol. structs. and collision effects on line shapes investig. 7—80901
thermally induced Raman difference spectroscopy 7—121227
Hg $(CN)_2$, micro-Raman spectra, diamond anvil cell-micro Raman spectrometer system 7—144048
Li-$SOCl_2$ cells, in situ micro-Raman study of discharge products 7—126576
$NaNO_3$ cryst. standard for Raman spectroscopy meas. 7—132266

Ramsauer effect *see collision processes*

random-access storage
soft errors in dynamic random access memories—a basis for dosimetry 7—87215

random functions
see also random processes
Boolean random functions, simulation, texture analysis *(French)* 7—117146
microstructure, random textures models, image anal. *(French)* 7—118113
Schrodinger operators, random and quasi-periodic, results and conjectures 7—80634

random noise
see also thermal noise
1/f-type FM noise, impact on coherent optical communications 7—141855
AC method for measuring low-frequency resistance fluctuation spectra 7—102455
accuracy of instrument adjustment in the presence of noise 7—140654
acoustic attenuation parameter, robust estimation 7—110698
additive and multiplicative noise, Fokker-Planck model 7—80644
amorphous materials Gaussian to dispersive atomic transport transition 7—84357
atmosphere sodar system design, noise problem reduction 7—127508
background fluctuations in IR astronomy, effects on bits requirement for signal recover 7—72320
bistability driven by Gaussian coloured noise, first-passage times 7—95476
bistability in quantum optics, chaos and noise effects 7—136418
CARS, noise characteristics with single- and multimode lasers 7—110449
coloured noise approximation, unified, for dynamical systems 7—96994
composite signal amplitude and time-delay parameters estimation 7—123312
cosmological density fluctuations, statistics of peaks in 3D Gaussian noise 7—88704
DC-driven CDW system, intermittent voltage jumps, numerical simulation 7—76796
dichotomous-noise-driven oscillators 7—95477
dielectric films, molecular microcontact, 1/f noise intensity, upper estimate 7—138383
disordered conductors, low temp. resist. fluctuations calcs. 7—105637
disordered metals, conductivity sensitivity to defect motion, w.r.t. 1/f noise, comment and reply 7—143536
disordered systems, localised states and nonequilib. noise 7—105496
dye lasers, pump noise, steady state properties and transient statistics 7—136294
external dichotomous noise, driving nonequilibrium transitions, stationary probability density, Stratonovich model 7—120947
fibre optic gyroscopes, laser intensity noise characts. 7—104022
fibre optic interferometric sensors, multiplexing using phase carrier techniques 7—123233
fibre waveguide, optical soliton formation, noise effects 7—90808

random noise continued
fibre-optic balanced heterodyne detection, excess-noise suppression 7—73418
fibre-optic sensors, interferometric arrays, appl. of TDM, anal. 7—123242
flicker noise generated by random walk of interface electrons 7—105635
fractal lattice, Nyquist and flicker noise meas. 7—80604
free carrier conc. and mobility determ., 1/f noise meas. method 7—77016
Gaussian noise, Fourier transforms 7—102311
Hooge's 1/f noise formula interpretation 7—143537
Hopf bifurcation, swept-parameter-induced postponements, noise 7—128452
ideal FT-IR spectrometers, rel. to efficiency of real instruments 7—73443
Ising systems, dynamics of droplet fluctuations 7—99478
Josephson junction parametric amplifiers, nonlinear effects of noise 7—138148
laser photolysis studies of photolabile samples, using optical multichannel analyser, noise reduction 7—106815
light interferometer shot noise, lack of limit of sensitivity *(German)* 7—103784
macrostate stabilization, noise induced transitions 7—89120
measurement device, additive noise suppression, frequency characteristic synthesis 7—67270
metals, irradiated, 1/f noise due to 1D-migrating defects 7—98125
nonlinear resistor network, randomly diluted, field-theoretic formulation 7—80629
nonuniform chaotic map, effects of noise 7—128446
optical chaos, conf., Quebec, Canada (June 1986) 7—134353
parametric oscillators, analogue simulation, expts. 7—80643
photoconductor extrinsic systems, chaotic dynamics 7—105617
photon-limited laser pulses, arrival time estimate in presence of shot and speckle noise 7—103864
resistor network, noise exponents 7—80628
scanning tunnelling microscopy images, noise characts. and digital filtering 7—117788
seismology, noise attenuation by 2D and 3D CDP stacking and Kirchhoff migration 7—79293
self organised criticality, 1/f noise explanation 7—120960
semiconductor, with surface states, generation-recombination noise 7—84925
semiconductor laser, FM noise and spectral linewidth 7—110359
semiconductors, conference, Copenhagen, Denmark (Aug. 1986) 7—102008
semiconductors, driven current filament, bifurcation routes to chaos 7—105581
shot noise driven process, first-passage times, stochastic trajectory anal. technique 7—89126
shot-noise light with arbitrary spectrum, approx. photocounting statistics 7—141821
SNR of one- and two-channel halfwave plate polarimeters 7—115991
spatial correlations for temperature fluctuations from surface noise 7—73228
squeezed quantum fluctuations and noise limits in amplifiers and attenuators 7—136244
stochastic, parametric oscillators, analogue simulation theory 7—80642
synthetic focused US imaging system, image reconstruction in presence of delay noise 7—126960
TCNQ salt, MBM$(TCNQ)_2$, noise spectrum 7—143534
TCNQ salts, morpholinium $(TCNQ)_2$, shot noise, soliton transport 7—143535
tuned fluxgate sensor noise characts. 7—108585
two-tone optical heterodyne spectroscopy with dye lasers, line shapes 7—82284
uncorrelated noise in turbulence measurements, error variance, atm. appl. 7—127360
variance-stabilising transforms for image-signal-dependent Rayleigh and other Weibull noise sources 7—110253
weakly coloured noise, stochastic calculus 7—95472
Ag/AgCl planar electrodes, noise power spectrum density analysis 7—133006
Al films, excess noise, rel. to electromigration activation energies 7—125065
Al-Si films, excess noise, rel. to electromigration activation energies 7—125065
Au thin films, correlation between 1/f noise and grain boundaries 7—92241
GaAs:Cr, spontaneous stochastic current oscills., dynamic model studies 7—137992
$GaTe_3$ chalcogenide glass switching structs., microwave noise and switching characts. 7—85022
Ge photoconductors, chaotic dynamics 7—105616
HgCdTe photoconductors, 1/f noise at 0.1 eV 7—84975
Nb-Nb_2O_5-PbBi(PbAuIn) tunnel junctions, electron trap states and LF noise 7—131919
$NbSe_3$ CDW conductors; magnetotransport studies 7—98989
$NbSe_3$:Zr(Ta), low freq. broadband noise, impurity effects 7—99144
Si:B ion-implanted resistors, 1/f noise temp. depend. meas. 7—143533
TaS_3, orthorhombic, non-Ohmic 1D cond. and narrow band noise 7—99028
V_2O_5 xerogel films,. conduction mechanism 7—77115

random number generation
maximum length sequences, cellular automata and random numbers, statistical props. 7—115771
multispin Monte Carlo algorithms, random number generator 7—134698
on-chip massively parallel Monte Carlo cellular processors, random-number arrays, optical generation 7—68583
single-variate probability distribs., algorithms for random sampling 7—140443

random phase approximation *see RPA calculations*

random processes
see also Brownian motion; chaos; fluctuations; Markov processes; probability; queueing theory; stochastic processes
ϵ expansions for crumpled manifolds 7—115906
acoustic spectrum analyser, spectrum parameter estimation and random signals discrimination 7—82934
aggregation, controlled, on square lattice 7—95497
algorithms and problems for solutions of some physics problems 7—115699
amorphous systems, quasicrystalline structural diffusion 7—69597
Anderson localization in nonlinear random media, invariant embedding method 7—80606

random processes continued
anisotropic spiral self-avoiding loops on square lattice, generating function 7−102337
anomalous diffusion in random media of any dimensionality 7−140609
anomalous diffusion on a random comblike structure 7−128505
anomalous scaling of moments in a random resistor networks 7−102325
arbitrary genus surfaces, results for D=0, −2 dimensions 7−95473
asymmetric Duffing eqn., Melnikov parameter and the appearance of chaos 7−80605
atomic transport in crystalline solids, statistical theories 7−98586
basin boundaries of one-dimensional maps 7−89122
Bethe spin glass, random graph bipartitioning ferromagnetic Bethe lattice, optimisation 7−143826
biased self avoiding walks, cell renormalisation study 7−102328
binomial polynomials, determinant sequence in lattice path counting 7−80294
biogenesis, critical phenomenon approach 7−80638
biological oscillator, topological patterns of synchronization 7−119703
Blume-Capel model with random field, tricritical points, mean field anal. 7−124440
book, patterns and waves 7−80190
Boolean networks, transition between frozen and chaotic behaviour, forcing functions 7−73215
bouncing ball dynamics, period doubling suppression 7−108220
cantori analytic fractal dimension 7−73222
car parking problem of randomly distrib. 1D spheres 7−80609
cardiac monitoring problem, dynamical complexity and pathological order 7−119702
carrier diffusion in semiconductors, simulation with random walks 7−118503
causality, multiple scattering in random media, comments 7−140618
Cayley trees with multiple connectivity, exponentially localised dispersionless states 7−120992
chessboard model, existence of modulated phases 7−67242
classical chaos, mathematical models and simulation 7−89114
classical diffusion in random fields with long-range correlations, renormalization group anal. 7−128500
classical diffusion in random media, relation with quantum localisation 7−102189
cluster growth models, scaling anal., Monte Carlo simulations 7−108403
cluster-growth processes, nontrapping self-avoiding walks 7−80670
compact group actions spherical Bessel functions, and invariant random variables 7−66915
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
conference, critical phenomena, random systems, gauge theories, Les Houches, France, (Aug.-Sept. 1984) 7−66826
conference on fluctuations and stochastic phenomena in condensed matter, Barcelona, Spain (May 1986) 7−134359
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
conformal anomaly, perturbative eval. at crit. points, appl. to random systems 7−121338
continuous random networks, amorphous materials struct., geometrical modelling by graphs 7−76002
Cornu spirals, disorder, renormalizability and theta fns. 7−108419
cosmological density fluctuations, statistics of peaks in 3D Gaussian noise 7−88704
critical fluctuations enhancement by quenched random fields with Gaussian correls. 7−73227
critical percolation clusters, random walks, scaling theory for dynamic density profile 7−102339
critical slowing down at percolation threshold, random walk system 7−73204
d-dimensional random systems, correlation length exponent calcs. 7−80634
damped pendulums, with quasiperiodic forcing, strange nonchaotic attractors 7−95311
delayed bifurcations in the presence of noise 7−102306
deterministic chaos, correlation dimension calcs. 7−108400
devil's staircase, scaling exponents, relations and order dependence 7−108472
Devil's staircase in double helices self-organization 7−108463
differential calculus, measurable spaces and random variable density distribs. *(Russian)* 7−72838
diffusion on two-dimensional random walks 7−95483
diffusion-limited aggregation, scaling structure, renormalization group anal. 7−80656
diffusion-limited aggregation and viscous fingering 7−108413
diffusion-limited aggregation of oriented anisotropic particles 7−128489
diffusive random walk in presence of large traps, scaling theory 7−95480
diffusively, coupled logistic maps, period-doubling suppression 7−73273
diffusively coupled chemical oscillators, bifurcation phenomena, numerical simulation 7−113908
dilute fractal networks, structure dynamics 7−73224
dimer problem solved by Vdovichenko's method 7−108470
Dirac equation, variational derivation and physical interpretation 7−80971
directed percolation models with disorder 7−121001
directed polymer scaling in random media 7−104592
directed self-avoiding polygons, polygon exponent 7−108445
discrete dynamics and metastability, mean first passage times and escape rates 7−134660
discrete wave eqns., localization estimates and renormalization transformations 7−73038
disordered 1D systems, effective eqns. 7−134675
disordered semiconductor, thermally activated hopping in Urbach band tail random walks in an exponential band 7−92198
disordered solids, electron transport, anomalous exponents in thermally activated random walks 7−137937
disordered systems, mathematical aspects 7−67219
disordered systems, phase transitions and critical phenomena, perturbative treatment 7−121039
disordered systems, random energy model, power law relaxation 7−98376
disordered systems, relativistic spectrum, two. dimens. models, exact results, $1/N$ expansion 7−128463
dispersive ordering and truncated distributions *(French)* 7−95283
dissipative dynamical systems perturbed by noise, macroscopic nonequilibrium pot., review 7−134677
double sequences, exchangeability and Hausdorff's theorem 7−72862
double-well Duffing oscillator subject to random force, spectral distrib. 7−128437
dynamical disorder model in uniform electric field, kinetic eqn. calcs. 7−128501
dynamical systems, extended information in 1D maps 7−108420
Eden models, noise reduction on square lattice 7−67231
elastic column in a fluid container under random vibratory excitation, vibrs. *(German)* 7−104203
elastic structural elements, specified reliability design for random vibrs., fatigue damage accumulation 7−83116
enhanced diffusion, Levy dynamics, appl. to turbulence 7−69111
evolution, microscopic diversity, error matching and noise 7−120935
external field effects on interface, entropic repulsion 7−73258
fatigue life prediction under Gaussian load processes, rain flow cycle distrib. 7−138815
Feigenbaum phenomenon, extended renormalisation group study 7−73213
first passage time for random walks on Cayley trees, continued fraction expansion 7−120966
first-passage time statistics for eqns. with Markovian dichotomous fluctuations 7−80626
forced Lotka-Volterra eqn., periodic solns. and local bifurcation curves 7−80347
four-dimensional volume-preserving maps, symmetric, pitchfork period doubling, renormalisation 7−89125
four-scale Cantor set, singularity spectrum, thermodynamic formalism 7−95530
fractal aggregates, review 7−115914
fractal dimensionalities from conformal invariance in percolation and self-avoiding walks 7−73250
fractal properties of model trajectories with exponential velocity autocorrelation functions 7−80704
fractal structure, random walk, appl. to incompressible turbulent flow 7−136906
fractals, Mandelbrot geometry 7−73223
fractals, random walks, review *(Polish)* 7−67216
fractional exponential decay in the capture of ligands by randomly distributed traps 7−67201
frustrated systems with finite connectivity, mean-field theory 7−105921
Galerkin multiharmonic procedure for nonlinear multidimens. random vibr. 7−120796
Gaussian process, stationary, central limit theorem for non-instantaneous filters 7−95467
Gaussian processes, first passage time intervals 7−134663
Gaussian random fields, peak correlations, N-point fns. 7−134650
Gaussian random process, correlation interval, nonparametric estimates 7−67193
Gaussian random processes classification, appl. to seismic differentiation 7−133595
generalized random energy model, thermodynamics study 7−73214
generic bifurcation of Hamiltonian systems with symmetry 7−67214
Glimm's difference approx., vacuum states and equidistribution of the random sequence 7−80348
graph bipartitioning, spin glasses, mean-field replica-symmetric theory, Ising ferromagnet 7−143827
gravity field of horizontal layer of Poisson random sources, stochastic props. 7−87434
growth walks with self-avoiding constraints 7−102331
harmonic oscillators, fluctuation-dissipation phenomena, appls. of coherent paired state, Lie group SU(1,1) 7−140517
Henon mapping, basin of attraction, shape and transient-periodic behaviour 7−115912
hierarchical lattices, real space renormalization 7−67251
hierarchical random surfaces 7−120959
hopping diffusion in randomly disordered one-dimens system precisely solvable models 7−143076
Hubbard model with random field, tricritical points, mean field anal. 7−124440
hydrodynamic instability, review, flow randomisation, nonlinear methods 7−136809
infinite atomic chain, intermediate quasiperiodic-random struct., Fourier spectrum 7−134635
infinite boson systems, point processes and position distrib., locally normal state 7−120932
inhomogeneous media, random, self-trapping of excitons, current carriers and solitons 7−84684
inhomogeneous networks, diffusion and conduction calcs. 7−115939
initially random fractal interface, dynamics 7−120943
integrated phonon density of states in 2D random systems 7−137481
interacting particles, transport in random networks in external field, random walks 7−128443
interaction of moving interfaces with obstacles 7−102305
ionic media, chemical wave-electrical field interaction phenomena 7−113907
irreversibility and fluctuation-dissipation relations 7−80714
Ising ferromagnetic model, Ursell function and random graph representation *(Russian)* 7−73236
Ising model, spin=1, effective field theory 7−85224
Ising model in random field, long-range order in 3D 7−70512
Ising systems, dynamics of droplet fluctuations 7−99478
isomorphisms for random sequential packing on lattices, packing fraction convergence continuum limits. 7−128480
Jacobi matrices, inverse spectral theory 7−95471
jump-diffusion-controlled reaction probability for random walks on spatial lattice 7−80681
Kauffman cellular automata, 3D, fractal dimension of damage at phase transition 7−80655
kinetics of cluster eating, mean field rate eqns. 7−80611
Koch curve, generalisations and randomisation, (2k+1)-sectioning procedure 7−134656
lamellar eutectic growth, steady state, random-walk model 7−118066
Langevin dynamics in d-dimens., Fokker-Planck eqn. equivalence and imaginary time Schrodinger eqn. 7−134678
Laplacian random walk, reflecting and absorbing boundary conditions on tail, comment 7−134695
large rectangular random matrices 7−140607
largest current in a random resistor network 7−137883
lattice invasion percolation, crit. points and exponents, Voronoi network 7−134691
lattices, transport props., systematic density expansion 7−80685
Levy walks, turbulence and chaos appl. 7−80636
Liapunov exponents in high-dimensional symplectic dynamics 7−73210

random processes continued
linear chain and ring-type random walks, theoretical description of shape 7−128456
linear extrapolation for random fields 7−128438
link matching problems, replica symmetric soln. 7−140610
liquid crystals, stochastic molecular orientational fluctuations, incoherent cold neutron scatt. studies 7−91431
localisation of random matrices with weak disorder parameter, Lyapounov exponents 7−102353
localization and anomalous diffusion of a damped quantum particle 7−115940
Lorentz gas models, heat transport coeff. calcs. 7−75748
low symmetry space groups, |E| distribs., exact random walk models in crystallographic statistics 7−76061
Lyapunov exponents for $n=3$ discrete self-trapping eqn. 7−108424
magnetic field of horizontal layer of Poisson random sources, stochastic props. 7−87434
Mandelbrot random measures associated with substitution *(French)* 7−80602
map model, disordered system with deterministic dynamics 7−115917
maximum length sequences, cellular automata and random numbers, statistical props. 7−115771
maximum likelihood method for dependent observations *(French)* 7−95465
mean field approach to the random potential problem 7−140615
mean-square error determ. of inverse problem 7−73199
metallic environment, light-particle diffusion, random walk model, quantum mech. calcs. 7−84356
meteorology, integral time scale estimation from time series autocorrelations *(German)* 7−79536
modulation-induced negative differential resistance in bistable systems 7−115907
multicomponent alloys, correlated random walk, self-consistent decoupling approx. 7−76473
multifractal lattices, Eden growth, growth probabilities, cluster spatial distrib., fractal geometry 7−140630
multifractal lattices, random walks on square lattice, site-residence probabilities, computer simulations 7−140629
multipath time delay estimation, high resolution, for broadband random signals 7−110638
multiple scaling corrections for period doubling 7−73207
nearest neighbor avoiding walks on 2D lattices, critical exponents 7−115915
non-Gaussian random fields, statistical props. rel. to cosmic microwave background temps. 7−140327
nondifferential processes with aftereffect, direct equations, kinetic coefficients 7−120786
nonequilibrium structures and instabilities, conf., Valparaiso, Chile (Dec. 1985) 7−108046
nonequilibrium systems, patterns, defects, microstructures, conf., Austin, TX, USA (March 1986) 7−115691
nonlinear differential eqns., subharmonic bifurcations, variational approach 7−108417
nonlinear elliptic equations with highly oscillatory random coefficients *(French)* 7−102087
nonlinear least square data fitting using random sequences 7−128257
nonlinear random media, localisation, invariant-imbedding approach 7−80443
nonlinear resistor network, randomly diluted, field-theoretic formulation 7−80629
nonMarkovian diffusion-like equation for transport processes with anisotropic scatt. 7−89167
nonstrange attractors in the presence of external, random noise 7−80625
nonuniversality in crumpled manifolds 7−108414
NP-complete decision problem, spin glass and golf-course cost function 7−115910
NP-complete problem with golf-course potential 7−115909
nuclear transition strength fluctuations, time-reversal invariance bounds, random matrix methods 7−141021
one-dimensional random Ising model with $r^{-(1+\epsilon)}$ interaction decay, convergent cluster expansion 7−134682
one-dimensional random-field Ising model, transitions and scaling relations 7−95500
one-dimensional randomness on a two-dimensional lattice 7−80674
open and closed random walk shapes, asphericity, radii of gyration, 1/d expansion 7−134655
optical transmission in disordered media 7−90509
packings for atomic substances 7−83694
particulate matter, size segregation by shaking 7−73220
paths with curvature-dependent action 7−102323
percolation clusters generated on Cayley tree at criticality, probability distrib. 7−108452
percolation growth and dynamical discrete models 7−132960
percolation models and props. in random media systems, review 7−67252
period doubling sequences with correlated noise, scaling, renormalization group anal. 7−140612
period-doubling bifurcation points in ordinary differential eqns., algorithms 7−80607
periodically correlated random processes, interpolation of estimates of probability characts. 7−128435
permeability variation due to spherical impurities in a disordered packing of equal spheres 7−140603
perturbative nonlinear random diffusion from stochastic integral representations, statistical props 7−128504
piecewise linear iterated maps, ergodic theorem for intermittency 7−140611
piecewise linear map, exact treatment of mode locking 7−73206
plane random walks, joint distrib. function for position and rotation angle 7−80679
plane wave random superpositions 7−115844
polaron effective mass, functional integral approach to statistical mechanical model 7−98826
polyacetylene, supersymmetric treatment of random disorder in continuum model 7−118417
Polyakov random surfaces with arbitrary genus, entropy, susceptibility critical exponent 7−80624
Polyakov string theory, stochastic quantization and random surface approach 7−108885
polymer chain, configurational statistics in external field 7−103701
polymer mixture, Flory-Huggins lattice model, crit. props. 7−108432
positivity requirements on fluctuating parameters 7−89130
random processes continued
power variables correlation, theory and appls. 7−115772
products of matrices, Liapounoff exponents, algebraic subgroup *(French)* 7−72768
pulse reflection statistics from randomly layered medium 7−89132
q-state random Potts model, critical behaviour and renormalization group eqns. 7−95495
quantum field theory, order parameter fluctuations and spontaneous breaking of translational invariance 7−108809
quantum particle in random pot., multifractal wave fn. at localization threshold 7−134701
quantum percolation thresholds and random walk fractal dimensions 7−102330
quantum systems, energy level fluctuations, random matrix methods 7−140547
quantum systems with random fields, crossover phenomena and criticality, renormalisation group study 7−121040
quasi-integrable systems, transitional periodic orbit amplitudes and semiclassical energy spectrum 7−140594
quasienergy statistics in chaotic and random systems 7−76725
quasiperiodically forced dynamical systems with strange nonchaotic attractors 7−108418
quasirandomness and k^{-d} spectra of several objects 7−88930
radiative transfer equation, diffusion approx. and random walk method of soln. 7−80695
rain intensity, models of stochastic point processes 7−79545
random lattice, percolation 7−67240
random resistor network, Potts model formulation, critical exponents determ. 7−95502
random walk dynamics, anomalous fluctuations 7−134662
random walk method soln. of Schrodinger eqn., small time steps limit validity 7−134652
random walk on 1D lattice with moving boundary 7−134700
random walk processes on networks, probability distrib. fns., analytic method 7−134661
random walks/surfaces, Monte Carlo noncanonical path and surface simulation 7−128444
random-bond D-2 Ising model, explicit momentum-space renormalisation-group anal. 7−120998
random-field Ising model, metastable states, critical props., dynamical model calcs. 7−84189
randomisation, combinatorial conditions for weak and strong validity 7−67217
randomly diluted *xy* and resistor networks near the percolation threshold 7−95501
real symmetric random matrix, correlation props., numerical calc. 7−140619
regularized bosonic strings, extrinsic curvature in triangulated random surface model 7−81162
relaxation time spectrum of diffusion in one-dimens, random medium 7−73197
resistor network, noise exponents 7−80628
resistor network at percolation threshold, infinite set of exponents, renormalization group anal. 7−80659
resistor networks, systematic density expansion 7−67232
restricted 3-body problem, topology of Jacobi levels with no zero velocity curves 7−73233
rigidity and ergodicity of randomly cross-linked macromolecules 7−111400
ring laser, random frequency base, optimisation 7−130206
ring laser with random frequency base, error, asymptotic estimate 7−130205
rumor spreading, Markov anal. 7−89133
sample covariance matrix and canonical correlation matrix, functions of eigenvalues and multivariate time series 7−95184
Schrodinger equation with random pot., mathematical review 7−67220
Schrodinger operators, density of states 7−67086
self-avoiding 2D random walks, effective coordination number 7−73217
self-avoiding polymer chain in 2D, exact contact crit. exponents 7−97900
self-avoiding random surfaces, 3-D lattice gauge theory 7−108751
self-avoiding random surfaces, connection with lattice gauge theories 7−80619
self-avoiding random walk, diffusion in high dimensions 7−120970
self-avoiding walk, nonergodicity of local length-conserving Monte Carlo algorithms 7−108408
self-avoiding walk on square lattice, Monte Carlo test of hyperscaling relation 7−120942
self-avoiding walks, critical behaviour on square and cubic lattices 7−102335
self-avoiding walks, critical exponents on finitely ramified fractals 7−80610
self-avoiding walks exponents, exact, for finitely ramified fractals 7−67224
self-avoiding walks in 3D, hyperscaling relation 7−95474
self-avoiding walks on diluted lattices near percolation threshold 7−80650
self-avoiding walks on random networks of resistors and diodes 7−108468
self-avoiding walks with bridges, resistance and spectral dimension 7−102304
self-avoiding walks with local bridges, resistance and spectral dimension investig. 7−89154
self-directed walk, 2D Monte Carlo study 7−73244
self-directed walk, Monte Carlo study on simple cubic lattice, in three dimensions 7−134687
self-generated complexity, measurement quantities 7−80637
self-interacting random walk on 1D integer lattice 7−108407
self-oscillators, randomly interacting, population dynamics, tractable models without frustration 7−89131
semi-infinite 3D spin 1/2 Ising model, with random surface and bulk fields, mean field theory 7−105939
semiconductors, coherent nonlinear effects, optical turbulence and stochasticity, coherent excitons, photons and biexcitons 7−68742
sequential packing in square cellular structures, method correlations 7−108444
serial rank statistics, weak convergence, time series and Markov processes appl. *(French)* 7−108399
shot noise driven process, first-passage times, stochastic trajectory anal. technique 7−89126
shrinkage estimators of the location parameter for spherically symmetric distributions *(French)* 7−102141
Siegel disks of arbitrary rot. number, universal small-scale struct. near boundary 7−108193

random processes continued
Sierpinski gasket, 2D, random walk on gasket fractal in external field 7−102338
Sinai anomalous diffusion law, generalisation 7−120940
singularity analysis of intersecting separatrices in near-integrable dynamical systems 7−67211
snowflake growth, diffusion limited aggregation simulation 7−73205
solar noise storms, burst-length distrib. and burst component energy spectrum 7−127808
spatial patterns in a simple reaction-diffusion system 7−140635
spectral representation of semistable processes, and semistable laws on Banach spaces 7−66983
spin exchange kinetic Ising model, critical dynamics in quasilinear fractal geometries 7−80651
spin exchange kinetic Ising model in 1D, critical effects in quasilinear fractal geometries 7−80652
spontaneous symmetry breaking due to randomness, chiral and translational symmetries, non-interacting fermion system 7−121392
standard mapping, symm. lines and nonintegrable dynamics 7−108422
stationary random processes, spectral density, superresolving estimates 7−67192
stepped leader random walk model 7−115901
stochastic dynamical systems, nonlinear, transient behaviour 7−128441
stochastic pathway to anomalous diffusion 7−95475
stochastic quantisation and Killing symmetries of random systems 7−80623
strange attractors, scalar-vector field representation 7−115913
supercritical sine circle map, scaling behaviour 7−67199
surfaces and walks, Monte Carlo simul. on sequential and parallel computer 7−128442
symmetric and nonsymmetric coupled logistic maps 7−95478
test particle in random harmonic chain, diffusion constant calcs. 7−140643
time series, low dimensional attractor 7−79935
time-averaged correlation for self-similar non-stationary data 7−88928
time-reversible Liouville equation, constraints, stochastic order parameter, Rayleigh-Benard cell 7−140613
topological defects dynamics and Melnikov's theory 7−102344
traps, 1D diffusion scavenging 7−89117
travelling salesman problem, simulated annealing algorithm for optimisation problems 7−80583
travelling salesman problem on tetrahedrally coordinated random networks, appl. to a-Si modelling 7−142586
triangular antiferromagnet, spin=1/2, with random exchange interaction, low temp. props. 7−85218
triangulated random surfaces with extrinsic curvature, discrete model 7−140637
two-dimensional Ising model, generalised Gaussian model with randomness, replica method exactness, crit. renormalisation 7−80666
two-dimensional random walk, exact probability distrib. 7−73212
two-state atom, elec. field interaction, Fourier spectra, semiclassical Jaynes-Cummings model 7−108410
$U(1)_2$ Hamiltonian lattice gauge theory, guided random walk algorithm 7−89373
U(∞) lattice gauge theory, random surface representation of strong-coupling expansion 7−67512
unidimensional random walk, first passage time problem 7−89155
uniformly biased diffusion on 2D percolation network 7−108478
unstable system driven by Ornstein-Uhlenbeck noise, scaling soln. 7−73292
vibrations of mechanical structures, mathematics, book 7−128464
vicious neighbour problem, Monte Carlo simulations 7−73203
viscous fingering in porous media, fractal nature 7−108437
walk on chain with dynamic disorder due to correlations 7−80703
walk on ultrametric spaces, time depend. bond construction 7−128491
walks, high-dimensional shapes 7−67234
walks with memory, review of kinetic growth processes 7−121005
wave propagation in unbounded random media 7−134535
weak disorder media, classical diffusion 7−102361
weakly independent random variables, strong approximations for partial sums 7−108425
white frequency-spectrum method for the measurement of the dynamic response of magnetic bodies in the linear regime 7−80824
Z_N lattice gauge theory, translation symm. breaking as random surface problem 7−67511
$F+H_2$, pot. energy surface, Schrodinger eqn. soln. using random walk method 7−119502

range finding *see distance measurement*

range of particles *see energy loss of particles*

ranging, laser *see optical radar*

ranging (sonar) *see sonar*

rare earth alloys
see also cerium alloys; dysprosium alloys; erbium alloys; europium alloys; gadolinium alloys; holmium alloys; lanthanum alloys; lutetium alloys; neodymium alloys; praseodymium alloys; promethium alloys; rare earth compounds; samarium alloys; terbium alloys; thulium alloys; ytterbium alloys
4f photoemission, f-d Coulomb interaction and Abrikosov-Suhl resonance 7−77755
amorphous, mag. props., amorphisation effects, review 7−85264
binary systems, phase diagrams, correlation with periodic table 7−71153
conference, Hamilton, Ont., Canada (June 1986) 7−66817
hard magnets, rare earth-transition metal, disclinations and magnetism 7−111559
Laves phase cpds., electronic structures and mag. props., review *(Japanese)* 7−84660
Laves phase intermetallic cpds., AT_2, (A=rare earth or transition metal, T=Ni,Co,Fe,Mn), magnetism, review *(Japanese)* 7−85319
magnets, hard, anisotropies, disclinations 7−83956
R-transition metal amorphous alloys, thermomagnetic switching parameters, time and radial depend. calcs. 7−118801
rare earth-transition metal alloy thin films, amorphous, coercive force, thermomagnetic recording, magnetisation reversal model 7−125444
rare earth-transition metal alloys, RM_2In or RM_2Sn, R=La, Sm, Gd-Tm, Lu, cryst. struct., X-ray diffr. 7−91527
rare earth-transition metal amorphous alloys, ion mixing form., mag. props. 7−76234
rare earth-transition metal Laves phase alloys, band struct. experimental anal. 7−70178

rare earth alloys continued
rare earth-transition metal-Si(Ge) systems, valence, EXAFS and X-ray studies 7−77689
relativistic self-interaction-corrected local density approx. calc. 7−76738
self-consistent approximations 7−76753
spin glasses, review 7−77314
ternary systems, superconductivity and ferromagnetism coexistence, review 7−77138
XPS and XAS core level spectra, Anderson impurity model anal. 7−77686
Al-rare earth alloy cathode for sputter ion pumps 7−134775
Fe-R-B alloys (R=rare earth), melt spun and plasma sprayed, mag. props. microstruct. 7−132085
Fe-R-B melt spun alloys (R=Pr,Nd,Y,Gd), hard mag. props. study, comp. depend. 7−99508
$Fe_{14}R_2B_xC_{1-x}$, high intrinsic coercivities 7−112860
Mg-Al-rare earth alloys, H interaction, electron microscopy and X-ray study 7−106514
Mn-Ge-misch metal alloys, Invar characts., machinability *(Japanese)* 7−76460
R-Co-(Fe) amorphous alloys, magnetism in disordered materials, model 7−112804
R-Co-B (R=Pr, Nd, Sm, Gd), mag. props. and cryst. struct. 7−138233
R-Fe amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7−112895
R-Fe-B, mag. domain struct., Lorentz microscopy 7−99490
R-Fe-B permanent magnets, corrosion characts. and mag. props. studies 7−132806
R-Fe-B powder oxidation during permanent magnet prep., DSC study 7−132804
R-transition metal amorphous alloy films for magneto-optic recording 7−132366
R-transition metal intermetallics, depend. of R-M exchange interactions on nature of R atom 7−125364
RCo_5, f band spin polarisation 7−125319
RCo_5, incommensurate phase, hybridisation and mag. form. factor 7−138189
RCo_5, magnetisation anisotropy 7−138215
R_2Co_{17}, f band spin polarisation 7−125319
R_2Co_7, intermetallic cpds., photo-induced hydride formation 7−119541
RCo_2B_2, magnetism and structural chemistry, B substitution 7−142700
$R_2Co_{14}B$ (R=La, Nd, Gd), single crystals, magnetisation, mag. anisotropy 7−112760
$R_2Co_{14}B$ borides with $Nd_2Fe_{14}B$ structure 7−76100
$R_2Co_{14}B$, room temp. polar Kerr effect meas., 3d sublattice magnetisation effects 7−70751
$R_2Co_{14}B$, size effects, determ. of lattice parameters 7−76082
$R_3Co_2Sn_7$, R=La, Ce, Pr, Nd, cryst. struct., mag. suscept., elec. resist. and thermopower meas. *(Russian)* 7−98048
RCu_6 (R=Ce, Pr, Nd, Sm, Ce_xLa_{1-x}), 4f partial states, VUV studies 7−106376
RCu_2Si_2, (R=Tb-Tm), mag. interactions 7−132007
RFe_{23}, dehydrogenation, thermodynamic study 7−105250
R_2Fe_{17}, cryst. field and easy axis direction 7−137866
$RFeAl_x$, mag. struct., Fe atom and moment location 7−131988
$RFeAlH_x$, R=Sm,Gd,Dy-Tm, breakdown of Fe sublattice long-range mag. order 7−99447
$R_2Fe_{14}B$ 7−125351
$R_2Fe_{14}B$ borides with $Nd_2Fe_{14}B$ structure 7−76100
$R_2Fe_{14}B$, Curie temp., spin reorientation, anisotropy and magnetisation 7−70544
$R_2Fe_{14}B$, exchange and crystal elec. field interactions 7−125365
$R_2Fe_{14}B$ magnetic props., 3d magnetism 7−70530
$R_2Fe_{14}B$, room temp. polar Kerr effect meas., 3d sublattice magnetisation effects 7−70751
$R_2Fe_{14}B$, size effects, determ. of lattice parameters 7−76082
$R_2Fe_{14}B$, spontaneous volume magnetostriction 7−143889
$R_2Fe_{14}BH_x$, (R=Dy, Ho, Y), spin rotation, Mossbauer study 7−113025
$R_2Fe_3Si_5$, R=Tb-Ho, Tm, Lu, electronic struct., X-ray emission spectra *(Russian)* 7−113316
RFe_6Sn_6, R=Gd-Ho, cryst. struct., X-ray diffr. studies 7−98037
$RIrGe_2$, R=Pr,Nd,Sm,Gd-Er, cryst. struct., X-ray diffr. anal. *(French)* 7−76080
RM_2X_2 (M=nd transition metal, X=Si, Ge), mag. interactions, mag. structures 7−77234
RMn_{23}, dehydrogenation, thermodynamic study 7−105250
R_6Mn_{23}, f band spin polarisation 7−125319
RNiAl, Laves phases, crystn. at high press. 7−142702
$RPtGe_2$, R=Ce-Nd,Tm, cryst. struct., X-ray diffr. anal. *(French)* 7−76080
RPt_2In (R=Gd,Tb, Y, Dy, Ho) cryst. struct. studies 7−69655
RPt_2Sn (R=Tb, Y, Tm) cryst. struct. studies 7−69655
RT_4B, T=Fe,Co, R=Pr, Nd, Sm, Gd, Tb, Dy, Er, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
R_2Zn_{17} alloys, mag. suscept. and elec. resist. meas. 7−70531
R_2Zn_{17}, R=La-Lu, cryst. chem., struct., X-ray diffr. study 7−91528

rare earth compounds
see also under the individual compounds e.g. cerium compounds
see also rare earth alloys
actinides and rare earths, anomalous, conf., Grenoble, France, (July 1986) 7−72697
aluminates, hexagonal, structs., luminesc. spectra, review 7−76108
aluminium garnets, synthesis by combined deposition of hydroxides 7−92846
anomalous, mag. props., neutron scatt. studies 7−77226
binary fluoride oxides, prep., comp., struct., and elec. cond. study 7−84387
borides, magnetic props., model-statistical prognostication method *(Russian)* 7−85356
bromates, AC mag. susceptibility between 1 and 4.2 K 7−105897
chalcogenides, heats of formation, fluorine combustion calorimetry 7−106824
chlorides, melting, liq. molar vols. 7−124461
complexes, with pyrene tetrasulphonate, energy deactivation study 7−125787
crystal growth and purification methods 7−77780
crystal phosphors, atomic sources of optical photons 7−129645
garnets, Faraday paramagnetic effect 7−144044
halides, absorption spectrophotometric studies under press. 7−77603
halides, metal-metal bonding and interstitials 7−91519

ire earth compounds continued
hexaborides, antiferromag. with localised moments, magnetoresistance 7−143482
high-temperature superconductors, discovery 7−92346
hydrides, crystal growth and phase diagram studies, autoclave system 7−95605
hydrides, electronic struct. and bonding, photoelectron spectra studies 7−106380
insulating systems, f-electron photoemission spectra calcs. 7−113343
lanthanide(III) systems, ligand polarisability contrib. to electronic Raman spectra 7−125719
lanthanide complexes in form of solid-solid solns., diffuse reflectance spectra, spectral intensities 7−118976
lanthanide compounds, chem. bonding 7−142694
lanthanide halides, electronic struct., INDO calcs. 7−89966
localized electronic excitations, Raman scatt. spectra 7−85704
magnetic structure, neutron diffr. meas. 7−138190
magnetic superconductivity, overview 7−118614
magnets, hard, anisotropies, disclinations 7−83956
minerals, modal analysis, electron raster microscopy and X-ray spectral microanal. 7−126511
mixed crystals, $RR'F_3$-type, inhomogeneous mag. dipole broadening of spectral lines 7−99806
mixed electronic states, mag. moments, XANES study 7−144180
mixed valence Cu oxides, high T_c superconductors, double exchange processes effect *(French)* 7−125166
mixed-valence cpds., electronic struct., giant resonances, PES study 7−143334
monochalcogenides, nonmetallic, electron spectrum 7−84674
nitratolanthanate complexes, anionic isotropic NMR shifts 7−90213
orthoferrites, hard domain boundary mobility, exchange relax. effects calcs. *(Russian)* 7−85349
orthovanadates, mag. susceptibility and cryst. field effects 7−77204
oxide superconductors, with high T_c, 123 struct. and comp. 7−118669
pentaphosphates, photoacoustic spectra 7−123357
photon- and electron-stimulated desorpt. study 7−143235
relativistic self-interaction-corrected local density approx. calc. 7−76738
sesquioxides, abnormal ferroelastic transition orientation variants and interfaces, group theory appl. 7−111439
ternary borides, superconducting critical fields 7−125277
ternary systems, superconductivity and ferromagnetism coexistence, review 7−77138
thermodynamic characts., microscopic theory anal. 7−124550
ultraphosphates, decomposition-rate constants 7−86586
Ba-R-Cu-O system (R=Y,Nd,Sm,Dy,Er,Yb) high T_c supercond., Meissner state 7−118706
$Ba_{0.6}M_{0.4}CuO_{3-x}$ M=Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb,Lu, superconductivity, transition temps. 7−99280
$Ba_{1-x}R_xCuO_{3-y}$, R=La-Nd, Sm-Er, Yb, supercond. and structural props. 7−99287
$Ba_2RCu_3O_7$, (R=Y,Pr,Sm,Eu,Gd,Dy,Ho,Er,Tm), high-T_c supercond., struct. props. 7−142736
$Ba_2RCu_3O_{9-x}$ (R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb), high T_c supercond., prep. and characts. 7−118660
$Ba(R_{2/3}W_{1/3})O_3$, cubic perovskites, prep., thermal stability 7−69673
$BaRb_9O_{16}:Ce^{3+}(Tb^{3+})$ (R=La, Gd, Ce), luminescence props. 7−70891
HfO_2-R_2O_3, single crystal solid solutions, elec. props. 7−105631
$KR(WO_4)_2$ (R=Gd, Y, Er), optical properties 7−106116
$La_{2-x-y}R_ySr_xCuO_{4-z}$, R=Pr, Nd, Sm, Eu, Gd, supercond., structural, mag. props. 7−112596
$LiMS(Se)_2$ (M=La, Ce, Nd, Sm, Gd, Tb, Dy, Ho, Er, Y), synthesis, order-disorder transition, mag. props. 7−111862
R-Ba-Cu-O, high T_c supercond., anomalous magnetism, temp. depend. 7−112648
R-Ba-Cu-O, R=Sm-Ho, supercond. props. 7−105803
R-Ba-Cu-O high T_c supercond., mag. and nonmag. impurity effects 7−112637
R-Ba-Cu-O high T_c supercond. powder fabrication and critical temp. determ. 7−118624
R-Ba-Cu-O supercond. ceramics, prep. using yttria concentrate *(Japanese)* 7−126074
$RBa_2Cu_3O_{6+x}$ (R=Y,La,Nd,Sm,Eu,Gd,Ho,Er,Lu), square planar cpds., superconductivity above 90 K 7−105795
$RBa_2Cu_3O_{6+x}$ (R=Y,Yb,Ce,Pr), possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
$RBa_2Cu_3O_{6+x}$, superconductivity above 90 K, magnetisation meas. 7−118653
$RBa_2Cu_3O_{6+y}$, high T_c supercond., mag. characts. 7−118705
$RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
$RBa_2Cu_3O_{7-x}$, R=La-Lu, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
$RBa_2Cu_3O_{7-y}$ (R=Y,Nd,Eu,Gd,Dy,Ho,Er,Tm), high T_c supercond., upper critical fields, anisotropy limits 7−131939
$RBa_2Cu_3O_{7+y}$, high T_c supercond., superconducting props. *(Russian)* 7−143653
$RBa_2Cu_3O_{9-\delta}$, R=La-Lu except Pm, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
$RBa_2Cu_3O_{9-\delta}$, R=Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb,Lu, high T_c superconductivity obs. 7−118659
$RBa_2Cu_3O_x$ (R=Gd, Er, Dy), high T_c supercond., mag. and supercond. properties 7−131888
$RBa_2Cu_3O_x$, (R=Y,Gd,Er,Yb), high T_c supercond., press. dependencies of T_c 7−131856
$RBa_2Cu_3O_x$ high T_c supercond., struct. and upper critical fields studies 7−125278
$R_2Ba_4Cu_6O_{14+y}$, R=La-Nd, Sm-Lu, high T_c supercond. props., elec. resist., X-ray diffr. meas. 7−99297
$R(BrO_3)_3.9H_2O$, R=La, Pr, Nd, Sm-Lu, optical biaxiality, twinning, struct. studies 7−104650
$RCo_{12}B_6$ mag. props. studies 7−99418
$RCr_{1-x}Mn_xO_3$, mag. props., Mn^{3+} impurity ion effects 7−138196
$RCu_3Mn_4O_{12}$ perovskites, polarisation of mag. moments of R^{3+} ions 7−132060
$RFe_{5-x}Ga_xO_{12}$ garnets, IR lattice spectra studies 7−132252
$R_2Fe_{14-x}Si_xB$ (R=Pr,Nd,Er) compounds, struct. and mag. props. 7−138278
$RGa_2S_4(Se_4):Nd^{3+}$ *(Russian)* 7−125770
$R_2Ge_2O_7$, R=La-Lu, structural relations, cryst. data, phase transitions 7−76088
rare earth compounds continued
RMSi(Ge) phases, M=transition metal, Ni-Ti-Si-type and ZrBeSi-type, struct. aspects of chemical bonding 7−117875
$RMoF_7$, (R=lanthanide), crystal structure data 7−83883
$R_2Mo_2O_7$, R=Nd, Sm, Gd, elec. resist. meas., 4.2-300 K 7−112287
R_3MoO_7, R=La, Pr, Nd, Sm, Eu-Ho, prep., cryst. chem. props., phase equilib. 7−91503
RMo_6S_8 (R=La, Gd, Yb, Ho), Chevrel phase, microstructures, positron lifetimes 7−144166
RNi_2P_2, R=Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Sm, Ce, Yb, La, mag. props. temp. depend. study 7−118767
R_2NiRuO_6, R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm, cryst. struct., neutron powder and X-ray diffr. 7−83922
R_2O_3, R=Pr,Nd,Sm-Tb,Ho,Tm,Yb, bonding anomalies, Raman and IR vibr. spectra 7−85628
R_2O_3-SiO_2 (R=Pr, Dy, Er) silicate glasses, sol-gel prep. 7−132977
RPtX, (X=P, As, Sb), cryst. struct. determ. 7−76106
RRh_2X_2 (X=P, As), ternary pnictides, cryst. struct. determ. 7−117877
$RRuB_4$, R=Gd-Tm, Lu, mag. suscept., elec. resist. meas., low temp. mag. order 7−92408
$RTiO_3$-Lu_2TiO_5 (R=Gd,Tb,Er), solid solutions 7−92970
R_2TiO_5, R=La-Lu, structural disordering on quenching, Raman spectra 7−99820
$R_2Ti_2O_7$, R=La-Lu, structural disordering on quenching, Raman spectra 7−99820
$R_{1/3}UO_2PO_4$ (R=La,Ce,Pr,Nd,Gd,Tb,Dy,Yb) lamellar solids, excited state props. 7−70881
TeO_2-Fe_2O_3-R_2O_3, R=La, Dy, Sm, Eu or Gd, rare earth tellurite glasses, phys. props. 7−84882
WO_3-R_2O_3, transparent amorphous films, prep. by ultrafast quenching 7−106457

rare earth elements *see rare earth metals*

rare earth metals
see also the individual metals e.g. cerium
4f energy level sequences, phonon interference, anal. 7−70211
abundance patterns in Iowa coal, determ. from instrumental neutron activation anal. 7−72027
adsorption on W(001), recursion method calcs. 7−118232
atoms, L X-ray fluoresc. cross-sections meas. 7−141517
cool CP stars, lanthanide abundances 7−88431
core level spectra, 4f level occupancy, Coulomb interactions and hybridisation effects 7−144247
crystal growth and purification, solid state electrotransport 7−119131
distorted FCC structure 7−76076
doped glasses, optical transition, homogeneous line broadening, review 7−75075
doped inorganic glasses, fluoresc. line narrowing, review 7−77632
electronic factors influencing superconductivity and beginning of rare-earth series 7−112534
electronic models, historical perspective of lanthanides and actinides 7−72760
f-electron delocalisation, regular struct. - low symmetry collapsed phase transition 7−76802
f-states, core level spectroscopy 7−92784
geochemistry, Pu and Sm meas. rel. to thermodynamics of trace element partitioning 7−94139
geochemistry, study of rocks and spring waters at Kanam and Kanjera, Kenya 7−87557
giant resonances, electron energy loss spectra anal. 7−144200
impurity systems, thermodynamic props., f-d Coulomb repulsion effects 7−76448
integrated target-ion source for fission yield meas. of rare-earth isotopes 7−96447
ions, two-photon absorpt. amplitudes, electron correlation effects calc. 7−96562
ions in crystals, elec. dipole transition amplitudes, electron correl. contribs. 7−137869
lanthanides, laser induced photoionis., photoelectron spectroscopy 7−90076
lanthanides in solar photosphere 7−88338
magnetism, history and foundations 7−66884
neutron activation anal. determ. in geological materials 7−100653
plasmas, laser generated, EUV spectra study 7−142482
self-interstitial props. 7−98122
semi-infinite, RKKY interaction near surface 7−138214
semiconductor:rare earth, bistable mixed-valence impurity states 7−70259
shergottite phosphates and residues, rare earth patterns 7−101741
spring waters, CO_2-rich, from Vals-les-Bains (France), U and rare earth elements geochemistry 7−94323
surface resonant transitions, soft X-ray appearance pot. spectra study 7−143552
vacuum spark, X-ray emission quasicontinuum band 7−123986
X-ray absorption spectroscopy for 500 to 2000 eV 7−125853
GaAs residual impurity gettering during growth, spectra studies 7−106108
InP, residual impurity gettering during growth, spectra studies 7−106108
LU_2O_3, rare earth impurities determ., X-ray fluoresc. spectrometry 7−139061
La-Ce and Sm-Nd isotope systematics in terrestrial rocks, coupled evolution model 7−107373
ZnS:R, rare earth ion excitation, energy transfer mechanism 7−70855

rare gases *see inert gases*

rarefied fluid dynamics
see also atomic beams; Knudsen flow; molecular beams
acetylene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
Boltzmann eqn., simulation methods 7−111035
cylindrical vessel, Monte Carlo direct simulation *(Japanese)* 7−142330
diffusion coeff., Chapman-Enskog soln. 7−123684
electrically conductive surface, partially covered by thin dielec. layer gas ion momentum and energy transfer 7−106350
ethene, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
flow near asymmetric plane stagnation point 7−142339
flow resistance of body in rarefied gas supersonic flow, surface pot. and mag. field effect 7−69213
gas flow, monotonic, in slot channel 7−130744
gas molecule-wall interaction, slip coeffs. depend. 7−117632
hypersonic flow, drag coeffs. of bodies 7−111034
kinetic theory of gas molecules in EHV environment, stochastic model 7−137045

rarefied fluid dynamics continued
molecular trapping dynamics, by rarefied gas jet free surface, Monte Carlo simulations 7−130746
monatomic and diatomic gases, macroscopic parameters distrib., boundary conditions influence 7−117631
monatomic rarefied gas, streamline flow round circular rot. cylinder *(Russian)* 7−123686
propyne, seeded mol. beam, free mol. flow, rot. distrib. 7−90084
radiating rarefied gas unsteady flow in rot. channel 7−123683
rarefied gas, heat transfer between two permeable plates, injection effects study 7−136936
three-dimensional bodies, minimal drag in rarefied gas, shape investig. 7−117630
twin-wire hot-wire anemometry diagnostics 7−136937
uniform flow, temp. field induced around sphere 7−123685
NH_3, seeded mol. beam, free mol. flow, rot. distrib. 7−90084

rarefied gas dynamics *see rarefied fluid dynamics*

rarefied gas flow *see rarefied fluid dynamics*

ray tracing, optical *see geometrical optics*

Rayleigh-Benard instability *see flow instability*

Rayleigh law *see Rayleigh scattering*

Rayleigh scattering
agarose gels, molecular dynamics, NMR, Rayleigh scatt., Mossbauer radiation 7−126698
alkali halide crystals, microcrack nucleation kinetics, light scatt. study, acoustic phonons 7−131222
4-n-alkyl-4′-cyanobiphenyls, n CB, nematic-isotropic phase transition, thermal diffusivity, crit. behaviour 7−98446
atoms, X-ray dispersion anal., relativistic effects 7−96584
automated spectrometer for studying scattered light fine structure 7−102535
azulene, saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750
backscatter statistics of single-mode fibre 7−68858
binary alloys, Rayleigh-Compton backscatter ratio anal. 7−93239
crystallisation capacity, liquid-phase separation, Rayleigh and Mandelshtam-Brillouin scatter 7−99875
cytochrome-c anomalous reson. enhanced quasielastic light scatt. 7−133224
disordered medium, coherently backscattered light, geometric effects and fluctuations, Rayleigh distrib.. 7−92695
fiber optic gyroscope, phase-modulated, coherent backscatter 7−75155
fluid, Rayleigh scatt. by microparticle surface-enhanced density fluctuations 7−129985
fluoride optical fibres, scattering characteristics 7−68845
fluorozirconate glass, optical and elastic props., investig. using Brillouin scattering 7−130281
gas concentration determ. using pulsed laser radiation 7−126523
gases, Rayleigh scattering cross sections meas. 7−135948
laser, signal analysis developments 7−108529
laser Doppler blood flow meas., opt. fibre probes investig. and improved performance 7−119829
liquid-glass transition, evolution of Rayleigh line wing and struct. correlations 7−132293
liquids, saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750
methanol, thermal diffusivity, photon correl. spectroscopy 7−76464
molecular fluid, depolarised interaction induced light scatt., ab initio calcs. 7−81970
molecular gases, Rayleigh spectrum fine struct., review 7−141586
Mueller matrix elements for Rayleigh, Rayleigh-Gans and Mie spheres 7−95145
nematic liq. cryst. polymer, diffusion coeff. reverse anisotropy meas. 7−124096
nematic liquid crystal, twist elastic constants, forced Rayleigh scattering 7−98291
parameterization for Rayleigh scattering transmission function for broadband models 7−129987
particle layer, light and Rayleigh scatt., radiation transfer eqn. 7−68562
phytol, Rayleigh scatt. and IR spectra meas. *(French)* 7−122554
phytyl acetate, Rayleigh scatt. and IR spectra meas. *(French)* 7−122554
polystyrene-toluene solns., tracer diffusion near glass transition, forced Rayleigh scatt. 7−113210
polystyrene-tri-m-tolyl phosphate, solns., tracer diffusion near glass transition, forced Rayleigh scatt. 7−113210
polyvinyl acetate-toluene, solns., tracer diffusion near glass transition, forced Rayleigh scatt. 7−113210
radiation-molecule interactions, mol. QED, book 7−134377
soot particulate, agglomerated, particle size, Rayleigh scatt. 7−100625
species concentration in complex turbulent flow, Rayleigh meas. 7−132985
stratospheric aerosol meas. by laser radar, calibration and error analysis *(Japanese)* 7−79692
tetrafluoromethane-Ar gas mixture, Rayleigh and Raman spectra 7−103514
toluene, thermal diffusivity, photon correl. spectroscopy 7−76464
transition metals, large angle elastic scattering 7−141497
tropospheric water vapour DIAL meas., correction for Rayleigh scattering effects 7−133919
Ba plasma, laser prod., opacity effects on near reson. Rayleigh scatt. 7−97794
Ba^+, depolarisation of near-resonance Rayleigh scattering 7−130925
Ba^+ plasma, local density, temporal evolution, Rayleigh scattering meas. 7−97703
$Ba_2NaNb_5O_{15}$, disproportionate phase transitions 7−124495
Bi, monocrystals, Debye-Waller factor meas., Mossbauer radiation Rayleigh scatt. 7−91753
CS_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
CS_2, Rayleigh-Brillouin scatt. calc. 7−82131
carbon tetrafluoride, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
Cd, large angle elastic scattering 7−141497
H_2O, depolarised Rayleigh wing, Fabry-Perot spectra, temp. depend. anal. 7−70760
H_2O, vap., free jets, condensation onset meas. 7−142335
He-Xe mixtures, Rayleigh Brillouin spectra, hydrodynamic description 7−77601
^3He-^4He solns., mutual diffusion, Rayleigh line width, near crit. vaporisation line 7−70023
I_2, dissoc., saturated absorpt., anharmonic forced Rayleigh scatt. 7−85750

Rayleigh scattering continued
methane, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
N_2, fluid, collision-induced scatt., multipolar polarisabilities, Rayleigh and Raman spectra anal. 7−82176
Na_2O-B_2O_3, crystallisation capacity, liquid-phase separation, Rayleigh and Mandelshtam-Brillouin scatter 7−99875
O_2, depolarised Rayleigh scatt., expt. and mol. dynamics study 7−122546
O_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
O_2.Rayleigh scatt. cooperative rot. motion and collision-induced term study 7−82174
SF_6-He gaseous mixture dynamics, Rayleigh-Brillouin spectra anal. 7−122552
Sb, monocrystals, Debye-Waller factor meas., Mossbauer radiation Rayleigh scatt. 7−91753
Sn, large angle elastic scattering 7−141497
ZrF_4 based fluoride optical fibres, scatt. loss due to crystallites 7−117328
ZrO_2:Y_2O_3 disordered cubic crysts., low freq. Raman spectra, Rayleigh wing broadening obs. 7−118994

Rayleigh-Taylor instability *see flow instability*

Rayleigh waves
see also surface acoustic waves
acoustoelectronic devices, conversion efficiency improvement by Rayleigh SAW propag. on deposited dielectric film 7−130509
anisotropic materials, Rayleigh wave vel. meas. using acoustic microscopy 7−123393
asymptotic methods, low and high freq., book 7−66857
crack depth measurement in corners using US Rayleigh waves 7−138938
dispersion in medium with subsurface inhomogeneities 7−82925
elastic solid, effect of surface stresses and voids 7−69030
elastic waves, propagation in periodically layered media 7−105222
EM oscillations caused by elastic waves in a conducting body 7−87435
halfspace, thermodiffusive, surface wave study 7−75402
homogeneous isotropic solid medium, Rayleigh wave interaction with gravity field 7−83095
Kalapana, Hawaii, 29 Nov. 1975 earthquake model and seismic radiation pattern 7−114642
liquid-solid and liquid-solid-liquid systems, non-specular effects, comparative anal. *(Japanese)* 7−124672
SE Maine, USA, Rayleigh wave dispersion and crust lateral anisotropy 7−139474
multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
nuclear explosions, nonlinear model of the tectonic stress release for underground explosions 7−139477
East Pacific Rise, asthenosphere seismic shear wave velocity struct. 7−87486
piezoelectric substrate with in-depth direction inhomogeneity, coupled EM-SAW anal. 7−143169
pipe flow US meas., using clamp-on Rayleigh wave transducers 7−123802
plate, laminated, asymmetric fibre-reinforced, wave propag. 7−69020
PMMA, acoustic emission signals propag., theoretical expt. study 7−124669
polyethylene, acoustic emission signals propag., theoretical expt. study 7−124669
propagation in deformed orthotropic materials 7−82928
propagation in initially stressed incompressible half space, mathematical model 7−140458
propagation in randomly inhomogeneous medium, calcs. 7−117394
reflection from edge of elastic wedge 7−130446
SAW delay line behavior in liq. 7−123386
SAW quartz cryst. cuts with low stress and temp. sensitivity, theoretical study 7−90868
SAWs, historical review and Polish-research activity *(Polish)* 7−97189
scattering at subsurface cracks parallel to the surface of a half-space *(German)* 7−104205
scattering at variously inclined discontinuity 7−133600
scattering by elastic half-strip end-coupled with elastic half-plane 7−142204
scattering of a Rayleigh wave by an elastic wedge 7−104158
seismic wave propagation in stepped structure equivalent mass-system model 7−133599
seismic wave scattering by rigid barrier 7−101205
seismic waves, phase vel. and amplitude values in presence of lateral heterogeneities 7−87462
steel circular cylinder, Rayleigh surface waves in nonuniform stress field, acoustoelastic effect *(Japanese)* 7−118224
stratified incompressible solids, thermoelastic waves, propag. *(Italian)* 7−75369
stressed conducting medium, elastic, magnetoelastic Rayleigh waves 7−75403
surface defects., Rayleigh to bulk mode conversion, laser study 7−124668
surface waves on general viscoelastic media, in presence of thermal field and gravity 7−142212
thermoelastic waves, generalised thermoelastic problem in infinite cylinder under initial stress 7−83090
transversely isotropic materials, speed calcs. 7−110667
US Rayleigh waves, attenuation on rough surfaces 7−112047
GaAs (112), fast surface acoustic waves of Rayleigh type, obs. 7−98664
$LiNbO_3$-SiO film structure, surface acoustic cnoidal waves and solitons 7−70056
Ni thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
P, black, low freq. surface dynamics, Brillouin scatt. 7−84473
Pt (111), with adsorbed O, adsorbate induced Rayleigh phonon gap 7−76588
RbBr (001), surface mode calcs. 7−70061
RbI (001), surface mode calcs. 7−70061
Si, Rayleigh waves, nonlinear optical excitation 7−112050
SiO_2 (glass)-ZnO-SiO_2(glass)(Si), boundary acoustic waves propag. *(Japanese)* 7−118222
ZnO-Si struct., acoustic layer mode propag., nonlinear electroelastic effect *(Japanese)* 7−124670

reactance *see electric reactance*

reaction kinetics
see also catalysis; chemical exchanges; chemical reactions; explosions; potential energy surfaces for collision processes; reaction kinetics theory; reaction rate constants
A15 multifilamentary supercond. form., solid state reaction and transform. kinetics 7−106466
acetic acid, unimolecular pyrolysis mechanisms, ab initio quantum chem. calcs. 7−126426
acrylamide-N,N^1-methylene-bis-acrylamide in aqs. soln., crosslinking polymerisation at 22°C 7−126451
acrylic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7−119509
acrylic acid, site selectivity, reaction pot. map anal. 7−86614
acrylonitrile, site selectivity, reaction pot. map anal. 7−86614
activation energy experiments, data analysis, BASIC program 7−108118
alkene-ICl mol. complexes, form. consts., alkene struct. effects 7−86571
amorphous As and Ge chalcogenides, photodoping as radiation enhanced solid state reaction 7−126468
9,10-anthraqunone, sulphonated derivatives, photophysics, photochemistry, emission and absorption spectra, photolysis, kinetics, transient species, states 7−144729
aromatic molecules, excited, stereospecific quenching by electron acceptors 7−122606
atom-molecule interactions, long-lived molecular complexes, obs. 7−139002
benzene, solvated electron reaction kinetics 7−132959
benzene+ethylene, meta photocycloaddition, semi-empirical calcs. 7−113912
benzoic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7−119509
bimethylpyrichrominium ion, protonated, adiabatic proton transfer, reaction kinetics, electronic excitation, fluorescent state, population inversion 7−144694
bimolecular association reaction dynamics calcs. 7−113895
bimolecular systems, isokinetic relationship investig. 7−113873
binary reaction, particle density time depend., exact 1D soln. 7−119489
binary reaction $1+1\rightarrow 0$ in one dimension 7−67238
binary system reaction, mass-closed condition, stability behaviour, second law anal. 7−138979
butadiene, substituted, conrotatory ring closure, kinetic principles 7−86577
calixspherand sodium picrate complex, X-ray struct., kinetic stability 7−144691
carbene cations and neutral mols., association reactions kinetics 7−113898
catalytic reactions, homogeneous, computer aided analysis of kinetics 7−86561
chemical reaction systems, nonequilibrium thermodynamics, algebraic symmetry 7−119491
chemical systems, age distrib. in kinetics 7−86557
chlorophyll a and photochlorophyll in frozen solns., fluoresc.-detected triplet kinetics study 7−100812
cyclopropane, surface-induced isomerisation, incident translational energy effect 7−113900
cytochrome b_5 electron transfer, role of heme vinyl groups 7−71664
electrode materials, high performance, for H evolution from alkaline media 7−113951
electron transfer reactions, dynamical effects, generalised moment expansion 7−93283
elementary chemical processes, mol. beam studies 7−110138
epoxy resin in cylindrical mould, cure process, kinetic and thermal parameters effect 7−126453
epoxy resins, 1,4-anhydroerythritol based, kinetics, branching determ. 7−93322
flames, laminar and turbulent, burning vel. and propag. vel. data 7−78500
formaldehyde, dissoc. reaction energies, coupled cluster and MBPT calcs. 7−93266
four-variable chem. reaction model, chaotic attractor, Lyapunov exponents and Poincare section calcs. 7−132910
gas phase polymerisation, cloud chambers meas., mathematical models study 7−126455
gas phase reactions induced by vibr. multiple-photon IR laser excitation kinetics 7−93263
homologous series, isoequilib. relationship, master eqn. theory investig. 7−113858
hydrocarbons, catalytic oxidation, heat liberation, vol. change 7−144690
hydrogen isocyanate, photodissoc., CO internal state distrib. 7−126465
hydrogen isocyanate, photodissoc., NH rot. state distrib. 7−126466
indoles, one-electron oxidation by free radicals 7−138991
interstellar problems, matrix isolation technique 7−88102
intramolecular mixed excimer form., time depend. fluoresc., kinetic and thermodynamic studies 7−122601
ionic reactions, diffusion controlled, in radiation-induced spurs, stochastic models 7−138993
mechanochemistry of solids, review 7−86594
membrane, bioreactors, mixing, minimizing dilution effects 7−93670
metal carbonyls, coordinatively unsaturated, gas phase transient IR spectrosc. 7−129707
metals, low-temp. electrochemically-driven oxidation kinetics, oxide props. effects 7−119435
methane, dissociative adsorpt. on Ni, kinetics for (111), (110) and (100) surfaces 7−137661
methane+OH, C kinetic isotope effect and tropospheric chemistry 7−87808
methanol, on Ru (001), decomposition, laser induced thermal desorption study 7−132967
2-methyl acetophenone derivatives, isomerisation, tunnelling model 7−132913
methyl isopropyl ether, gas phase dissociations 7−119498
methylene, insertion reactions 7−126424
microcomputer simulation of non-steady states in undergraduate chemistry 7−108089
molecular ions in dense interstellar clouds, ion-kinetics anal. 7−88561
myoglobin structural transitions, degrees of freedom, algorithmic methods, reaction paths 7−138956
nitroaromatic anions, collision-induced dissocs., mass analysed ion kinetic energy spectra 7−119497
nitrocompounds, condensed, thermal decomp. kinetics, automated data acquisition appls. 7−138999

reaction kinetics continued
nitrosamine metabolites, SCF calcs. polarisation functions and electron correlation effects, decomp. 7−109708
perfluoroalkyl iodides, photofragmentation, IR, multiphoton, absolute rate parameters determ. 7−122639
α-phenylazo-β-benzoyloxystilbene, solid state rearrangement 7−132929
polydimethacrylates, cross-linked, depolymerisation kinetics 7−139000
polyethylene, irradiated, radiation oxidised layer thickness evaluation *(Russian)* 7−139031
polymerisation kinetics, appl. of Z-transform inversion 7−86618
potassium benzoate, disproportionation to potassium terephthalate reaction system, ESCA, NMR, chemical anal. 7−126419
pressure-pulse measurements in electrode kinetics 7−126410
reaction rates and acid-base equilibria, micellar effects 7−139052
recombination kinetics, depletion and long-range effects 7−100527
refractory metal nitrides, combustion synthesis theoretical analysis 7−71115
RNA synthesis, replication-mutation systems struct. and dynamics 7−78720
Schiff bases, conjugated, protonation, quantum chem. study 7−132930
semiconductor technology, plasma stimulated deposition 7−71080
semiconductors, low-temp. electrochemically-driven oxidation kinetics, oxide props. effects 7−119435
six-membered rings, H^+ exchange reactions, ab initio calcs. 7−93271
sol/gel polymerisation, NMR 7−86619
solar-electric water purification using photocatalytic oxidation 7−100754
stopped-flow measurements, optical detection system 7−126404
synergetic semiconductor system, comparison with generic reaction diffusion model 7−105585
temporal chemical systems, inversion, filtering theory 7−138957
tetrafluoroethylene, low-temp. radiation-induced postpolymerisation, kinetics *(Russian)* 7−86626
triphenylmethane dyes in soln., barrierless electronic relax. 7−100520
tropone, decarbonylation, time depend. mass spectra, breakdown graphs 7−93273
two-particle decay, nonrelativistic model, reduced resolvent, centre of mass motion, coupling constant 7−140969
tyrosine, persulphate oxidised, chemiluminesc. and Raman spectrosc. charact. 7−122541
unimolecular reactions, coherent radiative control, 3D calcs. 7−126427
unimolecular reactions in condensed phases, nonMarkovian theory 7−93291
$\mu He^+(2s^1/_2)He_n$ complexes, symmetric, rate of formation 7−129907
Ag/AgS_2 scale interface reaction effects on sulphidation kinetics, modified Wagner's pellet method 7−119576
$Al_n^+ + O_2$, size-depend. barriers for reaction 7−113876
Ar+methane reaction, CH radical prod., vibr. energy, fluoresc. spectra anal. 7−138967
BH_3 coordination complexes form. CNDO/2 calcs., NMR coupling const. *(French)* 7−132931
Ba-Y-Cu-O high T_c supercond. perovskite phase synthesis, O partial press. depend. *(Japanese)* 7−132553
CO oxidation on Pt/SiO_2, integrated kinetic modelling and transient FTIR studies 7−126421
CO_2 + methyldiethanolamine, reaction kinetics in aqs. solns. 7−126420
$Ca+CO_2$, collision kinetics 7−90336
Ca+HF, 3D two-config. pot. energy surface 7−106766
$CaSO_4$, thermal dissociation in vacuum, influence of Al_2O_3 on reaction kinetics 7−113881
$ClO_2^- + I^-$, stationary states and dynamical behaviour, mixing effects 7−132920
Co/CoS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
$Cs+H_2$ collinear reaction, quantum mech. transition probabilities 7−93267
Cu/Cu_2S scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7−118325
D + H_2, quantum reactive scatt. in 3D, hyperspherical coordinates 7−132916
DBr+F, D transfer reaction, pot. energy surface white spot 7−126436
F/BiI_3 flames, role of I atoms in IF prod. 7−93328
F_2+NF_3+Si, SiF and SiF_2 radical prod., multiphoton ionisation mass spectrometric detection 7−78463
Fe catalyst, H activation, acetophenol hydrogenation, Raman scatt. anal. *(Russian)* 7−132963
Fe/FeS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
H + H_2 quantum reactive scatt. in 3D, hyperspherical coordinates 7−132916
$H+H_2$, collision-induced dissoc. classical dynamics threshold 7−126438
H_2-Si-SiH_4, glow discharge, dominant reaction channel and SiH_4 decomp. mechanism 7−106802
H_2-$SiCl_4$, inductively coupled plasma, reaction mechanism studied by mass spectrometry 7−106869
H_2+D, mol. beam reactions, absolute scatt. cross sections 7−132914
HO_2 radical, chemical reaction kinetics on aqueous aerosols 7−120085
H_2O, photolysis, H_2 evolution photosensitised, using TiO_2 particles on colloidal SiO_2 7−132953
$H_2O.H_3O^+$ cluster, dissoc., statistical phase space theory 7−86593
ICN, dissociation, transition states, real-time fs probing spectroscopy 7−135960
InSb anodic oxide growth kinetics, anion migration and distrib. calcs. 7−119471
Ir (111), H chemisorpt., desorption mass spectra, LEED and contact pot. study 7−137701
$Kr+O_2^+$, vibr. relax. mechanisms, computational evidence 7−113875
$Li_{17}Pb_{83}$, neutron irradiated, tritium release, reaction kinetics expt. 7−122183
Li_7Pb_2, neutron irradiated, tritium release, reaction kinetics expt. 7−122183
Mo LPCVD film deposition, kinetics and reaction mechanisms 7−113438
$N+O_2(O_3)$ reaction kinetics, chemiluminescence, rate constants, excitation mechanisms, discharge flow technique 7−144693
NCl_3, thermal decomposition in presence of H_2, kinetics, stoichiometry 7−138998
NH_2+NO, reaction, branching ratio 7−119523
NH_3, photodissoc., product energy distrib. 7−132951
NO+CH(CD), chemiluminesc. reaction, kinetic isotope effect, internal energy disposal 7−71494

reaction kinetics continued
NO_3 absorption cross section, titration by NO, reaction scheme, absolute concentrations 7−142434
N_2O+Zn, reaction kinetics study 7−78465
Na, associative ionisation process, hyperfine structs., reaction dynamics 7−113906
Nd-Fe-B magnets, oxidation behaviour, corrosion reaction kinetics study 7−132805
Ni/NiS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
$Ni_{1-x}Al_x(OH)_{2+x}$, Ni reduction kinetics, density and specific surface meas. 7−86588
O+H_2, reaction dynamics, OH product, laser induced fluoresc. 7−93289
O+H_2 reaction, extended active space CASSCF/MRSD CI calcs. 7−100533
O+trichloromethane (trifluoromethane), dynamics and microscopic kinetics, time-resolved Fourier transform spectroscopy 7−132919
OH+H_2, nonequilibr. reaction, OH rot. effect 7−138982
OH+HONO, gas-phase reaction kinetics 7−132915
OH+methyl mercaptan-d_0(-d_3), reaction kinetics 7−119519
$PbCrO_4$ illuminated system, periodic precipitation, multiple stability and pH dependence 7−139033
Pt (110)-(1×2), H chemisorpt., desorption mass spectra, LEED and contact pot. study 7−137701
Pt (111), H electrochemical adsorpt. and recomb. reactions, prechemisorbed S effects 7−143211
Pt(II) complexes, bromo-bridged, cleavage kinetics, solvent effects 7−138989
Ru (001), H diffusion coeff. transition state theory calcs. 7−93367
S(IV) oxidation by H_2O_2, methylhydroperoxide, peroxyacetic acid, kinetics study 7−120086
SO_2, absorpt. and reactions in dimethylaniline soln., kinetics 7−91963
SO_2 conversion to sulphate particles, rate determ. in air parcel from oil sands extraction plant plume 7−78701
SO_2, removal from gases by electron beam irradiation *(Chinese)* 7−86656
Si etching reaction with XeF_2, SiF_4 desorpt., TOF spectra 7−137696
Si initial oxidation states under electron bombardment, AES studies 7−119470
Si, oxidation, stress effects on reaction kinetics and oxidant diffusion 7−93224
a-Si:H natural oxidation kinetics 7−126344
Si_3N_4-SiC material, oxidation effect on strength and thermal stability 7−113749
SiO_2 polymorphs, electronegativity solid state chemistry 7−93298
Ta+C combustion, outgassing macrokinetics in reaction chambers 7−100571
Ti plate, self-sustaining exothermic oxidation kinetics in gas flow 7−71463
Ti+C combustion, outgassing macrokinetics in reaction chambers 7−100571
VN, oxidation behaviour in CO_2-CO mixtures 7−93135
W films, CVD, reaction kinetics of H_2 reduction of WF_6 7−113430

reaction kinetics models and mechanisms *see reaction kinetics theory*

reaction kinetics theory
A+B=0 recombination reaction, initial fluctuations influence 7−126414
acetylene+α-pyrone cycloaddition reaction mechanism, F substitution, ab initio SCF MO calcs. 7−96530
adiabatic thermal explosion, stochastic anal./molecular dynamics simulation comparisons 7−139012
anisotropy, reagent translational and rot. motion averaging 7−138996
anisotropy effects on pattern selection near dynamical instabilities 7−138964
atom-molecule kinematically constrained reactions, dynamics model 7−93286
atom-molecule reactive collision, cross section orientation dependence, kinetic theory model 7−93250
atomisation in graphite furnace, purge gas O_2 content effect, AAS anal. 7−100547
autocatalytic intermediate reactions, Hamiltonian dynamics 7−119510
autocatalytic reaction systems, stochastic model for quasistationary distribs. 7−78457
bacterial photosynthetic reaction centers, bacteriochlorophyll electron transfer mechanism study 7−71710
barrier crossing rates in weak coupling limit, analytical eigenvalue calc. 7−138958
Belousov-Zhabotinskii reaction, exptl. evidence for homoclinic chaos 7−86568
Belousov-Zhabotinskii reaction, quasiperiodicity to chaos modelling 7−93257
Belousov-Zhabotinskii reaction, quasiperiodicity to chaos study 7−93256
Belousov-Zhabotinskii system, spiral and concentric wave theory 7−126413
Bendixon-type theorems with applications 7−71464
bimolecular reaction kinetics in condensed media with irradiation, statistical theory 7−100512
Brusselator, degenerate bifurcations near double eigenvalue 7−93254
Brusselator, invariant tori bifurcation points determination 7−83157
chemical reactivity and density polarisation, LCAO MO calcs. 7−96538
chemical system, instability in linear region, theorem of minimum internal entropy change 7−106761
chemical system, local and global single Gaussian approx. 7−126406
chemically reactive liquids, kinetics 7−86567
combustion, condensed substance, low-freq. dynamic parameters, automatic control theory anal. 7−100562
combustion wave propag. of series-parallel chemical reactions, empirical schemes 7−100570
condensed phases, curve crossing phenomena, stochastic dynamic models 7−93249
conference, Liblice, Czechoslovakia (Oct. 1986) 7−72719
consecutive first-order reactions, Hamiltonian dynamics 7−119510
coupled reaction cells with pulse forcing periodic and aperiodic regimes 7−138992
criticality in a nearly circular cylinder 7−106762
cyclobutyl acetate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclopropane, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
Devils Comb model of mass transfer and chemical reaction at fractal interface *(French)* 7−73195

reaction kinetics theory continued
diatom+atom collisions, diatom dissoc. and recomb. rate consts., collinear classical trajectory study 7−100513
dictionary approach to reaction-diffusion systems with nonlinear diffusion coefficients 7−126776
diffusion, reaction rate coeff. *(Russian)* 7−86565
diffusion controlled reaction rate in random array of spherical sinks 7−106763
diffusion-controlled reactions, effective capture rate *(Russian)* 7−86566
diffusion-controlled reactions, fractal dimens. influence 7−126405
diffusion-limited reactions, effects of discrete fluctuations 7−138963
diffusively coupled chemical oscillators, bifurcation phenomena, numerical simulation 7−113908
dilute solute mass transfer with chemical reaction on nonuniform surface 7−132966
discrete fluctuations, effects on reaction kinetics 7−138963
electron transfer in polar solvent, dynamic solvent effects 7−132923
ethene+iodotrifluoromethane, CO_2 laser induced telomerisation study 7−78528
ethyl 3-cyclohexene-1-carboxylate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
ethylsilane, IR multiphoton dissoc., reaction channels study, ab initio and MNDO calcs. 7−74438
exothermic reaction front in condensed phase stability 7−100529
explosive reactions, intrinsic fluctuations, probability distrib. 7−100574
gelatin, grafting of ethylene oxide, ^{13}C NMR spectra study 7−113922
glass relaxation, fn., chemical reactions fractional exponential law appl. 7−142594
haloalkoxy radicals, H and Cl extrusion reactions, MNDO CI calcs. 7−141470
HTGR graphite cylinder, chemical reactions and diffusion with massive air ingress 7−109373
hydrocarbon fuel combustion products mixture in air, boundary layer characts. at cooled surface 7−138961
hydrocarbon oxidation, cool flame-ignition oscillations, thermokinetic model 7−134658
ion-surface impact, desorbed material, multiphoton reson. ionisation-TOF mass spectra anal. 7−92820
ionic media, chemical wave-electrical field interaction phenomena 7−113907
isokinetic relationship, unimolecular reaction systems, steady state solutions, vibrational spectra, liquid and gas phase reaction sites 7−144682
kinetic polynomial and constants, inverse problem 7−93252
membranes, microporous, conductance, absolute reaction rate theory appls. 7−100612
methyl, recombination reaction, rate consts., Monte Carlo integration 7−144692
methyl methacrylate, homopolymerisation, multiple-component initiator technique study 7−113921
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
methylnitrite ions, unimolecular decomposition, rate consts. and kinetics study 7−126425
models, review 7−86564
multiple bifurcations in continuous flow stirred tank reactor, normal form anal. 7−119490
MuMATH computer algebra system for 1st order kinetic eqns. 7−132909
non-Markovian activated rate processes, theories rel. to simulation data 7−113860
nonequilibrium solvation, linearised microscopic theories 7−93299
nonlinear chemical system bistable limit cycle oscills., noise-induced transitions 7−93259
nonlinear chemical systems, bistable limit cycle oscills. 7−93258
nonlinear oscillator, 2D, prototype, parameter space struct. 7−128272
nonsteady chem. kinetics, uniqueness of solns. of inverse coeff. problems 7−126412
nucleophilic substitution S_N2 reaction, pot. surface, nonempirical calcs. 7−78480
oscillating travelling waves at thermal decomposition reactions 7−93261
percolation growth and dynamical discrete models 7−132960
phenyl glycidylether+imidazoles, epoxide cure kinetics study, radiochemical anal. 7−113919
reaction diffusion equations on symmetric domains, generic hyperbolicity 7−72897
reaction-diffusion eqns., explosive instabilities 7−126409
reaction-diffusion equations, attractors, existence and estimate of dimension 7−138962
reaction-diffusion equations, strongly-coupled, comparison principles 7−133183
reaction-diffusion equations in 1D with general boundary conditions, generic hyperbolicity 7−93260
reaction-diffusion systems., global existence and boundedness of solns. 7−108488
regularisation in stability violating conditions in nonstationary problems 7−86562
reversible Oregonator, chem. entropy prod. rate, oscill. cycle 7−93255
Schlogl model, symmetry and invariant solution 7−71465
second order reactions, linearly independent progress variables, spectrophotometric anal. *(German)* 7−126411
self-consistent cluster expansion for wave propagation and diffusion-controlled reactions in a random medium 7−106764
solid fuel combustion, oscillating fronts, relaxation oscillations, period doubling, anal. 7−119492
steady-state dependences of reaction rates, kinetic polynomials appls. 7−138960
trans-stilbene, gas and liq. phase photoisomerisation, transition state theory 7−93285
stochastic potential, non-analytic, for local codimension-two bifurcation 7−80622
symbolic algebraic manipulation method for kinetics of complex reactions 7−126408
tetraethyl-ammonium hydrogen dichloride salt, ^2H and ^{36}Cl isotope exchange, H bonding role study 7−119524
tetramethyl-ammonium hydrogen dichloride salt, ^2H and ^{36}Cl isotope exchange, H bonding role study 7−119524
transition struct., diabatic surface formalism, VB and SCF calcs. 7−132908
unimolecular dissoc./free radical recombination, rate consts. 7−144692
Ag^+ perturbed Belousov-Zhabotinsky reaction 7−138994
$AgBrO_3$, precipitation in oscill. Belousov-Zhabotinsky system 7−138995
ClO_2^-+I^-, heterogeneity induced oscills., stirring effects 7−138990

eaction kinetics theory continued
Cu wire resistor aging model *(Russian)* 7−119406
Fe, surface-limited release of D, effect of O dosing 7−76604
H+H_2, reactive system, three-dimens. n-channel coupling scheme 7−113863
H+H_2 reactions, variational transition state theory 7−93287
HeI_2, van der Waals fragmentation, periodically forced oscillator model 7−132922
$Mn_2O_7^{2-}$+ninhydrin, chem. oscillator, in continuously stirred tank reactor 7−126423
NH_4ClO_4, burning surface, copper and sodium salicylate impurities elec. cond. meas. 7−100567
NiO, growth in electrolyte cells, structural depend., XANES and EXAFS spectra anal. 7−68341
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
PH, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
SH_5^-, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
SiH_5^-, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
WO_3 amorphous films, electrochromic indicator, effect of electrode area ratio on reaction kinetics 7−85601

eaction rate coefficients *see reaction rate constants*

eaction rate constants
1-butanol-water mixtures, electron reactivity, solvent struct. 7−86662
activated processes kinetics, Fokker-Planck eqn. nonstationary solns. 7−132907
alkenes, polymerisation kinetics on zeolites 7−139038
alkyl radical+alcohol, H atom detachment, cage mols. determ. 7−93304
2-alkyl radicals, sequential intramol. vibr. energy relax. 7−136046
aniline, multiphoton dissociation, reaction rate const., TOF spectra 7−139032
azurin+metalloporphyrin electron transfer reactions 7−119522
bacterial photosynthetic reaction centers, bacteriochlorophyll electron transfer mechanism study 7−71710
barrierless reactions in soln., relax. rate, temp. depend. 7−132912
benzophenone oxide, self-reaction, optical modulation spectrosc. 7−68290
bimolecular ion-molecule reactions in astrophysics 7−101676
bimolecular reaction kinetics in condensed media with irradiation, statistical theory 7−100512
butadiene, polymerisation, supported Ziegler-Natta Co catalyst activity study 7−113924
carbon tetrachloride-NH_3 RF pulsed discharges, radical formation/reaction kinetics 7−119531
cobalticinium-cobaltocene, electrochem. exchange, solvent-depend. kinetics meas. 7−113887
combustion, condensed substance, low-freq. dynamic parameters, automatic control theory anal. 7−100562
combustion wave propag. of series-parallel chemical reactions, empirical schemes 7−100570
conference, Liblice, Czechoslovakia (Oct. 1986) 7−72719
cresol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
cyclobutyl acetate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
cyclohexane+$He^+(C)(N^+)$, reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
cyclopropane, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
diatom+atom collisions, diatom dissoc. and recomb. rate consts., collinear classical trajectory study 7−100513
diffusion-controlled reactions, fractal dimens. influence 7−126405
difluoromethylene+$Br_2(Cl_2)(H_2)$, reaction rate consts., IR diode laser spectroscopy 7−78466
dimethylsilyene, gas-phase, reaction rate consts., time-resolved investig. 7−86560
DODCI, first excited singlet state, photosensitised electron transfer reaction 7−116888
electrode surface, electron transfer processes, strong and weak overlap 7−113941
ethene+iodotrifluoromethane, CO_2 laser induced telomerisation study 7−78528
ethyl 3-cyclohexene-1-carboxylate, synthetically unique reaction control by pulsed IR multiphoton irradiation 7−78526
ethylsilane, IR multiphoton dissoc., reaction channels study, ab initio and MNDO calcs. 7−74438
fluorobutanes, bichromophonic, IR laser chemistry, absolute and relative rate coeffs. 7−100594
formaldehyde, dissoc. rates and reson., quantum mech. calcs., comparison with RRKM and exact models 7−71468
glass relaxation, fn., chemical reactions fractional exponential law appl. 7−142594
haloalkoxy radicals, H and Cl extrusion reactions, MNDO CI calcs. 7−141470
2-heteroanyloxazoles, excited state ^1H transfer with acetic acid in ethanol fluoresc. spectra 7−141587
hexafluoro-2-(trifluoromethyl)-propane-$t_0(t_2)$, CO_2 laser induced multiphoton dissoc., T isotope separation study 7−68415
hexafluorobenzene+$He^+(C)(N^+)$, reaction rate consts., temp depend., quadrupole moment effects anal. 7−100523
hole-burning reactions, rate const. determ., fluoresc. 7−78518
HTGR graphite cylinder, chemical reactions and diffusion with massive air ingress 7−109373
hydrocarbon fuel combustion products mixture in air, boundary layer characts. at cooled surface 7−138961
impurity particles in solid state matrix, initial aggregation stage, kinetic parameters calcs. 7−137376
inclusions, diffusion-controlled reactions, effective capture rate *(Russian)* 7−86566
inclusions, two dimensional problem, effective diffusion, reaction rate coeff. *(Russian)* 7−86565
interstellar chemistry, radiative assoc. rate coeffs. rel. to complex O-containing mols. prod. 7−115550
ion-dipolar molecule collisions, cross sections and rate coeffs. 7−115225
keto sulfides, triplet, intramol. charge-transfer interactions investig. 7−113883
$(methane)^+$+N_2(He), collision-induced dissoc. press. depend., collisional energy deposition probability anal. 7−86585
methane-O_2 flame, alkali metal dopants, ion density and temp., equilib. consts., mass spectra anal. 7−86629
methane-O_2 premixed laminar flame, sensitivity anal. based on brute force method, rate consts. 7−78497

reaction rate constants continued
methanol-$d_0(d_1)(d_3)(d_4)$ glass, methyl radical trapping sites struct., ESR spectra anal. 7−106027
methoxy radical+CO reaction rate const., temp. depend., fluoresc. spectra meas. 7−138966
methyl, recombination reaction, rate consts., Monte Carlo integration 7−144692
methyl cation+NH_3, binary reaction and ternary assoc., rate coeffs. 7−132924
methyl methacrylate, homopolymerisation, multiple-component initiator technique study 7−113921
methyldioxy radicals, disproportionation reaction, rate const. temp. depend., UV spectra anal. 7−135957
methylium, C−H bond breaking, statistical adiabatic theory, ab initio quantum chemical approaches 7−96521
methylnitrite ions, unimolecular decomposition, rate consts. and kinetics study 7−126425
methylperoxy radicals+HO_2, cross-disproportionation, kinetic meas. 7−138970
molecular exciplex form. in gas phase, pot. curve crossing 7−106767
Mu+H_2, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
N_2 active, yellow glow, temperature dependence, Thrush mechanism, vibrational levels, emission, empirical equations 7−141619
nonsteady chem. kinetics, uniqueness of solns. of inverse coeff. problems 7−126412
numerical simulation for two degree of freedom system 7−86563
organic impurities in water, photooxidation using thin TiO_2 film 7−113961
organotin polymers, copolymerisation parameters study 7−113925
perfluoromethylcyclohexane anion, ion-ion recomb. reactions, rate coeff. meas. 7−106781
perfluoroolefins, ion+molecule reactions, gas phase, 295 K 7−119520
phenol-benzene van der Waals cluster, vibr. predissoc. ps photofragment spectroscopy 7−110042
phenyl glycidylether+imidazoles, epoxide cure kinetics study, radiochemical anal. 7−113919
polypropylene, isotactic, solid phase photooxidation, photoinitiator efficiency *(Russian)* 7−113963
polysulphone, synthesis, NMR and rheological study 7−119530
porphyrins, water-soluble, reactivity, polymer binding effects 7−119521
positronium-glycine complex form., N-substituted phenyl glycine rate consts. and basicities relationship 7−113967
prop-2-ylperoxyl radicals, self-reaction rate consts. meas., UV absorpt. spectra 7−113862
rare earth ultraphosphates, RP_5O_{14}, decomposition-rate constants 7−86586
singlet-singlet and triplet-triplet transfer and excitation kinetics, rate const. determ. 7−119494
styrene, homogeneous gas phase thermal polymerisation, diffusion cloud chamber meas. 7−126456
thermal rate consts., time-depends calc. method 7−86558
thin films, laser-induced deposition study 7−71068
trifluorohalomethanes +N_2, visible spectra, collisional quenching rate consts. 7−96713
unimolecular dissoc. rates, semiclassical anal. of quantum reson. lifetimes 7−71467
unimolecular dissoc./free radical recombination, rate consts. 7−144692
Ag^++(CO)$(NH_3)(ND_3)$(methane)(methyl halides) association, complex form., rate consts. 7−93282
$AgBrO_3$, precipitation in oscill. Belousov-Zhabotinsky system 7−138995
Ar^+ and Ar_2^+, thermal energy charge-transfer reactions, rate coeffs. 7−113896
Ar^++$H_2(N_2)$(Kr)(Xe), thermal energy charge transfer reactions, rates 7−86590
Ar^++O_2, flow tube parameters effect on reaction rate consts. 7−86584
Ar_2^++$H_2(N_2)$(Kr)(Xe), thermal energy charge transfer reactions, rates 7−86590
Ar_n^++CS_2(methane), (n=1 or 2), rate coeffs. determ., energy depend. 7−126407
BCl_3+H_2S isotope selective reactions, CO_2 laser induced vibr. excitation effects 7−78529
Br_2, high-temperature dissoc. and vibr. relax. study 7−100526
BrO+ClO in atmosphere, reaction kinetics and implications for stratosphere O_3 depletion 7−139712
C^++H_2, integral cross section determ. 7−113861
C^{2+}+$H_2(D_2)$, reaction rate coeffs. meas. 7−71469
CH+propane (isobutane)(neopentane), reaction rate consts. meas. 7−86574
CHO^++N_2O, proton transfer rates, effect of CHO^+ isomerism 7−83363
CO+H_2, photochemical reaction rates, matrix isolated spectra 7−100596
CO_2 + methyldiethanolamine, reaction kinetics in aqs. solns. 7−126420
CO_2+NaOH, rate coeffs., appl. to upper atmosphere 7−138959
COS+OH, reaction kinetics and tropospheric chemistry 7−86595
CS+N_2, excitation-transfer, rate consts. investig. 7−93276
Cu^++CO$(NH_3)(ND_3)$(methane)(methylhalides) association, complex form., rate consts. 7−93282
D+H_2, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
DNO_3+OD, rate const. determ., press. depend. and kinetic isotope effect 7−86559
ethylene, formation from ethyl radical +O_2, Arrhenius parameters, negation temperature coefficient, reaction path 7−144683
Fe complex, $Fe(CO)_3$(ethylene)$_2$, substitution kinetics, gas phase 7−78470
Fe, surface-limited release of D, effect of O dosing 7−76604
Fe-Mn-Ni-Si alloys, oxidation-induced transformations, kinetics 7−106670
$Fe(CO)_2$(ethylene)$_3$, dissociative substitution, transient IR spectrosc. 7−90113
H+H_2, rate consts. calc., Wigner threshold law behavior 7−106758
H+$H_2(D_2)$, rate consts. determ. by 3D quantum mech. distorted wave approx. 7−93275
H+N_2O, photochem. and BAC-MP4 calcs. 7−113886
H_2+Ar, nonequilib. dissoc. rate coeff., Monte Carlo trajectory and master eqn. simulation 7−93290
H_2CN^++HCN clustering reaction rate consts., appl. to plasmas and atm. of Titan 7−138976
HNC-HCN, isomerisation, intramol. energy transfer, quasiclassical calcs. 7−86591
HO_2+OH, isotopic species, discharge flow reaction rate consts., far IR mag. reson. meas. 7−100508

reaction rate constants continued
HOOH→OH+OH, bond fission, rate consts. and product state distribs. calcs. 7−106759
He+inert gas atoms, ionisation studied using kinetic plasma spectroscopy method, quenching rate const. 7−117045
$He^+ + N_2$, charge transfer, optical emission study 7−113892
Hg, 6s6p state, in Xe, spectrosc. and kinetics 7−89907
$Hg + N_2$, Hg $6s6p(^3P_0$ to $^3P_1)$ transition, temp. depend. 7−96826
I_2, high-temperature dissoc. and vibr. relax. study 7−100526
$K + N_2O$, absolute rate const., time-resolved atomic reson. absorpt. spectroscopy 7−100561
$Kr + O_2^+$, vibr. relax. mechanisms, computational evidence 7−113875
Mg_2Ni, dehydriding kinetics, heat flow effect removal 7−71475
$Mu + H_2(D_2)$ thermal reaction rate const. meas. 7−113890
Mu+Hd, reaction rate const., abstraction and exchange contribs. 7−78468
$N + O_2(H_2)(HF)$, reaction rate constants 7−86579
$N^+ + H_2 \rightarrow NH^+ + H$, interstellar, contrib. of energetic N^+ ions to reaction rate coeff. 7−120564
$N_2 + K + O_2$, third-order rate const., temp. depend., time-resolved atomic reson. absorpt. spectroscopy 7−100644
$N_2 + XeF_2$, energy transfer reactions rate consts., laser appls. 7−138983
NCNO, photodissociation, microcanonical state-to-state rates, ps photofragment spectroscopy 7−113965
$NH_2 + NO$, rate const., semiclassical trajectory calcs. 7−100517
NO, collisional quenching rate consts., fluoresc. anal. 7−96771
$NO^- + N_2$ (O_2) (CO) (CO_2), rate consts. determ., vibr.-level excitation effects 7−126447
$NO_2 + H_2O$, reaction kinetics for NO_2 disappearance 7−127318
$N_2O_5 + OH(HO_2)(Cl)(ClO)$, rate constants at 293 K 7−120090
Na, associative ionisation process, hyperfine structs., reaction dynamics 7−113906
$NaCl:Eu^{2+}$, impurity cation-vacancy dipoles, aggregation kinetics 7−137390
$NaO + H_2(D_2)(H_2O)(D_2O)$, gas phase reactions, rate consts. study 7−126435
$O + H_2$, thermal rate consts., effects of internal energy distrib., appl. to shocked interstellar medium 7−126416
O+HI, chemical exchange reactions, quasiclassical trajectory calcs. 7−113869
$O + HI(GeH_4)(SiH_4)(H_2Se)(H_2S)$, vibr. distrib. and rate const. meas. 7−113885
O+methyl radical, reaction kinetics, 294-900 K 7−138987
$O + NO_2(N_2O_4)(N_2O_3)$, reaction kinetics at low temps. 7−100516
$O + PH_3$, flash photolysis, rate const. meas. 7−132954
O_2, atom recomb., homogeneous and heterogeneous, $a^1\Delta g$ state, reaction rate const. meas., appl. to nightglow 7−78460
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
O_2^+ dissociative recombination in upper atmos., O ^1S state production 7−113933
$O_3 + HO_2$, rate const. determ. 7−132906
OH+cyclohexane(ethane), absolute rate const. meas. 7−93247
OH+HONO, gas-phase reaction kinetics 7−132915
Rb+Rb, associative and Penning ionisation cross sections 7−74743
$S + N_2$ excitation-transfer, rate consts. investig. 7−93276
SF_6^-, ion-ion recomb. reactions, rate coeff. meas. 7−106781
Si, dry oxidation kinetics, fits to the linear parabolic model 7−71411
Si_{39}^+ surface, reactivity of NH_3, Fourier transform-ion cyclotron reson. spectra 7−139037
$Si_{A_n}^+$ (n=1 to 8), cluster ions, reactive etching by NO_2 7−82413
$Si_{B_n}^-$ (n=1 to 6), cluster ions, reactive etching by NO_2 7−82413
$Si_n^+ + XeF_2$ (n=1 to 7), 7−113889
$SiBr_2$, $\tilde{A}^1B_1$-$\tilde{X}^1A_1$ transition, UV spectrum decay rate consts. determ. 7−129732
$SiCl_2 + O_2$, UV absorpt. spectra, rate const. meas. 7−100515
$T_2 \rightarrow HTO$, effects of water vapour and catalysts, first-order rate constant meas. 7−132974
U^{3+} stability in $HCl(H_2O)$ tri-butyl phosphate extraction system, oxidation rate meas. 7−100507
UF_6, charge exchange, ionis and fragmentation reactions, rate consts. and product yields meas. 7−93248
V-Nb-Se, nonequilibrium system, vibr. chem. reaction process 7−86569
WO_3 amorphous films, electrochromic indicator, effect of electrode area ratio on reaction kinetics 7−85601
Xe + chlorotrifluoromethane (dichlorodifluoromethane) chlorodifluoromethane, rate const., use of vibr. energy to control prod. distrib. 7−113877
$Zn + N_2O$, reaction kinetics study 7−78465

reactions (chemical) *see chemical reactions*
reactions (nuclear) *see nuclear reactions and scattering*
reactive ion etching *see sputter etching*
reactive power
see also power factor correction
wind power station electrical performance meas. for power collection network assessment 7−133032
reactive sputter deposition *see sputter deposition*
reactive sputter etching *see sputter etching*
reactive sputtering *see sputtering*
reactive voltamperes *see reactive power*
reactively sputtered coatings *see sputtered coatings*
reactors (nuclear) *see fission reactors*
Read diodes *see IMPATT diodes*
read-only storage
see also CD-ROMs; PROM
multi-stage programmable temperature ramp generator for ceramics fabrication 7−128560
readout, digital *see digital readout*
real time computer systems *see real-time systems*
real-time systems
see also online operation
acousto-optical time-integrating correlator for signal detect. *(Korean)* 7−82755
atmospheric dispersion model, real-time interactive simulation, system design 7−100786
CANDU reactor, real-time spatial simulation using modal anal. techniques 7−122038
CLASS radiosonde system, appl. of adaptive polynomials for real-time data editing 7−115064
real-time systems continued
cloud size distrib., remote sensing by satellite imagery in real time 7−127510
data acquisition system, microprocessor-based, for borehole radar, design and implementation 7−127477
data acquisition systems, appl. to forecasting of sea level and water circulation 7−94298
digital realtime SAR processor for C and X-band appls., flexible hardware concept 7−115114
electrochemical generators, data acquisition and test monitoring system 7−126589
EXTRA, real-time knowledge-based alarm system for industrial process control in PWR nuclear power plant 7−103149
keratometer, real-time analysis, for diagnosis and meas. of corneal parameters 7−145170
medical imaging, interactive workstation for real-time display and manipulation of three-dimens. data 7−145272
multi-band hearing-aid emulation using real-time digital signal processing 7−94024
multitasking multiuser nuclear system for clinical applics. 7−114467
nuclear power plant simulators, continuous real-time survey 7−121999
optical pattern recognition system, automatic, real-time 7−75109
Orion I graphics workstation for multivariate data anal. 7−135801
position fixing system for diver 7−97201
PWR, Westinghouse, cold shutdown capability, safety-grade and fire hazards, simulation 7−122060
PWR boron conc. control by real-time expert system PMS-2 7−73938
Rankine-cycle heat engines, water-based, direct manipulation interface 7−12641
real-time blood flow imaging system using Doppler ultrasound *(Japanese)* 7−145138
simulation, real-time, conservation eqn. appl. 7−123729
rearrangement (molecular) *see isomerisation*
reboilers *see boilers*
receivers
see also acoustic receivers; radio receivers; television receivers; transceivers; transponders
DC and LF AC meas. optical receivers anal. for optical fibre communication systems 7−104034
Gbit/s tuned optical receivers, noise performance 7−82855
heterodyne optical receivers, transformer-tuned front-ends 7−117344
integrated digital optical transmitter and receivers, high performance 7−82863
optical transmitter/receiver, boresight alignment 7−75018
polarisation controlling coatings for optical communication appls. 7−136604
SNR, light intensity correlations effect 7−128657
tuned optical receivers, improved design 7−117345
GaAs monolithic receiver and laser driver for GHz transmission rates 7−90830
HgCdTe photodiodes for heterodyne appls. 7−73425
receiving antennas
HF field, tripole antenna received, meas. and anal. 7−107636
Medicina radio-astronomy station, VLBI antenna *(Italian)* 7−127720
USW active receiving radar antenna for salt deposit location *(German)* 7−115094
VLF/MF band loop antenna system, design with series transformer-coupled network 7−134033
recombination, electron-hole *see electron-hole recombination*
recombination, ion *see ion recombination*
reconnaissance satellites *see artificial satellites*
record players *see gramophones*
recorders
see also tape recorders
Charpy testing machine, fast data capture programs, in BASIC 7−89215
mass spectrometer with high-speed recorder and interface 7−102560
transistor curve tracer, plasma physics expts. appl. 7−97807
Tucker and microwave-type wave recorders, comparison *(Japanese)* 7−101532
recording instruments *see recorders*
records management
radioactive materials transport in Italy, data bank 7−74128
recovery
see also recovery-creep
current filamentation region, recovery process, thermal stage characts. 7−84904
Inconel 718 powder, dynamically-compacted, heat-treatment response 7−86208
Inconel MA 6000, oxide dispersion strengthened superalloy, cyclic creep, lower stress level effect 7−132680
metals, electron irrad., defects, PAC-recorded isochronal recovery, rate theory simulations 7−91655
metals, FCC FCC, ion implanted, impurity-vacancy cluster form. 7−91631
metals, recovery theory and its application to stress relaxation tests 7−119285
Permalloy, order-disorder transitions, recovery of electron irradiated Fe-Ni alloys 7−104993
polymers, solid, multiaxial nonlinear viscoelasticity 7−118034
steel, Fe-Cr, martensitic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, Fe-Ni-Cr, ferritic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, Mn, bainitic, thermomechanical treatment, mech. props., microstruct. *(Polish)* 7−71267
steel, pearlitic, irrad., residual elec. resist., recovery following annealing *(Russian)* 7−112294
steel, stainless, dual phase, corrosion resist., phase transform., microstruct. 7−78343
steel, stainless, irrad., residual elec. resist., recovery following annealing *(Russian)* 7−112294
transition metals, BCC, stage II-recovery reactions 7−104732
Ag, polycrystalline, plastic deform., dynamic recovery 7−144434
Al, cold worked, recovery spectrum 7−105527
Al, dislocation emission from grain- and sub-boundaries during recrystallisation 7−76137
Al, ion implanted with H and He, annealing, positron lifetime studies 7−92775
Al, iteratively cold-worked, effects of stress-aided static recovery 7−86210

recovery continued
Al, proton irrad., damage and defect recovery, positron lifetime spectra, 20-500 K 7−84072
Al, strained at 4.2 K, energy loss, anisotropy, magnetoresistance and recovery 7−137901
Al-Fe dilute alloys, defect associations, Mossbauer studies 7−92557
Al-Ge (Ag)(Cu), dil. alloys, deformed, distrib. of activation energy for recovery, 50-85 K 7−104898
Al-Mg-Zr (10, 0.1 wt.%), warm rolling, superplastic flow, microstruct. 7−144481
Al-Mn-C (30, 0.8 wt.%), hot deformability, influence of microstruct. 7−113642
Au, quenched and deformed, recovery behaviour, positron studies 7−92773
Au-Co dilute alloys, vacancy-solute interactions, elec. resist. and positron lifetime studies 7−91637
Be foil, plastic deform. characts. during cold rolling 7−106531
Bi-Sn(Te) dil. alloys, electron irradiated, vacancy recovery, positron lifetime meas. 7−104839
Co polycrystal, stress relax. rate meas. 7−118003
Cu, hot compression, recovery and recrystallisation during stress relax. 7−119281
Cu, iteratively cold-worked, effects of stress-aided static recovery 7−86210
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7−78009
Cu-Nb composite, heavily cold-worked, strength and microstruct. charactn. 7−144459
α-Fe, electron irrad., internal friction orientation depend. in recovery stages I_E and III 7−98337
α-Fe, electron irrad. defect-induced mag. relax. and recovery, two-interstitial model 7−98248
α-Fe, electron irradiated, low temp., annealing behaviour of 110 K mag. relax. 7−111671
Fe, high purity and C doped, resistivity recovery after deform. 7−105525
α-Fe, irradiation softening and mobile dislocation interaction with Frenkel pairs 7−104803
Fe, magneto-acoustic and Barkhausen emission, dislocation effects 7−112919
Fe-Cr-Mo, neutron irrad., dislocation struct. rel. to irrad. softening 7−69774
GaAs, fast neutron irrad., thermal recovery, EPR and elec. transport props. 7−98263
$LaNi_5$-H_2 system, intrinsic degradation, thermal H_2 absorption-desorption cycling effects 7−86839
Li_2O polycrystals, deform., 700-950°C 7−84095
MgO single crysts., cyclic deform., recovery process, TEM obs. 7−86207
Mo single crysts., electron irrad., vacancy defects, positron studies 7−98137
NaCl, single crysts., dynamic recovery during compression testing at elevated temps. 7−124378
Nb, low temp. proton irrad. defect recovery, internal friction study 7−98272
Nb, self-interstitial long range migration, dislocation pinning, resist. recovery and internal friction meas. 7−98127
Nb, with various dopants, radiation damage recovery 7−104840
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
Ni, heavy ion irradiated, stage-I recovery 7−111695
Ni, pure and dilute alloy, neutron and electron irrad., defect struct., diffuse X-ray scatt. studies 7−91656
Ni, quenched vacancy migration, positron studies 7−91877
Ni-Zr metallic composites, form. of bulk amorphous metals from solid state reaction 7−113477
NiAl, Ni_3Al, plasticity anomaly 7−100284
NiGe, dil. alloy, electron irrad., isochronal resist. recovery and reciprocal damage rates 7−104838
NiO, point defects and high-temp deformation 7−69812
$Si:BF_2^+$ self-annealed implantation, electrical and structural characterisation 7−83989
n-Si:P, low temp. electron irrad. damage, annealing study 7−84035
β-SiC, reaction sintered, neutron irrad., isochronal annealing, recovery 7−119292
Ta, low temp. proton irrad. defect recovery, internal friction study 7−98272
V, soluble and nonsoluble implanted atoms, lattice site occupation, dose effects 7−131170
W alloys, carbide-hardened high-drawn wire, fine struct. and props. 7−138756
W, deformation, elec. resist. recovery, grain boundary recrystallisation 7−144433
$YH_x(D_x)$ solid solns., defect study 7−98219
Zr and its alloys, radiation damage, review 7−137404
Zr-based alloys, electron irradiated, damage rate and isochronal recovery 7−104841
Zr-Sn, electron irradiated, influence of Sn additions on recovery, positron annihilation study 7−106302

recovery-creep
alloys, creep mechanisms and dislocation distribs. 7−126177
celluloid tube, softened, creep deform. under nonproportional variable stresses 7−75326
cyclic stress change conditions, creep strain recovery eval. with account of internal friction 7−111750
metal, constructional, kinetic model of viscoelastic deform. component 7−98322
polypropylene monofilaments, highly drawn, creep and recovery 7−86265
Al-Li (0.25 wt.%), creep transients during stress change tests at 200°C 7−126186
Ni, pure, primary creep, expt. and theory 7−113601
Pb-Sn eutectic alloy, superplastic, strain rate transients 7−100314

recrystallisation
microstructural processes and features only
see also recrystallisation annealing; recrystallisation texture
acetylene derivatives, optical SHG, recrystn. solvent effects 7−110450
arc cathodes, work function and surface structure 7−112431
bicrystals use in interphase process studies by zone recrystn. in temp. gradient 7−77794
dynamic, nucleation criteria 7−119284
graphite, recrystallised, rad. stability 7−84036
heterogeneous systems, recrystallisation, continuum theory 7−124141
III-V ion implanted semiconductors, recrystallisation kinetics 7−119130

recrystallisation continued
imperfect crystals, neutron irrad., high-temp. annealing stages 7−69768
Inconel 718 powder, dynamically-compacted, heat-treatment response 7−86208
ion implanted, anomalous recrystallisation and amorphous struct. conversion 7−142832
kinetics, grain impingement, simulation by computer model 7−86203
material fracture, small punch test, deform. process, recrystallisation etch method, plastic analysis 7−71427
metals and alloys, dynamic recrystn., high temp. mech. behaviour, study using torsion testing 7−93036
room and elevated temp. mech. behaviour, additions influence 7−100243
SOI films, electron beam recrystallised, perforation seed struct. 7−112113
SOI films by laser recrystn., periodic seeding filled by selective epitaxial growth 7−84561
SOI layers formed by laser recrystallisation *(Japanese)* 7−69758
SOI unseeded recrystallisation using moving line heat source, 1D numerical model 7−76660
SOI-structures, anal. and generation mechanisms of cryst. defects 7−111650
solid solutions, supersaturated, discontinuous precipitation *(Russian)* 7−78016
steel, alloy Ni-Cr, ageing kinetics, strong plastic deform. effects *(Russian)* 7−78104
steel, austenitic Cr-Ni, Cr-Ni-Nb, hot stress-strain curves, recrystn. *(German)* 7−100316
steel, austenitic stainless, annealing twin control 7−111576
steel, austenitic stainless, creep, effects of recrystn. *(Korean)* 7−138783
steel, duplex δ-ferrite-austenite, microstruct. change during superplastic deform. 7−100304
steel, ferritic stainless, thermomech. processing, struct. and substruct. obs. 7−113578
steel, heat-resistant, crack propag. under thermal-mech. loading, struct. aspects 7−113713
steel, HSLA, precip. behaviour in specimens containing Mo, Al and trace amounts of Ti 7−78011
steel, hypoeutectoid, effect of preliminary holding on granular pearlite annealability range 7−106533
steel, low alloyed, struct. form. and mech. props., effect of deform. and subsequent cooling processes 7−100245
steel, medium C, continuous cooling transform., austenite deform. effect 7−138802
steel, medium C, struct. form. in austenite region, effect of alloying with Cr, Mo and Ni 7−132636
steel, microalloyed, changes in austenite grain struct. due to multiple hot deform. 7−132692
steel, Mn, bainitic, thermomechanical treatment, mech. props., microstruct. *(Polish)* 7−71267
steel, Nb microalloyed austenite, precip., comp., thermomech. processing 7−78021
steel, Nb-V microalloyed, austenite recrysts. 7−86211
steel, recrystallisation during laser heating, plastic deform. effects *(Russian)* 7−138757
steel, stainless, dual phase, corrosion resist., phase transform., microstruct. 7−78343
transition metal-metalloid metallic glasses, wear mechanism 7−113725
Al bicrystals, tensile deform., {111} twist grain boundary recrystallisation 7−132653
Al, dislocation emission from grain- and sub-boundaries during recrystallisation 7−76137
Al-Cu-Mn, as-extruded and soln.-soaked structs., effect of thermomech. process 7−100261
Al-Li-Cu-Mg, superplasticity 7−126167
Al-Mg-Si, compact specimens, plastic zone determ. 7−138794
Al-Mg-Zr (10, 0.1 wt.%), warm rolling, superplastic flow, microstruct. 7−144481
Al-Mn-C (30, 0.8 wt.%), hot deformability, influence of microstruct. 7−113642
Be foil, plastic deform. characts. during cold rolling 7−106531
$Bi_2Te_{3-x}Se_x$:$CdCl_2$, plastically deformed, impurity behaviour during recrystallisation 7−91698
CdHgTe crystals, growth by solid state recrystallisation, elec. and struct. evaluation 7−138647
Co-Fe-Nb, special mag. alloys, phase anal. and precip. kinetics 7−100248
CoPt, struct., mag. and mech. props., deformation and annealing effects *(Russian)* 7−144466
$CrSi_2$-Si, degradation of micron sized $CrSi_2$ lines 7−131369
Cu, deformed by shock waves, recrystn. 7−132637
Cu, static recrystallisation after hot working, stress-free or stress relaxation conditions, microscopic determ. 7−132635
Cu thin films, elec. resist. during isochronal annealing, thickness depend. *(Russian)* 7−99221
Cu-Mn (20 at.%), ordering and solute segregation to dislocations 7−86184
Cu-Nb composite, heavily cold-worked, strength and microstruct. charactn. 7−144459
Cu-P (Ge), single crysts., dynamic recrystn. 7−126144
Cu-Sn(Zn)(Ni), cold worked, twinning after annealing 7−78044
Cu-Zn, diffusion induced recrystn., nucleation 7−100251
Cu-Zr-Mg-Ni-Si, microalloyed, elec. resist. recovery, after low temp. deform. 7−100287
Cu_3Au, recrystallisation during annealing, TEM studies *(Russian)* 7−144429
Fe (111), nitridation and oxidation, XPS and AES obs. 7−131407
Fe-Cr-Al, rapidly solidified, grain growth behaviour 7−119286
Fe-Si alloy, hot rolled, texture changes due to deformation and heat treatment *(Russian)* 7−78060
FeAl, B2-structured alloy, dynamic recrystn. and grain boundary migration, obs. 7−138759
Ge epitaxial layers, recrystn. on SiO_2 using SrF_2 seed by pseudo-line electron beam annealing 7−124771
InP films on SiO_2, recrystallisation using Ar^+ laser *(Chinese)* 7−92862
InP-SiO_2, laser recrystallisation of InP films *(Chinese)* 7−131165
KH_2PO_4 single crystal growth, mother liquor purification 7−113371
Mg alloy, dynamic recrystallisation, hardening and plasticity *(Russian)* 7−100244
Mo single crysts., electron beam welded, tensile props. *(Japanese)* 7−100291
Ni-Zr metallic composites, form. of bulk amorphous metals from solid state reaction 7−113477
NiAl powders, recrystallised struct., failure rel. to porosity 7−106621

recrystallisation continued
Si, amorphous layer implantation damage recovery and recrystn. 7−84054
Si, film, zone recrystallisation, on fused quartz 7−106448
Si polycrystalline films, effects of crystallisation on trap state densities at grain boundaries 7−131655
Si SOI films, large area, seeded electron beam recrystn. with striped encapsulation 7−124768
Si SOI films, multilevel seeded lateral epitaxy, electron beam recrystn. 7−131471
Si SOI structure, laser recrystallisation, lateral seeding 7−124325
Si:As, defects, Rutherford backscatt.-channelling studies 7−138579
Si:As SOS structures, ion implanted, ion beam recrystn. and laser beam annealing 7−118588
SiP, implantation-amorphised, recrystallisation rate during rapid thermal annealing 7−105308
Te thin films, laser induced phase transformations, transient cond. studies 7−117969
W alloys, carbide-hardened high-drawn wire, fine struct. and props. 7−138756
W, deformation, elec. resist. recovery, grain boundary recrystallisation 7−144433
Yb, deformed, recrystn., X-ray obs. 7−113570

recrystallisation annealing
deformed ice, annealing recrystn., lattice orientation and texture studies 7−114820
grain boundary struct. during post-recrystn. anneals, influence of strong grain boundary pinning by particles 7−111578
semiconductors, transient melting regime and recrystallisation, two-pulse laser radiation 7−98394
SOI, growth front movement in electron beam recrystallisation, direct obs. 7−86204
SOS films, cryst. quality improvement by self-implantation *(Chinese)* 7−124724
steel, austenitic stainless, recrystallisation annealing, plastic props., twin boundaries 7−132667
steel, carbon, high-strength, powder particle struct. defectiveness effect on graphite dissolving during sintering 7−119199
steel, low C, P-containing, cold rolled, annealed, recrystallisation texture rel. to Mn content 7−132640
Zircaloy-4 fuel cladding, correlation of cold work, annealing and microstructure 7−86206
Al capacitor foils, struct., radiographic and metallographic study 7−106532
Al-Cu-Li alloy, annealing temp. rel. to recrystn. 7−132639
Al-Fe foils, recrystallisation with rapid heating 7−78082
Al-Zn single cryst., strain anneal growth, creep testing, dislocation gliding, TEM obs. 7−98167
Cu, hot compression, recovery and recrystallisation during stress relax. 7−119281
Cu, pure, cold rolled, nucleation of recrystallisation, TEM obs. 7−86217
Fe-B amorphous alloys, crystallisation, NMR and X-ray diffr. study 7−112992
Ge epitaxial crystallisation on Si using electron beam evaporation and recrystallisation techniques 7−84605
Ge/n-GaAs ohmic contacts, solid phase epitaxy of ion implanted evaporated Ge films 7−76690
Ni-Cr-Co superalloy, grain boundary splitting as primary recrystallisation nucleation mechanism 7−106537
PbS polycrystalline films, recrystallisation with activation annealing, oxidation 7−100258
Si (111), Pb^+ ion implantation, surface layer struct., after high temp. treatment 7−84461
Si, ion implanted with Si^+, damage annealing 7−124294
Si polycrystalline films on SiO_2 substrate, laser annealing with applied elec. field 7−98234
Si:Ge^+(As^+), ion implanted amorphous layers, rapid thermal annealing induced epitaxy 7−143259
Si:H amorphous layer epitaxial recrystallisation and regrowth during furnace annealing 7−83820
Si:P, polycrystalline films, ion implanted and laser annealed, elec. props. 7−85146
Si:P^+ implantation self annealing and ion beam assisted recrystn. studies 7−84053
Si:P^+(Si^+) amorphous layer, ion assisted epitaxial regrowth, orientation and doping effects study 7−84052
α-SiC:N(Cr), ion-implanted, recrystallisation 7−71222
Ti, pure β-phase crystals, recrystallisation, annealing of wires, dislocations, synchrotron X-ray topography 7−98166
Ti-V-Cr-Al-Sn (15,3,3,3 wt.%), hot-rolled, mech. props., microstruct. 7−78153
W alloy wires, Ni plated, recrystallisation, tensile strength rel. to comp. *(Japanese)* 7−106572
ZnP_2, amorphous layers, thermal evaporation, struct. 7−92019

recrystallisation texture
α-brass, recrystallisation texture, discrete distrib. transform. analysis 7−78042
cube orientation recrystallisation texture, origin mechanism 7−86218
cubic materials, textures, comparison of complete and reduced orientation distrib. functions 7−78056
deformed ice, annealing recrystn., lattice orientation and texture studies 7−114820
FCC metals, hot rolling deform., recrystallisation textures 7−100252
kinetics, grain impingement, simulation by computer model 7−86203
steel, low C, Al-killed, carbide precip. and texture development, effect of coiling temp. *(Korean)* 7−132638
steel, low C, P-containing, cold rolled, annealed, recrystallisation texture rel. to Mn content 7−132640
steel, low C sheet, tempering, recrystallisation texture, plastic anisotropy 7−144441
steel, texture development and recrystn., effect of C content 7−78055
Al capacitor foils, struct., radiographic and metallographic study 7−106532
Al-Fe foils, recrystallisation with rapid heating 7−78082
Cu, cold rolling, secondary recrystallisation texture, X-ray diffr., SEM-electron channeling pattern 7−113573
Cu, high purity, tension, compression or torsion deform. texture, recrystallisation temp., flow strength *(German)* 7−100321
Cu, recrystallisation texture, discrete distrib. transform. analysis 7−78042
recrystallisation texture continued
Fe-C, cold rolled polycryst., nucleation of {111} recrystallised grain at grain boundary 7−93037
Fe-Si, grain oriented sheets, deformation and recrystallisation texture changes 7−126172

rectangular waveguides
bent dielectric rectangular waveguides, optical characts. 7−117315
complex permittivity tensor meas., rectangular waveguide standing-wave method 7−115976
dielectric constant meas. of lossy fibres and rods, at microwave freq. 7−95617
dielectric waveguide with anisotropic material, vector variational anal. of guided modes 7−90778
diffraction problem, singular integral equations method 7−141765
hyperthermia applicator, coil and waveguide combined 7−107225
integrated optical waveguides, electromagnetic analyses 7−130392
laser radiation generation at difference frequency by nonlinear crystal 7−90701
mirror matching with hollow dielectric waveguide 7−90787
multidielectric waveguides anal., generalised method 7−136167
superconductor-insulator-superconductor receiver, low noise 230 GHz, astronomical appl. 7−127723
GaInAs strained layer quantum well GRIN ridge waveguide injection laser 7−110377

rectification
asymmetrical superlattices, rectification props., THz wave detection 7−138020
CDW DC-AC combined phenomena, perturbational anal., Fukuyama-Lee-Rice model 7−92159
p-n and p-i-n junctions, voltage-controlled struct. 7−92269
poly(4-(N,N-diphenylamino-)phenyl methylmethacrylate), electrochemical doping, rectification and photovoltaic props. 7−69631

rectifier tubes
No entries

rectifier valves *see rectifier tubes*

recursion method
branched polymers on fractal lattices, asymptotic props., recursion relations study 7−80672
C14 and C15 cpds., Laves structs., electronic struct., magnetism 7−84631
crystal growth, cellular automaton recursion method anal. 7−117848
decimation transformations, high temp. renormalisation group methods 7−102322
densities of states, continued fraction coeffs., terminators, recursion method 7−131505
disordered systems, single-particle energy spectrum, two-band case 7−70252
hierarchical heterostructs., 1D Schrodinger problem, tight-binding model calcs. 7−143306
nonlinear resistor network, randomly diluted, field-theoretic formulation 7−80629
one-dimensional phonon-exciton system, energy and absorpt. spectra 7−112195
one-dimensional quasiperiodic Hamiltonian with off-diagonal disorder, localisation 7−84776
orbital symmetrisation of the recursion method 7−92042
semiconductor structures, bound and virtual energy spectrum calcs. 7−70383
C, density of states calcs., recursion method 7−143308
$FeNi_3$, spin-polarised bands via the recursion method 7−125302
$GaAs_{1-x}Sb_x$, density of phonon states, effect of local at. arrangements 7−84155
$Ga_{1-x}In_xAs$, density of phonon states, effect of local at. arrangements 7−84155
$Ga_{1-x}In_xSb$, density of phonon states, effect of local at. arrangements 7−84155
Ge, density of states calcs., recursion method 7−143308
$InAs_{1-x}Sb_x$, density of phonon states, effect of local at. arrangements 7−84155
$LaNi_5$ electronic struct., tight-binding recursion method calcs., DOS anal. and comparison with $LaNi_5H_7$ 7−84667
$LaNi_5H_7$ electronic struct., tight-binding recursion method calcs., DOS anal. and comparison with $LaNi_5$ 7−84667
Nb-Ta alloys, short range order and superconductivity 7−85166
Ni atomic cluster, topologically disordered system, electronic density of states, recursive scattered-wave approach 7−76727
Si, density of states calcs., recursion method 7−143308
Si, structural stability in tight binding models 7−91520
Si:B,Li(P), impurity-induced local vibr. modes, local densities of states recursion method calcs. 7−84166
SiC band struct. and native defect electronic props., tight binding and recursion method calcs. 7−124855
SiC, native defects, electronic struct. calcs., cluster recursion method 7−98920
α-Sn, density of states calcs., recursion method 7−143308
V-Nb alloys, short range order and superconductivity 7−85166
V-Ta alloys, short range order and superconductivity 7−85166
W (001), rare earth metal adsorpt., recursion method calcs. 7−118232
$Zr_{70}Cu_{30}$, amorphous, struct. relax., effect on electronic props. 7−83693

recursive functions
Fourier transform holographic lens design with recursive techniques 7−90544

red shift
see also Doppler effect; gravitational red shift
0215+015, Lyman α lines number density, distrib. in red shift and equivalent width 7−95042
A999, A1016, linear galaxy clusters, redshifts meas. and virial masses estimation 7−146098
Abel clusters (D=6), correlations rel. to morphological classification (revised RS) 7−101946
Abell galaxy clusters, compilation of red shifts and vel. dispersions 7−115256
amino acids, UV reson. Raman excitation profiles study 7−68323
4-amino-4′-nitrodiphenyl, ethanol soln., dipole moment, visible fluoresc. spectra, edge-excitation red shift 7−135950
aniline, two-color photoionis. spectra 7−110018
anthracene, supersonic beam, intramolecular dephasing and vibr. redistrib., fluoresc. 7−129773
atoms, above-threshold-ionisation electron spectra, polarisation depend. 7−96623

red shift continued
AWM 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
benzene, cryogenic solvents, spectroscopic studies 7−135921
benzene, liquid, Raman spectra, resonant intermolecular coupling 7−90142
benzene-Ar clusters, Penning ionisation, UV spectra line shapes 7−82331
benzene-pyridine mixtures, liquid, Raman spectra, resonant intermolecular coupling 7−90142
binary galaxies, H I vels. meas. rel. to dark matter 7−101907
biphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
Bootes void, red shift survey 7−120624
3C 324, possible gravitationally-lensed giant radio galaxy, CCD images and redshifts 7−80108
3C 326.1, radiogalaxy, Lyman-α emission and detect. of 100 kpc cloud of ionised gas at 1.825 red shift 7−140288
Centaurus-Hydra galaxy supercluster, redshifts meas. rel. to galaxies space distrib. 7−120622
clusters of galaxies, distrib., effects of galactic interstellar absorption 7−72636
Coma filament of galaxies, vel. meas. 7−115608
correlated sources, red and blue shifts 7−110494
cosmological, energy loss of photons in curved space-time 7−115635
4-N,N-dimethylaminobenzonitrile, dual luminesc., quenching by H_2O 7−103558
2,3-dimethylanthracene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
2,3-dimethylnaphthalene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
2,5-diphenylfuran-alkane complexes and related cpds., fluoresc. excitation spectra 7−82247
dipyridotetraazapentalene, photooxidation, fluoresc. and phosphoresc. spectra 7−82268
dwarf galaxies, spatial distrib. in CfA slice of Universe 7−120611
dwarf irregular galaxies in Virgo cluster area, H I redshifts 7−95017
elliptical galaxies, spectroscopy and photometry rel. to large-scale streaming motion in local Universe 7−115587
emission-line galaxies in Bootes void, optical spectra and redshifts 7−128069
ferromagnetic semiconductors, electron spectrum and indirect exchange 7−138213
FRW universe, closed, early epochs, Hubble flow deviations 7−101991
galaxies, clustering in real space and in redshift space 7−107959
galaxies, isophotal diameters at high red shift 7−140269
galaxies, large-scale peculiar velocities due to cosmic strings 7−88640
galaxies, new meas. of radial velocities in clusters of galaxies 7−72594
galaxies, redshift and ang. dias. distrib. rel. to Local Supercluster phenomenon 7−128094
galaxies, redshifts survey rel. to relative contribs. of bulges and disks to Universe luminosity density 7−146082
galaxies between Local and Hydra/Centaurus Superclusters, H I survey and radial vels. 7−88607
galaxies in Bootes void region, redshift estimates from Case low-dispersion northern sky survey 7−101704
galaxies in cluster Klemola 22, radial vels. obs. with OPTOPUS (ESO multiple object spectroscopy facility) 7−115581
galaxies in region of Cancer cluster, large-scale distrib. from H I redshifts 7−120621
galaxy cluster assoc. with QSO PG 1613-65 (Mkn 876), gr-photometry and redshifts 7−146102
galaxy clusters, peculiar radial vels. determ. via cooled spaceborne submillimetre telescope 7−139919
galaxy clusters, redshifts and vel. dispersions of low-X-ray luminosity clusters 7−120623
galaxy clusters, two-point spatial correl. function of nearly Zwicky clusters *(Russian)* 7−72640
gamma-ray bursters at cosmological distances, suggested redshifts 7−88680
gamma-ray bursts, annihilation lines redshifts rel. to neutron stars struct. 7−80025
gravitational lens galaxies and cluster for triple radio source 2016+112, redshift model 7−107974
gravitational lenses, theory for multi-element multi-redshift lens 7−120262
Hercules supercluster, redshifts and distance rel. to Hubble constant estimate 7−115610
Hubble ratio, effects of Malmquist bias, type effect, and luminosity dispersion on galaxies Tully-Fisher relation 7−72588
IC 184, Seyfert 2 galaxy, and surrounding group, spectroscopic survey and redshifts 7−140252
IC 4553 (Arp 220), megamaser galaxy, radial vels. of OH 18 cm emission 7−128056
intervening galaxy responsible for Mg II absorpt. in QSO 4C 55.27, spectrum and redshift 7−146103
IRAS 13349+2438, IR-loud quasar, optical redshift and emission lines widths 7−88668
IRAS galaxies, photometric and redshift study of flux-limited sample 7−128058
IRAS galaxies in Bootes void area, redshift survey 7−146084
large-scale galaxy peculiar vel. field, minimal isocurvature model 7−101972
Local Group, deceleration parameter and Kahn-Woltjer mass determ. 7−120603
MC3 2032+107, blazar, red shift, spectra, jet characts. and radio emission features 7−101913
merocyanine dye in polyvinyl alcohol matrix, large edge excitation fluoresc. red shift 7−68396
microwave background, temp. upper limit (at z=1.776) 7−88690
MKW 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
neutron stars, redshift database anal. using γ burst annihilation lines 7−80025
NGC 5090-5091 (PKS 1318−43), interacting galaxies, optical red shifts and rot. curves 7−88613
NGC 7682, Seyfert 2 galaxy, accurate red shift meas. 7−101919
NGC 7752-53, interacting galaxies pair, Hα redshifts and vel. field of ionised gas 7−115580
para-terphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7−122602
red shift continued
pentafluorochloroethane, vibrational excitation, IR absorpt. spectra, ps pulse duration depend. study 7−109886
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7−96762
phenetole, two-color photoionis. spectra 7−110018
phenol, two-color photoionis. spectra 7−110018
PKS 0215+015, BL Lac object, confirmation of emission-line redshift 7−80087
PKS 1614+051, galaxy at redshift of 3.215, imaging and spectroscopic obs. 7−120586
PKS 2000−330, quasar, high redshift absorbing clouds characts., spectral obs. 7−140281
PKS 2005−489, BL Lac object, red shift determ. 7−140284
PKS 2208−137, blazar, red shift, spectra, jet characts. and radio emission features 7−101913
polar mol., solvation dynamics, fluoresc. line shapes probe 7−82251
polymethines, intramolecularly coupled, topological effect on MO energies 7−109740
pyrene complexes, complexation shift in $S_0 \rightarrow S_1$ spectrum, fluoresc. spectra 7−82246
pyridine, liquid, Raman spectra, resonant intermolecular coupling 7−90142
Q1232+134, multiple redshifts and spectral characts. 7−88672
Q 0046−293, 4.01 redshift quasar characts. *(French)* 7−80121
Q 1327−206, QSO-galaxy pair, absorpt. line systems redshifts 7−120636
QSO candidates, spectral characts., red shifts and identification 7−72648
QSO 1409+732, faint high-redshift quasar, spectrophotometry rel. to quasars surface density 7−107978
QSO 2000−330, Lyman α lines number density, distrib. in red shift and equivalent width 7−95042
QSO host galaxies, absorpt. line redshifts determ. from imaging spectroscopy 7−72650
QSO luminosity function, evolution with redshift 7−128120
quasar light echoes from supergalactic disks, predicted spectra and polarisation 7−140305
quasar redshift distrib., selection effects of slitless spectroscopy *(Chinese)* 7−120279
quasar spacetime distrib. w.r.t. cosmological redshift, modified model 7−140317
quasar spacetime distrib. w.r.t. cosmological redshift, theoretical model 7−140316
quasars, effect of redshifts on contrib. to integrated diffuse far-UV radiation field 7−107977
quasars, implications for chronometric cosmology of paucity of high-redshift objects 7−128115
quasars, optical spectral indices-redshifts relation 7−120637
quasars, optically selected, with z>3, redshifts and r-magnitudes 7−128114
quasars, redshift clustering anal. from ROE/ESO large-scale AQD survey 7−128122
quasars, redshifts meas. rel. to effect of Lyman-alpha forest on UV continua 7−88662
quasars, redshifts meas. rel. to X-ray props. 7−101951
quasars, spatial clustering, red shift survey 7−128121
quasars, surface density estimate for faint high-redshift quasars 7−107978
quasars in first Molonglo deep survey, optical identifications, spectroscopy, and redshifts 7−128105
quasars in Second Byurakan Survey, discovery, spectral and photometric meas. *(Russian)* 7−72652
quasars of CFHT survey, redshift and magnitudes rel. to space distrib. 7−101952
quasars of high-redshift, location using low-resolution spectra 7−94670
quasi-stellar objects, new optical catalogue 7−79850
radio galaxies, intrinsic size-redshift relation for weak Leiden-Berkeley Deep-Survey (LBDS) sources 7−115615
trans-retinylidene-N-butylamine, complexation with Lewis acids, C=N stretching freq. increase, reson. Raman spectra 7−90144
Shapley 8 galaxy cluster, red shifts and dynamics 7−88654
source correlation, spectral line shifts 7−110750
southern galaxies with active nuclei, optical spectra 7−80089
spiral galaxies, face-on, heliocentric radial rels. from H I surveys 7−115594
TOL 1037−271, TOL 1038−272, quasars, redshift systems in absorpt. spectra 7−128118
TOL 1037−27/1038−27, QSO pair, redshift systems in absorpt. spectra 7−128119
UGC galaxies, redshift survey and void filling 7−88649
velocity-dependent inertial induction, supergravity shift at solar limb 7−79823
Ar plasma, H_α broadening and shift meas. 7−111167
GaSe, spontaneous and stimulated emission, laser-driven shock wave effects 7−106216
H II galaxy giving rise to z=0.3930 absorpt. system in QSO 1209+107, photometry and spectrum 7−80118
HF-$H_2(O_2)$, H bonded complexes, matrix isolated, IR spectra 7−90117
NH_3, monomers and clusters, supersonic jets, Raman spectra 7−135946
NH_3-HF complexes, H-bonded, vibr. freqs. and intensities, ab initio calcs. 7−129564
OH megamasers in external galaxies, radial vels. meas. 7−95026
PH_3-HF complexes, H-bonded, vibr. freqs. and intensities, ab initio calcs. 7−129564
SF_6, vibrational excitation, IR absorpt. spectra, ps pulse duration depend. study 7−109886
UO_2^+ complexes, IR laser-induced decomp., double reson. results 7−68373

reduced gravity experiments *see zero gravity experiments*

reduction (chemical)
see also oxidation
acetone, photoreduction, CIDEP and relax., Heisenberg spin exchange investig. 7−116997
adenine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
adenosine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
anthracyclines, aglycone moieties, redox props., electrochemical expts., ab initio MO calcs. 7−100796
anthraquinone, laser photolysis, photoreduction, time-resolved spectra, charge transfer, polarisation, hydrogen transfer, solvents 7−141608

reduction (chemical) continued
anthraquinone, photoreduction, free radical prod., product yield-detected ESR 7−103545
ATP molecules, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
azomethynes, electrochem. reduction and reactivity, quantum-chem. calcs. *(German)* 7−68222
benzophenones, in molten acetamide, electrochem. reduction at 85°C 7−113953
ceramic synthesis from intercalation cpds. by carbothermal reduction 7−77895
ceramics, N, prep. and densification from oxides 7−138724
cytochrome C, spin and REDOX equilib. at Ag electrode/electrolyte interface, SERS spectra anal. 7−78778
DODCI, first excited singlet state, photosensitised electron transfer reaction 7−116888
gaseous reductant manufacture using arc plasma processes *(German)* 7−137133
menadione, photoreduction, free radical prod., product yield-detected ESR 7−103545
NADH models, synthesis and reactivity, NMR study *(French)* 7−93621
2-nitrobenzidine, in methanol-water mixtures, electrochem. reduction 7−113952
organic compounds, electronic properties, MO-based mol. mechanics calcs. 7−129909
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond., band gap, IR absorpt. spectra 7−71499
polyacetylene, reversible doping with I_2 in gas phase 7−92314
polyaniline, Raman and IR spectra determ. of struct. 7−70797
polyaniline, redox chemistry 7−71489
polyazulene film, electrochemical, EPR and optical props. 7−70629
polyindene film, electrochemical, EPR and optical props. 7−70629
polypyrrole film form. and modification on Pt electrodes cyclic voltammetry 7−100555
polythiophene film, degradation by doping-undoping cycles 7−78491
redox processes, at. orbital hybridisation dynamic changes effects 7−113880
rocks, electrical properties from 10^{-3} to 10^{+9} Hz, solvent effects 7−114702
semiconductor gas sensor operation mechanism 7−100672
β'-sialon powders, derived from aluminosilicate minerals, densification behaviour 7−138726
vibrational EELS study of redox tuning of surfaces 7−113326
viologen dimer, reduction by TiO_2 conduction band electrons 7−93369
Ag monolayer, adsorbed on Pt substrate, SERS study 7−119005
Au electrodes, in situ microweighing meas. 7−100581
$BaTiO_3$ ceramic, electrical conductivity, effect of excess TiO_2, reduction 7−84880
$(BiGdCa)_3(FeAlGa)O_{12}$ films, absorpt. loss, reducing treatment effects study 7−106284
$(BiGd)_3(FeAlGa)_5O_{12}$, pure and Ca doped epitaxial garnet film as 0.8 micron range optical isolator 7−103937
Bi_2O_3-PbO cathodes, appl. in Li batteries, reduction process, electrochemical and X-ray anal. *(French)* 7−86771
CO_2, electrochemical reduction, Raman spectra 7−144725
CO_2, electrochemical reduction Raman spectra 7−144726
CO_2/CO_2^- couple, reduction potential; 7−139016
Cu, anodic oxidation in pH 12 Na_2CO_3, ellipsometric study 7−100421
Cu electroless deposition mechanism 7−124743
Fe complex, $Fe_4(Fe(CN)_6)_3$, prussian blue, site-transfer cond., dielectric relaxometry, voltammetry and spectrophotometry anal. 7−70307
Fe^{III} to Fe^{II} in presence of oxalic acid, photoreduction in thin layers, form. of spatial dissipative structs. 7−100593
α-Fe_2O_3 particles, reduction to ultrafine Fe particles for mag. meas. 7−125480
α-Fe_2O_3 particles reduction for acicular ultrafine Fe particles 7−85372
GeO_2, glassy, reduction by H_2, anomalous behaviour 7−126418
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., oxidation state study 7−118715
Li_xFeS_2 intercalation system, cryst. struct., Mossbauer and electrochem. studies 7−142720
$LiNbO_3$, phase separation, lattice defects 7−71159
$Mg_xNi_{1-x}O$ and NiO, H_2 reduction on spherical C particles 7−106828
MgO:Fe^{3+}, impurity precipitation, electron irradiation 7−69767
Mn-Fe-O spinels, Mn cation; deficient, reduction-reoxidation behavior, TGA, elec. cond. meas. 7−113903
Mo LPCVD film deposition, kinetics and reaction mechanisms 7−113438
$Mo_{21}S_8$, formation by H_2 reduction of MoS_2 Chevrel phase synthesis 7−104673
$Ni_{1-x}Al_x(OH)_{2+x}$, Ni reduction kinetics, density and specific surface meas. 7−86588
Pt, small particles, synthesis and characterisation, chemical reduction of H_2PtCl_6, chloroplatinic acid 7−86082
Pt:TiO_2 catalysts, high-temp. reduction, Pt-Ti alloy form. 7−71479
Pt-Rh model automotive exhaust control catalysts, EXAFS, STEM and XRD characterisation 7−100678
Re complex, tricarbonylchloro(polypyridyl) Re (I), charge transfer excited state luminesc. and redox reactions 7−70867
Rh surface, NO and CO adsorption, reactions of NO with H and CO, surface struct. effect 7−71521
SiO_2/Si interface, defect microchemistry, oxide decomposition reaction 7−119525
TiO_2, Ar^+ bombardment, adsorption of O_2 7−91991
n-TiO_2 electrodes, O electroreduction, charge transfer mechanisms 7−113944
TiO_2 polycrystalline photoelectrodes in acidic solutions, electrochemical reduction effects. 7−126459
W CVD films produced by Si reduction of WF_6, microstructs. 7−112149
W films, CVD, reaction kinetics of H_2 reduction of WF_6 7−113430
W-K powder, particle size and internal strain meas., X-ray methods study 7−100147
$W_{21}S_8$, formation by H_2 reduction of WS_2, Chevrel phase synthesis 7−104673
$Y_1Ba_2Cu_3O_x$, high temp supercond., environmental and solvent effects 7−119557
$Y_{2.0}Ca_{1.0}Ge_{0.9}Fe_{4.1}O_{12.0}$ reduced garnet film, FMR spectra study 7−112890
Zn electrodes in aq. alkali and carbonate solns., oxidation and reduction, cyclic voltammetry study 7−100586
Zn electrodes in aq. alkali and carbonate solns., oxide film form. and dissolution, cyclic voltammetry study 7−100587
$Zr_{1-2x}Y_{2x}O_{2-x}$ (100), electron beam reduction, XPS study 7−77710

reed relays
vibrating reed apparatus for resonance frequency and internal friction determ., low-temp. 7−97466

reed switches *see reed relays*

reeling *see winding (process)*

reentrant superconductors *see magnetic superconductors*

reference circuits
voltage primary standard, using solid state references 7−121050

references (standards) *see standards*

reflectance *see reflectivity*

reflection
see also acoustic wave reflection; electromagnetic wave reflection; neutron reflection; reflectivity
albedo determination for ground reflected sunlight 7−145652
elastic solid, periodic distribution of cracks, time harmonic longitudinal wave propagation 7−142215
head-wave amplitudes, contrib. to reflection 7−140464
inhomogeneous media, wave reflection at normal incidence 7−128305
inhomogeneous media with curved interfaces, Gaussian wave packets 7−108257
seismic waves, parameter identification using pseudogradient method *(Spanish)* 7−133604
seismic waves, polarisation characts. of converted PS waves reflected from boundaries disturbed by fault systems 7−71968
solid-sandy bilateral interface, energy partitions due to incident antiplane shear wave 7−75399
specular gas reflection, stochastic law derivation 7−75742

reflection high energy electron diffraction
amorphous film, MBE deposited, solid phase crystal growth 7−143262
III-V semiconductors, MBE growth, RHEED oscillations *(French)* 7−132467
$LiNbO_3$, surface etching studies, RHEED anal. 7−71333
MBE, conf., York, England (Sept. 1986) 7−66816
MBE, surface growth, RHEED intensity oscill. technique 7−70116
MBE using RHEED intensity oscillations *(Japanese)* 7−125996
Permalloy, ion implanted, mag. recording material, struct. changes *(Chinese)* 7−131402
semiconductor MBE growth, RHEED intensity oscills., computational modelling 7−112139
stepped surface, RHEED intensity studies 7−143165
surface (111), surface topography changes during MBE growth, microprobe RHEED study 7−98636
AlAs/GaAs heterostructures, low temp. growth by modulated MBE 7−125990
AlGaAs, MBE growth instabilities and roughening rates on misoriented substrates, RHEED study 7−131490
AlGaAs/GaAs structures, MBE growth, compositional gradient control, RHEED oscills. 7−71014
$Al_{0.3}Ga_{0.7}As$, MBE growth on GaAs (100), RHEED specular beam intensity 7−113392
$Al_xGa_{1-x}As$ 7−71013
$Al_xGa_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Al_xGa_{1-x}As$, surface segregation, growth interface roughening 7−85952
$Al_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. sputtered thin film elec. props. study 7−118334
C film, transparent, mass-separated negative-carbon-ion-beam deposition 7−113443
CaF_2-MSi_2-Si (111) structs. (M=Co, Ni), MBE growth 7−144285
$Ca_{0.43}Sr_{0.57}F_2$/GaAs (100), epitaxial heterostructures, flash evaporation, charactn. 7−84537
$Ca_xSr_{1-x}F_2$, lattice matched epitaxial layer on GaAs (100), growth, characterisation 7−143253
CdSe:O/Au Schottky diodes, struct. and elec. props., O effects 7−105655
CdTe, MBE growth on GaAs (100), RHEED study 7−131485
CdTe-InSb multilayers, MBE growth and interdiffusion 7−77821
Co-Cr thin films, artificial superlattice struct., magnetism, struct. 7−76667
Cu, deposition on Au electrode, LEED, RHEED and AES investig. 7−98637
$Cu_xLi_{1-x}InTe_2$ epitaxial layers on III-V substrates, lattice misfit 7−124792
$DyBa_2Cu_3O_{7-x}$ high T_c supercond. film, MBE growth and props. 7−143245
α-Fe ferromagnetic films, MBE growth on ZnSe (001), (110) 7−76686
GaAs (001), surface disorder-induced Kikuchi features in RHEED 7−143142
GaAs, chemical beam epitaxial growth, obs. of intensity oscillations in RHEED 7−105304
GaAs films, MBE on Si, structural and optical props. 7−84599
GaAs, MBE, growth surface, RHEED oscill. obs. 7−70117
GaAs, MBE, secondary electron emission oscills., RHEED obs. 7−71018
GaAs, MBE, surface diffusion, RHEED 7−70118
GaAs MBE film grown on Si (001) RHEED studies and interface anal. 7−76670
GaAs, MBE growth, asymm. interface roughness, computer simulation 7−143159
GaAs, MBE growth, phased locked RHEED oscills. 7−71013
GaAs MBE growth, RHEED intensity oscillation study 7−92872
GaAs MBE growth on Ge (100), antiphase domain suppression, RHEED obs. 7−70127
GaAs MBE growth on Si, charactn. 7−70126
GaAs MBE growth on Si(100), initial stages and domain struct. 7−70137
GaAs, single domain MBE films, growth on double domain Si(001) substrates 7−71034
GaAs/$Al_xGa_{1-x}As$(100) quantum well structs., MBE, RHEED, photolum., computer simulation 7−70093
GaAs-$Al_{0.33}Ga_{0.67}As$ single quantum well interfaces, MBE grown, photoluminesc., RHEED dynamics studies 7−112093
GaAs-$Al_xGa_{1-x}As$ quantum wells, MBE, RHEED, disorder, interfacial step distrib., lumin. studies 7−138513
GaAs-NaI, stabilisation of GaAs in acidic conc. iodide electrolyte 7−112484
$Ga_{1-x}In_xAs$, MBE growth on Si substrate, characterisation 7−71033
$Ga_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735

reflection high energy electron diffraction continued
GaP/GaAs LPE systems, large lattice mismatch accommodation 7−112108
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
Ge (111), adsorption and growth of Ag and Au, photoelectron spectra, RHEED 7−85945
Ge (111) with adsorbed liquid Sn layers, struct. anomaly, RHEED study 7−143218
Ge, epitaxial growth, on Si, surface reconstruction 7−76577
Ge, monolayer and bilayer growth on Ge(111), RHEED, oscills. 7−70119
Ge_xSi_{1-x}/Si (001) heteroepitaxial system, MBE growth, RHEED oscillations 7−100083
$In_xGa_{1-x}As$-$In_xAl_{1-x}As$ MQWs and GaAs, MBE growth, lumin. 7−124739
$(La_{1-x}Sr_x)_2Cu_4O_4$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$LiInSe_2$ thin film hot wall epitaxy and structural charactn., RBS, SEM and AES studies 7−118328
$LiNbO_3$, (0001) substrate surface, electron diffr. studies of phase formation 7−137670
$LiNbO_3$/Ti interface, Ti diffusion and surface layer superstruct. form. 7−69989
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
Mo-Cu multilayered film, RHEED intensity oscill. during MBE growth 7−84596
Mo-GaAs, oriented growth of metal films, microstruct. 7−118303
Nb-GaAs, oriented growth of metal films, microstruct. 7−118303
Ni, epitaxial growth, RHEED beam intensity oscills. 7−84577
$NiSi_2$ layers grown on Si (111) by MBE and SPE 7−76679
$NiSi_2$-Si (111), cryst. intermediate phases in epitaxial layer formation 7−137748
PZT epitaxial films, sputter deposited, dielec., ferroelec. and pyroelec. props. 7−100064
$Pb_{1-x}Sn_xTe$, film, molecular beam epitaxy, on Ge, Si, GaAs, InSb and BaF_2 substrates 7−77830
PbTe, MBE growth on GaAs (100), RHEED study 7−131485
Sb thin film, crystallisation on GaAs(110), RHEED study 7−105306
Si (III), vicinal surface, facetting induced by Pd *(French)* 7−112035
Si (001), RHEED intensity calcs. for stepped surfaces for interpretation of oscills. during MBE growth 7−84464
Si (100), nucleation of GaAs, multilayer step formation after As adsorption 7−105309
Si (111), adsorption and growth of Ag, photoelectron spectra, RHEED 7−85945
Si (111), Ag adsorption and desorption, RHEED-X-ray spectra studies 7−118267
Si (111) surface topography after Ar^+ bombardment and thermal annealing, RHEED and electron microscopy studies *(French)* 7−112036
Si, epitaxial films, plasma CVD growth at low temps. 7−126015
Si, MBE, growth on single domain surface, RHEED oscills. 7−71019
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
Si:B films, low pressure CVD grown, microstructure 7−106434
SiC film prep. by electron cyclotron resonance plasma CVD, grain structure anal. using electron microscopy *(Japanese)* 7−132476
Zn chalcogenides, atomic layer epitaxy growth, dynamic RHEED studies 7−71030
$Zn_{1-x}Fe_xSe$ dilute mag. semiconductor, MBE growth, characterisation 7−112117
ZnS:Mn on Y_2O_3 (quartz), thin films, electrolum. characts. and struct. 7−138516
ZnSe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnSe films, low pressure MOVPE growth 7−92880
ZnSe, MBE growth on GaAs (001), RHEED intensity oscillations 7−71031
ZnSe MBE layers, surface phase diagram, RHEED study 7−137749
ZnTe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016

reflection nebulae *see nebulae*

reflection spectra *see reflectivity; spectra*

reflectivity
see also electroreflectance; magnetoreflectance; piezoreflectance; thermoreflectance
absolute diffuse reflectance from relative reflectance measurements 7−134838
absolute specular reflectance meas. in IR 7−121203
aerosols, atmospheric, anal. by total refl. X-ray spectrometry 7−139056
alkali metal halides, solid, DRIFT expts. in far-IR region, reststrahlen effects 7−92624
β-(BEDT-TTF)$_2I_2Br(AuI_2)$, IR and far IR polarised reflectance spectra studies 7−77563
β-(BEDT-TTF)$_2I_3(IBr_2)$ IR and visible reflectance spectra temp. depend. obs. 7−77564
β-(BEDT-TTF)$_2I_3(IBr_2)$ refl. spectra temp. depend., conductivity spectrum TBA calcs. 7−77501
α-(BEDT-TTF)$_2I_3$ 2D conductor, vibronic props., IR polarised refl. spectra 7−77565
(BEDT-TTF)$_2XI_2$ salts, X=Au, Br, electronic struct., props., polarised IR reflectance spectra 7−113189
(BEDT-TTF)$_3(Cl(Re)O_4)_2$ IR and visible reflectance spectra temp. depend. obs. 7−77564
(BEDT-TTF)$_3(NO_3)_2((ClO_4)_2)$, 2D organic metal, elec. anisotropy, polarised IR refl. meas. 7−76875
benzene, adsorpt. on acidified Al_2O_3, UV-visible reflectance spectra 7−98683
$(BPTTF)_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
chiral-nonchiral liq. cryst. mixture, blue phases, phase diagram determ. 7−91803
coating, IR opaque, materials survey 7−110532
conducting superlattices, optical props., plasma wave effects calcs. 7−144004
Corning Macor glass ceramic, submm and mm reflectance characts. 7−125863
cotton dust, acute pulmonary response rel. to comp., spectrosc. obs. 7−127046

reflectivity continued
$CuInS_2$, thin layers, structural/optical props., for CdS/$CInS_2$ solar cell *(French)* 7−143292
cyclohexane-methanol, fluid interface struct. near critical point, optical reflectivity anal. 7−137662
γ-cyclopropyl-bis(1,2,3′-trimethyl-indolenine-2-yl) pentamethinium tetrafluoroborate, mol. cryst., exciton-phonon coupling study 7−92074
DBTTF and DBTSF salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
deformed absorbing crysts., reflectivity, QM calcs., extended version 7−138407
DFB lasers, λ/4-shifted, with low refl. facets, coupling coeff. eval. by stopband method 7−82558
1,1′-diethyl-2, 2′-cyanine iodide, mol. cryst., exciton-phonon coupling study 7−92074
diffuse reflection and polarization modulation FT-IR spectrometry of surface species 7−93442
1,1′-dimethylferrocenium-TCNQ, 1:2 cpd., optical props. 7−119027
excitons, surface scattering, additional boundary conditions 7−143361
expanding plasma, laser light reflection 7−75798
gamma-ray total external reflection from solid surface at grazing incidence 7−125675
glass fibres, surface molecular orientation layer, IR spectrosc. obs. 7−85613
graphite-K intercalation cpd., normal and hydrided, optical reflectivity studies 7−125670
graphite-OsF_6 (MoF_6) intercalation cpds., charge transfer, optical reflection obs. 7−106127
II-IV-V_2 phosphides, semicond., optical refl. spectra, optical functions, band calcs. 7−113220
II-IV-V_2 ternary semicond. cpds., lattice dynamics, chem. binding, IR absorpt. and refl. spectra, Raman scatt., rigid ion model 7−113174
III-V ion implanted semiconductors, recrystallisation kinetics 7−119130
III-V semiconductors, surface (110), optical transitions between intrinsic electron states 7−131729
intensity disparity detection in differential stereo vision *(Japanese)* 7−133265
IR emittance and reflectance of optical material surfaces 7−110487
lanthanide complexes in form of solid-solid solns., diffuse reflectance spectra, spectral intensities 7−118976
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7−125752
metallic grating, bare, reson. response to S-polarised light, review 7−75104
metals, strongly charged surfaces, optical response, nonlocal effects, time depend. local-density-functional theory 7−143993
mineral abundances determ. from bidirectional reflectance meas. 7−101700
mineral optical reflectivity meas. method for polished absorbing grains 7−133946
molecular material monolayers, power reflection spectroscopy 7−99780
montmorillonite pressed pellets, prep. depend. props. rel. to optical consts. meas. in FIR 7−92627
multilayer structures, nondestructive characterisation by resonant attenuated total reflection spectroscopy 7−125655
nematic liquid cryst., anchoring props., attenuated total reflection studies, volt. depend. 7−113140
nonstationary reflectivity in the case of space-time-dependent refraction index 7−90504
4-n-octadecyl phenol, film on Cu, IR absorpt. intensity, rel. to film thickness 7−92759
one-dimensional electrified chains, ordered and disordered pots., Stark-ladder resonances calcs. 7−124940
optical films, spectral props., photoacoustic studies 7−92756
optical multilayers, spectral props. variations from different coating runs, inverse synthesis anal. 7−103936
optical thickness monitoring, sensitivity improvement using graphical methods 7−67363
organic charge transfer crystals, struct. phase transition, IR reflection spectra studies 7−85678
organic optical storage medium, dynamic laser marking 7−74881
oxidation resistant reflective surfaces for solar dynamic power generation 7−138891
pearls, IR lattice bands 7−77537
$(PEDTTTF)_mX_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
perylene-hexacyanobutadiene charge transfer complex, struct., optical studies 7−83943
phase conjugate resonators, reflectivity fluctuations 7−68786
photoreflectance of GaAs doping superlattices 7−99175
plasma, inhomogeneous, dynamic reflectivity switching of IR lasers 7−141914
polar crystals, long wavelength optical mode freqs., determ., differential reflection spectroscopy 7−138409
polariton-Stokes wave anharmonic coupling on slab, stimulated Raman spectra 7−82718
poly(3-methylthiophene), electrochemically doped, transient polaron occurrence 7−92087
poly(phenylene sulphide) films, ion irrad., spectroscopic anal. 7−99852
poly-3-methylthiophene, optical spectra and electronic struct. 7−77562
polydiacetylene single crystals, transient negative and positive reflectance changes 7−85776
polymer silvered materials, specular reflectance props. 7−125678
rough surfaces, reflectivity 7−68558
semiconducting multilayered materials, polariton struct. and spectral reflectance 7−76782
semiconducting slabs, interference spectra at excitonic resonances, coherent wave approach to band gap electrodynamics 7−85558
semiconductors, CW CO_2 laser annealing, optimal preheating temp. determ. 7−142830
semiconductors, optical bistability and nondegenerate wavefront reversal 7−75071
silk cloth, Japanese natural dyes, laser-induced fluorescence and optical reflection spectra 7−85901
silver anthraquinone derivatives, thin films, photosensitive props. 7−125837
sodium cryptand(2.2.2) sodide, optical reflectivity and absorpt. meas. 7−113222
sodium laurate, oriented multilayers, ATR IR spectra 7−82089
solar absorber materials, bidirectional and directional-hemispherical spectral reflectance meas. 7−126649

reflectivity continued
solar photothermal conversion, metal-dielectric layers absorption spectra in 0.5 to 2.0 μm range 7−71635
solar ponds, effect of bottom reflectivity on pond performance 7−144910
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
spectral reflectance meas. of high reflectance coatings 7−121204
steel, austenitic stainless, Al implanted, oxidation resistance and optical reflectivity 7−86485
stibnite (Sb_2S_3), reflectivity and optical consts. at 546 nm 7−133946
stripe-geometry distributed feedback lasers, below threshold characts., beam-propagation model 7−117248
surface differential reflectivity spectroscopy of semiconductor surfaces 7−118969
surface materials, power reflectivity investig. 7−99778
surface relief gratings, high reflectivity, in single mode optical fibres 7−103950
TCNQ, mol. cryst., exciton-phonon coupling study 7−92074
TCNQ salt, $TeEA(TCNQ)_2$, IR props. 7−99850
TCNQ salts, quasi-1D dimerised, IR spectral props., temp. depend. 7−85626
tetrathiafulvalene-*p*-chloranil, mixed-stock charge transfer crystal, reflectivity spectra, hydrostatic press. 7−118455
thickness measurement using scanned ATR technique 7−80852
thin films, absorbing, optical anal. 7−92754
thin films, emission, reflection and transmission spectroscopy 7−98751
$(TMTSF)_2AsF_6$, far-IR reflectivity through the spin density wave transition 7−118980
$(TMTSF)_2AsF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2ClO_4$, polarised single cryst. specular reflectance spectra 7−113224
$(TMTSF)_2SbF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
transition metal coordination compounds, superlattice form. by selective coordination epitaxy 7−71063
transparent thin film on transparent substrate, reflectances at oblique incidence 7−68556
22-tricosenoic acid Langmuir-Blodgett multilayers, surface press. effects 7−143229
TTT salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
two-stage systems design for diffuse reflectance meas. 7−110507
uniaxial absorbing media, indicating surface of natural reflectance, charactn. 7−141787
uniaxial transparent media, indicating surface of natural reflectance 7−141786
UV-visible reflectance spectroelectrochemistry, review 7−78582
X-ray multilayer mirrors, sputter deposited, performance 7−121315
Ag chemically deposited layer on glass, optical props. 7−138525
Ag interlayers in polyimide film, sintering process and charactn., laser writing appl. 7−119187
Ag, monolayer growth on polycrystalline (111) Al surfaces 7−98737
Ag, monolayer on Cu (111), Auger electron and surface reflectance spectroscopy study 7−138074
Ag thin sputtered films, spectrally selective coatings, influence of deposition parameters 7−144276
Ag-Cs_2O thin films, optical props, Ag content effect *(Chinese)* 7−99949
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7−124775
$AgGaS(Se)_2$ chalcopyrite ternary semiconds., fundamental energy gap temp. depend., refl. meas. 7−76774
AgI superionic conductor, phases, phase transitions and excitons, diffuse reflectance spectra studies 7−118091
Ag_xTiS_2 intercalation cpd., Z 7−99855
Al films for VLSI applications, low pressure CVD 7−71052
Al surface liquid films, dielectric loss meas. 7−99779
Al-Al_2O_3-Ag tunnel junctions, surface plasmons, optical detection 7−105725
Al-GaSb interface, thin film reactions 7−86680
Al-MgF_2 replicated coating aspheric mirrors for far UV, quality control and ageing tests 7−103928
AlAs-GaAs thin layer superlattices, photorefl. and low temp. photolum. 7−70922
Al_2O_3 sintered plate white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
Ar fluid, intermediate excitons, reflectivity spectra 7−84686
$As_{40}Se_{30}S_{30}$ chalcogenide glasses, refractive index dispersion 7−85569
Au coating on Al substrate, total spectral reflectance and bidirectional reflectance distrib. function 7−108627
Au thin film/fluid interface, surface plasmon-polariton studies 7−138532
BaB_2O_4, low temp. phase, IR reflection spectra *(Chinese)* 7−113164
$BaSO_4$ white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$Ba[Ni(CN)_4].4H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$Ba[Pd(CN)_4].4H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$Ba[Pt(CN)_4].H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
BiOM (M=Cl, Br) crystals, visible and UV absorpt. and refl. spectra, prep. depend. 7−106211
C-Sn amorphous thin films, semicond., optical and elec. props. 7−70318
CO, adsorbed on Rh/Al_2O_3 catalysts, diffuse refl. FTIR spectra 7−125717
CO, dissoc. adsorpt. on Ni (111) with preadsorbed K, IR reflection absorpt. spectra 7−106826
CO, interaction with mech. activated SnO_2 7−93376
CO, near-monolayer nonadsorbed on Pt electrodes, IR reflection-adsorpt. spectra 7−99813
CaO surface, CO and H_2 adsorpt., UV-visible reflectance investig. 7−91978
Cd-Te thin film couples, grain boundary interdiffusion, CdTe formation 7−98587
$Cd_xHg_{1-x}Se_yTe_{1-y}$ solid solutions, reflectivity spectra 7−92700
$Cd_{1-x}Mn_xSe$ solid solns., variation of optical energy gap with composition 7−70735
CdMnTe, reflectivity spectra modified by Mn density of states 7−113223
$Cd_{1-x}Mn_xTe$, fundamental reflectivity spectra, influence of 3d Mn electrons 7−70832
reflectivity continued
$Cd_{1-x}Mn_xTe$, excitons, energy struct., dynamics, refl. spectra 7−98812
$Cd_{1-x}Mn_xTe$:P,As, elec. and optical props. studies 7−131658
CdO, energy gap determ. by diffuse reflectance meas. 7−76729
$Cd_{1-x}Pb_xF_2$ crystals, reflectivity in vacuum UV range 7−85763
$Cd_{1.9}Pb_{0.1}SnO_4$ thick films, Burstein effect 7−125824
CdS, attenuated total reflectivity, calc., wave vector linear band splitting 7−138405
CdS crystals, dispersion of integral refractive index, determ. 7−132225
CdS-Au, exciton reflection spectra, influence of Schottky barrier field 7−143357
$CdS_{1-x}Se_x$ disordered crysts., luminesc., absorpt., refl. and gain spectra 7−106263
CdSe films, electrodeposited, growth and morphology 7−112121
CdSe films, electrodeposition, in situ optical reflectance study 7−144314
$CdSe_{1-x}S_x$, anomalous exciton reflection spectra and surface fluctuations 7−76560
Cd_2SnO_4 thick films, Burstein effect 7−125824
CdTe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
CdTe, MBE grown, mismatch strain meas., free exciton absorpt. and refl. 7−76683
CdTe pulsed laser evaporated films on glass and (100) GaAs substrates, refl. spectra 7−84560
Cds, prism-shaped crystal, light refraction near exciton-resonance 7−85561
$CeBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
CeO_2 single crysts., covalent insulator, optical reflectivity meas. 7−125673
Co black, selective solar absorber surfaces, comparison of different forms 7−144911
$Co_{1-x}Cr_x$ films, optical reflectance meas. 7−113299
Cr-Cr_2O_3 on Cu, scanning Auger microscopy and optical integrated reflectance meas. 7−118316
Cr_2O_3 surface props. studies 7−131395
$CrSi_2$ amorphous thin films, Raman scatt. 7−113202
Cs, optical spectra, refl. coeff., electronic struct., high press. calcs. 7−99886
$CsHSO_4$, normal and deuterated, IR and Raman vibr. spectra obs. 7−106165
Cu, laser-induced oxidation, optical self-regulation 7−100418
Cu-ZnO two-phase metal-insulator system, highly disperse mixture, optical props. 7−70733
$CuGaIn_{1-x}Se_2$ single crystals, props. for photovoltaic appls. 7−131707
$CuGaS_2$ single crystals, absorption edge study 7−85769
$CuInS_{2y}Se_{2-2y}$ single crystals, props. for photovoltaic appls. 7−131707
Fe complexes, N-substituted hydrazine carboxylic acids, spectral and synthetic study 7−70756
Fe-Al_2O_3 cermet film, low cost solar selective absorber 7−144913
$Fe_{1-x}Cu_xCr_2S_4$ mag. semicond., plasmon-phonon spectra 7−124414
Fe_3O_4, phonon modes, Verwey transition, IR reflectivity and Raman spectra 7−85653
GaAs (110), optical transitions polarisation depend., surface differential reflectivity meas. 7−118981
GaAs, doping superlattices, photoreflectance spectroscopy 7−138410
GaAs, ion bombarded, struct. changes and defects 7−137426
a-GaAs, MBE deposited, solid phase crystal growth 7−143262
GaAs, optical charactn., IR reflectance spectroscopy 7−77535
GaAs, optical spectroscopy of unoccupied density of states 7−106208
GaAs:Cr(Si)(Zn), optical charactn., IR reflectance spectroscopy 7−77535
GaAs:Te, highly doped, far IR optical props. 7−70758
GaAs/(Al, Ga)As multiple quantum wells, photoreflectance 7−131751
$GaAs/Al_xGa_{1-x}As$ selectivity doped heterostruct. 2D electron gas photoreflectance meas. 7−106114
$GaAs/Al_xGa_{1-x}As(In_yGa_{1-y}As)$ superlattices on Si substrates, optical props. 7−106105
GaAs/AlGaAs multilayer high-reflectivity mirrors, sensitivity anal. w.r.t. epitaxial growth parameters 7−123143
n-GaAs/Au tunnel junctions photo-resistive effect during plasma refl. of laser light 7−70413
$GaAs-Al_xGa_{1-x}As$ quantum well structs., piezomodulated electronic spectra 7−77508
$GaAs-Al_xGa_{1-x}As$ MQW, photoreflectance modulation mechanisms 7−70839
$GaAs-Al_xGa_{1-x}As$ multiple quantum wells, excited states, monolayer fluctuations, photocurrent and reflection spectra 7−84690
GaAs-AlAs multi-quantum barrier, electron wave refl. and leakage current, light emitting device appls. *(Japanese)* 7−131762
GaAs-AlAs quantum wells and super-lattices, photoconductivity and photoreflectance 7−143520
GaAs-AlAs superlattice, IR reflectivity and EELS 7−77714
GaAs-AlGaAs MQW, temp. depend. of photoreflectance line shapes 7−138474
GaAs-AlGaAs multiple quantum well reflection modulator 7−97127
$Ga_{0.47}In_{0.53}As$-InP multi-quantum barrier, electron wave refl. and leakage current, light emitting device appls. *(Japanese)* 7−131762
GaP (110), optical transitions polarisation depend., surface differential reflectivity meas. 7−118981
GaP, optical spectroscopy of unoccupied density of states 7−106208
GaS thin films, one-phonon lattice absorpt., IR spectra 7−70921
Gd-Tb-Fe films, magneto-optical effects, bias voltage depend. 7−144041
$Gd_2(MoO_4)_3$, IR dispersion at room temp. 7−70786
a-Ge sputtered films, optical gap and void fraction, thickness depend. 7−125828
a-Ge:H, ultrathin layers, quantum shift of optical absorpt. edge 7−125820
a-Ge:Si layers, amorphised by ion implantation, optical props. rel. to enthalpy of relax. 7−85578
Ge-Sb-S glasses, optical transmission and reflectivity 7−85571
$GeSe_2$, chalcogenide semiconductors, vitreous and crysts., struct., IR obs. 7−113207
$GeSe_2$:Ag, cryst. and amorphous, electronic struct., photoemission and optical spectra studies 7−105398
$(GeSe_x)Tl_y$, chalcogenide semiconductors, vitreous and crysts., struct., IR obs. 7−113207
GeTe, amorphous, laser-induced crystallisation, time-resolved study 7−137259
H_xWO_3, electrochromic mirrors with variable reflectance 7−144028
$HfSe_2(S_2)$ electronic struct. determ. photoacoustic saturation spectra study 7−91736

reflectivity continued
HgCdTe, laser annealing, effects on mercury loss and surface damage 7−131542
HgZnTe, laser annealing, effects on mercury loss and surface damage 7−131542
In thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
InBr, orthorhombic, polarized reflection spectra, 2-30 eV 7−106207
InO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
In_2O_3:Sn film degradation in H and Ar glow discharge plasmas 7−144634
InP cubic semicond., excitons and polaritons, reflectivity spectrum study, stress, press., and mag. field effects 7−112187
InP doping superlattices, MOCVD growth, optical props. 7−144114
InP, laser irrad., melting dynamics, light reflection abs. 7−104968
InP, laser irrad., melting and crystallisation, light reflection anal. 7−106131
InP-InGaAs Fabry-Perot etalons, MOCVD grown 7−130395
InSb single crystals, effect of laser radiation in liquid N_2 medium *(Japanese)* 7−132382
KBr(Cl), irradiated, interaction between colour centres and dislocations 7−111643
$K_2Ca_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7−138523
KH_2PO_4 and $K(H_{1-x}D_x)_2PO_4$, low-frequency phonon modes, IR reflectivity study 7−84151
KH_2PO_4-type cpds., paraelec.-ferroelec. transition mechanism 7−143988
KH_2PO_4-type crystals, ferroelec., vibr. modes, IR spectra, review 7−113170
$K_2Mg_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7−138523
$KPbI_3$-Al(Au)(Ni)(Cu)(glass), vacuum deposited films for photothermal conversion 7−85585
$KTiOPO_4$, single cryst., IR reflectivity spectrum 7−119003
Kr fluid, intermediate excitons, reflectivity spectra 7−84686
La-Ba-Cu oxide, supercond. energy gap, for IR reflectivity meas. 7−99319
La-Sr-Cu oxide, supercond. energy gap, for IR reflectivity meas. 7−99319
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Ca, Sr) high T_c supercond., optical reflectivity spectra and band struct. 7−92631
La_2NiO_4, nonstoichiometric, 2D plasmon, IR reflectivity study 7−113188
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR spectra and vibr. props. 7−92668
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., IR active phonons, refl. spectra 7−99837
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR reflectivity and optic phonon modes 7−99847
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon props., far-IR meas. 7−105824
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, for IR meas. 7−105825
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma edge and optical phonon spectra 7−113117
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR active phonons, reflection spectra study 7−144065
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., energy gap 7−99318
$La_{2-x}Sr_xCuO_4$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$La_{2-x}Sr_xCuO_4$, high T_c supercond., far-IR reflectivity 7−113192
$La_{2-x}Sr_xCuO_4$, high T_c supercond., normal state props. 7−143995
$La_{1-x}Sr_xFeO_3(CoO_3)$ perovskite-type oxides, IR reflectivity and electronic states 7−144053
LiF white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
LiH, reflection spectrum, optical consts., 4-40 eV range 7−138400
$LiNaSO_4$, lattice dynamics above room temp. studied by IR spectroscopy 7−118043
$LiNbO_3$ integrated optical substrates, refractive index meas. by TIR, prism coupling method 7−125662
LiO_3, IR active phonons, IR reflectivity and absorpt. spectra studies 7−99814
MgO surface, CO and H_2 adsorpt., UV-visible reflectance investig. 7−91978
Mn films, optical props, 190-900 nm, annealing effect 7−106287
Mn/SiO composite thin films, spectral selectivity meas. 7−138528
MnBi films, preparation, magnetic and magneto-optic props. 7−99533
$Mn_xCd_{1-x}Te$ single crystals, props. for photovoltaic appls. 7−131707
MoO_3-Cu-Ni black films, solar selective, charactn. 7−106451
$MoSi_2$, silicide, spectroscopic ellipsometry and reflectometry studies 7−92635
$NH_{4(1-x)}D_{4x}H_{2(1-x)}D_{2x}AsO_4$ crysts., light diffr. by SAW, isotope effects studies 7−138406
$(NH_4)_3H(SO_4)_2$, phase transitions, far IR reflectance studies 7−106174
$NH_4H_2PO_4$, low-frequency phonon modes, IR reflectivity study 7−84151
Na_3Sb thin absorbing films, optical method for heterogeneity analysis 7−113298
NbC_x, optical and elec. props. 7−85649
$(NbSe_4)_3I$, liner chain semicond., cryst. struct. and far-IR reflectance 7−98097
Ni (100), CO and H co-adsorption, vibrational spectroscopy and photoemission 7−105262
Ni (110). N_2 chemisorpt., kinetic parameters, thermodynamic quantities and struct., multitechnique approach, review 7−70086
Ni complex, $Ni(S_2C_2(CF_3)_2)_2$, prep., struct., elec. and mag. props. 7−99034
Ni complex, Ni(phthalocyanine)$(ClO_4)_y$, mol. metal, band filling and counterion ordering effects 7−143450
Ni, passivation in aq. solns., electrochemical polarisation obs. 7−132792
NiO and similar translucid solid, optical spectra, configuration interaction and oxidation state 7−113217
$NiSi_2$ amorphous thin films, Raman scatt. 7−113202
$NiSi_2$/Si (111) structures, laser irradiation damage 7−111655
$NiSi_2$-Si interface, melting dynamics under pulsed laser irrad. 7−84219
Ni_4Si polycrystalline layers, optical props. 7−125832
$Pb_{1-x}Gd_xTe$ semimag. cpd., optical props. temp. depend. meas. 7−113116
$Pb_5Ge_3O_{11}$ ferroelec. cryst., polariton dispersion, phonon freqs. and damping, IR refl. meas. 7−76320
PbI_2, 2H-polytype, bound excitons, photoluminesc. excitation rate effect, refl. spectra 7−77628
PbI_2-2H crystals reflectance and photoluminescence, polariton theory *(Russian)* 7−144129
reflectivity continued
$PbO-SiO_2-B_2O_3$-GdTe glasses, light absorption studies 7−125664
$PbS-SnO_2(ZnO)$ chemically deposited selective absorbers 7−86829
PbSe films, vacuum, evaporated and chemically deposited samples, effects of thermal annealing 7−92036
$Pb_{1-x}Sn_xTe$ epitaxial film, cond. and plasma refl. spectra, lattice vibr.-induced localisation effects 7−85141
Pd_4Si polycrystalline layers, optical props. 7−125832
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7−105548
Pt_4Si polycrystalline layers, optical props. 7−125832
Rb, optical spectra, refl. coeff., electronic struct., high press. calcs. 7−99886
$RhSb_3$, elec. props., IR refl. spectra 7−85645
S white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
SB_2S_3 (mineral), reflectivity and optical consts. at 546 nm 7−133946
SF_6, fluid interface struct. near critical point, optical reflectivity anal. 7−137662
SbSBr crystals, cryst. struct. and optical lattice vibrs. 7−69689
Sc thin films, optical props. 7−99958
Si crystal for bent crystal spectrometer, reflectivity 7−81843
Si, four-wave mixing reflectivity, free-carrier absorption 7−90720
Si, IR absorpt. coeff. meas., indirect transition model anal. 7−106155
Si, phase conjugate reflecting, pump-beam intensity depend. saturation behaviour 7−68792
Si, picosecond laser pulse-generated high-density plasma kinetics simulation 7−105605
Si, reflected second-harmonic light generation, surface contribs. 7−68790
Si, relaxation of photoexcited charge carriers, reflectivity and transmittance studies, picosecond time domain 7−99084
Si relaxation processes, picosec. reflectivity and transmission studies 7−131654
Si SOI wafers, ion implanted, nondestructive anal. 7−112100
Si:As, high dose ion implanted, laser annealed, optical study 7−85772
Si:B films, low pressure CVD grown, microstructure 7−106434
Si:O, interstitial O conc. by IR method, influence of back surface roughness 7−113209
SiC substrate with Ge overlayer increase in SiC reflectance 7−106281
Si_3N_4, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
Si_xN_y, substoichiometric, ion beam assisted deposition, optical props. 7−92877
SiO_2 quartz, optical props., influence of thermal annealing after $N^+(O^+)$ ion implantation 7−106130
SiO_2, quartz/fused silica, N and O implanted, IR reflection props. 7−138440
SiO_2-Ag(Cu), energy efficient coating props. study 7−125995
SiO_x antireflection coatings designed for increased $ZnIn_2S_4$ photocurrent 7−123158
SiO_xN_y, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
$SmAsO_4$, IR reflection and optical absorption 7−99826
Sn thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
SnO_2:F,Na films, optical and elec. props., influence of aging and impurities 7−144146
SnO_x, artificial dielectric films on crystalline quartz, optical props. 7−125839
SnO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
$Sr_{0.15}La_{1.85}CuO_{4-x}$, high T_c supercond., far IR props. 7−119021
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. characts., saturation Kerr rot. meas. 7−125499
Tb-Fe-Co films, magneto-optical effects, bias voltage depend. 7−144041
TbFe, amorphous thin films, sputter deposited, overcoated, dielec. tensor, magneto-optical props. 7−132199
$ThBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
TiN_xO_y thin films, optical absorption 7−99954
TiO_2-Ag(Cu), energy efficient coating props. study 7−125995
TmSe mixed valence cpd., light absorpt. and refl., optical density of states calcs. 7−143997
UBe_{13} heavy fermion superconductor, optical props. 7−92630
UBe_{13}, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
UO_2 (S), high press. optical reflection spectra studies 7−77604
UPt_3 single crysts., electronic struct., low energy optical reflectivity meas. 7−70173
V-Ti oxide, anatase-type solid-state soln., evidence of formation 7−84291
W films for VLSI applications, low pressure CVD 7−71052
WO_3, electrochromic form. of anodic film on W electrode, IR reflection and Raman spectroscopies 7−99812
WSi_2, silicide, spectroscopic ellipsometry and reflectometry studies 7−92635
Y-Ba-Cu-O, high T_c supercond., oriented films and polycrystalline bulk samples, supercond. energy gaps study 7−118714
Y-Ba-Cu-O high T_c superconds., IR reflectivity spectra, sintering temp. depend. study 7−106170
Y-Ba-Cu-O high T_c supercond., polycrystalline ceramic, far IR refl. studies 7−113193
Y-Ba-Cu-O high T_c supercond. phonon struct., far IR reflectance study 7−113194
Y-Ba-Cu-O high T_c supercond., reflectivity meas. 7−125668
$YBa_2Cu_3O_{6.5+x}$, high T_c supercond., far IR props. 7−119021
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., for IR spectroscopy 7−119012
$YBa_2Cu_3O_{7-y}$, high T_c supercond., free carrier relax. dynamics in normal state, reflectivity study 7−131662
$YBa_2Cu_3O_{7-y}$, high T_c supercond., far IR reflectivity spectrum, temp. depend. 7−132278
$Zn_xCd_{1-x}Se$, struct. phase transitions, composition depend. of band gap 7−112177
$ZnIn_2(S_xSe_{1-x})_4$ mixed crystals, optical and electronic props. 7−106151
ZnO, energy gap, exciton states transitions, effect of isotopic substitution, UV reflectivity spectra 7−76779
ZnSe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
$ZnSe_{1-x}Te_x$ solid solns., photoluminescence and exciton reflection spectra 7−138487

reflectivity continued
ZrN thin films, DC reactively magnetron sputtered, structural, superconducting and optical props. 7−99276
ZrS_2 electronic struct. determ. photoacoustic saturation spectra study 7−91736
reflectometry
see also microwave reflectometry; time-domain reflectometry
absolute diffuse reflectance from relative reflectance measurements 7−134838
directed-graph reflectometer error analysis *(Russian)* 7−73310
emissivity of hot cathode determ. during arc discharge, by laser reflectometry 7−121202
fibre optic cables losses meas., using Siemens universal reflectometer 7−82877
fibre optic sensors with serial readout *(German)* 7−97151
filter and mirror efficiencies meas. using vacuum reflectometer in UV, VUV 7−103947
guided-wave reflectometry with micrometer resolution for lightguide testing 7−123201
integrating sphere measurement of hemispherical reflectance, error correction 7−80851
integrating sphere-Fourier transform spectrophotometer emissometer for diffuse IR reflectance meas. design 7−108627
mineral optical reflectivity meas. method for polished absorbing grains 7−133946
multiplexed and distributed optical fibre sensor systems 7−130368
optical antireflection coatings, dual-beam referenced reflectometry 7−68907
optical coherence-domain reflectometry, optical eval. tech. 7−67378
optical fibres, fault detection using phase compensated reflectometer *(Japanese)* 7−97165
optical reflectometry data review 7−108632
refractive index distrib. meas. using single-mode and multimode optical fibres 7−108630
semiconductor optical waveguides, loss and facet reflectivity meas. technique 7−103994
spectral diffuse-reflection coeff. meas., reflectometer with mirror cylindrical concentrating system 7−108628
thickness measurement using scanned ATR technique 7−80852
thin films, non-absorbing, optical analysis by immersion spectroscopic reflectometry 7−80853
two-stage systems design for diffuse reflectance meas. 7−110507
UV-reflection factor at spherical concave surfaces, local inspection, meas. set-up *(German)* 7−82456
Al_2O_3 sintered plate white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
$BaSO_4$ white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
LiF white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
Ni, passivation in aq. solns., surface film comp. 7−132791
S white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
Si photodiode radiometry compared with Australian radiometric scale 7−108617
reflector antennas
see also antenna reflectors
FIRST antenna, misalignment and thermal distortion effects anal. 7−88121
Medicina radio-astronomy station, VLBI antenna *(Italian)* 7−127720
perfectly conducting spherical reflectors, influence of origin config. on HF surface currents 7−141769
reflex klystrons
No entries
refraction
see also acoustic wave refraction; electromagnetic wave refraction; refractive index
magnetic films, refraction of surface magnetostatic waves 7−85274
ocean surface waves, appl. of SAR obs. of refr. patterns to water depth determ. 7−107581
solid-sandy bilateral interface, energy partitions due to incident antiplane shear wave 7−75399
YIG films, refraction of surface magnetostatic waves 7−85274
refractive index
see also photorefractive effect; refractometers
aerosols, refractive index and absorpt. coeff. effect on attenuation coeff. 7−122830
albumin, struct and activity, hydration effects, integrated optics and IR Raman spectra study 7−68496
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7−77499
atmospheric, remote sensing, opt. inversion technique 7−115100
atmospheric particle size distrib., extinction and backscatt. coeff., refractive index influence 7−94432
axisymmetric nonhomogeneous media, refractive index profile 7−103745
binary gas mixtures, convection effect on light ray propag. 7−69140
cholesteryl oleate, density, refractive index, optical anisotropy 7−137218
corundum, particles, in aerosol, optical props. in IR region 7−119590
critical microemulsion, singular behaviour of refractive index 7−125661
2-cyclooctylamino-5-nitropyridine, nonlinear optical crystal, prep. and props. 7−68740
diffraction tomography in the Fresnel zone 7−74883
direct-gap semiconductors, linewidth enhancement factors 7−125663
dye solution, refractive index, spectral depend. 7−113106
equivalent tube index for fibre charactn. 7−90824
ethylene glycol, polymerisation effect on mol. polarizability and diamagnetic suscept., refractive index method 7−113926
fatty acid cholesteryl esters, homologous series, optical anisotropy and local order parameter 7−113112
ferroelectric smectic liq. cryst., high spontaneous polarisation, electro-optical props. 7−125627
fibre characterisation by transmitted near field meas. 7−82824
fibre optic evanescent field absorpt. sensor 7−136540
fibre profiling technique, refracted near-field based, thermal effect 7−82832
fibres, dual-shape core with α-index centre core, characts. 7−123256
fibres, elliptic core, equivalent step index model 7−142000
fibres, nonlinear, single-mode, picosecond steps and dark pulses 7−110590
fibres, radial effective-index method of analysis 7−130339
fibres, single-mode, periodically deformed, strain effects 7−117321
films, translucent, refractive index correction 7−136197
refractive index continued
fused tapered couplers, condition for insensitivity to external refractive index 7−68847
GaAs-AlGaAs, quantum well struct., electro-optic effect, room temp. 7−144029
gamma-ray total external reflection from solid surface at grazing incidence 7−125675
geometrical optics, Hamiltonian formulation 7−134398
glass, refractive index gradient form. by light radiation 7−77496
glass, refractive index meas. using Murty interferometer 7−113107
glass, refractive index rel. to density, dielec. theory 7−113110
glasses, glass- and gel-based composites, nonlinear optical properties 7−68753
gradient-refractometric gas analyzer, refractive index gradient stabilisation 7−111157
grazing incidence optics, modified sine condition 7−96946
heavy-metal fluoride glasses, optical dispersion 7−85568
N(p-n-hexyloxy benzylidene) p-n-octyl aniline, liq. cryst. transitions 7−124506
I_2-IV-VI_3 cpds., refractive index, spin-orbit splitting and optical nonlinearity eval. 7−85581
ice crystal surface, transition layer ellipsometry 7−98643
ice surface structure just below melting point, ellipsometric study 7−118203
inert gas mixtures, third harmonic generation, optical consts., multiphoton ionisation meas. 7−122648
infrared dispersive mirage spectra of solids submerged in water 7−140767
inorganic solids, refractive index and density 7−99782
insulators, optical effects of ion implantation, refractive index control, review 7−104790
insulators, refractive index effects produced by ion implantation 7−92632
isotropic samples, Raman microspectroscopy polarisation meas. 7−132268
laser diffraction spectrometry, Fraunhofer diffraction and Mie scatt. 7−108519
laser Doppler anemometry, refractive index variations compensation 7−117684
light scattering material, photothermal detection by light interferometry 7−95640
liquid, refractive index meas. using Murty interferometer 7−113107
liquid crystal refractive index matched to silica 7−113113
liquid crystalline polymers, uniaxially sheared, optical extinction behaviour study 7−92633
liquid crystals, isotropic phase, nonlinear optical props. 7−103874
liquid cryst., dielectric const., effective local field, Lorentz tensor and refractive index calcs. 7−125596
MBBA wedged homeotropic samples, electrohydrodynamic distortion 7−75976
mesogenic-nonmesogenic molecule mixtures, optical behaviour, refractive index and birefringence 7−144002
methane, refractivity virial coeffs., dielectric virial coeffs. and IR induced absorption comparisons 7−142435
methyl alcohol, aq. soln., refractive index meas. of conc. by diffr. grating 7−114023
methyl cyanide, liq., optical consts., IR dispersion spectra 7−70798
minerals, refractive index determ., point-dipole model calcs., chem. substitution effects 7−77500
molecular crystals, dielectric props., effect of exciton conc., refraction and absorption props. 7−99635
molecular crystals, two-level excitonic system, light absorpt. and refr. props., electric field effects 7−92072
molecular fluid, complex refractive index, light scatt. 7−92634
multimode fibres bandwidth concatenation, review 7−130356
nematic liquid crystals, optical Freedericksz transition dynamics 7−124095
nitrocellulose film, periodic surface microrelief, effects of laser irradiation 7−76572
nondipolar liquids, mol. Kerr relax. theory in reorienting pulse fields 7−144015
nonhomogeneous optical planar waveguides, surface layer depth determination 7−117316
nonlinear crystals isomorphic to KH_2PO_4, refractive index meas. 7−125667
nonstationary reflectivity in the case of space-time-dependent refraction index 7−90504
oils, sunflower, maize zerm, sunflower and groundnut, refractive index determ. by soln. technique 7−118973
ophthalmic lens, theoretical computation of refr. index 7−107044
optical components made by ion exchange in glass 7−136611
optical crystals, dielectric props. at submillimeter wavelengths 7−132215
optical fibre, Helmholtz eqn., beam propag. method 7−136558
optical fibres, nonlinear interactions and quantum optics 7−130380
optical planar waveguide design with prescribed propagation constants 7−136525
palladium poly-yne, third-order optical nonlinearity 7−97086
planar structures, leaky absorbing, for polarisers, loss coeff. and perturbed propag. const. 7−117352
Plexiglass refractive index determ. using nonlinear inverse scattering algorithms 7−136138
PMMA films, doped, optical waveguiding, refractive index pattern 7−99787
polar crystals, long wavelength optical mode freqs., determ., differential reflection spectroscopy 7−138409
polydiacetylene nonlinear optical response of excitons confined to one dimension 7−110444
polymers, complex refractive indexes, specular reflection IR spectra 7−85574
polymers, fluorinated, optical props. *(Japanese)* 7−103911
polypropylene fibres, optical anisotropy, draw ratio influence 7−118977
pyrimidonecarbocyanine dye, absorpt. and emission behaviour, conc. depend. 7−109978
quartz, refractive index studies 7−106121
quartz, surface polariton dispersion determ., effective refractive index meas., interference method 7−85564
quasistatic carrier induced frequency chirp in semiconductor laser diodes 7−97042
refraction and birefringence indexes, dispersion 7−99784
rhodamine 6G solns., laser-induced transient gratings efficiency and decay 7−82763
rib waveguide, propagation constants approximate values calc. 7−130322
rugate optical film coatings subject to CW and pulsed lasers, transient temp. distrib. model, CW case 7−124328

refractive index continued
rugate optical film coatings subject to CW and pulsed lasers, transient temp. distrib. model, repetitive pulsed case 7—124329
Schiff's base liquid crystal, oriented, X-ray diffr. and optical studies 7—91432
scintillation fibres light yield dependence on refractive index of sheath, calc. and obs. 7—109652
semiconductor, double heterojunction laser material selection 7—90612
semiconductor active directional coupler, optical switching by saturation-induced phase changes 7—117256
semiconductor lasers, phase-locked arrays, mode characts. at and above threshold 7—123039
semiconductor microcrystallites, linear and nonlinear optical props. 7—118979
semiconductor quantum wells, nonlinear interactions and excitonic effects 7—82697
semiconductor refractive index dispersion at intrinsic absorpt. edge 7—77502
semiconductor superlattices, quadratic electro-optic effect due to quantum-confined Stark effect 7—113133
semiconductors, free carrier concentration gradients, optical props. 7—106111
single mode fibres with arbitrary index profiles, cutoff frequencies calc. 7—130363
single mode optical fibres with zero total dispersion, design at 1.3 μm and 1.55 μm 7—82797
single transverse mode condition in long wavelength SCH semiconductor laser diodes 7—103820
single-mode channel waveguide charactn. from far field meas. 7—123246
sodium cryptand(2.2.2) sodide, optical reflectivity and absorpt. meas. 7—113222
SOI films, depth profiles of optical props., ellipsometry study 7—99788
solids submerged in liquids, FT-IR photothermal beam reflection spectrosc. 7—73442
soot particles, refractive indices, laser light scatt. meas. 7—110242
soot particulate, agglomerated, particle size, Rayleigh scatt. 7—100625
spatially dispersive media, Kramers-Kronig relations appls. *(Russian)* 7—110239
spherical particles, radiation absorpt., effect of imaginary part of refr. index 7—113119
stibnite (Sb_2S_3), reflectivity and optical consts. at 546 nm 7—133946
sum rules, derivation, appl. for linear and nonlinear optical consts. 7—106122
surface duct parameters for refractive index profile models, WKB method anal. 7—136458
thermal effects caused by the electron-phonon interaction 7—70736
thin crysts., polariton dispersion and refractive index, Green's function method calcs. *(Russian)* 7—84161
thin films, optical parameters from spectrophotometric transmission curves 7—125836
three-beam interferometry and Talbot bands meas. 7—121212
transparent inhomogeneities, axisymmetric, refractive index, interferometric diagnostics 7—122831
transparent solids, periodic surface microrelief, effects of laser irradiation 7—76572
transparent thin film on transparent substrate, reflectances at oblique incidence 7—68556
transport coefficient determ. in liquids and solids, nonstationary optical methods 7—118183
trichloromethylene-benzene(toluene)(p-xylene)(chloroform)(carbon tetrachloride), internal press. and molar refraction meas. *(German)* 7—69830
Ag, film, optical constants, interferometric determ. 7—70920
AgN thin-films, optical constants 7—125833
Ag_2Se thin films, refractive and absorpt. indices, ellipsometric meas. 7—85878
Al/Al_2O_3-based trilayer systems, optical props., ellipsometry studies 7—144005
Al/SnO_x trilayer systems, optical props., ellipsometry studies 7—144005
Al-SiN:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7—138089
Al-SiON:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7—138089
AlGaAs DBR laser, index-guided surface emitting type, effective index and dispersion meas. 7—68638
n-AlGaAs-GaAs, modulation doped quantum wells, optical modulation and switching 7—125762
AlGaAsSb band gap, refractive index and lattice const. calcs., optoelectronic device appls. pot. 7—105392
Al_2O_3-B_2O_3-SiO_2-Na_2O glass, heavy metal doped, generation of optically wave-guiding layers 7—103970
Al_2O_3-Ta_2O_5 medium-index mixed-oxide layers for antireflection coatings 7—103933
As-Se, photoinduced changes in optical props., rel. to vol. of gram-atom 7—70734
As-Se amorphous chalcogenides, light-induced refractive index changes 7—85570
As_2O_3 based heavy metal oxide glasses, struct. and optical props. 7—137251
As_2S_3, glassy chalcogenides, pressure-structural and optical studies 7—83716
As_2S_3, spin-coated multilayer thin films, growth, optical characterisation 7—85883
As_2Se_3 glassy films, photoabsorption and photorefraction under pulsed excitation 7—106118
As_xSe_{1-x} chalcogenide glasses, dispersion parameters of a Sellmeier and Lorentz-Lorenz relation 7—85567
$As_{40}Se_{30}S_{30}$ chalcogenide glasses, refractive index dispersion 7—85569
BaB_2O_4, optical, mechanical and thermal props. 7—141919
$Ba_3LaNb_3O_{12}$, optically transparent, synthesis, decolorisation 7—86014
$Ba_3LaTa_3O_{12}$, single crystal, physical props. 7—106117
$Ba_2NaNb_5O_{15}$ crystals, optical effects at phase transitions 7—138401
$Ba_{0.5}Sr_{1.5}K_{0.5}Na_{0.5}Nb_5O_{15}$, MM-wave dielec. props. at 77 and 300 K 7—99650
$BaTiO_3$, electronic polarisation with repulsion effects, polarisable point-ion model 7—85542
a-$BaTiO_3$ RF sputtered film dielec. and optical props., active display device appls. 7—143967
Bi_2S_3, refractive index in infrared region 7—132229
a-C, film, semiconducting props., growth rate, low temp. plasma 7—100094
C-Sn amorphous thin films, semicond., optical and elec. props. 7—70318
refractive index continued
CS_2, liq. and solid, Brillouin scatt. at press. up to 70 kbar 7—119023
CaO-P_2O_5 glass, water content effect on absorption, dispersion phenomena 7—125666
CdO-B_2O_3 glass system, struct., dielectric and optical props. 7—111407
CdO-Bi_2O_3-Ga_2O_3 heavy metal oxide glass, material dispersion, refractive index 7—132226
CdS cryst., refractive index dispersion, thickness depend. meas. *(Russian)* 7—70738
CdS crystals, dispersion of integral refractive index, determ. 7—132225
CdS crystals, nonlinear refractive anisotropy near fundamental absorption edge 7—90676
CdS, self-induced changes in refractive index at λ=532 nm 7—130267
CdS spray pyrolysed thin films, ellipsometric study 7—105333
CdS thin crystals, refractive index dispersion, sample size effect 7—138408
CdS:In amorphous films, elec., photoelec. and optical props, 7—85873
$CdS_{1-x}Se_x$, semicond. layers, waveguide, index and depth profiles determ. 7—130331
CdSe films, electrodeposition, in situ optical reflectance study 7—144314
$CdSnP_2$, refraction and birefringence indexes, dispersion 7—99784
CdTe films, hot-wall vacuum evaporated, optical transitions 7—70926
$CrSi_2$ ellipsometry and struct. studies 7—138404
Cs_2O thin film, optical props. dielectric consts. *(Chinese)* 7—99950
CuCl, nonlinear refr. index due to induced exciton-biexciton transition, time evolution 7—70737
Cu_2O, electrodeposits, optical dispersion meas. 7—138526
Dy_2S_3, elastic, piezoelectric and piezooptic props. 7—131203
GaAs, electrorefraction, phase modulators appl. 7—113137
GaAs, ion implantation, disordering, oxide film thickness 7—76183
GaAs, optical charactn., IR reflectance spectroscopy 7—77535
GaAs:Cr(Si)(Zn), optical charactn., IR reflectance spectroscopy 7—77535
GaAs/AlGaAs quantum wells, nonlinear interactions and excitonic effects 7—82697
GaAs-$Al_xGa_{1-x}As$ quantum wells, electric field induced refractive index changes 7—85595
GaAs-$Al_xGa_{1-x}As$ superlattices, refractive index determ. 7—138412
GaAs-AlAs, quantum well struct., electro-optic effect, room temp. 7—144029
GaAs-AlGaAs multiple quantum well, large quadratic electro-optic effect, obs. 7—113132
GaAs-AlGaAs:Zn superlattices, impurity-induced disorder-delineated optical waveguides 7—90773
GaInAsP, refractive index at lasing wavelength 7—85584
GaInAsP/InP MQW structures, LPE grown, electric field induced absorption 7—99802
GaInAsSb band gap, refractive index and lattice const. calcs., optoelectronic device appls. pot. 7—105392
GaP:As, refractive index profile, determ. by ellipsometry 7—99789
GdScGG:Cr,Nd laser host material, refr. index and $\Delta n/\Delta T$ at 1064 nm 7—68645
Ge liquid, optical props., meas. by nanosecond time resolved ellipsometry 7—125659
a-Ge:Si layers, amorphised by ion implantation, optical props. rel. to enthalpy of relax. 7—85578
Ge-As-S thin films, refractive index and absorption coefficient 7—85872
Ge-Se based chalcogenide glasses, fundamental optical props. 7—138402
Ge-Si_3N_4, refractive index meas., immersion ellipsometry 7—73403
GeS_2, glassy chalcogenides, pressure-structural and optical studies 7—83716
$(GeS_2)_x(As_2S_3)_{1-x}$, absorpt. edge under hydrostatic press. 7—106126
H_xWO_3 bronze thin films, optical props., nonmetal-metal transition 7—99963
$Hg_{0.795}Cd_{0.205}Te$, optical dispersion parameters temp. depend. anal. 7—118974
$Hg_{1-x}Cd_xTe$, refractive index dispersion 7—106129
I photodissociation laser with slow pumping, active-medium perturbation evolution and radiation focusing 7—130079
$In_{0.52}Al_{0.48}As$ as waveguide material lattice-matched to InP, refr. index 7—136462
InGaAsP, electrorefraction, phase modulators appl. 7—113137
InGaP-InP waveguides, pure and Fe doped, fabrication and characterisation 7—103964
InPSbAs band gap, refractive index and lattice const. calcs., optoelectronic device appls. pot. 7—105392
In_xSe_{1-x} thin films, growth and optical props. 7—144291
InSnO film optical constants in amorphous semiconductor multilayers 7—125831
K atom, refractive index spectrum in resonant optical field 7—129641
KCl, refractive index, thermal effects caused by the electron-phonon interaction 7—70736
KD_2PO_4, cryst., refractive index dispersion, harmonic generation study 7—82705
$K_{1-x}Li_xTaO_3$, cluster glass and domain state props., phase boundary 7—113090
$KR(WO_4)_2$ (R=Gd, Y, Er), optical properties 7—106116
K_2SO_4, refractive index changes at ferroelastic transition point 7—125665
$KTiOPO_4$, flux-grown, SHG and accurate index of refr. meas. 7—110448
$KTiOPO_4$ optical waveguides, fabrication and characterisation 7—90776
$KTiOPO_4$ optically biaxial cryst., SHG of light from AIG-Nd^{3+} laser 7—123100
$La_2O_2S:Er^{3+}$, spectral props. of Er^{3+} ions 7—99893
LiF, quadratic electro-optic effect, bond charge calc. 7—92641
LiF, refractive index, thermal effects caused by the electron-phonon interaction 7—70736
$LiNbO_3$ crystals, ion-exchange processes study during optical waveguide struct. form. 7—71484
$LiNbO_3$ integrated optical substrates, refractive index meas. by TIR, prism coupling method 7—125662
$LiNbO_3$, refraction anomaly above room temp., space charge effects 7—85580
$LiNbO_3$ waveguides, high index low loss, fabrication 7—82785
$LiNbO_3$:Fe, optical damage, annealing effects in O_2 and N_2 atmospheres *(Korean)* 7—85575
$LiNbO_3$:Fe cryst., optical damage effect in polarised light *(Chinese)* 7—132227
$LiNbO_3$:He^+ waveguide, optical props. 7—141987
$LiNbO_3$:Ti, Ti diffusion effect on refractive index profile *(Korean)* 7—144003
$LiNbO_3$:Ti optical waveguide form. by CO_2 laser annealing 7—90795

refractive index continued
$LiNbO_3$:Ti optical waveguides, wavelength dispersions as function of diffusion parameters 7−110565
$LiNbO_3$:Ti optical waveguides, Ti conc. inhomogeneities, electro-optical characts. 7−136513
$LiNbO_3$:Ti waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:Ti waveguides, refr. index step induced by wet atm. diffusion 7−136634
$LiNbO_3$:Ti(H^+) optical waveguides, refractive index profiles 7−123279
$LiTaO_3$ optical waveguides, fabrication by H^+ exchange 7−82781
$LiTaO_3$ thin films, prep. by dipping method, dielec. and optical props *(Japanese)* 7−132511
Li_2X-B_2O_3-SiO_2 (X=O,Cl_2) glasses, Li^+ conduction enhancement, network dilation and bonding strength variation effects 7−84385
MgF_2, effects of various ambient-aging processes in chopped and non-chopped optical films 7−85881
MgO, refractive index, thermal effects caused by the electron-phonon interaction 7−70736
Mn films, optical props, 190-900 nm, annealing effect 7−106287
Mn/SiO composite thin films, spectral selectivity meas. 7−138528
$MoSi_2$, ellipsometry and struct. studies 7−138404
$NH_{4(1-x)}D_{4x}H_{2(1-x)}D_{2x}AsO_4$ crysts., light diffr. by SAW, isotope effects studies 7−138406
Na-P-O-N glasses, prep., N dissolution kinetics, softening temp., thermal expansion, refractive index, microhardness 7−93016
Na_3AlF_6, effects of various ambient-aging processes in chopped and non-chopped optical films 7−85881
Na_3AlF_6-MgF_2 mixture, effects of various ambient-aging processes in chopped and non-chopped optical films 7−85881
NaF(Cl), refractive index, thermal effects caused by the electron-phonon interaction 7−70736
Na_2O-CaO-SiO_2 glass, stress-induced index change for Na^+-K^+ ion exchange 7−123136
Na_2O-MO-P_2O_5 glasses (M=Mg, Ca, Sr, Ba), N dissolution in melts, thermal expansion, refractive index 7−93013
Na_2O-P_2O_5-RuO_2 phosphate glass 7−85421
Na_2O-P_2O_5-TiO_2 phosphate glass, optical and spectromagnetical props., ESR and visible-UV absorpt. investig. 7−85421
Ni in acidic solns., passive film formation, ellipsometric study 7−93197
PZT films, growth and charactn. by reactive sputtering of metallic targets 7−100073
PbO-Bi_2O_3-Ga_2O_3 heavy metal oxide glass, material dispersion, refractive index 7−132226
PbSe laser-deposited films, IR absorpt. and electronic struct. props. 7−77672
PtSi, ellipsometry and struct. studies 7−138404
$RbNd(WO_4)_2$, optical properties 7−106116
SB_2S_3 (mineral), reflectivity and optical consts. at 546 nm 7−133946
Sb, film, optical constants, interferometric determ. 7−70920
Sb-Se amorphous chalcogenides, light-induced refractive index changes 7−85570
Se, glassy chalcogenides, pressure-structural and optical studies 7−83716
Se, vacuum-deposited thin films, optical props., direct transmission spectra meas. 7−76657
Si liquid, optical props., meas. by nanosecond time resolved ellipsometry 7−125659
Si, oxidation in dry O_2 at high press. 7−86493
Si, relaxation of photoexcited charge carriers, reflectivity and transmittance studies, picosecond time domain 7−99084
Si, surface, laser-induced form. of longit. microrelief 7−85903
Si surface oxide growth, variable refractive index 7−71409
Si wafer, ion implantation amorphised, optical props. 7−85577
Si wafer, thermal diffusivity lengths, ion implantation effects, mirage effect meas. 7−98592
a-Si:H film optical constants in amorphous semiconductor multilayers 7−125831
a-Si:H films, optical and elec. props., film thickness effects 7−106133
a-Si:H films, RF glow discharge deposited, optical props. 7−119163
Si-SiO_2, refractive index meas., immersion ellipsometry 7−73403
a-$Si_{1-x}C_x$:H, plasma deposited films, struct. and optical props. 7−132363
a-$Si_{1-x}C_x$:H films, optical constants, film microstruct., optical response, chemical ordering 7−119060
SiN films, room temp. prep. using double-tubed coaxial line-type microwave plasma CVD 7−119161
SiN_x:H amorphous films, optical props. 7−144140
Si_3N_4 films, IR study 7−85875
Si_3N_4 films deposited by ECR plasma CVD, properties *(Japanese)* 7−137765
Si_3N_4, noncrystalline, insulators, optical props. 7−77497
Si_3N_4, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
Si_3N_4, reactive ion-plasma sputtering, on Si 7−86501
Si_3N_4 thin films produced by low temp. photo-CVD, characterisation, optoelectronic device appls. 7−126018
Si_xN_y, substoichiometric, ion beam assisted deposition, optical props. 7−92877
SiO, noncrystalline, insulators, optical props. 7−77497
SiO_2, afterglow CVD prep., chem. and phys. props. 7−100112
SiO_2 film growth, chem. bonding, ellipsometry and IR spectroscopy studies 7−143271
SiO_2, noncrystalline and crystalline, insulators, optical props. 7−77497
SiO_2, reactive ion-plasma sputtering, on Si 7−86501
SiO_2 surfaces, ion interactions, laser interferometric studies 7−92796
SiO_2 thin films, photo-induced CVD growth using D lamps, annealing effects 7−113415
SiO_2, upper limit to refr. index thermal coeff. of fused silica at 184.9 nm 7−72301
SiO_2:Ge optical fibres; trapezoidal index single-mode for 1.55 μm band 7−82808
SiO_2:H, doping by ion beam enhanced hydration 7−91451
SiO_2:Sb_2O_3 fibres fabricated by VAD method 7−123219
SiO_2-B_2O_3-K_2O ternary glass forming system, props. and chemical composition relationship 7−136465
SiO_2-core single-mode fibres, refractive indices, residual stress effects 7−97138
SiO_2-GeO_2 glass system, smoothing of conc. fluctuations by diffusion 7−124581
SiO_2-GeO_2-B_2O_3 glass system, smoothing of conc. fluctuations by diffusion 7−124581
SiO_x antireflection coatings designed for increased $ZnIn_2S_4$ photocurrent 7−123158

refractive index continued
SiO_xN_y, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
SiO_xNy thin films, plasma enhanced CVD, deposition rate and props. depend. on N_2O conc. *(Slovenian)* 7−86042
SnO_x, artificial dielectric films on crystalline quartz, optical props. 7−125839
$Sn_2P_2Se_{6-x}S_x$ evaporated thin films optical consts. near ferroelec. transition 7−85869
$Sr_{0.61}Ba_{0.39}Nb_2O_6$, MM-wave dielec. props. at 77 and 300 K 7−99650
$SrTiO_3$, negative intrinsic thermo-optical effect 7−99807
Ta_2O_5 films, reactively sputtered, electrical, optical and structural props. 7−70707
TiN thin-films, optical constants 7−125833
TiO_x RF diode sputtering, stresses, stoichiometry, deposition rate and refractive index studies 7−144273
$(V_2O_5)_x(PbO)_{100-x}$, pure and Fe_2O_3 doped semiconducting glass, photoacoustic absorpt. spectra studies 7−142915
$(YBi)_3Fe_{5-x}Al_x(Ga_x)O_{12}$ films, growth-induced birefringence, Bi content and distrib. depend. 7−106282
$(YNd)_3(CoGeFe)_5O_{12}$ epitaxial magnetic films, optical props. comp. depend. study 7−106285
Y_2O_3:Er^{3+}, spectral props. of Er^{3+} ions 7−99893
ZnO, supersaturated soln., optical props., UV spectra 7−70834
ZnO thin film, RF magnetron sputtered on sapphire, refractive index meas. 7−132359
ZnO thin film, spray deposition, elec. and optical props. rel. to deposition variables 7−105321
Zn_3P_2, amorphous thin films, refractive index and optical absorption coeff. calcs. 7−76658
ZnS ALE films, ellipsometric meas. of thickness and refractive index 7−128631
ZnS thin films, ion beam sputtering 7−125982
ZnSe, refractive index, thermal effects caused by the electron-phonon interaction 7−70736
ZrF_4-EuF_2-CeF_3, paramagnetic fluoride glasses *(French)* 7−69606
ZrO_2 films, ion-beam assisted vapour deposition and ion-beam etching 7−71037

refractive index measurement
see also refractometers
absorbing thin film *n*, *k* and *d* meas. by multi-incident-angle ellipsometry *(Chinese)* 7−99956
anomalous dispersion curve of HF laser, meas. 7−108640
autocompensating, total internal reflection, limiting props. 7−67377
birefletance determ. 7−134839
change due to thermo-optic effect, meas. technique 7−121198
digital refractometry 7−128633
electronic speckle interferometry fringes, optimisation with limited laser power 7−102501
Fabry-Perot interferometer appl. 7−102495
fibre measurement, conf., London, England (May 1987) 7−88748
fibre nonlinear refr. index meas., direct interferometric meas. by cross-sphase modulation 7−130398
fibre optic pH sensor design, with rapid-response 7−97156
fibre optic refractive index and temp. sensor, nonambiguous evanescent-wave 7−75139
fibre preform refractive index meas. model 7−90816
fibre refractive index profile meas. by cladding-mode near-field technique 7−136568
fibres, refractive index profiling and dimensional meas. 7−90815
fibres, single mode, effective mode index meas. 7−90826
fibres single mode, characterisation by equivalent step index and mode field diameter meas. 7−90823
film refractive index determ. by spectrophotometry, ellipsometry and Abeles method 7−102496
films, dispersion effects on optical consts. determ. 7−106292
gas concs., interference refractometry, algorithm for controlling photodiode array 7−78567
glass, sintered, refractive index, difference meas. *(Japanese)* 7−128634
glass nonlinear refractive index meas. using three-wave frequency mixing 7−108629
gradient-index lenses, refr. index profiling by total reflection method 7−97114
integrated optic device parameter meas. using computer aided meas. techniques 7−104050
material, standard reference, film thickness and refractive index, calibrated by ellipsometry and profilometry 7−121047
materials for optical sensors 7−121199
microinterferometry, variable wavelength, for thickness and refr. index meas. of sections, layers and films 7−128639
mineral optical reflectivity meas. method for polished absorbing grains 7−133946
multimode optical fibre sensors appl. 7−130360
optical fibre refractive index profile meas. 7−104029
optical fibres, single- and multi-mode, refr. index distrib. meas. method 7−108630
plane-parallel transparent materials, method based on Lau's interf. principle 7−67376
single-layer system, immersion ellipsometry 7−73403
single-mode fibres, dispersion-optimised, highly accurate charactn. 7−90810
slab waveguide refractive index profile, automatic meas. by interferometric fringe processing 7−102508
solar collector reflective and black chrome, photometric methods for refractive indices determ. *(French)* 7−106926
soot particles index of refraction, in suit meas. using automated light scattering 7−140732
spatial filtering method of oblique slit for measurement of refractive-index profile of optical-fibre preforms 7−136547
thin films, non-absorbing, optical analysis by immersion spectroscopic reflectometry 7−80853
waveguide preform refractive index distrib., interference meas. 7−136519
waveguide preform refractive index distrib. in interferometer with reference plane wave, interference meas. 7−136520
waveguide preform refractive index distrib. interference meas. in radial shearing interferometer 7−136521
waveguide preforms testing using interferometers 7−136522
$CdWO_4$ refractive-index tensor determination by bireflectance 7−134839
He-Ne double-wave laser interferometer for thin-film optical constants *(Chinese)* 7−115998

refractive index measurement continued
$KTiOPO_4$, flux-grown, SHG and accurate index of refr. meas. 7−110448
$LiNbO_3$ crystals, ion-exchange processes study during optical waveguide struct. form. 7−71484
SiO_2 films, thickness and refr. index meas., ellipsometric method 7−128534
ZnS ALE films, ellipsometric meas. of thickness and refractive index 7−128631

refractivity *see refractive index*

refractometers
fluophotorefractometric detector, FFR-01 for meas. on liquids 7−114041
integrated optical waveguide refractometer, construction and props. *(German)* 7−136624
starch hydrolyzates, dry substance meas., computer-aided automatic refractometer 7−121200
thermorefractometric gas analyzer, accuracy characts. 7−100650

refractometry *see refractive index measurement*

refractories
see also ceramics; cermets; clay
aerosols, optical breakdown under pulsed CO_2 laser radiation 7−90667
alloy, crack resist. under creep conditions 7−78165
BCC metals, atomic-defect mechanisms for diffusion 7−105098
crack resistance and crack sensitivity of refractories with different structures *(Russian)* 7−86385
d-metal compounds, electronic structs., rel. to ideal crysts., defects and impurities 7−143319
electron beam disruption simulation 7−141287
heliostats and parabolic concentrators, performance of transparent fused quartz and 96% silica glass 7−144793
linear expansion coeff. of refractory materials meas., by X-ray dilatometry 7−124037
metal atom multiphoton ionisation, laser-evaporated pulsed atomic beams *(Chinese)* 7−103441
metal nitrides, combustion synthesis theoretical analysis 7−71115
metals, activated sintering using Pt group metal activators 7−132522
metals, lattice imperfections, FIM studies 7−91588
metals, surface self-diffusion anisotropy 7−112044
oxide shaped crystals, variable shaping growth 7−85996
quantitative microanalysis by time-of-flight laser probe mass spectrometry 7−100666
sialon and syalon powders, prod., props. and appls. 7−138722
sialon ceramics, prep. from low-cost raw materials 7−138725
steel, crack resist. under creep conditions 7−78165
thermal barrier ceramic oxide coatings, survivability 7−86389
thermal cond. coeff. determ., hot-wire method *(Russian)* 7−140694
thermal stability of rectangular refractory ceramic plates when subject to unilateral linear heating *(Russian)* 7−86386
two-phase refractory powder mixtures, densification behaviour during sintering 7−77926
$Al+O_2(SO_2)$, reactive scatt. using pulsed crossed supersonic mol. beams 7−144707
AlN coatings, plasma enhanced CVD on graphite substrates 7−71074
Al_2O_3 refractories, fracture strength, temp. and stressing rate effects 7−144512
Al_2O_3-B_4C, composite refractories, hot pressing 7−92950
Al_2TiO_5-Al_2O_3-SiO_2 mullite composite, synthesis, thermal shock resist. 7−86120
B_4C, surface layer struct. rel. wear and friction 20-1400 °C 7−106636
BaB_6-LaB_6 solid soln. based thick films, powder dispersion effect on electrophys. props. 7−77927
CaO-MgO-Fe_2O_3-Al_2O_3-Cr_2O_3-SiO_2 system, phase comp. and compatibility 7−77959
Cr electrodeposits from LiCl-KCl eutectic for fuel cladding against carbonisation and oxidation 7−116546
Cr electroplating from $CrCl_2$ dissolved in LiCl-KCl eutectic 7−119408
Cr laminate electroplating with microprocessor control 7−119176
H_3PO_4-CaO-Al_2O_3-SiO_2, hardened bodies, thermal changes, microhardness 7−113682
HfC, refractories, phase relationships, survey 7−92971
HfC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
HfN, refractories, phase relationships, survey 7−92971
MgO refractory materials sublimation investigation by gravimetric and mass spectrometric methods *(Russian)* 7−86521
Mo, single crysts., high temp. stress relax. 7−126163
Mo-Nb (3 wt.%) alloy single crysts., high temp. stress relax. 7−126163
Nb alloys, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7−144280
Nb/AlO_x/Nb Josephson junction, fabrication, lift-off processes 7−70484
Nb-Al_2O_3-Nb SIS tunnel junctions, fabrication 7−138150
NbC, heat treatment, effect on defect formation and props. 7−100247
SiC apparent strengthening by high-temp. macroscopic stress redistrib. and flaw blunting 7−132753
SiC, ceramics in Ar plasma jet, ablation study 7−138866
SiC powder, for elec. heater prod., elec. resist. control method 7−86115
SiC refractory ceramic, low temp. sp. ht. temp. depend. study 7−118122
Si_3N_4, ceramics in Ar plasma jet, ablation study 7−138866
SiO_2 refractories, tridymite to cristobalite transform. below 1470°C 7−106508
TaC, heat treatment, effect on defect formation and props. 7−100247
TiC-TiB_2 two-phase powder mixtures, densification behaviour during sintering 7−77926
TiC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
W and alloys, crack resistance optimisation, hardening schedule 7−113586
W, single crysts., high temp. stress relax. 7−126163
W-Cu finely divided mixture, kinetic of densification and growth of refractory phase grain in sintering 7−119198
WAg/W, elec. props., interaction with GaAs 7−143615
Y_2O_3 vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7−144280
ZrB_2 thin films, DC triode sputtering 7−106409
ZrC, heat treatment, effect on defect formation and props. 7−100247
ZrC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
$(Zr_{0.5}Nb_{0.5})C_{0.9}$, solid solution, heat treatment, effect on defect formation and props. 7−100247
ZrO_2, Y_2O_3 stabilised ultrafine powders, crystallinity, surface texture rel. to prep. and thermal treatment 7−76564

refractory materials *see refractories*

refrigeration
see also cryogenics; freezing; low-temperature production
^{3}He-^{4}He dilution refrigerator for polarised liquid ^{3}He and nuclear cooling applications 7−73354
cryogenic refrigeration methods for low and ultra-low temps. 7−140705
dilution refrigerators and superconducting/hybrid magnets in physics research 7−67331
Ericsson-cycle mag. refrigerator, rot., thermodynamic simulation 7−134745
horizontal flow boiling of pure and mixed refrigerants 7−110957
hybrid Gifford-McMahon cryocooler, regenerator efficiency 7−95595
miniature, solid-state gas compressor, using electrostrictive ceramic blocks 7−128586
neutral gas absorption refrigeration units, BASIC-2 listing to compute enthalpy/mass fraction diagram of NH_3/H_2 gas mixture 7−97683
nuclear power stations, cooling system, design criteria and methods 7−74259
R22 DMF turbo absorption refrigeration system using industrial waste heat process steam, performance anal. 7−119680
solar cooling, adsorption properties of zeolites 5A and 13X 7−119684
solar energy technology advances, industrial appls., book 7−66848
solar generator-adsorber optimisation for fruit-vegetable storage unit 7−86826
solar refrigeration, absorber heat recovery cycle study using NH_3-refrigerant 7−119687
sorption refrigeration systems, comparison 7−67327
Stirling cryocooler, cyclic flow regenerator, flow characteristics 7−73356
Stirling cycle cooler, miniature design 7−73355
thermodynamic properties of refrigerant-absorbent pairs of polar molecules 7−106932
thermoelectric refrigerator for gas analyzer 7−134735
^{3}He refrigerator, remote controlled, for hybrid magnet, design and performance 7−102418
^{4}He superfluid circulating dilution refrigerator 7−80798
LiBr-H_2O absorption cooler, absorber and condenser temp. differences 7−119683
NH_3-H_2O solar absorption cycles performance for refrigeration and heating, Athens 7−139131

refrigerators
cryostat CAD, thermal analysis and optimisation 7−73361
Ericsson-cycle mag. refrigerator, rot., thermodynamic simulation 7−134745
intermittent solar refrigerators performance, effect of condenser temp. 7−71641

regenerative receivers *see radio receivers*

Regge poles and trajectories
Casimir effect in conformal field theories 7−95749
chiral bag model struct. fns., scaling and Regge behaviour 7−121455
covariant N-string amplitude 7−89470
diffractive hard scattering, perturbative QCD and Regge phenomenology 7−81106
general relativistic spacetimes, Regge calculus anal., formalism 7−67096
Gribov's reggeon theory, nonself adjoint operators, diagonalisation 7−72766
light front QCD, stringy confinement of light quarks, condensates, Regge trajectories 7−116125
Neveu-Schwarz string, three-Reggeon light-cone vertex 7−135073
Pomeron exchange, preasymptotic corrections 7−73633
quark model, Regge trajectories 7−67569
Regge calculus, three-plus-one formalism, inflationary universe appl. 7−73136
scalar particles, scattering amplitude at random angles, Regge asymptotics 7−121397
spherically-symmetric vacuum spacetimes, Regge calculus anal. 7−67097
string theory, effective interacting field, Reggeon-Pomeron vertex 7−81157
$pN\rightarrow K^0X$, 12 GeV, cross section meas. and triple Regge behaviour 7−135163
$pN\rightarrow \Lambda^0X$, 12 GeV, cross section meas. and triple Regge behaviour 7−135163
$pp\rightarrow \lambda X$, 360 GeV/c inclusive hyperon prod. in target fragmentation region, triple Regge anal. 7−81254
$\pi^- d\rightarrow \pi^- d$, 1.75-3.1 GeV/c, backward scatt., differential cross section 7−96114

Reggeon field theory
coloured Reggeon field theory, solitonic approach 7−73562
covariant quantization and the three-reggeon vertex, light cone string field theory 7−108892
exotic baryon resonance prod. in hadronic processes 7−95881
Friedmann cosmologies via the Regge calculus 7−134326
linearised Regge calculus, fundamental theorem 7−95793
perturbation methods in Reggeon field theory, eigenvalues *(French)* 7−67533
Regge calculus, three-plus-one formalism, inflationary universe appl. 7−73136

Reggeons *see Regge poles and trajectories*

regulators *see controllers*

Rehbinder effect *see mechanical properties of substances; surface phenomena*

relational databases
cytometry, optical memory discs in image database management 7−139329
cytometry, optical memory discs in image database management 7−139330
dBASE II for construction of Cobalt-59 nuclear magnetic resonance spectra *(Japanese)* 7−143919
meteorological information database *(Japanese)* 7−139806
STARBASE: an applied database management system for education and research in astronomy 7−127741

relative density *see density*

relative humidity *see humidity*

relativistic band structure calculations
covalent crystals with Sb, electronic struct., ^{121}Sb isomer shift, LMTO calc. 7−106064
diamond, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
rare earth systems, relativistic self-interaction-corrected local density approx. calc. 7−76738

relativistic band structure calculations continued
spin polarised densities, relativistic scatt. theory formulation, appl. to electronic struct. of Pu 7−105371
Au_xPd_{1-x}, electronic struct., soft X-ray emission, Fermi surface props. 7−137785
γ-Ce, mag. moments, fully relativistic spin-polarised Dirac theory 7−76732
CuPd, electronic struct., ab initio calcs. 7−105391
Fe, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Ge crystals, localized cryst. orbitals and double-valued band representation 7−142680
Ge, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
HfS_2, 1T polytype, angle resolved UPS, band struct. 7−92064
InP:Yb, substitutional impurity electronic states 7−98876
Ir, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
K, equation of state anomaly in the 500 kbar regime 7−84180
$NaWO_3$, electronic band struct., self-consistent semirelativistic LMTO calcs. 7−105400
Ni, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Pd, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
Pd, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Pt, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
δ-Pu, band struct., relativistic spin-polarised KKR Green's function calc. 7−76756
Pu, FCC cryst., mag. moments, fully relativistic spin-polarised Dirac theory 7−76732
PuS(Se)(Te), equations of state, self-consistent energy band calcs. 7−76765
Rh, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
Sb, electronic struct., ^{121}Sb isomer shift, LMTO calc. 7−106064
Si, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
Sn, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643

relativistic corrections
see also Lamb shift
antiprotonic atoms, hyperfine struct., Dirac eqn. recoil corrections 7−74791
atom, photoabsorption, linear response method calcs. 7−109840
atom+ion collisions, relativistic electron capture 7−141681
atomic many-electron problem, g-Hartree mean-field, QED anal. 7−122387
atomic orbitals calc., g-Hartree method study 7−96555
atoms, Dirac-Fock-Slater pot., finite-basis set approach 7−122348
atoms, ground state energy, electronic correl., semiclassical method 7−81991
atoms, KMX/KMM and KXY/KMM Auger transitions, relative group intensities 7−116922
atoms, many-electron, radiative transition matrix elements, field theory approach 7−122352
atoms, relativistic equation for spinless particles 7−116884
atoms, relativistic many-electron Hamiltonians study 7−141453
atoms, relativistic pair eqn., correlation, projection operators method 7−122375
atoms, X-ray dispersion anal., relativistic effects 7−96584
atoms, X-ray transitions, relativistic HF-Dirac calcs. 7−122426
atoms, Z=1-92, Dirac-HFS screening function 7−122349
atoms and ions, energy spectra, relativistic approx. 7−90003
atoms and molecules, Dirac equation, variational solns. 7−122351
charge exchange relativistic theory with Coulomb boundary conditions 7−96862
conference, Uzhgorod, USSR (Sept. 1985) 7−120684
diatomic molecules orbitals, relativistic Dirac-Fock-Slater calcs., basis set errors anal. 7−141452
electron capture, relativistic radiative cross-sections, strong-pot. Born calcs. 7−122698
Gaussian nuclear charge distribs., use for calcs. relativistic electronic wavefunctions 7−74395
GPS user equipment, relativity correction 7−73317
halogen ions, negative, photodetachment cross sections, relativistic RPA calcs. 7−74533
heavy atom chemical shift in NMR, relativistic contrib. 7−96740
heavy atoms, s-electrons, HFS calcs. 7−103410
hydrogenic ions, relativistic and quasirelativistic line strengths 7−103437
L_3 subshell alignment calc. within coupled-state formalism 7−74546
M-shell additional vacancy, L-shell X-ray energy shift 7−82008
many-electron atoms, confluent levels, transition probabilities 7−122444
many-electron systems, correlation and relativistic effects, Dirac-Coulomb eqn., double perturbation theory 7−122385
methylene, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
molecular bonds, relativistic changes, Hellmann-Feynman force method calcs. 7−122350
molecular relativistic many body problem, CI calcs. 7−122380
molecules, quasi-relativistic CNDO/1 calcs. 7−96542
monatomic crystal, 1D model, relativistic effective masses 7−112169
multicharge ions, quantum defects and dispersion phases, relativistic quantum defect method calcs. *(Swedish)* 7−122334
muonium covariant two-body equation, Moller and Breit pots. 7−122771
nuclear motion in atoms and molecules, quasi-relativistic treatment 7−141478
pair equation, projected as to positive energy states 7−82007
positronium, covariant two-body equation, Moller and Breit pots. 7−122771
relativistic atomic many-body problem 7−108394
semiconductors, intrinsic and extrinsic, relativistic corrections 7−105363
spin polarization correlations, dynamical parameters in relativistic theory 7−122715
transition metal hydrides positive ions, spectroscopic parameters and dissoc, energies, CI calcs. 7−116869
X-ray energy shifts and electron binding energies, single-config. Dirac-Fock-Slater calcs. 7−90004
Ag^{n+} clusters, electronic struct., hyperfine interactions, Dirac scattered-wave method calcs. 7−103369

relativistic corrections continued
AgH, potential energy curves, bond lengths, relativistic ab initio CI calcs. 7−122379
Ar, inner-shell photoionisation, post-collision interaction, quantum calcs. 7−90055
AsH, low-lying states pot. energy curves, radiative transitions, multireference CI calcs. *(French)* 7−89973
Au, energy levels. fine and hyperfine struct., E1 transition amplitude, correl., pot. method 7−81997
Au_{13} icosahedral clusters, SCF Dirac scatt. wave calcs. 7−96912
B isoelectronic sequence, 1s vacancy states, Auger and radiative decay rates, CI and relativistic effects 7−103407
B isoelectronic sequence, $^2P_{1/2}$-$^2P_{3/2}$ ground-state M1 transition, multiconfig. Dirac-Fock calcs. 7−141440
Ba, energies and oscillator strengths relativistic multiconfiguration DF calcs. 7−96565
Ba hyperfine electronic const., relativistic virtual orbital, multiconfig. calcs. 7−135838
Ba, nonradiative transition probabilities relativistic calc. 7−68249
Be-like ions, SCF, Breit interaction, Dirac-HF calcs. 7−81936
C isoelectronic sequence, L-subshell photoionis. cross sections calc. 7−103447
CO, relativistic MO calcs. 7−109761
CS, atomic electric dipole moment, HF approx. calcs. 7−122382
Ca hyperfine electronic const., relativistic virtual orbital, multiconfig. calcs. 7−135838
CdHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
Co, X-ray diffr. electron. correl. and relativistic effects 7−129614
Co-like ions, Z=38-92, 3p-3d transition wavelengths 7−122421
^{133}Cs, parity nonconservation, time depend. HF calcs. 7−135833
Cu, atom, autoionising energy level assignment, ejected electron spectrosc. 7−141689
CuI isoelectronic series, $3d^94s^2\ ^2D$ term, fine struct., relativistic HF calcs. 7−68204
Er I+II+III, hyperfine struct., multiconfig. Dirac-Fock calcs. 7−82001
Fe, ^5D-^5F separation, single reference SDCI calcs. 7−109796
Fe, Auger spectrum, electrostatic spectrometer meas. 7−141546
Fe XII, relativistic effects on electron excitation of fine-struct. transitions within ground $3s^23p^3$ configuration 7−145816
Fr^+, electron-impact double ionis. cross section calc., giant reson. contrib., relativistic effects 7−103668
GaI, isoelectronic series, $3p^N$ and $4p^N$ configs., forbidden lines, transition probabilities, HFR SCF calcs. 7−89998
Gd, Ni-like, dielectronic recombination coeff. 7−103405
Ge_2, complete active space MCSCF and CI calcs., spectroscopic props. 7−96559
H, Dirac equation soln., quantum field theory nonperturbative evolution operator method 7−122395
H^++hydrocarbons (CO) (CO_2), C K-shell and Auger electron prod. cross sections 7−110096
H_2^+, Dirac eqn., third order variational perturbation calcs. 7−122397
H_2^+, relativistic energies, second-order Dirac eqn. 7−122398
H_2^{2+}, relativistic energy correction, Dirac and Schrodinger eqns., variational solns. 7−122396
HX, X=Br,I, ionised species, ground state, relativistic and correlation effects, valence SCF-CI calcs. 7−116870
He atom, relativistic Hartree-Fock equation 7−129578
He, momentum space correl. effects, HF wavefunctions 7−135834
He, Rydberg states, Casimir effects 7−122409
He-like ions, SCF, Breit interaction, Dirac-HF calcs. 7−81936
He-like ions, transition wavelengths, $(2p2p)^3P$ states to $(1s2p)^3P$ states 7−82027
$He+O^{n+}$ (n=2,3,4) O K Auger electron spectra 7−103452
Hg, atomic electric dipole moment, HF approx. calcs. 7−122382
Hg, photoelectron spectra, ang. distrib. parameter 7−74535
HgH_2, pot. energy surfaces calcs. 7−74485
HgNe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
Kr^{26+} transition energy meas., relativistic and QED effects 7−68233
$KrHe^+$, electronic states props. and pot. energy curves, relativistic CI calcs. 7−116860
Li-like ions, energies and relativistic radiative transition rates, MC Dirac-Fock calcs. 7−135883
Li-like ions, metastable state, lifetime, relativistic DF calcs. 7−116910
MgHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
NaCl, photoexcitation, Na K X-ray spectrum, DF calcs. 7−129738
Ne-like ions, electron impact excitation cross sections, relativistic distorted-wave calcs. 7−140388
Ne-lite ions, oscillator strengths and energy levels, ab initio HF SCF CI calcs. 7−140384
Ni, 3d and 4d impurity hyperfine fields and electronic struct. calcs. 7−70245
Ni, X-ray diffr. electron. correl. and relativistic effects 7−129614
Ni XIX, Ne-like, 3s-3p and 3p-3s transition, DF calcs. 7−74495
O, 2p-3s transitions investigated using MCHF method with Breit-Pauli corrections 7−74430
Pb, ions, X-ray energy shifts and electron binding energies, single-config. Dirac-Fock-Slater calcs. 7−90004
Pb, low-energy autoionising states, DF and CI calcs. 7−116878
^{85}Rb, parity nonconservation, time depend. HF calcs. 7−135833
S, 1s ionisation energies, relativistic corrections 7−90078
S VII-XIV spectra, wavelengths, oscill. strengths and energy levels 7−109825
Sc to Hg, valence orbitals, model pot., sd-MP set 7−103367
Sc to Hg, valence orbitals, model pots., spd-MP set 7−103368
SiH_2, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
$Ta_2Cl_6(NH_3)_4$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
$Ta_2Cl_6(NH_3)_4^-$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
TeH, electron states, relativistic CI calcs. 7−89991
Tl, energy levels. fine and hyperfine struct., E1 transition amplitude, correl., pot. method 7−81997
TlX, X=H, H^+, H_3, props., relativistic and correlation effects, pseudopot. calcs. 7−122383
^{205}Tl, parity nonconservation, time depend. HF calcs. 7−135833
U^{92+}+U^{92+} relativistic collisions, inner-shell capture, muon pair prod. 7−103619
UO, relativistic MO calcs. 7−109761
V, atomic form factor evaluated using nonrelativistic and relativistic corrected CI wavefunctions 7−74466

relativistic corrections continued
WF_6, ionisation energies, UPS study 7−136006
Xe, atomic electric dipole moment, HF approx. calcs. 7−122382
Xe, electron scatt., elastic and momentum transfer cross sections 7−136062
Xe, inner-shell photoionisation, post-collision interaction, quantum calcs. 7−90055
Xe, slow electron elastic scatt., quasirelativistic calcs. 7−122381
Yb, autoionisation reson., laser spectra, HF-Dirac calcs. 7−122463
Yb isoelectronic series, electronic transitions, multiconfig. Dirac-Fock calcs. 7−116874

relativistic electron beam tubes
backward ware oscillators at low currents, starting conditions 7−83554
high current relativistic electron beam diode, electron trajectory calcs. *(Chinese)* 7−96936
inverted diode, magnetically insulated, short-circuiting dynamics 7−123999
plasma-filled diode, relativistic electron beam generation 7−108703
Vavilov-Cerenkov radiation, EM waves amplification by relativistic beam 7−120830

relativistic fluid dynamics
accretion disks, axisymmetric MHD flows theory 7−115227
active galactic nuclei, radiation from relativistic beams interaction with interstellar gas 7−101937
astrophysical jets, spatial stability anal, and appl. to quasar (3C 345) 7−127705
4C 39.25, quasar, relativistic jet model for superluminal motion amid stationary struct. 7−101954
charged particles acceleration at relativistic shock fronts, diffusive accel. theory 7−107674
cold relativistic helically symmetric steady flows appl. to free electron lasers 7−69285
compressible flows, Rankine-Hugoniot relations, analytical solution, shock waves 7−111027
cylindrically invariant flows in relativistic fluid dynamics 7−123785
dissipative relativistic fluids, linear plane waves, Eckart and Israel-Stewart theory 7−104359
electron flows, hollow and circular, in magnetic field, irrotational states 7−110226
general relativistic vortices in stationary axisymmetric spacetimes 7−89068
locally anisotropic space, variational principle and relativistic hydrodynamics eqns. 7−120885
MHD flows in Schwarzschild geometry, axisymmetric flow theory 7−94649
perfectly conducting viscous magnetofluid in general relativity, Cauchy problem 7−88703
pressure shocks propag. in relativistic viscous heat-conducting fluids, shock vel. soln. 7−72273
radiation gas dynamics, eqns. in tetrad form for astrophysical appls. 7−127696
radiative shock, post-shock gas parameters with allowance for electron pairs prod. *(Russian)* 7−107717
shock wave propag. in radiating spherically symmetric mass distrib., appl. to supernovae 7−145814
shock waves, linear stability 7−83365
shocks, in gas of photons, electrons and protons, planar flow 7−111028
steady relativistic fluid jets, astrophysical appl. 7−94655
wind instability and helical perturbations of magnetized relativistic jets 7−104319

relativistic mechanics
see also relativistic fluid dynamics; relativistic scattering theory
celestial mechanics, unsolved problems in relativistic theory 7−72256
coordinate systems, relativistic theory *(Japanese)* 7−134487
dynamical systems, Lax representation 7−88959
electromagnetic gas dynamics, general and special relativity 7−115784
electromagnetic interactions, relativistic many particle Lagrangean 7−135013
entropy, connection with parametrised time 7−115898
equivalence principle, physical background 7−94647
five dimensional formulation of relativistic and nonrelativistic mechanics *(French)* 7−95327
free relativistic spinning particle, Berry's phase in rel. theory 7−80503
gravitational Poynting vector and energy transfer 7−80259
integrable relativistic N-particle system in external pot. 7−108231
isospectral transformations in relativistic and nonrelativistic mechanics 7−80405
massless spinning particles in arbitrary space-time dimensions, generalised Pauli-Lubanski vector 7−80515
Mercury, perihelion precession, general rel. props. from special rel. calc. 7−79816
multitemporal relativistic particle mechanics, gauge theory without gauge-fixings 7−67158
nonnegative distribution function in relativistic quantum mechanics 7−67079
opposite spacetime relations, Lorentz transform., relativity abandonment, time accelerating energy effect, scales, frames *(German)* 7−128276
perturbed Kepler problem, expectation value formulation 7−108083
Pluto, contrib. of cosmological constant to orbital irregularities 7−139960
presymplectic systems, canonical-transformation theory, time-dependent systems, relativistic free massive point 7−108217
system of events, uniqueness theorem for relativistic centre 7−128275
unidimensional spaceship, dynamics 7−88783

relativistic plasmas
V1343 Aql (SS 433), relativistic pair plasma model for radio jets 7−127891
astrophysical, stabilisation and consequences of relativistic electron bumps in extragalactic radio sources 7−115616
beat wave acceleration, increasing density, enhanced saturation amplitude 7−104395
beat-wave accelerator, Langmuir waves, temporal energy cascading study 7−104393
beat-wave generation, electron plasma waves plasmons and electromag. cascading study 7−104394
collisionless plasma, ion acoustic solitary waves, ion temp. effect 7−123973
dense high-temperature stellar plasma, relativistic free-free Gaunt factor 7−115228
dispersion functions, series, integrals and approximations 7−91359
drift effects, kinetic description 7−91360
drift instabilities, kinetic theory 7−91361
ECRH and lower-hybrid current drive, trapped electron effect 7−137096
electromagnetic wave propag., relativistic self-focusing study 7−104412
electron beam gas focusing dynamics 7−123909
electron beams, relativistic fluid eqns. 7−91362
electron beat-excited plasma waves, electrostatic mode coupling study 7−104392
electron Bernstein wave dispersion, relativistic and EM effects, ordinary models 7−123873
electron Bernstein wave dispersion, relativistic and EM effects, extraordinary modes 7−123874
electron cyclotron current drive efficiency for top-launched extraordinary mode in Tokamak 7−111175
electron energy increase of relativistic electron beam ring by major radius compression 7−91352
electron whistler and cyclotron maser instabilities, arbitrary energy anisotropy 7−130920
electron-cyclotron reson. plasma, particle motion, wave propag. eqn., relativistic effects 7−83415
electrons beat wave acceleration, Eulerian fluid model 7−104391
EM wave modulational instability 7−117723
EM wave propag., approx. theory 7−111240
Fokker-Planck equation, relativistic, num. soln. using TWODEPEP finite element library 7−142492
hose and sausage instabilities in relativistic electron beams, variable collision freq. effects 7−130919
hot degenerate plasma, longit.-wave spectrum, dispersion relation 7−83451
inhomogeneous plasma, EM wave transform. 7−111266
inhomogeneous plasma, intense EM beam self-focusing 7−123900
intense relativistic electron beam ring with large self-magnetic energy, current decay 7−91350
ion acoustic double layer in weakly relativistic plasma 7−130863
ion-acoustic solitary waves, pseudopotential approach 7−137122
kinetic theory with self-consistent Maxwell field, canonical-dissipative formulation 7−83528
Langmuir waves, modulationally unstable, in relativistic plasma, limitations in spectrum 7−91329
laser self focusing enhanced by relativistic electron motion in laser plasma 7−69357
magnetised plasma quasistatic mag. field generation by EM radiation 7−83486
magnetospheric plasma of a pulsar, props. investig. 7−120485
moving plasma, general relativistic ponderomotive force 7−97747
pulsar magnetospheres, influence of mag. field inhomogeneity on longit. waves excitation 7−127933
rarefied gas, Bennet distrib. transform. 7−75867
relativistic electron beam focusing calcs. and simulation 7−103727
relativistic Langmuir waves, detuning in beat-wave accelerator 7−91363
relativistic oblique magnetohydrodynamic shocks anal. 7−91330
shock waves, hydrodynamical constraints on cosmic-ray accel. 7−139868
SPAC-VI toroidal device, relativistic electron beam ring, X-ray bremsstrahlung 7−130917
SPAC-VII toroidal device, relativistic electron rings 7−130916
stimulated scattering of a plasma wave by a relativistic electron beam 7−83495
symmetric flows in two-fluid electromagnetic gasdynamics 7−83527
Vlasov-Poisson system in 2D, global solns. 7−75765
wakefield accelerator, driving electron beam stability 7−104421
wakefield accelerator, nonlinear plasma oscills., relativistic electron beam excitation 7−104420
wakefield accelerator expt. simulation 7−104461
Weibel instability in relativistic, anisotropic plasma 7−130864
wind instabillity and helical perturbations of magnetized relativistic jets 7−104319
Z-pinch plasma lens for high energy particle beams 7−103315

relativistic quantum field theory
see also Dirac equation
$\lambda\phi^4$ theory in curved spacetime, one-loop effective action in interacting quantum field-theory 7−81010
ϕ^3 theory, four-rung ladder diagram, scatt. amplitude 7−89350
ϕ^3 theory, ladder diagrams, high-energy large-momentum transfer processes 7−89349
Aharonov-Bohm scattering, relativistic correction, Lorentz contraction factor, Dirac eqn. 7−108280
anisotropic universe, vacuum energy-momentum tensor calc. 7−73497
Bianchi I metrics, Dirac eqn. generalisation 7−80989
bosonization in a two-dimensional Riemann-Cartan geometry 7−89092
bound state problem in Poincare-invariant quantum field theory 7−95763
causal Green's function in relativistic quantum mechanics, free-fluid Klein-Gordon eqn. 7−134924
charged bosons in magnetic field, wave fns. and matrix elements 7−140801
charmonium radiative decays, relativistic treatment and heavy-quark approximation 7−116178
chiral nuclear model, multiple solns. in config. space 7−73708
conformally invariant scalar field at finite temp. in anti-de Sitter space 7−95737
curved space string dynamics, perturbatively renormalised vertex operator, Virasoro algebra 7−116152
deformed nuclei, self-consistent Hartree descript. in rel. quantum field theory 7−121599
Dirac monopoles, singular potentials, gauge transforms. 7−89380
Dirac spinors in quantum space with torsion, quantized fiber-bundled spaces, spin connection, neutrino oscills. 7−134923
Duffin-Kemmer-Petiau particle with internal structure 7−67460
dynamical symmetry breaking, alternative effective pots., Gross-Neveu model pots. 7−81054
dynamical symmetry breaking in a de Sitter-invariant vacuum 7−116095
Einstein-Yang-Mills system, strings and superspace, d=10 supergravity 7−108796
extended objects, local Heisenberg field quantisation, semiclassical approx. 7−134953
free field theories with local gauge invariance, BRST quantisation of classical actions 7−73533
gauge bosons as composite particles in two-particle rel. quantum mech. 7−81139
geometric space-time perturbation, gauge invariance, Kaluza-Klein association 7−67102

relativistic quantum field theory continued
geometric space-time perturbation, multiparameter perturbations 7−67101
geometry and charge-monopole systems, canonical formulation problems 7−80996
Goldstone's theorem, charges and symm. breaking without locality, review 7−128741
Hadamard Regularization in curved spacetime 7−89097
ideal-preserving Lorentzian connections, exterior bundle fibers over Lorentzian manifold, Clifford algebra 7−140803
IOSp(D,2|2) symmetry from the BRST quantization of the relativistic spinning particle 7−81050
irreducible relativistic scaler fields fulfilling canonical commutation relations 7−67474
Killing approximation for vacuum and thermal stress-energy tensor in static space-times 7−115885
Klein-Gordon divisor, second rank tensor field theory classification 7−128771
Klein-Gordon eqn., large-N limit from uncertainty principle 7−67481
Klein-Gordon equation, generalized, with holomorphic potentials, appl. of complex Clifford anal. 7−80976
Laplacian, determinant on spinor fields on Riemann surface 7−89321
lattice gauge theory, relativistic fermions on collocation lattice 7−80964
light cones in linear and nonlinear field theories *(Russian)* 7−121381
line element and gauge fields in Riemannian space 7−80975
local products for relativistic quantum fields 7−95722
massive particle fields with integer fields, energy momentum tensor 7−120911
massless Klein-Gordon field at equilibrium, entropy 7−73525
massless Thirring model, energy spectrum and critical coupling constant 7−121327
meson mass spectra, relativistic effects in field theory 7−128873
mutually interacting quantum fields in Robertson-Walker universes 7−88719
nucleon effective mass lowering by attractive scalar mean field, rel. effects in nuclear physics 7−140999
open spin space-time manifolds, gauge theories, Yang-Mills eqns. 7−134922
particle distribution in quantum field theory 7−128740
point particles, relativistic, interacting field theory 7−73626
QED, Hohenberg-Kohn theorem, relativistic extension 7−108845
quantized spin 1/2 field, massless, confined between moving boundaries, anal. 7−95729
quasipotential eqns. with chromodynamic interaction, exact solns. 7−95759
quaternionic nonAbelian relativistic field theory in 4D 7−95738
Riemann boundary value problem on closed Riemann surfaces and integrable systems 7−67497
saturable Klein-Gordon eqn., self-trapped states 7−102610
scalar field, conformal anomaly and Casimir effect, path-integral derivation 7−95752
scalar field theory in curved Einstein space, variational approach 7−108733
spinless particle in EM field, nonrelativistic limit 7−128744
spinorial analysis and physical properties of fermions 7−108365
stimulated emission by external sources in relativistic quantum field theory 7−89328
string theory, critical dimension derivation in path-integral formulation 7−140910
strings, massless field generation, relativistic field equations 7−135086
SU(2) Einstein-Yang-Mills-Higgs model, wormhole solutions, iterative method, black holes 7−108742
supersymmetric Klein-Gordon equation in nonstandard superspace 7−89356
Swieca's theorem, charges and symm. breaking without locality, review 7−128741
tachyons, spin-1/2 wave eqns., solns. with complex energies 7−73494
thermal Goldstone theorem at finite temp. and density, Schwinger action principle 7−108782
Thirring model at finite temp. and density, derivative coupling model anal. 7−128769
Thomas-Fermi-Dirac-Weizsacker model, field theoretical approach 7−108843
three-dimensional field models, string solutions 7−80994
three-nucleon system, NN interaction calcs., Bethe-Salpeter eqn. and relativistic field theory 7−128974
two-centre Dirac eqn., continuum states 7−134947
two-particle system in harmonic oscillator pot., invariance principle in 1D 7−95739
N models, axial vector coupling constant and relativistic quark confinement 7−121456
NN interaction, relativistic field theoretical model with meson theory 7−67744
H, Dirac equation soln., quantum field theory nonperturbative evolution operator method 7−122395
^{208}Pb(p,p), 800 MeV, relativistic impulse approximation in an additive potential model 7−121839

relativistic scattering theory
see also elementary particle scattering; quantum field theory of elastic scattering; relativistic mechanics
few body systems with realistic interaction, ATMS method 7−128973
Gross-Neveu model, asymptotic completeness and multiparticle structure 7−108736
hadronic multiplicity distributions, generalized KNO scaling and the branching model 7−67656
hadronic negative binomial multiplicity distributions 7−67655
heterotic string, graviton, antisymmetric tensor, gauge boson covariant scatt. amplitudes 7−89398
Jost-like functions, unified class, scatt. theory appl. 7−116098
Kemmer-Fermi-Yang theory of nucleon-nucleon scattering 7−73664
Lippmann-Schwinger equation in three-body model, surface integrals at infinity 7−67534
local duality and the semi-classical approximation 7−140839
Moller operators in classical relativistic two-particle scattering 7−134984
multiple scattering, interpretation of single-particle scattering 7−134573
N/D equations with inelasticity, Coulomb effects and analytic props. 7−95774
quasipotential dependence on total energy of two-particle system 7−134985
resonance scattering of composite particles, binary process model 7−95775

relativistic scattering theory continued
scattering integral equations, soln. using global moment method 7−88942
tachyon scattering amplitudes, open string anal. in Polyakov path-integral formalism 7−67679
variational operator Pade approximants method, NN scatt. appl. 7−128791
$\gamma\gamma\rightarrow\bar{q}q$, local duality and the semi-classical approximation 7−140839
$NN\rightarrow NN(\pi d)(\pi NN)$, intermediate energies, effects of πd channel coupling on other channels 7−67643
NN partial wave pot. from phase shifts, inverse scatt. method 7−95937
πd elastic scatt., appl. of relativistic Faddeev theory to πNN system 7−121754
$\pi d\rightarrow pn\pi$, vector anal. power calc. near 3,3 resonance, relativistic Fadeev theory anal. 7−121956
πN scattering, role of three-body unitarity 7−67652
πNN system, relativistic Faddeev theory, πd elastic scatt. appl. 7−121754
$^3H_\Lambda$, bound state existence, separable model Faddeev equations 7−109090
$^3H_\Sigma$, Σ^- hypernuclei, bound state existence, separable model Faddeev equations 7−109090
π^-NN bound state proton, appl. to deuteron and 4,4 resonance, relativistic Faddeev anal. 7−116099

relativity
see also general relativity; light cones; relativistic mechanics; relativistic quantum field theory; relativistic scattering theory; special relativity
acceptability of relativity and atomic theory before quantum mechanics 7−72968
correction, the debate continues *(Polish)* 7−128281
Hermitian theory of relativity, solns. depend. on 3 coordinates from general relativity 7−108316

relaxation
for dislocation relaxation see dislocation damping
see also anelastic relaxation; chemical relaxation; dielectric relaxation; magnetic relaxation; stress relaxation; ultrasonic relaxation; viscoelasticity
adsorbate thermal relax., master eqn., coherence-coherence coupling effects 7−84477
amorphous alloys, role of atomic two-level system 7−97946
colloidal dispersion, complex viscosity meas., relax. behaviour anal. 7−100630
elastomers, relaxational props. during network formation, meas. method *(Russian)* 7−83645
epoxy binders, elasticity type effect on viscoelastic props. 7−138774
epoxy binders, viscoelastic behaviour mechanisms 7−138773
epoxy resin, exptl. study of low-temp. long-time relax. 7−111907
fibre-polymer matrix system, transition layer parameters eval. using dynamic mech. meas. 7−78444
galactic disks, modelling of collective relaxation processes by numerical expts. *(Russian)* 7−107967
glass relaxation, fn., chemical reactions fractional exponential law appl. 7−142594
glycerol, glass form. by linear cooling, isothermal enthalpy relax. meas. 7−84318
hopping conduction, relaxation mode theory using reduced one-body master eqn. 7−131642
liquids, shear wave speeds and elastic modulus meas. 7−97551
metallic glasses, crossover effects 7−97978
metallic glasses, enthalpy relaxation kinetics 7−98454
metallic glasses, short-range ordering kinetics, anal. of crossover effect 7−97979
meteorite craters, finite element models of non-Newtonian relaxation 7−101726
microplastics hardening process, rheokinetic investig. 7−144360
phonon reservoirs, relax., thermal equilib. approach stochastic theory 7−128433
polyarylate-polyethylene oxide block copolymers, relax. transitions near microphase separation boundary *(Russian)* 7−90914
polymer, oriented, nonlinear viscoelasticity in high-rate tension 7−78091
polymer, reverser design for complex tests 7−78439
polymer matrix, relax. phenomena, tautomeric complex with H^+ transfer 7−92669
polymers, mechanical behaviour nonlinearities, types and mechanisms *(Russian)* 7−98330
radio sources, extragalactic, stabilisation and consequences of relativistic electron bumps 7−115616
stellar dynamics, selective relaxation in one-dimensional self-gravitating systems 7−127979
stellar systems, existence of H-theorem inequality for violent relaxation 7−88546
structural relaxation, kinetics and distributed fictive temps. 7−97971
undercooled fluids, α-relax. dynamics near liq.-glass transition 7−75956
Co-P amorphous alloys, structural relax. and decomp., SAXS study 7−104559
$Cu_{59}Zr_{41}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
Fe-Cr-P-C amorphous ribbons, magnetic texture, curvature and structural relax. during annealing 7−70582
Fe-Ni, molten, component interaction, viscosity study *(Russian)* 7−91868
Fe-Ni-B, metallic glasses, struct. relax., microcalorimetric investig. 7−97974
Fe-Ti films, amorphous, compositionally modulated, struct. relax. and interdiffusion 7−111934
$Fe_{80}B_{20}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
$Fe_{85}B_{15}$, metallic glasses, relax., thermophys. investig. 7−97980
$Fe_{81}B_{13.5}Si_{3.5}C_2$, amorphous alloys, density and microhardness, influence of annealing 7−93102
$Fe_{40}Ni_{40}B_{20}$, $Fe_{40}Ni_{40}P_{20}$, metallic glasses, struct. relax. kinetics, calorimetric and resistometric studies 7−97976
$Fe_{40}Ni_{40}B_{20}$, neutron irrad. and annealed, Mossbauer spectroscopy studies 7−91661
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystallisation and struct. relaxation study 7−83707
Ge_xSe_{1-x}, amorphous films, relax. processes, elec. cond., annealing effect 7−70310
^{4}He, liquid, oscillator dynamical correlation and elementary excitations, memory fn. approach 7−111995
Ni-rich metal-metalloid glasses, relax. behaviour 7−97972
$Pd_{82}Si_{18}$, metallic glasses, relax., thermophys. investig. 7−97980
a-Si:H, structural and electronic stretched-exponential relax., H dispersive diffusion effects 7−143106

relaxation oscillators
coupled, simplified model, appl. of direct stability methods 7−140446
parametrically and self-excited mechanical systems, dynamic phenomena 7−95295
relaxation theory
No entries
relaxation time, carrier *see carrier relaxation time*
relay control
see also on-off control
perturbed non-vibrating systems with one degree of freedom, approx. synthesis 7−67002
solar heating with distributed storage, microprocessor-based control 7−133118
relay systems (radio) *see radio links*
relay systems (satellite) *see satellite relay systems*
relays
see also reed relays; switches
fission reactors, aging of relays and circuit breakers, interactive effects 7−89696
relays (repeaters) *see repeaters*
reliability
see also quality control; standards; testing
BWR, 4-divisional design, reliability and maintainability *(German)* 7−109270
BWR 8×8 fuel assemblies, reliability testing in Japan 7−116558
BWR operation for life extension 7−135476
ceramics, advanced structural and composites, reliability, review 7−77777
circular shaft, exact versus approximate determination of structural reliability 7−117476
Clinton nuclear power station, reliability-centred maintenance program 7−135513
conference on nuclear power plant operation, Chicago, USA, Aug. 1987 7−134357
ECG diagnostic functionality assessment in Helsinki hospitals 7−114530
failure probability and scattering of strength of smooth test bars *(German)* 7−93235
fibre optic appls., reliability considerations, conf., Cambridge, MA, USA (Sept. 1986) 7−140366
fibre optic interconnects, reliability 7−142032
fibre optic sources, high reliability packaging 7−142041
fibre optic system design, reliability considerations 7−142042
fission reactor component failure rates, risk evaluations of aging phenomena 7−89692
fission reactor pressure isolation valves, NRC performance test program 7−89681
fused tapered couplers reliability 7−142031
HTGR intermediate heat exchanger manifold header lifetime prediction *(Japanese)* 7−129134
IR sensing LEDs for chemical sensor appls., reliability 7−100684
ISIS operation of robots at Chinon A3 reactor, reliability *(French)* 7−109368
KANUPP regulating system, failure modes, reliability and state probabilities 7−116689
long-wavelength high-reliability lasers, characts. 7−97015
metallisation stability, microscopic control 7−133022
modular ultrasound equipment with piezoceramic transducers for semiconductor structure cleaning 7−75238
nuclear piping system reliability improvements 7−129354
nuclear power plant life extension through operating and maintenance strategies 7−135473
nuclear power plant operational safety and productivity system reliability anal. 7−141244
nuclear power plants, optimization of preventive maintenance 7−135514
nuclear power plants, reliability allocation, multiobjective programming approach 7−73833
nuclear power plants, reliability aspects of probabilistic risk anal. *(German)* 7−81588
nuclear power reactors, reliability criteria and cycle parameters, economic interpretation *(Russian)* 7−103064
nuclear power station coolant pump vertical fixed speed motors *(French, English)* 7−141191
nuclear power station error prevention and reliability improvement by operating personnel, man-machine system *(Russian)* 7−89644
nuclear power station performance, safety and reliability practice in Japan 7−129257
nuclear power station scram reduction, appl. of reliability based methodology 7−129341
nuclear power stations, check-valve operational performance evaluation 7−103060
nuclear power stations, RAPID/RAM-UM system for reliability assessments 7−129342
nuclear reactor protection, supervisory systems, active-inactive times determ., system availability maximisation 7−122054
optical fibre cable, failure mechanisms and life span *(Danish)* 7−75121
optical fibre cables, hydrogen problems and long term reliability 7−68872
optical fibres, hermetic coating 7−142028
optical fibres, reliability issues and telecomm. appls. 7−142026
oxides, ultrathin, breakdown depend. on thickness and hole current 7−92595
PATREC nuclear reliability program, implementation in PROLOG 7−102959
photovoltaic cells, overview highlighting design, analysis and test tool issues 7−126612
pipes, stainless steel, crack depth meas., methods and reliability 7−126390
piping components, dynamic reliability program 7−89682
polymer-coated optical fibres, mechanical reliability considerations 7−142027
power plant training simulator fidelity 7−135417
PWR high burnup experience at Farley 1 and Point Beach 2 7−141151
PWR steam generators, inspection, maintenance and operational reliability 7−103056
PWR valve testing using fast acquisition system 7−89643
reactor auxiliary feedwater system equipment, reliability anal. using GO methodology 7−129254
reactor safety system, reliability modeling 7−103105
San Onofre Unit 2 nuclear power station, reliability-centred maintenance, appl. to auxiliary feedwater system 7−135512
semiconductor injection lasers 7−141887
reliability continued
single-electron recording of light flow 7−121187
steam Generator Reliability Improvement Project 7−135474
Steam Generator Reliability Project, aims and initiation 7−103057
steel structure and welded joint reliability, neutron damage assessment *(Hungarian)* 7−122004
structural components, fatigue crack propag. under stationary random loading, reliability degradation 7−124384
thermoelectric SP-100 nucl. power systems, load following and reliability studies 7−67903
unsaturated fly ash landfill moisture content and pressure potential instrument evaluation 7−114160
Ag electromigration suppression effect 2,4-diamino-6-vinyl-s-triazine compounds 7−91856
AlN/GdTbFe/AlN/Al magneto-optical disc 7−74882
GaAs solar cell for satellite power supply 7−106907
Li-CF_x primary batteries, reliability 7−114085
Li-SO_2 high reliability long-life cells 7−126572
$LiNbO_3$:Ti guided wave devices, reliability considerations 7−141989
a-Si:H multijunction solar cells, stability and performance 7−144824
a-Si:H solar cells, failure anal. 7−100735
a-SiGe:H triple-junction solar cells and modules, reliability tests 7−144825
Si_3N_4 ceramics and composites, reliability enhancement 7−126132
SiO_2:Ge optical fibre loss increase due to H_2 and long-term loss stability 7−90800
remanence
see also coercive force
CrO_2 tape particles, switching field distrib., rel. to time depend. magnetisation 7−85376
Fe-Si, silicon steel strip, meas. of mag. props. by transient recording method *(Korean)* 7−134815
ferromagnetic hysteresis, remanent and peak magnetisation, tensile and compressive stress effects model calcs. 7−106003
haematite, synthesized, chemical remanent magnetisation acquisition appl. in palaeomagnetism 7−107390
hysteresis loops modeled from coercivity, anisotropy, and microstructure parameters 7−125452
Ising spin glass, infinite range, remanence, metastable states, relaxation processes 7−143825
magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
magnetic particles in eel and carp bone, mag. suscept. and remanence meas. 7−71768
magnetite ore, high-temperature remanent magnetic memory 7−139589
particular media, magnetisation processes, effect of interaction and anisotropy const. distrib. 7−85377
rock remanent magnetisation, high-press. var. 7−114694
rocks, metastable magnetic states, nature and mechanisms 7−120013
spin glass dynamics, thermoremanent magnetisation 7−143818
spin glass dynamics from mag. noise, relax. and susceptibility 7−118802
spin glasses, dilute metallic, response time, temp. depend., comment 7−99467
spin glasses, dilute metallic, response time, temp. depend., reply to comment 7−99468
spin-cluster theory of mag. materials, spin glasses appl. 7−92436
Stoner-Wohlfarth particles, noninteracting, isothermal remanent magnetisation 7−85379
synthetic sediments, post-depositional remanent magnetisation, compaction-induced inclination shallowing 7−72012
thermoremanent magnetisation, spin-system cluster model calcs. 7−99462
viscous remanent magnetization determ., Thellier test for rocks *(French)* 7−139781
AgMnSb dilute metallic spin glass, d'Almeida-Thouless transition, thermoremenance time decay meas. 7−125399
Ba ferrite-polymer composite, Mossbauer and mag. studies 7−125443
$CdCr_{1.7}In_{0.3}S_4$, spin-glass, ageing phenomena, temp. changes effect 7−143809
$CdIn_{0.3}Cr_{1.7}S_4$ spin glass, thermoremanent magnetisation, aging and relax., field effects 7−125400
Co particles, isothermal remanent magnetisation 7−85379
Co thin epitaxial FCC films on Cu, ferromagnetism obs. by spin-polarised photoemission 7−77385
Co-Fe-Nb, special mag. alloys, 7−126133
CoAsS (cobaltite), mineral anomalous magnetic props. 7−101283
Co_2SnTe_4, amorphous, mag. props. 7−132024
CrO_2:Fe powders, thermal stabilisation, effect on mag. and struct. props. 7−85373
CrO_2:Ir particles, mag. props. 7−85380
Cr_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
$Eu_xSr_{1-x}Te$, dil. antiferromagnet, spin glass behaviour, mag. meas. 7−112827
Fe epitaxial FCC film on Cu (001), magnetism, spin polarised photoelectron emission 7−105985
Fe-Al-C permanent mag. alloys, structural characterisation 7−78065
Fe-Cr-Co-based cold-rolled magnets, mag. props. and microstruct. studies 7−132065
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
$Fe_{48.7}Al_{8.3}Ni_{13.5}Co_{26.5}Cu_3$, Alnico 5, permanent magnet material, mag. props., potentiokinetic polarisation curves 7−99501
$Fe_{77.5}B_{13}Si_{9.5}$, amorphous, for choke and inductor applications, microstructure and mag. props. 7−86234
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7−132101
$Fe_{47.5}Cr_{28}Co_{23.5}Si$, permanent magnet material, mag. props., potentiokinetic polarisation curves 7−99501
$Fe_{76}Mo_3(SiB)_{21}$, metallic glass, low losses at high freqs., low remanence, effect of heat treatment 7−112863
$Fe_xNi_{80-x}B_{20}$, relax. processes, magnetoelastic meas. 7−85405
$Fe_{25}Ni_{55}Si_{10}B_{10}$ metallic glass, mag. elec. and elastic props. 7−85362
γ-Fe_2O_3:Co particles, stability of mag. props. 7−92469
γ-Fe_2O_3:Co^{2+},Zn^{2+} acicular particles, mag. props. modification 7−85371
γ-Fe_2O_3-Fe_3O_4 films, pyrolysis prep., Mossbauer and Faraday rot. study 7−85387
Fe_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Gd-Y superlattices, synthetic, modulated mag. props. 7−99525
Mn_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Nd-Fe-B, melt spun permanent magnet alloy, isotropic remanence 7−132084

remanence continued
Nd-Fe-B based isotropic permanent magnet, high performance 7−112861
$Nd_2Fe_{14}B$, permanent magnet, remanence direction at 77 K, as function of obliquely appl. mag. field 7−77345
Ni_2SnTe_4, amorphous, mag. props. 7−132024
SmCoFeCuZr permanent magnets, thermal remagnetisation study 7−138283
TbFe amorphous sputtered films, remanence 7−143873
$U_xY_{1-x}B_4$, spin-glass-like behaviour, obs. 7−77297

remanent magnetism *see remanence*

remote control *see telecontrol*

remote control equipment *see telecontrol equipment*

remote metering *see telemetering*

remote sensing
see also infrared imaging; remote sensing by laser beam
3-D remote sensing, appl. of advanced alternating frame technology (VISIDEP-TM system) 7−107576
10 GHz scatterometer 7−107574
37th IAF Congress, Conf., Innsbruck, Austria (October 1986) 7−120680
1986 International Geoscience and Remote Sensing Symposium, conf., Zurich, Switzerland (1986 September) 7−95093
1987 Yearbook 7−134387
acquisition and analysis of pictures of Earth from autonomous satellite scanner 7−79712
N Adriatic Sea, atmospheric correction of meas. data 7−133941
aerial photographs, interpretation by knowledge-based image understanding systems 7−101573
aeromagnetic surveys, estimation of vertical dimensions of perturbing objects and zero level of mag. anomalies 7−145322
aerosol extinction meas., information content analysis 7−87896
aerosol in atmosphere, satellite remote sensing method for spectral absorpt. 7−120153
agricultural land optical remote sensing 7−94477
agricultural land remote sensing by SAR radar, using polarization phase differences 7−72028
agricultural remote sensing, signature-extendable technology for crop recognition 7−72029
agricultural water management *(Dutch)* 7−134032
Airborne Oceanographic Lidar for ocean waves meas. capabilities, comparison with Surface Contour Radar 7−134000
airborne remote sensing, modular versatile data acquisition, recording and preprocessing system 7−134030
airborne type visible and thermal IR radiometer, review *(Japanese)* 7−79622
airglow, minimum cross-entropy inversion of satellite photometer data 7−115133
AIS radiometry, anal. of data from Mono Lake, California 7−101569
Antarctic 1986 spring O_3 meas. of atm. 7−120072
Arabian Sea, moisture field during 1984 summer monsoon, INSAT-1 B data 7−101415
Arctic sea ice, microwave signatures inter-sensor comparison 7−101564
N Atlantic, atmosphere characts. influencing infrared remote sensing 7−127345
atmosphere, appl. of adaptive polynomials for real-time data editing 7−115064
atmosphere, mesoscale eddy mapping method, involving radar obs. of sea surface 7−134016
atmosphere, path-integrated rain rate over ocean, determ. from airborne microwave radiometer data 7−127543
atmosphere, temperature sounding using partial interferograms 7−87915
atmosphere, total O_3 content retrieval from TOVS radiance meas. *(Chinese)* 7−72141
atmosphere, vertical sounding techniques, ONSAM expt. 7−115082
atmosphere boundary layer, noise problem reduction in sodar system design 7−127508
atmosphere O_3, stratospheric and total O_3 distrib., implications for troposphere 7−139685
atmosphere precipitation, anal. of dual-wavelength surface reference radar techniques 7−127500
atmosphere radiation budget, Nimbus 7 satellite determ. method 7−101531
atmosphere temperature profiles retrieval from satellite-based Microwave Sounding Unit and ground-based Profiler 7−127361
atmospheric aerosol, effect on spectral distrib. of brightness of transmitted radiation 7−79602
atmospheric CO_2 research 7−94331
atmospheric effects, correction in remote sensing 7−120157
atmospheric inhomogeneous nonisothermal precipitation, simulation and statistical retrieval 7−101407
atmospheric temperature and moisture, vertical profiles from VAS 7−127364
atmospheric water vapour and liquid water, SAMIR obs. analysis 7−133826
Australian remote sensing, overview of capabilities and activities 7−94478
Baltic Sea, near-surface wind speed from Nimbus 7 SMMR obs. 7−114990
Baltic Sea, sea ice studies using Nimbus 7 SMMR 7−114801
Bangladesh, agriculture and hydrology, NOAA AVHRR observations 7−127290
bathymetry, meas. by Seasat SAR and Skylab photographs, comparison 7−107586
bioclimatology mapping using remote sensing data 7−101479
Black Hills, South Dakota, anal. of large format camera images for topographic and thematic mapping 7−114609
Canadian Shield, geological remote sensing using SIR-B radar 7−72175
chemical sensing, calibration techniques for fibre optics in the near-IR 7−141994
cirrus, midlatitude and tropical, optical props. 7−127379
cirrus cloud experiment, intensive field obs. planned for First ISCCP Regional Expt. (FIRE) 7−101489
city buildings remote sensing by radar 7−101311
classification of multispectral imagery data, max. likelihood method for image processor 7−115046
classification of remote sensing images (book) 7−95125
clay minerals in Singatse Range, Nevada, airborne MSS data 7−101300
cloud base measurement, comparison of lidar and rotating beam ceilometer signals with pilot ceiling 7−115008
cloud cover analysis using spatial and temporal characts. of satellite data 7−133839

remote sensing continued
cloud cover remote sensing by satellite imagery, dynamic threshold method 7−101523
cloud cover satellite remote sensing, using hybrid bispectral threshold method 7−101528
cloud field morphology analysis using time series models 7−120152
cloud fields retrieval by HIRS2-MSU satellite remote sensing method 7−101527
cloud remote sensing at nighttime, multispectral IR satellite method 7−94485
cloud remote sensing by satellite, method for cloud cluster characts. 7−114965
cloud size distrib., remote sensing by satellite imagery in real time 7−127510
cloud type classification, IR remote sensing technique using NOAA 7 satellite 7−101524
cloudiness determination by surface observation and satellite method, comparison 7−101526
clouds, liquid water and precipitable water vapour determ. by ground-based microwave radiometers 7−127335
clouds, liquid water distribution determ. by radiometric data inversion 7−127544
clouds, motion vector extraction for INSAT-1 B imagery 7−101537
clouds liquid water distribution determ., appl. of coplanar scanning radiometers meas. 7−114864
clouds optical parameters, determ. from appearance of obscured city lights in satellite images 7−115011
Coastal Zone Colour Scanner on Nimbus-7, effects of multiple scatt. on atmospheric correction algorithm 7−115005
computer graphics for use with Landsat MSS remotely sensed data *(Czech)* 7−72188
computer software packages used by Indiana State Univ. 7−101595
conference, Baltimore, Maryland, USA (March-April 1987) 7−128190
conference, Orlando, USA (Apr. 1986) 7−108024
coniferous forests, effects of scene shadows on multispectral response 7−127504
coral reef studies, appls. of remote sensing 7−79430
crust microwave brightness temp., effect of elec. and thermal props. 7−107412
data integration with geographic information systems using artificial intelligence 7−107529
data system for receipt and data processing from meteorological satellites 7−145701
deciduous forests, directional light scatt., props. of wintering, deciduous hardwood canopy 7−127505
deep-layer mean winds, dynamical methods for building continuity in 7−134014
diamond prospecting method, by remote sensing of kimberlite linear structs. 7−94476
diffuse sky irradiance determ. from multidirectional radiance meas. 7−127473
digital imagery 1D resampling to sparse output grids 7−120160
Digital Photogrammetry System, stereo-push-broom scanner system characts. 7−101557
digital rain maps from radar, knowledge acquisition for automatic interpretation 7−139818
digital satellite imagery, preprocessing at FOMI 7−87967
digital signal processing, stabilisation of multidimensional recursive digital filters 7−127507
digital solar edge tracker for the Halogen Occultation Experiment 7−127609
digital terrain models automatic generation from satellite images 7−101498
disposable sensors for remote and in-situ analysis 7−93446
dual-mode radar images, results from SLAR mode with very low PRF 7−115098
Earth imaging spectrometry, aircraft and space programme 7−101567
Earth Observing System, high-resolution imaging spectrometer, conceptual design 7−115200
Earth Observing System, moderate resolution imaging spectrometer, preliminary system concepts 7−115201
Earth Observing System, SAR evolution and development 7−115202
Earth research, exposition nonuniformity correction by electronically controlled mask *(Czech)* 7−89292
Earth surface, Meteosat meas. of solar irradiance and albedo 7−133830
Earth surface, reflected solar radiation meas. *(German)* 7−139732
Earth-Observation Preparatory Programme of ESA 7−145664
Egypt, integrated remote sensing and satellite cartography approach to preparation of new geological map 7−114610
electrical sounding, induced current in long wire due to vertical elec. dipole above dissipative ground 7−101197
electro-optical dilatometer for differential thermal expansion analysis 7−67279
electronic imaging conf., Arlington, VA, USA (Oct. 1986) 7−134348
electronically steered thinned array radiometer (ESTAR) 7−101587
ELIA knowledge-based Landsat TM image anal. system 7−94519
EM wave scatt. in dense random medium 7−96933
ERS radar remote sensing, UK Data Centre, for offline processing and archiving facility 7−101495
ERS-1 altimeter, automatic tracking mode switching algorithm 7−101663
ERS-1 nonSAR instruments, processing 7−145721
ERS-1 programme, overview and status 7−101490
ERS-1 radar altimeter, performance, calibration, and data validation 7−101662
ERS-1 radar remote sensing project, Canadian plans 7−101581
ERS-1 radar remote sensing satellite, data processing facilities at ground station 7−101494
ERS-1 satellite, development status of payload instruments 7−101660
ERS-1 satellite, ESA approach for sensor calibration and performance verification 7−101491
ERS-1 wind scatterometer, on-ground verification and in-orbit performance prediction 7−101661
ERS-1 wind scatterometer design 7−101584
ERS-1 wind scatterometer system simulator, ground processing design 7−101585
Europe, conf., Lyngby, Denmark (June 1986) 7−95095
expert system for land surface remote sensing and mapping 7−107530
eye disorder remote sensing utilising retinal reflex photometer 7−93877
fibre optic rotation sensor 7−136585
fibre optic sensor, remote, for fluorescence measurement in phytoplankton, in situ 7−136586

remote sensing continued
fibre-optic sensors, interferometric arrays, appl. of TDM, anal. 7−123242
flooding of Bangladesh during monsoon, SAR radar and Landsat remote sensing technique 7−120059
flooding phenomena, satellite monitoring 7−101560
fluorescence monitoring for remote sample charactn., oil slick example 7−133167
FM-CW microwave system for snow stratigraphy 7−101561
forest damage in Austria, remote sensing survey using SICAD cartographic software 7−71659
forest stands, L-band radar backscatter modelling 7−127502
forestry management, application of SAR radar remote sensing 7−101312
Fram Strait marginal ice zone, ice and ocean charact. 7−133769
full wave solutions for rough surface scatt. and depolarisation 7−117127
future applications of Earth surface remote sensing 7−133682
geological features discrimination, appl. of digital and photographic enhancements of Landsat multispectral scanner data 7−87923
geological mapping, appl. of Spacelab data for structural interpretations 7−94456
geological mapping method using airborne multispectral scanner imagery 7−127509
geological patterns analysis in remote sensing images, computer-aided interpretation 7−107579
geological remote sensing, lithological units discrimination method using Landsat Thematic Mapper 7−127150
geological remote sensing by radar, discrimination of lava flows from sedimentary rocks 7−79659
geological remote sensing in presence of vegetation by Thematic Mapper, computer imaging method 7−94481
geology and geomorphology remote sensing, comparison of MSS, stereo and radar methods 7−101249
geomorphic features and landscape stability remote sensing using SPOT imagery 7−127219
geomorphology and vegetation cover remote sensing methods for arid areas, SPOT satellite imagery *(French)* 7−115047
Geosat, radar altimeter charact. and results 7−107587
glacial ice sheet retreat remote sensing method, by obs. of vegetation trim line 7−139657
glacier monitoring by satellites, by MSS image interpretation 7−72181
global surface wind and flux fields from model assimilation of Seasat data 7−127387
ground surface temperature wave estimation, appl. of surface heat flux anal. *(French)* 7−87914
hail detection by radar, study of hailstone shape factors 7−94371
hailstones, simulated, radar technique for meas. of rot. props. of falling oblate ice spheroids 7−127569
Halogen Occultation Experiment remote sensor, design and performance 7−87954
Haryana State, India, soil hazards remote sensing and mapping 7−107417
Hawaiian lava flows and SIR-B results 7−101255
Helmholtz equation, inverse transmission problem 7−110642
HF ground-wave radar remote meas. of Celtic Sea ocean wave and current, NURWEC 2 project 7−101611
HF radar sea echo interpretation, role of second-order shallow water hydrodynamic coupling coeff. 7−107591
HF vertical sounding in lower E region, vertical structure of ionisation irregularities 7−115162
high-level clouds, emissivity, fractional cover and cloud top temp. determ. 7−133991
hot spots and plumes: observation by meteorological satellite 7−133150
Hudson Bay, ocean bottom friction coeff. determ. from Seasat-alt data 7−72043
Hurricane Elena (1985), satellite obs. using VAS 6.7 μm water vapor channel 7−107466
Hurricane Josephine 1984, ocean swell age and source 7−133746
hydrological applications, review 7−114841
image analysis methods for processing remotely sensed data 7−87968
image distortion due to local terrain geometry, correction algorithm 7−79662
image recognition, by shape similarity using graph matching techniques 7−101594
image registration using parameter space techniques 7−101591
image representation via symmetrical components, matrix decomposition method 7−107575
images from NOAA meteorological satellites, digital filtering 7−145670
imaging of Earth from satellite, noise reduction filters 7−101592
imaging radar polarimetry from wave synthesis in remote sensing 7−107571
imaging radar polarisation signatures 7−134023
Indonesia, remote sensing programme for natural resources 7−114713
instrument-induced spatial crosstalk deconvolution algorithm 7−79685
ionosphere state monitoring using multifrequency beacon, AUSSAT appl. 7−145722
IR, evapotranspiration meas. 7−145671
IR imaging, temporal prediction of ground terrain images 7−115019
IR imaging expt. on Space Shuttle 7−87953
IR meteorological satellite image analysis using fractal dimension and lower-order statistics 7−139741
IR thermometry, appl. to meas. of radiant temperatures of sparse plant canopies and soil 7−127506
irradiance spatial struct. beyond receiving lens in detection and obs. system 7−72198
ISIPS, interactive satellite image processing system, hardware and software 7−79677
Italy, incident short-wave radiation at surface, Meteosat data anal. 7−101442
E Java, geomorphological units identification 7−79406
Kappa coefficient agreement theory, for classification accuracy 7−120159
knowledge-based aerial image understanding systems and expert systems 7−107527
Kocaeli Peninsula, Turkey, soil conservation methods 7−107416
Lake Erie, effluent dispersion in Long Point region, Landsat imagery 7−100766
lake surface temperature mapping method, using Landsat-5 infrared data 7−127301
lake surface water flow measurement method using aerial photography 7−134019
land altimetry systems evaluation 7−107334
land surface albedo changes measurement by GOES satellite visible sensor technique 7−101525
remote sensing continued
land surface albedo remote sensing method, from narrow band satellite data 7−94231
land surface charact. remote sensing by satellite, cloud screening method 7−127512
land surface imaging, optimum band-ratio triplets selection 7−72162
land surface imaging using landsat MSS data, radiometric correction method for atmos. and topography 7−101593
land surface of suburban areas, expert system for image analysis 7−107528
land surface optical remote sensing, multiple view angle obs. of reflectance anisotropy 7−107533
land surface reflectivity and vegetation remote sensing, effects of subpixel clouds 7−127511
land topography remote sensing, Seasat radar altimetry application 7−101601
land use and cover types, Landsat TM mapping, automatic update procedure 7−101313
land-use mapping with thematic mapper, using edge density texture 7−72030
landform investigation utilizing digitally processed satellite thematic mapper imagery 7−72166
Landsat, image restoration by spatial filter design 7−94508
Landsat cloud images and precipitation radar echoes *(Japanese)* 7−107481
Landsat data classification, watershed algorithm approach 7−115097
Landsat image data, information content anal. for data compression 7−127503
Landsat Thematic Mapper, experimental, acquisition and processing facility 7−145724
Landsat-4 multispectral scanner and thematic mapper data classification accuracy, expts. 7−79713
LANDSAT-5 TM and MSS sensors, radiometric comparison 7−115044
Landsat-assisted vegetation mapping of Innoko National Wildlife Refuge, Alaska 7−139819
large format camera data, appl. to print positioning and mapping 7−114608
Lascar volcano, N Chile, thermal anomaly detect. by Landsat Thematic Mapper 7−133635
lateritic covers with Spot images, S Mali Kangaba area results *(French)* 7−87916
lava flows, age rel. to radar backscatter 7−114672
Limousin, France, soil identification, use of thermal airborne remote sensing 7−107584
lithology mapping by mid-IR remote sensing, passive and laser methods 7−79661
local society environment, anal. *(Japanese)* 7−107539
Mali, thermal inertia and evapotranspiration mapping, use of Meteosat 7−87785
marginal ice zone, ice conc. estimates, comparison of active-passive microwave sensors 7−101565
marine geographic information systems 7−78699
Marine Observation Satellite-1, visible and IR radiometer *(Japanese)* 7−79621
marine pollution, discrimination between crude oil spills and monomolecular sea slicks by airborne remote sensors 7−114803
maritime rainfall analysis, resolution enhancement of Nimbus-7 SMMR multichannel microwave imagery 7−115057
mesosphere, O_3 photochemistry, SME obs. anal. 7−94529
mesosphere motions, appl. of simultaneous medium-freq. interferometer and spaced antenna expts. 7−115130
meteorological image reception and analysis, low-cost system for satellite pictures 7−107558
meteorological parameters derived from Meteosat imagery, automatic quality control 7−145656
meteorological parameters remote sensing, radio scintillation meas. method 7−94415
meteorological satellite images, water vapour information from Meteosat 7−145567
meteorology, Defense Meteorological Satellite Program of USA 7−107515
meteorology, digital satellite imagery acquisition and processing 7−101572
Metric Camera Mission-1 on Spacelab, results 7−134021
microwave obs. of sea ice and iceberg 7−87980
microwave radiometer for thermal radiation, for dual polarized radiation 7−72171
microwave radiometer weather-correcting sea ice algorithm 7−127241
microwave remote sensing of ocean wave directional spectra by aircraft 7−133996
microwave SAR degradation effects of rain 7−114991
microwave scattering properties of heterogeneous two-component mixtures, appl. to soil and snow water inclusions 7−96932
middle atmosphere, global residual mean circulation for northern winters 7−145614
middle latitudes daytime rainfall meas. techniques 7−87925
mineral deposit remote sensing, classification scheme involving host rock lithology 7−115048
MM wave moisture sounding, effect of clouds 7−114974
MM-wave imaging sensor produces moderate-resolution images 7−67369
mm-wave network analyser-based scatterometer for remote sensing 7−107573
MOS-1 multispectral electronic self-scanning radiometer, airborne verification 7−101556
MOS-1 VTIR data processing software *(Japanese)* 7−73346
N Mozambique, ore body detection in Monapo area 7−101301
multifrequency polarimetric SAR 7−107572
multisource remote sensing data analysis, methods for combining information contents 7−107526
multispectral image data, pot. information content comparisons, approach based on sensor system specifications 7−101555
multispectral imagery surface features extraction 7−101574
multispectral scanner imaging of land surface, radiometric corrections by analytic method 7−107410
multispectral thermal IR push-broom imager 7−101559
NASA Ocean Data System, satellite data management 7−94445
natural resource remote sensing satellites, prospects for AD 1987 to 1997 period 7−133957
NOAA HRPT data acquisition and anal., appl. of FRS-68010 system 7−101571

remote sensing continued
NOAA-AVHRR data, atm. correction methods, verification by ground truth meas. 7—107567
nonimaging data animation, appl. of 2-D and 3-D image processing methods 7—107577
ocean, bottom-related surface patterns detect. in visible spectrum imagery 7—107439
ocean, colour spatial and temporal var., Nimbus-7 meas. 7—107440
ocean, gravity wave equilib.-range spectral behaviour, Seasat microwave altimeter meas. 7—107590
ocean, surface flow estimation from visible and IR data 7—127234
ocean current profiling techniques, receiver and analogue homodyning effects on incoherent Doppler vel. estimates 7—127567
ocean depth determ. from surface wave refr. patterns, improved method 7—107581
ocean directional wave spectra, approaches for comparing remote and in-situ meas. 7—133995
ocean dynamics below sea ice, SAR radar technique for mesoscale phenomena 7—127253
ocean evaporation rate determ., by satellite microwave radiometry method 7—127611
ocean internal wave currents, estimation from SAR and IR scatterometer imagery 7—107434
ocean internal wave parameters estimation, appl. of backscattered radio signals *(Russian)* 7—145489
ocean internal wave surface patterns, airborne SAR imagery analysis 7—114800
ocean IR imaging, extraction method for eddy-like structs. 7—72173
ocean models, assimilation of satellite altimeter data 7—72065
ocean optical remote sensing, two-look method to overcome atmos. effects 7—94470
ocean parameter remote sensing, by passive microwave radiometry, use of microwave emission model 7—107534
ocean physical and biological properties monitoring using ship, aircraft, satellite methods 7—115018
ocean surface, statistics of specular refl. points 7—136171
ocean surface, two-step algorithm for microwave radiometry 7—115111
ocean surface backscatter, two-colour short-pulse laser altimeter meas. 7—87653
ocean surface current measurement method, using interferometric radar method 7—134015
ocean surface roughness and IR flux var. *(Russian)* 7—101318
ocean surface temp. determ., passive microwave remote sensing affected by wind 7—72172
ocean surface topography and flow estimation from IR satellite imagery 7—127233
ocean wave 2D spectra remote sensing by radar, SIR-B SAR method 7—101342
ocean wave directional spectra radar remote sensing by SAR method, satellite attitude requirements 7—101596
ocean wave Doppler radar remote sensing, airborne method for wave directions 7—94472
ocean wave height remote sensing by SAR radar, SIR-B method 7—101597
ocean wave parameter remote sensing method, using dual-radar system 7—127513
ocean wave remote sensing, radar Bragg scatt., simulation using wire wave sensor 7—139799
ocean wave remote sensing, SIR-B SAR radar method 7—101341
ocean wave remote sensing by radar, method for nonlinear wave parameters 7—94471
ocean wave spectra estimation technique from SIR-B data 7—134001
ocean waves, multilook images processing by SAR 7—101316
ocean waves, two-scale Bragg scatt. model for microwave backscatter from wind-generated waves 7—101332
ocean waves energy spectra estimation using radar ocean wave spectrometer 7—133999
ocean waves sensing, first-order spectral component of microwave backscatter 7—133773
ocean winds, Seasat microwave radiometer data 7—114992
oceanographic tracers for remote sensing of surface flow 7—94469
Ohio, satellite-based insolation estimates evaluation 7—87794
oil slick detection, appl. of side-looking airborne radar 7—114805
oil spill detection and analysis, results from radar and microwave radiometry 7—114806
optical remote sensing of city gas using fibre optic link and LED 7—106950
orbital radar imagery, exptl. app. of digital monoplotting technique 7—94055
organochlorides, remote detect. with fibre optic based sensor 7—71545
E Pacific, 1981 November 13 explosive cyclogenesis case study 7—87842
Pacific Ocean, tropical region, moisture bursts occurrence 7—133868
panchromatic and multispectral imagery from dual resolution satellite sensors, combination 7—127615
S Pantanal Matogrossense (South America), interpretation of MOMS and Landsat data 7—114846
Pennsylvania lithology from Landsat TM spectral data 7—101302
photogrammetry, off-line compilation of stereo models using digital image correl. 7—145311
photogrammetry, processing of digital three-line imagery using generalised model for combined point determ. 7—145310
potential field data interpretation, appl. of 2-D Hilbert transform 7—107578
precipitation index validation in African countries, using satellite data 7—87917
products, services, publications and facilities (book) 7—134374
quasi optical subsystem for a satellite radiometer 7—94521
radar altimeter techniques for high spatial resolution meas. 7—107588
radar backscatter from sea surface, meas. at extremely low grazing angle by C-band Doppler radar 7—107438
radar imagery interpretation using secondary image products 7—101582
radar imaging of Earth's surface, use of lognormal random-field models 7—79658
radar imaging of land surface, radar polarimetry method 7—72186
radar imaging of land surface, SAR polarimetric co-polarisation phase terms 7—72177
radar imaging of sea bottom, implications of surface currents obs. at Nantucket Shoals 7—107435
radar remote sensing, appl. of monogenic function range resolution radar 7—139489
remote sensing continued
radar remote sensing, German post-processing system for ERS-1 SAR data 7—101496
radar remote sensing, high-speed image processing system based on custom VLSI for DSP 7—115116
radar remote sensing, ISAR as new concept for high-precision digital SAR processing 7—115115
radar remote sensing, multipolarization SAR method to study surface features and forests 7—72176
radar remote sensing, operational use *(Dutch)* 7—134031
radar remote sensing, realtime SAR processor for C and X-band appls. 7—115114
radar remote sensing, SAR-580 data processing method in Japan 7—115113
radar remote sensing, setting up of radar cross-section databases 7—101588
radar remote sensing, using ERS-1 satellite, fast delivery processing of products 7—101578
radar remote sensing, very fast SAR signal processor for ERS-1 and Radarsat 7—115117
radar remote sensing, X-band and L-band backscatter meas. of agricultural crops, forest stands, and single trees 7—107583
radar remote sensing, X-band SAR and SIR-C radar systems 7—101665
radar remote sensing by SAR method, radiometric image correction method 7—94475
radar remote sensing from satellites, SAR systems future requirements 7—101664
radar remote sensing of Earth surface, Doppler FM rate theory 7—139789
radar remote sensing of geology of Canadian Shield, SIR-B radar capabilities 7—72175
radar remote sensing of land, new SAR satellite instrumentation design 7—101666
radar remote sensing of land and sea, requirement for ground truth studies 7—139788
radar remote sensing of land surface, topographic effects on SAR image tone 7—72163
radar sensing of continental cumulus clouds, obs. of echoes from seeded and nonseeded clouds 7—145628
radarclinometry, line integral approach 7—94457
radio acoustic sounding system, atmospheric wind and temp. meas., range limitation *(Japanese)* 7—79689
rain, functional box-counting and multiple elliptical dimensions in radar data anal. 7—114979
rainfall intensity and type determ. from GOES imagery, anal. of visible and IR data 7—79546
rainfall rates determ. from cloud radiance meas., use of pattern recognition algorithm 7—127546
Red Sea, Space Shuttle and Landsat obs. rel. to role of fracture zones during early rifting 7—145463
regional scale numerical model, incorporation of VAS temp. data using Gal-Chen variational approach 7—145641
regression intersection method of adjusting image data for band ratioing 7—72180
remote sensing applications in water management tasks of Rijkswaterstaat *(Dutch)* 7—133176
remote sensing of landforms, automatic classification aided by texture analysis *(French)* 7—72179
resource management applications, review 7—87951
Riiser-Larsenisen Ice Shelf flow and thickness, radio meas. 7—114831
river flood flow forecasting using microcomputer graphics and radar imagery 7—145557
rock surface remote sensing, mid-IR spectra of calcite and quartz 7—72014
rock type separation, optimal wavelength band selection 7—101583
SAR image reconstruction algorithm with complex phase correction *(Japanese)* 7—145720
SAR imagery of ocean bottom topography, results from improved model 7—107580
SAR imagery use for ocean waves energy spectra estimation 7—133998
SAR radar data, knowledge based processing system 7—79710
SAR-MSS Anderson River data set from Canadian Centre for Remote Sensing 7—107531
satellite altimeter tracking systems 7—107589
satellite cloud imagery, Fraunhofer diffr. anal. 7—127501
satellite image processing, detection of linear networks 7—87976
satellite image reception and anal. facility, image preprocessing techniques 7—94444
satellite imagery, appl. to weather nowcasting and very short range forecasting 7—114951
satellite microwave radiometry, appl. to classification of forest and surface types 7—107582
satellite microwave radiometry, appls. in Finland and Baltic Sea 7—79623
satellite radar altimetry methods, technique for radar pulse return averaging 7—115045
satellite remote sensing, scientists and engineers inservice training as information transfer method 7—95161
satellite remote sensing for mesoscale and cyclone events 7—115022
satellite temperature retrieval problem, ill-posed nature and retrievability limits 7—133969
satellite-borne instruments for temp. and moisture retrieval, design trade-offs 7—127542
satellite-computed tomography, design criteria and eigensequence plots 7—127527
savanna soils classification in Nigeria, appl. of reflectance characts. of surface cover 7—79404
scintillation spatial and temporal filtering 7—115043
sea ice, SAR automated remote sensing 7—101566
sea ice concentration, radar, passive microwave imagery and optical methods 7—127254
sea ice microwave remote sensing method 7—127251
sea ice monitoring, microwave backscatter coeffs. of artificially-grown first-year ice 7—101330
sea ice monitoring, operational SAR data collection and dissemination plans for ERS-1 data in Canada 7—101331
sea ice remote sensing methods, SIR-B and SMMR techniques 7—133726
sea ice sensing, shipborne interface system (STAR-VUE) for tactical ice navigation 7—115118
sea ice topography remote sensing, 36 GHz surface contour radar method 7—107535
sea surface, intensity of scattered light *(Russian)* 7—101317

remote sensing continued
sea surface scatterometry, radar scattering and equilibr. ranges in wind-generated waves 7—114739
sea surface temp. monitoring using IR radiometry, review 7—134026
sea surface temperature fields, method for data processing and display, use of VAS multispectral data 7—139773
sea surface temperature meas., comparison of satellite-derived temps. with in situ skin meas. 7—94270
sea surface temperature meas., implications of surface emissivity meas. for turbid waters 7—79453
sea surface temperatures, comparison of aircraft meas. using remote and direct sensing techniques 7—127236
sea wave measurements using ship radar, directional wave spectrum determ. 7—107437
seafloor composition and depth, ocean optics of remote sensing 7—94247
Seasat SAR and Landsat TM data, merging process 7—107561
Seasat scatterometer obs. of wind and Arctic ice/water boundaries 7—101586
SENSAT-2 IR remote sensing computer model 7—127480
sequential filter imaging radiometer (SFIR), new instrument configuration for Earth obs. 7—101570
side-looking radar imaging method 7—133947
SIR-B ocean-wave enhancement with fast Fourier transform techniques 7—134002
snow, microwave dielectric and scatt. behaviour 7—101357
snow and ice (book) 7—88758
snow and ice remote sensing by multichannel SAR, for Spitsbergen 7—101577
snow cover, data sets comparison for Northern Hemisphere 7—133784
snow cover, water equivalent, retrieval from satellite microwave radiometer data 7—107560
snow cover volume remote sensing, NOAA-AVHRR method 7—101359
snow covered urban and rural land surfaces, multispectral remote sensing of temperature and snow cover 7—127616
snow-covered sea ice, microwave remote sensing 7—101329
snowmelt runoff forecasting, MSS and AVHRR remote sensing methods 7—101362
snowpack remote sensing, scanning multichannel microwave radiometry method 7—72107
soil, microwave scatter and emission props. rel. to dielectric and surface parameters 7—101304
soil, physical properties effect on surface temp. meas. 7—107414
soil degradation evaluation, use of digital image processing 7—107585
soil degradation in arid region (Nile Valley) 7—107415
soil hydraulic properties, discrimination by combined thermal IR and microwave remote sensing 7—107453
soil microwave brightness temperature model for rough surfaces, for remote sensing 7—72174
soil moisture, effect of meas. error and confusion from vegetation on passive microwave estimates 7—107454
soil moisture, estimation using GOES-VISSR data 7—133987
soil moisture, irregular surface model for microwave remote sensing 7—101563
soil moisture estimation from diurnal surface temp. obs. 7—107455
soil moisture sensing, effects of salinity on microwave emission 7—107452
soil moisture sensing, parameterisation of effect of surface roughness on microwave emission 7—127218
soil regional mapping by aerial photography method 7—101598
soil remote sensing, microwave emissivity depend. on salinity and moisture 7—79660
soil thermal inertia and fluxes remote sensing 7—107413
soil thermal model for remote sensing application 7—79331
soil water remote sensing, satellite system for monitoring temporal and spatial behaviour 7—107451
solar system objects, reflectance spectra of terrestrial, lunar and meteoritic powders and frosts 7—87615
Space Station Polar Platform, Earth resources instrumentation 7—115199
spaceborne distributed aperture-coherent array processing technology in remote sensing 7—107569
spaceborne imaging radar for the 1990s 7—133997
spaceborne modest resolution radars for remote sensing 7—107570
spaceborne radar scatterometer system configuration, from NASA, simulation on NROSS 7—115119
spaceborne remote sensing, Australian developments, conf., Canberra, ACT, Australia (Jun.-Jul. 1987) 7—140379
spaceborne remote sensing of ocean waves, conf., Baltimore, USA (April 1986) 7—128175
spaceborne remote sensing technology for the late nineties 7—133939
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7—134003
Spectrasat radar ocean-wave spectrometer, design and operation 7—134004
Spectrasat radioaltimeter/SAR instrument design and processing of data 7—134005
Spectrasat system, design for ocean waves meas., assoc. communications and ground support 7—134110
SPOT imagery, appl. to topographic mapping 7—101180
Sri Lanka, vein-type mineral deposits tectonic environment 7—79352
STAR-1 SAR data and digital terrain mapping 7—107563
stereo line scanner/scanning laser ranger for cloud imaging 7—101558
storm over England and Wales, 1986 November 20-21, Meteosat and radar rainfall imagery interpretation 7—79524
stratosphere, MAP/GLOBUS 1983, balloon-borne remotely sensed O_3 meas. 7—133880
stratosphere aerosols, comp. and size distrib. retrieval from SAGE II data 7—115052
stratosphere background aerosols modelling, use of SAGE profiles 7—94382
stratosphere O_3 long term changes meas. by SBUV/2 radiometer 7—115061
stratosphere temperatures, semiannual oscillation features 7—145596
sub-polar glaciers in Spitsbergen, airborne radio echo sounding 7—72116
supercomputing and graphics in the Earth and planetary sciences 7—133954
Surface Contour Radar, wave meas. capabilities, comparison with the Airborne Oceanographic Lidar 7—134000
Surface Contour Radar for wave meas., capabilities comparison with Airborne Oceanographic Lidar 7—134000
surface height mapping, method using SIR-B SAR method 7—101342
surface reflectance at 600 nm from satellite obs. 7—133681
remote sensing continued
surface ship wakes at sea, anal. of synthetic aperture radar imagery 7—107436
surface soil moisture, temporal obs. using passive microwave sensor 7—101352
surface statistics evaluation, use of HCMM and GOES satellite temps. 7—101547
surface-vegetation parameterisation, evaluation using satellite temp. meas. 7—87739
syntactical wind streamline pattern identification 7—101473
temperature of Earth's surface using thermal IR data, physical model 7—101590
temperature remote sensing of upper atmosphere, by 15 microns infrared method *(Russian)* 7—127517
terrain mapping by SAR radar method, ground control point acquisition 7—72165
tethered satellite system (from Space Shuttle), as a new remote sensing platform 7—94474
Thematic Mapper, bandpass solar exoatmospheric irradiances 7—94480
thermal IR remote sensing of natural and man-made environment 7—101589
topographic mapping of land surface, using radar stereo-image pairs 7—72164
topographic mapping using remote sensing satellite (SPOT), accuracy of automatic parallax meas. 7—72161
topography mapping by SAR imagery, rectification of terrain induced distortions 7—120161
topography mapping by stereo imaging, digital image correlation errors 7—72160
topography mapping from SIR-B stereo radar images 7—107562
topography remote sensing by combined LANDSAT TM and MOMS-01 low solar elevation observation method 7—94479
triple etalon interferometer, gap thicknesses, reflectivity meas. 7—121207
turbulent atmosphere, statistical characts. determ. 7—94522
unsurveyed seamounts location in Austral archipelago, appl. of Seasat altimetric geoid data 7—94458
urban land-cover discrimination, computer expert system for use with multispectral images 7—107525
urban land-use classification, Landsat MSS and TM methods 7—79405
UV spectral albedo of Earth, Nimbus 7 SBUV meas. 7—139617
VAS retrievals, evaluation of various forms for preconvective environment anal. 7—127608
vegetation cover remote sensing methods for arid areas, SPOT satellite imagery *(French)* 7—115047
Venus, geology of S Ishtar Terra and Guinevere and Sedna Planitiae from Arecibo radar images 7—134159
VHF radiometric-lidar combined methods for atm. studies *(Russian)* 7—79666
visual evaluation and interpretation of data 7—115112
weather forecasting, role of satellite obs. 7—107568
weather forecasting using satellite remote sensing *(Dutch)* 7—133906
wind measurement, appl. of errors in sodar-estimated second moments to field meas. 7—115067
wind measurement, errors in second moments estimated from monostatic Doppler sodar winds 7—115066
wind remote sensing by ERS-1 radar scatterometry, ambiguity removal 7—101580
wind remote sensing by radar scatterometry, ERS-1 data conversion 7—101493
wind remote sensing in tropical pacific, bias in satellite observations due to data gaps 7—107537
wind remote sensing over oceans, passive microwave method using microwave emission model 7—107534
wind sensing at sea surface, radar scattering and equilibr. ranges in wind-generated waves with appl. to scatterometry 7—114739
wind speed remote sensing using satellite radars and buoy anemometry 7—101599
winds over ocean, remote sensing method using C-band scatterometry 7—101579
CO_2 atmospheric CO_2 variations and photosynthetic activity 7—94380
Fe alteration minerals remote sensing, mineral spectra study 7—79374
HgCdTe MW photovoltaic detectors, thermoelectrically cooled, for Halogen Occultation Expt. 7—87957
NO_2 in stratosphere, MAP/GLOBUS 1983 meas. by Solar Mesosphere Explorer 7—133884
O_3 global transport, role of planetary waves, satellite obs. 7—94384
W skarn deposits discovery using Landsat imagery and surficial geochemistry 7—101303

remote sensing by laser beam
aerosol flows, remote laser Doppler diagnostics 7—145691
aerosol space distrib. meas. in atmosphere using laser sounding technique 7—72158
air currents velocity, lidar correlation meas. 7—107549
air temperature profile measurement near ground, appl. of two laser beams technique 7—115071
Airborne Doppler lidar for wind meas., error evaluation 7—127573
airborne inertial surveying using laser tracking and profiling techniques 7—115099
Antarctic stratosphere, particulate content and water vapour budget 7—79566
atmosphere, differential absorption lidar (DIAL) meas., averaging methods 7—120131
atmosphere, humidity range meas. using parametric light oscillator radar 7—102420
atmosphere, techniques and appls. of laser remote sensing 7—120717
atmosphere, trace gas detection by spectroscopic method using Earth-to-satellite laser system 7—72156
atmosphere aerosol concentration in varying atm. background density lidar mapping algorithm 7—133976
atmosphere OH laser fluorescence measurement, press. depend of O_3 interference 7—115004
atmosphere-searching laser radar, appls. *(Japanese)* 7—103863
atmospheric aerosol remote sensing by Nd:YAG and ruby based lidar systems 7—72208
atmospheric laser radar target area accurate positioning *(Japanese)* 7—79691
atmospheric pressure profile remote sensing with tunable alexandrite laser transmitter 7—72209
atmospheric quality analysis, laser sounding technique 7—106951
atmospheric remote sensing literature survey 7—139817

remote sensing by laser beam continued
atmospheric water vapour, HCl, and methane meas. using MgF_2:Co laser 7−133942
attenuation and scatt. for meteorological parameters meas., appl. in pollution research 7−107547
bipath method meas. of spatial backscatter and extinction coeffs. with lidar 7−72157
cirrus, midlatitude and tropical, optical props. 7−127379
cirrus clouds, recording via lidar soundings *(German)* 7−79539
combustion devices, CARS appl., review 7−113934
combustion diagnostics, CARS appls. 7−86631
combustion system surfaces, reaction monitoring using Raman scatt. 7−113936
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference, Orlando, USA (Apr. 1986) 7−108024
continuous wave Doppler lidar meas. of wind magnitude and direction 7−127520
DIAL equation, mathematical limits to accuracy set by resolution limits due to sampling requirements 7−115006
differential absorption lidars with Raman lasers for O_3 meas., evaluation of solar blind effect 7−120132
dual-Doppler lidar measurement of winds in the JAWS experiment 7−127529
dye laser, Raman shifted, for water vapour DIAL measurements 7−103859
environmental pollution meas. by laser beams *(German)* 7−126682
fibre optic point source scanning system lateral offsets power loss meas., remote sensing appls. 7−123250
fibre optic pulsed laser delivery for remote meas. 7−123249
fluorescence monitoring for remote sample charactn., oil slick example 7−133167
fluorosensing of natural waters, environmental effects on laser-induced fluoresc. spectra 7−79688
high pulse rate lidar for boundary layer dynamics meas. via aerosol and smoke obs. 7−127521
humidity determination, airborne laser instrumentation using Pb-salt diode laser 7−120130
in reactor holography 7−129227
ionospheric species mapping, solid state bistatic lidar for Tethered Satellite System 7−72207
LIDAR, fluorescence, land and sea remote sensing appls. 7−75033
lidar for atm. plume dispersion clouds and stratospheric aerosols anal. 7−133966
lidar meas. accuracy, atm. drift velocity depend., Monte Carlo method study 7−107548
lidar obs. of atm. phenomena 7−107565
lidar-VHF radiometric combined methods for atm. studies *(Russian)* 7−79666
lithology mapping by mid-IR remote sensing, passive and laser methods 7−79661
Los Angeles, USA, elevated air pollution layers, lidar obs. 7−86851
methane, laser spectroscopy, review *(Japanese)* 7−82077
upper ocean layers, problems and methods 7−139791
ocean wave statistical properties, laser meas. 7−139792
oceanic chlorophyll remote determ., radiance-ratio algorithm wavelengths 7−114566
oil pollution diagnostics, appl. of laser-induced fluoresc. method 7−114804
optical inversion technique for remotely sensing atm. turbulence spectra, refr. index profiles and crosswind vel. 7−115100
parametric laser-reception lidar, anal. and design 7−103857
Raman laser developments for remote sensing appl. 7−75066
sea surface, remote laser sounding, echo signal statistics 7−87966
semiconductor laser-based instrumentation for ocean studies 7−139811
solid state laser technology for Earth Observation System requirements, NASA perspective 7−68700
solid state tunable lasers for remote sensing, conf., Stanford, CA, USA (Oct. 1984) 7−66832
soot particles in flames, light scatt. meas. techniques 7−113935
space lidar NASA plans, Earth Observing System 7−72205
space platform remote sensing, advanced laser lidar systems 7−72206
spent nuclear fuel pools laser surveillance system 7−122215
stratospheric aerosol meas. by laser radar, calibration and error analysis *(Japanese)* 7−79692
stratospheric aerosols assoc. with El Chichon eruption, Welsh lidar obs. 7−79584
troposphere aerosol, lidar probing study 7−107492
turbulent atmosphere, corner-cube reflectors location, intensity fluctuation characts. 7−127470
water surface quality analysis, laser sounding technique 7−106951
H_2O and aerosols profiles meas. from NASA ER-2 aircraft, lidar instrument appl. 7−75032
NO_2 concentration meas. in stack plume by two-wavelength long-path differential absorpt. laser radar *(Japanese)* 7−100788
Na, atmospheric, reson. fluoresc. line meas. using tunable Nd:YAG lasers 7−72210
Nd:YAG lidar accommodation on polar meteorological satellite 7−72252
YAG laser radiation used in atm. sounding, wavefront reversal of second harmonic 7−141944

Rene *see nickel alloys*

renormalisation
(1+1) dimensional field theory, renormalisation, correspondence principle and Coleman theorem 7−134913
1D autowave media dynamics, renormalization group universality, and scaling 7−128439
1D spin systems, non-universal crit. dynamical behavior 7−143828
2D bond-diluted O(n) model, phase transitions 7−143811
±J Ising model, phase diagram and critical exponents, Monte Carlo renormalisation group calcs. 7−105940
$(\lambda\phi^4)_4$ theories, dimensional continuation, Gaussian effective pot., d→4 limits 7−134958
$\lambda\phi^4$ model, new phase, triviality proof 7−89365
σ models with torsion, two-loop β-function 7−102601
σ-models with torsion, two-loop renormalisation, bosonic and supersymmetric cases 7−134933
$\phi_6{}^3$ theory, Langevin renormalization of Green's fns. 7−108808
$(\phi^4)_{1+1}$ model, virtual particle number, effect on S-matrix, mass renormalisation 7−108783
renormalisation continued
$(\phi^4)_{3+1}$ theory, infinitesimal bare coupling constants, BCS-type vacuum state 7−134957
ϕ^4 spin systems, 4D, critical phenomena, renormalization group trajectory 7−108449
Abelian gauge theories, renormalization-group-improved Yennie-Frautschi-Suura theory, Z^0 physics 7−128765
Abelian Higgs model, Monte Carlo renormalisation group study, symmetry breaking 7−80985
aggregation processes, Monte Carlo renormalisation group transformation 7−73249
amorphous films, supercond. transition temp. 7−105799
amorphous semiconductors, electronic props., lattice topology effects 7−112171
Anderson hamiltonian for arbitrary band-filling, renormalisation group study 7−92120
Anderson model, conductivity of a random electron chain renormalization group approach 7−70269
anisotropic universe, vacuum energy-momentum tensor calc. 7−73497
anomalous dimensions and mass renormalization in string theory 7−81155
anti-de Sitter supersymmetry, radiative mass term generation 7−67490
antiferromagnetic Heisenberg S=1/2 chains, dimerisation gap at 0 K 7−138257
antiferromagnetic quantum XY model on triangular lattice, renormalisation group approach 7−99483
asymptotic freedom beyond perturbation theory 7−67503
axial anomaly problem, analytic renormalisation scheme 7−95716
biased self avoiding walks, cell renormalisation study 7−102328
bipartite percolation, gelation, partial generating function, weight-average molecular weight, critical behaviour. 7−128477
block copolymers, crossover anal. using renormalisation group methods 7−83777
Blume-Capel model with random field, tricritical points, mean field anal. 7−124440
bounds on Euclidean Feynman graphs 7−67508
canonical quantisation of gravity, operator constraints, renormalisability 7−67153
causal propagators in the renormalisation program of quantum field theory 7−80970
chain geometry, renormalisation group method investig. 7−82400
chiral clock model, low temp. renormalisation study 7−105874
classical diffusion in random fields with long-range correlations, renormalization group anal. 7−128500
clusters in percolation, multifractal structure 7−80682
complex scalar field in general relativity, nontopological soliton solns., mini-soliton stars 7−102241
composite fields in curved space-time, asymptotic behaviour of effective pot. 7−108740
composite propagators, general struct. from renormalisation group and analyticity 7−121424
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
constrained systems, critical phenomena, renormalisation group results 7−121037
continuum quantum field theory, nonperturbative regularisation scheme, $\phi_6{}^3$ appl., scalar prototype 7−73511
continuum quantum field theory, regularisation, d-dimens. gauge theory appl. 7−73512
continuum quantum field theory, regularisation QCD_4 β-function appl. 7−73596
convergent renormalized Birkhoff-Gustavson normal form for the quartic anharmonic oscillator 7−102209
Cornu spirals, disorder, renormalizability and theta fns. 7−108419
Coulomb gauge QCD, perturbative ambiguities, Feynman rules 7−140881
counterterms in curved space-times of arbitrary dimensionality, linear dependence 7−89332
critical behaviour at surfaces, field-theoretical approach, book contrib. 7−137515
critical phenomena, coherent anomaly method 7−121035
critical phenomena, differential formulation of dynamic renormalisation group 7−121036
critical phenomena, renormalisation, self similarity and order-parameter struct. relax. 7−99477
curved space string dynamics, perturbatively renormalised vertex operator, Virasoro algebra 7−116152
curved spacetime sigma models, local renormalisation group eqn., diffeomorphisms, conformal invariance 7−89342
decimation transformations, high temp. renormalisation group methods 7−102322
diffusion limited aggregation, multifractal structure 7−80682
diffusion-limited aggregation, scaling structure, renormalization group anal. 7−80656
dilute antiferromagnetic Potts models, order propagation 7−70510
diluted Ising model, mean field renormalization group with reaction field 7−102342
Dirac sea effects on finite solitons, mass shift, polarisation effects, Friedberg-Lee appl. 7−108758
directed percolation, real space renormalisation group for arbitrary dimensions 7−102336
directed self-avoiding walk, real space renormalisation group for arbitrary dimensions 7−102336
discrete cubic model, Monte Carlo renormalisation group study, superconformal invariance 7−134689
discrete Gaussian model, Monte Carlo renormalisation-group study 7−108464
disordered 2D electron system, asymptotic density of states 7−131514
disordered interacting electron systems, generalized nonlinear σ model and effective Landau theory 7−137824
disordered media, conductance, σ-model approach 7−137881
disordered solid, localisation, spin-dependent scatt., renormalisation group study 7−131588
driven diffusive system with odd induced current, crit. behaviour 7−89165
dynamic critical behaviour and renormalisation groups, finite size effects 7−80718
dynamical critical points, classical to quantal behaviour temporal crossover 7−115945
dynamical systems, renormalisation group, fixed points construction 7−120765
dynamical systems, renormalisation scheme 7−73219
effective action asymptotical behaviour in higher derivative gravity 7−116045

renormalisation continued
electron gas, 1D, localized-delocalized transition, renormalization group anal. 7−105435
electron self energy in strong mag. fields, mass operator representation 7−81092
electroweak theory in nonlinear gauge, renormalisation 7−81082
elementary particle models, spontaneous symmetry breaking, multiplets and symm. groups *(German)* 7−128784
Feigenbaum phenomenon, extended renormalisation group study 7−73213
Fermi gas, two mag. impurities, renormalisation group study 7−77223
fermion-gauge field interacting theory, stochastically quantized in odd N, renormalization 7−116057
ferroelectrics, vibronic, magnetically induced spontaneous inhomogeneous currents 7−99771
finite nuclear matter, critical dynamics, renormalisation group anal. 7−81322
finite quantum field theories and supersymmetry 7−134920
finite-cluster expansions, renormalized 7−137511
first order phase transition, multiscale analysis, renormalisation group appl. 7−84197
first-order phase transitions, coarse-graining approach, two ground state spin system 7−125422
four-dimensional volume-preserving maps, symmetric, pitchfork period doubling, renormalisation 7−89125
gauge field theory, variational operator Pade approximants method 7−128791
gauge theories, renormalization 7−81034
Gross-Neveu model, asymptotic completeness and multiparticle structure 7−108736
Hamiltonian period doubling and time reversal invariance, renormalisation of Hamiltonians principal fn. 7−72945
heavy fermion systems, giant Migdal effects 7−112628
Heisenberg magnets, 1D and 2D, spin wave spectra fluctuations corrections 7−99484
heterotic string, spacetime versus world-supersymmetry 7−73140
hierarchical heterostructs., 1D Schrodinger problem, tight-binding model calcs. 7−143306
hierarchical lattices, real space renormalization 7−67251
Higgs mass prediction in standard model, Monte Carlo renormalisation group 7−128795
Hubbard model with random field, tricritical points, mean field anal. 7−124440
hypercubic lattices, dynamic scaling breakdown of bond diluted Ising model at percolation threshold 7−89145
impurity system critical thermodynamics, phase transitions, fluctuating field interaction effects *(Russian)* 7−89180
infinite component local fields, alternative to string theories 7−134940
infra-red Φ_4^4 7−67509
inhomogeneous disordered systems, Goldstone modes 7−84777
interfaces, renormalisation group theory, book contrib. 7−137667
intermediate bosons, longitudinally polarized, scatt. in symm. breaking sector, low energy theorems 7−135004
Ising model, 2D triangular lattice, Monte Carlo renormalization group anal *(Chinese)* 7−102324
Ising model, correlation length critical exponent, renormalisation group calc. 7−89149
Ising model, interfacial free energy calcs. using renormalization group schemes 7−73264
Ising model, operator oriented optimization of block spin transformations 7−80992
Ising model, semi-infinite with edge, critical behaviour 7−70574
Ising model, surface tension critical exponent, renormalisation group calc. 7−91927
Ising models, compressible, effective spin Hamiltonians 7−105938
Ising spins, 2D, with correlated dilution, low-temperature behaviour at the percolation threshold 7−77318
Ising systems, compressible, renormalisation group study 7−140632
Ising-type system, nonasymptotic critical behaviour, ordered-phase case 7−70573
iterated maps, 10, on real axis, renormalization group method 7−134445
Josephson networks, resistive transition, renormalisation method 7−143724
Kadanoff's lower bound variational method, improvement in real-space renormalization 7−89150
Kobayashi-Maskawa matrix, renormalisation group anal. 7−102684
Kondo lattice, coherent heavy-fermion state, renormalisation approach calcs. 7−84867
Kondo two impurities problem, relevance to heavy fermions 7−77220
Landau-Ginzburg-Wilson model, n-component, with cubic anisotropy and random impurities, critical behaviour 7−85340
large-n renormalisation group trajectories, invariants, characteristics and global geometry 7−66916
lattice correlation functions for actions on renormalised trajectories, continuum limit at small correlation lengths 7−121349
lattice Dirac operator spectrum in external U(1) gauge fields, index theorem 7−89344
lattice gauge field theories, renormalization group anal., effective action generation and coupling constant renormalization 7−73495
lattice gauge theory, U(1), compact, renormalization anal. 7−73506
lattice models, critical properties, Monte Carlo finite size scaling and renormalisation anal. 7−121007
lattice QCD, β-function calcs. and asymptotic scaling of 0^{++} glueball mass 7−95856
linear dynamical problems in ultrametric spaces, scaling breakdown, renormalisation group study 7−121009
linear kinetic theory, Enskog renormalisation and reduced distrib. fns. 7−80588
local field theory, phase struct. and vacuum stability, 1/N expansion 7−108805
local potential approximation, nontrivial fixed points 7−108737
local time, functional representation and renormalisation *(French)* 7−95237
localised spins, 1/z renormalisation of temp. Green function, excitations in singlet-singlet model 7−105884
massive spin-2 particles, limiting Lagrangian formalism 7−108746
massive unitary renormalisable Yang-Mills theory without Higgs bosons, one-loop corrections 7−108791
massive unitary renormalisable Yang-Mills theory without Higgs bosons 7−108792
massive Yang-Mills theories, renormalisation schemes and renormalisation group functions 7−134926

renormalisation continued
massless QCD, infrared singularity and struct. fn. of transverse gluon propagator 7−102691
membranes, elastic and fluid, renormalisation of curvature elastic constants 7−67018
metals, one-dimensional univalent, collective state electrons, phonon spectrum renormalisation *(Russian)* 7−70209
micellar solutions, nonuniversality of critical behaviour 7−80649
Migdal-Kadanoff recursion relations, uniqueness of solutions 7−102595
mixed action SU(2) lattice gauge theory, Bell-Mann-Low function, Migdal-Kadanoff determination, scaling parameter 7−108766
momentum-scale-dependent bounds on masses in two models with more than one Higgs multiplet 7−108831
Monte Carlo renormalisation group, appl. to mag. critical phenomena 7−112807
multiflavour Gross-Neveu model, exact soln. and renormalization group β function 7−67485
multiplicative and additive renormalization 7−67506
N=2 supersymmetric and gauge invariant interactions from harmonic superspace with central charges 7−140793
N=4 Yang-Mills theory, spontaneous symmetry breaking in quasi-super-renormalisable models 7−73514
nematic liquid crystal, isotropic-nematic phase transition in $2+\epsilon$ dimensions 7−137560
no-scale supergravity, radiative SU(2)×U(1) gauge symm. breaking, renormalisation framework 7−108378
non-equilibrium thermodynamics, renormalization group techniques appl., 1D spin model 7−108497
nonabelian gauge couplings, temp. dependence at finite temp., momentum-space subtraction method 7−116069
nonequilibrium critical phenomena in one-component reaction-diffusion systems 7−128514
nonlinear σ model, field-diffeomorphism anomalies, spectral series technique, Riemannian constraints 7−140802
nonlinear O(N+1) σ-model, BRS renormalisation, characterisation 7−108759
nonlinear resistor network, randomly diluted, field-theoretic formulation 7−80629
nonperturbative vacuum props., dynamical chiral symm. breaking and quark mass 7−108860
O'Raifeartaigh model, nonlinear, in four dimensions, spectator fields 7−108818
O(N) $\lambda\phi^4$ model, higher order contributions in finite temp. renormalisation 7−73536
O(N) σ model, symm. restoration at finite temp. 7−102644
O(N) symmetric $\lambda\phi^4$ theory, Gaussian-effective pot. approach 7−81011
on mass-shell renormalisation conditions for particles with mixing 7−128793
one-dimension, Kondo effect and mutual interaction 7−143760
one-loop N=2 supercurrent anomaly, superspace calcs. 7−81051
Peierls instability, dimensional regularisation approach, 1/N expansion 7−131558
period doubling sequences with correlated noise, scaling, renormalization group anal. 7−140612
phase space analysis and particle structure, asymptotically free and renormalizable models 7−121333
phase transitions, loop renormalization of Ginzburg-Landau free energy functionals 7−105012
phase transitions and critical phenomena, book 7−134379
polyacetylene, electron-phonon coupling and disorder 7−105416
polymer coil-globule transition by real space renormalisation 7−108434
polymer mixtures, dil. soln., crossover anal. using renormalisation group methods 7−83777
polymer solutions, hydrodynamic radius, Kirkwood-Riseman model, renormalisation group method 7−124071
polymer solutions, semidilute, in theta domain, renormalisation group study 7−117798
polymer system, symmetry, phase transition, n=0 limit 7−112829
polymers, sheet, tethered surfaces, equilib. conformations and dynamics, renormalisation and Monte Carlo methods 7−95498
Potts model, conformal invariance, Monte-Carlo finite-size scaling, surface magnetic exponent 7−128476
Potts model, ferromagnetic, mapping between hierarchical lattices, renormalization and duality 7−128474
power spectrum for renormalisation group eqns., universal scaling factors 7−120923
proton wave function from lattice gauge theories 7−80987
pseudoscalar Yukawa model, infrared asymptotic freedom at the critical point 7−89316
q-state Potts model, correlated percolation, critical amplitude calcs. 7−120999
q-state random Potts model, critical behaviour and renormalization group eqns. 7−95495
QCD_4, Langevin renormalization of Green's fns. 7−108808
QCD, asymptotically similar series, external field problems, renormalisation, N mag. moment 7−108862
QCD, dynamical symmetry breaking, quark masses, decay const., renormalisation group corrections, meson masses 7−135039
QCD phase transitions, renormalization group anal. for SU_n, n=2, 3, 4 gauge theory 7−95854
QCD renormalisation group eqn. at finite temp., effective coupling constant 7−140885
QED, finite-temperature and -density renormalisation, effect, radiative corrections 7−108844
QED, renormalisation and radiative corrections at finite temp. 7−89424
QED, renormalization-group β-fns., four-loop corrections, minimal subtraction, momentum subtraction schemes 7−140872
quantum ferroelectrics, struct. phase transition, dielectric susceptibility temp. depend. 7−125642
quantum field theory, renormalization group and cocycles 7−121357
quantum Ising model, pure and dil., position space studies, 2D and 3D calcs. at T=0 7−89144
quantum mechanical renormalization, indeterminancy, set theoretic anal. 7−89043
quantum particle in random pot., multifractal wave fn. at localization threshold 7−134701
quantum phase transitions, quenched disorder effects, renormalisation group approach 7−121038
quantum spin glass, RKKY interaction, real space renormalisation study 7−112824

renormalisation continued
quantum systems with random fields, crossover phenomena and criticality, renormalisation group study 7−121040
quark and gluon propagators in perturbative QCD, infrared asymptotic behaviour 7−128855
quasicrystals, one-dimensional, electron spectrum calcs. 7−105369
random axis magnet with infinite anisotropy, ferromagnetic, spin glass and disordered phase calcs. 7−85310
random discrete wave eqns., localization estimates and renormalization transformations 7−73038
random resistor network, Potts model formulation, critical exponents determ. 7−95502
random resistor network at percolation threshold, infinite set of exponents, renormalization group anal. 7−80659
random-bond D-2 Ising model, explicit momentum-space renormalisation-group anal. 7−120998
randomly inhomogeneous medium, infrared representation and large-distance behaviour 7−102627
randomly inhomogeneous medium, light propagation, renormalisation group and 4−ε expansion 7−74850
rare earth impurity systems, thermodynamic props., f-d Coulomb repulsion effects 7−76448
Regge lattices, cone subdivision, renormalisation group approach to quantum gravity 7−67159
Reggeon field theory, coloured, solitonic approach 7−73562
regular expansion for calculation of the renormalization-group functions in a theory with dimensional coupling constants 7−73541
renormalization group methods in gauge field theories 7−67504
right-handed gauge bosons, masses from renormalisation group equations 7−134998
rotor molecule in atomic cryomatrix, renormalised cryst. field calc. *(Russian)* 7−137867
scalar field theory, continuum limit and dimensionless renormalised coupling constant behaviour 7−89377
scalar field theory, renormalisation, form factors, resummations 7−67507
self-avoiding walks, critical exponents on finitely ramified fractals 7−80610
semileptonic neutrino scatt. experiment analysis, $\overline{\text{MS}}$ and on-shell renormalisation schemes 7−95889
Sierpinski gaskets, multi-layer and single-layer, Ising crossover 7−102340
sigma model, 2D nonlinear conservation laws, 1/N expansion 7−67468
simple cubic lattice, crit. percolation in three dimens., Monte Carlo renormalisation group approach 7−134694
simple quadratic Ising model with crossing bonds, ferromagnetic critical line 7−85334
single impurity Anderson model, many body phenomena simulations 7−124910
solid state, quantum field theory renormalization 7−76718
spin glass models, renormalisation group anal. 7−70568
spin glasses, chaos, renormalisation group study 7−112840
spin systems, dissipative, dynamic crit. phenomena, centre-manifold renormalisation 7−102309
spin wave energy thermal renormalisation, quantum mechanical expression 7−112805
spin-field correlators on Riemann surfaces and string nonrenormalization theorems 7−81068
string loop corrections to beta functions 7−116059
SU(2) gauge theory, finite temp. phase transition, Monte Carlo renormalisation group study 7−95750
SU(2) Higgs model, attempered renormalisation group scheme in 4D 7−108788
SU(2) lattice gauge theory, modified MK transform., single plaquette action 7−134915
SU(2)d Higgs model, symm. restoration at finite temp. 7−102644
$SU(3)_C \times SU(2)_L \times U(1)_Y$,$[\times(U(1))^2, \times U(1)]$ models with two, one, no Z bosons, gauge symmetry breaking, particle spectrum 7−73569
$SU(3) \times SU(2) \times U(1)$ model, probing the desert by the two-loop renormalization-group equations 7−102659
superconductors containing transition-metal impurities, strong-coupling theory 7−85182
superstrings, fourth generation, renormalisation group scaling of gauge couplings 7−95870
supersymmetric Adler-Bardeen theorem and regularization by dimens. reduction, axial current anomaly 7−128761
supersymmetric sigma models with torsion, β-functions and central charge 7−73531
supersymmetric systems, Casimir stress in plane geometry 7−89395
suspensions, non-dilute, transport props., renormalisation studies 7−111066
TGS, elastic moduli near the phase transition, fluctuation contributions 7−84082
thermal equations of state, renormalization group anal. 7−131264
thermal Goldstone theorem at finite temp. and density, Schwinger action principle 7−108782
thermofield dynamics, nonequilibrium processes and dissipative effects 7−121383
thermofield dynamics, renormalized soliton statistics 7−116078
$(TMTTF)_2AsF_6(PF_6)(Br)$ salts, spin-Peierls transition evolution under press., renormalisation group anal. 7−77313
toroidal magnetic confinement fusion device, mag. field lines struct., Hamiltonian stochasticity 7−130918
transitions to chaos, fractal bifurcation sets, renormalization strange sets and their universal invariants 7−134670
tree approximation, ϕ^{2n}-theories with random fields, critical dynamics 7−80719
triangular ising ferrimagnetic 2D model, transfer matrix and phenomenological renormalisation methods 7−92452
triangulated random surfaces with extrinsic curvature, discrete model 7−140637
turbulence, hydrodynamic eqns., ε expansion 7−123602
turbulent magnetised plasma, quasilin. renormalisation theory 7−97742
two-dimensional Ising model, generalised Gaussian model with randomness, replica method exactness, crit. renormalisation 7−80666
two-loop effect on the heavy quark mass near the fixed point 7−102662
two-loop Gell-Man-Low function, operator product expansion and calc. 7−67501
U(1) lattice gauge theory, phase struct. and Migdal-Kadanoff renormalisation 7−102592
unbroken SUSY models, generalised non-renormalisation theorems, Konishi anomaly 7−128781
renormalisation continued
universality of deconfining phase transition in finite-temperature lattice gauge theories 7−95757
universality of strange attractors in dissipative systems 7−128448
vacuum polarisation eqn. of state in QED 7−89423
Vilkovisky-DeWitt effective action, appl. to Yang-Mills theories, renormalizability 7−116062
weak disorder media, classical diffusion 7−102361
weak itinerant antiferromagnetism, spin fluctuations, self-consistent renormalisation theory 7−131982
Weinberg angle correction in GUT's, Pade approximation anal. 7−67550
Wess-Zumino model, one-loop pot. and supersymmetry renormalisation 7−81029
Wess-Zumino-Witten model, dimensional regularisation and renormalisation 7−95742
wetting transitions, scaling regimes and functional renormalisation 7−137509
Weyl gravity theory, asymptotic effective action, renormalisable theories, asymptote calculation with SU(2) field interaction 7−115886
Wilson loops, cusp singularities, anomalous dimension, perturbation expansion in Minkowski space, cusp angle 7−116084
X-Y model, fully frustrated, domain wall induced X-Y disorder 7−92435
X-Y model with cubic anisotropy, Monte Carlo and coarse graining renormalisation studies 7−67246
Yang-Mills theory, charge renormalisation to fourth order using dimensional regularisation 7−128754
Yang-Mills theory, phase cell approach, local stability, modified renormalisation group transform 7−89324
Yang-Mills theory, stochastic quantisation, gauge-fixing parameter dependence, equilibrium limit, gluon-selfenergy 7−121362
Yang-Mills theory coupled to matter, one-loop β-function in higher covariant derivative regularisation 7−102589
Z(q) spin model, 2D, mean-field-like variational and renormalization group anal. 7−128473
zero mass renormalisation and scaling hypothesis 7−121384
Zwanziger gauge fixing, Langevin renormalization 7−108808
$Gh' \rightarrow \eta 2\pi$, Chiral lagrangians, predictive power; renormalisation effects, quark and baryon loop duality 7−134976
$\pi\pi$ scattering, Chiral lagrangians, predictive power; renormalisation effects, quark and baryon loop duality 7−134976
^{32}Ar superallowed β-decay, axial-vector strength renormalisation 7−109124
Dy, paramagnetic and antiferromag. states, muon probe studies 7−70520
EuO, Heisenberg ferromag., critical spin dynamics 7−143836
GeTe, structural phase transition temperature, ab initio determination 7−137545
$^{206}Hg(0^+) \rightarrow {}^{206}Tl(0^-)$, renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839
$^{206}Tl(0^-) \rightarrow {}^{206}Pb(0^+)$, renormalization of charge density due to meson exchange effects, reduction in logft values 7−102839
U heavy fermion cpds., mean-boson field theory 7−112159
repackaging *see packaging*
repeaters
optical, Er^{3+} doped fibre amplifier operating at 1.54 μm 7−141881
optical using InGaAsP 1.5 μm travelling-wave laser amplifier with 5.2 dB noise figure 7−68631
semiconductor laser-amplifier repeater, bidirection and two-channel transmission system meas. 7−136600
replica techniques
grazing incidence optics replication 7−97182
ice crystal replication, application of common plastic solns. 7−128551
metal shadowing, high melting point, for high resolution freeze replica 7−87395
steam turbine component embrittlement, grain boundary segregation evaluation 7−126394
replicas
spin glasses, mean field theory, broken replica symmetry 7−85316
Al-MgF_2 replicated coating aspheric mirrors for far UV, quality control and ageing tests 7−103928
reproduction (copying)
see also photocopying; printing
CdS photoreceptors, development for xerography 7−80917
research and development management
see also research initiatives
ceramics and ceramic composites 7−71127
MHD generator and open-cycle system research, national and international *(Dutch)* 7−119666
Netherlands research on solar cell technology *(Dutch)* 7−86785
NRC research-regulation interface 7−89685
nuclear fusion, European Economic Community approach *(Italian)* 7−133042
picture processing techniques for interpreting experimental data, using AI methods 7−140680
Swedish hydroelectric power development experience 7−126543
research initiatives
computational fluid dynamics, research at National Aerospace Laboratory, Japan 7−136908
digital optical computing 7−122863
materials properties, database system, computer network; MIST Project overview 7−132421
power metallurgy, technology at Krupp 7−77883
SAWs, historical review and Polish-research activity *(Polish)* 7−97189
PLZT ceramics, research programme at Shanghai Institute of Ceramics 7−92616
residual stresses *see internal stresses*
resins *see polymers*
resistance (electric) *see electric resistance*
resistance furnaces
lead-ins with conical seals, for high-pressure chambers 7−134800
Mo resistance heater 7−128582
resistance noise *see thermal noise*
resistance thermometers
AC measuring techniques for applications in precision resistance thermometry *(German)* 7−73347
adiabatic colorimeter, computer controlled with pyroelec. thermometer, sp. ht. meas. 7−108560
calibration facility for low temperature thermometry, automated 7−121132
calorimetry sensors selection *(German)* 7−121129

resistance thermometers continued
film resistance thermometers, sensitivity and appls. *(German)* 7−89222
low temp. meas. using thermometers and thermocouples *(Czech)* 7−128577
microcomputer attachment, thermistor probe construction 7−115958
multilayer thin film heat transfer gauges, theory 7−128572
Neil Brown Mark III CTD, algorithm for combining separately digitised fast and slow temp. signals 7−133948
self-heating and self-cooling effects on temp. meas. *(Polish)* 7−140701
semiconductor thermistor thermometer 7−108552
thick film, for use below 1 K, heat capacity obs. 7−102416
thin film cryogenic thermometer 7−73369
Al, thin film device for 77-350°K range 7−102411
Ga triple-point temp. meas. using resistance thermometer, reproducibility *(Japanese)* 7−140700
Ge resistance thermometer calibration using ^{4}He supercond. transition temp. *(Korean)* 7−80789
Ge resistance thermometry in high mag. fields and low temps., comment 7−89218
Ge resistance thermometry in high mag. fields and low temps., reply to comment 7−89219
Pt, discontinuity meas. in dt/dt_{68} at 630.74°C in IPTS-68 7−89221
Pt resistance temp. detectors, processing conditions effects 7−128578
Pt, resistance thermometers, stability, 13-273 K 7−80786
Pt thin-film resistance thermometer development and manufacture *(Swedish)* 7−121119
Rh-Fe thin films, temp. coeffs. of resistivity, cryogenic thermometer appl. 7−125146
resistance welding
solar cell welding, Indian Space Res. Organisation technology 7−144868
Si connector integrated solar cells, in-plane stress-relief interconnector AC welding 7−144872
Si thin solar cell welding and assembly methods and environmental tests 7−144865
resistivity *see electrical conductivity*
resistors
see also photoresistors; posistors; thermistors; thick film resistors; thin film resistors; varistors
film resistance thermometers, sensitivity and appls. *(German)* 7−89222
neutron yield of plasma focus device, nonlin. damping resistors influence 7−69482
tensoresistors charact. determ. 7−121092
C epoxy resin resistors, elec. cond., temp. depend. *(Japanese)* 7−70370
C resistor type level detector of liquid He for supercond. generators 7−73366
Cr-SiO cermet thin films, prep. and elec. props. 7−132469
Cu wire resistor aging model *(Russian)* 7−119406
Si polycrystalline resistors, negative resist. charact. anal. 7−118493
ZnO based nonlinear resistors, sintered, microstruct., density rel. to additives 7−106473
resists
see also electron resists; photoresists
electronic devices using Langmuir-Blodgett thin film method with resist materials *(Korean)* 7−124691
PMMA copolymers, irrad.-induced degradation and sensitivity, resist appls. 7−142835
polymeric resists, wavelength depend. of excimer laser etching 7−93122
Ge-S-In(Ga) glasses, appls. in microelectronics and optics 7−103915
resolving power (optical) *see optical resolving power*
resonance
see also atomic beam electric resonance; circuit resonance; cyclotron resonance; dielectric resonance; Fermi resonance; magnetic resonance; magnetoacoustic resonance; molecular beam electric resonance; optical double resonance; vibrations
astrophysical fluid dynamics, ang. momentum transfer in resonant disk-satellite interaction 7−88101
celestial mechanics, 3/1 planar circular resonant problem anal. 7−72255
celestial mechanics, integration theory for extended Delaunay method 7−72259
circular cylinder, infinite perfectly conducting, numerical evaluation 7−96920
collapsible tube, self-excited and resonant oscillation of air flow 7−104349
conservative oscillating systems, inner resonances and orbital instabilities *(German)* 7−102157
dipole moments coupled by EM field, reson. interaction, scatt. theoretical treatment *(German)* 7−89048
galaxies, resonant induction of spiral struct. by satellite galaxy *(Russian)* 7−107966
He-like ions, collisional excitations rate coeffs. with inclusion of reson. effects 7−94650
localisation, appl. to model pots. 7−102195
membranes, resonance amplification of external influences, math. model 7−144990
metal optical constants determ. by surface polariton excitation using attenuated total reflection *(German)* 7−113306
N-body Schrodinger operator, absence of high energy resonances, dilated Hamiltonian eigenvalues 7−102215
parametric resonances when dry friction forces are present 7−95301
restricted-excitation oscillatory system, motion near resonance 7−120794
rod, flexurally vibrating, dispersion factor of generalised acoustic model 7−130448
shell, ellipsoidal, in fluid, transition surfaces for short-wave vibrs. 7−75396
resonance reactions and scattering, nuclear *see nuclear resonance reactions and scattering*
resonances, baryon *see baryon resonances*
resonances, meson *see meson resonances*
resonant absorption of gamma-rays *see Mossbauer effect*
resonant cavities *see cavity resonators*
resonant cavity wavemeters *see wavemeters*
resonant gamma-ray interactions in crystals *see Mossbauer effect*
resonators
see also cavity resonators; crystal resonators; dielectric resonators; resonance
2D EM field, lines of equal phase and closure conditions 7−129935
electromagnetism eigenvalue problem, weak formulations and FEM 7−103722
free electron lasers, status and perspectives for theory and expts. 7−123001
resonators continued
Helmholtz resonator and SQUID reading device for superfluid flow obs. through aperture 7−73365
radially-oscillating resonators, appl. to low-freq. acoustic impedance logging of Lamb-Stoneley waves 7−145685
SAW devices, fundamentals, materials and design 7−110692
CO_2 laser radars, optical resonator design 7−75027
resource allocation *see operations research*
reticles *see masks*
retina *see eye*
retrieval, information *see information retrieval*
revaporisation *see vaporisation*
reverberation
see also anechoic chambers; architectural acoustics; echo
autoregressive modeling of nonstationary multibeam sonar reverberation 7−123306
decay rate meas. 7−97239
DR1 digital reverberation system from Applied Research and Technology 7−90890
room reverberation times and reverberation levels 7−68950
stereo reproduced sound fields, interaural cross-correlation coefficients *(Japanese)* 7−130469
reverberation chambers
asymptotic modal analysis for sound fields of a reverberant chamber *(Japanese)* 7−68963
ensemble relative variance of random noise in reverberation room 7−97214
monaural hearing aids, linearly constrained adaptive beamforming for interference reduction 7−114559
reverse martensitic transformations
alloys, shape memory and hyperelasticity, martensitic deform. and transform. *(Japanese)* 7−118019
phase equilib., internal variable models 7−84233
steel, austenite transformation on high-speed and laser heating 7−86172
steel, maraging, $\alpha \rightarrow \gamma$ transform., effect of deform. 7−106506
steel, stainless, strain induced austenite transform. 7−132612
Ce, isostructural γ-α reversible transition nucleation features 7−138742
Cu-Al-Ni, reverse martensitic and intermartensitic transformations, thermal effects *(Russian)* 7−113551
Cu-Al-Ni (13.99, 3.5 wt.%), shape memory alloy, two-stage martensitic transform. 7−100222
Fe-Ni-Mn alloy, α' to γ transform., secondary austenite form. 7−144397
Fe-Ni-Ti, aging alloy, martensite to austenite transform. 7−106507
Ni-Al coating, β-phase instability, scale resist. of surface layer 7−78344
Ni-Ti, thermal cycling, precip., martensitic transform. 7−113560
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7−126110
NiTi alloy, two-stage yielding 7−78134
TiNi, alloyed, shape memory effect and martensitic transform. *(Chinese)* 7−126115
$Ti_{0.5}Ni_{0.5-x}Cu_x$, martensitic transformations, sound emission studies *(Russian)* 7−100219
reversible shape memory effect *see shape memory effects*
reviews
see also Bibliography Index (special index bound with Author index)
50 years of neutron diffraction, book 7−108065
A15 superconductors, fabrication techniques, review 7−126047
acoustic analogues of nonlinear-optics phenomena 7−104081
acoustic and photoacoustic effects, optical meas. 7−123373
acoustic charge transport devices overview 7−123370
acoustic fields, holographic and nonlinear optical imaging methods 7−130490
acoustic immittance of ear in Meniere's disease 7−86994
acoustic ringing effects in pulsed Fourier transform NMR spectroscopy 7−108607
acoustic waveguides, low freq. discontinuity calcs. *(French)* 7−142067
acousto-optical methods and devices 7−113128
actinide containing systems, photoelectron spectra 7−77754
actinide intermetallics, electronic struct. and mag. props., review 7−76759
active galaxies, classification and prospect of unified phenomenology 7−134311
active noise control systems 7−110673
acuity and hyperacuity, optical resolution, spatial localization, form perception 7−145015
adaptive optics in laser systems 7−82598
adhesion, contemporary theory review 7−138954
AELs, recent developments 7−74945
aerodynamic atomisation of liquid droplet in gas stream, expt. results review 7−136944
aerodynamics, viscous-inviscid interactions in external flow 7−111012
airborne cloud-physics projects, 1974 through 1984, review 7−79492
airglow studies in India 7−87994
allotropes and polymorphs study 7−108097
alloys, amorphous, mag. props., amorphisation effects, review 7−85264
alloys, high temp., cyclic oxidation, thermal stresses, oxide scale spallation 7−119420
alloys, oxidation, review of key principles 7−119419
alloys and coatings, α-Al_2O_3 scale growth and adhesion 7−78327
amorphous semiconductors, EXAFS, review 7−77690
amorphous solids, atomic short range order determ. methods 7−83704
amorphous state, structural aspects 7−142582
analytical electron microscopy 7−100476
Anger scintillation camera automatic tuning 7−107236
angled cracks limiting equilibrium and development, review of criteria 7−75425
anomalons in relativistic heavy-ion collisions 7−67864
Antarctic ice streams, review 7−145536
applied potential tomography evaluation: clinician's view 7−87296
APWR, state of art *(German)* 7−73828
aromatic cpds, liq. soln., triplet excimer phosphoresc., review 7−68404
artificially structured thin-film materials and interfaces 7−113397
astrophysical diatomic molecules, mol. ions and radicals 7−140383
astrophysical rotators, ecology (interaction with environment, and evolution) 7−94643
Aten-Apollo-Amor close-approach minor planets, review 7−88167
atmosphere, boundary layer flow over low hills 7−107462
atmosphere laser remote sensing, techniques and appls. 7−120717
atmospheric aerosol, sizes of particulate sulphate and nitrate 7−78700
atmospheric boundary layer, recent research, review 7−120107

reviews continued
atmospheric columnar vortices 7−120106
atmospheric dynamics, work done by Americans in AD 1983 to 1986 period 7−120103
atom ionisation by lasers *(French)* 7−109844
atom probe FIM, material science appl. review 7−132853
atom-surface interaction potentials, mol. beam expts. 7−144226
atomic, ions, spectral manifestations of configuration interactions review *(Swedish)* 7−122369
atomic cluster size distribution and cluster generation in atomic beams 7−74802
atomic effects of electrons and protons at low energies 7−74770
atomic emission spectroscopy, spectral interferences study 7−100682
atomic ions, electron-impact ionisation indirect processes, HF calcs. 7−141693
atomic ions, trapped, laser spectroscopy review 7−135890
atomic oscillators 7−115949
atomic photoionisation cross sections, many-body calcs. 7−122480
atomic resonance ionisation mass spectrometry review 7−93456
atomic spectroscopic anal. of biological material review 7−101162
atomic spectroscopic methods of Bengt Edlen's Handbuch der Physik, review 7−109824
atomic spectroscopy techniques development *(Italian)* 7−86687
atoms, above-threshold ionisation, pondermotive pot. effect 7−96622
atoms, many-electron, radiative transition matrix elements, field theory approach 7−122352
atoms, multiphoton ionisation by intense laser fields 7−96615
atoms, multiple-electron perturbations, nonperturbative techniques 7−96625
atoms, relativistic many-electron Hamiltonians study 7−141453
auditory prostheses: implantable and vibrotactile devices 7−107309
aurora and airglow 7−120196
austenitic alloys, irradiation induced microstructural evolution rel. to mech. props. 7−69770
automatic implantable cardioverter defibrillator, clinical and technical review 7−127039
bag model of hadron struct., review 7−128862
Bainite, three definitions comparison 7−132605
ball lightning, props. and nature, review 7−133874
Bauschinger effect, histories perspectives and main features 7−120749
Bauschinger effect, structural aspects, review 7−126182
o-benzyne, N_2 matrix isolated, vibr., IR spectra 7−82116
binary alloys, diffusional growth of multiphase scales 7−86432
binary logic by spatial filtering 7−74862
binary stars, intermediate-mass, merging of components through orbital ang. momentum loss 7−146042
bioelectrodes, phys. studies and recent trends *(Japanese)* 7−119916
biological effects of heavy ions phys. track struct. research review 7−145142
biological molecules, functional size determ. by radiation target theory meas. 7−71670
biological processes, low power monochromatic mm range EM radiation effect 7−107155
biological system optical characts., use of light absorpt., emission, scatt. and refl. *(Japanese)* 7−87092
biological systems, passive elec. props.: significance in physiology, biophys. and biotechnology 7−145014
biomedical instruments, development in developing countries 7−114523
biomedical sensors, trends over last decade 7−79110
biomedical X-ray instrumentation: X-ray CT and digital radiography *(Japanese)* 7−119845
biomembranes, ionizing radiation effects 7−78997
biomolecules, mol. dynamics 7−133188
biosensors: clinical requirements and scientific promise 7−107266
biosystem characteristics for absorpt. and scatt. of X- and γ-rays *(Japanese)* 7−87093
biosystem EM field distrib. meas. instrumentation *(Japanese)* 7−119915
biosystems characteristics recognition by phys. instrumentation, development of X-ray CT *(Japanese)* 7−119885
blood gas measurement of O_2, CO_2, inert and anaesthetic gases, review 7−93986
boiling heat transfer historical developments from 1930 7−134417
bone mineral measurements in normal subjects, effect of fat 7−101054
boundaries, cavitation bubbles, expt. and theoretical developments, book contrib. 7−97589
bow shock and magnetopause 7−127645
brittle materials, fracture toughness and fatigue testing, double torsion method 7−100466
bufadienolides, cardiac glycosides, ^{13}C NMR 7−66852
butalene, stability assessment, approximate HMO calcs., review 7−89970
Canadian research on fusion reactor materials, review 7−141309
CANDU reactors, once through thorium cycles 7−96218
carcinogenesis models, review of radiobiology and radiological and chemical physics research 7−78950
carcinogenic and cocarcinogenic effects of radiation in rat mammary carcinogenesis and mouse T-cell lymphomagenesis 7−114376
cardenolides, cardiac glycosides, ^{13}C NMR 7−66852
cardiac micropotentials, progress in study methods 7−86955
cardiovascular surgery, laser use overview 7−87151
CARS application to combustion devices, review 7−113934
cataclysmic binary stars, cyclical evolution through dwarf nova and classical nova stages 7−145978
cataclysmic binary stars, distances 7−88422
cataclysmic variable stars, absolute magnitudes 7−107860
cathodic arc deposition technology 7−71084
cavity nucleation at high temperatures involving pile-ups of grain boundary dislocations 7−111574
celestial mechanics, unsolved problems 7−72256
celestial mechanics, unsolved problems in solar system dynamics 7−72257
cellular electromanipulation, phy. and biological aspects 7−79155
cellular responses to ionising radiation: effects of interrupting DNA repair with chem. agents 7−114392
cellulose, and derivatives, NMR spectrosc. with magic spinning *(Japanese)* 7−132147
ceramic fibres, synthesis from organometallic polymers, mech. props. 7−77901
ceramic high temperature superconductors *(German)* 7−143728
ceramics, advanced structural and composites reliability 7−77777
ceramics, chemically bonded, new strong cement materials 7−113502
ceramics, fusion appls. 7−129381
ceramics, microstruct. engng. for high-temp. appl. 7−77914
reviews continued
ceramics, structural, tailoring of thermal transport props. and thermal shock resist. 7−78243
ceramics, term definition and interpretation 7−70992
cerebral blood flow measurement techniques 7−114466
Z Cha, dwarf nova, photometric and spectroscopic obs. rel. to struct. and evolutionary state 7−115448
channel modeling and threshold signal processing in underwater acoustics: an analytical overview 7−123302
charged particle interactions in few-body systems, quantum mechanical scatt. theory, review 7−128368
chemical anal., fibre optic sensors, review 7−130386
chemical analysis methods based on nucl. principles *(Italian)* 7−86688
chemical shieldings in solids 7−80198
chemisorption and electrochemisorption, cluster approach 7−93371
China coastline, description and classification 7−94195
chlorophyll frozen solns. spectra, zero-phonon lines studies, review *(Russian)* 7−106972
chondritic meteorites, props. of type 3 ordinary chondrites 7−94834
chromatography technique using supercritical fluids 7−114049
circular jet in cross flow, aerodynamics, review 7−111044
classical nova outbursts, review 7−120427
climate and palaeoclimate models 7−127458
climate of Europe in fourteenth and fifteenth centuries 7−139742
cloud and precipitation physics research, 1983 to 1986 AD 7−120105
α CMa (Sirius), review of props. *(French)* 7−120392
coals, Mesozoic and Tertiary, as major energy resource, geological and economic significance 7−86747
coastal ocean physical processes 7−114796
cochlear emissions, spontaneous, review of present experience 7−78902
cochlear potentials in the study of cochlear physiology 7−78894
coda waves 7−139494
collision dynamics with nonlocal complex potentials 7−141700
colour centre lasers 7−68658
combined light microscopy and SEM techniques, review 7−145294
P/Comet Halley (1982i), 1981-6 visual brightness behaviour 7−88307
P/Comet Halley (1982i), motion *(Polish)* 7−127779
P/Comet Halley (1982i) assessment of results from 1986 observing campaign *(French)* 7−139968
comets, plasma-solar wind interaction 7−79881
comparative high-speed impact with penetration tests on materials 7−78420
complex molecules, vibronic spectra and intensities in Raman spectra 7−141561
compound semiconductors, MOVPE, review of growth systems and environments 7−77841
compressible fluid, unsteady and transient flow in pipelines, review 7−83343
computer communications and data networks, user-oriented survey for astronomers 7−72319
computer graphics in X-ray crystallography *(Japanese)* 7−133524
condensed matter physics, open problems 7−76717
condensed mediums, investig. using polarisation echo method 7−123297
condensed-matter physics through the 1990's, book 7−108051
conductive polymer electrodes, electroactive, appl. to nonaqueous secondary batteries, review 7−93494
contact binary stars, polarisation props. 7−88526
contactless inspection of polymer coating thickness in prod. line 7−71445
contaminant transport in groundwater, modelling 7−114137
continental lithosphere, coincident seismic reflection/refraction studies 7−139535
continental rifts, struct. of sedimentary fill 7−79388
continuous fluid and plasma, generalised Hamiltonians, functional integration and statistics 7−111170
continuum damage mechanics 7−130601
convergent acoustic waves, laser generation, appl. to materials evaluation 7−123374
cool star chromospheres, UV spectra study 7−127848
coral reef studies, appls. of remote sensing 7−79430
core-level binding-energy shifts at surfaces and in solids, photoelectron spectroscopy obs., review 7−113353
coronal mass ejections, review of recent work 7−127823
corrosion, high temperature 7−86380
corrosion, pitting and crevice, theoretical modelling, review 7−93143
corrosion protective coatings, energy producing systems appl. review 7−86387
corrosion test methods 7−113812
cosmic ray composition, galactic and solar cosmic rays 7−127664
cosmic ray solar modulation and heliosphere anomalous components 7−127659
cosmic rays, Fermi acceleration, first order, at collisionless astrophysical shock fronts, review 7−145792
cosmic rays and solar wind, recent research 7−127674
coupled discretised continuum channels, method formalism 7−102850
covalent crystals, dislocations, review 7−76129
CP stars, progress in detection and classification 7−127890
CP violation, present and future tests 7−116089
creep microstructural models for pure metals 7−69014
critical binary mixtures, shear flow problems 7−83385
cross correlation flowmeters, design and appl., book 7−134385
crust, studies with Magsat and surface mag. data 7−139463
cryogenic fluids, transport properties, review 7−124579
cryogenic refrigeration methods for low and ultra-low temps. 7−140705
cryopumping, design features and performance parameters 7−115973
crystalline solids, stress-induced cleavage microcracking, micromech. theories 7−97430
crystals, electrogyration props., review 7−125698
CT, quantitative appls.: comparison of current scanners 7−93923
CT, X-ray emission and mag. reson., status survey 7−145210
Curie temp., spin reorientation, anisotropy and magnetisation 7−70544
cytochrome P-450 metabolism, organometallic aspects 7−93620
Czechoslovakia, seismotectonic model of upper crust 7−101220
DC arc, optical emission spectroscopy radiation source, review 7−82740
dense plasmas, thermodynamics, transport coeffs. and dynamic correlations, review 7−83430
detonation spraying of protective coatings 7−144270
diagnostic imaging developments, MR and NMR imaging 7−79062
diagnostic radiology 7−114464
diamond film growth from vapour phase, characterisation *(Japanese)* 7−71082

views continued
dielectric crysts., electro-optical effects and device appls., review 7−125696
dielectric properties of mammalian tissues and biological fluids from 1 Hz to 10 GHz 7−86946
diffusion in organised assemblies and biological membranes 7−114201
diffusion mechanisms and thermal equilib. defects in Si and Ge, review 7−98568
digital flowfield imaging technology 7−142408
dilute fractal networks, structure dynamics 7−73224
diode tunable laser technology development, overview 7−68704
direct drive laser ICF, present status and future prospects 7−81703
direct recoil sputtering and secondary ion production 7−125889
dislocation drag mechanisms, review 7−76128
disordered materials, survey of amorphous solids 7−111402
disordered metals in 1D, spatial dispersion of conductivity, temp. and freq. depend., review 7−98997
disordered semiconductors, critical phenomena near the metal-insulator transition, review 7−143349
disordered systems, electron and mag. behaviour 7−70567
dissipative dynamical systems perturbed by noise, macroscopic nonequilibrium pot., review 7−134677
dissipative two-state system, dynamics, functional integral approach, review 7−67080
DNA and polynucleotides, mechanisms of radiation-induced strand break form. 7−145144
dose-effect relationships and general mechanisms of combined exposures 7−114391
double layer form. in magnetically confined plasma in magnetosphere 7−117733
dye lasers, energy transfer type 7−68627
dynamic failure of solids 7−69061
dynamical systems with mode-locking and chaos, phase diagrams 7−73225
E. coli ribosome, approaches to a 3D model 7−86928
Earth crust deformation and contemporary plate motions, review 7−133654
Earth interior 3D structure from seismic studies 7−133605
Earth rotation, pole position and day-length variations 7−133552
Earth tides, review of publications (1983 to 1986) 7−133548
earthquake physics *(Polish)* 7−71981
eclipsing binary astronomy, amateur contributions 7−72338
El Chichon 1982 eruption, global atmospheric perturbations 7−139719
elastic recoil spectrometry, quantitative, mass and energy dispersive, resolution 7−116024
electrical properties of biological systems *(Japanese)* 7−86952
electro-stimulation, scientific basis, bone fracture/disease treatment appl. 7−79124
electrochemical interface, models for struct., review 7−124706
electron energy loss spectroscopy 7−103657
electron holography, development, techniques and applications, review 7−141818
electron microscopy, intermediate voltages 7−80943
electron pair correlation in atoms and mols. review 7−89979
electron-phonon coupling, review 7−70212
electron-phonon interactions and impurity mol. low temp. optical spectra zero-phonon lines *(Russian)* 7−106222
electronic theory for materials science 7−113357
electrostatic drift wave turbulence, numerical simulation 7−111223
electrostatic interaction modelling in globular protein function 7−78721
electroweak interaction process, charged and neutral currents, review 7−89400
electroweak interactions, spontaneously broken gauge symmetry, review *(Rumanian)* 7−81090
ellipsometry methods and apparatus 7−115993
EM energy, diagnostic and therapeutic appls. 7−87135
EM field meas. in biomedical appls. 7−107186
EM induction studies in geophysics 7−139464
EM radiation effects on cells 7−87096
English text-to-speech conversion 7−142114
entry flow problem for viscoelastic flows through contractions, book contrib. 7−97583
environmental measurements with TLDs, trends and issues 7−86871
enzymes, NMR studies review 7−100814
epitaxial deposition of cpd. semicond. by magnetron sputtering 7−125971
epitaxial growth mechanisms review 7−137738
EPR of transition metal, lanthanide and actinide ions in solids, 1979 literature review 7−77400
EPRI's nuclear safety research programme, review 7−81662
EPRI advanced LWR programme, progress report 7−102948
EPRI reactor containment and piping safety research, failure modes, leak-before-break 7−81663
erasable recording media for optical data storage 7−129998
erosive wear by particulates review 7−93103
ERS-1 programme, overview and status 7−101490
ESR imaging, review 7−108603
event-related potentials, critical review of single-trial detect. methods 7−107029
excimer lasers, development and future perspectives 7−82542
excitation energy transfer and electron transfer between mols., fundamental theory *(Japanese)* 7−96830
extremity dose, definition, standards, regulatory limits, radiobiological significance 7−133454
fast glacier flow, ice streams and surging and tidewater glaciers 7−145535
fatigue cracks, short, initiation, general summary 7−124386
fatigue cracks, short, review of two recent books 7−113658
FELs, high power, review 7−82593
ferrite thin film deposition and props. for microwave and MM-wave ICs 7−125966
ferroelectric liquid crystals, performance parameter meas. methods, review 7−92615
fibre optic interferometric sensors 7−130361
fibre optic sensor fundamentals and overview 7−123259
fibre optic sensors, commercial viability *(Japanese)* 7−123213
fibre optic sensors, developments and appls. *(Italian)* 7−90805
fibre optic sensors 7−75134
fibre optic techniques in medicine and biology, endoscopy, diagnostics and power transmission 7−79041
fibre reinforced ceramic composites, high temp, recent developments 7−77776

reviews continued
fibre reinforced ceramics, appl. and props. 7−77920
fibre reinforced plastics, embedded optical sensors for NDT *(Japanese)* 7−123211
film growth and erosion processes, plasma processing technologies, ion bombardment effects 7−70151
flameless atomic absorption spectrophotometric methods for determ. trace elements 7−114143
flood frequency analysis 7−114837
flows, asymptotic modelling 7−95348
flows with shocks, computer anal., review, book contrib. 7−97576
fluidised beds, surface heat transfer, review 7−142364
flux pinning in superconductors 7−138161
foam rheology, flow in viscometers, porous media and channels 7−91050
foetal monitors, electronic, current state 7−107284
Fourier transform NMR tomography, methods and algorithms 7−114442
fractal aggregates 7−115914
free electron lasers, recirculated and single passage, review of theory and expts. 7−117219
free electron lasers, status and perspectives for theory and expts. 7−123001
free-electron lasers 7−90625
frozen gas sputtering 7−125895
fuel cell technology, review 7−114096
functional electrical stimulation, develops. *(Japanese)* 7−139246
galactic center compact nonthermal radio source 7−120568
galactic cosmic ray 7−115186
Galactic disk, hydrodynamic and turbulent motions in stellar and interstellar components 7−128050
Galactic disk metal abundance gradient, past and present gradient determ. 7−145946
Galactic nucleus, hot ionised gas structs. *(French)* 7−134306
galactic ultraviolet astronomy 7−79854
galaxies active nuclei, emission-line and continuum vars. rel. to connection with SS 433 phenomenon 7−140263
galaxies active nuclei, nature of central power source 7−146091
Galileo mission to Jupiter 7−115289
gas discharge visualisation, physical image forming processes, Kirlian effect 7−130960
gas-surface interaction, sticking, desorption and inelastic scatt. 7−76615
generator coordinate method and quantized collective motion in nuclear systems 7−73718
geochemical evolution of crust and mantle 7−139536
geodesy, new instrumentation techniques (1983 to 1986) 7−133555
geodetic control surveys in North America, 1983 to 1986, review 7−133546
geodetic levelling, evidence of suppression of unequal ref. error 7−87425
geodetic theory, review 7−133549
geomagnetic and palaeomagnetic variations rel. to core dynamo 7−139458
geomagnetic reversals morphology 7−139457
geomagnetic variations 7−139459
geometric criteria for low interfacial energy 7−131414
geophysical measurements, effects of Newtonian and nonNewtonian gravity, review 7−67178
geopotential field status, review of developments (1983 to 1986) 7−133550
germ cells, male mouse, genetic effects of combined chem.-X-ray treatments 7−114393
German heavy ion fusion program 7−67960
glacier surge processes 7−145556
glass, sol-gel process, structural evolution 7−113512
glass optical guided-wave technology, review 7−68844
glass-ceramic and glassy materials, luminesc. 7−77648
glass-forming alloys, crystal nucleation 7−142625
glasses, chromophore optical transition homogeneous linewidths, theoretical studies, review 7−77487
glasses, doped, organic and inorganic, optical dephasing times studies, coherent transient photon-echo technique, review 7−75079
glasses, optical transition, homogeneous line broadening, review 7−75075
glassy crystal dynamics, phenomenological hypotheses, review 7−142648
glassy semiconductors, localised electron states 7−112246
global water masses, temp.-salinity meas. 7−87677
globular cluster systems in galaxy clusters, dynamical evolution 7−101943
globular clusters, characts. and origin of chemical inhomogeneity 7−80058
grating devices for integrated optics *(German)* 7−136623
gravimetry developments in United States, 1983 to 1986, review 7−133547
groundwater hydrology 7−114840
groundwater quality, impacts of agricultural chemicals 7−139160
Hamiltonian systems, nonlinear stability, energy-Casimir method 7−137062
hazards from EM fields resulting from large scale elec. facilities and large capacity power devices *(Japanese)* 7−119799
hearing, stimulus intensity and loudness recruitment: neural correlates 7−126833
hearing protectors in EEC, standards and recommendations 7−123325
heat transfer literature survey 1984-5 7−108071
heavy atoms, parity violation, optical rot. and Stark-interference study 7−122459
heavy fermion metals, induced-interaction model, review 7−92040
heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497
heavy ion beam driven ICF, present status and future prospects 7−81705
heavy ion collisions, intermediate energy, dynamical and statistical aspects, review 7−121918
Heavy Ion Fusion Accelerator Research Programme at US DOE, overview 7−67959
heavy ion ICF, 10 years research, review 7−81707
heavy ion ICF, beam-plasma interactions 7−67964
heavy ion physics 7−109202
heavy-ion collisions, nuclear matter properties at moderate, high, ultrahigh energies 7−109083
heliosphere collisionless shocks (book) 7−115698
HF techniques, deep heating with annular phased array 7−107218
high press. low temp. experimental techniques, review 7−102441
high T_c superconductors, review *(Japanese)* 7−125212
high temperature corrosion and protection 7−86381
high temperature materials, damage, environmental effects 7−86390
high-pressure geophysics, appl. of laser techniques 7−139812
high-temperature superconductors, review 7−138092

reviews continued
history of physics, resource letter 7−128235
HLW glass, thermal shock resistance, overview 7−74095
holographic interferometry and appl. to turbulent convective heat transfer 7−122874
homogeneous systems, evaporative vector appl. 7−141737
hormetic effects of ionising radiation, physiology 7−100985
hot isostatic pressing technology 7−92905
hot plasmas, magnetically confined, edge diagnostics 7−117763
humidity sensors, principles and appls. 7−73333
Huyghen's construction extension of wavefront to nonlin. wavefront and shockfront 7−103730
hydrated electron, structure, experimental evidence review 7−133025
hydrodynamic instability, review, flow randomisation, nonlinear methods 7−136809
hydrogen effects on steel 7−93181
hydrological applications of remote sensing 7−114841
hydrological data analysis and water resource modelling, review 7−114836
hydrological precipitation analysis, modelling, and prediction 7−114843
hydrology, computer usage in 1983-6 period, overview 7−114835
hydrology, historical and palaeoflood information 7−114838
hydrology, unsaturated flow and transport modelling 7−114839
VW Hyi, X-ray SU UMa star, characts. and multiwavelength monitoring 7−72460
hyperbaric environment, phys. and physiology, rel. to diving 7−145107
hyperthermia, externally induced EM, microwave techniques and applicators 7−107217
hyperthermia in the treatment of cancer 7−128161
hyperthermia treatment equipment, feedback control and optimisation, present status and future needs 7−107221
ice, self-interstitial diffusion mechanism, X-ray topographic studies, review 7−111548
ice sheets and CO_2 problem, effects of global warming 7−94425
ICF, concept and early history, review 7−81700
ICs, corrosion failure during accelerated tests 7−71366
(II-IV-V_2)-(III-V) semicond. heterojunctions, epitaxial growth, electrophysical props. 7−112455
II-IV-V_2 semicond. cpds., radiation defects 7−111648
II-VI semicond., epitaxial photochemical deposition 7−138679
III-V semiconductor compounds, irradiation induced defects, review 7−142843
III-V semiconductor waveguides for integrated optics 7−136615
III-V semiconductors, impact ionisation in high elec. fields 7−92189
image analysis, math. morphology *(French)* 7−117143
immunological effects of nonionising radiation 7−87100
implanted muon studies in condensed matter science, review 7−143945
impurity spectra zero-phonon line broadening in organic glass matrices, review *(Russian)* 7−106223
indentation fracture theory, review of development, principles and limitations 7−132844
induced Raman scattering ionization spectroscopy, methods 7−134852
inelastic molecule-surface scattering dynamics, approx. tests 7−92794
inertial confinement fusion, heavy ion driven, review 7−104423
inorganic glasses, impurity ion fluoresc. line narrowing, review 7−77632
instrumentation in thermoluminescence dosimetry 7−87221
insulators, optical effects of ion implantation 7−104790
integrated electro-optic modulators and switches, state-of-the-art 7−68826
integrated optical technology, commercial marketplace 7−68906
integrated optics, overview 7−130393
integrated optics, review *(German)* 7−75171
interface science, TEM/STM meas. 7−137658
intermetallic compounds, cryst. to amorphous transition under electron irrad., review 7−131189
intermetallic compounds, melting temp., density, strength, cryst. struct., stiffness 7−111833
intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7−126170
interstellar molecules *(Polish)* 7−128035
interstellar problems, matrix isolation technique 7−88102
intestinal microcirculation, math. models 7−126857
intestinal motor activity, computer anal. 7−127048
ion laser technology, review 7−68689
ion phase-space vortices and their relation to small amplitude double-layers 7−117718
ion sources and implantation systems 7−117950
ion storage processes in electron-ion beams and rings, review 7−141366
ion transport through nerves and tissues 7−114230
ionized cluster beam deposition 7−71081
ionosphere, blanketing sporadic-E layer 7−88014
ionosphere and magnetosphere 7−127631
ionosphere electrodynamics and plasma processes 7−120212
IR fibre optics materials 7−117281
irradiation creep results 7−93055
isomerisation, two-dimensional NMR exchange spectroscopy study 7−122573
nearly isotropic turbulence generation by grids 7−130666
IUE, nine years of UV astronomy, review 7−101654
Jablonski diagrams 7−110304
Josephson junctions, noise and chaos, review 7−77168
Khokhlov's method in nonlinear wave theory 7−102037
kinetics models 7−86564
Kohistan (N Pakistan), tectonic history and implications for Himalayan struct. 7−145429
KrF lasers for inertial confinement fusion, overview of laser issues 7−110324
laminated fibre reinforced composites, survey of failure theories 7−86321
lanthanides and actinides, electronic models, historical perspective 7−72760
large scale nuclear struct. studies, symmetry projected HFB quasiparticle configs. 7−121677
laser and electron sputtering in electronic excitation regime 7−125869
laser glasses, status and prospects 7−68653
laser ocular surgery *(Italian)* 7−93861
laser optics, fabrication and testing 7−74995
laser particle acceleration 7−74266
laser progress over 25 years 7−110374
laser remote sensing of atmosphere, literature survey 7−139817
laser safety standards and protective measures in USA 7−87101
laser-plasma interactions, stimulated Raman scatt., review 7−69362
late-type giants and supergiants, polarimetric characts. 7−72405

reviews continued
lattice gauge theory, introductory review 7−81025
Laves phase cpds., electronic structures and mag. props., review *(Japanese)* 7−84660
Laves phase intermetallic cpds., AT_2, (A=rare earth or transition metal, T=Ni,Co,Fe,Mn), magnetism, review *(Japanese)* 7−85319
layered materials, surface and interface vibrs., EELS studies, review 7−77713
LEP at 200 GeV, scaling laws, performance, energy uncertainty, beam lifetimes, review 7−141346
lepton-nucleon intermediate energy two-particle interactions 7−140945
leukocyte analysers, high-resolution: retrospective and prospective review 7−139324
life prediction techniques for combined creep and fatigue 7−71285
light element abundances (Na to Ca) in disk and halo stars, implications for Galaxy chemical evolution 7−145945
light mesons, review of radiative decays 7−95910
lightning data applications in meteorology 7−120108
linear operations theory, book 7−88842
liquid crystalline polymers, X-ray diffr. studies 7−124085
liquid crystals, electro-optical effects 7−142580
liquid semiconductors, semiconductor-metal transition, review 7−84679
liquid streams, surface tension driven instabilities, vacuum behaviour 7−104316
liquids, Raman spectra, interaction-induced and local fields effects study 7−82169
LMFBR fuel, book 7−72737
loess soils, subsidence and erosion processes 7−139650
low energy antiproton physics in the early LEAR era 7−89513
low energy plasma physics technology review 7−142513
low energy positron beams from linear, atomic physics appl. 7−129866
low-level ionising radiation studies in mice and guinea pigs 7−100990
low-temperature calorimetry, review 7−73367
low-temperature nuclear orientation in solid-state and nuclear physics, book contrib. 7−99609
lower atmosphere large-scale events causing ionosphere plasma perturbations 7−79750
luminescent materials, physical models 7−77645
macroelectrodynamics, inverse problems nonuniqueness, spherical and toroidal sources of EM fields 7−120828
magmatic processes 7−139552
magnetic crack detection using combined AC field magnetisation, state-of-the-art 7−71437
magnetic materials prepared by rapid solidification, review 7−86093
magnetic pulsed field generation, state of the art *(German)* 7−121168
magnetopause and related phenomena 7−88040
magnetosphere, electric fields and currents 7−127648
magnetosphere, ring current and radiation belts 7−127649
magnetosphere and ionosphere, waves and instabilities 7−127651
magnetosphere core plasma 7−127650
magnetospheres of outer planets 7−127762
magnetospheric plasma numerical simulation 7−127652
magnetostratigraphy, appl. to palaeosecular variation, polarity transitions, and mag. reversal sequences 7−145324
magnetostratigraphy 7−139460
magnetotail of terrestrial magnetosphere 7−127647
magnetotail theory 7−115180
Magnox and AGR safety, overview 7−89700
mammals, early and late responses to heavy charge particles 7−145150
mammography, survey of radiation dose and image quality, ongoing program in Italy 7−93932
Mars surface 7−115277
martensitic transformations, dislocation theory, review 7−76352
mass analysers 7−116023
massive stars in galaxies, review 7−72426
materials for electroluminescent thin films 7−77657
materials for TLD 7−93949
materials surface analysis, AES appls. 7−132384
MBBA amorphous solid states, struct. and dynamics 7−124103
measurement principles, metrology role, units, standards and calibration *(Italian)* 7−80720
mechanical and electromagnetic methods [of NDT] of NDT *(Italian)* 7−86534
mechanical properties of biosystems *(Japanese)* 7−87061
mechanochemistry of solids 7−86594
mechanoemission and mechanoluminescence in flaw inspection 7−132885
medical ^1H NMR, diagnostic value of T_1 and T_2 7−71841
medical body imaging *(Japanese)* 7−114532
medical imaging technology, recent developments *(Japanese)* 7−79118
medical NMR imaging, operational safety issues 7−139344
SE Mediterranean Sea, superposed tectonic patterns along continental margin 7−139579
membrane operation, mass transfer under turbulent cross flow 7−86674
mesosphere and stratosphere, minor constituent vertical distrib. 7−87990
mesosphere and stratosphere dynamics 7−120193
mesosphere and upper stratosphere minor constituents 7−120192
metal clusters, physics 7−110177
metal superlattices, collective electronic phenomena *(Russian)* 7−137836
metal surface, chemisorption, lattice-gas model, review 7−124716
metal surfaces, electronic screening props. 7−77028
metal surfaces, H_2 interactions, backscattering and chemisorption 7−77736
metal surfaces, liq. wetting, heat of adsorpt., lubrication 7−142904
metal thin films, continuous, resistivity, temp. coeff. of resistivity and thermoelec. power, review 7−125148
metal vapour lasers, capabilities and applications 7−68622
metal-electrolyte interface electron screening phenomena, self-consistent anal. in density functional formalism 7−118586
metal/aqueous electrolyte interface simulation 7−99158
metallic aerosol particles prep. and props. 7−92911
metallic glasses, corrosion resistance studies, review 7−144608
metallic glasses, order and disorder, atomic struct. calc. 7−83761
metallic glasses point defects and atomic diffusion, review 7−98558
metallic grating, bare, reson. response to S-polarised light, review 7−75104
metallic systems, ion-beam-induced amorphization 7−104865
metallic thin samples, galvanomagnetic size effects *(Russian)* 7−143434
metallogenesis 7−139538
metallurgical defects, positron annihilation trapping models, review 7−138542

eviews continued
metals, close-packed, structural transitions and phase stability, review 7—76380
metals, cubic, formation and evolution of dislocation structures during irradiation 7—76201
metals, electrical noise associated with dislocations and plastic flow, review 7—77017
metals, fatigue behaviour, gaseous environment effects 7—144516
metals, hot corrosion, chemistry and electrochemistry 7—86403
metals, laser microprocessing fundamentals, review 7—78360
metals, pure, oxidation behaviour, role of point defects in oxide scales 7—86457
metals, sheet, crystallographic texture, anisotropic yield surfaces and forming limits 7—113572
metamorphic geology 7—139540
meteorological analysis, appl. of potential vorticity *(Russian)* 7—145589
meteorological instrumentation, recent advances 7—120164
meteorological radar 7—120165
meteorology at mesoscale and severe storms 7—120104
methane, laser spectroscopy, review *(Japanese)* 7—82077
mica, trioctahedral review of Mossbauer data 7—118894
micellar solns., physical chemistry, NMR methods 7—71543
microclusters, physics and chemistry *(Japanese)* 7—96915
micronucleus assay in radiation protection, status 7—94026
microstructural control, art and science 7—113514
microwave irradiation and psychoactive drug actions 7—87097
microwave spectroscopy, review of develop. during 1970's *(Russian)* 7—128661
microwave thermography for biomedical appls., multiprobe radiometers 7—107223
midocean ridge crest processes 7—139539
mixed-valence systems, band calculations using local density method, overview 7—92139
molecular clusters, photoionisation mass spectrometry using synchrotron radiation 7—90474
molecular crystals, optical coherent spectroscopy 7—121228
molecular gases, Rayleigh spectrum fine struct., review 7—141586
molecular multiple-photon excitation and dissoc. book 7—88755
molecular relativistic many body problem, CI calcs. 7—122380
molecular solids, defects, positron studies 7—142757
molecular solids, surface electronic and vibr. studies 7—77027
Mollenstedt electron bi-prism, electron holography 7—141782
Mongol-Okhotsk seismic belt, seismogeology and geophysical fields rel. to earthquake prediction 7—71967
mononuclear phagocytes, clinico-biological aspects of radiation pathology *(Russian)* 7—71825
Moon, origin and lunar meteorites 7—115265
morphology changes due to energetic atom bombardment, geometric methods of anal., review 7—70966
multi-element analysis of metals, optical atomic emission spectra 7—86736
multimode fibres bandwidth concatenation 7—130356
multiply, charged ions, level inversion in plasma conditions, light amplification by stimulated XUV emission 7—91332
multiply connected conductors, mag. flux effects 7—138138
multiprocessors for high energy physics 7—135793
muscle mechanical properties and heat generation, instrumentation for study *(Japanese)* 7—87405
musical acoustics literature review 7—110721
myopia, review and suggested classification system rel. to age 7—133269
n-i-p-i doping superlattices, physics and applications 7—99176
near IR qualitative and quantitative anal. 7—100643
near UV CW coherent radiation generation 7—75062
nematic liquid crystals, IR optical properties, review 7—70748
neuronal function rel. to multiple Ca^{2+} channels 7—126790
new materials, state of the art *(Spanish)* 7—119117
nitrocarburising, austenitic 7—93164
NMR gyroscope 7—140721
NMR imaging and spectroscopy in vivo 7—87329
NMR theory and appls. for instrumentation for living system study *(Japanese)* 7—119826
noble metal like films, optical props. 7—106293
non-conducting materials, neutral and ion beam SIMS 7—85936
non-Newtonian, liquids, theory *(Russian)* 7—83279
nonlinear effects in optical fibres and fibre devices 7—103907
nonlinear guided wave theory 7—82696
nonlinear photoprocesses in diatomic molecules 7—136027
nonpolar molecular pairs, FIR absorpt., collision induced spectra 7—116957
nonreciprocal surface waves in magnetic systems, review 7—118789
NRC, generic safety issue management review 7—81630
nuclear interacting boson model, shell-model foundations 7—109071
nuclear isospin and nuclear structures 7—109015
nuclear medicine clinical engng. in a rapidly developing country (Kuwait) 7—114490
nuclear medicine in the eyes of the clinical engineer 7—114488
nuclear plants, computerised operator support systems, trends review 7—109256
Nuclear Safety Project at KfK, 1972-86, objectives and results 7—129288
nuclear safety research, French view, discussion 7—81617
nuclear winter, environmental consequences of nuclear war 7—95128
nucleosynthesis in stars and early Universe 7—107815
numerical advection algorithms and their role in atmospheric transport and chemistry models 7—101549
ocean, thermocline diapycnal mixing 7—120032
oceanographic equatorial dynamics 7—114797
oceanography, numerical modelling on midlatitude mesoscale and gyre-scale 7—114799
oil/gas fields, tectonics of occurrence in sedimentary basins of continental margins 7—79364
optical bistability, recent developments 7—136410
optical bistability all-optical device appls. 7—136409
optical bistability in liquid crystals 7—136400
optical chaos, definitions, measuring characteristics 7—134674
optical coating automated processes with optical thickness monitoring 7—104063
optical couplers for fibre optic systems 7—130377
optical fibre coating requirements and developments 7—68870
optical fibre fabrication techniques 7—130401
optical fibre manufacture by VAD, latest developments 7—68918
optical fibre manufacture using MCVD process 7—68916
optical fibre nonlinearities in optical communications 7—90809
reviews continued
optical fibre OVD manufacturing technology 7—68915
optical fibre sensor systems, multiplexed and distributed, review 7—82852
optical fibre technology in medicine 7—79055
optical fibres, dispersion characts., tutorial review 7—130351
optical fibres, picosecond and femtosecond light pulse production 7—136552
optical fibres, R&D in China, review 7—75126
optical materials 7—110488
optical microscopy, new developments rel. to cell biology 7—127062
optical plastic clad silica fibres to single-mode, axial lateral plasma deposition 7—68919
optical pulse self-action phenomena and femtosecond laser pulse generation 7—103884
optical reflectometry data review 7—108632
optical single mode fibre testing methods for industrial environment 7—82821
optical single-mode fibre cable developments by NTT 7—82826
optical single-mode fibre chromatic dispersion meas. technique, high resolution 7—82828
optical spatial filtering velocimetry 7—121076
optical storage disc materials 7—136212
optical surface inspection, subjective versus objective methods 7—104070
organic glasses, impurity mol. zero-phonon line broadening, hole burning studies, review 7—75076
organic molecular semiconductor devices review 7—118566
organic molecular solids, dynamic effects in VUV and X-ray photoelectron spectra 7—125923
organic mols. and mol. chains bonded to surfaces, NEXAFS studies, review 7—144173
organic solids, electronic struct., photoemission study 7—125926
organic solids, UV photoemission study 7—125925
α Ori (Betelgeuse), distance, diameter, light vars., and circumstellar shell 7—101776
orthopaedic applications of C fibres 7—79130
orthopaedic biomaterials, emerging issues 7—79144
OTEC systems, metallic materials for heat exchangers 7—86813
otoacoustic emission relative to cochlear micromechanics 7—78893
otoacoustic emissions and tinnitus 7—78900
oxide ceramic high-T_c superconductors, review 7—105767
oxide ceramic superconds., development, review 7—118603
oxide films and wear of steels 7—71394
oxide glass, ionic cond., dielec. relax., cond. polarisation 7—76484
oxide glasses, electron-conducting, electrochemistry, review 7—70301
NW Pacific Ocean and continental margin, stages of tectonic transformations 7—79351
packed beds, thermal cond., review 7—142153
palaeomagnetism in accretionary tectonics and structural geology 7—139461
percolation models and props. in random media systems, review 7—67252
percolation theory, dimensionality characteristics and geometrical critical exponents, review 7—128494
perinatal bioengineering, developing countries needs, technical advances 7—79112
PET, 3D image reconstruct., review 7—145200
PET instrumentation developments 7—145228
petrology of igneous rocks 7—139537
phase phenomena in parametric amplifiers and generators of ultrashort light pulses 7—136439
phase stability under irradiation, disordering, diffusion, segregation and precipitation 7—104815
phase-locked arrays of semiconductor injection lasers 7—110406
photodetectors for acousto-optic signal processing 7—80878
photoelectromagnetic effect in semiconductors and its applications 7—131706
photographic historical black-and-white negative duplication 7—73451
photon detector efficiencies 7—96460
photothermal spectroscopy review 7—95659
photovoltaic materials and systems, appls. 7—106888
photovoltaic solar energy conversion, review 7—86804
physical instrumentation for biosystems, objectives *(Japanese)* 7—87404
physical oceanography (1982-6) 7—114793
physical oceanography on small-scale 7—114794
physical properties and functions 7—83657
physical sputtering by particle impact, mechanisms and theory 7—125884
outer planet ionospheres 7—88172
planetary atmospheres 7—115269
planetary geodesy, progress report (1983 to 1986) 7—134158
planetary geology, laboratory experiments 7—115270
planetary magnetospheres, comparative anal. 7—88154
planetary magnetospheres, Voyager explorations of outer planets 7—88173
planetary science (1983-6) 7—115267
planets, auroral magnetospheres radio emission 7—79856
plasma processing appl. to ceramics *(Japanese)* 7—113503
plasma spraying, industrial scale coating deposition, equipment and facilities *(German)* 7—138648
plasma sputtering for protective coatings, status and devel. trends *(German)* 7—138654
plasma-based high-energy accelerators review 7—104460
plasma-maser effects in plasma astrophysics 7—115232
plasticity, past developments, current activities, future directions 7—136718
pnictide and chalcogenide semiconds., AC electrical cond. 7—137918
point and distributed polarimetric optical-fibre sensors 7—123205
polar fluids, dielectric relax. and mol. motion, dynamic and kinetic approaches, review 7—92586
polar oceans 7—114798
polar wander and paleomagnetic reference pole controversies 7—139462
polarisation spectroscopy of gaseous media using photon echo 7—121230
polyatomic molecules, semiclassical quantisation 7—135823
polyconjugated systems for intrinsically conductive polymers, elec. props. and synthesis 7—86610
polycrystals, mech. props., importance of grain size effects 7—69713
polymer films, deposition by plasma polymerisation 7—138689
polymer materials science, Fourier transform IR spectroscopy appls. 7—131059
polymer optical fibre development, loss mechanisms and fabrication 7—90799
polymer science, review 7—131060
polymer solutions, entry flow problem study review 7—91174
polypeptide chain conformation in water solns. 7—114173

reviews continued
polyvinylidene fluoride, piezo-, pyro- and ferroelectric props., review 7−132202
polyvinylidene fluoride, piezoelec., NMR studies, review 7−112963
porous media, immiscible displacements, statistical anal. modes 7−111088
positron annihilation, appls. 7−73485
positron beams, low-energy, review 7−136188
postural sway assessment, overview of technical and clinical advances 7−114364
probabilistic risk assessment in nuclear reactor regulation review 7−81624
projection display technology 7−136473
proton reactions and scatt., review of major trends 7−121855
pseudobinary semiconducting alloys, ordering observed by Raman scatt. 7−106197
pseudocrystals with fivefold symmetry 7−91517
psychrometric humidity meas., state of the art *(German)* 7−67339
PWR SBLOCAs, mixing phenomena review 7−116668
QCD, hadron mass spectrum, Monte Carlo simulations, review 7−67584
quantised Hall effect, normal and fractional, review of expts. and theories 7−125024
quantitative CT, basic methods 7−79074
quantum electrodynamic processes in electrical engineering circuits 7−67559
quantum field theory, large-N theories, review 7−67576
quantum mechanical scattering, mathematical theory review 7−140485
quantum mechanics, foundations since Bell inequalities 7−134390
quantum theory without locality, charges and symm. breaking 7−128741
quark-gluon plasma formation in relativistic heavy ion collisions, review *(Polish)* 7−67756
quasi 2D phases, computer simulation 7−118276
quasi-1D conductors, CDW dynamics, sliding motion *(Japanese)* 7−118390
quasicrystal ordering models, statistical physics, physical props., atomic and electronic structs., review 7−111389
quasicrystalline state study 7−137311
radiation hormesis in plants 7−100992
radiation measurement in ballistic experiments, equipment and methods 7−108624
radiation-induced DNA damage and its repair 7−101003
radioactive pollutants, transport mechanisms, physical dispersion models 7−133158
Radioastron project, Earth-space interferometer, appl. to determ. of fine struct. of radio sources 7−139917
radiobiological prerequisites for predicting the reaction of tumours to radiation *(Russian)* 7−71822
radiological services in the Arabian Gulf states 7−114489
radiosonde humidity and temp. errors anal. 7−127551
radiowave propagation in India, meteorological aspects 7−87776
Raman spectroscopy, ASTM E 13.08 committee and IUPAC commission 1.5, overview 7−89277
Raman spectroscopy, instrumental and methodical developments in Raman spectroscopy 7−93448
random data, anal. methods 7−89205
random walks on fractals *(Polish)* 7−67216
random walks with memory, review of kinetic growth processes 7−121005
rapid distortion theory for turbulence, recent developments, book contrib. 7−97500
rapid solidification, process technology for new materials and products 7−77885
rapid solidification technology, development scope and trends 7−77862
rapidly solidified materials, review 7−86092
rare earth aluminates, hexagonal, structs., luminesc. spectra 7−76108
rare earth cpds., localized electronic excitations, Raman scatt. spectra 7−85704
rare earth magnetism, history and foundations 7−66884
rare earth ternary systems, superconductivity and ferromagnetism coexistence, review 7−77138
receivers, uncooled low-inertia, for CO_2 laser radiation 7−128654
recurrent novae, observational props. and nature of outbursts 7−115445
recurrent novae, properties and nature of outbursts 7−115456
regular and disordered lattices, diffusion, continuous time random walk methods 7−108484
relativistic optics, transformation relations, review 7−68546
remote sensing, resource management applications, review 7−87951
renal proximal tubule, pH, solute conc., cellular regulation, kinetic transport model 7−93689
resonances in nuclear, atomic and mol. physics 7−102853
RETRAN thermal-hydraulic code, NSSS safety anals., overview 7−73834
RETRAN transient anal. code, generic review 7−73835
rhodopsin structure 7−119714
rhodopsin transduction mechanism, FTIR studies 7−119728
rift valleys, struct. and sedimentation 7−145457
ring polymer, Brownian dynamics simulation, error anal. 7−136108
rock fracture and seismic energy release 7−87623
rock magnetism, domain patterns, progress and problems 7−107402
rock melt and mineral thermodynamics 7−139593
rock-forming minerals 7−139605
rocks, anisotropy of mag. susceptibility, appl. 7−139592
rolling contact problems, algorithms and strategies, review 7−97460
Rossby solitons, natural vortices of Jovian Great Red Spot type investigation 7−139913
rotating superfluids, vortex oscillations and hydrodynamics, review 7−70012
rubber elasticity and elastomeric network characterisation 7−134409
sand and dust storms in Israel 7−101467
sapphire contact probe, Nd:YAG laser, surgical appl. *(Japanese)* 7−126995
satellite altimetry, oceanographic and geophysical appls. 7−133553
satellite positioning, appls. of laser ranging, TRANSIT positioning and GPS 7−133554
satellites of Jupiter and Saturn 7−115288
satellites of solar system, props, and internal structs. 7−127749
SAW devices, signal processing appls., construction and operation 7−82965
SAWs, historical review and Polish-research activity *(Polish)* 7−97189
scalar-tensor theories, general class, review 7−140576
scanning acoustic microscopy, principles and materials science appls. 7−132896
scanning tunnelling microscopy, theory and appl. review 7−130990
scanning tunnelling microscopy 7−69563
reviews continued
sea ice monitoring, operational SAR data collection and dissemination plans for ERS-1 data in Canada 7−101331
sea level and water circulation forecasting, appl. of real-time data systems 7−94298
sea surface temp. monitoring using IR radiometry, review 7−134026
seafloor mapping by sonar methods 7−134008
second invariants, direct search methods 7−66955
seismic exploration, general characterisation of seismic study of geological structs. 7−71966
seismic exploration for oil and gas, review 7−94515
seismic reflection and refraction studies of continental lithosphere 7−79247
seismic strong ground motion, site effects review 7−94117
SEM, backscattered electron imaging, biological applications 7−145302
semiconducting ternary cpds. and alloys, bulk single cryst. growth, review 7−119118
semiconductor amorphous films, optical absorpt. 7−106291
semiconductor diode lasers, high-power, fabrication and performance charcts., status 7−110404
semiconductor injection laser development 7−122954
semiconductor injection lasers, absorptive and dispersive bistability 7−123069
semiconductor injection lasers, development history 7−122952
semiconductor interface phenomena rel. to device behaviour, book contrib. 7−85051
semiconductor laser development history 7−120755
semiconductor lasers for device appls., static and dynamic bifurcations 7−123078
semiconductor optical integration, progress 7−103986
semiconductor polarimetric photodetectors, prep. principles, photopleochromism 7−113123
semiconductor quantum effect devices *(Japanese)* 7−118581
semiconductor quantum well lasers, dynamic props., review *(Japanese)* 7−74930
semiconductor quantum well structures for optoelectronics, review 7−70394
semiconductor research, review of high press. techniques 7−134801
semiconductors, complex lattice structure, amorphisation problem 7−131033
semiconductors, crystalline, props. of H, review 7−111632
semiconductors, defects characterisation by electron microscopy, review 7−124248
semiconductors, dilute magnetic, magnetic properties, review 7−125391
semiconductors, high magnetic field investigations *(German)* 7−125119
semiconductors, ion-beam assisted etching, review 7−71421
semiconductors, melting under ns and ps laser pulses 7−84208
semiconductors, nonradiative recomb. processes induced by deep impurity centres 7−92096
semiconductors, optical bistability, review 7−75037
semiconductors, point defect charactn. using optically detected mag. reson. methods, review 7−112999
sialon and syalon powders, prod., props. and appls. 7−138722
silicates, high press. phase transitions 7−105011
silicide films and double heterostructures on Si, template growth technique in UHV 7−86021
single mode fibre characteristics 7−130353
single mode fibres, broadening of intensity-modulated pulses 7−130357
single phase A/C plasmatrons *(Polish)* 7−69479
single-mode fibre designs for telecommunications 7−130352
skin blood flow, human, nonthermoregulatory control 7−71784
snow hydrology 7−114842
solar cells, photovoltaic research and appl., state-of-the-art 7−78638
solar cells, physics, recent advances 7−126622
solar excited gas lasers 7−103805
solar irradiance variations and oscills. 7−127822
solar neutrino flux measurements, exptl. approaches 7−115348
solar neutrino problem, questions and hypotheses 7−115347
solar neutrinos spectroscopy review 7−94848
solar particle acceleration in flares 7−127824
solar UV variability 7−79931
solar wind shock waves 7−127675
solid film lubrication, review 7−106632
solid state lasers, high average power, scalability 7−68706
solid state lasers, tunable, review 7−82581
solid-state capacitive pressure transducers 7−73332
solid-state lasers, tunable, review 7−74935
solid-state slab geometry lasers as tunable sources 7−68705
solidification cracking 7−71169
solids, defects, positron annihilation studies 7−137363
sonar signal processing, algorithms, architectures and technology 7−97226
SOS films, preparation, struct. and electrical props., review 7−105739
speckle field holograms 7−103779
spectral hole burning, scientific and practical applications, review *(Russian)* 7−103887
spectrochemical analysis using the near-IR, appl. to polymers 7−108112
spectroscopic data banks, review 7−80215
speed of light, definition, status, historical review *(Japanese)* 7−140408
spent reactor fuel, direct disposal, overview of ongoing activities *(German)* 7−96337
spin excitation modes in nuclei 7−73745
spin glass ordering, hyperfine interaction techniques, data review 7−112797
spin glasses 7−77314
spin glasses and related problems, review 7−125415
sputter initiated reson. ionisation spectroscopy review 7−92821
sputtered atoms, electronic excitation, oxygen effect 7−125891
statistical nonlinear acoustics, exptl. review 7−104082
steel, austenitic stainless, centrifugally cast components for PWRS, inspection and flaw detection 7−144676
steel, diffusion coating form. process 7−138903
steels, stainless, corrosion resistance in Cl^--containing environments, test techniques 7−144646
stiff ordinary differential eqns., numerical methods of soln., review 7−80332
stimulated Raman effect, historical review 7−75064
stochastic quantisation, Parisi-Wu approach, quantum field theory, string theory, QED, review 7−140822
stopping powers in organic materials 7−111708
strain ageing, dynamic 7−71207
strained-layer superlattices, device appl. 7−138018

reviews continued
stratified fluid turbulence 7—117642
stratified fluids, transition phenomena and turbulence devel., oceanic appl. 7—117641
stratosphere; trace gas measurement by balloon method 7—120166
stratosphere, natural and anthropogenic perturbations 7—120109
stratosphere and mesosphere, radiative heating-cooling and energetics 7—120128
stratosphere O_3 changes, prod. and destruction chemistry and pollution effects 7—145650
stratosphere-troposphere coupling, due to mass exchange, dynamical, radiative and elec. processes 7—87777
stray light, current technology, review 7—141793
stress intensity factor determ. from photoelastic isochromatic fringe patterns 7—97462
string and superstring theories, review 7—121484
structural concept of fatigue limit of structural alloys 7—78167
structure life prediction at high temp. 7—132710
subgroup VIa transition metal carbides, nitrides and oxides, electronic props., theory and expt. 7—112181
superalloys, gas turbine engine disc materials development 7—144336
superalloys, high temp. corrosion, process mechanisms 7—119416
superalloys, review of developments 7—144334
superconducting transition temperatures, ab initio calculation principles, book contrib. 7—85175
superconducting tunnelling spectroscopy and Josephson effect, review 7—131905
superconductivity, applications, review *(Italian)* 7—112527
superconductivity mechanism, review 7—112629
superplastic deformation mechanisms, role of struct. transformations *(Russian)* 7—137445
superstring theory, review of recent developments 7—140575
superstrings, total action, critical dimensionality and low-energy limit 7—140911
superstrings and string theory, review 7—108889
supersymmetry and GUT's technical hierarchy problem 7—108811
surface analysis for semicond., packaging and storage technology 7—98663
surface hyperfine fields, Mossbauer, NMR and PAC studies, review 7—112267
surface modification of industrial components by ion implantation 7—117947
surface phenomena, reflection electron microscopy studies 7—95682
surface treatment, ion beam processes, review 7—119393
surveying and mapping in Indonesia, land-related information systems and education 7—88761
surveyor's levels, modern trends in development 7—102488
suspended gyrocompass, technology, trends and status 7—73340
synthetic aperture optical imaging systems 7—110510
tagged photons, bremsstrahlung cross section anal 7—67792
target studies for heavy ion ICF, gain curves, review 7—67963
tectonic segregation of lithosphere, origin of major tectonic forms rel. to metallogeny 7—79330
tectonomagnetism and tectonoelectricity 7—139570
TEM, foil thickness meas. 7—144653
teratogenic effects of RF radiation induced heating 7—87099
ternary $A^{II}B^{III}{}_2X^{IV}{}_4$ cpds., nonmagnetic defective, struct. and lattice dynamics, review 7—124215
ternary semimagnetic semicond., electronic props., photoemission survey 7—138599
ternary superconductors, struct. and elec. props., review 7—125219
terrestrial planets, volatile inventories 7—115268
therapeutic uses of X-rays, historical review 7—108129
thermal barrier coatings, current status overview 7—77796
thermal characteristics of biological systems *(Japanese)* 7—86921
thermal sensors based Seebeck effect 7—73343
thermally stimulated exoelectron emission dosimetry, state-of-the-art 7—93950
thermobiology, present day problems *(Russian)* 7—78784
thermosphere, chemistry and composition 7—120191
thermosphere energetics and dynamics 7—120190
thermosphere of Earth, changes induced by solar EUV variations 7—79729
thermotropic liquid crystals, their chemistry and physics 7—142579
thick accretion disks, theory and obs. 7—145941
thin film absorption meas. by laser calorimetry 7—121127
thin film deposition, use of ion beams, review 7—70150
thin film preparation by spray pyrolysis for solar cells 7—100055
tissue acoustic charact. rel. to medical US diagnosis *(Japanese)* 7—87112
tissue pressure management, role of technology, rel. to prevention and treatment of press. sores 7—119899
tokamak fusion reactors, continuous current drive operation, review 7—69387
Tokamak plasma heating by wave damping, review 7—97765
tokamak plasmas, turbulent density fluctuations study 7—111262
tokamak plasmas, X-ray emission investig. review 7—137129
tokamaks, electrostatic and EM turbulence, anomalous transport study 7—111179
tokamaks, sawtooth phenomenon study 7—142447
tokamaks, turbulent transport theory and simulation, review 7—117754
Tokamaks edge plasma study 7—123959
transition metal cpds., P-containing, struct, reactivity, ^{31}P NMR 7—93308
transition metal ferromagnets, spin-polarized Auger-electron spectroscopy, review 7—85904
transition metal impurities in compound semiconductors 7—98867
transition metal selenides, $(M'_xM_{1-x})_3Se_4$, (M,M'=3d transition metal), phase diagrams 7—113526
transition metal silicide films on Si, epitaxial growth, props. and applications, review 7—86022
transition metal-rare earth amorphous alloy films for magneto-optic recording 7—132366
transition metals and compounds, localised excitations, XPS 7—125921
turbulence transition, flow instability, reviews 7—69102
turbulent secondary flows in 3D boundary layers and thin shear layers, review, book contrib. 7—97508
twinning-plane superconductivity, review 7—143683
two-dimensional systems, quantum Hall effect and localisation in Landau levels 7—131674
UK fast reactor programme, review at March 1987 7—109267
ultra-hard materials 7—113461
ultrafast supercontinuum white laser source 7—110470

reviews continued
ultrapotassic igneous rocks, geochemical charact., classification, and petrogenetic models 7—94220
ultrashort optical pulse propag., numerical modeling and precise results 7—123120
ultrasonic defect location and sizing, developments over 15 years 7—126372
underwater signal processing, uncertainty tolerance 7—123305
United States, Midwest convective clouds and precipitation 7—94392
Universe age 7—128159
upper ocean dynamics 7—114795
Uranus 7—115298
US bioeffects of microsonation, gas-body activation and related cavitation-like phenomena 7—126921
US exposure measurement, appl. to estimates of US dose 7—71886
USA Inertial Fusion Programme, overview 7—67958
USA Magnetic Fusion Programme, overview 7—67957
UV-visible reflectance spectroelectrochemistry 7—78582
vacancy formation energy, liquid structure and criteria for liquid-solid phase transitions, review 7—137527
vapour phase film growth, ion-surface interactions role 7—125968
vector quantisation in speech coding 7—104108
vein system fluid dynamics *(Japanese)* 7—119792
Venus 7—115275
Venus-solar wind interaction 7—115276
vestibular evoked pots., short-latency, induced by accel. impulses in expt. animals, recording method 7—87389
vibration of structures, free flexural, large amplitude 7—104194
vibrational lineshapes of adsorbates on solid surfaces 7—112055
viruses, spherical, structural analyses, viral coat proteins 7—78738
vision and driving 7—78839
volcanology, geochemistry and petrology 7—139551
volcanology, recent studies and developments 7—139553
water quality trends in United States rivers, review (1974 to 1981) 7—127302
wavelength-dispersive X-ray fluoresc. spectrometry review 7—95714
weak interactions in atomic physics, experiments and theory, review *(Polish)* 7—68471
wear, mechanical viewpoint of problems 7—130607
weather forecasting, status and recent developments in numerical prediction 7—120102
wind energy development in Kenya 7—126537
world achievements in tribology 7—131227
world optometry 7—78837
X-ray generators, mobile 7—128726
X-ray phosphors, development, parameters, future outlook 7—77647
X-ray source, laser prod. plasma, radiative charact., conversion efficiency 7—123925
X-ray sources of galactic bulge 7—115629
X-ray synchrotron radiation monochromators, diffraction props., optical systems and dynamical theory 7—128729
yield and nonlinear viscoelasticity, appl. of coupling model 7—131234
Z-pinches, appls., review 7—69429
zero-phonon lines and space-and-time domain holography of ultrafast events *(Russian)* 7—103775
Zircaloy cladding tubes for water-cooled fuel assemblies, development and technology 7—129171
$\gamma\gamma \rightarrow h$, meson formation, event topology, review 7—67680
$hh \rightarrow X$, direct photons, jets and particles, large momentum transfer prod. 7—108944
np elastic scatt., up to 1 GeV, present expt. status 7—116189
ν oscillations and massive ν props. in unified theories, review 7—140869
(p,n) reaction and the NN force, review 7—121627
Ag, electrodes, adsorbed H_2O, OH^- and H_3O^+ SERS 7—99809
Al, adhesive joining, surface prep., bond form. 7—144612
Al alloys, precip. hardened, grain boundary ductile fracture 7—86303
Al alloys developed by powder metallurgy, high temp. strength and corrosion resist. props., review 7—92927
Al, electrochemical energy conversion and power sources appls. 7—93488
Al films for VLSI applications, low pressure CVD 7—71052
Al isoelectronic sequence, transition probability determ., review 7—109839
Al, thermodynamic properties, review 7—143037
Al-Fe(Mn)(Ni)(Si)(Ti), thermodynamics props., reviews 7—80197
Al-Li, rapid solidification, physical metallurgy review 7—113533
Al-Mg alloys, intergranular SCC, Mg grain boundary segregation 7—86398
Am^{3+} ion, mag. behaviour 7—105882
Au prospecting 7—127487
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7—138111
$Bi_{12}Ge(Si)O_{20}$ sillenite crysts. photorefractive props., photoinduced space charge and elec. field distrib. evolution study 7—125043
C fibres and their appls. 7—85968
$C+HCN(O_2)(CO)(CO_2)(N_2)(NH_3)(H_2O)(SF_6)$, radioactive recoil atom reactions, review 7—106818
CNO abundances in dwarf and subdwarf stars, implications for Galactic nucleosynthesis 7—145944
CO_2 lasers, high power, for materials processing, state-of-the-art 7—82679
Cm^{3+} ion, mag. behaviour 7—105882
$CoSi_2$-Si (111), d-metal silicides film epitaxial growth and props., review 7—137747
Cr^{3+}:$BeAl_2O_4$ tunable alexandrite laser performance, review 7—68656
Cr-Al-M, M=Fe, Ni or Co, oxidation mechanism, influence of active elements 7—86458
CsAu liq. ionic alloy, metal-nonmetal transition and electrical cond. review 7—131607
Cu, nuclear magnetic ordering, susceptibility and entropy meas. 7—77261
Cu oxides, high T_c superconductivity, theorist's view, review 7—112610
Cu-Zn-Al, Cu-Zn, martensite and equilib. phases stability and transforms 7—78008
Cu_3 cluster, internal dynamics, review 7—129924
Fe-Ni Invar, metastable modulated state, supermoment dynamics, Mossbauer spectrum study, review 7—70529
GaAlAs heterostruct. devices, research at RSRE, control of interface props. 7—112480
(GaAl)As superlattices, Raman scatt. by phonons *(Japanese)* 7—119013
GaAs atomic layer epitaxy, monolayer control, thickness uniformity and electronic props., review 7—124795
GaAs, EL2, search for full atomic struct., review 7—137355
GaAs, EL2 defect, atomic struct. 7—98880
GaAs films, heteroepitaxial growth on CaF_2/Si structures, review 7—84604

reviews continued
GaAs, implanted ion solubility and activity, residual defects, review 7−76174
GaAs injection laser invention at IBM, history 7−122953
GaAs interfaces, unified defect model, appl. to ICs, book, contrib. 7−85110
GaAs, MBE growth on Si 7−84597
GaAs material prep. and charactn., book contrib. 7−86011
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
GaInAs(P), gas source MBE, single quantum wells, superlattice p-i-ns and bipolar transistors 7−77807
Ge, conduction in impurity bonds, review 7−143406
Ge films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
a-Ge:H doping, review 7−142811
H, electronic structure and Doppler-free laser spectroscopy 7−129629
H_2 absorption materials and rechargeable electrodes 7−86838
H_2 occurrence in subsurface fluids, relation of anomalous concs. to deep faults in USSR 7−79464
H_2, photoionisation, photoelectron spectra angular distrib. asymmetry parameter 7−109997
HF-DF chemical lasers, power extraction 7−122941
^3H laser isotope separation, IR laser-induced multiphoton dissoc. technique 7−106817
^3He, superfluid, quantized vortices and NMR studies of ferromagnetism 7−143129
HfC, refractories, phase relationships, survey 7−92971
HfN, refractories, phase relationships, survey 7−92971
HgCdTe, growth for long wavelength IR imagers, historical review 7−132441
HgTe-CdTe, superlattices, optical properties, review *(Polish)* 7−132219
InGaAs-InP, scaling of the integral quantum Hall effect 7−131675
KH_2PO_4 and isomorphs, electro-optical, linear and nonlinear optical props., devices, research areas 7−110484
KH_2PO_4, domains 7−99766
KH_2PO_4, longitudinal and transverse dielectric consts., KDP-type ferro- and antiferroelectrics 7−99640
KH_2PO_4, structural studies of KDP and isomorphs, transition, neutron and X-ray diffr. 7−99744
KH_2PO_4 type crystals, order-disorder models 7−113092
KH_2PO_4 type ferroelectrics, proton tunnelling model 7−113093
KH_2PO_4-type crystals, US expts. 7−111778
KH_2PO_4-type crystals, mag. reson. studies 7−112927
KH_2PO_4-type crystals, ferroelec., vibr. modes, IR spectra 7−113170
KH_2PO_4-type ferroelectrics, proton order-disorder, Slater theory and Ising model in transverse tunnelling field 7−113094
KH_2PO_4-type mixed crystals, phys. props. 7−111892
KrF gas laser as a driver for ICF, present status and future prospects 7−81702
$La_{2-x}Sr_xCuO_{4-y}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7−118607
Li batteries, spinel electrodes, review 7−139097
Mg-base alloys, rapid solidification, current status 7−126090
$MgSiO_3$, enstatite, polymorphism, review 7−113543
Mn thermodynamic props., review 7−80196
Mo alloys, particle strengthening, deform. mechanisms 7−71240
Mo, thermodynamic props., review 7−80196
NH_3, Rydberg states, spectroscopy and photophysics 7−74476
Na atmospheric layer, theoretical review, laser-radar meas. 7−79726
Na vapour, laser excited, atomic collisional energy transfer study 7−141669
Na_3 cluster, internal dynamics, review 7−129924
Nb-C system, phase equilibr., crystallographic and thermodynamic data, review 7−77942
Nd-Fe-B permanent magnets, mag. props. and prep., review 7−112864
Ne-like ion plasma in tokamaks, ion recombination coeff. study 7−97696
Ni (110), N_2 chemisorpt., kinetic parameters, thermodynamic quantities and struct., multitechnique approach, review 7−70086
Ni base superalloys, fatigue crack propag., microstruct., temp, effects 7−144541
Ni-base alloys, corrosion resistance in Cl^--containing environments, test techniques 7−144646
Ni-Cr-W superalloy, grain boundary precip. strengthening, nuclear heat exchanger appl. 7−106526
$NiSi_2$-Si (111), d-metal silicides film epitaxial growth and props., review 7−137747
O_2, nightglow excitation, atomic ^1S and five mol. bands investig. 7−79734
O_3 chemistry with chlorofluorocarbons, Antarctica ozone hole 7−108092
P, determ., water anal. methods, review 7−133141
PLZT electro-optic material props. and appls., review 7−125697
$\bar{p}p$ annihilation, W and Z^0 discovery, comparison with standard model *(Polish)* 7−67672
Pt_xTi, ordering phenomena, electron diffr., high resolution electron microscopy 7−138740
Pt_xV, ordering phenomena, electron diffr., high resolution electron microscopy 7−138740
^{241}Pu, half-life review 7−116344
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed crystals, phys. props. 7−111892
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed crystal glasses, freezing dynamics 7−143014
^{222}Rn, indoor air conc. in US housing, potable water source 7−87250
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287
Si as mechanical material, device appls., review 7−124369
Si, conduction in impurity bonds, review 7−143406
Si films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
Si integrated magnetic-field sensors 7−73381
Si, MBE, developments review 1984-86 7−77816
Si sensors overview 7−140684
Si, superconductivity of high press. phases 7−77136
Si, thermal donors, state of understanding 7−98906
a-Si:H, dangling bonds and metastability, expts. and models, review *(French)* 7−131592
a-Si:H, growth processes in plasma CVD *(Japanese)* 7−118317
a-Si:H doping, review 7−142811
a-Si:H solar cells, technical progress review 7−78637
Si:O, precipitation of O and O related donor formation, review 7−124530
Si:P,C,H, polycrystalline, impurity-defect interactions, overview 7−124321
Si-metal interface form., review 7−112110
Si-SiO_2 interface charactn., book contrib. 7−85132
Si_3N_4 powders, prep. methods 7−77913
SiO_2 optical fibres, interactions with H_2 and D_2 7−110588
reviews continued
SiO_2/Si interface, chemical and electronic struct. 7−70099
Ti-base alloys, rapid solidification, current status 7−126090
Ti-Mn, two-ductile phase alloys, stress-strain behaviour 7−78121
UO_2, surface energy meas., errors, critical review 7−84483
UPt_3 heavy fermion superconductor, antiferromag. spin fluctuations, inelastic magnetic neutron scatt. studies review 7−70534
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7−69927
W, defect-sensitive props. *(German)* 7−124245
W films for VLSI applications, low pressure CVD 7−71052
Xe, structural phases, VUV photoemission study 7−122615
$YBa_2Cu_3O_{7-x}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7−118607
Zr and its alloys, radiation damage, review 7−137404
revolution *see rotation*
revolving *see rotation*
rewinding *see winding (process)*
Reynolds number *see flow*
RF amplifiers *see radiofrequency amplifiers*
RF cosmic radiation *see radiofrequency cosmic radiation*
RF heating *see radiofrequency heating*
RF spectrometers *see radiofrequency spectrometers*
RF spectroscopy *see radiofrequency spectroscopy*
RF sputter deposition *see sputter deposition*
RF sputtered coatings *see sputtered coatings*
RF sputtering *see sputtering*
RFI *see radiofrequency interference*
RHEED *see reflection high energy electron diffraction*
rhenium
see also nuclei with .....
Fermi surface and electronic struct. under press. *(Russian)* 7−124835
meteorite Ru, Re, Os, Pt, Au contents, for 41 iron meteorites 7−127786
monomers and dimers adsorbed on W (110), possible magnetism 7−82020
pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096
pionic atoms, X-ray spectra study of level widths and shifts 7−110146
surface, (1010), adsorption of Na and Li, struct., work function, thermal stability 7−76619
surface, clean and oxygenated, core level binding energy shift 7−92244
surface, Li bombard., Li^+ prod., work fn. temp. depend. 7−85916
surface, Li impinging, thermal positive ion prod., effective work fn., time variation 7−92791
surface (0001), dissociative chemisorption of CO_2 7−84527
surface with epitaxially grown Eu crystallites, surface atomic struct. 7−143265
isotopic ratio meas., thermal vaporisation, reson. ionisation mass spectrometry 7−93459
Pt-Re (111) thin films, adsorbed Xe photoemission, AES, XPS and work function studies 7−137760
Re-Zn (Cu) heterocontacts, point contact spectroscopy in normal and superconducting states *(Russian)* 7−112436
$^{185}Re/^{187}Re$ abundance, reson. ionisation mass spectroscopy study 7−86697
rhenium alloys
see also rhenium compounds
Co-Ni-Mn-Re-P film, perp. magnetised, prep. by electroless plating, undercoating layer effect *(Japanese)* 7−92898
Co-Ni-Re-P electroless thin films for mag. recording appls., perp. coercivity, thickness depend. 7−112870
CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7−112885
Mo-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
Nb-Re, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
$Pt_{60}Re_{40}$ alloy, low press. O adsorption induced Re segregation, SIMS and Auger effect study 7−98697
Re-Pd, sputter-deposited, UPS studies 7−144230
Re-Ta-H, amorphous films, elec. resistance, superconducting transition in mag. field 7−112585
$Re_{14}Al_{57-x}$, cryst. struct., X-ray diffr. study 7−104635
RePd sputtered alloys, work function w.r.t. surface comp., appearance pot. spectra studies 7−143555
V-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
W-Re alloys, strain hardening and dislocation structure *(Russian)* 7−78045
W-Re alloys prep. by powder metallurgy, Re distrib. 7−86177
W-Re dilute alloys, excess resistivity and thermopower, temp. depend. 7−105545
WRe-C multilayers, temp. stability at high temps. 7−98746
rhenium compounds
see also rhenium alloys
carboxylates, gaseous phase, electron impact mass spectrometry 7−74778
oxides, catalysts, interaction with decomposition products of NH_4ReO_4 and silica 7−139043
Re complex, neutron absorption cross section for H, wavelength depend. 7−83590
Re complex, tricarbonylchloro(polypyridyl) Re (I), charge transfer excited state luminesc. and redox reactions 7−70867
Re-H, high press. phase, supercond. transitions 7−125204
Re_2 complex, quadruply bonded, optical activity 7−90282
$Re_2Cl_8^{2-}$, $\delta\delta^*$ excited electronic state, time-resolved reson. Raman spectra 7−82143
$Re_2Cl_8^{4-}$, reson. Raman spectra, simulation 7−82144
$ReF_6ReF_7MF_6MF_5$ (M=Sb,Au), mixed ion-molecule salts, preparation and stabilisation 7−104700
ReO_3, high press. polymorphic phases 7−118079
$ReOL_5^{2-}$ where L=Cl, Br, modified Urey-Bradley and valence force fields 7−109887

ıenium compounds continued
$ReSi_2$-Si, localised epitaxial growth of $ReSi_2$ on Si (111) and (001) 7−118302
ReW-C multilayer X-ray coatings, improved resolution 7−128728

ıeology
see also biorheology; plasticity; viscoelasticity
acrylic-melamine resin coatings, rheology during thermal curing, viscosity meas. 7−130616
adhesion, conf., Williamsburg, VA, USA (Feb. 1987) 7−134346
Bingham fluid squeezing flow between parallel plates, rheology *(French)* 7−123566
bodies with complex rheology, axisymm. contact problems, 2D integral eqns. 7−75480
butadiene-styrene rubber vulcanisates, sepiolite filler effect on dynamic props. 7−100276
n-butane, liq., rheology, nonequilib. mol. dynamics simulation 7−83146
cellulose triacetate, acetic acid solns., macromol. conform. changes, temp. effects *(Russian)* 7−82410
clay 7−120007
coal-water mixtures, rheological props., electrolyte effect 7−75490
colloids, rheological props., nonequilib. process linear Onsager theory 7−114006
controlled stress rheometer, oscillatory mode, fluid inertia effects for various geometries 7−97471
controlled stress rheometer and pulsatile pipe flow apparatus, combined steady and oscillatory stress mode 7−75720
critical binary mixtures, phase-separating fluids, viscosity enhancement 7−105092
n-decane, liq., rheology, nonequilib. mol. dynamics simulation 7−83146
dense suspension rheology, computer simulations appls. 7−93383
dilute suspensions of slender rods in weak flows, rheology 7−136771
dilute suspensions of solid spheres, cylindrical Couette flow, anisotropic particle distrib. 7−111080
Earth, tidal dissipation and short-term rheology 7−79178
Earth mantle, compressible convection dissipative heating, eqn. of state and rheology effects 7−71992
Earth upper mantle, rheology determ. from peridotite xenoliths from southernmost South America 7−101241
elastohydrodynamic lubrication, viscoplastic and viscoelastic models 7−142240
elastoviscoplastic media flow in channels, transient processes 7−142379
electrorheological suspensions, struct. and viscoelastic props. in electric field *(Russian)* 7−106563
extrudate swell, non-isothermal non-Newtonian, mixed boundary element and finite element method 7−110900
fluid, elastic of grade n, definition 7−83147
fluid elements deformation behind an advancing flow front 7−110908
foam, high gas fraction, extensional and shear deform., two-dimens. hexagonal cell model 7−97472
foam rheology, flow in viscometers, porous media and channels 7−91050
foam rheology, viscous forces model 7−110899
foams, rheology, polydispersity and liq. viscosity effects 7−130614
furcellarane, solns., rheological props. *(Russian)* 7−110901
gases, rheology, nonequilib. mol. dynamics 7−69079
granular materials, flow, frictional-collisional constitutive relations 7−75492
greases, viscometric material functions, shear rheometry 7−75493
ice V, viscosity and creep rate rheological eqn. determ. 7−111749
isobutylene polymers and copolymers, compatibility with polyorganosiloxanes *(Russian)* 7−83793
K-BKZ fluid, flow between parallel plates, shear thinning and inertial effects 7−69218
kaolinite-carbamide intercalates, conc. suspensions, rheological props. 7−75510
liquid crystal polymers, dynamical characts. viscoelastic props. 7−136770
liquid crystal polymers, simple shear and elongational flow, transient behaviour study 7−137209
liquid-filled membrane, deform. by viscous shear flow 7−123822
liquid-gas foams, bubble size distrib. in pipe flow 7−130772
low temp. high press. inelastic props., appl. to icy satellite interiors 7−111742
lubricated planar stagnation die flow with low viscosity liq. separating viscous material from solid wall 7−75504
magnetic fluids, rheological characteristics, viscometric meas. 7−132980
magnetic lacquers, rheogram meas. with couette apparatus 7−91049
magnetorheological suspension, turbulent flow and heat transfer study 7−123719
measurement of viscosity and the complex E-moduli with the longitudinal vibrating band *(German)* 7−69293
microplastics hardening process, rheokinetic investig. 7−144360
nematic liquid crystal polymers, flow and mol. orientation, computer simulation 7−75963
Newtonian fluid, die swell problem, numerical simulation using concept of stream function and local anal. 7−75503
non-Newtonian fluid, channel flow, vel. meas. laser-Doppler anemometry 7−69223
nonlinear rheology, empirical prediction rules from linear viscoelasticity 7−75508
Oldroyd fluid, 3D stretching flow, vortex sheet propag. 7−104313
oligomers, hardened, rheology, interphase slip *(Russian)* 7−83148
Pluronic F-68, adsorbed layers, rheological props., nonpolar phase effects 7−112079
polyamide acid, rheological props. and mol. mass, thermal imidization effects *(Russian)* 7−91052
polyamidobenzimidazoles, props., unit struct., rel. to monomer asymmetry *(Russian)* 7−91489
polydecamethylene terephthaloyl-bis-4-oxybenzoate melt, rheological props., deform. effects *(Russian)* 7−91053
polyethylene, high- and low-density, blends, isothermal elongation at const. stretching rate 7−78085
polyethylene, low density, sharkskin defect studied using flow birefringence and roughness meas. 7−75494
polyethylene, thermal stabilisation with lignosulphate, rheological props. 7−92954
polyethylene blends, mixing, morphology, rheology, mech. props. 7−126197
polyethylene melts, shear, biaxial and uniaxial extensions, constitutive eqns. comparison 7−130615
polymer liquids, viscoelasticity, constitutive eqns. 7−130613

rheology continued
polymer melts, diffusion, reptation and tube renewal mechanism, expt. and numerical simulation 7−75499
polymer melts and solutions, conformation tensor rheological models 7−75501
polymer particle collision with rigid barrier 7−136760
polymer solution, dil., channel flow, shear wall effects, Gaussian dumbbell model calcs. 7−111038
polymer solutions, anisotropic hydrodynamic drag, elastic dumbbell and reptating chain model 7−137186
polymer solutions, dil. linear and ring-shaped, rheological behaviour, ring closure effects 7−110894
polymer solutions, entry flow problem study review 7−91174
polymer solutions, extensional viscosity, rheometer meas., Trouton ratios anal. 7−98542
polymer solutions, fracture, steady and transient elongational flows 7−91419
polymer solutions, kinetic theory, bead-spring rings with hydrodynamic interaction approach 7−137190
polymer solutions, stress relaxation, diff. constitutive eqns., convected derivatives 7−110895
polymeric liquid crystals, rheology 7−69591
polymeric liquid crystals, shear flow induced struct. changes 7−83663
polymeric liquids, nonequilib. mol. dynamics, rheological props. 7−75502
polymeric liquids, viscoelasticity, conference, Grenoble, France (Jan. 1986) 7−72698
polymers, adsorbed on spherical particles, effects on fluid dynamics 7−91204
polystyrene ionomers soln., conform. relax. in extensional flow field, solvent quality, conc. depend. 7−124073
polystyrene-polyisoprene-polystyrene triblock copolymer, order-disorder transition, rheological obs. 7−126102
polysulphone, synthesis, NMR and rheological study 7−119530
polyurethane reinforced reaction injection moulding, rheology of glass-filled polyol slurries and polymeric isocyanates 7−92956
pseudo-plastic fluid flow between two coaxial cylinders with axial flow rate *(French)* 7−97485
PVC plastisols, viscosity depend. on temp. and time 7−131349
red mud slurry, rheological props. and flow characteristics 7−104347
rheometer, vibr. type, for rheological characts. of polymeric systems 7−75729
rheometer for concentrated polymer solutions containing volatile solvents 7−117686
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7−92953
shear acoustic wave rheology meas. 7−86538
sheet inflation rheometer, strain rate control 7−110898
silica suspension, polyacrylamide soln., flocculation, rheological behaviour study 7−114009
suspension, dipolar axisymmetric Brownian particles, Newtonian solvent, rheology, external field effects 7−114010
suspension, nonaqueous media, rheological study 7−100631
suspension, solid particles, three-phase sparged reactors, physical props. effects 7−98620
suspension, strongly-flocculated colloidal particles rheology and sedimentation study 7−93395
suspension of rigid rods, shear flow, stress growth, Galerkin method calcs. 7−114011
suspensions, rheological behaviour, Hooke'e elasticity influence *(Russian)* 7−97470
thermoplastic elastomers for cable and wire insulation, viscosity fn. 7−104593
thermoplastic rubbers, melt transition temp., hard segment size influence 7−69806
viscoelastic half-space, impact of rigid, axisymmetric indentor, integral eqn., num. soln. 7−69070
viscoelastic system, rheological characts. determ. 7−75506
viscoplastic body motion in mag. liq. flow, generalised rheological law 7−91250
C network in coal pitches, structural order, microraman investig. 7−90989
TiC single crystals, state variable analysis of inelastic deform. 7−113612
ZrF_4-BaF_2-NaF-LaF_3-AlF_3 glass, rubber state, appl. to polymer rheology 7−83073

rheopexy *see rheology*

rho mesons
σ-model with ρ meson coupling, chiral soliton stability 7−134930
four-quark condensates, contribs. to QCD sum rules for ρ and A_1 7−116097
relativistic constituent quark model, distribution amplitude 7−95839
Skyrme model, ρ meson model, alternative approach using σ-stabilised solitons 7−73528
$e^-e^+ \rightarrow \eta\rho$, mass spectrum interference effects 7−81166
$e^-e^+ \rightarrow \pi^+\pi^-$, inelastic effects and $\rho'(1250)$ inequivalence, form factor anal. 7−121522
$\gamma^*p \rightarrow \rho p$, exclusive ρ prod. in deep inelastic scatt., pomeron approach 7−73656
$\gamma p \rightarrow \eta\rho$, diffractive photoproduction, mass spectrum interference effects 7−81166
$\nu(\bar{\nu})N$ charged current interactions in Ne, spin alignment of ρ^0 produced 7−81168
$\bar{p}p \rightarrow \rho^0 X$, 32 GeV/c, topological and differential cross section meas. 7−95951
π-ρ-ω-A_1 system, baryons as solitons, hedgehog mass, baryon phenomenology 7−73529
ρ, analysis using modified QCD sum rules 7−95857
ρ, resonance parameters, QCD sum rule anal. 7−89451
$\rho \rightarrow 2\pi$, width calcs., ρ-A_1 sector parameters with improved Weinberg relation 7−140932
$\rho^- \rightarrow \gamma X$, decay width meas., $\pi N \rightarrow \rho^- X$, 200 GeV study 7−116177
$\rho'(1250)$, pion form factor model anal. in $e^+e^- \rightarrow \pi^+\pi^-$ 7−67634
$\rho''(1600)$, pion form factor model anal. in $e^+e^- \rightarrow \pi^+\pi^-$ 7−67634

rhodium
see also nuclei with .....
atom, X-ray tube parameters, effect on light element anal. 7−67442
conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
electron momentum density distribs. 7−76760
magnetic ordering and supercond. at microkelvin temps. *(German)* 7−112567

rhodium continued
post field ionisation and evaporation, ion energy distrib. FWHM anal., comment 7−106385
reflective surface, solar concentrator materials development 7−71580
self-powered Rh neutron detector, depletion characts. 7−103340
small supported crystals, growth in 400 keV electron microscope 7−100024
surface, (100), adsorbed H, vibrational modes and desorption kinetics 7−143182
surface, (100), CO, H_2O and O coadsorpt., EELS, LEED and TPRS investig. 7−118236
surface, (100), NO adsorpt. decomp. and desorpt., EELS and TPD investig. 7−112069
surface, (111), adsorbed benzene, lattice-dynamical model calcs. 7−112060
surface, CO(NO) adsorption, laser-induced desorption studies 7−143187
surface, methane dissociative and molecular adsorption 7−143225
surface, NO and CO adsorption, reactions of NO with H and CO, surface struct. effects 7−71521
surface, SiO_2 supported, adsorbed H-layers, ^1H NMR spectra 7−112059
surface (100), formate production from coadsorbed CO, H_2O, O 7−144747
surface (110), H_2 adsorption, isotope effects 7−131418
surface (111), azimuthal orientation of adsorbed benzene molecules, ARPES study 7−100016
surface (111), detection of neutral sputtered atoms, ejection, surface struct., energy and angle resolved meas. 7−138569
surface (111) with adsorbed O, detection of neutral sputtered atoms, ejection, surface struct., energy and angle resolved meas. 7−138569
surfaces, K and B contaminated, interaction of NO 7−143206
Al-SiO_2-Si:Rh, MIS struct., influence of Rh 7−143618
Co:^{100}Rh, hyperfine fields, DPAC meas. 7−118425
Fe:^{100}Rh, hyperfine fields, DPAC meas. 7−118425
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}:Rh^{2+}$, beta″-alumina, optical spectroscopy 7−92725
Rh/Al_2O_3 catalysts, adsorpt. of CO, diffuse refl. FTIR spectra 7−125717
^{103}Rh, hyperfine struct. determ. using laser RF double resonance method and laser spectroscopy 7−74471

rhodium alloys
see also rhodium compounds
superconducting ternary silicides and germanides, $R_5Rh_4X_{10}$, (R=Sc,Y,Lu; X=Ge,Si), DC electrical resistivity and upper critical mag. field 7−84814
$BaRh_3Pb_6$, crystal structure *(French)* 7−69657
$Ca_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
$Ce_{1-x}La(Y)_xRh$ alloy, struct., mag. props. and valence behaviour, substitution and surrounding effects 7−76847
$Ce(Rh, Pd(Ru))_3B_x$, resistivity and Ce L_3 valence state, temp. depend. 7−124960
$CeRh_3B_2$, Ce local moment meas. 7−118772
$CeRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$CeRh_3B_2$ single crystals, preparation and physical props. 7−117865
$Ce(Rh_{1-x}Ru_x)_2Si_2$ solid solns., mag. props. 7−77246
Co-Rh alloys, high temp. surface segregation, Auger electron spectra study 7−91949
CuRh alloys, low temp. sp. ht. data and charge self-consistent KKR-CPA calcs. 7−84316
Cu_xRh_{1-x} alloy, mag. and electronic props. 7−105387
$Dy_2Rh_3Si_5$, monoclinic structure, X-ray diffr. studies 7−69649
$Er_{1-x}Ho_xRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
$ErRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
$Er_xY_{1-x}Rh_{1.1}Sn_{3.6}$ system, superconductivity and mag. ordering 7−125205
$Eu_x(Rh_{1-y}Fe_y)_3B_2$, mag. behaviour, Mossbauer spectra 7−118897
Fe-Rh-N, austenite solid solutions, thermodynamic functions 7−98512
Fe_xRh_{1-x} ferromag. and antiferromag. alloys, electronic struct. and local mag. moment calcs. 7−70179
GdRh dilute HCP alloys, elec. field gradient, TDPAC studies 7−113006
$HoRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
$HoRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$HoRh_2Si_2$ thermodynamic and mag. props. studies using cryst. field model 7−70558
$LaRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$LuRh_{1.2}Sn_4$, supercond. props. and magnetism 7−92325
MoRhB amorphous alloys, NMR studies and superconductivity 7−99313
MoRhP amorphous alloys, NMR studies and superconductivity 7−99313
m-$Nb(Rh_{0.75}Pd_{0.25})_3$, prep. by rapid solidification processing, long-period close-packed phase of $PuGa_3$ type 7−119266
$NdRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$Ni_{1-x}Rh_xBi_3$, cryst. struct. and complete solid miscibility 7−69652
PdRh polycrystalline foil, high temp. oxidation, XPS and Raman studies 7−138590
Pt-Rh (111) and (100) surfaces, plasma induced erosion 7−113780
Pt-Rh alloys, grain boundary embrittlement *(Russian)* 7−106595
Pt-Rh model automotive exhaust control catalysts, EXAFS, STEM and XRD characterisation 7−100678
PtRh:S alloys, surface segregation, cosegregation with S impurities, composition depth profiles 7−119100
Pu_5Rh_4 and related cpds., cryst. structures, X-ray diffr. study 7−104637
Rh-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
Rh-Fe thin films, temp. coeffs. of resistivity, cryogenic thermometer appl. 7−125146
Rh-Zr metallic glass struct. determ. using scanning tunnelling microscope 7−142540
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
RhPt-Pt thermocouples, discontinuity meas. in dt/dt_{68} at 630.74°C in IPTS-68 7−89221
$RhSb_3$, elec. props., IR refl. spectra 7−85645
$SmRh_4B_4$ antiferromag. supercond., reentrant behaviour, microscopic mechanisms, Ginzburg-Landau approach 7−105816
$SmRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
$TbRh_{2-x}Ir_xSi_2$ cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
UGaRh, mag. behaviour studies 7−77298

rhodium alloys continued
URh_3B, mag. susceptibility, elec. resist. meas., hybridisation weakening 7−77251
V_3Rh, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7−76333
$Y_2Rh_3Si_5$, monoclinic structure, X-ray diffr. studies 7−69649
Yb-Rh-Sn, superconducting, Yb valence fluctuations, X-ray absorption studies 7−77688
$Yb_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
Zr-Rh-H, crystalline-to-amorphous transformation, thermal analysis 7−97929
ZrRh dilute HCP alloys, elec. field gradient, TDPAC studies 7−113006
$Zr_{75}Rh_{25}$, weak localisation effects on upper critical field 7−99371
Zr_3RhH_x, amorphous, produced by solid-state reaction, thermal props. 7−84317

rhodium compounds
see also rhodium alloys
carboxylates, gaseous phase, electron impact mass spectrometry 7−74778
$CeRh_3B_2$ cryst. struct., single cryst. X-ray diffr. study 7−142729
$CeRh_4B_4$ high press. prep. and search for superconductivity 7−143657
$Er_xY_{1-x}Rh_4B_4$, low temp. heat capacity, mag. and supercond. phase diagrams 7−92372
$Li_{1-z}Cu_zRhRu_{1-x}Mn_xO_4$ system, spinel phase determ. *(German)* 7−98065
$(NH_4)_3RhCl_6$, X-ray absorption-edge structures 7−99977
$PrRh_4B_4$ high press. prep. and superconducting props. 7−143657
RRh_2X_2 (X=P, As), ternary pnictides, cryst. struct. determ. 7−117877
Rh complex, $[Rh(2,2'\text{-bipyridine})_3]Cl_3$, triplet state, optically detected spin coherent transients 7−138352
Rh complex, dirhodium(II) dihydrate tetraformate, ground state config., ab initio SCF CI calcs. 7−96554
Rh complex, K cis-dichloro bis(oxalato) rhodate. H_2O, cryst. struct. 7−142741
Rh μ-amido A-frame complexes, deprotonated bis(diphenylphosphino)methane ligand tautomeric equilibria 7−119552
Rh^{3+} complex, rhodium(III) tris(bipyridine), phosphoresc. and ODMR meas. 7−82250
Rh-H, high press. phase, supercond. transitions 7−125204
α-$Rh_2As/GaAs$, metal/semiconductor epitaxial structures *(French)* 7−131498
$RhCl_3$-SiO_2 catalyst, CO absorpt. and thermal desorpt., H_2S effect 7−113987
$RhCl_3.3H_2O$, X-ray absorption-edge structures 7−99977
$Rh(NO_3)_3$-SiO_2 catalyst, CO absorpt. and thermal desorpt., H_2S effect 7−113987
Rh_2O_3-metal interface compositional anal., image atom probe mass spectroscopy 7−131394
Rh_2O_3-SiO_2 catalyst, CO absorpt. and thermal desorpt., H_2S effect 7−113987
URh_2Ge_2, struct., mag. and elec. props. 7−117878
$U_6Rh_{20}P_{13}$, prep., cryst. struct., X-ray diffr. study 7−83921
Zr_3Rh-H, crystal-glass transition by H absorption 7−91805
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564

rhodopsin *see proteins*
Richardson effect *see thermionic emission*
ridge waveguides *see rectangular waveguides*
Riemann-Cristoffel tensors *see general relativity; tensors*
Righi-Leduc effect *see thermomagnetic effects*
rigidity *see shear modulus*
rimming steel *see steel*
ring lasers
acousto-optic modulator as electronically selectable unidirectional device 7−141978
acoustooptic nonreciprocity rel. to Fizeau effect 7−141897
angle metrology appl. *(Czech)* 7−67280
backscattering, reducing effects 7−103844
beam propag. characts. of ring resonators *(Chinese)* 7−90654
decoupling method for laser system with wavefront reversal 7−136367
detuned laser, with saturable absorber, semiclassical anal. 7−82646
DFB modes in partially filled ring cavity 7−68713
dye laser, CW energy transfer, operating around 750 nm, passive mode locking 7−141853
dye ring laser, tunable picosecond pulse generation between 1.18 μm and 1.53 μm 7−82548
dye ring laser output, intracavity freq. doubling in α-$LiIO_3$, tunable UV radiation generation *(Chinese)* 7−130251
femtosecond laser flashed frame imaging utilizing a femtosecond streak camera 7−95561
fibre optic ring-resonant sensor, terminal-reflected, performance anal. 7−75136
fibre Raman soliton laser theory 7−97037
gas laser with intracavity nonlinear absorpt., freq. modulated reson. in radiation *(German)* 7−130190
gas ring laser at 0.63 μm, transition to dynamic chaos 7−68621
Gauss-Laguerre modes of a ring resonator 7−136372
gyroscope, locking eqn. with coloured noise 7−117235
gyroscope, passive ring laser in very high finesse cavity, laser feedback control system 7−123034
gyroscopes, fabrication and testing 7−74995
interference of counterpropagating waves of ring laser in independent coordinate system 7−90658
model, with swept parameter and additive coloured noise, postponed bifurcations 7−141900
multimode instabilities of homogeneously broadened lasers 7−68718
multimode laser with modulated inversion, numerical anal. 7−117172
oscillation output bifurcation and chaos 7−74993
Pointing alignment by orthogonal phase-lock feedback loops 7−75012
Raman ring-laser, chaotic pumping, noise reduction 7−130191
random frequency base, asymptotic estimate of error 7−130205
random frequency base optimisation 7−130206
resonator, beam amplification by dynamic hologram 7−110410
resonators, diffr. problems *(Russian)* 7−82649
ring-laser gyroscope, coloured noise effects, theoretical anal. and simulation 7−123031
solid state, mode locking effect on counter propagating waves 7−90660
spatiotemporal chaos in ring cavity ring cavity, spatiotemporal chaos 7−123032
stimulated Brillouin scattering lasers, self-pumped, field structure 7−82642

ring lasers continued
Styryl-9 ring dye laser, freq. selection using low-loss Mach-Zehnder interferometer 7−74954
theoretical model and practical devices 7−90659
two-phase clock based on transverse-profile Ikeda instability 7−68773
unidirectional operation using absorbing Fabry-Perot filter 7−103843
unidirectional ring gas laser, output irradiance, system optimisation 7−136368
unstable ring resonator with an intracavity prism beam expander 7−68808
vacuum chirality, QED anomaly, ring laser expt. possibility 7−108846
winking phenomena, scattering parameters depend. calcs. *(Russian)* 7−82648
Zeeman laser, stabilised transverse, applics. to polarisation meas. *(Chinese)* 7−75013
CO_2 ring lasers, phase locking 7−123036
GaAs-GaAlAs BH laser with ion-beam-etched quarter ring cavity 7−82608
He-Ne ring laser, opposite beam reson. interactions 7−74992
He-Ne/methane ring laser, competition between counterpropagating waves, axial mag. field effect *(Russian)* 7−82669
Nd:YAG ring laser, CW, kinematic mode locking 7−97045
Nd:YAG ring laser, spatial separation of opposite waves 7−130189
Nd:YAG ring laser, unidirectional, diode-laser pumped, mag. field effects 7−74962
Nd:YAG ring oscillator, laser pumped, freq. stability and offset locking 7−68717
Nd^{3+}:YAG CW laser, nonlinear optical effects 7−68655
ringers *see bells*
riometers *see ionospheric measuring apparatus*
ripplons
^{4}He liq. surface, 2D Wigner cryst., ripplonic polaron DC magnetocond. calcs. 7−76518
quantum-liquid surface, ripplon dispersion and finite-range effects 7−84423
He film, liq., surface polaron states in uniform mag. field 7−105164
He liquid, coupled plasmon-ripplon modes, Wigner crystal *(Japanese)* 7−98607
He surface, 2D electron system, momentum relax. rate and electron mobility *(Russian)* 7−137639
^{4}He liq., surface Wigner crystal, coupled plasmon-ripplon resonances and the Debye-Waller factor 7−84416
^{4}He superfluid surface, sticking of spin-polarised H atoms 7−112006
rivers
see also lakes
acidified surface water liming techniques, consequences and costs 7−106938
Aire, N England, seasonal flood risk rel. to antecedent catchment conditions 7−145563
alluvial channels, response to baselevel lowering, FORTRAN program 7−145525
Amazon, sediment contrib. to French Guiana continental margin, Late Quaternary sedimentation *(French)* 7−87607
Amazon River geochemistry, weathering chemistry and limits to dissolved inputs 7−127292
Amu-Dar'ya and Syr-Dar'ya rivers, USSR, annual flow rates in AD 1961 to 1980 period 7−114829
annual discharge variations, statistical modelling of influence of irrigation 7−133789
bed-load sediment transport theory 7−94307
bedform horizontal evolution due to flow in shallow water 7−107382
Bella Coola delta, BC, Canada, morphology of underwater part of delta 7−87591
Browney, N England, seasonal flood risk rel. to antecedent catchment conditions 7−145563
Changjiang, China, major dissolved constituents origin and migration *(Chinese)* 7−79474
channel geometry, dynamic aspects 7−145565
China, influence of fluvial sedimentation on coastline 7−94195
Currant Creek, SW Wyoming, beaver pond effects on nonpoint source water quality 7−114139
Danube-Tisza Interfluve, Hungary, electron microscope investigations of sand material from drill 7−139652
debris flow and boulder transport by rivers, a macro-viscous phenomenon 7−94308
dendritic river networks, tide simulation using numerical model 7−133791
discharge rate determ. method, using ultrasonically measured flow rate 7−114828
dispersion and rate coeffs. estimation by numerical routing 7−72126
distributed surface runoff systems, manifold cell model 7−127313
dominant discharge theories and bed-transforming discharges 7−120056
Douro/Tejo rivers, Portugal, ^{137}Cs concentration meas. 7−139150
drainage basin morphometry, book 7−115704
EM flow meas., interference sources *(Polish)* 7−139810
erodible beds with suspended sediment, instability *(Japanese)* 7−107384
Esk estuary, UK, Pu remobilisation from estuarine sediments 7−144925
estuaries, dynamics of surfactant films in inhomogeneous currents field 7−139639
estuarine plume onset, 3D primitive eqn. model 7−94282
estuary-shelf waters interaction, two-layer density stratified flow modelling 7−133731
explicit-implicit streamflow models, comparative anal. 7−139640
Feather River basin, cloud seeding feasibility and runoff anal. 7−133847
flood control, hydrologic model use as policy statement 7−120042
flood flow forecasting using microcomputer graphics and radar imagery 7−145557
flood frequency analysis, statistical intercomparison of EV1 estimators by Monte Carlo simulation 7−139641
flood frequency estimation, effect of regional heterogeneity 7−79480
flooding phenomena, satellite monitoring 7−101560
flow forecasting in real time, nonlinear filtering appl. 7−127316
flow time series, mixed gamma ARMA (1,1) model 7−72118
fluvial morphological features, determ. of ages and cycles of development 7−139663
Ganges, monsoon flooding during AD 1984 in Bangladesh 7−120059
Ganges, U and Rn concs. in river water in Uttar Pradesh Himalayas 7−114814
Gornyi Altai region, USSR, catastrophic flooding due to periglacial lakes 7−87735
graded profile rivers, mathematical modeling 7−72110
rivers continued
Haryana State, India, soil erosion and deposition 7−107417
historical floods, plotting positions and precision 7−127317
Hudson River, inventory of toxic pollution sources 7−86847
hydroelectric plants of USSR, reservoir influx long-term characts. 7−120055
hydroelectric power station instream flow needs, workshop, San Francisco, CA, USA (Jan. 1986) 7−78686
hydrology, linear diffusion water model observability 7−107442
Kaweah River basin, California, winter orographic cloud seeding and streamflow anal. 7−133936
Kern River basin, California, winter orographic cloud seeding and assoc. streamflow anal. 7−133935
Kosi, India, channel shifting 7−139654
Leschenault Estuary, Western Australia, characts. of surface buoyant jet 7−114759
Mahanadi river peak discharge due to heavy rainstorm 7−101385
manifold cell model calibration in time and Laplace domains 7−127315
meanders, determ. of ages and cycles of development 7−139663
Meuse River, S Belgium, origin of heavy metals, in water-meadow sediments 7−119697
Miami-Atlantic City sea level slope, effects of runoff and coastal wind stress 7−127263
N Michigan, USA, chem. composition of snowmelt and runoff 7−79463
Missouri River alluvial channels, dynamic aspects 7−145565
Muvattupuzha River (SW India), effect of pulp-paper effluents on water quality 7−139148
Naka Terrace, Ibaraki Prefecture, Japan, T concs. in rivers and groundwater 7−94327
natural streams, contaminant dispersion, two-equation model 7−93555
Nepean River near Sydney, Australia, comparison of thermoluminesc. and ^{14}C age determs. from Late Pleistocene sediments 7−127156
Niger Delta (Calabar Flank), case study of clay minerals buried diagenesis 7−87633
Nile, flood records since AD 650, showing 18.6 year period 7−139660
North Nashwaaksis Stream, New Brunswick, Canada, channel changes in short channelised reach 7−87718
Ontario, Canada, river ice and snow breakup after winter 7−114812
open-channel flow, streamwise vortex meas. 7−72124
Orinoco River tributaries, Venezuela, Se concs, meas. 7−87741
Ota river, Japan, turbulent boundary layer of tidal estuary *(Japanese)* 7−139618
S Pantanal Matogrossense (South America), interpretation of MOMS and Landsat data 7−114846
Perak River, Malaysia, flow time series, mixed gamma ARMA (1,1) model 7−72118
Periyar, India, lower reaches estuarine characts. 7−72108
Pichi-Richi Pass rocks, Australia, ancient sedimentation reflecting astronomical effects 7−133678
quality control, decentralised, hybrid technique 7−72109
Quaternary glaciofluvial deposits in S Finland, contorted structs. 7−114808
radioactive pollutants, transport mechanisms, physical dispersion models 7−133158
radionuclide transport in alpine Rhone watershed 7−139158
reservoirs inflow calculation for Siberian hydroelectric plants, lateral inflow transform. model 7−139662
response functions, time delay effect on cell models 7−127314
Rhone River, Zn distrib. 7−139155
rill pattern evolution and soil erosion, anal. via use of small flumes 7−87721
rivulet meanders, stability and geometry 7−120066
runoff volume rel. to total seasonal runoff forecast 7−72117
Saguenay Fjord, Quebec, Canada, PAH in sediments 7−126668
Saguenay Fjord (Quebec) catchment, record of climatologically-modulated sediment accumulation rates 7−127196
Sakura River, Japan, CNP herbicide contamination 7−126667
Salt River, Arizona, palaeoflood hydrology 7−87717
Sava River, Yugoslavia, streamflow drought analysis 7−72203
Schrondweilerbaach catchment, Luxembourg, sediment budget and implications for channel development 7−87720
seasonal flood risk rel. to antecedent catchment conditions 7−145563
Seine, N France, pollution by polychlorinated biphenyls 7−126666
Seine, repartition of polychlorobiphenyls between dissolved and particulate matter *(French)* 7−78690
Severn Estuary, UK, coal dust pollution chronology and distrib. 7−100768
SE Spain, response of Aguas and Feos river systems to differential epeirogenic uplift 7−145529
storm rainfall debris flows, Nagasaki July 1982, statistical investig. *(Japanese)* 7−101353
storm runoff, appl. to upland soil erosion model 7−87722
streamflow, maximum likelihood estimators for multisite lag-one model 7−127312
streamflow drought analysis method 7−72203
surface water, 3D modelling using mesh adaptive technique 7−110906
suspended loads, river-bed forming, flow rate distrib. *(Russian)* 7−101348
Texas estuaries, model of freshwater inflow requirements 7−79455
tributary arrangement in dendritic channel networks 7−145564
turbidity current, self-preserving solns. 7−94193
turbidity in shore zone, caused by breaking waves due to small motorboats 7−114825
turbulence, velocity vector component meas. 7−72113
Turunchuk River, velocity vector component meas. of turbulence 7−72113
United States, water quality trends in nation's rivers 7−127302
United States and Canada, 1986 December, water conditions 7−79470
United States and Canada, 1986 November water conditions 7−72115
United States and Canada, 1987 February, water conditions 7−101351
United States and Canada, 1987 January, water conditions 7−94328
United States and Canada, 1987 June, water conditions 7−139665
United States and Canada, May 1987, water conditions 7−145558
USA, April 1987 national water conditions 7−139664
USSR, permafrost-taiga zone small river basins, microelement flow characts. 7−127294
Wadi Howar, extinct river system in SE Sahara 7−133793
water infiltration to groundwater, T tracer study 7−127311
Weser River, West Germany, prevention of water pollution from Grohnde Power Station; 7−133140

rivers continued
Yangtze, China, flow concentration curve, evaluation parameters 7−107443
Yellow River, China, annual runoff and Antarctic ice-snow indices 7−127293

RKKY interaction
actinide systems, magnetic structure, neutron diffr. meas. 7−138190
alloys, resistivity, magnetic impurity pairs 7−124954
Fe film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
Kondo impurities; lattice problem 7−77217
Kondo two impurities problem, relevance to heavy fermions 7−77220
quantum spin glass, RKKY interaction, real space renormalisation study 7−112824
rare earth-Cu-Si alloys, RCu_2Si_2, (R=Tb-Tm), mag. interactions 7−132007
rare-earth metal, semi-infinite, RKKY interaction near surface 7−138214
semimagnetic semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
single impurity Anderson model, many body phenomena simulations 7−124910
spin glass alloys, classical RKKY model, anisotropy-induced phase transition, Monte Carlo simulation 7−125413
two dimensional electron gas, RKKY indirect exchange interaction on a sphere 7−131569
two-impurity Anderson model, Kondo limit, perturbative results 7−77219
AgMn dilute RKKY spin glass. nonlinear suscept. meas. 7−125402
AuCr spin-glass alloy, secondary standard high pressure gauge appl. 7−121143
$CeAl_3$, μ^+SR study of Kondo and RKKY interactions 7−113058
$Ce_{1-y}La_yNi_{1-x}Pt_x$ dense Kondo ferromagnet, magnetisation and elec. resist., substitution effects 7−70522
$CePd_3B_{0.3}$, high field low temp. heat capacity, exchange interactions 7−91835
Ce_2Sn_5, mag. susceptibility, sp. ht. meas. 7−70533
$Cu_{0.9}Pd_{0.1}MnSb$, magnetic structure 7−125325
Eu_xYb_{1-x}, magnetoresist. and magnetostriction meas. 7−131620
Gd-Y superlattices, RKKY interaction calcs. 7−125366
Gd-Y superlattices, synthetic, modulated mag. props. 7−99525
Gd-Y synthetic superlattices, polarised neutron diffr. studies 7−125322
$Gd(Cu_{1-x}M_x)_2$ (M=Ni, Co, Al), mag. struct. changes and thermal expansion, anomalies *(Russian)* 7−99402
$Ni_{0.8}Fe_{0.2}$ film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
(PbSnMn)Te, ferromagnetism under high pressure 7−99449
RM_2X_2 (M=nd transition metal, X=Si, Ge), mag. interactions, mag. structures 7−77234
$TbRh_{2-x}Ir_xSi$, cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
U_2Zn_{17}, antiferromag. heavy-fermion system, spin fluctuations 7−77238
U_2Zn_{17}, μ^+SR study of Kondo and RKKY interactions 7−113058

road traffic
1975 Dept. of Environment guidelines to calc. of traffic noise, reanalysis 7−93596
accident investigation, theme for teaching mechanics 7−140398
Amman, Jordan, road noise and its effects 7−126679
arbitrary traffic flow noise model *(Japanese)* 7−75203
disturbance by road traffic noise of the sleep of young male adults as recorded in the home 7−93598
environmental noise exposure change modelling 7−93595
highway noise barriers, insertion loss studies 7−123333
low noise road surfaces 7−90876
noise, excess attenuation model 7−97212
noise, influence of continuous and intermittent noise 7−133166
noise, prediction methods comparison 7−68935
noise attenuation with distance, calcs. 7−110676
radioactive material transportation to 1st US repository site, projected environmental impacts 7−74117
radioactive material Type A packages, costs and effectiveness of safety measures for road tunnel transit 7−74127
radioactive materials, transport by road, eval. of accident probabilities *(French)* 7−74231
return wall as a traffic noise barrier 7−68931
sloping road, traffic noise studies *(Japanese)* 7−104096
SNM transport system, safety anal., USA DOE/PNC joint programme 7−74112
spent CANDU fuel, road, rail and water transportation systems 7−109496
transport noise in built-up areas, computer model 7−93597
transportation noise in newly industrialised countries 7−93594
transuranic waste transportation tracking system 7−109497
tyre/road noise emission characts. meas. 7−110730
tyre/road noise generation studies 7−90875
ultrasonic vehicular traffic speed monitoring system 7−82951
urban road traffic noise, computer simulation model 7−142093
Urban traffic noise prediction under interrupted flow conditions, computer model 7−90877

road vehicles
see also automobiles
vehicle driving, falling cerebrum activity 7−107188
vehicle-pedestrian collisions, simulated motion patterns of pedestrian surrogates 7−107123

robot vision *see computer vision*

robots
see also artificial intelligence; industrial robots
absolute orientation closed-form soln. using unit quaternions 7−67406
acoustic imaging recognition system for intelligent robots 7−123366
acoustic range sensing robot servo control 7−82956
ARTS: a flexible laboratory instrument control language 7−134726
drugs in biological fluids, automated anal. system 7−127030
gripper control system using polyvinylidene fluoride piezoelectric sensors 7−123377
ISIS operation of robots at Chinon A3 reactor, reliability *(French)* 7−109368
JET, robotics equipment and special purpose tools 7−122091
legged locomotion, symmetry study 7−87047
limb parameters and joint reaction forces, estimation using robots 7−119882
LMFBRs, remote equipment and techniques for inspection 7−135501

robots continued
manipulator and end-effector interacting with environment, dynamic anal. 7−108225
microwave hyperthermia system, robot-controlled, non-invasive IR thermometry 7−107222
mobile robots for use in hazardous environments in nuclear plants 7−129346
MTS manipulator-carrier system for use at Wackersdorf nuclear reprocessing plant *(German)* 7−129215
object recognition sensor using ring pattern method for robotic appls. 7−82507
ocean hydrothermal ore deposits, submarine robot for exploration *(Japanese)* 7−101551
radioactive waste cask handling system, use of robotics 7−74183
rigid body system of arbitrary struct., analytic model 7−95303
robot arm, flexible, vibration anal. 7−130578
sample analysis appl. 7−102393
slip of objects in grippers, detection using acoustic emission signal anal. 7−110737
symmetric running with single and double support, in robots and animals, anal. 7−114354
trajectory planning in continuous-path applications, differential-geometry relations 7−120785

Rochelle salt
ammonium Rochelle salt, ferroelec. phase transition and Raman spectra 7−125724
crystals, domain walls, simultaneous elec. field and mech. stress effects meas. 7−138394
dielectric susceptibility and soft mode parameters, temp. dependence 7−85552
fracturing, role of phase transitions, appl. in earthquake research 7−94105
phase transition at 210 K, heat capacity obs. 7−104999
polarisation behaviour and ferroelec. mean-field eqn. of state near T_c 7−113101
Rochelle salt-ammonium Rochelle salt, solid soln., Raman spectra 7−132257
Rochelle salt-ammonium Rochelle salt mixtures, Raman spectra, phase transition mechanisms 7−106172
second acoustic harmonic amplitude, domain struct effects meas. 7−84138
Seignette salt, dielectric permitt., low-freq. dispersion, domain struct. reordering, stress effects study *(Swedish)* 7−125593
$RbMnCl_3$, ferroelastic, surface sound waves near phase transitions 7−131411

rock magnetism
anisotropy of mag. susceptibility, appl. and review 7−139592
anisotropy of magnetic susceptibility, influence of rock comp. versus strain 7−145448
asbestos, mag. orientation of respirable fibres 7−114157
basalt, TRM and ARM changes due to laboratory heating 7−107391
basalt samples selection for palaeointensity studies 7−79372
biogenic magnetite from bacteria, as limestone remanence carrier 7−101288
chemical remanent magnetization, during oxidation of magnetite 7−107393
chemical remanent magnetization self-reversal, palaeomagnetic example 7−133662
cobaltite (CoAsS), anomalous magnetic props. 7−101283
conference, Prague, Czechoslovakia (Aug. 1985) 7−102007
crystallization and chemical remanent magnetization (KRM and CRM) of magnetite 7−107394
dacite with self-reversed TRM, magnetic mineralogy of composite grains 7−133661
dolomites containing hydrocarbons, chemical remanent magnetization 7−107340
domain patterns, progress and problems 7−107402
Dunn Point volcanics (Early Silurian), Avalon Zone, Nova Scotia, palaeomagnetism and rock magnetism 7−119945
equipment for rapid determ. of rotational remanent magnetization 7−120139
evolution of mag. props. during minerals transform., example from Jurassic of French Alps *(French)* 7−72010
fine particle magnetism, implications for paleomagnetism 7−139591
fold-test evaluation of syn-folding remagnetization and grain-scale deformation 7−87614
gabbro and peridotite in serpentinized state, magnetic props. and marine mag. anomalies 7−87441
haematite, synthesized, chemical remanent magnetisation acquisition appl. in palaeomagnetism 7−107390
Harbour Main Group metabasalts, E Newfoundland, magnetisation ages from palaeomag. study 7−145335
hysteresis characteristics of synthetic samples with different magnetite and haematite contents 7−107399
hysteresis temperature dependence and domain struct. in magnetite particles 7−107400
ironcrust from SE Belgium, magnetic props. and synthetic Mn-substituted goethite studies 7−101285
Kono's correction factor compensating for changes during samples laboratory heating 7−79205
limestone magnetic foliation due to compaction 7−87611
limestone magnetization due to bacteria magnetite grains 7−101288
maghemitization influences on submarine basalt mag. props. 7−101282
magnetite, hydrothermally recrystallized, magnetic hysteresis props. 7−127205
magnetite ore, high-temperature remanent magnetic memory 7−139589
magnetization direction determ. for drill hole core samples 7−127481
magnetometer for laboratory rock studies, flux-gate spinner magnetometer interfacing to microcomputer 7−101512
magnetometer for rock magnetism studies, vibrating-sample type 7−101543
magnetostratigraphy, appl. to palaeosecular variation, polarity transitions, and mag. reversal sequences 7−145324
measurement method, pulsed field determ. technique for domain struct. 7−101286
metamorphic control of black shale magnetic mineralogy in Swiss Alps 7−133660
metamorphic minerals, anisotropy of magnetic susceptibility 7−145447
metastable magnetic states, nature and mechanisms 7−120013
Mull Tertiary intrusive complex, NW Scotland, contrib. of mag. igneous rocks to mag. anomalies 7−127207

ock magnetism continued
multi-component rock magnetization analysis using ROCOMA (rotating coil magnetometer) 7—145719
overview of geomagnetism and paleomagnetism (1983 to 1986) 7—139590
palaeomagnetic samples, improvement of accuracy of palaeointensity meas. 7—133569
Permo-Triassic redbeds from Asturias and Cantabric Chain, evidence for early Tertiary remagnetisation 7—139465
post-depositional detrital remanent magnetization, model of sediment processes 7—107395
pumice blocks (dacitic) from Mt Shasta, California, USA, mineralogy and reverse magnetization 7—101287
redbeds and thermoviscous magnetization theory 7—107387
remanent magnetisation, high-press var. 7—114694
sedimentary rocks of Akchagil Basin, USSR, authigenic mineralisation rel. to partial remagnetisation time 7—145445
sediments of deep-sea, magnetization acquisition for sediments undergoing compaction 7—133666
Spitsbergen, Permo-Carboniferous sediments, magnetisation characts. 7—145444
SQUID-based rock magnetometer with open-ended horizontal room-temperature access 7—139787
susceptibility mapping, Kalman filter approach 7—114705
synthetic sample and natural sample observations, discrepancies and their causes 7—107403
synthetic sediments, post-depositional remanent magnetisation, compaction-induced inclination shallowing 7—72012
titanomaghemite, mag. props. changes due to heating and cooling 7—101281
titanomaghemite (synthetic), magnetic Curie temp. and cell parameters 7—101280
titanomagnetite, cracking accompanying oxidation at seafloor conditions 7—101296
titanomagnetite, selection rules for bulk piezomagnetic coeffs. of isotropic dispersions 7—127197
titanomagnetite (Ti-rich), cryst. internal stress and mag. domain struct. 7—101284
titanomagnetite particles dispersion, specimen preparation method for rock magnetism studies 7—101544
titanomagnetites, domain obs. during hysteresis at elevated temp. and thermal cycling 7—107401
titanomagnetites in silicate matrix, magnetic hysteresis properties 7—107398
TRM acquisition in multidomain magnetite, expts. and kinematic model 7—107392
viscous remanent magnetization determ., Thellier test for rocks *(French)* 7—139781
weak field susceptibility depend. on applied mag. field 7—107396
$CaFe_2Si_2O_8(OH)$ ilvaite mixed valence single cryst., electron delocalisation and magnetic props. 7—76853
Fe ferrimagnetic oxide formed on heating nontronite, magnetisation, Mossbauer spectra and structure studies 7—77354
Fe_3O_4 particles, mag. hysteresis props. and ARM 7—107397

ocket vehicles *see rockets*

ockets
see also missiles; space vehicles
37th IAF Congress, Conf., Innsbruck, Austria (October 1986) 7—120680
Intercosmos 10 rocket, orbital decay analysis 7—145314
MARTHE—Mirror Array Telescope for High Energies, rocket borne 7—88114
Shuttle booster rocket exhausts in troposphere, Al_2O_3 particle analysis 7—100779

ocks
see also minerals; rock magnetism
Abitibi greenstone belt, Kalman filter approach to susceptibility mapping 7—114705
Abresist fused cast basalt, erosion behaviour 7—113729
acoustic emission for granite and limestone under uniaxial compression *(Chinese)* 7—145442
acoustic properties var. due to deform. under complex stress states 7—114696
acoustic velocity and acoustic emission of marble and gabbro, temp. effects *(Chinese)* 7—87609
AE, improved locations 7—138933
alkalic carbonatite lava from Oldoinyo Lengai, Tanzania, alteration chemistry rel. to calcite carbonatite lavas 7—145409
E Alps, strain anal. and microfabrics rel. to superposed deformations model 7—127209
W Alps ophiolites, blueschist and eclogite transforms, in Fe-Ti gabbros 7—101295
anisotropic elastic properties, effect on refl. amplitude vs. offset 7—119952
aquifer rocks of Lagos metropolis, Nigeria, implications for groundwater resources 7—87737
Arabian Shield ophiolites and Late Proterozoic microplate accretion 7—139565
Areachap Group, South Africa, tectonic deformation along eastern boundary of Namaqua Province 7—107409
Armenian granitoids of varying age and origin, high press. elastic wave vel. 7—114693
Asse salt mine, sedimentary rocks, geologic survey 7—101298
Assegaai greenstone belt, Transvaal, deform. of supracrustal rocks and adjoining granitoids 7—72020
Mid-Atlantic Ridge, quartz-cemented breccias due to hydrothermal activity 7—145441
augen gneiss terranes in Idaho, U-Pb geochronology and tectonic implications 7—79317
Baikal-Muya ophiolite belt, chemistry of N Baikal gabbroids rel. to ophiolites form. 7—145455
N Barents Sea, bedrock geology inferred from overlying Quaternary deposits 7—72005
basalt, thermal and mechanical props. beneath Hanford waste storage site 7—94215
basalt, TRM and ARM changes due to laboratory heating 7—107391
basalt microfracturing and Omori's power law aftershock sequences 7—120015
basalts, Cenozoic, of E Sayan region, petro-chemical series as indicators or orogenic regime 7—139548
basement rocks in mainland UK, heat flow, heat prod., and thermotectonic setting 7—127151

rocks continued
basic igneous rocks of Loganchin astrobleme, shock metamorphism characts. 7—145470
Beacon sandstone, Antarctic cold desert, biogenous and abiotic weathering rel. to microbial trace-fossil form. 7—120020
biaxial elastic inclusion stressmeter anal. 7—87920
biaxial stress loading, P-wave vel. and deform. characts. 7—107386
Bidart, France, O isotope ratio of carbonate during Campanian and Maastrichtian *(French)* 7—94196
boreholes in rock, elastic waves circumferential propagation 7—117506
brittle crack growth 7—87625
Bushveld Complex, field and petrologic evidence for assoc. hydrothermal system 7—145449
Butterton Dyke, Staffordshire, mag. mapping from vertical gradient mag. survey 7—127208
California-Nevada orogenic belts, metamorphic rocks characts. and tectonic implications 7—139564
carbonate dolomitization by pore fluid flow, model 7—114698
carbonatites in Lemitar Mountains, New Mexico, geology and regional implications 7—101292
Lower Carboniferous rocks of SE Tunguska syncline, stratigraphic age and mineralogy 7—145453
W Carpathians, mag. field palaeointensity meas. for three geological time periods, igneous rocks meas. 7—79207
chalk rocks of central Israel, faults and chalk types 7—87620
channel model of flow through fractured media 7—142387
cherts and other siliceous deposits, Rb-Sr and Sm-Nd systematics 7—94222
cherts from Onverwacht Group, South Africa, Rb-Sr and Sm-Nd isotope geochemistry and chronology 7—94223
cinder cones of Michoacan-Guanajuato, central Mexico, petrology and chemistry 7—101253
clay, strength of Ariake clay subjected to shear failure and disturbance *(Japanese)* 7—107404
coal from Iowa, trace element geochemistry 7—72027
coal measure rocks from Sydney Basin, New South Wales, elastic props. 7—120008
coals, Mesozoic and Tertiary, as major energy resource, geological and economic significance 7—86747
Col du Somport, France, Pyrenean Permian redbeds, palaeomag. direction determ. by strain removal 7—145321
Comoe Unit (Birrimian) of Ivory Coast, Eburnean deformations *(French)* 7—87632
conference Fredericton, New Brunswick, Canada (May 1985) 7—95072
continental Moho, relationship to crust-mantle boundary, evidence from mafic rocks 7—139515
E-Cordillera, Central Peruvian Andes, granitoids, K-Ar radiochronological data *(French)* 7—94176
crack growth in minerals and rocks, theory and expts. 7—87624
crack growth under influence of moving gas in underground cavity 7—101289
creep in granite and gabbro, ten year creep expt. results 7—79371
creep transition in fine-grained granitic aggregates and high-temp. and high-pressure 7—127206
Cretaceous-Tertiary boundary clays, evidence for global distrib. of shocked quartz 7—120021
Criffel granodiorite-granite zoned pluton (SW Scotland), oblique diapirism emplacement model 7—127210
crushed rock electric-thermal storage heating system 7—144919
lower crustal rocks of SW Germany, physical props. from 1D and 2D seismic modelling 7—79274
crystalline rocks permeability determ. by standard geophysical logs 7—94466
Daurskii regional gravity minimum (Transbaikal), rocks comp. rel. to local gravity anomalies 7—145307
deformability measurement method, using flexible dilatometer in boreholes 7—79665
deformation, appl. of kinematic vorticity number as measure of noncoaxiality 7—72016
deformation analysis, correction of oblique photographs in structural geology 7—71954
deformation analysis, cross-section drawing through folded layers using sequentially rotated cubic interpolators 7—127605
deformation analysis, displacement efficiency of faults and fractures 7—127202
deformation and fluid flow in discrete fractures, similarity solution 7—94214
deformation and fracture, energy approach to problem of continual destruction of solid body 7—133665
deformation effects on porosity and permeability 7—94206
deformation in Builth Ordovician Inlier, Mid-Wales, kinematics of strike-slip faulting 7—127213
deformation in Dolomites (Southern Alps, N Italy), implications for tectonic evolution 7—79393
deformation in Zambesi belt, NE Zimbabwe, strains and vorticity beneath tabular batholith 7—145469
deformation mechanics, Signorini problem with friction in linear thermoelasticity 7—139554
deformation of fractured sandstone and granite, for multiaxial pressure 7—79370
deformation of rocks, boundary value problem 7—94204
Deschutes Formation, Oregon, record of Late Miocene subsidence and volcanism in central High Cascades 7—139598
Devonian flysch (Maine), palaeocurrent directions determ. from 2D exposures of cross laminae 7—101293
dielectric anomaly of porous alumina ceramics saturated with electrolyte 7—133667
dolomite at Niue Atoll, South Pacific, prod. by seawater convection flow 7—101273
dolomites containing hydrocarbons, chemical remanent magnetization 7—107340
drilling mud infiltration into stratum from borehole 7—133679
DSDP Leg 82 gabbros, metamorphic crystallisations, fluid phase effects 7—127194
Dunlap Formation, W Nevada, growth faulting and synorogenic deposition rel. to Jurassic extensional tectonism 7—145458
Dunn Point volcanics (Early Silurian), Avalon Zone, Nova Scotia, palaeomagnetism and rock magnetism 7—119945
elastic properties for different press.-temp. conditions 7—114695
elastic wave nonlinear generation in crystalline rock 7—94208
electrical conductivity of rocks from Indian Subcontinent 7—114709

rocks continued
electrical conductivity prediction, based on Hg injection expts. 7−72184
electrical properties, physical model for complex resistivity of Earth 7−139445
electrical properties from 10^{-3} to 10^{+9} Hz, solvent effects 7−114702
electrical props., complex freq. depend. EM props. 7−133669
electrical resistivity of compressible solid-brine mixtures 7−94067
EM pulse emitted due to explosive rock rupture *(Chinese)* 7−87610
extensive-dilatancy anisotropy rel. to stress-aligned microcracks 7−127204
failure characts. for gabbro, granite, marble, limestone from N China *(Chinese)* 7−94205
failure criteria, appl. to anal. of seismic instability of Vancouver Island lithoprobe transect 7−79240
fault gouge superplastic flow 7−119997
fault gouges, radioactive dating in E alps 7−114667
fault surfaces corrugation and bifurcation, role of cross-slip 7−79377
Fernando de Noronha, Atlantic Ocean, isotope geochemistry and mantle characts. determ. from lava meas. 7−145377
filtering rocks, freezing, ice-barrier dynamics 7−101279
Fish Canyon tuff zircons, age standard for fission track dating 7−94506
flow modelling theory for rock fabric development 7−87639
fold development in overthrust terranes, geometrical anal. 7−79395
foreland fold-thrust belts, use of fault cut-offs and bed travel distance in balanced cross-sections 7−79396
fractal struct. of microfractures spatial distrib. 7−120010
fractional slide microcrack model of rock mechanics, exact soln. of Kachanov's problem 7−101278
fracture, contrib. of nonuniform 3D stress fields to discontinuous fault zones 7−72015
fracture instabilities accompanying dyke intrusion, implications for volcanic earthquakes 7−87621
fracture meas. by seismic techniques 7−113843
fracture of rocks, energy aspects of continuous fracturing 7−87627
fracture processes imitated using percolation theory 7−87626
fracture toughness in pressurised water at high temps., evaluation via AE technique 7−133668
fracturing and seismic energy release, conf., Liblice, Prague, Czechoslovakia (Oct.-Nov. 1985) 7−80166
geological materials, specimen isolation filtering techniques, SIMS anal. 7−93406
gneiss, groundwater travel times 7−101355
Gornyi Altai, USSR, folded structures Early Mesozoic activation, basite magmatism lateral zoning 7−87535
granite, elec. resistivity changes for rock undergoing creep 7−87490
granite, fracture and time-depend. defromation influence by water content 7−127200
granite, fracture process zone expts. 7−127199
granite, fracture zone tests rel. to radioactive waste disposal 7−89738
granite, fractured, radionuclide migration 7−101299
granite, groundwater travel times 7−101355
granite at low and high sliding vel., frictional behaviour 7−120012
granite batholiths in mainland UK, heat flow, heat prod., and thermotectonic setting 7−127151
granite batholiths in UK and heat flow-production 7−94148
granite depth W France rel. to heat flow and production 7−94147
granite from Illinois, USA, healed microcrack orientations and stress history 7−79358
granite rocks and tooth enamel, use in ESR dosimetry of A-bomb radiation 7−87213
granites and pegmatites geochem. and mineralogy, conf., Stanford, USA (July 1986) 7−101999
granites in UK, heat production distribution factors 7−94153
granitic, trace element determ., emission spectroscopy 7−127482
granitic surface fracture, morphology, geostatistical methods *(French)* 7−120155
granulite facies rocks of Central African Republic, Sm-Nd model ages rel. to Pan-African metamorphism 7−145467
granulites, form. by crustal melting and CO_2 streaming 7−107406
granulometric study of pyroclastics, discriminate top hat transformation and algorithm of erosion 7−94514
gravitational stresses in anisotropic rock masses 7−87617
Harbour Main Group metabasalts, E Newfoundland, palaeomag. study 7−145335
Hawaii. volcanoes, and lavas 7−127162
Hawaiian basalts origin, Pb isotope constraints 7−94165
Hercynian anatectic granite, Velay, French Massif Central, emplacement *(French)* 7−94179
High Shoals Granite, S Appalachians, emplacement during Alleghanian deform. and metamorphism 7−145450
high-pressure geophysics, appl. of laser techniques 7−139812
holographic interferometric testing method 7−122873
Hyderabad granite batholith, geothermal studies rel. to crustal thermal struct. of Southern Indian Shield 7−139543
Icelandic lavas, morphology and tectonics of Thingvellir fissure swarm 7−71997
igneous rocks, exptl. geochemistry of Pu and Sm rel. to thermodynamics of trace element partitioning 7−94139
igneous rocks of Hatton Bank (Rockall Plateau), seismic profiles of continental margin 7−79264
igneous rocks of W Cape Breton Highlands, Nova Scotia, U-Pb ages 7−79316
impactites from Lonar crater (India), coesite and stishovite obs. 7−133674
impulsive hydrofracture modelled using polymethyl methacrylate 7−139595
intrusive complexes beneath large intraplate volcanoes, density depth and shape determ. 7−120017
Jordan, Wadi Arab fault studies using Landsat TM data 7−101269
Jurassic calcareous shales of Dauphinois Alps; mag. props evolution during minerals transform. *(French)* 7−72010
Kalgoorlie greenstone sequence, Western Australia, evidence for structural repetition 7−139603
Kamchatka island arc, geodynamic characts., lavas petrology and geochem. as indicators 7−127174
Kanam-Kanjera area, Kenya, geochemistry of rocks and spring waters rel. to elements mobility and uptake 7−87557
Kashmir Basin, India, palaeopedology and chronostratigraphy rel. to Pleistocene climatic changes and landscape evolution 7−87637
Kaza Group of Cariboo Mountains, British Columbia, geometry of suprastructure-infrastructure transition 7−72021
kink-band formation in shear zones and faults, stick-slip model 7−139609
rocks continued
Lac du Bonnet granite, URL shaft displacements 7−94213
Lac du Bonnet granite mechanical and thermomechanical behaviour 7−94212
laccolith intrusions, centrifuge modelling 7−72026
laterite origin of India, historical review 7−79400
light element abundances determ. in rocks, effects of absorption correction in ZAF method *(French)* 7−114031
limestone, elastic and fracture props. by cap model 7−87616
limestone, EM surveys for karst and fault systems 7−114614
limestone, internal structure anal. using X-ray scanning densitometry *(French)* 7−145443
limestone and marble, shear modulus and internal friction at seismic freqs. 7−94211
loess at Rocourt, Belgium, thermoluminesc. dating 7−145389
Louisiana Gulf Coast sediments, kilometre-scale thermohaline overturn of pore waters 7−107449
mafic xenoliths from I- and S-type granitoids, radioactive heat production 7−94154
magma mixing, hyperbolic curves calc. for geochem. data, BASIC program 7−145680
magnetic susceptibility anisotropy, influence of rock comp. versus strain 7−145448
magnetite ore, high-temperature remanent magnetic memory 7−139589
magnetostratigraphy review 7−139460
lower mantle rocks, Poisson ratio and composition from seismic wave vels. 7−119985
marble/organic liquid film/water droplet system, contact angle interpret. 7−98625
marbles from N Mindoro, Philippine Islands, Sr isotopic comp. rel to Palaeozoic age of metamorphic complex 7−133677
N Mariana Islands, volcanic rocks O, S, Sr and Pb isotopic var., implications for crustal recycling 7−127136
Mars, Viking landing sites, exposed rocks and soils spectral refl. props. 7−101720
Mauna Loa lavas, geochemical evidence for disruption of magma system by 1868 Hawaiian earthquake 7−127165
mechanical behavior, constitutive model with strain softening 7−133663
mechanical properties determination using soil analogues in laboratory expts. 7−94203
melt extraction at mid-ocean ridges and island arcs, 2D modelling 7−127172
melts, crystallisation dynamics, assoc. thermodynamic conditions 7−119990
metamorphic petrology thermodynamic characts. 7−120018
metamorphic rocks of W Cape Breton Highlands, Nova Scotia, U-Pb ages 7−79316
Mid-Atlantic Ridge, MORB local and regional heterogeneity, evidence for geochem. enrichment 7−107367
mid-ocean ridge gabbros, two-phase separation and fracturing (above 700°C) 7−127193
Midway Atoll, stable isotope diagenesis signature rel. to Miocene sea-level falls 7−139601
minerals that form rocks, review 7−139605
mining digital dilatometer *(Polish)* 7−72199
Misis Complex, S Turkey, geology and geochemistry rel. to Neogene tectonics and plate convergence in E Mediterranean Sea 7−139599
moraines of E Sierra Nevada, California, age determ. for rock varnish and palaeoclimatic implications 7−145405
Mount Cameroon, active volcano of Cameroon Line, petrology and geochemistry rel to tectonic setting 7−87567
mullion structures, finite strain effects in expt. mullions 7−79376
New Zealand, Miocene mag. field intensity var., lavas meas. 7−79211
Newark Island layered intrusion, magma chamber rupture and inflation by silicic liquid 7−71995
Nyurol'ka Trough, USSR, basement rock comp., refracted waves data anal. 7−127145
obsidian archaeological artefacts, origin determ. by back-scatt. electron imaging 7−87940
ocean floor magmatism and lithosphere form. 7−119970
ocean island basalts, Ce isotope geochemistry 7−79334
oceanic islands, primary magmas comp. and upper mantle inhomogeneity 7−119969
Okinawa Trough, Pacific Ocean, pumice mineralogical characts. and distrib., implications for magnetism *(Chinese)* 7−79367
Oligocene-Miocene outliers of W Cornwall, implications for geomorphological evolution of Oldland Britain 7−145465
olistostrome rocks, identification in core of Abd-el-Aziz anticline, Syria 7−79385
ophiolite complex of E Sayan Mountains, identification of marianite-boninite series rocks 7−145454
Late Ordovician-Early Silurian platform sequence of Anticosti Island, Quebec, palaeomag. study 7−79197
Osen-Roa thrust sheet, Oslo Region, lateral and vertical changes of deformation style 7−127211
overcoring techniques for in-situ stress meas., finite element anal. 7−87921
Pennsylvania lithology from Landsat TM spectral data 7−101302
peridotite xenoliths from southernmost South America, appl. to upper mantle rheology determ. 7−101241
permeability during cycling pore pressure and confining pressure 7−72013
permeable rock mass, forced fluid motion, heat transfer study 7−142372
Peyron, France, dioritic magma-palingenetic granitic magma interaction *(French)* 7−133671
photoelectric index, Monte Carlo simul. and exptl. meas., well logging appl. 7−107405
Pichi-Richi Pass rocks, Australia, ancient sedimentary layers reflecting astronomical effects 7−133678
piezoelectric textures of quartz bearing rocks, rel. to stress state 7−133664
PIXE analysis of geological samples 7−94499
plasticity, subcritical, critical and supercritical directions of loading, uniaxial compression tests on rocks 7−75341
pore pressure rise due to fault slip 7−71969
porosity and subsidence history, FORTRAN 77 programs 7−145674
porous lava samples with saturation and vel. anisotropy, longitudinal ultrasonic wave vel. var. 7−107385
porous materials, fractal surfaces and elec. transport 7−108475
porous media physics and chemistry, conf., Ridgefield, CT, USA (Oct. 1986) 7−108008
porous sedimentary rocks, morphology 7−114697

rocks continued
porphyroblasts, development of curved inclusion trails 7−87640
post-failure behaviour, effects of stiffened testing machine on meas. 7−114706
Pre cambrian-Cambrian boundary, clays, Ir anomaly and stratigraphic position 7−87636
pre-Alpine basement rocks on Naxos, Sikinos and Ios, Greek Cyclades, isotopic age study 7−145388
Precambrian dolerite dykes from Tamil Nadu, India, palaeomag. and geochemical studies 7−79226
Precambrian granitic rocks of Goa, SW India, geochronology and geochemistry 7−145466
Precambrian rocks of N Cameroon, U-Pb dating rel. to orogenic evolution and chronology of Pan-African belt 7−139532
latest Precambrian volcanic rocks in S Israel, NE Sinai and SW Jordan, $^{87}Sr/^{86}Sr$ ratios and isochron ages 7−145404
Proterozoic ophiolite complexes, absence rel. to back-arc spreading in Proterozoic time 7−145435
pseudotachylite from Rochechouart meteorite crater, France, petrology, comp., and origin 7−101294
pseudotachylyte generation using friction welding apparatus, simulation of melting on fault plane 7−72024
Pugu Sandstone, Tanzania, fluvio-deltaic environment and in situ pedogenesis of Middle Miocene kaolinitic sandstones 7−87634
pumice-water interaction 7−101277
pumping fluid from point sink in isotropic elastic half-space with anisotropic permeability 7−94325
Purgatory Conglomerate, Rhode Island, volume change, real strains and sedimentary shape factor from press.-soln. deform. 7−79375
N Pyrenean metamorphic belt, hydraulic breccia origin *(French)* 7−94181
quartz-feldspar mylonite, high-temp. deform. mechanisms rel. to superplastic flow in lower continental crust 7−139594
quartz-micaschist in maritime Antarctic, physical props. rel. to freeze-thaw weathering studies 7−87612
quartzite verification of spherical electron channelling pattern map for quartz petrofabric anal. 7−79378
radiogenic heat production of crustal rocks, geochemical data 7−94152
Rand thrust, S California, tectonic microfabrics rel. to early history and reactivation 7−79394
rare-element granitic pegmatites, mobility of radiogenic ^{87}Sr rel. to Rb-Sr fractionation trends 7−94224
Ray-Iz Massif, USSR, tectonic features, rock and mineral anal. 7−145425
Reykjanes Ridge, volcanism and axial struct., comp. anal. 7−87536
rheology, upper limits of power law creep 7−87630
rock deformation principles, book 7−134380
rock fracture and seismic energy release 7−87623
Ronda peridotite massif, Spain, origin of mafic and ultramafic rocks 7−145379
rough surfaces under normal stress, contact area growth 7−120011
Sabaloka, Sudan, evidence for pan-African continental margin, granulites dating anal. 7−145419
salt-dome tectonics in Torei Basin (Chita Oblast, USSR), relation to genesis of lakes 7−133673
Samoa region, seamounts petrology rel. to Samoan volcanism, age and geochemical anal. 7−101227
sandstone, elastic constants of laterally isotropic rock, laboratory expts. *(Japanese)* 7−114703
sandstone, quantitative image analysis, genus and pore map software 7−87934
sandstone, quantitative image analysis, specific genus, cubic lattice models 7−87935
sandstone, thin-slice chemical shift imaging of oil and water 7−132140
sandstone, tropical landforms of East Kimberley region, NW Australia 7−101308
sandstone and shale of Mesaverde formation, USA, in situ dynamic moduli and laboratory moduli 7−127201
sandstones, dielectric constant in 60 kHz-4 MHz range 7−114704
sandy rocks identification in Western Siberian Plate, seismogeological prerequisites 7−145341
sedimentary basins within continental rift zones, conference, Ramot Village, Israel (April-May 1985) 7−145438
sedimentary rocks, porosity and brittle-ductile transition 7−114701
sedimentary rocks of Akchagil Basin, USSR, authigenic mineralisation rel. to partial remagnetisation time 7−145445
sedimentary rocks of continental margins, lithological associations rel. to oil and gas occurrence 7−79364
sedimentary rocks of continental palaeorifts, quantitative approach to rock formations anal. in E Transbaikal 7−145452
sedimentary rocks of continental rifts, relation to subsidence history 7−79388
sedimentary rocks of Greenland Sea-Barents Sea, sonobuoy meas. during 'Ymer' expedition 7−72006
sedimentary rocks of Mecca Hills, S E California, mag. stratigraphy and test for Quaternary block rot. 7−71963
sedimentary rocks of rift valleys, relation to rift struct. and hydrology 7−145457
seismic velocities of oceanic crust rocks, influence of pore water pressures 7−133596
shear ruptures and the simultaneous growth of several cracks of equal length 7−114707
Sicily, mag. field var., lavas palaeomagnetic meas. 7−79206
Upper Silesian Coal Basin, effects of lithology on heat flow meas. 7−101244
silicate melts, ultrasonic properties 7−145464
Skaergaard intrusion, E Greenland, fracture propag. assoc. with dyke emplacement 7−72025
spectral signatures, rock type separation, optimal wavelength band selection 7−101583
strain softening constitutive model, anal. 7−130528
stress measurement methods 7−87922
stress measurements, conf., Stockholm, Sweden (September 1986) 7−80149
subduction zone decollement horizon, de-watering of deforming sediments 7−87562
T1−permeability correlations 7−114699
tectonic deformation by rotating parallel faults, 'bookshelf' mechanism 7−139610
tektite-like bodies at Lonar Crater, India, geochemistry and implications for tektites origin 7−101309
tensile fracture expts., study of seismic wave energy release 7−87492
rocks continued
terrestrial γ radiation, natural background meas., 1981 to 1983, Taiwan 7−133680
Tertiary basalts from offshore NE Brazil, geochemistry and K-Ar ages 7−101225
Tertiary formations on Spitsbergen, stratigraphic age determ. 7−79398
thermodynamics of minerals and rock melts, review 7−139593
three-component viscodeformed medium dynamics 7−94159
thrust sheet movement, energy balance for large thrust-sheets and fault-bend folds 7−127203
thrust-fault propagation, alternative model 7−133675
tonalites, mantle-derived, in Early Proterozoic Penokean Orogen of Wisconsin, effects of crustal enrichment 7−101291
triboluminescence and radiowave emission during fracture of rocks and glass 7−107388
Troodos ophiolite, Cyprus, dikes vertical distrib. and alteration 7−87561
tuff, with mordenite admixture, sorption of $^{106}RuO_4$ vapour *(Czech)* 7−116709
turbidite sandstones of Moroccan Rif, distrib. rel. to major cross-element zone 7−145461
turbidites, palaeoslopes reconstruction using hydromechanical parameters of deposit 7−94194
two-dimensional strain determination, appl. of inverse SURFOR wheel 7−72017
ultrabasic rocks, macroelements and microelements behaviour in geochemical models 7−145387
ultramafic magmas, platinoid differentiation, effect of oxygen, sulphur fugacities *(French)* 7−101231
ultrapotassic igneous rocks, geochemical characts., classification, and petrogenetic models 7−94220
Ungra Wedge rocks of Aldan Shield, U-Pb and K-Ar isotope ages 7−145385
Uzbekistan loess rock, genesis and distrib. 7−139648
Vendee nappes, S Brittany, France, Variscan strain and deform. mechanisms 7−72022
Venus, rocks at Vega-1 and 2 landing sites, U, Th and K abundances 7−101713
volcanic rocks of Mont-Dore (French Massif Central), origin of manganiferous mineralisation *(French)* 7−101232
volcanogenic deposits of Tunguska syneclise (USSR), stratigraphic age determ. 7−133672
wet porous solids, dynamic compaction 7−87618
zonal relaxation, physical model investigation 7−133648
Fe sediments from Goru form., Jaisalmer India, Mossbauer spectroscopy study 7−139602
La-Ce and Sm-Nd isotope systematics in terrestrial rocks, coupled evolution model 7−107373
U(Th)(K), radioactive elements, estimation method in rocks using gamma ray spectrometry 7−79664
Roentgen rays *see X-rays*
roentgenography *see radiography*
rolling
see also cold rolling; hot rolling
complex permittivity tensor meas., rectangular waveguide standing-wave method 7−115976
cubic unit cell and tetrahedron, orientation 7−76066
hardened layers in rims, subjected to repeated rolling contacts, elastic-plastic anal. 7−97458
landslides, basic mechanisms 7−94229
metals, plastic flow during rolling, limitations of kinematic models 7−106540
metals, viscoplastic flow during flat rolling 7−106539
shape rolling of angle anal. by energy method using finite element division 7−130558
steel, HSLA, X70, development for arctic linepipe appl. *(Korean)* 7−132724
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7−86187
steel, stainless, duplex, SCC mechanism, fractography *(Japanese)* 7−119413
steel, structural, spalling failure, dynamic yield point and specific work meas. 7−100329
steel plate for offshore structures, thermomech. processing of Cu bearing age hardenable materials *(Japanese)* 7−144446
Al alloys, quality control, for can production, image analysis *(French)* 7−119291
Al sheet, rolled, grain reorientations, constraints model predictions comparison 7−86202
Al, temp. meas. using radiation pyrometers 7−108562
Fe-Si (3 wt.%) alloy, deformed H impregnated, corrosion-electrochem. behaviour in H_2SO_4 electrolyte 7−144591
Ti-Mo-Cr, rolled sheets, texture and struct., β to α transform. 7−144432
Zn-Al-Mg textured sheet, flow stress, influence of grain size and loading direction *(German)* 7−126204
ROM *see read-only storage*
roots of polynomials *see polynomials*
rotamers *see rotational isomerism*
rotating bodies
see also angular velocity measurement; centrifuges; gyroscopes; rotation
2-D structures, endochronic viscoelastic creep analysis 7−110798
thick accretion disks, ang. momentum redistrib. by nonaxisymmetric instabilities 7−88091
702 Alauda, rot. period and light curve from photoelectric five-colour photometry 7−79862
angular momentum and tidal torques in large cosmological N-body simulations 7−140334
1862 Apollo, photoelectric lightcurves and rotation 7−145864
approximation of point by point given rotation-symmetrical aspherics *(German)* 7−140444
artificial satellite attitude motion, first-order theory, appl. to Hipparcos 7−120240
artificial satellites, coupling terms between rot. and translational motions 7−72244
artificial satellites, motion relative to centre of mass of satellite with permanent magnet orientation system 7−120244
asteroids, energy partition into translational and rot. motion of fragments by impact disruption 7−134169
asteroids, lightcurves of 26 large rapidly rotating bodies 7−145863
asteroids, photoelectric photometry and rot. periods of radar target objects 7−134171

rotating bodies continued
asteroids, photoelectric V photometry of 17 objects, pole determs. 7−115280
asteroids, rotational properties and light curves for seven objects (94, 107, 197, 201, 360, 451, 511, 702) 7−72346
astrophysical bodies, ang. momenta rel. to characteristics actions $\hbar^{(2)}$ in struct. of Universe 7−128140
astrophysical objects, mag. moments as consequence of general relativity 7−120883
astrophysical rotators, ecology (interaction with environment, and evolution) 7−94643
B335, Bok globule, CO and HCO^+ isotopic obs. of rot. collapsing globule core 7−88564
binary galaxies, H I rot. curves rel. to dark matter 7−101907
black holes, charged rotating, ergoregions, reversible evolution 7−115498
Bok globules in southern hemisphere, rot. vels. from ^{12}CO (J=1-0) obs. 7−88595
bucket centrifuge, vibrs. and stability 7−102158
charged particle deflection, Gantmakher's and rot. formulas 7−128218
collisional evolution of rotating nonidentical particles system, appl. to Saturn ring system 7−134118
collisional excitation, integrability of Hamiltonian system 7−102219
P/Comet Encke, brightness var. and nucleus rot. 7−127766
P/Comet Giacobini-Zinner (1985 XIII), periodic light var. and nucleus rot. 7−88305
P/Comet Halley (1982i), CCD obs. with Giotto HMC and IHW filters from South Africa 7−115314
P/Comet Halley (1982i), CN jets, rotational props. 7−88283
P/Comet Halley (1982i), free precession of nucleus 7−72371
P/Comet Halley (1982i), gas shell expansion and rotation 7−94822
P/Comet Halley (1982i), nucleus characts. 7−94710
P/Comet Halley (1982i), nucleus rot. and tail dynamics 7−79887
P/Comet Halley (1982i), nucleus spin period, brightness var. obs. 7−88304
P/Comet Halley (1982i), obs. of rapid brightness changes (January 1986) 7−94692
P/Comet Halley (1982i), overview of results from spacecraft encounters 7−101738
P/Comet Halley (1982i), periodic light var. and nucleus rot. 7−88305
P/Comet Halley (1982i), rejection of 7.4 day rotation period 7−88207
P/Comet Halley (1982i), rotation and precession 7−94709
P/Comet Halley (1982i), rotation axis and period of nucleus 7−94736
P/Comet Halley (1982i), rotation period and spin axis from Vega 1 and 2 images 7−94728
comets, nucleus rot. effect on dust ejection distrib. 7−72365
compressed rod with imperfections, stability 7−75305
compressible differentially rotating cylinders, stability anal. 7−134126
differentially rotating gas clouds, with polytropic equations of state, stability 7−120540
differentially rotating systems, linear nonvortical modes physics for shearing sheet 7−134125
differentially rotating tori, dynamical stability, astrophysical appl. 7−72289
disc, viscoelastic, in a central force field, carried by a solid, rotational motion 7−136682
discs, dynamic deformation analysis, circumferential displacements effects 7−128266
disk, rotating, nonhomogeneous annular, radial depend. Young's modulus, stress distrib. 7−142176
disk galaxies, diameter-rot. vel. relations *(Russian)* 7−88643
disks, rotating, optoelectronic strain meas. system 7−97464
elastic dynamics in rotating reference frame, zero gravity environment 7−115781
elliptical galaxies, low-luminosities, H I distrib. and rot. curves 7−101934
elliptical galaxies, rapidly rotating, photometric detect. of weak galactic disks 7−72607
elliptical galaxies, struct. of Riemann S-ellipsoids with spheroidal halo 7−128040
elliptical galaxies with dark matter, ratio of rot. vels. to random vels. 7−128079
ESO 217-G09, peculiar galaxy, rot. curve rel. to mass and mass-luminosity ratio 7−140255
flexible rotating beam, model emphasising rotation-bending coupling 7−72962
8 Flora, rot. period and heliocentric longit. of pole from photometric obs. (July-November 1984) 7−127760
fluid filled gyros with free surfaces, vibr. and stability anal. 7−95323
Football, North American, rigid body dynamics 7−102046
forced torsional vibr. 7−75370
G10.6−0.4, ultracompact H II region, rot. and infall rates of assoc. collapsing mol. cloud 7−146071
G34.3+0.2, G45.07+0.13, ultracompact H II regions, H76α obs. rel. to sources rot. and expansion 7−94981
Galactic centre, rot. vels. from aperture-synthesis HCN obs. of circumnuclear mol. ring 7−128015
galactic disks, mass distrib.-rot. curve relation for Schwarschild distrib. function 7−128049
galaxies, contrib. of ang. vel. break in rot. curves to appearance of barred spiral struct. *(Russian)* 7−146096
galaxies, depend. of Tully-Fisher relation on morphological type 7−95007
galaxies, dynamical development of flat rot. curves 7−95008
galaxies, required observational data for development of spiral struct. theory 7−140262
galaxies, rot. curves for self-consistent equilib. models of perfect elliptical disk 7−128082
galaxies, rotation rel. to cosmic vorticity decay 7−128152
galaxies, rotational curves, and neutrino halos 7−95001
galaxies rot. curves due to galaxy forms by gravit collapse curves 7−128052
Galaxy, dynamical mass density model rel. to rot. curve 7−120580
Galaxy, mass models for rot. curve rel. to nature of cold dark matter 7−115589
Galaxy, rot. and galactocentric distance determ. from Cepheids obs. 7−101923
Galaxy, rot. curve determ. 7−101904
Galaxy, rot. curve determ. from kinematics of young open clusters 7−101861
Galaxy, rot. curve from new model of galactic mass distrib. 7−115604
Geminid meteoroid stream, spin rates estimation 7−94829
globular clusters, ellipticity correl. with CN enrichment in cluster giants 7−115531
rotating bodies continued
globular clusters, rot. model for observed axial ratios and orientations 7−140191
Goryachev-Chaplygin top and the Toda lattice 7−88952
gyroscope precession, principle of equivalence collapse, stationary and accelerated observers, spacetime curvature 7−128377
gyrostat, stability of uniform rotation round vertical axis on horizontal smooth plane 7−95317
gyrostat in circular orbit in Newtonian force field, orientation stabilisation 7−97296
gyrostat in Newtonian force field, permanent motions 7−134732
hailstones, simulated, radar technique for meas. of rot. props. of falling oblate ice spheroids 7−127569
hailstones gyrating in wind tunnel, sponginess and drop shedding 7−94348
Hamiltonian structures and stability for rigid bodies with flexible attachments 7−95294
532 Herculina, UBV lightcurves, pole orientation, and model 7−115281
ideal gas, 3D supersonic flow past revolving bodies, flow pattern investig. 7−117625
integrable equations in axially symmetric force fields 7−80402
interacting galaxies, effect of rot. on stellar shells generation 7−72587
interstellar clouds, ang. momentum and turbulence 7−107931
interstellar clouds, effect of poloidal mag. field on stability of rot. self-gravitating disk 7−120525
interstellar clouds, equilibria of rotating isothermal gas clouds 7−120557
interstellar clouds, protostars form. with nonuniform initial conditions 7−140042
interstellar molecular cloud cores, effect of ambipolar diffusion on mag. braking 7−88578
Jupiter, rot. rates of surface features during 1983 apparition 7−79866
L1551-IRS 5, pre-main-sequence star, CS obs. rel. to existence of rotating mol. disk 7−140235
laminar boundary layer on rotating sphere, differential suction and injection 7−83172
LMC rotation curve 7−115600
M13, globular cluster, rot. characts 7−101866
M31, core ionised gas kinematics 7−101903
massive body, gravitational Aharonov-Bohm effect 7−120912
material rot., deform. and stress rate 7−90935
Mindlin circular plate, rotating, self-excited vibr. 7−128267
Miranda, warming during chaotic rotation 7−120315
mixed convection, 3D laminar, about rotating sphere in stream, power series appl. 7−136847
Moon, physical librations due to rot. of ecliptic 7−94678
motion monitoring, using light as tool 7−140674
Neptune, rotation and mass characts. rel. to satellite mass and revolution characts. *(French)* 7−134177
neutral, polarisation and magnetisation 7−79825
NGC 2787, lenticular galaxy, H I rot. curve from WSRT obs. 7−80081
NGC 3516, Seyfert 1 galaxy, rot. curve rel. to bipolar flow from nucleus 7−146085
NGC 3628, spiral galaxy in Leo Triplet, rot. disk model for H I absorpt. obs. 7−107955
NGC 4013, edge-on spiral galaxy, rot. curve struct. rel to prodigious H I warp 7−140297
NGC 5090-5091 (PKS 1318−43), interacting galaxies, optical red shifts and rot. curves 7−88613
NGC 5170, spiral galaxy, disk stellar vel. dispersion, visible and H I obs. 7−101902
NGC 7531, ringed nonbarred spiral galaxy, rot. curve rel. to ring location 7−115592
NGC 7752-53, interacting galaxies pair, rot. curves from vel. field of ionised gas 7−115580
NGC 936, SB0 galaxy, pattern speed 7−101921
non-holonomic system with non-retaining constraint, eqns. of motion 7−67001
Ori OB1 association, rot. period of star form. region from proper motion meas. *(Russian)* 7−145948
201 Penelope, rot. period and light curve from photoelectric five-colour photometry 7−79862
plane sound wave scattering by thin solid of revolution in double-layer medium *(Russian)* 7−136640
planetary spin rates rel. to solar pulsation 160-min period 7−88359
planetesimal in solar nebula, collision-induced rotation theory 7−134154
planets, progress report on geodesy, gravity, topography and rot. (1983 to 1986) 7−134158
plate, debonding and crack occurrence on circular rigid inclusion under rotation 7−97435
Pluto, methane absorption vars. with rot. phase 7−134178
Pluto, rot. period determ. from light curves and eclipse obs. 7−101727
16 Psyche, rot. period and light curve from photoelectric five-colour photometry 7−79862
rigid body, fast motion about centre of mass in medium with square resist. law 7−95298
rigid wheel on a transversely elastic rail, rolling motion stability *(German)* 7−104226
ring, rotating viscoelastic, free and forced vibrs. 7−97373
ring, satellite, stability of rotation 7−136681
rod, elastic with end mass., free rot., space satellite model 7−79809
rotating sphere, tidal disruption, appl. to cosmic catastrophes 7−80233
Saturn ring particles, collisional evolution of rotating nonidentical particles system 7−134118
Savonius rotor-type current meter, influence of support rods on rot. speed 7−115063
shell, rotating axisymm., precession of vibr. standing waves 7−75375
shell structures, nonlinear anal. by flat triangular shell element 7−80401
shell theories, boundary surface orientated, large deflections *(German)* 7−75331
shells, classical linear theory accuracy 7−90940
shells, revolving, local loading ray solns. 7−123551
shells, rot. and strain, complementary pot. theory 7−75287
Sm-2701 FFT analyser for rotary machines meas. 7−89197
solid, elastic rot. with voids, plane waves 7−117508
spherical metal powder production by rotating electrode process 7−126046
spiral galaxies, light and mass distrib., illum. profiles and rot. curves 7−101915
spiral galaxies, max. rot. vels. rel. to stellar populations and radio continuum emission 7−120612

otating bodies continued
spiral galaxies, rot. curves and luminosity profiles rel. to halo parameters 7−115578
spiral galaxies, rot. curves rel. to form. of large-scale struct. of interstellar medium 7−127992
spiral galaxies, systematics of Tully-Fisher relation in B, V system 7−120579
stability in axially symmetric gravitational field 7−88099
stellar systems, complex instability of rotating oscillators around system rot. axis 7−120518
stellar systems, rot. vel. determ. for axisymmetric systems *(Spanish)* 7−115603
string, elastic, soln. of nonlinear problems 7−90926
strips and circular plates, elastic deform. under uniform press. 7−75353
sufficient condition for stability 7−115220
supermassive black hole at Galactic centre, evidence from obs. of pulsating decametric radio source 7−115607
swept wing flow, cross-flow instability mechanism 7−117561
thin rotating rings under radial pressure, stability *(German)* 7−102160
top, rotating rough horizontal plane, stability *(Chinese)* 7−120793
Turner's galaxy pairs, rot. moments *(Russian)* 7−128086
Universe, primordial cosmic rotation decay 7−128152
Uranus, internal structure models and rot. rate, implications for planetary accretion 7−120314
Uranus, Voyager-2 encounter, results for mag. field., atm., rot. and heat source 7−79867
375 Ursula, large C-type asteroid, rot. and var. 7−139952
Vesta, flattening, pole position, and albedo features from photometric data 7−134170
viscoelastic shafts, dynamic instability 7−120809

otation
see also angular velocity measurement; molecular rotation; optical rotation; rotating bodies; rotational flow; stellar rotation
n-eicosane paraffin, melting in rot. vertical tube study 7−98397
galaxies, contrib. of ang. vel. break in rot. curves to appearance of barred spiral struct. *(Russian)* 7−146096
micropolar elastodynamics, solns. for displacement-rotations for harmonically varying mass loads 7−128289
strain and rotation measures for finite deformations 7−75303
stress integration with finite rotations, accurate numerical algorithm 7−120807

otation by magnetisation *see Einstein-de Haas effect*

otational band (nuclear) *see nuclear collective states and giant resonances*

otational flow
see also swirling flow; vortices
2D Keplerian flows, non-linear waves, shear and rot. effects, accretion disks appl. 7−117624
accretion flows, effect of thermal conduction on self-similar rotating flows 7−127712
accretion tori stability, non-linear evol. to discrete planets 7−88105
aqueous drops in organic liquids, turbulent dispersion 7−130664
atmosphere, appl. of potential vorticity in meteorology *(Russian)* 7−145589
atmosphere, nested grid scheme for isolated vortex movement prediction in barotropic model 7−133856
atmosphere, press. and vel. response to action of horizontally extensive heat source 7−139705
axially rotating pipe, laminarisation of turbulent flow in inlet region 7−91139
axisymmetric boundary layers, response to suddenly imposed rotation 7−69127
baroclinic flows with and without two-wave bottom topography 7−79502
black hole accretion, stabilisation of nonaxisymmetric instabilities in rotating flow 7−127714
boundary layer transition on rotating cones in axial flow with free stream turbulence 7−97543
bubble-driven flow in axisymmetric container, num. model 7−104329
bulb turbine flow computation, quasi-3D method 7−142386
Casson fluid flow on a rot. disc *(Chinese)* 7−142340
cavitation bubbles, moving solid wall proximity effect on dynamics 7−123693
coarse-grained particles in suspension, prediction of minimum stirrer ang. velocities 7−123710
coaxial cylinder viscometer, combined oscillatory and steady-state shear mode eqns. 7−97664
coherent turbulent structures, eddy scale behaviour 7−136814
compressible differentially rot. cylinders, stability 7−69191
compressible differentially rotating cylinders, stability anal. 7−134126
computer-extended series for a source/sink driven gas centrifuge 7−97541
concentric sphere gap, stationary and time dependent vortex streams, Navier-Stokes eqns. *(German)* 7−123656
cone, rotating, laminar combined convection to thermally stratified environment 7−69095
confined vortices in flow machinery, book contrib. 7−97544
dielectric liq. layer subjected to charge injection and rot., stability study 7−123595
differentially rotating tori, dynamical stability, astrophysical appl. 7−72289
dilute suspensions of solid spheres, cylindrical Couette flow, anisotropic particle distrib. 7−111080
discrete vortex method for flow about a rot. circular cylinder 7−69187
disk, immobile in rot. fluid, boundary layer 7−83245
eccentric rotating flows, unsteady solutions of Navier-Stokes eqns. 7−130723
elastic tubes, liquid filled, perturbations in, velocity profiles, wave propag. 7−111008
electrorotational flow with external mag. field, heat and mass transfer study 7−123774
ferromagnetic fluid, rot. layer, convective instability 7−83233
fibre optic rotation sensor 7−136585
flow pattern description using critical point concepts, book contrib. 7−97545
fluid, differentially heated from below, spatial oscills. onset 7−91140
fluid dynamics, annual review, book 7−95112
fluid filled gyros with free surfaces, vibr. and stability anal. 7−95323
forced waves, generation and directed propag., oceanic appl. *(Russian)* 7−101319
free-streamline flow and separation in rot. fluid at low Rossby number 7−123649
Froude number effects on flow over topography 7−117640

rotational flow continued
gas-stirred metallurgical reactor, bubble driven flow, K-E turbulence model calcs. 7−104328
geophysical rotating fluid motion, quasi-geostrophic model study 7−142319
geostrophic vortices, coalescing 7−91133
gravity waves, behaviour on porous slopes 7−117620
gyratory flow of steady incompressible viscous fluid in circular channel, analytical study *(French)* 7−75590
heat transfer in hydromagnetic flow in rotating straight pipe 7−137005
helicity conservation laws for fluids and plasmas, theory 7−139906
homogeneous fluid, rot., meridional circulation, aspect ratio effect 7−83244
hot wire behaviour near conducting walls in laminar and turbulent flows 7−142419
hydrodynamic instability, review, flow randomisation, nonlinear methods 7−136809
hypersonic flow vel., heat and mass transfer 7−136919
hypersonic viscous shock layer in swirling gas flow on permeable surface 7−142334
ideal gas supersonic flow about axisymmetric solids of revol., coupled heat transfer study 7−75580
ideal gas transonic flow over bodies of revol., computational procedure convergence 7−69208
incompressible flow past slender body of revol., aerodynamic characts. 7−69194
incompressible fluid, boundary-layer growth on a rotating and accelerating sphere 7−91128
incompressible fluid flow, nonlinear stability study 7−91080
incompressible Newtonian fluid, viscoelastic, nonaxisymmetric flow between rotating disks 7−75594
incompressible viscous fluid between rot. curved tube and rigid core, flow study 7−91129
industrial cyclones, secondary rot. flow model 7−91136
internal solitary waves in rot. system, rot. influence on intumescence 7−83240
inviscid incompressible liq. film over cylinder, swirl flow, eigenvalue problem 7−110992
jet, rotating, in cylindrical channel 7−104320
K-BKZ fluid, flow between parallel plates, shear thinning and inertial effects 7−69218
laminar boundary layer heat transfer from rot. cone or disk 7−97488
linear nonvortical modes physics in differentially rotating system, anal. of shearing sheet 7−134125
longitudinal 2D flow along cylinders and plates, blunt leading-edge separation 7−104277
low-order unforced inviscid barotropic model, chaotic behaviour 7−101444
luminar flow, over rotating sphere, in axial stream, finite difference calcs. 7−110916
magnetised particle rot. in elec. cond. viscous medium *(Romanian)* 7−136873
magnetohydrodynamic free convective flow in rotating fluid, Hall effects study 7−142391
methane-air flame, impingement forced convective heat transfer 7−130688
MHD flow with mixed boundary conditions calcs. 7−123777
micropolar fluid, boundary layer flow, nonsimilar soln. 7−75569
micropolar fluid, exact solns. for flow 7−91172
micropolar fluid flow in diverging channel 7−123690
monatomic rarefied gas, streamline flow round circular rot. cylinder *(Russian)* 7−123686
motion in rotating containers, boundary fitted coord. system 7−110995
mushroom-like currents under rot. and stratified conditions, oceanic appl. *(Russian)* 7−75646
Navier-Stokes eqns. of viscous rotating flow past sphere 7−91061
Navier-Stokes equations, virtual finite elements separation, rotational flow in cylindrical vessel *(German)* 7−123655
non-axisymmetric perturbations, dynamical stability in differentially rotating bodies 7−101672
nonaxisymmetric Stokes flow past a torus in the presence of a wall 7−91126
nonlinear Rossby waves in rotating spheroidal fluid 7−133703
ocean, adjustment of azimuthally perturbed vortices 7−127259
ocean, pycnocline deformation during topographic cyclogenesis in two-layer fluid *(Russian)* 7−127230
ocean, time-dependent model for turbulent momentum transfer in stratified oceanic boundary layer 7−133712
ocean circulation geostrophic boundary current separation from coast 7−114751
ocean currents, numerical study of secondary flows over continental shelf edges 7−94242
Oldroyd fluid B, steady spinning flow, asymptotic behaviour 7−130749
Oldroyd-B fluid, torsional flow 7−130751
orographic features in stratified rot. flows, appl. to mountain flow effects 7−111057
partial fluidization in rotating fluidized beds 7−117659
pipes, curved, fully developed laminar flow 7−130795
polymeric liquids, viscoelasticity, conference, Grenoble, France (Jan. 1986) 7−72698
radiating rarefied gas unsteady flow in rot. channel 7−123683
Rayleigh-Taylor instability of rotating fluid in the presence of a vertical magnetic field 7−136802
rigid cylinder motion between parallel plates in Stokes flow 7−136867
rotating cylinder, free end, mass transfer coeffs. meas. 7−97540
rotating disk assemblies, performance evaluation by automated transient testing method 7−104262
rotating machinery, flow meas. using 2D laser Doppler anemometer system *(Chinese)* 7−142399
rotating-annulus flow computation by method of artificial compressibility *(Afrikaans)* 7−130722
rotational ellipsoid near a plane wall, incompressible fluid flow *(German)* 7−136881
scoop inlet, flow field, 2D numerical calcs. 7−136779
secondary flow due to slow rotation of two spheres in viscous medium 7−83246
secondary flow effects in high tip speed free convection 7−110976
shocks in separated laboratory channel flow 7−130793
spinning cylinder near wake, flow visualisation, image processing 7−142420
steady forced 2D flow, spectral modes bifurcations 7−69193

rotational flow continued
steady inviscid general circulation in a rectangular basin on beta plane 7−145505
steel, continuous casting, rotary electromag. stirring, secondary flow study 7−104278
Stokes flow, closed torus torque and drag, slip boundary conditions 7−104281
Stokes flow problem, alternate rot. eccentric cylinders, Lagrangian turbulence study 7−91141
Stokes fluid, axisymmetric flow within a sphere 7−104280
stratified fluid, gravitational-gyroscopic waves, external initial-boundary problem *(Russian)* 7−104323
stratified rapidly rotating flow, response to pulsating topography 7−83239
stratified rotating disk flow, Navier-Stokes eqns., similarity solns. 7−142320
stratified rotating flow over and around isolated three-dimensional topography 7−136876
sufficient condition for stability 7−115220
swirled wall jet, turbulent heat transfer, integral energy eqn. soln. 7−97591
swirling flow effect on flowmeters 7−130806
thermal convection in rotating shear flow, time-dependent 3D numerical model 7−79821
three-layer rotating fluid, explosive instability and Rossby waves three wave reson. interactions *(Russian)* 7−97542
topographically rectified tidal flow, horizontal profile 7−117612
transient Stokes flow in a wedge 7−123654
transient thermal convection in rotating porous medium 7−83211
transonic flow, inverse problem soln. for S_2 surface, elliptic algorithm 7−111018
tropical cyclones, contrib. of outward flow of ang. momentum to winds strengthening 7−133857
turbulent channel flow, algebraic Reynolds stress model 7−136865
unsteady circular Couette flow with random forcing, stability 7−110991
unsteady laminar flow along enclosed rotating disk 7−91085
vaned diffuser, rectangular flow cross-sections, visualisation study 7−83372
viscoelastic dusty liquid, unsteady laminar flow between rotating cylinders 7−104232
viscoelastic flow between rotating cylinders, appl. to rolling and calendering processes 7−91125
viscous fluid, spout-like flow evolution 7−130715
viscous fluid inside surface of revolution, axisymmetric motion 7−123653
viscous incompressible fluid, porous flow in a rotating straight annular channel 7−104342
viscous incompressible fluid, unsteady free convective flow from rot. disk 7−117597
viscous incompressible liq. film flow over rot. disk 7−130717
viscous incompressible rot. MHD flow, hodograph transform. 7−75682
water, liq., rot. flow induced by laser field, mol. dynamics simulation 7−117611

rotational isomerism
(1-) chloro-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
α-angelicalactone, internal rotation, microwave spectroscopy 7−122512
acetamide, microwave spectrum, internal axis method anal. 7−82085
acetonitrile, dil. spin I=3/2 powder, rot. isomerism, Zeeman and dipolar coherences, PMR spectra 7−68357
2-acetylanthracene, electronic spectra 7−74567
acetylene, protonated, rot. and vibr. spectrum, H migration tunneling effects 7−96642
acetylene, torsional barrier, ab initio calcs. 7−74456
acrylic acid, matrix isolated rot. isomerism, IR spectra 7−82106
acrylic acid, rot. isomerism, HF 4-21 basis set calcs. 7−81934
alkanethiols, conform. anal., mol. mech. force field appl. 7−109862
alkyl radicals, substituted, partly delocalised, isomerisation kinetics 7−138988
alkyl xanthates, Raman spectra, vibr. anal., rot. isomerism 7−82137
anisole, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
cis-azobenzenes, push-pull-substituted, substituent and solvent effects, electronic absorption spectra and thermal isomerisation 7−122399
benzaldehyde, geometry, barrier height, STO calcs. 7−129582
benzoyl fluoride, barrier to internal rotation, force field calculations, thermodynamic functions, vibrational spectra 7−122736
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
bicyclo[1.1.0]but-1(3)-ene, vibr. spectrum, ab initio calcs. 7−89928
biphenyl, inter-ring rot. pot., ab initio SCF MO calcs. 7−103387
1,3-bis(2-naphthyl)propane, in alkane solns., excimer form., press. effects 7−135999
bovine pancreatic trypsin inhibitor, sidechain rotational isomerisation, solvent effect, dynamic simulation 7−93618
1-bromo-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
bromo-aliphatic acid esters, rot. isomerism, Raman and IR spectroscopic investig. 7−103486
n-butane radical cation, rot. isomers, ESR charactn. 7−109957
butanol, fluidity correl. using modified free vol. eqn. 7−98535
catechin, conformational anal. 7−74422
1-chloro-2-butyne, barrier to internal rotation, microwave spectrum 7−122509
cresol isomers and complexes, supersonic free jets, fluoresc. excitation spectra 7−90238
cyclobutylgermane, conform. anal., internal rot. barriers, Raman investig. 7−74636
cyclobutylsilane, conform. anal., internal rot. barriers, Raman investig. 7−74636
cycloheptatrienes, fast internal conversions investigated by multiphoton ionisation 7−96797
cyclohexene radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7−68214
cyclopropylamine, IR spectra, conformation, force const. 7−82127
deoxycholate, methyl group dynamics, double quantum filtered NMR relax. obs. 7−141609
2,4-di(2-pyrenyl)pentane, diastereoisomers, conformer anal., excimer form., PMR obs. 7−129750
diamine chelate rings, 5-membered, conform. interconversion, strain energy calcs. 7−116839

rotational isomerism continued
1,3-dichloropropane, liq., conform. at 253 K, wide-angle X-ray scatt. obs. 7−117092
diethylbenzenes, supersonic mol. jet spectroscopy 7−141592
1,2-difluoroethane, conformational energies, ab initio MO calcs. 7−129573
2,2-dimethoxypropane, conform., anomeric effect, MO calcs. 7−96543
dimethyl ester of N-phthalyl-4-bromo-DL-glutamic acid, rotational isomers struct. 7−104711
dimethylamine, internal rot., character tables, symmetry eigenvectors 7−129568
dimethylated asymmetrical molecule, internal rot., character tables, symmetry eigenvectors 7−129568
2,3-dimethylbutane, rot. isomerism, US investig. at high press. 7−98346
trans-1, 2-dimethylcyclopropane, internal rot., character tables, symmetry eigenvectors 7−129568
N,N-dimethylformamide, internal rot. barriers, dynamic NMR and ab initio SCF MO method comparison 7−109722
dimethylsulphite-$d_0(d_8)$, low temp. matrix isolated, vibr., IR spectra 7−82111
4,6-dinitrobenzofurazan, bis(dimethylamino)naphthalene adduct, PMR obs. 7−96731
4,6-dinitrobenzofuroxan, bis(dimethylamino)naphthalene adduct, PMR obs. 7−96731
2,6-dioxo-1,4,7,10,13,16-hexaoxacyclooctadecane, struct., ^1H spin-spin obs. 7−96748
diphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
1, 2-dithiete, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
dithioglyoxal, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
elastomers, elongation, vol. and energy changes 7−84098
epicatechin, conformational anal. 7−74422
ethanol, fluidity correl. using modified free vol. eqn. 7−98535
ethyl azidoformate, conformational anal., MINDO/3 quantum-chem. calcs. and IR spectra 7−109775
ethyl isocyanate, vibr. spectrum, normal coord. anal., conform. stability and ab initio calcs. 7−90093
ethylbenzene, struct. and internal rot. in solns., PMR and MO investig. 7−103532
ethylbenzene, supersonic mol. jet spectroscopy 7−141592
ethyldifluorophosphine, IR and Raman spectra, conformational stability, normal coord. anal. 7−96677
ethylene dication, gas phase isomers stability study, ab initio MO calcs. 7−96501
ethyltoluenes, supersonic mol. jet spectroscopy 7−141592
fluoro vinyl radical isomers, vibr. anal., ab initio calcs. *(French)* 7−96533
2-fluorophenol, H-bonding, rot. isomerism, mol. orbital study 7−109747
formamide, conformation, microwave spectrum 7−122505
cis-glyoxal, selective pumping, isomerisation vibronic levels, IR fluoresc. spectra anal. 7−103489
glyoxal, trans-cis energy difference, electron correlation effects 7−96549
H_3PO, ground state pot. energy surface 7−90016
halogen substituted acetaldehydes, conformational energies, structs., torsional barrier height and force consts. 7−109720
halogen substituted ketones, conformational energies, structs., torsional barrier height and force consts. 7−109720
haloidmethylmethylsulphones, IR and Raman spectra, vibr. anal., conformations 7−82122
p-hydroxybenzoic acid, solid, intramol. motion, PMR investig. 7−74667
1-iodopropane, microwave spectra, conform. and quadrupole coupling consts. determ. 7−74571
isopropyl radical, struct. and internal rot. barriers, pot. fns. calc. 7−74726
methane-d0$(d_2)(d_4)$, adsorbed on NaCl, struct, props., IR spectra 7−82113
methanol, fluidity correl. using modified free vol. eqn. 7−98535
2-methoxyethylamine, low-lying torsionally excited states, vibr., microwave spectrum 7−82087
methyl chloride-Ar, rot. spectra using pulsed nozzle Fourier transform microwave spectrometer, internal rot. 7−90102
methyl ethyl sulphone-d_0 $(-d_1)(-d_5)$, vibr. spectra, rot. isomerism 7−96692
methyl group rotation, path integral approach 7−82391
methyl groups, correlation, multiple-quantum NMR study 7−90218
methylcyclobutane, conform. anal., internal rot. barriers, Raman investig. 7−74636
3-methylcyclopent-3-enone, internal rot. barrier, microwave spectrum 7−109881
cis-N-methylethylidenimine, internal rot., character tables, symmetry eigenvectors 7−129568
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
methyls enantiotopic, stereo specificity, NMR spectra 7−122575
methylsilylsulfide, internal rot., struct., dipole moment and microwave spectra meas. 7−74569
monothioformic acids, internal rot. barriers, struct., HF calcs. 7−109808
nitromethane-$d_1(d_2)$, cryst., methyl internal rot., neutron scatt., IR and Raman spectra 7−125730
nonanes, branched, Raman and IR spectra meas., normal coord. anal. 7−90147
9,10-octalin, radical cation, OD ESR and Freon matrix ESR spectro anal. UHE MINDO/3 calcs. 7−68214
organic azides, mol. struct., conform., vibr., ab initio HF SCF calcs. 7−81967
organic cpds., bonding between S and O, ab initio SCF-MO study 7−116817
organophosphorus cpds., conform. anal. by gas phase Raman spectrosc. 7−74640
oxazolidines, conform. anal., ^1H NMR spectra, mol. mechanics and PCILO calcs. 7−68215
1,2,3-pentatriene, internal rotation barrier, dipole moment, microwave spectra 7−135928
phenol, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7−90191
phenylphosphine, conformation, internal rot. and struct. studied by microwave spectroscopy 7−116948
phenylpyrroles, isomers, conform. MNDO and AM1 calcs. 7−103397
phosphorodithioic acid, O,O′-dialkyl esters, rot. isomerism, Raman investig. 7−74648

rotational isomerism continued
photoisomerisation, extended Kramers equation 7−139029
PMMA, side group rot. motion, mol. mechanics obs. 7−82406
pnictogen fluorides, tricoordinate, inversion barriers, periodic trends 7−74408
pnictogen hydrides, tricoordinate, inversion barriers, periodic trends 7−74408
poly-p-methacryloyloxy-p-azobenzenes, liq. cryst., IR spectrosc. *(Russian)* 7−83643
polydimethylsiloxanes, filled, molecular motions obs. *(Russian)* 7−110159
polymer chains, rot. isomeric state, excluded vol. effects 7−82405
2,2-propane diyl-bis(4-hydroxyphenyl) polyformal, spin relax. and local motion, temp. and conc. depend. 7−117102
propane-$d_0(d_7)(d_8)$, Raman trace scatt. intensity parameters 7−141581
propanol, fluidity correl. using modified free vol. eqn. 7−98535
n-propylamine, vibrational and conformational analysis, ab initio MO calcs, infrared spectroscopy 7−122539
propyltoluenes, supersonic jet, dispersed emission and TOFMS 7−129771
proteins, conformation prediction by energy minimisation, build up procedure, revised algorithms 7−144955
retinal Schiff base, protonated, isomerisation barrier heights, MNDO calcs. 7−93278
solute eigenvalues and eigenfunctions, solvaton model, INDO parameterised MO calcs. 7−109766
split-valence bond-orbital calculations of intermolecular and intramolecular interactions 7−129585
trans-stilbene, internal rot., phosphoresc. excitation and stimulated emission spectroscopy 7−68440
sucrose, D_2O soln., hydroxymethyl groups internal motion, ^{13}C NMR spectra study 7−116989
symmetric top mols., free internal rot., selection rules, vibr.-rot. spectra 7−109865
tetraarylporphyrins, atropisomerism, steric effects 7−74669
tetrafluoromethane, edge inversion process, spectrosc. props. 7−109870
1,4,7,10-tetraoxacyclododecane and complexes, pseudorotation activation energies, dipole-dipole relax. time 7−74682
thiane-1-tosylimide, and derivatives, conformational anal., X-ray anal. 7−68420
thioacetaldehyde, isotopic species, torsional vibrs., internal rot. barriers, visible spectra anal. 7−109917
thioethers, conform. anal., mol. mech. force field appl. 7−109862
thiolane-1-tosylimide, and derivatives mol. struct., X-ray diffr. 7−68421
toluene, supersonic jet, dispersed emission and TOFMS 7−129770
m-toluidine, electronically excited state, methyl group internal rotation 7−109993
1,1,1-trifluoro-2-propanol, gas, far IR and Raman spectra, conform. stability, internal rot. barriers 7−109898
trifluoroethyl cation, structs., stabilities, ab initio MO calcs. 7−89903
trifluoronitrosomethane, jet-cooled, fluoresc. excitation spectrum, visible transition 7−96768
2,2,4-trimethylpentane, rot. isomerism, US investig. at high press. 7−98346
triphenylphosphine, conform. anal., CNDO/2, INDO and MINDO/3 calcs. 7−68221
tryptophan in apocytochrome c, fluoresc. quenching dynamics, rot. isomerism study 7−78745
vinyl cation, rot. and internal rot. energy level calcs. 7−81932
vinylamine, amino wagging and torsion vibrations, far-infrared spectra 7−122526
vinylamine, inversion-torsion motion, microwave spectrum analysis 7−122504
para-xylene, internal rot., character tables, symmetry eigenvectors 7−129568
Xylene isomers, multiphoton reson. ionisation spectra anal. 7−90181
xylenes, supersonic jet, dispersed emission and TOFMS 7−129770
Cr complex, tris(acetylacetonato)chromium(III), dilute chloroform solns., ^1H spin relax. anal. 7−116990
Cr(III) complexes, octahedral, cis and trans disubstituted, electronic spectra study 7−108110
D_2O, liq., H-bond cooperativity, temp.-depend. pot. barriers of hindered rot. 7−109854
GeH_4, edge inversion process, spectrosc. props. 7−109870
H_2^+, ground state, vibr. and rot. props. in strong mag. field. 7−129684
HNO_2, geometry, stability, system comparison, ab initio studies 7−129558
HNS_2, geometry, stability, system comparison, ab initio studies 7−129558
H_2O, liq., H-bond cooperativity, temp.-depend. pot. barriers of hindered rot. 7−109854
HONO, torsional pot., ab initio SCF MO calcs. 7−110060
ND_3, excited state, inversion-rot. doublets 7−122496
NH_3 dimer, tunnelling-rot. energy levels classification in mol. symm. group 7−109878
NH_4BF_4, cryst., NH_3D^+ ion vibrs. at low temp. 7−135940
$(NH_4)_2(Co(H_2O)_6)(SO_4)_2$, IR struct. holeburning and orientation tunnelling of NH_3D^+ ions 7−138975
OH+acetylene (ethylene), radical reactions, barrier heights, perturbation theory 7−132918
$SO_2(SO_2^+)$, geometry, dynamics, supersonic molecular beam photoelectron spectra 7−136003
SiH_4, edge inversion process, spectrosc. props. 7−109870
SnH_4, edge inversion process, spectrosc. props. 7−109870
rotator phase in solids *see nuclear magnetic resonance; plastic crystals*
rotatory dispersion power *see optical rotation*
rotons
^4He superfluid, layered struct. at supercritical motion, energy and density operator calcs. 7−105166
^3He dilute solns. in superfluid ^4He, transverse acoustic impedance 7−70021
^4He, liquid, oscillator dynamical correlation and elementary excitations, memory fn. approach 7−111995
^4He superfluid, fifth sound and elementary excitation spectrum calcs. 7−91910
^4He superfluid, specific heat and entropy calcs. near λ point 7−124615
^4He, superfluid liquid, roton-like excitation, thermodynamic behaviour 7−143124
rotor model (nuclear) *see nuclear collective model*
rotors
automatic balancing system synthesis 7−75388
coupling effects of disc flexibility on the dynamic behaviour of multi disc-shaft systems 7−91005
rotors continued
electric motor rotor simulation, mixed convection in cylindrical annuli, laminar flow patterns, num. investig. 7−69146
oil whirl in rotor bearings 7−83247
orthogonal-rotor wind turbine expts. 7−139077
transverse vibration of a rotor system driven by two Cardan joints 7−91004
turbo-molecular pump, wide pressure range, with active mag. bearing *(Japanese)* 7−67343
unsteady thickness noise source 7−142089
VL-MLP wind driven elec. power station with interlocked vertical blades and linear generator 7−100691
Cu conductors in turbogenerator rotor windings, fatigue characts. 7−100325
He two-phase flow in superconducting rotor 7−67337
roughness measurement *see surface topography measurement*
roundoff errors
two-dimensional holographic topograms, quantitative deciphering 7−128541
Si, crystal ribbon growth, stress-free, numerical simulation 7−85989
rovibronic levels *see molecular rotation-vibration*
RPA calculations
A=15, 17, 39, 41, isoscalar mag. moments in σ-ω model, RPA type vertex corrections 7−109020
adsorbed diatomic molecule, IR-laser excitation of internal vibr. mode 7−84475
amorphous Heisenberg ferromagnets, spin waves 7−125358
antiferromagnetic paramagnon pairing mechanism, Fermi surface nesting, 2D model 7−118793
atomic electronic excitation, effective local pots., many-body theory 7−74728
Bethe-Salpeter equation, numerical problems 7−121681
binary alloys, liquid structure, pseudopot. theory anal. 7−83653
broken symmetries and vibrations of open shell systems in a partial random phase approximation 7−121586
charge exchange quadrupole excitation in nuclei, RPA calcs. 7−81279
classical fluid, perturbation theory of struct. factor and Helmholtz free energy 7−104506
collective pair excitations in dynamical nuclear field theory 7−89540
deformed boson expansions, reconstitution of rotational band structure, generic model 7−140998
deformed nuclei, isovector mag. mode, RPA calcs. 7−108985
deformed odd-A nuclei, A≃100, pairing reduction, RPA shell model calcs. 7−81275
degenerate quasirelativistic electron gas, thermodynamic potential 7−95458
double heterostructures, coupled intra- and inter-subband plasmon-phonon modes 7−85030
electron gas, density response function calcs. 7−105430
electron gas, layered, Friedell oscillations 7−143379
electron gas, proton screening cloud kinetic props., RPA type approx. calcs. 7−105434
electronic excitations, effective local pots., many-body theory 7−76722
even-even deformed nuclei, two-phonon pole shifts, RPA calcs. 7−135191
FCC nuclear model, nucleon eigenstates equivalence, correspondence with spin-orbit model 7−128977
finite nuclei, classical analogues of RPA operators and Vlasov eqn. 7−135234
free electron absorp. 7−70757
giant angle dipole, QRPA formalism, quasi-particle description 7−121587
giant resonance damping, normal mode anharmonic coupling, fluid dynamical model study 7−135272
giant resonances, spreading widths at finite temp. 7−108981
group contractions and symm. groups in RPA 7−102824
halogen ions, negative, photodetachment cross sections, relativistic RPA calcs. 7−74533
high-momentum phonon exchange and the effective shell-model interaction 7−102810
hot nuclei, fragmentation in constrained mean-field approx. 7−121678
interaction site fluids, struct., thermodynamics, cluster perturbation theory 7−137173
itinerant antiferromag. spin structures, SDW systems, spin wave modes 7−99431
itinerant multiple SDW systems, spin waves 7−99432
large amplitude collective motion, eqns. and coupling in TDHF theory 7−73720
large scale nuclear collective motion, local RPA and transport theory 7−140984
layered electron gas, interacting electron lifetime and effective mass, dynamical RPA calcs. 7−137830
localized collective oscillations in inhomogeneous electron systems 7−112209
low multipolarity giant resonances, vortex oscillations and compression calcs. 7−135273
magic and semimagic nuclei, excitations and G-matrix, BPA and RPA calcs. 7−109134
metal, electronic structure and plasma excitations at the surface of small voids in jellium 7−124817
metals, plasmon dispersion coeff., electron effective mass evaluation 7−105439
molecular polarizabilities, INDO wavefn. calc. within RPA 7−135841
n-type semiconductors, surface plasmons, influence of depletion and accumulation layers 7−125070
nonorthogonal determinant basis, configuration interaction 7−122388
nuclear dissipation, Boltzmannian and second RPA approach unification, Hartree-Fock eqn. of motion 7−135236
nuclear matter, model space approach, infinite order summation of particle-particle ring diagrams 7−67754
particle-hole and particle-particle RPA ground state correlations 7−102794
m-polydiphenylcarbene, ferromag. props., periodic Kondo-Hubbard model calcs. 7−77201
proton screening in electron gas, screening cloud momentum distrib. 7−137822
quasi-two-dimensional electron systems, excited vibr. and excited states, plasmon and electron-hole pair damping 7−99147
quasiparticle model, mass operator energy depend. effects 7−81310
quasiparticle relativistic *G*-matrix interaction 7−135237
rare-earth deformed nuclei, low-lying $K^\pi=1^+$ 7−108971
Roper resonance, colour dielectric model, adapted RPA calcs. 7−81107

RPA calculations continued
rotating nuclei, statistical γ-transitions, giant dipole resonance effects, RPA anal. 7−121702
rotating triaxial odd-A nuclei, M1 and E2 transitions, signature depend. 7−128999
semiconductor double heterostructures, dynamical screening, collective excitations, electron-phonon interaction 7−112211
single-particle resonances, approx. to RPA continuum calcs. 7−135290
SO(2r) time-dependent variational principle, TDHF generalisations 7−96005
spherical nuclei, $\beta^{\mp}$,(n→p),(p→n) transition strengths and excitation energies, $\lambda^{\pi}=0^{-}$, $2^{\$}$ 7−109113
spin excitation modes, shell model and RPA calcs., review 7−73745
spin-isospin volume and surface responses in nuclei, RPA calcs. 7−81297
superconductivity, excitonic mechanism reformulation 7−138119
Thomas-Reiche-Kuhn sum rule in finite nuclei, effective interactions 7−135217
two-component boson-fermion plasma, permittivity calcs. 7−99643
two-dimensional electron plasma-fast charged particle interactions, RPA calcs. 7−92217
valence shell and particle-hole degrees of freedom coupling in partial RPA 7−73742
zero-temperature second random phase approximation and its formal properties 7−109081
(γ,N) reactions, differential cross sections, RPA approach 7−116384
Be, generalised Tamm-Dancoff approx. and random phase approx. calcs. 7−81915
^{209}Bi(d, ^{3}He), particle-hole transitions, differential cross section meas. 7−129055
^{12}C, inclusive charge longitudinal response, RPA anal. 7−116252
^{12}C, semi-classical longitudinal response, RPA theory 7−121675
^{12}C, spin-isospin probes, RPA finite nucleus response, strength distrib. effects 7−135203
^{12}C(e, e′γ), giant resonance electromagnetic decay, RPA calcs. with Skryme-3 interaction 7−116390
^{12}C(e,e′), 200-300 MeV/c, 2p2h correls. effects on longitudinal quasielastic response 7−73690
^{40}Ca, semi-classical longitudinal response, RPA theory 7−121675
^{40}Ca(^{40}Ca, ^{40}CA′), cross sections and giant resonances in multiphonon excitation model 7−141094
^{40}Ca(p̄,p′), cross sections and analyzing power meas. 7−102880
^{48}Ca, inclusive charge longitudinal response, RPA anal. 7−116252
CeSb, anomalous mag. interactions, neutron study 7−77229
^{A}Dy, A=162, 164, pair transfer at high angular momenta, high spin states, RPA, cranked HFB 7−121564
^{164}Dy, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
Er, thermal high spin GDR, RPC and cranked HFB calcs. 7−135288
^{168}Er, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
Fe-V(Cr)(Mn)-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
^{56}Fe, inclusive charge longitudinal response, RPA anal. 7−116252
GaAs/GaAlAs interface 2D electron gas, impurity pot. screening effects, RPA and Thomas-Fermi approx. calcs. 7−118578
GaAs-$Ga_{1-x}Al_xAs$ heterostruct., quasi-2D electron gas, electron-phonon interaction effects calcs. 7−98832
GaAs-$Ga_{1-x}Al_xAs$ superlattices, inelastic light scatt. by collective charge density excitations 7−85654
^{A}Gd, A=156, 158, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{156}Gd, giant angle dipole structure in self consistent QRPA formalism 7−135283
Ge, electron-hole plasma, exchange and correlation energy 7−92091
He liquid film on solid substrate, surface electrons, RPA calcs. 7−118192
^{157}Ho, M1 and E2 transitions, signature depend., RPA study 7−128999
I^{-}, external subshells, electron photoejection 7−122467
Li_2, generalised Tamm-Dancoff approx. and random phase approx. calcs. 7−81915
LiH, generalised Tamm-Dancoff approx. and random phase approx. calcs. 7−81915
^{165}Lu, M1 and E2 transitions, signature depend., RPA study 7−128999
^{16}O(ē,e′X), 130 MeV, fifth structure function, HF and RPA calcs. 7−121808
^{16}O(e,e′), RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{16}O(e,e′p), RPA nuclear continuum, SK3 interaction, nuclear responses at ^{67}MeV, 400 and 130 MeV 7−129027
^{208}Pb 1^{+} state excitation, isoscalar character and tensor correls. importance from (p,p′) and (d,d′) 7−81299
^{32}S, charge density and octupole form factor in harmonic oscillator and HF models 7−67713
Si, electron-hole plasma, exchange and correlation energy 7−92091
^{28}Si(^{6}Li, ^{6}Li′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{28}Si(α,α′), continuum struct. and γ-transitions in giant resonance region 7−96046
^{154}Sm, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{A}Th, A=230, 232, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
^{238}U, octopole alignment in rotational states, cranking and RPA calcs. 7−81278
Xe, multiphoton ionisation, screening effects, RPA anal. 7−103442
^{174}Yb, low-lying $K^{\pi}=1^{+}$ states and M1 transitions, quasiparticle RPA calcs. 7−102808
^{90}Zr, damping of giant spin-flip dipole and quadrupole modes 7−96041
^{90}Zr(n,p), E_n=200 MeV, calculated spectra, microscopic model using random phase approx. 7−141053

rubber
abrasion, effect of lubricants 7−106627
anisotropic rubber sheets, complex permittivity tensor meas., reflecting characteris. 7−134802
butadiene-styrene rubber vulcanisates, sepiolite filler effect on dynamic props. 7−100276
butadiene-styrene rubber-polyethylene imine, dielec. relax. and elec. cond., phase separation effects *(Russian)* 7−113078
butyl rubber solutions, viscosity, thermodynamic props. at low temps. *(Russian)* 7−84349
cement, macrodefect-free, latex modified, effect on props. 7−106606
rubber continued
chemical and structural characterisation by Auger spectra and imaging 7−113322
complex permittivity tensor meas., rectangular waveguide standing-wave method 7−115976
contact adhesion, against glass, surface energy 7−105235
containing rigid inclusion, internal fracture 7−142899
crosslinked, uniaxial extension, true stress representation 7−78086
crumb filled polymer composite, mode of crack propag., model 7−144523
cured, nonlinear viscoelastic model for nonfactorisable time depend. behaviour 7−132658
elasticity, entropic versus kinetic viewpoints 7−128219
elasticity, molecular scale 7−84089
elasticity, review 7−134409
elasticity models for FEA 7−104147
epoxidised natural rubber vulcanizates, adhesion and friction 7−113726
epoxidised natural rubber-PVC blends, compatibility investig. 7−84296
ethylene propylene rubber matrix, $PbTiO_3$ filled, poling behaviour 7−99696
ethylene-propylene-rubber-base elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7−93127
finite elasticity, Poisson function 7−86246
friction against metal, surface changes, temp.-time method of recording 7−93114
friction against steel under 3D compression 7−93112
heat engines based on entropy elasticity *(Japanese)* 7−86814
lossy anisotropic rubber sheet, meas. methods for complex permittivity tensor, reliability study *(Japanese)* 7−128598
membranes, separation of organic vapours from air 7−119701
modified bulk and surface SKN-26, C filled, antifriction props., 7−93113
modulus, gel effect, physical model 7−104890
natural, γ-irradiation cross-linked, solid-state ^{13}C NMR obs. 7−106805
natural, chlorination products, struct. determ. *(Russian)* 7−113916
natural, compression, stress relax., modulus enhancement factor 7−78089
natural, fracture toughness in cold N_2 gas 7−113669
natural, microstructure and hydrobromination, NMR spectra 7−116994
natural, physical props., rel. to elec. fluctuations, temp. depend. *(Russian)* 7−99102
natural and synthetic, cold crystallisation, chain microstruct. effects 7−92522
neutron shields for radwaste packaging, expt. props. and Monte Carlo calcs. 7−74243
organosilicon rubber sealants, dielec. relax., γ-irrad. effects *(Russian)* 7−92591
peel test for rubber joints 7−132856
polyamide-rubber phase blend, chemically modified, compatibility, thermal and mech. props. *(French)* 7−97982
polybutadiene, fracture toughness in cold N_2 gas 7−113669
polyethylene and crosslinked elastomer combined dispersion, struct. correl. with phys., and mech. props. 7−71233
polyethylene-EPDM rubber binary blends, dynamic mech. behaviour 7−78087
polyisoprene, US relax. studies of glass transition 7−69837
polypropylene - EPDM rubber binary blends, dynamic mech. behaviour 7−78087
polypropylene-EPDM rubber-polyethylene ternary blends, dynamic mech. behaviour and struct. 7−78088
rubber-metal pair with water lubrication, boundary friction with account for hydrostatic press. 7−93111
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7−92953
rubber-reinforced polymer, crit. struct. defect size and shape *(Russian)* 7−86199
rubber/metal adhesive bonds, durability in seawater, electrochemical pot. effects 7−138863
rubber/steel adhesive joints, bond strength, acousto-US NDE, stress wave factor technique 7−144666
Shore A hardness and thickness 7−132857
silicone rubber thermal and radiation curing before and after thermal ageing 7−69766
silicone rubber-PZT composites, dielec. and piezoelec. props., stress stability 7−99689
styrene-butadiene rubber, thermophys. props., gas chromatographic meas. 7−69577
thermoelasticity, phenomenological theory 7−83045
thermoelasticity and stress-temp. behaviour 7−118005
toughened epoxy resin dual-phase system, struct. and mech. props. 7−100356
viscoelastic properties, nonlinear, determ. using Fourier transform mech. anal. 7−118035
vulcanised, absorpt. and desorpt. of water 7−84505
vulcanizates, mechanical props., $CuSO_4.H_2O$ effect 7−76261
vulcanized, strength rel. to crack tip sharpness 7−113686
C black filled natural rubber, mixed mode I and II fracture 7−138818
C filled, IR internal refl. spectroscopy applic. to characteris. 7−114030
ZrF_4-BaF_2-NaF-LaF_3-AlF_3 glass, rubber state, appl. to polymer rheology 7−83073

rubbing (abrasion) *see abrasion*

rubidium
see also nuclei with .....
atom, discrete and continuous spectra, oscillator-strength distrib. 7−103435
atom, elastic scatt., differential cross section determ. 7−68458
atom, fine-struct. mixing cross-sections excited to higher $nP_{1/2}$ states 7−141493
atom, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
atom, wavefront reversal in six-photon wave interaction investig. 7−109850
atom-ion scatt., cross sections, resonant charge exchange *(Russian)* 7−122681
atoms, highly excited, cm wave spectroscopy 7−96583
atoms, quasimetastable levels, emission spectra 7−74504
atoms excited in high s or d level, Penning and Hornbeck-Molnar ionisation 7−74742
chemical reaction and chemisorpt. on dichlorodimethylsilane-treated glass surface, effects on spin-relax. props. 7−126481
core excited levels, laser spectroscopy 7−109817
critical point data using Hoch-Arpshofen method 7−67266

rubidium continued
hyperfine transition, O-O, in evacuated wall-coated cell at melting temp. 7−82390
isotope separation by electromigration in cation-exchange membrane 7−103682
Kr-Rb pumping lamps 7−110363
liquid, dynamical struct. factors, scatt. laws 7−69583
liquid, shear viscosity, nonequilib. mol. dynamics calc. 7−76470
liquid, shear viscosity and transverse current correl. fn., computer simulation 7−98541
liquid, struct., self-diffusion, at 315 K, pseudopotential effect 7−117805
liquid, struct. factor determ., role of pair pot. 7−104530
maser freq. standards for measurement of time and of frequency *(French)* 7−73313
optical spectra, refl. coeff., electronic struct., high press. calcs. 7−99886
polyacetylene:Rb, X-ray diffr. and EPR spectroscopy 7−69629
positron sources for atomic physics experiments 7−81818
radioactive tracer diffusion in B_2O_3-SiO_2 based waste glasses 7−135660
spin polarised gas, giant opalescence and magnetokinetic effects calcs. 7−83408
vapour, dye laser frequency conversion by stimulated Raman scattering 7−130257
vapour, injection laser with external selective mirror 7−123025
vapour, laser-induced resonance ionisation, multiphoton and collisional ionisation 7−141534
vapour, stimulated emission during resonant multiphonon excitation, temporal characts. 7−82710
$BaCl_2$:Rb^+, solid electrolyte characts., dopant effect *(Japanese)* 7−84378
$C_4RbTl_{1.5}$, ternary donor graphite intercalation cpd., photoemission, electronic struct. 7−85948
CsCl(Br)(I):CN,Rb crysts., impurity defect complex IR absorpt. spectra study 7−99848
K-Rb mixture, Hornbeck-Molnar ionis. 7−141651
$K_{0.3}MoO_3$:W(Rb), 1D conductor, CDW transport and struct. props. 7−99031
MnO_2:Rb, polymorphs, hydrothermal synthesis and IR spectra 7−113363
Rb I, accurate energies and wavelength meas. 7−116899
Rb, multiphoton ionisation cross sections 7−110026
Rb-Ar mixture, optical piston due to light induced drift, fine structure, hyperfine structure depend. 7−135891
Rb-He magnetometers, characts. for geophysics *(Russian)* 7−79625
Rb-He vapour mixture, two-photon excitation, stimulated processes 7−123102
Rb-Sr fractionation trends in rare-element granitic pegmatites, evidence from mobility of radiogenic ^{87}Sr 7−94224
$Rb+(Cl_2)_n$, charge transfer collisions, cluster product collision energy depend. 7−82336
Rb+k, atomic and molecular ion prod. cross sections calc. 7−122665
Rb+K, Penning ionis., exchange and direct mechanisms 7−141665
$Rb+O_2$, intermultiplet collision transfer cross sections 7−129856
Rb+Rb, associative and Penning ionisation cross sections 7−74743
Rb^{++}Ar, autoionising state excitation, lifetime, electron spectra 7−117060
Rb_2, $2^1\Sigma_g^+$ electronic state, laser-induced fluoresc. Fourier transform IR spectrosc. 7−96782
RbI-AgI-CsI, phase diagram, DTA and X-ray investig. *(Russian)* 7−111831
^{A}Rb, A=85, 87, mag. field depend. g-factor ratio obs. 7−122731
^{81}Rb generators, production using ZrP, medical diagnostic appl. 7−133449
^{82}Rb generator, eluate radioanalysis 7−101082
^{82}Rb generator for nucl. medicine appl. 7−101080
^{82}Rb, partial decay scheme study, radiation dose meas. appl. 7−96026
^{82}Rb, preparation using SnO_2 continuous elution generator 7−101081
^{82}Rb/^{82}Sr generator elution profiles, radioassay and dosimetry 7−101084
^{82}Rb/^{82}Sr generator system for clinical use 7−101083
^{85}Rb, parity nonconservation, time depend. HF calcs. 7−135833
^{85}Rb, Zeeman shift in ground state hyperfine struct., extra term in Zeeman energy calc. 7−135879
^{87}Rb atomic clock, laser pumped 7−80751
^{87}Rb, magnetic-dipole and electric-quadrupole interaction constants 7−141516
^{87}Rb, Zeeman shift in ground state hyperfine struct., extra term in Zeeman energy calc. 7−135879

rubidium alloys
K-Rb, thermodynamic props. and lattice dynamics *(Russian)* 7−137482
K-Rb alloy interfaces, adhesive energies, density functional theory anal. 7−92094
Rb-Cs alloys, elec. field gradients and diffusion 7−112982
Rb-Cs alloys, Fermi surface changes and electron scatt. anisotropy, de Haas-van Alphen effect 7−70168
$Rb_{0.60}Na_{6.25}Ga_{20.02}$ synthesis and X-ray diffr. cryst. struct. determ. 7−83854

rubidium compounds
see also rubidium alloys
acid phthalate, pyroelectric props., temp. depend. 7−92607
core-excited, spectra, Ar^+ bombardment effects 7−132398
dirubidium zirconium di(nitrilotriacetate) dihydrate orthorhombic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
double sulphates, langbeinite structure, electronic spectra 7−113227
gamma irradiated ultrapure single crystals, laser Raman spectra 7−113168
hollandites, synthetic, comp., constitution, stability 7−83919
intercalation cpd. with NH_3 and graphite, NMR study of charge transfer 7−85458
thermochemical meas. 7−80194
Ag_4RbI_5 superionic conductor, transient baroelectric effects study 7−77466
Al_2O_3-Si_2O-Rb_2O mixture, F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
$Ce(PO_3)_3$-$RbPO_3$ system, composition diagrams, X-ray, thermal and IR anal. *(Japanese)* 7−124448
$K_{1-x}Rb_xC_{24}$ intercalation compound, composition modulation, struct. phase transitions 7−69679
$K_{0.5}Rb_{0.5}Cl$, mixed crystals, lattice vibrations 7−137487
$K_{0.95}Rb_{0.05}Cl:NCO^-$, mol. impurity centre, ultrasonic excitation, IR absorption spectra 7−132301
$LiRbSO_4$, elec. field-induced ferroelastic transform. twin struct., X-ray diffr. and polarising microscope obs. 7−77469
$LiRbSO_4$:Mn^{2+}, optical absorpt. spectra 7−113235

rubidium compounds continued
Na_2O-Rb_2O-SiO_2, glass-forming melts, cation diffusion 7−69944
(Rb, Cs)Na_2KSb photocathode with improved photosensitivity and green-red response *(Chinese)* 7−77748
$Rb_{1-x}(NH_4)_xD_2PO_4$, NMR in random fields, spin-glass-like transition 7−77421
$RbAg_4I_5$, coloured single crysts., superionic conductor, photolum. study 7−144101
$RbAg_4I_5$ ionic conductivity meas., by electrodeless method, temp. dependence 7−124588
$RbAg_4I_5$ solid electrolyte, effect of Pb, Cs and Cl impurities on elec. props. 7−111945
$RbAg_5I_4$ superionic crysts., photolum. and excitation spectra temp. depend. 7−77624
$RbAlF_4$, displacive transform., monochromatic Laue X-ray scatt. obs. 7−84234
$RbAlF_4$, lattice dynamics and struct. phase transitions 7−118044
$RbAlF_4$, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
$RbAl(SO_4)_2$:$Cr.12H_2O$ single crysts., optical absorpt. spectrum study 7−119032
$RbAl_{0.33}W_{1.67}O_6$, defective pyrochlores, superionic conductivity 7−84380
Rb_2AmCl_5, cryst. growth from soln., struct., X-ray diffr. study 7−91505
$RbBiS_2$, $RbBiSe_2$, $RbBi_3S_5$, electrophysical and photoelectric props. 7−99052
RbBr (001), surface mode calcs. 7−70061
RbBr, Gruneisen parameters, press. dependence 7−76335
RbBr:Ag^-, two photon absorpt. of Ag^- centres, luminesc. obs. 7−138497
RbBr-AgBr, molten mixtures, densities and molar excess vols. 7−91691
RbCN, cohesive and anharmonic props., temp. depend. 7−104627
$RbCaF_3$, ^{19}F NMR chemical shift meas., shielding anisotropy anal. 7−112983
$RbCaF_3$, crit. fluctuations, high resolution X-ray scatt. study 7−142988
$RbCaF_3$, crit. fluctuations, analysis of expt. results 7−142989
RbCl:Tl, colour centre dynamics and electronic props., reson. Raman scatt. study 7−106179
RbCl-MCl_2-H_2O (M=Mn, Fe, Co, Cu) salts, isodimorphism 7−76093
RbCl-RbBr mixed crystals, dielectric props., temp. and composition depend. 7−143954
$RbClO_4$, Raman data, latent space group symmetry in vibr. spectra 7−92657
RbCl−CsCl mixed crystals, struct. phase transitions 7−137547
Rb_2CoCl_4 ferroelec. crysts., phase transitions, elec. suscept. and elastic wave temp. depend. studies 7−77473
$Rb_2CoCl_4(Br_4)$, ferroelec. phase transitions, X-ray diffr. studies 7−77476
$Rb_2Co_{0.7}Mg_{0.3}F_4$ 2D antiferromag., critical scatt. studies 7−125425
$RbCrCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
Rb_2CrCl_4, planar ferromag., magnon and phonon Raman scatt. 7−106158
Rb_2CrCl_4:$Mg^{2+}(V^{2+})(Fe^{2+})$, ionic ferromagnet, neutron diffr. and visible spectra 7−112755
Rb_xCrF_3, struct. and Rb atom ordering, HREM image studies 7−98098
$Rb_2Cr_{1-x}Mn_xCl_4$, spin-glass, NMR spectra *(Japanese)* 7−77411
$RbCuCl_3$, cryst. struct. 7−76107
$RbCuCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
RbD_2AsO_4 nonlinear, crystals refractive index meas. 7−125667
RbD_2PO_4 crysts., microwave dielec. dispersion near ferroelec. transition 7−125586
RbD_2PO_4 nonlinear, crystals refractive index meas. 7−125667
RbD_2PO_4, phase transitions, dielec. and optical meas. 7−113091
RbD_2PO_4, single cryst., vibr., IR and Raman spectra 7−144061
RbF, electron-stimulated desorption of positive ions 7−118268
$RbFeCl_3$, spin-orbit and crystal field matrices 7−143418
$RbGa_{0.33}W_{1.67}O_6$, defective pyrochlores, superionic conductivity 7−84380
β-Rb_2GeF_6, ionic crystals, variable atom parameters, determ. by electrostatic calcs. 7−83828
RbH, $X^1\Sigma^+$ and $A^1\Sigma^+$ states, potential energy curves, probability density distributions 7−122418
RbH_2AsO_4 nonlinear, crystals refractive index meas. 7−125667
RbH_2AsO_4-$NH_4H_2AsO_4$ and RbD_2AsO_4-$ND_4D_2AsO_4$ proton glasses, mol. motion, EPR study 7−99571
$Rb_3(H_3O)_{0.2}Pt(CN)_4(O_3SOHOSO_3)_{0.5}.0.8H_2O$, 1D platinum chain cpd., conductivity and thermopower 7−131623
RbH_2PO_4 nonlinear, crystals refractive index meas. 7−125667
RbH_2PO_4, water adsorpt., phase transitions, calorimetry and thermogravimetry study 7−105013
RbH_2SO_4, order-disorder models, review 7−113092
Rb_2HfF_6, quadrupole hyperfine interaction, phase transition, TDPAC obs. 7−84245
RbI (001), surface mode calcs. 7−70061
RbI crystals, radiational creation of α,I pairs *(Russian)* 7−142773
RbI crysts., free exciton edge luminesc., polariton effects study 7−98814
RbI, thin crystals, excitonic structures 7−85157
$Rb_{2(1-x)}K_{2x}ZnCl_4$, polarisation reversal, switching time meas. 7−143984
$RbMnCl_3$, ferroelastic, surface sound waves near phase transitions 7−131411
$RbMnF_3$:Nd^{3+}, nonradiative energy transfer without lifetime quenching 7−85818
Rb_2MnF_4, layered magnet, staircases of mag. struct. 7−131991
$RbMn_xMg_{1-x}F_3$, nonradiative energy transfer without lifetime quenching 7−85818
$Rb_3Mo_2Cl(Br)_9$, effects of cation change on complex anion geometry 7−131120
$Rb_{0.3}MoO_3$, current-field relation of CDW near depinning threshold 7−84841
$Rb_4Mo_8P_{12}O_{52}$ crysts., layer and tunnel structs. studies 7−142726
$Rb_{0.22}(ND_4)_{0.78}D_2PO_4$, paraelec.-antiferroelec. transition, ^{87}Rb NMR studies 7−125637
$Rb_x(NH_4)_{1-x}AlF_4$, order-disorder transformation, EPR studies 7−142684
$Rb(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
$Rb_{1-x}(NH_4)_xH_2AsO_4$, proton pseudo-spin-glass, stretched-exponential nucl. magnetisation recovery 7−99601
$Rb_{0.65}(NH_4)_{0.35}H_2PO_4$, glossy system with relax.-time distrib., Brillouin scatt. 7−99878
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed cryst., PO_4 tetrahedron ν_1 mode 7−76318
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed crystals, phys. props., review 7−111892
$Rb_{1-x}(NH_4)_xH_2PO_4$, ferroelec., antiferroelec., proton glass behaviour, order-disorder models, review 7−113092
$Rb_{1-x}(NH_4)_xH_2PO_4$, X-ray diffuse scatt., temp. and NH_4 conc. depend. 7−113312

rubidium compounds continued
$Rb_{1-x}(NH_4)_xH_2PO_4$ proton glass phase, isotope effects 7−117844
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed cryst., polarisation fluctuations, Brillouin spectra obs. 7−125760
$Rb_{1-x}(NH_4)_xH_2PO_4$, struct. near ferroelec.-glass boundary, X-ray scatt. anal. 7−138392
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed crystal glasses, freezing dynamics 7−143014
$RbNO_2$, matrix isolated, struct., isotope effects, IR spectra 7−82091
$RbNO_2$, polymorphism, heat capacity, 83 to 483 K, calorimetric obs. 7−104986
$RbNO_3$ cryst. struct., space group and symm., single-cryst. neutron diffr. study 7−83866
Rb_2NaFeF_6 ($KFeF_6$), fluoroelpasoliths, crystal structures *(German)* 7−104696
$Rb_xNb_6Se_8$, prep. by molten salt ion exchange and ternary element insertion 7−83819
$RbNbUO_6$ single cryst. growth from melt and struct. determ. *(French)* 7−83903
$RbNbWO_3$, defective pyrochlores, superionic conductivity 7−84380
$RbNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7−98433
$RbNd(WO_4)_2$, optical properties 7−106116
$RbNiCl_3$ linear chain mag. cpds., low temp. sp. ht. meas. 7−143807
$RbNo_3$ molten cpd., sound vel. meas., determ. of high press. thermodynamic props. 7−84321
Rb_2O-MgO-TiO_2, phases in region of hollandite crystn., cryst. chem., elec. cond. meas. 7−98388
Rb_3ScF_6, high-temp. phase changes, Raman spectra study 7−85709
$RbSc(MoO_4)_2$:Li, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
$Rb_2SnCl_6(Br_6)$, host precipitates for trace analysis of heavy metal ions by laser excited fluorescence 7−86698
$RbTa(PO_4)_2$, layered structure, symmetry 7−104659
Rb_2TeCl_6 luminesc., octahedron distortion effects study 7−113248
$Rb_{2-x}V_{8+2x}O_{16+x}$, hollandites, high press. synthesis and cryst. struct. *(German)* 7−76105
Rb_2ZnBr_4, incommensurate superlattice, TEM study 7−137342
Rb_2ZnBr_4 single crysts., structural transitions and elec. field gradient tensor, quadrupolar perturbed NMR study 7−92545
Rb_2ZnCl_4, commensurate-incommensurate phase transitions, thermodynamic study 7−118955
Rb_2ZnCl_4 crystals, incommensurate-commensurate phase transition, permittivity, birefringence 7−137550
Rb_2ZnCl_4, discommensurations, interaction potential, direct meas. 7−113064
Rb_2ZnCl_4, ferroelec., incommensurate phase, permitt., anomalous thermal hysteresis under uniaxial deform. 7−77483
Rb_2ZnCl_4, ferroelectric-incommensurate systems, cryst. growth and related dielec. props. 7−118964
Rb_2ZnCl_4, low freq. permitt. meas. 7−99641
Rb_2ZnCl_4, normal phase, computer simulation near incommensurate transition 7−111866
Rb_2ZnCl_4, phase transition, ultrasonic studies 7−98350
$RbZn_{0.25}W_{1.75}O_6$, defective pyrochlores, superionic conductivity 7−84380
Rb_2ZrF_6, quadrupole hyperfine interaction, phase transition, TDPAC obs. 7−84245
YbI_2-RbI system, phase diagrams and struct. investig. 7−91765

ruby
acoustic phonon lifetime calcs. 7−69841
crystals, hypersound self-focusing, APR hysteresis study *(Russian)* 7−91737
electronic struct., self-consistent local density calcs. 7−98807
fibre, single cryst., growth and nonlinear optical use 7−75069
fluorescence scale for rapid pressure meas. 7−80810
fluorescence wavelength division fibre optic temp. sensor 7−123267
impurity absorpt. spectra zero-phonon lines and anomalous photoelec. props. studies *(Russian)* 7−105608
laser, highly coherent radiation formation for pulsed holography 7−141886
laser, passive shutter based on LiF cryst. with F_2^+ colour centres 7−117245
laser, with passively switched electrooptical shutter, ultrashort pulse form. dynamics 7−117210
laser based lidar system for atm. aerosol remote sensing 7−72208
laser crystals, growth and perfection 7−117211
laser crystals, nonradiative relaxation 7−122995
lasers, coherent ultrashort pulse amplification 7−136315
phase conjugation by degenerate four wave mixing, saturation effects 7−130266
ruby:Cr^{3+}, colour centre charge modification under UV irrad. *(Russian)* 7−124266
ruby:Cr^{3+}, inelastic reson. scatt. of 10^{12} THz acoustic phonons by exchange coupled impurity ion distant pairs 7−111786
ruby:Cr, inertial self-focusing of hypersound 7−111780
shock compression by mag. fields, luminescence-antiluminescence meas. 7−142909
solid-state NMR laser with injected signals, instabilities and chaos 7−74937
Al_2O_3:Cr, ruby, resonant energy transfer between single ions and fourth-nearest-neighbour pairs 7−85805
Al_2O_3:Cr^{3+}, ruby, spin Hamiltonian in strained crystal 7−137870
Al_2O_3:Cr^{3+} time-resolved excited-state electronic Raman spectrum 7−85615

Rudermann-Kittel-Kasuya-Yosida interaction *see RKKY interaction*

Runge-Kutta methods
charged particle trajectory calc., Runge-Kutta and Adams methods compared *(Russian)* 7−74823
comparative study of new truncation error estimates and intrinsic accuracies of some higher order Runge-Kutta algorithms 7−80394
cyclotron resonance model implementation 7−110222
global error in Runge-Kutta methods, improvement using Monte Carlo method *(Italian)* 7−88941
linear multistage methods treatment, order dependence on error constants 7−88944
periodic solutions to ordinary differential equations, Runge-Kutta methods 7−108207
stiff initial value problems, application of implicit Runge-Kutta methods 7−108206
transonic channel flow, upwind finite element multigrid scheme for the Euler equations *(French)* 7−91068

Runge-Kutta methods continued
vortex analysis of 3-bladed vertical axis wind turbines; 7−91132
H_2-air system, chemically reacting flow, efficient calc. 7−142397
$^2\tilde{H}$, $^3s_1$ state, convergence behaviour for numerical integration of differential equations by Runge-Kutta and renormalized Numerov methods 7−95974

rupture (solid) *see fracture*

Russell-Saunders coupling
atomic spectra, level and line statistics 7−82021
atoms, intensity factors for the $1s2l2l'$-$1s^22l''$ lines 7−122453
Z=10-20, multiply ionized states, Bohr-Coster diagrams, L-S coupling approx. 7−141454
B isoelectronic sequence, electric dipole oscillator strengths and radiative lifetime, LS-coupling calcs. 7−135880
Be-like ions, dielectronic recombination rate coeffs. 7−103654
Cs_2SnCl_6:UCl_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Cs_2ZrBr_6:UBr_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Cs_2ZrCl_6:UCl_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Ge, odd-parity spectrum, multichannel quantum-defect theory 7−96603

rust prevention *see corrosion protection*

ruthenium
see also nuclei with .....
cascade collapse to vacancy loops 7−104813
dispersed in pillared clay Fischer-Tropsch catalyst, STEM studies 7−100615
film (0001), Cu room temp. adsorption, AES, LEED and work function meas. 7−143227
heavy ion irrad., displacement cascade form. 7−104874
heavy-ion damage, vacancy-loop crystallography 7−111693
meteorite Ru, Re, Os, Pt, Au contents, for 41 iron meteorites 7−127786
meteorite Ru isotope compositions, of Allende and Leoville meteorites 7−115330
moment-generated spectra calcs. 7−141499
ores, Ru content, atomic fluoresc. anal. with vacuum electrothermal atomisation *(Russian)* 7−132984
phonons and electron-phonon interactions, point-contact and neutron spectroscopy studies 7−70381
single cryst. surface (001), CO and H adsorbated reactions, FTIRAS studies 7−144751
surface, (0001), struct. props. calc. 7−70045
surface, (0001), with adsorbed O, order-disorder critical behaviour, LEED study 7−137719
surface, (0001), with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
surface, (001), adsorbed CO, comparison of neutral to ionic photodesorption in valence region 7−118244
surface, (001), NO adsorption, temperature dependence, EELS study 7−143185
surface, adsorption of CO and O_2, effect of alkali metal coverage 7−143205
surface (001), adsorbed H, overlayer-underlayer transition, comment 7−118254
surface (001), adsorbed H, overlayer/underlayer transition, reply to comment 7−118255
surface (001), adsorbed methanol, decomposition, laser induced thermal desorption study 7−132967
surface (001), adsorption of alkali metals (Na, K and Cs), thermal desorption, work fn. and EELS studies 7−131442
surface (001), binding of RuO_n, struct., stability, diffusion barriers, molecular orbital study 7−84530
surface (001), C monolayer, H surface diffusion, laser-induced thermal desorpt. study 7−137698
surface (001), Cu adsorbed layer, CO molecular probe, Fourier transform IR vibr. spectra 7−137695
surface (001), cyclohexene decomp. and benzene hydrogenation, desorpt. studies 7−106831
surface (001), Fe overlayer epitaxial growth, CO and NH_3 adsorpt., AES, TDS and LEED studies 7−105337
surface (001), H diffusion coeff. transition state theory calcs. 7−93367
surface (001), Mn covered, adsorption of H_2, O_2 and CO simple molecules 7−143207
surface (001), Na adsorption and coadsorption with O, EELS study, electronic excitations 7−98700
surface (001), preadsorbed H, acetylene adsorpt. EELS and thermal desorption mass spectrometry 7−71524
surface (001), surface imperfections, influence on photodesorption of O^+ ions 7−91996
surface (001), thermal desorption of strained monoatomic Ag and Au layers 7−143208
surface (001), water desorption, isotope effects 7−118269
surface (1010), coadsorbed CO and Na interactions 7−92000
surface with Cu layer, adsorbed CO, Fourier transform IR spectra 7−91972
surfaces, (001), clean and chemically modified, adsorpt. of N_2, role of σ bending 7−105646
n-CdTe:Ru, photoelectrochem. solar cells, surface modification effects 7−133091
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props. 7−99530
Ru (001), coadsorption of O and K, K−O cpds., form. study 7−124690
Ru-Cu cluster morphology, effect of SiO_2 support, catalytic activity determ. 7−113996
Ru-TiN-Ru-Ag metallisation system for contacts to GaAs, solid-phase reactions 7−105157

ruthenium alloys
see also ruthenium compounds
Al-Ru, icosahedral phase form. by ion beam mixing and interdiffusion in interdigitated layers 7−104861
(Ce-Y)Ru_2Si_2 Kondo systems, low temp. heat capacity 7−70521
Ce(Rh, Ru)$_3B_2$, resistivity and Ce L_3 valence state, temp. depend. 7−124960
$Ce(Rh_{1-x}Ru_x)_2Si_2$ solid solns., mag. props. 7−77246
$CeRu_2Ge_2$, sp. ht. Schottky anomaly and cryst.-field splitting studies 7−69928
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$CeRu_{2-x}Os_xSi_2$, magnetism changes 7−70552
$CeRu_2Si_2$, heavy fermion system, Hall effect 7−70288

ruthenium alloys continued
$CeRu_2Si_2$ heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
$CeRu_2Si_2$, J=5/2 rare earth ion states, low field mag. props., tetragonal cryst. fields 7−138179
$CeRu_2Si_2$, metamagnetic-like transition 7−105918
$CeRu_2Si_2$, polarised heavy fermion system, high-pressure magnetoresistance and susceptibility meas. 7−70287
$CeRu_2Si_{2-x}Ge_x$, magnetism changes 7−70552
Cr-Mn-Os-Ru, elec. resist. anomaly and Neel temp. *(Russian)* 7−76880
Cu-Ru-Ni, effect of Ni addition on Cu-Ru system, phase diagrams, physicochemical anal. 7−100184
$DyRu_2Ge_2$, ^{161}Dy Mossbauer spectra 7−70686
$Fe_{1.4}Ru_{1.6}Si$ reentrant spin glass, magnetisation and Mossbauer studies 7−112801
$HoRu_2Ge_2$, squared modulated mag. struct., antiferromag. order, neutron diffr. study 7−118774
$La_{0.95}Gd_{0.05}Ru_3Si_2$, coexistence of superconductivity and spin glass freezing 7−77128
(La-Ce)Ru_2Si_2 Kondo systems, low temp. heat capacity 7−70521
$Nd_2(Fe_{0.9}Ru_{0.1})_{14}B$, spin reorientation, low temp. mag. meas. 7−77348
$Nd_2(Fe_{1-x}Ru_x)_{14}B$, low temp. mag. behaviour, spin reorientation phenomena 7−125369
Pd-Ru-In system, struct. and props. 7−132574
Ru-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
Ru-Cu surface, physisorpt. of Xe, photoemission obs. 7−100010
Ru-Pd/ice interface, proton exchange processes 7−99199
$Ru_xFe_{80-x}B_{20}$ amorphous alloys, high field magnetisation and ^{57}Fe hyperfine field studies 7−112849
$Ru_xFe_{80-x}B_{20}$, amorphous, electrical resistivity 7−137893
Ru_xFeGa cluster spin glass, ^{57}Fe Mossbauer and bulk magnetisation studies 7−112799
RuFeSi melt-spun cluster spin glass, spin dynamics, Mossbauer studies 7−112802
Ru_2FeSn, Heusler alloys, hyperfine mag. field meas. 7−118431
Ru_2Si_3 epitaxial films on Si (111), structural identification 7−76692
Ta-Ru-H high press. phases, superconductivity and cryst. struct. 7−70444
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
UGaRu, mag. behaviour studies 7−77298
URu_2Si_2 7−112747
URu_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, heavy fermion system, high press. magnetisation studies 7−77355
URu_2Si_2, heavy Fermion system, Hall effect and resistivity study 7−98988
URu_2Si_2 heavy fermion system, 17.5 K transition, thermopower and elasticity studies 7−98994
URu_2Si_2, mag. and thermal props., crystal field effect calcs. 7−112253
URu_2Si_2, mag. excitation, temp. depend. 7−77233
URu_2Si_2 single cryst. heavy fermion system, Fermi surface reconstruction, Hall effect meas. 7−131616
V-Ru alloys, electronic props., effect of structural transformation 7−131296
V-Ru system, electronic and supercond. props. 7−112605
V-Ru-H system, superconductivity and cryst. struct. of high-press. phases 7−138095

ruthenium compounds
see also ruthenium alloys
Creutz-Taube ion, electronic struct. calcs. 7−89930
Creutz-Taube ion, optical absorpt. spectrum model 7−90115
rare earth borides, $RRuB_4$, R=Gd-Tm, Lu, mag. suscept., elec. resist. meas., low temp. mag. order 7−92408
rare earth perovskite phases, R_2NiRuO_6, R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm, cryst. struct., neutron powder and X-ray diffr. 7−83922
$BaO-RuO_2-Al_2O_3$ system, Ba-poor cpds. at 1300°C 7−69897
$Bi_2Ru_2O_7$ pyrochlore cpds., ab initio electronic struct. studies 7−124862
$Er_3Ru_4Si_{12}$, struct. type, orthorhombic symmetry 7−137326
K_3RuCl_6, X-ray absorption-edge structures 7−99977
$LaRu_2P_2$, sintering prep., cryst. struct. and T_c determ. 7−117887
$Li_xRu_yMo_{6-x}Se_8$, ionic and electronic contributions to Li chemical pot. 7−98806
$Na_2O-P_2O_5-RuO_2$ phosphate glass 7−85421
$Pb_2Ru_2O_7$ pyrochlore cpds., ab initio electronic struct. studies 7−124862
Ru (II) acylpyridine complexes, slow triplet energy transfer to lower excited states 7−90309
Ru complex, absorpt. and luminesc. spectra, Zeeman effect, zero-phonon lines 7−99898
Ru complex, cyaninatometal compounds, phthalo- and naphthalo-based, synthesis and semicond. props. 7−100146
Ru complex, $Ru(2,2'\text{-bipyridyl})_3^{2+}$, adsorption on Ag colloids, SERS spectra anal. 7−77579
Ru complex, tris-(1,4,5,8-tetraazaphenanthrene) hydroquinone, photolysis and photopotentials 7−113962
Ru complexes, mixed ligand, intermol. electron hopping, ESR obs. 7−70635
Ru complexes, $Ru(bipyridyl)_3^{2+}$ derivatives, absorpt., luminesc., charge localisation 7−113183
Ru complexes, $Ru(bpy)_3^{2+}$, temp. and mag. field depend. in luminesc. 7−70856
Ru^{2+} complex, $[Ru(bpy)_3]^{2+}$, glass-to-fluid transition, time-resolved emission, charge-transfer delocalisation or localisation investig. 7−84265
Ru-H, high press. phase, supercond. transitions 7−125204
RuC, electronic states, bonding, all-electron ab initio HF CI calcs., mass spectra 7−109804
$Ru_3C(CO)_{15}$, cluster struct. determ. IR spectra 7−113181
$Ru_3(CO)_{12}$, vibr., Fourier transform IR, photoacoustic and Raman spectra 7−132272
$RuCl_3.nH_2O$, X-ray absorption-edge structures 7−99977
RuN films, synthesis by active N sputtering, expt. study 7−132452
$Ru(NH_3)_6Cl_3$, X-ray absorption-edge structures 7−99977
$Ru_{1-x}Nb_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
RuO_2 films, reactively sputtered, VLSI metallisation appl. 7−113383
RuO_2, reactively sputtered diffusion barriers in Si-RuO_2-Al structs., thermal stability 7−112118
RuO_n, binding to Ru (001), struct., stability, diffusion barriers, molecular orbital study 7−84530
p-RuS_2-aqueous electrolyte interface, impedance and photoelectrochem. props. 7−118583
ruthenium compounds continued
$RuS_2(Se_2)(Te_2)$, cryst. growth by chem. vapour transport and high temp. soln. growth 7−144252
Ru_2Si_3, semiconducting silicides, formation and oxidation 7−126346
$Ru_{1-x}V_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
$^{106}RuO_4$ vapour, sorption on natural tuff with mordenite admixture *(Czech)* 7−116709
$(Ru(bpy)_3)^{2+}$, time-resolved photoselection and exciton hopping in excited state 7−103477
$SrRu_2P_2$, sintering prep. and cryst. struct. determ. 7−117887
$Ti_{0.97}Ru_{0.03}O_2$ pyrolytic films on Ti, XPS studies 7−106378
$U_4Ru_7Ge_6$, struct., mag. and elec. props. 7−117878
URu_2Si_2 heavy-electron supercond., magnetic excitations and ordering 7−85271
Y_2NiRuO_6, cryst. struct., neutron powder and X-ray diffr. 7−83922
$YRuB_4$, mag. suscept., supercond. transition temp. meas. 7−92408

Rutherford backscattering *see particle backscattering*

rutile *see titanium compounds*

S-matrix theory
see also dispersion relations
$(\phi^4)_{1+1}$ model, virtual particle number, effect on *S*-matrix, nonperturbative technique 7−108783
atom+diatom collisions, Schrodinger eqn., close coupling wave packet formalism 7−73022
atomic scattering matrix, Sturmian representation, Coulomb plus Yukawa pot. 7−90318
charged particle scattering with energy/angular momentum/coupling constant relation, inverse problem 7−134574
colliding-particle internal structure, integral eqns. for partial amplitudes at energy surface 7−121750
complex a-plane, Levinson theorem modification *(Russian)* 7−81035
cosmological gravitation fields, quantum field theory of mutually interacting particles 7−72684
coupled channels S matrix in elastic case, parametrization, relation to Arndt-Roper form 7−109126
deformed nuclei, vibrational band excitation, coupled channel Born approx. calcs. 7−128955
eigenvalues of S matrices, Bethe-ansatz equations and Dynkin diagrams 7−95773
Euclidean invariant scattering amplitudes, Fock space scattering operators, Euclidean group E(2) 7−140826
Faddeev equation for local pots., analytical continuation in complex energy plane 7−67056
fermionic closed strings, algebraic geometry and covariant scatt. amplitudes 7−121469
Finslerian micro-structure and lepton model of the hadron S-matrix 7−128777
free field theories with local gauge invariance, BRST quantisation of classical actions 7−73533
Green-Schwarz superstring, loop calcs. and S-matrix elements 7−73625
hadronic mechanics, workshop, Patras, Greece (Aug. 1986) 7−128169
heavy fermions, effective Lagrangean, nonlinear realisation 7−121410
inelastic coupled channel NN scatt. S-matrix, elastic component parametrisation. 7−102811
inelastic scattering, coupled channels method, S-matrix parametrisation 7−121763
infinite-order sudden approx. testing 7−117037
invariant light front perturbation theory 7−128778
inverse scattering intertwinning methods study 7−102194
M- and S-matrix weather-radar meas., anal. and appl. 7−94418
methane, positron scatt. cross sections, complex optical pot. calcs. 7−103675
molecule, electron scatt., shape reson., S matrix poles, multiple scatt. Xα calcs. 7−103391
mutually interacting quantum fields in Robertson-Walker universes 7−88719
N=1 centrally extended sigma model, exact SUSY S-matrix, central charges for O(2N) 7−121342
nuclear scatt., S-matrix unitarity defect and underlying absorptive pot. 7−81355
open strings, zero-slope limit, factorization, tachyon emission, generating functional for S-matrix element 7−121479
QFT, nonperturbative S-matrix theory and electron self-energy 7−134963
quantum scattering with group symm., geometric approach 7−115833
quasistationary state parameters in RGM, algebraic calcs. 7−135228
reacting plasma, strongly coupled, partially ionized, scatt. theory methods 7−130835
relativistic N/D equations with inelasticity, Coulomb effects and analytic props. 7−95774
resonance scattering of composite particles, binary process model 7−95775
resonances, mathematical anal. 7−102218
resonances in nuclear, atomic and mol. physics 7−102853
scattering of polarised atoms, azimuthal asymmetry and S-matrix parameters anal. 7−90330
scattering operator generated by SL(2,R) on Fock space, SO(N) internal symmetry group 7−140825
self-consistent classical path method 7−82309
shortest-path method, physical scatt. matrix determ. from ambiguous solns., TPSPM computer code 7−134962
SU(N) self-dual gauge theory, Belinsky-Zakharov method, soliton solns. 7−80972
superparticle theory, covariant quantisation, S-matrix 7−73573
supersymmetric CP^{N-1} model, solitons, exact factorised S-matrix, 1/N expansion, antiparticles 7−121370
two-body nuclear reactions involving zero spin particles, reaction amplitude, CRAZS computer code 7−135343
unstable particle systems, transport approach, relation to statistical mechanics S-matrix formulation 7−140593
Y-junction from bimode planar light guide to monomode light guides, parameters 7−103968
Z(N) model, supersymmetric, factorizable, S-matrix 7−121385
^{8}Be, α-decay, quasistationary state parameters in RGM, algebraic calcs. 7−135228
^{2}H(N,N), multichannel N/D equations, new formulation, Coulomb interaction effects, K matrix method 7−121817
^{2}H(d,d), differential partial amplitudes, orbital Young scheme *(Russian)* 7−141057

S-matrix theory continued
$^{3}H(d,n)_2$ cross section meas., R-matrix and S-matrix anal. 7−116427
$^{150}Nd(^{12}C,^{12}C')$, vibrational band excitation, coupled channel Born approx. calcs. 7−128955

safety
see also accidents; alarm systems; fission reactor safety; fusion reactor safety; health hazards; protection
ALARA, Sellafield Nov. 1983 incident 7−74209
ALARA considerations and radioactive waste disposal in the UK 7−96389
ALARA philosophy to respiratory protection for TMI cleanup 7−103294
algin sequestration studies for radionuclide contaminants, prophylactic agent 7−109532
ANL computer controlled target storage system, status report 7−109577
ANSI N14.5 leak test standard for radioactive material packages, revision 7−74256
bentonite-based packing, role in limiting radionuclide releases from HLW repository 7−74084
bitumen radwaste forms, biodegradation 7−103248
bitumens/bituminous compound for radioactive waste treatment, thermal stability 7−144717
BNFL spent fuel handling safety, conf., London, England, (Feb. 1987) 7−66835
Bruce Nuclear Power Development Waste Operations Site-2, construction, safety and cost anal. 7−96352
Canadian nuclear waste management programme, ideology, risk and public consultation 7−109506
Canadian U mill tailings, risk assessment 7−109513
CANDU spent fuel, $^{137}Cs/Xe$, and $^{129}I/Xe$ release ratios, fuel-sheath gap leaching in groundwater 7−129426
cask performance and interface specifications for spent LWR fuel shipment 7−74150
CASKETSS code for radioactive material packaging thermal and struct. anals. 7−74253
Castor series transport casks for radioactive materials, manufacturing experience 7−74251
cement matrices, solubility modelling, implications for LLW immobilisation 7−103242
Chernobyl and nuclear safety 7−119628
Clinton nuclear power station, reliability-centred maintenance program 7−135513
Cluff Lake uranium mine, radionuclide and heavy metal concs. in water, sediments and biota 7−114504
commercial spent reactor fuel, rail transport in USA 7−109495
concrete radwaste forms in groundwater, attenuation of Pu, Am, Cs and Sr mobility 7−103244
concrete storage and transport cask for spent pebble bed reactor fuel 7−74144
conf., Davos, Switzerland, June 1986 7−72723
conf., London, England, Sept. 1986 7−95108
conference on radioactive waste management, Winnipeg, Canada, Sept. 1986 7−95091
coupled U cylinders, subcriticality meas. using ^{252}Cf driven neutron noise anal. 7−67911
criticality codes for large arrays of fissile material packages, validation exercise 7−74108
defective LWR spent fuel transportation, radioactivity leakage, double containment system 7−74252
DHLW cask, hypothetical accident condition loads with initial pressure 7−74188
DHLW truck shipping cask, design verification 7−74182
dosimetry of RF electromagnetic fields 7−79092
Dry-Cap spent fuel storage and transport cask 7−74157
Duke Power Company spent fuel storage and transportation experience 7−109491
EBR and LWBR fuel storage safety U and Pu neutron spectral reactivities 7−103007
EDAC system and other developments for criticality accident detection 7−135446
electric field distrib. around biological body, meas. by optical technique 7−101151
engineering education, safety and health integration 7−134389
environmental impact of nuclear waste transportation, analytical methodology 7−74118
environmental protection by final disposal of waste, lithosphere repositories, human effects 7−129422
experimental criticality data comparing organic with water moderation 7−103006
failed PWR fuel transport, R62 package appl., water radiolysis parametric expts. *(French)* 7−74198
financial and health risk issues in nuclear plant decommissioning 7−135541
finite cylindrical radwaste form, diffusional release of single component material 7−135658
flask containing irradiated LWR fuel, thermal response following loss of coolant water 7−74179
FTR fuel pins, organically moderated lattices neutron reaction rate meas. 7−103018
FTR MOX fuel pin arrays, light water and organic moderated, criticality expts. anal. 7−103019
gaseous effluents from nuclear power plants, effects on the air *(French)* 7−139168
generic assessments of plant/soil radioisotope concentration ratios 7−101097
geologic radioactive waste repositories, IOCRF60.2 regulation, designers interpretation 7−103226
Grohnde Power Station: process computer prevents water pollution and ensures efficient operation 7−133140
heat transfer boundary conditions in pool fires 7−74176
Hermes isotope separation facility, cleaning up alpha contamination 7−135677
HLLW tank storage research in UK and FRG, probabilistic safety anal. *(German)* 7−116713
HLW and spent fuel packagings, design, safety anal. and tests 7−74152
HLW and spent fuel transportation casks, US DOE acquisition programme status 7−141314
HLW management, Japanese safety research from April 1985 to March 1986 7−81733
HLW transportation in UK, flask design 7−74164
hospital solid radioactive waste disposal, radiological safety and materials handling procedures *(German)* 7−129421
IAEA safeguards, problems and progress 7−109289
II-VI semiconductor thin film solar cells fabrication, laboratory safety procedures for material processing 7−86800
III-V semiconductor solar cells, large scale production, safety comparisons of gas source deposition technologies 7−86802
immobilized radioactive waste transportation, safety regulations 7−74146
INS 1 GeV electron synchrotron, 3D neutron dose distrib. 7−127010
Integrity of Components research program, Phase II, safety assessment of cracked components 7−122006
ionising radiation meas. and standards, health and safety aspects 7−101095
irradiated CANDU fuel transport cask, design and testing 7−109494
irradiated fuel transport casks, thermomechanical tests and studies *(French)* 7−74197
JET pulse termination network 7−122170
Jordan van der Graaff accelerator, neutron skyshine and safety level 7−74262
Konrad radwaste repository, preliminary waste acceptance requirements 7−89736
Konrad repository, W. Germany, preliminary waste acceptance requirements 7−141321
Konrad repository, W. Germany, safety analysis 7−141322
KWU heating reactor, development work, status *(German)* 7−129279
laser output safety interlocking prior to optical fibre burnback 7−79093
laser protective eye wear, safety aspects 7−114502
laser protective filters for visible and IR 7−87247
laser safety, Austrian legislation 7−87246
laser safety standards and protective measures in USA 7−87101
lasers in medicine, safety precautions *(German)* 7−114500
LLW and ILW repository in Finland, performance anal. for Olkiluoto site 7−103246
LLW disposal, optimum alternative site/technology combination determ. 7−135670
LLW shallow land burial, chemical aspects, UK research programme 7−103243
LR56 Type B(U)F package for liquid radwaste effluents, design and mock-up tests *(French)* 7−74159
LWR core damage freq. anal. 7−81632
LWR HLW and spent fuel, long-term radiotoxicity, MOX and burn-up extension impacts 7−74093
LWR microcomputer-based system anal. and risk assessment system 7−81629
LWR probabilistic risk assessment methodology 7−81631
LWRs safety, conf., Gaithersburg, MD, USA (Oct. 1986) 7−80170
medical NMR imaging, operational safety issues 7−139344
megavoltage accelerators for radiotherapy, conf., London, England (May 1987) 7−108044
Mont-Louis accident and nuclear safety, salvage operations *(French)* 7−74140
Mostram systems for collection, transportation and storage of radwaste 7−74143
MOX fuel pin arrays moderated by organic soln., critical expts., calc. assessment 7−103017
MTS manipulator-carrier system for use at Wackersdorf nuclear reprocessing plant *(German)* 7−129215
multipurpose container construction for transporting radioactive materials 7−74158
MUTUAL code for criticality safety using solid angle method, user's manual 7−81481
natural radioactivity, selective method for removal from drinking water 7−93567
neutron-activated reactor parts, shallow land burial, near-field releases at ORNL 7−103245
NRC, generic safety issue management review 7−81630
NRC licensed nuclear facilities, safeguards 7−116549
NRC performance monitoring program, overview 7−129249
NRU research reactor, safety review of effluent heat recovery project 7−89662
nuclear, reactor regulation, uses of probabilistic risk assessment 7−81624
nuclear fuel reprocessing plant, main processing building, response spectra to earthquakes, aircraft and pressure waves *(German)* 7−116627
nuclear fuel reprocessing plants, design and modifications, ALARA, UKAEA perspective 7−96305
nuclear fuel transportation in Japan, safety regulations and emergency responses, status 7−74104
nuclear fuel waste disposal, probabilistic safety assessment, interface model development 7−96365
nuclear material packages, mixing and nuclear criticality safety 7−74225
nuclear material packaging manufacture, quality assurance, spent fuel casks 7−74109
nuclear materials, high temperature testing of structurally damaged impact and puncture package protection systems 7−74185
nuclear materials cask analysis, phase change models 7−74192
nuclear materials cask design specifications, evaluation using CAPSIZE program 7−74193
nuclear materials casks, target hardness comparisons 7−74191
nuclear materials testing and safety, conf., Stuttgart, Germany (Oct. 1986) 7−120695
nuclear materials transportation, risk 7−141335
nuclear materials transportation systems, shock and vibration road simulator tests 7−74187
nuclear materials transportation systems, thermal benchmarking 7−74184
nuclear plant performance indicator program 7−129251
nuclear plant risk status information management system study 7−81628
nuclear power, risk perspective 7−139094
nuclear power plant radiation safety *(Russian)* 7−133480
nuclear power station Class 1E equipment seismic qualification, IEEE recommended practice 7−141249
nuclear power station Class IE equipment safe part replacement, IEEE standard 7−141250
nuclear power station performance, safety and reliability practice in Japan 7−129257
nuclear power stations, engineering developments for safety 7−139093
nuclear reactor design standardisation discussion, role of NRC 7−81484
nuclear reactor diesel standby generators, surveillance test intervals and allowed outage times study 7−81627
nuclear reactor emergency operating procedures, post-Three Mile Island, implementation review 7−81623

safety continued
nuclear reactor risk-based performance indicators study, software packages prod. 7−81626
nuclear reactors, operational safety reliability research 7−81625
nuclear reactors, risk uncertainty analysis methods for NUREG-1150 7−81634
nuclear safety and security in a changing world 7−116721
nuclear safety research, French view, discussion 7−81617
NuPac 125-B rail cask, design and scale model testing 7−74190
oil-sealed rotary vane vacuum pumps, CVD appls., safety aspects *(German)* 7−140707
Ontario Hydro tritiated heavy water transportation package 7−74250
packaging, high-speed impact test 7−74180
PC management of Right-to-Know information and data 7−140683
photovoltaics safety, conf., Lakewood, CO, USA (Jan. 1986) 7−80168
PWR radioactive wastes and waste heat, effect on water environment *(French)* 7−139153
radiation, biological effects, damage mechanisms and risk estimates 7−93804
radiation exposures in UK from transport of Tc generators and ILW 7−74232
radiation safety in the nuclear medicine department: impact of the UK Ionising Radiations Regulations 7−139355
radiation therapy, automation and computer control of accelerators 7−114492
radiation therapy, safety of electron accelerators, 1981 standard 7−114503
radiation therapy accelerators, elec. and mech. safety, TRS 86 standard 7−114494
radioactive material packages under vehicle accident conditions, tie-down systems 7−74100
radioactive material packages with 2 containment barriers, radioactive gas release calcs. *(French)* 7−74254
radioactive material transport, evaluation of dose received by workers and general public *(French)* 7−74239
radioactive material transport casks, damage due to barge collisions, engineering assessment 7−74238
radioactive material transport in China 7−74121
radioactive material transport in FRG, R & D work, spent fuel casks 7−74115
radioactive material transport in FRG, risk assessment with INTERTRAN 7−74230
radioactive material transport packagings, safety factors under severe fire conditions *(French)* 7−74228
radioactive material transportation, risks and regulations *(French)* 7−96398
radioactive material transportation to 1st US repository site, projected environmental impacts 7−74117
radioactive material Type A packages, costs and effectiveness of safety measures for road tunnel transit 7−74127
radioactive materials, low activity, transportation experience and regulatory compliance assurance 7−74122
radioactive materials, small quantities, transportation in Italy 7−74136
radioactive materials, transport by road, eval. of accident probabilities *(French)* 7−74231
radioactive materials transport, IAEA class 7 requirements and Type B(U) packages 7−74102
radioactive materials transport, methodologies for radiological impact assessment 7−74233
radioactive materials transport in India, experience in regulation 7−74106
radioactive materials transport in Japan, safety research 7−74114
radioactive materials transportation in USA, federal, state and local activities 7−74227
radioactive waste, PRA, application of variance reduction techniques 7−89764
radioactive waste cask handling system, use of robotics 7−74183
radioactive waste management, role of optimization techniques in assessment of practicable environmental options 7−100762
radioactive waste packaging, quality assurance 7−74222
radioactive waste shallow land burial, COSMOS-S/D safety assessment code 7−89762
radioactive waste shallow land burial facility, safety and cost assessments 7−89750
radioactive waste storage, safety assessment for double-barrier in-ground container 7−89761
radioisotope disposal in municipal waste systems, radiological impacts 7−89760
radiological impact of transport accidents and incidents in UK over 20 year period 7−74234
radiopharmaceutical product transport in France *(French)* 7−74119
radiopharmaceuticals, hospital cyclotron-produced, guidelines for safety standards evaluation *(Japanese)* 7−107247
radwaste, disposal in plutonic rock 7−135674
radwaste bituminisation, safety aspects for various wastes *(German)* 7−129436
radwaste management systems anal., systematic approach 7−89782
reactor decommissioning waste transport in UK, preliminary risk assessment 7−74116
reprocessing wastes, transport criteria 7−74160
rescue container system for defective UF_6 cylinders 7−74138
RF EM fields, environmental monitoring for human safety, ANSI standards compliance 7−93963
RF EM fields, environmental monitoring for human safety, radiation probe configs. 7−93964
RF safety standard, ANSI, rationale and some problems 7−87245
rubber neutron shields for radwaste packaging, expt. props. and Monte Carlo calcs. 7−74243
sealed nuclear waste containers, H_2 conc. calc. methodology 7−103233
semiconductor thin film deposition in photovoltaics manufacture, safety considerations 7−86019
shallow land burial, safety anal. USNRC model overview *(Croatian)* 7−74092
shipping cask development for chopped nuclear fuel transportation 7−74151
shipping casks under accident conditions, thermal analysis computer code Q/TRAN 7−74181
Shippingport Station Decommissioning Project, barge transportation of waste, economic and safety aspects 7−103154
Shippingport Station Decommissioning Project, quality assurance program 7−103156
safety continued
SNM transport system, safety anal., USA DOE/PNC joint programme 7−74112
solid radwastes from nuclear power plants, effects on the environment *(French)* 7−139387
space nucl. reactors, post-operational disposal 7−68017
spent CANDU fuel, road, rail and water transportation systems 7−109496
spent fuel assemblies in a dry cask, heat transfer from WWER fuel 7−74110
spent fuel shipping casks, shielding methods for versatility eval., KWIK-DOSE code 7−109529
spent fuel transport, industrial, technical, safety and economic aspects 7−74124
spent fuel transport flask finned surface, fire testing of intumescent coating 7−74196
spent fuel transport in the USSR, experience and regulations for safety and personnel protection *(Russian)* 7−74130
spent LWR fuel, response to extreme environments, releases from cask accident 7−74258
spent LWR fuel shipping cask, database for hypothetical sabotage attack 7−74202
spent nuclear fuel dry shipping/storage casks, fuel pin surface temps. 7−74194
spent nuclear fuel flasks, thermal anal., use of FLUFF fin heat transfer code 7−74195
spent nuclear fuel packages, comparison of nodular cast Fe and forged C steel 7−74205
spent nuclear fuel shipping casks, microcomputer based thermal and impact code system 7−74199
spent nuclear fuel shipping containers, impact anals., static and dynamic FEA comparison 7−74201
spent nuclear fuel shipping vessel, dose rate distribs., on-board expts. and anal. 7−74237
spent nuclear fuel transport, safety in 'real' accidents, flask anal. 7−74111
spent nuclear fuel transport cask, 100 ton class, demonstration test for accidents 7−74113
spent nuclear fuel transportation cask design, fracture mechanics approach 7−74203
spent-fuel shipping cask, criticality effect of neutron channelling between B_4C granules in Boral 7−103021
Super-Phenix fuel elements and absorber rods, transport and storage container development *(French)* 7−74141
Tennessee Valley Authority hydroelectric power system growth and dam safety improvements 7−126549
TEXTOR neutral injector power supply system for ion source 7−122156
THTR spent fuel, handling and transport system 7−74163
TMI-2 fuel debris, transportation to INEL 7−74162
TN-24P PWR spent-fuel storage cask, testing and analyses 7−109492
TN-BRP and TN-REG spent fuel transport/storage casks, design and fabrication 7−74156
toxic air pollutants, routine emissions and accidental releases, risk, response and planning 7−86861
transport packaging and shroud for irradiated monitoring assemblies from the Creys-Malville fast reactor *(French)* 7−74245
transuranic waste transportation tracking system 7−109497
tritiated H_2 gas, internal dosimetry following in-vivo conversion to tritiated water 7−127013
TRUEX process, nuclear criticality safety considerations 7−103020
TRUPACT-I, containment anal. 7−74189
TRUPACT-I, TRU waste package transporter, containment, H_2 buildup, hypothetical accidents 7−74204
TRUPACT-I transuranic transporter, impact, puncture and thermal testing 7−74186
Type B(U) radioactive material packages, fracture safety philosophies effects 7−74257
Type B packages, radiological limits in IAEA transport regulations, spent fuel 7−74236
Type B spent fuel flasks, quality assurance 7−74107
UHV valve protection system for National Synchrotron Light Source 7−134749
UK radioactive waste disposal sites, development 7−96354
underground radioactive waste disposal facility, probabilistic risk assessment 7−96364
uranium mill tailings in western USA, governmental control 7−109509
USA DOT Specification 6M radioactive fissile material package, nuclear criticality safety reeval. 7−74247
used UF_6 shipping packages, testing and eval. of Model 30B cylinders 7−74255
VDU comfort and safety, visual fatigue and relative visibility meas. *(Japanese)* 7−126812
vitrified high level radwaste, transport and storage cask development 7−74142
Wackersdorf nuclear fuel reprocessing plant, safety considerations *(German)* 7−116625
Wackersdorf nuclear reprocessing plant, failure anal., radiological effects, counter measures *(German)* 7−116626
Yucca Mountain nuclear waste repository, seismic design strategy 7−103209
$CuIn-Se_2$-CdZnS solar cells, health and safety aspects in research and production 7−86801
Fe, deep penetration problems, point kernel versus radiation transport, spent fuel cask appl. 7−109528
H_2 gas generation in radioactive waste packages 7−74200
$^3H_2$, safe handling and storage 7−109525
Pu, air transportable package development 7−74153
Pu, metallic, qualified air transport packaging 7−74248
Pu transportation, packaging design 7−74240
Pu transportation, SAFPAK and SAFKEG high integrity packages 7−74147
Pu transportation risks, comparative literature survey 7−74229
$Pu(No_3)_4$ soln. storage at Rocky Flats, shielded annular tank 7−103022
PuO_2 packaging system for air transport 7−74246
^{226}Ra and ^{210}Pb concentrations in terrestrial and wetland plants on U mill tailings in Canada 7−93972
Si amorphous solar cells manufacture, safety procedures 7−86799
a-Si preparation technology, safety aspects 7−86020
T dispersion in the atmosphere, computer code 7−87259
U mill tailings, PRA of long-term environmental effects 7−89765
U, mining experience and radiological protection 7−81750

safety continued
U mining experience in Canada, radiation protection standards 7−87249
U tailings, disposal facilities, seepage and transport modelling 7−89766
U tailings, research into long-term environmental effects in Canada 7−109512
U transportation, SAFPAK and SAFKEG high integrity packages 7−74147
UF_6 in transport accidents, radiological and chemical risks 7−74235
UF_6 transport container, extra fire tests in Japan, numerical anal. comparison 7−73878
UF_6 transport overpacks, specification 21PF-1, update and insulation testing 7−74249
$UO_2(NO_3)_2$ solution, dynamic subcriticality meas. using ^{252}Cf-driven neutron noise method 7−103023
$UO_2(NO_3)_2$ solution, 3 interacting tanks, ^{252}Cf driven neutron noise meas., criticality safety 7−103024
$UO_2(NO_3)_2$-$Gd(NO_3)_3$-HNO_3 and $UO_2(NO_3)_2$-HNO_3 solns., density eqns. for criticality safety 7−116609

safety systems
see also alarm systems
breeder reactor safety systems using fault tolerant computers, software anal. and modelling 7−74017
nuclear materials safeguards, containment and surveillance systems, development 7−122012
nuclear power station, control and safety system *(Spanish)* 7−96263
vortex amplifier characts., multivalued region elimination 7−103079
VVER 440 reactor unit control and safety protection system *(Hungarian)* 7−81579

Salam-Weinberg model *see Weinberg model*

salt water conversion *see desalination*

samarium
see also nuclei with .....
adsorption on Mo(110) 7−131438
alkaline earth sulphide phosphors, doped with Ce and Sm, thermally stimulated luminesc. 7−144133
Archaean Talga-Talga Subgroup, Pilbara Block, Australia, age and mantle evolution, Sm-Nd obs. 7−145375
atom, chemical and isotopic anal., resolution limits inductively coupled plasma-mass spectrometry study 7−78563
atom, ionis. cross sections, Coulomb deflection effects 7−111684
cation, $4f^6(^7F)6s$ config. crossed-second-order field shift determ. 7−129663
K-shell ionisation by protons and deuterons 7−86714
magnetic struct., mol. field approx. 7−92403
mixed valence overlayers on Si (111) and GaAs (110), semiconductor oxidation enhancement 7−71420
thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
Au-Sm-GaAs (110) interface, chemical trapping and modification, photoemission study 7−138602
$Ba_4Na_2Nb_{10}O_{30}$:Sm^{3+} ceramics, dielec. and ferroelec. props., effect of rare-earth ions 7−92621
$BaTiO_3$:Sm hot-pressed ferroelectric ceramics, elec. cond. study *(Japanese)* 7−131645
$Ca_{1-x}Y(La)_xF_{2+x}$:Sm^{2+} mixed crysts., impurity optical props. and nonradiative decay studies 7−77637
Co:^{152}Sm(^{172}Yb), hyperfine magnetic fields at rare-earth elements in ferromagnetic transition metals 7−118423
Fe:^{152}Sm(^{172}Yb), hyperfine magnetic fields at rare-earth elements in ferromagnetic transition metals 7−118423
KCl:Sm^{2+}, defect aggregation kinetics, site-selective laser spectroscopy study 7−69918
$KNbO_3$:Sm, crystal growth and stress-induced piezoelec. voltage meas. 7−99712
LaF_3:Sm^{3+}, laser host, active Sm^{3+} centres, cryst. field investigation 7−84786
MgS:Ce,Sm dosimeters using optically stimulated luminescence 7−93945
MgS:Eu,Sm phosphors for TLD 7−93957
Ni:^{152}Sm(^{172}Yb), hyperfine magnetic fields at rare-earth elements in ferromagnetic transition metals 7−118423
$PbTiO_3$:Sm ceramics, electromech. coupling anisotropy 7−99700
PuSm geochemistry, exptl. study rel. to thermodynamics of trace element partitioning 7−94139
Sm, L-subshell ionization probabilities in very asymmetric ion-atom collisions 7−90368
Sm^{3+}, activation of glass-forming matrices, spectral-luminescence props. 7−99900
Sm:^{111}Cd, mag., elec. hyperfine interactions, temp., press. depend. 7−118426
^{141}Sm and ^{164}Tm nuclear isomers, laser separation and resonance photoionisation spectroscopy 7−67726
^{145}Sm: source for brachytherapy 7−133452
$Y_3Al_5O_{12}$:Sm^{3+}, absorpt. spectra and energy levels 7−90177
ZnS:Cu-Sm(Eu)(Pb)(Tm), cryst., electroluminesc. quantum yield, freq. depend. *(Japanese)* 7−132343
ZnS:Sm^{3+}, crystals and films, site-selective 4f-4f excitation of electrolum. centres 7−85822

samarium alloys
Co-Sm, amorphous mag. props. 7−132000
Gd-Sm-Fe amorphous films, mag. and magneto-optical characts. 7−143866
$(NiFe)_5Sm$ and $(NiFe)_4SmR$, permanent magnets, Ni substitution by Fe 7−112862
Sm-Co alloys, enthalpies of formation, solution calorimetry studies 7−93360
Sm-Co magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
Sm-Co permanent magnets, ordering process, positron annihilation studies 7−92769
Sm-Co powders, amorphous, mechanically alloyed, form. and consolidation 7−113474
Sm-Co quadrupole magnet spin separation of metal clusters 7−80827
Sm-Co sputtered polycryst. films, mag. props. 7−112877
$Sm_2(Co, Fe, Cu, Zr)_{17}$, permanent magnet production, hydrogen decrepitation process 7−92914
SmCo magnets for compensation of CERN Large Hadron Collider 10 T superconducting dipole magnets 7−129471
$SmCo_5$ film, EELS 7−125874
$SmCo_5$ permanent magnet materials, study leading to discovery of H_2 sorption props. of $LaNi_5$, survey 7−86838

samarium alloys continued
$SmCo_5$, permanent magnet production, hydrogen decrepitation process 7−92914
$SmCo_5$ powder magnet, mag. struct. and texture state influence 7−77381
$Sm(Co\ FeCuZr)_{7.3}$ alloy microstruct. and coercivity during aging, potentiostatic etching study 7−131321
$Sm(Co_{1-x}Cu_x)_5$, lattice constants and heat of formation 7−91841
$Sm(Co_{0.67}Fe_{0.21}Cu_{0.08}Ni_{0.02}Zr_{0.02})_{7.6}$ magnets, ageing, coercive force, hysteresis loop squareness *(Japanese)* 7−99497
SmCoFeCuZr permanent magnets, thermal remagnetisation study 7−138283
$Sm(Co_{0.67}Fe_{0.22}Cu_{0.08}Zr_{0.03})_{8.35}$ alloy, change in coercive force during heat treatment *(Russian)* 7−106640
$Sm(Co_{0.70-x}Fe_{0.20}Cu_{0.10}Zr_x)_{7.5}$, melt spin ribbons, mag. props., struct. rel. to Zr content *(Japanese)* 7−77356
$Sm_2(CoFeZr)_{17}$ magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
$SmCo_{5-x}Ni_x$ melt-spin and as-cast alloys mg. props. studies 7−125449
$SmCu_6$, de Haas-van Alphen effects and transport props. 7−70162
$SmFe_4B_4$, effective mag. fields, ^{57}Mossbauer spectra studies 7−92561
Sm_5Ge_4 and related cpds., cryst. structures, X-ray diffr. study 7−104637
$SmIn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
$SmMn_2Ge_2$, P-T mag. phase diagram 7−132018
$SmNi_2$ Laves compound, H-induced amorphisation 7−76001
$SmNi_5$ single cryst., magnetisation and mag. anisotropy 7−138268
$SmPd_3$, rare earth metal ions, intermultiplet transitions, inelastic neutron scattering 7−131598
$SmRh_4B_4$ antiferromag. supercond., reentrant behaviour, microscopic mechanisms, Ginzburg-Landau approach 7−105816
$SmRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
$SmSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7−105920
SmT_4B, T=Fe, Co, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064

samarium compounds
see also samarium alloys
mixed valence cpds., ground state props. 7−76836
orthoferrites, Sm-substituted, absorpt. spectra 7−113162
Ba-Sm-Cu-O system, high T_c supercond., Meissner state 7−118706
$Ba_{0.6}Sm_{0.4}CuO_{3-x}$, superconductivity, transition temps. 7−99280
$Ba_2SmCu_3O_7$, high-T_c supercond., struct. props. 7−142736
$Ba_2SmCu_3O_{9-x}$, high temp. supercond., electron and X-ray diffr., XPS studies 7−112597
$Ba_2SmCu_3O_{9-x}$, high T_c supercond., prep. and characts. 7−118660
$(BiDySmLu)_3(FeAl)_5O_{12}$ and $(BiDySmLuGd)_3(FeGa)_5O_{12}$ bubble films, LPE growth in PbO-Bi_2O_3-MoO_3 melt 7−113452
$(BiSmGdLu)_3(FeAlSc)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
$(BiSmLu)_3(FeSc)_5O_{12}$ 0.3-μm bubble material, LPE growth 7−125516
KPO_3-$Sm(PO_3)_3$, polymorphs, formation of $KSm(PO_3)_4$ *(French)* 7−131298
K_2SO_4:Sm_2O_3, annealed and recrystallised, thermally stimulated exoelectron emission glow curves 7−77774
Na_2SO_4-$M_2(SO_4)_3$ (M=La, Dy, Sm, In) and Na_2SO_4-Na_2WO_4 systems, ionic transport 7−98570
Sm chromites, electrode materials 7−131720
Sm complex, bis(pentamethylcyclopentadienyl) halide, X-ray cryst. struct. obs. 7−142713
Sm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Sm-Ba-Cu-O, high Tc conductivity, polycrystalline samples, perovskite phase 7−143744
Sm-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
Sm-Ga-S, SmS-Ga_2S_3 section, ternary compounds 7−71155
$Sm_{0.5}A_{0.5}CoO_3$ (A=Ca, Sr, Ba), perovskite oxide, p-type semiconductor, surface states, gas sensor material appl. 7−85025
Sm_4As_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
$SmAsO_4$, IR reflection and optical absorption 7−99826
$SmAsO_4$, polycryst. samples, dielec. props., temp. and freq. depend. 7−106076
SmB_6 $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
SmB_6, crystal dynamics, multichannel Raman spectra study 7−85710
SmB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
SmB_6:Er^{3+}, valency mixing, paramagnetic resonance and Jahn-Teller effect 7−137879
$SmBa_2Cu_3O_6$, superconductivity above 90 K 7−118650
$SmBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct. determ. 7−124204
$SmBa_2Cu_3O_{7-x}$, high T_c supercond., Raman scatt. 7−119011
$Sm_xBa_{1-x}CuO_{3-y}$, high T_c superconductivity 7−138106
Sm_4Bi_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Sm_4Bi_3, valence transition critical point, thermoelec. power meas. 7−137880
$SmCl_3$ $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
$SmCo_{12}B_6$ mag. props. studies 7−99418
$Sm_{0.8}Er_{0.2}FeO_3$, orthoferrite single crystals, $\Gamma_2 \rightarrow \Gamma_4$ reorientation phase transition, low field study 7−143791
SmF_3-ZnS thin films, electrolum. characts. *(Russian)* 7−77658
$SmFeO_3$, orthoferrite single crystals, $\Gamma_2 \rightarrow \Gamma_4$ reorientation phase transition, low field study 7−143791
$Sm_3Ga_5O_{12}$ garnets, photoelectrical props., thermal annealing and electron irrad. effects *(Russian)* 7−125053
SmI_2 mag. suscept. and fluoresc. spectrum in THF solvent meas. 7−143768
SmIG, citrate gel synthesis, charactn. 7−77905
Sm_2O_3, photon- and electron-stimulated desorpt. study 7−143235
Sm_2O_3-Y_2O_3, phase equilibria, rel. to thermal stability of polymorphic modifications 7−92964
Sm_2O_2S, oxidation to $Sm_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
$(SmO)_2Te$, thermodynamics of vaporisation and form. 7−78473
$SmRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_{c2} meas. 7−112647
$SmRh_4B_4$ single crystals, anisotropic magnetic properties 7−125337
$Sm(Ru, Os)_2B_2$, cryst. struct. determ. 7−83897

samarium compounds continued
SmS, optical absorpt. model 7−138473
SmS semiconducting single crysts., resist. and thermoelec. power meas. 7−76939
SmS single crysts., mixed valence state, thermoelec. power meas. under press. 7−84950
SmS substruct. form. after isomorphous high press. phase transition, X-ray diffr. study 7−69921
SmSb thin films, electrophysical props. 7−70334
SmSe, high press. electronic Raman scatt., $4f^6$ config. excitation meas. 7−77538
$Sm_{0.55}Tb_{0.45}FeO_3$ orthoferrite, susceptibility anisotropy 7−143849
$Sm_{0.75}Y_{0.25}S$, mixed-valence cpd., phonon dispersion curves 7−118046
$Sm_{0.75}Y_{0.25}S$, phonon frequencies and line widths at valence fluctuations, vibronic model 7−111792
$Sm_{1-x}Y_xS$, intermediate-valence, phonon dispersion relations, breathing-shell alloy model 7−137484
$(YLuSmGd)_3$ $(FeGa)_5O_{12}$, bubble garnets, heavily ion-implanted, growth-induced anisotropy field 7−77389
$(YSmCa)_3(FeGaV)_5O_{12}$, He^+ implanted, magneto-optical props. in UV range 7−144033
$(YSm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
$Y_{2.6}Sm_{0.4}Fe_{3.9}Ga_{1.1}O_{12}$ epitaxial films, submicron domain struct. obs. by optical microscopy 7−70615
$Y_{3-x}Sm_xFe_{5-y}Ga_yO_{12}$ garnet thin films, growth-induced anisotropy 7−138296
$(YSmLuCa)_3$ $(FeGe)_5O_{12}$:Fe^+, Fe^+ ion implantations 7−91612
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble layers, magnetisation, plasma exposure effects 7−112881
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble films, plasma exposure effect on mag. props. 7−112882
$Y_{2-x}Sm_xSn_2O_7$, high resolution solid-state NMR, paramag. shift probes 7−132142
$(YSmTmCa)_3(FeGa)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245

sample preparation *see specimen preparation*

sampling circuits *see analogue-digital conversion; signal processing equipment*

sand
atmospheric sand and dust storms in Israel, review 7−101467
elastic-plastic response during unloading 7−117488
granular materials, particle contact anisotropy assoc. with shearing 7−90929
monazite sands, Fe minerals, hyperfine interaction charactn. 7−127198
ocean, dyed sand tracers dispersion in oscillatory flow field 7−87605
seafloor sands, storm wave-induced displacement 7−87596
sediment traps for surf zone appl. 7−101522
seismic liquefaction behaviour, due to earthquake excitation 7−119954
ultrasonic shaking, test system for large landslide physics 7−91170

sapphire
crystal growth, gas inclusions upon horizontal, directional crystallization 7−104606
crystals, profiled, multiple growth, pulling technique 7−92849
high-pressure cell for optical spectroscopy at low temp., low-cost apparatus 7−102444
leucosapphire optical strength at 248 and 193 nm 7−69756
microwave absorption, fundamental, in high-quality dielec. crystals, exptl. obs. 7−85537
organic dye monolayer on sapphire, laser irrad. heat deposition, fluoresc. yields meas., photoacoustic spectra 7−116012
shaped crystals, growth and charactn. 7−85997
SOS, epitaxial growth, book chapter 7−102034
SOS films, cryst. quality improvement by self-implantation *(Chinese)* 7−124724
SOS films, preparation, struct. and electrical props. review 7−105739
SOS structs., crystalline quality, CMOS device performance 7−112510
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
substrate, ion beam induced modification of Cu film adhesion energy 7−91671
substrate, ion induced adhesion of Cu films 7−92010
substrates with ZrO_2 and ZrO_2-Y_2O_3 films, X-ray diffr. study *(Japanese)* 7−131499
surface, Au particle, polarisability and transmittance 7−105264
surface, K^+ ion bombardment, population of excited states 7−85929
zero-field Fe^{3+} EPR splitting anal. 7−125529
Al_2O_3:Co sapphire surfaces, laser energy deposition, etching, pulsed photothermal deformation study 7−104820
α-Al_2O_3:Fe^+, sapphire, ion implantation effects 7−91609
α-Al_2O_3:Ne(Ar)(Br), sapphire, ion implantation effects 7−91608
Al_2O_3:Ti, Zr, Sapphire single cryst., ion implantation, microstruct., friction, hardness 7−78299
Al_2O_3:Ti laser crystal growth 7−77791
Pd-Al_2O_3 interface, wetting and adhesion *(French)* 7−112106
Si-sapphire nonlinear waveguide structure, ultrafast optical switching 7−90784
Ti in sapphire and glass, absorpt. and fluoresc., comparison with alexandrite 7−70853
Ti:Al_2O_3 laser, flashlamp pumped efficiency 7−68660
Ti:Al_2O_3 laser performance pumped by doubled Nd:YAG laser, cavity configs. 7−68661
Ti:Al_2O_3 laser pumped by a frequency doubled Nd:YAG laser 7−68662
Ti:sapphire laser material charact. 7−141868
Ti:sapphire lasers, tuning 7−82583
Ti:sapphire ring laser using acousto-optic modulator as electronically selectable unidirectional device 7−141978
Ti:sapphire tunable laser system evaluation 7−68659
Ti:sapphire tunable lasers for differential LIDAR 7−74981
W-Al_2O_3, oriented growth of ultrathin W films on sapphire substrates 7−118305

satellite atmospheres *see planetary satellite atmospheres*

satellite computers
front ends for large detector system, fast signal calibration 7−81907
front-end data processing in the SLD data acquisition system 7−109680

satellite ground stations
Feedback Instruments Ltd WSR524 weather satellite receiver 7−107546
geodetic network observations, accuracy problems, stochastic model 7−79718
geostationary satellite links, Sun interference periods determ. 7−134219

satellite ground stations continued
GPS, precise positioning, measurement reduction techniques 7−79716
GPS engineering type networks, comparison with Terrameter results 7−79720
GPS navigation system, civilian use 7−79714
GPS orbit determination using the double difference phase observable 7−79717
GPS precision levelling for LEP trilateration network 7−79719
GPS receiver technology for geodetic positioning 7−79715
large particle accelerators, applied geodesy school, Geneva, Switzerland (April 1986) 7−72733
low elevation angle satellite systems, tropospheric scintillation model 7−94413
X band, statistical behaviour of amplitude scintillations 7−94408

satellite links
see also artificial satellites
acquisition and analysis of pictures of Earth from autonomous satellite scanner 7−79712
aerospace applications, conf., Vail, CO, USA (Feb. 1987) 7−108042
attenuation prediction in European region 7−139679
cloud imagery from polar orbiting satellites 7−94635
digital satellite imagery, preprocessing at FOMI 7−87967
ERS-1, automatic tracking mode switching algorithm for altimeter 7−101663
ERS-1, development status of payload instruments 7−101660
ERS-1, performance, calibration, and data validation of radar altimeter 7−101662
ERS-1 satellite, ESA approach for sensor calibration and performance verification 7−101491
ERS-1 wind scatterometer, on-ground verification and in-orbit performance prediction 7−101661
ERS-1 wind scatterometer design 7−101584
ERS-1 wind scatterometer system simulator, ground processing design 7−101585
Feedback Instruments Ltd WSR524 weather satellite receiver 7−107546
geosynchronous satellite radio beacon, Australian 7−145723
holograms, absorbing, mode-stabilized laser diodes prod., satellite communications link use 7−141816
ionosphere state monitoring using multifrequency beacon, AUSSAT appl. 7−145722
Landsat cloud images and precipitation radar echoes *(Japanese)* 7−107481
Landsat data classification, watershed algorithm approach 7−115097
Landsat satellite for environmental research, image processing *(Dutch)* 7−120133
Landsat Thematic Mapper, experimental, acquisition and processing facility 7−145724
Landsat-4 multispectral scanner and thematic mapper data classification accuracy, expts. 7−79713
Marine Observation Satellite-1, visible and IR radiometer *(Japanese)* 7−79621
maritime rainfall analysis, resolution enhancement of Nimbus-7 SMMR multichannel microwave imagery 7−115057
meteorological image processing in the Institute for Atmospheric Physics 7−87885
meteorological parameters remote sensing, radio scintillation meas. method 7−94415
Meteosat, meteorological satellite images, water vapour information 7−145567
MOS-1 VTIR data processing software *(Japanese)* 7−73346
near-surface currents meas. using satellite telemetering buoy 7−101608
NOAA, digital filtering of APT images 7−145670
Pakistani multiservice domestic telecommunication and weather satellite project 7−127684
rain attenuation, radiometeorological data logging and processing system for freq. over 10 GHz *(Polish)* 7−72200
remote sensing by satellite radar, SAR systems future requirements 7−101664
space engineering, Australian developments, conf., Canberra, ACT, Australia (Jun.-Jul. 1987) 7−140379
spaceborne remote sensing, conf., Baltimore, USA (April 1986) 7−128175
Spectrasat hybrid radar ocean wave spectrometer/SAR approach for wave monitoring 7−134003
Spectrasat radar ocean-wave spectrometer, design and operation 7−134004
Spectrasat system, design for ocean waves meas., assoc. communications and ground support 7−134110

satellite relay systems
see also satellite ground stations; satellite links
11.6 GHz satellite systems, rain attenuation, duration and rate of change, dynamic characts. 7−114849
37th IAF Congress, Conf., Innsbruck, Austria (October 1986) 7−120680
anisotropic stochastic ionosphere, satellite-Earth communication in polar domains 7−139854
atmospherics influence on radiocommunication, VHF to mm wave freqs. 7−87779
attenuation prediction in European region 7−139679
AUSSAT system, rain attenuation 7−145657
defense Meteorological Satellite Program 7−107515
Earth-space path, rain attenuation available-time statistics 7−107498
geostationary satellite links, Sun interference periods determ. 7−134219
GPS, codeless dual-band, three-coordinate positioning within 1 part in 10 million 7−79188
GPS, differential mode, hydrographic surveys 7−79707
GPS for high precision geodetic surveys, highlights and problem areas 7−79189
GPS ionospheric time delay algorithm for single frequency users, design and characteris. 7−79772
GPS ionospheric time delay algorithm for single-frequency users, eval. 7−79771
GPS position fix using single frequency reception, ionospheric propagation delay *(Japanese)* 7−101622
GPS relative geodesy, ionosphere effects 7−79709
GPS user equipment, relativity correction 7−73317
GPS-based geodesy in California, Mexico and the Caribbean 7−79708
Indian geostationary satellite, nighttime SHF scintillation studies 7−94573
INMARSAT solar array design and verification 7−144851
INTELSAT's low latitude propagation experiments 7−107501

satellite relay systems continued
intersatellite and fiber-optic communication with stripe domains 7−75169
low elevation angle satellite systems, tropospheric scintillation model 7−94413
nearly geostationary satellites, diurnal error bound in predicted ranges 7−79802
Pakistani multiservice domestic telecommunication and weather satellite project 7−127684
rain, simultaneous depolarisation and ionospheric scintillation impairments at 4 GHz 7−94572
rain attenuation predictions for European satellite propagation experiments to 135 GHz 7−94407
RF link availability computation, computer model 7−115207
SIRIO satellite, 8 years of ionospheric research 7−115016
SIRIO satellite and radar data for raindrop size estimation 7−114850
SIRIO satellite systems performances improvement, rain presence 7−114854
SIRIO SHF experiment, radar simulation and bistatic link, rain scatter interference results 7−114853
space engineering, Australian developments, conf., Canberra, ACT, Australia (Jun.-Jul. 1987) 7−140379
X band, statistical behaviour of amplitude scintillations 7−94408
satellites, artificial *see artificial satellites*
satellites, planetary *see planetary satellites*
Saticons *see television camera tubes*
saturable absorption, optical *see optical saturable absorption*
saturable core reactors
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118
saturable reactors *see saturable core reactors*
saturation control *see chemical variables control*
saturation effects, optical *see optical saturation*
saturation measurement *see chemical variables measurement*
Saturn
1984-5 apparition, visual and photographic obs. 7−107744
1985 visual obs. 7−107745
aperture synthesis observations at 2.7 mm wavelength, brightness temps. of planet and rings 7−134175
B-ring spokes, dynamical constraint on particulate sizes 7−120306
Dione, planar satellite orbits in 2:1 reson., chaos and secular var. 7−115290
Hyperion, corrections to orbital theory 7−139958
Hyperion (Saturn VII), expansion of disturbing force-function for high-eccentricity librations 7−145803
icy satellites, finite element models of non-Newtonian relaxation of impact craters 7−101726
ionospheres of outer planets, review 7−88172
magnetosheath dayside ion distributions 7−115284
magnetosphere, flyby magnetic field meas. 7−107746
magnetosphere, Voyager explorations 7−88173
magnetospheres of outer planets, review 7−127762
magnetospheric extinction during stellar occultation 7−139959
orbital elements, effect on three characteristic orbital parameters of Trojan asteroids 7−79860
orbital motion, computation of first and second derivatives of Lagrange eqns. by harmonic anal. *(French)* 7−79815
ring A, Voyager obs. of azimuthal brightness vars. 7−115292
ring system, features characts. from Voyager photopolarimeter stellar occultation 7−115291
ring system dynamics, collisional evolution of rotating nonidentical particles system 7−134118
rings, ice needles, instability development 7−72292
rings, rotating particles collisions, numerical simulations 7−120268
rings age and micrometeorite erosion model 7−120341
rings effect on atm. upper boundary insolation 7−127763
satellite system, crater characts. rel. to Uranus system 7−127765
satellites, review 7−115288
shepherd satellites to ring G, upper limit to satellite size 7−72351
Titan, concepts for atmospheric aerosols collection 7−101684
Titan, methane origin modelling 7−120307
Titan, rotating dynamical regimes in general circulation model 7−133823
Titan atmosphere, gas chromatographic instrumentation for anal. of aerosols and gases 7−101685
CO detection in Saturn's atmosphere, IR vibr.-rot. band obs. 7−88175
PH_3+O, flash photolysis, rate const. meas. 7−132954
SAW *see surface acoustic waves*
sawtooth generators *see function generators*
SC (sudden commencement) *see magnetic storms*
scalar particles *see sparticles*
scale invariance *see scaling phenomena*
scales *see balances*
scaling phenomena
see also elementary particle theory; renormalisation
1D autowave media dynamics, renormalization group universality, and scaling 7−128439
(2+1)-dimensional Ising model on square lattice, amplitude-exponent relation for correl. length 7−140628
$\lambda\phi^4_4$ field theory, high temp. series anal., logarithmic scaling corrections 7−95733
bosonic string theory, one-loop quantization, scaling behaviour and asymptotic freedom 7−108905
chiral bag model struct. fns., scaling and Regge behaviour 7−121455
circle maps, scaling exponents, relations and order dependence 7−108472
complex scaling and dilation analytic methods, many body theory 7−128369
conformal anomaly, perturbative eval. at crit. points, appl. to random systems 7−121338
conformal invariance, integrable theories, Bethe ansatz eqns., six-vertex and critical Potts models 7−121336
cosmic-ray interactions, scaling breakdown, exptl. anal. 7−67653
cosmological constant dynamical adjustment, cosmons, fifth force 7−134611
crossover scaling for moments in multifractal systems 7−120954
Delbruck scattering up to 10^4 MeV, predicted props. 7−128827
dilute Potts model, thermodynamic props., finite-size scaling study 7−120976
scaling phenomena continued
effective chiral action and soliton stability, scaling behaviour 7−102598
eight-vertex model, maximal eigenvalues, finite-size scaling corrections 7−108456
EMC effect, alternative explanations, factorization scale independence and QCD nuclear prop. predictions 7−128950
EMC effect, deep-inelastic scattering on nuclei, scaling and scale changes 7−116258
EMC effect, x and Q^2 rescaling equivalence and quark-gluon plasma transition 7−121604
Feigenbaum attractor, metric props. and trajectory scaling fns. 7−108458
finite theory, critical surfaces, flat directions, O(N)×O(N)-symmetric model, phase structure 7−121367
generalized non-scaling multiplicity distribution 7−89520
glueball, 0^{++}, asymptotic scaling of mass and lattice QCD β-fn. 7−95856
hadron-proton multiplicity distributions, KNO scaling, quark-parton model anal. 7−95943
hadronic multiplicity distributions, generalized KNO scaling and the branching model 7−67656
high-energy heavy-ion collisions, space-time picture, scaling properties 7−109214
invariant curves, existence in area-preserving maps 7−108192
KNO scaling as a phase transition in a Feynman-Wilson gas, quark-gluon plasma 7−95743
KNO scaling at Fermilab Tevatron Collider energies 7−121461
lattice animals, percolation and compact clusters, scaling props. of perimeter distrib. 7−120975
lattice gauge theory simulations, non-perturbative decoupling theorems, chiral condensation scaling 7−121348
lattice models, critical properties, Monte Carlo finite size scaling and renormalisation anal. 7−121007
lattice QCD, first-order chiral phase transition, asymptotic scaling violation 7−89450
lattice QCD, scaling and universality for string tension 7−73527
linear dynamical problems in ultrametric spaces, scaling breakdown, renormalisation group study 7−121009
mixed action SU(2) lattice gauge theory, Bell-Mann-Low function, Migdal-Kadanoff determination, scaling parameter 7−108766
multiple scaling corrections for period doubling 7−73207
multiquark clusters in nuclei, QCD scaling violation and struct. fns. 7−89555
nonlocal flavour singlet light cone operators, anomalous dimens. 7−135023
nucleon structure function at high Q^2, QCD test and Λ meas. from scaling violations in μN 7−135125
Polyakov string theory, stochastic quantization, Weyl scaling invariances 7−108885
Potts model, 2D diluted dynamic scaling breakdown 7−120985
Potts model, four-state, critical dynamics in finite-size scaling theory 7−120978
power spectrum for renormalisation group eqns., universal scaling factors 7−120923
scale invariance, in Bethe-Salpeter eqn. 7−108743
self-avoiding walk on square lattice, Monte Carlo test of hyperscaling relation 7−120942
self-avoiding walks in 3D, hyperscaling relation 7−95474
self-dual Z(N) spin systems, finite-size scaling and conformal invariance 7−121329
spin glasses, short-range, scaling theory of ordered phase 7−125416
stochastic centre manifold treatment for subcritical inverted bifurcation, intrinsic fluctuations 7−120939
strange sets, scaling struct. and thermodynamics 7−128488
SU(2) 7−81009
SU(2) lattice gauge theory, departures from scaling, Monte Carlo anal. 7−89360
SU(2) lattice gauge theory, topological susceptibility, high statistics computation algorithm 7−140807
SU(2) lattice gauge theory, vacuum state in 2+1 dimens. 7−128753
SU(2) Yang Mills theory, 3D, glueball mass calcs., scaling props. 7−95844
supercritical sine circle map, scaling behaviour 7−67199
superstrings, fourth generation, renormalisation group scaling of gauge couplings 7−95870
three-state Potts model, conformal invariance and finite-size scaling 7−120983
two-dimensional Ising model, correlation functions, scaling limit, infinite lattice Feynman-Kac formula 7−115927
y-scaling theory in plane wave impulse approx. 7−67774
zero mass renormalisation and scaling hypothesis 7−121384
(e,e'X), few-body systems, correlations, interactions and y-scaling, PWIA calcs. 7−67808
(e, e'X), y-scaling in inclusive scattering, structure function expansions 7−121753
ed→X, quasielastic region scaling, inclusive spectra, struct. fns., 0.36 to 1.16 GeV^2 7−116184
eN→e'N, inclusive process, y scaling anal. 7−67810
hh→X, multiplicity distributions, Furry-like cluster model, KNO scaling 7−108943
K structure function, rescaling, valon model anal. 7−116172
pN→pX(πX), 10^3-10^9 GeV, scaling violation in quasieikonal model for supercritical pomeron 7−73544
pp, ISR energies, branching, geometrical scaling and KNO scaling 7−128923
$\bar{p}$p, scaling breakdown, exptl. anal. 7−67653
π^+N→$\pi^\pm$X, 5-5000 TeV, inclusive spectra, Feynman scaling violation, pomeron showers 7−116205
$\bar{q}$q spectroscopy and asymptotic freedom, linear plus Coulomb potential anal. 7−116117
C(π, X), 5 GeV/c, noninvariant distributions, longitudinal and transverse momenta, scaling in the mean 7−116523
^{2}He(e,X), quasielastic region scaling, inclusive spectra, struct. fns., 0.36 to 1.16 GeV^2 7−116184
^{A}He(e,X), A=3,4 y scaling behaviour of response functions, impulse approx. 7−67804
lN deep inelastic scatt., impulse approximation, energy conservation kinematics modification, scaling violation, EMC effect *(Chinese)* 7−121517

scaling tubes *see counting tubes*

scandium
see also nuclei with .....
atom, matrix isolated, electronic and mag. circular dichroism spectra 7−90036
atom, polarised pseudostates and average static dipole polarisability 7−74463
atom, X-ray tube parameters, effect on light element anal. 7−67442
Fermi surface shape and size, press. effects 7−105374
thin films, optical props. 7−99958
thin films, struct. and elec. props. study *(Russian)* 7−98757
CeO_2:Sc^{3+}, anglastic and dielectric relaxation 7−98336
Sc_2, matrix isolated, electronic and mag. circular dichroism spectra 7−90036
^{46}Sc, neutron activation analysis on rocks *(Chinese)* 7−94504

scandium alloys
see also scandium compounds
transition metal alloys, ScM_2X, M=Co-Cu, Pd, Pt, Ag, Au, X=Al, Ga, In, Sn, cryst. struct., X-ray diffr. 7−91527
Al-Mg-Sc (2, 0.4 at.%), surface layer after irrad. with 2 MeV electrons, X-ray electron spectroscopy 7−84029
Co-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
Co_2ScSn, Heusler alloy, mag. and Mossbauer studies 7−118433
Fe-Sc liquid alloys, high temp. viscosity meas., oscillating viscosity isotherm pattern obs. *(Russian)* 7−91869
Ni-Cr-Sc phase diagram, 1100 to 1800°C 7−86129
Ni-Sc dilute alloy, paramag. suscept., Faraday method meas. *(Russian)* 7−125307
Pd-Sc, atomic short-range order, investig. by diffr. methods 7−142703
$ScCo_2$, intermetallic compounds, metamagnetic transition 7−132022
ScDy, anisotropic spin glasses, sp. ht. meas. 7−138240
ScDy spin glass, AC suscept., freq. depend. 7−105927
ScEr, anisotropic spin glasses, sp. ht. meas. 7−138240
ScEr dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
ScEr spin glass, AC suscept., freq. depend. 7−105927
ScGd spin glass, AC suscept., freq. depend. 7−105927
ScH_x, HCP, H diffusive hopping, proton and ^{45}Sc NMR obs. 7−124585
$Sc_5T_xX_{10}$, (T=Co,Rh,Ir; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
$Sc_2V_3Ge_4$ and related cpds., cryst. structures, X-ray diffr. study 7−104637
Zr-Sc, BCC phase, anomalous ^{95}Zr self-diffusion, influence of Sc 7−111939

scandium compounds
see also scandium alloys
ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
$Ba_{0-6}Y_{0.4-x}Sc_xCu$ oxides, effect of Sc on superconductivity, high T_c supercond. 7−112592
$Cd_{1-x}Sc_xF_{2+x}$:Nd^{3+} solid soln. single crysts., growth from melt and low threshold stimulated emission 7−85777
Cr^{3+}:$Sc_2(WO_4)_3$ spectroscopic and laser props. 7−130119
$Cs_2NaScBr_6$:Sb^{3+}, lumin. of Sb^{3+} ions 7−77638
Cs_3ScF_6, high-temp. phase changes, Raman spectra study 7−85709
$CsSc(MoO_4)_2$:Li, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
$(Gd,Sc)_3Ga_5O_{12}$:Nd^{3+}, Cr^{3+} laser with stimulated Brillouin scattering mirror and plasma switch for pulse variation 7−130168
$Gd_3Sc_2Al_3O_{12}$:Cr and $Gd_3Sc_2Al_3O_{12}$:Nd,Cr laser crystal growth 7−77791
$Gd_3Sc_2Al_3O_{12}$:Nd,Cr laser hosts, spectroscopic and laser props. 7−74939
GdScGG:Cr,Nd laser host material, refr. index and $\Delta n/\Delta T$ at 1064 nm 7−68645
GdScGG:Cr^{3+},Nd^{3+}, acoustooptic props. 7−144012
GdScGG:Cr^{3+} garnet crysts., UV absorption spectra studies 7−99883
$GdScGa_5O_{12}$:Cr,Tm,Ho crysts., cascade laser action 7−122990
$(GdSc)_3Ga_5O_{12}$:Cr,Nd, short-lived absorpt. rel. to solid-state laser efficiency 7−141869
$Gd_3Sc_2Ga_3O_{12}$:Nd,Cr flashlamp-pumped laser, performance and characteris. 7−74940
$Gd_3Sc_2Ga_3O_{12}$:Nd,Cr codoped garnet cryst. growth for laser use 7−77782
$Gd_3Sc_2Ga_3O_{12}$:Nd,Cr laser crystal growth, comparative studies 7−77792
$Gd_3Sc_2Ga_3O_{12}$:Nd,Cr laser crystal growth 7−77793
HfO_2-Sc_2O_3, single crystal solid solutions, elec. props. 7−105631
Ho^{3+}, Tm^{3+}, Cr^{3+}:$(Y,Sc)_3Ga_5O_{12}$ lasing at room temp. 7−68651
$KSc(MoO_4)_2$:Li, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
MgF_2-ScF_3 system, high press. phases 7−91789
γ-$Na_3M_2(PO_4)_3$ (M=Sc,Fe,Cr), superionics, elec. props. 7−91892
$Na_3Sc_2(PO_4)_3$, relaxation dispersion, freq. relations, temp. depend. 7−99647
$NiFe_{2-x}Sc_xO_4$ spinels, magnetisation and magnetostriction 7−92488
Pb_2ScTaO_6 single cryst. prep. from soln. in melt, ionic order, crystn. temp. depend. study 7−83805
Rb_3ScF_6, high-temp. phase changes, Raman spectra study 7−85709
$RbSc(MoO_4)_2$:Li, layered ferroelastics, impurity influence on phase transitions, dynamical character 7−131286
ScC_2, Ar matrix isolated, ESR spectra 7−82230
ScC_2, target material study for ISOLDE on-line mass separator 7−96442
ScF_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
ScH_2, electronic states and pot. energy surfaces, CAS SCF and second-order CI calcs. 7−96551
ScI_3, high-purity, calorimetric meas. 7−76443
ScI_3-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
$Sc_{1-x}S$, high temp. vaporisation study 7−131278
Sc_5Si_3-H $D8_8$-type system, H sorption props. 7−98689
TiO_2-Sc_2O_3, diffusion zone microstruct., interface morphology, isoconc. profile 7−92008
Y-Ba-Sc-Cu-O high T_c supercond., struct. and microstruct. obs. 7−112602
$Y_3Fe_{4.2-x}Ga_{0.8}Sc_xO_{12}$ garnet single cryst., Sc ion distrib. 7−131102
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
$Y_{5-a}Sc_aSi_3$-H, $D8_8$-type system, H sorption props. 7−98689
ZrO_2-Sc_2O_3 solid solutions, association of defects 7−91559

scanning acoustic microscopes *see acoustic microscopes*
scanning acoustic microscopy *see acoustic microscopy*
scanning electron microscope applications *see scanning electron microscopy*
scanning electron microscope examination of materials
see also scanning electron microscopy
alloys, X-ray energy dispersive spectroscopy for SEM anal. 7−78572
aluminised coatings on IN-713LC and MAR-M 247 superalloys, superlattice of β-phase 7−86477
automotive coatings, impact testing, flaked area rel. to thickness and glass transition *(German)* 7−138921
black, selective solar absorber surfaces, comparison of different forms 7−144911
$\alpha+\beta$ brass, cavitation erosion 7−71323
brass rubbing surface, periodic changes of electron work function rel. to fatigue damage 7−100396
calcium oxalate crystallisation, supersat. generated employing reverse osmosis 7−142671
cell cultures infected with herpes simplex virus type 1, HVEM and SEM obs. 7−78807
cement, macrodefect-free, latex modified, effect on props. 7−106606
ceramic surfaces and subsurfaces, NDE 7−126401
ceramics, non-oxide, metallising 7−86554
cervical cell smears, correlative exam. by opt. and scanning electron microscopy, photographic grid system 7−87399
clay, main displacement shear plane microstructure characteristics 7−107389
cytoskeletons, sputter coating technique 7−127065
diacetylenic acid Langmuir-Blodgett films, STM investigations 7−76624
diamond, brown and type II, abrasion resist., surface roughness, dislocation density 7−144564
diamond, microwave plasma growth under low press., particle struct., substrate adhesion 7−113411
diamond, polycrystalline sintered compacts, microstruct., phase form. at high temp. and press. 7−111768
elastoidin, mode of fracture rel. to strain rate 7−133350
electret forming polymers, struct. and physical props. 7−97993
embedded biological materials, study by secondary electron detectors, beam voltage effects 7−71948
epoxy resin, crack tip damage zone for fracture, comparison with graphite fibre reinforced composites 7−132742
epoxy resin, with glassy second component, impact-modified 7−113676
epoxy-polyethersulfone, dual phase blend, fracture toughness, miscibility 7−86332
evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
fat emulsions, parenteral, particle size determ. using SEM method and fixation procedure 7−139419
ferroelectric ceramics, grain-oriented, processing, microstruct. and elec. props. 7−99736
fibre reinforced polyphenylene sulphide, injected moulded, fracture toughness, microstruct. details and effect of testing conditions 7−78184
foodstuffs, examination using electron microscopy *(Italian)* 7−128716
gettering related phenomena, EBIC studies of defects and diffusion length 7−111324
glass fibre/ZrO_2 particle reinforced epoxy, hybrid composite, fatigue life study using US technique 7−78172
graphite fibre reinforced Mg-Al-Zn matrix composites, corrosion in aq. NaCl solns. 7−86407
graphite film, prep. by pyrolysis of polymers, phys. props. 7−86611
H_2 blistering and bubble form. 7−76223
HLW borosilicate glass corrosion in the presence of steel corrosion products 7−103253
ice crystal instability, SEM-replica technique studies 7−131073
Incoloy 800H, pre-oxidised, Y-ion implanted, sulphidation props. 7−93186
ion beam 3S sputtering method induced surface topography, SEM investig. 7−132813
Josephson tunnel junctions, trapped mag. flux quanta, 2D SEM imaging 7−85205
laryngotracheal epithelium in salamanders, correlated light and electron microscopic obs. 7−78808
liquid crystal droplet-polymer light control film, struct., optical and thermal props. 7−123133
liquid crystal droplet-polymer light control film, struct. and optical props. 7−123132
liquid crystal polymer, thermotropic, struct, dynamic mech. props. 7−131012
liquid crystalline copolyester, morphology and rheology 7−137196
metal dendrites, electrocrystallisation at high current densities 7−92039
metals, BCC, scanning electron fractography 7−71288
methane, RF plasma, etching and deposition phenomena 7−71341
mullite-zirconia composites and mullite, prep. and mech. props. 7−86118
mullite-ZrO_2(-Al_2O_3), tough ceramic composites, microstruct. 7−78058
myocardial debris ultramicroscopical anal., myocardial dose response to Ar laser irrad. in saline and blood 7−78973
Nimocast 713, hot corrosion in molten salt mixture 7−119423
nuclear ceramic materials, energy dissipation, image-analytical, indenting, quantitative methods 7−129183
optical fibres, microstructure characterisation 7−136578
patterned MBE layers on Si, microstructural characterisation 7−137729
Permalloy-Fe_3O_4 composite, hydrothermal reaction sintering *(Japanese)* 7−71137
PET fibres, aminolytic product characterisation 7−71560
PET thermotropic liq. cryst. copolyester, drawing behaviour 7−71255
poly(phenylene sulphide) films, ion irrad., spectroscopic anal. 7−99852
poly crystalline thin films on Cu and pyrex substrates, growth, work fn., elec. conductivity 7−124804
polycarbonate/ABS blends, props. 7−137267
polyetheretherketone, single particle impacts and erosion 7−78274
polyethylene, crystallisation and liq.-liq. phase separation in binary systems 7−69871
polyethylene, sepiolite filled, mech. and morphological props., effect of filler-polymer interface 7−78127
polyethylene fibres, adhesion to epoxy resin, pull out test, surface treatment effect 7−144576
polyimide films, Au containing, surface anal. 7−118208
polymeric multicomponent blends, low temp. microtoming for SEM investigations of structure 7−104595
polymers, glass filled, high temp. behaviour 7−132773
polypropylene-EPDM rubber-polyethylene ternary blends, dynamic mech. behaviour and struct. 7−78088

scanning electron microscope examination of materials continued
polypyrrole/Li battery, PF_6^- anion effects 7−71595
polystyrene, devolatilization, scanning electron microscope investig. 7−117795
polystyrene-ethylene-propylene-diene rubber blends, compatibility studied using ultrasonic method 7−124121
polytetrafluoroethylene polymers, glow discharge effects obs. 7−95689
porosity SEM investig. 7−111321
powders, plasma deposition, powder distrib. in plasma jet *(French)* 7−86018
proppants, microstruct., strength and environmental degradation 7−106646
PVC-copolyester elastomer blends, abrasive wear resist., SEM obs. 7−132765
pyridine adsorbed on Ag, charge transfer band, SERS mechanism 7−92676
rare earth cpds., RMo_6S_8 (R=La, Gd, Yb, Ho), Chevrel phase, microstructures, positron lifetimes 7−144166
rice husk ash filled-polyester resin composites, development, tensile and impact props., 7−113681
rubber toughened epoxy resin dual-phase system, struct. and mech. props. 7−100356
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7−92953
semiconductor crystals, dislocation slip planes, elec. activity 7−98171
sialon materials, charactn. and props. 7−126248
steam turbine component embrittlement, grain boundary segregation evaluation 7−126394
steel, alloy, welded, cleavage fracture, mechanism and statistical criterion *(Chinese)* 7−144508
steel, austenitic stainless, B in $M_{23}X_6$ precipitates, identification by EELS 7−86180
steel, austenitic stainless, corrosion pitting behaviour, effect of carbide precip. *(Korean)* 7−78317
steel, austenitic stainless, creep-corrosion interaction in molten NaCl-$CaCl_2$ at 570°C *(French)* 7−86474
steel, austenitic stainless, high N, microstruct. and mech. props., influence of annealing temp. 7−86351
steel, austenitic stainless, mech. props., effect of Rb 7−132811
steel, austenitic stainless, microstructural corrosion behavior 7−138895
steel, austenitic stainless, nitrided, micrograin struct., Auger electron microprobe obs. 7−100438
steel, austenitic stainless, sensitised, SCC performance in chloride and sulphate solns., effect of N and C 7−93141
steel, austenitic stainless, surface studies of interaction with CsOH vapour 7−126311
steel, austenitic stainless, time-dependent crack growth in elevated temp. Na 7−78161
steel, austenitic stainless, welds, pitting corrosion resist. microstruct., N addition effect 7−78381
steel, C and alloy, fretting fatigue mechanism *(Japanese)* 7−138836
steel, Cr, passivity breakdown studies with Cl^- ion addition 7−138904
steel, Cr, with pearlitic, bainitic and martensitic structs., fracture morphology, influence of P content *(Chinese)* 7−144510
steel, Cr-Mo, erosion, microstruct., tempering effect 7−138849
steel, Cr-Mo-V, ferritic, creep cavitation, austenite grain boundaries, optical and SEM metallography *(German, English)* 7−132684
steel, Cr-Mo-V, warm rolled, spheroidize annealed, microporosity, insoluble carbides, metallographic polishing 7−78410
steel, Cr-Mo-V, weldments, creep rupture life and ductility 7−93074
steel, Cr-Ni rotor grade, fractographic aspects of cyclic crack resist. in vac., air and H 7−144515
steel, eutectoid, high strength, cold-drawn wires, fatigue threshold determ. 7−100326
steel, galvanised reinforcements, corrosion in alkaline solns., SEM and corrosion prod. identification 7−113760
steel, high C, mech. props. rel. to thermomech. processing *(Japanese)* 7−119317
steel, high C, wires, drawing at elevated temp., cementite spheroidization 7−113616
steel, high speed, quantitative metallography by SEM 7−78416
steel, HSLA, dual-phase, microstruct. and mech. behaviour 7−126221
steel, HSLA, fracture topography 7−126222
steel, low alloy, continuously cast, tensile fracture rel. to interdendritic defects *(Japanese)* 7−93061
steel, martensitic, Ni-Cr-Mo, microstruct., effect of intercritical heat treatment *(Chinese)* 7−144507
steel, martensitic stainless, HT-9, microstruct.-mech. prop. relations 7−78187
steel, mild, N_2^+ ion implantation, treatment initiating sustained oxidative wear 7−106691
steel, Mo-Cr, tensile fracture in lamellar dual-phase struct. SEM obs. 7−100380
steel, Ni-Cr-Mo, arc weldments, struct.-prop. correl. 7−132736
steel, stainless, corrosion and sensitisation, effect of grain boundary struct. 7−126305
steel, stainless, fracture morphology and softening behaviour 7−86354
steel, stainless, low-Cr, high-temp. oxidation resist., Al and Si alloying effect 7−78384
steel, stainless, structure, fracture surface morphology *(Chinese)* 7−86322
steel, stainless, surface treatments, characterisation for BWR recirculation piping 7−89613
steel, surface inclusions, organic film extraction method, EDX and SEM obs. 7−106731
steel, tool, high speed, T6, directly sintered and wrought, strength, toughness and stiffness 7−100358
steel, tool, laser melt injection of BN powders, microhardness, struct. 7−78375
steels, C and low alloy, erosion-corrosion in water at 300°C 7−71356
steels, stainless, corrosion behaviour, slow strain rate tension tests under various cathodic pots. *(Japanese)* 7−106680
surface (110), growth of Sb overlayers 7−84523
surface relief grating, SEM study, moire fringes appl. 7−83601
surface topography using backscattered electron signal 7−142542
SYNROC-FA ceramic waste, leaching, phase analysis and microstruct. 7−81721
TCNQ-N-docosylpyridinium charge transfer salts, Langmuir-Blodgett films, struct. props. 7−70115
TFR graphite tiles, metal coverage effect on plasma impurity content 7−75817
thermally sprayed coatings *(German, English)* 7−132860

scanning electron microscope examination of materials continued
TMI-2 core component examinations for accident evaluation program 7−103008
transition metal-metalloid metallic glasses, wear mechanism 7−113725
tribological surface characterisation using scanning electron acoustic microscopy 7−126371
Udimet 500, Ni-based superalloy, low cycle fatigue, strain rate effects and assoc. deform. mode 7−144534
water treeing rel. to morphology and microstruct. 7−99675
wood fibre reinforced plaster, microstruct. rel. to failure mechanisms 7−119339
Zircaloy-2, reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
$[Al_2Li(OH)_6]_2CO_3.nH_2O$, precip., hydrothermal treatment, textural props. 7−86227
Ag-Cu, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
Ag-Si thin film, prep. by ion assisted deposition *(Chinese)* 7−132499
AgMgSi, proton irrad., microstructure, mech. props. 7−69780
Al black films, vacuum deposition, struct. and optical props. 7−132470
Al films by ionised cluster beam deposition 7−106438
Al, high purity, subgrain imaging, SEM electron channeling 7−138922
Al, surface pretreatments for oxide form., adhesive bonding 7−71349
Al-base alloys, age hardening, effect of US vib. 7−132632
Al-Fe melt spun alloys, rel. between microstruct. and processing 7−92983
Al-Gd, rapidly solidified, microstruct. and props. 7−93033
Al-Li-Cu-Mg-Zr, thermal oxidation behaviour 7−100432
Al-Pb, vacuum rheocasting, microstruct., mech. props. 7−71171
Al-Si, hypereutectic, deep etching reagents for SEM microstruct. 7−113824
Al-Si, mild wear during unlubricated sliding, surface structs., debris 7−144560
Al-Si-Sr, struct., mech. props., Sr content effect, solidification rate 7−86261
Al-Si-Sr(Sb), modification, influence of Sr or Sb additions *(Chinese)* 7−77961
Al-Ti, rapidly solidified, microstruct. and thermal stability 7−92997
Al-Zn-Mg, powder metallurgy, pitting corrosion, secondary phase precip., microstruct. 7−126282
Al-Zn-Mg plates, weld toe cracking, stress field effect 7−78233
AlGaAs-GaAs superlattices, focused Si ion beam implantation, compositional disordering, submicron grating fabrication 7−98718
AlGaInSb bulk crystal and LPE forms, charactn. 7−92892
AlMg, proton irrad., microstructure, mech. props. 7−69780
AlN coatings, plasma enhanced CVD on graphite substrates 7−71074
AlN, synthesis by nitridation of floating Al particles in N_2 gas *(Japanese)* 7−126072
AlN thin films by RF reactive sputtering 7−92871
Al_2O_3 ceramics, crack-interface grain bridging as fracture resist. mechanism 7−93076
Al_2O_3, ceramics, fatigue in rotating bending, Weibull distrib. *(Japanese)* 7−78189
Al_2O_3 ceramics, fracture strength rel. to indentation flaw size 7−71275
Al_2O_3 ceramics, prep. from high purity powders, mech. props. 7−86099
Al_2O_3 films, CVD on Si single crysts., nucleation and growth 7−86046
Al_2O_3 particles from Shuttle booster rocket exhausts in troposphere 7−100779
Al_2O_3, sintered, cyclic fatigue behaviour under rotary bending 7−119342
α-Al_2O_3:Ne(Ar)(Br), sapphire, ion implantation effects 7−91608
β''-Al_2O_3-Na_2O, stabilised with selected ions, microstruct. and ionic cond. 7−143086
Al_2O_3-SiO_2, amorphous, chemical polymerisation form., phase transformations, X-ray diffr. and SEM studies 7−105000
Al_2O_3-ZrO_2, duplex ceramics, toughening mechanism 7−86200
AlZnMg alloys, surface degradation in NaCl solns. under appl. pot. 7−126289
As_2Se_3 synthetic crysts., morphology and microstruct., TEM studies 7−69640
Au/GaAs, sputtering-controlled ion mixing 7−91664
Au/In composite films, grain boundaries, thermal grooving 7−112143
Au-GaP, interaction during heat treatment in vacuum 7−131404
BN composites, microstruct., thermal shock behaviour 7−119341
BN, sintered cubic, microstruct, and mech. props. 7−144476
BN surface layers on Fe, reactive ion beam enhanced deposition 7−119171
B_2O_3-Li_2O-LiCl glasses, ionic conductivity, Sn and SiC dispersoids effects 7−105113
BaF_2-ThF_4-based glasses, chem. durability, reaction with water 7−100406
$BaFe_{12}O_{19}$, ferrite, prep. by liq. mix technique, charactn. 7−86111
$Ba_8Mo_{20}O_{65}(OH)_6.12H_2O$, synthesis and props. 7−69677
BaO-SrO-SiO_2-TiO_2 system glass-ceramics, piezoelec. props. and microstruct. 7−99703
$BaO.6Fe_2O_3$, polycryst. ferrite, hot extrusion processing, microstruct. change *(Japanese)* 7−126202
$BaTiO_3$ ceramic, ferroelec. domains, SEM direct imaging, secondary electron and cathodolum. studies *(German)* 7−85556
$BaTiO_3$, high purity, microstruct. and props., effects of prep. and stoichiometry 7−125590
$BaTiO_3$:Ca ceramics, ferroelec. transition, effect of octahedrally coordinated impurity 7−92620
$BaZnGeO_4$, powder calcination, phase transitions, DTA, dielec. meas., X-ray diffr., SEM obs. 7−126107
barium stearate Langmuir-Blodgett films, STM investigations 7−76624
$BiGeO_3$ single cryst., microscopic defects, TEM, SEM and optical microscopy studies 7−131135
BiTeSb, p branch, thermoelectric efficiency, extrusion effect 7−131621
BiTeSe, n branch, thermoelectric efficiency, extrusion effect 7−131621
C fibre reinforced PEEK, interlaminar fracture morphology 7−106603
C fibre reinforced thermoplastics, adhesion at fibre/matrix, interface 7−106579
C fibres, surface energy, microwave plasma treatment effect 7−84484
C surfaces, modification in cold plasma 7−130878
C/graphite fibre reinforced PMMA for implant fixed-dental bridges 7−87366
CaF_2-MSi_2-Si (111) structs. (M=Co, Ni), MBE growth 7−144285
$CaO.Al_2O_3$ cement, surface state in presence of phosphoric acid soln. 7−86673
$Ca_{0.43}Sr_{0.57}F_2$/GaAs (100), epitaxial heterostructures, flash evaporation, charactn. 7−84537
$Ca_xSr_{1-x}F_2$, lattice matched epitaxial layer on GaAs (100), growth, characterisation 7−143253

canning electron microscope examination of materials continued
CdF_2-LiF-AlF_3-PbF_2 glasses, phase stability 7—131044
Cd_3P_2 films, growth by hot wall epitaxy 7—138685
CdS, photocond., air-sintered pellets, surface occurrence of impurity phases 7—86500
CdSe films, electrodeposited, growth and morphology 7—112121
CdTe, EBIC contrast of defects 7—111565
CdTe, EBIC contrast of defects 7—111566
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7—113577
Co-Cu multilayer electrodeposit structs., mag. props. study 7—125508
$Co_{80}B_{20}$ glassy alloys, corrosion rel. to crystn. 7—126278
CoCr sputtered thin films, struct. and mag. props., TEM and SEM studies 7—105973
CoCr thin film recording media, mag. anisotropy and struct. 7—125490
CoCr thin films, spin wave reson. spectra study 7—105977
CoCrAl, DC planar magnetron sputtering and study of props. 7—100059
Cr, oxidation kinetics and mechanisms in H_2-H_2O-H_2S gas mixtures 7—126313
Cr solar absorber coatings, rough surfaces, characteristic parameters 7—143162
Cr, sulphidation kinetics, scale structures, 973-1173 K 7—119434
$Cr_{23}C_6$, sulphidation props. at 1073 K in H_2-H_2S atm. of 10^{-6} to $10^{3.5}$ Pa S press. 7—126273
CrN, surface layers on Fe, reactive ion beam enhanced deposition 7—119171
Cu, cold rolling, secondary recrystallisation texture, X-ray diffr., SEM-electron channeling pattern 7—113573
Cu electroless coating, charactn. by XPS and SEM 7—98752
Cu film on Al_2O_3 substrates, ion beam induced modification of adhesion energy 7—91671
Cu film-ceramic interfaces, modifications by low energy ion/atom bombardment 7—70152
Cu, laser-induced oxidation, optical self-regulation 7—100418
Cu, surface topography influence on X-ray intensity in electron microprobe analysis 7—126524
Cu ternary cpd., semiconductors, struct. props. 7—124231
Cu, vapour deposited films, structure and growth morphology, O effects 7—118321
Cu wires, cone shaped, ion beam induced morphological evolution 7—104863
Cu/Sn thin films, surface morphology, whisker and hillock formation *(French)* 7—124790
Cu-Al-Co, FCC, twinning and fracture, cracks rel. to grain boundary cohesion strengths *(Russian)* 7—113660
Cu-Al-Co-Sb, FCC, twinning and fracture, cracks rel. to grain boundary cohesion strengths *(Russian)* 7—113660
Cu-Al-Ni (13.99, 3.5 wt.%), shape memory alloy, two-stage martensitic transform. 7—100222
Cu-Cr-Sn system, isothermal phase diagrams of Cu-rich corner 7—113522
Cu-Li alloys, plasma-flux elevated temp. sputtering, plasma emission spectroscopy 7—75874
Cu-Nb composite wires, microstruct. anal. mechanical strength 7—104502
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7—118325
$CuInSe_2$, chemically deposited thin films, composition and struct. 7—113458
$Cu_xMo_6Se_{7.6}$, Chevrel phase, microstructures, positron lifetimes 7—144166
CuO_x solar absorber coatings, rough surfaces, characteristic parameters 7—143162
Cu_2O on stainless steel, thin films galvanostatic deposition 7—118315
$DyBa_2Cu_3O_{7-x}$ high T_c supercond., oriented orthorhombic polycryst. prep. 7—126044
Eu, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7—93174
Fe, cast, austempered ductile, erosion behaviour of high Si bainitic structures 7—71321
Fe, cast, cryst. steps, obs. by SEM *(Chinese)* 7—144362
Fe, cast, nodular, four point bending fatigue testing in SEM, apparatus design 7—113822
Fe, oxidation wustite grain coalescence, hot stage environmental SEM obs. 7—119432
Fe, pure, sintered, unlubricated wear rel. to porosity 7—71325
Fe, pure, unlubricated wear, sliding conditions, SEM obs. 7—71326
Fe/Cu, explosively bonded plates, charactn. 7—86556
Fe-Al-Mn-C, oxidation, high temp. investig. 7—138905
Fe-B-(N), oxidation inhibition by deposited and ion-implanted B 7—106685
Fe-CR-Mn-C, laser clad alloys, microstruct. and wear props. 7—78256
Fe-Cr-Ni, superalloy, low cycle fatigue life, influence of various environments *(Chinese)* 7—132700
Fe-Cr-Ni alloys, prod. by laser surface alloying using mixed powder feed, charactn. 7—119446
Fe-Cr(Ni), transient state scale from. in H_2-H_2O-H_2S atm. 7—78376
Fe-Cu (8 wt.%) powders, sponge cementation, sintering, microstruct., SEM obs. 7—132529
Fe-R-B alloys (R=rare earth), melt spun and plasma sprayed, mag. props. microstruct. 7—132085
Fe-Y compositionally modulated films, thermal anal. 7—99512
Fe_3Al, ordered alloy, fracture, SEM study 7—78200
FeAlSiN sputtered thin films, hardness, struct., elec. resist. and mag. props., SEM study 7—105983
$Fe_{80}B_{20}$ glassy alloys, corrosion rel. to crystn. 7—126278
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7—106711
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glass, corrosion in H_2SO_4, chloride ions effect 7—106710
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7—106711
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ amorphous ribbon alloy, laser radiation enhancement of corrosion resistance 7—71369
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, H_2 blistering and bubble form. 7—76223
Ga-Ge-Se-Te films for reversible optical recording 7—68801
GaAs, capless annealing at high temps., As ambient conditions preventing surface degradation 7—132831
GaAs films, initial stages of MBE growth on Si (100) 7—84600
GaAs, localised cryst. defects, cathodolum. and EBIC contrast studies using SEM 7—113292
GaAs, solid particle erosion, strength evaluation, statistical method 7—113730
GaAs VPE layers, macroscopic cryst. defects, SEM investig. 7—131158

scanning electron microscope examination of materials continued
GaAs:Fe single crystals, LEC grown, phase analysis; ferromag. props. 7—86179
GaAs:Sn, form. by pulsed ruby laser interdiffusion, props. and elec. charcts. for FET contact structs. 7—76151
GaAs:tn, Si, Si diffusion, background doping depend. 7—84391
GaAs/Au layer structs., ion beam mixing, struct. and elec. props. 7—76242
GaAs-Au, encapsulated ohmic contacts, alloying process, RBS studies 7—98722
GaP, laser induced defect form., cathodolum. and SEM obs., thermal factors 7—131177
GaPAsSb bulk crystal and LPE forms, charactn. 7—92892
Gd, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7—93174
$Gd_2BiFe_5O_{12}$, SEM anal. and Faraday rot. temp. depend. 7—85604
Ge-Si, composite powders, mechanical alloying; SEM and X-ray obs. 7—77882
HgTe/CdTe multilayers, low temp. MOCVD, TEM and SEM studies 7—119159
In, cavitation erosion 7—71323
In_2O_3:Sn film degradation in H and Ar glow discharge plasmas 7—144634
InP, heteroepitaxial growth on Si by low pressure MOCVD 7—106425
InP, plasma-assisted sulphidation *(French)* 7—119473
InP substrate protection and cleaning for LPE, laser fabrication 7—71416
InP:Zn surfaces, Zn diffusion, crystal defects 7—118167
La-Ba-Cu-O, high T_c supercond., physical and chemical properties 7—131855
$LaAsO_4$, dielec. and thermal props. 7—131722
Li/I_2 (poly-2-vinylpyridine) battery, rate limiting mechanism, component morphologies, SEM study 7—71592
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7—100160
$LiInSe_2$ thin film hot wall epitaxy and structural charactn., RBS, SEM and AES studies 7—118328
$LiNbO_3$, room temp. ferroelec. microdomain reversal, SEM obs. 7—118963
Mg-Zn, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7—77982
$MgGeP_2$, possible nonexistence, rel. to prep. X-ray diffraction and SEM study 7—131122
MgO crystal, direct obs. by high resolution SEM 7—84455
MgO surface struct., in situ deposition of Cu and Pd particles, scanning reflection electron microscopy study 7—105219
MgO-$MgCl_2$ (1 wt.%), sintering, grain cuboidization, Kr adsorpt. isotherms 7—100157
Mn-Nb, high temp. sulphide corrosion, scale growth and morphology 7—86438
Mn-Zn ferrite single crysts., haematite second phase form., SEM and TEM obs. 7—113561
Mo contact coatings, deposited from vacuum arc discharge plasma, cryst. struct. and mech. erosion 7—86060
Mo LPCVD films, microstruct. charactn. 7—118330
Mo single crystals, low temp. fracture, quenching effect 7—113723
Mo surfaces, high energy α-bombardment, SEM obs. 7—104864
Mo-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7—71135
MoO_3-Cu-Ni black films, solar selective, charactn. 7—106451
MoS_2 sputtered films, props. and prep. 7—100070
Na samples, radioactive, morphology and elemental composition determ., SEM, X-ray spectroscopy *(German)* 7—133020
$NaCu_2ZrP_3O_{12}$ superionic conductor synthesis and charactn. 7—118152
$Na_2La_{1-x}Fe_xZrP_3O_{12}$ superionic conductor synthesis and charactn. 7—118152
$Na_2LaMZrP_3O_{12}$ (M=Co,Al,Cr), superionic conductors, synthesis and charcts. 7—137611
$NaM_2ZrP_3O_{12}$ (M=Ni,Cu), superionic conductors, synthesis and charcts. 7—137611
Na_2O-CdO-SiO_2 system, opal glass, microstruct. characterisation 7—111415
$Na_{5+x}YAl_xSi_{4-x}O_{12}$ ceramics, cond., struct., density 7—76480
$Na_3Zr_2Si_2PO_{12}/Na_2Zr_4Si_{16}P_8O_{61}$, NASICON/glass composite ceramics, conductivity and microstruct. *(French)* 7—131361
Nb/Al/Nb Josephson junction structs., TEM, SEM and AES studies 7—105291
Nb_3Sn layer, form., effect of small alloying additions *(Chinese)* 7—132772
Nb_3Sn multifilamentary supercond. wire, layer form., lattice parameter, critical props. 7—77182
NbTi-Cu composite superconducting properties charcts and struct. 7—131962
Nd-Fe-Co-B-Mo alloy, coercivity anisotropy field and thermomag. props. study 7—125445
Ni corrosion under V_2O_5 coating, oxide scale morphological charactn. using AES, SEM and X-ray diffr. *(French)* 7—93193
Ni electroless coating, charactn. by XPS and SEM 7—98752
Ni, electroplating from acidic acetate solns., brightness rel. to superimposed sinusoidal AC 7—71095
Ni, fatigue fracture induced by ultrasound *(Russian)* 7—126224
Ni, oxidation and sulphidation, scale structs. 7—106706
Ni-Al coatings, plasma sprayed, bend testing, AE obs. 7—78227
Ni-base superalloy, M38, laser beam irrad., hot corrosion behaviour 7—126302
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7—71250
Ni-Cr alloy, oxidation and sulphidation, scale structs. 7—106706
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7—86467
Ni-Cr-Be alloys, dental, cast, solidification struct. 7—113535
Ni-Cr-Co superalloy, laser beam irrad., hot corrosion 7—119457
Ni-Cr-Fe, superni, hot corrosion by V, crack growth 7—144583
Ni-Fe-Cr-Al-Hf, laser clad alloys, microstruct. rel. to Hf solubility 7—119395
Ni-Mn-O thermistors, form. and elec. props., X-ray diffr., SEM and AES studies 7—92176
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7—77799
Ni-Pb system, ion beam induced demixing 7—84067
Ni-Sn deposits from pyrophosphate plating bath, tensile fracture 7—138833
Ni-Zr, powder, amorphization by mechanical alloying, X-ray, SEM, microprobe compositional anal. 7—106461

scanning electron microscope examination of materials continued
$(Ni_{0.75}Al_{0.25})_{100-x}B_x$, rapid solidification, microstruct. 7−86161
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7−144350
$NiSi_2$ deposited films, sheet resist. and grain size studies 7−85158
$NiSi_2$/Si ⟨111⟩ structures, laser irradiation damage 7−111655
$NiSi_2$-Si (111), cryst. intermediate phases in epitaxial layer formation 7−137748
PZT ceramic etched piezoelectric structures 7−100411
PZT ceramics, morphotropic phase boundary comp., SEM, TEM, and X-ray diffr. study 7−91800
$Pb_5Ge_3O_{11}$, ferroelec. domain contrast, SEM obs. 7−99769
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ based dielec. ceramics, sintered, microstruct. inhomogeneity 7−92941
PbS, galena single crystals, cleaved surfaces, sublimation 7−69884
$Pb_{0.8}Sn_{0.2}Te$ thin films in MIS structs., elec. props., effect of laser irrad. 7−99237
$Pb_{0.94}Sr_{0.06}(Zr_{0.53}Ti_{0.47})O_3$ ceramics, microstruct., lattice parameters, Curie temp., dopants effect 7−105061
Pt-Rh (111) and (100) surfaces, plasma induced erosion 7−113780
Sb_2S_3-As_2S_3-Tl_2S and Sb_2S_3-Sb_2O_3-Tl_2S, chalcogenide glasses, synthesis and props. *(French)* 7−111416
Se desorption from graphite surface, mass spectral and atomic absorpt. study 7−143219
Se thin films, form. and growth, substrate temp., evaporation times 7−105322
a-Si films, thermal oxide characterisation 7−93214
Si, grain boundary electrical activity, struct. and chemical origin *(French)* 7−124919
Si polycrystal, e-h grain boundary recomb., scanning transmission EBIC methods 7−111320
Si shaped ribbon 7−85999
Si, SiO_2 and Si_3N_4, reactive ion etching in SF_6 gas mixtures 7−71403
Si single cryst. wafers, cut surface morphology, environmental fluids and temp. effects 7−105202
Si, solid particle erosion, strength evaluation, statistical method 7−113730
Si V-groove structure geometry obs. by SEM, sensors appl. 7−130992
a-Si:H layers, transient photocurrents, effect of morphology 7−84982
a-Si:H:F thin films, glow discharge deposition from fluorinated silanes, characterisation 7−132493
Si-C-O-N, oxynitride ceramics, dense, low cost, microstruct. 7−77894
Si-$TaSi_2$ semiconductor-metal eutectic composites, in situ junctions, charge collection SEM study 7−92288
SiC cubic single crystal films on Si, growth and characterisation 7−143267
β-SiC, dry etching in fluorinated gases, surface charact 7−126352
SiC fibre reinforced Li_2O-Al_2O_3-SiO_2 glass-ceramic, interfacial charactn. 7−78234
SiC whisker reinforced Al_2O_3, processing and mech. props. 7−77915
SiC whisker reinforced Si_2N_4, fabrication and props. 7−78241
SiC whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
SiC yarn, thermomech. props. 7−78282
SiC:B, hot pressed, sintered, β to α phase transform., feather form. 7−86167
Si_3N_4 ceramics, ion beam modified, friction and wear 7−119381
Si_3N_4, hot pressed bars, oxidation, cristobalite form., EPMA obs. *(Japanese)* 7−132786
Si_3N_4, hot-pressed, and reaction-bonded, charactn. and mech. props. 7−126250
Si_3N_4 powders sinterability and charactn. of sintered material 7−138719
Si_3N_4, sintered, hydrothermal leaching rel. to grain morphology *(Japanese)* 7−132785
Si_3N_4, sintered, tensile strength 7−126251
Si_3N_4 whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
SiO_2, beadblasted fused silica, surface damage evolution and optical performance 7−71318
SiO_2, fused, oblique Ar^+ ion beam bombardment, erosion topographies 7−70960
Sm, thin films, high temp. oxidation, elec. resist. *(Japanese)* 7−93174
Sm-Co alloys, enthalpies of formation, solution calorimetry studies 7−93360
Sm(Co FeCuZr)$_{7.3}$ alloy microstruct. and coercivity during aging, potentiostatic etching study 7−131321
SnO_2 natively textured film for optical confinement-type a-Si:H solar cell 7−70110
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
Ta thin film, oxidation, grain boundary particle effects 7−119451
TbFe, evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
Te microdendritic layers, form. during CdTe electrodeposition, A7 lattice type 7−119178
β-Ti alloy, adiabatic shearing at high strain rate *(Chinese)* 7−78098
Ti film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152
Ti, fractured surface, fractal charact. 7−86325
Ti, oxidation, effects of Sn^+ and N_2^+ ion implantation 7−106686
Ti surface hardness enhancement by ion implantation technique 7−71387
Ti, thin films, struct. and optical props. meas. 7−144136
Ti-base alloys containing Er and C, rapidly solidified, microstruct. and props. 7−119264
Ti-Mn, fracture surfaces during tensile separation, investig. of unusual features caused by adiabatic shear 7−144551
Ti-Ni (5.5 wt.%), rapidly solidified microstruct. and precip. 7−93001
Ti-V-Cr-Al (13,11,3 wt.%), fracture behaviour study with in-situ obs. of SEM and AE simultaneous meas. *(Japanese)* 7−78152
TiC CVD coatings on steel, effect of Cr in substrate 7−113412
TiC coated Mo, fusion limiter material exposed to high heat flux, surface anal., SEM, AES, EPMA 7−137684
TiC coatings, D ion bombardment, thermal cycling, fatigue, comp. analysis 7−84046
TiC, TiCN, hard material coatings on steel substrates 7−77844
TiC:H_n^+ (He^+), irradiation effects, SEM and TEM investig. 7−76153
TiF_2 with fluorite struct., high press. synthesis and cryst. struct., thermal stability 7−132445
TiN films deposited on steel by reactive ion plating, struct. and props., effect of substrate temp. and N_2 press. *(Korean)* 7−77846
TiN layers, PVD, metallography, SEM obs. *(German, English)* 7−132447
V-Hf-Cr, He ion irrad., blistering and sputtering, 200-600°C 7−142847

scanning electron microscope examination of materials continued
V-Ti oxide, anatase-type solid-state soln., evidence of formation 7−84291
V_2(Hf-Zr) Laves phase superconductor, prep., manufacturing techniques development 7−132520
V_2O_5, insertion of Mg^{2+} and Zn^{2+} bi-valence cations 7−69974
V_2O_5-Bi_2O_3 glasses, prep. and charactn. 7−111411
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
W films, abnormal-glow-discharge deposition 7−92879
W single crystals, cold-worked surfaces, investig. by SEM and X-ray diffr. *(German)* 7−113837
W-B system, form. of borides by solid state reaction between W and B powders 7−144349
W-Cu duplex structure, fusion divertor plate material, thermal cycling durability test, hardness and SEM study 7−109477
W-Cu pseudoalloy, sintered, failure features rel. to processing conditions 7−78208
W-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
WC powders, microstruct. study 7−100155
WC powders, microstruct., X-ray diffr. and SEM study *(Chinese)* 7−132532
WC single cryst., N ion implantation, subsurface modification 7−76159
WC-Co alloys, fracture mechanics, expt. study 7−144546
WC-Co hardmetal, fatigue fractography, SEM and EDAX obs. *(Japanese)* 7−119344
WO_3 amorphous thin films, struct., optical and elec. props. studies 7−143287
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−112555
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7−117873
Y-Ba-Cu-O high T_c supercond. cryst., TEM and SEM microanal. 7−118111
Y-Ba-Cu-O high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
Y-Ba-Cu-O high T_c supercond., growth charact., SEM studies 7−132424
Y-Ba-Cu-O high T_c superconds. and substituted systems, materials charactn. 7−143666
Y-Ba-Cu-O thin films, high T_c supercond., prep by RF magnetron sputtering 7−144274
YAG single crystals, growth and microscopic studies 7−85990
$YBa_2Cu_3O_7$, cryst. struct. of high-temp. superconductor 7−111501
$YBa_2Cu_3O_x$, high T_c supercond., elec., mech. and US props. 7−118709
$YBa_2Cu_3O_x$, high T_c supercond., polycrystalline, fracture props. 7−119329
$YBa_2Cu_3O_z$, supercond., weak field magnetisation rel. to microstructure 7−105831
Zn, single crystals, cleaved surfaces, sublimation 7−69884
ZnO based nonlinear resistors, sintered, microstruct., density rel. to additives 7−106473
ZnO ceramics, defect struct., spatially resolved cathodolum. studies 7−106275
ZnO-BaO ceramics, microstructural studies 7−124540
ZnO-Bi_2O_3 ceramics, defect struct., spatially resolved cathodolum. studies 7−106275
Zn_3P_2 film, flash evap., growth morphology and opt. props. 7−100086
Zr-Nb (2.5 wt.%), reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
ZrC and ZrO_2 protective coatings, ESCA, SEM and EDAX studies 7−106704
ZrO_2 ceramics, ion beam modified, friction and wear 7−119381
ZrO_2 fibers, high strength, prep. 7−144347
ZrO_2, MgO partially stabilised, eutectoid decomp. 7−132586
ZrO_2, pure and CaO stabilised, liq. mix synthesis, phase analysis 7−119216

scanning electron microscopes
see also scanning electron microscopy
algorithm for automatic focusing and astigmatism correction in scanning electron microscope 7−134898
light microscopical optics specimen stage for Cambridge S180 SEM 7−128719
MR-1 model, Polish make, construction, operation and parameters *(Polish)* 7−95681
pseudo-stereo techniques to detect stray magnetic fields in SEM 7−140778
qualitative element analysis and crystal atomic structure obs. *(Japanese)* 7−95680
reducing topographic contrast in X-ray maps 7−142543
STM combined with SEM 7−140780
surface microextensometry, moire interferometry using scanning electron microscope 7−121308
two detector system, development 7−108714
X-ray fluorescence analysis, high lateral resolution 7−108716

scanning electron microscopy
see also scanning electron microscope examination of materials; scanning electron microscopes
aerosol air pollutants, surface anal. techniques 7−133160
amorphous ferromag. alloys, mag. microstruct. study using SEM with polarisation anal. 7−112741
backscattered electrons, small area semiconductor detector 7−109658
biological applications of backscattered electron imaging 7−145302
cervical cell smears, correlative exam. by opt. and scanning electron microscopy, photographic grid system 7−87399
charge-collection probability, inverse problem of depth distrib. 7−80941
coating mechanical properties, ultra low load Vickers hardness meas. in SEM 7−106735
combined light microscopy and SEM techniques, review 7−145294
contamination effects, removal by homomorphic filtering 7−121304
digital image acquisition 7−108715
electrostatic lens design 7−68545
environmental, cathodoluminescence and gaseous scintillation 7−73478
fat emulsions, parenteral, particle size determ. using SEM method and fixation procedure 7−139419
feature-specific surface roughness meas. in SEM images 7−108710
field-ion tips shaping technique 7−102571
high purity gases, particle origin determ. techniques 7−139070
history, techniques and future developments *(Norwegian)* 7−134893
image analysis, metallurgical appl. *(French)* 7−119478

canning electron microscopy continued
image interpretation, model for secondary and backscatt. electron yields calc. 7—140775
insulating films, micro-, ultramicro- hardness meas. 7—106736
interfacial angles, meas. under SEM *(Japanese)* 7—117790
Josephson tunnel junctions, elementary pinning forces measured using low temperature scanning electron microscopy 7—112714
laser modification, LASEM 7—140776
lateral beam stability of a computer assisted scanning electron microscope/X-ray microanalysis system 7—140777
low-temperature, specimen preparation 7—95686
low-voltage, quadrupole detector 7—73480
low-voltage, secondary electron detection 7—73479
magnetic field obs. using secondary electron images in SEM 7—128717
microlithographic network for deformation expts. with SEM and optical microscopy 7—142539
noise-induced damage to stereocilia obs. 7—100925
nonlinear quantization in digitizing the scanning electron micrographs 7—134899
parameters determ. in direct gap semiconductors, cathodolum. intensity depend. on acceleration voltage applied to electron probe in a SEM 7—132344
photocapacitance images of metal-dielectric-semiconductor structures in a scanning optical microscope 7—108711
quantitative, at low magnifications, simple method 7—145292
rough surfaces, fractal characterisation using secondary electrons 7—131403
rough surfaces for solar energy conversion, determ. of characterising parameters 7—143162
scanning Auger electron microscope, resolution estimation, quantitative AES method 7—124051
scanning LEED microscopy, surface cleaning and surface processing *(Japanese)* 7—75949
secondary electron spin polarisation anal. magnetic and topographic imaging appls. 7—108706
sputter coating of cytoskeletons technique 7—127065
stereoscopic technique for mapping surface contours, appl. to teeth erosion due to polishing 7—80944
stroboscopic waveform made analysis in scanning electron microscopy, IC testing appl. 7—128720
superovulated mouse ovaries exposed to ultrasound, SEM study 7—126922
surface analysis for semicond., packaging and storage technology 7—98663
surface topography influence on X-ray intensity in electron microprobe analysis 7—126524
tilt module and double-sided stub 7—95690
topographic contrast in linewidth meas. with SEM 7—80942
Cu_2S-$Zn_xCd_{1-x}Se$ heterostructs., appl. as thin film detectors in SEM *(Russian)* 7—73476
Fe, cast, nodular, four point bending fatigue testing in SEM, apparatus design 7—113822
GaAs-GaAlAs, band discontinuities at heterostruct. interfaces, electron beam meas. 7—105700
Pt surface, electrochem. activated, nm topography, scanning tunnelling microscopic obs. 7—91933

scanning optical microscopes *see optical microscopes*

scanning optical microscopy *see optical microscopy*

scanning radiography *see radiography*

scanning-transmission electron microscope examination of materials
see also scanning-transmission electron microscopy
biological microanalysis, high resolution, beam induced mass loss 7—87398
cytoskeletons, sputter coating technique 7—127065
elemental mapping with elastically scattered electrons 7—86699
embedded biological materials, study by secondary electron detectors, beam voltage effects 7—71948
graphite brominated pitch-based fibres, microstructure derived macroscopic residual resistance 7—70272
pillared clay Fischer-Tropsch catalyst, dispersed Ru, STEM studies 7—100615
porin membranes, STEM and STM obs. 7—78799
steel, austenitic stainless, oxide scale, transverse microstructure, TEM/STEM anal. 7—113786
steel, austenitic stainless, pipe, weld heat affected zone, low temp. sensitisation 7—138893
steel, austenitic stainless, weld metal, primary austenite solidified, microsegregation and ferrite to austenite transform. 7—144407
steels, ferritic and austenitic, nonequilib. solute segregation to austenite grain boundaries 7—86189
thin metal specimens, X-ray micro-analysis using STEM 7—111322
Al-Mn quasicrystalline alloy studies, by STEM 7—142707
$Al_{86}Mn_{14}$, quasicryst. and cryst., EELS of microscopic regions 7—77712
Cr, oxidation kinetics and mechanisms in H_2-H_2O-H_2S gas mixtures 7—126313
Cu film-ceramic interfaces, modifications by low energy ion/atom bombardment 7—70152
$GaAs_{1-x}Sb_x$, OMVPE grown layers, ordered structs. 7—105342
$Ga_{1-x}In_xAs_{1-y}Sb_y$, OMVPE grown layers, ordered structs. 7—105342
InP surface, electron beam modifications 7—144640
LiH, EELS with STEM 7—144198
MgO, Pd particles form., refl. electron microscopy obs. 7—143140
NdDyFeBNb sintered magnets, microstruct., precipitation and coercivity, electron microscopy studies 7—69912
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7—71250
Ni-Fe-Cr-Al-Hf, laser clad alloys, microstruct. rel. to Hf solubility 7—119395
Pd catalyst, S-poisoned, analytical electron microscopy with dedicated STEM 7—100676
Pt particles on γ-Al_2O_3 support, struct., TEM and STEM studies 7—137672
Pt-Rh model automotive exhaust control catalysts, EXAFS, STEM and XRD characterisation 7—100678
Ru_2Si_3 epitaxial films on Si (111), structural identification 7—76692
Si polycrystal, e-h grain boundary recomb., scanning transmission EBIC methods 7—111320
SiC whisker reinforced Al-Cu-Mg matrix composite, microstruct., STEM obs. 7—113478
ThO_2 surface, adsorpt. of H_2O and methanol. STEM and Fourier transform IR spectra 7—98682

scanning-transmission electron microscope examination of materials continued
Ti film-ceramic interfaces, modifications by low energy ion/atom bombardment 7—70152
W 12-atom complex, visibility and stability in STEM 7—69566

scanning-transmission electron microscopes
see also scanning-transmission electron microscopy
field emission STEM, converted SEM, performance 7—121303
modified STEM and CTEM, comparison 7—139424

scanning-transmission electron microscopy
see also scanning-transmission electron microscope examination of materials; scanning-transmission electron microscopes
annular dark field images, simulation using multislice method 7—142546
biological microanalysis, high resolution, beam induced mass loss 7—87398
elemental mapping with elastically scattered electrons 7—86699
high-resolution analytical electron microscopy, accelerated volt. and analytic functions *(Japanese)* 7—73470
image formation of STEM based on the information transmission theory 7—134897
optimum defocus for STEM imaging and microanalysis 7—67440
probe profile, determ. in dedicated STEM 7—97874
reflection electron microscopy methods for surface structure studies 7—143140
sputter coating of cytoskeletons technique 7—127065
supported metal particles, generation of surface plasmon excitation by external electron beam 7—132393
thickness-independent imaging 7—142545

scanning tunnelling microscopy
artificially structured thin-film materials and interfaces 7—113397
automated image processing and data acquisition system 7—83609
automated scanning tunneling microscope 7—83603
computer system for scanning tunneling microscope automation 7—83608
conference, Santiago de Compostela, Spain (July 1986) 7—88740
construction technology 7—83604
development and progress 7—91402
diacetylenic acid Langmuir-Blodgett films, STM investigations 7—76624
digital image filtering and noise charact. 7—117788
easily operable scanning tunneling microscope 7—91407
electrochemical electrode surfaces, scanning tunnelling microscopy 7—93336
electron tunnelling time meas. with STM junction and laser-rectification expts. 7—118555
electronic processes, Green's function calcs. 7—130989
graphite, corrugation and resolution in scanning tunnelling microscopy *(French)* 7—70037
graphite, Kish, surface atomic corrugations, STM studies 7—98650
graphite, surface meas. using low-temperature scanning tunneling microscope 7—83613
graphite (0001) surface, highly asymmetric atomic struct. in STM images 7—118211
graphite substrate with adsorbed sorbic acid, vibr. spectra, scanning tunnelling microscopy study 7—105245
graphite surface, scanning tunnelling microscopy and electronic struct. calcs. 7—91947
graphite surface, STM images, tip size effects 7—131400
graphite surface topography, scanning tunneling microscopy 7—91948
high-stability design with bimorph piezoelectric disks 7—128721
historical development 7—140409
history and development 7—83614
image processing and pattern recognition 7—73484
inductoscanner tunneling microscope 7—83611
interaction potential of a charged particle in a plane-sphere geometry, appl. to scanning tunnelling microscope 7—111318
interface science, TEM/STM meas., review 7—137658
lattice vibration effects 7—83615
layered chalcogenides, CDW, scanning tunnelling microscopy studies 7—98841
local surface modifications, transition from tunnelling regime to point contract 7—124049
low-temperature scanning tunneling microscope 7—83613
mechanical construction improvements 7—83607
metal corrugated surfaces, image states, photoemission and STM appls. 7—99148
metallic glass struct. determ. appls. 7—142540
metallic glasses, nanometer scale structure fabrication with the scanning tunneling microscope 7—124045
metals, scanning tunneling microscopy, spectroscopy and topography 7—91404
metals, surface structure, scanning tunnelling microscope and transverse electron focusing studies 7—76570
micrometer coarse approach and thermal compensation 7—128722
micropositioning devices 7—83606
microscope, design using piezotubes and piezoelec. bimorph 7—73483
microscope construction *(Japanese)* 7—97869
microscope construction on a rigid square frame 7—73482
morphological control of STM probes by He cathode bombardment 7—83602
normal metal electrodes, vac. tunnelling thermopower 7—70294
observation of kinetic magnetostriction phenomena in permalloy plate 7—124050
oxide-free tip, tip repair procedure 7—124046
piezoelectric and electrostrictive ceramics for STM 7—83610
porin membranes, STEM and STM obs. 7—78799
pre-scanning tunnelling microscopy tunnelling 7—92256
recA-DNA, bare and shadowed, scanning tunnelling microscopy studies 7—78740
reflected and secondary electron effects on lithography with STM 7—83618
restoration of blurred images 7—83612
review of scanning tunnelling microscopy 7—69563
sawtooth nanometer slider, low voltage piezoelectric translation device 7—83605
SEM combined with STM 7—140780
spatial distribution of tunnel current, appl. to STM, semiclassical treatment 7—124048
spherical tip model, tunnelling currents 7—77045
STM applications for semiconductor materials and devices 7—83619
submicron metallic features, direct writing with a scanning tunnelling microscope 7—126266

scanning tunnelling microscopy continued
superconducting energy-gap spectroscopy using tunnelling microscope 7−112676
surface analysis for semicond., packaging and storage technology 7−98663
surface reconstruction algorithm 7−91405
surface roughness signals, spectrum analysis 7−83616
surface studies and instrumentation *(Japanese)* 7−130991
surface topographies, image reconstruction 7−142541
surface topography in STM, free-electron model 7−124658
theory and appl. review 7−130990
Al_2O_3 anodic barrier layer, scanning tunnelling microscopy 7−91406
Au (110), tunneling current through localized surface states 7−92257
Au (111), ordered step surface reconstruction, obs. by scanning tunnelling microscopy 7−84465
Au (334) surface in air, scanning tunnelling microscopy 7−70047
Au electroplating and corrosion on graphite surface in salt water, scanning tunnelling microscopy 7−93337
Au surface, (334), and thin films, (111), structure and thermal stability, STM study 7−105198
Au surface, scanning tunneling microscopy 7−91404
barium stearate Langmuir-Blodgett films, STM investigations 7−76624
Cu phthalocyanine adsorbed on Ag, STM obs. of individual molecules 7−83617
Fe polycrystal topography, scanning tunnelling microscopy study using CrCo mag. tip 7−105220
GaAs (001), chemomechanical polishing in aq. solns., STM images 7−106717
GaAs (110), atom selective imaging by scanning tunnelling microscope 7−98653
GaAs heterojunction laser diode, potentiometry and scanning tunnelling microscopy studies 7−99169
n-GaAs, high resolution photoelectrochem. etching using scanning electrochemical tunnelling microscope 7−106724
GaAs, photoconductive scanning tunnelling microscopy obs. 7−77009
GaSe, surface structure, scanning tunnelling microscopy studies 7−76579
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., local tunnelling and energy gaps, STM meas. 7−99350
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, STM meas. 7−99351
NbN granular superconducting films, energy gap, STM images 7−99341
NbN, surface meas. using low-temperature scanning tunneling microscope 7−83613
2H-$NbSe_2$, surface corrugation, scanning tunnelling microscopy studies 7−70042
Ni (100), tunneling current through localized surface states 7−92257
Ni (111) with adsorbed H, scanning tunnelling microscopy 7−91944
Ni/Si(111) $\sqrt{19}$ surface, surface modifications induced by low overage adsorbates 7−124699
Pd surface, scanning tunneling microscopy 7−91404
Pd_2Si film on Si (100), struct. props., scanning tunnelling microscopy and PES studies 7−76648
Pt (100), adsorbate covered, nucleation and growth, STM obs. 7−76625
Pt electrode surfaces with different preferred crystallographic orientations, scanning tunnelling microscopy 7−91946
Pt particles supported on a TiO_2/Ti plate, scanning tunnelling microscopy 7−91406
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
Si (100), electron trapping defects, STM studies 7−77033
Si (100) and (111), atomic scale defect electronic struct. and STM imaging 7−112037
Si (111), imaging electronic surface states in real space 7−143546
Si (111), new reconstruction, STM obs. 7−76580
Si (111), topographies obtained by scanning tunnelling microscopy, effect of tip morphology 7−137676
Si (111) and (001), electronic and geometric struct., STM studies 7−77034
Si (111)2×1, tunnelling current in scanning tunnelling microscopy 7−77032
Si (112), scanning tunnelling microscopy study 7−98660
SiO_2, native oxide on Si surface, TEM and STM studies 7−137678
TaS_2, 1T and 2H polytypes, CDW images obtained with scanning tunnelling microscopy 7−92090
$TaSe_2$, 1T and 2H polytypes, CDW images obtained with scanning tunnelling microscopy 7−92090
$TaSe_2(S_2)$, charge density waves, STM studies 7−98844
Ti surface, scanning tunnelling microscopy 7−91406
W ion milled tips for scanning tunnelling microscopy 7−73469

scattering
see also acoustic wave scattering; backscatter; electromagnetic wave scattering; potential scattering
N dependence of coherent radiation from crystals 7−95411
AKNS hierarchies, symmetries and constants of motion 7−108169
amplitude corresponding to reflecting obstacle, conditions for function $A(\theta',\theta,k)$ 7−120877
anisotropic scatt. in half-space and conservative Milne problem 7−120876
asymptotic methods, low and high freq., book 7−66857
Backlund transformation derivation for AKNS-integrable system by means of Riemann-Hilbert problem 7−95410
bilinear difference equations, linearization, rel. to inverse scatt. 7−80524
causality, multiple scattering in random media, comments 7−140618
charged particle interactions in few-body systems, quantum mechanical scatt. theory, review 7−128368
classic wavefield scattering from bounded objects, numerical treatment 7−67036
collision delay time mean value and variance complex T-function anal. *(Russian)* 7−67091
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
Coulomb problem in nonrelativistic scatt. theory 7−67066
diamond, ultrarelativistic electron beam scatt. near crystallographic axes, radiation emission angular distrib. 7−80459
dipole moments coupled by EM field, reson. interaction, scatt. theoretical treatment *(German)* 7−89048
direct and inverse scattering problem for the Landau-Lifshitz equation 7−102093
dissipative medium, one-dimensional, transient wave propagation, direct and inverse scatt. for phase-velocity mismatch 7−67035
elastic multiple scattering, similarity, critical path length 7−115849
elastic waves scattered by thin foreign inclusion, inverse problem 7−136738

scattering continued
emitting-absorbing-scattering spherical media, radiative heat transfer 7−136675
few body scattering and bound state problems in momentum space 7−128362
few-body systems, semiclassical methods, scatt. theory appl. 7−128374
Fokker-Planck, particle scattering in isotropic environment, dual Lanczos transform. theory 7−73281
four-body equations in momentum space, multichannel quantum scatt. theory 7−128365
gas-surface interaction, balance principle 7−108314
generalised dispersion relationship to solve multidimens. inverse scatt. problem *(Russian)* 7−67050
geophysical prospecting, diffr. tomography with arrays of discrete sources and receivers 7−127499
harpooning reactions 7−144224
Hartree-type eqns., scattering theory and asymptotic behaviour 7−73059
integrable nonlinear Hamiltonian systems, Lax operators for inverse scatt. scheme 7−108174
interatomic potentials, scattering integral, approximate solution 7−110057
intertwining relation for collisions in finite volume 7−102220
inverse scattering problem in 1D, iterative technique 7−120879
KdV equation, n-soliton soln., asymptotic behaviour, inverse scatt. method 7−140456
linear Boltzmann eqn., exterior domain, spectral and scatt. theory 7−95509
linearised inverse scattering in attenuating media 7−120878
long-range interactions, elastic scatt. amplitude, higher partial waves contribs. 7−128371
multichannel scatt. matrix at resonances, decomposition 7−115851
multicomponent nonlinear Schrodinger model, quantum inverse scatt. method 7−80479
multiple scattering, interpretation of single-particle scattering 7−134573
nonlinear Schrodinger model, Riemann-Hilbert problem, inverse scatt. method 7−115818
nonrelativistic Schrodinger eqn., bound state and Faddeev problems, spline expansion technique 7−128364
nonself-adjoint general matrix eigenvalue problem 7−80467
nonultralocal field theory with soliton solns., Poisson-Bracket algebra for scatt. data 7−108797
one-dimensional stochastic medium, radiation transfer 7−89161
particle scattering by long-range mag. fields 7−108267
particle scattering from two non-overlapping centers 7−73060
particles on a line with directed repulsive interactions, continuity of scattering data 7−67090
plane-wave scattering from random surfaces 7−115852
polydisperse systems, small-angle scatt., interference effects 7−139046
quantum mechanics, new approaches to selected topics, book 7−95770
quantum scattering theory, inverse problem formulation 7−95408
quantum-mechanical inelastic scatt. amplitude, use of classical trajectory calcs. 7−80520
radar, geometrical inversion for a scattering curve 7−80522
Rayleigh wave scattering at variously inclined discontinuity 7−133600
resonances, mathematical anal. 7−102218
resonances based on moment conditions and entire fns. 7−115850
resonances in nuclear, atomic and mol. physics 7−102853
scalar Schrodinger equation, inverse scatt. problem in nonlocal pots. 7−134576
Schrodinger eqn., inverse scattering problem, orthogonalization anal. 7−108285
seismic SH-waves scattering, parametric study of finite element eigenfunction method 7−94113
seismic waves, velocity and effective attenuation due to multiple scattering in fractured media 7−101215
seismic waves scatt. of plane harmonic P, SV and Rayleigh waves by dipping layers of arbitrary shape 7−87460
semiclassical Schrodinger eqn., time-decay of scattering solutions and classical trajectories 7−134546
shear wave scattering by rigid cylinder in inhomogeneous medium 7−123460
sinh-Poisson eqn., vortex equilib. states, exact solns. 7−108389
spinning top, integrability of Hamiltonian system 7−102219
supersymmetric quantum mechanics, Hamiltonian spectra and inverse scatt. problem 7−134578
surface and mass fractals, scatt. functions 7−80523
temporally inhomogeneous Hamilton eqns. in Hilbert space, scatt. theory 7−102107
three-body problems, scatt. and bound states, continued fractions methods 7−128363
wave equations, variable velocity, 3D inverse scatt., self-consistent eqns. 7−134538
waveguide with elastic walls, scatt. matrix 7−73005
W crystal, ultrarelativistic electron beam scatt. near crystallographic axes, radiation emission angular distrib. 7−80459

scattering matrix *see S-matrix theory*

SCC *see stress corrosion cracking*

SCF calculations
for MS SCF (MS Xalpha) calculations see Xalpha calculations
see also HF calculations; Xalpha calculations
acetone, electronic excitation, SCF-CI calcs., substituent effects 7−122371
acetylene, gas phase X-ray emission spectra, SCF and restricted HF calcs. anal. 7−141599
acetylene, protonated, Gaussian basis sets, bridged structure, proton affinity, rotational constant, stretching frequency 7−135840
acetylene+α-pyrone cycloaddition reaction mechanism, F substitution, ab initio SCF MO calcs. 7−96530
acetylene radical cation, IR spectra, SCF, MCSCF and CI methods 7−89989
aliphatic amino acids, interactions, ab initio pair potentials 7−89931
alkaline earth oxides, cryst. cluster SCF-X_α-RW method calcs. 7−143344
alkanes, radical and carbocation form., SCF-CI calcs., substituent effects 7−122371
alloys, binary ordering, surface layer atom distrib. *(Russian)* 7−143139
amines, protonation, SCF-CI calcs., substituent effects 7−122371
amorphous systems, ferromag. regime, correlated molecular field theory 7−112830
anharmonic crystals with substitutional impurities, self-consistent theory 7−142922

SCF calculations continued
anharmonic mols., Raman excitation profiles, semiclassical dynamics 7−90140
anion-H_2O-cation systems, H^+ transfer across H bonds, SCF LCAO MO calcs. 7−89945
14-annulene, struct., aromaticity, SINDO1 SCF and CI calcs. 7−116854
atomic charges derived from electrostatic potentials 7−141437
atomic many-electron problem, g-Hartree mean-field, QED anal. 7−122387
atomic orbitals calc., g-Hartree method study 7−96555
atoms, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
atoms, effective core pot. parameters, SCF, CASSCF and CI calcs. 7−74461
3−azidopropyne, structure, IR and Raman spectra, electron diffr. 7−122341
aziridine, saturated cycle struct., oscillatory anal. 7−141447
Be compounds, struct. and stability, ab initio closed-shell SCF calcs., electron correlations effects 7−109810
β-(BEDD-TTF)$_2I_3$, self-consistent band struct. calcs. using local density approx. 7−118357
benzene, Rydberg states 7−122404
p-benzoquinone-hydroquinone, complex, H-bonded and stacked structures, ab initio SCF calcs. 7−109745
bicyclo[1.1.0]but-1(3)-ene, vibr. spectrum, ab initio calcs. 7−89928
binary alloys, 1D, nonorthogonality effect in density of states, determ. 7−137773
biological molecules, hyperfine props., Coulomb corrections, self consistent Huckel calcs. 7−126696
biphenyl, inter-ring rot. pot., ab initio SCF MO calcs. 7−103387
bis(ethylenedithio)-TTF, spatial and electronic struct., SCF-MO-LCAO MNDO RHF calcs. 7−74446
carbonyl ylides, dynamic stability, ab initio MCSCF calcs. 7−89952
2-chloro-2-methylpropane, overtone spectra, local mode anal. 7−135910
chloromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7−89908
chlorotrimethylsilane, overtone spectra, local mode anal. 7−135910
CNDO/2 approx., charge iteration algorithm 7−129602
cyclopentadienyl cobalt complex, planar conform., triplet state, ab initio MO-SCF calcs. 7−116818
cyclopentadienylcobalt, $^1A_1$ state, electronic struct., ab initio LCAO-MO SCF calcs. 7−68208
cyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
cyclopropane, saturated cycle struct., oscillatory anal. 7−141447
cytosine, photoexcited states, electronic struct., CNDO/S3 calcs. 7−68218
diamond:N, electronic struct., hyperfine interaction, cluster study 7−118406
diamond, muonium hyperfine props 7−118933
diamond, XANES spectra, multiple scatt. approach 7−99978
diazomethane, electronic struct., spin-coupled descriptions 7−122326
N,N-dimethylformamide, internal rot. barriers, dynamic NMR and ab initio SCF MO method comparison 7−109722
dioxirane, O−O bond props., SCF MO calcs. 7−109732
disilene, electronic structure, ab initio studies 7−129617
1, 2-dithiete, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
dithioacetic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
dithioformic acid, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
dithioglyoxal, energies, geometries, vibr., ionisation pot., ab initio calcs. 7−129569
Dizatrifone, analytic activity, conform. and electronic struct., SCF-LCAO-MO calcs., CNDO/2 approx. 7−100803
DNA base pairs, nonempirical ab initio SCF calcs. 7−96514
DNA solution, equilib. Coulomb pot. and charge distrib., Monte Carlo and SCF calcs. *(Russian)* 7−111346
electron momentum densities, asymptotic expansions, nonrelativistic SCF calcs. 7−122337
electron pair correlation in atoms and mols. review 7−89979
electronic spectroscopies at adsorbate covered surfaces, theoretical aspects 7−125931
enhanced 2D mag. props. of surfaces, interfaces and overlayers, total energy local spin density calcs. 7−112757
ethyl radicals, fluorinated, struct., conform. anal., ab initio SCF MO study 7−81952
ethyl radicals, protonated heterosubstituted, 1,2-rearrangement, ab initio SCF calcs. 7−81949
ethylene, molecular orbital coeffs., energy minima, CNDO/2 MC-SCF calcs. *(French)* 7−141461
ethylene dimer and trimer cations, ab initio study, counterpoise correction 7−109743
first and second-row atoms, natural orbitals, Gaussian basis set contraction scheme 7−89986
fluctuation phonon approach to ferromagnetism *(Hungarian)* 7−131978
fluoromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7−89908
Fock matrix in LCAO-SCF calcs. 7−81971
formaldehyde, vibr., IR intensities, MC SCF wave functions 7−89909
formaldehyde-HF, mm wave spectrum rot., structural, ab initio and semirigid bender anal. 7−96650
formamide, liq., mol. dynamics simulations, test particle model pot. 7−91417
formamide monomer- and dimer- do$(d_1)(d_2)(d_4)$, mol. force consts., Fermi reson., intra-intermol. coupling ab initio SCF calcs. 7−74407
formamide-NH_3 complex, H_2O effect on H bonding, ab initio SCF MO calcs. 7−96498
formic acid, unimol. pyrolysis mechanisms, ab initio calcs. 7−93281
formic acid dimer- do$(d_1)(d_2)(d_4)$, mol. force consts., Fermi reson., intra-intermol. coupling, ab initio SCF calcs. 7−74407
granular films, optical props., retardation effects, dipolar treatment 7−118965
halogens and interhalogens, excited states, nuc. quadrupole coupling, SCF-MS-Xα study 7−81974
heterocycles, 3 member, N bearing, struct, oscillatory anal., ab initio calc. 7−141446
1,3,5-hexatriyne radical, mol. struct. ab initio SCF calcs., astron. appl. 7−103381
HF−NO/NO_2 complexes, IR spectra anal., ab initio UHF SCF calcs. 7−103355

SCF calculations continued
Hubbard model, short-range effects 7−105360
hydrocarbons, conjugated, MMP2 calc. method appls. 7−116838
hydrogen bonding correction to MNDO, crystallographic analysis, SCF semiempirical calculation modification 7−141712
ice, electric field gradients, internal. interactions effects, electrostatics 7−124938
ideal crystals, long time correlations near structural transitions, self-consistent treatment 7−84247
III-V semiconductors, point defect electronic props., tight binding investigation 7−137855
inert gas dimers, Gaussian basis sets, SCF calcs. 7−116836
integral processing study of CI and MCSCF calcs. 7−89920
intermolecular interactions, SCF calcs., basis set superposition error correction 7−96819
intermolecular interactions, SCF LCAO SCF calcs. 7−90307
isocyanomethane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
isocynocyclopropane, electronic and mol. struct., ab initio SCF MO calcs. 7−81964
large scale MCSCF wave fns., efficient optimisation with restricted step algorithm 7−116823
liquid, photoionisation, solvent binding energy shifts, self-consistent reaction field approach 7−113339
metal clusters, infinite size, distortions, corner dilemma 7−142691
metal clusters, multiply charged. spontaneous fragmentation 7−96914
metal dimers, electron transfer, ab initio wave functions 7−122683
metalloporphyrins, SCF perturbation calcs., oxidation and ionis. calcs. 7−103380
metals, local excitations, photoemission spectra 7−131531
metals, relation between XPS and Auger electron spectroscopy, relax. energy shifts 7−90053
methane, CH bond dipole moment, SCF wave fn. estimate 7−122339
methane, one electron scatt. props., ab initio SCF CI calcs. 7−103404
methane, protonated, struct., vibr., ab initio MO calcs. 7−96558
methyl dithioformate, conformational struct. and energies, ab initio SCF-MO calcs. 7−109751
methyl formate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl thiolformate, conformer stability, ab initio SCF-MO calcs. 7−81968
methyl thionoformate, conformer stability, ab initio SCF-MO calcs. 7−81968
methylamine cpds., IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
methylbenzoate radical anion derivatives, planarity, ESR 7−96751
methyldiazohydroxide, interconversion mechanism, ab initio MO SCF calcs. 7−109756
microclusters, evolution of electronic and struct. props. 7−122769
molecular crystals, high press. effects, ab initio SCF approach 7−131236
molecular dipole polarisabilities, Unsold approx., LCAO MO SCF calcs. 7−96539
molecular energy gradients, parallel computation on loosely coupled array of processors 7−129543
molecular orbital SCF wavefunctions, at. orbital populations and charges calcs. 7−141456
molecular pairs, correl. energy eval., semiempirical quantum-chem. CNDO-CMP SCF calc. 7−109812
molecular properties, ab initio determ., book 7−134384
molecular vibr. states, two strongly coupled modes, adiabatic and SCF method calcs. 7−74417
molecules, effective core pot. parameters, SCF, CASSCF and CI calcs. 7−74461
molecules, electric field gradients, ab initio SCF CI(SD) CPF calcs. 7−109801
molecules, one-electron props., HF limit basis sets 7−89988
monomethylnitrosamine, interconversion mechanism, ab initio MO SCF calcs. 7−109756
n-n heterojunction 2D electron gas energy levels, self-consistent calcs., Hartree approx. 7−138039
nitroacetylene derivatives, electrostatic potentials and rel. bond strengths 7−129829
nitrone, electronic struct., spin-coupled descriptions 7−122326
nitrosamine metabolites, SCF calcs. polarisation functions and electron correlation effects, decomp. 7−109708
nitrosoacetylene, derivatives, electrostatic potentials and rel. bond strengths 7−129829
nonmuffin-tin corrections of the SCF X_α-SW method 7−131523
orbital localisation, optimisation, direct search 7−122322
ordered ternary phases of semiconductor alloys, first principles calculations 7−105015
organic azides, mol. struct., conform., vibr., ab initio HF SCF calcs. 7−81967
organic cpds., bonding between S and O, ab initio SCF-MO study 7−116817
oxides formation, coordination of AlO_3 structural elements 7−76047
[5]paracyclophane, mol. struct., ab initio mol. quantum mech. calcs. 7−109709
peroxytrifluoroacetic acid, O−O bond props., SCF MO calcs. 7−109732
polyacetylene:Na, Raman and EPR spectra studies 7−70792
trans-polyacetylene electronic props., self-consistent linear combination of Gaussian orbitals method 7−105399
polyatomic systems, numerical orbitals, SCF calcs. 7−129555
polyelectrolytes, solution, equilib. Coulomb pot. and charge distrib., Monte Carlo and SCF calcs. *(Russian)* 7−111346
polyperylene and poly(p-phenylene), substituted polymers with metallic props., design 7−131522
potassium hydrogen diformate, cryst., electron density, ab initio MO-LCAO-SCF calcs. 7−91553
propargyl radical, ground and excited states, vibrational frequencies, SCF calculations, molecular geometries, electronic structures 7−141458
propellane, [1.1.1]- and [2.2.2]; bridgehead carbon interaction, ab initio studies 7−129557
pteridine, N-heterobicyclic π system, inter-ring coupling effects anal. 7−89916
pyridine-phenol complex, H-bonded and stacked structures, ab initio SCF calcs. 7−109745
pyridine-pyrrole, complex, H-bonded and stacked structures, ab initio SCF calcs. 7−109745
quadrupole coupling consts., ab initio SCF calcs. 7−122354
rare earth models, self-consistent approximations 7−76753
second-row atoms, SCF calcs. 7−103365

SCF calculations continued
self-consistent electronic band struct., LAPW calcs. 7−131525
semi-infinite Landau-quantised plasma, screened pot. for planar charged sheets 7−105429
semiconductor interfaces, band offset model calcs. 7−105687
small molecules and radicals, heats of form. and atomisation, SCF HF calcs. 7−96532
small N-containing molecules, electric field gradients, ab initio quantum chem. calc. 7−103400
surface (110), photoemission, calc. 7−119112
symmetry-adapted cluster calcs., integral depend. spin couplings 7−96552
tetrahedral hydrides, SCF proton densities HF calcs. 7−103371
thin films, composite domain structs., self-consistent theory 7−143881
time-dependent SCF approximation for semiclassical dynamics using Gaussian wavepackets in phase space 7−74397
$(TMTSF)_2ClO_4$, MO calcs. for $(TMTSF)^+$ and $(TMTSF)_2^+$ cations 7−81948
transition metal monopnictides and monochalcogenides, structural transforms., microscopic theory, electron-lattice interaction matrix element calcs. 7−76389
transition metal monoxides, ground state spectroscopic consts., ab initio pseudopot., SCF and CI calcs. 7−74460
transition struct., diabatic surface formalism, VB and SCF calcs. 7−132908
triethylamine, electron photoelectron spectra, ionisation potentials, excited states, transitions, SCF calculations, binding energies 7−141688
trifluoroethylidynesulphur trifluoride, gas phase struct., nonlinear coord. 7−141571
tris(methylene)metaphosphate, bonding, ab initio calcs. 7−129560
troponoid spiro compounds, absolute stereostruct., CD spectra calcs. 7−90235
two-electron systems, singlet excited states, SCF calcs. 7−141482
vinyl chloride, isomerisation equilib. rel. to carcinogenicity 7−93277
vitamin B_{12}, active centre quantum chem. simulation 7−106969
water, electric field gradients, internal. interactions effects, electrostatics 7−124938
Wigner crystal, structural transitions, interaction with elastic medium *(Russian)* 7−124432
Xα continuous program for calculating continuous solutions to Xα equations by the scattered-wave method 7−68213
zerolites, bridging OH group vibr. freqs., struct. and chem. effects 7−111789
$[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
$[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
Ag_2, electron correls., SCF, extended basis set 7−89995
AgH, electron correls., SCF, extended basis set 7−89995
AgH, potential energy curves, bond lengths, relativistic ab initio CI calcs. 7−122379
AgO, electron correls., SCF, extended basis set 7−89995
AgO_2, geometrical isomers, SCF, CI and pseudopot. calcs. 7−68226
Al, static struct. props., prediction from press. and total energy 7−142697
Al_2, $a^3\Pi_u$ ground state, ab initio CI calcs. 7−103402
Al_3, electronic and geometrical struct., ab initio MCSCF calcs. 7−96499
Al_n clusters, geometry, basis set and correl. effect 7−129919
Al_n clusters, n=2-6, 13, struct. and binding, wave fns. and extended basis sets investig. 7−129920
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
Al_2O_3, pure and Cr^{3+} doped, electronic struct., self-consistent local density calcs. 7−98807
As, rhombohedral, electronic band struct., angle resolved photoemission studies 7−98797
As_2, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
Au_{13} icosahedral clusters, SCF Dirac scatt. wave calcs. 7−96912
Au_3 cluster, low-lying states and pot. energy surfaces, CASSCF/CI calcs. 7−109795
B_2H_6-HF complex, struct., SCF calcs., IR spectra, rot. consts. and dipole moment 7−96495
BH_2NH_3 radical, struct., UHF SCF calcs 7−96535
BaTe, optical response and band struct. under press. 7−98803
Be ethylene, exciplexes, triplet state, reaction hypersurfaces 7−68236
Be-like ions, SCF, Breit interaction, Dirac-HF calcs. 7−81936
Be_{51} and Be_{57} clusters, electronic states; ab initio SCF calcs., binding energy 7−74401
$Be(H_2O)_n^{2+}$, struct., hydration energy, bonding, vibr. freqs., SCF calcs., electron correlations 7−141469
BeO, ionic crystals, self consistent field studies of core level shifts 7−137832
BrH-NH_3 (methylamine), H-bonded complexes, pot. surface, H^+ transfer, ab initio SCF calcs. 7−89976
BrH-NH_3 IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
C_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
C_2^+, electronic states, pot. energy curves, SCF calcs. 7−103361
C_2^-, electronic states, pot. energy curves, SCF calcs. 7−103361
CN, radical, photodissoc. probability, SCF-CI calcs. 7−129812
C_2N_2, ionisation pots., valence shell correl. effects 7−81989
CNe^{n+} (n=1 to 4), pot. curves, extended MCSCF calcs. 7−96516
CO, low lying states, pot. energy curves, dipole moments, multiconfig. SCF calcs. 7−116866
CO, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
CO_2, electrostatic interaction energy, self-consistent Madelung pot. method calcs. 7−104621
CO_3, ground state, E′ distortion, ab initio calcs. 7−129611
Ca, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
$CaAl_2Si_2$, band struct., 2D models 7−124857
CaO, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
Cd, electric field gradient on 5sp impurities, SC molecular/cluster calcs. 7−112257
CdHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
$Cd_{1-x}Mn_xTe$ semimag. semicond., band struct. and phase stability 7−124860
$Cd_{1-x}Mn_xTe$ semimagnetic semicond. and binary constituents, total-energy and band-struct. calcs. 7−70230

SCF calculations continued
CiH-NH_3, IR vibrational study, SCF ab initio calcs., stretching modes, force constants 7−141556
Cl, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
CoH electronic props., self-consistent spin-polarised LMTO calcs. 7−84670
CoO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
CrF_6^{3-} ion, spin density, SCF calcs. 7−109717
Cu(II) complexes, ferromag. and antiferromag. ground states, exchange interaction 7−85279
CuRh alloys, low temp. sp. ht. data and charge self-consistent KKR-CPA calcs. 7−84316
EuO quasiparticle electronic spectrum. density functions theory, dynamical corrections 7−98804
EuO quasiparticle electronic spectrum, density functional theory, temp. depend. and dynamical corrections 7−98805
F_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
F_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
FH_2^+, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
FOOF mol. struct. and vibr. CI calcs. with single and double excitations 7−89978
Fe complexes, $[Fe(MoS_4)Cl_2]^{2-}$, electronic struct.-SCF-Xα scatt. wave calcs. 7−129594
Fe oxides and silicates, charge transfer transitions 7−131604
Fe oxides and silicates, mixed valence, charge transfer and electron delocalisation 7−131603
Fe_2O_3, hyperfine interaction and isomer shift, self-consistent field cluster study 7−112261
GaAs, electronic states, ionisation pot., MCSCF and CI calcs. 7−89987
GaAs, heavy doping effects, models 7−118410
GaAs transition metal substitutional ions, tight binding calcs. 7−98871
$GaAs^+$, electronic states, ionisation pot., MCSCF and CI calcs. 7−89987
GaAs/AlAs superlattices, local density valence band offset 7−125092
GaAs-AlAs superlattices, self-consistent electronic props. 7−85082
GaAs-AlAs thin superlattices, confined states, self-consistent pseudopot. study 7−125097
GaAs-GaAlAs modulation doped quantum wells, Landau levels, magnetolumin. 7−85835
GaI, isoelectronic series, $3p^N$ and $4p^N$ configs., forbidden lines, transition probabilities, HFR SCF calcs. 7−89998
Ge_2, complete active space MCSCF and CI calcs., spectroscopic props. 7−96559
GeH_4, total energy calcs., scaling of H basis 7−109737
H adsorbed layer on LiF (001), vibr. surface states, SCF calcs. 7−137699
H^-, SCF calcs. using scaled STO basis sets 7−68196
H_2, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
H_2, momentum densities, bonding, electronic struct. calcs. 7−129546
H_2, solid, high press. effect, ab initio SCF approach 7−131237
H_5^+, pot. energy hypersurface, ab initio SCF CI calcs. 7−89996
HCCN, bent and linear conform., multiconfig. SCF calcs. 7−103364
HCN-NH_3(HCN), H bonded complexes, electronic props., ab initio SCF CI calcs. 7−129605
H_2CN^+, low-lying triplet and singlet states, ab initio SCF and MP MOC calcs. 7−109703
HCl^{2+}, pot. curves, CASSCF-CI method 7−68228
$(HCl)_2$ + ethylene, addition, ab initio SCF calcs. 7−144696
$(HF)_2$ + ethylene, addition, ab initio SCF calcs. 7−144696
HF, electrostatic interaction energy, self-consistent Madelung pot. method calcs. 7−104621
HF-$ClF(Cl_2)$ dimers, H and anti-H bonded isomers, ab initio electronic struct. calcs. 7−116871
HF-GeH_4(SiH_4)(methane), matrix isolated, vibr. stretches, IR spectra 7−90116
HF-H_2O-NH_3 system, H-bonded dimers, pot. energy curves, SCF calcs., counterpoise corrections 7−129552
HF-H_2O-NH_3 system, H-bonded dimers, SCF interaction energy, basis set depend. 7−129553
H_2N_2, ionisation pots., valence shell correl. effects 7−81989
H_2O, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
H_2O, HF eqn. soln. by pseudospectral method 7−81925
H_2O, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
H_2O-Li^+, SCF and MP2 levels, primary and secondary basis set superposition error 7−116834
H_2O_2, O−O bond props., SCF MO calcs. 7−109732
$(H_2O_2)_2$, H bonding interactions, frozen fragment reduced variational space anal. 7−129549
HONO, torsional pot., ab initio SCF MO calcs. 7−110060
H_3PO and H_2POH, isomeric forms, vibr., IR spectral intensities, ab initio SCF calcs. 7−81935
$H_6Si_2O_7$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
HX, X=Br,I, ionised species, ground state, relativistic and correlation effects, valence SCF-CI calcs. 7−116870
He atom, Hartree eqn., num. method 7−89902
He, interaction energy components, basis set extension effects, decomposition scheme 7−129826
He-like ions, Coulomb holes 7−141443
He-like ions, SCF, Breit interaction, Dirac-HF calcs. 7−81936
He+Li_2 interaction, SCF and MP2 methods 7−141649
HeC^{2+}, low-lying electronic states, MC CAS SCF calcs. 7−135829
HgNe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
IF_6^-, in nonoctahedral geometries, mol. struct., ab initio SCF studies 7−129589
I_2He, vibr. predissoc., num. investig. 7−129811
K complex, K^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
$K_2Cd(SO_4)_2.6H_2O:Cu^{2+}$, EPR study 7−138316
Kr, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
La-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
$LaCuO_3$, perovskite, electronic struct., local density approx. calcs. 7−92067
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534

CF calculations continued
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
Li complex, Li^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
Li small clusters, electronic struct and geometry 7−136116
Li^+, SCF calcs. using scaled STO basis sets 7−68196
Li-Na clusters, atomic distrib., SCF calcs. *(French)* 7−83844
$Li^{++}Li^+$ charge exchange, ab initio, SCF and CI calcs. 7−103642
Li_2, 1s core electron ionisation, hole localisation and broken symmetry, SCF, CI and CEPA calcs. 7−89980
LiBC, band struct., 2D models 7−124857
LiHe, electric discharge plasma, excited states form., pot. energy curves, MCSCF calcs. 7−89943
Mg+HF, ground and excited reactivity, ab initio SCF CI calcs. 7−86601
MgHe, pot. energies, pseudopot. SCF/CI calcs. 7−81999
MgO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
MgO, ionic crystals, self consistent field studies of core level shifts 7−137832
MnH_x, binding energy, energy bands and paramagnetism 7−69642
Mo, modified Finnis-Sinclair pots., defect energetics and cohesive energy calcs. 7−124161
$N+O_2 \rightarrow NO+O$, pot. surfaces, CASSCF/CI calcs. 7−106783
N_2, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
N_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
N_2, ionisation pots., valence shell correl. effects 7−81989
N_2, multiple bonds description, CASSCF/MRCI calcs. 7−109797
N_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
N_2-HF(HCl), H bonded complexes, electronic props., ab initio SCF CI calcs. 7−129605
N_2-Ne(Ar), pot. energy surfaces, HF SCF calcs., dispersion coeffs. 7−96577
NH, A $^3\Pi$ state, rot. fine struct., fluoresc. lifetimes 7−117008
NH, $X^3\Sigma^-$ state, CAS SCF/MRSD CI calcs. 7−81990
NH_2^-, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
NH_3, dissociation, pot. energy surface, ab initio MCSCF calcs. 7−103359
NH_3, potential energy surfaces and IR spectra, CASSCF and CEPA calcs. 7−103358
NH_3, singly and doubly ionised, X-ray satellite spectrum, HF and MC SCF calcs. 7−116832
NH_3, solid, electron density, ab initio MO LCAO SCF calcs. 7−98032
NH_3-Li^+, SCF and MP2 levels, primary and secondary basis set superposition error 7−116834
NH_3+H_2, rot. excitation, ab initio pot. energy surface calc. 7−68438
$(NH_3)_2$ vibr. force field, IR intensities ab initio SCF calcs. 7−81959
NH_4 complex, NH_4^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
N_2H_2, ground state pot. energy surface, MC SCF wave fn. calc. 7−109819
NO, multiple bonds description, CASSCF/MRCI calcs. 7−109797
Na complex, Na^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
Na-HCl, reactive quenching, pot. energy surfaces, MCSCF/CI wave fns. calc. 7−93253
$NaWO_3$, electronic band struct., self-consistent semirelativistic LMTO calcs. 7−105400
Ne-lite ions, oscillator strengths and energy levels, ab initio HF SCF CI calcs. 7−140384
Ni dilute alloys, impurity charge and magnetisation perturbation calcs. 7−99400
Ni_3, low-lying states, pot. surface SCF-contracted CI calcs. 7−89997
NiH_x, binding energy, energy bands and paramagnetism 7−69642
NiH_x self-consistent electronic energy band struct. calcs. 7−84669
$O+H_2$ reaction, extended active space CASSCF/MRSD CI calcs. 7−100533
$O+N_2 \rightarrow NO+N$, pot. surfaces, CASSCF/CI calcs. 7−106783
O_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
O_2, multiple bonds description, CASSCF/MRCI calcs. 7−109797
O_2, spectroscopic consts. and dissoc. energies determ. at CAS SCF MRCI correl. level 7−96553
O_3, centrifugal distortions, ab initio pot. energy hypersurfaces 7−129566
O_3 dissociation process, energetics, MC SCF, CI, MBPT calcs. 7−129607
OH, $X^2\Pi$ state, dipole moment, SCF CI calcs. 7−103401
P, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
P oxyacids, conjugate bases and neutral radicals, ab initio calcs. 7−109733
P, simple cubic metal, electronic band struct. and T_c calcs. 7−137794
P_2, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
PO_3^-, bonding, ab initio calcs. 7−129560
Pd_3Fe disordered alloy, electronic struct. 7−118348
Pd_3FeH, electronic structure and mag. props. 7−124845
PdH_x total energy and self-consistent electronic energy band struct. calcs. 7−84669
PuS(Se)(Te) relativistic semicond., band struct. calcs. 7−92068
Ra, XPS 5s-5p spectra, Green's function calcs. 7−82055
$RbFeCl_3$, spin-orbit and crystal field matrices 7−143418
Re, Fermi surface and electronic struct. under press. *(Russian)* 7−124835
Rh complex, dirhodium(II) dihydrate tetraformate, ground state config., ab initio SCF CI calcs. 7−96554
S containing molecules, first derivatives of SCF energies, basis set depend. Rys polynomial method 7−116826
S, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
S_2, effective valence shell Hamiltonian, electronic struct. and bond length depend. 7−81929
SO_2, IR laser multiphoton excitation, time-dependent SCF approach 7−129818
SO_2^{2+}, electronic states, SCF CI calcs. 7−135851
Sb_2, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
SeH^n (n=0 or +), electronic states, MC SCF (CAS SCF) and CI calcs. 7−135852
Si (100) with K monolayer, inverse photoemission study 7−144152
Si, chalcogen and vacancy pairs, electronic struct. and stabilities 7−98869
Si, electron density, press. depends., calc. 7−131092

SCF calculations continued
Si, muonium hyperfine props 7−118933
Si, negative ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
Si surface, adsorbed halogens and chalcogens, nuclear quadrupole interaction studies 7−112270
Si transition metal substitutional ions, tight binding calcs. 7−98871
Si:B, Fe, Fe-B pair complex, electronic props., self-consistent calc. 7−124914
Si:Fe, B, shallow acceptor impurity pairs, Xalpha calculations 7−98874
Si_4 and Si_4^+, CAS SCF and CI calculations 7−96550
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
SiH, π^2 mol., struct., pot. energy curve, ab initio HFR-MO-LCAO-SCF-CI method 7−103390
SiH_2, low-lying states, pot. energy surfaces and dynamical props., 2D MCSCF/6-31G** calcs. 7−116893
$Si_2H_x^n$ (n=0 or +), ground state surfaces, SCF and CI calcs. 7−109811
SiO_2, α-quartz, stishovite and β-cristobalite crystalline forms, electron struct., CNDO SCF quantum. chemical calcs. 7−70185
SiO_2, electron states pop. numbers, SCF HF-Slater pots. calc. *(Russian)* 7−122355
$Si_2O_7^{6-}$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
SnH_4, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
SnX_4 (X=F, Cl, Br, I), Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
Sr, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
SrO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
SrTe, optical response and band struct. under press. 7−98803
TaS_2 intercalation cpds., 2H polytype, electronic structs. 7−137775
TeF_6^{2-}, in nonoctahedral geometries, mol. struct., ab initio SCF studies 7−129589
$Te_2O_7H_6$ mol. cluster model of $V_o^{\cdot}$ centre, RHF-SCF electronic struct. calcs. 7−117113
tetramethyl tin, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
Th, XPS 5s-5p spectra, Green's function calcs. 7−82055
tiH_2 self-consistent electronic energy band struct. calcs. 7−84669
TmSe mixed valence cpd., light absorpt. and refl., optical density of states calcs. 7−143997
XeF_6, in nonoctahedral geometries, mol. struct., ab initio SCF studies 7−129589
Xe_2m repulsive interaction pot., extended SCF calcs. 7−109754
Y-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
$Y_{2-x}Sr_xCuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
Yb, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
YbP, 4f XPS spectrum, Anderson model calc., spin-orbit splitting 7−77756

scheduling
power system scheduling method to satisfy NO emission and power supply probability 7−71661
VVER-1000 reactor, axial energy distrib. control in manoeuvring mode *(Russian)* 7−129224

schizons *see elementary particle weak interactions*

schlieren devices *see schlieren systems*

schlieren systems
channel overflow slippage meas. by local density change visualisation *(Japanese)* 7−83380
flame front turbulence growth 7−69284
flame propagation studies using simultaneous laser diagnostics probing 7−86632
gas mixture, shock wave vibr. relax. times, laser schlieren technique meas. 7−90352
plasma layer in plasma focus, schlieren diagnostics 7−69467
surface roughness, quantitative measurements by the Schlieren method 7−134719
$Bi_{12}SiO_{20}$ 2D optical temporal bandpass filter using four-wave mixing, dynamic schlieren imaging system 7−97090
CO_2 axisymmetric bursting jet, schlieren visualisation and hot wire anemometry 7−123702

Schottky anomaly
$CeCu_6$, electron-phonon coupling, elastic constant temp. dependence, magnetoelastic effects and Schottky specific heat 7−70617
$CeCu(Ru)_2Ge_2$, sp. ht. Schottky anomaly and cryst.-field splitting studies 7−69928
$Mn_xFe_{1-x}Cl_2.4H_2O$, heat capacity, thermodynamic fns. 7−84314
$NpAl_2$ ferromagnetic intermetallic, sp. ht. meas. 7−69924
$Th_{1-x}Tb_x$ dilute alloys, 4f-instability, sp.ht., mag. suscept., and resist. meas. 7−76848
TmSe, nonstoichiometric and stoichiometric samples, anomalous thermal expansion 7−98523
UBe_{13}, sp. ht. Schottky anomaly and cryst.-field splitting studies 7−69928

Schottky-barrier diodes
see also semiconductor-metal boundaries
Debye shielding effect on C-V characts. 7−70379
diamond semiconductor devices, fabrication and high temp. characts. 7−111631
DLTS, minority carrier defects, detection in Schottky barrier diodes 7−112229
Gunn diode, high Schottky barrier, negative resistance studies *(Russian)* 7−84914
IR focal plane arrays, standard and Schottky-barrier, performance limits 7−68893
ITO/p-Si solar cells using conductive polymer 7−86783
metal-semicond. interface state spectrum distortion due to nonequilib. occupancy 7−92291
metallophthalocyanine crystal thin films, electronic conductivity 7−99231
nonexponential capacitance transients, multi-exponential DLTS implications 7−137846
photocurrent polariton peak, optical const. effects 7−105659
solar cells, temp. dependence of efficiency parameters, barrier height 7−78628
$AgGaSe_2$-Al Schottky barrier diodes, thin film, elec. characts. 7−105658
Al-GaAs Schottky barriers, sputter induced damage, elec. props. 7−112490

Schottky-barrier diodes continued
Al-Si:H Schottky diodes, effects of H ion implantation on elec. charact. 7−105704
Au/Si Schottky diodes, Si reactive ion etching-induced deep electron trap levels, DLTS study 7−100458
p-$CdIn_2Te_4$ Schottky diodes, current transport 7−138003
GaAs epitaxial layers on Si substrates, high volume production growth, Schottky diode fabrication 7−86059
GaAs Schottky diode, 52nd order harmonic mixing 7−110459
GaAs Schottky photodiode and FET association, planar monolithic integrated photoreceiver 7−95651
n-GaAs/Al Schottky diodes, surface plasma-enhanced internal photoemission 7−118550
GaAs/Au Schottky diode, semicond. surface minority-carrier trap levels, DLTS study 7−112489
$GaAs_{0.6}P_{0.4}$:Te p^+n and Schottky diodes, RTA and Zn implementation, electron traps, DLTS study 7−131575
H_2 detection using Pd MIS diode sensor 7−134728
InGaAs/GaAs n-n^+ heterojunctions, discrete interface traps 7−143569
$In_{2-x}Sn_xO_{3-y}$/GaAs near-ideal quasi-Schottky barrier formation 7−125086
NbN/MgO/Si Schottky diode growth and charact. 7−143256
Ni/GaP Schottky barrier diodes, current flow mechanism study *(Russian)* 7−99205
PtSi Schottky-barrier IR focal plane array, spectroscopic appl. 7−68892
PtSi/n-Si:H Schottky barrier height variation by ion implantation 7−76180
Si particulate device fabrication by screen printing, photovoltaic appls 7−78644
a-Si, Schottky diode detectors, recombination effects and noise 7−141394
a-Si:H,P films, elec. resist. thickness depend., admittance meas. on Schottky diodes 7−84873
a-Si:H Schottky diodes, midgap injection-induced optical absorption, modulation spectra 7−118989
a-Si:H-Pt, Schottky diode, photoelectric characteristics 7−85048
Si:Sb Schottky barriers and shallow p-n junctions, form. by Sb recoil implantation, phys. and elec. props., annealing temp. effect 7−112432
W/Si/GaAs contacts, Schottky charact. and chemical interdiffusion, Si layer effects study 7−131734
Zn_3P_2 thin film Schottky barriers, gap states study by admittance spectroscopy 7−77089
ZnS band-to-band impact ionisation rate, Schottky diode photocurrent multiplication meas. 7−143473

Schottky barriers *see Schottky effect*

Schottky defects
Cs halides, Schottky defect form. energy calcs., many-body effects 7−124255
CsBr, Schottky defect formation energies, three-body force shell model calcs. 7−131146
CsCl, Schottky defect formation energies, three-body force shell model calcs. 7−131146
CsI, Schottky defect formation energies, three-body force shell model calcs. 7−131146
$LaMgAl_{11}O_9$, laser and phosphor host, cryst. struct., thermal expansion determ. 7−84327
NH_4 halides, Schottky defect form. energy calcs., many-body effects 7−124255
NH_4Cl, Schottky defect formation energies, three-body force shell model calcs. 7−131146
Tl halides, Schottky defect form. energy calcs., many-body effects 7−124255
TlBr, Schottky defect formation energies, three-body force shell model calcs. 7−131146
TlCl, Schottky defect formation energies, three-body force shell model calcs. 7−131146
$ZnSiAs_2$, elec. resist., Hall effect, rel. to defect props. *(French)* 7−84892

Schottky effect
see also work function
amorphous As and Ge chalcogenides, photodoping as radiation enhanced solid state reaction 7−126468
barrier heights, at semiconductor alloy-metal interfaces, alloy disorder effects 7−125078
barrier structures, quantum efficiency of photocurrent 7−77042
contacts on Si, barrier heights, press. depend. 7−105656
dangling bonds, energy determ. 7−125101
Debye shielding effect on C-V charact. 7−70379
diodes, nonexponential capacitance transients, multi-exponential DLTS implications 7−137846
electronic cond. in insulating films, book contrib. 7−105743
n-GaAs:Be^+ Schottky barrier height enhancement by ion implantation, electrostatic model anal. 7−99159
Gunn diode, high Schottky barrier, negative resistance studies *(Russian)* 7−84914
metallophthalocyanine crystal thin films, electronic conductivity 7−99231
nonideal structures, photocapacitance kinetics, tunnelling effects 7−77038
polypropylene films, negative resistance charact. *(Korean)* 7−143475
potential fn., symmetry props. *(German)* 7−99161
recent advances in metal-semiconductor interfaces 7−112493
semiconductor heterostructures, evaluating band-edge offsets from Schottky barriers 7−77051
semiconductor materials, electrical characterisation techniques 7−112479
semiconductor surfaces and interfaces, recombination velocities and surface states 7−131730
semiconductor-metal contacts, virtual gap states and defects 7−105707
semiconductor-metal Schottky contacts, virtual gap states, present understanding 7−105661
semiconductors, optical beam induced current images, scan speed dependence 7−77002
semiconductors, solid-state physics, book 7−102027
silicide films and double heterostructures on Si, template growth technique in UHV 7−86021
silicon phthalocyanine Langmuir-Blodgett film Schottky barriers and MIS structures, photoelec. props. 7−99162
solar cell charact. *(Russian)* 7−78635
solar cells, effects of inhomogeneity 7−78633
surface layers, pot. distrib., analytical expression *(German)* 7−105657
transition metal impurities in semicond., band lineups, Schottky barriers 7−118413
transition metal silicide films on Si, epitaxial growth, props. and applications, review 7−86022

Schottky effect continued
TSC spectra anal. 7−112414
Ag (110), Xe adsorption on low and high work function metals 7−131419
Ag-InP Schottky barrier charact. change with time 7−112429
Al films by ionised cluster beam deposition 7−106438
Al/porphyrin/Au Schottky barrier cells, exciton diffusion lengths and apparent barrier widths 7−105653
Al-GaAs Schottky barriers, sputter induced damage, elec. props. 7−112490
Al-Si (100), Schottky barrier formation using nozzle jet beam deposition 7−77802
Al-SiO_2-nSi, peaked Schottky barrier investig. 7−85124
Au/Si interface, low-temp. elec. charact. 7−99201
Au-GaAs Schottky barrier contacts on different substrates, electronic and optoelectronic charactn. 7−92251
Au-SiC Schottky contacts, heat treatment effect 7−131733
Au-stearic acid-InP Schottky barrier *(Chinese)* 7−125079
CdSe:O/Au Schottky diodes, struct. and elec. props., O effects 7−105655
n-CdTe Schottky barrier, nonlinear C^{-2}-V charact. anal. 7−112433
n-CdTe:In crystals, heat treated, DLTS studies 7−98862
CdTe-Mn(Cr)(V), Schottky barriers and interface reactions 7−131735
Cr-Si Schottky barriers, forward bias current flow behaviour 7−85042
GaAs epitaxial layers, growth and characterisation 7−86038
GaAs interfaces, unified defect model, appl. to ICs, book, contrib. 7−85110
GaAs refractory-metal contacts research in microelectronics under RUI and IBM research grants 7−112491
GaAs Schottky barriers, LEC and horizontal Bridgman grown, electron trap and free carrier concs., annealing effects 7−99200
GaAs surfaces, optically orientated electron spin precession, photoemission study *(German)* 7−85961
GaAs:B/Au Schottky barriers, implantation levels anal. using optical isothermal transient spectroscopy 7−112238
GaAs:H-Si, hydrogenation, effect on diode reverse leakage current, FET 7−143560
GaAs/a-WSi_x, Schottky barrier formation 7−85044
GaAs/GaAlAs heterojunctions, band offsets determ. 7−105697
GaAs/WN_x Schottky contacts, reactive RF sputtering 7−77040
GaAs-Al Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-Au Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-metal contacts with TiN diffusion barrier, solid-phase reactions 7−105157
GaAs-metal Schottky contacts, elec. charactn. 7−92250
GaAs-Mo(Ta) Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
GaAs-refractory metal nitride contacts, thermal stability and barrier height enhancement 7−70412
GaAs-$TiSi_2$ Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-Y interface chemistry, Schottky barrier formation 7−85046
$Ga_{0.47}In_{0.53}As$:Be, ion implanted, Schottky barrier height enhancement 7−125074
GaP-In(Al)(Ge)(Cu)(Au), near ideal Schottky barrier formation, XPS study 7−106354
p-Ge/Ni contact with radial charge carrier flow, elec. props. 7−92293
Ge-Si ordered superlattices, struct., optical transitions, TEM, Schottky barrier electroreflectance studies 7−112096
In/polypyrrole Schottky barrier formation 7−92296
n-$In_{0.53}Ga_{0.47}As$/Al(Nb) diodes, Schottky barrier heights 7−70377
$In_xGa_{1-x}As$-InP quantum wells, exciton-LO phonon interactions 7−85067
InP (110), Schottky barrier heights, electrical study 7−85045
InP (110)-Ag (Al) Schottky contacts, effect of Sb interlayers 7−131784
Ir/Si interface, silicides form., Schottky-barrier form., XPS and UPS studies 7−125076
MoS_2-metal interface, Schottky barrier formation without Fermi-level pinning 7−138064
Na-GaAs (110) Schottky diodes, elec. props. 7−138065
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
$NiSi_2$/Si high quality epitaxial films grown by MBE, Schottky contact props. 7−76680
PtSi/n-Si:H Schottky barrier height variation by ion implantation 7−76180
Si (100)/Ti-W interface, Schottky barrier height 7−112427
Si (111)-Ti interface, silicide formation, Schottky barrier formation 7−84404
Si, low energy Ar ion etching damage charactn. 7−126351
Si, reactive sputter etching damage removal methods 7−144642
a-Si Schottky barrier, admittance 7−77041
Si Schottky barrier modification by low energy H implantation 7−83995
Si Schottky SEED device, hybrid optical bistability based on increasing absorpt. in depletion layer 7−82684
p-Si:B low temp. electron irrad. damage, defect production and annealing studies 7−84034
Si:B-Ag(Al)(Ni), vacuum annealed surfaces, elect. props. 7−138004
a-Si:H, charactn. by surface photovoltage and C-V meas. using liquid Schottky barriers *(Japanese)* 7−118528
a-Si:H,B(P)-(quinone-hydroquinone), liquid Schottky barrier, charact. 7−77039
a-Si:H films, glow-discharge deposited, frequency-dependent conductivity 7−76952
a-Si:H-Au, electronic density of states near mid-gap of a-Si:H 7−143310
a-Si:H-Au, Schottky barriers, barrier height temp. dependence 7−125075
Si:H-Ge:H/Pt Schottky barrier with amorphous superlattice, junction props. 7−70378
Si:H^+, defect state annealing, DLTS study 7−105483
Si:Ni, doping props. *(German)* 7−76817
Si:Sb Schottky barriers, form. by Sb recoil implantation, phys. and elec. props., annealing temp. effect 7−112432
Si-In_2O_3 heterojunctions, electron beam induced defects and interfacial reactions during annealing *(French)* 7−125117
Si-$TaSi_2$ semiconductor-metal eutectic composites, in situ junctions, charge collection SEM study 7−92288
SiC Schottky barriers, cathodoamplification 7−143556
SiC/Al, 6H polytype, annealing effects on rectifying contacts 7−143554
TiN reactively sputtered films, deposition, contact, and electromigration props. 7−118331
Ti_xW_{1-x}/Si contacts, barrier height and contact resistance 7−118585
W/Si/GaAs contacts, Schottky charact. and chemical interdiffusion, Si layer effects study 7−131734
$Zn_xCd_{1-x}S$ films, elec. props. 7−143651

chottky effect continued
Zn_3P_2, H_2 passivation, DLTS and Schottky diode studies 7−70243
Zn_3P_2/Mg Schottky barriers, vacuum-deposited, gap states, admittance spectroscopy 7−112434

chottky gate field effect transistors
GaAs epitaxial layers on Si, growth, props. and applications to FETs and LEDs 7−86034
GaAs epitaxial layers on semi-insulating substrates, fabrication technology 7−144306
GaAs, MBE grown, δ-doping, device appl. 7−77811
GaAs MESFET, self-aligned, WAg/W refractory metal gate 7−143615
GaAs MESFET front-end cct. for 1.55 μm, 450 Mbit/s high-sensitivity receiver design and a long distance transmission experiment 7−117347
GaAs monolithically integrated photoreceiver with large gain-bandwidth product for 800 nm wavelength 7−97174
GaAs n-type active layer, electron irrad.-induced defects, DLTS study 7−98253
GaAs:Si, ion implanted, rapid thermal annealing, MESFET fabrication 7−117945
GaAs/WN_x Schottky contacts, reactive RF sputtering 7−77040
GaInAs(P)-InP, MOCVD growth, characterisation and applications *(Polish)* 7−132498

chottky noise *see random noise*

chrodinger equation
1/N expansion for screened Coulomb pots., perturbative results 7−140505
AC driven damped sine-Gordon system, phase pulling and breather instability 7−134570
atom, Yukawa pot. in momentum space, eigenfunctions analytical behaviour 7−134557
atom+diatom collisions, Schrodinger eqn., close coupling wave packet formalism 7−73022
atomic scattering matrix, Sturmian representation, Coulomb plus Yukawa pot. 7−90318
atoms, strong-field laser ionisation, FEM study 7−96620
atoms and mols., ground state Schrodinger eqn., diffusion Monte Carlo simulations 7−129570
Bessel and Hausdorff-Young type eqns. for unidimensional Schrodinger operator *(Russian)* 7−66932
Bethe's ansatz soln. ambiguity for one-dimens. models with linear dispersion 7−134544
bistable-soliton pulse propag., stability aspects 7−140470
Bloch oscillations in uniform electric and magnetic field, tight-binding method, Landau subbands 7−108300
Born-Oppenheimer approximation, systematic corrections 7−109702
bound electron in EM field, energy shift, gauge invariance 7−128334
bound-state solutions, screened Coulomb pot. appl. 7−73041
Buttiker-Landauer characteristic barrier interaction times, arbitrary barriers 7−140544
Buttinker-Landauer charact. barrier interaction times, arbitrary point in barrier 7−140545
charge-monopole system, phase factor, Green function 7−73502
chargeless spinning particle in periodic mag. field, quantum mechanics 7−95143
chemical system, local and global single Gaussian approx. 7−126406
classical diffusion in random media, relation with quantum localisation 7−102189
complex potential, one-turning-point scatt. problem, phase shift calc. 7−108308
composite particle model, (1+1)-dimensional, adiabatic approximation, Schrodinger eqn. soln. 7−73609
compressed atom model, energy levels and normalized wave fns. 7−141439
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
connection between the KDV and the AKNS spatial transforms 7−80464
continuous Lie groups, functionally independent invariants 7−121390
covariant Schrodinger formalism and application to accelerated observers 7−67154
cyclotron resonance model implementation 7−110222
damped driven harmonic oscillator as a quantum dissipative system 7−73034
Darboux-Crum-Krein transformations on Schrodinger eqn. 7−134575
deep-water Stokes wavepackets in presence of nonuniform medium, Benjamin-Feir instability 7−79443
derivative nonlinear Schrodinger eqn., quantum inverse spectral method 7−67076
diatomic molecules, multigrid approach for Hartree-Fock calculations 7−116812
diatomic mols., photoabsorpt. cross section, pot. curves 7−129692
Dirac equation, variational derivation and physical interpretation 7−80971
dissipative force, quadratic in vel., wave eqn. 7−120824
effective generating functions for quantum canonical transformations 7−67077
effective local pot., density amplitude 7−129567
eigenvalues, numerical calcs. 7−140495
electronic structure calculations, multiple-scattering solution of Schrodinger's equation for potentials of general shape 7−105370
envelope solitons, stability properties 7−95363
Euclidean quantum mechanics 7−108393
evolution equations, associated quasidifferential systems 7−134527
explicit scattering solutions for one-dimens. 7−95401
exponential-cosine-screened Coulomb pot., Schrodinger eqn., 1/N expansion 7−128350
FCC nuclear model, nucleon eigenstates equivalence, correspondence with spin-orbit model 7−128977
femtosecond solitons existence in optical waveguides 7−90789
few body Schrodinger eqn., geometrical coupling coeff. calcs. for hyperspherical harmonics approach 7−108313
finite tilted quantum well, approx. methods anal. 7−80263
first order Schrodinger field, stress tensor symmetrization and spin-orbit coupling 7−67498
first-order logarithmic perturbation iteration method convergence, Schrodinger eqn. appl. 7−67073
forced Toda lattice, nonlinear Schrodinger solitons 7−73271
fractal dimensionality in Schrodinger problem, form. model 7−89045
fused point perturbation theory, coupled nonlinear equations, Rayleigh-Schrodinger theory, Pade potentials 7−140488
Gamow states in nonlocal pots., resonant and nonresonant states 7−140553
gas-surface interaction, sticking, desorption and inelastic scatt. 7−76615

Schrodinger equation continued
Gelfand-Levitan eqns. for multicomponent nonlinear Schrodinger eqn. 7−140529
generalised dispersion relationship to solve multidimens. inverse scatt. problem *(Russian)* 7−67050
generalised exponential-cosine-screened Coulomb pot., energy spectra, hypervirial 1/N expansion 7−128349
generalised nonlinear Schrodinger eqn., Backlund transform. and N-soliton soln. 7−108264
Green's function calc. method 7−102205
hadronic atoms, automatic gridpoint method, momentum space solns. of Coulomb plus strong interaction bound states 7−136096
harmonic oscillator, feynman propagator and space-time transformation technique 7−73043
harmonic-chaos transition, plane wave interference in nonlinear media *(Hungarian)* 7−128454
Hermitian theory of relativity, formulation and gauge invariance *(German)* 7−89050
hierarchical heterostructs., 1D Schrodinger problem, tight-binding model calcs. 7−143306
hierarchies of moment equations, solution with random potential and closure 7−73056
hopping conduction, relaxation mode theory using reduced one-body master eqn. 7−131642
hypervirial JWKB calculation for harmonic oscillator 7−73033
incommensurate systems, analyticity breaking of wave functions, fractal phase diagram 7−105358
infinite dimensional parametric distributions 7−108268
inhomogeneous layer, scatt. of wave packets, inverse problem 7−120839
integral form, solution in momentum space 7−117040
integration using maximally adapted Coleman's method 7−95381
inverse scattering intertwinning methods study 7−102194
isolated singularities of solutions with a radial potential 7−95376
isospectral transformations in relativistic and nonrelativistic mechanics 7−80405
isotropic coupled oscillators, 2D, time depend., appl. to quantum optics 7−102208
K^{th} diameter of Sobolev spaces on R^n with Schrodinger operators *(French)* 7−67046
kink-bearing systems with double well and asymmetric pots., class. stat. mech. 7−102177
Landau-Ginzburg model, spontaneous phase transitions, complex order parameter kinetics eqn., anal. and soln. 7−131901
Langevin dynamics in d-dimens., Fokker-Planck eqn. equivalence and imaginary time Schrodinger eqn. 7−134678
Langmuir and ion-acoustic waves, collisional damping, coupled nonlin. Schrodinger eqn. derivation 7−75788
Langmuir turbulence models, num. comparison 7−83482
large-N expansion, modified, soln. 7−128354
lattice loop calculus, Yang-Mills vacuum, orthonormal basis, loop space hamiltonian 7−134927
Lie admissible formulation of quantum gravity 7−128416
linear scattering problem in MHD medium, transmission reson. for mag. slab 7−123767
linearity and symmetry 7−140524
local smoothing properties of general dispersive equations *(French)* 7−102190
logarithmic perturbation expansion for central pot. 7−102188
Mach's principle derivation, quantum theory extension 7−89044
magnetosphere, finite β, theory and obs. of Alfven solitons 7−139865
many-electron systems, correlation and relativistic effects, Dirac-Coulomb eqn., double perturbation theory 7−122385
maximal and minimal eigenvalues and their associated nonlinear equations 7−140502
maximal symmetry group, appl. to atoms and mols. 7−115840
maximal symmetry group, functionally independent invariants 7−121390
metal lattice, single H perturbation, electron density distrib. 7−98930
Mie-type potential, convergence radius for 1/N expansion 7−120869
modified Rayleigh-Schrodinger perturbation theory 7−140539
modulation of weakly non-linear dispersive waves near the marginal state of instability 7−108293
molecular diabatic energy surfaces and wave fns., permutation operation 7−90014
molecular electron density, one-body pot., Schrodinger eqn. soln. 7−73021
molecular predissociation, matrix Schrodinger operators and resonances, mathematical theory 7−141635
molecular resonant excitation transfer, QED study 7−90310
molecular rovibrational states, Hartree theory calcs. 7−135916
molecules, generalised pot. surface nucl. motion inclusion 7−129627
multi-soliton solutions of coupled nonlinear Schrodinger equations 7−95380
multicomponent nonlinear Schrodinger model, quantum inverse scatt. method 7−80479
multiparticle quantum systems, localized states with small relative energies 7−120848
N-body quantum system, spinless, nonrelativistic, time evolution operator anal. 7−140511
N-body Schrodinger operator, absence of high energy resonances, dilated Hamiltonian eigenvalues 7−102215
N-level system coupled to bosonic degree of freedom, soln. of eigenvalue problem 7−80478
n-n heterojunction 2D electron gas energy levels, self-consistent calcs., Hartree approx. 7−138039
neutral bound excitons in a high magnetic field, 7−137805
non-abelian path integrals and generalised quantum mechanics in the external field of the 't Hooft-Polyakov monopole 7−89034
nonHamiltonian eigenvalue eqns. stationary perturbation theory 7−103349
nonlinear, Lax pair eqns. soln., ferromagnetic chain space-periodic soln. 7−99383
nonlinear, perturbed, Painleve anal., conservation laws and Lie-Backlund symmetries 7−120816
nonlinear, quantum coherence 7−140554
nonlinear, soliton solns. and group representation theory 7−115928
nonlinear, solitons, energy transfer and self-trapping 7−143376
nonlinear, wave modulation anal. 7−108251
nonlinear deep water wave evolution in horizontal directions 7−97553
nonlinear dispersive evolution equations with critical power nonlinearities, solitary waves 7−128302
nonlinear effects in optical fibres and fibre devices 7−103907
nonlinear equation, limit of solution at blowing-up time *(French)* 7−95384

Schrodinger equation continued
nonlinear ion acoustic plasma waves, marginal instability state, modulational instability of carrier 7−142449
nonlinear random media, localisation, invariant-imbedding approach 7−80443
nonlinear Schrodinger eqn., initial value problem solns. 7−73024
nonlinear Schrodinger eqn., Kac-Moody symm. 7−134549
nonlinear Schrodinger equation, Cauchy problem, temporal asymptotic soln. 7−134551
nonlinear Schrodinger equation, continuous dependence near blow-up time *(French)* 7−95383
nonlinear Schrodinger equation, multiple pole solutions 7−73045
nonlinear Schrodinger equation, solitons 7−73052
nonlinear Schrodinger equation in classical limit, Hamiltonian structures 7−80475
nonlinear Schrodinger equations, invariance props. 7−80474
nonlinear Schrodinger equations, Painleve anal. 7−108292
nonlinear Schrodinger model, Riemann-Hilbert problem, inverse scatt. method 7−115818
nonlinear soln., supershort pulse self-interaction in optical fibres 7−110583
nonlinear systems, explicit auto-Backlund relation through gauge transformations 7−73037
nonlinear weakly damped Schrodinger eqn., finite dimensional behaviour *(French)* 7−140484
nonrelativistic Schrodinger eqn., bound state and Faddeev problems, spline expansion technique 7−128364
nonspherical-symmetric inverse scattering problem in spheroidal coordinates 7−73739
nuclear bound state calcs. for centrifugal, Coulomb repulsive and nucl. pot. superposition 7−135214
nuclear cranking model, moments of inertia, parallel axis theorem, potential and density distribs. 7−135176
numerical integration, exponential and Bessel fitting methods 7−95382
numerical integration, soln. subspace accuracy 7−120875
one-dimensional system, soliton scatt. from a point defect, nonlinear Schrodinger eqn. *(Russian)* 7−92079
one-way equations, pseudodifferential operators operating orders, marching algorithms, path integrals 7−142083
optical fibres, pulse propagation, intensity depend. spectra, nonlinear Schrodinger eqn. 7−104016
optical fibres, single-mode, soliton evolution from chirped and noisy pulses 7−75129
optical fibres, soliton pulse nonlinear interaction 7−104030
optical single mode fibres, reducing soliton interaction 7−104007
optical strip waveguides, pulse propag., generalized nonlinear Schrodinger eqn. description 7−90772
particle on spheroidal surfaces, stationary motion study 7−115847
path integral quantum cosmology, Robertson-Walker scalar field models 7−72679
path-integral formulation of quantum mechanics, classical limit in density matrix terms 7−80231
physical parameters and dynamical variables quantisation, wavefunction single-valuedness classical system discretisation 7−108279
plasma, laser, $[2\omega_0]$ harmonic emission struct., bandwidth effects, soliton generation theory 7−97749
plasmon satellites, photoemission, coupled-channel Schrodinger eqn. 7−125924
point interaction, one dimensional Schrodinger operator scaling technique, potentials. 7−128313
power series method for eigenvalue calculation 7−140531
power series solution of the Schrodinger equation 7−102204
prolongation theory, nonlinear Schrodinger eqn. 7−134556
propagator for time depend. mass subject to time-depend. freq. oscillator 7−140523
QED in Schrodinger picture in field representation *(German)* 7−89429
quantisation formula with repulsive potential 7−120873
quantum and classical electrons, one-dimens. infinite pot. well, static electric field 7−102053
quantum and classical mechanical systems, transition point, deterministically defined 7−80511
quantum Gravity and Schrodinger Equations on Orbifolds 7−115881
quantum harmonic oscillator, symmetries and supersymmetries 7−80477
quantum scattering theory, inverse problem formulation 7−95408
quasi-particles and Brownian quasi-particles 7−128430
quasiperiodic Schrodinger operator spectrum, Fibonacci Hamiltonian transfer matrices, Cantor set 7−120836
quasiperiodic solutions of the nonlinear Schrodinger equation 7−128314
quasiperiodically forced dynamical systems with strange nonchaotic attractors 7−108418
quaternion quantum mechanical treatment of an electron in a magnetic field 7−120732
R-separation of variables 7−80404
radial equation, eikonal solution, jWKB method and quasilinearisation 7−67059
radial Schrodinger eqn., (p,p′) optical potential, soln. using enhanced Numerov algorithm 7−140496
radial Schrodinger equation, simplified fixed-point perturbation theory 7−67062
radial Schrodinger operators, resonance fns. 7−80470
radical Schrodinger equation, fixed point perturbation theory, Pade pots. appl. 7−102199
random Schrodinger operators, density of states 7−67086
random walk method soln. of Schrodinger eqn., small time steps limit validity 7−134652
Rayleigh-Schrodinger perturbation theory, energy corrections 7−66872
recursion relations for Schrodinger eqn. solns. 7−80519
reflection theory for EM and particle waves, book 7−108066
relativistic particles, Dirac eqn. transformation to modified Schrodinger eqn. 7−115832
relativistic quantum theory, nonperturbative methods for square root kinetic energy operators 7−80468
resonances, localisation, appl. to model pots. 7−102195
resonances and microlocal analysis 7−102193
rotating displaced oscillator calcs. 7−80480
rotating Morse oscillators, matrix elements, Elsum and Gordon approx. method 7−115827
scalar Schrodinger equation, inverse scatt. problem in nonlocal pots. 7−134576
scatter matrix for short range and Coulomb potentials 7−80489
scattering solution, Monte Carlo method calcs. 7−102210

Schrodinger equation continued
Schrodinger equation with random pot., mathematical review 7−67220
Schrodinger operator, dense point spectra 7−73047
Schrodinger operator, location of resonances in semiclassical limit, resonance free domains 7−128332
Schrodinger operator spectral theory, stochastic methods, Feynman-Kac formula, continuous spectra, Hilbert-Schmidt properties 7−140487
Schrodinger operators, eigenvalues and resonances, Fredholm determinant anal. 7−73026
Schrodinger operators, random and quasi-periodic, results and conjectures 7−80634
Schrodinger-Hartree time-dependent equations, time decay of solutions to Cauchy problem 7−102187
semiclassical, time-decay of scattering solutions and classical trajectories 7−134546
semiclassical behavior of a Schrodinger operator with a periodic potential *(French)* 7−80469
semiclassical quantization rule in SUSY quantum mechanics, exactness 7−89036
semiclassical quantum gravity, exact soln. in two dimens. 7−73134
shell model equivalent harmonic oscillator pot. 7−89546
shooting methods for the Schrodinger equation 7−80483
short solitary pulse formation in amplifying nonlinear medium 7−80453
solitary wave soln., appl. to plasmas turbulence 7−75793
solitary waves in the presence of symmetry, stability theory 7−134528
soliton collision, energy radiation, perturbed nonlinear Schrodinger eqn. 7−123870
solutions in exterior domains, asymptotics and continuity props. near infinity 7−95372
solvable quantum field theories and polynomial conserved quantities for the quantum nonlinear Schrodinger equation 7−80506
solvent-molecule interaction, perturbation theory for nonlinear Schrodinger eqn. 7−108270
spatially extended wave fn. and localised pot., fast Fourier transform calcs. 7−89023
spatially varying effective mass, Schrodinger eqn., wave function matching conditions, hermitean Hamiltonian calcs. 7−76745
sphere interactions in quantum mechanics, exactly solvable models, Schrodinger Hamiltonians, δ-sphere model 7−140515
spin-wave theory, kinematical problem, spin-1/2 nearest neighbour Heisenberg Hamiltonian, Schrodinger eqn. 7−138204
spinless field theory, functional representation for de Sitter space isometries 7−95440
squeezed-light generation in a medium governed by the nonlinear Schrodinger equation 7−90556
string theory, Hawking-Unruh effect, reparametrization invariance analytic mappings 7−134623
Sturm-Liouville problem for steady-state axisymmetric gravitational fields 7−120884
supersymmetric nonlinear Schrodinger equation, complete integrability, Painleve criterion, fermionic and bosonic fields 7−140506
supersymmetric path integration in SUSY quantum mechanics 7−128348
supersymmetric quantum mechanics, Hamiltonian spectra and inverse scatt. problem 7−134578
supersymmetric quantum mechanics in flat space, stochastic representation of arbitrary fermion sectors 7−73039
symmetric Schrodinger operator, dissipative extensions in Weyl's limiting circle case *(Russian)* 7−89016
three dimensional Schrodinger eqn., inverse scattering problem, orthogonalization anal. 7−108285
three-body atomic wavefunctions, Fock expansion in hyperspherical coordinates 7−109725
three-body atomic wavefunctions, solutions using spherical coordinates 7−109726
three-dimensional wave collapse, quasiclassical theory 7−115810
three-nucleon systems, Faddeev eqn. soln. by Lanczos algorithm and spline expansions 7−67775
three-particle system, Schrodinger eqn. for spherical coordinate system 7−67781
through bond coupling, ligand length dependence, Schrodinger equation, electron transfer, tight binding approximation 7−141673
tight binding model, one-dimensional quasiperiodic pot., resistance and eigenstates calcs. 7−105359
time dependent, comparison of TDHF and ATDHF approximations *(Spanish)* 7−73011
time dependent, one-dimensional, explicit solns. using the Darboux transformation 7−73032
time dependent equation, existence of solutions 7−102186
time discreteness, EPR probe study 7−128346
time periodic Hamiltonians with no bound states, decay of Schrodinger eqn. solns. 7−80517
time-delay and Lavine's representation formula 7−89014
trace formula, zeroth order, for Schrodinger operator with Coulomb pot. in 3D space 7−134577
Trotter-formula for the time evolution of quasi-periodic quantum system 7−134579
two-state atom near partially reflecting walls, quantum theory 7−120865
ultrasmall quantum well boxes, electronic struct. calcs., multielectron effective mass Schrodinger eqn. 7−138033
variable coefficient Schrodinger type equations, stability anal. of difference schemes 7−89041
variational operator Pade approximants method, special case solns. 7−128791
wave equations standing and travelling waves 7−108260
zero eigenvalue, conditions for nonexistence for Schrodinger operator 7−115831
$(\alpha,2\alpha)$, cluster spectroscopic factors using bound wave fns. and three-body coupling 7−135340
(d,X), three-body Schrodinger eqn., Pauli blocking correction 7−73777
$dt\mu$, Schrodinger integral equation, numerical solution 7−122749
Υ, mass spectrum, decay-widths, anal. using local equivalent Schrodinger eqn. with relativistic kinematics 7−67615
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
CO_2, electrostatic interaction energy, self-consistent Madelung pot. method calcs. 7−104621
D_2, photodissociation branching ratio, interference effects 7−96807
$F+H_2$, pot. energy surface, Schrodinger eqn. soln. using random walk method 7−119502
$GaAs/Al_{0.3}Ga_{0.7}As$ single quantum well, exciton parameter calcs., well shape and elec. field effects 7−105407

:hrodinger equation continued
GaAs/$Al_xGa_{1-x}As$ modulation doped superlattices, 2D electron density 7−99184
H, one dimens. struct., Schrodinger, Klein-Gordon and Dirac eqns. 7−102043
H_2 photodissociation branching ratio, interference effects 7−96807
H_2^+, energy level calcs., quantum harmonic oscillator, adiabatic and related approximations 7−73023
H_2^+, ground and excited states, single-center expansion 7−122338
H_2^+, relativistic energy correction, Dirac and Schrodinger eqns., variational solns. 7−122396
HD^+, symm. breaking effects calcs. 7−122344
HF, electrostatic interaction energy, self-consistent Madelung pot. method calcs. 7−104621
$^3H(d,X)$, muon catalysed, Schrodinger eqn. series soln. 7−115839
He adsorbed on Ne-plated graphite, spectral and thermodynamic props. 7−105251
He, ground state, fast convergent hyperspherical expansion 7−74434
He, ground state electron correlation, momentum-space Schrodinger eqn., iterated solns. 7−135845
He-like atoms, ^1S states, Coulomb pot. exact wave fns. expansion 7−89915
He-like ions in dense plasmas, energy eigenfunctions 7−128347
K^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Li^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Li_3^+, breath mode. vibr., Raman spectrum, ab initio model 7−96709
Na, core polarisabilities, quantum defects and fine struct. 7−129580
Na^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
O^{44}, partial autoionisation widths, complex eigenvalue Schrodinger eqn. 7−135885
RbH, $X^1\Sigma^+$ and $A^1\Sigma^+$ states, potential energy curves, probability density distributions 7−122418

chroedinger equation *see Schrodinger equation*

chwarz-Hora effect
No entries

chwarzschild metric
accretion of charged matter by collapsing objects 7−146022
black hole, gravitational entropy 7−140150
black hole as gravitational lens 7−102049
black hole normal modes, WKB approach, pot., scatt. 7−102250
black holes, quasi-normal mode determ. 7−73101
convariant Klein-Gordon eqn. on Schwarzschild metric, asymptotic behaviour 7−95424
equivalence principle test, electromag. radiation in Sun's Schwarzschild metric 7−134593
evolving universe, gravitating source 7−80142
general relativity, Vaidya metric, imbedded in deSitter space, pure radiation field condition, equations, integrals 7−108320
GEOCALC, curvature tensor calcs., Schwarzschild appl. 7−95183
gravitational field with toroidal topology, Einstein eqns., axially symmetric solns. 7−140558
gravity form bosonic, heterotic and SUSY strings 7−108358
Hawking effect, quantum covariant Klein-Gordon eqn. on Schwarzschild spacetime 7−73132
Kaluza-Klein theory, mag. monopole stability in Euclidean background metric 7−95423
Kerr metric, types of unbound geodesics 7−67106
Kruskal-like model with finite density 7−102225
light deflection in Schwarzschild space, trigonometric approx. formula *(German)* 7−89072
linear stability under perturbations which are nonvanishing on bifurcation 2-sphere 7−128381
massless particle on Reissner-Nordstrom horizon, generalized Kerr-Schild metric 7−89059
Newman-Penrose equations *(Rumanian)* 7−80564
nonzero-rest-mass particle motion in Schwarzschild geometry, orbits, Jacobian elliptic functions 7−89057
quantum energy-momentum tensor, time-like killing vector, stress-energy tensor, Schwarzchild black hole 7−120666
quasi-Schwarzschild R^4 as a spherical wave embedding in flat $M^4\times D^2\times D^2$ 7−134586
singularity history 7−73097
space vehicle in Schwarzschild field, eqns. of slow radial motion 7−73065
spherical shell motion at metric junctions 7−67105
Sun, light deflection due to three-space curvature 7−128226
tachyonic compactification, generalization to 5D and Kruskal anal. 7−89085
H-like atoms in strong gravitational fields, energy levels and wave functions 7−128384

Schwarzschild space *see Schwarzschild metric*

Schwinger source theory
anomalies in chiral Schwinger model, regulating operator, Lorentz invariance 7−134980
arbitrary gauge and finite temp. solns. 7−116053
bosonization in the chiral Schwinger model 7−116096
Casimir surface force density on compact ball for $\epsilon\mu=1$ 7−95366
chiral anomaly at finite temperature, derivative-expansion method 7−121395
conformal field theory, inhomogeneous transformation laws of currents, Schwinger terms 7−128772
hadronic short distance propagators in long range background field 7−81126
lattice fermions in the Schwinger model 7−102614
lattice massive Schwinger model, numerical simulation using fast fermion Monte Carlo algorithm 7−89374
long-range dynamics broken symmetries, Coulomb gauge, chiral symmetry breaking 7−140804
massless Schwinger model, Hamiltonian Monte Carlo study 7−128734
Schwinger's action principle quantization, Dirac quantisation equivalence, Lagrange undetermined multipliers 7−134959
source methods in finite-temperature gauge fields 7−67466
stimulated emission by external sources in relativistic quantum field theory 7−89328
string theory, BRST current algebra, anomalous Schwinger terms 7−102717
thermal Goldstone theorem at finite temp. and density, Schwinger action principle 7−108782
thermodynamics of the Schwinger and Thirring models 7−102611

science education *see education*
scientific societies *see societies*
scintigraphy *see radioisotope scanning and imaging*
scintillation
see also phosphorescence; phosphors
alkali halide crystallophosphors, energy transfer by luminescence centres 7−132345
amplitude scintillations, statistical behaviour at X band in satellite link 7−94408
atmosphere, near-IR stellar scintillation meas. above Observatorio del Teide 7−107507
atmosphere, wind and refr. index struct. meas. from optical scintillation obs. 7−107566
atmospheric emission variation measurements at 3, 0.9, and 0.33 cm wavelength 7−133892
atmospheric refractive turbulence profiling using synthetic aperture spatial filtering of scintillation 7−87913
HF communications over long distances, fading by scintillation theory 7−139843
intense ionospheric scintillations, spatial correlations, comparison between numerical computation and obs. 7−115164
interplanetary scintillation, 3D structures modelling 7−88070
interplanetary scintillation obs. of flat-spectrum sources at 102.5 MHz, scintillation components charact. *(Russian)* 7−128107
interplanetary shock wave due to 1979 August 18 solar flare, scintillation obs. 7−88067
interstellar refractive scintillation of radiosources 7−107938
interstellar refractive scintillation through galactic disk 7−80071
interstellar scintillation of extragalactic radio sources, galactic latit. depend. of centimetre-wavelength flicker 7−80070
interstellar scintillation of pulsar fluxes, determ. of interstellar plasma charact. *(Russian)* 7−88601
ionosphere, scintillation measurements at Legon, Ghana 7−127634
ionospheric Faraday rotation angle fluctuations and amplitude scintillation over Suva, Fiji 7−79739
Jupiter decametric emission, interplanetary scintillation rel. to localisation of Io and non-Io sources 7−79864
laser incidence in weak atmospheric turbulence, scintillation index 7−115012
liquid scintillation cocktails, alkylbenzene and detergent based, performance comparisons for disposal 7−132958
meteorological parameters remote sensing, radio scintillation meas. method 7−94415
nighttime SHF scintillation studies using transmission from the Indian geostationary satellite 7−94573
organic liquid scintillator, energy transfer and quenching, effect of dil. and temp. 7−132341
organic scintillators with short phosphoresc., VUV excitation *(Russian)* 7−144098
path-integrated refractive turbulence irradiance scintillations, probability density 7−68560
quencher concentrations, effects of nonuniform quencher distrib., use of liquid scintillation techniques 7−91855
radio galaxies, interplanetary scintillation obs. rel. to correl. of radio spectra with morphological type of active galaxies *(Russian)* 7−107965
radio sources, electron scintillation in gravitationally-lensed images 7−107975
rain, simultaneous depolarisation and ionospheric scintillation impairments at 4 GHz 7−94572
remote sensing, scintillation spatial and temporal filtering 7−115043
satellite systems, low elevation angle, tropospheric scintillation model 7−94413
single-star scintillation analysis of wind and turbulence 7−87761
slant path amplitude radio scintillations, depend. on meteorological parameters 7−94414
space-time intensity correlation function of scintillation due to a deep random phase screen 7−134066
underwater sound, scintillation structure of turbulent tidal flow 7−114754
Ar, liq., α particles and fission fragments, scintillation and ionis. yields meas. 7−92743
$Li_2B_4O_7$, single cryst., excitons, UV absorpt. and luminesc. study 7−125816
LiF:Mg,Ti, thermostimulated luminescence, activation energy and freq. factor 7−132349
NaI(Tl), optical and thermoluminescent props., impurity effects 7−85859
NaI(Tl) scintillation grade crystals, growth, material considerations 7−71000

scintillation chambers
see also scintillation counters
gas scintillation drift chambers with wave shifter read-out for hard X-ray astronomy 7−72307
Ar, liquid, scintillation and ionisation signals from relativistic La ions 7−74368

scintillation counters
see also photomultipliers; position sensitive particle detectors
4π charged particle detector, γ-ray spectroscopy 7−116773
γ-ray spectrometer logging of small diameter boreholes, use of lengthened scintillation counters *(Russian)* 7−79643
Anger scintillation camera automatic tuning, review 7−107236
automated scintillation spectrometer with five-window discriminator 7−129523
BGO calorimeter, L3, production progress 7−109631
BGO camera for PET, slanting light-guides 7−81856
BGO Compton, suppressed Ge detectors, neutron background meas. 7−135755
BGO detectors, response functions 7−116785
BGO scintillator, spectroscopic and timing props. *(Czech)* 7−68142
BGO-CsI(Tl), phoswich detector props. 7−109622
cameras LFOV and LFOV ZLC 370, detection parameters comparison *(Czech)* 7−74360
charged-particle identification by energy release meas. in thick scintillator 7−81902
Chateau de Cristal $4\pi\gamma$ multidetector system, nuclear behaviour studies 7−81892
cosmic ray monitor for the Stanford gravitational radiation detector 7−73157
cosmic rays composition meas., light attenuators for plastic scintillation detectors 7−139934
counting efficiency for electron-capture nuclides, VIASKL computer program calcs. 7−96461

scintillation counters continued
CUSB-II, BGO calorimeter, design, status 7−68159
EAS array, low cost liquid scintillator counters 7−145833
environmental gamma ray exposure rates meas. comparison between EML and JAERI method 7−103293
fibre detector, high resolution, performance 7−122315
fibre scintillators coupled to a multianode photomultiplier as a high rate tracking detector 7−68134
fibres, channel electron multiplier arrays 7−109642
fibres embedded in Pb sheets, dense EM calorimeters 7−109630
fibres light yield dependence on refractive index of sheath, calc. and obs. 7−109652
flat diagram-scintillation detector, directional-props. 7−122311
gas filled photomultiplier, photocathode and grid performance 7−116781
gas scintillation proportional counter for the X-ray astronomy satellite SAX 7−72308
high energy accelerators, perspectives for experimental apparatus, seminar, San Minato, Italy (May 1986) 7−108021
hodoscopic hadron and photon scintillation calorimeters, radial distrib. of shower energy release 7−81903
large liquid scintillator module, scintillation light transport and detection 7−116787
light collection efficiency of a large-area scintillation counter 7−109602
liquid scintillation counter, for ^{32}P detection 7−89883
liquid scintillation counter calibration data, curve fitting study 7−96472
liquid scintillation counter for fast neutron capture cross section meas. *(Chinese)* 7−81873
liquid scintillation systems, β-spectroscopy, ^{90}Sr and ^{90}Y dosimetry appl. 7−107248
liquid scintillator neutron coincidence counter for Pu assay 7−103141
modular hadron calorimeter, iron-scintillator sandwich, energy and coordinate meas. 7−109604
multipath rotating modulation collimator, hard X-ray images 7−72310
NE102A plastic scintillation detector system, beta spectra anal. *(Chinese)* 7−103330
NE213 scintillation detector for in-assembly fast neutron spectrum meas. 7−96469
NE912 ^{6}Li glass spectrometer for low energy fission neutrons 7−81848
neutron counting using 3-detectors for PET agent yield prediction 7−81855
neutron time of flight high resolution meas. with CYRIC 7−109593
PAC high resolution BaF_2 six-detector spectrometer 7−135731
PET, high resolution, 4×4 BGO crystal array coupled to dual PMTs 7−87308
PET, high resolution, modular array detectors, crystal identification 7−141402
PET, high resolution, scintillation photon detection and event selection 7−87307
PET, high resolution detector blocks 7−145230
PET instrumentation developments, review 7−145228
photomultiplier resolution, Monte Carlo simulation 7−74344
photon detector efficiencies, review 7−96460
plastic scintillating fibers for track detection 7−74371
plastic scintillating fibres for calorimeters and tracking devices 7−109641
plastic scintillator telescope, proton detection efficiency function 7−135765
plastic scintillator whole body contamination monitors, effect of elevated background 7−71896
plastic scintillators transparency meas. 7−129524
polystyrene scintillators, stabilising influence of ionising radiation on excitation energy transfer 7−103332
position sensitive photomultiplier, readout of optical scintillation fibres 7−135750
preamplifier-discriminator IC for photomultipliers 7−68148
precision storage device for regulation circuits of scintillation detectors 7−129528
primary scintillant fluorescent decay times by near UV pulsed laser excitation 7−96470
pulse height distribs. in scintillation-photodetector systems 7−74345
radioactive ion beam research at Lawrence Livermore National Laboratory 7−109588
recent developments in γ-ray and charged particle detectors 7−89868
scintillating glass fibre-optic active target for vertex detection and tracking appls. 7−68139
SEM, environmental, cathodoluminescence and gaseous scintillation 7−73478
semiconductor, for X-ray tomography, CdS and ZnSe afterglow characts. determ. 7−103334
supermassive charged particle detection, extremely slow proton electronic excitation 7−129534
thickness meas. scintillation detector, beta particles detection with minimal response to bremsstrahlung 7−96463
TOF counters for VENUS detector 7−109601
Underground Neutrino Observatories in Italy 7−74389
X-ray detector, digital, high-resolution, utilising a $CdWO_4$ scintillator array and a photodiode array 7−101064
BaF_2 detectors, impact on nuclear solid state investigations 7−122309
BaF_2 detectors for ^{181}Hf TDPAC spectroscopy 7−116031
BaF_2 plastic scintillator, pulse height response 7−74350
BaF_2 scintillation counter, appl. to positron lifetime spectrometer 7−96475
BaF_2 scintillator, development of new gamma camera 7−81854
BaF_2 scintillators for high-resolution positron lifetime spectrometer 7−74331
BaF_2-TMAE detector for PET appl. 7−79117
$Bi_4Ge_3O_{12}$, BGO suppressed gamma detector arrays 7−89870
$Bi_4Ge_3O_{12}$ detector array, response to 0.5-21 MeV photons *(Chinese)* 7−103328
CaF_2:Eu scintillator, evaluation for β-ray detection of tritium 7−81858
CaF_2:Tm detectors, radiation induced thermoluminescence 7−77664
$CaSO_4$:Dy, production techniques, effect on characteristics *(Russian)* 7−68143
CsI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
CsI:Tl scintillator coupled to double photodiode readout system, light particle detection 7−109607
CsI:Tl scintillator counter, photodiode readout and pulse shape anal. 7−135751
CsI(Na) scintillation plate with high spatial resolution 7−74341
CsI(Tl) crystal scintillation gamma spectrometer, gamma quantum energies of 10-10^4 MeV meas. 7−108729

scintillation counters continued
CsI(Tl) scintillators, with photodiode read-out for ΔE-E telescopes 7−74346
CsI(Tl) stabilized scintillation detector, model testing 7−122310
Cu-scintillator calorimeter module with photodiode readout, energy resolution 7−109629
(Ga,Al)As-GaAs, semiconductor scintillator, nuclear particle and X-ray detector 7−141403
Gd-loaded large liquid scintillation counters for neutron multiplicity distribs. 7−81890
^{3}He scintillation detector, fabrication and props. 7−74354
HgI detectors, pulse filtering 7−68152
^{125}I, continuous meas. using liquid scintillation counter 7−116798
^{6}LiF:Eu crystals, photo-energy calibration in mixed radiation fields using ^{24}Na 7−132340
NaI detector, measurement of d+T neutron pulses 7−109623
NaI detectors, use in pion^0 electromag. form factor meas. 7−74373
NaI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
NaI(Tl) FD-71 scintillation radiometer, characts. *(Chinese)* 7−81876
NaI(Tl), optical and thermoluminescent props., impurity effects 7−85859
NaI(Tl), oriented radioactive nuclei NMR and spin-lattice relaxation meas. 7−128616
NaI(Tl), proton registration efficiency calc. 7−109655
NaI(Tl) scintillation spectrometer stability at high count rates 7−81846
NaI(Tl) scintillation spectrometer evaluation, weak leakage γ-ray dose *(Japanese)* 7−109657
NaI(Tl), scintillation detector performance for nuclear imaging 7−141401
NaI(Tl) stabilized scintillation detector, model testing 7−122310
Pb-liquid Ar calorimeter for FNAL E653, design, operation, anal. 7−68133
Pb-scintillator aperture counters, multilayer, for hodoscopic automated multiphoton spectrometers 7−81879
Pb-scintillator strip EM calorimeter, response and energy resolution 7−109614
Pr_2O_3 based glass as scintillator for high energy physics expts. 7−68138
T concentration determ., optimised cell for liquid scintillation radiometer 7−106871
T measurement using liquid scintillation spectrometer *(Czech)* 7−116800
T monitoring by liquid scintillation counting, Scotch tape method 7−103283
U scintillator calorimeter, wavelength-shifting plastic-fibre readout system study 7−74366
U-plastic scintillator calorimeter for HERA 7−109626
U-scintillator calorimeter, hadron, electron and muon response 7−135746
Xe-He gas scintillator for low energy isotope imaging 7−74342
YAG:Ce, ionising particle tracks, activator effects 7−129517
scintillation detectors *see scintillation counters*
scintillation spectrometers *see particle spectrometers; scintillation counters*
scintillators *see scintillation; scintillation counters*
scintillometers *see scintillation counters*
scorching *see combustion*
Scott effect
No entries
SCR *see thyristors*
screening *see shielding*
screening, nuclear *see nuclear screening*
screens, fluorescent *see fluorescent screens*
screens, phosphorescent *see fluorescent screens*
screw dislocations
alloys, ordered $L1_2$ type, screw superdislocation Peierls stresses *(Russian)* 7−98149
$Ba(NO_3)_2$ crysts., soln. growth induced lattice defects, surface topography 7−98015
bar, elasto-plastic, torsion via dislocation method 7−123493
crystal facet under small supersaturation, steps behavior 7−76566
crystal whisker growth, spontaneous breaking of chiral symmetry, giant screw dislocations 7−143303
discotic liquid crystals, melting, defect model 7−104544
dynamic brittle fracture and crack propag., dislocation-crack edge interaction 7−104208
dynamic organisation of dislocation structs., simulation 7−117931
elastic material, velocity field, approximate soln. 7−91585
FCC crystals, cyclic deformation, dislocation mechanisms and steady states 7−76124
hexagonal blue phase, Brownian motion of screw dislocations and phase transition obs. in elec. field 7−111354
ice, growth mechanism at low press., habit changes 7−131070
interstitial impurity diffusion mobility, acoustic wave effects, dislocation vibr. and impurity-dislocation interactions 7−69979
lamellar phases, relationship between permeation and screw dislocations *(French)* 7−98148
metals, screw dislocation inclined pileup at crack tip 7−117926
nonlocal elasticity, constitutive eqns., appls. 7−136701
ordered alloys, $L1_2$, stability of superdislocations and shear faults 7−111556
static dislocation problems, global solutions 7−91581
twist boundary, dislocation superlattice, X-ray diffraction, plane-wave image profiles 7−91598
twist boundary, screw dislocation superlattice, X-ray diffraction, superstructure factor 7−91597
two-dimensional dislocation array distrib., continuum model calcs. 7−124271
Ag, localised secondary grain boundary dislocations in (001) twist boundaries, TEM study 7−124285
Al, vacancy emission from and absorption to helical dislocation 7−104802
Ar crystals, screw dislocation config., simulation 7−83955
Au, localised secondary grain boundary dislocations in (001) twist boundaries, TEM study 7−124285
Au-Cu alloy, superstructure screw dislocations, atomic config. *(Russian)* 7−76121
Be single crystals, deformed by prismatic slip, dislocation struct. 7−111562
CdF_2:Mn single cryst., characteris., lattice consts., dislocation density, microhardness, X-ray spectra 7−124310
$DyFeO_3$ cryst., flux grown, hillocks and spirals on {110} faces 7−104608
Fe, H induced softening and hardening mechanism 7−78039
α-Fe, irradiation softening and mobile dislocation interaction with Frenkel pairs 7−104803

crew dislocations continued
GaAs foils, split dislocation images by weak-beam and lattice-resolution methods 7—83961
GaAs, plastically deformed, dislocation struct. 7—98157
GaAs, semi-insulating, partial dislocation mobility under high stress 7—98162
Ge whisker crystals, relax. of stresses 7—112155
InSb dislocation glide, in situ TEM study 7—91592
InSb single crystals, microdeformation, X-ray topographic studies 7—111564
InSb thin foils, screw dislocation climb irrad. in HVEM 7—98163
K, screw dislocation core, stationary and resonance states, contrib. to electrical resistivity 7—76126
KCl (100) surfaces, growth spirals, step vel. meas., molecular beam method 7—83815
$LiNbO_3$, inclusions, dislocations, X-ray topography study *(Chinese)* 7—91586
Mg, dipoles of basal dislocations 7—98154
MgO single crysts., cyclic deform., recovery process, TEM obs. 7—86207
Nb-V, H embrittlement, dislocation substructure, deform. twinning 7—78181
$Ni_3(Al,Nb)$ single crystals, fatigued at ambient and elevated temps, dislocation struct. 7—144504
Ni_3Fe Ll_2 ordered alloy single crysts., cross-slip and Kear-Wilsdorf locks, TEM study 7—137368
Sn high purity single crysts., low-temp. plasticity, Peierls relief *(Russian)* 7—78106
Sn-Pb solder, Cu_6Sn_5 whisker precipitates, mech. props. 7—119311
Ti, substitutional solid soln. hardening, screw dislocation motion 7—132633
Xe crystals, screw dislocation config., simulation 7—83955
YAG single crystals, flux grown, obs. of macrospiral 7—124239
ZnS, crystal whiskers, struct. and twist, X-ray topography studies 7—143302

scrubbing (abrasion) *see abrasion*

scuffing *see abrasion*

SDI *see information dissemination*

sea ice
1986 International Geoscience and Remote Sensing Symposium, conf., Zurich, Switzerland (1986 September) 7—95093
Amundsen Sea, Antarctica, sediments rel. to Recent glacial history and rapid ice stream retreat 7—145493
Antarctic sea ice and W Pacific subtropical high intensity and area indices 7—127293
W Antarctica, seismic travel times of till beneath Ice Stream B 7—145540
W Antarctica, struct. and continuity of till beneath Ice Stream B 7—145541
Arctic ice/water boundaries, Seasat scatterometer obs. 7—101586
Arctic Ocean, deforming broken ice field dynamics, granular flow theory 7—94233
Arctic sea ice, microwave signatures inter-sensor comparison 7—101564
Baltic Sea, sea ice conc. determ. from satellite microwave radiometry 7—79623
Baltic Sea, sea ice studies using Nimbus 7 SMMR 7—114801
Beaufort and Chukchi seas, ice motion from satellite radar data 7—133725
Se Beaufort Sea, effects of ice cover on nutrients distrib., water circulation, and primary prod. 7—94303
Bering Sea, sea ice extent fluctuations rel. to atmos. circulation 7—133724
Bering Sea polynyas due to offshore winds, max. size attained 7—133718
Bering Strait, sea ice drift during 1982 AD 7—133723
Bering Strait, sea ice movement forecasting and driving forces 7—101322
brine drainage channel formation processes 7—133728
Canada, operational SAR data collection and dissemination plans for ERS-1 data 7—101331
Caspian Sea, rafted ice thickness, calculation and prediction 7—107448
circulation of ocean including sea ice effects, diagnostic ice-ocean model 7—145514
collisions between ice floes, role in sea ice rheology 7—133721
constitutive law for sea ice and its motion 7—120034
Crozier Channel (near Beaufort Sea), microwave emissions from sea ice 7—79434
diffusive transport of light 7—133694
dynamics, feedback between feedback between ice flow, barotropic flow and baroclinic flow in presence of bottom topography 7—114736
dynamics of ocean below sea ice, SAR radar technique for mesoscale phenomena 7—127253
first-year sea ice, simulated, microwave backscatter coeffs. 7—101330
floating ice plate, waves due to a steadily moving source 7—139629
floe-structure interaction simulation 7—94246
Fram Strait, atmospheric boundary layer dynamics in marginal ice zone 7—133840
Fram Strait, Greenland Sea, marginal ice zone SAR observations 7—101337
Fram Strait, marginal ice zone melting and sub-ice mesoscale features 7—107425
Fram Strait, microwave backscatter properties of marginal ice zone 7—101338
Fram Strait, microwave sea ice signatures in summer 7—127252
Fram Strait, physical props. of summer sea ice 7—127250
Fram Strait, sea ice discharged from Arctic Ocean, characts. 7—133772
Fram Strait marginal ice zone, ice and ocean characts. 7—133769
Fram Strait marginal ice zone, ice edge var. 7—133768
Greenland Sea, dynamics and thermodynamics of ice-upper ocean system in marginal ice zone 7—133715
E Greenland Sea, effect of observed ice conditions on drag coeff. in summer marginal ice zone 7—133710
Greenland Sea, fine structure, internal waves and intrusions in marginal ice zone 7—133706
NE Greenland Sea, high-freq. internal waves obs. in marginal ice zone 7—133707
Greenland Sea, ice cover and Odden ice tongue, satellite obs. 7—101339
Greenland Sea, ice edge noise 7—142082
Greenland Sea, ice floe collisions accelerometer observations 7—133720
Greenland Sea, mesoscale var. in surface stress, heat fluxes and drag coeffs. in marginal ice zone 7—133708
Greenland Sea, wind stress meas. over rough ice during 1984 Marginal Ice Zone Experiment 7—133709

sea ice continued
Greenland Sea and Fram Strait, mesoscale and large-scale ice morphology 7—127251
Greenland Sea marginal ice zone, boundary layer, upper ocean and ice obs. 7—133713
Greenland Sea marginal ice zone, ice floe kinematics 7—101340
Greenland Sea marginal ice zone, mesoscale ice deformation 7—133719
growth and decay modelling, role of leads and polynyas 7—72063
Gullmaren fjord, under ice cover response to wind and Baltic Sea outflow 7—120030
heat flux from ocean to atm. through sea ice *(Japanese)* 7—107427
ice edge bands formation, in stability theory of ice-air interaction 7—133711
internal gravity waves under Arctic pack ice 7—72052
internal structure, use of X-ray computed tomography *(Japanese)* 7—107541
light scattering and absorpt. in sea ice of McMurdo Sound, Antarctica 7—94291
Marginal Ice Zone Experiments (1983), bottom ablation and heat transfer coeffs. 7—133714
Marginal ice Zone Expt. in Fram Strait and Greenland Sea 7—127244
mean ocean temperature-sea ice system, periodic forcing rel. to long-term climatic vars. 7—79582
melting of ice floes in Greenland Sea, lateral melt rate observations 7—133717
melting of ice sheet by induced convection 7—72081
microwave backscatter properties of marginal ice zone of Fram Strait 7—101338
microwave emission from sea ice around Greenland 7—79433
microwave emissions from ice near to onset of melting 7—79434
microwave emissivity and backscatt. props. in marginal ice zone 7—127252
microwave freq. tensor dielectric constant, model predictions 7—79432
microwave obs. of sea ice and iceberg 7—87980
microwave radiometer weather-correcting sea ice algorithm 7—127241
microwave remote sensing of snow-covered sea ice 7—101329
motion, random discontinuous model 7—127240
polar sea ice sub-tropical atmospheric circulation interactions, Northern Hemisphere 7—107480
polynyas caused by offshore winds, model of maximum size 7—133718
porous sea/ice water interface, sand refraction and reflection 7—117390
pseudopiezoelectric effects in natural ice, evidence from EM radiation 7—99684
remote sensing, automatic tracking mode switching algorithm for ERS-1 altimeter 7—101663
remote sensing, performance, calibration, and data validation of ERS-1 radar altimeter 7—101662
remote sensing (book) 7—88758
remote sensing method for sea ice topography, 36 GHz surface contour radar method 7—107535
remote sensing methods, SIR-B and SMMR techniques 7—133726
remote sensing methods for ice concentration, radar, passive microwave imagery and optical methods 7—127254
Ross Ice Shelf, W Antarctica, ice dynamics at mouth of Ice Stream B 7—145538
Ross Ice Shelf, West Antarctica, morphology of Ice Streams A, B and C and their environs 7—145537
SAR automated remote sensing 7—101566
scalar roughness and scalar transfer coeff. over snow and sea ice 7—101375
Sea of Okhotsk, sea ice extent fluctuations rel. to atmos. circulation 7—133724
seawater-ice turbulent boundary layer with melting or freezing 7—72060
sonar measurement system for ice cover movement determ. 7—79704
Southern Ocean, effect of sea ice changes on atmospheric winter circulation 7—114952
Southern Ocean, obs. of recurring polynyas over Cosmonaut Sea and Maud Rise 7—94266
W Spitsbergen, evidence for Late Weichselian open water from Broggerhalvoya 7—72001
STAR-VUE, tactical ice navigation workstation, design criteria and system description 7—115118
summer decay of sea ice cover, role of shortwave radiation 7—133716
surface roughness meas. using X-band radar *(Japanese)* 7—107428
turbulent momentum transfer in boundary layer beneath sea ice, time-depend. model 7—133712
upwelling at ice edge, mechanism for deep water form. 7—114740
Weddell Sea, marginal ice zone, remote sensing obs. 7—133726
Weddell Sea ice sheet dynamics, role of standing waves 7—72080
Winter Ice Experiment Beaufort Sea (WIEBS)—data collection 7—133751

sealing *see seals (stoppers)*

seals (stoppers)
see also glass-metal seals
bimetallic transition couplings, metallurgically bonded, for cryogenic service 7—73362
high-pressure fluid seals, for up to 2 kbar, analysis and expt. 7—121140
high-vacuum seal for low temperatures 7—102428
LWR fuel assembly sealing techniques 7—122014
magnetic fluid coded seal, thermodynamic process modelling 7—97671
magnetic fluid seals, design problems and appls. 7—73373
nuclear fuel transport/storage flasks, sealing techniques 7—122014
resistance heater lead-ins with conical seals, for high-pressure chambers 7—134800
vacuum valve, 12×4 ft, development for laser isotope separation chamber 7—134752

seawater
θ-S relations in northern seas, implications for deep circulation 7—79451
abnormal phenomena in ocean, oceanographic approach for diagnosis *(Japanese)* 7—114785
abyssal temperature anomalies, large-scale influence of geothermal sources 7—94268
SW African coast, sea surface temps. rel. to rainfall vars. in equatorial and southern Africa 7—145626
Antarctic Bottom Water in N Atlantic, ratio of mixing coeffs. of heat and salt 7—94274
Central Arabian Sea, circulation and water mass struct. (December 1982) 7—139627
Arabian Sea, distrib. of various forms of Cd, Pb and Cu in Wadge Bank region 7—139637

seawater continued
Arctic Ocean, mass, heat and salt transports with special emphasis on Fram Strait 7−139633
Arctic Ocean, ventilation rate of deep ocean basins from ^{14}C data 7−114733
E Atlantic deep water, renewal rates estimation by inversion of ^{14}C data 7−94273
tropical Atlantic Ocean, annual cycle of subsurface heat budget and thermal struct. 7−87659
NW Atlantic Ocean, glacial thermocline struct. at Little Bahama Bank 7−114792
Equatorial Atlantic Ocean, North Equatorial Countercurrent obs. (July 1982 to August 1984) 7−114731
Atlantic Ocean, response of equatorial thermocline to seasonally varying trade winds 7−114729
Equatorial Atlantic Ocean, response to trade wind vars. (1983 to 1984) 7−114732
equatorial Atlantic Ocean, surface temp. and thermocline depth response to wind stress vars. 7−114910
equatorial Atlantic Ocean, vel. and temp. obs. at 28°W during SEQUAL expt. 7−114744
N Atlantic polar front, retreat vel. during last deglaciation from ^{14}C accelerator mass spectrometry 7−133757
Australian North West Shelf, internal hydraulic jumps and solitons at shelf break region 7−114756
Baffin Bay, oceanographic conditions rel. to polar water outflow through Canadian Arctic Archipelago 7−79452
Baltic Sea, dense water flow computations from hydrographic meas. in Arkona Basin 7−94297
Batschinski relation, empirical consts. 7−72036
S California, evidence for cool last interglacial ocean from stable isotope comps. of fossil molluscs 7−133704
colligative props. empirical relations 7−72033
convection model for dolomitisation of atolls, evidence from Niue island, South Pacific 7−101273
Cordova Channel, British Columbia, temp. and acoustic, scintillation structure of turbulent tidal flow 7−114754
deep water formation, role of upwelling at ice edge 7−114740
deep-sea hydrothermal deposits, anomalous $^{234}U/^{238}U$ ratios 7−72004
differential pulse cathodic stripping voltammetry use for Ni and Co determ. 7−87708
dimethylsulphide, regional and seasonal vars. in flux to atmosphere 7−94302
DSDP Leg 82 gabbros, metamorphic crystallisations, fluid phase effects 7−127194
El Nino-Southern Oscillation, detect. of signal in continental temperature and precip. records 7−107503
El Nino/Southern Oscillation, quadratic temp. iteration 7−87660
equations of state for seawater, Knudsen-Ekman compared to International 1980 7−87694
fluorescence spectra, laser-induced, of natural waters, environmental effects 7−79688
freezing point salinity depend. 7−72035
Greenland Sea, dynamics and thermodynamics of ice-upper ocean system in marginal ice zone 7−133715
Greenland Sea, fine structure, internal waves and intrusions in marginal ice zone 7−133706
Greenland Sea marginal ice zone, boundary layer, upper ocean and ice obs. 7−133713
Gulf of Guinea, appl. of sea surface temps. to prediction of Sahelian rainfall 7−79559
Gulf of Maine, influence of warm core rings on slope water influx 7−127257
hydrophysical fields sampling, evaluation of Rapid-Sampling Vertical Profiler 7−127565
ice-seawater turbulent boundary layer with melting or freezing 7−72060
W Indian Ocean, ^{210}Pb distrib., disequilibrium and partitioning between dissolved and particulate phases 7−145524
W Indian Ocean, ^{226}Ra profiles and oceanographic characts. 7−145523
Juan de Fuca Ridge, Pacific Ocean, vent fields hydrothermal plumes characts. 7−145485
Kuroshio Extension, N Pacific Ocean, meas. near Emperor Seamounts 7−114738
E Levantine basin, temp. and salinity meas. rel. to small synoptic/mesoscale eddies 7−107430
mean ocean temperature-sea ice system, periodic forcing rel. to long-term climatic vars. 7−79582
measurement standard, certification procedures in USSR for 'normal' seawater 7−87947
Mediterranean outflow, hydrographic evidence for contrib. from Western Mediterranean Deep Water 7−94271
W Mediterranean Sea, circulation of Levantine Intermediate Water in Algerian Basin 7−127262
Meteorological Office Historical Sea Surface Temperature Data Set, quality control and appls. 7−133756
methane oxidation and methane fluxes in the ocean surface layer and deep anoxic waters 7−101345
mid-ocean ridge gabbros, two-phase separation and fracturing (above 700°C) 7−127193
mixing efficiency is stably stratified grown turbulence, meas. in uniform gradient shear flows 7−114762
Neogene seawater Sr isotopic evolution 7−127280
North Sea, results of Dutch monitoring programme, on TiO_2 acid waste discharges 7−139152
ocean deep waters, vars. in form. mode and temp. over past 125 kyr 7−107431
optical absorption coeff., empirical relations 7−72038
optical properties, meas. using fibre optics 7−79700
osmotic press. as salinity and temp. function 7−72032
E Pacific Ocean, hydrographic variability west of Galapagos Islands during 1982-3 El Nino 7−87697
NE Pacific Ocean, mesoscale variability off Central California coast 7−87696
equatorial Pacific Ocean, obs. of annual and El Nino thermal and flow vars. (1980 to 1985) 7−127258
equatorial Pacific Ocean, water transport rel. to sea level trends (1974-75 to 1981) 7−114742
Panama Basin, response of particulate matter distribs., chemistry and flux to environmental forcing 7−87695
petroleum hydrocarbons in bottom-sediment, plankton and seston of Stockholm archipelago, chemical fingerprinting 7−139151
plume flow measurements from hydrothermal vent field, total heat flow and max. plume height 7−87602
radiative transfer, two-stream irradiance model for deep waters 7−114714
radiative transfer eqns. in vertically inhomogeneous scattering media, Green's functions determ. *(Russian)* 7−145663
resistivity soundings interpretation for seawater intrusions in NE Spanish coast 7−119939
Rupert Inlet, British Columbia, continuous and surge-type flows rel. to submarine channel form. 7−94202
Rupert Inlet, British Columbia, surge-type turbidity currents and submarine channel form 7−94201
Santa Monica Basin, Th isotopes in dissolved and particulate form., profiles 7−145522
NW Sargasso Sea, contrib. of advection and diapycnal mixing to seasonal cycle of upper ocean struct. 7−114753
sea surface temp. at Puerto Chicama, Peru, time series rel. to strange attractor for Southern Oscillation 7−87886
sea surface temperature, hemispheric and global response to increasing greenhouse gases 7−87887
sea surface temperature changes, response of atmospheric boundary layer height 7−127389
sea surface temperatures, comparison of aircraft meas. using remote and direct sensing techniques 7−127236
seasonal thermocline mixing, indications from available potential energy of overturns 7−114752
solar desalination plant for seawater distillation, computer simulation results comparison 7−139126
solar radiance distrib. in deep water inc. fluorescence effects 7−114715
Southern Ocean, temp. distrib. rel. to recurring polynyas over Cosmonaut Sea and Maud Rise 7−94266
Spencer Gulf, South Australia, episodic stratification and gravity currents in modulated turbulence environment 7−114761
standard seawater comparisons 7−133737
steel, stainless, extra low interstitial superferritic, in chloride environments under galvanic coupling, corrosion behaviour 7−138878
subLF EM fields, large amplitude changes induced by seabed 7−133570
surface emissivity of turbid waters, meas. rel. to sea surface temp. sensing 7−79453
surface layers bubble clouds and temp. anomalies, obs. rel. to mixing processes 7−114791
surface temperature front in equatorial Atlantic Ocean, assoc. long waves obs. 7−94267
surface temperature meas., comparison of satellite-derived temps. with in situ skin meas. 7−94270
surface temperatures, relation between El Nino events and variability in United States cloudiness 7−145627
suspended sediment concs. on Purie and Madras beaches, E India, contrib. to sediment transport 7−139587
temperature anomalies of N Atlantic and Arctic Oceans, modelling of asynchronous relationships 7−133752
temperatures in marginal ice zone, relation to bottom ablation and heat transfer coeffs. 7−133714
thermal stratification, one-dimensional modelling 7−120026
viscosity, salinity depend., linear empirical relation 7−72034
visible light half-value thickness 7−72037
water mass composition anal., least squares multiple tracer technique 7−94488
water masses transformation by global circulation, effect on marine biota production 7−139638
water-mass conversion, role of thermobaricity and cabbeling 7−114760
West Spitsbergen Current, disposition and water mass transform. 7−114734
Cd content due to upwelling and industrial fallout, determ. from Cd meas. in corals 7−133777
H_2O_2 variability in ocean surface water, contrib. of rainwater 7−94304
^3He excess in ocean surface layer 7−127282
Pb pollution in NE Atlantic Ocean, evidence from deep-sea sediments 7−78693
$^A Pu$, A=239,240, fallout in marine samples, mass spectrometric determ. 7−144926

second-order optical susceptibility *see nonlinear optical susceptibility*

second sound
see also liquid helium sound propagation
transport in phonon systems, book 7−72740
^3He, superfluid, Peshkov transducer 7−137651
^3He-^4He dilute superfluid mixture, second sound nonlinear wave interactions *(Russian)* 7−124612
^3He-^4He mixtures, solid-superfluid interface phenomena 7−105173
^4He, superfluid, electrokinetic phenomena 7−70008
^4He, superfluid, flow velocities in rotating cylinder, during spin-up, first and second sound transit time meas. *(German)* 7−76521
^4He, superfluid, porous media probing using sound propagation 7−111991
^4He, superfluid, second sound nonlinear wave interactions *(Russian)* 7−124612
^4He, superfluid, second sound velocity, precision meas. 7−137641
^4He, superfluid, thermal shock struct. 7−91911
^4He, superfluid film, temp. variation of first and second sound 7−70006
^4He, superfluid fraction from 1.5 K to $T_\lambda(P)$ and from vapour press. to melting curve 7−76515

secondary cells
30 kW solar installation with solar array, DC/AC invertor, storage battery and computerised monitoring 7−133089
Al/air batteries develop. 7−106899
batteries for artificial hearts 7−71934
conductive polymer electrodes, electroactive, appl. to nonaqueous secondary batteries, review 7−93494
electrochemical generators, data acquisition and test monitoring system 7−126589
electrode couples and electrolytes, factors affecting choice *(French)* 7−126571
Li battery, $Fe_xNb_{1-x}Se_3$ with 1D struct. as positive electrodes, electrochemical behaviour 7−93500
Li rechargeable cells, V_2O_5 in electrodes, cycling behaviour 7−126593
organic polymer batteries, critical aspects 7−93497
poly(3-methylthiophene) film as cathode-active material in nonaqueous secondary batteries 7−114092
polyacenic semiconductor based battery 7−93498
polyacetylene, doped, electrochemical reaction with acetonitrile electrolytic soln., battery appl. 7−93339

secondary cells continued
polyacetylene batteries, scaling up and problems 7—93499
polyacetylene battery with unsymmetrical tetraalkyl ammonium salt 7—93495
polyacetylene electrodes for all-plastic battery 7—71596
polyaniline, electrochemistry and appl. to rechargeable batteries 7—71502
polyaniline anode in $LiClO_4$/propylene carbonate electrolyte, electrochemical props. 7—71501
polyazulene, electrochemically formed, appl. to secondary battery 7—114090
polypyrrole film cathode in secondary cell, electrochem. behaviour in $LiClO_4$-propylene carbonate 7—86781
polypyrrole/Li rechargeable cells, capacity and self-discharge 7—78626
polyvinylferrocene electrode-active material for polymer batteries 7—100712
power and energy-CHP, nuclear power, generators secondary cells and acid rain 7—71658
Prussian blue containing Nafion composite film as rechargeable battery 7—144814
pulse power tests 7—139106
space vehicle batteries and fuel cells, principles for system level electrochemistry 7—106900
Al, electrochemical energy conversion and power sources appls. 7—93488
C fibre electrode for redox flow battery 7—114089
$Cu_xMo_6S_{8-y}/Rb_4Cu_{16}I_7Cl_{13}/Cu_xMo_6S_{8-y}$, rechargeable all solid-state cell 7—144817
$Cu[Fe(CN)_6]_3$ thin layer suitability for secondary cell electrodes 7—119642
Fe electrode for alkaline storage batteries, statistical optimisation 7—86780
Fe^{2+}/Fe^{3+} redox system, study using DC linear polarisation and impedance techniques 7—93490
$Fe_4[Fe(CN)_6]_3$ thin layer suitability for secondary cell electrodes 7—119642
$LaNi_5H_x$ electrodes, charge discharge characteristics 7—106901
Li ambient temp. rechargeable batteries, solvent blending effects on cycling characts. 7—133084
Li ambient-temp. secondary battery assessment for electric utilities and vehicles 7—133086
Li, appl. of electrochemically formed polypyrrole film anodes 7—133076
Li, appl. of fibrous polyaniline as positive active material 7—133078
Li, appl. of polyaniline as conductive polymer anode 7—133077
Li batteries, Bi_2O_3-PbO cathode materials, X-ray crystallographic and thermodynamic studies *(French)* 7—69675
Li batteries, electrodes, electrolytes, performance and characts. conf., Kyoto, Japan (May 1986) 7—120692
Li batteries employing $Cu_{3+\delta}Mo_6S_{7.9}$ porous thin films 7—133074
Li cell, users guide 7—100705
Li cells, $NiPS_3$ cathode material for high energy 7—100706
Li, electrochemical and structural characteristics of Nb_2O_5 in rechargeable batteries 7—133073
Li, electrode corrosion protection using hydrocarbon electrolyte additive 7—133079
Li, impedance measurements of polyacetylene cathode in electrolytic solns. 7—133075
Li, investig. of electrochemical behaviour of amorphous vanadium oxide cathodes 7—133072
Li rechargeable batteries, stable organic electrolytes 7—126592
Li rechargeable batteries, new anions as supporting electrolytes 7—133082
Li rechargeable batteries develop., cathode active materials, electrolytes 7—126591
Li rechargeable cells, C blacks as cathode material 7—144813
Li rechargeable cells, solvent effects 7—133081
Li rechargeable cells, V_2O_5, V_6O_{13} and $Li_{1+x}V_3O_8$ as electrode materials, cycling behaviour 7—126594
Li secondary batteries, solid-state composite polymer positive electrodes 7—144815
Li secondary cells, electrode kinetics in poly(ethylene oxide)-based electrolytes 7—133065
Li secondary cells, structure-conductivity relationship in polymer electrolytes 7—133085
Li solid-state rechargeable cells, polypyrrole-polyethylene oxide electrode, cycling behaviour 7—139104
Li, using Cu chevrel phase thin film, characts. *(Japanese)* 7—86777
Li^+ conducting solid polymer electrolytes, appl. to solid-state storage cells 7—114091
Li/I_2 (poly-2-vinylpyridine) battery, rate limiting mechanism, component morphologies, SEM study 7—71592
Li/I_2 (poly-2-vinylpyridine) battery, rate limiting mechanism, impedance spectroscopy 7—71593
Li/Li_xMoS_2 secondary cells, electrolyte reactions, in situ study 7—100707
Li/nonylbenzo-hexaquinone cells, redox mechanism and cycling behaviour 7—126595
Li/polyacetylene solid-state battery 7—126596
Li/polypyrrole battery, PF_6^- anion effects 7—71595
Li-amorphous V_2O_5-P_2O_5 secondary batteries, ethylene carborate/ether solvent 7—133083
Li-FeS_2 cells, electrochemical reactions in molten salt electrolytes 7—100709
Li-Li_xCoO_2 rechargeable cell, $LiAsF_6$ in methyl acetate as electrolyte 7—139105
Li-$LiBF_4$-poly(2,5-pyrrolylene) secondary cell current and energy efficiencies 7—119641
Li-$LiClO_4$-poly(2,5-thienylene) secondary cell current and energy efficiencies 7—119641
Li-organic electrolyte batteries, electro-chemical stability of heterocyclic semicond. polymers as cathode-active materials 7—93496
Li-TiS_2, organic electrolyte solns. study 7—133080
Li-$V_9Mo_6O_{40}$ secondary cells, performance 7—114088
LiAl/FeS_2 high temp. cells, mathematical modelling 7—144812
$Li_xMo_2O_4$, cathode material for secondary Li cells 7—144816
$Li_xNi_{1-x}PS_3$, Li intercalated $NiPS_3$, struct., conduction mechanism, appl. as secondary battery electrode 7—92183
Li(Si)/FeS_2, high temp. cells, mathematical modelling 7—144812
MoO_2-$LiCoO_2$, Li intercalation cells without metallic Li 7—114087
a-MoS_x electrodes for nonaqueous secondary cells 7—100711
Na liq.-β-alumina/$NaAlCl_4$-(Fe,Ni)Cl_2 Zebra battery cell 7—139101
Na^+ conducting solid polymer electrolytes, appl. to solid-state storage cells 7—114091
Na-S accumulator, development *(German)* 7—126590
secondary cells continued
Na-S battery cathode additive effectiveness test by cyclic voltammetry 7—119636
Na-S battery system development 7—71597
Na-S battery with ceramic electrolyte for electric vehicles *(German)* 7—139100
Na-S cell, numerical simulation of dual mat S electrode 7—114086
Na-S cells, porous S electrodes, electrochemical reaction rate, 2D distribution 7—71594
Ni/metal hydride sealed battery using microencapsulated H_2 storage alloy 7—100710
Ni-Cd battery, comparison with Pb acid battery *(German)* 7—144811
Ni-Cd cell, electrode kinetics, failure model prediction 7—86778
Ni-Cd cells, discharged and shorted, open-circuit voltage recovery transient 7—119637
Ni-Cd sealed prismatic and cylindrical cells, plastic-bonded electrode limitations 7—139103
Ni-Fe alkaline accumulators, study of Fe_3O_4 electrodes 7—93492
Ni-Fe rechargeable cells, alkaline porous Fe electrodes, open circuit potential-recovery transients 7—139108
Ni-H cells, overcharge effects on capacity below 1 V 7—139107
Ni-H_2 battery, anode catalyst for aerospace system 7—78625
Pb acid batteries, Sb poisoning 7—93491
Pb acid sealed cell, O_2 recombination 7—93489
Pb-acid batteries, pasted-type, positive plates, discharge performance, anisotropic graphite effects 7—100708
Pb-acid battery, AC superimposition effect on capacity and cycle life 7—71591
Pb-acid battery, behaviour of C black in positive electrodes 7—119638
Pb-acid battery negative plate mass vol. pulsation obs. 7—133070
Pb-acid cell low-temp. charge acceptance rate obs. 7—133071
Pb-acid cells, Sb(V) transport in H_2SO_4 7—71590
Pb-Sb alloy grid corrosion in stored lead-acid batteries 7—139102
V_2O_5, cathode for solid rechargeable battery, insertion of Mg^{2+} and Zn^{2+} bi-valence cations 7—69974
WO_2-$LiCoO_2$ 7—114087
Zn redox battery flow cell, mass transfer 7—86779
Zn-Br flow cell, mathematical model 7—100713
Zn-ZnI_2-polyaniline battery charge storage and energy efficiency obs. 7—119640
Zn-Zn(Cl,Br)$_2$-polyaniline battery charge storage and cycling obs. 7—119639
$ZnBr_2$ cells, preparation and performance of plastic-bonded-CBr electrodes 7—93493

secondary electron emission
atom-ion collisions, secondary electron spectra 7—96834
Auger electron appearance potential fine struct. spectroscopy, improved spectrometer 7—121309
biological applications of SEM 7—145302
dielectric, secondary electron emission coeff., space charge form. effects 7—119079
energy- and angle-selected, statistical analysis 7—80945
graphite, secondary-electron emission in H_2^+ plasma 7—138558
Kapton, secondary electron and photo-emission, electron yields and escape depths 7—113323
magnetic and nonmagnetic solids, spin polarised electron emission 7—132403
magnetic field obs. using secondary electron images in SEM 7—128717
organic ion detection by secondary electron prod. 7—106318
plasma with hot electrons, potential measurements using secondary electron emission-capacitive probe 7—117757
polyimide films, surface characterisation, high resolution EELS studies 7—143141
polymers, surface charging by electron irrad., secondary emission yield determ. 7—85052
SEM, topographic contrast in linewidth meas. 7—80942
surface topography using backscattered electron signal 7—142542
surfaces (100), (110) and (111), angular resolved secondary electron emission, effect of band struct. 7—70949
Teflon, secondary electron and photo-emission, electron yields and escape depths 7—113323
wall probes current-voltage characts., study in TEXTOR tokamak, secondary electron emission effects 7—75803
Al foil, fast light ion bombardment, secondary electron emission 7—113333
$BaTiO_3$ ceramic, ferroelec. domains, SEM direct imaging, secondary electron and cathodolum. studies *(German)* 7—85556
Be film on Pt substrate, secondary electron spectra K-shell ionisation lines intensity, elastic scatt. effects *(Russian)* 7—70950
Be oxidised surface, secondary electron yield fine struct. meas. method 7—92789
C foil, secondary electron emission from fast ion bombardment 7—99997
Co, ferromagnetic, spin polarisation of secondary electrons 7—119077
Cr_2O_3 surface props. studies 7—131395
Cu, monocryst., near-surface layer, ion beam movement patterns, secondary ion-electron emission method 7—92819
Cu:Cr, secondary electron emission characteristics improvement by ion implantation 7—106320
Fe, ferromagnetic, spin polarisation of secondary electrons 7—119077
Fe targets, RF sputtering, surface oxidation 7—113331
Fe-Ni-B metallic glasses, ferromag., spin polarisation of secondary electrons 7—138559
$Fe_{82}B_{12}Si_6$, metallic glass, ferromag., spin polarisation of secondary electrons 7—138559
GaAs, MBE, secondary electron emission oscills., RHEED obs. 7—71018
GaAs, surface As oxide formation 7—78390
GaAs:$Ba^{2+}(Na^+)$, Auger electron spectra, secondary electron yields, work function 7—77709
GaP:$Ba^{2+}(Na^+)$, Auger electron spectra, secondary electron yields, work function 7—77709
$H^+ + H_2$, singly differential cross-sections for secondary electrons prod. 7—75755
H_2, solid, secondary electron emission, energy and angular distrib. 7—76539
Ni (110), O adsorption, magnetic probing depth in spin-polarized secondary-electron spectroscopy 7—119078
Ni (111), adsorbed O_2, secondary electron spectra and work function 7—85906
Ni, ferromagnetic, spin polarisation of secondary electrons 7—119077

secondary electron emission continued
Ni surfaces, band struct., low energy elastic electron reflection meas. 7−105390
Si, secondary radiation yield, effect of X-ray total external refl. 7−70973
SiO_2:Bi semiconducting glasses, secondary electron emission charact. determ. 7−144189
V_2O_5:Bi semiconducting glasses, secondary electron emission charact. determ. 7−144189
W surface, bombard. by slow highly charged ions, electron emission 7−106344
W surface, interaction with Ar^{9+}, secondary electron energy distribs. meas. 7−92790
ZnO sputtered films, physical props. 7−125873

secondary emission
see also secondary electron emission; secondary ion emission
No entries

secondary ion emission
see also secondary ion mass spectra; secondary ion mass spectroscopy
alloys amorphous, secondary ion emission, energy distrib. 7−132400
biomolecules, secondary ion emission from liquid matrices, primary ion beam parameters effects 7−139057
direct recoil sputtering and secondary ion production, review 7−125889
elements, secondary ion emission, energy distrib. 7−132400
ion beam induced sputtering, secondary ion emission 7−113330
ion formation in spontaneous desorption TOF mass spectra 7−106319
Cr-Ni, secondary ion emission, chemical and physical matrix effects 7−77718
Fe-Cr, secondary ion emission, chemical and physical matrix effects 7−77718
Fe-Cr-Ni, secondary ion emission, chemical and physical matrix effects 7−77718
Fe-Ni, secondary ion emission, chemical and physical matrix effects 7−77718
Ge positive secondary ion sputtering yield, chem. bonding effects, XPS study 7−85924
O_2 chemisorption on metals and III-V semiconductors, excited molecular ion emission on Ar^+ bombardment 7−70959
PbO_2, Kr-bombardment induced secondary ion emission spectra study 7−85915
Si clusters, charge transfer in secondary ion emission, tight binding model 7−113336
Si positive secondary ion sputtering yield, chem. bonding effects, XPS study 7−85924
Si, secondary ion emission, quasiresonant electron-exchange mechanism 7−85927
Si:O (100), secondary ion emission, dynamical charge transfer processes 7−125902
Si:O clusters, charge transfer in secondary ion emission, tight binding model 7−113336
SnO, Kr-bombardment induced secondary ion emission spectra study 7−85915
SnO_2, Kr-bombardment induced secondary ion emission spectra study 7−85915

secondary ion mass spectra
alloys, mechanical props. and struct. modifications w.r.t. pulsed ion beam effects 7−117988
biomolecules, secondary ion emission from liquid matrices, primary ion beam parameters effects 7−139057
chemical state depth profiling, energy distrib. curves, factor anal. 7−139071
depth resolution loss with depth due to ion dose density variations across rastered area 7−80930
dielectrics, local surface analysis, secondary-ion mass spectrometry 7−131409
electrode, surface and electrochemical product charactn. using Nier-Johnson secondary ion mass spectrometer 7−134873
glycerol matrix, polyatomic ions sputtering, collision cascade model anal. 7−138566
graphite erosion and deposition in JET wall surfaces, SIMS anal. 7−75809
III-V semiconductor layers, MBE grown, charact. by SIMS 7−84008
III-V semiconductors, optical and electrical properties 7−131586
iodonium salts, positive secondary ion mass spectra, solvent effect 7−71549
isotope effect 7−119092
low energy ion beams conf., Brighton, Sussex, England (April 1986) 7−66825
negative atomic ions, double-charged, secondary ion mass spectra meas. 7−93433
non-conducting materials, neutral and ion beam SIMS 7−85936
polymers, ion beam induced chemical changes, SIMS studies 7−86651
polysilicon-SiO_2 transition layers, Hubbard subband cond. 7−125136
semiconductor III-V cpd. multilayer device structs., ion beam etching, in situ monitoring 7−132837
SiC fibres, CVD coated with C(SiC), EELS and SIMS studies *(French)* 7−113413
steel, B ion implantation, grain boundary segregation, SIMS 7−104776
steel, N ion implantation, surface struct., wear resist. 7−104775
sulfonium salts, positive secondary ion mass spectra, solvent effect 7−71549
surface studies, factor analysis techniques 7−114050
Swedish nuclear waste glasses, leachability rel. to comp., SIMS obs. 7−109490
, Si, ion implantation by $^1H(^2H)$, random and channelling depth distributions 7−111701
Al, surface pretreatments for oxide form., adhesive bonding 7−71349
Al/Nb multilayer structure, SIMS depth profiling using Ne, Ar, Kr and Xe ions and neutral species 7−77744
AlAs-GaAs:Si superlattices, Si-induced intermixing 7−111976
AlGaAs - GaAs:Si, MOCVD produced heterostructure lasers, power and temp. performance 7−82567
AlGaAs, quantitative SIMS meas. rel. to alloy composition and ion beam energy 7−70961
AlGaAs:C films grown on GaAs substrates, C incorporation in MOCVD growth 7−100090
AlGaAs-GaAs, multi quantum well laser, index guided, Si induced disordering 7−141893
AlGaAs-GaAs:Si implanted superlattices, compositional disordering, effect of rapid thermal annealing 7−71211

secondary ion mass spectra continued
$Al_xGa_{1-x}As/Si_{2x}(GaAs)_{1-x}/GaAs$ quantum well structs., impurity-induced layer disordering and thermal annealing 7−70097
AlN, solid Al^+ ion source 7−85937
Au/GaAs, sputtering-controlled ion mixing 7−91664
BN surface layers on Fe, reactive ion beam enhanced deposition 7−119171
$CaCO_3$-$SrCO_3$ system, calcite bicrystals, chemically induced grain boundary migration 7−118158
Co, thermal oxidation rel. to ion implanted impurities 7−138897
$CoSi_2$ form. at Co/Si interface, self-aligned process and elec. charact. 7−98714
CrN, surface layers on Fe, reactive ion beam enhanced deposition 7−119171
Cu film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152
Cu substrate with adsorbed benzaldehyde, secondary ion mass spectra and XPS studies 7−92835
Fe, passivation in borate buffer solution, ^{18}O/SIMS study 7−100419
Fe-Al bilayers, ion beam induced at. mixing, RBS, TEM, SIMS, resist. meas. 7−84069
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glass, corrosion in H_2SO_4, chloride ions effect 7−106710
$Fe_{2-x}Cr_xO_3$, passive oxide films on FeCr, comparison of Auger and SIMS anal. 7−132387
$Ga_{1-x}Al_xAs$, MOVPE multilayer growth, transient composition effects 7−98733
GaAs (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
GaAs crystals, He ion channeling, ranges and depth distributions 7−111702
GaAs film growth by vacuum chemical epitaxy using thermally precracked trimethyl arsenic 7−119147
GaAs, ion implantation by $^1H(^2H)$, random and channelling depth distributions 7−111701
GaAs, LPE growth, deoxygenation of Ga solvent 7−137754
GaAs shallow ion implantation profiles for device dimension scaling, C-V and SIMS studies 7−76176
GaAs substrates, cleaning by H radical beam irrad. 7−71415
GaAs:B, impurity distrib. and conc. determ., IR absorpt., SIMS and Hall effect meas. 7−124314
GaAs:Cr,Fe,Zn, SIMS calibration exercise 7−134887
GaAs:Cr,Si dopant distrib. and elec. activation by short time annealing 7−84019
GaAs:Si,C, atmospheric press. organometallic CVD growth using triethylarsenic 7−77837
GaAs:Si MBE heavily doped layers, compensation mechanism 7−70329
GaAs:Si/AlGaAs superlattices, ion implanted, surface region disordering 7−124729
GaAs:Si(Se), SIMS analysis of isotopic impurities in ion implants 7−84009
GaAs:tn, Si, Si diffusion, background doping depend. 7−84391
GaAs/AlGaAs interfaces, MBE grown, O accumulation, SIMS profiling 7−105289
GaAs-Au, encapsulated ohmic contacts, alloying process 7−98722
GaAs-$Ga_{1-x}Al_xAs$ modulation-doped quantum wells, temp. depend. of electron mobility 7−85065
GaAs-GaAlAs superlattice including sub-monolayer grown by MBE, SIMS anal. 7−84547
GaAs-GaAlAs:Si superlattices, enhanced disordering by Si ion beam implantation 7−118291
$GaAs_{1-x}P_x$:N VPE layers, N conc. determ., SIMS, absorpt. spectra, cathodoluminesc. meas. 7−106227
GaInAs(P)-InP, MOCVD growth, characterisation and applications *(Polish)* 7−132498
GaP-Au, interaction during heat treatment in vacuum 7−131404
GaSb, anomalous sputtering under Cs^+ ion bombardment 7−119093
Ge crystals, He ion channeling, ranges and depth distributions 7−111702
a-Ge:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
HgCdTe, ion implanted, Hf diffusion, role in junction formation, elec. profile 7−125084
HgCdTe LPE layers, ion-implanted p-n junctions on CdTe substrates 7−98190
In-borosilicate glass interface, adhesion, SIMS depth profiling 7−76713
InAs (100) SIMS analysis of surface prep. 7−86491
InGaAs/InP heterointerface, LPE, SIMS, Raman obs. 7−100128
InGaAs-InP, VPE grown, X-ray diffr., SIMS and photolum. characterisation 7−131480
$In_{0.53}Ga_{0.47}As$:Si (Be) layers formed on InP substrates by ion implantation and flash annealing, elec. props. 7−85151
InGaP-InP waveguides, pure and Fe doped, fabrication and characterisation 7−103964
InP (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
InP:Au, Au diffusion from active layer, SIMS study 7−143099
InP:Fe epitaxial layers, LPE and MOCVD grown, activation ratio 7−112219
InP:Mn(Zn), implant profiles and anomalous dopant diffusion, SIMS study 7−76192
InP:Si(Be), n- and p-type layers formed in semi-insulating InP by thermal anneal/ion implantation, elec. props. 7−85152
InP:Ti, donor levels, elec. and optical props. 7−105470
InP:Ti,Hg(Cr,Hg)(Cr,Cd), double doped semi-insulating crysts., growth and charactn. 7−125950
InP:transition metals, deep donor levels, Hall effect meas. 7−105469
InP:Yb, growth by metalorganic CVD, photolum. 7−86040
InSb-CdTe heterojunctions, interface characterisation and MBE growth *(Polish)* 7−132475
Mo/fused SiO_2 interface, thermocompression, SIMS study 7−105290
Ni bicrystals, H at surface and grain boundaries, SIMS study 7−143094
Ni, ion irrad., point defect-sink interactions, self-diffusion meas. 7−104804
Ni/Cu multilayer struct., interface widths depend. on ion bombardment, secondary ion mass spectral anal. 7−113328
NiCr:Si stable thin film resistors, structural and elec. props. studies 7−138075
NiS_x, radiation induced S segregation, resistivity and SIMS studies 7−105050

secondary ion mass spectra continued
PbO_2, Kr-bombardment induced secondary ion emission spectra study 7−85915
Pd small particles, CO oxidation and desorption, SIMS studies 7−119580
Pd_3Sn, O adsorption, XPS and SIMS studies 7−138592
Pt (111), CO and K coadsorption, static SIMS and temp. programmed desorption study 7−124714
Pt (111), ketene adsorption, surface chemistry, TPD and SIMS studies 7−105269
$Pt_{60}Re_{40}$ alloy, low press. O adsorption induced Re segregation, SIMS and Auger effect study 7−98697
Pt(111), K-covered, stabilisation of adsorbed H_2 by K 7−131441
a-Se, crystallisation caused by Al diffusion through Se-Al interface *(Japanese)* 7−83673
Si crystals, He ion channeling, ranges and depth distributions 7−111702
Si, epitaxial films, plasma CVD growth at low temps. 7−126015
Si, impurity segregation under O_2^+ bombardment, sputter depth profiling and SIMS studies 7−84294
Si, ion implantation, formation mech. and structures of buried SiO_xNy layers 7−69726
Si, MBE growth, delta-function doping layer 7−91623
Si MBE layers, impurity and defect study 7−76812
Si wafers, denuded zone charact. 7−124318
Si wafers, thin film chem. growth processes, integrated system 7−138678
Si:As, implant electrical activation and transient enhanced diffusion during rapid thermal annealing 7−84398
Si:As, ion implanted, low-temperature annealing 7−111601
Si:As, shallow implants, SIMS depth profiling 7−137389
Si:As^+, shallow n^+p junction formation, charact. 7−118565
Si:B, high-dose ion implanted, dopant distrib., SIMS and electrorefl. study 7−69734
Si:B, hyper-abrupt doping transitions, SIMS studies 7−98213
Si:B, ion implanted, alloy profiles, SIMS study and simulation 7−111641
Si:B, ion implanted, enhanced tail diffusion 7−105117
Si:B, solid phase epitaxial regrowth, low press. CVD 7−137736
Si:B,H, H as deep donor 7−92104
Si:B surface amorphous layers, As implanted, SIMS crystallisation anal. 7−117859
Si:B surfaces, dopant redistribution during vacuum annealing 7−98215
Si:B-Ag(Al)(Ni), vacuum annealed surfaces, elect. props. 7−138004
Si:$B^+(BF_2^+)$ diffusion and elec. props. charactn. after rapid thermal annealing 7−86215
Si:BF_2 ion implantation and annealing, RBS, SIMS and NRA studies 7−76168
Si:BF_2-SiO_2, ion implantation, F behaviour with rapid thermal annealing 7−137383
Si:BF_2^+ self-annealed implantation, electrical and structural characterisation 7−83989
Si:B(As), oxidation-enhanced diffusion, HCl effects 7−118163
Si:B(As) single cryst. and preamorphised wafers, implant activation and diffusion during rapid thermal annealing 7−86213
Si:Ga(Sb) modulation-doped superlattices, solid phase epitaxial growth, sharp profiles and low temp. diffusion 7−142818
a-Si:H, laser induced Al diffusion, photovoltaic device appls. 7−137622
a-Si:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
Si:H single crysts., hydrogenation-induced defects studies 7−111542
Si:N, defects related to N ion implantation 7−98204
Si:N, single crystals, defects related to N implantation 7−137839
Si:O, enhanced impurity diffusion at 500°C, SIMS study 7−98582
Si:P, ion implanted, lattice defects study 7−98182
Si:P, point defect generation during P diffusion, conc. above solid solubility 7−142766
Si-Ag, O_2^+ bombardment, Ag redistribution, oxide formation 7−113329
Si-SiO_2:As, As depth profiling at interface, SIMS study 7−84533
Si-SiO_2-Si buried layer structure formed by O ion implantation, interface evolution 7−76636
Si-SiO_2-Si buried layer structure, formation by ion implantation and annealing 7−76637
Si-SiO_x, multilayer planar structures formed by ion synthesis 7−99211
SiC whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
Si_3N_4 whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
SiO_2:Cl films formed suing trichloroethane oxidation and low pressure CVD 7−71049
SiO_2-GeO_2 optical fibre, impurity diffusion from jacketing material 7−110596
SiO_x:TbF_3 films, comparative study of doped and undoped samples, comp., struct., elec. and optical props. 7−105332
SiO_xN_y-Si, rapid thermal annealing prep., elec. charact. 7−131792
SnO, Kr-bombardment induced secondary ion emission spectra study 7−85915
SnO_2 films, Na^+ adsorpt. from aq. soln., film hydration and ion exchange activity determ. 7−143210
SnO_2, Kr-bombardment induced secondary ion emission spectra study 7−85915
Ta_2O_5, sputter profiling, energy distrib. curves, factor anal. 7−139071
$TaSi_2$:As(B)(P), ion implanted, dopant diffusion into Si, SIMS anal. and elec. charactn. 7−143113
Ti film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti-Al, thin film system, diffusion coeffs., 773-923 K *(Russian)* 7−143079
TiC+H_2^+ (D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiN+H_2^+(D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiNx, plasma deposition parameters, Auger spectra, thin films 7−144293
TiO_2+H_2^+(D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
U, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
U surfaces, clean and O covered, interaction of H_2O vapour 7−85958
UO_2, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
U_3O_8, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
W, diffusion of Cr, SIMS study of isotope effect 7−105129
W/Si/GaAs contacts, Schottky charact. and chemical interdiffusion, Si layer effects study 7−131734
secondary ion mass spectra continued
W-Cr single cryst. system, Cr diffusion, isotopic effects, SIMS studies *(Russian)* 7−143078
WSi_x:F-polySi composite gate struct., CVD, F distrib. 7−91622
ZnS:Tb, F electroluminescent thin films, RF magnetron sputtered, annealing effects 7−99939
ZnSe, film quality in MBE growth, beam pressure ratio effect, optical and elec. props. 7−76684
secondary ion mass spectroscopy
apparatus installation on side of ion beam mixing machine *(Japanese)* 7−134886
biological tissues analysis, matrix effects obs. 7−101159
biomolecular ions, fast ion induced desorption, sample thickness effect 7−124348
calibration using GaAs:Cr,Fe,Zn 7−134887
coal fly ash particle characterisation by micro-surface analytic techniques 7−78591
electrode, surface and electrochemical product charactn. using Nier-Johnson secondary ion mass spectrometer 7−134873
geological materials, specimen isolation filtering techniques, SIMS anal. 7−93406
high accuracy ion optics computing 7−80937
HLW borosilicate glass corrosion in the presence of steel corrosion products 7−103253
liquid SIMS, molecular ion intensities as function of primary ion pulse freq. 7−121289
material science research appl. 7−95674
microfocussed ion beams for surface and thin film anal. 7−134888
optical coatings, non-optical characterisation techniques 7−123161
plasma desorption mass spectrometry, secondary ion beam transport props. 7−80928
polymers, surface analysis 7−93443
profiling of shallow implanted layers using quadrupole and magnetic sector instruments 7−119606
quantitative aspects of O enhancement, bond breaking model 7−138574
secondary neutral and secondary ion mass spectrometry, calibration, comparative study 7−134875
semiconductors, highly sensitive H, C, and O anal. *(Japanese)* 7−93403
semiconductors, SIMS depth profiling, rapid automatic compensation for charging effects 7−80929
SIMIPS: secondary ion mass image processing system 7−95672
solid solution breakdown, secondary ion mass spectrometry using cluster ions 7−124519
surface analysis techniques and their application to materials and device characterization 7−125904
surface sputtering, apparatus for study of neutral component 7−67417
tokamak T-15, near wall plasma diagnostics, surface anal. station 7−130936
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
security locks (electronic) *see digital circuits; safety systems*
security of data
see also data handling; data privacy
closed circuit TV-video cable with high tamper resistance 7−122061
security of information *see security of data*
sedimentation
see also disperse systems; sediments; water treatment
aerosol resuspension from sand surfaces by action of wind 7−145568
Alicante, Spain, climatic control of marly-calcareous sedimentation during Mesozoic, ^{18}O study *(French)* 7−139583
alluvial channels, response to baselevel lowering, FORTRAN program 7−145525
Anglo-Paris basin, sedimentary dynamics, Upper Jurassic inversion *(French)* 7−87523
N Aquitaine shelf, sedimentary sequences *(French)* 7−101270
Aruba island, Netherlands Antilles, sand beach erosion 7−87598
atmosphere aerosols, morphology and size distrib. of particles deposited on foliage and inert surfaces 7−101387
Baffin Island-Baffin Bay area, Quaternary marine sedimentation 7−133659
banded Fe formations of Precambrian deposition model 7−87514
Barents Sea, suspended matter distribution and dynamics 7−133657
beach advance and retreat 7−101275
beach exposure and inundation statistics from published tide tables 7−145675
beaches (of carbonate type), sedimentary charact. of lower-energy beaches 7−87597
bedform horizontal evolution due to flow in shallow water 7−107382
Bella Coola delta, BC, Canada, morphology of underwater part of delta 7−87591
Bidart, France, O isotope ratio of carbonate during Campanian and Maastrichtian *(French)* 7−94196
blood, thin layers, method for yield stress meas. 7−127049
Celtic Sea, sediment transport by internal tides 7−114691
China, loess deposits stratigraphy 7−133685
Chinese rivers, influence of sedimentation on coastline 7−94195
debris flow and boulder transport by rivers, a macro-viscous phenomenon 7−94308
deflation of terrace scarp in arctic periglacial setting, a source of aeolian sediments 7−133684
differential diagenesis of clay minerals inside barytic and phosphatic nodules and in their clayey matrix *(French)* 7−72011
electrolyte, aq. soln., sedimentation pot. and ionic partial molar volumes 7−114013
erythrocyte sedimentation profiles under a gravitational field, He-Ne laser obs. 7−71709
flax cellulose nitrate, mol. conform., diffusion-sedimentation anal. and viscometric obs. *(Russian)* 7−82409
Florida Keys, sedimentary charact. of lower-energy beaches of shell sand 7−87597
fluvial morphological features, determ. of ages and cycles of development 7−139663
French Guiana continental margin, Late Quaternary sedimentation charact. *(French)* 7−87607
granular phosphorites, genesis, grains of foraminifers *(French)* 7−79462
Gulf of California, upwelling intensity and varved sediments for last 3000 years 7−139632
Gulf of Riga, Baltic Sea, sedimentation rate 7−72195
Gulf trough, United States, Eocene and Oligocene sections charact. 7−139521

sedimentation continued
Hangzhou Bay, East China Sea, sedimentation distrib. and 2D tidal waves *(Chinese)* 7−79450
incompressible multiphase particulate suspensions, gravity sedimentation problem 7−94311
Indus Cone, deep-sea fan sediments, morphology and struct. *(French)* 7−120006
isotopes for depositional and diagenetic problems, conf., San Jose, USA (Aug. 1984) 7−128167
Juan de Fuca Ridge, Pacific, massive sulphide deposits 7−87593
Kallodoc bead suspensions, non-Newtonian behaviour study 7−100632
N Kerala coast, India, beach erosion and accretion due to longshore currents 7−87599
Lake Tanganyika trough, neotectonics and associated sedimentation *(French)* 7−87574
laminar base state convective flow in vessels with inclined walls 7−123584
Late Palaeozoic ocean sediment hiatuses 7−139584
long-term stratigraphic cycles, control by pulsation tectonics 7−133658
magnetic fluids, hydrodynamics, sedimentation, US propag. and pipe flow 7−75685
measurement method for sedimentation rate, using ^{210}Pb radioactivity 7−72195
Merida Andes, Venezuela, Hercynian deformation, microtectonic anal. *(French)* 7−79341
N Ireland, Quaternary deposits and glacial stratigraphy 7−133687
Namib Desert, Namibia, lacustrine sediments of late Pleistocene and climate 7−79475
Negev highlands, Israel, colluvio-aeolian aprons as palaeo-climate indicators 7−79410
New Caledonia, SW Pacific, sedimentology of coral reef lagoon 7−87600
North Nashwaaksis Stream, New Brunswick, Canada, channel changes in short channelised reach 7−87718
ocean, Sr diagenetic exchange between carbonates and pore fluids during sedimentation 7−127280
ordered emulsions of drops at low Reynolds numbers, sedimentation 7−132982
Owens Lake, California, salt solution and crystn. processes (1969 to 1971) 7−94321
E Pacific Ocean, primary prod., new prod. and vertical flux 7−72105
NE Pacific off USA coast, suspended particulate matter study 7−94262
Palaeozoic midcontinental seaways, palaeo-oceanography, conference, Kent, Ohio (April 1986) 7−128178
Panama Basin, response of particulate matter distribs., chemistry and flux to environmental forcing 7−87695
Pichi-Richi Pass rocks, Australia, ancient sedimentation reflecting astronomical effects 7−133678
poly(dimethyl siloxanes), lin., sedimentation coeffs., intrinsic viscosities and mol. wt. meas. 7−117106
polystyrene, colloid spheres, struct., Debye-screening length role microscopic exam. 7−91418
polystyrene type spheres in aqs. and aqs. methanol suspensions, sedimentation equilib., struct. obs. 7−71532
proglacial Lake Wisconsin, outwash sedimentation rel. to lake-ice collapse trenches 7−87719
radioactive pollutants, transport mechanisms, physical dispersion models 7−133158
Red Sea rift zone sediments, radiocarbon ages and sedimentation history 7−87608
resuspension measurement device, utilizing oscillating grid 7−72187
rigid cylinder motion between parallel plates in Stokes flow 7−136867
river graded profiles, mathematical modeling 7−72110
river shore zone, turbidity caused by breaking waves due to small motorboats 7−114825
rivers, bed-load sediment transport theory 7−94307
Roussillon Basin, France, Pliocene series sedimentation and tectonics *(French)* 7−94134
Rupert Inlet, British Columbia, continuous and surge-type flows rel. to submarine channel form. 7−94202
Rupert Inlet, British Columbia, surge-type turbidity currents and submarine channel form 7−94201
Saguenay Fjord, Quebec, 20th-century record of climatologically-modulated sediment accumulation rates 7−127196
Santa Monica Basin, E Pacific, marine sediment processes and chemistry 7−127195
Schrondweilerbaach catchment, Luxembourg, sediment budget and implications for channel development 7−87720
seafloor sands, storm wave-induced displacement 7−87596
small bore ducts, fluid motion accompanied by heat and mass transfer with sedimentation 7−123752
stratigraphic record completeness estimation and sedimentation rates 7−72019
Subalpine Basin, France, fault-controlled continental and marine sedimentation *(French)* 7−94197
sulphate particulates, dry deposition rates for eastern England 7−127321
suspension, strongly-flocculated colloidal particles rheology and sedimentation study 7−93395
Thermaikos plateau, NW Aegean Sea, Holocene sediments and sedimentation, seismic study 7−127192
Verendrye valley and Glidden esker, Saskatchewan, Canada, subglacial and ice-walled features 7−87642
Washington continental shelf, sediment transport of volcanic ash from Columbia river 7−145440
whale and walrus feeding marks in sediments of Bering Sea floor 7−79369
Williams Lake area, BC, Canada, late Quaternary sedimentation and stratigraphy 7−87715
Th in seawater and suspended particulate matter, scavenging and vertical flux 7−72104

sediments
see also rocks; sedimentation
accumulating sediments surface, deep heat flux evaluation 7−94160
acoustic measurement of gravel transport 7−101610
NW Alaska, Pleistocene lake bed gravity anomaly due to sediments of glacial origin 7−145396
alluvial fans displacement by Fish Springs fault, California, evidence for Late Quaternary vertical displacement rate 7−87588
Amundsen Sea, Antarctica, sediments rel. to Recent glacial history and rapid ice stream retreat 7−145493
Asse salt mine, sedimentary rocks, geologic survey 7−101298

sediments continued
NE Atlantic Ocean, evidence of recent Pb pollution in deep-sea sediments 7−78693
authigenic magnetite formation in suboxic marine sediments 7−87606
Baffin Island-Baffin Bay area, Quaternary marine sedimentation 7−133659
N Baretns Sea, implications of Quaternary deposits for bedrock geology 7−72005
W Bay of Bengal, Hg distrib. in estuarine and nearshore sediments 7−100767
bedform horizontal evolution due to flow in shallow water 7−107382
Bella Coola delta, BC, Canada, morphology of underwater part of delta 7−87591
benzthiazole pollution of San Francisco Bay sediments, due to car tyres and street runoff 7−107441
Black Sea-W Georgian SSR gravel coast protection 7−101272
N BNarents Sea, unconsolidated sediments and shallow struct. 7−72007
Bombay harbour bay, particle size distrib. in bottom sediments 7−139586
Bonneville Basin, Utah, evidence for shallow Early or Middle Wisconsin-age lake 7−127300
Buzzards Bay, Massachusetts, ^{222}Rn/^{226}Ra and ^{234}Th/^{238}U disequilib. rel. to transport processes in nearshore sediments 7−94200
Canadian shield, glacial drift carbonate sediments 7−94130
Changjiang River, China, major dissolved constituents origin and migration *(Chinese)* 7−79474
Chilliwack River valley, BC, Canada, deglaciation processes 7−127286
China, glacial stratigraphy 7−133688
China, loess deposits stratigraphy 7−133685
China Loess Plateau, palaeosol complex S_5 as record of Late Pleistocene climatic optimum 7−139647
Chinese rivers, influence of sedimentation on coastline 7−94195
clastic sediments, progressive chemical modification with burial 7−114710
clay-carbonate layers in semiarid soils of S-central Montana, climatic implications of alternating form. 7−127459
Cluff Lake uranium mine, radionuclide and heavy metal concs. in water, sediments and biota 7−114504
continental shelf, suspended sediment stratification correction for combined wave and current flows 7−127261
cosmic spherules containing Pt, marine sediment incrustations in French Polynesia *(French)* 7−120022
crater lake of Mount Naka-dake, Aso Volcano, sediments in flow (1980 to 1984) *(Japanese)* 7−107377
Cuyahoga Valley, Erie Basin, Ohio, stratigraphy of glacial sediments 7−94128
dating method for glaciolacustrine sediments of Pleistocene age, thermoluminescence technique 7−101504
dating of lake sediments, method using ^{210}Pb, ^{137}Cs, ^{7}Be 7−115030
Dead Sea, ^{226}Ra and Ba conc. modelling 7−145526
Dead Sea sediments, shear strength during deformation 7−87619
deep ocean bottom sound scattering, sediment volume inhomogeneities 7−82912
deep-sea 0 to 300000-yr chronostratigraphy, development from orbital theory of ice ages 7−72150
deep-sea hydrothermal deposits, anomalous ^{234}U/^{238}U ratios 7−72004
deep-sea sediments, ^{18}O record rel. to deep waters form. mode and temp. over past 125 kyr 7−107431
deflation of terrace scarp in arctic periglacial setting, a source of aeolian sediments 7−133684
diagenesis of nearshore marine sediments, REE elements in pore waters 7−87595
Douro/Tejo rivers, Portugal, ^{137}Cs concentration meas. 7−139150
Late Eocene impact microspherules, stratigraphy, age, and geochemistry 7−139614
Late Eocene microtektites, major element comp. var. within and between strewn fields 7−139615
erodible beds with suspended sediment, instability *(Japanese)* 7−107384
Esk estuary, UK, Pu remobilisation from estuarine sediments 7−144925
W Europe, geomag. field relative palaeointensity var., lake sediments anal. 7−145329
Five Islands Formation, Nova Scotia, radiocarbon age rel. to deglaciation of Bay of Fundy 7−127214
Fort Nelson area, B.C., Canada, L Wisconsin, deglaciation and Holocene river evolution 7−87644
glacial Lake Columbia, sedimentary stratigraphy rel. to status during last floods from glacial Lake Missoula 7−87742
Gulf of California, upwelling intensity and varved sediments for last 3000 years 7−139632
Gulf of Mexico, pyrite enriched sediments at sulphide brine seep 7−87594
Hangzhou Bay, East China Sea, sedimentation distrib. and 2D tidal waves *(Chinese)* 7−79450
Holocene sediments from Puget Lowland, Washington, appl. to sea-level record determ. 7−87698
E Indian coast, suspended-load and bed-load sediment transport on Puri and Madras beaches 7−139587
W Indian Ocean, ^{210}Pb distrib., disequilibrium and partitioning between dissolved and particulate phases 7−145524
N Indian Ocean, sediment core C isotopes and Upper Quaternary monsoon regime 7−79580
Indus Cone, deep-sea fan sediments, morphology and struct. *(French)* 7−120006
NE Japan accretionary prism, crustal heat and water flow 7−94162
Juan de Fuca Ridge, Pacific, massive sulphide deposits 7−87593
Juan de Fuca Ridge, Pacific Ocean, vent fields hydrothermal plumes charact. 7−145485
Kashmir Basin, India, palaeopedology and chronostratigraphy rel. to Pleistocene climatic changes and landscape evolution 7−87637
lacustrine sediments, simple model for mag. records interpretation 7−87628
Lake Biwa, Japan, palaeoclimatic implications of time vars. of erosional force and grain size in Pleistocene sediments 7−145560
Lake Sobygaard, Denmark, recovery after P loading reduction 7−87733
LF underwater acoustic propagation and sediment depth, meas. 7−97205
lithoseismic analysis *(French)* 7−87946
loess, regionally representative selection of soil samples for environmental specimen bank 7−139612
loess at Rocourt, Belgium, thermoluminesc. dating 7−145389
loess deposits in Kashmir Valley, India, thermoluminescence dating study 7−94133
loess soils, subsidence and erosion processes 7−139650

sediments continued
loess-like red-yellow soil of SW coastal Korea, comparison with loess of China and Japan 7−139653
loess-like silt in N Yakutia, USSR, mineralogy and origin 7−139646
loess-mantled slopes stabilisation, effects of lithology, time, and exposure direction 7−139611
loess-palaeosol sequences in Hungary, stratigraphy and chronology 7−139649
Louisiana Gulf Coast sediments, kilometre-scale thermohaline overturn of pore waters 7−107449
magnetic deep sea cosmic spherules, Pt metals distrib. and microstruct. 7−101742
magnetic minerals in lacustrine and ocean sediments, simple model for mag. records interpretation 7−87628
magnetization of carbonate oozes, due to biogenic magnetite from bacteria 7−101288
magnetostratigraphy review 7−139460
marine sedimentation, ultrasonic effects *(French)* 7−104087
marine sediments, photon activation anal., internal standard model 7−119603
Mars, origin and evolution of layered deposits in Valles Marineris 7−134163
W Mediterranean, circulation and temp. for last 140000 years, foraminifera isotope and species records *(French)* 7−139623
SE Mediterranean, masking of superposed tectonic patterns along continental margin by young sediments 7−139579
Meuse River, S Belgium, origin of heavy metals, in water-meadow sediments 7−119697
Milankovitch signal in marine sediments, with eustatic modulation *(French)* 7−139582
Miyako Cretaceous sediments, palaeomagnetism of NE Japan 7−139444
E Mojave Desert, California, Late Quaternary stratigraphy rel. to climatic control of geomorphology and pedogenesis 7−87652
N Ireland, Quaternary deposits and glacial stratigraphy 7−133687
Namib Desert, Namibia, lacustrine sediments of late Pleistocene and climate 7−79475
New Brunswick area, sea level changes and postglacial stratigraphy 7−94239
New Caledonia, SW Pacific, sedimentology of coral reef lagoon 7−87600
Niger Delta (Calabar Flank), case study of clay minerals buried diagenesis 7−87633
North Sea, results of Dutch monitoring programme, on TiO_2 acid waste discharges 7−139152
Norwegian-Greenland Sea continental margins, seismic vel. profiles in sedimentary section 7−71978
ocean, dyed sand tracers dispersion in oscillatory flow field 7−87605
ocean, stratified, sound scattering calcs. 7−130431
ocean currents laser-Doppler anemometry role of light scatt. by microparticles *(Russian)* 7−101520
ocean sediments, simple model for mag. records interpretation 7−87628
ocean sediments recycling through mantle, limits from Ce isotope geochemistry 7−79334
ocean suspended sediments, surface emissivity meas of turbid waters 7−79453
organic carbon determ. method for marine sediments, dry combustion technique 7−134018
Owens Lake, California, salt solution and crystn. processes (1969 to 1971) 7−94321
Pacific Central basin, struct. of sedimentary cover, seismic refl. study 7−87489
Panama Basin, response of particulate matter distribs., chemistry and flux to environmental forcing 7−87695
Perisaharan loess, sedimentological characterisation and palaeoclimatic significance 7−139651
Late Pleistocene alluvial deposits near Sydney, Australia, comparison of thermoluminesc. and ^{14}C age determs. 7−127156
polar ice cosmic dust content, evidence for comet break-up hypothesis 7−88205
proglacial Lake Wisconsin, outwash sedimentation rel. to lake-ice collapse trenches 7−87719
Puget glacial lobe, rapid soft bed sliding 7−145548
Qinghai-Xizang (Tibet) Plateau, China, Holocene sediments anal. rel. to climatic changes 7−145661
Quaternary glaciofluvial deposits in S Finland, contorted structs. 7−114808
Red Sea rift zone sediments, radiocarbon ages and sedimentation history 7−87608
remanent magnetization acquisition for deep-sea sediments undergoing compaction 7−133666
rift valleys, sedimentation rel. to struct. 7−145457
Rupert Inlet, British Columbia, continuous and surge-type flows rel. to submarine channel form. 7−94202
Rupert Inlet, British Columbia, surge-type turbidity currents and submarine channel form 7−94201
Saguenay Fjord, Quebec, 20th-century record of climatologically-modulated sediment accumulation rates 7−127196
Saguenay Fjord, Quebec, Canada, PAH in sediments 7−126668
Salt River, Arizona, flood slackwater deposits rel. to palaeoflood hydrology 7−87717
San Diego Bay sediments, distrib. and fate of butyltin compounds 7−93560
sand deposits of Great Hungarian Plain, electron microscope investigations of drill-core material 7−139652
Santa Monica Basin, E Pacific, marine sediment processes and chemistry 7−127195
Santa Monica Basin, Th isotopes in dissolved and particulate form., profiles 7−145522
Santorini volcano sediment layer in E Mediterranean, Cape Riva tephra layer 7−127160
Schrondweilerbaach catchment, Luxembourg, sediment budget and implications for channel development 7−87720
seafloor elec. conductivity mapping, theory for EM systems 7−94464
seawater intake wave and shore current effects 7−114721
seismic waves in three-component granular media, averaged eqns. of movements 7−119958
Severn Estuary, UK, coal dust pollution chronology and distrib. 7−100768
Seychelles and Amirante banks, Indian Ocean, seafloor geology and sediments 7−72009
shear waves in situ vel. meas. with higher mode Rayleigh waves 7−79295
sediments continued
Shubenacadie River headwater lakes, Nova Scotia, Canada, water and sediment characts. 7−87725
Sicilian Channel, surface sediments and heavy metals 7−101274
siliceous deposits, conf., Tokyo-Akita-Kyoto, Japan, (Aug. 1981) 7−102025
sonar methods to map deep sea floor, review 7−134008
sound wave reflection in porous media, limit angle variation *(Spanish)* 7−87911
South Atlantic Bight, ^{228}Ra distrib. and ocean-sediment interaction 7−120039
STABLE instrument for studying benthic boundary layer current struct. and sediment transport 7−101609
Stockholm archipelago, chemical fingerprinting of petroleum hydrocarbons in bottom-sediment, plankton and seston 7−139151
storm rainfall debris flows, Nagasaki July 1982, statistical investig. *(Japanese)* 7−101353
subglacial sediment deform., rheology and geological consequences 7−145472
subglacial till, properties and processes 7−145471
surf zone, sediment traps 7−101522
suspended loads, river-bed forming, flow rate distrib. *(Russian)* 7−101348
synthetic sediments, post-depositional remanent magnetisation, compaction-induced inclination shallowing 7−72012
Thermaikos plateau, NW Aegean Sea, Holocene sediments and sedimentation, seismic study 7−127192
thermoluminescence dating of sediments 7−87959
till beneath Ice Stream B, W Antarctica, coupled ice-till flow model 7−145543
till beneath Ice Stream B, W Antarctica, props. determ. from seismic travel times 7−145540
till beneath Ice Stream B, W Antarctica, struct. and continuity, from seismic refl. sounding 7−145541
till deformation beneath Ice Stream B, W Antarctica, evidence and implications 7−145542
turbidites, palaeoslopes reconstruction using hydromechanical parameters of deposit 7−94194
turbidity current, self-preserving solns. 7−94193
underwater sound, subcritical penetration of narrow Gaussian beams into sediments 7−130439
United States east coast continental shelf, suspended matter conc. during storms, optical characts. technique use 7−139581
Uzbekistan loess, genesis and distrib. 7−139648
Verendrye valley and Glidden esker, Saskatchewan, Canada, subglacial and ice-walled features 7−87642
Victoria Land Basin, Antarctica, Mid-Cenozoic record of glaciation and sea level change 7−133782
Vijaydurg Bay, Maharashtra, W India, sediments sounding, bathymetry, and seismic profiles 7−139585
Washington continental slope, fallout and natural radionuclide cycling 7−144924
late Weichselian sediments of SE Sweden, stratigraphy rel. to deglaciation of Scandinavian ice sheet 7−145559
whale and walrus feeding marks in sediments of Bering Sea floor 7−79369
Williams Lake area, BC, Canada, late Quaternary sedimentation and stratigraphy 7−87715
$^{238,239,240}Pu$, in sediments, isolation and γ-particle spectrometric determ. 7−93602
Np transfer from seawater for sediments and organisms 7−78692
Pu in sea sediments, α-track meas. using cellulose nitrate films 7−93554
^{A}Pu, A=239,240, fallout in marine samples, mass spectrometric determ. 7−144926
U concentration in sediments from hydrothermal mounds, geochemical mechanism *(French)* 7−79319

Seebeck effect
chelate polymers, electrical cond. meas. 7−76989
heavy fermion cpds., Seebeck coefficient 7−70291
NDT appl. *(Polish)* 7−138951
semiconductors, transverse magneto-Seebeck coeff. magnetophonon oscills. 7−99099
small polaron formation and motion, effects of disorder 7−131648
system, elec. and thermal transport props., cation substitution effect 7−92173
thermal sensors based Seebeck effect, review 7−73343
thermoelectric materials Seebeck coeff. determ., by potentiometric meas. 7−80813
thermoelectric power measuring system for high-pressure studies 7−89228
Bi thermally evaporated thin films, elec. resist. and Seebeck coeff. temp. and film thickness depend. 7−85147
Bi_2S_3, single crystals, transport props. 7−137917
CoO:In, elec. props. meas., 1270-1470 K 7−137971
Fe_3O_4 magnetite, elec. props., mag. field cooling effects 7−143464
Fe_3O_4-$CoFe_2O_4$ ferrospinel, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
Fe_3O_4-$FeAl_2O_4$ ferrospinel, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
Fe_2SiO_4-Mg_2SiO_4 olivine, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
In-Se amorphous films, variable-range hopping conduction 7−99059
InBi, elec. resist. and absolute Seebeck coeff., temp. depend. 7−105529
$La_{1-x}Sr_xCr_{1-y}Mn_yO_3$ system, elec. and thermal transport props., cation substitution effect 7−92173
$Li_{1+x}Ti_{2-x}O_4$, Seebeck coeff. 7−143497
PLZT ceramics, dielec. and elec. props. 7−99134
Si thermal sensors based Seebeck effect, review 7−73343
$TaSe_3$, thermoelec. power and elastoresistance 7−84843
$YCrO_3$:Ca(Mg)(Sr)(Ba), elec. cond., Seebeck coeff. 7−70342

segregation
microstructural processes and features only
see also grain boundary segregation; Guinier-Preston zones; spinodal decomposition
$A^{III}B^{V}$-Bi systems, reactions in melt, segregation, Bi vapour press., epitaxial growth of $A^{III}B^{V}$ cpds. 7−111894
alloy phase systems, dendritic microsegregation, Scheil eqn. adaptation 7−78015
alloy systems, dendritic microsegregation, Brody-Flemings model with solid-state diffusion 7−105351
alloys, binary, impurity distrib. after cellular crystn. 7−86143
alloys, oxidation, review of key principles 7−119419

segregation continued
alloys, phase microstructure, evolution during irrad. 7−69744
alloys, preferential sputtering theory, role of Gibbsian segregation 7−70963
alloys, solidifying, two-phase zone, influence of interdendritic liq. flow on mass transfer 7−86145
atom probe FIM, material science appl. review 7−132853
binary alloys, molten, segregation by density 7−91809
binary alloys, molten, segregation by density during directional solidification 7−91810
binary alloys, surface segregation, electronic theory, CPA calcs. 7−91936
binary molten alloys, SRO, conc. fluctuations 7−105031
block copolymer and Benard pattern formation, computationally efficient modelling 7−104591
carboboride hardened steel phase composition calc. 7−86127
crack growth, role of surface phenomena in adhesive and cohesive rupture *(French)* 7−111755
Czochralski and magnetic Czochralski growth, effective distrib. coeff., crucible rotation influence 7−98013
Czochralski cryst. growth, ultimate pull rate limitation, constitutional supercooling and dopant accumulation effects 7−100048
defect observations, transmission electron microscopy study *(French)* 7−98164
dendritic solidification, image anal. *(French)* 7−119255
diffraction effects from homophase interfaces, influence of segregation 7−105301
dilute alloys, radiation induced solute transport 7−91881
directional solidification, X-ray topography capabilities for interfacial instabilities obs. 7−98010
ferronematic suspension, orientational struct. and mag. props. 7−105969
fracture processes, effects of irrad. and segregation 7−69747
graphite-K intercalation cpd., search for low temp. staging transitions and phase separation 7−84241
Hastelloys and Inconels, weld metal, solidification microstruct., PHACOMP calcs. 7−77971
ice/water interface, solute redistribution, elec. props. and interface processes implications 7−118243
impurity particles in solid state matrix, initial aggregation stage, kinetic parameters calcs. 7−137376
IN 718, direct aged Ni-base superalloy, microstruct. charactn. and elemental partitioning 7−126122
Inconel X-750, MC particles growth on stacking faults and dislocations 7−78025
IV/IV semiconductor heterostructures, growth, initial stages of interface formation 7−84552
light metal hydrides, plasmon spectra, EELS meas. 7−137828
metals and alloys, point defects, conf., Berlin, Germany (Sept. 1986) 7−88731
$Mn_{1-x}Zn_xFe_2O_4$ ferrites, single crystal growth, segregation, Scheil eqn. 7−106396
multicomponent systems, segregation profiles, evaluation from regular soln. model 7−126124
Ostwald ripening, dynamics of fluctuations 7−104949
oxide interfaces, stabilisation by defects and impurities 7−112105
particulate matter, size segregation by shaking 7−73220
$PbTiO_3$, thermostimulated Ti surface segregation and layer form., intersite diffusion model, Auger spectra 7−98640
phase separation, structure functions 7−69916
phase stability under irradiation, disordering, diffusion, segregation and precipitation 7−104815
polyaniline, emeraldine base form, insulator to metal transition on protonation 7−70193
polyimide:$Ar^+(Cu^+)(Zn^+)$ films, ion-implanted, structure and morphology 7−91938
polymer blend, phase-separating, late-stage kinetics 7−142651
polymer mixtures, phase separation kinetics 7−69917
stability criteria for phases under irradiation 7−117968
steel, alloy, NDE using acoustic and mag. Barkhausen signals, effect of intergranular impurity segregation 7−113839
steel, alloy, S segregation and high-temp. brittle intergranular fracture 7−144505
steel, austenitic stainless, surface layer after irrad. with 2 MeV electrons, X-ray electron spectroscopy 7−84029
steel, austenitic stainless, surface segregation of P and S, ageing effect 7−70043
steel, austenitic stainless, weld metal, primary austenite solidified, microsegregation and ferrite to austenite transform. 7−144407
steel, B, case hardenability and B redistrib. in carbonised and carbonitrided case *(Chinese)* 7−71345
steel, C, rare-earth metal modified, H embrittlement, effect of S and P 7−100334
steel, carbon, high-strength, powder particle struct. defectiveness effect on graphite dissolving during sintering 7−119199
steel, continuously cast TMCP, susceptibility to weld cold cracking 7−93094
steel, dendritic microsegregation, computer model develop. 7−106496
steel, low alloy, low C, chem. microheterogeneity 7−106513
steel, low-C, struct. and conc. features of $\delta(\alpha)\rightarrow\gamma$ transform. *(Chinese)* 7−126106
steel, martensite ageing, hardened, redistribs. of alloying elements during rapid heating, effect of Mn *(Russian)* 7−93029
steel, medium C, cast, normalising, dendrite-oriented ferrite form. 7−106544
steel, Mn, annealing, concurrent equilib. adsorpt. and segregation of impurities, Auger spectra *(Russian)* 7−144416
steel, Mn low strength, hydrogen induced cracking, bulk and grain boundary P content influence 7−100382
steel, solidification, dendritic segregation, non-metallic inclusions form. 7−144383
steel, stainless, solute segregation under focused electron beam irrad. 7−106518
steel, stainless, struct. form. on cooling and heating 7−132618
steel, stainless, Type 316, surface segregated, activity, mass spectrometry and Auger electron spectrosc. 7−139064
substitutional alloys, binary, ground state phase stability diagrams, segregation and order 7−111818
substitutional impurity near a surface, segregation energies 7−91941
surface order-disorder transition on BCC(110) surface 7−118214
surfaces, wear, adhesion and elec. breakdown phenomena *(French)* 7−104904
Ag-Cu (15 wt.%), rapidly solidified, cellular microsegregation 7−92994

segregation continued
Ag-Ni, very dil. alloys, surface sandwich segregation, mean field approach 7−105210
Ag-Sb, solidification, maximum inhomogeneity, Scheil eqn. anal. 7−71163
Al, transition metal implants, high fluence, effect of temp. 7−104777
Al-Ag dil. alloys, grain boundary internal friction peak, strain amplitude depend. 7−104908
Al-Be alloys, surface segregation and oxidation 7−113788
Al-Cu alloys, Al-rich, densities during solidification 7−100204
Al-Cu dil. alloys, grain boundary internal friction peak, strain amplitude depend. 7−104908
Al-Cu-Li system, solidification of quasicryst. phase 7−119258
Al-In dilute alloys, In segregation, vacancy trapping 7−118101
Al-InSb (110) interface, exchange reaction clustering and surface segregation 7−138601
Al-Li based alloys, deform., fracture, microstruct. rel. to comp. and heat treatment 7−144465
Al-Li-Cu-Mg, quenched in vacancies, annealing, elec. resist. obs. 7−119298
Al-Mg-Sc (2, 0.4 at.%), surface layer after irrad. with 2 MeV electrons, X-ray electron spectroscopy 7−84029
Al-Sn dil. alloys, grain boundary internal friction peak, strain amplitude depend. 7−104908
Al-transition metal alloys, impurity diffusion anomalies 7−98578
Al-Zn alloys, electron irrad.-induced precipitation and solute atom redistrib. study 7−105049
$Al_xGa_{1-x}As$, surface segregation, growth interface roughening 7−85952
AlIn, quenched, annealing, defect studies, positron lifetime and PAC meas. 7−98225
Al(Li), sputtering during ion bombardment 7−84042
Au-GaAs interface, atom distrib. profiles, polar angle depend. XPS study 7−118284
Au-Mg system, metastable, formed by Au ion implantation 7−106484
AuNiGe-GaAs, ohmic contact, interface microstruct., effect on uniformity and thermal stability 7−118282
B_4C, impurity surface segregation, radiation induced 7−91939
CaF_2 single crysts., inclusion form. by impurity segregation during Stockbarger growth 7−98112
$Cd_{1-x}Zn_xTe$, MBE grown, phase separation 7−131487
Co epitaxy, overlayer growth and surface segregation on GaAs, electron diffr. and photoemission meas. 7−70144
Co-Cr columnar films, perp. coercivity rel. to inhomogeneous Cr conc. 7−85385
Co-Cr sputtered film, segregated microstruct. revealed by wet etching, appl. for mag. recording 7−76666
Co-Ni, surface segregation, preferential sputtering, Auger spectra computer simulation 7−137575
Co-Rh alloys, high temp. surface segregation, Auger electron spectra study 7−91949
CoCr/Ti film/sublayer system, struct. and mag. props. 7−112905
$Co_{50}Ni_{50}$-S system, surface segregation, effect of S 7−76571
Cu (100) with epitaxially grown Fe, LEED meas. 7−84467
Cu complex in cyclohexane, dynamical behaviour and gelation kinetics, EPR study 7−85417
Cu-Mn (20 at.%), ordering and solute segregation to dislocations 7−86184
$CuMSe_2$ (M=In,Ga), thin films, ESCA study, appl. for solar cells, segregation influence 7−125934
Cu_xNi_{1-x} (110), Cu surface segregation, ion scatt. spectra and photoemission of adsorbed Xe studies 7−92836
CuSb alloy, effect of grain boundary struct. on segregation 7−124531
Fe (111), nitridation and oxidation, XPS and AES obs. 7−131407
Fe, cast, ductile, fracture and tensile props. rel. to heat treatment 7−78220
Fe, cast, microdistrib. of nodulizer in various phases *(Chinese)* 7−71187
Fe, creep cavitation, oxides as nucleation sites 7−144462
Fe, creep cavitation, sulphides and carbides as nucleation sites 7−144461
γ-Fe metastable phase form in $Fe_{83}B_{17}$ amorphous alloy, Mossbauer spectroscopy and X-ray diffr. studies 7−124521
Fe, paramagnetic, dilute impurities, surface segregation and electronic struct. 7−84301
Fe-Al alloys, oxidation, surface segregation of AlO_x, S effects *(French)* 7−71371
Fe-Al-Ti, hot ductility, S segregation, Ti additions effect 7−78132
Fe-C-M, third-component segregation 7−106512
Fe-Cr-Mo (100), O-induced Fe surface segregation, AES studies 7−144409
Fe-Cr-Ni (25, 20 wt.%) melt-spun and sputtered alloys, as-quenched microstruct. 7−92988
Fe-Cr-Ni based austenitic alloys, element radial redistrib. under HVEM electron irrad. 7−104844
Fe-Si alloy single crystals, orientation dependent surface segregation 7−78029
Fe-Sn (1.3 wt.%), (111) surface, Sn segregation, struct. transitions 7−143154
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, hyperfine fields and phase separation, Mossbauer study 7−111893
$FeNi_3$, binary ordering, surface layer atom distrib. *(Russian)* 7−143139
$Ga_{1-x}Al_xAs$, long-range order and segregation in semiconductor superlattices 7−105690
GaAs, multilayer structures, C^+ RBS studies 7−144215
GaAs:Sn, LEC grown, Sn segregation and donor compensation 7−91817
GaAs/AlGaAs interfaces, MBE grown, O accumulation, SIMS profiling 7−105289
GaAs-Au atom profiling, use of angle-dependent photoemission 7−119106
Ge crystals, floating zone expts. in sounding rockets 7−71004
^3He-^4He solid mixtures, phase separation 7−124631
In-Pb alloys, solid and liquid states, surface segregation 7−84471
InSb-Au, atom profiling, use of angle-dependent photoemission 7−119106
InSb-CdTe heterostructures, interfacial layer form., Raman scatt. study 7−112094
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
KBr:Eu single crystals, hardening, yield stress meas., temp. and impurity conc. depend 7−91704
KCl:Sm^{2+}, defect aggregation kinetics, site-selective laser spectroscopy study 7−69918
$LaNi_5$-H_2 system, intrinsic degradation, thermal H_2 absorption-desorption cycling effects 7−86839
$LaNi_3Mn_2$, surface props., H_2 storage material 7−98645
MgO(110) surface, diffusion of ^{57}Co, influence of ionic charge 7−98463

egregation continued
NaCl:Eu^{2+}, impurity cation-vacancy dipoles, aggregation kinetics 7−137390
Nb-Ta superlattice, critical behaviour of H, in situ X-ray scattering study 7−137727
$(Nb_{1-x}Zr_x)_3Sn$ layers, segregation of Zr and effects 7−77144
Ni:Si, ion implantation, phase stability rel. to radiation damage, 25-650°C 7−104867
Ni-base melt-spun alloys, cellular solidification 7−92982
Ni-base superalloy, vibr. fatigue props. of laserglazed specimens 7−119374
Ni-Cr-Be alloys, dental, cast, solidification struct. 7−113535
Ni-Pb system, ion beam induced demixing 7−84067
Ni-Pt single crystal alloys, multilayer segregation 7−105214
Ni_3Al, directional solidification, process parameters charactn. 7−119259
$Ni_{55}B_{45}$, $Ni_{62}B_{38}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
NiCr:Si stable thin film resistors, structural and elec. props. studies 7−138075
NiCrAl, undoped, adherent Al_2O_3 scale form. 7−71381
$Ni_{44}Fe_{32}Cr_{11}P_8B_5$ sputter deposited on stainless steel, electrochem. and XPS study 7−113797
NiGe dilute alloys, electron-irradiation-induced segregation kinetics study, temp., conc., and dose depend. 7−104842
NiS_x, radiation induced S segregation, resistivity and SIMS studies 7−105050
NiSi dilute alloys, electron-irradiation-induced segregation kinetics study, temp., conc., and dose depend. 7−104842
Pb-Tl alloy (30 wt.%), upward solidification, thermosolutal convection-induced morphologies of solid-liq. interface 7−100198
$PbMo_6S_8$:Al doping and heat treatment effects on phase comp., lattice consts. and Tc 7−83987
$PbTiO_3$ (100), surface segregation of Ti, 300-1200 K 7−76574
$PbZrO_3$-Pb $(M_{0.5}W_{0.5})O_3$, M=Mg,Co solid soln., struct. and dielec. props. studies 7−125622
Pd (110), clean and C contaminated, LEED studies 7−84468
Pd, free surface impurities segregation, XPS obs. 7−106355
Pd-Ag, surface struct. and segregation, calc. 7−143155
Pd-Au, surface struct. and segregation, calc. 7−143155
Pd-Cu, surface struct. and segregation, calc. 7−143155
$Pd_{72}B_{28}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
Pt, free surface impurities segregation, XPS obs. 7−106355
Pt-Ni, surface sandwich segregation, mean field approach 7−105210
$Pt_{72}B_{28}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
$Pt_{0.5}Ni_{0.5}$ (110), surface sandwich segregation, multilayer relax., LEED meas. 7−105207
$Pt_{60}Re_{40}$ alloy, low press. O adsorption induced Re segregation, SIMS and Auger effect study 7−98697
PtRh:S alloys, surface segregation, cosegregation with S impurities, composition depth profiles 7−119100
RePd sputtered alloys, work function w.r.t. surface comp., appearance pot. spectra studies 7−143555
Sb-Sn system, peritectic alloys, solidification, microsegregation 7−132593
Si, bicrystal and polycrystalline, grain boundaries, EBIC and conductance meas. 7−125010
Si, grain boundary electrical activity, struct. and chemical origin *(French)* 7−124919
Si, impurity segregation under O_2^+ bombardment, sputter depth profiling and SIMS studies 7−84294
Si, polycrystalline, extended crystallographic defects, passivation 7−124290
Si polycrystalline, impure, thin film solar cell efficiency 7−126625
Si, polycrystalline, recombination effects and segregation at grain boundaries 7−125011
Si:As, shallow implants, SIMS depth profiling 7−137389
a-Si:Au, ion beam induced epitaxy, interfacial segregation, crystallisation 7−124099
Si:BF_2-SiO_2, ion implantation, F behaviour with rapid thermal annealing 7−137383
Si:C,O, microsegregation, scanning Fourier transform IR spectroscopy 7−98216
Si:Ga, growth mechanism and segregation, electron microscopy studies 7−131065
Si:Ge, Czochralski grown, effective segregation coeff. of Ge 7−111639
Si:N, implanted, photoluminesc. spectra 7−92712
Si:O, metal impurity surface segregation, O effects 7−124528
Si:P,C,H, polycrystalline, impurity-defect interactions, overview 7−124321
Si-Ag, O_2^+ bombardment, Ag redistribution, oxide formation 7−113329
$Si_{1-x}Ge_x$, long-range order and segregation in semiconductor superlattices 7−105690
SiO_2:As, As segregation and drift under temp. gradient 7−76490
SiO_2-WSi_2-Si structure, dopant redistrib. modelling 7−91628
Sn-As-Si, phase separation, viscosity and elec. cond. studies *(Russian)* 7−124516
Sn-Co, heterojunction formed by diffusion, corrosion protection 7−76497
Ta-Co system, segregation of Co atoms at Ta grain boundaries, Mossbauer spectra study *(Russian)* 7−106062
Te, equilibrium segregation coefficient and liquid diffusion coeff. of some impurities 7−111925
Te impurity segregation coeffs. during zone refining 7−105051
Ti-Al-Sn-Zr-Mo-Si, Ti-6242s, ion irrad., phase transform. 7−69775
Ti-C, C redistrib., effect of pulsed laser rad. 7−69755
TiFe, oxidised layers, semiconductor photoelectrodes, surface composition and topology 7−98646
TiFe-misch metal, hydrogen storage material, surface props. 7−98647
TiH_2 aggregate form in CuTi alloys, fractal struct., neutron scatt. obs., comment and response 7−137571
W-Re alloys prep. by powder metallurgy, Re distrib. 7−86177
$(YGdBi)_3(FeGa)_5O_{12}$ garnet LPE film growth and elemental distrib. study 7−105331
$(Y_xNd_{1-x})_2Co_{17}$, ^{59}Co NMR spin echo spectra and relax. times 7−138338
ZnO-BaO ceramics, microstructural studies 7−124540
Zr-Ni intermetallic alloy catalysts, XPS and AES studies 7−144235

Seidel theory *see aberrations*

Seignette salt *see Rochelle salt*

Seignettoelectric materials *see ferroelectric materials*

seismic waves
see also seismology
3-D kinematic migration in variable velocity media, algorithm and numerical procedures 7−79298
Lg attenuation and source studies using 1982 Miramichi data 7−114625
P-waves, short-period source spectrum, regional var. 7−114628
apparent and intrinsic Q, ID case by single scatt. theory 7−107360
Aquitaine shelf (Bay of Biscay), deep seismic refl. and refr. profiling 7−79269
Armenian granitoids of varying age and origin, high press. elastic wave vel. 7−114693
in atmosphere, contrib. to small-scale Alfven wave packets in mid-latit. plasmasphere 7−120216
attenuation measurement using spectral ratio and rise time techniques 7−127108
attenuation measurements, appl. to rock fracture meas. 7−113843
automatic system for measuring coordinates of seismic-wave source *(Russian)* 7−127518
average velocity determination, appl. of secondary derivatives of head waves travel-time curves 7−139485
body waves, amplitudes and waveforms, effects of subducting slabs 7−119995
body waves from Tangshan (China) aftershock sequence, implications 7−87483
buried geological interfaces location, estimation approach 7−115103
Carpathian Mountains, Romania, seismic wave velocity model *(Romanian)* 7−145367
causality in wave propagation theory 7−139486
circumferential propagation on boreholes and cylindrical cavities 7−117506
coal measure rocks from Sydney Basin, New South Wales, compressional and shear wave vels. 7−120008
coal seam (multilayered), SH and P-SV wave dispersion calcs. 7−79291
coda waves, review 7−139494
compressional velocities rel. to depth dependence of heat production in continental lithosphere 7−94156
computational aspects of wave propagation, numerical differentiation in large-scale simulation 7−127106
continental margin of Iberian Peninsula, propagation of normal incidence Love waves 7−133573
converted pS waves data acquisition and processing 7−79294
converted PS waves reflected from boundaries disturbed by fault systems, polarisation characts. 7−71968
crustal laminations in France and neighbouring areas, obs. in deep seismic profiles 7−79268
crustal reflection seismic sounding, contribs. of oblique, low freq. and shear wave illuminations 7−79267
crustal velocities in Greenland Sea-Barents Sea, sonobuoy meas. during 'Ymer' expedition 7−72006
crustal velocity measurements along margins of Norwegian-Greenland Sea, refr. and refl. meas. 7−71978
crystalline rock, nonlinear generation of elastic waves 7−94208
cylindrical reflector, caustic region, HF expression using Maslov's method 7−110631
deep reflection events in UK South Western Approaches, planar faults model 7−79261
DEKORP 2-S reflection profile through Variscide orogen in Germany, results 7−79271
diffracted seismic waves on common-offset sections, detection method 7−101514
dispersion in large-scale spherical weakly-contrasting inclusion, approx. formulae 7−145354
lower E-region, vertical structure of ionisation irregularities prod. by acoustic wave 7−115162
Earth elastic parameters determ. using monochromatic vibr. field at surface, half-space model 7−107375
earthquake hazards on Cascadia subduction zone, NW United States, strong ground motions and tsunami 7−114647
earthquake near-field synthetic seismograms, for normal faulting 7−119949
elastic wave velocities in homogeneous anisotropic media, approximate formulae 7−139483
elastodynamic eigensolutions for some anisotropic systems 7−145347
electroacoustic pulse source for high-resolution seismic explorations 7−127617
EM oscillations caused by elastic waves in a conducting body 7−87435
Europe, upper mantle lateral heterogeneity determ. from broad-band body waves anal. 7−145392
evanescent effects in acoustical wave propagation 7−75240
exploration seismology, general characterisation of seismic study of geological structs. 7−71966
extensive-dilatancy anisotropy for shear waves, due to crack-induced anisotropy 7−107354
facies classification using waveform recognition method 7−101602
far-field signatures of linear airgun arrays, computation method 7−79300
finite element modelling of elastic waves propagating in 2D media *(Chinese)* 7−139470
finite-difference migration, phase errors 7−79299
frequency-wavenumber approach of τ-p transform, appl. 7−115036
Gaussian beam summation method 7−101207
Gaussian random processes classification, appl. to seismic differentiation 7−133595
geosounds, high freq., in epicentre region prior to earthquake *(Chinese)* 7−127093
Great Basin of Nevada and California, ground motion attenuation 7−94107
Green's function used for propagation in infinite and stratified poroelastic media 7−133580
head waves, linearised model anal. and CMRW data processing 7−127104
incident wavelet approximation, appl. of pseudo-acoustic impedance section to thin beds detect. 7−79296
intracrustal seismic waveguide, thermal nature 7−71982
inverse dynamic problem soln. for velocity field reconstruction for 3D media 7−139491
inversion of reflection traveltimes and amplitudes 7−115040

seismic waves continued
ionosphere, excitation and propag. of MHD waves generated by acoustic perturbation 7−139467
Japan Sea, 1983 May tsunami, propag. *(Japanese)* 7−79239
Kalapana, Hawaii, 29 Nov. 1975 earthquake model and seismic radiation pattern 7−114642
Kanto (Japan) earthquake, S arrivals and S−P intervals anal. rel. to focal depth determ. *(Japanese)* 7−107363
kinematically-equivalent wave field continuations, appl. for separating interfering waves 7−139482
Lamb-Stoneley waves, low-freq. acoustic impedance logging using radially-oscillating resonators 7−145685
Lg attenuation meas. using reversed two-station method 7−115024
long-period surface waves, phase, effects of off-great-circle propag. 7−145348
long-period surface waves from four W United States earthquakes, meas. by Pasadena strainmeter 7−87461
Longling Yunnan, magnitude 6.2 aftershock strong motion modeling *(Chinese)* 7−101201
Love seam-waves in a horizontally inhomogeneous three-layered medium 7−114637
mantle velocities, implications for Poisson ratio and composition of lower mantle 7−119985
mathematical analysis methods and appl. (book) 7−128205
Mexico City, 1985 September 19 earthquake, resonance effect in damage distrib. 7−87488
Michoacan earthquake, Mexico (1985 September 19), tsunami characts. 7−114619
microearthquakes near Sleepy Hollow oil field, SW Nebraska, first motion data rel. to origin 7−87454
multiple scattering in fractured media, vel. and effective attenuation of P-waves and S-waves 7−101215
W Nagano Prefecture (Japan) earthquake, 1984 September 14, high vertical accels. meas. 7−139505
near field P-SV strong ground motion, scaling relationships 7−101219
near-field SH ground motion, scaling laws for strike-slip earthquakes 7−79227
noncausal autoregressive bispectrum estimation and deconvolution 7−107559
nonexplosive sources, spectral props. of oscillating gas bubble *(Spanish)* 7−133592
nonlinear seismic waves, evolutionary equations for waveform changes 7−145355
North Yemen earthquake, 1982 December 13, broadband body-wave anal. rel. to rupture complexity 7−87449
oceanic layer 2, elastic vels. vars. near Hawaii and correl. with lithosphere flexure 7−87604
oceanic lithosphere teleseismic P_n and S_n phases and Q freq. depend. 7−94108
oceanic lithosphere velocities, evidence for vars. in magma prod. along spreading centres 7−133655
one-way equations, pseudodifferential operators operating orders, marching algorithms, path integrals 7−142083
P-wave deconvolution, appl. of multi-channel method to seismic array data 7−87459
P-wave first motions from Lake Biwa (Japan) earthquake, coseismic groundwater level vars. *(Japanese)* 7−87507
P-wave vel. in lower crust under Japan 7−133631
P-wave velocities beneath SW Tokyo metropolitan area, results from seismic prospecting *(Japanese)* 7−87505
P-waves, Regional Seismic Test Network, crustal structure from teleseismic waveform inversion 7−114657
P-waves, velocity and attenuation in water-filled sand layers with partial gas saturation *(Japanese)* 7−79246
P-waves from Angarakan earthquake swarm (Baikal Rift Zone), first motions anal. 7−145342
NW Pacific Basin, lower lithosphere P-wave vel. anal. 7−114652
NW Pacific Basin, P-wave travel times, 15 degree shadow zone 7−114653
perfectly reflecting wedge, used as control model in seismic diffraction modelling 7−127109
phase times automatic determination from seismic wave data, reliability of results *(Japanese)* 7−87971
plane harmonic P, SV and Rayleigh waves, scatt. by dipping layers of arbitrary shape 7−87460
polarization of reflected composite PS-waves, case of boundaries disturbed by faults 7−87469
porous lava samples with saturation and vel. anisotropy, longitudinal wave vel. var. 7−107385
porous media saturated with fluid, boundary conditions for waves at interface 7−94101
propagation and petroleum exploration (book) 7−72743
propagation in ellipsoidal Earth model 7−94097
propagation in stepped structure equivalent mass-system model 7−133599
PUMA experiment west of Lewis, Outer Hebrides, crustal thickness and Moho location 7−79263
ray tracing of body waves in anisotropic medium, three methods 7−133583
Rayleigh wave scattering at variously inclined discontinuity 7−133600
Rayleigh wave scattering by rigid barrier 7−101205
Rayleigh waves, phase vel. and amplitude values in presence of lateral heterogeneities 7−87462
Rayleigh waves propagation, generalised thermoelastic problem in infinite cylinder under initial stress 7−83090
raypath anomalies effect on structural interpretation, case history 7−127099
reflection amplitude v offset for rocks, effects of anisotropic elastic props. 7−119952
reflection from lower continental crust, symposium, Kiel, Germany (August 1986) 7−128165
reflection from lower crust., relation between crustal layering and tectonic extension 7−79325
reflection from mid-crustal shears at N edge of London Platform, survey of S North Sea 7−79262
reflection of near-vertical P-wave on free interface 7−139480
reflection profiles across W Barents Sea, reflectivity pattern and crustal thickness determ. 7−79265
reflection profiles on N North Sea continental margin, results from SHET survey 7−79324
reflection seismogram inversion, wave scattering deconvolution 7−115035
seismic waves continued
reflection sounding off Vijaydurg Bay, Maharashtra, W India, relation to sedimentary strata 7−139585
reflection survey of Black Forest, SW Germany, implications for crustal struct. 7−79272
reflection-refraction survey in SW Germany, modelling of physical props. and struct. of lower crust 7−79274
reflectivity function, parameter identification using pseudogradient method *(Spanish)* 7−133604
reflectivity integral for stratified media, reduction to finite range 7−133587
refracted wave data, statistical anal. rel. to horizontal inhomogeneity of crustal layers *(Spanish)* 7−133620
refraction study under Jordan, appl. to crustal struct. anal. 7−145407
Rhine graben, wide-angle vibroseis test 7−79270
rocking strong earthquake accelerograms, synthesis method 7−94114
rocks under biaxial stress loading, P-wave vel. and deform. characts. 7−107386
S−P times, determ. for ultramicroearthquakes (M=−3) occurring near ground surface *(Japanese)* 7−87508
S-waves analysis, separation of source, propag., and site effects *(Japanese)* 7−87504
S-waves from earthquakes preceding and following 1975 Hawaii main shock, stress drops and amplitude ratios 7−87451
Sagami Bay region, Japan, existence of seismic-wave velocity discontinuity *(Japanese)* 7−139500
N Scandinavia, extensive-dilatancy anisotropy revealed by refraction profile 7−107354
sea floor, geophysical prospecting, pipeline architecture of prediction algorithm 7−101223
sediments, shear waves in situ vel. meas. with higher mode Rayleigh waves 7−79295
seismic reflection coefficients from mantle fault zones, results from BIRPS profiles 7−79260
seismograms back projection, implementation of inverse Radon transform 7−127098
seismograms synthesis, representation of extended seismic source in propagator-based formalism 7−87448
SH waves, stratigraphic filtering in spherical layered Earth 7−101216
SH-wave generation by Ita-tataki method, theory 7−133994
SH-waves propagation in 2D structures with laterally varying surfaces, extension of refl. method 7−94096
SH-waves propagation modelling in irregularly layered medium, appl. to seismic profiles near dome 7−79297
SH-waves scattering, parametric study of finite element eigenfunction method 7−94113
shallow SH-reflection survey on paved ground surface, reflected waves characts. *(Japanese)* 7−79245
shear waves, appl. in deep seismic sounding in W Yakutiya (USSR) 7−133577
short period P-waves, stochastic dispersion due to scatt. and multipathing 7−94099
single-station attenuation measurements of high-frequency Rayleigh waves in Scotland 7−94095
soil, blast wave, cylindrical propag., asymm. problem 7−101221
soil, water-saturated, elastic wave propagation *(Chinese)* 7−127094
soil nonlinearity, for soft soil subject to strong forces from plate of vibrator 7−119957
spherical inhomogeneity in layered half-space, synthetic seismograms 7−101206
spherical wave propagation in nonlinearly compressible elastoplastic materials 7−107365
stopping phases in seismograms, appl. to determ. of spatio-temporal extent of earthquakes 7−87450
strong earthquake, Fourier spectral amplitudes 7−94115
strong ground motion, calc. for extended earthquake source in laterally varying struct. 7−87447
strong ground motion, identification of nonuniform grounded by discrete wave number method 7−94116
strong ground motion, site effects review 7−94117
strong ground motion attenuation in E North America, crustal structure effects 7−114655
strong ground motion by semi-empirical method, for inhomogeneous faulting 7−127127
strong ground motion observed on sedimentary layers, anal. of wave groups observed at Tokyo *(Japanese)* 7−87503
surface wave group velocities in Kirgizian Tien-Shan, evidence for horizontal inhomogeneities in Earth's crust *(Spanish)* 7−133619
synthetic seismic wavefield movement computer-aided anal. 7−87513
synthetic seismograms and multi-fold path integrals 7−72167
synthetic seismograms and multifold path integrals, computations 7−71971
synthetic seismograms for plane layered Earth models, FORTRAN-IV program 7−127114
Tas-Yuryakh-Amlaznyi-Malykai profile, (W Yakutia), crustal and upper mantle vels. 7−139481
teleseismic feature extraction for discrimination between earthquakes and nuclear detonations 7−139507
teleseismic P-waves from Thessaloniki (N Greece) earthquake, 1978 June 20, iterative deconvolution 7−101217
teleseismic surface waves, linearized scattering on spherical Earth 7−107361
three-component granular media, seismic waves and behaviour of media 7−119958
Tonankai (Japan) earthquake, 1944 December 7, S−P time intervals rel. to hypocentre location *(Japanese)* 7−87506
transients, weakly dispersive spectral theory, spectral integral eval. 7−108248
transverse SH waves in paired actions 7−87466
travel time calc. using approx. ray tracing in laterally heterogeneous struct. 7−127129
travel times in subglacial till; determ. for Ice Stream B, W Antarctica 7−145540
travel-time decrease in Charlevoix region (Quebec), evidence for aligned saturated cracks in Earth crust 7−139504
tsunami, long surface wave propag. calcs., nonlinear dispersion model 7−110993
tsunami assoc. with Nihonkai-chubu (Japan) earthquake, numerical simulation of propag. *(Japanese)* 7−107364
tsunami at Hyuganada, Japan, 7 Aug. 1984 wave 7−127121
tsunami danger to Kamchatka coast, NW Pacific 7−114646

seismic waves continued
tsunami due to Mt. St. Augustine volcano, Alaska 7—127115
tsunami flooding extension for coastal zones of Mexico 7—133749
tsunami forces exerted on vertical cylindrical barriers 7—87465
tsunami generation in Gulf of Alaska, due to Shumagin seismic gap 7—145361
tsunami hazard delineation in Pacific Ocean 7—133602
tsunami magnitude scale classification 7—114621
tsunami of Japanese coasts 7—127125
tsunami propagation in bay, coastal run-up soln. *(Russian)* 7—127112
tsunami travel time charts, accuracy 7—133601
Tsunami Warning System for the Pacific coast of Canada 7—133603
tsunami wave generation mechanism, model 7—133588
tsunamis, theoretical investigations, book contrib. 7—101222
tsunamogenicity of earthquakes, determ. method involving teleseismic waves 7—133589
two-point ray tracing, new approx. algorithm 7—139475
underground nuclear explosions, near-source contrib. to P-wave coda 7—139478
vehicle-generated seismic signatures, effect of snow 7—82933
velocity bounds determination, appl. of statistical estimates of $\tau(p)$ and $X(p)$ 7—87482
velocity mapping in SW Germany, results from combined refl. and refr. profiling 7—79273
velocity-depth profile for Hatton Bank (Rockall Plateau), implications for continental margin struct. 7—79264
vertical seismic profiles wave field transformation 7—94102
vertically inhomogeneous medium, wave eqn. theory *(Chinese)* 7—79236
wave field parameters estimation, multipurpose algorithms construction using hierarchical struct. of computer storage 7—139484
waveform modelling in heterogeneous media, appl of ray perturbation theory 7—87481
wavelet estimation techniques 7—79668
wavenumber integration techniques 7—79242
Wellington region, New Zealand, local earthquakes coda duration temporal var. 7—139495

seismographs *see seismometers*

seismology
see also earthquakes; seismic waves; seismometers
3-D kinematic migration in variable velocity media, algorithm and numerical procedures 7—79298
3D boundary detection algorithm, seismic images appl. 7—87975
4th Australian Society of Exploration Geophysicists Meeting, Sydney, Australia (September 1985) 7—134341
400 km seismic discontinuity and, mantle olivine-spinel transitions 7—114645
1986 September 19 sonic shock-wave-generated seismic signals due to meteoroid 7—127782
acoustic impedance logging, low-frequency, Lamb-Stonel waves, appl. of radially-oscillating resonators 7—145685
acoustic logs digital recording system and anal. 7—139766
acoustic well logging, digital interference immune recording equipment *(Russian)* 7—79642
active periods division using Fisher's method 7—87510
activity triggering due to frictional heating, pore press. rise and fluid migration 7—71969
Adavale Basin, E Australia, crust struct. and tectonics 7—79285
Adirondacks area of New York, USA, crust seismic velocity struct. 7—119962
Adriatic region, seismic characts. and relationship to Africa 7—139512
Aegean area, long-term earthquake prediction based on seismic quiescence 7—94092
Aegean Sea region, periodic seismicity 7—139497
N Aegean Trough, seismic profiling and geomagnetic study of crust 7—94094
aftershock occurrence models 7—145345
aftershock seismicity expressed using Omori's law 7—127126
aftershocks, Omori's power law *(Japanese)* 7—145372
AGIS expert system for automated geophysical interpretation of seismic images 7—115110
Agulhas Bank (off S Africa), seismic study of crust deep structure 7—79282
Akita, Japan, P-waves velocity and attenuation in water-filled sand layers with partial gas saturation *(Japanese)* 7—79246
S Alaska, crust struct. beneath exposed accreted terranes 7—79255
Albuquerque-Belen basin of Rio Grande rift, USA, seismic evidence for magma existence 7—145412
Aleutian subduction zone, double to single Wadati-Benioff zone transition 7—87475
Altai-Sayan folded region, USSR, seismic activity rel. to free mantle surface relief 7—145386
South American continent, seismic velocity struct. and Q_β struct. 7—133582
Angarakan earthquake swarm (Baikal Rift Zone), focal mechanisms determ 7—145342
ANK-A acoustic well-logger, panel attachment *(Russian)* 7—79641
annular magnetostrictive radiators in impulsive regime, excitation *(Russian)* 7—79640
Appalachian Ultra-Deep Core Hole, seismic refl. data tectonic implications 7—87546
Appalachian Ultra-Deep Core Hole site study, regional Vibroseis profiling 7—87545
N Appalachians, Maine, United States, crustal migrated seismic refl. profiles anal. 7—87548
Appalachians, Quebec-Maine region, Grenville basement location and characts., seismic anal. 7—87549
N Appalachians, wide-angle deep crustal and mantle reflections 7—87550
apparent and intrinsic Q, ID case by single scatt. theory 7—107360
Aquitaine shelf (Bay of Biscay), deep seismic refl. and refr. profiling 7—79269
Arunta Block, Central Australia, deep seismic refl. studies 7—79288
astroblemes, nearby seismicity rel. to longevity of impact-induced faults as sites for tectonic activity 7—101242
N Atlantic, magma-metamorphosed crust depth and seismic velocity struct. 7—139527
N Atlantic, upper mantle seismic lateral heterogeneity and azimuthal anisotropy 7—119964
Atlantic Ocean, equatorial, fracture zones anal. use for Pangea breakup characts. determ. 7—133644
atmospheric earthquake noises above epicentre, theory 7—145584
seismology continued
attenuation measurement using spectral ratio and rise time techniques 7—127108
attenuation parameter, robust estimation 7—110698
SW Western Australia, earthquake risk maps 7—127097
Western Australia, seismicity of SW Seismic Zone, risk assessment 7—127095
Central Australia seismic profiling expt. for crust struct. 7—79287
Australian-Antarctic discordant zone, anomalous upper mantle and seismic velocities 7—133574
Axel Heiberg Island Continental margin, Arctic Ocean, crust refl. profiling from floating ice platform 7—87473
Axial Seamount, Juan de Fuca Ridge, microseismicity survey 7—87456
Azores-Gibraltar fracture zone, seismic profile for crust struct. 7—71980
b and b_0 values and implications for regional crystal deformation 7—133581
Baja California, seismicity anal., 1982-1984, for N Peninsular Ranges 7—87457
N Baltic Shield, seismic reflection profiles of crust 7—79277
NW Banda Arc, Indonesia, heat flow and seismic obs. rel. to tectonic movements 7—87558
Barbados Ridge accretionary complex, tectonic fabric mapping 7—79354
N Barents Sea, bedrock geology from seismic refl. sounding 7—72007
W Barents Sea, deep seismic refl. profiles 7—79265
Bay of Biscay, northern margin formation and crust struct. 7—101245
Benioff zone, dip angle sharp changes rel. to earthquake focal processes 7—119955
Bermuda Rise, ODP drill core and seismic studies 7—127155
BIRPS unsolved problems review 7—87474
Black Forest, SW Germany, pre-drilling seismic refl. survey 7—79272
blast wave effects on decoupling with axisymmetric cavities 7—145349
Bohemian Massif, Czechoslovakia, seismic velocity struct. of crust and upper mantle 7—114648
borehole full waveform acoustic logging, study of P-waves and Stoneley waves *(Chinese)* 7—139768
Brazil deep trough, S Atlantic Ocean, seismological study of oceanic crust struct. 7—79365
Britain continental shelf, characts. of igneous extrusive and hypabyssal features in seismic data 7—139514
Bulgaria, fault length distrib. compared to magnitude-freq. relations 7—114649
buried geological interfaces location, estimation approach 7—115103
Burma-India-China boundary area, seismicity and earthquake mechanisms *(Chinese)* 7—87443
Burmese arc subduction zone, seismicity and stress state *(Chinese)* 7—101256
Calabria and Balkan areas, correlation of seismicity 7—94090
CALCRUST (1985), seismic refl. survey, Whipple Mountains detachment terrane, California 7—87908
California, central region, evidence for subducted sedimentary materials, seismic meas. 7—139563
central California, Mesozoic accretionary margin, struct. 7—87540
Campania-Lucania earthquake of S Italy, crust stress determ. from aftershocks 7—133640
Campos Basin, offshore Brazil, deep seismic reflectors characts. 7—87543
ECanada, Lg attenuation meas. using reversed two-station method 7—115024
W Canada-NE Pacific convergent margin struct., seismic profiling study 7—79256
S Canadian Cordillera, LITHOPROBE seismic transect and current struct. 7—79258
W Carpathians, seismic crustal profiles of active continental collision belt 7—79280
cascaded migrations: improving the accuracy of finite-difference migration 7—115041
Cascadia subduction zone, NW United States, earthquake hazards 7—114647
CDP reflection profiling in hard rock terranes, improvement of resolution 7—79251
Celtic Sea, relation between lower crustal layering and crustal extension 7—79325
Chalk River area seismicity, implications for LLW disposal facility siting 7—89781
Charleston (South Carolina) earthquake, aftershocks epicentres locations (1886-1889) 7—87480
Charlevoix region (Quebec), seismic travel-time decrease as evidence for aligned saturated cracks in Earth crust 7—139504
China, crust seismic velocity struct. along Yongping line *(Chinese)* 7—101202
E China, L_g wave attenuation in eastern 6 provinces *(Chinese)* 7—94084
SW China, mean stress axes directions, determ. from microearthquake data 7—114679
China, sequential seismic activity and subsequent strong earthquakes 7—119967
N China, synchronous steps of M=4.75+ earthquakes *(Chinese)* 7—139469
China and nearby marginal seas, upper mantle P-wave velocity struct. *(Chinese)* 7—87445
N China basin, seismic velocity struct. of crust and mantle 7—145358
Chinese seismic network, calibration function for surface wave magnitude *(Chinese)* 7—79235
chirp-excited seismic exploration systems, data sequence, non-minimum-phase behavior removal 7—115109
coal measure rocks from Sydney Basin, New South Wales, compressional and shear wave vels. 7—120008
coal mine in Australia, coal seam discontinuity mapping by seismology 7—133576
coal mines in Poland, mining tremors at Nowa Ruda mine 7—79229
common depth point profiling, signal correction method 7—101507
common-depth-point method, CDP-PS travel time curves formulae 7—87467
complex subduction zone earthquakes, appl. of inhomogeneous stress (patch) model 7—87479
computational aspects of wave propagation, numerical differentiation in large-scale simulation 7—127106
conference, Strasbourg, France (April 1987) 7—95088
continental crust deep seismic reflection characts. 7—139518
continental crust reflectivity rel. to crustal age, heat flow and viscosity 7—133571
continental lithosphere, coincident seismic reflection/refraction studies review 7—139535

seismology continued
continental lithosphere, thermal and seismic implications of two extension configurations 7−139517
continental lithosphere seismic studies, conf., Tokyo, Japan (August 1985) 7−134356
continental lithosphere struct., seismic refl. and refr. studies, review 7−79247
continental margin of Iberian Peninsula, propagation of normal incidence Love waves 7−133573
continental Moho, relationship to crust-mantle boundary, seismic and thermal characts. anal. 7−139515
controlled directional analysis of seismic recordings, kinematic wave parameter estimation 7−87470
convergent plate boundaries, large deep-focus shocks and significant volcanic eruptions (1900 to 1980) 7−145437
core and mantle 3D struct., review 7−133605
Coyote Lake earthquakes, California, seismic attenuation changes rel. to earthquake prediction 7−133579
Crimea-Caucasus-West Turkmenia, earthquakes max. magnitude prediction using method of approximations 7−145353
cross spectral analysis method for velocity monitoring and relative differential times 7−71976
crust deep struct., conf., Cambridge, England (July 1986) 7−72692
crust deep struct. from contrasting reflection patterns, integrated approach 7−79647
crust deep structure, migration of refl. profiling data 7−79249
crust-mantle boundary lateral variations near the Grafenberg array, Germany 7−71975
crustal block oscill. after earthquake, model 7−87468
crustal deformation cycle rel. to earthquake prediction, review 7−133654
crustal laminations in France and neighbouring areas, obs. in deep seismic profiles 7−79268
crustal reflection seismic sounding, contribs. of oblique, low freq. and shear wave illuminations 7−79267
crustal velocity measurements along margins of Norwegian-Greenland Sea, refr. and refl. meas. 7−71978
crystalline crust, seismic refl. characts. 7−87553
crystalline rock, nonlinear generation of elastic waves 7−94208
curve fitting of Omori's formula to aftershock activity 7−127124
Czechoslovakia, lithosphere lateral vel. var. beneath GRF array 7−114662
Czechoslovakia, seismotectonic model of upper crust 7−101220
D norm for seismic deconvolution, quadratic filters design 7−114650
dam seismic responses, for earth dams 7−79311
data acquisition system microcomputer interface 7−107516
data processing, implementation of inverse Radon transform 7−127098
data processing and interpretation mathematics, book 7−115706
deconvolution of prospecting data, by adaptive least squares method *(Chinese)* 7−139767
deconvolution operators, ideal performance criteria 7−115037
deep crustal reflector imaging by CMP stack, in presence of signal-generated noise 7−79248
deep reflection events in UK South Western Approaches, planar faults model 7−79261
deep seismic sounding method, using both P- and S-waves 7−127105
direction estimation of vector-planewave fields, for single 3 component sensor and sensor arrays 7−115106
Dukou area of China, seismic sounding of crust struct. *(Chinese)* 7−79233
Earth elastic parameters determ. using monochromatic vibr. field at surface, half-space model 7−107375
Earth normal modes, multiplet-multiplet coupling due to lateral heterogeneity 7−107351
earthquake forecasting, clustering method by bipartite graph theory 7−87512
earthquake location, master event strategy for seismic array data 7−115104
earthquake occurrence simulation, Gutenberg-Richter formula *(Japanese)* 7−145371
earthquake prediction, by analogy with fractal struct. of rock microcracks 7−120010
earthquake prediction, groundwater level vars. assoc. with Lake Biwa (Japan) earthquake (1980 September 11) *(Japanese)* 7−87507
earthquake prediction, seismic waves dispersion in large-scale spherical weakly-contrasting inclusion 7−145354
earthquake prediction using 'Window' method for seismicity data *(Chinese)* 7−87444
earthquake prediction using seabed sensors *(Japanese)* 7−79673
earthquakes, 1986 July to September, centroid-moment tensor solns. 7−119965
earthquakes, self-similar activity, traits extraction 7−101224
earthquakes maximum magnitude prediction, appl. of method of approximations for intervals of expert evaluations 7−145353
ECORS project in France, operations and main results 7−79266
Ecuador and N Peru, deep seismically active fracture zones 7−114690
Egypt Western Desert, seismic reflectivity of Abu Gharadig Basin sediments 7−133593
El Dabaa, NW Egypt, seismicity at nuclear power plant site 7−79232
elastic dipping layer, seismic response 7−145370
electric power supply for field apparatus, stabilizing voltage converter 7−145713
electroacoustic pulse source for high-resolution seismic explorations 7−127617
EM oscillations caused by elastic waves in a conducting body 7−87435
central England, seismic profile of crust struct. of Charnwood Forest area 7−127113
SE Europe, Asia Minor and E Mediterranean, 2D and 3D seismic velocity patterns 7−119951
Europe, upper mantle lateral heterogeneity determ. from broad-band body waves anal. 7−145392
exploration, modelling evaluation 7−145686
exploration method of seismic reflection profiling, book 7−66856
exploration seismology, 3-D processing of seismic profiling data 7−94517
exploration seismology, average vel. determ. from secondary derivatives of head waves travel-time curves 7−139485
exploration seismology, computation of far-field signatures of linear airgun arrays 7−79300
exploration seismology, detect. of thin beds using pseudo-acoustic impedance section 7−79296
exploration seismology, elastic wave velocities in homogeneous anisotropic media 7−139483
seismology continued
exploration seismology, polarisation of converted PS waves reflected from boundaries disturbed by fault systems 7−71968
exploration seismology, seismogeological prerequisites for identifying sandy zones in cover of Western Siberian Plate 7−145341
exploration seismology, spectral props. of oscillating gas bubble press. *(Spanish)* 7−133592
exploration seismology, stratigraphic filtering of SH waves in spherical layered Earth 7−101216
exploration seismology, use of kinematically-equivalent wave field continuations for separating interfering waves 7−139482
exploration seismology in fractured media, waves vel. and effective attenuation due to multiple scatt. 7−101215
explosion seismology, wave motion excited in ocean by impulsive monopole source 7−79290
extensional tectonics and continental crust evolution seismic refl. profiling evidence 7−79323
extensive-dilatancy anisotropy for shear waves, due to crack-induced anisotropy 7−107354
f_{max} of large earthquakes and freq.-magnitude relation for small earthquakes 7−79306
facies classification using waveform recognition method 7−101602
Fairview Peak-Dixie Valley, Nevada, USA, AD 1954-9 earthquakes 7−145365
fault length estimation for small-sized events, using P wave pulse width 7−87484
fault rupture, seismic energy release over broad freq. band. 7−87499
fault rupture mechanics, energy approach to problem of continual destruction of solid body 7−133665
fault system seismic energy release, laboratory model study 7−87498
faults in crust, seismograms used to study struct. of faults 7−139490
FBR core, seismic anal., SNR-2 case study 7−141234
Fiji region of Pacific, upper mantle seismic velocity struct. 7−87485
finite-difference migration, phase errors 7−79299
foreshock sequence use in statistical short-term earthquake prediction 7−127116
forward modelling using new time integration technique 7−115034
N France, tectonic features and struct., seismic profile anal. 7−120004
free oscillations, local eigenfrequency and its uncertainty determ. from fundamental spheroidal mode freq. shifts 7−71972
free oscillations of asymmetric Earth, multiplet amplitude anomalies and freq. shifts 7−107353
French Polynesia, Society and Tuamotu islands, crustal struct., seismic meas. 7−71983
frequency-magnitude relations estimation from heterogeneous catalogs 7−101218
frequency-wavenumber approach of τ-p transform, appl. 7−115036
Mt Fuji, Japan, seismic and geodetic tilt monitoring observations 7−119988
fuzzy mathematics and seismicity patterns research *(Chinese)* 7−145337
Galicia passive continental margin, Spain, rift tectonics, seismic meas. 7−79353
Garm Region, Tadzhikistan, USSR, tectonic deformation, crust struct., seismicity 7−139568
gas exploration, review 7−94515
gaussian beam method, spectral aspects, refl. from homogeneous half-space 7−94098
Gaussian beam summation method 7−101207
Gaussian random processes classification, appl. to seismic differentiation 7−133595
general down-hole synthetic seismogram calc. algorithm 7−127102
general seismology, characterisation of seismic study of geological structs. 7−71966
generalized linear inversion applied to seismic data in one and two dimensions 7−115108
geometric configuration of seismicity zones, planar, tabular or volumnar 7−79244
geophysical fields, nature and geological interpretation, conference, Moscow, USSR (August 1984) 7−115088
East Germany, crust struct. from seismic survey data 7−139526
Germany, crustal reflectivity, crustal age, heat flow, viscosity interrelations 7−133571
SW Germany, lithosphere S-wave velocities and chem. composition 7−101212
SW Germany, physical props. and struct. of lower crust revealed by 1D and 2D seismic modelling 7−79274
Germany, results of DEKORP 2-S and other refl. profiles through Variscide orogen 7−79271
SW Germany, seismic vel. mapping from combined refl. and refr. profiling 7−79273
Germany, seismic velocity struct. of upper mantle and crust 7−71974
S Germany and N Switzerland, crust struct. from seismic refl. and refr. data 7−79275
Gippsland Basin, SE Australia, seismic prospecting for oil 7−107518
global seismicity, Oct. to Dec. 1986 centroid-moment tensor solns. 7−145362
global seismicity in AD 1979, centroid-moment tensor solns. 7−145363
global seismicity in AD 1986 second quarter, centroid-moment tensor solns. 7−94109
global seismicity of 1978, centroid-moment tensor solns. for 512 earthquakes 7−119966
global seismicity temporal variations during twentieth century *(Chinese)* 7−145336
Gorda Rise-Mendocino fracture zone area of Pacific, earthquake relocations, seismicity, tectonics 7−107358
Gorleben mine, geological reconnaissance for radwaste repository *(German)* 7−96339
Grand Banks region, Atlantic Ocean, continental margin refl. profiling within Lithoprobe East 7−87552
Great Basin of Nevada and California, ground motion attenuation 7−94107
Green's function used for propagation in infinite and stratified poroelastic media 7−133580
Greenland Sea-Barents Sea, sonobuoy meas. during 'Ymer' expedition 7−72006
Gulf of Maine, lower crust seismic struct. and tectonic characts. 7−87551
Gulf trough, United States, Eocene and Oligocene sections characts. 7−139521
Haiyuan (China) earthquake, 1920 December 16, assoc. displacement along Haiyuan fault 7−87453

seismology continued
Harriet oil reservoir in continental shelf of W Australia, seismic profiles 7—133575
Hatton Bank (Rockall Plateau), continental margin struct. from seismic profiles 7—79264
Hawaii earthquake, 1975 November 29, apparent stresses, stress drops, and amplitude ratios of preceding and following earthquakes 7—87451
heat flow in lower continental crust rel. to high reflectivity zones 7—107371
Henan area of China, seismic profile and crust struct., Suixian to Xian *(Chinese)* 7—79234
Herglotz-Wiechert-Bateman inversion rel. to tau-sum inversion 7—119953
S Hokuriku District, Japan, tectonics and seismicity of Sabae fault *(Japanese)* 7—87641
hydraulic fracture around borehole, microseismicity and induced low-velocity zone 7—145357
hydroseismicity, possible role of water in generation of intraplate seismicity 7—133578
Ice Stream B, W Antarctica, subglacial till struct. and continuity from seismic refl. meas. 7—145541
Ice Streams B, W Antarctica, seismic travel times meas. for subglacial till 7—145540
Iceland, seismic struct. and geology 7—79328
central India, deep seismic soundings along Hirapur-Mandla profile 7—79283
India, seismic velocity struct. of crust and upper mantle 7—127117
central Indian Ocean, near ridge extensional seismicity 7—87464
Indian Ocean and Indonesian Region, teleseismic phase velocity distribution 7—107357
W Indian Ocean north of Madagascar, gravity and magnetic anomalies, seismic profiles 7—145432
Indian subcontinent, seismic velocity struct. and Q_β struct. 7—133582
Intermountain Seismic Belt, microearthquake study of stress domains 7—114632
intracrustal seismic waveguide, thermal nature 7—71982
intracrustal waveguide existence and geodynamic consequences 7—101203
inverse dynamic problem soln. for velocity field reconstruction for 3D media 7—139491
Israel, deep seismic reflection studies of crust 7—79281
Israel, earthquake epicentre distrib. rel. to mapped faults 7—87478
Italy, Central Apennines tilt obs. and seismicity 7—127120
Italy, macroseismic magnitudes of largest Italian earthquakes 7—145368
Italy, N. Apennine region, seismicity study 7—79237
Japan, empirical relationship between seismic intensity, epicentral distance and magnitude 7—119947
central Japan, interplate seismic coupling 7—127191
Japan, precursors to earthquakes 7—94118
Japan, precursory activity in seismic belts containing focal regions of forthcoming large intraplate earthquakes 7—139503
central Japan, seismic refraction profile in Nagano Prefecture 7—133598
Japan, space-time distrib. of large shallow quakes 7—94119
Jordan, crustal struct. study derived from seismic refr. study 7—145407
Jordan, seismic shear wave velocity struct. 7—107355
Kakuto caldera, Japan, nature of recent seismicity (1983 to 1985) *(Japanese)* 7—87571
Kamchatka, USSR, earthquake precursory electrotelluric phenomena 7—94121
Kanazawa (Japan), 1799 June 29, earthquake damage rel. to fault movement *(Japanese)* 7—87509
Kanto (Japan) earthquake, 1923, focal depth determ. from S arrivals and S—P intervals *(Japanese)* 7—107363
Kirgizian Tien Shan, horizontal crustal inhomogeneities from surface wave group velocities *(Spanish)* 7—133619
Kirishima volcano, Japan, nature of recent seismicity (1983 to 1985) *(Japanese)* 7—87571
Lancaster seismic zone, SE Pennsylvania, USA, seismicity in AD 1750 to 1900 period 7—139472
layered half-space, elastic parameters recovery, refl. seismology appl. 7—71970
Li Yang Jiang Su earthquake, China, in 1979, associated geomagnetic variations *(Chinese)* 7—94087
limestone and marble, shear modulus and internal friction at seismic freqs. 7—94211
lithoseismic analysis for sedimentology *(French)* 7—87946
LMFBR reactor building, seismic load mitigation *(Japanese)* 7—73955
location method for earthquakes that occur along a plane 7—145360
London Platform, evidence for mid-crustal shears at northern edge from seismic refl. survey 7—79262
lower continental crust, symposium, Kiel, Germany (August 1986) 7—128165
M_m, theory of variable-period mantle magnitude 7—145351
Madagascar, Moho struct. from teleseismic observations *(French)* 7—94122
magnetic fluctuations due to seismic waves, superconducting gradiometer meas. equipment 7—133955
magnetic levitation vibrator seismic source design for seismic profiling 7—79252
magnetotelluric method combined with seismic refl. profiling 7—79646
magnitude determination methods, for local earthquake magnitudes in China *(Chinese)* 7—145668
magnitudes exceedance rate probability distrib. determ., use of seismic data from similar regions 7—145340
SE Maine, USA, Rayleigh wave dispersion and crust lateral anisotropy 7—139474
lower mantle, elec. conductivity inhomogeneities calc. using seismic data 7—133560
lower mantle, seismic eqn. of state 7—94112
mantle 3D shear wave struct. by overtone waveform inversion 7—101209
marble and gabbro, acoustic velocity and acoustic emission rel. to temperature *(Chinese)* 7—87609
marine resonance vibration source for seismic wave generation at sea 7—127491
marine sediment continuous seismic profiling, methods for higher resolution 7—71979
marine seismology, design and operation of data processing system 7—120135
mathematical analysis methods and appl. (book) 7—128205
N Matsumoto Basin, Japan, seismic profiling of crust struct. 7—127128
maximum magnitude earthquake occurrence estimation using mixture distribs. 7—101210
Messina area, Sicily, 1972 to 1983, limitations of Generalised Poisson model for microearthquakes occurrence 7—127100
metamorphic terrains, synthetic seismic refl. profiles 7—79254
meteorological precursors to strong earthquakes in Turkmenia and Uzbekistan 7—133591
Mexicali-Imperial Valley, earthquake recurrence models and historical seismicity 7—114631
Mexico City earthquake of 1985, damage to buildings and building design 7—139506
Mid-Atlantic Ridge, seismic velocity struct. of uppermost crust 7—145359
migration with erroneous vel. 7—79301
Miramichi region, New Brunswick, earthquake spectral scaling 7—114623
Miyota-Shikishima profile, Japan, explosion seismic obs. 7—114620
Mojave Desert, California, deep crustal structures refl. profiling 7—87542
Mongol-Okhotsk seismic belt, seismogeology and geophysical fields rel. to earthquake prediction 7—71967
monogenic function range resolution radar 7—139489
Monticello, South Carolina, USA, earthquake focal mechanisms and crust struct. 7—133585
multi-storey building horizontal response to earthquake shaking *(Chinese)* 7—94088
multichannel seismic data processing, signal-to-noise ratio enhancement using Karhunen-Loeve transform 7—79650
multichannel seismograms, phase spectra processing 7—127492
multimass seismic hammer *(Russian)* 7—79633
multipurpose algorithms for seismic data processing, construction using hierarchical struct. of computer storage 7—139484
W Nagano earthquake, Japan, postseismic and precursory seismic 7—114644
W Nagano earthquake, Japan, Sept. 1984, precursory coda changes 7—79307
W Nagano Prefecture (Japan) earthquake, 1984 September 14, assoc. ultramicroearthquakes (M=—3) occurrence near ground surface *(Japanese)* 7—87508
W Nagano Prefecture (Japan) earthquake, 1984 September 14, high vertical accels. meas. 7—139505
Nazarbek (USSR) earthquake, 1980 December 11, geomag. investigations in epicentral zone 7—87472
near field P-SV strong ground motion, scaling relationships 7—101219
N Negev, Israel, seismic risk of Qeren fault 7—87477
Nevada Test Site, USA, near-source information from teleseismic obs. 7—139479
New Caledonia, overthrust emplacement of ophiolite, geophysical evidence 7—139571
New Guinea seismotectonics, model 7—127188
new Madrid seismic zone, central USA, 3D seismic velocity struct. 7—119961
New Zealand, North Island, seismic velocity struct. and descending slab segmentation 7—127119
New Zealand (North Island), study of Hikurangi convergent margin 7—79289
Newport-Inglewood fault zone, Los Angeles basin seismotectonics 7—114630
Nihonkai-chubu (Japan) earthquake, 1983 May 26, numerical simulation of propag. of accompanying tsunami *(Japanese)* 7—107364
noise amplitudes in strong motion accelerographs 7—139501
noise reduction techniques for use with vertical stacking, empirical comparison 7—94465
noncausal autoregressive bispectrum estimation and deconvolution 7—107559
nonlinear seismic waves, evolutionary equations for waveform changes 7—145355
ENorth America, crustal structure effects on strong ground motion attenuation 7—114655
ENorth America, earthquake ground motions prediction 7—114627
ENorth America, hard-rock sites, ground motion and spectral response prediction 7—114626
E and WNorth American earthquakes source scaling relations 7—114622
North Sea, Iapetus suture location by BIRPS deep seismic refl. profiling 7—139511
N North Sea continental margin, nontypical refl. profiles from SHET survey 7—79324
North Yemen earthquake, 1982 December 13, broadband body-wave anal. rel. to rupture complexity 7—87449
Norwegian and E Greenland continental margins, seismic study of crust struct. 7—139493
nuclear explosion at Mururoa in French Polynesia, magnitudes from T-phases at Rarotonga 7—107350
nuclear explosions at Amchitka Island, teleseismic P waves 7—107352
nuclear reactor core, AGR graphite brick slices response to earthquakes 7—67891
Nyurol'ka Trough, USSR, basement rock comp., refracted waves data anal. 7—127145
Oberpfalz, Bavaria, deep seismic refl. profiling of crust 7—79276
oceanic crust seismic velocities, influence of pore water pressures 7—133596
oceanic layer 2, elastic vels. vars. near Hawaii and correl. with lithosphere flexure 7—87604
oceanic lithosphere teleseismic P_n and S_n phases and Q freq. depend. 7—94108
oceanic spreading centres, seismic refl. and refr. studies rel. to vars. in magma prod. rate 7—133655
Oceanographer transform fault, N Atlantic, crust struct. 7—133597
oil and gas deposit prospecting by reflection seismic method 7—127493
oil exploration, effects of seismic raypath anomalies on structural interpretation 7—127099
oil exploration, review 7—94515
oil exploration data, decision rules for feature extraction 7—87974
oil reservoir with low seismic impedances contrast, refl. profiling a method 7—133575
oil seismic prospecting in Australia, direct hydrocarbon detection methods 7—107517
middle Okinawa Trough, crust seismic struct. and seismicity 7—79238
middle Okinawa Trough, DELP 1984 cruises results 7—79312
Omori's power law aftershock sequences 7—120015
P-wave deconvolution, appl. of multi-channel method to seismic array data 7—87459
W Pacific, high-freq. seismic attenuation 7—79309
NW Pacific Basin, lower lithosphere P-wave vel. anal. 7—114652

seismology continued
NW Pacific Basin, P-wave travel times, 15 degree shadow zone 7−114653
Pacific Central basin, struct. of sedimentary cover, seismic refl. study 7−87489
Pacific crust and upper mantle 3D velocity struct., Love wave study *(Chinese)* 7−139468
East Pacific Rise, asthenosphere seismic shear wave velocity struct. 7−87486
E. Pacific Rise, seismic imaging of crustal magma chamber 7−71991
Pamirs-Tien Shan transition zone, stress fields interrelationship at different structural levels rel. to seismic charact. *(Spanish)* 7−133618
Pangea, 3D seismic velocity struct. 7−101213
Panxi tectonic belt, China, geodynamic processes from explosion seismology study *(Chinese)* 7−79233
Parkfield, California, temporal changes in microseismicity and creep 7−107362
perfectly reflecting wedge, used as control model in seismic diffraction modelling 7−127109
periodic motion of a piecewise homogeneous medium with complex damping 7−94103
N Peru, deep seismically active fracture zones 7−145436
petroleum exploration (book) 7−72743
phase times automatic determination from seismic wave data, reliability of results *(Japanese)* 7−87971
piezoelectric method of seismic prospecting, elastic wave scattering integrodifferential eqns. 7−139790
plane harmonic P, SV and Rayleigh waves, scatt. by dipping layers of arbitrary shape 7−87460
plane-layered medium generalised spectral function 7−79292
portable seismic exploration equipment *(Russian)* 7−79632
precursory behaviour monitoring equipment for electric fish 7−145707
precursory behaviour of granite undergoing creep, complex resistivity changes 7−87490
precursory electric field changes preceding earthquakes 7−94120
precursory geoelectric phenomena measuring apparatus 7−145710
precursory seismic and strain field changes for shear rupture event 7−79230
precursory seismic attenuation changes, meas. technique involving earthquake doublets 7−133579
precursory seismicity rel. to sunspot and Earth rotation parameters 7−87511
prediction of earthquakes, conf., Hyderabad, India (Nov. 1984) 7−128186
prediction of earthquakes and rockbursts, study of barrier fracturing 7−87495
prestack migration based on full elastic two-way wave eqn. 7−94461
prospecting for oil, linear velocity function method for depth conversion 7−107518
pseudospectral method for forward seismic modelling 7−120142
PUMA experiment west of Lewis, Outer Hebrides, crustal thickness and Moho location 7−79263
W Pyrenees area, seismic attenuation spatial variations 7−101208
pyrolite composition at Earth mantle conditions, pyroxene-garnet transformation 7−94210
S Queensland, Australia, 800 km deep seismic profile 7−79286
Rabaul caldera, Papua New Guinea, earthquake locations rel. to outward-dipping ring fault struct. 7−127164
random noise attenuation by 2D and 3D CDP stacking and Kirchhoff migration 7−79293
ray tracing of body waves in anisotropic medium, three methods 7−133583
Rayleigh waves, phase vel. and amplitude values in presence of lateral heterogeneities 7−87462
record classification, data acquisition and feature extraction *(Chinese)* 7−139492
reflection and refraction processing and interpretation methods, comparison 7−114633
reflection coefficients from mantle fault zones, results from BIRPS profiles 7−79260
reflection profiling, inverse Q-filtering using spectral balancing technique 7−127107
reflection profiling, one-dimensional two-channel inverse problem 7−94516
reflection profiling, removal of medium and long wavelength statistics anomaly 7−139487
reflection profiling by CDP method, the double off-end configuration 7−145693
reflection profiling involving normal moveout correction of CDP data, multiples suppression *(Chinese)* 7−101499
reflection profiling method for deep struct., using local earthquakes as sources 7−79250
reflection profiling seismograms, inversion using stacking velocities as constraints 7−127515
reflection seismogram inversion, wave scattering deconvolution 7−115035
reflection theory for EM and particle waves, book 7−108066
reflection-refraction method, using land recorded long-range marine airgun data 7−79648
reflectivity function, parameter identification using pseudogradient method *(Spanish)* 7−133604
reflectivity integral for stratified media, reduction to finite range 7−133587
refraction first-arrival time selection algorithm 7−120137
refraction profiling, shear velocity profiling by surface wave imaging 7−133584
refraction profiling & picking method for noisy data 7−139775
refraction seismology, evidence for horizontal inhomogeneity of crustal layers *(Spanish)* 7−133620
Regional Seismic Test Network, system and seismic site noises 7−114634
Rhine graben, wide-angle vibroseis test 7−79270
Ricker wavelet classification in seismogram analysis, decision-theoretic approach 7−79304
rock fracture meas. by seismic techniques 7−113843
rock melting on fault plane, artificial pseudotachylyte generation using friction welding apparatus 7−72024
Rockall Plateau southwest flank, crust seismic velocity struct. 7−133586
rockburst in coal mines, possible mechanism 7−87497
rockbursts in Czechoslovakia, inversion of local network first-motion amplitudes 7−79228
rocking strong earthquake accelerograms, synthesis method 7−94114

seismology continued
Round Valley, California, coda Q changes associated with 23 Nov 1984 earthquake 7−94106
Roya river mean valley, seismic swarm, conjugated faults movements *(French)* 7−79241
rule-based interpretation system for segmentation of seismic images 7−79681
S-waves analysis, separation of source, propag., and site effects *(Japanese)* 7−87504
San Andreas fault, seismic potential for area SE of San Francisco 7−114641
sand liquefaction behaviour, due to earthquake excitation 7−119954
sandstone and shale of Mesaverde formation, USA, in situ dynamic moduli and laboratory moduli 7−127201
Santa Rita fault zone, SE Arizona, large-magnitude earthquakes with very long recurrence intervals 7−87452
N Scandinavia, extensive-dilatancy anisotropy revealed by refraction profile 7−107354
seafloor seismic exploration by reflection method, influence of heave of towed source 7−72159
seismic sources spatio-temporal extent, determ. from stopping phases in seismograms 7−87450
seismicity changes detection by Bayesian approach to study of magnitude-freq. relation 7−87487
seismicity rates, man-made changes in seismicity catalogues 7−87455
seismogram microfilm archive at California Institute of Technology 7−114636
seismograms synthesis, representation of extended seismic source in propagator-based formalism 7−87448
Senya Fault, Akita Prefecture, Japan, Holocene activities *(Japanese)* 7−79337
SH-waves propagation in 2D structures with laterally varying surfaces, extension of refl. method 7−94096
SH-waves propagation modelling in irregularly layered medium, appl. to seismic profiles near dome 7−79297
SH-waves scattering, parametric study of finite element eigenfunction method 7−94113
shallow SH-reflection survey on paved ground surface, reflected waves charact. *(Japanese)* 7−79245
Shanxi Graben and earthquake zone in N China, tectonics and seismicity *(Chinese)* 7−145415
Shillong Plateau, NE India, microseismicity and source mechanism study 7−87458
shot static corrections for expanding spread profiling, use of least squares procedure 7−127103
West Siberian Platform, tectonic zonation of basement from refr. and refl. seismology 7−139597
Silent Canyon Caldera, Nevada Test Site, vel. structure 7−114656
single-station attenuation measurements of high-frequency Rayleigh waves in Scotland 7−94095
Skagerrak, Kattegat and S Sweden, seismic refl. and refr. study of crust 7−79648
Sleepy Hollow oil field, SW Nebraska, micro-earthquakes locations rel. to tectonic or induced origin 7−87454
small seismic events during mining, mechanisms 7−114639
smooth profiles from $\tau(p)$ and $X(p)$ data [seismology] 7−94100
Society of Exploration Geophysicists 56th Annual International Meeting, conf., Houston, TX, USA (November 1986) 7−88728
soil, blast wave, cylindrical propag., asymm. problem 7−101221
soil liquefaction due to seismic waves, theory 7−119948
soil nonlinearity, for soft soil subject to strong forces from plate of vibrator 7−119957
solar activity increase in 21st century, and terrestrial consequences 7−115357
solar motion and planetary motions correl. with global seismicity 7−94089
source azimuth estimation schemes, comparison 7−72168
South island, New Zealand, seismotectonic comparison with Transverse Ranges, California 7−139502
statistical data processing using cumulant analysis 7−101315
Steno dam site, NW Greece, microearthquake survey 7−94093
stick-slip earthquakes, model for kink-band formation in shear zones and faults 7−139609
stress-strain-rate relation for transversely isotropic incompressible fluid 7−94110
strong earthquake, Fourier spectral amplitudes 7−94115
strong ground motion, calc. for extended earthquake source in laterally varying struct. 7−87447
strong ground motion, identification of nonuniform grounded by discrete wave number method 7−94116
strong ground motion, site effects review 7−94117
strong ground motion by semi-empirical method, for inhomogeneous faulting 7−127127
strong ground motion observed on sedimentary layers, anal. of wave groups observed at Tokyo *(Japanese)* 7−87503
Swabian Jura, SW Germany, microearthquake recordings 7−71976
S Sweden, seismic refl. study of crust struct. 7−79278
synthetic long-period seismograms calc. and multiplet coupling 7−145350
synthetic regression analysis method for processing more than one straight line *(Chinese)* 7−94084
synthetic seismic wavefield movement computer-aided anal. 7−87513
synthetic seismogram, generalized 1D model 7−114638
synthetic seismograms and multi-fold path integrals 7−72167
synthetic seismograms and multifold path integrals, computations 7−71971
synthetic seismograms for plane layered Earth models, FORTRAN-IV program 7−127114
Tadzhikistan, USSR, precursory seismicity in Khait-Garm region 7−119956
Talas-Fergana deep fault zone, USSR, palaeoseismicity 7−133590
Tangshan (China) aftershock sequence, epicentres distrib. and fault plane solns. 7−87483
Tangshan earthquake region of China, crust and mantle seismic velocity struct. *(Chinese)* 7−94082
Tangshan-Beijing area, China, freq. depend. Q factors *(Chinese)* 7−94083
teleseismic feature extraction for discrimination between earthquakes and nuclear detonations 7−139507
teleseismic method for earthquake moments, use of variable-period mantle magnitude (M_m) 7−145352
teleseismic surface waves, linearized scattering on spherical Earth 7−107361

seismology continued
temporal resolution of seismic recording, estimation methods 7—145343
tensile fracture expts., study of seismic wave energy release 7—87492
theory and practice in seismology, conference, Tokyo, Japan (August 1985) 7—128180
Thermaikos plateau, NW Aegean Sea, Holocene sediments and sedimentation, seismic study 7—127192
Thessaloniki (N Greece) earthquake, 1978 June 20, iterative deconvolution of teleseismic P-waves 7—101217
three-component granular media, seismic waves and behaviour of media 7—119958
central Tibet, nature of upper crust from seismic vel. study 7—139509
Tokai area, central Japan, magnitude-freq. relation 7—127122
Tokai region, Japan, recent seismic activity near location of predicted large earthquake 7—145369
SW Tokyo metropolitan area, underground struct. from seismic prospecting *(Japanese)* 7—87505
tomographic imaging of crust struct., for limited data cross-borehole case 7—115105
tomographic inversion via the conjugate gradient method 7—94462
tomographic method of seismic prospecting 7—101204
tomographic prospecting methods *(Japanese)* 7—115032
tomographic seismic prospecting, theoretical background *(Japanese)* 7—115033
tomographic seismic travel-time inversion method 7—120138
Tomsk Oblast area of W Siberia, oil and gas seismic prospecting 7—127493
Tonankai earthquake, Japan, 1944 December 7, seismicity before and after main earthquake *(Japanese)* 7—87506
Tonankai earthquake, Japan, precursory seismicity to AD 1944 event 7—127118
trace interpolation in seismic data processing 7—101513
Transverse Ranges, California, seismotectonic comparison with South Island, New Zealand 7—139502
transverse wave generation, with impulse surface equipment (nonexplosive) 7—127490
travel time calc. using approx. ray tracing in laterally heterogeneous struct. 7—127129
travel-time anomalies of deep earthquakes, effects of subducting slabs 7—119995
tsunamogenicity of earthquakes, determ. method involving teleseismic waves 7—133589
two-point ray tracing, new approx. algorithm 7—139475
Tyrrhenian Sea area, plate tectonic opening and crust struct. 7—114673
underground explosion, elastic wave radiation, time-freq. characts. 7—78509
underground nuclear explosions, near-source contrib. to P-wave coda 7—139478
underground nuclear explosions, nonlinear model of tectonic stress release 7—139477
United States, central and eastern regions, crustal subdivisions and seismicity 7—133613
SE United States, COCORP seismic profiling 7—87544
EUnited States, ground motion attenuation 7—114624
W United States, long-period surface waves of four earthquakes recorded by Pasadena strainmeter 7—87461
USA, crust deep struct., COCORP seismic profiling findings 7—79253
western USA, m_b and M_s formulae and M_s/m_b discriminant 7—139476
USA Cordillera, COCORP deep seismic refl. traverses 7—79259
Utah, USA, crust struct. from seismic refl. and refr. data 7—79275
Vancouver Is., BC, Canada, struct of accreted terrane complex 7—87463
Vancouver Is., Canada, crust seismic velocity struct. 7—114643
Vancouver Is., Canada, deep seismic reflections in crust 7—79257
Vancouver Island, refr. and refl. surveys rel. to seismic instability of lithoprobe transect 7—79240
velocity bounds determination, appl. of statistical estimates of $\tau(p)$ and X(p) 7—87482
velocity bounds determination from $\tau(p)$ and X(p) data 7—94460
velocity profiling, method for vertical heterogeneity and moveout 7—127110
velocity-depth envelope determ. from wide-angle seismic data 7—94459
vertical seismic profiles wave field transformation 7—94102
vertical seismic profiling in borehole, new techniques 7—133950
vertically inhomogeneous medium, wave eqn. theory *(Chinese)* 7—79236
vibrator seismic source, radiation patterns of single and double vibrators 7—145344
vibrator seismic source, wave fields generated by vertical and horizontal oscillations 7—87471
vibrator source for seismic profiling, coupling of base-plate to ground 7—139783
Vibroseis data, improvement techniques 7—120141
Vibroseis seismic prospecting method, phase correction technique 7—145692
Vijaydurg Bay, Maharashtra, W India, sediments sounding, bathymetry, and seismic profiles 7—139585
Viking Graben, North Sea, seismic struct. and hydrocarbon prospects 7—79333
central Virginia, United States, lower crustal seismic struct. 7—87547
volcanic earthquakes, fracture instabilities accompanying dyke intrusion 7—87621
volcanic tremors, due to slow waves trapped in fluid-filled crack 7—145356
Voronezh Crystalline Massif, USSR, lithosphere layering 7—133572
Vrancea seismic region, Romania, depth variation of moment tensor principal axes 7—94091
VSP prospecting method, data migration by focused-lag sum imaging 7—107519
water injection into granite rock mass, microseismicity induction 7—101211
waveform modelling in heterogeneous media, appl of ray perturbation theory 7—87481
wavenumber integration techniques 7—79242
Wellington region, New Zealand, local earthquakes coda duration temporal var. 7—139495
West Wallsend No.2 Colliery, NSW, Australia, in-seam seismic mapping obs. 7—133576
Whipple Mountains, California, crustal struct., seismic refr. study 7—87541
Williston Basin, S central Canada, seismic refraction survey 7—119963
W Yakutia, deep seismic studies along Tas-Yuryakh-Amlaznyi-Malykai profile 7—139481
seismology continued
W Yakutiya, USSR, crust seismic anisotropy parameters 7—127146
W Yakutiya (USSR), appl. of shear waves in deep seismic sounding 7—133577
Yugoslavia, Moho discontinuity and crust struct. from DSS profiles 7—79279
Zenisu ridge, Japan, intraplate microearthquakes and tectonics 7—145364
seismometers
see also seismology
ASE, accelerograph for strong earthquake recording, tests 7—120168
ASEO-1, automatic seismic electrographic oscillograph appl. 7—120175
ASOZ autonomous seismic station for recording of perceptible earthquakes 7—145703
automatic system for measuring coordinates of seismic-wave source *(Russian)* 7—127518
azimuth determination procedures for ocean bottom seismometers 7—94489
borehole electrodynamic seismograph 7—120171
Cherepakha multichannel seismic station 7—120176
computer real-time processing of seismic signals, Elektronika DZ-28 microcomputer 7—145666
data processing system at Bureau of Mineral Resources, design and operation 7—120135
data recording in ocean bottom seismic stations, amplifier for magnetic recording 7—72194
design and circuit diagram of capacitance transducer for long-period accelerometer 7—145717
digital seismic array using K-PRS recording complex 7—120181
digital seismic measurement apparatus 7—145711
digital seismological station with broad dynamic and freq. ranges 7—145705
direction estimation of vector-planewave fields, for single 3 component sensor and sensor arrays 7—115106
electric power supply for field apparatus, stabilizing voltage converter 7—145713
epicentral digital seismic station 7—120169
fibre optic accelerometer, microbend, horizontal, for borehole seismometry 7—127604
fibre optic seismometer, interferometric, development 7—127603
ground displacement recording 7—120180
horizontal pendulum for true displacements, motion of sphere on plate, theory 7—145714
horizontal pendulum seismometer, dynamic characts. 7—145712
horizontal position control system of three-component seismometer 7—145709
laser interferometer for seismic measurement automated instrumentation 7—145706
long-period noise immune seismometers 7—145716
long-period seismometric channel with low sensitivity 7—120172
magnetic drum recording in waiting mode 7—120179
ocean borehole horizontal seismometer, sensor azimuthal orientation determ. method 7—94490
optimal placement of seismic stations for registration of near earthquakes 7—133958
PEO-1M electrographic oscillograph for strong earthquake recording 7—120178
piezoelectric seismometer, small three-component instrument 7—145704
portable seismic exploration equipment *(Russian)* 7—79632
portable wideband feedback seismometer, design and performance *(Chinese)* 7—145669
pulse calibration of seismometric channels of ASS-3 seismic station 7—145715
recording with different channel scanning rates on one recording medium 7—120173
SAMSON seismic testing machine *(German)* 7—133949
seabed sensors and their applications to earthquake prediction *(Japanese)* 7—79673
seismometers based on automated laser interferometers 7—145706
signal processing channel for ocean bottom seismic station with logarithmic conversion 7—145708
transients in long-period channels 7—120177
Volna seismic station 7—120170
selective dissemination of information *see information dissemination*
selectively doped heterojunction field effect transistors *see high electron mobility transistors*
selenium
see also nuclei with .....
adsorbed on Ni (001), core level photoelectron diffraction 7—144229
adsorbed on Ni (001), surface phases, refl. electron diffr., AES, transfer matrix scaling studies 7—84514
adsorbed on Si surface, nuclear quadrupole interactions studies 7—112270
amorphous, crystallisation caused by Al diffusion through Se-Al interface *(Japanese)* 7—83673
amorphous, drift mobility, field deactivation 7—84893
amorphous, field disactivation of hole drift mobility 7—76965
amorphous, highly disordered elemental semiconductors, DC electrical conductivity 7—131646
amorphous, ultrasonic investigation of dynamic props. 7—76305
amorphous, vitreous transform. and crystn. 7—83702
amorphous films, deep trapping levels 7—98931
amorphous films, light-induced structural transformations 7—124324
amorphous films, short range order, X-ray radial distrib. fn. anal. 7—142587
amorphous films, vapour-deposited, crystallisation kinetics, substrate effects 7—111403
amorphous semiconductor, constant-dipole-matrix-element model 7—125705
atmosphere of Samoa, tropical South pacific, trace element concentrations 7—139702
charge transport meas. in high resistivity materials, xerographic discharge techniques 7—124982
covalent clusters in zeolites, electronic and vibr. spectra 7—125723
crystal, helical structure, Landau theory, even and odd distortion modes 7—142696
desorption from graphite surface, mass spectral and atomic absorpt. study 7—143219
electroradiographic plates, DTA analysis 7—89293
energy band gap, photoacoustic determ. 7—84677
excited carrier thermalisation, photocond. and photoluminescence obs. 7—125792

selenium continued
fractionally charged particle search in matter, technique, results 7−116040
glassy, γ-ray irrad., solubility studies 7−84287
glassy chalcogenides, pressure-structural and optical studies 7−83716
glassy oxygenated, elec. resist., effect of high press. 7−85017
interfacial properties, static and time-resolved nonlinear optical props. 7−75052
ion implantation, GaAs-AlGaAs waveguide, selective superlattice intermixing 7−141990
liquid, electronic and thermodynamic props., high temp. and press. 7−105513
Orinoco River tributaries, Venezuela, Se concs, meas. 7−87741
permittivity, press. depend. 7−118937
photoexcited electron spectrum, post collision interaction effect 7−70978
radioisotope prod. from irradiated RbBr, electrolytic separation, tracer appls. 7−119854
radwaste, synthetic basalt groundwater, irreversibility of Se(VI)/Se(IV) redox couple 7−103273
removal from ash pond effluents by Fe coprecipitation 7−114140
Se-Te liq. mixtures, heat capacity temp. depend., cond. and bonding rearrangement 7−76426
single crystal, inhomogeneities, elec. and photoelectrical props. 7−92221
solubility, in PbSe, rel. to vapour pressure of Se_2, 1070-1270 K 7−69910
thin films, form. and growth, substrate temp., evaporation times 7−105322
trigonal crysts., positron annihilation Doppler line broadening meas. 7−77684
vacuum-deposited thin films, optical props., direct transmission spectra meas. 7−76657
X-ray laser research at the Lawrence Livermore National Laboratory Nova laser facility 7−90586
AlGaAs-GaAs:Se quantum well heterostructs., doping effects, thermal annealing and photolum. meas. 7−143573
$Al_xGa_{1-x}As$-GaAs:Se superlattices, layer interdiffusion 7−137630
β-BN:Se, elec. and thermal cond. rel. to defects 7−84878
Bi/Se multilayer thin films, optical recording 7−74880
Bi-Se multilayer thin films, optical wiring characteristics 7−122853
GaAs:In,Se, ion implantation, carrier conc. and mobility profile meas. 7−76178
GaAs:Se, post implantation annealing studies 7−98212
GaAs:Se, SIMS analysis of isotopic impurities in ion implants 7−84009
GaAs:Se^+, uncapped, regrowth and defect prod. after electron beam annealing 7−98196
GaAs:Se^+,Zn^+, donor-acceptor pair emission, photolum. spectra study 7−77649
KBr:Se^{2-}, F centers, photochemical prod. 7−124261
a-Se film, AC and DC cond., optical transmittance *(Korean)* 7−92317
Se XXX, B-like, emission lines, Tokamak Fusion Test Reactor 7−130924
Se XXXI, Be-like, emission lines, Tokamak Fusion Test Reactor 7−130924
Se XXXII, Li-like emission lines, Tokamak Fusion Test Reactor 7−130924
Se XXXII, O-like, emission lines, Tokamak Fusion Test Reactor 7−130924
Se^{24+}, electron impact excitation cross sections, relativistic distorted-wave calcs. 7−140388
Se:As, isothermal crystallisation kinetics, 110-200°C 7−104604
Se:Cd, liq., Knight shift of dilute ^{111}Cd dopants 7−85497
a-Se:Cl films, transient photocond. probing of negative bulk space charge evolution 7−143521
Se:Ge, isothermal crystallisation kinetics, 110-200°C 7−104604
Se:I, isothermal crystallisation kinetics, 110-200°C 7−104604
a-Se/Cd_xSe_{1-x} multilayer films, preparation and optoelectronic props. 7−125985
Se-As electrode, pick-up tube for X-ray topography *(Czech)* 7−108731
Se-Nb-V, nonequilibrium system, vibr. chem. reaction process 7−86569
Se_n clusters, (n=3 to 8), equilib. geometries calc., density functional method, mol. dynamics and simulated annealing 7−136113
a-$Se_{1-x}Te_x$-Se double layer xerographic photoreceptors, carrier drift mobility 7−105572
Si:P,Se, chalcogen double donors, hydrogen neutralisation 7−131572
Si:S,Se,Te, electronic struct. of mixed chalcogenide pairs *(Chinese)* 7−118401
Si:Se, deep level defects, optical cross sections, tight binding calcs. 7−99894
Si:Se, defect pairing, electronic struct. and total energy calcs. 7−83982
Si:Te, Se, S, double donors, IR absorption, Hall effect and DLTS studies 7−98905
TiO_2-Se thin film solar cells, fabrication and charactn. 7−93502

selenium alloys
see also selenium compounds
As_xSe_{1-x} amorphous, electronic struct., cluster model calcs. 7−143326
As_xSe_{100-x} chalcogenide glasses, relaxation of photosensitised metastable capture centres 7−131587
$As_{0.4}Se_{0.3}Te_{0.3}$, chalcogenide glass, electrical conduction and switching process 7−124988
Bi-Se, liq., electronic props., diamagnetism 7−92148
BiTeSe, n branch, thermoelectric efficiency, extrusion effect 7−131621
CdSe films, electrodeposited, growth and morphology 7−112121
Ce-Se, shape change during $\gamma \rightleftarrows \alpha$ and $\gamma \rightleftarrows \beta$ transforms. *(Russian)* 7−126105
$Cu_{0.15}As_{0.35}Se_{0.5}$, chalcogenide glass, electrical conduction and switching process 7−124988
Ge-As(Se,Te), liq., Knight shift, anomalous behaviour 7−118878
$Ge_{1-y}Se_y$ amorphous films, gap states, ESR spectra studies 7−92493
$NbSe_2$-2H surface images using STM 7−83604
Pd-Se system, phase relations, superconductivity 7−113519
Sb-Se, liq., electronic props., diamagnetism 7−92148
Sb-Se-Bi film, erasable optical disc media 7−75089
Se-^{181}Ta system, nuclear quadrupole interaction and elec. field gradient 7−113013
Se-Te, liq., liq., Schottky-type excess specific heat and metal-nonmetal transition 7−84308
Se-Te system, structural phase transitions in the liq. state and the melting enthalpy 7−76377
a-$Se_{1-x}Te_x$ field-assisted thermal hole emission from deep mobility gap states, xerographic dark discharge meas. 7−119115

selenium alloys continued
a-$Se_{1-x}Te_x$-Se double layer xerographic photoreceptors, carrier drift mobility 7−105572
$Tl_6Ag_{20-y}Se_{14-y}$, cryst. struct. four-circle diffractometer data *(German)* 7−69650

selenium compounds
see also selenium alloys
amorphous insulators, Se-based, xerographic-mode transient charge technique for probing drift mobility in high-resistivity materials 7−99118
diethyldithiocarbamate (DEDTC), simultaneously heated with $(DEDTC)_2Cd$, behaviour, IR spectra 7−113173
Ag-As-Se-Te glasses, ionic and electronic cond. and Ag diffusion 7−137617
As-Ge-Se chalcogenide glasses, photoluminescence, chem. etching effects 7−85803
As-Sb-Se glass ceramics, crystallisation and microstructures 7−104575
As-Se amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7−130282
$As_{17}Ge_{23}Se_{20}Te_{40}$, amorphous chalcogenide glasses, EXAFS struct. study 7−124109
$As_{40}Se_{30}S_{30}$ chalcogenide glasses, refractive index dispersion 7−85569
CsX:ScH^-, (X=Cl,Br,I), phonon sidebands 7−137489
Ge-Sb-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
Ge-Se chalcogenide glass, fatigued photolum., dark recovery of fatigued centres 7−143412
Ge-Se-Sb, amorphous films, temperature dependence of AC and DC conductivity 7−137935
Ge-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
Ge-Se-Te-Tl glasses, thermal and IR transmittance props. 7−104574
$Ge_xSb_{10}Sb_{90-x}$, conduction mechanisms in bulk amorphous system 7−137929
Ge_xSe_{1-x} alloys, DC conductivity and thermoelectric power studies 7−137931
Ge_xSe_{1-x}, amorphous films, relax. processes, elec. cond., annealing effect 7−70310
a-Ge_xSe_{1-x} system, photoluminescence transients 7−85802
$Ge_{22}Se_{78}Bi(Sb)(Te)_x$ chalcogenide amorphous thin films, photocond. studies 7−85003
$Ge_x(Se_{1-y}Te_y)_{1-x}$ glasses, prep., for optical appl. 7−106119
In-Se-Tl films, phase-change optical media, single-beam overwrite expt. 7−75091
KBr:SeH^-, phonon sidebands 7−137489
$Sb_{0.2}Se_{0.8}$ amorphous films, photoinduced optical density changes and crystn. 7−77670
Sb_2Se_2Te, bulk disordered system, threshold switching, nonlinear I-V behaviour 7−112346
Sb_2Se_2Te, elec. transport props. 7−137926
Se-S system, glasses, prep., struct. and optical props. 7−83715
Se-Te, interfacial properties, static and time-resolved nonlinear optical props. 7−75052
Se-Te, semiconductor glasses, XANES and EXAFS study, short range disordering 7−143324
Se-Te glasses, XANES study at Se K-absorpt. edge, metal-semiconductor transition 7−144175
Se-Te:Cl, electrophotographic props. 7−110492
Se-Te-Sb:Cl alloys, electrophotographic props. *(Japanese)* 7−84969
SeCO+Xe(Ar)(Kr), chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
$SeCl_3.AuCl_4$, cryst. struct., X-ray diffr. study 7−104645
SeF_6, electric hyperfine interaction, TDPAC meas. 7−113014
SeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
SeF_6, phase, nucleation, electron diffr. investig. 7−98380
SeGe films, real-time hologram recording 7−110296
a-$Se_{75}Ge_{25}$ obliquely deposited thin films, photo-induced optical effects *(Korean)* 7−132365
SeH, electron affinities, electron propagator theory appl. 7−122340
SeH^-, rot. photodetachment spectroscopy 7−82295
SeH^n (n=0 or +), electronic states, MC SCF (CAS SCF) and CI calcs. 7−135852
$(SeO_3)_4$, solid and vapour phases, vibr. Raman spectra 7−85667
SeO_2-V_2O_5 glass system, phase diagram 7−111414
SeO_3 vapour, matrix isolation, mass spectrometric and IR obs. 7−82112
SeO_3, vibr. assignment, force const. calc. 7−116935
SeS mols. in Ar matrix, fluoresc. excitation spectra *(Russian)* 7−68332
$Se_{1-x}Sb_x$ semiconducting glasses, optical energy gap meas., photoacoustic studies 7−144001
$Se_{100-x}Sb_x$, amorphous, nucleation, cryst. growth, elec. resist. 7−111410
$Se_{1-x}Te_x$, amorphous photoreceptor films, thermal and mech. props. of single and double layers 7−84606
$Se_{1-x}Te_x$ semiconducting glasses, optical energy gap meas., photoacoustic studies 7−144001
$Se_{80}Te_{20}$, polycrystalline thin films, vacuum deposition, amorphous-crystalline transition, elec. cond. 7−112331
YSeF, mixed layer cpds., electron diffr. effects 7−142761

self-adjusting systems
see also learning systems; model reference adaptive control systems
visual system, mammalian self-organising neural network model 7−126815
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, self-organisation obs. 7−70112

self-consistent field methods *see SCF calculations*

self-diffusion
see also self-diffusion in gases; self-diffusion in liquids; self-diffusion in solids
random walk on chain with dynamic disorder due to correlations 7−80703
shear-induced self-diffusion in conc. suspensions of spheres 7−83317

self-diffusion in gases
light-induced drift, adsorption effects 7−90045
microporous solids, fluid density distrib., pore diffusivity, Enskog's kinetic theory calcs. 7−137600

self-diffusion in liquids
aqueous ionic solutions, translational diffusive proton motion, quasi-elastic neutron scatt. 7−84339
asymmetric top molecule, rot. Brownian motion, Fokker-Planck-Langevin model 7−69943
colloids, self-diffusion, fluoresc. photobleaching expts. 7−71531

self-diffusion in liquids continued
concentrated solutions of attractive hard spheres, mutual diffusion coeff. 7—131344
formamide, microemulsion microstruct. from NMR meas. of self-diffusion 7—106838
HCl, aq. solns., neutron scatt. phonon spectra meas. 7—96884
ice-water interface, density and orientation profiles, diffusion consts., TIP4P model 7—137281
metals, liq., self- and interdiffusion, space expts. 7—105089
metals liq., dimensional analysis of physical quantities near melting point *(Japanese)* 7—97907
microdynamics, diffusion and structural relaxation in liquids 7—137202
microporous solids, fluid density distrib., pore diffusivity, Enskog's kinetic theory calcs. 7—137600
nematic liq. cryst. polymer, diffusion coeff. reverse anisotropy meas. 7—124096
NMR spin-echo meas., fixed field gradient, Bessel fn. fit anal. 7—92548
poly(sulphone-ethylene oxide) block copolymer soln., self-diffusion coeff. determ. 7—118142
polymer blends, mutual diffusion, fast macromol. control 7—118141
polymer melts, dense cubic lattice multichain systems, long time dynamic props., Monte Carlo study 7—117796
polymer solutions, entangled, hydrodynamic screening and diffusion 7—104519
smectic bubbles, collapse dynamics and permeation coeff. 7—117806
solute transport across liquid-liquid interfaces, capillary tube method 7—105252
tracer diffusion in alkane solvents, correlation to rough hard-sphere theory 7—137601
water, supercooled, self-diffusion coeff. meas. to 300 MPa 7—137605
water-N-methyl-2-pyrrolidone-polyethersulphone, membrane form., component mobility anal. 7—118140
water-oil microemulsion, self-diffusion coeff. calc. 7—137602
Ar, liq., Couette flow, self-diffusion, correl. functions, mol. dynamics study 7—124574
Ar-Kr(Ne) mixtures, far IR absorpt. spectra 7—132263
Fe melt, ^{59}Fe, diffusion coeffs. meas. with opposite convection, capillary method 7—131343
Fe-Cr-O system melt, ^{51}Cr diffusion coeffs. meas. with opposite convection, capillary method 7—131343
Ga-As soln., electrotransport model for liq. phase electroepitaxial growth 7—100129
HCl, aq., fast H^+ motion absence investig., neutron scatt. 7—82386
H_2O, self-diffusion, quasielastic neutron scatt. data, mol.-dynamics study 7—124573
^{3}He-^{4}He mixtures, superfluid, two-phase sound 7—98612
In, atomic diffusion coeffs. and atomic grouping, temp. relationship *(Russian)* 7—124572
KCl, aq. soln., mol. dynamics study 7—75968
K_2O-SiO_2, glass-forming melts, cation diffusion 7—69944
LiCl, aq. solns., Li^+ and Cl^- tracer diffusion coeffs. meas. 7—111929
$LiNO_3$, molten, electromigration, isotope effect 7—124577
Na, liquid, velocity autocorrelation neutron scatt. study 7—104531
Na, single particle motion, slow neutron scatt. studies 7—84345
Na_2O-Rb_2O-SiO_2, glass-forming melts, cation diffusion 7—69944
Pb, atomic diffusion coeffs. and atomic grouping, temp. relationship *(Russian)* 7—124572
Rb, liq., struct., self-diffusion, at 315 K, pseudopotential effect 7—117805
Si, crystalline, amorphous and liq., phase diagram studies 7—118059

self-diffusion in solids
see also diffusion creep
alloys, binary, BCC and FCC, mutual diffusion processes, ordering effects *(Russian)* 7—76476
alloys, irradiated, interstitial diffusion of metallic solutes 7—91880
amethyst, Brazil twins, X-ray study 7—124286
atom migration kinetics in crystalline lattice, interatomic interaction effects calcs. *(Russian)* 7—91874
atomic transport in crystalline solids, statistical theories 7—98586
BCC metals with n-body interatomic potentials, point-defect and stacking fault props. 7—76117
concentrated lattices, tracer diffusion correl. factor, Monte Carlo evaluation 7—84354
crack, slender, evolution under diffusion mass transfer 7—110856
crystal surface diffusion and structural props., effective temp. derivation 7—98638
cubic metals, self-interstitial defect migration w.r.t. Debye temp. 7—98124
diamond-like lattice with excess host atom, migration, quasimolecular model 7—105095
diffusion jump dynamic, NMR, PAC, Mossbauer and neutron scatt. study methods 7—99624
dislocation structure, irradiated, spatial instability 7—105146
displacement-induced point defect conc. and flux fluctuations, cascade diffusion theory 7—104814
enhanced vacancy accumulation near planar sinks, diffusion mechanisms 7—98136
FCC metals, self-diffusion, monovacancy and divacancy contributions 7—76478
freely-migrating defect production during irradiation 7—104812
glass composition modification during heavy ion irradiation 7—91893
graphite:Mo, radiation enhanced self-diffusion, influence of Mo impurities 7—91871
graphite-HNO_3, intercalation cpd., critical behaviour of diffusion constant for 2D melting 7—84367
ice, self-interstitial diffusion mechanism, X-ray topographic studies, review 7—111548
ice, surface dynamical props. *(Japanese)* 7—106046
ice, surface props, NMR study, temp. depend. 7—118874
ice-water interface, density and orientation profiles, diffusion consts., TIP4P model 7—137281
intermetallic cpds., diffusion, disordering and vacancies 7—105147
ion irrad. ordered alloys, self-interstitial uncorrel. long range migration, FIM obs. 7—98128
ionic crysts., contact melting, conc. distrib. 7—142962
metallic alloys, amorphous, self-diffusion and impurity diffusion 7—105103
metallic glasses point defects and atomic diffusion, review 7—98558
metals, BCC radiation damage, point defect models 7—91642
metals, diffusion of randomly distributed particles *(Japanese)* 7—76475
metals, electron irrad., vacancy-impurity interactions, positron annihilation studies 7—91567

self-diffusion in solids continued
metals, HCP, strained, anisotropic point-defect diffusion, continuum eqn. calcs. 7—84402
metals, interaction between interstitial subsystems *(Russian)* 7—76115
metals, isotope effect for anomalous fast diffusion 7—84399
metals, trivacancy migration energies and point defect interactions 7—91630
metals, two-dimensional self-interstitial diffusion in void lattice form. 7—98559
metals, vacancy and divacancy migration, positron effects 7—91876
metals and alloys, BCC VI B, anomalous self-diffusion and mode softening 7—98557
metals crysts., self-diffusion, anharmonicity effects, stochastic rate theory calcs. 7—98552
molecular crysts., bivacancy contrib. to self-diffusion coeff. 7—131350
Monel 400, mass transport of Cu and Co, radioactive tracer obs. 7—118148
naphthalene, mol. cryst., self-diffusion, pot. energy calcs. 7—98563
NMR free induction decay of spins in periodic lattice with vacancy diffusion 7—85468
$PbTiO_3$, thermostimulated Ti surface segregation and layer form., intersite diffusion model, Auger spectra 7—98640
peritectic transform., globular eutectic growth, diffusion model 7—132601
plasma, one-component, glass transition, dynamic correlations, generalised viscoelastic formalism 7—105027
rare earth and transition metals, self-interstitial props. 7—98122
refractory BCC metals, atomic-defect mechanisms for diffusion 7—105098
refractory metals, surface self-diffusion anisotropy 7—112044
semiconductors, concerted exchange diffusion mechanism without vacancies or interstitials 7—111958
semiconductors, point defects and diffusion mechanisms 7—104751
solid-solid interfaces, chem. composition *(French)* 7—111936
steel, thin films, Cr, Ti diffusion profile determ., appl. of X-ray chem. anal. technique 7—119608
tetrabutylammonium iodide, polycryst., mol. reorientation, spin-lattice relax. times meas. 7—76049
vacancy and interstitial-less diffusions, exchange mechanism 7—131360
well-annealed materials, point defect concs., rate eqn. applicability 7—91565
Zircaloy-4 cladding, thermal creep under internal pressure, self diffusion 7—86271
Ag, stationary nonequilib. vacancies during thermotransport 7—98121
Ag vacancy diffusion, Monte Carlo studies 7—91875
Ag-Al, NMR study of Al diffusion 7—106047
α-Ag-As, nonlinear solvent diffusion enhancement 7—131353
Ag-Cd/Ag diffusion couple, interdiffusivity and ratio of intrinsic diffusivities 7—111978
Ag-Sb alloys, stationary nonequilib. vacancies during thermotransport 7—98121
AgAl alloys, electron irradiated, SRO kinetics, elec. resistivity study 7—104739
Al, rebonding effects in separation and surface-diffusion barrier energies of an adatom pair 7—112084
Al, self-diffusion, NMR study 7—105097
Al, vacancies, positron lifetime spectroscopy and trapping 7—92771
Al-Ag alloys, precipitate plate growth mechanisms study 7—137569
Al-Al_2O_3(-Si), creep behaviour and dislocation struct. 7—100319
Al-Zn (4.5 at.%), electron irradiation-enhanced diffusion 7—105101
Al-Zn alloys, electron irrad.-induced precipitation and solute atom redistrib. study 7—105049
Al-Zn-Mg, 7075, discontinuous deform. *(Japanese)* 7—126174
Al-Zr-V, dil-alloy, precip., Ostwald ripening cubic to tetragonal transform. 7—78023
Al_2TiO_5, microstructure and props., effects of excess Al_2O_3 and TiO_2 7—71131
Ar, solid, vacancy diffusion, Monte Carlo studies 7—91875
Au-Ag alloys, electron irradiated, kinetics of SRO formation, resistivity change 7—104738
Au-Al, NMR study of Al diffusion 7—106047
Au-Cu, quenched, vacancy formation, migration energy *(Korean)* 7—84813
Au-Pd concentrated alloys, vacancies and vacancy behaviour, SRO kinetics, elec. resistivity meas. 7—104736
$Ba_6M_2O_{11}$ (M=Nb,Ta), defect structure, transport properties 7—131139
$BaMnF_4$, incommensurate insulator, kink topography and diffusion 7—143077
$BaNaNb_5O_{15}$, incommensurate insulator, kink topography and diffusion 7—143077
$BiO_{0.1}F_{2.8}$, tysonite-like solid electrolyte, NMR study of anion mobility 7—91889
$Bi_2Se_{0.3}Te_{2.7}$, Bi diffusion 7—91888
Cd, vacancy migration, perturbed angular correlation studies 7—91879
CdTe, Cd self-diffusion profiles and coeffs. 7—137612
Co-Fe-Si-B submicron surface layers, diffusion, X-ray spectral microanal. 7—124584
Co-Ga B2 ordered alloys, vacancy and antistruct. atom conc. and diffusion, NMR study 7—105105
$Co_{75}B_{25}$, metallic glasses, diffusion of Si and B 7—91885
Cu, embrittlement by surface mobility mechanism 7—119330
Cu nanocrystalline material, self-diffusion coeff. meas. 7—91882
Cu, vacancy clusters, efficient energy minimisation scheme calc. 7—98132
Cu, vacancy diffusion, Monte Carlo studies 7—91875
Cu-Al, diffusion, vacancy and interstitialcy enhancement during electron irradiation 7—105148
Cu-Al, NMR study of Al diffusion 7—106047
Cu-Al (15 at.%), electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7—98246
Cu-Au, diffusion, vacancy and interstitialcy enhancement during electron irradiation 7—105148
Cu-Be, irradiation induced phase precipitation and interstitial transport 7—104994
Cu-Mn (13 at.%), electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7—98246
Cu-Ni-Fe, irradiation induced phase decomp. and diffusive atom transport 7—104994
Cu-Zn alloys, diffusion, vacancy and interstitialcy enhancement during electron irradiation 7—105148
CuH, H diffusion, quasielastic neutron scatt. study 7—69973
$Cu_{2-\gamma}Se$, Cu diffusive mobility and precipitation, obs. of comp. changes under press. 7—137574
EuO thin films, O vacancy diffusion and elec. cond. 7—118156

self-diffusion in solids continued
Fe, self-diffusion and V impurity diffusion 7−98560
Fe, self-diffusion coeff., calc. of temp. variations 7−84359
α-Fe, self-interstitial pipe diffusion along edge dislocation, uniaxial loading effects 7−84366
α-Fe, vacancy migration and form., positron annihilation studies 7−91572
α-Fe, vacancy mobility, high-volt. electron microscopy studies 7−91878
Fe-Cr-Ni FCC alloys, point defects study 7−104744
Fe-Cu-C, proeutectoid cementite precip., Cu effect 7−78022
Fe-Ti spinels, mag. suscept. aftereffect and cation diffusion studies 7−118831
$Fe_{75}B_{25}$, metallic glasses, diffusion of Si and B 7−91885
FeCr, electron irrad., deviations from Matthiessen's rule, interstitial migration, elec. resist. meas. 7−98981
$Fe_{40}Ni_{40}B_{20}$, amorphous, diffusion of ^{59}Fe and ^{32}P 7−91883
$Fe_{41}Ni_{41}B_{18}$, amorphous, self-diffusion of radioactive ^{59}Fe tracer atoms 7−91884
FeNiCr alloys, dynamics of point defect populations 7−104743
$Fe_{0.8}Ni_{0.2}TiH_{1.24}$, H diffusion, Mossbauer studies 7−84362
α-FeSi solid soln.,-Zn vapour system, phase relations, diffusion paths 7−77950
Ge, dislocation interactions with point defects following HVEM electron irrad. 7−104806
Ge, Frenkel pair energy spectrum, migration of components 7−112225
Ge self-diffusion mechanisms and thermal equilib. defects, review 7−98568
H in BCC metals, hopping, incoherent quasi-elastic scatt. fn. Monte Carlo calc. 7−84352
InSb anodic oxide growth kinetics, anion migration and distrib. calcs. 7−119471
K_2O-SiO_2 glasses, ionic diffusion and frequency dependent conductivity 7−76486
K_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
$LaCu_5H_{3.4}$, H absorpt. and diffusion, NMR studies 7−85461
$La_{2-x}Sr_xCuO_4$ high T_c superconds., fabrication, mech. props., sp. ht. and O diffusion studies 7−119209
β-LiAl fast mixed conductor, photovoltaic effects study 7−137614
$LiH_x(D_x)$, diffusion and latt. distortions, Mossbauer studies 7−84363
$LiKSO_4$, translational and rotational dynamics, computer simulation 7−124132
$γ$-$Li_{1+x}V_3O_8$, vanadium bronze, transport and equilibrium characteristics 7−143088
Li_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
$MgAl_{2-x}Fe_xO_4$, spinel ferrite, O self-diffusion rel. to Debye temp., Mossbauer spectra 7−111952
$MgFe_2O_4$-$ZnFe_2O_4$, mutual diffusion of cations 7−105107
$(NH_4)_4Fe(CN)_6.H_2O$, high pressure proton NMR studies, diffusion obs. 7−106037
Na_2O-SiO_2 glasses, ionic diffusion and frequency dependent conductivity 7−76486
Na_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
Nb, self-interstitial long range migration, dislocation pinning, resist. recovery and internal friction meas. 7−98127
NbH_x, diffusion of H under hydrostatic press. 7−84364
NbH_x, tunnelling states of H in normal and superconducting Nb 7−84365
Ni, ion irrad., point defect-sink interactions, self-diffusion meas. 7−104804
Ni, lattice vacancies introduced by electron irrad., quenching and cyclic deformation 7−91574
Ni, pure, cavity sintering 7−111573
Ni, quenched vacancy migration, positron studies 7−91877
Ni, stage III and Stage IV defects, recovery and migration 7−91566
Ni-Al, $γ'(Ni_3Al)$ precip. under proton irrad. during ageing 7−84045
Ni-Al intermetallic cpds., vacancy diffusion mechanism, DSC and positron annihilation studies 7−105104
Ni-P-Cu chemically deposited coatings, heat treatment effects on struct. *(Russian)* 7−143288
Ni-Si (Ge)(Sb), dilute electron irrad. alloys, void nucleation, solute atom effects 7−91591
Ni-Zr, amorphous phase formation and crystallisation, diffusion mechanism 7−97928
NiAl coatings, oxidation resist. on Ni base superalloys, Hf effect *(French)* 7−86469
$NiFe_2O_4$-$ZnFe_2O_4$, mutual diffusion of cations 7−105107
NiO thin film growth, oxidation by ionic diffusion 7−118312
Pb-Au supersaturated solid solns., Au diffusion coeffs. during precipitation 7−105102
Pb-Au(Ag), power-law creep, effect of Au and Ag additions 7−144460
Pb-In, self diffusion rel. to comp. 7−111938
Pb-Sn-Ni alloys, Ni diffusion and electromigration 7−118147
$PbMoO_4$ single cryst., electrophys. and optical props., point defect interaction effects 7−84013
PbTe, comp. stability limits, Hall effect, cond. meas. 7−125022
Pd:H system, diffusivity, microstruct., galvanostatic permeation meas. 7−84358
$PdH_{0.7}$, single crystal anisotropy of nuclear spin lattice relax. times 7−85465
Pt-Pd, mutual diffusion coeffs., comp. depend., X-ray microanalysis *(Russian)* 7−111940
Pt-Pd, mutual diffusion coeffs., X-ray microanal. results *(Russian)* 7−137610
Pt_3Co ion irrad. ordered alloys, self-interstitial uncorrel. long range migration, FIM obs. 7−98128
Rb-Cs alloys, elec. field gradients and diffusion 7−112982
ScH_x, HCP, H diffusive hopping, proton and ^{45}Sc NMR obs. 7−124585
Si, crystalline, amorphous and liq., phase diagram studies 7−118059
Si, ion implantation, formation mech. and structures of buried SiO_xNy layers 7−69726
Si, passive thermal oxidation, ^{18}O tracer study 7−126342
Si self-diffusion mechanisms and thermal equilib. defects, review 7−98568
Si, surface, self-diffusion, simulation using Stillinger-Weber pot. 7−76481
Si vacancy migration energy, self-consistent Green's function method 7−98569
Si:C,O, electron irrad., divacancy accumulation kinetics, impurity effect, IR absorpt. spectra 7−104837
SiO_2, amorphous, radiation-sensitivity enhancement and annealing 7−124334

self-diffusion in solids continued
SiO_2 thin film growth, oxidation by ionic diffusion 7−118312
SiO_2 thin film growth by Si oxidation and O_3^+ defect electromigration 7−119467
$Sr_6M_2O_{11}$ (M=Nb,Ta), defect structure, transport properties 7−131139
T, solid, atom densities, NMR studies 7−138334
$TaH_x(D_x)$, low temp. diffusion, perturbed angular correlation spectra 7−84361
β-Ti, self-diffusion via vacancies 7−105099
Ti-Al, thin film system, diffusion coeffs., 773-923 K *(Russian)* 7−143079
TiH_x, tracer diffusion coeffs. for H, NMR spin echo meas. 7−84360
$(U_{0.8}Pu_{0.2})O_{2-x}$, chemical diffusion of O, 1400°C *(French)* 7−96184
$V_{1-x}Ti_xH_y$ solid solns., H diffusivity temp. and comp. depend., cell model anal. 7−118149
W, high temperature vacancy migration enthalpy 7−91575
W-Cr single cryst. system, Cr diffusion, isotopic effects, SIMS studies *(Russian)* 7−143078
Xe-Kr cryocryst. solid solns., exciton-induced diffusion, luminesc. intensity distrib. obs. *(Russian)* 7−76482
$YBa_2Cu_3O_{7-\delta}$, high temperature superconductor, O mobility and isotope effect 7−118680
Zn, vacancy migration, perturbed angular correlation studies 7−91879
ZnS, annealing of F^+ EPR centres, optical absorpt. spectral bands 7−106024
α-Zr, load relaxation, strain ageing influence 7−144435
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
α-Zr, self-diffusion coeff. 7−111941
β-Zr-Fe alloys, anomalously fast diffusion of Fe, Mossbauer study 7−105100
Zr-Sc, BCC phase, anomalous ^{95}Zr self-diffusion, influence of Sc 7−111939
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564

self-focusing
see also electrostriction; optical self-focusing
DNA, self-trapping and dispersion, gel electrophoresis 7−114170
plasma Langmuir waves, self-focusing and anisotropic collapse, inverse scattering method 7−117714
ruby:Cr, inertial self-focusing of hypersound 7−111780
US phased array sector scanner, dynamic focusing scheme 7−68961
whistlers, self-focusing, multifocus structures 7−141754

self-induced transparency
atomic medium with degenerate transition's, self-induced transparency in presence of strong mag. field 7−123128
paramagnetic media *(Russian)* 7−110481
ultrashort optical pulse propag., numerical modeling and precise results, review 7−123120
very short optical pulses, first-order wave eqn. soln. 7−82724

self inductance *see inductance*
self-optimising systems *see self-adjusting systems*
self-organising systems *see self-adjusting systems*
self-phased arrays *see antenna phased arrays*
self testing *see automatic testing*
self-trapping *see self-focusing*
self-tuning control *see adaptive control; self-adjusting systems*
self-tuning systems *see adaptive control; self-adjusting systems*
Selfoc optics *see gradient index optics*
SEM *see scanning electron microscopy*
semi-insulating materials *see semiconductor materials*
semiconductor alloys *see semiconductor materials; semiconductors*

semiconductor counters
see also position sensitive particle detectors
BGO Compton, suppressed Ge detectors, neutron background meas. 7−135755
CCDs, virtual phase, detectors of minimum ionising particles 7−135748
charge-sensitive preamplifier with drain feedback for X-ray spectrometer 7−122317
environmental gamma ray exposure rates meas. comparison between EML and JAERI method 7−103293
equivalent noise charge on KP903 transistors determ. 7−122313
experimental nuclear physics appl. 7−74382
fitting peaks in γ-ray spectra, semicond. detector meas. *(Czech)* 7−68144
high energy accelerators, perspectives for experimental apparatus, seminar, San Minato, Italy (May 1986) 7−108021
hyperfine structure resolution using planar Si detectors *(Japanese)* 7−129510
in-situ environmental γ-monitoring using Ge(Li) spectrometry 7−133481
ion-implanted semiconductor γ radiation detector used for the purposes of radiation monitoring *(Chinese)* 7−89874
low background telescope system for $^{12}C(n,\alpha)$ meas. 7−81891
low biased p-Si surface barrier detector 7−109600
microanalysis of N_2 and O_2 impurities in C specimens 7−86726
n^+p diffused junction diodes for nucl. radiation detection, reverse bias voltage decay and dark current meas. 7−81888
neutron spectrometers, fusion plasma diagnostics systems 7−89721
photon detector efficiencies, review 7−96460
pn-junction design, doping using low energy ion beams 7−138576
radial semiconductor drift chambers, step noise effects on energy resolution 7−81871
recent developments in γ-ray and charged particle detectors 7−89868
semiconductor detectors for telescope systems, electron spectroscopy, 0.15-3.5 MeV 7−74336
surface barrier detectors, pulse height defects for heavy ions 7−109620
two-dimensional position sensitive detector, correlation technique 7−116777
(n,f), 8.5-19 MeV, associated particle identification in TCAPM cross section meas. 7−81905
CdS scintillator for X-ray tomography, afterglow characts. determ. 7−103334
CdSe detectors, transient charge technique evaluation 7−74353
CdTe detector, properties for nuclear medicine 7−81857
CdTe detectors, appl. in ophthalmological radiology for X-ray spectrometry, dose reduction and image optimization 7−145269
(Ga,Al)As-GaAs, semiconductor scintillator, nuclear particle and X-ray detector 7−141403
Ge coaxial detector line shapes, charge carrier trapping 7−81869
Ge detector, high purity, resolution and stability *(Chinese)* 7−89873
Ge detector, high purity, total γ-ray cross-section meas. 7−109619
Ge detectors, appl. to nucl. struct. physics 7−74361

emiconductor counters continued
Ge detectors, ratio of peak to total efficiencies *(Japanese)* 7−81885
Ge detectors, timing props., centroid diagrams of prompt photopeaks and Compton events 7−109616
Ge, efficiency meas. for atomic-field bremsstrahlung 7−89869
Ge γ-ray detectors, IEEE standard test procedures 7−109659
Ge, high-energy particle transmission, energy losses, Landau distrib. comparisons 7−116804
Ge, hyper pure high resolution detector for K-shell photoelectric cross section meas. 7−96473
Ge poly- and monocrystals, neutron cross sections at various temps. 7−96466
Ge:Li detectors, response to narrow beam of photons, Monte Carlo simulation 7−116778
Ge:Li double spectrometer, γ-ray background induced at balloon altitudes 7−116769
Ge:Li low-background semiconductor spectrometer for studying double beta decay 7−122300
Ge:Li p-i-n junction spheric-coaxial γ-detector, bulk charge and elec. field profile calcs. 7−135763
Ge(Li), coaxial, absolute efficiency calibration function, energy range 63-3054 keV 7−135761
Ge(Li), oriented radioactive nuclei NMR and spin-lattice relaxation meas. 7−128616
HgI_2 crystal growth and its properties of photoluminescence *(Korean)* 7−85811
HgI_2 detector, Monte Carlo simulation *(French)* 7−141396
HgI_2 detectors, transient charge technique evaluation 7−74353
Si counter array, construction and performance in UA2 7−109639
Si crystal acoustic detector for neutrino experiments and dark matter searches 7−129512
Si detector, p-i-n type, surface protection using anode oxidation technique 7−71401
Si detectors, appl. to nucl. struct. physics 7−74361
Si detectors for short range particles, limiting resolution 7−135764
Si high resolution thermal detectors 7−122316
Si, high-energy particle transmission, energy losses, Landau distrib. comparisons 7−116804
Si large area wafer, use in hadronic sampling calorimetry 7−109632
Si microstrip counter with VLSI readout for DELPHI microvertex detector 7−74370
Si microstrip detector as ALEPH minivertex detector 7−109638
Si, response to ^1H and ^4He ions 7−89871
Si sandwich calorimeters, beam tests 7−109625
a-Si, Schottky diode detectors, recombination effects and noise 7−141394
Si single wafer dE-E detector for fast neutron spectrometer 7−74332
Si strip detector, γ-ray polarisation, energy and direction meas. 7−141397
Si strip detector with integrated coupling capacitors 7−135752
Si strip particle detector IC *(Norwegian)* 7−74337
Si transmission detectors with photodiode read-out for ΔE-E telescopes 7−74346
Si:Au(Pt) radiation resistant diode detectors, minority carrier lifetime 7−81884
Si:B detectors, oxide charge state compensation 7−74340
Si:Li and HPGe detectors, X-ray and gamma-ray intensity meas. in ^{210}Pb, ^{177}Lu, ^{170}Tm and ^{141}Ce decays 7−135248
Si:Li X-ray detector, efficiency at low energies 7−135744
Si/W and Si/U sandwich calorimeters, lateral EM shower development, optimal granularity 7−68137
Si-U sandwich sampling calorimeter, longitudinal EM shower development 7−109633
Si-W sandwich sampling calorimeter, longitudinal EM shower development 7−109633
Si(Au) detectors, radiation damage by fast neutron irradiation *(Chinese)* 7−81874
Si(Li) detector lineshapes for PIXE anal. 7−86703
Si(Li) detector response functions for 1.3-4.0 keV monochromatic photons 7−116792
Si(Li) detectors, radial dependence of registration efficiency determ. 7−109654
Si(Li), efficiency meas. for atomic-field bremsstrahlung 7−89869
Si(Li) X-ray detector response to proton induced K X-rays, Monte Carlo anal. 7−141399
ZnSe scintillator for X-ray tomography, afterglow characts. determ. 7−103334

semiconductor defects *see crystal defects*

semiconductor device manufacture
Used for commercial manufacture only
Columbus high-power solar array technology assessment 7−144852
II-VI semiconductor thin film solar cells fabrication, laboratory safety procedures for material processing 7−86800
III-V semiconductor solar cells, large scale production, safety comparisons of gas source deposition technologies 7−86802
ion implantation technology conf., Berkeley, CA, USA, (July-Aug 1986) 7−95081
photovoltaics safety, conf., Lakewood, CO, USA (Jan. 1986) 7−80168
solar cell welding, Indian Space Res. Organisation technology 7−144868
thin film deposition in photovoltaics manufacture, safety considerations 7−86019
$CuIn-Se_2$-CdZnS solar cells, health and safety aspects in research and production 7−86801
GaAs satellite solar cell mfg. using vertically separated three-chamber LPE 7−144839
GaAs solar cell mfg. facility and processing methods 7−144840
GaAs solar cells, high efficiency; manufacturing experience; satellite power supply appls. 7−126607
GaAs spacecraft solar cell mfg. experience 7−144838
GaAs spacecraft solar cell pilot production line technology assessment 7−144841
Si amorphous solar cells manufacture, safety procedures 7−86799
a-Si preparation technology, safety aspects 7−86020
Si solar cell contact/interconnector system Intercontact 7−144842
Si solar cell manufacturing technology in Japan, present status and future direction 7−71623
a-Si solar cells, continuous fabrication on polymer substrates 7−126615
Si spacecraft solar cell US welding equipment 7−144843
Si thin solar cell welding and assembly methods and environmental tests 7−144865
a-Si:H solar cells, continuous-mode fabrication on polyimide substrates 7−133100

semiconductor device models
diode laser arrays, steady-state self-consistent anal. 7−90605
lasers, 2D device simulator 7−103819
MIS structures, charge transfer kinetics modelling *(Japanese)* 7−131789
MNOS structures, injection and charge transfer *(Japanese)* 7−131790
MOS capacitor, linear approx. doping profile 7−77106
noise sources *(French)* 7−131724
one dimensional semiconductor device, simulation of transient behaviour 7−92167
one-dimensional semiconductors, electric potential solution 7−92168
p-n junction, transient behaviour, asymptotic anal. 7−131759
resonant-tunnelling device, Wigner-function model 7−138024
Schottky-barrier solar cell characts. *(Russian)* 7−78635
small device barrier height fluctuations dopant discreteness and distrib. effects 7−118397
SOI unseeded recrystallisation using moving line heat source, 1D numerical model 7−76660
solar cell, open circuit voltage, partial illum. effect, distributed parameter model 7−100729
solar cell fill factor and efficiency, analytical determ. 7−71614
solar cells, single-diode and double-diode model parameters extraction from I-V characts. 7−71606
tandem solar cell design, spectral p-n junction model 7−71605
tunnel structures, I-V characts. calc. simulation model 7−125085
variably spaced superlattice energy filter, appl. to devices 7−85093
AlGaAs-GaAs heterojunction quantum wells, analytical models 7−138045
$CdS-CuInSe_2$ solar cells, optimum interface thickness, modelling 7−144836
GaAs, solar cell degradation model for low-energy proton impact 7−144876
$InGaAs/GaAs$ $n\text{-}n^+$ heterojunctions, discrete interface traps 7−143569
Si bifacial solar cell modelling for degradation by space particle irradiation 7−144881
Si photovoltaic convertor using Nd laser radiation, parametric study 7−133105
Si photovoltaic devices, spectral response and efficiency of heavily doped emitters 7−133108
Si, polycrystalline, model of photovoltaic props. depend. on effective diffusion length 7−77007
Si polycrystalline solar cells, 3D modelling 7−126624
Si solar cell efficiency, effect of vertical dimensions, 2D anal. 7−139114
Si solar cell nonlinear effects, internal quantum efficiency model 7−144880
Si, thin film polycryst. p-n junction solar cells, 2-D model 7−133103
a-Si:H solar cells, degradation, SCL current diode model 7−126599
a-Si:H solar cells, I-V characteristics 7−144837

semiconductor device testing
see also integrated circuit testing
capacitance study of semiconductors with high dielectric constant 7−108577
IR sensing LEDs for chemical sensor appls., reliability 7−100684
large-area solar cell calibration, absolute indoor differential spectra responsivity method 7−144885
long-wavelength high-reliability lasers, characts. 7−97015
mobile pulsed solar simulator development for spacecraft solar array testing 7−144892
performance under global irradiance, effect of atm. parameters 7−119654
radiation hardness testing, BeO TLDs use for high-dose dosimetry 7−89783
Solar Array Flight Experiment (1984) test results 7−144882
solar cell forward and reverse I-V characteristic test equipment 7−144887
solar cell spectral response mismatch error analysis and correction 7−144889
solar cells characts. meas. 7−86797
SPASOLAB equipment for solar cell space qualification 7−144893
surface analysis techniques and their application to materials and device characterization 7−125904
third-generation rigid fold-out solar array development and testing 7−144848
GaAs solar array performance expt. on EURECA-1 low Earth orbital flight 7−144861
GaAs solar cell anal. and testing using light emission technique 7−71619
GaAs solar cell proton damage energy-dependence and combined-radiation effects 7−144890
GaAs spacecraft solar cell pilot production line technology assessment 7−144841
InP based solar cell power/mass ratio and end-of-life efficiency for space use 7−144867
Si bifacial solar array alternative module configuration for low Earth orbit 7−144844
Si solar cell contact/interconnector system Intercontact 7−144842
Si solar cell spectral response meas. for space qualification 7−144884
Si solar cell welds, Ag foil interconnector low-cycle fatigue tests 7−144845
Si thin solar cell welding and assembly methods and environmental tests 7−144865
a-SiGe:H triple-junction solar cells and modules, reliability tests 7−144825

semiconductor devices
see also field effect devices; Gunn devices; integrated circuits; semiconductor counters; semiconductor diodes; semiconductor junction lasers; space-charge limited devices; thermistors; thyristors; transistors; transit time devices; varistors
acoustic emission when current flows through devices 7−82995
amorphous materials, conference, Balatonszeplak, Hungary (Sept. 1986) 7−80153
ballistic electrons in semiconductors, device appls. 7−76968
band-gap engineering, device appls. 7−125998
carrier lifetime meas., using reverse recovery method *(Czech)* 7−99085
dimension scaling, shallow ion implantation study 7−76176
flicker noise generated by random walk of interface electrons 7−105635
IEICE National Convention, Keio, Japan (March 1987) 7−108028
interface phenomena rel. to device behaviour, book contrib. 7−85051
microprobes, recording/biocompatibility props., cortical neurons extracellular recording appl. 7−114598
organic molecular semiconductor devices review 7−118566
powder mixing rate instrumentation system *(Japanese)* 7−113465
science and appls. of amorphous materials 7−83682
semiconductor interfaces, conf., Manchester, England (April 1987) 7−108048

semiconductor devices continued
SOS bridges, plasma generator for explosives ignition 7−139011
STM applications for semiconductor materials and devices 7−83619
surface and interface effects in VLSI, book 7−80185
Bi_2Te_3 thermoelectric radiation detector with fast response 7−128576
GaAs and related cpds., conf., Las Vegas, NA, USA (Sept. 1986) 7−120702
n-GaAs microwave devices, charge carrier conc. in active layer, magnetoresistance meas. *(Romanian)* 7−143491
GaAs-AlGaAs heterostructs., 1D wires, high mobility, quantum transport, mag. field and temp. depend. 7−125021
a-Si and alloys, materials and device stability, conf., Palo Alto, CA, USA (Jan. 1987) 7−140350
Si piezoresistive absolute pressure sensor, design and realisation *(Slovenian)* 7−80764
Si polycrystalline resistors, negative resist. charact. anal. 7−118493
Si pressure sensors, design and temp. compensation cct. *(German)* 7−108535

semiconductor diode light emitters *see light emitting diodes*

semiconductor diodes
see also avalanche diodes; charge storage diodes; light emitting diodes; photodiodes; Schottky-barrier diodes; solid-state rectifiers; tunnel diodes; varactors; Zener diodes
blanket integrated blocking diodes for solar array protection 7−144874
chalcogenide amorphous semiconductor diodes, fabrication by low temp. thermal diffusion 7−125087
double barrier diodes, resonant tunnelling and sequential tunnelling 7−92265
field enhanced generation mechanisms 7−105590
holographic real time recording of microwave fields, laboratory prototype 7−103777
MIS diodes, AC cond., contribs. of recomb. and tunnelling at interface states 7−85128
n^+p diffused junction diodes for nucl. radiation detection, reverse bias voltage decay and dark current meas. 7−81888
p-n junction, transient behaviour, asymptotic anal. 7−131759
p-n junction diodes, lifetime and surface recomb. vel. determ. by transients obs. 7−67347
p-n junction diodes, minority carrier lifetime determ. from open-circuit voltage decay including junction capacitance effects 7−80820
polypyrrole/polythiophene p-n junction diode, electrochemical fabrication 7−93325
polythiophene derivatives-GaAs based electronic structures and devices 7−92277
resonant-tunnelling device, Wigner-function model 7−138024
triangular barrier diodes, barrier height and technological parameters 7−105692
triple-barrier diodes with undoped spacer layer, resonance characteristics 7−131755
$Cd_xHg_{1-x}Te$ p-n junctions, transport mech. 7−77052
GaAs polycrystalline p-n junction diodes, origin of shunt effect 7−77083
$In_{0.52}Al_{0.48}As:O^+$ diodes, O^+ implantation and annealing-effect on electrical props. 7−93115
InGaAsP/GaAs heterojunction diode defect distrib., light-beam-induced current method study 7−118577
InP fully ion-implanted abrupt p-n junctions, mesa diode fabrication 7−138014
InP:Ga(As), isoelectronically doped, bipolar diode fabrication, device charact. 7−111602
Si diode thermometer with IC instrumentation package, for 77.5 to 290 K 7−121133
Si, n^+-p diodes, generation lifetime 7−143480
Si pin diodes, solitary current filaments 7−143591
a-Si:H p-i-n diodes with Al electrode, current-voltage charact. 7−143250

semiconductor doping
see also doping profiles; ion implantation
amorphous As and Ge chalcogenides, photodoping as radiation enhanced solid state reaction 7−126468
amorphous semiconductor, struct., thermodynamic view 7−142583
batch process ion implanter, planar channelling effects 7−104781
bridging implant technique to characterize MeV implants 7−117960
chalcogenide amorphous semiconductor diodes, fabrication by low temp. thermal diffusion 7−125087
chalcogenide glasses, doping, electrical conductivity 7−76009
chalcogenide glasses, electrical doping by Bi, model 7−142647
chalcogenide glasses, photoelectronic properties, changes induced by chemical doping, irradiation and thermal history 7−143523
dose uniformity in high current implantation systems 7−111611
dosing accuracy, expt. comparisons 7−111610
double charged ion beam, energy purity for serial process ion implanters 7−104783
dynamic simulation of ion implantation with damaging processes included 7−111616
electrostatically scanned ion implantation system, ultra-uniformity 7−111612
heteroarylene vinylene units, five-membered, semiconductors, polymerisation and doping 7−76958
high current injector for tandem accelerators 7−103301
III-V compound semiconductors, maskless ion implantation system for 3D fine doping structures 7−98206
III-V semicond. cpds., focused ion beam implantation and MBE technology appls. 7−76175
implant uniformity improvement using advanced scanning techniques 7−111609
impurity-induced disordering technology, appls. in integrated optoelectronics 7−124307
ion beam technology appls. 7−124308
ion implantation, basic principles *(French)* 7−76184
ion implantation, historical perspectives 7−95165
ion implantation technology conf., Berkeley, CA, USA, (July-Aug 1986) 7−95081
ion implants, thermal wave monitoring 7−117956
large diameter ion beam implantation system 7−103320
laser microfabrication of thin films 7−71006
layered materials, implantation process, Monte Carlo simulation 7−111621
low dose implanted layers, four-point probe monitoring 7−117955
MBE, conf., York, England (Sept. 1986) 7−66816
MV ion implantation facility 7−104780

semiconductor doping continued
n-type, effect of dopants conc. on resolution and rate of light photoetching, model 7−138914
optical dosimetry for ion implants 7−117957
optimization of the ion implantation process 7−117954
Pearson function anal. of implanted dopant distrib. 7−111620
phtalocyaninatoaluminium fluoride films, I ion implanted, elec. props. 7−105738
phthalocyanine derivatives, mol. semicond. and junction formation 7−92276
phthalocyanine thin films, elec. and optical props. 7−99234
pn-junction detector, doping using low energy ion beams 7−138576
poly(4-(N,N-diphenylamino-)phenyl methylmethacrylate), electrochemical doping, rectification and photovoltaic props. 7−69631
polyacetylene:Li(Na), semicond.-metal transition, ESR studies 7−98810
polyacetylene, reversible doping with I_2 in gas phase 7−92314
polyacetylene films, ion implanted, elec. props. 7−124986
self implanted amorphized Si substrate, boron implantation, channelling avoidance 7−111624
semiconductor-metal system, photodoping process modelling, three-layer struct. and optical consts. *(Russian)* 7−137384
shallow junctions by ion implantation and rapid thermal annealing 7−76171
shallow p^+n junction formation by dual F^+/B^+ implantation 7−111625
sheet resistance monitoring of low dose implants using the double implant technique 7−118484
SOI, buried layer anal. from high dose O^+ implantation 7−98207
SOS, ion implanted, laser beam annealing, channelling and sheet resist. meas. 7−84025
SOS films, As dopant redistrib. during thermal annealing, theoretical and expt. study 7−76661
SOS films, autodoping and lattice defects, review 7−105739
surface charge neutralisation during ion implantation 7−104782
tilt gradient dose error in an electrostatically scanned ion implanter 7−124305
transient doping behaviour in CVD, simplified treatment, circuit representations 7−98192
weak bond-dangling bond conversion 7−124104
a-Si:H-a-SiN_x:H superlattices, transfer doping, electron trapping, effect of a-SiN_x:H comp. 7−99212
AlGaAs:Zn, Te-GaAs:Zn, Te, superlattice surfaces, simultaneous Zn, Te diffusion, appl. for quantum well lasers 7−105142
AlGaAs-GaAs:Se(Mg) quantum well heterostructs., doping effects, thermal annealing and photolum. meas. 7−143573
AlGaAs-GaAs:Si lasers, low threshold buried heterostruct. quantum well, fabrication by laser assisted disordering 7−117227
$Al_xGa_{1-x}As$:Zn; impurity induced struct. disorder, Raman study 7−99845
$Al_xGa_{1-x}As$-AlAs-GaAs:Si selectively doped MQW heterostructs., electron mobility, influence of AlAs spacer 7−92263
$Al_xGa_{1-x}As$-GaAs selectively doped heterostruct., MBE, GaAs oval defect elimination by substrate prep. 7−71023
As-Ge-X:Pb(Cu), glasses, (X=S, Se, Te), electrical and structural props. 7−83711
As_2S_3:Ag submicron resolution optical grid, Ag photodiffusion study 7−105120
B implantation through photochemically deposited SiO_2 films on $Hg_{1-x}Cd_xTe$, MWIR detector appl. 7−84006
BF_2^+, ultra-low energy implantation, shallow junctions, avoidance of channelling 7−111623
$BaTiO_3$ based semiconducting ceramic, prep. by doping from the liq. phase 7−92952
Bi-Ge chalcogenide system, Bi doping model and EXAFS study 7−142616
$Bi_2Te_{3-x}Se_x$:$CdCl_2$, plastically deformed, impurity behaviour during recrystallisation 7−91698
a-C, electronic and atomic struct. 7−70177
a-C:H, electronic and atomic struct. 7−70177
$CdCr_2Se_4$, thermal stability, stoichiometric and doping effects 7−78386
$CdIn_2S_4$, thermal stability, stoichiometric and doping effects 7−78386
CdMnTe-CdTe:In doped superlattices, growth by photoassisted MBE, physical props. 7−77803
$Cd_{1-x}Mn_xTe$-CdTe, superlattice, photoassisted MBE, substitutional doping 7−132472
CdP_2, doping, effects of valence and covalent radius 7−69720
CdTe high-cond. n-type vacuum deposited films, formation and props. 7−100076
CdTe photoassisted MBE films, controlled substitutional doping 7−131164
CdTe:Al on GaAs, MBE growth and Al doping, struct. optical and elec. props. 7−77820
CdTe:In(Sb), thin films, photoassisted MBE, substitutional doping 7−132472
CdTe:Tl, deep acceptors, elec. activity *(Russian)* 7−124907
CdTe:Zn, growth by gradient freeze method solid-liquid interface shape 7−132443
CdTe-CdS heterosystem, rear-barrier photoelectric transducer, preparation and props. *(Russian)* 7−95649
GaAs, doping in metalorganic MBE using gaseous sources 7−76152
GaAs, doping with Group VI elements, phase transitions 7−69721
GaAs, gas source MBE, doping enhancement by excimer laser irradiation 7−71035
GaAs, growth in low press. MOVPE, orientation depend. of growth rate and Si doping 7−144298
GaAs, heavy doping effects, models 7−118410
GaAs high-sensitivity microanalysis of impurities using multielement doped GaAs standard samples 7−100646
GaAs, implanted ion solubility and activity, residual defects, review 7−76174
GaAs, ion-implanted and neutron-transmutation doped, rapid thermal annealing, Raman studies 7−111598
GaAs, MBE grown, δ-doping, device appl. 7−77811
GaAs, MBE grown crystals, dopant incorporation, kinetic and thermodynamic aspects 7−137381
GaAs, MOVPE growth, impurity incorporation, laser-irradiation effects 7−71060
GaAs multilayer targets, recoil range distrib., Monte Carlo simulation 7−111619
GaAs, n-type, effect of dopants conc. on resolution and rate of light induced etching 7−132838
GaAs, neutron transmutation doped, electrical props., influence of fast neutrons 7−76929

miconductor doping continued
GaAs quantum wells, picosecond carrier transport, high field effects 7−92284
GaAs shallow ion implantation profiles for device dimension scaling, C-V and SIMS studies 7−76176
GaAs, stacking fault energy, dopant and deformation temp. effects 7−142800
GaAs VPE layers for microwave Schottky tuning varactors 7−138670
GaAs:$Ar^+(Xe^+)$, ion-implanted, study by multiple angles of incidence ellipsometry 7−83983
GaAs:Au, surface, photoconductivity, photovoltage, effects of vacuum thermal treatment 7−77004
GaAs:$Ba^{2+}(Na^+)$, Auger electron spectra, secondary electron yields, work function 7−77709
GaAs:C, atomic layer doping using flow-rate modulation epitaxy, p-type doping profile 7−111595
GaAs:Cd(In)(Xe), as-implanted lattice sites of dopants 7−98222
GaAs:Cr crysts., LEC growth, Cr incorporation and segregation 7−100043
GaAs:Er, Er doping during LPE growth, photoluminesc. study 7−113257
GaAs:Fe epitaxial films, doping during vapour deposition, structural and electrical props. 7−76664
GaAs:Fe single crystals, LEC grown, phase analysis; ferromag. props. 7−86179
GaAs:In,Se, ion implantation, carrier conc. and mobility profile meas. 7−76178
GaAs:In,Si LEC crystals, double doping studies 7−131163
GaAs:In epitaxial layers, VPE trichloride growth using Ga/In alloyed source 7−71065
GaAs:In low dislocation density semi-insulating crysts. by doping *(Chinese)* 7−76150
GaAs:In semi-insulating single crystals, growth of 50 mm low dislocation density substrates 7−85976
GaAs:In VPE layers, EL2 characts. 7−98887
GaAs:Mg, dopant activation by post-implant rapid thermal annealing 7−86212
GaAs:Mg/GaAlAs, dopant activation by post-implant rapid thermal annealing 7−86212
GaAs:Se, post implantation annealing studies 7−98212
GaAs:Se^+, uncapped, regrowth and defect prod. after electron beam annealing 7−98196
GaAs:Si, Bridgman growth , thermodynamic analysis 7−132438
GaAs:Si, deep levels induced by focused ion implantation 7−98921
GaAs:Si, doping from disilane in gas source MBE 7−77808
GaAs:Si, δ-doping layer, magnetotransport props. 7−131688
GaAs:Si, gas source MBE growth, Si doping 7−125986
GaAs:Si, LPE, temp. difference method 7−126030
GaAs:Si, low press. OMVPE, doping using disilane 7−132482
GaAs:Si, MBE grown, doping efficiency and thermal stability of electron conc. 7−142810
GaAs:Si,Be, Esaki-Tsu type doping superlattice, realisation 7−125102
GaAs:Si recoil implantation under As^+ bombardment, annealing effects, Hall Meas. 7−76177
GaAs:Si(In,Si), Czochralski crystals, ion-implanted, amphoteric doping 7−137382
GaAs:Si(Zn)(Cr), stacking fault energy, dopant and deformation temp. effects 7−142800
GaAs:Sn, form. by pulsed ruby laser interdiffusion, props. and elec. characts. for FET contact structs. 7−76151
GaAs:Sn, LEC grown, Sn segregation and donor compensation 7−91817
GaAs:Sn, mechanism for electrically activating Sn implants 7−83996
GaAs:Sn, n-layer fabrication and characts. by open-tube diffusion process 7−124306
GaAs:Sn epitaxial layers, gaseous Sn doping during vapour deposition 7−76663
GaAs:Te, liquid phase epitaxy, from Bi melt, Te doping 7−71088
GaAs:Zn, Zn diffusion using sintered ternary source 7−98579
GaAs-AlGaAs:Si, atomic planar doping, improvement of 2D electron gas conc. 7−77065
GaAs-$Ga_{1-x}Al_xAs$:Si superlattices, MBE, plasmons, Raman scatt. obs. 7−70764
GaAs-GaAlAs MQW optical modulators, effect of residual doping on optimum structure 7−82766
GaInAs:Mg, grown by organometallic VPE, detection of defects 7−132496
GaInAs-InP superlattices, band struct., self-consistent pseudopotential method, modulation doping effect 7−112473
GaP:$Ba^{2+}(Na^+)$, Auger electron spectra, secondary electron yields, work function 7−77709
GaP:Cd(In)(Xe), as-implanted lattice sites of dopants 7−98222
GaP:N, S epitaxial layers, prep. by VPE CVD method 7−86037
GaP:O(S)(Se)(Te), liquid phase epitaxy, thermodynamic anal. of doping 7−91606
GaSb:Cd,Sn, epitaxial layers, dislocation density 7−91589
Ge surface pot. and photo-memory, dopant effects *(Russian)* 7−77035
a-Ge:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
a-Ge:H doping, review 7−142811
a-Ge:N_2^+ films, electronic props., ion implantation effects 7−117980
Ge_2S_3:Ag, glassy, effect of DC elec. field on Ag migration 7−105121
$Ge_{20}S_{80-x}Bi_x$, semiconducting glass, structural transformations 7−142637
HgCdTe, heterojunction devices, model for composition and doping profiles 7−131766
$Hg_{1-x}Cd_xTe$, doping and composition profiling, graded capacitance-voltage method 7−143622
$Hg_{1-x}Cd_xTe$:In(Zn), native defects and complex form., doping and alloying effects 7−98202
$Hg_{1-x}Cd_xTe$:P,As,Sb,Bi LPE films, impurity incorporation, elec. activity and distrib. coeff., Hall meas. 7−70128
$In_{0.53}Ga_{0.47}As$:Si (Be) layers formed on InP substrates by ion implantation and flash annealing, elec. props. 7−85151
InGaAsP-InP:Fe VPE, high speed buried heterostructure laser diode 7−141896
InP, MBE grown crystals, dopant incorporation, kinetic and thermodynamic aspects 7−137381
InP:$Bi^+(N^+)$, ion implantation disorder, annealing effects, RBS channelling study 7−76179
InP:Fe, Ga, LEC growth, dislocation density 7−125943
InP:Fe, semi-insulating, chloride VPE growth 7−100096
InP:Ga(As), isoelectronically doped, bipolar diode fabrication, device characts. 7−111602

semiconductor doping continued
InP:MH (M= transition metals), optical absorpt., P-H bond vibrational mode, chemical shift 7−125732
InP:Mg, grown by organometallic VPE, detection of defects 7−132496
InP:Mg, MOVPE grown, photolum, data 7−99910
InP:R (R=Ce,Ho,Eu,Gd,Yb), influence of lanthanoids on elec. props. 7−131632
InP:S, MBE grown, S incorporation and desorption 7−76674
InP:S, single crysts., thermal activation of deform. 7−98307
InP:Si, dopant activation by post-implant rapid thermal annealing 7−86212
InP:Si(Be), n- and p-type layers formed in semi-insulating InP by thermal anneal/ion implantation, elec. props. 7−85152
InP:Si(Te), MOVPE, carrier conc. rel. to doping 7−124301
InP:Sn,S neutron transmutation doping, photothermal ionisation photocond. studies 7−124300
InP:Ti,Hg(Cr,Hg)(Cr,Cd), double doped semi-insulating crysts., growth and charactn. 7−125950
InP:V Fourier transform spectra, deep level optical spectra 7−125733
InP:Yb, growth by metalorganic CVD, photolum. 7−86040
InP:Zn, $p^+(p^-)n$ junction form. rel. to substrate conc., time and temp. depend. 7−111964
InP:Zn,S, deform., dislocation generation and movement 7−131215
InP:Zn surfaces, Zn diffusion, crystal defects 7−118167
InP-Zn, electron irrad., annealing, EPR, ODMR 7−125535
InSb:Pb, LPE growth 7−106445
P^{2+} ions discharge in beamline of medium current implanters 7−111608
$Pb_{0.8}Sn_{0.2}Te$ laser-doped crysts., ESCA obs. of comp. of near-surface domain 7−133018
PtSi/n-Si:H Schottky barrier height variation by ion implantation 7−76180
Si (111), Pb^+ ion implantation, surface layer struct., after high temp. treatment 7−84461
Si, brittle to ductile transition, bend testing, crack tip dislocation motion, doping effect 7−86309
Si, damage profiles of Ga and Si implants 7−111618
Si, defects and O impurities, positron studies 7−144161
Si, dopant distrib., cathodoluminescent monitoring, surface oxide layers 7−77660
Si epitaxial CVD layer deposition and doping, process control eqns. development 7−98193
Si, epitaxial CVD layers, doping, modelling and theory development 7−124297
Si epitaxial layers on buried Si_3N_4 produced by ion implantation, props. 7−85131
Si, float zone crystals, dislocation-free, N_2 doping 7−86013
Si, high resistance neutron transmutation doped, prep. and props. 7−71100
Si implantation in GaAs(GaAsP) by 7 MeV electron beam doping 7−117961
Si implanted slices, stress/strains ion implantation effects 7−111686
Si, ion beam synthesis of thin buried layers of SiO_2 7−69724
Si, ion implantation, formation of buried oxide layers 7−69725
Si, ion implantation, formation mech. and structures of buried SiO_xNy layers 7−69726
Si, ion implantation for carrier lifetime control 7−111627
Si, ion implanted, thermal wave meas. 7−117958
Si, MBE, developments review 1984-86 7−77816
Si MBE, use of alloy source for group V 7−144284
Si, molten, dopant diffusion by pulsed excimer laser 7−124570
Si, monocrystalline, P doping by neutron transmutation in Harwell reactors 7−91658
Si multicrystalline solar cells, PF_5^+ ion implantation and rapid thermal annealing 7−126626
Si, neutron transmutation doped high resist. state, photoinduced current transient spectra 7−112243
Si p-n junction produced by low temp. diffusion of B 7−70392
Si, polycrystalline, hydrogen-radical-enhanced CVD 7−71061
Si polycrystalline solar cells, 3D modelling 7−126624
Si Schottky barrier modification by low energy H implantation 7−83995
Si solar cells, polycrystalline, base doping concentration modelling, grain boundaries effect 7−78643
Si solar cells, thin-film single cryst., fabrication *(Japanese)* 7−119648
Si surface barrier modification by low-energy N ion implantation 7−142807
Si VPE layer doping, theoretical foundations, incorporation eqns. 7−124296
Si wafer ion implant damage, relaxation at room temp. 7−117959
Si:Al, recoil implantation, elec. props. 7−111603
Si:Al^+, deep p-layer formation, diffusion 7−111622
Si:As, As diffusion coeff., dependence on conc., internal electric field model 7−105139
n^+Si:As, shallow layer implant activation and redistrib. by rapid thermal annealing 7−76172
Si:As(B)(P), MeV implantation profiles 7−111615
Cz-Si:B, defect characteristics, doping and annealing depend. 7−142758
Si:B, Harwell series II implantation RBS standards calibration 7−76170
Si:B, heavy doping in MBE using HBO_2 source, knudsen cell 7−91605
Si:B, low energy implants, RTP shallow junction formation 7−117953
Si:B, solid phase epitaxial regrowth, low press. CVD 7−137736
Si:B epitaxial layers, doping suppression in presence of HCl 7−69719
Si:B shallow p^+ junction fabrication using laser-induced melting doping technique 7−124299
Si:$B^+(P^+)(As^+)$, MeV implantation 7−111614
Si:BF_2 ion implantation and annealing, RBS, SIMS and NRA studies 7−76168
Si:B(P) amorphous films, bias effects on preparation in triode glow discharge 7−126028
Si:B(P)(Ga), MeV implants, range distrib. 7−111617
a-Si:C, doping effects on defects, optical and electrophys. props. 7−137380
Si:C, formation of SiC by implantation with negative ion implanter 7−67432
Si:Cd(In)(Xe), as-implanted lattice sites of dopants 7−98222
Si:Ga, doped oxide Ga diffusion, open tube technique 7−137624
Si:H, amorphous, glow discharge deposited films, Raman scatt. obs. of struct. changes and SRO 7−99957
a-Si:H, doped and undoped, density of states 7−84623
a-Si:H, elec., optical and doping props. 7−76953
a-Si:H, laser induced Al diffusion, photovoltaic device appls. 7−137622
a-Si:H, P(N) films, photoinduced absorption and conductivity 7−99774

semiconductor doping continued
a-Si:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
a-Si:H,P, doped and undoped, steady-state transport under nonequilibrium conditions 7−84977
a-Si:H,P, photo-CVD grown, doping-induced defects 7−124928
a-Si:H,P thin films, low energy ion doping technique 7−124342
Si:H amorphous thin-film solar cell production by CVD 7−113424
a-Si:H doping, review 7−142811
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, persistent photoconductivity, doping effects 7−77003
a-Si:H-Pt, Schottky diode, photoelectric characteristics 7−85048
a-Si:H(H,P) films, optical and electrical props. 7−85871
Si:In MBE growth, accelerated-ion beam doping using low energy In ion source 7−86033
Si:Ni, doping props. *(German)* 7−76817
Si:O, high current accelerator with postacceleration meas. anal. for O^+ implantation 7−103317
Si:O, ion implanted wafers, annealing stacking faults form., SiO_2 precipitates dissolution 7−111587
Si:O, SIMOX implantation, layer thicknesses 7−98208
Si:P, γ-irradiated, carrier mobility and density 7−70304
Si:P, high energy implantation, electronic stopping and range profile calcs. 7−76182
Si:P, RAD growth, doping induced dislocations, TEM obs. *(French)* 7−111560
Si:P, transmutation doped, minority carrier lifetime, annealing effects 7−84923
Si:P epitaxial layers, laws of doping *(Chinese)* 7−131492
Si:P film, simultaneous deposition and doping by LPCVD, model of growth rate nonuniformity 7−132484
Si:P films, CVD, crystallographic and elec. props. charactn. 7−138676
Si:P single crysts., high energy ion implantation and annealing effects study 7−76169
Si:Sn, B, ion implantation and annealing, shallow junction form. 7−76173
Si:Te (111), doping under pulsed laser irradiation, He^+ backscattering 7−91620
Si-SiO_w multilayer planar structures formed by ion synthesis 7−99211
SiB, amorphisation implants, low temp. rapid thermal anneal 7−111613
β-SiC, device quality, CVD, on Si-substrates 7−113427
SiC:Al, ion implanted 4H polytype, p-n junctions, capacitance spectroscopy 7−99177
a-SiC:H,B, elec. and optical props., substrate temp. depend. *(Korean)* 7−137936
$Si_{1-x}Ge_x$, neutron transmutation doped, electrophysical parameters, ϵ_1 cond. 7−84875
$Si_{1-x}Ge_x$, neutron transmutation doped, cond. meas. 7−104768
$Si_{1-x}Ge_x$:Ga, neutron-transmutation doped, galvanomag. props., inhomogeneities 7−105591
SiH,B(P) plasma CVD coatings with $(SiH_2)_n$ groups, doping, cond., optical gap control 7−98750
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
$(SnTe)_{1-x}(EuTe)_x$, mag. susceptibility, effect of Eu doping on physical props. 7−105881
$TiSi_2$/Si, p-n shallow junction form. by impurity ion implantation and drive-in method 7−104769
Zn dopant, photodeposition rates from diethylzinc 7−71515
ZnO polycryst., bulk and grain boundary defect states, doping and heat treatment effects 7−112234
ZnS:Ce(Eu)(Tb)(Tm) thin films, growth and charact. 7−70130
ZnS:In VPE on GaP substrates, doping effects study 7−105317
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048
$ZnSnP_2$ conductivity type conversion by In doping, diffusion and heat treatment 7−85016

semiconductor-electrolyte boundaries
7X Si, p-n junction electrodes, photocurrent stability, decomposition potentials 7−70410
electrochemical interface, models for struct., review 7−124706
interface simulation in UHV, H_2O and halogen adsorption 7−143608
photoelectrochem. memory effect 7−70408
poly (3-methyl thiophene) film with aq. electrolyte contact, impedance and electrorefl. spectra, polaron transition obs. 7−99797
pyrrole, photoelectrochemical polymerisation on TiO_2, appl. to conducting pattern generation 7−100551
semiconductor electrodes, charge transfer kinetics 7−99190
semiconductor island film, nonlinear photoeffect under pulsed illumination 7−77119
semiconductor photoelectrochemistry, opportunities and problems 7−106810
time-resolved response to illumination pulses 7−99191
transient and periodic illumination of a semiconductor-electrolyte interface, minority carrier concentrations 7−143607
tunnel electrode-dye solution interface, acceptor state density distrib. meas. *(Japanese)* 7−131781
n-:CdS/$Fe(CN)_6^{4-/3-}$ photoelectrochemical cell, overlayer formation and stability 7−71626
$Bi_{12}GeO_{20}$, Fermi level and current transport 7−143606
p-$CdCr_2Se_4$, photoelectrochemical behaviour studies 7−118540
n- CdS film electrodes, polycryst., photoetching, electroreflectance obs. 7−113802
n-CdS, photoelectrochemical kinetics of hydroquinone oxidation 7−99192
n-CdSe films, traps and minority-carrier diffusion length 7−131818
CuI photocathodes, dye-sensitised, photocurrent quantum efficiency 7−99194
n-GaAs electrode in aq. electrolyte, photoinduced capacitance peaks, e-h recomb. model anal. 7−99120
GaAs films, electro-co-deposited, photoelectrochemical solar cell fabrication 7−92900
n-GaAs, intensity modulated photocurrent spectroscopy 7−112388
n-GaAs, semiconductor-electrolyte interface, electroreflectance spectra 7−112481
n-GaAs/electrolyte interface, photocapacitance obs. 7−112389
GaAs/electrolyte interface, photoresponse 7−112486
p-GaAs/H_2SO_4−$S_2O_8^{2-}$ semiconductor-electrolyte interface, electroluminesc. 7−113288
GaAs-NaI, stabilisation of GaAs in acidic conc. iodide electrolyte 7−112484

semiconductor-electrolyte boundaries continued
p-GaP/electrolyte interfaces, charge transfer processes, surface decomposition intermediates effects 7−112482
GaP-H_2SO_4 electrolyte contact, electron diffusion length, determ. by photocurrent meas. 7−125120
HgCdTe, electroreflectance at low temps. 7−144014
p-InP/NaOH−$S_2O_8^{2-}$ semiconductor-electrolyte interface, electroluminesc. 7−113288
InP-KCl electrolyte junction, interfacial defects, photolum. and photocond. studies 7−112485
$MoSe_xTe_{2-x}$ electrodes for photoelectrochem. solar cells, valence and conduction bands 7−85101
Nb_2O_5 anodic thin films, photoelectrochem. props. at semicond.-electrolyte junctions 7−112483
$Ps_3(PS_4)_2$, PdPS, PdP_2 and PdS, semiconducting cpds., photoelectrochem. props. 7−105702
p-RuS_2-aqueous electrolyte interface, impedance and photoelectrochem. props. 7−118583
Si photoelectrodes, metal coated, solar energy conversion appls. 7−106915
Si:P, electrically active defect profiles, photoelectrochem. method 7−137360
n-Si/acetonitrile electrolyte interface, surface states, optical absorpt. 7−105701
SnO_2/rhodamine dye solution interface, laser-induced photoelectrochem. transients 7−70409
Ti-TiO_2-electrolyte, electronic conduction 7−118584
n-TiO_2 electrodes, O electroreduction, charge transfer mechanisms 7−113944
TiO_2, sensitisation in visible light region, using Zn porphyrins 7−99193
TiO_2/2-propanol interface, electron transfer dynamics, transient grating investig. 7−92287
$TlSbS_2$ photoelectrodes, photoconductivity measured at the solid-electrolyte interface 7−70411
WO_3 film-acidic H_2O electrolyte contact, photoelectrolysis solar cell potentiality determ. 7−143287
p-WS_2 polycrystalline electrodes, preparation and photoelectrochem. props. 7−105703
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
Zn_3P_2 vacuum evaporated films, appl. photoelectrochemical solar cells 7−126636
n-$1ZrS_2$, photoelectrochemistry in aqueous solutions 7−71625

semiconductor electron states *see band structure of crystalline semiconductors and insulators; electron energy states of amorphous solids; electron energy states of liquid semiconductors*

semiconductor epitaxial layers
characterisation using X-ray Buerger precession camera 7−97857
defect depth profiling by synchrotron X-radiation topography 7−131473
growth, solid solution cooling method 7−105311
growth on Si, conf., Palo Alto, CA, USA (April 1986) 7−80174
heterostructures, for light generation, detection and modulation 7−132495
HgTe, chem. compositions, effects of surface treatment 7−84460
(II-IV-V_2)-(III-V) semicond. heterojunctions, epitaxial growth, electrophysical props., review 7−112455
II-VI semicond., epitaxial photochemical deposition 7−138679
III-V cpd. multilayer device structs., ion beam etching, in situ monitoring 7−132837
III-V cpd. superlattices, internal stress, effects on thermal stability, Raman study 7−106195
III-V multilayer heterostructures, lattice mismatch and elastic stresses 7−143247
III-V semiconductor epitaxial layers, laser vacuum deposition on Si substrate 7−105334
III-V semiconductor epitaxial layers, MOCVD growth 7−71071
III-V semiconductor layers, MBE grown, charact. by SIMS 7−84008
III-V semiconductors, high temperature properties, Raman scattering studies 7−92653
III-V semiconductors, MBE growth, RHEED oscillations *(French)* 7−132467
$InAs_xSb_{1-y}$/GaInAsSb/GaSb struct., LPE growth, charactn. and IR photodiode appl. 7−92895
ionised cluster beam technique and appl. to thin film deposition and epitaxy *(Japanese)* 7−71083
IR detectors and imagers, epitaxial materials technology 7−128658
IV-VI semiconductor epitaxial films, for IR detector technology 7−132471
magnetron sputtering deposition, review 7−125971
metallophthalocyanine crystal thin films, electronic conductivity 7−99231
multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
narrow gap semiconductors, magnetophonon effect in high elec. fields *(German)* 7−125030
SOI films by laser recrystn., periodic seeding filled by selective epitaxial growth 7−84561
SOS epitaxial films, rapid thermal processing 7−70103
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
substrate stressed state, effects on film quality and electrophysical charact. 7−112152
subsurface micro-lattice strain mapping, digital automated rocking curve topography 7−130983
ZnS, II-VI compounds, wide gap, VPE 7−138674
(Al,Ga)As/$(Ca,Sr)F_2$ multilayer structures, MBE growth as broad-band high-reflectivity mirror 7−77825
(Al,Ga)As-GaAs heterostructures grown by MBE with growth interruption, photolum. 7−70869
AlAs-GaAs:Si superlattices, Si-induced intermixing 7−111976
AlGaAs, high quality, quantum wells, low temp. MBE growth, mobility and photolum. obs. 7−71022
AlGaAs laser, narrow-beam with thin tapered-thickness active layer 7−122957
AlGaAs layer on GaAs deposited from unsaturated Al-Ga-As melt, obs. after anodic oxidation 7−76699
AlGaAs, MBE grown layers, elec. props., Hall meas. 7−70315
AlGaAs, MBE growth, C impurity conc., photoluminesc. spectra 7−112115
AlGaAs, MBE growth, photoluminesc. spectra 7−143280
AlGaAs, MBE growth instabilities and roughening rates on misoriented substrates, RHEED study 7−131490

miconductor epitaxial layers continued
AlGaAs MBE layer, deep level nonradiative recomb. cross section meas., DLTS study 7−125014
AlGaAs:Mn layers and AlGaAs/GaAs:Mn quantum wells, luminescence 7−70904
n-AlGaAs:Te, DX centres, admittance anal. 7−137837
AlGaAs-GaAs, modulation-doped heterojunction, organometallic VPE for microwave appls., expt. charactn. 7−84582
AlGaAs-GaAs heterojunction, energy relax. of 2D electrons 7−70405
AlGaAs-GaAs heterostructure on GaAs (110), MBE growth and props. 7−71026
AlGaAs-GaAs laser diode, inner stripe type, single-step MBE fabrication 7−68675
$AlGa_{1-x}As$, MBE grown, ODMR study 7−143933
$Al_{0.3}Ga_{0.7}As$, MBE growth on GaAs (100), RHEED specular beam intensity 7−113392
$Al_xGa_{1-x}As$, band edge, depend. on composition, absolute meas. of x 7−144201
n-$Al_xGa_{1-x}As$ epitaxial layers, photoluminesc., electron irrad. effects *(Russian)* 7−77650
$Al_xGa_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Al_xGa_{1-x}As$ epitaxial thin crystals, long range order, depend. on growth parameters 7−105347
$Al_xGa_{1-x}As$ MBE films, mid-gap electron trap, nonradiative electron-hole recombination 7−98864
$Al_xGa_{1-x}As$, MBE layer, photoluminescence *(Korean)* 7−92735
$Al_xGa_{1-x}As$ MBE layers, deep electron trap charactn., DLTS study 7−105462
$Al_xGa_{1-x}As$ MBE layers, energy gap, Al conc. depend., photoluminesc. meas. 7−138507
$Al_xGa_{1-x}As$, VPE, halide transport reactor, optoelectronic device appls. 7−100080
$Al_xGa_{1-x}As$:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
$Al_xGa_{1-x}As$:Ge, LPE, photoluminescence *(Korean)* 7−85812
$Al_xGa_{1-x}As$:Mg LPE films grown at 700°C, electronic props. *(Chinese)* 7−76655
$Al_xGa_{1-x}As$:Si MBE films on GaAs(511) substrates, low temp. photoluminesc. 7−125782
$Al_xGa_{1-x}As$:Si MBE layers, DX centres and shallow donors, doping conc. depend. study 7−124924
$Al_xGa_{1-x}As$:Sn, epitaxial layer, photoluminescence *(Korean)* 7−144118
$Al_xGa_{1-x}As$:Sn-$Al_xGa_{1-x}As$:Ge LPE junctions, Ge-related DX level 7−98897
$Al_xGa_{1-x}As$:Te, electrical conductivity in alternating heating elec. fields 7−92316
$Al_xGa_{1-x}As$:Te, uniaxial stress effect on photoconductivity 7−131700
$Al_xGa_{1-x}As$-GaAs, LPE, contact phenomena kinetics *(Russian)* 7−86065
$Al_xGa_{0.5-x}In_{0.5}P$ MOVPE layers grown on GaAs, study of deep levels 7−98916
AlGaInSb bulk crystal and LPE forms, charactn. 7−92892
$Al_xGa_{1-x}N$ epitaxial layers, energy band gap bowing parameter, optical absorpt. study 7−98798
$Al_xGa_{1-x}Sb$, LPE grown, acceptor and defect levels, photoluminesc. spectra 7−113283
$Al_xGa_{1-x}Sb$/GaSb heteroepitaxial system, composition and DLTS studies 7−98865
$Al_xGo_{1-x}As$:In epitaxial layers, liq.-phase epitaxy, composition distrib., In impurity effects 7−118324
$Al_{0.48}In_{0.52}As$ epitaxial layers on InP, Raman and photolum. spectral studies 7−106198
$Al_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
AlInP layers, characterisation by Raman spectroscopy 7−106194
$Al_xIn_{1-x}P$ epilayers, organometallic VPE grown, optical props. 7−77668
CdHgTe epitaxial layers, growth using interdiffused multilayer process 7−77840
CdMnTe, photoassisted MBE 7−132472
$Cd_{1-x}Mn_xTe$ films, epitaxial growth by ionized-cluster beams and magneto-optical props. 7−113442
$Cd_{1-x}Mn_xTe$ epitaxial films, hot-wall evaporation 7−126000
Cd_3P_2 films, growth by hot wall epitaxy 7−138685
CdS epitaxial films, struct. and chelate organometallic cpd. prep. *(Russian)* 7−124754
CdSe heteroepitaxial films deposited on cryst. and amorphous substrates by hot-wall technique, struct. obs. 7−70132
CdSe, preferential growth of sphalerite or wurtzite struct. by gas-solid process 7−144307
CdTe, electroreflectance study 7−77511
CdTe epitaxial layers on GaAs (100) and (111) and CdTe (111), MOCVD grown, defect struct. 7−98726
CdTe films, ion beam sputter deposition and epitaxy 7−138655
CdTe films, metal-organic CVD 7−77840
CdTe, low temp. LPE from Hg solvent, photolum., X-ray diffr. 7−113454
CdTe, MBE grown, deep-level photoluminescence spectroscopy 7−113260
CdTe, MBE grown, mismatch strain meas., free exciton absorpt. and refl. 7−76683
CdTe MBE grown films, defect-related luminesc. 7−99925
CdTe, MBE on GaAs substrate, high resolution TEM 7−132473
CdTe, on GaAs, selective etching and photolum. 7−126331
CdTe photoassisted MBE films, controlled substitutional doping 7−131164
CdTe single crystals and epitaxial layers, laser annealing, photoinduced sublimation 7−91646
CdTe:Al on GaAs, MBE growth and Al doping, struct. optical and elec. props. 7−77820
CdTe:In(Sb), photoassisted MBE, substitutional doping 7−132472
CdTe-GaAs(001), epitaxial layer on GaAs substrate, static atomic displacements 7−105305
CdTe-InSb multilayers, MBE growth and interdiffusion 7−77821
$Cd_{1-x}Zn_xTe$, MBE grown, phase separation 7−131487
$CuGaS_2$ epitaxial layers, MOCVD growth 7−126016
$CuInSe_2$ thin films, rheotaxial growth 7−106418
$Cu_xLi_{1-x}InTe_2$ epitaxial layers on III-V substrates, lattice misfit 7−124792
EuS epitaxial films on Si (111) substrates, rhombohedral distortion 7−137757
(Ga,In)(As,Sb)/BaF_2 structures, MBE growth 7−77826
$Ga_{0.7}Al_{0.3}As/GaAs/Ga_{0.7}Al_{0.3}As$ single square quantum well, confinement effect study 7−92266

semiconductor epitaxial layers continued
$Ga_{1-x}Al_xAs$, long-range order and segregation in semiconductor superlattices 7−105690
$Ga_{1-x}Al_xAs$:Sn MOVPE film, carrier density, growth temp. depend., Hall meas. 7−85149
$Ga_{1-x}Al_xSb$/GaSb epitaxial layer system, thickness and composition, X-ray microanal. 7−124758
GaAs defect struct. generated during MBE, growth temp. depend., TEM study 7−112138
GaAs, donor identification in bulk and epitaxial samples, photoluminesc. studies in high mag. fields 7−98917
GaAs epilayers, defect-mediated recombination lifetimes 7−92194
GaAs epitaxial films, growth and characterisation 7−84603
GaAs epitaxial films, growth by thermal decomposition, charact. *(Russian)* 7−106435
GaAs epitaxial films, ion beam irradiated, conductivity compensation 7−85145
GaAs, epitaxial growth kinetics, effects of gas phase composition 7−71045
GaAs, epitaxial layer, MeV ion bombarded, defect strain field 7−111692
GaAs epitaxial layer growth from Ga-As-Bi solution 7−100139
GaAs epitaxial layer on Si [100] substrate, Raman study 7−125715
GaAs epitaxial layers, metastable defects, DLTS study 7−84735
GaAs epitaxial layers, CVD growth on Ge coated Si substrates, solar cells fabrication 7−86058
GaAs epitaxial layers, crystallographic defect form. during MOCVD growth 7−104759
GaAs epitaxial layers, growth kinetics, vapour-phase composition effects 7−106427
GaAs epitaxial layers, Hall mobility lowering 7−138081
GaAs epitaxial layers, elec. and optical measurements during chem. etching 7−138084
GaAs epitaxial layers on Si, conf., Palo Alto, CA, USA (April 1986) 7−80174
GaAs epitaxial layers on Si, misfit dislocations, atomic resolution electron microscopy 7−84548
GaAs epitaxial layers on Si, growth, props. and applications to FETs and LEDs 7−86034
GaAs epitaxial layers on Si substrates, high volume production growth 7−86059
GaAs epitaxial layers on Si substrates, dislocation density reduction by InGaAs-GaAsP strained-layer superlattices 7−124773
GaAs epitaxial struct. surface-depleted photoconductors 7−105611
GaAs, epitaxially induced stress on V-grooved Si and GaAs substrates 7−124770
GaAs film, ionized evaporation, epitaxy and composition, AC elec. field effect 7−138667
GaAs films, artificial epitaxy on insulating substrates 7−92024
GaAs films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
GaAs films, initial stages of MBE growth on Si (100) 7−84600
GaAs films, MBE growth on Si, dislocation density and carrier mobility 7−84598
GaAs films, MBE on Si, structural and optical props. 7−84599
GaAs films, short-term LPE from Bi melt 7−77838
GaAs films grown by MOMBE, defects 7−76673
GaAs films on Si, photoluminescence and photoluminescence excitation spectra 7−85846
GaAs, gas source MBE, doping enhancement by excimer laser irradiation 7−71035
n-GaAs, gas source MBE grown, electron traps, DLTS study 7−98863
GaAs grown on $(Ca,Sr)F_2$ by MBE, elec. resist. and Hall effect meas. 7−77114
GaAs, growth in low press. MOVPE, orientation depend. of growth rate and Si doping 7−144298
GaAs heteroepitaxial layers grown on ⟨100⟩ Ge substrates by MOCVD, deep levels 7−70235
GaAs heteroepitaxial MOCVD layer growth and charactn. on Ge/Si composite substrates 7−71054
GaAs, investigation of 400 meV deep position, DLTS study *(German)* 7−143403
GaAs, LPE growth, deoxygenation of Ga solvent 7−137754
GaAs layer, MBE on (100)-oriented Si substrate, preheating effect, charactn. 7−113394
GaAs layers, MBE on Si, structural evolution 7−84602
GaAs, layers on Si, elec. and structural props. 7−143252
GaAs, MBE, acceptor conc., Hall mobility, photolum. 7−77113
GaAs MBE, surface defects anal. 7−76659
GaAs MBE film grown on Si (001) RHEED studies and interface anal. 7−76670
GaAs, MBE grown, δ-doping, device appl. 7−77811
GaAs, MBE grown, very high purity, free exciton photoluminesc. and magnetophotoluminescence spectra 7−144115
GaAs, MBE grown layers, elec. props., Hall meas. 7−70315
GaAs, MBE growth, asymm. interface roughness, computer simulation 7−143159
GaAs, MBE growth, oval defects due to Ga_2O_3 and particulates 7−143273
GaAs, MBE growth from triethylgallium and AsH_3 7−71032
GaAs MBE growth on Ge (100), antiphase domain suppression, RHEED obs. 7−70127
GaAs MBE growth on high temp. H annealed (100) Si substrates, expt. study 7−144279
GaAs MBE growth on Si, charactn. 7−70126
GaAs, MBE growth on Si 7−84597
GaAs, MBE growth on Si(100), dislocation accommodation 7−100084
GaAs, MBE growth on Si(100), antiphase boundaries, self-annihilation 7−124769
GaAs, MBE growth on Si substrate, elec. and optical props. 7−144289
GaAs, MBE growth using triethylgallium and As_4 7−71029
GaAs MBE layer growth on InP substrate, AES study 7−77806
GaAs MBE layers, oval defects 7−98739
GaAs MBE layers on misoriented Si substrates, cryst. orientations and defect structs. 7−143282
GaAs, MBE on Si, rapid thermal annealing, APD fabrication 7−143283
GaAs, MBE on Si substrate, IC appls. 7−138662
GaAs, MOCVD layers on Si substrates, misfit and threading dislocations 7−70138
GaAs, MOCVD layers on (001) substrates, anisotropic lateral growth 7−100098

semiconductor epitaxial layers continued
GaAs, MOVPE growth, impurity incorporation, laser-irradiation effects 7−71060
GaAs MOVPE layers, optical charact. 7−132360
n^+-GaAs narrow wires, quantum interf. effect, aperiodic magnetocond. study 7−125160
GaAs, nucleation on vicerial Si, multilayer step formation after As adsorption 7−105309
GaAs, on semi-insulating substrates, fabrication technology 7−144306
GaAs on Si and SOS substrates, organometallic VPE for microwave appls., expt. charactn. 7−84582
GaAs on Si substrates, polar-on-nonpolar epitaxy 7−70125
GaAs, patterned MBE layers on Si, microstructural characterisation 7−137729
GaAs, single domain MBE films, growth on double domain Si(001) substrates 7−71034
GaAs surface, H_2S adsorption, chemical shifts and surface core-level shifts 7−144244
GaAs thin film solar cells fabricated on Ge-coated Si substrates by CVD 7−78647
GaAs VPE layers, macroscopic cryst. defects, SEM investig. 7−131158
GaAs, vapour levitation epitaxial layers, optical characterisation 7−106266
GaAs, very high purity MBE layer, free exciton dominated photoluminesc., magnetophotoluminescence spectra 7−106260
GaAs:Au, surface, photoconductivity, photovoltage, effects of vacuum thermal treatment 7−77004
GaAs:Be, heavily doped MBE layers, nonradiative centres, cathodoluminesc. and electron acoustic studies 7−125810
GaAs:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
GaAs:Er, Er doping during LPE growth, photoluminesc. study 7−113257
GaAs:Er MBE layer, photolum. excitation meas., impurity states and transitions 7−106239
GaAs:Fe epitaxial films, doping during vapour deposition, structural and electrical props. 7−76664
GaAs:In, low temp. MBE growth, elec. props. studies 7−124798
GaAs:In epitaxial layers, VPE trichloride growth using Ga/In alloyed source 7−71065
GaAs:In MBE layers, elec. props. 7−77111
GaAs:In VPE layers, EL2 charact. 7−98887
GaAs:In/GaAs impurity gettering and dislocation reduction by strained layer epitaxy, related effects 7−124801
GaAs:Mg LPE films grown at 700°C, electronic props. *(Chinese)* 7−76655
GaAs:Mn, Ni, Co, Cu films, MBE grown, effect of impurities on electrical props. 7−77110
GaAs:Se, post implantation annealing studies 7−98212
GaAs:Si, AlGaAs and GaAs-AlGaAs heterostruct., MBE growth of highly uniform epitaxial layers over multiple substrates 7−71025
GaAs:Si, δ-doping layer, magnetotransport props. 7−131688
GaAs:Si, gas source MBE growth, Si doping 7−125986
GaAs:Si, LPE, temp. difference method 7−126030
GaAs:Si, MBE growth on (311) substrates, elec. and optical props. 7−125988
GaAs:Si,C, atmospheric press. organometallic CVD growth using triethylarsenic 7−77837
GaAs:Si epitaxial films, fast electron irrad., luminescence props. 7−77621
GaAs:Si MBE heavily doped layers, compensation mechanism 7−70329
GaAs:Si MBE layers, valence band structs., UPS study 7−132406
GaAs:Sn, MBE grown, low resist. nonalloyed ohmic contacts 7−131783
GaAs:Sn epitaxial layers, gaseous Sn doping during vapour deposition 7−76663
GaAs:Sn MBE grown in hydrogen presence, DLTS and photolum. 7−70239
GaAs:Te, doping during liquid phase epitaxy from Bi melt 7−71088
GaAs:Zn epilayers, H(D) passivation of acceptors, IR absorpt. spectra 7−113240
GaAs:Zn(Mg)(C), epitaxial CVD films, acceptor impurities, Hall effect and photolum. studies 7−98856
GaAs/$(Ca_xSr)F_2$ heteroepitaxial layers, MBE grown, crystalline defects 7−112127
GaAs/$Al_xGa_{1-x}As$ MBE quantum wells, elec. field-induced photolum. props. study 7−125774
GaAs/$Al_xGa_{1-x}As$ selectivity doped heterostruct. 2D electron gas photoreflectance meas. 7−106114
GaAs/$Al_xGa_{1-x}As(In_yGa_{1-y}As)$ superlattices on Si substrates, optical props. 7−106105
GaAs/AlGaAs interfaces, MBE grown, O accumulation, SIMS profiling 7−105289
GaAs/AlGaAs multilayer high-reflectivity mirrors, sensitivity anal. w.r.t. epitaxial growth parameters 7−123143
GaAs/AlGaAs multiquantum well lasers, MBE pair groove substrate, charact. 7−141862
GaAs/Ge composite layer growth on Si and SiO_2/Si substrates 7−84601
GaAs-$Al_{0.33}Ga_{0.67}As$ single quantum well interfaces, MBE grown, photoluminesc., RHEED dynamics studies 7−112093
GaAs-$Al_{0.3}Ga_{0.7}As$ modulation doped quantum well structures, anisotropic electron transport 7−118561
GaAs-$Al_{0.3}Ga_{0.7}As$:Si quantum wells, electron transport, substrate orientation and impurity effects 7−143572
GaAs-$Al_xGa_{1-x}As$ quantum wells grown by interrupted, uninterrupted MBE, interface struct. atomistic models 7−70124
GaAs-$Al_xGa_{1-x}As$ quantum-well structures, MBE grown, Be acceptor Raman scatt. 7−70765
GaAs-AlAs quasiperiodic heterostructures, MBE growth, struct., electronic and vibr. props. 7−70122
GaAs-AlAs superlattices grown by MBE, struct. props., TEM and X-ray diffr. obs. 7−70123
GaAs-AlGaAs heterostruct., real space transfer and negative resist. 7−99188
GaAs-AlGaAs quantum-well struct., atomistic nature of heterointerfaces, rel. to photolum. 7−138498
GaAs-Au Schottky barrier contacts on different substrates, electronic and optoelectronic charactn. 7−92251
GaAs-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
GaAs-$Ga_{1-x}Al_xAs$ microstructures, energy levels, hydrostatic press. effect 7−85066
GaAs-GaAlAs high-NA optical waveguides with low losses 7−82776
semiconductor epitaxial layers continued
GaAs-GaAlAs multilayer struct., LPE grown, contact resistance profiling 7−138009
GaAs-GaAlAs planar waveguide acoustooptic Bragg cells fabrication and charact. 7−123199
GaAs-GaAlAs superlattice including sub-monolayer grown by MBE, SIMS anal. 7−84547
GaAs-on-Si, MBE grown, ion implantation and annealing props. 7−143284
GaAs-Si heteroepitaxy, interface formation, XPS studies 7−143244
$(GaAs)_{1-x}Ge_{2x}$, epitaxial (111)-oriented growth model, long range order 7−98745
$GaAs_{1-x}P_x$, OMVPE growth, solid and gas comp. 7−86044
$GaAs_{1-x}P_x$:N VPE layers, N conc. determ., SIMS, absorpt. spectra, cathodoluminesc. meas. 7−106227
$GaAs_{1-x}P_x$-GaAs, heteroepitaxial layers, influence of substrate defects, cathodolum. study 7−84555
$GaAs_xP_{1-x}$ epitaxial layers, MOCVD growth, numerical model 7−71056
$GaAs_xP_{1-x}$:N LEDS, deep electron traps 7−84733
GaAsSb-InAs lattice matched system, band gap, spin-orbit splitting 7−77069
$GaAs_ySb_{1-y}$, $Ga_{1-x}Al_xSb$ and $Ga_{1-x}In_xSb$ ternary solid solutions, OMVPE growth *(French)* 7−132489
GaAsSbP-GaAs structures, plastically deformed, mismatch dislocations 7−137740
$GaAs_{1-x-y}Sb_xP_y$ epitaxial layers, direct obs. of high resist. regions 7−85150
GaInAs, MOCVD gas mixing device, photolum. obs. of comp. uniformity 7−138672
GaInAs strained layer quantum well GRIN ridge waveguide injection laser 7−110377
GaInAs-AlInAs modulation doped strained layer superlattice, electron and hole mobility 7−70389
GaInAs-AlInAs single quantum wells, MBE growth, photoluminesc. charactn. 7−112124
GaInAs-InP, phase and amplitude modulation by free carriers injection at 10.6 μm 7−136500
$Ga_{0.47}In_{0.53}As$ (100), epitaxial, XPS study of chemical cleaning 7−106718
$Ga_{0.47}In_{0.53}As$:Mg(Hg), photolum. studies 7−85827
$Ga_{0.47}In_{0.53}As$-InP epitaxial superlattices, absorpt., photolum. and photocurrent spectra 7−70384
$Ga_{1-x}In_xAs$-$Al_{1-y}In_yAs$, strained-layer superlattices, (111) growth axis, nonlinear optical response 7−136401
$Ga_{1-x}In_xAs$ and $Ga_{1-x}Al_xAs$, MBE growth, minimum As pressure *(French)* 7−132466
$Ga_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
GaInAsP/AlGaAs visible laser diodes on GaAs, LPE, planar BH, 674 nm 7−68699
GaInAsP-InP heterostruct. lasers, 1.5 μm, OMVPE fabrication 7−103840
GaInP layers and GaInP-GaAs superlattices, characterisation by Raman spectroscopy 7−106194
GaInP/GaAs heterostructures, selectively-doped, chloride VPE grown, 2D electron gas 7−125088
$Ga_{0.5}In_{0.5}P$-GaAs(001), metalorganic VPE grown, existence of ordered state, relation to band gap 7−76652
GaInPAs-InP, heterostructure waveguide, liq. phase epitaxy 7−68837
GaN single-crystal films, MOVPE growth, luminescent props. 7−113405
GaN:Cd(Zn), time-resolved spectroscopy 7−99907
GaP epitaxial films, defect displacements, anal. by convergent beam electron diffr. 7−70141
GaP, gas source MBE using PH_3 decomposed by electron impact 7−71057
GaP LPE crysts., electron irrad. defects, EPR and ENDOR studies 7−98254
GaP, LPE layers, 0.85 eV deep hole level 7−112231
GaP:N homoepitaxial films, optically inactive N atoms, structure states 7−70914
GaP:N layers, determ. of N conc., lumin. study 7−85786
GaP:O(S)(Se)(Te), liquid phase epitaxy, thermodynamic anal. of doping 7−91606
GaP/GaAs LPE systems, large lattice mismatch accommodation 7−112108
GaPAsSb bulk crystal and LPE forms, charactn. 7−92892
n-GaSb LPE cryst., low temp. electron irrad. defects, DLTS study 7−98255
GaSb, MBE grown, spectroscopic studies of shallow defects 7−77631
GaSb, surface phonons, high resolution EELS studies 7−143174
GaSb:Cd,Sn, dislocation density, distrib. mechanism 7−91589
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
GaSb/GaAlAsSb heterojunctions, conc. profiles, electron probe anal. 7−126505
$(GaSb)_{1-x}Ge_{2x}$, epitaxial (111)-oriented growth model, long range order 7−98745
Ge coating on Si, substrate for GaAs epitaxial growth 7−86058
Ge epitaxial crystallisation on Si using electron beam evaporation and recrystallisation techniques 7−84605
Ge epitaxial films, growth and characterisation 7−84603
Ge, epitaxial growth, on Si, surface reconstruction 7−76577
Ge epitaxial layers, recrystn. on SiO_2 using SrF_2 seed by pseudo-line electron beam annealing 7−124771
Ge films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
Ge heteroepitaxy, search for geometrical lattice matching 7−84558
Ge, MBE growth on Si(100), crystalline quality, thermal annealing effects 7−100085
Ge:Ga,As, heavily doped, strongly compensated heteroepitaxial films, elec. props. 7−131814
Ge/Si (100), ultrathin epitaxial films, strain meas. 7−137752
Ge-Si (111), dislocation struct., transmission electron microscopy 7−84542
Ge-Si ordered superlattices, struct., optical transitions, TEM, Schottky barrier electroreflectance studies 7−112096
Ge_xSi_{1-x}/Si (001) heteroepitaxial system, MBE growth, RHEED oscillations 7−100083
Hg based II-VI compounds, developments and trends in MBE 7−77819
HgCdTe, developments and trends in MBE 7−77819
HgCdTe epilayers with predesigned comp. profiles, laser MBE growth 7−132464
HgCdTe films, ion beam sputter deposition and epitaxy 7−138655

semiconductor epitaxial layers continued
HgCdTe LPE layers, ion-implanted p-n junctions on CdTe substrates 7−98190
HgCdTe layers, MBE, spectroscopic ellipsometry 7−71021
HgCdTe, MBE on GaAs substrate, high resolution TEM 7−132473
$Hg_{1-x}Cd_xTe$ LPE layers, anomalous Hall effect props. studies 7−143484
$Hg_{1-x}Cd_xTe$:P,As,Sb,Bi LPE films, impurity incorporation, elec. activity and distrib. coeff., Hall meas. 7−70128
HgTe films, metal-organic CVD 7−77840
HgTe, MBE on GaAs substrate, high resolution TEM 7−132473
InAlAs/InP heterostructures, chemical etching characteristics 7−71407
$In_{0.52}Al_{0.48}As$ electro-optic directional coupler grown on InP by MBE 7−136498
$In_{0.52}Al_{0.48}As$, MBE growth and charactn. 7−143281
n-$In_{0.52}Al_{0.48}As$, MBE layers, deep level capacitance transient anal. 7−143397
$In_xAl_{1-x}As$/InP epitaxial heterostruct., deep trap levels and DX-like centres, photocond. study 7−137844
InAs, gas phase epitaxy in InAs-$AsCl_3$-H_2 system, thermodynamics 7−71075
InAs, gas phase epitaxy in InAs-$AsCl_3$-H_2 system, growth kinetics 7−71076
InAs heteroepitaxy on GaAs, lattice relax. study 7−76672
InAs, MBE, selective epitaxial growth on GaAs 7−125991
InAs, MBE on (001) GaAs, monolayer stage, island form., TEM obs. 7−70120
InAs, surface phonons, high resolution EELS studies 7−143174
InAs-GaAs strained-layer superlattices, HRTEM, X-ray diffr. and photolum. meas. 7−70095
$InAs_{1-x-y}Sb_xP_y$ epitaxial diode structs., electrophysical and photoelectric props. 7−99112
InGaAlAs-InP ridge optical waveguide grown by MBE, low loss 7−136531
$In_{0.53}(Ga_xAl_{1-x})_{0.47}As$ layers, MBE growth, photoluminesc. charactn., optointegrated device appls. 7−144288
$In_{1-x-y}Ga_xAl_yAs$, MBE growth and charactn. 7−143281
InGaAs, electrolyte electrorefl. spectra and comp. anal *(Chinese)* 7−77509
InGaAs, LPE grown, short-range-order structure 7−112128
InGaAs, LPE growth, crystal purity, graphite boat material effect 7−100122
InGaAs, MOVPE-grown, compositional homogeneity of layers 7−138673
InGaAs/InP heterointerface, LPE, SIMS, Raman obs. 7−100128
InGaAs/InP heterostructures, chemical etching characteristics 7−71407
InGaAs/InP layers, thin-melt multi-slice LPE, constitutional supercooling 7−144311
InGaAs-InAsP, epitaxial heterojunction structures, growth, luminescence props. 7−70387
InGaAs-InP, MQW structs. grown by metalorganic MBE, excitons, high temp. obs. 7−92070
InGaAs-InP, VPE grown, X-ray diffr., SIMS and photolum. characterisation 7−131480
InGaAs-InP MQW structs., atmospheric-pressure MOCVD grown, exciton electroabsorpt. at room temp. 7−92640
InGaAs-InP quantum wells, VPE grown, quantum-confined Stark effect 7−84785
$In_{0.53}Ga_{0.47}As$:Si (Be) layers formed on InP substrates by ion implantation and flash annealing, elec. props. 7−85151
$In_{0.53}Ga_{0.47}As$/InP quantum wells, interwell-exciton transfer, optical detection 7−92716
$In_{0.53}Ga_{0.47}As$/InP system, LPE interfaces, elec. active defects, C-V profiling 7−112464
$In_{0.53}Ga_{0.47}As$-InP epitaxial single quantum wells, electronic props. 7−77057
$In_{1-x}Ga_xAs$, LPE growth by source-current-controlled method 7−100124
$In_xGa_{1-x}As$ MBE thin crystals, LRO study 7−137732
$In_xGa_{1-x}As$, VPE, hydride method, equilib analysis, ternary comp. 7−132481
$In_xGa_{1-x}As$:Si LED, spectral characts. electron-beam induced variations, electroluminesc. spectra anal. 7−106273
$In_xGa_{1-x}As$/InP(001), pseudomorphic junction, band gap, coherency strain effects 7−99172
$In_xGa_{1-x}As$-GaAs heterostructures, critical layer thickness, determ. by X-ray diffr. 7−84534
$In_xGa_{1-x}As$-GaAs n-n heterojunction epilayers, MBE growth and charactn. 7−143587
InGaAsP epitaxial layers, strain-energy-stabilised growth on GaAs (111)A substrates 7−124774
InGaAsP heterostructures, LPE grown, transition layer thickness, XPS study 7−100005
InGaAsP, LPE growth on $GaAs_{1-y}P_y$ substrates 7−100135
InGaAsP, LPE growth on GaAs substrates 7−124779
InGaAsP/GaAs (001) LPE layers, photoluminesc. spectra 7−125784
InGaAsP/InP, quality control, defect detection by IR luminesc. microscopy 7−113846
InGaAsP-GaAs double heterostructures, LPE grown, 40-300 Å active region thicknesses, quantum size effects, photoluminesc. spectra 7−113252
InGaAsP-GaAs quantum well separate confinement DH laser, prep. by LPE, λ=0.79 μm, injection luminesc. obs. 7−110354
InGaAsP-InP heterostructs., LPE, photolum. spectra, quantum size effects 7−132316
InGaAsP-InP LPE heterostruct., structural charactn. using X-ray double cryst. diffr. 7−137724
InGaAsP-InP lasers, MOVPE-grown DFB lasing at 1.5 μm 7−122965
InGaAsP-InP material, waveguide struct. by epitaxial techniques 7−136532
$In_{1-x}Ga_xAs_yP_{1-y}$ superlattices grown by LPE, electroabsorpt. characts. 7−138692
n-$In_{0.53}Ga_{0.47}As$ MBE layers, deep level capacitance transient anal. 7−143397
InP films, hydride VPE growth, effect of PH_3 pyrolysis on the morphology and growth rate 7−71051
InP, heteroepitaxial growth on Si by low pressure MOCVD 7−106425
InP, high purity, electron mobility, compensation ratios, FIR magnetoabsorption spectrum 7−118480
InP, LPE, buried heterostructure devices 7−113455
InP, MBE using low-energy P^+ ion beam, elec. and optical props. 7−77812
InP, VPE, hydride method, PH_3 decomp., substrate heating 7−113407
InP, vapour levitation epitaxial layers, optical characterisation 7−106266

semiconductor epitaxial layers continued
InP:As/InP impurity gettering and dislocation reduction by strained layer epitaxy, related effects 7−124801
InP:Fe, semi-insulating, chloride VPE growth 7−100096
InP:Fe epitaxial layers, LPE and MOCVD grown, activation ratio 7−112219
InP:Ga(As), isoelectronically doped, bipolar diode fabrication, device characts. 7−111602
InP:Mg, MOVPE grown, photolum, data 7−99910
InP:S, MBE grown, S incorporation and desorption 7−76674
InP:Si,S,O, donor impurity incorporation, O_2 effects, spectroscopic evidence 7−98184
InP:Yb, MOCVD growth, elec. and optical charactn. 7−125159
InP:Yb epitaxial films, galvanomag. effects 7−131670
InP-GaInAs-AlInAs quantum wells, correlation of struct., chemical and optical props. 7−105345
n-InSb heteroepitaxial films, long-wave absorption edge formation 7−99953
InSb:Bi,Zn epitaxial layers, impurity interactions 7−106446
InSb:Pb, LPE growth 7−106445
InSb-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
InSb-CdTe interface prepared by MBE, quasi-2D electron gas, Shubnikov-de Haas obs. 7−77072
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
$Pb_{1-x}Sn_xTe$ epitaxial film, cond. and plasma refl. spectra, lattice vibr.-induced localisation effects 7−85141
$Pb_{1-x}Sn_xTe$, film, molecular beam epitaxy, on Ge, Si, GaAs, InSb and BaF_2 substrates 7−77830
$Pb_{1-x}Sn_xTe$, liquid phase epitaxy, layer thickness rel. to deposition parameters 7−92020
$Pb_{1-x}Sn_xTe$, stressed quantum well epitaxial films, photolum. 7−113251
PbTe epitaxial layers, photocond. kinetics 7−84973
PbTe, p-n transition, effects of annealing in H_2 7−85015
PbTe-$Pb_{1-x}Eu_xTe$ superlattices, quantum size effects in optical transmission spectra 7−143996
PbTe-SnS, solid solutions, thermal evaporation in vacuum 7−106417
$PbTe_{1-x}S_x$, prep. by liquid phase epitaxy, unit cell parameters 7−106447
$PbTe_{1-x}Se_x$ solid soln. epitaxial layers, Se distrib. studies *(Russian)* 7−124755
Si (001), RHEED intensity calcs. for stepped surfaces for interpretation of oscills. during MBE growth 7−84464
Si, dislocation and stacking fault interactions 7−91629
Si, doped MBE layers, elec. props. 7−77109
Si, epitaxial CVD layers, doping, modelling and theory development 7−124297
Si epitaxial film surface microscopic roughness meas. by second harmonic intensity variation anal. 7−121068
Si, epitaxial films, plasma CVD growth at low temps. 7−126015
Si, epitaxial growth, book 7−102034
Si, epitaxial growth and prebaking, UV radiation effects 7−113406
Si, epitaxial layers, photo-CVD using VUV light 7−126017
Si epitaxial layers on buried Si_3N_4 produced by ion implantation, props. 7−85131
Si epitaxial structs. with buried oxide and nitride insulating layers *(Russian)* 7−76694
Si epitaxial thin layers, on preannealed Si substrates, structural and elec. props. 7−124749
Si epitaxial wafer, area contact model of depletion layer width under avalanche breakdown, three-probe method *(Chinese)* 7−125002
Si films, epitaxial growth, planar gettering effects *(Russian)* 7−76695
Si films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
Si films, solid phase epitaxial growth, substrate-surface cleaning 7−124767
Si heteroepitaxy, search for geometrical lattice matching 7−84558
Si, ion beam induced epitaxial crystn. and layer amorphisation, substrate temp. and ion irrad. parameters depend. 7−84048
Si LPE layers, morphology *(Chinese)* 7−131493
Si, MBE, nucleation and annealing, LEED, spot profile analysis 7−76676
Si MBE, particulate behaviour 7−143278
Si, MBE growth, delta-function doping layer 7−91623
Si MBE layers, impurity and defect study 7−76812
Si polycrystalline, impure, thin film solar cell efficiency 7−126625
n-Si, quenched-in deep defect levels, press. coeffs. and capture cross section determ. 7−105482
Si SOI, Si selective epitaxial growth over thick SiO_2 islands 7−100103
Si SOI films, multilevel seeded lateral epitaxy, electron beam recrystn. 7−131471
Si thin monocrystalline solar cell epitaxy and etch stop technology 7−144866
Si, VPE kinetics at reduced temps. 7−100091
Si VPE layer doping, theoretical foundations, incorporation eqns. 7−124296
Si wafer, ion implantation amorphised, optical props. 7−85577
Si:As, amorphous layers, ion beam induced epitaxial crystn. 7−131495
Si:As, polycrystalline films, ion implanted, solid phase epitaxy 7−131472
Si:B, heavily doped, electron lifetime, electron mobility, and band-gap narrowing 7−92202
Si:B, hyper-abrupt doping transitions, SIMS studies 7−98213
Si:B, SIMS depth resolution loss with depth due to ion dose density variations across rastered area 7−80930
Si:B,Ge epitaxial films, dynamical X-ray diffr., photoeffect 7−77747
Si:B epitaxial layers, doping suppression in presence of HCl 7−69719
Si:B(P), ion implantation during MBE growth 7−142809
a-Si:H, laser crystallisation, temp. field control model *(Chinese)* 7−98725
Si:O, O implantation, internal gettering, carrier lifetime 7−84041
Si:P epitaxial layers, laws of doping *(Chinese)* 7−131492
a-Si-$Ge_{0.2}Si_{0.8}$, interfacial superstructure, synchrotron X-ray diffr. study 7−84545
β-SiC (100) epitaxial layers, angle-resolved XPS at 1300 °C 7−113351
3C-SiC CVD epilayers on Si, internal stresses, Raman scatt. meas., elastic deform. theory calcs. 7−118336
SiC epitaxial layers, grown by temp. gradient zone melting, morphology 7−124752
SiC epitaxial layers grown by temp. gradient zone melting, morphology 7−124751
β-SiC films, epitaxial growth by laser-induced sublimation *(Japanese)* 7−84574
SiC, LPE growth, struct. and electrophysical props. 7−70105

semiconductor epitaxial layers continued
SiC, neutron irradiated 6H polytype, thermal stability of D_1 defect lumin., influence of growth conditions 7−99902
SiC:H epitaxial films, high temp. luminesc. 7−119035
3C-SiC:N, electrical properties, temp. dependence 7−99227
3C-SiC/6H-SiC MBE growth, elec. props. of p-n junction 7−77823
$(SiC)_{1-x}(AlN)_x$ epitaxial layers, deposition and struct. props. *(Russian)* 7−126006
Te, growth on PbTe, interphase struct., epitaxial relationships 7−76646
YIG:Ca, Ge epitaxial films, elec. props., excitation effects 7−125154
Zn chalcogenides, atomic layer epitaxy growth, dynamic RHEED studies 7−71030
Zn-Se-GaAs heteroepitaxial system, lattice distortion 7−92030
Zn_3As_2, MBE growth on InP or GaAs 7−77822
$ZnGeAs_2$ MBE growth on GaAs 7−77822
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
ZnS ALE films, ellipsometric meas. of thickness and refractive index 7−128631
ZnS epitaxial films, struct. and chelate organometallic cpd. prep. *(Russian)* 7−124754
ZnS, MBE growth on Si substrates 7−138668
ZnS, MBE on oriented (100) Si substrates, crystallographic quality, morphology 7−71020
ZnS MOCVD epitaxial layers on GaAs, vacancy centres, ODMR study 7−132164
ZnS:Ce(Eu)(Tb)(Tm) thin films, growth and characts. 7−70130
ZnS_xSe_{1-x} epitaxial films, vapour-grown, thermodynamic anal. and luminescent props. 7−144303
ZnSe, atmospheric pressure MOVPE growth on GaAs substrates 7−100109
ZnSe epitaxial films, edge cathodolum. spectra 7−70915
ZnSe, epitaxial growth on Ge(100) by MBE 7−143255
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048
ZnSe epitaxial layers on GaAs, characterisation using modulation of Renninger scan intensity 7−69534
ZnSe epitaxial layers on GaAs substrates, misfit strain, Raman study 7−99835
ZnSe, film, epitaxial, edge cathodoluminesc. 7−119056
ZnSe, film quality in MBE growth, beam pressure ratio effect, optical and elec. props. 7−76684
ZnSe films, low pressure MOVPE growth 7−92880
ZnSe films, MOVPE growth, diethylzinc diffusion-limited condition 7−144304
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe, high purity, low press. VPE growth, luminesc. props. 7−71066
ZnSe, II-VI compounds, wide gap, VPE 7−138674
ZnSe, low temperature plasma-assisted epitaxial growth 7−126013
ZnSe, MBE growth on GaAs (001), RHEED intensity oscillations 7−71031
ZnSe MBE layers, surface phase diagram, RHEED study 7−137749
ZnSe, MBE single cryst. growth, vapour species conc. obs. 7−137763
ZnSe thin film low temp. growth by hydrogen radical enhanced CVD *(Japanese)* 7−118293
ZnSe-MnSe-ZnSe heterojunctions, valence band discontinuities, UPS meas. 7−112445
ZnSe-ZnTe strained-layer superlattice, growth and charactn., photolum. and TEM obs. 7−76682
$ZnSe_{1-y}S_y$, $(0 \leq y \leq 0.25)$, MOVPE layers, room temp. photolum. 7−125769
ZnTe-ZnS strained-layer superlattices, Raman probing and lattice modes 7−99856

semiconductor glasses *see amorphous semiconductors; chalcogenide glasses*

semiconductor growth
artificially structured thin-film materials and interfaces 7−113397
band-gap engineering, device appls. 7−125998
BH DFB lasers, 1.5 μm, low-pressure MOVPE growth and low-threshold operation 7−68673
BH-DFB lasers, 1.55 μm, LP-MOCVD growth 7−68695
bulk crystals for IR optoelectronic devices 7−132422
CdTe-$Hg_{1-x}Zn_xTe$, Hg-based superlattices, properties and growth *(Polish)* 7−132474
compound semiconductors, MOVPE, review of growth systems and environments 7−77841
crystal growth, conf. Calcutta, India (Jan. 1986) 7−134342
crystal growth, conference, Budapest, Hungary, (July 1986) 7−134333
crystal growth by YO-YO solute feeding method *(Japanese)* 7−125941
DFB lasers, MOVPE growth, 1.55 μm differential quantum efficiency 7−136349
epitaxial deposition by magnetron sputtering, review 7−125971
epitaxial layers, solid solution cooling method 7−105311
epitaxial structures, for light generation, detection and modulation 7−132495
film preparation by spray pyrolysis for solar cells, review 7−100055
fluoride buffer layers for heteroepitaxy of Pb chalcogenides and CdTe 7−92874
fluoride graded IIa buffer layers for heteroepitaxy of Pb chalcogenides and CdTe on Si 7−77824
GaAs-AlAs-Si structure, high mobility, MBE growth 7−77804
GAS small self-contained payload, development *(Japanese)* 7−77779
heterojunction mobilities determ. using mag. field depend. Hall technique 7−70390
heterojunctions grown by VPE, factors impairing comp. transition abruptness 7−138675
high-pressure LEC crystal growth yield better wafers 7−86007
II-VI semiconductors, IR detection appls., growth and props. *(Spanish)* 7−116009
II-VI ternary alloys, bulk single cryst. growth, review 7−119118
III-V cpd. semiconds., atomic layer epitaxy by hydride VPE 7−124799
III-V semicond. cpds., focused ion beam implantation and MBE technology appls. 7−76175
III-V semicond. materials and quantum well structs., atomic layer epitaxy, self-limiting mechanism 7−124800
III-V semiconductor epitaxial layers, laser vacuum deposition on Si substrate 7−105334
III-V semiconductor epitaxial layers, MOCVD growth 7−71071
III-V semiconductor heteroepitaxy on Si substrates *(Japanese)* 7−70143

semiconductor growth continued
III-V semiconductor layers and devices, metalorganic CVD growth on Si using strained superlattices 7−86057
III-V semiconductor solar cells, large scale production, safety comparisons of gas source deposition technologies 7−86802
III-V semiconductors, Czochralski growth, LEC in-situ synthesis 7−138634
III-V semiconductors, electron beam source MBE 7−144283
III-V semiconductors, MBE, computer simulation, lattice matched interfaces 7−143263
III-V semiconductors, MBE, computer simulation, lattice matched interfaces 7−143264
III-V semiconductors, MBE growth, RHEED oscillations *(French)* 7−132467
III-V semiconductors, MOCVD growth, trimethylgallium and triethylgallium, pyrolysis reactions 7−100110
III-V ternary alloys, bulk single cryst. growth, review 7−119118
infrared materials, characterisation, X-ray diffraction techniques 7−130982
InP, large dia. low defect density wafers, vertical gradient freeze growth 7−125949
ionised cluster beam technique and appl. to thin film deposition and epitaxy *(Japanese)* 7−71083
IV-VI semiconductor epitaxial films, for IR detector technology 7−132471
IV/IV semiconductor heterostructures, growth, initial stages of interface formation 7−84552
laser, high power inverted channel substrate planar grown by MOCVD 7−136308
laser induced compound synthesis 7−117974
laser-induced deposition of thin films study 7−71068
lasers, single element fundamental mode, recent developments 7−110393
LEC crystal growth, weight gain signal, buoyancy effect 7−100044
low-dimensional structs., optical props., conf., St. Andrews, Scotland (July-Aug. 1986) 7−128196
MBE, conf., York, England (Sept. 1986) 7−66816
MBE, conference, Cambridge, MA, USA (Oct. 1986) 7−128174
MBE, linearly graded comp. or doping profiles 7−144282
MBE, substrate temp. and growth rate meas. by IR spectroscopy 7−71015
MBE using RHEED intensity oscillations *(Japanese)* 7−125996
MIS device technology using MOCVD growth 7−86043
MOCVD applications in semiconductor technology 7−71070
molecular beam epitaxy, RHEED intensity oscills., computational modelling 7−112139
photovoltaic advanced R&D, conf., Denver, CO, USA (May 1986) 7−128184
phthalocyanine, vacuum deposited film, characterisation *(Japanese)* 7−77829
plasma CVD and photo-CVD, LSI manufacturing appls. *(Japanese)* 7−138671
seed particle growth by silane pyrolysis, runaway nucleation in aerosol reactors 7−71047
semiconductor alloys, structure-property relationships 7−131132
shaped crystal growth, symposium, Budapest, Hungary (July 1986) 7−80150
shaped crystals grown from melt, temp. field and thermal stresses, asymptotic calc. 7−83810
SOI films by laser recrystn., periodic seeding filled by selective epitaxial growth 7−84561
solid-state physics, book 7−102027
strained layer semiconductors, growth and defects 7−138019
ternary semiconds. bulk single cryst. growth, review 7−119118
thin film deposition in photovoltaics manufacture, safety considerations 7−86019
transient doping behaviour in CVD, simplified treatment, circuit representations 7−98192
vertical directional solidification, thermosolutal convection, flow transitions study 7−91774
ZnS, II-VI compounds, wide gap, VPE 7−138674
$(Al,Ga)As/(Ca,Sr)F_2$ multilayer structures, MBE growth as broad-band high-reflectivity mirror 7−77825
(Al,Ga)As-GaAs heterostructures grown by MBE with growth interruption, photolum. 7−70869
AlAs, VPE growth by Cl_2 transport method 7−144308
AlAs/GaAs heterostructures, low temp. growth by modulated MBE 7−125990
$(AlAs)_m(GaAs)_m$ superlattices, ultrathin-layer, MBE growth 7−100074
AlGaAs BH lasers, single-step MOCVD technology 7−90650
AlGaAs heterostruct. with quantum-well layers, LPE growth 7−106452
AlGaAs, high quality, quantum wells, low temp. MBE growth, mobility and photolum. obs. 7−71022
AlGaAs, MBE growth, photoluminesc. spectra 7−143280
AlGaAs, MBE growth instabilities and roughening rates on misoriented substrates, RHEED study 7−131490
AlGaAs:C films grown on GaAs substrates, C incorporation in MOCVD growth 7−100090
AlGaAs:Si, electrical properties, effect of coincident Pb flux during MBE growth 7−77112
AlGaAs/GaAs MQW laser diodes, MOCVD growth on Si substrates 7−68685
AlGaAs/GaAs MQW laser diode, MOCVD growth on Si substrates 7−130166
AlGaAs/GaAs MQW structure, MOCVD grown, nonlinear absorption 7−90727
AlGaAs/GaAs structures, MBE growth, compositional gradient control, RHEED oscills. 7−71014
AlGaAs-GaAs, modulation-doped heterojunction, organometallic VPE for microwave appls., expt. charactn. 7−84582
AlGaAs-GaAs DFB lasers, λ/4 shifted, double window structs., MOCVD fabrication and characts. 7−97028
AlGaAs-GaAs heterostructure on GaAs (110), MBE growth and props. 7−71026
AlGaAs-GaAs heterostructures, MBE growth with interruption at interfaces, optical props. 7−143272
AlGaAs-GaAs laser, BH, formation by MOCVD 7−122959
AlGaAs-GaAs laser diode, inner stripe type, single-step MBE fabrication 7−68675
AlGaAs-GaAs laser diode fabricated by vapour phase etching and MOVPE 7−122958

semiconductor growth continued
AlGaAs-GaAs lasers, single element fundamental mode, recent developments 7−110393
AlGaAs-GaAs ridge waveguide DFB laser, MBE fabricated, low-threshold current 7−68681
AlGaAs-GaAs single quantum wells, MBE, photolum. 7−70868
AlGaAs-GaAs single quantum wells, migration-enhanced epitaxy, photolum. study 7−119033
AlGaAs-GaAs:Si lasers, low threshold buried heterostruct. quantum well, fabrication by laser assisted disordering 7−117227
AlGaAs-GaAs-AlGaAs quantum wells, island formation at interfaces upon growth interruption 7−84544
AlGaAs-InGaAs resonant tunnelling structs., MBE growth 7−144286
$Al_{0.3}Ga_{0.7}As$, MBE growth on GaAs (100), RHEED specular beam intensity 7−113392
$Al_xGa_{1-x}As$ 7−71013
$Al_xGa_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Al_xGa_{1-x}As$, VPE, halide transport reactor, optoelectronic device appls. 7−100080
$Al_xGa_{1-x}As$-GaAs, LPE, contact phenomena kinetics *(Russian)* 7−86065
$Al_xGa_{1-x}As$-GaAs quantum wells, MBE growth on GaAs (331) substrate 7−143279
$Al_xGa_{1-x}As$-GaAs selectively doped heterostruct., MBE, GaAs oval defect elimination by substrate prep. 7−71023
AlGaInAs/GaInAs, double HJBT, MBE growth, charcts. 7−77814
AlGaInP laser diodes, DH, 664 to 690 nm, active layer growth by MOVPE 7−122956
AlGaInSb bulk crystal and LPE forms, charactn. 7−92892
AlInAs-GaInAs selectively doped heterostructs., MOCVD growth, appl. to HIFETs 7−112478
$Al_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
AlN films, low temperature growth from metalorganics and hydrazine 7−71058
AlN, gas-phase epitaxy on sapphire substrates, growth kinetics and struct. 7−70106
AsSeBr, glass formation, preparation, microhardness studies 7−144358
BaF_2/(Ga,In)(As,Sb) structures, MBE growth 7−77826
BiSeI, glass formation, preparation, microhardness studies 7−144358
BiSeI, single cryst. growth from vapour 7−77784
Bi_2Te_3-Sb_2Te_3(Bi_2Se_3) thermoelectric materials, vacuum deposition 7−71036
a-C, film, semiconducting props., growth rate, low temp. plasma 7−100094
C-S, semiconducting solid complexes, synthesis, characterisation 7−142584
Cd_3As_2 films, pulsed laser evaporated, elec. props. and lattice parameters 7−71039
CdHgTe crystals, growth by solid state recrystallisation, elec. and struct. evaluation 7−138647
CdHgTe epitaxial layers, growth using interdiffused multilayer process 7−77840
CdHgTe layers, epitaxial growth 7−84554
$Cd_xHg_{0.5-x}Te_{0.5}$, preparation in H_2 environment, thermodynamic analysis 7−100023
$Cd_xHg_{1-x}Te$, crystal growth of IR material by travelling heater method 7−77785
$Cd_xHg_{1-x}Te$ crystals, growth using accelerated crucible rotation, quenching obs. 7−113375
$Cd_xHg_{1-x}Te$ layers, open tube isothermal VPE, comp. and thickness control 7−113445
$Cd_xHg_{1-x}Te$, MOCVD growth and elec. props. 7−77843
$Cd_xHg_{1-x}Te$, MOVPE growth, temp. var. 7−86045
$Cd_xHg_{1-x}Te$, photo-assisted epitaxy, UV laser source 7−132497
$CdIn_2S_4$, single crysts., growth from soln. in a melt 7−85979
CdMnTe, photoassisted MBE 7−132472
$Cd_{0.96}Mn_{0.04}Te$, high energy electron and ion ejection during pulsed laser evaporation 7−85902
$Cd_{1-x}Mn_xTe$ films, epitaxial growth by ionized-cluster beams and magneto-optical props. 7−113442
$Cd_{1-x}Mn_xTe$ epitaxial films, hot-wall evaporation 7−126000
$Cd_{1-x}Mn_xTe$ thin films, diffusive vapour transport, growth kinetics 7−84553
Cd_3P_2 films, growth by hot wall epitaxy 7−138685
CdS, electrodeposition using nonaqueous triphenylstibine sulphide, photoelectrochem appls. 7−86067
CdS epitaxial films, struct. and chelate organometallic cpd. prep. *(Russian)* 7−124754
CdS films, sprayed, annealing, XPS obs. 7−86016
CdS, growth rate by vap. transport in closed ampoule 7−92844
CdS, low resist. films grown by RF sputtering in Ar-H_2 atmosphere 7−132458
CdS polycrystalline films, low pressure MOCVD growth 7−126011
CdS thin film growth for SAW appls. 7−100089
CdS thin film photoanode production for photoelectrochemical cells using electrodeposition 7−144315
CdS thin films, spray-pyrolyzed, nucleation and growth 7−71009
CdS:Zn sublimation grown crystals, growth stability, soln. hardening effect 7−100026
CdS-Te system, film deposition, cothermolysis of chelates of Cd(Te) organometallic cpds. 7−113401
CdS(Te), single crystal growth, high temp. annealing effect on elec. transport props. 7−138620
CdSe deposition by fused salt electrolysis 7−71097
CdSe film, preferential growth of sphalerite or wurtzite struct. by gas-solid process 7−144307
n-CdSe films, electrodeposition, stoichiometry and purity, AES studies 7−106455
CdSe films, solution growth technique 7−119179
CdSe heteroepitaxial films deposited on cryst. and amorphous substrates by hot-wall technique, struct. obs. 7−70132
CdSe thin films, electrodeposition from diethylene glycol+tri-n-butylphosphine selenide 7−106449
$CdSnP_2$ polycryst. thin film, MOCVD, structural and compositional charactn. 7−119167
CdTe, electrodeposition, microdendritic Te layers form. with A7 lattice type 7−119178
CdTe, epitaxial growth on clean GaAs (100), orientation control, precursor surface reconstruction 7−112120
CdTe, epitaxial photochemical deposition 7−138679

semiconductor growth continued
CdTe films, (100) and (111), growth on GaAs (100) by hot wall epitaxy 7−70145
CdTe films, ion beam sputter deposition and epitaxy 7−138655
CdTe films, metal-organic CVD 7−77840
CdTe films, photoelectrochemical deposition 7−71092
n-CdTe films, vacuum-evaporated, preparation and conductivity 7−71038
CdTe high-cond. n-type vacuum deposited films, formation and props. 7−100076
CdTe, low temp. LPE from Hg solvent, photolum., X-ray diffr. 7−113454
CdTe, low temp. organometallic VPE growth, new source of dimethylditelluride 7−118289
CdTe, MBE grown, mismatch strain meas., free exciton absorpt. and refl. 7−76683
CdTe, MBE growth on GaAs (100), RHEED study 7−131485
CdTe, MBE on GaAs substrate, high resolution TEM 7−132473
CdTe photoassisted MBE films, controlled substitutional doping 7−131164
CdTe pulsed laser evaporated films on glass and (100) GaAs substrates, refl. spectra 7−84560
CdTe, substrate, growth and characterisation, modified horizontal Bridgman technique 7−132442
CdTe:Al on GaAs, MBE growth and Al doping, struct. optical and elec. props. 7−77820
CdTe:Cl, growth, elec., and optical props. *(Korean)* 7−143398
CdTe:In(Sb), thin films, photoassisted MBE, substitutional doping 7−132472
CdTe:Zn, growth by gradient freeze method solid-liquid interface shape 7−132443
CdTe-CdS-SnO_2:F thin film solar cells prep. by CVD and close-space sublimation 7−133097
CdTe-$Hg_{1-x}Cd_xTe$, Hg-based superlattices, properties and growth *(Polish)* 7−132474
CdTe-$Hg_{1-x}Mn_xTe$, Hg-based superlattices, properties and growth *(Polish)* 7−132474
CdTe-InSb multilayers, MBE growth and interdiffusion 7−77821
CdTe-ZnTe superlattice, MOCVD growth 7−138681
Cd_xTe, ionic electrodeposition, computer simulation of quasi-rest potentials 7−100133
$CuGaS_2$, CVD using chloride sources 7−138680
$CuGaS_2$ epitaxial layers, MOCVD growth 7−126016
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7−118325
$CuGaSe_2$ crystal growth from the melt 7−119126
$CuInSe_2$, chemically deposited thin films, composition and struct. 7−113458
$CuInSe_2$ film, amorphous, deposition, conductivity and energy gap 7−137928
$CuInSe_2$, films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
$CuInSe_2$ thin films, DC triode sputtering conditions rel. to elec. and optical props., solar cell appls. *(Japanese)* 7−100069
$CuInSe_2$ thin films, rheotaxial growth 7−106418
$CuInSe_2$-CdS thin film solar cells, low cost production methods 7−133096
$CuInSe_2(Te_2)$ crystal growth from the melt 7−119126
$CuInTe_2$ films, electrodeposition 7−138695
$Cu_xLi_{1-x}InTe_2$ epitaxial layers on III-V substrates, lattice misfit 7−124792
Cu_2O on stainless steel, thin films galvanostatic deposition 7−118315
Cu_2S chemiplating on Cd and Cu, stoichiometry and solar cell applic. 7−132507
Cu_2S/CdS solar cells, dry formation, growth kinetics 7−139118
Cu_2S-CdS solar cells, vacuum deposition and constituent layers eval. 7−139115
Cu_xS, chemiplated thin films, electroanalysis 7−105320
Cu_xS topotaxially grown films on sprayed CdS films, growth mechanism 7−100127
$Cu_{2-x}Se$ thin films, chemically deposited, structural, electrical and optical props. 7−106456
(Ga,Al)As-GaAs, semiconductor scintillator, nuclear particle and X-ray detector 7−141403
Ga-Al-In-As ternary and quaternary alloy compositions, MBE growth and device appl. 7−77810
Ga-As soln., electrotransport model for liq. phase electroepitaxial growth 7−100129
GaAlAs/GaAs surface emitting laser, MOCVD growth 7−123018
GaAlAs-GaAs heterostructures, LPE grown, quantitative anal. by XPS *(French)* 7−113342
GaAlAs-GaAs lasers, surface emitting circular buried heterostructure, fabrication and characters. 7−130102
$Ga_{1-x}Al_xAs$, MOVPE multilayer growth, transient composition effects 7−98733
$Ga_xAl_yIn_{1-x-y}As$-InP multilayer heterostructs., MBE growth, appl. to p-i-n APD 7−144287
$Ga_{0.96}Al_{0.04}Sb$ junctions, LPE grown, 1.55 μm photodetection props. *(French)* 7−131756
GaAs (001), MBE and stepped surfaces, RHEED studies 7−143165
GaAs (001), surface disorder-induced Kikuchi features in RHEED 7−143142
GaAs (001) substrates, in situ chem. etching by gaseous HCl prior to MBE growth 7−143274
GaAs (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
GaAs and related cpds., conf., Las Vegas, NA, USA (Sept. 1986) 7−120702
GaAs and ternary alloys, laser selective deposition, direct writing 7−106437
GaAs atomic layer epitaxy, monolayer control, thickness uniformity and electronic props., review 7−124795
GaAs bulk crystal growth by liq. phase electroepitaxy 7−100031
GaAs CVD, UV spectra of organometallic compounds 7−135961
GaAs, chemical beam epitaxial growth, obs. of intensity oscillations in RHEED 7−105304
GaAs, crystal growth in horizontal Bridgman furnace, temp. conditions 7−106395
GaAs, Czochralski growth, liquid encapsulated, thermal stress model 7−138639
GaAs defect struct. generated during MBE, growth temp. depend., TEM study 7−112138
GaAs, doping in metalorganic MBE using gaseous sources 7−76152

semiconductor growth continued
GaAs, electrical properties, effect of coincident Pb flux during MBE growth 7−77112
GaAs epitaxial films, growth and characterisation 7−84603
GaAs epitaxial films, growth by thermal decomposition, charact. *(Russian)* 7−106435
GaAs epitaxial films, MOCVD grown, growth rate 7−144300
GaAs, epitaxial growth kinetics, effects of gas phase composition 7−71045
GaAs epitaxial layer growth from Ga-As-Bi solution 7−100139
GaAs epitaxial layers, growth and characterisation 7−86038
GaAs epitaxial layers, CVD growth on Ge coated Si substrates, solar cells fabrication 7−86058
GaAs epitaxial layers, crystallographic defect form. during MOCVD growth 7−104759
GaAs epitaxial layers, growth kinetics, vapour-phase composition effects 7−106427
GaAs epitaxial layers on Si, conf., Palo Alto, CA, USA (April 1986) 7−80174
GaAs epitaxial layers on Si, growth, props. and applications to FETs and LEDs 7−86034
GaAs epitaxial layers on Si substrates, high volume production growth 7−86059
GaAs epitaxial layers on semi-insulating substrates, fabrication technology 7−144306
GaAs film, ionized evaporation, epitaxy and composition, AC elec. field effect 7−138667
GaAs films, artificial epitaxy on insulating substrates 7−92024
GaAs films, electro-co-deposited, structural, electrical and optical props. 7−92899
GaAs films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
GaAs films, initial stages of MBE growth on Si (100) 7−84600
GaAs films, MBE growth on Si, dislocation density and carrier mobility 7−84598
GaAs films, MBE on Si, structural and optical props. 7−84599
GaAs films, short-term LPE from Bi melt 7−77838
GaAs, gas source MBE, doping enhancement by excimer laser irradiation 7−71035
n-GaAs, gas source MBE grown, electron traps, DLTS study 7−98863
GaAs grown on $(Ca,Sr)F_2$ by MBE, elec. resist. and Hall effect meas. 7−77114
GaAs, growth by metalorganic CVD, thermal precracking technique 7−106423
GaAs growth by molecular layer epitaxy, surface reaction processes 7−105338
GaAs, growth in low press. MOVPE, orientation depend. of growth rate and Si doping 7−144298
GaAs, high mobility, low compensation crysts., low press. OMVPE 7−126022
GaAs, integrated optical bent waveguide with 45° mirror, selective LPE growth 7−123195
GaAs, LEC, crystal orientation effect on dislocation form. 7−137284
GaAs, LEC cryst. growth, double crucible apparatus with X-ray imager 7−100046
GaAs, LEC crystal growth, magnetic field effect on residual impurity concentration 7−138641
GaAs, LEC crystals, undoped, effect of crucible material 7−138640
GaAs, LEC grown, dislocation density inspection, reference face prep. *(Chinese)* 7−131150
GaAs, LEC growth, X-ray topography using synchrotron radiation *(Japanese)* 7−124149
GaAs, LPE growth, deoxygenation of Ga solvent 7−137754
GaAs layer, MBE on (100)-oriented Si substrate, preheating effect, charactn. 7−113394
GaAs layers, MBE on Si, structural evolution 7−84602
GaAs, liquid encapsulate Czochralski growth, heat flow model 7−138638
GaAs, MBE, acceptor conc., Hall mobility, photolum. 7−77113
GaAs, MBE, growth surface, RHEED oscill. obs. 7−70117
GaAs, MBE, low dimensional systems, quantum wires and boxes 7−70121
GaAs, MBE, low temp. 7−76653
GaAs MBE, optical meas. of Ga beam flux 7−71024
GaAs, MBE, secondary electron emission oscills., RHEED obs. 7−71018
GaAs MBE, surface defects anal. 7−76659
GaAs, MBE, surface diffusion, RHEED 7−70118
GaAs, MBE, surface phase diagrams, appls. 7−71017
GaAs, MBE grown crystals, dopant incorporation, kinetic and thermodynamic aspects 7−137381
GaAs MBE grown surface, Sb used for passivation 7−71402
GaAs, MBE growth, asymm. interface roughness, computer simulation 7−143159
GaAs, MBE growth, focused ion beam doping 7−76154
GaAs, MBE growth, oval defects due to Ga_2O_3 and particulates 7−143273
GaAs, MBE growth, phased locked RHEED oscills. 7−71013
GaAs MBE growth, RHEED intensity oscillation study 7−92872
GaAs, MBE growth from triethylgallium and AsH_3 7−71032
GaAs MBE growth on Ge (100), antiphase domain suppression, RHEED obs. 7−70127
GaAs MBE growth on high temp. H annealed (100) Si substrates, expt. study 7−144279
GaAs MBE growth on Si, charactn. 7−70126
GaAs MBE growth on Si(100), initial stages and domain struct. 7−70137
GaAs, MBE growth on Si 7−84597
GaAs, MBE growth on Si(100), dislocation accommodation 7−100084
GaAs, MBE growth on Si(100), antiphase boundaries, self-annihilation 7−124769
GaAs MBE growth on Si using thermally strained buffer layers 7−124796
GaAs, MBE growth on Si substrate, elec. and optical props. 7−144289
GaAs, MBE growth using triethylgallium and As_4 7−71029
GaAs MBE layers, oval defects 7−98739
GaAs, MBE on Si, rapid thermal annealing, APD fabrication 7−143283
GaAs, MBE on Si substrate, IC appls. 7−138662
GaAs MBE on SiO_x and photolum. props. study 7−131479
GaAs, MOCVD, selective growth on Si substrates using superlattice intermediate layers 7−86051
GaAs, MOCVD growth on Si substrates, stresses and strains 7−100107
GaAs, MOCVD growth using trimethylgallium and diethylarsine 7−92881
semiconductor growth continued
GaAs MOCVD layers on Si substrates, misfit and threading dislocations 7−70138
GaAs, MOCVD layers on (001) substrates, anisotropic lateral growth 7−100098
GaAs, MOVPE, lattice matched hetero-epitaxial growth on garnets 7−113409
GaAs, MOVPE growth, impurity incorporation, laser-irradiation effects 7−71060
GaAs material prep. and charactn., book contrib. 7−86011
GaAs, metal-organic CVD growth at atmospheric press. 7−106436
GaAs monomolecular layer epitaxy, deposition mechanism study 7−100081
GaAs, nucleation, MBE growth stages on Si(100), 3D critical transition 7−111814
GaAs, nucleation on vicerial Si, multilayer step formation after As adsorption 7−105309
GaAs on Si and SOS substrates, organometallic VPE for microwave appls., expt. charactn. 7−84582
GaAs on Si substrates, polar-on-nonpolar epitaxy 7−70125
GaAs p-n junctions, MBE growth on AlGaAs buffer layers 7−138017
GaAs, plasma-assisted epitaxial growth, characterisation 7−105343
GaAs residual impurity gettering during growth, spectra studies 7−106108
GaAs selective LPE, kinetics and morphology 7−86063
GaAs, single crystal growth, impurity anal. *(Chinese)* 7−132439
GaAs, single domain MBE films, growth on double domain Si(001) substrates 7−71034
GaAs solar cell mfg. facility and processing methods 7−144840
GaAs substrates, in situ deoxidation by HCl gas, MBE appl. 7−71414
GaAs substrates, radiationally heated, behaviour and charact. 7−143275
GaAs tunnel junction, MOVPE growth for multigap cascade solar cells 7−144834
GaAs VPE growth process, computer aided modelling 7−138669
GaAs VPE layers for microwave Schottky tuning varactors 7−138670
GaAs, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
GaAs:Be/AlAs multilayered structure, compositional disorderings, MBE growth temp. dependence 7−125987
GaAs:C, atomic layer doping using flow-rate modulation epitaxy, p-type doping profile 7−111595
GaAs:Cr crysts., LEC growth, Cr incorporation and segregation 7−100043
GaAs:Er, Er doping during LPE growth, photoluminesc. study 7−113257
GaAs:Fe epitaxial films, doping during vapour deposition, structural and electrical props. 7−76664
GaAs:Fe single crystals, LEC grown, phase analysis; ferromag. props. 7−86179
GaAs:In, directional solidification, X-ray topography capabilities for interfacial instabilities obs. 7−98010
GaAs:In, MBE, photolum. 7−77813
GaAs:In, slip dislocation propagation during crystal growth 7−124279
GaAs:In epitaxial layers, VPE trichloride growth using Ga/In alloyed source 7−71065
GaAs:In LEC crystals, grown-in dislocations 7−137367
GaAs:In low dislocation density semi-insulating crysts. by doping *(Chinese)* 7−76150
GaAs:In semi-insulating single crystals, growth of 50 mm low dislocation density substrates 7−85976
GaAs:Si, AlGaAs and GaAs-AlGaAs heterostruct., MBE growth of highly uniform epitaxial layers over multiple substrates 7−71025
GaAs:Si, Bridgman growth , thermodynamic analysis 7−132438
GaAs:Si, doping from disilane in gas source MBE 7−77808
GaAs:Si, δ-doping layer, magnetotransport props. 7−131688
GaAs:Si, gas source MBE growth, Si doping 7−125986
GaAs:Si, LPE, temp. difference method 7−126030
GaAs:Si, low dislocation single crystals, growth and props. 7−85988
GaAs:Si, low press. OMVPE, doping using disilane 7−132482
GaAs:Si, MBE grown, doping efficiency and thermal stability of electron conc. 7−142810
GaAs:Si, MBE growth on (311) substrates, elec. and optical props. 7−125988
GaAs:Si,In, LEC growth and LED charact. study 7−138643
GaAs:Sn, LEC grown, Sn segregation and donor compensation 7−91817
GaAs:Sn epitaxial layers, gaseous Sn doping during vapour deposition 7−76663
GaAs:Sn MBE grown in hydrogen presence, DLTS and photolum. 7−70239
GaAs:Te, liquid phase epitaxy, from Bi melt, Te doping 7−71088
GaAs/$(Ca,Sr)F_2$ heteroepitaxial layers, MBE grown, crystalline defects 7−112127
GaAs/$Al_xGa_{1-x}As$ superstructure, MOCVD grown, composition analysis by thickness fringe method 7−98717
GaAs/$Al_xGa_{1-x}As$(100) quantum well structs., MBE, RHEED, photolum., computer simulation 7−70093
GaAs/AlGaAs GRIN SCH quantum well lasers, MBE growth on misoriented (111)B substrates 7−97011
GaAs/AlGaAs heterostructs., MBE growth and transport props. 7−105696
GaAs/AlGaAs laser diodes on monolithic GaAs/Si substrates, prep. and characterisation 7−82570
GaAs/GaAlAs buried laser, p-dopant implanted stripe, LPE regrowth 7−136348
GaAs/Ge composite layer growth on Si and SiO_2/Si substrates 7−84601
GaAs-$Al_{0.3}Ga_{0.7}As$, modulation doped quantum well structs., MBE, anisotropic low field electron transport 7−70388
GaAs-$Al_{0.3}Ga_{0.7}As$ modulation doped quantum well structures, anisotropic electron transport 7−118561
GaAs-$Al_xGa_{1-x}As$ quantum wells grown by interrupted, uninterrupted MBE, interface struct. atomistic models 7−70124
GaAs-$Al_xGa_{1-x}As$ quantum-well structures, MBE grown, Be acceptor Raman scatt. 7−70765
GaAs-AlAs quasiperiodic heterostructures, MBE growth, struct., electronic and vibr. props. 7−70122
GaAs-AlAs superlattices grown by MBE, struct. props., TEM and X-ray diffr. obs. 7−70123
GaAs-AlGaAs, distributed feedback transverse junction stripe laser, 867 nm, MBE grown 7−117226
GaAs-AlGaAs, double heterostructure diode laser, on GaAs (110) substrate 7−141892

semiconductor growth continued
GaAs-AlGaAs, low-loss, single mode optical waveguides, organometallic VPE grown, appl. for integrated optoelectronics 7−117310
GaAs-AlGaAs 2D electron gas structs., OMCVD growth 7−92889
GaAs-AlGaAs 2D-EG structs. with high carrier mobility, MBE growth 7−143583
GaAs-AlGaAs BH diode lasers with self-aligned mask for Zn diffusion 7−110382
GaAs-AlGaAs heterointerfaces, growth by flow-rate modulation epitaxy, improved flatness 7−92004
GaAs-AlGaAs lateral DH DFB surface-emitting laser diode 7−110383
GaAs-AlGaAs MQW structs., MOVPE-grown, quantum confined Stark shifts 7−138421
GaAs-B_2O_3 system, LEC crystal growth, weight gain signal, buoyancy effect 7−100044
GaAs-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
GaAs-$Ga_{1-x}Al_xAs$:Si superlattices, MBE, plasmons, Raman scatt. obs. 7−70764
GaAs-GaAlAs, growth and interface characterisation 7−98747
GaAs-GaAlAs multilayer structures grown by LPE 7−138690
GaAs-GaAlAs planar waveguide acoustooptic Bragg cells fabrication and characts. 7−123199
GaAs-GaAlAs quantum well laser, lateral spatial variation in thickness, MOCVD grown 7−74953
GaAs-on-Si, MBE grown, ion implantation and annealing props. 7−143284
GaAs-Si, heteroepitaxy of GaAs, improvement 7−137730
GaAsP, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
$GaAs_{1-x}P_x$, OMVPE growth, solid and gas comp. 7−86044
$GaAs_{1-x}P_x$ solid soln. single cryst., liquid-encapsulated Czochralski growth 7−106398
$GaAs_xP_{1-x}$ epitaxial layers, MOCVD growth, numerical model 7−71056
GaAsSb, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
$GaAs_{0.5}Sb_{0.5}$-InP, MBE growth, low temp. optical characterisation 7−105303
$GaAs_{1-x}Sb_x$, OMVPE grown layers, ordered structs. 7−105342
$GaAs_ySb_{1-y}$, $Ga_{1-x}Al_xSb$ and $Ga_{1-x}In_xSb$ ternary solid solutions, OMVPE growth *(French)* 7−132489
GaAs; MBE growth on GaAs (331) substrate 7−143279
GaInAs, MOCVD gas mixing device, photolum. obs. of comp. uniformity 7−138672
GaInAs:Mg, grown by organometallic VPE, detection of defects 7−132496
GaInAs-AlInAs pseudomorphic MODFET heterostructs., MBE growth and charactn. 7−143585
GaInAs-AlInAs quantum well TEGFET structs., MBE growth and charactn. 7−143586
GaInAs-AlInAs single quantum wells, MBE growth, photoluminesc. charactn. 7−112124
GaInAs-InP, phase and amplitude modulation by free carriers injection at 10.6 μm 7−136500
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
$Ga_{0.47}In_{0.53}As$/InP double-heterostructure and multiquantum well lasers grown by chemical beam epitaxy 7−130104
$Ga_{0.47}In_{0.53}As$-InP quantum wells and superlattices, CBE growth, TEM, IR absorpt., photocond. and photolum. charactn. 7−126023
$Ga_{1-x}In_xAs$ layers, growth on InP by organometallic VPE, compositional uniformity 7−105344
$Ga_{1-x}In_xAs$, MBE growth on Si substrate, characterisation 7−71033
$Ga_{1-x}In_xAs$ semi-insulating single crysts., mag. field applied LEC growth and props. 7−125959
$Ga_{1-x}In_xAs$ and $Ga_{1-x}Al_xAs$, MBE growth, minimum As pressure *(French)* 7−132466
$Ga_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Ga_xIn_{1-x}As$, VPE growth *(Chinese)* 7−132488
GaInAs(P), gas source MBE, single quantum wells, superlattice p-i-ns and bipolar transistors 7−77807
GaInAsP system, LPE regrowth 7−143260
GaInAsP/AlGaAs visible laser diodes on GaAs, LPE, planar BH, 674 nm 7−68699
GaInAsP/InP epilayer, LPE, lattice const., emitting wavelength rel. to growth conditions 7−113453
GaInAsP/InP single quantum-well lasers, OMVPE grown 7−68641
GaInAsP-AlGaAs 0.67 μm laser, LPE grown, fabrication and lasing characts. 7−68680
GaInAsP-InP, high power phase-locked laser array, 1.3 μm 7−141907
GaInAs(P)-InP, MOCVD growth, characterisation and applications *(Polish)* 7−132498
GaInAsP-InP heterostruct. lasers, 1.5 μm, OMVPE fabrication 7−103840
GaInAsSb/GaSb DH, LPE growth for 2.0-4.5 μm optical communications appls. 7−71093
$Ga_{1-x}In_xAs_{1-y}Sb_y$, OMVPE grown layers, ordered structs. 7−105342
GaInP/AlGaInP MQW laser, MOCVD grown, room-temp. CW operation 7−90606
GaInPAs/InP, lattice matched heterostructures, LPE 7−100126
GaInPAs-InP, heterostructure waveguide, liq. phase epitaxy 7−68837
GaN films, low temperature growth from metalorganics and hydrazine 7−71058
GaN single-crystal films, MOVPE growth, luminescent props. 7−113405
GaN:Zn, low temp. growth using ECR plasma excited MO-VPE *(Japanese)* 7−138666
GaP crystals, SSD growth, influence of crucible motion on growth rate and quality 7−125947
GaP, gas source MBE using PH_3 decomposed by electron impact 7−71057
GaP thin films, vacuum evaporated, substrate temp. depend., elec. and optical props. 7−125999
GaP:N, S epitaxial layers, prep. by VPE CVD method 7−86037
GaP:O(S)(Se)(Te), liquid phase epitaxy, thermodynamic anal. of doping 7−91606
GaP:Zn, crytallisation from melt, Zn distrib. coefficient 7−69730
GaP-$GaAs_{0.35}P_{0.65}$, optical interference filter, photodiode, single-crystal integration 7−140747
GaPAsSb bulk crystal and LPE forms, charactn. 7−92892
GaSb, crystal growth, Czochralski methods 7−85991

semiconductor growth continued
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
Ge, amorphous films, influence of growth conditions 7−131484
Ge, Czochralski growth, temp. oscillation influence on measured cryst. weight, transfer function 7−125951
Ge epitaxial crystallisation on Si using electron beam evaporation and recrystallisation techniques 7−84605
Ge epitaxial films, growth and characterisation 7−84603
Ge epitaxial growth, low temp., and isotropic heterostruct. fabrication by direct ion beam deposition 7−92876
Ge, epitaxial growth, on Si, surface reconstruction 7−76577
Ge epitaxial layers, recrystn. on SiO_2 using SrF_2 seed by pseudo-line electron beam annealing 7−124771
Ge films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
Ge heteroepitaxy, search for geometrical lattice matching 7−84558
Ge, MBE, high quality heteroepitaxy on (100) Si 7−76678
Ge, MBE growth on Si(100), crystalline quality, thermal annealing effects 7−100085
Ge, monolayer and bilayer growth on Ge(111), RHEED, oscills. 7−70119
a-Ge sputtered films, optical gap and void fraction, thickness depend. 7−125828
q-Ge:H films, RF glow-discharge deposition, ellipsometry study 7−113404
Ge-Si alloy microstruct. fabrication by direct laser writing, comp. anal. using Raman microprobe spectra 7−119157
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
GeSi-Si strained layer superlattices, growth using limited reaction processing, struct., TEM, AES, RBS 7−118300
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
Ge_xSi_{1-x}/Si (001) heteroepitaxial system, MBE growth, RHEED oscillations 7−100083
$Ge_{1-x}Sn_x$ films, sputter deposition, ion beam collisional mixing, metastable single cryst. growth 7−113386
Hg based II-VI compounds, developments and trends in MBE 7−77819
HgCdTe, developments and trends in MBE 7−77819
HgCdTe epilayers with predesigned comp. profiles, laser MBE growth 7−132464
HgCdTe films, ion beam sputter deposition and epitaxy 7−138655
HgCdTe, growth for long wavelength IR imagers, historical review 7−132441
HgCdTe, isothermal LPE growth 7−132506
HgCdTe, isothermal VPE, thermodynamic and kinetic model 7−100079
HgCdTe layers, MBE, spectroscopic ellipsometry 7−71021
HgCdTe, MBE, X-ray diffraction characterisation 7−130982
HgCdTe, MBE on GaAs substrate, high resolution TEM 7−132473
HgCdTe/CdTe/GaAs/Si epitaxial struct., growth and characterisation 7−84550
$Hg_{1-x}Cd_xTe$, bulk crystal growth, for avalanche photodiodes 7−132432
$Hg_{1-x}Cd_xTe$, crystal growth by travelling heat method, Hall effect, comp. distrib. *(Korean)* 7−138629
$Hg_{1-x}Cd_xTe$ films, LPE, substrate holder for dipping method 7−100125
$Hg_{1-x}M_xTe$ (M=Cd, Mn, Zn), MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Mn_xTe$-HgTe superlattices, MBE growth 7−132463
HgTe, epitaxial photochemical deposition 7−138679
HgTe films, metal-organic CVD 7−77840
HgTe, MBE on GaAs substrate, high resolution TEM 7−132473
InAlAs/InGaAs resonant tunneling barrier structures, MBE grown, negative differential resistance 7−70395
$In_{0.52}Al_{0.48}As$ electro-optic directional coupler grown on InP by MBE 7−136498
$In_{0.52}Al_{0.48}As$, MBE growth and charactn. 7−143281
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ resonant tunnelling barriers, MBE grown, negative differential resistance 7−70397
InAs, gas phase epitaxy in InAs-$AsCl_3$-H_2 system, thermodynamics 7−71075
InAs, gas phase epitaxy in InAs-$AsCl_3$-H_2 system, growth kinetics 7−71076
InAs, MBE, selective epitaxial growth on GaAs 7−125991
InAs, MBE, surface phase diagrams, appls. 7−71017
InAs, MBE on (001) GaAs, monolayer stage, island form., TEM obs. 7−70120
InAs/$Sr_{1-x}Ba_xF_2$/InAs structures, MBE growth 7−100088
InAs-GaAs quantum well heterostructs. grown by atomic layer epitaxy, stimulated emission 7−92703
InAs-GaAs quantum well TEGFET structs., MBE growth and charactn. 7−143586
InAs-GaAs strained-layer superlattices, HRTEM, X-ray diffr. and photolum. meas. 7−70095
InAs-GaAs structures, MBE growth, in situ contact form. 7−143582
InAsPSb/InAs heterostructures, LPE growth 7−71094
$InAs_{1-x}Sb_x$-InAs, MBE growth, optical props., 8 to 12 μm range 7−92651
InGaAlAs-InP monolithic integrated ridge waveguide photodiodes, MBE grown, 1.55 μm operation 7−104036
InGaAlAs-InP ridge optical waveguide grown by MBE, low loss 7−136531
$In_{0.53}(Ga_xAl_{1-x})_{0.47}As$ layers, MBE growth, photoluminesc. charactn., optointegrated device appls. 7−144288
$In_{1-x-y}Ga_xAl_yAs$, MBE growth and charactn. 7−143281
InGaAs, LPE growth, crystal purity, graphite boat material effect 7−100122
InGaAs, MOVPE-grown, compositional homogeneity of layers 7−138673
InGaAs strained layer superlattices, MBE grown, 1.6-2 μm photoluminesc. efficiency 7−77834
InGaAs/GaAs stained layer superlattice, MBE, photolum. 7−77813
InGaAs/GaAsP superlattices, molecular stream epitaxy 7−144292
InGaAs/InAlAs quantum wells, MBE, photolum. 7−77813
InGaAs/InP heterointerface, LPE, SIMS, Raman obs. 7−100128
InGaAs/InP layers, thin-melt multi-slice LPE, constitutional supercooling 7−144311
InGaAs-InAsP, epitaxial heterojunction structures, growth, luminescence props. 7−70387
InGaAs-InGaAlAs, heterostructures, MBE growth, high speed device appls. 7−76675
InGaAs-InP, lattice matched heterostructure, metallorganic VPE, for high speed photodetectors 7−140746
$In_{1-x}Ga_xAs$, LPE growth by source-current-controlled method 7−100124

semiconductor growth continued
$In_xGa_{1-x}As$, VPE, hydride method, equilib analysis, ternary comp. 7−132481
$In_xGa_{1-x}As$:Si LED, spectral characts. electron-beam induced variations, electroluminesc. spectra anal. 7−106273
$In_xGa_{1-x}As$-GaAs n-n heterojunction epilayers, MBE growth and characterization 7−143587
$In_xGa_{1-x}As$-$In_xAl_{1-x}As$ MQWs and GaAs, MBE growth, lumin. 7−124739
InGaAsP buried crescent injection lasers, hybrid growth and 1.3 μm operation 7−123009
InGaAsP epitaxial layers, strain-energy-stabilised growth on GaAs (111)A substrates 7−124774
InGaAsP, LPE growth on $GaAs_{1-y}P_y$ substrates 7−100135
InGaAsP, LPE growth on GaAs substrates 7−124779
InGaAsP on GaAs, phase diagram and LPE 7−100131
InGaAsP/InP etched-mesa BH lasers, sidewall interfaces, LPE regrowth 7−110356
InGaAsP-GaAs quantum well separate confinement DH laser, prep. by LPE, λ=0.79 μm, injection luminesc. obs. 7−110354
InGaAsP-InP DFB lasers, 1.53 μm, VPE fabricated, very low-threshold design 7−97027
InGaAsP-InP lasers, single element fundamental mode, recent developments 7−110393
InGaAsP-InP material, waveguide struct. by epitaxial techniques 7−136532
InGaAsP-InP planar BH lasers grown by MOCVD LPE hybrid technique 7−130105
InGaAsP-InP:Fe VPE, high speed buried heterostructure laser diode 7−141896
$In_{1-x}Ga_xAs_yP_{1-y}$ grown by LPS, photolum. 7−70386
$In_{1-x}Ga_xAs_yP_{1-y}$ superlattices grown by LPE, electroabsorpt. characts. 7−138692
InGaAsSb-AlGaAsSb DH laser, MBE growth 7−141884
$In_xGa_{1-x}As_ySb_{1-y}$ MBE on GaSb (100), room temp. IR photolum. study 7−70129
InGaP LEDs, MOCVD growth on GaP substrates 7−71067
In_2O_3 films, reactively evaporated, amorphous-to-crystalline transition 7−137759
In_2O_3 transparent conducting coating for IR region, activated reactive evaporation 7−86032
InP (001) substrates, in situ chem. etching by gaseous HCl prior to MBE growth 7−143274
InP (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
InP crystals, Si incorporation in soln. growth process, growth temp and P vapour press. depend. 7−100035
InP doping superlattices, MOCVD growth, optical props. 7−144114
InP epitaxial growth on Si using MIBE technique 7−77805
InP films, hydride VPE growth, effect of PH_3 pyrolysis on the morphology and growth rate 7−71051
InP grown by LPE, photolum. 7−70386
InP, heteroepitaxial growth on Si by low pressure MOCVD 7−106425
InP, high purity growth under high temp. by synthesis-solute diffusion technique 7−85972
InP, LEC growth, thermoelastic stress, effect of ambient temp. gradient *(Chinese)* 7−124150
InP, LPE, buried heterostructure devices 7−113455
InP, low press. metalorganic VPE growth using trimethylindium-trimethylphosphine adduct source 7−113441
InP, MBE grown crystals, dopant incorporation, kinetic and thermodynamic aspects 7−137381
InP, MBE using low-energy P^+ ion beam, elec. and optical props. 7−77812
InP, materials aspects, conf., Harwichport, MA, USA (Sept. 1986) 7−120691
InP n^+-p-p^+ struct. solar cells, OMVPE growth 7−86796
InP, new direct synthesis using liq. P 7−85971
InP particle deposition on Si_3N_4 and SiO_2 masks by low press. MOCVD, particle density 7−144297
InP, residual impurity gettering during growth, spectra studies 7−106108
InP, selective epitaxial growth by metalorganic CVD 7−132479
InP substrate protection and cleaning for LPE, laser fabrication 7−71416
InP synthesis using radiant heat to control P temp. thermal field anal. *(Chinese)* 7−125954
InP, VPE, hydride method, PH_3 decomp., substrate heating 7−113407
InP:C MOVPE growth and characterization 7−126021
InP:Fe, Ga, LEC growth, dislocation density 7−125943
InP:Fe, low press. MOCVD growth for laser structs. 7−92885
InP:Fe, semi-insulating, chloride VPE growth 7−100096
InP:Ga,Fe, double doped, LEC grown, X-ray topography and TEM study 7−86005
InP:Mg, grown by organometallic VPE, detection of defects 7−132496
InP:Mg, MOVPE grown, photolum, data 7−99910
InP:S, LEC growth, automatic dia. control system 7−125948
InP:S, MBE grown, S incorporation and desorption 7−76674
InP:Si(Te), MOVPE, carrier conc. rel. to doping 7−124301
InP:Ti,Hg(Cr,Hg)(Cr,Cd), double doped semi-insulating crysts., growth and characterization 7−125950
InP/InGaAsP, OMVPE reactor design, flow visualisation and fraser gas study 7−126009
InP-GaInAs quantum wells and selectively doped heterostructures, growth and charact., solid source MBE 7−77809
InP-InGaAsP optical waveguides, MOVPE grown, low-loss, single-mode, fabrication, props. and appls. 7−103966
In_2S_3, single crysts., growth from soln. in a melt 7−85979
InSb crystal growth, Czochralski technique, homogeneity anal. 7−77790
InSb, high energy electron and ion ejection during pulsed laser evaporation 7−85902
InSb, plasma-assisted epitaxial growth, characterisation 7−105343
InSb single crysts. grown by Czochralski technique with alternate rot. impurity homogeneity *(Japanese)* 7−125946
InSb thin films, application and properties for highly sensitive magnetoresistance elements *(Japanese)* 7−125158
InSb:Bi,Zn epitaxial layers, impurity interactions 7−106446
InSb:Pb, LPE growth 7−106445
InSb:Te Czochralski-grown, Te distrib., face effect 7−69731
InSb-CdTe heterojunctions, interface characterisation and MBE growth *(Polish)* 7−132475
InSb-CdTe interface, microscopic interactions, photoelectron, LEED and Auger spectroscopy 7−77073
semiconductor growth continued
InSb-CdTe interface prepared by MBE, quasi-2D electron gas, Shubnikov-de Haas obs. 7−77072
In_xSe_{1-x} thin films, growth and optical props. 7−144291
$InSe_{0.82}S_{0.18}$ crysts., Bridgeman growth and elec. props. 7−125961
$In_{2-x}Sn_xO_{3-y}$ films, DC magnetron sputtering, resist. and light transmission *(Japanese)* 7−138657
$In_{2-x}Sn_xO_{3-y}$, ion beam sputtered films, XPS anal. 7−106361
$In_{2-x}Sn_xO_{3-y}$/InGaAsP, n-p solar cell on GaAs substrate, conversion efficiency 7−71612
La-S films, sputter deposition, structural and transport props. 7−76691
$MgGeP_2$, possible nonexistence, rel. to prep. X-ray diffraction and SEM study 7−131122
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
Pb salt, lasers, long-wavelength, LPE growth 7−74929
$Pb_{1-x}Ba_xTe$, MBE growth, diode laser appls. 7−131486
$Pb_{1-x}Cd_xS_{1-y}Se_y$/PbS/$Pb_{1-x}Cd_xS_{1-y}Se_y$, DH lasers, MBE, pulsed operation 7−74960
$Pb_{1-x}Eu_xSe$, MBE, elec. characts., optical props., diode laser and IR appl. 7−77815
PbS thin films, vacuum deposition rate effects on struct. 7−106420
PbSnSe/PbSSe/PbS heterostruct. laser, separate electron and optical confinement 7−141864
PbSnTe-PbTeSe lattice matched single heterostructure diode lasers 7−74923
$Pb_{1-x}Sn_xTe$, Bridgman-grown single crysts., precip. study by TEM 7−91818
$Pb_{1-x}Sn_xTe$, film, molecular beam epitaxy, on Ge, Si, GaAs, InSb and BaF_2 substrates 7−77830
$Pb_{1-x}Sn_xTe$, liquid phase epitaxy, layer thickness rel. to deposition parameters 7−92020
$Pb_{1-x}Sr_xTe$, MBE growth, diode laser appls. 7−131486
PbTe films, hot wall vapour deposition 7−92873
PbTe, MBE growth on GaAs (100), RHEED study 7−131485
PbTe-SnS, solid solutions, epitaxial films, thermal evaporation in vacuum 7−106417
$PbTe_{1-x}S_x$, prep. by liquid phase epitaxy, unit cell parameters 7−106447
PbTe(Se) and (Pb,Sn)Se IR detectors on Si, heteroepitaxial growth 7−73424
$RuS_2(Se_2)(Te_2)$, cryst. growth by chem. vapour transport and high temp. soln. growth 7−144252
SbSI, glass formation, preparation, microhardness studies 7−144358
SbSeBr, vapour growth of hollow needles and whiskers 7−76714
SbSeI, vertical Bridgman growth, elec. cond., 13-30°C, phase transition temp. 7−76941
Se thin films, form. and growth, substrate temp., evaporation times 7−105322
a-Se/Cd_xSe_{1-x} multilayer films, preparation and optoelectronic props. 7−125985
Si (001), RHEED intensity calcs. for stepped surfaces for interpretation of oscills. during MBE growth 7−84464
Si (111), surface topography changes during MBE growth, microprobe RHEED study 7−98636
Si (111) surface, adatom diffusion and adatom-ledge interaction, semiempirical pot. energy function 7−143179
Si (111) surface, kink-site form. energies using semiempirical pot. energy function 7−143176
Si, amorphous films, deposition from $SiCl_4$ glow discharges 7−144296
Si amorphous/liquid Si interface, crystallisation instability 7−111836
Si beam deposition, atomistic simulation 7−124781
Si bicrystals, Czochralski growth, grain boundary effects 7−125955
Si, crystal whiskers, growth kinetics, depend. on diameter 7−143300
Si, crystallisation, transitional regimes, effects on microdefects transitional regimes, effects on microdefects 7−98007
Si, Czochralski cryst. growth, radiative heat exchange 7−144263
Si, Czochralski growth technique, review 7−125960
Si, denuded zone formation, generation lifetime *(Korean)* 7−137954
Si, deposition on electron irradiated Si (100) 7−77832
Si, directional solidification and moulding using insulating molten salt, solar cell efficiency 7−93509
Si, directional solidification growth for solar cells *(French)* 7−125956
Si, EFG ribbons, struct. defect generation mechanisms 7−83813
Si epitaxial deposition in a barrel reactor, convective transport 7−132446
Si, epitaxial films, plasma CVD growth at low temps. 7−126015
Si, epitaxial growth, book 7−102034
Si epitaxial growth, low temp., and isotropic heterostruct. fabrication by direct ion beam deposition 7−92876
Si, epitaxial growth, low temp., by plasma-enhanced CVD *(Japanese)* 7−138682
Si, epitaxial growth, molecular dynamics simulation 7−124782
Si, epitaxial growth and prebaking, UV radiation effects 7−113406
Si, epitaxial layers, photo-CVD using VUV light 7−126017
Si film, MBE, substrate cleaning, layer nucleation, in situ light scatt. 7−77817
Si, film, zone recrystallisation, on fused quartz 7−106448
Si films, epitaxial growth, planar gettering effects *(Russian)* 7−76695
Si films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
Si films, laser plasma CVD growth *(Chinese)* 7−113399
Si films, solid phase epitaxial growth, substrate-surface cleaning 7−124767
Si, float zone crystals, dislocation-free, N_2 doping 7−86013
Si foils, shaped cryst. growth by, ramp assisted casting technique, photovoltaic props. 7−92852
Si, growth rate of selective epitaxial deposits 7−132483
Si heteroepitaxy, search for geometrical lattice matching 7−84558
Si interdendritic ribbons, growth process modelling *(Russian)* 7−124143
Si, ion bombardment, by Ar^+ and N_2^+, angular distrib. of sputtered particles 7−77740
Si, lateral solid-phase epitaxy induced by focused ion beams 7−70136
Si low-temp. growth of epitaxial layers using Si-I_2-H_2 CVD system 7−113426
Si MBE, crystal defects formation, depend. on cryst. orientation 7−71028
Si, MBE, developments review 1984-86 7−77816
Si, MBE, growth on single domain surface, RHEED oscills. 7−71019
Si, MBE, nucleation and annealing, LEED, spot profile analysis 7−76676
Si MBE, particulate behaviour 7−143278
Si MBE, use of alloy source for group V 7−144284
Si, MBE grown, influence of substrate misorientation and temp. 7−76671
Si, MBE growth, delta-function doping layer 7−91623

semiconductor growth continued
Si melt, flow asymm. and temp. distrib., 3D simulation of Czochralski bulk flow in mag. field 7−98012
Si melts, hydromagnetic Czochralski flow, cryst. elec. cond. effects 7−113373
Si, microcrystalline films, plasma deposition 7−144295
Si monolayer films, epitaxial growth, optical SHG study 7−131489
Si, multiply-twinned particles, decahedral, gas evaporation 7−70994
Si, plasma CVD growth, effect of substrate temp. *(Chinese)* 7−76650
Si, polycrystalline, growth and solar cell props. *(French)* 7−125958
Si, polycrystalline, hydrogen-radical-enhanced CVD 7−71061
Si, polycrystalline, solidification and microstructure 7−124460
Si, polycrystalline layer growth during pyrolysis, kinetics and mechanism *(Russian)* 7−125939
Si, Polyx photovoltaic technology, progress and prospects 7−125957
Si, precipitate form. during solid-phase epitaxial growth 7−124757
a-Si preparation technology, safety aspects 7−86020
Si RAD ribbons, gettering effects, XPS/AES study 7−86497
Si RAD ribbons, interface shape in growth, finite element analysis 7−83807
Si ribbon, edge stabilised growth, solar cell appl. 7−93506
Si ribbon growth, dislocation motion and multiplication 7−117845
Si ribbons, dendritic web type, dislocation dynamics and viscoplastic buckling 7−98016
Si ribbons, prep. and thermal residual stress anal. *(French)* 7−125962
Si ribbons, RAD growth process, photovoltaic appl. 7−93505
Si ribbons, RTR, cryst. defects, characts. and influence on ribbon cell performance 7−86015
Si SOI, Si selective epitaxial growth over thick SiO_2 islands 7−100103
Si SOI films, large area, seeded electron beam recrystn. with striped encapsulation 7−124768
Si SOI films, multilevel seeded lateral epitaxy, electron beam recrystn. 7−131471
Si SOI structure, laser recrystallisation, lateral seeding 7−124325
Si shaped crystal growth, transient solute effects 7−83811
Si shaped ribbon 7−85999
Si sheet, grown by spin method, rel. between solar cell efficiencies and cryst. struct. 7−86001
Si sheet, long nonagons, EFG method, solar cell appl. 7−92853
Si sheet, residual stress meas. by shadow moire interferometry 7−83138
Si sheet continuous horizontal growth from melt, finite element analysis 7−85994
Si sheet growth, rate limits, vertical and horizontal growth methods 7−85993
Si sheet growth, transverse temp. field nonuniformity effects on stress 7−83809
Si sheets, growth by zone melting process from powder, solar cell efficiency 7−93508
Si single cryst., float zone and Czochralski grown, perfection, γ-ray diffr. obs. 7−100040
Si, solar cells prepared from polycrystals grown by RAD technique, defects 7−86000
Si, spherical particles, crystal growth by gas evaporation 7−70993
a-Si thin film, deposition from microwave plasma 7−126012
a-Si thin film growth by sputtering, Monte Carlo studies 7−105329
Si, twinned growth in chill modified Al-Si eutectic, electron diffr. 7−100045
Si, VPE kinetics at reduced temps. 7−100091
Si vertical asymmetric sheet EFG, finite element modelling 7−85995
Si wafers, thin film chem. growth processes, integrated system 7−138678
Si web, growth, computer controlled thermal environment, solar cell efficiency 7−93507
Si web crystal growth, plastic deform. analysis 7−84093
Si web type ribbon growth, dislocation dynamics 7−83965
Si:Al(B)(Ga)(In), material considerations for high efficiency solar cells 7−133098
Si:As, amorphous layers, ion beam induced epitaxial crystn. 7−131495
Si:As, MBE growth, doping by low-energy implantation using microion source 7−142808
Si:As, polycrystalline films, ion implanted, solid phase epitaxy 7−131472
Si:B films, low pressure CVD grown, microstructure 7−106434
Si:B(P), ion implantation during MBE growth 7−142809
Si:B(P) amorphous films, bias effects on preparation in triode glow discharge 7−126028
Si:Ga, growth mechanism and segregation, electron microscopy studies 7−131065
Si:H, amorphous, glow discharge deposited films, Raman scatt. obs. of struct. changes and SRO 7−99957
a-Si:H, glow discharge SiH_4 decomposition, reactive species incorporation 7−138683
a-Si:H, growth processes in plasma CVD *(Japanese)* 7−118317
a-Si:H, plasma deposited, structural changes after annealing *(Japanese)* 7−84583
a-Si:H, prep. by cross homogeneous CVD technique 7−86049
Si:H,P, heavily doped films, microcrystallisation 7−126010
Si:H amorphous layer epitaxial recrystallisation and regrowth during furnace annealing 7−83820
Si:H amorphous thin-film solar cell production by CVD 7−113424
a-Si:H film growth, gas and surface processes 7−132491
a-Si:H films, catalytic CVD growth 7−71059
a-Si:H films, coaxial-line-type microwave plasma CVD growth *(Japanese)* 7−71079
a-Si:H films, electron cyclotron resonance microwave plasma CVD, photodiode appl. 7−86050
a-Si:H films, growth in inductive coupling glow discharge reactor 7−113416
a-Si:H films, laser induced CVD, photovoltaic devices and material props. 7−132492
a-Si:H films, microwave electron-cyclotron-resonance plasma CVD 7−100104
a-Si:H films, microwave-excited plasma CVD from SiH_4 7−144302
a-Si:H films, RF glow discharge deposited, optical props. 7−119163
a-Si:H films, RF glow-discharge deposition, ellipsometry study 7−113404
a-Si:H solar cells, continuous-mode fabrication on polyimide substrates 7−133100
a-Si:H solar cells, improvements in disilane plasma deposition 7−133102
a-Si:H solar cells, prep. by Hg sensitised photo-CVD of disilane 7−133101
a-Si:H thin film growth, Monte Carlo simulations 7−92027
a-Si:H:F thin films, glow discharge deposition from fluorinated silanes, characterisation 7−132493

semiconductor growth continued
Si:In MBE growth, accelerated-ion beam doping using low energy In ion source 7−86033
Si:P CVD layers, lateral solid-phase epitaxial growth by ion implantation 7−106401
Si:P film, simultaneous deposition and doping by LPCVD, model of growth rate nonuniformity 7−132484
Si:P films, prep. by low press. CVD of PH_3 and Si_2H_6 7−100114
Si:P^+(Si^+) amorphous layer, ion assisted epitaxial regrowth, orientation and doping effects study 7−84052
Si/C sheet composite materials shaped cryst. growth technique 7−92851
Si/$CoSi_2$ epitaxial structures, MBE, Si overgrowth, permeable base transistor appl. 7−77818
Si/$Si_{1-x}Ge_x$ heterojunctions, MBE, elec. characts., cond. band discontinuity 7−77071
Si/SiGe strained layer superlattices, MBE, band offsets, vertical transport meas. 7−77070
SiC, cubic, CVD growth on Si(100), antiphase domains 7−113400
β-SiC, device quality, CVD, on Si-substrates 7−113427
β-SiC films, CVD on SI and quartz substrates 7−92884
β-SiC films, epitaxial growth by laser-induced sublimation *(Japanese)* 7−84574
β-SiC films, inclined epitaxy on Si, CVD 7−118290
SiC heteroepitaxial CVD cubic single cryst. growth and elec. characts. on Si substrates 7−106428
SiC, LPE growth, struct. and electrophysical props. 7−70105
β-SiC semiconductor films grown from $SiHCl_3$-C_3H_8-H_2 system, characts. 7−126004
a-SiC:H thin films, magnetron sputtering using methane *(Japanese)* 7−92887
a-SiC:H/a-Si:H p-i-n solar cells with graded-band-gap layer, photoCVD 7−114109
3C-SiC/6H-SiC MBE growth, elec. props. of p-n junction 7−77823
$(SiC)_{1-x}(AlN)_x$ epitaxial layers, deposition and struct. props. *(Russian)* 7−126006
$(SiC)_{1-x}(AlN)_x$ wide gap solid soln., VPE epitaxial growth 7−113417
a-SiGe:H films, CVD using microwave-excited plasma 7−100106
a-SiGe:H solar cells, photoCVD fabrication 7−126602
a-SiGe:H solar cells, prep. by Hg sensitised photo-CVD of disilane 7−133101
a-SiN_x:H film formation, NH_3 adsorption on Si surfaces 7−118273
a-Sn:H films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
SnO_2 films, CVD, evidence of CL removal by annealing in H_2 atmosphere 7−71055
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
SnO_2:Sb films, photo-CVD growth of transparent and conducting films 7−71064
SnS thin films, chemical deposition and optical props. 7−126037
SnTe thin films, synthesis by solid-state reactions 7−100057
Te, growth on PbTe, interphase struct., epitaxial relationships 7−76646
TiO_2 films, n-type semicond., sol-gel prep., photoelectrochemical props. 7−131710
Tl_2SnS_3 crystals, growth, photoelectric props. 7−85992
Zn chalcogenides, atomic layer epitaxy growth, dynamic RHEED studies 7−71030
Zn_3As_2, MBE growth on InP or GaAs 7−77822
$Zn_xCd_{1-x}Te$-InSb(InAs) heterostructures, transition layer form. during vacuum epitaxy *(Russian)* 7−124725
$Zn_{1-x}Fe_xSe$ dilute mag. semiconductor, MBE growth, characterisation 7−112117
$ZnGeAs_2$ MBE growth on GaAs 7−77822
$ZnIn_2Te_4$, thin film growth and struct. props. 7−138688
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
ZnO films, chemical deposition from aqueous solutions 7−113460
ZnO films, RF sputter deposition on GaAs substrates, piezoelec. props. 7−125981
ZnO films, transparent and conducting, activated reactive evaporation 7−119150
ZnO thin film, spray deposition, elec. and optical props. rel. to deposition variables 7−105321
ZnO:Tb films, spray pyrolysis and photoluminesc. props. 7−100054
Zn_3P_2 film, flash evap., growth morphology and opt. props. 7−100086
Zn_3P_2, large cryst. growth techniques 7−144250
Zn_3P_2 single crysts. and polycryst. ingots, growth and elec. props. 7−85975
ZnS bulk single crystal growth by temperature difference-constant temperature method *(Japanese)* 7−132426
ZnS epitaxial films, struct. and chelate organometallic cpd. prep. *(Russian)* 7−124754
ZnS, MBE growth on Si substrates 7−138668
ZnS, MBE on oriented (100) Si substrates, crystallographic quality, morphology 7−71020
ZnS thin films, ion beam sputtering 7−125982
ZnS_xSe_{1-x} epitaxial films, vapour-grown, thermodynamic anal. and luminescent props. 7−144303
ZnSe, atmospheric pressure MOVPE growth on GaAs substrates 7−100109
ZnSe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnSe epitaxial growth on GaP and GaAs substrates, growth rate limitations and surface morphologies 7−105316
ZnSe, epitaxial growth on Ge(100) by MBE 7−143255
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048
ZnSe epitaxial layers on GaAs substrates, misfit strain, Raman study 7−99835
ZnSe, film quality in MBE growth, beam pressure ratio effect, optical and elec. props. 7−76684
ZnSe films, low pressure MOVPE growth 7−92880
ZnSe films, MOVPE growth, diethylzinc diffusion-limited condition 7−144304
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685

semiconductor growth continued
ZnSe, growth by the Markov-Davydov method, hole conductivity, luminescence props. 7−77783
ZnSe, heteroepitaxy on GaAs 7−137741
ZnSe, high purity, low press. VPE growth, luminesc. props. 7−71066
ZnSe, low temperature plasma-assisted epitaxial growth 7−126013
ZnSe, MBE growth on GaAs (001), RHEED intensity oscillations 7−71031
ZnSe, MBE single cryst. growth, vapour species conc. obs. 7−137763
ZnSe, single crystal growth, high temp. annealing effect on elec. transport props. 7−138620
ZnSe single crysts., melt growth, resist., carrier mobility and conc. 7−144261
ZnSe:As(Au)(Tl) single crysts., solvent growth, morphology, photolum. 7−144254
ZnSe:Mg_1 growth, structural and optical props. 7−77789
ZnSe-ZnTe strained-layer superlattice, growth and charactn., photolum. and TEM obs. 7−76682
ZnSe−ZnS strained-layer superlattices, metallorganic MBE growth 7−132465
$ZnSnP_2$ chalcopyrite LPE on GaAs sphalerite substrate, orientation depend. and related defects 7−118326
$ZnSnP_2$, vacuum grown thin films, characterisation 7−112137
ZnTe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnTe-HgTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
$ZnTe_{1-x}Se_x$ growth in closed tube system, thermodynamic calc. *(Japanese)* 7−106399

semiconductor-insulator boundaries
see also semiconductor-insulator-semiconductor structures
bound state level subbands, quasicontinuous distrib. at accumulation or inversion layer 7−77097
classical magnetoactive semicond.-insulator superlattice, reson. and absorpt. based 7−106313
dielectric films, current cond. imaging and detection by emission microscopy 7−92322
interface phenomena rel. to device behaviour, book contrib. 7−85051
MOSFET, grating-gate, electron states in narrow channels, self-consistent calc. 7−92306
periodic semiconductor-insulator structure, subjected to transverse mag. field, resonances 7−84956
polysilicon-SiO_2 transition layers, Hubbard subband cond. 7−125136
reflected bulk acoustic waves, in piezoelectric/semiconductor structure, amplification and convolution 7−130444
semiconductor interfaces, conf., Manchester, England (April 1987) 7−108048
semiconductor-molecular film insulator system, charged defects effects on adsorbed mol. fluoresc. 7−77654
semiconductor-piezoelectric layered struct., acoustoelectronic interactions 7−105629
SOI, buried layer anal. from high dose O^+ implantation 7−98207
SOI, epitaxial growth, book chapter 7−102034
SOI, growth front movement in electron beam recrystallisation, direct obs. 7−86204
SOI films, depth profiles of optical props., ellipsometry study 7−99788
SOI films, electron beam recrystallised, perforation seed struct. 7−112113
SOI films by laser recrystn., periodic seeding filled by selective epitaxial growth 7−84561
SOI layers formed by laser recrystallisation *(Japanese)* 7−69758
SOI unseeded recrystallisation using moving line heat source, 1D numerical model 7−76660
SOI-structures, anal. and generation mechanisms of cryst. defects 7−111650
SOS, epitaxial growth, book chapter 7−102034
SOS films, As dopant redistrib. during thermal annealing, theoretical and expt. study 7−76661
SOS films, cryst. quality improvement by self-implantation *(Chinese)* 7−124724
SOS films, interface behaviour and electrical props., review 7−105739
SOS structs., crystalline quality, CMOS device performance 7−112510
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
a-Si:H-a-SiN_x:H superlattices, transfer doping, electron trapping, effect of a-SiN_x:H comp. 7−99212
Al_2O_3-InP, growth of anodic native oxide double layers 7−132830
CaF_2/Si structure, electrical props. and structural defects 7−85134
CaF_2/Si(111) epitaxial interface, elec. props., MIS characterisation 7−118591
$Ca_{0.43}Sr_{0.57}F_2$/GaAs (100), epitaxial heterostructures, flash evaporation, charactn. 7−84537
CdSe/ice interface, photoelec. phenomena 7−99210
GaAs/$(Ca,Sr)F_2$ heteroepitaxial layers, MBE grown, crystalline defects 7−112127
GaAs-Al_2O_3 film interface, structural study using high-energy ion scatt. 7−70096
GaAs-CaF_2 film interface, structural study using high-energy ion scatt. 7−70096
GaAs-oxide interface, electronic states charge DLTS response rel. to plasma oxide growth conditions 7−77030
GaAs-plasma oxide interface, electron states, small signal charge transient spectra study 7−125133
GaAs-sulphide interfaces, nearly ideal electronic props. 7−131787
Ge, native insulators, elec. charactn. *(French)* 7−125141
Ge-GeO_2 structures, charge transfer processes, ns and ps light pulses effects 7−92305
Ge-Si_3N_4, refractive index meas., immersion ellipsometry 7−73403
n-InAs, MOS structure, surface states, deep level transient spectroscopy 7−92302
InAs-SiO_2, transverse conduction mechanism, at low temps. 7−85122
InP-SiO_2, laser recrystallisation of InP films *(Chinese)* 7−131165
InP-SiO_2 MIS struct., slow insulator state conc. reduction using plasma-enhanced CVD 7−143625
InSb-oxide boundary, struct. study using high resolution electron microscopy 7−98719
InSb-Polikor periodic semiconductor-insulator structure, subjected to transverse mag. field, resonances, 37-75 GHz 7−84956
$MoSi_2$/Si layer system mech. stability and form. by rapid thermal annealing 7−105298

semiconductor-insulator boundaries continued
PtSi/n-Si:H Schottky barrier height variation by ion implantation 7−76180
Si epitaxial layers on buried Si_3N_4 produced by ion implantation, props. 7−85131
Si epitaxial structs. with buried oxide and nitride insulating layers *(Russian)* 7−76694
Si inversion layer, description based on electron gas eqn. of state generalisation 7−105645
Si, ion beam synthesis of thin buried layers of SiO_2 7−69724
Si, ion implantation, formation of buried oxide layers 7−69725
Si, native oxide films, phys., chem., and elec. props. 7−113811
Si p-n junction, Zn borosilicate glass passivated, reverse I-V charact., H annealing effects study 7−99179
Si SOI films, grain boundaries, EBIC studies 7−124284
Si SOI films, large area, seeded electron beam recrystn. with striped encapsulation 7−124768
Si SOI films, multilevel seeded lateral epitaxy, electron beam recrystn. 7−131471
Si SOI structure, laser recrystallisation, lateral seeding 7−124325
Si SOI wafers, ion implanted, nondestructive anal. 7−112100
Si surface barrier structs., carrier heating 7−112501
Si:As, Sb, dopant diffusion, effect of window edge stress 7−124600
Si:As SOS structures, ion implanted, ion beam recrystn. and laser beam annealing 7−118588
Si:As-insulator interface, implanted, impurity distrib. after annealing, RBS study 7−83991
Si:BF_2-SiO_2, ion implantation, F behaviour with rapid thermal annealing 7−137383
a-Si:H thin film surface cell structs., band bending, optical, elec. and photoelec. props. 7−131801
a-Si:H/a-SiN_x:H multilayer structures, steady-state photomodulation spectroscopy 7−118592
a-Si:H-Si_3N_4:H double barrier structs., resonant tunnelling through quantised states 7−131800
a-Si:H-Si_3N_4:H double-barrier structures, reson. tunnelling 7−118593
Si:N, implantation producing SOI struct., microstruct. study 7−83997
Si:Nd-SiO_2 interface, elec. props. 7−99209
Si:Nd-SiO_2 interface, negative elec. effects 7−125137
Si:O, SIMOX implantation, layer thicknesses 7−98208
Si/CaF_2 interface, bonding and struct., photoemission studies 7−105295
Si/Si_3N_4, local bonding and electronic structure, EELS studies 7−99153
Si/SiO_2, catalytic oxidation form. 7−93221
Si/SiO_2, local bonding and electronic structure, EELS studies 7−99153
Si/SiO_2 interface, high-resolution TEM obs. 7−76632
Si/SiO_2 interface, in MOS struct., EPR obs. 7−112949
Si/SiO_2 interface of SiO_2 precipitates in Si, defects, EPR obs. 7−112954
Si/SiO_2 interface trap state props., EPR studies, overview 7−112948
Si/VDF-TFE copolymer interface, corona injection, field coupling and induced inversion studies 7−105715
Si-AlN interface, AES, C-V charact. 7−70948
Si-Si_3N_4, point defects, influence on LOCOS process 7−131143
Si-Si_3N_4 SoI structures, ion beam synthesis and lamp annealing 7−112099
Si-SiO_2, defects in device oxides, soft X-ray damaged, EPR study 7−118860
Si-SiO_2, dioxide formation by rapid thermal oxidation of SiO 7−126329
Si-SiO_2, growth mechanisms, oxidation theories, book contrib. 7−106727
Si-SiO_2, hot carrier injection, book contrib. 7−105723
Si-SiO_2, interface states, charge pumping meas. method 7−118590
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, adlayers 7−105293
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, microvoids 7−105294
Si-SiO_2, interface trap production by low temp. thermal processing 7−143616
Si-SiO_2, MOS struct., photoinjection, potential barrier height 7−92303
Si-SiO_2, plasma-grown, elec. props of oxide 7−126334
Si-SiO_2, refractive index meas., immersion ellipsometry 7−73403
Si-SiO_2, Si selective epitaxial growth over thick SiO_2 islands 7−100103
Si-SiO_2, thermally grown, electron traps 7−112502
Si-SiO_2 amorphous multilayered structures, quantum dimensional effect 7−85126
Si-SiO_2 complete system, surface avalanche method meas. 7−112507
Si-SiO_2 fast interface trap density change high-field stress, SOI 7−143619
Si-SiO_2 interface, appl. of low energy charged particle beams for CI anal. 7−93411
Si-SiO_2 interface, carrier transport, book contrib. 7−85133
Si-SiO_2 interface, cycling of defects between trapped negative charge and interface states 7−99206
Si-SiO_2 interface, D_2 gas interactions, ion-beam study 7−124688
Si-SiO_2 interface, dark current minimization in radial semiconductor drift chambers 7−81871
Si-SiO_2 interface, high temp. oxide decomp. 7−70090
Si-SiO_2 interface, irrad. prod. surface states, annealing 7−104856
Si-SiO_2 interface, lattice relax., electron self-trapping and transfer in SiO_2 7−118501
Si-SiO_2 interface, mechanical stresses 7−76585
Si-SiO_2 interface and Si, oxidation, HRTEM and ellipsometry studies 7−100459
Si-SiO_2 interface charactn., book contrib. 7−85132
Si-SiO_2 interface state density and SiO_2 film charge due to Pt diffusion 7−112495
Si-SiO_2 interfacial struct. and oxide growth mechanism, TEM modelling 7−124733
Si-SiO_2 MIS, gate currents and space charge under electron beam irrad. 7−70420
Si-SiO_2 SOI layers, formation by ion implantation, nondestructive characterisation 7−124742
Si-SiO_2 structs., local electrophys. props. of elec. active defects 7−143627
Si-SiO_2 structures, acoustoelectric conversion props., charge injection effect 7−105628
Si-SiO_2 structures, H^+ implantation, interface defects 7−125139
Si-SiO_2 structures, passivation and related instabilities, book 7−102026
Si-SiO_2 structures, pot. barrier meas., contactless method 7−143628
Si-SiO_2 structures, UV effects of Ar plasma 7−105717
Si-SiO_2 system, interface states 7−112509
Si-SiO_2 system, ozone cleaning 7−113798
Si-SiO_2:As, As depth profiling at interface, SIMS study 7−84533
Si-SiO_w multilayer planar structures formed by ion synthesis 7−99211

semiconductor-insulator boundaries continued
a-Si-SiO_x barriers, tunnelling via localised states, microscopic study 7−70423
Si-SiO_x photodeposited interface, elec. characterization 7−85125
Si-SrO interfaces, MBE heteroepitaxial growth 7−118299
SiN-Si-SiO_2-Si:H system, H profiling using $^1H(^{19}F, \alpha\gamma)$ reaction *(Chinese)* 7−111633
a-$SiN_{1.4}$:H/a-Si:H band offset and electronic struct., AES, XPS and IPES studies 7−92300
SiO_2, electron trap centre generation due to hole trapping, Fowler-Nordheim tunnelling stress 7−131786
SiO_2 films, on Si, paramag. point defects, generation by electron injection and ionising radiation 7−111555
SiO_2, implantation effect on transport props. of mobile Na ions, rel. to semicond. technology 7−125140
SiO_2 layers on Si, mobile ions, book contrib. 7−105140
SiO_2/Si (111) interface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
SiO_2/Si interface, anomalous bonding configurations, UV photoemission spectra study 7−118283
SiO_2/Si interface, chemical and electronic struct. 7−70099
SiO_2/Si interface, defect microchemistry, oxide decomposition reaction 7−119525
SiO_2-Si, thermally grown films, ionic current study 7−77103
SiO_2-Si (100), defect-related breakdown, role of O 7−99208
SiO_2-Si system, contact pot. and surface photovoltage kinetics, Kelvin method 7−99207
SiO_2-Si:Fe interface, catastrophic oxide breakdown, impurity behaviour effects 7−143624
SiO_2/Si interface form. from adsorbed O_2 on Si surface, photoemission spectra studies 7−113344
SiO_xN, buried layers; formation by ion implantation in Si 7−69726
SiO_xN_y-Si, rapid thermal annealing prep., elec. characts. 7−131792
Si−SiO_2 interface, struct., EPR obs. 7−112111
Si−SiO_2 structures, interfacial P_{b0} defects, low temp. EPR obs. 7−112950
SnO_2-SiO amorphous thin films, AC elec. props. rel. to annealing 7−143620
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7−70706
$TiSi_2$:As/Si silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
ZnO-SiO_2-Si multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
ZnS-Al_2O_3 multilayer structures, profiling with monoenergetic positrons 7−85891

semiconductor-insulator-semiconductor structures
devices, past and current research, review 7−138069
finite layered structures, interface excitations, appl. mag. field effect 7−99220
Landauer conductance formula generalization in conductor-insulator-conductor structures 7−70427
MISIS structure, elec. characts. and C-V depend. *(Chinese)* 7−77098
polysilicon-SiN_xO_y-Si_3N_4-SiO_2-Si structs., cond. props. of oxide layers 7−105728
GaAs-$(Ca,Sr)F_2$-GaAs SIS structures, MBE grown, high resolution TEM study 7−118280
InAs/$Sr_{1-x}Ba_xF_2$/InAs structures, MBE growth 7−100088
In_2O_3-SiO_2-Si solar cells, aging effects investig. using Auger electron spectroscopy 7−100731
Si films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
Si-Si_3N_4-Si buried layer structures, ion beam synthesis 7−76164
Si-Si_3N_4-Si buried layer structures with rectangular profiles, ion beam synthesized 7−76635
Si-SiN_x-Si structure formed by ion implantation, structural characterisation 7−76634
Si-SiO_2-Cu_2S, heterostructure, switching mechanism 7−70429
Si-SiO_2-Si buried layer structures, ion beam synthesis 7−76164
Si-SiO_2-Si buried layer structure formed by O ion implantation, interface evolution 7−76636
Si-SiO_2-Si buried layer structure, formation by ion implantation and annealing 7−76637
Si-SiO_2-Si structs., defect spectrum responsible for breakdown 7−143626

semiconductor integrated circuits *see monolithic integrated circuits*

semiconductor junction lasers
1.55 μm wavelength tunable FBH-DBR laser 7−68678
1.5 μm DFB ridge waveguide lasers with first order gratings fabricated by electron lithography 7−97005
1.5 μm near TW laser amplifier, gain, polarisation sensitivity and power 7−68637
1/f-type FM noise, impact on coherent optical communications 7−141855
2D device simulator 7−103819
accelerated life testing considerations 7−141888
AM laser system for distance and displacement meas. 7−75007
AM sideband injection locking of slave semicond. laser, characts. for WDM 7−82554
amplifier, bistable optical switching, injection-current-controlled operation 7−123040
amplifier for multiplexed coherent systems 7−68725
amplifier for terahertz AM signals 7−82867
array diode, stable quasi 0° phase mode operation, nearly aligned phase shifter 7−110426
array geometries, lateral phase locking geometries 7−117205
array with enhanced mode stability, anal. 7−123012
arrays, coupling with photorefractive passive phase conjugate mirrors 7−110414
arrays, gain-guided, free-running modes 7−123014
arrays, high power LD, pump sources for freq. doubled Nd:YAG lasers 7−74978
arrays, supermode discrimination and radiation angles depend. on channel widths and spacings 7−68629
asymmetric double quantum well laser diode, lasing wavelength 7−123027
asymmetric quarter-wave shifted DFB laser with high differential efficiency 7−97006
automatic laser diode test system *(Japanese)* 7−104054
band mixing effects on quantum well gain 7−130107
BH DFB lasers, 1.5 μm, low-pressure MOVPE growth and low-threshold operation 7−68673
BH distributed feedback laser emitting at 1.3 μm for high-bit-rate systems 7−75166
BH lasers, lateral far-field interference patterns 7−141912
BH lasers, long-wavelength, leakage currents meas. 7−68696
BH travelling-wave optical amplifiers, 1.5 μm, design and realisation 7−68676
BH-DFB lasers, 1.55 μm, LP-MOCVD growth 7−68695
bimodal switching in laser diodes 7−136303
bistable, stability analysis 7−122969
bistable lasers, cascadable optical triggering scheme using photoconductors 7−90638
bistable lasers optical feedback effect 7−123074
buried transverse-junction stripe laser for optoelectronic-integrated circuits 7−103837
buried-stripe self-aligned lasers, coupled-guide waveguiding 7−74955
C^3 laser, emission spectrum tuning *(German)* 7−130115
C^3 lasers, multilongitudinal-mode model, results, calcs. 7−123029
carrier-induced lasing wavelength shift for quantum well laser diodes 7−130114
channelled-substrate planar laser diodes, active layer intrusions, optical microscopy and cathodolum. studies 7−122978
coherent optical communication appls. 7−90671
coherent OTDR instrument development for fault location in fibres 7−97154
common-cavity two-section, bistability, computer simulation 7−123075
composite resonator-semiconductor laser, emission line anomalous contraction 7−110409
compound cavity, asymmetrical coupling, locking and chaos 7−136306
conference, Albuquerque, NM, USA (Feb. 1987) 7−102021
conference, lasers and electro-optics, Baltimore, MD, USA (April-May 1987) 7−120705
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
constant current driven, obs. of amplitude squeezing 7−74924
continuously-tunable single-frequency, design 7−130159
coupled cavity lasers, numerical anal. *(French)* 7−130117
coupling of laser diode to multimode using plano-convex GRIN lens 7−130335
coupling stabilisation to optical fibre *(Japanese)* 7−68884
cross-correlation coefficients between mode fluctuations, anal. 7−122973
CSP phased laser arrays, array mode characts. study 7−82562
DBR laser, frequency tuning, phase and Bragg wavelength control 7−82606
DBR surface emitting lasers with semicond. multilayer, anal. and appl. 7−90610
development history, review 7−120755
DFB, intrinsic bandwidth meas. utilising satellite mode induced by far end refl. 7−117196
DFB diode laser, multielectrode type with saturable absorber, tunable optical-wavelength conversion 7−141883
DFB diode lasers at 1.5 μm, low threshold operation 7−122980
DFB laser, low threshold, high bit-rate appl. 7−68698
DFB laser, second-order dynamic single-mode, yield anal. 7−130099
DFB laser evaluation at 1.53 μm for high dispersion multi-Gbit transmission system 7−68899
DFB laser first order gratings, fabrication by HV electron beam lithography 7−97004
DFB laser sources for coherent optical communication systems 7−68901
DFB lasers, λ/4 phase-shifted corrugations fabrication using positive and negative photoresists 7−82650
DFB lasers, λ/4-shifted, with low refl. facets, coupling coeff. eval. by stopband method 7−82558
DFB lasers, gain nonlinearities 7−130100
DFB lasers, linewidth enhancement due to longit. field depend. in laser cavity 7−122950
DFB lasers, MOVPE growth, 1.55 μm differential quantum efficiency 7−136349
DFB lasers, quarter-wave-shifted type with epitaxial layer taper, props. study 7−90611
DFB lasers, spectral linewidth depend. on facet reflectivity, theoretical and expt. study 7−68711
DFB lasers, stripe-geometry, below threshold characts., beam-propagation model 7−117248
DFB lasers and phase diversity reception for coherent transmission system 7−68902
DH lasers for optical communication 7−82618
DH ridge-waveguide lasers, single mode, threshold current optimisation 7−68642
diameter meas. using lasers and CCDs 7−140671
diffraction-coupled laser arrays, supermode selection 7−96998
diode array performance prediction method 7−117231
diode arrays, phase and spatial coherence meas., comparison to supermode theory 7−136379
diode chips, thermal impedance meas., elec. method 7−123002
diode laser, appl. in an ESPI system 7−67384
diode laser, single mode, for optical scanning and recording 7−82619
diode laser, specifications and characteristics 7−74965
diode laser array, injection locking and single-mode fibre coupling 7−103846
diode laser array, side lobe suppression 7−90664
diode laser array for laser printers 7−82674
diode laser array in external cavity, narrow single-lobed beam, high power, high efficiency 7−103842
diode laser arrays, coupling with photorefractive passive phase conjugate mirrors 7−110414
diode laser arrays, steady-state self-consistent anal. 7−90605
diode laser high resolution fiberoptical infrared spectrometer 7−121244
diode laser pumping of solid-state lasers 7−68690
diode lasers, tunable, stabilisation for spectroscopy of low density gases 7−136392
diode lasers for DRAW optical disc systems 7−82676
diode lasers for printing and information processing 7−82675
diode modules, SPICE simulation 7−82550
diodes, appl. *(French)* 7−82609
directional laser Doppler velocimetry using self-mixing effect of semiconductor laser diode 7−103866
Doppler anemometry for velocity meas., semiconductor devices appl. *(German)* 7−140675
double channel planar BH at 1.3 μm, DC electrical characts. 7−130160
double channel planar buried heterostructure laser diode, 1.3 μm 7−141895
double heterojunction laser material selection 7−90612
dual laser diode array, coherent CW emission, external cavity 7−74987

semiconductor junction lasers continued
dynamic behaviour Auger recombination, simulation 7−110352
dynamic props., review *(Japanese)* 7−74930
electro-optical studies of semiconductor cpds. for electroluminescent and laser devices 7−113131
electron beam pumped, influence of excitation inhomogeneity on output characts. 7−97012
epitaxial structures, for light generation, detection and modulation 7−132495
evanescently coupled laser arrays, stability of highest order supermode 7−82555
external Bragg reflector, chirp and linewidth reduction at 1.5 μm 7−130094
Fabry-Perot semicond. laser amplifier, high-speed all-optical gate switching expt. 7−129991
Fabry-Perot semiconductor-laser amplifier appl. to bistable switching 7−117257
Fabry-Perot-type semiconductor lasers, modulation capabilities 7−82656
facet coating effect on far fields 7−97002
fiber-optic communications, 1.3 μm lasers and LEDs 7−82616
fibre optic appls., reliability considerations, conf., Cambridge, MA, USA (Sept. 1986) 7−140366
fibre optic ring resonator appl. to laser spectral linewidth meas. 7−75137
fibre Raman amplifier pumped by high-power semicond. lasers, 1.5 μm, amplification of WDM signals 7−68674
fibres single-mode, stimulated Brillouin scattering with laser diode pumping 7−123101
FM noise and spectral linewidth 7−110359
four-wave mixing and phase configuration 7−75072
gain distrib. and photon density profiles, numerical anal. 7−122985
gain guiding in semiconductor laser array 7−97030
gain meas., accuracy of Fabry-Perot method 7−97001
gain-switched pulse-compressed DFB laser diodes for optical waveform sampling 7−68729
GaInAsP 1.5 μm broadband travelling-wave laser amplifier with high-saturation output power 7−68632
grating rhomb diode laser power combiner 7−130225
grating-surface-emitting diode lasers, phase-locked operation of coupled pairs 7−74918
HF laser package for microwave optical communications 7−90832
high brightness CW diode laser arrays, performance characts. 7−141856
high-power, astigmatism 7−68730
high-power, external-cavity, with single-mode fibre output port 7−97035
high-power aging tests of 1.3 and 1.5 μm VIPS lasers 7−136380
high-power CW operation of 780 nm T^3 laser diodes 7−103813
high-power etched-facet lasers 7−117198
high-power lasers, 1.5 μm, design and performance *(Japanese)* 7−110399
high-power semiconductor diode lasers, fabrication and performance characts., status 7−110404
history, note on photon-disequilibrium-amplification scheme, 1953 7−120756
holograms, absorbing, mode-stabilized laser diodes prod., satellite communications link use 7−141816
III-V semiconductor heteroepitaxy on Si substrates, laser fabrication *(Japanese)* 7−70143
inhomogeneously-pumped, bistability, influence of carrier leakage 7−90613
injection heterolasers, radiation intensity, self supporting pulsation freq. 7−141890
injection heterolasers and diffuse planar optical waveguides, coupling methods 7−68838
injection heterostructure laser, Q-switched, picosecond pulses 7−103850
injection laser, external resonator equipped, frequency capture of semiconductor laser 7−82659
injection laser, frequency-modulated, with interferometer, high-frequency amplitude beat signal generation 7−82655
injection laser, single-frequency, suppression and spectral splitting of amplitude noise, mode beating 7−122974
injection laser, single-frequency with external dispersive resonator, intensity fluctuations 7−97038
injection laser development, historical review 7−122954
injection laser in short external cavity, optical signal detection and rate eqn. anal. 7−110361
injection lasers, absorptive and dispersive bistability, review 7−123069
injection lasers, appl. of thermoelectric coolers to improve power and efficiency *(Russian)* 7−90644
injection lasers, chirping and intersymbol interference reduction by pulse shaping 7−68724
injection lasers, development history, review 7−122952
injection lasers, emission wavelength stabilisation 7−130116
injection lasers, multimode, intensity and frequency fluctuations 7−90614
injection lasers for rise-time meas. of photodiodes 7−102526
injection-locked, locking bandwidth meas. method 7−110431
instabilities by optical feedback, modulation, and mode-hopping 7−136307
instabilities in twin-stripe laser diodes 7−136305
integrated optical devices, developments *(Italian)* 7−90835
interferometric fibre optic sensors, freq. modulated *(Portuguese)* 7−130389
intracavity nearly-degenerate four-wave mixing, instabilities 7−136374
laser, high power inverted channel substrate planar grown by MOCVD 7−136308
laser docking system radar flight experiment 7−75025
laser interferometer for measuring displacement and distance 7−102503
lateral carrier diffusion effect in parametric modulation of semiconductor lasers 7−117203
lateral phase uniformity under sine current modulation *(Chinese)* 7−74999
laterally coupled-cavity, threshold behaviour 7−82560
lens coupling systems for laser modules and single mode fibres *(German)* 7−136590
lightwave device technology for communications 7−110559
linear travelling wave semiconductor laser amplifiers for optical communication systems 7−130151
linewidth analyser *(Japanese)* 7−123045
linewidth reduction by coupled-phase-shift DFB lasers 7−141858
local beam deflector integrated in a diode laser cavity 7−82864
logic functions using nearly degenerate four-wave mixing in laser diodes 7−90723
long-wavelength high-reliability lasers, characts. 7−97015
low threshold current laser, potential controlled, theoretical study and struct. 7−97013
semiconductor junction lasers continued
low-power, design 7−123030
micromachining with focused ion beams 7−68905
microwave, 1.3 μm DFB and multimode lasers under deep microwave modulation, linearity with optical feedback 7−136309
modal field analysis of injection-laser devices 7−130321
MQW laser diode array development progress 7−68703
multi-quantum-well wire lasers, threshold current densities 7−82564
multilongitudinal mode, electro-optical modulation at 850 nm with coherence multiplexing 7−130198
multiple-emitter diode laser array, in-phase, central-lobe output power depend. on fill factor 7−110353
narrow-linewidth laser with prism grating/GRIN rod lens config. as external cavity 7−90657
nonlinear diode laser amplifiers in optical processors and interconnects 7−123071
nonuniform phased arrays of diode lasers for fundamental supermode operation 7−141854
optical bistability on reflection 7−123070
optical bistable semiconductor laser, optical fibre directional coupled *(Chinese)* 7−103812
optical fibre, sources and detectors., conf., Cannes, France (Nov. 1985) 7−66822
optical fibre communications appls. 7−130163
optical harmonics at microwave freqs., interferometric generation using freq. modulated semiconductor laser 7−130250
optical pickup, autofocusing effect due to wavelength change of diode lasers 7−117250
optical time domain reflectometry in 1.5 μm range *(Japanese)* 7−140731
optically powered, transducer with optical fibre data and power link *(Japanese)* 7−128569
oscillation and chaotic behaviour obs., under DC modulation 7−90616
output linewidth for laser with Bragg mirror 7−82566
paired nanosecond current pulses generator for laser diodes 7−130146
phase locked diode laser arrays, direct supermode anal. 7−130096
phase locking in single-lobe Y-coupled laser diode lasers, quasi-instantaneous locking 7−97003
phase-locked arrays, mode characts. at and above threshold 7−123039
phase-locked arrays of semiconductor injection lasers, review 7−110406
phased array with integrated phase shifter 7−97039
phased locked semiconductor laser arrays, design 7−97033
photon statistical props. of visible laser diodes 7−102544
picosecond optical sampling by semiconductor lasers 7−103853
polarisation and frequency control with external cavity structure 7−97040
polarisation bistability, rate eqn. anal. 7−110350
polarisation-maintaining single-mode fibre/semicond. laser optical coupling technique 7−68849
position-coded residue look-up table using laser diodes 7−74856
positive feedback circuit composed of twin-stripe laser diode, p-i-n photodiode and transistor, optical tristability 7−68739
pulse power supplies for injection lasers 7−130177
pump fluctuation and amplitude squeezing, high-impedance suppression 7−103816
pump sources for miniature Nd:YAG lasers 7−68701
quantum effect devices, review *(Japanese)* 7−118581
quantum well laser, physics of operation 7−136310
quantum well laser diodes 7−68644
quasistatic carrier induced frequency chirp in semiconductor laser diodes 7−97042
rate equation models and wavelength modulation 7−130197
reliability 7−141887
respiration diagnostics, tunable diode laser based spectroscopic system 7−107291
RF radiation spectrum of semiconductor laser, optical communication line wave reflection 7−123016
ridge waveguide DH lasers, self-consistent anal. 7−74922
ridge waveguide laser array, in-phase coupling using distributed saturable absorpt. in subordinate laser cavities 7−97041
role of Petermann's *K*-factor in semiconductor laser oscillators−a further note 7−82556
self-calibrating low power laser rangefinder for space applications 7−75026
semiconductor, DFB lasers, modulation-induced wavelength shift 7−75006
semiconductor DFB laser, multielectrode, FM 7−97010
semiconductor laser arrays with etalon feedback, single longitudinal mode operation 7−123028
semiconductor laser low phase noise source for sensors 7−75157
semiconductor laser-amplifier repeater, bidirection and two-channel transmission system meas. 7−136600
semiconductor lasers, directly-modulated, second harmonic distortions due to spatial filtering 7−103851
short coupled-cavity, single-mode characts. 7−130113
short external cavity, stable single-longitudinal-mode operation 7−97044
signal regenerator using bistable laser amplifier, error-rate meas 7−123072
single element fundamental mode, recent developments 7−110393
single transverse mode condition in long wavelength SCH semiconductor laser diodes 7−103820
single-frequency external-cavity semiconductor laser, polarisation switching 7−117247
single-frequency laser, coherence determ. with fibre Michelson interferometer 7−142014
single-longit. mode semicond. laser, external cavity config. long-term freq stabilisation 7−68709
single-mode fibre and laser far field power meas., two dimens. high ang resolution and dynamic range 7−82833
single-mode laser diode, coupling to optical waveguide via gap, theoretical study 7−90779
single-mode semiconductor lasers, external cavity operated 7−130112
single-quantum-well lasers, narrow stripe graded barrier, threshold current considerations 7−130110
sources, high reliability packaging 7−142041
space communication, single quantum well and double heterostructure lasers 7−130179
spectral linewidth of semiconductor lasers meas., for use with coherent communications systems 7−123052
stable pulsations of semiconductor lasers by optoelectronic feedback with avalanche photodiodes 7−82652
static and dynamic bifurcations in semiconductor lasers for device appls. review 7−123078

semiconductor junction lasers continued
stripe contact, index guided lasers *(Dutch)* 7−90615
stripe geometry semicond. laser, theory of elec. and optical waveguiding processes *(Chinese)* 7−122949
superluminescent diodes, 0.83 μm, Fabry-Perot spectral modulation 7−141894
surface emitting laser diode with bent waveguide 7−110376
surface-emitting-type optical threshold device, operation anal. *(Japanese)* 7−110358
synchronous mode locking using picosecond optoelectronic switches 7−75003
thermoelectrically tunable DBR laser, monolithically integrated 7−141861
thin quantum well, cavity length dependence of threshold behavior 7−130111
three cavity configuration, at 1.3 μm characts. 7−97036
time-domain reflectometry, 1.5 μm range, using laser diode and cooled InGaAs-InP APD 7−108631
transient process in an injection laser with a non-quasi-Fermi electron distribution function 7−122981
travelling wave laser amplifier for 100 Mbit/s PSK heterodyne expt. 7−68900
travelling-wave optical amplifier at 1.3 μm 7−141859
tunable diode laser technology development, overview 7−68704
tunable-diode-laser spectroscopy, advances 7−108678
TW semiconductor laser amplifier, picosecond pulse response 7−136298
twin-stripe lasers, current-light characteristics negative slope 7−97009
two-colour gain saturation in optical amplifier 7−82722
unstable resonator, eigenvalues 7−74994
unstable resonator, high-efficiency power output 7−117236
VSIS lasers coupled with external cavity, wavelength stabilisation *(Japanese)* 7−130181
Y coupled laser diode arrays with single-lobe far-field radiation pattern 7−68677
Y-junction semiconductor laser array, anal. 7−123010
Y-junction semiconductor laser arrays fabricated by MOCVD 7−123011
AlGaAs - GaAs:Si, MOCVD produced heterostructure lasers, power and temp. performance 7−82567
AlGaAs BH lasers, single-step MOCVD technology 7−90650
AlGaAs CSP diode lasers, space communications 7−130178
AlGaAs CW single-frequency laser, coherence determ. with fibre Michelson interferometer 7−142014
AlGaAs DBR laser, index-guided surface emitting type, effective index and dispersion meas. 7−68638
AlGaAs DH laser, optical SHG 7−136302
AlGaAs, dichroic combination of beams for space communications 7−130180
AlGaAs diode laser, 450 Hz relative freq. stability 7−136376
AlGaAs grating-surface-emitting diode laser array, phase locked operation 7−96995
AlGaAs laser, narrow-beam with thin tapered-thickness active layer 7−122957
AlGaAs laser appl. to chirped freq. interferometric distance sensor 7−130388
AlGaAs laser diode arrays for pumping Nd:YAG 7−68702
AlGaAs laser for tunable superselective radiation detector 7−108663
AlGaAs lasers, channelled-substrate-planar, ten-element array 7−90639
AlGaAs lasers, conf., Albuquerque, NM, USA (Feb. 1987) 7−102021
AlGaAs lasers, frequency offset locking as negative feedback technique 7−82559
AlGaAs lasers, high-power broad-area, injection behaviour 7−122982
AlGaAs lasers, index guided with mode filter, local normal mode analysis 7−122960
AlGaAs lasers with optical feedback, coherence props. and LF noise 7−74928
AlGaAs monolithic laser diode arrays, ultra-high power, with high power conversion efficiency 7−110381
AlGaAs, surface emitting DFB lasers 7−141879
AlGaAs transverse junction BH diode laser 7−82605
AlGaAs, ultralow threshold graded-index separate confinement single quantum well lasers with high reflectivity coatings 7−110351
AlGaAs window lasers, high power operation 7−82617
AlGaAs:Zn, Te-GaAs:Zn, Te, superlattice surfaces, simultaneous Zn, Te diffusion, appl. for quantum well lasers 7−105142
AlGaAs:Zn multiple-stripe-geometry lasers, current spreading and carrier diffusion 7−96997
AlGaAs/GaAs distributed feedback laser with first order grating 7−130149
AlGaAs/GaAs double heterostructures, low threshold pulsed and continuous laser oscillation 7−68630
AlGaAs/GaAs double heterostruct. laser diode for fibre optic transmission system 7−103817
AlGaAs/GaAs MQW laser diodes, MOCVD growth on Si substrates 7−68685
AlGaAs/GaAs MQW laser diode, MOCVD growth on Si substrates 7−130166
AlGaAs/GaAs multiquantum well DBR laser, surface-emitting, CW operation 7−103835
AlGaAs/GaAs ridge waveguide DFB laser, oscill. freq. stabilisation 7−68634
AlGaAs/GaAs SQW laser, low-drive-current high-efficiency 7−136297
AlGaAs/GaAs stripe laser diodes fabrication on Si substrates by MOCVD, lasing characts. 7−122975
AlGaAs/GaAs TJS lasers, fabrication on Si substrate by MOCVD, superlattice layers 7−122976
AlGaAs-GaAs, coupled stripe laser diodes, low threshold gain-guided, laser-assisted processing 7−136347
AlGaAs-GaAs, multi quantum well laser, index guided, Si induced disordering 7−141893
AlGaAs-GaAs DFB lasers, multiple quantum well struct., reduction of spectral linewidth 7−90603
AlGaAs-GaAs DFB lasers, λ/4 shifted, double window structs., MOCVD fabrication and characts. 7−97028
AlGaAs-GaAs DQW-SCH metal-clad ridge waveguide lasers 7−82604
AlGaAs-GaAs double heterostruct. lasers, high power CW single-lobe operation 7−90604
AlGaAs-GaAs GRIN-SCH SQW microcleaved facet laser as one-chip optoelectronic integrated transmitter 7−68679
AlGaAs-GaAs graded index separate confining heterostructure quantum well lasers, performance optimisation 7−117197
AlGaAs-GaAs high power single quantum well lasers, chemically assisted ion beam etched mirrors 7−117228
semiconductor junction lasers continued
AlGaAs-GaAs laser, BH, formation by MOCVD 7−122959
AlGaAs-GaAs laser, SCH DFB, at 880 nm, grown by MOCVD 7−130098
AlGaAs-GaAs laser diode, inner stripe type, single-step MBE fabrication 7−68675
AlGaAs-GaAs laser diodes, index-guided 6950 to 7150 Å, optimisation and charactn. 7−122955
AlGaAs-GaAs laser diode fabricated by vapour phase etching and MOVPE 7−122958
AlGaAs-GaAs laser material, valence-band discontinuity determ. 7−124858
AlGaAs-GaAs laser waveguide under current injection, carrier-induced phase shift and absorpt. 7−82549
AlGaAs-GaAs lasers, single element fundamental mode, recent developments 7−110393
AlGaAs-GaAs MQW lasers on Si substrates, MBE grown, low threshold operation 7−122948
AlGaAs-GaAs ridge waveguide DFB laser, MBE fabricated, low-threshold current 7−68681
AlGaAs-GaAs surface emitting laser, epitaxial Fabry-Perot resonator with AlGaAs-AlAs quarter-wave reflectors 7−90609
AlGaAs-GaAs:Si lasers, low threshold buried heterostruct. quantum well, fabrication by laser assisted disordering 7−117227
$Al_{0.32}Ga_{0.68}As$ femtosecond lasers and ultrafast processes 7−82569
$Al_{0.85}Ga_{0.15}As$ low-threshold V-channeled substrate inner stripe lasers 7−110355
$Al_xGa_{1-x}As$-GaAs, coupled two-stripe quantum-well heterostructure lasers, supermodes 7−117201
$Al_xGa_{1-x}As$-GaAs, graded-index, separate confinement heterostruct. single quantum well lasers, threshold current, temp. depend. 7−110407
$Al_xGa_{1-x}As$-GaAs coupled stripe quantum well lasers, defined by vacancy enhanced impurity induced layer disordering from $(Si_2)_y(GaAs)_{1-y}$ barriers 7−110347
$Al_xGa_{1-x}As$-GaAs quantum well heterostructure, continuous photopumped laser operation 7−110348
$Al_xGa_{1-x}As$-GaAs quantum well heterostructs. grown on Si, stable room temp. CW laser operation 7−136295
$Al_xGa_{1-x}As$-GaAs:Si, coupled stripe quantum well lasers, Si impurity-induced layer disordering 7−74952
$Al_xGa_{1-x}As$-GaAs:Si, index guided quantum well lasers, vacancy-enhanced impurity induced layer disordering 7−76186
AlGaInP laser diodes, DH, 664 to 690 nm, active layer growth by MOVPE 7−122956
AlGaInP visible light laser, 683 nm, MOVPE grown, transverse-mode stabilised, high-power operation 7−130155
ArH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
BH_3, gas-phase infrared spectrum 7−135936
GaAlAs buried heterostruct. laser, high speed digital modulation 7−130193
GaAlAs diode laser, wavelength stabilisation in high-speed modulation using Rb-D_2 absorpt. line 7−110415
GaAlAs diode lasers, wide freq. modulation operation using composite-optical cavity *(Japanese)* 7−110420
GaAlAs external cavity semiconductor lasers, polarisation bistability 7−130184
GaAlAs laser appl. to IR Raman spectroscopy 7−108679
GaAlAs laser array, gain-guided, single-mode oscillation 7−110392
GaAlAs laser coupled to external cavity of variable length, bistable behavior 7−123073
GaAlAs laser optical dipole moments and gain spectra, phase dampings 7−82572
GaAlAs laser structure, high power with current-blocked regions near cavity facets 7−123013
GaAlAs semiconductor diode laser, phase conjugate master oscillator-power amplifier, $BaTiO_3$ mirror 7−75070
GaAlAs single-mode LD, large signal nonlinear distortion prediction under microwave intensity modulation 7−82563
GaAlAs/GaAs lateral current injection MQW laser, impurity-induced disordering 7−68640
GaAlAs/GaAs surface emitting laser with TiO_2/SiO_2 multilayer Bragg reflector 7−68684
GaAlAs/GaAs surface-emitting laser, directly modulated, single longitudinal mode operation 7−117202
GaAlAs/GaAs surface emitting laser, MOCVD growth 7−123018
GaAlAs-GaAs, DFBL, modulated stripe width struct., complete single longitudinal mode oscillation 7−130194
GaAlAs-GaAs CW injection lasers, service life tests 7−141885
GaAlAs-GaAs GRIN ridge waveguide laser developed by ion beam etching 7−74957
GaAlAs-GaAs laser material, behaviour as Bragg case X-ray interferometer, lattice mismatch determ. 7−92009
GaAlAs-GaAs laser with dielectric-film waveguide DBR 7−130101
GaAlAs-GaAs lasers, surface emitting circular buried heterostructure, fabrication and characters. 7−130102
GaAlAs-GaAs photoexcited quantum well laser, 140 ps optical pulse generation 7−68721
GaAlAs-GaAs stripe laser arrays, phase locking of stimulated emission using active directional couplers 7−141863
GaAlAsSb, alloy for 2 to 4 μm laser diodes 7−97014
GaAs femtosecond lasers and ultrafast processes 7−82569
GaAs, focused ion beam etching of deep grooves and laser-mirror facets 7−110379
GaAs heterojunction laser diode, potentiometry and scanning tunnelling microscopy studies 7−99169
GaAs injection laser invention at IBM historical review 7−122953
GaAs, interfaces, STM and potentiometry studies 7−76649
GaAs laser, grown by metalorganic chemical vapour on Si, degradation of laser props. 7−130093
GaAs laser actively mode-locked, bandwidth-limited picosecond pulse generation 7−103848
GaAs laser diodes, double contacted BCRW type, self-pulsating operation with high repetition rate 7−130195
GaAs laser rangefinders for industrial appls. 7−75023
GaAs layers and devices, metalorganic CVD growth on Si using strained superlattices 7−86057
GaAs monolithic receiver and laser driver for GHz transmission rates 7−90830
GaAs surface-emitting laser, pulsed operation using TiO_2/SiO_2 dielec. multilayer reflector 7−110380

semiconductor junction lasers continued
GaAs/AlGaAs GRIN SCH quantum well lasers, MBE growth on misoriented (111)B substrates 7−97011
GaAs/AlGaAs GRIN-SCH lasers, fabrication with ridge waveguides 7−123019
GaAs/AlGaAs laser diodes on monolithic GaAs/Si substrates, prep. and characterisation 7−82570
GaAs/AlGaAs multiquantum well lasers, MBE pair groove substrate, characts. 7−141862
GaAs/GaAlAs buried laser, p-dopant implanted stripe, LPE regrowth 7−136348
p-GaAs/GaAlAs multiple quantum well laser, ultrahigh relaxation oscillation freq. 7−130091
GaAs-$Al_xGa_{1-x}As$ injection laser, lightly doped, threshold characts. 7−103814
GaAs-AlAs multimode double-heterostructure lasers, growth condition influence on props. 7−68643
GaAs-AlGaAs, actively mode-locked diode lasers, pulse shortening by wavelength tuning 7−90661
GaAs-AlGaAs, chlorine ion-beam assisted etching, for deflecting mirrors, laser cavity mirrors 7−144644
GaAs-AlGaAs, DFBL, CW surface-emitting grating-coupled, narrow beam divergence 7−110606
GaAs-AlGaAs, distributed feedback transverse junction stripe laser, 867 nm, MBE grown 7−117226
GaAs-AlGaAs, double heterostructure diode laser, on GaAs (110) substrate 7−141892
GaAs-AlGaAs, single quantum well lasers, different confinement structs., carrier trapping 7−125767
GaAs-AlGaAs BH diode lasers with self-aligned mask for Zn diffusion 7−110382
GaAs-AlGaAs DH laser, inhomogeneously excited, bistable operation, lasing wavelength depend. 7−110360
GaAs-AlGaAs DH transverse junction stripe lasers, planar struct. on semi-insulating GaAs, optoelectronic IC appl. 7−68672
GaAs-AlGaAs dry etched short-cavity MQW lasers, high relax. oscillation freq. 7−97034
GaAs-AlGaAs laser arrays with nonabsorbing mirrors, 770 nm, 2.4 W CW operation, characts. 7−90637
GaAs-AlGaAs lasers, MQW, characts. 7−130108
GaAs-AlGaAs lateral DH DFB surface-emitting laser diode 7−110383
GaAs-AlGaAs mixed-mode phase-locked quantum well laser arrays 7−90652
GaAs-AlGaAs twin-channel laser, modified for 150-mW quasi-CW fundamental-mode operation 7−141860
GaAs-AlGaAs:Zn superlattices, impurity-induced disorder-delineated optical waveguides 7−90773
GaAs-GaAlAs BH laser with ion-beam-etched quarter ring cavity 7−82608
GaAs-GaAlAs electron-beam-pumped semiconductor laser with a waveguide output 7−123020
GaAs-GaAlAs Fabry-Perot DH laser amplifier, gain and freq. bandwidth *(Chinese)* 7−122983
GaAs-GaAlAs laser with high energy brightness 7−82610
GaAs-GaAlAs lasers, linear tailored gain broad area, anal. 7−123015
GaAs-GaAlAs multiple quantum well lasers, spontaneous recombination rate 7−90608
GaAs-GaAlAs quantum well laser, lateral spatial variation in thickness, MOCVD grown 7−74953
GaAsAs lasers, wide-band electrical noise and modulation response, parasitic element influence 7−122971
$GaAs_{1-x}P_x$ laser development history, personal perspective 7−120757
GaInAs strained layer quantum well GRIN ridge waveguide injection laser 7−110377
GaInAs, strained quantum well laser, 1.55 μm, threshold current, temp. sensitivity 7−82568
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
$Ga_{0.47}In_{0.53}As$/InP double-heterostructure and multiquantum well lasers grown by chemical beam epitaxy 7−130104
GaInAsP 1.5 μm travelling-wave laser amplifier with angled facets 7−136301
GaInAsP laser amplifier, travelling wave, 1.5 μm, characts. 7−122967
GaInAsP lasers, 1.55 μm, threshold current and carrier lifetime, press. depend. 7−82557
GaInAsP lasers, conf., Albuquerque, NM, USA (Feb. 1987) 7−102021
GaInAsP p-type substrate mass-transported diode laser, sinusoidal and digital high-speed modulation 7−82654
GaInAsP VIPs lasers, 1.3 μm, high-power output 7−122961
GaInAsP/AlGaAs visible laser diodes on GaAs, LPE, planar BH, 674 nm 7−68699
GaInAsP/InP BH lasers, CW operation at 3 μm at room temp. *(Korean)* 7−82561
GaInAsP/InP epilayer, LPE, lattice const., emitting wavelength rel. to growth conditions 7−113453
GaInAsP/InP single quantum-well lasers, OMVPE grown 7−68641
GaInAsP/InP surface-emitting laser diodes 7−74961
GaInAsP/InP unstable resonator lasers, fabrication using chemical facet etching method, characts. and performance 7−130157
GaInAsP-AlGaAs 0.67 μm laser, LPE grown, fabrication and lasing characts. 7−68680
GaInAsP-InP, high power phase-locked laser array, 1.3 μm 7−141907
GaInAs(P)-InP, MOCVD growth, characterisation and applications *(Polish)* 7−132498
GaInAsP-InP 1.5-1.6 μm bundle-integrated-guide DBR lasers 7−117204
GaInAsP-InP BH lasers, current leakage prevention 7−74958
GaInAsP-InP DBR injection locked dynamic single mode lasers, struct. and fabrication 7−130165
GaInAsP-InP DFB laser, 1.55 μm wavelength, design with high power and wide bandwidth 7−130156
GaInAsP-InP diode laser cavities, cylindrical mirror facets, reduced beam divergence 7−90635
GaInAsP-InP heterostruct. lasers, 1.5 μm, OMVPE fabrication 7−103840
GaInAsP-InP lasers, DBR dynamical single mode bundle-integrated-guide, 1.5 μm, spectral behaviour 7−122962
GaInAsP-InP lasers, phase-adjusted DFB, stability in single longitudinal mode operation 7−122963
GaInAsP-InP lasers, 1.55 μm, low threshold current 7−122966
GaInAsP-InP lasers at 1.3 μm, high speed dynamics 7−122984
GaInAsP-InP laser, five-wavelength integrated DFB with quarter-wave-shifted structures 7−130158
semiconductor junction lasers continued
GaInAsP-InP laser devices fabricated by mass transport 7−136364
GaInAsP-InP monolithic 2D CW diode-laser arrays 7−90651
GaInAsP-InP surface emitting lasers, large monolithic 2D arrays 7−68671
GaInAsP-InP surface emitting injection lasers, single transverse mode condition *(Japanese)* 7−110421
GaInAsP-InP surface emitting laser with circular buried heterostruct. *(Japanese)* 7−130182
GaInAsP-InP weakly coupled asymm. mirror refl. DFB lasers, stable single-mode operation over wide temp range 7−123038
$Ga_xIn_{1-x}As_yP_{1-y}$ DFB lasers, gain spectrum scanning using hydrostatic press. 7−97000
GaInAsSb/GaSb DH, LPE growth for 2.0-4.5 μm optical communications appls. 7−71093
GaInAsSb-GaAlAsSb-GaSb DH lasers, 2.2 μm, threshold current density anal. 7−82553
GaInP/AlGaInP DH laser grown by MOCVD, low threshold current density 7−141857
GaInP/AlGaInP MQW laser, MOCVD grown, room-temp. CW operation 7−90606
GaP-$Al_xGa_{1-x}P$ Raman laser operation 7−122951
GaSb/AlGaAsSb lasers 1.6 to 1.7 μm, output threshold, temp depend. 7−141865
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
GaSb-AlGaSb MQW laser diode, high-speed modulation characts. 7−68720
GaSb-AlSb multiquantum well heterostructures, enhanced T_0-values, laser appls. 7−130109
GaSb-GaInAsSb, p-n heterojunction, generation of coherent radiation, lasing threshold 7−97008
GaSb-GaInAsSb single heterojunction quantum well laser, characts., band discontinuities 7−74926
H_2O^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
HeH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
InAs-GaAs quantum well heterostructs. grown by atomic layer epitaxy, stimulated emission 7−92703
InAsPSb/InAs heterostructures, LPE growth 7−71094
InAsPSb-InAs, double heterostructure, growth and modelling 7−143296
InAsSb, alloy for 2 to 4 μm, laser diodes 7−97014
InGaAs-GaAs-AlGaAs, strained-layer laser, continuous room temp. operation 7−122947
InGaAs-InAlAs MQW laser diodes, optically bistable operation using reson. tunnelling effect 7−123056
$In_{0.53}Ga_{0.47}As$/InP multiple quantum wells, nonlinear spectroscopy 7−130092
InGaAsP 1-3 μm semiconductor lasers, resonant freq., damping rate 7−74989
InGaAsP 1.5 μm travelling-wave laser amplifier with 5.2 dB noise figure 7−68631
InGaAsP, 1.5 μm travelling wave semiconductor laser amplifiers, homogeneous gain saturation 7−130095
InGaAsP BH laser with 22 GHz bandwidth and high modulation efficiency 7−136299
InGaAsP buried crescent injection lasers, hybrid growth and 1.3 μm operation 7−123009
InGaAsP buried crescent injection lasers, 1.3 and 1.55 μm, differential quantum efficiency, effect of active layer thickness 7−136346
InGaAsP, DFB injection lasers, long cavity length, detuned Bragg wavelength, linewidth, narrowing 7−68708
InGaAsP DFB lasers for optical communication, operational characts. 7−130164
InGaAsP Fabry-Perot cavity-type laser amplifier for 1.5 μm wavelength. 7−104033
InGaAsP heterostructure diode lasers, 1-3 μm, relative intensity noise reduction 7−110349
InGaAsP laser, 16 Gbit/s direct modulation 7−117239
InGaAsP laser, gain-switched, picosecond dynamics 7−122970
InGaAsP laser DBR, 1.5 μm, spectral characts. 7−130097
InGaAsP laser material linewidth enhancement factors at 1.5 μm 7−125663
InGaAsP laser optical bistability on reflection 7−123070
InGaAsP lattice matched to InP, 1.3 μm, screening influence on Auger coeff. 7−68639
InGaAsP MQW BH lasers grown by LPE, dynamic spectral linewidth 7−68633
InGaAsP semiconductor laser, nondegenerate four-wave mixing, spectral hole burning 7−123118
InGaAsP TM-wave injected laser based optical RS flip-flop 7−90692
InGaAsP TW laser amplifier, gain saturation depend. on signal wavelength 7−68636
InGaAsP travelling-wave laser amplifier, 1.5 μm, signal gain saturation in two-channel common amplification 7−82552
InGaAsP tunable fibre-extended-cavity laser 7−68710
InGaAsP:Er 1.5 μm lasers, single longitudinal mode operation 7−96996
InGaAsP/GaAs laser, internal loss and gain factor 7−82565
InGaAsP/InP 1.3 μm DFB p-substrate partially inverted BH laser diode 7−96999
InGaAsP/InP etched-mesa BH lasers, sidewall interfaces, LPE regrowth 7−110356
InGaAsP/InP lasers, threshold currents, temp. dependence 7−74921
InGaAsP/InP lasers at 1.3 μm with high facet power densities, CW performance 7−97007
InGaAsP/InP nonlinear laser diode amplifiers for optical thresholding and logic 7−90648
InGaAsP-GaAs quantum well separate confinement DH laser, prep. by LPE, λ=0.79 μm, injection luminesc. obs. 7−110354
InGaAsP-InP, continuous mesa-stripe separate-confinement double heterojunction lasers, prep. and characts. 7−74925
InGaAsP-InP, DFB laser, ultrahigh speed, 1.3 μm wavelength 7−122972
InGaAsP-InP 1.55 μm λ/4-shifted DFB aged lasers, spectral behaviour 7−68635
InGaAsP-InP bistable lasers optical feedback effect 7−123074
InGaAsP-InP buried heterostruct. DFB lasers, 1.55 μm, low threshold current 7−123274
InGaAsP-InP DFB laser, spectral linewidth reduction by detuning effect 7−82551

semiconductor junction lasers continued
InGaAsP-InP DFB lasers, 1.53 μm, VPE fabricated, very low-threshold design 7−97027
InGaAsP-InP DFB laser integrated with MQW modulator in 1.5 μm range 7−130391
InGaAsP-InP DH lasers, effect of carrier leakage over heterobarrier *(Chinese)* 7−74919
InGaAsP-InP diode lasers, 1.3 μm, wide-waveguide interferometric phase-locked arrays 7−82607
InGaAsP-InP heterojunction bipolar transistor and double heterostruct. laser, vertical integration 7−90633
InGaAsP-InP injection lasers, twin-ridge, modal bistability 7−123077
InGaAsP-InP laser amplifier, bistable, dynamics 7−74991
InGaAsP-InP lasers, single element fundamental mode, recent developments 7−110393
InGaAsP-InP lasers DFB asymmetric λ/4 shifted lasing at 1.5 μm 7−122964
InGaAsP-InP lasers, MOVPE-grown DFB lasing at 1.5 μm 7−122965
InGaAsP-InP laser, polarisation bistability, mode inhibition mechanism 7−122968
InGaAsP-InP laser, polarisation-bistable, switching mechanism 7−123076
InGaAsP-InP laser amplifier, 1.3 μm with integrated passive waveguides 7−123278
InGaAsP-InP lasers, BH, ion beam etched cavity, fabrication and charcts. 7−130103
InGaAsP-InP lasers, double-carrier-confinement grown by three melt LPE, charcts. 7−130106
InGaAsP-InP laser antiresonant reflecting optical waveguide structures 7−130390
InGaAsP-InP lasers emitting at about 1.3 μm, fast degradation defects on reflecting faces 7−137399
InGaAsP-InP MQW lasers, linewidth enhancement factor 7−110378
InGaAsP-InP multimode laser, tunable single-mode output in tunable fibre grating external cavity 7−82651
InGaAsP-InP planar BH lasers grown by MOCVD LPE hybrid technique 7−130105
InGaAsP-InP ridge-waveguide stripe structure bistable DH laser, expt. charcts. *(Chinese)* 7−74920
InGaAsP-InP ridge-waveguide-laser diodes, polarisation control 7−90607
InGaAsP-InP semiconductor lasers, bistable control 7−136304
InGaAsP-InP:Fe VPE, high speed buried heterostructure laser diode 7−141896
InGaAsP-Ti:$LiNbO_3$ narrow-linewidth electro-optically tunable extended cavity laser 7−123037
InGaAsSb-AlGaAsSb DH laser, MBE growth 7−141884
InGaSbAs injection laser emitting at 2.4 and 2.1 μm 7−68686
InGaSbAs/GaAlSbAs, injection lasers, fabrication by LPE, charcts. 7−122977
InP integrated external cavity distributed Bragg reflector laser 7−74988
InP modified double-channel planar-buried heterostruct. laser, improved high temp. stability 7−117199
InP substrate protection and cleaning for LPE, laser fabrication 7−71416
InP:Fe, low press. MOCVD growth for laser structs. 7−92885
InP:Sn, S, defects, cathodoluminescence study 7−99943
InP/InGaAsP integrated external cavity distributed Bragg reflector laser charcts. at 1.3 μm 7−117200
InP/InGaAsP mushroom stripe lasers, degradation localisation 7−130150
InP-InGaAsP, surface emitting laser diode, slant edge mirrors, multilayer reflectors 7−141891
NeH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
OH^-, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
OH^+, molecular ions, diode lasers, pure rotational spectroscopy 7−135937
Pb salt, lasers, long-wavelength, LPE growth 7−74929
Pb salt single-mode diode laser, airborne meas. of humidity 7−120130
$Pb_{1-x}Ba_xTe$, MBE growth, diode laser appls. 7−131486
$(Pb_{1-x}Cd_x)S_{1-y}$, ternary solid soln. semicond., comp. and stoichiometry, laser diode appl. *(Japanese)* 7−122979
$Pb_{1-x}Cd_xS_{1-y}Se_y/PbS/Pb_{1-x}Cd_xS_{1-y}Se_y$, DH lasers, MBE, pulsed operation 7−74960
$Pb_{1-x}Eu_xSe$, MBE, elec. charcts., optical props., diode laser and IR appl. 7−77815
PbEuSeTe diode lasers as mid-IR sources 7−74927
PbEuSeTe-PbTe, diode laser, 2.5-30 μm, band offsets 7−130118
$Pb_{1-x-y}Mn_xSn_ySe$, semiconductor laser diodes, g-factor, compositional depend. 7−70172
$PbS_{1-x}Se_x$, optically pumped mode-locked laser 7−110413
$(PbSe)_{0.8}(SnTe)_{0.2}$-$PbSe_{0.32}Te_{0.68}$ heterostruct for IR magnetoplasma injection laser 7−103818
PbSnSe laser, 16 μm CW tunable, high-resolution spectroscopy appl. 7−136296
PbSnSe/PbSSe/PbS heterostruct. laser with quantum-well active region 7−110357
PbSnSe/PbSSe/PbS heterostruct. laser, separate electron and optical confinement 7−141864
PbSnTe-PbTeSe lattice matched single heterostructure diode lasers 7−74923
$Pb_{1-x}Sr_xTe$, MBE growth, diode laser appls. 7−131486
Si_3N_4 antireflection coatings for semiconductor lasers, reactive sputtering directly controlled deposition 7−68668
YIG cryst. laser diode module with optical isolator, floating zone growth method 7−103815

semiconductor junctions
see also p-n junctions; semiconductor superlattices
2D electron gas, theory of magnetocond., self-consistent screening model 7−70422
band offset model calcs. 7−105687
band-gap engineering, device appls. 7−125998
biased quantum wells, ultrashort elect. pulse generation by virtual population screening 7−138032
bound and virtual energy spectrum calcs. 7−70383
characterisation using TEM 7−75950
condensed matter physics, open problems 7−76717
conference on physics of semicond. cpds., Jaszowiec, Poland (April 1986) 7−72689
dangling bonds, energy determ. 7−125101
double heterostructures, coupled intra- and inter-subband plasmon-phonon modes 7−85030
double heterostructures, dynamical screening, collective excitations, electron-phonon interaction 7−112211

semiconductor junctions continued
double-barrier resonant-tunnelling struct., intrinsic bistability obs. 7−105691
electrical characterisation techniques 7−112479
GaAs-AlAs-Si structure, high mobility, MBE growth 7−77804
heterojunction, Shockley-like model *(Chinese)* 7−125112
heterojunction (110) interfaces, band discontinuities, tight-binding calc. 7−85095
heterojunction band discontinuities, nonlinear transport, effects of struct. 7−143561
heterojunction band offset and acoustic deform. pot. calcs. 7−85069
heterojunction mobilities determ. using mag. field depend. Hall technique 7−70390
heterojunctions, surface states, Kane model 7−85059
heterojunctions, valence band offsets, ab initio pseudopot. calcs. 7−77054
heterojunctions and quantum wells, polar scatt., appl. to GaAs-$Al_xGa_{1-x}As$ 7−99183
heterostructure, energy-momentum conservation eqns. in relax. time approx. 7−131760
heterostructures, boundary conditions for envelope fn. approaches 7−85087
heterostructures and quantum wells, image force effects, determ. 7−85089
high-low junctions, voltage meas. 7−112457
high-low junctions, voltage meas. 7−112458
hydrogenic impurity in quantum well wires in mag. field, binding energies 7−105681
III-V quantum wells, photoluminescence under hydrostatic press. *(French)* 7−132334
III-V semiconductor heterostructures, intrinsic radiative transitions, time consts. 7−77620
III-V semiconductor interface microcharactn. methods 7−70406
III-VI semiconductor quantum wells, magnetoexcitons theory 7−125106
inelastic and Raman light scatt. at interfaces 7−138466
interface phenomena rel. to device behaviour, book contrib. 7−85051
interfaces, conf., Manchester, England (April 1987) 7−108048
inverted band quantum wells, gap subbands, k.p model 7−85071
ion mixing, moving species 7−98265
IV-VI semiconductors, high field effects, magneto-optical methods 7−132246
IV/IV semiconductor heterostructures, growth, initial stages of interface formation 7−84552
multilayer structures, nondestructive characterisation by resonant attenuated total reflection spectroscopy 7−125655
n-n heterojunction 2D electron gas energy levels, self-consistent calcs., Hartree approx. 7−138039
n-n isotype heterojunction transmission characteristics 7−77053
narrow 2D electron systems, mag. crossover 7−131778
narrow bandgap semiconductor devices, past and current research, review 7−138069
nonlinear balance eqns., hot electron transport with finite phonon relax. time 7−84909
nonuniform structure, boundary states, chiral anomaly 7−125109
optoelectronic single quantum well devices based on electron bleaching of exciton absorpt. 7−110605
optoelectronics appls. 7−136619
organic molecular semiconductor devices review 7−118566
p-n-n^+ structures, breakdown volt., n-region thickness effects *(French)* 7−125113
potential steps, determ. and prediction 7−77051
quantum well, hot electron reson. tunnelling spectroscopy 7−112475
quantum well, tunneling current, negative differential resistance effects 7−99173
quantum well 2D electron gas transport relax. time, SAW scatt. effects calcs. 7−112366
quantum well conduction band intersubband optical absorpt., elec. field depend. calcs. 7−113142
quantum well in elec. field, higher level optical transitions 7−113138
quantum well physics and appls. in optics 7−70393
quantum well structs., hot electron relax., multisubband occupation effects 7−99081
quantum well structs., quasi-one-dimensional, electronic therm. cond. 7−138037
quantum well structures, electric field dependence of optical props. 7−144032
quantum well structures, field induced optical nonlinearity, optical gate, bistability 7−136408
quantum well structures, optical nonlinearities due to exciton localisation 7−130230
quantum well structures for optoelectronics, review 7−70394
quantum well wires, warm electron-phonon scatt. and energy relax. time calcs. 7−118496
quantum well with in-plane mag. field, electronic struct, arrow train method calcs. 7−105372
quantum wells, exciton binding energy, variational-perturbational approach 7−105409
quantum wells, finite-depth, energy levels in elec. field 7−112463
quantum wells, nonlinear interactions and excitonic effects 7−82697
quantum wells for optical information processing, materials and devices 7−110261
quantum wells with arbitrary pot. distrib., eigenstates, elec. field depend. 7−112474
quasi-2D systems, hybrid magneto-elec. quantisation 7−138043
radiation ordering, surface enhanced in semicond. structures 7−104809
recombination velocities and surface states 7−131730
resonant tunnelling in heterostructures, coherence 7−125099
semiconductors, solid-state physics, book 7−102027
SIPOS-Si heterojunctions, elec. charcts., cond. mechanisms 7−85080
solar cell emitter recomb. current, effect of high-low junction 7−78650
surface barrier structures, getter mechanism of defects 7−125115
thin heterojunctions, carrier multiplication, impact ionisation coefficients 7−131650
transition metal impurities in semicond., band lineups, Schottky barriers 7−118413
triangular barrier diodes, barrier height and technological parameters 7−105692
two-band semiconductor, supersymmetric inhomogeneous structures, and nature of parity anomaly in (2+1) electrodynamics 7−92267
two-dimensional semiconducting well structs., free carrier-exciton scatt. cross section calcs. 7−118368
(Al,Ga)As-GaAs heterostructures grown by MBE with growth interruption, photolum. 7−70869

semiconductor junctions continued
AlAs/GaAs heterostruct., phonon parameters, IR and Raman spectra studies 7−98666
AlAs-GaAs, valence-band offsets, role of d orbitals 7−118574
AlAs-GaAs double quantum well reson. tunnelling struct., elastic tunnelling traversal times 7−92280
AlAs-GaAs structures, minority carrier retention 7−143580
AlAs-GaAs-AlAs heterostructures, resonant tunnelling via X-point states 7−92264
AlAs-GaAs-AlAs heterostructures, tunnelling under hydrostatic press. 7−143581
$Al_xGa_{1-x}As$-GaAs heterojunctions, 2D electron gas, linearised Boltzmann eqn., soln. 7−138027
AlGaAs, high quality, quantum wells, low temp. MBE growth, mobility and photolum. obs. 7−71022
AlGaAs/GaAs, double-barrier resonant tunnelling structures, charge transport 7−112459
AlGaAs/GaAs heterojunctions, parallel conductance *(Chinese)* 7−112444
AlGaAs/GaAs interface, FIR emission from 2D plasmons *(Japanese)* 7−85081
AlGaAs/GaAs structures, MBE growth, compositional gradient control, RHEED oscills. 7−71014
AlGaAs/GaAs:Mn quantum wells and AlGaAs:Mn layers, luminescence 7−70904
AlGaAs-AlAs, semiconductors, high magnetic field investigations *(German)* 7−125119
AlGaAs-GaAs, resonant polaron effects cyclotron resonance energy calcs. *(German)* 7−124883
AlGaAs-GaAs heterostructures, MBE growth with interruption at interfaces, optical props. 7−143272
n-AlGaAs-GaAs heterostructs., thermally stimulated persistent conductivity studies 7−143570
AlGaAs-GaAs laterally microstructured heterojunctions, far IR transmission reson. in mag. field 7−138059
AlGaAs-GaAs selectively doped heterostructures, strong electric fields, longitudinal electron transport 7−112343
AlGaAs-GaAs single quantum wells, MBE, photolum. 7−70868
$Al_xGa_{1-x}As$ heterostructure launchers for ballistic electron generation 7−92281
$Al_xGa_{1-x}As/GaAs/Al_yGa_{1-y}As$ delta-doped asymmetric quantum wells, high-mobility 2D electron gas 7−85063
$Al_xGa_{1-x}As/Si_{2x}(GaAs)_{1-x}/GaAs$ quantum well structs., impurity-induced layer disordering and thermal annealing 7−70097
$Al_xGa_{1-x}As$-GaAs capacitor structures, obs. of bulk Landau levels in transverse magnetotunnelling 7−125114
$Al_xGa_{1-x}As$-GaAs quantum wells, excitonic transition photolum. linewidth, elec. field effect model 7−132237
$Al_xGa_{1-x}As$-GaAs selectively doped heterostruct., MBE, GaAs oval defect elimination by substrate prep. 7−71023
$Al_xGa_{1-x}As$-GaAs-$Al_xGa_{1-x}As$ double barrier structs., resonant tunnelling current, depend. on Al content 7−105671
$Al_xGa_{1-x}As$-GaAs-$Al_xGa_{1-x}As$ heterostructs., selectively doped, lumin. 7−113250
p-$Al_xGa_{1-x}As$-p-GaAs-n-GaAs heterostructures, electric and photoelectric characts. 7−112453
$Al_xGa_{0.5-x}In_{0.5}P$ MOVPE layers grown on GaAs, study of deep levels 7−98916
AlGaSb:Te-GaSb, characts. of deep electron traps 7−105490
AlX (X=P,As,Sb) based heterostructs., band discontinuity modeling, modified Harrison model 7−138053
As_2Se_3-Sb_2Se_3 two-layer glassy semiconductor structs., injection sensibilisation of photoeffect 7−84985
$Cd_{1-x}Hg_xTe$, inverted contact and linear zero-mass spectrum 7−85097
CdS/$CuInSe_2$ junction, elec. characts., stoichiometry and O effects 7−125161
CdTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe/ZnTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe-CdTe-CdS film, p-n-n struct., no-load voltage, spectral distrib. 7−99115
CdTe-GaAs (001), MOCVD grown, TEM of dislocations at interface 7−112098
CdTe-HgTe, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
CdTe-HgTe, valence-band offsets, role of d orbitals 7−118574
CdTe-HgTe heterojunctions, valence band discontinuity, face orientation depend. 7−85072
p-CdTe-n-CdTe-n-CdS thin film struct., determ. of recomb. consts. 7−143564
GaAlAs heterostruct. devices, research at RSRE, control of interface props. 7−112480
GaAlAs-GaAs, two-dimensional surface depletion region 7−105680
GaAlAs-GaAs heterostructures, band-edge offsets 7−77051
GaAlAs-GaAs heterostructures, LPE grown, quantitative anal. by XPS *(French)* 7−113342
$Ga_{0.7}Al_{0.3}As/GaAs/Ga_{0.7}Al_{0.3}As$ single square quantum well, confinement effect study 7−92266
N-$Ga_{0.7}Al_{0.3}As/In_xGa_{1-x}As/GaAs$, strained modulation-doped structures 7−99180
$Ga_{1-x}Al_xAs$, MOVPE multilayer growth, transient composition effects 7−98733
$Ga_{1-x}Al_xSb$/GaSb epitaxial layer system, thickness and composition, X-ray microanal. 7−124758
GaAs and related cpds., conf., Las Vegas, NA, USA (Sept. 1986) 7−120702
GaAs epitaxial layers on Si, misfit dislocations, atomic resolution electron microscopy 7−84548
GaAs gated heterostructure, mag. field depend. of gate voltage and current in the quantum Hall regime 7−85079
GaAs heterojunction, spatial potential fluctuations, determ. by weak localisation 7−77096
GaAs heterojunction laser diode, potentiometry and scanning tunnelling microscopy studies 7−99169
GaAs modulation doped heterostructures, electron mobility 7−112449
GaAs n^+n-n-n^+ structures, drift velocity at 300 K 7−85064
GaAs n^+nn^+ diodes, subMM-wave negative conductance 7−112462
GaAs n^+nn^+ structures, magnetophonon reson. in crossed high elec. and mag. fields 7−138042
GaAs n-n isotype heterojunction transmission characteristics 7−77053

semiconductor junctions continued
GaAs, structures, near- and submicron length, role of boundary conditions, book contrib. 7−85098
GaAs with n and p contacts, double injection induced conductivity, expt., numerical simulation 7−105698
GaAs:Fe(Cr), π-ν-n structs., I-V characts., strong electric fields 7−105678
GaAs:H-Si, hydrogenation, effect on diode reverse leakage current, FET 7−143560
GaAs:Mg/GaAlAs, dopant activation by post-implant rapid thermal annealing 7−86212
GaAs:Si-$Al_xGa_{1-x}As$ heterostructures, illuminated, conduction props., expt. 7−112460
$GaAs/Al_{0.32}Ga_{0.68}As$, single quantum well, phonon mode resonant mixing 7−143593
$GaAs/Al_{0.3}Ga_{0.7}As$ single quantum well, exciton parameter calcs., well shape and elec. field effects 7−105407
$GaAs/Al_xGa_{1-x}As$ heterostructures, illuminated, conduction props., theory 7−112461
$GaAs/Al_xGa_{1-x}As$ MBE quantum wells, elec. field-induced photolum. props. study 7−125774
$GaAs/Al_xGa_{1-x}As$ quantum wells, electronic and optical absorpt. props. in elec. field 7−70398
$GaAs/Al_xGa_{1-x}As$ single quantum wells, photoexcited, stimulated emission 7−70843
$GaAs/Al_xGa_{1-x}As$ selectivity doped heterostruct. 2D electron gas photoreflectance meas. 7−106114
$GaAs/Al_xGa_{1-x}As$(100) quantum well structs., MBE, RHEED, photolum., computer simulation 7−70093
GaAs/AlGaAs heterojunction, 2D electron gas low temp. thermopower calcs. 7−105601
GaAs/AlGaAs heterojunctions and $n^+n^-n^+$ sandwich structs., tunnelling and hopping cond. 7−143599
GaAs/AlGaAs heterostruct., 2D electron channel, magnetoplasma oscills. obs. 7−85075
GaAs/AlGaAs heterostructs., hot carrier energy transfer rate study 7−99073
GaAs/AlGaAs heterostructs., MBE growth and transport props. 7−105696
GaAs/AlGaAs heterostruct., 2D electron gas density of states determ. at fractional filling factors 7−137825
GaAs/AlGaAs heterostructs., fractional quantum Hall effect, activation energy study 7−137966
p-GaAs/AlGaAs heterostructs., low temp. fractional quantum Hall effect 7−137967
GaAs/AlGaAs heterostruct., edge currents in integral quantum Hall effect 7−143595
GaAs/AlGaAs interfaces, MBE grown, O accumulation, SIMS profiling 7−105289
GaAs/AlGaAs modulation doped heterostructure interface, neutron irradiation effects on electron transport 7−143562
GaAs/AlGaAs quantum wells, nonlinear interactions and excitonic effects 7−82697
GaAs/AlGaAs quantum well heterostructures, mobility degradation 7−92262
GaAs/AlGaAs quantum well, ion implantation damage, annealing behaviour, TEM and cathodolum. studies 7−117982
$GaAs/Ga_{0.77}Al_{0.23}As$ heterojunction, energy gap in condensed phase 7−77075
$GaAs/Ga_{1-x}Al_xAs$ heterostruct., exciton binding energy and carrier effective mass calcs. 7−112193
$GaAs/Ga_{1-x}Al_xAs$ quantum wires, confined electron states calcs. 7−70399
$GaAs/Ga_{1-x}Al_xAs$ quantum wells, hot carrier nonequilib. cooling, transient photolum. study 7−105579
n-GaAs/$Ga_{1-x}Al_xAs$ single layer heterojunction, effective mass meas. using electron cyclotron reson. 7−118579
GaAs/GaAlAs, composition fluctuations, TEM study *(French)* 7−131456
GaAs/GaAlAs heterojunctions, band-edge offsets, EBIC studies 7−99170
GaAs/GaAlAs heterojunctions, band offsets determ. 7−105697
GaAs/GaAlAs heterojunctions, cyclotron reson. studies 7−138058
GaAs/GaAlAs interface 2D electron gas, impurity pot. screening effects, RPA and Thomas-Fermi approx. calcs. 7−118578
GaAs/GaAlAs quantum well photolum. polarisation, variational calcs. 7−106253
GaAs/GaAlAs quantum wells in an elec. field, excitonic coupling 7−137804
GaAs/GaAlAs solar cell performance, crystal defect effects 7−139112
GaAs/GaInAs, local bonding and electronic structure, EELS studies 7−99153
GaAs/GaP LPE systems, large lattice mismatch accommodation 7−112108
GaAs/GaSe heterostruct., atomic layer epitaxy by hydride VPE 7−124799
GaAs/Ge composite layer growth on Si and SiO_2/Si substrates 7−84601
GaAs/n-$Al_xGa_{1-x}As$ selectively doped heterostruct., MBE growth of highly uniform epitaxial layers over multiple substrates 7−71025
GaAs/Si, acceptor and excitonic features, stress effects, photolum. study 7−125691
GaAs-(GaAl)As heterojunctions, p-type, transport props. in high mag. fields 7−131774
$GaAs-Al_{0.33}Ga_{0.67}As$ single quantum well interfaces, MBE grown, photoluminesc., RHEED dynamics studies 7−112093
$GaAs-Al_{0.3}Ga_{0.7}As$, modulation doped quantum well structs., MBE, anisotropic low field electron transport 7−70388
$GaAs-Al_{0.3}Ga_{0.7}As$:Si quantum wells, electron transport, substrate orientation and impurity effects 7−143572
GaAs-$Al_xGa_{1-x}As$, modulation doped, mobility enhancement 7−138026
GaAs-$Al_xGa_{1-x}As$ 2D heterostruct., Shubnikov-de Haas oscill. asymmetry 7−85068
GaAs-$Al_xGa_{1-x}As$ abrupt heterojunctions, effective-mass Hamiltonian 7−118570
GaAs-$Al_xGa_{1-x}As$ heterojunctions and quantum wells, polar scatt. 7−99183
GaAs-$Al_xGa_{1-x}As$ heterostructures, photoexcited carriers 7−138041
GaAs-$Al_xGa_{1-x}As$ quantum wells grown by interrupted, uninterrupted MBE, interface struct. atomistic models 7−70124
GaAs-$Al_xGa_{1-x}As$ struct., space charge effects, importance in resonant tunnelling devices 7−77058
GaAs-$Al_xGa_{1-x}As$ single heterojunction, photolum. from 2D electrons 7−138510

semiconductor junctions continued
GaAs-AlAs barrier structs., impedance switching effects, expt. study 7−131744
GaAs-AlAs capacitor structs., elec. meas. 7−112448
GaAs-AlAs heterojunctions, valence band discontinuity, face orientation depend. 7−85072
GaAs-AlAs heterojunction valence-band discontinuities, tight-binding calcs. 7−125094
GaAs-AlAs quasiperiodic heterostructures, MBE growth, struct., electronic and vibr. props. 7−70122
GaAs-AlAs resonant tunnelling struct., quantum interf. effects 7−112477
GaAs-AlGaAs, intersubband resonance in quasi one-dimensional inversion channels 7−125104
GaAs-AlGaAs heterointerfaces, growth by flow-rate modulation epitaxy, improved flatness 7−92004
GaAs-AlGaAs heterojunctions, quasi-2D electrons coupled to 3D phonons, phonon drag. contrib. to thermopower 7−92083
GaAs-AlGaAs heterojunctions, recombination via 2D excitons 7−131553
GaAs-AlGaAs heterojunction, press. effects on tunnelling current 7−131758
GaAs-AlGaAs heterojunctions, resonant subband-Landau level coupling, cyclotron reson. study 7−138057
GaAs-AlGaAs heterostructs., 1D wires, high mobility, quantum transport, mag. field and temp. depend. 7−125021
GaAs-AlGaAs heterostruct., high freq. cond. in quantum Hall effect regime 7−131699
GaAs-AlGaAs heterostruct., repulsive/attractive math. centres effect on magnetotransport 7−143594
GaAs-AlGaAs heterosystems, hot electron transient transport, finite phonon relax. times depend. 7−99076
GaAs-AlGaAs interface, edge magnetoplasmons under quantum Hall effect conditions 7−99187
GaAs-AlGaAs interface, near band gap lumin. 7−106230
GaAs-AlGaAs quantum well with compositionally graded interface, energy levels, envelope function approx. 7−92272
GaAs-AlGaAs quantum wells, electron and phonon dynamics, Monte Carlo method calcs. 7−125108
GaAs-AlGaAs tunnel junction, current oscillations and oscillatory density of states, Frohlich polaron anal. 7−98827
GaAs-AlGaAs:Si, atomic planar doping, improvement of 2D electron gas conc. 7−77065
GaAs-AlGaAs-InGaAs quantum well heterostructure, resonant tunnelling 7−112447
GaAs-$Ga_{0.77}Al_{0.23}As$ heterojunction, field-periodic magnetoconductance oscills., supercond. transition 7−112669
GaAs-$Ga_{0.8}Al_{0.2}As$ double heterostruct., N-shaped I-V charact., electroabsorpt., photocurrent 7−143563
GaAs-$Ga_{1-x}Al_xAs$ heterostruct., quasi-2D electron gas, electron-phonon interaction effects calcs. 7−98832
GaAs-$Ga_{1-x}Al_xAs$ heterojunctions, intersubband reson., Fourier transform spectra study 7−112469
GaAs-$Ga_{1-x}Al_xAs$ quantum wells, excitons, polaron effects 7−105689
GaAs-$Ga_{1-x}Al_xAs$ quantum well wires, exciton binding energy 7−124871
GaAs-$Ga_{1-x}Al_xAs$ quantum well, electronic struct., compressive uniaxial stress effects 7−138029
GaAs-$Ga_xAl_{1-x}As$ heterostructs., quantum Hall effect, fractional filling factors up to 4.2 K 7−137968
GaAs-$Ga_xAl_{1-x}As$ heterojunction, 2D electron gas, high press. transport props. 7−138055
GaAs-GaAlAs heterojunction two-dimensional conductor system transverse magnetoresist. quantum effect 7−131683
GaAs-GaAlAs heterojunction, fractional quantum Hall effect study 7−137965
GaAs-GaAlAs heterostruct., transverse magnetoresist. quantum effects 7−131684
GaAs-GaAlAs heterostructs., 2D systems, Landau level widths and cyclotron reson., self-consistent screening theory 7−137827
GaAs-GaAlAs quantum wells, interband photocond., magneto-optics study 7−138437
GaAs-Ge mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaAs-InGaAlP heterojunctions, interface props., study by capacitance-voltage profiling technique 7−92259
n-GaAs-n-$Al_xGa_{1-x}As$, deformative EMF, effect of electron visualisation *(Russian)* 7−112466
GaAs-on-Si, MBE grown, ion implantation and annealing props. 7−143284
GaAs-Si, heteroepitaxy of GaAs, improvement 7−137730
GaAs-Si, MBE grown, photolum. microscopy 7−137735
GaAs-Si interface, defect structs. after annealing 7−118278
GaAs-Si mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaAsP-Si mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaAsSb-InAs lattice matched system, band gap, spin-orbit splitting 7−77069
$GaAs_{0.5}Sb_{0.5}$-InP, MBE growth, low temp. optical characterisation 7−105303
GaInAs single well heterostructs., vel.-field characts., Monte Carlo calcs. 7−143577
GaInAs/InP quantum well photolum. polarisation, variational calcs. 7−106253
GaInAs-AlInAs, 2D electron gas, magnetotransport meas., hydrostatic press. 7−138056
GaInAs-AlInAs single quantum wells, MBE growth, photoluminesc. charactn. 7−112124
GaInAs-InP heterointerface with traps, C-V measurement, modelling 7−77066
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
$Ga_{0.47}In_{0.53}As$-InP quantum wells and superlattices, CBE growth, TEM, IR absorpt., photocond. and photolum. charactn. 7−126023
GaInAs(P), gas source MBE, single quantum wells, superlattice p-i-ns and bipolar transistors 7−77807
GaInAsP/InP quantum-box structure, light emission by current injection 7−99938
GaInPAs/InP, lattice matched heterostructures, LPE 7−100126
GaSb quantum well structures, Auger recombination 7−77076
GaSb/$Al_xGa_{1-x}Sb$ quantum well heterojunction, band offsets, common anion rule, light scatt. obs. 7−77084
semiconductor junctions continued
GaSb/AlSb heterojunction, valence-band discontinuity, XPS core-level spectra 7−105672
GaSb/AlSb multilayers, alloys and optical devices, MBE on Si (100) 7−86035
GaSb/GaAlAsSb heterojunctions, conc. profiles, electron probe anal. 7−126505
GaSb/InAs/GaSb quantum wells, electronic states and quantum Hall effect 7−125091
GaSb-GaAs mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaSb-InAs, narrow gap low dimens. structures, electronic states, mag. field effects *(Polish)* 7−131769
GaSb-InAs-GaSb, 2D electron-hole system, magnetotransport meas., hydrostatic press. 7−138056
GaSb-InAs-GaSb double heterostructures, pressure-induced elimination of the hole gas 7−70404
Ge epitaxial growth, low temp., and isotropic heterostruct. fabrication by direct ion beam deposition 7−92876
Ge/Si overlayer-substrate system electron beam doping 7−117961
$Ge_{0.2}Si_{0.8}$-Si (001) heterostructure, coherently strained, piezoelec. effect 7−143579
HgCdTe/CdTe/GaAs/Si epitaxial struct., growth and characterisation 7−84550
$Hg_{1-x}Cd_xTe$-CdTe heterostruct., charge transfer, magnetoabsorption studies 7−138031
HgTe-CdTe heterojunction valence-band discontinuities, tight-binding calcs. 7−125094
HgTe-CdTe junctions, interdiffusion behaviour 7−91902
HgTe-CdTe superlattices and heterojunctions, spin-orbit scatt. time and carrier depending time 7−92268
InAlAs/InGaAs modulator structs., excitonic energies and inhomogeneous line broadening 7−143578
InAlAs/InGaAs resonant tunneling barrier structures, MBE grown, negative differential resistance 7−70395
InAlAs/InP heterostructures, chemical etching characteristics 7−71407
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ resonant tunnelling barriers, MBE grown, negative differential resistance 7−70397
$In_{0.52}Al_{0.48}As$-InP, MBE grown, nonrandom alloying 7−76651
$In_xAl_{1-x}As$/InP epitaxial heterostruct., deep trap levels and DX-like centres, photocond. study 7−137844
InAs MBE films on GaAs, inhomogeneous lattice distortion in heteroepitaxy 7−137733
InAs/GaAs heterojunction, MBE, nucleation, surface phase diagrams 7−71017
InAs/GaAs quantum well structs., atomic layer epitaxy, self-limiting mechanism, luminesc. study 7−124800
InAs/GaSb heterojunction valence band discontinuity determ., X-ray photoemission core level spectra 7−105679
InAs/GaSb single quantum well, 2D electron gas, g-factor enhancement meas. 7−99185
InAs-GaAs structures, MBE growth, in situ contact form. 7−143582
InAs-GaSb quantum well system, optical phonon-electron interactions 7−105422
InAs-Ga(Al)Sb(As) quantum wells, carrier densities, galvanomag. meas. 7−143588
$InAs_{1-x}Sb_x$-InAs, MBE growth, optical props., 8 to 12 μm range 7−92651
$InAs_ySb_{1-y}$/GaInAsSb/GaSb struct., LPE growth, charactn. and IR photodiode appl. 7−92895
InGaAs doped single modulation quantum well, electron density transition, absorption spectra 7−144144
InGaAs/GaAs $n\text{-}n^+$ heterojunctions, discrete interface traps 7−143569
InGaAs/InP heterojunction, 2D electron gas low temp. thermopower calcs. 7−105601
InGaAs/InP heterostructures, chemical etching characteristics 7−71407
InGaAs/InP quantum wells grown by MOCVD, quantum-confined Stark effect 7−92285
InGaAs/InP quantum well luminesc. spectra, many body effects in e-h recombination 7−99917
InGaAs/InP single-quantum-well heterostructure, X-ray scattering 7−92012
InGaAs-InGaAlAs, heterostructures, MBE growth, high speed device appls. 7−76675
InGaAs-InP, scaling of the integral quantum Hall effect 7−131675
InGaAs-InP, VPE grown, X-ray diffr., SIMS and photolum. characterisation 7−131480
InGaAs-InP quantum wells, luminescence linewidths, free-carrier effects 7−113247
$In_{0.53}Ga_{0.47}As$ p-i-n photodiodes, meas. of hole velocity 7−92218
$In_{0.53}Ga_{0.47}As/AlAs$ resonant tunnelling barrier, pseudomorphic structure 7−138021
$In_{0.53}Ga_{0.47}As$/InP, p-p heterojunction, trap detection by C-V, I-V and photocapacitance obs. 7−112465
$In_{0.53}Ga_{0.47}As$/InP quantum wells, interwell-exciton transfer, optical detection 7−92716
$In_{0.53}Ga_{0.47}As$/InP system, LPE interfaces, elec. active defects, C-V profiling 7−112464
$In_{0.53}Ga_{0.47}As/N\text{-}In_{0.52}Al_{0.48}As$ selectively doped heterostructures, MBE-grown, 2D electron gas conc. 7−70396
$In_{0.53}Ga_{0.47}As$-InP, conduction electron g-value, meas. by optically detected mag. resonance 7−125561
$In_xGa_{1-x}As$/InP(001), pseudomorphic junction, band gap, coherency strain effects 7−99172
$In_xGa_{1-x}As$-GaAs n-n heterojunction epilayers, MBE growth and charactn. 7−143587
InGaAsP heterostructures, LPE grown, transition layer thickness, XPS study 7−100005
InGaAsP-GaAs double heterostructures, LPE grown, 40-300 Å active region thicknesses, quantum size effects, photoluminesc. spectra 7−113252
InGaAsP-InP heterostructures, irrad. damage, DLTS study 7−104855
InGaAsP-InP heterostructs., LPE, photolum. spectra, quantum size effects 7−132316
InGaAsP-InP LPE heterostruct., structural charactn. using X-ray double cryst. diffr. 7−137724
InGaAsP-InP quantum wells, photoluminescence 7−144106
InGaP/GaAs LPE layer system, photoluminescence, lattice mismatch effects 7−113267
InP/InGaAsP, OMVPE reactor design, flow visualisation and fraser gas study 7−126009

semiconductor junctions continued
InP-InGaAs Fabry-Perot etalons, MOCVD grown 7−130395
InSb-CdTe heterostructures, interfacial layer form., Raman scatt. study 7−112094
PbS-Si heterojunction, intermediate layer I-V characts. 7−77064
$Pb_{1-x}Sn_xTe$, inverted contact and linear zero-mass spectrum 7−85097
PbTe quantum well, band offset, cyclotron reson. determ. 7−70373
Si epitaxial growth, low temp., and isotropic heterostruct. fabrication by direct ion beam deposition 7−92876
Si, intrinsically gettered, p-n or field-induced junctions, leakage current diffusion component, EBIC study 7−77082
Si n^+-n-n^+ struct., impact-avalanche ionisation, current filament 7−143590
Si p-p^+ junction, heating of holes by CO_2 laser radiation, photoresponse 7−99113
a-Si:H, p-i-n devices electron mobility, single and double injection 7−85056
Si:H,F-$SiGe_x$:H,F stacked amorphous multilayers, prep. and props. *(Japanese)* 7−118530
Si:P, coupled exciton tunnel dissociation in elec. field in p^+-n-n^+ struct. 7−143364
Si/GaAs(P) overlayer-substrate system, electron beam doping 7−117961
$Si/Si_{1-x}Ge_x$ heterojunctions, MBE, elec. characts., cond. band discontinuity 7−77071
Si-In_2O_3 heterojunctions, electron beam induced defects and interfacial reactions during annealing *(French)* 7−125117
SiC-Si (100), neutron irradiated, defect study 7−98710
$a\text{-}Si_{1-x}C_x$:H pin struct., injection lumin. 7−85851
α-Sn-CeTe (110) interface, characterisation by angle resolved XPS 7−84546
n-SnO_2-n-$CdGeP_2$:In isotypic heterojunction, photoelectric props. 7−131763
$Zn_xCd_{1-x}Te$-InSb(InAs) heterostructures, transition layer form. during vacuum epitaxy *(Russian)* 7−124725
ZnO/Si layered piezoelec.-semicond. struct., acoustoelectronic bistability phenomena 7−112405
ZnO-Si struct., acoustic layer mode propag., nonlinear electroelastic effect *(Japanese)* 7−124670
ZnS-p-Si thin film interface electronic density of states meas., conductance technique 7−131753
ZnS-Si heterojunctions, RF sputtered ZnS films, characts. 7−131757
ZnSe-GaAs heterostructure, Raman spectrum 7−138455
ZnSe-MnSe-ZnSe heterojunctions, valence band discontinuities, UPS meas. 7−112445
ZnTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078

semiconductor materials
see also amorphous semiconductors; degenerate semiconductors; elemental semiconductors; heavily doped semiconductors; II-VI semiconductors; III-V semiconductors; III-VI semiconductors; IV-VI semiconductors; liquid semiconductors; magnetic semiconductors; many-valley semiconductors; narrow band gap semiconductors; organic semiconductors; polar semiconductors; semiconductors; ternary semiconductors
$A^{III}B^V$-Si(Ge) eutectics, composition and temp. eutectic point determ. 7−111857
random zinc blende semicond. alloys, total energy, spectral density, non-muffin tin formalism 7−98854
rare earth semiconducting cpds., optical absorpt. model 7−138473
Ag-Zn_3P_2-Ag cells, I-V characts., Ag electromigration 7−105737
$Ag_xCu_{1-x}I$ solid solution thin films, exciton spectrum features 7−131549
$Ag_8GeSe_5(Se_6)$ and Ag_2GeSe_3, elec. resistivity, pressure dependence 7−92170
$Al_xGa_{1-x}As/Si_{2x}(GaAs)_{1-x}/GaAs$ quantum well structs., impurity-induced layer disordering and thermal annealing 7−70097
$Al_xV_2O_5$, low temp. AC and DC susceptibility 7−92418
As-Ge-Te, ternary system, phase diagram *(French)* 7−132588
As_2S_3, cryst. and glassy, bond strengths determ. using temp. depend. of EXAFS 7−125851
As_4S_4, bond strengths determ. using temp. depend. of EXAFS 7−125851
As_xS_3, solid solns., two- and three-photon scatt., reson. Raman scatt. 7−70772
As_2Se_3, crystalline and amorphous, triplet excited states 7−70899
As_2Se_3, photoluminescence, thermalisation of excited carriers, band states 7−125792
As_2Se_3 single crysts., photoluminesc., emission and excitation spectra, 4.2 to 20 K *(Japanese)* 7−125768
As_2Te_3-GeTe, phase diagram, stable and metastable phases *(French)* 7−132587
Au/Pb_2CrO_5/SnO_2 struct., contact barriers, photoconducting characts. and band struct. studies 7−92299
$B_xC_yN_x$, graphite-like structure, synthesis and props. 7−69678
$BaBi_{1-x}Pb_xO_3$ semicond.-metal transition using spatially inhomogeneous order-parameter approx. 7−98809
$Ba_{0.5}La_{0.5}Fe_{1-x}Cu_xO_{2.75-(x/2)+\delta}$, struct., oxidation states, elec. props., chem. anal., X-ray diffr., electron diffr., Mossbauer spectra, mag. suscept. meas. 7−84891
$BaPb_{1-x}Bi_xO_3$, metal-semiconductor transition, dimerisation model, Raman study 7−70192
$Ba(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$BaTiO_3$ ceramic, electrical conductivity, effect of excess TiO_2, reduction 7−84880
$BaTiO_3$ semiconducting ceramics, elec. cond. mechanism, extended model 7−137950
$BaTiO_3$:Sb ceramics, resistivity, sintering time depend. 7−76950
$Ba_2YCu_3O_6$, semicond., struct. between 25°C and 750°C, rel. to supercond. $Ba_2YCu_3O_{7-\delta}$ 7−142738
Bi-Sb alloys, thermoelec. power anisotropy in quantising mag. field 7−137969
Bi-Sb semiconducting alloys, thermoelectric power, heavy hole bands 7−112377
$Bi_{12}GeO_{20}$, Fermi level and current transport 7−143606
n-$Bi_{1-x}Sb_x$, photoelectromagnetic effects meas. using computer controlled spectral studies 7−77006
$Bi_{96.6}Sb_{3.4}$, magnetoresist., Shubnikov-de Haas oscills., I-V characts., in high elec. and mag. fields *(Russian)* 7−92206
$Bi_{2-x}Sb_xTe_3$ films, transport props. and valence band edge struct. studies 7−138083
$Bi_2Se_{0.3}Te_{2.7}$, Bi diffusion 7−91888
Bi_2Te:I, micro X-ray analysis of I content 7−84000
Bi_2Te_3 alloy, Seebeck coeff. determ. by potentiometric meas. 7−80813

semiconductor materials continued
Bi_2Te_3 thermoelectric radiation detector with fast response 7−128576
Bi_2Te_3:Ge, incorporation of Ge atoms into host lattice, X-ray diffr. study 7−104795
Bi_2Te_3-Sb_2Te_3 sputtered films, electron irrad.-induced residual cond. meas. 7−138086
Bi_2Te_3-$Sb_2Te_3(Bi_2Se_3)$ thermoelectric materials, vacuum deposition 7−71036
$Bi_2Te_{3-x}Se_x$ alloys, instability to air annealing 7−93218
$Bi_2Te_{3-x}Se_x$ crystals, elastic props., anharmonicity 7−104916
$Bi_2Te_{3-x}Se_x$:$CdCl_2$, plastically deformed, impurity behaviour during recrystallisation 7−91698
CaF_2:Eu, single cryst., excitation spectra *(Japanese)* 7−125766
Cd-Sb, with double-hump nonparabolic band struct., magneto-optics 7−125706
$CdAs_2$, temperature and enthalpy of melting, DSC studies 7−91769
Cd_3As_2, acceptor level broadening with cation vacancy ordering *(Russian)* 7−84767
Cd_3As_2 films, pulsed laser evaporated, elec. props. and lattice parameters 7−71039
CdF_2, obs. of shallow donors, test of Toyozawa impurity self-trapping model 7−92100
CdF_2:Eu^{3+}, tetragonal symm. impurity centre, cryst. field parameters, phenomenological values 7−92122
CdF_2:Y, shallow donor thermal ionisation energy, intra-donor absorpt. spectrum 7−92705
Cd_4GeS_6 films, deposition using discrete thermal and pulsed laser evaporation, struct. 7−76665
$CdIn_2O_4$ sputtered films, scatt. of charge carriers 7−77117
CdP_2, doping, effects of valence and covalent radius 7−69720
Q-Cd_3P_2, colloidal, aq. soln., flash photolysis, optical absorpt. meas. 7−113167
Cd_3P_2 films, growth by hot wall epitaxy 7−138685
Cd_3P_2, Q-state particles, radiation chemistry, small semiconductor clusters quantum state 7−70830
$Cd_{1-x}Pb_xF_2$ crystals, reflectivity in vacuum UV range 7−85763
$Cd_{1.9}Pb_{0.1}SnO_4$ thick films, Burstein effect 7−125824
$Cd_xPd_{1-x}S$ polycrystalline films, photosensitivity, reversible transition between sensitive-insensitive states 7−112394
$Cd(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
CdSb, electron and hole effective masses, localised orbitals method calcs. *(Russian)* 7−98785
CdSb negative magnetoresist. anal., quantum corrections calcs. 7−70331
CoO:In, elec. props. meas., 1270-1470 K 7−137971
$CrVO_4$, elec. transport props. 7−105602
$CsMo_{4-x}O_{12}$, semiconductor, room temp. cryst. struct. resistivity anisotropy 7−69670
CuCl microcrystals, gas-evaporated, exciton absorption 7−143362
CuCl platelets, optical bistability and dielec. function nonlinearities due to biexcitons 7−82701
$CuFeO_2$:Mg(Sn), photoconductivity, band edge positions, optical transitions 7−84990
$(Cu_2GeSe_3)_x(CdSe)_{1-x}$ solid solns., electrophysical props. 7−84879
CuI photocathodes, dye-sensitised, photocurrent quantum efficiency 7−99194
CuO, Cu_2O fine particle layers, elec. props. *(Japanese)* 7−112329
Cu_2O, electrodeposits, optical dispersion meas. 7−138526
Cu_2O films, electrodeposition and characterisation 7−100138
Cu_2O on stainless steel, thin films galvanostatic deposition 7−118315
Cu_2O, phonon hot spot, exciton-phonon lumin. spectrum 7−132319
Cu_2O:Cd, time-dependent hyperfine interactions, TDPAC studies 7−113015
CuS/CuCNS dye-sensitised heterojunction photoelectrochem. cell, quantum efficiency 7−100737
Cu_2S chemiplating on Cd and Cu, stoichiometry and solar cell applic. 7−132507
Cu_2S, formation and charactn. on lipid bilayer membranes 7−105204
Cu_2S/CdS solar cells, dry formation, growth kinetics 7−139118
Cu_2S-CdS solar cells, vacuum deposition and constituent layers eval. 7−139115
Cu_2S-CdS solar cells characts., thermal annealing effect 7−144835
Cu_2S-CdZnS high efficiency thin film solar cells, design criteria, theory and practice 7−133093
Cu_2S-SiO_2-Si heterostructure, switching mechanism 7−70429
Cu_2S-$Zn_xCd_{1-x}Se$ heterostructs., appl. as thin film detectors in SEM *(Russian)* 7−73476
Cu_2S-$Zn_xCd_{1-x}S$ thin film heterojunctions in solar cells, electron microprobe X-ray anal. 7−78631
$Cu_{2-x}S$ phase in ZnS-Cu electroluminophores, anal. by X-ray lumin. 7−85792
$Cu_{2-y}S$-$GaAs_{1-x}P$ heterojunction solar cells, photoelectric characts. 7−114104
Cu_xS topotaxially grown films on sprayed CdS films, growth mechanism 7−100127
Cu_xS-CdS heterojunction form. by photoelectrochem. deposition 7−86782
Cu_xS-CdS p-n junction photocathode in a wet solar cell, quantum efficiency meas. 7−114112
$Cu_{2-\delta}Se$, state below superionic transition temp. 7−69922
$Cu_{2-x}Se$ thin films, chemically deposited, structural, electrical and optical props. 7−106456
Cu_2SnS_3 thin films, photovoltaic characts. 7−143518
FeO_x/Fe interface, current and capacity, computer supported pulse meas. 7−113753
Fe_2O_3-Cr_2O_3-Fe solar spectrally selective surfaces on stainless steel, prep. by chemical conversion 7−86830
γ-FeP_4, cryst. growth from vapour, photosensitive semicond. props. 7−84995
FeSi, anomaly in meg. susceptibility 7−85237
$Fe_xV_2O_5$, low temp. AC and DC susceptibility 7−92418
$(GaAs)_{1-x}(Ge_2)_x$, disordered, mixing enthalpies, pseudopotential calcs. 7−124523
$(GaAs)_{1-x}Ge_{2x}$, epitaxial ⟨111⟩-oriented growth model, long range order 7−98745
$(GaAs)_{1-x}(Ge_2)_x$, metastable semicond., energy band struct. calc. *(Chinese)* 7−124847
$(GaAs)_{1-x}Ge_{2x}$, struct. model, energy gap, consequences of stochastic growth process 7−83923
$(GaAs)_{1-x}(SiC_2{:}H)_{1-x}$ polycrystalline films, MOCVD grown, AC and dielec. props. 7−70438
$(GaSb)_{1-x}Ge_{2x}$, epitaxial ⟨111⟩-oriented growth model, long range order 7−98745

semiconductor materials continued
$(GaSb)_{1-x}Ge_{2x}$ semicond. alloy, struct., electronic and thermodynamic props., role of correlations 7—118396
$(GaSb)_{1-x}Ge_{2x}$, struct. model, energy gap, consequences of stochastic growth process 7—83923
Ge-Si, composite powders, mechanical alloying; SEM and X-ray obs. 7—77882
Ge-Si alloy microstruct. fabrication by direct laser writing, comp. anal. using Raman microprobe spectra 7—119157
Ge-Si alloys, shallow impurity states, local distortion of crystal potential 7—143394
Ge-Si:P, disorder, bound exciton photoluminescence studies 7—70859
$GeSe_2$, chalcogenide semiconductors, vitreous and crysts., struct., IR obs. 7—113207
$GeSe_2$, elec. resistivity, pressure dependence 7—92170
$GeSe_2$:Ag, cryst. and amorphous, electronic struct., photoemission and optical spectra studies 7—105398
$(GeSe_2)Tl_2$, chalcogenide semiconductors, vitreous and crysts., struct., IR obs. 7—113207
GeSi-Si strained layer superlattices, growth using limited reaction processing, struct., TEM, AES, RBS 7—118300
GeSi-Si strained layer superlattices, second order optical suscept., Pockels coeff. calcs. 7—118975
$Ge_{0.2}Si_{0.8}$-Si (001) heterostructure, coherently strained, piezoelec. effect 7—143579
Ge_xSi_{1-x}, electron radiation defect form., near edge IR absorpt. spectra study 7—137407
Ge_xSi_{1-x} system, low temp. phase diagram, solid solubility comp. depend. under press. 7—76395
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7—76677
Ge_xSi_{1-x}/Si (001) heteroepitaxial system, MBE growth, RHEED oscillations 7—100083
$Ge_{1-x}Sn_x$ films, sputter deposition, ion beam collisional mixing, metastable single cryst. growth 7—113386
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., electrical resistivity, scatt. mechanisms 7—76956
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., thermoelec. power and band struct. studies 7—137970
HfS_2, 1T polytype, angle resolved UPS, band struct. 7—92064
HfS_2, indirect absorpt. edge, transmission spectra meas. 7—132298
$HfSe_2(S_2)$ electronic struct. determ. photoacoustic saturation spectra study 7—91736
$Hf_xTi_{1-x}Se$, photoemission and transport studies 7—85943
HgI_2, layered semicond. colloids, size quantization 7—85766
HgI_2, photoelectronic props. 7—112396
In_2O_3, crystn. by vapour phase reaction 7—92845
In_2O_3 films, reactively evaporated, amorphous-to-crystalline transition 7—137759
In_2O_3 semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7—135955
In_2O_3 transparent conducting coating for IR region, activated reactive evaporation 7—86032
In_2O_3:Sn film degradation in H and Ar glow discharge plasmas 7—144634
In_2O_3:Sn thin films, DC sputtered, microstruct. study, annealing 7—105339
In_2O_3:Sn transparent films as IR filters 7—82761
In_2O_3-InP surface barrier structs., photoelectric props. 7—92226
In_2O_3-Si heterojunctions, electron beam induced defects and interfacial reactions during annealing *(French)* 7—125117
In_2S_3, formation and charactn. on lipid bilayer membranes 7—105204
In_2S_3, single crysts., growth from soln. in a melt 7—85979
$In_2S_3(Se_3)$ (Te_3), electric field gradients and regular lattice sites 7—112260
In_xSe_{1-x} thin films, elec. and photovoltaic props. study 7—138085
In_xSe_{1-x} thin films, growth and optical props. 7—144291
$In_{2-x}Sn_xO_{3-y}$ evaporated films, transport props., temp. dependence 7—85156
$In_{2-x}Sn_xO_{3-y}$ films, DC magnetron sputtering, resist. and light transmission *(Japanese)* 7—138657
$In_{2-x}Sn_xO_{3-y}$ in a-Si:H solar cells, failure anal. 7—100735
$In_{2-x}Sn_xO_{3-y}$, ion beam sputtered films, XPS anal. 7—106361
$In_{2-x}Sn_xO_{3-y}$/GaAs near-ideal quasi-Schottky barrier formation 7—125086
$In_{2-x}Sn_xO_{3-y}$/InGaAsP, n-p solar cell on GaAs substrate, conversion efficiency 7—71612
$In_{2-x}Sn_xO_{3-y}$/p-InSe/Au solar cells, elec. and photovoltaic props. 7—139111
$In_{2-x}Sn_xO_{3-y}$/Si photovoltaic junction solar cells 7—119664
Ir_3Si_5, semiconducting silicides, formation and oxidation 7—126346
$La_{1-x}Ca_xCr_yCo_{1-y}O_3$ solid soln., prep. and elec. props. *(Japanese)* 7—124983
La_2CuO_4, electronic struct. calcs. with reference to superconductivity of $La_{2-y}X_yCuO_4$ 7—77132
La_2CuO_4, electronic struct. calcs. with reference to electronically driven instabilities and superconductivity of $La_{2-x}Ba_xCuO_4$ 7—77133
La_2CuO_4, phonon density of states determ. 7—104943
La_2CuO_4, semicond., elec. and mag. props. 7—92179
La_2O_3-NiO-ZrO_2 system, phase relations, materials prep. and elec. props. *(Russian)* 7—124447
La_2O_2S single crysts., optical props. study 7—144007
La_2O_2S:Nd, cathodolumin. study 7—138518
$LaS_{1.4}$, tensile strength and struct. 7—98306
$LiBeH_3$, electronic struct., electron-phonon coupling 7—143339
$Li_xNi_{1-x}PS_3$, Li intercalated $NiPS_3$, struct., conduction mechanism, appl. as secondary battery electrode 7—92183
Mn_3Ge_5, high press. synthesis, cryst. struct., elec. resist., thermoelec. power meas. 7—112334
MoS_2, angle resolved photoemission and electronic band structure 7—138609
$MoSe_xTe_{2-x}$ electrodes for photoelectrochem. solar cells, valence and conduction bands 7—85101
MoX_2 (X=Se,S), electronic struct., band struct. calcs., photoelectron spectra 7—84675
MoX_2 (X=Se,S), electronic struct., nature of optical band gaps 7—84676
$(NbSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7—85701
$((Nb_{1-x}Ta_x)Se_4)_3I$, localisation effect in thermopower and resistivity 7—137930
NiO-Mn_3O_4 mixture, resist. and I-V meas. of Mn_3O_4 and nickel manganite depend. on Mn_3O_4 content, thermistor use 7—143465

semiconductor materials continued
Ni_xTiS_2 intercalation cpd., electron and hole cond., elec. resist., Hall coeff. meas. 7—92214
$Pb_{1-x}Ba_xTe$, MBE growth, diode laser appls. 7—131486
$Pb_{1-x}Cd_xS_{1-y}Se_y/PbS/Pb_{1-x}Cd_xS_{1-y}Se_y$, DH lasers, MBE, pulsed operation 7—74960
PbEuSeTe diode lasers as mid-IR sources 7—74927
$Pb_{1-x}Hg_xTe$, composition depend. of optical and elec. charcts. 7—76997
PbI_2, 2H-polytype, bound excitons, photoluminesc. excitation rate effect, refl. spectra 7—77628
PbI_2, disordered microcryst. prod. from colloidal suspension, Raman obs. 7—85721
PbI_2, exciton luminescence, lux-intensity charcts. 7—77626
PbI_2-aniline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7—76399
PbI_2-hynoline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7—76399
PbI_2-quinoline intercalation compound, phase transition, miniband spectrum, superlattice 7—131306
$Pb(ReO_4)_2$, thermal, dielectric and elec. transport props. 7—104992
$Pb_{1-x}Sr_xTe$, MBE growth, diode laser appls. 7—131486
PbTe-CrTe, quasibinary system, temp. depend. of CrTe solubility 7—92961
Pd complex, K bis(1,2-cyclobutanedione 3,4-dithiolato) palladate, interstack interactions and crystal structure 7—76096
$PdPt(C_2S_2O_2)_2$ bimetallic 1D polymer, synthesis and physical props. 7—99038
$Ps_3(PS_4)_2$, PdPS, PdP_2 and PdS, semiconducting cpds., photoelectrochem. props. 7—105702
Pt complex, $Pt(en)_2$ $Pt(en)_2I_2$ $(ClO_4)_4$, halogen bridged, photocond. studies 7—99129
Pt^{II}-Pt^{IV} mixed valence complex, quasi-one-dimens. soliton-to-band optical absorption 7—106205
PuS(Se)(Te), equations of state, self-consistent energy band calcs. 7—76765
PuS(Se)(Te) relativistic semicond., band struct. calcs. 7—92068
$PuSb_{1-x}Te_x$, elec. resist., Hall effect meas. 7—76938
$RuS_2(Se_2)(Te_2)$, cryst. growth by chem. vapour transport and high temp. soln. growth 7—144252
Ru_2Si_3, semiconducting silicides, formation and oxidation 7—126346
Sb_2S_3 film, space-charge limited cond., dark cond. temp. depend., trap density 7—131817
Sb_2S_3 films, deposited in substrate laser-irradiated zone, structure and morphology 7—112141
Sb_2S_3, vac. deposited films, space charge limited cond. 7—99074
SbSeBr, vapour growth of hollow needles and whiskers 7—76714
Se-Te, interfacial properties, static and time-resolved nonlinear optical props. 7—75052
$Si/Si_{1-x}Ge_x$ heterojunctions, MBE, elec. charcts., cond. band discontinuity 7—77071
Si/SiGe strained layer superlattices, MBE, band offsets, vertical transport meas. 7—77070
Si-$Ge_{0.05}Si_{0.95}$ strained layer superlattice, local distortions, meas. by convergent beam electron diffr. 7—76630
a-Si-$Ge_{0.2}Si_{0.8}$, interfacial superstructure, synchrotron X-ray diffr. study 7—84545
Si-SeGe strained layer superlattices 7—85092
$Si-Si_xGe_{1-x}$ strained layer interface, misfit dislocation struct. 7—143238
SiC, 6H and 3C polytypes heteroepitaxial CVD, Raman spectra study 7—119148
β-SiC (100) epitaxial layers, angle-resolved XPS at 1300 °C 7—113351
SiC, anisotropic and selective reactive ion etching in trifluoromethane and O_2 plasma 7—126349
SiC band struct. and native defect electronic props., tight binding and recursion method calcs. 7—124855
3C-SiC CVD epilayers on Si, internal stresses, Raman scatt. meas., elastic deform. theory calcs. 7—118336
3C-SiC crysts., biexciton luminesc. spectra, binding energy determ. *(Russian)* 7—70910
SiC, cubic, CVD growth on Si(100), antiphase domains 7—113400
SiC cubic single crystal films on Si, growth and characterisation 7—143267
β-SiC, device quality, CVD, on Si-substrates 7—113427
β-SiC, dry etching in fluorinated gases, surface charcts 7—126352
SiC epitaxial layers, grown by temp. gradient zone melting, morphology 7—124752
SiC epitaxial layers grown by temp. gradient zone melting, morphology 7—124751
SiC, fast electron irrad., deep levels, DLTS study 7—104835
β-SiC films, CVD on Si and quartz substrates 7—92884
β-SiC films, epitaxial growth by laser-induced sublimation *(Japanese)* 7—84574
β-SiC films, inclined epitaxy on Si, CVD 7—118290
SiC heteroepitaxial CVD cubic single cryst. growth and elec. charcts. on Si substrates 7—106428
SiC, LPE growth, struct. and electrophysical props. 7—70105
SiC, native defects, electronic struct. calcs., cluster recursion method 7—98920
SiC, neutron irradiated 6H polytype, thermal stability of D_1 defect lumin., influence of growth conditions 7—99902
SiC, nonequilib. phase transitions induced by thermomechanical treatment, obs. 7—131289
SiC, obs. of deep levels, surface treatment 7—105448
SiC p-n structure, voltage limitation studies 7—112472
SiC refractory ceramic, low temp. sp. ht. temp. depend. study 7—118122
SiC Schottky barriers, cathodoamplification 7—143556
β-SiC semiconductor films grown from $SiHCl_3$-C_3H_8-H_2 system, charcts. 7—126004
SiC, sintered, elec. cond., effect of annealing 7—112340
SiC structural and high-press. props., ab initio pseudopot. study 7—104688
SiC, surface and bulk valence band photoemission 7—113349
SiC:Al, ion implanted 4H polytype, p-n junctions, capacitance spectroscopy 7—99177
SiC:B, exciton absorption spectrum 7—70835
SiC:Ga(Al), ODMR studies 7—138351
SiC:H epitaxial films, high temp. luminesc. 7—119035
3C-SiC:N, electrical properties, temp. dependence 7—99227
SiC:N, impurity optical absorpt. spectra, energy struct. of donor 1s states 7—113230

semiconductor materials continued
β-SiC:N films, N doped and undoped, elec. props., temp. depend., CVD grown 7−105735
3C-SiC/6H-SiC MBE growth, elec. props. of p-n junction 7−77823
SiC/Al, 6H polytype, annealing effects on rectifying contacts 7−143554
SiC-Au Schottky contacts, heat treatment effect 7−131733
β-SiC-Fe reactions, Fe_3C interfacial layer, Auger study 7−106316
SiC-Si (100), neutron irradiated, defect study 7−98710
$(SiC)_{1-x}(AlN)_x$ epitaxial layers, deposition and struct. props. *(Russian)* 7−126006
$(SiC)_{1-x}(AlN)_x$ wide gap solid soln., VPE epitaxial growth 7−113417
$(Si_2)_y(GaAs)_{1-y}$ barriers, vacancy enhanced impurity induced layer disordering of coupled stripe $Al_xGa_{1-x}As$-GaAs quantum well lasers 7−110347
SiGe/GaP, heat content, thermal diffusivity, cond. 7−143117
$Si_{0.5}Ge_{0.5}$-Si superlattices, strain induced confinement 7−125090
$Si_{1-x}Ge_x$, long-range order and segregation in semiconductor superlattices 7−105690
$Si_{1-x}Ge_x$, neutron transmutation doped, electrophysical parameters, ϵ_1 cond. 7−84875
$Si_{1-x}Ge_x$, neutron transmutation doped, cond. meas. 7−104768
$Si_{1-x}Ge_x$, struct. phase transitions under press. 7−104981
$Si_{1-x}Ge_x$:Ga, neutron-transmutation doped, galvanomag. props., inhomogeneities 7−105591
$Si_{1-x}Ge_x$:P, EPR study, hyperfine interaction, influence of uniaxial press. 7−143907
SiN_x, nonstoichiometric, electronic struct., soft X-ray emission spectra study 7−125861
$Sm_{0.5}A_{0.5}CoO_3$ (A=Ca, Sr, Ba), perovskite oxide, p-type semiconductor, surface states, gas sensor material appl. 7−85025
SmS semiconducting single crysts., resist. and thermoelec. power meas. 7−76939
SmSb thin films, electrophysical props. 7−70334
SnO_2, electron beam evaporated thin films, electrical and optical props. 7−85155
SnO_2, electronic struct. of O vacancies 7−143547
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
SnO_2 natively textured film for optical confinement-type a-Si:H solar cell 7−70110
SnO_2 photoelectrochemical cells, rhodamine B sensitised, doping effects 7−93513
SnO_2 substrate, for ultrathin tetraphenylporphyrin film, depend. of luminesc. quenching on substrate conductivity 7−106254
SnO_2 tunnel electrode-dye solution interface, acceptor state density distrib. meas. *(Japanese)* 7−131781
SnO_2, wide-gap semicond., acceptors and donors, PAC studies 7−98902
SnO_2:Au(Ir)(Pd)(Pt), gas sensing props., dopant effect *(Japanese)* 7−80773
SnO_2:Cd, time-dependent hyperfine interactions, TDPAC studies 7−113015
SnO_2:F,Na films, optical and elec. props., influence of aging and impurities 7−144146
SnO_2:Sb, high purity, elec. cond. as function of temp. 7−76940
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
SnO_2:Sb films, photo-CVD growth of transparent and conducting films 7−71064
SnO_2/rhodamine dye solution interface, laser-induced photoelectrochem. transients 7−70409
$SnO_2/SiO_2/Si$, spray-deposited solar cells, short-circuit photocurrent v. open circuit voltage characteristics 7−126603
n-SnO_2-n-$CdGeP_2$:In isotypic heterojunction, photoelectric props. 7−131763
SnO_x-Pd MIS capacitor as O_2 gas sensor 7−80765
SnS_2 (Se_2), conduction band states, bremsstrahlung-isochromat studies 7−124824
SnSe-Bi, solid solutions, thermo-EMF, elec. cond. rel. to density 7−92960
SnTe-Bi_2Te_3, metal atom ordering, Mossbauer investig. 7−83877
$Sr(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$(TaSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7−85701
TiO_2 (110), electronic struct. of O vacancies 7−143547
TiO_2 colloid, conduction band electron reduction of acceptor relay species 7−93369
TiO_2 films, n-type semicond., sol-gel prep., photoelectrochemical props. 7−131710
TiO_2 films, thermally grown, elec. cond. 7−105736
n-TiO_2, laser-induced photopot. meas. with or without current doubling reagent 7−99109
TiO_2, sensitisation in visible light region, using Zn porphyrins 7−99193
TiO_2 thin film photoelectrochem. cells, quantum efficiency for back or front side refl. 7−86808
TiO_2:Cr, electrical conductivity, isothermal variations, comparison of doping concentration *(French)* 7−92169
TiO_2:NiO catalyst, NaOH, aq. soln. and coating, photocatalytic decomposition study 7−71523
TiO_2/2-propanol interface, electron transfer dynamics, transient grating investig. 7−92287
$(Tl\text{-}V\text{-}VI_2)_{1-x}(2\text{-}IV\text{-}VI)_x$ solid solns., semicond., energy band struct. 7−84664
Tl_2SnS_3 crystals, growth, photoelectric props. 7−85992
$TmSe_{1-x}Te_x$, semicond. to metal valence transition, high press. low temp. resist. meas. 7−76850
$(U_{0.3}Y_{0.7})O_{2-x}$ semiconducting solid soln. as O_2 sensor 7−115954
VO_2, formation by oxidation of V, kinetics, stability 7−100603
VO_2 thin films, optical contrast at semiconductor-metal transition 7−70927
VO_x, metal-semiconductor transition, optical props. 7−84680
p-WS_2 polycrystalline electrodes, preparation and photoelectrochem. props. 7−105703
WSe_2, electronic struct., band struct. calcs., photoelectron spectra 7−84675
WSe_2, electronic struct., nature of optical band gaps 7−84676
Y-Ba-Cu-O, Raman spectra of high T_c supercond. $YBa_2Cu_3O_7$ and semicond. $YBa_2Cu_3O_6$ 7−125726
YIG:Ca, Ge epitaxial films, elec. props., excitation effects 7−125154
Zn_3As_2, MBE growth on InP or GaAs 7−77822
Zn_3As_2, optical transitions below fund. absorpt. edge, IR spectra 7−92649

semiconductor materials continued
$(Zn_xCd_{1-x})_3P_2$, thermodynamic props. 7−98501
ZnO-SnO_2 mixtures, heat treatment, struct., elec. cond., green luminesc 7−86228
ZnP_2, gyrotropic, Raman light scatt., spatial dispersion effects 7−99818
Zn_3P_2, electrical conductivity 7−70300
Zn_3P_2 film, flash evap., growth morphology and opt. props. 7−100086
Zn_3P_2 films, grown by close space evaporation, props. 7−125993
Zn_3P_2 films, vacuum deposited, structural, optical, elec. charact 7−105737
Zn_3P_2, H_2 passivation, DLTS and Schottky diode studies 7−70243
Zn_3P_2, IR multiphonon and defect absorpt. spectra, heat treatment effec 7−138459
Zn_3P_2 junctions and interfaces, electronic struct. and electrical prop meas. 7−92290
Zn_3P_2, large cryst. growth techniques 7−144250
Zn_3P_2 single crystals, surface chemistry studied by X-ray photoemissio spectroscopy 7−119593
Zn_3P_2 single crysts. and polycryst. ingots, growth and elec. prop 7−85975
Zn_3P_2 thin film Schottky barriers, gap states study by admittance spectro scopy 7−77089
Zn_3P_2 vacuum evaporated films, appl. photoelectrochemical solar cel 7−126636
Zn_3P_2/Mg Schottky barriers, vacuum-deposited, gap states, admittanc spectroscopy 7−112434
$Zn_3P_{2(1-x)}Sb_{2x}$ thin films prep. by hot-wall deposition, elec. props. stud 7−125155
ZnSe-MnSe-ZnSe heterojunctions, valence band discontinuities, UP meas. 7−112445
ZrO_2-Er_2O_3 system, elec. cond. meas. 7−85018
ZrS_2 electronic struct. determ. photoacoustic saturation spectra stud 7−91736
ZrS_2, indirect absorpt. edge, transmission spectra meas. 7−132298
nZrS_2, photoelectrochemistry in aqueous solutions 7−71625

semiconductor-metal boundaries
see also Schottky-barrier diodes
breakdown investigations 7−85112
fluctuation excess currents, temp. depend., calc. 7−131782
n-GaAs:Be^+ Schottky barrier height enhancement by ion implantatio electrostatic model anal. 7−99159
interface phenomena rel. to device behaviour, book contrib. 7−85051
ion mixing, moving species 7−98265
IR absorpt. from adsorbed CO molecules 7−85670
magnetoplasma modes in thin films in the Faraday config. 7−98820
metal films evaporated on Si and SiO_2, ion modification of prop 7−91673
metal-semiconductor random heterostructures, Cu, Ag, Au embedde particles, microstructures for IR detection 7−132290
metallophthalocyanine crystal thin films, electronic conductivity 7−99231
ohmic contacts, specific contact resist. determ., effects of non-zero met resist. and metallisation *(Chinese)* 7−125125
photodoping process modelling, three-layer struct. and optical const *(Russian)* 7−137384
radiation ordering, surface enhanced in semicond. structures 7−104809
recent advances in metal-semiconductor interfaces 7−112493
Schottky barrier, C-V characts., effect of Debye shielding 7−70379
Schottky barrier diode metal-semicond. interface state spectrum distortio due to nonequilib. occupancy 7−92291
Schottky barrier heights, at semiconductor alloy-metal interfaces, allo disorder effects 7−125078
Schottky barrier solar cells, effects of inhomogeneity 7−78633
Schottky barrier structures, quantum efficiency of photocurrent 7−77042
Schottky contacts, virtual gap states, present understanding 7−105661
Schottky contacts on Si, barrier heights, press. depend. 7−105656
Schottky diodes, photocurrent polariton peak, optical const. effec 7−105659
Schottky-barrier solar cell characts. *(Russian)* 7−78635
semiconductor interfaces, conf., Manchester, England (April 198 7−108048
silicide films and double heterostructures on Si, template growth techniqu in UHV 7−86021
stochastic auto-oscillations in cond. 7−143611
superlattices, with adsorbed diatomic mol. layer, IR adsorpt. stud 7−99849
surface barrier structures, getter mechanism of defects 7−125115
surface-layer ohmic contacts, specific resist. calc. computer mod 7−85109
thin film diffusion barriers 7−111979
transition metal silicide films on Si, epitaxial growth, props. and applica tions, review 7−86022
virtual gap states and defects role in metal-semiconductor contac 7−105707
Ag/Si (111) interface, bonding characteristics identified by energy depe dence of the photoionisation cross section 7−70100
Ag-Pt/ZnTe stable ohmic contacts, fabrication and expt. study 7−14361
Al (111)/Si (111) interface, ionised cluster beam deposited, structur channelling study 7−92005
Al-GaSb interface, thin film reactions 7−86680
Al-InSb (110) interface, exchange reaction clustering and surface segreg tion 7−138601
Al-Si (100), Schottky barrier formation using nozzle jet beam depositio 7−77802
Al-Si:H Schottky diodes, effects of H ion implantation on elec. charact 7−105704
a-As_2S_3/metal structure, photodissolution processes 7−84286
a-As_2Se_3-Al contacts, current transient studies 7−143614
Au/GaAs, sputtering-controlled ion mixing 7−91664
Au/Si interface, low-temp. elec. characts. 7−99201
Au-Cu/ZnTe stable ohmic contacts, fabrication and expt. stud 7−143612
Au-Ge/Ag/Au ohmic contact on GaAs, elec. props. *(Korean)* 7−85108
Au-Si interface, TEM specimen heating during ion beam thinning, micro struct. instability 7−130994
Au-Sm-GaAs (110) interface, chemical trapping and modification, photo mission study 7−138602
Au-ZnO, interaction with He and Ne metastable atoms, effects on ele tron emission and cond. 7−92295
AuGe-GaAs, ohmic contacts, Auger electron and X-ray spectroscopic an 7−77704

emiconductor-metal boundaries continued
CO−Si interface, Ar ion bombardment induced mixing, interfacial oxide effects 7−69782
$CaF_2/CoSi_2$/Si (111) epitaxial insulator-metal-semiconductor structures, rapid thermal annealing 7−84549
CaF_2-MSi_2-Si (111) structs. (M=Co, Ni), MBE growth 7−144285
$Cd_xHg_{1-x}Te$-metal contacts, electrophysical props. 7−99197
CdS-Au, exciton reflection spectra, influence of Schottky barrier field 7−143357
CdSe:O/Au Schottky diodes, struct. and elec. props., O effects 7−105655
CdTe-Mn(Cr)(V), Schottky barriers and interface reactions 7−131735
Co/Ti interface system, ion beam mixing, layer struct. and composition 7−76640
$CoSi_2$ and $CoSi_2$/Si heterostructures, growth on Si(111) 7−143294
$CoSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
Cu-Pt/ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
Cu-ZnO system, effect of H_2 chemisorption on IR transparency 7−85673
Fe-Ta thin film multilayers on Si, sputter depth profiling with LEIS and LENRS 7−84559
FeO_x/Fe interface, current and capacity, computer supported pulse meas. 7−113753
GaAs (110), epitaxial growth of Fe, electronic struct. and interface formation 7−70146
GaAs (110), oxidation enhancement by mixed valence SM overlayers 7−71420
GaAs (110)-Na Schottky diodes, elec. props. 7−138065
n-GaAs, Au-Ge-Ni ohmic contact metallisations 7−125126
GaAs contact for meas. in diamond-anvil cell 7−121142
GaAs interfaces, unified defect model, appl. to ICs, book, contrib. 7−85110
GaAs, ohmic contacts, interfacial resist., flange correction formula 7−85105
n-GaAs, ohmic contacts, selective form. 7−85103
GaAs refractory-metal contacts research in microelectronics under RUI and IBM research grants 7−112491
GaAs Schottky barriers, LEC and horizontal Bridgman grown, electron trap and free carrier concs., annealing effects 7−99200
GaAs:Sn, MBE grown, low resist. nonalloyed ohmic contacts 7−131783
n-GaAs/Al Schottky diodes, surface plasma-enhanced internal photoemission 7−118550
GaAs/Au layer structs., ion beam mixing, struct. and elec. props. 7−76242
GaAs/Au Schottky diode, semicond. surface minority-carrier trap levels, DLTS study 7−112489
n-GaAs/Au tunnel junctions photo-resistive effect during plasma refl. of laser light 7−70413
GaAs/AuGe-Ni ohmic contact form. by scanned electron beam alloying 7−105708
GaAs/Co interface, cpd. form., AES, TEM and X-ray diffr. studies 7−98712
n^+-GaAs/MGe, M=Au, Ag, Al, ohmic contacts, laser/furnace annealed, resistance, surface morphology study 7−143613
GaAs/metal contacts, effect of reflecting contacts on high-field transport 7−143609
GaAs/metal contacts, interface reactions and elec. characteristics 7−125121
GaAs/metal thin-film systems, phase stability and film morphology 7−143240
GaAs/Pd/Ge nonalloyed ohmic contacts by solid phase epitaxy 7−143637
GaAs/Sn, ion beam mixing, ballistic and radiation enhanced regimes 7−76241
GaAs-Ag, surface polariton excitation, photoresponse influence 7−112198
GaAs-Al, ballistic barrier photoEMF 7−118535
GaAs-Al Schottky barriers, sputter induced damage, elec. props. 7−112490
GaAs-Al Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-Au, picosecond temporal resolution photoemissive sampling 7−125903
GaAs-Au atom profiling, use of angle-dependent photoemission 7−119106
GaAs-Au based ohmic contacts, improved morphology using CVD SiO_2 cap layer 7−85104
GaAs-Au interface, atom distrib. profiles, polar angle depend. XPS study 7−118284
GaAs-Au interface, field emission microscopy study *(French)* 7−124738
GaAs-Au Schottky barrier contacts on different substrates, electronic and optoelectronic charactn. 7−92251
GaAs-Au Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-Au system, As desorption and interaction reactions during thermal annealing 7−92006
GaAs-In-Pd, ohmic contact formation by metallisation 7−125122
GaAs-InAs structures, in situ contact form. 7−143582
GaAs-LaB_6 interface, Schottky barrier formation, thermal stability, XPS study 7−77090
GaAs-metal contacts with TiN diffusion barrier, solid-phase reactions 7−105157
GaAs-metal Schottky contacts, elec. charactn. 7−92250
GaAs-metal structs., ohmic contact resist. 7−105709
GaAs-Mo interface, structural change after 500°C annealing, high resolution TEM, electron diffr. studies 7−76631
GaAs-Mo(Ta) Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
GaAs-$Ni_{60}Ta_{40}$, interfacial reactions, phase separation 7−143111
GaAs-Ni(Pd)(Pt), interfacial structures, compositions and reaction morphologies, TEM and RBS studies 7−98716
GaAs-refractory metal nitride contacts, thermal stability and barrier height enhancement 7−70412
GaAs-Ti (Cr), interface movement, temperature dependent reaction 7−124732
GaAs-$TiSi_2$ Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-Y interface chemistry, Schottky barrier formation 7−85046
GaAs(110)-Sb interface, influence of annealing, PES study 7−125919
GaP-Au, interaction during heat treatment in vacuum 7−131404
GaP-In(Al)(Ge)(Cu)(Au), near ideal Schottky barrier formation, XPS study 7−106354
Ge/metal systems, ion mixing, moving species 7−76502
p-Ge/Ni contact with radial charge carrier flow, elec. props. 7−92293
Ge-Fe interface electronic struct. and mag. effects 7−118835
HgCdTe-Ti interfacial reactions, $TiTe_x$ form., Hg and Cd depletion, photoelectron spectra study 7−118279
In-$Cd_{0.2}Hg_{0.8}Te$, deterioration of contacts 7−105706
p-InGaAs, use of Ni_2P as ohmic contact and diffusion barrier 7−105705

semiconductor-metal boundaries continued
n-$In_{0.53}Ga_{0.47}As$/Al(Nb) diodes, Schottky barrier heights 7−70377
InP (110), Schottky barrier heights, electrical study 7−85045
InP (110)-Ag (Al) Schottky contacts, effect of Sb interlayers 7−131784
InP contact for meas. in diamond-anvil cell 7−121142
InP, ohmic contact form. by Nd:YAG laser alloying *(Chinese)* 7−77091
n-InP, ohmic contact form., optimal annealing technique 7−77092
n-InP, use of Ni_2P as ohmic contact and diffusion barrier 7−105705
InP:Si-AuGe/Ni/Au rapid thermal alloyed ohmic contact, elec., structural and metallurgical props. 7−138006
InP/AuZn system, ion implanted, contamination layer and ohmic contacts 7−84539
InP/Ni interface, amorphous and crystalline ternary phase form. 7−98711
InP-Ag Schottky barrier characts. change with time 7−112429
InP-Au, spreading of Au dots on InP surfaces, reaction kinetics 7−131371
InP-In contacts, elec. transport, LO phonon oscills., electron freeze-out 7−125124
InP-Sn contacts, elec. transport, LO phonon oscills., electron freeze-out 7−125124
InSb/Ag system, Ag ultrathin films, cryst. modification, LEED studies 7−112140
InSb-Au, atom profiling, use of angle-dependent photoemission 7−119106
MoS_2-metal interface, Schottky barrier formation without Fermi-level pinning 7−138064
Ni/GaP Schottky barrier diodes, current flow mechanism study *(Russian)* 7−99205
Ni-Ta structure on Si, ion-beam mixing, ballistic effects 7−76217
Ni-ZnSe-Ge structures, photoelec. props. 7−105620
NiGa on GaAs, epitaxial thermodynamically stabilised metal/III-V semiconductor interface 7−138063
$NiSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
$NiSi_2$/Si high quality epitaxial films grown by MBE, Schottky contact props. 7−76680
$NiSi_2$-Si, thin epitaxial layers, cond. and mobility 7−138076
$NiSi_2$-Si (111), cryst. intermediate phases in epitaxial layer formation 7−137748
PdGe-GaAs, ohmic contacts formed by solid phase epitaxy 7−85102
Pt/Si(Si:As), interface, growth kinetics and microstructure of Pt_2Si and PtSi 7−76698
Pt-Si contacts, interfacial PtSi formation, P diffusion and defect modification 7−124605
Pt-Si reaction, silicide formation, elec. meas. 7−99195
Pt-ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
PtSi-Si (111) interface and epitaxial growth of PtSi and Si (111), electron microscopy 7−76643
α-Rh_2As/GaAs, metal/semiconductor epitaxial structures *(French)* 7−131498
p-RuS_2-aqueous electrolyte interface, impedance and photoelectrochem. props., effect of metal deposition 7−118583
a-Se, crystallisation caused by Al diffusion through Se-Al interface *(Japanese)* 7−83673
Si (100)/Ti-W interface, Schottky barrier height 7−112427
Si (111), oxidation enhancement by mixed valence SM overlayers 7−71420
Si (111)-Ga, surface core level shifts 7−125927
Si (111)-Ti interface, silicide formation, Schottky barrier formation 7−84404
Si (111)$\sqrt{3}\times\sqrt{3}$-Ag surface, photoelectron spectra, surface and core-level shifts 7−85949
n-Si electrode, Pt, island coated, photovoltage generation 7−114097
Si photoelectrodes, metal coated, solar energy conversion appls. 7−106915
Si Schottky barrier modification by low energy H implantation 7−83995
Si:As/Pt interface, silicide form. by ion mixing 7−76240
Si:B-Ag(Al)(Ni), vacuum annealed surfaces, elect. props. 7−138004
Si:B-W, W CVD, reduction of Si p^+-n interfacial tunnel defects 7−138062
a-Si:H-Al film, low temp. crystallisation, Auger, X-ray diffraction 7−143250
a-Si:H-Al interface, energy band struct., voltage depend. internal photoemission study 7−85942
a-Si:H-Au, Schottky barriers, barrier height temp. dependence 7−125075
Si:H-Ge:H/Pt Schottky barrier with amorphous superlattice, junction props. 7−70378
a-Si:H-Pt, Schottky diode, photoelectric characteristics 7−85048
a-Si:H-metal contacts, current transport mechanisms 7−85106
Si:O/Al system, electron diffusion length improvement by gettering 7−125012
Si:P(As)/Ti interface disilicide form., growth rate dopant conc. depend., depth profiling, sheet resist. and TEM studies 7−118173
Si:Sb Schottky barriers and shallow p-n junctions, form. by Sb recoil implantation, phys. and elec. props., annealing temp. effect 7−112432
n-Si/Al contacts, elec. characteristics, Ar^+ ion bombardment effects 7−112488
Si/Au/Ag system, interactions, Auger spectra studies 7−112109
Si/Au-Nb system, resistance decrease and diamagnetism increase above 77 K 7−70432
Si/Co interface system, ion beam mixing, layer struct. and composition 7−76640
Si/$CoSi_2$ epitaxial structures, MBE, Si overgrowth, permeable base transistor appl. 7−77818
Si/Cr bilayers, Cr^+ ion irrad., silicide form., annealing effects 7−76237
Si/Cr interface, ion-induced reactions, ion channelling studies 7−78545
Si/Cr interface, silicide form. on annealing, electronic and struct. props. 7−84541
Si/Fe interfaces, ion beam mixing, Mossbauer spectra studies 7−76238
α-Si/metal contact characts., generation-recomb. current anal. *(Russian)* 7−77093
Si/metal interface reactions, high energy ion scatt./channelling studies 7−113998
Si/metal systems, ion mixing, moving species 7−76502
Si/Mo interface, $MoSi_2$ form. by ion beam mixing 7−76239
Si/Ni thin films, stacking faults and F bubbles, dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
Si/Pd_2Si system, struct. props., scanning tunnelling microscopy and PES studies 7−76648
Si/Pt interface, heat treatment form., XPS investigation 7−131460
Si/Ti, iron beam mixing, thermal oxidation studies 7−78359
Si/Ti interface, TiSi silicide form. by ion beam mixing 7−76641
Si/Ti thin layer systems, ion implantation and struct. 7−137419

semiconductor-metal boundaries continued
Si-Ag, tailored microstructures for IR detection 7−132290
Si-Al laser implanted structs., I-V and C-V characts. 7−99196
Si-Au-M (M=Pt,Fe,Co,Mo,Ni), thin film reactions, selectively enhanced silicide formation 7−137629
Si-Co interface form., struct., high resolution core level photoelectron spectra study 7−105297
Si-Cr Schottky barriers, forward bias current flow behaviour 7−85042
a-Si-metal contact, space charge region, tunneling 7−125123
Si-metal interface form., review 7−112110
Si-$NiSi_2$ interface, effects of Si surface defects on $NiSi_2$ orientation during deposition, LEED, AES studies 7−112095
Si-Pd interface, phase comp., Si Auger spectrum intensities meas. 7−106856
Si-$TaSi_2$ eutectic composite structures, DLTS studies 7−112487
Si-$TaSi_2$ semiconductor-metal eutectic composites, in situ junctions, charge collection SEM study 7−92288
Si-Ti system, silicide form. under thermal and laser annealing *(Chinese)* 7−105153
Si-$TiSi_2$:C interface, C implantation to stabilise $TiSi_2$ during thermal annealing 7−83990
Si-WSi_2-SiO_2 structure, dopant redistrib. modelling 7−91628
SiC/Al, 6H polytype, annealing effects on rectifying contacts 7−143554
SiC-Au Schottky contacts, heat treatment effect 7−131733
Ti/Si sputtered multilayers, Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti/Si:As silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
$TiSi_2$ formation by ion beam mixing, effect of implant and rapid thermal annealing temps. *(French)* 7−124353
$TiSi_2$ thin film form. by high temp. solid state interaction *(Chinese)* 7−105152
$TiSi_2/p^+n$ Si junctions, elec. props., post-silicidation annealing effects 7−143610
W photochemical deposition on InP, (Ga,In)As and GaAs for ohmic contacts 7−92883
W:F-Si contact structs., LPCVD formed, F conc., thermal stability, silicide formation 7−106424
W/Si/GaAs contacts, Schottky characts. and chemical interdiffusion, Si layer effects study 7−131734
W-WSi_x-Si contact structs., charactn. under thermal annealing 7−124737
ZnO-Au contacts, metastable He(Xe) atom interactions, adsorption effects 7−113337
Zn_3P_2 junctions and interfaces, electronic struct. and electrical props. meas. 7−92290
Zn_3P_2/Mg Schottky barriers, vacuum-deposited, gap states, admittance spectroscopy 7−112434
ZnSe/Al/Ge heterojunction with monolayer intralayer, tight-binding calcs. 7−99203
ZnTe-Ohmic contact systems, contact resist., high temp. behaviour 7−92292

semiconductor-metal-semiconductor structures *see semiconductor-metal boundaries*

semiconductor-metal transition *see electrical conductivity transitions; metal-insulator transition*

semiconductor processing *see semiconductor technology*

semiconductor quantum well lasers *see semiconductor junction lasers*

semiconductor quantum wells *see semiconductor superlattices*

semiconductor storage
see also integrated memory circuits
GaAs-AlGaAs 2D electron gas structs., OMCVD growth 7−92889
Ge-S-In(Ga) glasses, appls. in microelectronics and optics 7−103915

semiconductor storage devices *see semiconductor storage*

semiconductor storage systems *see semiconductor storage*

semiconductor superlattices
amorphous, multilayered, periodic and quasiperiodic superlattices 7−143589
amorphous semiconductor, modulation doped, carrier motion under static elec. field *(Chinese)* 7−105674
artificially structured thin-film materials and interfaces 7−113397
asymmetrical superlattices, rectification props., THz wave detection 7−138020
band bowing, effective mass model, appl. to AlAs-GaAs system 7−112182
band struct. model 7−102052
bound and virtual energy spectrum calcs. 7−70383
carrier capture, direct and indirect, by semiconductor quantum wells 7−85086
CdTe-$Hg_{1-x}Zn_xTe$, Hg-based superlattices, properties and growth *(Polish)* 7−132474
characterisation using TEM 7−75950
characterisation using X-ray Buerger precession camera 7−97857
charge density excitations dispersion relation calcs. 7−143574
classical magnetoactive semicond.-insulator superlattice, reson. and absorpt. based 7−106313
double barrier quantum well structures, transport mechanism, freq. limit 7−77068
electron capture rate by wells, determ. 7−138054
electron gas, 2D, dispersion relation of surface plasmons 7−77074
electron mobility due to alloy disorder 7−138036
electron-phonon interaction *(Japanese)* 7−76324
electronic and phonon Raman scatt. 7−106193
envelope functions derived from Bastard model, continuity conditions 7−138040
exciton linewidths, temp. depend. 7−84692
femtosecond lasers and ultrafast processes 7−82569
GaAs-AlGaAs, quantum well struct., electro-optic effect, room temp. 7−144029
graded gap quantum well, enhancement of quantum confined Stark effect 7−125694
heavily doped, optical props., plasma wave effects calcs. 7−144004
helicon waves under quantum Hall effect conditions 7−138038
heterojunction mobilities determ. using mag. field depend. Hall technique 7−70390
heterostructures, boundary conditions for envelope fn. approaches 7−85087
heterostructures and quantum wells, image force effects, determ. 7−85089
high frequency conductivity with electron-phonon coupling 7−105686
high mobility, Raman spectra, constant current effect 7−92654
high-field transport, theory 7−92273

semiconductor superlattices continued
II-VI semiconductors, IR detection appls., growth and props. *(Spanish)* 7−116009
III-V cpds., internal stress, effects on thermal stability, Raman study 7−106195
III-V quantum well structs., high carrier densities, photolum. studies 7−106270
III-V semiconductor epitaxial layers, MOCVD growth 7−71071
III-V semiconductor interface microcharactn. methods 7−70406
III-V semiconductor layers, MBE grown, charact. by SIMS 7−84008
III-V semiconductor layers and devices, metalorganic CVD growth on S using strained superlattices 7−86057
III-V semiconductor superlattices, IR photodetector appl. 7−67391
III-V semiconductor ternary alloys, mixing enthalpies, pseudopotentia method 7−84292
III-V semiconductors, impact ionisation in high elec. fields, review 7−92189
III-V semiconductors, MBE, computer simulation, lattice matched inter faces 7−143263
III-V semiconductors, MBE, computer simulation, lattice matched inter faces 7−143264
III-VI semiconductor quantum wells, magnetoexcitons theory 7−125106
inelastic light scattering by free carriers 7−85100
infinite superlattice, plasmon polariton dispersion and damping 7−137807
integral Landau level filling, magnetoplasma modes 7−124898
intersubband lumin. of quantum well structs. 7−132311
inverted band quantum wells, gap subbands, k.p model 7−85071
IV-VI semiconductor epitaxial films, for IR detector technology 7−132471
IV-VI semiconductors, high field effects, magneto-optical methods 7−132246
lattice-mismatched interfaces, energetics, determ., epitaxial growth, roles of axial commensuration and strain 7−118285
light absorpt. in presence of strong electric fields 7−144016
localisation and interaction in disordered metals and doped semiconductors, Summer School, St. Andrews, Scotland (July-Aug. 1986) 7−108004
MBE, conference, Cambridge, MA, USA (Oct. 1986) 7−128174
MBE artificially layered struct., automatic process control 7−138663
MBE using RHEED intensity oscillations *(Japanese)* 7−125996
MOVPE, novel reactor and charactn. of multilayer structures 7−104499
MOVPE of multilayer structures with III-V semiconductors 7−105683
MQW laser diode array development progress 7−68703
multilayered materials, polariton struct. and spectral reflectance 7−76782
multilayered piezoelectric semiconductors, SAW propagation, acoustoelectric interaction 7−85011
multiple quantum well systems, CDW states 7−137823
multiquantum well structs., cyclotron resonance linewidth due to electron-phonon interaction 7−125089
multiquantum well structures, impact ionisation enhancement 7−112450
multiquantum well structures, magneto-phonon scattering 7−131779
n-i-p-i doping superlattices, physics and applications 7−99176
narrow gap low dimens. structures, electronic energy levels *(Polish)* 7−131768
narrow gap semiconductor superlattices, CARS obs. 7−85698
nonlinear balance eqns., hot electron transport with finite phonon relax time 7−84909
optical bistability model of quantum-well-self-electro-optic-effect device 7−123063
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
photoreflectance of GaAs doping superlattices 7−99175
plasmon dispersion relations 7−143387
plasmon polaritons, dispersion and damping props. 7−143596
polar semiconductors, collective excitations in superlattice structs., electron energy loss, sensitivity to outermost layer 7−85911
polariton damping in finite semicond. superlattices 7−70207
quadratic electro-optic effect due to quantum-confined Stark effect 7−113133
quantum effect devices, review *(Japanese)* 7−118581
quantum heterostructures, interband lumin., anal. 7−132313
quantum superlattices, nondissipative thermomag, effects study 7−143493
quantum well, hot electron reson. tunnelling spectroscopy 7−112475
quantum well electroabsorption, strong electric field, continuum spectrum approach 7−77512
quantum well structs., quasi-one-dimensional, electronic therm. cond 7−138037
quantum well structs., two-photon absorption 7−85579
quantum wells, band nonparabolicity effects 7−118567
quantum wells, binding energy of exciton, effect of heavy-light hole coupling 7−138046
quantum wells, nonlinear interactions and excitonic effects 7−82697
quantum wells, photolum. efficiency, oscillatory variation 7−85837
quasi-2D semiconductor quantum well structs., quantum theory of thermo power 7−76990
quasiperiodic superlattices, interface polariton modes 7−124875
Raman scattering from phonons 7−85692
research on layered semiconductor structures 7−105682
resonant dechannelling in semiconductor superlattice 7−118001
RF quantum Hall effect, helicon wave propag. 7−125019
saddle point excitons, interband absorption spectra 7−137803
semi-infinite, electron-phonon interactions 7−137813
spatial bunching of electrons 7−112452
strained layer semiconductors, growth and defects 7−138019
strained layer superlattice, band struct. engineering for maximal light-hole behaviour 7−99189
strained layer superlattice, optical props. along (111) growth axis 7−106206
strained-layer superlattices, (111) growth axis, nonlinear optical response 7−136401
strained-layer superlattices, device appl. 7−138018
strained-layer superlattices, molecular dynamics simulation of growth 7−124783
strongly-coupled quantum wells, electron states, reciprocity and variational formulations 7−131752
tight binding band struct. calcs., inclusion of spin-orbit coupling 7−92050
type I, dynamic cond. magnetoplasma reson., memory function MHD anal. 7−138061
type I, electron-hole liquid 7−70197
type-I superlattice, high-frequency resistivity, temp. depend. 7−70401
ultrasmall quantum well boxes, electronic struct. calcs., multielectron effective mass Schrodinger eqn. 7−138033

semiconductor superlattices continued
ultrathin-layered, electronic struct. and props. 7−105676
undamped helicon, low-freq. EM wave spectrum calcs. 7−84962
variably spaced superlattice energy filter, appl. to devices 7−85093
$In_{0.15}Ga_{0.85}As$/AlAs superlattices, acoustic phonon stop bands, imaging 7−112052
a-Si:H-a-SiN_x:H superlattices, transfer doping, electron trapping, effect of a-SiN_x:H comp. 7−99212
(Al,Ga)As-GaAs MQW planar waveguides, optical props., reactive ion etching of rib waveguides and directional couplers 7−117350
(Al,Ga)As-GaAs MQW DH optical waveguides as electroabsorpt. modulators 7−136501
AlAs/GaAs heterostructures, low temp. growth by modulated MBE 7−125990
AlAs/GaAs superlattices, mixing caused by multiple implantation of Be and Ge 7−91665
AlAs-$Al_xGa_{1-x}As$ quantum wells, two-dimensional magnetotransport 7−125018
AlAs-GaAs direct-indirect heterostruct., polynomial kinetic energy approx. 7−84646
AlAs-GaAs structures, minority carrier retention 7−143580
AlAs-GaAs superlattice, DX-centre elimination, appl. to 2DEGFETs 7−77077
AlAs-GaAs superlattices, thin-layered, resonant Raman scatt. 7−113165
AlAs-GaAs superlattices, electronic struct. calcs., full pot. linearised APW method 7−138052
AlAs-GaAs thin layer superlattices, photorefl. and low temp. photolum. 7−70922
AlAs-GaAs triple barrier diodes, resonant tunnelling of holes 7−85055
AlAs-GaAs:Si superlattices, Si-induced intermixing 7−111976
$(AlAs)_{0.5}(GaAs)_{0.5}$ fractional layer superlattice, growth on (001) vicinal surfaces by MOCVD 7−112116
$(AlAs)_m(GaAs)_m$ superlattices, ultrathin-layer, MBE growth 7−100074
$(AlAs)_m(GaAs)_n$ ultra-thin superlattices, Raman scatt. and photoluminescence meas. *(Japanese)* 7−85662
AlGaAs heterostruct. with quantum-well layers, LPE growth 7−106452
AlGaAs, high quality, quantum wells, low temp. MBE growth, mobility and photolum. obs. 7−71022
AlGaAs quantum wells, photoluminescence switching in elec. field 7−138495
AlGaAs:Zn, Te-GaAs:Zn, Te, superlattice surfaces, simultaneous Zn, Te diffusion, appl. for quantum well lasers 7−105142
AlGaAs/GaAs interface, interdiffusion in quantum well 7−124603
AlGaAs/GaAs MQW structure, MOCVD grown, nonlinear absorption 7−90727
n-AlGaAs/GaAs modulation-doped heterostruct., low-field galvanomag. transport, model anal. 7−118575
n-AlGaAs/GaAs modulation-doped heterostruct., low field galvanomag. transport model predictions 7−118576
AlGaAs/GaAs multiquantum wells, Si-doped, Be implantation and diffusion 7−137725
AlGaAs/GaAs quantum wells, OMCVD grown, carrier confinement and luminescent props. 7−131750
AlGaAs/GaAs structures, MBE growth, compositional gradient control, RHEED oscills. 7−71014
AlGaAs/GaAs TJS lasers, fabrication on Si substrate by MOCVD, superlattice layers 7−122976
AlGaAs-GaAs, modulation-doped heterojunction, organometallic VPE for microwave appls., expt. charactn. 7−84582
n-AlGaAs-GaAs, modulation doped quantum wells, optical modulation and switching 7−125762
AlGaAs-GaAs, multi quantum well laser, index guided, Si induced disordering 7−141893
AlGaAs-GaAs, quantum well, coupled states 7−143600
AlGaAs-GaAs heterojunction, effect of buried superlattice on dynamic storage of electrons 7−118558
AlGaAs-GaAs heterojunction quantum wells, analytical models 7−138045
AlGaAs-GaAs heterostructure on GaAs (110), MBE growth and props. 7−71026
AlGaAs-GaAs heterostructures, MBE growth with interruption at interfaces, optical props. 7−143272
AlGaAs-GaAs laser material, valence-band discontinuity determ. 7−124858
AlGaAs-GaAs selectively doped heterostructures, strong electric fields, longitudinal electron transport 7−112343
AlGaAs-GaAs single quantum wells, migration-enhanced epitaxy, photolum. study 7−119033
AlGaAs-GaAs superlattices, focused Si ion beam implantation, compositional disordering, submicron grating fabrication 7−98718
AlGaAs-GaAs:Se(Mg) quantum well heterostructs., doping effects, thermal annealing and photolum. meas. 7−143573
AlGaAs-GaAs:Si implanted superlattices, compositional disordering, effect of rapid thermal annealing 7−71211
AlGaAs-GaAs-AlGaAs quantum wells, island formation at interfaces upon growth interruption 7−84544
AlGaAs-$In_xGa_{1-x}As$ double barrier structs., resonant tunnelling 7−138051
$Al_xGa_{1-x}As$:Si/GaAs:Si heterostructures, impurity-induced layer disordering via diffusion 7−70091
$Al_xGa_{1-x}As$/GaAs heterostruct., Al-Ga interdiffusion, dielec. encapsulation and As overpress. effects study 7−69990
$Al_xGa_{1-x}As$/GaAs heterostruct., electron energy loss rates at low temps. 7−118572
n-$Al_xGa_{1-x}As$/GaAs MQW heterostructs., interband magneto-photolum. spectra study 7−138435
$Al_xGa_{1-x}As$/GaAs superlattices, ion implantation induced damage, RBS studies 7−83988
$Al_xGa_{1-x}As$-AlAs-GaAs:Si selectively doped MQW heterostructs., electron mobility, influence of AlAs spacer 7−92263
$Al_xGa_{1-x}As$-GaAs coupled quantum wells, Stark effect 7−106136
$Al_xGa_{1-x}As$-GaAs multilayers for superlattice MODFETs, electronic subbands and high field transport 7−143584
$Al_xGa_{1-x}As$-GaAs quantum wells, MBE growth on GaAs (331) substrate 7−143279
$Al_xGa_{1-x}As$-GaAs superlattices, intermixing by pulsed laser irradiation 7−111975
$Al_xGa_{1-x}As$-GaAs superlattices, tunneling cyclotron reson. studies 7−137788
AlInAs-GaInAs quantum wells, optical spectra, atomic scale struct. 7−138508
AlInAs-GaInAs selectively doped heterostructs., MOCVD growth, appl. to HIFETs 7−112478
$Al_{0.48}In_{0.52}As$-$Ga_{0.47}In_{0.53}As$, resonant Zener tunnelling between valence and conduction band quantum wells 7−138012
$Al_{0.48}In_{0.52}As$-$Ga_{0.47}In_{0.53}As$, superlattice avalanche photodiode, impact ionization 7−143604
Bi_2Te_3:Ge, incorporation of Ge atoms into host lattice, X-ray diffr. study 7−104795
CdMn Te, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
CdMnTe-CdTe:In doped superlattices, growth by photoassisted MBE, physical props. 7−77803
$Cd_{1-x}Mn_xTe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Cd_{1-x}Mn_xTe$-CdTe, superlattice, photoassisted MBE, substitutional doping 7−132472
$Cd_{1-x}Mn_xTe$-CdTe superlattices, UV excited photolum., Raman scatt. 7−85787
CdS amorphous monolayer and multilayer structures, persistent photocond. 7−84987
CdS-ZnO, transverse acoustic waves in piezoelectric superlattices 7−77061
CdTe-$Hg_{1-x}Cd_xTe$, Hg-based superlattices, properties and growth *(Polish)* 7−132474
CdTe-$Hg_{1-x}Mn_xTe$, Hg-based superlattices, properties and growth *(Polish)* 7−132474
CdTe-HgTe ultrathin semicond. superlattice structs., thermodynamic instability, total energy pseudopot. calcs. 7−76644
CdTe-InSb multilayers, MBE growth and interdiffusion 7−77821
CdTe-ZnTe superlattices, resonance Raman scattering 7−92652
CdTe-ZnTe superlattice, MOCVD growth 7−138681
$Ga_{1-x}Al_xAl$-GaAs superlattices, growth imperfections, X-ray studies 7−84536
GaAlAs buried heterostruct. laser, high speed digital modulation 7−130193
GaAlAs quantum well structures, elastic recoil spectrometry, quantitative, mass and energy dispersive, resolution 7−116024
GaAlAs resonant tunnelling superlattice, 10 μm IR detector using intersubband absorpt. 7−89258
(GaAl)As superlattices, Raman scatt. by phonons *(Japanese)* 7−119013
GaAlAs/GaAs lateral current injection MQW laser, impurity-induced disordering 7−68640
GaAlAs-GaAs disordered superlattices, X-ray diffraction studies 7−118281
$Ga_{1-x}Al_xAs$, long-range order and segregation in semiconductor superlattices 7−105690
$Ga_xAl_yIn_{1-x-y}As$-InP multilayer heterostructs., MBE growth, appl. to p-i-n APD 7−144287
GaAs, doping in metalorganic MBE using gaseous sources, nipi doping superlattice preparation 7−76152
GaAs doping superlattices, tunable electroabsorption 7−92639
GaAs, doping superlattices, photoreflectance spectroscopy 7−138410
GaAs, MBE, low dimensional systems, quantum wires and boxes 7−70121
GaAs, MBE grown, δ-doping, device appl. 7−77811
GaAs modulation doped quantum well structs., valence band mixing, polarized luminesc. obs., uniaxial stress effects study 7−77079
GaAs multiple-quantum-well structs., high-speed optical phenomena 7−92283
GaAs n-i-p-i superlattices, electronic struct. calcs. 7−70403
GaAs nipi doping superlattice, electrolum., tunable absorpt. 7−138517
GaAs quantum well structs., carrier lifetime reduction 7−70407
GaAs quantum wells, below-gap photoexcitation dynamics 7−92286
GaAs quantum wells, optical transitions in mag. field, band mixing, hole subbands 7−85610
GaAs quantum wells, picosecond carrier transport, high field effects 7−92284
GaAs quantum wells, quasi-2D excitons, phonon sideband, absorpt. spectral characts. 7−85775
GaAs quantum wells, resonant tunnelling spectroscopy of hot minority electrons 7−92260
GaAs quantum wells with extended monolayer flat regions, photolum. studies 7−106269
GaAs semiconductor quantum wells, lattice scatt. mobility of 2D electron gas 7−92275
GaAs:Be/AlAs multilayered structure, compositional disorderings, MBE growth temp. dependence 7−125987
GaAs:Si,Be, Esaki-Tsu type doping superlattice, realisation 7−125102
GaAs:Si/AlAs superlattices, donor levels, elec. and photolum. props., substrate temp. depend. study 7−143576
GaAs:Si/AlGaAs quantum wells, heavily doped, emission props., selective doping effects 7−125783
GaAs:Si/AlGaAs superlattices, ion implanted, surface region disordering 7−124729
GaAs:Si-AlGaAs quantum wells, 2D electron gas, photolum. study 7−85836
GaAs:Si-GaAlAs superlattices, characterisation of interface defects 7−138011
GaAs/(Al, Ga)As multiple quantum wells, photoreflectance 7−131751
GaAs/$Al_xGa_{1-x}As$ modulation doped superlattices, 2D electron density 7−99184
GaAs/$Al_xGa_{1-x}As$ multiple quantum well struct., high press. study 7−105675
GaAs/$Al_xGa_{1-x}As$ multiple quantum wells, transition energies and oscillator strengths 7−118573
GaAs/$Al_xGa_{1-x}As$ superstructure, MOCVD grown, composition analysis by thickness fringe method 7−98717
GaAs/$Al_xGa_{1-x}As(In_yGa_{1-y}As)$ superlattices on Si substrates, optical props. 7−106105
GaAs/$Al_xGa_{1-x}As$(100) quantum well structs., MBE, RHEED, photolum., computer simulation 7−70093
GaAs/AlAs [001] superlattices, band-edge states 7−99171
GaAs/AlAs short-period superlattice, localized indirect excitons, optical props. 7−138502
GaAs/AlAs superlattices, tunnelling, indirect-gap electron states 7−92274
GaAs/AlAs superlattices, local density valence band offset 7−125092
GaAs/AlGaAs heterostruct., Aharonov-Bohm effect obs. 7−112375
GaAs/AlGaAs heterostruct., thermal conductance, quantum magneto-oscillations 7−143119

semiconductor superlattices continued
GaAs/AlGaAs MQW structs., confined shallow impurity states, far IR magnetospectroscopy studies 7−137859
GaAs/AlGaAs MQW structs., photolum. and energy loss rates under high density excitation 7−144103
GaAs/AlGaAs multilayer high-reflectivity mirrors, sensitivity anal. w.r.t. epitaxial growth parameters 7−123143
GaAs/AlGaAs multiquantum well lasers, MBE pair groove substrate, charact. 7−141862
GaAs/AlGaAs pattern-doping multilayered cryst. growth, MBE and focused ion beam implantation appls. 7−76175
GaAs/AlGaAs quantum wells, nonlinear interactions and excitonic effects 7−82697
GaAs/AlGaAs quantum well structures, electron-hole dynamics picosec. luminesc. studies 7−85845
GaAs/AlGaAs superlattice waveguide, 2DEG, intersubband absorpt. and photon drag, IR detector appls. 7−112471
GaAs/AlGaAs superlattices, Si-implanted, Compositional disordering by rapid thermal annealing 7−137726
GaAs/AlGaAs superlattices, magneto-photolum. spectra studies 7−138436
GaAs/AlGaAs superlattices, high-sensitivity sampling technique for luminesc. time constant meas. 7−144099
GaAs/$Ga_{1-x}Al_xAs$ superlattices, periodic negative conductance by sequential reson. tunnelling 7−112470
GaAs/$Ga_{1-x}Al_xAs$ superlattices, Raman scatt. by longitudinal modes, linear response calcs. 7−144070
GaAs/GaAlAs compensated superlattices, perpendicular transport, DLTS studies 7−112232
p-GaAs/GaAlAs multiple quantum well laser, ultrahigh relaxation oscillation freq. 7−130091
GaAs/GaAlAs:Mn superlattices, impurity luminesc. studies 7−113274
GaAs/GaAlAs:Si superlattice interface electron traps. capacitance transients meas. 7−112467
GaAs/InGaAs and GaP/GaAsP strained-layer-superlattices, ion-implantation induced damage 7−143236
GaAs/n-AlGaAs, modulation doped heterostruct., low temp. photoluminescence *(Chinese)* 7−99167
GaAs-$A1_xGa_{1-x}As$ quantum wells, electric field induced refractive index changes 7−85595
GaAs-$Al_{0.3}Ga_{0.7}As$, modulation doped quantum well structs., MBE, anisotropic low field electron transport 7−70388
GaAs-$Al_{0.3}Ga_{0.7}As$ modulation doped quantum well structures, anisotropic electron transport 7−118561
GaAs-$Al_xGa_{1-x}As$ quantum well structs., piezomodulated electronic spectra 7−77508
GaAs-$Al_xGa_{1-x}As$, multiple quantum well struct., expansion of electron-hole plasma 7−143602
GaAs-$Al_xGa_{1-x}As$, multi-quantum-well struct., magneto-optical studies 7−144045
GaAs-$Al_xGa_{1-x}As$, quantum well struct., intersubband relaxation 7−144069
GaAs-$Al_xGa_{1-x}As$ 10 μm, MQW IR detector, improved responsivity 7−108658
GaAs-$Al_xGa_{1-x}As$ (001) superlattice, zone folding and subband dispersions 7−138022
GaAs-$Al_xGa_{1-x}As$ double barrier heterostructures, resonant tunnelling 7−85090
GaAs-$Al_xGa_{1-x}As$ heterojunction, 2D electron gas, microwave photoresistivity and fractional quantum Hall effect 7−125036
GaAs-$Al_xGa_{1-x}As$ heterostructures, photoexcited carriers 7−138041
GaAs-$Al_xGa_{1-x}As$ MQW, photoreflectance modulation mechanisms 7−70839
GaAs-$Al_xGa_{1-x}As$ MQW, photoluminescence in high mag. fields 7−70898
GaAs-$Al_xGa_{1-x}As$ multiple quantum wells, excited states, monolayer fluctuations, photocurrent and reflection spectra 7−84690
GaAs-$Al_xGa_{1-x}As$ multilayer heterostructs., transverse transport under carrier heating conditions, calc. 7−99178
GaAs-$Al_xGa_{1-x}As$ multilayer structures, MBE 7−105684
GaAs-$Al_xGa_{1-x}As$ MQW structs., magneto-optical studies 7−106148
GaAs-$Al_xGa_{1-x}As$ quantum-well superlattice, high-frequency resistivity, temp. depend. 7−70401
GaAs-$Al_xGa_{1-x}As$ quantum wells, electron-hole gas, in-plane mag. field effects 7−70402
GaAs-$Al_xGa_{1-x}As$ quantum-well structures, MBE grown, Be acceptor Raman scatt. 7−70765
GaAs-$Al_xGa_{1-x}As$ quantum wells, resonant Raman study of low-temperature exciton localisation 7−70783
GaAs-$Al_xGa_{1-x}As$ quantum wells, resonant Raman scatt. from quasi-localised excitons 7−85671
GaAs-$Al_xGa_{1-x}As$ quantum wells, light scatt. by intersubband transitions, Stark effect 7−125750
GaAs-$Al_xGa_{1-x}As$ quantum wells, excitonic transitions, optically excited transport 7−137988
GaAs-$Al_xGa_{1-x}As$ quantum wells, high press. study, low temp. 7−138509
GaAs-$Al_xGa_{1-x}As$ quantum wells, MBE, RHEED, disorder, interfacial step distrib., lumin. studies 7−138513
GaAs-$Al_xGa_{1-x}As$ superlattice, phonons 7−70058
GaAs-$Al_xGa_{1-x}As$ superlattices, confined and interface phonons, mag. field enhanced Raman scatt. 7−70780
GaAs-$Al_xGa_{1-x}As$ superlattices, barrier doublets, optical transitions 7−92717
GaAs-$Al_xGa_{1-x}As$ superlattices, refractive index determ. 7−138412
GaAs-$Al_xGa_{1-x}As$ superlattice reson. Raman scatt., impurity-induced Frohlich-interaction scatt. 7−138453
GaAs-$Al_xGa_{1-x}As$ undoped quantum well in electric field, excitonic spectrum 7−84691
GaAs-AlAs, quantum well struct., electro-optic effect, room temp. 7−144029
GaAs-AlAs, superlattice bandstruct., determ. using wave fn. matching technique 7−85088
GaAs-AlAs, superlattices, confined optic phonons, annealing effects, Raman obs. 7−85694
GaAs-AlAs, superlattice, excitons and phonons in quantum wells, reson. Raman obs. 7−85696
GaAs-AlAs capacitor structs., elec. meas. 7−112448
GaAs-AlAs MOCVD superlattices, struct., diffusion, and phonon scatt., Raman studies 7−125728
GaAs-AlAs MQW, Landau-level broadening, hole-phonon interactions calcs. 7−125096
GaAs-AlAs MQW, photoluminesc. study 7−77618
semiconductor superlattices continued
GaAs-AlAs monolayer superlattices, candidate for highly spin-polarised electron source 7−85078
GaAs-AlAs multi-quantum barrier, electron wave refl. and leakage current, light emitting device appls. *(Japanese)* 7−131762
GaAs-AlAs piezoelectric superlattices, transverse elastic waves, propagation along symmetry directions 7−105224
GaAs-AlAs quantum wells, resonant Raman scatt. from quasi-localised excitons 7−85671
GaAs-AlAs quantum wells and super-lattices, photoconductivity and photoreflectance 7−143520
GaAs-AlAs short period superlattices, interface phonon combinations and overtones, reson. Raman scatt. 7−70778
GaAs-AlAs short period superlattices, direct to indirect gap transition, optical evidence 7−85070
GaAs-AlAs superlattices, coupled mode stop bands of acoustic phonons 7−70062
GaAs-AlAs superlattice, MBE grown, structure anal. 7−70098
GaAs-AlAs superlattices grown by MBE, struct. props., TEM and X-ray diffr. obs. 7−70123
GaAs-AlAs superlattices, compositional disordering by ion implantation, review 7−76174
GaAs-AlAs superlattice, IR reflectivity and EELS 7−77714
GaAs-AlAs superlattices, self-consistent electronic props. 7−85082
GaAs-AlAs superlattices, band offsets and zone-folding 7−85091
GaAs-AlAs superlattices, folded acoustical Raman line intensities, influence of supercell struct. 7−85651
GaAs-AlAs superlattices, folded acoustic phonons, reson. Raman spectra 7−85693
GaAs-AlAs superlattices, electronic structure, layer thickness effects 7−92261
GaAs-AlAs superlattice barrier heterostruct., reson. tunnelling 7−112476
GaAs-AlAs superlattices, electronic struct., folding effects 7−118571
GaAs-AlAs superlattice, comparison of exptl. and simulated lattice images 7−131458
GaAs-AlAs superlattices, convergent-beam electron diffr. 7−131459
GaAs-AlAs superlattice, DX centre deep donor level calcs. 7−131577
GaAs-AlAs superlattice, acoustoelectric effects, separate medium struct. 7−131717
GaAs-AlAs superlattice; polariton modes, free charges localised at interfaces 7−137808
GaAs-AlAs superlattice, cubic, sagittal elastic waves, Green's function studies 7−143168
GaAs-AlAs thin superlattices, confined states, self-consistent pseudopot. study 7−125097
GaAs-AlAs ultrathin semicond. superlattice structs., thermodynamic instability, total energy pseudopot. calcs. 7−76644
GaAs-AlGaAs, multiple quantum well structs., many exciton theory 7−76780
GaAs-AlGaAs, quantum well intersubband transitions, Stark shift, obs. 7−77522
GaAs-AlGaAs, semiconductors, high magnetic field investigations *(German)* 7−125119
GaAs-AlGaAs, superlattices, optical phonons, Raman scatt. 7−85695
GaAs-AlGaAs, superlattices, band struct. determ. 7−138049
GaAs-AlGaAs, superlattice photodiodes, responsitivity 7−143605
GaAs-AlGaAs, waveguide, grating coupler, selective superlattice intermixing 7−141990
GaAs-AlGaAs 2D electron gas structs., OMCVD growth 7−92889
GaAs-AlGaAs 2D-EG structs. with high carrier mobility, MBE growth 7−143583
GaAs-AlGaAs biwell superlattice, negative differential resist. device 7−70391
GaAs-AlGaAs graded gap superlattice, Bloch transport of electrons and holes 7−125103
GaAs-AlGaAs heterostructs., 2D systems, inelastic light scatt. in high mag. fields 7−138438
GaAs-AlGaAs lasers, MQW, charact. 7−130108
GaAs-AlGaAs MQW, temp. depend. of photoreflectance line shapes 7−138474
GaAs-AlGaAs MQW heterostructure transitions to confined states of split-off band 7−118568
GaAs-AlGaAs MQW structs., MOVPE-grown, quantum confined Stark shifts 7−138421
GaAs-AlGaAs MQW waveguides for integrated optics *(German)* 7−136533
GaAs-AlGaAs modulation doped quantum well structs., spectral photoconductivity 7−118527
GaAs-AlGaAs modulation doped heterostruct., photoexcited quantum Hall behaviour 7−131685
GaAs-AlGaAs modulation-doped quantum wells, single-particle relax. time from light scatt. spectra 7−138452
GaAs-AlGaAs modulation doped MQWs, high press. photolum. props. 7−138511
GaAs-AlGaAs multiple quantum well reflection modulator 7−97127
GaAs-AlGaAs multiple quantum wells, 2D and 3D magnetoluminescence meas. 7−106231
GaAs-AlGaAs multiple quantum well, large quadratic electro-optic effect, obs. 7−113132
GaAs-AlGaAs multiple quantum wells, stimulated emission, ultrafast absorpt. recovery 7−113216
GaAs-AlGaAs quantum wells, stark states 7−84788
GaAs-AlGaAs quantum wells, band offsets, light scatt. determ. 7−85094
GaAs-AlGaAs quantum wells, radiative recomb. coeff. of free carriers, temp. depend. 7−113245
GaAs-AlGaAs quantum wells, optical characterisation, photolum. studies 7−113287
GaAs-AlGaAs quantum wells, subpicosecond dynamics of electron injection 7−138013
GaAs-AlGaAs quantum wells, quantum states of carriers, effect of in-plane mag. fields 7−138048
GaAs-AlGaAs quantum wells, thermalisation of hot carriers 7−138050
GaAs-AlGaAs quantum-well struct., atomistic nature of heterointerfaces, rel. to photolum. 7−138498
GaAs-AlGaAs superlattice, electronic density of states 7−84633
GaAs-AlGaAs superlattices, interface vibr. Raman lines 7−125829
GaAs-AlGaAs superlattices, MBE growth 7−137755
p-GaAs-AlGaAs superlattice, hole band struct. and excitons, cyclotron reson. study 7−138060
GaAs-AlGaAs:Zn superlattices, impurity-induced disorder-delineated optical waveguides 7−90773

semiconductor superlattices continued
GaAs-AlGaAs-InGaAs quantum well heterostructure, resonant tunnelling 7−112447
GaAs-$Ga_{0.72}Al_{0.28}As$:Sn,B superlattices, Sn-induced interdiffusion, influence of B 7−76501
GaAs-$Ga_{1-x}Al_xAs$ modulation-doped quantum wells, temp. depend. of electron mobility 7−85065
GaAs-$Ga_{1-x}Al_xAs$ microstructures, energy levels, hydrostatic press. effect 7−85066
GaAs-$Ga_{1-x}Al_xAs$ MQW heterostruct., photoluminescence 7−138485
GaAs-$Ga_{1-x}Al_xAs$ superlattices, inelastic light scatt. by collective charge density excitations 7−85654
GaAs-$Ga_{1-x}Al_xAs$ superlattices, momentum-mixing-induced enhancement of band nonparabolicity 7−138028
GaAs-$Ga_{1-x}Al_xAs$:Si superlattices, MBE, plasmons, Raman scatt. obs. 7−70764
GaAs-$Ga_{(1-x)}Al_xAs$, superlattices, exciton binding energy using photoluminescence 7−124870
GaAs-GaAlAs, band discontinuities at heterostruct. interfaces, electron beam meas. 7−105700
GaAs-GaAlAs, energy relax. phenomena, elec. and optical studies 7−131772
GaAs-GaAlAs, growth and interface characterisation 7−98747
GaAs-GaAlAs, quantum well wires and boxes, quantum size effects 7−85084
GaAs-GaAlAs heterojunction with modulated doping, 2D electron-hole system, lumin. study 7−132317
GaAs-GaAlAs MQW structs., photoluminesc. excitonic props. and temp. behaviour *(Chinese)* 7−106233
GaAs-GaAlAs MQW struct., 2D e-h plasma dynamics, time-resolved Raman scatt. meas. 7−125107
GaAs-GaAlAs multilayer heterostruct., S-shaped current-voltage charact. 7−131747
GaAs-GaAlAs multilayers, 2D electrons, Landau level density of state studies 7−137826
GaAs-GaAlAs multilayer struct., LPE grown, contact resistance profiling 7−138009
GaAs-GaAlAs multilayer structures grown by LPE 7−138690
GaAs-GaAlAs quantum wires, valence levels 7−85085
GaAs-GaAlAs quantum wells, external electric field, optical spectroscopy 7−85833
GaAs-GaAlAs quantum wells, Stark shifts, photoluminesc. study 7−106138
GaAs-GaAlAs superlattices, photoemission and photolum. studies 7−77767
GaAs-GaAlAs superlattice, C-V charcts., deep traps, DLTS, band offset meas. 7−105694
GaAs-GaAlAs superlattices, confined and interface phonons, reson. Raman scatt. 7−118225
GaAs-GaAlAs superlattices, high perpendicular electric fields, elec. struct., transport props. 7−118563
GaAs-GaAlAs:Si superlattices, enhanced disordering by Si ion beam implantation 7−118291
GaAs-GaAlAs-type quantum wells, k.p theory 7−138023
GaAs-GaAsP strained-layer superlattices, picosecond relax. of hot carrier distrib. 7−137943
GaAs-GaInAs, strained layer superlattices, deformations 7−131464
GaAs-GaP semi-infinite superlattice, surface phonon polaritons 7−76783
GaAs-$In_{0.2}Ga_{0.8}As$ heterojunction interface, electronic and at. structures, XPS, AES, tunable EELS studies 7−70374
GaAs-$In_xAl_{1-x}As$, indirect bandgap superlattices, transport data interpretation 7−143601
GaAs-$In_xGa_{1-x}As$ strained-layer superlattices, Raman scatt. study of folded acoustic phonons 7−125716
GaAs-InGaAs single strained quantum well structs., hole transport, charge transfer 7−105699
$(GaAs)_n/(AlAs)_n$ superlattices, band structure, tight binding calc. 7−99181
GaAs(AlGaAs) multiple quantum well structs., excitonic radiative recomb., photolum. temp. charcts. studies 7−77085
GaAs-xP_x/GaP strained layer superlattices, planar channelling, Monte Carlo simulation 7−111716
GaInAs, strained quantum well laser, 1.55 μm, threshold current, temp. sensitivity 7−82568
GaInAs/AlInAs multiple quantum wells, carrier cooling, photoluminescence obs. 7−138030
GaInAs-AlInAs, quantum wells, magneto-optics and strain effects 7−85609
GaInAs-AlInAs modulation doped strained layer superlattice, electron and hole mobility 7−70389
GaInAs-AlInAs pseudomorphic MODFET heterostructs., MBE growth and charactn. 7−143585
GaInAs-AlInAs quantum well TEGFET structs., MBE growth and charactn. 7−143586
GaInAs-InP, quantum wells, magneto-optics and strain effects 7−85609
GaInAs-InP quantum well structs., Raman scatt. 7−85668
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
GaInAs-InP quantum wells, nonlinear excitonic optical absorption 7−136450
GaInAs-InP quantum wells, photolum. quenching, electric field depend. exciton energy 7−144093
GaInAs-InP superlattices, band struct., self-consistent pseudopotential method 7−112473
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$, multi quantum well structs., excitonic recombination rel. to barrier config., photolum. 7−70094
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ MQW struct., e-h plasma cooling, time-resolved photolum. meas. 7−125095
$Ga_{0.47}In_{0.53}As$/InP double-heterostructure and multiquantum well lasers grown by chemical beam epitaxy 7−130104
$Ga_{0.47}In_{0.53}As$-$In_{0.52}Al_{0.48}As$, hot carrier-phonon interaction, photolum. studies 7−85828
$Ga_{0.47}In_{0.53}As$-InP, quantum well photodiode, photocurrent step-like struct. 7−143603
$Ga_{0.47}In_{0.53}As$-InP epitaxial superlattices, absorpt., photolum. and photocurrent spectra 7−70384
$Ga_{0.47}In_{0.53}As$-InP multiple quantum wells, optical studies of excitons 7−113244
$Ga_{0.47}In_{0.53}As$-InP multi-quantum barrier, electron wave refl. and leakage current, light emitting device appls. *(Japanese)* 7−131762
semiconductor superlattices continued
$Ga_{0.47}In_{0.53}As$-InP quantum wells and superlattices, CBE growth, TEM, IR absorpt., photocond. and photolum. charactn. 7−126023
GaInAs(P), gas source MBE, single quantum wells, superlattice p-i-ns and bipolar transistors 7−77807
GaInAsP/InP MQW structures, LPE grown, electric field induced absorption 7−99802
GaInAsP/InP MQW structures, elec. field induced reflection 7−138424
GaInAs(P)-InP, MOCVD growth, characterisation and applications *(Polish)* 7−132498
GaInP/GaAs heterostructures, selectively-doped, chloride VPE grown, 2D electron gas 7−125088
GaInP-GaAs superlattices, characterisation by Raman spectroscopy 7−106194
GaP-$GaAs_{0.35}P_{0.65}$, optical interference filter, photodiode, single-crystal integration 7−140747
GaSb quantum well structures, Auger recombination 7−77076
GaSb/AlSb (001) superlattices, defect and impurity deep level calcs. 7−105454
GaSb-AlGaSb MQWs, electroabsorption effect and high-speed waveguide optical modulator fabrication 7−90767
GaSb-AlGaSb quantum wells, band offsets, light scatt. determ. 7−85094
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
GaSb-AlSb, semiconductor superlattices, optical properties *(Polish)* 7−132220
GaSb-AlSb multi quantum well structures, direct-indirect cross-over, time resolved spectroscopy 7−85074
GaSb-AlSb multiquantum well heterostructures, enhanced T_0-values, laser appls. 7−130109
GaSb-AlSb quantum wells, optical transitions, omission spectra 7−85832
GaSb-AlSb superlattice, DX centre deep donor level calcs. 7−131577
GaSb-InSb semiconductor superlattices, optical properties *(Polish)* 7−132220
Ge/Si (100), ultrathin epitaxial films, strain meas. 7−137752
Ge-Si ordered superlattices, struct., optical transitions, TEM, Schottky barrier electroreflectance studies 7−112096
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
GeSi-Si strained layer superlattices, growth using limited reaction processing, struct., TEM, AES, RBS 7−118300
GeSi-Si strained layer superlattices, second order optical suscept., Pockels coeff. calcs. 7−118975
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
Ge_xSi_{1-x}/Si (001) heteroepitaxial system, MBE growth, RHEED oscillations 7−100083
$Hg_{1-x}M_xTe$-CdTe (M=Cd, Mn, Zn) superlattices, type III-type I transition 7−131754
$Hg_{1-x}Mn_xTe$ (Se), diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Hg_{1-x}Mn_xTe$-HgTe superlattices, MBE growth 7−132463
HgTe/CdHgTe superlattices, anomalous confinement effects, pseudopot. calcs. 7−105688
HgTe/CdTe multilayers, low temp. MOCVD, TEM and SEM studies 7−119159
HgTe-CdTe, heterojunction, valence band offsets 7−131767
HgTe-CdTe, multilayer structures, on $Cd_{1-x}Zn_xTe$, TEM study 7−131462
HgTe-CdTe, optical properties, review *(Polish)* 7−132219
HgTe-CdTe MBE grown superlattices, optical props. 7−92650
HgTe-CdTe superlattices and heterojunctions, spin-orbit scatt. time and carrier depending time 7−92268
HgTe-CdTe superlattices, optical props., quantitative theory 7−92629
HgTe-CdTe superlattices, electronic props. 7−118580
HgTe-CdTe superlattices, band struct. determ. 7−138049
HgTe-CdTe superlattices, photoluminesc. 7−138492
$In_{0.2}Al_{0.8}As$/GaAs strained layer superlattices, lattice distortions, buffer layer effects, X-ray diffr. anal. 7−124727
InAs-GaAs monolayer superlattice, electronic struct., self-consistent pseudopot. calc. 7−138025
InAs-GaAs quantum well TEGFET structs., MBE growth and charactn. 7−143586
InAs-GaAs strained-layer superlattices, HRTEM, X-ray diffr. and photolum. meas. 7−70095
InAs-GaSb, surface phonons, high resolution EELS studies 7−143174
InAs-GaSb superlattices, longitudinal phonon spectrum, calc. 7−84167
InAs-GaSb superlattices, optical props. hydrostatic press. 7−138434
InAs-Ga(Al)Sb(As) quantum wells, carrier densities, galvanomag. meas. 7−143588
InGaAs strained layer superlattices, MBE grown, 1.6-2 μm photoluminesc. efficiency 7−77834
InGaAs/GaAs superlattices, conduction and valence band strain effects estimates 7−85077
InGaAs/GaAsP superlattices, molecular stream epitaxy 7−144292
InGaAs/InAlAs modulation doped heterostructures, high-field transport 7−112454
InGaAs/InAlAs quantum wells, MBE, photolum. 7−77813
InGaAs/InP multiple quantum wells, optical Stark effect 7−125692
InGaAs/InP quantum well, luminescence spectra, many body edge singularity 7−106256
InGaAs/InP quantum well struct., ion channelling strain meas. 7−112468
InGaAs-GaAs, selectively doped strained quantum well struct., magnetotransport, lumin. meas. 7−105670
InGaAs-GaAs single strained quantum wells, magnetoluminescence meas. 7−106271
InGaAs-GaAs strained superlattices, photolum. 7−77630
InGaAs-GaAsP strained layer superlattices, growth and characterisation 7−118304
InGaAs-InAlAs, superlattice photodiodes, responsitivity 7−143605
InGaAs-InAlAs MQW optical modulator integrated with DFB laser 7−130391
InGaAs-InAlAs waveguide MQW optical modulators with high on/off ratio and low drive voltage 7−110557
InGaAs-InP, MQW structs. grown by metalorganic MBE, excitons, high temp. obs. 7−92070
InGaAs-InP heterostruct., carrier diffusion and trapping, optical time-of-flight meas. 7−138482
InGaAs-InP MQW structs., atmospheric-pressure MOCVD grown, exciton electroabsorpt. at room temp. 7−92640
InGaAs-InP multiple quantum wells, MOCVD grown, charcts. 7−138010

semiconductor superlattices continued
InGaAs-InP quantum wells, VPE grown, quantum-confined Stark effect 7−84785
InGaAs-InP quantum well structs., electron-hole plasma, photolum. studies 7−85834
InGaAs-InP quantum well structs., thermal stability, growth by gas source MBE 7−86219
$In_{0.53}Ga_{0.47}As/InP$ multiple quantum wells, nonlinear spectroscopy 7−130092
$In_{0.53}Ga_{0.47}As$-$In_{0.52}Al_{0.48}As$ modulation-doped structs., anomalous lamp annealing effects 7−69739
$In_{0.53}Ga_{0.47}As$-InP double barrier tunnelling structures, conduction, depend. on mesa-etching 7−85057
$In_{0.53}Ga_{0.47}As$-InP epitaxial single quantum wells, electronic props. 7−77057
$In_{0.53}Ga_{0.47}As$-InP(100) quantum wells, resonant Raman scatt. 7−85669
$In_xGa_{1-x}As$-GaAs heterostructures, critical layer thickness, determ. by X-ray diffr. 7−84534
$In_xGa_{1-x}As$-GaAs strained-layer superlattices, dislocation struct. 7−142785
$In_xGa_{1-x}As$-GaAs superlattices, inter-quantum-well diffusion 7−118569
$In_xGa_{1-x}As$-$In_xAl_{1-x}As$ MQWs and GaAs, MBE growth, lumin. 7−124739
$In_xGa_{1-x}As$-InP quantum wells, exciton-LO phonon interactions 7−85067
InGaAsP-InP quantum well modulators, MBE grown 7−110552
InGaAs(P)-InP superlattices, MBE grown, high resolution X-ray diffr. study 7−131478
$In_{1-x}Ga_xAs_yP_{1-y}$ grown by LPS, photolum. 7−70386
$In_{1-x}Ga_xAs_yP_{1-y}$ superlattices grown by LPE, electroabsorpt. characts. 7−138692
$In_xGa_{1-x}InP$ strained-layer superlattices, electronic energy levels 7−125100
$In_{0.49}Ga_{0.5}P$-$In_{0.13}Ga_{0.87}As_{0.74}P_{0.26}$-$In_{0.49}Ga_{0.51}P$ heterostructs., laser LPE formed, photolum. study 7−99901
InP doping superlattices, MOCVD growth, optical props. 7−144114
InP grown by LPE, photolum. 7−70386
$InP/In_{0.53}Ga_{0.47}As$, modulation-doped multiquantum wells, APCVD grown, transport props. 7−125083
InP-$Ga_{0.47}In_{0.53}As$ heterojunctions, band offsets, meas. by admittance spectroscopy 7−112446
InP-$Ga_xIn_{1-x}P$, surface quantum wells 7−118559
InP-GaInAs quantum wells and selectively doped heterostructures, growth and charact., solid source MBE 7−77809
InP-GaInAs single quantum well, mag. resonance of 2D electrons 7−85437
InP-GaInAs-AlInAs quantum wells, correlation of struct., chemical and optical props. 7−105345
InSb-CdTe heterojunctions, interface characterisation and MBE growth *(Polish)* 7−132475
InSe cathodes, Li intercalated, electron and phonon aspects 7−133058
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
MnSe-ZnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
PbI_2-quinoline intercalation compound, phase transition, miniband spectrum, superlattice 7−131306
PbS-PbSe superlattice, magnetotransport and photoconductivity, mag. fields to 8 Tesla 7−131776
PbSe-SnSe superlattices, X-ray diffraction study 7−112122
$Pb_{1-x}Sn_xTc$-PbTe, superlattices, properties *(Polish)* 7−131770
$Pb_{1-x}Sn_xTe$, stressed quantum well epitaxial films, photolum. 7−113251
PbTe doping superlattices, photoconductive response 7−118526
PbTe nipi structs., electronic subbands, obs. 7−138047
$PbTe$-$Pb_{1-x}Sn_xTe$, envelope fn., electronic struct. and symm. props. 7−143597
$PbTe$-$Pb_1-Pb_{1-x}Eu_xTe$ superlattices, quantum size effects in optical transmission spectra 7−143996
a-Se/Cd_xSe_{1-x} multilayer films, preparation and optoelectronic props. 7−125985
Si n-i-p-i superlattices, electronic struct. calcs. 7−70403
a-Si superlattice struct. solar cells *(Japanese)* 7−71613
Si:Ga(Sb) modulation-doped superlattices, solid phase epitaxial growth, sharp profiles and low temp. diffusion 7−142818
a-Si:H, amorphous superlattice, Raman scatt. 7−85697
a-Si:H,F-$SiGe_x$:H,F modulated structs., material design, photoconductivity 7−132494
a-Si:H doping modulated superlattices, persistent photocond., field enhanced cond. obs. 7−70400
a-Si:H doping superlattice films, junction capacitance studies 7−131765
a-Si:H nipi doping superlattices, persistent photoconductivity, carrier recomb. kinetics 7−131714
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, persistent photoconductivity, doping effects 7−77003
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, undoped, persistent photoconductivity 7−84968
a-Si:H/a-$Si_{1-x}N_x$:H superlattices and a-$Si_{1-x}N_x$:H films, electron-hole recombination processes 7−70905
a-Si:H/a-SiN_x:H amorphous superlattice films, photoacoustic spectra 7−85764
a-Si:H/a-SiN_x:H multilayer films, plasma deposition, persistent photoconductivity 7−76999
a-Si:H/a-SiO_x:H microporous superlattices, confinement and fluoresc. of aromatic mols. 7−122609
a-Si:H-Ge:H superlattices, band edge alignment, quantum size effects 7−131764
Si:H-Ge:H/Pt Schottky barrier with amorphous superlattice, junction props. 7−70378
Si:H-SiN_x:H, amorphous superlattices, phonon stop bands 7−124673
a-Si:H-a-SiN_x:H layered structures, persistent photocond., internal stress effects 7−105693
a-Si:H-a-SiN_x:H multilayers, carrier transport, picosecond time-of-flight studies 7−138034
Si/SiGe strained layer superlattices, MBE, band offsets, vertical transport meas. 7−77070
Si-Ge multilayered structs., Bi ion range distributions 7−119085
Si-Ge strained-layer superlattice on Si(001), optical transitions, determ. 7−125098
Si-Ge ultrathin strained superlattices, new optical transitions, tight-binding calcs. 7−143592
Si-$Ge_{0.05}Si_{0.95}$ strained layer superlattice, local distortions, meas. by convergent beam electron diffr. 7−76630
Si-Ge_xSi_{1-x}, Raman scattering in Fibonacci superlattices 7−99186

semiconductor superlattices continued
Si-Ge_xSi_{1-x} strained-layer superlattices, folded acoustic phonons 7−70059
Si-SeGe strained layer superlattices 7−85092
Si-$Si_{0.5}Ge_{0.5}$ superlattices, strain induced confinement 7−125090
Si-SiO_2 amorphous superlattices, phonon stop bands 7−124673
$Si_{1-x}Ge_x$, long-range order and segregation in semiconductor superlattices 7−105690
a-SiN_x:H, amorphous superlattice, Raman scatt. 7−85697
ZnMnSe, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
$Zn_{1-x}Mn_xSe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
ZnSe-(ZnMn)Se superlattices, exciton lumin., electric field induced shifts 7−138481
$ZnSe$-ZnS_xSe_{1-x}, strained-layer superlattices, quantum confinement, strain effects 7−113246
ZnSe-ZnTe strained-layer superlattice, growth and charactn., photolum. and TEM obs. 7−76682
ZnSe−ZnS strained-layer superlattices, metallorganic MBE growth 7−132465
ZnTe-HgTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
ZnTe-ZnS strained-layer superlattices, Raman probing and lattice modes 7−99856
ZnTe-ZnSe strained layer superlattices, resonant Raman scatt. and photoluminesc. 7−144051

semiconductor switches
GaAs plasma dispersion effect total refl. type optical switches, wavelength bandwidth 7−110608
$GaTe_3$-based switching struct., nonstationary low resistance state decay 7−99137

semiconductor technology
See also under specific device headings
see also resists; semiconductor doping; semiconductor growth
angular chlorine ion-beam assisted etching, of GaAs and AlGaAs 7−144644
chemomechanical polishing in aq. solns., STM images 7−106717
cleaning of structure using modular ultrasound equipment with piezoceramic transducers 7−75238
deep level spectrometer, modern, and characterisation application of semiconductor materials and structures *(Hungarian)* 7−95614
diamond semiconductor devices, fabrication and high temp. characts 7−111631
diamond-like C film on Si MIS structure, ESCA compositional profiles and elec. props. 7−125129
dielectric films, current cond. imaging and detection by emission microscopy 7−92322
gettering and defect engineering, conf., Garzau, Germany (Oct. 1985) 7−120679
high electric field and low temp. effects 7−95600
III-V cpd. multilayer device structs., ion beam etching, in situ monitoring 7−132837
III-V wafers, substrate imperfections, laser scattering tomography *(French)* 7−115988
internal gettering and as grown defects 7−124246
ion direct writing, radiation damage and pattern resolution 7−99994
ion milling, suppression of surface topography development 7−137680
IR detector fabrication, quality control, digital automated rocking curve topography 7−130983
IR detectors and imagers, epitaxial materials technology 7−128658
IR materials for IR detectors and sources, conf., Boston, USA (Dec 1986) 7−128194
laser microfabrication of thin films 7−71006
materials and interfaces investig. using electron microscopes *(French)* 7−128715
microelectronic structures, 2D surface erosion and deposition process simulation 7−144572
plasma stimulated deposition 7−71080
pneumatic shutter for high power arc lamps, optical annealers appl 7−128554
polybutadiene dielectrics, cyclized, thermal and mech. props. *(French)* 7−124561
rapid thermal processing, uniformity characterisation 7−106550
rarefied fluid dynamics cylindrical vessel, Monte Carlo direct simulation *(Japanese)* 7−142330
refractory metal sputtered films, diffusion barrier props. 7−118175
shallow junctions by ion implantation and rapid thermal annealing 7−76171
SIMS for highly sensitive H, C, and O anal. *(Japanese)* 7−93403
SOI, growth front movement in electron beam recrystallisation, direct obs 7−86204
SOI layers formed by laser recrystallisation *(Japanese)* 7−69758
solar cell welding, Indian Space Res. Organisation technology 7−144868
solid state science, book contrib. 7−102035
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
superluminescent diodes, 0.83 μm, Fabry-Perot spectral modulation 7−141894
surface analysis for semicond., packaging and storage technology 7−98663
surface analysis techniques and their application to materials and device characterization 7−125904
surface electronic topography study, combined photo-acoustoelec. method 7−92243
thin oxide growth by rapid thermal processing 7−106726
AlN substrate, highly thermal conductive, green sheet technology development 7−131379
As_2 source for MBE, high efficiency catalytic cracking oven 7−137734
B_2O_3-P_2O_5-SiO_2 borophosphosilicate glass, LPCVD from organic reactants 7−113410
B_2O_3-P_2O_5-SiO_2 glasses, dopant conc., FTIR spectroscopy anal. 7−83726
BP (100) epitaxially grown on Si (100) substrates, cryst. props. and growth conditions *(Korean)* 7−84565
Cd-Te thin film couples, grain boundary interdiffusion, CdTe formation 7−98587
CdS layers, crystallization, Mn, Cu embedding, α-Cr_2O_3 gettering effect 7−104958

emiconductor technology continued
CdTe, epitaxial layers on GaAs, selective etching and photolum. 7—126331
CdTe printed films, pulse electron-beam induced synthesis 7—111675
n-$Ga_{0.47}$ $In_{0.53}As$, maskless photoassisted etching in basic KOH solns. 7—93212
GaAs (100), in H_2SO_4-H_2O_2-H_2O system 7—86499
GaAs and related cpds., conf., Las Vegas, NA, USA (Sept. 1986) 7—120702
GaAs, defect-selective etching in CrO_3-HCl solns. 7—86492
GaAs, diffusion of Zn using PECVD SiO_2 films as mask *(Chinese)* 7—124597
GaAs, dislocations and point defects, microelectronics technology 7—98169
GaAs, focused ion beam etching of deep grooves and laser-mirror facets 7—110379
GaAs heteroepitaxial layers grown on ⟨100⟩ Ge substrates by MOCVD, deep levels 7—70235
GaAs high-sensitivity microanalysis of impurities using multielement doped GaAs standard samples 7—100646
GaAs MBE grown surface, Sb used for passivation 7—71402
GaAs MESFET, self-aligned, WAg/W refractory metal gate 7—143615
n-GaAs, ohmic contacts using high-temperature rapid thermal annealing for self-aligned processing 7—92289
GaAs, rapid thermal processing, evaporation through encapsulants 7—91782
GaAs refractory-metal contacts research in microelectronics under RUI and IBM research grants 7—112491
GaAs, semi-insulating, dislocation gettering, cathodoluminescence studies 7—91587
GaAs:Pd-AuIn, electroless deposition of InAu alloys for ohmic contacts 7—113456
GaAs-Si_3N_4, plasma deposited encapsulation layers 7—113341
GaP, laser induced damage, channelling in Rutherford backscatt. obs., defect prod. mechanisms 7—131176
GaP, laser induced defect form., cathodolum. and SEM obs., thermal factors 7—131177
$Ga_{0.47}In_{0.53}As$ MIS diodes, effect of photochemical etching on interface state density 7—143617
InAs (100) SIMS analysis of surface prep. 7—86491
InP surface, electron beam modifications 7—144640
InP ultra-flat substrates produced by chemo-mechanical polishing 7—100457
InP wafers, polishing processes, damaged layer evaluation, X-ray diffr. studies 7—106722
PbS polycrystalline films, recrystallisation with activation annealing, oxidation 7—100258
Pt-Si reaction, silicide formation, elec. meas. 7—99195
Si based sensors, conf., London, England (Dec. 1986) 7—95099
Si epitaxial thin layers, on preannealed Si substrates, structural and elec. props. 7—124749
Si, growth rate of selective epitaxial deposits 7—132483
Si interfaces, bonding by solid-phase epitaxy 7—112129
Si MBE on GaP and GaAs 7—105685
Si MIS capacitors, polish damage, gate oxide integrity, minority carrier lifetime 7—138066
Si materials, reactive ion beam etching with saddle field source, mass spectra of F containing gases 7—93215
Si, near threshold sputtering in Cl_2 environment 7—106327
Si on fused SiO_2, crystal quality improvement by zone melting recrystallisation 7—144258
Si, oxidation in dry O_2 at high press. 7—86493
Si photo-etching in Cl_2 gas using high power Hg lamp 7—86503
Si, polycrystalline solar cells, high efficiency, using solar grade cast wafers 7—71611
Si, Polyx photovoltaic technology, progress and prospects 7—125957
a-Si, pulsed laser annealing, inhomogeneous solidification 7—69754
Si single cryst. wafers, cut surface morphology, environmental fluids and temp. effects 7—105202
a-Si solar cell modules, laser patterned *(Japanese)* 7—139116
Si solar cells, front surface passivation with antireflection coating 7—114110
Si substrates for GaP film MBE heteroepitaxy *(Japanese)* 7—119651
Si, surface alloying by laser aluminothermy 7—113805
Si, surface nitridation, synchrotron radiation induced 7—71399
Si thin monocrystalline solar cell epitaxy and etch stop technology 7—144866
Si wafers, laser evaporated Mg_2SiO_4 coatings, morphology 7—71027
Si:Fe, intrinsic gettering 7—91627
a-Si:H CVD initial transient phenomena, effect on device props. 7—144294
Si:O, O implantation, internal gettering, carrier lifetime 7—84041
Si:O wafers, precipitation testing 7—84299
Si-SiO_2, ultrathin gate oxide formation, catalytic Si oxidation 7—119461
Si-SiO_2 interface microstructure, observation and electronic props. 7—131461
Si-SiO_2 system, ozone cleaning 7—113798
Si-Ti-As, silicidation by halogen lamp annealing, effect of As 7—99992
SiC/Al, 6H polytype, annealing effects on rectifying contacts 7—143554
SiN films, fabrication by double tubed coaxial line type microwave plasma CVD 7—113420
SiN:F films, plasma-enhanced CVD growth, elec. and optical props. 7—84589
SiO_2, afterglow CVD prep., chem. and phys. props. 7—100112
SiO_2, etching in SF_6 plasmas, role of ions and electrons in etching mechanisms 7—71342
SiO_2 thermal films grown polycrystalline Si, transport props. 7—112524
Si(111), ion assisted etching by F, XPS study 7—119472
$TiSi_2$ formation on Si process control using rapid thermal processing 7—105326
WSi_x film sheet resistance, temp. profile meas. in rapid thermal annealers 7—106551
WSi_x films, Si-rich, effects of annealing 7—113391

emiconductor thin films
for electronic conduction in crystalline and amorphous films, see "electronic conduction in crystalline semiconductor thin films" and "electrical conductivity of amorphous semiconductors and insulators", respectively see also amorphous semiconductors; semiconductor epitaxial layers
acoustic quantum waves, polaris. effects *(Russian)* 7—111782

semiconductor thin films continued
aluminium phthalocyanine thin films, photoelec. props. *(Japanese)* 7—84971
amorphous film, dangling bond passivation by gas adsorpt. 7—71419
amorphous films, optical absorpt. 7—106291
anodic thin films, on metal electrodes, photocurrent spectrosc. 7—112390
artificially structured thin-film materials and interfaces 7—113397
chalcogenide glasses, photoluminescence and photoinduced optical anisotropy, polarisation memory 7—144131
charge transport meas. in high resistivity materials, xerographic discharge techniques 7—124982
chemisorption time constant, kinetics of electronic-molecular processes 7—76623
coherently strained Si-like layers, structural metastability, atomistic Monte Carlo study 7—84540
current filamentation region, recovery process, thermal stage charact. 7—84904
degenerate, elec. cond. size effect calcs. under specular surface scatt. conditions 7—99236
dielectric permittivity, screening of charged centre field 7—92568
dimensionally quantised, plane transverse mag. wave, bistable reflection 7—70440
disordered semicond. system, polycryst. powders and film, elec. cond., grain barrier effects under particle adsorpt. 7—105567
electron drift, space-charge wave beams, three-frequency interaction 7—70437
gallium phthalocyanine thin films, photoelec. props. *(Japanese)* 7—84971
II-VI compounds as light-sensitive barriers in Josephson tunnel junctions 7—76993
III-V semiconductor layers and devices, metalorganic CVD growth on Si using strained superlattices 7—86057
indium phthalocyanine thin films, photoelec. props. *(Japanese)* 7—84971
ionised cluster beam technique and appl. to thin film deposition and epitaxy *(Japanese)* 7—71083
IR materials for IR detectors and sources, conf., Boston, USA (Dec. 1986) 7—128194
island structure, nonlinear photoeffect under pulsed illumination 7—77119
Langmuir-Blodgett films from glycerol subphase, elec. and optical props. 7—124766
laser-induced deposition of thin films study 7—71068
light absorpt. in presence of strong electric fields 7—144016
magnetoplasma modes in thin films in the Faraday config. 7—98820
nonlinear properties in high elec. fields, field effect and nonlinear capacitance 7—112347
PbTeSe thin films, optical write-read charact. with pit-edge recording 7—103772
photosemiconductor-nematic liq. crystal system, intrinsic optical bistability study 7—118541
photovoltaic thin film cells develop. *(German)* 7—100719
phtalocyaninatoaluminium fluoride films, I ion implanted, elec. props. 7—105738
phthalocyanine thin films, elec. and optical props. 7—99234
polariton scattering by dielectric constant fluctuations 7—124877
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond. 7—71498
poly-p-phenylene films, prep. by electrochemical polymerisation, elec. cond., band gap, IR absorpt. spectra 7—71499
polyanthracene films, prep. by electrochemical polymerisation, elec. cond. 7—71498
polymethylphenylsilylene, hole transport, hopping mechanism 7—99064
polynaphthylene films, prep. by electrochemical polymerisation, elec. cond. 7—71498
polypyrrole polymer, electric conductivity meas., appl. as source mount in $4\pi\beta$ counting 7—135698
quasi-2D systems with anisotropic and tilted valleys, magnetooptical transitions 7—77516
singularly-perturbed BVPs, soln. and appl. *(Russian)* 7—120792
SIPOS-Si heterojunctions, elec. charact., cond. mechanisms 7—85080
SOI system, zone melting growth 7—132501
SOS films, heavily doped, electrical props. 7—77116
SOS films, preparation, struct. and electrical props. review 7—105739
SOS implanted films, transport studies using picosecond optoelectronic switches 7—75003
spray pyrolysis preparation for solar cells, review 7—100055
Te, vacuum deposited, room temp. semiconducting props. 7—70433
temperature fields and thermoelastic stresses under ion implantation conditions 7—142852
ternary chalcopyrite semiconductors, effective electron mass in ultrathin films, theoretical anal. 7—76743
ternary materials for photovoltaic appls., deposition and characterisation 7—126633
vanadyl phthalocyanine films, electroabsorption spectra 7—85874
wedge-shaped, quantum-size effect 7—85137
Ag-Cs_2O colloid-semicond. films, light absorpt. and scatt. *(Chinese)* 7—99948
Ag-Cs_2O thin films, optical props, Ag content effect *(Chinese)* 7—99949
$Ag_xCu_{1-x}I$ solid solution thin films, exciton spectrum features 7—131549
$AgGaSe_2$ thin films, optical props. 7—99962
AlGaAs:Si, MOCVD grown, donor-cation vacancy complex, photoluminesc. study 7—98224
AlN films, low temperature growth from metalorganics and hydrazine 7—71058
As-S, amorphous, microhardness meas. techniques *(Russian)* 7—84112
As-S (Se) amorphous chalcogenide films, mech. props., photoinduced changes 7—84607
As-S amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7—130282
As-Se, amorphous, microhardness meas. techniques *(Russian)* 7—84112
As-Se amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7—130282
As_2S_3, amorphous, phase conjugation, one-way image transmission *(Korean)* 7—82719
As_2S_3, glassy, optical effects in thin film waveguides 7—103969
As_2S_3, spin-coated multilayer thin films, growth, optical characterisation 7—85883
a-As_2S_3/metal structure, photodissolution processes 7—84286
As_2S_3-As_2Se_3:Tl, thin films, optical absorpt. edge, Tl doping effects 7—113226
a-AsSe films, light induced reversible drift mobility effect 7—77000
As_2Se_3 amorphous films, photoabsorption and photorefractive effect under pulsed excitation 7—113304

semiconductor thin films continued
As_2Se_3 glassy films, photoabsorption and photorefraction under pulsed excitation 7−106118
As_2Se_3 glassy films, SAW propag. vel. and elastic consts., photo-induced variations study *(Russian)* 7−85593
As_2Te_3, amorphous films, electron irrad., struct. and comp. 7−84030
$Bi_{2-x}Sb_xTe_3$ films, transport props. and valence band edge struct. studies 7−138083
Bi_2Te_3-Sb_2Te_3(Bi_2Se_3) thermoelectric materials, vacuum deposition 7−71036
C, amorphous films deposited by ion beam methods, electrical, optical and mechanical props. 7−106413
a−C films, arc evaporated, optical and mobility gap determ. 7−125674
a-C, semiconducting props., growth rate, low temp. plasma 7−100094
a-C:H films, arc evaporated, optical and mobility gap determ. 7−125674
C-Sn amorphous thin films, semicond., optical and elec. props. 7−70318
Cd-As amorphous films, struct., LAXS and EXAFS studies 7−84571
Cd-As disordered thin films, Raman scatt. 7−113203
Cd-Te thin film couples, grain boundary interdiffusion, CdTe formation 7−98587
Cd_3As_2 films, pulsed laser evaporated, elec. props. and lattice parameters 7−71039
$Cd_{47}As_{53}$ amorphous films, electron diffr. studies 7−92032
n-$CdGeAs_2$ chalcopyrite semiconductors, effective electron mass in ultra-thin films, theoretical anal. 7−76743
$CdGeAs_2$, ultrathin films, Einstein relation, carrier diffusivity to mobility ratio 7−99233
Cd_4GeS_6 films, deposition using discrete thermal and pulsed laser evaporation, struct. 7−76665
(CdHg)Te, semicond. film vap. deposition, chem. reaction model 7−119169
$Cd_xHg_{1-x}Te$ Hall probes, for magnetic studies of Nb_3Sn superconductors 7−73377
$Cd_xHg_{1-x}Te$, MOCVD growth and elec. props. 7−77843
$CdInGaS_4$, photoluminescence props. 7−125805
$CdIn_2O_4$ sputtered films, scatt. of charge carriers 7−77117
$CdIn_2O_4$, thin conducting and transparent films, electrical props. 7−85139
$Cd_{1-x}Mn_xTe$ thin films, diffusive vapour transport, growth kinetics 7−84553
$Cd_xPd_{1-x}S$ polycrystalline films, photosensitivity, reversible transition between sensitive-insensitive states 7−112394
CdS, electrodeposition using nonaqueous triphenylstibine sulphide, photoelectrochem appls. 7−86067
CdS, evaporated film, cathodoluminescence interference effect 7−70913
CdS films, sprayed, annealing, XPS obs. 7−86016
CdS films, surface texture, NH_3 solution treatment effects 7−105323
CdS, low resist. films grown by RF sputtering in Ar-H_2 atmosphere 7−132458
CdS polycrystalline films, low pressure MOCVD growth 7−126011
CdS spray pyrolysed thin films, ellipsometric study 7−105333
CdS sprayed films, elec. and struct. props., effect of process parameters 7−85153
CdS thin film growth for SAW appls. 7−100089
n-CdS, thin film photoanode, solar energy storage through photoelectrochem. cells 7−106914
CdS thin film photoanode production for photoelectrochemical cells using electrodeposition 7−144315
CdS thin films, spray-pyrolyzed, nucleation and growth 7−71009
CdS thin sprayed films, cavityless optical bistability 7−138530
CdS:In amorphous films, elec., photoelec. and optical props, 7−85873
CdS-Te system, film deposition, cothermolysis of chelates of Cd(Te) organometallic cpds. 7−113401
CdSe deposition by fused salt electrolysis 7−71097
n-CdSe films, electrodeposition, stoichiometry and purity, AES studies 7−106455
CdSe films, electrodeposition, in situ optical reflectance study 7−144314
CdSe films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7−105641
CdSe films, negative differential cond. study *(Russian)* 7−92319
CdSe films, solution growth technique 7−119179
n-CdSe films, traps and minority-carrier diffusion length 7−131818
CdSe, photocurrent, saturation and negative differential resistance 7−99119
n-CdSe, thin film photoanode, solar energy storage through photoelectrochem. cells 7−106914
CdSe thin films, electrodeposition from diethylene glycol+tri-n-butylphosphine selenide 7−106449
CdSe thin films, optically monitored electrodeposition 7−86068
CdSe thin films, photoconducting props., annealing effects 7−118599
$CdSe_xTe_{1-x}$ films, deep centres, luminesc. temp. quenching mechanisms 7−70909
Cd_2SnO_4, thin conducting and transparent films, electrical props. 7−85139
$CdSnP_2$ polycryst. thin film, MOCVD, structural and compositional charactn. 7−119167
CdTe, chemisorption of O_2, kinetics of electronic-molecular processes 7−76623
n-CdTe electrodeposited thin films, defect levels 7−112521
CdTe films, hot-wall vacuum evaporated, optical transitions 7−70926
CdTe films, photoelectrochemical deposition 7−71092
CdTe films, pressure change-induced EMF 7−143598
CdTe films, vacuum-deposited, photovoltaic effect 7−125157
n-CdTe films, vacuum-evaporated, preparation and conductivity 7−71038
CdTe high-cond. n-type vacuum deposited films, formation and props. 7−100076
CdTe polycryst. films, elec. and stoichiometric props., deposition parameters depend. 7−105319
CdTe pulsed laser evaporated films on glass and (100) GaAs substrates, refl. spectra 7−84560
CdTe thin films, photodielectric props. 7−85001
CdTe vacuum-deposited films, anomalous photovoltaic effects study 7−143510
CdTe:Ag film, absorption admixture field, anomalous photovoltaic effect 7−99124
CdTe-CdS heterosystem, rear-barrier photoelectric transducer, preparation and props. *(Russian)* 7−95649
CdTe-CdTe-CdS film, p-n-n struct., no-load voltage, spectral distrib. 7−99115
CdTe-nematic liq. cryst., light-induced orientational effects study 7−85006
(CdZn)S, semicond. film vap. deposition, chem. reaction model 7−119169
semiconductor thin films continued
$Cd_{1-x}Zn_xS$ films, low absorpt. coeffs., photothermal deflection spectroscopy 7−77673
$CuGaS_2$, CVD using chloride sources 7−138680
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7−118325
$CuInS_2$, structural/optical props., for CdS/$CInS_2$ solar cell *(French)* 7−143292
$CuInSe_2$ chemically deposited thin films, prep. and charactn. 7−84586
$CuInSe_2$ chemically deposited thin films, prep. and charactn. 7−84587
$CuInSe_2$, chemically deposited thin films, composition and struct. 7−113458
$CuInSe_2$ electrodeposited films, heat treatment effects on struct. and comp. 7−84585
$CuInSe_2$ film, amorphous, deposition, conductivity and energy gap 7−137928
$CuInSe_2$, polycryst., excess In effect on elec. props. 7−99228
$CuInSe_2$ prep. by electrodeposition and selenisation, solar cell appls. 7−119180
$CuInSe_2$, semicond. film vap. deposition, chem. reaction model 7−119169
$CuInSe_2$ thin films, elec. characts., stoichiometry and O effects 7−125161
$CuInSe_2$-CdS thin film solar cells, low cost production methods 7−133096
$CuInSe_2(S_2)$ thin film comp. determ., electrochem. methods 7−118329
$CuInTe_2$ films, electrodeposition 7−138695
$CuMSe_2$ (M=In,Ga), thin films, ESCA study, appl. for solar cells, segregation influence 7−125934
Cu_2O, electrodeposits, optical dispersion meas. 7−138526
Cu_2O films, electrodeposition and characterisation 7−100138
Cu_2S chemiplating on Cd and Cu, stoichiometry and solar cell applic. 7−132507
Cu_2S-$Zn_xCd_{1-x}Se$ heterostructs., appl. as thin film detectors in SEM *(Russian)* 7−73476
Cu_xS, chemiplated thin films, electroanalysis 7−105320
Cu_xS topotaxially grown films on sprayed CdS films, growth mechanism 7−100127
$Cu_{2-x}Se$ thin films, chemically deposited, structural, electrical and optical props. 7−106456
Cu_2SnS_3 thin films, photovoltaic characts. 7−143518
EuO thin films, O vacancy diffusion and elec. cond. 7−118156
GaAs, electroreflection spectra modelling *(German)* 7−106140
GaAs film, quantum-sized film subband struct., strain-induced changes 7−77118
a-GaAs films, elec. and optical props. *(Chinese)* 7−112516
GaAs films, electro-co-deposited, structural, electrical and optical props. 7−92899
GaAs, films, growth in continuous gas-epitaxy reactors, gas-flow regimes, num. study 7−118323
GaAs films, photo-CVD growth, photochemical reaction mechanisms 7−71514
a-GaAs, flash evaporated films, elec. conductivity meas., conduction mechanism 7−131820
GaAs foils, split dislocation images by weak-beam and lattice-resolution methods 7−83961
GaAs, MBE, low temp. 7−76653
GaAs, MOCVD, selective growth on Si substrates using superlattice intermediate layers 7−86051
GaAs, MOCVD growth on Si substrates, stresses and strains 7−100107
GaAs, MOCVD layers on Si substrates, lattice distortion and tensile stress 7−98741
GaAs polycrystalline films, MOCVD grown, AC and dielec. props. 7−70438
GaAs ultrathin films, field emission, size quantisation effects 7−138616
GaAs ultrathin films, wide-gap semiconductor, effect of size quantisation of photoemission 7−85951
GaAs:Si(Cr) wafers, semi-insulating, spatial distrib. of point defects and complexes, photoluminesc. study 7−98918
$(GaAs)_{1-x}(SiC_2{:}H)_{1-x}$ polycrystalline films, MOCVD grown, AC and dielec. props. 7−70438
GaN films, low temperature growth from metalorganics and hydrazine 7−71058
GaP amorphous films, electron-excited, internal current amplification mechanism 7−137946
GaP films on Si substrates *(Japanese)* 7−119651
a-GaP, flash evaporated films, elec. conductivity meas., conduction mechanism 7−131820
GaP thin films, vacuum evaporated, substrate temp. depend., elec. and optical props. 7−125999
GaP:As, refractive index profile, determ. by ellipsometry 7−99789
GaS thin films, one-phonon lattice absorpt., IR spectra 7−70921
Ge amorphous film, electrical and optical props., influence of substrate temp. 7−143645
Ge, amorphous films, influence of growth conditions 7−131484
a-Ge sputtered films, optical gap and void fraction, thickness depend. 7−125828
Ge, thin film, ionisation cross section *(Chinese)* 7−92763
Ge thin films, elec. cond., effects of electrodes and high fields 7−70439
a-Ge:H, ultrathin layers, quantum shift of optical absorpt. edge 7−125820
a-Ge:N_2^+ films, electronic props., ion implantation effects 7−117980
a-Ge:Si layers, amorphised by ion implantation, optical props. rel. to enthalpy of relax. 7−85578
Ge-As-S thin films, refractive index and absorption coefficient 7−85872
Ge-C thin films, amorphous, Raman spectra *(Chinese)* 7−77527
Ge-Si alloy microstruct. fabrication by direct laser writing, comp. anal. using Raman microprobe spectra 7−119157
Ge-Te-X (X=Pb, Cu, Si, In, Sb, As, Ga, Sn), chalcogenide glassy semiconductors, thermal stability 7−69601
$Ge_{22}Se_{78}$, amorphous thin films, photocurrent anomalous decay 7−92225
Ge_xSe_{1-x}, amorphous films, relax. processes, elec. cond., annealing effect 7−70310
$Ge_{22}Se_{78}Bi(Sb)(Te)_x$ chalcogenide amorphous thin films, photocond. studies 7−85003
$Ge_{1-x}Sn_x$ films, sputter deposition, ion beam collisional mixing, metastable single cryst. growth 7−113386
GeTe, amorphous, laser-induced crystallisation, time-resolved study 7−137259
GeTe, amorphous films, electron irrad., struct. and comp. 7−84030
$Ge_{16}Te_{80}As_4(Cu_4)(In_4)$, solid and liquid disordered states, charge transport 7−76946
InGaAsP films, dense e-h plasma, time-resolved photolum. studies 7−70896
$In_{2-x}Ga_xS_3$, prepared by spray pyrolysis, opt. energy gaps 7−85870

semiconductor thin films continued
In_2O_3 films, reactively evaporated, amorphous-to-crystalline transition 7—137759
In_2O_3 transparent conducting coating for IR region, activated reactive evaporation 7—86032
In_2O_3:Sn film degradation in H and Ar glow discharge plasmas 7—144634
In_2O_3:Sn thin films, DC sputtered, microstruct. study, annealing 7—105339
In_2O_3:Sn transparent films as IR filters 7—82761
a-InP, flash evaporated films, elec. conductivity meas., conduction mechanism 7—131820
InP particle deposition on Si_3N_4 and SiO_2 masks by low press. MOCVD, particle density 7—144297
InSb, application and properties for highly sensitive magnetoresistance elements *(Japanese)* 7—125158
InSb films, prep. by pulsed flash evaporation 7—126027
InSb thin foils, screw dislocation climb irrad. in HVEM 7—98163
InSe amorphous thin films, AC elec. cond. hopping mechanism meas. 7—85148
InSe amorphous thin films, optical absorpt., effects of thermal annealing 7—85882
InSe amorphous thin films, optical absorpt., photoconductivity 7—105625
n-InSe/p-ZnTe thin film heterojunction, DC current-voltage charact. meas. 7—143567
In_xSe_{1-x} thin films, elec. and photovoltaic props. study 7—138085
In_xSe_{1-x} thin films, growth and optical props. 7—144291
$In_{2-x}Sn_yO_{3-y}$ evaporated films, transport props., temp. dependence 7—85156
$In_{2-x}Sn_xO_{3-y}$ films, DC magnetron sputtering, resist. and light transmission *(Japanese)* 7—138657
$In_{2-x}Sn_xO_{3-y}$, ion beam sputtered films, XPS anal. 7—106361
La-S films, sputter deposition, structural and transport props. 7—76691
Li electrode primary passivation film, semiconductor nature and electronics conductivity 7—133060
Nb_2O_5 anodic thin films, photoelectrochem. props. at semicond.-electrolyte junctions 7—112483
$Pb_{1-x}Hg_xTe$, composition depend. of optical and elec. charact. 7—76997
PbS, films, laser assisted deposition, thickness, struct., elec. props. 7—77827
PbS, photosensitive layers, formation, depth conc. profiles 7—77831
PbS photosensitive polycryst. films, temp. functions of basic parameters 7—70436
PbS thin films, vacuum deposition rate effects on struct. 7—106420
PbS-type polycryst. films, inversion channels network, Hall effect calcs. 7—137959
PbSe, chemically deposited film, thermal annealing effects on photoconductive behaviour 7—137979
PbSe, films, laser assisted deposition, thickness, struct., elec. props. 7—77827
PbSe films, vacuum, evaporated and chemically deposited samples, effects of thermal annealing 7—92036
PbSe laser-deposited films, IR absorpt. and electronic struct. props. 7—77672
PbSe polycryst. layers, carrier mobility and photocond., adsorbed O effects *(Russian)* 7—99235
PbSe, polycrystalline films, residual conductivity, surface state effects 7—85144
PbSe polycrystalline photosensitive films, electron and hole mobilities, heat treatment 7—112519
$Pb_{0.8}Sn_{0.2}Te$ thin films in MIS structs., elec. props., effect of laser irrad. 7—99237
PbTe films, crystallite sizes, thermal stability 7—112126
n-PbTe films, effect of γ-irrad. on thermoelectric props. 7—84955
PbTe films, γ-irrad., elec. props., dose depend. 7—112520
PbTe films, hot wall vapour deposition 7—92873
PbTe, films, laser assisted deposition, thickness, struct., elec. props. 7—77827
PbTe films, thermoelectric props., effect of γ irradiation and annealing 7—84953
Sb chalcogenides, amorphous film, photoinduced changes in optical props. *(Russian)* 7—113302
Sb-S, amorphous, mechanism of optical recording *(Russian)* 7—111659
Sb-Se, amorphous, mechanism of optical recording *(Russian)* 7—111659
Sb_2S_3, amorphous, crystal formation and growth *(Russian)* 7—83720
Sb_2S_3 amorphous evaporated thin films, short range order, X-ray diffr. study 7—105335
Sb_2S_3 films, deposited in substrate laser-irradiated zone, structure and morphology 7—112141
Sb_2S_3, space-charge limited cond., dark cond. temp. depend., trap density 7—131817
$Sb_{0.2}Se_{0.8}$ amorphous films, photoinduced optical density changes and crystn. 7—77670
a-Se, amorphous films, short range order, X-ray radial distrib. fn. anal. 7—142587
a-Se, crystallisation caused by Al diffusion through Se-Al interface *(Japanese)* 7—83673
a-Se film, AC and DC cond., optical transmittance *(Korean)* 7—92317
Se, thin film, ionisation cross section *(Chinese)* 7—92763
Se thin films, form. and growth, substrate temp., evaporation times 7—105322
a-$Se_{75}Ge_{25}$ obliquely deposited thin films, photo-induced optical effects *(Korean)* 7—132365
$Se_{1-x}Te_x$, amorphous photoreceptor films, thermal and mech. props. of single and double layers 7—84606
Si, amorphised polycrystalline films on SiO_2, crystallisation parameters, temp. depend. 7—143257
Si amorphous film, dangling bond passivation by gas adsorpt. 7—71419
Si amorphous film, self-sustaining crystn. phases 7—131470
Si amorphous film deposited by plasma CVD, solar cell appl. *(Japanese)* 7—71073
Si, amorphous films, deposition from $SiCl_4$ glow discharges 7—144296
Si, amorphous thin film deposition by laser CVD *(Japanese)* 7—71072
a-Si, Ar^+ ion irradiated, hopping cond. 7—84898
Si based selective gas sensors, nanocryst. Si, gas adsorption effect on elec. cond. 7—92313
a-Si, conductivity prefactor as a function of Fermi level position, field effect experiment 7—124990
Si, deposition on electron irradiated Si (100) 7—77832
Si film, pulsations in optical directional melting 7—137528

semiconductor thin films continued
a-Si, film growth and condensation conditions on substrate surfaces *(Chinese)* 7—98724
a-Si films, density of states distribution, photoconductivity meas. 7—84626
a-Si films, ESR, sputter deposition rate depend. 7—85433
Si films, laser plasma CVD growth *(Chinese)* 7—113399
a-Si films, transport props. investigation by fast transient techniques 7—84886
Si, H_2 plasma etching, etch rates 7—132828
Si, ion bombardment, by Ar^+ and N_2^+, angular distrib. of sputtered particles 7—77740
Si, laser crystallised films on Al_2O_3 ceramic substrates for solar cells *(Japanese)* 7—119649
a-Si layers, ion implanted, explosive crystn. 7—83691
Si, microcrystalline films, plasma deposition 7—144295
Si nanocrystalline thin films, dark elec. cond. meas., depend. on structural props. and substrate bias 7—99229
Si, plasma CVD growth, effect of substrate temp. *(Chinese)* 7—76650
Si, polycrystalline, hydrogen-radical-enhanced CVD 7—71061
Si polycrystalline CVD film, elec. cond. studies 7—112522
Si polycrystalline films, quasi-rheotaxy grown on Al-glass substrates 7—84591
Si polycrystalline films, effects of crystallisation on trap state densities at grain boundaries 7—131655
Si SOI films, large area, seeded electron beam recrystn. with striped encapsulation 7—124768
Si solar cells, thin-film single cryst., fabrication *(Japanese)* 7—119648
n-Si thin film, negative magnetoresist., spectrum anisotropy effects 7—70435
a-Si thin films, dark elec. cond. meas., depend. on structural props. and substrate bias 7—99229
Si thin films, electron scattering, core losses, Monte Carlo simulation 7—106322
Si thin films, optical excitation of nonequilib. acoustic phonons, heat pulses 7—137636
a-Si thin films and solar cells, light-induced effect 7—144826
Si wafer, anal. of laser pulse interaction, bulk lifetime and surface recomb. vel. determ. 7—118536
Si, zone recrystallisation, on fused quartz 7—106448
Si:As, shallow implants, SIMS depth profiling 7—137389
Si:As implanted polycrystalline films on Si, epitaxial realignment by rapid thermal annealing 7—112114
Si:B crystalline and polycrystalline films, piezoresistive props. 7—85539
Si:B films, low pressure CVD grown, microstructure 7—106434
Si:B polycrystalline CVD films, ion implanted, B diffusion *(French)* 7—124601
Si:B(P) amorphous films, bias effects on preparation in triode glow discharge 7—126028
a-Si:C, N, H films, plasma deposited, struct. characterisation by gas evolution, IR absorpt. 7—143258
a-Si:Fe films, ^{57}Fe impurity states, Mossbauer spectra 7—70677
a-Si:H, Al glow discharge films, optical and elec. props. 7—84584
a-Si:H, Ar dilution effect on optical and electrical props. *(Korean)* 7—85877
a-Si:H, charge transfer from adsorbates to the bulk 7—99157
a-Si:H, dangling-bond recombination and photoconductivity 7—84981
a-Si:H, Fe films, ^{57}Fe impurity states, Mossbauer spectra 7—70677
a-Si:H, film, impurities and defects, statistical theory *(Chinese)* 7—91621
a-Si:H, film growth, glow discharge method 7—71069
a-Si:H, flat band voltage determ. from temperature dependent field effect conductance 7—85142
α-Si:H, near-boundary fields, structural charact. and props. 7—91453
a-Si:H, photocapacitance charact., light-induced changes 7—143504
a-Si:H, prep. by cross homogeneous CVD technique 7—86049
a-Si:H, sputtered, photo-excited carrier recombination 7—137957
a-Si:H, thin film deposition, plasma excitation freq. influence 7—131496
a-Si:H,Cl films, struct. order 7—84568
a-Si:H,Cl films, thermal annealing and hydrogenation, effect on optical and electrical props. 7—85154
Si:H,F thin films, hole transport 7—99226
a-Si:H,O^+ films, mobility gap defect states obs. 7—112248
Si:H,P, heavily doped films, microcrystallisation 7—126010
a-Si:H,P films, elec. resist. thickness depend., admittance meas. on Schottky diodes 7—84873
a-Si:H,P thin films, low energy ion doping technique 7—124342
a-Si:H,Sn(Fe)(Pt)(Pd) films, impurity diffusion studies 7—84392
Si:H amorphous thin-film solar cell production by CVD 7—113424
a-Si:H film, transient phototransport mechanism study 7—92222
a-Si:H film clad for multilayer waveguide polariser 7—110574
a-Si:H films, activation energy of dark conductivity 7—99232
Si:H films, amorphous and microcryst., photoinduced density of states variation, DLTS study 7—143408
a-Si:H films, asymmetric lineshape of dangling bond ESR spectrum 7—92503
a-Si:H films, coaxial-line-type microwave plasma CVD growth *(Japanese)* 7—71079
a-Si:H films, density of states and photoconductivity 7—84629
a-Si:H films, ESR, sputter deposition rate depend. 7—85433
a-Si:H films, glow-discharge deposited, frequency-dependent conductivity 7—76952
a-Si:H films, low temp. cond. and Staebler-Wronski effect *(Chinese)* 7—105555
a-Si:H films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7—105641
a-Si:H films, photo-CVD, surface reaction and recombination of SiH_3 radical. 7—71041
a-Si:H films, photocond. degradation and annealing charact. 7—143512
a-Si:H films, plasma deposited, electronic struct. 7—76747
α-Si:H films, prep. by DC magnetron sputtering technique 7—86023
a-Si:H films, reversible struct. changes, prolonged illumination, annealing 7—98734
a-Si:H films, role of H, IR spectral anal. 7—98730
a-Si:H films, structural disorder, Raman scatt. investig. 7—118993
a-Si:H films, time-of-flight signal, effects of sample capacitance and light intensity 7—84978
a-Si:H glow discharge films, electron transport, source gas species depend. 7—99065
a-Si:H layers, H depth profiles and impurity contents, elastic recoil detection and RBS 7—83681
a-Si:H layers, transient photocurrents, effect of morphology 7—84982

semiconductor thin films continued
a-Si:H sputtered films, metastable defect generation by light soaking and electron irrad. 7−142837
a-Si:H thin film growth, Monte Carlo simulations 7−92027
a-Si:H thin film surface cell structs., band bending, optical, elec. and photoelec. props. 7−131801
a-Si:H thin films, sub-band gap absorption, optically induced changes 7−92762
a-Si:H/a-SiN_x:H multilayer and single layer thin films, small angle X-ray diffr. study *(Chinese)* 7−118288
a-Si:H-SiO_x:H, ultrathin layers, photoemission spectroscopy 7−125909
a-Si:H(H,P) films, optical and electrical props. 7−85871
Si:O films, ion implanted and rapid thermal annealed, microstruct. studies 7−105060
Si:P, polycrystalline films, ion implanted and laser annealed, elec. props. 7−85146
Si:P films, prep. by low press. CVD of PH_3 and Si_2H_6 7−100114
Si:P nanocrystalline thin films, dark elec. cond. meas., depend. on structural props. and substrate bias 7−99229
Si:P(B) polycryst. films, conductivity and Hall meas., intergranular pot. fluctuation effects 7−143648
Si/Ni thin films, stacking faults and F bubbles, dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
Si-on-sapphire films, picosec. photocarrier relax. time temp. depend. meas. 7−143511
SiC, cubic, CVD growth on Si(100), antiphase domains 7−113400
β-SiC films, CVD, ion dose response of TSEE 7−87238
β-SiC films, CVD on SI and quartz substrates 7−92884
SiC substrate with Ge overlayer increase in SiC reflectance 7−106281
a-SiC thin films, Raman spectra *(Chinese)* 7−77527
a-SiC:F(:H) films, prep. by magnetron sputtering, props. 7−112400
a-SiC:H, magnetron sputtered films, IR spectra, struct. 7−77552
a-SiC:H,B, elec. and optical props., substrate temp. depend. *(Korean)* 7−137936
a-SiC:H magnetron sputtering, H effects on film props. 7−92866
β-SiC:N films, N doped and undoped, elec. props., temp. depend., CVD grown 7−105735
a-$Si_{1-x}C_x$:H, plasma deposited films, struct. and optical props. 7−132363
a-$Si_{1-x}C_x$:H films, optical constants, film microstruct., optical response, chemical ordering 7−119060
a-$Si_{1-x}C_x$:H films, photolum. study 7−85821
a-$Si_{1-x}C_x$:H films, valence electron props., UPS, EELS studies 7−85941
a-$Si_{1-x}C_x$:H films, XPS and ESR charactn. *(Japanese)* 7−124748
a-Si_xC_{1-x}:H films, field effect under illumination *(Chinese)* 7−112386
$Si_{1-y}C_yH_{2-y}$, semicond. polymer, electronic, optical and struct. props. 7−99961
SiGe, amorphous films, struct. study by EXAFS 7−125848
a-SiGe:H,F films, minority carrier diffusion length after light or proton irrad. 7−143476
a-$Si_{1-x}Ge_x$ films, density of states 7−84627
SiH,B(P) plasma CVD coatings with $(SiH_2)_n$ groups, doping, cond., optical gap control 7−98750
a-SiH:C alloy films, detection of deep-lying defects 7−137863
a-SiH_x:B, annealing effect on optical props. *(Korean)* 7−85876
SiN_x:H amorphous films, optical props. 7−144140
a-$Si_{1-x}N_x$:H films and a-Si:H/a-$Si_{1-x}N_x$:H superlattices, electron-hole recombination processes 7−70905
a-Si_xN_{1-x}:H layers, H depth profiles and impurity contents, elastic recoil detection and RBS 7−83681
SmSb thin films, electrophysical props. 7−70334
SnO_2, electron beam evaporated thin films, electrical and optical props. 7−85155
SnO_2 epitaxially grown thin films, cryst. struct. considerations 7−84593
SnO_2 films, CVD, evidence of CL removal by annealing in H_2 atmosphere 7−71055
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
SnO_2 natively textured film for optical confinement-type a-Si:H solar cell 7−70110
SnO_2 substrate, for ultrathin tetraphenylporphyrin film, depend. of luminesc. quenching on substrate conductivity 7−106254
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
SnO_2:Sb films, photo-CVD growth of transparent and conducting films 7−71064
SnO_2:Sb(In), film, reactively evaporated, prep. and props. 7−112518
SnS thin films, chemical deposition and optical props. 7−126037
SnTe, glassy thin film, structural characterisation 7−142606
SnTe thin films, synthesis by solid-state reactions 7−100057
Te thin films, elec. cond., effects of electrodes and high fields 7−70439
Te thin films, laser induced phase transformations, transient cond. studies 7−117969
Te thin films, photo-oxidized photoconduction 7−85005
Te-TeO_2:Pd write-once media for optical discs 7−75087
TiO_2 films, n-type semicond., sol-gel prep., photoelectrochemical props. 7−131710
TiO_2 thin film photoelectrochem. cells, quantum efficiency for back or front side refl. 7−86808
TiO_n films, Pd implantation, high energy defect migration 7−111597
VO_2 thin films, optical contrast at semiconductor-metal transition 7−70927
WO_3 amorphous thin films, struct., optical and elec. props. studies 7−143287
WO_3, monolayer on silica particles, hydrolysis, electrochemical measurements, electronic props. 7−138082
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
$Zn_{1-x}Cd_xS$ thin films, prep. by MOCVD, struct. and optoelectronic props. 7−119166
$Zn_xCd_{1-x}S$ films, elec. props. 7−143651
$Zn_xCd_{1-x}S$ layers, photoelec. and optical props. 7−105619
$Zn_xCd_{1-x}S$-Cu_2S thin film heterojunctions in solar cells, electron microprobe X-ray anal. 7−78631
$ZnIn_2Te_4$, thin film growth and struct. props. 7−138688
ZnO film surface conductivity, influence of absorbed gases *(Chinese)* 7−112517
ZnO films, chemical deposition from aqueous solutions 7−113460
ZnO films, cond. press. and temp. depend., influence of decomposition and O chemisorption 7−85140
ZnO films, RF sputter deposition on GaAs substrates, piezoelec. props 7−125981
ZnO films, transparent and conducting, activated reactive evaporation 7−119150
ZnO layer in sandwich struct., boundary acoustic wave prop. *(Japanese)* 7−70057
ZnO sputtered films, physical props. 7−125873
ZnO thin film, spray deposition, elec. and optical props. rel. to deposition variables 7−105321
ZnO:In(Al), heat-treated thin films, elec. props. 7−125156
ZnO:Tb films, spray pyrolysis and photoluminesc. props. 7−100054
ZnP_2, amorphous layers, thermal evaporation, struct. 7−92019
Zn_3P_2, amorphous thin films, refractive index and optical absorption coeff calcs. 7−76658
Zn_3P_2 films, vacuum deposited, structural, optical, elec. charactn 7−105737
Zn_3P_2, flash evap., growth morphology and opt. props. 7−100086
$Zn_{43}P_{57}$ amorphous films, electron diffr. studies 7−92032
$Zn_3P_{2(1-x)}Sb_{2x}$ thin films prep. by hot-wall deposition, elec. props. study 7−125155
ZnS, optical props., 2-12 μm 7−92760
ZnS thin films, ion beam sputtering 7−125982
ZnS:Mn^{2+} thin CVD films, EPR obs. 7−77401
ZnS-p-Si thin film interface electronic density of states meas., conductance technique 7−131753
ZnS-SmF_3 thin films, electrolum. characts. *(Russian)* 7−77658
$ZnSiAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSnAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSnP_2$, vacuum grown thin films, characterisation 7−112137
ZnTe films, optical props. 7−99951
ZnTe, vac. evaporated films, electrical cond. meas. 7−118598

semiconductors
Generalities and properties of unspecified materials only. For specific materials see semiconductor materials.
see also amorphous semiconductors; degenerate semiconductors; heavily doped semiconductors; magnetic semiconductors; many-valley semiconductors; narrow band gap semiconductors; polar semiconductors; thermoelectric effects in semiconductors and insulators
1D semiconductor, density of states and localisation length 7−134675
3D semiconductor systems, high press. transport expts. 7−137942
adsorbed layer, semicond. substrate, SERS anal. study 7−77569
alloys, structure-property relationships 7−131132
alloys and superlattices, band bowing, effective mass model 7−112182
atom probe FIM, material science appl. review 7−132853
atomic configuration at semiconductor interfaces, high resolution TEM determ. 7−112097
ballistic electrons in semiconductors, device appls. 7−76968
band-gap engineering, device appls. 7−125998
bicrystal, elec. conductivity, thermal and field emission mechanisms, boundary states 7−112319
bicrystals, strongly anisotropic 2D systems, one-particle density of states electron-electron interaction corrections 7−112425
biexcitons on dislocations 7−131547
binary, tetrahedrally bonded, microhardness 7−84105
bistable semiconductor elements, optical data processing, photonic logic 7−75050
bond orbital parameters, direct calc. *(Chinese)* 7−122329
bond susceptibility and ionicity in $A^{III}B^VC_4^{VI}$ compounds 7−137289
bonding and ionicity in semiconductors 7−124162
carrier capture by attraction centres 7−84931
carrier diffusion in semiconductors, simulation with random walk 7−118503
carrier distributions, bifurcation of solutions of basic equation 7−124976
carrier plasma photothermal radiometric imaging of semiconductors 7−70343
charge carrier kinetics, sources and detectors for picosecond/femtosecond spectroscopy 7−134857
charge carrier transport, phonon scatt., quasiclassical kinetic eqn 7−118470
classical magnetoactive semicond.-insulator superlattice, reson. and absorpt. based 7−106313
coherent excitations, time-resolved CARS meas. 7−85683
coherent nonlinear effects, optical turbulence and stochasticity, coherent excitons, photons and biexcitons 7−68742
compensated, carrier mobility, appearance of minima in temp. depend. 7−99062
compensated, filamentation instability of Alfven wave 7−70345
complex lattice structure, amorphisation problem 7−131033
compound semiconductors, MOVPE, review of growth systems and environments 7−77841
conference, Copenhagen, Denmark (Aug. 1986) 7−102008
conference on physics of semicond. cpds., Jaszowiec, Poland (April 1986) 7−72689
constant-capacitance voltage transient meas., method to improve speed and sensitivity 7−80821
Coulomb gap, doped semicond. in nonmetallic regime, conc.-fluctuation model 7−84630
covalent, warm electrons, two-particle Monte Carlo calcs. 7−76966
covalent semiconductors, two-particle Monte Carlo method for thermal electrons 7−143474
critical potentials and local interelectron attractions 7−84717
crystal concave diffr. gratings, aberrations 7−123184
crystalline, props. of H, review 7−111632
crystallites, band struct., size-dependent development 7−105396
crystals, direct and indirect two-photon absorpt. processes, perturbation calcs. 7−77489
cubic semiconductor, degenerate valence bands, interband electronic Raman scatt. 7−125720
CW CO_2 laser annealing, optimal preheating temp. determ. 7−142830
cyclotron resonance with tunnel-thin potential barrier 7−92505
D^- states, negatively charged donor ions, spectroscopic studies 7−144092
deep centres, majority carrier capture, hopping process 7−92116
deep level defects, optical cross sections, tight binding calcs. 7−99894
deep level density determ. by transient spectroscopy 7−76809
deep trap profiles, effects of nonabrupt depletion edge, DLTS determ 7−105463
defect electronic struct. and defect props. 7−98868
defect reactions, optical nuclear polarisation and spin-depend. recomb techniques 7−112996

semiconductors continued
defects, ab initio calcs. 7−98114
defects, conf., Paris, France (Aug. 1986) 7−95080
defects, positron annihilation studies 7−137363
defects characterisation by electron microscopy, review 7−124248
deformable extrinsic semiconductor, heat and charge carrier flux, coupled evolution eqns., EIT theory 7−70299
deformed crystal, exciton absorpt. band, profile determ. 7−143358
density functional theory, exchange-correlation potential, discontinuity 7−131506
diamond-like, positron annihilation gamma photons, angular distribs. 7−77680
direct gap, absorpt. coeff. exponential increase upon resonant biexciton formation 7−85583
direct gap, Auger lifetime, anisotropy and valence band warping effects calcs. 7−84927
direct-gap, transient nonlinear optical effects 7−82698
direct-gap semiconductors, linewidth enhancement factors 7−125663
dislocation mobility and elec. activity, influence of point defects 7−124323
dislocation slip planes, elec. activity 7−98171
dislocations, review 7−76129
disordered, book 7−140382
disordered, intermediate order, energy spectrum, density of states 7−143311
disordered, magnetic field induced metal-insulator transition 7−143351
disordered, resist., electron hopping with virtual bound states 7−137916
disordered regions, recombination props., heating effects anal. 7−137952
disordered semiconductor, thermally activated hopping in Urbach band tail random walks in an exponential band 7−92198
disordered semiconductors, critical phenomena near the metal-insulator transition, review 7−143349
disordered semiconductors, metal-insulator transition at milliKelvin temperatures 7−143350
disordered semiconductors with negative U-centres, steady-state photocond. 7−105607
disordered system, polycryst. powders and film, elec. cond., grain barrier effects under particle adsorpt. 7−105567
disordered systems, AC cond., power law depend., relax. spectrum nonanalyticity 7−92178
donor-acceptor pairs, hopping conduction and luminescence relax. 7−105564
doped, bulk and low-dimensional, optical spectra, many-body aspects 7−106113
doped, diffusion of ionised impurities 7−118159
doped, impurity band phenomena 7−84769
doped, mag. props. and metal-insulator transition 7−105946
driven current filament, bifurcation routes to chaos 7−105581
dye aggregate-semiconductor interface, exciton migration and chemical reactions 7−98816
electrical cond. temp. depend., use of Fermi function derivative as probability density function 7−76866
electron beam pumped lasers, amplified spontaneous emission 7−68647
electron probe local anal., microrelief and composition 7−126514
electron wind, high temp. gradient caused by laser treatment 7−69978
electron-hole plasma, energy conversion into microwave oscillations 7−137974
electron-hole radiative recombination in strong EM wave field 7−106264
electronic interband Raman scatt. in static mag. field, nonlocal effects 7−113201
electrons, holes and excitons, localisation at edge dislocation kinks 7−84738
energy relaxation of an electron-hole plasma in semiconductors 7−112385
energy-level struct. determ. using superconducting photorelaxation spectroscopy *(Japanese)* 7−76734
exciton binding, effect of disorder in semicond. alloy 7−70201
excitonic absorption band under uniaxial press. *(Russian)* 7−118984
excitons and electronic polarisation 7−105414
excitons in semiconductors with disordered regions 7−112188
extended interstitial lattice distortion, valence force potentials 7−98140
extended irreversible thermodynamic description of isotropic semiconductors 7−76924
extrinsic, avalanche breakdown, positive and negative differential resistance 7−70321
extrinsic, double source optical absorpt., spectral photocond. meas., deep impurity levels pop. effects 7−132300
Fabry-Perot interferometer, spontaneous oscillations, transverse diffusion instability and spatial dissipative structures in optical bistability and multistability 7−123067
field enhanced generation mechanisms 7−105590
free carrier concentration gradients, optical props. 7−106111
gapless, population inversion by optical interband pumping *(Polish)* 7−137955
glide and shuffle of semiconductor dislocation cores 7−91584
Hall coefficient and conductivity, high-temperature measurement technique 7−102445
heavy elements, virial theorem and eqn. of state, relativistic effects 7−76739
helical instability in an inhomogeneous electric field, obs. 7−131696
helicon waves, meas. of carrier conc., mobility and distrib. inhomogeneity 7−105604
highly excited, partial coherence of excitons and biexcitons 7−84689
hot electron effects, transport eqn. solution 7−118472
hot electron luminescence and optical orientation of electron and nuclear spins 7−85841
hot electron systems, noise-power temp. calcs. 7−112410
hot electron transport, Boltzmann modelling, boundary value problems 7−84912
hot electrons in one dimension, backscattering 7−105580
hot electrons scatt. by deform. optical phonons, distrib. function simulation 7−112344
hydrostatic piezoresistive effect meas. as function of temp., computer-controlled system 7−128596
impact ionisation, soft energy thresholds, classical model 7−105574
implanted ion conc. profiles, radiation-induced redistribution in semicond. with defects 7−83998
implanted ions, impact parameter dependent electronic energy losses 7−137433
impurity diffusion and drift due to laser irradiation 7−111962
impurity pair form. and density of states calcs. 7−84764
inhomogeneous relax. semiconds., galvanomag. effects 7−137963
semiconductors continued
instabilities, domains, filaments and chaos 7−105587
instabilities in semiconductors 7−136414
interaction with strong resonance EM field 7−138539
interband absorpt. coeff. of light, asymptotic behaviour in disordered semiconductors, determ. 7−132224
interface and surface structure, high resolution electron microscopy 7−98661
interference spectra of semiconducting slabs at excitonic resonances, coherent wave approach to band gap electrodynamics 7−85558
interstitial defect dynamic props., impurity vibrations, Green's function calcs. 7−142937
intrinsic, chem. pot. and Fermi level near absolute zero temp. 7−84639
intrinsic and extrinsic, relativistic corrections 7−105363
inverted photoelectron distrib., quantising mag. field 7−138534
ion beam technology appls. 7−124308
ion-beam assisted etching of semiconductors, review 7−71421
ionised-impurity-scattering mobility of semiconductors with broadened density of states 7−99063
IR materials for IR detectors and sources, conf., Boston, USA (Dec. 1986) 7−128194
laser annealing, nonthermal mechanism 7−111663
laser diagnostics, conf., Albuquerque, NM, USA (Feb. 1987) 7−102022
laser induced compound synthesis 7−117974
laser irradiated, defect migration anal. 7−131185
layered piezoelectric-semiconductor structs., nonlinear acoustoelec. effects at high surface wave intensities 7−70055
layered semiconductor, acoustoelectric interaction with SAWs 7−85009
layered semiconductors, exciton absorption band half-width *(Russian)* 7−118972
layered struct., band gap temp. depend., electron-phonon interaction and flexural wave scatt. studies 7−70210
light induced magnetisation, spin polarisation 7−105964
lightly doped, plasmon damping, local and resonance impurity electron state effects 7−143382
localisation and interaction in disordered metals and doped semiconductors, Summer School, St. Andrews, Scotland (July-Aug. 1986) 7−108004
low-dimensional structures, optical nonlinearities 7−130244
low-frequency deep-level capacitance spectrometer 7−121148
low-temp. electrochemically-driven oxidation kinetics, oxide props. effects 7−119435
magnetic resonance in solids, optical detection, conf., Kiev, USSR (May 1985) 7−134343
magnetic susceptibility, high temp., meas. method and apparatus 7−73382
magneto-optics of materials with double-hump nonparabolic band structures, appl. to Cd-Sb 7−125706
magnetoabsorption of a bichromatic optical wave in semiconductors, high freq. oscillations 7−132242
magnetoabsorption of strong bichromatic light wave 7−106143
majority carriers edge region nonsaturated filling, deep centre profile meas. 7−137838
MBE, conference, Cambridge, MA, USA (Oct. 1986) 7−128174
melting under ns and ps laser pulses, review 7−84208
metastability of defects, configuration coordinate diagrams 7−98890
microcrystallites, gigantic nonlinear optical polarisability 7−90691
microcrystallites, linear and nonlinear optical props. 7−118979
microprocessor-based data acquisition system for high-impedance meas. on semiconductors 7−140681
microstructures, determ. of electronic states, envelope fn. method 7−131508
minority carrier lifetime, diffusion length and diffusion const., simultaneous determ. using modulated light beam 7−99089
minority carrier lifetime meas. apparatus, based on point contact conductivity modulation 7−134806
mixed valent impurity systems, spectroscopy, energetics and Hall effect 7−76843
mixing enthalpies, delta lattice parameter model 7−137568
mobility edge, review 7−131520
multilayered materials, polariton struct. and spectral reflectance 7−76782
multinary semiconductor cpds., tight-binding theory 7−105373
n-type, effect of dopants conc. on resolution and rate of light photoetching, model 7−138914
n-type, minority carrier diffusion length meas. by photoelectro-chemical method 7−137951
n-type semiconductors, surface plasmons, influence of depletion and accumulation layers 7−125070
negative dynamic resistance induced by optical radiation 7−125052
noise in nondegenerate semiconductors, unified theory 7−99142
noncrystalline, nonlinear absorption of ultrasound under hopping conduction conditions 7−84137
nondegenerate, electron-electron scatt. 7−118473
nondegenerate, nonequilibrium current fluctuations, Boltzmann eqn., Green function approach 7−125064
nondissipative thermomagnetic effects, quantising mag. field 7−131691
nonequilibrium carrier transport *(Chinese)* 7−131665
nonequilibrium electron-phonon-impurity system in appl. high elec. field, nonperturbative balance eqns. 7−124999
nonequilibrium phonons, thermal size galvanomag. effects 7−76979
nonequilibrium phonons in semicond. and insulator crystals, book 7−66842
nonequilibrium plasma, thermal radiation 7−112380
nonlinear cond. and carrier spatial distribs., dislocation charge effects 7−76960
nonlinear refraction of 2D laser beams 7−82687
nonlinear spectroscopy, [-] 7−136399
nonlinear static Poisson eqn., soln. using fast iterative algorithm 7−115751
nonparabolic band, cyclotron reson. absorpt. coeff. calcs. 7−70161
nonradiative recomb. processes induced by deep impurity centres, survey 7−92096
nonradiative transitions, n-mode model 7−70208
nonradiative trapping rate, anal. *(German)* 7−131666
nuclear spin system, optical cooling 7−85843
one dimensional semiconductor device, simulation of transient behaviour 7−92167
one-dimensional semiconductors, electric potential solution 7−92168
optical beam induced current images, scan speed dependence 7−77002
optical bistability, review 7−75037
optical bistability, towards the optical computer 7−82700
optical bistability and nondegenerate wavefront reversal 7−75071

semiconductors continued
optical bistability of excitons, Fabry-Perot resonator 7−130229
optical characteristics, hysteresis, two-band model 7−75040
optical interband processes, phonon-assisted 7−84706
optical materials, review 7−110488
optical nonlinearities and instabilities 7−75048
optical waveguides, loss and facet reflectivity meas. technique 7−103994
optically excited semiconductors, conductivity relax time due to electron-hole collisions 7−118523
optically induced nuclear magnetic resonance 7−99613
optoacoustic interaction and acoustic beam wavefront reversal 7−68927
ordered ternary phases of semiconductor alloys, first principles calculations 7−105015
oxides, p-type semiconductors, transport props., influence of aliovalent impurities 7−143102
p-n junction solar cells, saturation photocurrent and photovoltage calcs. 7−106905
p-n junctions, photovoltaic effect in hot current carriers *(Russian)* 7−99174
paramagnetic, impurity centres, fluctuon states 7−98860
paramagnetic semiconductors, metal-insulator transition, influence of s-d exchange interaction 7−76776
parameters determ. in direct gap semiconductors, cathodolum. intensity depend. on acceleration voltage applied to electron probe in a SEM 7−132344
Peierls, charge density wave phase slip centre dynamics calcs., microscopic theory 7−118392
PEM effect and appls. 7−131706
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
photo-deep-levels Fourier spectroscopy for deep-levels analysing apparatus *(Japanese)* 7−128666
photoacoustic effect, free carrier light absorption calcs. 7−131241
photochemistry, industrial aspects 7−105615
photoconductivity, nonlinear light transmission, optical absorpt. saturation 7−118534
photoconductivity in relaxation case systems 7−105621
photoelectrochemical memory effect 7−70408
photoelectrochemistry, opportunities and problems 7−106810
photoemission with X-ray standing waves, electron transport problem 7−100006
photoexcited, recomb.-stimulated synergetic photovoltaic aftereffects 7−105618
photoexcited, with inhomogeneous carrier distrib., fast carrier dynamics 7−90504
photomagnetoelectric effect, nonlinear props. *(Chinese)* 7−118525
photon assisted two-photon transitions 7−132230
photon drag of electrons 7−85007
photostimulated lattice defect clustering induced by interaction with recomb. centres 7−104810
photothermally stimulated excitation 7−118499
photovoltage and photocurrent, relax. case 7−105622
physical properties, book 7−80186
physical sputtering of elemental metals and semiconductors 7−70962
planar Hall effect, magnetoresistance, determ. by probe methods, anal. 7−118511
plasma deposition, layer structure, from low temp. pulsed plasma 7−76704
point defect charactn. using optically detected mag. reson. methods, review 7−112999
point defect density, impurity solubility, thermodynamical evaluation 7−131145
point defects and diffusion mechanisms 7−104751
polariton-phonon scatt., macrofilled upper branch polariton mode *(Russian)* 7−124878
polycrystalline, minority carrier lifetime, 1D nonequilibrium steady state anal. 7−125008
pseudobinary semiconducting alloys, ordering observed by Raman scatt. 7−106197
pseudobinary semiconductor alloys, configuration depend. of Coulomb interactions 7−104630
quasi-2D electron gas in magnetic field *(German)* 7−118391
quasi-two-dimensional electron gas, interaction with cryst. lattice in quantising mag. field 7−112200
quasiparticle band structure, exchange and correlation effects 7−137795
radiation physics of semiconductors and nonmetals, conf., Tashkent, USSR (Oct. 1984) 7−101997
rare earth impurities, bistable mixed-valence impurity states 7−70259
refractive index dispersion at intrinsic absorpt. edge 7−77502
relaxation processes, dynamics of test pulse 7−144102
relaxation semiconductors, photogalvanic effect 7−143515
resistance oscills. in localisation regime *(Russian)* 7−77014
resonant tunnelling in magnetic fields, space charge buildup 7−125081
s-dimensional semiconductors, intrinsic conc., effective density of states, conductivity, relativistic corrections 7−137787
semiconductor electrode interfaces, chemical processes, charge transfer distrib. 7−137998
semiconductor plasma gain spectra, lineshape theory of plasmon-phonon sidebands 7−99913
SHG in MM wave region in DC mag. field 7−118521
signal and noise currents, longitudinal extrinsic photoconductors in background-limited regime 7−70350
SIMS depth profiling, rapid automatic compensation for charging effects 7−80929
simulation, spectral analysis of decoupling algorithm 7−99044
single valley, anisotropic planar acoustomagnetoelec. effects 7−112404
small particles, luminescence, high excitation effects 7−85801
solid powders, dielectric parameters at microwave freqs., determ. method 7−106078
solid state science, book contrib. 7−102035
solid-state physics, book 7−102027
sp-bonded solids, structural props., cryst. stability, semiempirical tight-binding method 7−124489
space-charge limited currents, analytical I/V charact. for nonlinear velocity-field relationship 7−137947
spherical microcrysts., exciton states, quantum size effect, variational calcs. 7−112192
spin-depend. defect reactions 7−137842
STM applications for semiconductor materials and devices 7−83619
strong perturbation theory, impurities in semiconductors 7−124909
strongly disordered, LF cond. anomalies 7−143530
surface, excitonic resonances, coherent wave approach calcs. 7−77021

semiconductors continued
surface, magnetoplasma surface waves, generation by moving charges *(Russian)* 7−118524
surface, regular relief form. under millisec. laser pulse irrad. *(Russian)* 7−137682
surface, vibrationally excited molecule interactions 7−119083
surface 2D excitonic states, spectral charact. *(Russian)* 7−118971
surface and surface space change region, luminescence 7−144119
surface differential reflectivity spectroscopy 7−118969
surface electronic topography study, combined photo-acoustoelec. method 7−92243
surface layer, hyper-Raman scatt. by lattice vibrs. 7−77531
surface layers, local crystal-symmetry meas. by harmonic generation and stimulated reflection spectroscopy 7−136428
surface photovoltage study apparatus with bimorphous piezoelectric Kelvin probe 7−67348
surface recombination rates, thermogradient magnetoconcentration effect 7−99156
surface reconstruction, electrostatic charge interaction effects calcs. *(Russian)* 7−112046
surface screening and short range dielec. function props. 7−98852
surface states generation-recombination noise 7−84925
surface topography development, suppression by ion milling 7−137680
surface-excited slab, carrier kinetics, influence of boundary conditions 7−84872
synergetic semiconductor system, comparison with generic reaction diffusion model 7−105585
TEM of semiconductors and their defects 7−97868
ternary and multinary cpds., simple theory of defects 7−104752
ternary semiconductor alloys, local bonding struct., EXAFS studies 7−106310
tetrahedral, electronic struct. and total energy calcs. 7−98801
tetrahedral, electronic struct. of defects, Green's function calcs. 7−143405
tetrahedral, force constant models, tight-binding theory 7−124370
tetrahedrally bonded, bulk modulus-vol.-ionicity relationship 7−69797
tetrahedrally bonded alloys, theory of ordering 7−104952
thermoelectric power of hot carriers, acoustic instability threshold 7−70340
thermomagnetic phenomena in quantising mag. field 7−84949
transient doping behaviour in CVD, simplified treatment, circuit representations 7−98192
transient melting regime and recrystallisation, two-pulse laser radiation 7−98394
transition metal impurities in semicond., band lineups, Schottky barriers 7−118413
transport in phonon systems, book 7−72740
transverse magneto-Seebeck coeff. magnetophonon oscills. 7−99099
TSC spectra anal. 7−112414
tunnelling in k-space, appl. to degenerate valence band in infinite spin-orbit interaction limit 7−105584
two band, coherent radiation interaction, cooperative effects 7−106295
two-band, supersymmetric inhomogeneous structures, and nature of parity anomaly in (2+1) electrodynamics 7−92267
ultrafast relax. phenomena, nonequilib. statistical operator method appl. 7−119044
ultrashort IR pulse generation via electron-density waves 7−130199
ultrasound attenuation, strong EM wave effects 7−137473
valence electron density change at impurity centre 7−92101
variable-valence semiconductors, defect form., excitons and light absorption 7−143369
wafer with differing surface recomb. vels., minority carrier continuity eqn. *(Chinese)* 7−125009
warm electrons, HF elec. field, two particle Monte Carlo method 7−137949
Wigner condensation, mag. field induced *(German)* 7−124891
wurtzite, acceptor-associated bound mag. polaron, cryst.-field model 7−118380
X-ray diffraction technique for determ. of integrated charact. of struct. perfection 7−130981
X-ray emission from Core excitons 7−118374
GaAlAs:Zn, variband semiconductor, spin echo 7−138491
GaAs:Cd(In)(Xe), as-implanted lattice sites of dopants 7−98222

semicustom integrated circuits *see integrated logic circuits*

semileptonic decays
conf., Gaithersburg Maryland, USA, Nov. 1983 7−66838
fermion decays in e^+e^- annihilation, fermion-lepton forward-backward asymmetries 7−121523
hyperon semileptonic decays, angular momentum conservation and Garcia-Kielanowski theorems 7−102739
$\tilde{n}\rightarrow H+\bar{\nu}_e$, H=hydrogen, relativistic bound-state Bethe-Salpeter anal. 7−121502
neutron lifetime meas. through UCN storage 7−81183
quark mass matrices, special forms, phenomenological constraints 7−95859
weak decays, recoil corrected bag model calcs. 7−108870
$B\rightarrow De\bar{\nu}$, weak mixing angles from semileptonic decays in quark model, comment 7−81171
$B\rightarrow K^+(K^-, K^0/\bar{K}^0)X$, branching ratios 7−89500
$B\rightarrow Kl^+l^-(K\nu\bar{\nu})$ implications for heavy t quark and fourth generation 7−81172
$B\rightarrow K\mu^+\mu^-$, branching ratio and light Higgs, three- and four-generation models 7−140927
$B\rightarrow l^+l^-X$, flavour changing neutral current decay, branching fraction 7−102732
B nonleptonic and semileptonic decays, $b\rightarrow u$ and $b\rightarrow c$ transitions, comparisons of exclusive decay rates 7−116161
$B\rightarrow ul\nu(cl\nu)$, branching ratio, end point lepton momentum spectrum 7−121494
$B_s^0\rightarrow l^{\pm}\nu_l X$, mixing ratio calcs., $p\bar{p}\rightarrow$ heavy flavours study 7−140961
$D^{\pm,0}$ lifetime measurements 7−121499
$D^{\pm}\rightarrow\bar{K}^{*0}e^+\nu$, lifetime and cross section meas. 7−108912
$\tilde{e}^{\pm}\rightarrow e^{\pm}$+light neutralino, cross section calcs. 7−95887
$K\rightarrow\pi l^+l^-$, decay amplitudes, chiral perturbation theory in standard model 7−135099
$K^+\rightarrow e^+\pi^0\nu/\pi^+\pi^+\pi^-$, probability ratio, photographed events from bubble chamber *(German)* 7−128884
$K^+\rightarrow\pi^+e^+e^-$, chiral description of radiative decays 7−81200
$K^+\rightarrow\pi^+\mu^{\pm}e^{\mp}$ in extended technicolour model with composite and elementary fermions and technifermions 7−134997

mileptonic decays continued
$K^+ \rightarrow \pi^+ \bar{\nu}\nu$, exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
$K^+ \rightarrow \pi^+ \bar{\nu}\bar{\nu}^c$, reaction anal. 7−108910
$K^+ \rightarrow \pi^+ \upsilon\bar{\upsilon}$, ultra-heavy quarks in rare decays 7−102731
K_{e4}, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$K_L \rightarrow \pi^0 e^+ e^-$, CP violation in standard model 7−81169
$\Lambda_c \rightarrow \mu^- e^+ X$, reaction rate calcs., $\nu_\mu N \rightarrow \mu^- e^+ X$ study 7−140926
$\bar{n}$ decay, beta-asymmetry meas. for g_A/g_V determ. 7−67619
n decay, mean lifetimes, exptl. overview 7−67624
n lifetime determination by trapped proton counting technique 7−68164
n lifetime determination using e-p coincidence technique 7−68163
n lifetime measurements, review 7−67618
n lifetime measurements using in-beam techniques 7−68165
n lifetime measurements using bottled neutrons at ILL 7−68166
$n \rightarrow pe\bar{\nu}$, β-decay half-life estimations *(Chinese)* 7−95900
$n \rightarrow pe\bar{\nu}_e$, axial vector current model anal. 7−67617
$\vec{n} \rightarrow pe\bar{\nu}_e$, triple correlation coefficient meas. and T invariance 7−67620
$p \rightarrow e^+ \pi^0$, relativistic SU(5) model anal., B-S eqn. based 7−135117
$\bar{p}p \rightarrow \mu^+ \mu^- X$, beauty prod. and semileptonic decay 7−81245
t($\bar{t}$) semileptonic decay, appl. to t quark mass determ. 7−135165
$\tau \rightarrow 5\pi^\pm + \pi^0 \nu_\tau$, branching ratio meas. 7−108919
$\tau \rightarrow 5\pi^\pm \nu_\tau$, branching ratio meas. 7−108919
$\tau \rightarrow 5\pi^\pm \nu_\tau(\pi^0 \nu_\tau)$, ν_τ mass limit 7−81185
$\tau \rightarrow 7\pi^\pm + \nu_\tau n\gamma$, branching ratio meas. 7−108919
$\tau \rightarrow \nu_\tau \eta\pi$, second-class currents or isospin symmetry breaking effects, anal. 7−95903
$\tau^- \rightarrow \pi^- 2(3)\pi^0 \nu_\tau$, decay modes study 7−121504
$\tau^+ \rightarrow \pi^- \nu_\tau$, $K^- \nu_\tau$, sensitivity to mirror-lepton mixing, anal. 7−116169
$\tau^+ \rightarrow \pi^+ \eta\bar{\nu}_\tau$, branching ratio meas. 7−95904
$K^+ \rightarrow \pi^+ \nu\bar{\nu}$, standard model with four generations, banding ratio upper limit 7−121493

mimagnetic semiconductors
diluted magnetic semiconductors, mag. polarons, phenomenological theory 7−131563
dynamic spin suscept., Ising model cluster calcs. 7−125429
high magnetic field effects, conf., Wurzburg, Germany (Aug. 1986) 7−128198
localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
magnetic properties, review 7−125391
magnetically mixed semiconductors, ESR and spin-dependent Raman scatt. at electron centres 7−138324
magnetisation, direct calcs. 7−70586
Raman scattering by mag. excitations 7−77596
semimagnetic semiconductors, magneto-optical studies, Warsaw 7−132247
spin-glass phase props. from susceptibility meas. 7−77293
ternary semimagnetic semicond., electronic props., photoemission survey 7−138599
$AgIn(Ga)Te_2$, semimag. semicond., mag. props. 7−125341
(Cd,Mn)Se; Raman scattering at low temp. and high magnetic fields 7−140759
$Cd_{1-x}Fe_xSe$ dilute mag. semicond., Van Vleck paramagnetism, photolum. study 7−85238
$Cd_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
CdHgTe, disorder-induced Raman spectra, Green's function theory 7−85686
CdMn Te, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$(CdMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$(Cd_{0.917}Mn_{0.083})_3As_2$, exchange interaction, effect on quantum transport 7−70328
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semiconductor, preparation, structure and mag. props. 7−70532
$(Cd_{1-x}Mn_x)_3As_2$, magnetisation meas. 7−70585
$Cd_{1-x}Mn_xS$ magnetically mixed crysts., p-d exchange interaction anomalies 7−84789
$Cd_{1-x}Mn_xS$, Raman scatt. from antiferromagnetically coupled Mn^{2+} ion pairs 7−92421
$Cd_{1-x}Mn_xS(Te)$, high-field magnetisation steps and nearest-neighbour exchange const. meas. 7−99502
$Cd_{0.9}Mn_{0.1}Se$, large negative magnetoresist., Hall coeff., magnetisation meas. 7−84940
n-$Cd_{0.95}Mn_{0.05}Se$, semimag. semicond., nonmetal-metal transition study 7−76775
n-$Cd_{0.95}Mn_{0.05}Se$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
$Cd_{1-x}Mn_xSe$, magnetically mixed semiconductor, spin optical orientation 7−138490
$Cd_{1-x}Mn_xSe$ powders, random internal fields distrib., EPR lineshape study 7−92489
$Cd_{1-x}Mn_xSe$, Raman scatt. from antiferromagnetically coupled Mn^{2+} ion pairs 7−92421
$Cd_{1-x}Mn_xSe$ solid solns., variation of optical energy gap with composition 7−70735
$Cd_{1-x}Mn_xSe(Te)$, magnetic polaron form. dynamics, picosec. photolum, study 7−99433
CdMnTe, energy gap, influence of mag. fluctuations 7−76763
CdMnTe magnetically mixed semiconds., optical bistability mechanism 7−75038
CdMnTe, photoassisted MBE 7−132472
CdMnTe, reflectivity spectra modified by Mn density of states 7−113223
CdMnTe, spin glass, dynamic mag. susceptibility, Faraday rotation meas. 7−77294
CdMnTe, synthesis by implantation of Mn into CdTe 7−91611
CdMnTe-CdTe:In doped superlattices, growth by photoassisted MBE, physical props. 7−77803
$Cd_{0.55}Mn_{0.45}Te$, Faraday effect, wavelength and temp. depend. 7−85607
$Cd_{0.8}Mn_{0.2}Te$ dilute mag. semicond., integrated mag. spectroscopy obs. 7−125450
$Cd_{0.96}Mn_{0.04}Te$, high energy electron and ion ejection during pulsed laser evaporation 7−85902
$Cd_{1-x}Mn_xTe$ films, epitaxial growth by ionized-cluster beams and magneto-optical props. 7−113442
$Cd_{1-x}Mn_xTe$, fundamental reflectivity spectra, influence of 3d Mn electrons 7−70832
p-$Cd_{1-x}Mn_xTe$, deep electron traps 7−76805

semimagnetic semiconductors continued
$Cd_{1-x}Mn_xTe$ diluted mag. semicond., zero field muon spin relax. studies 7−92564
$Cd_{1-x}Mn_xTe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Cd_{1-x}Mn_xTe$ epitaxial films, hot-wall evaporation 7−126000
$Cd_{1-x}Mn_xTe$, excitons, energy struct., dynamics, refl. spectra 7−98812
$Cd_{1-x}Mn_xTe$, high press. phase transition, Raman scatt. study 7−119006
$Cd_{1-x}Mn_xTe$, mixed crystal amalgamation bands, mobility edge luminescence 7−125778
$Cd_{1-x}Mn_xTe$, Mn 3d states in photoelectron spectra, electronic struct., parametrised tight-binding model 7−92833
$Cd_{1-x}Mn_xTe$, Mn-derived partial density of states 7−70159
$Cd_{1-x}Mn_xTe$, phase transition, high-press. Raman scatt. obs. 7−85687
$Cd_{1-x}Mn_xTe$, photoluminescence, temp., pressure depend. 7−144116
$Cd_{1-x}Mn_xTe$, press. induced B3-B1 phase transition, EDX diffr., elec. resist. meas. 7−98436
$Cd_{1-x}Mn_xTe$ semimag. semicond., band struct. and phase stability 7−124860
$Cd_{1-x}Mn_xTe$ semimagnetic semicond. and binary constituents, total-energy and band-struct. calcs. 7−70230
$Cd_{1-x}Mn_xTe$, semimagnetic semiconductor, transient luminescence, automatic picosecond single-photon-counting spectroscopy *(Japanese)* 7−108670
$Cd_{1-x}Mn_xTe$, shallow energy surface states 7−70371
$Cd_{1-x}Mn_xTe$, spin glass freezing, universal scaling, mag. suscept. meas. 7−99472
$Cd_{1-x}Mn_xTe$, temp. depend. photocond., photolum. and UPS studies 7−85794
$Cd_{1-x}Mn_xTe$ thin films, diffusive vapour transport, growth kinetics 7−84553
$Cd_{1-x}Mn_xTe_x$, polycrystalline powder, stress effect of grinding 7−106458
$Cd_{1-x}Mn_xTe_{1-y}Se_y$, energy gap, valence band struct, 7−76771
$Cd_{1-x}Mn_xZ(Z=S, Se, Te)$ 3d partial density of states, p-d hybridisation, photoemission study 7−92834
$Cd_xZn_yMn_zTe_{1-w}Se_w$ semimag. semiconds., EPR linewidth temp. depend. anal. 7−70626
$CuIn(Ga)Te_2$, semimag. semicond., mag. props. 7−125341
$(CuInTe_2)_{1-x}(MnTe)_x$ diluted mag. system, phase relationships 7−124451
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
p-HgCdMnTe bicrystals, quantum Hall effect and magnetoresistance under hydrostatic press. 7−76977
p-$Hg_{0.75}Cd_{0.23}Mn_{0.02}Te$ bicrystals, quantum Hall effect 7−131686
$Hg_{1-x-y}Cd_xMn_yTe$, magnetoresistance, quantum limit regime 7−112376
$Hg_{1-x-y}Cd_xMn_yTe$, spin modulated energy state, Shubnikov-de Haas analysis *(German)* 7−125311
$Hg_{1-x}Fe_xSe$ dilute mag. semicond., charge-centre scatt. rate reduction 7−99061
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
HgMnTe, acceptor binding energy, photoconductivity and magnetoconductivity meas. *(German)* 7−124927
HgMnTe, exchange splitting of shallow acceptor, photocond. and transmission meas. 7−76803
p-$Hg_{0.915}Mn_{0.085}Te$, semimag. semicond., nonmetal-metal transition study 7−76775
p-$Hg_{0.915}Mn_{0.085}Te$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
$Hg_{1-x}Mn_xTe$ (Se), diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Hg_{1-x}Mn_xTe$, acceptor ionisation energy in high mag. fields 7−76804
$Hg_{1-x}Mn_xTe$, MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Mn_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
$Hg_{1-x}Mn_xTe$, magnetoresist., Hall effect and phase differences between quantum oscills. 7−143485
$Hg_{1-x}Mn_xTe$ narrow gap semiconductors, magnetophonon effect in high elec. fields *(German)* 7−125030
$Hg_{1-x}Mn_xTe$ p-n junctions, characts. 7−77055
$Hg_{1-x}Mn_xTe$, zero-gap semimagnetic semicond., anomalous magnetoresist. anisotropy 7−84934
$Hg_{1-x}Mn_xTe$-CdTe superlattices, type III-type I transition 7−131754
$Hg_{1-x}Mn_xTe$-HgTe superlattices, MBE growth 7−132463
$Hg_{1-x}Se$, transverse magnetoresist., Shubnikov-de Haas oscills. 7−84935
$Mn_xCd_{1-x}Se_4$ crystal growth from vapour phase by chem. transport, EPR 7−100025
$Mn_xHg_{1-x}Te$, thermo-EMF meas., mag. field effects study *(Russian)* 7−125033
$Pb_{1-x}Gd_xTe$ semimag. cpd., optical props. temp. depend. meas. 7−113116
$Pb_{1-x}Mn_xTe$, band struct. in high mag. fields, magneto-optical methods 7−132246
(PbSnMn)Te, ferromagnetism under high pressure 7−99449
$Zn_{1-x}Fe_xSe$ dilute mag. semiconductor, MBE growth, characterisation 7−112117
$(ZnMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$Zn_{1-x}Mn_xS(Se)(Te)$ dilute mag. semicond., Mn-Mn exchange interaction 7−125363
ZnMnSe, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$Zn_{0.45}Mn_{0.55}Se$, dilute mag. semicond., mag. ordering, neutron diffr. studies 7−125317
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
$Zn_{1-x}Mn_xSe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Zn_{1-x}Mn_xSe$, high-field magnetisation steps and nearest-neighbour exchange const. meas. 7−99502
$Zn_{1-x}Mn_xSe$, magnetospectroscopy studies *(German)* 7−125028
$Zn_{1-x}Mn_xSe(Te)$, spin glass behaviour below percolation limit 7−70547
$Zn_{0.95}Mn_{0.05}Te$, magnetisation meas. in mag. fields up to 42 T 7−99423
$Zn_{1-x}Mn_xTe$, localised excitations, press. and temp. depend. 7−85826
$Zn_{1-x}Mn_xTe$, low temp. high field magnetisation step obs. 7−92464
ZnMnX (X=Se, Te), dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
ZnSe-(ZnMn)Se superlattices, exciton lumin., electric field induced shifts 7−138481

semimetallic thin films
Bi films, Einstein relation, size quantisation effects 7−85143
Bi films, obliquely deposited, structure and thermoelec. props. 7−92315
Bi, island struct., redistribution of atoms on heating 7−92022
Bi, polycrystalline, elec. transport props. 7−70434
Bi size quantised films, interband absorption 7−138529
Bi thermally evaporated thin films, elec. resist. and Seebeck coeff. temp. and film thickness depend. 7−85147
Bi thin films, 10 μm radiation, photon drag detection 7−121225
Bi/Se multilayer thin films, optical recording 7−74880
$CrSi_2$ amorphous thin films, Raman scatt. 7−113202
$NiSi_2$ amorphous thin films, Raman scatt. 7−113202
Sb thin film, crystallisation on GaAs(110), RHEED study 7−105306
Sb thin film, transverse photon drag detect. of FIR radiation by free carriers 7−108659

semimetals
see also antimony; arsenic; bismuth; semimetallic thin films
degenerate, phonon drag thermoelec. power sign anisotropy, diffusion-size effect calcs. 7−76988
graphite, EELS, excitation continuum 7−113324
high magnetic field superconductivity 7−85183
high T_c superconductivity, electron-exciton interactions 7−112642
high temp. magnetoresist. quantum oscills. mechanism, electron relax. level broadening *(Russian)* 7−112374
lightly doped, plasmon damping, local and resonance impurity electron state effects 7−143382
melts, US vel. and compressibility polytherms 7−131240
Al-In-Sn alloys, directionally solidified in high and low gravit. fields 7−138736
$Bi_{1-x}Sb_x$ semimetallic alloys, hole Fermi surface, Shubnikov-de Haas oscills. study *(Turkish)* 7−112168
$In_{1-x}Ti_xTe$ alloys, energy spectrum, cond. in a mag. field, press. depend. 7−131672

Senftleben-Beenakker effect
No entries

sensing devices *see detectors*

sensing devices, electric *see electric sensing devices*

sensing devices, nonelectric *see nonelectric sensing devices*

sensitisation (metallurgy) *see corrosion; heat treatment*

sensitivity
deep level transient spectroscopy, energy resolution optimisation techniques 7−143395
fibre ring interferometer sensitivity, radiation statistics influence 7−136557
gyroscope, passive ring laser in very high finesse cavity, laser feedback control system 7−123034
interferometer, classical, noise-limited sensitivity 7−128641
interferometers, active and passive, equivalence due to cavity losses 7−140741
microphones, sensitivity to wind and popping noise *(German)* 7−130498
optical waveguides, multimode graded index, sensor functional potentiality and sensitivity 7−130370
pyrooptic converter, device sensitivity estimations 7−121222
strain gauge, resistance-type, interaction with composite test material surface, opt. obs. 7−71428
tape electrostatic field sensor characteristics, calibration and applications 7−128556
thermal inspection sensitivity calc. on basis of one-dimens. problem of heating of three-layer sheet 7−132884
US twin probe characteristics for NDT 7−100489
X-ray microanalyser use as microdensitometer in local density change determ. 7−78429
AlN/GdTbFe/AlN/Al magneto-optical disc 7−74882
$Bi_{12}SiO_{20}$ cryst. appl. as voltage sensor in optical fibres 7−123204

sensitivity analysis
see also control system analysis; dynamic response; frequency response; transient response
breathing mechanics, exptl. conditions influence on parameter estimation, sensitivity analysis approach 7−107143
cardiovascular model sensitivity analysis with limited feedback 7−106955
digital integration of envelope-detected noise 7−67367
forward method for high order sensitivity anal. 7−129140
micropolar thermoelasticity, performance criterion sensitivity anal. 7−90943
nonadiabatic collisions, potential structure, curve crossing theory 7−129842
nonstationary thermoelasticity, optimal design and sensitivity anal. problems 7−97324
structural shape variation in heat transfer problems 7−90915
O_2 consumption algorithms, propag. of meas. errors 7−119886

sensors, nonelectric *see nonelectric sensing devices*

sensory aids
see also contact lenses; handicapped aids; hearing aids
aspheric ophthalmic lenses, aberrations, design and performance 7−94020
basic problems in assisting and substituting sensory systems *(Japanese)* 7−145279
bifocal, electrically switched intraocular and eyeglass molecular lenses 7−94022
character reader with speech output for blind people *(Japanese)* 7−145281
closed-circuit TV reading machines and optical aids, comparative study in use for visual disability patients 7−133510
lenses, aspherical, fabrication, flexible manufacturing system 7−117364
mobility aids for the blind using ultrasound *(Japanese)* 7−145282
ophthalmic lens, theoretical computation of refr. index 7−107044
ophthalmic lens design with splines 7−94017
ophthalmic lenses, thin film coating technology 7−90753
ophthalmic optics, conf., Cannes, France (Dec. 1985) 7−88735
ophthalmic progressive addition lenses, optical characts. 7−79128
plastic lens coatings evaluation by abrasion tester 7−90750
plastic ophthalmic lenses, coating evaluation 7−90751
plastic ophthalmic lenses, vacuum coated, abrasion testing 7−90752
polyvinylidene fluoride transducer arrays for Braille cell appls. 7−101147
reading aid for people with impaired vision *(German)* 7−71927
rehabilitation R&D progress reports (1986) 7−94023
spectacle lens, scratch diamond test 7−90740
spectacle lens design, third order distortion theory 7−94016
spectacle lenses and third-order distortion 7−133511

sensory aids continued
spectacles and myopic progress prevention, study on schoolchildren 7−145018
speech conveyance method for the deaf through sensory organs except visual sense *(Japanese)* 7−145285
speech training using visual displays *(Japanese)* 7−145284
sunglasses, pupil dilation and solar UV irradiation 7−71926
tactile aids for sound detection 7−145278
Varilux lenses conception, visual reliability 7−94019
vertical yoked prism−patient acceptance and postural adjustment 7−133509
vibrotactile sensation for the blind *(Japanese)* 7−145280
vibrotactile skin stimulation based wearable multi-channel auditory prosthesis *(German, English)* 7−87363
visual prostheses using sensory substitution, design 7−119908

separation
see also desalination; distillation; drying; filtration; isotope separation; magnetic separation
acid-salt separation by dialysis through ionic epoxide membranes 7−119566
alkali metal cations, selective separation using bulk chloroform membranes 7−113991
binary fluid mixture, Soret separation disturbed by convective motion, numerical simulation 7−117587
binary gas mixture flow in channel, separation using semipermeable membranes, diffusion effect 7−137007
binary mixtures, phase separation and critical phenomena 7−142969
binary solid-liquid beds, mixing and segregation 7−91208
butadiene-styrene rubber-polyethylene imine, dielec. relax. and elec. cond., phase separation effects *(Russian)* 7−113078
carboxylic acids, transfer from decane to water, interfacial resistance 7−69948
continuous-contact separation processes, simulation, unsteady-state absorpt. 7−124515
diffuse interfacial transport method for phase studies 7−111897
elastomers, filled, fracture mechanics under dynamic loading *(Russian)* 7−113834
electrodialytic ion transport through solvent extraction membranes 7−113946
extractive emulsion separation, hydrodynamics of plate-like settling tank 7−142351
gas dynamic separation method, construction and optimisation of separation cascade 7−141709
gasdynamic separation, statistical mechanics study *(Japanese)* 7−130765
gasdynamic separator flow field, nonequilib. processes study 7−130761
gravitational separation investigations using RBMK-1500 drum separator model, efficiency study for nuclear power generation *(Russian)* 7−135453
irreversibility of separation processing, modelling *(German)* 7−73307
macromolecules, linear and ring, chromatographic *(Russian)* 7−114054
mass separators, design principles 7−129536
metallic alloys, mixing and separation *(German)* 7−98478
methane-ethane, separation factors on zeolites, NMR gas phase meas. 7−92003
1-methylnaphthalene, separation from dodecane using liq. membrane, surfactant effects 7−113988
mixing-settling extractor, calculation of settling zone 7−126486
multicomponent mixtures, optimisation of cascades for separation 7−141183
oil-water separation, vortex phenomena 7−97539
oil-water separation by vortex in stirred draining vessel 7−123646
organic vapours, separation from air, membrane process 7−119701
particles suspended in liquid, separation by nonuniform travelling field 7−111074
phase separation, dynamics 7−84281
polydimethylsiloxane-polymethacrylic acid, interpenetrating networks, swollen struct. study 7−91470
polydisperse suspension, gravitational separation, diffusion-convection model 7−83313
polyethylene, crystallisation and liq.-liq. phase separation in binary systems 7−69871
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93320
polyurethane, block copolymers, polymerisation, Monte Carlo simulation 7−93321
sieving of test samples, error reduction 7−128533
solutes in ethanol solns. reverse osmosis separation with cellulose acetate membranes 7−126480
static bed, solvent recirculation and longit. mixing, solvent extraction 7−130775
steel, thermomechanical control process, separation effect on strength *(Japanese)* 7−86347
supercritical extraction systems, solubility, calcs., computer simulation 7−84288
thermodiffusional separation of gas mixtures in the field of a sound wave 7−97680
toluene-n-heptane, separation by oil-water-oil liq. membrane 7−113990
toluene-n-heptane separation by oil-water-oil liq. membrane 7−113989
viscoelastic liquids, separation by stirring, propeller in cylinder, velocity and shear rate *(German)* 7−123692
weakly interacting particle dispersions, phase separation 7−93384
C_8 aromatic isomer mixtures, separation by pervaporation through polymer films 7−78544
Cr VI ions, separation using tri-n-octylamine xylene based transport membranes 7−119574
(Fe, Mn)WO_4, wolframite, spherical agglomeration of particles from dispersion 7−93468
H_2 gas separation membranes using a plasma polymerization method 7−86676
H_2O and D_2O, spin modifications, separation using supersonic jet 7−142349
K_2SO_4, batch crystallisation and solid-liquid separation 7−91500
N_2-air, diffusion-induced separations, press. swing adsorpt. 7−111140
SO_2, removal from gases by electron beam irradiation *(Chinese)* 7−86656
U separation from thorium based spent fuel *(Chinese)* 7−109309

sequences *see series (mathematics)*

series (mathematics)
Bernoulli and Euler numbers, inverse power summation method 7−95293
binary processes, inflation, deflation and self-similarity, appl. to diatomic quasicrystals 7−72926

series (mathematics) continued
binomial polynomials, determinant sequence in lattice path counting 7−80294
Bravais lattice, lattice sums using Fourier series and Poisson's summation methods 7−83825
celestial mechanics, Hansen's coeffs. for Fourier series in terms of Bessel functions 7−107701
Cornu spirals, disorder, renormalizability and theta fns. 7−108419
critical amplitude ratio calcs. using series expansions 7−80654
cylinder, with spherical cavity, stressed state 7−134500
double sequences, exchangeability and Hausdorff's theorem 7−72862
elasticity theory, solution of 3D problems using re-expansion formulae 7−95341
electrostatic potential problems involving spherical conductors, solution, dual series approach 7−117119
ellipsoid, inhomogeneous, gravitational potential, power series expansion 7−134480
exponential functions, generalised series for analytical functions in multi-circular domain 7−88860
factorial n, analytical approxs. 7−128223
Filon's method of series expansion of functions in homogeneous solutions 7−134498
flow fields, complex BEM without matrices 7−91059
Fourier series, generalized absolute harmonic summability 7−134430
generalised hypergeometric series, identities, group theoretical basis 7−72806
generalized functions, representation using nonstandard finite sequences 7−108158
heterogeneous media, conductivity bounds using Volterra-Wiener series 7−137884
homogeneous mean values, weights and asymptotics 7−72924
hypergeometric series, analytic continuation 7−108184
hypergeometric series in U(n) and multivariable hypergeometric orthogonal polynomials, Whipple's transformation 7−80309
inhomogeneous means, asymptotic behaviour 7−72923
multiple Fourier series, asymptotic behaviour of Lebesgue constants 7−108161
non-Newtonian flow between eccentric rotating cylinders 7−136941
nonlinear least square data fitting using random sequences 7−128257
nonlinear oscillations, power series solutions, software 7−95309
open cavity equations, eigenfunction series expansions *(German)* 7−130293
Pade approximants for rough surface scattering 7−110210
penny-shaped crack, effect on externally cracked elastic solid, anal. 7−136745
planet, potential expansion convergence improvement, use of series in Chebyshev polynomials 7−127731
plate problems, analytical 3D elasticity solns. 7−97317
plates, rectangular orthotropic, efficient large deflection analysis by direct energy minimisation 7−123459
q-Bessel functions, integral representation and transformation props., series anal. 7−95259
quantum statistics, series representations, grand potential 7−115893
quantum statistics, series representations, particle energy averages and thermodynamic props. 7−115894
rod under combined loads of bending, shearing and torsion, dynamic anal., Laplace transform. and Fourier series expansion 7−97315
sample covariance matrix and canonical correlation matrix, functions of eigenvalues and multivariate time series 7−95184
sequence, discrete exponential functions, discrete Fourier transformation 7−67289
series representations, particle energy averages and thermodynamic props. 7−115894
shells, approx. calc. of local stresses by combined method, double series and integrals 7−75300
shells, circular cylindrical, elastic anal. by rod theory 7−130542
simple pendulum with oscillating support, power series soln., convergence props. 7−134485
solitary wave profile, series expansion diagonal Pade approximants convergence anal. 7−111003
special relativistic flat spacetime electromagnetic fields, Volterra series for post-Maxwellian corrections 7−72967
summability factors of infinite series 7−88934
suspension of equi-sized spheres, conductivity bounds using Volterra-Wiener series 7−137994
Taylor series, singular point calcs. 7−66951
two-dimensional Ising model, correlation functions, scaling limit, infinite lattice Feynman-Kac formula 7−115927
two-photon absorption, unsaturated, squeezing, analytical formulae 7−136240
unbounded brittle body with circular opening, crack form. on compressing, Fourier series of Legendre polynomials 7−75461

serrated yielding
Inconel 625, serrated flow, strain ageing, ladders bands, solute migration to mobile dislocations 7−78138
Portevin-Le Chatelier effect, phenomenological theory 7−98315
steel, austenitic stainless, strength-differential effect during high temp. fatigue deform. 7−132751
steel, austenitic stainless, tensile deform. at cryogenic temps. *(Japanese)* 7−100292
strain ageing, dynamic, review 7−71207
Al-Li-Cu-Mg-Zr alloy, yield stress, temp. and strain rate depend. 7−138797
Al-Zn-Mg, 7075, discontinuous deform. *(Japanese)* 7−126174
Al-Zn-Mg, Guinier-Preston zones and onset strain of serrated flow 7−144487
Fe-Ni-C, tensile tests, martensitic transform., AE, mag. suscept. 7−144665

SERS *see surface enhanced Raman scattering*

serum albumin *see proteins*

server systems *see queueing theory*

services, information *see information services*

servicing *see fault location*

servo systems *see servomechanisms*

servomechanisms
gyroscope, fibre optic, closed loop, electronics subsystem 7−123262
optical disc storage, optical component inspection 7−82750
positional servo for vibrationally isolated tables 7−121096
two-beam optical head 7−82501

servomotors
testing machine with programmable loading 7−132872

servos *see servomotors*

set theory
see also fuzzy set theory
1-set contraction fields, surjective 7−102079
almost disjoint family of sets, representing sets 7−72783
biordered sets of idempotents of semigroups of some types 7−88836
boundary distortion under conformal mappings and Hausdorff dimensionality *(Russian)* 7−80328
bounded point evaluations for nonminimal measures 7−66901
Cech closure operators, complementation in the lattice 7−73238
classical lattice, low-temp. phase diagrams, order-by-order construction, convex sets 7−120988
convex cone of a finite dimensional compact convex set at a point 7−95208
convex hypersurfaces and their closed characteristics *(French)* 7−72769
diagonal maps between sequence spaces 7−72765
direct solutions using block-three diagonal matrix 7−88823
discrete spectra variation, symmetric matrix eigenvalues under perturbation, selfadjoint operator 7−120759
dynamical systems, dimens. spectrum, large-deviation theory, Markov maps, Hausdorff dimens. 7−120944
FK spaces and Kuttner's theorem, inclusions 7−72787
fractals and chaos, book 7−134378
infinite-dimensional set, inequality involving infinite series 7−80307
interacting particle systems, existence theorems 7−88829
Julia sets, process $z \rightarrow z^p + c$, symmetries, self-replicating properties, Mandelbrot sets 7−134432
linear inverse problems, strong regularisability *(Russian)* 7−80289
locally convex spaces, fixed point index 7−115767
locally semimetrizable closed spaces 7−72911
Mandelbrot random measures associated with substitution *(French)* 7−80602
naive set theory, Russell's paradox *(French)* 7−72772
Newtonian mechanics, alternative set theory 7−88951
noetherian ring, reduction of modules 7−72784
partitions of triangles into convex sets 7−72793
projective hypersurfaces, dual and hessian mappings 7−72785
quantum mechanical renormalization, indeterminancy, set theoretic anal. 7−89043
quasiperiodic Schrodinger operator spectrum, Fibonacci Hamiltonian transfer matrices, Cantor set 7−120836
rib of an open set of a euclidean space *(French)* 7−102131
riesz products, Hausdorff dimension and normal numbers 7−72788
rotundity of convex functions 7−102100
s-closed spaces, equivalence to Cd-compactness and weak RS-compactness 7−72912
selfadjoint Hankel matrix, unitary group 7−72774
separability of a fixed system of sets *(Russian)* 7−66896
singularities of classical potential scattering, Cantor set struct., deflection fn., unstable periodic orbits. 7−140555
streamline flow theory of periodic arrays, functional equation solvability 7−88855
strongly α-irresolute mappings 7−72846
transitions to chaos, fractal bifurcation sets, renormalization strange sets and their universal invariants 7−134670

sets (mathematics) *see set theory*

SEXAFS *see EXAFS*

Seyfert galaxies
see also Markarian galaxies
accretion disks in active galactic nuclei, line and continuum radiation outer disks 7−115579
active galactic nuclei, Compton-heated wind from accretion disk, cooling and clouds form. 7−128081
Arakelian 120, spectrophotometry of Seyfert 1 galaxy 7−134300
broad-line region emission line var., general relativistic effects 7−107946
CfA sample, radio spectral props. 7−101929
classification of active galaxies, prospect of unified phenomenology 7−134311
compact radio sources, results of frequent flux density monitoring at 24 GHz 7−120631
compact X-ray sources, nonthermal first-order Compton pair cascades in soft radiation fields 7−120646
continuum of type 1 Seyfert galaxies, single form modified by effects of dust 7−107951
electron densities and temps. determ. 7−140228
extended non-nuclear IR emission 7−95016
IC 184, Seyfert 2 galaxy, and surrounding group, spectroscopic survey and redshifts 7−140252
IRAS 00521-7054, unusually warm Seyfert 2 galaxy, ER energy distrib. and optical spectrum 7−115590
IRAS 09595−0755, Seyfert ring galaxy discovery 7−120607
IRAS 23060+0505, highly obscured active galaxy, optical spectra and IR photometry 7−128071
Klemola 22/17, Seyfert 2 galaxy, magnitudes and radial vels. from obs. with OPTOPUS 7−115581
low-luminosity Seyfert nuclei in nearby galaxies characts. 7−115572
Markarian 231, 273, high-vel. wings obs. in OH megamaser emission 7−95026
Markarian 231, Seyfert 1.5 galaxy, high resolution U-band surface photometry 7−134312
Markarian 315, jetlike feature assoc. with Seyfert I galaxy 7−88618
Markarian 348 (=NGC 262), optical and radio obs. of tidally disrupted galaxy 7−115606
Markarian 509, EXOSAT X-ray spectrum 7−128066
Markarian 533, Seyfert 2 galaxy, nucleus bright emission-lines nature 7−72581
Markarian 845, Seyfert 1 galaxy in Bootes void, optical spectrum and redshift 7−128069
mid-IR and far-IR var. study 7−95019
narrow-line regions, dynamical models 7−134307
NGC 1068, nuclear region, IR obs. of variability 7−94999
NGC 1068, Seyfert 2 galaxy, CO obs. of mol. cloud ring 7−80101
NGC 1068, Seyfert 2 galaxy, struct. in nucleus at 10 microns wavelength 7−72609
NGC 1068, Seyfert 2 galaxy, X-ray heated wind model 7−88625
NGC 1068, Seyfert 2 galaxy, X-ray spectrum nature and origin 7−120606

Seyfert galaxies continued
NGC 1068, Seyfert 2 galaxy, [O III] 500.7 nm line shape rel. to central gas cloud 7—140295
NGC 1275 (Per A), obs. of fast fluctuations in emission spectrum of galactic nucleus 7—128078
NGC 1566, Seyfert 1 galaxy, recurrent outbursts obs. in broad-line region 7—88612
NGC 2992, extended emission line region dynamics 7—101900
NGC 3393, Seyfert 2 galaxy, nucleus multifrequency obs. 7—72632
NGC 3516, Seyfert 1 galaxy, kinematic signature of bipolar flow 7—146085
NGC 3783, nucleus photometric characts. and struct. 7—72601
NGC 4051, photographic magnitudes of SN 1983 I (1983 May 11 and 17) 7—134261
NGC 4151, 3516, 5548 and 6814, He and S emission line profiles near 1 μm obs. 7—80107
NGC 4151, line profiles and intensities of [Fe X] and [Fe XIV] lines 7—140250
NGC 4151, narrow-line region core, dynamics, spectral obs. 7—101897
NGC 4151, nucleus UV emission lines, predictions from duelling wind model 7—72629
NGC 4151, Seyfert 1 galaxy, new outflowing component in Mg II line profile 7—88635
NGC 4945, nucleus dynamics, radio and IR features 7—115601
NGC 5506, edge-on Seyfert galaxy, obs. of unusual radio loop 7—115588
NGC 5548, Seyfert 1 galaxy, nucleus optical and UV spectral characts. 7—72631
NGC 6814, X-ray flux, short time scale variability 7—88617
NGC 7682, Seyfert 2 galaxy, search for jet-like optical feature near nucleus 7—101919
nuclei, emission-line and continuum vars. rel. to connection with SS 433 phenomenon 7—140263
nuclei, nature of central power source 7—146091
nuclei, near-IR spectra rel. to interstellar reddening problem 7—120600
nuclei, optical emission-line activity rel. to radio continuum power 7—101910
nuclei, spectral energy distribs. between 0.1 and 100 microns 7—88614
nuclei evolution, models without stellar evolution 7—101926
optical luminosity function of quasars and low-luminosity active galactic nuclei, determ. from flux-limited survey 7—146083
photoionizing continuum origin 7—80099
PKS 1614+051, Seyfert 2 galaxy at redshift of 3.215, imaging and spectroscopic obs. 7—120586
Seyfert 1 galaxies, nuclei X-ray/UV emission *(Chinese)* 7—101894
Seyfert II galaxies, IRAS obs. 7—120601
southern galaxies with active nuclei, optical spectra 7—80089
spectral classification of emission-line galaxies, diagnostic line ratios 7—95018
spherical synchrotron-self-Compton process in active nuclei 7—88619
star formation in Seyfert galaxies, evidence from far-IR fluxes 7—72610
superluminal radio sources, probability approach to ballistic models 7—128103
surface brightness distribution, data anal. 7—128036
surface brightness distribution, multiaperture photometry meas. 7—72580
type 1 Seyfert galaxies, continuum, thermal and non-thermal components 7—140270
UBVRI photometry of active galaxies, observational results 7—88606
UV spectra, comparison with intermediate-redshift quasars 7—101953
X-ray luminosity and variability timescale in active galactic nuclei, statistical significance of correl. 7—134310
III Zw 77, high-ionisation Seyfert 1 galaxy, UV and optical emission-line spectrum 7—128057
H II regions, element abundances 7—140277

SF_6 insulation *see gaseous insulation*

sferics *see atmospherics*

SGEMP *see electromagnetic pulse*

shape memory effects
alloy coupler, behaviour for quick replacement handling in fusion reactor 7—141277
alloys, characteris. *(Japanese)* 7—106510
alloys, shape memory and hyperelasticity, martensitic deform. and transform. *(Japanese)* 7—118019
alloys, shape memory and pseudoelasticity 7—137456
alloys, shape memory effect, macroscopic model *(French)* 7—69807
alloys, structural phase transition dynamics 7—137457
elastic crystals exhibiting phase transitions, soliton props. 7—137553
martensitic transformations in shape memory alloys, driven domain walls 7—106511
$Ti_{50}Ni_{10}Au_{40}$, martensitic transformations 7—138744
Ce, isostructural γ-α reversible transition nucleation features 7—138742
Cu based shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7—126109
Cu-Al-Ni (13.99, 3.5 wt.%), shape memory alloy, two-stage martensitic transform. 7—100222
Cu-Al-Ni-Ti shape memory alloys, grain refined, X-phase struct. and comp. 7—86192
Cu-Sn liquid rapidly quenched alloys, shape memory effects 7—86301
Cu-Sn(Al)(Zn) alloys, rapidly quenched shape memory alloys 7—86162
Cu-Zn-Al, appl. 7—126108
Cu-Zn-Al, isothermal martensite transform. and shape memory 7—86176
Cu-Zn-Al, shape memory effects, effect of martensite ordering 7—144486
Cu-Zn-Al (25.3, 2.9 wt.%), high temp. shape change, deform. temp. depend. *(Japanese)* 7—126175
Cu-Zn-Al fatigued shape-memory alloys, dislocation struct., TEM study 7—91593
β-Cu-Zn-Al shape memory alloys, martensitic transform. cycles, effect of plastic deform. 7—113554
Cu-Zn-Al-B shape memory alloys, mech. props., martensitic temps. rel. to B addition and aging 7—119323
Cu-Zu-Al, shape memory alloys, ordered struct., thermal cycling effect 7—71185
CuAlNi, shape memory alloys, thermoelastic martensitic transform. 7—78006
CuZnAl, coil spring reversible shape memory actuators, shape strain degradation model 7—100310
CuZnAl, coil spring reversible shape memory actuators, biased reversion and cycling induced degradation 7—100311
CuZnAl, reversible shape memory alloys, thermally cycled, transient degradation phenomena 7—119270
Ni-Ti, appl. 7—126108
Ni-Ti, rapidly quenched shape memory alloys 7—86162
Ni-Ti, shape memory effect, stepwise phase transform. *(German)* 7—100224
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7—113553
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7—126110
NiTi alloy, two-stage yielding 7—78134
Ti-Ni, deform., fracture, electron microscopy obs. *(Russian)* 7—113659
$Ti_{50}Au_{50}$, martensitic transformations 7—138744
TiNi alloy, cold working, heat treatment, phase transform., DSC obs. 7—71184
TiNi, alloyed, shape memory effect and martensitic transform. *(Chinese)* 7—126115
TiNi, powdered, inert additions effect on superelastic behavior 7—119196
TiNi, shape memory alloys, near-equiatomic, precip. processes, TEM studies 7—144410

shear *see crystallographic shear*

shear flow
see also shear turbulence
2D Keplerian flows, non-linear waves, shear and rot. effects, accretion disks appl. 7—117624
Alfven internal gravity waves in shear flow, effect of density discontinuity 7—94646
atmosphere, numerical modelling of cloud development in sheared environment 7—87767
axisymmetric cavity, shear layer, flow oscills. effect 7—83251
axisymmetric cavity shear layer oscillations, response to external forcing 7—69196
circular cylinder, viscous shear flow, unsteady NS eqn. soln., integro-differential anal. 7—142268
coaxial cylinder viscometer, combined oscillatory and steady-state shear mode eqns. 7—97664
cohesionless granular material flow down inclined plane, flow avalanche model 7—94306
cohesionless granular material flow down inclined plane, flow avalanche model 7—94309
colloidal structures in solvent, shear instabilities 7—130776
compressible, inviscid, 3D, linear stability anal. using generalised shooting method 7—130642
critical binary mixtures, shear flow problems 7—83385
current-driven magnetohydrodynamic thermal instabilities in sheared fields, solar atm. appl. 7—88088
dense fluids, viscoelastic props., 2D viscosities 7—118144
diblock copolymers, homogeneous disordered phase, shear flow 7—136942
disks, elastic circular, plane flow, balance laws and constitutive relations 7—117655
dissipative instability of fluid flows with piecewise linear velocity profiles 7—142267
dry magnetic powder, shear flow in externally mag. field, appl. to xerography 7—123778
elliptical shear cell, design 7—142409
flexible macromolecules, dil. soln., config., nonequilibr. statistics 7—90458
flexible macromolecules in dil. soln., Brownian dynamics, nonequilibr. statistics 7—90459
flexible polymers in Newtonian fluid, nonlinear dumbbell model 7—69219
foam, high gas fraction, extensional and shear deform., two-dimens. hexagonal cell model 7—97472
foam rheology, viscous forces model 7—110899
free shear 2D flow behind splitter plate, stability 7—123594
gas-liquid stratified flow in horizontal pipe, wall and interfacial shear stress 7—91188
granular flow, binary mixtures of spherical particles, kinetic theory 7—91182
granular materials, flow, frictional-collisional constitutive relations 7—75492
granular materials, flow props. with large overburden loads 7—94230
granular materials, shear flow, balance laws, constitutive relations and boundary conditions 7—136985
granular materials, steady shear flow instability 7—91078
heterogeneous shear flows, modified instability criterion 7—91082
hexaethyleneglycolmonohexadecylether micelles, shear flow, neutron scatt. study 7—126488
homogeneous incompressible fluid plane parallel flows, stability, external friction effects *(Russian)* 7—97494
horizontal slurry flow, large solid particle transport, Bagnold theory 7—136821
ideal gas, general, under shear, thermodynamics 7—83402
incompressible 3D flow, multicell vortices, Euler eqn. fine-mesh soln. 7—123659
incompressible flow, subharmonic perturbations in far wake 7—83235
incompressible Newtonian fluid, shearing flow, nonlinear constitutive relation 7—83075
internal Alfven-gravity waves in shear flow, critical level behaviour 7—79820
Kallodoc bead suspensions, non-Newtonian behaviour study 7—100632
Lennard-Jones gas, velocity distrib. fn., shear-flow-induced distortion, mol. dynamics simulation 7—110913
linear nonvortical modes physics in differentially rotating system, anal. of shearing sheet 7—134125
liquid crystal polymers, simple shear and elongational flow, transient behaviour study 7—137209
liquid film flow down inclined plane, surface and shear instability modes 7—83186
liquid-filled membrane, deform. by viscous shear flow 7—123822
liquids, shear wave speeds and elastic modulus meas. 7—97551
loosely packed granular media, vertical shaft, shear flow, plug flow, energy transport *(German)* 7—123728
Maxwell fluid, plane Couette flow stability and crit. Weissenberg number *(German)* 7—142266
metal powders, dry cohesionless, rapid shearing flow study 7—75733
methane-air premixed flames, forced convective heat transfer 7—83216
MHD stratified shear flow stability of conducting fluid in mag. field 7—137017
molecular liquids, mol. mass distrib. effect on mass and momentum transport 7—105087
N suspended particles, hydrodynamic interaction, simulation 7—136995
non-Newtonian fluid mechanics, book 7—108067

shear flow continued
nonaxisymmetric Stokes flow past a torus in the presence of a wall 7−91126
nonclassical continuum mechanics, symposium, Durham, England (July 1986) 7−134367
nonlinear viscoelastic fluids through circular pipes, unsteady shear flow 7−75679
nonlinear wave packets propag. in shear flow with free surface 7−111007
ocean, near-surface shear measurement 7−94269
ocean currents, horizontal-shear in alongshore current at continental shelf edge 7−94242
oceans, mixing efficiency is stably stratified grown turbulence 7−114762
passage from memory functionals to Rivlin-Ericksen constitutive equation 7−128298
plasticating extruder flow in cylindrical shear gap, anal. and calc. *(German)* 7−142385
polyethylene melts, glass and C fibre filled, transient shear flow props. 7−69581
polymer solution, dil., channel flow, shear wall effects, Gaussian dumbbell model calcs. 7−111038
polymer solutions, relaxation oscillators, hydrodynamic interaction eqn. 7−75629
polymeric liquid crystals, shear flow induced struct. changes 7−83663
power-law fluids, laminar flow in curved pipes anal. 7−75622
pseudoturbulence models, simulated, unsteady lift and drag predictions 7−110923
self-diffusion in conc. suspensions of spheres 7−83317
separated shear layer behind normal flat plate, pulsed-wire anemometry meas. 7−110938
shear dispersion, asymptotic conc. distrib., tilted Gaussian model 7−142249
shear layer, spatial develop., nonlinear binary-mode interactions, Kelly's mechanism 7−111059
shear layer structural transitions, vorticity distrib. depend., contour dynamics study 7−136956
solar pond wind-induced waves and liquid mixing 7−100753
solid particle migration in shear flow, local instabilities 7−136961
spectral methods in fluid dynamics, book contrib. 7−97509
sphere assemblies, inelastic in shear flow, stress calcs. 7−91184
square cylinder and thick symmetrical airfoil wakes, compressible flows 7−104299
stably stratified shear flow response to diabatic heating 7−145609
stellar interiors, shear viscosity of dense matter 7−120263
Stokes flow past slits and holes 7−91273
stratified shear flow instability, Richardson number investig. 7−75645
subcritical instability to long waves, model eqn. 7−117567
superposed fluids, common boundary, viscous attenuation of waves 7−142327
superposed fluids with viscosity discontinuity, Couette and shear flow instability 7−123582
suspension of rigid rods, shear flow, stress growth, Galerkin method calcs. 7−114011
suspensions, sheared, ordering and viscosity study using elliptical shear cell 7−142409
Taylor-Goldstein problem, non-singular neutral modes, wave vel. boundedness 7−80425
thermal convection in rotating shear flow, time-dependent 3D numerical model 7−79821
time-variant flows, vortex dynamics modelling, conf., Aix-en-Provence, France (April 1986) 7−72732
Tollmien-Schlichting wave cooling of chips is flow in grooved channels 7−123636
transition, Ginzburg-Landau eqn. soln. 7−117674
turbulence, direct simulation of boundary layer instability by higher order method of lines 7−110922
two-layer stratified flow, shear prod. due to boundary-index 7−114757
vertical mixed convection flow about horizontal heating/cooling line source 7−130692
viscoelastic liquids, dynamic shear flow problem, initial-boundary value problems 7−130750
viscoplastic body motion in mag. liq. flow, generalised rheological law 7−91250
viscous fluid flow over perforated boundary at low Reynolds numbers 7−117663
vortex/airfoil interaction, numerical modelling 7−69184
water-granule mixture, parallel flow under gravity, continuum modelling 7−91185
wavelike midlatitude disturbance in presence of shear flow on sphere, barotropic decay 7−110998
zonal shear flow, disturbances nonlinear devel. 7−117563
^{3}He, superfluid B phase, finite size effects, shear viscosity 7−111998

shear modulus
agarose gel-sol transition, shear modulus crit. behaviour investig. 7−100628
alloys, two-phase, interfacial stresses prod. by pile-up of discrete edge dislocations 7−111557
allylmethacrylate, dielectric relax. determ. 7−118943
n-butylacrylate, dielectric relax. determ. 7−118943
cylinder, nonhomogeneous circular, periodic shearing stress, torsional vibr. study 7−142206
diblock copolymers, homogeneous disordered phase, shear flow 7−136942
epoxy binders, viscoelastic behaviour mechanisms 7−138773
fibre, synthetic, deformational rigidity meas. using dynamometric instrument 7−78437
fibre reinforced composite, mechanical props. rel. to cure press., resin flow, voids 7−138782
glass fibre reinforced polypropylene, impact strength, influence of vel. 7−78206
glycerol, glass transition, freq.-depend. shear modulus meas. 7−124511
inhomogeneous media in polar coordinates, 2D inverse problem of elasticity theory 7−67019
Iosipescu and asymmetrical four-point bend test 7−110886
isobutylacrylate, dielectric relax. determ. 7−118943
isobutylmethacrylate, dielectric relax. determ. 7−118943
itinerant multiple SDW systems, spin waves 7−99432
liquids, shear wave speeds and elastic modulus meas. 7−97551
membrane models with bending rigidity, effective potential stability 7−95329
metallic glasses, shape formation, structural relaxation 7−142604
metals, Ne ion implanted, induced X-ray emission 7−104778

shear modulus continued
methane-perfluoromethane, stability and struct., mol. dynamics model 7−105014
organotextolite, ageing mechanism in subtropical climate 7−78291
polycrystalline semiconducting compounds, elastic moduli, temp. and press. derivatives 7−98296
polyethylene, lin., hydrostatically extruded, mechanical props. meas. 7−104889
polymer, rigidity moduli determination from monomer chem. struct. 7−69804
polymeric systems, rheological characteristics measurement, vibr. rheometer 7−75729
polystyrene, monodisperse atactic, dynamic mech. props., time-temp. superposition 7−113597
polystyrene blends, complex moduli evaluation 7−69580
shells of revolution, multilayer rib reinforced, nonaxisymmetric temp. force 7−97345
silicate clays, mixed layered, ion size and substrate rigidity, X-ray and Raman spectra investig. 7−83945
solid soln. alloys, creep behaviour analysis 7−106587
sphere and shell, nonhomogeneity effect on stresses 7−75318
split rigidities, method, to find lower bounds of fundamental natural frequencies and initial loads *(Chinese)* 7−137437
suspensions of penetrable spheres at nondilute conc., bulk and shear moduli 7−119585
unidirectional fibrous composites, transverse shear modulus eval. 7−144452
Ag_2O-B_2O_3-based superionic glasses, elastic behaviour under pressure 7−124374
Al polycrystal elastic props. at high temps., ultrasonic meas. 7−118011
BaO−ZnO−P_2O_5 glasses, coordination numbers suggested by elastic props. 7−113595
Co-P, amorphous, shear modulus reversible relaxation 7−142879
$Co_{84}Nb_{10}B_6$ metallic glass, fully-crystallised, elastic moduli, yield stress and ductility 7−71227
Cu-Ni-Sn single cryst. yield stress asymmetry *(Russian)* 7−138780
Cu-P (Ge), single crysts., dynamic recrystn. 7−126144
$Fe_{4.7}Co_{65.6}Ni_{3.4}Cr_{1.1}Nb_{2.5}B_{13.8}$ $Si_{9.\ 1}$, metallic glass, internal friction, struct. relax, microhardness 7−106566
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ metallic glass, inhomogeneous deform., bending meas. 7−98319
$Fe_{78}Si_{10}B_{12}$ glass, mag. annealing influence on shear modulus and internal friction, piezomag. props. 7−70622
$MgSiO_3$, ilmenite and perovskite phases, struct. and elastic props., computational model 7−76097
$Mn_{0.7}Ni_{0.3}$ FCC alloy, anomalous elastic props. 7−119302
MoO_3-P_2O_5 glass, US vel., temp. depend., 4-600 K, anelastic and elastic effects 7−76304
Nb-Mo, thermal expansion, elastic props. 7−98522
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
$Pd_{77.5}Cu_6Si_{16.5}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
$Pd_{48}Ni_{32}P_{20}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
$Pt_{58.4}Ni_{14.6}P_{27}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
Si, ion implanted, two-phase medium, elastic field associated with square dislocation loop 7−142874
Si_3N_4 based materials, hot compaction, elastic props. rel. to porosity 7−106561
TaS_3, CDW state, shear modulus meas. 7−137442
Ti-Ni, temp. spectra of internal friction and shear modulus, effect of pre-annealings 7−100278
U-Ti (0.75 wt.%), depleted, determ. of dynamic elastic moduli as function of temp. by piezoelec. US composite oscillator technique 7−113596

shear strength
alumina shock-loaded, shear strength determ. with longitudinal and transverse manganin gauges 7−124368
Ariake clay subjected to shear failure and disturbance, strength variation *(Japanese)* 7−107404
brass, soldered joints, shear strength, microstruct. rel. to solder comp. 7−113619
composite rods for beam structures, load-bearing capacity, minimal weight design 7−68987
composite springs, elliptic, static mech. performance 7−75466
ductile material, shear strength, effect on plane shock wave propag. 7−76297
epoxy resin, torsional fatigue props. *(Japanese)* 7−93085
epoxy-glass insulation for ASDEX upgrade TF coils, mechanical props. 7−135635
fibre reinforced composite, mechanical props. rel. to cure press., resin flow, voids 7−138782
fibre reinforced composites, interlaminar shear strength, improved quality acceptance procedure 7−132840
fibre reinforced polymers, unidirectional, longitudinal tensile strength, effect of interfacial shear strength, theoretical modelling 7−97308
glass fibre reinforced thermoplastic composites, interfacial shear strength determ. 7−119321
glass fibre/sphere, polyester tensile, flexural and shear strengths, 7−78126
graphite fibre reinforced epoxy, prep. from pristine and Br intercalated fibres, mech. and elec. props. 7−144451
Iosipescu and asymmetrical four-point bend test 7−110886
Iosipescu shear test method, current status 7−144648
limit loads of heterogeneous and homogenized structures, comparison *(French)* 7−123485
low temp. high press. inelastic props., appl. to icy satellite interiors 7−111742
mortar, fracture in shear-compression field 7−126213
plane torsion test, buckling conditions *(German)* 7−97355
polyacetal, torsional fatigue props. *(Japanese)* 7−93085
polycarbonate, torsional fatigue props. *(Japanese)* 7−93085
polypropylene, transcrystalline layers, struct., mech. props. 7−119234
powders, plane strain, friction bonds model of shear 7−92909
rubber, vulcanized, strength rel. to crack tip sharpness 7−113686
rubber toughened epoxy resin dual-phase system, struct. and mech. props. 7−100356
stainless steel wire reinforced Al-Mg-Si composite, interfacial shear strength rel. to annealing temp. 7−132673
steel, prestrained, plastic shearing 7−132688

shear strength continued
Al alloy lap joint, adhesive bond strength rel. to moist air exposure 7−78286
Al-Zn-Mg, 7475, superplastic, solid-state bonding 7−93246
Al-Zn-Mg clad sheet, Ag coated, diffusion bonded overlap joints, shear strength 7−113614
α-Al_2O_3, extrudate structure and strength, formulation effect 7−92902
B fibre reinforced Al, with heterogeneous interface between components shear strength 7−138816
C fibre reinforced Al, with various C fibre coatings, strength 7−86315
C fibre reinforced epoxy, peel fracture, fractographic characts. 7−132707
C fibre reinforced thermoplastics, adhesion at fibre/matrix, interface 7−106579
Cu, soldered joints, shear strength, microstruct. rel. to solder comp. 7−113619
SiC fibre reinforced Li_2O-Al_2O_3-SiO_2 glass ceramic, high temp. mech. props. 7−132720
SiC fibre reinforced Si_3N_4, mech. props. 7−78242
Ti-Al-V alloy, for porous-coated implant devices, post-sintering treatment effect on mech. props. 7−86254

shear turbulence
air pollution model for turbulent shear flow 7−86850
axisymmetric jets flowing into closed tubes, numerical study 7−75644
baroclinic laboratory mixed layer above sloping surface 7−123608
boundary layers, 3D including separation, computation, conf., Rhode-St-Genese, Belgium (April 1986) 7−72731
channel flow, large eddy simulation, turbulent shear stress 7−117573
closure theory, energy dissipation fn. 7−91106
coherent structures of a turbulent boundary layer over a d-type rough surface at a low Reynolds number−analysis with the four quadrant method *(Chinese)* 7−110939
compressible Coanda wall jet, struct. and breakaway 7−130758
convective annular flow evaporation modelling 7−97513
curved jet, 2D along circular arc, vel. profiles and turbulence meas. 7−69247
disturbances, propag., governing equations 7−130679
duct flow, eddy viscosity models 7−91101
duct flow, wall shear stress fluctuations, scaling study 7−69124
externally excited turbulent free shear flow, coherent motion 7−83193
flow instability caused by non-homogeneous external forcing 7−130675
forced convection heat transfer in smooth tubes roughened by helically coiled ribbons 7−136848
forced shear layer, vorticity field and entrainment dynamics, vortex simulation study 7−91104
free-shear flow, turbulent diffusion, one-eqn. model 7−110944
horizontal slurry flow, large solid particle transport, Bagnold theory 7−136821
ideal fluid, supersonic flow about bodies, turbulent shear layer 7−130739
incompressible turbulent shear flow, Lyapunov dimens. calcs., chaotic attractors 7−136827
large-scale organized structures, eduction in a turbulent plane wake 7−136825
mixing layers, visualisation and velocimetry meas. 7−123609
near-wall turbulence, evolution of shear-layer structures 7−130680
numerical experiments on turbulent flow using the random vortex method 7−130673
one point closures, multiple time scale modeling 7−91105
plane parallel jet interaction, static press. and vel. meas. 7−69236
plane shear layer, mass transfer, numerical anal. 7−130626
plasma MHD turbulent shear flows, subgrid modeling 7−83443
polymer and polymer fibre mixtures, drag reduction, shear stability study 7−97582
probability density function soln. 7−83201
reattaching layer behind rearward facing step, time depend. behaviour 7−136820
relaxing boundary layer, calc. using Reynold's stress model *(German)* 7−136828
Reynolds stress meas. in turbulent channel flow with polyethylene oxide additives 7−83200
secondary flows in 3D boundary layers and thin shear layers, review, book contrib. 7−97508
secondary instabilities, coherent structures and turbulence 7−123613
separated flow, struct. obs. 7−142286
separating flow downstream of a step. susceptibility to acoustic perturbations 7−110936
shock-turbulence interaction, amplified turbulence and noise spectra 7−110934
spatial restriction effect on wall turbulence inner-layer struct. 7−83199
stenosis determ. in turbulent blood flow using dual-transducer pulsed Doppler US system *(Japanese)* 7−126965
stratified flow, turbulence meas. 7−145602
subsonic compressible axisymmetric jets, Kelvin-Helmholtz instability, numerical simulation 7−69237
surface pressure fluctuations in a separating turbulent boundary layer 7−83197
transverse vorticity meas. critical anal. 7−142415
turbulent boundary layer, shear driven, transverse strain effect, laser Doppler velocimetry 7−69125
turbulent boundary layer-wake interaction, shear flow relax. 7−142298
turbulent self-preserving wake, organised motion 7−123640
wall jets, stability along concave surfaces 7−75634
wall jets long strong convex surface, mean flow and turbulence characts. 7−117636
weak interaction process in stratified turbulent flow, analytical soln. 7−83195
He-N_2 variable density mixing layer, second-order modelling 7−136824

shear turbulent flow *see shear turbulence*

shear waves *see elastic waves*

sheathing, cable *see cable sheathing*

sheaths, plasma *see plasma sheaths*

shell model (nuclear) *see nuclear shell model*

SHG *see harmonic generation*

SHG (optical) *see optical harmonic generation*

shielding
see also magnetic shielding; radiation protection
AGN 1 spent fuel transport cask, quality assurance aspects of fabrication and transport 7−74226
American Nuclear Society, Conference, Dallas, TX, USA (June 1987) 7−102014
compact ignition tokamaks, high-heat flux components, magnetic vapour shielding 7−103187
concrete, neutron attenuation curves using various radiation protection quantities 7−96396
concrete shielding slabs, ang. props. of 6.13 MeV gamma rays 7−74215
cylindrical human model, shield effect of cylindrical mesh 7−87241
deep penetration of gamma rays, fluorescence effect, transport calcs. 0.03-0.5 MeV 7−129181
electron accelerators, radiation shielding, technicoeconomic evaluation 7−122219
Fusion Experimental Reactor, radiation streaming through narrow gaps 7−81711
fusion reactor design, neutron spectra calcs. using ZZFEWG 1.31/1F data set 7−96308
fusion reactor shielding, radiation streaming through small penetrations, parametric study 7−103195
gamma radiation shielding by European houses, Monte Carlo photon transport code study 7−74214
gamma-ray streaming through pipes, total dose meas., semiempirical formula 7−96135
Geiger-Muller tubes, energy compensated, suitability for meas. of X-radiation transmitted through shielding 7−68149
hadronic internuclear cascade penetration into matter, radiation shielding for accelerators 7−103284
high-energy proton accelerators, Moyer model approximations for point and extended beam losses 7−109563
induced eddy currents in EM screens, calc. *(German)* 7−68508
JOYO LMFBR, neutron dose and spectra, measurements and evaluations 7−129305
Konrad repository, W. Germany, waste package receival procedures and emplacement monitoring, vehicle/building shielding 7−141326
Kuosheng spent fuel pools, shielding anal. of reracking and rod consolidation options 7−141327
low-Z materials, gamma-ray buildup factors, discrete ordinates, point Monte Carlo methods 7−129180
marble attenuation characteristics for diagnostic X rays 7−87243
medical X and γ rays, shielding by NCRP Report No.49 methods, general soln. 7−93959
microcomputer-based codes for reactor physics and shielding anal. 7−102957
multilayer insulations at low boundary temps., heat transfer investigs. 7−73363
multipurpose container construction for transporting radioactive materials 7−74158
NET vacuum vessel and bulk shield design 7−135574
Norwegian dwellings, indoor γ-radiation during 1st 3 months after Chernobyl accident 7−101092
nuclear fuel disposal containers, casting development 7−141312
Ontario Hydro tritiated heavy water transportation package 7−74250
photon absorptiometry of hydrocarbons, total mass attenuation coeffs. 7−96390
photon interaction cross sections and mass attenuation coeffs., empirical eqns. *(Japanese)* 7−89891
Pickering A CANDU plant, leakage from biological shield cooling system 7−81616
radiation therapy, shielding block mounting with double-stick tape 7−107232
radiopharmaceutical solution preparation, dose reduction to workers by simple shielding equipment *(Japanese)* 7−87248
radiotherapy, shielding design for the ceiling of a 6-MV accelerator in an existing facility 7−93960
rubber neutron shields for radwaste packaging, expt. props. and Monte Carlo calcs. 7−74243
scattered photon angular props. for Al, Pb and steel shields 7−135675
SIRIUS-M, radiation streaming anal., shielding design appl. 7−103197
Sn-albedo Monte Carlo-albedo Monte Carlo coupling technique, JOYO neutron streaming appl. 7−81471
spent fuel shipping casks, shielding methods for versatility eval., KWIK-DOSE code 7−109529
spent nuclear fuel shipping cask design using depleted U shielding 7−74244
spent-fuel shipping cask, criticality effect of neutron channelling between B_4C granules in Boral 7−103021
steel shielding slabs, ang. props. of 6.13 MeV gamma rays 7−74215
technical issues and requirements of experiments and facilities for fusion nuclear technology 7−96315
TIBER-II, tritium breeding potential, shield modifications, effects on magnet damage and cost 7−103189
TN-24P PWR spent-fuel storage cask, testing and analyses 7−109492
transport packaging and shroud for irradiated monitoring assemblies from the Creys-Malville fast reactor *(French)* 7−74245
TRISTAN code development for shielding anal. by direct integration method 7−89598
Be, gamma-ray buildup factors, discrete ordinates, point Monte Carlo methods 7−129180
Fe, deep penetration problems, point kernel versus radiation transport, spent fuel cask appl. 7−109528
Fe-polyethylene shielding, optimum arrangement for neutron dose rate 7−129449
Li_2O-CdO-SiO_2 system, glass-ceramic and glasses, elec. props., neutron absorpt., biological shield appl. 7−143948
Pb shielding slabs, ang. props. of 6.13 MeV gamma rays 7−74215
$Pu(No_3)_4$ soln. storage at Rocky Flats, shielded annular tank 7−103022

shielding, magnetic *see magnetic shielding*

shift register sequences *see binary sequences*

shift registers
see also logic circuits
proportional-counter module for ANI experimental complex 7−129522

ships
see also navigation; radio direction-finding
bodies, elastic, iterative method for solving interaction problem 7−136763
exhaust plume trails, meteorological satellite images 7−133808
IR signature determ. and calc. 7−73344
navigation by Transit satellite system, intermediate position fixes determ. via regression anal. 7−139881
NMR gyroscope, review 7−140721
radioactive material transport casks, damage due to barge collisions, engineering assessment 7−74238

ships continued
radioactive waste, transportation by sea, design of special-purpose vessels 7−74148
sensitivity to directional wave spectra 7−133745
spent CANDU fuel, road, rail and water transportation systems 7−109496
spent nuclear fuel shipping vessel, dose rate distribs., on-board expts. and anal. 7−74237
surface ship wakes, anal. of synthetic aperture radar imagery 7−107436
Tucker and microwave-type wave recorders, comparison *(Japanese)* 7−101532
underwater acoustic sound ship mechanical features detection 7−110663

shock, thermal *see thermal shock*

shock measurement
contactless vibration and shock vel. meas. using laser Doppler velocimetry *(Chinese)* 7−121077
piezoresistance gauges, dynamically loaded, resistive hysteresis 7−102398
polymers, shock absorbing characteris. *(Japanese)* 7−113816
polyvinylidene fluoride, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713
polyvinylidene fluoride shock wave sensors 7−128557
self-adjustable pre-event pulse generator for shock wave experiments 7−140711
thin wall shell structures, shock and vibration meas., effects of structural imperfections *(German)* 7−109456
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713

shock tubes
see also shock waves
chemical laser, pulsed, modelling of tapered duct acoustic suppressors 7−110405
energy conversion in gas shock tube, theory and experiments 7−91157
temperature measurements using laser-based absorpt. technique 7−83368
transient inviscid gas flow in shock tube, Euler eqn. soln. 7−83270
van der Waals fluid, vanishing viscosity-capillarity approach to Riemann problem 7−136907
velocity interferometry in shock tubes and shock tunnels 7−123812
wave starting process in shaped nozzle of large-diameter shock tube 7−136922
CO, supersonic nozzle, overtone band, IR emission spectra 7−74608
Sn, molten, boiling fragmentation interaction with water study 7−75612

shock wave effects
ADINA and nonlinear FEA, conf. Cambridge, MA, USA, (June 1987) 7−101995
alumina shock-loaded, shear strength determ. with longitudinal and transverse manganin gauges 7−124368
Antarctic meteorites, recent shock effects on natural thermoluminesc. 7−101746
atomised liquid fuel self-ignition in shock-compressed gas, gas temp. depend. 7−100568
biological structures, short laser pulse interaction, shock wave prod. 7−71818
cataclysmic binary stars, radiatively-driven shocked stellar winds model 7−115428
charged particles acceleration at relativistic shock fronts, diffusive accel. theory 7−107674
cluster emission and bioorganic mol. desorpt. under heavy ion bombardment, shock wave mechanism model 7−76298
collapsing cavitation bubble, impulsive pressure, water microjet effect 7−97588
conical inviscid flow, swept shock, underlying boundary layer 7−83271
converging conical shock waves, reaction in porous specimens 7−104912
cosmic ray acceleration, energy gain rate and max. energy in diffusive shock accel. 7−115184
cosmic ray acceleration, numerical study of steady-state shock acceleration 7−72229
cosmic ray acceleration at shock fronts, nonlinear self-regulation 7−88047
cosmic-ray acceleration in relativistic shocks, hydrodynamical constraints 7−139868
crack formation after high power laser irradiation 7−131178
ductile material, shear strength, effect on plane shock wave propag. 7−76297
exploding layer, shock wave front parameters anal. 7−130743
explosives, low-density, detonation initiation study 7−97569
galaxies formation, influence of pre-galactic shocks on density perturbations 7−134309
gas bubble dynamics, shock tide experiments *(German)* 7−117627
hybrid systems, lean detonation limit, decrease mechanism 7−93331
IC 443, supernova remnant, shock excitation model for IR spectrum 7−115547
interplanetary shock waves and cosmic ray fluctuations power spectra var. 7−88048
interstellar C grains, shock processing, diamond form. 7−140244
interstellar gas clouds, shock-driven implosions rel. to star form. 7−72399
ionic crystals, shock compression, space charge generation mechanism 7−104911
laminar detached bubble decay in boundary layer flow along plates *(German)* 7−123680
laminar shock-boundary layer interaction, numerical investigation, skewed shock wave *(German)* 7−123681
leg, human, probabilistic estimation of impact strength under dynamic loading 7−87065
Loganchin astrobleme, Siberia shock metamorphism of basic rocks 7−145470
lung haemorrhage due to shock waves in dogs, press. dependence 7−78946
metal powders, porous, explosive-driven mag. flux cumulation by shock-wave propagation 7−115979
metals and alloys, high power ion beam modified, struct. anal. methods 7−117985
meteorites, Leedey L6 chondrite, shock effects and Ar loss 7−145901
meteorites, Mossbauer study of shock-induced effects in ordered alloy $Fe_{50}Ni_{50}$ 7−145902
meteorites, petrology and shock effects in ordinary chondrite falls from China 7−139992
methane-O_2 systems, lean detonation limit, decrease mechanism 7−93331
molten metal drops, fragmentation behind press. shock wave, solidification effects 7−111838
nonequilibrium process in 1D planes stress wave kinetics 7−76296

shock wave effects continued
oblique shock wave/laminar boundary layer interaction, press. distrib. 7−83272
permeable fibrous materials, dynamic strength props. 7−78209
plane shock wave reflection over double wedge 7−75613
plate, impulsively loaded, large displacements calc. methods 7−110811
polyvinylidene fluoride, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713
pressure fluctuation measurements with passive shock/boundary-layer control 7−91158
pressure pulse propag. in water-filled metal tubes 7−136933
quartz, cryst., naturally shocked, Raman microprobe spectra 7−70821
quartz grains in Cretaceous-Tertiary boundary clays, global distrib. of shock metamorphism 7−120021
renal calculi, destruction by external shock-waves using Dornier lithotripter 7−87111
ruby, shock compression by mag. fields, luminescence-antiluminescence meas. 7−142909
separated flows, shock-induced, on lee surface of delta wings 7−97564
separation, shock-induced over flat plate, Navier-Stokes eqns., upwind relax. algorithms 7−91166
shock-wave-boundary-layer interactions, surface static press. and shear stress distrib. meas. 7−142336
simple molecules, shock compression, statistical mechanical model 7−74727
solar wind shock, cosmic rays accel. 7−88056
spinal column, human, dynamics of loading and breaking of elements, modelling scheme 7−71807
star formation triggering by expanding supernova shell shocks 7−140044
steel, elastic unloading wave velocity recording method 7−126368
steel fibres, permeable, dynamic strength props. 7−78209
Sun, nonstochastic prompt proton acceleration by fast magnetosonic shocks in the solar plasma 7−88089
superhard materials, explosive form. by liner impact, shock wave front press. calcs. 7−89191
supersonic flow past convex corner, shock wave interactions, num. simulation 7−97573
supersonic free jet, 2D focusing by rectangular orifice 7−123700
supersonic gas flow, num. simulation 7−117626
surface roughness influence on transition from regular to Mach reflection in pseudo-steady flows 7−75611
transient problems in computational fluid dynamics, adaptive finite element scheme 7−83150
transonics shock-wave-boundary layer interaction, turbulence model validation *(French)* 7−111032
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. and piezoelec. props., shock gauge and transducer appls. 7−99713
RT Vir, semi-regular variable star, shock wave model for H_2O maser outburst *(Russian)* 7−107865
viscoelastic body, inverted jet form, strength effects 7−130568
vortex shedding behind a square cylinder in transonic flows 7−91161
water, structure, behind shock front, calcs. 7−137181
BN powders, cubic, shock compaction, grain size, microhardness, density 7−86107
Bi dense plasma, shock compression and adiabatic decompression of solid and porous samples 7−84127
CsI, pressure-induced high-temp. disproportionation, X-ray diffraction and conductivity meas. 7−137468
Cu, deformed by shock waves, recrystn. 7−132637
Cu, Ni mass transfer during shock wave passage, residual deform. effect *(Russian)* 7−143105
$Cu_2Mo_6S_8$ Chevrel phase supercond., laser-induced shock damage and disorder effects on T_c 7−104824
$Cu_2Mo_6S_8$, shock press.-disordered, supercond. transition temp. meas. 7−143673
Fe, Armco, shock-loaded, reverse transformations, in-material piezoresistance gauge measurements 7−131295
$Fe_{79}B_{16}Si_5$, amorphous alloy, shock consolidated powder, mag. props. rel. to compression rate 7−112855
$Fe_{60}Ni_{20}B_{20}$, amorphous alloy, struct. and props., effect of shock loading 7−83708
GaSe, spontaneous and stimulated emission, laser-driven shock wave effects 7−106216
Ge, elec. cond. under effect of laser pulse shock wave effects, ionisation effects and residual changes 7−124395
H_2, excitation and dissoc. in shock waves at interstellar densities 7−136034
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., shock-induced chemical synthesis 7−119220
Mo, shock Hugoniot calcs. and shock vel.-particle vel. relations 7−104910
N_2, shock-compressed liq., dissoc. 7−106785
Ni-Al, amorphous alloy formation under shock-wave loading 7−77856
O+H_2, thermal rate consts., effects of internal energy distrib., appl. to shocked interstellar medium 7−126416
Si, shock launching, X-ray diffraction studies 7−124397
Si_3N_4, explosively shocked compacts, effect of shock press. *(Japanese)* 7−138715
Si_3N_4 powder, dynamic compaction, density, microhardness 7−86106
Sn, molten, boiling fragmentation interaction with water study 7−75612
Y-Ba-Cu-O high temp supercond., metal composite monoliths, shock-compression fabrication 7−126057
Yb foil gauges in fused silica matrix, piezoresist. response under shock loading to 45 kbar 7−69078

shock waves
see also compressible flow; detonation; explosions; plasma shock waves; shock tubes; shock wave effects; supersonic flow
3D hypersonic viscous shock layer on blunt bodies, investig. 7−97575
acetaldehyde, oxidation in shock waves, mass spectrometric obs. 7−139001
acetylene+O_2 jets, multifront detonation, critical diameter and propag. study 7−97568
acoustic Doppler effect and shock wave cones, diagram construction 7−80241
adiabatic shock waves, growth of linear perturbations 7−115223
air, shock wave form. by supersonic plasma jet, interferometric study 7−97571
air jet impingment on Helmholtz resonator, self-sustained oscill. 7−123697
airfoils, transonic wave drag prediction method 7−142333
Armco iron, explosive loading, rarefaction shock waves 7−78163

shock waves continued
astrophysical, charged particles acceleration at relativistic shock fronts 7−107674
astrophysical, nonlinear self-regulation of cosmic ray accel. 7−88047
astrophysical, steady-state shock acceleration of cosmic rays 7−72229
atmosphere, propag. studies 7−117379
axisymmetric, behaviour near a cumulation point 7−117524
axisymmetric shock wave-turbulent boundary-layer interaction flow, holographic interferometry 7−83366
beams, plastic axially constrained, dynamic response to blast loads 7−75337
benzene adsorbed on activated C, fixed-bed adsorpt. cycles anal. 7−113975
biological structures, short laser pulse interaction, shock wave prod. 7−71818
bipolar flow in plane-parallel gas layer, form. by stellar wind action 7−79953
blast wave effects on decoupling with axisymmetric cavities 7−145349
blast wave impinging on circular cylinder, Euler eqn. soln. 7−104305
Boltzmann eqn., simulation methods 7−111035
camouflet explosion, elastic wave radiation, time-freq. characts. 7−78509
Cas A, supernova remnant, shock dynamics rel. to complex struct. 7−140207
Coanda jets, flat supersonic nozzles 7−136915
coaxial cylinders, gas flow, accidental disintegration, Godunov finite-difference scheme 7−136776
P/Comet Halley (1982i) bow shock, Giotto meas. of cometary and solar wind plasma 7−107756
P/Comet Halley (1982i) bow shock, results from plasma wave analyser (APV-V) on board Vega spacecraft *(French)* 7−120324
composite, wave phenomena, mixture model approach 7−142210
compressed gas between colliding plates, temp. meas. 7−136930
compressible supersonic compression corner shock wave/turbulent boundary-layer interaction 7−111022
compression-ramp flows, shock-wave/boundary-layer interaction 7−136927
computational fluid dynamics, selected topics and mathematical techniques 7−140454
concentric, propagation in nonhomogeneous solid medium 7−91168
conjugate heat exchange in the initial stage of reflection of a viscous shock wave from a wall 7−111026
cosmic rays, Fermi acceleration, first order, at collisionless astrophysical shock fronts, review 7−145792
Cygnus Loop, shock waves rel. to form. of fine struct. of emission filaments 7−127990
cylinder, hollow magnetoelastic, in liq. medium, dynamic reaction during impulsive excitation 7−123513
cylindrical compression, nonuniform press. driven, of ideal gases and real matter 7−83273
cylindrical shock waves propag., in self-gravitating gas, effect of azimuthal mag. field 7−127694
diffracting shock wave systems, regions and boundaries 7−75614
Earth bow shock, nonlinear MHD waves generation by reflected H^+ 7−115183
equilibrium theory for complete adiabatic adsorption cycles 7−113975
explosives, low-density, detonation initiation study 7−97569
extragalactic radio sources, particle accel., synchrotron losses role in spectrum determ. 7−72647
fibre reinforced plastic beams subjected to impulsive loading, optimum design 7−69041
flame, turbulent, propag. and spark ignition, hydrodynamic mathematical model 7−132938
flows with shocks, computer anal., review, book contrib. 7−97576
fluid flow with small viscosity and capillarity, traveling wave soln. 7−83255
fluidised beds, continuity and shock wave propag. 7−104339
focusing and refl. in liq.-filled elliptical cavity 7−117628
focusing of weak shock waves in a slightly elliptical cavity 7−130455
galactic centre region, bridge connecting Sgr A to radio arc, shocked mag. jet model 7−140293
gas, sound absorpt. in vibr. relax. zone behind shock wave 7−75619
gas dynamics, exact solns. with shock waves 7−69212
gas mixture, shock wave vibr. relax. times, laser schlieren technique meas. 7−90352
gas with general equations of state, shock polars 7−95521
gas-particle system, shock wave propag., particle fusion 7−75617
gasdynamics, conservative eqns., implicit boundary treatment 7−123579
gaseous explosive, detonation wave structure determ. using optical method *(French)* 7−91167
global relaxation procedure for compressible solutions of the steady-state Euler equations 7−91160
AM Her stars, effects of shock height oscill. on optical-IR continuous spectrum 7−115509
Herbig-Haro objects, interstellar bow shock emission profiles 7−94979
Herbig-Haro objects, radiative bow shock models rel. to spectral line profiles 7−128012
high vel. motion of bodies in H_2-air mixture 7−123678
high-speed inlet analysis, lower-upper implicit scheme 7−130733
holographic system for studying phase inhomogeneities 7−130025
hydraulic-impact tester, unsteady press. distrib. in working chamber 7−123565
hypersonic flow over multistage cones, heat transfer study 7−97565
hypersonic viscous shock layer in swirling gas flow on permeable surface 7−142334
IC 443, SNR shock-mol. cloud interaction, mol. line obs. 7−72559
ideal gas, 3D supersonic flow past revolving bodies, flow pattern investig. 7−117625
ideal gas, plane and cylindrical shocks in MHD 7−104351
ideal gas flows, supersonic, internal shock waves past wedge-plate and cone-cylinder configurations 7−97574
inert gas mixtures, mass disparity shock wave struct. 7−123679
inhomogeneous dust-gas mixture, shock propag., numerical modelling 7−130740
instantaneous velocity field meas. appl. to shock wave studies 7−69286
intense sound wave attenuation for propag. through air-filled, bulk porous materials 7−130424
interplanetary quasi-parallel shocks upstream and downstream MHD fluctuations 7−94625
interplanetary shock wave due to 1979 August 18 solar flare, scintillation obs. 7−88067
interplanetary shocks, near-Earth and Pioneer Venus obs. 7−94630

shock waves continued
interstellar clouds ensemble, response to galactic spiral pot. 7−107970
interstellar clouds interaction with supernova remnants, attrition shocks rel. to cloud condensation and ejection 7−101875
interstellar medium, shock front compression of mag. field in CMa R1 association 7−140226
interstellar MHD shocks, chemical test for ambipolar diffusion 7−134294
interstellar MHD shocks, rotationally inelastic collisions between H_2 mols. 7−94993
interstellar molecular shocks, form. of molecules containing 2 or 3 C atoms 7−128030
interstellar radio loops, spectral indices characts. within cosmic ray electrons diffusive shock accel. model 7−72622
interstellar shock waves, possible detectability of vibrationally excited formyl ion transitions 7−128022
interstellar shock waves, time-depend. struct. rel. to grain destruction in interstellar medium 7−146069
inviscid 2D transonic flow through compressor and turbine cascades, numerical soln. 7−97563
kaolinite in aqueous suspension, shock wave front pressure intensification study 7−136932
Kapton films, laser ablation, shock and cooling waves, obs. 7−138857
laminar subsonic flow past airfoil compressible reduced Navier-Stokes eqns. 7−136798
liquid-solid interface, compressional shock waves 7−124398
liquids, laser beam-induced shock waves, fluid ejection and liq.-vapour interface channel form. *(Japanese)* 7−117026
liquids, laser induced generation of subnanosecond sound pulses 7−69831
Lonar meteorite crater (India), shock wave press. from coesite and stishovite in impactites 7−133674
LWR pipe rupture, homogeneous flow model of two-phase jet impingement 7−89599
Mach reflection, triple point thermal nature 7−111029
magnetogasdynamics, self similar flow with radiative heat transfer, shock effects 7−69280
magnetosphere bow shock, diffuse ions accel. obs. and modelling 7−139859
metal surface evaporation intensity investig. 7−130745
meteoroid sonic shock-wave-generated seismic signals 7−127782
MHD intermediate shocks 7−123768
MHD shock waves in viscous, thermally conducting fluid, phenomenological model 7−83360
nonconservative difference schemes, theoretical estimation of disbalances *(Russian)* 7−136926
nondiffusive particle systems, hydrodynamic eqns. and shock wave phenomena 7−110921
nonequilibrium gas flow, shock wave form. 7−69281
nonequilibrium MHD flow, cylindrical shock wave form. 7−123779
nonlinear hysteretic media, plane blast wave propag. series soln. *(Chinese)* 7−90998
nonlinear shock wave analysis 7−130420
nonlinear wave operator factorisation, appl. to shock waves in nonlinear elasticity 7−97371
nonlinearly heat-conducting gas, point-source thermal explosion, asymptotic representation 7−75618
nonoscillatory shock capturing methods, hyperbolic conservation laws approx. 7−115795
oblique shock-bow shock interaction in double-driver shock 7−111033
one-component two-phase bubbly flow, shocks, transient press. profiles 7−75649
Orion Molecular Cloud, detect. of vibr.-rot. band lines of shocked CO 7−140237
overdriven detonation wave, planar perturbation decay 7−111031
particle-shock interactions, dynamics, Basset term effect 7−123677
particle-shock interactions, dynamics, similitude 7−123676
passive shock wave/boundary layer control, porosity strength effect 7−104306
passive shock-wave/boundary-layer control on a wall-mounted model 7−83262
PKS 1209−52, SNR, shock-interstellar cloud interaction 7−72572
plane gas flow, density jumps, interferometry 7−117629
plane surface, pressure waves−boundary layer interaction, saw-tooth shocks *(German)* 7−136929
plane waves in gas dynamics, non-one-dimensional selfsimilar solutions 7−97676
plate-rod impact at very high speed, anal. 7−91040
point explosion in slightly inhomogeneous atm., shock waves dimens. anal. 7−97572
polar ionosphere, MHD slow shock model and polar wind 7−101623
polytropic gas, concentric shock wave, radiation effects *(Polish)* 7−130742
polytropic gas, strong shock waves near explosion centre *(Polish)* 7−130741
porous material, shock waves, 1D impact, optimal control 7−76300
pre-galactic shocks, influence on density perturbations evolution 7−134309
pregalactic shock waves, contrib. of H_2 to radiative cooling 7−128053
pressure limitation, gasdynamic mechanism 7−75616
pressure pulse propag. in water-filled metal tubes 7−136933
pressure shocks propag. in relativistic viscous heat-conducting fluids, shock vel. soln. 7−72273
primordial expanding gravitating universe, spherical detonation wave propag. 7−88086
propagation on fluid surface solitons 7−123290
Pup A, SNR, shock front forbidden coronal Fe lines emission, effects of inhomogeneities 7−140222
Pup A, supernova remnant, forbidden coronal Fe line images rel. to cloud evaporation and shocked cloud models 7−115551
radiating supercritical shock wave propag. study 7−75615
radiative MHD media, weak waves, thermal effects 7−137019
recurrent nova remnants, effects of radiative heat loss on shock wave propag. 7−134252
reflected plane shock wave motion 7−136886
refractive fringe diagnostic appl. to shocks in air 7−137040
relativistic, linear stability 7−83365
relativistic radiation gas dynamics, eqns. in tetrad form for astrophysical appls. 7−127696
relativistic radiative shock, post-shock gas parameters with allowance for electron pairs prod. *(Russian)* 7−107717
relativistic shocks, in gas of photons, electrons and protons, planar flow 7−111028

ock waves continued
relativistic simple gas, Rankine-Hugoniot relations, analytical solution, shock waves 7−111027
relaxation algorithms for the Euler equations 7−91165
research aspects, appl. to astrophysics 7−83248
Riemann problem for 2×2 of nonstrictly hyperbolic conservation laws, soln. 7−88981
rotating shocks in separated laboratory channel flow 7−130793
rubber-like elastic material, normal shock reflection 7−90999
self-adjustable pre-event pulse generator for shock wave experiments 7−140711
self-similar flow behind spherical shock wave in non-ideal gas 7−107705
shape-memory alloys, domain walls and transverse shock waves 7−124396
shock-turbulence interaction, amplified turbulence and noise spectra 7−110934
SN 1006 remnant, nonradiative shock vel. from high-velocity Hα emission obs. 7−120561
SN 1572 remnant, nonradiative shock vel. from high-velocity Hα emission obs. 7−120561
soil, blast wave, cylindrical propag., asymm. problem 7−101221
solar wind, energetic ions acceleration by quasiperpendicular shock 7−72243
sonoluminescence, transient-violent cavitational origin and gentle stable theory 7−125818
St. 3, explosive loading, rarefaction shock waves 7−78163
stability, outgoing sound wave solns. 7−117523
starting process in shaped nozzle of large-diameter shock tube 7−136922
steam turbines, nucleation and droplet growth study 7−130773
steel, C, metallurgical evolutions induced by laser generated high pressure shocks 7−137402
strong shock calculations using artificial viscosity and heat flux methods, sources of error 7−142337
Sun, type II radio bursts, assoc. Langmuir waves free energy source charcts. 7−115345
supernova remnants, dynamic models and spectra of radiative shocks 7−127715
supernova remnants, radiative shock fronts model rel. to sheet description of optical emission 7−101888
supernova remnants, shock waves rel. to optical emission stratification in adiabatic remnants 7−140220
supernovae, shock wave propag. in radiating spherically symmetric mass distrib. 7−145814
supersonic flow, two-dimensional, over concave corner, shock formation distance in radiative magnetogasdynamics 7−75708
supersonic flow about circular cone, shock- and shed-vorticity 7−69186
supersonic flows past convex corner, shock wave interactions, num. simulation 7−97573
supersonic jets, broadband shock-associated noise, stochastic model theory 7−123330
supersonic jets, interaction with shock waves, boundary soln. 7−117637
supersonic solar wind flow past Earth's magnetosphere, shock wave geometry 7−107673
supersonic streamline flow past deformed shells, num. soln. *(Russian)* 7−136925
supersonic wind tunnel study of shock wave/boundary interaction, using holographic interferometry 7−97661
surface pressure fluctuations in 3D shock wave/turbulent boundary interaction 7−69123
time-dependent cosmic ray modified shocks 7−72227
transient inviscid gas flow in shock tube, Euler eqn. soln. 7−83270
transonic diffuser flow, self-excited oscills., Navier-Stokes eqn. simulation 7−136910
transonic disk accretion revisited 7−140047
transonic flow, external spatial streamline problems, boundary value methods for nonlinear differential eqns. 7−97560
turbulent boundary layer interaction, laser Doppler velocimetry 7−104304
turbulent boundary layer interactions with compression corners study 7−142338
UHV valve protection system for National Synchrotron Light Source 7−134749
underexpanded sonic jet, from slot nozzle, central compression shock position 7−104308
underwater detonation, pentolite cylinders, explosion dynamics and dissipated energy calcs. 7−91169
unsteady boundary layer over a moving flat plate swept by a counter-moving shock *(Chinese)* 7−91164
unsteady full pot. scheme, conservation form soln. 7−83269
unsteady radiative shocks, dynamical models, astrophysical appl. 7−94653
vectored suction on shock-induced separation 7−104307
velocity interferometry in shock tubes and shock tunnels 7−123812
viscous gas, heat-conducting, ID flow form. investig. 7−117556
viscous gases, supersonic streamline flow around blunt bodies, shock layers eqns. *(Russian)* 7−104303
viscous shock layer, hypersonic flow calcs. 7−130738
wavefront expansion properties and limitations 7−80447
waverider shape 7−136918
weak discontinuties propagation in nonequilib. flows, transport eqns. 7−127703
white dwarfs, accreting, shock structs. rel. to X-ray and UV radiation 7−88392
Ar-O_2 mixture, atom-atom excitation in shock waves 7−96825
BaS, state and dynamic compression, phase transition, eqns. of state 7−76343
BaSe, state and dynamic compression, phase transition, eqns. of state 7−76343
BaTe, state and dynamic compression, phase transition, eqns. of state 7−76343
CO-Ar mixtures, temp. meas. behind shock waves, line broadening 7−111030
Fe_3Al, focused collisions, study 7−118002
GaSe, ultrafast shock wave generation by laser pulses, photoluminesc. study 7−111667
H_2+liquid O_2 spray, detonation wave, unidimens. stability 7−97570
^{4}He, superfluid, thermal shock struct. 7−91911
N_2, gas, vibr. excited, weak shock wave propag. 7−83274
N_2 gas, vibrationally excited, steady pipe flow, kinetic theory 7−136931
N_2+H_2O, vibr. relax., laser schlieren study 7−103627
Pb, shock Hugoniot calcs. and melting 7−142945
Xe one-dimensional gasdynamic flow, polymer foil slowing dynamics, mass determ. *(Polish)* 7−136928

shocks, electric *see electric shocks*

short-circuit currents
p-n junction space-charge region, minority carrier accumulation at base edge under short-circuit conditions 7−126631
polymeric materials with Al-PET-Cu structure, short-circuit current in high temp. region *(Korean)* 7−138071
power transformer Cu winding strength improvement by cold working 7−100250
solar cell power losses to spreading resistance eval. 7−86788
solar cells, mono and polycrystalline, base collection efficiency calc. by separation of variables 7−78640
solar panel micrometeorite impact damage simulation 7−144857
stearic acid Langmuir Blodgett films on metal and semiconductor substrates, transport mech. 7−99166
transitory skin effect appearing in conductors during short circuits, EM field distrib. *(Rumanian)* 7−99103
Mn alkaline cell impedance correl. with short-circuit current behaviour 7−86775
Si p^+-n-n^+ solar cells, large area, high efficiency 7−86803
Si solar cell arrays, short-circuit current and efficiency variation in tropical conditions 7−71604
Si solar cells, short-circuit current depend. on angle of incident radiation 7−71620
a-Si:H p-i-n solar cells, light soaking behaviour 7−144831

short-range order
see also order-disorder transformations
4-ethyl-2′-fluoro-4′-(4″-pentylcyclohexyl)biphenyl, mesogenic compounds, crystal and mol. structs. 7−137353
alkali metal halides spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
alkali metal halides with substitutional OH^- and CN^- defects, microscopic models 7−111642
amorphous covalent solids electronic struct., cluster model calcs. 7−143326
amorphous materials, atomic short range order, glass form. 7−83728
amorphous metals, conc. binary, chem. short-range order 7−97968
amorphous semiconds., optical absorpt. and dielec. const., two-band tight binding model calcs. 7−143994
amorphous solids, atomic short range order determ. methods, review 7−83704
atomic and molecular excited states, conf., Fuji-Yoshida, Japan (Aug. 1986) 7−140351
binary alloys, interaction parameters, correlations 7−84714
binary alloys, short range ordering suppression kinetics 7−124252
binary molten alloys, SRO, conc. fluctuations 7−105031
borophosphate glass, ^{31}P-NMR study, PO_4 unit discrimination 7−131051
α-brass, short range order, diffuse neutron scatt. studies 7−137320
α-brass, short range order observation by ^{67}Zn Mossbauer spectroscopy 7−85492
chalcogenide glass, Bloch-type extended states, tail and gap states 7−143459
closed-shell ions short range force indicator from orbital moments, cryst. struct. preference calcs. 7−83798
composition stratification processes, influence on mag. props. of amorphous alloys *(Russian)* 7−104549
disordered alloys, short-range order, electron-microscope imaging 7−91401
disordered systems, high resolution neutron powder diffr. studies 7−111398
disordered ternary alloy, short range order diffuse scatt., intrinsic inequalities among partial intensities 7−137306
4-ethyl-4′-(4″-pentylcyclohexyl)biphenyl, and its fluoro derivative, mesogenic compounds, crystal and mol. structs. 7−137353
fluorite-type crystals, ionic cond., ordering 7−91887
icosohedral structs., mag. moments, Curie temp., anisotropy and domain walls 7−131996
II-VI pseudo-binary semiconductors, atomic bonding and thermodynamic props. 7−111445
III-V semiconductor ternary solid solutions, thermodynamic theory 7−111914
interstitial alloys, statistical props., cluster field method 7−111637
metallic glasses, electronic states 7−92053
metallic glasses, magnetostriction and short-range order 7−85402
metallic glasses, order and disorder, atomic struct. calc., review 7−83761
metallic glasses, short-range ordering kinetics, anal. of crossover effect 7−97979
metals and alloys, amorphous and liq., electronically driven structural effects, short range order 7−83700
Metglas 2605S-2, struct. relaxation, short range order parameter, Mossbauer hyperfine field distrib. 7−142619
multicomponent solid solns., short-range order, Ising model 7−91823
noncrystalline solids, short-range order, exptl. investig. 7−142592
oxides, statics and dynamics, charge relax. effects 7−131083
phospholipid monolayer ordering, synchrotron X-ray diffr. and fluoresc. microscopy studies 7−114205
poly-p-xylene films, electronic props., polymerisation effects 7−112398
random alloy electronic structure calc., using KKR-CPA method, Bloch spectral fn. 7−143327
semiconductors, dilute magnetic, magnetic properties, review 7−125391
silicate glasses, thermal expansion and coordination numbers 7−69940
similarity symmetry, group theoretical method calcs. *(Russian)* 7−95505
simple liquid, vel. autocorrelation function, high freq. asymptotic behaviour 7−75953
solid soln., short range order evolution, Monte Carlo simulation 7−98385
solid solutions, binary metallic, annealed, plastic deformed and neutron irradiated, local order 7−144431
sp-bonded solids, structural props., cryst. stability, semiempirical tight-binding method 7−124489
spin glasses, dilute, short-range order and high-temp. susceptibility *(Russian)* 7−70548
spin glasses, short-range, scaling theory of ordered phase 7−125416
spin glasses and disordered magnets, infinite range models, fluctuations and phase transitions 7−105934
steel., austenitic stainless, stable, N strengthening 7−113563
steel, maraging, Ni, ageing struct. anal. *(Chinese)* 7−78036
transition metal-metalloid amorphous alloys, short range order in relaxed and unrelaxed models 7−97944
transition metal-metalloid based metallic glasses, physical props. rel. to processing conditions 7−113534
22-tricosenoic acid, monolayer on water, annealing disclination 7−137715

short-range order continued
two-dimensional polycryst. grain growth, particle distrib. and short range order, computer simulation 7−118118
XY antiferromagnet, triangular lattice, quantum spin models, zero-temp. props. 7−92432
Ag, island film struct., amorphous and liq. states, room temp. 7−92021
Ag overlayers on Si (111)-2×1, LEED and AES studies 7−118275
Ag-Al, electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
AgAl alloys, electron irradiated, SRO kinetics, elec. resistivity study 7−104739
Al amorphous island films, close-range order during crystallisation and melting *(Russian)* 7−124756
Al, liquid, bond orientational short range order 7−83654
Al-Cu, short range order, diffuse neutron scatt. studies 7−137320
$Al_xGa_{1-x}As$-GaAs quantum wells, excitonic transition photolum. linewidth, elec. field effect model 7−132237
$Al_{50}Ge_{40}Mn_{10}$, amorphous, comp. short-range order development on annealing 7−117825
$Al_{86}M_{14}$, M=transition metal, icosahedral and ordered alloys, stability, electron state density 7−131100
Ar, liquid, spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
Au-Ag alloys, electron irradiated, kinetics of SRO formation, resistivity change 7−104738
Au-Ag alloys, short-range ordering by low temp. electron irrad. 7−69761
Au-Mn alloys, arrangement of Mn atoms in re-entrant spin glass 7−131098
Au-Pd concentrated alloys, vacancies and vacancy behaviour, SRO kinetics, elec. resistivity meas. 7−104736
AuAg concentrated alloys, point defect props., short range ordering 7−104907
B_2O_3-SiO_2 glass surface, chem. control of wetting transition 7−98626
$BaMnF_4$ antiferroelec. short range order, microstructural modification and phase transitions 7−85543
$Ba_xY_{1-x}CuO_{3-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Be_{37.5}Ti_{62.5}$ metallic glass, struct., X-ray and neutron diffr. 7−97962
$Bi_{12}GeO_{20}$ melt, liq. struct., short-range order parameters, at. interactions, X-ray diffr. study 7−97893
$Bi_{2-x}M_xO_3$, M=Y, Er, Yb, ionic conductors, struct. and dynamical props., EXAFS study 7−144170
$(Ca,Ba)_2CuO_4$ high T_c supercond., struct. defect-type, TEM study 7−124243
$Ca_{60}Al_{40}$, glass structure, X-ray diffr. and computer simulation studies 7−142601
$Cd_{1-x}Mn_xTe_x$, polycrystalline powder, stress effect of grinding 7−106458
Co-Fe amorphous ferromag. alloys, isothermal annealing, permeability aftereffect 7−105965
Co-Zr metallic glasses, short-range order and density 7−91465
$(Co_{0.94}Fe_{0.06})_{75}Si_{15}B_{10}$ metallic glasses, magnetostriction const. meas., temp., stress, structural relax. depend. 7−85400
$CrSi_2$ amorphous thin films, Raman scatt. 7−113202
$Cs_xBa_yAl_{x+2y}Ti_{8-x-y}O_{16}$ hollandites, electron irradiation structural effects 7−142840
Cu-Al (15 at.%), electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
Cu-Au ordering alloys, defect struct. evolution *(Russian)* 7−142753
Cu-Au system, residual electrical resistivity, temp. depend., pseudopotential approx. 7−84819
Cu-Mn, mag. phase diagram, EPR study *(Russian)* 7−112788
Cu-Mn (13 at.%), electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
Cu-Ti, amorphous, short range order, bond energy, charge transfer model 7−97943
Cu-Zr, amorphous, elec. resist., temp. depend. 7−105521
Cu-Zr, amorphous, short range order, bond energy, charge transfer model 7−97943
Cu_3Au FCC alloys, recovery stages after high energy irradiation, ordering through vacancies, interstitials and crowdions 7−104737
CuCl, molten, struct. anal., ordering potential anal. 7−75965
$Cu_{57}Hf_{43}$ amorphous alloy microstruct., TDPAC meas. 7−111391
CuMn, stacking fault energy, dislocation struct., transmission electron microscopy study 7−142788
Cu_3Pd, electron irrad., spinodal ordering beyond Lifshitz point, HVEM 7−132600
$Cu_{50}Ti_{50}$, amorphous, melt spun, radiation damage, short range ordering, elec. resist. 7−104845
$Cu_{50}Ti_{50}$, amorphous struct., neutron- and X-ray diffr. study 7−91454
$Cu_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
CuZr, amorphous, electronic struct. and chemical short-range order 7−105378
Fe-B, melts, high temp. mag. suscept. 7−143759
Fe-B amorphous alloys, short range order, high resolution electron microscopy 7−97941
Fe-B amorphous ribbons, linear thermal expansion anomaly *(Russian)* 7−69941
Fe-based metallic glasses, short range order changes, topological order 7−142609
Fe-Co-B glasses, short range order, comp. depend. props. 7−97966
Fe-Co-B-Ni(Cr), metallic glass, relaxation kinetics and Curie temp. 7−104579
Fe-Ni-B, amorphous alloys, relax. behaviour 7−98339
Fe-V(Cr)(Mn)-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
Fe-Zr-B metallic glasses, thermal stability 7−83752
$Fe_{1-x}Al_x$ concentrated spin glass alloy, magnetic phase diagram, atomic short-range order influence 7−138237
$Fe_{1-x}B_x$ metallic glasses, rapidly quenched mag. and structural props. 7−105900
$Fe_{80}B_{20}$, crystn. location by conversion electron Mossbauer spectroscopy 7−76023
$Fe_{78-y}Co_ySi_9B_{13}$ metallic glasses, change in Young's modulus during struct. relax. 7−132659
$Fe_{82-x}M_xB_{18}$ amorphous ribbons, mag. props. and atomic struct. studies 7−99507
$Fe_{71.5}Mn_8B_{9.5}Si_{11}$, amorphous, Curie temp., influence of struct. relax. 7−97977
$Fe_{40}Ni_{40}B_{20}$, neutron irrad. and annealed, Mossbauer spectroscopy studies 7−91661
short-range order continued
FeNiCr alloys, dynamics of point defect populations 7−104743
$Fe_{40}Ni_{38}Mo_4B_{18}$, amorphous, chemical short range order, isochronal resist. meas. 7−104583
Fe_yO, solid wustite thermodynamic props., subdomain stability boundaries, numerical results *(French)* 7−124555
$(GaAs)_{1-x}Ge_{2x}$, epitaxial ⟨111⟩-oriented growth model, long range order 7−98745
$(GaAs)_{1-x}(Ge_2)_x$, metastable semicond., energy band struct. calc. *(Chinese)* 7−124847
$(GaSb)_{1-x}Ge_{2x}$, epitaxial ⟨111⟩-oriented growth model, long range order 7−98745
$(GaSb)_{1-x}Ge_{2x}$ semicond. alloy, struct., electronic and thermodynamic props., role of correlations 7−118396
H_2O, spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
^3He, superfluid glass modelling, variational wave fn. anal. 7−105170
^4He, liquid, surface electron binding energy *(Russian)* 7−124610
InGaAs, LPE grown, short-range-order structure 7−112128
KNO_2-KNO_3 mixed salt, effect on short range order in water 7−69794
$LiNbO_3$-Fe_2O_3, amorphous, struct 7−83676
MG-Ho alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
Mg-Tb alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
Mg_xZn_{100-x} molten alloy, struct., X-ray diffr. study 7−97908
$(Mn_xNi_{1-x})_{75}P_{16}B_6Al_3$, amorphous alloys, mag. and atomic short range order 7−112742
$Mn_{1-x}Zn_xO$, spin glass transition, susceptibility studies 7−143814
MoO_3 amorphous thin films, short range and medium range struct. 7−84572
Na_2O-WO_3 system, glass form., neutron diffr. structural study 7−97954
Nb-Ta alloys, short range order and superconductivity 7−85166
Nb_2O_5, amorphous film, short range atomic ordering, oxidising pyrolysis of organometallic compounds 7−75999
Ni base amorphous alloys, glass form., thermal stability, mag. props. 7−83729
Ni-Al (10 at.%), short range order, X-ray diffuse scatt. obs. 7−137308
Ni-Cr-Th_2 alloy, cold worked, dispersion hardened, proton irrad., creep, microstruct. 7−100293
Ni-P, amorphous alloys, densities of stakes, effects of medium-range order 7−143307
Ni-P, microcrystalline and amorphous, thermal expansion and structural relax. 7−84331
Ni-rich metal-metalloid glasses, relax. behaviour 7−97972
Ni-Ti, amorphous phase crystallisation by ion-implantation 7−91616
Ni_cFe_{1-c} alloys, Ni-rich, mag. and compositional order interaction 7−118773
$Ni_{80-x}Fe_xB_{16}S_4$ glassy alloy, short range order and mag. props. 7−85324
Ni_4Mo, irrad. induced metastable phase form. 7−84021
$NiSi_2$ amorphous thin films, Raman scatt. 7−113202
$Ni_{35}Ti_{65}$ metallic glass, short range and stress-induced directional ordering phenomena 7−98441
$Ni_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
NiZr, amorphous, electronic struct. and chemical short-range order 7−105378
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
Pd-Sc(Dy)(Ti)(Mn), atomic short-range order, investig. by diffr. methods 7−142703
Pd_3V long and short range order, diffuse electron, neutron and X-ray scatt., mean-field theory anal. 7−111453
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
Sb_2S_3 amorphous condensates, two-phase system, p-n heterojunctions, photovoltage studies *(Russian)* 7−92231
Sb_2S_3 amorphous evaporated thin films, short range order, X-ray diffr. study 7−105335
a-Se, amorphous films, short range order, X-ray radial distrib. fn. anal. 7−142587
Se-Te, semiconductor glasses, XANES and EXAFS study, short range disordering 7−143324
Si:H, amorphous, glow discharge deposited films, Raman scatt. obs. of struct. changes and SRO 7−99957
a-Si:H,Cl films, struct. order 7−84568
$a\text{-}Si_{1-x}H_x$ films, vibrational and optical props., optical absorpt. and Raman scatt. meas. 7−125830
SiO_2, amorphous, press. induced bond angle var., NMR meas. 7−69596
SiO_2, porous glass and vitreous struct., X-ray diffr. 7−104566
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Tb_{0.22}Cu_{0.78}$ amorphous alloy, short and medium range mag. order, neutron scatt. obs. 7−85323
Te-Ge, semiconductor glasses, XANES and EXAFS study, short range disordering 7−143324
$2TeO_2$,V_2O_5-Li_2O.V_2O_5-$2TeO_2$ system, phase diagram and IR spectrum 7−77956
V-Nb alloys, short range order and superconductivity 7−85166
V-Ta alloys, short range order and superconductivity 7−85166
WO_3, amorphous film, short range atomic ordering, oxidising pyrolysis of organometallic compounds 7−75999
WO_3 amorphous thin films, short range and medium range struct. 7−84572
Y-Ba-Cu-O high T_c supercond., defects, high resolution TEM studies 7−111549
Y-H(D) solid soln., long and short-range ordering 7−84303
$Zn_{0.45}Mn_{0.55}Se$, dilute mag. semicond., mag. ordering, neutron diffr. studies 7−125317
Zr-Ni amorphous alloys, crystn. enthalpies, expt. and theoretical study 7−83749

shot noise *see random noise*

showers, cosmic ray *see cosmic ray showers and bursts*

Shpolskii spectra
photodiode array detection with Shpolskii and fluoresc. line-narrowing spectroscopy 7−128664
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7−106212

shrinkage
particle coarsening theory with log-normal distrib. 7−113464
PMMA, oriented, yield and thermoelastic props. 7−69810

shrinkage continued
polyethylene-EPDM rubber binary blends, dynamic mech. behaviour 7−78087
polypropylene, isotactic, highly oriented, melting, rel. to stretching multiplicity *(Russian)* 7−91775
polypropylene - EPDM rubber binary blends, dynamic mech. behaviour 7−78087
sialons, α- and β-phase, sintering, effect of N_2 gas press. *(Japanese)* 7−126065
steel, austenitic stainless, sintered composites, props. rel. to Y_2O_3 addition 7−113683
Al_2O_3, sintering, TiO_2 addition effect, solid solubility, shrinkage 7−126062
Cu, powder compacts, sintering, shrinkage eqn. 7−71110
Fe-CrC powder mixture, sintering, shrinkage, microstruct., hardness, bending strength, impact toughness, comp. depend. 7−106620
Ni, pure, cavity sintering 7−111573
Ni, ultrafine powders, sintering, elastic modulus, elec. resist., contact phenomena 7−71111
SiC whisker reinforced Al_2O_3, sintered, fabrication 7−77916
Si_3N_4, pressureless sintered with magnesia-neodymia additions, densification and transform. kinetics 7−77896
SiO_2 aerogel foam, liq. D-T addition, opacity and shrinkage, ICF target appl. 7−96311
SiO_2-Fe_2O_3 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
SiO_2-ZrO_2 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
TiC CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162
TiN CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162
Shubnikov-de Haas effect *see magnetoresistance*
Si-Ge alloys *see Ge-Si alloys*
SIC *see monolithic integrated circuits*
signal acquisition *see signal detection*
signal coding *see encoding*
signal conditioning circuits *see analogue-digital conversion; signal processing*
signal delay lines *see delay lines*
signal detection
acoustic array signal processing performance 7−123338
acoustic signal and noise field estimation, using least absolute values norm 7−123340
acousto-optical time-integrating correlator for signal detect. *(Korean)* 7−82755
broadband source at hydrophone array, combined detection and source motion estimation, thresholds 7−104089
channel modeling and threshold signal processing in underwater acoustics: an analytical overview 7−123302
composite signal amplitude and time-delay parameters estimation 7−123312
cryogenic gravitational wave antenna, spectral domain data anal. techniques 7−89102
diagnostic test performance, criterion-free parameter-free distrib.-independ. index, appl. to glaucoma visual data 7−93983
diffracted seismic waves on common-offset sections, detection method 7−101514
direct-detection optical communication systems, symbol and frame synchronisation 7−68571
EEG spike detection, parametric algorithms 7−114537
fatigue life prediction, fluctuating stress signal, detection of arbitrary peak and troughs 7−144657
field appl. of coherent optical communication systems 7−90834
frequency stepping-post-detected matching processor system *(Chinese)* 7−104103
hydrophone arrays with randomly perturbed sensor locations, signal detectors 7−110736
impulse-response signals, estimation, through empirically derived digital matched filter smoothing 7−80759
Ionospheric Sounding Satellite-b resonance spike identification for ionograms 7−87937
line segments in 2D image, efficient constant false alarm rate detection 7−110286
matched-field processing in deep-water Pacific environment, simulation 7−123307
matched-filter envelope detector deflection performance for a correlated phase channel 7−123311
mesocyclones and tornadic vortex signatures real-time automated detect. 7−127371
narrowband passive arrays, source detection improvement, sphericity test modification 7−110665
optical excisor processor, improving signal detection 7−82497
passive array treatment: detection of signals and estimation of the spectral matrix of the noise 7−90883
passive localization algorithm and its accuracy analysis 7−123339
passive sonar, continuous gain adaptive trackers design 7−110658
phase detection technique using ultrasonic transducers, undergraduate demonstrations 7−120728
semiconductor laser in short external cavity, optical signal detection and rate eqn. anal. 7−110361
sonar, coherence and time delay estimation 7−68929
sonar, range resolution, optimal sequences for detection using a matched filter binary integrator 7−104091
sound field, logarithmic least mean square estimation 7−110666
triangulation ranging, time delay meas. errors modelling by conditional beta density functions 7−123341
undersea noise, signal detection problem 7−75211
underwater, uncertainty tolerance 7−123305
underwater burst noise, mixture models, bivariate density representation 7−123303
underwater non-Gaussian noise detection, using sequential adaptive detectors 7−123304
weather radar systems, sensitivity, signal processing effects 7−133974
wideband direction estimation algorithm for acoustic arrays, eval. 7−110700
signal generators
see also function generators
cardiac arrhythmia simulator, using CMOS 8-bit microprocessor 7−127031
signal generators continued
quantum-mechanical frequency standards, adaptive methods appl. 7−140709
transcutaneous stimulator, HV linear, design strategy 7−114436

signal processing
see also acoustic signal processing; correlation theory; data compression; filtering and prediction theory; picture processing; signal detection; signal processing equipment; signal synthesis; Walsh functions
2D speech/ECG signal processing using Wigner-Ville distribution 7−79109
analog processing system for liquid Ar calorimeter, sampling and multiplexing hybrid test results, SLAC SLD project 7−68173
astronomical low-count-rate sources, variability anal., use of a χ^2 test 7−107727
astronomical pulsed emission searches, determ. of period and amplitude from epoch folding for sinusoidal signals 7−120281
atmosphere radar Doppler sampling, folded radial vel. rectification to Cartesian space 7−127580
auditory single evoked pots., adaptive estimation 7−93780
bioelectronics, information processing future *(German)* 7−78832
biological signal anal., phase distortion caused by linear phase FIR filters 7−71919
cardiac event series processing, signal anal. approach 7−78823
CLASS radiosonde system, appl. of adaptive polynomials for real-time data editing 7−115064
composite signal in nonwhite Gaussian noise, amplitude and time delay parameters estimation 7−110682
conducting sphere, impulse response deconvolution by conjugate gradient method 7−82435
digital doubling integrating filter for heave meas. of ocean 7−79697
discrete 2D Fourier transforms, tensor representation, orthogonal functions 7−67290
discrete exponential functions, discrete Fourier transformation 7−67289
ECG pattern recognition by relational matching of significant points 7−87273
EEG signal processing 7−114527
EEG signals, estimation of entropy and mutual information of continuous distributions 7−101115
eigenvectors and high resolution 7−97227
electrooculogram, saccidic, adaptive filtering of nonstationary signals appl. 7−93979
EMG, reflex recognition from background locomotory activity 7−100865
EMG, signal modelling and processing by spectral anal. 7−93725
EXOSAT source intensity power spectra data, instrumental effects removal 7−107721
FFT performance in the presence of noise, biological systems appl. 7−114161
flow meas. using PC-based instruments conf., Harrogate, England (Feb. 1987) 7−102020
ICASSP '87 acoustics, speech and signal processing conf., Dallas, USA (Apr. 1987) 7−108035
imaging radar polarimetry from wave synthesis in remote sensing 7−107571
impedance plethysmograph, coherent averaging improvements 7−101123
impulse-response signals, estimation, through empirically derived digital matched filter smoothing 7−80759
intelligent flow meas. 7−104365
interference detection and correction applied to *D* region incoherent scatter radar power spectral measurements 7−101546
laser Doppler tissue flowmeters, in vivo evaluation of signal processors, cat obs. 7−71944
laser Rayleigh scattering, signal analysis developments 7−108529
mesocyclones and tornadic vortex signatures real-time automated detect. 7−127371
metal detection (buried pipes), signal processing methods for subsurface radars 7−72170
microwave cardiograms, constrained adaptive filtering for heart rate estimation 7−93890
miniature pressure sensors and their temperature compensation 7−121099
multichannel time series myoprocessor for A/K prosthesis control 7−94025
music signals, subband coding without loss of quality 7−145087
myoelectric signal processing, nonstationary, some aspects 7−71724
myoelectric signals, surface detected, decomposition 7−100866
neuromuscular blockade monitoring using integrated electromyography 7−87265
noncausal autoregressive bispectrum estimation and deconvolution for output seismic trace 7−107559
nonlinear discrete-time signal processing in devices 7−102373
nuclear spectral data, digital processing 7−141405
Occam's inversion, algorithm for generating smooth models from EM sounding data 7−94071
P300, latency meas. using a cosine matching algorithm 7−93719
peripheral admittance plethysmogram, digital enhancement 7−71911
pulse filtering technique for X-ray binaries pulse anal. 7−107891
quarterwave multilayers, optical monitoring of thickness *(French)* 7−97179
seismic data processing, use of trace interpolation 7−101513
seismic noise reduction techniques for use with vertical stacking, empirical comparison 7−94465
seismology and petroleum exploration (book) 7−72743
self-averaging Pitot tubes design for flow meas. 7−123799
skin electrode signals, 2 methods for optimal maternal ECG elimination and foetal ECG detect. 7−71913
Society of Exploration Geophysicists 56th Annual International Meeting, conf., Houston, TX, USA (November 1986) 7−88728
somatosensory evoked pot. components, enhancement and dynamic time warping, multiple sclerosis appl. 7−114297
spectral γ-logs for K, U and T conc., data smoothing technique 7−94468
spinal somatosensory evoked pots., surface recorded, charactn. and processing 7−87031
stratified thick turbulent boundary layer on flat plate, hot-wire signal processing *(German)* 7−69128
strong motion accelerographs, noise amplitudes 7−139501
uterine electrohysterogram, processing for obstetrical monitoring 7−107282
ventricular fibrillation detection by regression test on autocorrelation function 7−107287
visual electrophysiological signals, transverse filter appl. 7−93738

signal processing continued
visual evoked potentials, scalp topography, waveform decomposition technique appl. 7−100892
weather radar systems, sensitivity, signal processing effects 7−133974
signal processing, computerised *see computerised signal processing*
signal processing equipment
see also voice equipment
acousto-optic Bragg cells for microwave signal processing 7−82481
acousto-optical processors, transform domain filter effects anal., simulation 7−82495
analogue input unit for picture processing *(Czech)* 7−103754
analogue precision lineariser for thermocouples 7−80780
dispersion distortion removal from pulsar radio signals 7−88124
electrometer for He leak detector 7−134808
FFT processor of laser velocimeter signal 7−121086
field meas. of sound insulation with battery-operated intensity analyser 7−75222
FX, digital spectro-correlator system for radio astronomy 7−127728
gated base-line restorer without 'droop' 7−102392
gyroscope, fibre optic, closed loop, electronics subsystem 7−123262
integrating digital post-processor, design and development 7−82494
interferometric triple product processor 7−82493
linearizer with piecewise-linear approx., for hot-wire anemometer 7−137041
logging multichannel averager with 25 ns resolution 7−95554
mass flow rate digital meter design 7−123797
muscle therapy, quadricep contraction conversion into digital signal for microcomputer system 7−87353
optical crossbar interconnected signal processor, optimal least square filtering 7−82491
optical excisor processor, improving signal detection 7−82497
real-time polychromatic signal detection using colour liquid crystal television 7−110268
SAR radar data, knowledge based processing system 7−79710
SAW devices, fundamentals, materials and design 7−110692
SAW devices, signal processing appls., construction and operation, review 7−82965
seismometer on seafloor, signal processing channel with logarithmic conversion 7−145708
SQUID magnetometer, RF, for biomag. field detection, digital control unit 7−79122
SUS/KUS, sound/vibration monitoring systems for LWR's and PWR's *(German)* 7−129379
threshold processing of optical signals in angle-code converters with scanning 7−123003
weak-signal integrator 7−108531
white frequency-spectrum method for the measurement of the dynamic response of magnetic bodies in the linear regime 7−80824
wind remote sensing by radar scatterometry, ERS-1 data conversion 7−101493
Si diode thermometer with IC instrumentation package, for 77.5 to 290 K 7−121133
signal synthesis
multifrequency method of parameters determ. of dielectrics, data processing effectiveness 7−132875
signal transformers *see pulse transformers*
signature analysers *see signal processing equipment*
signature analysis *see signal processing*
silica minerals *see minerals*
silicate glasses *see glass*
silicate minerals *see minerals*
silicon
see also nuclei with .....
2D electron-hole system at Si surface, optical studies on mag. phenomena 7−138426
2D thermal oxidation 7−106719
$A^{III}B^{V}$-Si eutectics, composition and temp. eutectic point determ. 7−111857
A-centres, electron energy level shifts and splittings under uniaxial stress 7−92114
acoustic radiation-induced static strains 7−124405
activation characts. for P diffusion 7−143097
amorphised polycrystalline films on SiO_2, crystallisation parameters, temp. depend. 7−143257
amorphous, band gap origin 7−137791
amorphous, benzene chemisorption 7−71520
amorphous, characterisation by photothermal deflection spectroscopy *(Japanese)* 7−70774
amorphous, density of states calcs., CPA 7−84622
amorphous, diamagnetic susceptibility 7−143756
amorphous, electronic props. effects of applied and internal strain 7−76951
amorphous, electronic struct., cluster model calcs. 7−143326
amorphous, H_2 plasma etching, etch rates 7−132828
amorphous, highly disordered elemental semiconductors, DC electrical conductivity 7−131646
amorphous, low press. oxidation kinetics, AES study 7−126337
amorphous, low-temp. steady-state photocond. studies 7−118537
amorphous, materials and device stability, conf., Palo Alto, CA, USA (Jan. 1987) 7−140350
amorphous, optical recording medium appl. 7−82728
amorphous, p-i-n junction solar cells, localised states and trapped carrier distribs. after light soaking 7−144822
amorphous, p-i-n solar cell, conversion efficiency *(Korean)* 7−86798
amorphous, photovoltaic cells, breaking of the efficiency-stability-production barrier 7−126616
amorphous, preparation technology, safety aspects 7−86020
amorphous, pulsed laser annealing, inhomogeneous solidification 7−69754
amorphous, Schottky barrier, admittance 7−77041
amorphous, solar cells, continuous fabrication on polymer substrates 7−126615
amorphous, solar cells, DOE/SERI research project status 7−126613
amorphous, solar cells, status of Solarex research and development program 7−126614
amorphous, structural and vibrational props. calcs., 216-atom continuous-distorted-network model 7−69848
amorphous, structural characterisation 7−131035
amorphous, tetrahedrally bonded struct., equilibration anal. 7−104555
amorphous, translucent solar cell, See-Through Amorton 7−126601
silicon continued
amorphous and crystalline, IR absorpt., bond-distortion and phonon effects, phenomenological theory 7−106178
amorphous electronic density of states, determ. from amorphous-crystalline transition 7−131517
amorphous film, dangling bond passivation by gas adsorpt. 7−71419
amorphous film deposited by plasma CVD, solar cell appl. *(Japanese)* 7−71073
amorphous films, deposition from $SiCl_4$ glow discharges 7−144296
amorphous films, ESR, sputter deposition rate depend. 7−85433
amorphous films, self-sustaining crystn. phases 7−131470
amorphous films, thermal oxide characterisation 7−93214
amorphous films, transport props. investigation by fast transient techniques 7−84886
amorphous layer implantation damage recovery and recrystn. 7−84054
amorphous layers, ion implanted, explosive crystn. 7−83691
amorphous p-i-n solar cell stability, deposition rate effects 7−144830
amorphous solar cells, stability anal. under illum. 7−144827
amorphous solar cells manufacture, safety procedures 7−86799
amorphous surface layer form. by ion bombardment, crystallisation 7−84457
amorphous thin film, deposition from microwave plasma 7−126012
amorphous thin film deposition by laser CVD *(Japanese)* 7−71072
amorphous thin films, dark elec. cond. meas., depend. on structural props. and substrate bias 7−99229
amorphous thin films and solar cells, light-induced effect 7−144826
amorphous-polycrystalline transformation by rapid thermal annealing 7−83692
amorphous/liquid Si interface, crystallisation instability 7−111836
anodisation for porous Si formation, dissolution reaction effect on porous Si density 7−113808
Ap Si stars, anal. of Si absorpt. in UV spectra 7−134239
artificially structured thin-film materials and interfaces 7−113397
atom, multiphoton ionisation, UV fluoresc. spectra anal. 7−96585
atomic clusters 7−110181
automatic system for electrical band profile meas. by anodic oxidation *(French)* 7−70312
axial channelling dip, continuum model and multistring thermally averaged pot. calc. *(Chinese)* 7−76248
band structure, Wannier type functions, all electron self-consistent variational method 7−70183
bandgap voltage, temp. depend. *(Chinese)* 7−124978
beam deposition, atomistic simulation 7−124781
bent cryst., X-ray Bragg reflection 7−75942
bicrystal and polycrystalline, grain boundaries, EBIC and conductance meas. 7−125010
bicrystals, carrier recombination, SEM/EBIC studies 7−92199
bicrystals, Czochralski growth, grain boundary effects 7−125955
bicrystals, deformation mechanisms, TEM and X-ray obs. 7−124735
bicrystals, grain boundaries, electronic props. 7−124917
bifacial solar array alternative module configuration for low Earth orbit 7−144844
bifacial solar cell antireflection coating design rel. to operating temp. 7−144871
bifacial solar cell modelling for degradation by space particle irradiation 7−144881
bipolar technology, misfit dislocation generation during diffusion processes 7−124278
Brewster-angle reflection polarizers, angular sensitivity 7−123167
brittle to ductile transition, bend testing, crack tip dislocation motion, doping effect 7−86309
bulk and (001) surface electronic structure *(Korean)* 7−143549
bulk props., lattice vibr. contribution 7−84088
carrier recomb. and attachment centres, small-angle light scatt. study 7−144081
carrier spin-dependent transport and recombination 7−137921
catalyzed gaseous F_2 etching of Cu- and Ag- metallised surfaces 7−126336
cation, dielectronic-recomb. rates, config. mixing effects 7−116877
chalcogen and vacancy pairs, electronic struct. and stabilities 7−98869
channelling radiation, electron motion near ⟨110⟩ axis, γ-ray spectra anal. 7−85504
charge carrier drift and diffusion rel. to elec. field 7−125003
chemisorption of Ni on (111) and (100) surfaces, cluster model and DV-Xα calcs. *(Chinese)* 7−105243
cleavage cracks in (110) plane, propagation 7−124392
clusters, charge transfer in secondary ion emission, tight binding model 7−113336
clusters, supersonic beam, TOF UPS 7−117109
coating, on $Pd_{77}Si_{23}$ amorphous ribbon, effect on crystallisation 7−142626
coherent wave mixing, ps pulse amplification 7−103881
collectors, concentration profiles meas. by neutron activation analysis in ion etching 7−139068
compensated, metal-insulator transition, DC elec. transport props. 7−143528
concerted exchange diffusion mechanism without vacancies or interstitials 7−111958
conduction in impurity bonds, review 7−143406
connector integrated solar cells, in-plane stress-relief interconnector AC welding 7−144872
critical analysis of soft X-ray cross section data 7−77695
crystal, electron irrad., parametric X-ray yield, spectral line splitting 7−92765
crystal for bent crystal spectrometer, reflectivity 7−81843
crystal orientation and electron energy, channeled electron scatt. depend. 7−118000
crystal quality improvement by zone melting recrystallisation of Si on fused SiO_2 substrate 7−144258
crystal ribbon growth, stress-free, numerical simulation 7−85989
crystal whiskers, growth kinetics, depend. on diameter 7−143300
crystalline, amorphous and liq., phase diagram studies 7−118059
crystalline and a-Si:H, luminesc. mechanism during anodic oxidation *(Japanese)* 7−85867
crystalline/amorphous interface, ion beam induced crystn. and amorphisation, temp. depend. study 7−84051
crystallisation, transitional regimes, effects on microdefects 7−98007
crystals, microdefects obs. by X-ray plane-wave topography 7−124241
crystals, O-free, butterfly-type intrinsic gettering defect centres study 7−111540
crystals, relativistic electron radiation loss studies *(Japanese)* 7−117989

silicon continued
crystals, transition element channeling distributions and electronic stopping 7−111700
crystals with microdefects, X-ray refl. curves in Laue case 7−111543
Czochralski annealed, second isoelectronic multiexciton centre 7−113284
Czochralski cryst. growth, radiative heat exchange 7−144263
Czochralski grown, defect distrib. due to multi-step heat treatment 7−124293
Czochralski grown, nucleation of O precipitates 7−124316
Czochralski growth, mag., O transport 7−86004
Czochralski growth technique, review 7−125960
Czochralski-grown, plate-like O precipitates, struct. 7−125953
damage annealing in self implanted Si, dopant anomalous diffusion 7−142849
damage induced by low-energy Ar magnetron discharges 7−137424
damage profiles of Ga and Si implants 7−111618
dangling bond defects, struct., ESR obs. 7−112951
dangling bonds coupling 7−70246
deep level defect electronic props., DLTS anal. 7−98911
deep level electron emission, stress effects, shear deform. pot. const. determ. 7−112236
defect generation, influence of intentional contamination 7−124317
defect structs., perturbed angular correlation studies 7−138367
defects, high temp. positron annihilation studies 7−99970
defects, structural changes, oscillatory reaction 7−142820
defects and O impurities, positron studies 7−144161
defects in O_2 plasma irradiated Si, optical spectroscopy study *(Chinese)* 7−118402
deformed cubic semiconductor, commutation effect 7−131533
density of states calcs., recursion method 7−143308
denuded zone formation, generation lifetime *(Korean)* 7−137954
detectors, appl. to nucl. struct. physics 7−74361
detectors for short range particles, limiting /resolution/ 7−135764
diamagnetic enhancement in amorphous semiconductors 7−92400
dielectric, surface damage and plasma form. thresholds 7−130898
diffusion and migration, defects, ab initio calcs. 7−98114
diffusion length and pn product meas. method 7−102446
diode dosimetry system, high precision 7−93938
diode thermometer with IC instrumentation package 7−121133
diodes, avalanche breakdown voltage, influence of deep levels 7−105457
diodes, miniature, thermoelectric characts. 7−73350
directional solidification and moulding using insulating molten salt, solar cell efficiency 7−93509
directional solidification growth for solar cells *(French)* 7−125956
dislocation and oxidation stacking fault generation, influence of contamination 7−124291
dislocation and stacking fault interactions 7−91629
dislocation loop size and density, simulation of triple crystal X-ray rocking curves, ion implanted and annealed Si 7−91399
dislocation-free, precipitation form., cooperative bimodular mechanism 7−118100
dislocation-induced optical centres modification under tangential stress, photolum. study 7−144011
dislocations, review 7−76129
dislocations monitoring, using pick-up tube for X-ray topography *(Czech)* 7−108731
dissolution of transition metal precipitates by rapid thermal processing 7−71219
divacancies, spectral studies 7−70847
divacancy electronic struct., tight binding study 7−98872
divacancy study, neutron, proton and deuteron irradiated 7−98914
dopant distribution, cathodoluminescent monitoring, surface oxide layers 7−77660
doped bridges, plasma generator for explosives ignition 7−139011
doped MBE layers, elec. props. 7−77109
dosimeter, p^+n struct., temp. receptivity anal. 7−103286
dynamic X-ray scatt. parameters, determ. elevated temps. 7−69644
EFG of vertical asymmetric Si sheet, finite element modelling 7−85995
EFG ribbons, cryst. defect studies 7−111544
EFG ribbons, struct. defect generation mechanisms 7−83813
elastic consts., temp. depend., fourth order anharmonic theory 7−104894
electron, gamma-ray and fast neutron irrad. defects, DLTS study 7−84756
electron and ion irradiated, amorphization processes 7−76244
electron beam recrystallisation of plasma sprayed substrates 7−124336
electron density, press. depends., calc. 7−131092
electron irrad., divacancy production, DLTS studies 7−104748
electron irrad. pulled sample, DLTS spectrum 7−105486
electron irradiated, 3942 cm^{-1} optical band 7−85782
electron irradiated, intrinsic point defects, props. and interactions with impurities 7−124260
electron microscope images in ⟨110⟩ orientation 7−130997
electron momentum density, directional Compton profile meas. 7−91523
electron states with spin ≥1 at dislocations, EPR spectrum fine struct. 7−98858
electron-hole plasma, exchange and correlation energy 7−92091
electron-hole plasma, second condensed phase 7−112384
electron-hole plasma lateral expansion, picosec. time-resolved Raman study 7−112383
electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
electronic struct. and positron states at vacancies 7−98879
electronic struct. calc. of polySi 7−84662
electronic struct. of twin stacking faults 7−84765
electroplating in molten fluoride media 7−119175
energy band gap, photoacoustic determ. 7−84677
energy band struct. by empirical pseudopotential method *(Korean)* 7−84661
energy structure, effect of heavy doping, electrorefl. study *(Chinese)* 7−77510
epitaxial CVD layer deposition and doping, process control eqns. development 7−98193
epitaxial CVD layers, doping, modelling and theory development 7−124297
epitaxial deposition in a barrel reactor, convective transport 7−132446
epitaxial film surface microscopic roughness meas. by second harmonic intensity variation anal. 7−121068
epitaxial films, plasma CVD growth at low temps. 7−126015
epitaxial growth, book 7−102034
epitaxial growth, low temp., and isotropic heterostruct. fabrication by direct ion beam deposition 7−92876

silicon continued
epitaxial growth, low temp., by plasma-enhanced CVD *(Japanese)* 7−138682
epitaxial growth, molecular dynamics simulation 7−124782
epitaxial growth and prebaking, UV radiation effects 7−113406
epitaxial layers, photo-CVD using VUV light 7−126017
epitaxial layers on buried Si_3N_4 produced by ion implantation, props. 7−85131
epitaxial structs. with buried oxide and nitride insulating layers *(Russian)* 7−76694
epitaxial thin layers, on preannealed Si substrates, structural and elec. props. 7−124749
epitaxial wafer, area contact model of depletion layer width under avalanche breakdown, three-probe method *(Chinese)* 7−125002
erosion by solid particles, effect of microstruct. 7−86367
etching, bias-dependent, in aqueous KOH 7−71404
etching in CF_4/H_2 glow discharge, fluorocarbon film deposition effects 7−126335
etching in diluted SF_6 plasmas, kinetics rel. to flux of incident species 7−132835
exciton complexes 7−84695
extended interstitial lattice distortion, valence force potentials 7−98140
Fabry-Perot interferometers, micromachining manufacture 7−134841
filamentary crystals, internal friction meas., universal test rig 7−132871
film, deposition on electron irradiated Si (100) 7−77832
film, MBE, substrate cleaning, layer nucleation, in situ light scatt. 7−77817
film, pulsations in optical directional melting 7−137528
film, zone recrystallisation, on fused quartz 7−106448
film edge induced dislocation, nucleation role of point defects 7−98170
films, amorphous and crystalline, Raman scatt. 7−85722
films, epitaxial growth, planar gettering effects *(Russian)* 7−76695
films, heteroepitaxial growth on CaF_2/Si structures, review 7−84604
films, laser plasma CVD growth *(Chinese)* 7−113399
films, solid phase epitaxial growth, substrate-surface cleaning 7−124767
films on sapphire, picosec. photocarrier relax. time temp. depend. meas. 7−143511
float zone crystals, dislocation-free, N_2 doping 7−86013
floating and dangling bond energetics, atomistic total-energy cluster calcs., comment 7−76828
floating-zone single crysts., yield stress and dislocation vel. activation parameters 7−124380
foils, shaped cryst. growth by, ramp assisted casting technique, photovoltaic props. 7−92852
four-wave mixing reflectivity, free-carrier absorption 7−90720
free exciton transport properties, time-of-flight investig. 7−85819
GaAs:Si^+, p^+, electrical activation using laser beam annealing 7−131174
GaAs:Si, implant activation efficiency and melt stoichiometry correls., DLTS study 7−124923
gamma-ray irrad., defect annealing elec. resist. and photoluminescence studies 7−98240
gamma-ray radiation defects *(Czech)* 7−98926
gettering and defect engineering, conf., Garzau, Germany (Oct. 1985) 7−120679
grain boundary charged defect trap states, heat treatment and impurity effects 7−112233
grain boundary electrical activity, struct. and chemical origin *(French)* 7−124919
grain boundary electrical activity 7−124920
grain boundary states, trapped charge relax 7−76825
ground state and electronic props., first principles calc. 7−92062
growth rate of selective epitaxial deposits 7−132483
halogen based plasma etching, model 7−119464
heavily-doped, statistics of electrons and holes 7−131656
heteroepitaxy, search for geometrical lattice matching 7−84558
hexagonal site self-interstitial impurity state, pseudopot. electronic struct. calcs. 7−76806
high pressure steam oxidation, selective, defect formation 7−126347
high resistance neutron transmutation doped, prep. and props. 7−71100
high resistivity semiconductor, dielectric relax. associated with deep levels 7−99662
high-energy particle transmission, energy losses, Landau distrib. comparisons 7−116804
high-speed transport in ultrasmall dimensions 7−112353
hot-jet etching using directed flux of radicals 7−71413
HV photovoltaic cell with controllable spectral sensitivity 7−86792
HV solar cells for solar radiation sensor 7−78630
III-V semiconductor epitaxial layers, laser vacuum deposition on Si substrate 7−105334
implantation in GaAs(GaAsP) by 7 MeV electron beam doping 7−117961
implanted slices, stress/strains ion implantation effects 7−111686
impurity segregation under O_2^+ bombardment, sputter depth profiling and SIMS studies 7−84294
impurity-induced microstruct. of grain boundaries, elec. props. 7−124288
impurity-vacancy defects, annealing temp., depend. on nature of impurity conc. 7−84737
induced absorption, picosecond pulse pump speckle effects 7−103883
inelastic scattering of X-rays in asymmetric Bragg diffraction 7−92779
initial oxidation states under electron bombardment, AES studies 7−119470
integrated magnetic-field sensors, review 7−73381
integrated pressure sensor using p-well CMOS process, design, fabrication and characts. 7−80766
intense ion irrad.-initiated plastic deform. and thermal stresses study 7−117986
interdendritic ribbons, growth process modelling *(Russian)* 7−124143
interface and surface structure, high resolution electron microscopy 7−98661
interface structures, surface enhanced radiation ordering 7−104809
interfaces, bonding by solid-phase epitaxy 7−112129
interfacial overheating during melting 7−69867
interstitial diffusivity, bulk trapping effects, model 7−118172
interstitial-defect reactions, DLTS study 7−124903
inversion layer, description based on electron gas eqn. of state generalisation 7−105645
inversion layer, scatt. mechanisms, weak localisation expts. 7−105718
inversion layer, tunnelling in high mag. fields 7−131804
inversion layers, magnetoconductance due to parallel mag. fields 7−70424
inversion layers, nonlocal potential measurements of quantum conductors 7−118516

silicon continued
inversion layers, p-channel, thermoelectric power under strong mag. quantisation 7−99100
inversion layers, spatial potential fluctuations, determ. by weak localisation 7−77096
inversion layers, thermopower 7−131795
ion beam etching, noble gas defect threshold energy, photoluminesc. study 7−126353
ion beam induced epitaxial crystn. and layer amorphisation, substrate temp. and ion irrad. parameters depend. 7−84048
ion beam synthesis of thin buried layers of SiO_2 in Si 7−69724
ion bombardment, by Ar^+ and N_2^+, angular distrib. of sputtered particles 7−77740
ion etching damage charactn. 7−126351
ion implant damage, relaxation at room temp. 7−117959
ion implantation, basic principles *(French)* 7−76184
ion implantation, formation mech. and structures of buried SiO_xNy layers 7−69726
ion implantation, formation of buried oxide layers 7−69725
ion implantation, in AlGaAs, index guided multi quantum well laser 7−141893
ion implantation, random equivalent method for bare (100) orientation 7−83985
ion implantation by $^1H(^2H)$, random and channelling depth distributions 7−111701
ion implantation damage, recoil and displacement calcs. 7−84050
ion implantation for carrier lifetime control 7−111627
ion implantation induced amorphisation 7−104858
ion implantation of Ne/Ar, diffusion anomalies *(German)* 7−142855
ion implantation-induced lattice damage, multiple cryst. X-ray diffr. study 7−84049
ion implanted, anomalous channelling effects, Monte Carlo simulation 7−117996
ion implanted, dislocation structure, form. by scanning laser radiation, photoluminesc. obs. 7−76208
ion implanted, laser annealing, Raman scattering spectra 7−111662
ion implanted, microstruct. obs., correlation with optical meas. 7−104791
ion implanted, residual defect suppression 7−137423
ion implanted, surface defect state, contact angle and wetting meas. *(Russian)* 7−124647
ion implanted, thermal nitridation 7−86504
ion implanted, thermal wave meas. 7−117958
ion implanted, two-phase medium, elastic field associated with square dislocation loop 7−142874
ion implanted with focused ion beam, Raman microprobe obs. 7−111606
ion implanted with Si^+, damage annealing 7−124294
ion induced amorphisation, effect of implantation temp. 7−104859
ion induced Auger electron spectra, energy thresholds 7−138571
ion-enhanced etching by XeF_2, importance of physical and chemical sputtering 7−113800
ion-implantation induced vacancy profiling using slow positron beams 7−111677
IR absorpt. coeff. meas., indirect transition model anal. 7−106155
irradiated crysts., defect triplet centres, spin-depend. photocond. and optical nuclei polarisation study 7−98818
irradiated with γ-rays or neutrons, radiation defects, divacancy energy levels 7−112224
isothermal capacitance transient spectroscopy of localised states in semicond. *(Japanese)* 7−84761
Josephson junctions with Si interlayer and arrays, DC and microwave props. 7−131909
lapping, abrasive surface damage, X-ray Laue diffraction 7−76573
laser annealed, In-vacancy interaction, PAC meas. 7−91641
laser annealed and ion implanted, phase transitions, Raman studies 7−119008
laser crystallised films on Al_2O_3 ceramic substrates for solar cells *(Japanese)* 7−119649
laser induced chemical etching in Cl_2 atmosphere 7−113799
laser irradiated, defect formation 7−137396
laser processed, cyclotron reson. variations induced by paramag. defects 7−112952
laser-enhanced thermal oxidation, rate constants 7−144637
laser-irradiated melt morphology, order-disorder transitions, comment 7−142966
laser-stimulated desorption, of O_2 and C compounds 7−76617
laser-stimulated oxidation, model 7−113806
lateral solid-phase epitaxy induced by focused ion beams 7−70136
lattice defects charact. by means of double cryst. diffractometer 7−69695
lattice vibration correlations 7−142920
lattice-defect distrib., X-ray diffr. studies 7−124041
layers, Si ion implanted, photoacoustic optical and thermal characterisation 7−111777
leakage current diffusion component of intrinsically gettered Si p-n or field-induced junctions, EBIC study 7−77082
light absorpt. by dislocation band states 7−144088
light induced light diffraction, optical heterogeneities 7−90677
light-ion implantation, beam-induced annealing of defects 7−84071
liquid, optical props., meas. by nanosecond time resolved ellipsometry 7−125659
localised and reson. states of defects, Green's function calc. 7−105455
low-temp. growth of epitaxial layers using $Si-I_2-H_2$ CVD system 7−113426
macrostresses created by metal-semiconductor transitions, metastable phases 7−142978
magnetic properties of donors and acceptors 7−143757
magnetic traps of hot holes 7−131651
magnetically dilute spin system, photonuclear magnetism, resonance and relax. studies 7−118887
many-body Tersoff-type potential, development 7−83839
Mars, regolith Ca/Si ratio, evidence for carbonates and early climate 7−120295
MBE, developments review 1984-86 7−77816
MBE, growth on single domain surface, RHEED oscills. 7−71019
MBE, nucleation and annealing, LEED, spot profile analysis 7−76676
MBE, particulate behaviour 7−143278
MBE, use of alloy source for group V 7−144284
MBE crystal defects formation, depend. on cryst. orientation 7−71028
MBE grown, influence of substrate misorientation and temp. 7−76671
MBE grown doping structs., carrier profiles, spreading resistance anal., model calcs. 7−85024
MBE growth, delta-function doping layer 7−91623
silicon continued
MBE layers, impurity and defect study 7−76812
mean ionic charge in ^3He-rich solar flares 7−127791
mechanical props., device appls., review 7−124369
melt, flow asymm. and temp. distrib., 3D simulation of Czochralski bulk flow in mag. field 7−98012
melting under ns and ps laser pulses, review 7−84208
melts, hydromagnetic Czochralski flow, cryst. elec. cond. effects 7−113373
metallisation stability, microscopic control 7−133022
metastable thermal donor states, DLTS study 7−105449
micro-transducer for differential pressure 7−95575
microclusters, fragmentation, molecular dynamics study 7−82416
microcrystalline, H_2 plasma etching, etch rates 7−132828
microcrystalline, nucleation, in situ spectroscopic ellipsometry study 7−118052
microcrystalline films, plasma deposition 7−144295
microdefect images, two-crystal X-ray topography 7−69536
micromachined Si for extrinsic fibre optic sensors 7−82853
microstructural transformations during current filamentation, X-ray diffr. studies 7−106082
microwave conductivity of perturbed near-surface layer 7−112426
minority carrier lifetime meas. methods for solar grade crystalline semiconductors *(Japanese)* 7−118498
minority carrier transport, TOF meas. 7−92187
MIS diodes, AC conductance, contribs. of bulk and interface states 7−118587
MIS inversion layer solar cells, higher efficiency and lower production costs *(German)* 7−114101
MIS photovoltaic junctions, defects due to low voltage sputter deposition, charact. 7−84595
MIS structs., 2D nonlinear electron system, filamentation of Hall current, quantising mag. field *(German)* 7−131798
MIS structs., γ-irradiated, electrophysical props., electric field in insulator 7−112496
MIS structs., Coulomb energy spectrum gaps under fractional quantum Hall effect 7−138016
MIS structure, flow of current between adjacent inversion layers in a quantizing magnetic field 7−70425
MIS/IL solar cell, charge storage effect in LPCVD Si_3N_4 for improved conversion efficiency 7−86805
molecule, electronic states, second-order CI calcs. 7−89975
molecules, mag. susceptibility and NMR chemical shift tensors 7−116988
molten, dopant diffusion by pulsed excimer laser 7−124570
molten, mag. and gravitational natural convection, 2D heat transfer rate calcs. 7−130701
molten, modes of oscillation in melts from Fourier analysis of temperature-time data 7−138642
monocrystalline, P doping by neutron transmutation in Harwell reactors 7−91658
monolayer films, epitaxial growth, optical SHG study 7−131489
morphology of LPE layers *(Chinese)* 7−131493
MOS capacitors, dopant conc. profile, acceptor hydrogenation, high-freq. C-V curves 7−125128
MOS inversion layer, 2D electron gas, Fermi energy, many body effects, statistical calcs. 7−92301
MOS struct., electron density, Fermi energy, quantum oscills. at an inversion layer in a mag. field 7−99213
MOS structs., fractional quantum Hall effect study 7−137964
MOS structs., oxide trapping under spatially variable oxide electric field 7−131788
MOS structures, quantum effects on LF and HF capacitance 7−77081
MOSFET, SiO_2 gate dielectric, low press. CVD, rapid thermal annealing 7−131481
multicrystalline solar cells, PF_5^+ ion implantation and rapid thermal annealing 7−126626
multilayered semicond., acoustoelectric interaction and transverse acoustoelectric voltage 7−125058
multimicroelectrode for neural impulse meas., fabricated by Si dry etching 7−114569
multiphonon IR absorpt. spectra 7−77533
multiple species implantation, atomic mixing 7−76181
multiply-twinned particles, decahedral, gas evaporation 7−70994
muonium hyperfine props 7−118933
muonium states, hyperfine interaction study, μSr spectra 7−113051
n^+-n-n^+ strut., impact-avalanche ionisation, current filament 7−143590
n^+-p diodes, generation lifetime 7−143480
n-i-p-i superlattices, electronic struct. calcs. 7−70403
n-type, AC cond. below metal-insulator transition 7−143529
n-type, defect complexes form. rate, electron irrad. temp. depend. study 7−137408
n-type, elastically deformed, Hall effect meas. *(Russian)* 7−125025
n-type, magnetoresistive electromotive force in strong elec. microwave fields 7−99095
n-type, porous surface layers, form. props., effects of anodic polaris, conditions 7−112125
n-type, quenched-in deep defect levels, press. coeffs. and capture cross section determ. 7−105482
n-type wafers, oxidised, surface charge and interface trap densities, AC surface photovoltages 7−85116
nanocrystalline Si based selective gas sensors, gas adsorption effect on elec. cond. 7−92313
nanocrystalline thin films, dark elec. cond. meas., depend. on structural props. and substrate bias 7−99229
native oxide films, phys., chem., and elec. props. 7−113811
near threshold sputtering in Cl_2 environment 7−106327
negative atomic ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
neutral complex defects, bound excitons, electronic struct. studies 7−98877
neutron transmutation doped high resist. state, photoinduced current transient spectra 7−112243
nonequilibrium phonon drag effect study 7−104941
nonequilibrium pure-generation centre model 7−137851
nonplanar oxidation and oxide leakage current reduction by rounding-off oxidation 7−132829
nucleation of oxide precips., high temp. annealing 7−144406
nuclei, crit. size, size depend. surface tension calc. 7−69639
optical absorpt. apparent value, effect of surface smoothness *(Chinese)* 7−125660

silicon continued
optical and electrophysical props. of fast neutron irradiated Si at low temp. 7−113232
optical dispersion parameters, temp. depend. 7−132228
optically detected cyclotron resonance 7−118862
oxidation, initial parabolic growth regime, direct O transport mechanism 7−119466
oxidation, SiO_2 thin film growth by O_3^+ defect electromigration 7−119467
oxidation, stress effects on reaction kinetics and oxidant diffusion 7−93224
oxidation and amorphisation via crystalline SiO_2 interface layer, TEM modelling 7−124733
oxidation by O_2, rate eqn. 7−144639
oxidation in dry O_2, parallel oxidation mechanism 7−132833
oxidation in dry O_2 at high press. 7−86493
oxidation kinetics, fits to the linear parabolic model 7−71411
oxidation kinetics in afterglow of microwave-induced plasma 7−138910
oxidation mechanisms, model comparison 7−119468
oxidation model 7−113803
oxidation stacking faults at mechanically induced weak surface defects 7−69718
oxidation-induced stacking faults, length, density and dislocation interactions model 7−98181
p^+-n-n^+ solar cells, large area, high efficiency 7−86803
p^+-n-n^+ solar cells with AM1 efficiency of 19.5%, excimer laser processing and oxide passivation 7−86795
p^+n junction, one-side abrupt, space charge region, un-depletive anal. *(Chinese)* 7−77060
p-n homojunction solar cells, influence of defects on performance 7−114114
p-n junction, microplasma breakdown region, current-voltage charact., noise 7−143565
p-n junction, Zn borosilicate glass passivated, reverse I-V charcts., H annealing effects study 7−99179
p-n junction electrodes, photocurrent stability, decomposition potentials 7−70410
p-n junction produced by low temp. diffusion of B 7−70392
p-n junctions, self-interstitials and generation lifetime 7−92271
p-n junctions in strong electric field, static elec. conductivity due to rectilinear dislocations 7−131746
p-n structures, pressure change-induced EMF 7−143598
p-p^+ junction, heating of holes by CO_2 laser radiation, photoresponse 7−99113
p-type (100) surface inversion layer, grating coupler-induced intersubband reson. calcs. 7−85120
p-type substrates, oxide layer form. kinetics from porous surface layer 7−144635
p-type wafers, CW CO_2 laser annealing, optimal preheating temp. determ. 7−142830
parametric Cerenkov X-radiation, obs. of fine structure in spectral lines 7−138540
particulate device fabrication by screen printing, photovoltaic appls 7−78644
personal dosimetry systems, reliability, technical merit, economic factors 7−87182
phase conjugate reflecting, pump-beam intensity depend. saturation behaviour 7−68792
phonon freqs., ab initio calcs. using small at. clusters 7−91744
photoconductivity spectra of heat treated materials, electrodeless method 7−84993
photodetectors, filtered, absolute, spectra irradiance scales 7−108618
photodiode, quantum efficiency and spectral responsivity self-calibration 7−121192
photodiode appl. to IR Raman spectroscopy 7−108679
photodiode radiometry compared with Australian radiometric scale 7−108617
photoelectrodes, metal coated, solar energy conversion appls. 7−106915
photoluminescence from widely dissociated straight partial dislocations 7−99924
photovoltaic convertor using Nd laser radiation, parametric study 7−133105
photovoltaic devices, spectral response and efficiency of heavily doped emitters 7−133108
photovoltaics for commercial solar power appls., conf., Cambridge, Ma, USA (Sept. 1986) 7−120699
picosecond laser pulse-generated high-density plasma kinetics simulation 7−105605
piezoresistive absolute pressure sensor, design and realisation *(Slovenian)* 7−80764
piezothermoelectric power tensor, symmetry 7−143494
pin diodes, solitary current filaments 7−143591
planar channelling, quantum states of fast electrons 7−137434
planar channelling of electrons, angular distributions 7−85912
planar cylindrical junctions, breakdown voltage, choice of ionisation coeffs. 7−138044
planar optical waveguides, Si-clad, FEM analysis of propagation charcts. 7−110560
plasma, laser produced high resolution diagnostics 7−75839
plasma CVD growth, effect of substrate temp. *(Chinese)* 7−76650
plasma etching, parametric studies 7−113809
plasmochemical etching through two-layer mask 7−138909
plastically deformed, defects classification 7−99576
plastically deformed, dislocation-impurity interactions, rel. to elec. props. 7−111646
plastically deformed, EPR spectra 7−99578
plastically deformed, pentavacancies, EPR studies 7−106021
plates, high energy Ar^+ bombardment, structural effects, nondestructive X-ray methods study 7−98266
point contact concentrator solar cells 7−71622
point contacts, ballistic charge carrier transport 7−84911
point defect creation, threshold energy 7−98145
point defects, electronic structure calcs. 7−104730
poly Si-WSi_x:F, composite gate struct., CVD, F distrib. 7−91622
polycrystal, e-h grain boundary recomb., scanning transmission EBIC methods 7−111320
polycrystalline, barrier height and minority carrier capture cross-sections, plasma annealing effect 7−125007
polycrystalline, elec. and photoelectric props., effect of heat treatment *(Russian)* 7−125045
polycrystalline, extended crystallographic defects, passivation 7−124290
silicon continued
polycrystalline, growth and solar cell props. *(French)* 7−125958
polycrystalline, hydrogen-radical-enhanced CVD 7−71061
polycrystalline, impure, thin film solar cell efficiency 7−126625
polycrystalline, model of photovoltaic props. depend. on effective diffusion length 7−77007
polycrystalline, photovoltaic cells charcts. study 7−100724
polycrystalline, recombination effects and segregation at grain boundaries 7−125011
polycrystalline, solar-grade, recombination, DLTS study 7−112358
polycrystalline, solidification and microstructure 7−124460
polycrystalline CVD film, elec. cond. studies 7−112522
polycrystalline CVD film, structural study 7−105318
polycrystalline films, effects of crystallisation on trap state densities at grain boundaries 7−131655
polycrystalline films, quasi-rheotaxy grown on Al-glass substrates 7−84591
polycrystalline films on SiO_2 substrate, laser annealing with applied elec. field 7−98234
polycrystalline layer growth during pyrolysis, kinetics and mechanism *(Russian)* 7−125939
polycrystalline p-n junctions, photoelec. props., tunnelling and noise, grain boundary struct. effects *(Russian)* 7−85096
polycrystalline resistors, negative resist. charcts. anal. 7−118493
polycrystalline solar cells, 3D modelling 7−126624
polycrystalline solar cells, H ion passivation 7−126623
polycrystalline solar cells, high efficiency, using solar grade cast wafers 7−71611
polycrystalline solar cells using solar grade wafers, charcts *(Japanese)* 7−119650
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
polysilicon, 193 nm excimer laser assisted etching 7−126348
polysilicon-SiN_xO_y-Si_3N_4-SiO_2-Si structs., cond. props. of oxide layers 7−105728
polysilicon-SiO_2 transition layers, Hubbard subband cond. 7−125136
Polyx photovoltaic technology, progress and prospects 7−125957
porous, anodised, direct evaporation of noble metals 7−143285
porous, specific surface, effects of anodic reaction and high temp. annealing 7−93222
positive secondary ion sputtering yield, chem. bonding effects, XPS study 7−85924
positron annihilation gamma photons, angular distribs. 7−77680
powder, laser synthesised, processing of reaction bonded Si_3N_4 7−71129
powder, ultra-fine, prod. by arc plasma method 7−106472
powders, laser synthesis 7−132533
precipitate form. during solid-phase epitaxial growth 7−124757
pressure sensor, four-terminal, at centre of diaphragm 7−128564
pressure sensors, design and temp. compensation cct. *(German)* 7−108535
process-induced point defects, EPR study 7−126354
proton Bethe stopping cross sections 7−98282
proton irrad., instability zone of radiation defects 7−104853
QSO 2000-330 and 2126-158, C IV, Si III and C I absorpt. line meas. 7−120639
quantum Hall effect, basic theories and appl. *(Italian)* 7−76978
quasiparticle band structure, exchange and correlation effects 7−137795
RAD ribbons, gettering effects, XPS/AES study 7−86497
RAD ribbons, interface shape in growth, finite element analysis 7−83807
radiation defects after high energy e, γ and n irradiation *(Czech)* 7−124332
radiation defects in high resistivity p-type Si, charcts. 7−84736
radiative melting, surface roughness and SiO_2 effects 7−104961
Raman mode transform. during laser irrad., CARS study 7−92672
rapid solidification dynamics 7−113540
Rayleigh waves, nonlinear optical excitation 7−112050
reactive ion beam etching with saddle field source, mass spectra of F containing gases 7−93215
reactive ion etching, deep hole form. 7−144643
reactive ion etching, microstructural studies 7−113801
reactive ion etching in CCl_4 and HCl plasmas 7−132832
reactive ion etching in SF_6 gas mixtures 7−71403
reactive ion etching prod. defects, photoluminesc. study 7−99145
reactive ion etching-induced deep electron trap levels, DLTS study 7−100458
reactive ions etching, large scale optical components fabrication 7−144641
reactive sputter etching damage removal methods 7−144642
red giants, Si isotopic abundances obs. 7−127858
refining and nitriding processes using plasma techniques 7−97819
reflected second-harmonic light generation, surface contribs. 7−68790
relaxation of photoexcited charge carriers, reflectivity and transmittance studies, picosecond time domain 7−99084
relaxation processes, picosec. reflectivity and transmission studies 7−131654
resistors, ion-implanted, sheet-resistance at cryogenic temps. 7−137922
resonant microstructures, optical excitation 7−95574
ribbon, edge stabilised growth, solar cell appl. 7−93506
ribbon growth, dislocation motion and multiplication 7−117845
ribbon growth, thermal viscoplastic buckling 7−90995
ribbon polycrystalline, photovoltaic cells exptl. study 7−86794
ribbons, dendritic web type, dislocation dynamics and viscoplastic buckling 7−98016
ribbons, grown by various methods, cryst. struct., X-ray topographic obs. 7−83971
ribbons, prep. and thermal residual stress anal. *(French)* 7−125962
ribbons, RAD growth process, photovoltaic appl. 7−93505
ribbons, RTR, cryst. defects, charcts. and influence on ribbon cell performance 7−86015
Schottky barrier modification by low energy H implantation 7−83995
Schottky contacts on Si, barrier heights, press. depend. 7−105656
Schottky SEED device, hybrid optical bistability based on increasing absorpt. in depletion layer 7−82684
scleral lens for ganzfeld, pattern and optic fibre ERG 7−93988
screening response in static dielec. matrix, density functional approach with ab initio pseudopotentials 7−84724
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
secondary ion emission, quasiresonant electron-exchange mechanism 7−85927
secondary radiation yield, effect of X-ray total external refl. 7−70973
seed particle growth by silane pyrolysis, runaway nucleation in aerosol reactors 7−71047

silicon continued
self implanted amorphized Si substrate, boron implantation, channelling avoidance 7−111624
self-defocusing of convergent beams, circular intensity waves 7−68799
self-diffusion mechanisms and thermal equilib. defects, review 7−98568
self-interstitials, mol. dynamics study 7−137362
self-interstitials, role in thermally induced rod-like defect formation 7−131144
self-ion implanted, vacancy and interstitial distribs. 7−83950
semiconductive and semimetallic phases, Hall effect and low-temp. resist. meas. 7−137962
semiconductor crystals, dislocation-impurity interactions 7−124322
semiconductor evaluation technique using heat pulses 7−98597
sensors, conf., London, England (Dec. 1986) 7−95099
sensors and instruments based on thin-film Si and new materials 7−121091
sensors overview 7−140684
Sgr A West, Si II 34.815 μm forbidden line detect. 7−88593
shallow donor diamagnetic susceptibility pressure dependence calculations 7−76824
shallow thermal donor annealing props., photothermal ionisation spectra study 7−98910
shaped crystal growth, transient solute effects 7−83811
shaped ribbon 7−85999
shear piezoresistance coefficients, graphical representation 7−124987
sheet, grown by spin method, rel. between solar cell efficiencies and cryst. struct. 7−86001
sheet, long nonagons, EFG method, solar cell appl. 7−92853
sheet, residual stress meas. by shadow moire interferometry 7−83138
sheet continuous horizontal growth from melt, finite element analysis 7−85994
sheet growth, rate limits, vertical and horizontal growth methods 7−85993
sheet growth, transverse temp. field nonuniformity effects on stress 7−83809
sheets, growth by zone melting process from powder, solar cell efficiency 7−93508
shock launching, X-ray diffraction studies 7−124397
a-Si:H, defects, EPR studies 7−138328
Si:Sn(Sb), high conc. implants, incoherent light annealing 7−98231
Si-Si_3N_4, interface formation by catalytic nitridation, XPS study 7−126330
n-Si-SiO_2 MOS structures, density of states for Na^+ impurity bands 7−77101
silicide formation with codeposited Ti-Ta alloys 7−131372
single cryst., float zone and Czochralski grown, perfection, γ-ray diffr. obs. 7−100040
single cryst., internal stresses and dislocation motion, nonlinear resonance characts. *(Russian)* 7−111726
single cryst., relativistic electron bombardment, parametric X-ray generation, spectral and ang. distribs. 7−77677
single cryst. surface, struct. after ion-chem. etching 7−105199
single cryst. wafers, cut surface morphology, environmental fluids and temp. effects 7−105202
single crystal, amorphisation, millisecond pulsed laser irradiation 7−76206
single crystal, plane-like precipitate, X-ray topographic study *(Chinese)* 7−111889
single crystal damaged surface layer, nondestructive meas. using reflection acoustic microscope 7−138927
single crystals, Czochralski method growth, microdefects form., thermal processes *(Japanese)* 7−132440
single crystals, photocond., nucl. radiation and ultrasound influence 7−131711
single crystals containing growth and decoration dislocations, Laue diffr. *(Russian)* 7−91395
single crysts., clusters of point defects, study using gamma-ray diffraction 7−98119
single crysts., microdefect-generated dislocation loops, X-ray topography study 7−83958
single crysts. diamag. suscept. meas., plastic deform effects study 7−112735
single wafer dE-E detector for fast neutron spectrometer 7−74332
SIPOS-Si heterojunctions, elec. characts., cond. mechanisms 7−85080
slip, nondissociation of Lomer-Cottrell dislocations 7−131455
slit structure, birefringence, appl. to switchable IR waveplates and shutters 7−103938
small semicond. clusters, struct. and bonding, tight-binding-density functional theory calcs. 7−124833
SOI, buried layer anal. from high dose O^+ implantation 7−98207
SOI, growth front movement in electron beam recrystallisation, direct obs. 7−86204
SOI, Si selective epitaxial growth over thick SiO_2 islands 7−100103
SOI films, depth profiles of optical props., ellipsometry study 7−99788
SOI films, electron beam recrystallised, perforation seed struct. 7−112113
SOI films, grain boundaries, EBIC studies 7−124284
SOI films, large area, seeded electron beam recrystn. with striped encapsulation 7−124768
SOI films, multilevel seeded lateral epitaxy, electron beam recrystn. 7−131471
SOI films, paramag. centres at Si-SiO_2 interfaces 7−112943
SOI films by laser recrystn., periodic seeding filled by selective epitaxial growth 7−84561
SOI layers formed by laser recrystallisation *(Japanese)* 7−69758
SOI structure, laser recrystallisation, lateral seeding 7−124325
SOI system, zone melting growth 7−132501
SOI wafers, ion implanted, nondestructive anal. 7−112100
solar battery based on disk cells 7−100723
solar cell, intrinsic energy conversion efficiency and quantum efficiency, photoacoustic determ. 7−71608
solar cell arrays, short-circuit current and efficiency variation in tropical conditions 7−71604
solar cell based photovoltaic unit with concentrators 7−86822
solar cell contact/interconnector system Intercontact 7−144842
solar cell efficiency, effect of vertical dimensions, 2D anal. 7−139114
solar cell manufacturing technology in Japan, present status and future direction 7−71623
solar cell nonlinear effects, internal quantum efficiency model 7−144880
solar cell spectral response meas. for space qualification 7−144884
solar cell welding process temp. meas. and finite-element simulation 7−144846
solar cell welds, Ag foil interconnector low-cycle fatigue tests 7−144845
silicon continued
solar cell-coverglass direct bonding 7−144847
solar cells, amorphous and monocrystalline, technology development trends *(German)* 7−144832
solar cells, construction and functioning *(German)* 7−114100
solar cells, deviations from superposition principle at low illum. 7−133107
solar cells, diffused junction, lifetime and energy-bandgap narrowing 7−126598
solar cells, direct meas. of junction ideality factor 7−133104
solar cells, effect of attitude on solar energy received *(Italian)* 7−93503
solar cells, electron irrad. effects on shunt resistance 7−100732
solar cells, electron radiation damage, comparison with GaAs cells 7−133106
solar cells, flat plate cells and modules, perform. improvements 7−100733
solar cells, front surface passivation with antireflection coating 7−114110
solar cells, high efficiency, fabrication techniques 7−126627
solar cells, high efficiency, review 7−126608
solar cells, high-efficiency, n^+-p-p^+ back-surface-field, optimisation 7−100727
solar cells, lumped series resistance determ., effect of diode ideality factor 7−78641
solar cells, photoacoustic charactn. 7−119660
solar cells, photovoltaic research and appl., state-of-the-art 7−78638
solar cells, photovoltaic research at SERI, current status 7−126619
solar cells, physics, recent advances, review 7−126622
solar cells, point-contact, operation and performance description 7−126610
solar cells, polycrystalline, base doping concentration modelling, grain boundaries effect 7−78643
solar cells, recombination under high-level carrier injection conditions 7−114107
solar cells, short-circuit current depend. on angle of incident radiation 7−71620
solar cells, stable with high temp. survivability, appl. of TiN layer 7−78645
solar cells, thin-film single cryst., fabrication *(Japanese)* 7−119648
solar cells, ultrathin, low-energy electron (0.3 to 3 MeV) and γ radiation damage obs. 7−144891
solar cells efficiency, effect of diffuse solar radiation 7−119658
solar cells energy conversion efficiency study 7−126609
solar cells fabrication using glow-discharge implantation, thermal annealing and oxide passivation 7−71603
solar cells for electricity generation *(German)* 7−114099
solar cells for space appls., materials testing 7−126629
solar cells prepared from polycrystals grown by RAD technique, defects 7−86000
solar grade prepared by Bridgman-Stockbarger process, transport phenomena 7−126099
solar photovoltaic cell technology, dendritic web 7−114113
solid, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
solid, pulsed laser melting, mol. dynamics calcs. 7−138555
solid particle erosion, strength evaluation, statistical method 7−113730
SOS, ion implanted, laser beam annealing, channelling and sheet resist. meas. 7−84025
SOS, O^+ ion implanted, carrier lifetime depend. on ion implantation dose 7−70324
SOS carrier lifetime vs. ion-implantation dose 7−92203
SOS epitaxial films, rapid thermal processing 7−70103
SOS films, cryst. quality improvement by self-implantation *(Chinese)* 7−124724
SOS films, heavily doped, electrical props. 7−77116
SOS films, preparation, struct. and electrical props. review 7−105739
SOS implanted films, transport studies using picosecond optoelectronic switches 7−75003
SOS structs., crystalline quality, CMOS device performance 7−112510
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
spacecraft solar array performance and cost 7−144854
spacecraft solar cell US welding equipment 7−144843
specific heat, thermal expansion at high temp. 7−137586
specimen prep. and TEM, high resolution, signal-to-noise ratio improvement 7−134900
spherical particles, crystal growth by gas evaporation 7−70993
stability and electronic props. of complex struct. under press 7−137467
stacking faults, oxidation-induced, TEM 7−91603
static dielec. matrices, ab initio pseudopotential density functional approach 7−84723
stochastic auto-oscillations in cond. of semicond.-metal structures 7−143611
strain gauge using Si cantilever, 1 to 1000 bar range appl. 7−95576
strip particle detector IC *(Norwegian)* 7−74337
structural stability in tight binding models 7−91520
structure factors, X-ray wavelength depend., anomalous dispersion term 7−76073
substrate, (001), local oxidation, film-edge-induced dislocation generation 7−112131
substrate, C:H hard amorphous thin films, Raman scatt. study 7−125727
substrate, Co thin film, Co_2Si form., growth kinetics and moving species during rapid thermal annealing 7−105154
substrate, GaAs MBE growth using thermally strained buffer layers 7−124796
substrate, Ge coated, for GaAs epitaxial growth 7−86058
substrate, MBE, IC appl. 7−138662
substrate, molecular beam epitaxy of $Pb_{1-x}Sn_xTe$ 7−77830
substrate, passivation-induced phenomena, book contrib. 7−106728
substrate, reactive ion-plasma sputtering of SiO_2 and Si_3N_4 dielectric films 7−86501
substrate for GaAs epitaxial growth, effect of heat treatment 7−86034
substrate for heteroepitaxy, conf., Palo Alto, CA, USA (April 1986) 7−80174
substrate for integrated optics 7−104044
substrate heteroepitaxy of III-V semiconductors *(Japanese)* 7−70143
substrate with GaAs epitaxial films, misfit dislocations, atomic resolution electron microscopy 7−84548
substrates, film stresses and critical glide forces determ. by HVEM technique 7−111567
substrates, film-edge-induced dislocation generation 7−112130
substrates, Ge-coated, for thin film GaAs solar cell fabrication by CVD 7−78647

silicon continued
substrates, RIE damage, intrinsic gettering, scanning DLTS and EBIC studies 7−126338
substrates for GaP film MBE heteroepitaxy *(Japanese)* 7−119651
Sun, transition region UV brightenings, Si IV and O IV obs. 7−72384
superconducting FET, critical current induced by proximity effect, carrier conc. depend. 7−105850
superconductivity of high press. phases 7−77136
surface, (001)2×1, monolayer and bilayer high steps 7−124655
surface, (001), 2×1 reconstruction, bilayer-high steps 7−98648
surface, (001), RHEED intensity calcs. for stepped surfaces for interpretation of oscills. during MBE growth 7−84464
surface, (001), vibr. excitations, surface reconstruction 7−84476
surface, (100), electron irradiated, deposition of Si films 7−77832
surface, (100), interaction of adsorbed Sb monolayer, effect of ion bombard., TSD study 7−85933
surface, (100), nucleation of GaAs, multilayer step formation after adsorption 7−105309
surface, (100), step structures, annealing effects, UHV-BEM studies 7−98649
surface, (100)-2×1, with adsorbed As overlayer, surface state bands, angle-resolved photoelectron spectra 7−125072
surface, (111), absorbed thiophene, desulphurisation process study 7−114001
surface, (111), adatom diffusion and adatom-ledge interaction, semiempirical pot. energy function 7−143179
surface, (111), adsorbed $Mo(CO)_6$, $W(CO)_6$ and $Fe(CO)_5$, laser interaction mechanisms, HREELS, TDS and AES investig. 7−91974
surface, (111), adsorption and growth of Ag, photoelectron spectra, RHEED 7−85945
surface, (111), chemical bonding in ordered Ce overlayers 7−125915
surface, (111), electronic props., influence of disorder 7−92247
surface, (111), K adsorption, metallisation effect 7−112082
surface, (111), kink-site form. energies using semiempirical pot. energy function 7−143176
surface, (111), NH_3 adsorption, Si-H bond production, UPS study 7−105273
surface, (111), oxidation enhancement by mixed valence SM overlayers 7−71420
surface, (111), Pb^+ ion implantation, surface layer struct., after high temp treatment 7−84461
surface, (111), single cryst. electrode, surface structural symmetry, electrochem. process effects, SHG investig. 7−91953
surface, (111), vicinal surface, facetting induced by Pd *(French)* 7−112035
surface, (111), with adsorbed In overlayer, surface state bands, angle-resolved photoelectron spectra 7−125072
surface, (111)$\sqrt{3}\times\sqrt{3}$-Bi, atomic structure, X-ray photoelectron diffraction 7−137713
surface, (111) cleavage, (2×1) reconstruction processes 7−118207
surface, (331), chemisorption of O_2, surface reconstruction, LEED, UPS, AES *(Chinese)* 7−124682
surface, (III), atomic displacements, X-ray scattering study 7−131401
surface, adsorbed halogens and chalcogens, nuclear quadrupole interaction studies 7−112270
surface, anisotropically etched, selective IR optical props. *(Russian)* 7−77550
surface, Ar^+ ion induced etching by condensed SF_6, model 7−93220
surface, Ar^+ sputtering at low temp. and high vacuum press. 7−99995
surface, atomic struct. and reconstructions, direct obs. by FIM 7−84459
surface, curved, oxidation 7−71410
surface, direct formation of dielec. thin films by low energy ion beam bombardment 7−84075
surface, epitaxial growth, props. and applications of transition metal silicides 7−86022
surface, etching reaction with XeF_2, SiF_4 desorpt., TOF spectra 7−137696
surface, ion modification of evaporated metal film props. 7−91673
surface, laser-induced form. of longit. microrelief 7−85903
surface, microwave plasma etching 7−138911
surface, NH_3 adsorption, a-SiN_x:H film formation 7−118273
surface, Ni autocatalytic plating 7−144310
surface, O removal via reaction with adsorbed Ge 7−71398
surface, scanning CW CO_2 laser beam irradiated, dislocation structure 7−111661
surface, self-diffusion, simulation using Stillinger-Weber pot. 7−76481
surface, SiO_2 film thermal and atomic beam assisted desorpt., AES and LEED studies in ultrahigh vacuum 7−91969
surface, small-scale capillary wave struct. generated by picosec. laser pulse irrad. 7−70048
surface, synchrotron radiation-assisted etching 7−126339
surface (001), inversion layers, electron effective mass changes 7−118552
surface (001), surface state band, deformations due to roughening and misorientation 7−85035
surface (001)(2×1), metallic surface state, angle-resolved UPS study *(Chinese)* 7−105640
surface (100), adsorbed Cs and Na, catalytic oxidation, photoemission studies 7−93221
surface (100), adsorption of H_2O on planar and stepped surfaces 7−143204
surface (100), atomic steps, electron diffr. studies 7−143143
surface (100), Co sputtered film, silicide form., self-aligned process and elec. characts. 7−98714
surface (100), diffusion limited dry oxidation, power law modelling 7−71412
surface (100), electron trapping defects, STM studies 7−77033
surface (100), GaAs MBE growth and defect struct., TEM study 7−112138
surface (100), NH_3 dissociation, XPS and UPS studies 7−86606
surface (100), O_2 adsorption, roughness effect of dangling bond band 7−144240
surface (100), O_2 adsorption and SiO desorption studies 7−118266
surface (100), O_2 desorption, real-time anal. 7−84504
surface (100), O adsorption and reaction, mol. beam and XPS studies 7−143195
surface (100), order-disorder transition *(Japanese)* 7−118215
surface (100), plasma-enhanced deposited Si_3N_4 and $Si_3O_3N_2$, mechanical stress meas. 7−71007
surface (100) 2×1, Cs or Na overlayers, adsorbed O_2 electronic props., photoemission spectra studies 7−113344
silicon continued
surface (100) with adsorbed F, Si−F bond directions, ESDIAD study 7−98696
surface (100) with K monolayer, inverse photoemission study 7−144152
surface (110), O_2 adsorption, early stage behaviour 7−124708
surface (110), vicinal, reconstructed, domain form., LEED obs. 7−143163
surface (111)2×1, tunnelling current in scanning tunnelling microscopy 7−77032
surface (111), adsorbed Br, lattice location, transmission channelling studies 7−143191
surface (111), Ag adsorption and desorption, RHEED-X-ray spectra studies 7−118267
surface (111), Ar ion etching, chemically bonded states, Auger electron spectra 7−119089
surface (111), benzene adsorption, valence and core states, photoemission obs. 7−118248
surface (111), buckled, dangling bond states 7−85038
surface (111), chemisorption of I, LDF-DVM study *(Chinese)* 7−98669
surface (111), dimer-adatom-stacking fault model, calcs. 7−143156
surface (111), Ge monolayers, π-bonded chain struct., calc. 7−84640
surface (111), imaging electronic surface states in real space 7−143546
surface (111), ion assisted etching by F, XPS study 7−119472
surface (111), ion implanted, desorption behaviour 7−143226
surface (111), laser induced gases desorption, pumpdown process 7−134759
surface (111), LEED study of high temp. and laser quenched surface structs. 7−112041
surface (111), long range ledge-ledge interactions, surface stress tensor 7−118217
surface (111), monatomic O adsorption, theoretical study of UPS spectra 7−77768
surface (111), N_2 chemisorpt., ion scatt., LEED and temp.-programmed desorpt. studies 7−143199
surface (111), new reconstruction, STM obs. 7−76580
surface (111), pyrene submonolayers, electronic energy transfer, fluoresc. 7−105247
surface (111), roughening under high temp. thermal cycling 7−124646
surface (111), surface topography changes during MBE growth, microprobe RHEED study 7−98636
surface (111), tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
surface (111), terrace size and edge roughness high resolution surface-sensitive electron diffr. meas. 7−91934
surface (111), topographies obtained by scanning tunnelling microscopy, effect of tip morphology 7−137676
surface (111) 2×1, NH_3 adsorption, high resolution EELS study 7−124695
surface (111) 2×1, vibr. spectrum, acoustic branch in π bonded-chain model 7−137691
surface (111) 7×7, silane chemisorption studies 7−143192
surface (111) $\sqrt{3}\times\sqrt{3}$, Al, Ga and In adatoms, empty surface states and adatom geometries, IPES study 7−112421
surface (111) (7×7), complex alcohol and carboxylic acid adsorbates, NEXAFS study 7−106308
surface (111) and (001) localised epitaxial growth of $TaSi_2$ by rapid thermal annealing 7−143254
surface (111) topography after Ar^+ bombardment and thermal annealing, RHEED and electron microscopy studies *(French)* 7−112036
surface (111) with absorbed Bi, evidence for trimer, nearly normal incidence X-ray diffr. 7−84525
surface (111)-2×1, Ag overlayer, LEED and AES studies 7−118275
surface (112), scanning tunnelling microscopy study 7−98660
surface alloying by laser aluminothermy 7−113805
surface analysis techniques and their application to materials and device characterization 7−125904
surface and deep states induced by rapid thermal processing, electrical effects 7−92106
surface barrier modification by low-energy N ion implantation 7−142807
surface barrier structs., carrier heating 7−112501
surface barrier structures, getter mechanism of defects 7−125115
surface deposited Fe-Ta multilayers, sputter depth profiling with LEIS and LENRS 7−84559
surface etching with hot SF_6 beam 7−78389
surface nitridation, synchrotron radiation induced 7−71399
surface oxidation, cleaning procedure effects 7−106723
surface oxide growth, variable refractive index 7−71409
surface reflection, third optical harmonic generation processes interference 7−90712
surface struct., scanning tunnelling microscopy studies *(Japanese)* 7−130991
surface topology development during ion sputtering 7−106336
surfaces, atomic structures, FIM studies 7−137673
surfaces, Ne^+ ion bombard., implantation, spectroscopic ellipsometry study 7−84062
surfaces, oxidation, dislocation generation at cracks 7−86495
surfaces, periodic structure evolution due laser beam interaction 7−131182
surfaces, silicide films and double heterostructures formation 7−86021
surfaces (100) and (111), atomic scale defect electronic struct. and STM imaging 7−112037
surfaces (111) and (001), electronic and geometric struct., STM studies 7−77034
surfaces (111) and (100), termination by adsorbed As, X-ray angle-resolved photoemission meas. 7−125920
swirl defect form. thermodynamics and kinetics *(German)* 7−111554
synchrotron plane wave X-ray topographic camera with large crystal stage 7−69538
texture analysis, heterogeneous morphology, neutron diffr. studies 7−124541
thermal donor preferential alignment 7−98188
thermal donor related luminescence lines, time resolved studies 7−99927
thermal donors, state of understanding 7−98906
thermal expansion meas. standards 7−121064
thermal oxidation, mech. stress effect 7−126332
thermal oxidation, passive, ^{18}O tracer study 7−126342
thermal oxidation, simulation 7−138913
thermal oxide form., thermal and struct. deform. 7−71417
thermal sensors based Seebeck effect, review 7−73343
thermally treated, recomb. nonuniformity, role of swirl defects *(Russian)* 7−76975

silicon continued
thermoelectric power and elec. conductivity near melting point, temp. depend. 7−99097
thin film, negative magnetoresist., spectrum anisotropy effects 7−70435
thin film deposition in photovoltaics manufacture, safety considerations 7−86019
thin film polycryst. p-n junction solar cells, 2-D model 7−133103
thin films, optical excitation of nonequilib. acoustic phonons, heat pulses 7−137636
thin layers on glass substrates, laser melting, phase boundary stability 7−118062
thin membranes, channelling transmission of protons 7−69790
thin monocrystalline solar cell epitaxy and etch stop technology 7−144866
thin solar cell welding and assembly methods and environmental tests 7−144865
tilt grain boundaries, symm. ⟨001⟩ type, structures and energies calcs. 7−111582
transient defect kinetics during oxidation and dopant diffusion phenomena 7−111968
transition metal substitutional ions, tight binding calcs. 7−98871
transmission detectors with photodiode read-out for ΔE-E telescopes 7−74346
trap-Auger recomb. anal. 7−112354
triplet centres, spin depend. phenomena, ESR, optical nuclear polarisation study 7−138327
twin boundaries, electronic properties, heat treatment effects *(French)* 7−124918
twinned growth in chill modified Al-Si eutectic 7−100045
ultra-pure crystal, electrical transport, freq. and time response 7−84884
uniaxially deformed crystals, indirect absorpt. edge 7−99793
US phased array transducer for acoustic imaging 7−123422
V-groove structure geometry obs. by SEM, sensors appl. 7−130992
vacancy migration energy, self-consistent Green's function method 7−98569
vacancy-impurity defect in electron irradiated Si, ESR study 7−112947
vibrating cylinder transducer for pressure meas. about 1 atm. 7−140660
vicinal (111) surface, phase separation 7−124660
virgin and implanted, rapid thermal annealing of elec. active defects 7−76202
VPE kinetics at reduced temps. 7−100091
VPE layer doping, theoretical foundations, incorporation eqns. 7−124296
wafer, (111) growth of $CoSi_2$ and $CoSi_2$/Si heterostruct. 7−143294
wafer, adhesion of electroless Ni. plating rel. to etching *(Japanese)* 7−77851
wafer, anal. of laser pulse interaction, bulk lifetime and surface recomb. vel. determ. 7−118536
wafer, as grown and process-induced defects, TEM charact. 7−124247
wafer, ion implantation amorphised, optical props. 7−85577
wafer, tetrafluoromethane plasma etching and diagnostics charcts. study using elec. probe method *(Korean)* 7−86498
wafer, thermal diffusivity lengths, ion implantation effects, mirage effect meas. 7−98592
wafer surface quality assessment using total integrated scatt. meas. system 7−123286
wafer temp. meas. during RF Ar^+ plasma etching 7−119465
wafers, denuded zone charact. 7−124318
wafers, thin film chem. growth processes, integrated system 7−138678
web, growth, computer controlled thermal environment, solar cell efficiency 7−93507
web crystal growth, plastic deform. analysis 7−84093
web type ribbon growth, dislocation dynamics 7−83965
X-irradiated, ionisation enhanced effects 7−104826
X-ray attenuation coeff. meas. 7−75938
X-ray diffr., coplanar three-beam 7−75924
X-ray multiwave diffraction, secondary radiation yield, angular depend. 7−77752
Pt/SiO_2/n-Si photoelectrodes in I and Br aq. solns., elec. props. and thermal oxide growth 7−100585
a-Si:H-a-SiN_x:H superlattices, transfer doping, electron trapping, effect of a-SiN_x:H comp. 7−99212
Ag/Si (111) interface, bonding characteristics identified by energy dependence of the photoionisation cross section 7−70100
Al (111)/Si (111) interface, ionised cluster beam deposited, structure, channelling study 7−92005
Al:Si, effect of doping on mobile charge of Si-SiO_2-Al structures 7−85123
Al:Si, ion implantation effect on low temp. props. 7−142815
Al/Si multilayer films, ion beam mixing, disordered AlSi alloy prodn., T_c enhancement 7−84074
Al/SiO_2/Si struct., interface states charcts. meas., optical MOS admittance technique 7−105714
Al/SiO_2/Si tunnel diode, localised state interactions and low freq. resist. fluctuations study 7−112505
Al/Zn/p-p^+ Si diodes, elec. characteristics 7−125807
Al-$(Ba_{0.9}Sr_{0.1})TiO_3$-Si, I-V characteristics, polarisation hysteresis 7−92304
Al-Al_2O_3-Si capacitor, high-field electron injection and trapping obs. *(Korean)* 7−85130
Al-$BaTiO_3$-Si metal-ferroelectric-semiconductor structs., nonvolatile memory behaviour 7−99217
Al-Si:H Schottky diodes, effects of H ion implantation on elec. charcts. 7−105704
Al-Si-Al, switching effects and negative resistance 7−131807
Al-SiO_2-Si capacitors, const. current avalanche hole injection, feedback voltage anal. 7−143623
Al-SiO_2-Si structs., defect spectrum responsible for breakdown 7−143626
Al-SiO_2-Si structs., local electrophys. props. of elec. active defects 7−143627
Al-SiO_2-Si:Rh, MIS struct., influence of Rh 7−143618
Al-SiO_x-p-Si MIS minority carrier grating type solar cells, temp. depend of I-V charcts 7−78639
Al-SiO-Si, MIS solar cells, I-V charcts., 100-450 K 7−119661
Al-$Sn_2P_2S_6$-Si structs., voltage-capacitance charcts. 7−131799
AlAs-GaAs:Si superlattices, Si-induced intermixing 7−111976
AlGaAs - GaAs:Si, MOCVD produced heterostructure lasers, power and temp. performance 7−82567
AlGaAs:Si, electrical properties, effect of coincident Pb flux during MBE growth 7−77112
AlGaAs:Si, MBE growth, DX centre, bistability, trapping charcts. 7−98894

silicon continued
AlGaAs:Si, passivation of donors and DX centres, H_2 plasma exposure 7−92105
AlGaAs:Si; DX centres, capture and emission processes, effect of host band struct. 7−98896
AlGaAs/GaAs multiquantum wells, Si-doped, Be implantation and diffusion 7−137725
AlGaAs-GaAs superlattices, focused Si ion beam implantation, compositional disordering, submicron grating fabrication 7−98718
AlGaAs-GaAs:Si implanted superlattices, compositional disordering, effect of rapid thermal annealing 7−71211
AlGaAs-GaAs:Si lasers, low threshold buried heterostruct. quantum well, fabrication by laser assisted disordering 7−117227
$Al_{0.3}Ga_{0.7}As$:Si solid soln., influence of dopant conc. on electrophysical props. 7−143460
$Al_xGa_{1-x}As$:Si, DX centre, photoionisation cross section 7−105476
$Al_xGa_{1-x}As$:Si, model of deep donor centres 7−98898
$Al_xGa_{1-x}As$:Si MBE films on GaAs(511) substrates, low temp. photoluminesc. 7−125782
$Al_xGa_{1-x}As$:Si MBE layers, DX centres and shallow donors, doping conc. depend. study 7−124924
$Al_xGa_{1-x}As$:Si solid solutions, deep donor level 7−70236
$Al_xGa_{1-x}As$:Si/GaAs:Si heterostructures, impurity-induced layer disordering via diffusion 7−70091
$Al_xGa_{1-x}As$-AlAs-GaAs:Si selectively doped MQW heterostructs., electron mobility, influence of AlAs spacer 7−92263
$Al_xGa_{1-x}As$-GaAs:Si, coupled stripe quantum well lasers, Si impurity-induced layer disordering 7−74952
$Al_xGa_{1-x}As$-GaAs:Si, index guided quantum well lasers, vacancy-enhanced impurity induced layer disordering 7−76186
Au film on Si substrate, struct. and comp., Auger spectra anal. 7−118287
Au/Si interface, low-temp. elec. charcts. 7−99201
Au-Si interface, TEM specimen heating during ion beam thinning, microstruct. instability 7−130994
bicrystals, X-ray diffraction, total external reflection 7−84578
C III 190.9 nm/Si III 189.2 nm ratio as planetary nebula-symbiotic star discriminant 7−139940
CO−Si interface, Ar ion bombardment induced mixing, interfacial oxide effects 7−69782
CaF_2/$CoSi_2$/Si (111) epitaxial insulator-metal-semiconductor structures, rapid thermal annealing 7−84549
CaF_2/Si structure, electrical props. and structural defects 7−85134
CaF_2/Si(111) epitaxial interface, elec. props., MIS characterisation 7−118591
CaF_2-MSi_2-Si (111) structs. (M=Co, Ni), MBE growth 7−144285
Co/Ti interface system, ion beam mixing, layer struct. and composition 7−76640
$CoSi_2$/Si:As structure, tunnelling spectroscopy 7−85111
$CoSi_2$-Si (111), d-metal silicides film epitaxial growth and props., review 7−137747
$CoSi_2$-Si MBE layers, strain relax. 7−143276
$CrSi_2$-Si, degradation of micron sized $CrSi_2$ lines 7−131369
$CuInSe_2$-Si:H hybrid tandem multijunction photovoltaic module research 7−133099
D ions, impact on Be, C and Si, range and backscattering 7−138577
Fe-Si (111) surfaces, angle resolved UV photoelectron spectroscopy study 7−138598
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props. 7−99530
α-Fe_2O_3:Co,Si single crystal, photomag. effect 7−112924
$Ga_{1-x}Al_xAs$:Si variable gap p-n structures, expansion of spectral photosensitivity by reradiation 7−137987
GaAs on Si and SOS substrates, organometallic VPE for microwave appls., expt. charactn. 7−84582
GaAs:Cr,Si, close contact rapid thermal annealing, coimplantation and autocompensation studies 7−71220
GaAs:Cr,Si dopant distrib. and elec. activation by short time annealing 7−84019
GaAs:H-Si, hydrogenation, effect on diode reverse leakage current, FET 7−143560
GaAs:In,Si LEC crystals, double doping studies 7−131163
GaAs:Si, activation and characterisation of MeV implants 7−104792
GaAs:Si, Be, dual implantation, p-n junction formation *(Chinese)* 7−131166
GaAs:Si, Bridgman growth , thermodynamic analysis 7−132438
GaAs:Si, deep levels induced by focused ion implantation 7−98921
GaAs:Si, donor neutralisation, H_2 plasma exposure 7−112220
GaAs:Si, doping from disilane in gas source MBE 7−77808
GaAs:Si, δ-doping layer, magnetotransport props. 7−131688
GaAs:Si, electron traps, rapid thermal processing 7−118502
GaAs:Si, gas source MBE growth, Si doping 7−125986
GaAs:Si, growth in low press. MOVPE, orientation depend. of growth rate 7−144298
GaAs:Si, high activation transient annealing, improved graphite heater 7−106553
GaAs:Si, ion implanted, capless rapid thermal annealing, carrier conc. 7−69743
GaAs:Si, ion implanted, rapid lamp annealing front- and back-side irrad. 7−104817
GaAs:Si, ion implanted, rapid thermal annealing, MESFET fabrication 7−117945
GaAs:Si, ion implanted, TEM obs. of defects 7−124273
GaAs:Si, ion implanted, nonlinear strain effects 7−142806
GaAs:Si, LPE, temp. difference method 7−126030
GaAs:Si, lattice relax. of press. induced deep centres, DLTS study 7−124904
GaAs:Si, low dislocation single crystals, growth and props. 7−85988
GaAs:Si, low press. OMVPE, doping using disilane 7−132482
GaAs:Si, MBE grown, doping efficiency and thermal stability of electron conc. 7−142810
GaAs:Si, MBE growth of highly uniform epitaxial layers over multiple substrates 7−71025
GaAs:Si, MBE growth on (311) substrates, elec. and optical props. 7−125988
GaAs:Si, microdefects noncontact obs. by photothermal radiation and photoluminescence microscopy 7−124275
GaAs:Si, optical charactn., IR reflectance spectroscopy 7−77535
GaAs:Si, SIMS analysis of isotopic impurities in ion implants 7−84009
GaAs:Si, shallow level impurities, deep level defects 7−105491
GaAs:Si, stacking fault energy, dopant and deformation temp. effects 7−142800
GaAs:Si,Be, Esaki-Tsu type doping superlattice, realisation 7−125102

licon continued
GaAs:Si,C, atmospheric press. organometallic CVD growth using triethylarsenic 7−77837
n-GaAs:Si,H, donor neutralisation, Si-H complexes *(French)* 7−131581
n-GaAs:Si,H, H diffusion and donor neutralisation, elec. studies 7−105135
GaAs:Si,H(D), Si related H(D) complexes, IR absorption spectroscopy 7−70759
GaAs:Si,In, LEC growth and LED characts. study 7−138643
GaAs:Si,P, co-implanted, activation efficiency enhancement 7−98191
n-GaAs:Si,Sn,Dx centre, mobility, free electron density 7−131578
GaAs:Si (100), damage induced by plasma etching 7−144636
GaAs:Si (100), MBE grown, high resolution EELS, As desorption, plasmon and phonon modes 7−125877
GaAs:Si epitaxial films, fast electron irrad., luminescence props. 7−77621
GaAs:Si LED, elec. and optical props. *(Korean)* 7−84869
GaAs:Si layers, Si ion implanted, photoacoustic optical and thermal characterisation 7−111777
GaAs:Si MBE heavily doped layers, compensation mechanism 7−70329
GaAs:Si MBE layers, valence band structs., UPS study 7−132406
GaAs:Si nonuniform carrier distrib. from Hall meas., surface-depletion effect correction 7−105589
GaAs:Si recoil implantation under As^+ bombardment, annealing effects, Hall Meas. 7−76177
GaAs:Si single crystals, critical resolved shear stress meas. 7−104764
GaAs:Si wafers, semi-insulating, spatial distrib. of point defects and complexes, photoluminesc. study 7−98918
GaAs:Si/AlAs superlattices, donor levels, elec. and photolum. props., substrate temp. depend. study 7−143576
GaAs:Si/AlGaAs quantum wells, heavily doped, emission props., selective doping effects 7−125783
GaAs:Si/AlGaAs superlattices, ion implanted, surface region disordering 7−124729
GaAs:Si/Si, ion implanted structure, defects and donor activation 7−91604
GaAs:Si-$Al_xGa_{1-x}As$ heterostructures, illuminated, conduction props., expt. 7−112460
GaAs:Si-AlGaAs quantum wells, 2D electron gas, photolum. study 7−85836
GaAs:Si-GaAlAs superlattices, characterisation of interface defects 7−138011
GaAs:Si^+, damage-related deep levels, incoherent light annealing 7−84762
GaAs:Si^+, ion implanted, rapid thermal annealing, controlled atmosphere annealing 7−111629
GaAs:Si(Be), focused ion beam implantation, impurity thermal diffusion 7−137623
GaAs:Si(In,Si), Czochralski crystals, ion-implanted, amphoteric doping 7−137382
GaAs:tn, Si, Si diffusion, background doping depend. 7−84391
GaAs/AlGaAs superlattices, Si-implanted, Compositional disordering by rapid thermal annealing 7−137726
GaAs/GaAlAs:Si superlattice interface electron traps. capacitance transients meas. 7−112467
GaAs/Si, acceptor and excitonic features, stress effects, photolum. study 7−125691
GaAs-$Al_{0.3}Ga_{0.7}As$:Si quantum wells, electron transport, substrate orientation and impurity effects 7−143572
GaAs-AlGaAs:Si, atomic planar doping, improvement of 2D electron gas conc. 7−77065
GaAs-$Ga_{1-x}Al_xAs$:Si superlattices, MBE, plasmons, Raman scatt. obs. 7−70764
GaAs-GaAlAs:Si superlattices, enhanced disordering by Si ion beam implantation 7−118291
GaAs-Si, heteroepitaxy of GaAs, improvement 7−137730
GaAs-Si interface, defect structs. after annealing 7−118278
GaAs-Si mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaAsP-Si mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaP-Si, electron affinity rule, photoemission tests 7−138600
Ge:Si, defect vibr. modes, lattice dynamic method anal. 7−118047
a-Ge:Si layers, amorphised by ion implantation, optical props. rel. to enthalpy of relax. 7−85578
Ge/Si (100), ultrathin epitaxial films, strain meas. 7−137752
Ge-Si, artificially layered struct., automatic process control 7−138663
Ge-Si (111), dislocation struct., transmission electron microscopy 7−84542
Ge-Si ordered superlattices, struct., optical transitions, TEM, Schottky barrier electroreflectance studies 7−112096
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
$Ge_{0.2}Si_{0.8}$-Si (001) heterostructure, coherently strained, piezoelec. effect 7−143579
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
H ions, impact on Be, C and Si, range and backscattering 7−138577
H_2-Si-SiH_4, glow discharge, dominant reaction channel and SiH_4 decomp. mechanism 7−106802
HgCdTe/CdTe/GaAs/Si epitaxial struct., growth and characterisation 7−84550
$In_{0.53}Ga_{0.47}As$:Si, ion implanted, anomalous lamp annealing effects 7−69739
$In_{0.53}Ga_{0.47}As$:Si layers formed on InP substrates by ion implantation and flash annealing, elec. props. 7−85151
$In_xGa_{1-x}As$:Si LED, spectral characts. electron-beam induced variations, electroluminesc. spectra anal. 7−106273
In_2O_3-SiO_2-Si solar cells, aging effects investig. using Auger electron spectroscopy 7−100731
InP:Fe,Si, Si-ion implanted, close contact rapid thermal annealing, type conversion 7−69740
InP:Fe,Si, two-step rapid thermal annealing, activation of implanted Si 7−113575
InP:Fe,Si elec. and morphological props. after P overpress. rapid thermal annealing 7−138765
InP:Si, dopant activation by post-implant rapid thermal annealing 7−86212
InP:Si, ion implanted, capless rapid thermal annealing 7−124295
InP:Si, MOVPE carrier conc. rel. to doping 7−124301
InP:Si, n- and p-type layers formed in semi-insulating InP by thermal anneal/ion implantation, elec. props. 7−85152

silicon continued
InP:Si,S,O, donor impurity incorporation, O_2 effects, spectroscopic evidence 7−98184
InP:Si-AuGe/Ni/Au rapid thermal alloyed ohmic contact, elec., structural and metallurgical props. 7−138006
InSb/SiO_2/poly-Si MOS structures, elec. props. 7−105711
InSb/SiO_2/poly-Si structures, InSb surface conductivity 7−105712
InSnO-Si heterojunction solar cells prep. by thick film techniques 7−119663
Ir/Si interface, silicides form., Schottky-barrier form., XPS and UPS studies 7−125076
Li concentration determ. by cyclotron radioactivation method 7−124309
MgO/Si ultrathin substrate, NbN epitaxial growth, Schottky diode characts. 7−143256
$MoSi_2$/Si layer system mech. stability and form. by rapid thermal annealing 7−105298
$MoSi_2$-polysil-oxide-Si struct. for VLSI appl., structural and elec. props. 7−100269
Nb-Si-Nb Josephson sandwich junctions, Ag shunt, electrophysical and microwave props. 7−70494
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
Ni film on Si (100), ion beam mixing, Rutherford backscattering and Auger depth-profile anal. 7−91663
Ni:Si, ion implantation, phase stability rel. to radiation damage, 25-650°C 7−104867
Ni/Si(111) $\sqrt{19}$ surface, surface modifications induced by low overage adsorbates 7−124699
NiCr:Si stable thin film resistors, structural and elec. props. studies 7−138075
$NiSi_2$/Si high quality epitaxial films grown by MBE, Schottky contact props. 7−76680
$NiSi_2$/Si:As structure, tunnelling spectroscopy 7−85111
$NiSi_2$-Si, thin epitaxial layers, cond. and mobility 7−138076
$NiSi_2$-Si (111), cryst. intermediate phases in epitaxial layer formation 7−137748
$NiSi_2$-Si (111), d-metal silicides film epitaxial growth and props., review 7−137747
O desorption, ion-induced 7−70070
PbS-Si heterostructures, current-voltage characts. 7−131745
Pd/Al_2O_3/SiO_2/Si struct., appl. as H sensor 7−71053
Pd-SiO_2-Si MOSCAP sensors, admittance studies of H_2-induced states 7−80775
Pt/Si interface, growth kinetics and microstructure of Pt_2Si and PtSi 7−76698
Pt/Si:As interface, growth kinetics and microstructure of Pt_2Si and PtSi 7−76698
Pt-Si contacts, interfacial PtSi formation, P diffusion and defect modification 7−124605
PtSi/n-Si:H Schottky barrier height variation by ion implantation 7−76180
PtSi-Si (111) interface and epitaxial growth of PtSi and Si (111), electron microscopy 7−76643
SbSI-Si junctions, effective polarisation charges and interface states from HF C-V hysteresis meas. 7−99218
Si (100) substrates, BP (100) epitaxially grown layers, cryst. props. and growth conditions *(Korean)* 7−84565
Si (111)-Ga, surface core level shifts 7−125927
Si (111)-Ti interface, silicide formation, Schottky barrier formation 7−84404
Si (111) $\sqrt{3}\times\sqrt{3}$-Ag surface, photoelectron spectra, surface and core-level shifts 7−85949
Si (111) $\sqrt{3}\times\sqrt{3}$-Bi surface, angle resolved UV photoelectron spectra 7−125907
Si clusters, photoionisation mass spectrum, ionising laser intensity depend. 7−110170
a-Si, conductivity prefactor as a function of Fermi level position, field effect experiment 7−124990
Si, critical analysis of soft X-ray cross section data 7−77695
a-Si, defects, threefold or fivefold coordination 7−111401
n-Si electrode, Pt, island coated, photovoltage generation 7−114097
a-Si, film, Ar^+ ion irradiated, hopping cond. 7−84898
a-Si, film growth and condensation conditions on substrate surfaces *(Chinese)* 7−98724
a-Si films, density of states distribution, photoconductivity meas. 7−84626
Si II (IV), EUV emission lines in the atmospheres of cool stars 7−88420
Si III, new metastable phase, transport props *(French)* 7−84933
Si III 1892 Å/C III 1908 Å, emission-line ratio in late-type stars 7−88383
Si MBE on GaP and GaAs 7−105685
Si MIS capacitors, polish damage, gate oxide integrity, minority carrier lifetime 7−138066
p-Si MOS structures, radiative recombination spectra, of 2D electrons 7−131802
n-Si, metal-insulator transition in high mag. fields 7−131543
a-Si p-i-n solar cells, deposition using photo-CVD reactor 7−119156
Si photo-etching in Cl_2 gas using high power Hg lamp 7−86503
n-Si photoanode, stabilised, O_2 evolution enhancement 7−86636
Si, polycrystalline, recomb. processes at grain boundaries, determ. 7−92270
a-Si, Schottky diode detectors, recombination effects and noise 7−141394
a-Si solar cell modules, laser patterned *(Japanese)* 7−139116
a-Si, structural model with simulated annealing, tetrahedrally coordinated random networks 7−142586
a-Si superlattice struct. solar cells *(Japanese)* 7−71613
a-Si thin film growth by sputtering, Monte Carlo studies 7−105329
Si^{12+}, doubly excited, atomic parameters, Hartree-Fock-Slater model calcs. 7−116876
Si: As (111) surface, As terminated, electronic and atomic struct., passivation 7−98651
Si: transition metals, nonradiative recombination via deep impurity levels 7−119041
Si:3d transition metals, hyperfine interaction constants, ENDOR 7−98900
Si:Ag, Ag solubility, diffusion and thermodynamic props. 7−137567
Si:Ag, implant regrowth, redistrib., range and shape factors, TEM study 7−69733
Si:Al, As(P), interstitial interactions, As-Al and P-Al emitter push effect 7−111644
Si:Al, B(Al,Ga)(B,Ga), interstitial interactions, pull effect 7−111547
Si:Al, implantation profiles investig. by ion-photon spectroscopy method 7−76193

silicon continued
Si:Al, recoil implantation, elec. props. 7−111603
Si:Al$^+$, deep p-layer formation, diffusion 7−111622
Si:Al(B)(Ga)(In), material considerations for high efficiency solar cells 7−133098
Si:Ar$^+$(Ti$^+$), ion implanted, stresses and radiation damage 7−142848
Si:As, amorphous layers, ion beam induced epitaxial crystn. 7−131495
Si:As, As diffusion coeff., dependence on conc., internal electric field model 7−105139
Si:As, As redistribution during high press. thermal oxidation 7−78385
Si:As, defects, Rutherford backscatt.-channelling studies 7−138579
Si:As, Ge, implantation effect on defect anneal kinetics 7−117952
Si:As, heavily doped, phase transformation, post-rapid-thermal annealing, TEM and Rutherford backscatt. study 7−142982
Si:As, high dose ion implanted, laser annealed, optical study 7−85772
Si:As, implant electrical activation and transient enhanced diffusion during rapid thermal annealing 7−84398
Si:As, implant redistrib., activation and diffusion during rapid thermal annealing 7−86214
Si:As, implanted, growth mechanism of dislocation loops 7−98156
Si:As, ion implanted, dopant redistrib. during thermal annealing *(Chinese)* 7−76187
Si:As, ion implanted, electron beam annealing 7−137415
Si:As, ion implanted, halogen and Hg lamp annealing 7−69742
Si:As, ion implanted, low-temperature annealing 7−111601
Si:As, ion implanted, nanosecond laser annealing, nonthermal factors 7−84024
Si:As, ion implanted, rapid thermal annealing 7−98211
Si:As, ion implanted, secondary defects, thermal wave studies 7−124303
Si:As, low implant conc. meas. by RBS microanal. 7−77733
Si:As, MBE growth, doping by low-energy implantation using microion source 7−142808
Si:As, polycrystalline films, ion implanted, solid phase epitaxy 7−131472
Si:As, Sb, dopant diffusion, effect of window edge stress 7−124600
Si:As, shallow implants, SIMS depth profiling 7−137389
n$^+$Si:As, shallow layer implant activation and redistrib. by rapid thermal annealing 7−76172
a-Si:As (P), donor states, local disorder effects 7−124929
Si:As implanted polycrystalline films on Si, epitaxial realignment by rapid thermal annealing 7−112114
Si:As ion implanted and laser-annealed diodes, elec. characts. 7−92258
Si:As polycrystalline films, low temp. annealing characts., conductance 7−118597
Si:As SOS structures, ion implanted, ion beam recrystn. and laser beam annealing 7−118588
Si:As thin film, transport props., thermal annealing effects *(French)* 7−99230
Si:As/Pt interface, silicide form. by ion mixing 7−76240
Si:As$^+$, high dose implanted, defect density reduction by low temp. thermal and electron beam annealing *(Chinese)* 7−76218
Si:As$^+$, shallow n$^+$p junction formation, characts. 7−118565
Si:As$^+$(P$^+$), channelled and random implanted ion profiles, Monte Carlo simulation 7−137422
Si:As-insulator interface, implanted, impurity distrib. after annealing, RBS study 7−83991
Si:As(B)(P), MeV implantation profiles 7−111615
Si:Au, A-centre and impurity acceptor electron capture cross-section, uniaxial stress effects study 7−112363
Si:Au, deep acceptor, $P_{1/2}$ resonant states and Fano resonances 7−98924
Si:Au, deep acceptor and donor levels, press. depend. 7−105477
Si:Au, donor and acceptor levels, optical and elec. props. *(Chinese)* 7−105450
Si:Au, EPR detect. of Si-Au pair 7−92500
Si:Au, gettering of Au, tool for studying props. of Si interstitials 7−104797
Si:Au, implantation damage, microscopic distrib. 7−124304
a-Si:Au, ion beam induced epitaxy, interfacial segregation, crystallisation 7−124099
Si:Au, photoconductivity oscillations, chaos 7−70356
Si:Au, point defects and diffusion mechanisms 7−104751
Si:Au, steady-state photoconductivity, optical charge transfer 7−118532
Si:Au, substitutional impurity annealing, indiffusion and nucleation 7−113584
Si:Au, transient negative photoconductivity 7−112387
Si:Au crystals, A-type microdefects, Au diffusion and thermal annealing 7−104758
Si:Au(Pt) radiation resistant diode detectors, minority carrier lifetime 7−81884
Si:B, (111) oriented dislocations revealed by preferential chemical etching 7−124277
Si:B, anomalous transient B diffusion, effect of Si ion implantation, damage 7−142802
Si:B, B diffusion, influence of implant induced vacancies and interstitials 7−124592
Si:B, correlations of lattice vibrations 7−142920
Cz-Si:B, defect characteristics, doping and annealing depend. 7−142758
Si:B, diffused wafers, O_2 plasma damage 7−71405
Si:B, electron irradiated, diffusion and complexing of interstitial B, IR study 7−132282
Si:B, electron-irradiated, defect studies 7−70240
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
Si:B, Fe, Fe-B pair complex, electronic props., self-consistent calc. 7−124914
Si:B, H, surface layer swelling on H implantation at different doping concentrations 7−124350
Si:B, Harwell series II implantation RBS standards calibration 7−76170
Si:B, heavily doped, electron lifetime, electron mobility, and band-gap narrowing 7−92202
Si:B, heavy doping in MBE using HBO_2 source, knudsen cell 7−91605
Si:B, high-dose ion implanted, dopant distrib., SIMS and electrorefl. study 7−69734
Si:B, hyper-abrupt doping transitions, SIMS studies 7−98213
Si:B, impurity diffusion coeff. along various crystallographic axes *(Chinese)* 7−124593
Si:B, impurity diffusion in inert and oxidising ambients 7−105138
Si:B, impurity photoconductivity, relax. kinetics, A$^+$ centres, A_2^+ complexes 7−118531
Si:B, impurity redistrib. and diffusion, ion implantation damage effects, 2D model calcs. 7−69983
Si:B, interstitial impurity migration and annealing behaviour, DLTS study 7−111969
silicon continued
Si:B, interstitial negative-U defect levels, optical DLTS obs. 7−124912
Si:B, ion implantation during MBE growth 7−142809
Si:B, ion implanted, alloy profiles, SIMS study and simulation 7−111641
Si:B, ion implanted, dopant redistrib. during thermal annealing *(Chinese)* 7−76187
Si:B, ion implanted, enhanced tail diffusion 7−105117
Si:B, low energy implants, RTP shallow junction formation 7−117953
Si:B, SIMS depth resolution loss with depth due to ion dose density variations across rastered area 7−80930
Si:B, solid phase epitaxial regrowth, low press. CVD 7−137736
Si:B,C, DLTS studies of interstitial C defect 7−84755
Si:B,Ge epitaxial films, dynamical X-ray diffr., photoeffect 7−77747
Si:B,H, H as deep donor 7−92104
Si:B,H, H passivation of B acceptors, Raman scatt. studies 7−85655
Si:B,H, H permeation during low energy ion beam bombardment 7−143095
Si:B,Li(P), impurity-induced local vibr. modes, local densities of states recursion method calcs. 7−84166
Si:B,Ni, donor levels, Hall effect and DLTS meas. 7−137852
Si:B,O, Czochralski grown, furnace and rapid thermal annealed, minority carrier lifetime 7−131659
Si:B,O,C wafers, O precipitation, preannealing and impurity conc. effects 7−98477
Si:B crystalline and polycrystalline films, piezoresistive props. 7−85539
Si:B detectors, oxide charge state compensation 7−74340
Si:B epitaxial layers, doping suppression in presence of HCl 7−69719
Si:B films, low pressure CVD grown, microstructure 7−106434
Si:B implanted laser-annealed layer, impurity distrib. and unidirectional lattice contraction, dechannelling study 7−76253
Si:B ion-implanted resistors, 1/f noise temp. depend. meas. 7−143533
p-Si:B low temp. electron irrad. damage, defect production and annealing studies 7−84034
Si:B polycrystalline CVD films, ion implanted, B diffusion *(French)* 7−124601
Si:B polycrystalline films, heavily doped, elec. charactn. 7−131815
Si:B predamaged, preamorphised and cryst. wafers, implant diffusivity during rapid thermal annealing, enhancement factor determ. 7−84020
Si:B shallow p$^+$ junction fabrication using laser-induced melting doping technique 7−124299
Si:B surface amorphous layers, As implanted, SIMS crystallisation anal 7−117859
Si:B surfaces, dopant redistribution during vacuum annealing 7−98215
Si:B/Si:P bilayered crystals, free exciton capture 7−70203
Si:B-Ag(Al)(Ni), vacuum annealed surfaces, elect. props. 7−138004
Si:B-W, W CVD, reduction of Si p$^+$-n interfacial tunnel defects 7−138062
Si:B$^+$, ion implanted, residual deep-level defects after annealing, DLTS study *(Chinese)* 7−124916
Si:B$^+$ single crysts., disturbed surface layer, three-cryst. X-ray diffr. spectra study 7−124163
Si:B$^+$(BF_2^+) diffusion and elec. props. charactn. after rapid thermal annealing 7−86215
Si:B$^+$(P$^+$)(As$^+$), MeV implantation 7−111614
Si:BF_2 ion implantation and annealing, RBS, SIMS and NRA studies 7−76168
Si:BF_2-SiO_2, ion implantation, F behaviour with rapid thermal annealing 7−137383
Si:BF_2^+, ion implantation, rapid thermal annealing *(Chinese)* 7−131165
Si:BF_2^+ ion-implanted wafers, depth profiling with photoacoustic technique 7−83984
Si:BF_2^+ self-annealed implantation, electrical and structural characterisation 7−83989
Si:BF_2^+ thin films, microstructural defects and solid-phase epitaxy dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
Si:B(Al)(Ga)(In), heat treatment centres, EPR, resist. meas. 7−99568
Si:B(Al)(Ga)(In), O-rich, photoluminesc. studies 7−92733
Si:B(As), oxidation-enhanced diffusion, HCl effects 7−118163
Si:B(As) single cryst. and preamorphised wafers, implant activation and diffusion during rapid thermal annealing 7−86213
Si:B(As)(B,As), undoped and heavily doped, ion beam induced amorphisation 7−84043
Si:B(Ge)(Sn), pre-implantation amorphisation by group IV ion bombardment 7−76227
Si:B(P), dislocation loops, effect of free surface and interface on thermal annealing 7−142784
Si:B(P) amorphous films, bias effects on preparation in triode glow discharge 7−126028
Si:B(P)(Al), photolum. technique calibration, impurity conc., Fourier transform spectroscopy 7−85824
Si:B(P)(As)(Sb), impurity steady-state solubility 7−124312
Si:B(P)(Ga), MeV implants, range distrib. 7−111617
Si:Be, C, far IR absorption and near IR excitation spectroscopy of isoelectronic bound excitons 7−113200
Si:Be optical waveguide, emission from impurities 7−136516
a-Si:C, doping effects on defects, optical and electrophys. props 7−137380
Si:C, electron irrad., interstitial impurity diffusion coeff. determ., IR absorpt. meas., annealing effect 7−111971
Si:C, formation of SiC by implantation with negative ion implanter 7−67432
Si:C, impurity induced deep traps,. DLTS study 7−105460
Si:C, interstitials, electronic and vibr. IR absorption 7−99843
a-Si:C, N, H films, plasma deposited, struct. characterisation by gas evolution, IR absorpt. 7−143258
Si:C, O, electron irrad. damage effects, defect centres 7−137413
Si:C, O, fast neutron irradiated, behaviour of optically active C 7−113233
Si:C, O, impurity related deep level complexes, Xα cluster model calc 7−98904
Si:C, radiation damage levels 7−98144
Si:C, room-temperature electron irrad. damage 7−137414
Si:C, solar grade, high C impurity conc. determ., peak ratio method evaluation 7−91624
Si:C, subthreshold electron irrad. damage, defect complexes, photolum study 7−98257
Si:C,O, defect identification by photolum. 7−125804
Si:C,O, electron irrad., divacancy accumulation kinetics, impurity effect IR absorpt. spectra 7−104837

licon continued
Si:C,O, microsegregation, scanning Fourier transform IR spectroscopy 7−98216
Si:C,O, thermal donors, C-O defects 7−76820
Si:C,O,Fe precipitation of O and C, effect of Fe *(Chinese)* 7−105032
Si:C,O grown by Czochralski and crucibleless zone-melting methods, influence of impurities on swirl defects 7−91560
Si:C(Ge), impurity complex local electron density of states calcs. *(Russian)* 7−98929
Si:Cd, band gap Jahn-Teller distortions 7−118407
Si:Cd(In)(Xe), as-implanted lattice sites of dopants 7−98222
Si:Co, B(P), impurity solubility, diffusion and ion pairing at 700°C 7−111970
Si:Co, ion implant lattice sites 7−76167
Si:Co,P, impurity distrib. after P diffusion gettering, Mossbauer spectra study 7−111640
Si:Cu, electron irrad. defects-impurity interactions, thermal treatment, DLTS study 7−98913
Si:Cu, impurity levels, DLTS and photolum. studies 7−143396
Si:Cu,N, precipitation of N, rel. to etch pit formation 7−111901
Si:Cu(Ag)(Au), implanted impurity diffusion temp. depend. study 7−84397
Si:D, ion implanted Si, beam-induced annealing of defects 7−98275
a-Si:F films, deposition by flow discharge, magnetron and diode sputtering, NMR and IR studies 7−138333
Si:Fe, B, shallow acceptor impurity pairs, Xalpha calculations 7−98874
Si:Fe, B(Al), impurity-acceptor pair states, uniaxial stress DLTS meas. 7−112235
Si:Fe, intrinsic gettering 7−91627
Si:Fe, metastability of Fe acceptor pairs 7−98891
Si:Fe, spin polarised electronic struct., supercell full pot. linear APW calc. 7−98875
Si:Fe, surface analysis, reson. ionisation of sputtered atoms, TOF mass spectrometry 7−89298
a-Si:Fe films, ^{57}Fe impurity states, Mossbauer spectra 7−70677
Si:Ga, doped oxide Ga diffusion, open tube technique 7−137624
Si:Ga, growth mechanism and segregation, electron microscopy studies 7−131065
Si:Ga, ion implanted, high resolution spectral photocond. meas. 7−92220
Si:Ga, photolum. studies of Ga-related defects 7−99923
Si:Ga modulation-doped superlattices, solid phase epitaxial growth, sharp profiles and low temp. diffusion 7−142818
Si:Gd, press. induced dissociation of Gd precipitates, elec. resistivity meas. 7−143461
Si:Ge, Czochralski grown, effective segregation coeff. of Ge 7−111639
Si:Ge, S, H, IR spectral hole burning of S-H deep donors 7−136455
Si:Ge, struct. imperfection 7−98185
Si:Ge, thermal donor form. and breakdown, elec. resist. studies *(Russian)* 7−124906
Si:Ge,B, Ge impurity diffusion, B doping effects study 7−111966
Si:Ge solid solns., electron irrad. defect form. processes characts. 7−137406
Si:Ge$^+$, ion implanted, oxidation kinetics 7−144633
Si:Ge$^+$(As$^+$), ion implanted amorphous layers, rapid thermal annealing induced epitaxy 7−143259
a-Si:H, Al glow discharge films, optical and elec. props. 7−84584
Si:H, amorphous, glow discharge deposited films, Raman scatt. obs. of struct. changes and SRO 7−99957
Si:H, amorphous and amorphous microcrystalline mixed phases, ^{29}Si NMR 7−85448
Si:H, amorphous and cryst., temp. depend. optical absorption 7−99781
a-Si:H, amorphous superlattice, Raman scatt. 7−85697
a-Si:H, Ar dilution effect on optical and electrical props. *(Korean)* 7−85877
a-Si:H, Auger line shape anal. of $L_{23}VV$ peak 7−132385
Si:H, B(Al)(Ga), acceptor-H complexes, vibrational props., IR studies 7−91751
a-Si:H, band tails, entropy and equilib. defect conc. calcs. 7−124311
Si:H, bonding or antibonding position of H, covalent two-electron bond theory 7−117858
α-Si:H, carrier mobility-lifetime estimates from transient and steady-state photocond. meas. 7−118507
a-Si:H, charactn. by surface photovoltage and C-V meas. using liquid Schottky barriers *(Japanese)* 7−118528
a-Si:H, charge transfer from adsorbates to the bulk 7−99157
a-Si:H, const. photocurrent method, determ. of density of localised states 7−105493
Si:H, crystalline, effect of H on passive dopants 7−84734
a-Si:H, dangling bond centres, hyperfine interactions, ENDOR spectra study 7−77427
a-Si:H, dangling bonds and metastability, expts. and models, review *(French)* 7−131592
a-Si:H, dangling bonds associated with H incorporation, ENDOR study 7−118892
a-Si:H, dangling-bond recombination and photoconductivity 7−84981
a-Si:H, deep localised states of D-centres originating from dangling bonds 7−84772
a-Si:H, defects, ab initio calcs. 7−98114
a-Si:H, density of localised electron states, determ. from transient photocurrent 7−98934
a-Si:H, density of midgap defect states, appl. in transport properties determ. 7−124932
a-Si:H, density of states determ. 7−70157
Si:H, diffusion of H, unintentional hydrogenation during ion beam processing, mechanism 7−69986
a-Si:H, doped, photoinduced change in localised state density near cond. band 7−137862
a-Si:H, doped, thermally induced instabilities and Staebler-Wronski effect 7−143506
a-Si:H, doped and undoped, density of states 7−84623
a-Si:H, dual-beam-modulated photocond., response-time and drift-mobility meas. 7−112399
Si:H, e, n, and γ irrad. defects props., DLTS and FTIR spectroscopy study 7−112239
Si:H, EPR of Si−H centres 7−138325
a-Si:H, EXAFS, review 7−77690
a-Si:H, elec., optical and doping props. 7−76953
a-Si:H, electron capture, ballistic and diffusive processes; impurity content depend. 7−118506
Si:H, electron irrad., mol. vibrs., IR studies 7−106173

silicon continued
Si:H, electron irrad.-induced defects, thermal pretreatment effects 7−98244
a-Si:H, electron relaxation, ICTS and DLTS studies 7−98933
a-Si:H, electronic struct., tight binding calcs. 7−84624
a-Si:H, electronic struct. 7−84771
a-Si:H, electronic struct. calcs. 7−84652
a-Si:H, Fe films, ^{57}Fe impurity states, Mossbauer spectra 7−70677
a-Si:H, field effect problems with I-V meas. 7−84887
a-Si:H, film, impurities and defects, statistical theory *(Chinese)* 7−91621
a-Si:H, film growth, glow discharge method 7−71069
a-Si:H, flat band voltage determ. from temperature dependent field effect conductance 7−85142
a-Si:H, gap state density distrib., light-induced effects 7−137790
a-Si:H, gap states distribution, photoconductivity meas. 7−84625
a-Si:H, glow discharge deposition, equilib. temp., related defects 7−131466
a-Si:H, glow discharge SiH_4 decomposition, reactive species incorporation 7−138683
a-Si:H, growth processes in plasma CVD *(Japanese)* 7−118317
Si:H, γ-ray and neutron irradiated, IR absorption bands 7−92709
a-Si:H, H depth profiling, reliability and detection limit using Ar ion elastic recoil meas. 7−137388
a-Si:H, IR stimulated current 7−85004
Si:H, impurity electronic struct. 7−76808
a-Si:H, impurity profiling by resonance nuclear reactions 7−86728
Si:H, interstitial H diffusion and dopant passivation reactions 7−112240
a-Si:H, kinetics of photostructural transformations 7−118533
a-Si:H, laser crystallisation, temp. field control model *(Chinese)* 7−98725
a-Si:H, laser induced Al diffusion, photovoltaic device appls. 7−137622
a-Si:H, level of dangling bond centres 7−76827
Si:H, Li, interstitial and dangling bond defects, Haldane-Anderson model calcs. 7−98141
a-Si:H, light induced defects, thermal and laser annealing 7−84017
A-Si:H, light induced effects on charge carrier generation and decay 7−143503
a-Si:H, light induced metastable defects, ODMR meas. at 2 K 7−143934
a-Si:H, light soaked, ^{1}H ENDOR EPR spectra obs. 7−85485
a-Si:H, light-induced creation of defects, influence of mech. stress, photocond. study 7−118539
a-Si:H, light-induced deep defect generation 7−143409
a-Si:H, light-induced defect creation, examination using junction-capacitance methods 7−118416
a-Si:H, light-induced defects, electrorefl. study 7−144013
a-Si:H, light-induced metastable changes in donor and acceptor levels 7−143407
a-Si:H, low temp. phenomena mechanisms 7−118170
a-Si:H, Meyer-Neldel rule, statistical Fermi level shift, calc. 7−84632
a-Si:H, Meyer-Neldel rule examined by temperature-modulated space-charge-limited current 7−84906
a-Si:H, microscopic mobility 7−131641
a-Si:H, mol. relax. versus orientational ordering of H_2 7−137359
a-Si:H, n-type, transient photoconductivity 7−118538
α-Si:H, near-boundary fields, structural characts. and props. 7−91453
Si:H, neutron irradiated, new infrared absorp. bands 7−132279
a-Si:H, optical absorption edge, photoacoustic spectroscopy study 7−125669
a-Si:H, p-i-n devices electron mobility, single and double injection 7−85056
a-Si:H, P(N) films, photoinduced absorption and conductivity 7−99774
a-Si:H, persistent photoconductivity, thermal equilibration model 7−131713
a-Si:H, photocapacitance characts., light-induced changes 7−143504
a-Si:H, photoconductivity, absorpt. in defective region 7−131703
a-Si:H, photodegradation under long-time repeated light exposure 7−143505
a-Si:H, photofield-effect current, illumination flux depend. 7−84980
a-Si:H, photoinduced degradation of device behaviour, elimination, solar cell appls. 7−131716
a-Si:H, photovoltaic advanced R&D, conf., Denver, CO, USA (May 1986) 7−128184
a-Si:H, plasma deposited, structural changes after annealing *(Japanese)* 7−84583
a-Si:H, positron lifetime meas. interpretation 7−132371
a-Si:H, positron lifetimes, comment 7−99968
a-Si:H, prep. by cross homogeneous CVD technique 7−86049
Si:H, profiling using ^{1}H(^{19}F, αγ) reaction *(Chinese)* 7−111633
a-Si:H, recombination mechanisms of photogenerated carriers 7−84976
a-Si:H, recombination-enhanced defect formation, annealing 7−131593
a-Si:H, space charge limited currents under light illumination 7−84979
α-Si:H, sputtered, photo-excited carrier recombination 7−137957
a-Si:H, Staebler-Wronski effect, H motion 7−131715
a-Si:H, statistical shift of Fermi energy, prefactor of DC conductivity 7−131530
a-Si:H, steady state photoconductivity, sensitization and recombination centres 7−105606
a-Si:H, structural and electronic stretched-exponential relax., H dispersive diffusion effects 7−143106
a-Si:H, sub-band-gap absorption coeff. and density of states, constant photocond. method 7−105614
a-Si:H, sub-bandgap optical absorpt. and light-induced defects 7−144086
a-Si:H, substitutional doping, EPR, optical absorption and transport meas. 7−92111
Si:H, thermally induced deep levels, H passivation 7−104807
a-Si:H, thin film deposition, plasma excitation freq. influence 7−131496
a-Si:H, transient photocurrent meas., weak electron-multiphonon coupling 7−84698
a-Si:H, trapped nonequilibrium carriers, two-beam photoconductivity 7−84774
a-Si:H, triplet exciton recombination, ODMR 7−84681
Si:H, vibr. props. of H, calc. 7−84157
a-Si:H, weak bond-dangling bond conversion 7−124104
a-Si:H,B, dangling bond defect occupancy, ESR, sub-bandgap absorpt. and transport meas. 7−84779
a-Si:H,B, heavily doped, anomalous substrate and annealing temp. depend., appl. for solar cells 7−76998
a-Si:H,BL(P) thin films, deposition by microwave electron-cyclotron-resonance plasma discharge, elec. and optical props. 7−77845
a-Si:H,B(P)-(quinone-hydroquinone), liquid Schottky barrier, charact. 7−77039

silicon continued
a-Si:H,C(N) films, glow discharge deposited, composition, thermal stability 7−131501
a-Si:H,Cl films, struct. order 7−84568
a-Si:H,Cl films, thermal annealing and hydrogenation, effect on optical and electrical props. 7−85154
Si:H,F thin films, hole transport 7−99226
a-Si:H,F-$SiGe_x$:H,F modulated structs., material design, photoconductivity 7−132494
Si:H,F-$SiGe_x$:H,F stacked amorphous multilayers, prep. and props. *(Japanese)* 7−118530
a-Si:H,O_2 reactively sputtered, electron transport 7−99058
a-Si:H,O^+ films, mobility gap defect states obs. 7−112248
a-Si:H,P, doped and undoped, steady-state transport under nonequilibrium conditions 7−84977
a-Si:H,P, drift mobility of steady-state photocarriers 7−137986
a-Si:H,P, energy levels of dangling bond centres, photocapacitance transient spectroscopy 7−131589
Si:H,P, heavily doped films, microcrystallisation 7−126010
a-Si:H,P, high temp. drift mobility and cond. meas. 7−143469
a-Si:H,P, photo-CVD grown, doping-induced defects 7−124928
a-Si:H,P films, elec. resist. thickness depend., admittance meas. on Schottky diodes 7−84873
a-Si:H,P plasma enhanced CVD films, elec. props., RTA effects 7−131816
a-Si:H,P thin films, low energy ion doping technique 7−124342
a-Si:H,P(As), thermally and optically induced metastabilities, EPR obs. 7−124931
a-Si:H,Sn(Fe)(Pt)(Pd) films, impurity diffusion studies 7−84392
Si:H amorphous layer epitaxial recrystallisation and regrowth during furnace annealing 7−83820
Si:H amorphous thin-film solar cell production by CVD 7−113424
a-Si:H and a a-Si:H,P, light-induced changes, ENDOR-detected ESR study 7−143928
a-Si:H and a-Si, sputtered films, DC conductivity, change with ambient conditions 7−92318
a-Si:H based single and multilayers, persistent photoconductivity 7−131712
a-Si:H CVD initial transient phenomena, effect on device props. 7−144294
a-Si:H doping, review 7−142811
a-Si:H doping modulated superlattices, persistent photocond., field enhanced cond. obs. 7−70400
a-Si:H doping superlattice films, junction capacitance studies 7−131765
a-Si:H film, transient phototransport mechanism study 7−92222
a-Si:H film clad for multilayer waveguide polariser 7−110574
a-Si:H film growth, gas and surface processes 7−132491
a-Si:H film optical constants in amorphous semiconductor multilayers 7−125831
a-Si:H films, activation energy of dark conductivity 7−99232
Si:H films, amorphous and polycrystalline, optical gaps, 4 to 973 K 7−125680
Si:H films, amorphous and microcryst., photoinduced density of states variation, DLTS study 7−143408
a-Si:H films, asymmetric lineshape of dangling bond ESR spectrum 7−92503
a-Si:H films, catalytic CVD growth 7−71059
a-Si:H films, coaxial-line-type microwave plasma CVD growth *(Japanese)* 7−71079
a-Si:H films, density of states and photoconductivity 7−84629
a-Si:H films, drift mobility, acoustoelectric meas. 7−105627
a-Si:H films, ESR, sputter deposition rate depend. 7−85433
a-Si:H films, electron cyclotron resonance microwave plasma CVD, photodiode appl. 7−86050
a-Si:H films, evaporated, elec. props., hydrogenation effects 7−70360
a-Si:H films, glow-discharge deposited, frequency-dependent conductivity 7−76952
a-Si:H films, growth in inductive coupling glow discharge reactor 7−113416
α-Si:H films, ion implanted with Cr(Co)(Ni)(Ar), photoconductivity and optical props. 7−85002
a-Si:H films, laser induced CVD, photovoltaic devices and material props. 7−132492
a-Si:H films, light-induced degradation and thermal recovery, rate equations 7−143513
a-Si:H films, low temp. cond. and Staebler-Wronski effect *(Chinese)* 7−105555
a-Si:H films, low-energy photolum. peak 7−85790
a-Si:H films, microwave electron-cyclotron-resonance plasma CVD 7−100104
a-Si:H films, microwave-excited plasma CVD from SiH_4 7−144302
a-Si:H films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7−105641
a-Si:H films, optical and elec. props., film thickness effects 7−106133
a-Si:H films, photo-CVD, surface reaction and recombination of SiH_3 radical. 7−71041
a-Si:H films, photocond. degradation and annealing characts. 7−143512
α-Si:H films, photoconductivity, kinetics of broken bond formation 7−143508
a-Si:H films, plasma deposited, electronic struct. 7−76747
a-Si:H films, positron annihilation, annealing effect study 7−106304
a-Si:H films, positron-lifetime studies 7−132373
α-Si:H films, prep. by DC magnetron sputtering technique 7−86023
a-Si:H films, RF glow discharge deposited, optical props. 7−119163
a-Si:H films, RF glow-discharge deposition, ellipsometry study 7−113404
a-Si:H films, reversible struct. changes, prolonged illumination, annealing 7−98734
a-Si:H films, role of H, IR spectral anal. 7−98730
a-Si:H films, structural disorder, Raman scatt. investig. 7−118993
a-Si:H films, surface and bulk defect densities, photothermal and photoconductive determ. 7−105492
a-Si:H films, thickness, homogeneity and optical props. 7−70923
a-Si:H films, time-of-flight signal, effects of sample capacitance and light intensity 7−84978
a-Si:H glow discharge films, electron transport, source gas species depend. 7−99065
a-Si:H image sensors, physical props. 7−84983
a-Si:H layers, H depth profiles and impurity contents, elastic recoil detection and RBS 7−83681
a-Si:H layers, transient photocurrents, effect of morphology 7−84982
a-Si:H MIS structures, field effect study 7−85115

silicon continued
Si:H multijunction photovoltaic module research 7−133099
a-Si:H multijunction solar cells, stability and performance 7−144824
a-Si:H natural oxidation kinetics 7−126344
a-Si:H nipi doping superlattices, persistent photoconductivity, carrier recomb. kinetics 7−131714
a-Si:H optical confinement-type solar cell using SnO_2 transparent electrode 7−70110
a-Si:H p-i-n devices, kinetics of light-induced defects, effects of drift carrier transport 7−144821
a-Si:H p-i-n solar cells, effect of band tails on electric field, determ 7−133109
a-Si:H p-i-n solar cells, light soaking behaviour 7−144831
a-Si:H p-i-n solar cells, O-contaminated, light-induced degradation 7−144829
a-Si:H p-i-n solar cells, perform improvement 7−133094
a-Si:H p-i-n solar cells, photo-CVD prep., light-induced degradation 7−144828
a-Si:H photoreceptor film, dark discharge props. study 7−143647
a-Si:H photoreceptors, a-C:H protective coatings 7−97110
a-Si:H photosensitive devices, DC magnetron sputtering, photoelectric props. 7−84984
a-Si:H plasma deposited films, thermal expansion and elastic props 7−91846
a-Si:H Schottky diodes, midgap injection-induced optical absorption modulation spectra 7−118989
Si:H single crysts., hydrogenation-induced defects studies 7−111542
a-Si:H solar cells, continuous-mode fabrication on polyimide substrates 7−133100
a-Si:H solar cells, degradation, SCL current diode model 7−126599
a-Si:H solar cells, deposition rate, effects of discharge parameters from pure SiH_4 plasma 7−119170
a-Si:H solar cells, failure anal. 7−100735
a-Si:H solar cells, high efficiency, light induced degradation and struct 7−144823
a-Si:H solar cells, I-V characteristics 7−144837
a-Si:H solar cells, improvements in disilane plasma deposition 7−133102
a-Si:H solar cells, optimal design *(Chinese)* 7−78629
a-Si:H solar cells, prep. by Hg sensitised photo-CVD of disilane 7−133101
a-Si:H solar cells, reversible light-induced changes 7−144820
a-Si:H solar cells, technical progress review 7−78637
a-Si:H solar cells, thermal degradation by dopant diffusion 7−114111
a-Si:H solar cells and modules, long term stability 7−133095
a-Si:H solar cells using metal substrate 7−119647
a-Si:H sputter deposited films, annealed, H conc. and motion, depth profiling 7−131475
a-Si:H sputtered films, metastable defect generation by light soaking and electron irrad. 7−142837
a-Si:H thin film growth, Monte Carlo simulations 7−92027
a-Si:H thin film surface cell structs., band bending, optical, elec. and photoelec. props. 7−131801
a-Si:H thin films, diffusion lengths, surface photovoltage studies 7−118500
a-Si:H thin films, sub-band gap absorption, optically induced changes 7−92762
a-Si:H:F thin films, glow discharge deposition from fluorinated silanes characterisation 7−132493
a-Si:H/Si amorphous-cryst. heterojunction, C-V eqns. at low freq 7−105695
Si:H_2^+, B(P)(As) LPCVD coatings, polycryst., implanted, resist. and grain boundary chem. 7−143649
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, persistent photoconductivity, doping effects 7−77003
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, undoped, persistent photoconductivity 7−84968
a-Si:H/a-$Si_{1-x}N_x$:H superlattices and a-$Si_{1-x}N_x$:H films, electron-hole recombination processes 7−70905
a-Si:H/a-SiN_x:H amorphous superlattice films, photoacoustic spectra 7−85764
a-Si:H/a-SiN_x:H multilayer films, plasma deposition, persistent photoconductivity 7−76999
a-Si:H/a-SiN_x:H multilayer and single layer thin films, small angle X-ray diffr. study *(Chinese)* 7−118288
a-Si:H/a-SiN_x:H multilayer structures, steady-state photomodulation spectroscopy 7−118592
a-Si:H/a-SiO_x:H microporous superlattices, confinement and fluoresc. of aromatic mols. 7−122609
a-Si:H/c-Si heterojunction, optoelectrical props., imaging device appl 7−112456
a-Si:H/p-Si junctions, dark current and spectral response 7−77086
a-Si:H-Al film, low temp. crystallisation, Auger, X-ray diffraction 7−143250
a-Si:H-Al interface, energy band struct., voltage depend. internal photoemission study 7−85942
a-Si:H-Au, electronic density of states near mid-gap of a-Si:H 7−143310
a-Si:H-Au, Schottky barriers, barrier height temp. dependence 7−125075
Si:H-C:H, amorphous, sputtered multilayers, interface defects 7−137728
Si:H-$CuInSe_2$, solar cells, thin film, perform. aspects 7−126618
a-Si:H-Ge:H superlattices, band edge alignment, quantum size effects 7−131764
Si:H-Ge:H/Pt Schottky barrier with amorphous superlattice, junction props. 7−70378
a-Si:H-Pt, Schottky diode, photoelectric characteristics 7−85048
a-Si:H-Si p-n junction, built-in pot., interface pot., and depletion widths 7−77087
a-Si:H-Si_3N_4:H double barrier structs., resonant tunnelling through quantised states 7−131800
a-Si:H-Si_3N_4:H double-barrier structures, reson. tunnelling 7−118593
Si:H-SiGe:H solar cells, thin film, perform. aspects 7−126618
Si:H-SiN_x:H, amorphous superlattices, phonon stop bands 7−124673
Si:H^+, defect state annealing, DLTS study 7−105483
Si:H^+, high-energy proton irradiated, energy deposition 7−117991
Si:H^+, ion implantation induced damage 7−124349
a-Si:H-a-SiC:H solar cells, effects of C profiles at p-i interface 7−78636
a-Si:H-a-SiN_x:H layered structures, persistent photocond., internal stress effects 7−105693
a-Si:H-a-SiN_x:H multilayers, carrier transport, picosecond time-of-flight studies 7−138034
a-Si:H-metal contacts, current transport mechanisms 7−85106
a-Si:H(H,P) films, optical and electrical props. 7−85871

silicon continued
Si:He, He bubble desorption/permeation, void production mechanisms 7−117917
Si:He crystals, He ion channeling, ranges and depth distributions 7−111702
Si:He^+, ion implantation induced damage structure 7−76165
Si:He(Ne)(Ar)(Kr)(Xe), implanted, photoluminesc. defects, uniaxial stress study 7−99932
Si:In, As(P)(Sb), acceptor-donor atom pair form., PAC study 7−113042
Si:In, laser annealed, vacancy interaction with In 7−117920
Si:In, lattice defects, PAC study 7−117942
Si:In, Sb, acceptor-donor pair interactions, PAC study 7−113043
Si:In,P, defect-impurity interactions, PAC technique meas. 7−76199
Si:In MBE growth, accelerated-ion beam doping using low energy In ion source 7−86033
Si:K, impurity diffusion, conductivity and distrib. studies 7−112336
Si:$Kr^+(P^+)$, hot implant induced hexagonal phase 7−76166
Si:Li, correlations of lattice vibrations 7−142920
Si:M, M=transition metal, deep impurity states, calc. *(Japanese)* 7−118414
a-Si:Mn, localised states spectrum of Mn impurity, Coulomb gap collapse 7−84773
Si:N, defects related to N ion implantation 7−98204
Si:N, implantation producing SOI struct., microstruct. study 7−83997
Si:N, implanted, photoluminesc. spectra 7−92712
Si:N, impurity-point defect complexes, optical absorpt. studies 7−132305
Si:N, O, substitutional impurities, thermal annealing, EPR studies 7−98186
Si:N, single crystals, defects related to N implantation 7−137839
Si:N, substitutional impurity charge state, EPR study, effects of additional dopants 7−105458
Si:N,C, photolum. study of defects, N-C interactions 7−125794
Si:N float zone wafers, mechanical props. and CCD device performance, N conc. and state depend. 7−69809
Si:N^-, pseudo-Jahn-Teller instability 7−84784
Si:N^+, irrad.-induced disorder depth profiles, He^+ Rutherford backscatt. and channelling meas. 7−117987
Si:Na, impurity content determ. by neutron activation anal. *(Russian)* 7−100675
Si:Nd-SiO_2 interface, elec. props. 7−99209
Si:Nd-SiO_2 interface, negative elec. effects 7−125137
Si:Ni, doping props. *(German)* 7−76817
Si:Ni, impurity precipitates, press. induced changes, elec. resistivity meas. 7−143462
Si:Ni, Ni-related deep levels, combined Hall effect and DLTS meas. 7−70247
Si:O, annealed, defect centres, microwave cond., inverted EPR signal obs. 7−99569
Si:O, C, impurity interaction with multiphonon IR absorpt. bands at low temps. 7−113231
Si:O, Czochralski grown, O-related defect generation 7−124315
Si:O, defects produced by O^+ implantation, EPR study 7−99577
Si:O, elec. resistivity, O precipitation effects 7−112326
Si:O, enhanced impurity diffusion at 500°C, SIMS study 7−98582
Si:O, enhanced O diffusion, stress-induced dichroism studies 7−98581
Si:O, Fe(Cr)(Pt), transition metal solubility, O precipitate effects 7−98476
Si:O, Ge, vibr. absorpt. spectra 7−99891
Si:O, H, B, substitutional off-centre and small aggregate defects, electronic struct. 7−98870
Si:O, impurity conc. meas. using IR absorpt. 7−84007
Si:O, impurity vibrations, IR spectrum 7−113175
Si:O, interstitial depletion during annealing, thermal donor model calcs. 7−131141
Si:O, interstitial O conc. by IR method, influence of back surface roughness 7−113209
Si:O, interstitial O vibr. modes, IR absorption spectra studies 7−91750
Si:O, ion implanted, defects, EPR spectra 7−125537
Si:O, ion implanted, PAC study., EFG-surface charge relationship 7−118905
Si:O, ion implanted wafers, annealing stacking faults form., SiO_2 precipitates dissolution 7−111587
Si:O, ion implanted with O isotopes, IR absorption studies 7−98203
Si:O, metal impurity surface segregation, O effects 7−124528
Si:O, new donors and n-type cond., bulk/precipitate inversion layer effects 7−98908
Si:O, new thermal donors form., photolum. and EPR studies 7−98909
Si:O, O implantation, internal gettering, carrier lifetime 7−84041
Si:O, O-induced defects, negative EBIC contrast 7−69694
Si:O, O-vacancy complex, electronic struct., ENDOR studies 7−98903
Si:O, oxide precipitates in ion-implanted Si, morphologies, TEM study 7−98221
Si:O, P(B), O-related defects, doping and annealing effects 7−98227
Si:O, precipitation behaviour and control 7−84298
Si:O, precipitation of O and O related donor formation, review 7−124530
Si:O, pseudo-Jahn-Teller instability 7−84784
Si:O, SIMOX implantation, layer thicknesses 7−98208
Si:O, SiO_2 precipitates, electron microdiffraction studies 7−118102
Si:O, thermal donors, ^{17}O ENDOR study 7−98912
Si:O, thermal donors, generation kinetics at 430°C 7−111638
Si:O,C, Czochralski-grown, donor formation 7−84004
Si:O,C, heat treated, deep level defects, DLTS studies 7−105485
Si:O,C, inhomogeneous thermal donor distrib., photolum. and Hall effect meas. 7−98907
Si:O,C, point defects influence on intrinsic gettering 7−111590
Si:O,H, O-related thermal donor clusters, H passivation 7−104767
Si:O (100), secondary ion emission, dynamical charge transfer processes 7−125902
Si:O clusters, charge transfer in secondary ion emission, tight binding model 7−113336
Si:O films, ion implanted and rapid thermal annealed, microstruct. studies 7−105060
Si:O light induced mobility transition, photo-Hall effect meas. 7−112409
p-Si:O wafers, AC surface photovoltage, saturation due to photocapacitances 7−99123
Si:O wafers, precipitation testing 7−84299
Si:O/Al system, electron diffusion length improvement by gettering 7−125012
Si:OC, C_i-O_i complex, electrical activity 7−131579
Si:P, compensation tuning study of metal-insulator transition 7−143352
Si:P, coupled exciton tunnel dissociation in elec. field 7−143364
silicon continued
Si:P, defect interactions during P diffusion, model calcs. 7−84011
Si:P, electrically active defect profiles, photoelectrochem. method 7−137360
Si:P, electron irrad. defect annealing, IR absorpt. spectra study 7−98256
Si:P, γ-irradiated, carrier mobility and density 7−70304
Si:P, high energy implantation, electronic stopping and range profile calcs. 7−76182
Si:P, implantation effect on defect anneal kinetics 7−117951
Si:P, impurity-defect reactions, DLT study 7−98915
Si:P, ion implantation during MBE growth 7−142809
Si:P, ion implanted, lattice defects study 7−98182
Si:P, ion-implanted, impurity-defect complexes, obs. by perturbed angular correlation method 7−98228
n-Si:P, low temp. electron irrad. damage, annealing study 7−84035
Si:P, mag. susceptibility across the metal-insulator transition 7−112734
Si:P, n-type, type-1 thermal donor, ESR study, electron irradiation 7−106022
Si:P, n-type , Fermi level shift, conduction inversion, radiation effects 7−143393
Si:P, point defect generation during P diffusion, conc. above solid solubility 7−142766
Si:P, polycrystalline films, ion implanted and laser annealed, elec. props. 7−85146
Si:P, positron lifetime meas., thermal stability of P-vacancy pairs 7−70935
Si:P, proton stimulated diffusion of P implants 7−131364
Si:P, RAD growth, doping induced dislocations, TEM obs. *(French)* 7−111560
Si:P, SHG, total freq. with refl., cryst. struct. randomisation 7−90713
Si:P, S(Se)(Te), chalcogen double donors, hydrogen neutralisation 7−131572
Si:P, selective optical electron pumping, intervalley scatt. at impurity centres 7−137843
Si:P, shallow donors, influence of quenching 7−71328
Si:P, shallow levels, virtual level field ionisation spectroscopy 7−143402
Si:P, spin dephasing time due to weak scatt. processes 7−105932
Si:P, spin dynamics across the metal-insulator transition 7−112944
Si:P, spin localization, ^{31}P NMR studies 7−137864
Si:P, thermal donor defects, passivation by H_2 plasma exposure 7−70234
Si:P, transmutation doped, minority carrier lifetime, annealing effects 7−84923
Si:P,As, impurity-bound exciton recomb., radiative decay obs. 7−98819
Si:P,As double donor system, metal-insulator transition, Mott-Hubbard picture 7−137799
Si:P,As(Sb), double donors, metal-nonmetal transition 7−105403
Si:P,B, B diffusion in inert and oxidising ambients 7−105138
Si:P,C,H, polycrystalline, impurity-defect interactions, overview 7−124321
a-Si:P,H, hole trap transport parameters charactn. 7−92195
Si:P bolometer, heat pulse detection 7−73352
Si:P CVD layers, lateral solid-phase epitaxial growth by ion implantation 7−106401
Si:P epitaxial layers, laws of doping *(Chinese)* 7−131492
a-Si:P evaporated films, ion implanted, localised defect density of states determ., dose depend. 7−76829
Si:P film, simultaneous deposition and doping by LPCVD, model of growth rate nonuniformity 7−132484
Si:P films, CVD, crystallographic and elec. props. charactn. 7−138676
Si:P films, prep. by low press. CVD of PH_3 and Si_2H_6 7−100114
Si:P ion implanted polycryst. solar cells, comparison of excimer laser and thermal annealing 7−71618
Si:P nanocrystalline thin films, dark elec. cond. meas., depend. on structural props. and substrate bias 7−99229
Si:P p^+nn^+ structs., investigation of impurity states by tunnel spectroscopy 7−143566
Si:P single crysts., high energy ion implantation and annealing effects study 7−76169
Si:P^+, ion implanted and layer annealed, defect evolution, light scatt. study 7−142831
Si:P^+ implantation self annealing and ion beam assisted recrystn. studies 7−84053
Si:$P^+(Si^+)$ amorphous layer, ion assisted epitaxial regrowth, orientation and doping effects study 7−84052
Si:P(As) heavily doped semiconds., low temp. cond., bent band model calcs. 7−124992
Si:P(As)/Ti interface disilicide form., growth rate dopant conc. depend., depth profiling, sheet resist. and TEM studies 7−118173
Si:P(As)(Sb), implanted impurity distrib. after pulsed electron annealing 7−131169
Si:P(B) polycryst. films, conductivity and Hall meas., intergranular pot. fluctuation effects 7−143648
Si:Pb, implanted, IR transient annealing, lattice disorder and impurity distrib. *(Chinese)* 7−104821
Si:Pd, defect energy levels identification *(Chinese)* 7−105451
Si:Pd, energy levels identification by DLTS 7−98899
Si:Pd, energy levels identification *(Chinese)* 7−105453
Si:Pd (Pt) (Au), impurity energy levels, uniaxial stress and hydrostatic press. depend. 7−105474
Si:Pt, deep levels, electron irrad. effects *(Chinese)* 7−76807
Si:Pt, donor centres, photoionisation cross-sections 7−112230
Si:Pt, p^+n diodes, emission rate, trap conc., accurate determ. methods 7−118411
Si:Pt(Au), diffusion mechanisms and thermal equilib. defects, review 7−98568
Si:S, pseudo-Jahn-Teller instability 7−84784
Si:S,Se,Te, electronic struct. of mixed chalcogenide pairs *(Chinese)* 7−118401
Si:S(Se)(Te), defect pairing, electronic struct. and total energy calcs. 7−83982
Si:S(Se)(Zn), deep level defects, optical cross sections, tight binding calcs. 7−99894
Si:Sb, implanted polycrystalline films, effect of heat treatment on elec. resistivity 7−106639
Si:Sb, metal-nonmetal transition, I-V characteristics 7−99136
Si:Sb modulation-doped superlattices, solid phase epitaxial growth, sharp profiles and low temp. diffusion 7−142818
Si:Sb Schottky barriers and shallow p-n junctions, form. by Sb recoil implantation, phys. and elec. props., annealing temp. effect 7−112432
Si:Si, thermal struct. characterisation using photothermal microscopy 7−121115
Si:Sn, B, ion implantation and annealing, shallow junction form. 7−76173

silicon continued
Si:Sn, O, C, irradiated, optical band at 3942 cm^{-1} 7−99842
Si:Te, impurity diffusion and penetration profile meas. 7−111967
Si:Te, Se, S, double donors, IR absorption, Hall effect and DLTS studies 7−98905
Si:Te (111), doping under pulsed laser irradiation, He^+ backscattering 7−91620
Si:transition metals, interstitial 3d impurities, ab initio cluster studies 7−105475
Si:Xe, impurity bubbles press., lattice parameters and solid-fluid phase transforms. 7−84018
Si:Zn, deep level spectrum, influence of γ-irradiation 7−112222
Si:Zn, deep levels, influence of uniaxial press. on transient capacitance spectroscopy 7−118404
Si:Zn, implanted, impurity depth distrib., radiation damage, diffusion, RBS, channelling anal. *(Chinese)* 7−124344
Si:Zn(Pt), defect-dopant reactions in surface regions *(German)* 7−104808
n-Si/acetonitrile electrolyte interface, surface states, optical absorpt. 7−105701
n-Si/Al contacts, elec. characteristics, Ar^+ ion bombardment effects 7−112488
a-Si/$AlSi_x$/a-Si, silicide formation 7−92788
Si/Au/Ag system, interactions, Auger spectra studies 7−112109
Si/C sheet composite materials shaped cryst. growth technique 7−92851
Si/CaF_2 interface, bonding and struct., photoemission studies 7−105295
Si/Co interface system, ion beam mixing, layer struct. and composition 7−76640
Si/$CoSi_2$ epitaxial structures, MBE, Si overgrowth, permeable base transistor appl. 7−77818
Si/Cr bilayers, Cr^+ ion irrad., silicide form., annealing effects 7−76237
Si/Cr interface, ion-induced reactions, ion channelling studies 7−78545
Si/Cr interface, silicide form. on annealing, electronic and struct. props. 7−84541
Si/Fe interfaces, ion beam mixing, Mossbauer spectra studies 7−76238
Si/FeC compositionally modulated amorphous alloys, mag. and diffusional props. 7−85358
Si/Ge heterostructures, growth, initial stages of interface formation 7−84552
p-Si/ITO solar cells using conductive polymer 7−86783
Si/$In_{2-x}Sn_xO_{3-y}$ photovoltaic junction solar cells 7−119664
α-Si/metal contact characts., generation-recomb. current anal. *(Russian)* 7−77093
Si/metal interface reactions, high energy ion scatt./channelling studies 7−113998
Si/metal systems, ion mixing, moving species 7−76502
Si/Mo interface, $MoSi_2$ form. by ion beam mixing 7−76239
p-Si/NH_3+KI/NH_3+K/Pt photoelectrochemical cell, supra-band-edge reaction 7−106912
Si/Ni thin films, stacking faults and F bubbles, dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
Si/Ni-Cr films, pulsed ion beam irradiation, silicide formation 7−104860
Si/Pd_2Si system, struct. props., scanning tunnelling microscopy and PES studies 7−76648
Si/Pt interface, heat treatment form., XPS investigation 7−131460
a-Si/Si (111) 7×7 interface, symmetry, X-ray diffr. studies 7−98721
Si/Si heterostructures, growth, initial stages of interface formation 7−84552
$Si/Si_{1-x}Ge_x$ heterojunctions, MBE, elec. characts., cond. band discontinuity 7−77071
Si/Si_3N_4, local bonding and electronic structure, EELS studies 7−99153
Si/Si_3N_4 buried layer system, N ion implantation form., beam current and dose depend. 7−83992
Si/SiGe strained layer superlattices, MBE, band offsets, vertical transport meas. 7−77070
Si/SiO_2, local bonding and electronic structure, EELS studies 7−99153
Si/SiO_2 interface, high-resolution TEM obs. 7−76632
Si/SiO_2 interface, in MOS struct., EPR obs. 7−112949
Si/SiO_2 interface of SiO_2 precipitates in Si, defects, EPR obs. 7−112954
Si/SiO_2 interface trap state props., EPR studies, overview 7−112948
Si/SiO_2/Ni multilayers, ion mixing, isotropic and anisotropic transport 7−76235
$Si/SiO_2/Si_xN_yO_z$/Al struct., varying-gap dielec., current transport and charge storage characts. *(Russian)* 7−112506
Si/SiO_x/Mo MOS VLSI, oxide form. at Mo/Si interface, contact resist. *(Japanese)* 7−78388
Si/Ti, iron beam mixing, thermal oxidation studies 7−78359
Si/Ti interface, TiSi silicide form. by ion beam mixing 7−76641
Si/VDF-TFE copolymer interface, corona injection, field coupling and induced inversion studies 7−105715
Si/ZnO layered piezoelec.-semicond. struct., acoustoelectronic bistability phenomena 7−112405
Si-Ag, O_2^+ bombardment, Ag redistribution, oxide formation 7−113329
Si-Ag, tailored microstructures for IR detection 7−132290
Si-Al, Schottky barrier formation using nozzle jet beam deposition 7−77802
Si-Al laser implanted structs., I-V and C-V characts. 7−99196
Si-AlN interface, AES, C-V characts. 7−70948
Si-Au, interface study, AuSi formation, ion transmission channeling 7−92011
Si-Au-M (M=Pt,Fe,Co,Mo,Ni), thin film reactions, selectively enhanced silicide formation 7−137629
Si-CdS p-n heterojunction struct. for 11% efficiency solar cell, fabrication and elec. characts. 7−100721
Si-Co interface form., struct., high resolution core level photoelectron spectra study 7−105297
Si-$CoSi_2$, MBE of $CoSi_2$, in situ TEM study 7−137731
Si-Cr Schottky barriers, forward bias current flow behaviour 7−85042
Si-F_2 chemistry, role of energetic ion bombardment in surface-reactive gas interactions 7−125898
Si-GaAs, MBE grown, photolum. microscopy 7−137735
Si-GaAs, MBE grown GaAs layers, dislocations effect of annealing 7−84535
Si-Ge multilayered structs., Bi ion range distributions 7−119085
Si-Ge strained-layer superlattice on Si(001), optical transitions, determ. 7−125098
Si-Ge ultrathin strained superlattices, new optical transitions, tight-binding calcs. 7−143592
Si-$Ge_{0.05}Si_{0.95}$ strained layer superlattice, local distortions, meas. by convergent beam electron diffr. 7−76630
a-Si-$Ge_{0.2}Si_{0.8}$, interfacial superstructure, synchrotron X-ray diffr. study 7−84545
silicon continued
Si-Ge_xSi_{1-x}, Raman scattering in Fibonacci superlattices 7−99186
Si-Ge_xSi_{1-x} strained-layer superlattices, folded acoustic phonons 7−70059
Si-GeSi strained layer superlattices, growth using limited reaction processing, struct., TEM, AES, RBS 7−118300
Si-GeSi strained layer superlattices, second order optical suscept., Pockels coeff. calcs. 7−118975
Si-He, quantitative He anal., sputtered neutral mass spectrometry 7−138570
Si-In_2O_3 heterojunctions, electron beam induced defects and interfacial reactions during annealing *(French)* 7−125117
a-Si-metal contact, space charge region, tunneling 7−125123
Si-metal interface form., review 7−112110
Si-Mo multilayer monochromator for the extreme UV 7−110543
a-Si-Nb electrode Josephson tunnel junctions, fabrication and props. 7−131904
Si-Ni interface effect on mag. behaviour of Ni films 7−118837
a-Si-Ni_xSi, silicide formation, TEM study 7−111974
Si-$NiSi_2$, evidence for Si diffusion, photoemission study 7−91901
Si-$NiSi_2$ interface, effects of Si surface defects on $NiSi_2$ orientation during deposition, LEED, AES studies 7−112095
Si-$NiSi_2$ interface, melting dynamics under pulsed laser irrad. 7−84219
Si-PLZT spatial light modulators, 1D, performance design and appls. 7−110554
Si-PbS heterojunction, intermediate layer I-V characts. 7−77064
Si-Pd interface, phase comp., Si Auger spectrum intensities meas. 7−106856
Si-Pd_2Si, submicron epitaxial islands, formation 7−76500
Si-Pt reaction, silicide formation, elec. meas. 7−99195
Si-$ReSi_2$, localised epitaxial growth of $ReSi_2$ on Si (111) and (001) 7−118302
Si-sapphire nonlinear waveguide structure, ultrafast optical switching 7−90784
Si-SeGe strained layer superlattices 7−85092
Si-$Si_{0.5}Ge_{0.5}$ superlattices, strain induced confinement 7−125090
Si-Si_3N_4, point defects, influence on LOCOS process 7−131143
Si-Si_3N_4 SoI structures, ion beam synthesis and lamp annealing 7−112099
Si-Si_3N_4-Si buried layer structures, ion beam synthesis 7−76164
Si-Si_3N_4-Si buried layer structures with rectangular profiles, ion beam synthesized 7−76635
$Si-Si_xGe_{1-x}$ strained layer interface, misfit dislocation struct. 7−143238
Si-SiN_x-Si structure formed by ion implantation, structural characterisation 7−76634
Si-SiO_2, defects in device oxides, soft X-ray damaged, EPR study 7−118860
Si-SiO_2, dioxide formation by rapid thermal oxidation of SiO 7−126329
Si-SiO_2, growth mechanisms, oxidation theories, book contrib. 7−106727
Si-SiO_2, hot carrier injection, book contrib. 7−105723
Si-SiO_2, interface states, charge pumping meas. method 7−118590
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, adlayers 7−105293
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, microvoids 7−105294
Si-SiO_2, interface trap production by low temp. thermal processing 7−143616
Si-SiO_2, MOS struct., photoinjection, potential barrier height 7−92303
Si-SiO_2, mol. adsorption of H_2O, ethanol and pentanol on SiO_2 7−76621
Si-SiO_2, oxide interface, serrations, protrusions, XPS study 7−138595
Si-SiO_2, plasma-grown, elec. props of oxide 7−126334
Si-SiO_2, refractive index meas., immersion ellipsometry 7−73403
Si-SiO_2, thermally grown, electron traps 7−112502
Si-SiO_2, ultrathin gate oxide formation, catalytic Si oxidation 7−119461
Si-SiO_2 amorphous multilayered structures, quantum dimensional effect 7−85126
Si-SiO_2 amorphous superlattices, phonon stop bands 7−124673
Si-SiO_2 complete system, surface avalanche method meas. 7−112507
Si-SiO_2 complete system, semicond. surface quality study 7−112508
Si-SiO_2 fast interface trap density change high-field stress, SOI 7−143619
Si-SiO_2 interface, appl. of low energy charged particle beams for Cl anal. 7−93411
Si-SiO_2 interface, carrier transport, book contrib. 7−85133
Si-SiO_2 interface, cycling of defects between trapped negative charge and interface states 7−99206
Si-SiO_2 interface, D_2 gas interactions, ion-beam study 7−124688
Si-SiO_2 interface, high temp. oxide decomp. 7−70090
Si-SiO_2 interface, irrad. prod. surface states, annealing 7−104856
Si-SiO_2 interface, lattice relax., electron self-trapping and transfer in SiO_2 7−118501
Si-SiO_2 interface, mechanical stresses 7−76585
Si-SiO_2 interface and Si, oxidation, HRTEM and ellipsometry studies 7−100459
Si-SiO_2 interface charactn., book contrib. 7−85132
Si-SiO_2 interface microstructure, observation and electronic props. 7−131461
Si-SiO_2 interface roughness evolution 7−112107
Si-SiO_2 interface state density and SiO_2 film charge due to Pt diffusion 7−112495
Si-SiO_2 interfaces in MIS structs., positive charge accumulation, high-field breakdown 7−77067
Si-SiO_2 MIS, gate currents and space charge under electron beam irrad. 7−70420
Si-SiO_2 MOS structures, degradation by Fowler-Nordheim tunnelling 7−99214
Si-SiO_2 metal structs., radiation damaged, interface trap peaks 7−125127
Si-SiO_2 SOI layers, formation by ion implantation, nondestructive characterisation 7−124742
Si-SiO_2 structs., local electrophys. props. of elec. active defects 7−143627
Si-SiO_2 structures, acoustoelectric conversion props., charge injection effect 7−105628
Si-SiO_2 structures, H^+ implantation, interface defects 7−125139
Si-SiO_2 structures, luminesc. spectral distrib., interference effect 7−92744
Si-SiO_2 structures, passivation and related instabilities, book 7−102026
Si-SiO_2 structures, pot. barrier meas., contactless method 7−143628
Si-SiO_2 structures, UV effects of Ar plasma 7−105717
Si-SiO_2 system, contact pot. and surface photovoltage kinetics, Kelvin method 7−99207
Si-SiO_2 system, interface states 7−112509
Si-SiO_2 system, ozone cleaning 7−113798
Si-SiO_2:As, As depth profiling at interface, SIMS study 7−84533

silicon continued
Si-SiO_2-Al, mobile charge, effects of doping Al with Cu, Zn or Si 7−85123
Si-SiO_2-Cu_2S, heterostructure, switching mechanism 7−70429
Si-SiO_2-In_2O_3:Sn MOS structs., optically activated interface states, expt. study 7−70415
Si-SiO_2-Si buried layer structures, ion beam synthesis 7−76164
Si-SiO_2-Si buried layer structure formed by O ion implantation, interface evolution 7−76636
Si-SiO_2-Si buried layer structure, formation by ion implantation and annealing 7−76637
Si-SiO_2-Si structs., defect spectrum responsible for breakdown 7−143626
Si-SiO_2-Si_3N_4 acoustic sensor design and fabrication 7−97246
Si-SiO_2-Si_3N_4-metal structs., optically-induced hot-hole injection probability meas. and anal. 7−105713
Si-SiO_2-metal structs., optically-induced hot-hole injection probability meas. and anal. 7−105713
Si-SiO_2-metal structs., interface states capture time const. determ. 7−112500
Si-SiO_w multilayer planar structures formed by ion synthesis 7−99211
a-Si-SiO_x barriers, tunnelling via localised states, microscopic study 7−70423
a-Si-SiO_x evaporated superlattices, struct. meas. 7−131477
Si-SiO_x MOS, structs., RF-annealing, impurity activation and trap annealing, TSC meas. *(Russian)* 7−138068
Si-SiO_x photodeposited interface, elec. charactn. 7−85125
Si-SnO_2, polycrystalline solar cell, antireflection coating investig. 7−126621
Si-SnO_2 solar cells, light scatt. model 7−126620
Si-SrO interfaces, MBE heteroepitaxial growth 7−118299
Si-Ta_2O_5 interface, dielec. charcts., effect of SiO_2 7−118934
Si-$TaSi_2$ eutectic composite structures, DLTS studies 7−112487
Si-$TaSi_2$ semiconductor-metal eutectic composites, in situ junctions, charge collection SEM study 7−92288
Si-Ti, silicide formation, surface extended energy loss fine struct. and extended appearance pot. fine struct. studies 7−143112
Si-Ti diffusion couples, $TiSi_2$ form. and Si loss via SiO sublimation 7−118073
p-Si-Ti MIS diodes, Mott-Schottky characteristics, temp. dependence 7−112498
Si-Ti system, silicide form. under thermal and laser annealing *(Chinese)* 7−105153
Si-Ti-As, silicidation by halogen lamp annealing, effect of As 7−99992
Si-TiN-SnO_2:F, transparent conducting electrodes 7−118554
Si-TiO_2-SnO_2:F, transparent conducting electrodes 7−118554
Si-$TiSi_2$:C interface, C implantation to stabilise $TiSi_2$ during thermal annealing 7−83990
Si-W:F, contact structs., LPCVD formed, F conc., thermal stability, silicide formation 7−106424
Si-WSi_2-SiO_2 structure, dopant redistrib. modelling 7−91628
Si-YSi_{2-x}, epitaxial silicide, vacuum annealing 7−124740
Si-ZnS heterojunctions, RF sputtered ZnS films, charcts. 7−131757
$Si+F_2+NF_3$ 7−78463
$Si^+ + H_2$, pot. energy surface, ab initio HF calcs. 7−96494
$Si^{11+} + He$, coincident ionization plus excitation 7−96836
$Si^{15+} + H_2$, resonant transfer and excitation, two photon coincidence study 7−90410
Si_{39}^+ surface, reactivity of NH_3, Fourier transform-ion cyclotron reson. spectra 7−139037
Si_4 and Si_4^+, CAS SCF and CI calculations 7−96550
Si_A^+ (n=1 to 8), cluster ions, reactive etching by NO_2 7−82413
Si_n^- (n=1 to 6), cluster ions, reactive etching by NO_2 7−82413
$Si_n^{(+,-,0)}$ ($7 \leq n \leq 30$), valence electronic struct. determ. 7−122767
$Si_n^+ + XeF_2$ (n=1 to 7), 7−113889
Si(Au) detectors, radiation damage by fast neutron irradiation *(Chinese)* 7−81874
SiB, amorphisation implants, low temp. rapid thermal anneal 7−111613
SiC fibre reinforced Si, surface energy as indicator of interfacial mechanical response 7−76592
a-SiC:H/a-Si:H p-i-n solar cells with graded-band-gap layer, photoCVD 7−114109
a-SiC/a-Si, flexible heterojunction and stable tandem solar cells with blocking barriers 7−126617
SiC-Si (100), neutron irradiated, defect study 7−98710
SiC-Si composites, siliconised, creep rupture 7−78244
SiC-Si composites, siliconized, high temp. mech. props. 7−78245
SiH,B(P) plasma CVD coatings with $(SiH_2)_n$ groups, doping, cond., optical gap control 7−98750
a-SiH_x, atomic and electronic struct., large-scale CRN model 7−83680
a-SiH_x:B, annealing effect on optical props. *(Korean)* 7−85876
a-$Si_{1-x}H_x$ films, vibrational and optical props., optical absorpt. and Raman scatt. meas. 7−125830
SiH(D), vibrs., localised modes, IR absorpt. spectra, impurity bonding 7−91749
Si(Li) detectors, radial dependence of registration efficiency determ. 7−109654
Si(Li) detectors in energy range 4.5 to 17.5 keV 7−95653
Si(Li) X-ray detector response to proton induced K X-rays, Monte Carlo anal. 7−141399
SiN-Si-SiO_2-Si:H system, H profiling using $^1H(^{19}F, \alpha\gamma)$ reaction *(Chinese)* 7−111633
a-$SiN_{1.4}$:H/a-Si:H band offset and electronic struct., AES, XPS and IPES studies 7−92300
SiO_2/Si (111) interface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
SiO_2/Si interface, anomalous bonding configurations, UV photoemission spectra study 7−118283
SiO_2/Si interface, chemical and electronic struct. 7−70099
SiO_2/Si interface, defect microchemistry, oxide decomposition reaction 7−119525
SiO_2-Si, thermally grown films, ionic current study 7−77103
SiO_2-Si (100), defect-related breakdown, role of O 7−99208
SiO_2-Si:Fe interface, catastrophic oxide breakdown, impurity behaviour effects 7−143624
SiO_2-Si:P,B, thermal nitridation of SiO_2, effect on Si interstitial conc. 7−131140
SiO_2-Si(100), struct. props. of native and thermal oxides, surface EXAFS study 7−132378
SiO_2-ZnO-Si, boundary acoustic waves propag. *(Japanese)* 7−118222
SiO_xN_y-Si, rapid thermal annealing prep., elec. charcts. 7−131792

silicon continued
SiP, implantation-amorphised, recrystallisation rate during rapid thermal annealing 7−105308
a−Si−Pd−Ni, form. of Pd_2Si buffer layer, impeding Ni diffusion 7−124734
Si−SiO_2 films, paramag. point defects, generation by electron injection and ionising radiation 7−111555
Si−SiO_2 interface, struct., EPR obs. 7−112111
Si−SiO_2 structures, interfacial P_{b0} defects, low temp. EPR obs. 7−112950
^{27}Si nuclear spin polarisation by tilted foil technique 7−118871
^{28}Si, pionic atoms, X-ray spectra study of level widths and shifts 7−110146
n-Si(111), surface composition, rel. to adsorption of Gd, AES study 7−91992
a-Sn:H films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
SnO_2/SiO_2/Si, spray-deposited solar cells, short-circuit photocurrent v. open circuit voltage characteristics 7−126603
$TaSi_2$-Si:Sb(B), point defect generation, enhanced impurity diffusion 7−124591
Tc-Si amorphous films, superconducting transition temp., density of electron states 7−70445
Ti/Si sputtered multilayers, Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti/Si thin layer system, ion implantation and struct. 7−137419
Ti/Si:As silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
Ti-SiO_2-Si system, silicide form. under thermal and laser annealing *(Chinese)* 7−105153
Ti-W/Si(100) interface, Schottky barrier height 7−112427
$TiSi_2$:As/Si silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
$TiSi_2/p^+n$ Si junctions, elec. props., post-silicidation annealing effects 7−143610
$TiSi_2$/Si, p-n shallow junction form. by impurity ion implantation and drive-in method 7−104769
V/Si superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
W/Si/GaAs contacts, Schottky charcts. and chemical interdiffusion, Si layer effects study 7−131734
W-WSi_x-Si contact structs., charactn. under thermal annealing 7−124737
WSi_2-Si, silicide thin films, deposition and charcts., TEM study 7−113396
YIG:Si, elec. relaxation processes and photomag. props., thermostimulated depolarisation study *(Russian)* 7−125606
YIG:Si magnetoanisotropic impurity centres study *(Russian)* 7−84768
YIG:Si single crysts., photoinduced magnetisation reversal mechanism and threshold studies *(Russian)* 7−99550
$Zn_xCd_{1-x}S$-Si, heterojunction, electrophys. parameters 7−70385
ZnO-Si, piezoelectric-semiconductor structs., multistability of acoustoelectronic interaction 7−131718
ZnO-Si struct., acoustic layer mode propag., nonlinear electroelastic effect *(Japanese)* 7−124670
ZnO-SiO_2-Si multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
ZnS-p-Si thin film interface electronic density of states meas., conductance technique 7−131753
ZnS-Si, effect of ZnS deposition process on thin film interface 7−138652

silicon alloys
see also Ge-Si alloys
Al-Mn-Si quasicrystals, convergent-beam electron diffraction *(Japanese)* 7−98047
amorphous, materials and device stability, conf., Palo Alto, CA, USA (Jan. 1987) 7−140350
graphite particle reinforced Al-Si-Cu alloy, cast, corrosion charcts. in different environments 7−93140
ion implantation effect on low temp. props. 7−142815
$Pd_{82}Si_{18}$, amorphous, isothermal annealing, struct. relax., elec. resist., X-ray diffr. 7−104562
rare earth alloys, $R_2Fe_3Si_5$, R=Tb-Ho, Tm, Lu, electronic struct., X-ray emission spectra *(Russian)* 7−113316
rare earth-Cu-Si alloys, RCu_2Si_2, (R=Tb-Tm), mag. interactions 7−132007
rare earth-transition metal-Si(Ge) systems, valence, EXAFS and X-ray studies 7−77689
Sendust bulk ferromagnets, magnetisation-reversal waves in surface region, Kerr effect study 7−125463
silicide films and double heterostructures on Si, template growth technique in UHV 7−86021
stainless steel wire reinforced Al-Mg-Si composite, interfacial shear strength rel. to annealing temp. 7−132673
superconducting ternary silicides, $R_5T_4Si_{10}$, (R=Sc,Y,Lu; T=Co,Rh,Ir,Os), DC electrical resistivity and upper critical mag. field 7−84814
transition metal silicide films on Si, epitaxial growth, props. and applications, review 7−86022
transition metal-Si rapidly solidified alloys, 3D modulated struct., quasicryst. form. 7−117868
AL-Si-Mn, melt spun, icosahedral and glassy phases, form., struct., X-ray scatt., TEM studies 7−97958
Ag-Si thin film, prep. by ion assisted deposition *(Chinese)* 7−132499
AgMgSi, proton irrad., microstructure, mech. props. 7−69780
Al-Al_2O_3-Si, creep behaviour and dislocation struct. 7−100319
Al-based icosahedral phases, contrast variation effects on neutron diffraction patterns 7−83846
Al-Cr-Si quasicrystals, with high Si conc., formed by rapid quenching, thermal and elec. props. 7−100200
Al-Cu-Mg-Si, thermodynamics, unidirectional solidification 7−77979
Al-Cu-Si, 2014, commercial, rapid quenching 7−86201
Al-Fe-Mo-Si, rapidly solidified and heat treated, precipitate identification 7−132628
Al-Fe-Si, adhesive wear, metallography 7−78411
Al-Fe-Si, direct chill casting, intermetallic phase form., TEM and EDAX 7−86155
Al-Fe-Si direct chilled cast alloys, solidification struct., primary Al-Fe-Si particles 7−106505
Al-Hf-Si (3, 0.3 wt.%), rapidly solidified, phase decomp. during ageing 7−92996

silicon alloys continued
Al-Mg-Si, age hardened, tensile props. and anisotropy, double ligament test method 7−132851
Al-Mg-Si, compact specimens, plastic zone determ. 7−138794
Al-Mg-Si, soln. treated, cyclic strain induced precip. 7−144402
Al-Mg-Si-Fe, corrosion, influence of Li-containing solns. 7−119440
Al-Mn-Fe-Si, noncrystallographic alloy phases, Fe and Mn sites, EXAFS study 7−85897
Al-Mn-Si, facet formation, grain shapes and spatial disorder 7−137245
Al-Mn-Si, icosahedral, sputter deposition 7−100066
Al-Mn-Si (10, 2.5 wt.%), dispersion hardened, powder metallurgy, yield stress, fatigue props. 7−138804
Al-Mn-Si alloys, cryst., quasicryst. and amorphous, positron annihilation study 7−77682
Al-Mn-Si alloys, quasicrystals, comparative electron microscopic study with Mg-Al-Zn alloys 7−137316
Al-Mn-Si icosahedral alloys, NMR lines obs., magnetism 7−112968
Al-Mn-Si icosahedral quasicrystal, dislocations, HREM studies 7−69704
Al-Nb-Si coatings on Ni alloys, effect on high-temp. fatigue 7−113784
Al-Si, cast, isothermal heat treatment, Si particle growth 7−78069
Al-Si, deform., precip. 298-698 K 7−78141
Al-Si, erosion by solid particles, effect of microstruct. 7−86367
Al-Si, eutectic microstruct., interparticle spacing and undercooling 7−100203
Al-Si, eutectic spheroidization metallography *(German, English)* 7−113585
Al-Si, hypereutectic, deep etching reagents for SEM microstruct. 7−113824
Al-Si, melt-spun, rel. between solidification morphology and texture 7−92985
Al-Si, mild wear during unlubricated sliding, surface structs., debris 7−144560
Al-Si, precip. kinetics. and relax. of precip. induced stresses 7−78033
Al-Si, rapid solidification, excimer laser rad. induced 7−119260
Al-Si, rapidly quenched, excess vacancies 7−92995
Al-Si, rapidly quenched, struct., elec. and mech. props. 7−93002
Al-Si, rapidly solidified by electron beam surface melting, struct. and mech. props. 7−93211
Al-Si, sputtered films, hillock, grain and cryst. orientation, substrate temp. depend. 7−137746
Al-Si, thermodynamics props., reviews 7−80197
Al-Si, thin film metallisations, mech. props. and microstructure 7−124786
Al-Si, TiN treated by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
Al-Si, undercooled, solidification struct. development 7−77984
Al-Si (15 wt.%), hypereutectic, high press. crystn. struct., mech. props. *(Russian)* 7−144391
Al-Si (6 to 12.6 wt.%), directionally solidified, interdendritic eutectic growth 7−126094
Al-Si (7 wt.%) castings, tensile props. rel. to porosity 7−78119
Al-Si alloy, metal-matrix corrosion studies in Canadian shield granitic groundwaters for radwaste 7−100455
Al-Si alloy powder rapidly solidified by rotating water atomisation, hot extrusion and struct. study 7−92928
Al-Si alloy wires prod. by in-rotating-water-spinning process. props. 7−77891
Al-Si alloys, directional solidification, mechanical properties, eutectic struct. *(Turkish)* 7−113562
Al-Si alloys, oxidation in air 7−86409
Al-Si alloys, quality control by PIXE 7−139065
Al-Si alloys, structural properties *(Turkish)* 7−113528
Al-Si alloys, TTPIXE anal., Si conc. overestimation 7−93410
Al-Si base alloys, silumins, fracture under tension, influence of alloying additions 7−86318
Al-Si binary alloy systems at high press. 7−100183
Al-Si dilute alloys, US peak doublets and tilted mixed dumbell cages 7−91734
Al-Si eutectic, chill modified, twinned growth of Si, electron diffr. 7−100045
Al-Si eutectic alloy, Si cryst. growth, effect of twinning 7−77980
Al-Si films, excess noise, rel. to electromigration activation energies 7−125065
Al-Si hypereutectic, tensile props. and anisotropy, double ligament test method 7−132851
Al-Si melts, modification and surface tension, effect of vibr. 7−71168
Al-Si powder, sintering characts., effects of oxidation 7−144339
Al-Si/$MoSi_2$ contacts on p-n shallow junctions 7−85107
Al-Si-Cr(Mn), quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al-Si-Cu, (6.5, 3.5 wt.%), evaporative pattern castings, mech. props., Sr addition effect 7−77970
Al-Si-Sr, elec. resist. rel. to Sr content, Si precip., eutectic microstruct. 7−131614
Al-Si-Sr, struct., mech. props., Sr content effect, solidification rate 7−86261
Al-Si-Sr(Sb), modification, influence of Sr or Sb additions *(Chinese)* 7−77961
Al-Si-Ti, sputtered films, hillock, grain and cryst. orientation, substrate temp. depend. 7−137746
Al-Si-base alloys, hypereutectic, microstruct. improvement by rheocasting 7−100209
$Al_{71}Fe_{19}Si_{10}$, sp. ht. meas. 7−105064
AlMgSi alloy, heat treatment, influence on atomic and electronic struct., X-ray emission study 7−132380
AlMgSiP alloy, fracture surface, XPS, Auger electron and ion scatt. spectroscopy study 7−138591
AlMnFeCrUSi, pentagonal symmetry *(Dutch)* 7−91516
AlMnSi quasicrystals, disorder, X-ray diffr. and TEM studies 7−142709
$Al_{50}Mn_{12}Si_7$, sp. ht. meas. 7−105064
$Al_{72}Mn_{22}Si_6$ rapidly quenched quasicrystalline alloy, fracture process obs. 7−142902
$Al_{70}Ni_{15}Si_{15}$, amorphous, crystallization study, DTA, resistivity anal. *(French)* 7−75994
Al_2O_3 fibre reinforced Al-Mg-Si, weldability, interface struct., tensile strength 7−113854
AlSi alloy, superconducting study using ion beam mixing 7−85159
AlSi disordered alloy prodn. by ion beam mixing, T_c enhancement 7−84074
AlSi superconductivity following liq. He temp. ion beam mixing 7−125198
$Al_{60}Si_{20}Cr_{20}$, new quasicryst., form. and struct. 7−83858
silicon alloys continued
$Al_{70}Si_{17}Fe_{13}$ amorphous alloy, neutron diffr. study 7−137244
$Al_{85}Si_1Mn_{14}$ quasicrysts., thermal transform. to conventional crysts., two-step mechanism 7−105002
$Al_{70}Si_{15}Ni_{15}$ amorphous alloy, crystallisation and structure *(French)* 7−91525
AlVSi, low activation alloy development for R-tokamak project 7−74061
Au-Si-Be liq. metal ion source, focused beam intensity profile 7−67421
Au-Zn-Si liquid metal ion source, Zn and Si emission 7−95677
B-Si-Ge alloys, super-assisted-plasma CVD 7−86052
$CO_{70}Fe_5Si_{10}B_{15}$ amorphous alloy, regions of reverse magnetisation 7−70587
$CO_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloy, stress relax. low mag. field props. 7−132117
$CO_{75}Si_5B_{20}$, metallic glass, exoelectron emission 7−132418
$CaF_2/CoSi_2/Si$ (111) epitaxial insulator-metal-semiconductor structures, rapid thermal annealing 7−84549
Ce-Cu_2Si_2 heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497
Ce-transition metal alloys, CeM_2Si_2, M=Fe-Cu, Ce core level XPS spectra 7−132412
(Ce-Y)Ru_2Si_2 Kondo systems, low temp. heat capacity 7−70521
$CeCu_{2-x}Co_xSi_2$, mixed valence to heavy fermion transition characts. studies 7−124950
$CeCu_{2-x}Ni_xSi_2$ alloys, heavy fermion to mixed valence transition, sp. ht. behaviour studies 7−124548
$CeCu_{1.54}Si_{1.46}$, heavy electron Kondo lattice, mag., sp. ht., elec. resist. meas. 7−77279
$CeCu_2Si_2$, band structure of heavy fermions 7−76754
$CeCu_2Si_2$ films, lattice disorder effects on superconductivity and electrical resistivity, fast ion irradiation 7−70495
$CeCu_2Si_2$ heavy fermion superconductor, phonon density of states, comparison with $LaCu_2Si_2$ 7−69845
$CeCu_2Si_2$, heavy fermion supercond., Knight shift meas. 7−85193
$CeCu_2Si_2$, Kondo cpds., neutron scatt. calc. 7−77235
$CeCu_2Si_2$, Kondo lattice, magnetoresistance 7−70289
$CeCu_2Si_2$, mag. and superconducting props., composition depend. 7−70555
$CeCu_2Si_2$, resonant photoemission, partial density of states 7−125906
$CeCu_2Si_2$, supercond. transition temp., press. depend. 7−125165
$CeCu_2Si_2$, superconducting Kondo lattice, upper critical field, angular depend. 7−77174
$CeCu_2Si_2$ thin films, ion irrad., heavy fermion superconductivity 7−77126
$CeCu_2Si_2$, unconventional even parity superconductivity, nucl. relax. rate 7−70470
$Ce_xLa_{1-x}Cu_2Si_2$, heavy fermion state and supercond., elec. resist., Kondo temp. 7−92326
CeM_2Si_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
CeM_2Si_2 (M=transition metal), reentrant Kondo-mixed valent-Kondo regime behaviour 7−124974
$CePd_2Si_2$, mag. susceptibility, heat capacity 7−118779
$CePd_3Si_{0.3}$, heavy fermion cpd., sp. ht. meas., anomalous cryst. field effects 7−76433
CePtSi, heavy fermion cpd., meg. and elec. props. 7−98982
$CePt_2Si_2$, Kondo lattice cpd., specific heat and high pressure effects 7−70553
$Ce(Rh_{1-x}Ru_x)_2Si_2$ solid solns., mag. props. 7−77246
$CeRu_{2-x}Os_xSi_2$, magnetism changes 7−70552
$CeRu_2Si_2$, heavy fermion system, Hall effect 7−70288
$CeRu_2Si_2$ heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
$CeRu_2Si_2$, J=5/2 rare earth ion states, low field mag. props., tetragonal cryst. fields 7−138179
$CeRu_2Si_2$, metamagnetic-like transition 7−105918
$CeRu_2Si_2$, polarised heavy fermion system, high-pressure magnetoresistance and susceptibility meas. 7−70287
$CeRu_2Si_{2-x}Ge_x$, magnetism changes 7−70552
$CeSi_2$, Kondo resonance, high temp. collapse, UV photoemission meas. 7−113347
$CeSi_x$ alloy, Kondo effect and exchange interactions competition, comp. depend. elec. resist. study 7−118469
$CeSi_x$, nonmag. Kondo lattice, Hall effect 7−143435
$CeSi_x$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
Co-B-Si glasses, thermal expansion, sp. ht. 7−118804
Co-C-Si, rapidly quenched, nonequilib. phases 7−113521
Co-Cr-Si, isothermal oxidation rel. to dispersed Si_3N_4 particles 7−119430
Co-Er-Si icosohedral structs., mag. moments, Curie temp., anisotropy and domain walls 7−131996
Co-Fe-Si-B, amorphous, stress annealing induced mag. anisotropy 7−99440
Co-Fe-Si-B, current pulse annealing, effects on mag. props. 7−142641
Co-Fe-Si-B amorphous alloys, magnetostriction and mag. permeability 7−85406
Co-Fe-Si-B metallic glass, current pulse heating, crystallisation, elec. resist. 7−83722
Co-Fe-Si-B submicron surface layers, diffusion, X-ray spectral microanal. 7−124584
Co-Fe-Si-B-based amorphous ribbons, coercivity changes over ribbon length 7−85359
Co-Si alloys, α-martensite 2H-struct, 1D disorder, dimension factor effect *(Russian)* 7−91531
Co-Si amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
Co-Si sputtered alloy film, struct. and mag. props., Si content depend. 7−112916
Co-Si-B amorphous alloy ribbons, magnetostriction, induced anisotropy and annealing effects, comp. depend. 7−70540
Co-Si-B rapidly melt quenched metallic glasses, magnetomechanical coupling meas. 7−99548
$Co_{70.3}F_{4.7}Si_{15}B_{10}$ amorphous alloy powders, mag. props. and dynamic compaction, cavitation method 7−92933
$Co_{67.8}Fe_{4.2}CrB_{12}Si_{15}$, glassy metal alloys, perminvar characts. 7−112918
$Co_{69}Fe_{4.5}Cr_2Si_{2.5}B_{22}$ long-time tunnelling at He temps. 7−76463
CoFeMnSiB amorphous soft mag. materials, mag. props. and electronic appls. 7−92467
$Co_{66}Fe_4(MoSiB)_{30}$ amorphous ferromag. alloy, influence of Ni ion plating, FMR and AFMR studies 7−70649
$(Co_{0.94-x}Fe_{0.06}Nb_x)_{78}Si_4B_{18}$ amorphous alloys, mag. props., influence of Nb content and heat treatment *(Korean)* 7−138856
$(Co_{1-x}(Fe_{0.5}Ni_{0.5})_x)_{75}Si_{15}B_{10}$ metallic glasses, electrical resistivity, temp. depend. 7−76877

silicon alloys continued
- $Co_{43}Fe_5Ni_{30}Si_{8.8}B_{13.2}$ ferromag. amorphous alloy, struct. relax. obs. 7−83776
- $(Co_{0.94}Fe_{0.06})_{75}Si_{15}B_{10}$ metallic glasses, magnetostriction const. meas., temp., stress, structural relax. depend. 7−85400
- $(Co_{1-x}Fe_x)_{0.75}Si_{10}B_{15}$ metallic glasses, reversible resistivity changes during struct. relax. 7−92147
- $Co_{70}Fe_5Si_{15}B_{10}$ amorphous ribbons, surface quality and thickness effects, recording head appls. 7−77888
- $Co_{70}Fe_5Si_{15}B_{20}$ metallic glasses, acoustic emission studies 7−78451
- $Co_{70.3}Fe_{4.7}Si_{15}B_{10}$ amorphous alloys, mag. after effect, influence of heat treatment 7−132086
- $Co_{70.5}Fe_{4.5}Si_{10}B_{15}$, Cr_2O_3 and ZrO_2 particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
- $Co_{75-x}Fe_xSi_{15}B_{10}$ amorphous alloy, mag. anisotropy, stress annealing 7−85283
- $Co_{75}Fe_5Si_{15}B_{10}$ amorphous alloy, plastically deformed, stress relax. and microhardness *(Russian)* 7−126159
- $Co_2MnAl_{1-x}Si_x$ Heusler alloys, hyperfine fields, NMR spin echo studies *(Russian)* 7−70670
- CoMnFeMoSiB soft mag. amorphous alloy material props., electronic appls. 7−93118
- $Co_{58}Ni_{10}Fe_5Si_{11}B_{16}$ metallic glass, relax. phenomena, crossover effects 7−85363
- $CoSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
- $Co_{70}Si_yB_{30-y}$ metallic glasses, struct. changes 7−131040
- $Co_{75}Si_{15}B_{10}$, amorphous alloy, anisotropy of tensile props. 7−86233
- Cr-Co-Ti-V-Si-Fe, microstruct. and superplasticity *(Russian)* 7−71238
- Cr-Si system, thermodynamic props., 953 to 1133 K 7−119243
- Cr_3Si films, elec. resist., Hall coeff. meas. 7−99223
- Cr_5Si_3, amorphous films, cryst., elec. resist., TEM obs. 7−131034
- Cr_5Si_3 films, elec. resist., Hall coeff. meas. 7−99223
- Cu-Al-Si-Co, superplastic deform., cavity alignment 7−71249
- Cu-Si crystals, dilated surface layers, defects, electron microscope images 7−111563
- Cu-Si system, phase equilib., thermodynamic assessment 7−132565
- Cu_3Si, chem. bonding, struct. of Auger spectrum of Si 7−77705
- $DyFe_2SiC$, quaternary iron-rich phase stabilised by C, struct. 7−142701
- Eu-Ni-Si nonstoichiometric intermetallic cpds., Eu electronic state study *(Russian)* 7−70265
- $Eu(Au_xPd_{1-x})_2Si_2$ alloy, ferromagnetism and valence mixing studies, high press. effects 7−112278
- $Eu(Cu_{1-x}Au_x)_2Si_2$, ^{151}Eu Mossbauer studies 7−118896
- $EuCu_2(Si_xGe_{1-x})_2$, Kondo-lattice type state 7−84794
- $Eu(Pd_{1-x}Au_x)_2Si_2$, valence transition, Mossbauer effect, X-ray diffr. meas. 7−92142
- $EuPd_2Si_2$ intermediate valence impurity state relax. rate model calcs. 7−76845
- $EuPd_2Si_2$, mixed valence cpd., dynamic mag. susceptibility, neutron scatt., magnetisation, Mossbauer effect meas. 7−70264
- Fe-Al-Mo-Ti-Si, DO_3 superlattice transition temp. rel. to comp. 7−113546
- Fe-Al-Si alloys, X-ray spectra and chem. bond. 7−137318
- Fe-Al-Si sputtered films, mag. props. 7−112876
- Fe-B-Si amorphous films, magnetic ripple, Lorentz microscopy studies 7−70607
- Fe-B-Si system, powders prepared by water atomisation, comp. effect on glass-forming regions 7−132527
- Fe-B-Si-C, metallic glasses, crystn., enthalpic and struct. anal. 7−83742
- Fe-B-Si-C-H metallic glasses, magnetoelastic effect 7−85403
- Fe-C-Cr-Ni-Si rapidly quenched alloys, solidification struct. 7−144388
- Fe-C-Si, third-component segregation 7−106512
- Fe-C-Si alloy wires prod. by in-rotating-water-spinning process. props. 7−77891
- Fe-C-Si amorphous alloys, prep. by melt quenching 7−97957
- Fe-C-Si system, Fe-rich corner, stable and metastable equilib. 7−132566
- Fe-C-Si-Ce, directional solidification, struct. transform. of graphite *(Chinese)* 7−144381
- Fe-Co-Mn-B-Si amorphous ribbons, mag. aftereffect studies 7−92470
- Fe-Co-Si-B amorphous alloy comp. optimisation for saturation induction, crystn. temp. and thermal stability 7−99428
- Fe-Co-Si-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
- Fe-Cr-Si, melt-quenched, application as strain gauge sensor 7−84821
- Fe-Cr-Si-B amorphous alloy wires, fatigue strength and corrosion resistance 7−91716
- Fe-Cr-Si-B amorphous alloy, oxidation behaviour, influence of Cr addition 7−93198
- Fe-Cr-Si-B glass, passivity-maintaining current density, cooling-condition depend. 7−144605
- Fe-Ga-Si crystalline soft magnetic alloy films, high saturation magnetisation 7−125501
- Fe-Mn-Ni-Si alloys, oxidation-induced transformations, kinetics 7−106670
- Fe-Mn-Si, martensitic transformations *(Japanese)* 7−113552
- Fe-Ni-B-Si metallic glasses, reversible structural relax., DSC and X-ray diffr. 7−131054
- Fe-Ni-Si-B, current pulse annealing, effects on mag. props. 7−142641
- Fe-Ni-Si-B amorphous alloys, Ni magnetism, Mossbauer studies 7−113044
- Fe-Ni-Si-C, mag. props., struct., Mossbauer obs. *(Russian)* 7−143858
- Fe-Ni-Si-Cu-C, Cu precip. and solubility 7−100226
- Fe-Si, corrosion in hot conc. salt brines *(German)* 7−93202
- Fe-Si, deform. under strain control, instabilities in hysteresis loops 7−132689
- Fe-Si, domain struct. and mag. props., thermomechanomagnetic treatment effects *(Russian)* 7−138265
- Fe-Si, grain oriented sheets, deformation and recrystallisation texture changes 7−126172
- Fe-Si, melt-spun ribbons, magnetic and mechanical props. 7−85364
- Fe-Si, nonoriented, texture study 7−126140
- Fe-Si, oxidation kinetics, 900-1100°C 7−106700
- Fe-Si, thermal demagnetisation below Curie pt. influence on mag. permeability 7−143857
- Fe-Si 1.7 wt.%, single crysts., cryst. orientation change during cold rolling *(Korean)* 7−78046
- Fe-Si (10 at.%) single cryst. with graphite overlayer, desegregation kinetics, AES study 7−84515
- Fe-Si (1.7 wt.%), single and polycryst., cold rolling, orientation depend. of stored energy and coherent domain size *(Korean)* 7−126141
- Fe-Si (3 wt.%), (110) surface deviation from [001] direction influence on thickness depend. of domain widths 7−99491

silicon alloys continued
- Fe-Si (3 wt.%), deformed H impregnated, corrosion-electrochem. behaviour in H_2SO_4 electrolyte 7−144591
- Fe-Si (3 wt.%), domain struct, cryst. orientation effect 7−143843
- Fe-Si (3 wt.%), H-induced intergranular cleavage *(Chinese)* 7−132701
- Fe-Si (3 wt.%), oriented bicrystals, floating zone melting growth and perfection 7−113379
- Fe-Si (3 wt.%), single crystals, prep. of highly perfect samples by thermal cyclic annealing 7−125963
- Fe-Si (3 wt.%), solidification, in situ obs. by synchrotron rad. X-ray topography 7−100205
- Fe-Si (3 wt.%) electrical steel, electromag. losses, influence of multilayer nature of domain struct. *(Russian)* 7−105950
- Fe-Si (3 wt.%) single crystals, H induced cleavage cracking under mode 2 loading 7−78159
- Fe-Si (4.6 to 6.5 wt.%), solidification process in roller quenching method 7−77989
- Fe-Si (6.5 wt.%) prepared by rapid solidification, review 7−86093
- Fe-Si alloy, hot rolled, texture changes due to deformation and heat treatment *(Russian)* 7−78060
- Fe-Si alloy single crystals, orientation dependent surface segregation 7−78029
- Fe-Si alloy target, magnetron sputtering 7−106411
- Fe-Si amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
- Fe-Si BCC alloy, phase diagrams in the generalized Ising model 7−85335
- Fe-Si crystals, domain struct. and EM losses, thickness effects *(Russian)* 7−77344
- Fe-Si sputtered films, mag. props. 7−112875
- Fe-Si steel, highly permeable, forsterite ground layer effect on mag. props. 7−77353
- Fe-Si system, thermodynamic anal. and formulation of A2/B2/DO3 atomic ordering energy 7−138733
- Fe-Si-Al Sendust alloy ribbons, mag. props., heat treatment effects 7−100399
- Fe-Si-Al Sendust alloy single crysts., mag. anisotropy and magnetostriction, comp. depend. 7−70541
- Fe-Si-Al-TiC, Sendust, precip. strengthening 7−132630
- Fe-Si-B, amorphous alloys, produced by spark erosion, microstruct. and props., effect of quench rate 7−119202
- Fe-Si-B, rapidly solidified, microstruct. and phase comp. 7−131041
- Fe-Si-B alloys, amorphous and cryst., magnetic losses, thermomag. treatment effects *(Russian)* 7−99437
- Fe-Si-B amorphous alloy, oxidation behaviour, influence of Cr addition 7−93198
- Fe-Si-B amorphous alloy mag. props. temp. depend. meas. 7−99506
- Fe-Si-B amorphous ferromagnets, spin dynamics, neutron scatt. obs. 7−85322
- Fe-Si-B amorphous materials prod., new method to produce melts 7−77871
- Fe-Si-B metallic glass, density meas., heat treatment influence 7−71199
- Fe-Si-B metallic glasses, density determ. 7−131201
- Fe-Si-B-based amorphous alloys, mag. permeability and thermal stability 7−85361
- Fe-Si-Mn(Ni), high Si steel, erosion behaviour with austempering 7−71322
- Fe-Si(C), melt-spun ribbons, rapidly solidified, solidification parameters and microstruct. 7−100211
- $Fe_{3-x}Al_xSi$ alloys, crystal struct., neutron diffr. and Mossbauer studies 7−131101
- FeAlSiN sputtered thin films, hardness, struct., elec. resist. and mag. props., SEM study 7−105983
- $Fe_{80.5}(B,Si,C)_{19.5}$ amorphous ribbon, effect of laser irradiation on 50 Hz core loss 7−85347
- $Fe_{81}B_{13.5}C_2$, amorphous films, FMR and fiber optic interferometric studies 7−125541
- $Fe_{77.5}B_{13}Si_{9.5}$, amorphous, for choke and inductor applications, microstructure and mag. props. 7−86234
- $Fe_{78}B_{13}Si_9$ amorphous alloy, viscous flow meas. near T_g under continuous heating 7−98321
- $Fe_{78}B_{13}Si_9$ amorphous ribbons, mag. moment distrib., Mossbauer study 7−113027
- $Fe_{78}B_{13}Si_9$, amorphous to crystalline transformation 7−142636
- $Fe_{78}B_{13}Si_9$ glassy metal powder cores, mag. props. 7−85365
- $Fe_{78}B_{13}Si_9$, metallic glass, surface oxidation, annealing, AES obs. 7−106709
- $Fe_{78}B_{13}Si_9$ metallic glass, magnetomechanical coupling 7−132115
- $Fe_{78}B_{22-x}Si_x$, metallic glasses, crystn. and thermal stability 7−83745
- $Fe_{79}B_{16}Si_5$, amorphous, structural relax., crystallisation, Mossbauer spectra, elec. resist., X-ray diffr. *(Japanese)* 7−76004
- $Fe_{79}B_{16}Si_5$, amorphous alloy, shock consolidated powder, mag. props. rel. to compression rate 7−112855
- $Fe_{79}B_{16}Si_5$, amorphous alloy. phys. props. and struct., effect of cold rolling 7−144437
- $Fe_{79.5}B_{12}Si_{8.5}$ amorphous alloy, temper embrittlement, compositional depend. 7−86357
- $Fe_{80}B_{13}Si_7$, amorphous alloy, mag. props., crystallisation and embrittlement 7−132013
- $Fe_{80}B_{14}Si_6$ amorphous alloy low temp. mag. props., annealing effects study 7−100400
- $Fe_{80}B_{14}Si_6$ long-time tunnelling at He temps. 7−76463
- $Fe_{80}B_{20-x}Si_x$ amorphous alloys, mag. props. and mag. annealing, effect of different Si contents *(Korean)* 7−132089
- $Fe_{80}B_{8.74}Si_{11.26}$ metallic glass, magnetisation studies 7−143856
- $Fe_{82}B_{12}Si_6$, amorphous to crystalline transformation 7−142636
- $Fe_{82}B_{12}Si_6$, metallic glass, ferromag., spin polarisation of secondary electrons 7−138559
- $Fe_{82}B_{18-x}Si_x$ amorphous alloys, magnetoelastic behaviour, localised moment model explanation 7−99549
- $Fe_{82}B_{18-x}Si_x$, metallic glasses, disaccommodation phenomenon 7−138280
- $Fe_xB_{13}Si_{87-x}$, metallic glasses, annealing embrittlement, effect of Ce microadditions 7−113724
- $Fe_{78}B_{10}Si_5C$, composite amorphous powder cores, prep. and mag. props. 7−132081
- $Fe_{78}B_{11}Si_9C_2$, amorphous to crystalline transformation, isothermal kinetics 7−142640
- $Fe_{80}B_{16}Si_2C_2$ metallic glass, crystn. and embrittlement, SAXS study 7−97959
- $Fe_{80}B_{16}Si_2C_2$ metallic glass, annealing embrittlement, AES study 7−98331

silicon alloys continued
$Fe_{81}B_{13.5}Si_{3.5}C$ amorphous ferromag. ribbons, mag. domains, dynamical obs. 7−125515
$Fe_{81}B_{13.5}Si_{3.5}C$ metallic glass, dry sliding wear 7−86372
$Fe_{81}B_{13.5}Si_{3.5}C_2$, amorphous alloy, crystallisation kinetics, DSC, X-ray diffr. 7−76006
$Fe_{81}B_{13.5}Si_{3.5}C_2$, amorphous alloys, density and microhardness, influence of annealing 7−93102
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloys, permeability and coercive field, heat treatment, freq. and field depend. 7−105961
$Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous alloy, mag. props., stress depend. 7−143890
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7−106711
$Fe_{81}B_{13.5}Si_{3.5}C_2$, Metglas 2605 SC, radial distrib. function anal. 7−142608
$Fe_{81.5}B_{13.5}Si_4C$, amorphous ribbons, annealing, struct., Mossbauer spectra, X-ray diffr. 7−106554
$Fe_{83}B_{14}Si_{1.5}C_{1.5}$ metallic glass, struct. evolution during crystn. 7−83744
FeBSiCrC, ferromag. amorphous alloys, internal friction, structural evolution, 20-550°C 7−119305
$Fe_{81}B_{13.5}Si_{3.5}C_2$, Metglas 2605 SC, crystallisation kinetics 7−142634
$Fe_{80.5}Bi_{12}Si_{4.5}C_3$ amorphous alloy ribbon, mag. props., substrate temp. effects 7−100401
$Fe_{81}Bi_{3.5}Si_{3.5}C_2$, structural changes, effects of annealing, hydrogen and vacuum 7−142638
$(Fe_{1-x}Co_x)$-Si, B amorphous wires, Barkhausen discontinuities 7−125460
$Fe_{67}Co_{18}B_{14}S_i$ metallic glass, surface oxide layers, AES and XPS studies 7−143161
$Fe_{67}Co_{18}B_{14}Si$, amorphous mag. material, isothermal nucleation and growth studies 7−117818
$Fe_{67}Co_{18}B_{14}Si$, metallic glass, annealing and crystn. behaviour 7−76030
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, struct., Mossbauer spectra, electrochemical props. 7−100450
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, hyperfine fields and phase separation, Mossbauer study 7−111893
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glass, corrosion in H_2SO_4, chloride ions effect 7−106710
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7−106711
$Fe_{67}Co_{18}B_xSi_1$, structural changes, effects of annealing, hydrogen and vacuum 7−142638
$Fe_{4.7}Co_{65.6}Ni_{3.4}Cr_{1.1}Nb_{2.5}B_{13.8}$ $Si_{9.1}$, metallic glass, internal friction, struct. relax, microhardness 7−106566
$(FeCoNi)_{78}Si_{10}B_{12}$ amorphous alloys, magnetic anisotropy studies 7−99442
$Fe_{1-x}Co_xSi$ solid soln., band magnetism, mag. susceptibility and sp. ht. studies 7−99463
$Fe_{3-x}Co_xSi$, Mossbauer effect and mag. props. 7−132174
$(Fe_{1-x}Co_x)_{70}(Si_{0.4}B_{0.6})_{30}$ amorphous ribbons, permeability temp. depend. and magnetostriction 7−85354
$(Fe_{1-x}Co_x)_{75}Si_{15}B_{10}$, crystallisation, elec. resistivity meas., effects of Co additions 7−142635
$(Fe_{1-x}Co_x)_{75}Si_{15}B_{10}$, metallic glasses, thermoelec. and calorimetric studies 7−137904
$(Fe_{1-x}Co_x)_{77}Si_{10}B_{13}$, amorphous alloy, magnetostriction meas. *(Korean)* 7−92487
$Fe_5Co_{70}Si_{15}B_{10}$ amorphous films, pulse magnetisation properties *(Russian)* 7−143864
$Fe_{67}Co_{18}SiB_{14}$ metallic glasses, nucleation and crystal growth 7−137241
$Fe_{72}Co_3Si_{15}B_{10}$, glassy alloy, Mossauer, elec. and mag. studies 7−99632
$Fe_{78-y}Co_ySi_9B_{13}$ metallic glasses, change in Young's modulus during struct. relax. 7−132659
$(Fe_{1-x}Cr_x)_{80}B_{12}Si_8$ amorphous alloys, mag. props., effect of Cr additions *(Korean)* 7−131045
$Fe_{75-x}Cr_xB_{15}Si_{10}$, amorphous wires, corrosion fatigue 7−113796
$Fe_{77}Cr_2B_{16}Si_5$ amorphous ribbons, magneto-elastic wave amplitude variation *(Japanese)* 7−106009
$Fe_{78}Cr_2B_{12}Si_8$, amorphous, quenched, annealed, ferromag. reson. 7−112962
$Fe_{80-x}Cr_xB_{12}Si_8$, amorphous alloy, electrical transport studies 7−137890
$Fe_{80-x}Cr_xB_{14}Si_6$, amorphous, Mossbauer spectra, effects of Cr content and temp. 7−99623
$Fe_{47.5}Cr_{28}Co_{23.5}Si$, permanent magnet material, mag. props., potentiokinetic polarisation curves 7−99501
$Fe_{74.7}Cr_{3.8}P_{8.7}C_{10.7}Si_{1.9}$, melt spun amorphous ribbons, mag. props. 7−132076
$Fe_{80-x}Cr_xSi_8B_{12}$ amorphous alloys, hyperfine parameters, Cr addition effects, Mossbauer study 7−112265
$Fe_{71.5}Mn_8B_{9.5}Si_{11}$, amorphous, Curie temp., influence of struct. relax. 7−97977
$Fe_{80-x}Mn_xB_{14}Si_6$, amorphous and crystallised, elec. resist., 300-1200 K 7−98972
$Fe_{76}Mo_3(SiB)_{21}$, metallic glass, low losses at high freqs., low remanence, effect of heat treatment 7−112863
$(Fe_{1-x}Nb_x)_{80}B_{16}Si_4$, amorphous alloy ribbons, mag. domain props. rel. to annealing and Nb content *(Korean)* 7−132070
$Fe_{80-x}Nb_xSi_5B_{15}$, rapidly quenched alloys, magnetostriction, mag. props. 7−118846
$Fe_{40}Ni_{40}B_{20}/Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous ribbon AC two-core transducer, displacement meas. 7−140686
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$Fe_{16}Ni_{64}B_{19}Si$ amorphous ferromag., effective susceptibility exponent 7−143770
$Fe_{40}Ni_{40}B_{13}Si_7$ glassy ribbons, process parameters and props. 7−77889
$Fe_xNi_{77-x}B_{13}Si_{10}$, amorphous, spin-disorder scattering 7−143456
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromag., phase transition, AC susceptibility meas. 7−85294
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous alloy, Hall effect meas., influence of contact prep. and cooling rate 7−98992
$Fe_xNi_{80-x}B_{18}Si_2$ amorphous ferromagnets, Curie point anomalies in elec. resist. 7−99461
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, critical exponent, mag. susceptibility meas. 7−85321
$Fe_xNi_{80-x}B_{18}Si_2$ glassy alloys, mag. transition, inhomogeneity effects 7−92427
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, irreversible mag. permeability decay 7−92463
$(Fe_{0.1}Ni_{0.33}Co_{0.55}Cr_{0.02})_{78}Si_8B_{14}$, magnetic stability, reversible disaccommodation w.r.t. demagnetization 7−92471

silicon alloys continued
$(FeNiCo)_{100-x}(SiB)_x$ amorphous alloys, adhesive wear and friction coeffs. comp. depend. meas. 7−91717
$(Fe_{0.1}Ni_{0.35}Co_{0.55})_{78}Si_8B_{14}$, pre-annealed amorphous, mag. relaxation 7−77382
FeNiCrMoSiB, amorphous, electronic transport studies 7−137895
$Fe_3Ni_{82.24}Cr_7Si_{4.5}B_{3.2}C_{0.06}$, amorphous struct., X-ray diffraction study 7−131047
$Fe_{40}Ni_{38}Mo_4B_{17}Si$, composite amorphous powder cores, prep. and mag. props. 7−132081
$Fe_{82-x-y}Ni_xMo_yB_{16}Si_2$ amorphous alloys, hyperfine interactions, Mo effects, Mossbauer study 7−112266
$Fe_{39}Ni_{39}Mo_2(SiB)_{20}$ mag. metallic glasses, corrosion resist. in acidic and neutral aqueous solns. 7−93172
$Fe_{39}Ni_{39}Mo_4Si_6B_{12}$, crystallisation, Mossbauer spectroscopy 7−142633
$Fe_{39}Ni_{39}Mo_4Si_8B_{12}$, metallic glass, crystallisation, effect of Mo and Si 7−142628
$(Fe_{1-x}Ni_x)_{77}Si_{10}B_{13}$, amorphous alloy, mag. contribution of Fe and Ni *(Korean)* 7−85353
$Fe_{15}Ni_{60}Si_{10}B_{15}$ amorphous alloy, Debye temp., quadrupole splitting temp. depend., Mossbauer study 7−70678
$Fe_{25}Ni_{55}Si_{10}B_{10}$ metallic glass, mag. elec. and elastic props. 7−85362
$Fe_{40}Ni_{40}Si_{13}B_7$ amorphous ferromagnet, temp. depend. of mag. props. 7−132165
$Fe_{50}Ni_{30}Si_{10}B_{10}$ amorphous alloy, crystn. and relax. during pulse heating 7−71228
$Fe_{50}Ni_{30}Si_{10}B_{10}$, metallic glass, rapidly heated, crystn. 7−76015
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
$Fe_{1.4}Ru_{1.6}Si$ reentrant spin glass, magnetisation and Mossbauer studies 7−112801
FeSi, BCC polycrystals, stress-strain curves analysis 7−138801
FeSi bicrystals, intergranular SCC, nucleation and growth rel. to slip 7−138907
FeSi grain orientated sheets, stray field profile 7−105962
α-FeSi solid soln.,-Zn vapour system, phase relations, diffusion paths 7−77950
FeSi, temperature-induced magnetism, neutron scatt. meas. 7−118781
FeSi, transformer steel, heat loss mag. macrostruct. 7−113611
$Fe_{0.5}Si_{0.5}$ (100), quantitative Auger anal., noble gas ion sputtering 7−125872
$Fe_{100-x}Si_x$, rapidly quenched alloys, Mossbauer effect studies 7−113038
Fe_3Si, spin dynamics above T_C, high resolution inelastic neutron scatt. study 7−85311
$Fe_{72}Si_{18}B_{10}$ amorphous alloy, second order mag. phase transition 7−85295
$Fe_{78}Si_{10}B_{12}$ amorphous alloy, crystallisation activation energy 7−97955
$Fe_{78}Si_{10}B_{12}$ glass, mag. annealing influence on shear modulus and internal friction, piezomag. props. 7−70622
$Fe_{78}Si_{10}B_{12}$, RF sputtered thin films, SAW attenuation *(Japanese)* 7−124671
$Fe_{78}Si_{10}B_{12}$, WC particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
$Fe_{78}Si_9B_{13}$ amorphous alloys, calorimetric, mag. and mech. props., influence of P 7−117829
$Fe_{7.5}Si_{10}B_{15}$ metallic glass wire, struct., X-ray diffr. 7−83763
$Fe_{80}Si_6B_{14}$, electrical and thermal conductivities at low temp. *(Russian)* 7−124953
$Fe_{81}Si_xB_{19-x}$, metallic glasses, transform. behaviour study by SAXS 7−83740
$Fe_{83}Si_5B_{12}$, amorphous alloy, crystn., activation energy 7−83741
$Fe_{90-x}Si_xB_{10}$, amorphous, Mossbauer spectra, quadrupole splitting distrib. 7−85506
$Fe_{90-x}Si_xB_{10}$ amorphous alloys, heat treatment, change D/T_c ratio 7−113734
$Fe_{78}Si_9B_{11}C_2$, metallic glasses, structural defects, Mossbauer study 7−118904
$Fe_{80}Si_6B_xP_{14-x}$, amorphous alloys, magnetostriction, soft mag. props. *(Korean)* 7−138279
$Fe_{80}Si_xP_{20-x}$ amorphous alloys, crystn. *(Korean)* 7−131046
FeZrBiSiB amorphous alloy, relax. phenomena mag. props. 7−111408
$GdMn_2Si_2$, mag. ordering, X-ray, magnetisation and Mossbauer studies 7−138224
$GdSi_2$, Gibbs energy, enthalpy and entropy of form., 830-960 K 7−77945
Gd_5Si_4 and related cpds., cryst. structures, X-ray diffr. study 7−104637
$HoRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$La_{0.95}$ $Gd_{0.05}Ru_3$ Si_2, coexistence of superconductivity and spin glass freezing 7−77128
(La-Ce)Ru_2Si_2 Kondo systems, low temp. heat capacity 7−70521
$LaCu_2Si_2$, phonon density of states, comparison with $CeCu_2Si_2$ 7−69845
$LaRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
Mg-Al-Si, rapidly solidified, microstruct. and props. 7−78125
Mg-Si, activity calc. from phase diagram involving intermediate cpd. using entropy of form. 7−76453
Mg-Si alloys, hypereutectic, rapidly solidified microstruct. 7−126098
Mn_3Si, pure and Fe-doped, itinerant antiferromag., mag. excitations 7−138207
$MoSi_2$, thin films, electronic transport props. 7−143644
$MoSi_2/B_2O_3$-BaO-SiO_2 finely dispersed metal+glass mixture, electrical conductivity of vitreous component 7−92242
Mo_3Si, neutron-induced disordering and amorphisation *(Russian)* 7−97925
Nb-Si, metastable, phase transforms. 7−93008
Nb-Si, rapid solidification, microstruct., phase analysis 7−86153
$Nb_3(Al,Si)$ prepared by continuous rapid quenching, high-field superconducting props. 7−77183
$Nb_3Al_{1-x}Si_x$ supercond. tape prep. by continuous liquid quenching method 7−132517
Nb_3Si, A15 phase, high T_c material, high press. synthesis 7−77121
Nb_xSi, laser alloyed coatings on Nb, high temp. oxidation protection 7−100428
$Nd_2Fe_{14-x}Si_xB$, substituted system, mag. props. 7−105963
$NdMn_2Si_2$, metamagnetic phase transition, magnetocaloric effect 7−132017
$(Ni,Cr,Fe)_{75}Si_{25}$ amorphous film, temp. coeff. of resist., rel. to tempering temp. and noncrystallinity 7−98973
Ni-C-Si, rapidly quenched, nonequilib. phases 7−113521
Ni-Cr-Si-B coatings, plasma sprayed, adhesion, struct., comp, microhardness rel. to laser treatment 7−144269
Ni-Cr-Si-Ce, oxide scale adherence rel. to Ce additions 7−78328
Ni-Cu-Si, modulated struct. during initial transform., TEM study *(Chinese)* 7−144438

silicon alloys continued
Ni-Si alloys, radiation-induced grain boundary segregation, mechanical props. study 7−104876
Ni-Si dilute electron irrad. alloys, void nucleation, solute atom effects 7−91591
Ni-Si oxidation, high-temp. microstruct. and mechanisms, Si alloying effect 7−71396
Ni-Si-B, amorphous wires, melt spinning, bending strength, thermal stability rel. to alloy additions 7−93065
Ni-Si-B, fracture and ductility rel. to comp. 7−113603
Ni-Si-B alloy, amorphous ribbon and powder compaction, densification and bonding 7−92932
Ni-Si-B amorphous and crystallised alloys, wear behaviour study, embrittlement and ductility 7−91718
Ni-Si-B metallic glass system, thermomechanical behaviour, liquid metal corrosion 7−86361
Ni-Si-B metallic glasses, thermal stability, temp. coeff. of resist. 7−105516
Ni-Si-Mn-Fe, high temp. corrosion in SO_2-O_2 gas mixtures 7−86433
$Ni_{77.5}B_{14.6}Si_{7.9}$ amorphous alloy, Auger obs. of metalloid redistrib. 7−117823
$Ni_{78}B_{14}Si_8$, amorphous alloy crystn. 7−83756
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$, metallic glass, thermal stability, internal friction, TEM, DTA 7−69598
$Ni_{78-x}Cr_xSi_{10}B_{12}$ metallic glasses, positron annihilation, crystalline embryos model of struct. 7−132368
$Ni_{80-x}Fe_xB_{16}S_4$ glassy alloy, short range order and mag. props. 7−85324
NiFeSiB amorphous alloys, high field susceptibility peak 7−132075
$(Ni_{1-x}Fe_x)_{77}Si_{10}B_{13}$ metallic glasses, valence bands, XPS obs., many-electron effects 7−119107
$Ni_{80-x}Fe_xSi_8B_{12}$ amorphous magnet, reentrant transition studies 7−143797
$Ni_{73}M_5Si_{10}B_{12}$ metallic glasses, M=Ti, V, Cr, Mn, Fe, Co, Ni or Cu, thermal stability effect of transition metal admixture 7−83757
NiSi dilute alloys, electron-irradiation-induced segregation kinetics study, temp., conc., and dose depend. 7−104842
NiSi, $NiSi_2$ epitaxial silicides, forming conditions in system comprising vacuum condensate and single cryst. Si *(Russian)* 7−92888
$NiSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
$NiSi_2$ epitaxial film, surface struct., low energy ion scatt. studies 7−118219
$NiSi_2$ layers grown on Si (111) by MBE and SPE 7−76679
$NiSi_2$/Si high quality epitaxial films grown by MBE, Schottky contact props. 7−76680
Ni_3Si-Ti, intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7−126170
$Ni_{75}Si_8B_{17}$ amorphous alloy sheets, spray quenching, warm rolling, surface smoothing and densification 7−86090
$Ni_{75}Si_8B_{17}$, amorphous alloy, spheroidisation process 7−144357
$Ni_{75}Si_8B_{17}$ spray-quenched amorphous alloy powder prod. and warm-consolidation 7−92929
$Ni_{75}Si_8B_{20}$, amorphous alloy, anisotropy of tensile props. 7−86233
$Ni_{77.5}Si_{7.9}B_{14.6}$, amorphous, crystallisation process, FIM, atom probe techniques *(Korean)* 7−137257
$Ni_{78}Si_{10}B_{12}$ metallic glass, dispersed with μm sized WC particles, yield stress 7−113607
$Ni_{78}Si_8B_{14}$, metallic glasses, corrosion behaviour, role of B and Ni 7−86490
$Ni_{78}Si_8B_{14}$, metallic glasses, wear mechanism 7−113725
$Ni_{78}Si_8B_{14}$, thermal expansion, 20-400 K 7−98525
$Ni_{78}Si_xB_{22-x}$ metallic glasses, thermal stability, crystallisation, exoelectron emission study 7−131025
$Ni_{80}Si_{10}B_{10}$, $Ni_{80}Si_5B_{15}$, metallic glass ribbons, US stressing, fracture toughness 7−113672
$Ni_{73}V_5Si_{10}B_{12}$, metallic glass, crystallisation kinetics, exoelectron emission, effect of hydrogenation 7−132420
$NpCo_2Si_2$, high pressure Mossbauer studies of magnetic actinide systems 7−118899
Pd-(Fe,Co,Ni)-Si metallic glasses, crystallisation kinetics, resist. obs. 7−83760
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
Pd-Cu-Si metallic glass, solid-undercooled liq. interfacial energy 7−76558
Pd-Ni-Si-Be-B liquid metal ion source, emission props., ambient gas effects 7−68101
Pd-Si, amorphous, H diffusivity rel. to comp. 7−105143
Pd-Si, glassy, crystallisation, H absorption, internal friction, elec. resist. 7−104588
Pd-Si, glassy alloys, two-site model of H solubility 7−106522
Pd-Si, liq. alloys, thermodynamic behaviour 7−77947
Pd-Si, rapidly quenched, comparison with form. by mech. alloying 7−113476
Pd-Si metallic glass struct. determ. using scanning tunnelling microscope 7−142540
Pd-Si metallic glasses, stabilisation by irrad. with picosecond laser pulses 7−117973
Pd-Si metallic glasses, surface-induced crystn., DSC study 7−111405
Pd-Si metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Pd-U-Si glassy alloys, electronic struct., photoelectron spectra 7−98791
Pd-U-Si glassy and icosahedral alloys, low temp. thermal cond. meas. 7−70276
$Pd_{77.5}Cu_6Si_{16.5}$, amorphous, relax., internal friction 7−106565
$Pd_{77.5}Cu_6Si_{16.5}$ metallic glass, internal friction near the glass transition temp. and crystallisation temp. 7−76295
$Pd_{77.5}Cu_6Si_{16.5}$, metallic glass, internal friction, creep, annealing effect *(Japanese)* 7−93059
$Pd_{77.5}Cu_6Si_{16.5}$, metallic glasses, mech. relax., glass transition, internal friction 7−106564
$Pd_{77.5}Cu_6Si_{16.5}$, undercooled melts, $PdSi_3$ nucleation 7−131272
PdSi-base amorphous alloys, thermal expansion and vol. effect on transform. *(Chinese)* 7−143054
$Pd_{77}Si_{23}$, amorphous ribbons, crystallisation, effect of Cr and Si coating 7−142626
$Pd_{77}Si_{23}$ metallic glasses, crystn. kinetics, effect of surface 7−117830
$Pd_{80}Si_{20}$, amorphous, liq. quenched, cold rolled, SAXS obs. 7−126147
$Pd_{80}Si_{20}$, amorphous, thermal stability, effect of surface oxidation *(Chinese)* 7−144581
$Pd_{80}Si_{20}$ amorphous alloys, low temperature neutron irrad., defects, diffuse X-ray scatt. studies 7−98260
$Pd_{80}Si_{20}$ metallic glasses, creep behaviour *(Chinese)* 7−132664
$Pd_{82}Si_{18}$, metallic glasses, relax., thermophys. investig. 7−97980

silicon alloys continued
$Pd_{1-x}Si_xH_y$ amorphous alloys, H solubility, press.-comp. isotherms, EMF and resistivity meas. 7−118107
$Pd_{58.8}Si_{20.6}U_{20.6}$, icosahedral and glassy, low-energy modes, neutron inelastic scatt. 7−118048
$Pd_{58.8}U_{20.6}Si_{20.6}$ icosahedral alloy, quasicrystallinity 7−104638
PdX (X=C, Si, Ge Sn), LCGTO MP LSD calcs. 7−109694
$Pr_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
Pt-Si, glassy alloys, dielec. functions and optical conductivity 7−99791
PtSi on Si and Si:As, growth kinetics and microstructure 7−76698
PtSi thin films and wires, weak localisation, magnetoresistance 7−84828
PtSi thin wires, localisation and electron-electron interaction effects 7−125152
PtSi-Si (111) interface and epitaxial growth of PtSi and Si (111), electron microscopy 7−76643
Pt_2Si on Si and Si:As, growth kinetics and microstructure 7−76698
RuFeSi melt-spun cluster spin glass, spin dynamics, Mossbauer studies 7−112802
Ru_2Si_3 epitaxial films on Si (111), structural identification 7−76692
Si-Au mixture films, oxidation behaviour, appl. for integrated circuits 7−113735
Si-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
Si-$CoSi_2$ thin films, periodic eutectic structures 7−126091
Si-Fe annealed ribbons, change of permeability 7−132087
Si-Fe single cryst., domain struct., uniaxial stretching effects 7−138266
Si-Ge solid solution, high-speed temp. sensor appl. 7−134741
$Si_{1-x}Ag_x$:H amorphous thin films, RF sputtered, optical props. 7−92757
SiC whisker reinforced $MoSi_2$, crack deflection as toughening mechanism 7−100341
a-$Si_{1-x}C_x$, dielectric fn., tetrahedron model 7−118395
a-$Si_{1-x}C_x$:H films, optical constants, film microstruct., optical response, chemical ordering 7−119060
SiCoTa dilute alloy, Ar^+ sputtering and surface composition changes *(Chinese)* 7−85920
Si_3N_4-Al cermet, prep. and densification 7−77919
$TbRh_{2-x}Ir_xSi$, cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
Tb_xSi_{1-x}, amorphous, neutron scatt. study of atomic local order 7−75996
ThIrSi, point contact spectroscopy 7−77167
Ti-Al-Zr-Mo-Si, low cycle fatigue rel. to silicide precip. 7−100371
Ti-Al-Zr-Mo-Si-based alloys, α_2 phase precipitation and embrittlement *(Russian)* 7−144405
Ti-Si, ion implanted, thermal oxidation studies 7−78359
Ti-Si, oxidation, O dissolution rel. to alloying elements, microhardness 7−86422
Ti-Si, oxide film adherence, influence of nature of alloying elements 7−126312
Ti-Si, solid solns., itinerant antiferromagnetism, mag. susceptibility meas. 7−138198
Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti-Si-Al, low-energy ion bombardment-induced preferential sputtering, statistical model calcs. 7−77732
$Ti_{62.5}Cu_{12}Ni_{23}Si_{2.5}$, metallic glasses, struct. changes 7−91467
$Ti_{70}Ni_{25}Si_5$, metallic glass, electron phenomena before and after crystallisation 7−125847
$Ti_{75}Ni_{20}Si_5$ alloys, amorphous and crystalline, acid corrosion 7−100444
$Tm_{1-x}Lu_xCu_2Si_2$, mag. props. and sp. ht. studies 7−118778
UIr_2Si_2, point contact spectroscopy 7−77167
UPt_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2 7−112747
URu_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, heavy fermion system, high press. magnetisation studies 7−77355
URu_2Si_2, heavy Fermion system, Hall effect and resistivity study 7−98988
URu_2Si_2 heavy fermion system, 17.5 K transition, thermopower and elasticity studies 7−98994
URu_2Si_2, mag. and thermal props., crystal field effect calcs. 7−112253
URu_2Si_2, mag. excitation, temp. depend. 7−77233
URu_2Si_2 single cryst. heavy fermion system, Fermi surface reconstruction, Hall effect meas. 7−131616
USi_x, elec. resist., temp. variation 7−92153
$U_{1-x}Th_xCu_2Si_2$, effect of Th substitution on magnetism 7−125456
V-Ni-Si, rapidly solidified, two-dimensional quasicrystal with eightfold rotational symmetry 7−137317
V-Si system, vaporization thermo-dynamics in V-rich region, high temp. Knudsen cell mass spectrometry 7−111845
V-Si thin film, A15 supercond., sp. ht. meas. 7−112662
$V_{1-x}Si_x$, high field magnetoresistance studies *(German)* 7−124968
$V_{1-x}Si_x$ supercond. amorphous alloys crit. mag. field, evidence for weak localisation effects 7−99367
V_3Si 7−131609
V_3Si, anharmonicity, X-ray diffr. study 7−104946
V_3Si films, reactive diffusion formed, superconducting transition temps. 7−112553
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
V_3Si, plastically deformed, lattice defects, positron annihilation study 7−106298
V_3Si single cryst., dynamic charact. temp. depend., X-ray thermal diffuse scatt. meas. 7−98360
V_5Si_3/V_3Si oriented eutectic interphase interface, TEM study *(French)* 7−71166
$V_3SiFe_xCo_y$, Fe and Co impurity crystallographic positions, X-ray emission spectra studies *(Russian)* 7−70942
V_3SiH_x polycryst. superconductor, sp. ht. temp. depend., H interstitial effects study 7−69925
V_3TiSi, fusion blanket structural material, corrosion behaviour *(German)* 7−132826
WSi_2, thin films, electronic transport props. 7−143644
$Y_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$Y_2Fe_3Si_5$, electronic struct., X-ray emission spectra *(Russian)* 7−113316
$Y_2Rh_3Si_5$, monoclinic structure, X-ray diffr. studies 7−69649
$YbCo_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$YbFe_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
YbM_2Si_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
$YbPd_2Si_{2-x}Ge_x$, spin fluctuation changes 7−77300

silicon alloys continued
YbSi, nearly localised heavy fermion antiferromagnet 7−70562
Zn-Al-Si, hot dip coating on steel sheet, formability, tensile and bending props. *(Japanese)* 7−78110
Zn-Al-Si, mech. props., lubricated wear rel. to ageing 7−132766
Zn-Al-Si, wear resist., microstruct,, heat treatment 7−138850
$Zr_{1-x}Si_xM_2$ (M=Mn, Fe, Co) Friauf-Laves phases 7−117863

silicon compilers *see circuit layout CAD*

silicon compounds
see also quartz; silicon alloys; silicones
aerosil surface, modification by organo-silicon cpds., reactions, ^{29}Si NMR study 7−78551
Au-SiO, thin cermet film, elec. cond. and thermopower 7−143538
betalomonosovite cryst. struct., X-ray diffr. meas. and refinement 7−124205
borosilicate glass, plastic flow under heavy ion bombardment 7−131211
catalytic oxidation, photoemission studies 7−93221
circumstellar silicates, optical and near-IR emission pros. 7−145937
disilene, electronic structure, ab initio studies 7−129617
feldspar melts with additives, wetting, viscosity, behaviour during heat treatment 7−98536
low-temperature RF plasma anodisation and deposition 7−93213
magadiite-polyacrylonitrile intercalation compound, prep. and conversion to SiC 7−119228
magadiite-polyacrylonitrile intercalation compound, Si_3N_4 form. by carbothermic reduction 7−119229
mica mineral fracture, generation of X-ray spectra w.r.t. vacuum sparks 7−125842
montmorillonite, Mossbauer spectra, influence of cation substitutions on hyperfine parameters *(Chinese)* 7−132175
mullite-zirconia ceramics, slip casting 7−86098
mullite-zirconia composites, obtained by reaction sintering, microstruct. development 7−86117
mullite-zirconia composites and mullite, prep. and mech. props. 7−86118
mullite-ZrO_2(-Al_2O_3), tough ceramic composites, microstruct. 7−78058
multilayer and single layer thin films, small angle X-ray diffr. study *(Chinese)* 7−118288
multimicroelectrode for neural impulse meas., fabricated by Si dry etching 7−114569
NASICON ionic cond., microstruct. and water reactivity, comp. and processing parameters depend. 7−118154
NMR shielding consts., quadrupole coupling, ab initio calcs. 7−68342
nucleophilic substitution reactions, MO calcs. 7−93280
organophilic silicate surfaces, in alcohol (surfactant)-water-electrolyte media, adhesion, thermodynamics 7−112021
oxide growth on Si, variable refractive index 7−71409
pentasil zeolites, isomorphous substitution, ^{29}Si MAS NMR spectra 7−135966
polysilicon oxide film growth by rapid thermal processing 7−86496
polysilicon-SiN_xO_y-Si_3N_4-SiO_2-Si structs., cond. props. of oxide layers 7−105728
polysilicon-SiO_2 transition layers, Hubbard subband cond. 7−125136
Raman background nature *(German)* 7−68316
Si-Si_3N_4, interface formation by catalytic nitridation, XPS study 7−126330
sialon, ceramic synthesis from intercalation cpds. by carbothermal reduction 7−77895
β′-sialon, prep. and densification from oxides 7−138724
sialon and syalon powders, prod., props. and appls. 7−138722
sialon ceramics, high temp. props., influence of secondary phases *(French)* 7−71259
sialon ceramics, non-oxide, conf., Limerick, Ireland (Jul. 1985) 7−134361
sialon ceramics, prep., reaction sequences 7−138723
sialon ceramics, prep. from low-cost raw materials 7−138725
sialon ceramics, wear behaviour in sliding contact 7−126265
α′-β′-sialon composites, form., reaction mechanisms 7−77918
sialon materials, charactn. and props. 7−126248
β′-sialon phase, struct. evolution under high press. and high temp. 7−137349
β′-sialon powders, derived from aluminosilicate minerals, densification behaviour 7−138726
sialon-metal glasses, multianion, prep. and charactn. 7−126079
β-sialon-SiC composites, annealing, mech. props., thermal expansion *(Japanese)* 7−132654
sialons, α′ and β′, form. and prep., role of Nd_2O_3 as additive 7−77897
sialons, α- and β-phase, sintering, effect of N_2 gas press. *(Japanese)* 7−126065
sialons, materials development study 7−138717
α′-sialons, Y, prep. and charactn. 7−126076
SiC fibres, CVD coated with C(SiC), EELS and SIMS studies *(French)* 7−113413
silanes, chemisorption on Si (111) 7×7 7−143192
silica, adsorption of rhodamine B, depth profile, photoacoustic spectrosc. obs. 7−124681
silica, fused, O_2^- emission band in phosphorescence and photoluminescence 7−125795
silica, vitreous, impurity ion homogeneous optical linewidth, Raman contrib. determ., temp. depend. calcs. 7−77610
silica aerogel, positron annihilation, Doppler broadening-ang. distrib. correl. obs. 7−106297
silica aerogels, specific heat and thermal conductivity meas., fractal model anal. 7−100621
silica fibre light guide, doping additives, Raman scatt. determ. 7−114059
silica fused matrix, Yb foil gauge piezoresist. response under shock loading to 45 kbar 7−69078
silica gel, chem. shift anisotropy, ^1H NMR *(German)* 7−92530
silica gel packed beds, moisture transport, exptl. obs. 7−128497
silica gel packed beds, moisture transport, theory 7−128496
silica polymorphs, bond, pot. functions, struct. and elastic props., ab initio quantum mechanical calcs. 7−76072
silica polymorphs, glasses and crysts., tetrahedra vibrational interactions calcs. 7−76329
silica rough particles in soln., surface fractal props., colloids growth simulation model, comment and reply 7−76051
silica suspension, polyacrylamide soln., flocculation, rheological behaviour study 7−114009
silica synthetic materials, porosity 7−111902
silicalite, adsorbed aromatic mols., heat of adsorpt., calorimetric study 7−76605
silicate, shortest known interpolyhedral O-O distance 7−69688

silicon compounds continued
silicate clays, mixed layered, ion size and substrate rigidity, X-ray and Raman spectra investig. 7−83945
silicate component of Mars dust 7−120296
silicate fluffy dust grains of Periodic Comet Halley (1982i) and Periodic Comet Giacobini-Zinner (1985 XIII) 7−115323
silicates, bond, pot. functions, struct. and elastic props., ab initio quantum mechanical calcs. 7−76072
silicates, Raman spectra 7−132248
silicates, stability studies using molecular models 7−96545
silicates, strip-chain defects, electron microscopy and electron and X-ray diffr. studies 7−137357
SiN_x:H, amorphous, density of gap states, effect of N incorporation, SCL current meas. 7−98935
SiO_2, vitreous peroxy linkage, semi-empirical calc. 7−137246
SiO_2 film thermal and atomic beam assisted desorpt. from Si surface, AES and LEED studies in ultrahigh vacuum 7−91969
SiO_2 fused silica fibres, damage threshold meas. using long optical pulse XeCl lasers 7−136386
SiO_2 substrate, InP film deposition and recrystallisation using Ar^+ laser *(Chinese)* 7−92862
SOI films, depth profiles of optical props., ellipsometry study 7−99788
SOI films, paramag. centres at Si-SiO_2 interfaces 7−112943
syalon ceramics for appl. at high temp. and stress 7−138807
tetracoordinated, nucleophilic substitution pathways, MO calcs. 7−93279
tridymite single crystals, reconstructive high temp. transformation to cristobalite 7−69903
zirconia-mullite composites, reaction sintered with MgO and CaO additions, TEM study 7−132556
Pt/SiO_2/n-Si photoelectrodes in I and Br aq. solns., elec. props. and thermal oxide growth 7−100585
Ag-HfO_2/SiO_2-Ag struct., metal film boundary influence on luminesc. intensity 7−85840
Ag-SiO_2 interface, preferred orientations 7−124793
$Ag_7SiS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7−84382
Al/SiO_2/Si struct., interface states charact. meas., optical MOS admittance technique 7−105714
Al/SiO_2/Si tunnel diode, localised state interactions and low freq. resist. fluctuations study 7−112505
Al/SiON/GaAs MIS systems, C-V characteristics 7−105716
Al-SiN:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7−138089
Al-SiO_2-Si capacitors, const. current avalanche hole injection, feedback voltage anal. 7−143623
Al-SiO_2-Si structs., defect spectrum responsible for breakdown 7−143626
Al-SiO_2-Si structs., local electrophys. props. of elec. active defects 7−143627
Al-SiO_2-Si:Rh, MIS struct., influence of Rh 7−143618
Al-SiO_2-nSi, peaked Schottky barrier investig. 7−85124
Al-SiO_x-p-Si MIS minority carrier grating type solar cells, temp. depend of I-V charact 7−78639
Al-SiO-Si, MIS solar cells, I-V charact., 100-450 K 7−119661
Al-SiON:H-semicond. elec. props., stable bonding ratio effects in plasma deposited insulating film 7−138089
$Al_xGa_{1-x}As/Si_{2x}(GaAs)_{1-x}$/GaAs quantum well structs., impurity-induced layer disordering and thermal annealing 7−70097
Al_2O_3-Br_2O-SiO_2 electroceramic, crystalline and glassy phases, mechanical props., neutron irrad. effects study 7−84038
Al_2O_3-Si_2O-X_2O mixture (X=Li, Na, Rb, K), F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
Al_2O_3-Si_3N_4, hot-pressed ceramics, elec. charact. 7−112332
Al_2O_3-SiO_2, corundum in mullite, solid solutions, crystal-chemical model 7−104661
Al_2O_3-SiO_2, crystn. behaviour of Al_2O_3 in presence of SiO_2 7−91447
Al_2O_3-SiO_2, mechanical activation of reaction, wet grinding, aluminosilicic acid 7−92940
Al_2O_3-SiO_2, mullite, silicate melt corrosion, microstruct. 7−86378
γ-Al_2O_3-SiO_2, surface struct., catalysis and electronic state 7−131408
Al_2O_3-SiO_2, translucent mullite ceramics, pressureless vacuum sintering, grain size 7−113492
Al_2O_3-SiO_2 ceramic, corrosion in S-O_2 atmosphere 7−132775
Al_2O_3-SiO_2 electroceramic, crystalline and glassy phases, mechanical props., neutron irrad. effects study 7−84038
Al_2O_3-SiO_2 gels and sols, growth processes and struct. 7−119587
Al_2O_3-SiO_2:Cr^{3+} mullite glass and ceramic, impurity optical linewidths, resonant fluorescence line narrowing study 7−77608
Al_2O_3-SiO_2-Fe_2O_3, Fe solubility in mullite, temp. depend 7−91811
Ar-SiH_x discharges, optical emission spectroscopy 7−83536
B_4C abrasive material props. influence on US machining effectiveness of ceramics 7−78295
B_2O_3-SiO_2, monodisperse particle processing 7−106470
BaO-$LaO_{1.5}$-SiO_2, glasses, struct., Raman spectra 7−77539
BaO-$YO_{1.5}$-SiO_2, glasses, struct., Raman spectra 7−77539
Bi_2O_3-SiO_2, sillenites, electroreflectance spectra, fundamental absorpt. edge 7−144017
$Bi_{12}SiO_{20}$, induced impurity photoelectret state 7−70696
$Bi_{12}SiO_{20}$:Al,Mn single crystals, transient electrooptical effects due to deep impurity states *(Japanese)* 7−132240
C fibre reinforced SiC, morphological and mech. charactn. 7−78237
C/SiO_2-gel powder mixtures, elec. and. meas., time depend. DC resistance 7−70368
C/SiO_2-gel powder mixtures, elec. conduction meas., press. depend. 7−70369
C-Si-O(B) thin films, plasma CVD, X-ray mask substrate appl. 7−100105
CaO-Al_2O_3-SiO_2, molten silicates, heterogeneous dissoln. of refractory oxides 7−91812
CaO-MgO-Fe_2O_3-Al_2O_3-Cr_2O_3-SiO_2 system, phase comp. and compatibility 7−77959
CaO-SiO_2 glasses, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
$CdSiP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$CeCu_2Si_2$ heavy fermion supercond., single particle tunnelling spectra studies 7−105855
$Co_xNb_yTi_z$-SiO_2 double layered mag. films, domain wall structs. 7−99529
CoO-Al_2O_3-SiO_2 spin glass, sp. ht., anomalous field depend. near spin freezing temp. 7−112814
$CoSiF_6.6D_2O$, rhombohedral-monoclinic transition, ^2D NMR study 7−124475

icon compounds continued
$CoSiF_6.6D_2O$, struct. phase transitions, ^2H NMR 7−91795
Cr-Si oxide insulating wear protecting layer manufacture by reactive DC sputtering *(German)* 7−144277
Cr-SiO cermet thin films, prep. and elec. props. 7−132469
Cr-SiO cermets, solar selective absorbers, high temp. treatment 7−144912
Cr-SiO_2, ion mixing at low temp., chemical effects 7−76499
Cs_2O-Na_2O-Al_2O_3-SiO_2 zeolite, synthesis, cryst. struct., IR spectra, X-ray diffr. anal. 7−98005
Er: GeO_2-SiO_2 fibre laser, 1555 nm, low-threshold CW operation 7−136314
Fe/SiO_2, composition modulated films, sputter deposition system 7−100065
Fe/SiO_2, compositionally modulated films, mag. props. 7−99524
Fe/SiO_2 system, Ar^+ irradiated, ion beam mixing effects 7−117983
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props. 7−99530
FeCrCPSi metallic glass, Curie temp. determ., quench rate effects on structural state, DSC study *(French)* 7−99458
Fe_2O_3-SiO_2-Al_2O_3, proppants, microstruct., strength and environmental degradation 7−106646
$FeSiF_6.6H_2O$, mag. susceptibility, energy spectrum, low temp. and high press. study 7−138276
GaAs-Si_3N_4, plasma deposited encapsulation layers 7−113341
$(GaAs)_{1-x}(SiC_2{:}H)_{1-x}$ polycrystalline films, MOCVD grown, AC and dielec. props. 7−70438
Ge-GeO_2-Si_3N_4 MIS structures, mechanical and electrical props. 7−143629
Ge-Si_3N_4, refractive index meas., immersion ellipsometry 7−73403
Ge-substituted silicate cages, ^{29}Si 2D NMR 7−90197
GeO_2-SiO_2 glasses, struct. determ by XANES, EXAFS and WAXS 7−83712
H_2-Si-SiH_4, glow discharge, dominant reaction channel and SiH_4 decomp. mechanism 7−106802
H_3PO_4-CaO-Al_2O_3-SiO_2, hardened bodies, thermal changes, microhardness 7−113682
$H_4Si(W_3O_{10})_4$, polytungstic acid, preparation and physical props. 7−106202
InAs-SiO_2, transverse conduction mechanism, at low temps. 7−85122
In_2O_3:Sn-SiO_2-Si MOS structs., optically activated interface states, expt. study 7−70415
In_2O_3-SiO_2-Si solar cells, aging effects investig. using Auger electron spectroscopy 7−100731
InP-SiO_2, laser recrystallisation of InP films *(Chinese)* 7−131165
InSb/SiO_2/poly-Si MOS structures, elec. props. 7−105711
InSb/SiO_2/poly-Si structures, InSb surface conductivity 7−105712
InSb-SiO_2 MIS diodes, photoCVD deposition 7−138067
K_2O-Al_2O_3-SiO_2, feldspar, growth twinning mechanisms 7−104762
K_2O-Ga_2O_3-SiO_2 glass, durability in HNO_3 rel. to comp. and struct. 7−93132
K_2O-SiO_2 glasses, ionic diffusion and frequency dependent conductivity 7−76486
$K_2Si_4O_9$ glass, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
$LiAlSi_mO_{2m+2}$ liquids, viscosity meas. *(French)* 7−131347
$LiNbO_3$-SiO film structure, surface acoustic cnoidal waves and solitons 7−70056
LiO_2-SiO_2 melt and glass, structural simulation, molecular dynamics calc. *(Japanese)* 7−76005
Li_2O-CaO-MgO-Al_2O_3-SiO_2 glasses, thermal conductivity study, crystalline products 7−137637
Li_2O-CdO-SiO_2 system, glass-ceramic and glasses, elec. props., neutron absorpt. 7−143948
Li_2O-CdO-SiO_2 system, glasses and glass-ceramics, density, thermal expansion, mech, props. 7−144511
Li_2O-SiO_2 glass ceramic, crystn. kinetics 7−142596
MgO-Al_2O_3-SiO_2, cordierite, lattice thermal expansion, neutron diffr. obs. 7−98521
MgO-Al_2O_3-SiO_2-Si_3N_4-based glass-ceramics, prep. in Mg-sialon system 7−77932
MgO-Si_3N_4, hot-pressed ceramics, elec. characts. 7−112332
$Mg_8SiW_9O_{37}.24.5H_2O$ trigonal struct., topotactic relations and thermal dehydration 7−142723
Mn/SiO composite thin films, spectral selectivity meas. 7−138528
MnO-Al_2O_3-SiO_2 spin glass system, calorimetric and susceptibility studies 7−112819
Mo/fused SiO_2 interface, thermocompression, SIMS study 7−105290
$NaFeO_2$-SiO_2, silica-containing ferrite phases, phase equilibria 7−132590
$NaNbO_3$-SiO_2 glass, ultrasonic vel. and attenuation, pulse-echo meas. 7−142916
$NaNbO_3$-SiO_2 glasses, dielec. props. comp., freq. and temp. depend. 7−143952
Na_2O-CaO-SiO_2 glass, Vickers indentation, four point bending delayed fracture, crack growth characts. *(Japanese)* 7−93086
Na_2O-CdO-SiO_2 system, opal glass, microstruct. characterisation 7−111415
Na_2O-Fe_2O_3-SiO_2 glass, struct., bonding, coordination number, EXAFS, X-ray diffr. 7−76007
Na_2O-Ga_2O_3-SiO_2 glass, durability in HNO_3 rel. to comp. and struct. 7−93132
Na_2O-SiO glasses, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
Na_2O-SiO_2 glass, radiation damage and annealing for radwaste 7−103267
Na_2O-SiO_2 glass against $(NaNO_3)_{0.9}(TlNO_3)_{0.1}$ melt, ion exchange behaviour 7−93302
Na_2O-SiO_2 glasses, ionic diffusion and frequency dependent conductivity 7−76486
Na_2SiF_6, cryst. struct., pseudotrigonal polar phases in double hexafluorides 7−69686
$Na_2Si_4O_9$ glass, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
$Na_{1+x}Zr_2Si_xP_{3-x}O_{12}$:MgO(CaO) NASICON superionic ceramics, chem. comp. and phase homogeneity, sintering conditions effects 7−119191
Nb/SiC joint, intermediate cpd. growth at interface 7−124728
Ni/SiO_2/Si multilayers, ion mixing, isotropic and anisotropic transport 7−76235
Ni-SiO, composite film, fracture characteristics 7−78212
Ni-SiO interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7−70946
Ni-SiO_2, ion mixing at low temp., chemical effects 7−76499
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7−136466

silicon compounds continued
P_2O_5-GeO_2-SiO_2 optical fibre preform, parameters distrib. along radius 7−136467
PbAuIn-SiO-PbBi Josephson junction, RF plasma oxidised, annealing and aging phenomena 7−118722
PbO-SiO_2 glass, ^{29}Si environment, magic angle spinning NMR studies 7−104577
Pd/Al_2O_3/SiO_2/Si struct., appl. as H sensor 7−71053
Pd/SiO_2/semicond. diode H_2 sensor, ultrahigh vacuum studies 7−124689
Pd-SiO_2-Si MOSCAP sensors, admittance studies of H_2-induced states 7−80775
$Pd_xSi_{1-x}H_y$, amorphous, H diffusion, quasielastic neutron scatt. study 7−84372
Pt/SiO_2 catalysts, use in CO oxidation, integrated kinetic modelling and transient FTIR studies 7−126421
Pt-SiO_2, adsorpt. of NO, IR obs. 7−135941
R_2O_3-SiO_2 (R=Pr, Dy, Er) silicate glasses, sol-gel prep. 7−132977
$RhCl_3$-SiO_2 catalyst, CO absorpt. and thermal desorpt., H_2S effect 7−113987
$Rh(NO_3)_3$-SiO_2 catalyst, CO absorpt. and thermal desorpt., H_2S effect 7−113987
Rh_2O_3-SiO_2 catalyst, CO absorpt. and thermal desorpt., H_2S effect 7−113987
SF_4^+, $\tilde{D}^2A_1$-$\tilde{C}^2T_2$ emission band, John-Teller distortion 7−68337
SI_3N_4 LPCVD antireflective coating on MIS/IL solar cell 7−86805
SI_3N_4-Si, point defects influence on LOCOS process 7−131143
S_1O_2 particles, gelation, critical viscoelasticity 7−104233
Se_xTe_{100-x} glasses, struct. and electronic props. 7−142612
Si:BF_2-SiO_2, ion implantation, F behaviour with rapid thermal annealing 7−137383
a-Si:H/a-$Si_{1-x}C_x$:H multilayers, persistent photoconductivity, doping effects 7−77003
a-Si:H/a-$Si_{1-x}N_x$:H superlattices and a-$Si_{1-x}N_x$:H films, electron-hole recombination processes 7−70905
a-Si:H/a-SiN_x:H amorphous superlattice films, photoacoustic spectra 7−85764
a-Si:H/a-SiN_x:H multilayer films, plasma deposition, persistent photoconductivity 7−76999
a-Si:H/a-SiN_x:H multilayer structures, steady-state photomodulation spectroscopy 7−118592
a-Si:H/a-SiO_x:H microporous superlattices, confinement and fluoresc. of aromatic mols. 7−122609
a-Si:H-Si_3N_4:H double barrier structs., resonant tunnelling through quantised states 7−131800
a-Si:H-Si_3N_4:H double-barrier structures, reson. tunnelling 7−118593
Si:H-SiN_x:H, amorphous superlattices, phonon stop bands 7−124673
a-Si:H-SiO_x:H, ultrathin layers, photoemission spectroscopy 7−125909
Si:Nd-SiO_2 interface, elec. props. 7−99209
Si:Nd-SiO_2 interface, negative elec. effects 7−125137
Si/Si_3N_4, local bonding and electronic structure, EELS studies 7−99153
Si/SiO_2, local bonding and electronic structure, EELS studies 7−99153
Si/SiO_2 interface, high-resolution TEM obs. 7−76632
Si/SiO_2 interface, in MOS struct., EPR obs. 7−112949
Si/SiO_2 interface of SiO_2 precipitates in Si, defects, EPR obs. 7−112954
Si/SiO_2 interface trap state props., EPR studies, overview 7−112948
Si/SiO_2/$Si_xN_yO_z$/Al struct., varying-gap dielec., current transport and charge storage characts. *(Russian)* 7−112506
Si-Al-O-N, high-temp. oxidation by water vapour 7−113744
Si-Al-O-N system, Al solubility 7−84285
Si-Al-O-N system, microstruct. engng. of ceramics for high temp. appl. 7−77914
Si-B system, thermodynamic data for borides, optimisation 7−131332
a-Si-C: H alloy systems, optical absorption and disorder 7−132297
Si-C-O system, thermodynamics, relevance to SiC and Si prod. 7−143051
Si-C-O-N, oxynitride ceramics, dense, low cost, microstruct. 7−77894
Si-O, oxide layers, cathodoluminescent monitoring of dopant distrib. in Si 7−77660
Si-O, substrate, Langmuir monolayers of fatty acid salts, mean free path of electrons 7−77707
Si-O-N, prep. and densification from oxides 7−138724
Si-O-N fibres, prep. and mech. props. *(Japanese)* 7−126070
Si-Si_3N_4 SoI structures, ion beam synthesis and lamp annealing 7−112099
Si-Si_3N_4-Si buried layer structures, ion beam synthesis 7−76164
Si-Si_3N_4-Si buried layer structures with rectangular profiles, ion beam synthesized 7−76635
Si-SiN_x-Si structure formed by ion implantation, structural characterisation 7−76634
Si-SiO_2, defects in device oxides, soft X-ray damaged, EPR study 7−118860
Si-SiO_2, dioxide formation by rapid thermal oxidation of SiO 7−126329
Si-SiO_2, growth mechanisms, oxidation theories, book contrib. 7−106727
Si-SiO_2, hot carrier injection, book contrib. 7−105723
Si-SiO_2, interface states, charge pumping meas. method 7−118590
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, adlayers 7−105293
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, microvoids 7−105294
Si-SiO_2, interface trap production by low temp. thermal processing 7−143616
Si-SiO_2, MOS struct., photoinjection, potential barrier height 7−92303
Si-SiO_2, mol. adsorption of H_2O, ethanol and pentanol on SiO_2 7−76621
Si-SiO_2, refractive index meas., immersion ellipsometry 7−73403
Si-SiO_2, Si selective epitaxial growth over thick SiO_2 islands 7−100103
Si-SiO_2, thermally grown, electron traps 7−112502
Si-SiO_2, ultrathin gate oxide formation, catalytic Si oxidation 7−119461
Si-SiO_2 amorphous multilayered structures, quantum dimensional effect 7−85126
Si-SiO_2 amorphous superlattices, phonon stop bands 7−124673
Si-SiO_2 complete system, surface avalanche method meas. 7−112507
Si-SiO_2 complete system, semicond. surface quality study 7−112508
Si-SiO_2 fast interface trap density change high-field stress, SOI 7−143619
Si-SiO_2 interface, appl. of low energy charged particle beams for Cl anal. 7−93411
Si-SiO_2 interface, carrier transport, book contrib. 7−85133
Si-SiO_2 interface, cycling of defects between trapped negative charge and interface states 7−99206
Si-SiO_2 interface, D_2 gas interactions, ion-beam study 7−124688
Si-SiO_2 interface, mechanical stresses 7−76585

silicon compounds continued
- $Si-SiO_2$ interface and Si, oxidation, HRTEM and ellipsometry studies 7−100459
- $Si-SiO_2$ interface charactn., book contrib. 7−85132
- $Si-SiO_2$ interface roughness evolution 7−112107
- $Si-SiO_2$ interface state density and SiO_2 film charge due to Pt diffusion 7−112495
- $Si-SiO_2$ interfaces in MIS structs., positive charge accumulation, high-field breakdown 7−77067
- $Si-SiO_2$ interfacial struct. and oxide growth mechanism, TEM modelling 7−124733
- $Si-SiO_2$ MIS, gate currents and space charge under electron beam irrad. 7−70420
- $Si-SiO_2$ MOS structures, degradation by Fowler-Nordheim tunnelling 7−99214
- $Si-SiO_2$ metal structs., radiation damaged, interface trap peaks 7−125127
- $Si-SiO_2$ SOI layers, formation by ion implantation, nondestructive characterisation 7−124742
- $Si-SiO_2$ structs., local electrophys. props. of elec. active defects 7−143627
- $Si-SiO_2$ structures, acoustoelectric conversion props., charge injection effect 7−105628
- $Si-SiO_2$ structures, H^+ implantation, interface defects 7−125139
- $Si-SiO_2$ structures, luminesc. spectral distrib., interference effect 7−92744
- $Si-SiO_2$ structures, passivation and related instabilities, book 7−102026
- $Si-SiO_2$ structures, pot. barrier meas., contactless method 7−143628
- $Si-SiO_2$ structures, UV effects of Ar plasma 7−105717
- $Si-SiO_2$ system, interface states 7−112509
- $Si-SiO_2$ system, ozone cleaning 7−113798
- $Si-SiO_2$:As, As depth profiling at interface, SIMS study 7−84533
- $Si-SiO_2$-Al, mobile charge, effects of doping Al with Cu, Zn or Si 7−85123
- $Si-SiO_2-Cu_2S$, heterostructure, switching mechanism 7−70429
- $Si-SiO_2$-Si buried layer structures, ion beam synthesis 7−76164
- $Si-SiO_2$-Si buried layer structure formed by O ion implantation, interface evolution 7−76636
- $Si-SiO_2$-Si buried layer structure, formation by ion implantation and annealing 7−76637
- $Si-SiO_2$-Si structs., defect spectrum responsible for breakdown 7−143626
- $Si-SiO_2-Si_3N_4$ acoustic sensor design and fabrication 7−97246
- $Si-SiO_2-Si_3N_4$-metal structs., optically-induced hot-hole injection probability meas. and anal. 7−105713
- $Si-SiO_2$-metal structs., optically-induced hot-hole injection probability meas. and anal. 7−105713
- $Si-SiO_2$-metal structs., interface states capture time const. determ. 7−112500
- $Si-SiO_w$ multilayer planar structures formed by ion synthesis 7−99211
- a-$Si-SiO_2$ evaporated superlattices, struct. meas. 7−131477
- $Si-SiO_2$ MOS, structs., RF-annealing, impurity activation and trap annealing, TSC meas. *(Russian)* 7−138068
- $Si-Sio_2$, interface, near Pb precipitates in Pb^+ ion implanted Si (111) 7−84461
- $Si_3Al_3O_3MN_5$ ceramic material examination by neutron diffraction *(Dutch)* 7−69542
- SiAlON ceramics, amorphous second phase controlled crystn., microstruct., mech. props. 7−132620
- β-SiAlON filled PTFE with low degree of filling, struct. and mech. props. 7−78255
- SiAs, electrophysical and optical props. 7−76936
- SiBN amorphous films, plasma-enhanced CVD, dielec. props. 7−100102
- $SiBr_2$, $\tilde{A}^1B_1-\tilde{X}^1A_1$ transition, UV spectrum decay rate consts. determ. 7−129732
- $SiBr_4$, flash photolysis prod. $SiBr_2$ 7−129732
- $SiBr_4$, mol. fund. and lattice vibr. modes, Raman spectra study 7−85708
- SiC, 6H and 3C polytypes heteroepitaxial CVD, Raman spectra study 7−119148
- β-SiC (100) epitaxial layers, angle-resolved XPS at 1300 °C 7−113351
- SiC (220), laser-induced phonon-polariton coupling with X-rays, Bragg case 7−98821
- SiC (220), laser-induced phonon-polariton coupling with X-rays, Laue case 7−98822
- SiC (3C), high press. X-ray studies 7−111513
- SiC, adsorption of H, R-tokamak candidate materials study 7−74062
- β-SiC, Al_2O_3 and C additions effect on phase transform, during sintering 7−132542
- SiC, anisotropic and selective reactive ion etching in trifluoromethane and O_2 plasma 7−126349
- SiC apparent strengthening by high-temp. macroscopic stress redistrib. and flaw blunting 7−132753
- SiC, Auger spectra, first-derivative C KLL, comparison of XPS and AES 7−85905
- SiC band struct. and native defect electronic props., tight binding and recursion method calcs. 7−124855
- SiC barrier coated B fibre, brittle phases form. at fibre/molten Al interphase boundary 7−77892
- SiC, bound multiexciton complexes, luminescence spectra *(Russian)* 7−112197
- 3C-SiC CVD epilayers on Si, internal stresses, Raman scatt. meas., elastic deform. theory calcs. 7−118336
- SiC, CVD for coated fuel particles 7−109273
- SiC, ceramic synthesis from intercalation cpds. by carbothermal reduction 7−77895
- SiC ceramics, engineering, elastic props. at elevated temps. *(Japanese)* 7−138775
- SiC, ceramics, fusion appls., review 7−129381
- α-SiC ceramics, ion implanted, struct. and mechanical props. 7−91831
- SiC ceramics, non-oxide, conf., Limerick, Ireland (Jul. 1985) 7−134361
- SiC ceramics, oxidizing atmosphere behaviour, microstruct. *(French)* 7−86388
- SiC ceramics, wear behaviour in sliding contact 7−126265
- SiC, ceramics in Ar plasma jet, ablation study 7−138866
- SiC coated graphite limiter in Alcator C, redeposition of plasma eroded material 7−103175
- SiC coating for HTR fuel core, automated fluidised bed method *(German)* 7−129197
- SiC coating formation by pyrolysis in HF glow discharge 7−78363
- SiC coatings, RF sputtering on C fibres 7−86026
- 3C-SiC crysts., biexciton luminesc. spectra, binding energy determ. *(Russian)* 7−70910
- SiC, cubic, 3C, single-cryst. elastic consts. from room temp. to 1000 degC 7−111729
- SiC, cubic, CVD growth on Si(100), antiphase domains 7−113400

silicon compounds continued
- SiC cubic single crystal films on Si, growth and characterisation 7−143267
- SiC, decomposition rate and defects, high temp. HTR fuel element study *(German)* 7−129199
- β-SiC, device quality, CVD, on Si-substrates 7−113427
- SiC, dielectric susceptibility determ. 7−138373
- β-SiC, dry etching in fluorinated gases, surface charact 7−126352
- SiC, dry friction behaviour *(French)* 7−71304
- SiC epitaxial layers, grown by temp. gradient zone melting, morphology 7−124752
- SiC epitaxial layers grown by temp. gradient zone melting, morphology 7−124751
- SiC, fast electron irrad., deep levels, DLTS study 7−104835
- SiC fibre and particle reinforced Al composites, mech. props. 7−138819
- SiC fibre reinforced Al_2O_3 ceramic composites, erosion rel. to abradent particle size and vel. 7−78252
- SiC fibre reinforced Al composites, pitting and corrosion protected surfaces 7−138860
- SiC fibre reinforced glass matrix composites, compressive fracture, fibre orientation, strain rate, temp. effects 7−78158
- SiC fibre reinforced $Li_2O-Al_2O_3-SiO_2$ glass-ceramic, interfacial charactn. 7−78234
- SiC fibre reinforced $Li_2O-Al_2O_3SiO_2$ glass-ceramic, fatigue behaviour 7−78235
- SiC fibre reinforced $Li_2O-Al_2O_3-SiO_2$ glass ceramic, high temp. mech. props. 7−132720
- SiC fibre reinforced $LiO_2-Al_2O_3-SiO_2$ glass ceramic, fatigue, stress rupture 7−132729
- SiC fibre reinforced $Li_2O-Al_2O_3-SiO_2$ glass ceramic, interfacial mech. props. 7−144517
- SiC fibre reinforced Si, surface energy as indicator of interfacial mechanical response 7−76592
- SiC fibre reinforced SiC, mech. props., improvement 7−78151
- SiC fibre reinforced SiC, laminar composite, fracture toughness anisotropy 7−78238
- SiC fibre reinforced Si_3N_4, mech. props. 7−78242
- SiC fibre reinforced Ti-Al-V alloy, TiC and TiN interlayers effect on reaction zone *(German)* 7−92935
- SiC fibre/whisker reinforced osumilite glass-ceramic, thermal conductivity/diffusivity 7−131378
- SiC fibres, Nicalon, mech. props., effect of curing conditions 7−113623
- SiC film prep. by electron cyclotron resonance plasma CVD, grain structure anal. using electron microscopy *(Japanese)* 7−132476
- β-SiC films, CVD, ion dose response of TSEE 7−87238
- β-SiC films, CVD on SI and quartz substrates 7−92884
- β-SiC films, epitaxial growth by laser-induced sublimation *(Japanese)* 7−84574
- β-SiC films, inclined epitaxy on Si, CVD 7−118290
- SiC formation by ion implantation with negative ion implanter 7−67432
- SiC, friction and wear in water, hydrodynamic lubrication at low sliding speeds 7−78246
- SiC, friction in lubricated sliding 7−78250
- SiC heteroepitaxial CVD cubic single cryst. growth and elec. charact. on Si substrates 7−106428
- SiC, hot pressed, fracture toughness rel. to grain boundary oxidation 7−144518
- SiC, hot pressed, grain boundary cavitation, cyclic creep effect, small angle neutron scatt. 7−113621
- SiC, IR opaque coating materials survey 7−110532
- SiC in IRAS identified C stars 7−72440
- SiC, ion beam mixing of B, Cr and ZrO_2 layers 7−106330
- α-SiC, ion bombardment induced amorphisation, cross-sectional TEM studies 7−111697
- SiC, LPE growth, struct. and electrophysical props. 7−70105
- SiC, laser heated surface temp. distribs., expt. determ. 7−111652
- SiC, native defects, electronic struct. calcs., cluster recursion method 7−98920
- SiC, neutron irradiated 6H polytype, thermal stability of D_1 defect lumin., influence of growth conditions 7−99902
- SiC, Nicalon, fibres, mech. props., free C content, ESR obs. 7−92494
- SiC, nonequilib. phase transitions induced by thermomechanical treatment, obs. 7−131289
- SiC, obs. of deep levels, surface treatment 7−105448
- SiC, oxidized polycrystalline surface, adsorbed hydrocarbons, angle resolved XPS 7−98634
- SiC p-n structure, voltage limitation studies 7−112472
- SiC particle reinforced Al-Mg-Fe, internal stress/strain, X-ray diffr. study 7−86197
- SiC particle reinforced Al-Zn-Mg, high strength, powder metallurgy, superplasticity 7−100303
- SiC particle reinforced Al-Zn-Mg composite, thermal cycling induced internal stresses, plastic deform. 7−132687
- SiC, plasma processing appl. *(Japanese)* 7−113503
- SiC polytypes, structures and bonding, ab initio MO calcs. 7−98076
- SiC polytypes, thermal expansion anisotropy 7−131337
- SiC, polytypes in aggregations, Raman spectra *(Russian)* 7−113205
- SiC, polytypic struct., electron probe microanalysis 7−76101
- SiC powder, for elec. heater prod., elec. resist. control method 7−86115
- SiC powder, form. by laser heated vapour phase reactions 7−113506
- β-SiC powder, mechanochem. effect on sintering behaviour *(Japanese)* 7−92946
- SiC powders, hot isostatic pressing sintering without additives *(Japanese)* 7−126063
- SiC powders, laser synthesis 7−132533
- α-SiC powders, plasma exposure, surface morphology 7−71335
- SiC powders, prep. by RF plasma *(Japanese)* 7−119222
- β-SiC powders, solid combustion synthesis 7−144328
- SiC powders, ultrafine, prep. by pyrolysis of tetramethyldisilane *(Japanese)* 7−119226
- SiC preionised TEA nitrogen and carbon dioxide lasers 7−130046
- SiC, prep. from magadiite-polyacrylonitrile intercalation cpd. 7−119228
- SiC, pressureless sintering mechanism 7−86114
- SiC, pressureless sintered, brazing by Ag-Cu-Ti, wettability, bond strength, bend strength 7−113856
- SiC, REFEL self-bonded, mech. props., effect of microstruct. features 7−126249
- β-SiC, reaction sintered, neutron irrad., isochronal annealing, recovery 7−119292
- SiC refractory ceramic, low temp. sp. ht. temp. depend. study 7−118122
- SiC Schottky barriers, cathodoamplification 7−143556

licon compounds continued
β-SiC semiconductor films grown from $SiHCl_3$-C_3H_8-H_2 system, charact. 7−126004
SiC single crystals, surface struct., effect of machining 7−71359
SiC sinter powders, synthesis using high temp. plasma reactors *(German)* 7−138712
SiC, sintered, elec. cond., effect of annealing 7−112340
SiC, sintered, with AlN additives, US absorpt. and vel. meas., two-level tunnelling system model anal. 7−84141
SiC, sintered modulus of rupture bars, crack size, US surface wave meas. 7−132898
SiC structural and high-press. props., ab initio pseudopot. study 7−104688
SiC substrate with Ge overlayer increase in SiC reflectance 7−106281
SiC, surface and bulk valence band photoemission 7−113349
SiC, surface modification by ion implantation 7−71344
SiC surfaces, ion irradiation effects 7−117981
SiC synchrotron radiation mirror design, thermal loading considerations 7−95707
SiC, thermal plasma prod., equilib. calcs. 7−130831
SiC thick films, vacuum deposited, friction and frictional tracks 7−113728
a-SiC thin films, Raman spectra *(Chinese)* 7−77527
SiC wettability to Al and alloys 7−91925
SiC whisker reinforced Si_3N_4, thermal props. *(Japanese)* 7−69942
SiC whisker reinforced Si_3N_4, sintering *(Japanese)* 7−71138
SiC whisker reinforced Al-Cu-Mg, creep behaviour 7−71252
SiC whisker reinforced MgO composite ceramics, hot pressing, fracture energy *(Japanese)* 7−71279
SiC whisker reinforced Al_2O_3, processing and mech. props. 7−77915
SiC whisker reinforced Al_2O_3, sintered, fabrication 7−77916
SiC whisker reinforced Si_3N_4 and Al_2O_3 ceramic matrix composites, struct. rel. to processing 7−77922
SiC whisker reinforced Al alloys, hot working behaviour 7−78070
SiC whisker reinforced Al_2O_3, processing and creep performance 7−78099
SiC whisker reinforced Si_3N_4, fabrication and mech. props. 7−78149
SiC whisker reinforced Al_2O_3 and mullite, improvement in mech. props. 7−78239
SiC whisker reinforced ZrO_2-toughened ceramics, fabrication and mech props. 7−78240
SiC whisker reinforced Si_2N_4, fabrication and props. 7−78241
SiC whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
SiC whisker reinforced Al composite, stiffness, thermal expansion coeff., fibre aspect ratio effect 7−91851
SiC whisker reinforced $MoSi_2$, crack deflection as toughening mechanism 7−100341
SiC whisker reinforced Al_2O_3 composite, thermal shock behaviour 7−100342
SiC whisker reinforced Al-Cu-Mg, impact fracture toughness *(Japanese)* 7−100349
SiC whisker reinforced Al_2O_3, ceramic toughening by whiskers 7−100373
SiC whisker reinforced Al-Cu-Mg matrix composite, microstruct., STEM obs. 7−113478
SiC whisker reinforced Al_2O_3 matrix composite, crack initiation and arrest 7−119335
SiC whisker reinforced Al alloys, stiffness, strength, struct. 7−138787
β-SiC whiskers, CVD, propag. mechanism 7−98763
SiC yarn, thermomech. props. 7−78282
SiC:Al, ion implanted 4H polytype, p-n junctions, capacitance spectroscopy 7−99177
SiC:B, exciton absorption spectrum 7−70835
SiC:B, hot pressed, sintered, β to α phase transform., feather form. 7−86167
SiC:B(Al)(P) cubic thin films, ion implanted, CVD grown, photolum. studies 7−77629
a-SiC:F(H) films, prep. by magnetron sputtering, props. 7−112400
SiC:Ga(Al), ODMR studies 7−138351
a-SiC:H, glow discharge deposited, evidence for microstructure, IR adsorption peak 7−132283
a-SiC:H, magnetron sputtered films, IR spectra, struct. 7−77552
a-SiC:H, transient photocurrent meas., weak electron-multiphonon coupling 7−84698
a-SiC:H,B, elec. and optical props., substrate temp. depend. *(Korean)* 7−137936
SiC:H epitaxial films, high temp. luminesc. 7−119035
a-SiC:H films, charge storage in deep traps 7−84922
a-SiC:H magnetron sputtering, H effects on film props. 7−92866
a-SiC:H solar cells, high efficiency, light induced degradation and struct. 7−144823
a-SiC:H thin films, magnetron sputtering using methane *(Japanese)* 7−92887
a-SiC:H/a-Si:H p-i-n solar cells with graded-band-gap layer, photoCVD 7−114109
a-SiC:H-a-Si:H solar cells, effects of C profiles at p-i interface 7−78636
3C-SiC:N, electrical properties, temp. dependence 7−99227
SiC:N, impurity optical absorpt. spectra, energy struct. of donor 1s states 7−113230
β-SiC:N films, N doped and undoped, elec. props., temp. depend., CVD grown 7−105735
α-SiC:N(Cr), ion-implanted, recrystallisation 7−71222
3C-SiC/6H-SiC MBE growth, elec. props. of p-n junction 7−77823
a-SiC/a-Si, flexible heterojunction and stable tandem solar cells with blocking barriers 7−126617
SiC/Al, 6H polytype, annealing effects on rectifying contacts 7−143554
SiC/Invar alloy joint, residual stress, shape and size effects 7−132674
SiC/Ti system, high-energy ion beam mixing, TEM and RBS studies 7−98269
SiC-AlN ceramics, modulated structs. 7−132619
SiC-Au Schottky contacts, heat treatment effect 7−131733
SiC-C fibres, synthesis of precursors by co-pyrolysis of polysilane and pitch *(Japanese)* 7−119225
β-SiC-Fe reactions, Fe_3C interfacial layer, Auger study 7−106316
SiC-metal structure, stochastic auto-oscillations in cond. 7−143611
SiC-Si (100), neutron irradiated, defect study 7−98710
SiC-Si composites, siliconised, creep rupture 7−78244
SiC-Si composites, siliconized, high temp. mech. props. 7−78245
SiC-Si_3N_4 system, composite particles prep. by vapour reaction method *(Japanese)* 7−113504
SiC-Ti, effects of N_2^+ and Ar^+ implantation on atomic mixing and hardness 7−137421

silicon compounds continued
$Si_{1-x}C_x$:H, amorphous, junction struct. with cryst. Si:H, blue-white electrolum. obs. *(Chinese)* 7−125808
a-$Si_{1-x}C_x$:H, glow discharge deposited films, ESR and photoluminescence 7−125536
a-$Si_{1-x}C_x$:H, plasma deposited films, struct. and optical props. 7−132363
a-$Si_{1-x}C_x$:H, triplet exciton recombination, ODMR 7−84681
a-$Si_{1-x}C_x$:H,B(P) films, ESR and IR studies 7−85427
a-$Si_{1-x}C_x$:H films, photolum. study 7−85821
a-$Si_{1-x}C_x$:H films, valence electron props., UPS, EELS studies 7−85941
a-$Si_{1-x}C_x$:H films, XPS and ESR charactn. *(Japanese)* 7−124748
a-$Si_{1-x}C_x$:H pin struct., injection lumin. 7−85851
a-$Si_{1-x}C_x$:H/a-Si:H multilayers, undoped, persistent photoconductivity 7−84968
Si_xC_{1-x}, amorphous, phonon density of states calc. 7−76328
a-Si_xC_{1-x}:H films, field effect under illumination *(Chinese)* 7−112386
SiC(-Si)(-Al)(-AlN) low at. number ceramics, limiter materials for fusion appls. 7−122206
$(SiC)_{1-x}(AlN)_x$ epitaxial layers, deposition and struct. props. *(Russian)* 7−126006
$(SiC)_{1-x}(AlN)_x$ wide gap solid soln., VPE epitaxial growth 7−113417
$Si_{1-x}C_xH_{2-y}$, semicond. polymer, electronic, optical and struct. props. 7−99961
$SiC^{17}O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
SiCl, Lamb dip spectra obs. in mol. beam 7−135858
SiCl, rotational structure, isotope shifts, UV fluoresc. spectra anal. 7−96720
$SiCl_2+O_2$, UV absorpt. spectra, rate const. meas. 7−100515
$SiCl_3$ radicals, geometry and electronic props., ab initio UHF and SW Xα calcs. 7−89955
$SiCl_4$, photoionisation, angle-resolved photoelectron spectra 7−136008
$SiCl_4$, pyrolysis in N_2-H_2 plasma 7−100511
$SiCl_4$, Si L edges resonances, gas phase UV photoabsorpt. spectra 7−116982
$SiCl_4$, VUV and fluoresc. excitation spectra 7−109912
$SiCl_4$-H_2, inductively coupled plasma, reaction mechanism studied by mass spectrometry 7−106869
Si_2Cl_6, VUV and fluoresc. excitation spectra 7−109912
$Si(Co_2(CO)_7)_2$ complex, cryst. struct., X-ray diffr. study 7−104652
SiD_4, electron input, low energy, cross-section calcs. 7−110122
SiF systems bond energies, generalised VB and CI calcs. appl. to Si etching 7−122365
SiF^+ (SiF), electronic states, CI calcs. 7−74462
SiF_4, ground state, second-order Stark effect, IR spectrosc. 7−122529
SiF_4+CO_2, near reson,. V-V energy transfer blow 300 K 7−90349
Si_2F_6, bond props., kinetic consts. method calcs. 7−81916
$(Si_2)_y(GaAs)_{1-y}$ barriers, vacancy enhanced impurity induced layer disordering of coupled stripe $Al_xGa_{1-x}As$-GaAs quantum well lasers 7−110347
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
SiH, π^2 mol., struct., pot. energy curve, ab initio HFR-MO-LCAO-SCF-CI method 7−103390
SiH^+, laser photofragment spectrosc. 7−122498
a-SiH:C alloy films, detection of deep-lying defects 7−137863
SiH_2, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
SiH_2, ions. pot. and excitation energies, FCI wave fns. calc. 7−81993
SiH_2, low-lying states, pot. energy surfaces and dynamical props., 2D MCSCF/6-31G** calcs. 7−116893
SiH_2, rovibronic levels, lifetimes, visible fluoresc. spectra anal. 7−103519
SiH_2, rovibronic levels, quantal fluctuations in fluoresc. lifetimes 7−103564
$SiH_2+D_2(H_2)$, insertion reactions study 7−93295
SiH_3, electronic struct., UHF and SW Xα calcs. 7−81972
SiH_3 radical, reactions on a-Si:H surface 7−71041
SiH_4, Ar dilution effect of a-Si:H optical and elec. props. *(Korean)* 7−85877
SiH_4, edge inversion process, spectrosc. props. 7−109870
SiH_4 elastic electron cross sections, low energy struct. 7−122713
SiH_4, electron input, low energy, cross-section calcs. 7−110122
SiH_4, electron scatt., low energy, adiabatic nuclei approx. appl. 7−122710
SiH_4, gas-phase IR intensities, bond polar parameter model 7−82115
SiH_4, low energy electron collisions using parameter free spherical optical pot. 7−122662
SiH_4 optical films, plasma-deposited and dip-coated, charactn. 7−90748
SiH_4, plasma CVD, RF discharges, spectroscopic diagnostics 7−113403
SiH_4 pyrolysis, gaseous reactions, numerical study 7−100538
SiH_4, pyrolysis study 7−93295
SiH_4, SCF proton densities HF calcs. 7−103371
SiH_4-Ar glow discharge, SiH radical profile control 7−97822
SiH_4-HF, matrix isolated, vibr. stretches, IR spectra 7−90116
SiH_4+He^+, thermal energy charge-transfer reaction, optical spectroscopic study 7−93262
SiH_4+O, vibr. distrib. and rate const. meas. 7−113885
SiH_5^-, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
$(SiH)_n$, polysilane, substitutional doping using thermal neutron irradiation 7−91660
Si_2H_4 isomers, thermodynamic functions 7−142430
$Si_2H_4^n$ (n=0 or +), ground state surfaces, SCF and CI calcs. 7−109811
Si_4H mol., eigenmodes and eigenfrequencies, appl. to H vibr. in solid Si 7−91749
Si_5H_{12} at. clusters, using in ab initio calc. of phonon freqs. in bulk solid Si 7−91744
Si_6H_6, mol struct., ab initio MO and electron correl. calcs. 7−81922
SiN films, ECR plasma CVD growth, N_2 ions and radicals effects 7−100108
SiN films, fabrication by double tubed coaxial line type microwave plasma CVD 7−113420
SiN films, room temp. prep. using double-tubed coaxial line-type microwave plasma CVD 7−119161
SiN films fabrication, coaxial-line microwave plasma CVD system 7−100093
p-SiN:F, low temp. plasma deposition, elec. props., bonding and stability 7−132480
SiN:F films, plasma-enhanced CVD growth, elec. and optical props. 7−84589
SiN-Al CVD layered structs., H_2 evolution, blister and void formation 7−104727
SiN-Si-SiO_2-Si:H system, H profiling using $^1H(^{19}F, \alpha\gamma)$ reaction *(Chinese)* 7−111633

silicon compounds continued
a-$SiN_{1.4}$:H/a-Si:H band offset and electronic struct., AES, XPS and IPES studies 7−92300
SiN_x amorphous layers, charact. using Auger parameter in XPS 7−85938
SiN_x film mask for Zn diffusion in GaAs 7−143100
SiN_x films, reactive RF magnetron sputtering 7−138659
SiN_x, ion beam enhanced electron beam deposition, wear props. 7−113395
SiN_x, nonstoichiometric, electronic struct., soft X-ray emission spectra study 7−125861
a-SiN_x:H, amorphous superlattice, Raman scatt. 7−85697
α-SiN_x:H, cond. band edge, localised p-like states, reson. photoemission obs. 7−119109
SiN_x:H amorphous films, optical props. 7−144140
SiN_x:H amorphous thin films, small polaron transport, I-V meas. 7−84894
a-SiN_x:H bonding and electronic structs., AES, XPS and optical meas. 7−92029
a-SiN_x:H film formation, NH_3 adsorption on Si surfaces 7−118273
a-SiN_x:H films, prep., struct., electronic props. 7−86048
a-SiN_x:H-a-Si:H layered structures, persistent photocond., internal stress effects 7−105693
a-SiN_x:H-a-Si:H multilayers, carrier transport, picosecond time-of-flight studies 7−138034
a-SiN_x:H-a-Si:H superlattices, transfer doping, electron trapping, effect of a-SiN_x:H comp. 7−99212
$Si_{1-x}N_x$, amorphous, electronic struct., defect states, optical absorpt. 7−124930
a-$Si_{1-x}N_x$:H, triplet exciton recombination, ODMR 7−84681
a-$Si_{1-x}N_x$:H,B films, ESR and IR studies 7−85427
a-$Si_{1-x}N_x$:H films and a-Si:H/a-$Si_{1-x}N_x$:H superlattices, electron-hole recombination processes 7−70905
Si_3N_4, amorphous, continuous random network model constructed using plastic balls and spokes 7−83675
Si_3N_4, amorphous, ion irrad., optical absorption edge shift 7−77495
Si_3N_4 antireflection coatings for semiconductor lasers, reactive sputtering directly controlled deposition 7−68668
Si_3N_4 antireflection coatings for high efficiency Si solar cells 7−126627
Si_3N_4, α-β transition, jump mechanism *(Chinese)* 7−131300
Si_3N_4 based bodies, nature of sialon joints 7−113857
Si_3N_4 based materials, hot compaction, elastic props. rel. to porosity 7−106561
β-Si_3N_4 based SiAlON, struct. and props. 7−98059
Si_3N_4 buffer layers for Si solar cell laser crystallised films on Al_2O_3 ceramic substrates *(Japanese)* 7−119649
Si_3N_4 buried layer in Si, N ion implantation form., beam current and dose depend. 7−83992
Si_3N_4 buried layers produced by ion implantation, Si epitaxial layer growth and props. 7−85131
Si_3N_4 ceramic, fatigue strength anal. at room temp. 7−78419
Si_3N_4 ceramic rotor for turbomolecular pumps for fusion appl. 7−134777
Si_3N_4, ceramic synthesis from intercalation cpds. by carbothermal reduction 7−77895
Si_3N_4 ceramics, engineering, elastic props. at elevated temps. *(Japanese)* 7−138775
Si_3N_4, ceramics, fusion appls., review 7−129381
Si_3N_4 ceramics, ion beam modified, friction and wear 7−119381
Si_3N_4 ceramics, joining by hot-pressing 7−86555
Si_3N_4 ceramics, liq. phase bonding 7−100505
Si_3N_4 ceramics, non-oxide, conf., Limerick, Ireland (Jul. 1985) 7−134361
Si_3N_4 ceramics, oxidizing atmosphere behaviour, microstruct. *(French)* 7−86388
Si_3N_4 ceramics, sintered with MgO/Nd_2O_3 mixed additions, microstruct. development 7−138720
Si_3N_4 ceramics and composites, reliability enhancement 7−126132
Si_3N_4, ceramics in Ar plasma jet, ablation study 7−138866
Si_3N_4, coarsening and densification kinetics during heat treatment 7−138718
Si_3N_4 coatings on stainless steel, retardation of hydrogen embrittlement 7−71380
Si_3N_4, elastic modulus-porosity relationship 7−113594
Si_3N_4 encapsulation effects on interdiffusion in $Al_xGa_{1-x}As$/GaAs heterostructs. 7−69990
Si_3N_4, explosively shocked compacts, effect of shock press. *(Japanese)* 7−138715
Si_3N_4 fibres, synthesis by polycarbosilane nitridation, tensile strength 7−132537
Si_3N_4 film, gradient field plasma CVD 7−130928
Si_3N_4 films, encapsulation of n-GaAs, Raman spectra, stress-induced spectral changes 7−70766
Si_3N_4 films, IR study 7−85875
Si_3N_4 films, selective area laser CVD, microlenses fabrication 7−71062
Si_3N_4 films deposited by ECR plasma CVD, properties *(Japanese)* 7−137765
Si_3N_4 films in strong fields, math. modelling of electron transport processes in dielecs. 7−70418
Si_3N_4, form. by carbothermic reduction of magadiite-polyacrylonitrile intercalation compound 7−119229
Si_3N_4, friction and wear in water, hydrodynamic lubrication at low sliding speeds 7−78246
Si_3N_4, friction in lubricated sliding 7−78250
Si_3N_4, gas-press. sintered, solid particle erosive wear rel. to props. *(Japanese)* 7−71327
Si_3N_4 gate micro ISFET for biomedical research 7−101152
Si_3N_4, HIP sintered with $BeAl_2O_4$ addition, density, bending strength *(Japanese)* 7−132552
Si_3N_4, high-temp. oxidation by water vapour 7−113744
Si_3N_4, hot pressed bars, oxidation, cristobalite form., EPMA obs. *(Japanese)* 7−132786
Si_3N_4, hot pressed ceramics, bending test, crack size distrib., non-destructive inspection 7−106746
Si_3N_4, hot-pressed, and reaction-bonded, charactn. and mech. props. 7−126250
Si_3N_4, hot-pressed, solid particle erosion, rel. to α- and β-phase content 7−138854
Si_3N_4, hot-pressed ceramics, elec. characts. 7−112332
Si_3N_4, ion beam mixing of Y and Cr layers 7−106330
Si_3N_4 joining with Al braze, pre-heat-treatment effects 7−86383
Si_3N_4, low at. number ceramics, limiter materials for fusion appls. 7−122206
Si_3N_4 MNOS structures, electrophysical props. at low temp. 7−99054

silicon compounds continued
Si_3N_4 matrix based ceramics, strength, fracture toughness 7−78157
a-Si_3N_4, multiphonon capture, memory effect and radiative transitions, Si-Si defect effects, polaron model calcs. 7−85779
Si_3N_4 negative hopping magnetoresist. in strong elec. field, carrier localisation obs. *(Russian)* 7−76962
Si_3N_4, noncrystalline, insulators, optical props. 7−77497
Si_3N_4, nonohmic hopping cond, in strong elec. and mag. fields 7−84897
Si_3N_4, plasma processing appl. *(Japanese)* 7−113503
Si_3N_4 plasma-enhanced CVD films in $Si/SiO_2/Si_3N_4$ system, ESCA/AES analysis 7−131483
Si_3N_4, plasma-enhanced deposited on Si (100), ion bombardment-induced mechanical stress meas. 7−71007
Si_3N_4 polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
Si_3N_4 powder, dynamic compaction, density, microhardness 7−86106
Si_3N_4 powder, hydrothermal oxidation 7−144571
Si_3N_4 powder, plasma arc synthesis, hardness struct., fracture toughness *(Japanese)* 7−113505
Si_3N_4 powder, sinterability, rel. to BeO addition, microstruct. *(Japanese)* 7−71119
Si_3N_4 powder compacts. microstruct. development and characts. rel. to mech. props. 7−138721
Si_3N_4 powders, fabricated by different processing conditions, influence of impurities on high temp. props. of sintered material 7−77898
Si_3N_4 powders, hot isostatic pressing sintering without additives *(Japanese)* 7−126064
Si_3N_4 powders, oxidised without additives, very high press. hot pressing *(Japanese)* 7−126066
Si_3N_4 powders, prep. by RF plasma *(Japanese)* 7−119222
Si_3N_4 powders, prep. from SiO_2, effects of NH_3 and NaF *(Japanese)* 7−126073
Si_3N_4 powders, prep. methods 7−77913
Si_3N_4, powders, thermal plasma prod., synthetic routes survey 7−130832
Si_3N_4 powders, vapour phase reaction prep., crystallisation, hot pressing, mech. props. *(Japanese)* 7−113508
Si_3N_4 powders sinterability and charactn. of sintered material 7−138719
Si_3N_4, prep. by reaction sintering of submicrometer Si powder 7−92942
Si_3N_4, prep. from precipitated colloidal SiO_2 from geothermal discharge waters 7−113486
Si_3N_4, pressureless sintered with magnesia-neodymia additions, densification and transform. kinetics 7−77896
Si_3N_4 processing, dissolving in MgO-Al_2O_3-SiO_2 effects on glass phys. and mech. props. 7−71142
Si_3N_4, prod. by $SiCl_4$ pyrolysis in N_2-H_2 plasma 7−100511
Si_3N_4 produced by N implantation of Si, microstruct. of SOI struct. studied 7−83997
Si_3N_4, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
Si_3N_4, reaction bonded, in-situ fractured, XPS study of grain boundary chemistry 7−70985
Si_3N_4, reaction bonded, processing 7−71129
Si_3N_4, reaction bonded, thermal diffusivity, effect of oxidation 7−76507
Si_3N_4, reaction sintering, porous struct. 7−77910
Si_3N_4, reaction-bonded, permittivity and dielec. loss, freq. and temp. depend. 7−113061
Si_3N_4, reactive ion etching in SF_6 gas mixtures 7−71403
Si_3N_4, reactive ion etching in tetrafluoromethane plasma 7−100402
Si_3N_4, reactive ion-plasma sputtering, on Si 7−86501
Si_3N_4, response to repeated impact loads 7−86305
Si_3N_4 sinter powders, synthesis using high temp. plasma reactors *(German)* 7−138712
Si_3N_4, sintered, α to β transform., flexural strength, density *(Japanese)* 7−132694
Si_3N_4, sintered, behaviour of mirror-like region under rotary bending fatigue 7−138841
Si_3N_4, sintered, hydrothermal leaching rel. to grain morphology *(Japanese)* 7−132785
Si_3N_4, sintered, static and cyclic fatigue 7−119336
Si_3N_4, sintered, surface condition effect on flexural strength 7−132778
Si_3N_4, sintered, tensile strength 7−126251
Si_3N_4, sintered, tensile strength, high temp. testing *(Japanese)* 7−144477
Si_3N_4, sintered ceramic, void charactn, by scanning laser acoustic microscopy 7−138943
Si_3N_4, sintered under gas press., LF Raman spectra, lattice modes, long-range order 7−113179
Si_3N_4 surfaces, ion irradiation effects 7−117981
Si_3N_4, thermal plasma prod., equilib. calcs. 7−130831
Si_3N_4 thin films, deposition by remote plasma enhanced CVD 7−86047
Si_3N_4 thin films, formation by low energy ion bombardment of Si 7−84075
Si_3N_4 thin films, plasma CVD synthesis in HF planar reactor *(Russian)* 7−77842
Si_3N_4 thin films, plasma enhanced CVD, influence of deposition parameters on props. *(Slovenian)* 7−86041
Si_3N_4 thin films produced by low temp. photo-CVD, characterisation, optoelectronic device appls. 7−126018
Si_3N_4, wettability by Al, Cu and Ag, work of adhesion 7−143132
Si_3N_4 whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
α-Si_3N_4, Y-containing, 2D solid soln. form. 7−86139
Si_3N_4:Al, X-ray energy dispersive spectroscopy, low peak to background ratio, uncertainty anal. 7−100679
a-Si_3N_4:H, stable photoinduced paramag. defects, ESR study 7−138326
Si_3N_4:Y_2O_3, sintered reaction bonded, flash oxidation, flexural stress rupture life 7−86324
Si_3N_4/Al braze joint, fracture, bend strength, SCC 7−132731
Si_3N_4/stainless steel multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
Si_3N_4/Ti system, high-energy ion beam mixing, TEM and RBS studies 7−98269
Si_3N_4-(ZrO_2-Y_2O_3), structural ceramics, effect of Y_2O_3 additions, degradation 7−71276
Si_3N_4-Al, interfacial reaction, TEM study 7−131454
Si_3N_4-Al-Invar joints, interface strength and reaction 7−106754
Si_3N_4-based ceramics, hot pressed, hardness 7−78155
Si_3N_4-based ceramics, sintering and props. 7−138727
Si_3N_4-based cutting tools, hot-pressed, performance 7−78251
Si_3N_4-based materials, hot-pressed, charactn. by microhardness meas. 7−113671

silicon compounds continued
Si_3N_4-C amorphous composite, prep. by CVD, high temp. evaporation 7−142970
Si_3N_4-MgO, thermal expansion coeff., effects of CaF_2 conc. 7−105084
Si_3N_4-SiC based ceramics, strength degradation in salt environments 7−78284
Si_3N_4-SiC composite materials, hot isostatic pressing, sintering, density, fracture toughness 7−132534
Si_3N_4-SiC material, oxidation effect on strength and thermal stability 7−113749
Si_3N_4-SiC-MgO reaction-sintered, oxidation in presence of salts, effect on strength 7−119392
Si_3N_4-SiO_2 optical waveguides on Si, low loss 7−117349
Si_3N_4-Ti, thin film reaction 7−86666
Si_3N_4-Y_2O_3, reaction-bonded with yttria sintering aid, grain boundary phases 7−119217
Si_3N_4-ZrO_2 system, phase reactions, influence of atm. 7−77954
a-Si_xN_{1-x}:H films, laser induced CVD, film props., deposition parameters 7−100095
a-Si_xN_{1-x}:H layers, H depth profiles and impurity contents, elastic recoil detection and RBS 7−83681
Si_xN_y films, tensimetric investigation 7−86616
Si_xN_y, substoichiometric, ion beam assisted deposition, optical props. 7−92877
a-$Si_xN_yH_z$, angular distortions, exponential absorpt. edge 7−119009
$Si_xN_yH_z$ film, synchrotron-radiation excited CVD 7−77839
SiN_xHy:F, plasma enhanced CVD using SiH_4-NH_3-NF_3 mixtures 7−77836
SiO desorption and O_2 adsorption on Si (100) 7−118266
SiO emission from R Aqr 7−88442
SiO in envelopes of cool giant stars, contrib. to radiative cooling instability 7−120398
SiO, interface with nematic liquid crystal 4-n-pentyl-4′-cyanobiphenyl, anchoring strength, temp. depend. 7−98621
SiO maser emission and IR continuum from evolved stars 7−79973
SiO, matrix isolated in Ar, valence states, fluoresc. emission spectra 7−82275
SiO, noncrystalline, insulators, optical props. 7−77497
SiO, prod. by $SiCl_4$ pyrolysis in N_2-H_2 plasma 7−100511
SiO sublimation mechanism for Si loss during $TiSi_2$ form in Ti-Si diffusion couple 7−118073
SiO, total and orbital energies and multipole moments, LCAO HF STO calcs. 7−81919
SiO-Ag ultrathin superlattices, DC elec. cond. switching 7−92294
SiO-Ni interface effect on mag. behaviour of Ni films 7−118837
SiO_2 (110), MeV ion bombard., Si-H and C-H bond breaking 7−111690
SiO_2 absorpt. of high power IR radiation as result of weakly forbidden transitions 7−135915
SiO_2, adsorbed malachite green, fractal distrib., pore-size effects, electronic energy transfer investig. 7−131423
SiO_2, adsorbed molecules, vibrational relaxation 7−143173
SiO_2, adsorption of glycine amino acids, photoelectron spectroscopy 7−106374
SiO_2 aerogel, superinsulating spacers, thermal loss coeffs. 7−144916
SiO_2 aerogels, skeletal density 7−139050
SiO_2, afterglow CVD prep., chem. and phys. props. 7−100112
SiO_2 aggregates, vap.-phase, surface and mass fractals, light and neutron scatt. investig. 7−68564
SiO_2, amorphous, ion implantation and gas exposure influence obs. 7−98210
SiO_2, amorphous, press. induced bond angle var., NMR meas. 7−69596
SiO_2, amorphous, radiation-sensitivity enhancement and annealing 7−124334
SiO_2, amorphous, Si−O bond length modification 7−124105
SiO_2, amorphous, struct. defects and triboluminescence excitation 7−138524
SiO_2, amorphous, thermally grown and crystalline quartz, time-resolved photoluminescence 7−70900
SiO_2, amorphous, thermally grown, struct. interpretation anal. 7−83672
SiO_2, amorphous and crystalline, dissolution kinetics in HF-HCl mixtures 7−143018
SiO_2, amorphous powder, energetically metastable, X-ray diffr. 7−97927
SiO_2 amorphous RF sputtered films, IR and Rutherford backscatt. studies 7−85917
SiO_2, amorphous silica, structural transformations under steaming, IR spectroscopic studies 7−104551
SiO_2 amorphous thin films; thermally induced diffusivity and reactivity of water, press. effects study 7−118169
SiO_2, at Ta_2O_5-Si interface, effect on dielec. characts. 7−118934
SiO_2 based optical fibres, γ-radiation effects on optical loss and defects *(Japanese)* 7−117340
SiO_2, beadblasted fused silica, surface damage evolution and optical performance 7−71318
SiO_2 buffer layers for Si solar cell laser crystallised films on Al_2O_3 ceramic substrates *(Japanese)* 7−119649
SiO_2 buried oxide layers formation by ion implantation of Si 7−69725
SiO_2, CVD, mech. stress changes by ion bombardment and heat treatment 7−92038
SiO_2, charact. using Auger parameter in XPS 7−85938
SiO_2 clusters, electronic struct., props., MNDO calcs. 7−122772
SiO_2 coatings, vapour deposited, laser-pulsed, corrosion protection 7−92890
SiO_2 coatings on stainless steel, retardation of hydrogen embrittlement 7−71380
SiO_2, coesite, struct., electron density distrib. and bonding from X-ray diffr. data 7−111481
SiO_2, colloidal, gelation 7−126492
SiO_2, colloidal, with TiO_2 particles, photosensitised evolution of H_2 from water 7−132953
SiO_2 colloidal silica antireflection coatings for KrF and Nd:glass lasers, damage thresholds 7−68815
SiO_2, cryst. struct., neutron and X-ray diff. data 7−76089
SiO_2, crystalline silica, low freq. dispersive modes and T^3 sp. ht. anomaly, comment 7−69932
SiO_2, crystalline silica, T^3 sp. ht. anomaly, reply to comment 7−69933
SiO_2 defect generation and annealing in IGFET 7−142834
SiO_2 dielec. surface, hot electron emission into vacuum 7−113348
SiO_2, E'_1 centres, oscillatory free-induction decay 7−85435
SiO_2, effect of additions on mech. props. of epoxy resin composites *(Japanese)* 7−126165
silicon compounds continued
SiO_2, electron self-trapping and transfer near Si-SiO_2 interface lattice relax. 7−118501
SiO_2, electron states pop. numbers, SCF HF-Slater pots. calc. *(Russian)* 7−122355
SiO_2, electron trap centre generation due to hole trapping, Fowler-Nordheim tunnelling stress 7−131786
SiO_2, electron trap generation by electron-hole recombination 7−99088
SiO_2 encapsulation effects on interdiffusion in $Al_xGa_{1-x}As$/GaAs heterostructs. 7−69990
SiO_2, etching in SF_6 plasmas, role of ions and electrons in etching mechanisms 7−71342
SiO_2 fibre Raman laser, UV short pulse, excimer laser pumped 7−82573
SiO_2 film, ion implanted, beam etching 7−111685
SiO_2, film, ionic trap density, effect of annealing *(Russian)* 7−111953
SiO_2 film electric breakdown under WSi_x:F CVD coating, impurity diffusion effects 7−118944
SiO_2 film growth, chem. bonding, ellipsometry and IR spectroscopy studies 7−143271
SiO_2 films, 5 nm thick, post-oxidation anneal and reoxidation effects 7−126355
SiO_2 films, breakdown and wear-out phenomena, book contrib. 7−106084
SiO_2 films, defects, nature and elec. props., book contrib. 7−105488
SiO_2 films, E′ centres, symm., rebound effects 7−112953
SiO_2 films, γ-irrad. effect on dielec. props. 7−104831
SiO_2 films, hole trapping, annealing in low press. O_2 atmosphere effects 7−143479
SiO_2 films, microwave O_2 plasma growth, MOS props. 7−93223
SiO_2 films, on Si, paramag. point defects, generation by electron injection and ionising radiation 7−111555
SiO_2 films, plasma-deposited, stability, stress and IR measurements 7−113418
SiO_2 films, selective area laser CVD, microlenses fabrication 7−71062
SiO_2 films, thickness and refr. index meas., ellipsometric method 7−128534
SiO_2 films in MOS capacitor structs., trapping characts., effects of thermal nitridation 7−131821
SiO_2 films in strong fields, math. modelling of electron transport processes in dielecs. 7−70418
SiO_2 fine powders, prep. from polysilicic acid esters *(Japanese)* 7−71124
SiO_2, fused, α-cristobalite, TEM obs. 7−97953
SiO_2, fused, oblique Ar^+ ion beam bombardment, erosion topographies 7−70960
SiO_2 fused, refractive-index change due to thermo-optic effect, meas. technique 7−121198
SiO_2, fused silica, extinction coeff. for CO_2 laser wavelengths, temp. depend. 7−92628
SiO_2, fused silica surface, surface charging in laser damage 7−69753
SiO_2 gate dielectric in Si MOSFET. low press. CVD, rapid thermal annealing 7−131481
SiO_2 gel, formation by sol-gel process, dynamic shear meas. 7−93396
SiO_2 gel, struct. determ. by X-ray diffr., gel to glass conversion 7−93394
SiO_2 gel surface, adsorbed dimeric pyrene, fluoresc. spectra obs. 7−109984
SiO_2 glass, crystallized fused, strength improvement by etching 7−100403
SiO_2 glass, high silica, dynamic fatigue, crack tip blunting rel. to treatment 7−119386
SiO_2 glass, IR absorpt. edge due to multiphonon absorpt., polariton theory 7−99775
SiO_2 glass, microhardness in various environments 7−132722
SiO_2 glass, microhardness indentation, diffusion of water influence 7−132779
SiO_2 glass, surface, struct. anal., mol. dynamics computer simulation 7−91935
SiO_2 glass, toughness rel. to surface stresses 7−100339
SiO_2 glasses, prep. and sintering of high-density green bodies 7−86121
SiO_2, grains, formation conditions 7−132425
SiO_2 high temp. vapour, IR absorptivity, Elzasser model calcs. 7−103503
a-SiO_2, IR absorpt. peak of vibr. stretching mode, struct. order 7−132253
SiO_2, implantation effect on transport props. of mobile Na ions 7−125140
SiO_2, inclusions in laser-processed steel, surface hardening 7−78364
SiO_2, interstitial and dangling bond defects, Haldane-Anderson model calcs. 7−98141
SiO_2, laser ablative chem. etching 7−144574
SiO_2 layers in polysilicon-oxide-nitride-oxide-Si structs., cond. props. 7−105728
SiO_2 layers obtained by ion assisted deposition, growth, optical study, optical filter appls. 7−125970
SiO_2 layers on Si, mobile ions, book contrib. 7−105140
SiO_2, luminescence excited during ion implantation 7−92748
SiO_2, mol. adsorption of H_2O, ethanol and pentanol 7−76621
SiO_2, native oxide on Si surface, TEM and STM studies 7−137678
SiO_2, near threshold sputtering in Cl_2 environment 7−106327
SiO_2 needles, growth induced by positive corona discharging 7−124772
SiO_2, neutral O-vacancy centre. π-bonded model, tight-binding total energy calcs. 7−92107
SiO_2, noncrystalline and crystalline, insulators, optical props. 7−77497
SiO_2, nonlocal pseudopotentials in molecular dynamical density functional theory 7−137835
SiO_2, optical crystals, dielectric props. at submillimeter wavelengths 7−132215
SiO_2 optical fibre sensitivity to radiation, radioluminescence and ESR *(Polish)* 7−68888
SiO_2 optical fibres, characts., influences of drawing conditions 7−123252
SiO_2 optical fibres, interactions with H_2 and D_2, review 7−110588
SiO_2 optical films, plasma-deposited and dip-coated, charactn. 7−90748
SiO_2, optical glasses, physics and appls. *(Russian)* 7−110491
SiO_2, optical thickness monitoring fully automated system for thin film prod. 7−104064
SiO_2 PECVD films, mask for Zn diffusion in GaAs *(Chinese)* 7−124597
a-SiO_2 plasma deposited films, thermal expansion and elastic props. 7−91846
SiO_2, plasma enhanced LPCVD on Si and InP, growth and in situ luminesc. charactn. 7−113408
SiO_2, plasma-grown, elec. props 7−126334
SiO_2, plastic clad, fibre characts., temp. depend. 7−68874
SiO_2 plastic clad fibres, axial lateral plasma deposition for single and multimode fibres 7−68919
SiO_2 polymorphs, electronegativity solid state chemistry 7−93298
SiO_2, porous glass and vitreous struct., X-ray diffr. 7−104566

silicon compounds continued
SiO_2 porous silica boules, mass fraction profiling based on X-ray tomography 7−121074
SiO_2 powder, surface energy determ. from elasticity meas. 7−131415
SiO_2, prep. from plasma enhanced CVD of SiH_4-NO_2 mixtures 7−86056
SiO_2, prod. by $SiCl_4$ pyrolysis in N_2-H_2 plasma 7−100511
SiO_2, pure and Ge-doped optical fibres, E′ centre thermodynamic props., drawing conditions depend., EPR study 7−98146
SiO_2, quartz/fused silica, N and O implanted, IR reflection props. 7−138440
SiO_2, reactive ion beam etching with saddle field source, mass spectra of F containing gases 7−93215
SiO_2, reactive ion etching in SF_6 gas mixtures 7−71403
SiO_2, reactive ion etching, lattice damage and polymer coating form., TEM study 7−144573
SiO_2, reactive ion-plasma sputtering, on Si 7−86501
SiO_2, reactive sputter etching, role of F atoms, Langmuir probe and optical actinometry meas. 7−126276
SiO_2 refractories, tridymite to cristobalite transform. below 1470°C 7−106508
SiO_2 rich particles release from rice husk by microbial fermentation 7−119181
SiO_2, silica, based optical fibres for IR *(Danish)* 7−123202
SiO_2, silica, temp. distrib meas. using holographic interferometry 7−80857
SiO_2, silica based devices, matching liq. cryst. refr. index 7−113113
SiO_2, silica optical fibres, polymer clad, γ-irrad., transmission losses 7−68881
SiO_2, silica particles, flame-formed, in situ meas. using dynamic light scattering 7−117139
SiO_2, silica smoke-particle aggregates, low-frequency vibrational density of states, temp. depend. 7−137500
SiO_2, silicalite, thermodynamic props. 7−105079
SiO_2 single-mode fibres, piezoelectric films deposition, appl. K phase modulators 7−125984
SiO_2, stishovite, Raman and infrared investigations 7−138463
SiO_2 stishovite, struct. and bonding, X-ray diffr. meas., Fourier and pseudoatom refinements 7−76098
SiO_2 substrate for WO_3 monolayer, hydrolysis, electrochemical measurements on WO_3 electronic props. 7−138082
SiO_2 surface, ion modification of evaporated metal film props. 7−91673
SiO_2, surface elec. cond., water adsorption effects and control 7−143553
SiO_2 surfaces, Ar^+-ion etching, XPS and Auger studies 7−132780
SiO_2 surfaces, in CsCl and LiCl solns., elec. double layer pots. 7−113949
SiO_2 surfaces, ion interactions, laser interferometric studies 7−92796
SiO_2 thermal films grown polycrystalline Si, transport props. 7−112524
SiO_2 thin buried layers in Si, ion beam synthesis 7−69724
SiO_2 thin film growth, oxidation by ionic diffusion 7−118312
SiO_2 thin film growth by Si oxidation and O_3^+ defect electromigration 7−119467
SiO_2 thin film. technological parameters effects on dielectric props. obs. *(Slovak)* 7−125980
SiO_2 thin films, ballistic electron transport 7−105741
SiO_2 thin films, deposition by remote plasma enhanced CVD 7−86047
SiO_2 thin films, formation by low energy ion bombardment of Si 7−84075
SiO_2 thin films, gate insulators, high temp. thermal nitridation, low temp. electron beam enhanced nitridation 7−93134
SiO_2 thin films, low temp. growth by double excitation photo-CVD 7−113414
SiO_2 thin films, photo-induced CVD growth using D lamps, annealing effects 7−113415
SiO_2 thin films, photo-CVD from Si_3H_8 and O_2 7−126014
SiO_2 thin films, plasma enhanced CVD, influence of deposition parameters on props. *(Slovenian)* 7−86041
SiO_2 thin-films, switching in MOS structure 7−70419
SiO_2, trapping centre production by ionising radiation *(Czech)* 7−69698
SiO_2, ultrathin gate oxide on Si, characterisation 7−131465
SiO_2, upper limit to refr. index thermal coeff. of fused silica at 184.9 nm 7−72301
SiO_2, vitreous, continuous random network model, computer simulation 7−83677
SiO_2, vitreous, defect Raman bands, struct. model 7−85656
SiO_2, vitreous, heat pulse propagation at critical heat power 7−131380
SiO_2, vitreous, O−O vibrs., Raman obs. 7−70825
SiO_2, vitreous, radiation H(I) and H(II) centers, photo- and thermostimulated processes 7−70643
SiO_2, vitreous, scatt. fn. determ. 7−131031
SiO_2:As, As segregation and drift under temp. gradient 7−76490
SiO_2:As, ion implantation, calc. of O recoil *(Chinese)* 7−131194
SiO_2:As, P, impurity atomic states, XPS studies 7−137379
SiO_2:BF cladding for radiation resistant modified rod-in tube (MRT) fibres *(Japanese)* 7−142019
SiO_2:Bi semiconducting glasses, secondary electron emission characts. determ. 7−144189
SiO_2:Ce, (Al)(P) glasses, plasma CVD, fluoresc., absorpt spectra, codoping effects 7−71046
SiO_2:Cl films formed suing trichloroethane oxidation and low pressure CVD 7−71049
SiO_2:Cs films, Cs diffusion, RBS studies 7−91898
SiO_2:Er^{3+}, single-mode fibre laser operating at 1.55 μm 7−68692
SiO_2:Eu^{2+}(Yb^{2+}), vitreous, luminescence props. 7−70857
SiO_2:F layer MCVD, F chemistry and incorporation mechanism 7−100092
SiO_2:F multiclad single mode fibres 7−136575
SiO_2:F optical fibres, stress props. 7−82790
SiO_2:Ge optical fibres; trapezoidal index single-mode for 1.55 μm band 7−82808
SiO_2:GeO_2 fibres prepared by VAD, photoluminesc. 7−136596
SiO_2:GeO_2 high NA multimode fibre made by pressurized MCVD 7−68920
SiO_2:GeO_2 optical fibres, stress props. 7−82790
SiO_2:GeO_2 optical waveguides, optical props. effect of laser heating 7−136538
SiO_2:GeO_2 Raman fibre amplifier characteristics for use in optical transmission systems 7−110451
SiO_2:H, doping by ion beam enhanced hydration 7−91451
SiO_2:Na, SiO_4/Na centre, thermoluminescence and phosphorescence studies 7−125817
a-SiO_2:OH, γ-ray irrad., H-associated defect centres, ESR studies 7−97932

silicon compounds continued
SiO_2:OH, OH diffusion at high temp. 7−131365
SiO_2:Sb_2O_3 fibres fabricated by VAD method 7−123219
SiO_2:Yb^{3+}, Er^{3+} optical fibres, multiphoton effects 7−90819
SiO_2/Si (111) interface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
SiO_2/Si interface, anomalous bonding configurations, UV photoemission spectra study 7−118283
SiO_2/Si interface, chemical and electronic struct. 7−70099
SiO_2/Si interface, defect microchemistry, oxide decomposition reaction 7−119525
SiO_2/TiO_2 multicavity filter stability 7−123176
SiO_2-Ag(Cu), energy efficient coating props. study 7−125995
SiO_2-Al_2O_3, adsorbed trialkylphosphine probe, ^{31}P NMR study 7−68349
SiO_2-Al_2O_3-RO:Cr(III), R=Mg, Ca, Zn, transparent glass ceramics, crystalline phases, spectroscopic props. 7−124111
SiO_2-B_2O_3-K_2O ternary glass forming system, props. and chemical composition relationship 7−136465
SiO_2-based amorphous solids, thermal conductivity above the plateau 7−98596
SiO_2-Fe granular solids, mag. props. 7−125476
SiO_2-Fe_2O_3 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
SiO_2-GeO_2 optical fibre, impurity diffusion from jacketing material 7−110596
SiO_2-GeO_2 optical fibre, impurity diffusion during MCVD deposition 7−110597
SiO_2-GeO_2 system obtained by sol-gel method, phase composition 7−91829
SiO_2-GeO_2-P_2O_5:Nd^{3+} doped optical fibres, prep., optical props. 7−92734
SiO_2-$Hg_{1-x}Cd_xTe$ interface, B implantation studies, MWIR detector appl. 7−84006
SiO_2-InP MIS struct., slow insulator state conc. reduction using plasma-enhanced CVD 7−143625
SiO_2-InSb MIS structs., characterisation of interface electrical props., prep. by plasma enhanced CVD 7−105719
SiO_2-Li_2O-Al_2O_3-CaO:Eu^{3+} glasses, impurity homogeneous linewidth spectral and temp. depend. studies 7−77607
SiO_2-$Na_2O(Cs_2O)$ glass, struct. mol. dynamics simulation 7−104576
SiO_2-NaCl adhesion, radiation effects 7−111678
SiO_2-R_mO_n, R=Cr, Mn, Fe, Cu or Co, coating flat glass by dipping into metal-organic solns., semi-empirical model 7−86064
SiO_2-Si, thermally grown films, ionic current study 7−77103
SiO_2-Si (100), defect-related breakdown, role of O 7−99208
SiO_2-Si interface, high temp. oxide decomp. 7−70090
SiO_2-Si interface, irrad. prod. surface states, annealing 7−104856
SiO_2-Si interface, struct, thermal oxidation, mech. stress effect 7−126332
SiO_2-Si interface form., AES study 7−126337
SiO_2-Si interface microstructure, observation and electronic props. 7−131461
SiO_2-Si MOS structures, density of states for Na^+ impurity bands 7−77101
SiO_2-Si photodeposited interface, elec. charactn. 7−85125
SiO_2-Si system, contact pot. and surface photovoltage kinetics, Kelvin method 7−99207
SiO_2-Si:Fe interface, catastrophic oxide breakdown, impurity behaviour effects 7−143624
SiO_2-Si:P,B, thermal nitridation of SiO_2, effect on Si interstitial conc. 7−131140
SiO_2-Si_3N_4 composite 10 nm dielectric films, electron avalanche injection 7−76964
SiO_2-Si_3N_4-SiO_2 rib waveguides, low loss Bragg reflectors 7−117348
SiO_2-SiO_2:F, pure silica core fibre with doped cladding, VAD fabrication technique and characts. 7−97144
SiO_2-Si(100), struct. props. of native and thermal oxides, surface EXAFS study 7−132378
SiO_2-supported Rh, adsorbed H-layers, ^1H NMR spectra 7−112059
SiO_2-TiO_2 fibre prep. from polytitanosiloxanes 7−92947
SiO_2-TiO_2 glass planar optical waveguides, fabrication by soot deposition process 7−97129
SiO_2-TiO_2 wideband antireflection coating design by the random research approach 7−103932
SiO_2-W, nucleation of W on insulator, selective CVD 7−86039
SiO_2-WSi_2-Si structure, dopant redistrib. modelling 7−91628
SiO_2-Yb_2O_3-Nd_2O_3-Cr_2O_3 glasses, luminescent solar concentrators 7−144915
SiO_2-ZnO-SiO_2(Si)(glass), boundary acoustic waves propag. *(Japanese)* 7−118222
SiO_2-ZrO_2 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
SiO_3/Si interface form. from adsorbed O_2 on Si surface, photoemission spectra studies 7−113344
SiO_x antireflection coatings designed for increased $ZnIn_2S_4$ photocurrent 7−123158
SiO_x, disordered solid, struct. phase transition 7−137243
SiO_x film on NaCl (001), struct. and growth morphology 7−118322
SiO_x film waveguides for integrated optics, losses 7−97175
SiO_x films, plasma-deposited, bond strain effects 7−126019
SiO_x films, variable composition, AC conduction 7−125163
SiO_x obliquely deposited layers, surface struct. and liq. cryst. alignment 7−124079
SiO_x protective coatings, solar concentrator materials development 7−71580
SiO_x thin films, obliquely evaporated, columnar struct., depend. on deposition angle and condensation rate 7−84570
SiO_x:TbF_3 films, comparative study of doped and undoped samples, comp., struct., elec. and optical props. 7−105332
SiO_x-a-Si barriers, tunnelling via localised states, microscopic study 7−70423
SiO_z, silica fibres, plastic-clad, attenuation props., modelling 7−123245
$^{29}Si_2O$, hyperfine splitting, ESR spectra, zero-field splitting 7−135973
Si_2O_4, electronic struct., CNDO/SW calcs. 7−110182
Si_2O_5-Na, vermiculite, Raman spectra study 7−85700
Si_2O_5-Sr, vermiculite, Raman spectra study 7−85700
$Si_2O_7^{6-}$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
$Si_mO_n^{m-}$, methanolic soln., tetramethylammonium ions effect 7−100535
Si_xO_y small cluster equilib. configs., semi-empirical pot. energy function, Monte Carlo simulations 7−74803
SiO_xN, buried layers; formation by ion implantation in Si 7−69726

silicon compounds continued
SiO_xN_y fibres, synthesis by polycarbosilane nitridation, tensile strength 7−132537
SiO_xN_y films, plasma processing studies 7−132462
SiO_xN_y, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
SiO_xN_y thin films, deposition by remote plasma enhanced CVD 7−86047
SiO_xN_y-Si, rapid thermal annealing prep., elec. characts. 7−131792
$Si_3O_3N_2$, plasma-enhanced deposited on Si (100), ion bombardment-induced mechanical stress meas. 7−71007
$Si_xO_yN_z$ film waveguides for integrated optics, losses 7−97175
$SiO_xN_yH_z$ amorphous plasma-enhanced CVD films, IR, ESR and resistivity meas. 7−85428
$SiO_xN_yH_z$ films, plasma enhanced CVD 7−106433
$SiO_xN_yH_z$ films, plasma deposited, EPR struct. study 7−143249
SiO_xNy thin films, plasma enhanced CVD, deposition rate and props. depend. on N_2O conc. *(Slovenian)* 7−86042
$SiO-CeO_2$ thin films, admixtures, ESR study 7−132135
SiP_2O_7, cubic and monoclinic, vibrational spectra, normal coordinate anal. 7−106169
SiS_2-LiS-LiBr(l), glass-forming region and struct., X-ray diffr. and FT-IR spectra 7−142602
$SiSe_2$, chalcogenide glass, struct. modelling 7−142617
Si_xTe_{100-x} chalcogenide glasses, critical comp. study, elec. resist. meas. 7−105565
$Si_{12}Te_{48}As_{30}Ge_{10}$ chalcogenide vitreous semicond., threshold switching, highly conductive filament formation 7−105634
$Si-SiO_2$ interface, struct., EPR obs. 7−112111
$Si-SiO_2$ structures, interfacial P_{b0} defects, low temp. EPR obs. 7−112950
Sn-As-Si, phase separation, viscosity and elec. cond. studies *(Russian)* 7−124516
$SnO_2/SiO_2/Si$, spray-deposited solar cells, short-circuit photocurrent v. open circuit voltage characteristics 7−126603
SnO_2-SiO amorphous thin films, AC elec. props. rel. to annealing 7−143620
Ta_2O_5-SiO_2-GaAs waveguide, acoustooptic interaction 7−136517
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7−70706
Ti-SiO_2, ion mixing at low temp., chemical effects 7−76499
Ti-SiO_2-Si system, silicide form. under thermal and laser annealing *(Chinese)* 7−105153
TiB_2 particle reinforced SiC, hot-pressed, mech. props. and oxidation behaviour 7−78147
TiB_2 particle reinforced SiC, microstruct. and material props. 7−78148
TiO_2/SiO_2 dielectric multilayer reflector for GaAs surface-emitting laser 7−110380
TiO_2/SiO_2 multilayer Bragg reflector for GaAlAs/GaAs surface emitting laser 7−68684
TiO_2-Nb_2O_5-B_2O_3-Na_2O-SiO_2 glass for nonlinear optical waveguides, synthesis and charactn. 7−136469
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7−125834
Ti_3SiC_2, CVD deposition 7−144305
(WC-Co)-SiC composite, densification kinetics in hot pressing 7−77925
WSi_x films, Si-rich, effects of annealing 7−113391
ZnO-SiO_2-Si multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
$ZnSiAs_2$, elec. resist., Hall effect, rel. to defect props. *(French)* 7−84892
$ZnSiAs_2$, Hall mobility meas. rel. to defect props. *(French)* 7−84939
$ZnSiAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSiP_2$, electrochemically assisted synthesis 7−86072
ZrO_2-Al_2O_3-SiO_2-TiO_2, toughened mullite ceramic composites, sintering, microstruct., phase comp. 7−77930
ZrO_2-SiO_2 system, sol-gel prep., precip. ZrO_2 transform., fracture toughness *(Japanese)* 7−132614
silicon controlled rectifiers *see thyristors*
silicon integrated circuits *see monolithic integrated circuits*
silicon-on-sapphire integrated circuits *see field effect integrated circuits*
silicon reference diodes *see avalanche diodes; Zener diodes*
silicones
optical fibre coatings, UV curable 7−136592
rubber, thermal and radiation curing before and after thermal ageing 7−69766
silicone rubber-PZT composites, dielec. and piezoelec. props., stress stability 7−99689
transducer for gas flow meas. *(Swedish)* 7−83369
silver
see also nuclei with .....
absolute specular reflectance meas. in IR 7−121203
adsorbed layers on Mo (011), phase transition, condensate-2D gas 7−84528
adsorption and desorption on Si (111), RHEED-X-ray spectra studies 7−118267
adsorption and growth on Si and Ge (111) surfaces, photoelectron spectra, RHEED 7−85945
adsorption of O_2 on free particles 7−84503
adsorption on AgBr (100), latent image form., quantum chem. investig. 7−131450
Ag-Pd films, pyridine adsorbed layer, SERS spectra, electromag. quenching and enhancement study 7−77575
aggregates, on Ag halides and coated electrodes, SERS obs. 7−77584
anode vaporisation in electric arc column *(French)* 7−97833
atom, neutron activation anal. in biological materials, accuracy study 7−101156
atom, Zeeman furnace AAS, matrix effects study 7−133007
cascade collapse to vacancy loops 7−104813
chemically deposited layer on glass, optical props. 7−138525
coadsorbed layer with pyridine on cold Cu films, SERS study 7−138444
colloid, adsorbed dye, SERS 7−68314
colloid, adsorbed polymethine dynes, inelastic three-photon light scatt. *(Chinese)* 7−129821
colloidal, adsorpt. of oxyhaemoglobin, surface enhanced reson. Raman spectrosc. 7−93644
colloidal, in stretched polyvinyl alcohol films, lin. dichroism 7−132256
colloids, adsorbed acrylamide, polymerisation, SERS 7−144056
colloids, adsorbed flavoproteins, SERS 7−99821
colloids, adsorbed indigoid dyes, reson. Raman and three-photon scatt. 7−122551
colloids, adsorbed layers of haem proteins, reson. SERS spectra study 7−78779
silver continued
colloids, adsorpt. of 2,2′-bipyridine and pyridine, SERS spectra anal. 7−77582
colloids, chemisorption of benzoic acid, SERS spectra study 7−74631
colloids, rhodamine 6G and crystal violet adsorbed layers, reason. SERS and fluoresc. spectra coverage depend. 7−74629
colloids, surface polymerisation of acrylic acid, SERS spectra anal. 7−74798
composite contacts, prep. by infiltration method, props. *(Japanese)* 7−106468
contact surface, contaminant film growth, ellipsometric anal. 7−113790
cooled films, second harmonic generation surface enhancement mechanism 7−82707
Cu-Ag films, pyridine adsorbed layer, SERS spectra, electromag. quenching and enhancement study 7−77575
cylindrical films, Aharonov-Bohm effect, weak localisation, magnetoresist. meas. 7−118595
discontinuous films on sapphire, temp. depend of electrical conduction 7−105732
electric field enhancement near surface irregularities 7−132284
electrode, adsorbed ATP, SERS, protonation effects 7−114188
electrode, adsorpt. of DABCO, SERS, photon-driven charge transfer 7−76628
electrode, coadsorpt. of pyridine and methylpyridine, SERS obs. 7−74634
electrode, ethylenediaminetetracetic acid, SERS 7−99810
electrode, HCN adsorpt., SERS, soln. effect 7−77541
electrode, imidazole and imidazolium ion adsorpt., SERS 7−131433
electrode, in electrochem. cell, SERS mechanism 7−77587
electrode, polymeric coating adsorption, SERS monitoring study 7−77577
electrode, pyridazine adsorpt., vibr. freq. shifts, SERS 7−74620
electrode for O_2 analyser, biomedical appl. *(Czech)* 7−133500
electrode surface, aniline adsorpt. in acidic soln., SERS study 7−77578
electrode surface, guanine and methylated derivatives adsorbed layers, SERS spectra study 7−77576
electrode/bone interface, elec. characts. 7−119878
electrodes, adsorbed H_2O, OH^- and H_3O^+, SERS 7−99809
electrodes, adsorpt. of O-, N- and S-containing mols. (ions), CNDO/2 calcs. 7−91967
electrodes, SERS of HCN 7−77542
electroless deposition as interlayer within polymer films 7−86066
electromigration suppression effect 2,4-diamino-6-vinyl-s-triazine compounds 7−91856
electron inelastic mean free paths, energy dependence 7−138565
electron irradiated, point defect precipitation at dislocations, HVEM obs. 7−98249
electron momentum density distribs. 7−76760
electron momentum distrib., renormalised free atom model, Compton profile study 7−113308
electron self-energy, dynamical screening and nonlocal exchange effects calcs. 7−92060
electron-phonon interaction, point-contact spectroscopy 7−84705
electroplated Cu leadframes, porosity meas. by electrographic printing 7−138701
emitter current dependence of transverse electron focusing 7−105537
fast neutron irrad., low temp., defects, X-ray diffr. studies 7−104852
FCC, self-diffusion, monovacancy and divacancy contributions 7−76478
film, discontinuous island, with rhodamine B dye overlayer, optical transmission spectra 7−113297
film, island struct., amorphous and liq. states, room temp. 7−92021
film, obliquely evaporated, SERS studies 7−138450
film, optical constants, interferometric determ. 7−70920
film, surface plasmon enhanced Brillouin scatt., double reson. effect obs. 7−125759
film, transparent, optical consts. 7−106293
films, direct evaporation on anodised porous Si 7−143285
films, pyridine adsorbed layer, SERS, cavity model discussion 7−77573
films, SERS active, preparation method 7−76709
films, vacuum deposited on Langmuir-Blodgett layers, birefringence 7−106135
foil, 120 keV electron inelastic scatt. 7−96878
gamma-ray photoelec. cross sections, 43-152 keV 7−96607
glass:Ag^+, field-assisted Ag^+ diffusion, I-V characteristics, linearity 7−98577
interlayers in polyimide film, sintering process and charactn., laser writing appl. 7−119187
inverse diffr. problem, delta functions, Gaussian distrib. *(Russian)* 7−104483
island films, annealed, surface plasmon spectra, substrate effects 7−98850
island films, crystal violet adsorbed layer, SERRS spectra study 7−77572
island films, energy transfer with fluorescent dye molecules, appl. for solar concentrators 7−144124
island films, pyridine adsorpt., SERS charge-transfer band investig. 7−77580
island films, substrate for ion-implanted polyethylene films, SERS spectra anal. 7−77581
KLL Auger spectrum 7−116923
L shell X-ray cross sections from Be^+ collisions 7−90373
lattice and grain-boundary diffusion of ^{121}Te after radioisotope implantation 7−105128
layers, hot hollow cathode deposition, bonding to austenitic stainless steel 7−70131
liquid, pair correl. functions, Born-Green-Yvonne theory 7−104532
localised secondary grain boundary dislocations in (001) twist boundaries, TEM study 7−124285
magnetic ordering and supercond. at microkelvin temps. *(German)* 7−112567
metallised Si surface, catalyzed gaseous F_2 etching 7−126336
mirror, optical SHG at 1.064 μm 7−136430
mirrors, bare Ag and Ag on Cu, glancing incidence absorptance meas. 7−110495
molten, wetting of Si_3N_4, work of adhesion 7−143132
monolayer, adsorbed on Pt substrate, SERS study 7−119005
monolayer growth on Mo (110), AES, ELS, TDS, ADT and work fn. meas. *(German)* 7−131452
monolayer growth on polycrystalline (111) Al surface 7−98737
monolayer on Cu (111), growth and electronic props. 7−138074
monolayers, lattice contraction, LEED study 7−143295
Nafion-Ag microcomposite membrane; O_2-N_2 separation 7−119569
neutrino recoil expts., PAC study 7−118903
neutron activation analysis in biological samples and mineral ores 7−100656

silver continued
nonequilibrium phonon drag effect study 7−104941
nuclear magnetic ordering 7−77187
overlayer, effect on magnetisation of thin Co films 7−118836
overlayer on Cu (001), 3D valence band struct. development, ARPES obs. 7−125068
overlayers on Si (111)-2×1, LEED and AES studies 7−118275
particle array, optical absorbance 7−113300
particles, incremental charging by single electrons, tunnelling study 7−131739
particles in ferrofluid composite, props. at MM wave freqs., mag. absorpt. 7−125864
particulate over $Al/Al_2O_3/Au$ tunnel junction, surface plasmon mode obs. 7−84725
phase-matched SHG of surface polariton along Ag layer on slab optical waveguide 7−123084
plasma, thin film capacitive discharge, early time spectral features study 7−142483
plated C fibre reinforced Al alloy matrix composite, corrosion stability 7−106651
polycrystalline, deform., shear bands, cellular dislocation systems 7−132666
polycrystalline, electron-stimulated desorption of atomic O 7−105238
polycrystalline, plastic deform., dynamic recovery 7−144434
polycrystalline surface, chemisorbed O_2, evidence for superoxo and peroxo species, combined EELS-XPS study 7−125928
polycrystalline wires, sputtering yield, critical angle of incidence 7−106333
positron annihilation rate enhancement 7−138541
powder heat exchanger for colling liquid ^3He 7−108565
powder surfaces, adsorption behaviour of SO_2, SERS study, nearly environmental conditions 7−70065
quenching for vacancy cluster formation, ultrahigh vacuum techniques *(Japanese)* 7−138762
rapidly quenched, lattice defects 7−92986
reflective surface, solar concentrator materials development 7−71580
single crystal with adsorbed Cl (Cs), surface EXAFS studies 7−125857
sol, adsorbed guanine series, SERS 7−132265
sol, aqueous, chemisorption of 2-butanethiol, SERS study 7−125734
sol, chemisorbed 1-butanethiol, SERS 7−96704
solid, H^+ stopping cross sections 7−117997
sols, adsorption of $Fe(2,2'\text{-bipyridyl})_3^{2+}$ on Ag colloids SERS spectra anal. 7−77579
spheres, microlithographically produced, expt. test of Mie theory 7−70838
stationary nonequilib. vacancies during thermotransport 7−98121
strained monoatomic layers on Ru (001), thermal desorption 7−143208
substrate, coupled to Ag or dielec. sphere, optical response, surface plasmon polariton excitation 7−106160
superimposed films, elec. cond. 7−131812
surface, (110), adsorbed $Fe(CO)_4$, UF-induced photochem. 7−119560
surface, (110), H_2O, OH and O_2 adsorption, LEED, AES, TDS, ESDIAD and work function studies 7−105267
surface, (111), desorption rates of Xe and Ar, lateral interactions, image theory 7−84509
surface, (111), electron state photoemission cross section resonances 7−100012
surface, (111), H_2(HD) scatt., close coupling wave packet method appl. 7−106331
surface, (111), He inelastic scatt., interaction pot. calc. 7−92792
surface, (111), NO dissociative chemisorpt. dynamics 7−139034
surface, (111), O_2(Ar) molecular-beam scattering 7−144227
surface, (III), physisorbed CO_2, vibrational excitation, EELS study 7−143171
surface, Ar impact, excited particle secondary emission 7−125899
surface, complex form. with thiosemicarbizide, struct. anal., SERS spectra study 7−74630
surface, corrosion resistance, microhardness and contact resistance, effect of B ion implantation 7−78356
surface, H_2 phthalocyanine adsorbate, resulting complex Raman spectra study 7−74628
surface, inert gas atom, effective eqn. of motion 7−119086
surface, ion bombarded, morphology development 7−69784
surface, optical SHG from Tl 7−82706
surface, polystyrene adsorption kinetics, meas. by surface plasmon oscillations 7−98706
surface, SERS of adsorbed benzoic acid, attenuated-total-reflection geometry 7−125748
surface (001), Fe epitaxial film mag. and electronic props., spin-polarised photoemission study 7−112913
surface (100), Cl c(2×2) overlayer struct., surface extended X-ray absorpt. fine struct. study 7−143215
surface (100), hyperthermal Xe atom scatt. study 7−138580
surface (100), image potential surface states, inverse photoemission 7−138000
surface (110), adsorbed Na and K, empty electronic states, inverse photoemission studies 7−85032
surface (110), avoided crossing of vibr. modes obs. by He time of flight meas. 7−137690
surface (110), chemisorbed O_2 bond length and orientation, near-edge EXAFS study 7−112081
surface (110), Cl covered, domain wall and incommensurate structs., SEXAFS study 7−143145
surface (110), Xe adsorption on low and high work function metals 7−131419
surface (110), Xe-Kr monolayer system, conduction band structure, unoccupied electron levels, inverse photoemission investig. 7−131728
surface (111), angle resolved inverse photoemission 7−92766
surface (111), $Cl^-(I^-)(Br^-)$ adsorpt. and desorpt., energy profiles, CNDO/2 calc. 7−70066
surface (111), desorbed and scattered trifluoromethane, orientation 7−137721
surface (111), electrode, second harmonic intensity, rot, anisotropy obs. 7−117265
surface (111), H_2O and O coadsorpt., H_2O-OH-O surface chem. and interactions, LEED and desorpt. studies 7−143212
surface (111), He atom scatt., Debye-Waller factor calcs. 7−84171
surface (111), O_2^+ impact, harpooning transitions 7−125901
surface (111), V and Mn adlayers, minority-spin states, momentum-resolved inverse photoemission studies 7−113307
surface (111), Xe-NO_2 monolayer system, ferromag. order 7−132091
silver continued
surface microscopic roughness meas. by second harmonic intensity variation anal. 7−121068
surface structure, scanning tunnelling microscope and transverse electron focusing studies 7−76570
surface with adsorbed pyridine, surface enhanced Raman scatt., collective fermi resonance nature 7−77555
surface with adsorbed pyridine charge transfer band, SERS mechanism 7−92676
surface-plasmon excitation by electrons in microlithographically produced channels 7−85909
surfaces, (110) and (111), low energy He atom scatt., effective two-body pot. 7−85932
surfaces, electron enhanced F_2 sorption 7−105239
surfaces, reaction and adsorption of Cl_2, X-ray and ion radiation effects, XPS and Auger spectra studies 7−119579
thermal vacancies, positron lifetime meas. 7−91570
thermomigration in Sn under microgravity 7−117576
thin film, CO vapour deposited layer, SERS, electromag. field enhancement study 7−77567
thin film/insulator struct. for gas sensing, filament model anal. 7−108539
thin films, MeV $^4He^+$ ion irradiated, stopping powers 7−98289
thin films with organic overlayers, SERS, short-ranged EM fields 7−125756
thin sputtered films, spectrally selective coatings, influence of deposition parameters 7−144276
ultrathin filaments, conductivity at low temps. 7−112296
ultrathin films, cryst. modification, LEED studies 7−112140
vacancy diffusion, Monte Carlo studies 7−91875
Ag electrode/electrolyte interface, spin and REDOX equilib. of cytochrome C, SERS spectra anal. 7−78778
Ag sol, chemisorbed benzoic acid, SERS 7−96708
Ag V, $4d^7$-$4p^65p$ transitions spectrum, LSF parametric calcs. 7−116897
Ag^+, adsorp. on AgBr (100), latent image form., quantum chem. investig. 7−131450
Ag^+ fluoresc. quenching of acridinium and 6-methoxyquinolinium 7−82276
Ag^+ perturbed Belousov-Zhabotinsky reaction 7−138994
Ag^{37+}, electron impact excitation cross sections, relativistic distorted-wave calcs. 7−140388
Ag^{n+} clusters, electronic struct., hyperfine interactions, Dirac scattered-wave method calcs. 7−103369
Ag:In,O, vacancy struct. following α-bombardment, PAC study 7−117964
Ag:S, residual resistivity, impurity effects 7−98980
$Ag/a\text{-}As_2S_3$ structure, photodissolution processes 7−84286
$Ag/Ag_3AsS_3/Ag$ complex resist. freq. and temp. depend. study *(Russian)* 7−92307
Ag/Ag^+ electrode, polycrystalline, kinetics, HF impedance spectroscopy 7−113943
Ag/AgCl planar electrodes, noise power spectrum density analysis 7−133006
Ag/AgS_2 scale interface reaction effects on sulphidation kinetics, modified Wagner's pellet method 7−119576
Ag/Au/Si system, interactions, Auger spectra studies 7−112109
Ag/Si (111) interface, bonding characteristics identified by energy dependence of the photoionisation cross section 7−70100
Ag/Si interface reactions, high energy ion scatt./channelling studies 7−113998
Ag-aqueous electrolyte interface, optical SHG and differential capacitance obs. 7−76629
Ag-Ar, arc voltage fluctuations, depend. on nature of electrode and atm. *(French)* 7−83577
$Ag\text{-}As_2Te_3$ interface, electron irradiated, struct. and compositional changes 7−84030
$Ag\text{-}Cs_2O$ colloid-semicond. films, light absorpt. and scatt. *(Chinese)* 7−99948
$Ag\text{-}Cs_2O$ thin films, optical props, Ag content effect *(Chinese)* 7−99949
Ag-CsOH, sorption isothermics for reactor accident interactions calcs. 7−129301
Ag-Cu boundary, atom mixing processes under Ar ion bombard. 7−84068
Ag-GaAs, surface polariton excitation, photoresponse influence 7−112198
Ag-GeTe interface, electron irradiated, struct. and compositional changes 7−84030
$Ag\text{-}HfO_2/SiO_2$-Ag struct., metal film boundary influence on luminesc. intensity 7−85840
Ag-InP (110) Schottky contacts, effect of Sb interlayers 7−131784
Ag-InP Schottky barrier characts. change with time 7−112429
Ag-Mo boundary, atom mixing processes under Ar ion bombard. 7−84068
$Ag\text{-}Na_3AlF_6$, positron annihilation study 7−144163
Ag-Ni fibrous periodic composite, characteristic lengths determ. laser beam diffr. method 7−69562
Ag-SiO ultrathin superlattices, DC elec. cond. switching 7−92294
$Ag\text{-}SiO_2$ interface, preferred orientations 7−124793
Ag-V multilayered structures, proximity coupled, upper crit. field meas. 7−99372
$Ag\text{-}Zn_3P_2$-Ag cells, I-V characts., Ag electromigration 7−105737
Ag^+-Na^+ ion-exchanges channel waveguides in optical glasses charactn. 7−103985
$Ag+H^+$ K-shell ionisation 7−129844
$Ag+He^{2+}(D^+)$, impact L-shell ionization cross sections 7−74747
Ag^++(CO)(NH_3)(ND_3)(methane)(methyl halides) association, complex form., rate consts. 7−93282
Ag_2, electron correls., SCF, extended basis set 7−89995
Ag_7 cluster, form. in Ne matrix, EPR study 7−122763
$AgBr_{0.15}Cl_{0.85}:Ag^{2+}$, anomalous quasi-isotropic g-tensor, strong covalency 7−91521
AgCl-Ag thin films, light induced periodic structures 7−124763
Ag(111)-Fe(110) epitaxial superlattices, growth and examination 7−113032
$Al\text{-}Al_2O_3$-Ag, planar tunnel junction photodetectors, electromag. resonance enhanced photoabsorption 7−73417
$Al\text{-}Al_2O_3$-Ag, switching effects and negative resistance 7−131807
As_2S_3:Ag submicron resolution optical grid, Ag photodiffusion study 7−105120
As_2S_x:Ag, photoenhanced dissolution and diffusion 7−84393
$BaPb_{1-x}Bi_xO_3$:Ag solid inclusion solns., high T_c superconductivity study *(Russian)* 7−112540
$Ca_5(PO_4)_3Cl$:Ag, Na^+, thermoluminesc. under X-ray irradiation 7−106279

ilver continued
$CdBr_2$:Ag^{2+}, anomalous quasi-isotropic g-tensor, strong covalency 7−91521
CdTe:Ag film, absorption admixture field, anomalous photovoltaic effect 7−99124
CdTe:Cu, Ag, Au, impurity and cation vacancy electronic struct. 7−98873
Cu substrate, organic film, surface EM wave absorption, Ag layer effect 7−113305
Fe-Ag neutron-polarising supermirrors 7−74827
$Fe_{70}B_{30}$-Ag compositionally modulated amorphous sputtered films, magnetisation temp. depend. study 7−112900
n-GaAs:Be^+/Ag Schottky barrier height enhancement by ion implantation, electrostatic model anal. 7−99159
Ge_2S_3:Ag, glassy, effect of DC elec. field on Ag migration 7−105121
$Ge_xSb_yS_{100-x-y}$:Ag, glasses, influence of In (Ag) atoms on optical and electrical props. 7−137924
$GeSe_2$:Ag, amorphous, high energy ion beam induced impurity diffusion, RBS 7−124351
$GeSe_2$:Ag, cryst. and amorphous, electronic struct., photoemission and optical spectra studies 7−105398
GeTe: Ag, effect of electromigration and temp. gradients on impurity distrib. 7−84010
$HgCr_2Se_4$:Ag single crysts., FMR lineshape and anisotropy meas. 7−85443
KBr:Ag, Na, activator photodissociation, colour centre generation *(Russian)* 7−83952
NaCl:Ag, electronic struct of $(Ag^+)_2$ pairs, MSX_α calcs. 7−76816
Nb-Si-Nb Josephson sandwich junctions, Ag shunt, electrophysical and microwave props. 7−70494
PbTe:Ag, elec. props. and photoluminesc. 7−105557
RbBr:Ag^-, two photon absorpt. of Ag^- centres, luminesc. obs. 7−138497
Si (111) $\sqrt{3}\times\sqrt{3}$-Ag surface, photoelectron spectra, surface and core-level shifts 7−85949
Si solar cell welds, Ag foil interconnector low-cycle fatigue tests 7−144845
Si:Ag, Ag solubility, diffusion and thermodynamic props. 7−137567
Si:Ag, implant regrowth, redistrib., range and shape factors, TEM study 7−69733
Si:Ag, implanted impurity diffusion temp. depend. study 7−84397
Si:B-Ag, vacuum annealed surfaces, elect. props. 7−138004
Si-Ag, O_2^+ bombardment, Ag redistribution, oxide formation 7−113329
Si-Ag, tailored microstructures for IR detection 7−132290
SiO_2-Ag, energy efficient coating props. study 7−125995
TiO_2-Ag, energy efficient coating props. study 7−125995
V/Ag multilayered films with artificial superstruct., prep and supercond. 7−112677
V-Ag multilayered superconductors, mag. field penetration depth, material parameters 7−105828
WO_3/Ag, dielec. grid patterns on metal film, examination using surface plasmon microscopy 7−140743
$Zn_{1-x}Cd_xS$ phosphor powders, surface recombination mediation by Pd microislands 7−113259
ZnO-ZnSe:Ag, diodes, influence of dopant on electrolum. 7−85848
ZnS(Se):Cu, Ag, Au, impurity and cation vacancy electronic struct. 7−98873
ZnSe:Ag, strongly lattice coupled luminesc. transition, temp. broadening 7−92711

ilver alloys
amalgams, thermodynamic props., calorimetric obs. *(French)* 7−115965
dilute alloys, radiation induced solute transport 7−91881
dilute electron irrad. alloys, interstitial-solute interaction 7−91634
vacancy-solute binding energies, rel. to bulk props. 7−76197
Ag-Al, electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
Ag-Al, NMR study of Al diffusion 7−106047
α-Ag-As, nonlinear solvent diffusion enhancement 7−131353
Ag-Au, alloy phase stability, electronic theory 7−70181
Ag-Au, S dissolution, H effect, thermodynamics 7−100190
Ag-Au droplets, undercooled, microscopic observations 7−126093
Ag-Au foils, CESR linewidth, Au conc. and foil thickness depend. 7−85436
Ag-Cd/Ag diffusion couple, interdiffusivity and ratio of intrinsic diffusivities 7−111978
Ag-Cd-Zn alloys, lattice parameters and Debye temps. 7−98038
Ag-Cd(In)(Sn)(Sb) dil. alloys, ^{99}Rh PAC meas. 7−118440
Ag-Cu, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
Ag-Cu (15 wt.%), rapidly solidified, cellular microsegregation 7−92994
Ag-Cu crystalline brazing alloys, rapidly quenched, C steel wettability obs. 7−106757
Ag-Cu eutectic alloy, low energy sputtering 7−125882
Ag-Cu-Mg, metallic glasses, electron transport props. and related electronic struct. 7−98792
Ag-Fe, ductile two-phase alloys, strengthening prediction model for high strains 7−132642
Ag-In-Sb(Sn), liq. state, ternary systems, enthalpy of mixing *(German)* 7−98479
Ag-M-Sn dil. alloys, (M=Rh, Pd, Pt), interaction of ^{119}Sn probe with impurities 7−106066
Ag-Mg, intermetallic β′ phase, yield stress, temp. and comp. depend. 7−126192
Ag-Mg long period superlattice, commensuration process, in situ TEM obs. 7−76391
Ag-Mg-M (M=Zn, Au, Cu, Al, Sn), out-of-step distance, substitutional element effects 7−142708
Ag-Mn, chemically induced grain boundary migration 7−76145
Ag-Mn, spin-glass dynamics from mag. noise, relax. and susceptibility 7−118802
Ag-Mn spin glasses, electronic structure, angle resolved UPS studies 7−77766
Ag-Ni, very dil. alloys, surface sandwich segregation, mean field approach 7−105210
Ag-Pd random alloys, Auger spectra, matrix elements effects 7−106317
Ag-Pt/ZnTe stable ohmic contacts, fabrication and expt. study 7−143612
Ag-R (R=La, Ce, Pr, Nd, Gd, Tb, Y) binary liquid alloys, thermodynamic props. 7−118132
Ag-Sb, solidification, maximum inhomogeneity, Scheil eqn. anal. 7−71163
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, self-organisation obs. 7−70112

silver alloys continued
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, structure and phase composition obs. 7−71152
Ag-Sb alloys, stationary nonequilib. vacancies during thermotransport 7−98121
Ag-Si thin film, prep. by ion assisted deposition *(Chinese)* 7−132499
Ag-Sn, amorphous alloys, density of states of Fermi energy, struct.-induced min., influence of noble-metal content 7−92058
Ag-Sn, liq., thermodynamic props. 7−143053
Ag-Sn, peritectic solidification, nonequilib. γ-phase form., homogenisation kinetics 7−113524
Ag-Sn-Sb, liq. state, ternary systems, enthalpy of mixing *(German)* 7−98479
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7−124775
Ag-Zn films, electrodeposition, annealing, corrosion in H_2S atmosphere, surface layer charactn. *(Japanese)* 7−78316
Ag-Zn thin films, magnetron-sputtered, optical recording appl. *(Japanese)* 7−125977
AgAl alloys, electron irradiated, SRO kinetics, elec. resistivity study 7−104739
AgCu, wettability of solid Fe *(French)* 7−112014
$Ag_{1-x}Cu_x$ UHV evaporated films, elec. cond., comp. and grain size depend. 7−125147
AgMg β-electron cpds., lattice disorder and defects study 7−104729
Ag_3Mg, long period superstructs. 7−76078
AgMn dilute RKKY spin glass. nonlinear suscept. meas. 7−125402
$Ag_{1-x}Mn_x$ dil. alloys, UPS study of Mn local moment 7−70976
Ag_5MnAl, Silmanal, vibr. damping capacity, heat treatment effects *(Russian)* 7−138763
AgMnSb dilute metallic spin glass, d'Almeida-Thouless transition, thermoremenance time decay meas. 7−125399
AgNi, wettability of solid Fe *(French)* 7−112014
AgPb, wettability of solid Fe *(French)* 7−112014
Ag_xPd_{1-x}, transition metal alloys, Knight shift 7−132150
Ag_xPd_{100-x} random alloys, electron states, canonical description 7−70182
AgSn alloys, excess entropy in vacancy-impurity binding 7−105082
AgSn, wettability of solid Fe *(French)* 7−112014
Al-Ag, dil. alloys, deformed, distrib. of activation energy for recovery, 50-85 K 7−104898
Al-Ag, Guinier Preston zone comp., APFIM obs. 7−78028
Al-Ag, high resolution electron microscopy of small precipitates 7−144418
Al-Ag, phase transform. mechanism, surface relief obs. 7−132608
Al-Ag alloys, precipitate plate growth mechanisms study 7−137569
Al-Ag dil. alloys, grain boundary internal friction peak, strain amplitude depend. 7−104908
Al-Ag dilute alloys, neutron irrad., defect distrib., X-ray scatt. studies 7−91659
Al-Ag dilute alloys, US peak doublets and tilted mixed dumbell cages 7−91734
Al-Ag-Zn multicomponent systems, compositional instabilities, phase separation 7−105055
Al-Cu-Mg-Ag, precipitates nucleation and growth 7−144413
Al-Zn-Ag, early stage precip., anomalous X-ray scatt. 7−144401
Au-Ag, quenched, vacancy formation, migration energy *(Korean)* 7−84813
Au-Ag alloys, electron irradiated, kinetics of SRO formation, resistivity change 7−104738
Au-Ag alloys, short-range ordering by low temp. electron irrad. 7−69761
AuAg concentrated alloys, point defect props., short range ordering 7−104907
$Au_{18}Ag_{20}$, colloidal, plasmon freq. obs., UV-vis spectra 7−113221
Ba-Ag, phase diagram, cryst. struct., thermal anal., metallography, X-ray diffr. 7−77940
$CeAg_2Ge_2$, heavy fermion system, inelastic neutron scatt. study 7−77232
$CeAg_{1-x}In_x$, anomalous magnetostriction 7−125522
$CeInAg_{2-x}Cu_x$ Heusler phases, crystallographic, mag., elec. resist. meas. 7−77281
$CeInAg_{2-x}Cu_x$, Heusler phase, Konda lattice, mag., elec., specific heat props. 7−138188
Cu-Ag, alloy phase stability, electronic theory 7−70181
Cu-Ag, dual phase alloys, stress-strain relations, finite element analysis *(French)* 7−78129
Cu-Ag thin films, MeV $^4He^+$ ion irradiated, stopping powers 7−98289
EuAgGa, cryst. struct., X-ray powder diffr. study 7−91526
Fe-Ag-Al, Al distrib. between Ag and Fe, effect of Ca *(Chinese)* 7−71148
Fe-Ag-Ce, Ce distrib. between Ag and Fe, effect of Ca *(Chinese)* 7−71148
G d_xAg_{1-x}, amorphous, magnetostriction, thermal expansion meas. 7−99544
Ga-Ag system, low Ag conc. range, phase equilib. 7−132572
n^+-GaAs/AgGe ohmic contacts, laser/furnace annealed, resistance, surface morphology study 7−143613
$Gd_xY_{50-x}Ag_{50}$ amorphous and crystalline alloys, hyperfine interactions, Mossbauer study 7−112264
Mg-Ag-In-Cd system, solubility of element in Mg 7−100182
Mg-Ag-Sn(In) powders, local X-ray spectral anal. 7−126507
MnAgAu dilute spin glass critical behaviour, Dzyaloshinsky-Moriya interaction effects 7−125401
Ni-Ag (2 wt.%), bulk undercooled, grain refinement 7−77985
Ni_xAg_{1-x}, amorphous thin films, elec. and mag. props. 7−143430
Pb-Ag, power-law creep, effect of Ag addition 7−144460
Pb-Ag-Bi, liq., excess Gibbs energies from boundary binary systems data 7−144370
Pd-Ag, surface struct. and segregation, calc. 7−143155
Pd-Ag binary alloys active-passivation polarisation behaviour 7−78303
Pd-Ag disordered alloys, electronic states, tight-binding CPA calcs. 7−124844
Pd-Ag-In, impurity repulsive interaction between In and Ag, PAC study 7−118902
Pd-Au, solubility of H, D and T, at low hydrogen concs., 250-733 K 7−105039
$Si_{1-x}Ag_x$:H amorphous thin films, RF sputtered, optical props. 7−92757
Sn-Ag single crystals, electromigration and Soret effect 7−143114
Th-Ag system, phase diagram 7−144365
$Tl_6Ag_{20-x}Se_{14-y}$, cryst. struct. four-circle diffractometer data *(German)* 7−69650
WAg/W, film, microstructure, elec. props., interaction with GaAs 7−143615

silver alloys continued
$Yb_{80}Ag_{20}$ amorphous alloys, transport props., mag. susceptibility, sp. ht. 7−98968
$YbAgCu_4$ struct. and Yb valence state, mag. suscept. meas. 7−98042

silver compounds
AgI-mordenite inclusion cpd., photoinduced effects 7−144105
$AgInS_2(Se_2)(Te_2)$, anisotropy of thermal expansion, X-ray diffr. data 7−131341
anthraquinone derivatives, thin films, photosensitive props. 7−125837
halide exposure, abrupt reduction of photoconductivity *(Japanese)* 7−128690
halide photochromic glass, laser radiation propag. 7−125658
halide photopolymer compositions, camera-speed, introduction and principles 7−139022
halide precipitation coalescence processes 7−139018
halide surface, effect on adsorbed Ag clusters, quantum chemical calcs. 7−118274
halides, characteristic electron density distribution 7−69643
halides, cryst., adsorbed Ag aggregates, SERS obs. 7−77584
halides, holographic photomaterials, light scatt. study 7−122879
halides, interionic pots. based on charge-transfer model, cohesive energy, mol. consts. and ionicity calcs. 7−76071
halides, light scatt., noise effect on holograms and specklegrams *(Chinese)* 7−130022
salts as cathode materials in Li/NH_4NO_3-$LiNO_3$-amide cells, room temp. discharge characts. 7−71588
$XeF_6.AgF_3$, solid, synthesis and vibr. spectrum 7−106185
Ag ClO_4, orientationally disordered cubic high-temp. phase, cryst. struct. *(German)* 7−69687
Ag complex, β-alanine-$AgNO_3$, single crystal, vibr. modes, IR Raman spectra anal. 7−71689
Ag complex, of tetrahydroboratobis(triphenylphosphine), IR and Raman spectra, vibr. anal. 7−85666
Ag halide grains, microwave photoconductivity meas., high sensitivity apparatus *(Japanese)* 7−128686
Ag halide sensitivity limits, w.r.t. development efficiency *(Japanese)* 7−128692
Ag halide systems, development trends *(Japanese)* 7−128691
$Ag/Ag_3AsS_3/Ag$ complex resist. freq. and temp. depend. study *(Russian)* 7−92307
Ag/AgCl planar electrodes, noise power spectrum density analysis 7−133006
Ag/AgS_2 scale interface reaction effects on sulphidation kinetics, modified Wagner's pellet method 7−119576
Ag-As-Se system, glasses, formation, thermal behaviour 7−69605
Ag-As-Se-Te glasses, ionic and electronic cond. and Ag diffusion 7−137617
Ag-Se-S(Te) chalcogenide glasses, selective solubility 7−105048
Ag_3AsS_3, broad phase transition near T∼150 K 7−69888
Ag_3AsS_3, proustite, photoinduced phase transition 7−69889
AgBr (100), Ag^+ and Ag adsorpt., latent image form., quantum chem. investig. 7−131450
AgBr colloids, adsorbed pyridine and dye-1555 mols., SERS 7−82139
AgBr crystal development kinetics *(Hungarian)* 7−73453
AgBr crystals, theoretical and expt. study of ionic motion 7−69972
AgBr crystals in gelatin soln., Ostwald ripening 7−137288
AgBr emulsion dissociation charactn., stopped-flow turbidity 7−139025
AgBr emulsions, interference phenomena 7−121256
AgBr evaporated layer, response to soft X-ray irradiation 7−128684
AgBr exciton condensation, rhythmic processes *(Russian)* 7−143368
AgBr, exciton dynamics, ps reson. Raman scatt. spectra anal. 7−85748
AgBr films, sensitivity centres and latent image centres, created and visualised in vacuum 7−108683
AgBr hypothetical crystals, with switched off van der Waals interactions, lattice spacing 7−83840
AgBr layers, evaporated, developed Ag cluster distrib. 7−139019
AgBr microcrystal, Rothstein effect, electron polarisation model *(Japanese)* 7−128699
AgBr microcrystals, size effect on spectral absorpt. of photochem. colouring centres 7−77613
AgBr monodisperse emulsion, granularity of magenta-dye image 7−139049
AgBr photographic emulsion, seven different kinds of crystal forms 7−139048
AgBr, time resolved luminescence spectra at high density excitations 7−125779
AgBr:I, light emission from impurity states, conventional and coherent phonon descriptions 7−77640
AgBr:I, optically excited, immersed in He bath, heat transfer rate determ. 7−138489
AgBr-CsBr(KBr)(NaBr)(RbBr), molten mixtures, densities and molar excess vols. 7−91691
AgBr(Cl), polarons, cyclotron resonance studies 7−84704
$AgBr_{0.15}Cl_{0.85}:Ag^{2+}$, anomalous quasi-isotropic g-tensor, strong covalency 7−91521
$AgBr_xCl_{1-x}$, trapped excitons, ODMR study 7−106058
AgCl colloids, adsorbed pyridine layers, SERS, enhancement origin 7−82140
AgCl, cryst., slip bands and strain hardening, temp. depend. 7−126139
AgCl crysts., direct and indirect two-photon absorpt. processes, perturbation calcs. 7−77489
AgCl, exciton dynamics, ps reson. Raman scatt. spectra anal. 7−85748
AgCl, high temp. photolum., high photoexcitation rates 7−70865
AgCl hypothetical crystals, with switched off van der Waals interactions, lattice spacing 7−83840
AgCl, polarons, cyclotron reson. study 7−124882
AgCl:NaCl, slip mode transition temp. range shift study 7−118017
AgCl-Ag thin films, light induced periodic structures 7−124763
AgCl-AgBr IR fibre, fabrication, characts. and appls. 7−82847
AgCl(Br), defect Gibbs energy and impurity diffusion coeff. calcs. 7−91842
$AgCl(Br):M^{2+}$, M=Zn,Mn,Cd,Sr,Pb, ionic cryst., vacancy-impurity complexes, dipole moment calcs. 7−137394
$AgCl_xBr_{1-x}$ IR optical fibres, occluded artery recanalisation using CO_2 lasers 7−79046
Ag_2CrO_4, single cryst. gel growth, thermoanalytical and morphological studies 7−69662
$Ag_{1-x}Cu_xI$ red emission excitation spectra 7−125775
$Ag_xCu_{1-x}I$ solid solution thin films, exciton spectrum features 7−131549

silver compounds continued
$(Ag_{1-x}Cu_x)_2Se$, solid solns., ionic conductivity, thermoelectric power 7−143081
$AgF_2.AsF_5$ adduct, cryst. struct., X-ray diffr. study 7−104649
$AgGa_xIn_{1-x}S_2$, microhardness and Debye temp. 7−131225
$AgGaS_2$, chalcopyrite, crystal growth, nonlinear IR appl. 7−68783
$AgGaS_2$, uppermost valence bands splitting by crystal field and spin-orbit interactions 7−76831
$AgGaS(Se)_2$ chalcopyrite ternary semiconds., fundamental energy gap temp. depend., refl. meas. 7−76774
$AgGaS_2(Se_2)$, IR freq. generation 7−75068
$AgGaSe_2$, chalcopyrite, crystal growth, nonlinear IR appl. 7−68783
$AgGaSe_2$ thin films, optical props. 7−99962
$AgGaSe_2$-Al Schottky barrier diodes, thin film, elec. characts. 7−105658
Ag_7GeS_5I superionic cond. and struct. studies *(French)* 7−124221
$Ag_7GeS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7−84382
$Ag_8GeSe_5(Se_6)$ and Ag_2GeSe_3, elec. resistivity, pressure dependence 7−92170
AgH, electron correls., SCF, extended basis set 7−89995
AgH, potential energy curves, bond lengths, relativistic ab initio CI calcs. 7−122379
Ag_2HgI_4, elec. cond., α-β transition, prep. technique effect 7−105114
β-AgI, disordered solid, polarisability and induced light scatt., Raman spectra anal. 7−85744
β-AgI, electron density distrib 7−111446
AgI, first-order phase transitions, defect conc. independ., model-free theory 7−124492
α-AgI, Haven ratio, Monte Carlo calc. 7−98574
AgI, ice nucleation in supercooled water cloud 7−133842
AgI, molten, partial struct. factors, hypernetted chain approx. calc. 7−104521
β-AgI, resonance Raman scatt. study 7−132260
AgI, single cryst. growth by means of membranes 7−138625
AgI, strain-ageing, role of I 7−91713
AgI superionic conductor, phases, phase transitions and excitons, diffuse reflectance spectra studies 7−118091
β-AgI vacuum deposited thin films, exciton-phonon interactions, dielec. function spectra meas. *(Russian)* 7−84729
$AgI-Ag_2MoO_4$ glass, AC conductivity 7−98575
$AgI-Ag_2O-V_2O_5-P_2O_5$, vitreous electrolytes, glass form. and elec. cond. 7−131362
AgI-AgBr system, diamag. susceptibility 7−125306
AgI-AgBr-CuI solid solns., ionic cond., comp. depend., 25-300°C 7−69971
AgI-AgBr-CuI system, nucleating ability for water freezing, soluble salts effect 7−104962
AgI-CsI(KI)(NaI), molten mixtures, densities and molar excess vols. 7−91691
Ag_xI_8 (BEDT-TTF) and $Ag_4(CN)_5$ (BEDT-TTF), polymeric-anion derivatives, elec. props. 7−99010
Ag(III) complex *(German)* 7−104698
$Ag_3I(NO_3)_2$ single crysts., growth method from soln. 7−85985
$Ag_3I(NO_3)_2$, single cryst. growth by means of membranes 7−138625
$Ag_7I_4VO_4$ solid electrolyte thin film electrodeposition, cond. and permittivity obs. 7−131354
AgI−KI mixture, convection in cylindrical thermal diffusion cell, 3D numerical study 7−130703
$AgIn(Ga)Te_2$, semimag. semicond., mag. props. 7−125341
AgInSe, photoelectrochemical cells, photovoltaic activity 7−126637
n-$AgInSe_2$ vacuum evaporation and semicond. props. study 7−119154
$Ag_2MoO_4+HgI_2$, solid-state ionic reaction, kinetics and mechanism 7−105111
$AgMo_6S_8$ superconducting thin films, reactive sputtering 7−118619
$AgMo_6S_8$ superconducting thin films, critical current densities and critical fields 7−131970
$AgMo_6Te_6$, one-dimensional compound, crystal structure *(French)* 7−104668
AgN thin-films, optical constants 7−125833
$AgNO_3$, metastable phase III, ferroelectricity 7−99742
$AgNO_3$-ErF_3-YbF_3-GeO_2-PbF_2 glass ceramics, up-conversion yield, fluoresc. meas. 7−113266
$AgNa(NO_2)_2$, temp-depend. of disorder of nitrite ions 7−83862
$AgNbO_3$, ceramic, phase transitions at high hydrostatic press., possibility of ferroelec. phase 7−125632
$Ag_{0.33}NbSe_2$, intercalated cpd., lattice dynamics, Raman spectra data, valence force field model 7−84162
$Ag_xNb_6Se_8$, prep. by molten salt ion exchange and ternary element insertion 7−83819
AgO, electron correls., SCF, extended basis set 7−89995
AgO:In, In−O bond EFG, PAC study 7−124944
AgO_2, geometrical isomers, SCF, CI and pseudopot. calcs. 7−68226
Ag_2O:In, In−O bond EFG, PAC study 7−124944
$Ag_2O-B_2O_3$ glasses, Ag ion coordination, EXAFS studies 7−92780
$Ag_2O-B_2O_3$-based superionic glasses, elastic behaviour under pressure 7−124374
Ag_3O_4 cryst. struct. and prep. by anodic oxidation of aq. solns., thermal anals. *(German)* 7−83906
$AgPO_3$-PbI_2, vitreous electrolyte, small angle, quasielastic and inelastic neutron scatt. 7−98573
Ag_4RbI_5 superionic conductor, transient baroelectric effects study 7−77466
Ag_2S activation of CdS colloid soln., fluoresc. study 7−92718
Ag_2S, superionic conductor, ion dynamics, inelastic neutron scatt., anal. 7−131357
$(Ag_2S)_{0.3}(AgI)_{0.55}(HgI_2)_{0.15}$, cationic superionic conductor, transport props. 7−76488
β-AgSI polycryst., ultrasonic vel. and attenuation, pulse-echo-overlap meas. 7−76306
Ag_3SI nonequilib. phase transition kinetics, neutron diffr. study 7−131297
Ag_3SbS_3, broad phase transition near T∼150 K, permitt., US meas. 7−69888
Ag_3SbS_3, pyrargyrite, NQR spectra, hydrostatic and axial press. 7−143924
Ag_2Se thin films, refractive and absorpt. indices, ellipsometric meas. 7−85878
$(Ag_2Se)_{0.452}(AgI)_{0.258}(HgI_2)_{0.290}$ superionic cond., thermoelec. props. study 7−137615
$Ag_7SiS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7−84382

lver compounds continued
$Ag_7SnS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7—84382
$AgTa_xNb_{1-x}O_3$, solid solns., phase transitions, X-ray diffr. study 7—76390
$AgTaO_3$, structural phase transitions, Raman scatt., X-ray diffr. and dielectric meas. 7—76386
Ag_xTaS_2, intercalated cpd., photoemission studies 7—77761
α-Ag_2Te impurity-carrier scatt. mechanism, Hall coeff., thermo-EMF and elec. cond. meas. 7—84871
Ag_2Te, transport props. 7—76954
$Ag_{0.35}TiS_2$, second-order phase transition, X-ray study, order parameters 7—84239
$Ag_{0.35}TiS_2$, superspace-group description 7—76053
Ag_xTiS_2, electrochemical formation at 300 K 7—100590
Ag_xTiS_2 films, intercalation, UPS studies 7—143270
Ag_xTiS_2 intercalation cpd., Z 7—99855
Ag_3VO_4 thin films, photoinduced phase transition 7—118092
$Ag_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7—98833
β-$Ag_xV_2O_5$, phase transition and bipolaron form. 7—137548
AgX (X=Cl, Br), resonant light scatt. at localised electronic states, evidence for Ag clusters 7—85758
$AgX\text{-}Ag_2O\text{-}B_2O_3$ glasses, X=Br, Cl, I, struct., X-ray diffr. study 7—91457
Ag_2X, X=S, Se, Te, superionic cond., sp. ht. 7—111908
Al_2O_3 fibre reinforced AgCl composites, ionic cond., plastic deform. 7—69969
$Ba_{0.1}La_{1.9}Ag_xCu_{1-x}O_{4-y}$, high T_c supercond., comp. depend. of T_c 7—99291
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crystalline solid solns., lattice parameter determ., X-ray powder diffr. 7—117906
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crysts., optical and elec. props. study 7—118542
$Cu_{1-x}Ag_xIn_5S_8$ solid soln., struct., elec. and optical props., comp. depend. study 7—118109
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., electrical resistivity, scatt. mechanisms 7—76956
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., thermoelec. power and band struct. studies 7—137970
In-$AgInTe_2$ liquid system, electronic props. 7—137972
Li-AgV_2O_x cells, heat dissipation during storage and low-rate discharge 7—133068
$Li_2B_4O_7$:AgCl crystallised glasses, X-irradiated at liq. N_2 temp., TSEE and thermolum. 7—85967
$Li_2O\text{-}Ag_2O\text{-}B_2O_3\text{-}P_2O_5$ glasses, ionic cond. comp. depend., mixed cationic effect obs. 7—118153
$Na_2O\text{-}AgO\text{-}Al_2O_3$ prep. by ion exchange and conductivity charactn., grain boundary and mixed alkali effects 7—84390
$NiAg_4(P_3O_9)_2.6H_2O$, structural study *(French)* 7—124219
Pd-Ag-O-Cs photocathodes, photoemission charcts. under star illum. *(Chinese)* 7—77753
$RbAg_4I_5$, coloured single crysts., superionic conductor, photolum. study 7—144101
$RbAg_4I_5$ solid electrolyte, effect of Pb, Cs and Cl impurities on elec. props. 7—111945
$RbAg_5I_4$ superionic crysts., photolum. and excitation spectra temp. depend. 7—77624
Sb-Ag-S, chalcogenide glasses, chemical and electrical props. 7—111956
SnI_2-AgI system, elec. conductivity of solid phases 7—143087
$YBa_2(Ag_xCu_{1-x})_3O_{9-y}$, high T_c supercond., comp. depend. of T_c 7—99290

IMD computers *see parallel processing*

IMS *see secondary ion mass spectra; secondary ion mass spectroscopy*

imulation
see also aerospace simulation; analogue simulation; brain models; digital simulation; flow simulation; modelling; physiological models; plasma simulation; semiconductor device models
adsorbate adsorption site and bond length determ., EXAFS simulation 7—144172
automobile exhaust, effect on environment *(German)* 7—100782
bovine pancreatic trypsin inhibitor, sidechain rotational isomerisation, solvent effect, dynamic simulation 7—93618
breathing mechanics, exptl. conditions influence on parameter estimation, sensitivity analysis approach 7—107143
CANDU 600, daily load-following cycle simulation 7—129258
CANDU 600, fuel management simulation 7—96224
cerebral probe implantation method, spatial viewing, simulator using floating line concept 7—114551
charged systems with periodic boundary conditions, computer simulation and Ewald sum 7—142687
conducting continua, error determ. in BVP simulation *(Russian)* 7—128256
diagonal type MHD generators, electrical nonuniformities simulation 7—119667
diatomic molecules, interacting on 2D lattices, analog simulation 7—95147
dielectric constants, microscopic derivation of fluctuation formulas by simulation 7—74807
distributed inert electrode with complete RZW_2C_2 network, charging 7—110185
dynamical systems, numerical simulation of weak colored noise effects 7—73211
ERS-1 wind scatterometer system simulator, ground processing design 7—101585
evaporation processes, computer simulation 7—124784
fission reactor system transient simulation research 7—96293
gas properties simulation using Benedict-Webb-Rubin equation, Applesoft program 7—75746
grazing incidence mirror free abrasive grinding simulation with vertical honing and flexible blades 7—97180
hydrocyclone apparatus for investigation of hydrobrasive wear 7—73338
KILnGAS coal gasification process, ash agglomeration rel. to air-steam ratio 7—78653
left ventricle ischaemia and infarction, mech. model for simulation 7—107142
LINK RETACT code for TMI-1 advanced simulator 7—96154
LOFT large break expts., thermal hydraulics and DRUFAN-02 simulation 7—96294
LWR training simulator, 3D nodal coupling coeff. calcs. 7—96250
MNOS struct., numerical simulation of bipolar injection and recomb. 7—85113

simulation continued
multiwire drift chamber, charged particle track simulation, reson. multiphoton ionisation technique 7—89879
nuclear criticality simulator for safety training 7—96296
nuclear criticality simulator for safety training 7—103095
nuclear power plant emergency exercises, scenario development methodology 7—141243
prosthesis, above-knee, swing phase design, simulation 7—133513
PWR compact analyser, interactive simulator for operator training and eval. 7—89603
PWR on-line advanced plant simulator, kinetic modeling 7—96159
PWR test facility, CATHENA simulation of two-phase thermosiphoning 7—96295
radical polymerisation, heterogeneous catalysis of chain transfer, simulation 7—93317
reactor simulation codes, statistical approach to sensitivity anal. 7—96153
river networks, dendritic, tide simulation using numerical model 7—133791
science education, simulation games, efficiency investig. 7—80270
solar absorption coolers for residential space cooling, cost anal. using simulation procedure 7—93527
solar array deployment simulation and analysis software 7—144875
solar array micrometeorite impact damage simulation using plasma accelerator 7—144858
solar panel micrometeorite impact damage simulation 7—144857
solar thermal system, simplified simulation model 7—71634
steel, Ni-Cr-Mo, carburised-quenched, transform. plasticity, simulation method *(Japanese)* 7—78114
supercomputers, nuclear engineering problem solving, Integrated Planning and Simulation System *(German)* 7—129138
TEMPOL-^{15}N, slow two-jump processes, saturation recovery electron paramagnetic resonance spectroscopy 7—135974
Torness AGR simulator for commissioning and operator training 7—102069
vertical solar still, transient simulation 7—119682
vocal field oscillation, simulation using lumped mass-spring approach 7—126849
^{222}Rn, simulator for underground migration studies 7—79678
Zr alloys 7—86436

simulation, digital *see digital simulation*

simulation languages
CAMAS computer aided modelling analysis and simulation environment 7—67011
linguistic dynamic simulation—theory and practice 7—67012

simulation of computers, digital *see virtual machines*

simulators *see simulation*

Sinanoglu's theory *see atomic structure*

sine-Gordon model *see nonlinear field theory*

sinewave generators *see function generators*

single-chip microcomputers *see microprocessor chips*

single quantum well structures *see semiconductor junctions*

sintering
see also densification
bronze-ferrochrome composite, comp. and prod. conditions effect on mech. and tribotech. props. 7—78267
β-$Ca_3(PO_4)_2$ bioceramics, sintering with $Na_4P_2O_7.10H_2O$, biological compatibility obs. 7—113490
ceramic, sinter powders, synthesis using high temp. plasma reactors *(German)* 7—138712
ceramic superconducting powder prep. by freeze-drying 7—119184
ceramics, microstruct. engng. for high-temp. appl. 7—77914
ceramics, microstructure, compositional control, review 7—71133
ceramics, N, coarsening and densification kinetics during heat treatment 7—138718
ceramics, N, prep. and densification from oxides 7—138724
ceramics, N-containing, high temp. props., influence of secondary phases *(French)* 7—71259
ceramics, non-oxide, conf., Limerick, Ireland (Jul. 1985) 7—134361
ceramics, plasma processing appl., review *(Japanese)* 7—113503
conference, Dresden, Germany, Feb. 1986 *(German)* 7—140475
diamond, polycrystalline sintered compacts, microstruct., phase form. at high temp. and press. 7—111768
diamond, reaction sintering using Fe-Ti solvent catalyst, vickers microhardness 7—113484
dielectric, sintering in microwave field, model 7—119188
ferrites, structure form. and gas evolution in vac. liq. phase sintering 7—106476
glass, porous, sintered, colloidal SiO_2 content nonuniformity *(Japanese)* 7—132557
glass, sintered, refractive index, difference meas. *(Japanese)* 7—128634
glass, sol-gel process, structural evolution 7—113512
hot isostatic pressing technology, review 7—92905
inhomogeneous, stresses, distortion and damage due to heterogeneities 7—71107
interface structured, sintering technique methods 7—143241
liquid phase sintered microstructures, 2D connectivity 7—100153
liquid phase sintering, agglomeration, capillary forced between spheres 7—71104
metal powders, sintering, motive force and kinetics of diffusion processes *(Russian)* 7—92916
metallic porous systems, microstruct. form. rel. to pressing and sintering conditions 7—71112
microwave heating, design principles 7—71108
MOX fuel fabrication, economics and performance study 7—116619
mullite-zirconia composites, obtained by reaction sintering, microstruct. development 7—86117
NASICON ionic cond., microstruct. and water reactivity, comp. and processing parameters depend. 7—118154
neck measurement, in sintered materials, automatic image analyser *(French)* 7—119189
optical fibre manufacturing processes and testing *(German)* 7—82869
optical fibres, sol-gel processing 7—136597
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7—118673
Permalloy-Fe_3O_4 composite, hydrothermal reaction sintering *(Japanese)* 7—71137
pore arrays, controlled morphology, prod. 7—144326
potassium aluminate+natural clays, sintered mixtures, mechanical strength 7—93075

sintering continued
powder materials, sintered, form. and densification 7−138703
powder system sintering, initial stage kinetics 7−86079
rare earth oxides, $RBa_2Cu_3O_{9-\delta}$, R=La-Lu except Pm, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
rate, particle size distrib. effects, comment 7−119185
rate, particle size distrib. effects, reply to comment 7−119186
refractory metals, activated sintering using Pt group metal activators 7−132522
Shimadzu vacuum sintering furnace *(Japanese)* 7−67306
sialon and syalon powders, prod., props. and appls. 7−138722
sialon ceramics, prep., reaction sequences 7−138723
sialon ceramics, prep. from low-cost raw materials 7−138725
α'-β'-sialon composites, form., reaction mechanisms 7−77918
sialons, α' and β', form. and prep., role of Nd_2O_3 as additive 7−77897
sialons, α- and β-phase, sintering, effect of N_2 gas press. *(Japanese)* 7−126065
silica glass, sol-gel derived, impurity distribution, dehydration/sintering effects 7−141955
snow densification, particle rearrangement and dislocation creep processes study 7−114819
steel, austenitic stainless, sintered composites, props. rel. to Y_2O_3 addition 7−113683
steel, C, sintered, pulsed laser treatment, effect on struct. and props. 7−93194
steel, carbon, high-strength, powder particle struct. defectiveness effect on graphite dissolving during sintering 7−119199
steel, Cr-Mo, sintered, microstruct., hardness 7−86087
steel, high speed, fatigue rel. to powder metallurgy 7−126233
steel, rapidly solidified particulate, sintering, consolidation and struct. studies 7−92917
steel, stainless, duplex, sintered, mech. props. rel. to Si addition and σ phase precip. 7−126198
steel, tool, high speed, T6, directly sintered and wrought, strength, toughness and stiffness 7−100358
steel, tool, joining by cold sintering, heat treatment, transverse rapture strength, hardness, grain growth 7−126403
steels, sintered, secondary porosity and its effect on product quality and consistency 7−144340
stellites, wear resistant, development by liq. phase sintering 7−92920
theory for sintering in temp. gradients, role of long-range mass transport 7−92913
two-phase refractory powder mixtures, densification behaviour during sintering 7−77926
US waves meas. of case depth in sintered parts 7−123382
zirconia-mullite composites, reaction sintered with MgO and CaO additions, TEM study 7−132556
Ag interlayers in polyimide film, sintering process and charactn., laser writing appl. 7−119187
Al powder, sintering characts., effects of oxidation 7−144339
Al-Cu powder compacts, particle size effect on vol. changes during liq. phase sintering 7−119197
Al-Si/$MoSi_2$ contacts on p-n shallow junctions 7−85107
Al_2O_3 ceramic, crack resistance rel. to struct. development 7−113704
Al_2O_3 compact prep. by sol-gel processing, drying and sintering 7−113496
Al_2O_3 corundum ceramic, low sintering temp., development and insulator appl. 7−77907
Al_2O_3, densification, effects of Ce_2O_3 additions 7−71132
Al_2O_3, grain growth morphology and kinetics, liq. phase effect 7−113481
Al_2O_3, liquid phase sintered, creep cavitation, small angle neutron scatt. 7−100288
Al_2O_3, liquid phase sintering, densification rel. to additives 7−126059
Al_2O_3, polycrystalline, penetration by liq. $CaO-Al_2O_3-SiO_2$ glass 7−131387
Al_2O_3 powder, hot pressing, annealing, struct., density, porosity 7−86108
Al_2O_3 powder compacts, densification, effect of sintering temp. 7−100161
α-Al_2O_3 powder compacts, sintering, pore struct. agglomerates effect 7−132535
Al_2O_3, sintered, grain boundary cavitation, cyclic creep effect, small angle neutron scatt. 7−113621
Al_2O_3, sintered alumina, fretting wear against alumina, C steel, glass and WC 7−71319
Al_2O_3, sintering, plastic flow, TEM obs. 7−77899
Al_2O_3, sintering, TiO_2 addition effect, solid solubility, shrinkage 7−126062
α-Al_2O_3, structural evolution from gel 7−113487
Al_2O_3-AlN, long period polytypoid structs., fluctuations during sintering 7−69690
Al_2O_3-Cr_2O_3 ceramic system, colouration and sintering *(Japanese)* 7−126060
β/β''-Al_2O_3-K_2O-Na_2O polycrysts. synthesis, sintering and spray drying 7−144351
Al_2O_3-MgO, triphasic xerogels, densification using isostructural seeding 7−113491
Al_2O_3-SiO_2, mullite, silicate melt corrosion, microstruct. 7−86378
Al_2O_3-SiO_2, translucent mullite ceramics, pressureless vacuum sintering, grain size 7−113492
Al_2O_3-SiO_2-Fe_2O_3, Fe solubility in mullite, temp. depend 7−91811
Al_2O_3-TiO_2, effects of excess on microstructure and props. of Al_2TiO_5 7−71131
Al_2O_3-ZrC composites, pressure sintered, mech. props. 7−86119
Al_2O_3-ZrO_2, duplex ceramics, toughening mechanism 7−86200
Al_2TiO_5 ceramics, microstruct., bending strength, thermal expansion, additives effect 7−126201
Al_2TiO_5, microstructure and props., effects of excess Al_2O_3 and TiO_2 7−71131
B_4C-SiC composite ceramics, synthesis, thermomechanical props. *(French)* 7−100151
B_2O_3-SiO_2, monodisperse particle processing 7−106470
(Ba,M)TiO_3 ceramics (M=Ca,Y), microstruct. rel. to processing conditions 7−98487
$BaFe_{12}O_{19}$, isotropic, microstruct. improvement using colloidal filtration route 7−71117
$BaO.2ZnO.8Fe_2O_3$, anisotropic ferrite magnets, mag. props., Al_2O_3 substitution effects *(Japanese)* 7−125377
$BaPb_{1-x}Bi_xO_3$-La_2O_3 system, superconductive oxide, synthesis by sintering 7−70453
$BaTiO_3$ ceramics, electronic struct. and second phase distrib., cathodolum. studies 7−137796
$BaTiO_3$ commercial powder, centrifugation and fast firing 7−100167
sintering continued
$BaTiO_3$, donor doped, grain growth rel. to O_2 partial press. 7−113480
$BaTiO_3$:Sb ceramics, resistivity, sintering time depend. 7−76950
$BaTiO_3$-TiO_2 ceramics, sintering, annealing, surface phase identification 7−91930
$Ba_{1-x}Y_xCuO_{3-y}$, prep. by sintering, supercond. props. 7−99286
$Ba_2YCu_3O_7$, high T_c superconducting oxide ceramic, fabrication 7−118677
$Ba_2YCu_3O_{9-\delta}$ high T_c supercond., ceramic processing methods 7−119205
$BaZrO_3$:Li, low sintering and electrical conductivity meas., X-ray diffraction study 7−131693
BeO, dynamics of compaction and growth, rel. to presence of Fe_2O_3 7−71101
Bi molybdates, synthesis, electrophysical props. 7−99135
Ca-Al-Si-S-O-C, cemented carbides, sintering, atmospheric and impurity effects 7−92949
CaO-Fe_2O_3, form. of stick-shaped and needle-like ferrites 7−86116
Ca_3PO_4 containing hydroxyapatite ceramics, sintered, bending strength *(Japanese)* 7−132695
$CaTiO_3$ powders, prep. by hydrothermal method, props. of sintered ceramics 7−77857
CdS, photocond., air-sintered pellets, surface occurrence of impurity phases 7−86500
CeO_2, sintered ceramic with high density and fine grain size, role of Nb_2O_5 or TiO_2 additives 7−92943
Cr_3C_2-Ni base cemented carbides, fabrication and improvement of mech. and chem. props. *(Korean)* 7−77923
$CrSi_2$:Fe powder, slip casting, sintering, thermoelec. props. *(Japanese)* 7−77902
Cu alloy, sintered precipitation hardening, prep. and characteris. 7−78038
Cu, powder compacts, sintering, shrinkage eqn. 7−71110
Cu thin films, elec. resist. during isochronal annealing, thickness depend. *(Russian)* 7−99221
Cu-Sn abrasive composite, elec. discharge sintering, struct., mech. props. 7−106465
Cu-Sn powder compacts, sintering, Sn melt flow, porosity, comp. inhomogeneity 7−119201
Cu-Sn-Ti-Ni system, struct. form. mechanism in sintering, contact interaction of Ti-Ni and Cu-Sn 7−119200
Cu-Sn-ferrochromium system, vol. shrinkage accompanying sintering 7−77874
CuZnMg ferrites, powder preparation conditions effect on elec., mag., microstruct. props. *(Korean)* 7−86077
Fe compacts, low temp. sintering *(Korean)* 7−132526
Fe, elastic moduli rel. to microstructure 7−126162
Fe, fine particles, morphology, porous texture, mag. props, haematite reduction prep. 7−77868
Fe, pure, sintered, unlubricated wear rel. to porosity 7−71325
Fe-C compacts, struct. changes during sintering *(Korean)* 7−77866
Fe-CrC powder mixture, sintering, shrinkage, microstruct., hardness, bending strength, impact toughness, comp. depend. 7−106620
Fe-Cu, liq. phase sintering, pore filling, entrapped inert gas effect 7−77870
Fe-Cu (8 wt.%) powders, sponge cementation, sintering, microstruct., SEM obs. 7−132529
Fe-Fe_2Ti system, transient liq. phase sintering, strength, elongation 7−77864
Fe-Mo-B, sintering and mech. props. 7−92919
GaAs:Zn, Zn diffusion using sintered ternary source 7−98579
Gd_2O_3, sintering behaviour, effect of CeO_2 additions 7−92945
n-InP, ohmic contact form., optimal annealing technique 7−77092
La-Sr-Cu-O system, high T_c superconductor, critical current density, prep. by solidification 7−118621
$La_3Ba_3Cu_6O_{14+x}$, $LaSrCu_2O_{6+x}$ and $La_{2-x}Sr_xCuO_{4-x/2+y}$, mixed-valence capacitor electrodes, co-sintering with $BaTiO_3$ and dielec. props. 7−99773
$La_{1-x}Ca_xCr_yCo_{1-y}O_3$ solid soln., prep. and elec. props. *(Japanese)* 7−124983
$(La_{1-x}M_x)_z$ CuO_4 (M=Ba,Sr), high T_c supercond., amorphous citrate process prep. and elec. props. 7−119204
$La_{2-x}M_xCuO_4$ (M=Ca,Sr,Ba), superconducting props., synthesis and struct. 7−92342
$LaMn_{1-x}Ni_xO_3$, prep. and electrical props. 7−92912
$LaRu_2P_2$, sintering prep., cryst. struct. and T_c determ. 7−117887
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., sintering conditions dependence 7−99274
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ultrasonic velocity and attenuation studies 7−112604
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ supercond. films, high T_c, screen printing method prep. 7−92915
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ceramic processing methods 7−119205
$La_{1.85}Sr_{0.15}CuO_4$, hot-pressed and sintered, superconducting props. 7−99259
Li ferrite toroids, sintering rel. to Nb_2O_5 or V_2O_5 content 7−86109
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7−100160
Li_2CO_3-Ta_2O_5, reaction mechanism, solid phase sintering, liberation of CO_2 7−86075
Li_2O-Al_2O_3-SiO_2, crystallisation, sintering of glass powder, effects TiO_2 additions 7−106478
γ_{II}-$Li_{3.4}Si_{0.4}V_{0.6}O_4$, sintering, ionic cond. *(Japanese)* 7−132548
$LiTaO_3$ ceramics, prep. by gelation process, sintering 7−71121
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., sintering, struct., mech. props. 7−132547
Mg_2CoH_5, prep. struct. and props. 7−83893
MgO compacts, creep-sintering, microstruct. 7−113482
MgO, obtained from sea water, sintering, effects of additives 7−138714
MgO powders, sintering, green density, surface area 7−71122
MgO, sintering, pores surface area and vol. 7−100159
MgO-$MgCl_2$ (1 wt.%), sintering, grain cuboidization, Kr adsorpt. isotherms 7−100157
Mn-Fe-O spinels, Mn cation, deficient, reduction-reoxidation behavior, TGA, elec. cond. meas. 7−113903
MnZn Ferrite formation, Mossbauer study 7−138360
$Mn_{1-x}Zn_xFe_xO_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7−77912
Mo-Ni, heat treatment, grain boundary migration, diffusional coherency strain induced curvature effect 7−131368
Mo-Ni, liq. phase sintering, liq-grain mixture flow and isolated pore elimination during early stages *(Korean)* 7−138705

sintering continued
Mo-Ni alloys, chemically-induced liq. film migration, coherency strain effect 7−71109
Mo-Ni alloys, instability of solid-liq. interface induced by diffusional coherency strain 7−113471
Mo-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
N_2-H_2 atmosphere for heat treatment, sintering and ion nitriding, preparation from NH_3 7−100412
Na_2O-B_2O_3-Al_2O_3-Ta_2O_5 glass ceramic, heat treatment, sintering, leaching, struct., porosity 7−71141
Na_2O-Y_2O_3-GeO_2 system ceramic ionic conductor, prep. by solid state reaction and activation energy meas. 7−84388
$Na_{5+x}YAl_xSi_{4-x}O_{12}$ ceramics, cond., struct., density 7−76480
$Na_{1+x}Zr_2Si_xP_{3-x}O_{12}$:MgO(CaO) NASICON superionic ceramics, chem. comp. and phase homogeneity, sintering conditions effects 7−119191
NbN-AlN system, sintered composites, elec. cond. rel. to dispersion of initial components 7−77928
Nb_3Sn-Cu supercond. wire prep. by liq. phase sintering, supercond. props. study 7−132515
Nd-Fe-B, sintered magnets, coercivity, thermal ageing effects 7−132083
Nd-Fe-B magnets, sintered, hardness and thermal expansion, temp. depend. *(Chinese)* 7−132702
Nd-Fe-B magnets, texture, anal. on basis of easy growth axis determ. of $Nd_2Fe_{14}B$ single crystals 7−132078
Nd-Fe-B permanent magnets, mag. props. and prep., review 7−112864
Nd-Fe-B sintered magnet, coercivity of surface grains 7−138287
$Nd_2Fe_{14}B$, permanent magnet production, hydrogen decrepitation process 7−92914
Ni, elastic moduli rel. to microstructure 7−126162
Ni, ultrafine powders, sintering, elastic modulus, elec. resist., contact phenomena 7−71111
Ni-Mn-O thermistors, form. and elec. props., X-ray diffr., SEM and AES studies 7−92176
NiAl, sintered, martensitic transform., microstruct., mech. props. *(Japanese)* 7−126110
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7−144350
NiO powder, prep., grain boundary diffusion 7−106471
$Ni_{0.5}Zn_{0.5}Fe_2O_x$, ferrite, added AlN and Al_2O_3, formation of ferrospinel oxonitride 7−100149
Pb $(Mn_{2/3}Sb_{1/3})_{0.08}Ti_{0.495}Zr_{0.425}O_3$ sintered powders, electrical properties *(Korean)* 7−143955
$Pb(Mg_{1/3}Nb_{2/3})O_3$-based perovskites, microwave sintering, capacitor appls. 7−138702
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ based dielec. ceramics, sintered, microstruct. inhomogeneity 7−92941
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ ceramics, low temp. fired, densification and dielec. props. 7−92948
$(PbO\text{-}Fe_2O_3)_{100-x}(La_2O_3)_x$ magnets, mag. and phys. props. 7−105966
$PbTiO_3$, perovskite, microwave sintering, capacitor appls. 7−138702
Si, porous, specific surface, effects of anodic reaction and high temp. annealing 7−93222
Si solar cells, front surface passivation with antireflection coating 7−114110
Si-C-O-N, oxynitride ceramics, dense, low cost, microstruct. 7−77894
β-SiC, Al_2O_3 and C additions effect on phase transform, during sintering 7−132542
β-SiC powder, mechanochem. effect on sintering behaviour *(Japanese)* 7−92946
SiC powders, hot isostatic pressing sintering without additives *(Japanese)* 7−126063
SiC, pressureless sintered, brazing by Ag-Cu-Ti, wettability, bond strength, bend strength 7−113856
β-SiC, reaction sintered, neutron irrad., isochronal annealing, recovery 7−119292
SiC, sintered, elec. cond., effect of annealing 7−112340
SiC, sintered modulus of rupture bars, crack size, US surface wave meas. 7−132898
SiC whisker reinforced Si_3N_4, thermal props. *(Japanese)* 7−69942
SiC whisker reinforced Si_3N_4, sintering *(Japanese)* 7−71138
SiC whisker reinforced Al_2O_3, sintered, fabrication 7−77916
SiC whisker reinforced Si_2N_4, fabrication and props. 7−78241
SiC:B, hot pressed, sintered, β to α phase transform., feather form. 7−86167
Si_3N_4 ceramics, sintered with MgO/Nd_2O_3 mixed additions, microstruct. development 7−138720
Si_3N_4, HIP sintered with $BeAl_2O_4$ addition, density, bending strength *(Japanese)* 7−132552
Si_3N_4 powder, dynamic compaction, density, microhardness 7−86106
Si_3N_4 powder, plasma arc synthesis, hardness struct., fracture toughness *(Japanese)* 7−113505
Si_3N_4 powder, sinterability, rel. to BeO addition, microstruct. *(Japanese)* 7−71119
Si_3N_4 powder compacts. microstruct. development and characts. rel. to mech. props. 7−138721
Si_3N_4 powders, fabricated by different processing conditions, influence of impurities on high temp. props. of sintered material 7−77898
Si_3N_4 powders, hot isostatic pressing sintering without additives *(Japanese)* 7−126064
Si_3N_4 powders, oxidised without additives, very high press. hot pressing *(Japanese)* 7−126066
Si_3N_4 powders sinterability and charactn. of sintered material 7−138719
Si_3N_4, prep. by reaction sintering of submicrometer Si powder 7−92942
Si_3N_4, pressureless sintered with magnesia-neodymia additions, densification and transform. kinetics 7−77896
Si_3N_4, reaction sintering, porous struct. 7−77910
Si_3N_4, sinterability in hot isostatic pressing without additives, influence of O content *(Japanese)* 7−71125
Si_3N_4, sintered, α to β transform., flexural strength, density *(Japanese)* 7−132694
Si_3N_4, sintered, hydrothermal leaching rel. to grain morphology *(Japanese)* 7−132785
Si_3N_4, sintered, static and cyclic fatigue 7−119336
Si_3N_4, sintered, tensile strength, high temp. testing *(Japanese)* 7−144477
Si_3N_4, sintered under gas press., LF Raman spectra, lattice modes, long-range order 7−113179
Si_3N_4:Y_2O_3, sintered reaction bonded, flash oxidation, flexural stress rupture life 7−86324
Si_3N_4-Al cermet, prep. and densification 7−77919
Si_3N_4-based ceramics, sintering and props. 7−138727
sintering continued
Si_3N_4-based cutting tools, hot-pressed, performance 7−78251
Si_3N_4-SiC based ceramics, strength degradation in salt environments 7−78284
Si_3N_4-SiC composite materials, hot isostatic pressing, sintering, density, fracture toughness 7−132534
Si_3N_4-Y_2O_3, reaction-bonded with yttria sintering aid, grain boundary phases 7−119217
SiO_2 gel, struct. determ. by X-ray diffr., gel to glass conversion 7−93394
SiO_2 glasses, prep. and sintering of high-density green bodies 7−86121
SiO_2:GeO_2 fibres prepared by VAD, photoluminesc. 7−136596
$Sm_2(Co, Fe, Cu, Zr)_{17}$, permanent magnet production, hydrogen decrepitation process 7−92914
$SmCo_5$, permanent magnet production, hydrogen decrepitation process 7−92914
Sr-La-Cu-O system, prep. by coprecipitation, supercond. props. 7−99292
$(Sr_{1-z}Ca_z)_{0.15}La_{1.85}CuO_{4-y}$, high T_c superconductor, props., depend. on sintering atmosphere 7−92331
$SrRu_2P_2$, sintering prep. and cryst. struct. determ. 7−117887
Ta_2WO_8, $Ta_{30}W_2O_{81}$, polycryst. ceramic prep., low thermal expansion 7−143057
$(Th,U)O_2$ high density pellet preparation by a powder metallurgy method 7−67921
ThO_2 sol-gel microspheres, sintering behaviour 7−71118
Ti, sponge, energy characts. of dynamic densification 7−77879
Ti, wire, coated with Cu or Ti-Cu, state of sintering, diffusion microstructure *(Japanese)* 7−126045
Ti/Si thin layer system, ion implantation and struct. 7−137419
Ti-Cu, porous, state of sintering, diffusion microstructure *(Japanese)* 7−126045
Ti-Ni composite powders, state of sintering by eutectic reaction *(Japanese)* 7−138706
TiB_2 ceramics, sintering, densification, grain growth, O contamination 7−144345
TiB_2, combustion synthesized, sintering kinetics, 1800-2100°C, densification, grain size 7−113485
TiB_2-TaB_2-CoB hot pressed bodies from fine powders, transverse rupture strength *(Japanese)* 7−93099
TiC-NbC-TaC-WC-Co cemented carbide, gamma phase layer form., growth kinetics and microstruct. rel. to sintering atmosphere 7−77929
TiC-TiB_2 two-phase powder mixtures, densification behaviour during sintering 7−77926
$(UCe)O_2$ pellets, sol-gel microsphere pelletization process, porosity, density microstruct. 7−77906
UO_2, densification at low burn-up 7−81525
UO_2 fuel pellets, sintered, fracture toughness, fracture surface energy, Vickers hardness 7−78186
UO_2 LWR fuel pellets, oxidative sintering, NIKUSI process 7−116613
W-Cu, infiltration of liq. in sintered W 7−92921
W-Cu finely divided mixture, kinetic of densification and growth of refractory phase grain in sintering 7−119198
W-Cu powder mixtures, liq. phase sintering, densification localisation, structural inhomogeneity 7−106464
W-Cu pseudoalloy, sintered, failure features rel. to processing conditions 7−78208
W-K powder, particle size and internal strain meas., X-ray methods study 7−100147
W-Ni, liquid phase sintering, distribution effects *(German)* 7−144343
W-Ni, sintering, liq. phase and solid-state, influence of dislocation density 7−92922
W-Ni powder compact, sinterability rel. to Ni chemical state 7−100156
W-Ni powder compact, sintering, microstruct., densification mechanism 7−144342
W-Ni-Fe, liq. phase, microstructure, image anal. *(French)* 7−119190
W-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
W-Re alloys prep. by powder metallurgy, Re distrib. 7−86177
WB, synthesis and reaction sintering *(Japanese)* 7−126068
WC based cemented carbide systems, sintering, binder comp., phase equilib., mech. props. 7−71151
WC-Co, sintering, grain growth rel. to inhomogeneous milling 7−71136
WC-Co cemented alloys with B as sintering additive 7−132554
WC-Co-TiC, sintered, internal friction, speed of sound 7−144449
Y-Ba-Cu-O, high temperature superconductor, powder preparation and sintering 7−118678
Y-Ba-Cu-O high T_c supercond. transition props., quench temp. depend. studies 7−105772
Y-Ba-Cu-O high T_c superconds., IR reflectivity spectra, sintering temp. depend. study 7−106170
Y-Ba-Cu-O high T_c supercond. phase diagram and struct. charactn., comp. and sintering conditions depend. 7−117888
Y-Ba-Cu-O high T_c supercond., oxidation treatment, stoichiometry and lattice parameters w.r.t. T_c 7−118605
Y-Ba-Cu-O high T_c supercond., Cu valence and O deficiency, sintering atmosphere effects 7−118628
Y-Ba-Cu-O high T_c supercond., sinter-forging technique 7−119207
Y-Ba-Cu-O high T_c supercond., mixed and single phase ceramics, X-ray diffr. and EPMA studies 7−119250
YAG ceramics, mech. props. rel. to process parameters 7−86100
YAG ceramics, prep., microstruct., mech. and optical props. 7−138713
$YBa_2Cu_3O_7$, high T_c supercond., prep. methods 7−119122
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond. ceramic sinters, improving inter-grain contact 7−144327
$YBa_2Cu_3O_{7-x}$, high temp. supercond., zero elec. resist. at 106 K 7−105777
$YBa_2Cu_3O_{9-\delta}$, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
$YBa_2Cu_3O_x$ ceramic high T_c supercond., prep. and props. 7−118608
$YBa_2Cu_3O_x$, high T_c supercond., elec., mech. and US props., rel. to sintering prep. 7−118709
ZnB_2, sintered, electrode behaviour in aq. solns. *(Japanese)* 7−78290
ZnO based nonlinear resistors, sintered, microstruct., density rel. to additives 7−106473
ZnO-Nb_2O_5 system, non-ohmic behaviour rel. to comp. and sintering temp. 7−84905
ZrO_2, doped, made from organic precursors, prod. and props. 7−86096
ZrO_2, MgO partially stabilised, sintering, behaviour of impurity silicate phase 7−92944
ZrO_2, MgO partially stabilised, milling, cast microstruct., sinterability 7−100158
ZrO_2, tetragonal polycrysts., Y_2O_3-containing, prep. and props. 7−86097

sintering continued
ZrO_2, Y_2O_3, tetragonal polycrystalline powders, sinterability 7−144344
ZrO_2, Y_2O_3 partially stabilised, sintered and hot-pressed, mech. props. and microstruct. 7−106469
ZrO_2, Y_2O_3 stabilised ceramic, slip casting, sintering 7−77909
ZrO_2:Y_2O_3 polycrystals, Al_2O_3 and SiC particle dispersed, thermal stability, mech. props. 7−78183
ZrO_2-Al_2O_3-SiO_2-TiO_2, toughened mullite ceramic composites, sintering, microstruct., phase comp. 7−77930
ZrO_2-P_2O_5 based ceramics, solid soln., thermal expansion, microcracking, Ta_2O_5 and Nb_2O_5 additions 7−143055
ZrO_2-Y_2O_3, YSZ powders, homogeneous precipitation and sintering 7−144329
ZrO_2-Y_2O_3 sintering differential thermal expansion analysis 7−67279
ZrO_2-Y_2O_3 stabilised, prep. from freeze-dried coprecipitated hydroxides, mech. props. and crit. grain size 7−92939

sinusoidal generators *see function generators*

SIT *see field effect transistors*

size, particle *see particle size*

size effect
cubic metals EFG due to vacancies and interstitials 7−118450
cubic semiconductor, quantum-sized film subband struct., strain-induced changes 7−77118
degenerate semicond. thin films, elec. cond. size effect calcs. under specular surface scatt. conditions 7−99236
degenerate semimetals, phonon drag thermoelec. power sign anisotropy, diffusion-size effect calcs. 7−76988
ferroelectric phase transitions, anharmonicity of normal vibr. *(Russian)* 7−113100
finite systems, weak localisation of photons and backscattering 7−82465
granular systems, density of states, effects on hopping conduction 7−112161
mesoscopic meal particles, quantum-size affected conductivity 7−143500
metal films, granular with rough surfaces, transport props. 7−131813
metallic thin films, frequency depend. current density 7−105731
metallic thin films, quantum size effects in Fermi energy and electronic density of states, free-electron finite square well model 7−85036
metallic thin samples, galvanomagnetic size effects *(Russian)* 7−143434
MSM, cooling thermoelements, influence of size effects 7−133110
narrow 2D electron systems, mag. crossover 7−131778
phase transitions, finite size effects 7−124430
polycrystalline metals, mean free path concept 7−84836
rare earth alloys, $R_2Co_{14}B$, size effects, determ. of lattice parameters 7−76082
rare earth alloys, $R_2Fe_{14}B$, size effects, determ. of lattice parameters 7−76082
semiconductor film, dimensionally quantised, plane transverse mag. wave, bistable reflection 7−70440
semiconductor quantum well structures for optoelectronics, review 7−70394
semiconductor spherical microcrysts., exciton states, quantum size effect, variational calcs. 7−112192
TCR, deviation from Matthiessen's rule in combined Soffer-Cottey model 7−105730
thin films, inhomogeneous, quantum E-type waves *(Russian)* 7−77108
thin metal films, Hall coefficient and magnetoresist., surface roughness and transverse mag. field depend. 7−143438
thin metal films, surface scattering process, independence in framework of multidimensional conduction models 7−118594
thin metal wires, longitudinal magnetoresist., simple anal. 7−118461
tiny disordered conductors, residual conductance fluctuations 7−105508
Ag superimposed films, elec. cond. 7−131812
Ag-Ni, very dil. alloys, surface sandwich segregation, mean field approach 7−105210
AlGaAs-GaAs laser diodes, index-guided 6950 to 7150 Å, optimisation and charactn. 7−122955
Bi size quantised films, interband absorption 7−138529
Bi, thin wires, magnetoresist., quantum dimensional oscills. *(Russian)* 7−76980
$Bi_{0.88}Sb_{0.12}$, thermal cond., size effect 7−76508
$CdGeAs_2$, ultrathin films, Einstein relation, carrier diffusivity to mobility ratio 7−99233
$CdSe_xS_{1-x}$ impurity microstructs. in borosilicate glass, quantum confinement effects, optical props. study 7−106224
Cs clusters in zeolite X, conduction electron spin resonance studies 7−138329
Cu, small particles in mag. field, size effect 7−125549
CuCl microcrystals, gas-evaporated, exciton absorption 7−143362
Ga, high purity, residual elec. resist. investig. 7−124966
GaAs film, quantum-sized film subband struct., strain-induced changes 7−77118
GaAs narrow wires, magnetoconductance fluctuations, sample size depend. 7−143490
n^+-GaAs narrow wires, quantum interf. effect, aperiodic magnetocond. study 7−125160
GaAs ultrathin films, field emission, size quantisation effects 7−138616
GaAs ultrathin films, wide-gap semiconductor, effect of size quantisation of photoemission 7−85951
p-GaAs/GaAlAs multiple quantum well laser, ultrahigh relaxation oscillation freq. 7−130091
GaAs-GaAlAs, quantum well wires and boxes, quantum size effects 7−85084
GaInAsP/InP quantum-box structure, light emission by current injection 7−99938
a-Ge:H, ultrathin layers, quantum shift of optical absorpt. edge 7−125820
HgI_2, layered semicond. colloids, size quantization 7−85766
In films, supercond. quantum size effect 7−70487
InGaAsP-GaAs double heterostructures, LPE grown, 40-300 Å active region thicknesses, quantum size effects, photoluminesc. spectra 7−113252
InGaAsP-InP heterostructs., LPE, photolum. spectra, quantum size effects 7−132316
NiCr thin films, elec. props., substrate surface roughness effect 7−118596
$Pb_{1-x}Sn_xTe$, stressed quantum well epitaxial films, photolum. 7−113251
PbTe-$Pb_{1-x}Eu_xTe$ superlattices, quantum size effects in optical transmission spectra 7−143996
Pt film, thickness-depend. cond. 7−143642
Pt-Ni, surface sandwich segregation, mean field approach 7−105210
n-Si thin film, negative magnetoresist., spectrum anisotropy effects 7−70435

size effect continued
a-Si:H/a-SiN_x:H amorphous superlattice films, photoacoustic spectra 7−85764
a-Si:H-Ge:H superlattices, band edge alignment, quantum size effects 7−131764
a-Si:H-Si_3N_4:H double barrier structs., resonant tunnelling through quantised states 7−131800
Si/FeC compositionally modulated amorphous alloys, mag. and diffusional props. 7−85358
Si-SiO_2 amorphous multilayered structures, quantum dimensional effect 7−85126
SnTe MOS diodes, current-voltage spectra, expt. 7−99215
SnTe MOS diodes, current-voltage spectra, analysis 7−99216
Te, film, vacuum deposited, room temp. semiconducting props. 7−70433
Y-based metallic glasses, crystallisation, differential scanning calorimetry, neutron diffraction 7−142600

skin
adhesion, meas. of interfacial energies for press.-sensitive adhesives 7−145120
animal skin temp., influence of thermal convection of air under mag. fields 7−78785
blood flow, continuous meas. method 7−87269
blood flow, human, nonthermoregulatory control, review 7−71784
blood flow, laser Doppler velocimetry, fibre movement artefact study 7−78933
blood flow in arteriopathic limbs, laser Doppler assessment 7−101030
dermal microcirculation oscillations, influence of microwaves 7−139316
dielectric properties, comparison for normal and wounded human skin 7−78824
electrical admittance, blood flow and temp., simultaneous meas., probe design 7−107323
electron dose rate conversion factors for external exposure 7−133457
EM wave scattering distrib. over cutaneous surfaces 7−107150
epidermal horny layer, human, elec. props. and water transport 7−126799
extremities, secondary (radiation) lymphostasis, changes of skin and underlying tissues *(Russian)* 7−126934
force transducer to meas. force required to close surgical wound 7−71925
hand, human, vibration exposure and skin mechanical energy absorption 7−114339
hyperthermia and ionising radiation, separate and combined exposure, chem. modification obs. *(Russian)* 7−78994
laser Doppler skin blood flowmeter, calibration using He-Ne and an IR laser diode 7−87155
laser treatment of skin disorders using flashlamp-pumped dye lasers 7−119828
mechanics, mixture approach 7−145119
mixed fractionation with X-rays and neutrons, effect on tumour growth delay and skin reactions in mice 7−107170
multi-channel skin resistance measurements *(German)* 7−107265
neutron beam therapy, skin-sparing effects of filtering materials 7−133446
organisms, spontaneous polarisation and pyroelec. behavior 7−114237
peripheral venous disorder noninvasive diagnostics via optical fibres 7−79051
postburn hypertrophic, human, mech. charactn. during press. therapy 7−107125
radiotherapy, total irrad. with scanning beam electron accelerator, dosimetric study 7−133462
shoulder skin electrostimulation for sensory feedback in functional neuromuscular stimulation of quadriplegics 7−101128
skin thermal injury determ., HF US imaging and backscatter attenuation techniques 7−126981
stimulation with capacitor electrodes 7−107187
surface, human, image analysis and 3D profilometry 7−107330
surface electrode recordings, artifact attenuation by lowering skin impedance 7−145003
tissue burns, effect on dermal microcirculation, investigation using computerised image anal. 7−139212
vascular plexus damage role in radiation injury development of swine skin *(Russian)* 7−93836
vibrotactile skin stimulation based wearable multi-channel auditory prosthesis *(German, English)* 7−87363
wound healing rates, electrostimulation percutaneum influence 7−107036
X-ray or fast neutron reirrad. of mouse skin, response obs. 7−114404
BeO thin film detectors, skin dose determ. for β radiation by TSEE 7−87199

skin effect
see also anomalous skin effect
$(BEDT\text{-}TTF)_2AuI_2$, microwave cond. meas. 7−84965
β−I $(BEDT\text{-}TTF)_2IAuI$, microwave conductivity 7−125035
cylindrical conductor, skin effect, temp. distrib. 7−137976
induced eddy currents in EM screens, calc. *(German)* 7−68508
metal, deform. mechanisms, pulsed mag. field effect at low temps., induced eddy currents 7−77393
metal plates, strong skin effect, calc. of ohmic losses due to longitudinal edge currents 7−70346
metallic thin films, frequency depend. current density 7−105731
metallic thin samples, galvanomagnetic size effects *(Russian)* 7−143434
pulsed microwave discharge in waveguide, parameters meas., cond. method 7−91384
toroidal stellarator, HF AC inductive heating 7−117752
transitory skin effect appearing in conductors during short circuits, EM field distrib. *(Rumanian)* 7−99103
W, skin effect under high mag. field, surface defect layer effect *(Russian)* 7−92215

sky brightness
diffuse short-wave radiation for clear and cloudy skies, zonal characts. 7−114947
Mauna Kea, Hawaii, V-band extinction and nighttime sky brightness meas. 7−72452
meter-wavelength range, distributed cosmic radio radiation, brightness temp. meas. 7−128134
night sky optical spectrum, obs. from high altitude observatory 7−87993
Seville, diffuse sky light luminance and polarization 7−133922

sky surveys *see astronomical catalogues*

Skyrme force *see nuclear forces*

Slater-type orbital calculations *see STO calculations*

slave computers *see satellite computers*

sliderules *see calculating apparatus*

sliding contacts, electrical *see electrical contacts*

slip
see also kink bands; plastic flow
alloys, creep mechanisms and dislocation distribs. 7—126177
alloys, $L1_2$ superstructure, deforming stress, double peak in temp. depend. *(Russian)* 7—78102
alloys, Ll_2 struct., antiphase boundary energy, orientation depend. studies 7—126084
alloys, ordered $L1_2$ type, screw superdislocation Peierls stresses *(Russian)* 7—98149
anisotropic crysts., physical model of dislocation crack form. 7—104902
Ariake clay subjected to shear failure and disturbance, strength variation *(Japanese)* 7—107404
Bauschinger effect, histories perspectives and main features 7—120749
brass, polycrysts., number of active slip systems 7—117930
α-brass, single crysts., oriented for easy glide, interaction of surface and interior to produce Bauschinger behavior 7—132685
cavity nucleation at high temperatures involving pile-ups of grain boundary dislocations 7—111574
composites, metal matrix, deform., moire interferometry investig. 7—123558
crystalline solids, stress-induced cleavage microcracking, micromech. theories 7—97430
deformation, steady state, dislocation theory, approach in creep and dynamic tests 7—84091
dislocation structures, dynamic organisation, simulation 7—117931
elastic materials, separation, contact-slip zone 7—97455
elastic-plastic solid, porous, fracture toughness determ. 7—110855
elemental semiconductors, dislocation structures/dynamics and plasticity 7—142780
eutectic composites, lamellar, directionally solidified, elastic-plastic anal. 7—76279
fatigue crack growth due to appl. of impact load 7—113665
fatigue crack initiation, role of point defects 7—124389
fatigue crack propagation model, short, interpretation of short-long crack transition 7—124387
fatigue model by homogenisation method *(French)* 7—75457
FCC crystals, cyclic deformation, dislocation mechanisms and steady states 7—76124
FCC crystals, work hardening, deform. band form. 7—76280
flow localisation in elastic-plastic material developing from stress-free surface 7—90977
fractional valency donor-acceptor molecular crystals, ground state degeneracy and slip energies 7—105443
gas molecule-wall interaction, slip coeffs. depend. 7—117632
glide and shuffle of semiconductor dislocation cores 7—91584
grain boundary sliding, blocking effect of inclusions, spherical grain approx. 7—142793
grain boundary sliding under structural superplasticity, materials accommodation 7—111584
HCP, brittle-plastic transition, plastic deform. anal., grain size effect *(Russian)* 7—76289
ice single cryst. plastic deform., dislocation mechanisms study 7—111571
ice single crysts., dislocation glide, synchrotron radiation X-ray topography study 7—111572
Incoloy 800, γ' hardening, low cycle fatigue, creep, slip bands, microstruct. 7—106527
Inconel X-750, Ni-base superalloy, plastically strained, high-misfit, dislocation-precip. interaction during coarsening 7—78024
ionic crystals, strength, induced anisotropy 7—124382
layered shear walls, slip failure 7—131219
metal flow, plane strain, within specified plastic boundaries, FEA 7—142184
metallic glasses, plastic deformation, microscopic mechanism 7—144478
oligomers, hardened, rheology, interphase slip *(Russian)* 7—83148
ordered alloys, $L1_2$, stability of superdislocations and shear faults 7—111556
oxide dispersion strengthened materials, elimination of threshold stress for creep by thermal cycling 7—132691
x-phthalocyanine crystals, dislocation array, TEM obs. 7—76131
polar glacier ice, creep rate controlling processes and deform. mechanism study 7—114817
polycrystal, active slip systems in plastic deform., intermediary Sachs-Taylor models *(French)* 7—118020
polycrystalline metals, plastically deformed, surface glide traces, probability anal. 7—86509
polycrystalline solids, cavity growth and grain boundary sliding 7—91723
polycrystals, mech. props., importance of grain size effects 7—69713
reaction-diffusion approach to dislocation patterns 7—117928
robot grippers, slip detection using acoustic emission signal anal. 7—110737
semiconductor crystals, dislocation slip planes, elec. activity 7—98171
semiconductors, III-V, dislocation structures/dynamics and plasticity 7—142780
solid soln. alloys, creep behaviour analysis 7—106587
sphere rolling on track demonstrations 7—134397
steel, alloy, fatigue crack initiation and propag. during exposure to $NaClO_4$ soln. 7—113696
steel, austenitic stainless, low-cycle, biaxial fatigue life, effect of axial-torsional straining at 550°C *(Japanese)* 7—106616
steel., austenitic stainless, stable, N strengthening 7—113563
steel, austenitic stainless, weld metal, SCC, effect of N content *(Korean)* 7—78318
steel, austentic stainless, cold worked single crysts., SCC in boiling $MgCl_2$ soln. *(Japanese)* 7—119414
steel, dual-phase, cyclic deform. effects of morphology and strength of martensite 7—100300
steel, dual-phase, fatigue behaviour, influence of martensite content 7—113691
steel, Fe-Ni-Mn, structure and mech. props., carbide intermetallic strengthening *(Russian)* 7—78103
steel, Hadfield, hardening mechanism and stress-strain diagrams *(Russian)* 7—71205
steel, high strength, near threshold fatigue crack propag., temper microstruct. 7—100361
steel, high tensile, cathodically protected, tensile fracture behaviour evaluation with slow strain rate technique 7—144553
steel, low strength medium C, fretting fatigue under two-step block loading 7—100352

slip continued
steel, stainless, corrosion fatigue cracks, initiation and early growth mechanisms 7—78321
steel, stainless, N_2^+ ion implantation influence on fatigue props. 7—76286
surface free energy of crystalline solids 7—84486
synchrotron radiation topography appl. to single crystal dynamic processes 7—91562
textured polycrystals, yield locus calc. using Taylor and relaxed Taylor theory 7—76278
triple grain junction, grain boundary sliding 7—76142
trusses, kinematic hardening 7—97329
Zircaloy-2 plates SCC in I atmosphere, plastic deform., crystallographic orientation 7—71382
Zircaloy-4 sheets, cold-rolled, evidence of pyramidal slip mode 7—69711
AL-Cu, fatigued, containing shearable precipitates, behaviour of persistent slip bands 7—111569
Ag, polycrystalline, plastic deform., dynamic recovery 7—144434
AgCl, cryst., slip bands and strain hardening, temp. depend. 7—126139
AgCl:NaCl, slip mode transition temp. range shift study 7—118017
AgI, strain-ageing, role of I 7—91713
Al bicrystals, tensile deform., {111} twist grain boundary recrystallisation 7—132653
Al crystal plastic deformation under complex constraint in simple traction *(French)* 7—111746
Al single crystal, stretching deformation, sound emission studies *(Russian)* 7—100282
Al single crystals fatigue crack initiation and propag. 7—71292
Al single crysts., quenched, plastic deform., slip bands, dislocation loops *(Japanese)* 7—100289
Al, tricrystal, triple grain junction, grain boundary sliding 7—76142
Al-Cu-Mg, creep, relax., theoretical calc. for polycrystals 7—106575
Al-Li, rapid solidification, physical metallurgy review 7—113533
Al-Li based alloys, deform., fracture, microstruct. rel. to comp. and heat treatment 7—144465
Al-Zn single cryst., strain anneal growth, creep testing, dislocation gliding, TEM obs. 7—98167
Al-Zn-Mg, high-purity 7075, H embrittlement, microstruct. effects 7—144506
Al-Zn-Mg(-Fe), fatigue behaviour, effect of Fe content 7—119358
$AlPO_4$ α-berlinite, TEM obs. of lattice defects and water precip. 7—142786
Al_3Ti, plastic deform., 25-860°C 7—86290
B fibre reinforced Al alloy, deform. of tensile coupon with central slot 7—119310
$BaO.6Fe_2O_3$, polycryst. ferrite, hot extrusion processing, microstruct. change *(Japanese)* 7—126202
Be single crystals, deformed by prismatic slip, dislocation struct. 7—111562
Be single crysts., critical resolved shear stress for prismatic slip, TEM obs. 7—132660
$BeAl_2O_4:Cr^{3+}$ alexandrite crysts., Czochralski, growth, struct. defects, laser output 7—132437
$Be_3Al_2(SiO_3)_6$ beryl, Knoop microhardness determ. of slip systems 7—131218
$Cd_xHg_{1-x}Te$, sub-grain boundary struct. 7—132647
CdS conductivity anisotropy, edge prismatic dislocation effects 7—143463
CdTe, sub-grain boundary struct. 7—132647
Co-Cr sputtered films, mag. props., microstruct. 7—85392
Co_3Ti single crysts., plastic flow under compression, temp., orientation and comp. depend. 7—119307
Cu, FCC, cyclic deformation, dislocation mechanisms and steady states 7—76124
Cu, fatigue in inert environments, changes included in strain localisation behaviour 7—113653
Cu, fatigued in neutral oxidising environment, development of current transients 7—86336
Cu, fatigued single crysts., persistent slip band nucleation 7—111568
Cu, flow stress 7—144463
Cu, plastic deform., propag. with depth, acoustic emission study *(Russian)* 7—111739
Cu, single crystals, fatigued, elec. resist. 7—84113
Cu, textured tubing, small strain biaxial yield, cryst. slip modelling 7—86282
Cu, tricrystal, triple grain junction, grain boundary sliding 7—76142
Cu-Al crystals, mech. twinning mechanisms, stacking fault energy, slip 7—76143
Cu-Al single crystals, strain softening and plastic flow instability 7—78097
Cu-base alloys, martensitic transform., dislocation form. 7—126117
Cu-Ce alloys, dislocation glide, in situ TEM study 7—83959
Cu-Ge, thermally induced FCC to HCP martensitic transform., TEM obs. 7—78005
Cu-Ni, dislocation motion and multiplication 7—104760
Cu-Ni (12.5, 27 wt.%), rolling texture development 7—100249
Cu-Pd, plastic deformation and nucleation, mobile dislocations *(Russian)* 7—71236
Fe, fatigue crack nucleation and early growth, grain orientation depend. *(Japanese)* 7—106613
Fe, oxidation wustite grain coalescence, hot stage environmental SEM obs. 7—119432
Fe-Al, prep., tensile and fracture props. 7—86285
Fe-Al-Mn-C (8.7, 29.7, 1.04 wt.%), austenitic fatigue, dislocation microstruct., TEM obs. 7—113697
FeSi bicrystals, intergranular SCC, nucleation and growth rel. to slip 7—138907
GaAs, glide of α and β dislocations 7—98160
GaAs single crystals, indentation damage, temp. variation 7—106624
GaAs:In, slip dislocation propagation during crystal growth 7—124279
$Ga_{1-x}In_xAs$ semi-insulating single crysts., mag. field applied LEC growth and props. 7—125959
InSb dislocation glide, in situ TEM study 7—91592
$(K,Na)AlSi_3O_8$ feldspars, (010)[001] dislocation fine struct., TEM, planar defect structural models 7—83960
KCl single crysts., fast edge dislocation charge and polarisation meas. under controlled deform. 7—69708
LiF (100), microindentation, planar dislocation pileups, local shear stress 7—83962
LiF, gamma irrad., latent hardening, mobile dislocations and internal stresses 7—83967
LiF, neutron irrad. effect on plasticity and strength characts. 7—104846
LiF, props. of sessile dislocations 7—98168

slip continued
LiF single cryst., friction and wear, microhardness, creep, temp. depend. 7−131230
LiF single crystals, dislocation pile-ups, pulsed polarisation, slip 7−69709
LiF-LiF:Mg layer crystals, plastic props. 7−131213
βLiIn, defect, struct., mech. props. 7−144482
$LiNbO_3$:Fe, laser induced damage, glide lines, microcracks, microdomains *(Chinese)* 7−98232
Mg alloy, dynamic recrystallisation, hardening and plasticity *(Russian)* 7−100244
Mg, dipoles of basal dislocations 7−98154
$MgAl_2O_4$ spinel, stoichiometric single cryst., Knoop microhardness anisotropy 7−98327
MgO single crystal, aspect ratio effect on compression 7−131216
Mo alloys, deformed by upsetting, texture 7−106534
Mo alloys, fibre textured, microstruct. and strength anisotropy 7−78228
NaCl single crysts., fast edge dislocation charge and polarisation meas. under controlled deform. 7−69708
Nb single crysts., dislocation mobility, temp. and impurity interactions depend., selective etching meas. 7−69702
Nb-V, H embrittlement, dislocation substructure, deform. twinning 7−78181
NbC_x, hot isostatically pressed, steady-state creep 7−144480
$Nb_2C_{0.74}$, hot isostatically pressed, kinetics and mechanisms of creep 7−71263
Ni, FCC polycrystalline, fatigued, microcracks 7−71268
Ni, fatigue fracture induced by ultrasound *(Russian)* 7−126224
Ni, fractography of H and Hg embrittlement 7−126206
Ni, surface intergranular cracking in large strain fatigue 7−113650
Ni with ion beam mixed Ni-Al surface films, slip band distribution and morphology 7−76274
Ni-base superalloy, PWA 1480, γ' dislocation pairs 7−124280
Ni-W-Co-Cr single crysts., fatigue crack growth 7−93090
Ni-W-Cr, single cryst., high temp. creep, γ' phase subgrain boundaries, TEM 7−78139
$Ni_3(Al,Nb)$ single crystals, cyclic deform. at ambient and elevated temps. 7−144503
$Ni_3(Al,Nb)$ single crystals, fatigued at ambient and elevated temps, dislocation struct. 7−144504
$Ni_3(Al,Ti)$ single crysts., flow stress rel. to strain rate *(Japanese)* 7−100290
$Ni_3(Al, Ti)$ single crysts., high temp. yielding *(Japanese)* 7−126173
Ni_3Al, in situ straining in TEM 7−113602
Ni_3Al-B, ductilization, role of B 7−86287
Ni_3Fe Ll_2 ordered alloy single crysts., cross-slip and Kear-Wilsdorf locks, TEM study 7−137368
Ni_3Ga single crystals, plastic flow asymm. 7−113610
Ni_3V alloys, cross slip of partial dislocations, stair-rod mode, zigzag propagation of deformation microtwins 7−91596
Si bicrystals, deformation mechanisms, TEM and X-ray obs. 7−124735
Si, EFG ribbons, struct. defect generation mechanisms 7−83813
Si ribbon growth, dislocation motion and multiplication 7−117845
Si, slip, nondissociation of Lomer-Cottrell dislocations 7−131455
Si substrates, film stresses and critical glide forces determ. by HVEM technique 7−111567
Si web crystal growth, plastic deform. analysis 7−84093
Si:P, RAD growth, doping induced dislocations, TEM obs. *(French)* 7−111560
Sn high purity single crysts., low-temp. plasticity, Peierls relief *(Russian)* 7−78106
Sn single cryst., β-phase, plastic deformation anisotropy *(Russian)* 7−71237
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7−86283
Ti, textured sheets, deform. behaviour in uniaxial tensile test, effect of twinning 7−144500
Ti-Al (7.5 wt.%), deform. mode rel. to injected He 7−119316
Ti-Al alloy, α-phase, deform. and failure in strong mag. fields, 293 to 4.2 K range 7−93052
Ti-Al-Nb, as-cast and deformed samples, dislocations 7−124274
Ti-Al-V (6,4 wt.%) creep behaviour at room temp., effect of H 7−126191
Ti-Mo (30 wt.%), plastic deform. in BCC alloys induced by H conc. gradients 7−113632
Ti-Y-Y_2O_3, oxide-dispersion hardened alloys, prep. by rotating electrode process 7−77869
TiAl, cleavage fracture mechanism, dislocation reactions 7−86349
Ti_3Al, as-cast and deformed samples, dislocations 7−124274
Ti_3Al, intermetallic cpd., dissoc. of superdislocations 7−83964
TiB_2, high temp. deform., Hall-Petch relation, TiC precip. effect 7−113615
TiC single crystals, state variable analysis of inelastic deform. 7−113612
WC single crysts., N ion implantation, ductile-brittle transition 7−119351
WC-Co, deform., crack nucleation, slip transfer, plastic incompatibility 7−86250
Zn bicrystals, grain boundary glide and intragrain slip *(Russian)* 7−76135
Zn single crystals, fracture form. when basic slip is prevented *(Russian)* 7−126223
Zn-Al-Mg textured sheet, flow stress, influence of grain size and loading direction *(German)* 7−126204
ZnP_2, α- and β-crystals, anisotropy of microhardness, density of defects 7−91710
Zr plates, SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
α-Zr, texture form. due to rolling *(Russian)* 7−144428

slot antennas *see waveguide antennas*

slot lines *see waveguides*

small electric machines
electric motor rotor simulation, mixed convection in cylindrical annuli, laminar flow patterns, num. investig. 7−69146

Small Magellanic Cloud
brightest blue stars in SMC, Hγ-line equivalent widths and luminosity classes 7−120390
early-type stars in SMC, stellar winds props. from IUE spectra 7−134225
globular clusters as mass segregation candidates 7−120523
Lindsay 1, populous SMC cluster, main-sequence turnoff photometry 7−80054
N83 and N84, fragmentation and exciting stars characts. 7−101879
N88A, H II region, 8 to 13 μm spectra rel. to dust grains comp. 7−134293
NE arm, bright stars spectral types 7−140257

Small Magellanic Cloud continued
OB stars, colours and spectral classification 7−101922
PSR 0042−735 in SMC, discovery and parameters at 610 MHz 7−134262
radio emission, thermal and non-thermal 7−101901
S18/SMC, peculiar early-type emission-line supergiant, optical and UV spectroscopic study 7−101771
star counts in SMC NE halo, detect. of shell-like features 7−140249
stars, mass loss rate rel. to LMC 7−145932
supergiant stars, search for variability in BVRI obs. 7−101782
supergiants, reddenings and intrinsic colours, BVRI photometric obs. 7−101781
Wing, bright stars, spectral types 7−140256
X-ray images using Einstein IPC 7−128067
H II radial velocity field and kinematics, determ. from Hα obs. 7−95024

small polaron conduction
disordered electronic systems, electron mobility, polaron form., hopping-to-band transitions 7−137923
disordered media, strong electron-phonon coupling, freq. depend. of conductivity 7−131636
disordered systems, cond. field depend. for high temp. small polaron hopping regime 7−131640
disordered systems, hopping transport by small polarons 7−70303
disordered systems, small polaron mobility, intersite tunnelling percolation 7−76934
ionic lattice, solvated polaron conduction model, comment 7−124993
material disorder, effects on small polaron formation and motion 7−131648
system, elec. and thermal transport props., cation substitution effect 7−92173
$B_{1-x}C_x$, small bipolaron formation and hopping 7−70314
$CrVO_4$, elec. transport props. 7−105602
CuV_2O_6, elec. cond., thermoelec power, dielec const. 7−137973
$FeMoO_4$, elec. transport props., small polaron motion, α-β transition region 7−131638
FeO-P_2O_5-MgO glasses, polaronic hopping conduction, AC mechanism 7−84889
Fe_3O_4, magnetite, small polaron conductivity 7−124991
Fe_3O_4, magnetite, small polar conductivity, anal. 7−137920
Fe_3O_4-$CoFe_2O_4$ ferrospinel, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
Fe_3O_4-$FeAl_2O_4$ ferrospinel, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
Fe_2SiO_4-Mg_2SiO_4 olivine, cation intersite distrib. determ., elec. cond. and Seebeck effect meas. 7−76099
Ge_xSe_{1-x} alloys, DC conductivity and thermoelectric power studies 7−137931
$La_{1-x}Sr_xCr_{1-y}Mn_yO_3$ system, elec. and thermal transport props., cation substitution effect 7−92173
$Li_yMgYb_2S_4(Se_4)$ lithiated spinels, elec. and mag. meas 7−143422
$Mn_{0.863}Fe_{2.137}O_4$ ferrite, elec. cond., thermoelec. power, cation distrib. 7−118479
SiN_x:H amorphous thin films, small polaron transport, I-V meas. 7−84894
SiO_x films, variable composition, AC conduction 7−125163
V_2O_5-Bi_2O_3 glasses, prep. and charactn. 7−111411
V_2O_5-P_2O_5 glasses, polaronic hopping conduction, AC mechanism 7−84889
$YCrO_3$:Ca(Mg)(Sr)(Ba), elec. cond., Seebeck coeff. 7−70342
YIG, elec. cond., thermoelec. power meas., small polaron model 7−99051

small-size generators *see small electric machines*

small-size motors *see small electric machines*

SMC *see Small Magellanic Cloud*

smectic liquid crystals
8CB, liquid crystal, phase transitions, photoacoustic study 7−131309
8CB nematic and smectic A liq. cryst., phase transitions, photoacoustic detection 7−105017
A state in associated liquid crystals, exotism 7−83666
A-phase, X-ray diffr. and optical transforms of model density functions 7−137234
mono- and bis-alkenyl(oxy) substituted esters, mesomorphic props. 7−137229
5-n-alkoxy-2-pyridinecarboxaldehyde, mesomorphic props. 7−137230
N(p-n-alkoxybenzilidene)-p-n-alkylanilines, nematic-smectic and smectic-smectic phase transitions 7−137558
4-n-alkoxybenzoic acids, nematic-smectic C phase transition, X-ray diffraction patterns, microscopic textures 7−124082
4′-(4″-n-alkoxybenzyloxy)-4-cyanostilbene, nematic-smectic A phase transition, critical behaviour 7−131311
alkoxyphenyl 4-alkoxybenzoate-based ferroelec. liq. crysts., synthesis and props. 7−125701
alkyl chain liq. cryst., orientational order, D NMR studies 7−75977
4-alkyl-4′-cyanostilbene, homologous series, X-ray diffraction studies 7−111373
p-n-alkyl-p′-cyanobiphenyls, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7−124083
4,4′-di-n-alkylazoxybenzene, nematic and smectic A phases, orientation order, NMR studies 7−111358
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7−77499
p-alkyloxyphenyl-p′-alkoxybenzoates, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7−124083
BABA mixtures, smectic C-nematic transitions, DSC studies 7−105019
biaxial smectic E phase, zero-field NMR study 7−91436
binary mixtures, bend elastic const. of nematic-smectic *A*-smectic *C* multicritical point, Freedericksz deform. meas. 7−111887
binary mixtures of smectic A, creation of nematic phases 7−111884
binary mixtures of smectics A:120CB and compound n-DBT homologous series, phase diagrams 7−137557
BOH8-MPOOBC, ferroelec. liq. cryst., thin cell dielec. response 7−97917
p-bromo-p-n-hexyloxybenzylidene aniline, smectic B phase, mol. dynamics, PMR relax. meas. 7−137228
bubbles, collapse dynamics and permeation coeff. 7−117806
C* phase, ferroelectric, electrooptical props 7−106139
C phase, polarisation-induced optical transitions 7−104539
C-6 polysiloxane, polymeric liq. cryst., nematic-smectic C phase transition, high-resolution X-ray study 7−76405
chiral lipid bilayers, electrostatic buckling *(French)* 7−69585
chiral liquid crystal polymers, struct. characterisation of thermotropic polyesters 7−111383
chiral mixtures with injected smectic phases, thermochromism 7−99808

smectic liquid crystals continued
chiral smectic C* liquid crystals, uniformly layered, in an electromagnetic field, continuum theory 7—75985
chiral smectic C liq. cryst. in elec. field, soliton lattices near a tricritical point, first order phase transition 7—91761
cholesterol p-n-octyloxybenzoate, mesophase crystalline precursors struct., X-ray study, intermol. interaction energy calcs. 7—91555
cholesterol-containing polymers, layer ordering in smectic and cholesteric mesophases *(Russian)* 7—137197
cholesteryl, α,α,ω-trihydrofluoroalkylcarbonates, homologous series, phase transitions 7—111882
cholesteryl 4-n-alkoxy-3-methoxybenzoates, synthesis, thermal props. 7—137213
cholesteryl erucate, smectic liquid crystal, ultrasonic waves propagation, specific volume 7—91727
cholesteryl oleate, density, refractive index, optical anisotropy 7—137218
cholesteryl pelargonate at glycerin interface, surface tension, temp. depend. 7—131393
cyano biphenyl sidechain liq. cryst. polysiloxanes, X-ray diffraction anal. 7—124086
defect structures hierarchy in space filling by flexible A layers 7—131022
p-p′-dialkylazoxybenzenes, nematic-smectic A transition, static electric permittivity, cond., anisotropy 7—124083
N-[-4(dimethylamino)phenyl]-and N-(4-nitrophenyl)-α-(4-alkoxyphenyl)nitrone mixtures, liq. cryst. props. 7—137219
S-3,7-dimethyloctan-1-ol, liquid crystalline derivatives 7—111382
DOBAMBC, ferroelectric, mixture with smectic C liquid crystal, electro-optical response 7—99799
DOBAMBC, smectic-A-chiral-smectic-C phase transition 7—98444
DOBAMBC helicoidal ferroelec. smectic C* liq. cryst., spontaneous polarisation 7—113065
doping induced helical struct., ferroelec. props. 7—99749
edge dislocation arrays in swollen lamellar phases 7—142555
electrical cond. and charge carrier mobility temp. depend. meas. *(Russian)* 7—111932
EM field interactions with homogeneous and inhomogeneous surfaces 7—97913
epoxy compounds and lactic ethers, ferroelectric liquid crystals, fast-switching, physical props. 7—99758
ester systems, effect of lateral substitution on smectic C formation 7—111363
esters, carbonyl substituted, effect on mesomorphic props. 7—124503
excess free energy due to hard-core repulsions 7—75988
ferroelectric, high spontaneous polarisation, electro-optical props. 7—125627
ferroelectric, smectic C* phases and phase transitions 7—91443
ferroelectric chiral polar smectic C liquid crystals, synthesis 7—111368
ferroelectric fast-switching low-temperature liquid crystal mixtures 7—124092
ferroelectric liq. crystal mixture, smectic A—smectic C* phase transition, Goldstone mode and soft mode, dielectric relax. 7—84260
ferroelectric liquid crystal, helical winding, unwinding and switching 7—85547
ferroelectric liquid crystal, optical transmission, hysteresis 7—99803
ferroelectric liquid crystals, electro-optic props. 7—70749
ferroelectric liquid crystals, generalised Landau model 7—132207
ferroelectric liquid crystals, helicoidal structure, optical switching and memory effects 7—99800
ferroelectric liquid crystals, performance parameter meas. methods, review 7—92615
ferroelectric liquid crystals, props. and appls. 7—110262
ferroelectric liquid crystals, spontaneous polarisation, elec. and optical props. 7—99734
ferroelectric liquid crystals, spontaneous polarisation 7—99735
ferroelectric liquid crystals, spontaneous polarisation and twisting power 7—77455
ferroelectric liquid crystals, surface stabilised, switching processes 7—69587
ferroelectric liquid crystals, viscosity meas. using polarisation switching current 7—98539
ferroelectric liquid crystals *(Italian)* 7—91427
flow induced transitions 7—84258
fluoride-bearing liquid crystal MB80.5 (F), structure and phase transitions *(Chinese)* 7—97911
Halperin-Lubensky-Ma effect in nematic-smectic A transition 7—143007
hard-rod fluid, aligned, smectic order, density functional approach 7—97915
Helfrich deformation in smectic A liquid crystals 7—69589
4,4′-di-n-heptylazobenzene, nematic and smectic A phases, orientation order, NMR studies 7—111358
4,4′-di-n-heptylazoxybenzene, nematic and smectic A phases, solvent-solute interactions 7—111359
N(p-n-heptyloxy benzylidene) p′-n-octylaniline, structural and phase transition studies of mesophases 7—111377
heptyloxypentylphenylthiolbenzoate-octyloxycyanobiphenyl, nematic-smectic-C heat capacity investig. 7—69908
4-n-heptylphenyl-4′-(4″-nitrobenzoyloxy)benzoate, nematic-smectic phase transition, X-ray reflectivity meas. 7—76404
N-4-hexadecylpyridinium chloride, anhydrous, mesomorphic behaviour 7—111376
N(p-n-hexyloxy benzylidene) p-n-octyl aniline, liq. cryst. transitions 7—124506
4-hexyloxy-4′-cyanobiphenyl-4-octyloxy-4′-cyanobiphenyl liq. cryst., elastic consts. 7—104887
hexyloxycyanobiphenyl-octyloxycyanobiphenyl mixtures, compression modulus meas. in vicinity of nematic-smectic A transition, light scatt. study 7—83658
hexyloxycyanobiphenyl-octyloxycyanobiphenyl mixtures, nematic-smectic A transition, light scatt. study 7—84259
4-n-hexyloxyphenyl-4′-(2″-methylbutyl)biphenyl-4-carboxylate cholesteric/smectic phase transition, high pressure study 7—143005
4-n-hexyloxyphenyl-4n-decyloxybenzoate, smectic C phase, tilt angle and optical biaxiality meas. 7—99792
intermediate boundary-induced smectic A phase obs. in nematic-smectic C transition 7—98443
isotropic phase susceptibility due to orientational/translational order parameters interaction 7—124097
large-scale dynamics of cholesterics and smectics C* 7—104548
liquid cryst., mixtures, phase diagram, intermediate phase form., dipole-dipole correl. and geometric factors 7—84261
MBBA, smectic structs., modelling using neutron scatt. 7—111384
smectic liquid crystals continued
mesomorphic and solid, phases X-ray diffr. studies 7—104542
1-methyl-alkoxy-phenyl group chiral smectic liq. cryst., phys. props. 7—77456
methylchloropentanoic acid-4′,4″-octyloxybiphenyl ester, ferroelectric liq. cryst., dielec. polarisation obs. 7—85530
mixtures and pure compounds, correl. between mol. struct. and spontaneous polarisation 7—137227
molecular dynamics and spectral density determ. 7—75983
monomeric and polymeric, light scatt. 7—138469
naphthyl-2 p-alkoxybenzoates, 6 substituted, ferroelec. liq. crystals 7—70716
nematic-smectic A phase transition, orientational order of mol. fragments 7—105025
nematic-smectic C transition, influence of boundary conditions 7—124498
nematic-to-smectic A transition and elastic consts. determ., optical response method *(Turkish)* 7—111872
NMR ^1H-^{13}C spin pair zero-field study 7—92517
nonchiral layered smectic ferroelec. fluids 7—118953
4-n-nonoxybenzylidene-t′-butylaniline, smectic-F phase, orientational flow, D NMR obs. 7—99589
nonsterol cholesterogens, mesomorphic phases, vibr. spectra 7—113186
4-n-octyl-4′-cyanobiphenyl, nematic and smectic ordering 7—75979
octylcyanobiphenyl (8CB) smectic A phase, X-ray scatt. study *(Hungarian)* 7—131020
4-n-octyloxy-4′-cyanobiphenyl, liq. cryst. phase transitions, conform. and electronic struct. changes 7—69909
parallel hard rods model for smectic-A ordering 7—142577
N-(4-n-pentyloxybenzylidene)-4-n-alkylaniline, I/N, N/SmA transitions, even-odd effect 7—137555
N-(4-n- pentyloxybenzylidene)-4-n-alkylaniline, nematic-smectic A transition 7—105018
planar oriented smectic C phases, Freedericksz transition 7—91430
polar-nonpolar liq. crystal mixture, phase transitions, microscopic description 7—76402
poly α-chloroacrylates, smectic C* liq. cryst. side-chain polymers 7—111365
polymer, side-chain, dielec. relax., glass transition 7—85536
polymer films, side chain, struct. analysis, electron microscopy 7—142562
polymer films, smectic layers, direct obs. 7—142563
polymers, main chain and combined, linear and cross linked, X-ray investigations 7—142569
polymethacrylate comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7—111352
polymethacrylates, ferroelec. liq. crysts., synthesis, phase states, structs. and props. *(Russian)* 7—138389
polymethacrylates, smectic C* liq. cryst. side-chain polymers 7—111365
polymethylsiloxane comblike liq. cryst. sidechain polymers., conformational anisotropy, small angle neutron scatt. study 7—111352
ring deuterated smectic liq. cryst., D NMR spin-lattice relax. studies 7—77420
Schiff's base liquid crystal, oriented, X-ray diffr. and optical studies 7—91432
smectic A-nematic transition, lattice model critical behaviour 7—118094
smectic E-smectic B transition, Monte Carlo computer simulation studies 7—111874
smectic-A_d-smectic-A_2 critical point, X-ray studies, first-order phase transitions 7—137559
smectic-A mesophase, hard rod lattice model *(Russian)* 7—111387
smectogenic compounds, binary systems, intermediate nematic phases 7—111878
spiro(3.3)heptane ring containing liquid crystals, thermal props. 7—91435
sterol cholesterogens, mesomorphic phases, vibr. spectra 7—113186
stochastic molecular orientational fluctuations, incoherent cold neutron scatt. studies 7—91431
stripe mag. domains, analogy to lyotropic liq. cryst. 7—143882
surfactant-alcohol-brine lyotropic lamellar phases, X-ray scatt. study 7—83659
terephthal-bis-butylaniline, smectic H phase, texture and conoscopic interference figure 7—137235
terephthalylidene-bis-p-n-decylaniline, structural and phase transition studies of mesophases 7—111377
terephthalylidene-p-n-decylaniline smectic liq. cryst., transitions and density studies 7—124366
thiobenzoate series, ferroelectric smectic C* phases 7—69588
4-trans-4′-n-hexyl-cyclohexyl-isothiocyanato-benzene binary mixtures, dielec. studies 7—125585
4-(trans-4-alkylcyclohexyl)-1-(2-cyanoethenyl)-benzene, binary mixture with 60CB, nematic reentrant phase, elec. props. 7—124499
N,N′N″-trialkyl-1,3,5-benzenetricarboxamides, liq. cryst. phases 7—75982
twisted C phase, domain instabilities *(Russian)* 7—124080
uniaxial liquid crystals, steric effects of substituents in mesogens and phase transition temps. 7—111879
wetting and layering theory, lattice model 7—124642
N-(p-n-hexyloxybenzylidene)-p-n-toluidine, liquid cryst. transitions, US studies 7—105022

smell (physiological) *see chemioception*

smoke
see also air pollution; dust
atmosphere, summertime smoke injection during nuclear war, response of upper ocean 7—86853
atmosphere, turbid layer vertical development, for case of solar radiation absorpt. 7—120097
fluid dynamics research, smoke generation system 7—111131
high pulse rate lidar boundary layer dynamics meas. via aerosol and smoke obs. 7—127521
Moscow region, USSR, smoke haze effect on sunlight and natural illumination at surface 7—127467
Moscow region, USSR, smoke-filled atm. aerosol spectral optical thicknesses and radiation heating 7—127468
plume coagulation after nuclear war 7—93585
Mg-SiO smokes, amorphous, kinetic study of hydrous alteration rel. to cometary particles and chondrite matrix 7—101737

snap off varactors *see varactors*

Snoek effect
amorphous metal-H system, internal friction and relax. strength 7—142907
KBr:Eu single crystals, hardening, yield stress meas., temp. and impurity conc. depend 7—91704

Snoek effect continued
Nb:H,O, Snoek peaks, internal friction studies 7−98335
V:H,O, Snoek peaks, internal friction studies 7−98335

Snoek-Koster relaxation *see anelastic relaxation; dislocation damping*

snow
accumulation rates estimation in Greenland, appl. of radioactive Cs layer from Chernobyl accident 7−139169
acidification in rural area, acidifying agent identification 7−100777
alignment of snowflakes close to aircraft due to elec. field associated with aircraft 7−127593
Alps, snow cover recession map for Swiss MAD-Davos testsite 7−101361
antarctic, chemical compounds in meltwater 7−101350
Antarctic Ice Sheet, effects of increased snowfall due to atmospheric CO_2 increase 7−94425
Antarctic ice-snow indices rel. to China hydroclimatic regions and W Pacific subtropical high 7−127293
Arctic haze and snow, radiative effects of anthropogenic aerosols 7−139760
avalanche theory, effects of free water on snow gliding 7−120047
Baltic Sea, sea ice studies using Nimbus 7 SMMR 7−114801
boundary between snowfall and rainfall in atmosphere, width and speed of boundary 7−79570
chemical composition, spatial var. in Scottish catchment 7−94314
clouds, ice crystal nucleation rates and aggregation processes var., effect on orographic snowfall 7−87790
cohesionless granular material flow down inclined plane, flow avalanche model 7−94306
cohesionless granular material flow down inclined plane. flow avalanche model 7−94309
NE Colorado, USA, snowstorms, orographic effects 7−127393
cooling tower plume-snowfall interaction, mm Doppler radar study 7−133149
dense random medium, remote sensing appl. 7−96933
densification, particle rearrangement and dislocation creep processes study 7−114819
Earth rotation and gravity field changes due to seasonal snow cover 7−145309
falling snow, ^{18}O content var. and snow form. process 7−79565
Finland, determ. of water equivalent of seasonal snow cover 7−79623
forest area, snow melting due to sunlight absorpt. 7−101363
fracture mechanics under field conditions 7−139658
Fram Strait, physical props. of summer sea ice 7−127250
Great Plains of N America, snowpack remote sensing observations 7−72107
S Greenland snow chemistry, seasonal and spatial trends 7−94315
ground-based radiometer meas. (1-37 GHz range) 7−107450
Hokkaido, Japan, snowmelt runoff model and basin heat balance 7−139642
hydrological research, review 7−114842
ice/water interface layer, kinetic processes, crystal growth 7−120048
IR meas. of free-water content and grain size 7−114834
Japan, snow cover volume distrib., remote sensing observations 7−101359
N Kazakhstan, snow cover and drifting 7−72114
Lake Michigan, lake-induced mesoscale snowstorms, modelling 7−145595
light extinction in near-IR and visible wavelengths *(French)* 7−133785
measurement of snowfall, design and operation of snow scales *(German)* 7−115102
melting on roof using solar energy collection and aquifer seasonal storage 7−71650
N Michigan, USA, chem. composition of snowmelt and runoff 7−79463
microwave dielectric and scatt. behaviour 7−101357
microwave emissivity of snow cover at 35 GHz, emission model 7−101360
microwave remote sensing of snow-covered sea ice 7−101329
microwave scattering properties of heterogeneous two-component mixtures, appl. to soil and snow water inclusions 7−96932
microwave signatures of snow on sea ice, inter-sensor comparison 7−101564
mm wave emissions from snow covers of different types 7−79466
moisture reserves in snow cover, cosmic ray neutron attenuation meas. 7−87740
mountain slope snow cover, stress and flow *(Japanese)* 7−107444
mountain snowfall, snowpack chemistry, meteorology, acidity 7−120051
Northern Hemisphere snow cover, data sets comparison 7−133784
Ontario, Canada, pollution chemistry of winter air, clouds, precipitation 7−127323
optical haloes due to falling snow, due to faceted snow crystals 7−79592
polar firn densification by grain-boundary sliding, model calcs. 7−114818
radar measurements, rain signal contamination by melting snow 7−127579
remote sensing (book) 7−88758
remote sensing method for snow cover volume, NOAA-AVHRR technique 7−101359
remote sensing methods for snowmelt runoff forecasting 7−101362
remote sensing of snowpack, scanning multichannel microwave radiometry method 7−72107
Riiser-Larsenisen Ice Shelf, movement, mass balance, snow temp. 7−114832
salt migration from ground to snow cover 7−107447
SAR for snow and glacier monitoring system 7−87981
scalar roughness and scalar transfer coeff. over snow and sea ice 7−101375
shear testing of snow cover, annular blade equipment 7−107543
South America, snow cover correlated with Southern Oscillation phenomena 7−114971
Spitsbergen, snow and ice cover SAR remote sensing observations 7−101577
stratigraphy, obs. with FM-CW microwave system 7−101561
stress in snow cover on mountain slope, meas. method and instrumentation 7−139779
sulphate scavenging by snow over Greenland Ice Sheet 7−93582
thermal convection and conductivity, experimental study *(French)* 7−111985
urban and rural land surfaces, multispectral remote sensing of temperature and snow cover 7−127616
NE USA, snow chemical props. and comp. 7−120053
vertical wind tunnel for snow process studies 7−127583
walking sounds spectral anal. 7−110629
water equivalent of snow cover, retrieval from satellite microwave radiometer data 7−107560

snow continued
watershed runoff due to snowmelt and basin heat balance 7−139642
weather Doppler radar for snowfall obs. *(Japanese)* 7−114925
Pb concentrations in Antarctic snow, natural and anthropogenic 7−139661

SNR *see supernova remnants*

SO groups
see also O groups
6j coefficients with 1 multiplicity index for groups SP(2N), SO(2N) and SO(2N+1) 7−72809
anisotropic universes, inflation, Higgs fields, local isotropy 7−146116
anomaly-free theories beyond superstrings containing N=1 supergravity and Yang-Mills matter 7−95795
biorthogonal systems and analytical inversion symm. 7−72810
biorthogonal systems for $SU_4 \supset SU_2 \times SU_2$, $SU_n \supset SO_n$ and $Sp_4 \supset U_2$ and the symmetry of analytical inversion 7−95778
bosonic string on SO(N) group manifolds, crit. dimensions, path integral anal. 7−95796
cancellation of dilaton tadpoles and two-loop finiteness in SO(32) type-I superstring theory 7−121483
Clebsch-Gordan coeffs. of SL(2,R) in hyperbolic basis, Gel'fand realisation, generating function 7−72807
closed superstrings as soliton-type solns. of 26-dimens. bosonic strings 7−73630
continuous Hahn polynomials and the Heisenberg algebra 7−72781
d=11 supergravity, compactification, gauge-invariant vacuum solns., Stiefel manifold, SO(5), SO(3) 7−128422
de Sitter quantum gravity, critical behavior on hypercubic lattice, SO(5) symmetry breaking 7−115882
Dirac and Weyl fermion determinants 7−102266
Dirac quantisation rule, mass and dual mass, gravitational magnetic monopoles 7−140574
$E_8 \times E_8$ superstring models, cosmological consequences, baryon asymmetry, supermassive shadow particles 7−115878
effective supergravity lagrangians for 4D superstring massless sector, underlying nonlinear σ model 7−135078
frustrated Heisenberg antiferromagnet on 3D layered triangular lattice, crit. behaviour 7−77338
generalized Morse oscillator in the SO(4,2) dynamical group scheme 7−73030
generalized Yang-Mills-Higgs theory, finite action soln. 7−80982
gravitation and generalized spinor fields, SO(4,1)→SO(3,1) reduction 7−67129
gravity, Stephenson-Kilmister-Yang theory, dynamics, SO(3,1) gauge theories, Hamiltonian form 7−120913
heterotic string light-cone field theory on a torus 7−89460
hidden gauge theory, SO(3) solns., H-dibaryon 7−102609
interacting boson fermion model, SUSY as formal prop. of Schwinger-type boson-fermion mapping 7−67747
interacting boson model, fermion SO(8) model derivation 7−81315
Kaluza theory in 8D, origin of SO_3 spinors 7−67135
Kaluza-Klein theory, equivalence of spin and ang. momentum 7−73120
kinematic algebras, elementary particle groups, momentum space geometry, Riemannian momentum space 7−116154
Lagrangian structure of the Kirchhoff equations 7−80315
Landau potential minimisation, SO(3) invariance, nonmaximal D_4 stability group 7−140831
left-right Pati-Salam model, P invariance and isospin breaking, SO(10) model 7−128812
Lorentz symmetry breaking mechanism, effect on gravit. field action 7−140828
minimal N=2 supergravity, chiral actions 7−108376
nuclear collective states, fermion dynamical symmetries 7−135185
path integration over compact and noncompact rotation groups 7−134968
preon models, chiral, with SU(N) metacolour, SU(5), SO(10) quark-lepton predictions 7−108871
pseudo-orthogonal rotation groups, generalized Euler angles as intrinsic coords. 7−115745
quantum rotor, algebraic realisation in terms of SU(3)→SO(3) algebra 7−95398
quantum scattering with group symm., geometric approach 7−115833
quarks at the ends of open strings, group theory 7−95858
quaternion fields, Fock representation and quantum mechanics 7−95760
quaternion gauge fields, pseudocolour symm. and SO(4) symm. breaking 7−102631
relativistic two-particle system in harmonic oscillator pot., invariance principle in 1D 7−95739
scattering operator generated by SL(2,R) on Fock space, SO(N) internal symmetry group 7−140825
Schrodinger equation, maximal symmetry group, appl. to atoms and mols. 7−115840
self-dual Taub-NUT metric, monopole scatt. and hidden symm. 7−81075
SO_3 gauge field interaction with isovector Higgs field, magnetic monopole structure 7−73521
SO*(8) enveloping algebra, decomposition and SU(3) tensor operators 7−115746
SO(10) from supersymmetric E_6, spontaneous symmetry breaking anal. 7−95784
SO(10) models, light neutrino masses and mixing angles 7−89410
SO(10) superstring models, unified, with intermediate $SU_R(2)$ breaking, SUSY particle spectrum 7−95814
SO(10) unified field theory, neutrino masses 7−102652
SO(16) invariance in 110 supergravity 7−80575
SO(2) spin operators, n-point correlation functions on a torus 7−73570
SO(2l+1) 6-j symbols in terms of SO(3) rotation matrices 7−80481
SO(2r) time-dependent variational principle, TDHF generalisations 7−96005
SO(3,1) ø U(1) gravitation-Maxwell gauge model, anal. 7−134614
SO(3,1) local invariance of gravity at planetary level 7−73092
SO(3,R) images and quotients, van der Waerden theorem 7−88839
SO(3) invariant Landau pots., minimization for spin four 7−95800
SO(3) lattice gauge theory, 3D, specific heat meas., Monte Carlo simulations 7−95736
SO(3) rotation matrices, representation of SO(2l+1) 6-j symbols 7−80481
so(4)-extended d=2 superconformal algebra, nonlinear representation 7−121354
SO(6) representations, symmetric, SU(2)×SU(2)×U(1) basis, generator matrix elements 7−81043

SO groups continued
SO(8192) open bosonic string theory, d=26, one-loop divergences cancellation 7−81158
SO(8) nuclear model, interacting boson-fermion limit. 7−141005
SO(N,1), de Sitter group, N-sphere symmetric tensor spherical harmonics 7−108328
SO(p,q) pure spinors, manifold construction 7−134964
spatially compact manifolds, Einstein's eqns., nonexistence of stationary, axisymmetric dust solns. 7−67126
SU(2) gauge fields, SO(4) trivialisable, geometry and topology 7−102633
$SU(9) \supset SO(9) \supset SO(5) \times SU_1(2) \times SU_2(2)$, physical basis for group chain 7−134973
super-Riemann surfaces, N=2, O(N) and SO(N) surfaces 7−73555
superstring, SO(16)-SO(10) spin field scattering, one-loop amplitudes 7−73570
superstring-inspired $SU(3) \times SU(2) \times (U(1))^2$ models with SO(10) unification 7−128403
supersymmetric GUT, $SO(4) \rightarrow SU(2)^R$ global symm. props. 7−134993
supersymmetric quantum mechanics, index theorem for arbitrary Lorentz irreps 7−102638
ternary vector cross products, symmetry breaking and SO(8) triality principle 7−140420
topological aspects of string theories 7−89469
type I SO(32) open superstrings on orbifolds, propagation 7−95429
type-I superstring theory, parity-violating one-loop six-point fn. 7−89479
type-I superstring theory, Pauli-Villars regularization and one-loop finiteness 7−73628
unified gauge theories 7−89422
unique SU(5) and SO(10) unification with complete dynamical symmetry breaking 7−116103
Yang-Mills systems, conformally invariant extensions, to d=4p, 4p+2 dimensions, $SO((^1/_2)d)$ solns. 7−140814
$^{12}C+^{12}C$, noncompact-group model for quasimolecular nuclei *(Chinese)* 7−109205
$^{12}C+^{18}O$, noncompact-group model for quasimolecular nuclei *(Chinese)* 7−109205

social and behavioural sciences *see behavioural sciences; social sciences*

social and behavioural sciences computing *see behavioural sciences computing*

social sciences
see also teaching
entropy and energy, appl. to model of social change 7−88817
human population migration, social processes dynamics 7−72762

societies
No entries

sociologic effects *see economic and sociologic effects*

sociology *see social sciences*

sockets (electrical) *see electric connectors*

sodar *see sonar*

sodium
see also nuclei with .....
ab initio phonon quantities, Hartree-Fock cluster calcs. 7−84156
adsorbed atoms on Ta (100), covalent bonding, angle resolved UPS study 7−106357
adsorbed on Ag (110), empty electronic states, inverse photoemission studies 7−85032
adsorbed on Re (10$\bar{1}$0), struct., work function, thermal stability 7−76619
adsorbed on Si (100), catalytic oxidation, photoemission studies 7−93221
adsorbed on W (110), repulsive dipole phase diagram 7−112072
adsorption and coadsorption with O on Ru (001), EELS study 7−98700
adsorption on Ru(001), thermal desorption, work fn. and EELS studies 7−131442
anodic stripping voltammetry with in situ Na amalgamation, programmed time-potential inputs appls. 7−114043
atmospheric layer, theoretical review, laser-radar meas. 7−79726
atom, $2s2p^6nln'l'$ terms, L-Auger line intensities and widths 7−141545
atom, 3s-3p transition, generalised oscill. strength calcs. 7−96796
atom, cascade system, two-photon-induced saturated dispersion at glass-vapour interface 7−68268
atom, Cherenkov radiation during picosec. light pulse propagation 7−141506
atom, collisional spectral line broadening 7−117050
atom, competition between amplified spontaneous emission and the four-wave-mixing process 7−68600
atom, core polarisabilities, quantum defects and fine struct. 7−129580
atom, D_1 line, high resolution polarisation spectroscopy 7−82051
atom, degenerate levels, rearrangement in nonreson. and reson. fields 7−82038
atom, discrete and continuous spectra, oscillator-strength distrib. 7−103435
atom, elastic scatt., differential cross section determ. 7−68458
atom, electron affinity, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
atom, electron affinity, open-shell coupled-cluster method calcs. 7−141492
atom, electron and positron scatt. cross section 7−74773
atom, electron and positron scatt. cross sections, core-corrected modified Glauber approx. calc. 7−129873
atom, emission intensity in O_2-H_2 flames, mag. field effects 7−116903
atom, field ionis. 7−74780
atom, frequency upconversion from 10 μm atm. window to visible, third-order nonlinear susceptibility *(Japanese)* 7−97088
atom, K-photoionisation, rearrangement of electronic shells and multiplet effects *(German)* 7−129670
atom, K-shell double-ionis. cross section, electron-impact energy depend. 7−103667
atom, large angle superelastic electron scatt. 7−122661
atom, laser excited states, electron-impact excitation study 7−117084
atom, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
atom, optically pumped, relaxation rates, appl. to H^- ion source targets 7−141358
atom, polarization plane mag. rotation inside spectral line absorption contour 7−141528
atom, positronium form. differential and total cross sections, pseudopots. appl. 7−103692
atom, resonant multiphoton ionisation and competing processes study 7−90071
atom, scatt. from W(110) surface, charge exchange, 3 electronic state system 7−82344

sodium continued
atom, stopping and trapping in 0.1 K supercond. mag. trap, fluorescence obs. 7−96595
atom, structural energies, pot. calc. 7−98794
atom, two-level, optical bistability 7−68765
atom, velocity selective optical pumping, subnatural linewidth effects 7−68259
atom, wavefront reversal in six-photon wave interaction investig. 7−109850
atom concentration determ., optical diagnostics in hypersonic wakes of ballistic models 7−96891
atom Rydberg states, low field Stark levels, RF induced quantum interference 7−96601
atom-ion scatt., cross sections, resonant charge exchange *(Russian)* 7−122681
atom-NH_3 complexes, IR spectra in solid Ar matrix 7−74582
atomic absorption, velocity selective, collision expts. 7−68628
atomic beam, optical pumping, efficient electro-optic modulator design 7−82773
atomic beam, photodeflection ang. distrib. 7−122433
atomic beam, single-state, prep. by optical pumping and radiative deflection 7−129900
atomic beam, torus magnetic field meas., by rapid-frequency-scan laser spectroscopy 7−142507
atomic beams, Autler-Townes effect in optical pumping expt. 7−103433
atomic fluoresc., subnatural linewidth optical pumping dips in homogeneously broadened spectral line 7−74503
atomic vapour, continuous wave self oscillation, pressure induced two-wave mixing 7−117258
atomic vapour, excited levels, relaxation times, polarimetric study 7−74477
atomic vapour, parametric oscillation due to four-wave mixing 7−117259
atoms, 2-D laser-induced fluorescence detection system for MHD combustion gas plasma 7−142510
atoms, associative ionisation process, hyperfine structs., reaction dynamics 7−113906
atoms, K photoabsorpt. spectra in double excitation region 7−116894
atoms, light induced drift in absence of wall adsorption 7−135889
atoms, multilevel, optical pressure force of two-frequency laser radiation 7−90044
atoms, optical transition saturation by phase-diffusing laser field 7−116906
atoms, quasimetastable levels, emission spectra 7−74504
atoms, two-photon excited parametric emission 7−130248
band struct. calc. neutron scattering 7−143328
catalyst adsorbed on Si(100), role in formation of $Si\text{-}Si_3N_4$ interface 7−126330
cluster, orbital energies, shell structs., ionis. pots., HMO calcs. 7−81986
clusters supported on Kr layers, photoemission studies 7−125918
coadsorption with CO and Ru(1010) interactions 7−92000
coadsorption with CO on Al (100), CO decomposition temp. depend. study 7−91975
coadsorption with O on Cu(110), evidence for Na_2O_2 surface species 7−131440
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
core enrichment due to $^{22}Ne(p,\gamma)^{23}Na$ in H-burning stars *(Russian)* 7−140046
critical point data using Hoch-Arpshofen method 7−67266
cylindrical plasma, electron temperature measurements, effects of inhomogeneities, optical depth and finite bandwidth 7−123843
D-lines, lunar Na vapour search 7−134155
degenerate atomic level splitting in external fields *(Russian)* 7−122441
dense fluid, entropy investig., density fluctuations role 7−130824
dimer, binding energy and pot. energy curve, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
dimer, electron scatt., rot. transitions, differential cross sections calc. 7−129887
double plasmon oscillations during X-ray emission 7−84728
electron impact-photon emission spectra, form. factor determ. 7−99964
electrons attenuation length, energy depend. study 7−142856
excited atoms, in air-acetylene flame, laser enhanced ionis. and laser induced photoionis. yields determ. 7−90295
fluorescence spectroscopy of Na vapour at high pressure and temp., absorption cell 7−96597
gas, vel. distrib., picosecond transient grating expts., spectroscopy 7−96580
gas vapour, optical anisotropy by strong pump field *(Russian)* 7−141942
high pressure arcs, energy balance, radiation transport and line broadening 7−130974
high-pressure lamp, emission spectrum, influence of NaNa, NaHg, and NaXe mols. 7−135870
high-pressure lamp HF operating characteristics *(Korean)* 7−91383
hollow cathode discharge, optical phase conjugate spectroscopy 7−129634
interstellar Na, search at 170 mm 7−107924
ion adsorpt. on SnO_2 film from aq. soln., film hydration and ion exchange activity determ. 7−143210
ion channel gating, phys. model 7−119751
ISFET using $M_2O\text{-}Al_2O_3\text{-}SiO_2$ glass plate 7−93404
isoelectronic sequence, electron impact collision water calcs. 7−141696
laser excited atoms, electronic energy transfer by rare gas atoms and simple mols., pulsed mol. beam study 7−141670
light induced diffusion pulling of vapour into light beam 7−104367
liquid, single particle motion, slow neutron scatt. studies 7−84345
liquid, thermodynamic entropy 7−118133
liquid, velocity autocorrelation neutron scatt. study 7−104531
liquid and solid states, binary correlative functions, calc. 7−104527
liquid-isothermal compressibility, pair pot., direct correl. function 7−76259
liquid-vapour interface, longit. and transverse density distribs. 7−137663
low-pressure discharge lamps *(German)* 7−130973
M51, interstellar Na I D absorpt. towards background galaxy, NGC 5195 nucleus 7−128091
mesosphere, $NaHCO_3$ as reservoir source for Na 7−138959
mesosphere Na chemistry, comparison with K rel. to seasonal behaviour 7−115129
molecule, absorption spectrum from 350 to 1075 nm 7−122559
molecule, $B^1\Pi_u$ state, pot. energy barrier, rot.-vibr. energies 7−90311
molecule, perturbation facilitated optical-optical double reson. spectroscopy, hyperfine splittings, struct. 7−96753
molecule, UV spectra, diffuse bands 7−122563

sodium continued
molecule, vibr. levels studied by polarisation spectroscopy, deperturbed mol. consts. 7−96667
nearly free electron metals, photoemission spectra 7−138607
nightglow, polar mesopause gravity wave activity 7−94533
nonradioactive, leak from Superphenix, March 1987 *(French)* 7−116647
on-line, real-time alkali monitor for process stream analysis 7−144781
optical conductivity, pseudopot. method calcs. *(Russian)* 7−99777
overlayer on Si (100) 2×1, adsorbed O_2 electronic props., photoemission spectra studies 7−113344
overlayers on Al(111), unoccupied electron band struct., IPES study 7−125071
particle-beam-induced atomic plasmas, analytic kinetic model 7−130880
photoemission spectra calc. 7−77764
PIGE analysis of Na in thin aerosol samples 7−87944
plasma, electron density radial profiles derived from Stark broadening 7−111165
polyacetylene:Li(Na), semicond.-metal transition, ESR studies 7−98810
polyacetylene:Na, incommensurate-commensurate and order-disorder transformations 7−105007
polyacetylene:Na, Raman and EPR spectra studies 7−70792
α-quartz:Na, irradiation effects on elec. props. 7−70701
quartz:Na, optical absorpt. and luminesc. centres, struct. 7−144130
quasiparticle band structs., deter. 7−131532
radioactive Na samples, morphology and elemental composition determ., SEM, X-ray spectroscopy *(German)* 7−133020
reactor coolant, γ-, X-ray spectroscopy, REM anal., nuclidic abundance determ. *(German)* 7−129202
Rydberg atoms, squeezing 7−136248
Rydberg-atom+Rydberg-atom collisions, radiative, strong field regime 7−129843
seeded flame as phase-conjugate oscillator 7−141947
spin polarised, spin polarized electron elastic scatt., spin-orbit, exchange effects 7−96876
Superphenix reactor, Na circuits and components *(French)* 7−116643
surface, dressed-atom approach to embedding and physisorption of He and Ar 7−84499
surface (110), photoemission, calc. 7−119112
transmission properties of Na filled Fabry-Perot cavity 7−136412
two-photon change in picosecond pulse polarization 7−90079
vapor, gas dynamics, picosecond transient grating expts. 7−129630
vapor, transmission characts. below bistability threshold 7−141924
vapour, collision-aided Faraday effect, nonlinear susceptibility and optical pumping calcs. 7−82692
vapour, collision-aided self-focusing and -defocusing 7−75086
vapour, dye laser frequency conversion by stimulated Raman scattering 7−130257
vapour, forward four-wave mixing, squeezed noise obs. 7−68598
vapour, four-photon parametric scattering, spectral and energy characts. 7−141934
vapour, generation of high brightness UV radiation at 343.1 nm 7−110465
vapour, laser excited, atomic collisional energy transfer study 7−141669
vapour, parametric four-wave mixing 7−75061
vapour, transport props., second virial coeffs., Hulburt-Hirschfelder pot. calcs. 7−123827
vapour, two-phase clock based on transverse-profile Ikeda instability 7−68773
vapour, UV emission under tunable dye laser pumping 7−122423
vapour laser oscillations and new spectra 7−110342
vapour-filled Fabry-Perot cavity, period doubling and intermittency in transmission 7−68768
Z-pinch plasma, spectroscopic anal. for X-ray-laser pumping efficiency 7−117751
Ag^+-Na^+ ion-exchanges channel waveguides in optical glasses charactn. 7−103985
β″-Al_2O_3/Na interface, O_2 activity and asymmetric polarisation 7−105109
$BaCl_2$:Na^+, solid electrolyte characts., dopant effect *(Japanese)* 7−84378
CaF_2:Na^+, F_{2A} oscillator strengths 7−138478
$Ca_5(PO_4)_3Cl$:Ag, Na^+, thermoluminesc. under X-ray irradiation 7−106279
$CaSO_4$:Dy TLD, Na removal during polycryst. growth 7−145250
CdF_2:Er^{3+}, Na^+, excited state absorpt., up conversion in Er^{3+} single sites, antiStokes fluoresc. study 7−92732
CsI:Na, crystallophosphors, energy transfer by luminescence centres 7−132345
GaAs:Ba^{2+}(Na^+), Auger electron spectra, secondary electron yields, work function 7−77709
GaP:Ba^{2+}(Na^+), Auger electron spectra, secondary electron yields, work function 7−77709
K+Na heteronuclear energy pooling collisions 7−122670
KBr:Ag, Na, activator photodissociation, colour centre generation *(Russian)* 7−83952
KCl:Na, electronic excitation localised near Na ion *(Russian)* 7−143391
KCl:Na^+,O_2^- F_2^+-like centre laser operation in 1.7 to 2.2 μm range 7−68652
$KTaO_3$:Na, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
$KTaO_3$:Na, soft modes and pyroelectricity, Raman scatt. spectra meas. 7−125749
LiF:Na, ion beam modification of embedded Na precipitates, optical absorption obs. 7−91670
MgO:Na, ion beam mixing-induced phase modification 7−76236
^{23}Na beam source, spin polarisation using double-resonance technique 7−109580
Na isoelectronic sequence ions, dielectronic recombination, static electric fields effect 7−82353
Na liq.-β-alumina/$NaAlCl_4$-(Fe,Ni)Cl_2 Zebra battery cell 7−139101
Na^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Na^-, charge distrib., model core pot., variation method 7−68206
Na^-, doubly excited states, energy and widths, diagonalisation method calcs. *(Swedish)* 7−122402
Na^+ channels, Ca^{2+} block sites, rat brain obs. 7−100880
Na^+ channels in rat muscle fibres, slow inactivation 7−100851
Na^+ conductance change in nerve, phys. mechanism: electron transfer model 7−78817
Na^+ current in frog node of Ranvier and neuroblastoma X glioma hybrid, props. 7−100879
Na^+, low cond. channels in cardiac Purkinje cells obs. 7−139239
Na^+ scattering from Cu(110), neutralisation effect 7−125881

sodium continued
Na^+ selective disk electrodes, use of Monensin and its neutral methylester *(German)* 7−79101
Na-Ar(Ne)(Xe) mixtures, radiation trapping, line broadening, fluoresc. obs. 7−82034
Na-GaAs (110) Schottky diodes, elec. props. 7−138065
Na-HCl, reactive quenching, pot. energy surfaces, MCSCF/CI wave fns. calc. 7−93253
Na-inert gas mixture, light-induced drift velocities 7−109841
Na-K mixture, heteronuclear atom collisions, energy pooling processes 7−110082
Na-S accumulator, development *(German)* 7−126590
Na-S battery cathode additive effectiveness test by cyclic voltammetry 7−119636
Na-S battery system development 7−71597
Na-S battery with ceramic electrolyte for electric vehicles *(German)* 7−139100
Na-S cell, numerical simulation of dual mat S electrode 7−114086
Na-S cells, porous S electrodes, electrochemical reaction rate, 2D distribution 7−71594
Na-Xe arcs, Na D line collisional broadening 7−135882
Na-Xe quasimolecules, spin exchange, efficiencies of various buffer gases 7−68381
Na+Ar, radiative transitions induced by short laser pulses 7−122622
Na+Ar diffusion processes and atomic collisions, studied by laser induced population grating method 7−137046
Na+Ar(Kr), differential cross section, left/right asymmetry 7−141656
Na+D_3O^+(D_2F^+) fast charge transfer reactions, metastable states prod. 7−136053
Na+H^-(D^-), charge transfer and electron detachment cross sections 7−74753
Na+H^+, charge transfer and target excitation cross sections 7−103643
Na+H^+, electron capture cross sections, initial state pop., TOFS anal. 7−90402
Na+H^+, excitation and ionis. cross section determ., atomic orbital calcs. 7−68434
Na+H^+(He^+), autoionisation states cross section meas. 7−122680
Na+He, collision induced S-P transitions, P state orientation and alignment, propensity rules 7−90385
Na+He diffusion processes and atomic collisions, studied by laser induced population grating method 7−137046
Na+I_2, electron transfer mechanism 7−110069
Na+inert gas atoms collisions, fine struct. pop. and depolarisation mechanism study 7−141662
Na+inert gas systems, half collisions, depolarisation and fine struct. effects 7−74736
Na+Na, associative ionisation, polarisation and vel. depend. 7−90384
Na+Na, atomic and molecular ion prod. cross sections calc. 7−122665
Na+Na, excited state assoc. ionisation rate consts. 7−119515
Na+Na, in Rydberg state, resonant collisions, dipole-dipole interaction 7−110077
Na+Na(3p), assoc. ionis., $^2\Sigma_u^+$ and $^1\Sigma_g^+$ adiabatic mol. states effects 7−96848
Na+Na→Na_2, laser-induced photoassoc. theory 7−110081
Na+Ne^{q+}, electron capture, core interactions effects, UV spectra anal. 7−90023
Na+O_2, intermultiplet collision transfer cross sections 7−129856
Na+Xe, van der Waals mol. form., parameter values 7−100539
Na^++15-crown-5-derived lariat ethers, thermodynamic parameters determ. using ion-selective electrodes 7−119549
Na^++Na* (3p), resonant charge exchange, alignment and orientation effects 7−74756
Na^++Ne, two-electron excitation and autoionis., differential energy-loss meas. 7−129802
$(Na_{19})_2$ stable giant alkali metal-atom dimer 7−122770
Na_2 photoinduced drift in He *(German)* 7−130821
Na_2, photoionization in DC electric field, evidence for field-induced rotational autoionization 7−68412
Na_2, rotational rainbows in electron-molecule scattering 7−110125
Na_2+He(Ne)(Ar), supernumerary rot. rainbows 7−90326
Na_2+Na(Kr), collision-induced radiationless transitions, fluoresc. spectra anal. 7−103637
Na_2+Ne(Ar), interaction pot. anisotropy, energy depend. 7−90325
Na_3 cluster, internal dynamics, review 7−129924
Na_3, vibr. ground-state level, two-photon ionisation spectrum 7−110052
Na_n^m (n=2 to 9, m=0 or +), metal clusters, geometry and stability, HMO calcs. 7−81985
Na_x^+ clusters, ionisation induced unimol. dissoc., photoionisation 7−90475
Na_2O-P_2O_5-TiO_2 phosphate glass, optical and spectromagnetical props., ESR and visible-UV absorpt. investig. 7−85421
^{22}Na yields in nova explosions, gamma-ray constraints 7−120439
^{23}Na, antiprotonic, widths and shifts, meas. of strong interaction effects 7−110141
^{24}Na, neutron activation analysis on rocks *(Chinese)* 7−94504
^{25}Na, 4f antiprotonic level width, Dover-Richard NN-potential, scattering length, P-wave and S-wave moment 7−110142
Na*+H^+(He^+), ion impact autoionisation and excitation, PWBA calcs. 7−68433
Na*+Na*, radiative Rydberg atoms collisions in strong field regime 7−129843
Pb0-B_2O_3-SiO_2:Na^+, metal-glass-semiconductor capacitors; surface charge studies 7−70416
Si:Na, impurity content determ. by neutron activation anal. *(Russian)* 7−100675
SiO_2:Na, implantation effect on transport props. of mobile Na ions 7−125140
SiO_2:Na, SiO_4/Na centre, thermoluminescence and phosphorescence studies 7−125817
SnO_2:F,Na films, optical and elec. props., influence of aging and impurities 7−144146
SrF_2:Na^+, F_{2A} oscillator strengths 7−138478
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048

sodium alloys
In-Na-Sb liquid alloys, nuclear quadrupole relax. and thermodynamics 7−85482
K-Na alloy interfaces, adhesive energies, density functional theory anal. 7−92094
Li-Na clusters, atomic distrib., SCF calcs. *(French)* 7−83844

sodium alloys continued
Li-Na liquid alloy, partial structure factors 7−104528
Li_xNa_{n-x}, photoionis. mass spectra 7−68501
Na-Cs, liquid alloys, osmotic pressure, temp. and press. dependence 7−83648
Na-Cs, liquid metal systems, atomic arrangement and electronic struct. 7−83652
Na-Cs liq. alloys., resistivity and thermopower calcs. Faber-Ziman formalism with finite mean free path correction 7−112288
Na-K, liquid-isothermal compressibility, pair pot., direct correl. function 7−76259
Na-K-Cs, viscosity and density 7−143074
Na-Sn liq. alloys., resistivity and thermopower calcs. Faber-Ziman formalism with finite mean free path correction 7−112288
$NaHg_4$, supercond., surface magnetisation 7−125240
NaK, $C(3)^1\Sigma^+$ state, laser-induced fluoresc. and two-photon ionis. spectroscopy 7−129801
NaKCs, glassification temps. 7−143009
NaSn alloys, results of diffuse neutron scattering *(Dutch)* 7−69542
$Rb_{0.60}Na_{6.25}Ga_{20.02}$ synthesis and X-ray diffr. cryst. struct. determ. 7−83854
Sb-Na-K-Cs photocathodes, photoemission characts. under star illum. *(Chinese)* 7−77753

sodium compounds
see also Rochelle salt; sodium alloys
β alumina crysts. and electrolytes, surface comp. and struct., water adsorption and diffusion, conc. profiles studies 7−84463
acetamide-NaCNS eutectic mixture, dielec., relax. spectrosc. 7−99663
alkanoates, lamellar phases, quadrupole coupling const. calc. 7−85478
alkanoates, solid and liq. cryst., struct. parameters 7−111357
asbestos-like silicates, crystn. from forsterite, in NaOH medium 7−106394
betalomonosovite cryst. struct., X-ray diffr. meas. and refinement 7−124205
borohydride treated reaction centres from Rhodobacter spheroides R26, optical spectra, exciton theory appl. 7−114210
crystallisation capacity, liquid-phase separation, Rayleigh and Mandelshtam-Brillouin scatter 7−99875
$Cs_2NaYCl_6:Cr^{3+}$, electron-nuclear interaction of Cr^{3+}, ligand and quadrupole interactions 7−143929
dodecyl sulphate surfactant micelles, decoration of poly(ethylene oxide) semidilute solns., neutron scatt. study 7−83636
dyotropic disodium cromoglycate in water, magnetically aligned, polarised absorption spectra 7−137224
feldspar melts with additives, wetting, viscosity, behaviour during heat treatment 7−98536
halides, carrier for emission spectrochem. anal. detection limit lowering 7−114056
halides, cryst., phase transform., interionic. pot. 7−104980
ion pairs, struct., ab initio MO calcs. 7−109695
limestone double-alkali flue gas desulphurisation process pilot plant tests 7−133162
β-Na_2O-K_2O-Al_2O_3, thermodynamics of mixing 7−76416
$Na_x(NH_3)_y(MoS_2)$, layered intercalation cpds., ^1H NMR obs. 7−112976
NaCl thin single crystals preparation, by anisotropic dissolution 7−113459
$NaMg[Cr(Oxalate)_3].9\ H_2O$, single cryst., paramagnetic anisotropy 7−125305
NASICON, superionic cond. and intermediate structure 7−142743
NASICON ionic cond., microstruct. and water reactivity, comp. and processing parameters depend. 7−118154
natrolite, orthorhombic, diffusion of water mols., NMR obs. 7−112981
natrolite, orthorhombic struct., Peikov anal. 7−112980
octanoate-octane-water system, liq. cryst. phase, nucl. mag. relax. study 7−99599
pentasil zeolites, isomorphous substitution, ^{29}Si MAS NMR spectra 7−135966
salicylate, luminesc., VUV, X-ray and β particle excited, time depend. 7−113262
salt hydrate melts, density, pycnometric meas. 7−91688
sodium borohydride treated reaction centres from Rhodobacter sphaeroides R26, optical spectra, exciton theory appl. 7−114210
stilbite crystals, slow mol. motions and solid echo 7−92550
tourmaline crysts., elastic consts., thermal neutron irrad. effects study 7−117979
zeolite Ca-A, thermally treated, framework defects, NMR spectra study 7−70661
Ag-Na_3AlF_6, positron annihilation study 7−144163
AgCl:NaCl, slip mode transition temp. range shift study 7−118017
$AgNa(NO_2)_2$, temp-depend. of disorder of nitrite ions 7−83862
AlF_3-YF_3-GdF_3-CaF_2-SrF_4-BaF_2-$NaXF_6$, X=P, As, glasses, time-resolved lumin. and decay characts. 7−70878
β/β''-Al_2O_3-K_2O-Na_2O polycrysts. synthesis, sintering and spray drying 7−144351
β-Al_2O_3-Na_2O, cond. mech. 7−137619
β''-Al_2O_3-Na_2O, H_2O and H_3O^+ contaminants influence on ionic cond. 7−143085
β''-Al_2O_3-Na_2O, stabilised with selected ions, microstruct. and ionic cond. 7−143086
β''-Al_2O_3-Na_2O ceramic electrolyte, asymmetric polarisation rel. to comp. and surface treatment 7−92580
β''-Al_2O_3-Na_2O isomorphs, chemical analysis 7−139069
β''-Al_2O_3-Na_2O:Nd^{3+} laser, single pass gain 7−82582
Al_2O_3-Si_2O-Na_2O mixture, F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
$Ba_2NaNb_2O_{15}$-$Pb_2KNb_5O_{15}$ ceramics, struct. and ferroelec. props. 7−99760
$Ba_2NaNb_5O_{12}$ crystals, wavefront reversal 7−141945
$Ba_2NaNb_5O_{12}$:La, anomalous elec. behaviour, 30 to 275°C 7−118951
$Ba_2NaNb_5O_{15}$ crystals, optical effects at phase transitions 7−138401
$Ba_2NaNb_5O_{15}$ crysts., incommensurate phase, optical birefringence temp. depend. study *(Russian)* 7−70740
$Ba_2NaNb_5O_{15}$, disproportionate phase transitions 7−124495
$Ba_2NaNb_5O_{15}$, incommensurate phase, influence of irradiation defects 7−117976
$Ba_2NaNb_5O_{15}$, Lefkowitz precursor investigations 7−125623
$Ba_4Na_2Nb_{10}O_{30}$:La^{3+}(Pr^{3+}), ferroelectric ceramics, modified, dielec. behaviour 7−85520
$Ba_4Na_2Nb_{10}O_{30}$:La^{3+}(Sm^{3+})(Dy^{3+}) ceramics, dielec. and ferroelec. props., effect of rare-earth ions 7−92621

sodium compounds continued
$BaNaP_3O_9.3H_2O$ cryst. struct. and coordination determ. *(French)* 7−83868
$Ba_{1-x}Na_xTi_{1-x}Mg_xO_{3-3x}F_{3x}$ solid soln. ceramics, dielec. and pyroelec. props. study *(French)* 7−125598
CO_2-H_2O-NaCl, phase behaviour meas. 7−111821
$CaMgSi_2O_6$-$NaFeSi_2O_6$-$NaFeGe_2O_6$-$CaMgGe_2O_6$ systems, phase equilibria studies 7−100194
Cs_2NaMBr_6:Sb^{3+}, lumin. of Sb^{3+} ions 7−77638
Cs_2NaRBr_6(R=Dy, Ho, Tm), rare earth bromo-elpasolites, soft rotary mode and structural phase transition 7−142987
Cs_2NaYCl_6:Yb^{3+} crystals, ENDOR studies 7−138347
Cs_2O-Na_2O-Al_2O_3-SiO_2 zeolite, synthesis, cryst. struct., IR spectra, X-ray diffr. anal. 7−98005
CuCl-NaCl photochromic glasses, light-sensitive phases 7−70728
$CuCs_{2.2}Na$ zeolite, electron spin echo envelope modulation simulation 7−106016
Fe_2O_3-TiO_2-Na_2O, X-ray fluorescent Fe $K\beta_5$ spectra 7−106311
$(Fe_2O_3)_x$-$(Na_2O$-$2V_2O_5)_{1-x}$ glass, room temp. Mossbauer study 7−125573
GaAs-NaI, stabilisation of GaAs in acidic conc. iodide electrolyte 7−112484
HCl-NaCl-NaI-H_2O, quaternary diffusion coeffs. determ., diaphragm-cell studies 7−84338
H_2O-NaCl freezing around Al spheres 7−137523
$(K,Na)AlSi_3O_8$ feldspars, (010)[001] dislocation fine struct., TEM, planar defect structural models 7−83960
KCl-NaCl concentrated mixed crysts., ionic cond. temp. depend. meas. 7−76483
KCl-NaI, excess internal press. and intermol. interactions eval. 7−110062
$(KDP)_{1-x}(NaDP)_x$, mixed crystal, ferroelectric transition *(Korean)* 7−143982
K_2NaCrF_6, fluoroelpasoliths, crystal structures *(German)* 7−104696
$K_{0.5}Na_{0.5}NbO_3$, dielectric props., phase transitions, press. effects 7−125629
$K_3Na(SO_4)_2$, ESR of SO_4^- centres 7−85430
$KNa_5(TeO_6)$, cryst. struct. determ. *(German)* 7−98068
$(Li_{0.65}Na_{0.35})_{0.9}Mo_6O_{17}$ single cryst., superconductivity, electron tunnelling study 7−112703
$LiNaSO_4$, lattice dynamics above room temp. studied by IR spectroscopy 7−118043
$LiNaY_2F_8$:Tb^{3+}, luminescence *(French)* 7−106258
Li_2O-Na_2O-B_2O_3, mixed-alkali glasses, complex impedance spectra 7−124590
$Mg(ClO_4)_2$-NaSCN, organic solns., Raman spectra 7−92684
MgF_2:LiF, NaF, colour centre activation 7−124264
MgO-Na_2O-B_2O_3 glass, far-IR investig. 7−76011
MgO-Na_2O-B_2O_3 glasses, mid-IR and Raman investig. 7−77540
$MnNaSi_2O_6$, cryst. struct. refinement, X-ray diffr. study 7−104644
Na complex, cryptand [2.2.2], electronic props. 7−85019
Na complex, Na lasalocid, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
Na complex, Na monensin, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
Na complex, Na^+ with organic ligands, interaction energy, pair pots., ab initio SCF-LCAO-MO calcs. 7−116824
Na halides, struct. phase transition press., calc. 7−131304
Na liq.-β-alumina/$NaAlCl_4$-(Fe,Ni)Cl_2 Zebra battery cell 7−139101
Na vermiculite, intercalation cpds., hydration states, phase transitions 7−137543
Na zeolites, synthetic, ion exchange in nonaqueous NH_3 solns. of alkali metal nitrates 7−71483
Na^+ conducting solid polymer electrolytes, appl. to solid-state storage cells 7−114091
Na-K β- and β''-aluminas, cryst. struct. and electric modulus studies 7−83929
Na-O-H system, phase relations for reactions of H_2 with Na_2O between 500 and 900°C 7−69861
Na-P-O-N glasses, prep., N dissolution kinetics, softening temp., thermal expansion, refractive index, microhardness 7−93016
NaA zeolites, gel growth in presence of triethanolamine 7−70996
$NaAlCl_4$, gaseous, mass spectrometry and standard enthalpy of form. 7−113972
$Na_2Al_2Cl_8$, gaseous, mass spectrometry and standard enthalpy of form. 7−113972
Na_3AlF_6, effects of various ambient-aging processes in chopped and non-chopped optical films 7−85881
Na_3AlF_6/Na_2SO_4 system, phase diagram and ionic conductivity *(German)* 7−111955
Na_3AlF_6-MgF_2 mixture, effects of various ambient-aging processes in chopped and non-chopped optical films 7−85881
$Na(AlGeO_4)$, cryst. struct., X-ray diffr. study 7−104680
$Na_8(Al_6Ge_6O_{24})Ge(OH)_6.2H_2O$, synthetic cancrinite, cryst. struct., X-ray diffr. study 7−104678
$Na_8Al_6Ge_5O_{25}(OH)_2$, hydrosodalite, ferroelastic phase transition and dielec. relax. 7−124484
$NaAlH_4$, evolution of metal-hydrogen bonds, deuteration IR and Raman spectroscopy 7−104622
Na_3AlH_6, evolution of metal-hydrogen bonds, deuteration IR and Raman spectroscopy 7−104622
$NaAl_3(PO_4)_2(OH)_4$, brasilianite, hole centres, GPR 7−106025
$NaAl(SO_4)_2.12D_2O$:CrO_4^{3-}, single crystal, EPR study 7−85426
$NaAlSi_3O_8$, albite, feldspar, kinetics and emission spectra of thermoluminescence 7−106278
$Na_6Al_6Si_6O_{24}$-NaI powder compaction kinetics study 7−86076
$Na_4Al_3Si_3O_{12}X$ (X=Br,I), ceramic, luminesc. and colouration *(Russian)* 7−142774
$Na_4Al_3Si_3O_{12}X$ (X=Br, I), ceramic, elec. props. *(Russian)* 7−143080
$Na_6(AlSiO_4)_6.8D_2O$, cryst. struct., localisation of water, neutron powder diffr. Rietveld profile anal. at 10 K 7−98049
Na_3AuS_2 crystals, prep., cryst. struct. determ. *(German)* 7−98072
$(Na_2B_4O_7)_{80}$-$(Pb_3O_4)_{20-x}$-$(CuO)_x$ glasses, IR spectra, optical absorpt., DSC obs. 7−104568
$Na_2B_4O_7.10H_2O$, NQR lines, intensity 7−143926
$NaBi(MoO_4)_2$, scheelite, luminescence 7−106246
$NaBiS_2$, $NaBiSe_2$, $NaBi_3S_5$, electrophysical and photoelectric props. 7−99052
NaBr, aq. soln., heat capacities, 306-603K, 17.5 MPa 7−98488
NaBr, hyperfine spectrum investig. 7−74554
NaBr, permeability in PMMA stereocomplex membranes 7−113992
NaBr-AgBr, molten mixtures, densities and molar excess vols. 7−91691

sodium compounds continued
$NaBrO_3$, acoustic activity, degeneracy splitting with neutron scatt. 7−104918
$NaBrO_3$, X-ray birefr., forbidden reflections, direct obs. of struct. factor phases 7−137322
NaCN, cohesive and anharmonic props., temp. depend. 7−104627
NaCN, cryst., Raman spectrum 7−70815
Na_2CO_3:$SrCO_3$, ionic cond. and cryst. struct. studies 7−69963
$NaCaMg_2V_3O_{12}$:Cu^+ laser hosts, spectroscopic and laser props. 7−74939
NaCl (100), adsorbed methane, struct, props., IR spectra 7−82113
NaCl (100) single crystal, radiational and thermal annealing of surface 7−137410
NaCl, activity determ. using dual-gate ISFET probe 7−105069
NaCl, adsorpt. of methane on (100) face 7−112080
NaCl aerosols, water droplet growth study in continuous flow diffusion cloud chamber 7−87764
NaCl aq. soln., apparent molar heat capacities study 7−76425
NaCl, aq. soln., sonoluminesc. and subharmonic generation in cavitation zone 7−99947
NaCl, B1-B2 transition pressure at high temp. 7−124491
NaCl, Brillouin scattering set-up using triple-pass tandem Fabry-Perot interferometer 7−108644
NaCl clusters, multiphoton stimulated desorption, magic numbers anal. 7−119559
NaCl, Compton profile anisotropy 7−77679
NaCl crystals, compression, deform. and fracture anal. 7−91697
NaCl crystals, electron-phonon relax., XUV electron emission, computer expt. *(Russian)* 7−142935
NaCl crystals, impact attrition study 7−91708
NaCl, crystals, interstitial impurity ions, polaris. pot. *(Russian)* 7−111593
NaCl crystals, struct. of H interstitials and creation of Frenkel defects *(Russian)* 7−142771
NaCl, DNA salt dependence 7−136105
NaCl, decoration with In_2O_3 and SnO_2 by spraying technique 7−71340
NaCl, defect control by light diffr. effects on US vibrs. *(Russian)* 7−85594
NaCl, dielectric, surface damage and plasma form. thresholds 7−130898
NaCl, dislocation motion in static mag. fields 7−137627
NaCl, enthalpy of soln. in water at 298.15 K 7−84277
NaCl, F-centre ionisation, exciton model of exoelectron emission 7−92843
NaCl film, adsorbed CO, IR spectra and thermodynamic meas. 7−105278
NaCl, Gruneisen parameters, press. dependence 7−76335
NaCl, γ-irrad., comminution of colloidal Na particles during plastic deform. 7−104829
NaCl, γ-irrad., fracture, electron emission 7−76210
NaCl, ionic crystals, influence of UV radiation on crack formation 7−131224
NaCl, laser fragmentation investig. 7−119537
NaCl, laser radiation effect on colour centres 7−69700
NaCl, Madelung constant, symm. bounds, sine and exponential series 7−124160
NaCl, mass transport in tetramethoxysilane gel, conc. and diffusion coeff. meas. 7−144257
NaCl, melt, prep. of $Bi_4Ti_3O_{12}$ 7−92848
NaCl, microcrack nucleation kinetics, light scatt. study, acoustic phonons 7−131222
NaCl microcrystalline powder, colloid formation 7−111552
NaCl, optical crystals, dielectric props. at submillimeter wavelengths 7−132215
NaCl particles, influence of surfactants on droplet growth by water vapour condensation 7−87765
NaCl, photoexcitation, Na K X-ray spectrum, DF calcs. 7−129738
NaCl, refractive index, thermal effects caused by the electron-phonon interaction 7−70736
NaCl, single crysts., dynamic recovery during compression testing at elevated temps. 7−124378
NaCl single crysts., fast edge dislocation charge and polarisation meas. under controlled deform. 7−69708
NaCl, solns., trace impurities anal. using inductively coupled plasma-AES 7−133013
NaCl solution, diffusiophoresis, migration velocity, zeta potential, concentration gradient, electrophoresis, chemiphoresis, hard sphere theory 7−143064
NaCl, struct. props., eqn. of state, linearised augmented plane wave calcs., press. calibration 7−84179
NaCl substrates, nucleation of Au films, model 7−112146
NaCl surface, adsorbed symmetric top mol., self-consistent interaction pot. 7−105246
NaCl, surface charging during fast cleavage, dislocation mechanism 7−131223
NaCl, surface decoration, step nucleation processes 7−119474
NaCl, surface tension determ. using automatic apparatus 7−131391
NaCl surfaces, nucleation and growth of Au films 7−118319
NaCl surfaces, nucleation and growth of Au films 7−118320
NaCl, TLD props. 7−87228
NaCl, three- and four-photon excitation of nonequilibrium carriers in broad-band crystals 7−143517
NaCl, three-photon positron annihilation studies 7−144165
NaCl two-photon spectra, extension to vacuum UV, using synchrotron radiation 7−128679
NaCl, vapour deposited on Ni (111), XPS studies 7−85955
NaCl with adsorbed CO, vibr. CO predesorption induced by resonant IR laser excitation 7−119016
NaCl:Ag, electronic struct of $(Ag^+)_2$ pairs, MSX_α calcs. 7−76816
NaCl:Al(Mg), doped crystals, ionic conductivity 7−84379
NaCl:Cu, excited states, absorpt. bands study 7−119031
NaCl:Cu^+ crysts., low temp. heat capacity, internal stress effects *(Russian)* 7−76429
NaCl:Eu crystals, ageing, precip., photolum., TSC, mech. response 7−69913
NaCl:Eu^{2+}, aggregation processes, fractal and percolative features, time resolved spectra study 7−84757
NaCl:Eu^{2+}, impurity cation-vacancy dipoles, aggregation kinetics 7−137390
NaCl:Ge, ODMR studies 7−138351
NaCl:H, UV-stimulated lattice destruction and defect form. study *(Russian)* 7−69751
NaCl:M^{2+}, M=Mg,Ca,Sr,Ba,Mn,Cd,Pb, ionic cryst., vacancy-impurity complexes, dipole moment calcs. 7−137394
NaCl:Mn^{2+}, mag. transition, Suzuki phase, sp. ht. meas. 7−112823
sodium compounds continued
NaCl:N, impurity centre, photoluminescence studies 7−77642
NaCl:O, O-perturbed F_2^+ colour centre, optical props. 7−106204
NaCl:$OH(F_2^+)_H$ colour centre laser tunable from 1.47 to 1.87 μm 7−130127
NaCl:Pb,Mn^{2+}, Mn^{2+} orange emission, fluoresc. intensity meas. 7−77639
NaCl:Pb^{2+}, luminescence during glassy to crystalline transition 7−106272
NaCl:Sr, 340, 380 K glow peaks 7−138519
NaCl:Sr, optical and mechanical props. 7−104796
NaCl:Sr^{2+}, Eu^{2+}, 407 nm emission band, X-ray diffr. identification of secondary phase 7−85804
NaCl:Tl, excited states, absorpt. bands study 7−119031
NaCl:Tl, impurity states, photoluminesc. study *(Russian)* 7−85838
NaCl:V^{2+}, dipole equilibrium, population distrib., EPR 7−125528
NaCl-$AlCl_3$ melts, oxide behaviour, potentiometric study 7−104515
NaCl-$AlCl_3$ molten mixture molecular dynamics, computer simulation *(Japanese)* 7−130999
NaCl-$CaCl_2$, aq. electrolyte mixture, activity coeffs., mean spherical approx. 7−71519
NaCl-CuCl laser mixture, performance 7−130072
NaCl-H_2O, critical behaviour at 380°C 7−76344
NaCl-HCl, aq. electrolyte mixture, activity coeffs., mean spherical approx. 7−71519
NaCl-KBr mixtures, aq., densities and apparent molar vols. calcs. 7−104883
NaCl-KCl, multicomponent diffusion, solvation effect 7−113940
NaCl-KCl mixed crystals, second order elastic consts. C_{11} and C_{44} meas. 7−124372
NaCl-KCl mixtures, crystallisation driving force, NaCl effects 7−69637
NaCl-methane-H_2O, fluid phase equilibria, to 800 K and 250 MPa 7−124442
NaCl-NaBr and NaCl-NaI cells, thermal conductivity determ. under pressure 7−95585
NaCl-oil-Aerosol-OT systems, phase behavior, surfactants, hydrocarbons 7−144763
NaCl-SiO_2 adhesion, radiation effects 7−111678
NaCl-$SrCl_2$-H_2O, diffusion coefficients, Rayleigh interferometry, molarity ratio, Nernst-Hartley equation 7−143066
Na_4Cl_4, neutral and negative cluster, electron attachment induced cluster isomerization 7−129921
NaCl(F), $NaK_\alpha L^1$ X-ray multiplet struct. study under photon excitation 7−85886
$(NaCl)_x(NaBr)_{1-x}$, thermodynamic props., 840 K, mass spectrometric obs. 7−105075
$NaClO_3$-$NaBrO_3$ mixed crystals, melting temps. 7−124453
$NaClO_4$, aq. soln., ion-pairing and hydration, Raman spectra 7−92682
$NaClO_4$, aq. soln., mol. dynamics simulation 7−69568
$Na(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
NaCl(Tl), cryst., neutron irradiation 7−124339
$NaCrO_2$, standard molar Gibbs free energy form., EMF meas. 7−76438
$NaCrS_2$, core level photoemission and photoelectron diffr., mag. interactions 7−144232
$NaCu_4(AsO_4)_3$, hydrothermal synthesis and cryst. struct. anal. 7−83864
$Na_5Cu_3H(AsO_4)_4$ cryst. struct. determ. 7−83872
$NaCu_2ZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
NaF (001) surface phonon mode folding, He atom inelastic scatt. TOF meas. 7−91957
NaF, CI pot. fn. calc. 7−74465
NaF capillary-discharge plasma, implosion for X-ray laser expts. 7−91372
NaF films, surface phonons 7−143170
NaF flashlamp pumped lasers using F-centre conversion 7−136323
NaF, K continuous absorpt. spectra, cluster description of fine structure 7−70937
NaF, refractive index, thermal effects caused by the electron-phonon interaction 7−70736
NaF, three-photon positron annihilation studies 7−144165
NaF:$Ca^{2+}(Mg^{2+})(Mn^{2+})$ crystals containing F_2^+-like centres, lasing features, absorpt. and luminesc. bands 7−97020
NaF:Cr^+, equilib. Cr^+-F^+ distance determ. 7−84746
NaF:Cu^+, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
NaF:Cu^+, impurity electron states, HF calcs. 7−84740
NaF:Mg, excited F_2^+− and M−centres, lifetime studies 7−106257
NaF-AlF_2 cryolitic melts, Al_4C_3 solubility 7−105037
NaF(Cl), interstitial U_2 centres, UHF MC INDO calcs. 7−137853
NaF(Cl)(Br) dielec. crysts., ultrasonic attenuation temp. depend. calcs. 7−76309
$Na_2(FeCN_5)NO.2H_2O$, H_2O mol. flipping motions, PMR spin-lattice relax. time meas. 7−85472
$Na_2Fe(CN)_5.2H_2O$, Mossbauer γ-quanta, electronic and nucl. reson. scatt. 7−143944
$NaFeF_4$, amorphous mag. insulator, hyperfine and exchange field distribs. 7−113031
$NaFeO_2$-SiO_2, silica-containing ferrite phases, phase equilibria 7−132590
$NaGaGe_3O_8$ melt, struct., analysis, X-ray diffr. 7−124076
Na_xGaSe intercalation, chem. pot. conc. depend. studies 7−137593
NaH, $^1\Sigma$ ground state, Dunham coeffs. determ., far-IR spectrum 7−74591
NaH, binding energy, ab initio effective core pots.-quantum Monte Carlo calcs. 7−116830
$NaHCO_3$ as reservoir species for Na in mesosphere 7−138959
$NaHCO_3$-H_2O, binary and ternary mutual diffusion coeffs. meas. at 25°C 7−76465
$NaHF_2(d_1)$ zero field NQR and low-field NMR 7−90203
$Na_4H_2(H_2(W_3O_{10})_4)$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
$Na^+(H_2O)_n$, (n=1 to 4 and 6), interaction energies, pairwise additivity investig. 7−109698
$NaHe^+$ quasimolecule, $^1\Sigma$ and $^3\Sigma$ states, energies and radial couplings 7−81966
NaI crysts., self-localised excitons, luminescence studies 7−137800
NaI:Tl, crystallophosphors, energy transfer by luminescence centres 7−132345
NaI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
NaI-AgI, molten mixtures, densities and molar excess vols. 7−91691
NaI-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
$NaIO_4$:$^{131}I^-$, thermal and radiation annealing effects study 7−117967
NaI(Tl) FD-71 scintillation radiometer, charcts. *(Chinese)* 7−81876

sodium compounds continued
NaI(Tl) hardened phosphor crysts., surface struct., etching studies 7−98639
NaI(Tl), optical and thermoluminescent props., impurity effects 7−85859
NaI(Tl) scintillation grade crystals, growth, material considerations 7−71000
NaI(Tl) scintillation detector, proton registration efficiency calc. 7−109655
NaI(Tl) scintillation detector, stabilised model testing 7−122310
NaI(Tl), scintillation detector performance for nuclear imaging 7−141401
$Na_3In_2Li_3F_{12}$:Cr garnet, photolum., high press. effects 7−144126
$Na_3In_2P_3O_{12}$, superionic conductor, electrophysical props. 7−98561
Na_xInSe intercalation, chem. pot. conc. depend. studies 7−137593
NaK, long range states, lowest asymptotes, spin-orbit effects, dissoc., perturbative model, matrix methods, wavefunctions 7−144685
$Na_{1-x}K_xCl:Eu^{2+}$ mixed crysts., EPR ionic thermocurrent, optical absorpt. and emission spectra meas. 7−124292
$NaKSO_4$ crystals, fast neutron irrad., elec. cond. 7−111679
Na_2KSb, optical and photoemission spectra 7−85960
$Na_2La_{1-x}Fe_xZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
$Na_2LaMZrP_3O_{12}$ (M=Co,Al,Cr), superionic conductors, synthesis and characts. 7−137611
$NaLaS_2$, IR window material, fused salt synthesis 7−103910
$NaLa(SeO_4)_2.2H_2O$ cryst. struct. determ. 7−124207
$Na_{1-x}Li_xNbO_3$ solid soln., ferroelec. Curie temp., const. elec. field effects study 7−85545
$NaMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
γ-$Na_3M_2(PO_4)_3$ (M=Sc,Fe,Cr), superionics, elec. props. 7−91892
$NaM_2ZrP_3O_{12}$ (M=Ni,Cu), superionic conductors, synthesis and characts. 7−137611
$Na_{1+x}Mg_xAl_{11-x}O_{17}:Nd^{3+}$, optical pair interactions, four wave mixing spectrum 7−136456
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}$, β''-alumina, laser material, single crystal growth 7−86010
$NaMgCl_3$, flux cryst. growth and thermolum. glow curves 7−132354
$NaMgF_3$ crystals, thermoluminescence, kinetics and trapping parameters 7−106277
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}:Cr^{3+}(Rh^{2+})$, beta″-alumina, optical spectroscopy 7−92725
$Na_{0.7}MnO_2$ bronze, defect struct. w.r.t. electrochem. cathode pot., elec. cond., thermoelec. and thermogravimetric meas. 7−119536
$Na_{0.9}Mo_6O_{17}$, purple bronze, struct. determ., rel. to two-dimensional cond. 7−131116
Na_2MoO_4-B_2O_3-KF system, liquidus surface, melting point meas. 7−111832
$Na_xMo_6S_{8-y}I_y$ ($Se_{8-y}I_y$), Chevrel phases, electrochemical, structural and physical props. 7−76090
$NaNH_4SO_4.2H_2O$, dielec. and elastic props. above Curie temp. 7−113063
$NaNO_2$, elec. field on ^{14}N NQR in single domain state 7−92541
$NaNO_2$, ferroelectric, paraelectric transition, surface charge layer effect *(Korean)* 7−143983
$NaNO_2$, matrix isolated, struct., isotope effects, IR spectra 7−82091
$NaNO_2$ modulated dipole lattices, ferroelec. config., electrostatic energy calcs. 7−143974
$NaNO_2$, permutation-inversion symmetry groups, optical props. 7−124212
$NaNO_2$, polycrystalline, ^{14}N NQR obs. via suppression of piezoelec. reson. 7−92540
$NaNO_2$ powder, ^{14}N NQR, particle size and stress depend. studies 7−92542
$NaNO_2$, pure and doped, sensitized luminesc., stationary spectra 7−99934
$NaNO_2$, sensitized lumin., time-resolved studies 7−113279
$NaNO_2$ single crysts., incommensurate phase, gamma irrad.-induced defect effects, sp. ht. meas. 7−117918
$NaNO_2$:KNO_2, sensitized lumin., time-resolved studies 7−113279
$NaNO_3$ cryst. standard for Raman spectroscopy meas. 7−132266
$NaNO_3$, DC cond. and spontaneous polarisation, gamma irrad. effects study 7−92177
$NaNO_3$, melts, and binary mixtures, effective Debye temp. 7−91754
$NaNO_3$, mode Gruneisen parameters and thermal expansion 7−76334
$NaNO_3$, phase transitions and twinning 7−132208
$NaNO_3$-Na_2SO_4, aq. soln., mixing processes, time resolved Raman spectra 7−92689
$NaNO_3$-$NaNO_2$ molten mixtures, Fe corrosion, thermodynamic study 7−71363
$NaNO_3$-$TlNO_3$, molten mixture, internal mobilities, density and elec. cond. meas. 7−91863
$NaNbO_3$, antiferroelectric transition, influence of reduction of Nb ions valency 7−92619
$NaNbO_3$ solid solns., Krainik's classification according to dielectric props. 7−70721
$NaNbO_3$-SiO_2 glass, ultrasonic vel. and attenuation, pulse-echo meas. 7−142916
$NaNbO_3$-SiO_2 glasses, dielec. props. comp., freq. and temp. depend. 7−143952
$Na_xNb_6Se_8$, prep. by molten salt ion exchange and ternary element insertion 7−83819
$NaNb_{1-x}V_xO_3$, effect of ion substitution, on ferroelectric Curie temp. 7−85544
$NaNdP_4O_{12}$, broad tuning range lasers, CW operation at 1.05, 1.32 μm 7−136320
$NaNo_3$ in agar gel, Co^{2+} tracer diffusion coeffs. meas. and calc. 7−98531
$NaNo_3$, molten cpd., sound vel. meas., determ. of high press. thermodynamic props. 7−84321
$NaNo_3$-KNO_3 system, contact fusion in centrifugal force field 7−98399
$NaO+H_2(D_2)(H_2O)(D_2O)$, gas phase reactions, rate consts. study 7−126435
Na_2O-AgO-Al_2O_3 prep. by ion exchange and conductivity charactn., grain boundary and mixed alkali effects 7−84390
Na_2O-Al_2O_3, electron beam irrad., nm scale structure, EELS 7−98258
β-Na_2O-Al_2O_3 composites, introduction of compressive surface stresses into brittle materials 7−100343
Na_2O-Al_2O_3 ionic cond. freq. depend., hopping model calcs. 7−118151
Na_2O-Al_2O_3-B_2O_3-SiO_2 glasses, crack growth and fatigue, influence of dissoln. rate 7−113670
Na_2O-Al_2O_3-SiO_2 glass, electrostriction effects study using uniaxial stress compressometer 7−99724
Na_2O-B_2O_3, crystallisation capacity, liquid-phase separation, Rayleigh and Mandelshtam-Brillouin scatter 7−99875
sodium compounds continued
Na_2O-B_2O_3 glasses, density related to struct., atomic arrangements 7−131050
Na_2O-B_2O_3-Al_2O_3-Ta_2O_5 glass ceramic, heat treatment, sintering, leaching, struct., porosity 7−71141
Na_2O-B_2O_3-SiO_2 glass, electrostriction effects study using uniaxial stress compressometer 7−99724
Na_2O-B_2O_3-SiO_2 glass, phase separation, chemical durability 7−113737
Na_2O-B_2O_3-SiO_2 glasses, phase separation, elec. cond., TEM obs. *(Japanese)* 7−132629
Na_2O-B_2O_3-SiO_2 glass, phase separation, effect of MoO_3 addition *(Japanese)* 7−138749
Na_2O-CaO-B_2O_3-SiO_2 glass fibres containing Al dispersoids, elec. cond. 7−84376
Na_2O-CaO-SiO_2 glass, ion exchange strengthening, stress buildup and relax. 7−71139
Na_2O-CaO-SiO_2 glass, Vickers indentation, four point bending delayed fracture, crack growth charact. *(Japanese)* 7−93086
Na_2O-CaO-SiO_2 glass, stress-induced index change for Na^+-K^+ ion exchange 7−123136
Na_2O-CaO-SiO_2 glass, fracture strength rel. to polyaxial stress states 7−132721
Na_2O-CaO-SiO_2 glass, median crack initiation, appl. of AE technique *(Japanese)* 7−138842
Na_2O-CaO-SiO_2 glass, rectangular bars, crack branching, stress intensity and Johnson-Holloway criterion comparison 7−142225
Na_2O-CaO-SiO_2 glass single-mode channel waveguides, fabrication by two-step diffusion *(Japanese)* 7−110571
Na_2O-CdO-SiO_2 system, opal glass, microstruct. characterisation 7−111415
Na_2O-Fe_2O_3-SiO_2 glass, struct., bonding, coordination number, EXAFS, X-ray diffr. 7−76007
Na_2O-Ga_2O_3-SiO_2 glass, durability in HNO_3 rel. to comp. and struct. 7−93132
Na_2O-GeO_2 glass, struct., X-ray diffr. studies 7−97956
β''-Na_2O-K_2O-Al_2O_3, mixed alkali, elec. conductivity 7−76487
$\beta'(\beta'')$-Na_2O-K_2O-Al_2O_3, mixed-phase aluminas, structural determ. 7−142739
Na_2O-K_2O-Nb_2O_5-SiO_2 glasses, crystn., phase decomp., permittivity and electro-optic effects 7−83710
Na_2O-La_2O_3-Y_2O_3-P_2O_5, glass crystallisation, phase equilibria 7−84263
Na_2O-MO-P_2O_5 glasses (M=Mg, Ca, Sr, Ba), N dissolution in melts, thermal expansion, refractive index 7−93013
Na_2O-MgO-CaO-SiO_2 glass, dissoln. in aq. HF soln. 7−100408
Na_2O-P_2O_5-RuO_2 phosphate glass 7−85421
Na_2O-PbO-B_2O_3 glass, optical absorpt. spectra of VO_2^+ ions, bonding mode of Pb atoms *(Japanese)* 7−70842
Na_2O-Rb_2O-SiO_2, glass-forming melts, cation diffusion 7−69944
Na_2O-SiO glasses, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
Na_2O-SiO_2 amorphous powders from hydrolysis of alkoxides, X-ray fluoresc. spectra, energy shifts 7−92785
Na_2O-SiO_2 glass, colour centres, absorption spectra studies 7−132302
Na_2O-SiO_2 glass, electrostriction effects study using uniaxial stress compressometer 7−99724
Na_2O-SiO_2 glass, pulse irrad., optical absorpt. spectra, electron centres 7−132306
Na_2O-SiO_2 glass, radiation damage and annealing for radwaste 7−103267
Na_2O-SiO_2 glass, struct. mol. dynamics simulation 7−104576
Na_2O-SiO_2 glass against $(NaNO_3)_{0.9}(TlNO_3)_{0.1}$ melt, ion exchange behaviour 7−93302
Na_2O-SiO_2 glasses, ionic diffusion and frequency dependent conductivity 7−76486
Na_2O-SiO_2 vitreous electrolytes, corrosion by molten S 7−144579
Na_2O-SiO_2-Al_2O_3 glass, surface composition, chemical and thermal treatment 7−131406
Na_2O-SiO_2-Al_2O_3:Tl glasses, struct., lumin. studies, optical basicity 7−91460
Na_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
Na_2O-WO_3 system, glass form., neutron diffr. structural study 7−97954
Na_2O-Y_2O_3-GeO_2 system ceramic ionic conductor, prep. by solid state reaction and activation energy meas. 7−84388
$Na_2OAl_2O_3$-Na_2CO_3 solid electrolyte potentiometric CO_2 gas sensors 7−80777
$Na_2O(Fe_{0.5}Al_{0.5})_2O_3$, Mossbauer effect study of spin fluctuation 7−85491
NaOH, aq. soln. and coating, TiO_2: NiO catalyst, photocatalytic decomposition study 7−71523
NaOH, hydrothermal solution, crystn. of asbestos-like silicates from forsterite 7−106394
NaOH production using coupled membrane alkaline fuel cell reactor/membrane electrolysis cell 7−71599
NaOH-CaO glass detector, fission fragment track annealing activation energy models 7−74376
NaOH-H_2O mixtures, chem. equilib. *(French)* 7−119555
NaOH-H_2O systems, thermochem. characts. *(French)* 7−119554
NaOH-NbS_2, intercalated H_2O, NMR spectra 7−106041
NaOH+CO_2, rate coeffs., appl. to upper atmosphere 7−138959
$Na_2O-P_2O_5-B_2O_3$ system liq. mixtures, enthalpy of mixing, calorimetry meas. 7−98480
$NaPO_3$-glass, structural relaxation 7−124509
Na_3PO_4-Na_2SO_4, solid electrolytes, cond., phase diagrams, lattice parameters 7−131359
$Na_x(P_2O_4)_2(WO_3)_{2m}$, phosphate tungsten bronzes, insertion reactions 7−106787
NaSCN, aq. soln. and melts, vibr. and rot., Raman spectra 7−85646
Na_2SO_3, standard enthalpies of soln. in water 7−91816
Na_2SO_4, cryst. struct. at 693 K 7−83861
Na_2SO_4 hideout in heated steam generator crevices, corrosion 7−132824
Na_2SO_4-Cs_2SO_4, phase equilibr. thermodynamics 7−76413
Na_2SO_4-Li_2CO_3 system, elec. cond., comp. depend. studies 7−84384
Na_2SO_4-$M_2(SO_4)_3$ (M=La, Dy, Sm, In) and Na_2SO_4-Na_2WO_4 systems, ionic transport 7−98570
Na_2SO_4-NaCl, corrosion behaviour of Nimonic-75 and Ni-Cr-Al 7−93203
Na_2SO_4-water-decanol-decyl sodium sulphate lyotropic nematic system, viscoelastic props. 7−76255
Na_2SO_4-$Y_2(SO_4)_3$-Al_2O_3 solid electrolyte, electrical, thermal and phase props. studies 7−84381

sodium compounds continued
Na_2SO_4-$ZnSO_4$:Mn glasses, ESR and optical absorpt. of Mn^{2+} ions 7−132128
Na_2SO_4-$ZnSO_4$:Pr(Tm), glasses, spectral studies 7−70849
$Na_2S_2O_3$ electrolyte for electrodeposition of CdS thin film 7−144315
$Na_2S_2O_5$, standard enthalpies of soln. in water 7−91816
Na_3Sb, chemoepitaxy, reactive diffusion product 7−98732
Na_3Sb thin absorbing films, optical method for heterogeneity analysis 7−113298
$Na_3Sc_2(PO_4)_3$, relaxation dispersion, freq. relations, temp. depend. 7−99647
$Na_6Si_6Al_6O_{24}$-NaCl, NMR chem. shift determ. 7−77415
Na_2SiF_6, cryst. struct., pseudotrigonal polar phases in double hexafluorides 7−69686
$Na_2Si_4O_9$ glass, speciation and local structure, ^{29}Si NMR spectroscopy 7−83714
$Na_2SiO_2(OD)_27D_2O$, location and anisotropic refinement of D atoms, H bonding, thermal stability, neutron diffr. study 7−111460
Na_4TeO_5, cryst. struct. determ. *(German)* 7−98067
Na_2TiF_6, cryst. struct., pseudotrigonal polar phases in double hexafluorides 7−69686
Na_4TiO_4, Na_2TiO_3, $Na_8Ti_5O_{14}$, $Na_2Ti_3O_7$ and $Na_2Ti_6O_{13}$, stoichiometry and Raman spectra of titanates 7−91830
$NaTi_2(PO_4)_3$, NASICON-type phase, intercalation electrode 7−106804
$Na_4TiP_2O_9$, superionic conductor, phase transition 7−69968
Na_4UO_5 single crysts., struct. determ. coordination number calcs. *(German)* 7−124223
$NaVO_3$, solid-state battery formation with KVO_3 7−86773
NaV_6O_{11}, synthesis, cryst. struct. determ. *(French)* 7−83900
$Na_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
$Na_4V_2O_7.H_2O$, cryst. struct., X-ray diffr. study *(German)* 7−111463
$Na_3VO_4.3H_2O$, cryst. struct., X-ray diffr. study *(German)* 7−111465
$NaWO_3$, electronic band struct., self-consistent semirelativistic LMTO calcs. 7−105400
Na_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
$Na_5W_{3-x}Ti_xO_{9-2x}F_{5+2x}$, crystallographic, thermal and dielectric meas. *(French)* 7−92618
$Na_{0.5-x}Y_{0.5+x}F_{2+2x}$, solid solution, elec. props., excess F *(French)* 7−131358
$Na_{5+x}YAl_xSi_{4-x}O_{12}$ ceramics, cond., struct., density 7−76480
$NaYF_4$ thin film MIM structs., dielec. props. temp., freq. and film thickness depend. 7−138384
$Na_2Y(MoO_4)(PO_4)$, cryst. struct., X-ray diffr. study *(French)* 7−104648
$Na_{3+3x-y}Y_{1-x}Si_{3-y}P_yO_9$, ionic cond. props. 7−111943
$Na_{1-x}Zr_2P_{3-x}Si_xO_{12}$, high temp. cryst. chemistry 7−137341
$Na_{1+x}Zr_2Si_xP_{3-x}O_{12}$:MgO(CaO) NASICON superionic ceramics, chem. comp. and phase homogeneity, sintering conditions effects 7−119191
$Na_3Zr_2Si_2PO_{12}$, Nasicon, crystal structure 7−104684
$Na_3Zr_2Si_2PO_{12}/Na_2Zr_4Si_{16}P_8O_{61}$, NASICON/glass composite ceramics, conductivity and microstruct. *(French)* 7−131361
$Na_3Zr_2Si_2PO_{12}$-Na_2CO_3 solid electrolyte CO-CO_2-O_2 conc. cell, EMF and elec. cond. meas., partial press. depend. 7−86641
$Na_3Zr_2Si_2PO_{12}$-$NaCO_3$ solid electrolyte potentiometric CO_2 gas sensors 7−80777
$Na_8[AlSiO_4]_6(OH)_2$, H dynamics, inelastic and quasielastic neutron scatt. 7−136078
P_2O_5-BaO-ZnO-Na_2O-$Na_2U_2O_7$ VG-13 glass, high resolution nuclear-track-recording detector 7−74375
$(Pb_{1-x}Ba_x)_2NaNb_5O_{15}$ ceramic, piezoelectric props., press. along polarisation direction 7−113082
$(Pb_{1-x}Ba_x)_{2.5-y}Na_{2y}Nb_5O_{15}$, ceramic, piezoelectric props., in morphotropic region 7−106088
$Pb_{1-x}(NaBi)_{x/2}Bi_4Ti_4O_{15}$ grain-oriented ceramics, piezoelec. props. 7−99705
$(Pb_{1-x}Sr_x)_2NaNb_5O_{15}$ ceramic, piezoelectric props. 7−113083
(Rb, Cs)Na_2KSb photocathode with improved photosensitivity and green-red response *(Chinese)* 7−77748
Rb_2NaFeF_6 ($KFeF_6$), fluoroelpasoliths, crystal structures *(German)* 7−104696
Si_2O_5-Na, vermiculite, Raman spectra study 7−85700
$Sr_2NaNb_5O_{15}$-$Pb_2KNb_5O_{15}$($PbNb_2O_6$) ceramics, struct. and ferroelec. props. 7−99760
$Te(OH)_6$-Na_2SO_4, vibr. IR and Raman spectra 7−113172
ThF_4-ZnF_2-YF_3-BaF_2-ZrF_4-NaF-LiF-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
TiO_2-Nb_2O_5-B_2O_3-Na_2O-SiO_2 glass for nonlinear optical waveguides, synthesis and charactn. 7−136469
ZnO-Na_2O-B_2O_3-SiO_2:$CdSe_xS_{1-x}$, quantum confinement effects of impurity microcrysts., optical props. study 7−106224
ZrF_4-BaF_2-NaF-LaF_3-AlF_3 glass, rubber state, appl. to polymer rheology 7−83073
ZrO_2-Na_2O-SiO_2 glass ceramic, phase transform. depth profiles, synchrotron radiation X-ray diffr. 7−93009

sodium potassium tartrate tetrahydrate *see Rochelle salt*

sofar *see sonar*

soft modes
see also displacive transformations; lattice phonons
alkylammonium derivatives, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
anisotropic systems, structural phase transitions, soft modes 7−142942
anthracene-TCNB charge transfer crystals, phase transition, lattice dynamical approach 7−111806
benzil, phase transition and order parameter 7−142999
betaine calcichloride, incommensurate ferroelec., soft modes 7−85550
binary alloys, monocrystal elastic const. estimation, phonon softening 7−111734
bounded ferroelastics, instability of longitudinal acoustic phonons 7−137503
t-butyl cyanide, disordered phase, cooperative dynamics 7−142940
p-chlorobenzamide, order-disorder phase transition, IR and Raman studies 7−142685
disordered system, noninteracting electron diffusion, weak magnetic field effects, soft modes 7−137861
displacive ferroelectrics, Curie-Weiss dielec. suspectibility 7−99754
doped displacive ferroelectrics, soft mode frequency in external electric field 7−99752
early soft mode history, personal view 7−120750
ferroelectric cpds., dynamical properties, polarisability model calcs. 7−85548
ferroelectric displacive crystal, anharmonic, doped, elec. field depend. of specific heat in paraelectric phase 7−98491
ferroelectric liq. crystal mixture, smectic A−smectic C* phase transition, Goldstone mode and soft mode, dielectric relax. 7−84260
ferroelectrics, doped, displacive, electric field depend. of neutron inelastic scatt. cross-section 7−70712
ferroelectrics, ultrasonic study of incommensurate transitions 7−125628
ferroelectrics, vibronic structural phase transitions, mag. field-induced effects 7−104950
ferroelectrics and superconductors, phonon anomalies and soft modes, band struct. anal. 7−111808
high T_c supercond., phonon freq. changes and spin density waves 7−125232
history, ferroelectricity, soft mode concept 7−120753
hyper-Raman scattering by vibrational excitations in crystals, glasses and liquids 7−106177
incommensurate phase, 2D model phase diagram, mol. dynamics simulation 7−118055
lithium thallium tartrate, thermally unstable mode, submillimetre spectrum 7−77472
metals and alloys, BCC VI B, anomalous self-diffusion and mode softening 7−98557
noncodimensional phases, defect-induced ferroelastic and ferroelec. props. 7−125626
paraelectric soft modes, dielectric spectroscopy 7−124421
α-quartz, vibr. modes, high press. Raman scatt. study 7−111811
Rochelle salt, dielectric susceptibility and soft mode parameters, temp. dependence 7−85552
Rochelle salt-ammonium Rochelle salt mixtures, Raman spectra, phase transition mechanisms 7−106172
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
sp-bonded solids, structural props., cryst. stability, semiempirical tight-binding method 7−124489
tungsten bronze ferroelectrics, dielectric responses, rotational mode 7−125633
virtual domain walls and kinks, dynamics, 1D ϕ^4 scalar model 7−137502
weakly polar ferroelec., dielectric props., soft modes 7−143986
$AlPO_4$, vibr. modes, high press. Raman scatt. study 7−111811
β-(BEDT-TTF)$_2$X crystals, (X=I_3IAuI), electron-phonon coupling and supercond. gap 7−131926
$Ba_2NaNb_5O_{15}$, Lefkowitz precursor investigations 7−125623
$BaTiO_3$ crystalline powders, inelastic low freq. opalescence near struct. phase transitions 7−132291
$BaTiO_3$, hexagonal crysts., structural and ferroelec. transitions, soft phonon modes, Raman scatt. study 7−77544
$BaTiO_3$, lattice dynamics, ferroelectricity and Raman spectrum in cubic phase 7−119001
$Bi_4Ti_3O_{12}$, Raman-active modes, pressure depend. 7−77549
$BiVO_4$ ferroelastic, soft acoustic mode anisotropy 7−124422
CdHg, soft modes and body centred tetragonal-HCP transition, frozen photon calc. 7−104995
$Cd_2Nb_2O_7$, Raman soft mode damping, thermal hysteresis of dielectric const. 7−125589
$(Cd_{0.83}Pb_{0.17})_2Nb_2O_7$, ferroelec. transition, dielectric and electrothermal measurements 7−125638
CdS, superconductivity and soft modes, e-p coupling and mag. props., variational calcs. 7−143690
Ce monopnictides, LF mag. excitations 7−77268
$CeCu_6$, electron-phonon coupling, magnetoelastic and Gruneisen parameter effects, softening of c_{11} and c_{33}-modes 7−70617
$CeCu_6$, Kondo cpd., elastic props. 7−69801
CsH_2PO_4 H-bonded ferroelec., hyper-Raman spectra, central mode 7−106181
Cs_2NaRBr_6(R=Dy, Ho, Tm), rare earth bromo-elpasolites, soft rotary mode and structural phase transition 7−142987
CuCl, photoactivated defect-induced dielec. anomalies 7−113073
$DyKMo_2O_8$, cooperative Jahn-Teller effect, antiferrodistortive structural phase transition, Raman and IR spectra 7−118444
$DyKMo_2O_8$, cooperative Jahn-Teller system, antiferrodistortive structural phase transition, mag. field depend. 7−118445
GaSb, semiconductor-metal transition, elastic props. under high press. 7−111781
GaSe, lattice dynamics, photoelasticity, Raman scatt., optical suscept., high press. studies 7−98364
$Ge_{1-x}Sn_xSe_2$ glasses, phase separation 7−83724
Hg, soft modes and body centred tetragonal-HCP transition, frozen photon calc. 7−104995
Hg_2Cl_2 ferroelastic, soft acoustic mode anisotropy 7−124422
$K_3Co(CN)_6$, 20r polytype, incommensurate struct., NQR linewidth, low temp. 7−70669
$K_3Co(CN)_6$, crysts., press.-induced phase transition, Raman scatt. obs. 7−84237
KD_2PO_4-type ferroelectrics, Debye relaxation time 7−138388
KH_2PO_4, ferroelec. phase transition mechanism, soft mode, Raman spectra 7−111810
KH_2PO_4, press. depend. of static and dynamic props., KDP and related crystals 7−99747
KH_2PO_4, sp. ht. props. near transition temp. and at low temps. 7−99746
KH_2PO_4, structural studies of KDP and isomorphs, transition, neutron and X-ray diffr. 7−99744
KH_2PO_4-type 7−138388
KH_2PO_4-type crystals, US expts., review 7−111778
KH_2PO_4-type crystals, mag. reson. studies, review 7−112927
KH_2PO_4-type crystals, ferroelec., vibr. modes, IR spectra, review 7−113170
$KMnF_3$, R-point instability, Crit. exponents 7−142985
KNO_3, central component in Raman spectrum 7−119002
$K_{0.5}Na_{0.5}NbO_3$, dielectric props., phase transitions, press. effects 7−125629
$KNbO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
$KTa_{0.68}Nb_{0.32}O_3$, dielectric props., phase transitions, press. effects 7−125629
$KTaO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
$KTaO_3$:Na, soft modes and pyroelectricity, Raman scatt. spectra meas. 7−125749
$KTiOPO_4$, high press. Raman study, press. induced phase transitions 7−92674

soft modes continued
La-Ba-Cu-O compounds, high T_c supercond., electronic struct. and electron-phonon coupling 7−99306
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., wide temp. instability, US absorpt., vel. meas., possible glassy state 7−112671
$La_{2-x}Ba_xCuO_4$, electronically driven instabilities, superconductivity, using La_2CuO_4 results 7−77133
$La_{2-x}Ba_xCuO_4$, lattice instability, high T_c supercond., elec. resist., mag. susceptibility meas. 7−77131
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., sp. ht., resist. and diamag. susceptibility 7−99331
$La_{2-x}Sr_x(Ba_x)CuO_4$, quasi-2D supercond., Fermi surface, van Hove saddle point singularity 7−92052
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR spectra and vibr. props. 7−92668
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Young's modulus, internal friction studies 7−105822
$La_{2-x}Sr_xCuO_4$, soft-phonon behaviour, hopping conduction 7−137546
$(La_{1.85}Sr_{0.15})Cu_{0.95}Sn_{0.05}O_4$, perovskite supercond., phonon and electron anomalies 7−92350
$Li_2Ge_7O_{15}$, ferroelec., struct. phase transition, neutron diffraction study 7−124486
$Li_2Ge_7O_{15}$, ferroelectric phase transition 7−132210
$LiMO_3$ (M=Ta,Nb), dielectric props., phase transitions, press. effects 7−125629
$LiNbO_3$, phase diagram under anisotropic compression, ESR studies 7−137519
$LiTaO_3$, phase diagram under anisotropic compression, ESR studies 7−137519
$Mg_3Zn_3Al_2$, icosahedral supercond., sp. ht. meas. 7−112663
NH_4AlF_4, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
Na-DNA, lowest optic modes, softening 7−71693
$(NbSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7−85701
$(NbSe_4)_xI$, liner chain cpd., phase transitions, Raman scatt. studies 7−99869
$PbDPO_4$, lattice dynamics of the ferroelectric transition, comparison with $PbHPO_4$ 7−85546
$PbHPO_4$, lattice dynamics of para-electric phase, Raman spectrum meas. 7−131252
$PbHPO_4$, ferroelec. transition, lattice dynamics, Raman spectrum 7−111807
$Pb_3(PO_4)_2$ ferroelastic, soft acoustic mode anisotropy 7−124422
$RbAlF_4$, displacive transform., monochromatic Laue X-ray scatt. obs. 7−84234
$RbAlF_4$, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
$RbCaF_3$, crit. fluctuations, high resolution X-ray scatt. study 7−142988
RbD_2PO_4 crysts., microwave dielec. dispersion near ferroelec. transition 7−125586
$Rb_{0.22}(ND_4)_{0.78}D_2PO_4$, paraelec.-antiferroelec. transition, ^{87}Rb NMR studies 7−125637
$(Sn_xPb_{1-x})_2P_2(S_ySe_{1-y})_6$ ferroelectrics, soft phonon spectrum, phase diagram, Raman spectra study 7−132261
SnTe, ferroelectric props., shell-model study using renormalised harmonic approximation 7−84153
$(TaSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7−85701
TeO_2, elastic props., temp. depend. 7−131208
$ThCl_4:U^{4+}$, incommensurate struct., obs. by optical spectroscopy, U^{4+} probe 7−85783
TiO_2, charge density, anharmonicity, incipient ferroelec. transition, X-ray and γ-ray diffr. 7−111458
U_6Fe, supercond. transition, ^{57}Fe Mossbauer studies 7−92554
UPt_3 heavy fermion system, high field elastic const. meas. 7−69802
W (001), surface phonon instabilities and electronic surface states 7−84478
W (100), reconstruction soft surface phonon mode, He scatt. study 7−112042
Y-Ba-Cu-O high T_c supercond., space groups, convergent beam electron diffr. studies 7−117900
YBaCu(Nb)O high T_c superconds., lattice instability, ultrasonic meas. 7−138132
$YBa_2Cu_3O_y$, high T_c supercond., Raman spectrum temp. depend. 7−119010

softening (metallurgical)
celluloid tube, softened, creep deform. under nonproportional variable stresses 7−75326
creep, primary, kinetic eqns. with account of softening, model 7−113637
displacement prescribed loading, 1D softening with localisation 7−86230
ferritic alloys, irrad., dimensional stability, strength, toughness, fusion reactor appl. 7−103170
high-temperature strength materials, aggressive media pressure influence on softening, test unit 7−113832
Invar, thermal expansion and mech. props., effects of P and S 7−113626
metals, FCC, plane strain deform., texture softening and strain instability 7−144427
plate, infinite, thermo-plastic stability 7−83076
room and elevated temp. mech. behaviour, additions influence 7−100243
steel, austenitic stainless, strain hardening and softening, discrete memory description 7−78052
steel, Cr-Mo-V, fatigue life, effect of creep damage 7−144554
steel, Cr-Mo-V, high temp. creep as relax. processes 7−93067
steel, ferritic, cleavage rel. to substitutional alloys 7−119326
steel, ferritic, directional strain softening 7−78040
steel, ferritic stainless, creep, microstructural changes 7−100317
steel, low C, cyclic softening and cyclic creep mechanisms 7−144533
steel, maraging, W-bearing, Co-free, low cycle fatigue behaviour 7−86335
steel, medium C, continuous cooling transform., austenite deform. effect 7−138802
steel, static softening meas. by cold working props. 7−100246
steel, welded joints, dissimilar metal, prediction of low cycle fatigue life at elevated temps. *(Japanese)* 7−100351
steel sheet, flow behaviour, effects of cold rolling 7−132671
Udimet 500, Ni-based superalloy, low cycle fatigue, strain rate effects and assoc. deform. mode 7−144534
AgMgSi, proton irrad., microstructure, mech. props. 7−69780
Al, iteratively cold-worked, effects of stress-aided static recovery 7−86210

softening (metallurgical) continued
Al-Cu, superplastic eutectic alloy, strain sensitive flow, contrib. of concurrent grain growth 7−86286
Al-Cu-Mg, 2024, high temp. flow behaviour, charactn. and modelling 7−78122
Al-Cu-Si, 2014, commercial, rapid quenching 7−86201
Al-Fe-Mn, microplastic surface deform. 7−78094
Al-Fe-Si, commercial, high temp. deform. 7−78124
Al-Mg sheet, thermal and strain rate softening during necking and shear band form. 7−126193
AlMg, proton irrad., microstructure, mech. props. 7−69780
Cd, flow stress under hydrostatic press., effect of grain size *(Japanese)* 7−106583
Cu, deformed by shock waves, recrystn. 7−132637
Cu, iteratively cold-worked, effects of stress-aided static recovery 7−86210
Cu, polycrystalline, cyclic loading, transient response to strain rate changes 7−144484
Cu, static recrystallisation after hot working, stress-free or stress relaxation conditions, microscopic determ. 7−132635
Cu-Al single crystals, strain softening and plastic flow instability 7−78097
Cu-Ni-Fe, torsional fatigue behaviour, influence of environment 7−93089
Fe, H induced softening and hardening mechanism 7−78039
Fe-Cr-Mo, neutron irrad., dislocation struct. rel. to irrad. softening 7−69774
$Fe_{79}B_{16}Si_5$, amorphous alloy. phys. props. and struct., effect of cold rolling 7−144437
GaAs:Cu, crystal softening due to deep Cu Jahn-Teller centres 7−76263
Nb, neutron irrad., mech. props. *(Japanese)* 7−93060
Nb-V, neutron irrad., mech. props. *(Japanese)* 7−93060
Ni, flow stress, effects of cathodically charged H 7−78095
Ni-base superalloy compacts, coarse-grained, modelling of plastic flow under isothermal forging 7−113609
Ni-C, flow stress, effects of cathodically charged H 7−78095
Ni-Fe-Cr-Mo superalloy, strain hardening and softening, discrete memory description 7−78052
NiAl, Ni_3Al, plasticity anomaly 7−100284
Ti-Al-V (6,4 wt.%), superplastic, post-forming tensile props. 7−100302
Ti-Al-V-Mo, hot rolled, annealing induced texture, softening *(Russian)* 7−113565

software (computers) *see computer software*

software development *see software engineering*

software engineering
see also software portability
ACP multiprocessor system, software development 7−135814
ALEPH, software development using structured techniques 7−135807
D0 software development, use of structured analysis/structured design methods 7−135808
FASTBUS, standard routine specification, status 7−68172

software packages
ANA program package for dynamical simulation 7−67010
astronomy packages for Apple Macintosh 7−120746
BALANCE−a computer program for the handling and supervision of analytical standards 7−121082
Bose Modeler CAD system for architectural acoustics design 7−136645
CAD of thin film optical coatings, versatile software package 7−103934
cardiovascular interactions−a simulation package to help learning 7−126865
charged particles in EM fields, software package dealing with particle motion 7−88774
COMO, optical design program 7−110517
copyright, 1987 ICCE policy statement 7−88770
crystallography, STRUCTURE TIDY computer program for data standardisation 7−83582
dBASE II for construction of Cobalt-59 nuclear magnetic resonance spectra *(Japanese)* 7−143919
Discovery Lab educational software package for Apple II series 7−88771
educational software for physics teaching, buyer's guide 7−88798
electron microscope image simulation and electron diffr. anal., EMS software package 7−67297
Enzyme Investigations, CAI/simulation package for Apple II series 7−115716
GUARDIAN, IBM PC software for nuclear plant scram reduction 7−135409
IMAGE interactive computer program for mol. struct. visualisation 7−97849
inset motion, on-line analysis with microcomputer 7−87401
ionic transport studies of solid electrolytes using microcomputer controlled instrumentation 7−137618
lattice dynamics calcs., UNISOFT program package appls. 7−84152
LEGO, modular, PWR power plant modelling appl. 7−67893
logic software for physics class 7−88796
Manda-Lab, compact multiprocessor system for heavy ion physics detector tests 7−68179
MISSYM program for space group symmetry determ. 7−98024
Molecular Editor, 3D shape manipulation package for Apple Macintosh 7−136090
MuMATH computer algebra system for 1st order kinetic eqns. 7−132909
neutron time-of-flight powder diffr., IPNS Reitveld anal. software package 7−69546
Pathfinder: a microcomputer experience in interpreting graphs 7−88788
PERTURB, algebraic manipulation program for classical perturbation theory 7−128330
quantum chemical software package for molecular properties calcs. 7−141419
RETACT code validation for LWR simulation 7−135418
science classes, problem solving software 7−120745
SICAD cartographic software for forest damage data processing 7−71659
SIMIPS: secondary ion mass image processing system 7−95672
tool software for use by high school physics teacher 7−88794

software portability
cross-variograms, 2D experimental, calc. by FORTRAN 77 program 7−145676

software prototyping *see software engineering; systems analysis*

software reliability
see also fault tolerant computing
breeder reactor safety systems using fault tolerant computers, software anal. and modelling 7−74017

software selection
Educational Software Evaluation Consortium, most important criteria used 7−88766
science computer software, inquiry characteristics assessment inventory 7−108117

software testing *see program testing*

sogicons *see semiconductor devices*

soil
1986 International Geoscience and Remote Sensing Symposium, conf., Zurich, Switzerland (1986 September) 7−95093
ADINA and nonlinear FEA, conf. Cambridge, MA, USA, (June 1987) 7−101995
aerosols in atmosphere, optical props. in IR region *(Russian)* 7−79586
atmosphere aerosols, morphology and size distrib. of particles deposited on foliage and inert surfaces 7−101387
Biosphere-Atmosphere Transfer Scheme, sensitivity to soil characts. 7−120118
blast wave, cylindrical propag., asymm. problem 7−101221
Brittany, France, soil organisation mapping by remote sensing obs. 7−101598
carbonaceous particles from fossil fuel combustion, distrib. in Swedish forest soils 7−93553
cations mobility, pH and Cl^- conc. effects study 7−108105
Chernobyl accident, Hungarian population irradiation and pollution *(Hungarian)* 7−126662
China Loess Plateau, palaeosol complex S_5 as record of Late Pleistocene climatic optimum 7−139647
Cretaceous-Tertiary boundary impacts, soil weathering effects 7−127455
degradation evaluation, use of digital image processing 7−107585
degradation in arid region (Nile Valley) 7−107415
downward water infiltration, Richards' eqn. quasi-soln. 7−120061
erodibility of loamy soils, determ. via appl. of small flumes 7−87721
erosion by raindrop impact, mathematical model and experimental study 7−127303
erosion risk in tropical rain forest, meas. in Kalimantan Timur (Indonesian Borneo) 7−87647
Fielding Geosol of Bonneville Basin, Utah, relation to shallow Early/Middle Wisconsin-ge lake 7−127300
filtering rocks, freezing, ice-barrier dynamics 7−101279
forest decline attributable to acidic deposition and other conditions 7−106939
freezing, probability and effects 7−87738
French Guiana, soil organisation mapping by remote sensing obs. 7−101598
frost heave model, role of coupled heat and moisture transport *(Japanese)* 7−107445
frost heaving, segregation pot. concept *(Japanese)* 7−107446
frozen soil, effects of temp. on water transport 7−94312
generic assessments of plant/soil radioisotope concentration ratios 7−101097
gravity drainage analysis for scale heterogeneous porous materials under falling water table conditions 7−120062
groundwater in irrigated soil layer, impermeable inclusion effect 7−69260
Haryana State, India, soil hazards remote sensing and mapping 7−107417
heat balance of soil surface 7−72189
heat eqn. and thermal diffusivity in dynamical temp. field *(Japanese)* 7−142155
house basement, infiltration of pollutants due to soil gas migration 7−119695
hydraulic parameter prediction using soil texture data 7−79481
hydraulic properties, discrimination by combined thermal IR and microwave remote sensing 7−107453
hysteretic hydraulic props., closed-form expressions 7−72123
INAA, homogeneity test *(Chinese)* 7−114039
irrigated soil, impermeable layer underlay, systematic drainage study 7−145532
Johnston Atoll, transuranium-element-contaminated soil cleanup 7−106943
Kashmir Basin, India, palaeopedology and chronostratigraphy rel. to Pleistocene climatic changes and landscape evolution 7−87637
Kocaeli Peninsula, Turkey, soil conservation methods 7−107416
landfill site, model for pollutant transport into soil deep layer 7−86842
Limousin, France, soil identification, use of thermal airborne remote sensing 7−107584
liquefaction due to seismic waves, theory 7−119948
loess deposits in Kashmir Valley, India, thermoluminescence dating study 7−94133
loess soils, subsidence and erosion processes 7−139650
loess-like red-yellow soil of SW coastal Korea, comparison with loess of China and Japan 7−139653
loess-like silt in N Yakutia, USSR, mineralogy and origin 7−139646
loess-mantled slopes stabilisation, effects of lithology, time, and exposure direction 7−139611
loess-palaeosol sequences in Hungary, stratigraphy and chronology 7−139649
lysimeters with monolithic soil column, low-press. principle *(German)* 7−101552
Main, USA, forest floor debris and soil trace metal contents 7−133139
mechanical behaviour during cutting 7−91042
microwave brightness temperature model for rough surfaces, for remote sensing 7−72174
microwave emission, effects of salinity of soil moisture 7−107452
microwave emission, parameterisation of effect of surface roughness 7−127218
microwave emissivity depend. on salinity and moisture 7−79660
microwave scatter and emission props. rel. to dielectric and surface parameters 7−101304
microwave scattering properties of heterogeneous two-component mixtures, appl. to soil and snow water inclusions 7−96932
moisture, irregular surface model for microwave remote sensing 7−101563
moisture and surface heat flux 7−87739
moisture content, by theory of averaging fields 7−120057
moisture content, influence on ratio of horizontally to vertically polarised components of atmospherics 7−127338
moisture content in Sacramento Basin, water balance model development for climate impact assessment 7−145566
moisture deficits in Great Britain, 1961-86, appl. of MORECS climatological data set 7−127296

soil continued
moisture estimation from diurnal surface temp. obs. 7−107455
moisture estimation using GOES-VISSR data 7−133987
moisture reserves in soil, cosmic ray neutron attenuation meas. 7−87740
moisture sensing, effect of meas. error and confusion from vegetation on passive microwave estimates 7−107454
moisture transport interaction with atm. boundary layer devel. 7−101376
E Mojave Desert, California, influence of Late Quaternary climatic changes on geomorphic and pedogenic processes 7−87652
S-central Montana, climatic implications of alternating clay and carbonate form. in semiarid soils 7−127459
Nagano-Honcho area, Akita City, Japan, soil characts. during 1983 May 26 earthquake 7−139613
natural soil materials, carbonate sorption capacity during groundwater flow 7−101356
Nigerian savanna soils classification, appl. of reflectance characts. of surface cover 7−79404
nonlinear viscoelastic model 7−79380
Norway, fall-out pattern after Chernobyl accident estimated from soil samples, ^{134}Cs and ^{137}Cs meas. 7−106942
Perisaharan loess, sedimentological characterisation and palaeoclimatic significance 7−139651
pH measurement as introduction to quantitative anal. 7−108104
physical properties effect on surface temp. meas. 7−107414
Puget glacial lobe, rapid soft bed sliding 7−145548
Pugu Sandstone, Tanzania, fluvio-deltaic environment and in situ pedogenesis of Middle Miocene kaolinitic sandstones 7−87634
pumping fluid from point sink in isotropic elastic half-space with anisotropic permeability 7−94325
Quebec, Canada, glacial till, trace elements, lognormal distrib., neutron activation anal. determ. 7−119982
radiant temperatures of sparse plant canopies and soil, meas. via IR thermometry 7−127506
radioisotope activity concs. and temporal vars. in surface air, soil activity contrib. 7−145631
radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
remote sensing of regional soil types 7−101598
response to earthquake, dynamic characts. 7−127217
rock and geophysical materials, mechanical properties determination using soil analogues in laboratory expts. 7−94203
Salt Lake City UMTRA Project, geotechnical and construction considerations 7−96372
samples selection, regional-representative selection for environmental specimen bank 7−139612
seepage theory, nonlinear programming analysis of unconfined steady-state seepage 7−120044
seismic liquefaction behaviour, due to earthquake excitation 7−119954
seismic nonlinearity, for soft soil subject to strong forces from plate of vibrator 7−119957
seismic waves in three-component granular media, averaged eqns. of movements 7−119958
smelter waste tip metal pollution, wind dispersal and soil conc. 7−119699
snow cover, transport of soluble solids to and from the soil 7−107447
soil, freezing, heat and moisture transfer, self-simulating problem 7−145531
spherical wave propagation in nonlinearly compressible elastoplastic materials 7−107365
steady flow in partially saturated porous media, multigrid model 7−127305
stratified soils, transient unsaturated flow, hydraulic conductivities 7−72121
stratified soils, transient unsaturated flow, moisture content 7−72120
strong seismic motion, identification of nonuniform grounded by discrete wave number method 7−94116
subglacial sediment deform., rheology and geological consequences 7−145472
subglacial till, properties and processes 7−145471
surface soil moisture, temporal obs. using passive microwave sensor 7−101352
terrestrial γ radiation, natural background meas., 1981 to 1983, Taiwan 7−133680
thermal diffusivity, water content effect 7−114134
thermal inertia and fluxes remote sensing 7−107413
thermal model for remote sensing application 7−79331
underground channels in thawing soil, nonsteady state heat exchange 7−87736
underground pipes, freezing over dynamics 7−145530
unsaturated flow, large-scale transient systems, stochastic modelling 7−72119
unsaturated flow and transport modelling, review 7−114839
unsaturated flow in centrifuge, hydraulic conductivity meas. and Darcy's law text 7−72125
upland soil erosion model, derivation from basic principles 7−87722
USA Great Plains, evapotranspiration model, soil moisture, runoff 7−127298
central USA Great Plains, soil moisture, evapotranspiration and runoff model 7−127297
Uzbekistan loess, genesis and distrib. 7−139648
Wales, smelter waste tip metal pollution, wind dispersal and soil conc. 7−119699
water balance calculation, WTRBLN computer program 7−101347
water content remote sensing, satellite system for monitoring temporal and spatial behaviour 7−107451
water flow in soil, sectional average rate, direct meas. method *(Japanese)* 7−127618
water infiltration, robust-resistant spatial analysis 7−120065
water infiltration into soil, asymptotic time behavior for 1D case 7−79482
water saturation determ. using dielectric meas. 7−127309
water-saturated soil, elastic wave propagation *(Chinese)* 7−127094
wetness changes induced by atmospheric CO_2 increase 7−133783
wind erosion in presence of atm. acoustic waves 7−139735
X-ray fluorescence analysis appl. to agricultural research *(German)* 7−86731
NO and NO_2 gas emissions from soil, grassland site in Colorado, USA 7−87807
NO_x gas emission from foils, comparison of 2 meas. techniques 7−87931
Pb determination using ^{203}Pb radioisotope substoichiometric method *(Chinese)* 7−113969
Pu, distrib. in surface soil from Piemonte region, Italy 7−78688
^{A}Pu, A=238-240 migration in soil 7−126664

soil continued
^{226}Ra in soil gas, correl. with ^{222}Rn inside adjacent houses 7−71900
^{222}Rn emanation from soil, moisture content effect 7−133485
^{222}Rn, simulator for underground migration studies 7−79678
S compounds, gas emission rates for wetland soil of Florida, USA 7−126665
^{A}Sr, A=89,90, distrib in Slovenia, Yugoslavia after Chernobyl accident 7−78689

solar absorber-convertors
absorbers, directional total emittance at 368 K 7−137598
absorption coolers for residential space cooling, cost anal. using simulation procedure 7−93527
active solar collectors, calcs. and appls. (book) 7−100759
active solar heated house in UK 7−78616
agricultural solar air collectors, design and performance 7−93531
air conditioning system investigation using finite element method 7−126556
air conditioning system using solar energy to dry desiccant for dehumidification 7−71578
air heating collectors, transient test method for performance eval. 7−100756
air-conditioning system with heat-pipe collectors, performance study 7−139129
albedo determination for ground reflected sunlight 7−145652
alternative and renewable energy sources conf., Reading, England (April 1987) 7−72735
anisotropic solar irradiance model for tilted surfaces comparison with engng. algorithms 7−93535
axicon solar fluid heater, temp. distrib. along absorber walls 7−106925
bidirectional and directional-hemispherical spectral reflectance meas. 7−126649
biogas plant, transient anal. 7−119669
biological and biomimetic systems 7−106917
bivalent solar collector plant for space and water heating *(German)* 7−114121
black chrome optical film properties, substrate surface preparation effects 7−139133
box-type solar cooker, thermal performance, transient anal. 7−119676
buried pebble bed thermal storage system coupled to air solar collectors *(French)* 7−126652
central receiver solar power system 7−119622
central receiver systems for steam turbine electric generation 7−71577
CESA-I solar central receiver computer simulation, power plant operation 7−100755
closed-loop water heating system using solar air heating collector, perform. eqns. 7−93529
collector, evaluation of optimum tilt angle for maximum sunlight collection 7−126646
collector field design, effect of shading 7−78666
collector loop modelling and experimental validation for distributed parameter models 7−78672
collector-sky radiator with spectrally selective surface, solar heating, radiative cooling 7−139130
collectors, optimum area evaluation for domestic water heating system 7−126647
collectors, radiative property of absorbing materials and its collection efficiency 7−71647
combined solar-fuel boiler rooms, centralised hot water supply system 7−86819
compound parabolic concentrator collector with time dependent input function, transient anal. 7−78613
compound-parabolic concentrating solar-energy collectors, math. model for thermal behaviour 7−78675
concentrator collector, silver-polymer film development, specular reflectance properties 7−144790
conversion efficiency improvement using optical materials 7−126559
cooker, design and devel. for maximum energy capture in stationary mode 7−71644
cooker, hot plate solar type with thermal energy storage system 7−78660
cookers, box-type, thermal test procedures 7−144909
cookers, modification of box-type solar cooker, mathematical analysis and computer simulation 7−126645
cooling, adsorption properties of zeolites 5A and 13X 7−119684
desalination plant for seawater distillation, computer simulation results comparison 7−139126
desiccant dehumidifier regeneration using direct solar radiation, anal. 7−106927
desiccant-evaporative air-conditioning system, expt. investigation 7−133124
design criteria for solar energy systems 7−78659
discrete mirror solar concentrators, optical performance anal. 7−119624
domestic solar hot water systems design in India, socio-economic constraints 7−93477
double-pipe heat exchanger coupled to flat-plate solar collector, transient anal. 7−71636
dryers in tobacco growing 7−114128
dye mixtures in solar energy appl. 7−144905
emittance meas. using portable device 7−121112
energy, efficiencies 7−71621
energy density determ. on thermal receiver of facet concentrator 7−86757
energy output thermodynamic limit, background thermal radiation calc. 7−86817
energy storage for cattle breeding farm 7−78678
energy storage with phase change 7−144921
evacuated solar collector tubes, stagnation temp. reduction 7−133123
evacuated tubular solar collector, heat transfer charact., piping effects *(Japanese)* 7−133127
evaporative air conditioner water heater, thermodynamic anal. 7−86820
evaporative thermal siphons manufacturing technology 7−100745
exergetic anal. of efficiency 7−114124
exposure testing of absorber surfaces 7−126370
flat collectors, energetically optimum slope 7−86824
flat plate and evacuated tubular solar collector performance, Tehran 7−71640
flowing-film liquid direct solar absorption receiver, expt. investigation 7−144903
fluid heat exchange process adaptive control 7−93536
gas lasers with solar excitation 7−103805
gel pond technology develop. 7−133122
gel solar ponds, benefit cost analysis 7−119681

solar absorber-convertors continued
generator-adsorber optimisation for fruit-vegetable storage unit 7−86826
glass tubes solar collector testing 7−86823
granular aerogel systems, superinsulating spacers, thermal loss coeffs. 7−144916
gravity air solar-heating systems, thermotechnical and aerodynamic characts. study 7−100751
gray fluid inside a transparent solar collector receiver tube, heat transfer parameters 7−106930
heat pump system, design criterion 7−114120
heat-pump drying unit with solar collector, exergetic anal. 7−100746
heating and hot water systems with heat pumps, absorption panels 7−114123
heating system collectors, thermal losses coeff. and effective absorptivity 7−86821
heating system for buildings, efficiency eval. 7−78664
heating systems heat capacity calc. allowing for climatic conditions 7−78665
heating with distributed storage, microprocessor-based control 7−133118
heliostats and parabolic concentrators, performance of transparent fused quartz and 96% silica glass 7−144793
Highlands Close group solar heating scheme 7−119685
honeycomb roof cover system for passive solar space heating 7−71574
honeycomb solar pond, design and performance charact. 7−71643
hot houses and stills for crop drying in rural areas of developing countries 7−78676
hot water production by solar low-temp. heat accumulation *(Portuguese)* 7−119674
hot water system with thermosiphon heat extraction and automatic freeze protection 7−78671
hot-water supply system, heat regime in thermal-storage tanks 7−100760
hybrid solar industrial process heat system for preheating boiler feed water, Taiwan 7−71652
hybrid solar water heating system for Delhi, technoeconomic simulation model 7−133117
integral collector storage and conventional solar water heating systems, comparisons 7−106933
integral collector-storage solar water heaters, expt. and calc. performance comparison 7−93530
integrated storage collector systems, prospects for Central Europe 7−139132
intermittent solar refrigerators performance, effect of condenser temp. 7−71641
kilns, box-type collector, performance determ. methods 7−106929
large-scale heat storage system developments *(Romanian)* 7−114132
line concentrating solar energy collectors with tubular absorbers ray tracing simulation 7−93479
linear concentrator-tubular absorber system, anal. 7−71573
liquid-cooled flat-plate solar collectors, heat-removal factor 7−100758
luminescent solar concentrators, operation 7−86754
metal membrane concentrator, construction and shaping technique 7−126557
multilayer semi-transparent packed bed for selective absorption of solar radiation *(French)* 7−93528
natural circulation solar water heater for arid areas, improvements, performance and testing 7−71638
open loop single pass hot water system, long-term performance fluctuations 7−93532
parabolic trough collectors, optical perform. anal., from design data 7−133121
parameter identification by step input test procedure 7−71645
passive solar residences, peak load auxiliary energy consumption elimination 7−144908
phase change material energy storage in solar space heating 7−78682
photothermal capability of dye solutions for solar convertors, figure of merit correlation 7−144906
photovoltaic collector system assembly, construction and performance *(Romanian)* 7−114081
plastic film solar air and water heaters, thermal performance 7−119686
pond, nonconvecting, study of transient thermal behaviour 7−126644
ponds, effect of bottom reflectivity on pond performance 7−144910
ponds, Israeli pilot-scale plants 7−133120
ponds with nonconstant temp. gradient, stability anal. 7−71642
portable shallow solar pond water heater 7−86828
pumped laser technology options for space power transmission 7−71579
radiant energy receivers, math. investigation using auxiliary-wall method 7−78661
reflective and black chrome, photometric methods for refractive indices determ. *(French)* 7−106926
refrigerating unit, generator adsorber heat regime calc. 7−78663
rockbins, design and control of passive solar houses 7−144907
roof as solar collector/storage system, thermal performance, comparative studies 7−119677
roof-mounted flat plate solar collectors, wind flow induced top losses 7−93533
rough surfaces for solar energy conversion, determ. of characterising parameters 7−143162
row to row Shadow effect in solar power systems 7−119689
saline water solar ponds for arid regions in India 7−100752
salinity profiles in steady-state solar ponds 7−78669
salt gradient solar ponds, thermal behaviour 7−133119
salt gradient solar ponds, time-temperature variations in storage zone 7−93537
salt-gradient solar pond, heat extraction 7−71655
salt-gradient solar pond, optical anal. of behaviour 7−119673
salt-gradient solar ponds, efficiency and stability 7−78677
shallow solar pond, collection efficiency *(Japanese)* 7−139128
shallow solar pond appls., study at Tehran 7−71639
shallow solar pond performance, theoretical model 7−71646
snow melting on roof using solar energy collection and aquifer seasonal storage 7−71650
solar energy technology advances, collection and storage systems, book 7−66847
solar pond wind-induced waves and liquid mixing 7−100753
solar powered combined cooling/power system package for institutional buildings 7−78674
solar thermal energy option, economic perspective, overview 7−78673
solar thermal research status conf., Golden, CO, USA (Feb. 1986) 7−140353
solar-electric water purification using photocatalytic oxidation 7−100754
state-of-the-art in solar energy utilisation in USA *(German)* 7−119675

solar absorber-convertors continued
stationary nonevacuated compound parabolic concentrator solar collectors, economic optimisation 7−106889
steel, stainless, solar collector, selective film 7−126642
step type desalination unit, freezing of saline water 7−114127
still, effect of water depth on daily yield 7−139127
sub-atmospheric solar distillation unit 7−119690
sunspace and water hybrid solar device, expt. comparison at LESO test facility 7−93534
super-solution field absorption process for storing and pumping heat 7−133112
surface drift current return pipe systems, salt gradient solar ponds appl. 7−78667
swimming pool, solar heated, energy fluxes, model and expt. validation 7−119678
textile dyeing process, cascading heat process solar system with computerised control 7−71651
thermal appls. in agriculture, drying, hot water production and greenhouses, book 7−66854
thermal energy storage, high temp. solar radiation conversion 7−71656
thermal energy systems, experience gained in solar conversion 7−78651
thermal storage tanks in solar heating systems, charging time determ. using math. models 7−78681
thermal system, simplified simulation model 7−71634
thermosyphonic solar water heaters, diurnal performance, empirical prediction method 7−139135
thermosyphons with heat exchangers, test facility to compare with active systems 7−78670
tilted surfaces, monthly average daily insolation calc., comments and reply 7−133126
transparent insulation, appl. in radiative energy transmission, thermal collection and long-term storage 7−126560
transparent insulation material, solar transmission 7−144917
transparent insulation materials, minimum thermal conductivity, determ. 7−143120
transparent tubular covers as solar drying chambers enclosures 7−114126
trough collectors, steady-state modelling of absorber tube 7−100757
tubeless flat-plate solar collector performance 7−119688
tubular solar collector with heat and gas exchange, nonsteady state processes modelling 7−114125
underground shallow solar pond water heater, transient anal. 7−71648
utilizability correlations for solar collectors with multiple apertures, thermal performance 7−106931
vertical solar still, transient simulation 7−119682
water heater heat absorber, efficiency calc. 7−114122
water heater using direct expansion collector heat pump *(Japanese)* 7−71649
water heaters, test data correlation 7−133125
water heaters using thermal trap, performance prediction of two models 7−71637
water heating system, economic eval. 7−119679
water hybrid collector, solar pump powered, flow rate control and performance 7−78668
water-heating unit panels, total pressure loss eval. 7−86818
white-black selective coatings for solar-energy transducers and radiators, electrolytic oxidation 7−78662
Ag island films, energy transfer with fluorescent dye molecules, appl. for solar concentrators 7−144124
B_2O_3-SiO_2-UO_2 glasses, luminescent solar concentrators 7−144915
CdS film prep. and props., solar energy converter appls. 7−144278
Co black, selective solar absorber surfaces, comparison of different forms 7−144911
Cr solar absorber coatings, rough surfaces, characteristic parameters 7−143162
Cr-SiO cermets, solar selective absorbers, high temp. treatment 7−144912
$Cu(H_2O)_6^{2+}$−$CuCl_4^{2-}$-ethanol system for solar energy storage 7−114129
CuO-Cu_2O, solar absorber coatings, accelerated aging tests 7−144914
CuO_x solar absorber coatings, rough surfaces, characteristic parameters 7−143162
Fe-Al_2O_3 cermet film, low cost solar selective absorber 7−144913
Fe_2O_3-Cr_2O_3-Fe solar spectrally selective surfaces on stainless steel, prep. by chemical conversion 7−86830
H_2 production using solar energy devices 7−126656
LiBr-H_2O absorption cycles, machine irreversibility using new entropy calcs. 7−139134
NH_3-H_2O solar absorption cycles performance for refrigeration and heating, Athens 7−139131
Ni-MgF_2 cermet, solar absorber coatings, accelerated aging tests 7−144914
NiS solar selective absorbing films fabrication by dip and dry technique 7−126643
PbS-Cu, surface absorbers, selection criteria *(Spanish)* 7−86816
PbS-SnO_2(ZnO) chemically deposited selective absorbers 7−86829
SiO_2 aerogel, superinsulating spacers, thermal loss coeffs. 7−144916
SiO_2-Yb_2O_3-Nd_2O_3-Cr_2O_3 glasses, luminescent solar concentrators 7−144915
SnO_2 spectrally selective coatings for porcelain enamelled absorbers in solar collectors 7−106928
SnS-Cu, surface absorbers, selection criteria *(Spanish)* 7−86816

solar absorbers *see solar absorber-convertors*

solar activity
see also solar flares; solar prominences; solar-terrestrial relationships; sunspots
21st century, high solar activity prediction and terrestrial consequences 7−115357
680 Myr BP solar cycle length 7−127474
1986 March activity during Periodic Comet Halley (1982i) spacecraft encounters 7−88366
active regions locations, relation to photospheric global horizontal circulation 7−140025
AR 2522/45 complex, 1980 July 1, soft X-ray pulsations obs. 7−134204
Boulder Region 4500, UHF and SHF obs. during partial eclipse 7−127797
chromosphere, Hα observations during cycle 20 decline (1970-6) 7−127818
chromosphere, Hα observations during cycle 21 ascent (1976-83) 7−127819
chromosphere Ca II K-line variations over solar cycle 7−88340
classification of active regions, flare prediction and fuzzy set theory *(Chinese)* 7−107784

solar activity continued
P/Comet Halley (1982i), plasma tail activity correlation 7−94777
compact visible sources, VLA obs. 7−88346
complex gradual microwave burst, VLA obs. at 6 cm wavelength 7−101752
corona activity, implications of force-free magnetic fields topology 7−72380
coronal bright points, obs. at 6 cm wavelength 7−115349
coronal holes, rotation props. during solar cycle declining phase 7−140015
coronal loops, heating and cooling processes 7−145908
coronal loops, plasma and mag. field characts. 7−107788
coronal loops, resistive stability to perturbations with short wavelength across mag. field 7−145925
coronal loops, thermal stability, nonlinear diffusion asymptotics 7−115332
coronal loops and arcades, MHD waves characts. 7−145825
coronal loops thermal stability, role of gravity 7−140002
coronal mass ejection (1980 September 1) vel. field 7−94846
coronal mass ejection events, search for forerunner activity 7−127811
COSPAR symposium, Toulouse France (June-July 1986) 7−128162
cycle 19, flares occurrence rate 7−140021
cycle 20 activity and ionospheric electron density profiles over Istanbul 7−127638
cycle 21, flare index time var. 7−145909
cycle 22 forecast using dynamo theory method 7−127800
cycle prediction of the maximum annual mean sunspot number in the coming solar maximum epoch, max. annual mean sunspot number prediction 7−120364
cycles 13 to 20, mag. activity and geomag. disturbances 7−94614
cycles 20 and 21, comparative study of flare-microwave burst association for post-max periods 7−140026
cyclical changes, 1944 to 1979, search for assoc. cosmic ray intensity vars. 7−120225
diameter oscillations of long period, rel. to solar activity cycle *(French)* 7−140029
dynamic evolution of transition zone plasma 7−88353
electric current systems in active regions 7−145922
faculae, H line profiles in visible and IR, models 7−140027
fibre burst, 1981 August 19, metre-wave obs. rel. to plasma parameters in coronal loop 7−115351
fine structure of active regions, Hα morphology 7−127806
flare activity, quasi-periodicity (1980-1) 7−88358
flares distribution, 1980 to 1985, evidence for superactive regions and active zones 7−115337
hydrodynamic systems, random fluctuations, space-time spectra 7−69198
intensity variations of Sun and oscillations, review 7−127822
kilometre-wave type III bursts, visibility function from Voyager and Earth-based obs. 7−94836
longitudinal distribution, contrib. of r-mode oscills. to active longits. 7−127825
loops, magnetic energy build-up and storage modelling 7−120344
magnetic and velocity structure adjacent to solar active regions 7−140004
magnetic field of active region, nonpotential features obs. 7−115336
magnetic neutral lines of large-scale field and solar activity 7−88335
magnetic reconnection process, numerical simulation 7−101756
magnetosphere plasma sheet, ion composition at various geomagnetic and solar activity 7−139863
mass ejection-assoc. activity, SMM 1980 study 7−120362
maximum sunspot number, relation to heliosheet thickness at previous sunspot min. 7−134073
McMath 14822, microwave sources polarisation inversion rel. to coronal mag. fields meas. 7−107801
plage areas (Ca type) rel. to size of sunspot areas 7−79927
plages, mag. fields, Fourier analysis deconvolution scheme 7−72383
plages, spectral characts. of flux tube models 7−72382
plages area, latit. distrib. rel. to large-scale background mag. field 7−127805
plages spectra, Ca II H and K line indices and appl. to stellar plages spectra 7−115339
plages spectra, Hα line indices rel. to stellar plages spectra 7−115340
quasi-two-year cycle 7−145914
radiative intensities and mag. field large scale parameters 7−120347
radio noise storms, burst-length distrib. and burst component energy spectrum 7−127808
radio source structure at 1.35-cm wavelength, determ. from occultation obs. during solar eclipse (1982 December 15) 7−127809
rotations 1754-60 activity anal. 7−107789
solar constant changes due to sunspots and faculae 7−79926
solar constant due to sunspots and faculae 7−79925
solar wind transition region geometry rel. to solar activity 7−88065
spicule model in middle chromosphere, results from anal. of solar eclipse data 7−79908
spicules, convection zone origins and contrib. to coronal heating 7−88348
sunspot activity fluctuations, anal. for solar cycles 12 to 19 (1878 to 1964) 7−140024
sunspot cycle 21, simulations of Sun's polar mag. fields 7−107798
sunspot cycle analyses appl. to objective characterisation of stellar activity cycles 7−115380
sunspot cycle bimodality, implications for duration of cycle 21 (1976 to 1987) 7−115356
sunspots and faculae, 1985 AD observations at Istanbul University Observatory 7−127821
superhealing instability in active regions of solar atmosphere 7−115358
TA activity report (1987 February-March) 7−120350
TA activity report (1987 July) 7−145907
TA activity report (1987 June) 7−145906
TA activity report (1987 March-April) 7−120351
TA activity reports (1987 April-May) 7−140001
temporal trends of solar EUV and UV full-disk fluxes 7−127828
time characts. rel. to cosmic ray intensity var. 7−88055
transition region fine structure, radio emission flux depression at transition region temps. *(Russian)* 7−145916
transition region UV brightenings, Si IV and O IV obs. 7−72384
troposphere, thermal regime, rel. to solar activity *(Russian)* 7−127347
Type I radio noise storms fluctuations, plasma relaxation oscills. model *(Russian)* 7−145915
Ne IX, emission line ratios, electron excitation rates and plasma characts., solar appl. 7−140012

solar atmosphere
see also chromosphere; photosphere; solar corona
absorption line formation depth and contrib. functions 7−88337

solar atmosphere continued
acoustic tube waves propag. in solar atmosphere, effects of Mg II and Ca II line emission 7−94838
acoustic waves, interactions with mag. and internal modes 7−111006
active regions, determ. of vel. and mag. fields 7−79907
Alfven wave dissipation 7−139907
Alfven waves of low freq., source location 7−88061
collisionless shocks (book) 7−115698
compressive waves propag. through fibril mag. fields 7−140009
compressive waves scatt. from slab of mag. flux tubes 7−140008
current-driven magnetohydrodynamic thermal instabilities in sheared fields 7−88088
electric fields in post-flare mag. loops 7−145923
eruptive processes in magnetospheric and solar physics 7−145819
flare plasma, effect of electron energy and ang. distrib. on hard X-rays anisotropy ratio 7−115352
flares distribution, 1980 to 1985, evidence for superactive regions and active zones 7−115337
incompressible MHD surface waves, nonlinear charact., appl. to solar atm. 7−127708
jump conditions across thin mag. flux tube shock front 7−115219
magnetic flux tube in stratified atm., model 7−127812
magnetic flux tube oscillations, mode classification and wave propag. in magnetically-structured medium 7−140031
mass ejections with gravitation, linear MHD instability analysis 7−120361
MHD surface waves reson. absorpt. 7−72279
MHD wave transition 7−134220
MHD waves generation 7−104388
microwave burst source, mag. field struct. from VLA obs. at 6 cm wavelength 7−101752
oscillations, MHD modes of periodic mag. medium 7−145823
oscillations phase shifts, obs. using diode arrays 7−79910
quiescent prominences, short-period oscills., Ca II obs. 7−107794
radio source structure at 1.35-cm wavelength, determ. from occultation obs. during solar eclipse (1982 December 15) 7−127809
resonance oscillations and wave transform. 7−127693
Scheuer-Thomas sunspot model, umbral oscills. spectrum 7−145931
slow sausage waves in mag. tube 7−145824
superheating instability in active regions of solar atmosphere 7−115358
tearing mode instability above sunspots *(Chinese)* 7−101748
thermal diffusion in partially ionized gases with unequal temps. 7−101760
THF brightness temperature determ. from spectral obs. 7−140005
X-ray emission mechanism, implications for stars 7−127816
Fe abundance from Fe I oscillator strengths 7−88361

solar batteries *see solar cells*

solar cell arrays
see also solar power
30 kW solar installation with solar array, DC/AC invertor, storage battery and computerised monitoring 7−133089
Aerospatiale/AEG solar array in-orbit performance results 7−144864
bifacial albedo-collecting photovoltaic panels, incident radiation estimation 7−71607
bifacial solar cell array performance comparison with BSFR cell 7−144863
blanket integrated blocking diodes 7−144874
CMZ coverglass optical and physical characteristics 7−144869
Columbus high-power solar array technology assessment 7−144852
deployment simulation and analysis software 7−144875
European Retrievable Carrier solar array design and verification for low Earth orbit 7−144850
Fokker Strongback solar array 7−144855
geostationary satellite solar array differential charging process and countermeasures 7−144860
high-voltage solar array, cct. transients due to arcs 7−71609
hit in hot spots 7−86784
HV solar array-plasma interaction and albedo flux, in-orbit expts. 7−144883
INMARSAT solar array design and verification 7−144851
Kapton insulation failure expts. simulating ECS solar array in-orbit power losses 7−144856
linear concentrator photovoltaic module, nonuniform illum. and temp. effects on efficiency 7−71616
low Earth orbit plasma anomalous interaction with solar array modules 7−144859
METEOSAT solar array electrical design and qualification test programme 7−144878
micrometeorite impact damage simulation 7−144857
micrometeorite impact damage simulation using plasma accelerator 7−144858
mobile pulsed solar simulator development for spacecraft solar array testing 7−144892
orientation and movement about fixed point, kinematic parameters 7−86790
peak load reduction using house rooftop solar cell installations *(German)* 7−100718
Phobos spacecraft plasma spectrometer with solar power generator 7−145828
photoelectric station with H_2 energy storage, design and charact. 7−86756
photovoltaic array sizing for electrical needs, Yemeni 7−119657
photovoltaic generators in space, 5th European Symposium, The Hague/Scheveningen, Netherlands (Sept.-Oct. 1986) 7−140377
photovoltaic modules reliability 7−126612
photovoltaic systems, optimum operation by voltage mode control 7−100726
plasma electron collection by PIX-II, computer simulation 7−71610
Retractable Advanced Rigid Array for European Retrievable Carrier spacecraft 7−144849
Solar Array Flight Experiment (1984) test results 7−144882
spacecraft solar array electrical and thermal behaviour, dynamic modelling approach 7−144877
SPOT solar array in-orbit deployment results evaluation 7−144862
Stretched Rohini Satellite 1 solar array design and fabrication 7−144879
Summeregg tunnel lighting using solar cells in Grimsel Pass *(German)* 7−100717
third-generation rigid fold-out solar array development and testing 7−144848

solar cell arrays continued
three level photovoltaic sub-array, optimised struct., simulation program 7−71617
tilt angle optimisation of solar cell array, load dependent seasonal variation 7−144833
GaAs concentrator solar array concepts for geostationary and low Earth orbit missions 7−144853
GaAs satellite solar cell mfg. using vertically separated three-chamber LPE 7−144839
GaAs solar array performance expt. on EURECA-1 low Earth orbital flight 7−144861
GaAs spacecraft solar array performance and cost 7−144854
Si bifacial solar array alternative module configuration for low Earth orbit 7−144844
Si solar cell arrays, short-circuit current and efficiency variation in tropical conditions 7−71604
Si solar cells efficiency, effect of diffuse solar radiation 7−119658
Si spacecraft solar array performance and cost 7−144854
Si thin solar cell welding and assembly methods and environmental tests 7−144865

solar cells
amorphous film deposited by plasma CVD, solar cell appl. *(Japanese)* 7−71073
amorphous semiconductor solar cells *(Japanese)* 7−139110
calibration, differential spectral responsivity method 7−106904
cascade solar cells, new design using tunnel diode interfaces 7−71615
construction, current/voltage relationship *(German)* 7−114098
coverglass and second surface mirror coating improvements 7−144870
development prospects for 21st century *(Japanese)* 7−100720
diffuse sunlight, global radiation model and angular distrib. *(Japanese)* 7−119653
efficiency increasing developments up to 20% *(Slovak)* 7−133092
electricity generation using solar cells, research and development *(German)* 7−119656
emitter recomb. current, effect of high-low junction 7−78650
energy, efficiencies 7−71621
energy production and costs, influence of solar cells *(Finnish)* 7−100728
fill factor and efficiency, analytical determ. 7−71614
film preparation by spray pyrolysis for solar cells, review 7−100055
forward and reverse I-V characteristic test equipment 7−144887
horizontal global radiation model and ang. distrib. of diffuse irradiance, solar-cell perform. eval. 7−78642
hybrid photovoltaic simulator for utility interactive studies 7−114108
II-VI semiconductor thin film solar cells fabrication, laboratory safety procedures for material processing 7−86800
III-V semiconductor solar cells, large scale production, safety comparisons of gas source deposition technologies 7−86802
industrial appls. of solar energy 7−106908
ITO/p-Si solar cells using conductive polymer 7−86783
large-area solar cell calibration, absolute indoor differential spectra responsivity method 7−144885
lens-type holographic concentrators for photovoltaic modules 7−100696
limiting thermodynamic EMF 7−86786
load charact. shape, distributed resist. effect calc. 7−86791
materials and processing for large scale terrestrial and space appls. 7−100734
measurement of charact. 7−86797
minority carrier lifetime, transient measurements 7−106906
minority carrier lifetime determ. from open-circuit voltage decay including junction capacitance effects 7−80820
MINP solar cells, surface recomb. vel. 7−106910
MIS inversion layer solar cells, higher efficiency and lower production costs *(German)* 7−114101
MIS/IC solar cell, charge storage effect in LPCVD Si_3N_4 for improved conversion efficiency 7−86805
mono and polycrystalline, base collection efficiency calc. by separation of variables 7−78640
mountain chalet energy supply using solar cells *(German)* 7−100716
n^+-p-n^+ type two sided solar cell for increased efficiency 7−114106
Netherlands research on solar cell technology *(Dutch)* 7−86785
open circuit voltage, partial illum. effect, distributed parameter model 7−100729
operating charact., physical principles, performance and appls. *(Italian)* 7−93504
operating principles and power prod. 7−119662
operation efficiency, effect of surface soiling from road traffic pollution 7−86787
p-n junction, lifetime and surface recomb. vel. determ. by transients obs. 7−67347
p-n junction, saturation photocurrent and photovoltage calcs. 7−106905
p-n junction space-charge region, minority carrier accumulation at base edge under short-circuit conditions 7−126631
performance under global irradiance, effect of atm. parameters 7−119654
photoelectrochemical cells, optical losses calc. and meas. 7−71627
photon collection enhancement by white rear cover reflection and the design of reference cells for module performance measurement *(Japanese)* 7−119652
photovoltaic advanced R&D, conf., Denver, CO, USA (May 1986) 7−128184
photovoltaic materials and systems, appls. 7−106888
photovoltaic research and appl., state-of-the-art 7−78638
photovoltaic research at SERI, current status 7−126619
photovoltaic thin film cells develop. *(German)* 7−100719
photovoltaics for commercial solar power appls., conf., Cambridge, Ma, USA (Sept. 1986) 7−120699
photovoltaics in a single dimension 7−139117
photovoltaics safety, conf., Lakewood, CO, USA (Jan. 1986) 7−80168
polycrystalline solar cells of the inversion type with surface barriers 7−78634
power losses to spreading resistance eval. 7−86788
principles, fabrication and appls. *(Spanish)* 7−106909
protective surface automatic cleaning 7−114103
pyramidally textured surfaces, light trapping props., solar cell and photovoltaic energy conversion appls. 7−118966
radiation damage in-orbit low-temp.-rise annealing by 10 mW CW laser 7−144886
reflected solar radiation from snow *(Japanese)* 7−126604
Schottky barrier solar cells, effects of inhomogeneity 7−78633
Schottky solar cells, temp. dependence of efficiency parameters, barrier height 7−78628

solar cells continued
Schottky-barrier solar cell characts. *(Russian)* 7−78635
semiconductor photoelectrochemistry, opportunities and problems 7−106810
single-diode and double-diode model parameters extraction from I-V characts. 7−71606
solar energy conversion and lighting technology, materials and optics conf., San Diego, CA, USA (Aug. 1986) 7−120700
solar energy technology advances, heating, agricultural and photovoltaic appls., book 7−66849
SPASOLAB equipment for solar cell space qualification 7−144893
spectral response mismatch error analysis and correction 7−144889
status and prospects for elec. power generation *(German)* 7−133090
tandem solar cell design, spectral p-n junction model 7−71605
ternary and multinary cpds., appls. for solar cells, conf., Snowmass, CO, USA (Sept. 1986) 7−120711
ternary materials for photovoltaic appls., deposition and characterisation 7−126633
ternary semiconductors, chalcopyrite type, props. and appls. *(Japanese)* 7−70313
terrestrial photovoltaic units, standard solar spectrum for efficiency and electric parameters meas. 7−114105
thick transmission phase holograms for photovoltaic concentrator applications 7−144798
thin film deposition in photovoltaics manufacture, safety considerations 7−86019
welding, Indian Space Res. Organisation technology 7−144868
, Si, polycrystalline, base doping concentration modelling, grain boundaries effect 7−78643
Al, oxidised thin films, photovoltaic appls. 7−126628
Al-SiO_x-p-Si MIS minority carrier grating type solar cells, temp. depend of I-V characts 7−78639
Al-SiO-Si, MIS solar cells, I-V characts., 100-450 K 7−119661
AlGaAs-GaAs thin-film solar cells for conversion of concentrated solar radiation 7−126605
CdS film prep. and props., solar energy converter appls. 7−144278
CdS/$CuInS_2$, prepared by airless spray, open circuit/short circuit current values, $CuInS_2$ optical, structural props. *(French)* 7−143292
CdS-CdTe heterojunction solar cells, relative carrier densities, trap effects 7−76973
CdS-$CuInSe_2$ solar cells, optimum interface thickness, modelling 7−144836
Cd(Se,Te), photoelectrochemical solar cell, efficiency insensitive to light variations 7−93511
CdSe films, electrodeposited, growth and morphology 7−112121
$CdSe_{1-x}Te_x$, thin film photoelectrochemical solar cells, electrochem. energy storage 7−106911
CdTe high-cond. n-type vacuum deposited films, formation and props. 7−100076
n-CdTe:Ru, photoelectrochem. solar cells, surface modification effects 7−133091
CdTe-CdS-SnO_2:F thin film solar cells prep. by CVD and close-space sublimation 7−133097
CdTe-ZnO heterojunction solar cells, prep. by reactive sputtering 7−144275
$Cd_{1-y}Zn_yS$-Cu_2S solar cells, fabrication by sprayed pyrolysis technique and dry chemical process 7−126630
CeO_2 doped coverglass UV cut-on wavelength for satellite solar cells 7−144873
CuIn-Se_2-CdZnS solar cells, health and safety aspects in research and production 7−86801
$CuIn_{1-x}Ga_xSe_2$-ZnCdS thin film polycrystalline solar cells, deposition and characts. 7−126634
$CuInS_2$ films in electrochemical photovoltaic cells, performance and stability in polysulfide and polyiodide electrolytes 7−139113
$CuInSe_2$, films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
$CuInSe_2$ prep. by electrodeposition and selenisation, solar cell appls. 7−119180
$CuInSe_2$ thin films, DC triode sputtering conditions rel. to elec. and optical props., solar cell appls. *(Japanese)* 7−100069
$CuInSe_2$ thin films and devices, effect of stoichiometry and O_2 on elec. characts. 7−131819
$CuInSe_2$, type conversion on deposition of CdS, appl. for solar cells 7−125118
$CuInSe_2$/CdS solar cells, time-dependent open-circuit voltage 7−100725
$CuInSe_2$-CdS thin film solar cells, development and characts 7−126632
$CuInSe_2$-CdS thin film solar cells, low cost production methods 7−133096
$CuInSe_2$-CdZnS high efficiency thin film solar cells, design criteria, theory and practice 7−133093
$CuInSe_2$-Si:H hybrid tandem multijunction photovoltaic module research 7−133099
$CuMSe_2$ (M=In,Ga), thin films, ESCA study, appl. for solar cells, segregation influence 7−125934
Cu_2S chemiplating on Cd and Cu, stoichiometry and solar cell applic. 7−132507
Cu_2S/CdS solar cells, dry formation, growth kinetics 7−139118
Cu_2S-CdS solar cells, vacuum deposition and constituent layers eval. 7−139115
Cu_2S-CdS solar cells characts., thermal annealing effect 7−144835
Cu_2S-CdZnS high efficiency thin film solar cells, design criteria, theory and practice 7−133093
Cu_2S-$Zn_xCd_{1-x}S$ thin film heterojunctions in solar cells, electron microprobe X-ray anal. 7−78631
Cu_xS-CdS heterojunction form. by photoelectrochem. deposition 7−86782
Cu_xS-CdS p-n junction photocathode in a wet solar cell, quantum efficiency meas. 7−114112
GaAlAs solar cells for space appls., materials testing 7−126629
GaAs epitaxial layers, CVD growth on Ge coated Si substrates, solar cells fabrication 7−86058
GaAs films, electro-co-deposited, photoelectrochemical solar cell fabrication 7−92900
GaAs, low-energy electron (0.3 to 3 MeV) and γ radiation damage obs. 7−144891
GaAs, manufacturing experience in high efficiency solar cell production, appl. in satellite power supplies 7−126607
n-GaAs, photoelectrochemical electrodes (Os^{3+} modified) for solar cells with 15% efficiency 7−93510
GaAs solar cell anal. and testing using light emission technique 7−71619
GaAs, solar cell degradation model for low-energy proton impact 7−144876
solar cells continued
GaAs solar cell for satellite power supply 7−106907
GaAs solar cell mfg. facility and processing methods 7−144840
GaAs solar cell proton damage energy-dependence and combined-radiation effects 7−144890
GaAs solar cell with dot grating junction geometry 7−78648
GaAs solar cells, conversion efficiency improvement using multilayer top contacts 7−100730
GaAs solar cells, electron radiation damage, comparison with Si cells 7−133106
GaAs solar cells, n^+-p junction, back-surface field design 7−78646
GaAs, space solar cell research, opportunities and challenges 7−126611
GaAs spacecraft solar cell mfg. experience 7−144838
GaAs spacecraft solar cell pilot production line technology assessment 7−144841
GaAs thin film solar cells fabricated on Ge-coated Si substrates by CVD 7−78647
GaAs tunnel junction, MOVPE growth for multigap cascade solar cells 7−144834
GaAs, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
GaAs:Te-GaAs:C(Mg)-$Al_xGa_{1-x}As$ 7−119659
GaAs/GaAlAs solar cell performance, crystal defect effects 7−139112
GaAs-GaAlAs solar cells with back pot. barrier based on isotype heterojunctions 7−100722
GaAs-Ge mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaAs-Si mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
GaAsP, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
GaAsP-Si mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
$GaAs_{1-x}P_x$-$Cu_{1.8}S$ hetero-photovoltaic cells props. study 7−86793
$GaAs_{1-x}P_xCu_{2-y}S$ heterojunction solar cells, photoelectric characts. 7−114104
GaAsSb, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
GaAs−$Al_xGa_{1-x}As$ heterojunctions in solar cells for improved efficiency 7−114102
GaInAs-AlGaAs multijunction monolithic cascade solar cells grown by MOCVD, efficiency 7−126606
GaP films on Si substrates *(Japanese)* 7−119651
GaSb-GaAs mechanically stacked two-junction solar cells efficiency meas. and calcs. 7−126600
Ge-Si alloy, PV cells, breaking of the efficiency-stability-production barrier 7−126616
Ge-Si solid solution single crystal solar cells, photoelectric props. 7−78632
In_2O_3-SiO_2-Si solar cells, aging effects investig. using Auger electron spectroscopy 7−100731
InP based solar cell power/mass ratio and end-of-life efficiency for space use 7−144867
InP n^+-p-p^+ struct. solar cells, OMVPE growth 7−86796
InP, shallow homojunction solar cells, fabrication by MOCVD, characts. 7−126597
InP solar cell radiation resistance after 10 MeV proton irrad. 7−144888
InP solar cells, fabrication by open tube diffusion 7−78649
InP solar cells with high conversion efficiency and radiation resistance *(Japanese)* 7−133088
InP, space solar cell research, opportunities and challenges 7−126611
InP-CdS heterophotovoltaic cells, damage caused by proton irradiation 7−86789
InSnO-Si heterojunction solar cells prep. by thick film techniques 7−119663
$In_{2-x}Sn_xO_{3-y}$/InGaAsP, n-p solar cell on GaAs substrate, conversion efficiency 7−71612
$In_{2-x}Sn_xO_{3-y}$/p-InSe/Au solar cells, elec. and photovoltaic props. 7−139111
$In_{2-x}Sn_xO_{3-y}$/Si photovoltaic junction solar cells 7−119664
$MoSe_xTe_{2-x}$ electrodes for photoelectrochem. solar cells, valence and conduction bands 7−85101
Si *(Japanese)* 7−119649
Si amorphous solar cells manufacture, safety procedures 7−86799
a-Si and alloys, materials and device stability, conf., Palo Alto, CA, USA (Jan. 1987) 7−140350
Si bifacial solar cell antireflection coating design rel. to operating temp. 7−144871
Si bifacial solar cell modelling for degradation by space particle irradiation 7−144881
Si connector integrated solar cells, in-plane stress-relief interconnector AC welding 7−144872
a-Si, continuous fabrication on polymer substrates 7−126615
a-Si, DOE/SERI research project status 7−126613
Si, dendritic web, and solar photovoltaic cell technology 7−114113
Si, deviations from superposition principle at low illum. 7−133107
Si, directional solidification and moulding using insulating molten salt, solar cell efficiency 7−93509
Si, directional solidification growth for solar cells *(French)* 7−125956
n-Si electrode, Pt, island coated, photovoltage generation 7−114097
Si, energy conversion efficiency study 7−126609
Si, flat plate cells and modules, perform. improvements 7−100733
Si HV solar cells for solar radiation sensor 7−78630
Si, high efficiency, fabrication techniques 7−126627
Si, impurity-induced microstruct. of grain boundaries, elec. props. 7−124288
Si, lumped series resistance determ., effect of diode ideality factor 7−78641
Si multicrystalline solar cells, PF_5^+ ion implantation and rapid thermal annealing 7−126626
Si p^+-n-n^+ solar cells, large area, high efficiency 7−86803
Si, p^+-n-n^+ solar cells with AM1 efficiency of 19.5%, excimer laser processing and oxide passivation 7−86795
a-Si p-i-n junction solar cells, localised states and trapped carrier distribs. after light soaking 7−144822
a-Si p-i-n solar cell stability, deposition rate effects 7−144830
a-Si p-i-n solar cells, deposition using photo-CVD reactor 7−119156
Si p-n homojunction solar cells, influence of defects on performance 7−114114
Si p-n junction produced by low temp. diffusion of B 7−70392
Si particulate device fabrication by screen printing, photovoltaic appls 7−78644

solar cells continued
a-Si photovoltaic cells, breaking of the efficiency-stability-production barrier 7−126616
Si photovoltaic devices, spectral response and efficiency of heavily doped emitters 7−133108
Si point contact concentrator solar cells 7−71622
Si, point-contact, operation and performance description 7−126610
Si, polycrystalline, barrier height and minority carrier capture cross-sections, plasma annealing effect 7−125007
Si, polycrystalline, extended crystallographic defects, passivation 7−124290
Si, polycrystalline, growth and solar cell props. *(French)* 7−125958
Si polycrystalline, impure, thin film solar cell efficiency 7−126625
Si, polycrystalline, model of photovoltaic props. depend. on effective diffusion length 7−77007
Si, polycrystalline, photovoltaic cells characts. study 7−100724
Si, polycrystalline solar cells, high efficiency, using solar grade cast wafers 7−71611
Si polycrystalline solar cells using solar grade wafers, characts *(Japanese)* 7−119650
Si polycrystalline solar cells, H ion passivation 7−126623
Si polycrystalline solar cells, 3D modelling 7−126624
Si, Polyx photovoltaic technology, progress and prospects 7−125957
Si RAD ribbons, interface shape in growth, finite element analysis 7−83807
Si, review of high efficiency cells 7−126608
Si ribbon, edge stabilised growth, solar cell appl. 7−93506
Si, ribbon polycrystalline, photovoltaic cells exptl. study 7−86794
Si ribbons, RAD growth process, photovoltaic appl. 7−93505
Si ribbons, RTR, cryst. defects, characts. and influence on ribbon cell performance 7−86015
Si sheet, grown by spin method, rel. between solar cell efficiencies and cryst. struct. 7−86001
Si sheet, long nonagons, EFG method, solar cell appl. 7−92853
Si sheets, growth by zone melting process from powder, solar cell efficiency 7−93508
Si solar battery based on disk cells 7−100723
Si solar cell, intrinsic energy conversion efficiency and quantum efficiency, photoacoustic determ. 7−71608
Si solar cell based photovoltaic unit with concentrators 7−86822
Si solar cell contact/interconnector system Intercontact 7−144842
Si solar cell efficiency, effect of vertical dimensions, 2D anal. 7−139114
Si solar cell manufacturing technology in Japan, present status and future direction 7−71623
a-Si solar cell modules, laser patterned *(Japanese)* 7−139116
Si solar cell nonlinear effects, internal quantum efficiency model 7−144880
Si solar cell spectral response meas. for space qualification 7−144884
Si solar cell welding process temp. meas. and finite-element simulation 7−144846
Si solar cell welds, Ag foil interconnector low-cycle fatigue tests 7−144845
Si solar cell-coverglass direct bonding 7−144847
Si solar cells, amorphous and monocrystalline, technology development trends *(German)* 7−144832
Si solar cells, construction and functioning *(German)* 7−114100
Si solar cells, diffused junction, lifetime and energy-bandgap narrowing 7−126598
Si solar cells, direct meas. of junction ideality factor 7−133104
Si solar cells, effect of attitude on solar energy received *(Italian)* 7−93503
Si solar cells, electron irrad. effects on shunt resistance 7−100732
Si solar cells, electron radiation damage, comparison with GaAs cells 7−133106
Si solar cells, front surface passivation with antireflection coating 7−114110
Si solar cells, high-efficiency, n^+-p-p^+ back-surface-field, optimisation 7−100727
Si solar cells, photoacoustic charactn. 7−119660
Si solar cells, physics, recent advances, review 7−126622
Si solar cells, recombination under high-level carrier injection conditions 7−114107
Si solar cells, short-circuit current depend. on angle of incident radiation 7−71620
a-Si solar cells, stability anal. under illum. 7−144827
Si solar cells, stable with high temp. survivability, appl. of TiN layer 7−78645
Si solar cells, thin-film single cryst., fabrication *(Japanese)* 7−119648
Si solar cells fabrication using glow-discharge implantation, thermal annealing and oxide passivation 7−71603
Si solar cells for electricity generation *(German)* 7−114099
Si solar cells for space appls., materials testing 7−126629
Si, solar cells prepared from polycrystals grown by RAD technique, defects 7−86000
Si spacecraft solar cell US welding equipment 7−144843
a-Si, status of Solarex research and development program 7−126614
a-Si superlattice struct. solar cells *(Japanese)* 7−71613
Si, thin film polycryst. p-n junction solar cells, 2-D model 7−133103
a-Si thin films and solar cells, light-induced effect 7−144826
Si thin monocrystalline solar cell epitaxy and etch stop technology 7−144866
a-Si, translucent, See-Through Amorton 7−126601
Si, ultrathin, low-energy electron (0.3 to 3 MeV) and γ radiation damage obs. 7−144891
Si web, growth, computer controlled thermal environment, solar cell efficiency 7−93507
Si:Al(B)(Ga)(In), material considerations for high efficiency solar cells 7−133098
Si:C, solar grade, high C impurity conc. determ., peak ratio method evaluation 7−91624
a-Si:H, laser induced Al diffusion, photovoltaic device appls. 7−137622
a-Si:H, photoinduced degradation of device behaviour, elimination, solar cell appls. 7−131716
a-Si:H,B, heavily doped, anomalous substrate and annealing temp. depend., appl. for solar cells 7−76998
Si:H amorphous thin-film solar cell production by CVD 7−113424
a-Si:H films, laser induced CVD, photovoltaic devices and material props. 7−132492
Si:H multijunction photovoltaic module research 7−133099
a-Si:H multijunction solar cells, stability and performance 7−144824
solar cells continued
a-Si:H optical confinement-type solar cell using SnO_2 transparent electrode 7−70110
a-Si:H p-i-n devices, kinetics of light-induced defects, effects of drift carrier transport 7−144821
a-Si:H p-i-n solar cells, effect of band tails on electric field, determ. 7−133109
a-Si:H p-i-n solar cells, light soaking behaviour 7−144831
a-Si:H p-i-n solar cells, O-contaminated, light-induced degradation 7−144829
a-Si:H p-i-n solar cells, perform improvement 7−133094
a-Si:H p-i-n solar cells, photo-CVD prep., light-induced degradation 7−144828
a-Si:H photosensitive devices, DC magnetron sputtering, photoelectric props. 7−84984
a-Si:H solar cells, continuous-mode fabrication on polyimide substrates 7−133100
a-Si:H solar cells, degradation, SCL current diode model 7−126599
a-Si:H solar cells, deposition rate, effects of discharge parameters from pure SiH_4 plasma 7−119170
a-Si:H solar cells, failure anal. 7−100735
a-Si:H solar cells, high efficiency, light induced degradation and struct. 7−144823
a-Si:H solar cells, I-V characteristics 7−144837
a-Si:H solar cells, improvements in disilane plasma deposition 7−133102
a-Si:H solar cells, optimal design *(Chinese)* 7−78629
a-Si:H solar cells, prep. by Hg sensitised photo-CVD of disilane 7−133101
a-Si:H solar cells, reversible light-induced changes 7−144820
a-Si:H solar cells, technical progress review 7−78637
a-Si:H solar cells, thermal degradation by dopant diffusion 7−114111
a-Si:H solar cells and modules, long term stability 7−133095
a-Si:H solar cells using metal substrate 7−119647
Si:H-$CuInSe_2$, solar cells, thin film, perform. aspects 7−126618
Si:H-SiGe:H solar cells, thin film, perform. aspects 7−126618
a-Si:H-a-SiC:H solar cells, effects of C profiles at p-i interface 7−78636
Si:P ion implanted polycryst. solar cells, comparison of excimer laser and thermal annealing 7−71618
Si-CdS p-n heterojunction struct. for 11% efficiency solar cell, fabrication and elec. characts. 7−100721
Si-SnO_2, polycrystalline solar cell, antireflection coating investig. 7−126621
Si-SnO_2 solar cells, light scatt. model 7−126620
Si-TiN-SnO_2:F, (Si-TiO_2-SnO_2:F), transparent conducting electrodes 7−118554
a-SiC:H solar cells, high efficiency, light induced degradation and struct. 7−144823
a-SiC:H/a-Si:H p-i-n solar cells with graded-band-gap layer, photoCVD 7−114109
a-SiC/a-Si, flexible heterojunction and stable tandem solar cells with blocking barriers 7−126617
a-SiGe:H solar cells, high efficiency, light induced degradation and struct. 7−144823
a-SiGe:H solar cells, photoCVD fabrication 7−126602
a-SiGe:H solar cells, prep. by Hg sensitised photo-CVD of disilane 7−133101
a-SiGe:H triple-junction solar cells and modules, reliability tests 7−144825
a-Si; p-i-n solar cell, conversion efficiency *(Korean)* 7−86798
a-Sn:H films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
SnO_2/SiO_2/Si, spray-deposited solar cells, short-circuit photocurrent v. open circuit voltage characteristics 7−126603
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
TiO_2-Se thin film solar cells, fabrication and charactn. 7−93502
WO_3 film-acidic H_2O electrolyte contact, photoelectrolysis solar cell potentiality determ. 7−143287
ZnO:In-glass, thin films heat treatment study 7−119142
Zn_3P_2 vacuum evaporated films, appl. photoelectrochemical solar cells 7−126636
solar chromosphere *see chromosphere*
solar collectors *see solar absorber-convertors*
solar composition
corona, chem. comp. characts. 7−120232
erupting prominence, EUV Skylab obs. 7−94843
interior metal abundance, implications of power spectrum of solar long-period oscills. 7−127802
mass-losing solar models, comparison with standard solar model 7−145910
photosphere, log abundance-microturbulence relation 7−120346
photosphere ^{3}He abundance determ. from flare 2.223 MeV γ-ray line obs. 7−140019
C, N and O abundances, comparison with α CMi (Procyon) and α Boo (Arcturus) 7−120376
^{56}Fe nuclei abundance in solar flares, effects on proton spectrum determ from gamma-ray lines intensities *(Russian)* 7−72389
^{3}He abundance, effect of turbulent diffusion due to differential rot. 7−79905
^{7}Li abundance, effect of turbulent diffusion due to differential rot. 7−79905
solar constant *see solar radiation*
solar corona
260 MHz flux rel. to solar constant variation 7−145928
acoustic waves, interactions with mag. and internal modes 7−111006
activity, implications of force-free magnetic fields topology 7−72380
Alfven waves propagation, coherent mode damping in stochastic astrophysical fluids 7−88095
auroral frequency in relation to coronal holes, latit. depend. 7−134048
Boulder Region 4500, UHF and SHF obs. during partial eclipse 7−127797
composition and electron temp. 7−120232
cosmic ray protons, azimuthal propag. in and escape from corona 7−88050
current-driven magnetohydrodynamic thermal instabilities in sheared fields 7−88088
downflow in coronal loops 7−107792
electron acceleration by electron cyclotron harmonic wave, implications for type III radio bursts 7−127789
electron corona, radial var. of differential rot. 7−107800

solar corona continued
energetic particles prod., source temp. from effects of flare X-rays on ionic charge states 7−88049
energy deposition by Alfven waves 7−139907
equatorial streamers, contrib. to solar wind flow in ecliptic plane 7−134073
EUV jets, relation to solar microwave fluctuations 7−79913
F-corona, interpretation of radial vel. obs. 7−79914
filamentary magnetic loops, dynamics simulation 7−134212
flare, 1980 May 15, simultaneous VLA obs. at 6 and 20 cm wavelengths 7−145913
flare loop cooling through radiation and conduction 7−120363
flare-related coronal phenomena, COS PAR 26th plenary meeting, Toulouse, France (June to July 1986) 7−115670
flares, stabilising effect of transverse mag. field in current sheets *(Russian)* 7−145917
flares hard X-ray bursts, quasi-linear relaxation and bremsstrahlung of thick-target electron beams 7−79909
flaring corona, electron beams stability 7−145926
flux tube, particle propagation effects on wave growth 7−88344
green corona, intensity, latitude distrib. (1951 to 1985) *(Japanese)* 7−79939
heating, magnetic energy rapid resistive dissipation 7−127707
heating by resonant absorption of Alfven waves 7−127796
heating due to magnetosonic shock waves of flare origin 7−88089
heating mechanism, convection zone origins 7−88348
heating mechanism rel. to flaring 7−79922
heating rate perturbations and plasma dynamics 7−140014
HF oscillations observed at 1983 June 15 Indonesia eclipse 7−145927
holes, particles emission during Periodic Comet Halley (1982i) spacecraft encounters 7−88366
holes, rotation props. during solar cycle declining phase 7−140015
holes as sources for type III storms, anti-correl. 7−127676
isolated force free magnetic arches, consistent model 7−115346
large-scale structure, determ. from radio obs. using Clark Lake Radioheliograph 7−115350
loop flare models, explosive chromospheric instability 7−127814
loop flare models, nonlocal thermal conduction 7−127815
loop plasma parameters, estimate from fibre burst obs. 7−115351
loops, heating and cooling processes 7−145908
loops, magnetic energy build-up and storage modelling 7−120344
loops, plasma and mag. field characts. 7−107788
loops, resistive stability to perturbations with short wavelength across mag. field 7−145925
loops, thermal stability, nonlinear diffusion asymptotics 7−115332
loops and arcades, MHD waves characts. 7−145825
loops during flare gradual phase, characts. 7−134211
loops thermal stability, role of gravity 7−140002
low-latitude coronal hole, vel. fields anal. C IV obs. with SMM 7−127794
magnetic arches, evolution, projected charact. method anal. 7−115333
magnetic field 3D struct. and photosphere projected solar wind speed 7−107790
magnetic field characts. determ. from Helios Faraday rot. meas. 7−127831
magnetic field rot. 7−140003
magnetic fields measurement, appl. of inversion of polarisation of local microwave sources 7−107801
magnetic fields struct. and solar noise storms polarities 7−127832
magnetic heating, contrib. of photospheric convection flows 7−134203
magnetic loops, plasma relaxation oscills. model for fluctuations of Type I radio noise storms *(Russian)* 7−145915
magnetic mirror effect on beams of subrelativistic electrons, radio emission evidence 7−140016
magnetic structures rel. to photosphere polarity neutral lines distrib. 7−134209
mass ejection (1980 September 1) vel. field 7−94846
mass ejection event of 6 July 1980, a coronal shock wave 7−72386
mass ejection events, search for forerunner activity 7−127811
mass ejection-assoc. activity, SMM 1980 study 7−120362
mass ejections, review of recent work 7−127823
mass ejections with gravitation, linear MHD instability analysis 7−120361
mean polarisation brightness, appl. to solar cycle and stellar activity cycles anal. 7−115380
MHD stability of coronal arcades, sheared equilibrium fields 7−88351
MHD tube waves propag. in coronal holes, implications for high-speed solar wind streams 7−115355
MHD wave absorption 7−88364
physical processes (book) 7−80191
plasma, frequency shift accompanying radio waves propagation 7−79938
plasma, nonlinear evolution of radiation-driven thermally unstable planar fluid 7−107709
plasma drift wave low-freq. instability effect on Hall conductivity 7−145812
polarization and electron densities (1980 February 16) 7−140028
post-flare coronal arches, thermal structures 7−120359
pressure gradients in loop induced by proton beam 7−88352
prominence formation, nonlinear radiative condensation in sheared mag. field 7−139909
quiescent soft X-ray power loss, relation to white-light flare parameters 7−88405
radio bright points, obs. at 6 cm wavelength 7−115349
radioemissions from outer corona 7−88356
rotation of corona compared to interplanetary recurrence, for 1964 to 1976 period 7−127666
soft X-ray pulsations, relation to Alfven waves in mag. loop 7−134204
solar wind minor ions, and corona non-Maxwellian electrons 7−72236
source regions producing ^{3}He-rich particle events 7−134217
streamers, propagation of type III burst-emitting electrons 7−120360
temporal trends of solar EUV and UV full-disk fluxes 7−127828
total emission measure and struct. 7−127837
transition region, UV Al III emission lines 7−120352
transition region line radiation causing excitation of nearby line due to solar wind effects 7−107787
transition region UV brightenings, Si IV and O IV obs. 7−72384
type II radio bursts, assoc. Langmuir waves free energy source characts. 7−115345
X-ray bright points, MHD modelling 7−145912
Fe XII emission lines, electron excitation of fine-struct. transitions within ground $3s^23p^3$ configuration 7−145816

solar corona continued
Fe XIII 1074.7 nm coronal emission line polarization 7−101751
H, Lyman α radiation loss rates 7−94842
S XT emission lines, electron collisional excitation and reson. photoexcitation 7−88349

solar corpuscular radiation *see solar wind*

solar corpuscular streams *see solar wind*

solar cosmic ray particles
see also solar cosmic ray photons
1982 June 3 flare, neutron emission and characts. 7−140011
1984 February 16, ground level event time struct. 7−101644
^{3}He-rich particle events from coronal source regions 7−134217
acceleration by electrostatic double layers 7−72231
atmospheric particle precipitation, effect on ionospheric VLF wave propagation 7−115161
axions, laboratory bounds on ultralow background Ge spectrometer 7−88051
composition of galactic and solar cosmic rays, review 7−127664
effect on atm. (book) 7−88751
electron fluxes in interplanetary space, relation to energy parameters of microwave bursts 7−120353
flare energetic particles, effects of flare X-rays on ionic charge states 7−88049
flare particles, 1982 June 3, relation to origin of pion-decay gamma-ray emission 7−127798
flare particles, flares and spectra from high-energy flare processes 7−115341
flare protons, spectrum determ from gamma-ray lines intensities *(Russian)* 7−72389
flares, energetic particles generation 7−72390
flares neutron production and capture γ-ray emission ang. depend. 7−134216
flux spatial distribution in magnetosphere, implications for magnetosphere struct. 7−72226
ground-level event, 1984 February 16, assoc. cosmic ray intensity oscills. 7−107677
heavy charged particles, Neuman distrib. and statistics, registration by SSNTD *(Russian)* 7−81904
heavy water Cherenkov detector, solar neutrino problem appl. 7−141400
Landau-Zener probability, solar-neutrino oscillation 7−108829
matter enhanced solar neutrino oscillations, analytic treatments 7−81078
Mikheyev-Smirnov-Wolfenstein effect in electron-neutrino scattering experiments 7−120228
neutrino detection using superfluid He 7−115343
neutrino emission due to interactions with dark matter particles 7−94616
neutrino expt., low rates due to vacuum oscillations 7−95807
neutrino flux, implications of fifth force 7−88087
neutrino flux, semiannual variations, EM properties 7−88365
neutrino flux, time variation magnetic moment postulate 7−79941
neutrino flux 7−79905
neutrino flux measurements, exptl. approaches 7−115348
neutrino oscillation parameter limits from Cl solar-neutrino expt. 7−94619
neutrino problem, electron meas. in liquids 7−115188
neutrino problem, Mikheyev-Smirnov-Wolfenstein oscillation enhancement as possible soln. 7−121414
neutrino problem, questions and hypotheses 7−115347
neutrino problem, role of neutrino oscills 7−94847
neutrino problem, test involving neutrino oscills. in Earth 7−72232
neutrino problem (book) 7−88751
neutrino production, implications of $^3He(\alpha,\gamma)^7Be$ and $^3H(\alpha,\gamma)^7Li$ cross sections 7−135335
neutrinos, detection via $^{81}Br(\nu,e^-)^8$ Kr reaction technique 7−94849
neutrinos, use in super microscopes, supernovae 7−128877
neutrinos spectroscopy review 7−94848
particle physics advances, solar neutrino oscillations and superstrings 7−116102
primary protons, contrib. to cosmogenic nuclides prod. in extraterrestrial objects 7−101652
Prognoz-9 spacecraft meas. of solar cosmic ray composition and energy spectra 7−94621
protons, azimuthal propag. in and escape from corona 7−88050
protons from flares of early Sun, fluence, evidence from meteorites comp. 7−79897
protons in magnetosphere, dynamics during mag. disturbances use for ring current dynamics investigation 7−79777
resonant neutrino oscillations, appl. to solar neutrino problem 7−102668
solar neutrino problem, possible resolutions, overview 7−94844
solar neutrino problem, relevance of neutrino electric dipole moment in resolution 7−95907
solar neutrinos, flux limits, 400 MeV-2 GeV energies 7−94617
Ulysses, out-of-ecliptic mission for solar and interplanetary obs. 7−101655
fermion mass matrix, permutation symmetry S_4, Kobayashi-Maskawa matrix elements mass patterns and mixings, solar neutrino problem, fermion mass matrix 7−108823
ν, nonadiabatic resonant conversion in three generations 7−67545
ν, oscillations, masses and mixing angles, MSW soln. 7−102661
ν problem, energy and ang. depend. calcs. using νe scatt. results 7−108909
ν problem, Fe-rich phase effects in Debye-Huckel approx. 7−79936
$\nu_e \rightarrow \nu_\mu$ conversion in the Sun, solar neutrino puzzle, density fluctuations influence 7−79934
^{3}He-rich events and particle accel. at Sun 7−94615
^{3}He-rich flares, Si and Fe mean ionic charge obs. 7−127791

solar cosmic ray photons
flare gamma rays, line and continuum spectra from high-energy flare processes 7−115341
flare gamma-ray lines intensities, appl. to proton spectrum determ. *(Russian)* 7−72389
pion-decay emission from 1982 June 3 flare, interaction model 7−127798
X-ray bursts from flares, hard X-ray Halpha characts. *(Chinese)* 7−115342

solar disturbances *see solar activity*

solar eclipses
1980 february 16, coronal polarization and electron densities 7−140028
1981 July 31, interpretation of F-corona radial vel. obs. 7−79914
1981 July 31, solar limb intensity profiles, 30-200 μm airborne obs. 7−88347
1982 December 15, eclipse obs. of active region struct. at 1.35-cm wavelength 7−127809

solar eclipses continued
1983 June 15, Indonesian eclipse, coronal HF oscills. obs. 7—145927
1984 May 30, assoc. obs. of active region (Boulder 4500) 7—127797
1984 May 30th, solar granulation contrast meas. 7—120345
1984 November 23, total phase timing rel. to size of Sun 7—115210
1986 October 3, obs. by geostationary weather satellite GOES 7—134116
1988 March 17 to 18 total solar eclipse, obs. prospects 7—139890
1988 March 18, predictions for total solar eclipse 7—120253
1999 August 11, ground track of total eclipse 7—79814
atmosphere of Earth, sky polarisation during total eclipses 7—79595
chromosphere flash spectrum, appl. of spicule model in middle chromosphere 7—79908
E-region parameters temporal changes during eclipses due to neutral wind var. 7—88004
total eclipses, March 1988 and July 1991, eclipse tracks and meteorological prospects *(French)* 7—120252

solar-electric power stations *see solar power stations*

solar energy concentrators
absolute specular reflectance meas. in IR 7—121203
amorphous-metal materials production using concentrated solar energy 7—86081
automatic sun tracking system, determ. of tracking error using composite parabola 7—126561
automatic tracking schemes and systems *(Romanian)* 7—114080
bifacial cylindrical compound parabolic concentrators, truncation effects 7—133038
building materials decoration using concentrated solar energy 7—78608
central receiver solar power system 7—119622
central receiver systems for steam turbine electric generation 7—71577
collector, silver-polymer film development, specular reflectance properties 7—144790
compound parabolic concentrator, nonimaging secondary, design, testing 7—144792
compound parabolic concentrator collector with time dependent input function, transient anal. 7—78613
compound parabolic concentrator for single and multiphase flows, thermo-optical anal. 7—71576
compound parabolic concentrator with low thermal losses 7—86761
compound-parabolic concentrating solar-energy collectors, math. model for thermal behaviour 7—78675
daylighting systems with mirror light pipes and fluorescent planar concentrators 7—126555
discrete mirror solar concentrators, optical performance anal. 7—119624
dome Fresnel lens concentrator for space solar dynamic power 7—71581
electrostatic film concentrators shape forming using nonlinear Karman DE 7—78607
energy density determ. on thermal receiver of facet concentrator 7—86757
geometry optimisation of seasonally adjusted concentrator by discrete maximum principle 7—86762
glass, solar terrestrial mirror design for space appl. 7—126554
heated cavity type hemispherical directional reflectometer, error anal. *(Japanese)* 7—139084
heliostat and central receiver solar power conversion efficiency *(Romanian)* 7—114078
heliostat automatic control system, dynamic properties, influence of cross effect 7—86758
heliostat design using stretched steel or Al membranes 7—133035
heliostat mean wind load reduction 7—144795
heliostats and parabolic concentrators, performance of transparent fused quartz and 96% silica glass 7—144793
holographic solar concentrator 7—126552
holographic solar concentrators fabrication, mirror of dichromate gelatin 7—144791
ideal nonfocusing concentrator with fin absorbers in dielectric rhombuses 7—133036
large solar power systems, generic approach to shading effect of collectors 7—133037
lens-type holographic concentrators for photovoltaic modules 7—100696
line concentrating solar energy collectors with tubular absorbers ray tracing simulation 7—93479
linear concentrator photovoltaic module, nonuniform illum. and temp. effects on efficiency 7—71616
linear concentrator-tubular absorber system, anal. 7—71573
linear Fresnel lens concentrators for thermal appls., assessment 7—144796
liquid filled lens V trough concentrator design and performance 7—133039
luminescent solar concentrators, operation 7—86754
metal membrane concentrator, construction and shaping technique 7—126557
mirror concentrating system, inverse problem formulation 7—100697
parabolic cylinder concentrator, energy characts. calc., photometric approach 7—78606
parabolic solar concentrators, spherical facets optimisation 7—71582
photovoltaic static concentrator prototype, theoretical anal. 7—86760
polymer mirrors, specular reflectance props. 7—125678
power plant heliostat focal spot characteristics test equipment and methodology *(Romanian)* 7—114079
pumped laser technology options for space power transmission 7—71579
receivers with real parabolic dish collectors, radiation distrib. determ. *(German)* 7—114084
reflective and refractive solar concentrator materials development 7—71580
silvered polymer reflectors for solar energy concentrators 7—144789
solar energy technology advances, collection and storage systems, book 7—66847
solar power stations heliostat kinematics 7—78610
solar thermal research status conf., Golden, CO, USA (Feb. 1986) 7—140353
stationary nonevacuated compound parabolic concentrator solar collectors, economic optimisation 7—106889
stressed-membrane heliostats, wood and graphite composites, stress strain anal. using NASTRAN 7—144794
thermal concentration power system characteristics for terrestrial and space applications 7—144799
thick transmission phase holograms for photovoltaic concentrator applications 7—144798
tower type solar power stations, start-up of concentrating system 7—78609
volume-phase holographic optical elements and holographic solar concentrators *(Chinese)* 7—122871

solar energy concentrators continued
white-black selective coatings for solar-energy transducers and radiators, electrolytic oxidation 7—78662
GaAs concentrator solar array concepts for geostationary and low Earth orbit missions 7—144853
GaAs solar array performance expt. on EURECA-1 low Earth orbital flight 7—144861
GaAs solar cell mfg. facility and processing methods 7—144840
Si solar cell based photovoltaic unit with concentrators 7—86822

solar energy conversion
see also solar absorber-convertors; solar cells
Almeria test centre for solar energy conversion and storage *(German)* 7—119655
biological methods, commercial prospects 7—106916
Brayton cycle in solar/fuel-assisted power generating loop, theoretical anal. 7—78658
chlorella suspension growing in sloped-stepped solar unit, temp. conditions 7—83311
cooling parameter monitoring, 16-channel microcomputer data acquisition system 7—106886
DODCI, first excited singlet state, photosensitised electron transfer reaction 7—116888
dynamic power for space appl. 7—71584
free-piston Stirling engines for terrestrial solar electric power conversion 7—71632
heliostat and central receiver solar power conversion efficiency *(Romanian)* 7—114078
hot water production by solar low-temp. heat accumulation *(Portuguese)* 7—119674
hybrid solar systems using solar thermal, photovoltaics and wind energy 7—71575
hydrocarbons, photolytically induced reactions, molecular beam mass spectroscopy observations 7—144687
isopropanol, photoassisted thermal decomp. in fluidised bed 7—144689
methanation catalytic reaction, photodissociation, high solar flux effects 7—144732
methanol, photoassisted thermal decomp. in fluidised bed 7—144689
MIRA one-repetitive day method for long-term performance prediction of solar systems 7—133040
non-equilibrium chemical reactions with rapid heating and quenching, solar energy absorption 7—144688
organic Rankine cycle power conversion systems for space applications 7—144902
Ormat closed-cycle organic vapour turbogenerators, energy conversion appls. 7—93476
oxidation resistant reflective surfaces for solar dynamic power generation 7—138891
passive solar buildings, dynamic perform. anal. using modelling and simulation 7—126558
photochemical conversion and storage of solar energy, conf., Paris, France (July 1986) 7—102003
photothermal conversion, metal-dielectric layers absorption spectra in 0.5 to 2.0 μm range 7—71635
photothermochemistry for fuels and chemicals production 7—144904
photovoltaic solar energy conversion, review 7—86804
photovoltaics in a single dimension 7—139117
polymer films, specular transmittance, optical inhomogeneities effect 7—125835
refrigeration, absorber heat recovery cycle study using NH_3-refrigerant 7—119687
silkworm nursery, cocoons drying in air-heater 7—86825
solar energy conversion and lighting technology, materials and optics conf., San Diego, CA, USA (Aug. 1986) 7—120700
solar energy storage through photoelectrochem. cells 7—106914
solar energy technology advances, collection and storage systems, book 7—66847
solar energy technology advances, heating, agricultural and photovoltaic appls., book 7—66849
solar energy technology advances, industrial appls., book 7—66848
subsurface-irrigation systems in greenhouse, moisture and heat transfer, physical-mathematical model 7—100749
thermal dynamic power system for 21st century 7—71583
thermal-to-electric conversion potential for near-Earth spacecraft 7—144896
thermoelectric generator operation on combined heat source 7—100738
wind/solar power plants 7—78595
Si photoelectrodes, metal coated, solar energy conversion appls. 7—106915
SiO_2-Ag(Cu), energy efficient coating props. study 7—125995
TiO_2-Ag(Cu), energy efficient coating props. study 7—125995

solar energy power stations *see solar power stations*

solar evolution
see also solar nebula
early Sun flaring activity, evidence from meteorites comp. 7—79897
mass loss from early Sun, implications for early solar system 7—88416
mass-losing solar models, comparison with standard solar model 7—145910
turbulent diffusion due to differential rot., effects on evol. 7—79905
young Sun, calculated UV fluxes compared with UV spectrophotometry of T Tau stars 7—88411

solar flares
1979 August 18, assoc., interplanetary shock, scintillation obs. 7—88067
1980 May 15, simultaneous VLA obs. at 6 and 20 cm wavelengths 7—145913
1980 November 12 17.00 UT flare, SMM obs. and hydrodynamic modelling 7—72381
1980 November 6, Hα obs. of loops 7—120356
1980 September 23, flares assoc. with nonpotential features in vector mag. field 7—115336
1981 May 18, VLA obs. of complex gradual microwave burst at 6 cm wavelength 7—101752
1982 June 3, origin of pion-decay gamma-ray emission 7—127798
1982 June 3 flare, neutron emission and characts. 7—140011
1982 March 30, observational study of 2B/X2.8 flare in optical, radio and X-ray ranges 7—115354
1982 November-December solar-geophysical activity 7—88355
1983 February 3 chromospheric flare, time-match semi-empirical models and spectral obs. 7—134214
1983 July 31, flare and filament activation in distorted mag. field configuration 7—115353
1983 October 14, dm-spikes rel. to flare phenomena 7—79919

solar flares continued
1984 April 25, eruption of untwisting filament 7−120357
1984 February 16, cosmic ray intensity oscills. before and after ground-level event 7−107677
1985 July 2, new X-ray spectral line identifications in high-temp. flare 7−88363
1986 February flares and assoc. geomag. storm characts. 7−127653
γ-ray/proton flares, classes characts. 7−94839
in active regions, relation to Hα morphology of active region fine struct. 7−127806
activity associated with ^{3}He-rich particle events from coronal source regions 7−134217
auroral frequency in relation to flares number, latit. depend. 7−134048
beam-heated models, collisional and return current heating functions 7−127699
Birmingham University Department of Space Research studies 7−88362
chromospheric flare activity during periodic Comet Halley (1982i) spacecraft encounters 7−88366
corona, electron beams stability 7−145926
coronal flare loop cooling through radiation and conduction 7−120363
coronal loop flare models, explosive chromospheric instability 7−127814
cosmic rays emission of 1984 February 16, ground level event time struct. 7−101644
current sheets, stabilising effect of transverse mag. field *(Russian)* 7−145917
cycle 21, flare index time var. 7−145909
dm-spikes rel. to flare phenomena in 1983 October 14 event 7−79919
double layers and circuits in astrophysics 7−72286
dynamic evolution of transition zone plasma 7−88353
electron acceleration by electron cyclotron harmonic wave, implications for type III radio bursts 7−127789
electrons stochastic accel. 7−134213
energetic particles emission, effects of flare X-rays on ionic charge states 7−88049
energetic particles generation 7−72390
explosive chromospheric evaporation 7−127795
field aligned elec. currents 7−134212
hard X-ray bursts, quasi-linear relaxation and bremsstrahlung of thick-target electron beams 7−79909
hard X-ray emission, anisotropy ratio calc. rel. to continuous electron injections/accels. 7−115352
high-energy processes, contrib. to fluxes and spectra of energetic particles and photons 7−115341
homologous flares, energy release, mag. field struct. and spatial morphology, UV and X-ray obs 7−140007
impulsive phase, hard X-ray spatial struct. 7−134210
impulsive phase, nonthermal energy distributions determ. from Fe XXV and Fe XXIV lines obs. 7−140018
intermediate energy storage, role of plasma turbulence 7−88090
July 25 1981, magnetic field sign var. with altitude 7−127788
large flares gradual phase, assoc. chromosphere gentle evaporation, Hα obs. 7−127792
logarithmic flare index as solar activity measure, use of ARIMA model *(Chinese)* 7−101749
loop flare models, nonlocal thermal conduction 7−127815
low-altitude dose meas. 7−114507
magnetic energy rapid resistive dissipation 7−127707
magnetosonic shock waves, implications for coronal heating and proton accel. 7−88089
mass ejections with gravitation, linear MHD instability analysis 7−120361
mechanism rel. to coronal heating 7−79922
MHD stability of coronal arcades, sheared equilibrium fields 7−88351
microwave bursts, energy parameters rel. to electron fluxes in interplanetary space 7−120353
microwave bursts-flare association, comparative study for post-max. periods of consecutive solar cycles 7−140026
microwave emission from solar electron beams, obs. of drifting microwave fine structs. 7−79911
microwave radiation from dense magneto-active plasma, gyrosynchrotron emission theory 7−145904
momentum balance in flare, X-ray observational test 7−79932
near-IR spectra, H I and He I line profiles 7−127804
neutron production and capture γ-ray emission ang. depend. 7−134216
nonthermal excitation and ionisation of H, effects on temp. min. region 7−79903
occurrence rate, 152 day periodicity 7−107791
occurrence rate (in solar cycle 19) 7−140021
particle acceleration in flares, review 7−127824
particle propagation effects on wave growth in a solar flux tube 7−88344
photosphere ^{3}He abundance determ. from flare 2.223 MeV γ-ray line obs. 7−140019
physical processes (book) 7−80191
physics of solar flares, COS PAR 26th plenary meeting, Toulouse, France (June to July 1986) 7−115670
plasma drift wave low-freq. instability effect on Hall conductivity 7−145812
plasma temperature, determ. from X-ray spectral line ratios 7−115335
polarized flare elements, Hα fine structure obs. 7−88357
post-flare coronal arches, thermal structures 7−120359
post-flare magnetic loops, elec. fields 7−145923
prediction and fuzzy set theory *(Chinese)* 7−107784
preheating phase, gradual and impulsive reconnection 7−134211
proton fluence from early Sun, evidence from meteorites comp. 7−79897
proton spectrum determination from gamma-ray line intensities, effects of ^{56}Fe nuclei abundance *(Russian)* 7−72389
proton-heated, beam-induced pressure gradients in early phase 7−88352
quasi-periodicity of flare activity (1980-1) 7−88358
radiation rel. to flare types 7−127801
stratosphere of Earth, electric current systems perturbed by solar flare 7−145587
strong loop heating by fast reconnection in closed system 7−88038
Sun, Al XII, line ratios sensitive to electron temp. and density 7−127719
superheating instability in active regions of solar atmosphere 7−115358
surface distribution, 1980 to 1985, evidence for superactive regions and active zones 7−115337
TA activity report (1987 July) 7−145907
type III bursts and ^{3}He-rich events 7−94615
white light flares origin 7−79903
white-light flare parameters, implications for flare mechanism evolution in dwarf stars 7−88405

solar flares continued
X-ray bursts from flares, hard X-ray Halpha characts. *(Chinese)* 7−115342
X-ray characts., Hinotori obs. review 7−107793
X-ray spectra and ionisation balance of Fe XXV, XXIV and XXIII 7−120348
X-ray wavelength predictions for the $1s^22p$-$1s2p3p$ satellite transitions 7−120273
^{12}C(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
Fe XIII, XIV, intercombination lines identification 7−122486
Fe XXI 135.41 nm line profiles, SMM-UVSP obs. 7−88354
Hα flare kernels and peaks of observed longitudinal elec. current densities 7−127830
Hα line shape and linear polarisation, obs. during pulse phases of two flares 7−140030
^{3}He-rich flares, Si and Fe mean ionic charge 7−127791
Mg XII, 8.42 Å doublet obs. 7−134215
^{16}O(p,X), 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
S XT emission lines, electron collisional excitation and reson. photoexcitation 7−88349

solar furnaces *see furnaces*

solar interior
αω dynamo with α-effect due to magnetostrophic waves, solar appl. 7−79904
acoustic oscillations of frequencies, implications for solar age and comp. 7−79952
acoustic waves and oscillations *(Russian)* 7−127817
connection zone, r-mode oscills. rel. to solar irradiance vars. and active longitudes 7−127825
convection, contrib. of third-order convection to large-scale background mag. field 7−127805
convection in interior, mixing-length theory of deep convection 7−88107
convection patterns, search for giant convection elements using mag. tracers 7−140023
convection zone, contrib. to solar atmosphere heating 7−88348
convection zone, g-mode oscill. generation by coupling of two p-modes 7−145911
convection zone inertial oscillations, effects of superadiabatic gradient and differential rot. 7−140010
convective envelope mean sidereal rot. rate 7−127826
convective zone mag. fields, dynamic oscill. and propulsion 7−72379
convective zone rotation, turbulent heat transport rel. to surface temp. latitudinal vars. *(Russian)* 7−145918
free-free opacities, effect of ion correls. 7−139904
giant convective rolls causing modulation of solar differential rotation 7−134205
mass-losing solar models, comparison with standard solar model 7−145910
matter enhanced solar neutrino oscillations, analytic treatments 7−81078
metal abundance, implications of power spectrum of solar long-period oscills. 7−127802
Mikheyev-Smirnov-Wolfenstein effect in electron-neutrino scattering experiments 7−120228
neutrino electrodynamics and possible consequences for solar neutrinos 7−102676
neutrino emission due to interactions with dark matter particles 7−94616
neutrino flux, statistical significance of possible time vars. 7−107786
neutrino flux measurements, exptl. approaches 7−115348
neutrino oscillations in solar interior, nonadiabatic 7−121402
neutrino problem, neutrinos spectroscopy review 7−94848
neutrino problem, questions and hypotheses 7−115347
neutrino problem, role of neutrino oscills. 7−94847
neutrino problem, test involving neutrino oscills. in Earth 7−72232
neutrino problem (book) 7−88751
neutrino production, implications of ^{3}He(α,γ)^{7}Be and ^{3}H(α,γ)^{7}Li cross sections 7−135335
neutrinos propagation, effect of mag. moment on time var. of neutrino flux 7−79941
neutrinos use in super microscopes, supernovae 7−128877
overshoot layer mag. flux storage 7−94866
p-mode oscillations, search for freq. changes (1980 to 1985) 7−101750
particle-physics model for the Voloshin-Vysotski-Okun solution to the solar-neutrino problem 7−89506
processes and characts. (book) 7−80189
radiative zones non-uniform rot. and mag. fields 7−94860
resonant neutrino oscillations, appl. to solar neutrino problem 7−102668
rotation depth and latit. depend. from p-mode oscillation freqs. 7−101755
solar neutrino problem, possible resolutions, overview 7−94844
solar neutrino problem, relevance of neutrino electric dipole moment in resolution 7−95907
structure, implications of fifth force 7−88087
submerged horizontal flux tubes thermal effects 7−94841
turbulent diffusion due to differential rot., effects on evol. 7−79905
ν capture, effect of cosmic asymmetry on cold dark matter 7−72669
ν problem, energy and ang. depend. calcs. using νe scatt. results 7−108909
ν problem, Fe-rich phase effects in Debye-Huckel approx. 7−79936
ν problem, oscillations, masses and mixing angles, MSW soln. 7−102661
$\nu_e \rightarrow \nu_\mu$ conversion in the Sun, solar neutrino puzzle, density fluctuations influence 7−79934

solar magnetic fields *see solar magnetism*

solar magnetism
2B/X2.8 flare, 1982 March 30, observational study in optical, radio and X-ray ranges 7−115354
αω dynamo with α-effect due to magnetostrophic waves, solar, appl. 7−79904
active region, nonpotential features obs. in vector mag. field 7−115336
active regions, adjacent mag. and vel. struct. 7−140004
active regions, determ. of vel. and mag. fields 7−79907
active regions, radiative intensities and mag. field large scale parameters 7−120347
active regions emerging twisted mag. vectors 7−134206
activity for minima of cycles 13 to 20, geomag. disturbances 7−94614
activity rel. to other stars (book) 7−88751
atmosphere, acoustic waves transform. to slow magnetosonic waves, role of mag. field 7−127693
atmospheric mag. structures simulation 7−139907
background mag. field polarity distrib., spatial var. 7−145921

solar magnetism continued
background magnetic field, Hα maps rel. to solar activity distrib. 7−127805
background magnetic field distrib. and differential rotation 7−79917
chromosphere, acoustic waves propag. through vertical mag. flux tubes 7−94838
compressive waves propag. through fibril mag. fields 7−140009
compressive waves scatt. from slab of mag. flux tubes 7−140008
convection zone, flux tube flow rel. to solar atmosphere heating 7−88348
convective zone mag. fields, dynamic oscill. and propulsion 7−72379
corona, coherent Alfven mode damping in stochastic fluid 7−88095
corona, isolated force free magnetic arches, consistent model 7−115346
corona, mag. heating theory 7−134203
corona, magnetic field characts. determ. from Helios Faraday rot. meas. 7−127831
corona, magnetic fields struct. and solar noise storms polarities 7−127832
corona, magnetic mirror effect on beams of subrelativistic electrons, radio emission evidence 7−140016
corona, magnetic structures rel. to photosphere polarity neutral lines distrib. 7−134209
corona, nonlinear radiative condensation in sheared mag. field 7−139909
corona, quasi-linear relaxation and bremsstrahlung of thick-target electron beams in flares 7−79909
corona 3D magnetic field and photosphere projected solar wind speed 7−107790
coronal arches, evolution, projected charact. method anal. 7−115333
coronal bright points, 6 cm obs. and relation to miniature mag. loops 7−115349
coronal field rot. 7−140003
coronal filamentary magnetic loops, dynamics simulation 7−134212
coronal holes, mag. geometry rel. to MHD tube waves propag. and high-speed solar wind streams 7−115355
coronal loop, Alven waves model for soft X-ray pulsations 7−134204
coronal loops, magnetic energy build-up and storage modelling 7−120344
coronal loops, plasma and mag. field characts. 7−107788
coronal loops, resistive stability to perturbations with short wavelength across mag. field 7−145925
coronal loops and arcades, MHD waves characts. 7−145825
coronal magnetic field tracers, radial var. of differential rot. 7−107800
coronal magnetic fields, meas. from inversion of polarisation of local microwave sources 7−107801
coronal magnetic loops, electron acceleration by electron cyclotron harmonic wave 7−127789
coronal magnetic loops, plasma relaxation oscills. model for fluctuations of Type I radio noise storms *(Russian)* 7−145915
coronal X-ray bright points, MHD modelling 7−145912
dipole moment magnitude, correl. with underground cosmic rays daily var. meas. 7−127658
disturbed filament, material ejecta, Hα obs. and mag. modelling 7−127829
eleven-year cycle, appl. of mag. activity indices to anal. of solar and stellar cycles 7−115380
equatorial neutral sheet, contrib. to solar wind flow in ecliptic plane 7−134073
fibril magnetic field effects, p-mode freq. shift 7−88342
flare, 1980 May 15, mag. field struct. rel. to VLA obs. at 6 and 20 cm wavelengths 7−145913
flare of July 25 1981, magnetic field sign var. with altitude 7−127788
flare X-ray characts., Hinotori obs. review 7−107793
flares, gyrosynchrotron microwave radiation from dense magneto-active plasma 7−145904
flares, preheating phase, gradual and impulsive reconnection 7−134211
flares, stabilising effect of transverse mag. field in current sheets *(Russian)* 7−145917
flux tube, particle propagation effects on wave growth 7−88344
force-free magnetic fields topology, implications for coronal activity 7−72380
forced current sheets, struct. and dissipation, appl. for coronal heating and flares 7−127707
Fourier analysis deconvolution scheme 7−72383
general magnetic field unbalance evidence from anomalies in interplanetary mag. field (1970 to 1981) 7−127803
granulation and magnetic field structures 7−127790
Hα flare kernels and peaks of observed longitudinal elec. current densities 7−127830
homologous flares, energy release, mag. field struct. and spatial morphology, UV and X-ray obs 7−140007
interior and global props. (book) 7−80189
jump conditions across thin mag. flux tube shock front 7−115219
large-scale solar magnetic fields, relation to strong fluctuations of sunspot activity 7−140024
local rigid rotation and Active Centres emergence 7−139999
magnetic reconnection process, numerical simulation 7−101756
MHD modes of periodic mag. medium 7−145823
microwave burst source, mag. field struct. from VLA obs. at 6 cm wavelength 7−101752
neutral lines of large-scale field and solar activity 7−88335
neutrinos propagation, effect of mag. moment on time var. of neutrino flux 7−79941
NOAA 4263 active region, flare and filament activation in distorted mag. field configuration 7−115353
overshoot layer mag. flux storage 7−94866
photosphere, background mag. fields distrib. rel. to global horizontal circulation 7−140025
photosphere, distrib. of polarity neutral lines rel. to coronal mag. structures 7−134209
photosphere, large-scale mag. field morphology rel. to giant convection elements 7−140023
photosphere, optical polarisation meas. at sensitivity of parts in ten million 7−79933
photosphere, oscill. mode classification and wave propag. in magnetically-structured medium 7−140031
photosphere, spurious mag. flux var. assoc. with sunspot group decay 7−101753
photosphere flux tubes modelling 7−139902
physical processes (book) 7−80191
plages, spectral characts. of flux tube models 7−72382
polar magnetic fields, simulations during sunspot cycle 21 (1976 to 1984) 7−107798
polarities from Hα data rel. to magnetograph data 7−120354
post-flare coronal arches, thermal structures 7−120359
solar magnetism continued
post-flare magnetic loops, elec. fields 7−145923
prominence, 2D magnetohydrostatic model 7−145924
quiescent prominences, form. model 7−134207
quiet Sun, small scale motions above conc. mag. regions 7−127827
quiet Sun regions, mag. field meas. from line-ratio method 7−127807
radiative zones non-uniform rot. and mag. fields 7−94860
reversal of dipole field, implications for reversal of Earth's field 7−79923
rigidly rotating mag. field patterns 7−140015
Scheuer-Thomas sunspot model, umbral oscills. spectrum, mag. field effects 7−145931
skew magnetic fieldline reconnection 7−127692
slow sausage waves in mag. tube 7−145824
splitting factors from Lande factors 7−88360
stratified atm., mag. flux tube model 7−127812
submerged horizontal flux tubes thermal effects 7−94841
sunspot umbrae, mag. field and temp. characts. determ. from Mg I 457.1 nm line Stokes profiles 7−140013
sunspots, brightness and mag. fields evol. 7−72385
sunspots, contrib. of mag. flux tubes to acoustic (*p*-mode) oscillations absorpt. 7−140022
sunspots, magnetic fields and vel. gradients determ. method 7−145836
sunspots development, role of mag. diffusion instability *(Chinese)* 7−107785
superhealing instability in active regions of solar atmosphere 7−115358
Ulysses, out-of-ecliptic mission for solar and interplanetary obs. 7−101655
vector magnetic fields, changes during transform. to heliographic coords. 7−134208
X-ray emission and mag. activity implications for stars 7−127816

solar nebula
Allende carbonaceous chondrite, solar nebula origin of chondrule olivine ferrous zoning 7−127783
chondrule precursor components 7−145900
diamonds form. in ureilites 7−120343
formation of Sun and planets (book) 7−88751
gas flow in stellar nebula, contrib. to form. of Jupiter 7−134153
high-FeO silicates in enstatite chondrites, form. in solar nebula 7−101745
magnetic field, inferred from Olivenza meteorite mag. props. 7−134201
mass distributions in nebulae of other solar systems, theoretical model 7−88528
Mercury protoplanet, vaporization model for Fe-silicate fractionation 7−88156
Modern Laplacian theory for solar system form., implications of Voyager-2 Uranus data 7−115297
planet orbit semi-major axis changes during accumulation process 7−145840
planetesimals, two-body resonance capture 7−145846
planetesimals rotation, collision-induced rot. theory 7−134154
protoplanetary disk formation, effects of accretion onto disk 7−88136
protoplanets, orbital migration due to tidal interaction with protoplanetary disk 7−88137
protoplanets, self-regulating growth 7−145841
supernova as collapse trigger, evidence from anomalous ^{50}Ti in refractory inclusions of Murchison carbonaceous chondrite 7−88332
turbulent convection in primitive solar nebula 7−120285
turbulent convection in primitive solar nebular 7−120284
Uranus, internal structure models and rot. rate, implications for planetary accretion 7−120314
viscous accretion disk models rel. to protoplanetary disk structure 7−115266
viscous diffusion stage global evol. 7−94676

solar noise *see noise; solar radiofrequency radiation*

solar origin *see solar evolution*

solar ponds *see energy storage; solar absorber-convertors*

solar power
see also solar energy concentrators
30 kW solar installation with solar array, DC/AC invertor, storage battery and computerised monitoring 7−133089
air conditioning system investigation using finite element method 7−126556
alternative energy source utilisation in German Federal Republic, technical problems *(German)* 7−86755
box-type solar cooker, thermal performance, transient anal. 7−119676
building auxiliary energy loads, discrete Fourier series models, network formulation techniques 7−139085
building materials decoration using concentrated solar energy 7−78608
central receiver solar power system 7−119622
cooker, design and devel. for maximum energy capture in stationary mode 7−71644
cookers, box-type, thermal test procedures 7−144909
design criteria for solar energy systems 7−78659
direct-gain and nonvented Trombe walls, solar energy harnessing performances in Yemen 7−106885
energy storage in protected ground, heat exchange in combined production/drying unit 7−78680
heating system in experimental residence, Mertsavan, Russia 7−78611
heating system in expt. residence, heat balance anal. 7−114083
heating using variable air volume system in offices 7−106887
interzonal heat and mass transfer through doorway by convection 7−100699
kilns, box-type collector, performance determ. methods 7−106929
passive buildings, solar energy appls. conf., Brussels, Belgium (Nov. 1986) 7−128201
passive solar space heating comparisons for seven houses in Birmingham, UK 7−78615
passive solar-heating system for building, temp. regime, air exchange effect 7−78612
performance prediction using insolation values freq. distrib. 7−145655
regenerative energy usage by year 2000 *(German)* 7−71567
renewable energy sources develop., Pakistan 7−78614
Solar Thermal Technology Program, technical focus 7−144787
solar thermal/photolytic destruction of hazardous organic wastes 7−144728
Stirling-cycle heat engine based Solar-Dynamic Space Power Systems 7−126640
thermal and biogas systems, medium term market perspectives, Italy 7−119625
thermal appls. in agriculture, drying, hot water production and greenhouses, book 7−66854

solar power continued
thermal trap material for non-air conditioned building space heating 7−119623
United States solar thermal research and technology, status and progress 7−144788
wind/solar power plants 7−78595
H_2 production using solar energy devices 7−126656

solar power satellites
implications for health and safety, ecology and astronomy 7−86841

solar power stations
see also photovoltaic power systems; solar power satellites
central receiver systems for steam turbine electric generation 7−71577
concentrator automatic tracking schemes and systems *(Romanian)* 7−114080
Eurelios 1 MW helioelectric power plant of European Communities 7−93478
Eurelios project, 1 MW helioelectric power plant of European Communities 7−100698
free-piston Stirling engines for terrestrial solar electric power conversion 7−71632
gas turbines as solar energy converters in space 7−144797
heliostat and central receiver solar power conversion efficiency *(Romanian)* 7−114078
heliostat focal spot characteristics test equipment and methodology *(Romanian)* 7−114079
heliostat kinematics 7−78610
large solar power systems, generic approach to shading effect of collectors 7−133037
metal membrane concentrator, construction and shaping technique 7−126557
photoelectric station with H_2 energy storage, design and charact. 7−86756
state-of-the-art in solar energy utilisation in USA *(German)* 7−119675
tower type solar power stations, start-up of concentrating system 7−78609

solar prominences
2D magnetohydrostatic model 7−145924
2D magnetostatic plasma equilibria, stability analysis 7−120358
1984 May 7, matter vertical motion, Hα obs. 7−79937
active prominence, plasma and spectral charact. *(Japanese)* 7−79940
disturbed filament, material ejecta, Hα obs. 7−127829
erupting prominence, EUV Skylab obs. 7−94843
filaments, fine struct. obs. in Hα 7−140000
filaments locating, relation to photospheric global horizontal circulation 7−140025
local rigid rotation and Active Centres emergence 7−139999
mass ejection-assoc. activity, SMM 1980 study 7−120362
NOAA 4263 active region, flare and filament activation in distorted mag. field configuration 7−115353
nonlinear radiative condensation in sheared mag. field, 2D numerical simulation 7−139909
physical processes (book) 7−80191
quiescent, diagnostic capability of O 777.4 nm line 7−88341
quiescent prominence, 1984 March 23, semi-empirical models 7−79912
quiescent prominences, form. model 7−134207
quiescent prominences, short-period oscills., Ca II obs. 7−107794
TA activity report (1987 July) 7−145907
H I spectrum formation in quiescent prominences, 1-D models with standard partial redistrib. 7−145905
Hα filaments as sources for type III storms, evidence for weak correl. 7−127676

solar pulsations *see stellar pulsations*

solar radiation
see also solar radiofrequency radiation; solar spectra
2B/X2.8 flare, 1982 March 30, observational study in optical, radio and X-ray ranges 7−115354
1980 November 12 17.00 UT flare, SMM obs. and hydrodynamic modelling 7−72381
γ-ray/proton flares, classes charact. 7−94839
active regions, radiative intensities and mag. field large scale parameters 7−120347
chromosphere, effects of Mg II and Ca II line emission on acoustic tube waves propag. 7−94838
chromosphere, submillimetre diagnostics of response to compressional waves 7−115334
chromosphere continuum emission, appl. of spicule model in middle chromosphere to eclipse data 7−79908
corona, mean polarisation brightness meas. rel. to anal. of solar cycles 7−115380
corona, optical struct compared with radio obs. using Clark Lake Radioheliograph 7−115350
corona, total emission measure and struct. 7−127837
coronal flare loop cooling through radiation and conduction 7−120363
coronal soft X-ray power loss, relation to white-light flare parameters 7−88405
coronal soft X-ray pulsations, relation to Alfven waves in mag. loop 7−134204
coronal X-ray bright points, MHD modelling 7−145912
electron corona, polarisation brightness obs. rel. to radial var. of differential rot. 7−107800
emission mechanisms (book) 7−80191
EUV flux, 160-min. modulation rel. to 160-min pulsations of geomag. AE-index 7−127635
flare activity during Periodic Comet Halley (1982i) spacecraft encounters 7−88366
flare complex in distorted mag. field configuration, Hα and total radio flux obs. 7−115353
flare gamma rays, line and continuum spectra from high-energy flare processes 7−115341
flare impulsive phase, hard X-ray spatial struct. 7−134210
flare X-ray charact., Hinotori obs. review 7−107793
flare X-rays, effects on ionic charge states of energetic flare particles 7−88049
flares, Hα line shape and linear polarisation during pulse phases 7−140030
flares, X-ray emission and cosmic rays 7−72390
flares hard X-ray bursts, quasi-linear relaxation and bremsstrahlung of thick-target electron beams 7−79909
flares hard X-ray emission, anisotropy ratio calc. rel. to continuous electron injections/accels. 7−115352

solar radiation continued
flares neutron production and capture γ-ray emission ang. depend. 7−134216
flaring corona X-ray bursts modelling 7−145926
flux variations over time scales of solar rot. 1978 to 1982, statistical anal. 7−114913
green corona, intensity, latitude distrib. (1951 to 1985) *(Japanese)* 7−79939
hard X-ray emission and flare electrons stochastic accel. 7−134213
intensity variations revealed by sea surface temperature study 7−139631
irradiance variations, contrib. of global r-mode oscills. 7−127825
luminosity variations, implications of photospheric spectral lines vars. (1976 to 1985) 7−115338
Lyman alpha and interplanetary Lyman α 7−127665
multiperiodic irradiance changes caused by *r*-modes and *g*-modes 7−127826
neutrino emission due to interactions with dark matter particles 7−94616
neutrino flux, statistical significance of possible time vars. 7−107786
optical polarisation, meas. at sensitivity of parts in ten million 7−79933
paraphoton-electron coupling strengths, astrophysical bounds from Sun and white dwarfs 7−127717
photosphere granulation, power spectra determ. from speckle interferometry 7−94835
pion-decay emission from 1982 June 3 flare, interaction model 7−127798
plages, Ca II H and K line irradiance rel. to indices for stellar plages 7−115339
plages spectra, Hα line indices rel. to stellar plages spectra 7−115340
pressure, effect on artificial satellites rot. 7−120240
quiescent prominence, 1984 March 23, semi-empirical models rel. to radiative energy losses 7−79912
short hard X-ray events, evidence for repetitive structures 7−140020
short-term luminosity variations, influence on atmospheric O_3 concs. *(Russian)* 7−145592
solar constant, Soviet satellite-borne meas. 7−72387
solar constant changes and influences on Earth's atmos., conf., USA (1985) 7−72696
solar constant changes due to sunspots and faculae 7−79926
solar constant changes in AD 1968 to 1985 period, on time scales of minutes to years 7−79924
solar constant due to sunspots and faculae 7−79925
solar constant influenced by solar active regions 7−79928
solar constant variation, correl. with active sunspot area peaks and coronal 260 MHz flux 7−145928
temporal trends of solar EUV and UV full-disk fluxes 7−127828
THF brightness temperature determ. from spectral obs. 7−140005
transition region UV brightenings, Si IV and O IV obs. 7−72384
UV flux vars., atmospheric temp. response to solar cycle 7−120110
UV irradiance (200 to 358 nm) meas. 7−134134
UV irradiation calc. for human cornea rel. to required sunglass lens transmittances 7−93962
UV variability, review 7−79931
variability and oscillations, review 7−127822
X-ray bursts from flares, hard X-ray Halpha charact. *(Chinese)* 7−115342
X-ray emission, studies by Birmingham University Department of Space Research 7−88362
X-ray emission and mag. activity implications for stars 7−127816
X-ray emission assoc. with February 1986 flares and their assoc. geomag. disturbances 7−127653
X-ray emission rel. to radio continua during flares 7−79918
young Sun, calculated UV fluxes compared with UV spectrophotometry of T Tau stars 7−88411
$^{12}C(p,X)$, 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388
Ca K-index use for rot. rate determ. 7−145929
H, Lyman α radiation loss rates 7−94842
$^{16}O(p,X)$, 40-85 MeV, cross sections for astrophysically significant γ-ray lines by excitation and spallation 7−81388

solar radio emission *see solar radiofrequency radiation*

solar radiobursts *see solar radiofrequency radiation*

solar radiofrequency radiation
2B/X2.8 flare, 1982 March 30, observational study in optical, radio and X-ray ranges 7−115354
10.7 cm flux variations over time scales of solar rot. 1978 to 1982, statistical anal. 7−114913
10.7-cm flux, short-term vars. rel. to atmospheric O_3 concs. *(Russian)* 7−145592
160-minute brightness oscillations, obs. at millimetre wavelengths 7−127810
active region structure at 1.35-cm wavelength determ. from occultation obs. during solar eclipse (1982 December 15) 7−127809
Boulder Region 4500, UHF and SHF obs. during partial eclipse 7−127797
bursts, night-time reception over wide bandwidths 7−127799
centimetric emission, temporal variability at 10.7-cm wavelength 7−79930
chromosphere-corona transition region, depression of radio emission flux of unresolved fine structures *(Russian)* 7−145916
compact variable sources, VLA obs. 7−88346
complex gradual microwave burst, VLA obs. at 6 cm wavelength 7−101752
corona, large-scale struct. from radio obs. using Clark Lake Radioheliograph 7−115350
corona, magnetic mirror effect on beams of subrelativistic electrons, radio emission evidence 7−140016
outer corona at radio wavelengths 7−88356
coronal 260 MHz flux rel. to solar constant variation 7−145928
coronal bright points, obs. at 6 cm wavelength 7−115349
coronal streamers, propagation of type III burst-emitting electrons 7−120360
cycle 22 forecast using dynamo theory method 7−127800
dm-spikes rel. to flare phenomena in 1983 October 14 event 7−79919
emission mechanisms (book) 7−80191
fibre burst, 1981 August 19, metre-wave obs. rel. to plasma parameters in coronal loop 7−115351
flare, 1980 May 15, simultaneous VLA obs. at 6 and 20 cm wavelengths 7−145913
flare complex in distorted mag. field configuration, Hα and total radio flux obs. 7−115353
flare radio continua rel. to X-ray emission 7−79918
geostationary satellite links, Sun interference periods determ. 7−134219

olar radiofrequency radiation continued
kilometre-wave type III bursts, visibility function from Voyager and Earth-based obs. 7−94836
microbursts in 30-70 MHz range 7−88345
microwave bursts, energy parameters rel. to electron fluxes in interplanetary space 7−120353
microwave bursts-flare association, comparative study for post-max. periods of consecutive solar cycles 7−140026
microwave emission from solar electron beams, obs. of drifting microwave fine structs. 7−79911
microwave fast absorption phenomenon obs. 7−134218
microwave fluctuations, implications of coordinated 4.75 GHz obs. 7−79913
microwave radiation from dense magneto-active plasma, gyrosynchrotron emission theory 7−145904
microwave sources, polarisation inversion obs. rel. to coronal mag. fields meas. 7−107801
noise storm, VLA obs. 7−140017
noise storms, burst-length distrib. and burst component energy spectrum 7−127808
noise storms polarities rel. to interplanetary mag. fields sector struct. 7−127832
time series, low dimensional attractor 7−79935
Type I radio noise storms fluctuations, plasma relaxation oscills. model *(Russian)* 7−145915
type II bursts, synchrotron-maser emission theory 7−88350
type II radio bursts, assoc. Langmuir waves free energy source charact. 7−115345
type II radio bursts, mechanism 7−94580
type III burst and plasma-maser effects 7−115232
type III bursts, role of electron acceleration by electron cyclotron harmonic wave 7−127789
type III bursts and ^{3}He-rich events, particles accel. charact. 7−94615
type III bursts and nonlinear wave-wave interactions 7−94840
type III bursts assoc. with ^{3}He-rich particle events from coronal source regions 7−134217
type III emission and solar wind bump-in-tail driven Langmuir waves 7−134105
type III storms, trajectories in interplanetary medium, backtracking and sources charact. 7−127676

solar radiowaves *see solar radiofrequency radiation*

solar rotation
convection zone inertial oscillations, effects of superadiabatic gradient and differential rot. 7−140010
convective envelope mean sidereal rot. rate 7−127826
convective zone rotation, turbulent heat transport rel. to surface temp. latitudinal vars. *(Russian)* 7−145918
corona rot. rate of large-scale struct. from Clark Lake Radioheliograph obs. 7−115350
coronal magnetic field 7−140003
coronal rotation compared to interplanetary recurrence, for 1964 to 1976 period 7−127666
depth and latitude dependence, determ. from obs. of p-mode oscillation freqs. 7−101755
differential rotation, relation to photospheric global horizontal circulation 7−140025
differential rotation and background magnetic field distrib. 7−79917
differential rotation and dynamo for spiral spots form. 7−134206
differential rotation of photospheric mag. tracers, relation to giant convection elements 7−140023
electron corona, radial var. of differential rot. 7−107800
elements of rotation (i and Ω), determ. from recurrent single sunspots 7−72378
EUV and UV full-disk emissions, solar rot.-induced var. 7−127828
flare-producing active zones, rot. period (1980 to 1985) 7−115337
flux variations over time scales of solar rot. 1978 to 1982, statistical anal. 7−114913
giant convective rolls causing modulation of solar differential rotation 7−134205
interior and global props. (book) 7−80189
internal rotation from acoustic and gravity normal mode spectra, implications for gravit. quadrupole moment 7−79944
local rigid rotation and Active Centres emergence 7−139999
oscillation frequencies, rot. decomposition *(French)* 7−94845
radiative zones non-uniform rot. and mag. fields 7−94860
rate determination from Ca K-index 7−145929
rigidly rotating mag. field patterns 7−140015
slower rotation during Maunder minimum 7−72388
spectral line asymmetries, amplification by rotation 7−101757
splitting obs. in solar rot. calcs. *(French)* 7−79920
turbulent diffusion due to differential rot., effects on evol. 7−79905

solar spectra
see also solar activity; solar radiation
1980 November 12 17.00 UT flare, SMM obs. and hydrodynamic modelling 7−72381
1983 February 3 chromospheric flare, time-match semi-empirical models and spectral obs. 7−134214
1984 May 7 prominence, matter vertical motion, Hα obs. 7−79937
absorption line computation, weighting-fn. method of solar and stellar spectra 7−88128
absorption line formation depth and contrib. functions 7−88337
active prominence, plasma and spectral charact. *(Japanese)* 7−79940
chromosphere, effects of Mg II and Ca II line emission on acoustic tube waves propag. 7−94838
chromosphere Ca II K-line variations over solar cycle 7−88340
chromosphere flash spectrum, appl. of spicule model in middle chromosphere 7−79908
chromosphere long-period mass vel. oscills. 7−145930
coronal Fe XII emission, electron excitation of fine-struct. transitions within ground $3s^23p^3$ configuration 7−145816
Doppler velocity observations, appl. to power spectrum of long-period solar oscills. 7−127802
equivalent widths of spectral lines, quality anal. of Moore, Minnaert and Houtgast data 7−107797
erupting prominence, EUV Skylab obs. 7−94843
faculae, H line profiles in visible and IR, models 7−140027
flare, Mg XII, 8.42 Å doublet obs. 7−134215
flare gamma rays, line and continuum spectra from high-energy flare processes 7−115341

solar spectra continued
flare gamma-ray lines intensities, appl. to proton spectrum determ. *(Russian)* 7−72389
flare of July 25 1981, magnetic field sign var. with altitude 7−127788
flare X-ray charact., Hinotori obs. review 7−107793
flare X-ray spectra, line identifications in high-temp. flare 7−88363
flare X-ray spectra and ionisation balance of Fe XXV, XXIV and XXIII 7−120348
flare-associated microwave bursts, spectra during post-max. periods of consecutive solar cycles 7−140026
flares, capture γ-ray line emission 7−134216
flares, Hα line shape and linear polarisation during pulse phases 7−140030
flares, impulsive phase, nonthermal energy distributions determ. from Fe XXV and Fe XXIV lines obs. 7−140018
flares hard X-ray emission, anisotropy ratio calc. rel. to continuous electron injections/accels. 7−115352
flares near-IR spectra, H I and He I line profiles 7−127804
flares X-ray spectra, line ratios rel. to plasma temp. determ. 7−115335
full-disk, velocity meas., search for p-mode freq. changes (1980 to 1985) 7−101750
full-disk Doppler images, appl. to determ. of depth and latit. depend. of solar rot. 7−101755
high-resolution spectrum atlas (117.5 to 171.0 nm) 7−79849
ion-collision broadening in far IR and submm spectrum 7−120349
lanthanides in photosphere 7−88338
large flares gradual phase, assoc. chromosphere gentle evaporation, Hα obs. 7−127792
line formation in finite slabs, resonance polarization 7−101668
low-latitude coronal hole, vel. fields anal. C IV obs. with SMM 7−127794
magnetic fields, Fourier analysis deconvolution scheme 7−72383
microwave radiation from dense magneto-active plasma, gyrosynchrotron emission theory 7−145904
optical polarisation, spectral depend. of circular polarisation at sensitivity of parts in ten million 7−79933
photosphere, altitude gradient of small-scale vel. fluctuation 7−139998
photosphere, spectra of Ti I and Cr I, LTE anal. evidence for non-LTE in excitation 7−120346
photosphere ^{3}He abundance determ. from flare 2.223 MeV γ-ray line obs. 7−140019
photosphere line asymmetries, amplification by rotation 7−101757
photosphere lines variations, 1976 to 1985, implications for solar luminosity vars. 7−115338
photosphere oscillations, study using electrooptic Fabry-Perot filter in spectrophotometer 7−120276
photosphere spectrum, appl. of spherical harmonic anal. technique for steady photospheric flows 7−107795
plages, spectral charact. of flux tube models 7−72382
plages spectra, Ca II H and K line indices and appl. to stellar plages spectra 7−115339
plages spectra, Hα line indices rel. to stellar plages spectra 7−115340
quiescent prominence, 1984 March 23, semi-empirical models rel. to Balmer and Ca II line profiles 7−79912
quiescent prominences, diagnostic capability of O 777.4 nm line 7−88341
quiescent prominences, short-period oscills., Ca II obs. 7−107794
quiet Sun, small scale motions above conc. mag. regions 7−127827
spectral changes in photosphere and chromosphere, solar cycle 21 observations 7−79929
sunspot penumbra, Evershed effect rel. to photospheric line equivalent width 7−140032
sunspot umbrae, mag. field and temp. charact. determ. from Mg I 457.1 nm line Stokes profiles 7−140013
sunspots, magnetic fields and vel. gradients determ. method 7−145836
sunspots, umbral oscills. obs. in Mg II k-line 7−107799
THF brightness temperature determ. from spectral obs. 7−140005
transition region, UV Al III emission lines 7−120352
transition region and coronal response to heating rate perturbations 7−140014
UV lines, SMM obs. of flares and transient brightenings 7−88353
UV measurements (200 to 358 nm) 7−134134
velocity-dependent inertial induction, supergravity shift at solar limb 7−79823
wind outflow vel. causing line excitation by chromospheric-transition region radiation in nearby line 7−107787
X-ray wavelength predictions for the $1s^22p$-$1s2p3p$ satellite transitions in flares 7−120273
Zeeman splitting factors from Lande factors 7−88360
Al I and II, hollow-cathode discharge, Fourier transform IR spectra 7−74493
Al XII, line ratios sensitive to electron temp. and density 7−127719
C III, laboratory plasma emissions compared with astrophysical obs. 7−115224
C, N and O abundances, determ. from optical and near-IR spectra 7−120376
CN weak lines, photospheric turbulent vels. 7−88336
Ca II K-line, obs. and oscillatory props. of mesostructures in solar chromosphere 7−101754
Ca II line profile disturbances, appl. of nonlinear inversion method 7−94837
Ca K-index use for rot. rate determ. 7−145929
F VI, laboratory plasma emissions compared with astrophysical obs. 7−115224
Fe I 524.7 and 525.0 nm, line ratios meas. rel. to mag. fields outside active regions 7−127807
Fe I lines, I- and V-parameters calc. rel. to spurious var. of photospheric mag. flux 7−101753
Fe XIII, XIV, intercombination lines identification 7−122486
Fe XIII 1074.7 nm coronal emission line polarization 7−101751
Fe XXI 135.41 nm line profiles of solar flares, SMM-UVSP obs. 7−88354
H I spectrum formation in quiescent prominences, 1-D models with standard partial redistrib. 7−145905
H, Lyman α radiation loss rates 7−94842
Hα fine structure of polarized flare elements 7−88357
K I 769.9 nm resonance line, centre-limb var. of line asymmetries and shifts with granulation and oscills. 7−107796
Mg, solar IR emission lines, Edlens polarisation formula 7−115344
Ne IX, emission line ratios, electron excitation rates and plasma charact. 7−140012

solar spectra continued
Ne VII, laboratory plasma emissions compared with astrophysical obs. 7−115224
O V, laboratory plasma emissions compared with astrophysical obs. 7−115224
S XT emission lines, electron collisional excitation and reson. photoexcitation 7−88349

solar stills *see distillation; solar absorber-convertors*

solar system
see also celestial mechanics; planets; solar nebula; Sun
absolute motion 7−101992
barycentre, adoption as reference point for timing of variable star obs. 7−88123
celestial mechanics, unsolved problems 7−72256
celestial mechanics, unsolved problems 7−72257
comets formation time, implications of radiogenic heating by ^{26}Al 7−145879
comets of small size and large abundance, limitation set by interplanetary spectral intensity 7−101732
dust, COSPAR meetings, Toulouse, France (June-July 1986) 7−108007
evolution, minor bodies and fragmentation 7−145842
evolution of small solar system bodies, conference, Varenna, Italy (August 1985) 7−140373
formation, 3D gas flow in stellar nebula leading to form. of Jupiter 7−134153
formation, comets prod. in wind-driven shell around proto-Sun 7−88203
formation, orbital migration of protoplanets due to tidal interaction with protoplanetary disk 7−88137
formation, planetesimals rotation induced by collisions 7−134154
formation, possible mass distribs. in nebulae of other star systems 7−88528
galactic disk crossing events, assoc. comet impacts on Earth causing volcanism and mass extinctions 7−94167
heliosphere boundary determ., cosmic ray characts. anal. 7−115260
impact cratering record, Voyager 2 results at Uranus and implications for origin of impacting objects 7−134179
local condensations in collisional discs 7−72339
Nemesis, accretion, high-energy radiation implications for Earth 7−120286
Oort cloud, freq. and intensity of comet showers 7−145889
Oort cloud, galactic tidal effects 7−94744
Oort cloud and comets 7−94677
Oort cloud models rel. to processed giant comets 7−94743
Oort cloud perturbations, relation to episodic comet showers and 30 Myr cyclicity in terrestrial record 7−127777
penetration of charged interstellar dust into the Solar System 7−120562
planetary accretion timescales and protoplanetary disk structure 7−115266
primitive material search rel. to comets 7−115261
protoplanetary disk formation, effects of accretion onto disk 7−88136
s-process abundances, effects of neutron capture nucleosynthesis during core He burning in massive stars 7−107805
satellites of solar system, props, and internal structs. 7−127749
structure, implications of Voyager-2 Uranus encounter data 7−115297
Titius-Bode law for planet distances in solar system, gravitational explanation 7−101667
D/H ratio in ordinary chondrites 7−145898
H isotope abundances in unequilibrated chondrites 7−145897

solar-terrestrial relationships
21st century, high solar activity prediction and terrestrial consequences 7−115357
1982 November-December solar-geophysical activity 7−88355
1986 February flares and assoc. geomag. storm characts. 7−127653
aeronomy, introduction 7−120189
atmosphere nonsphericity, ellipsoid major axis orientation rel. to solar right ascension *(Russian)* 7−127475
atmosphere O_3 concentration, influence of short-term solar radiation vars. *(Russian)* 7−145592
atmosphere of Earth, solar UV changes, influences on middle atmos. at low-latitude 7−79510
atmospheric parameters variation with solar activity, implications of solar flux vars. anal. 7−114913
atmospheric temperature response to solar cycle UV flux variations 7−120110
auroral frequency in relation to solar-terrestrial and interplanetary parameters, latit. depend. 7−134048
bacteria, agglutination rel. to cosmic ray neutrons, cosmo-helio-geophysical factors 7−107004
coronal transients, influences of magnetosphere and ionosphere 7−139876
equatorial middle atmospheric temp. response to solar activity (1971-82) 7−145645
equatorial temp. response to solar activity (1971-82) 7−145645
geomagnetic activity, quiet days in fluctuating activity rel. to solar wind flow in ecliptic plane 7−134073
geomagnetic AE-index, obs. of 160-min pulsations assoc. with solar 160-min pulsations 7−127635
geomagnetic disturbances (for minima of solar cycles 13 to 20) 7−94614
geomagnetic variations showing solar cycle variations 7−107342
hydrodynamic systems, random fluctuations, space-time spectra 7−69198
Indian southwest monsoon, variation of onset over Kerala with solar activity 7−133916
interplanetary mag. field, sectoral structure, geomagnetic effect, geophysical and biomedical evaluation 7−79797
ionospheric periodic electron density vars. rel. to 160-min solar oscills. 7−88019
magnetic storms, effect of interplanetary parameters as function of geomag. latit. 7−101639
magnetospheric activity influenced by solar flare compact triplets 7−145794
mesopause region winds, long-period changes and possible solar cycle influence 7−87991
mesosphere pressure, detect. of 11 yr solar cycle 7−115121
meteorology, effects of IMF sector struct. on midlatitude troposphere and stratosphere 7−101453
meteorology, Sun-weather relationships, new theory 7−72130
Nile River, flood records since AD 650, showing 18.6 year period 7−139660
North Pole region, stratospheric temp., sunspot numbers and quasi-biennial oscillation 7−120074

solar-terrestrial relationships continued
ocean surface temperature, rel. to solar radiation intensity variations 7−139631
Pichi-Richi Pass rocks, Australia, ancient sedimentation reflecting astronomical effects 7−133678
Pleistocene climate and insolation 7−127460
Precambrian climate, solar-cycle effects on surface temperature 7−87891
processes (book) 7−88751
solar constant changes and influences on Earth's atmos., conf., USA (1985) 7−72696
stratosphere, O_3 and temperature changes due to solar UV variations 7−79511
stratosphere, wave motions, rel. to solar activity 7−139718
stratosphere and mesosphere of Earth, solar UV induced variations 7−79509
thermosphere NO density profiles at solar cycle 21 diminishing phase 7−79730
thermosphere of Earth, changes induced by solar EUV variations, review 7−79729
troposphere, thermal regime, rel. to solar activity *(Russian)* 7−127347
upper atmosphere, influence of solar activity level changes 7−134036
O_3, solar cycle influence on atmos. total ozone 7−87809

solar visible radiation *see sunlight*

solar wind
2D structure near Sun, MHD simulation 7−120233
3D scintillation structures modelling 7−88070
Alfven waves, simulation of amplitude-modulated circularly modified waves 7−134079
Alfven waves (oblique) causing heating of solar wind 7−79798
Alfven waves interacting with terrestrial magnetosphere 7−94607
Alfven waves of low freq., source location 7−88061
alpha particles density profiles near outer coma of Periodic Comet Halley (1982i) 7−88213
AMPTE ion release expt., southward ion cloud motion explanation 7−94612
AMPTE neutral Li cloud release expt., 7−139878
AMPTE solar wind ion releases, shocklike electrostatic noise characts. 7−94628
anisotropic particle fluxes accelerated in the interplanetary medium 7−79795
anomalous components of solar wind, review 7−127659
auroral frequency in relation to solar wind streams, latit. depend. 7−134048
Birmingham University Department of Space Research, role in solar and heliosphere research 7−88362
bow shock, obs. and modelling of diffusive shock accel. 7−139859
bump-in-tail driven Langmuir waves during type III emission 7−134105
Bz field component and magnetotail convection pattern 7−94583
charge state of minor ions, and corona non-Maxwellian electrons 7−72236
charged particles accel. in heliosphere, use of method of generations 7−88056
charged particles activity during Periodic Comet Halley (1982i) spacecraft encounters 7−88366
circumsolar plasma, frequency shift accompanying radio waves propagation 7−79938
closed magnetic field line structs. from proton temp. obs. 7−120238
collisionless plasma, quasiperpendicular shock wave interaction 7−137083
collisionless shocks in heliosphere (book) 7−115698
P/Comet Giacobini-Zinner, magnetotail configuration and current sheet 7−72242
P/Comet Giacobini-Zinner, theory for low-freq EM waves 7−107755
P/Comet Giacobini-Zinner (1984 XIII), ICE obs. of magnetotail and solar wind interaction 7−79891
P/Comet Giacobini-Zinner (1985 XIII), solar wind interaction, gasdynamic interpretation 7−88245
P/Comet Giacobini-Zinner (1985 XIII) interaction, gasdynamic interpretation of ICE measurements 7−94691
P/Comet Halley(1982i), disconnection events in 1986 April, assoc. solar wind characts. 7−88217
P/Comet Halley (1982), pre-shock region, ions stochastic Fermi accel. 7−88240
P/Comet Halley (1982i), bow shock, cometary H_2O group ions obs. 7−88247
P/Comet Halley (1982i), cometosheath plasma characts., Vega obs. 7−88221
P/Comet Halley (1982i), energetic particles and mag. field environment 7−107758
P/Comet Halley (1982i), ion pick up-mass loading process obs. by Suisei 7−88242
P/Comet Halley (1982i), mag. pile-up region and cavity boundaries, Giotto meas. 7−79884
P/Comet Halley (1982i), MHD model 7−79885
P/Comet Halley (1982i), near-comet bow shock, fine struct., plasma wave obs. 7−88237
P/Comet Halley (1982i), plasma structures, solar wind effects 7−79886
P/Comet Halley (1982i), plasma-solar wind interaction, Giotto implanted ion spectrometer meas. 7−139924
P/Comet Halley (1982i), protons picked up by solar wind, Giotto obs. 7−79882
P/Comet Halley (1982i), solar wind flow through bow shock 7−88239
P/Comet Halley (1982i), solar wind interaction, gasdynamic interpretation 7−88245
P/Comet Halley (1982i), solar wind interaction, Giotto obs. 7−79883
P/Comet Halley (1982i), solar wind interaction, spacecraft obs. 7−94712
P/Comet Halley (1982i), solar wind ions in coma, charge exchange 7−88243
P/ Comet Halley (1982i), solar wind mass loading 7−120235
P/Comet Halley (1982i), solar wind plasma characts. in cometopause region 7−88230
P/Comet Halley (1982i), upstream region, foreshock and bowshock wave characts. 7−88238
P/Comet Halley (1982i), upstream solar wind plasma characts., Giotto meas. 7−79800
P/Comet Halley (1982i), waves in mag. field and solar wind flow outside bowshock 7−88241
P/Comet Halley (1982i) and comets, conf., Heidelberg, Germany (1986 October) 7−72721
P/Comet Halley (1982i) bow shock, Giotto meas. of cometary and solar wind plasma 7−107756

olar wind continued
P/Comet Halley (1982i) interaction, auroral model for electron fluxes and plasma waves during Vega 2 encounter 7−134183
P/Comet Halley (1982i) interaction, plasma characts. observed by Suisei 7−79889
P/Comet Halley (1982i)-solar wind interaction region, Giotto electron obs. 7−79890
comet interaction with solar wind, upstream pickup ions 7−145892
comet interactions, LF plasma turbulence and instabilities excitation 7−127697
comet ionosphere model 7−127775
comet nuclei-solar wind interaction, laboratory modelling of ion-mol. cluster prod. 7−107759
comet tail disturbances and magnetic disturbances 7−94784
comet-solar wind interaction, influence of plasma turbulence on new cometary ions 7−145795
comet-solar wind interaction, model of turbulence generation 7−145796
cometary bow wave, ICE analysis of P/Comet Giacobini-Zinner (1985 XIII) 7−94816
cometary interactions, laser simulation of effects of UV radiation and plasma streams *(German)* 7−134124
comets, electron impact ionization of coma by solar wind 7−127776
comets, ion interaction with solar wind outside bow shock 7−72241
comets, plasma-solar wind interaction 7−79881
compound streams, magnetic clouds, and major geomagnetic storms 7−107686
corona 3D magnetic field and photosphere projected solar wind speed 7−107790
coronal holes mass flux, MHD modelling of coronal X-ray bright points 7−145912
coronal mass ejecta causing draping of mag. field lines 7−107683
coronal mass ejection (1980 September 1) vel. field 7−94846
coronal mass ejection event of 6 July 1980, a coronal shock wave 7−72386
coronal mass ejections, review of recent work 7−127823
coronal rotation compared to interplanetary recurrence, for 1964 to 1976 period 7−127666
coronal transients and influences on solar wind, magnetosphere and ionosphere 7−139876
cosmic ray shocks, short-wavelength compressive instabilities, heat conduction 7−127654
cosmic ray variations and mag. field fluctuations in outer heliosphere 7−115187
current system, numerical computations 7−88064
dynamic pressure model for P/Comet Halley (1982i) tail disconnection event 7−94782
early-main-sequence mass-loss episode, effects on struct. and comp. of present Sun 7−145910
Earth bow shock, nonlinear MHD waves generation by reflected H^+ 7−115183
ecliptic plane solar wind flow, relation to geomag. quiet days and fluctuating activity 7−134073
electron cyclotron harmonic waves, AMPTE-IRM plasma wave expt. 7−107687
electron distribution functions of unusual type, Helios plasma expt. obs. 7−72239
electron velocity distrib. functions, between 0.3 and 1 AU 7−72240
electron velocity distrib. functions, derived from Helios plasma expt. 7−72238
energetic ions acceleration by quasiperpendicular shock 7−72243
flare-related interplanetary phenomena, COS PAR 26th plenary meeting, Toulouse, France (June to July 1986) 7−115670
flux transfer events, field and flow perturbations outside reconnected field line region 7−79787
geomagnetic activity index (Ap) between AD 1947 and 1978, rel to solar wind struct. 7−79216
geomagnetic field observations and mid and low latitudes, influenced by IMF sector effect *(Chinese)* 7−139856
P/Halley(1910 II), 1910 May 13 kinked ion tail due to sector boundary crossing 7−88216
P/Halley (1982i), plasma-solar wind interaction, Giotto electron plasma expt. meas. 7−139884
heliopause, filtering of local interstellar medium, Monte Carlo simulation 7−120230
heliosphere boundary determ., cosmic ray characts. anal. 7−115260
heliosphere interface, elastic-collisional coupling between protons and He of interstellar origin 7−80064
heliosphere pulsations, search for assoc. cosmic ray intensity vars. 7−120225
heliospheric boundary modulation of cosmic rays and interplanetary radial gradients 7−127657
high-speed streams, energy input by MHD tube waves in coronal streams 7−115355
high-speed streams at 1 AU, magnetic field configuration 7−120239
IMF field draping about fast solar coronal mass ejecta 7−107683
interaction with P/Comet Halley (1982i), magnetic field draping in coma 7−127772
interaction with Periodic Comet Halley (1982i), results from plasma wave analyser (APV-V) on board Vega spacecraft *(French)* 7−120324
internal energy eqn. for multicomponent anisotropic solar wind plasma 7−94623
interstellar pickup ion evolution model 7−72237
ion acceleration by nearly perpendicular shock waves 7−88068
ion beam marginal stability, observational evidence 7−127669
ion pick-up from planetary atm., role of quasi-parallel bow shock 7−94627
ion solitary waves in magnetized plasma, obliquely propagating *(Chinese)* 7−115196
Jupiter, magnetosheath dayside ion distributions 7−115284
Jupiter, radio-emission at various freq., source extent and solar wind effects 7−127761
Jupiter magnetosphere plasma depletions, due to transport and solar wind interaction 7−107740
kinematic parameters of protons and α-particles, behaviour as function of solar wind vel. *(German)* 7−134104
large-scale fluctuations of interplanetary medium, 1 to 9 AU 7−79796
latitudinal dependence of solar wind speed 7−145798
Lyman alpha var., Pioneer Venus obs. 7−127665
magnetic clouds, response of magnetosphere 7−88045
magnetic field, Giotto magnetometer expt. 7−139883
magnetic field characts. near Sun, Helios Faraday rot. meas. 7−127831

solar wind continued
magnetic field effect on tail of Periodic Comet Halley (1982i) 7−88072
magnetic field enhancements assoc. with Apollo asteroid 2201 Oljato 7−120234
magnetic field rel. to ion fluxes at large distances from Periodic Comet Halley (1982i) 7−88215
magnetic field southward turning, large-scale response of magnetosphere 7−94584
magnetic fields rotation at solar wind base, implications of differential rot. obs. in electron corona 7−107800
magnetic flux meridional transport between 1 and 10 AU, theory 7−127667
magnetic polarity asymmetry, relation to unbalance in general solar mag. field (1970 to 1981) 7−127803
magnetosphere, global convection elec. field and current due to coupling with solar wind 7−115155
magnetosphere and ionosphere of Earth interaction with solar wind 7−145783
magnetosphere interaction, effect of interplanetary parameters on mag. storms as function of geomag. latit. 7−101639
magnetosphere interaction, mag. reconnection rel. to field-aligned currents near magnetosphere cusp regions 7−134059
magnetosphere interaction, reconnection-associated nonstationary phenomena in magnetopause tail region *(German)* 7−134092
magnetosphere interaction, solar wind disturbances rel. to relativistic electron fluxes at geosynchronous orbit *(German)* 7−134093
magnetosphere interaction and geomagnetic disturbances (for minima of solar cycles 13 to 20) 7−94614
magnetosphere of Earth, bow shock and shock drift acceleration at low energies 7−72224
magnetosphere of Earth, foreshock compressional waves 7−107655
magnetosphere of Earth, interplanetary medium influence on magnetospheric unrest 7−88034
magnetosphere of Earth, MHD flow of solar wind near the stagnation point 7−145776
magnetosphere of Earth, shock geometry for supersonic and hypersonic solar wind flow 7−107673
magnetosphere of Earth, upstream region, ion beams and ion-ion acoustic instability 7−107662
magnetosphere of Earth, upstream waves observed by ISEE and UKS spacecraft 7−127643
magnetosphere-solar wind coupling, conf., Pasadena, USA (Feb. 1985) 7−95105
Mars, magnetosphere plasma flow and influence on neutral atmos. evolution 7−107735
mass loss from early Sun, implications for early solar system 7−88416
Mercury, solar wind-magnetosphere interactions leading to VLF emissions and surface heating 7−107732
MHD wave instability, theory 7−79794
MHD waves assoc with pick-up ions 7−120266
model with power spectrum of Alfvenic fluctuations 7−127677
nonlinear wave decay processes, AMPTE IRM plasma wave expt. obs. 7−107688
nonlinear wave-wave interactions and type III bursts 7−94840
northward interplanetary mag. field-assoc. field aligned currents, global characts. 7−94587
outflow vel. causing line excitation by chromospheric-transition region radiation in nearby line 7−107787
Parker field mag. helicity 7−107682
particle acceleration in flares, review 7−127824
particle transport in mag. field, effect of MHD turbulence 7−88066
Pc 3 pulsations shown to correlate with solar wind speed 7−115172
planetary interactions, laser simulation of effects of UV radiation and plasma streams *(German)* 7−134124
planetary non-thermal radio emission, solar wind effects 7−79793
planetary surfaces interaction, methane ice erosion by energetic ions 7−115294
plasma, Giotto 3D positive ion analyser meas. 7−139888
plasma, toroidal Alfven solitons 7−88063
plasma and particle meas. by Vega probes near P/Comet Halley (1982i) *(Hungarian)* 7−115310
plasma dynamics simulation for AMPTE expt. 7−94626
plasma interaction with Periodic Comet Halley (1982i) plasma and Periodic Comet Giacobini-Zinner (1985 XIII) 7−88071
plasma meas. with Giotto EPONA lightweight energetic particle detector 7−139923
plasma turbulence, ISEE 1 and 2 propagation expts. 7−120231
plasma turbulence and hydrodynamic waves by ideal MHD eqns. theory 7−127673
pressure, effect on solar cosmic ray fluxes in magnetosphere 7−72226
propagation of Jovian electrons to 1 AU 7−88062
proton tail and double beam generation by Coulomb collisions 7−127668
proton temperature characts. 7−79799
protons, collisional heating of interstellar He atoms in heliosphere 7−101653
protons and heavy ions behaviour, Prognoz 7, 8 investig., appl. to solar corona characts. determ. 7−120232
protons of low-energy associated with interplanetary shocks as a coherent population 7−127671
quasi-parallel shocks, upstream and downstream MHD fluctuations 7−94625
quiet conditions and magnetotail lobe characts. 7−88042
review of recent research 7−127674
Saturn, magnetosheath dayside ion distributions 7−115284
scintillation obs. of flat-spectrum sources at 102.5 MHz, scintillation components characts. *(Russian)* 7−128107
sector structure and solar noise storms polarities 7−127832
shear Alfven wave, reson. mode conversion, appl. to plasma heating in solar wind 7−104389
shock wave, cosmic rays accel. 7−88056
shock wave due to 1979 August 18 solar flare, interplanetary scintillation obs. 7−88067
shock wave transition in inner solar wind, slow to fast shocks 7−107684
shock waves, research aspects 7−83248
shock waves and cosmic ray fluctuations power spectra var. 7−88048
shock waves of heliosphere, review 7−127675
shocks, near-Earth and Pioneer Venus obs. 7−94630
shockwaves, angular depend. of high Mach number plasma interactions 7−94597
solar flare compact triplets, influence on interplanetary medium 7−145794

solar wind continued
solar wind acceleration of cometary ions, by lower hybrid waves 7−88069
speed structure of solar wind rel. to solar activity 7−127670
spherically-symmetrical solar wind-like plasma systems, theoretical non-Maxwellian particle vel. distrib. functions 7−104383
stream structure at large heliocentric distances, Pioneer obs. 7−94624
terrestrial effects (book) 7−88751
transition region geometry rel. to solar activity 7−88065
transition region of heliosphere near to Sun 7−79921
Tunguska phenomena in Siberia, due to ejected solar plasma blob 7−87649
turbulence modelling using radio occultation meas. 7−139877
type III storms, trajectories in interplanetary medium, backtracking and sources characts. 7−127676
Ulysses, out-of-ecliptic mission for solar and interplanetary obs. 7−101655
upstream region of Earth magnetosphere, fast shocks at edges of hot diamagnetic cavities 7−94598
Vega 1 and 2 PLAZMAG-1 plasma analysers characts. 7−79810
velocity at P/Comet Halley (1982i), photographic obs. from Comenius Univ. Observatory 7−94792
velocity of solar wind throughout solar cycle, showing periodic struct. *(Chinese)* 7−115195
velocity-waves, effect on comet outburst activity 7−72235
Venus, compressional ULF foreshock boundary, Pioneer Venus Orbiter obs. 7−94629
Venus, ionosphere magnetisation, response to solar wind dynamic press. meas. 7−120237
Venus, solar wind interaction, effect of hot O corona 7−120236
Venus, solar wind interaction model 7−127672
Venus, solar wind mass loading 7−120235
Venus ionosphere interaction, effects of hot O ions flux on solar wind *(German)* 7−134161
Venus-solar wind interaction 7−115276
viscosity of solar wind near the sector boundaries *(Chinese)* 7−139875
whistler mode and plasma-maser effects 7−115232
He^{2+}/H^{+} temperature ratio in slow solar wind, three-fluid model calcs. 7−134103

soldering
brass, soldered joints, shear strength, microstruct. rel. to solder comp. 7−113619
material machining by laser, advantages *(French)* 7−106538
Cu, soldered joints, shear strength, microstruct. rel. to solder comp. 7−113619
Cu/brass joints soldered with eutectic Sn-Bi, mech. props. and microstruct. 7−100506
Pb-Sn solder/Cu joints, tensile behaviour 7−119312
Sn-Pb solder, Cu_6Sn_5 whisker precipitates, mech. props. 7−119311

solenoids
see also coils; electromagnets
3 Tesla superconducting solenoid for the AMY particle detector at TRISTAN 7−129473
air-core superconducting solenoid as nuclear-reaction-product spectrometer, tests 7−141389
automated torque magnetometer for use in a 13 T superconducting solenoid 7−80826
coaxial, magnetic field distrib. with coaxial superconducting shield 7−102464
compensation convertor from small pressure differences meas. *(German)* 7−73331
EM fields, vector potential visualization 7−96924
emittance degradation dependence on beam ang. momentum 7−141373
field uniformity, lower order errors correction using Fe shims calcs. 7−74808
free space dyadic Green's function expression 7−96925
solenoid, elementary single turn, use as transmitter and receiver in NMR imaging 7−139341
superconducting solenoids constant determ., by nuclear induction 7−134821
TOPAZ superconducting solenoid cryostat, multilayer insulation with aluminised dimpled polyester 7−74303
TOPAZ thin superconducting solenoid cryogenic system, design and testing 7−67333
VENUS detector, excitation of a superconducting large thin solenoid magnet 7−129515

solid effect
hexamethylbenzene, ^{1}H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
polyethylene, ^{1}H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
polypropylene, ^{1}H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
rate equations for a spin-1 nucleus 7−70674

solid electrolytes *see superionic conducting materials*

solid helium
crystal-superfluid interface, roughening transitions and shape relax. time study 7−105179
crystallisation, liq.-solid interface roughening transitions study 7−112002
electron and ions behaviour in surface layer 7−76538
equation of state, three-body exchange interactions 7−105165
ion motion, vacancies and impurities, book contrib. 7−84443
liquid-solid interface, Kapitza resist. 7−98604
low temperature physics, book 7−80208
phonon thermal cond. 7−105178
solid/liquid interface, phonon transmission, surface roughness effects 7−84440
H-He mixtures, fluid-fluid, fluid-solid and three-phase equilibria up to 75 kbar 7−84204
^{3}H, solid, high polarised, magneto-static modes 7−118193
^{3}He, BCC, exchange freq. calc. in path integral Monte Carlo method 7−84442
^{3}He, BCC, vacancies at high molar volumes 7−98615
^{3}He BCC crysts., dislocation tunnelling, penetrating Fermi particles, massive Thirring model calcs. 7−76534
^{3}He, HCP, ferromag., anisotropy energy 7−112004
^{3}He, mag. polarons 7−70025
^{3}He, mag. props. 7−76537
^{3}He, polarised solid, rapid melting, temp. change calcs. 7−105176
^{3}He, solid, magnetisation, 0.2 to 11 T 7−112005
^{3}He, solid, magnetism in classical approx. 7−76532

solid helium continued
^{3}He, solid, pressure and compressibility calculated by a lowest-order constrained-variation method 7−84441
^{3}He, solid, thermostatistical theory of spin structure 7−76540
^{3}He, surface relaxation time in porous glasses 7−143128
^{3}He, two-dimens. on Grafoil, T_1 study of exchange and spectral density 7−105174
^{3}He, u.u.d.d. phase, magnetic domain wall structure and spin wave scattering 7−70026
^{3}He-^{4}He mixtures, solid-superfluid interface phenomena 7−105173
^{3}He-^{4}He solid mixtures, phase separation 7−124631
^{3}He-^{4}He solid solutions, phases and structures, X-ray diffr. meas. 7−124632
^{4}He, BCC, thermal vacancies, X-ray meas. 7−105175
^{4}He, HCP, surface roughening transition 7−76533
^{4}He, kinetic growth coeff. determ., US transmission meas. 7−70024
^{4}He, liq. and solid, three-body correlations 7−84422
^{4}He, liquid-solid interface mobility 7−76517
^{4}He, solid, pressure and compressibility calculated by a lowest-order constrained-variation method 7−84441
^{4}He, surface structure, growth kinetics 7−76536
^{4}He:^{3}He, quantum diffusion with strong localisation *(Russian)* 7−124630
^{4}He:^{3}He crysts., elastic modulus and damping const., impurity effects study 7−98616

solid hydrogen
see also quantum solids
Cryogenic Limb Array Etalon Spectrometer solid H_2 cooler, design and performance 7−67326
crystalline, momentum distribution 7−143131
diffusion Monte Carlo simulation 7−98603
dissociation below 1 K 7−71476
equation of state, molar vol. and bulk modulus 7−105180
equation of state and phonon freq., rotational state depend. 7−91917
HCP, high temp. expansion, free energy 7−112003
isothermal compression of condensed gases meas. at 4.2 K, 15-ton press design 7−102442
metal-H_2 system, vol. fraction of solid H_2 in metal pores, internal friction *(Russian)* 7−76531
orientational order parameters, density matrix approach 7−76535
orientationally disordered, isotropic model of quadrupole glass *(Russian)* 7−91915
positive muons, depolarisation 7−105181
quadrupole glass transition, crit. temp. *(Russian)* 7−91916
quantum diffusion, tunneling mobility stimulation *(Russian)* 7−98614
Raman spectra study 7−125747
secondary electron emission, energy and angular distrib. 7−76539
Space Infrared Telescope Facility cryogenic systems, comparison of He and He-solid H_2 7−67322
substrate, localisation in nondegenerate 2D electron gas 7−105648
H-He mixtures, fluid-fluid, fluid-solid and three-phase equilibria up to 75 kbar 7−84204

solid lasers
see also colour centre lasers; gamma-ray lasers; Raman lasers; semiconductor junction lasers
advanced crystalline laser materials development 7−74986
atom ionisation appls. *(French)* 7−109844
conference, Cambridge, NA, USA (Sept. 1986) 7−140365
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference, Los Angeles, CA, USA (Jan. 1986) 7−80160
crystal growth, cryst. quality and comp. control 7−77791
disc amplifiers, optimised flashlamp pumping 7−74969
dye mixture saturable absorbers in passive switch for laser mode locking 7−141948
emerald, spectroscopic and laser props. 7−82585
emerald laser, tuned from 720 to 842 nm spectroscopic parameters meas. 7−122988
emission energies, thermal conditions and structural designs *(Russian)* 7−110362
fibre laser using phase-matched four-photon mixing 7−117268
fibre sensors and lasers fabrication techniques *(Japanese)* 7−123212
fibres, monomode, with flowing dye system, coherent amplification 7−136321
fluoride glasses, transition metal doped, luminescence 7−106259
frequency conversion of solid laser sources in nonlinear crysts. 7−75067
geodetic laser ranging station to monitor satellites, at Santiago de Cuba 7−79656
glasses, status and prospects 7−68653
heavy metal fluoride glasses for laser applications 7−82580
high average power, scaling laws 7−82623
high average power solid state lasers, scalability 7−68706
high performance, developments and prospects 7−130120
high power laser installations, optical layout study 7−103832
high power solid state lasers at Lawrence Livermore National Laboratory 7−82620
industrial pulsed lasers, flashlamp pumping, design 7−74951
lanthanide and transition metal solid-state lasers, review 7−74974
layered coupled waveguide arrays, approx. soln. of eigenmode problems 7−90782
LIDAR appls., eye-safe solid-state lasers design 7−74980
NIXE, Nd:glass laser, design and plasma prod. appl. 7−75839
optical pumping efficiency factors, anal. 7−122994
optically pumped, efficiency, elliptical pump cavities effects *(German)* 7−122986
periodic layered structured laser using electro-luminescent excitation 7−141832
polarisation coupled lasers, birefr. compensation 7−117206
pump cavity design 7−74996
pumping, lamp design and optimisation 7−68688
pumping using diode lasers 7−68690
radiated power regulation 7−121093
ruby, interference recording of laser radiation 7−97054
ruby, laser, with passively switched electrooptical shutter, ultrashort pulse form. dynamics 7−117210
ruby laser, highly coherent radiation formation for pulsed holography 7−141886
ruby laser, passive shutter based on LiF cryst. with F_2^{+} colour centres 7−117245
ruby laser based lidar system for atm. aerosol remote sensing 7−72208

solid lasers continued
ruby laser produced plasma, refractive fringe diagnostic using N_2 laser 7−83537
ruby lasers, coherent ultrashort pulse amplification 7−136315
ruby solid-state NMR laser with injected signals, instabilities and chaos 7−74937
semiconductor electron beam pumped lasers, amplified spontaneous emission 7−68647
semiconductor laser, water vapour stabilised, absolute stability study 7−68654
short pulse generation by novel passive Q-switching technique 7−130203
slab geometry lasers, low thermal focusing and birefr., modelling 7−68663
slab geometry lasers as tunable sources 7−68705
slab laser design, strength parameters 7−136317
slab laser development, Gemini and Centurion systems 7−74985
slab lasers, flashlamp pumping 7−74971
slab lasers, zig-zag optical path systems 7−82622
solar pumped laser technology options for space power transmission 7−71579
subcritical Hopf bifurcation obs. in NMR laser device 7−141873
technology for Earth Observation System requirements, NASA perspective 7−68700
temperature influence on operation of lasers with passive switches *(German)* 7−130124
thin film dye laser integrated with DFB oscillator, amplifier and mode filter on anisotropic crystal prism 7−110400
thin-film energy-transfer dye lasers 7−122942
tunable, review 7−74935
tunable, review 7−82581
tunable laser crystal host systems 7−68657
tunable lasers for differential LIDAR 7−74981
tunable lasers for remote sensing, conf., Stanford, CA, USA (Oct. 1984) 7−66832
YAG:Nd laser for femtosecond single-pass cascade Raman scatt. soliton generation at 1.5 μm 7−141996
$Al_2O_3:Ti^{3+}$, cryst., output in continuous and quasicontinuous lasing regimes *(Japanese)* 7−130128
$Al_2O_3:Ti^{3+}$, vibr. transitions, $^2E_g E_{3/2}$ electronic state, picosecond excite-and-probe absorpt. meas. 7−106152
$BeAl_2O_4:Cr^{3+}$, alexandrite, tunable lasing, 20 to 200°C 7−117208
$BeAl_2O_4:Cr^{3+}$, solid laser material energy migration and radiationless relax. processes, four-wave-mixing meas. 7−92737
$BeAl_2O_4:Cr^{3+}$ alexandrite crysts., Czochralski, growth, struct. defects, laser output 7−132437
$CaF_2:Eu^{2+}$ fluorescence excitation spectrometer fabrication and results *(Japanese)* 7−82587
CdS electron beam pumped lasers, amplified spontaneous emission 7−68647
CdS electron-beam-pumped lasers with reduced threshold voltage and current density 7−90622
CdS laser, pulse periodic electron-beam-pumped 7−130125
Cr,Nd:GdScGG laser host material, refr. index and $\Delta n/\Delta T$ at 1064 nm 7−68645
Cr,Nd:$(GdSc)_3Ga_5O_{12}$, short-lived absorpt. rel. to solid-state laser efficiency 7−141869
Cr,Tm,Ho:$GdScGa_5O_{12}$ cascade laser action 7−122990
Cr:$BeAl_2O_4$ laser crystal growth 7−77793
Cr:$Gd_3Sc_2Al_3O_{12}$ laser crystal growth 7−77791
$Cr^{3+}:Al_2O_3$ laser crystals, nonradiative relaxation 7−122995
$Cr^{3+}:Al_2(WO_4)_3$ spectroscopic and laser props. at 800 nm 7−130119
$Cr^{3+}:BeAl_2O_4$, alexandrite laser amplifiers 7−82578
$Cr^{3+}:BeAl_2O_4$, alexandrite laser pumped tunable intracavity Raman laser 7−82626
$Cr^{3+}:BeAl_2O_4$, alexandrite, novel inclusion in laser crystals *(Chinese)* 7−104602
$Cr^{3+}:BeAl_2O_4$, laser crystals, nonradiative relaxation 7−122995
$Cr^{3+}:BeAl_2O_4$ alexandrite laser technology improvements 7−74938
$Cr^{3+}:BeAl_2O_4$ tunable alexandrite laser performance, review 7−68656
$Cr^{3+}:BeAl_2O_4$ tunable alexandrite laser transmitter for remote sensing of atm. press. profile 7−72209
$Cr^{3+}:KZnF_3$ laser quasicontinuous operation, tuning 785 to 865 nm 7−97022
$Cr^{3+}:Sc_2(WO_4)_3$ spectroscopic and laser props. 7−130119
Cr^{3+}:Y-Er phosphate glass, sensitisation in amplification regime luminesc. 7−85816
Cr^{3+}:YAG, energy states calc. 7−143404
$Cu^+:NaCaMg_2V_3O_{12}$ laser hosts, spectroscopic and laser props. 7−74939
Er, Yb:glass laser at 1.54 μm pumped by Nd:YAG laser 7−136322
Er^{3+} doped fibre amplifier operating at 1.54 μm 7−141881
Er^{3+} doped single-mode fibre laser, AlGaAs diode laser pumped operation 7−141882
Er: GeO_2-SiO_2 fibre laser, 1555 nm, low-threshold CW operation 7−136314
Er:YAG mid-IR solid state laser with fiber optics as an ideal medical scalpel 7−114452
Er:$YAlO_3$ laser, stimulated emission at 1.662, 1.677, 1.706 and 1.729 μm 7−68646
Er:$YAlO_3$ laser emission at 3 μm, polarisation props. 7−74936
Er:$YAlO_3$ laser lines around 3 μm 7−122992
Er^{3+}:fluoride glass, laser and luminesc. props. 7−136312
$Er^{3+}:LiYF_4$, laser, diode-pumped, CW and pulsed 2.8 μm operation 7−97016
$Er^{3+}:SiO_2$, single-mode fibre laser operating at 1.55 μm 7−68692
$Er^{3+}:YAlO_3$ orthorhombic crysts., luminesc. and multiwave stimulated emission obs. *(Japanese)* 7−119028
GaAs laser, pulse periodic electron-beam-pumped 7−130125
GaAs laser with longitudinal pumping by scanning electron beam *(Russian)* 7−136319
GaAs sealed electron-beam-pumped laser, degradation causes 7−97021
GdGG, substituted, laser crysts., Czochralski growth, colour centres, lattice consts., efficiency 7−100042
p-Ge AR laser oscillation using external reflectors 7−68650
Ge hot hole IR laser, radiation modal composition 7−122993
Ge hot hole inter-subband transitions for tunable far-IR laser 7−74934
p-Ge, hot holes long wavelength IR stimulated emission spectra, Landau quantisation 7−125753
p-Ge hot-hole laser, directional stimulated emission obs. 7−136325
p-Ge laser, FIR based on hot holes, tunable from 70 to 200 μm 7−141866
Ho,Tm:YAG laser, CW operation at 2.1 μm 7−141872

solid lasers continued
Ho^{3+}, Tm^{3+}, $Cr^{3+}:(Y,Sc)_3Ga_5O_{12}$ lasing at room temp. 7−68651
Ho:$YLiF_4$, efficiency laser, longitudinally pumped by semiconductor laser array 7−136311
Ho^{3+}:fluoride glass, laser and luminesc. props. 7−136312
$Ho^{3+}:YAlO_3$ orthorhombic crysts., luminesc. and multiwave stimulated emission obs. *(Japanese)* 7−119028
$KNdP_4O_{12}$ laser oscillation, tunable CW 7−117212
$K_3NdSi_2O_7$, hexagonal cryst. struct., mini laser material 7−124181
$LaMgAl_{11}O_9$, laser and phosphor host, cryst. struct., thermal expansion determ. 7−84327
$La_{1-x}Nd_xMgAl_{11}O_{19}$ laser appl. to ^{3}He nuclei polarisation 7−122460
$La_xNd_{1-x}MgAl_{11}O_{19}$ pumping by diode laser 7−122991
$LiIO_3$ crystal in Nd:YAG laser cavity, noncollinear SHG 7−97085
$LiNdP_4O_{12}$ laser oscillation, tunable CW 7−117212
MgF_2:Co laser for atmospheric water vapour, HCl, and methane meas. 7−133942
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}$, β''-alumina, laser material, single crystal growth 7−86010
$NaNdP_4O_{12}$, broad tuning range lasers, CW operation at 1.05, 1.32 μm 7−136320
Nd,Cr:$Gd_3Sc_2Al_3O_{12}$ laser hosts, spectroscopic and laser props. 7−74939
Nd,Cr:$Gd_3Sc_2Al_3O_{12}$ laser crystal growth 7−77791
Nd,Cr:$Gd_3Sc_2Ba_3O_{12}$ laser crystal growth, comparative studies 7−77792
Nd,Cr:$Gd_3Sc_2Ga_3O_{12}$ flashlamp-pumped laser, performance and characteris. 7−74940
Nd,Cr:$Gd_3Sc_2Ga_3O_{12}$ laser crystal growth 7−77793
Nd,Cr:$Gd_3Sc_2Ga_3O_{12}$ laser materials, crystal growth 7−86009
Nd,Cr:$Gd_3Sc_2Ga_5O_{12}$ codoped garnet cryst. growth for laser use 7−77782
Nd,Cr:$Gd_3(Sc,GGa)_2Ga_3O_{12}$ laser, 1.06 μm transition cross section 7−90619
Nd,Cr:$Gd_3(ScGa)_2Ga_3O_{12}$ lasers with photochromic centers 7−82575
Nd,Cr:$Gd_3(ScGa)_2Ga_3O_{12}$ laser with prism-resonator and polarisation coupling 7−82576
Nd,MgO:$LiNbO_3$ miniature CW and active internally Q-switched lasers 7−68683
Nd glass laser, inversion dumping and amplification dynamics of ns pulses *(German)* 7−130122
Nd, interference recording of laser radiation 7−97054
Nd laser beam irradiation of metal surface, laser plasma production and detection 7−137101
Nd laser mode locking with $GdScGa_5O_{12}$ switch 7−130201
Nd laser spectrum narrowing with plasma mirror 7−141874
Nd lasers, high power, for industrial appls. 7−82680
Nd^{3+}, $Cr^{3+}:(Gd,Sc)_3Ga_5O_{12}$ laser with stimulated Brillouin scattering mirror and plasma switch for pulse variation 7−130168
Nd^{3+} doped fibre laser, CW, 1064 nm, using all-fibre reflectors 7−117222
Nd^{3+} doped fibre laser 7−82571
Nd^{3+} doped fibre laser operating at 938 nm, diode-laser-pumped 7−142040
Nd^{3+} laser with intracavity SHG, output characts., α-$LiIO_3$ radiation defect effects *(Russian)* 7−82588
Nd: glass laser system, multiple pass amplifiers 7−68687
Nd:glass four-channel laser for spherical plasma compression 7−69395
Nd:glass Gemini slab laser system, sandwiched flashlamp geometry 7−74985
Nd:glass laser, active mirror system for TW output powers 7−82628
Nd:glass laser, actively-passively mode-locked, feedback control 7−110375
Nd:glass laser, performance of colloidal silica antireflection coatings 7−68815
Nd:glass laser active element, thermo-optical distortion, temp. field distrib. study 7−103827
Nd:glass laser optical filters, Eu activated quartz glass, efficiency 7−130304
Nd:glass laser system, high power, picosecond, with high repetition frequency 7−97019
Nd:glass laser with active-passive mode-locking, electro-optic gain control and cavity dumping 7−110417
Nd:glass laser with composite active element and stimulated Brillouin scattering mirror 7−82643
Nd:glass lasers, pumping using high power flashlamps 7−74968
Nd:glass Nova laser, coatings for high energy appl. 7−74964
Nd:glass Nova laser, ultra high power level phenomena 7−82621
Nd:glass Nova laser, ZZ 7−82711
Nd:glass slab lasers, conduction cooling 7−82624
Nd:$La_2Be_2O_5$ athermal lasers 7−82579
Nd:$LiYF_4$ amplifier, high gain 7−82584
Nd:$LiYF_4$ laser, Cs filter resonant operation 7−82657
Nd:$LiYF_4$ laser, flash-lamp-pumped acousto-optically Q-switched, intracavity doubling of 0.527 μm output 7−123098
Nd:$LiYF_4$ mode-locked oscillator and regenerative amplifier 7−103824
Nd:phosphate glass laser, colliding pulse mode locking using dye saturable absorber 7−110422
Nd:phosphate glass laser with composite active element, diffraction-limit divergence *(German)* 7−130123
Nd:phosphate glass lasers, Ar laser pumping, thermally induced stresses 7−74931
Nd:YAG, pulse compression of Raman-depleted ps pulses and spectrally windowed self-phase modulated pulses at 1.06 μm 7−103890
Nd:YAG, pulsed, SHG in vinylidene cyanide/vinyl acetate copolymer 7−136432
Nd:YAG, pumping using diode lasers 7−68690
Nd:YAG, sapphire contact probe, surgical appl., *(Japanese)* 7−126995
Nd:YAG CW mode locked lasers, operating specifications 7−74976
Nd:YAG CW mode locked laser, pulse compression, scientific appls. 7−75005
Nd:YAG CW mode locked Q-switched laser pump for cavity dumped dye laser 7−74977
Nd:YAG CW multimode laser beam transmission through fibre optic delivery system 7−136361
Nd:YAG Centurion slab laser system, sandwiched flashlamp geometry 7−74985
Nd:YAG eye-safe laser rangefinder, Raman wavelength shifting 7−82615
Nd:YAG fibres, clad for laser appls., performance 7−110586
Nd:YAG industrial lasers, CW-pumped, design 7−74972
Nd:YAG intracavity-doubled, multi transverse-mode laser 7−122987
Nd:YAG laser, breakdown of biological structures, study using ns pulses 7−71818
Nd:YAG laser, CW, simultaneous passive and kinematic mode locking 7−130202

solid lasers continued
Nd:YAG laser, CW mode-locked, pumping of fibre Raman soliton laser 7−68694
Nd:YAG laser, coherent laser radar at 1.06 μm 7−75014
Nd:YAG laser, high-power pulse-periodic with unstable telescopic resonator and two-stage amplifier *(German)* 7−130121
Nd:YAG laser, phase-matched SHG in 2-methyl-4-nitroaniline thin film waveguide *(Japanese)* 7−97089
Nd:YAG laser, pulse pump oscillators SL122, 124 and 126 from NEC *(Japanese)* 7−130171
Nd:YAG laser, use of LiF:F_2^- colour centre Q-switch 7−117207
Nd:YAG laser 0.532 μm pulse compression in fibre optic compressor 7−141904
Nd:YAG laser at 946 nm, quasi-three-level, modeling and CW operation 7−90618
Nd:YAG laser based lidar system for atm. aerosol remote sensing 7−72208
Nd:YAG laser contact endoprobes for medical appls. 7−79048
Nd:YAG laser controlled by passive switch, radiation angular distrib. 7−130219
Nd:YAG laser crystal growth, comparative studies 7−77792
Nd:YAG laser crystals, growth and perfection 7−117211
Nd:YAG laser hosts, spectroscopic and laser props. in presence of colour centres 7−74939
Nd:YAG laser light frequency conversion in single-mode fibre 7−117268
Nd:YAG laser material high temp. fluoresc. lifetime investig. 7−92736
Nd:YAG laser photodiode-pumped CW, amplitude fluctuations 7−136324
Nd:YAG laser pulse compression and splitting at 1.32 μm in a single mode fibre 7−130350
Nd:YAG laser pulse shaping by stimulated Mandelstam-Brillouin scattering 7−68782
Nd:YAG laser pump cavity reflector, metal-dielectric coating *(Korean)* 7−82577
Nd:YAG laser pumping with diode laser array 7−68702
Nd:YAG laser pumping with Kr-Rb lamps 7−110363
Nd:YAG laser radiation phase modulation with SHG of ultrashort pulses, correlation meas. 7−141903
Nd:YAG laser rangefinder/designator 7−75019
Nd:YAG laser resonators with low misalignment sensitivity and large mode volumes 7−123035
Nd:YAG laser rod end-pumped by monolithic diode laser, 370 mW 1.06 μm CW 7−103821
Nd:YAG lasers, coherence characts. 7−136274
Nd:YAG lasers, coherent ultrashort pulse amplification 7−136315
Nd:YAG lasers, flashlamp pumped, scientific applications 7−74973
Nd:YAG lasers, freq. doubled, diode laser array pump sources 7−74978
Nd:YAG lidar accommodation on polar meteorological satellite 7−72252
Nd:YAG miniature laser diode pumped lasers 7−68701
Nd:YAG oscillator in Q-switched TEM_{00} mode, birefringence compensation in polarization coupled lasers 7−117206
Nd:YAG ring laser, CW, kinematic mode locking 7−97045
Nd:YAG ring laser, spatial separation of opposite waves 7−130189
Nd:YAG ring laser, unidirectional, diode-laser pumped, mag. field effects 7−74962
Nd:YAG ring oscillator, laser pumped, freq. stability and offset locking 7−68717
Nd:YAG spherical cavity, CW laser oscillation 7−103825
Nd:YAG tunable lasers, reson. fluoresc. line meas. of atm. Na 7−72210
Nd:YAP laser configuration with single frequency CW output at 1.079 μm 7−68716
Nd:$YAlO_3$ perovskite picosec. laser, temporal characts. study 7−103822
Nd^{3+}: phosphate glass laser, contribution of UV absorpt. to laser power 7−90621
Nd^{3+}: silica fibres, P, Co co-doped, lasing spectrum 7−136318
Nd^{3+}:AlG laser light, SHG in $KTiOPO_4$ optically biaxial cryst. 7−123100
Nd^{3+}:β″-Al_2O_3-Na_2O laser, single pass gain 7−82582
Nd^{3+}:glass multifibre laser, lasing props. 7−141870
Nd^{3+}:SiO_2 fibre lasers, single-mode, line-narrowing and hole burning 7−103823
Nd^{3+}:YAG, $^4F_{5/2}$ and $^2H2_{9/2}$ levels, radiative decay probabilities *(Japanese)* 7−130129
Nd^{3+}:YAG CW laser, nonlinear optical effects 7−68655
Nd^{3+}:YAG laser, Q-switched short light pulses generation 7−110419
Nd^{3+}:YAG laser ultrashort pulse generation 7−141906
Nd^{3+}:YAG laser with composite active element, diffraction-limit divergence *(German)* 7−130123
Nd^{3+}:YAG laser with polymer passive *Q* switch 7−97046
Nd^{3+}:YAG laser with resonator loss modulation, chaotic regimes and stability of peak output power 7−122989
Nd^{3+}:YAG laser with unstable resonator, short giant radiation pulse form., bleachable dye Q-switch 7−97048
Nd^{3+}:YAG lasers, continuously pumped as picosecond radiation sources 7−136316
Nd-doped fibre lasers using direct-coated dielec. mirrors 7−117209
$NdAl_3(BO_3)_4$, pulsed laser performance, luminesc. conc. quenching effect rel. to struct. characts. 7−74933
$Nd_xLa_{1-x}MgAl_{11}O_{19}$, promising power laser crystal, growth, stability, optical props. 7−138633
NdP_5O_{12}, broad tuning range lasers, CW operation at 1.05, 1.32 μm 7−136320
NdP_5O_{14} laser oscillation, tunable CW 7−117212
NdP_5O_{14} miniature pulsed laser, structure design *(Chinese)* 7−130152
PbF_2-ZnF_4-GaF_3-YF_3-AlF_3-NdF_3 (HoF_3), fluoride glass, laser props., calc. 7−68649
Ti in sapphire and glass, absorpt. and fluoresc., comparison with alexandrite 7−70853
Ti:Al_2O_3 laser, flashlamp pumped efficiency 7−68660
Ti:Al_2O_3 laser performance pumped by doubled Nd:YAG laser, cavity configs. 7−68661
Ti:Al_2O_3 laser pumped by a frequency doubled Nd:YAG laser 7−68662
Ti:Al_2O_3 sapphire laser crystal growth 7−77791
Ti:sapphire laser material characts. 7−141868
Ti:sapphire lasers, tuning 7−82583
Ti:sapphire ring laser using acousto-optic modulator as electronically selectable unidirectional device 7−141978
Ti:sapphire tunable laser system evaluation 7−68659
Ti:sapphire tunable lasers for differential LIDAR 7−74981
Ti^{3+}:$BeAl_2O_4$, lasing and optical props. 7−97018
Tm^{3+}, Ho^{3+}:YAG laser, diode pumped, CW room-temp. operation at 2.1 μm 7−97017

solid lasers continued
YAG laser, cavity dumped Q-switched mode-locked, efficient operation 7−97050
YAG laser marker with optical deflectors, operating principles *(Chinese)* 7−103861
YAG laser radiation used in atm. sounding, wavefront reversal of second harmonic 7−141944
ZnO laser, pulse periodic electron-beam-pumped 7−130125
ZnO-TeO_2-Nd_2dO_3 (Ho_2O_3), oxide glass, laser props., calc. 7−68649
ZnSe electron-beam-pumped lasers with reduced threshold voltage and current density 7−90622
ZnSe laser, pulse periodic electron-beam-pumped 7−130125
ZrF_4-BaF_2-LaF_3-AlF_3-NdF_3 (HoF_3) fluoride glass, laser props., calc. 7−68649
ZrF_4-BaF_2-LaF_3-AlF_3-NaF-PbF_2:Nd glass fibre lasers 7−136313

solid-liquid transformations
see also crystallisation; freezing; melting; solidification
colloids, phase diagrams, free energy calcs. 7−91770
contact angle equilibrium, influence of solid microdeformation 7−118198
crystal-melt boundary instability, surface tension effects, critical wavelength calcs. *(Japanese)* 7−118053
diphenyl, surface melting light scatt., surface liq. cryst. phase formation 7−124459
$DIPS\phi_4(I_3)_{0.76}$, quasi-1D conductor, Peierls transition and I_3^- ordering 7−99020
equilibrium phases, conc. calc., from liquidus and solidus surfaces model 7−84175
ethane, p-T phase diagram, NMR study 7−84249
ethane-pentacosane, three-phase equilibr. 7−84185
ethane-tetracosane, phase equilibr,. meas. and calcs. 7−91771
freezing point expts., interface props., melting rules 7−142965
glycerol, excitations above liquid-glass transition, Brillouin scatt. study 7−92698
hard disk system, solid-liq. phase transitions, Monte Carlo simulation 7−104967
hard sphere fluid viscosity divergence, fluid-solid phase transition indicator 7−75959
ice/water interface layer, kinetic processes, crystal growth 7−120048
inert gas atoms, monolayer, two-dimensional Lennard-Jones system 7−91989
isothermal-isobaric Nose-Hoover method, correlation length, defect form. *(Spanish)* 7−142957
Langmuir monolayers, polar molecules, phase transitions study 7−91970
Nose-Hoover method, isothermal-isobaric algorithm validity test *(Spanish)* 7−142956
phase-changing material in finite domain heat transfer, self-consistent perturbation expansion 7−104132
polyethylene oxide-water system, phase anal. *(Russian)* 7−84228
solid-fluid interface, perturbed planar, weakly nonlinear evolution, stability anal., interface dynamics 7−118067
solid/liquid phase change energy transport, free convection influence, computational model 7−136854
vacancy formation energy, liquid structure and criteria for liquid-solid phase transitions, review 7−137527
water-ice phase transition, anomalous Raman scatt. spectra obs. 7−142958
water-sodium bis(2-ethylhexyl)sulphosuccinate-undecane, cond., percolation transition, temp. and salinity effect 7−98533
Al, solid-liquid interface, microscopic struct., quasi-static model 7−104966
Ar clusters, solid-liq. transition, stability, mol. dynamics method simulation 7−117794
H_2O, liquid to ice transition, DSC anal. 7−69868
^4He, liquid-solid interface mobility 7−76517
InAsPSb-InAs, double heterostructure, growth and modelling 7−143296
$LiNbO_3$, Czochralski grown, solid-liq. interface micromorphology 7−98674
NH_3-H_2O phase diagram at high-press., and planetary satellite implications 7−120290
NO, in inert gas matrix, emission, diffusion-controlled quenching 7−135984
Si, thermoelectric power and elec. conductivity near melting point, temp. depend. 7−99097
Xe bubbles in Si and Al matrices, press., lattice parameters and solid-fluid phase transforms. 7−84018

solid mechanics *see mechanics*

solid phase epitaxy *see epitaxial growth*

solid solubility
alloy phase systems, dendritic microsegregation, Scheil eqn. adaptation 7−78015
alloys, comparison of structs. prod. by ion implantation and rapid solidification 7−92923
alloys, rapidly solidified, mechanical props. and potential applications 7−86302
BCC metals-H, Monte Carlo calcs., hard core lattice gas 7−105040
binary hydrides, imaginary binary hydride model, hydrogen site occupancy, heat of formation 7−106823
binary non-transition metal based alloys, solid solubility, graphical method 7−143022
binary oxide solid soln., demixing under temp. gradient 7−93017
eutectic systems, solid solubility 7−111895
four-component systems, calc. of isotherms of spinodal 7−106489
heterophase zone growth during diffusion saturation of O in three-component solid soln. *(Russian)* 7−91822
metal multilayered samples, ion beam mixing 7−76230
metal multiple layers, amorphisation induced by ion mixing 7−76232
metallic glass formation prediction, ion mixing 7−137253
metallic glasses, He solubility, method of determ. in solid and melts 7−91828
metals, H_2 solubility, temp. variation 7−98472
rare earth alloys, RFe_{23} (Mn_{23}), dehydrogenation, thermodynamic study 7−105250
steel, austenitic, Cr-Ni, P solubility, effect of Cr 7−100225
steel, austenitic stainless, cathodically charged, H conc. gradients 7−137387
steel, austenitic stainless, kinetics and mechanism of σ-phase dissolution 7−132623
steel, carbides coarsening simulation method 7−86186
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7−86187
steel, NbCN solubility, thermodynamic calc. 7−86128

olid solubility continued
Ti_3Cu, H absorption and solubility, thermodynamics 7−69911
Ag-Au, S dissolution, H effect, thermodynamics 7−100190
Ag-Cu, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
Al-Cr-Zr, Al-rich solid solns. extended by rapid solidification, ageing behaviour 7−93034
Al-Fe, liq.-quenched, lattice imaging anal. and Mossbauer spectroscopy 7−92999
Al-Li (2.85 wt.%), solid soln., decomp. after hardening under high press. 7−106524
Al-Li alloys, specific Young's modulus and phase diagram, rapid solidification processing effects 7−100279
Al-Mn-Cr, ternary alloys, rapid solidification 7−92998
Al-Zn (30 wt.%), ageing, phase dissolution kinetics 7−132616
Al-Zn (30 wt.%), cellular precipitates dissolution 7−78014
Al-Zn-Mg, Guinier-Preston zones stability, Mg conc. depend. 7−78078
$AlAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
AlGaInP, miscibility gaps in phase diagrams 7−131317
Al_2O_3, sintering, TiO_2 addition effect, solid solubility, shrinkage 7−126062
Al_2O_3-SiO_2-Fe_2O_3, Fe solubility in mullite, temp. depend 7−91811
a-As_2S_3/metal structure, photodissolution processes 7−84286
As_2S_x:Ag, photoenhanced dissolution and diffusion 7−84393
Au-AuSn-Pb partial ternary system, constitution 7−144371
Au-GaAs interface, atom distrib. profiles, polar angle depend. XPS study 7−118284
Ba-La system, phase diagram 7−106481
$BaTiO_3$-$Cd_5(PO_4)_3Cl$ impurity-modified ceramic for high-temp. applic. 7−143980
CaO-MgO-Fe_2O_3-Al_2O_3-Cr_2O_3-SiO_2 system, phase comp. and compatibility 7−77959
$Ca_3(Si_{1-x}Al_x)(O_{5-x}F_x)$, stable solid solns., 1050 to 1250°C 7−105053
CdTe-Tl, alloying, solubility and diffusion studies *(Russian)* 7−124517
Ce-H, dissociative pressure, thermodynamic and physical props. 7−105043
CeH_x, phase relationships and transitions in homogeneity range 7−84201
Co-TaC, microstruct. of different struct. transforms. induced by rapid quenching 7−92992
Cu-Al-Be, Be solubility in $CuAl_2$ 7−93020
Cu-Zr(Fe)(Ni), rapidly solidified, microstruct. and mech. props. 7−92993
$Cu_{1-x}Ag_xIn_5S_8$ solid soln., struct., elec. and optical props., comp. depend. study 7−118109
$(CuInTe_2)_{1-x}(MnTe)_x$ diluted mag. system, phase relationships 7−124451
CuTi-NiTi quasi-binary eutectic system phase diagram 7−106485
$Cu_{60}Zr_{40-x}Ni_x$ glasses, ideal soln. behaviour rel. to Ni addition 7−83768
Er-H, dissociative pressure, thermodynamic and physical props. 7−105043
$ErFe_2$-H(D), pressure-composition-temp. data, thermodynamic props. 7−106493
Fe, creep cavitation, oxides as nucleation sites 7−144462
Fe, creep cavitation, sulphides and carbides as nucleation sites 7−144461
Fe-C solid solutions, C-C interaction energy 7−118129
Fe-Cr system, long term annealed, miscibility gap, Mossbauer spectra 7−138751
Fe-Cr-Mn-C alloy laser clad, evolution of microstructure 7−86482
Fe-Ge, BCC system, miscibility gap rel. to ordering 7−132579
Fe-Ni-Ti, aging alloy, martensite to austenite transform. 7−106507
Fe-Si-B, rapidly solidified, microstruct. and phase comp. 7−131041
Fe-V-C system, austenitic, cubic VC solubility, thermodynamic calc. 7−98461
$Fe_{100-x}B_x$, amorphous alloys, crystallisation, Curie temp., mag. props., Mossbauer spectra *(Japanese)* 7−92425
$Fe_{100-x}M_x$ (M=B, C, Al, Si, P), rapidly quenched alloys, Mossbauer effect studies 7−113038
FeTi, activation for H absorption 7−105045
FeTi-H, H profiling, nuclear reaction anal., $^{15}N(^1H, ^4He)^{12}C$, 4.43 MeV γ rays 7−105047
$FeTi_2O_5$-$MgTi_2O_5$, mutual solubility studies at 1300°C 7−124518
Ga-Ag system, low Ag conc. range, phase equilib. 7−132572
GaAs:Fe single crystals, LEC grown, phase analysis; ferromag. props. 7−86179
GaInPAs/InP, lattice matched heterostructures, LPE 7−100126
Ge_xSi_{1-x} system, low temp. phase diagram, solid solubility comp. depend. under press. 7−76395
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7−119247
InAs-GaAs, miscibility gap, effect on In-GaAs reaction 7−143025
$InAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
InPAsSb, miscibility gaps in phase diagrams 7−131317
InSb:Pb, LPE growth 7−106445
$La(Ba_{2-x}La_x)Cu_3O_{7+\delta}$, O ordering and superconductivity 7−131850
Mg-Ag-In-Cd system, solubility of element in Mg 7−100182
Nb-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Nb-O system, phase comp. and struct. investig. 7−132570
Nb-Ta-H, phase equilibria calc., first principle, model and empirical methods 7−104988
NbH_x, coherent phase transition, neutron radiography, computerised tomography 7−98217
Ni bulk and evaporated, layers, N ion implantation, diffusion, annealing behaviour 7−91896
Ni, H permeation in polycryst samples implanted with He^+, Ar^+, Ni^+, Y^+ and Pt^+ ions 7−105124
Ni-Al, $\gamma'(Ni_3Al)$ precip. under proton irrad. during ageing 7−84045
Ni-Be (12 at.%), β-phase precip. morphology, atom probe FIM 7−144419
Ni-Cr-Fe (15, 10 wt.%), S solubility and diffusion, thermodynamic studies 7−76449
Ni-Fe-Cr-Al-Hf, laser clad alloys, microstruct. rel. to Hf solubility 7−119395
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-TiC-MC, M=Zr, Hf, Nb or Ta, phase equilib. 7−100180
NiAl-Cr quasibinary eutectic, microstruct. and phase solubility extension, effect of rapid solidification vel. 7−92991
$Ni_{1-x}Rh_xBi_3$, cryst. struct. and complete solid miscibility 7−69652
Np-H, P-C-T studies, 0.0005 to 70 bar 7−105042
PbTe, solubility of Te, 873-1168 K 7−84273
PbTe, solubility of Te, temp. inversion 7−98462
PbTe-CrTe, quasibinary system, temp. depend. of CrTe solubility 7−92961
Pd (111)-H, H transport in surface and subsurface regions, 6-800 K 7−105046
Pd-Au, solubility of H, D and T, at low hydrogen concs., 250-733 K 7−105039

solid solubility continued
Pd-Co, disordered alloy, absorption of H_2, pressure-composition isotherm 7−105038
Pd-H, thin films, absorption-desorption, pressure-composition isotherms 7−105041
Pd-$H_2(D_2)$, hysteresis effects in desorption and absorption, p(n) isotherms 7−105249
Pd-Pt solid solutions, H solubility, composition depend. *(Russian)* 7−76410
Pd-Si, glassy alloys, two-site model of H solubility 7−106522
Pd-T, phase boundaries, solubility, superconducting temp. ^3He precipitation 7−91821
Pd-U, disordered alloy, absorption of H_2, pressure-composition isotherm 7−105038
Pd-Y (8 at.%), H solubility, elec. resist. anomalies, phase transition 7−98467
Pd-Y solid solutions, struct., density and X-ray diffr. studies 7−76086
$PdC_{0.15}$, interstitial solid solutions hydrogen accommodation 7−91820
PdC_xH_y, coexistence of hydrogen and carbon solutes 7−91820
$Pd_{1-x}Si_xH_y$, amorphous alloys, H solubility, press.-comp. isotherms, EMF and resistivity meas. 7−118107
Pd_3U, absorption of H_2, pressure-composition isotherm 7−105038
Si, ion implantation, formation mech. and structures of buried SiO_xNy layers 7−69726
Si:Ag, Ag solubility, diffusion and thermodynamic props. 7−137567
Si:B(P)(As)(Sb), impurity steady-state solubility 7−124312
Si:Co, B(P), impurity solubility, diffusion and ion pairing at 700°C 7−111970
Si:Ge, thermal donor form. and breakdown, elec. resist. studies *(Russian)* 7−124906
Si:O, Fe(Cr)(Pt), transition metal solubility, O precipitate effects 7−98476
Si:P, point defect generation during P diffusion, conc. above solid solubility 7−142766
Si-Al-O-N system, Al solubility 7−84285
SiO_2-WSi_2-Si structure, dopant redistrib. modelling 7−91628
SnTe, nonstoichiometric, impurity limiting solubility calcs., crystallochem. anal. 7−84275
SnTe-CdSe, section of ternary reciprocal system 7−71157
$SrCl_2$-$EuCl_2(Cl_3)$ systems, preparation and phase characterisation 7−86136
Ta-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Ta-Ru-H high press. phases, superconductivity and cryst. struct. 7−70444
Th-Ag system, phase diagram 7−144365
α-Ti, O solid solns., microhardness and lattice parameter calibrations 7−138830
Ti-Al-Sn-Zr-Mo, O solid solns., microhardness and lattice parameter calibrations 7−138830
Ti-Mo(Nb), internal friction spectrum in β-phase caused by impurities, effect of nitrogenation 7−100271
Ti-V-H system, struct., phase diagram, H solubility, band struct. 7−77946
TiO_2-Fe_2O_3-MgO solubility in mullite 7−132617
TiO_2-Nb_2O_5 solid solns., lattice parameter variation for rutile 7−111476
U-Er-H, dissociative pressure, thermodynamic and physical props. 7−105043
UO_2, unirradiated, solubility in granitic groundwater 7−89778
V-Fe:H, effect of H absorption on electronic and structural props. 7−105394
V-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
V-Ni-Cr system, phase diagram, diffusion couples and equilibrated alloys 7−144367
V-T, phase diagram, 100-473 K 7−105044
V-Ti, H and D diffusion coeffs., temp. depend., 230-473 K 7−84395
Y-H, dissociative pressure, thermodynamic and physical props. 7−105043
$YBa_{2-x}Sr_xCu_3O_7$ high T_c supercond., struct., resist. and Meissner effect studies 7−112532
Zr based metallic glasses, H solubility and embrittlement 7−106521

solid solution hardening
brass, special, wear, alloying effects, metallography 7−113732
carboboride hardened steel phase composition calc. 7−86127
steel., austenitic stainless, stable, N strengthening 7−113563
steel, ferritic, cleavage rel. to substitutional alloys 7−119326
steel, low C, P-containing, cold rolled, annealed, recrystallisation texture rel. to Mn content 7−132640
Al-Cr-Fe, vapour quenched, tensile props. rel. to microstruct. and comp. 7−119306
CdS:Zn sublimation grown crystals, growth stability, soln. hardening effect 7−100026
Co based superalloys, strengthening mechanisms, hot corrosion resist., gas turbine appls. 7−86461
Fe-Ni, plastic deformation, magnetically induced Invar hardening 7−76275
Fe-Ni-C, martensitic transform., effect of solution strengthening of austenite *(Chinese)* 7−144395
$Fe_{65}(Ni_{1-x}Mn_x)_{35}$, plastic deformation, magnetically induced Invar hardening 7−76275
Nb alloys, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb, H phase hardening *(Russian)* 7−113564
Nb-Zr-C, hardened, solid soln. struct., yield stress, internal friction *(Russian)* 7−144495
Ni alloys, solid-soln. hardening, extra contrib. of transition-metal solutes 7−71202
Ni-Cr-W superalloy, grain boundary precip. strengthening, nuclear heat exchanger appl. 7−106526
Ni-Cr-W-Ti-Al superalloy, γ' precip. strengthened, alloy design *(Korean)* 7−78037
Ni_3Al-B-Fe, microstructs. and mech. props., influence of Fe additions 7−144492
Ni_3Al-Ni_3Mn, $L1_2$-type intermetallic cpd., high-temp. strength and ductility 7−113622
Ti, substitutional solid soln. hardening, screw dislocation motion 7−132633
Ti-Al-Zr, annealing, cryst. struct., hardness *(Japanese)* 7−93078
Zn-Cu single crysts., hardening, deform, conditions 7−71201

solid solutions
solid solutions such as Au-Cu are indexed under alloys of the named elements i.e. 'gold alloys' and 'copper alloys' in this example
see also alloys; solid solubility
$A^{IV}B^{VI}$, cryst. growth by sublimation, influence of thermal rad. on source material 7−100027
alkali metal halides, high purity crystals, instability of solid solns. *(Russian)* 7−143016
alloys, binary containing secondary solid solns., thermal cond. and electrical resistivity calcs. 7−124957
alloys, creep ductility, influence of dynamic strain ageing 7−113631
bacterial chlorophyll, solid solution, vibronically selected spectra *(Russian)* 7−86914
$BaTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
BCC derivative structs., twinning 7−131156
binary macroscopic systems, crystallisation kinetic coeffs. *(Russian)* 7−124144
binary metallic solid solns., annealed, plastic deformed and neutron irradiated, local order 7−144431
binary oxide solid soln., demixing under temp. gradient 7−93017
breakdown, secondary ion mass spectrometry using cluster ions 7−124519
camphor-polystyrene solid solutions, dielectric props. at microwave freqs. 7−106078
coherent precip., differential diffusion eqn., 1D approx 7−71188
decomposition transform., 1D approx., differential diffusion eqn. 7−69856
deuteromethane-Kr solid solns., thermal expansion anomaly, X-ray diffr. study *(Russian)* 7−76459
dilute solid solns., struct., EXAFS 7−99980
equilibrium crack evolution by internal adsorption of impurities at its edges 7−84108
eutectic systems, solid solubility 7−111895
EXAFS spectroscopy, method and applications 7−85900
FCC derivative structs., twinning 7−131156
four-component solid soln. epitaxial layers, lattice period stabilisation effect 7−105324
I-III-VI semiconductors and their solid solns., microhardness and Debye temp. 7−131225
III-V semiconductor ternary solid solutions, thermodynamic theory 7−111914
lanthanide complexes in form of solid-solid solns., diffuse reflectance spectra, spectral intensities 7−118976
laser cladding, extended solid solution, 1D diffusion model 7−111658
metallic, chem. comp. and reactivity of interfaces 7−86670
methane-Kr, disorder effects, rotational excitations 7−142663
multicomponent, short-range order, Ising model 7−91823
$Na_{0.5-x}Y_{0.5+x}F_{2+2x}$, elec. props., excess F *(French)* 7−131358
organic molecules, vectorial excitation energy transfer involving inhomogeneously broadened electronic levels 7−116944
oxide solid solution, modelling of transient and steady-state demixing in O chem. pot. gradient 7−124525
pseudobinary solid soln., liquidus surface props. 7−84216
radioactive waste, crystal chemical incorporation in ceramics, valence, location, radiation damage, hydrothermal durability 7−135659
Rochelle salt-ammonium Rochelle salt, solid soln., Raman spectra 7−132257
semiconductor epitaxial layers, growth, by solid solution cooling method 7−105311
short range order evolution, Monte Carlo simulation 7−98385
solid solns., synthesis, thermal stability 7−71191
supersaturated, discontinuous precipitation *(Russian)* 7−78016
synthesis and characterisation of AB_2X_4 derived layered cpds. 7−105054
tetramethylammonium tetrahalogenometallate (II), solid soln. single crystals, phase transitions 7−124471
transition metal solid solns., electron sp. ht. and T_c comp. depend. calcs. *(Russian)* 7−131838
zinc-blende lattices, internal strain energy and possible order 7−76070
$Ag_xCu_{1-x}I$ solid solution thin films, exciton spectrum features 7−131549
$(Ag_{1-x}Cu_x)_2Se$, solid solns., ionic conductivity, thermoelectric power 7−143081
AgI-AgBr-CuI solid solns., ionic cond., comp. depend., 25-300°C 7−69971
$AgTa_xNb_{1-x}O_3$, solid solns., phase transitions, X-ray diffr. study 7−76390
Al-Li alloy, dil. solid soln., interdiffusion meas. by elec. resist. 7−137632
AlGaAs, liquid-phase epitaxy, solubility 7−105030
AlGaAs semiconductor impulsive pressure sensor 7−73318
$Al_{0.3}Ga_{0.7}As$:Si solid soln., influence of dopant conc. on electrophysical props. 7−143460
AlMn solid solns., ^{59}Fe diffusion coeff. meas. 7−91900
Al_2O_3-Cr_2O_3 and $FeAl_2O_4$-$FeCr_2O_4$ solid solns., phase relations at 1823 K 7−132585
Al_2O_3-SiO_2, corundum in mullite, solid solutions, crystal-chemical model 7−104661
$Al_2O_3(Cr_2O_3)_x(Fe_2O_3)_y$ solid solns., thermal cond., comp. depend. study 7−105160
Al_2TiO_5 ceramics, microstruct., bending strength, thermal expansion, additives effect 7−126201
$AlVO_4$ solid solution, form. from alkoxides 7−144348
As_2S_3-As_2Se_3:Tl, thin films, optical absorpt. edge, Tl doping effects 7−113226
As_2S_3, solid solns., two- and three-photon scatt., reson. Raman scatt. 7−70772
$BaAl_2O_4$-$BaGa_2O_4$, solid solution formation, high and low temp. regions 7−106490
$Ba_6M_2O_{11}$ (M=Nb,Ta), defect structure, transport properties 7−131139
$Ba_{1-x}M_xTi_{1-x}Mg_xO_{3-3x}F_{3x}$, M=Na, K, solid soln. ceramics, dielec. and pyroelec. props. study *(French)* 7−125598
BaO-TiO_2-Nb_2O_5 phase diagram, cryst. chem. and struct. studies 7−83904
$BaPb_{1-x}Bi_xO_3$:Ag solid inclusion solns., high T_c superconductivity study *(Russian)* 7−112540
Bi-Te, alloy production, ultrafast quenching of melt 7−71001
$Bi_{2-x}M_xO_3$, M=Y, Er, Yb, ionic conductors, struct. and dynamical props., EXAFS study 7−144170
Bi_2O_3-$Nb_2O_5(Ta_2O_5)(MoO_3)(WO_3)(V_2O_5)$, solid soln., ordered phases 7−69858
Bi_2O_3-Pb_2OF_2, ionic conduction, thermal dependence 7−98571
$(Bi_2O_3)_{1-x}(Er_2O_3)_x$, phase relationships, rel. to temp. and press. 7−131299
$(Bi_2O_3)_{1-x}(M_2O_3)_x$, (M=Y, Er, Yb), oxide ion conductors, structural comparison 7−83895

solid solutions continued
$(Bi_2O_3)_{1-x}(Y_2O_3)_x$, phase relationships, rel. to temp. and press. 7−131299
$(Bi_2O_3)_{1-x}(Yb_2O_3)_x$, phase relationships, rel. to temp. and press. 7−131299
$Bi_{0.88}Sb_{0.12}$, extruded samples, struct. and thermoelectric props. 7−70341
Bi_2WO_6-Bi_2MoO_6, phase diagram, crystalline phases, electrophysical props. 7−92967
$CaCl_2$-$EuCl_2$ solid soln., phase charactn. by X-ray powder diffr. 7−143020
$CaCl_2$-$SrCl_2$ solid soln., phase charactn. by X-ray powder diffr. 7−143020
$CaTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
$CaTiO_3$-$SrTiO_3$, phase diagram 7−106494
$Ca_3(VO_4)_2$-$Pb_3(VO_4)_2$ solid solns., nonlinear props., optical structural, dielec. and thermal meas. *(French)* 7−124527
$CdCr_2(Se_{4-x}Te_x)$, prep. and mag. props. 7−105896
$Cd_4GeS_6(Se_6)$ solid solns., physicochem. and photoelec. props. *(Japanese)* 7−125046
$Cd_xHg_{1-x}Te$ solid soln., heavy hole effective mass and density studies 7−137786
$Cd_{1-x}Mn_xCr_{2-y}V_ySe_4$, combined cation substitution, solid solutions *(Russian)* 7−124195
$(Cd_{0.83}Pb_{0.17})_2Nb_2O_7$, ferroelec. transition, dielectric and electrothermal measurements 7−125638
CdS, solid solns., two- and three-photon scatt., reson. Raman scatt. 7−70772
$CdS_{1-x}Se_x$ solid solution, kinetics of localised exciton formation 7−144121
$Cd_{1-x}Sc_xF_{2+x}:Nd^{3+}$ solid soln. single crysts., growth from melt and low threshold stimulated emission 7−85777
CdSe, solid solns., two- and three-photon scatt., reson. Raman scatt. 7−70772
$CoCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$(Cr_xFe_{1-x})VO_4$, solid solns., struct. 7−83896
CsBr-CsI solid soln., av. cryst. lattice parameter in decomposition 7−83901
Cu Ni, small particles, radial distrib. of elements 7−91943
Cu-Ni, surface and grain boundary solutions, heats of adsorption and mixing 7−84297
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crystalline solid solns., lattice parameter determ., X-ray powder diffr. 7−117906
$(Cu_2GeSe_3)_x(CdSe)_{1-x}$ solid solns., electrophysical props. 7−84879
$Cu_xM_{1-x}(H_2O)_6SiF_6$, M=Zn,Fe,Ni, metastable phases, successive ordering of Jahn-Teller distortions 7−131285
Cu_2Te-Cr_2Te_3 solid soln., mag. props. and metallic cond. 7−125380
Dy_2O_3-Y_2O_3, phase equilibrium, 1300-2450°C 7−92965
$Eu_{1-x}La_xS$ solid solns., ferromag. phase transitions studies 7−70546
Fe-Cu (8 wt.%) powders, sponge cementation, sintering, microstruct., SEM obs. 7−132529
Fe-N solid solutions, interstitial atom redistributions from second order Doppler shift *(French)* 7−125562
Fe-Nb-O, phase equilibria at 1200°C 7−132589
Fe-Ni-W-C phase diagram at 1273 K, diffusion-couples heat treatment, Gibbs energy anal. 7−132567
Fe-Rh-N, austenite solid solutions, thermodynamic functions 7−98512
$FeCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
α-Fe_2O_3-SnO_2 fine particles, residual surface SO_4^{2-} ions 7−104670
$FeSe_{1-x}Te_x$, ^{57}Fe Mossbauer spectra, mixed struct. *(Korean)* 7−138363
Ga-In-P-As, melt, vapour pressure of P and As 7−98400
$(GaAs)_{1-x}(Ge_2)_x$, disordered, mixing enthalpies, pseudopotential calcs. 7−124523
Ga_2O_3-GeO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
Ga_2O_3-SiO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
Ga_2O_3-TiO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
Gd_2O_3-Y_2O_3, phase equilibria, rel. to thermal stability of polymorphic modifications 7−92964
Ge-Li solid soln. single crysts., diffuse scatt. of X-rays by defects 7−111306
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., electrical resistivity, scatt. mechanisms 7−76956
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., thermoelec. power and band struct. studies 7−137970
^3He-^4He solid solutions, phases and structures, X-ray diffr. meas. 7−124632
Hg-Ga-S system, liquidus surface, crystallisation fields and precipitation *(Russian)* 7−124444
$(InP)_x(InAs)_{1-x}$ solid solns., homogeneous single crysts., Vegard law, lattice consts. 7−83879
$K_{1-x}Bi_xO_zF_{1+2x-2z}$ solid solution, elec. props. *(French)* 7−105115
KH_2PO_4-type mixed crystals, phys. props., review 7−111892
$K_{2+x}Li_xPb_{4-x}Nb_{10}O_{30}$ solid soln. ceramic, struct., dielec., piezoelec. and ferroelec. transition props. 7−83880
$La_{1-x}Ca_xCr_yCo_{1-y}O_3$ solid soln., prep. and elec. props. *(Japanese)* 7−124983
$LaCoO_3$-$LaFeO_3$ solid soln. system, spin state of Co^{3+}, mag. suscept., Mossbauer spectra 7−125582
$LaCrO_3$, Cr at. interactions, mag. susceptibility obs. *(Russian)* 7−112774
$LaMn_{1-x}Ni_xO_3$, prep. and electrical props. 7−92912
La_2O_3-Fe_2O_3-MO (M=Ni, Cu) systems, solid solutions 7−105036
La_2O_3-Y_2O_3, solid solutions, phase equilibrium 7−92963
$LaPO_4$-$CePO_4$ solid soln., unit cell vol. determ. 7−137337
$La_{1-x}Pb_xCo_{1-x}Ti_xO_3$ solid soln. prep. and charactn. 7−142731
$LaSrCo_xAl_{1-x}O_4$, solid solns., synthesis, mag. susceptibility *(Russian)* 7−112773
$LaSrCrO_4$, Cr at. interactions, mag. susceptibility obs. *(Russian)* 7−112774
$La_{2-x}Sr_xCuO_{4-y}$ solid solns., superconducting props., sp. ht. *(Russian)* 7−105756
$La_{1-x}Sr_xFeO_{3-\delta}$, solid soln., thermodynamic quantities and defect equilib. 7−84320
$(La_xY_{1-x})_2Mo_2O_7$ pyrochlore solid soln., lattice consts. and spin-glass props. 7−85308
$LiFeSi_2O_6$-$CaMgSi_2O_6$ glass system, pyroxene solid soln. crystallisation 7−76003
$Li_{1+x}Ge_{2-x}Al_xP_3O_{17}$, phase relationships and elec. conductivity *(Chinese)* 7−112321
Li_4GeO_4-Li_2SO_4 solid solns., solid electrolytes, struct. and elec. props. 7−111944
Li_2O-Ta_2O_5-$(WO_3)_2$, nonstoichiometry and ferroelec. props. at 1250°C and atmospheric press. 7−84304

olid solutions continued
γ_{II}-$Li_{3.4}Si_{0.4}V_{0.6}O_4$, sintering, ionic cond. *(Japanese)* 7−132548
$Li_{1-5x}Ta_{1+x}O_3$ ceramic ferroelec. solid solns., elec. props., AC impedance meas. 7−106095
Lu_2TiO_5-$RTiO_5$ (R=Gd,Tb,Er), solid solutions 7−92970
$(Mg,Cu)_3(PO_4)_2$, solid solution and mag. props. 7−112764
$Mg_{0.2}Cd_{0.8}Te$ solid solns., laser irradiation, effect on electrophysical props. 7−99114
MgF_2-ScF_3 system, high press. phases 7−91789
$Mg_xNi_{1-x}O$ and NiO, H_2 reduction on spherical C particles 7−106828
$MnCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$NH_4Cl_{1-x}Br_x$ solid solns., spin-glass-type phase 7−99464
$NaFeO_2$-SiO_2, silica-containing ferrite phases, phase equilibria 7−132590
$Na_{1-x}Li_xNbO_3$ solid soln., ferroelec. Curie temp., const. elec. field effects study 7−85545
$NaNbO_3$ solid solns., Krainik's classification according to dielectric props. 7−70721
$NaNb_{1-x}V_xO_3$, effect of ion substitution, on ferroelectric Curie temp. 7−85544
Na_2O-La_2O_3-Y_2O_3-P_2O_5, glass crystallisation, phase equilibria 7−84263
Na_3PO_4-Na_2SO_4, solid electrolytes, cond., phase diagrams, lattice parameters 7−131359
$Na_5W_{3-x}Ti_xO_{9-2x}F_{5+2x}$, crystallographic, thermal and dielectric meas. *(French)* 7−92618
Nb:H,O, Snoek peaks, internal friction studies 7−98335
Ni-Mg olivine solid soln., thermodynamics 7−143043
$Ni_{75}Al_{25-c}Mn_c$ solid solns., mag. props., plastic deform. effects 7−70621
$NiCr_{2-x}Ga_xSe_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$(Ni_{1-y}Fe_y)_{1-x}S$ mag. semicond., neutron and X-ray diffr. studies 7−85245
PZT solid solution system, second order transition region, phenomenological theory 7−99759
$Pb_{1-x}Bi_xO_xF_{2-x}$ solid solutions, F ion mobility, NMR studies *(French)* 7−138335
$(Pb_{1-x}Cd_x)S_{1-y}$, ternary solid soln. semicond., comp. and stoichiometry, laser diode appl. *(Japanese)* 7−122979
PbF_2-BiF_3-BiOF ternary system, O-F substitution, influence on ionic conductivity *(French)* 7−111954
PbF_2-BiO_xF_{3-2x} system, crystal synthesis of fluorite type solid solns. by hydrothermal reactions *(Japanese)* 7−132550
$(PbMg_{1/3}Nb_{2/3}O_3)_{0.55}(PbSc_{1/2}Nb_{1/2}O_3)_{0.45}$ solid soln. ferroelec., nonlinear electrostrictive strain meas. *(Polish)* 7−138386
$PbSe_{1-x}Te_x$, electron and hole band spectrum *(Russian)* 7−124850
$Pb_{1-x}Sn(Ge)_x$ S, energy levels associated with intrinsic defects 7−143392
$Pb_{1-x}Sn_xTe$, solid soln., isoenergetic surfaces and Hall factor anisotropy determ. *(Bulgarian)* 7−76887
$Pb_{0.94}Sr_xLa_y(Zr_{0.52}Ti_{0.48})O_3$, X-ray struct. determ. 7−124193
PbTe-SnS, epitaxial films, thermal evaporation in vacuum 7−106417
$PbTe_{1-x}S_x$, prep. by liquid phase epitaxy, unit cell parameters 7−106447
$PbTe_{1-x}Se_x$ solid soln. epitaxial layers, Se distrib. studies *(Russian)* 7−124755
$PbTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
$PbTiO_3$-$BiFeO_3$ solid solns., lattice parameters, X-ray diffr. study 7−98099
$PbZr_{1-x}(Fe_{0.5}Nb_{0.5})_xO_3$, piezoceramic solid solns., phase diagram, electrophysical props. 7−85541
$PbZrO_3$-Pb $(M_{0.5}W_{0.5})O_3$, M=Mg,Co solid solns., struct. and dielec. props. studies 7−125622
$PbZrO_3$-$PbTiO_3$ system, tetragonal-rhombohedral phase coexistence, crystallochemical inhomogeneity 7−124513
Pd-Y solid solutions, H diffusion 7−124598
$PdC_{0.15}$, interstitial solid solutions hydrogen accommodation 7−91820
PdC_xH_y, coexistence of hydrogen and carbon solutes 7−91820
Pu-H, equilib. and structural props. 7−104954
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed crystals, phys. props., review 7−111892
$Ru_{1-x}Nb_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
$Ru_{1-x}V_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
$(Sb_2Te_3)_{1-x}(Nd(Gd)Te)_x$ solid solns., elec. props. temp. and comp. depend. meas. 7−84881
Si, precipitate form. during solid-phase epitaxial growth 7−124757
Si:Ge solid solns., electron irrad. defect form. processes characts. 7−137406
Si_3N_4-$(ZrO_2$-$Y_2O_3)$, structural ceramics, effect of Y_2O_3 additions, degradation 7−71276
SiO_2-GeO_2 system obtained by sol-gel method, phase composition 7−91829
Sm_2O_3-Y_2O_3, phase equilibria, rel. to thermal stability of polymorphic modifications 7−92964
$SnMo_{6-x}Nb_x(Ta_x)S_{8-y}$, superconductivity and struct. *(Russian)* 7−99245
SnSe-Bi, solid solutions, thermo-EMF, elec. cond. rel. to density 7−92960
SnTe-Ni_3Te_2, interaction, temp. depend. of thermoEMF 7−86138
$Sr_6M_2O_{11}$ (M=Nb,Ta), defect structure, transport properties 7−131139
$SrTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
$SrTiO_3$-$SrNb_2O_3$, glass ceramic, temperature autostabilisation 7−113072
$TaSi_2$-WSi_2, solid solutions, phase diagrams and resistivities 7−111823
$Ti_{1-x}Al_xN$ solid solution with NaCl-type structure, RF sputter deposition 7−106407
$TlBiSe_2$-$TlBiTe_2$, growth and characterisation, X-ray diffr. studies 7−131129
$Tl_{1-x}Ga_xS_2(Se_2)$, solid solns., Tl enriched 7−84274
$TlInS_2$, solid solns., Tl enriched 7−84274
$TlInTe_2$-$TlRTe_2$ (R=La, Ce, Pr) solid solutions, elec. props. and X-ray anal. 7−92172
$(U_{0.3}Y_{0.7})O_{2-x}$ semiconducting solid soln. as O_2 sensor 7−115954
V:H,O, Snoek peaks, internal friction studies 7−98335
V-P-Mo-O system, preparation and characterisation 7−104664
V-Ti oxide, anatase-type solid-state soln., evidence of formation 7−84291
$V_{1-x}Ti_xH_y$ solid solns., H diffusivity temp. and comp. depend., cell model anal. 7−118149
Xe-Kr cryocryst. solid solns., exciton-induced diffusion, luminesc. intensity distrib. obs. *(Russian)* 7−76482
Y-Ba-Cu-O high T_c supercond. system, 950°C subsolidus phase diagram 7−119246
Y-H(D) solid soln., long and short-range ordering 7−84303
$(Y_{1-x}Lu_x)_3Al_5O_{12}$, resonance phonon-impurity scatt. 7−76317
$Y_{5-x}Sc_xSi_3$-H, $D8_8$-type system, H sorption props. 7−98689
$Y_{2-x}Sm_xSn_2O_7$, high resolution solid-state NMR, paramag. shift probes 7−132142

solid solutions continued
$YbBr_2$-YCl_2 solid soln. synthesis and X-ray diffr. structural study 7−83908
$Zn_xCd_{1-x}In_2S_4$ synthesis and charactn. 7−143021
$(Zn_xCd_{)-x}1_3P_2$, thermodynamic props. 7−98501
$Zn(P_xAs_{1-x})_2$, mag. susceptibility 7−99396
$ZnSe_{1-x}Te_x$ solid solns., composition depend. shift of band gap, lumin. study 7−132312
$ZnSe_{1-x}Te_x$ solid solns., photoluminescence and exciton reflection spectra 7−138487
Zr-Co multilayers, interdiffusion and amorphisation, metastable phase equilib. 7−98384
ZrC-ZrN, solid solutions formation simulation 7−92962
ZrN_yH_z, order-disorder phase transformations 7−69892
$(Zr_{0.5}Nb_{0.5})C_{0.9}$, heat treatment, effect on defect formation and props. 7−100247
ZrO_2, Y_2O_3 stabilised, diffusional creep, kinetic demixing 7−144469
ZrO_2-CaO system, solid solutions 7−92969
ZrO_2-Gd_2O_3 pyrochlore-type solid soln., stability and antiphase domain struct. study 7−86141
ZrO_2-M_2O_3 solid solutions, (M=Sc,Lu,Y,Gd,Eu), association of defects 7−91559
ZrO_2-P_2O_5 based ceramics, solid soln., thermal expansion, microcracking, Ta_2O_5 and Nb_2O_5 additions 7−143055
ZrO_2-Y_2O_3-Al_2O_3 ceramic electrolytes, ionic cond., thermal shock resist., mech. props. 7−76479

solid-state microwave circuits
see also Gunn oscillators; microwave integrated circuits
superconductor-insulator-superconductor heterodyne receiver at 230 GHz, low-noise design for radioastronomical appls. 7−134132
GaAs 8 GHz low-noise FET preamplifier for InGaAs p-i-n photodiode optical receiver 7−68896
GaAs monolithically integrated photoreceiver with large gain-bandwidth product for 800 nm wavelength 7−97174

solid-state microwave devices
see also IMPATT diodes
Josephson junction, phase locking to external microwave source 7−112684
Josephson triode for MM-wave heterodyne detect., anal. 7−125261
sHF waveguide semiconductor modulator for space radiometric systems 7−101656
surface magnetostatic waves spectrum in planar structure with ferromagnetic components with dielectric layers 7−132003
$BaFe_{12}O_{19}$, magnetostatic waves excitation at 20 to 80 GHz 7−118791
n-GaAs microwave devices, charge carrier conc. in active layer, magnetoresistance meas. *(Romanian)* 7−143491
InGaAs/InP p-i-n photodiodes for microwave fibre links, high-speed self passivated 7−97173
NbN-NbO_x-Pb Josephson junctions, AC props. 7−132448
W-Ni point contact diode, far infrared harmonic generation and mixing 7−82703
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7−118840

solid-state phase transformations
see also ageing; decomposition; ferroelastic transitions; ferroelectric transitions; glass transition (polymers); high-pressure solid-state phase transformations; martensitic transformations; order-disorder transformations; polymorphic transformations; precipitation; segregation; spinodal decomposition
A15 multifilamentary supercond. form., solid state reaction and transform. kinetics 7−106466
adamantanamine hydrochloride, solid, phase transition and mol. rot. investig. 7−77543
adamantane derivatives, phase transitions and struct. 7−143000
agarose gel-sol transition, shear modulus crit. behaviour investig. 7−100628
alkali halide mixed crystals, struct. phase transitions 7−137547
alkali metal, hydridoaluminates, prep., thermodynamic and structural props. 7−83817
bis(di-n-alkylammonium)tetrachlorometallates, conformational disorder 7−129898
alkylammonium derivatives, perovskite-type layer cpd., structural phase transitions, Raman spectra anal. 7−85702
alloys, peaks in electron state density, effect on structural and mag. stability 7−143309
alloys possessing characts. of isomorphic and nonisomorphic dissociation and ordering, regular structs. *(Russian)* 7−124488
ammonium nitrates, substituted, phase transitions, Raman and IR obs. 7−70817
ammonium perchlorates, substituted, phase transitions, Raman and IR obs. 7−70817
aniline-PbI_2 intercalation cpd., aniline sublattice mol. packing after phase transition, IR spectra study 7−142979
anisotropic systems, structural phase transitions, soft modes 7−142942
anthracene-TCNB, phase transitions, Brillouin scatt. and calorimetric studies 7−142998
anthracene-TCNB charge transfer crystals, phase transition, lattice dynamical approach 7−111806
anthraquinone dye films, reversible laser marking process based on photothermal transformations 7−82733
Bainite, three definitions comparison 7−132605
bainite reaction, interface motion and the mechanism of phase transformation 7−132604
$(BEDT=TTF)_2X$ salts, superconductors, structural phase transitions 7−84252
β-$(BEDT\text{-}TTF)_2I_3$, thermal expansion meas., structural phase transition 7−85192
β-$(BEDT\text{-}TTF)_2I_3$ supercond., low temp. struct. transition 7−124497
$(BEDT\text{-}TTF)_2IBr_2$, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
$(BEDT\text{-}TTF)_2IBrCl$, elec. cond., static mag. susceptibility meas., phase transitions 7−84901
benzil, phase transition and order parameter 7−142999
betaine calcichloride, incommensurate ferroelec., soft modes 7−85550
biphenyl crysts., superradiance of guest pyrene molecules, effect of struct. transitions *(Russian)* 7−99888
biphenyl-d_{10}, cryst., successive phase transitions, calorimetric obs. 7−104985
Bloch walls, motion in uniaxial materials, nonlinear dynamics and strange attractors 7−143837
borosilicide coatings, interaction with Nb alloy, X-ray exam. 7−138686

solid-state phase transformations continued
casting solidification, melt and mould physical props. effects, num. simulation sensitivity 7−106497
5-chloro-2-pyridone, phase transition, IR, Raman and dielec. meas., NQR spectrum 7−77423
chrysotile asbestos, thermal transform., structural changes 7−124469
colloids, phase diagrams, free energy calcs. 7−91770
crumpling transition in polymerized membranes 7−111429
crystal, planar defects and dislocations in low-symmetry phase *(Russian)* 7−142778
crystal-chemical estimation of the pressures of phase transitions 7−69905
crystallographic space group R3c, microstruct. and phase transitions, symm. anal. 7−83829
crystals, dislocations, struct. phase transitions, volume increase in elementary cell 7−131307
crystals with dislocations, light scatt. near struct. phase transitions 7−138467
crystals with dislocations, sound absorpt. and velocity, anomalies near second order phase transition 7−137474
decylammonium chloride, phase transitions, Raman and IR spectroscopy 7−84251
defects effects 7−118085
p-dichlorobenzophenone, phase transitions, Brillouin scatt. and calorimetric studies 7−142998
dielectric crystals with dipole impurities, concentrational phase transitions, random field theory 7−131305
diffusional and displacive transformations mechanisms 7−132606
diffusional solid state transform., interphase kinetics, struct., comp. 7−132607
5,6-dioxycarbonyl(2.2.1)bicyclohept-2-ene, phase transition, temp. depend., plastic crystal phase form. 7−137542
dislocations near first order transition points,. validity of elastic isotropic crystal approx. 7−98426
DNA, structural transition, B→Z phase, solitary excitations 7−144960
elastic crystals exhibiting phase transitions, soliton props. 7−137553
electro-optical effects in crystals 7−144031
electron probe X-ray microanalysis, high-temperature technique for diffusion and phase transitions obs. 7−106855
epitaxial films, layer by layer film growth and morphological transitions, continuum model 7−137764
epoxide resin, mol. mobility, octadecylamine effects, PMR obs. *(Russian)* 7−99591
ethanes, hexasubstituted, large amplitude motions and phase transitions 7−142933
ferroelectric crysts., microstructural phenomena, high resolution electron microscopic studies 7−97867
ferroelectricity conference, Metz, France, (Sept. 1986) 7−115683
ferroelectrics, vibronic structural phase transitions, mag. field-induced effects 7−104950
graphite-diamond transition, TNT detonation products, statistical mechanical determ. 7−142944
graphite-H_2SO_4 intercalation cpd., staging transition, Raman scatt. meas. 7−84238
graphite-hexagonal diamond transformation, total energy studies 7−105005
graphite-K, intercalation compounds, hydrogen storage, isotopic H-D exchange 7−93545
graphite-K intercalation cpd., search for low temp. staging transitions and phase separation 7−84241
HCP crystals with random growth faults, transformation to FCC phase, diffraction effects 7−131159
hysteresis of a phase transition in an elastoplastic medium 7−97328
ice, cooling and warming, freezing damage of erythrocytes 7−133251
ice, nucleation in porous silica, neutron diffr. studies 7−131294
ice, phases V and VI, phase transitions, heat flow calorimetry obs. 7−131293
ice in cometary nuclei, amorphous to crystalline ice transition rel. to evolution and activity of nuclei 7−115299
ice in cometary nuclei, radiogenic heating rel. to amorphous-cubic transition and comets form. time 7−145879
ice precipitates in glassy LiCl, ice I_c struct. and I_c-I_h transitions 7−131112
icosahedral phase formation by ion beam alloying methods 7−111440
ideal crystals, long time correlations near structural transitions, self-consistent treatment 7−84247
induction-probe magnetometric instrument for temp. investig. during heat treatment 7−78430
ionic crystals, orientationally disordered, two-dimensional dynamics 7−91495
Jahn-Teller crystals, domain walls with competing magnetic structural ordering 7−118446
Johnson-Mehl-Avrami equation, test 7−98428
Landau theory, region of applicability 7−124472
layered crystals, $TlAlF_4$-type, successive struct. phase transitions 7−124473
$Li_2Ti_3O_7$, cryst. growth, phase transitions and props. 7−92856
lithium thallium tartrate, low temp. phase transition, critical fluctuations, Raman spectra anal. 7−85713
local phase transition around a cavity in a solid 7−84257
local phase transition at termination of a crack in a solid 7−76349
loop renormalization of Ginzburg-Landau free energy functionals 7−105012
malononitrile, phase transition studies 7−69894
metal films, nitridation by ion implantation, structural transformations 7−71388
metal hydrides, properties and applications, conf., Maubuisson, France (May 1986) 7−80151
metal-coating system, elec. cond. method for thermal stability investig. 7−93228
metallic glasses, magnetostriction and short-range order 7−85402
metallic glasses, struct. transform., photostimulated exoelectron emission 7−76019
metals and alloys, high-purity, phase transform. features *(Chinese)* 7−126081
methanol, lattice vibrs., Raman spectrosc. obs. 7−85727
L-methionine, crystalline, conform. phase transition, IR and Raman spectra, MNDO calcs. 7−124413
4-methyl-pyridine-d_0 (-d_7), cryst., phase transitions, mol. dynamics 7−85729
methylammonium nitrate, N-deuterated, single cryst., Raman spectra 7−132273
solid-state phase transformations continued
methylene iodide-d_0 (-d_2), cryst., Raman and far IR spectra 7−85728
4-methylpyridine, phase transitions, mol. mechanism 7−143002
mixed valence as an almost broken symmetry, strong-coupling props. 7−84798
mixed valence compounds, phase transitions 7−118454
mixed-stack cpds., dimerisation transition versus neutral-ionic transition 7−112281
mordenite, high temp-phase transition *(Chinese)* 7−98423
narrow-band IV-VI semiconductors, energy bands, dielectric props. and defects 7−84678
NASICON, superionic cond. and intermediate structure 7−142743
nematic liquid crystal, internal optical bistability with light-induced structural phase transition 7−141917
n-nonacosane, first-order phase transitions, dilatometric obs. 7−111859
n-nonadecane, first-order phase transitions, dilatometric obs. 7−111859
nuclear quadrupole interactions signature in continuous phase transitions 7−118452
organic charge transfer crystals, struct. phase transition, IR reflection spectra studies 7−85678
organic metals, A[M(dmit)$_2$] (Az DBTTF, BEDT-TTF, HMTTeF, BPDT-TTF; M=Ni; Pd) electrical and structural properties 7−99014
organic mixed-stack charge-transfer crysts., neutral-to-ionic transform. and ground-state props., Hubbard Hamiltonian model 7−118087
organosilicon films, plasma polymerised, phase transition effects 7−131290
oxalate trihydrate and epitaxy in weddellite-whewellite system 7−100801
pentaerythritol-polyalcohols neopentylglycol, mixture, calorimetric study 7−118089
pentaglycerine-polyalcohols neopentylglycol, mixture, calorimetric study 7−118089
pentaglycerine/neopentylglycol mixtures, solid solid transitions, energy exchange, time and temp. dependence 7−126653
pentylenediammonium cadmium tetrachloride, orientational conformational disorder 7−142748
peritectic transform., globular eutectic growth, diffusion model 7−132601
perylene-hexacyanobutadiene charge transfer complex, struct., optical studies 7−83943
phase stability under irradiation, disordering, diffusion, segregation and precipitation 7−104815
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
photostimulated surface reconstruction, oscillatory effects 7−70050
plastic crystals, binary diagrams, excess enthalpy *(French)* 7−137520
point defect long range elastic interaction near second-order phase transitions 7−137361
poly(vinylidenefluoride-trifluorethylene) ferroelectric copolymers, phase transition, spectroscopic study in submillimetre region 7−118956
polyalcohol aqueous solns., vitreous state decomposition 7−131319
polyamides, cryst. lattice, thermal expansion obs. *(Russian)* 7−111921
polybis-(p-toluene sulphonate) single crystal, phase transition at low temp., photoacoustic effect study *(Chinese)* 7−118075
polydiacetylene, urethane substituted, solid-state phase transitions 7−142991
polyvinylidene fluoride films, struct. changes in elec. fields 7−124122
polyvinylidene fluoride-trifluoroethylene copolymers, far IR spectra, dielec. props., phase transitions 7−126101
polyvinylidene fluoride/PMMA blends, oriented, PMMA effect on morphology and $\alpha \rightarrow \beta$ transition 7−112135
quartz, refractive index studies 7−106121
rare earth germanates, $R_2Ge_2O_7$, R=La-Lu, structural relations, cryst. data, phase transitions 7−76088
rare earth titanates, $R_2Ti_2O_7$ and R_2TiO_5, R=La-Lu, structural disordering on quenching, Raman spectra 7−99820
Rochelle salt, phase transition at 210 K, heat capacity obs. 7−104999
seed diffusion growth, in external periodic field, first order phase transitions 7−143293
shape memory alloys, structural phase transition dynamics 7−137457
shear transformations, 2H→4H crystal structures, X-ray diffraction effects 7−104979
solids, transformations, computer simulation techniques 7−111861
solids containing defects, phase transitions, anal. 7−111854
spinel crysts., Jahn-Teller effect-induced orthorhombic and tetragonal deforms. *(Russian)* 7−91693
squaric acid, struct. phase transition, pseudospin-lattice coupled mode model 7−104996
stability criteria for phases under irradiation 7−117968
steel, alloy, morphology and phase transform. of granular bainite *(Chinese)* 7−77993
steel, austenitic stainless, weld metal, primary austenite solidified, microsegregation and ferrite to austenite transform. 7−144407
steel, bainitic, HSLA, containing Si, microstruct. exam. 7−100216
steel, bainitic, HSLA, containing Si, tensile deform. 7−100301
steel, C-Mn, continuous cooling transform. 7−86175
steel, computer-aided heat treatment, phase transform. *(Korean)* 7−138766
steel, Cr-Ni, two-phase, δ-ferrite transform. during tempering 7−86224
steel, Cr-Ni-Mn-Mo, heating and cooling, transform. behaviour *(Serbian)* 7−71173
steel, Cr-Ni-W, internal friction of bainitic transform. *(Chinese)* 7−71175
steel, dendritic microsegregation, computer model develop. 7−106496
steel, dual-phase, austenite form. from tempered martensite *(Korean)* 7−78064
steel, dual-phase, isolated retained austenite, etching contrast, optical identification 7−100217
steel, dual-phase, transformed ferrite growth rate, theoretical prediction *(Korean)* 7−138739
steel, eutectoid, austenite form. during thermomech. treatment 7−71223
steel, eutectoid, isothermal pearlitic transform., plastic deform. *(French)* 7−86165
steel, eutectoid, post thermomechanical treatment transform. struct. of ferrite in pearlite 7−100218
steel, eutectoid cylinder, cooling, internal stresses, transform. plasticity 7−132603
steel, ferrite form. obs., interface migration 7−132609
steel, ferrite grain size, effect of cooling 7−100215
steel, HSLA, intercritically annealed, austenite retention 7−78072
steel, laser hardening depth, latent heat influence of solid-phase transforms. 7−100427
steel, martensite-bainite, low C, weldable, improvement of mech. props. 7−100335

solid-state phase transformations continued
steel, medium C, continuous cooling transform., austenite deform. effect 7−138802
steel, Mn, bainitic, thermomechanical treatment, mech. props., microstruct. *(Polish)* 7−71267
steel, Mn-Mo-Nb, bainitic transform., microphase struct. 7−77999
steel, Mn-Mo-Nb, intermediate transform. during continuous cooling 7−132602
Steel, Nb, low C, transform texture, proeutectoid ferrite nucleation 7−78000
steel, near eutectoid, thermal fatigue, microstruct. instability and transform. 7−144532
steel, Ni-Cr-Mo, carburised-quenched, transform. plasticity, simulation method *(Japanese)* 7−78114
steel, non-isothermal transformations, math. treatment 7−93005
steel, pearlitic transform. kinetics during continuous cooling, stress effects 7−113541
steel, stainless, dual phase, corrosion resist., phase transform., microstruct. 7−78343
steel, stainless, fracture morphology and softening behaviour 7−86354
steel, stainless, struct. form. on cooling and heating 7−132618
steel, V, hardening due to non-pearlitic eutectoid transform., anal. *(Polish)* 7−138754
steel, V treated, pearlite colony size rel. to transform. temp. and prior austenite grain size 7−77998
steels and alloys, high-speed dilatometry appl. 7−144647
structural mechanism of the ordering of ions in tetrahedral holes in spinels 7−69906
structural phase transition temp. correl. with superconducting transition temp. in new and classical superconductors 7−112528
structure II clathrate cryst., thermal expansion, const. press. mol. dynamics 7−105085
superplastic deformation mechanisms, role of struct. transformations *(Russian)* 7−137445
surface structures, phase transitions, book contrib. 7−137683
symmetry changes, group theory analysis for R_2Mx_4 cpds., (R=organic cation; M=Cu,Cd,Hg,Zn; X=Cl,Br) 7−137297
TCNQ salt, $MPht(TCNQ)_2$, phase transitions, IR absorpt. spectra 7−138439
1,2,4,5-tetrabromobenzene, crystals, anharmonicity, piezomodulated Raman spectroscopy studies 7−138456
tetrabutylammonium iodide, polycryst., mol. reorientation, spin-lattice relax. times meas. 7−76049
tetrahydrofuran clathrate hydrate: KOH, phase transition, sp. ht. meas. 7−91798
tetramethylammonium cobalt tetrachloride, single cryst., phase transitions, laser Raman study 7−144059
tetramethylammonium copper bromide, phase transitions, EPR studies 7−131302
tetramethylammonium tetrabromoplatinate(II), cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tetrahalopalladate(II) cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
thallium n-tetradecanoate, heat capacity and thermodynamic functions 7−84312
thick hot rolled strip, mechanism of texture formation *(Russian)* 7−106530
thin films, phase and morphological transform. kinetics 7−112133
$(TMTSF)_2PF_2O_2$, supercond., competing phase transitions 7−84252
$(TMTSF)_2PF_6$, SDW transitions in mag. field, comparison with $(TMTSF)_2CLO_4$, magnetotransport behaviour 7−84854
$(TMTSF)_2X$ salts, superconductors, structural phase transitions 7−84252
transition metal monopnictides and monochalcogenides, structural transforms., microscopic theory, electron-lattice interaction matrix element calcs. 7−76389
transition metal selenides, $(M'_xM_{1-x})_3Se_4$, (M,M'=3d transition metal), phase diagrams 7−113526
tridymite single crystals, reconstructive high temp. transformation to cristobalite 7−69903
triethylenediamine, polyiodides, reson. Raman spectra and X-ray struct. 7−92663
tris(hydroxymethyl)aminomethane, H bonding, vibr. study 7−144076
TTF-chloranil mixed stack cpd., neutral-ionic transition 7−84253
TTF-p-chloranil, neutral-ionic transition, ^{1}H-NMR and EPR studies 7−84256
TTF-p-chloranil single cryst., neutral-ionic phase transition 7−84255
two-dimensional anisotropic interface fluctuation thermodynamics, equilib. cryst. shape geometry 7−92007
two-dimensional automated X-ray detector for diffraction experiments 7−109653
ultradispersed systems, defect struct. and solid phase transformations 7−124240
Urea inclusion cpds., diffuse scatt. and disorder 7−86892
Wigner crystal, structural transitions, interaction with elastic medium *(Russian)* 7−124432
zinc bis(oxalato(platinate, $Zn_{0.81}[Pt)C_2O_4)_2].6H_2O$, 1D conductor, transport props. and phase transitions 7−105552
ZrO_2-CaO system with tetragonal ZrO_2 polycrystals 7−132513
Ag overlayers on Si (111)-2×1, LEED and AES studies 7−118275
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7−124775
Ag_3AsS_3, broad phase transition near T∼150 K 7−69888
Ag_3AsS_3, proustite, photoinduced phase transition 7−69889
AgI superionic conductor, phases, phase transitions and excitons, diffuse reflectance spectra studies 7−118091
Ag_3SbS_3, broad phase transition near T∼150 K, permitt., US meas. 7−69888
$AgTaO_3$, structural phase transitions, Raman scatt., X-ray diffr. and dielectric meas. 7−76386
$Ag_{0.35}TiS_2$, second-order phase transition, X-ray study, order parameters 7−84239
Ag_3VO_4 thin films, photoinduced phase transition 7−118092
β-$Ag_xV_2O_5$, phase transition and bipolaron form. 7−137548
Al-Cr, rapidly quenched, icosahedral quasicrystal form., thermal stability, elec. resist. 7−113580
Al-Ge, sputtered thin films, laser irrad., metastable phase form. 7−113387
Al-Ge alloy films, metastable phase prod. and transform. by rapid crystn. and annealing treatments 7−75991
Al-Mg system, new metastable phase 7−77953

solid-state phase transformations continued
Al-Mn, quasicrystalline-amorphous structural transition, temp. and radiation dose depend. calcs. 7−124100
Al-Mn system, phase equilib., stable and metastable 7−86134
Al_6CuMg_4, endothermic quasicrystalline-crystalline transition, electron microscopic and DSC studies 7−111868
Al_6CuMg_4, endothermic quasicryst.-cryst. phase transition 7−131301
AlLiCu, T_2 phase, phase transition under heat treatment 7−137319
AlMnFeCrUSi, pentagonal symmetry *(Dutch)* 7−91516
Al_2O_3-SiO_2, amorphous, chemical polymerisation form., phase transformations, X-ray diffr. and SEM studies 7−105000
$AlPO_4$ crystals with high Q-factor, growth and props., bulk wave device appl. 7−119121
$Al_{85}Si_1Mn_{14}$ quasicrysts., thermal transform. to conventional crysts., two-step mechanism 7−105002
As-Ge-Te, ternary system, phase diagram *(French)* 7−132588
As_2Te_3-GeTe, phase diagram, stable and metastable phases *(French)* 7−132587
Au single crystal (111) and (100) UHV-prepared surfaces, stability in aq. electrolyte, LEED and electrochem. anal. 7−105216
$Ba_2EuCu_3O_x$, high temp. supercond., O stoichiometry as function of temp. 7−118110
$Ba_2GdCu_3O_x$, high temp. supercond., O stoichiometry as function of temp. 7−118110
$BaMnF_4$ antiferroelec. short range order, microstructural modification and phase transitions 7−85543
$BaMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$Ba(NO_3)_2$, thermal hysteresis 7−76393
$Ba_2NaNb_5O_{15}$, disproportionate phase transitions 7−124495
$BaPb_{1-x}Bi_xO_3$, first order structural phase transition and scaling law 7−91799
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7−138111
$Ba(R_{2/3}W_{1/3})O_3$, cubic perovskites, prep., thermal stability 7−69673
$Ba(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
BaS, state and dynamic compression, phase transition, eqns. of state 7−76343
BaSe, state and dynamic compression, phase transition, eqns. of state 7−76343
BaTe, state and dynamic compression, phase transition, eqns. of state 7−76343
$BaTiO_3$ crystalline powders, inelastic low freq. opalescence near struct. phase transitions 7−132291
$BaTiO_3$, hexagonal crysts., structural and ferroelec. transitions, soft phonon modes, Raman scatt. study 7−77544
$Ba_{0.7}Y_{0.3}CuO_x$, high T_c superconductor, identification of phases 7−91543
$Ba_2YCu_3O_{7-\delta}$, high T_c supercond., electron diffr. and microscopy study 7−112589
$Ba_2YCu_3O_x$, high T_c supercond., orthorhombic tetragonal transition, depend. on O content 7−118076
$Ba_2YCu_3O_x$, high temp. supercond., O stoichiometry as function of temp. 7−118110
$Ba_2YCu_3O_x$, high-T_c superconductor, stoichiometry 7−105775
$BaZnGeO_4$, powder calcination, phase transitions, DTA, dielec. meas., X-ray diffr., SEM obs. 7−126107
Be-Fe, technical purity, Fe containing phases, Mossbauer studies 7−142954
CO-Nb-B glasses, magnetostriction, anomalous temp. depend. 7−85404
CO-transition metal alloys, cryst. struct., FCC-HP phase transition effects *(Russian)* 7−137313
$Ca_3(VO_4)_2$-$Pb_3(VO_4)_2$ solid solns., nonlinear props., optical structural, dielec. and thermal meas. *(French)* 7−124527
$Cd(ClO_4)_2.6H_2O$, phase transitions attributable to disorder in waters of hydration 7−118082
$Cd_xCu_{1-x}Fe_2O_4$, x=0-0.3, struct. phase transition, Mossbauer study 7−142974
$Cd(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
CdS:Cl, press. quenched, elec. and anomalous mag. transitions 7−112732
$CdTiO_3$ single crysts., birefringence temp. depend. studies 7−113126
Ce-Gd, shape change during $\gamma\rightleftarrows\alpha$ and $\gamma\rightleftarrows\beta$ transforms. *(Russian)* 7−126105
Ce-Se, shape change during $\gamma\rightleftarrows\alpha$ and $\gamma\rightleftarrows\beta$ transforms. *(Russian)* 7−126105
$CeCu_6$, Kondo cpd., elastic props. 7−69801
$CeCu_6$, lattice distortion 7−69893
$CeCu_{2-x}Co_xSi_2$, mixed valence to heavy fermion transition characts. studies 7−124950
$CeCu_{2-x}Ni_xSi_2$ alloys, heavy fermion to mixed valence transition, sp. ht. behaviour studies 7−124548
CeD_x single crysts., magnetic order and structural transformations studies 7−112745
CeH_x, phase relationships and transitions in homogeneity range 7−84201
$Ce_{0.7}Th_{0.3}$, Kondo vol. collapse and α-γ transition, XPS and BIS studies 7−77760
Co, heat capacity in region of aligned phase transitions *(Russian)* 7−143034
Co, single crystal, desorption of ion implanted atoms 7−76622
Co-TaC, microstruct. of different struct. transforms. induced by rapid quenching 7−92992
$Co_{0.005}Fe_{0.995}S$, mag. study of superlattice transition 7−70528
$CoSiF_6.6D_2O$, rhombohedral-monoclinic transition, ^{2}D NMR study 7−124475
$CoSiF_6.6D_2O$, struct. phase transitions, ^{2}H NMR 7−91795
$Co_{75}Sn_{25-x}As_x(In_x)(Sb_x)$, struct., and struct. transformations, alloying addition effects 7−104641
$CoTiF_6.6D_2O$, rhombohedral-monoclinic transition, ^{2}D NMR study 7−124475
$CoTiF_6.6D_2O$ struct. phase transitions, ^{2}H NMR 7−91795
Cr (110), Br and Cl adsorpt. and surface phase transitions, AES, TDS and LEED studies 7−105276
Cr and Cr-V types, transform. to pearlite from hot-deformed and austenitised austenite 7−100260
Cr-Mn steels, ϵ to γ phase transformation, resistometric, dilatometric and calorimetric effects *(Russian)* 7−104983
Cr-Ni-Mn-Si steels with packet martensite struct., austenite formation, ultrafast laser heating *(Russian)* 7−106480
Cr-Te alloys, phase transformations, mass spectra studies 7−105001
$Cr_{1-t}Mn_tAs$, paramag.-helimagnetic transition, struct. and mag. charcts 7−132020
$CsBi(MoO_4)_2$, IR vibr. spectrum, struct. phase transitions *(Russian)* 7−99816

solid-state phase transformations continued
$CsCrCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
$CsCuCl_3$ cooperative Jahn-Teller system, first-order struct. phase transformation, pseudospin-phonon model 7−112255
$CsCuCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
$CsDy(MoO_4)_2$, low freq. mag. props., mag. and struct. phase transitions 7−132014
$Cs_2FeCl_5.H_2O$, crystallographic phase transition, Mossbauer investigation 7−142990
$CsH(D)SeO_4$, superionic phase transition, neutron diffr. investigation 7−124487
$CsHSO_4$, normal and deuterated, IR and Raman vibr. spectra obs. 7−106165
$CsHSO_4$, struct. phase transitions, influence of water and thermal and mech. treatment 7−137552
$CsHSO_4$ superionic conductor, phase transition and proton cond. mechanisms, Raman scatt. study 7−125739
$CsHSO_4$, superionic protonic conductor, mechanism and proton dynamics 7−143093
$CsHSO_4$, water adsorpt., phase transitions, calorimetry and thermogravimetry study 7−105013
Cs_3ScF_6, high-temp. phase changes, Raman spectra study 7−85709
$CsSnCl_3$, Raman spectra, vibr. modes, phase transitions 7−138461
Cu oxide layered perovskite high T_c superconductors, struct. props. 7−118651
Cu-Al-Ni alloy ribbon, reversible colour change assoc. with phase transform. 7−78066
Cu-Be, irradiation induced phase precipitation and interstitial transport 7−104994
Cu-Ni-Fe, irradiation induced phase decomp. and diffusive atom transport 7−104994
Cu-Sb, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Cu-Sn, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Cu-Sn, vacuum condensates, phase conversion during annealing *(Russian)* 7−93042
Cu-Zn-Al (25.83, 3.96 wt.%), prebainitic transform. *(Chinese)* 7−71174
$Cu_3Au(001)$, critical wetting and surface-induced continuous phase transition 7−70049
Cu(II) complexes, stereochem., struct. phase transition 7−105010
$Cu_xM_{1-x}(H_2O)_6$ SiF_6, M=Zn,Fe,Ni, metastable phases, successive ordering of Jahn-Teller distortions 7−131285
Cu_6PS_5I, superionic phase transition, dielec. and optical props. 7−69966
$CuSnF_6$ hydrates, phase transitions 7−91790
Cu_3Ti, phase changes, X-ray diff. and pseudopots. investig. 7−142980
$DyVO_4$ cryst., thermal expansion in external mag. field, Jahn-Teller domains influence 7−85398
$ErFe_2H_x$, local, macroscopic structural and mag. props., rhombohedral distortion effect 7−99446
Fe, cast, austenitising under pulsed laser rad. action 7−106543
Fe, cast, computer-aided heat treatment, phase transform. *(Korean)* 7−138766
Fe complex, mixed valence, lattice dynamics, ^2H NMR 7−92511
Fe thermodynamically complete eqns. of state 7−76342
Fe-base amorphous alloys, crystallisation temp., composition effects *(Chinese)* 7−91784
Fe-C alloys, bainitic transform., thermodynamics *(Chinese)* 7−131328
Fe-Co-Cr system, highly coercive, struct., phase transform. 7−144392
Fe-Cr-C-Nb system, white cast Fe, phase equilib., solidification and solid-state phase transforms. 7−132578
Fe-Cr-Co-Mo, high coercivity, phase equilib. characts. *(Russian)* 7−142953
Fe-Cr-Co(-Mo)(-W)(-Nb), stratification process, thermodynamic study *(Russian)* 7−125386
Fe-Mn containing ε-martensite, friction and wear, struct. transformations *(Russian)* 7−77995
Fe-Mn-C (12, 0.8 wt.%), pearlite-austenite growth interface 7−77991
Fe-Mn-C (12, 0.8 wt.%), pearlite growth mechanism 7−77992
Fe-Mn-Ni-Si alloys, oxidation-induced transformations, kinetics 7−106670
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7−138784
Fe-Te alloys, phase transformations, mass spectra studies 7−105001
Fe-V, equiatomic, sigma phase form. mechanism 7−93007
Fe_2O_3, impulse treatment, phase composition and packing defects anal. 7−98425
FeS:Mn, M=3d transition metal, mag. and crystallographic transitions, Mossbauer, X-ray studies 7−132006
$Fe_{81}Si_xB_{19-x}$, metallic glasses, transform. behaviour study by SAXS 7−83740
$Fe_{80}Si_xP_{20-x}$ amorphous alloys, crystn. *(Korean)* 7−131046
GaAs (-1-1-1), (2×2) reconstructions, related phase transitions, ab initio theory 7−124678
GaAs, doping with Group VI elements, phase transitions 7−69721
GaAs, nucleation, MBE growth stages on Si(100), 3D critical transition 7−111814
$Gd_2(MoO_4)_3$, elec. field-induced phase transitions, D-E hysteresis loop obs. 7−76388
Ge (111), continuous phase transition, LEED studies 7−84458
GeO_2, glassy, reduction by H_2, anomalous behaviour 7−126418
GeTe, struct. phase transition, neutron diffr. study 7−84235
GeTe, structural phase transition temperature, ab initio determination 7−137545
GeTe-Bi_2Te_3, physicochem. examination *(German)* 7−69904
H_2, solid, HCP, high temp. expansion, free energy 7−112003
^4He crystal-superfluid interface, roughening transitions and shape relax. time study 7−105179
$Hf_{1-x}Ta_xV_2$, lattice instability, TDPAC studies 7−111855
$HfTe_5$, lattice instabilities, TDPAC nuclear quadrupole interaction studies 7−111856
HgX, X=0, S, Se, helical structure, Landau theory, even and odd distortion modes 7−142696
Hg_2X_2 (X=Cl, Br), IR spectra, phase transition effects 7−132259
$In_2S_3(Se_3)$ (Te_3), electric field gradients and regular lattice sites 7−112260
$In_3Sb_5O_{12}$, phase transition, NQR study 7−105003
Ir single cryst. surface reconstructions, FIM obs. 7−143148
$KAlF_4$ premartensitic phase, neutron and X-ray scatt. 7−142983
solid-state phase transformations continued
$(KBr)_{0.36}(KCN)_{0.64}$ mixed crysts., history effects, domains, and glass form. studies 7−84243
$(KBr)_{1-x}(KCN)_x$, specific heat meas., phase and glass transitions 7−131326
KCl:Cu, local phase transitions with S state impurities 7−137538
$K_3Cr(CN)_6$, monoclinic, phase transform., Raman spectra 7−132274
KD_2PO_4, monoclinic crystal, phase transition 7−131288
$K_{1-x}Li_xTaO_3$, pure and Li doped, sp. ht. meas., temp. depend., phase transition 7−76430
KNO_3, central component in Raman spectrum 7−119002
$KNbF_6$, struct. transforms., NMR relax. investig. 7−70666
K_2OsCl_6, struct., temp. depend. 7−104978
$K_{1-x}Rb_xC_{24}$ intercalation compound, composition modulation, struct. phase transitions 7−69679
KSCN, X-ray scatt. struct. study 7−124201
$KTaF_6$, struct. transforms., NMR relax. investig. 7−70666
$KWNb_2O_9$, hexagonal bronze, domain patterns, electron microscopic studies 7−125645
$kMnF_3$, tetragonal phase, domain volume distrib. 7−76424
$Kr_2Pb_4Nb_{10}O_{30}$, formation reactions, thermogravimetric and X-ray diffr. studies 7−126432
La-Sr-Cu oxide ceramics, high T_c supercond., struct. and electronic props. 7−105805
La-Sr-Cu-O high T_c supercond., phase transformations and microstruct. 7−118084
$La_{2-x}A_xCuO_4$, A=Ba, Sr, electron-phonon model tetragonal-to-orthorhombic instability, bond dimerization, T_c values 7−99360
$LaBa_2Cu_3O_{9-\delta}$, high T_c supercond., effect of struct. changes on T_c 7−131859
$LaBa_2Cu_3O_y$, high T_c supercond., orthorhombic-tetragonal phase transition 7−142993
$(La_{1-x}Ba_x)_2CuO_{4-y}$, crystallographic, mag. and superconductive transitions 7−92332
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., 180 K tetragonal-to-orthorhombic phase transition, anomalous struct. 7−112579
La_2CuO_{4-y}:Ca(Ba)(Sr), superconducting, high T_c cpds., prep. and characterisation 7−112563
La_2CuO_{4-y}, antiferromag. obs. by powder neutron diffraction 7−112753
$La_{2-x}M_xCuO_{4-y}$, M=Ba, Sr, Ca, orthorhombic-to-tetragonal structural phase transform., superconductivity anal. 7−99242
$LaNi_5H_3$, pressure-composition isotherm meas., X-ray diffr. study 7−84202
$LaNi_5H_x$, thermal desorption of H, 160 to 420 K 7−91982
La_2O_3-Y_2O_3, solid solutions, phase equilibrium 7−92963
$(La_{1-x}Sr_x)_2$ CuO_4 high T_c supercond., structural phase transition, neutron powder diffr. anal. 7−111869
$La_{2-x}Sr_x(Ba_x)CuO_4$, quasi-2D supercond., Fermi surface, van Hove saddle point singularity 7−92052
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic distortion 7−98437
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp., localisation and struct. transitions 7−105760
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic transition 7−111852
$La_{2-x}Sr_xCuO_4$, high T_c supercond., structural instability, X-ray diffr. study, 15-298 K 7−98434
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. and elec. props., struct. transition preceding superconductivity *(Russian)* 7−124474
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. and phase transitions *(Russian)* 7−142711
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. transformations *(Russian)* 7−142977
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Raman and IR study of lattice vibrs. 7−144075
$La_{2-x}Sr_xCuO_4$, soft-phonon behaviour, hopping conduction 7−137546
$LiCsSO_4$, cryst., low temp. thermodynamic props. 7−143042
$Li_2Ge_7O_{15}$, ferroelec., struct. phase transition, neutron diffraction study 7−124486
$LiIO_3$-γ-Al_2O_3 dispersed system phase transition temp. 7−98424
$LiKSO_4$, low temp. phase transitions, mol. vibr., Raman spectra anal. 7−85713
$LiKSO_4$, phase transitions, Brillouin scatt. study 7−92697
$LiKSO_4$, structural phase transitions, EPR using SO_4^- probe 7−76385
$LiKSO_4$:Cr, EPR of SO_4^- and CrO_4^{3-} centres, low temp. phase transition 7−70640
$LiKSO_4$:Cu^{2+} single cryst., phase transitions, EPR studies 7−106017
$LiKSO_4$:NH_3^+, low temp. phase transitions, EPR study 7−131303
Li_xMoO_2, struct., phase diagram and electrochemistry, in situ X-ray diffr. and electrochemical studies 7−83927
$Li(N_2H_5)SO_4$ pure and doped single cryst., DC cond. and dielec. props., phase transition 7−113076
$LiRbSO_4$, cryst., low temp. thermodynamic props. 7−143042
Li_2SO_4, monoclinic, low-temp. behaviour of Li modes, polarized Raman spectra 7−99851
$Mg(ClO_4)_2.6H_2O$, phase transitions attributable to disorder in waters of hydration 7−118082
Mg_2Ni-H, phase transition, low and high temp. modifications 7−98429
Mg_2NiH_4, X-ray crystallographic and thermal props., low and high temp. phases 7−142975
Mg_2NiH_x, phase transition, heat conduction calorimetry 7−118080
MgO, structural transforms, in $Mg(OH)_2$ and $MgCO_3$ decomposition, TEM obs. 7−100227
$MgTiF_6.6H_2O$:Mn^{2+} single crysts., ESR at phase transition 7−99559
Mn-Cu-Ni-Fe-Al, struct. transform. in specimens alloyed with Ni, Fe and Al 7−100221
$Mn_{0.67}Cu_{0.33}$, phase separation kinetics 7−137572
$MnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
ND_4ClO_4, phase transitions, laser Raman studies 7−104997
ND_4DSeO_4 crystals, coexistence of polar and nonpolar phases, dielectric const. 7−99638
$(NH_4)_2BeF_4$, low freq. permitt. meas. 7−99641
NH_4CdCl_3, phase transitions, laser Raman studies 7−106175
NH_4Cl, dispersion and spontaneous current phenomena 7−77446
NH_4Cl:Cu^{2+}, charge transfer bands, influence of phase transition 7−143423
NH_4CoF_3, heat capacity, 1st order phase transitions and mag. transitions 7−105065
$(NH_4)_3H(SO_4)_2$, phase transitions, far IR reflectance studies 7−106174
$(NH_4)_3H(SO_4)_2$, phase transitions, vibr. study 7−143001

olid-state phase transformations continued
$(NH_4)_3H(SO_4)_2$ second-order phase transition and space group, X-ray diffr. obs. 7−111864
NH_4I, vibr. mode, variable temp. Raman obs. 7−70808
NH_4MnF_3, heat capacity, 1st order phase transitions and mag. transitions 7−105065
$((NH_4)_{1-x}K_x)_2SO_4$ crystals, struct. changes 7−91796
Na halides, cryst., phase transform., interionic. pot. 7−104980
Na halides, struct. phase transition press., calc. 7−131304
Na vermiculite, intercalation cpds., hydration states, phase transitions 7−137543
$NaNO_3$, phase transitions and twinning 7−132208
$Na_4TiP_2O_9$, superionic conductor, phase transition 7−69968
Nb-Sn (Al)(Ge)(Si), metastable, phase transforms. 7−93008
NbH_x, coherent phase transition, neutron radiography, computerised tomography 7−98217
$(NbSe_4)_3I$, liner chain semicond., cryst. struct. and far-IR reflectance 7−98097
$(NbSe_4)_3I$, thermal cond. and thermal capacity 7−98601
$(NbSe_4)_xI$, liner chain cpd., phase transitions, Raman scatt. studies 7−99869
Nb_3Te_4, CDW phase transition, elec. resist., mag. susceptibility and X-ray studies 7−98840
Ni (100), (113) and (115), step form, and roughening transition temp. calcs. 7−143146
Ni complex, $Nien_2(NCS)_2$ single crysts., synchrotron radiation X-ray topography, defects and phase transitions 7−91594
Ni-Al, ion beam mixing, metastable phase form. 7−84066
Ni-Al-W system, cast, phase equilib. 7−132569
Ni-Cr-Al-Mo system, intermetallic cpd. precip. 7−144411
Ni-Te system, vaporisation kinetics, β_2 phase form., Knudsen effusion mass spectra 7−118074
$Ni_{0.01}Fe_{0.99}S$, crystallographic and spin-flip transitions, impurity temp. hysteresis effects, Mossbauer study 7−125578
$NiSi_2$-Si interface, melting dynamics under pulsed laser irrad. 7−84219
O_2, phase transformations, melting and solid-solid, 120-650 K 7−113184
O_2 supercooled liquids and solids in porous sol-gel glasses 7−98406
PLZT, field-enforced phase transition, electrooptic studies 7−106098
PZT ferroelectrics, local phase transitions during damage 7−69890
Pb complex, bis(pyridinium)hexachloroplumbate, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Pb-Sb, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Pb-Sn, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Pb-Sn (5 wt.%), discontinuous precip., low undercooling instability in cellular mechanism 7−78032
$Pb_{1-x}Ge_xSe$, phase transition, X-ray diffr., elec. resist., Tl impurity effect 7−111853
PbI_2-aniline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7−76399
PbI_2-hynoline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7−76399
PbI_2-quinoline intercalation compound, phase transition, miniband spectrum, superlattice 7−131306
$PbMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$Pb(NO_3)_2$, thermal hysteresis 7−76393
$Pb(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$PbTiO_3$, crystal growth, phase transform., and microcracking 7−100038
$Pb_3(VO_4)_2$, low temp. phase, electron diffr. study 7−69899
$Pb(Zn_{1/3}Nb_{2/3})O_3$-based ceramics, perovskite phase stability 7−98440
Pd-Y (8 at.%), H solubility, elec. resist. anomalies, phase transition 7−98467
$PrCu_6$, low temp. monoclinic form, neutron diffraction study 7−124168
Pt complex, bis(pyridinium)hexachloro-platinate, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Pt complexes, $M(II)PtCl_6.6H_2O$, NQR freq., temp. depend. 7−106056
Pt single cryst. surface reconstructions, FIM obs. 7−143148
Pt-Si reaction, silicide formation, elec. meas. 7−99195
$RbAlF_4$, lattice dynamics and struct. phase transitions 7−118044
$RbCrCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
$RbCuCl_3$, Jahn-Teller cpd., theory of diffuse neutron scatt. in high temp. phase 7−69544
RbH_2PO_4, water adsorpt., phase transitions, calorimetry and thermogravimetry study 7−105013
Rb_2HfF_6, quadrupole hyperfine interaction, phase transition, TDPAC obs. 7−84245
$Rb_{1-x}(NH_4)_xH_2PO_4$ mixed cryst., polarisation fluctuations, Brillouin spectra obs. 7−125760
$Rb_{1-x}(NH_4)_xH_2PO_4$, struct. near ferroelec.-glass boundary, X-ray scatt. anal. 7−138392
$RbNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7−98433
Rb_3ScF_6, high-temp. phase changes, Raman spectra study 7−85709
Rb_2ZnCl_4, low freq. permitt. meas. 7−99641
Rb_2ZrF_6, quadrupole hyperfine interaction, phase transition, TDPAC obs. 7−84245
$ReF_6ReF_7MF_6MF_5$ (M=Sb,Au), mixed ion-molecule salts, preparation and stabilisation 7−104700
SF_6, phase, nucleation, electron diffr. investig. 7−98380
Se, helical structure, Landau theory, even and odd distortion modes 7−142696
SeF_6, phase, nucleation, electron diffr. investig. 7−98380
Si, laser annealed and ion implanted, phase transitions, Raman studies 7−119008
Si:As, heavily doped, phase transformation, post-rapid-thermal annealing, TEM and Rutherford backscatt. study 7−142982
Si_3N_4, α-β transition, jump mechanism *(Chinese)* 7−131300
Si_3N_4 ceramics, sintered with MgO/Nd_2O_3 mixed additions, microstruct. development 7−138720
SiO_x, disordered solid, struct. phase transition 7−137243
Sn complex, bis(pyridinium) hexa-chlorometallates, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Sn, tilt boundary migration in vicinity of grain boundary phase transition *(Russian)* 7−111960
Sn-In alloys, US study of phase transitions, Young's modulus 7−98349
$SnMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$Sr_2Co_2O_5$, phase transitions, neutron thermodiffractometry study 7−91797
solid-state phase transformations continued
SrF_2:Mn, local phase transitions with S state impurities 7−137538
$SrFeO_{3-y}$, first order transition, Fe mixed valence, Mossbauer spectra study 7−92560
$Sr(NO_3)_2$, thermal hysteresis 7−76393
$Sr(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$SrTiO_3$, SAW propagation, nonlinear acoustic effects, region near struct. phase transition 7−70054
Steel, Cr-Mn, electron flux irrad., surface layer local anal. 7−124650
Ta-H-T, electromigration of T, effective valency rel. to thermodynamic factor 7−91905
$TbFe_2H_x$, local, macroscopic structural and mag. props., rhombohedral distortion effect 7−99446
$Tb_xGd_{1-x}VO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
Te complex, bis(pyridinium)hexachlorotellurate, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Te, helical structure, Landau theory, even and odd distortion modes 7−142696
TeF_6, phase, nucleation, electron diffr. investig. 7−98380
Ti alloy, phase transitions exam. in single crysts. using X-ray diffr. method 7−132862
α-βTi alloys, high temp. ductility losses, model 7−86289
Ti, oxidation kinetics in laser irrad., scale phase transform. 7−144585
Ti-Al-Mo, $\alpha+\beta$, substruct. changes during hot working 7−78067
Ti-Al-Mo-Zr, superplastic deform., stress induced H diffusion 7−132686
Ti-Cr alloys, irradiation-induced phase transformation, cascade-driven structural interface migration 7−111681
Ti-Cr disordered alloys, electronic phase transition and lattice props. anomalies 7−85021
Ti-Er, thermal stability of Er_2O_3 when annealed above α/β transus 7−119297
Ti-Fe disordered alloys, electronic phase transition and lattice props. anomalies 7−85021
Ti-Hf alloys, interdiffusion in BCC β-phase *(French)* 7−143110
TiAl, crystn., heat treatment, struct., phase comp. 7−144440
TiNi-TiPd intermetallic compound system, valence band evolution and structural instability 7−84659
$Ti_{49.5}Ni_{48}Cr_{2.5}$, phase transform., TEM study 7−126116
TiO_2-Sb_2O_3, doped and undoped, anatase to rutile transform. 7−100214
$TiSi_2$, C49 to C54 transformation temperature, grain size effects 7−113544
$TlAlF_4$, ferroelastic, struct. phase transitions and cryst. struct. 7−111858
$TlNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7−98433
$TmPO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
$TmVO_4$, Jahn-Teller cryst., mag. field, influence on struct. phase transition *(German)* 7−132122
UBe_{13} heavy-electron superconductor, quadrupolar Kondo effect 7−137914
UCl_4, struct. transitions anticipating melting 7−84229
α-UF_5, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
U_2F_9, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
U_6Fe amorphous, crystallisation and nucleation limited stability 7−97938
UMn_2, cubic-orthorhombic transformation, rhombohedral precursor 7−98431
$UO_2(NO_3)_2.6H_2O$, pyroelec. single crysts., phase transitions, Raman spectrosc. obs. 7−70807
UPt_3, heavy fermion supercond., US attenuation, phase study 7−99336
V-Ga alloys, rapidly solidified, microstruct. and phase transform. 7−119265
V-Ru alloys, electronic props., effect of structural transformation 7−131296
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567
Xe incommensurate layers on Pt (III), struct., symm., and rotational epitaxy, high resolution He diffr. study 7−105258
Y-Ba-Cu-O high T_c supercond., cryst. struct. and supercond. props. 7−111489
Y-Ba-Cu-O high T_c supercond., X-ray single cryst. struct. anal. 7−111490
Y-Ba-Cu-O high T_c supercond., unit cell dimensions and O contents 7−117898
Y-Ba-Cu-O high T_c supercond., phase transformations and microstruct. 7−118084
Y-Ba-Cu-O high T_c supercond., O nonstoichiometry and struct. 7−118117
Y-Ba-Cu-O high T_c supercond., oxidation treatment, stoichiometry and lattice parameters w.r.t. T_c 7−118605
Y-Ba-Cu-O high T_c supercond., struct. and supercond. props., annealing effects 7−124188
Y-Ba-Cu-O high T_c supercond., struct. behaviour and superconductivity 7−124226
YBaCu(Nb)O high T_c superconds., lattice instability, ultrasonic meas. 7−138132
$YBa_2Cu_3O_7$, high T_c supercond., struct. at elevated temps., orthorhombic-tetragonal transition 7−137344
$YBa_2Cu_3O_7$, high T_c supercond., shear transformation, twin formation 7−137374
$YBa_2Cu_3O_{7-\delta}$, struct. phase transition, role of dimensionality for high T_c superconduction 7−112588
$YBa_2Cu_3O_{7-x}$ high T_c superconductor, variation of stoichiometry, cell symmetry on temp. and press. 7−111498
$YBa_2Cu_3O_{7-x}$, supercond., high temp. X-ray powder diffr., 298-1300 K 7−142997
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., phase transitions 7−118081
YIG, phase transition, magnetoelectric effect meas. 7−76387
Y_2TiO_5, structural disordering on quenching, Raman spectra 7−99820
$Y_2Ti_2O_7$, structural disordering on quenching, Raman spectra 7−99820
$YbAs_3$ mixed valence system, temp.-induced structural transition, mag. suscept. and resist. meas. 7−76384
Zn-Al based alloys, solid-state reactions 7−77994
$Zn_xCd_{1-x}Se$, struct. phase transitions, composition depend. of band gap 7−112177
$Zn(ClO_4)_2.6H_2O$, phase transitions attributable to disorder in waters of hydration 7−118082
$ZnSnAs_2$ semicond. crysts., interatomic interaction dynamics, phase transition, intrinsic point defect formation 7−137539

solid-state phase transformations continued
$ZnTiF_6.6D_2O$, rhombohedral-monoclinic transition, ^2D NMR study 7—124475
$ZnTiF_6.6D_2O$ struct. phase transitions, ^2H NMR 7—91795
$ZnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7—104998
$ZnTiO_3$, form. and transform. 7—98427
Zr, BCC high temp. phase, phonon-phonon coupling 7—98367
ZrO_2, MgO partially stabilised, gel-derived, phase transforms. 7—77996
ZrO_2, MgO partially stabilised ceramics, mech. behaviour at elevated temps. 7—78185
ZrO_2, prep. from Zr citrate, structural transformation 7—77854
ZrO_2:Y_2O_3, stress-induced transformation, zone size, Raman microprobe obs. 7—70812
ZrO_2-Y_2O_3, TZP ceramics, sintered, development of secondary tetragonal phase 7—86112
ZrO_2-Y_2O_3 stabilised, H_2O effects under hydrothermal conditions, degradation mechanism 7—86382
ZrO_3-Y_2O_3 system, phase diagram and microstructures 7—138735
$ZrSiO_4$, zircon, alpha-decay fracturing and crystalline-metamict state transitions 7—124352
ZrV_2 intermetallic cpd., phase transitions effect on neutron irrad. of introduction of H *(Russian)* 7—126104

solid-state plasma
see also helicons; plasmons
2D plasma, fast-particle energy loss 7—137432
α-(BEDT-TTF)$_2I_3$, quasi-2D metal, light scatt. by plasmons 7—77530
binary heterostructure, electron-hole plasma, stratification dynamics study 7—131697
carrier plasma photothermal radiometric imaging of semiconductors 7—70343
cubic metallic elements, empirical electron-phonon λ values from resistivity 7—137495
direct gap polar semiconds. under continuous laser illum., nonequilibr. thermodynamic state 7—84961
double heterostructures, dense electron-hole plasma, nonstationary heating 7—105677
dynamic reflectivity switching of IR lasers 7—141914
electron distribution around impurity modified Sjolander-Stott integral eqn. 7—92088
electron fluid with non-local electron-hole interaction, dynamical effects 7—99104
electron-hole plasma, mag. field oscillating along current 7—143498
electron-hole plasma, spreading, coherent acoustic field nonlinear restriction, transonic velocities 7—143501
electron-hole plasma of binary heterostructures, nonequilibr. processes 7—112382
energy relaxation of an electron-hole plasma in semiconductors 7—112385
film surface modification, plasma chemistry 7—91932
four-layer semiconductor structs., plasma phenomena, expt. study *(Czech)* 7—131698
generalised plasma in 1D, partition function evaluation 7—91287
heavy-fermion materials, plasma oscillations 7—143384
helical instability in an inhomogeneous electric field, obs. 7—131696
hot electron plasma in electric field, negative differential conductivity, overheating ionisation mechanisms 7—112381
III-V quantum well structs., high carrier densities, photolum. studies 7—106270
irradiation by electron-electron and electron-X-ray beams, using synchronised accelerators 7—137412
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7—125752
lossy dispersive media, conservation expressions and relationships to cct. theory 7—136638
magnetised semiconductor plasma, radiation from a point source 7—105603
metal, electronic structure and plasma excitations at the surface of small voids in jellium 7—124817
metal optics near the plasma freq., book 7—80188
metals, plasma oscillation-dislocation interactions *(Russian)* 7—98846
optically excited semiconductors, conductivity relax time due to electron-hole collisions 7—118523
plasma superconductivity in a 2-D electron system 7—70347
polar semiconductors, dynamical conductivity in IR from impurity scatt. 7—125050
polar semiconductors, thermalisation, cooling processes in dense photogenerated plasma, screening, phonon heating 7—84910
semi-infinite Landau-quantised plasma, screened pot. for planar charged sheets 7—105429
semiconductor, SHG in MM wave region in DC mag. field 7—118521
semiconductor electron-hole plasma, energy conversion into microwave oscillations 7—137974
semiconductor nonequilibrium plasma, thermal radiation 7—112380
semiconductor plasma gain spectra, lineshape theory of plasmon-phonon sidebands 7—99913
semiconductor superlattices, integral Landau level filling, magnetoplasma modes 7—124898
semiconductor surface, magnetoplasma surface waves, generation by moving charges *(Russian)* 7—118524
semiconductors, compensated, filamentation instability of Alfven wave 7—70345
semiconductors, free carrier light absorption calcs. 7—131241
semiconductors, highly excited, current relax. processes 7—99106
semiconductors, polar, hot electron plasma, influence of recombination centres on relaxation process 7—137956
surface helicons, damping 7—70344
two-component boson-fermion plasma, permittivity calcs. 7—99643
two-dimensional electron plasma-fast charged particle interactions, RPA calcs. 7—92217
type I superlattice, dynamic cond. magnetoplasma reson., memory function MHD anal. 7—138061
Ag_xTiS_2 intercalation cpd., Z 7—99855
$Bi_{1-x}Sb_x$, electron cyclotron mobility, effective conc., phonon scatt. 7—99105
CdS crysts., electron-hole plasma excitation spectra 7—98813
CdS electron-hole dynamics picosec. luminesc. studies 7—85845
CdSe, electron-hole plasma, hot electrons, phonons, photolum. study *(German)* 7—132336
$CeBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7—106124

solid-state plasma continued
GaAs, electron-hole plasma, photoexcited, dynamics, ps. time-resolved Raman scatt. investig. 7—85684
GaAs, hot carriers, femtosecond collision times, picosecond time-resolved light scatt. 7—113199
GaAs, hot electron-hole plasma cooling, carrier lifetime influence 7—99107
GaAs, hot photoexcited e-h plasma, photolum. studies 7—137975
GaAs, optically excited, electron-hole plasma Raman scatt. obs. 7—85681
GaAs, photoexcited plasmas, picosecond Raman scatt., interfacial recomb. 7—125751
GaAs, plasma cooling, electron-phonon interactions 7—137812
GaAs, warm lattice, heating of cold electrons, probe of carrier-phonon interaction 7—137977
n-GaAs/Au tunnel junctions photo-resistive effect during plasma refl. of laser light 7—70413
GaAs-$Al_xGa_{1-x}As$, multiple quantum well struct., expansion of electron-hole plasma 7—143602
GaAs-$Al_xGa_{1-x}As$ injection laser, lightly doped, threshold characts. 7—103814
GaAs-AlGaAs, actively mode-locked diode lasers, pulse shortening by wavelength tuning 7—90661
GaAs-GaAlAs MQW struct., 2D e-h plasma dynamics, time-resolved Raman scatt. meas. 7—125107
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ MQW struct., e-h plasma cooling, time-resolved photolum. meas. 7—125095
GaSe, anal. of excitonic Mott transition 7—70903
Ge current instabilities and e-h plasma stratification during photocarrier exclusion 7—137980
Ge, electron-hole plasma, exchange and correlation energy 7—92091
InGaAs-InP quantum well structs., electron-hole plasma, photolum. studies 7—85834
InGaAsP films, dense e-h plasma, time-resolved photolum. studies 7—70896
InP, photoexcited plasmas, picosecond Raman scatt., interfacial recomb. 7—125751
InSb, solid-state plasma, extraordinary mode, stimulated Raman scatt. 7—84959
InSb, solid-state plasma, magnetoactive, stimulated Brillouin scatt. of EM wave 7—113215
Nb-NbO_x-PB Josephson tunnel junctions, HF loss meas. near plasma reson. 7—138143
Ni complex, Ni(phthalocyanine)$(ClO_4)_y$, mol. metal, band filling and counterion ordering effects 7—143450
$(PbSe)_{0.8}(SnTe)_{0.2}$-$PbSe_{0.32}Te_{0.68}$ heterostruct for IR magnetoplasma injection laser 7—103818
$Pb_{1-x}Sn_xTe$:In, admixture electron capture effect on Gunn domains 7—99077
Si, electron-hole plasma, exchange and correlation energy 7—92091
Si electron-hole plasma, second condensed phase 7—112384
Si, electron-hole plasma lateral expansion, picosec. time-resolved Raman study 7—112383
Si, p-n junction, microplasma breakdown region, current-voltage charact., noise 7—143565
Si, picosecond laser pulse-generated high-density plasma kinetics simulation 7—105605
Si, Rayleigh waves, nonlinear optical excitation 7—112050
Si surface, 2D electron-hole system, optical studies on mag. phenomena 7—138426
TaS_2, 1T polytype, 2D conductor, submillimeter spectra of dynamic conductivity 7—144184
$ThBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7—106124
TlBr, luminescence of direct- and indirect-gap electron-hole plasma 7—85829
UBe_{13}, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7—106124
ZnO e-h plasma, nonequilib. long-wavelength plasmons, radiative props. 7—143499
ZnSe epitaxial films, edge cathodolum. spectra 7—70915

solid-state rectifiers
see also thyristors
No entries

solid structure
see also crystal structure; long-range order; noncrystalline state structure; short-range order
concrete strength and elasticity, modified classical theory *(German)* 7—75284
disordered packings of regular polygons, geometrical structure 7—98290
insulating materials, bonding and structure, tutorial 7—111304
low-temperature deposits of organic compounds, morphology and structure meas. apparatus 7—104495
quasicrystal ordering models, statistical physics, physical props., atomic and electronic structs., review 7—111389
ultradisperse media, atomic struct. distortions 7—124362
α-Fe solid struct., nanometer-sized crystallites, X-ray diffr. study 7—124167

solid theory
No entries

solid-vapour transformations
see also sublimation
ethane, adsorpt. equilib. meas. by volumetric apparatus 7—118072
ethylene adsorpt. equilib. meas. by volumetric apparatus 7—118072
methane, adsorpt. equilib. meas. by volumetric apparatus 7—118072
propane, adsorpt. equilib. meas. by volumetric apparatus 7—118072
CO_2-He(N_2), gas mixtures, surface desublimation study 7—137534
Mo, vapour form. by electron beam irradiation energy deposition, electron microprobe anal. 7—76212
Ta-C-Cl system, solid-gas equilibria., thermodynamic anal. of isothermal chemical transport 7—111849
Xe bubbles in Si and Al matrices, press., lattice parameters and solid-fluid phase transforms. 7—84018

solidification
see also directional solidification; segregation
alloy melts, crystallisation under microgravity and uniform compression conditions 7—71160
alloy melts, supercooled, solidification, fundamental aspects 7—92980
alloys, binary, crystn. eqns. 7—97926
alloys, binary, impurity distrib. after cellular crystn. 7—86143

solidification continued
alloys, binary, planar solidification interface, stable config. of chem. pots. 7−126097
alloys, binary, solidification, effect of gravity, numerical simulation 7−71161
alloys, columnar front with temp. dependent vel., model 7−86147
alloys, columnar-dendritic, interdendritic liq., permeability for flow 7−77977
alloys, comparison of structs. prod. by ion implantation and rapid solidification 7−92923
alloys, crystallisation defects, porosity, cavities, form. mechanisms 7−142754
alloys, equiaxed dendrite growth at small supercoolings 7−77975
alloys, hypoeutectic, dendrite coring and eutectic content, influence of cooling rate 7−86142
alloys, rapid solidification, interface morphology 7−92981
alloys, rapidly quenched, phase struct. and microstruct. 7−92979
alloys, rapidly solidified, mechanical props. and potential applications 7−86302
alloys, rapidly solidified, microstructure origin 7−86159
alloys, reciprocal effect of liq. and solid states 7−106502
alloys, solidification, pore form. mechanism 7−106503
alloys, solidification kinetics 7−77963
alloys, solidification simulation using finite element method 7−137522
alloys, solidifying, two-phase zone, influence of interdendritic liq. flow on mass transfer 7−86145
alloys, two-component, solidification, dendrite arm conversion under isothermal conditions *(Russian)* 7−92978
alloys equiaxed growth ahead of columnar front 7−86148
amorphous alloy ribbons, single roller casting process, small hump form. mechanism *(Japanese)* 7−106504
binary alloy, mushy region, heat balance integral method, enthalpy formulation 7−76356
binary alloy melt, dendritic solidification model 7−113532
binary alloys, solid-liq. interface, faceted to non-faceted transition 7−84214
binary mixture, solidification in axisymm. enclosures, approx. calcs. 7−104969
Bridgman solidification, homogeneous monocrystal section rel. to growth rate 7−86003
cast iron, solidification, liquid flow in mushy zone *(French)* 7−91768
casting solidification, melt and mould physical props. effects, num. simulation sensitivity 7−106497
centrifuge melt spinning with high cooling rate 7−100145
cracking, review 7−71169
dendrites, longitudinal segregation, image anal. *(French)* 7−119255
dendritic crystal growth, symmetric model velocity selection 7−76716
dendritic growth, equiaxed, solute diffusion model 7−113527
dendritic solidification, 2D, pattern formation 7−83822
dendritic solidification, numerical results in 2D 7−76363
drop solidification, gravity influence, shaped cryst. growth processes 7−84212
eutectic alloys, solidification, spinodal decomp. and glass transition during quenching from liq. phase 7−98409
eutectic alloys, solidification, stability of comp. growth, theoretical anal. *(Russian)* 7−92977
FCC metals, rapidly quenched, lattice defects 7−92986
fine metallic particulate, production by chill block casting techniques 7−113468
finite bodies, slabs and shells, solidification, heat flux study 7−75260
finite elements, physics applications, summer school, Lausanne, Switzerland (Sept. 1986) 7−134339
fusion reactor first wall subjected to plasma disruption, thermomechanical behaviour 7−109473
glass powder, solidification by hydrothermal hot-pressing technique 7−71172
Hastelloys and Inconels, weld metal, solidification microstruct., PHACOMP calcs. 7−77971
ice and ice clathrate, thermal conductivity 7−111986
Inconel 713C, rapidly quenched using twin-roll technique, aging behaviour 7−93031
interface shape, freezing in plane channel flow with wall cooling 7−142959
lamellar eutectic growth, steady state, random-walk model 7−118066
lamellar eutectic solidification, model 7−144380
laser cladding, extended solid solution, 1D diffusion model 7−111658
liquid metal mixing during costing, solidification and liq. alloy form. study 7−106500
low alloy, continuously cast, tensile fracture rel. to interdendritic defects *(Japanese)* 7−93061
main-chain liquid crystal polymer, solidification, elec. fields, surfaces and mesophase ageing effects 7−91480
melting spinning cooling rate, influence of process parameters 7−77886
Mephisto space program, morphological and convective instabilities in 1 g and space conditions 7−117586
metal casting, solidification, heat cond., finite element simulation 7−104127
metal droplets, atomised, solidification, nucleation catalysed by spherically-shaped oxide particles 7−119262
metallic alloy films, prod. by laser breakdown CVD and ion implantation 7−119165
metallic composites, melting and solidification in space 7−118061
metallic glass, comminution mechanisms of amorphous alloys, effects on mag. characts. 7−77873
metallic glasses, microstructure, ultrafast cooling form. *(Russian)* 7−77964
metals and alloys, high-purity, phase transform. features *(Chinese)* 7−126081
metals and alloys, liq., undercooling produced by rapid quenching 7−77981
metals and alloys, solidification, finite element modelling, nuclear waste disposal appl. 7−132599
metals and metallic glasses, hollow sphere form., solidification characts., melt jet instability technique 7−86089
microstructural control, art and science 7−113514
molten metal drops, fragmentation behind press. shock wave, solidification effects 7−111838
multicomponent systems, kinetic phase diagrams 7−124452
needle crystals, solidification, vel. selection, nonlocal model 7−84612
numerical simulation, geometric modelling with finite element anal. 7−106498
one-dimensional polycrystal growth model, isothermal peritectic solidification 7−144387
parabolic equation, fourth order, semilinear, solns. and pattern formation, solidification appl. 7−80368
periodic crystalline structures formed by cavitation, effect of vibr. 7−84207
peritectic type alloys, crystn. features 7−86144
permanent magnet castings, thermomag. treatment regimes optimisation 7−77872
phase change model, melting and solidification with internal heat generation 7−136855
polypropylene, isotactic, structurization near solid surface *(Russian)* 7−91487
polypropylene film casting, heat cond. calcs., multizonal integral method 7−113529
rapid, nonequilib. interface kinetics 7−113539
rapid, struct. form. mechanisms 7−100197
rapid solidification, process technology for new materials and products 7−77885
rapid solidification technology, development scope and trends 7−77862
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
rapidly solidified alloys, conf., Boston, MA, USA (Dec. 1986) 7−108040
rapidly solidified materials, review 7−86092
ribbon casting, amorphous and crystalline, solidification mechanisms 7−77990
slab, phase-change, heat transfer problem 7−110774
solid-liquid interface in melt, hydrodynamic regimes 7−131277
solidification blockage for laminar pipe flow, critical conditions 7−98396
steel, austenitic, Mn, containing Ms, microstruct. modification and props. 7−92987
steel, austenitic stainless, weld metal, primary austenite solidified, microsegregation and ferrite to austenite transform. 7−144407
steel, cooling from solidification, intergranular sulphide precip. 7−93019
steel, Cr, rapid solidification of surface layers melted by CO_2 laser 7−93210
steel, electron beam rapid solidification and heat treatment, microcomputer controlled beam deflection 7−86154
steel, high grade, horizontal casting process development 7−132597
steel, high strength, cast, intergranular layers, amorphous inclusions 7−144385
steel, melt extracted fibres and particulate, prod., props., and appls. 7−92934
steel, microalloyed structural, high temp. props. in continuous casting, cooling conditions and strain rate effect *(German)* 7−100383
steel, rapidly solidified particulate, sintering, consolidation and struct. studies 7−92917
steel, solidification, dendritic segregation, non-metallic inclusions form. 7−144383
steel, solidification, liquid flow in mushy zone *(French)* 7−91768
steel, stainless, martensitic, rapidly solidified and ion implanted, phase stability 7−76355
steel, stainless, physical and chemical props., effects of rapid solidification 7−86163
steel, stainless, struct. form. on cooling and heating 7−132618
steel, stainless, weld filler metal, rapidly quenched, implications for rapid solidification processes 7−92989
steel, tool, high speed, electron beam rapid solidification and transient tempering 7−119267
steel, tool, high speed, rapidly solidified, struct. 7−92990
steel, tool, high-speed, integrated rapid solidification and heat treatment using computerised electron beam processing 7−119261
steel, vacuum arc melting, Mn evaporation kinetics 7−86146
steel pipes, centrifugal casting, recirculating flows effect study 7−106501
superalloys, dispersion-stabilised, alternative approaches to processing 7−86084
superalloys, industrial gas turbine appls. 7−144335
surface solidification, pulsed laser control 7−77976
visualisation of alloy streams in centrifuge melt spinning by stroboscopic photography 7−132596
water, supercooled, solidification, kinetics study 7−91767
Ag-Au droplets, undercooled, microscopic observations 7−126093
Ag-Cu, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
Ag-Cu (15 wt.%), rapidly solidified, cellular microsegregation 7−92994
Ag-Sb, solidification, maximum inhomogeneity, Scheil eqn. anal. 7−71163
Ag-Sn, peritectic solidification, nonequilib. γ-phase form., homogenisation kinetics 7−113524
Al alloys, rapidly solidified by electron beam surface melting, struct. and mech. props. 7−93211
Al alloys, solidification morphology, effect of process conditions during melt spinning 7−92984
Al alloys, structurally disordered, RMS displacements 7−142610
Al and alloys, melt-spun, rel. between solidification morphology and texture 7−92985
Al ingot, continuously cast, grain refinement using heating oscillator *(Japanese)* 7−92974
Al ingots, grain refinement in heating oscillator *(Japanese)* 7−93039
Al melts, solidification in Evaporator-M equipment 7−126088
Al powder, segregation free, prod. by US gas atomisation 7−92925
Al, solidification, undercooling 7−126095
Al, solidification of Ar bubbles 7−144378
Al/mild steel, plasma arc butt fusion welding, intermetallic alloy layer form. 7−84538
Al-based alloys, high performance, light wt., prep. by rapid solidification processing 7−119203
Al-Be-Li (10, 2 wt.%), rapidly solidified, mech. props. at elevated temps. 7−78224
Al-Cr, rapidly solidified spray deposits, struct. 7−86071
Al-Cr-Fe(Co)(Ni), rapidly solidified, microstruct. and mech. props. *(Korean)* 7−77966
Al-Cr-Si quasicrystals, with high Si conc., formed by rapid quenching, thermal and elec. props. 7−100200
Al-Cr-Zr, Al-rich solid solns. extended by rapid solidification, ageing behaviour 7−93034
Al-Cr-Zr rapidly solidified alloys prod. and processing 7−92931
Al-Cu, liq., Al-rich, viscosities 7−143075
Al-Cu, roller cast, ribbon form. 7−77988
Al-Cu, stircasting, coarsening rel. to stirring speed 7−86149
Al-Cu, structurally disordered, RMS displacements 7−142610

solidification continued
Al-Cu, vacuum rheocasting, grain refinement, high temp. ductility, stirring conditions 7−71170
Al-Cu (4.5 wt.%), rheocast, microstruct. rel. to stirring rate and pouring temp. 7−100213
Al-Cu (5.23 wt.%), melt spinning, heat flow model 7−126092
Al-Cu alloy powder rapidly solidified by rotating water atomisation, hot extrusion and struct. study 7−92928
Al-Cu alloys, Al-rich, densities during solidification 7−100204
Al-Cu binary alloys, liq., Al-rich, surface tension 7−124641
Al-Cu melts, solidification in Evaporator-M equipment 7−126088
Al-Cu-Li system, solidification of quasicryst. phase 7−119258
Al-Cu-Mg alloy, rapidly solidified, quench sensitivity 7−132528
Al-Fe, liq.-quenched, lattice imaging anal. and Mossbauer spectroscopy 7−92999
Al-Fe, rapidly solidified spray deposits, struct. 7−86071
Al-Fe alloy, heat-resistant, compact semiproducts prep. from powders obtained by rapid solidification of melt 7−77880
Al-Fe melt spun alloys, rel. between microstruct. and processing 7−92983
Al-Fe-Ce, rapidly solidified, isothermal annealing, dispersed particle coarsening rel. to plastic deform. 7−93064
Al-Fe-Ce (8.4, 3.6 wt.%), rapid solidification, high temp. deform. 7−100308
Al-Fe-Mn, nature of $FeAl_3$-liquid-$(FeMn)Al_6$ reaction 7−86135
Al-Fe-Mo-Si, rapidly solidified and heat treated, precipitate identification 7−132628
Al-Fe-Si, direct chill casting, intermetallic phase form., TEM and EDAX 7−86155
Al-Fe-Si direct chilled cast alloys, solidification struct., primary Al-Fe-Si particles 7−106505
Al-Gd, rapidly solidified, microstruct. and props. 7−93033
Al-Gd alloys, rapidly solidified, microstruct. obs. and thermal stability 7−138737
Al-Ge(Ni)(Be), rapidly solidified, microstruct. 7−93000
Al-Hf-Si (3, 0.3 wt.%), rapidly solidified, phase decomp. during ageing 7−92996
Al-Li, rapid solidification, physical metallurgy review 7−113533
Al-Li-Cu, icosahedral phase, growth morphology rel. to solidification 7−111395
Al-Li-Cu-Mg-Zr alloy powders, rapidly solidified, gas-atomised solidification microstructs. 7−86150
Al-Li-Zr (4, 0.2 wt.%), rapid solidification processed, superplastic forming 7−144494
Al-Mg-Mn alloy powder, rapidly solidified, partitionless struct. obs. 7−71164
Al-Mg-Mn alloy powders, rapidly solidified, microstruct. charactn. 7−86156
Al-Mn, melt spinning, electron beam surface melting, icosahedral and decagonal phase form. 7−77972
Al-Mn, rapidly solidified spray deposits, struct. 7−86071
Al-Mn (14 at.%), rapidly solidified droplets, icosahedral quasicrystals and glass form. 7−131052
Al-Mn (27 wt.%) ribbons, rapid solidification, microstruct., crystallisation 7−77969
Al-Mn-Cr, ternary alloys, rapid solidification 7−92998
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Pb, vacuum rheocasting, microstruct., mech. props. 7−71171
Al-Si, rapid solidification, excimer laser rad. induced 7−119260
Al-Si, rapidly quenched, struct., elec. and mech. props. 7−93002
Al-Si, undercooled, solidification struct. development 7−77984
Al-Si (Mg), rapidly quenched, excess vacancies 7−92995
Al-Si (15 wt.%), hypereutectic, high press. crystn. struct., mech. props. *(Russian)* 7−144391
Al-Si alloy powder rapidly solidified by rotating water atomisation, hot extrusion and struct. study 7−92928
Al-Si melts, modification and surface tension, effect of vibr. 7−71168
Al-Si-Sr, struct., mech. props., Sr content effect, solidification rate 7−86261
Al-Si-Sr(Sb), modification, influence of Sr or Sb additions *(Chinese)* 7−77961
Al-Si-base alloys, hypereutectic, microstruct. improvement by rheocasting 7−100209
Al-Ti, rapidly solidified, microstruct. and thermal stability 7−92997
Al-Ti-B, rapidly quenched, microstruct. 7−119263
Al-Ti-Bi, stressed solidification of Bi inclusions 7−100374
Al-transition metal alloys, rapid solidification, microstruct. characts. 7−113537
Al-Zr-Gd (4,4 wt.%), rapidly solidified microstruct. 7−132598
Al-Zr-V, rapidly solidified, coarsening of $L1_2$ structured $Al_3(Zr_xV_{1-x})$ precipitates 7−126130
Al_6CuLi_3, free-surface solidification, habit, point-group symmetry 7−69866
AlCuMg rapidly solidified powder prodn. by optimised gas atomisation, microstruct. study 7−92930
$Al_{97}Fe_3$, rapidly solidified alloy with dispersoids, fatigue props. 7−86532
$Al_{91}Mn_5B_5$, rapid solidification, quasi-crystalline precipitates with icosahedral morphology 7−78031
Al_2O_3 fibre reinforced Mg composites, tensile props. rel. top processing parameters 7−86284
Cd-Cu, rapidly quenched, icosahedral, new cryst. and glassy phases, TEM obs. 7−83859
Co-C-Si, rapidly quenched, nonequilib. phases 7−113521
Co-Ni, melt-spun alloys, martensitic transform. 7−93012
Co-TaC, microstruct. of different struct. transforms. induced by rapid quenching 7−92992
Cr-Ni-Cu, laser mixed Cr-Ni films on Cu, microstruct. studies 7−70039
Cu-Cr, rapidly solidified, microstruct. and mech. props. 7−144379
Cu-Mo-Al_2O_3 system, solidification, microgravity expt., dispersion hardening 7−77978
Cu-Ni-Fe (10, 8 wt.%), rapidly solidified, thermal effect 7−113536
Cu-Sn(Al)(Zn) alloys, rapidly quenched shape memory alloys 7−86162
Cu-Zr(Fe)(Ni), rapidly solidified, microstruct. and mech. props. 7−92993
$EuBa_2Cu_3O_x$, high T_c ceramic superconductor, preparation by rapid solidification and oxidation 7−126052
Fe, cast, graphite morphology rel. to Ce content 7−92976
Fe, cast, microdistrib. of nodulizer in various phases *(Chinese)* 7−71187
Fe, cast, with high S contents, solidification and struct. 7−132595
Fe-Al (40 at.%), rapidly quenched by melt spinning, brittle low temp. fracture 7−100376
Fe-Al-C system, cast Fe, microstruct. and mech. props., effect of Al content props. *(Korean)* 7−77967
solidification continued
Fe-based amorphous and cryst. materials, produced by spark erosion, microstruct. and props., effect of quench rate 7−119202
Fe-C, irregular eutectic growth, analytical model 7−77960
Fe-C melt, spheroidal graphite particle growth, model 7−100202
Fe-C system, double eutectic equilibrium corroboration 7−126100
Fe-C-Cr-Ni-Si rapidly quenched alloys, solidification struct. 7−144388
Fe-Cr-Al, rapidly solidified, grain growth behaviour 7−119286
Fe-Cr-C-Nb system, white cast Fe, phase equilib., solidification and solid-state phase transforms. 7−132578
Fe-Cr-Ni (25, 20 wt.%) melt-spun and sputtered alloys, as-quenched microstruct. 7−92988
Fe-Ni-Al-C alloys, rapidly solidified, lattice modulation and form. of lamellar duplex ferrite/carbide microstruct. 7−100206
Fe-Si (3 wt.%), solidification, in situ obs. by synchrotron rad. X-ray topography 7−100205
Fe-Si (4.6 to 6.5 wt.%), solidification process in roller quenching method 7−77989
Fe-Si-B, rapidly solidified, microstruct. and phase comp. 7−131041
Fe-Si(C), melt-spun ribbons, rapidly solidified, solidification parameters and microstruct. 7−100211
^4He, solid, kinetic growth coeff. determ., US transmission meas. 7−70024
HgI_2, phase transitions in nucl. reactor radiation field 7−69873
In-Bi, solidified from highly undercooled liq. at atm. press., high press. phase form. 7−77986
Mg, liquid, freezing, cryst. phase stability, density functional theory 7−91773
Mg-Al(-Si), rapidly solidified, microstruct. and props. 7−78125
Mg-base alloys, rapid solidification, current status 7−126090
Mg-based corrosion resistant alloys, high performance, light wt., prep. by rapid solidification processing 7−119203
Mg-Si alloys, hypereutectic, rapidly solidified microstruct. 7−126098
Mg-Zn, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
Nb-Ge, undercooling in 100 m drop tube 7−77987
Nb-Ge alloys, drop tube processed, metastable structs. 7−119192
Nb-Si, rapid solidification, microstruct., phase analysis 7−86153
m-$Nb(Rh_{0.75}Pd_{0.25})_3$, prep. by rapid solidification processing, long-period close-packed phase of $PuGa_3$ type 7−119266
Ni-Ag (2 wt.%), bulk undercooled, grain refinement 7−77985
Ni-Al-W system, cast, phase equilib. 7−132569
Ni-base melt-spun alloys, cellular solidification 7−92982
Ni-C-Si, rapidly quenched, nonequilib. phases 7−113521
Ni-Cr-Be alloys, dental, cast, solidification struct. 7−113535
Ni-Cr-W, superalloy, microstruct. and strength after laser rad. surface fusion-solidification *(Chinese)* 7−132787
Ni-Cu, melt spun, oxidation, diffusion induced grain boundary migration 7−98583
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-Mo, eutectic alloys, microstruct. rel. to undercooling 7−92975
Ni-Mo, rapidly quenched, faulted structs. 7−76113
Ni-Mo-Cr-B rapidly solidified alloys, wear and corrosion resist and mech. props., microstruct. effects 7−91719
Ni-Sn, undercooled, dendritic growth, recalescence, high speed optical temp. meas. 7−100208
Ni-Sn, undercooled, solidification, dendritic growth, high speed cinematography 7−100207
Ni-Ti, rapidly quenched shape memory alloys 7−86162
NiAl-Cr quasibinary eutectic, microstruct. and phase solubility extension, effect of rapid solidification vel. 7−92991
Ni_3Al-B-Fe, formability and ductility, effect of solidification rate 7−119325
$(Ni_{0.75}Al_{0.25})_{100-x}B_x$, rapid solidification, microstruct. 7−86161
$Ni_{75}Si_8B_{17}$, amorphous alloy, spheroidisation process 7−144357
O_2 physisorbed layer on graphite, solidification, susceptibility studies 7−124696
Pb-Bi, undercooled droplets, crystn. kinetics during rapid solidification 7−77983
Pb-Mg-Bi system, Pb-rich corner, crystn. studies 7−77944
Pb-Sb, undercooled, solidification struct. development 7−77984
Pb-Sb-Sn (10, 3 wt.%), near eutectic, solidification in elec. field, microstruct. 7−119253
Pb-Tl alloy (30 wt.%), upward solidification, thermosolutal convection-induced morphologies of solid-liq. interface 7−100198
Pd-Si, rapidly quenched, comparison with form. by mech. alloying 7−113476
$Pd_{77.5}Cu_6Si_{16.5}$, undercooled melts, $PdSi_3$ nucleation 7−131272
Sb-Sn system, peritectic alloys, solidification, microsegregation 7−132593
Si, polycrystalline, solidification and microstructure 7−124460
Si, rapid solidification dynamics 7−113540
Si sheet continuous horizontal growth from melt, finite element analysis 7−85994
SiO_2-Fe_2O_3 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
SiO_2-ZrO_2 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
Te-Er_2O_3, prod. of ultrafine rare earth oxides by rapid solidification 7−92926
Ti-Al-V-Sn, rapidly solidified, consolidation by hot pressing 7−86083
Ti-base alloys, rapid solidification, current status 7−126090
Ti-base alloys containing Er and C, rapidly solidified, microstruct. and props. 7−119264
Ti-Ni (5.5 wt.%), rapidly solidified microstruct. and precip. 7−93001
Ti-Pd, rapidly quenched, comparison with form. by mech. alloying 7−113476
Ti-Sn-La, rapidly solidified, second phase coarsening 7−93024
TiAl, crystn., heat treatment, struct., phase comp. 7−144440
TiAl, rapidly solidified, microstruct. development 7−86158
V-Ga alloys, rapidly solidified, microstruct. and phase transform. 7−119265
W-Ni alloys, rapidly solidified, microstruct. 7−119268
Y-Ba-Cu-O high T_c supercond., rapid solidification, supercond. transition temp. 7−118060
$Yb_{0.17}Ba_{0.33}Cu_{0.50}$ glassy alloy as precursor for $Yb_1Ba_2Cu_3O_x$ high T_c supercond., 7−144333
Zn-Al-Cu-Mg, cast in metal moulds, solidification structs. and mech. props. 7−144389
Zn-Al-Ti, solidified, eutectic struct. rel. to cooling rate and Ti addition 7−113538

solids
Generalities only; for specific aspects see appropriate headings see also crystals; quantum solids; solid hydrogen; solid structure; solid theory
solid state chemistry, conf., Karlovy Vary, Czechoslovakia (Oct. 1986) 7−80171

solions *see transducers*

solitons
1D antiferromagnet, easy-plane, Kink-antikink scatt. 7−105873
2D Burgers equations, phase manifold geometry 7−80990
π lagrangian and skyrmion masses 7−116088
σ models, soliton solns., inverse scatt. method and n-step superpotential 7−89369
σ-model with ρ meson coupling, chiral soliton stability 7−134930
ϕ_2^4 field theory, broken symmetry phase, kink sector construction 7−134919
acoustoelectromagnetic solitons in fiber optic waveguides 7−123215
adiabatic gas dynamics, soliton propag. and inverse scatt. transform 7−108243
alpha-helix, solitons, anal. 7−78719
anharmonic atom chain, fluctuation rupture, collective effects influence 7−98326
anisotropic Heisenberg chain, soliton excitations in the Holstein-Primakoff boson spin operator representation 7−99482
anisotropic systems, structural phase transitions, soft modes 7−142942
anisotropic xy chain in longitudinal mag. field, perturbed sine-Gordon model 7−138183
antiferromagnetic chain, classical, 1D, soliton excitations in a mag. field with arbitrary direction 7−77319
antiferromagnetic Heisenberg-Ising ring, magnons and solitons 7−143777
associated connections and holonomy groups 7−72804
atom attached to mol. chain, conversion electrons soliton capture 7−92078
atomic chain, transverse envelope solitons 7−80667
Australian North West Shelf, internal hydraulic jumps and solitons at shelf break region 7−114756
Backlund transformations, gauge theory and nonlinear evolution eqn. 7−108798
bag model, topological chiral solitons, ω meson role 7−116136
bag model of hadron struct., solitonic nature of hedgehog solns., review 7−128862
BBM equation, solitary-wave solns., amplitude changes, perturbation theories method 7−140460
Bechgaard salts, field induced spin density waves, spin susceptibility 7−125356
birefringent fibres, soliton polarisation instabilities 7−68861
bis(tetramethylammonium) zinc tetrachloride, normal-incommensurate-commensurate phase transition *(Japanese)* 7−131562
bistable solitons and optical switching 7−130231
bistable-soliton pulse propag., stability aspects 7−140470
Bloch lines, dynamics, ferromagnet 7−132056
blood flow in large arteries, solitary waves 7−78935
boson fluid film mixture, soliton propagation, microscopic anal. 7−84428
CHAB, ferromag. chain system, linear and nonlinear excitations 7−125352
chiral soliton quark models, non-hedgehog ansatz and ω-meson role 7−140898
classical anisotropic Heisenberg chain, soliton spin configurations 7−143834
closed superstrings as soliton-type solns. of 26-dimens. bosonic strings 7−73630
collision, energy radiation, perturbed nonlinear Schrodinger eqn. 7−123870
collisionless cold plasma, solitons 7−69328
collisionless cold plasma, two-dimens. hydrodynamic model, soliton solns. 7−104378
colour-dielectric model, soliton bags, numerical anal., nucleon props. 7−116137
complex scalar field in general relativity, nontopological soliton solns., mini-soliton stars 7−102241
coupled KdV equations, leapfrogging solitons 7−140473
coupled nonlinear wave equations, solitary wave solutions 7−134531
coupled system of Langmuir and transverse waves, soliton behaviour *(Chinese)* 7−97718
current-carrying plasma pinches, necking down of sausages 7−83507
cyclohexylammonium trichlorocuprate (II), mag. susceptibility, bound magnon contribs. 7−112768
cylindrical pinch, Hall current fluid, MHD eqns. 7−111200
Davydov solitons, eqns. of motion, quantum mechanical derivation 7−67037
decay of shrinking solitons in multidimensional sine-Gordon equation 7−67025
diatomic Peierls system, amplitude breathers, analytic expressions and numerical dynamics calcs. 7−143446
dilatons, subcritical and transcritical types 7−95356
Dirac eqn., 1/n-contracted soliton background, spectral asymm. and fractional charge soln. 7−95719
Dirac sea effects on finite solitons, mass shift, polarisation effects, Friedberg-Lee appl. 7−108758
discrete easy plane ferromagnet, shape correction and mode control, soliton stability 7−132033
discrete Heisenberg spin chain, complete integrability, Lax pair, nonlocal conservation laws 7−143752
discrete molecular chains, perturbation theory for soliton dynamics 7−105425
discrete periodic resonant medium, coherent interaction of light 7−68762
discrete soliton equations, Fredholm determinant method, lattice eqns. appl. 7−115918
dissipative LC lattice, Toda analogue, soliton phase-shift characts. study 7−120973
DNA, collective sugar puckering, harmonic oscillator model, kinks and breathers 7−93630
DNA, structural transition, B→Z phase, solitary excitations, 7−144960
DNA double helices, soliton excitation, influence of longit. vibr. 7−126687
DNA dynamics, soliton-like excitations, relative disorder and statistical mechanics 7−119704
double sine−Gordon solitons, dynamics, radioactive and inelastic effects 7−120823

solitons continued
double sine-Gordon kink, collective coordinates and linear modes 7−134960
dressed Langmuir solitons 7−142454
driven sine-Gordon breathers as kink-antikink bound states of nonrelativistic constant wave number 7−80450
driven sine-Toda chain, nonlinear wave propag. calcs. 7−115926
dynamics in cyclic discrete chains, numerical study *(Russian)* 7−80455
early Universe, cosmological topological defects, phase transitions and causality 7−108001
elastic crystals exhibiting phase transitions, soliton props. 7−137553
electric monopole in Kaluza-Klein theory 7−80536
Euler equations, solitary-wave solns., amplitude changes, Korteweg de Vries eqn. perturbation 7−140461
exotic skyrmions *(Hungarian)* 7−128766
extended ϕ^4 model with dissipation, soliton dynamics 7−108254
extended Klein-Gordon systems, approaching asymptotically stationary outgoing solitary wave solns., behaviour of solns. 7−134536
external field problems, fractional charges, inverse scatt. method 7−95727
femtosecond pulse generation through soliton effect in single-mode fibre 7−103875
femtosecond single-pass cascade Raman scatt. soliton generation at 1.5 μm 7−141996
femtosecond solitons existence in optical waveguides 7−90789
femtosecond wave packets in nonlinear dispersive medium, self-effect, maximum contraction 7−123083
Fermi field, stochastic quantisation, fermions as solitons 7−67475
fermion quantization in soliton field, implementation of gauge transformations 7−67471
fermion soliton stars and black holes, nontopological solns. in general relativity 7−102243
fermion-induced spin, collective rot. motion quantisation, vacuum fluctuations 7−121346
fermion-meson interacting fields, soliton solns. 7−116087
ferroelectrics, nonlinear travelling waves anal. 7−125652
ferromagnetic chain, easy-plane, specific heat, quantum corrections 7−138246
ferromagnets, dynamical soliton relax. calcs. 7−118815
ferromagnets, one-axis, nonlinear dynamics, weakly bounded soliton-antisoliton states 7−92440
ferromagnets and antiferromagnets, two-dimensional small-radius solitons 7−105937
fibre Raman soliton laser pumped by Nd:YAG laser 7−68694
fibre Raman soliton laser theory 7−97037
fibre waveguide, optical soliton formation, noise effects 7−90808
finite element method appl. 7−67028
finite-temp. soliton dynamics, nonlinear density-matrix eqn. study 7−84685
first order phase transition of soliton lattices near a tricritical point, appl. to chiral smectic C liq. cryst. in elec. field 7−91761
fluxon scatt. at interface of long Josephson junctions *(Russian)* 7−125263
forced Toda lattice, nonlinear Schrodinger solitons 7−73271
Frenkel-Kontorova model discrete quantum self-consistent structures at finite temp. 7−140636
Friedmann-Robertson-Walker cosmological models, perfect fluid, solitonic perturbations, Kaluza-Klein anal. 7−72661
gauged chiral SU(2) action, skyrmion-baryon phenomenology 7−108755
generalised nonlinear Schrodinger eqn., Backlund transform. and N-soliton soln. 7−108264
good Boussinesq equation, soliton resonances 7−108252
gravitational plane waves collision, vacuum Einstein eqns., soliton solns. for space-time 7−80533
gravitational solitons, effective energy, exact soln. of Einstein eqn. 7−102239
gravitational solitons, Einstein equations *(Chinese)* 7−108315
H-bonded chains, dynamics of two-component solitary waves 7−124582
half-filled electron-lattice system, soliton levels, density coupling effects, tight binding calcs. 7−131559
Hopf bifurcation dynamics 7−73004
Hubbard-Peierls model, quarter-filled, charge versus fermion fractionalization 7−105550
ice, orientational defect migration, cooperative model, continuum model anal. 7−137356
Illner model, general two-velocity discrete model, 1+1 dimensional exact solns. 7−108480
instability of one-dimensional drift solitons with allowance for the vector nonlinearity 7−104411
interaction of particles with cavitons in plasma *(Chinese)* 7−97706
ion-acoustic solitons, propag. into weak localised transverse mag. field 7−123886
ion-acoustic solitons, propag. into weak localized longit. mag. field 7−123887
ion-acoustic solitons in warm 2-ion plasma, ionic temp. effects 7−97738
Josephson junctions, physical effects and applications, conf., Torino, Italy (Sept. 1985) 7−102018
Josephson superlattices, soliton behavior 7−131924
KdV eqn., soliton interaction, asymptotic formula derivation 7−95364
KdV equation, n-soliton soln., asymptotic behaviour, inverse scatt. method 7−140456
KdV soliton interaction with dispersive wave train 7−95362
KdV soliton splitting investig. 7−89001
KdV type solitary waves, stability and instability 7−102180
KdV-type bilinear eqns. passing Hirota's three-soliton condition 7−140465
kink-bearing systems with double well and asymmetric pots., class. stat. mech. 7−102177
Klein-Gordon equations, solitons, asymptotic behaviour of energy parameters *(German)* 7−140476
Klein-Gordon kinks, classical dynamics collective coordinate method 7−134961
KP coordinate approach to string amplitudes 7−120822
Landau-Ginzburg model, spontaneous phase transitions, complex order parameter kinetics eqn., anal. and soln. 7−131901
Langmuir soliton stability, investig. by catastrophe theory 7−83473
Langmuir turbulence models, num. comparison 7−83482
large-N baryons in two flavour Nambu-Jona-Lasinio-type model 7−95840
laser, computational two-cavity model 7−103826
laser plasmas, harmonic space and time resolved struct. and density profile 7−90711
lattice dynamics of H-bonded systems, 1D continuum model 7−104927
lattice field theory, soliton quantisation, Euclidean Green fn. methods 7−134912

solitons continued
light field propag. in medium with cubic nonlinearity, distrib. laws 7−141918
light pulse propagation in single mode optical fibres, soliton mode, possible experimental realisation 7−82818
linear mol. chain, soliton states, thermal fluctuations effects, quantum theory *(Russian)* 7−82015
localised mixed electron-phonon excitation, soliton retardation effects 7−143372
long Josephson junction, resonance interaction between fluxon and plasma waves 7−131910
long nonlinear water wave excitation by moving press. distrib., 3D effects 7−83250
Love waves, self-induced transparency 7−69823
magnetic fluids, surface nonlinear waves and fluid instability 7−75688
magnetosonic waves, nonlin., oblique propag. 7−91317
many-particle effects in nearly integrable systems 7−67039
mass-spring chain, quasi-continuous spatial motion, solitary wave solns. 7−115808
Master symmetries and point particle representations, recursion operator, soliton eqn. hierarchies 7−140467
MHD solitons, appl. to extragalactic jets 7−139902
mKdV bilinear equations, three-soliton solutions 7−134532
modified Korteweg-de Vries eqn., shape preserving splines appl., fractional time-step method 7−134524
molecular crystals, soliton analysis taking account of exciton non-conservation 7−131551
monatomic nonlinear systems, soliton resonances 7−112205
multi-soliton pulse self-compression in optical fibres 7−68761
multi-soliton pulse spectral filtering in optical fibres, pedestal suppression 7−68760
multi-soliton solutions of coupled nonlinear Schrodinger equations 7−95380
narrow-gap semiconds., helicon soliton propag., Kane dispersion law 7−84957
nematic liq. crysts., perturbed solitons under time-depend. shear 7−117808
nematic liquid crystals, 2D axisymmetric solitons 7−142574
nematic liquid crystals, ring-shaped solitons 7−111375
nerve fibres, information transmission, thermodynamical stability 7−100841
nonisothermic plasma, dispersion hydrodynamics, soliton shock wave fronts and self-similar discontinuities 7−117711
nonlinear σ model coupled with gauge fields, topologically stable soliton solns. 7−89371
nonlinear Alfven waves in the magnetosphere 7−115170
nonlinear dimer, solitons, energy transfer and self-trapping 7−143376
nonlinear dispersive evolution equations with critical power nonlinearities, solitary waves 7−128302
nonlinear effects in optical fibres and fibre devices 7−103907
nonlinear electron-phonon dynamics, solitary excitations, localised modes 7−104939
nonlinear equations, soliton solutions and group representation theory 7−115928
nonlinear integrable lattices, soliton-radiation interaction, soliton position shift, Toda and Langmuir lattices 7−121361
nonlinear interactions between solitons in complex t-plane 7−80445
nonlinear interactions in complex t-plane 7−88993
nonlinear ion-acoustic waves and solitons, self-focusing, num. simulations 7−91315
nonlinear model of scalar field, perturbation theory soln. of Heisenberg field eqns. 7−102628
nonlinear partial differential eqns., higher order soliton solns., computer-algebra methods 7−95232
nonlinear periodic structures, gap solitons 7−122794
nonlinear pulse propagation in monomode waveguide 7−90781
nonlinear Schrodinger equation, multiple pole solutions 7−73045
nonlinear Schrodinger equation, solitons 7−73052
nonlinear systems, explicit auto-Backlund relation through gauge transformations 7−73037
nonlinear transmission line, cusp solitons, shock waves and envelope solitons, evol. eqn. 7−102178
nonlinear wave motion in fluctuating parameters medium 7−128301
nontopological soliton bag model, hadron wave fns., first order corrections 7−128857
nontopological solutions for soliton star form. in general relativity 7−102240
nonultralocal field theory with soliton solns., Poisson-Bracket algebra for scatt. data 7−108797
one-dimensional antiferromagnets, soliton dynamics 7−138211
one-dimensional damped systems, solitary waves 7−67038
one-dimensional magnets, solitons, quantum effects and specific heat 7−138245
one-dimensional mol. chains, joined, role of supersonic Davydov solitons in energy transfer 7−103680
one-dimensional strongly-coupled electron-lattice system, soliton localised vibr. modes 7−111799
one-dimensional system, soliton scatt. from a point defect, nonlinear Schrodinger eqn. *(Russian)* 7−92079
one-dimensional weakly localised system, forward-scattering and incommensurate lattice 7−143411
optical bistability and soliton transverse struct. 7−75046
optical chaos and coherence in passive nonlinear systems 7−68767
optical fibres, birefringent, soliton stability 7−123251
optical fibres, interaction forces between solitons, obs. 7−104018
optical fibres, nonlinear, single-mode, picosecond steps and dark pulses 7−110590
optical fibres, single-mode, soliton evolution from chirped and noisy pulses 7−75129
optical fibres, single-mode, solitons at zero-group-dispersion wavelength 7−123255
optical fibres, soliton interaction in presence of loss and periodic amplification 7−104017
optical fibres, soliton propag., numerical anal. 7−117336
optical fibres, soliton pulse nonlinear interaction 7−104030
optical fibres, supershort pulse self-interaction, computer simulation using inverse scatt. method 7−110583
optical fibres soliton shaping by stimulated Raman process 7−136561
optical nonlinear waveguide, soliton motion with dissipation and pumping 7−141988
solitons continued
optical pulse self-action phenomena and femtosecond laser pulse generation, review 7−103884
optical single mode fibres, reducing soliton interaction 7−104007
optical single mode fibres, soliton propag. *(Japanese)* 7−68868
optical soliton generation, 1.37-1.49 μm 7−90672
optical source, principle and charactn. *(French)* 7−82641
optical strip waveguides, pulse propag., generalized nonlinear Schrodinger eqn. description 7−90772
optical waveguides, soliton formation, influence of regular phase modulation 7−141984
parametrically changed size-Gordon eqn., solitons, perturbation anal. 7−120825
particles, 4-vector solitons, and the modified Dirac equations 7−67040
Peierls semicond., charge density wave phase slip centre dynamics calcs., microscopic theory 7−118392
perturbed KdV eqn., Painleve prop., Lax pair, auto-Backlund transform, recursion operator 7−120819
pinned sine-Gordon soliton, chaotic motion 7−73002
planar Heisenberg ferromagnet with biquadratic exchange, soliton props. and three-atom interactions 7−85228
plasma, drift waves, nonlinear 2D, evolution numerical simulation 7−123869
plasma, laser, $/2\omega_0/$ harmonic emission struct., bandwidth effects, soliton generation theory 7−97749
plasma double layers, shocklike modified Korteweg-de Vries soliton form. 7−142473
plasma ion acoustic soliton, critical negative ion density, difference eqn. soln. *(Japanese)* 7−75791
plasma wave emission from soliton, external resonant field, long Josephson junction *(Russian)* 7−99344
polarization solitons in nonlinear optics 7−68759
polyacetylene:I, doped and undoped, muon spin rotation and relax. 7−70688
polyacetylene:Na, Raman and EPR spectra studies 7−70792
trans-polyacetylene, amplitude and phase modes, reson. Raman scatt. and induced IR activity 7−138451
trans-polyacetylene, bond conjugation defects, ENDOR study 7−99605
polyacetylene, cis- and trans-, photogenerated solitons, IR-active vibrs. 7−70788
polyacetylene, Coulomb and pinning effects on soliton-related phonon modes 7−137499
polyacetylene, degeneracy of solitons and polarons for translation between nearest neighbour sites 7−92086
polyacetylene, doped, XPS, Coulomb interaction effects 7−100017
polyacetylene, doped chain, charged soliton conduction mechanism, interstitial and hole dislocations 7−131561
polyacetylene, Durham, conformational defects, IR and Raman studies 7−69624
polyacetylene, electron-phonon coupling and disorder 7−105416
trans-polyacetylene, interchain photogeneration of charged solitons 7−105423
trans-polyacetylene, interchain solitonic excitons, IR absorption 7−118370
polyacetylene, model Hamiltonian discrete symmetries and selection rules 7−70215
t-polyacetylene, neutral soliton dynamics, temp. depend. 7−70218
trans-polyacetylene, NMR obs. of temp. depend. spin-lattice relax. 7−138339
polyacetylene, phonons and soliton diffusion 7−137817
trans-polyacetylene, photocond., polarons and solitons 7−84998
polyacetylene, soliton config. effects of localized modes 7−137498
trans-polyacetylene, soliton localised electron states 7−143390
polyacetylene, soliton pinning, multiple-quantum spin coherence obs. 7−137811
polyacetylene, soliton spin density, ENDOR 7−70217
polyacetylene, soliton wave function, ENDOR studies 7−125557
polyacetylene, vibr. and soliton dynamics 7−69849
polyacetylene, WCl_6-doped, photoelectron spectroscopy 7−70980
trans-polyacetylene chains, soliton states, electron correls. effects 7−105424
polyacetylene doped chain, charged soliton conduction 7−99037
polyacetylenes, soliton kinetic props., continuum model calcs. 7−112202
polydiacetylene single crystal, pulsed ESR meas. of photoexcited triplet-soliton pairs 7−70624
polymers, cond., with different 3D mag. ordering, instability of polarons and bipolarons 7−92085
polymers, conducting, synthetic metal superlattices 7−105664
polymers, conjugated, kink excitations 7−137816
polymers, electron correlation, bond alternation 7−131570
projective field theory, generalized Backlund transformation and solitons 7−102256
propagation in fluid-filled pipe, mathematical model 7−69271
protosolitons, proton transport, along hydrogen banded chain of water mols. *(Russian)* 7−111937
pulse compression and splitting at 1.32 μm in a single mode fibre 7−130350
QCD, pion effective Lagrangian and soliton physics 7−89431
QCD and Skyrmions, effective chiral Lagrangian, soliton solns. without baryon quantum nos. 7−116129
quantum many-particle systems, appl. of Hamilton's eqns. 7−112730
quantum solitons, squeezing 7−103787
quantum solitons, statistical mechanics, mass shift and entropy at finite temp. 7−116078
quasi-1D CDW electrodynamics, interelectron Coulomb interaction effects calcs. 7−98845
quasi-one-dimensional magnetic chains, soliton dynamics 7−138210
quasiperiodic solutions of the nonlinear Schrodinger equation 7−128314
radiative decay, perturbation induced 7−138153
random inhomogeneous media, self-trapping of excitons, current carriers and solitons 7−84684
reflectionless kinks, parent pots. for infinite class 7−140462
Reggeon field theory, coloured, solitonic approach 7−73562
resonant EM soliton in plasma 7−123901
RF discharge in EM wave fields, elementary dissipative structs. 7−124008
Roper resonance, colour dielectric model, adapted RPA calcs. 7−81107
Rossby solitons, natural vortices of Jovian Great Red Spot type investigation 7−139913
saturable Klein-Gordon eqn., self-trapped states 7−102610
scalar soliton stars and black holes, nontopological solns. in general relativity 7−102242

solitons continued
scalar solitons in nonlinear scalar field theories, compactness criterion 7−81018
Schrodinger equation, solitary wave soln., appl. to plasmas turbulence 7−75793
self-effect femtosecond optical wave packets 7−90674
shallow water wave soliton, transmission and reflection calcs. at submerged barrier 7−130727
shallow water waves over step, edge layer theory, soliton reflection, transmission 7−97550
shallow-water soliton, reflection, numerical evaluation 7−94253
shape memory alloys, driven domain walls 7−106511
shock waves propagation on fluid surface solitons 7−123290
short solitary pulse formation in amplifying nonlinear medium 7−80453
sine-Gordon breather soln., parametric adiabatic perturbations 7−108176
Sine-Gordon equation, discrete backlund transformation 7−73003
sine-Gordon equation, kink motion in applied field 7−80434
sine-Gordon multisoliton solns., linear superposition formula 7−80446
sine-Gordon solitons, energy emission, quasi-classical quantization and stochastic decay 7−115807
sine-Hilbert equation kinks, dynamical motions, dependent variable transform. 7−140434
single-mode fibres, soliton propag. in presence of source chirping and mutual interaction 7−68851
sinh-lattice eqn. with nearly integrable solitons 7−73001
sixfold symmetry model, waves, bifurcations and solitons 7−140463
Skyrme model, ρ meson model, alternative approach using σ-stabilised solitons 7−73528
Skyrme model, extended, even-dimensional, higher-dimensional solitons 7−116055
Skyrme soliton model for baryons in SU(2)×SU(2) chiral theory 7−67590
Skyrme solitons, effective Lagrangians and static properties of baryons 7−67465
Skyrme solitons with vector mesons, electromagnetic and axial props., nonlinear chiral theory 7−108757
Skyrme Yang-Mills model, solitonic baryon mass predictions 7−121350
Skyrmion, quantisation, Wess-Zumino term, Berry phases and magnetic monopoles 7−89315
solitary Rossby waves, uniqueness 7−88991
solitary travelling waves anal. of non-lin. unsteady processes 7−115803
solitary waves in the presence of symmetry, stability theory 7−134528
solitary waves overtaking collisions, water-wave eqn. anal. 7−104284
solitary-wave interaction, long wave limit 7−140468
soliton-antisoliton pair prod. in strong external fields, sine-Gordon theory, generator-coordinate method 7−121374
solitons and instantons, operator quantization 7−115696
space-time pattern form. and conversion in DC driven, damped sine-Gordon eqn. 7−70486
spin wave emission from soliton, easy plane ferromagnet, external resonant field *(Russian)* 7−99344
spin-Peierls systems, incommensurate phase, NMR and EPR studies 7−85483
stability of solitary wave equations, long wave model eqns. 7−67027
stability properties 7−95363
stationary electrosonic p-polarized waves in a nonisothermal plasma 7−130868
stationary solitary wave solns. 7−102179
stochastic sine-Gordon type equations, intermittent oscillations *(Japanese)* 7−80641
SU(2) Skyrme model, soliton interaction, interaction energy between topological centres, factorization ansatz 7−128773
SU(2) Skyrme-model Lagrangian, quantum mechanical struct. and collective coord. quantisation 7−89372
SU(3) Skyrme model, octet dominance of the hadron weak transition, matrix elements 7−89378
SU(N) self-dual gauge theory, Belinsky-Zakharov method, soliton solns. 7−80972
Su-Schrieffer-Heeger chains, strongly coupled, ground state and nonlinear excitations 7−70155
superconductivity, high T_c, resonating valence bond state and solitons 7−105813
supersymmetric CP^{N-1} model, solitons, exact factorised S-matrix, 1/N expansion, antiparticles 7−121370
surface plasma wave solitons 7−123867
surface soliton dislocations, structural and dynamical props., He beam scattering 7−137685
synchronously pumped soliton Raman fibre ring laser, expt study 7−90617
TCNQ salt, $MBM(TCNQ)_2$, noise spectrum 7−143534
TCNQ salts, morpholinium $(TCNQ)_2$, shot noise, soliton transport 7−143535
tetramethylammonium manganese chloride, 1D antiferromagnet, easy-plane, Kink-antikink scatt. 7−105873
thermofield dynamics, renormalized soliton statistics 7−116078
three-dimensional initial wave in channel giving rise to solitons 7−79444
three-dimensional wave collapse, quasiclassical theory 7−115810
TMMC, soliton-magnon interference, obs. by AFMR 7−106029
Toda lattice, clustered impurities, soliton excited, localized mode oscillations 7−124420
Toda lattice, inelastic soliton scatt. by an interface 7−108473
Toda lattice, SL(2,C), nonAbelian solitons 7−108430
toroidal mag. confinement plasma, vortex soliton form. 7−123855
travelling wave solutions near isolated double-pulse solitary waves of nerve axon equations 7−115805
TTF-chloranil mixed stack cpd., neutral-ionic transition 7−84253
TTF-p-chloranil, neutral-ionic transition, ^{1}H-NMR and EPR studies 7−84256
TTF-p-chloranil single cryst., neutral-ionic phase transition 7−84255
TTF-TCNQ, CDW state, dielectric losses, temp. depend. 7−99668
two dimensional theories, one-loop corrections to solitons, ϕ^4 kink 7−121368
two-dimensional Toda lattice, Casorati's determinants, Backlund transform. 7−73256
$U(2)_v$ Yang-Mills approach to skyrmions with vector mesons, nucleon EM props. 7−128763
ultrashort optical pulse propag., numerical modeling and precise results, review 7−123120
virtual domain walls and kinks, dynamics, 1D ϕ^4 scalar model 7−137502
vortices and solitons in plasmas, nonlinear wave eqn. review 7−130849
warm plasma, Alfvenic turbulence, MHD oscills. 7−111228
solitons continued
water waves in straits of varying depths and widths, integrable nonlinear eqns. 7−104287
d form factors in topological soliton approach 7−128891
π-ρ-ω-A_1 system, baryons as solitons, hedgehog mass, baryon phenomenology 7−73529
Au (111), reconstructed, misfit dislocations, double-sine-Gordon soliton 7−112043
Au (111) surface, soliton reconstruction 7−124665
$^{52}Cr(\alpha,X)$, Coulomb and nuclear excitation, soliton nature of interference 7−121868
$CsMnF_3$ antiferromagnetic bound electron-nucleus mag. system, solitons 7−112779
$CsNiF_3$ 1D easy-plane ferromagnetic magnons and solitons, nuclear spin-lattice relax. meas. 7−105909
H-bonded like chains, collective nonlinear dynamics 7−122761
HF(Cl)(Br), solid, electronic and dynamic props. under press. 7−124490
^{3}He BCC crysts., dislocation tunnelling, penetrating Fermi particles, massive Thirring model calcs. 7−76534
$K_{0.3}MoO_3$, CDW state, dielectric losses, temp. depend. 7−99668
La_2CuO_4 based compounds, supercond., phase transitions, resonating valence bond theory 7−112582
$LiNbO_2$-SiO film structure, surface acoustic cnoidal waves and solitons 7−70056
$NbSe_3$, mag. field-induced phase transition 7−99141
$^{60}Ni(\alpha,X)$, Coulomb and nuclear excitation, soliton nature of interference 7−121868
Pt^{II}-Pt^{IV} mixed valence complex, quasi-one-dimens. soliton-to-band optical absorption 7−106205
Rb_2ZnCl_4 crystals, incommensurate-commensurate phase transition, permittivity, birefringence 7−137550
YIG epilayers, magnetostatic soliton propag. at microwave freq., power response meas. 7−138299

sols
see also colloids; sedimentation
agarose gel-sol transition, shear modulus crit. behaviour investig. 7−100628
alcohol-free sol-gel process, silicon alkoxide system 7−132978
glass, sol-gel process, structural evolution 7−113512
glasses for optical use, sol-gel process preparation *(Japanese)* 7−68914
hydrosol, high density, off-axis multiple scatt. of laser beam in turbid media 7−68559
nMR study of the sol/gel polymerization 7−86619
particulate sols and emulsions, electrically induced concentration bonding 7−93388
polymer, crosslinked, graph represent. and topological gelation criterion 7−97984
polymer solutions, sol-gel transition, thermodynamic theory 7−91843
porous sol-gel glasses, studies of supercooled O_2 liquids and solids 7−98406
PVC plastisols, viscosity depend. on temp. and time 7−131349
sol-gel glasses, porous, chemistry and physics 7−126078
Ag, adsorbed guanine series, SERS 7−132265
Ag, chemisorbed 1-butanethiol, SERS 7−96704
Ag, chemisorbed benzoic acid, SERS 7−96708
Ag sols, adsorption of $Fe(2,2'\text{-bipyridyl})_3^{2+}$ on Ag colloids SERS spectra anal. 7−77579
Al_2O_3 compact prep. by sol-gel processing, drying and sintering 7−113496
Al_2O_3-MgO, triphasic xerogels, densification using isostructural seeding 7−113491
Al_2O_3-SiO_2, mechanical activation of reaction, wet grinding, aluminosilicic acid 7−92940
Al_2O_3-SiO_2 gels and sols, growth processes and struct. 7−119587
CdO semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
In_2O_3 semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
PbO-TiO_2 system, sol-gel processing, pH and temp. effects 7−71114
$PbTiO_3$, sol-gel derived, struct. control of monolithic gels 7−113489
R_2O_3-SiO_2 (R=Pr, Dy, Er) silicate glasses, sol-gel prep. 7−132977
SiO_2 gel, formation by sol-gel process, dynamic shear meas. 7−93396
ThO_2 sol-gel microspheres, sintering behaviour 7−71118
$(UCe)O_2$ pellets, sol-gel microsphere pelletization process, porosity, density microstruct. 7−77906
UO_2, spherical fuel particle prep., sol. gel process 7−81543
ZrO_2, hydrated, sorption of B, reversibility 7−93372

solubility
see also phase equilibrium; solid solubility; solutions
acrylic acid-methacrylic acid copolymers, aq. soln., conform. behaviour 7−97891
adipic acid, solubility in water from 278.15 to 338.15 K 7−84279
n-alkanes in organic solvents, predictive eqn. for determ. solubility 7−98460
binary liq. mixtures, polarity investig. *(German)* 7−69920
caffeine, aq. electrolytes soln., Setschenow coeffs. 7−91813
cement matrices, solubility modelling, implications for LLW immobilisation 7−103242
citric acid, solubility in water from 278.15 to 338.15 K 7−84279
diffuse interfacial transport method for phase studies 7−111897
dilute supercritical mixtures, appl. of Kirkwood-Buff theory 7−124514
dimyristoylphosphatidylglycerol dispersion in H_2O, lipid bilayer form., equilib. phase diag. investig. 7−93663
2,4-dinitrodiphenylamine, solubility study in micelles and microemulsions 7−98464
epoxidised natural rubber-PVC blends, compatibility investig. 7−84296
ethane-tetracosane, phase equilibr., meas. and calcs. 7−91771
fatty acids, long-chain, solid-liquid phase relations in organic solvents 7−124454
gas bubbles dissolution kinetics in water, surfactant effects study *(Russian)* 7−84300
gaseous diffusivity and solubility in liquids, simultaneous meas. 7−84341
gaseous solute solubility in polymers; solute-polymer interactions anal. 7−111899
graphite:H_3^+(D_3^+), thermal and ion-induced release of ion implants 7−91610
halogenated benzenes, aqueous solubilities, correlations 7−84295
hydrocarbons, vapours, absorpt. in polyethylene films, thermodynamics 7−118239

solubility continued
ice/water interface, solute redistribution, elec. props. and interface processes implications 7—118243
immiscible fluids in constructed tube, slow displacement by countercurrent in spontaneous imbibition *(French)* 7—91922
isobutylene polymers and copolymers, compatibility with polyorganosiloxanes *(Russian)* 7—83793
LWR irradiated MOX fuel elements, solubility in reprocessing *(German)* 7—109305
maleic acid, solubility in water from 278.15 to 338.15 K 7—84279
malic acid, solubility in water from 278.15 to 338.15 K 7—84279
malonic acid, solubility in water from 278.15 to 338.15 K 7—84279
metal hydrides, properties and applications, conf., Maubuisson, France (May 1986) 7—80151
metal-H systems, diffusion and solubility coeffs., high-vac. setup with mass spectrometric attachment 7—73463
metallic glasses, He solubility, method of determ. in solid and melts 7—91828
metallic solid solutions, chem. comp. and reactivity of interfaces 7—86670
metallic systems, component intersolubility estimation 7—105035
micelles, dipole-dipole energy transfer, time resolved spectra, probe induced perturbations, solubilization sites 7—142550
microemulsions, simple microscopic model, three-component mixture, surface tension 7—139054
nematic host, solubilities of the components of binary dye mixtures 7—76420
3-nitroaniline, solubility study in micelles and microemulsions 7—98464
oxalic acid, solubility in water from 278.15 to 338.15 K 7—84279
partially miscible liquid system equilibrium, computation by total Gibbs energy minimisation *(Chinese)* 7—98514
phase separation, dynamics 7—84281
PMMA film dissolution and swelling behaviour in solvent/nonsolvent mixtures, in situ ellipsometric charactn. 7—124520
PMMA-polystyrene-co-acrylonitrile blends, miscibility window, laser light scatt. obs. 7—91825
poly-2,6-dimethyl-1,4,-phenylene oxide, miscibility with styrene-tetramethylpiperidinyl methacrylate copolymers 7—98457
polyamide-rubber phase blend, chemically modified, compatibility, thermal and mech. props. *(French)* 7—97982
polyamides, rigid-rod, solubility, mol. factors influence 7—98474
polyaniline, formation reaction and structure 7—71490
polyaniline, soluble, synthesis and elec. props. 7—105052
polycarbonate phenoxy blends, physical behaviour, interchange reactions in melt-processing conditions 7—77936
polymer-surfactant aq. solns., solubilisation equilib., Raman spectrosc. obs. 7—70802
polystyrene, ion bombarded, molecular weight distribution and solubility changes 7—91667
polystyrene, solns., Mark-Houwink-Sakurada consts. calcs. 7—91826
PVC-polyacrylate, miscibility, thermodynamic and phase behaviour 7—91824
quartz, increased solubility in water due to complexing by organic compounds 7—87622
radioactive used fuel, effect of precipitation on radionuclide vaults release in geological 7—89780
radionuclide solubility in water, HTR-100 reactor fission product release study *(German)* 7—109462
spheres, diffusion-controlled dissoln. 7—98473
steel, H effects, review 7—93181
succinic acid, solubility in water from 278.15 to 338.15 K 7—84279
supercritical, decorated lattice gas model 7—140631
supercritical extraction systems, solubility, calcs., computer simulation 7—84288
supercritical fluid extraction and retrograde condensation, statistical mechanical description 7—131282
systems with compound-forming tendencies and miscibility gap, appl. of Hoch-Arpshofen model 7—137564
tartaric acid, solubility in water from 278.15 to 338.15 K 7—84279
theobromine, aq. electrolytes soln., Setschenow coeffs. 7—91813
theophylline, aq. electrolytes soln., Setschenow coeffs. 7—91813
2,4,6-trinitrodiphenylamine, solubility study in micelles and microemulsions 7—98464
uric acid dihydrate, precip. diagrams and solubility 7—126475
uric acid-NaOH-HCl-water system, computed phase diagrams, dissolution and precip. 7—126476
water structure, change as function of diphilic mol. and hydrocarbon chain length 7—104522
yellow dyes for guest-host applications, optical order parameters 7—124087
Ag-Se-S(Te) chalcogenide glasses, selective solubility 7—105048
Al_4C_3 solubility in NaF-AlF_3 cryolitic melts, C electrodeposition 7—105037
Ar, gas, solubility in methanol-$d_0(d_3)(d_1)(d_4)$-$H_2O(D_2O)$, solubility, isotope effects 7—111159
Au, He solubility 7—118098
$BaPb_{1-x}Bi_xO_3$ supercond., solution growth and transition temp. *(Japanese)* 7—113372
CS_2SO_4-$Li_2SO_4(Na_2SO_4)(K_2SO_4)$, phase equilibr. thermodynamics 7—76413
CaO-P_2O_5-H_2O, at high temps. and pressures, to 250°C 7—106515
Cd-Pb-Zn system, calc. of liq. miscibility gap 7—132563
Cu-Cr system, phase diagram, thermodynamic characts, 7—144372
Fe-C system, C solubilities in Fe at elevated temps., anal. by statistical thermodynamics 7—98475
Fe-C-V melts, thermodynamic activity interaction coeff. 7—98517
Fe-Cr-C melts, enthalpy of graphite soln., effect of Cr 7—105034
Fe-Cr-Ni, complex liq. alloys, N solubility 7—76418
Fe-Cr-Ni, complex liq. alloys, N solubility, effect of Ti 7—76419
Fe-Ni-N system, with up to 30 wt.% Ni, N activity and solubility 7—126083
Fe-Ni-Si-Cu-C, Cu precip. and solubility 7—100226
Fe-Pb phase diagram, solubility-temp. relationship *(Chinese)* 7—132559
$FeBO_3$ single cryst., flux growth in Fe_2O_3—B_2O_3—PbO—PbF_2 system 7—132435
Ga-Sb-Se films, obliquely deposited, negative resist behaviour 7—116015
Ga-Sn-Sb, composition diagrams of GaSb-Sn and GaSb-SnSb, 985-600 K 7—106491
HF gas, solubility in fluoride melts 7—69915
Hg, solubility in normal alkanes 7—91807
I_2, solubility study in micelles and microemulsions 7—98464
solubility continued
Kr, gas, solubility in methanol-$d_0(d_3)(d_1)(d_4)$-$H_2O(D_2O)$, solubility, isotope effects 7—111159
Kr, solubility in ethanol-water system, struct. investig. 7—143024
N_2, soln. from arc plasma into liq. Fe, arc current effect 7—104465
Na_2O-B_2O_3-SiO_2 glass, phase separation, effect of MoO_3 addition *(Japanese)* 7—138749
Na_2O-MO-P_2O_5 glasses (M=Mg, Ca, Sr, Ba), N dissolution in melts, thermal expansion, refractive index 7—93013
Nb-H system, hydride precip., X-ray diffr. study 7—84284
Nb-Mo-H system, hydride precip., X-ray diffr. study 7—84284
Ne, gas, solubility in methanol-$d_0(d_3)(d_1)(d_4)$-$H_2O(D_2O)$, solubility, isotope effects 7—111159
Ni, diffusion and solubility of O_2 thermodynamics 7—71192
Ni-base liquid alloys, ternary and multicomponent, N and H solubility, equivalent influence of alloying elements *(German)* 7—111900
Ni-Cr liquid alloys equilibrated with Cr_2O_3, thermodynamic study using EMF method 7—143023
Ni-Mg olivine solid soln., thermodynamics 7—143043
Pb-Al system, thermodynamics and solubilities 7—124557
PbSe, solubility of Se, rel. to vapour pressure of Se_2, 1070-1270 K 7—69910
Pd, deformed, anomalous H solubility 7—124522
Pd-Ce-Y-B, diffusion and solubility of H, lattice dilation effect 7—84401
Pd_3Mn, disorder-order system, elec. resist. anomalies, H solubilities 7—76883
Rn, solubility in selected perfluorocarbon compounds and water 7—91808
Se, glassy, γ-ray irrad., solubility studies 7—84287
Ti_2Cu, H(D) absorpt., X-ray and neutron diffr. studies 7—84283
UO_2, amorphous, solubility and mononuclear hydrolysis consts. 7—96384
Xe, gas, solubility in methanol-$d_0(d_3)(d_1)(d_4)$-$H_2O(D_2O)$, solubility, isotope effects 7—111159
Zn-In system, liq. immiscibility and associated monotectic reaction 7—124524
ZnSe:Ar, molten, props., composition of crystallisation 7—76358
Zr_2Pd, H(D) absorpt., X-ray and neutron diffr. studies 7—84283
solute clustering *see segregation*
solution annealing
Inconel 625, marine crevice corrosion resist., effect of Nb content 7—113755
Inconel 625, serrated flow, strain ageing, ladders bands, solute migration to mobile dislocations 7—78138
steel, austenitic stainless, corrosion pitting behaviour, effect of carbide precip. *(Korean)* 7—78317
steel, austenitic stainless, electron irrad., soln-annealed, void form. and precip. rel. to Ti, Zr and V addition 7—84031
steel, austenitic stainless, fatigue, proton irrad., precip. hardening, strain amplitude and temp. effect 7—113721
steel, austenitic stainless, fracture toughness, fatigue crack growth in high press. H_2 *(Japanese)* 7—119348
steel, maraging, W-bearing, Co-free, low cycle fatigue behaviour 7—86335
steel, microalloyed, Al or Nb containing, hot ductility rel. to precip. 7—144491
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7—86187
Al-li (1.8 wt.%), thermomech. treatment, fatigue, deform. bands, dislocation struct. *(Japanese)* 7—93081
Al-Li based alloys, deform., fracture, microstruct. rel. to comp. and heat treatment 7—144465
Al-Li-Cu-Mg, soln, treated, quenched, grain boundary solute segregation, Auger spectra 7—100234
Al-Mg alloys, intergranular SCC, Mg grain boundary segregation 7—86398
Al-Zn-Mg clad sheet, Ag coated, diffusion bonded overlap joints, shear strength 7—113614
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7—113577
Cu based shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7—126109
Cu-Zn-Al-B shape memory alloys, mech. props., martensitic temps. rel. to B addition and aging 7—119323
Fe-Ni-Cr, γ' strengthened, mag. props., austenitic phase stability, 4.2 K *(Japanese)* 7—105959
Ni-Be-Ti, β-phase dissoln., influence of soln. treatment *(Chinese)* 7—71186
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7—113553
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7—100307
Ti-V-Cr-Al-Sn (15,3,3,3 wt.%), hot-rolled, mech. props., microstruct. 7—78153
solution energy *see heat of solution*
solutions
see also critical mixtures; Debye-Huckel theory; heat of solution; liquids; polymer solutions; solid solutions; solvation
acetic acid, aq. soln., Raman spectroscopy, factor anal. and band contour resolution 7—68315
alkali halide aqueous solns., Raman band, temp. and salt conc. depend. studies *(Japanese)* 7—118992
alkali halides, solns., in water-acetamide mixtures, ion-solvent interactions volume 7—111336
alkali halides solutions, in water-acetamide mixture, ion-solvent interactions 7—91422
alkaline earth polystyrenesulphonates, aq. solns., entropies, enthalpies and free enthalpies 7—137591
alkyl polyoxyethylene micellar solutions cloud curve phase separation, perturbation theory, Flory-Huggins theory, low critical volume fractions 7—143039
alkyltrimethylammonium bromides, aq. solns., heat capacities and densities meas. 7—143030
amino acid aqueous solutions, viscosities, solute-solvent interactions 7—91866
anthracene, fluoresc. quenching in alcohols and water-alcohol mixtures 7—117016
aqueous, frozen, dipolar dielec. relax., thermally stimulated depolarisation studies 7—99665
aqueous ionic solutions, translational diffusive proton motion, quasi-elastic neutron scatt. 7—84339
aromatic hydrocarbons, solns., triplet-triplet annihilation *(Japanese)* 7—129624

solutions continued
BALANCE—a computer program for the handling and supervision of analytical standards 7—121082
BDN dye in liquid crystal ground state recovery time 7—123127
benzene-$C_4H_8O_2$, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7—125602
benzene-carbon disulphide, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7—125602
benzene-tetrachloromethane, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7—125602
benzisatins, UV spectra study in ethanol 7—141595
9,9′-bianthyl, alcohol soln., picosec. excited state solvation dynamics 7—119516
binary mixtures, critical region, isochoric specific heat and eqn. of state 7—137583
biphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7—122602
bis(2-ethylhexyl) sulphosuccinate micelles in aq. solns., struct. and growth 7—114012
1,3-bis(2-naphthyl)propane, in alkane solns., excimer form., press. effects 7—135999
n-Bu_4NI/sulpholane binary solutions, US studies 7—84130
charged particle solutions., transport processes, statistical mechanics, electrophoretic fluctuation dynamics 7—80693
charged rod-like macrocells in soln., pair-distrib. fn., light scatt. intensity calcs. 7—137188
charged spherical particles, suspensions in electrolyte solns., permittivity meas. 7—106839
p-chloroaniline, aq. soln. adsorp.. by macroporous copolymers 7—112078
chloromethylstannanes, soln. struct. and preferred orientation in liq. crysts. 7—68362
chrysene fluorescence quenching by KI in methanol-ethanol solns. 7—122600
coenzyme B_{12}, base-off form, soln. behaviour, 2-dimens. NMR 7—74671
colligative properties, solvent cluster size effects 7—84226
concentrated solutions of attractive hard spheres, mutual diffusion coeff. 7—131344
CTAB, dil. surfactant soln., viscoelasticity, micellar chain model 7—110897
sym-dibenzo-16-crown-5-oxyacetic acid, soln., mol. relax. dynamics 7—118041
2,4-dibromophenol, aq. soln. adsorp.. by macroporous copolymers 7—112078
2,5-dichlorophenol, aq. soln. adsorp.. by macroporous copolymers 7—112078
1,4-dioxane, liq., vibr. dephasing and relax. 7—96828
DNA solution, equilib. Coulomb pot. and charge distrib., Monte Carlo and SCF calcs. *(Russian)* 7—111346
dodecylammonium trifluoroacetate, micellar soln., small angle neutron scatt. obs. 7—114004
dust solutions, aqueous, cond. props. 7—124566
dye solns., triplet-triplet annihilation *(Japanese)* 7—129624
dye solutions, ultrafast population relaxation obs. using time-delayed four-wave mixing 7—123064
electrolyte, aq. soln., sedimentation pot. and ionic partial molar volumes 7—114013
electrolyte solutions, mag. surface phenomena 7—91857
electrolyte solutions, meniscus-wetting film transition zone, on quartz surface 7—112020
electrolytic solutions, aqueous, sound vel. and energy of crystalline lattice 7—111771
fatty acids, long-chain, solid-liquid phase relations in organic solvents 7—124454
filtration, flux enhancement, solution destabilisation effects 7—113994
flow in through-holes of printed circuit panels, panel movement effects 7—130782
formaldehyde, linear oligomers, in mixed solvents, mol. mass distrib., NMR meas. *(Russian)* 7—82226
guaiacol-glycerin solution, double critical point study 7—84200
n-hexadecane-n-hexafluorobenzene(-benzene), vapour-liquid equilib., 323.15 K 7—124462
homogeneous nucleation of bubbles, crit. supersaturation meas. 7—144741
hydrophilic solutes, aq. solns., stepwise hydration, thermodynamic model 7—93364
hydrophilic solutes, aq. solns., stepwise hydration, thermodynamic model of binary nonelectrolytes 7—93365
internal energy, mean spherical approx, and Debye-Huckel calcs. 7—137174
ion mobility, in nonaqueous solvents, Hubbard-Onsager dielectric friction theory 7—137176
ionic mixture in dipolar solvent, mean spherical approx., anal. soln. 7—111326
ionic solutions, dilute, Hall effect, microscopic theory, Brownian ion-continuum solvent limit 7—111328
ionogenic surfactants, multicomponent soln., adsorpt. isotherms at interface with air 7—76555
liquid scintillation cocktails, alkylbenzene and detergent based, performance comparisons for disposal 7—132958
2-6-lutidine-water soln., kinetic mobility meas. 7—131011
methyl alcohol, aq. soln., refractive index meas. of conc. by diffr. grating 7—114023
methyl alcohol aq. solns., struct. and adiabatic compressibility 7—124070
α-Mn:C, dilute soln. thermodynamics 7—105080
monochloroacetic acid, in aq. ethanol, US vel., temp. and conc. depend. 7—98345
naphthalene, supercrit. solns. in CO_2 intermol. interactions, Raman obs. 7—74614
2-nitrobenzidine, in methanol-water mixtures, electrochem. reduction 7—113952
nitrotoluene in cyclohexane soln., dielectric polarisation, precritical state 7—132187
nonpolar gas mixtures, aq. solns., density meas. 7—84080
organic aqueous non-electrolytes, thermodynamic parameter studies 7—111770
organic compounds, laser beam-induced shock waves, fluid ejection and liq.-vapour interface channel form. *(Japanese)* 7—117026
osmosis, solvent structure effects 7—86675
para-terphenyl hindered rotational relax. of excited singlet state in methyl-substituted solns., fluoresc. spectra meas. 7—122602
phenanthrene fluorescence quenching by KI in methanol-ethanol solns. 7—122600
solutions continued
phenol blue, mol. interactions in dil. supercritical fluid solns. 7—122655
phenol-pyridine, in organic solvents, H bond equilibrium 7—86663
polar solvent mixtures, electron transfer reactions at crit. phase separation point 7—136058
polyelectrolytes, solution, equilib. Coulomb pot. and charge distrib., Monte Carlo and SCF calcs. *(Russian)* 7—111346
potassium laurate-1-decanol-D_2O micellar cholesteric liq. cryst. solns., microscopic textures, phase transitions 7—124088
proflavine-dinucleotide complexes, eq. solns., PMR obs. 7—141607
pyrene, excimer form. in crown ether surfactant micelles 7—109816
pyrene-pyromellitic anhydride solns., charge recomb. dynamics, picosec laser spectrosc. obs. 7—68291
quartz, suspensions, in univalent-univalent electrolyte solns., elec. cond. 7—78554
rhodamine 6G, glycerol soln., fluoresc. lifetime and polaris. characts., relax. effects 7—74706
rhodamine 6G solutions, highly conc., fluorescence behaviour 7—99911
salt solution and crystn. processes in Owens Lake, California, mineral, chemical and isotopic evidence 7—94321
Scheibe-aggregates of pseudoisocyanine in soln. and molecular monolayers, fluoresc. lifetimes 7—117004
solvent softness, linear solvation energy relationships 7—135859
stilbene, in alkane and alcohol solns., rot. diffusion 7—69947
supercritical solns., rapid expansion, powders and film production 7—106402
tetra-*n*-butylammonium picrate, in ionic solvent, elec. cond., viscosity and density 7—143065
tetrachloromethane-carbon disulphide, nonpolar liquid solutions, orientation polarization dielectric dispersion props. 7—125602
n-tetradecane-n-hexafluorobenzene(-benzene), vapour-liquid equilib., 323.15 K 7—124462
uni-univalent electrolyte solns., glass electrode investig. 7—113947
vitamin B12, sorption from aq. soln. 7—105241
$AlCl_3$, aq. soln., water struct. and dynamics, NMR study 7—92534
n-alkane in n-alkane solvent, partial molar volumes at 298.15 K 7—98508
$CaSO_4$, hydration and hardening, activation by metallic cations, elec. potential *(French)* 7—111816
Q-Cd_3P_2, colloidal, aq. soln., flash photolysis, optical absorpt. meas. 7—113167
ClO_n^- anions, aq. solns., absolute Raman intensities and EOPs 7—82147
CsCl, soln., elec. double layer potentials, determ. from adsorpt. meas. 7—113949
$CuBr_2$, aq. soln., conc., X-ray scatt. obs. 7—113314
$CuBr_2$-N,N-dimethylformamide solns., spectrophotometric and conductometric obs. 7—106209
Eu^{3+}, fluoresc. quenching in alcohols and water-alcohol mixtures 7—117016
HCl, aq. soln. enthalpy of dilution, thermodynamic props. 7—143047
$KAl(SO_4)_2.12H_2O$ in water and aqueous H_2SO_4, viscometric studies 7—91865
KCl, aq. soln., mol. dynamics study 7—75968
KCl-KH_2PO_4-H_3PO_4 mixtures, aq., quaternary diffusion 7—84340
KCl-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7—113999
K_2SO_4, aq. solns., cryst. growth kinetics *(German)* 7—111436
K_2SO_4-potassium polystyrenesulphonate mixtures, aq. solns., Donnan dialysis 7—113999
$LiClO_4$ solns. in 2-methyltetrahydrofuran, mols. relax. dynamics and struct. 7—104516
LiCl, aq. soln., conc., optical absorpt. obs. of trapped electrons 7—92702
LiCl, soln., elec. double layer potentials, determ. from adsorpt. meas. 7—113949
$MgCl_2$, aq. soln., props. and dynamics 7—83638
$NH_4Al(SO_4)_2.12H_2O$ in water and aqueous H_2SO_4, viscometric studies 7—91865
NaBr, aq. soln., heat capacities, 306-603K, 17.5 MPa 7—98488
NaCl-KBr mixtures, aq., densities and apparent molar vols. calcs. 7—104883
$NaClO_4$, aq. soln., mol. dynamics simulation 7—69568
$NiBr_2$, aq. soln., conc., X-ray scatt. obs. 7—113314
$O_2^-(H_2O)_n$, gas phase, electron transfer, ab initio MO calcs. 7—68500
cis-Pt (diamine)(ascorbate) complexes, soln. chem., NMR investig. 7—129742
SF_6, supercritical, solvent props: solute UV spectral line shift obs. 7—103411
U/Pu mixed solutions, assay using gamma-ray densitometer 7—114061
$UO_2(NO_3)_2.6H_2O$, density meas. nuclear materials safeguards appl. *(French)* 7—109320
Xe, supercritical, solvent props. solute UV spectral line shift obs. 7—103411
Zn^{2+} solutions in conc. aqueous KOH, structure, Raman and ^{67}Zn studies 7—97896
$ZnBr_2$, aq. soln., conc., X-ray scatt. obs. 7—113314
$ZnCl_2$/LiI aqueous complexes, acoustic and volumetric investigations 7—111769

solvated electrons
1-butanol-water mixtures, electron reactivity, solvent struct. 7—86662
binding energy, dynamical corrections 7—93270
hydrated electron, path integral Monte Carlo study 7—119501
hydrated electron, structure 7—109729
hydrated electron struct., quantum simulation 7—86659
polyatomic molecules, dissoc. attachment and radiation chem. stability 7—93348
statistical model of the hydrated electron 7—139076
structure, experimental evidence review 7—133025
structures, ab initio localised electron correls. 7—89925
water, excess electrons, evidence of prehydrated state with femtosecond lifetime 7—85657
Fe^{2+}-Fe^{3+} electron exchange in water, free energy of solvation calc. 7—93300
NHz soln., optical absorpt. spectra 7—82026

solvated protons *see hydroxonium ion*

solvation
see also hydroxonium ion; solvated electrons
acetone, hydration free energy, finite difference thermodynamic integration 7—106784
albumin, struct and activity, hydration effects, integrated optics and IR Raman spectra study 7—68496

solvation continued
alcohols and alkanes solvation props., mol. dynamics method, thermodynamic-cycle perturbation theory 7—138978
alkanes, liquid, solvation forces between smooth surfaces meas. 7—137660
amino acids in solution, recognition, hydrophobic forces role 7—86884
aromatic molecules, microsolvation, spectroscopic investig. 7—129823
aromatics in solution, microscopic solvation dynamics, time-resolved spectroscopic meas. 7—93288
bacteriorhodopsin, solvation dynamics, mol. fluoresc. and near reson. Raman yields probe 7—103562
9,9′-bianthyl, alcohol soln., picosec. excited state solvation dynamics 7—119516
+—butanol, aq. soln., hydrophobic hydration, Raman spectra 7—132255
cadmium arachidate, order disorder transition, trace water effects 7—104617
catanionic surfactant-water systems, phase equilib. 7—111826
charge delocalised anions, bonding in protic and dipolar aprotic solvent mols. 7—100536
charged organic molecules, free energies of hydration, hydration shell model 7—144739
coumarin, picosecond solvation dynamics investig. 7—106777
cytochrome C oxidase, crystalline membranous struct., electron density profile, electron microscopy and X-ray diffr. study 7—78744
4,4′— diaminophenyl sulphone, intramol. charge transfer state, time-resolved fluoresc. spectra 7—129783
dimethylamine, hydration free energy, finite difference thermodynamic integration 7—106784
4-N-N-dimethylaminobenzonitrile, jet-cooled, dispersed fluoresc. spectra and lifetimes 7—109980
dimyristoyl phosphatidylcholine, lipid membranes, Raman spectra and head group hydration 7—71696
dinitrophenylpolyenes, polar fragments, selective orientational solvation effects on spectra 7—144705
egg-lecithin multibilayers hydration, 1,6-diphenyl-1,3,5-hexatriene probe fluoresc. depolarisation expts. 7—119740
electrolyte solns., multicomponent diffusion, solvation effect 7—113940
electrolyte solutions, electrostatic solvation energy, self-consistent continuum model 7—71495
electron, solvated optical absorption spectra 7—132959
enniatin B, conformation, effects of cryst. packing and hydration 7—86891
ethanol, aq. soln., hydrophobic hydration, Raman spectra 7—132255
ethidium bromide, alcohol-water soln. fluoresc. study 7—99909
fluid confined between walls, solvation forces, phase equilibr. 7—104971
glycine zwitterion, aq. soln., Auger spectra, Green's function method calcs. 7—103356
halomercuriomethanes, Raman spectra 7—82150
hydrated electron struct., quantum simulation 7—86659
hydrophilic solutes, aq. solns., stepwise hydration, thermodynamic model 7—93364
hydrophilic solutes, aq. solns., stepwise hydration, thermodynamic model of binary nonelectrolytes 7—93365
hydrophobic interaction, Monte Carlo simulation 7—84276
ionic aq. soln., thermodynamics, long-range force truncation 7—93357
isopropanol, aq. soln., hydrophobic hydration, Raman spectra 7—132255
isoquinoline van der Waals clusters, chromophore electronic struct., TOF mass spectra 7—103705
linearised microscopic theories of nonequilibrium solvation 7—93299
liquid-solid filtration, flow-inhibiting boundary layer form. kinetics 7—130769
macromolecular solvation, computer calc. of free energies 7—119706
metal ions, divalent, aq. soln. Raman ν_1 band 7—132267
N-methylacetamide, aq. hydration, Monte Carlo calcs., isomerism effects 7—131006
monochloroacetic acid, in aq. ethanol, US vel., temp. and conc. depend. 7—98345
neutral and charged molecules, hydrogen bonding correction to MNDO, crystallographic analysis, SCF semiempirical calculation modification 7—141712
noncrystalline solids, irradiation induced processes, mechanisms and kinetics 7—69749
nonionic organic molecules, free energies of hydration, hydration shell model 7—144738
2-norbornyl cation, stabilisation energies, solvent models role 7—139003
nucleic acids/nucleotides, hydration in aqueous ethanolic solns., US meas. 7—91726
phospholipid bilayer, gramicidin-induced H_{II} phase, acyl chain study, ^2H and ^{31}P NMR meas. 7—74660
photoisomerisation reactions, zero-barrier, nonequilib. solvation dynamics effects 7—100519
polar fluids, dielectric response and solvation, molecular theory 7—125604
polar molecules, solvation dynamics and vibr. relax., hole-burning spectroscopy 7—82326
polyacetylenes, I-doped substituted, Raman and far-IR vibr. spectra 7—144047
polymer solutions, solvent interactions, RISM integral eqn. soln. 7—96568
polymers, glass transition temp., calorimetric determ. *(Russian)* 7—84267
proteins, conformation prediction by energy minimisation, build up procedure, revised algorithms 7—144955
protonation energies in soln., discrete and continuum dielectric models anal. 7—126442
purple membrane, water absorpt. 7—93638
pyridazine van der Waals clusters, chromophore electronic struct., TOF mass spectra 7—103705
pyridines, substituted, protonated, acidity consts. in acetonitrile-water 7—93301
solute molecule, free energies of hydration, overlapping vols. calcs. 7—144737
solute-continuum interaction, electrostatic, surface cavity-bond charge distrib. 7—141479
solvent mixture of different polarities, dielectric enrichment, exciplexes, mol. fluoresc. anal. 7—68389
solvent softness, linear solvation energy relationships 7—135859
spheres of unequal size, intersection vol. calcs., rel. to hydration 7—144740
Stockmayer mols. between Lennard-Jones plate, mol. dynamics study 7—69567
tetradesmethyl-β-carotene, reson. Raman and fluoresc. lineshapes, vibr. relax., solvation dynamics 7—74615
2,2,6,6-tetramethylpiperidine nitroxide radical used to study $LiClO_4$, LiI, LiBr, $NaBPh_4$ and NaI solns. 7—119512

solvation continued
2,2,6,6-tetramethylpiperidine radical, solvation of Li^+, complex form., ^7Li NMR study 7—93264
tryptophan, excited, solvation, in polar glasses *(Japanese)* 7—132932
univalent anions, in solns., photoionisation, inner-sphere nucl. reorganisation, solvation model 7—110028
water structure, change as function of diphilic mol. and hydrocarbon chain length 7—104522
$AL(ClO_4)_3$, N,N-dimethylformamide soln., molar cond. and volume meas. 7—69946
$Be(ClO_4)_2$, N,N-dimethylformamide soln., molar cond. and volume meas. 7—69946
BeF_2 glass surface, hydration, IR absorbance spectra 7—106157
$Be(H_2O)_n^{2+}$, struct., hydration energy, bonding, vibr. freqs., SCF calcs., electron correlations 7—141469
CO_2, hydration, ab initio calcs. 7—86615
$Ca(H_2PO_4)_2.H_2O$, proton conductor, solid-state high-temp. reactions under steam pressure, dehydration and hydrolysis 7—144703
$CaO.Al_2O_3$ cement, surface state in presence of phosphoric acid soln. 7—86673
$CdCl_2$ thin films, hydration-dehydration 7—106791
$(Cl^-)_2$, solvated ions at contact 7—106779
Co (II) complexes in aqueous-organic solvent mixtures, PMR spectra anal. 7—109949
Co(III) amine complexes, laser excitation, aquation and H-D exchange 7—139027
Cr complex, tris(acetylacetonato)chromium(III), dilute chloroform solns., ^1H spin relax. anal. 7—116990
Cu acetate-pyridine derivative complexes, UV, visible and EPR obs., solvent effect 7—96752
Fe complex, oxo centered acetate, mixed-valence, solvation, micromodulation 7—92136
Fe^{2+}-Fe^{3+} electron exchange in water, free energy of solvation calc. 7—93300
$I^-.SO_2$, solvated ion, prereson. Raman effect 7—82149
$In(ClO_4)_3$, N,N-dimethylformamide soln., molar cond. and volume meas. 7—69946
LiCl, aq. soln., cation-anion pair, hydration number determ., Raman obs. 7—77526
LiI, clusters, solvation 7—96910
$LiNO_3$ in DMSO soln., IR and Raman spectra, ion pairing and solvation depend. on soln. temp. 7—82095
$NH_4(NH_3)_n$, Rydberg radicals, structs., correl. diagrams 7—90008
NO_2^-:$Li^+(H_2O)$, ion-pair hydrate clusters, Monte Carlo simulations 7—90470
$NaClO_4$, aq. soln., mol. dynamics simulation 7—69568
Ni (II) complexes in aqueous-organic solvent mixtures, PMR spectra anal. 7—109949
$SCN^-.SO_2$, solvated ion, prereson. Raman effect 7—82149
SiO_2:H, doping by ion beam enhanced hydration 7—91451

solvent effects
(1-) chloro-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7—69935
9,9′-bianthryl, excited state dipole moments, fluoresc. study 7—135996
1-butanol-water mixtures, electron reactivity, solvent struct. 7—86662
2-acetamido-2-deoxy-D-glucopyranoses, circular dichroism, rotations strength, solvent dependence, anomeric effects 7—141614
acetophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7—122735
acetylene derivatives, optical SHG, recrystn. solvent effects 7—110450
acrylic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7—119509
alanine dipeptide in water, integral eqn. methods for evaluation of correlations 7—114164
albumin, struct and activity, hydration effects, integrated optics and IR Raman spectra study 7—68496
alcohols, saturated, ν_{OH} freq., gas-solvent shifts 7—109813
alkali naphtholates, emission and absorpt. props., solvent effect 7—113959
alkyl polyoxyethylene micellar solutions cloud curve phase separation, perturbation theory, Flory-Huggins theory, low critical volume fractions 7—143039
alkylaryl ureas, configs., IR spectra 7—96670
amino acid aqueous solutions, viscosities, solute-solvent interactions 7—91866
amino acid assignments, millimolar solutes, inhomogeneous part elimination of PMR spectra 7—71941
4-amino-4′-nitrodiphenyl, ethanol soln., dipole moment, visible fluoresc. spectra, edge-excitation red shift 7—135950
1-aminoalkyl-2-naphthols, excited state H^+ transfer, fluoresc. study 7—90256
2-aminophenyl phenylsulphone, luminescence, temperature dependence, emission and absorption spectra, excited states, solvent effects, change transfer 7—141620
amphiphile-solvent system, lattice model of micellar phase in quasi-chemical approx. 7—71534
trans-anethole-9-cyanophenanthrene, exciplex luminescence, magnetic field effect, polar solvents, dielectric constant 7—141618
aniline and derivatives, soln., rot. dynamics, picosecond fluoresc. anisotropies 7—90255
anthracene, fluoresc. quenching in alcohols and water-alcohol mixtures 7—117016
anthraquinone, laser photolysis, photoreduction, time-resolved spectra, charge transfer, polarisation, hydrogen transfer, solvents 7—141608
9,10-anthraquinone aligned in stretched polyethylene, IR spectra, vibr., symmetry assignments 7—82124
anthraquinone-2, 6-disulphonate, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7—82192
4-(9-anthryl)-N,N-dimethylaniline, time resolved spectra, solvent dependence, charge transfer, reorientation, relaxation, laser spectroscopy 7—141480
aromatic molecules, microsolvation, spectroscopic investig. 7—129823
cis-azobenzenes, push-pull-substituted, substituent and solvent effects, electronic absorption spectra and thermal isomerisation 7—122399
azulene, solvent effects, Raman excitation profiles, line broadening stochastic model calcs. 7—82190
bacteriochlorophyll α, pheophytin substitute fluoresc. spectra, critical energy transfer distances calc. 7—106983
bacteriorhodopsin, solvation dynamics, mol. fluoresc. and near reson. Raman yields probe 7—103562

solvent effects continued
benzenamine-4-(9-anthryl)-N,N-dimethyl related cpds., synthesis, spectroscopic props. 7—90265
benzene, ^{1}H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7—109950
benzene, cryogenic solvents, spectroscopic studies 7—135921
benzene derivative mol. electronic struct. anisotropic medium effects calc. 7—116829
benzene derivatives, Raman intensity and mol. interaction investig., substituent effects 7—90152
benzene in propane, optical absorpt. and emission transitions 7—90178
benzene-d_0 (d_6), liq., isotopic dilution anal., vibr. Raman spectrum 7—90155
benzenes, substituted, nonpolar, elec. quadrupole reaction field, NMR solvent shifts 7—109940
benzilidenephthalides, photoexcited, radiationless deactivation rate, solvent influence 7—129768
benzoic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7—119509
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7—116977
benzophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7—122735
N-benzoylindoles, charge transfer fluoresc., solvent effects 7—96760
2,2′-bipyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7—77582
bis(trimethylsilyl)acetylene, liq. state dynamics, Raman scatt. obs. 7—92662
block copolymers, solid, low-freq. acoustic parameters, prep. conditions effects *(Russian)* 7—90913
bovine pancreatic trypsin inhibitor, sidechain rotational isomerisation, solvent effect, dynamic simulation 7—93618
1-bromo-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7—69935
1,4-butanediol, solns., IR spectrosc. 7—109897
butanol-solvent interactions, dielectric const. meas. 7—99644
caffeine in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7—85831
3-carbamoyl-2,2,5,5-tetramethylpyrroline-1-oxyl, radicals, ESR spectra 7—74687
cellulose triacetate, acetic acid solns., macromol. conform. changes, temp. effects *(Russian)* 7—82410
chemically reactive fluids, solvent effects, statistical mech. study 7—100542
chiral molecule-solvent interaction, ordering mechanism, conflict with second law of thermodynamics 7—110009
chiral protein-nonpolar solvent interaction, thermodynamic behaviour 7—110010
chlorophyll, aggregation in solns., Raman excitation profile anal. 7—82191
chlorophyll a and photochlorophyll in frozen solns., fluoresc.-detected triplet kinetics study 7—100812
cobalticinium-cobaltocene, electrochem. exchange, solvent-depend. kinetics meas. 7—113887
coenzyme F_{430}, nickel hydrocorphinoids, structural changes, Raman spectroscopy 7—133196
complex formation, electrostatic interaction 7—122777
coronene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7—129689
crystal violet, solns., nonradiative torsional dynamics meas., viscosity and press. depend. 7—103563
p-cyano-N,N-dimethylaniline, intramolecular excited state charge transfer, fluoresc. 7—135995
cyanocarbon acids, ionis., solvent kinetic isotope effects 7—141477
cyclohexene radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7—68214
di-tert-butyl ethanal, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7—129744
diatomic mol., dielectric friction in liqs., mol. dynamics study 7—105088
dichloromethane, ^{1}H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7—109950
3,3′- diethyl-6,6′-diphenyl-9-enthyloxacarbocyanine iodine, time-resolved fluoresc. spectra, solvent depend. 7—82252
dimethyl sulphoxide, vibr. spectra in different media, IR and Raman obs. 7—103505
4-(N,N-dimethylamino)benzonitrile, visible spectra, solvent effects 7—74652
4-(4-(N,N-dimethylamino)phenylazo)azobenzene, liq. cryst. solns. orientational order, NMR 7—82220
p-dimethylaminobenzonitrile, soln., photoisomerisation dynamics, polarity depend. barriers 7—93268
dimethylformamide, carbonyl band frequency, solvent polarity and acidity properties influence 7—122735
p-N-N-dimethylnitroaniline in ethanol, excitation depend. fluoresc. to phosphoresc. ratio 7—74699
2,4-dinitrobenzyl carbanion, photochem. prod., absorpt. spectra, solvent effect 7—99879
2,4-dinitrophenol, intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7—122501
dinitrophenylpolyenes, polar fragments, selective orientational solvation effects on spectra 7—144705
2,6-diphenyl-4-(2,4,6-triphenyl-l-pyridinio)phenoxide, lipid membranes, interfacial solvent props. and surface pot. determ. 7—93664
l,n-diphenyl-l,n-diyls, substituted, UV spectral lifetimes, substituent and solvent effects 7—82204
diphenylpolyenes, dual fluoresc. in solns. 7—90258
diphenylpolyenes, picosecond photophysics, excited-state conformational changes 7—96717
duroquinone, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7—82192
electrolyte solutions, thermodynamic props., Kirkwood-Buff approach 7—91840
electron transfer in polar solvent, dynamic solvent effects 7—132923
electron transfer reactions, dynamical effects, generalised moment expansion 7—93283
epoxide polymers, sorption, diffusion and adhesional structs rel. to topological struct. *(Russian)* 7—97995
ethidium bromide, alcohol-water soln. fluoresc. study 7—99909
ethyl lactate, IR spectra, solvent influence 7—90123
fluid, vibr. relax., many-body scatt. formalism 7—74739
fluorescence background in Raman spectroscopy, solvent effects 7—103506
solvent effects continued
formamide-NH_3 complex, H_2O effect on H bonding, ab initio SCF MO calcs. 7—96498
furylacrylolyl chromophore, active site environment, UV reson. and IR difference Raman spectra anal. 7—68490
glycine zwitterion, aq. soln., Auger spectra, Green's function method calcs. 7—103356
glycolaldehyde, negative vicinal proton-proton and proton-carbon spin-spin couplings, temp. and solvent depend. 7—129744
hydrocarbons, solvent and free radical effects, ^{13}C NMR spectra 7—96734
8-hydroxy-1,3,6-pyrene trisulfonate, intermol. proton transfer, solvent depend. investig., absorpt. spectra 7—93305
4-hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl, radicals, ESR spectra 7—74687
intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7—122501
iodonium salts, positive secondary ion mass spectra, solvent effect 7—71549
N-isopropylacrylamide gels in mixed solvents, reentrant vol.-phase transition 7—69885
3-keto-steroids, aq. soln., protein binding, mol. fluoresc. study 7—78748
liquid, photoionisation, solvent binding energy shifts, self-consistent reaction field approach 7—113339
liquids, Raman spectra bandshape, H-bond strength and soln. viscosity depend. 7—82172
lysozyme, aq. solns., H bonding, low freq. Raman spectra study 7—68319
lysozyme, interaction with linear polyelectrolyte in soln., polarised luminesc. obs. *(Russian)* 7—85839
macromolecules, fluorescence energy transfer, donor-to-acceptor distance distrib., freq.-domain fluoresc. spectra 7—139204
Mannich base, trisubstituted, isotopic ratio and intramol. H bond strength, solvent effect 7—129734
metalloproteins, g-strain effect, EPR spectra simulation 7—106977
methane, in liq. cryst. mixtures, chem. shielding, NMR study 7—90195
methoxydifluorophosphinoxide-$d_0(d_3)$, liq. gas, solid vibr., conform., IR and Raman spectra 7—96687
1-methyl indole, in polar and nonpolar solvents, fluoresc. decays 7—117010
9-methylanthracene, fluoresc. quenching by cyclooctatetraene in aq. micellar solvent 7—90261
methylviologen, solvent cage escape yields following electron transfer quenching 7—82076
mixture of different polarities, dielectric enrichment, exciplexes, mol. fluoresc. anal. 7—68389
molecular interactions, solvent mediated, integral eqn. methods 7—129828
nickel porphyrins, noncoordinating solvents, excited state dynamics, reson. Raman spectra anal. 7—82196
1-nitropyrene, fluoresc. background in Raman spectroscopy, solvent effects 7—103506
nitroxyl radical in soln., exchange and hyperfine contrib. to EPR line shifts 7—68372
7-norbornadienyllithium, struct., MNDO calcs. 7—74445
2-norbornyl cation, stabilisation energies, solvent models role 7—139003
nuclear quadrupole coupling constants, reaction fields and solvent depend. 7—109946
9,10-octalin, radical cation, OD ESR and Freon matrix ESR spectro anal., UHE MINDO/3 calcs. 7—68214
organic dyes, energy transfer in methanol, fluoresc. quenching 7—96785
organic molecules, vectorial excitation energy transfer involving inhomogeneously broadened electronic levels 7—116944
oxazine 17, fluoresc. in H^+ donor and aprotic solvents, steady-state and picosec. excitation 7—117017
peptide β-turn conform., Pro-Asp and -Asn dipeptides study, IR, ^{1}H NMR and X-ray diffr. spectra 7—78750
phenanthrene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7—129689
phenylbenzothiazole derivatives, photophysics, photochem., solvent effects 7—116943
1-phenylbromoethanes, substituted, racemisation and radio-Br exchange, solvent effects 7—96886
photoinduced electron transfer, excited electronic state interactions 7—110097
picric acid, dissoc., solvent effects, -10 to +80°C 7—106765
pinacyanol, solns., intramolecular and orientational motion, fluoresc. study 7—74697
PMR spectroscopy, solvent effects 7—134410
polar medium, electron transfer, longit. solvent dielec. relax., model 7—131568
poly(2-hydroxyethyl methacrylate) in mixed water-alcohol solvents, conformational props. 7—74795
polymer chain geometry near theta-point, regularisation 7—82399
polymer solutions, solvent interactions, RISM integral eqn. soln. 7—96568
polymethine dyes, S_1-state deactivation, time resolved fluoresc. and absorpt. investig. 7—103572
polystyrene, star-shaped, intrinsic viscosities, temp. and solvent effects 7—69578
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective solvent effects 7—93310
polystyrene(hydrogenated)-PMMA diblock copolymer micelles, selective binary solvent-effects 7—93311
porphyrins, pyromellitimide-bridged, photoinduced electron transfer, fluorescence techniques, charge separation, inverted regions, dielectric relaxation recombination rates 7—141674
PRODAN, intramolecular reaction, time resolved spectroscopy 7—122594
protein and solvent environments incorporation into reson. Raman calcs. 7—93623
protein-solvent system, electrostatic pot., numerical calcs., self consistent boundary method 7—106958
proteins, NMR fingerprinting in H_2O soln., 2-dimens. longit. 2-spin-order technique 7—74792
protochlorophyll, Mg atom coordination, spectral-luminesc. obs. 7—141566
pyrene-dimethylaniline, exciplex luminescence, magnetic field effects, polar solvents, dielectric constant 7—141618
pyrene-N,N-dimethylaniline exciplex, fluoresc. spectra, thermochromic shifts 7—136012
pyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7—77582
pyridines, substituted, protonated, acidity consts. in acetonitrile-water 7—93301

solvent effects continued
pyridinium cations, N-naphthyl, struct. relax. effect on fluoresc. 7−138494
quadrupolar nuclei, NMR spectra line narrowing, appl. of supercritical fluid solvents 7−109942
α-resorcinol, cryst. growth, solvent effect 7−70998
RNA polymer, double stranded poly(rA).poly(rU), imino protons, spin-lattice relax. study, NMR spectra anal. 7−74672
rocks, electrical properties from 10^{-3} to 10^{+9} Hz, solvent effects 7−114702
rubrene, soln., triplet states, thermally activated intersystem crossing 7−68405
salicylideneaniline, photophysics, photochem., solvent effects 7−116943
semiquinone radicals, methoxyl-substituted, ^1H hyperfine coupling consts., ab initio UHF calcs. 7−109744
solute eigenvalues and eigenfunctions, solvaton model, INDO parameterised MO calcs. 7−109766
solute-continuum interaction, electrostatic, surface cavity-bond charge distrib. 7−141479
solvent softness, linear solvation energy relationships 7−135859
solvent-molecule interaction, perturbation theory for nonlinear Schrodinger eqn. 7−108270
trans-stilbene, gas and liq. phase photoisomerisation, transition state theory 7−93285
sulfonium salts, positive secondary ion mass spectra, solvent effect 7−71549
tetra-n-butylammonium bistrifluoroacetate, organic solvent solns., IR and PMR spectra 7−96738
tetracene, soln., triplet states, thermally activated intersystem crossing 7−68405
2,3,4,5-tetrachloro-6-(dimethylamino methyl) phenol, isotope ratios, solvent effects 7−96697
tetracyanoquinodimethane system, electron exchange, solvent dependence 7−100518
tetrahydrophenanthridine hydroxynitrostyrils. absorpt, spectra 7−141568
tetrahydropyrans, 2-substituted, anomeric effect, solvent polarity influence, ^{13}C NMR spectra 7−90189
tetramethyl-p-phenylenediamine, solns., photoionisation, solvent effects, reson., Raman spectra anal. 7−82195
tetramethylsilane, in liq. cryst. mixtures, chem. shielding, NMR study 7−90195
theophylline in methanol, fluoresc. and phosphoresc. props., solvent, heavy atom and matrix effects 7−85831
TIPS2 fluid next to surfaces, Monte Carlo investig. 7−83622
TMPD in methylcyclohexane, photocond. kinetics with pulsed laser ionisation 7−92224
TMPO free radical, H donor solvents, assoc. consts., ESR spectra study 7−103546
toluene-α-d_3, isotope shifts, solvent and substituent perturbation on ^{13}C NMR 7−90190
transition metal carbonyl complexes, vibrational energy lifetimes meas., picosecond-IR sat.-recovery expts. 7−74577
tryptophan and its derivatives in soln., nonexponential fluoresc. decay, conformational states, lifetimes 7−90259
unimolecular reactions in condensed phases, nonMarkovian theory 7−93291
viologen-cyclodextrin/ferrocyanide system, blue electrochromism 7−138422
xylenols, fluorescence quenching of excited states due to H bonding with triethylamine 7−82266
$AlCl_3$, conc. aq. solns., Raman active vibr. 7−92683
CdO semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
ClO_2 liquid solns., rot. Fokker-Planck-Langevin model, mag. relax. data anal. 7−106012
Co (II) complexes in aqueous-organic solvent mixtures, PMR spectra anal. 7−109949
Co complex, Co (III) diethyldithiocarbamate, metal atom environment, solvent effects, EXAFS spectra anal. 7−109927
Cr, matrix-enhanced forbidden transitions, moment anal. 7−103413
Cu acetate-pyridine derivative complexes, UV, visible and EPR obs., solvent effect 7−96752
Eu^{2+} complexes with crown ethers, luminescence, solvent and temp. effects 7−70872
Eu^{3+}, fluoresc. quenching in alcohols and water-alcohol mixtures 7−117016
Fe complex, trans-$MFe(CO)_3$ substituted phosphine 7−129619
Fe(II)complex, (2,2′-bipyridine)tetracyanoferrate(II), excited charge transfer obs., solvent tuning 7−110101
HCl-CO, gas and liq. soln., vibr. energy transfer 7−90341
HDO dissolved in ketones and ethers solvents, IR spectra study 7−122530
HF and dimer in soln., mol. vibr., continuum approx. 7−103461
H_2O solution, solvent reson. selective suppression technique 7−102475
I_2, n-hexane soln., polarisation dispersion curves for reson. Raman scatt. 7−82182
I_2, n-hexane soln., vibr. struct., reson. Raman excitation profile 7−82183
I_2-organic complexes, Raman spectra motional narrowing 7−90151
IBr, complexing reaction with benzene, far IR spectra anal. 7−103497
In_2O_3 semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
$KAl(SO_4)_2.12H_2O$ in water and aqueous H_2SO_4, viscometric studies 7−91865
KCl, in $H_2O(D_2O)$, solvent isotope effect on K^+ and Cl^- mobilities 7−74473
Li compounds, dimerisation, solvent effects calcs. 7−138985
$LiClO_4$, binary solvent soln. IR spectra 7−68305
$LiClO_4$, nitromethane-acetonitrile solns., struct. and IR spectra 7−109903
LiNCS, binary solvent soln. IR spectra 7−68305
$MgCl_2$, conc. aq. solns., Raman active vibr. 7−92683
$Mg(ClO_4)_2$, organic solns., Raman spectra 7−92684
$Mg(ClO_4)_2$-NaSCN, organic solns., Raman spectra 7−92684
N_2+CO vibrational energy transfer rate consts. meas. 7−117051
$NH_4Al(SO_4)_2.12H_2O$ in water and aqueous H_2SO_4, viscometric studies 7−91865
Na complex, Na lasalocid, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
Na complex, Na monensin, $^{23}Na^+$ spin-lattice relax., complexation effects, NMR spectra anal. 7−74673
Ni (II) complexes in aqueous-organic solvent mixtures, PMR spectra anal. 7−109949
solvent effects continued
Ni complex, Ni (II) diethyldithiophosphate, metal atom environment, solvent effects, EXAFS spectra anal. 7−109927
O_2 phosphorescence quantum yield in benzene solvent, IR spectra 7−116954
$POCl_3$:$SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
Pt(II) complexes, bromo-bridged, cleavage kinetics, solvent effects 7−138989
$(Ru(bpy)_3)^{2+}$, time-resolved photoselection and exciton hopping in excited state 7−103477
SF_6, supercritical, solvent props. solute UV spectral line shift obs. 7−103411
SO_2 in polar organic solvents, vapour-liq. equilibria 7−98413
Xe, supercritical, solvent props. solute UV spectral line shift obs. 7−103411
$Y_1Ba_2Cu_3O_x$, high temp supercond., environmental and solvent effects 7−119557

somatosensory phenomena, mechanical *see mechanoception*

somatosensory phenomena, thermal *see biothermics*

sonar
see also bioacoustics; navigation; underwater sound
3D underwater imaging method based on synthetic aperture image holography using acoustic lens *(Japanese)* 7−110657
acoustic Doppler current profiler, design and operation 7−101607
acoustic range sensing robot servo control 7−82956
acoustic transponding compass tag for free-swimming fish, design 7−97198
atmosphere sodar system design, noise problem reduction 7−127508
Australian maritime defence, appls. of underwater acoustics 7−110650
autoregressive modeling of nonstationary multibeam sonar reverberation 7−123306
beamforming for high-speed scanning sonars using digital techniques 7−97202
closed-form passive source localisation using range difference meas., spherical interpolation method 7−110662
coherence and time delay estimation 7−68929
coherent clutter textures with arbitrary spectra, simulation 7−123313
computerised sonar imaging for navigational model 7−110701
coordinates determ. of towed submarine apparatus using seismoacoustic splits *(Russian)* 7−123361
digital image processing for sidescan sonar data analysis 7−97203
digital sonar-signal processor, development 7−97196
driving point impedance loop for small sonar transducers, meas. 7−75230
eigenvectors and high resolution 7−97227
electronic sector scanning sonars, stabilisation 7−97199
fish location systems used in Japan *(Japanese)* 7−117391
frequency hopping patterns for simultaneous multiple-beam sonar imaging 7−110664
GPS, differential mode, hydrographic surveys 7−79707
grid-search, optimization and tracking for passive sonar localization in shallow water 7−123346
hydrophone arrays with randomly perturbed sensor locations, signal detectors 7−110736
marine acoustic surveying with sub-m accuracy 7−134006
marine sonar methods used in offshore oil industry 7−134010
marine submersibles, sonars for obstacle avoidance and obstacle searching 7−134011
matched-field processing in deep-water Pacific environment, simulation 7−123307
matched-filter envelope detector deflection performance for a correlated phase channel 7−123311
narrowband passive arrays, source detection improvement, sphericity test modification 7−110665
ocean current profiling techniques, receiver and analogue homodyning effects on incoherent Doppler vel. estimates 7−127567
ocean currents and turbulence meas. by Doppler sonar, signal processing techniques 7−139793
ocean technology electronics, conf., Edinburgh, Scotland (March 1987) 7−95103
ocean wave and currents, Doppler sonar methods 7−134012
oceanic acoustic tomography technology for ocean dynamics study 7−134013
optimal extraction of velocity information from a sonar correlation log using digital signal processor 7−130477
passive multipath target tracking in inhomogeneous acoustic medium 7−110661
passive ranging in a multipath dominated environment 7−110660
passive sonar, continuous gain adaptive trackers design 7−110658
position and velocity finding, using sensor array and linear-period-modulated signal *(Japanese)* 7−142134
random error versus S/N performance of an automatic broadband bearing/time delay tracking system 7−110688
range finding and surface characterization using high-frequency air transducers 7−82983
range resolution, optimal sequences for detection using a matched filter binary integrator 7−104091
real-time position fixing system for a diver 7−97201
remote measurement of the atmospheric wind velocity and temperature profiles using acoustic interrogation techniques 7−145699
robots, acoustics appl. to kinematic and dynamic behaviour control 7−123376
sea ice cover movement measurement, sonar system 7−79704
seafloor acoustic sounding, using lateral waves from sound source 7−133765
seafloor mapping by sonar methods, review 7−134008
seafloor mapping by sonar methods 7−134009
seafloor object detection, problem of optimal discrimination in presence of receiver noise 7−87948
sensor array, wavenumber estimation using asymptotic statistics 7−110640
signal processing, algorithms, architectures and technology, review 7−97226
sonar data, knowledge-based segmentation 7−110686
sound field, logarithmic least mean square estimation 7−110666
subsea positioning and control in hydrocarbons exploration, use of transponder network 7−75199
tracking array calibration underwater, remote monitoring 7−123308
tracking of moving target, US meas. system 7−90896

sonar continued
transducer, radiating flexural shell, FEM analysis of acoustic behaviour 7−117433
transmitter, high power flexible, design 7−97200
triangulation ranging, time delay meas. errors modelling by conditional beta density functions 7−123341
two-axis velocity measuring device with high accuracy, design 7−97197
VLSI devices for correlation processing of long data sequences 7−97225
wide-band monopulse sonar, remote seafloor profiling appl. 7−127496
wideband underwater transducer arrays with single acoustic matching plate 7−123318
wind measurement, appl. of errors in sodar-estimated second moments to field meas. 7−115067
wind measurement, errors in second moments estimated from monostatic Doppler sodar winds 7−115066
wind shear studies using forward scattering sodar over New Delhi 7−101408
workstation design and construction for oceanography appl. 7−79698
sonic boom *see shock waves*
sonic propagation *see acoustic wave propagation*
sonoluminescence
acoustic cavitation threshold meas. 7−130427
threshold meas. using cavitation studies 7−130426
transient-violent cavitational origin and gentle stable theory 7−125818
NaCl, aq. soln., sonoluminesc. and subharmonic generation in cavitation zone 7−99947
Soret effect *see thermal diffusion in liquids*
sorption
see also adsorption; chemisorption; desorption; surface diffusion
binary systems, isothermal fixed-bed sorption, non-Langmuir solutes with type isotherms, azeotropic systems 7−144743
binary systems, isothermal fixed-bed sorption, solutes obeying the binary Langmuir isotherm 7−144742
binary systems, isothermal fixed-bed sorption, Type I/II/IV isotherm solutes, phase separation phenomena 7−144744
casein hydration, TSDC studies 7−139184
charcoal with absorbed ozone, combustion, chromatography studies 7−78501
continuous-contact separation processes, simulation, unsteady-state absorpt. 7−124515
cryopump cryosorption process, thermodynamical treatment 7−134771
elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7−93127
electrochemical interface, models for struct., review 7−124706
epoxide polymers, sorption, diffusion and adhesional struct. rel. to topological struct. *(Russian)* 7−97995
ethylene-propylene-rubber-base elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7−93127
gas absorbers, He lattice sorption 7−98675
glassy polymers, solvent sorption, free boundary problem 7−84507
goethite, carbonate sorption capacity during groundwater flow 7−101356
graphite, fission product retention capabilities, mass spectroscopy, evaporation and sorption tests *(German)* 7−109464
hydrocarbons, vapours, absorpt. in polyethylene films, thermodynamics 7−118239
hysteresis, rel. to laws of thermodynamics 7−95153
instantaneous irreversible reactions, absorpt., Sherwood-Pigford model 7−86572
isotherm meas. using computer-aided microgravimetric method 7−137712
metal hydrides, heat pump, dynamics of H_2 transfer 7−93524
metal hydrides, hydrogen storage, contribution of cathodic charging 7−93544
metals and alloys, crystalline and non-crystalline, H absorption props. 7−105287
microporous particle, nonisothermal sorption model 7−143177
montmorillonite-Na-water system, selective absorption of Cs, Sr, and Ca 7−126493
multidrop gravity spray, trace gas absorpt., mass transfer anal. 7−78541
nozzle, submerged, gas injection, absorption, interfacial areas calcs. 7−104321
nuclear waste packages, radionuclide release, sorption and decay effects 7−103229
nylon, stress cracking in aq. salt soln., nylon-salt interactions 7−113739
organoplastic, unidirectional, moisture absorpt. and desorpt. under steady temp.-humidity conditions, Fick's model 7−86391
oxides, microhardness indentation, diffusion of water influence 7−132779
palygorskite, cation-substituted, NH_3 and H_2S sorption, mechanism investig. 7−70073
Pd-Co(U), disordered alloys, absorption of H_2, pressure-composition isotherm 7−105038
peat, sorption coeff. determ. 7−100763
PET, CO_2 induced crystn., X-ray diffr. and IR spectra study 7−117840
phenylon C4, polyamide, water diffusion and sorption *(Russian)* 7−137625
PMMA, water sorption, crosslinks effects 7−70085
PMMA, water sorption, mol. wt. effects 7−70084
PMMA-high density polyethylene blends, sorption and diffusion of low-mol. cpds. *(Russian)* 7−98709
polycarbonate films, sorption and diffusion of CO_2 and methane 7−98459
polyethylene terephthalate, crystallisation, strain and secondary relax. transition *(Russian)* 7−137454
polyethylene-PAA copolymers, radiation grafted, small angle neutron scatt. obs. *(Russian)* 7−97996
polymer film, sorption, oscillatory, buoyancy correction method 7−118240
polymers, gas sorption and transport, antiplasticization effect, free vol. interpretation 7−84498
polymers, interactions with water and suitability for use as electrical insulators 7−118253
polyphenylene oxide, gas sorption and permeability rel. to antiplasticization 7−84497
polysiloxanes, cross-linked stationary phases, n-alkane sorption mechanism, thermodynamics investig. 7−113978
polystyrene, iodohexane impurity sorption and steady-state diffusion front motion, case-II diffusion regime 7−118165
polystyrene films, sorption and diffusion of CO_2 and methane 7−98459
polystyrene transient swelling, iodohexane sorption, case-II diffusion regime 7−118164
polysulfone, gas sorption rel. to antiplasticization, thermal and mech. props. 7−84496
polyurethane, segmented, organic solvent sorption and diffusion 7−76496
sorption continued
purple membrane, water absorpt. 7−93638
quasi-equilibrium approx. in dynamic sorption theory *(Russian)* 7−124717
random sequential adsorption, maximal coverage 7−67223
refrigeration systems, comparison 7−67327
resins, crosslinked, uptake of metal ions from aq. H_2SO_4 7−92523
rock-groundwater system, radionuclide migration, sorption−liquid/solid ratio effects study 7−119698
rubbers, vulcanised, absorpt. and desorpt. of water 7−84505
sedimentary rocks, Asse salt mine, sorption coeff. meas. 7−101298
selective molecular transfer using resonance laser radiation 7−112092
softwood, stable-state creep limit, mechano-sorptive creep 7−71337
soil, carbonate sorption capacity during groundwater flow 7−101356
spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
surface process probe, molecular beams 7−144758
Ti_3Cu, H absorption and solubility, thermodynamics 7−69911
ZFA filtering unit for nuclear power engineering 7−116715
Ag-CsOH, sorption isothermics for reactor accident interactions calcs. 7−129301
AlN, ultra-fine powder, hydrated surface, ^1H NMR study 7−99588
Al_2O_3 single crystal, microhardness indentation, diffusion of water influence 7−132779
Am, sorption and radiocolloid formation in aqueous soln. 7−93391
Ar, cryogenic layers, sorptive props, formation conditions depend. 7−143217
Bi, electrodeposited, electrosorption valency of I^- ions 7−91966
CO oxidation, on pt, molecular beam/infrared emission spectroscopy 7−144759
CO_2, absorpt. into laminar falling films of NaOH-containing aq. kaolin slurries 7−91962
CO_2, absorpt. into tertiary amine aq. soln. 7−86573
CO_2 absorption on zeolites, decontamination of power plant process blowoffs *(Russian)* 7−103010
Ca-Ni based alloys, cyclic response in H_2, effect of Al and mischmetal, Auger spectra *(Japanese)* 7−98687
$Ca_{1-x}X_xNi_{5-y}Al_y$ system, X=CeLaNdPrFeMg, H absorption, hydride form. enthalpy *(Japanese)* 7−78684
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
CsI-Cr_2O_3, sorption isothermics for reactor accident interactions calcs. 7−129301
CsOH-Cr_2O_3, sorption isothermics for reactor accident interactions calcs. 7−129301
D_2, absorption-desorption in metal hydrides, computer controlled microbalance rig 7−95577
Fe, vacuum chromising, mechanism and kinetics 7−119450
γ-Fe_2O_3 powders, particle perfection influence on mag. props. 7−85374
γ-Fe_2O_3 powders for mag. recording, surface props. 7−84482
FeTi activated powders, H absorption, Mossbauer spectra studies 7−118272
FeTi, activation for H absorption 7−105045
$FeTiH_x$ and $FeTi_{1.15}H_x$, hydriding behaviour, ease of activation, β-phase skipping 7−98469
H absorption study of R-tokamak getters 7−74063
H, sticking coefficient and flash desorption on transition metal surface *(Korean)* 7−91984
H_2 absorption, in activated FeTi, conversion electron Mossbauer spectroscopy 7−99621
H_2, absorption-desorption in metal hydrides, computer controlled microbalance rig 7−95577
H_2O sorption by polymers, quartz-crystal microbalance apparatus appl. 7−137708
H_2O, sorption by swelling hydrophilic sorbent, thermodynamic parameters calc. 7−131425
H_2S, absorpt. into tertiary amine aq. soln. 7−86573
Hf-Te, penta, tri- and ditellurides, oxidative degradation 7−132783
I_2, gaseous absorpt. by water droplets, LWR spray system appl. 7−129302
$LaCo_5$ films, elec. resist., effects of H absorpt. and determ. of H content 7−143641
$LaCu_5H_{3.4}$, H absorpt. and diffusion, NMR studies 7−85461
$LaNi_{5-x}Fe_xH_y(D_y)$,thermodynamic, structural and mag. props. 7−98468
Mg-TiO_2 admixtures, hydriding and dehydriding kinetics 7−71528
MgFe and MgFeAl disordered alloys, H_2 absorption and storage 7−106936
Mg_2Ni-H, hydrogenation characts., effect of thermal cycling 7−119511
N, cryogenic layers, sorptive props, formation conditions depend. 7−143217
$Nd_{15}Fe_{17}B$, magnetisation, effect of H_2 absorption 7−92459
Pd-H, absorption-desorption, pressure-composition isotherms 7−105041
Pd-$H_2(D_2)$, hysteresis effects in desorption and absorption, p(n) isotherms 7−105249
Pd-Si, glassy, crystallisation, H absorption, internal friction, elec. resist. 7−104588
Ru-Cu surface, physisorpt. of Xe, photoemission obs. 7−100010
$^{106}RuO_4$ vapour, sorption on natural tuff with mordenite admixture *(Czech)* 7−116709
SO_2, absorpt. and reactions in dimethylaniline soln., kinetics 7−91963
Sc_5Si_3-H $D8_8$-type system, H sorption props. 7−98689
Si-SiO_2 interface, D_2 gas interactions, ion-beam study 7−124688
Si_xN_y films, tensimetric investigation 7−86616
SiO_2 glass, microhardness indentation, diffusion of water influence 7−132779
SiO_2:F layer MCVD, F chemistry and incorporation mechanism 7−100092
Sn phosphates and hexacyanoferrates, spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
Ti phosphates and hexacyanoferrates, spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
Ti-Mg pseudoalloys, H capacity and sorption kinetics 7−78362
TiFe-misch metal, hydrogen storage material, surface props. 7−98647
V-Fe:H, effect of H absorption on electronic and structural props. 7−105394
Y-Ba-Cu-O systems high T_c supercond., lattice distortions and superconductivity effect of O content 7−143662
$Y_{100-x}Fe_x$ metallic glass ribbons, H absorption 7−84302
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., Gd substitution effect 7−132011
YMn_2H_x, mag., crystallographic and H absorpt. props. 7−98466
$Y_{5-a}Sc_aSi_3$-H, $D8_8$-type system, H sorption props. 7−98689

sorption continued
Zr hydrides, heat of H absorption, effects of H-H interactions 7−105254
Zr phosphates and hexacyanoferrates, spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
Zr-Ni particle bed, H isotope absorption and desorption characts. *(Japanese)* 7−84489
Zr-Te, penta, tri- and ditellurides, oxidative degradation 7−132783
$ZrMn_2H_x$, mag., crystallographic and H absorpt. props. 7−98466
ZrO_2, hydrated, polymerisation during dehydration 7−93390
ZrO_2, hydrated, sorption of B, reversibility 7−93372
Zr_3Rh-H, crystal-glass transition by H absorption 7−91805
SOS integrated circuits *see field effect integrated circuits*
sound *see acoustic waves; acoustics*
sound amplification *see acoustic wave amplification*
sound boards (computer peripherals) *see acoustic generators; electronic music*
sound broadcasting *see radio broadcasting*
sound field *see acoustic field*
sound generators *see acoustic generators*
sound intensity *see acoustic intensity*
sound measurement *see acoustic variables measurement*
sound propagation *see acoustic wave propagation*
sound ranging *see sonar*
sound reproduction
see also audio acoustics; audio recording; pick-ups
stereo reproduced sound fields, interaural cross-correlation coefficients *(Japanese)* 7−130469
sound waves *see acoustic waves*
source region electromagnetic pulse *see electromagnetic pulse*
space charge
see also limited space charge accumulation; space-charge-limited conduction; space-charge limited devices
bipolar spray charging for leaf-tip corona reduction by space-charge control 7−83563
bounded plasma, ion-beam instabilities, electrostatic wave excitation 7−123910
butadiene-acrylonitrile films, conduction, heat treatment and UV irradiation effects 7−105578
carrier recombination in solid dielectric, kinetic model 7−84915
charge relaxation model in dielectric with shorted electrodes *(Polish)* 7−143966
charged particle beam, space charge effects, statistical dynamics theory 7−74826
dielectric, secondary electron emission coeff., space charge form. effects 7−119079
dielectric films, space charge conduction and relax. calcs. 7−106085
dielectrics, breakdown and prebreakdown phenomena, phenomenological models 7−99670
electrolyte solutions, space charge density, transport eqns. and Debye-Huckel theory 7−143063
electron beams, energy broadening, effect of space charge interactions, Monte Carlo simulation *(Japanese)* 7−129957
ethylene-vinyl acetate copolymer, elec. conduction, space charge effects 7−131653
femtosecond streak tube, limiting factor of dynamic range obs. 7−95560
four-layer semiconductor structs., plasma phenomena, expt. study *(Czech)* 7−131698
free electron laser, rotating electron beam in mag. field, linear theory 7−122998
free electron laser start-up from noise and high-gain regime, Hamiltonian formulation 7−82591
ice, low-frequency space charge dispersion, proton charge carrier mobility 7−99676
inert gas atom, multiphoton ionisation, electron energy distrib. 7−68260
interfaces, STM and potentiometry studies 7−76649
ion beam end erosion, 1D dynamical theory 7−102562
ionic crystals, shock compression, space charge generation mechanism 7−104911
LDPE, space charge polarisation in divergent AC field, role of atmospheric gases 7−125608
liquid metal ion sources, current-voltage curves, space-charge-based model 7−67429
metal-dielectric-metal system, current-voltage depend., carrier generation and injection mech. effects 7−143632
metal-dielectric-metal system, current-voltage depend., carrier recombination and injection mech. effects 7−143633
mirror-confined hot-electron plasma, generation and control of high transient elec. potentials 7−75861
nonlinear screening, stability of solutions 7−70221
p^+-n junctions, barrier capacitance under injection conditions 7−118560
p-n junction space-charge region, minority carrier accumulation at base edge under short-circuit conditions 7−126631
p-n junction space-charge region under high forward voltage, analytical study 7−143571
p-n junctions under forward voltage, space charge region capacitance, model, time-domain reasoning 7−118564
PET films, ionic space charge thermocurrent meas. 7−92581
photorefractive materials, equivalent circuit for spatial variations 7−138397
phthalocyanine derivatives, mol. semicond. and junction formation 7−92276
PMMA, electron beam irrad., Kerr electro-optic field mapping meas. 7−99795
PMMA, radiation-induced charge effects in insulation 7−70705
polyether ether ketone films, dielec. and cond. props. 7−85532
polyethylene, AC elec., ageing phenomena, thermally stimulated discharge current meas. 7−85529
polymer films, electron irradiation induced conductivity, time and space depend., trapezoid model 7−84919
polymer insulators, carrier injection, space charge, and elec. breakdown 7−125607
polymer insulators, nonequilib. charge carrier transport, stochastic description 7−124981
polypropylene films, negative resistance characts. *(Korean)* 7−143475
polyvinylidene fluoride, ferroelec., poling, space charge effects 7−113066
poorly conducting fluid in elec. field, calc. of forces 7−69276
PVDF electret, thermal stimulated current characts. due to space charge *(Korean)* 7−143961
space charge continued
pyrene in non-polar hydrocarbon solvents, slow conductivity signals from pulsed laser irradiation 7−137978
relativistic electron beam diode, high current, electron trajectory calcs., space charge effects *(Chinese)* 7−96936
relativistic sheet electron beam propag. over sinusoidal grating, 2D radiation 7−110221
Schottky barrier, C-V characts., effect of Debye shielding 7−70379
semiconductor film with electron drift, space-charge wave beams, three-frequency interaction 7−70437
semiconductor-metal contacts, fluctuation excess currents, temp. depend., calc. 7−131782
superlattice, spatial bunching of electrons 7−112452
surface-layer ohmic contacts, specific resist. calc. computer model 7−85109
wave optical treatment 7−110228
X-ray free electron laser using stimulated transition radiation, space charge effect on gain *(Japanese)* 7−110368
XLPE, thermally stimulated surface pot. meas. using temp. gradient, trapped carrier polarity 7−125601
Al anodic films, composition, growth mechanism and space charge 7−113169
AlGaAs/GaAs, double-barrier resonant tunnelling structures, charge transport 7−112459
As_2S_x:Ag, photoenhanced dissolution and diffusion 7−84393
$BaTiO_3$:Fe, photorefractive props. and electrooptic coeffs., holographic efficiency 7−90552
$Bi_{12}GeO_{20}$ photorefractive sillenite cryst., deep electron trap effects 7−98859
$Bi_{12}Ge(Si)O_{20}$ sillenite crysts. photorefractive props., photoinduced space charge and elec. field distrib. evolution study 7−125043
BiI_3-electrolyte interface optically generated space charge layer, electroreflectance obs. 7−113135
CO_2 laser pumping, self-sustained volume discharge form. 7−123021
CdSe, I_S luminesc. line behaviour 7−70861
CdTe, EBIC contrast of defects 7−111566
GaAs (100), space charge, electron energy loss studies 7−118551
GaAs heterojunction laser diode, potentiometry and scanning tunnelling microscopy studies 7−99169
GaAs MIS barrier structures, gamma-ray irrad. induced modification of deep levels, DLTS study 7−112413
GaAs, semi-insulating surface props., CW electro-optic probing technique 7−99794
GaAs, space-charge layers, magnetic excitons 7−112956
GaAs, structures, near- and submicron length, role of boundary conditions, book contrib. 7−85098
GaAs:Be p-n junctions, ion implanted and rapid thermal annealed, surface recombination currents 7−112451
GaAs:Fe(Cr), π-ν-n structs., I-V characts., strong electric fields 7−105678
GaAs-$Al_xGa_{1-x}As$ struct., space change effects, importance in resonant tunnelling devices 7−77058
GaAs-AlAs solid solution MIS struct., space charge modulation, transistor characts. 7−77100
Ge:Cu, Sb, electron irrad. induced defect form., elec. props. 7−104836
HgI_2, illuminated, dielec. behaviour, temp. dependence 7−99636
$InAs_{1-x-y}Sb_xP_y$ epitaxial diode structs., electrophysical and photoelectric props. 7−99112
$LiNbO_3$, refraction anomaly above room temp., space charge effects 7−85580
N_2 gas, low-energy electron beam propag., plasma generation 7−137095
O glow discharge, pot. fall produced by moving space-charge dipole layer 7−104470
PZT ceramics, polarisation and space charge spatial distribs. determ. by laser intensity modulation method 7−99741
$Pb_{1-x}Sn_xZrO_3TiO_3$, spatial distrib. of polarisation and space charge, meas. by laser intensity modulation method 7−125600
$PbTiO_3$, ferroelectric domain walls, high resolution electron microscopy study 7−138393
$PbZrO_3$ single crysts., pyroelec. and dielec. props., transient phase study 7−99751
SF_6, props. of streamers and streamer channels 7−69300
a-Se:Cl films, transient photocond. probing of negative bulk space charge evolution 7−143521
Si, grain boundary states, trapped charge relax 7−76825
Si MOS capacitors, dopant conc. profile, acceptor hydrogenation, high-freq. C-V curves 7−125128
Si p^+n junction, one-side abrupt, space charge region, un-depletive anal. *(Chinese)* 7−77060
Si surface barrier structs., carrier heating 7−112501
a-Si:H p-i-n solar cells, effect of band tails on electric field, determ. 7−133109
a-Si:H-Si p-n junction, built-in pot., interface pot., and depletion widths 7−77087
a-Si-metal contact, space charge region, tunneling 7−125123
Si-SiO_2 MIS, gate currents and space charge under electron beam irrad. 7−70420
SiO_2, implantation effect on transport props. of mobile Na ions 7−125140
$SmAsO_4$, polycryst. samples, dielec. props., temp. and freq. depend. 7−106076
TiO_2 (110) Ti-rich surfaces, spectral, cond. and annealing studies 7−85041
$YAsO_4$, polycryst. samples, dielec. props., temp. and freq. depend. 7−106076

space-charge-limited conduction
see also limited space charge accumulation
1D insulators, isothermal and nonisothermal carrier transport 7−84870
ceramics, grain boundaries, models for electronic cond. 7−70322
Chlorazole Black E dye, deep and shallow traps 7−124997
cyclohexane, lightly purified, electrical conductivity study in tip-plane electrode geometry *(French)* 7−143071
diamond thin film MIS structures, SCL current 7−112523
insulating films, electronic cond., book contrib. 7−105743
insulators, SCL currents with shallow traps and conductivity distribution 7−76967
miniaturised electrostatic quadrupole channel, space charge limited current 7−81815
needle-plane geometry, SCL current 7−136121

space-charge-limited conduction continued
p-n junctions, space-charge-limited transient currents and carrier density 7—77063
polypropylene films, finely dispersed Au loaded, cond. props. 7—85135
semiconductors, space-charge limited currents, analytical I/V charcts. for nonlinear velocity-field relationship 7—137947
SiN_x:H, amorphous, density of gap states, effect of N incorporation, SCL current meas. 7—98935
TGS, ferroelectric, improved method for obtaining I-U charcts. 7—106093
$BaTiO_3$ semiconducting ceramics, elec. cond. mechanism, extended model 7—137950
n-CdSe films, traps and minority-carrier diffusion length 7—131818
GaAs, pulsed space-charge-limited currents 7—70320
GaAs, SCL currents, I-V characteristics 7—112349
GaAs, semi-insulating, SCL current flow, DC I-V charcts. 7—84913
GaP amorphous films, electron-excited, internal current amplification mechanism 7—137946
GaP:Fe p-i-n^+ structs., photoelec. props. 7—77062
$Gd_xY_{3-x}Fe_5O_{12}$, polycrystalline ferrimagnet, voltage depend. of DC resistance 7—112348
Sb_2S_3 films, space-charge limited cond., dark cond. temp. depend., trap density 7—131817
Sb_2S_3, vac. deposited films, space charge limited cond. 7—99074
a-Si:H, density of states determ. 7—70157
a-Si:H, Meyer-Neldel rule examined by temperature-modulated space-charge-limited current 7—84906
a-Si:H, space charge limited currents under light illumination 7—84979
a-Si:H solar cells, degradation, SCL current diode model 7—126599
a-Si:H solar cells, I-V characteristics 7—144837
a-Si:H sputtered films, metastable defect generation by light soaking and electron irrad. 7—142837
a-Si:H-Au, electronic density of states near mid-gap of a-Si:H 7—143310
SiN_x:H amorphous thin films, small polaron transport, I-V meas. 7—84894
TiO_2, time-of-flight effects in presence of space-charge-limited currents 7—92192
TiO_x films, thermally oxidised, threshold conduction switching 7—131808
YIG:Ca, Ge epitaxial films, elec. props., excitation effects 7—125154

space-charge limited devices
see also limited space charge accumulation
p-n junction space-charge region under high forward voltage, analytical study 7—143571
a-SiC:H films, charge storage in deep traps, appl. for charge storage devices 7—84922

space-charge limited solid state diodes *see space-charge limited devices*

space-charge limited solid state triodes *see space-charge limited devices*

space communication links
see also satellite links; space vehicles; telemetering
CSP diode lasers, NASA developments 7—130178
Giotto radio science expt., downlink use for cometary charcts. determ. 7—139943
Giotto telemetry and tracking system 7—79804
laser beams, dichroic combination 7—130180
laser diode structures, single quantum well and double heterostructure 7—130179
optical communications, development program 7—134133
solar system limits, deep space communication missions and problems *(Italian)* 7—134107

space groups
see also crystal atomic structure; crystal symmetry
absolute struct. determ., absorpt. corrections 7—76058
antisymmetry G_3 space groups, cataloguing 7—91508
ζ-(BEDT-TTF)$_2$I$_{10}$ cryst. struct. determ. 7—124235
α-(BEDT-TTF)$_2$IBr$_2$ cryst. struct. determ 7—124234
p-bromophenacyl ester of 15-fluoro-15-desoxy-11-epi-prostaglandin $F_{2\alpha}$, cryst. and mol. struct. determ. 7—124236
cholesteric liquid crystal, cubic blue phases, electric field effects, Landau model 7—124094
coloured symmetry, one-dimens. case, space groups and procedures classification 7—91513
commensurately modulated crystals, superspace-group description 7—76053
crown ether based on 1,4-naphthoquinone, cryst. struct., X-ray anal. 7—124237
crystallographic space group $R\bar{3}c$, microstruct. and phase transitions, symm. anal. 7—83829
dispersive structures, centrosymmetrical two-phase invariants, estimation using one-wavelength technique 7—76057
figures of merit in direct methods, probabilistic approach 7—75931
icosahedral quasicrystals, classification *(French)* 7—91512
incommensurate phase transitions, superspace groups 7—91755
incommensurate phases, structure and symmetry 7—76054
inorganic compounds, cation sublattice description 7—111441
invariants, joint probability distribution 7—91510
low symmetry space groups, |E| distribs., exact random walk models in crystallographic statistics 7—76061
manganese oxalate dihydrate linear chain system, cryst. and magnetic struct., neutron diffr. study 7—99407
P1, quartet phase sums, estimation from joint probability distrib. of normalised struct. factors 7—76060
physically irreducible representations of the 230 space groups 7—76059
point group and rot. group O(3) representation 7—91514
polyacetylene films, structural props. determ. from X-ray fibre patterns 7—69625
Q-reducible two-dimensional space groups and layer groups 7—104610
quasi-anomalous method for triclinic, monoclinic and orthorhombic crystals 7—131071
structure amplitudes and their moduli, extinction conditions, additions to International Tables of Crystallography 7—104612
symmetry, computer derivation using MISSYM computer program 7—98024
symmetry changes, group theory analysis for R_2Mx_4 cpds. (R=organic cation; M=Cu,Cd,Hg,Zn; X=Cl,Br) 7—137297
transformation matrices and equivalence of $P2_1/c$ and $P2_1/n$ 7—91515
trimethylamine cadmium trichloride cryst. struct. in high temp (3×3) phase 7—142746
triplet invariants, probabilistic theory 7—76056
(TSeT)$_2$I crystals, chirality and microtwinning 7—91551

space groups continued
Ag_3O_4 cryst. struct. and prep. by anodic oxidation of aq. solns., thermal anals. *(German)* 7—83906
$Ag_{0.35}TiS_2$, superspace-group description 7—76053
$BaCd_2Cl_6.5H_2O$ cubic pyrochlore cryst. struct., single-cryst. X-ray diffr. study 7—83913
$Ba_2HoCu_3O_{7-x}$ high T_c supercond., cryst. struct., neutron diffr. anal. 7—124202
$BaO-TiO_2-Nb_2O_5$ phase diagram, cryst. chem. and struct. studies 7—83904
Bi_2MoO_6 struct., high-resolution TEM study 7—83911
$CaB_2U_2O_{10}$, synthesis and monoclinic cryst. struct. *(French)* 7—124184
$Ca_2Pb(VO_4)_2$, crystallographic study under high pressure *(French)* 7—91532
$Ca_2Pt_3O_8$ hydrothermal synthesis and structural charactn., X-ray and neutron diffr. 7—83909
$Ca(ReO_4)_2.2H_2O$ cryst. struct. determ. *(French)* 7—142730
$CaUMo_4O_{16}$ cryst. struct., X-ray diffr. study 7—83916
$Ca_3(VO_4)_2$-$Pb_3(VO_4)_2$ solid solns., nonlinear props., optical structural, dielec. and thermal meas. *(French)* 7—124527
$CdTeO_3$, space group determ. by Kossel patterns 7—111477
$CeRh_3B_2$ cryst. struct., single cryst. X-ray diffr. study 7—142729
$Co_{1.5}Pt_{0.5}Ta_6PtSe_{16}$ quaternary layered cpd., structural charactn. 7—142724
$Cr_3B_7O_{13}I$, cubic cryst. structure 7—124182
$CsH(D)SeO_4$, superionic phase transition, neutron diffr. investigation 7—124487
$Cs_{0.33}MoO_3$ red bronze cryst. struct. determ., single cryst. X-ray diffr. study 7—142727
$Cs_2Mo_4P_6O_{26}$ crysts., layer and tunnel structs. studies 7—142726
Cu complex, pentadiene-2,4-ic acid copper (I) chloride, cryst. struct. determ. 7—124208
Cu_2Se superionic conductor, low temp. phase superstructural ordering, single cryst. X-ray and electron diffr. studies 7—83928
$DyFe_2SiC$, quaternary iron-rich phase stabilised by C, struct. 7—142701
$ErBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct., X-ray powder diffr. study 7—104674
$EuBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct. determ. 7—124204
$EuNi_2P_3$ synthesis and cryst. struct. study 7—83915
α-$FeC_2O_4.2D_2O$ quasi-1D antiferromag., magnetic struct. and transitions neutron diffr. study 7—125316
FeGe, hexagonal, symmetry analysis of antiferromagnetic phase transitions 7—85289
$GdBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct. determ. 7—124204
Ge crystals, localized cryst. orbitals and double-valued band representation 7—142680
$HoBa_2Cu_3O_x$ high T_c supercond. cryst. struct. determ., X-ray powder diffr. study 7—117891
$In_2Sn_3S_7$ cryst. struct. determ., Mossbauer spectra and X-ray diffr. studies *(French)* 7—124217
KCN, permutation-inversion symmetry groups, optical props. 7—124212
$K_3Cu_2(P_2O_7)H(P_2O_7)$, triclinic cryst. struct. 7—124179
$K_3NdSi_2O_7$, hexagonal cryst. struct., mini laser material 7—124181
$K_4P_4O_{12}.Te(OH)_6.2H_2O$, monoclinic cryst. struct. 7—124183
KSnAs(Sb) cryst. struct., puckered hexagonal nets, X-ray powder diffr. study 7—83912
K_4UO_5 single crysts., struct. determ. coordination number calcs. *(German)* 7—124223
$La_{2-x}Ba_xCuO_4$ high T_c superconductor, orthorhombic phase electronic struct. study 7—118364
La_2CuO_4, orthorhombic, pure and doped, electronic struct., rel to superconductivity 7—137777
$La_2CuO_{4-\delta}$ space group determ. using conventional and convergent electron beam diffr. 7—142674
$LiBF_4.H_2O$ cryst. struct. determ. 7—124206
$M_4Mo_8P_{12}O_{52}$, M=Cs,K,Rb,Tl, crysts., layer and tunnel structs. studies 7—142726
$Mg_8SiW_9O_{37}.24.5H_2O$ trigonal struct., topotactic relations and thermal dehydration 7—142723
$(NH_4)_3H(SO_4)_2$ second-order phase transition and space group, X-ray diffr. obs. 7—111864
$NaLa(SeO_4)_2.2H_2O$ cryst. struct. determ. 7—124207
$NaNO_2$, permutation-inversion symmetry groups, optical props. 7—124212
Na_4UO_5 single crysts., struct. determ. coordination number calcs. *(German)* 7—124223
$NbPO_5$, allotropic, preparation lattice parameters *(French)* 7—91533
$NiAg_4(P_2O_9)_2.6H_2O$, structural study *(French)* 7—124219
α-$NiSO_4.6H_2O$, structure, absolute configuration, optical activity 7—124175
$RbNO_3$ cryst. struct., space group and symm., single-cryst. neutron diffr. study 7—83866
$Rb_{0.60}Na_{6.25}Ga_{20.02}$ synthesis and X-ray diffr. cryst. struct. determ. 7—83854
$SmBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct. determ. 7—124204
$Sr_3Al_2O_5Cl_2$ prep. and struct. determ., single cryst. X-ray diffr. study *(German)* 7—124218
$TaPO_5$, allotropic, preparation lattice parameters *(French)* 7—91533
$TaTe_4$, commensurately modulated structure determination 7—124174
Tb_2CoGe_2, cryst. struct. 7—131103
$Th(NO_3)_4.4H_2O$, monoclinic cryst. struct. *(French)* 7—124180
Tm complex, cis,syn,cis-dicyclohexyl-18- crown-6 thulium (III) nitrate, cryst. struct. determ. 7—124209
$U_4Cu_4P_7$, synthesis and crystal struct. 7—142699
WBr_6 rhombohedral cryst. struct. *(German)* 7—124185
Y-Ba-Cu-O high T_c supercond., low temp. struct., neutron diffr. study 7—104675
Y-Ba-Cu-O high T_c supercond., cryst. struct., neutron diffr. anal. 7—104676
Y-Ba-Cu-O high T_c supercond., new phase obs., struct. and symm., electron diffr. and microscopy 7—117872
Y-Ba-Cu-O high T_c supercond., high resolution neutron diffr. struct. anal. 7—117874
Y-Ba-Cu-O high T_c supercond., orthorhombic cryst. struct. 7—117896
Y-Ba-Cu-O high T_c supercond., space groups, convergent beam electron diffr. studies 7—117900
Y-Ba-Cu-O high T_c supercond., cryst. struct. determ. 7—124199
Y-Ba-Cu-O high T_c supercond., localised electrons and cryst. struct. determ. 7—124203

space groups continued
Yb-Ba-Cu-O high T_c supercond. cryst. struct., X-ray diffr. Rietveld anal. 7−104677
$Zn_3(PO_4)_2.H_2O$, cryst. struct. determ., X-ray diffr. study *(French)* 7−124222

space heating
active solar heated house in UK 7−78616
advanced heat pump design goals for residential and small commercial buildings 7−133116
bivalent solar collector plant for space and water heating *(German)* 7−114121
building auxiliary energy loads, discrete Fourier series models, network formulation techniques 7−139085
building outer enclosure, thermal conditions regulation 7−100739
crushed rock electric-thermal storage heating system 7−144919
direct-gain and nonvented Trombe walls, solar energy harnessing performances in Yemen 7−106885
domestic central-heating boiler effectiveness improvement using heat storage 7−119692
ejector-compression heat pump for space cooling and heating 7−133113
exhaust-air heat pump appls. in USA 7−126639
gas-fired heat pump concept 7−71633
greenhouse subsurface-irrigation systems, heat and moisture transfer 7−114082
greenhouses, heat and mass transfer, math. model 7−100750
Highlands Close group solar heating scheme 7−119685
honeycomb roof cover system for passive solar space heating 7−71574
hydronic heat pumps for residential and light commercial use 7−106924
interzonal heat and mass transfer through doorway by convection 7−100699
natural illumination calc. under clear sky, opposite building consideration 7−86759
passive buildings, solar energy appls. conf., Brussels, Belgium (Nov. 1986) 7−128201
passive solar buildings, dynamic perform. anal. using modelling and simulation 7−126558
passive solar space heating comparisons for seven houses in Birmingham, UK 7−78615
passive solar-heating system for building, temp. regime, air exchange effect 7−78612
phase change material energy storage in solar space heating 7−78682
residential building thermal energy storage effectiveness rel. to convection coeffs. at massive exterior walls 7−139136
solar heating system for buildings, efficiency eval. 7−78664
solar heating system in experimental residence, Mertsavan, Russia 7−78611
solar heating system in expt. residence, heat balance anal. 7−114083
solar heating using variable air volume system in offices 7−106887
subsurface-irrigation systems in greenhouse, moisture and heat transfer, physical-mathematical model 7−100749
super-solution field absorption process for storing and pumping heat 7−133112
thermal energy storage, economic anal. for centralised residential heating system 7−119694
thermal energy store for a heat-pumped, domestic, central-heating system, computer model 7−100742
thermal trap material for non-air conditioned building space heating 7−119623

space research
see also artificial satellites; astronomy and astrophysics; space vehicles
37th IAF Congress, Conf., Innsbruck, Austria (October 1986) 7−120680
aerosol collection in Titan's atmosphere, instruments design 7−101684
aerospace technology '86, missions to Uranus and Periodic Comet Halley (1982i) 7−72245
asteroid missions, energetically optimum flights with manoeuvres near planets 7−120247
ASTROMAG, superconducting particle astrophysics magnet Facility for NASA Space Station 7−134141
charge-neutral beams injection into space plasmas, ambient plasma environment response 7−134123
P/Comet Giacobini-Zinner (1985 XIII), gasdynamic interpretation of ICE measurements 7−94691
P/Comet Halley (1982i), auroral model for electron fluxes and plasma waves during Vega 2 encounter 7−134183
P/Comet Halley (1982i), Giotto evidence for chain molecules enriched in C, H and O 7−139982
P/Comet Halley (1982i), Giotto identification of first astronomical polymer (polyoxymethylene) 7−139983
P/Comet Halley (1982i), Giotto meas. of cometary and solar wind plasma at cometary bow shock 7−107756
P/Comet Halley (1982i), Japanese space probes *(Japanese)* 7−107690
P/Comet Halley (1982i), Vega probes, Hungarian contribs. *(Hungarian)* 7−115198
P/Comet Halley (1982i) assessment of results from 1986 observing campaign *(French)* 7−139968
P/Comet Halley (1982i) environment, results from plasma wave analyser (APV-V) on board Vega spacecraft *(French)* 7−120324
cosmic physics, space research effects 7−72281
cryogenic Michelson interferometer spectrometer for Space Shuttle application 7−87958
Earth imaging spectrometry, aircraft and space programme 7−101567
electron beam injection into space plasmas, ambient plasma environment response 7−134122
ESA, activities from May 1986 to April 1987 7−134112
fluid-physics research in microgravity, optical diagnostic instruments development 7−128620
gamma-ray spectrometry of solar system minor bodies, appl. to surface comp. determ. 7−120283
GAS small self-contained payload, development *(Japanese)* 7−77779
hexagonal detector arrays for point-source location 7−79842
IR imaging spectrometer for investig. of Mars 7−88117
Jupiter decametric radio emission, high freq. limit and visibility of non-Io and Io-depend. emission 7−94685
Magellan altimetry experiment 7−107693
Mars, Viking Orbiter obs. of layered deposits in Valles Marineris 7−134163
materials science under microgravity conditions, conf., Bordeaux, France (Dec. 1986) 7−108043
Moon, relation between geology and geochemistry in Undarum-Spumans-Balmer region 7−134156

space research continued
muon catalysed fusion, space appls. 7−135387
optical communications, development program 7−134133
pinhole/occulter facility on mast on Space Shuttle, optical detection of modal oscillation *(Portuguese)* 7−134136
planetary magnetospheres, Voyager explorations of outer planets 7−88173
planetary science, 1983-6 review 7−115267
quotation patterns in space research, spacecraft citations anal. 7−79801
red cells and platelets clumping decrease under zero gravity, cancer and heart diseases implications 7−139389
Sakigake and Suisei, Japanese deep space probes, tracking and orbit determ. *(Japanese)* 7−127685
Saturn rings, features characts. from Voyager photopolarimeter stellar occultation 7−115291
Second Columbus Workshop, Hannover, Germany (June 1986) 7−128185
Shuttle infrared imaging experiment, apparatus and obs. 7−87953
solar electron fluxes in interplanetary space, relation to energy parameters of microwave bursts 7−120353
solar kilometre-wave type III bursts, visibility function from Voyager and Earth-based obs. 7−94836
Solar Maximum Mission repair−lessons learned 7−115204
Space Infrared Telescope Facility cryogenic systems, comparison 7−67322
Titan atmosphere, gas chromatographic instrumentation for anal. of aerosols and gases 7−101685
toroidal electrostatic analyser for space research, expt. tests 7−88077
Uranus, kilometric radiation beaming obs. and implications for planetary mag. field 7−120308
Uranus satellites, Voyager 2 obs. rel. to cratering records and origin of impacting objects 7−134179
Venus, atmospheric, water vapour profile from Vega-1 and Vega-2 meas. 7−88159
Venus, geological and morphological description of Sedna Planitia and Guinevere Planitia 7−88157
Venus, geology of S Ishtar Terra and Guinevere and Sedna Planitiae from Arecibo radar images 7−134159
Venus, radio occultation obs. rel. to conditions for night-time ionosphere form. 7−120294
Venus, relief and geology of north polar region from radar survey 7−88158
WISP/HF expt. on space shuttle 7−72216

space science *see space research*

space-time configurations
see also differential geometry; general relativity
2+1 dimensional space-times, Newman-Penrose formalism, Ricci curvature 7−89065
5D Kaluza-Klein metric in variable rest mass gravit. theory, de Sitter-type cosmological solns. 7−115633
absolutely closed universes, existence 7−120889
affine gauge theories on GA(4,R) space-time 7−73550
anisotropic universes, inflation, Higgs fields, local isotropy 7−146116
apparent size of distant objects in arbitrary pseudo-Riemannian space-time 7−102233
asymptotic simplicity in post-Minkowskian space-times 7−73075
asymptotically anti-de Sitter universes in arbitrary space-time dimens. 7−73116
asymptotically Minkowskian space-times, positive energy theorems 7−80579
axisymmetric stationary vacuum space-times, fourth-order eqn. 7−67108
back reaction calcs. for quantum fields in curved spacetime with arbitrary coupling 7−89096
Bianchi I space-time and zero-curvature Friedmann-Robertson-Walker model, solns. 7−115868
Bianchi type III minisuperspace model, singularities in quantum cosmology 7−102276
Bianchi type IX and VIII spacetimes, propagation amplitude in homogeneous quantum cosmology 7−107993
Bianchi type IX universe with embedded Kerr particle, Einstein eqn. solns. 7−140561
Bianchi type-I perfect fluid solns., new results 7−95056
Bianchi type-I universe filled with disordered radiation in self-creation cosmology 7−128142
big bang, processes and theories 7−101961
bimetric general relativity theory, appl. to mass accretion onto collapsed star 7−72474
binary pulsar, strong-field point-particle limit and equations of motion 7−127937
black hole evaporation, quantum field effects in flat spacetime 7−127943
black holes, intrinsic character using spin coeff. techniques 7−107889
black holes, props. of stable circular geodesics with min. energy in extreme Kerr metric *(Russian)* 7−72502
bosonic closed string theory, BRST operator on Riemann surface 7−67602
bosonic string mechanics in harmonic world-sheet coords., gauge-fixed formalism 7−89462
bosonic string on SO(N) group manifolds, crit. dimensions, path integral anal. 7−95796
bosonic strings classical, appl. of Jordan algebras and Freudenthal triple systems in (D+2)-dimensional space-time 7−67536
Brans-Dicke field equations, solns. for plane and cylindrically-symmetric space-times 7−72271
canonical superspace 7−67514
Cauchy-Riemann structures in optical geometry 7−67142
causal sets, space-time and quantum dynamics 7−134626
Cawley's counterexample Lagrangian to Dirac's conjecture on curved space-time 7−115854
charged scalar boson, relativistic quantum mech. w.r.t. observer's past light cone 7−115830
chronometric cosmology, implications of high-redshift quasar cutoff 7−128115
closed bosonic string in curved space-time, Virasoro algebra and vertex operators 7−89480
closed bosonic strings, off-shell propagators, scattering amplitudes, Riemann surfaces 7−116151
closed fermionic string models, construction in 5 dimens. 7−89472
closed Robertson-Walker metric, physical interpretation, rot. viscous fluid 7−115855
closed strings, bosonic, type II and heterotic, vertex operators 7−108883
compactified O(16)×O(16)′ heterotic string theory, supersymmetry restoration 7−73557
complex-real vector space formulation of unified field theory 7−73115

space-time configurations continued
composite fields in curved space-time, asymptotic behaviour of effective pot. 7−108740
conformal gravity in d=2, appl. to string theory 7−89088
conformally invariant scalar field at finite temp. in anti-de Sitter space 7−95737
cosmic censorship and topology change in general relativity 7−72290
cosmic string, straight, gravitational effects, appl. to quasar and galaxy images 7−102044
cosmic string and charged black hole in equilibrium 7−67128
cosmic string interactions 7−72667
cosmic string loops as power source for quasars 7−88671
cosmic strings, lens effects rel. to astronomical constraints on string-dominated universe 7−120664
cosmic strings, semiclassical gravitational effects 7−89093
cosmic strings, superconducting, with massive fermions 7−101975
cosmological particle creation and spontaneous entropy generation, statistical subdynamics anal. 7−89095
cosmology, appl. of Einstein-Straus vacuole model to average cosmological density determ. 7−120654
cosmology, chaotic, critical dimension anal. 7−72668
cosmology, higher dimensional models 7−115665
cosmology, isotropic homogeneous, singularity problem, gauge gravitational theory framework 7−94640
cosmology, negative vacuum density model with infinite strings 7−140332
cosmology 7−72672
curved space-times, conformally invariant differential operators 7−72964
curved space-times, Noether's theorem in classical field theories and gravitation 7−134594
cyclic and null Killing symmetries, commutation props. of Killing vectors 7−95418
D-decay cosmology, universe dimensionality problem 7−101982
de Sitter metric type in presence of self-gravitating scalar field with cubic nonlinearity, soln. 7−128141
de Sitter space, massless minimally coupled scalar field, Fock vacuum states 7−102278
de Sitter spacetime, d-dimensional, instability to black hole formation 7−127942
de Sitter universe, no hair theorems, black hole comparisons 7−120677
deformed internal space, self-consistent soln., massless scalar fields minimally coupled to gravity 7−120908
DeWitt monopole particle detectors for thermal states in static space-times 7−89376
dimensional reduction and the Higgs potential 7−140805
Dirac and Weyl fermion determinants 7−102266
Dirac determinant bundles in 2D, geometry, gauge and diffeomorphism anomalies 7−134911
Dirac spinors in quantum space with torsion, quantized fiber-bundled spaces, spin connection, neutrino oscills. 7−134923
double Kerr solution and related metrics, Weyl coordinate description 7−73083
double-Kerr-Schild equivalence and hyperheavens 7−89053
duality in statistical Mechanics and string theory 7−80563
dust spacetimes, gravitational wave propagation 7−67118
dynamical symmetry breaking in a de Sitter-invariant vacuum 7−116095
early Universe, cosmological topological defects, phase transitions and causality 7−108001
early Universe, topological defects, winding numbers 7−88702
effective action asymptotical behaviour in higher derivative gravity 7−116045
Einstein field equations, Cartan ideal, prolongation and Painleve property 7−73080
Einstein field equations, self-similar space-time 7−108327
Einstein metrics, inhomogeneous, on complex line bundles 7−67094
Einstein-Finsler space, generalized 7−72908
Einstein-Maxwell eqns. for nonnull electromagnetic fields, conformal Ricci collineations 7−115857
Einstein-Maxwell spacetimes, type-D, potentials for perturbations 7−67127
Einstein-Maxwell theory, spacetime as a membrane in higher dimensions 7−89080
Einstein-scalar gravitational equations, exact axially symm. stationary solns. 7−73076
electrons, photon emission in radiation dominated universe 7−95442
embedding problem for three-parametric family of homogeneous three-spaces 7−140335
EPR paradox, zigzagging causality model criticism 7−128317
equations of motion, geometrical integrability and conservation laws 7−121319
equatorial geodesics in magnetic universes 7−73079
equivalence principle, physical background 7−94647
Ernst potential and multipole moments of asymptotically flat vacuum soln. 7−73078
Euclidean invariant scattering amplitudes, Fock space scattering operators, Euclidean group E(2) 7−140826
evaporating black hole space-times and the back reaction 7−73130
exact inhomogeneous Einstein−Liouville solutions in Robertson-Walker space-times 7−102232
expanding universe, geometrical foundation for unified field theory 7−115667
false-vacuum bubbles and localized inflation in Minkowski space 7−89094
fermionic condensate, influence of space-time topology in four-fermion interaction model 7−89435
five-dimensional classical unified field theories, Abelian principle bundles, energy positivity 7−115870
four-dimensional superstring models, cosmological constant vanishing, free string spectrum 7−134610
free scalar field in curved spacetime, Green's functions 7−102227
Freidmann space-time metric, appl. to vacuum model for self-creation cosmology 7−128139
Friedmann's models and Einstein's equations *(Polish)* 7−128157
Friedmann cosmological models, conformal extension of pseudo-Newtonian forces and potentials 7−80141
Friedmann cosmologies, changes in Bianchi symmetry 7−101968
Friedmann-Robertson-Walker cosmological models, uniqueness 7−102257
gauge approach to gravity, nonmetricity and torsion 7−67152
gauge theory, Chern-Simons form, topological origin of ang. momentum 7−134932
gauge-invariant, string field theory for torus compactified closed string 7−89482
general Lorentz transformations in six-dimensional spacetime 7−120802
space-time configurations continued
general relativistic singularity free description of matter 7−73084
general relativistic vortices in stationary axisymmetric spacetimes 7−89068
general relativity, higher-derivative, homogeneous space-times 7−115640
general relativity, Killing-Yano tensors, idealised space-times 7−115853
general space-time structure, spinor stratification, connectedness existence conditions 7−140563
geodesic equation for charged particle, comparison with Lorentz eqn. of motion 7−89052
geometric space-time perturbation, gauge invariance, Kaluza-Klein association 7−67102
geometric space-time perturbation, multiparameter perturbations 7−67101
ghost neutrino field, Weyl-eqn., flat space-time integration, flux vector and Robinson eqn. 7−108323
global gravitational anomalies and smooth 11-manifolds 7−102272
Godel-type rotating spacetimes and Riemannian manifolds 7−67111
Goldstone-type gravitation with Poincare translation gauge fields, space-time symm. breaking 7−140585
gravitating U(1) cosmic strings, discontinuity cylinder model 7−120667
gravitation, relativistic theory, principles, new space-time predictions 7−134616
gravitational energy, positivity 7−73089
gravitational gauge field theory with de Sitter group localization 7−120897
gravitational metrics, influence on luminosities of stellar accretion disks 7−115371
gravitational plane waves colliding, vacuum Einstein eqns., exact soln. for space-time 7−80532
gravitational plane waves collision, vacuum Einstein eqns., soliton solns. for space-time 7−80533
gravitational radiation, near spatial and null infinity 7−67121
gravitational singularities, topological transitions in Wheeler-De Witt superspace 7−140579
gyroscope precession, principle of equivalence collapse, stationary and accelerated observers, spacetime curvature 7−128377
Hadamard Regularization in curved spacetime 7−89097
Hawking effect, quantum covariant Klein-Gordon eqn. on Schwarzschild spacetime 7−73132
Hawking effect in de-Sitter space-time, particle production probability calcs. 7−88496
Hawking-Unruh effect in Rindler manifold of arbitrary dimension 7−89098
heat kernel expansion in geometric fields, Riemann-Cartan spacetime 7−134943
heterotic string, Calabri-Yau compactification and D=4 N=1 supersymmetry 7−95797
heterotic string, modular subgroups, odd spin struct. and gauge invariance 7−135069
heterotic string in arbitrary SUSY compactifications, Fayet-Iliopoulos D-terms calcs. 7−140845
heterotic string theory, global anomalies 7−102709
heterotic string theory, low-energy effective Lagrangian 7−67608
heterotic strings, compactification from 26 to 4 dimensions via T^{22}/G 7−116100
heterotic superstring model, geometrical struct. in even dimens. 7−73142
higher dimensional field theories, internal-external space splitting problem 7−67130
higher dimensional spacetime with torsion, EM waves as geometrical ripples 7−102245
higher dimensional unification, dimensional reduction by isometry 7−80542
higher-dimensional Bianchi type I cosmologies 7−146126
homogeneous anisotropic cosmological models in 11D, dynamics 7−115666
homogeneous isotropic spacetimes with conformally invariant quantum fields, quantum effects 7−115658
Huygens' principle, validity on type-N space-times 7−73077
hypersurfaces in Euclidean space, projective curvature tensor 7−66968
ideal-preserving Lorentzian connections, exterior bundle fibers over Lorentzian manifold, Clifford algebra 7−140803
inflationary universe, monopole problem and primordial black hole problem 7−88700
inflationary Universe, vacuum energy density bounds 7−72671
inhomogeneous cosmological models with EM field in general relativity, physical and geometrical props. 7−120650
inhomogeneous cosmology, influence of primordial gravitational waves on background geometry 7−128146
initial value gravitational quadrupole radiation theorem 7−67120
irreversibility and space-time structure 7−134456
k-dimensional Euclidean space, regularisation of eqns. of N-body problem 7−107698
Kaluza-Klein cosmology, Friedmann models with phenomenological matter 7−89071
Kaluza-Klein cosmology with double compactification, spontaneous symm. breaking by Higgs fields 7−108362
Kaluza-Klein cosmology with Lovelock lagrangian, field eqns. and curvature tensor 7−108363
Kaluza-Klein theory, equivalence of spin and ang. momentum 7−73120
Kaluza-Klein theory, nonAbelian Wong eqns. in curved space-time 7−73122
Keplerian metric of space-time 7−120258
Kerr metric geodetics *(Russian)* 7−88495
Kerr-Newman metric in cosmological background of closed Robertson-Walker universe, Einstein-Maxwell eqns. 7−80139
Kerr-Newman solns. of Einstein-Maxwell eqns. in deSitter space-time 7−128393
Kerr-NUT metric with all mass multipole moments, Einstein vacuum eqns. soln. 7−67110
Killing approximation for vacuum and thermal stress-energy tensor in static space-times 7−115885
kink and skyrmion fields, homotopy conservation laws and extension theorems 7−80988
lagrangian procedures for higher order field equations 7−134951
large scale symmetric space-time geometry from field propag. on fractal structs. 7−108319
Lie groups space, 7−146124
local linearization stability, Einstein eqns., in finite space-time region 7−140566
local Poincare symm. in general relativity, quantum effects 7−73072
LRS Bianchi type-I perfect fluids space-times 7−128143

space-time configurations continued
Lyra manifold, vacuum solns. compared with Freidmann vacuum models 7−128144
Lyttleton-Bondi Universe, plane symmetric cosmological solns. 7−140329
massive particle fields with integer fields, energy momentum tensor 7−120911
massless Kaluza-Klein gauge fields and scalar-induced space-time compactification 7−134599
massless scalar field, Casimir effect and vacuum stability in rotating spacetimes 7−108778
matter field quantum fluctuations back reaction on space-time config., Brans-Dicke theory, quantum gravity anal. 7−102270
Maxwell-Lorentz electrodynamics for multidimensional world *(Russian)* 7−67045
metric spinor and frame field concomitants equivalence, lorentz invariance 7−140565
Minkowski spacetime, unstable, primitive black hole generation 7−88494
Minkowskian space-time, Newman-Penrose constants for zero-rest-mass fields 7−134454
multiple cosmic strings, Newtonian image 7−134325
N=1 supergravity in 4D, higher derivatives 7−95449
neutron star, nonrotating, maximum mass in metric theories of gravitation 7−101837
nonlinear σ model, field-diffeomorphism anomalies, spectral series technique, Riemannian constraints 7−140802
nonlinear σ models on arbitrary Riemann surfaces, Virasoro algebra 7−140810
nonlinear σ-model, hyperkahler metrics from (4,0) superspace 7−95744
null hypersurfaces, junction conditions 7−67145
NUT-Kerr-Newman spacetime, thermal particle creation 7−72500
open bosonic string theory, off-shell vertex and twisted ghost fields 7−140909
open spin space-time manifolds, gauge theories, Yang-Mills eqns. 7−134922
open superstring, one-loop path integral description 7−73627
opposite spacetime relations, Lorentz transform., relativity abandonment, time accelerating energy effect, scales, frames *(German)* 7−128276
p-adic string, cohomology and vertex operator 7−128395
parametrized Maxwell field, canonical representation of spacetime diffeomorphisms 7−67123
perfect fluid space-times with local rot. symm., Dirac eqn. separability, exact solns. 7−115858
Petrov type D vacuum metrics, embedding class 2 7−66977
phase transitions in the early Universe, geometric effects 7−72677
photons, curved space-time behaviour, astronomical implications 7−115635
plane gravitational wave collisions, exact soln. of vacuum Einstein eqns. 7−73103
plane-symmetric universes in general relativity, gravit. fields solns. 7−95055
preferred null direction spacetimes, 2D isometries group, null dust case 7−102224
primordial black hole, wave function in $S^1 \times S^2$ topology 7−73109
Proca test field in a spacetime with torsion 7−67124
progressing waves in flat spacetime and in plane-wave spacetimes 7−102231
projective inertial structure and (n-1) force, determ. by monopole eqn. of motion, fifth force existence 7−108338
propagators for massive vector fields in anti-de Sitter space-time using Stueckelberg's Lagrangian 7−80566
QFT in de Sitter space, antipodal identification and elliptic inflation 7−108373
quantum action at a distance, EPR constraints, causality and Sutherland paradox 7−128316
quantum coherence that allows non-simply connected manifolds 7−134624
quantum effects near the singularity in a general cosmological scenario 7−95068
quantum energy-momentum tensor, time-like killing vector, stress-energy tensor, Schwarzchild black hole 7−120666
quantum field at short distance, spin-statistics connection and anomalous dimens. 7−140791
quantum field theory, functional measure in curved spacetime 7−108779
quantum field theory and the antipodal identification of black-holes 7−67147
quantum Gravity and Schrodinger Equations on Orbifolds 7−115881
quasi-local momentum near a point 7−66970
$R \times S^3$ space-time, global N=1 SUSY on surface of 4D sphere 7−73554
$R \times S^3$ topology field theory, gravitation 7−89074
reflexive Orlicz spaces and Lions lemma 7−102136
Regge calculus, three-plus-one formalism, inflationary universe appl. 7−73136
Reissner-Nordstrom Vaidya metric, appl. to radiation from system in nonadiabatic gravit. collapse 7−72277
relativistic bubble dynamics, cosmic inflation and hadronic bags 7−120670
relativistic radiation gas dynamics, noninertial co-moving reference frame for tetrad form eqns. 7−127696
renormalisation counterterms in curved space-times of arbitrary dimensionality, linear dependence 7−89332
Riemann space-time, local quantum statistics 7−80601
Robertson-Walker metric, possibility of determ. from observable relations 7−72659
Robertson-Walker metric, volume and curvature defects, cosmological model construction *(German)* 7−140330
Robertson-Walker space-time, affine collineations 7−134453
Robinson-Trautman pure radiation solns., asymptotic solns. 7−102223
Robinson-Trautman solns., time evolution and wire singularities 7−102229
Robinson-Trautman space-times, dynamics and evolution 7−73070
rotating mass in a Godel Universe with an electromagnetic field 7−134583
scalar electrodynamics in three dimensions with topological mass terms 7−134950
scalar field, eqn. of state determ. 7−95057
scalar-tensor theory, nonexistence of static conformally flat solns. 7−115869
Schwarzschild black holes, quasi-normal mode determ. 7−73101
Schwarzschild geometry, general relativistic MHD flows theory 7−94649
singletons, flat space limit of Green's functions 7−67488
small universe model, topological struct. of space-time 7−73071
space vehicle in Schwarzschild field, eqns. of slow radial motion 7−73065
space-time configurations continued
space with affine connection, deviation equations 7−66969
space-time curvature and the sources of gravity 7−120736
space-time elasticity and fundamentals of electrodynamics and gravitational theory 7−102246
space-time theory of gravity, present status 7−134585
spatially compact manifolds, Einstein's eqns., nonexistence of stationary, axisymmetric dust solns. 7−67126
special relativistic flat spacetime electromagnetic fields, Volterra series for post-Maxwellian corrections 7−72967
special relativity on $R \times S^3$ topology 7−72965
spherical shell motion at metric junctions 7−67105
spherical symmetry and direct products 7−102221
spherically symmetric shear free perfect fluid configurations 7−89055
Spherically symmetric space-times, symmetries 7−80526
spherically-symmetric vacuum spacetimes, Regge calculus anal. 7−67097
spin 3/2 fields on stationary black holes 7−73107
spin fluids in stationary axis-symmetric space-times, perfect fluid/spin-fluid tensor equivalence 7−108331
spin substructure of space-time 7−95279
spinless field theory, functional representation for de Sitter space isometries 7−95440
stability conditions for scalar field nonminimally coupled to gravity 7−73127
static conformally flat cosmological model in Lyra's manifold 7−146112
static distorted black holes, geometrical invariant expression of vacuum polarization effects 7−73133
static perfect fluid spacetimes, spherical symmetry, positive mass theorem, stellar model 7−107808
static spherically symmetric gravitational field, post-Newtonian limit and vacuum tensions field 7−67093
stationary axisymmetric electrovacuum gravit. fields metric, determ. in generalised gravitation theory 7−120894
stationary axisymmetric perfect-fluid metrics with $q+3p$=const 7−128389
stationary vacuum space-times in Ernst coordinates 7−67109
string field theory, BRST symmetry and differential geometry 7−108882
string theory, Hawking-Unruh effect, reparametrization invariance analytic mappings 7−134623
string theory, higher-derivative gravity, surface terms, Euler densities, surface geometry, boundary-value problem 7−120907
string-type field theories, spacetime content 7−81064
strings, mathematical theory and statistical examples 7−89061
superalgebras of higher spins in de Sitter space 7−134628
superconformal field theory, 2D, geometric anal. 7−134954
superstring compactifications rel. to semisimple Lie algebras, topological invariants 7−135062
superstring world sheet supergravity, prepotentials solns. 7−73624
superstrings, 10D, quantum cosmology, evolution, dynamics and coupling constants 7−134621
superstrings, low-energy theory, localization and compactification 7−140912
superstrings, total action, critical dimensionality and low-energy limit, review 7−140911
supersymmetric QED, constant field strength effective Lagrangian in 2+1 dimensional space-time 7−135014
supersymmetric systems, Casimir stress in plane geometry 7−89395
tachyon/antiparticle production in extended general relativistic manifold 7−80530
Taub-NUT, hyperkahler generalization from harmonic superspace 7−95781
Taub-NUT-like cosmology, EM field propagation, spacetimes with mild singularities 7−101986
test particles with internal struct., eqns. of motion, generalized form 7−134584
Teukolsky-Press relations in arbitrary space-times, EM field 7−80539
three-generation Calabi-Yau manifold, Ricci-flat Kahler manifolds, topological numbers 7−115873
topological modifications leading to spinor struct., gravit. mag. monopoles 7−115856
transitively self-similar space-times, Einstein eqn. solns. 7−67112
twisted string theories on group manifolds, chiral models with Wess-Zumino terms 7−89464
twistor space, embeddings and symmetries 7−89060
type IIA superstring, supermembrane derivation and relation to D=11 supergravity 7−102715
Universe wave fn., effective gravit. action with matter fields correction 7−115880
vacuum Einstein eqns., generalized Kasner soln., symm. and variational methods 7−95417
vacuum Friedmann cosmological models in Dunn's scalar-tensor theory 7−80537
Weyl and energy momentum tensors, metric uniqueness, Einstein theory general space-time 7−140564
Weyl space-time, geometrical unified EM-gravitation theory 7−95426
Wilson loop symm. breaking and instantons in $M_4 \times K$ space-times 7−134949
Yang-Mills fields, topological aspects in curves spaces 7−73496
Yang-Mills-Higgs fields at low energy, point singularities 7−134908
Zitterbewegung from Dirac electron in curved space, classical model, eqn. of motion 7−102222
$\lambda\phi^4$ theory and scalar electrodynamics, effective action with torsion in de Sitter space 7−89070

space vehicle power plants
Aerospatiale/AEG solar array in-orbit performance results 7−144864
ARIANE 5 space nuclear power appls. of closed Brayton conversion system 7−89602
batteries and fuel cells, principles for system level electrochemistry 7−106900
bifacial solar cell array performance comparison with BSFR cell 7−144863
bimodal nuclear reactor for space station power supply 7−67898
Brayton cycle and radiator study for Ariane 5 space nucl. power appl. 7−67904
CMZ coverglass optical and physical characteristics for solar arrays 7−144869
Columbus high-power solar array technology assessment 7−144852
European Retrievable Carrier solar array design and verification for low Earth orbit 7−144850
Fokker Strongback solar array 7−144855

space vehicle power plants continued
fully passive space reactor, conceptual design 7—102953
geostationary satellite solar array differential charging process and countermeasures 7—144860
HV solar array-plasma interaction and albedo flux, in-orbit expts. 7—144883
inertial confinement fusion driver and reactor for space power plants 7—68010
INMARSAT solar array design and verification 7—144851
Kapton insulation failure expts. simulating ECS solar array in-orbit power losses 7—144856
METEOSAT solar array electrical design and qualification test programme 7—144878
NASA growth space station nuclear reactor power system, feasibility assessment 7—67900
nuclear alkali-metal Rankine power systems for space appl. 7—67905
nuclear power plants commercialisation 7—67942
nuclear power system concepts comparison, thermoelectric conversion 7—67901
nuclear reactors, post-operational disposal 7—68017
organic Rankine cycle power conversion systems for space applications 7—144902
PEGASUS drive, multi-megawatt nuclear electric propulsion system for spacecraft 7—67899
Phobos spacecraft plasma spectrometer with solar power generator 7—145828
photovoltaic generators in space, 5th European Symposium, The Hague/Scheveningen, Netherlands (Sept.-Oct. 1986) 7—140377
reactor power systems, operational characts. for spacecraft 7—67941
Retractable Advanced Rigid Array for European Retrievable Carrier spacecraft 7—144849
solar array deployment simulation and analysis software 7—144875
solar array electrical and thermal behaviour, dynamic modelling approach 7—144877
Solar Array Flight Experiment (1984) test results 7—144882
solar array micrometeorite impact damage simulation using plasma accelerator 7—144858
solar dynamic power for space appl. 7—71584
solar panel micrometeorite impact damage simulation 7—144857
solar thermal concentration power system characteristics for terrestrial and space applications 7—144799
solar thermal dynamic power system for 21st century 7—71583
solar thermal-to-electric conversion potential for near-Earth spacecraft 7—144896
SPOT solar array in-orbit deployment results evaluation 7—144862
Stirling-cycle heat engine based Solar-Dynamic Space Power Systems 7—126640
Stretched Rohini Satellite 1 solar array design and fabrication 7—144879
systems code development project, design objectives 7—102954
tethered satellites, enhanced current flow through plasma cloud by induction of plasma turbulence 7—134109
thermionic nuclear reactor systems for space appl. 7—67956
thermoelectric SP-100 nucl. power systems, load following and reliability studies 7—67903
thin monocrystalline solar cell epitaxy and etch stop technology 7—144866
third-generation rigid fold-out solar array development and testing 7—144848
CeO_2 doped coverglass UV cut-on wavelength for satellite solar cells 7—144873
GaAs concentrator solar array concepts for geostationary and low Earth orbit missions 7—144853
GaAs satellite solar cell mfg. using vertically separated three-chamber LPE 7—144839
GaAs solar array performance expt. on EURECA-1 low Earth orbital flight 7—144861
GaAs solar cell for satellite power supply 7—106907
GaAs solar cells, high efficiency; manufacturing experience; satellite power supply appls. 7—126607
GaAs, space solar cell research, opportunities and challenges 7—126611
GaAs spacecraft solar array performance and cost 7—144854
GaAs spacecraft solar cell mfg. experience 7—144838
GaAs spacecraft solar cell pilot production line technology assessment 7—144841
InP based solar cell power/mass ratio and end-of-life efficiency for space use 7—144867
InP solar cell radiation resistance after 10 MeV proton irrad. 7—144888
InP, space solar cell research, opportunities and challenges 7—126611
Ni-H_2 battery, anode catalyst for aerospace system 7—78625
Si bifacial solar array alternative module configuration for low Earth orbit 7—144844
Si photovoltaic convertor using Nd laser radiation, parametric study 7—133105
Si solar cell spectral response meas. for space qualification 7—144884
Si spacecraft solar array performance and cost 7—144854
Si spacecraft solar cell US welding equipment 7—144843

space vehicles
see also artificial satellites; rockets; space vehicle power plants
37th IAF Congress, Conf., Innsbruck, Austria (October 1986) 7—120680
aerospace technology '86, missions to Uranus and Periodic Comet Halley (1982i) 7—72245
alkaline water electrolysis technology for space station regenerative fuel cell storage 7—71602
asteroid probes, energetically optimum flights with manoeuvres near planets 7—120247
balloons use in exploration of Mars 7—134106
CAESAR—Comet Atmosphere Encounter and Sample Return 7—107695
comet coma sample return mission 7—107694
P/Comet Halley (1982i), Giotto DIDSY-IPM instrument performance 7—115205
P/Comet Halley (1982i), Vega probes, Hungarian contribs. *(Hungarian)* 7—115198
communication with deep space probes, by radio and laser *(Italian)* 7—134107
CRAF mission, instrumentation and mission objectives 7—94634
dynamics, extremal problems, duality theorem study *(Russian)* 7—88078
elastic filament in orbit around gravitating centre, instability 7—72292
Endeavour GAS electronics unit, manufacture and flight qualification 7—139926
ESA, activities from May 1986 to April 1987 7—134112
expendable instrumentation modules pneumatic orbital launching 7—79811
Galileo mission 7—101658
Galileo mission to Jupiter 7—115289
Giotto, cometary and solar wind plasma meas. at Comet Halley bow shock 7—107756
Giotto, radio science equipment 7—139943
Giotto, vel. changes use to determ. dust characts. of Periodic Comet Halley (1982i); 7—115324
Giotto 3D positive ion analyser 7—139888
Giotto DIDSY and PIA instrumentation 7—88311
Giotto DIDSY instrumentation 7—139885
Giotto DIDSY IPM-P detector, particle impacts simulation 7—107722
Giotto DIDSY-IPM instrument, calibration expts. 7—107723
Giotto electron plasma expt. 7—139884
Giotto encounter with Periodic Comet Halley (1982i) and extended mission 7—139882
Giotto EPONA lightweight energetic particle detector 7—139923
Giotto Halley multicolour camera, control and operation 7—139889
Giotto heavy ion analyser PICCA 7—139887
Giotto implanted ion spectrometer characts. 7—139924
Giotto ion mass spectrometer 7—139886
Giotto magnetometer expt. 7—139883
Giotto telemetry and tracking system 7—79804
gravitational wave detection method, by interplanetary spacecraft Doppler tracking technique 7—134143
high intensity noise testing 7—97215
ICE, gasdynamic interpretation of plasma meas. at Comet Giacobini-Zinner encounter 7—94691
inertial navigation of space vehicle in Schwarzschild field, eqns. of slow radial motion 7—73065
Japanese Halley's Comet probes *(Japanese)* 7—107690
lidar in-space technology expt. from space shuttle 7—75031
low-orbiting spacecraft, dynamical anal. of gyroscopic attitude-control systems *(German)* 7—134111
Magellan 1989 Type IV mission design 7—107691
Magellan altimetry experiment for Venus topography and surface studies 7—107693
Magellan data products 7—107692
magnetometer data primary processing 7—139941
multilayer insulations at low boundary temps., heat transfer investigs. 7—73363
N-body problem, regularisation of eqns. for simultaneous collision of n-bodies 7—107698
navigation of spacecraft on missions to planets, computer methods for navigation 7—72251
optical baffle materials, spacecraft thermal control, UV and visible BRDF data 7—141796
optical communications, development program 7—134133
orbital manoeuvres strategy, analytical dispersion anal. 7—139879
orbital motion control, simplified techniques for navigational plotting 7—120246
orbital motion control in vicinity of collinear libration centre in restricted elliptical three-body problem 7—120243
Pioneer 11 tracking data, use in search for giant waves in 30-2000 seconds period range 7—139880
planetary exploration technology for the late nineties 7—133939
quotation patterns in space research, spacecraft citations anal. 7—79801
rendezvous trajectories., fuel-optimal and singular, based on linearisation about point in circular orbit 7—145806
Sakigake and Suisei, Japanese deep space probes, tracking and orbit determ. *(Japanese)* 7—127685
satellite damage caused by collisions with space debris 7—139175
self-calibrating low power laser rangefinder for space applications 7—75026
simulation methods, vibro-acoustic environments 7—134724
Solar Maximum Mission repair—lessons learned 7—115204
SP-100 space nucl. reactor subsystem, site design for ground engineering test 7—67902
Space Shuttle large population rodent holding facility, radiation experimentation 7—114510
Space Shuttle Orbiter, passive vehicle charging and potential expt. 7—127683
Space shuttle plasma wake, O^+ density and electron density observations 7—107611
Space Shuttle ram ion scattering in ionosphere plasma 7—145764
Space Shuttle tile, new millimeter and microwave substrate for aerospace applications 7—115206
Space Station, Second Columbus Workshop, Hannover, Germany (June 1986) 7—128185
Space Station and observations relating to general relativity 7—73148
Space Station Polar Platform, Earth resources instrumentation 7—115199
Spacelab 2 coded mask X-ray telescope 7—88111
STS51-C, red cells and platelets clumping decrease under zero gravity, cancer and heart diseases implications 7—139389
Suisei, attitude var. due to impact of dust from Periodic Comet Halley (1982i) 7—115325
tethered satellite, conf., Arlington, VA, USA (September 1986) 7—115676
tethered satellites, enhanced current flow through plasma cloud by induction of plasma turbulence 7—134109
Ulysses, out-of-ecliptic mission for solar and interplanetary obs. 7—101655
Vega, TV experiment, strategy, hardware, and software 7—88079
Vega 1 and 2 PLAZMAG-1 plasma analysers characts. 7—79810
Vega spacecraft, plasma wave analyser meas. in vicinity of Periodic Comet Halley (1982i) *(French)* 7—120324
Vega-1,2, PUMA instruments, mass resolution and sensitivity 7—107697
Vega-1,2 and Giotto, dust and gas impacts including secondary electron emission 7—107696
Voyager spacecraft, solar kilometric type III bursts obs. rel. to bursts visibility function 7—94836
windward laminar heating meas. on biconic in hypervelocity flows 7—142261

spacecraft *see space vehicles*
spallation (nuclear) *see nuclear spallation*
spark chambers
see also position sensitive particle detectors
Hamamatsu R 1564U microchannel plate photomultiplier, time resolution performance 7−74347
microchannel plate limited imaging with ultra-thin wedge and strip anodes 7−74348
spark counters
corona discharge in gas-discharge detectors for diagnosis of meas. apparatus 7−109649
jump spark counter, use in differential fission cross section meas. 7−74384
miniature spark counter for public communication and education 7−74378
polymer foils, spark counting of particle tracks, neutron flux, spectrometry meas. 7−74335
thermal-neutron detector with six He counters 7−129526
spark erosion machining *see spark machining*
spark-gap voltmeters *see voltmeters*
spark gaps
air-filled gap spark discharge, IR radiation screening, brightness meas. 7−117786
air-filled gaps, cathode-directed streamer propag. 7−69513
switch for N_2 lasers, rise time, field emission effects study 7−124015
Al and Cu 7−91382
N_2 laser, TE, LC inversion, design criteria analysis and obs. 7−141889
spark machining
circular saw attachment for use in spark machining 7−128553
Elinvar, surface layer formation during electrospark treatment, effect on tuning fork sensor characts. 7−78351
surface modification using elec. discharge machining, corrosion and oxidation resist. *(Japanese)* 7−132808
Ti, electroerosion, high-energy impulse-discharge, in nitrogen, electrode surface effects 7−132814
Ti, electrospark alloying for improved corrosion resist. 7−144597
sparks
see also electric breakdown; lightning
acoustic wave refraction in air 7−75182
air at atmospheric press., long continuous laser spark, emission spectrum 7−97827
air-filled gap spark discharge, IR radiation screening, brightness meas. 7−117786
continuum radiation dynamics of low-voltage spark-discharge plasma 7−83488
discharge species trajectories, mag. confinement and control 7−83555
dust cloud, ignition by spark 7−75904
electrode material flow into discharge gap, spectral emission in vacuum spark discharge 7−142471
flame, turbulent, propag. and spark ignition, hydrodynamic mathematical model 7−132938
ignition engines, knocking detection, structural vibrations based 7−110672
in-cylinder gas flow, double-spark method meas. *(Japanese)* 7−97666
inductively coupled plasma devices for spectrography *(German)* 7−106874
low-voltage, discharge plasma, ionisation front propagation 7−83570
magnetic field obs. in low press. spark 7−69516
metals, spectrometric anal. with spark discharges in Ar, burn spot phenomenon study *(German)* 7−133009
methane-air mixtures, near threshold, ignition by spark discharge 7−75903
methane-air mixtures, turbulent combustion. combustion products and water vapour addition 7−75702
mica mineral fracture, generation of X-ray spectra w.r.t. vacuum sparks 7−125842
organic dielectric with evaporated thin electrodes, chem. processes during elec. breakdown 7−99671
power technology, spark erosion for rapidly quenched fine powder production 7−100152
rare earth metal vacuum spark, X-ray emission quasicontinuum band 7−123986
spectroscopic source 7−117769
sphere gap, earthed surface, proximity effect 7−83565
underdense plasma prod., laser beam self-focusing 7−104435
CO_2 TEA laser operation and output, effect of sliding spark, corona and Ge preionisers 7−103838
CO_2-N_2-He mixture, volume to spark discharge transition, electrooptic meas. 7−137146
Ga^{2+}, autoionising energy levels, X-ray spark spectra anal. 7−141513
Ge^{3+}, autoionising energy levels, X-ray spark spectra anal. 7−141513
H excited states, nonresonance cubic optical susceptibility 7−82704
He-like ions, vacuum-spark hot point, X-ray emission 7−124017
He-like ions in vacuum spark, Lamb shift study 7−123980
sparticles
$\tilde{\gamma}\rightarrow\gamma$+gravitino, constraints on lower mass bounds 7−108835
cosmological dark matter, cosmological constraints on 'ino' particles composing galactic haloes 7−115577
dark matter induced neutrinos from the Sun, theory versus expt. 7−94616
dilaton classical soln. and supersymmetry breaking evolution in expanding universe 7−67167
ECFA Workshop on LEP 200, Aachen, Germany, (Sept.-Oct, 1986) 7−140381
fundamental particle physics without accelerators 7−73110
Galaxy centre, dark matter density, isothermal and adiabatic models 7−107964
gaugino and sfermion mass correls. in N=1 supergravity models 7−120917
gaugino masses, mechanism for low-energy supersymmetry breaking in superstring-inspired models 7−81069
gaugino masses in superstring models, one-loop corrections 7−108827
gluino induced effects in strangeness-changing neutral currents 7−95890
gluinos, experimental limits from CUSB-I.5 7−68159
goldstino frequency fn. in broken global supersymmetry 7−95779
Goldstone bosons and superpartners in supersymmetric theories 7−95788
Higgsino, baryon-violating decays, role in cosmological matter-antimatter asymmetry problem, superstring anal. 7−88710
Kahler manifolds with vanishing chiral potential 7−81084
magnino experimental constraints and consequences, stable weakly interacting massive particle 7−128808
N=1,2 superparticle, quantization with irreducible constraints 7−95780
sparticles continued
PEP searches for SUSY particles 7−102648
R-parity breaking and cosmological consequences for supersymmetric particle decay 7−67525
relativistic astrophysics, conf., Bogota, Columbia (1984 February) 7−120712
string theory, ghost supercurrent and gravitino zero modes 7−102713
$SU(3)_C\times SU(2)_L\times U(1)_Y$,[$\times(U(1))^2$,$\times U(1)$] models with two, one, no Z bosons, gauge symmetry breaking, particle spectrum 7−73569
superstrings, radiative corrections to N=1 supergravity model, gravitino and gaugino masses 7−135079
supersymmetric cosmic accelerators, flux at Earth, companion stability, underground muons 7−127656
SUSY theory of particles and interactions 7−108820
toponium-stoponium mixing 7−95786
vector-boson production in supersymmetric QCD 7−128850
Wino mass determ., asymmetry meas. in $\mu\rightarrow e\nu\bar{\nu}$ 7−108918
B^0-$\bar{B}^0$ mixing, CP violation in supersymmetric models, squark and gluino masses 7−128807
$\tilde{e}^{\pm}\rightarrow e^{\pm}$+light neutralino, cross section calcs. 7−95887
$e^-e^+\rightarrow X$, supersymmetric particle mass limits determ. 7−108928
$e^+e^-\rightarrow$ sparticles ($\tilde{\gamma}$, $\tilde{\nu}$, $\tilde{e}$, $\tilde{W}$), search at PETRA, QED comparison 7−121526
$e^+e^-\rightarrow$anti-$\tilde{\nu}_e+\tilde{\nu}_e$, t-channel gaugino-Higgsino mixing 7−95887
$e^+e^-\rightarrow\tilde{e}^+\tilde{e}^-$, t-channel gaugino-Higgsino mixing 7−95887
$e^+e^-\rightarrow$scalar fermions, $\tilde{\gamma}$, $\tilde{W}$, $\tilde{Z}$, cross section calcs. 7−89493
g and q mass limits from UA1 expts. 7−102781
$\tilde{G}\rightarrow\gamma\tilde{\gamma}$, $g\tilde{g}$, light-element yields, early universe 7−101965
$\tilde{g}\rightarrow$hadrons, production and decay search, $\pi^-N\rightarrow\tilde{g}X$, 350 GeV/c 7−89529
$\tilde{G}\rightarrow$photons, photo-destruction of light elements in inflationary universe 7−101976
$\tilde{g}\rightarrow q\bar{q}\tilde{W}$, $q\bar{q}\tilde{Z}$, gluino detection at hadron supercolliders 7−116202
$K^+\rightarrow\pi^+\tilde{\nu}\bar{\tilde{\nu}}$, reaction anal. 7−108910
$\nu\nu$ cross section and sneutrino coupling const. limits from SN 1987A in LMC 7−120481
$\bar{p}p\rightarrow\tilde{W}+X(\tilde{z}+X)$, first order supersymmetric QCD corrections to rapidity, massless partons 7−135168
$\pi^0\rightarrow\tilde{\gamma}\tilde{\gamma}(\gamma\tilde{\gamma}\tilde{\gamma})$, light photino search, branching ratios 7−116179
$\tilde{q}\rightarrow qZ$, $q\tilde{W}$, $q\tilde{g}$, gluino detection at hadron supercolliders 7−116202
tt bound state, spectroscopy, decay modes and quark struct. determ. 7−128840
$\tilde{\tau}_1$, top squark prod. and decay at e^+e^- colliders 7−128905
$\tilde{T}\rightarrow\gamma X$, search for light gluinos 7−73643
$\tilde{W}$ leptonic and hadronic decay widths in supergravity models 7−73678
$\tilde{W}$ mass effects on $\bar{p}p\rightarrow$gaugino pair production 7−89528
$\tilde{W}$ mass lower bound from $\mu\rightarrow e^+\nu\bar{\nu}$ exotic contributions 7−140934
$Z^0\rightarrow H^0\gamma$ ($H^0\mu^+\mu^-$), supersymmetric Higgs boson production, branching ratios, supersymmetric fermion virtual exchange 7−140936
$Z^0\rightarrow$neutralino pairs, supersymmetric parameters 7−140938
$Z'\rightarrow w_h^+ + w_l^-\rightarrow l^+\bar{\nu}+l^-\bar{\nu}$, T-odd angular correlation, chargino, numerical examples in E_6 models 7−134995
$e^+e^-\rightarrow$ supersymmetric particles, LEP 200 search, mass limits estimation 7−140923
$\tilde{\gamma}$ lower bound on mass, constraints from superlight gravitino 7−108835

spatial filters
apodisation filters, point spread functions 7−68817
associative processor, error-correction coding 7−122840
atmospheric turbulence spectra, refr. index profiles and crosswind vel., remote sensing, opt. inversion technique 7−115100
Bessel annular apodizers: imaging characteristics, computer-simulated images 7−122843
binary logic by spatial filtering, review 7−74862
binary phase-only filter reconstruction using Hughes liquid crystal light valve 7−82471
binary phase-only filters, multiplexing capabilities 7−82472
colour image statistical pattern recognition filter using incoherent optical correlator 7−129988
composite matched filter output partitioning for pattern recognition 7−117298
correlation filters, distortion-invariant, iterative technique for synthesis 7−103759
correlation filters, rotation invariant, iteratively designed, expt. use 7−136211
distortion invariant pattern recognition with phase filters 7−122837
ferroelectric liquid crystals, optical computing and image processing appls. 7−110263
ferromagnetic fluids, magnetically induced spatial filtering effect 7−123171
holographic filter, adjustment errors influence on optical information processing system operation 7−122845
holographic filters, optimal property 7−68592
image averaging using adaptive 2D least mean square filter 7−103749
image restoration by spatial filter design 7−94508
incoherent light optical processing and holography appls. 7−117154
inverse filter transfer function optimisation in blurred image restoration with incoherent light 7−90531
local spectrum display, pseudocoloring approach 7−122839
magnetic domain grating for light switches 7−136488
mirror double phase conjugate, optical information processing appls. 7−110264
modified composite filter for pattern recognition, noise with nonzero mean, experimental results 7−136225
moving holes, size meas. using spatial filtering 7−73323
multiclass stochastic images buried in additive noise, classification using optimal correlation filter 7−68576
object phase distributions detection by optical differentiation operations *(Japanese)* 7−110255
optical iconic filters for large class recognition 7−117297
optical pattern recognition by spatial filtering *(Japanese)* 7−110540
optical preprocessing using liquid crystal televisions 7−110254
optical spatial filtering velocimetry, review 7−121076
pattern recognition using reduced information content filters 7−122836
phase-only and classical matched filters, scale sensitivities 7−68818
phase-only composite filter, design, appl. 7−123173
photorefractive wave mixing, spatial light modulation, filtering effects 7−68791
pupil-function design for complex incoherent spatial filtering 7−136218
quasiphase-only matched filtering 7−110538

atial filters continued
semiconductor lasers, directly-modulated, second harmonic distortions due to spatial filtering 7−103851
sine-cosine cascade correlator with real-valued filters 7−103761
$BaTiO_3$ phase conjugator, spatial filtering characts. 7−141943
ZnSe bistable interference filters switched by ns light pulses, temporal behaviour 7−110442
atial orientation control *see attitude control*
atial variables control
see also attitude control; position control; thickness control
wavefront-distortion correcting mirror, deformation control *(Russian)* 7−110496
patial variables measurement
see also angular measurement; area measurement; curvature measurement; diameter measurement; displacement measurement; distance measurement; height measurement; length measurement; level measurement; particle size measurement; position measurement; surface topography measurement; thermal expansion measurement; thickness measurement; volume measurement
AM laser system for distance and displacement meas. 7−75007
angiography, high precision, quantitative 7−145202
blood vessel size computerised determ. in digital subtraction angiography 7−133440
computer-controlled standards laboratory meas., using universal meas. machine 7−121051
diffraction method of meas. small linear dimensions, mode composition effects on errors 7−102385
diffraction-type dimension meas. devices, spectral characts. *(Russian)* 7−110548
grain structure model, linear intercept length distrib. with log-normal form dia. distrib. 7−138730
grain-size analysis for a conducting powder in a planar capacitor 7−121057
laser interferometry, electrooptical phase shift control, metrologic appls. 7−102509
microhardness gauge for indentation kinetics determ. 7−106733
Mini Laser Rangefinder, review 7−75024
moving holes, size meas. using spatial filtering 7−73323
nondestructive detection and sizing of flaws by differential gamma scattering spectrum techniques 7−138929
optical fibre measurement, conf., London, England (May 1987) 7−88748
optical fibres, refractive index profiling and dimensional meas. 7−90815
optical measuring microscope, objective lens aberration effects 7−136210
optical metrology in length and mechanical standards 7−134830
optical microscope, automated, design, magnetic recording head, dimensions meas. 7−121067
optical testing and metrology, conf., Quebec City, Canada (June 1986) 7−115684
plano-cylindrical lens curvature radii meas., by opto-electronic method 7−142052
rectilinearity monitoring by laser beam, baseline reproduction error analysis 7−123053
robot grippers, slip detection using acoustic emission signal anal. 7−110737
scanning lidar bathymeter for water depth measurement 7−79368
single-mode, spot size estimation from far field meas. 7−136555
sintered parts, US waves meas. of case depth 7−123382
submicrometer linewidth metrology in the optical microscope 7−140668
suspensions, particle shape determ. using magneto-optical method 7−71540
tongue shape measurement using piezoelectric thin film *(Japanese)* 7−119881
triangulation with expanded range of depth 7−80734
ultrasonic sensors, principles and appls. *(Japanese)* 7−142141
He-Ne laser beam, spot size meas. using boundary-diffraction wave 7−136388
speakers *see loudspeakers*
special purpose computers
large dense generalised eigenvalue problem solutions on Cray X-MP/24 7−80399
statistical physics appls. 7−89104
special relativity
see also Lorentz transformation
astronomical radiosources, superluminal separation, transverse expansion, apparent position, Doppler effect 7−115619
Bell's theorem, quantum mechs., relativity 7−128210
causal representation of Bell's theorem, locality, reflection and wave-particle duality 7−128321
charged scalar boson, relativistic quantum mech. w.r.t. observer's past light cone 7−115830
Compton effect, comparison of kinematical props. with light reflection laws 7−74842
conformally invariant differential operators on Minkowski space, curved analogues 7−72964
direct observation and modelling approach 7−95328
energy-mass relationship 7−140448
equivalence principle, physical background 7−94647
ether, experimental detection 7−88961
ether drift experiments, early views 7−108132
extended thermodynamics, material coeffs. 7−134713
flat spacetime electromagnetic fields, Volterra series for post-Maxwellian corrections 7−72967
gravitational Poynting vector and energy transfer 7−80259
heat transmission eqns., linear momentum and energy conservation *(Portuguese)* 7−121018
impact of special relativity on theoretical physics 7−108229
Lienard-Wiechert pots., generalisation and applicability limits 7−108226
light as an expression of mental activity 7−134422
linear co-ordinate transformation, four-vector (k, ω/c) calc. 7−120803
linearly accelerated system, electrodynamics 7−128280
Lorentz aether theory, expt. evidence against theory 7−72966
mass effects in mutual rest systems 7−72963
McCausland's returning astronaut and special relativity 7−67013
Mercury, perihelion precession, general rel. props. from special rel. calc. 7−79816
Mercury perihelion procession, special relativity 7−128225
Michelson-Morley experiment in Earth's gravitational field, theory 7−102163
modern experimental tests of special relativity 7−108230
nonstandard synchrony of infinite sets of clocks 7−102165
special relativity continued
opposite spacetime relations, Lorentz transform., relativity abandonment, time accelerating energy effect, scales, frames *(German)* 7−128276
phenomenological electrodynamics in curvilinear space, with application to Rindler space 7−136180
physical theories, nature and dimensionality 7−66890
pilot wave theory for very light scalar particles in refractive medium 7−140449
post-Galileian relativity group, Lie algebra 7−134486
quantum mechanics, spectral theory for unitary operators on a quaternionic Hilbert space 7−134559
quantum systems, Einstein causality violation 7−108307
$R \times S^3$ topology in special relativity 7−72965
railgun recoil and relativity 7−128279
reference frames in special relativity 7−66869
relativistic mass depend. on vel. 7−128217
satellite contributions to light velocity theory, book 7−134372
Silvertooth experiment for expt. detection of ether 7−88962
similarity theory and the ether, historical perspective 7−140406
simultaneity, conventialism and generally covariant formalism 7−102164
simultaneity, quantum theory and special relativity *(Danish)* 7−88960
teaching approach using Michelson-Morley expt. 7−140397
teaching using quasars 7−66860
telemetry, relativistic, theory 7−95135
specific gravity *see density*
specific gravity measurement *see density measurement*
specific heat
see also Debye temperature; Gruneisen coefficient; specific heat of gases; specific heat of liquids; specific heat of solids
adjoint heat eqn., heat capacity and parabolic measure 7−102365
anisotropic Heisenberg model, specific heat 7−85344
deoxyribonucleic acid, specific heat below 5 K 7−126699
differential scanning calorimeter, specific heat data correction method 7−95591
dilute classical spin chains, thermodynamics, mag. field effects 7−143824
DNA, low-temperature heat capacity 7−144981
eutectic mixture screening, latent heat thermal energy storage materials, 200-1500°C *(Japanese)* 7−144918
Fermi liquid theory on the basis of periodic Anderson Hamiltonian with orbital degeneracy 7−124819
ferromagnetic chain, easy-plane, specific heat, quantum corrections 7−138246
fluids, heat capacity and density, transient hot wire measurements 7−95580
higher dimensional black holes, spin degrees of freedom 7−127940
Hubbard model, appl. to small clusters, ground state and thermodynamic props. 7−98767
Ising-type system, nonasymptotic critical behaviour, ordered-phase case 7−70573
lattice stabilities, new method of describing 7−111820
Lennard-Jones particle systems, melting, computer simulation 7−137525
measurement errors and disrepancies determ. due to temp. scales 7−121105
metallic and composite structure response, intense thermal heating, thermomechanical effects 7−136663
mixtures, thermodynamic properties, conc. fluctuations method calc. 7−124551
nonequilibrium steady states, specific heat calcs. 7−123442
one-dimensional easy-plane magnets, classical sine-Gordon and quantum models 7−138244
one-dimensional magnets, solitons, quantum effects and specific heat 7−138245
polymer mixture, Flory-Huggins lattice model, crit. props. 7−108432
Potts model, 3D, 3-state, multilattice microcanonical simulation 7−120996
q-state random Potts model, critical behaviour and renormalization group eqns. 7−95495
resistance thermometers for use below 1 K, heat capacity obs. 7−102416
SO(3) lattice gauge theory, 3D, specific heat meas., Monte Carlo simulations 7−95736
surface tension, relation to negative entropy, energy and heat capacity 7−124635
thermodynamics, inequalities between means, negative heat capacities 7−95531
Mn thermodynamic props., review 7−80196
Mo, thermodynamic props., review 7−80196
N_2 mols., isolated in solid Ar matrix, mol. rot. motion, calorimetric studies *(Russian)* 7−90096
Rb cpds., thermochemical meas. 7−80194
specific heat at constant pressure *see specific heat*
specific heat at constant volume *see specific heat*
specific heat of gases
Bose-Einstein condensation in an external potential 7−95463
constant volume measurement *(Italian)* 7−73341
ethane surface tension and capillary const. meas. in liq.-vapour coexistence range *(Russian)* 7−112025
ethylene, use as reference state for thermodynamic props. of homologous series 7−78532
finite heat source and sink, effectiveness of Maxwell's demon 7−128211
methanol vapour, thermal diffusivity and cond. meas. 7−75745
n-pentane, spherical shell pot., equivalent eqns. method calcs. 7−129827
physical properties calc. *(German)* 7−97679
polyatomic ions, gaseous, standard thermodynamic functions 7−80195
n-propyl alcohol, eqn. of state, calorimetric meas. 7−97673
$AlCl_3$, basic, heat capacities and PMR *(German)* 7−69298
Ga_xCl_y, vibr. modes Raman spectroscopy quantitative anal. *(French)* 7−129717
^2H, high density, sp.ht., resistivity, thermal cond., sound vel. and viscosity calc. 7−103183
specific heat of liquids
4′-(4″-n-alkoxybenzyloxy)-4-cyanostilbene, nematic-smectic A phase transition, critical behaviour 7−131311
n-alkoxyethanol-di-n-butylether mixtures, excess props. 7−143041
alkyltrimethylammonium bromides, aq. solns., heat capacities and densities meas. 7−143030
aniline-carboxylic acids mixtures, US vel., excess vols., heat capacities and compressibilities *(German)* 7−91728
benzene, adiabatic colorimeter, computer controlled with pyroelec. thermometer, sp. ht. meas. 7−108560

specific heat of liquids continued
benzene, adsorbed on SiO_2 gel, capillary condensation, thermophysical props. determ. 7−91777
binary mixtures, critical region, isochoric specific heat and eqn. of state 7−137583
butan-2-one-heptane(cyclohexane)(methyl-cyclohexane), speeds of sound, molar vols., compressibilities 7−76257
carboxylic polyelectrolyte solns., heat capacity meas. 7−131325
decyltrimethylammonium bromide, aq. soln. heat capacity meas. 7−91832
deoxyhemoglobin soln., sp. ht. temp. depend. meas. 7−144947
2,6-dimethyl pyridine-water, binary crit. mixture, light scatt. and specific heat near lower crit. point 7−113211
dispersion relation for collective modes in liquids and amorphous solids 7−111775
DOBAMBC, smectic-A-chiral-smectic-C phase transition 7−98444
dodecyltrimethylammonium bromide, aq. soln. heat capacity meas. 7−91832
electrolytes, isobaric specific heat meas. device 7−143029
ethane surface tension and capillary const. meas. in liq.-vapour coexistence range *(Russian)* 7−112025
ferroelectric liquid crystals, generalised Landau model 7−132207
glass-forming melts, two-level model, nonisobaric conditions 7−98448
heptanol, density, specific heat, thermodynamic props. 7−143038
heptyloxypentylphenylthiolbenzoate-octyloxycyanobiphenyl, nematic-smectic-C heat capacity investig. 7−69908
n-hexane, isobaric specific heat at high press. 7−137582
melts, and binary mixtures, effective Debye temp. 7−91754
methanol 7−108560
mixtures critical temperatures, estimation method 7−131324
n-nonyl alcohol, isobaric specific heat at high press. 7−137582
nucleation, adiabatic, numerical approximations 7−91760
n-octane-hexane isomer mixtures, heat capacities, 298.15 K 7−84306
n-octyl alcohol, isobaric specific heat at high press. 7−137582
organic aqueous non-electrolytes, thermodynamic parameter studies 7−111770
pentan-2-one-heptane(cyclohexane), speeds of sound, molar vols., compressibilities 7−76257
potassium n-butanoate, heat capacities and thermodynamic props. 7−76444
pyridine-carboxylic acids, mixtures, US vel., excess vols., heat capacities and compressibilities *(German)* 7−91728
Se-Te liq. mixtures, heat capacity temp. depend., cond. and bonding rearrangement 7−76426
smectic A-nematic transition, lattice model critical behaviour 7−118094
thermophysical props. determ. 7−130520
triethylamine 7−108560
wide-frequency specific heat spectrometer 7−128574
Al-Fe(Mn)(Ni)(Si)(Ti), thermodynamics props., reviews 7−80197
$CaCl_2$, aq. soln., heat capacity meas. 7−84307
$Ca(NO_3)_2$-KNO_3, freq. depend. specific heat near glass transition, photoacoustic effect meas. 7−91804
$Cu(H_2O)_6^{2+}$−$CuCl_4^{2-}$-ethanol system for solar energy storage 7−114129
$Gd_{63.2}Co_{36.8}$, glass-forming eutectic, thermodynamic props. 7−118135
^{3}He, motional states in K-L zeolite 1D channels, sp. ht. and heat of sorption studies 7−137649
^{3}He-^{4}He mixtures, dilute, mK molar heat capacity meas. 7−143130
^{4}He, liq., ultrasonic attenuation near the λ point 7−84421
^{4}He, motional states in K-L zeolite 1D channels, sp. ht. and heat of sorption studies 7−137649
^{4}He superfluid, specific ht. and phonon dispersion from elementary excitation spectrum in ring diagram approx. 7−91909
^{4}He superfluid, specific heat and entropy calcs. near λ point 7−124615
K-Pb alloys, heat capacity, anomalous temp. depend. 7−118121
Li-Ba liq. alloy, density, compressibility, heat capacity and surface tension 7−137436
$LiNO_3$, melts, and binary mixtures, effective Debye temp. 7−91754
n-Te, liq., Schottky-type excess specific heat and metal-nonmetal transition 7−84308
NaBr, aq. soln., heat capacities, 306-603K, 17.5 MPa 7−98488
NaCl aq. soln., apparent molar heat capacities study 7−76425
$NaNO_3$, melts, and binary mixtures, effective Debye temp. 7−91754
Se-Te, liq., liq., Schottky-type excess specific heat and metal-nonmetal transition 7−84308
Se-Te system, structural phase transitions in the liq. state and the melting enthalpy 7−76377
Si, crystalline, amorphous and liq., phase diagram studies 7−118059
V_2O_5, high-temp. relative enthalpies meas. 7−76458

specific heat of solids
see also Schottky anomaly
1D antiferromagnets, universality classes, critical props. 7−125392
2-chloro-6-(trichloromethyl)pyridine, heat capacity and thermodynamic props. 7−98515
2D electrons, fractional quantum Hall effect and sp. ht. 7−98494
actinide compounds, magnetic response functions, neutron inelastic scatt. 7−77240
anthracene-TCNB, phase transitions, Brillouin scatt. and calorimetric studies 7−142998
BCS superconductor, mixed-valence impurities, reduced transition temp. and sp. ht. jump, Brillouin-Wigner perturbation calcs. 7−85185
Bethe Ansatz soln., mixed valent impurity, two mag. configurations, charge fluctuations, thermodynamic props. 7−76837
binary ordered alloys, electronic sp. ht. at low temp., electron-phonon interaction effects calcs. *(Russian)* 7−91837
biphenyl-d_{10}, cryst., successive phase transitions, calorimetric obs. 7−104985
complex chemical substances, specific heat calcs. 7−91752
conductors with N-shaped I-V characts., current and temp. nonlinear oscills., sp. ht. determ. 7−98993
copper chloride tetramethyl sulphoxide, ferromag. linear chain, mag. birefringence 7−113154
cubic metallic elements, empirical electron-phonon λ values from resistivity 7−137495
degenerate Kondo model, sp. ht. in the presence of cryst. fields 7−124547
p-dichlorobenzophenone, phase transitions, Brillouin scatt. and calorimetric studies 7−142998
diglycidyl ether of bisphenol, phonon fracton density of states, cryst. and amorphous samples 7−76319
diluted Ising ferromagnet, Curie temp. and sp. ht., biquadratic exchange effects 7−99476
dimethylpropane, speed of sound, spherical acoustic resonator meas. 7−117695
dispersion relation for collective modes in liquids and amorphous solids 7−111775
electron gas, two-dimensional, density of states in high mag. fields 7−105365
electron glass, critical behaviour, dielec. suscept., entropy, and sp. ht., Coulomb interaction effects calcs. 7−105428
epoxy resin, exptl. study of low-temp. long-time relax. 7−111907
epoxy resin in cylindrical mould, cure process, kinetic and thermal parameters effect 7−126453
ferroelectric displacive crystal, anharmonic, doped, elec. field depend. of specific heat in paraelectric phase 7−98491
ferromagnetic Ising model on 2D and 3D lattices, transfer matrix and finite size scaling 7−77329
flux calorimeter for meas. thermophysical props., of solids, triglycine sulphate meas. appl. 7−108561
four-site clusters, periodic Anderson model calcs. 7−84618
galvinoxyl radical mixed crystals and hydrogalvinoxyl cpd., diamag.-paramag. phase transition, thermodynamic props. 7−138239
glass, nucleation, isothermal and adiabatic theories 7−83713
glass transitions, relaxation calorimetry obs. 7−105026
HCP lattice, hindered rot. of impurity diatomic mols. *(Russian)* 7−76043
heavy fermion cpds., itinerant antiferromag. state, SDW phase diagram anal. 7−125411
heavy fermion superconductors, Landau's Fermi liq., theory and periodic Anderson model Hamiltonian correls. and calcs. 7−105810
heavy fermion systems, universal low-temp. props., microscopic derivation 7−124808
heavy metal fluoride glass, eqn. of state 7−124429
high T_c oxides, upper bound on sp. ht. jump 7−143706
high T_c superconductors, critical fluctuations 7−143713
high T_c superconductors, doped Mott insulator description 7−125233
high T_c superconductors, effect of low dimensionality on parameters 7−138129
high T_c superconductors, strong-coupling effects 7−112633
high temperature superconductivity, superexchange mechanism, mean-field model, EHT calcs. 7−112623
ice: KOH, XI-I_h transition, high press. calorimetry study 7−91791
ice, saline, accreted, de-icing and thermal props. 7−133787
ice I_h doped with alkali hydroxides, calorimetric study, transformation to ice XI 7−118127
ID conductors, electron-phonon interaction and phonon dynamics, spinless fermions 7−124419
Inconel, thermal conductivity, thermal diffusivity and sp. ht. 7−143432
inert gases, adsorbed on graphite, heat capacities calcs. 7−70071
intermediate valence systems, spectroscopic properties, many-body theory 7−76840
intermetallic compounds, heavy-fermion, low temp. electronic heat capacity, effective mass anal. 7−112173
isotropic ferromagnetic Heisenberg chain, arbitrary spin, critical behaviour 7−125434
isotropic Heisenberg chain, suscept. and sp. ht., cluster transfer matrix method calcs. 7−85346
lattice vibrs., specific heat meas. 7−66866
macromolecules, linear, solid, heat capacities calcs. using skeletal vibrs. 7−143031
macromolecules, solid, unbranched, heat capacities calc. 7−118128
magnetic superconductors, electronic heat capacity, effect of spin scatt. and mag. order 7−85191
malononitrile, phase transition studies 7−69894
measurement using adiabatic calorimeter, automated, small simple-size design 7−121128
metallic glasses and alloys, amorphous non-magnetic, low-temp. anomalous props. 7−105517
metals, narrow band and heavy fermion systems, electronic heat capacity and mag. susceptibility 7−91834
nitromethane-$d_1(d_2)$, cryst., methyl internal rot., neutron scatt., IR and Raman spectra 7−125730
nucleation, adiabatic, numerical approximations 7−91760
organic quasi-1D conductors, quantised field-induced SDW ordering 7−99473
perchlorobiphenyl, heat capacities and intramol. twisting vibrs. 7−76431
perfluorobiphenyl, heat capacities and intramol. twisting vibrs. 7−76431
periodic Anderson Hamiltonian, heavy electrons, electronic specific heat enhancement 7−131507
PET, sp. ht. meas., 0.4-15 K 7−118126
phonons in disordered solids, thermodynamic props. 7−84169
poly(di-p-alkoxyphenyl itaconate)s, glass transitions and relax. obs. 7−124508
polyester fibres LF spectra, Raman spectroscopy appl. 7−89266
polyesters, linear, aliphatic, heat capacities 7−91836
cis-polyisoprene, mech. relax., rel. to struct. relax. *(Russian)* 7−91488
polymer, thermal ageing tests, end-point transformations *(German)* 7−93234
polypropylene, syndiotactic, thermophysical props. 7−98593
potassium n-butanoate, heat capacities and thermodynamic props. 7−76444
proximity effect sandwich, with nonmag. localised states, specific heat jump 7−70490
quantum spin glass, RKKY interaction, real space renormalisation study 7−112824
quartz, heat capacities, 340-1000 K, revised values for thermodynamic props. 7−124543
quasi-1D conductors, magnetic field induced metal-SDW transition, sp. ht. jump 7−105925
rare earth Z 7−125277
rare earth-Ba-Cu-O cpds., $RBa_2Cu_3O_x$ (R=Gd, Er, Dy), high T_c supercond., mag. and supercond. properties 7−131888
Rochelle salt, phase transition at 210 K, heat capacity obs. 7−104999
rotor molecule in atomic cryomatrix, renormalised cryst. field calc. *(Russian)* 7−137867
second-phase decoration of dislocations 7−117927
semiconductors, zero-gap, low temp. sp. ht. 7−137585
silica aerogels, specific heat and thermal conductivity meas., fractal model anal. 7−100621
site-bond diluted Ising ferromagnet on anisotropic square lattice, thermodynamic props. calcs. 7−70571
spin reorientation of ferromagnets, sp. ht. 7−132030

pecific heat of solids continued
steel, stainless, thermal conductivity, thermal diffusivity and sp. ht. 7−143432
superconductivity in a Kondo lattice *(Chinese)* 7−112612
superconductivity in the generalized periodic Anderson model with strong local attraction 7−118696
superconductivity superlattices, transition temp., single electron density of states and sp. ht., BCS theory calcs. 7−99317
superconductors, anisotropic, with Shiba-Rusinov impurities, sp. ht. jump at T_c 7−77154
superconductors containing transition-metal impurities, strong-coupling theory 7−85182
TANOL organic free radical, magnetic interaction and phase transitions 7−77290
teaching approach, using computer 7−140400
tetrahedral compounds, thermal properties 7−143060
tetrahydrofuran clathrate hydrate: KOH, phase transition, sp. ht. meas. 7−91798
thallium n-tetradecanoate, heat capacity and thermodynamic functions 7−84312
thick supercond. plate, heat capacity and proximity effect 7−125246
thin films, thermal transport meas., anal. of heat pulse method 7−95584
TMTSF Bechgaard salts, field induced SDW states, thermodynamics 7−112828
transition metal solid solns., electron sp. ht. and T_c comp. depend. calcs. *(Russian)* 7−131838
U-based systems, heavy electron materials, chem. trends rel. to their formation 7−105066
XXZ Heisenberg model with arbitrary spin, thermodynamics 7−85339
Ag_2X, X=S, Se, Te, superionic cond., sp. ht. 7−111908
Al, lattice dynamics 7−142925
Al, lattice sp. ht., press. depend., ab initio calc. 7−124546
Al, thermodynamic properties, review 7−143037
Al-Fe(Mn)(Ni)(Si)(Ti), thermodynamics props., reviews 7−80197
AlAs, sp. ht., thermal expansion coeff. calcs. 7−105068
$Al_{71}Fe_{19}Si_{10}$, sp. ht. meas. 7−105064
Al_4Mn, sp. ht. meas. 7−105064
$Al_{78}Mn_{22}$ quasicrystalline decagonal alloys, low temp. sp. heat and magnetic meas. 7−77310
$Al_{84}Mn_{16}$, icosahedral, sp. ht., comparison with related crystalline phases 7−105064
$Al_{50}Mn_{12}Si_7$, sp. ht. meas. 7−105064
Al_2O_3, corundum, heat capacity calc. 7−76435
AlP, sp. ht., thermal expansion coeff. calcs. 7−105068
AlSb, sp. ht., thermal expansion coeff. calcs. 7−105068
Ar-O_2, solid HCP and FCC solns., thermal expansion determ. *(Russian)* 7−91848
Au-Fe dil. spin glass alloys, sp. ht. below 30 K 7−138241
$Ba_2Cu_3O_{7-\delta}$-based high T_c superconds., electronic and sp. ht. props. 7−118652
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7−138111
C fibre reinforced glassy C composites, thermal consts., temp. depend. *(Japanese)* 7−131381
C fibre reinforced Li_2O-Al_2O_3-SiO_2 glass ceramic, thermal diffusivity, sp. ht., thermal cond. 7−69999
Ca-Mg-Al metallic glasses, electronic struct. and electron transport, low temp. sp. ht. meas. 7−76746
$Ca(NO_3)_2$-KNO_3, freq. depend. specific heat near glass transition, photoacoustic effect meas. 7−91804
$Cd_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$CdGeP_2(As_2)$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$Cd_4GeS_6(Se_6)$ solid solns., physicochem. and photoelec. props. *(Japanese)* 7−125046
CdMn dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
$(CdMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$(Cd_{0.83}Pb_{0.17})_2Nb_2O_7$, ferroelec. transition, dielectric and electrothermal measurements 7−125638
$CdSiP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$CdSnP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
Ce-based Kondo lattices, specific heat of heavy fermions 7−70556
Ce-Cu_2Si_2 heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497
(Ce-Y)Ru_2Si_2 Kondo systems, low temp. heat capacity 7−70521
$CeAl_2$, heavy electron state, photoemission evidence 7−85946
$CeAl_2$, magnons, inelastic neutron scatt. meas., rel. to sp. ht. coeff. 7−77269
$CeAl_3$, band structure of heavy fermions 7−76754
$CeAl_3$, Kondo effect, Fermi liquid description of thermodynamics 7−92402
$CeAl_3$, sp. ht. and entropy, temp. depend. 7−124545
$CeAl_3$, specific heat, pressure depend. 7−69926
Ce_4Bi_3, heavy fermion ferromag. system, sp. ht. meas. 7−77296
$CeCu_5$, Kondo lattice showing mag. order, phys. props. meas. 7−77210
$CeCu_6$, thermodynamic and transport props. 7−137584
$Ce_{26}Cu_{74}$, low temp. specific heat, local random mag. anisotropy 7−77295
$CeCuAl_3$, Kondo lattice, elec., mag., and thermal props. 7−138201
$CeCu_3Al_3$, heavy fermion behaviour at low temp. 7−118464
$CeCu_4Al$, nonmagnetic, heavy fermion behaviour, elec. resist, thermopower, sp. ht. meas. 7−92154
$CeCu_2Ge_2$, Kondo lattice, mag. order., susceptibility, sp. ht., elec. resist. meas. 7−77278
$Ce(Cu_{1-x}Ni_x)_5$, conc. Kondo system state-mixed valence state transition 7−112277
$CeCu_{2-x}Ni_xSi_2$ alloys, heavy fermion to mixed valence transition, sp. ht. behaviour studies 7−124548
$CeCu_{1.54}Si_{1.46}$, heavy electron Kondo lattice, mag., sp. ht., elec. resist. meas. 7−77279
$CeCu_2Si_2$, band structure of heavy fermions 7−76754
$CeCu_2Si_2$, mag. and superconducting props., composition depend. 7−70555
$CeFe_2$, magnetic transitions, high resolution transport prop. meas. 7−77307
$Ce_{1-x}Gd_xAl_3$, heavy fermion, Kondo, spin glass-like and antiferromagnetic behaviour 7−70554

specific heat of solids continued
$Ce_{1-x}Gd_xAl_3$ spin glass-like heavy fermion system, percolation behaviour, low field suscept. meas. 7−125403
CeH_x low temp. sp. ht. and photoelectron spectra meas. 7−84313
$CeInAg_{2-x}Cu_x$, Heusler phase, Konda lattice, mag., elec., specific heat props. 7−138188
CeInAu, sp. ht., mag. susceptibility, transport props. 7−77247
$CeInAu_2$, sp. ht., mag. susceptibility, transport props. 7−77247
$Ce_xLa_{1-x}Al_2$, Kondo effect, Fermi liquid description of thermodynamics 7−92402
$Ce_xLa_{1-x}Cu_6$, heavy fermion system, electrical and mag. props. 7−70278
$Ce_{1-x}La_xPb_3$, heavy-fermion behavior and the single-ion Kondo model 7−99401
$Ce(Pb_{1-x}Sn_x)_3$, heavy fermion to mixed valence system, resistivity, susceptibility, sp. ht. 7−112822
$CePd_3B_{0.3}$, high field low temp. heat capacity, exchange interactions 7−91835
$CePd_3B_{0.6}$, heavy fermion cpd., sp. ht. meas., anomalous cryst. field effects 7−76433
$CePd_2Si_2$, mag. susceptibility, heat capacity 7−118779
$CePd_3Si_{0.3}$, heavy fermion cpd., sp. ht. meas., anomalous cryst. field effects 7−76433
CePtSi, heavy fermion cpd., mag. and elec. props. 7−98982
$CePt_2Si_2$, Kondo lattice cpd., specific heat and high pressure effects 7−70553
$CeRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$CeSi_x$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
$CeSi_x$, structural and mag. props. at ambient and high press. 7−99399
Ce_2Sn_5, mag. susceptibility, sp. ht. meas. 7−70533
Co, heat capacity in region of aligned phase transitions *(Russian)* 7−143034
Co, thermodynamic props., critical evaluation, mag. contribution 7−131335
Co-B-Si glasses, thermal expansion, sp. ht. 7−118804
$CoCl_2$-graphite intercalation compounds, mag. sp. ht. 7−92442
$(Co_{78}Fe_{22})_3V$, low temp. sp. ht. 7−118803
CoO-Al_2O_3-SiO_2 spin glass, sp. ht., anomalous field depend. near spin freezing temp. 7−112814
$Cr_{1-t}Mn_tAs$, paramag.-helimagnetic transition, struct. and mag. charact s 7−132020
$CsCuCl_3$ linear chain mag. cpds., low temp. sp. ht. meas. 7−143807
$CsDy(MoO_4)_2$ sp. ht. and thermal cond., temp. depend. 7−124544
$CsGd(MoO_4)_2$ sp. ht. and thermal cond., temp. depend. 7−124544
$CsNiCl_3$ linear chain mag. cpds., low temp. sp. ht. meas. 7−143807
Cs_2Te, thermodynamic props. meas. 7−84311
Cu oxide high T_c superconductors sp. ht. and T_c meas. 7−112601
Cu standard, using tray type calorimeter 7−80794
Cu superconducting oxides, mixed valence, high T_c, bidimensional electronic model calcs. *(French)* 7−124849
Cu-Mn dil. spin glass alloys, sp. ht. below 30 K 7−138241
$CuAlTe_2$, molar heat capacity temp. depend. at const. press., lattice anharmonicity effects 7−98490
$CuCl_2.2H_2O$, magnetic heat capacity under hydrostatic pressure 7−108568
$CuGe_2P_3$, sp. ht. Gruneisen fn. 7−98493
CuI, thermodynamic data, report 7−111915
CuRh alloys, low temp. sp. ht. data and charge self-consistent KKR-CPA calcs. 7−84316
$Cu_{50}Zr_{50-x}Al_x$ metallic glass, electronic struct.-sensitive electron transport 7−98963
D, high density, thermodynamic props. and thermal cond. 7−69931
Dy, resistance and sp. ht. anomalies at Neel point 7−92428
$Dy_3Al_5O_{12}$, sp. ht. meas. near T_N 7−85312
$Dy_3Al_5O_{12}$:Y, sp. ht. meas. near T_N 7−85312
$DyBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$Dy_xW_yO_2$, thermodynamic props. investig. 7−98503
Er, magnetic phases, low temp. sp. ht. meas. 7−105928
$ErBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
α-ErH_x, magnetic phases, low temp. sp. ht. meas. 7−105928
$Er_xY_{1-x}Rh_4B_4$, low temp. heat capacity, mag. and supercond. phase diagrams 7−92372
$Eu_{1-x}La_xS$ solid solns., ferromag. phase transitions studies 7−70546
$Eu_{0.08}MoO_3$, mag. props., Mossbauer spectra, sp. ht. meas. 7−92430
EuS_ySe_{1-y}, mag. phase transitions close to bicritical concentration 7−99456
$Eu_pSr_{1-p}S_s$ insulating, specific heat, mag. transitions 7−125433
Fe (II) complexes, low-spin-high spin transitions, calorimetric obs. 7−76427
Fe, cast, graphite, compacted vermicular, thermal props. rel. to microstruct. *(Korean)* 7−131338
γ-Fe, FCC, lattice dynamics, elastic consts. and sp. ht. 7−104933
Fe-Cr system, thermodynamic description and phase relationships 7−113516
Fe-Zr, amorphous alloys, low temp. sp. ht. 7−98495
Fe_x Hf_{1-x} glasses, mag. props. 7−118922
$Fe_{85}B_{15}$, metallic glasses, relax., thermophys. investig. 7−97980
$FeCl_3$ graphite intercalation compounds, mag. sp. ht. 7−92442
$Fe_{1-x}Co_xSi$ solid soln., band magnetism, mag. susceptibility and sp. ht. studies 7−99463
$Fe(H_2O)_6(NH_4)_2(SO_4)_2$, Mossbauer and other expts. on ferrous ion, ligand field model 7−105498
Fe_3O_4 magnetite, thermal and dielectric props. near Verwey transition 7−132027
Fe_yO, solid wustite thermodynamic props., subdomain stability boundaries, numerical results *(French)* 7−124555
$FePd_2Au$, sp. ht. meas., 3-20 K *(Russian)* 7−76428
$Fe_{20}Zr_{80}$ superconducting metallic glass, sp. ht. and elec. resist. meas. 7−137889
GVO_4, heat capacity over the range 5 to 300 K 7−91833
GaAs, doping with Group VI elements, phase transitions 7−69721
GaAs-GaAlAs multilayers, 2D electrons, Landau level density of state studies 7−137826
Gd, high purity, heat capacity, interstitial impurity effects 7−143032
$GdBa_2Cu_3O_{6+\delta}$, high T_c supercond., calorimetric evidence of antiferromagnetism 7−112834
$GdBa_2Cu_3O_{7-x}$, supercond. and normal samples, pres. and field depend. of mag. transition 7−132021
$Gd_{63.2}Co_{36.8}$, glass-forming eutectic, thermodynamic props. 7−118135

specific heat of solids continued
Ge, thermal expansion at high temp. 7−137586
He adsorbed on Ne-plated graphite, spectral and thermodynamic props. 7−105251
HfC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
$Hf_{90}Mo_{10}$, weak localisation effects on upper critical field 7−99371
$Hg_{3-\delta}AsF_6$, sp. ht. and diamag. susceptibility above supercond. transition temp. 7−99397
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$HoBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$HoRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$HoRh_2Si_2$ thermodynamic and mag. props. studies using cryst. field model 7−70558
In, with N-shaped I-V characts., current and temp. nonlinear oscills., sp. ht. determ. 7−98993
$In_{1-x}Ga_xAs_yP_{1-y}$, electronic heat capacity, oscillatory mag. field depend. 7−143804
$(KBr)_{1-x}(KCN)_x$, specific heat meas., phase and glass transitions 7−131326
KCl crysts., low temp. heat capacity, internal stress effects *(Russian)* 7−76429
KCl: Li^+, low temp. heat capacity and thermal expansion meas. 7−84309
KCs, glassification temps. 7−143009
KH_2PO_4, sp. ht. props. near transition temp. and at low temps. 7−99746
KH_2PO_4, thermal and dielectric props. at low temp. 7−70692
$K_{1-x}Li_xTaO_3$, pure and Li doped, sp. ht. meas., temp. depend., phase transition 7−76430
K_xMoO_3 blue bronze, CDW transport, sp. ht. and ion channelling 7−99030
KVO_3, heat capacity meas. 7−118124
$KZnF_3$, heat capacity and lattice dynamics 7−111794
La-Sr-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7−111470
(La-Ce)Ru_2Si_2 Kondo systems, low temp. heat capacity 7−70521
$(La_{0.9}Ba_{0.1})_2CuO_{4-y}$, high T_c supercond., mag. and thermal meas. 7−112665
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., sp. ht anomaly at supercond. transition 7−99333
$(La_{1-x}Ba_x)_2CuO_{4-y}$ high T_c supercond., transport props. and sp. ht. 7−92371
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., thermal anomalies of latt. props. *(Russian)* 7−125172
$(La_{1-x}Ca_x)_2Cu_2O_4$, sp. ht., superconductivity 7−92328
$La_{1-x}Ce_xB_6$, Kondo system, cryst. field effects 7−76830
$(La_{1-x}Ce_x)B_6$, thermodynamics, Coqblin-Schrieffer model 7−77299
La_2CuO_{4-y}, physical props., O defect effects 7−142756
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., sp. ht., resist. and diamag. susceptibility 7−99331
$LaRh_2Si_2$, low temp. sp. ht. meas., mag. props. 7−92411
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., heat capacity and supercond. transition temp. 7−99332
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon density of states 7−104934
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. jump, critical temperature 7−112659
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. and phonon spectrum, neutron and Raman scatt. studies *(Russian)* 7−131327
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., antiferromagnetic interactions 7−143815
$La_{1.8}Sr_{0.2}CuO_4$ ceramic, high T_c supercond., struct. and thermodynamic anomalies at T_c *(Russian)* 7−125171
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., thermal capacity *(Russian)* 7−125245
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., normal and supercond. state props. 7−99303
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., thermodynamic and other props. 7−143707
$La_{2-x}Sr_xCuO_4$, high temp. superconductor, temp. depend. of specific heat 7−85189
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic props. 7−99369
$La_{2-x}Sr_xCuO_4$ high T_c superconds., fabrication, mech. props., sp. ht. and O diffusion studies 7−119209
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
$La_{2-x}Sr_xCuO_{4-y}$ solid solns., superconducting props., sp. ht. *(Russian)* 7−105756
LiF crysts., low temp. heat capacity, internal stress effects *(Russian)* 7−76429
$LiGaO_2$, heat capacity and thermodynamic props., 180 to 700 K 7−105063
$LiInS_2(Se_2)(Te_2)$, heat capacity, 200 to 550 K 7−84310
Lu ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
LuB_{12}, homogeneity region and sp. ht. studies *(Russian)* 7−124535
$MgSiO_3$, ilmenite, heat capacity calc. 7−76435
Mg_2SiO_4(forsterite mineral), phonon density of states and specific heat at Earth mantle conditions 7−133670
$Mg_3Zn_3Al_2$, icosahedral supercond., sp. ht. meas. 7−112663
$MnAs_{1-x}P_x$, sp. ht., low-high spin anomaly 7−118811
$Mn_xFe_{1-x}Cl_2.4H_2O$, heat capacity, thermodynamic fns. 7−84314
$MnO\text{-}Al_2O_3\text{-}SiO_2$ spin glass system, calorimetric and susceptibility studies 7−112819
Mo, thermal and electrical conductivity meas., pulsed laser heating method 7−137899
α-N_2, molecular crystal, lattice dynamics, Kohin type potential *(Japanese)* 7−111791
N_2-Ar-CO orientational glass, low temp. specific heat 7−143035
$NH_4Cl_{1-x}Br_x$ solid solns., spin-glass-type phase 7−99464
NH_4CoF_3, heat capacity, 1st order phase transitions and mag. transitions 7−105065
NH_4IO_4, heat capacity meas., adiabatic calorimetry 7−118123
NH_4MnF_3, heat capacity, 1st order phase transitions and mag. transitions 7−105065
NH_4ReO_4, cooperative ordering, pseudospin model 7−111435
Na vermiculite, intercalation cpds., hydration states, phase transitions 7−137543
NaCl:Cu^+ crysts., low temp. heat capacity, internal stress effects *(Russian)* 7−76429
NaCl:Mn^{2+}, mag. transition, Suzuki phase, sp. ht. meas. 7−112823
specific heat of solids continued
NaKCs, glassification temps. 7−143009
$NaNO_2$ single crysts., incommensurate phase, gamma irrad.-induced defect effects, sp. ht. meas. 7−117918
Nb-Sn thin film, A15 supercond., sp. ht. meas. 7−112662
$(NbSe_4)_3I$, thermal cond. and thermal capacity 7−98601
Nb_3Sn, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Nd-Fe-B permanent mag., elec. resist. and sp. ht. studies 7−131611
$NdRh_3B_2$, possible antiferromag. interactions, mag. suscept., sp. ht. meas. 7−105911
$Ni_{1+2x}Fe_{2-3x}Sb_xO_4$, spinel ferrite, sp. ht., thermal conductivity and thermal diffusivity 7−92433
$NpAl_2$ ferromagnetic intermetallic, sp. ht. meas. 7−69924
O_2 monolayers on graphite, specific heat, sound velocity, Debye temp., lattice dynamics 7−137697
O_2 physisorbed layer on graphite, solidification, susceptibility studies 7−124696
Pb, lattice dynamics 7−142925
$Pb(Sc_{0.5}Nb_{0.5})O_3$, polycrystalline ferroelectric, glasslike behaviour at low temp. 7−125588
$Pd_{1-y}Cu_yH_x$, influence of Cu on supercond. props. 7−112713
Pd_3FeH, electronic structure and mag. props. 7−124845
$Pd_{82}Si_{18}$, metallic glasses, relax., thermophys. investig. 7−97980
Pr, high pressure bandstruct. and electronic props. 7−105388
Pr, self-consistent band struct. under press 7−143330
Pt, with N-shaped I-V characts., current and temp. nonlinear oscills., sp. ht. determ. 7−98993
PtNi, system of interacting Kondo moments, mag. props. 7−105885
$RbNO_2$, polymorphism, heat capacity, 83 to 483 K, calorimetric obs. 7−104986
$RbNiCl_3$ linear chain mag. cpds., low temp. sp. ht. meas. 7−143807
Sc ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
ScDy, anisotropic spin glasses, sp. ht. meas. 7−138240
ScEr, anisotropic spin glasses, sp. ht. meas. 7−138240
ScEr dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
Si, crystalline, amorphous and liq., phase diagram studies 7−118059
Si, thermal expansion at high temp. 7−137586
Si:H, amorphous and cryst., temp. depend. optical absorption 7−99781
a-Si:H, mol. relax. versus orientational ordering of H_2 7−137359
SiC fibre/whisker reinforced osumilite glass-ceramic, thermal conductivity/diffusivity 7−131378
SiC refractory ceramic, low temp. sp. ht. temp. depend. study 7−118122
p-SiGe, heat content, thermal diffusivity, cond. 7−143117
SiGe/GaP, heat content, thermal diffusivity, cond. 7−143117
SiO_2, crystalline silica, low freq. dispersive modes and T^3 sp. ht. anomaly, comment 7−69932
SiO_2, crystalline silica, T^3 sp. ht. anomaly, reply to comment 7−69933
$Sn_2P_2(S_xSe_{1-x})_6$ uniaxial ferroelectrics; critical behaviour near Lifshitz point 7−118961
$Sn_2P_2(Se_xS_{1-x})_6$, ferroelectric phase transition splitting, phenomenological anal. 7−125636
$TaH(D)_{0.5}$, elec. field gradient, calorimetric determ. 7−98492
Th, specific heat meas., 298-700 K 7−76432
$Th_{1-x}Tb_x$ dilute alloys, 4f-instability, sp.ht., mag. suscept., and resist. meas. 7−76848
Ti, lattice stability, heat capacity, transform. enthalpy 7−84315
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
$TiBe_2$, low temp. transport props., single component Fermi liquid theory 7−137897
TiC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
$TlGaSe_2$, heat capacity studies, 4.2 to 350 K 7−105067
$Tm_{1-x}Lu_xCu_2Si_2$, mag. props. and sp. ht. studies 7−118778
U equiatomic ternary cpds., mag. and elec. props. 7−132031
U-based systems, heavy electron materials, phys. props., supercond., electron itineracy 7−105758
U-based systems, hybridisation effects, evolution from nonmagnetic to mag. behaviour 7−105917
$UAs_{1-x}Sb_x$, f-electron band, electronic transition, mag. ordering, sp.ht. study 7−105935
$UAs_{1-x}Sb_x$, sp. ht. meas., 1.5-11 K 7−76434
UBe_{13} heavy fermion superconductor, coherence and pair-breaking effects, extended BCS theory 7−70466
UBe_{13} heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497
UBe_{13}, heavy fermion supercond., sp. ht. under press. 7−77155
UBe_{13}, heavy fermion superconducting props. investigations 7−105801
UBe_{13} heavy-electron superconductor, quadrupolar Kondo effect 7−137914
UBe_{13}, sp. ht. and thermal cond. quasiexponential temp. depend. studies 7−69930
UBe_{13}, specific heat, pressure depend. 7−69926
UBe_{13}, superconducting state, resonant impurity scatt., sp. ht. 7−105834
$U(Ga_{1-x}Ge_x)_3$ hybridised f-electron system, magnetic to nonmagnetic transition studies 7−112789
UGaM (M=Co,Ir,Ni,Pt,Rh,Ru) mag. behaviour studies 7−77298
$U_{1-y}Gd_yO_2$, heat capacity, 310-1500 K 7−118125
UIrGe heavy fermion cpd., low temp. susceptibility and sp. ht. 7−125389
UPt_3 heavy fermion cpd., unconventional s-wave superconductivity 7−112664
UPt_3, heavy fermion supercond., sp. ht. under press. 7−77155
UPt_3, low temp. transport props., single component Fermi liquid theory 7−137897
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7−69927
UPt_3, specific heat, pressure depend. 7−69926
$U(Pt_{1-x}Pd_x)_3$ heavy-fermion alloys, superconductivity and antiferromagnetism, phase diagram determ. 7−112790
$U(Pt_{1-x}Pd_x)_3$ pseudobinary heavy fermion systems, sp. ht., resist. and mag. suscept. meas. 7−69929
URu_2Si_2, mag. and thermal props., crystal field effect calcs. 7−112253
$USb_{1-x}Te_x$, sp. ht. meas., 1.5-11 K 7−76434
$U_xTh_{1-x}Zn_{8.5}$ system, mag. anisotropy 7−112736
V, Debye temp. in high-temp. limit, heat capacity anharmonic component 7−98371
V:H(D), pressure composition isotherms, lattice gas model *(German)* 7−76436

ecific heat of solids continued
V-Ag multilayered superconductors, mag. field penetration depth, material parameters 7−105828
V-Ga thin film, A15 supercond., sp. ht. meas. 7−112662
V-Os system, electronic and supercond. props. 7−112605
V-Ru system, electronic and supercond. props. 7−112605
V-Si thin film, A15 supercond., sp. ht. meas. 7−112662
VN thin films, ion irrad. prep., supercond. and elec. props. 7−76226
VO_2, sp. ht. and mag. susceptibility, determ., metal-insulator transition 7−137797
V_2O_5, high-temp. relative enthalpies meas. 7−76458
V_4O_7, specific heat meas., 0.4-50 K, λ-type transition obs., entropy meas. 7−143805
V_3SiH_x polycryst. superconductor, sp. ht. temp. depend., H interstitial effects study 7−69925
V_2Zr, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Y ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
Y-Ba-Cu-O high T_c supercond., upper critical field temp. depend. meas. 7−105864
Y-Ba-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7−111470
Y-Ba-Cu-O high T_c supercond., sp. ht. jump at 92 K 7−112658
$YBa_2Cu_3O_7$, extreme type II supercond., magnetisation meas. 7−138124
$YBa_2Cu_3O_7$, high T_c supercond., sp. ht. jump 7−112645
$YBa_2Cu_3O_{7-\delta}$, heat capacity at superconducting transition temp. 7−131890
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., sp. ht. anomaly at superconducting transition 7−131891
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., thermal and mag. props. 7−138127
$YBa_2Cu_3O_{7-x}$, high T_c supercond., sp. ht. study 7−138130
$Y(Fe\text{-}Co)_2$, mag. props., rigid band model 7−99390
Yb high pressure bandstruct. and electronic props. 7−105388
$Yb_{1-x}In_xCu_z$ valence phase transition studies 7−98948
YbSi, nearly localised heavy fermion antiferromagnet 7−70562
$Yb_{80}X_{20}$ (X=Cu, Ag, Au), amorphous alloys, transport props., mag. susceptibility, sp. ht. 7−98968
ZnMn dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
$(ZnMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
ZnMnX (X=Se, Te), dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$ZnSnAs_2$, high-temp. sp. ht., lattice anharmonicity 7−69923
ZrC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
$Zr_{100-x}Cu_x$, amorphous sputtered alloys, low temp. specific heat meas., low energy excitations 7−143033
$Zr_{100-x}Cu_x$ amorphous superconducting sputtered alloy, low-temp thermodynamic props. 7−138128
$Zr(Fe_{1-x}Co_x)_2$, mag. props., rigid band model 7−99391
$Zr_{70}Ni_{30}$, weak localisation effects on upper critical field 7−99371
ZrO_2, polycrystalline ceramics, thermal diffusivity and cond., sp. ht. 7−98591
$Zr_{75}Rh_{25}$, weak localisation effects on upper critical field 7−99371
Zr_3RhH_x, amorphous, produced by solid-state reaction, thermal props. 7−84317

specific volume *see density*

specimen preparation
see also biological specimen preparation; metallography; replica techniques
brass, thin corrosion layers prep. method for TEM 7−132850
circular saw attachment for use in spark machining 7−128553
cylindrical sections production for metallography, optical microscopy and electron microprobe analysis *(German, English)* 7−71429
ice crystal replication, application of common plastic solns. 7−128551
intelligent HPLC autosampler 7−106844
low-temperature SEM 7−95686
metals in solid samples, laser ablation sample introduction for plasma emission spectroscopy 7−71544
montmorillonite pressed pellets, prep. depend. props. rel. to optical consts. meas. in FIR 7−92627
organochlorines and trace metals, micropollutants in open ocean waters, sampling procedures 7−93608
polymeric multicomponent blends, low temp. microtoming for SEM investigations of structure 7−104595
Prepamatic−a machine for the fully automatic preparation of metallographic specimens *(German, English)* 7−132859
robots appl. 7−102393
rock salt, texture anal., neutron diffraction methods 7−86508
sediments of seafloor, organic carbon determ. method, dry combustion technique 7−134018
steel, maraging, Ni, microscopic determ. of austenite 7−138924
surface decoration, step nucleation processes 7−119474
TEM, high resolution, signal-to-noise ratio improvement 7−134900
titanomagnetite particles dispersion, specimen preparation method for rock magnetism studies 7−101544
Al powder particles, thinning for TEM obs. 7−78409
Al-Ti-B, grain refining wires, metallographic prep. *(German, English)* 7−86529
C fibre reinforced epoxy, fibre bending strength and elastic modulus determ. method 7−78423
^{252}Cf plasma desorption mass spectrometry, advances and appls. 7−116019
Cu, soft alloys, metallographic prep. of structural defects, pores, crack form. during heat treatment *(German, English)* 7−71430
Fe, cast, lower bainitic nodular, austempered foils, polishing, TEM obs. 7−78071
GaAs, TEM specimen preparation by ion milling, radiation damage 7−111698
Mg_2Si transform, during TEM foil prep. 7−138923
^{A}Pu, A=239,240, fallout in marine samples, mass spectrometric determ. 7−144926

speckle
accommodation dark focus, variation with lases speckel exposure duration 7−78843
astronomical image reconstruction using space slit aperture telescope 7−115251
astronomical imaging by Space Telescope, resolution improvement by roll deconvolution of data 7−79846

speckle continued
astronomical IR speckle interferometry, constraints 7−127856
astronomical speckle masking, image reconstruction by cross triple correlation 7−101693
astronomy, optical long-baseline interferometry and aperture synthesis by speckle masking 7−101695
automated electronic speckle pattern interferometry for inspection 7−80739
automated fringe measurement in speckle photography 7−102498
automatic analysis of Young's fringes in speckle photography and particle-image velocimetry 7−128548
binary stars, speckle interferometric meas., potential accuracy 7−88505
binary stars, speckle interferometric meas. of 28 systems using BTA 7−88506
birefringence measurements by double speckle photography 7−67380
blood flow measurement using superposition of laser speckle 7−93869
blood flow monitoring using optical fibre probe 7−79052
brass specimen, crack tip displacements, speckle photography anal. 7−91015
colour image retrieval from black and white transparencies using partially coherent speckle 7−110271
comparative speckle interferometry; improvement 7−73410
computer aided laser measurement techniques *(German)* 7−130227
computer-generated holography, image reconstruction, speckle improvement *(Japanese)* 7−130026
cylinder, internally pressurised, part-circular crack, evaluation of finite element calc. by coherent optics techniques 7−123555
differential interferometer using double aperture imaging applied to phase object study 7−102505
digital speckle interferometry of 100 binary and suspected binary stars *(Russian)* 7−140180
diode laser, appl. in an ESPI system 7−67384
displacement measurement by image-processed speckle patterns 7−121210
distance meas. based on lateral speckle velocity *(German)* 7−128536
χ Dra, spectroscopic binary, stellar masses, luminosity and orbit 7−101849
echographic equipment, speckle and texture, imaging performance 7−126957
electronic speckle interferometry fringes, optimisation with limited laser power 7−102501
electronic speckle pattern interferometric images, smoothing method 7−103757
electronic speckle pattern interferometry, present state w.r.t. automatic inspection 7−80869
flow measurement by pulsed laser velocimetry 7−104364
flow measurement by speckle interferometry 7−102506
flow visualisation using real-time TV speckle interferometer 7−104363
heterogeneous media, light-scattering speckle patterns, correlation properties 7−122825
holograms of speckle fields 7−103779
holographic fringe formation and localisation, stat. optics approach in terms of speckle concepts 7−117162
holography, double exposure technique, formula for intensity distrib. 7−68585
image digitizer system comparison with coherent and incoherent light, speckle size influence 7−117147
images, Erlangen-bispectral processing 7−74871
in-plane translation meas. by speckle calculation, using linear image sensor 7−80863
interference fringes, visibility oscills. and localisation, in speckle interferometry 7−116004
interference pattern of deformed object, normal displacements influence 7−130012
interferograms, high-contrast longitudinal-displacement 7−116003
interferometry, multiplexing methods 7−95643
interferometry, phase difference between two interfering speckle fields, statistical props. 7−90507
interferometry, sensitivity and accuracy, comparison with holographic interferometry 7−140739
interferometry appl. to difference deformation meas. 7−121214
interferometry of phase objects, effect of incidental motion 7−140740
IR speckle interferometry image reconstruction techniques in astronomy 7−107850
J-integral invariance in plastic deform., three point bending 7−110866
laser and stellar speckle, statistical props. 7−134148
laser speckle displacement cardiography 7−119825
laser speckle displacement cardiography during I and II sounds 7−87154
laser speckle method using optical fibres, velocity meas. 7−68737
laser speckle photography for inhomogeneous strain field studies *(French)* 7−140734
laser speckle velocimetry, autocorrelation analysis of fringe images 7−123810
liquid convection in cavity cooled from above, speckle meas. 7−142148
metrology, hololens imaging system 7−67379
microrough surfaces, optical characterisation, limitations and success of theory 7−80737
microscopic deformations meas., speckle interferometry appl. *(German)* 7−95642
multi-aperture white light speckle photography, applications 7−73454
multimode fibres, statistical correlation of optical field, vibr. effect 7−104013
multimode light guides, polarisation characts. 7−90811
new speckle pattern measurement method for in-plane displacement analysis *(Japanese)* 7−89200
non-Gaussian speckle, Nakagami m-distribution 7−110244
on-chip massively parallel Monte Carlo cellular processors, random-number arrays, optical generation 7−68583
particle image velocimetry, directional ambiguity removal using holographic image separation 7−104360
particle image velocimetry measurements of unsteady separating flow over an inclined flat plate 7−123809
pattern correlation by digital image processing 7−140738
phase breaking direct obs. via speckle patterns 7−82477
photography fringe anal., fast transforms, comparison 7−103756
photomechanics and optical metrology techniques 7−134846
pipes, holographic NDT, predicted fringe patterns and exptl. results 7−119484
Pluto-Charon system, speckle interferometric obs. (1983 July 8 to 15) 7−72352
power spectra, optical fibre probe detection 7−129981

speckle continued
radio interferometry, weak objects imaging in conditions of poor phase stability 7−120280
shearography determination of strains and moments in uniformly loaded triangular plate 7−142242
single-star scintillation analysis of wind and turbulence 7−87761
SIR-B ocean wave imagery, speckle noise reduction 7−134002
SN 1987A in LMC, IR speckle obs. and photovisual magnitudes 7−94924
solar granulation, power spectra determ. from speckle interferometry 7−94835
spatially incoherent source, 3D information from spectral content of speckle pattern 7−75093
stellar speckle interferograms of binary stars, data reduction based on shift-and-add method 7−127735
stellar speckle interferometry energy spectrum recovery by convex projections 7−94665
stereoscopic white-light speckle photography for in-plane surface displacements meas. 7−67407
stimulated Raman scattering, coherence props. 7−123106
strain measurement, interior 7−136768
supernova 1987A in LMC, speckle observations indicating existence of nearby bright feature 7−94920
surface roughness, evaluation by laser speckle spectral density 7−90857
surface roughness meas. by speckle method *(German)* 7−67276
tilted planar sources, complex coherence degree based on speckle pattern spectral content 7−110237
TV speckle interferometer with photographic storage appl. to displacement and vibration detection 7−102507
ultra-low thermal expansion meas. using push-rod dilatometers, dial gauge and laser speckle appl. 7−128530
US imaging, B-mode speckle pattern changes meas. 7−126959
US imaging, speckle S/N ratio vs. lateral resolution 7−126958
US reflection-mode computerised tomography for in-vivo imaging of small organs 7−126961
US speckle reduction using FM pulses 7−101027
velocity measurements by Doppler speckle interferometry 7−128637
volume holograms of speckle field, saturable photoresponse conditions, noise calcs. 7−130020
white-light processing application to holographic interferometric and metrological studies 7−117161
wide-angle diffuser transmission functions and far-zone speckle 7−68561
Ag halides, light scatt., noise effect on holograms and specklegrams *(Chinese)* 7−130022
Si, induced absorption, picosecond pulse pump speckle effects 7−103883

spectacles *see lenses; sensory aids*

spectra
see also alpha-particle spectra; astronomical spectra; atmospheric spectra; atomic spectra; beam-foil spectra; beta-ray spectra; Brillouin spectra; cosmic ray energy spectra; electron spectra; energy level crossing; gamma-ray spectra; light scattering; luminescence; mass spectra; matrix isolation spectra; microwave spectra; molecular spectra; multiphoton spectra; neutron spectra; nonradiative transitions; optical double resonance; optical hole burning; optogalvanic spectra; oscillator strengths; photoacoustic spectra; proton spectra; quantum beat spectra; Raman spectra; spectra of inorganic liquids and solutions; spectra of organic molecules and substances; spectra of solids; spectral line breadth; spectral line shift; spectrochemical analysis; Stark effect; stimulated scattering; time of flight spectra; time resolved spectra; transition moments; tunnelling spectra; two-dimensional spectra; X-ray spectra
No entries

spectra of diatomic inorganic molecules
see also infrared spectra of diatomic inorganic molecules; radiofrequency and microwave spectra of diatomic inorganic molecules; Raman spectra of diatomic inorganic molecules
cometary diatomic molecules, spectral features and calcs. 7−122556
cyanogen photolysis, Ar-cyanogen flow, CN UV fluoresc. spectra anal. 7−96718
diatomic molecules, vibr.-rot. spectrosc., computer algebra calcs. 7−122342
diatomic mols., photoabsorpt. cross section, pot. curves 7−129692
emission spectroscopy with use of Polaroid films 7−108107
excimer laser photolysis, decay times, emission spectra, ultraviolet spectra 7−139017
inert gas hydride excimers, binding energies, bound-free UV fluoresc. spectra anal. 7−96723
Kr_2, excimer emission from high-pressure glow discharges 7−104476
linear Stark effect, adsorbed on metal surface 7−77515
molecular gases, independent discharges, spectrosc. anal. 7−117782
rare-gas excimers, heavy-ion excitation 7−116983
vibrational spectra, low resolution study of chaotic regions in quasicontinuum 7−103475
Al_2, $a^3\Pi_u$ ground state, ab initio CI calcs. 7−103402
Ar excimer, radiation from free jet expansion, VUV spectra 7−96730
Ar_2, excimer, excited state collisional quenching, pulse radiolysis 7−68403
Ar_2, rovibronic spectra, rot.-electronic motion coupling 7−74566
B_2, matrix isolated, ESR and ab initio CI calcs. 7−129751
BO, band systems, electronic transition moment variation 7−135827
BS, electronic band spectrum 2100-9000 Å, isotope shift studies 7−129792
Br_2, $1g(^3P_2)$ ion-pair state, pump-probe excitation science, optical-optical double resonance technique 7−135978
Br_2, ion-pair state investigated by state-selective spectroscopy using sequential two-photon transitions 7−96714
Br_2, photodissoc., continuum absorpt. coeff. and quantum yields meas. 7−129730
C_2 (0-0) Swan band obs. of P/Comet Halley (1982i) 7−94819
C_2, energy states population distrib., reson. fluoresc. theory anal. 7−122325
CN, intrinsic line widths determ. from interstellar absorpt. lines obs. 7−88689
CN, solar photospheric turbulent vels. from weak lines 7−88336
CN(0-0) band R-branch spectrum of P/Comet Halley (1982i) 7−94818
CO, inter-Rydberg $K^1\Sigma^+$-$B^1\Sigma^+$ and $L^1\pi$-$B^1\Sigma^+$ transitions obs., optogalvanic spectra 7−129728
CO, interaction with mech. activated SnO_2 7−93376
CO, refined partition functions determ. 7−134120
CO, Rydberg states, photoabsorpt. and photodissoc. cross sections 7−103592
CO^+, $B^2\Sigma^+$−$A^2\Pi_i$, system, rot., mol. consts., UV spectra 7−90182
spectra of diatomic inorganic molecules continued
CO_2, Q-branch of ν_1 band, CARS study *(French)* 7−122545
CS emission from two periodic comets, IUE UV obs. 7−88294
$^{12}C^{13}C$ features in comets, profile study 7−94749
Ca-inert gas mol. bands, laser absorpt. profiles 7−109872
Cl_2, D′→A′ transition, UV emission spectra 7−82205
Cs-Xe, for using diffuse struct., half collision anal. 7−141565
CuCl flame spectra, oxidant, reductant and Cu compound effects on band transitions *(Chinese)* 7−93327
D_2, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
DCl, resonantly-enhanced UV two-photon spectra 7−96810
EuF, absorption, emission, lases fluorescence spectra 7−129726
$F^-+H^+(H_2^+)$, HF excited states distrib., UV chemiluminesc. spectra anal. 7−96719
F_2, UV absorpt. spectra 7−129736
GdO, absorption, emission, lases fluorescence spectra 7−129726
Ge_2, complete active space MCSCF and CI calcs., spectroscopic props. 7−96559
H halide-cyclopropyl derivates, H bonded complexes, matrix isolation spectra 7−109734
H, photoabsorption, photodissoc. and fluoresc. 7−90299
H_2, electronic transition, spectral moments, quasiclassical 7−68292
H_2, fast beam, Rydberg state, hyperfine and fine struct., UV obs. 7−74656
H_2 line emission by Lyman-alpha hygrometers, influence on temp. sensitivity 7−127568
H_2, Lyman and Werner band systems, rot. coupling effect on emission probabilities 7−129737
H_2, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
H_2, refined partition functions determ. 7−134120
H_2, Rydberg states, field ionisation threshold study 7−136019
H_2+C^{4+}, subshell-selective electron capture cross sections, VUV spectra 7−90408
HCl, resonantly-enhanced UV two-photon spectra 7−96810
HCl^+, $A^2\Sigma^+$ to $X^2\Pi$ system, emission spectra, electronic transition moments 7−82207
HD, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
HD, triplet 3s,3d complex, laser photofragment spectroscopy 7−141588
HD, triplet Rydberg states, fast neutral-beam photofragment spectroscopy 7−90010
HF, vibr. excited, form., IR chemiluminesc. obs. using SISAM 7−68288
He excimer, radiation from free jet expansion, VUV spectra 7−96730
HeH, dipole transition moments 7−116942
I_2, high sensitivity intracavity stimulated emission pumping, small optical gains meas. 7−129795
I_2, ion-pair states, VUV fluoresc. spectra anal. 7−135963
I_2, $R0_u^+$ state, rot.-resolved Rydberg transition 7−68419
I_2, vel. distrib., picosecond transient grating expts., spectroscopy 7−96580
I_2, vibrational spectrum, single- and two-photon absorpt., laser photoacoustic spectroscopy 7−141589
I_2 visible spectra, saturation, cross-relaxation effects 7−109918
ICl, laser photolysis, 530 nm, time-resolved LMR obs. 7−122576
InBr, mol. vibr. struct., absorpt. and emission spectra 7−68339
InBr, rot. struct. calcs. 7−141554
K_2, rovibrational transitions, Doppler-free polarisation spectroscopy, visible spectra anal. 7−109916
Li_2 diffuse violet bands, 4000 Å region, intense spontaneous amplified emission 7−122555
Li_2 Rydberg states, polarisation labelling spectroscopy, quantum defect 7−74469
LiCl, diode laser spectroscopy at elevated temp., vibr. parameters 7−96710
LiH, isotopic species, vibr. levels lifetimes, UV fluoresc. spectra 7−141591
MgCl, 4730 Å band, rot. anal., molecular constants and isotopic shifts 7−141590
N_2 LBH emission and far UV vehicle glow of S3-4 satellite 7−127627
N_2, light parametric freq. conversion in short wavelength region 7−103886
N_2, molecule, new emission bands in 85 to 107.8 nm range 7−74659
N_2^+ photofragments in laser photodissoc. of N_2O, kinetic energy spectra in visible region 7−100597
N_2^+ plasma, A-X system, UV electronic absorpt. spectra 7−123981
NH* fragment, UV emission spectra 7−122725
NO, in inert gas matrix, emission, diffusion-controlled quenching 7−135984
Na_2, absorption spectrum from 350 to 1075 nm 7−122559
Na_2, UV spectra, diffuse bands 7−122563
NaK, $C(3)^1\Sigma^+$ state, laser-induced fluoresc. and two-photon ionis. spectroscopy 7−129801
NiBr emission spectra at 3800 to 5500 Å 7−122560
NiD, rot. anal. UV and visible spectra 7−74653
O_2, light parametric freq. conversion in short wavelength region 7−103886
O_2 liquid, vibrationally and electronically excited, nonlinear and luminesc. spectroscopy 7−141580
O_2, UV absorpt. cross-sections and band oscillator strengths 7−135962
O_2, UV photoabsorpt. cross-section, pot. curves 7−129735
OH radical, 306.4 nm emission in reduced pressure ICPs 7−122561
OH, vibr. excited, form., IR chemiluminesc. obs. using SISAM 7−68287
PN, $A^1\Pi$-$X^1\Sigma^+$ bands, rot. anal., perturbation studies 7−141560
PN radical, VUV spectra 7−141598
PbS, $B1$-$X^1\Sigma^+$ transition, laser excitation spectroscopy, fluoresc. obs., hyperfine splitting 7−122603
PtN^-, autodetachment dynamics and spectrosc. 7−122500
Sc_2, matrix isolated, electronic and mag. circular dichroism spectra 7−90036
SiCl, rotational structure, isotope shifts, UV fluoresc. spectra anal. 7−96720
SiH^+, laser photofragment spectrosc. 7−122498
T_2, isotope effects on ^3T β-spectrum 7−116885
ThO, visible and UV bands, rot. anal. 7−82200
UO, absorption, emission, lases fluorescence spectra 7−129726
XeH mol. UV emission spectra obs. 7−109920
YO,$X^2\Sigma^+$ state, fine and hyperfine struct., visible spectra 7−74651
ZrO, singlet systems and energy levels, stellar appl. 7−103517

ectra of inorganic liquids and solutions
see also Raman spectra of inorganic liquids and solutions
aligned anisotropic fluids, rotational contribution to the vibrational band-shape of ordered systems 7−132250
complexes, H bonded in soln., dynamics effect on bond shapes 7−125729
condensed media, vibr. spectra, temp. depend. of line freqs. 7−76330
shape of IR absorption bands of molecules with internal motion *(Russian)* 7−109901
water, excess electrons, evidence of prehydrated state with femtosecond lifetime 7−85657
water, liq., optical consts., temp. variation, Fourier transform IR spectra 7−77532
Ar-Kr(Ne) mixtures, far IR absorpt. spectra 7−132263
CN^-, anodic oxidation on Pt electrode in solns. 7−93370
CdO semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
Q-Cd_3P_2, colloidal, aq. soln., flash photolysis, optical absorpt. meas. 7−113167
$CeCl_3$, in soln., $^2D(5d)$ excited state, stimulated absorpt. and luminesc. study 7−125790
$CuBr_2$-N,N-dimethylformamide solns., spectrophotometric and conductometric obs. 7−106209
Er acetate, nitrate and sulphate solutions, interaction and intensity parameters 7−70882
HD, liq., rot. and fundamental bands, interference effects in IR spectra 7−90109
HDO dissolved in ketones and ethers solvents, IR spectra study 7−122530
HgI_2, layered semicond. colloids, size quantization 7−85766
In_2O_3 semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
KBr, molten liq., picosecond recomb. dynamics of electrons 7−77602
KCl molten liq., picosecond recomb. dynamics of electrons 7−77602
$LiClO_4$ solns. in 2-methyltetrahydrofuran, mols. relax. dynamics and struct. 7−104516
LiCl, aq. soln., conc., optical absorpt. obs. of trapped electrons 7−92702
NH_3 solution, solvated electrons, optical absorpt. spectra 7−82026
Ni^{2+}-H_2O-NH_3 system, comp. and electronic spectra of complex species in soln., computer studies 7−144084
OCN^-, anodic oxidation on Pt electrode in solns. 7−93370
$(Pt_3(CO)_6)_n^{2-}$, visible spectra, press. shifts 7−96711
Ru complexes, Ru(bipyridyl)$_3^{2+}$ derivatives, absorpt., luminesc., charge localisation 7−113183
Zn^{2+} solutions in conc. aqueous KOH, structure, Raman and ^{67}Zn studies 7−97896
ZnO, supersaturated soln., optical props., UV spectra 7−70834

ectra of inorganic molecules
see also spectra of diatomic inorganic molecules; spectra of polyatomic inorganic molecules
No entries

ectra of inorganic solids
see also impurity and defect absorption spectra of inorganic solids; infrared spectra of inorganic solids; luminescence of inorganic solids; radiofrequency spectra of inorganic solids; Raman spectra of inorganic solids; visible and ultraviolet spectra of inorganic solids
alkali iodides, excitonic spectra including relativistic effects, ab initio calcs. 7−92076
amorphous semiconductors, potential fluctuations and density of gap states, rel. to Urbach tail 7−84653
high temperature superconductors, conf., Anaheim, CA, USA (April 1987) 7−108049
metals, electron-hole symm. of shells of equivalent electrons, effects on spectral and mag. props. *(Russian)* 7−112156
rare earth metals, core level spectra, 4f level occupancy, Coulomb interactions and hybridisation effects 7−144247
semiconductor formation and charactn. on lipid bilayer membranes 7−105204
$Ba_3LaTa_3O_{12}$:$Nd^{3+}(Eu^{3+})$ cryst., rhombohedral perovskite, spectral luminesc. props. 7−119050
BaTe, optical response and band struct. under press. 7−98803
Bi size quantised films, interband absorption 7−138529
Cd_3P_2, Q-state particles, radiation chemistry, small semiconductor clusters quantum state 7−70830
Cs compounds, core-excited, spectra, Ar^+ bombardment effects 7−132398
$CsPbI_3$, excitonic states, absorption, reflection, luminescence spectra *(Russian)* 7−119047
GaAs residual impurity gettering during growth, spectra studies 7−106108
InP, residual impurity gettering during growth, spectra studies 7−106108
K compounds, core-excited, spectra, Ar^+ bombardment effects 7−132398
KCN, permutation-inversion symmetry groups, optical props. 7−124212
$NaNO_2$, permutation-inversion symmetry groups, optical props. 7−124212
Rb compounds, core-excited, spectra, Ar^+ bombardment effects 7−132398
$RbFeCl_3$, spin-orbit and crystal field matrices 7−143418
Ru complexes, Ru(bipyridyl)$_3^{2+}$ derivatives, absorpt., luminesc., charge localisation 7−113183
Si_3N_4 film, gradient field plasma CVD 7−130928
SrTe, optical response and band struct. under press. 7−98803
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7−125834
ZnO, Q-state particles, radiation chemistry, small semiconductor clusters quantum state 7−70830

pectra of organic molecules and substances
see also infrared spectra of organic molecules and substances; luminescence of organic solids; radiofrequency and microwave spectra of organic molecules and substances; Raman spectra of organic molecules and substances; Shpolskii spectra
2-acetylanthracene, electronic spectra 7−74567
acetylene, protonated, rot. and vibr. spectrum, H migration tunneling effects 7−96642
acridine dyes, luminesc. in solvents and biological systems *(Japanese)* 7−129785
acrylic acid, rot. isomerism, HF 4-21 basis set calcs. 7−81934
alkali naphtholates, emission and absorpt. props., solvent effect 7−113959
n-alkyl thiols, monolayers on Au, ellipsometric, spectrosc. and ellipsometric obs. 7−131426
allyl radicals, gas phase, vibronic spectrum, multiphoton ionis. 7−135909
4-amino-4′-nitrodiphenyl, ethanol soln., dipole moment, visible fluoresc. spectra, edge-excitation red shift 7−135950

spectra of organic molecules and substances continued
2-aminophenyl phenylsulphone, luminescence, temperature dependence, emission and absorption spectra, excited states, solvent effects, change transfer 7−141620
anilines, ground and excited electronic states, H bonding, electronic spectra 7−96645
9,10-anthraquinone, sulphonated derivatives, photophysics, photochemistry, emission and absorption spectra, photolysis, kinetics, transient species, states 7−144729
4-(9-anthryl)-N,N-dimethylaniline, time residual spectra, solvent dependence, charge transfer, reorientation, relaxation, laser spectroscopy 7−141480
basket handle porphyrins, extremely short chain, synthesis, spectrosc., struct. 7−103476
benzene, adsorbed on Pt (111), mol. distortion, angle resolved UPS study 7−82281
benzene, cryogenic solvents, spectroscopic studies 7−135921
benzene, Rydberg states 7−122404
benzene in propane, optical absorpt. and emission transitions 7−90178
benzenes, monosubstituted, two-photon thermal lensing spectrosc. 7−68289
benzenoid hydrocarbons, chem. graphs, Randic mol. connectivity index 7−129547
benzol chromophores, circular dichroism *(German)* 7−103555
benzophenone oxide, self-reaction, optical modulation spectrosc. 7−68290
3-benzylidene-isobenzofuranone, luminophore, photophys. props. *(German)* 7−103560
benz[a]anthracene, dichroism spectra, fluorescence polarisation spectroscopy, transitions, NDO calcs., LCAO calcs., moment directions 7−141611
9,9′-bianthyl, alcohol soln., picosec. excited state solvation dynamics 7−119516
biscarbocyanines, conform. equilib. calcs. from absorpt. spectra 7−103479
chlorin, in amorphous SiO_2, hole-burning spectroscopy 7−123119
2-chloro-2-methylpropane, overtone spectra, local mode anal. 7−135910
chloroanilines, ground and excited electronic states, H bonding, electronic spectra 7−96645
chlorotrimethylsilane, overtone spectra, local mode anal. 7−135910
coronene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
deoxyheme, parity-forbidden transitions 7−86913
dibenzofuran, single crysts., doped, triplet energy transport and excitation density 7−70675
N,N-dimethyl formamide, vibr. spectra, force field and isotopic shifts 7−96641
dimethyl methylphosphonate, adsorbed on oxidised Fe surface, effect of coadsorbed water, TPD, AES studies 7−71522
2,3-dimethylanthracene, orientationally disordered single crystals, absorpt. and phosphoresc. spectra, line profiles 7−99899
2,3-dimethylbenzonitriles, near ultraviolet absorpt. spectra 7−122502
2,4-dinitrophenol, intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7−122501
dinitrophenylpolyenes, polar fragments, selective orientational solvation effects on spectra 7−144705
3,5-dinitrosalicylic acid, intramolecular and intermolecular hydrogen bonding, organic substances, electronic absorpt. spectrosc. 7−122501
dye solution, refractive index, spectral depend. 7−113106
ethyl isocyanate, vibr. spectrum, normal coord. anal., conform. stability and ab initio calcs. 7−90093
fluoromethane-d_2(-d_3) isolated CH chromophore, spectra calcs. 7−135919
formaldehyde, $n\rightarrow\pi^*$ forbidden transition intensity, effect of electronic-vibrational interaction 7−90186
fumaronitrile, C_2 Swan band emission by multiphoton photodissociation at 193 nm 7−141636
heterocyclic molecules, polyatomic, PNDO method, spectroscopic parametrization 7−122358
hexathiopentacene, energy struct., absorption spectra *(Russian)* 7−122503
1,3,5-hexatriyne radical, mol. struct. ab initio SCF calcs., astron. appl. 7−103381
hydrocarbons, aromatic, excited singlet state, absorpt. cross sections 7−129622
2-hydroxy-4,5-benzotropone, in inert gas matrices and ethanol solns., H^+ transfer 7−71478
3-hydroxyflavone, intramol. excited state proton transfer, picosecond transient absorpt. study 7−74655
2-(2′-hydroxyphenyl)benzothiazole, nitro-derivatives, photophys., photochem., solvent effects 7−117012
indole, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7−103524
Langmuir-Blodgett films, optical props. 7−125825
leuco compounds, electronic struct., absorpt. spectra 7−103480
light harvesting chlorophyll complex, picosec. dynamics, detergent effects 7−71681
M_2L_6 cpds., with $6^2\pi^4$ config. triple bonds, electronic absorpt. spectra 7−90100
methane, laser spectroscopy, review *(Japanese)* 7−82077
methane, ultrahigh-resolution laser spectroscopy with cold particles 7−141487
methanethiol, photoexcitation, photofragment fluorescence, excitation spectra, Rydberg series, bands 7−144731
methyl radical+alkanes, high temp. reactions, H abstraction 7−126417
methylene chloride-d_1, C−H and C−D interbond coupling, photoacoustic spectrosc. 7−122572
N-(methylpyrolidinone)$_2H^+PW_{12}O_{40}^{3-}$, photochem., picosec. spectrosc. 7−126461
methylviologen, solvent cage escape yields following electron transfer quenching 7−82076
molecules with long flexible substituents, orientation in polymer matrix 7−103481
organic molecules, vectorial excitation energy transfer involving inhomogeneously broadened electronic levels 7−116944
oxazine-4-perchlorate, in amorphous SiO_2, hole-burning spectroscopy 7−123119
2,2,4,4,6-pentacyanocyclohexenamine, cryst. struct. and vibr., spectrosc. obs. 7−98102
phenanthrene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
phenylbenzothiazole derivatives, photophysics, photochem., solvent effects 7−116943
poly(N-(vinyloxy)carbonyl)carbazole and its monomeric analogue, triplet exciton processes, laser pulse-probe study 7−93347

spectra of organic molecules and substances continued
poly(paraphenylene vinylene), electronic struct., visible and UV spectra, INDO and PPP calcs. 7−137774
polyacetylene, heavily-doped, transition to a gapless Peierls insulator 7−70367
polymers, flexible, conjugated, absorpt. spectra in weak-disorder limit 7−136104
polymers, quasi-one-dimensional conductors, bipolaron lattice theory 7−98998
polystyrene: 4-bromo-4′-chlorobenzophenone films, mol. aggregation, phosphoresc. spectra 7−99918
propargyl alcohol, overtone excitations, classical and quantum dynamics 7−109871
protochlorophyll, Mg atom coordination, spectral-luminesc. obs. 7−141566
ω-(1-pyrenyl)-α-N,N-dimethylaminoalkanes, intramol. exciplex form. photophys. 7−74480
pyrido(2,3-b)pyrazine, $^3n\pi^*$ triplet state optical and mag. props. 7−90257
resorufin in ethanol glass, linewidths, phases, relaxation processes 7−136451
retinal, two-photon absorpt. spectra and polaris. *(Japanese)* 7−129694
retinyl acetate, two-photon absorpt. spectra and polaris. *(Japanese)* 7−129694
rhodamine 6 G, associated, absorpt. band shape approximation 7−90278
rhodamine dyes, absorpt. spectra, homogeneous relax. component, temp. depend. 7−141567
riboflavin-indole complexes, mol. associations, spectroscopic study 7−86609
salicylideneaniline, nitro-derivatives, photophys., photochem., solvent effects 7−117012
salicylideneaniline, photophysics, photochem., solvent effects 7−116943
soot from premixed flat flame, radiation props. 7−104370
t-stilbene, intramol. vibr. redistrib., time-resolved fluoresc. spectra, photochem. timing meas. 7−117055
tetracene and its van der Waals complexes with inert gas atoms, rot. resolved laser spectroscopy 7−129733
1,1,2,2-tetrachloroethyl alkyl ethers, vibr. spectra and confirmations 7−74568
tetrafluoromethane, edge inversion process, spectrosc. props. 7−109870
tetrahydrophenanthridine hydroxynitrostyrils. absorpt, spectra 7−141568
tetranitromethane, electronically excited, transient species and product form. 7−68234
tetrathiotetracene, energy struct., absorption spectra *(Russian)* 7−122503
toluidine, ground and excited electronic states, H bonding, electronic spectra 7−96645
trialkylarsine used in CVD of GaAs, UV absorpt. spectra 7−135961
trialkylgallium used in CVD of GaAs, UV absorpt. spectra 7−135961
trichlorofluoromethane, fluoresc. emission and absorpt. spectra meas. 7−116985
trifluorohalomethanes $+N_2$, visible spectra, collisional quenching rate consts. 7−96713
trimethylamine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
trimethylarsine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
trimethylphosphine, C−H stretching overtones, photoacoustic spectrosc. 7−129691
troponoid spiro compounds, absolute stereostruct., CD spectra calcs. 7−90235
verdazyl cations, electronic struct., absorpt. spectra 7−103480
verdazyl radicals, electronic struct., absorpt. spectra 7−103480
vibrational spectra, low resolution study of chaotic regions in quasicontinuum 7−103475
CH^+, laser photofragment spectrosc. 7−122498
H halide-cyclopropyl derivates, H bonded complexes, matrix isolation spectra 7−109734
Zn complexes, tetranapthoporphines, triplet-triplet absorpt. spectra 7−109874

spectra of polyatomic inorganic molecules
see also infrared spectra of polyatomic inorganic molecules; radiofrequency and microwave spectra of polyatomic inorganic molecules; Raman spectra of polyatomic inorganic molecules
aerosol particle comp., IR size modulation, visible light scatt. Fourier transform spectroscopy 7−106859
Creutz-Taube ion, electronic struct. calcs. 7−89930
K_2ReF_6, $\Gamma_7(^2T_{2g})$-$\Gamma_8(^4A_{2g})$ absorpt. and luminesc. spectra, vibr. dispersion 7−122595
metal N,N-dimethylmonothio-oxamide complexes, vibr. spectra 7−96643
molecular gases, independent discharges, spectrosc. anal. 7−117782
ozone, IR multiphoton excitation dynamics study 7−74597
tetrafluoromethane, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
triatomic mols., kinetic anharmonicity electron diffr. and spectroscopy anal. 7−103661
vibrational spectra, low resolution study of chaotic regions in quasicontinuum 7−103475
water, absorption lines, air pressure induced centre shift, rel. to atm. optics 7−109873
$ArCO_2$, van der Waals mol., spectrosc. props. and empirical pot. energy surfaces 7−68424
BBr_3, reactions in He afterglow, BBr^+ visible spectra anal. 7−116978
$Ba[Ni(CN)_4].4H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$Ba[Pd(CN)_4].4H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$Ba[Pt(CN)_4].H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$Bi_xSb_y^+$, Fourier transform mass spectra 7−74801
C_{60}, follene-60, electronic struct., spectra, CNDO/S calcs. 7−129913
C_{60} mol., geometrical struct. and UV spectrum, PPP CI MO calcs. 7−109780
CO_2, absorpt. spectrum, nf Rydberg series and 1st ionis. pot. 7−122406
CO_2+D, hot atom collisional excitation, isotope effects, laser-excited rot. spectra 7−136043
CS_2, multiphoton spectra, fragmentation, photodissociation, photoionisation photolysis 7−141639
CS_2, vibrational level relax., UV fluoresc. spectra anal. 7−96722
Cl_2-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125
ClF-sulphide complexes, vibr. and electronic spectroscopy, matrix isolation investigation, photochemistry 7−90125

spectra of polyatomic inorganic molecules continued
Co complex, cytochrome P450 active site analogue, synthesis, struct., spectrosc. 7−114192
$Cr(CO)_5$ complexes, $^1A_1$-^1E transition rel. to π acceptor ability 7−90097
Cr(III) complexes, octahedral, cis and trans disubstituted, electronic spectra study 7−108110
Cu acetate-pyridine derivative complexes, UV, visible and EPR obs., solvent effect 7−96752
Cu complexes, hindered internal conversion in rigid matrix, emission investig. 7−74698
Cu porphyrin-free base porphyrin dimer, triplet-triplet energy transfer 7−135864
DCP^+, $\tilde{A}^2\Sigma^+ \rightarrow \tilde{X}^2\Pi_i$ emission spectra, vibronic anal. 7−68338
GeF_4, VUV and fluoresc. excitation spectra 7−109912
GeH_4, edge inversion process, spectrosc. props. 7−109870
H_2CO, in electric field, struct. and spectroscopic consequences 7−110126
H_2CO, vibrationally excited, collisional energy transfer, stimulated emission pumping-transient absorpt. spectra 7−136044
HCP^+, $\tilde{A}^2\Sigma^+ \rightarrow \tilde{X}^2\Pi_i$ emission spectra, vibronic anal. 7−68338
H_2O, nearly free rotation in soln., weak interaction with solvent 7−82070
H_2O, photodissoc., photofragment laser-induced fluoresc. study 7−68334
H_2O, photodissoc. dynamics in B-$\tilde{X}$ absorpt. band 7−122635
H_2O, vapour, absorptivity and emissivity study 7−135952
H_2O^+, fluoresc. efficiency factors rel. to H_2O^+ abundance in Comet Kohoutek (1973 XII) 7−120264
H_2O_2 photolysis, OH radicals rot. distrib., laser-induced fluoresc. study 7−68333
H_2S, vac. UV and REMPI spectra 7−82306
Hg-methane(-ethane)(-N_2)(-CO) complexes, jet-cooled complexes, electronic spectra and intramultiplet relax. 7−90357
ICN, A state, I* quantum yields, laser gain-vs.-absorpt. spectra 7−93342
ICN, dissociation, transition states, real-time fs probing spectroscopy 7−135960
KOH, high-temperature Stark and radiofrequency-microwave double-resonance microwave spectrometer 7−103688
Kr_2F excimer, photoabsorption cross-section at 248 nm 7−109921
Kr_2F, excited states, absolute absorpt. cross sections meas. 7−135951
Kr_2F^* trimer, excimer laser, absorpt. at 248 nm 7−110323
$LiClO_4$, nitromethane-acetonitrile solns., struct. and IR spectra 7−109903
$Mo(CO)_5$ complexes, $^1A_1$-^1E transition rel. to π acceptor ability 7−90097
Mo(VI) polyoxoanions, charge transfer absorpt. spectra 7−90098
N_2 ICP rot. spectrosc. temp. determ. 7−121117
N_2^+ ICP rot. spectrosc. temp. determ. 7−121117
NCO^- anion Fermi doublet, vibr. spectra in aqueous solns. *(Russian)* 7−122495
NCl_3, decomposition flame, kinetic spectrosc. 7−135923
NCl_3, photolysis, spectra, time profiles 7−139028
NF_3, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
NH_3, jet cooled, UV absorpt. spectra, isotope shifts 7−103529
NH_3, nearly free rotation in soln., weak interaction with solvent 7−82070
NH_3, reson. hyper-Raman scatt. spectra 7−109906
NH_3, Rydberg states, spectroscopy and photophysics 7−74476
NO_2, excited electronic states, perturbed visible system, rot. transitions, hyperfine struct. 7−116980
NO_2, high resol. UV spectra 7−96726
NO_2, multiphoton dissoc. investig. 7−110040
NO_2, spectral absorpt. cross-sections for 426 to 450 nm region 7−135949
O_3, electronic states, pot. energy surfaces, UV continuum, ab initio calcs. 7−96515
$^{16}O_3$, ν_1 and ν_3 bands, line positions and intensities 7−122499
O_3, UV spectral absorpt. of Hg. 253.7 nm line 7−139805
OClO, absorpt. cross section meas. 7−103530
Pd complexes with polyacids, circular dichroism and electronic absorpt. spectra 7−90234
PuF_6, vibronic band fine struct. high resol. visible spectra 7−122557
SCl_2, K-shell X-ray absorpt. spectra 7−109925
S_2Cl_2, K-shell X-ray absorpt. spectra 7−109925
SF_4^+, $\tilde{D}^2A_1$-$\tilde{C}^2T_2$ emission band, John-Teller distortion 7−68337
SF_6, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
SO_2, core-level photoionisation, asymmetry parameter, VUV absorpt. spectra 7−135964
S_2O, visible absorption spectrum spectrographic techniques, laser optoacoustic techniques 7−122558
$SOCl_2$, K-shell X-ray absorpt. spectra 7−109925
SO_2Cl_2, K-shell X-ray absorpt. spectra 7−109925
$SiBr_2$, $\tilde{A}^1B_1$-$\tilde{X}^1A_1$ transition, UV spectrum decay rate consts. determ. 7−129732
$SiCl_2+O_2$, UV absorpt. spectra, rate const. meas. 7−100515
$SiCl_4$, Si L edges resonances, gas phase UV photoabsorpt. spectra 7−116982
$SiCl_4$, VUV and fluoresc. excitation spectra 7−109912
Si_2Cl_6, VUV and fluoresc. excitation spectra 7−109912
SiH_2, rovibronic levels, lifetimes, visible fluoresc. spectra anal. 7−103519
SiH_4, edge inversion process, spectrosc. props. 7−109870
SnH_4, edge inversion process, spectrosc. props. 7−109870
$Ta_2Cl_6(NH_3)_4$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
$Ta_2Cl_6(NH_3)_4^-$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
$W(CO)_5$, complexes, $^1A_1$-^1E transition rel. to π acceptor ability 7−90097
W(VI) polyoxoanions, charge transfer absorpt. spectra 7−90098
Xe_2Cl, excited states, absolute absorpt. cross sections meas. 7−135951
$Xe_2^+Cl^-$, in Xe matrix, UV emission spectra 7−90184
XeF_2, valence level cross sections, photoelectron spectra 7−129789
$Y_3Al_5O_{12}$:Sm^{3+}, absorpt. spectra and energy levels 7−90177

spectra of solids
see also impurity and defect absorption spectra of solids; luminescence of solids; Shpolskii spectra; spectra of inorganic solids; spectra of organic molecules and substances
catalyst systems, Fourier transform IR spectroscopy 7−128605
charge transfer crystals, low dimensional, IR excitation spectra, multidimensional linear response theory 7−144073
charge-transfer excitons, spatial and orientational ordering at intense pumping, absorption and fluorescence spectra 7−125793
dielectric media with small metallic particles, optical props. 7−77551
IR dispersive photothermal beam deflection spectroscopy 7−89281

spectra of solids continued
mixed valent impurity systems, spectroscopy, energetics and Hall effect 7−76843
molecular crystals, distortion induced IR and Raman activity, vibr. dynamics 7−104926
non-metallic solids, fundamental absorption edge, Urbach-Martienssen rule 7−144000
one-dimensional quasicrystalline and incommensurate systems, energy spectral props. 7−92625
phonons, theory and expts., book 7−80187
rare earth systems, conference, Hamilton, Ont., Canada (June 1986) 7−66817
semiconductor superlattices and solids, saddle point excitons, interband absorption spectra 7−137803
semiconductors, doped, bulk and low-dimensional, optical spectra, many-body aspects 7−106113
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
spectroscopic properties, many-body theory 7−76840
superlattices, surface polaritons, attenuated total refl. 7−131556

spectral analysers
see also spectral analysis
acoustic spectrum analyser, spectrum parameter estimation and random signals discrimination 7−82934
acousto-optic spectrum analyser for laser radar applications 7−75029
acousto-optical processors, transform domain filter effects anal., simulation 7−82495
acousto-optical spectrum analyser, transmission dynamics of freq. modulated signals 7−123185
automated apparatus with multiple angular scanning for study of secondary processes in X-ray diffraction in crystals 7−67451
FFT analyser as sound-intensity measuring unit 7−90894
mm-wave radiometer appl. 7−108571
optical, wavelength, spectral width and coherence meas. *(Italian)* 7−73407
optical information processing, conf., Orlando, FL, USA (April 1986) 7−80161
SAW RF spectrum analyser/channelizer using acoustic wave diffraction 7−82942
SAW slanted chirped transducer spectrum analyser *(Japanese)* 7−117424
Sm-2701 FFT analyser for rotary machines meas. 7−89197
Si substrate for integrated optics appl. to optical spectrum analyser 7−104044

spectral analysis
see also spectral analysers
2-D acousto-optic spectrum analyzer 7−117405
3D scattering by finite homogeneous anisotropic circular cylinder, spectral approach 7−110205
acoustic signals, time-frequency analysis *(French)* 7−142113
acoustic spectrum analyser, spectrum parameter estimation and random signals discrimination 7−82934
AIS-2 automated meter for spectra recorded on photographic plates 7−67296
equatorial Atlantic basin, forced oscills. obs. during SEQUAL programme (1983 to 1984) 7−114746
atmosphere circulation, effect of stochastic perturbations on low-order spectral model 7−79556
atmospheric turbulence anal., influence of spectrum functions and filters on crossing freq. determ. 7−127365
authenticity analysis of spectrum-like experimental curves 7−80756
bilinear transfer in microscopy, spectral anal. 7−103750
brainstem auditory evoked potentials, power spectral analysin is normal and pathological subjects 7−114275
Bratu 2D nonlin. eigenvalue eqn., analytical and num. study 7−102143
breast NMR images, multispectral anal. 7−145185
Burger eqn., implicit/explicit spectral method 7−89156
CLEAN use for time series spectral anal. in astronomy 7−107726
cloud fields spatial power spectra, problems in interpretation 7−114912
complex-source pulsed beam spectral analysis 7−74814
cosmic microwave background fluctuations, radiation correl. functions and ang. power spectra 7−95053
cryogenic gravitational wave antenna, spectral domain data anal. techniques 7−89102
Cyg X-2, complex cross-spectra of X-ray intensity vars. 7−140172
diffraction-type dimension meas. devices, spectral charcts. *(Russian)* 7−110548
digital color image restoration 7−90534
directional wave spectra, approaches for comparing remote and in-situ meas. 7−133995
discrete spectra variation, symmetric matrix eigenvalues under perturbation, selfadjoint operator 7−120759
dispersive long wave equation, spectral transform of 2D extension 7−120818
Doppler blood flow measurements, CW, spectral broadening index value 7−119813
Doppler blood flow signal spectral analysis, autoregressive modelling applic. 7−119812
dual jerk waveform spectral anal. in congenital nystagmus 7−114250
EEG, computerised anal. in elderly normal, demented and depressed subjects 7−78826
EEG ontogeny measures, spectral anal. approaches 7−94043
EELS, optimal background estimation 7−138560
eigenvectors and high resolution 7−97227
electric fields, 50-60 Hz, simulation 7−87083
electron scattering, radiative tail, piece-wise analytic evaluation 7−116801
EM induction in radially and laterally inhomogeneous Earth, spectral theory 7−101195
EM wave propagation, spectral anal. and synthesis 7−136143
EMG, power spectra estimators of muscle conduction velocity 7−94010
EMG, power spectrum and turns anal. at different voluntary efforts in normal subjects 7−78828
EMG, signal modelling and processing by spectral anal. 7−93725
energy spectra estimation from SAR imagery 7−133998
energy spectra estimation using radar ocean wave spectrometer 7−133999
equatorial regions, spectral anal. for climatic/weather variation predictions 7−87952
exponential piecewise function for approximating single spectral peaks 7−67295
ferromagnetic probe magnetometer, data spectral anal. algorithm and noise charcts. *(Russian)* 7−79626
gastrointestinal electrical signals anal. 7−126792

spectral analysis continued
geodesy, pole coordinates short-period vars. calc. using Maximum Entropy Spectral Anal. and Ormsby filter 7−139429
geomagnetic anomalies of crustal origin in Europe, maximum entropy and FFT spectral anals. 7−127077
GX 5−1, complex cross-spectra of X-ray intensity vars. 7−140172
heart sounds, spectral anal. 7−87129
human growth acceleration process cycle anal. 7−78712
hyperbolic initial boundary value systems, stability anal. of spectral methods 7−88906
in-beam gamma-ray spectra, continuum estimation and peak analysis 7−116768
incompressible plane mixing layer, temporal and spectral anal. 7−130663
infinite plane grating, numerical anal. of surface current distrib. 7−136145
injection lasers using IR pulse Fourier spectroscopy, radiation spectrum dynamics investig. 7−97029
integrable nonlinear evolution eqns. in (2+1) D, combined ∂ and Riemann-Hilbert inverse methods 7−102118
interference fringes removal from optical spectra, numerical procedure 7−128545
Krein-Feller differential operator, infinite dimensional analog, generalised resolvents and spectral functions 7−88866
BL Lac, power spectrum anal. of short-term optical light vars. *(Russian)* 7−72625
magnetosphere relativistic electron flux vars. at orbit of geostationary satellite, spectral anal. *(German)* 7−134093
magnetotelluric sounding, noise-degraded curves smoothing method 7−127079
mechanical structures freq. response functions estimation, comparison of new methods 7−100480
microcomputer programs for instrumentation and data anal. using IBM PCs 7−134407
microwave remote sensing of ocean wave directional spectra by aircraft 7−133996
microwaveguides, integrated optical components, acoustooptical and electrooptical diffraction based 7−90836
moving acoustic source, directionality pattern estimation 7−110699
multi-exponential function fitting program for the analysis of the positron annihilation life spectrum *(Chinese)* 7−113310
muscular sound and surface EMG at fatigue, compared spectral anal. 7−93726
nasal consonants feature extraction, high resolution frequency anal. of voices 7−110714
neuronal activity extraction from noise, signal processing technique 7−87319
neutral spike train sampling device with built-in memory 7−87320
neutron Larmor precession as energy analyser, transmission spectrometer 7−135733
NMR spectral parameter estimation by deconvolution 7−102485
non-Gaussian stationary time series, spectrum separation method 7−121081
non-orthogonal spectral analysis, new method for analysis of short time-series 7−133953
noncausal autoregressive bispectrum estimation and deconvolution for output seismic trace 7−107559
nuclear spectral data, digital processing 7−141405
ocean wave heights prediction, research and appls. involving directional wave spectra 7−94299
ocean waves, effect of wave breaking on wave spectrum in water of finite depth 7−114749
ocean waves, nonlinear energy transport in wind wave spectrum *(Russian)* 7−127231
optical image angular periodicities determ., one-dimens. invariant functions applic. 7−141806
power spectrum analysis in the study of ocular mechanisms 7−133281
Prony's method for vibration analysis *(French)* 7−110835
radiometric NDT devices, nonlinear conversion of pulses of spectrometric flaw detector 7−71438
random data, anal. methods, review 7−89205
random vibrations of mechanical structures, mathematics, book 7−128464
response functions, removal of Compton scattered γ-rays from γ-ray spectra 7−116802
restoration of limited-data seismic tomography images 7−115105
robustness against noise, timing-synchrony meas. 7−114296
SAWD for complex spectrum and inverse implementation 7−110747
sea waves, directional spectrum determ. using ship's radar 7−107437
seismic facies classification using waveform recognition method 7−101602
seismic wave sources, spectral props. of oscillating gas bubble press. *(Spanish)* 7−133592
semiconductor simulation, spectral analysis of decoupling algorithm 7−99044
sensor array, wavenumber estimation using asymptotic statistics 7−110640
SIR-B data use for ocean wave spectra estimation 7−134001
solar granulation, power spectra determ. from speckle interferometry 7−94835
solar long-period oscillations, power spectrum anal. rel. to theoretical solar models 7−127802
solar photosphere flows spectrum determ., spherical harmonic anal. technique 7−107795
sound, time-varying spectra anal. editing 7−104106
spectroscopic ADC based on sliding scale principle 7−135772
spiral structures, growth coeff. determ. by spatial spectrum method 7−72318
stationary random processes, spectral density, superresolving estimates 7−67192
string amplitude and decay time meas. using FFT techniques 7−110685
time-resolved, high-speed spectroscope for time-varying optical spectrum analysis 7−121238
tissue characterisation, 2D US power spectrum anal. *(Japanese)* 7−126975
tissue imaging with US sector scanning, spectral anal. *(Japanese)* 7−126977
UHF introscopy of laminated media, radiopulse envelope synthesis 7−71444
unfolding of spectra, iterative methods 7−109672
upper ocean internal waves, influence of surface and mixed layer on wave spectra and coherence 7−114741
vowel recognition, binary spectral pattern method *(Japanese)* 7−82946

spectral analysis continued
X-ray binary stars, influence of physical phenomena on power spectra of quasi-periodic oscills. 7−146037
γ-ray photopeak and multiplet automatic anal. 7−116803

spectral filters *see optical filters*

spectral line breadth
see also atomic spectral line breadth; chemical shift; Davydov splitting; Doppler effect; EPR line breadth; molecular spectral line breadth; NMR line breadth; Stark effect; Zeeman effect
alkali metal halides, F-centre photoacoustic signals, comment and reply 7−76307
alkane-urea clathrates, cryst., Raman linewidths 7−85730
amorphous solids, dispersive kinetic processes, optical linewidths and dephasing, hole growth and filling 7−75080
amorphous solids, optical dephasing and impurity homogeneous optical band, tunnelon theory 7−77609
anthracene, surface exciton polariton, guided wave mode 7−125780
Ap stars, rapidly oscillating, computed spectral line vars. for oblique non-radial pulsators 7−72436
astronomical spectra, absorpt. and emission line profiles in nonlinear reson. scatt. problem 7−127690
RW Aur, T Tau star, Balmer-line and photometric vars. obs. 7−127863
B-type rapidly-rotating stars, axial inclinations and differential rot. from absorpt. line profiles 7−127868
Be stars, rapid vars. in Hα and Hβ emission lines of γ Cas, ζ Tau and 66 Oph 7−140103
benzene, liq., polaritons, stimulated Raman scatt. induced anti-Stokes Raman scatt. 7−70773
1-bromo-4-chloronaphthalene, triplet-triplet energy transfer, double reson. and laser line narrowing obs. 7−112997
μ Cen, Be star, obs. of Hα emission event (March-April 1987) 7−145994
chromophore aggregates, circular dichroism band shape, ensemble-averaged resolvent matrix method 7−96756
circumstellar shells, effects of dust on line formation in expanding spherical medium 7−120368
circumstellar shells, spectral line profiles from moving spherical shells 7−145934
HL CMa, dwarf nova, IUE obs. of P Cyg line profiles rel. to winds of cataclysmic variables 7−115428
P/Comet Halley (1982i), velocity-resolved obs. of H_2O IR emission 7−88185
complexes, H bonded in soln., dynamics effect on bond shapes 7−125729
coupled spin systems in high mag. fields, differential T_1 and T_2 relax. 7−112973
cross-phase modulation in optical fibers, spectral broadening 7−123254
cryst., H bonded, OH stretching band shape anal., H^+ dynamics 7−70826
cyclotron reson. line shape function, exponential expressions validity calcs. 7−92047
deformation pot. polaron system, cyclotron reson. lineshape calcs. 7−92080
DFB lasers, linewidth enhancement due to longit. field depend. in laser cavity 7−122950
DFB lasers, spectral linewidth depend. on facet reflectivity, theoretical and expt. study 7−68711
dibromonaphthalene, triplet excitons, impurity and phonon scatt., optical line broadening 7−132294
direct-gap semiconductors, linewidth enhancement factors 7−125663
discrete apodised magnitude-mode lineshapes, freq. interpolation 7−80886
disordered solid, line shape for coherently backscattered light 7−96941
doped solid systems, photochemistry and spectroscopy, zero-phonon lines props. *(Russian)* 7−106219
Doppler broadened H_α lineshapes, RF low press. H_2 discharge 7−104473
30 Dor, effects of spatial resolution on line profiles and comparison with giant extragalactic H II regions 7−94994
dye laser, grazing incidence, subnanosecond pulse generation 7−130082
early-type stars, mass-UV linewidth relations rel. to initial mass function in starburst galaxies 7−145935
electron spectroscopies of incompletely filled bands, many-body effects 7−77703
emission line profile and line source function, determ. for case of partial redistrib. 7−115226
emission spectrum, determination of characterising parameters, by photon correlation and multichannel analyser 7−121235
EPR signals, gaussian lineshape, saturation *(Slovak)* 7−134823
Fabry-Perot interferogram integral eqn. for spectral line profile determ. *(French)* 7−115996
femtosecond pulses in atmospheric air, spectral broadening 7−133927
fibre optic ring resonator appl. to laser spectral linewidth meas. 7−75137
flame, temperature meas. by single-pulse CARS, pump. laser linewidth, effect on noise 7−128583
Gaussian peak centroids, errors in determination 7−134855
giant extragalactic H II regions in NGC 4303, effects of spatial resolution on line profiles 7−94994
glass-forming liquids, high resolution Raman Scatt. 7−70824
glasses, chromophore optical transition homogeneous linewidths, theoretical studies, review 7−77487
glasses, impurity optical linewidths and photon echo decays, stochastic model anal. 7−75081
glasses, optical transition, homogeneous line broadening, review 7−75075
GX 339−4 (V821 Ara), black hole candidate, He II line width rel. in orbital inclination and period 7−127975
HD 151932, WN7-A star, obs. of He I and Si IV lines vars. 7−120405
HD 187399, Be-type X-ray binary, spectroscopic investigation 7−127872
HD 190073, early-type emission line star, line profiles rel. to multiple circumstellar line form. regions 7−145964
ι Her (B3 IV-V), short-period light and spectrum vars. 7−101788
Herbig-Haro objects, radiative bow shock models rel. to spectral line profiles 7−128012
HH 46, 47A, 47B, Herbig-Haro object and connecting filament, dynamics from emission-line profiles obs. 7−88598
EX Hya, eclipsing intermediate polar, time-resolved optical spectroscopy 7−140108
impurity absorption spectra zero-phonon line homogeneous broadening in glasses and crysts. *(Russian)* 7−106220
impurity spectra zero-phonon line broadening in organic glass matrices, review *(Russian)* 7−106223
inductively coupled plasmas, effective line profiles, detect. limit 7−89267
inorganic glasses, impurity ion fluoresc. line narrowing, review 7−77632

spectral line breadth continued
instrumental broadening effects, detects. by photomultiplier tube and photodiode array detectors 7−80896
interstellar molecules, spectral lines form. in turbulent vel. field with finite correl. length 7−101874
IR absorption bands of molecules with internal motion, theory of spectral line shape *(Russian)* 7−109901
laser oscillators with mixed line broadening, stability criteria 7−90572
laser photolysis system for meas. of transient species absorpt. spectra *(Japanese)* 7−115987
lecithin-water-ethylene glycol nonaqueous liq. cryst., NMR and X-ray studies 7−91437
localised radical pair, RYDMR signal, lineshape study 7−100810
Lorentzian broadened spectra, direct deconvolution study 7−74512
Lorentzian broadened spectra, stepped deconvolution and smoothing filtration study 7−74513
Markarian 231, 273, Seyfert galaxies, high-vel. wings obs. in OH megamaser emission 7−95026
Markarian 52, starburst-nucleus galaxy, obs. of blueward-asymmetric emission-line profiles 7−140282
methoxydifluorophosphinoxide-$d_0(d_3)$, liq. gas, solid vibr., conform., IR and Raman spectra 7−96687
mica mineral fracture, generation of X-ray spectra w.r.t. vacuum sparks 7−125842
multiquantum well structs., cyclotron resonance linewidth due to electron-phonon interaction 7−125089
NGC 1068, Seyfert 2 galaxy, [O III] 500.7 nm line shape rel. to central gas cloud 7−140295
NGC 1566, Seyfert 1 galaxy, recurrent outbursts obs. in broad-line region 7−88612
NGC 4151, line profiles and intensities of [Fe X] and [Fe XIV] lines 7−140250
NGC 4151, Seyfert 1 galaxy, new outflowing component in Mg II line profile 7−88635
Ni-Ga ordered β-phase alloys, constitutional and thermal defect form., Mossbauer spectra studies 7−83948
NMR signals, gaussian lineshape, saturation *(Slovak)* 7−134823
Nova Her 1987, ejection vels. from emission line widths 7−94893
OB-type supergiant sequence, stellar wind UV line profiles rel. to optical spectral classifications 7−72429
organic crystal mixtures, nonlinear line-narrowing spectroscopy 7−138441
organic glasses, impurity mol. zero-phonon line broadening, hole burning studies, review 7−75076
organic glasses 7−141952
organic glassy hosts, guest mol. optical linewidths and dephasing, hole burning study 7−75077
τ Peg , δ Sct star, Hα line vars. rel. to high-freq. radial oscills. *(Russian)* 7−107866
picosecond pulse compression and shaping by holographic method 7−96957
plasma, nonequilibrium, temp. meas. using spectral line shapes 7−97789
plasma-ion broadening, spectral line asymmetry 7−142505
polyacetylene, picosec. Raman transients obs. 7−85735
polyethylene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polyethylene, C KVV Auger line shape, satellite identification 7−125870
polymer films, planar macromolecular orientation, transmission IR band shapes 7−113208
polymethylmethacrylate: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
polystyrene: 4-bromo-4′-chlorobenzophenone films, mol. aggregation, phosphoresc. spectra 7−99918
polystyrene: phthalocyanine, optical line shifts and broadening under press., hole burning study 7−75078
quartz cryst., positron annihilation, Doppler broadening-ang. distrib. correl. obs. 7−106297
quasars, effects of electron scatt. opacity in broad emission-line regions 7−88667
rare earth insulating systems, f-electron photoemission spectra calcs. 7−113343
rare earth mixed crystals, $RR'F_3$-type, inhomogeneous mag. dipole broadening of spectral lines 7−99806
resonant secondary radiation, time-dependent spectra, line narrowing 7−74703
rotational reorientation, zero-field NMR and NQR line shapes 7−70668
ruby:Cr^{3+}, inelastic reson. scatt. of 10^{12} THz acoustic phonons by exchange coupled impurity ion distant pairs 7−111786
semiconductor crystal, excitonic absorption band under uniaxial pressure, temp. dynamics *(Russian)* 7−118984
semiconductor laser, FM noise and spectral linewidth 7−110359
semiconductor lasers, conf., Albuquerque, NM, USA (Feb. 1987) 7−102021
Seyfert galaxies dynamical model for narrow-line region 7−134307
silica, vitreous, impurity ion homogeneous optical linewidth, Raman contrib. determ., temp. depend. calcs. 7−77610
silica aerogel, positron annihilation, Doppler broadening-ang. distrib. correl. obs. 7−106297
single crysts., axial electron channelling radiation linewidth calcs. 7−69788
single-longit. mode semicond. laser, external cavity config. long-term freq. stabilisation 7−68709
single-mode laser linewidth, polarization symmetry 7−96988
SN 1987A in LMC, evolution of Hα line profile (1987 February 26 to March 31) 7−146010
SN 1987A in LMC, IR emission lines rel. widths 7−94913
SN 1987B in NGC 5850, spectroscopic classification and line widths 7−88484
solar Ca II line profile disturbances appl. of nonlinear inversion method 7−94837
solar flares, H I and He I line profiles in near-IR spectra 7−127804
solar K I 769.9 nm resonance line, centre-limb var. of line asymmetries and shifts with granulation and oscills. 7−107796
solar line asymmetries, amplification by rotation 7−101757
solar quiescent prominences, 1-D models of H I spectrum form. with standard partial redistrib. 7−145905
spectral line asymmetries, amplification by rotation 7−101757
stellar spectra, influence of Stark effect on equivalent widths and element abundances determ. 7−127834
stellar winds, UV line profiles modelling for early-type stars in SMC 7−134225
submicrometer linewidth metrology in the optical microscope 7−140668

spectral line breadth continued
supernova remnants, dynamic models and spectra of radiative shocks 7−127715
TOL 1037−27/1038−27, QSO pair, C IV absorpt. line profiles 7−128119
two-level resonant medium, phase modulation and parametric broadening of pulse spectrum 7−97065
two-level system, quantum theory of stimulated Raman scattering, time-depend. spectrum 7−103891
4U 0900−40 (HD 77581), massive X-ray binary, search for rapid vars. of P Cyg line profiles 7−120502
ultra-short pulses, spectral super-broadening in Kerr medium, computer simulation 7−75085
vibrational linewidths of adsorbed molecules, experimental considerations 7−85674
Voigt profile, asymptotic behaviour 7−82043
BW Vul, β Cep star, spectroscopy of optical photosphere rel. to pulsation kinematics 7−140094
PW Vul (Nova 1984 No.1), stellar winds vels. from P Cyg lines absorpt. components 7−72435
AgBr, time resolved luminescence spectra at high density excitations 7−125779
AlGaAs, MBE growth, C impurity conc., photoluminesc. spectra 7−112115
AlGaAs-GaAs DFB lasers, multiple quantum well struct., reduction of spectral linewidth 7−90603
$Al_xGa_{1-x}As$:Sn, epitaxial layer, photoluminescence *(Korean)* 7−144118
$Al_xGa_{1-x}As$-GaAs quantum wells, excitonic transition photolum. linewidth, elec. field effect model 7−132237
$Al_{0.48}In_{0.52}As$ epitaxial layers on InP, Raman and photolum. spectral studies 7−106198
Al_2O_3-SiO_2:Cr^{3+} mullite glass and ceramic, impurity optical linewidths, resonant fluorescence line narrowing study 7−77608
Ar plasma, H_α broadening and shift meas. 7−111167
$BaCeO_3$:Dy, synthesis, impurity oxidation state, Mossbauer spectra 7−92553
$BaTiO_3$, Roman spectrum, line shapes of oblique phonons computation *(Korean)* 7−85647
$Bi_{25}FeO_{40}$:B single cryst., X band Fe^{3+} ESR spectra studies 7−85415
$Bi_{12}Si(Ge)(Ti)O_{20}$:Fe single cryst., X band Fe^{3+} ESR spectra studies 7−85415
CO adsorbed on metal surfaces, vibrational lineshape studies, review 7−112055
$Cd_{1-x}Mn_xTe$, excitons, energy struct., dynamics, refl. spectra 7−98812
$Cd_{1-x}Mn_xTe$:P,As, elec. and optical props. studies 7−131658
CdTe, energy gap and joint density of states temp. depend., interband luminesc. 7−76762
Ce alloys, unstable 4f-shell, transport props.−quasielastic neutron spectra linewidth correls. anal. 7−118460
Co-Ga ordered β-phase alloys, constitutional and thermal defect form., Mossbauer spectra studies 7−83948
$CsCoCl_3.2H_2O$, 1D antiferromag., magnon sideband under mag. field 7−70752
CsH_2PO_4, cryst., H bonded, OH stretching band shape anal., H^+ dynamics 7−70826
CsH_2PO_4 H-bonded ferroelec., hyper-Raman spectra, central mode 7−106181
CuIn alloy, positron annihilation, effect of vacancies and precipitation 7−106299
CuO_2 crysts., resonance exciton-photon luminesc. and Raman scatt. obs. 7−77622
Fe foils, annealed and plastically deformed, Mossbauer effect 7−138355
$FeBO_3$ single cryst., flux growth in Fe_2O_3−B_2O_3−PbO−PbF_2 system 7−132435
$Fe_{1-x}Co_xCr_2S_4$ cryst. struct. and mag. props., X-ray diffr. and Mossbauer spectra studies 7−91539
$Fe_{0.8}Ni_{0.2}TiH_{1.24}$, H diffusion, Mossbauer studies 7−84362
$Ga_{1-x}Al_xAs$ optical filters, thermo-optical effects 7−70755
GaAs, hot carriers, femtosecond collision times, picosecond time-resolved light scatt. 7−113199
$GaAs/Al_xGa_{1-x}As$ selectivity doped heterostruct. 2D electron gas photoreflectance meas. 7−106114
GaAs-AlGaAs MQW, temp. depend. of photoreflectance line shapes 7−138474
GaAs-AlGaAs modulation doped MQWs, high press. photolum. props. 7−138511
GaAs-AlGaAs quantum-well struct., atomistic nature of heterointerfaces, rel. to photolum. 7−138498
GaAs-GaAlAs MQW structs., photoluminesc. excitonic props. and temp. behaviour *(Chinese)* 7−106233
GaAsAs lasers, wide-band electrical noise and modulation response, parasitic element influence 7−122971
$Ga_{0.6}Fe_{0.4}NiCrO_4$, anomalous Mossbauer lineshapes and AC susceptibility 7−99425
GaInAs-AlInAs single quantum wells, MBE growth, photoluminesc. charactn. 7−112124
GaInAs-InP quantum wells and heterostruct. devices, growth by chemical beam epitaxy 7−86030
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$, multi quantum well structs., excitonic recombination rel. to barrier config., photolum. 7−70094
GaP:N layers, determ. of N conc., lumin. study 7−85786
GaSb, reson. Raman scatt. by LO phonons near $E_0+\Delta_0$ gap 7−125746
GaSe, spontaneous and stimulated emission, laser-driven shock wave effects 7−106216
Ge-Si alloy microstruct. fabrication by direct laser writing, comp. anal. using Raman microprobe spectra 7−119157
$(GeS_2)_x(As_2S_3)_{1-x}$, absorpt. edge under hydrostatic press. 7−106126
Ge_xSi_{1-x}, electron radiation defect form., near edge IR absorpt. spectra study 7−137407
H I sheets and supergiant H I shells in LMC, 21-cm line profiles 7−88596
H_2 solid, localised electrons, interference effects in IR spectra 7−92656
Hα line in Sun and stars, line width and line shift rel. to plage props. 7−115340
^3He-^4He solns., mutual diffusion, Rayleigh line width, near crit. vaporisation line 7−70023
$Hg_{1-x}Cd_xTe$, modulated optical and electrical props., electrolyte electroreflectance study 7−84874
$HgCr_2Se_4$:Ag single crysts., FMR lineshape and anisotropy meas. 7−85443

spectral line breadth continued
InAs/GaAs quantum well structs., atomic layer epitaxy, self-limiting mechanism, luminesc. study 7−124800
InGaAs doped single modulation quantum well, electron density transition, absorption spectra 7−144144
InGaAs, electrolyte electrorefl. spectra and comp. anal *(Chinese)* 7−77509
InGaAsP, 1.5 μm travelling wave semiconductor laser amplifiers, homogeneous gain saturation 7−130095
InGaAsP direct-gap semiconductors, linewidth enhancement factors 7−125663
InGaAsP-InP DFB laser, spectral linewidth reduction by detuning effect 7−82551
$K_3Co(CN)_6$, 20r polytype, incommensurate struct., NQR linewidth, low temp. 7−70669
$K_{0.3}MoO_3$:Fe, CDW state, Mossbauer studies 7−118928
$KNdP_4O_{12}$:Pr^{3+} inhomogeneous broadening and energy transfer 7−106242
$LaCl_3$:Tb, fluorescence line narrowing, competitive technique to EPR 7−70885
$La_{1.85-x}Pr_x(Eu_x)Sr_{0.15}CuO_4$ high T_c supercond., sharp-line lanthanide fluorescence obs. 7−113261
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., positron annihilation Doppler broadened lineshape study 7−119064
Li_2O-P_2O_5-CaO-Al_2O_3-Nd_2O_3 phosphate glass, low temp. homogeneous linewidths 7−99914
Li_2SO_4, monoclinic, low-temp. behaviour of Li modes, polarized Raman spectra 7−99851
$MgAl_{2-x}Fe_xO_4$, spinel ferrite, O self-diffusion rel. to Debye temp., Mossbauer spectra 7−111952
$MnCl(Br)(I)_2$ photolum. and absorpt. spectra temp. depend. study 7−85823
NaCl with adsorbed CO, vibr. CO predesorption induced by resonant IR laser excitation 7−119016
$NaNO_2$, pure and doped, sensitized luminesc., stationary spectra 7−99934
Nd^{3+}:SiO_2 fibre lasers, single-mode, line-narrowing and hole burning 7−103823
Ni (100), (113) and (115), step form, and roughening transition temp. calcs. 7−143146
Pt (111) with adsorbed CO, vibr. lineshape, theoretical study 7−119015
Se trigonal crysts., positron annihilation Doppler line broadening meas. 7−77684
Si, Czochralski annealed, second isoelectronic multiexciton centre 7−113284
Si, electron irradiated, 3942 cm^{-1} optical band 7−85782
Si Raman mode transform. during laser irrad., CARS study 7−92672
a-Si:H films, positron annihilation, annealing effect study 7−106304
SiO_2, amorphous, thermally grown, struct. interpretation anal. 7−83672
SiO_2-Li_2O-Al_2O_3-CaO:Eu^{3+} glasses, impurity homogeneous linewidth spectral and temp. depend. studies 7−77607
TbF_3, fluoresc. dynamics, effect of ferromag. order 7−113276
$ThCl_4$:U^{4+}, incommensurate struct., obs. by optical spectroscopy, U^{4+} probe 7−85783
Y-Ba-Cu-O high T_c supercond., positron annihilation Doppler broadened lineshape study 7−119064
$(Y_{0.6}Ba_{0.4})_2CuO_{4-y}$, high T_c supercond. props., FIR transmission spectra 7−113204
$Y_{2.0}Ca_{1.0}Ge_{0.9}Fe_{4.1}O_{12.0}$ reduced garnet film, FMR spectra study 7−112890
YIG thin film, ferromag. reson. linewidth, ESR spectrometer meas. study 7−118863
Yb alloys, unstable 4f-shell, transport props.−quasielastic neutron spectra linewidth correls. anal. 7−118460
n-ZnSe, plasmon-LO-phonon coupled modes, Raman scatt. 7−113185
ZnSe:Ag, strongly lattice coupled luminesc. transition, temp. broadening 7−92711
ZrF_4-BaF_2-AlF_3-LaF_3:Eu^{3+} glasses, impurity homogeneous linewidth spectral and temp. depend. studies 7−77607

spectral line profiles *see spectral line breadth*

spectral line shift
see also chemical shift; isomer shift; isotope shifts; Lamb shift; radiative shifts; red shift; Stark effect; Zeeman effect
acetonitrile, liquid, A_1 modes vibr. dephasing, computer simulation 7−97882
acetophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
adenine, aq. soln., self-assoc., UV spectra 7−78474
adenosine, aq. soln., self-assoc., UV spectra 7−78474
alcohols, saturated, ν_{OH} freq., gas-solvent shifts 7−109813
5′-AMP, aq. soln., self-assoc., UV spectra 7−78474
aniline radical cation, vibr., time resolved reson. Raman spectra 7−90139
anilino radical, vibr., time resolved reson. Raman spectra 7−90139
atom, two-level, reson. fluoresc., radiation redistrib., diffusing modes or extra laser 7−82036
atomic spectra QED freq. shift, thermodynamics 7−68254
atoms, frequency shifts, QED thermodynamics 7−68253
benzenamine-4-(9-anthryl)-N,N-dimethyl related cpds., synthesis, spectroscopic props. 7−90265
benzene, cryogenic solvents, spectroscopic studies 7−135921
benzene in supercritical N_2, spectroscopic studies 7−90179
benzene-Ar clusters, Penning ionisation, UV spectra line shapes 7−82331
benzene-d_0 (d_6), liq., isotopic dilution anal., vibr. Raman spectrum 7−90155
benzenes, substituted, nonpolar, elec. quadrupole reaction field, NMR solvent shifts 7−109940
benzophenone, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
2,5-bis(2-benzothiazolyl)hydroquinone, jet cooled, excited state intramol. H^+transfer 7−86599
cardiolipin, lipid bilayer, FTIR spectra 7−90112
charge-transfer excitons, spatial and orientational ordering at intense pumping, absorption and fluorescence spectra 7−125793
chlorophyll-carotenoid complexes, Photosystem I photosynthesis model 7−71679
chromophore aggregates, circular dichroism band shape, ensemble-averaged resolvent matrix method 7−96756
core-level binding-energy shifts at surfaces and in solids, photoelectron spectroscopy obs., review 7−113353
correlated sources, red and blue shifts 7−110494
coumarin, picosecond solvation dynamics investig. 7−106777

spectral line shift continued
cyclic hydrocarbon-HX complexes, X=Cl,F,Br, matrix isolation studies 7−82107
β-cyclodextrin-indole inclusion complex, absorpt. and fluoresc. spectra 7−103569
trans-diaminostilbene, fluoresc. rel. to cure characterisation of epoxy network 7−90262
2,5-diaryloxazole pyridine analogs, quaternary salts, solid solns., fluoresc. 7−119048
N,N-dihydro-4,4′-bipyridinium radical cation and parent dication, reson. Raman spectra 7−144060
dimethylformamide, carbonyl band frequency, solvent polarity and acidity properties influence 7−122735
dinitrophenylpolyenes, polar fragments, selective orientational solvation effects on spectra 7−144705
diode lasers, quantum well, carrier-induced lasing wavelength shift 7−130114
diphenylpolyenes, dual fluoresc. in solns. 7−90258
dye solution, refractive index, spectral depend. 7−113106
energy shifts due to the ponderomotive potential 7−141536
erythrosine, adsorbed on semiconductor-molecular film insulator system, charged defects effects on mol. fluoresc. 7−77654
formaldehyde-d_2, ground state Stark shift, laser microwave double reson. 7−122580
frequency shift, Raman spectroscopy, difference and Fourier transform methods 7−90175
β-D-glucose dinitrates, vibr. spectra calcs., site localisation and substitution effects study 7−103474
hexafluorobenzene cation, vibr. freqs., perturbation by Ne matrix 7−96640
light sources, redshifts and blueshifts of spectral lines caused by source correlations 7−82739
metal atoms, in gas phase, absorpt. line shifts 7−74516
methanol, H bonded complexes in cryogenic solns., IR spectra 7−82090
modified Boltzmann kinetic equation for line shape functions 7−122618
molecular system asymmetric Fano profile distortions above metallic grating surface 7−74712
Morse potential, use in bond length and local mode freq. relationship 7−90315
2-nitroanisole, solute probe for Xe and SF_6 supercrit. solvent props. investig. 7−103411
nitrobenzene, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
nitroxyl radical in soln., exchange and hyperfine contrib. to EPR line shifts 7−68372
organic crystal mixtures, nonlinear line-narrowing spectroscopy 7−138441
organic molecules, vectorial excitation energy transfer involving inhomogeneously broadened electronic levels 7−116944
paraxylene clusters, reson. enhanced multiphoton ionisation study 7−90292
perfluoro-tert-butanol, H bonded complexes in cryogenic solns., IR spectra 7−82090
phenol blue, mol. interactions in dil. supercritical fluid solns. 7−122655
phenylacetylene, clusters, reson. enhanced multiphoton ionisation study 7−90292
trans-2-phenylcyclopropanecarboxylic acid derivatives, vibr. circular dichroism 7−117001
phosphatidylcholine, lipid bilayer, FTIR spectra 7−90112
phosphatidylethanolamine, lipid bilayer, FTIR spectra 7−90112
phosphatidylglycerophosphate, lipid bilayer, FTIR spectra 7−90112
pionic atoms, X-ray spectra study of level widths and shifts 7−110146
PMMA, intramol. charge transfer fluoresc. as mobility probe 7−90263
polymers, flexible, conjugated, absorpt. spectra in weak-disorder limit 7−136104
pressure broadening and shift of spectral lines, unified theories, Van der Waals interaction 7−74511
pyrene complexes, complexation shift in $S_0 \rightarrow S_1$ spectrum, fluoresc. spectra 7−82246
pyrene-N,N-dimethylaniline exciplex, fluoresc. spectra, thermochromic shifts 7−136012
quasars, effects of electron scatt. opacity in broad emission-line regions 7−88667
rare earth metal vacuum spark, X-ray emission quasicontinuum band 7−123986
rare earth sesquioxides, R_2O_3, R=Pr,Nd,Sm-Tb,Ho,Tm,Yb, bonding anomalies, Raman and IR vibr. spectra 7−85628
rhodamine 6G, ethanol solution, dynamic Stokes shift, fluoresc. spectrum, stochastic behaviour 7−82249
rigid symmetric-top molecules, Stark shifts, equation branch point anal. 7−66951
Rydberg states, QED level shifts between conducting planes 7−68258
semiconductor crystal, excitonic absorption band under uniaxial pressure, temp. dynamics *(Russian)* 7−118984
semiconductor injection laser, single-frequency, suppression and spectral splitting of amplitude noise, mode beating 7−122974
sodium laurate, oriented multilayers, ATR IR spectra 7−82089
solar K I 769.9 nm resonance line, centre-limb var. of line asymmetries and shifts with granulation and oscills. 7−107796
solvated electrons, NHz soln., optical absorpt. spectra 7−82026
source correlation, spectral line shifts 7−110750
stellar plasmas, partially ionised, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
stimulated Mandelstam-Brillouin scattering, anomalous line shift 7−82714
stimulated Raman scattering, power-dependent dispersion effects 7−90698
trifluoroethanol, H bonded complexes in cryogenic solns., IR spectra 7−82090
2,4,6-triisopropylbenzophenones, lowest triplet states, rot. relax., picosecond laser spectroscopy investig. 7−129690
two-photon two-level media, multiwave mixing, quantum theory 7−96965
vinylamine, inversion-torsion motion, microwave spectrum analysis 7−122504
water, absorption lines, air pressure induced centre shift, rel. to atm. optics 7−109873
water, intramolecular model potentials 7−110061
Wolf-Rayet stars, stellar wind turbulence rel. to spectral line profiles and redshifts 7−115365
Ag, Zeeman furnace AAS, matrix effects study 7−133007
Ar, microwave discharge, high press., emission profile width and shift 7−69503
Ar-HF, H bonded complexes, vibr. freq. shifts, dipole moments 7−90083
a-As_2S_3, temp. depend. of photodissociation 7−103602
spectral line shift continued
B IV, 2l2l′ dielectronic satellite lines, width and electron-produced shift anal. 7−129656
Bi, HFS of 648 nm line, collisional broadening, Faraday spectroscopy 7−122449
CO_2 trimer, van der Waals species sub-Doppler IR spectra 7−122519
$Cd_{1-x}Mn_xTe$, photoluminescence, temp., pressure depend. 7−144116
CdO semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
Cl, photoexcited Kα X-ray satellites spectra 7−135873
Co, photoexcited Kα X-ray satellites spectra 7−135873
Cs_2NaSbX_6 (X=Cl, Br), delocalised excited state transition, luminesc. spectra 7−119034
Cu(I), spectral line shifts and Stark broadening calc. 7−74509
D_2, collision-induced polarised and depolarised Raman scatt. 7−82179
D_2, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
D_2, Q-branch lineshapes, pressure depend., Raman spectra anal. 7−82163
$EuLiH_3$, paramag. and ferromag. states, PMR spectra 7−99585
^{19}F, antiprotonic, widths and shifts, meas. of strong interaction effects 7−110141
$Fe_{80-x}Cr_xB_{14}Si_6$, amorphous, Mossbauer spectra, effects of Cr content and temp. 7−99623
$Ga_{1-x}Al_xAs$ optical filters, thermo-optical effects 7−70755
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$, multi quantum well structs., excitonic recombination rel. to barrier config., photolum. 7−70094
GaInAsP-InP lasers, DBR dynamical single mode bundle-integrated-guide, 1.5 μm, spectral behaviour 7−122962
GaSe, anal. of excitonic Mott transition 7−70903
GdH_3, paramag. state, PMR linewidths and shifts meas. 7−99586
H atom, quantum electrodynamic level shifts between parallel conducting planes 7−68257
H excited states spectra in strong mag. fields, appl. to stellar field strength meas. 7−141505
H_2, collision-induced polarised and depolarised Raman scatt. 7−82179
H_2, collision-induced Raman scatt., temp. depend. anal. 7−82171
H_2, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
HCl complexes, electron correlation and anharmonicity 7−89999
HCl, fundamental IR bands, N_2 and air broadening effects 7−74586
HCl-HBr mixture, rotation line shift 7−122617
HCl+N_2, fundamental vibr.-rot. lines broadening and shifting calcs. 7−117056
HD, matrix isolated in Kr(X), spectral transition freqs., press. effects 7−82075
HF complexes, electron correlation and anharmonicity 7−89999
HF, fundamental IR bands, N_2 and air broadening effects 7−74586
HF-HBr mixture, rotation line shift 7−122617
HF-HCl mixture, rotation line shift 7−122617
H_2O, collisional broadening of 380 GHz line, temp. depend. 7−116937
Hα line in Sun and stars, line width and line shift rel. to plage props. 7−115340
HgI_2, layered semicond. colloids, size quantization 7−85766
In_2O_3 semiconductor colloidal solns., preparation, UV absorpt. spectra, solvent effects, photochemistry 7−135955
K, photoexcited Kα X-ray satellites spectra 7−135873
K, Stark broadening by electron, H^+ and Ar II impact 7−129652
Kr, hollow cathode discharge, Stark shift, optogalvanic spectra 7−129633
^ALi, A=6,7, antiprotonic, widths and shifts, meas. of strong interaction effects 7−110141
MgO:Cr^{3+}, press.-induced blue and red shifts of spectra 7−85591
N_2, gas-liquid phase change, spectral shifts, CARS setup for precise meas. *(Chinese)* 7−129713
N_2 Raman Q-branch transitions, self-density frequency shift measurements 7−82286
^{14}N, antiprotonic, widths and shifts, meas. of strong interaction effects 7−110141
^{23}Na, antiprotonic, widths and shifts, meas. of strong interaction effects 7−110141
Ni_2Si, empty states, soft X-ray absorpt. spectra 7−119071
OCS, J=2→3 line half-width and shift parameters *(French)* 7−129695
P, photoexcited Kα X-ray satellites spectra 7−135873
Pt complexes, $M(II)PtCl_6.6H_2O$, NQR freq., temp. depend. 7−106056
RbD_2PO_4, single cryst., vibr., IR and Raman spectra 7−144061
S, photoexcited Kα X-ray satellites spectra 7−135873
Si (111)$\sqrt{3}\times\sqrt{3}$-Ag surface, photoelectron spectra, surface and core-level shifts 7−85949
SiO_2:Ce, (Al)(P) glasses, plasma CVD, fluoresc., absorpt spectra, codoping effects 7−71046
TbF_3, fluoresc. dynamics, effect of ferromag. order 7−113276
Tl, press. effects of Ne and Ar collisional broadening and shift of 535 nm line 7−103423
Tl+Ne(Ar), $8p^2P_{1/2,3/2}$-$7s^2S_{1/2}$, collisional broadening and shifts 7−129657
Tm, Ne matrix isolated, spectral and temporal characts. 7−68245
Xe, above-threshold ionisation with subpicosecond laser pulses, shifts and broadenings 7−135897
Xe^{2+}, multielectron effects in ultrasoft X-ray emission spectra 7−82032
$Xe_2{}^+Cl^-$, in Xe matrix, UV emission spectra 7−90184
$YBa_2Cu_3O_y$, high T_c supercond., Raman spectrum temp. depend. 7−119010

spectral linewidths *see spectral line breadth*

spectral methods of temperature measurement
see also pyrometers
CARS applications to combustion diagnostics 7−86631
CARS N_2 thermometry at high pressure, for internal combustion engine appls. 7−80907
CARS thermometry at ultrahigh temperatures 7−80904
combustion diagnostics using high-resolution CARS 7−80906
combustion measurements using high-resolution coherent Raman spectroscopy 7−80905
EM hyperthermia, temp. meas. technique using refl. method 7−107211
fibre optic temperature sensor using fluorescent decay of alexandrite crystal 7−123218
flame, temperature meas. by single-pulse CARS, pump. laser linewidth, effect on noise 7−128583
fluorescence thermometers using intramolecular exciplexes 7−115957
gasdynamic separator flow field, nonequilib. processes study 7−130761
ICP rotational spectrosc. temp. determ. using N_2 and $N_2{}^+$ 7−121117
industrial radiation thermometry 7−67304

spectral methods of temperature measurement continued
IR radiation thermometer 7—67393
laser calorimetric spectroscopy on flows 7—130803
liquid convection in cavity cooled from above, speckle meas. 7—142148
NBS scale of spectral radiance 7—140729
optical temperature sensing, fluorescence monitoring 7—75163
phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7—85791
radiance temp., meas. methods and instrumentation 7—95588
radiation thermometers, interpolation eqn. for exponent *(Japanese)* 7—140699
radiation thermometry, principles and instruments 7—115960
radiation thermometry when radiometer's field of view contains more than one type of material *(Japanese)* 7—73348
radiometer wavelength selection for indirect temp. meas. *(French)* 7—115990
robot-controlled microwave hyperthermia system, non-invasive IR thermometry 7—107222
shock tubes, temperature measurements using laser-based absorpt. technique 7—83368
thermal dosimetry based on radiometry in multilayered media during microwave hyperthermia treatment 7—107213
Ar ions, temp. and velocity meas. using Ar ion laser 7—123989
GaAs, MBE, substrate temp. and growth rate meas. by IR spectroscopy 7—71015
GaAs surface oxide desorption temp. meas. 7—143213
N_2 CARS, broadband, pump-induced population changes implications for thermometry 7—123105
N_{2_1} spatially resolved rot. and vibr. temps. in ICP 7—121122
N_2^+ emission band, partially resolved, for temperature diagnostics 7—97791
Na cylindrical plasma, electron temperature measurements, effects of inhomogeneities, optical depth and finite bandwidth 7—123843
Ni-Sn, undercooled, dendritic growth, recalescence, high speed optical temp. meas. 7—100208
SF_6 circuit-breaker rotating arc spectrum *(French)* 7—130961
Si solar cell welding process temp. meas. and finite-element simulation 7—144846
W lamp, press. and temp. profiles CARS meas. 7—80900

spectrochemical analysis
see also atomic absorption spectroscopy; atomic emission spectroscopy; X-ray fluorescence analysis
acridine dyes, luminesc. in solvents and biological systems *(Japanese)* 7—129785
aerosol, particle comp., IR size modulation, visible light scatt. Fourier transform spectroscopy 7—106859
aerosols, atmospheric, anal. by total refl. X-ray spectrometry 7—139056
AES, lateral resolution considerations 7—139062
archaeology, analytical spectroscopic methods appl. *(German)* 7—86745
atmosphere, IR spectroscopy 7—93593
atom concentrations, determ. by reson. radiation capture 7—114058
atomic spectrochemical analysis, structural effects, evaporation characts. study *(German)* 7—133008
atoms, Auger spectra using Al, Ag and Ti Kα X-ray radiation 7—141544
ATR-spectrometric extinctions ratios determ. *(German)* 7—114055
autocorrelation function and cross correl. function evaluation, signal to noise ratio 7—93436
blood gas measurement of O_2, CO_2, inert and anaesthetic gases, review 7—93986
BOXCAR detection, basis and use in analytical spectrometry 7—67396
calibration techniques for fibre optics in the near-IR 7—141994
cathode surface charactn. using Raman scatt. 7—126501
chemical vapour deposition, intracavity laser spectroscopy quantitative detect. 7—133000
chlorpropamide, and tablets, PMR spectrometric determ. 7—100673
coherent forward scattering spectroscopy 7—93445
combustion diagnostics, CARS appls. 7—86631
combustion diagnostics using high-resolution CARS 7—80906
combustion measurements using high-resolution coherent Raman spectroscopy 7—80905
cotton dust, acute pulmonary response rel. to comp., spectrosc. obs. 7—127046
dentine, resin-reinforced, Raman microprobe study 7—132994
diatomic molecule form. in electrothermal atomisers, interferences and analytic possibilities 7—93315
diffuse reflection and polarization modulation FT-IR spectrometry of surface species 7—93442
drug release kinetics from colloidal particles determ., automated device 7—133505
drug vials, sealed, rapid headspace anal. using multichannel Raman spectroscopy. 7—74626
EELS, near-edge fine struct., chemical cpd. identification using TEM 7—130995
electrical contacts, complex, quantitative Auger anal. 7—119595
environmental materials anal. using spectroscopic methods 7—93609
ESCA, spatially resolved, instrument performance optimisation 7—78581
ESCA appl. in materials research 7—71564
fibre optic evanescent field absorpt. sensor 7—136540
flame and plasma diagnostics, atomic and ionic fluoresc. dip spectroscopy study 7—133010
fluophotorefractometric detector, FFR-01 for meas. on liquids 7—114041
fluorescence detection, conf., Los Angeles, CA, USA (Jan. 1987) 7—140367
fluorescence spectrophotometer, multidimensional data collection and processing, microcomputer based system 7—121239
forensic diagnostics, laser excited fluoresc. appls. 7—114044
formaldehyde-methanol aq. soln., ^{13}C NMR study *(French)* 7—96737
Fourier transform infrared spectrometer for a single aerosol particle 7—86727
gallstone, Raman spectrosc. identification 7—127024
gallstones, microstruct., Raman microprobe and FT-IR microsampling obs. 7—107191
geological materials, spectrochem. anal. *(German)* 7—86730
granitic rocks, trace element determ., emission spectroscopy 7—127482
Hadamard transform photothermal deflection imaging, resolution, dynamic range 7—102402
heavy metal ions, host precipitates for trace anal. by laser excited fluorescence 7—86698
homogeneous molecular profiles, in optical waveguides, quantitative Raman spectrosc. meas. 7—86691

spectrochemical analysis continued
2—hydroxy-4, 5-benzotropone, proton transfer dynamics, matrix isolation spectra 7—133001
3—hydroxychromone, proton transfer dynamics, matrix isolation spectra 7—133001
3—hydroxyflavone, proton transfer dynamics, matrix isolation spectra 7—133001
inductively coupled plasma devices for spectrography *(German)* 7—106874
inductively coupled plasma spectroscopies 7—93437
inductively coupled plasmas, effective line profiles, detect. limit 7—89267
information theory appl. *(German)* 7—93438
infrared and Raman spectroscopy appls. in industry 7—93439
internal combustion engine, molecular species spatial distrib., multichannel Raman spectroscopy 7—93333
IR gas analyser, nondispersive, transfer behaviour *(German)* 7—93408
IR sensing LEDs for chemical sensor appls., reliability 7—100684
IR spectra library searching, odd moments of the cross-correlation fn. study 7—144766
laser calorimetric spectroscopy on flows 7—130803
laser enhanced ionisation spectroscopy with high press. liq. chromatography 7—144779
laser induced fluorescence and ionization spectroscopy: theoretical and analytical considerations for pulsed sources 7—86729
laser induced fluorescence spectroscopy, multilevel rate eqns. perturbation treatment 7—106850
laser microspectral analysis, excitation in plasma of gliding discharge 7—144780
laser spectrofluorimeter with nanosecond time resolution and automated data processing 7—89265
layered phosphates, modification by low-energy ion bombardment, chemical factors 7—93307
liquid surface film analysis by pulsed laser photoacoustic spectroscopy 7—92755
local absorption measurement by laser-induced fluorescence 7—106851
lock-in detection, basis and use in analytical spectrometry 7—67395
melamine-formaldehyde adducts, charactn. by NMR, UV spectra and chromatography 7—93402
metal chelates of Schiff bases, stability consts., thermodynamic props. 7—93363
metal deposition on low-Z samples during ECR and glow discharge cleaning in TEXTOR 7—75812
metals, corrosion and oxidation anal. using spectroscopic techniques 7—93207
metals, fracture due to microsecond laser pulses, rel. to at. spectrochem. anal. 7—119373
metals, spectrochemical anal. using laser-induced breakdown spectroscopy 7—132991
metals, surface analysis and corrosion inhibition mechanisms 7—119454
metals in solids, direct determ. by laser ablation DC Ar plasma emission spectrometry 7—114060
methane, nonpremixed flames, spontaneous Raman scatt. study 7—86627
methyl fluoride+HCl, complex-forming reactions in neutral noble gas clusters 7—119503
methyl radical+I, gas-phase reactions, intracavity laser spectroscopy method appl. 7—106790
microprobes for Raman and fluoresc. microspectrometry 7—89275
microwave-induced plasmas, spatial emission props., easily ionised elements effect 7—142499
minerals with fluid inclusion, Raman spectroscopy computerised system *(French)* 7—132995
mobile emission spectrometer for metal analysis in industrial environment *(German)* 7—100674
molecular gases, independent discharges, spectrosc. anal. 7—117782
monodisperse model aerosol, mol. comp. determ. 7—132981
multi-color CARS for simultaneous measurements of multiple combustion species 7—132999
multicomponent gas mixtures, spectral anal., nonlinear correl. 7—119610
multicomponent mixtures, orthogonal spectra appl. to component spectra estimation 7—86690
near IR qualitative and quantitative anal. 7—100643
near-IR spectroscopy, appl. to simple cpds. and polymers 7—108112
NMR, high field, anal. appls. 7—80838
NMR analysis of polymers, computerised model fitting 7—78568
nuclear principles based methods, review *(Italian)* 7—86688
oil spill on Bombay beach, characterisation and source identification by gas chromatography and IR spectroscopy 7—139147
on-line, real-time alkali monitor for process stream analysis 7—144781
optical fibre chemical sensors using spectrophotometric anal. 7—95634
optical waveguides, homogeneous molecular profiles, quantitative Raman spectrosc. meas. 7—80885
organic free radicals solns., paramag. species relative concs., EPR spectra least-squares anal. 7—116999
organic hydroxy compounds, microcomputer controlled pulsed amperometric detector system, appl. 7—67397
organic solvents, volatile, ICP spectrometric anal. 7—126497
organochlorides, remote detect. with fibre optic based sensor 7—71545
organometallic intermediates, IR spectroscopy analytical techniques 7—86738
phenylethynyldisilanes, photochemical and photophysical props., intramol. charge transfer emission 7—93346
plane grating spectrograph, line hyperfine struct. obs. 7—126527
PMMA copolymers, irrad.-induced degradation and sensitivity, resist appls. 7—142835
polybutadiene dielectrics, cyclized, thermal and mech. props. *(French)* 7—124561
polycarbosilane fibre, oxidation curing mechanism by solid-state ^{29}Si high-resolution NMR 7—119528
polyelectrolytes, cationic, low level determ. in water, complexation method 7—106849
polymer industry, spectroscopic methods 7—114019
polypropylene-PMMA thin film composites, refl.-absorpt. IR spectra, TEM, chem. labelling 7—71546
polytetrafluoroethylene polymers, glow discharge effects obs. 7—95689
polythiophenes, conducting, enhancement of mean conjugation length 7—78488
propane, effect on at. spectrometric signals in Ar ICP 7—89268
quality control analysis by IR spectroscopy 7—100637
quantitative microfluorometry of isolated living cells with pulsed excitation 7—133532
quantitative UV resonance Raman spectroscopy using KrF excimer laser 7—102532

spectrochemical analysis continued
Raman measurements, fluorescence effects 7−103507
reaction products, laser induced fluoresc. detect., coherent saturation effects 7−96783
reactive transients detect. in flames, laser spectroscopic techniques *(German)* 7−132997
remote and in situ Raman spectroscopy using optical fibres 7−89276
remote sample characterization based on fluorescence monitoring, oil slick example 7−133167
remote sensing using fibre optics and UV-VIS-NIR spectroscopy 7−100636
respiration diagnostics, tunable diode laser based spectroscopic system 7−107291
seeds, oil-yielding, quantitative NMR anal. 7−114057
Si, solid, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
silica fibre light guide, doping additives, Raman scatt. determ. 7−114059
silk fibroins biosynthesis in silkworms, NMR obs. 7−114190
species concentration in complex turbulent flow, Rayleigh meas. 7−132985
Standard Reference Materials discussion 7−100681
steel, austenitic stainless, SCC susceptibility rel to cathodic reduction treatment *(Japanese)* 7−78325
steel, Cr bearing, N ion implantation, wear, surface struct., Auger spectra 7−119379
steel, N ion implantation, surface struct., wear resist. 7−104775
surface films and powders, Fourier transform IR spectra using metal light pipe 7−132990
surface films and powders, metal light pipe Fourier-transform IR spectroscopy theory 7−132989
temperature variable long path cell for absorption measurements 7−133002
tetraphenylporphinatozinc, oxidation investigated using thin layer spectroelectrochemical cell employing specular reflectance 7−119596
TEXTOR, C layer carbonisation and surface modification by Tokamak discharge 7−75814
TEXTOR, films deposited by wall carbonisation, characterisation 7−75813
trace element analysis, laser enhanced ionis. spectroscopy 7−93465
trace element analysis, reson. ionis. spectroscopy, contamination avoidance 7−93466
trace elements, detect. using reson. ionis. spectrosc. *(German)* 7−129677
transient IR absorpt., high sensitivity detect. using tunable diode lasers 7−119592
transition metal chromophore as sensitive tag for proteins 7−144970
transition metal ions, aq. soln., metal binding with melanin, use of CTPO assay, ESR spectra anal. 7−74675
UV source optimisation for unburnt hydrocarbon detection *(French)* 7−130285
UV-visible reflectance spectroelectrochemistry, review 7−78582
waste incineration emission monitoring for control using noncontacting infrared absorption gas analyser 7−139075
X-ray emission spectroscopy of substrate-under-film transition layers in heterostructures 7−102572
X-ray photoelectron spectroscopy *(Japanese)* 7−119597
Ag, Zeeman furnace AAS, matrix effects study 7−133007
Al alloy sample, laser induced plasma prod. and charactn. for atomic spectrometry 7−100640
Ar inductively coupled plasma, impurities spatial distribs. study 7−130834
As atoms, detection by laser-induced fluorescence 7−126494
BN_3, solid, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
B_2O_3-P_2O_5-SiO_2 glasses, dopant conc., FTIR spectroscopy anal. 7−83726
C fibres, surface chemistry, use of XPS and labelling techniques 7−86700
C filled polymers, IR internal refl. spectroscopy applic. to characteris. 7−114030
C surfaces, modification in cold plasma 7−130878
CO imaging in combustion gases by laser induced fluoresc. 7−139007
CO oxidation on Pt/SiO_2. integrated kinetic modelling and transient FTIR studies 7−126421
CO_2, electrochemical reduction, Raman spectra 7−144725
CO_2 nondispersive IR analysers, calibration with CO_2-in-air reference gases 7−127525
Ca^{2+} ion concentration in living cell, laser microfluorometry 7−71712
Ca_2AlFeO_5, surface comp., electron and optoacoustic spectroscopy 7−105201
$Ca_3Al_2O_6$, surface comp., electron and optoacoustic spectroscopy 7−105201
Cr-Cr_2O_3 on Cu, scanning Auger microscopy and optical integrated reflectance meas. 7−118316
Fe complexes, N-substituted hydrazine carboxylic acids, spectral and synthetic study 7−70756
Fe-Cr alloys, high-temp. air corrosion products, Raman obs. 7−70813
Fe-Ni, N_2^+ ion implantation effect on corrosion in H_2SO_4 soln. 7−126296
Ga, reson. ionis. spectrometric anal. 7−93467
GaAs high-sensitivity microanalysis of impurities using multielement doped GaAs standard samples 7−100646
GaAs:Mn, Ni, Co, Cu films, MBE grown, effect of impurities on electrical props. 7−77110
GaAs-AlGaAs, etch and etch stop reactions in dichlorodifluoromethane plasma 7−119463
Ga_xCl_y, vibr. modes Raman spectroscopy quantitative anal. *(French)* 7−129717
GaInAs, anodic oxidation, Auger and RBS comp. anal. 7−132834
H_2-O_2-N_2 flames H conc meas. by photoionisation controlled-loss spectroscopy 7−139006
HCO+I, gas-phase reactions, intracavity laser spectroscopy method appl. 7−106790
He, annular ICP, generated in low gas flow torch, characterisation 7−93434
He inductively coupled plasma, energy transfer, ionisation processes, heavy inert gas atoms effect 7−130830
He plasma, surface wave sustained, spatial emission props., spectroscopy appl. 7−142498
I_2, disproportionation reactions in basic solns., Raman spectrosc: obs., rel. to nucl. safety 7−74018
InP MIS devices, with thin native oxide double layer insulator films, prep. and elec. props. 7−125134
spectrochemical analysis continued
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
Li/$SOCl_2$ cells, discharge products, in situ microRaman obs. 7−78583
Li-$SOCl_2$ cells, in situ micro-Raman study of discharge product 7−126576
NH_2+I, gas-phase reactions, intracavity laser spectroscopy method appl 7−106790
NO_2 concentration meas. in stack plume by two-wavelength long-path differential absorpt. laser radar *(Japanese)* 7−100788
NbC_xN_{1-x} superconducting films, reactively sputtered in (Ar, N_2, C_2H_4) mixtures, charactn. 7−131843
Ni, passivation in aq. solns., surface film comp. 7−132791
Ni-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta-P amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni^{2+}-H_2O-NH_3 system, comp. and electronic spectra of complex species in soln., computer studies 7−144084
NiAl, transient oxidation, XPS study 7−71350
NiO_2, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
O+trichloromethane (trifluoromethane), dynamics and microscopic kinetics, time-resolved Fourier transform spectroscopy 7−132919
O_2 concentration meas. using fluoresc. quenching, biomedical sensor appl 7−78579
O_3 conc. determ. by UV absorpt. spectra method 7−139805
OH, far IR detection in P/Comet Halley (1982i) 7−88258
OH radicals in flame, absolute density meas. by time-resolved laser induced fluorescence 7−71493
$Pb_{0.8}Sn_{0.2}Te$ laser-doped crysts., ESCA obs. of comp. of near-surface domain 7−133018
Pd, determ. investigation, graphite furnace technique 7−126496
Pd-Si interface, phase comp., Si Auger spectrum intensities meas 7−106856
Pt, determ. investigation, graphite furnace technique 7−126496
Pu laser-induced fluoresc. in inductively coupled plasma nuclear fuel reprocessing analytical control appl. 7−144767
SO_2Cl_2 electrolytes, water traces, IR spectroscopic anal. 7−100583
Si:C, solar grade, high C impurity conc. determ., peak ratio method evaluation 7−91624
a-Si:H films, role of H, IR spectral anal. 7−98730
Si:O, impurity conc. meas. using IR absorpt. 7−84007
Si:O wafers, precipitation testing 7−84299
SiC, Nicalon, fibres, mech. props., free C content, ESR obs. 7−92494
Si_3N_4 plasma-enhanced CVD films in $Si/SiO_2/Si_3N_4$ system, ESCA/AES analysis 7−131483
SiO_2, afterglow CVD prep., chem. and phys. props. 7−100112
SiO_2, reactive sputter etching, role of F atoms, Langmuir probe and optical actinometry meas. 7−126276
Tl_3AsSe_3 IR acousto-optic tunable filter for multi-gas stack emission monitoring 7−133177
Tl_3AsSe_3 single crystal filter for IR source for spectrochemical anal. of flue gases 7−126502
U(VI)+tropolone reaction, extraction-spectrophotometric determ 7−100657
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
Zn_3P_2 single crystals, surface chemistry studied by X-ray photoemission spectroscopy 7−119593

spectrography *see spectroscopy*

spectrometer components and accessories
see also mass spectrometer components and accessories
automatic recording system for Raman spectra of globular protei 7−78758
charge-sensitive preamplifier with drain feedback for X-ray spectrometer 7−122317
circuit for pulsing-off a side-window photomultiplier 7−80888
concave grating spectrometers, aberration reduced, numerical design method 7−130306
controller using microcomputer, for IR spectrophotometer 7−140768
cooled armored electromagnet for optical studies 7−121165
cryostats, optical, with variable layer for spectra of solns. in liquefied gases 7−102401
cyclone spray chambers, recycling, for ICP AES 7−73428
cylindrical Pierce gun for high-intensity bremsstrahlung isochromat spectroscopy 7−95688
DC plasma for at. emission spectrosc., simplex optimisation 7−89269
diamond anvil cell for high-pressure microRaman spectroscopy 7−89284
dielectric multilayer mirrors, combined phase parameter, appl. to interferometers 7−68811
double-tuned $^{13}C/^1H$ probe cct. for CP/MAS NMR, linewidths 7−73390
double-tuned circuit for in vivo NMR 7−128610
dual illuminator for thermally induced Raman difference spectroscopy 7−121227
EPR spectrometers with AFC, power supply of klystron oscillator 7−121179
fibre optics for Raman scattering at low temp. and high magnetic field 7−140759
fluorescence spectroscopy of Na vapour at high pressure and temp, absorption cell 7−96597
gas sampling introduction system for ICP spectroscopy and plasma gas anal. 7−80884
high-pressure cell for optical spectroscopy at low temp., low-cost apparatus 7−102444
high-pressure probe for NMR obs. of homogeneous catalysts 7−73389
hollow cathode discharge, microwave-coupled lamp for AES 7−130283
injection locked dye lasers, for high resolution CARS spectrometer 7−82162
IR accessory for emissivity meas. of Al surface 7−124562
IR IKS-21 spectrometer modernisation 7−121242
IR lamp housing, high-efficiency 7−128680
IR spectrometer system, ADC data acquisition system *(Korean)* 7−140765
laser Raman spectroscopy, computer interfaces *(Korean)* 7−140766
lock-in detection, basis and use in analytical spectrometry 7−67395
magic-angle spinning NMR, efficient stator rotor assembly 7−95632

spectrometer components and accessories continued
methylsilsesquioxane, reference material for magic angle ^{13}C NMR spectroscopy 7—102470
microcapacitor electrodes for microwave rotational spectroscopy 7—103683
microcell, for Raman obs. of discharge products of $Li/SOCl_2$ cells 7—78583
microchannel plate intensified multichannel detectors, gain variation correction 7—73429
microprobes for Raman and fluoresc. microspectrometry 7—89275
mixing devices for time-resolved Raman spectroscopy 7—89272
modular light pipe interface for GC/FT-IR 7—121240
multinuclear transceiver/digitizer for high-resolution NMR spectrometer 7—95631
neutral atoms, magnetostatic trapping fields 7—73434
permanent magnet for Mossbauer spectrometer 7—108727
Phobos spacecraft plasma spectrometer with solar power generator 7—145828
Pockel cell computer controlled switching device for Raman spectroscopy 7—128671
programmable magnetic-field modulator for microwave EPR spectrometer 7—67362
pulsed amperometric detector system, microcomputer controlled, appl. to organic hydroxy compounds 7—67397
pulsed amplifier controller 7—89239
quadraphase modulator for proton-detected ^1H-X correl. spectrosc. 7—73394
Raman optical activity, instrumental advances 7—89271
Rayleigh line rejection filter for Raman spectrometers 7—89273
remote and in situ Raman spectroscopy using optical fibres 7—89276
resonance monochromator for at. absorpt. and at. fluoresc. spectrometry 7—73437
sample rotation in diffuse reflectance Fourier transform infrared spectroscopy 7—102547
servomechanism driven variable neutral density filter, for modulation spectroscopy 7—128677
Soleil-Babinet compensator for Raman optical activity spectrometer 7—74617
solid state NMR spectrometer component developments 7—128604
spinner, hybrid, for magic angle ^{13}C NMR spectroscopy 7—102470
temperature variable long path cell for absorption measurements 7—133002
tetraphenylporphinatozinc, oxidation investigated using thin layer spectroelectrochemical cell employing specular reflectance 7—119596
PtSi Schottky-barrier IR focal plane array, spectroscopic appl. 7—68892
Si(Li) detectors in energy range 4.5 to 17.5 keV 7—95653

spectrometers
see also interference spectrometers; magnetic resonance spectrometers; mass spectrometers; microwave spectrometers; particle spectrometers; radiofrequency spectrometers; X-ray spectrometers
accelerators in research and industry, conf., Denton, TX, USA (Nov. 1986) 7—88733
aerosols, electrooptical spectrometers, metrological support 7—73431
Auger electron appearance potential fine struct. spectroscopy, improved spectrometer 7—121309
automated spectrometer for studying scattered light fine structure 7—102535
automatic low-frequency deep-level capacitance spectrometer 7—121148
Brillouin spectrometer using piezoelectrically scanned Fabry-Perot interferometer *(Japanese)* 7—108672
capacitance cell for dielectric spectrometer 7—95608
cathode-luminescence and X-ray spectral anal., high resolution spectrometer 7—121232
Cryogenic Limb Array Etalon Spectrometer solid H_2 cooler, design and performance 7—67326
cryogenic Michelson interferometer spectrometer for Space Shuttle application 7—87958
Czerny-Turner spectrograph, automatic design by nonlinear optimisation method 7—121233
decay time spectrometer, design for nanosecond region 7—108665
diamond anvil cell for high-pressure microRaman spectroscopy 7—89284
diode laser high resolution fiberoptical infrared spectrometer 7—121244
dye laser grating spectrometer for tunable ps pulse generation 7—68670
dye laser spectrometer, ultra-high resolution using non-tunable reference resonator 7—102528
Earth Observing System, high-resolution imaging spectrometer, conceptual design 7—115200
Earth Observing System, moderate resolution imaging spectrometer, preliminary system concepts 7—115201
Ebert spectrograph, spectral line tilt effect 7—134850
energy-angular-mass spectrometer, magnetotail plasma ions investig 7—115168
fibre optic sensor readout, wavelength division multiplexer appl. 7—130334
FIR/submm hinge spectrometer using grating Fabry-Perot configuration 7—72300
forward scattering spectrometer probe for cloud liquid water content determ. 7—127532
four-zone null-type spectroscopic ellipsometer, construction and appls. *(Japanese)* 7—121193
Fourier spectrometer scanning mirror displacement meas. device 7—128531
Fourier transform infrared spectrometer for a single aerosol particle 7—86727
Giotto implanted ion spectrometer characts. 7—139924
holographic gratings, design for high SNR flat field spectrograph 7—110551
Hubble Space Telescope with second generation spectrograph Solar Maximum Mission experiences 7—115204
imaging spectrometer for investig. of Mars 7—88117
instrument complex for nS phenomena in optical spectroscopy *(Russian)* 7—128660
IR cryogenic echelle spectrometer characts. 7—115539
IR IKS-21 spectrometer modernisation 7—121242
IR laser heterodyne spectrometer, O_3 spectrum meas. 7—80914
IR Raman spectroscopy with semiconductor devices for excitation and detection 7—108679
IUE SWP and LWR cameras in low dispersion mode, recalibration 7—94658

spectrometers continued
laser, with telescopic resonator, link between diffraction losses and light beam cross section 7—141910
laser aerosol spectrometers, calibration 7—73438
laser photoionisation spectrometer, appl. to Rydberg atom study 7—67401
laser spectrofluorimeter with nanosecond time resolution and automated data processing 7—89265
longitudinal chromatic aberration, design and performance 7—134856
Mossbauer spectrometer, remote microprocessor controlled 7—108719
Mount Stromlo coude echelle spectrograph, instrumental response function meas. 7—134137
multichannel Raman optical activity spectrometer 7—128670
nanosecond decay time spectrometer construction suggestions, report 7—80897
objective crystal spectrometer for Bragg imaging of extended cosmic X-ray sources 7—139915
optical array spectrometers with greyscale for particle size meas. 7—115079
photoacoustic spectrometer with automatic data acquisition *(Czech)* 7—128672
pulse dielectric spectrometer, with logarithmic time scale 7—134805
raindrop size spectrometers, corrections for horizontal drag forces effect on rain trajectories 7—127533
raindrop velocity spectrometer for drop chemistry investigations 7—127534
spectroradiometer, calibration rel. to energy brightness of IR laser radiation 7—140762
three-parameter electrostatic spectrometer, space plasma obs. 7—95606
tilting filter spectrometer with microcomputer control 7—133943
UV spectrometer of Solar Spectrum Experiment on Spacelab-1 (December 1983) 7—134134
Voigt effect coherent forward scattering spectrometer, noise characts. 7—121237
VUV spectrometer-detector system, comparison of methods for second-order detect. efficiency determ. 7—95660
VUV spectrometers for plasma diagnostics, in situ absolute calibration 7—97792
wide-frequency specific heat spectrometer 7—128574
XPS images using X-ray photoelectron spectrometer 7—89308
XUV laser spectrometer, pulsed dye lasers, dichroic mirrors photoion yield, cooled target, applications 7—140763
CO_2 automated tunable stabilized laser spectrometer for molecular studies 7—108677
$CaF_2:Eu^{2+}$ fluorescence excitation spectrometer fabrication and results *(Japanese)* 7—82587
H_2O, atmosphere, ν_2 absorpt. band, IR spectra, tunable diode laser spectrometry 7—103504

spectrophotometers
see also spectrophotometry
automated spectrophotometric system with fibre-optic link, construction 7—134834
computer-controlled spectroradiometer as precision colorimeter 7—128625
drug release kinetics from colloidal particles determ., automated device 7—133505
electrooptic Fabry-Perot filter in spectrophotometer for solar oscillations study 7—120276
fluorescence spectrophotometer, multidimensional data collection and processing, microcomputer based system 7—121239
integrating sphere-Fourier transform spectrophotometer emissometer for diffuse IR reflectance meas. design 7—108627
IR, controller using microcomputer 7—140768
microcomputer-controlled, BAS-M model *(German)* 7—102491
multichannel microspectrophotometer for visual pigment investigations 7—101161
optical antireflection coatings, dual-beam referenced reflectometry 7—68907
optical fibre chemical sensors using spectrophotometric anal. 7—95634
SpectrAA-20 automated atomic absorpt. spectrophotometer 7—67366
spectroradiometer, automated two-channel 7—108623

spectrophotometry
see also colorimetry; spectrophotometers
atmospheric aerosols containing Zn, Cd, Pb and Mn *(Japanese)* 7—145646
atomic absorpt. spectrophotometry, background correction speed, effect on accuracy 7—67365
cerebral cytochrome P-450 meas. 7—145300
computer processing, Specord 75 IR spectrophotometer with 15IPG32 computer complex 7—102548
coronagraph for astronomical imaging and spectrophotometry 7—72299
error in colour coordinate meas. determ. 7—128624
film refractive index determ. by spectrophotometry, ellipsometry and Abeles method 7—102496
integrating sphere measurement of hemispherical reflectance, error correction 7—80851
NBS scale of spectral radiance 7—140729
on-line vision systems, light source characts. and electro-optics optimum choice 7—121191
optical fibre chemical sensors using spectrophotometric anal. 7—95634
optimum sampling interval determ. 7—121186
particle size and numerical density determination with spectrophotometer and its application *(Japanese)* 7—67283
polystyrene latex spheres deionised suspension, structural relax. time meas. 7—137189
second order reactions, linearly independent progress variables, spectrophotometric anal. *(German)* 7—126411
solar cell calibration, differential spectral responsivity method 7—106904
spices, irradiated by gamma-rays, spectrophotometric anal. 7—93813
spiral wave propagation in Belousov-Zhabotinskii reaction 7—69282
spiral wave propagation in Belousov-Zhabotinskii reaction 7—69283
thin films, optical parameters from spectrophotometric transmission curves 7—125836
tissue viability noninvasive meas., spectrophotometric and replication techniques evaluation 7—119830
UV, with liquid absorbance standard, accuracy, linearity 7—73441
WWER, spectrophotometric methods for oil trace determ. in primary coolant 7—96239
Al_2O_3 sintered plate white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7—67368
$BaSO_4$ white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7—67368

spectrophotometry continued
Fe complex, $Fe_4(Fe(CN)_6)_3$, prussian blue, site-transfer cond., dielectric relaxometry, voltammetry and spectrophotometry anal. 7−70307
Ho_2O_3 wavelength standard, determ. 7−80724
LiF white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
S white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368

spectroscopes *see spectrometers*

spectroscopic light sources
colour centre lasers for spectroscopic appls. 7−73444
DC arc, optical emission spectroscopy radiation source, review 7−82740
DC arc excitation as radiation sources for optical emission spectroscopy 7−91385
dual ICP at. emission source, characterisation 7−102530
dye lasers, VUV light generation, appl. to reson. ionisation spectroscopy 7−90602
extraction discharge source for analyte line intensities enhancement in ICP-AES 7−102531
hollow cathode discharge, microwave-coupled lamp for AES 7−130283
inductively coupled plasmas, effective line profiles, detect. limit 7−89267
laser-produced-plasma VUV continuum source 7−80910
plasma torch, high pressure, inductively coupled 7−123997
UV flash lamp probe source for nanosecond spectroscopy 7−82737
UV source optimisation for unburnt hydrocarbon detection *(French)* 7−130285
vacuum spark, low-inductance, spectroscopic source 7−117769
Ar ICP, effect of propane on at. spectrometric signals 7−89268
He ICP, kinetic model 7−80883
PbSnSe laser, 16 μm CW tunable, high-resolution spectroscopy appl. 7−136296

spectroscopy
see also beam-foil spectroscopy; computerised spectroscopy; electron spectroscopy; Fourier transform spectroscopy; interference spectroscopy; magnetic resonance spectroscopy; mass spectroscopy; matrix isolation spectroscopy; microwave spectroscopy; modulation spectroscopy; optical double resonance; optogalvanic spectroscopy; photoacoustic spectroscopy; photon correlation spectroscopy; photothermal spectroscopy; point contact spectroscopy; quantum beat spectroscopy; radiofrequency spectroscopy; Raman spectroscopy; spectroscopy computing; time resolved spectroscopy; tunnelling spectroscopy; two-dimensional spectroscopy; two-photon spectroscopy; X-ray spectroscopy
absorption spectroscopy detection of single atom 7−102534
alpha-spectrometry of environmental samples 7−93600
atomic, laser excitation of ion beams 7−82050
Brillouin spectroscopy of SAW using tandem-multipass Fabry-Perot interferometer *(Japanese)* 7−108671
coherent optical spectroscopy, laser hyperbolic secant π pulse appl. 7−90662
coherent spectroscopy and light echo, conf., Kharkov, USSR (Oct. 1985) 7−120685
colour centre lasers for spectroscopic appls. 7−73444
complex optical spectra decomposition methods 7−128665
conference, lasers and electro-optics, San Francisco, CA, USA (June 1986) 7−120703
conference on radiative processes in discharge plasmas, Pitlochry, Scotland (June-July 1985) 7−128187
core-excited metastable levels, appl. to spectroscopy, picosecond XUV pulse generation and lasers 7−90011
crystals, superradiance, phenomena and appls. 7−122885
detection limit determination in spectroscopy 7−135728
detection of spectrally narrow light emission by laser intra-cavity spectroscopy 7−108676
diffuse reflection and polarization modulation FT-IR spectrometry of surface species 7−93442
diode lasers, tunable, stabilisation for spectroscopy of low density gases 7−136392
Earth imaging spectrometry, aircraft and space programme 7−101567
emission spectroscopy with use of Polaroid films 7−108107
excited state spectroscopy, measurement techniques 7−129899
external reflection spectroscopy, selection of optimum parameters for thin films on smooth metal surfaces 7−67394
external reflection spectroscopy for recording thin-film 7−80891
extinction laser spectroscopic technique, meas. of level positions, oscillator strengths and autoionising linewidths 7−102542
FIR spectroscopy of solids using synchrotron radiation *(Japanese)* 7−73445
fluorescence spectroscopy of Na vapour at high pressure and temp., absorption cell 7−96597
fluoride glass IR optical fibres in medicine and biology 7−79042
fractionally charged particle search using charge spectrometer system, technique, results 7−116040
frequency-domain fluorescence spectroscopy resolution of complex emission 7−73436
Gaussian peak centroids, errors in determination 7−134855
glassy systems, with relax. time distributions, spectroscopy 7−99878
Hadamard transform spectrometer with liq. crystal spatial light modulator array 7−140748
highly ionised atoms, almost Doppler-free spectroscopy technique 7−140755
holographic grating based Ebert spectrograph, aberration props. and design procedure 7−128674
infrared and Raman spectroscopy appls. in industry 7−93439
instrument complex for nS phenomena in optical spectroscopy *(Russian)* 7−128660
intracavity laser spectroscopy, sensitivity, influence of emission spectra kinetics of multimode lasers *(German)* 7−130039
intracavity laser spectroscopy in ns dye laser 7−74997
intracavity spectroscopy and magneto-optic phenomena research 7−130187
ion+molecule collisions, gas phase, collision spectroscopy appls. 7−68432
IR, selective reduction of data 7−134861
IR diode laser absorpt. spectroscopy in NO seeded mol. beam 7−109884
IR dispersive mirage spectra of solids in submerged in water 7−140767
Jablonski diagrams, review 7−110304
laser calorimetric spectroscopy on flows 7−130803
laser diffraction spectrometry, Fraunhofer diffraction and Mie scatt. 7−108519
laser induced fluorescence spectroscopy, multilevel rate eqns. perturbation treatment 7−106850

spectroscopy continued
laser light scattering spectroscopy, using fibre optics, spatial coherence considerations 7−108674
laser material diagnostics, conf., Albuquerque, NM, USA (Feb. 1987) 7−102022
laser photoionization system for high resolution spectroscopy appl. 7−95655
laser photolysis system for meas. of transient species absorpt. spectra *(Japanese)* 7−115987
laser spectroscopy, update 7−140754
laser spectroscopy for electronic materials processing 7−67398
lasers and electro-optics, conf., Baltimore, MD, USA (April-May 1987) 7−120705
lasers and their interactions and appls., conf., Las Vegas, NV, USA (Dec. 1985) 7−108033
methyl isothiocyanide, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
methyl thiocyanide, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
microwave-induced plasmas, spatial emission props., easily ionised elements effect 7−142499
molecular crystals, optical coherent spectroscopy, review 7−121228
molecular luminescence and photophysics, conf., Torun, Poland (2-5 Sept. 1986) 7−108006
multicomponent mixtures, orthogonal spectra appl. to component spectra estimation 7−86690
multiple-frustrated total-internal-reflection spectroscopy, optical constants 7−116010
near IR spectroscopy: neonatal brain monitoring appl. 7−107209
nonlinear 7−136399
nonlinear absorption and emission spectroscopy, appls. to excited states 7−108667
octanone, ion mobility spectrometry, charge distrib. and struct. effects 7−71550
optical spectroscopy for online process control 7−100647
phase-lifetime spectroscopy of photocycle processes, kinetic anal. of amplitude dispersion curves 7−93805
photodiode array detection with Shpolskii and fluoresc. line-narrowing spectroscopy 7−128664
picosecond spectrochronography of pure and impurity crystals secondary radiation 7−128659
picosecond spectroscopy, development operation and appls. 7−128676
plasma diagnostics appl., oscillating electric fields 7−123979
plasma emission spectroscopy, local emission coeffs. and parameters, optically thin case *(German)* 7−130938
polarisation spectroscopy of gaseous media using photon echo, review 7−121230
pulse formation through scanning optical coherent spectroscopy 7−121231
pulse shaping effects in laser spectroscopy 7−128675
pulsed noise reduction in infrared luminescence spectroscopy, by algorithmic signal processing technique 7−95661
quantum electronics, conf., Baltimore, MD, USA (April-May 1987) 7−128191
reaction kinetics, stopped-flow measurements, optical detection system 7−126404
remote sensing, surface features extraction from multispectral imagery 7−101574
resolution improvement, mathematical methods, limits 7−102540
resolution into elementary symmetric bands, by Gram-Schmidt orthogonalisation method 7−102541
resonance ionization spectroscopy, appl. to trace element detection *(German)* 7−129677
saturation spectroscopy, coherent effects 7−89270
saturation spectroscopy for optically thick atomic samples 7−80893
signal reduction to ideal instruments, a priori spectral information appls. 7−73439
Stokes parameters spectral dependence determ. 7−121190
surface differential reflectivity spectroscopy of semiconductor surfaces 7−118969
synchrotron radiation use in vacuum UV spectroscopy and radiometry 7−102543
thin films, emission, reflection and transmission spectroscopy 7−98751
total luminescence spectroscopy, appls. 7−108666
triple cell for spectral, photophysical and photochemical experiments 7−108548
tunable-diode-laser spectroscopy, advances 7−108678
UV-vis detection, multichannel, for monitoring liq. chromatography 7−134858
variable dispersion spectrographs, astronomical appl. *(French)* 7−101690
vibrational spectroscopy, ab initio MO calcs. *(Japanese)* 7−74557
Voigt functions, unified presentation 7−140751
wavelength selection for absorbance ratio monitoring of liquid chromatography 7−134859
XUV spectroscopy, coherent high-resolution 7−89278
H^+ transfer in lasers and spectroscopy 7−113867
He plasma, surface wave sustained, spatial emission props., spectroscopy appl. 7−142498

spectroscopy applications of computers *see computerised spectroscopy; spectroscopy computing*

spectroscopy computing
see also computerised spectroscopy
2D fluorescence, Fourier transform based pattern recognition algorithm 7−102533
acetanilide unconventional amide I band 7−90128
adsorbed species, on solid catalysts, IR spectra, band shape anal. 7−76594
atomic emission spectroscopy, spectral interferences study 7−100682
atomic fluorescence curves of growth, computer program anal. 7−132992
complex optical spectra decomposition methods 7−128665
complex species in solution, comp. and electronic spectra, computer studies 7−144084
computer-interfaced temperature controller for FT-IR diffuse reflectance cell 7−140750
cyclopentanes, substituted, NMR chem. shift, spectra simulation 7−116986
cyclopentanols, substituted, NMR chem. shift, spectra simulation 7−116986
discrete apodised magnitude-mode lineshapes, freq. interpolation 7−80886
element analysis in flames, laser enhanced ionisation spectroscopy with high press. liq. chromatography 7−144779

spectroscopy computing continued
EPR spectra, least-squares fitting, Monte Carlo methods simulation 7−115983
FX, digital spectro-correlator system for radio astronomy 7−127728
gas chromatograph mass spectrometer, quadrupole-type library search system *(Japanese)* 7−67420
ICP mass spectroscopy, computerised reference manual for spectral data and interferences 7−102557
Infrared library search on principal-component-analyzed Fourier-transformed absorption spectra 7−80911
ion transmission through laser microprobe mass analyser, study using ray-tracing computer programs 7−67419
IR, selective reduction of data 7−134861
IR libraries, compression by eigenvector projection 7−102545
IR spectra library searching, odd moments of the cross-correlation fn. study 7−144766
IR spectrometer system, ADC data acquisition system *(Korean)* 7−140765
IR spectrometry, teaching program in LISP and PROLOG 7−80272
laser photolysis system for meas. of transient species absorpt. spectra *(Japanese)* 7−115987
marine sediments, photon activation anal., internal standard model 7−119603
mass spectral peak interpretation using PROLOG program 7−93435
minerals with fluid inclusion, Raman spectroscopy computerised system *(French)* 7−132995
multidetector spectrometer system for Ge double-beta expt., design 7−68180
NMR analysis of polymers, computerised model fitting 7−78568
NMR signal convolution by digital signal processing 7−67358
NMR spectroscopy, localised, selective pulse techniques simulation 7−115982
NMR spectroscopy, microprocessor controlled electronic integrators 7−108590
NMR spectroscopy, two-dimensional spectra, cross peaks detection, cluster anal. 7−89247
numerical procedure for interference fringes removal from optical spectra 7−128545
processing, automated system 7−67382
SIMIPS: secondary ion mass image processing system 7−95672
slitless spectra automated anal., astron. appl. 7−127740
spectrophotometry, Specord 75 IR spectrophotometer with 15IPG32 computer complex 7−102548
spectroscopic data banks, review 7−80215
Stanexpert, knowledge-based software environment for anal. of spectroradiometer data, appl. to mineral identification 7−101568
time-resolved, high-speed spectroscope for time-varying optical spectrum analysis 7−121238
two-dimensional NMR, cross-peak fine struct. simulation 7−128612
X-ray fluorescence data processing in the energy range 1.5 to 15.4 KeV 7−78561
n-$Bi_{1-x}Sb_x$, photoelectromagnetic effects meas. using computer controlled spectral studies 7−77006

spectrum *see spectra*

spectrum analysers *see spectral analysers*

speech
see also hearing
acoustic tube reconstruction from noncausal excitation 7−136651
adventitiously deaf male cochlear implant adults, speaking rate 7−142116
articulation-disordered children, lingual activity, instrumental phonetic study 7−107086
articulatory movements meas., EM device 7−114518
audiology conf., Ballarat, Vic., Australia (April 1986) 7−101993
auditory speech perception, precedence over nonspeech perception 7−145086
background noise for speech audiometry *(German, English)* 7−139318
breathing, age effects 7−145122
children, kinematic characts. investigation 7−78907
cochlear implant patients, matching acoustical props. of speech with elec. stimulation freq. boundaries 7−127044
German phonetics, unaccented word-final vowels duration *(Japanese)* 7−145097
hearing protection, effects of self-utterance *(Japanese)* 7−145081
mental health assessment, speech technology eval. 7−114295
movement timing, deaf and hearing speakers, comparison of phonetically heterogeneous syllable strings 7−145094
narratives of children with and without language disorder, episode organisation and cohesive conjunctives 7−107087
pathological and normal voices, comparison of various acoustical characts. 7−119783
perioral neuromuscular system, functional identification, signal flow diagram 7−78908
perioral reflexes of stutterers and nonstutterers, surface EMG recording 7−107096
phonatory control in spasmodic dysphonia 7−107088
production modelling, direct registration of articulatory movements vs. acoustic anal. 7−107097
reflex responses in human jaw, lip, and tongue muscles elicited by mech. stimulation 7−78909
rhythm, teacher's speech in classroom *(Japanese)* 7−133328
sound level monitoring using a tactile transducer 7−79134
speech-muscle visuomotor tracking in dysarthric and nonimpaired speakers 7−107095
tongue articulation, factor anal. 7−107090
tracheoesophageal voice prod., aerodynamic and myoelastic contrib. 7−145092
transmission of speech information through the mouth shape: various methods for supplementing speech reading *(Japanese)* 7−145088
vocal field oscillation, simulation using lumped mass-spring approach 7−126849
vocal severity prediction 7−107091
vocal tract fluid flow, finite element model 7−114309
vocalis muscle, canine, twitch response to elec. field stimulation 7−145121
voice perturbation measurements, technical considerations 7−107093
vowels, stuttered and fluent, formant freq. investig. 7−145089

speech amplifiers *see audio-frequency amplifiers*

speech analysis and processing
2D speech/ECG signal processing using Wigner-Ville distribution 7−79109
acoustic-phonetic segment classification and scale-space filtering 7−110719
adaptive acoustic echo canceller with high speech quality 7−117410
ARMA anal. and glottal source waveform, voice source and vocal tract parameters estimation 7−110717
auditory nerve representation criteria for speech analysis synthesis 7−114274
cleft palate speech, nasalization meas. *(Japanese)* 7−75214
computerised quantitative speech profile 7−126989
consonant-to-vowel durational effects in Italian 7−87027
continuous speech, parallel algorithms for hypotheses generation 7−142120
continuous speech, S/N ratio meas. techniques 7−75217
difference limens for fundamental frequency contours in sentences 7−82943
digital inverse filtering for linguistic research 7−78911
disphonic voices, speech pattern recognition for laryngeal disease diagnosis *(Spanish)* 7−119782
English; initial consonant voicing, fricative cue duration 7−142118
fast estimation of poles corresponding to the formants using a method to estimate only the poles in the vicinity of the specified argument *(Japanese)* 7−90886
fundamental frequency stability characteristics of elderly women's voices 7−82945
glottal flow estimation from pressure gradient measurements 7−100927
ICASSP '87 acoustics, speech and signal processing conf., Dallas, USA (Apr. 1987) 7−108035
iterative speech enhancement with spectral constraints 7−110711
Japanese, mora timing expts. 7−110704
labelling of known speech using demiphoneme network representation *(Japanese)* 7−117411
lattice filter model with accurate lip impedance for dynamic articuratory movement 7−110720
LPC distances, deterministic characts. 7−110706
motor equivalence in speech production 7−142115
nasal consonant acoustic props. 7−130480
nasal consonants feature extraction, high resolution frequency anal. of voices 7−110714
neural network model with speech signal feature extraction, digital simulation *(Japanese)* 7−93782
NMR imaging, appl. to speech prod. anal. 7−87028
pitch-synchronous weighted linear prediction 7−104109
sensorineural hearing loss, electronic simulation by speech processing, rel. to intelligibility 7−119781
soprano solo and choir singing, acoustic comparison 7−142122
spectral speech transition modelling using temporal decomposition techniques 7−110708
spectral transition dynamics of voiceless stop consonants 7−82944
speech perception research studies *(Japanese)* 7−145080
speech training using visual displays *(Japanese)* 7−145284
spelling alphabet words intelligibility, digital processing and BER effect 7−136648
subglottal formant analysis 7−78906
temporal acoustic measures of dysarthria associated with amyotrophic lateral sclerosis 7−78910
time-domain pitch determ. using laryngograph 7−75219
vector quantisation for minimum residual energy in pitch prediction of speech 7−139293
vector quantisation in speech coding, review 7−104108
vocal tract parameter estimation, ARMA model compared to LPC 7−100928
vocal tract resonant freqs. and voice personality 7−97229
vocal tract shape determination from acoustic signal, error anal. 7−110716
vocal tract simulation: implementation of continuous variations of the length in a Kelly-Lochbaum model, effects of area function spatial sampling 7−114292
vocal tract/cord model for speech parameter estimation 7−110713
vocal tremor detect., comparative evaluation of pitch process models 7−126847
voice fluctuations over period of a day 7−123354
voice quality, psychometric evaluation *(Japanese)* 7−107085
voice quality factors, acoustic features related to gender 7−110712
vowel extraction using a microcomputer for acoustical investigations 7−90885
vowel imitation, categorical tendencies in self-produced isolated vowels 7−75216
vowel production, articulatory and acoustic analyses 7−142117
vowel recognition, binary spectral pattern method *(Japanese)* 7−82946
word-final English stop production 7−130484

speech intelligibility
see also hearing
auditory nerve representation criteria for speech analysis synthesis 7−114274
average talkers in typical listening environment 7−114294
diagnostic information from subjective and objective intelligibility tests 7−110707
English verification of the STI method for estimating speech intelligibility of a communications channel 7−130481
format transition rate effect on differentiation of sounds 7−107089
frequency important function for continuous discourse 7−87016
fricative perception by children and adults, coarticulatory effects 7−145090
hearing aid users with various high-frequency cutoffs 7−93770
hearing aids in tele-coil listening mode, speech discrimination tests 7−87029
hearing-impaired subjects with in-the-ear and behind-the-ear hearing aids, speech understanding and directional hearing 7−87021
monaural hearing aids, linearly constrained adaptive beamforming for interference reduction 7−114559
nonlinearly transformed speech signals for speech analyzer investigation 7−87018
paging system design computer program 7−110705
primary parameter estimations 7−130483
sensorineural hearing loss, electronic simulation by speech processing, rel. to intelligibility 7−119781
SIL curves for verbal communication in background noise 7−68954
speech transmission index, assessment prospects 7−130482

speech intelligibility continued
spelling alphabet words intelligibility, digital processing and BER effect 7−136648
synthesized speech intelligibility, ECHO II vs. VOTRAX 7−145096
synthesized speech signals intelligibility, distortion study, anal. of basilar membrane in cochlea 7−126850
velopharyngeal function in speakers with cleft palate with and without prostheses 7−107094
voice quality factors, acoustic features related to gender 7−110712
vowel production by profoundly hearing-impaired speakers, training effects 7−107092
speech processing *see speech analysis and processing*
speech recognition
acoustic-phonetic segment classification and scale-space filtering 7−110719
aging subjects, reaction times to monaural verbal stimuli 7−107082
auditory model with pitch-synchronous anal., appl. 7−110718
auditory nerve representation as a front-end for speech recognition in a noisy environment 7−114269
auditory training effects on speech recognition by hearing-impaired adults 7−107079
automatic learning approach to adaptation of speech recognition system to one or several speakers 7−75218
cerebral palsy speech recognition, vowel consistency study 7−107098
cerebral palsy speech recognition using adaptive sequential regression algorithm 7−126848
Chinese, 4 tones recognition 7−110709
consonant recognition by elderly hearing-impaired subjects, acoustic modification effects 7−87017
consonant-to-vowel durational effects in Italian 7−87027
consonant-vowel articulations, synthetic, visual perception 7−145095
continuous speech, parallel algorithms for hypotheses generation 7−142120
continuous speech recognition by means of acoustic/phonetic classification obtained from a hidden Markov model 7−110710
disabled people, computer use 7−114557
expert system for word recognition based on key syllables 7−90889
gross articulatory features, fluently spoken speech, syllable-based segment-hypotheses generation 7−110715
ICASSP '87 acoustics, speech and signal processing conf., Dallas, USA (Apr. 1987) 7−108035
isolated digit recognition expts. with cochlear model 7−107083
isolated long German vowels, perception model *(German)* 7−78891
Japanese sentence analysis system used in the book-reader for the blind 7−133508
labial-doubles-recognition method for substitution hearing aid 7−93778
multiple-channel cochlear inplant, formant-estimating speech processor meas. 7−123352
nasal consonants feature extraction, high resolution frequency anal. of voices 7−110714
pattern matching techniques for speech recognition *(Japanese)* 7−75215
robustness against noise, timing-synchrony meas. 7−114296
speaker independent automatic speech recognition, human auditory perception simulation 7−107084
spectrographic voice identification 7−130486
stop consonant recognition, effect of hearing loss on utilization of short-duration spectral cues 7−133321
stress and noise conditions, hidden Markov model techniques 7−110684
synthetic sounds quantitative anal. of similarities between data using MDS-kNN 7−82947
threshold in noise, hearing loss, freq. response, speech materials effects 7−145091
transmission index, further validation 7−145093
vocal tract parameter estimation, ARMA model compared to LPC 7−100928
voice identification by voiceprint, fundamental considerations 7−130485
vowel and consonant recognition of cochlear implant patients using formant-estimating speech processors 7−123353
vowel recognition, binary spectral pattern method *(Japanese)* 7−82946
word and feature identification by profoundly deaf teenagers using the Queen's University tactile vocoder 7−78912
word recognition system, speaker-independent *(Japanese)* 7−142119
speech synthesis
auditory nerve representation criteria for speech analysis synthesis 7−114274
character reader with speech output for blind people *(Japanese)* 7−145281
consonant-vowel articulations, synthetic, visual perception 7−145095
data processing and visual disability *(Italian)* 7−87362
disabled persons and computer technology, conf., Northridge, CA, USA (Oct. 1985) 7−95092
disabled persons communication means development *(Italian)* 7−87361
English text-to-speech conversion 7−142114
format transition rate effect on differentiation of sounds 7−107089
ICASSP '87 acoustics, speech and signal processing conf., Dallas, USA (Apr. 1987) 7−108035
intelligibility of synthesized speech, ECHO II vs. VOTRAX 7−145096
intelligibility of synthesized speech signals, distortion study, anal. of basilar membrane in cochlea 7−126850
mental health assessment, speech technology eval. 7−114295
psychophysical studies relevant to the design of a digital electrotactile speech processor 7−126851
real-time speech synthesis model, estimation of articulatory trajectories by Kalman filtering 7−90888
speech prosthesis system for laryngectomees using 'electropalatograph' and a small keyboard 7−101140
vocal tract model for speech synthesis, real-time processing capability 7−90887
vocal tract/cord model for speech parameter estimation 7−110713
voice quality factors, acoustic features related to gender 7−110712
speech transmission *see voice communication*
speed *see velocity*
speed control *see velocity control*
speed indicating instruments *see velocity measurement*
speed measurement *see velocity measurement*
spelter *see zinc*
spherical aberration *see aberrations*
spheroidizing
damping capacity, treatment, microstruct. 7−138776
spheroidizing continued
steel, Cr, pearlitic transform. kinetics and pearlite morphology, effect of austenite state 7−86223
steel, Cr-Mo-V, warm rolled, spheroidize annealed, microporosity, insoluble carbides, metallographic polishing 7−78410
steel, damping capacity, treatment, microstruct. 7−138776
steel, hypoeutectoid, effect of preliminary holding on granular pearlite annealability range 7−106533
steel, low C, austenite form., TEM study *(Chinese)* 7−71209
steel, near eutectoid, thermal fatigue, microstruct. instability and transform. 7−144532
Al-Si, eutectic spheroidization metallography *(German, English)* 7−113585
$Ni_{75}Si_8B_{17}$, amorphous alloy, spheroidisation process 7−144357
spicules *see chromosphere*
spin
see also elementary particle spin and parity; nuclear spin and parity
higher dimensional black holes, spin degrees of freedom, Casimir invariants 7−127940
Kaluza-Klein theory, equivalence of spin and ang. momentum 7−73120
$O+H_2 \rightarrow OH+H$, reactive collision, crossed beam expt. 7−144710
spin arrangements *see magnetic structure*
spin decoupling (NMR) *see double nuclear magnetic resonance*
spin density waves
2D systems, coexistence of ferromagnetism, charge-density waves and spin-density waves 7−85331
Bechgaard salts, field induced spin density waves, spin susceptibility 7−125356
Bechgaard salts, field-induced spin density waves, magnetotransport studies 7−84938
Bechgaard salts, mag. field induced SDW, band energy transverse second harmonics 7−112309
disordered metals, magnetic field induced metal-insulator transition 7−143351
heavy fermion cpds., itinerant antiferromag. state, SDW phase diagram anal. 7−125411
heavy fermion superconductors, SDW instability 7−125225
heavy fermion systems, spin density waves, model calcs. 7−125412
high T_c oxide superconductors, T_c enhancement due to SDW instabilities 7−99283
high T_c supercond., phonon freq. changes and spin density waves 7−125232
itinerant antiferromag. spin structures, SDW systems, spin wave modes 7−99431
itinerant ferromagnets, localisation and correl. effects, generalized N-orbital model 7−99392
itinerant multiple SDW systems, spin waves 7−99432
low energy collective modes in field induced spin density wave phases *(French)* 7−70509
magnetically ordered metals, quantising mag. field, low temp. static SDW *(Russian)* 7−99429
organic quasi-1D conductors, cascade of field-induced SDW phases 7−99460
organic quasi-1D conductors, quantised field-induced SDW ordering 7−99473
Peierls electron-phonon system with half-filled band, decoupling of charge and spin density waves 7−84699
polyene linear chain, Hartree-Fock eigenvalues, instability numbers *(Russian)* 7−143451
quasi 1D conductors, magnetic field-induced phase transitions 7−84708
quasi-1D conductors, field-induced SDW phases, quantum cascade 7−76794
quasi-1D conductors, magnetic field induced metal-SDW transition, sp. ht. jump 7−105925
sinusoidal phase, wave vector dependent suscept., Landau theory 7−118757
su(8) model for superconductivity, charge and spin density wave unification 7−112616
superconducting d-wave pairing near Fermi surface instabilities 7−92361
superconductivity and antiferromagnetism, 2D Hubbard model, scaling theory 7−125222
superconductor, highly anisotropic, thermodynamic props. in external mag. field *(Russian)* 7−99330
superconductors, CDW and SDW types, thermodynamics, Δ/T_c ratio, paramag. limit 7−112626
$(TMTSF)_2AsF_6$, far-IR reflectivity through the spin density wave transition 7−118980
$(TMTSF)_2AsF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2ClO_4$ Bechgaard salt, field-induced SDW Green's function calcs. 7−77312
$(TMTSF)_2ClO_4$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2ClO_4$, low temp. metallic phase, rapid mag. quantum oscills. obs. 7−143440
$(TMTSF)_2ClO_4$, mag. field induced SDW transitions, DTA study 7−92069
$(TMTSF)_2ClO_4$, non-Ohmic transport in field-induced SDW state 7−84847
$(TMTSF)_2ClO_4$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2ClO_4$, semiconductors, high magnetic field investigations *(German)* 7−125119
$(TMTSF)_2ClO_4(PF_6)$ conductors, high field magnetoresistance studies *(German)* 7−124968
$(TMTSF)_2PF_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
$(TMTSF)_2PF_6$, crystallographic and electronic struct. 7−83940
$(TMTSF)_2PF_6$, high field magnetotransport, quantum effects, phase transitions 7−84829
$(TMTSF)_2PF_6$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
$(TMTSF)_2PF_6$, SDW transitions in mag. field, comparison with $(TMTSF)_2ClO_4$, magnetotransport behaviour 7−84854
$(TMTSF)_2PF_6$, supercond., electronic props., PMR anal. 7−85474
$(TMTSF)_2SbF_6$, SDW state, far IR cond. meas. by bolometric technique 7−85676
$(TMTSF)_2X$, Bechgaard salts, small period oscillation of magnetoresistance 7−84823
$(TMTSF)_2X$, superconductivity mechanism 7−70459

spin density waves continued
$(TMTSF)_2X$ salts, collective modes 7−84853
TMTSF Bechgaard salts, field induced SDW states, thermodynamics 7−112828
TMTSF compounds, Bechgaard salts, field induced SDWs in presence of normal impurities 7−70551
$BaPb_{1-x}Bi_xO_3$, band struct., APW calc. 7−92065
$CeRu_2Si_2$ heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
Cr, antiferromagnetic, μ^+ diffusivity, SDW and CDW interactions, μSR study 7−113056
Cr, antiferromagnetic, symmetry-adapted Wannier functions 7−138185
Cr, Mossbauer effect, evidence of third harmonic of spin-density-waves 7−125563
Cr-Ge dil. alloys, elastic constants and thermal expansion 7−77392
$CsNiF_3$, field-induced spin-energy-density coupling, longitudinal spin response, neutron scatt. study 7−125357
Dy-Y superlattices, mag. struct., neutron diffr. study 7−99409
$FeGe_2$, mag. phase transitions and mag. struct., neutron scatt. studies *(Russian)* 7−138228
Ho, Neel transition splitting obs. in appl. mag. field 7−125388
$(La_{1-x}Ba_x)_2CuO_{4-y}$, crystallographic, mag. and superconductive transitions 7−92332
La_2CuO_4, semicond., elec. and mag. props. 7−92179
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Sr) high T_c supercond., transport props. and Fermi surface 7−92337
$(La_{1-x}M_x)_2CuO_4$, high T_c superconductor, Fermi surface instability, phase diagram 7−99262
LaSrCuO, high T_c supercond., evidence for incommensurate SDW in electron tunnelling studies 7−138155
$La_{2-x}Sr_xCuO_4$ (x=0 to 0.2), high T_c supercond., electron-electron correlations 7−112656
$Lu_5Ir_4Si_{10}$ supercond., electronic phase transition suppression by hydrostatic press. 7−125220
$Ni_{2-x}Cu_xMo_6S_8$, elec. cond. behaviour, electronic instability 7−131723
UPt_3, heavy fermion superconductivity and magnetic props. 7−70472
UPt_3 heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
$U(Pt_{1-x}Pd_x)_3$ pseudobinary heavy fermion systems, sp. ht., resist. and mag. suscept. meas. 7−69929
URu_2Si_2 heavy fermion system, 17.5 K transition, thermopower and elasticity studies 7−98994
$U_{1-x}Th_xBe_{13}$, inherent spin-density-wave instability in heavy-fermion superconductivity 7−112580

spin disorder resistivity
$CeInAg_{2-x}Cu_x$, Heusler phase, Konda lattice, mag., elec., specific heat props. 7−138188
Er, magnetic phases, low temp. sp. ht. meas. 7−105928
α-ErH_x, magnetic phases, low temp. sp. ht. meas. 7−105928
$Fe_xNi_{80-x}B_{20}$ glassy alloys, magnetisation and elec. resist. meas. 7−85360
$Fe_xNi_{77-x}B_{13}Si_{10}$, amorphous, spin-disorder scattering 7−143456

spin dynamics
see also spin density waves; spin disorder resistivity
alloys, resistivity, magnetic impurity pairs 7−124954
alternating bond Ising chain, critical dynamics, relaxational and diffusive kinetics 7−125426
anharmonic oscillator, quantised, time evolution, spin analogue 7−67083
antiferromagnetic paramagnon pairing mechanism, Fermi surface nesting, 2D model 7−118793
antiferromagnetic semiconductors, carrier energy fluctuation shifts 7−70184
antiferromagnets, intermediate state, magnetoelastic interaction effect 7−99538
Bechgaard salts, field induced spin density waves, spin susceptibility 7−125356
$(BEDT\text{-}TTF)_2I_3$, α- and β-phases, CESR spectra, 5-300 K 7−85438
β-$(BEDT\text{-}TTF)_2IBr_2$, CESR spectra, 5-300 K 7−85438
β-$(BEDT\text{-}TTF)_2X$, (X=I_3, IBr_2), quasi-2D metals, spin relax. and diffusion 7−92491
cellulose, natural abundance ^{13}C spin exchange study 7−70663
conduction electrons, spin dynamics under mag. breakthrough conditions 7−143320
copper heptachloride N-methylphenethyl ammonium, anomalous mag. props. 7−125328
copper hexachloride (cyanomethane), anomalous mag. props. 7−125328
di(tetramethylammonium) tetraiodo cadmate, mol. dynamics, PMR study 7−92538
dilute fractal networks, structure dynamics 7−73224
dilute magnetic alloys, low temp. conduction electron spin dynamics calcs. *(Russian)* 7−77266
dilute polarised fermions, spin diffusion at all temps. 7−105922
discrete spin Hamiltonian, equivalent Ising Hamiltonian with multispin interactions 7−92437
disordered magnets, competing anisotropy, nuclear spin waves *(Russian)* 7−125343
disordered solids, ferromag. long range order, dipolar coupling effects 7−143831
dynamics, thermoremanent magnetisation 7−143818
ethylene-α-olefine copolymers, spin-diffusion relax., ^1H and ^{13}C NMR 7−92531
Fermi liquids, almost-localised, antiferromagnetic correlations 7−125409
Griffiths phase, spin autocorrelation function 7−138243
heavy fermion superconductors, anisotropic Cooper pairing, antiferromagnetic spin fluctuations, effects on transport props. 7−70464
heavy fermion systems, Kondo lattice props. 7−92164
heavy fermions, low-Q spin fluctuation effects 7−137653
Heisenberg ferromagnets and antiferromagnets, 2D, spin correlation functions *(Russian)* 7−70580
Heisenberg paramagnets, neutron scatt. line profile, temp. depend. *(Russian)* 7−77202
hexamethylbenzene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
Ising model, local freezing, mean field theory 7−112839
Ising systems, dynamics of droplet fluctuations 7−99478
isotropic ferromag. μ^+ longitudinal spin relaxation, mag. field effect 7−85516
isotropic ferromagnetic Heisenberg chain, arbitrary spin, critical behaviour 7−125434
itinerant multiple SDW systems, spin waves 7−99432

spin dynamics continued
kinetic Ising model, critical dynamics in quasilinear fractal geometries 7−80651
kinetic Ising model in 1D, critical effects in quasilinear fractal geometries 7−80652
Laves phase intermetallic cpds., AT_2, (A=rare earth or transition metal, T=Ni,Co,Fe,Mn), magnetism, review *(Japanese)* 7−85319
linear response theory on spin van der Waals model *(Korean)* 7−85268
magnetic superconductors, electronic heat capacity, effect of spin scatt. and mag. order 7−85191
metals, dirty, spin dephasing time due to weak scatt. processes 7−105932
metals, magnetism, spin fluctuation theory *(Japanese)* 7−77311
metals, spin dynamics of local magnetic 4d moment, perturbed γ-ray distrib. method 7−138187
3-methyl-2-aminopyridinium copper octachloride, anomalous mag. props. 7−125328
N-methylpiperazinium copper octachloride, anomalous mag. props. 7−125328
multiple quantum dynamics in NMR, directed walk through Liouville space 7−92515
nonlinear dynamics of highly anisotropic spin-1 magnetic materials 7−132079
orthoferrites, ground state and domain struct. near smooth spin reorientation 7−132050
orthoferrites, Sm-substituted, absorpt. spectra 7−113162
orthorhombic antiferromagnets, spin-flop phase transition, mean-field theory calcs. 7−105919
oxide high T_c superconductors, electron-phonon interactions, exchange enhancement 7−112618
paramagnetic lattice, electron self-energy, spin fluctuation effects 7−85301
paramagnons, effects in proximity sandwich 7−70488
polyethylene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
polyethylene, linear, natural abundance ^{13}C spin exchange study 7−70663
polypropylene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
quantum Hall effect, fractional, spin-reversed quasiparticles 7−105596
quasi 1D antiferromag. systems, low temp. spin dynamics, critical EPR line broadening *(Russian)* 7−99553
random field Ising model, statics and dynamics 7−143830
(rare earth)$_2Fe_{14}B$ polycryst. alloys, spin reorientations simulation w.r.t. permanent magnet and recording appls. 7−125351
rare earth alloys, $R_2Fe_{14}B$, Curie temp., spin reorientation, anisotropy and magnetisation 7−70544
rare earth alloys, $R_2Fe_{14}B$, polycrystalline, computer simulation of spin reorientations 7−99465
responses to pulses, echoes, and phase relations 7−80688
semiconductors, disordered, spin dephasing time due to weak scatt. processes 7−105932
semiconductors, light induced magnetisation, spin polarisation 7−105964
semimagnetic semicond., localisation, magnetoresist. and magnetospectroscopic meas. 7−105495
short-range spin glasses, scaling theory of ordered phase 7−125416
spin glasses, review 7−77314
spin wave energy thermal renormalisation, quantum mechanical expression 7−112805
spin-cluster theory of mag. materials, spin glasses appl. 7−92436
spin-fluctuation-mediated superconductivity, T_c estimation 7−138117
superconductors containing transition-metal impurities, strong-coupling theory 7−85182
TCNQ salts, TEA-$(TCNQ)_2$, magnetic susceptibility anomaly 7−85306
time-dependent systems, decay of quasistationary state, spin thermodynamics 7−125410
$(TMN)_3(ClO_4)_2((ASF_6)_2)$ cation radical salts, electronic props. 7−84858
transition metal cpds., $MPS_3(Se_3)$, (M=Fe,Ni,Zn), spin ordering, inelastic light scatt. studies 7−143812
weak itinerant antiferromagnetism, spin fluctuations, self-consistent renormalisation theory 7−131982
zero field 2D deuterium mag. reson., spin diffusion obs. 7−117791
CaO, phosphoresc., F_2^{2+} defect, optically detected stimulated spin echoes 7−85432
$Cd_{1-x}Mn_xSe(Te)$, magnetic polaron form. dynamics, picosec. photolum, study 7−99433
$Cd_{0.8}Mn_{0.2}Te$ dilute mag. semicond., integrated mag. spectroscopy obs. 7−125450
$Cd_{1-x}Mn_xTe$ diluted mag. semicond., zero field muon spin relax. studies 7−92564
Ce compounds, electronic spin fluctuations, NMR study 7−77418
Ce-La-Nd-Fe-B, high field magnetisation, AC suscept., anisotropy field meas. 7−92413
CeAs, order-parameter-conserving antiferromagnet, critical behaviour 7−143817
$CeCu_{1.54}Si_{1.46}$, heavy electron Kondo lattice, mag., sp. ht., elec. resist. meas. 7−77279
$CeNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
$CeRu_{2-x}Os_xSi_2$, magnetism changes 7−70552
$CeSi_x$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
$Ce_{0.74}Th_{0.26}$, mixed valence alloy, γ-α valence transition, paramag. response, neutron scatt. study 7−70263
Co complex, $Co(ClO_4)_2$(γ-picoline-N-oxide), 2D antiferromag. Ising layer cpd., mag. excitations, EPR 7−105905
$CoBr_2.6H_2O$, spin reorientation direction at the spin-flop transition 7−99466
$CoCl_2.6H_2O$, spin reorientation direction at the spin-flop transition 7−99466
Co_2SnTe_4, amorphous, mag. props. 7−132024
Co_xZn_{2-x} W-type hexaferrite, mag. props., 78-700 K 7−125371
Cr, dislocations, dynamic behaviour at mag. transitions, internal friction meas. 7−111570
$CsNiCl_3$, 1D near-Heisenberg antiferromag., inelastic neutron scatt. studies 7−125393
$CsVCl_3$, 1D near-Heisenberg antiferromag., inelastic neutron scatt. studies 7−125393
$CuCl_2 2H_2O$, high freq. absorpt. at spin flop transition, AFMR line broadening *(Russian)* 7−92506
$CuCl_2.2H_2O$, spin reorientation direction at the spin-flop transition 7−99466
$CuSO_4.5H_2O$, quasi-1D Heisenberg mag. system, spin dynamics, EPR linewidth meas. 7−70566

spin dynamics continued
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7−118797
$(Er_{1-x}Gd_x)_2Fe_{14}B$, spin-reorientation phenomena, ^{57}Fe Mossbauer spectra study 7−92434
$ErRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
$EuNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
EuO, Heisenberg ferromag. 7−143836
Fe thin films, spin autocorrel. time calcs. 7−77386
Fe-Si-B amorphous ferromagnets, spin dynamics, neutron scatt. obs. 7−85322
$Fe_{1-x}Co_xSi$ solid soln., band magnetism, mag. susceptibility and sp. ht. studies 7−99463
$Fe_{80}Cr_5B_{15}$, amorphous ferromagnet, paramag. neutron scatt. 7−138192
$Fe_3F_8(H_2O)_2$, 'frustrated' cpd., mag. props. 7−105888
$FeF_3.xHF$, amorphous, Mossbauer spectra, mag. suscept. meas. 7−125583
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous ferromagnet, spin dynamics, neutron scattering 7−105903
$Fe_{90-x}Ni_xZr_{10}$ amorphous alloys, spin dynamics, inelastic neutron scatt. study 7−125347
FeSi, anomaly in meg. susceptibility 7−85237
Fe_3Si, spin dynamics above T_C, high resolution inelastic neutron scatt. study 7−85311
$Fe_{1.75}Ti_{1.25}O_5$ pseudo-brookite spin glass, muon spin relax. study 7−125398
$Fe_{20}Zr_{80}$ superconducting metallic glass, sp. ht. and elec. resist. meas. 7−137889
G d_xAg_{1-x}, amorphous, magnetostriction, thermal expansion meas. 7−99544
GaAs:Cr(Cu), doped and undoped, electric saturation of an NMR line, roles of defects and spin diffusion 7−99584
Gd thin films, spin autocorrel. time calcs. 7−77386
^3He superfluid, two-domain precessing magnetic struct. studies 7−105172
$Hg_{1-x-y}Cd_xMn_yTe$, spin modulated energy state, Shubnikov-de Haas analysis *(German)* 7−125311
Ho-Er-Co-Ni, spin reorientation, magnetocryst. anisotropy studies 7−138235
$HoFe_{0.95}Al_{0.05}O_3$, orthoferrite single crystals, spin reorientation and mag. moments 7−143790
$HoFeO_3$, orthoferrite single crystals, spin reorientation and mag. moments 7−143790
InSb, photoexcited, spin depend. props., far-IR magneto-optical studies 7−113160
La_2CuO_4 2D antiferromag. props., neutron scatt. meas., relevance to high T_c superconds. 7−143763
La_2CuO_4 single cryst., mag. susceptibility and anisotropy 7−138200
$MnAs_{1-x}P_x$, sp. ht., low-high spin anomaly 7−118811
MnP itinerant-electron ferromagnet, paramag. neutron scatt. cross section meas. 7−112776
MnSi, ^{55}Mn nucl. spin relax. critical divergence, muon-nucl.-spin double relax. 7−125584
$Mn_xZn_{1-x}F_2$, dil. antiferromag., spin dynamics 7−118786
$Na_2O(Fe_{0.5}Al_{0.5})_2O_3$, Mossbauer effect study of spin fluctuation 7−85491
Nd-Fe-B magnets, graduated demagnetisation curves, soft phase, oxidation and spin reorientation effects 7−99499
$NdCo_5$, uniaxial permanent magnet, magnetostriction 7−138304
$Nd_2Fe_{14}B$ cpds. mag. anisotropy, effect of Ni and Mn substitution 7−132010
$Nd_2Fe_{14}B$ intermetallic cpd., Mossbauer effect study, temp. depend and spin reorientation 7−118926
$Nd_2Fe_{14}B$, magnetic anisotropy, cryst. elec. field model calcs. 7−125374
$Nd_2Fe_{14}B$, positive muon spectroscopy 7−132178
$Nd_2Fe_{14}B$ single cryst. first-order field-induced magnetisation transitions 7−125385
$Nd_2Fe_{14}B$-based alloys, substituent effects, cryst. field model anal. 7−70550
$Nd_2Fe_{14}B$-structure materials, intrinsic mag. props. 7−70588
$Nd_2(Fe_{1-x}Co_x)_{14}B$, Mossbauer spectra study, 100-700 K 7−77434
Ni (100), electronic structures and surface magnetism at finite temps. 7−77024
Ni thin films, spin autocorrel. time calcs. 7−77386
$Ni_{80-x}Fe_xSi_8B_{12}$ amorphous magnet, reentrant transition studies 7−143797
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
$Pr_2Fe_{14}B$, magnetic anisotropy, cryst. elec. field model calcs. 7−125374
$Pr_2Fe_{14}B$, positive muon spectroscopy 7−132178
RuFeSi melt-spun cluster spin glass, spin dynamics, Mossbauer studies 7−112802
Si:P, spin dynamics across the metal-insulator transition 7−112944
$Sm_{0.8}Er_{0.2}FeO_3$, orthoferrite single crystals, $\Gamma_2 \rightarrow \Gamma_4$ reorientation phase transition, low field study 7−143791
$SmFeO_3$, orthoferrite single crystals, $\Gamma_2 \rightarrow \Gamma_4$ reorientation phase transition, low field study 7−143791
$SmRh_4B_4$ magnetic superconds., spin dynamics temp. depend., muon spin relax. studies 7−92565
$Tb_2Fe_{14-x}Co_xB$, magnetism 7−131998
U-based systems, hybridisation effects, evolution from nonmagnetic to mag. behaviour 7−105917
UBe_{13}, low temp. ^9Be spin-lattice relax. rate meas. in heavy fermion superconductor 7−70477
UP, ^{31}P NMR, dynamic mag. behaviour study, paramag. state 7−125551
UPt_3, heavy fermion superconductivity and magnetic props. 7−70472
UPt_3 heavy fermion superconductor, antiferromag. spin fluctuations, inelastic magnetic neutron scatt. studies review 7−70534
UPt_3, specific heat, pressure depend. 7−69926
U_2Zn_{17}, antiferromag. heavy-fermion system, spin fluctuations 7−77238
$Y_3Al_xFe_{5-x}O_{12}$, Mossbauer effect study of spin fluctuation 7−85491
$Y(Co_{1-x}Al_x)_2$, weakly itinerant ferromagnet, NMR and magnetisation 7−85470
$Y(Fe\text{-}Co)_2$, mag. props., rigid band model 7−99390
YIG:Si single crysts., photoinduced magnetisation reversal mechanism and threshold studies *(Russian)* 7−99550
YMn_2, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{0.9}Al_{0.1})_2$, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{1-x}Al_x)_2$, characteristic spin fluctuations, thermal expansion and susceptibility meas. 7−132034
Y_2Ni_7 thermal spontaneous ferromagnetism, band model 7−99454
Yb compounds, electronic spin fluctuations, NMR study 7−77418
$YbNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
spin dynamics continued
$YbPd_2Si_{2-x}Ge_x$, spin fluctuation changes 7−77300
$Zn_xNi_{1-x}Fe_2O_4$, Mossbauer effect study of spin fluctuation 7−85491
$Zr(Fe_{1-x}Co_x)_2$, mag. props., rigid band model 7−99391

spin echo (EPR)
amplitude of ESE modulation, depend. on microwave field intensity 7−96750
chemically shifted unequally populated lines, uncollapsed doublet signature 7−103539
disordered systems, electron spin echo modulation spectra, spectrometer dead time effect 7−90220
DPPH, disordered solid, hyperfine and quadrupole interactions, electron spin echo modulations 7−112926
electron spin echo modulation patterns, completely asymmetric nuclear quadrupole effects 7−85484
bis-(fluoranthen) hexafluorophosphate, electron mobility, electron spin-echo spectrosc. 7−92490
$(fluoroanthenyl)_2X$ conductors, EPR, NMR studies 7−85439
longitudinal relax., T_1 selectivity, inversion-recovery 3-pulse sequence technique 7−74686
methanol, irradiated polycrystal, electron spin echo modulation, nuclear quadrupole interaction 7−106011
poly-p-phenylene(-d), donor- and acceptor-doped, temp. depend. electron spin echo studies 7−70641
polyacetylene, nonlinear optical activity, elec. cond., mag. reson. techniques 7−99607
polyacetylene, soliton pinning, multiple-quantum spin coherence obs. 7−137811
polydiacetylene single crystal, pulsed ESR meas. of photoexcited triplet-soliton pairs 7−70624
polymers, heteroatomic ladder, nonlinear optical activity, elec. cond., mag. reson. techniques 7−99607
relaxation times of dilute solutions obs., using pulsed EPR spectrometer 7−140722
$Ca_2:Gd^{3+}K^+$ electron spin echo envelope modulation 7−118858
CaO, phosphoresc., F_2^{2+} defect, optically detected stimulated spin echoes 7−85432
Cu^{2+} complex, deuterated ligand, electron spin-echo modulation, spherical-averaging approx. study 7−112938
$CuCs_{2.2}Na$ zeolite, electron spin echo envelope modulation simulation 7−106016

spin echo (NMR)
acetonitrile, dil. spin I=3/2 powder, rot. isomerism, Zeeman and dipolar coherences, PMR spectra 7−68357
atomic high resolution coherence spectroscopy, optical double resonance and Raman anal. *(German)* 7−129644
chemically shifted unequally populated lines, uncollapsed doublet signature 7−103539
computer controlled spin echo spectrometer for the study of ferromagnetic materials 7−115981
diffusion in liqs., NMR spin-echo meas., fixed field gradient, Bessel fn. fit anal. 7−92548
hexamethylbenzene, NMR imaging 7−92547
homonuclear editing method for ^{13}C-^1H and ^{12}C-^1H signals 7−122565
macromolecules, reptation, effect on diffusional attenuation of stimulated spin-echo signal *(Russian)* 7−82412
magnetism applications of neutron spin echo spectroscopy 7−92546
NMR, B_1 field precision mapping, nutation rate, rot. frame expt., spin echo imaging 7−108584
purine derivatives, deuterated, ^2H quadrupole coupling consts., ^2H NMR spectra anal. 7−77419
relaxation time and proton density images in NMR imaging *(Japanese)* 7−108611
spin-Peierls systems, incommensurate phase, NMR and EPR studies 7−85483
spurious echo cancelling in NMR imaging expts., phase-cycling technique 7−73386
stilbite crystals, slow mol. motions and solid echo 7−92550
volume-selective multipulse spin-echo spectroscopy 7−80835
Al_2O_3, double quantum rotary echoes due to magnetic dipolar interaction in a multi-level NMR system 7−99604
$CdCr_2Se_4$ ferromag. semicond., mag. heterogeneity, NMR spin echo studies 7−112754
$CdCr_2Se_4$:In, NMR spin echo meas. 7−70671
Co, ferromagnet, fine mag. struct., spectral diffusion *(Russian)* 7−105951
$Co_{3-x}Fe_xB$ system, ^{59}Co spin echo NMR study 7−112993
$Co_2MnAl_{1-x}Si_x$ Heusler alloys, hyperfine fields, NMR spin echo studies *(Russian)* 7−70670
$Co_{86}Ti_{14}$, soft ferromag. amorphous thin films, with induced uniaxial anisotropy, nucl. signal enhancement 7−92549
Cs^{133} ions, Gramicidin transmembrane channel, spin 7/2 relaxation processes, NMR spin-echo study 7−77424
$CsHF_2$, polycryst., NMR spin-echo sequence effects 7−118890
$Dy_{0.1}Fe_{0.05}Gd_{0.85}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.1}Gd_{0.9}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.5}Tb_{0.5}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
$Dy_{0.1}Tb_{0.1}Gd_{0.8}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7−77425
Fe:Co(Mn)(Cu), ferromagnet, fine mag. struct., spectral diffusion *(Russian)* 7−105951
Fe-B amorphous alloys, crystallisation, NMR and X-ray diffr. study 7−112992
$Fe_{99.5}V_{0.5}$ alloys, internal oxidation and precipitation, spin echo and Mossbauer studies 7−144617
$HoFe_2$:V, electric quadrupole interaction, hyperfine field 7−118891
$KEu(WO_4)_2$, RF hole burning with inhomogeneously broadened Raman heterodyne signals 7−85488
KHF_2, polycryst., NMR spin-echo sequence effects 7−118890
$LiNO_3$-NH_3, diffusion coeffs., NMR spin-echo 7−74681
Mn-Zn ferrites, spinels, NMR spin echo study 7−138346
$MnCl_2.4H_2O$, ^{54}Mn pulsed NMR of oriented nuclei 7−132152
$MnFe_2O_4$, domain walls, subharmonic nuclear spin echo 7−132162
Ni-Zn ferrites, spinels, NMR spin echo study 7−138346
Pd surface, chemisorbed CO, bonding and diffusion, NMR study 7−77429
TiH_x, tracer diffusion coeffs. for H, NMR spin echo meas. 7−84360
YFe_2:V, electric quadrupole interaction, hyperfine field 7−118891

spin echo (NMR) continued
YFe_2H_x hydrides, NMR study 7−70672
$(Y_xNd_{1-x})_2Co_{17}$, ^{59}Co NMR spin echo spectra and relax. times 7−138338

spin flop phase *see antiferromagnetic properties of substances; antiferromagnetism*

spin fluctuations *see spin dynamics*

spin glasses
see also mictomagnetism
alloys, classical RKKY model, anisotropy-induced phase transition, Monte Carlo simulation 7−125413
antiferromagnetic Ising spin glass, reentrant phase transition 7−92450
Bethe spin glass, random graph bipartitioning ferromagnetic Bethe lattice, optimisation 7−143826
chaos, renormalisation group study 7−112840
classical spin-glass models 7−105923
cluster paramagnets with chaotic anisotropy, nonlinear permeability *(Russian)* 7−92439
CoBa fluorophosphate spin-glass, acoustic suscept. calcs. 7−112923
concentrational phase transitions, random field theory 7−131305
condensed matter physics, open problems 7−76717
conference, critical phenomena, random systems, gauge theories, Les Houches, France, (Aug.-Sept. 1984) 7−66826
conference on fluctuations and stochastic phenomena in condensed matter, Barcelona, Spain (May 1986) 7−134359
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
dilute, short-range order and high-temp. susceptibility *(Russian)* 7−70548
dilute metallic, response time, temp. depend., comment 7−99467
dilute metallic, response time, temp. depend., reply to comment 7−99468
dilute spin glass critical behaviour, Dzyaloshinsky-Moriya interaction effects 7−125401
dilute spin systems with finite connectivity, stability 7−85305
discrete spin Hamiltonian, equivalent Ising Hamiltonian with multispin interactions 7−92437
disordered magnets, infinite range models, fluctuations and phase transitions 7−105934
disordered systems, activated dynamic scaling 7−112835
disordered systems, competing interactions, scaling corrections, mean-field effective-field, model calcs. 7−118807
disordered systems, electron and mag. behaviour, review 7−70567
disordered systems, long-distance behaviour of correlation fns. 7−85221
dynamical mean field theory, phase transitions in AC external fields 7−77309
dynamics, thermoremanent magnetisation 7−143818
dynamics from mag. noise, relax. and susceptibility 7−118802
Edwards Anderson spin glass, equivalence of random and competing non-random bonds 7−85338
field quenching, aging experiments on spin glasses, method for achieving a random initial state 7−112825
finite spin glass systems, free energy, computational complexity and tree width 7−134642
fractal hamiltonians in condensed matter physics 7−125292
geometric long-range spin glass, equilibrium and nonequilibrium theory 7−70578
granular superconductors and spin glasses, analogies 7−131899
Heisenberg spin glass, Dzyaloshinskii-Moriya anisotropy, relax., FCC lattice, Monte Carlo simulation 7−85341
hysteresis loops stability 7−92461
Ising and N-vector spin glasses, long-range, high temperature phase 7−92446
Ising model, hidden valley structure 7−92454
Ising model, phase diagram of spin glasses 7−112836
Ising model critical exponents, high-temp series anal. 7−125419
Ising spin glass, infinite range, remanence, metastable states, relaxation processes 7−143825
Ising spin glass, unidirectional anisotropy empty site-antiferromagnetic bond 7−138249
ising spin glass in 3D, dynamical phase transitions, time evolution and temp. regimes 7−138251
Ising spin glasses, high temp. series expansion 7−125427
Ising spin glasses, high temp series expansion 7−125428
Ising spin glasses, replica symm. solns. in the tree approx. 7−138255
Ising spin glasses, short range, theoretical model at low temp. 7−138256
±J model, correlation fn. on finite square and simple cubic lattices 7−108474
local energy minima in quantum spin glasses, six-site cluster eigenstates 7−138258
long-range interactions at high temperature, Ising and N-vector spin glasses 7−125423
low-temp. AC suscept., temp. and freq. depend., thermally activated hopping diffusion model 7−118812
magnetic fluids, dipole glasses, spin glass-like behaviour 7−138236
magnetic fluids, ESR spectra, spin glass formation 7−77395
mathematical model 7−77306
mean field theory, broken replica symmetry 7−85316
mean field theory and related problems, review 7−125415
metallic glasses, electron transport props., systematic studies 7−92149
metallic glasses, local magnetic environment probe using magnetoresist. 7−84830
metallic glasses, magnetic static behaviour near critical conc. 7−143855
mixed spin glass Ising systems, phase diagrams and domains 7−132041
neural network models, spin-glass networks, learning of correlated patterns by local learning rules 7−78820
nonsymmetric spin glasses, dynamical phase transition 7−143810
NP-complete decision problem, spin glass and golf-course cost function 7−115910
one-dimensional long-range models, upper bounds on correlation decay 7−125406
ordering, hyperfine interaction techniques, data review 7−112797
path-integral approach to Ising spin-glass dynamics 7−105942
phase diagrams of Ising spin glasses, straight phase boundaries 7−138252
Potts, quadrupolar and clock models, spin glasses 7−77336
quadrupolar and Ising glasses, replica symm. breaking 7−70579
quantum spin glass, RKKY interaction, real space renormalisation study 7−112824
random anisotropy axes, critical lines 7−77274
random axis magnet with infinite anisotropy, ferromagnetic, spin glass and disordered phase calcs. 7−85310

spin glasses continued
random graph bipartitioning, spin glasses, mean-field replica-symmetric theory, Ising ferromagnet 7−143827
random Ising model 7−77333
random Potts model on Bethe lattice, spin glass fixed point 7−108465
random site and random bond models 7−70569
random spin systems, critical behaviour at the percolation threshold 7−85333
random-bond Ising models, freq. depend. spectra, dynamic high temp. series expansions 7−125430
randomly frustrated systems with finite connectivity, mean-field theory 7−105921
relaxation dynamics model 7−132037
renormalisation group anal. of spin glass models 7−70568
replica symmetry breaking and the spin-glass on a Bethe lattice 7−143803
review 7−77314
semiconductors, dilute magnetic, magnetic properties, review 7−125391
semimagnetic semiconductors, spin-glass phase props. from susceptibility meas. 7−77293
Sherrington-Kirkpatrick model, pure states, comparison with replica-symmetry-breaking soln. 7−77320
Sherrington-Kirkpatrick spin glass model, configuration averaging of thermodynamic variables 7−105945
short range van Hemmen model, simple Kikuchi approximation 7−70564
short-range spin glasses, scaling theory of ordered phase 7−125416
SK model, dynamic mean field theory, evidence against ultrametricity 7−85320
spin-cluster theory of mag. materials, spin glasses appl. 7−92436
stable points for spin-glasses and neural networks of higher orders 7−77305
states with equal weights, overlap distribs., taxonomy anal. 7−85303
structural glass transition dynamics, p-spin-interaction spin glass model 7−105028
theory, review 7−143819
theory of spin glasses, introduction 7−92443
thermoremanent magnetisation, spin-system cluster model calcs. 7−99462
three-dimensional systems, phase transitions 7−132040
transverse Ising spin-glass model, zero temp. transition, mean field approx. 7−125431
triangular antiferromagnet, spin=1/2, with random exchange interaction, low temp. props. 7−85218
uniaxial, spin wave spectrum calcs., Sherrington-Kirkpatrick model 7−85309
vector, anisotropy-induced crossover exponent calcs. 7−118813
zero temperature parallel dynamics for infinite range spin glasses and neural networks 7−105924
ZnMn uniaxially anisotropic spin glasses, zero-field muon spin relax. temp. depend. meas. 7−85318
Ag-Mn spin glasses, electronic structure, angle resolved UPS studies 7−77766
$AgIn(Ga)Te_2$, semimag. semicond., mag. props. 7−125341
AgMn dilute RKKY spin glass. nonlinear suscept. meas. 7−125402
AgMnSb dilute metallic spin glass, d'Almeida-Thouless transition, thermoremenance time decay meas. 7−125399
Al-Mn quasicrystals, mag. moment and spin glass behaviour 7−77304
Au-Fe dil. spin glass alloys, sp. ht. below 30 K 7−138241
Au-Mn alloys, arrangement of Mn atoms in re-entrant spin glass 7−131098
AuCr spin-glass alloy, secondary standard high pressure gauge appl. 7−121143
AuFe, dynamic magnetic susceptibility, reverse ferromagnetic-spin glass transition 7−131994
AuFe, transport props. near the percolation limit 7−137902
$CdCr_{1.7}In_{0.3}S_4$, measurement of spontaneous magnetic fluctuations 7−99471
$CdCr_{1.7}In_{0.3}S_4$, spin-glass, ageing phenomena, temp. changes effect 7−143809
$CdCr_{2x}In_{2(1-x)}S$, insulating, crit. behaviour 7−105926
$Cd_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$CdIn_{0.3}Cr_{1.7}S_4$ spin glass, thermoremanent magnetisation, aging and relax., field effects 7−125400
CdMn dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semiconductor, preparation, structure and mag. props. 7−70532
CdMnTe, spin glass, dynamic mag. susceptibility, Faraday rotation meas. 7−77294
$Cd_{1-x}Mn_xTe$ diluted mag. semicond., zero field muon spin relax. studies 7−92564
$Cd_{1-x}Mn_xTe$, spin glass freezing, universal scaling, mag. suscept. meas. 7−99472
$Ce_{26}Cu_{74}$, low temp. specific heat, local random mag. anisotropy 7−77295
$Ce(Fe_{1-x}Al_x)$, instability of ferromag., Al substitution effects 7−143813
$Ce_{1-x}Gd_xAl_3$, heavy fermion, Kondo, spin glass-like and antiferromagnetic behaviour 7−70554
$Ce_{1-x}Gd_xAl_3$ spin glass-like heavy fermion system, percolation behaviour, low field suscept. meas. 7−125403
$CoIn_2S_4$, struct. and mag. props. 7−125417
$CoO-Al_2O_3-SiO_2$ spin glass, sp. ht., anomalous field depend. near spin freezing temp. 7−112814
Co_2SnO_4, mag. behaviour, AC susceptibility meas. 7−112845
Co_2SnTe_4, amorphous, mag. props. 7−132024
Co_2TiO_4, disordered spinel ferrite, spin glass behaviour, AC mag. suscept. meas. 7−92438
Co_xTiS_2, mag. phase diagram 7−85307
$Co_{12}Zn_{0.8}TiO_4$, AC mag. suscept. meas. 7−92438
$Co_{2-x}Zn_xTiO_4$, mag. behaviour, AC susceptibility meas. 7−112845
$Cr_{75}Fe_{25}$, reentrant spin-glass transition temp., Mossbauer studies 7−125408
Cr_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
$CsNiFeF_6$, measurement of spontaneous magnetic fluctuations 7−99471
Cu-3d element alloys, Kondo and spin glass effects correl. *(Russian)* 7−76918
Cu-Mn, mag. phase diagram, EPR study *(Russian)* 7−112788
Cu-Mn dil. spin glass alloys, sp. ht. below 30 K 7−138241
Cu-Mn spin glass, coexisting aging states 7−92441
$CuIn(Ga)Te_2$, semimag. semicond., mag. props. 7−125341
CuMn spin glass, torque relax. meas. 7−143816
CuMn, spin glass, ultrasonic velocity meas. 7−76303

spin glasses continued
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
Cu_2MnAl amorphous spin glass film, orientation depend. relax. obs. 7−125397
$Dy(P_{1-x}V_x)O_4$ random anisotropy system, AC susceptibility, freq. depend. 7−125336
$Eu_{0.4}Sr_{0.6}S$, spin glass, temp. depend. of mag. VF noise 7−112821
$Eu_{0.4}Sr_{0.6}S$, spin glass, evidence for phase transition from dynamic susceptibility meas. 7−118800
$Eu_{0.44}Sr_{0.56}S$, spin glass, mag. reson. line shape 7−99555
$Eu_{0.54}Sr_{0.46}S$, reentrant spin-glass, spin-correlation lengths, elastic light scatt. 7−105933
$Eu_xSr_{1-x}S_a$ insulating, specific heat, mag. transitions 7−125433
$Eu_xSr_{1-x}Te$, dil. antiferromagnet, spin glass behaviour, mag. meas. 7−112827
Eu_xYb_{1-x} alloy, elec. and mag. props. studies w.r.t. comp. 7−132073
Eu_xYb_{1-x}, magnetoresist. and magnetostriction meas. 7−131620
Fe-Cu, FCC alloys, sputtered, magnetic percolation 7−132039
Fe-Ni alloys, itinerant-electron spin glasses, local environment effect 7−70557
Fe-Ni-Cr alloys, mag. states, low temp. phase diagrams 7−85286
Fe-Ni-Cr spin glasses, mag. field-temp. diagram 7−138238
Fe-Ni-Cr(Mn) spin glasses, mag. props. 7−105936
$Fe_{1-x}Al_x$ concentrated spin glass alloy, magnetic phase diagram, atomic short-range order influence 7−138237
$Fe_{1-x}Al_x$, spin glass, mag. phase diagram 7−85313
$(Fe_xCr_{1-x})_2Ca_3(GeO_4)_3$, mixed garnet, mag. frustration, phase diagram, neutron diffr. 7−105889
$(Fe_xCr_{1-x})_{75}P_{15}C_{10}$, amorphous, reentrant spin glass props. 7−112811
$(Fe_{100-x}Cr_x)_{99}Sn$, ^{119}Sn-site hyperfine field changes, Mossbauer effect spectra 7−92134
$Fe_{0.4}Mg_{0.6}Cl_2$, Ising spin glass, transverse fluctuations 7−105943
$Fe_{1-x}Mg_xCl_2$ spin glass-dilute antiferromag. system, spin wave props., inelastic neutron scatt. study 7−125395
$Fe_xMn_{1-x}Cl_2$ spin glass, Mossbauer spectra studies 7−118927
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
FeNiBAl amorphous alloys near critical comp., low field reversible DC magnetisation meas. 7−70591
$Fe_{59}Ni_{21}Cr_{20}$, spin glass transition temp., sound damping 7−105930
$Fe_{80-x}Ni_xCr_{20}$, magnetovol. effects, thermal expansion meas. 7−138305
$Fe_xNi_{80-x}Cr_{20}$, concentrated spin glasses in mag. field, freezing temp. *(German)* 7−132038
$Fe_7Ni_{73}P_{14}B_6$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
$(Fe_{0.16}Ni_{0.84})_{75}P_{16}B_6Al_3$, conc. spin glass, spin relax. 7−112932
$Fe_{12}Ni_{63}P_{16}B_6Al_3$, concentrated spin glasses, linear and nonlinear susceptibility, mag. response near ferromag. transition 7−112815
$(Fe_xNi_{1-x})_{75}P_{16}B_6Al_3$, x=0.06, 0.1, thermal magnetic fluctuations in metallic spin glasses 7−105931
$Fe_xNi_{78-x}Si_9B_{13}$ amorphous alloy, mag. double transition, Mossbauer and magnetisation meas. 7−85296
$Fe_{1.4}Ru_{1.6}Si$ reentrant spin glass, magnetisation and Mossbauer studies 7−112801
Fe_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7−85304
$Fe_{1.75}Ti_{1.25}O_5$ pseudo-brookite spin glass, muon spin relax. study 7−125398
Fe_xTiS_2, intercalation cpd., linear and nonlinear AC mag. suscept. 7−138199
Gd-Al, amorphous spin glass, mag. correlations 7−112817
$GdAl_2$ thin film, tunnelling to spin glass, zero bias anomaly, density of states 7−138072
$Gd_{72-x}M_xGa_{18}B_{10}$, (M=Al, Fe, Co, Mo, Pd, Th), spin glass system, double transition behaviour, effect of alloying elements 7−112809
$Gd_{65-x}Tb_xCo_{35}$, anisotropic spin glass, mag. transitions 7−112810
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$La_{0.95}Gd_{0.05}Ru_3Si_2$, coexistence of superconductivity and spin glass freezing 7−77128
$(La_xY_{1-x})_2Mo_2O_7$ pyrochlore solid soln., lattice consts. and spin-glass props. 7−85308
Mg-Mn alloy sputtered films, spin glass transition obs., mag. suscept. meas. 7−118814
Mn-Y amorphous alloys, spin glass characts., AC suscept. study 7−105929
Mn-Y(Zr)(Nb) amorphous alloys, mag. and elec. props. 7−76876
$MnO-Al_2O_3-SiO_2$ spin glass system, calorimetric and susceptibility studies 7−112819
Mn_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
$Mn_{1-x}Zn_xF_2$ dilute antiferromagnets, mag. mom. and suscept. temp. and freq. depend 7−105901
$Mn_{1-x}Zn_xO$, spin glass transition, susceptibility studies 7−143814
NiMn, reentrant spin glass state, NMR study 7−132155
$Ni_{75}Mn_{25}$ spin glass alloy, magnetisation vector meas. 7−112812
PdAuFe, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
PdAuMn, magnetic ordering, elec. resist. and magnetoresist. studies 7−131618
PdFe dilute alloy, spin glass transition, relax., Mossbauer studies 7−112831
$(Pd_xPt_{1-x})_3Fe$ reentrant spin glass, magnetisation and Mossbauer studies 7−112800
$Rb_2Cr_{1-x}Mn_xCl_4$, spin-glass, NMR spectra *(Japanese)* 7−77411
$Ru_xFe_{80-x}B_{20}$, amorphous, electrical resistivity 7−137893
Ru_xFeGa cluster spin glass, ^{57}Fe Mossbauer and bulk magnetisation studies 7−112799
RuFeSi melt-spun cluster spin glass, spin dynamics, Mossbauer studies 7−112802
ScDy, AC suscept., freq. depend. 7−105927
ScDy, anisotropic spin glasses, sp. ht. meas. 7−138240
ScEr, AC suscept., freq. depend. 7−105927
ScEr, anisotropic spin glasses, sp. ht. meas. 7−138240
ScEr dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
ScGd, AC suscept., freq. depend. 7−105927

spin glasses continued
Tb-Fe amorphous alloys, spin ordering, small angle neutron scatt. studies 7−125323
U-based systems, hybridisation effects, evolution from nonmagnetic to mag. behaviour 7−105917
$U_xY_{1-x}B_4$, spin-glass-like behaviour, obs. 7−77297
$Y(Mn_{1-x}Al_x)_2$, characteristic spin fluctuations, thermal expansion and susceptibility meas. 7−132034
$Y_2Mo_2O_7$, spin-glass-like system, neutron diffr. study 7−112820
YTb_3, XY spin glass, rotation of anisotropy direction 7−112813
$Zn_xCd_{1-x}Cr_2S(Se)$, struct. and mag. props. 7−125342
ZnMn dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
$Zn_{1-x}Mn_xSe(Te)$, spin glass behaviour below percolation limit 7−70547

spin Hamiltonians
2D systems, coexistence of ferromagnetism, charge-density waves and spin-density waves 7−85331
Anderson lattice, effective hybridised-band Hamiltonian, absence of ferromag. instability 7−77253
anisotropic, order-order transition sequences 7−143745
anisotropic Heisenberg model, numerical diagonalization of quantum spin Hamiltonians 7−77191
Baxter eight-vertex model, lattice Virasoro algebra and corner transfer matrices 7−80675
bilinear-biquadratic exchange Hamiltonian, critical behaviour 7−143746
classical spin clusters, integrability and dynamical properties 7−143823
conjugated hydrocarbons, topological spin Hamiltonian, graph theoretical approach 7−81917
dipole system in 2D on lattice with arbitrary rhombicity angle, ground state 7−112727
discrete spin Hamiltonian, equivalent Ising Hamiltonian with multispin interactions 7−92437
Fermi gas, two mag. impurities, renormalisation group study 7−77223
Fermi liquids, almost-localised, antiferromagnetic correlations 7−125409
heterophase Hubbard model, critical temperature 7−125303
Ising models, compressible, effective spin Hamiltonians 7−105938
itinerant electron-localised spin system indirect interactions 7−138184
muonium states in solids, relax. function 7−85513
NMR powder spectrum simulation for nuclei with I>1/2 7−92529
paramagnetism of spin, classical limit 7−131984
S-state ions, mag. reson. spin Hamiltonian, odd-order terms admission 7−77190
spin van der Waals Hamiltonians with quartic exchange interactions, static props. 7−70570
spin-wave theory, kinematical problem, spin-1/2 nearest neighbour Heisenberg Hamiltonian, Schrodinger eqn. 7−138204
time-dependent systems, decay of quasistationary state, spin thermodynamics 7−125410
two-layer ferromag. films, static and dynamic props. *(Russian)* 7−143863
Yang-Baxter eqn., non-symmetric eight-vertex constant solns., spin Hamiltonians 7−105876
yttrium trifluoromethanesulphonate nonahydrate:Er^{3+}(Dy^{3+})(Gd^{3+}), spin Hamiltonian parameters, EPR study 7−125532
zero-field splitting of ^5D ion in D_2 symm., fourth-order perturbation formula, appl. to FeF_2 7−92123
Al_6Mn, Al_4Mn, and $Al_{12}Mn$ polycrystals, NMR powder patterns, rel. to quasiperiodic materials 7−85457
$Al_2O_3:Cr^{3+}$, ruby, spin Hamiltonian in strained crystal 7−137870
$As_2O_3-V_2O_5$, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
$B_2O_3-V_2O_5$, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
CaO, O vacancy defects in phosphorescent spin quartet state, ODMR studies 7−138354
$CaTiO_3$: Er^{3+}(Yb^{3+}), single cryst., EPR study 7−99566
$Cd(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
CdTe:Eu^{2+}, ESR spectra, transferred hyperfine interaction 7−125533
CeF_3:Gd^{3+} single cryst., EPR linewidth var. with temp. 7−106019
$Co(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
$CsCaCl_3$:Gd^{3+}, impurity spin Hamiltonian parameters, EPR spectra 7−85423
$CsPbCl_3$:Gd^{3+}, impurity spin Hamiltonian parameters, EPR spectra 7−85423
^{3}He, solid, magnetism in classical approx. 7−76532
InP, undoped, P antisites, triplet spin ODMR study 7−99614
$Li_2O-B_2O_3$ glass, ESR of VO^{2+} and Cu^{2+}, spin Hamiltonian parameters 7−85416
$Nd_2Fe_{14}B$-based alloys, substituent effects, cryst. field model anal. 7−70550
$Ni(NH_4)_2(SO_4)_2.6H_2O$:Mn, Mn^{2+} EPR 7−85419
O_2, solid, mag. and dynamic props. in external mag. fields *(Japanese)* 7−131255
O_2, solid α- and β-, mag. coupling and dynamics, ab initio calcs. 7−85220
YIG:Ca,Ge, charge uncompensated, mag. props. determ. 7−112728
Zn complex, hexakisantipyrine zinc perchlorate, EPR study of Mn (II) 7−112934
ZnS:Mn^{2+} thin CVD films, EPR obs. 7−77401

spin-lattice relaxation
see also electron spin-lattice relaxation; nuclear spin-lattice relaxation
adamantanamine hydrochloride, solid, phase transition and mol. rot. investig. 7−77543
blood plasma protein water protons, NMR relax. in animals in expt. carcinogenesis 7−144966
bone marrow, prolonged T_1-relax. in acute leukaemia, in vivo tissue charactn. by NMR imaging 7−139343
cerebrospinal fluid, NMR relax. times obs. 7−119823
cytochrome P-450, spin-lattice relax., dimensionality crossover 7−114176
medical NMR, high-speed techniques for estimating $T1$, $T2$, and density images 7−119822
medical NMR, relax. times in proton imaging, methodology for meas. and anal. 7−139340
medical NMR, reproducibility of spin-lattice relax. time meas. 7−71836
medical NMR, temp dependence of proton relax. times in vitro 7−139338
medical NMR, variable flip angle gradient refocused imaging 7−139339
methane liq. and solid, spin rot. expts. of muons and muonic atoms 7−74788
methylbenzene, α-substituted, liq., mol. reorientation, Raman spectra 7−92681
molecular crystals, triplet exciton interactions 7−112185

spin-lattice relaxation continued
oriented radioactive nuclei NMR and spin-lattice relaxation, automatic meas. 7−128616
rectal carcinoma, quantitative NMR imaging, T_1 and T_2 relax. times obs. 7−126994
tetramethylcyclobutane-1,3-dithione crystal, defect trap phosphoresc. spectra and lifetimes 7−144095
yeast flavocytochrome b_2, interactions between haeme and flavin, EPR and spin-lattice relax. time obs. 7−133186
^{3}He, two-dimens. on Grafoil, T_1 study of exchange and spectral density 7−105174
$TiCuD_x$, amorphous and cryst., charactn. by deuteron mag. resonance 7−118876

spin-orbit interactions
$5d^1$ system, in octahedral symm. cryst. field environment, NMR chem. shift 7−77413
alkali iodides, excitonic spectra including relativistic effects, ab initio calcs. 7−92076
Anderson transition in two dimensions in the presence of spin-orbit coupling 7−92041
aromatic molecules, radiative singlet-triplet transitions, nonadiabatic channel study 7−117023
atoms, intensity factors for the $1s2l2l'$-$1s^22l''$ lines 7−122453
atoms, spin-polarized HF method, electron localisation in outer open shells 7−96491
Bloch electrons, mag. suscept. in presence of localised mag. moments 7−85219
chlorodifluoronitrosylmethane, photodissociation, photofragment fluoresc. spectra anal. 7−96801
conduction electrons, spin dynamics under mag. breakthrough conditions 7−143320
Coulomb energies, relativistic enhancement of mag. spin-orbit contribs. 7−81267
l,n-diphenyl-l,n-diyls, substituted, UV spectral lifetimes, substituent and solvent effects 7−82204
disordered metals, electron quantum interference, oscillatory magnetoresist. obs. 7−105540
disordered solid, localisation, spin-dependent scatt., renormalisation group study 7−131588
electron-photon-photon coincidence events, polaris. and ang. correl. relations 7−82387
excimer laser photolysis, decay times, emission spectra, ultraviolet spectra 7−139017
Hartree-Fock approximation, relativistic treatment, infinite nuclear matter and finite nuclei appl. 7−116312
heavy atom chemical shift in NMR, relativistic contrib. 7−96740
heavy electron materials, superconducting props., cryst. symmetry effects 7−92387
heavy fermion superconductors, collective modes, hydrodynamic description 7−112640
heteronuclear diatomic alkali molecules, long range states, lowest asymptotes, spin-orbit effects, dissoc., perturbative model, matrix methods, wavefunctions 7−144685
I_2-IV-VI_3 cpds., refractive index, spin-orbit splitting and optical nonlinearity eval. 7−85581
II-VI semiconductors with 3d dopants, covalent bonding, influence on spin-orbit and Zeeman interactions 7−137874
III-V semiconductors, deep impurity centres, tunnelling in elec. fields 7−76810
intermediate valency, couplings, Hamiltonian, elec. resistivity 7−105504
iron (III) tetraphenylporphyrin complex mag. susceptibility, Mossbauer study 7−99617
iron p-tolylsulphite, Mossbauer quadrupole splitting, orbit-lattice interaction effects 7−138364
Kondo lattices, Wilson ratio and mag. susceptibility 7−112738
lanthanum ethylsulphate: Gd^{3+}, effective crystal fields, spin-orbit coupling, residual interactions 7−105499
magnetically correl. cryst. field, correlation in cryst. field theory 7−92126
magneto-optic coeff., spin-orbit interaction and exchange splitting effects calcs. 7−113157
metals, anomalous Hall effect in hopping transport 7−70286
metals, dirty, spin dephasing time due to weak scatt. processes 7−105932
metals with Ce impurities, resistivity and magnetoresist., exchange interactions, Kondo. effects 7−76894
nonrelativistic particles, depolarisation, isotropic nonmagnetic substance 7−143419
odd-mass deformed nuclei, fermion dynamical symmetry, spherical shell model approx., coupling schemes 7−116301
paramagnetic ions in crysts., anisotropic two-body orbit-orbit and spin-orbit interaction calcs. 7−98939
polyacenic materials, pristine and heavily doped, ESR studies 7−112930
quinoxaline, electronic states investig., Raman excitation profile 7−82189
relativistic antiprotonic nuclei, shifts and widths, spin and isospin effects 7−81359
relativistic ls coupling in scalar potential, ls level splitting, ultrarelativistic limit, Thomas precession 7−128356
relativistic mean field and HF approx., nuclear saturation and spin-orbit splitting 7−109080
relativistic spin polarised densities, scatt. theory formulation, appl. to electronic struct. of Pu 7−105371
retinol, electronic states investig., Raman excitation profile 7−82189
semiconductor, II-VI and III-V type, transition metal impurities, review 7−98867
semiconductors, disordered, spin dephasing time due to weak scatt. processes 7−105932
semiconductors, tunnelling in k-space, appl. to degenerate valence band in infinite spin-orbit interaction limit 7−105584
structural glass transition dynamics, p-spin-interaction spin glass model 7−105028
superlattice semiconductors, tight binding band struct. calcs., inclusion of spin-orbit coupling 7−92050
superlattices, spin-orbit coupling Hamiltonian derivation, zone folding effects 7−105501
tetrafluoromethane cation, $\tilde{D}^2A_1 \rightarrow \tilde{C}^2T_2$ emission band system 7−68336
tetralkylammonium chlorobromo ruthenate, vibr. and electronic reson. Raman spectra *(German)* 7−106189
tetramethylcyclobutane-1,3-dithione crystal, defect trap phosphoresc. spectra and lifetimes 7−144095
$(TMTSF)_2ClO_4$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
spin-orbit interactions continued
$(TMTSF)_2PF_6$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
transition metals and alloys, spin-orbit effects, chem. bonding and 5d orbital occupancy, X-ray absorption meas. 7−138544
triplet intermediates, spin-orbit coupling, mag. field effects 7−109951
triplet pairing nuclei, superfluid phases 7−116217
van der Waals molecules, fine-struct. electronic predissoc. quantum-mechanical model 7−110039
zero-field splitting of ^5D ion in D_2 symm., fourth-order perturbation formula, appl. to FeF_2 7−92123
(e,e'p), knockout reaction, using eikonal formalism 7−109136
NN spin orbit interaction, two-gluon exchange diagrams contribs. 7−121626
(p,p'), intermediate energy inelastic scatt. by spin 0 nuclei, spin-orbit interaction effects calcs. *(Russian)* 7−81395
pp scattering, 6 GeV/c, evidence of short-range repulsive spin-orbit components 7−89516
Ag cylindrical films, Aharonov-Bohm effect, weak localisation, magnetoresist. meas. 7−118595
Ag^{n+} clusters, electronic struct., hyperfine interactions, Dirac scattered-wave method calcs. 7−103369
Ag-Au foils, CESR linewidth, Au conc. and foil thickness depend. 7−85436
$Ag_xCu_{1-x}I$ solid solution thin films, exciton spectrum features 7−131549
$AgGaS_2$, uppermost valence bands splitting by crystal field and spin-orbit interactions 7−76831
Al, matrix isolated, MCD spectrosc. and magnetisation obs. 7−90035
Al thin films and narrow wires, localisation and supercond. fluctuations 7−70479
Al:Au(Pd), superconducting films, metal-insulator transition 7−125185
$Al_{52.4}Cu_{12.6}Mg_{35}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
$Al_2O_3:Fe^{3+}$, EPR zero-field splitting anal. 7−125529
$Al_{20.2}Zn_{40.3}Mg_{39.5}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
Ar, spin-orbit components, partial photoionisation cross sections 7−103444
AsH, low-lying states pot. energy curves, radiative transitions, multireference CI calcs. *(French)* 7−89973
Au_{13} icosahedral clusters, SCF Dirac scatt. wave calcs. 7−96912
BaF_2, isotropic hyperfine ligand interaction in clusters of ns' ions, influence of spin polarisation 7−131599
Bi, sound wave giant quantum attenuation anal., deform. pot. and spin-split Landau levels 7−124406
Bi thick disordered films, inelastic electron scatt. time and metal-insulator transition critical exponent 7−76777
$Bi_{1-x}Sb_x$ alloys and constituent metals, pseudopotential band struct. calc. 7−84658
Br, spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
Br_2 resonant multiphoton ionisation photoelectron spectra study 7−117030
BrCN, vibronic mixing, photoelectron spectra 7−136009
C isoelectronic sequence, L-subshell photoionis. cross sections calc. 7−103447
CO^+, $B^2\Sigma^+ - A^2\Pi_i$, system, rot., mol. consts., UV spectra 7−90182
$^{13}C(p, d)$, with subsequent decay to ground state, tensor polarisation, DWBA calcs. 7−135327
CaF_2, isotropic hyperfine ligand interaction in clusters of ns' ions, influence of spin polarisation 7−131599
$Ca_5(PO_4)_3F:Mn^{2+}$, zero field splitting and impurity d-d transitions on Ca sites 7−92130
$CdGeAs_2$, effective electron mass in n-channel inversion layers 7−76744
CeO, low-lying electronic states, cryst. field and spin-orbit interactions calcs. 7−92127
$Cl+Cl_2$, pot. energy surfaces, topography, spin-orbit interaction 7−110072
Cl+HCl, pot. energy surface, topography, spin-orbit interaction calcs. 7−110071
CoO, $a^4\Delta_i$ ground state, red system, laser-induced fluoresc. 7−96774
Cr, matrix-enhanced forbidden transitions, moment anal. 7−103413
Cr, $P \leftarrow S$ transitions, matrix isolated absorpt. and MCD spectra, moment anal. 7−103421
Cs clusters in zeolite X, conduction electron spin resonance studies 7−138329
$Cs+H_2$ reaction cross section, atomic fine-struct. depend. 7−119495
$Cs_2NaScCl_6:As^{3+}$, luminescence spectra, Jahn-Teller effect, spin-orbit coupling 7−138484
Cu thin films, weak localisation, resistance and magnetoconductance meas., 1.5-40 K 7−143638
Cu-La (Ce), thin films, weak localisation, resistance and magnetoconductance meas., 1.5-40 K 7−143638
$CuGa_{1-x}In_xS_2$, photoelectric props. 7−125055
$CuGaSe_2$, photoconductivity, valence band struct. 7−125054
$CuInTe_2$:Fe, optical absorption spectra 7−77611
$F+F_2$, pot. energy surfaces, topography, spin-orbit interaction 7−110072
F+HF, pot. energy surface, topography, spin-orbit interaction calcs. 7−110071
Fe, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Fe II, doubly excited states, accidental degeneracy 7−74481
Fe^{3+} ion in cubic field, ground-state zero-field splitting 7−143417
Fe^{q+} q=15, 23, 25, dielectronic recombination, distorted wave approx. 7−82355
GaAs, g-factors of donor levels, spin-orbit interaction in field of impurity centre 7−112223
GaAs:Cr^{2+}, trigonal centre ^5E excited state, photoluminesc. anal. 7−137857
GaAs-AlAs superlattices, band offsets and zone-folding 7−85091
GaAs-GaAlAs quantum wells, interband photocond., magneto-optics study 7−138437
GaAs-GaAlAs-type quantum wells, k.p theory 7−138023
GaAsSb-InAs lattice matched system, band gap, spin-orbit splitting 7−77069
GaSb, intraband absorpt. study 7−113218
GaSb, spin relax. of photoexcited holes in spin-orbit-split valence band 7−99933
$Gd_3Fe_5O_{12}:Co^{2+}$, magneto-optical effects, strong cryst. field approx. calcs. 7−106146
$H+F_2(Cl_2)$, pot. energy surfaces, topography, spin-orbit interaction calcs. 7−110070
Hg, low-lying states, model pot. CI calcs. 7−68229

spin-orbit interactions continued
$Hg_{1-x}Cd_xTe$, bulk crystal growth, for avalanche photodiodes 7−132432
$Hg_{1-x}Cd_xTe$ photodiodes, emission and detection props., 1 to 3 μm 7−73423
HgH_2, pot. energy surfaces calcs. 7−74485
HgTe-CdTe superlattices and heterojunctions, spin-orbit scatt. time and carrier depending time 7−92268
I, spin-orbit states, transient gain-vs.-absorpt. laser probing 7−116880
ICN, vibronic mixing, photoelectron spectra 7−136009
InAs n-inversion layers, spin-orbit interaction in 2D systems 7−98941
InGaAs, electrolyte electrorefl. spectra and comp. anal *(Chinese)* 7−77509
InP, spin relax. of photoexcited holes in spin-orbit-split valence band 7−99933
Ir, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
KI crysts., free exciton edge luminesc., polariton effects study 7−98814
$KrHe^+$, electronic states props. and pot. energy curves, relativistic CI calcs. 7−116860
$La_{1-x}Ce_xB_6$, Kondo system, cryst. field effects 7−76830
$LaF_3:Sm^{3+}$, laser host, active Sm^{3+} centres, cryst. field investigation 7−84786
$LiCsSO_4:Ni^{2+}$, electronic absorpt. spectra 7−74494
Li_2SO_4-$ZnSO_4$:Pr(Tm), glasses, spectral studies 7−70849
MgZn metallic glass, low temp. magnetoconductivity 7−98991
Mn^{2+} impurity systems, zero-field splitting, uniaxial stress effects 7−112271
MoX_2 (X=Se,S), electronic struct., nature of optical band gaps 7−84676
N atom, with half-filled electron shells, spin rotation interaction 7−82005
$(NO)_2$, vibr. predissoc., energy distrib., time depend. 7−122641
NSe radical, vibr.-rot. and fine struct., laser mag. reson. 7−122577
$NaF:Cu^+$, impurity electron states, HF calcs. 7−84740
Na_2SO_4-$ZnSO_4$:Pr(Tm), glasses, spectral studies 7−70849
^{148}Nd, antiprotonic, strong-interaction fine struct. effects 7−96018
Ne I Stark effect splittings, energy matrix, wave functions, group theory, radial and spin-orbit effects 7−135878
^{20}Ne, M1 excitations in even-even sd-shell nuclei, orbital current total strength 7−135246
Ni, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Ni-lite ions, excited state transitions, Slater-Condon-type calcs. 7−141451
O_2 molecules, isotope effects 7−96567
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
Pd, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
Pd, ferromag., appl. of relativistic treatment of interacting spin-aligned electron systems 7−105384
Pt, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
PtNi, ordering 7−142992
$RbFeCl_3$, spin-orbit and crystal field matrices 7−143418
Rh, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
SF_4^+, $\tilde{D}^2A_1$-$\tilde{C}^2T_2$ emission band, John-Teller distortion 7−68337
SO molecules, isotope effects 7−96567
SeH^n (n=0 or +), electronic states, MC SCF (CAS SCF) and CI calcs. 7−135852
Si, neutral complex defects, bound excitons, electronic struct. studies 7−98877
Si:Fe, spin polarised electronic struct., supercell full pot. linear APW calc. 7−98875
SmI_2 mag. suscept. and fluoresc. spectrum in THF solvent meas. 7−143768
$SmPd_3$, rare earth metal ions, intermultiplet transitions, inelastic neutron scattering 7−131598
Sn, electron configuration, Mossbauer effect 7−76799
Sn-Au, superconducting Sn films with Au overlayers, fluctuation induced conductivity 7−112552
SnH_4^+, spin-orbit coupling, ab initio CI calcs. 7−103398
$^ASn(p,p')$, A=116,120,124, spin-orbit pot., deformation parameters 7−116410
$^ASn(p,p)$, A=116,120,124, spin-orbit pot., deformation parameters 7−116410
SrF_4, isotropic hyperfine ligand interaction in clusters of ns′ ions, influence of spin polarisation 7−131599
$^{50}Ti(e,e')$, C6 transition, electromagnetic spin-orbit contrib. 7−109151
TlX, X=H, H^+, H_3, props., relativistic and correlation effects, pseudopot. calcs. 7−122383
V/Mo superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V/Si superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V_3Ga very thin supercond. films, critical fields and spin polarised tunnelling meas. 7−131935
WSe_2, electronic struct., nature of optical band gaps 7−84676
$YAG:Cr^{3+}$, energy states calcs. 7−143404
YIG:Bi,Tm, anomalous effective g-value, temp. depend. ferromag. resonance study 7−112960
YbP, 4f XPS spectrum, Anderson model calc., spin-orbit splitting 7−77756
$ZnSe:Mn^{2+}$, spin-lattice coupling coeffs. 7−84787
$Zr_{100-x}Ni_x$ amorphous superconducting alloys, critical mag. fields, spin-orbit interaction 7−125276
Zr_2NiH_x metallic glass, magnetoresist., H effects 7−84827

spin-phonon interactions
see also spin-lattice relaxation
chelate: Cr^{3+} crystal, asymmetric spin-phonon coupling, low temp. behaviour of dipole subsystem 7−132134
CoBa fluorophosphate spin-glass, acoustic suscept. calcs. 7−112923
dielectric crystals, quadrupole spin-lattice interactions, role of point defects 7−132159
Heisenberg model, 2D, ESR line width, correlation functions 7−77396
$MEM(TCNQ)_2$, far IR transmission and lattice dynamical calcs. 7−84160
spin-Peierls transition theory for quasi-1D antiferromagnet, Heisenberg model calcs. 7−77342
$(TMTTF)_2AsF_6(PF_6)(Br)$ salts, spin-Peierls transition evolution under press., renormalisation group anal. 7−77313
β-AgSI polycryst., ultrasonic vel. and attenuation, pulse-echo-overlap meas. 7−76306

spin-phonon interactions continued
GaAs:Cr^{2+}, trigonal centre ground states, low freq. APR anal. 7−137856
GaAs:Fe^{3+}, EPR spectra, uniaxial compression effect 7−77398
GaP:$Fe^+(Co^{2+})(Mn^{2+})(Ni^{3+})(Cr^{4+})$, EPR spectra, uniaxial compression effect 7−77398
InP:Fe^{3+}, EPR spectra, uniaxial compression effect 7−77398
KD_2PO_4-type ferroelectrics, Debye relaxation time 7−138388
KH_2PO_4-type 7−138388
O_2, solid, far IR absorpt. spectra, spin and phonon subsystems effects *(Russian)* 7−77529

spin polarised atomic hydrogen
Bose-Einstein condensation in dynamic trap 7−108392
gas, giant opalescence and magnetokinetic effects calcs. 7−83408
ground state energy calcs. using LOCV method 7−96493
interatomic interactions, thermodynamic and mag. props., book contrib. 7−84446
low temperature physics, book 7−80208
magnetic trapping at 40 mK 7−137656
nuclear spin-lattice relax. rate on liq. He coated surface, substrate mag. particles effects 7−84445
spin wave coeffs. and 2D second virial coeffs. 7−124633
sticking on superfluid He surface 7−112006
zero temp. quantum fluids, integral eqn. interpolation method 7−76541
D, spin polarised in mag. traps 7−137657
$H↓$, spin-polarised, press. and compressibility, LOCV calcs. 7−137044
N_2, spin-polarised crystals, stability 7−84444

spin polarised electron emission
magnetic and nonmagnetic solids, spin polarised electron emission 7−132403
rare gas adsorbates, electronic resonances, spin-resolved electron spectroscopy 7−106370
transition metal ferromagnets, spin-polarized Auger-electron spectroscopy, review 7−85904
Co, ferromagnetic, spin polarisation of secondary electrons 7−119077
Co thin epitaxial FCC films on Cu, ferromagnetism obs. by spin-polarised photoemission 7−77385
$Cu_3Au(001)$, critical wetting and surface-induced continuous phase transition, SPLEED study 7−70049
Fe epitaxial FCC film on Cu (001), magnetism, spin polarised photoelectron emission 7−105985
Fe, ferromagnetic, spin polarisation of secondary electrons 7−119077
Fe-Ni-B metallic glasses, ferromag., spin polarisation of secondary electrons 7−138559
$Fe_{82}B_{12}Si_6$, metallic glass, ferromag., spin polarisation of secondary electrons 7−138559
GaAs surfaces, optically orientated electron spin precession, photoemission study *(German)* 7−85961
Gd, surface magnetisation at the bulk Curie temp. 7−112858
Kr, Ager electron spin polarisation 7−68267
Ni (110), O adsorption, magnetic probing depth in spin-polarized secondary-electron spectroscopy 7−119078
Ni, ferromagnetic, spin polarisation of secondary electrons 7−119077
Xe (111), valence and conduction bands, spin-polarised photoemission studies 7−118549
Xe, Ager electron spin polarisation 7−68267

spin polarised electron phenomena *see electron spin polarisation*

spin reorientation *see spin dynamics*

spin-spin nuclear coupling in molecules *see molecular nuclear coupling*

spin-spin relaxation
acetonitrile liq., intermol. dipole-dipole NMR relax. rate, mol. dynamics calc. 7−90209
1- acyl-sn-glycerophosphocholine systems, NMR, diffusion coeff. and spin relax. meas. 7−74679
anisotropic power media, ^2H NMR line shapes 7−99598
antiferromagnet, nuclear magnon slow relax. rate calcs. *(Russian)* 7−112985
benzene, ^1H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
blood plasma protein water protons, NMR relax. in animals in expt. carcinogenesis 7−144966
breast, normal, transverse relax-times in NMR imaging during menstrual cycle 7−79033
cerebrospinal fluid, NMR relax. times obs. 7−119823
chlorophyll a-dimyristoyllecithin lipid bilayer, cooperative lengths and elastic consts. 7−114202
coupled spin systems in high mag. fields, differential T_1 and T_2 relax. 7−112973
dichloromethane, ^1H-^{13}C spin coupling consts., Fe acetylacetone paramag. relax. reagent effect 7−109950
2,6-dioxo-1,4,7,10,13,16-hexaoxacyclooctadecane, struct., ^1H spin-spin obs. 7−96748
erythrocyte superoxide dismutase, bovine, anion binding, nucl. relax., ^1H NMR 7−119724
fluoroadamantane, mol. motion, NMR relaxation times 7−142660
heterogeneous solid samples, cross-polarisation NMR spectra 7−85467
hexamethylbenzene, ^1H-^{13}C polarisation transfer via the nuclear solid effect 7−70673
liquid crystals, molecular dynamics and spectral density determ. 7−75983
localized proton spectroscopy using stimulated echoes appl. to phantoms and human extremities 7−93868
low frequency field cycling experiment for relaxation dispersion measurements 7−112986
medical ^1H NMR, diagnostic value of T_1 and T_2 7−71841
medical NMR, high-speed techniques for estimating *T1*, *T2*, and density images 7−119822
medical NMR, relax. times in proton imaging, methodology for meas. and anal. 7−139340
medical NMR, temp dependence of proton relax. times in vitro 7−139338
medical T_2-weighted NMR imaging, method for reducing motion induced errors 7−133404
metals, dirty, spin dephasing time due to weak scatt. processes 7−105932
metals and insulators, nuclear relaxation and nuclear orientation, book contrib. 7−99603
natural abundance ^{13}C spin exchange study 7−70663
Nile blue, ethanol soln., nonlin. receptivity, nonMarkovian model 7−90180
NMR free induction decay of spins in periodic lattice with vacancy diffusion 7−85468
NMR imaging, relaxation time and proton density images *(Japanese)* 7−108611

spin-spin relaxation continued
NMR relax. investig. 7—90219
orthopyroxenes, spin-spin relax. of Fe(II) ions, Mossbauer spectra 7—92555
oxazine-18, ethanol soln., nonlin. receptivity, nonMarkovian model 7—90180
E-N-phenylformamide, homonuclear multiple-quantum NMR relax. rates 7—99602
poly(γ-benzyl-L-glutamate), lyotropic, mol. motion, PMR obs. 7—92539
polyacrylate deuterons, relax., counterion influence 7—82217
polyethylene, ^{1}H-^{13}C polarisation transfer via the nuclear solid effect 7—70673
polyethylene, linear, natural abundance ^{13}C spin exchange study 7—70663
polypropylene, ^{1}H-^{13}C polarisation transfer via the nuclear solid effect 7—70673
proteins, g-factor tensor anisotropy, ESR spectra 7—103702
rectal carcinoma, quantitative NMR imaging, T_1 and T_2 relax. times obs. 7—126994
semiconductors, disordered, spin dephasing time due to weak scatt. processes 7—105932
striated muscle, rat, water phases as determined by T_2 proton NMR relax. times 7—139207
wood components, ^{1}H T_1 and T_2 relax. times, ^{13}C CP/MAS NMR obs. 7—106045
$CdCr_2Se_4$, pure and In doped spinel, NMR of innerdomain ^{53}Cr nuclei *(Russian)* 7—138342
Cr complex, tris(acetylacetonato)chromium(III), dilute chloroform solns., ^{1}H spin relax. anal. 7—116990
Cu^{2+}-poly(riboadenylic acid) interaction, NMR investig. 7—90211
$ErCrO_3$, pulsed laser irradiation-induced antiferromag. to weak ferromag. transition study 7—77288
H_2O-amino acid interaction, NMR relax. investig. 7—90219
In-Na-Sb liquid alloys, nuclear quadrupole relax. and thermodynamics 7—85482
In-Sb (Hg) liquid alloys, atomic dynamics with attractive A-B interactions 7—83656
Na-Xe quasimolecules, spin exchange, efficiencies of various buffer gases 7—68381
$Ni_{35}Ti_{65}$, amorphous, H diffusion, NMR relax. rates 7—105145
Rb chemical reaction and chemisorpt. on dichlorodimethylsilane-treated glass surface, effects on spin-relax. props. 7—126481
Si 7—118887
Tl-Te-Bi liq. system, electron localisation, NMR studies 7—98787
$YBa_2Cu_3O_{9-\delta}$, normal and supercond., NMR of ^{89}Y 7—118717
$YH_2(D_2)$, NMR rotating frame relax., spin-spin interactions, rigid lattice regime 7—85466

spin systems
see also magnetic properties of substances; magnetism
ϕ^4 spin systems, 4D, critical phenomena, renormalization group trajectory 7—108449
ϕ^4 spin systems, 4D, critical phenomena, susceptibility and correlation length anal. 7—108450
anisotropic, scaling stiffness energy 7—77337
anisotropic lattice spin models, scaling dimensions and conformal anomaly 7—102327
antiferromagnetic incommensurate struct. collective modes 7—70535
arbitrary dimensional lattices, interplay between boson, fermion and spin-1/2 systems 7—134686
binary magnetic lattice gas in transverse field 7—92397
binary sequences, low autocorrelation type, statistical mechanics and config. space anal. 7—80582
chiral clock model, low temp. renormalisation study 7—105874
classical spin clusters, integrability and dynamical properties 7—143823
dilute spin systems with finite connectivity, stability 7—85305
dipolar interaction spin systems, thermodynamic props in high field 7—106034
dipole-couple spin systems, multipulse NQR, characts. 7—143925
discrete, residual entropy and third law of thermodynamics 7—121032
discrete spin Hamiltonian, equivalent Ising Hamiltonian with multispin interactions 7—92437
discrete spin models approximating the classical Heisenberg ferromagnet 7—105877
electron spin echo modulation patterns, completely asymmetric nuclear quadrupole effects 7—85484
Fermi liquids, almost-localised, antiferromagnetic correlations 7—125409
ferromagnet, heating of spin system by strong laser field 7—85272
first-order phase transitions, coarse-graining approach, two ground state spin system 7—125422
Heisenberg antiferromagnetic spin chains, representations of higher Weiss-Zumino-Witten models 7—118764
Heisenberg frustrated spin system, elementary excitations and phase transition 7—143832
Heisenberg quantum spin chains, generalised, phase behaviour 7—125432
Heisenberg spin chain, anisotropic, modified form, inverse problem and prolongation structure 7—70513
I_2S moieties in polycrystalline systems, NMR, nuclear shielding tensor orientations determ. 7—85455
Ising systems, dynamics of droplet fluctuations 7—99478
itinerant electron-localised spin system indirect interactions 7—138184
Landau-Ginzburg-Wilson model, n-component, with cubic anisotropy and random impurities, critical behaviour 7—85340
localised moment system coupled to conduction electrons, critical dynamics 7—70565
magnetic materials, short-range spin order, core-level photoelectron diffr., single scatt. cluster model 7—125922
mixed valence as an almost broken symmetry, strong-coupling props. 7—84798
Monte Carlo simulations using vector computers *(Japanese)* 7—85233
n-vector model, equation for pair correlation function 7—77189
non-equilibrium thermodynamics, renormalization group techniques appl., 1D spin model 7—108497
nonferromagnetic lattice systems of continuous spins uniqueness 7—67221
nuclear quadrupole system, low freq. susceptibility at low temps. 7—85480
periodically pulsed, quantum chaos *(Japanese)* 7—95405
phthalocyaninato-copper(II)iodide, mag. transitions and embedded local moments 7—99459
planar dipolar system on honeycomb lattice, ground state energy 7—143808
planar spin systems, 2D uniformly frustrated, transitions 7—143822
quantum, finite, cluster decomposition approach 7—99388

spin systems continued
quantum, nonintegrability 7—125297
quantum anisotropic mag. materials with competing interactions, inhomogeneous states 7—131987
quantum spin systems, appl. of thermofield quantum Monte Carlo method 7—67187
quantum spin systems, fast algorithm for 1D Monte Carlo simulations 7—99386
random spin systems, critical behaviour at the percolation threshold 7—85333
randomly frustrated systems with finite connectivity, mean-field theory 7—105921
relaxation time calcs., finite size scaling effects 7—73265
renormalized finite-cluster expansions 7—137511
rigid interfaces in discrete spin systems at low temp. 7—67250
spin-1 system with competing interactions and reentrant mag. behaviour, props. 7—99470
spin-Peierls systems, incommensurate phase, NMR and EPR studies 7—85483
surface critical behaviour and local operators with boundary-induced critical profiles 7—70559
thermoremanent magnetisation, spin-system cluster model calcs. 7—99462
three-sites three-electrons system, charge transfer instability with structural change 7—84796
two level systems, excitation, NMR, iterative maps with multiple fixed points 7—92514
$[Fe(2,6\text{-bis(pyrazol-3-yl)pyridine})_2][BF_4]_2$, spin transition, hysteresis, transition temperatures, activation energies, states 7—138180
Gd-Fe, thin Gd films on Fe in applied mag. field, surface spin reorientation 7—70560
^{3}He, solid, thermostatistical theory of spin structure 7—76540
SiO_2, E'_1 centres, oscillatory free-induction decay 7—85435

spin tickling (NMR) *see double nuclear magnetic resonance*

spin wave resonance *see ferromagnetic resonance*

spin waves
see also magnetostatic waves; magnons
amorphous Heisenberg ferromagnets, spin waves 7—125358
antiferromagnet, classical easy-plane, dynamical response at low temps. 7—105904
antiferromagnet, nuclear magnon slow relax. rate calcs. *(Russian)* 7—112985
antiferromagnetic incommensurate struct. collective modes 7—70535
antiferromagnets, spin waves localised at domain walls 7—77267
CHAB, ferromag. chain system, linear and nonlinear excitations 7—125352
combinative parametric resonance, calc. *(Russian)* 7—99552
disordered conducting antiferromagnets, spin wave damping, electron-magnon interaction 7—143775
disordered ferromagnetic chains, localised spin waves 7—77303
disordered magnets, competing anisotropy, nuclear spin waves *(Russian)* 7—125343
energy thermal renormalisation, quantum mechanical expression 7—112805
FCC vector antiferromagnets, ground-state selection, ordering by disorder 7—125318
Fe film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7—132005
ferroelectric elementary excitations, dipole waves, low temp; 7—143973
ferromagnet, weak, spin wave emission from domain wall 7—138153
ferromagnetic film, nonlocal mag. suscept. tensor and spin-wave reson., Green's function method calcs. 7—112898
ferromagnetic insulators, spin wave excitations near interface, Bethe lattice approx. 7—77264
ferromagnetic metals and alloys, exchange interactions, local spin density functional calcs. 7—99434
ferromagnetic thin films, amorphous and monocrystalline, FMR, replaceability of surface anisotropy with effective volume anisotropy 7—112891
ferromagnetic thin films, impurity layer localised spin wave modes, surface midplane co-action 7—138290
ferromagnetic-paramagnetic bilayers, Kirkendall effect, spin wave reson. study 7—69992
ferromagnetic/antiferromag. superlattice, spin-wave props. calcs. 7—125354
FMR, spin-wave turbulence 7—125540
garnet films, ferromagnetic, with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7—99521
Heisenberg ferromagnets, spin wave theory in 1D and 2D at low temp. 7—77341
Heisenberg frustrated spin system, elementary excitations and phase transition 7—143832
Heisenberg magnets, 1D and 2D, spin wave spectra fluctuations corrections 7—99484
Heisenberg rhombohedral antiferromagnet, long range order produced by quantum disorder 7—99387
inhomogeneously deformed medium, elastic and spin waves freq. depend. effects 7—142905
insulating magnetic films, spin wave spectra, exact calcs. 7—99430
itinerant antiferromag. spin structures, SDW systems, spin wave modes 7—99431
itinerant ferromagnets, localisation and correl. effects, generalized N-orbital model 7—99392
itinerant multiple SDW systems, spin waves 7—99432
kinematical problem, spin-1/2 nearest neighbour Heisenberg Hamiltonian, Schrodinger eqn. 7—138204
layered oxide systems, Jahn-Teller effect-mediated superconductivity 7—112643
mag. and dynamic props. in external mag. fields *(Japanese)* 7—131255
magnetic semicond., electron spin wave amplification by laser interband absorption 7—105907
metals, amorphous ferromagnetic, elec. resist., Faber-Ziman model *(Russian)* 7—137887
metamagnets, kinematic soft mode in absence of transitions 7—125359
noninteracting spin waves, critical behaviour, free-spin-wave theory of Heisenberg ferromagnet 7—138206
noninteracting spin waves, statistical theory, low-temp. results, quantum Heisenberg ferromagnet 7—138205
nuclear spin waves, effect on NMR saturation 7—132151
organic superconductors, superconductivity type 7—143686
paramagnetic Boltzmann gases, spin wave damping 7—105879

spin waves continued
parametrically excited, modulation instability, nonlinear props. anal. *(Russian)* 7−112781
parametrically excited spin wave nonlinear damping coeff. study *(Russian)* 7−77272
polyene linear chain, Hartree-Fock eigenvalues, instability numbers *(Russian)* 7−143451
quasi-periodic layered structs., spin wave spectrum, calc. 7−85266
Raman scatt. mechanism, scatt. of light by spin waves 7−99819
random Heisenberg antiferromagnets, spin waves, Anderson localisation 7−85269
superconductors, spin wave spectra, helicoidal ordering of localised mag. moments *(Russian)* 7−77265
surface spin wave excitations, softening, in thin ferromagnetic film, unaxial anisotropy 7−138202
surface spin waves in magnet electron fluid 7−112780
tetramethylammonium manganese chloride, 1D antiferromagnet, easy-plane, Kink-antikink scatt. 7−105873
$(TMTSF)_2X$ crystals, Bechgaard's salts, type of superconductivity 7−99337
transmission through domain walls 7−112778
triangular lattice Heisenberg antiferromagnet, spin wave reson. calcs. 7−106030
two dimensional ferromagnets, spin-wave spectrum fluctuation-dissipation corrections 7−118790
uniaxial spin glasses, spin wave spectrum calcs., Sherrington-Kirkpatrick model 7−85309
X-Y model, classical 2D dynamics, numerical simulation 7−115924
$Bi_{3-2x}Ca_{2x}Fe_{5-x}V_xO_{12}$, magnon spectra, Brillouin scatt. study *(Chinese)* 7−118783
CeAs, order-parameter conserving antiferromagnets, conserved staggered magnetisation in FCC lattice 7−138208
Co-Au amorphous thin films, prep. and mag. props. 7−85393
Co-Fe-Nb amorphous films, magnetisation and FMR studies 7−132102
CoCr thin films, spin wave reson. spectra study 7−105977
$CsCuCl_3$ linear chain mag. cpds., low temp. sp. ht. meas. 7−143807
$CsMnBr_3$ triangular antiferromagnet, spin wave props., inelastic neutron scatt. meas. 7−85250
$CsMnBr_3$ triangular antiferromagnet, spin waves, neutron scatt. study 7−125348
$CsMnF_3$ antiferromagnetic, parametrically excited spin wave periodic density redistrib. obs. 7−105908
$CsMnF_3$ antiferromagnetic bound electron-nucleus mag. system, solitons 7−112779
$CsMn_xMg_{1-x}Br_3$ crysts., Mn^{2+} cluster mag. excitations, inelastic neutron scatt. study 7−85251
$CsNiCl_3$, 1D near-Heisenberg antiferromag., inelastic neutron scatt. studies 7−125393
$CsNiCl_3$ linear chain mag. cpds., low temp. sp. ht. meas. 7−143807
$CsNiF_3$, field-induced spin-energy-density coupling, longitudinal spin response, neutron scatt. study 7−125357
$CsVCl_3$, 1D near-Heisenberg antiferromag., inelastic neutron scatt. studies 7−125393
Fe film across Cr interlayers, evidence for antiferromag. coupling 7−118839
Fe, free electronlike Stoner excitations 7−118788
Fe, Heisenberg model, paramag. response 7−131981
Fe ultrathin layers on W(110), Damon-Eshbach surface spin wave mode freq., surface anisotropy effects 7−132099
Fe/Pd multilayers, collective magnetostatic spin wave excitation obs. 7−112777
Fe/W multilayers, collective magnetostatic spin wave excitation obs. 7−112777
Fe-Mn alloys, FCC, electronic struct., spin-density meas. 7−105386
Fe-Si-B amorphous ferromagnets, spin dynamics, neutron scatt. obs. 7−85322
$Fe_{70}B_{30}$-Ag compositionally modulated amorphous sputtered films, magnetisation temp. depend. study 7−112900
$Fe_{84}B_{16}$, amorphous, mag. props. 7−105906
FeGe, hexagonal, symmetry analysis of antiferromagnetic phase transitions 7−85289
$Fe_{0.4}Mg_{0.6}Cl_2$, Ising spin glass, transverse fluctuations 7−105943
$Fe_{1-x}Mg_xCl_2$ spin glass-dilute antiferromag. system, spin wave props., inelastic neutron scatt. study 7−125395
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, spin waves at 77 K, inelastic neutron scatt. study 7−92419
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous ferromagnet, spin dynamics, neutron scattering 7−105903
Fe_3O_4, spin wave stiffness consts. 7−77270
Fe_3Si, spin wave study at low temp. *(Chinese)* 7−118782
$Fe_{90-x}Si_xB_{10}$ amorphous alloys, heat treatment, change D/T_c ratio 7−113734
$Fe_{95-x}W_5B_x$ amorphous alloys, thermomagnetic and crystallisation behaviour 7−77258
GdCoMo amorphous thin films, surface mag. anisotropy, X-band microwave spectra study 7−99522
H, spin polarised gas, spin wave coeffs. and 2D second virial coeffs. 7−124633
He, spin polarized gas, spin wave coeffs. and 2D second virial coeffs. 7−124633
^{3}He superfluid, two-domain precessing magnetic struct. studies 7−105172
^{3}He, superfluid B-phase, thin layers, mag. reson. and spin waves 7−70018
^{3}He, u.u.d.d. phase, magnetic domain wall structure and spin wave scattering 7−70026
$HgCr_2Se_4$, ferromagnetic semiconductor, spin wave damping 7−85267
$HgCr_2Se_4$, mag. semicond., magnetostatic and spin wave intensification 7−85273
KH_2PO_4, transverse and longitudinal mode damping, temp. depend. 7−131263
Li-Zn ferrite, spin wave stiffness consts. 7−77270
Mn_3Si, pure and Fe-doped, itinerant antiferromag., mag. excitations 7−138207
Mn_3Si:Fe, magnetic excitations, inelastic neutron scatt. study 7−125346
Ni, propagating spin waves above T_c 7−143778
Ni_3Al, mag excitations, theoretical study 7−118787
$Ni_{0.8}Fe_{0.2}$ film exchange coupling across nonmag. interlayers, light scatt. and microwave absorpt. study 7−132005
$Ni_{80}Fe_{20}$ ferromag. double layers, spin wave modes in parallel and antiparallel magnetised states, light scatt. study 7−85270
O_2, solid α- and β-, mag. coupling and dynamics, ab initio calcs. 7−85220
spin waves continued
O_2, solid α- and β-, mag. coupling and dynamics, mag. field effects 7−85287
$Pd_{1-x}(FeNi)_x$, magnetic excitations, saturation magnetisation meas. *(Russian)* 7−143774
PuSb correlated actinide system, mag. props., cryst. field splitting and resonant f-band scatt. calcs. 7−112254
$RbNiCl_3$ linear chain mag. cpds., low temp. sp. ht. meas. 7−143807
UO_2, 3-K mag. struct. anal., magnetoelastic and quadrupolar interactions 7−99406
UO_2, antiferromagnet, spin wave relaxation *(Russian)* 7−125344
URu_2Si_2 heavy-electron supercond., magnetic excitations and ordering 7−85271
USe single domain ferromagnet, spin-wave polarisation, inelastic neutron scatt. study 7−125349
$(Y,Ca)_3(Fe,Ge)_5O_{12}$ thin garnet films, magnetostatic spin waves, cubic and uniaxial anisotropy 7−138203
YIG film, bulk spin wave-light waveguide interaction obs. *(Polish)* 7−138301
YIG film, surface spin waves, cubic anisotropy effects 7−132092
YIG film-ferroelectric plate composite medium, reson. interaction of magnetostatic and slow EM waves 7−85276
YIG films, surface spin waves, attenuation and nonlinearity threshold 7−77384
YIG films, surface spin wave propag., obs. at frequencies above the dipole spectrum limit 7−85275
YIG films with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7−99521
YIG single cryst. ferrite, noisy nonlinear EM emission in FMR 7−99581
YIG, spin wave stiffness consts. 7−77270
YIG: H_2^+ thin film, surface spin-wave modes photoinduced mag. anisotropy effect relax., FMR obs. 7−112897
YIG:H_2^+ thin films, ion implanted, surface spin wave modes, photoinduced effect 7−112959
spinodal decomposition
alloys, electron irradiation, dislocation loop kinetics 7−98155
catastrophes and spinodals 7−124437
epitaxial films, layer by layer film growth and morphological transitions, continuum model 7−137764
eutectic alloys, solidification, spinodal decomp. and glass transition during quenching from liq. phase 7−98409
first-order phase transitions, mean field methods and stability limits 7−121034
four-component systems, calc. of isotherms of spinodal 7−106489
gas-fluid system, metastable and unstable state decay, mechanisms and open problems 7−84196
Langevin equations, time depend. Ginzburg-Landau model 7−137573
liquid-vapour interface, orthobaric densities, spinodal decomposition 7−98622
metal-H_2, spinodals, catastrophe theory 7−98471
modelling based on concept of mechanics 7−67262
polymer mixtures, phase separation kinetics 7−69917
polystyrene-poly(vinyl methyl ether) mixtures, phase separation, conc. prob. distrib. function by direct image anal. 7−124129
solid solns., 7−69856
steel, stainless, fine scale microstruct., APFIM and analytical electron microscopy obs. 7−138772
steel, ultra high strength, development based on spinodal decomp. 7−86229
$AlAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
Cu-Ni alloys, electron irrad.-induced spinodal decomp. study 7−104843
Cu-Ni-Cr spinodal alloys, hardening mechanism 7−126189
α-Cu-Ti alloys, electron irrad.-induced spinodal decomp. study 7−104843
Fe-Cr, spinodal decomp. during ageing, nucleus internal field, Mossbauer spectra *(Japanese)* 7−100228
Fe-Cr (45.7 at.%), spinodal decomp., Mossbauer effect, internal mag. field distrib. *(Japanese)* 7−106063
Fe-Cr-Co-based cold-rolled magnets, mag. props. and microstruct. studies 7−132065
α-Fe-Mo alloys, electron irrad.-induced spinodal decomp. study 7−104843
Fe-Ni-B amorphous alloy, neutron irrad., elec. resist. spinodal decomposition model 7−105518
$InAs_xP_ySb_{1-x-y}$, solid solution, calc. of isotherms of spinodal 7−106489
KH_2PO_4 cryst., domain form., optical and X-ray studies 7−77485
$Mn_{0.67}Cu_{0.33}$, phase separation kinetics 7−137572
NiAl-Cr quasibinary eutectic, microstruct. and phase solubility extension, effect of rapid solidification vel. 7−92991
SiC-AlN ceramics, modulated structs. 7−132619
SnO_2-TiO_2, tetragonal system, spinodal decomp. 7−113556
SrO-GeO_2 system, time-temp.-transform. diagram *(Japanese)* 7−132592
ZrO_2-Al_2O_3-SiO_2 system, rapidly quenched, tetragonal ZrO_2-glass structs. form. 7−119231
spinor groups *see group theory*
spinors *see vectors*
spirality *see elementary particle theory*
spirometry *see pneumodynamics*
splat cooling
alloys, rapidly quenched, phase struct. and microstruct. 7−92979
Al-Cr-Fe(Co)(Ni), rapidly solidified, microstruct. and mech. props. *(Korean)* 7−77966
Fe-B-Si and Fe-P-C systems, powders prepared by water atomisation, comp. effect on glass-forming regions 7−132527
α-Np, twinning study using TEM and X-ray diffr. 7−76139
Pb-Sb thin metallic ribbon, prep. and cold forming effects on corrosion rate 7−92918
Pd based alloys, splat cooling, glass forming ability, struct. 7−83732
Sb-Ag-S, chalcogenide glasses, chemical and electrical props. 7−111956
ZrO_2-Al_2O_3-SiO_2 system, rapidly quenched, tetragonal ZrO_2-glass structs. form. 7−119231
splines (mathematics)
see also curve fitting; function approximation; interpolation
airflow patterns for various approximations to velocity-pressure-gradient data 7−104336
cantilevered Euler-Bernoulli beams with tip bodies, stiffness/damping estimation 7−75281
clamped shallow spherical shells, symmetric buckling problems, cubic spline soln. *(Chinese)* 7−142190
closed surface, B-spline approx. 7−66991
contact lenses, spline algorithm and computing and developing 7−94018
electrostatic spline lenses, model 7−103726

splines (mathematics) continued
experimental data, smoothing and differentiation using cubic splines 7−67292
gravity measurements, terrain corrections improvement using numerical integration techniques and bicubic spline interpolation 7−127072
heat conduction, quasi-steady periodic linear inverse, periodic B-splines and integral transforms anal. 7−110751
lattice gauge theory, relativistic fermions on collocation lattice 7−80964
meteorology, numerical variational methods for data filtering and interpolation 7−127561
modified Korteweg-de Vries eqn., shape preserving splines appl., fractional time-step method 7−134524
nonrelativistic Schrodinger eqn., bound state and Faddeev problems, spline expansion technique 7−128364
ophthalmic lens design with splines 7−94017
partial spline method for discontinuities inclusion in otherwise smooth 2D and 3D objective anal. 7−133975
plates, thin, large deflection analysis using spline finite strip method 7−123478
quadrilateral plate bending, spline FEA *(Chinese)* 7−90983
scalp potential mapping by surface spline interpolation 7−114235
structural geology, cross-section drawing through folded layers using sequentially rotated cubic interpolators 7−127605
three-nucleon systems, Faddeev eqn. soln. by Lanczos algorithm and spline expansions 7−67775

sponges *see porous materials*

sponginess *see porosity*

spontaneous emission, amplified *see superradiance*

spontaneous fission
barrier tunnelling in fission and fusion, pairing correlation effects a probability and dynamics 7−73817
conference, Gaussig, Germany, Nov. 1985 7−72725
dissipative coupling of fission degree of freedom, effect on spontaneous fission lifetime 7−81460
self-consistent periodic mean field equations 7−109141
superdeformed nuclei study, heavy ion collisions, fission 7−128942
^{252}Cf, identification of new neutron-rich rare earth isotopes 7−141109
^{252}Cf, neutron energy and angular distrib., low energy meas. 7−109248
^{252}Cf, polar particle emission in spontaneous fission 7−73816
^{252}Cf, spontaneous fission, fragment energy and mass distrib. correlations 7−73807
^{252}Cf, spontaneous fission, fine struct. variation with excitation energy 7−129116
^{252}Cf, spontaneous fission, low mass fission product search 7−73808
^{252}Cf spontaneous fission, neutron and fission fragment study 7−73805
^{252}Cf, spontaneous fission, symmetric tripartition 7−129119
^{252}Cf, spontaneous fission neutrons, energy/angular distrib. correlations 7−73806
^{252}cf(sf), particle emission model, energy spectra, ang. distribs. 7−121971
^{A}Np, A=238, 239, spontaneous fission of highly deformed excited states, shadow method 7−135381
^{238}Np, fission time, shadow method 7−67884
Pu, fissile material quantitative anal., prompt spontaneous fission gamma meas. *(Russian)* 7−116605
^{240}Pu, mass asymmetric fission barrier, Skyrme-Hartree-Fock calculation 7−121972
^{244}Pu, spontaneous fission, long range α-emission LRA/B ratios 7−121976

spontaneous magnetisation
copper diformate tetrahydrate, 2D Heisenberg antiferromagnet, spontaneous staggered magnetisation, PMR study 7−105899
copper diformate-urea-D_2O complex, 2D Heisenberg antiferromagnet, spontaneous staggered magnetisation, PMR study 7−105899
decamethylferrocenium tetracyanoethenide, ferromag. ground state obs. 7−112767
fluctuation phonon approach to ferromagnetism *(Hungarian)* 7−131978
Invar, Fe_xNi_{1-x}, low temp. mag. state *(Russian)* 7−92415
Ising model, spontaneous magnetization on 4-6 lattice 7−125293
Ising model 4-8 lattice, spontaneous magnetisation 7−118758
Ising model on square lattice, spontaneous magnetisation 7−125295
polymer system, symmetry, phase transition, n=0 limit 7−112829
spherical model with competing interactions, phase transition 7−70563
two dimensional n=0 vector model, mag. props. 7−70508
ultrathin film and surface ferromagnetic phase transition, Heisenberg model calcs. 7−112893
$CdCr_2(Se_{4-x}Te_x)$, solid solutions, prep. and mag. props. 7−105896
$CeNi_{0.8}Pt_{0.2}$, dense Kondo ferromagnet, mag. props. 7−77249
Cu-Ni [100] oriented superlattices, mag. props. study 7−125334
$Eu_{1-x}La_xS$ solid solns., ferromag. phase transitions studies 7−70546
Fe complex, $Fe(C_5Me_5)_2$ (TCNE), ferromag. props. 7−99426
Fe ferrimagnetic oxide formed on heating nontronite, magnetisation, Mossbauer spectra and structure studies 7−77354
Fe ultrafine particles in Fe-SiO_2 granular solids, spontaneous magnetisation, temp. depend. 7−125475
Fe-Ni alloys. mag. props. meas. 7−125340
Fe-Ni-Cr, austenitic, ageing, low temp. mag. props. rel. to precipitated γ' phase particles *(Japanese)* 7−105958
$Fe_{70}B_{30}$-Ag compositionally modulated amorphous sputtered films, magnetisation temp. depend. study 7−112900
$Fe_{95-x}W_5B_x$ amorphous alloys, thermomagnetic and crystallisation behaviour 7−77258
Gd-Y, initial ordering regime, neutron diffr. study 7−143762
$Gd_3Fe_{5-z}Al_zO_{12}$ single crystals, mag. props., ionic migration effects 7−138197
(La-Ce)Ru_2Si_2 Kondo systems, low temp. heat capacity 7−70521
$Ni_{75}Al_{25-c}Mn_c$ solid solns., mag. props., plastic deform. effects 7−70621
$Pr_2Fe_{14}B$ single cryst., first order magnetisation processes 7−92465
$Y_3Fe_{5-x}Sc_xO_{12}$, amorphous, mag. props. study 7−143765
Y_2Ni_7 thermal spontaneous ferromagnetism, band model 7−99454

spontaneous symmetry breaking
$\lambda\theta^4$ field theory, nonstandard expansion techniques for effective potential 7−89368
ϕ_2^4 field theory, broken symmetry phase, kink sector construction 7−134919
abelian Higgs model, Chern-Simons terms by spontaneous symm. breaking 7−116067
Abelian Higgs model, Monte Carlo renormalisation group study, symmetry breaking 7−80985
Abelian lattice Higgs model, phase diagrams, Gribov copies 7−121335

spontaneous symmetry breaking continued
anomalous baryon number violation in high temp. electroweak theory 7−140854
anomalous U(1) gauge theory, unitarity and Lorentz invariance in symm. broken phase 7−67486
anti-de Sitter supersymmetry, spontaneous breaking, Wess-Zumino model 7−73560
axions, cosmological bound relaxation in superstring models 7−135074
bag model with broken chiral symm. 7−95861
baryogenesis in superstring unification with intermediate gauge symmetry breaking 7−146129
Chern-Simons term by spontaneous symmetry breaking in an abelian Higgs model 7−128796
chiral gauge theories, canonical quantisation, anomalies and Weyl modes 7−128770
chiral gauge theory, effective action for dynamical SUSY breaking 7−81048
chiral SU(6)⊗SU(6) symmetry breaking and the pseudoscalar meson masses 7−81059
compactified O(16)×O(16)′ heterotic string theory, supersymmetry restoration 7−73557
conformally invariant model with Gursey term, instanton and meron solns. 7−121379
Cosmological implications of conformal symmetry breaking 7−95071
cosmological model, open, isotropic, spontaneous symmetry breaking and vacuum polarization 7−128150
cosmology, mag. monopole abundance from GUT symmetry breaking phase transition in early Universe 7−107986
CP invariance breakdown in SU(5) model, Fritzsch matrices, Kobayashi-Maskawa angles calculation 7−116112
d=11 supergravity, spectrum and symmetry breaking, quotient of manifolds by discrete groups 7−67166
d=6 Einstein-Yang-Mills theory, spectrum and symmetry breaking, quotient of manifolds by discrete groups 7−67166
de Sitter quantum gravity, critical behavior on hypercubic lattice, SO(5) symmetry breaking 7−115882
dilaton and dynamical fermion mass generation 7−95748
dilaton classical soln. and supersymmetry breaking evolution in expanding universe 7−67167
dimensional reduction and the Higgs potential 7−140805
Dirac particle in vortex field, CP invariance breaking for massive fermions 7−102582
Dirac spinors in quantum space with torsion, quantized fiber-bundled spaces, spin connection, neutrino oscills. 7−134923
discrete space-time symmetry violation study 7−67522
dynamical symmetry breaking, alternative effective pots., Gross-Neveu model pots. 7−81054
dynamical symmetry breaking in a de Sitter-invariant vacuum 7−116095
$E_6\times E_8$ superstring theory, SUSY breaking from group gaugino condensates 7−128803
E_6 GUT, superheavy 27-multiplet fermions in $E_6\times SU(3)$ model 7−135005
E_6 superstring model with exotic quarks, CP violation 7−73577
E_6 superstring models, particle dichotomy and left-right decomposition, Dirac neutrino, W′ boson 7−128815
early Universe, symm. breaking phase transitions, quantum field theoretic description 7−120916
effective potential, boundary conditions in path-integral formulation 7−95751
effective potential for Kaluza-Klein radius, gauge depend., self-consistent dimens. reduction 7−73113
effective super-Higgs and Str M^2 from four-dimensional strings 7−140589
Eguchi-Kawai model with new lattice actions, Monte Carlo study 7−102591
electroweak interactions, spontaneously broken gauge symmetry, review *(Rumanian)* 7−81090
elementary particle models, spontaneous symmetry breaking, multiplets and symm. groups *(German)* 7−128784
extended hypercolour models, dynamical mass decreases as possible cure to difficulties 7−81080
extended supergravities, spontaneous breaking 7−67172
false vacuum decay rate at high temps. 7−116111
finite QED, chiral symmetry breaking 7−81098
finite temperature and density effect on symmetry breaking by Wilson loops 7−102647
finite theory, critical surfaces, flat directions, O(N)×O(N)-symmetric model, phase structure 7−121367
four-generation SU(2)×U(1) model, Yukawa couplings, CP violating mixing matrix 7−140856
gauge theories, light dilaton, chiral symmetry breaking 7−81003
gauge theories and symmetries, introduction 7−95817
gauge theory, chiral symmetry breaking, PCAC dynamics 7−102604
gauge theory anomalies, loop corrections, Lagrangian symmetry breaking, regularization in ultraviolet region 7−134956
gauge theory in four dimens., geometrical hierarchy and spontaneous symm. breaking 7−102603
gauge theory with scalar condensate, canonical quantisation and spontaneous symm. breaking 7−140787
gauged chiral SU(2) action, skyrmion-baryon phenomenology 7−108755
global family symm. and Peccei-Quinn symm., connections, breaking and familons 7−81076
globally supersymmetric theories, complexification of character of internal symmetry group 7−73552
glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
goldstino frequency fn. in broken global supersymmetry 7−95779
Goldstone's theorem, charges and symm. breaking without locality, review 7−128741
Goldstone bosons and superpartners in supersymmetric theories 7−95788
Goldstone-type gravitation with Poincare translation gauge fields, space-time symm. breaking 7−140585
gravitation, gauge dependence of one-loop effective action 7−95433
GUTs, U(1) generation symmetry, quark, lepton and neutrino masses and mixings, mirror particles 7−140851
heterotic superstring compactification, 4 dimens. supergravity as low-energy limit 7−89476
hierarchical chiral symmetries and quark mass matrix 7−67526
Higgs potential minimization, no-go theorems 7−95756
higher derivative gravity, new variable formalism, SU(2) gauge invariant form, O(4) field variables 7−128415
IBFM, U(6/12) supersymmetry scheme and nuclear wave fn. 7−135229

spontaneous symmetry breaking continued
intermediate bosons, longitudinally polarized, scatt. in symm. breaking sector, low energy theorems 7−135004
intermediate mass scales, radiative generation in superstring-inspired models 7−89402
Kaluza-Klein cosmology with double compactification, spontaneous symm. breaking by Higgs fields 7−108362
Landau potential minimisation, SO(3) invariance, nonmaximal D_4 stability group 7−140831
Langevin and microcanonical simulations for fermions, comparison 7−81044
lattice field model, role of symmetry breaking effects in a random fermion model 7−89337
lattice gauge theory, charges and symm. breaking without locality, review 7−128741
lattice gravity as spontaneously broken gauge theory of local Poincare group 7−134934
lattice QCD, chiral-symmetry-breaking, phase transitions, fermion flavour and lattice spacing effects 7−108857
lattice U(1)-Higgs model, Landau gauge and spontaneous symmetry breaking 7−134945
left-right Pati-Salam model, P invariance and isospin breaking, SO(10) model 7−128812
left-right symmetric models, CP violation through Higgs-boson exchange 7−102657
light meson systems, chiral symm. breaking and QCD 7−89443
local supersymmetry, Lorentz symm., vierbein formalism 7−128789
long-range dynamics and symmetry breaking, algebraic dynamics and math. structs. 7−73553
Lorentz symmetry breaking mechanism, effect on gravit. field action 7−140828
low-energy supergravity from 4D superstrings, supersymmetry breaking pattern 7−102720
mass degeneracy and the super-Higgs mechanism 7−108816
massive pseudoscalar mesons, quark spectrum asymm. and effective Lagrangian 7−135035
massless QCD, quark self-energy bifurcation, infrared and ultraviolet cutoffs 7−89438
massless quarks in nonAbelian chromomagnetic field, effective Lagrangian 7−73599
meson radiative decays, vector dominance model, coupling constants and effective lagrangians 7−67610
mesonic rare decays in N=1 supergravity 7−80577
N=1 supergravity, SU(5) and SU(2)XU(1) radiative breakings 7−102287
N=1 supersymmetric gauge theories, ultraviolet regularization, softly broken extended supersymmetry 7−128774
N=1 supersymmetric GUT based on SU(5)×U(1) 7−140853
N=2 superelectrodynamics with D term, potential, infinitely degenerate vacuum, gauge symmetry breaking 7−128829
N=4 Yang-Mills theory, spontaneous symmetry breaking in quasi-superrenormalisable models 7−73514
neutron electric dipole moment lower bound in spontaneous DP nonconservation models 7−81189
Nicolai map, supersymmetry breaking at finite temp. 7−95790
no-scale supergravity, invisible axion in hidden sector 7−67168
no-scale supergravity, radiative SU(2)×U(1) gauge symm. breaking, renormalisation framework 7−108378
noncompact σ models, quantisation procedures 7−116052
nonperturbative vacuum props., dynamical chiral symm. breaking and quark mass 7−108860
nonrelativistic many body theory, charges and symm. breaking without locality, review 7−128741
nonrelativistic quark model, spontaneously broken chiral symm., degrees of freedom 7−108864
nucleon effective mass lowering by attractive scalar mean field, rel. effects in nuclear physics 7−140999
O'Raifeartaigh model, nonlinear, in four dimensions, spectator fields, low energy limit 7−108818
O(N) σ model, symm. restoration at finite temp. 7−102644
O(N) model with several coupling constants, phase transitions, chiral symm. breaking 7−134955
O(N) symmetric $\lambda\phi^4$ theory, Gaussian-effective pot. approach 7−81011
open bosonic string theory, off-shell vertex and twisted ghost fields 7−140909
orbifold compactified superstring theories; gauge symmetry breaking 7−120899
OSp(N,4) supersymmetry, semiclassical solns. 7−140837
Parker limit for flux of multiply charged monopoles 7−95808
Pati-Salam group induced by supergravity, symmetry-breaking hierarchies 7−128421
preon dynamics through local supersymmetry 7−73610
pseudoscalar meson form factors, SU(3) breaking mechanism, constituent quark model 7−135121
QCD, asymptotic freedom and symm. breaking 7−128841
QCD, chiral phase transition, temp. dependence 7−81117
QCD, dynamical symmetry breaking, quark masses, decay const., renormalisation group corrections, meson masses 7−135039
QCD, Goldstone mode of chiral symmetry 7−73597
QCD, pion effective Lagrangian and soliton physics 7−89431
QCD and chiral symmetry breaking 7−81116
QCD chiral symmetry breaking 7−81112
QCD confinement and CP violation, geometrical symmetry breaking 7−67575
QCD vacuum, strange $q\bar{q}$ pair condensates, partial chiral symm. restoration 7−135029
QCD vacuum, strong correlation of instantons due to light quark exchange 7−135040
QED, dynamical chiral breaking and mass generation 7−81094
quantum field theory, order parameter fluctuations and spontaneous breaking of translational invariance 7−108809
quantum gravity, spontaneous compactification, classical stability 7−108368
quark masses and hierarchies, electroweak symmetry breaking, SU(7)×SU(7) chiral preon model 7−95815
quasi Nambu-Goldstone models, spontaneous internal symm. breaking and mass splittings 7−95789
quaternion gauge fields, pseudocolour symm. and SO(4) symm. breaking 7−102631
$R\times S^3$ space-time, global N=1 SUSY on surface of 4D sphere 7−73554
spontaneous symmetry breaking continued
R-parity breaking and cosmological consequences for supersymmetric particle decay 7−67525
randomness, chiral and translational symmetries, non-interacting fermion system 7−121392
replica field theory with broken replica symm., one-loop effective pot. 7−128768
Salam-Weinberg symmetry breaking with superheavy Higgs particles 7−81065
scalar-tensor theory for induced gravity 7−89076
scale fields as a simplicity principle, mass generation as symm. breaking effect 7−140790
scale invariance and spontaneous symmetry breaking 7−134999
Schwinger model, long-range dynamics broken symmetries, Coulomb gauge, chiral symmetry breaking 7−140804
second order phase transition, everyday geometric model 7−102051
self-interacting scalar and gravit. fields, spontaneous symm. breaking 7−102258
singly-charged scalar field, family mixing and lepton-number breaking, supersymmetric case 7−128798
Skyrmion geometry, energy functional geometrical interpretation, conformal transformations, chiral symmetry breaking 7−121325
SO_3 gauge field interaction with isovector Higgs field, magnetic monopole structure 7−73521
SO(10) from supersymmetric E_6, spontaneous symmetry breaking anal. 7−95784
SO(10) superstring models, unified, with intermediate $SU_R(2)$ breaking, SUSY particle spectrum 7−95814
SO(3) invariant Landau pots., minimization for spin four 7−95800
softly broken supersymmetric theories, massless Higgs boson 7−89390
softly-broken superconformal invariance, chaotic inflation possibility, complex scalar fields 7−140340
spontaneously broken non-Abelian gauge models, low mass Skyrmions, stabilization term, GSI particle 7−108745
standard model extension to include invisible axions and majorons 7−121405
string theory, Fayet-Iliopoulos terms, vacuum destabilization 7−108877
strong coupling QED, vacuum struct., chiral symm. breaking 7−128828
Stuckelberg-Kibble model, long-range dynamics and broken symmetries in gauge models 7−134909
SU(2) lattice gauge theory, simulation using hybrid differential equations and fermion fields 7−81001
SU(2) quenched lattice QCD with staggered fermions, meson spectrum and flavour symm. restoration 7−67574
SU(2)d Higgs model, symm. restoration at finite temp. 7−102644
$SU(3)_C\times SU(2)_L\times SU(2)_N\times U(1)_Y\times(1)_{Y'}$ models, $E_8\times E_{8'}$ based, properties 7−140860
$SU(3)_C\times SU(2)_L\times U(1)_Y$,$[\times(U(1))^2,\times U(1)]$ models with two, one, no Z bosons, gauge symmetry breaking, particle spectrum 7−73569
SU(3) theory, baryon number violation by chiral colour axiinstantons 7−140855
SU(6) broken quark-diquark model, baryon masses and mag. moments, charmed baryon masses 7−81133
superconducting cosmic strings, dynamical props. 7−135070
superconducting cosmic strings, dynamics, covariant classical action and eqns. of motion 7−135071
supergravity, minimal low energy, R-parity breaking and the top quark mass 7−89099
supergravity, spontaneous R parity violation, model for solar neutrino oscillations 7−134631
supergravity as spontaneously broken gauge theory of local Poincare group 7−134934
superspace Yang-Mills and gravitational systems, Witten index 7−128413
superstring generated N=1 supergravity model, duality and gaugino condensation 7−102719
superstring inspired models, gauge symmetry breaking 7−102264
superstring models, rank-five, from $CP_3\times CP_3$ 7−128804
superstring models, supersymmetry breaking in observable sector 7−102263
superstring-inspired models, global symm., phenomenological roles 7−102721
superstring-inspired models, low-energy supersymmetry breaking through gaugino masses 7−81069
superstrings, radiative corrections to N=1 supergravity model, nonperturbative supersymmetry breaking 7−135079
superstrings, SUSY breaking mechanism 7−81058
supersymmetric σ-model, geometry and anomaly struct. study 7−80966
supersymmetric GUT, electroweak breaking, $W^{\pm}$ and Z masses 7−134993
supersymmetric GUT with automatic fine adjustment 7−95813
supersymmetric harmonic oscillators with symm. breaking 7−108822
supersymmetric quantum mechanics, Hamiltonian spectra and inverse scatt. problem 7−134578
supersymmetric radiative corrections to asymmetry meas. at Z^0 peak 7−134975
supersymmetric SU(4)×SU(2)×SU(2) partial unification group, spontaneous symm. breaking and mass spectra calcs. 7−108834
supersymmetry breaking at finite temp., order parameter, Witten index and Nicolai map temp. depend. 7−108813
SUSY QCD in large N_c limit, absence of dynamical supersymmetry breaking 7−140883
SUSY QCD-based dynamical model for composite quarks and leptons 7−128863
Swieca's theorem, charges and symm. breaking without locality, review 7−128741
symmetric and nonsymmetric coupled logistic maps 7−95478
technicolor theories, chiral hierarchies from slowly running couplings, dynamical mass, fermion condensate 7−121445
temporal gauge, dyon solutions, non-Abelian gauge field tensor, Higg's-triplet field 7−121371
three-generation superstring model, symmetry breaking and low-energy phenomenology 7−128401
two-scale, two scalar model, spontaneously broken, hierarchy stability 7−89366
U(1) gauge coupling limits, phenomenological bounds 7−89343
unique SU(5) and SO(10) unification with complete dynamical symmetry breaking 7−116103
Universe homogeneity at the time of a GUT phase transition 7−88716
vacuum polarization in gravit. field of cosmic string 7−108354
very early universe, scalar and spinor fields 7−101969

pontaneous symmetry breaking continued
Wilson loop symm. breaking and instantons in $M_4 \times K$ space-times 7−134949
Z_2 cosmic strings from symmetry breaking, string mass 7−120673
Z_N lattice gauge theory, translation symm. breaking as random surface problem 7−67511
$B \rightarrow K^* \gamma$, squark and gluino mass constraints, spontaneously broken minimal supergravity 7−135103
D→mesons, analysis based on SU(3) symmetry and final-state interactions 7−102735
$e^- e^+ \rightarrow \tau^+ \mu^-$, scalar-lepton mixing, softly broken supersymmetric model 7−135094
$e^+ e^- \rightarrow Z'$, resonance prodn., standard model with broken $SU(2) \times U(1) \times U(1)$ gauge symm. 7−135000
$\eta_c(2980)$ existence in SU(4) symmetry 7−67528
γ, massless, in Veneziano model, loop anal., absence of spontaneous. symmetry breaking 7−89478
$\iota(1460)$ glueball candidate, mixing study in chiral symm. breaking framework 7−81131
$K^0 \rightarrow \bar{K}^0$, matrix element calculation, chiral quark-loop model, B-factor, K^+ decay amplitude 7−116167
$(K\pi)$ atom, energy levels, lifetime, wave function, meson chiral interaction parameters 7−68477
mass, Majorons, electroweak $SU(2) \times U(1)$ gauge theory 7−135001
μ decay, double Majoron emission, electroweak $SU(2) \times U(1)$ gauge theory 7−135001
$\mu N \rightarrow eN$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
np interaction, charge symmetry breaking effects, consistent eval., one-boson-exchange pot. 7−135147
p, strange quark content and chiral symmetry breaking, model anal. 7−102640
π form factor in instanton-vacuum model, structure function, spontaneous chiral invariance breaking 7−116175
$\pi^+ \rightarrow \nu e^+$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
$(\pi\pi)$ atom, energy levels, lifetime, wave function, meson chiral interaction parameters 7−68477
$\psi \rightarrow B\bar{B}$, quark mass effects for baryon-antibaryon system 7−89497
$\psi \rightarrow$baryons, SU(2) and SU(3) violation 7−135102
$Z' \rightarrow w_h^+ + w_l^- \rightarrow l^+ \bar{\nu} + l^- \tilde{\nu}$, T-odd angular correlation, chargino, numerical examples in E_6 models 7−134995
$Z'^0 \rightarrow Z^0 H$, Higgs boson signals in superstring-inspired E_6 supergravity models 7−135119
π-q interaction, perturbative treatment, variational approach to chiral quark models 7−89454

spooling *see winding (process)*

sporadic-E layer
blanketing sporadic-E near the magnetic equator, review 7−88014
communication link through E_s-layer, statistical model 7−79743
doublet whistlers, rocket obs. in lower ionosphere, propag. characts. study *(Japanese)* 7−134072
dynamo action in determining height of E_s-layer 7−94543
meteorite trail plasma inhomogeneities 7−145751
middle latitude E_s, horizontal extent and vertical motions, EISCAT obs. 7−101624
screening intensity for E_s *(Chinese)* 7−115143
VHF sporadic-E propagation, ionisation patch sizes investig. 7−107639

sports *see entertainment*

spray coating techniques
see also electrostatic coating techniques; flame spraying; plasma arc spraying; powder spraying
semiconductor film preparation by spray pyrolysis for solar cells, review 7−100055
$Cd_{1-y}Zn_yS$-Cu_2S solar cells, fabrication by sprayed pyrolysis technique and dry chemical process 7−126630
Fe-Ni based 7−86090

spray coatings
see also electrostatic coatings; flame sprayed coatings; plasma arc sprayed coatings; powder sprayed coatings
hot gas sprayed coatings on powder materials 7−71334
thermally sprayed coatings *(German, English)* 7−132860
Al-Cr, rapidly solidified spray deposits, struct. 7−86071
Al-Fe, rapidly solidified spray deposits, struct. 7−86071
Al-Mn, rapidly solidified spray deposits, struct. 7−86071
β/β''-Al_2O_3-K_2O-Na_2O polycrysts. synthesis, sintering and spray drying 7−144351
CdS films, sprayed, annealing, XPS obs. 7−86016
CdS spray pyrolysed thin films, ellipsometric study 7−105333
CdS sprayed films, elec. and struct. props., effect of process parameters 7−85153
CdS sprayed films, growth mechanism of Cu_xS topotaxially grown films 7−100127
CdS thin films, spray-pyrolyzed, nucleation and growth 7−71009
CdS thin sprayed films, cavityless optical bistability 7−138530
$Co_xFe_{3-x}O_4$ high quality ferrite films, high speed deposition from aqueous solns. at low temps. 7−113381
$CuInS_2$, structural/optical props., for CdS/$CInS_2$ solar cell *(French)* 7−143292
FeS_2 pyrite thin layers, spray pyrolysis deposited, absorpt. edge meas. 7−119058
α-Ga_2O_3:Co and β-Ga_2O_3 thin films, spray pyrolysed, optical props. 7−144138
$In_{2-x}Ga_xS_3$, prepared by spray pyrolysis, opt. energy gaps 7−85870
In_2O_3:Sn transparent films as IR filters 7−82761
PbS-SnO_2(ZnO) chemically deposited selective absorbers 7−86829
SnO_2:F spray pyrolysis coating, optically allowed transitions 7−106289
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
SnO_2/SiO_2/Si, spray-deposited solar cells, short-circuit photocurrent v. open circuit voltage characteristics 7−126603
TiO_2-Ti hot gas sprayed coatings, high-speed heat treatment, exam. of thermal conditions 7−125964
ZnO thin film, spray deposition, elec. and optical props. rel. to deposition variables 7−105321
ZnO:Tb films, spray pyrolysis and photoluminesc. props. 7−100054

sprays
see also aerosols; drops; jets
aerial spraying, electrostatic 7−83324
aerodynamic atomisation of liquid droplet in gas stream, expt. results review 7−136944
air flow over wavy pool, spray generation and interfacial stress model 7−111079
bipolar spray charging for leaf-tip corona reduction by space-charge control 7−83563
combustion engines, fuel spray model for mixing, free jet 7−136952
controlled spray generator development 7−123723
drop condensation, hydrodynamics, heat and mass transfer study 7−111075
droplet size meas. techniques, comparison of Malvern laser-diffraction and Aerometrics phase/Doppler techniques 7−108510
impacting spray, film boiling heat transfer mechanisms 7−75554
inviscid incompressible liquid in centrifugal sprayer, asymptotic anal. 7−83282
liquid jet injection into dense gas, atomisation 7−123701
multidrop gravity spray, trace gas absorpt., mass transfer anal. 7−78541
multiphase flow, spherical particles size and velocity meas. 7−123806
water droplets, charged, evaporating, change and mass flux in elec. field 7−83322
H_2+liquid O_2 spray, detonation wave, unidimens. stability 7−97570

spreading *see wetting*

spreadsheet programs
brachytherapy planning appl. 7−145205
control charting with Lotus 1-2-3 7−102391
electrostatic field solutions on PC spreadsheets 7−110190
Laplace's eqn. soln. using spreadsheets 7−134395
LOTUS 1-2-3: a tool for scientific problem solving 7−115714
problem solving in physical chemistry using electronic spreadsheets 7−95162
visual information processing simulation 7−114259

SPS *see solar power satellites*

spurions *see elementary particles*

sputter deposited coatings *see sputtered coatings*

sputter deposition
amorphous materials grown by different processes, high resolution electron microscopy *(Japanese)* 7−69594
cathodic arc deposition, magnetic enhancement 7−138656
combined vapour deposition and ion implantation technique 7−119172
cytoskeleton sputter coating technique for electron microscopy 7−127065
DC reactive sputtering systems, critical pressure and elec. power 7−106415
diamond-like C film on Si MIS structure, ESCA compositional profiles and elec. props. 7−125129
ferrite thin film deposition and props. for microwave and MM-wave ICs 7−125966
ferromagnets, high rate sputtering using U-type target 7−113384
ion beam techniques in thin film deposition 7−100067
ion bombardment, low-energy, during film deposition, effects on microstruct. and microchem. 7−100056
low-temperature RF plasma anodisation and deposition 7−93213
metal shadowing, high melting point, for high resolution freeze replica 7−87395
oxide films, comp. control by means of tri-pole magnetron sputtering system *(Japanese)* 7−113390
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
photoinduced deposition of thin films 7−100111
piezoelectric thin films, epitaxial growth, SAW and optoelectronic appls. 7−99720
planar magnetron sputtering cathodes, design, performance 7−134811
planar magnetron sputtering source 7−132456
property modification and synthesis by low energy particle bombardment concurrent with film growth 7−91672
protective coating deposition using plasma sputtering, status and devel. trends *(German)* 7−138654
reactive RF sputtering, temp. hysteresis 7−106414
reactive sputtering of compound materials, modeling 7−106410
refractory metals and silicides, sputtering targets develop. 7−119145
semiconductor compound, epitaxial deposition by magnetron sputtering, review 7−125971
single-grid ion-beam sputtering, thin-film formation 7−119138
SNS bridges, fabrication by sputter deposition and anodic oxidation *(Japanese)* 7−125270
teeth, sputtered metal films for preventing dental caries 7−79137
thin film deposition, ion beam sputtering apparatus with simple accelerator system 7−113388
whisker growth under sputtering conditions, kink site saturation mechanism 7−98760
Ag-Zn thin films, magnetron-sputtered, optical recording appl. *(Japanese)* 7−125977
AlN films, C-axis oriented, high rate prep. by reactive sputtering 7−92863
AlN films, improved planar magnetron sputtering system 7−100061
AlN thin films by RF reactive sputtering 7−92871
Al_2O_3, amorphous, RF sputtered, struct. and tribological behaviour *(German)* 7−93136
Au film deposition in Ar-O_2 discharges, AuO^+ and AuO_2^+ form., glow discharge mass spectrometry study 7−119084
B-Si-Ge alloys, super-assisted-plasma CVD 7−86052
BN films, cubic, reactive diode sputtering 7−138661
BN films, preparation by RF bias sputtering and plasma decomposition 7−100115
$BaTiO_3$ thin films, RF sputtering prep., struct., elec., and optical props. 7−100072
$(BiY)_3Fe_5O_{12}$ ion beam sputtered garnet thin films prep. 7−106405
C, amorphous films, preparation by RF bias sputtering and plasma decomposition 7−100115
C transparent film preparation by negative C ion beam deposition 7−96427
a-C:H films, metal-containing, tribological and electrical props. 7−92861
C0-V thin films, RF sputter deposition, mag. props. 7−125974
CdS, low resist. films grown by RF sputtering in Ar-H_2 atmosphere 7−132458
CdS_xSe_{1-x} doped glass nonlinear guided wave structures 7−136518
CdTe films, ion beam sputter deposition and epitaxy 7−138655
Co base thin film alloys, sputtering, amorphous forming range, mag. props. *(Korean)* 7−132454

sputter deposition continued
Co particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Co-Cr ferromagnetic alloy film, magnetron sputtering prep. and charactn. 7−106404
Co-Cr film deposition using compressed mag. field magnetron sputtering with mag. target 7−92864
Co-Cr films, sputter deposition, c-axis orientation rel. to process conditions 7−132459
Co-Cr sputtered film, struct. and mag. props., additive gases effects studies 7−105974
Co-Cr thick targets, magnetron sputtering deposition 7−92865
Co-Cr thin films, sputter deposition on rotating disc substrates 7−106408
Co-Fe-Nb amorphous films, magnetisation and FMR studies 7−132102
CoCr sputtered thin films, c-axis orientation, film growth condition effects 7−125973
CoCr thin films, DC magnetron sputtering 7−125493
Cr films, vacuum sputtering prep. in elec. field, struct. and composition 7−125972
Cr-Si oxide insulating wear protecting layer manufacture by reactive DC sputtering *(German)* 7−144277
Cu_xFe_{1-x} film production with variable composition using sputtering device 7−71011
$CuInSe_2$, films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
$CuInSe_2$ thin films, DC triode sputtering conditions rel. to elec. and optical props., solar cell appls. *(Japanese)* 7−100069
$Er_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
Fe films, sputter-deposition in high press. atmosphere 7−125978
Fe particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Fe, pure, soft mag. thin film, gas addition by dual ion beam sputtering 7−132104
Fe/SiO_2, composition modulated films, sputter deposition system 7−100065
Fe-C films, dual ion beam sputtered, mag. props. 7−125976
Fe-C magnetic films, getter sputtering on high temp. substrates 7−71010
Fe-Hf amorphous alloys, Curie temp. shift under hydrostatic press. 7−85299
Fe-Si alloy target, magnetron sputtering 7−106411
$Fe_{80}B_{20}$ amorphous ultrafine metallic particles, sputtering deposition and mag. props. 7−85381
Gd-Co amorphous films, comp. modulated, by bias sputtering 7−86025
a-Ge sputtered films, optical gap and void fraction, thickness depend. 7−125828
HgCdTe films, ion beam sputter deposition and epitaxy 7−138655
InP films on SiO_2, recrystallisation using Ar^+ laser *(Chinese)* 7−92862
InSb MAOS structure, fabrication by anodisation and sputtering 7−125131
$In_{2-x}Sn_xO_{3-y}$ films, DC magnetron sputtering, resist. and light transmission *(Japanese)* 7−138657
$In_{2-x}Sn_xO_{3-y}$/InGaAsP, n-p solar cell on GaAs substrate, conversion efficiency 7−71612
La-S films, sputter deposition, structural and transport props. 7−76691
La-Sr-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
$(La_{1-x}M_x)_yCuO_4$ (M=Sr, Ba, Ca) high T_c thin films, sputter prep. and transition temp. studies 7−92868
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sputter deposition and onset temp. 7−105792
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, superconducting thin films, sputter deposition 7−125179
$La_{1.8}Sr_{0.2}CuO_4$ high T_c film Josephson junctions 7−92380
$La_{1.8}Sr_{0.2}CuO_4$, superconductivity thin films, synthesis and irradiation-induced defects 7−125218
MgO, sputtering, damage and nucleation 7−138575
Mn-Al sputter deposited film, ferromag. τ phase charactn. 7−113385
MnZn ferrite thin film with soft mag. props., sputter prep. 7−85389
Mo, deposition on JIPP T-IIU tokamak limiter wall by sputtering, investig. 7−67988
Mo-Si layers, sputtering from composite targets 7−100068
Mo-Ta interface, sputter deposited, sticking coeff., struct., RBS, X-ray diffr. studies 7−105296
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
MoN films, synthesis by active N sputtering, expt. study 7−132452
Nb-Cu-Nb SNS bridges, directional sputter deposition and anodic oxidation 7−85200
NbC_xN_{1-x} high T_c superconducting films, high-rate synthesis by hollow target sputtering 7−100062
NbN epitaxial growth on MgO/si ultrathin substrate, Schottky diode charact. 7−143256
NbN, sputtering, damage and nucleation 7−138575
NbN superconducting thin films, sputter deposition, optical emission spectroscopy 7−132450
NbN-Al_2O_3-NbN tunnel junction series arrays, processing 7−131908
NbN-MgO-NbN sputter deposited superconductor-insulator junctions, insulator interface effects 7−125268
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
NbN-NbO_x-Pb Josephson junctions, AC props. 7−132448
NbN-Si-Nb based Josephson junctions with unoxidised Si barriers 7−131907
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
$Nd_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
Ni-Fe thick targets, magnetron sputtering deposition 7−92865
NiFe films, dual ion-beam sputtering, mag. and struct. props. 7−125502
PZT epitaxial films, sputter deposited, dielec., ferroelec. and pyroelec. props. 7−100064
PZT films, growth and charactn. by reactive sputtering of metallic targets 7−100073
$PbTiO_3$ films, epitaxial growth on $MgAl_2O_4$-Si substrates 7−100071
Pt, cytoskeleton sputter coating technique for electron microscopy 7−127065
PtMnSb/NiMnSb multilayer films, preparation and magneto-optical Kerr effect 7−138431
RuN films, synthesis by active N sputtering, expt. study 7−132452

sputter deposition continued
Si detector, p-i-n type, surface protection using cathode sputtering technique 7−71401
a-Si films, ESR, sputter deposition rate depend. 7−85433
Si, ion bombardment, by Ar^+ and N_2^+, angular distrib. of sputtered particles 7−77740
Si MIS photovoltaic junctions, defects due to low voltage sputter deposition, charact. 7−84595
a-Si thin film growth by sputtering, Monte Carlo studies 7−105329
a-Si:H films, ESR, sputter deposition rate depend. 7−85433
SiC coatings, RF sputtering on C fibres 7−86026
a-SiC:H magnetron sputtering, H effects on film props. 7−92866
a-SiC:H thin films, magnetron sputtering using methane *(Japanese)* 7−92887
SiN_x films, reactive RF magnetron sputtering 7−138659
Si_3N_4 antireflection coatings for semiconductor lasers, reactive sputtering directly controlled deposition 7−68668
SiO_2 thin film. technological parameters effects on dielectric props. obs. *(Slovak)* 7−125980
α-Sn form. by chem. sputtering of β-Sn target in H_2 plasma 7−92870
a-Sn:H films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
$Sr_xLa_{2-x}CuO_{4-y}$ thin film high T_c supercond., sputter deposition prep. 7−92869
Ta_2O_5 thin films, sputter deposition, struct., piezoelec. and SAW props. studies 7−106406
Tb-Co and Tb-Fe-Co magneto-optical disc prep. by RF sputtering 7−144036
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. charact., saturation Kerr rot. meas. 7−125499
TbCo amorphous films, density and magnetooptical props., effect of sputtering conditions 7−132243
TbFe amorphous sputtered films, remanence 7−143873
Ti, deposition on JIPP T-IIU tokamak limiter wall by sputtering, investig. 7−67988
$Ti_{1-x}Al_xN$ solid solution with NaCl-type structure, RF sputter deposition 7−106407
TiFe amorphous alloy thin films, heat treatment effects 7−95693
W and refractory metals, VLSI appls., conf., Palo Alto, CA, USA (Nov. 1986) 7−108045
W, cytoskeleton sputter coating technique for electron microscopy 7−127065
WN_x/GaAs Schottky contacts, reactive RF sputtering 7−77040
WO_3 sputtered films, electrochromic, preparation and aging 7−144019
Y-Ba-Cu-O films, high T_c supercond., prep. and substrate reactions 7−138653
Y-Ba-Cu-O high T_c supercond. films, DC magnetron sputtering prep. and props. study 7−118604
Y-Ba-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
Y-Ba-Cu-O high T_c supercond. thin films, RF magnetron sputtering prep. 7−119139
Y-Ba-Cu-O high T_c supercond. thin film, dual magnetron sputtering prep. 7−119140
Y-Ba-Cu-O high T_c supercond. thin film prep. by DC magnetron sputtering and props. 7−144272
Y-Ba-Cu-O thin films, high T_c supercond., prep by RF magnetron sputtering 7−144274
YBaCuO superconducting thin films, high T_c, sputter deposition method and superconducting props. 7−92345
$YBa_2Cu_3O_{7-x}$ high T_c supercond. film prep. by RF magnetron sputtering 7−144352
Yb-Ba-Cu-O high T_c supercond. thin films, sputter deposition 7−112554
ZnO films, RF sputter deposition on GaAs substrates, piezoelec. props. 7−125981
ZnS thin films, ion beam sputtering 7−125982
ZrB_2 thin films, DC triode sputtering 7−106409

sputter etching
3S ion beam sputtering method induced surface topography, SEM investig. 7−132813
binary cpd., total sputtering yield and etching rate calcs. *(Chinese)* 7−126269
concentration profiles meas., by neutron activation analysis 7−139068
contact profile meters, sensor tips control, gauge marks fabrication *(Slovak)* 7−121065
film growth and erosion processes, plasma processing technologies, ion bombardment effects 7−70151
fluorinated monomers, plasma-polymerised thin films, deposition and etching in RF discharge 7−113402
focused ion beam milling 7−86393
graphite, chemical sputtering of H ions 7−144214
high-power etched-facet lasers 7−117198
ion sputtering, crater depth rel. to etching rate 7−77743
Josephson junctions, variable-thickness bridges, fabrication by RF sputter etching *(Japanese)* 7−125269
Kapton-H surface morphology development by sputter etching 7−144578
large-area microwave plasma etching of polyimide 7−119388
low energy ion beams conf., Brighton, Sussex, England (April 1986) 7−66825
magnetically enhanced plasma deposition and etching 7−100118
medical prostheses, ion beam appls. 7−79138
metal films evaporated on Si and SiO_2, ion modification of props. 7−91673
metallic island films, ion irrad. and island removal 7−125879
methane, RF plasma, etching and deposition phenomena 7−71341
mirror analyser/quadrupole mass spectrometer for plasma processes 7−137128
morphological evolution of surfaces under multiple processes 7−118206
noble gas ion bombardment of solids, chemical etching 7−92799
photon assisted plasma etching 7−100409
planar focusing lens for reflection-mode acoustic microscope 7−123395
plasma etching, trends and limits 7−119389
PMMA film, plasma etching by low-temp. carbon tetrafluoride-O_2 discharge plasma 7−71343
polyethylene fibres, adhesion to epoxy resin, pull out test, surface treatment effect 7−144576
polymer waveguides, efficient grating coupler fabrication by reactive ion beam etching 7−117302

sputter etching continued
reactive etching of materials for microelectronics, fusion, space technologies 7−106649
RF dry etching systems, power loss mechanisms 7−132781
RF generated plasma, elec. meas. using driven electrostatic probe 7−117758
RF multipolar plasma for broad and reactive ion beams 7−69388
RF-broad-beam ion source for reactive sputtering 7−80939
RIE, laser spectroscopy for electronic materials processing 7−67398
semiconductor III-V cpd. multilayer device structs., ion beam etching, in situ monitoring 7−132837
semiconductors, ion-beam assisted etching, review 7−71421
steel, corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
steel, stainless, 3S method induced surface topography, SEM investig. 7−132813
steel, stainless, ion beam sputtered materials, surface roughness, 3S method for incidence angle influence 7−132812
surface analysis, etching rate and crater depth, resputtering influence 7−131410
surface roughness of broad ion beam sputtered materials, 3S method for incidence angle influence 7−132812
tetrafluoromethane plasma etching and diagnostics characts. study using elec. probe method *(Korean)* 7−86498
(Al,Ga)As-GaAs MQW planar waveguides, optical props., reactive ion etching of rib waveguides and directional couplers 7−117350
Al, 3S method induced surface topography, SEM investig. 7−132813
Al dry etch reactor, surface passivation by adding fluorocarbons and chlorofluorocarbons 7−132815
Al films, reactive ion etching characts., O impurity effects 7−106671
Al, ion beam sputtered materials, surface roughness, 3S method for incidence angle influence 7−132812
Al plasma etching, comparison of chlorinated etchants 7−113771
Al-Cu films, reactive ion etching 7−126327
AlGaAs, angular chlorine ion-beam assisted etching 7−144644
AlGaAs-GaAs high power single quantum well lasers, chemically assisted ion beam etched mirrors 7−117228
$Al_{0.22}Ga_{0.78}As$, reactive ion etching damage, Raman study 7−126350
Ar, RF generated plasma, electron energy distrib. functions 7−117759
Au film on Si substrate, struct. and comp., Auger spectra anal. 7−118287
Cu sputtering by $SiCl_4$ molecules 7−119105
Fe corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
GaAs (110), interaction of ionised hydrogen, comparison with atomic hydrogen 7−100462
GaAs, angular chlorine ion-beam assisted etching 7−144644
GaAs, focused ion beam etching of deep grooves and laser-mirror facets 7−110379
GaAs, low press. plasma etching, surface texture, damage and contamination, XPS study 7−106721
GaAs, reactive ion etching damage, Raman study 7−126350
GaAs:Si (100), damage induced by plasma etching 7−144636
GaAs/AlGaAs laser diodes on monolithic GaAs/Si substrates, prep. and characterisation 7−82570
GaAs-AlGaAs, etch and etch stop reactions in dichlorodifluoromethane plasma 7−119463
GaAs-GaAlAs BH laser with ion-beam-etched quarter ring cavity 7−82608
In_2O_3:Sn film degradation in H and Ar glow discharge plasmas 7−144634
InP, dry etching 7−71422
InP surfaces, sputter-etched, photoemission study 7−126328
$LiNbO_3$, reactive ion beam etching characts. 7−93133
MgO, sputtering, damage and nucleation 7−138575
Nb-NbO_x-Pb Josephson tunnel junctions, with anodised Nb barrier, elec. characts. 7−112687
NbN, sputtering, damage and nucleation 7−138575
NbN-MgO-NbN sputter deposited superconductor-insulator junctions, insulator interface effects 7−125268
NbN-Nb/PbSb Josephson tunnel junction prep. in single vac. cycle 7−143719
Pt-Rh (111) and (100) surfaces, plasma induced erosion 7−113780
Si, amorphous and microcrystalline, H_2 plasma etching, etch rates 7−132828
Si, Ar^+ ion induced etching by condensed SF_6, model 7−93220
Si, Ar^+ sputtering at low temp. and high vacuum press. 7−99995
Si, damage induced by low-energy Ar magnetron discharges 7−137424
Si etching in CF_4/H_2 glow discharge, fluorocarbon film deposition effects 7−126335
Si, etching in diluted SF_6 plasmas, kinetics rel. to flux of incident species 7−132835
Si, halogen based plasma etching, model 7−119464
Si, ion beam etching, noble gas defect threshold energy, photoluminesc. study 7−126353
Si, ion-enhanced etching by XeF_2, importance of physical and chemical sputtering 7−113800
Si, low energy Ar ion etching damage charactn. 7−126351
Si materials, reactive ion beam etching with saddle field source, mass spectra of F containing gases 7−93215
Si, microwave plasma etching 7−138911
Si, plasma etching, parametric studies 7−113809
Si, plasmochem. etching through two-layer mask 7−138909
Si, process-induced point defects, EPR study 7−126354
Si, reactive ion etching, deep hole form. 7−144643
Si, reactive ion etching, microstructural studies 7−113801
Si, reactive ion etching in CCl_4 and HCl plasmas 7−132832
Si, reactive ion etching prod. defects, photoluminesc. study 7−99145
Si, reactive ion etching-induced deep electron trap levels, DLTS study 7−100458
Si, reactive ions etching, large scale optical components fabrication 7−144641
Si, reactive sputter etching damage removal methods 7−144642
Si, SiO_2 and Si_3N_4, reactive ion etching in SF_6 gas mixtures 7−71403
Si single cryst. surface, struct. after ion-chem. etching 7−105199
Si substrates, RIE damage, intrinsic gettering, scanning DLTS and EBIC studies 7−126338
Si surface, synchrotron radiation-assisted etching 7−126339
Si wafer temp. meas. during RF Ar^+ plasma etching 7−119465
Si:B, diffused wafers, O_2 plasma damage 7−71405
a-Si:H sputter deposited films, annealed, H conc. and motion, depth profiling 7−131475

sputter etching continued
SiBN amorphous films, plasma-enhanced CVD, dielec. props. 7−100102
SiC, anisotropic and selective reactive ion etching in trifluoromethane and O_2 plasma 7−126349
β-SiC, dry etching in fluorinated gases, surface characts 7−126352
Si_3N_4, reactive ion etching in tetrafluoromethane plasma 7−100402
Si_3N_4, reactive ion-plasma sputtering, on Si 7−86501
SiO_2, etching in SF_6 plasmas, role of ions and electrons in etching mechanisms 7−71342
SiO_2, fused, oblique Ar^+ ion beam bombardment, erosion topographies 7−70960
SiO_2, reactive ion etching, lattice damage and polymer coating form., TEM study 7−144573
SiO_2, reactive ion-plasma sputtering, on Si 7−86501
SiO_2, reactive sputter etching, role of F atoms, Langmuir probe and optical actinometry meas. 7−126276
SiO_2 surfaces, Ar^+-ion etching, XPS and Auger studies 7−132780
SiO_2 surfaces, ion interactions, laser interferometric studies 7−92796
Si(111), ion assisted etching by F, XPS study 7−119472
Ti, 3S method induced surface topography, SEM investig. 7−132813
Ti, ion beam sputtered materials, surface roughness, 3S method for incidence angle influence 7−132812
U cleaned surface, high temp., XPS study 7−132413
W ion milled tips for scanning tunnelling microscopy 7−73469
ZrO_2 films, ion-beam assisted vapour deposition and ion-beam etching 7−71037

sputtered coatings
amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7−112895
chrome coatings on steel, composition and chemical binding, XPS studies 7−126297
diamond-like films, sputtered, wear and friction behaviour *(Japanese)* 7−132755
Fe-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
flexible plastic web, thin film coating processes *(German)* 7−77801
formation in vacuum, effect of technological parameters 7−86029
fractal multilayered superconductors, upper parallel crit. field meas. 7−70500
Gd-Tb-Co-Fe amorphous films; biaxial oblique mag. anisotropy, Hall characts. 7−143868
magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
metal films, contact step coverage, 2D and 3D simulations 7−118310
metal films evaporated on Si and SiO_2, ion modification of props. 7−91673
metal optical constants determ. by surface polariton excitation using attenuated total reflection *(German)* 7−113306
mirrors for high-power CW Ar lasers 7−130143
nonmetallic coatings on stainless steel, retardation of hydrogen embrittlement 7−71380
optical coatings for large area interference filters 7−136480
Permalloy soft ferromagnetic films, irreversible magnetisation transforms 7−105992
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
protective coating deposition using plasma sputtering, status and devel. trends *(German)* 7−138654
refractory metal sputtered films, diffusion barrier props. 7−118175
semiconductor compound, epitaxial deposition by magnetron sputtering, review 7−125971
SIMS apparatus for study of neutral component of surface sputtering 7−67417
steel, magnetron sputtered on Cu, structure and phase structure, TEM study *(Chinese)* 7−76688
thin films, sputter deposited, stress and microstruct., molecular dynamics simulations 7−143261
US convex surface EM transducer, impulse sound radiation 7−123428
vacuum science, technology, appl., conference, Glasgow, Scotland (March 1986) 7−134358
X-ray multilayer mirrors, sputter deposited, performance 7−121315
Ag thin sputtered films, spectrally selective coatings, influence of deposition parameters 7−144276
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7−124775
$AgMo_6S_8$ superconducting thin films, reactive sputtering 7−118619
Al alloy, sputtered films, hillock, grain and cryst. orientation, substrate temp. depend. 7−137746
Al amorphous island films, close-range order during crystallisation and melting *(Russian)* 7−124756
Al films, ion beam processing, TEM technique 7−119141
Al films, vacuum condensates produced by ion sputtering 7−86024
Al, magnetron sputtered on Cu, structure and phase structure, TEM study *(Chinese)* 7−76688
Al RF bias sputtered films for metallisation appls., charactn. 7−124803
Al sputtered films as glue layers for blanket W deposition 7−113437
Al-Cr quasicrystal film form., RF sputtering, investig. 7−137762
Al-GaAs Schottky barriers, sputter induced damage, elec. props. 7−112490
Al-Ge, sputtered thin films, laser irrad., metastable phase form. 7−113387
Al-Mn(-Si), icosahedral, sputter deposition 7−100066
Al_2O_3, amorphous, RF sputtered, struct. and tribological behaviour *(German)* 7−93136
Al_2O_3 films, optical props. 7−113303
Al_2O_3-Ta_2O_5 composite RF sputtered films, dielec. props. study 7−99678
Al_2O_3-ZrO_2 tetragonal, stabilisation in reactive magnetron sputtered thin films 7−137745
Al_xO_y-Pb sputtered, duplex, anomalous elec. resist. behaviour 7−105729
Au/Ni bilayers on Cu substrates, diffusion behaviour 7−105151
BN, cubic films, RF reactively sputtered, comprehensive stresses 7−113389
BN, ion plated, XPS anal. 7−106377
Ba sputtered gas absorbers, He lattice sorption 7−98675
$BaFe_{12-x-y}Co_xTi_xO_{19}$ sputtered films, mag. props. for magneto-optical memory appls. 7−112912
$BaFe_{12}O_{19}$ thin films for high density recording, microtexture and crystallographic characts., effect of sputtering gas press. 7−85384
$BaSrTiO_3$, sputtered thin films, domain struct., ferroelectric phase transition *(Chinese)* 7−132211

sputtered coatings continued
a-$BaTiO_3$ RF sputtered film dielec. and optical props., active display device appls. 7−143967
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$Ba_2YCu_3O_{7-y}$, epitaxial thin films, anisotropic superconducting critical current 7−118750
Be amorphous sputtered thin films, critical currents and flux pinning, Abrikosov vortex memory appl. 7−112719
Be films, ion beam sputtered, superconducting crit. temp. 7−70446
Be superconducting films, ion beam sputtered, props. study 7−131845
Bi_2Te_3-Sb_2Te_3 sputtered films, electron irrad.-induced residual cond. meas. 7−138086
$Bi_4Ti_3O_{12}$ RF sputtered films, dielec. props. 7−99679
C, amorphous films, preparation by RF bias sputtering and plasma decomposition 7−100115
C, amorphous films deposited by ion beam methods, electrical, optical and mechanical props. 7−106413
C diamondlike film on Ni(111), chemically bonded from ion beam deposition 7−118314
C-Sn amorphous thin films, semicond., optical and elec. props. 7−70318
C-W layered synthetic microstructures, AES sputtering depth profile anal. 7−84557
$C_{1-x}Sn_x$:H, amorphous films, sputter-assisted plasma chemical deposited, structural and optical props. 7−125838
$CdIn_2O_4$ sputtered films, scatt. of charge carriers 7−77117
$CdIn_2O_4$, thin conducting and transparent films, electrical props. 7−85139
CdS, low resist. films grown by RF sputtering in Ar-H_2 atmosphere 7−132458
Cd_2SnO_4, thin conducting and transparent films, electrical props. 7−85139
CdTe films, ion beam sputter deposition and epitaxy 7−138655
Co base thin film alloys, sputtering, amorphous forming range, mag. props. *(Korean)* 7−132454
Co-base sputtered thin films *(Korean)* 7−132453
Co-CoO compositionally modulated films, mag. props. 7−112869
Co-CoO layered films, bias modulated reactively sputtered, magnetisation props. 7−70605
Co-Cr film deposition using compressed mag. field magnetron sputtering with mag. target 7−92864
Co-Cr films, mag. domains, neutron depolarisation study 7−85395
Co-Cr films, perpendicular mag. recording, grain boundary segregation and coercivity 7−143876
Co-Cr films, sputter deposition, c-axis orientation rel. to process conditions 7−132459
Co-Cr perpendicular media, mag. and recording props. 7−92474
Co-Cr sputtered film, segregated microstruct. revealed by wet etching, appl. for mag. recording 7−76666
Co-Cr sputtered film perpendicular recording media, magnetisation reversal mechanisms 7−105993
Co-Cr sputtered films, coercive force control 7−85386
Co-Cr sputtered films, mag. props., microstruct. 7−85392
Co-Cr sputtered films, surface and vol. mag. hysteresis 7−92478
Co-Cr sputtered layers, domain struct. and mag. reversals 7−105991
Co-Cr thin films, artificial superlattice struct., magnetism, struct. 7−76667
Co-Cr thin films, mag. props. depend. on sputtering parameters 7−92472
Co-Cr-Ta(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Cu compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Co-F films, mag. and magneto-optical props. 7−113150
Co-Gd-Mo, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Co-N films, RF sputtered, mag. props. rel. to comp. 7−132455
Co-Nb amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Ni-Cr(W) sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Si sputtered alloy film, struct. and mag. props., Si content depend. 7−112916
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural props. 7−92482
Co-Ti amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
Co-Zr amorphous films, induced anisotropy, static field annealing effects 7−99528
CoCr sputtered films, coercivity and struct. characterisation 7−125496
CoCr sputtered films, thermomag. anal., annealing and Cr distrib. 7−125492
CoCr sputtered films, wall energy and exchange stiffness 7−99534
CoCr sputtered thin films, struct. and mag. props., TEM and SEM studies 7−105973
CoCr thin films, DC magnetron sputtering 7−125493
CoCr thin films, mag. props. and anisotropy 7−125495
CoCr-NiFe double layers, FMR and mag. props. 7−92475
CoCrAl, DC planar magnetron sputtering and study of props. 7−100059
Co_xGd_{1-x}, amorphous alloys, crystn. kinetics and mechanism 7−83753
Co_3O_4 pure and Ni doped mixed valence spinel films, charge transfer processes and optical absorpt. spectrum assignment 7−119026
CoZr and CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7−112885
Cr/Ni thin film multilayer struct., depth resolution, substrate roughness effects 7−131500
Cr-C amorphous alloys sputtered, form. and crystn. 7−83754
Cr-Ni multilayer thin films on Si, Auger electron spectra depth profiles, influence of sample roughness 7−138572
Cr-SiO cermets, solar selective absorbers, high temp. treatment 7−144912
CrN coatings, prod. by high rate sputter deposition, props. 7−119143
$CrSi_2$ amorphous thin films, Raman scatt. 7−113202
Cu films, atmospheric corrosion 7−78379
Cu sputtered films, struct. and mag. props. studies 7−112899
Cu-Ni [100] oriented superlattices, mag. props. study 7−125334
Cu-Sn coatings, magnetron sputtered, topography and microstructure 7−138660
Cu-Ti amorphous alloys, Hall effect and resistivity 7−131810
Cu-Y amorphous alloys, sputtered, electronic struct. as deduced by optical and electron spectroscopy 7−92057

sputtered coatings continued
$CuInSe_2$ chalcopyrite sputtered film, structural, electronic and optical props. 7−118327
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
Cu_xS sputtered films, composition depend. on growth temp. *(Spanish)* 7−84556
Er-Ba-Cu-O RF sputtered supercond. films, high T_c superconductivity 7−143658
$Er_2Fe_{14}B$ thin film mag. props. study 7−112894
Fe and FeN_x sputtered films, stress levels determ. by X-ray topography 7−76710
Fe, epitaxial films on GaAs (100), growth by ion beam sputtering 7−125489
Fe, for soft mag. layer in perp. recording media 7−92476
Fe ion beam sputtered film, induced uniaxial mag. anisotropy meas. 7−105982
Fe, pure, soft mag. thin film, gas addition by dual ion beam sputtering 7−132104
Fe sputtered films, lattice expansion and contraction due to H charging 7−124778
Fe sputtered films, struct. and mag. props. studies 7−112899
Fe/Cu multilayered sputtered films, struct. and mag. props. studies 7−112899
Fe/SiO_2, compositionally modulated films, mag. props. 7−99524
Fe-Al_2O_3 cermet film, low cost solar selective absorber 7−144913
Fe-Al-Ge, crystalline soft magnetic alloy films, high saturation magnetisation 7−125501
Fe-Al-Si sputtered films, mag. props. 7−112876
Fe-C getter sputtered films, struct. and mag. props. 7−112873
Fe-Co ion-beam sputtered thin films, mag. props. 7−112879
Fe-Co-Al high mag. moment sputtered films, mag. props. 7−125504
Fe-Cr-Ni, sputtered deposits, phase comp., Mossbauer spectra *(French)* 7−76707
Fe-Cr-Ni (25, 20 wt.%) melt-spun and sputtered alloys, as-quenched microstruct. 7−92988
Fe-Cu, compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Fe-Cu, FCC alloys, sputtered, magnetic percolation 7−132039
Fe-Cu multilayered films, magnetron sputtered, mag. props. 7−99516
Fe-Cu multilayered films deposited by facing targets sputtering, mag. props. 7−112904
Fe-F films, mag. and magneto-optical props. 7−113150
Fe-Gd, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Fe-Nd multilayer films, mag. props. 7−112903
Fe-Ni-B sputtered amorphous films, stress sources, mag. meas. 7−84609
Fe-Si sputtered films, mag. props. 7−112875
Fe-Si-Ru/Fe-Ni/SiO_2 multilayered films, mag. props. 7−99530
Fe-Tb amorphous alloys, co-sputtered, direction of easy-axis 7−112886
Fe-Tb multilayers, magnetic properties and structural charactn. 7−112907
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7−77387
Fe-Te films, sputtered, struct., Mossbauer spectra 7−112134
Fe-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
Fe-Zr, amorphous, sputtered and solid-state-reacted films, phase separation 7−98744
Fe-Zr, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
FeAlSiN sputtered thin films, hardness, struct., elec. resist. and mag. props., SEM study 7−105983
FeB amorphous sputtered film temp. sensor 7−89212
$Fe_{0.8}B_{0.2}$ sputtered amorphous films, crystallization, mag. props., influence of surface layer 7−131026
$Fe_{1-x}B_x$, sputtered layers, imaging atom probe obs. 7−98758
$Fe_{60}B_{40}$ sputtered amorphous alloys, in-plane mag. texture, Mossbauer spectra studies 7−70614
$Fe_{70}B_{30}$-Ag compositionally modulated amorphous sputtered films, magnetisation temp. depend. study 7−112900
$Fe_{81}B_{13.5}C_2$, amorphous films, FMR and fiber optic interferometric studies 7−125541
$Fe_{100-x}C_x$ amorphous alloys, sputtered, crystn. 7−76021
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7−132101
FeO_x thin films, RF sputtered, elec. resist. studies 7−143652
γ-Fe_2O_3:Os sputtered films for mag. recording appl., grain growth, impurity effects 7−105315
γ-Fe_2O_4 sputtered thin films, magneto-optic Kerr effect hysteresis loop meas. 7−106147
Fe_3O_4 sputtered thin films, magneto-optic Kerr effect hysteresis loop meas. 7−106147
Fe_xO_{1-x}-based perpendicular thin films, mag. recording appls. 7−125494
Fe_xO_y, RF sputtered thin films, coercivity study *(Chinese)* 7−118832
$Fe_{78}Si_{10}B_{12}$, RF sputtered thin films, SAW attenuation *(Japanese)* 7−124671
$Fe_{1-x}Ti_x$, amorphous alloys, prod. by vap. quenching, thermal stability 7−83671
$Fe_{73}Ti_{27}H_x$ amorphous alloys, mag. props., Mossbauer studies 7−143942
FeZr amorphous films, resistivity 7−98970
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
Gd-Co-(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Gd-Eu-Co amorphous films, FMR study 7−143912
Gd-Eu-Co sputtered films, Kerr rot. angle and Hall effect 7−144039
Gd-Sm-Fe amorphous films, mag. and magneto-optical charact. 7−143866
Gd-Tb-Co amorphous films, mag. and magnetooptical charact., influence of sputtering conditions 7−132098
Gd-Tb-Fe films, magneto-optical effects, bias voltage depend. 7−144041
Gd-Tb-Fe magneto-optical disc film, mag. anisotropy distrib. meas. using Hall method 7−143787
Gd-Tb-Fe-Co amorphous films, mag. props. control for magneto-optical recording 7−92481
$GdAl_2$ thin film, tunnelling to spin glass, zero bias anomaly, density of states 7−138072
GdCo amorphous films, DC diode getter sputtered, with perp. anisotropy, anomalous aging charact. 7−125497
GdTbCo films, RF diode sputtered, prep. conditions effect on mag. props. and ageing behaviour 7−125498

uttered coatings continued
GdTbFe:ONH$_2$O sputtered film mag. props., impurity effects study 7−112887
$Gd_{27}Tb_{10}Fe_{63}$ amorphous film, mag. anisotropy and thermal stability, effect of annealing 7−70604
$Gd_xY_{1-x}N$ dilute system, mag., elec. and optical behaviour 7−125503
Ge-C thin films, amorphous, Raman spectra *(Chinese)* 7−77527
a-$Ge_{1-x}C_x$:H, RF sputtered, IR, optical, EPR study 7−144137
$Ge_{1-x}Sn_x$ films, sputter deposition, ion beam collisional mixing, metastable single cryst. growth 7−113386
HgCdTe films, ion beam sputter deposition and epitaxy 7−138655
HgTe, epitaxial layers, chem. composition, effects of surface treatment 7−84460
Ho-Co, amorphous thin films, mag. anisotropy and magneto-optic Kerr spectra 7−125376
In_2O_3:Sn thin films, DC sputtered, microstruct. study, annealing 7−105339
$In_{2-x}Sn_xO_{3-y}$, ion beam sputtered films, XPS anal. 7−106361
Ir-Cr(Mo)(W)(Re)(Pt), sputtered films, elec. resistivity and lattice parameters 7−112515
IrO_x films, prep. by high deposition rate technique, appl. to optical attenuator 7−106412
La-Sr-Cu-O sputtered coatings, structural props., annealing effect 7−118672
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. thin films, Hall effect meas. 7−92210
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin films, T_c meas. 7−99239
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$La_{1-x}Sr_xMO_{3-z}$, (M=Cr,Mn,Fe,Co), perovskite electrodes for high temperature solid electrolyte fuel cells 7−114093
$LiNbO_3$ polycrystalline films on Si substrates, elec. and photoelec. props. 7−99131
Li_2O-B_2O_3-SiO_2 amorphous films, prep. by RF sputtering, ionic cond. 7−118157
Li_2O-SiO_2 amorphous films, prep. by RF sputtering, ionic cond. 7−118157
Mg-Mn alloy sputtered films, spin glass transition obs., mag. suscept. meas. 7−118814
Mo-Al multilayers, RF sputter deposited, elec. resist. meas. 7−84596
Mo-GaAs Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
Mo-Ta interface, sputter deposited, sticking coeff., struct., RBS, X-ray diffr. studies 7−105296
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
MoN films, synthesis by active N sputtering, expt. study 7−132452
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
MoS_2 coatings, HF sputtering, struct., tribotechnical props 7−71308
MoS_2 sputtered films, props. and prep. 7−100070
MoS_2, struct. and tribotechnical props., effect of substrate temp. 7−84581
MoS_x films, sputtered on steel by ion beam mixing, enhanced endurance life 7−106634
$MoSi_2$ thin films, sputter deposited, substrate temp. effects 7−112145
$MoSi_2$/Si layer system mech. stability and form. by rapid thermal annealing 7−105298
$MoSi_2$-polysil-oxide-Si struct. for VLSI appl., structural and elec. props. 7−100269
Nb-Ge high T_c superconducting film, prep. and surface study 7−125187
NbC films, prepared by reactive laser sputtering, supercond. props., X-ray and chem. anal. 7−99250
NbC_xN_{1-x} superconducting films, reactively sputtered in (Ar, N_2, C_2H_4) mixtures, charactn. 7−131843
Nb_3Ge:Ar sputtered amorphous films, impurity bubbles, flux pinning and TEM studies 7−131138
NbN and NbCN, RF sputtered films, thermal annealing effects 7−132451
NbN high-field supercond. sputter deposited on complex substrates 7−131841
NbN sputtered coatings on practical substrates, high field supercond. props. study 7−131957
NbN, sputtered film, fabrication, struct. and supercond. props. *(Japanese)* 7−112537
NbN sputtered films, electron microscopy study, superconducting props. 7−105341
NbN sputtered thin films, microwave surface resistance 7−131731
NbN supercond. thin films, RF surface resistance 7−138120
NbN-MgO(Al_2O_3)-NbN, tunnel junction fabrication 7−131912
Nb_3Sn supercond. thin films, RF surface resistance 7−138120
NbTi film for mag. shield, thickness depend. of screened mag. fields 7−77147
NbZr supercond. thin films, RF surface resistance 7−138120
Nd-Fe-Co sputtered films, mag. and magneto-optical props. 7−143869
$Nd_2F_{14}B$ thin film mag. props. study 7−112894
$Nd_2Fe_{14}B$ film, EELS 7−125874
Ni sputtered films, struct., neutron diffr. study 7−104557
Ni-C multilayer sputtered films, mag. props. study 7−125509
Ni-Cr thin films, X-ray diffr. characterisation 7−98756
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
Ni-F films, mag. and magneto-optical props. 7−113150
Ni-Mo magnetic superlattice prep. and structural props. study 7−124726
Ni-TiB_2 coatings, sputtered, erosion resist. rel. to comp. and process parameters 7−132764
Ni_xAg_{1-x}, amorphous thin films, elec. and mag. props. 7−143430
$Ni_{44}Fe_{32}Cr_{11}P_8B_5$ sputter deposited on stainless steel, electrochem. and XPS study 7−113797
$NiFe_2O_4$ ferrite films, growth on MgO substrates 7−100101
$Ni_{0.60}Nb_{0.40}$, amorphous diffusion barriers, AES studies 7−124604
NiO-based sputtered coatings, electrochromism 7−144024
NiO_xH_y coatings, electrochromic, produced by RF magnetron sputtering, optical props. 7−92753
Ni_2P sputtered film as ohmic contact and diffusion barrier 7−105705
Ni_2P sputtered films, structure 7−119144
$NiSi_2$ amorphous thin films, Raman scatt. 7−113202
$Ni_{0.95}Tb_{0.05}$ amorphous sputtered films, struct., neutron diffr. study 7−104557
on Si (100), silicide form., self-aligned process and elec. characts. 7−98714

sputtered coatings continued
PLZT electro-optic material props. and appls., review 7−125697
Pt-Mn-Sb RF sputtered films, magneto-optical props. 7−144042
PtMnSb thin films, RF sputtered, optical, mag. props., Kerr magneto-optical effect meas. 7−118841
Re-Pd, sputter-deposited, UPS studies 7−144230
RuN films, synthesis by active N sputtering, expt. study 7−132452
RuO_2 films, reactively sputtered, VLSI metallisation appl. 7−113383
RuO_2, reactively sputtered diffusion barriers in Si-RuO_2-Al structs., thermal stability 7−112118
a-Si:F films, deposition by flow discharge, magnetron and diode sputtering, NMR and IR studies 7−138333
a-Si:H, plasma deposited, structural changes after annealing *(Japanese)* 7−84583
a-Si:H, sputtered, photo-excited carrier recombination 7−137957
a-Si:H,O, reactively sputtered, electron transport 7−99058
a-Si:H and a-Si, sputtered films, DC conductivity, change with ambient conditions 7−92318
a-Si:H films, optical and elec. props., film thickness effects 7−106133
α-Si:H films, prep. by DC magnetron sputtering technique 7−86023
a-Si:H photosensitive devices, DC magnetron sputtering, photoelectric props. 7−84984
a-Si:H sputter deposited films, annealed, H conc. and motion, depth profiling 7−131475
a-Si:H sputtered films, metastable defect generation by light soaking and electron irrad. 7−142837
a-Si:H thin film surface cell structs., band bending, optical, elec. and photoelec. props. 7−131801
a-Si:H-Au, electronic density of states near mid-gap of a-Si:H 7−143310
Si:H-C:H, amorphous, sputtered multilayers, interface defects 7−137728
$Si_{1-x}Ag_x$:H amorphous thin films, RF sputtered, optical props. 7−92757
a-SiC thin films, Raman spectra *(Chinese)* 7−77527
a-SiC:F(H) films, prep. by magnetron sputtering, props. 7−112400
a-SiC:H, magnetron sputtered films, IR spectra, struct. 7−77552
a-$Si_{1-x}C_x$:H films, XPS and ESR charactn. *(Japanese)* 7−124748
SiGe, amorphous films, struct. study by EXAFS 7−125848
a-$Si_{1-x}H_x$ films, vibrational and optical props., optical absorpt. and Raman scatt. meas. 7−125830
SiN_x:H amorphous films, optical props. 7−144140
Si_3N_4, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
SiO_2 amorphous RF sputtered films, IR and Rutherford backscatt. studies 7−85917
SiO_2 thin film. technological parameters effects on dielectric props. obs. *(Slovak)* 7−125980
SiO_x antireflection coatings designed for increased $ZnIn_2S_4$ photocurrent 7−123158
SiO_xN_y, pure and hydrogenated, RF sputtered amorphous films, optical props. study 7−85879
Sm-Co sputtered polycryst. films, mag. props. 7−112877
$SmCo_5$ film, EELS 7−125874
SnO_2 films, Na^+ adsorpt. from aq. soln., film hydration and ion exchange activity determ. 7−143210
SnO_2, reactively sputtered thin films, flammable gas sensing characts. 7−114024
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
n-$SrTiO_3$ amorphous sputtered thin films, electronic processes, optical and photoelectrochem. props. 7−144141
Ta sputtered films, lattice expansion and contraction due to H charging 7−124778
Ta-GaAs Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
Ta_xCu_{1-x} amorphous alloy films, diffusion barriers for Au/GaAs system 7−105307
TaN sputtered films, thermal oxidation, dielec. props. 7−113746
Ta_2O_5 films, reactively sputtered, electrical, optical and structural props. 7−70707
Ta_2O_5 sputtered films, optical losses, light scatt. and absorpt. meas. 7−113301
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7−70706
$TaSi_x$ sputtered films on polycryst. Si, stress-temp., behaviour study 7−105350
Tb-Co sputtered films, mag. and magneto-optical props., stability in air 7−144043
Tb-Co(Fe) amorphous sputtered films, struct. and mag. props. 7−132096
Tb-Co(Fe) sputtered films, saturation magnetisation and comp., Ar press. depend. *(Japanese)* 7−112906
Tb-Fe amorphous films, stability of mag. props. 7−92480
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. characts., saturation Kerr rot. meas. 7−125499
Tb-Fe-Co films, magneto-optical effects, bias voltage depend. 7−144041
Tb-Fe-Co sputtered films, mag. and struct. props., influence of H_2 partial press. 7−132097
TbCo amorphous films, prep. mag. anisotropy, effects of sputtering conditions 7−132095
TbCo sputtered films, mag. and struct. characts., effects of Ar press. and substrate bias 7−132094
TbFe, amorphous films, sputter deposition, magneto-optical and mag. props 7−132105
TbFe amorphous sputtered films, effective comp., thickness depend. 7−143248
TbFe, amorphous thin films, sputter deposited, overcoated, dielec. tensor, magneto-optical props. 7−132199
(Ti, Al)N coatings, prod. by high rate sputter deposition, props. 7−119143
Ti sputtered films, lattice expansion and contraction due to H charging 7−124778
Ti/Si sputtered multilayers, Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti-$W_{60}N_{40}$ bilayer, thermal stability and N redistrib. 7−118174
Ti_xFe_{100-x} thin films, H_2 storage characts. *(Japanese)* 7−71657
TiN coating, sputter ion plating, internal stress, microstruct. 7−138658
TiN layer in stable Si solar cells with high temp. survivability 7−78645
TiN layers, PVD, metallography, SEM obs. *(German, English)* 7−132447
TiN reactively sputtered films, deposition, contact, and electromigration props. 7−118331
TiN sputtered films as glue layers for blanket W deposition 7−113437
TiN-VN strained layer superlattices, growth, struct., hardness 7−119137
TiN_x films, DC magnetron sputtering system, film props. 7−100060

sputtered coatings continued
TiN_x films, sputter deposited, CaF_2-type structure, X-ray characterisation 7−124788
TiN_x layers, sputter deposited, strain gradients, X-ray anal. 7−112144
TiN_xO_y thin films, optical absorption 7−99954
$Ti_{1-x}Nb_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
TiO_2, amorphous films, anatase crystals, oriented growth 7−97930
$TiSi_2$ films, composite sputtering and rapid thermal annealing 7−125983
$TiSi_2$ sputtered films, nucleation and growth, TEM studies 7−118295
$Ti_{1-x}V_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7−125979
W-WSi_x-Si contact structs., charactn. under thermal annealing 7−124737
WN_x reactively sputtered films, elec. and phys. props. 7−118333
WO_3 electrochromic coatings, DC reactive sputtering, struct. and optical props. 7−144026
WO_3 films, optical props., stoichiometry influence, XPS and LIMA anal. 7−138533
WO_3, high contrast layers, electrochromic response time 7−144025
WSi_x cosputtered films, grain sizes of WSi_2, X-ray diffr. peak broadening meas. 7−76656
WSi_x films, Si-rich, effects of annealing 7−113391
Y-Ba-Cu-O high T_c supercond. thin films, 89 K T_c and Meissner effect obs. 7−105750
Y-Ba-Cu-O high T_c supercond. films, DC magnetron sputtering prep. and props. study 7−118604
Y-Ba-Cu-O high T_c supercond. sputtered film charactn. 7−118627
Y-Ba-Cu-O high T_c supercond. sputtered films, struct. and supercond. props. studies 7−131832
Y-Gd-Fe amorphous sputtered films, mag. props. 7−143865
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984
ZnO sputtered film transducer for low temp. ultrasonic meas. on InSb substrate 7−117431
ZnO sputtered films, physical props. 7−125873
ZnO thin film, RF magnetron sputtered on sapphire, refractive index meas. 7−132359
ZnO transparent conducting films, prep. by reactive sputtering 7−144275
ZnO:Al films, transparent and heat reflecting, reactively sputtered, optical props. 7−125819
ZnO:In-glass, thin films heat treatment study 7−119142
ZnO:In(Al), heat-treated thin films, elec. props. 7−125156
ZnO/Si layered piezoelec.-semicond. struct., acoustoelectronic bistability phenomena 7−112405
ZnS:Tb, F electroluminescent thin films, RF magnetron sputtered, annealing effects 7−99939
ZnS:Tb,F thin films, electron-beam evaporated and RF magnetron sputtered, electroluminesc. 7−125809
ZnS-Si, effect of ZnS deposition process on thin film interface 7−138652
ZnS-Si heterojunctions, RF sputtered ZnS films, characts. 7−131757
Zr-Cu, sputtered, struct. relax., low temp. thermal cond., X-ray scatt. 7−105346
Zr-Fe/Tb-Fe compositionally modulated multilayered films, sputtered, mag. props. 7−99518
Zr-N sputtered films, cryogenic thermometer 7−121116
ZrC and ZrO_2 protective coatings, ESCA, SEM and EDAX studies 7−106704
$Zr_{100-x}Cu_x$ amorphous superconducting sputtered alloy, low-temp thermodynamic props. 7−138128
ZrN thin films, DC reactively magnetron sputtered, structural, superconducting and optical props. 7−99276
ZrO_2 and Y_2O_3 stabilized ZrO_2 films on Al_2O_3 substrates, X-ray diffraction study *(Japanese)* 7−131499

sputtered layers *see sputtered coatings*

sputtering
see also sputter deposition; sputter etching
AES, sputter depth profiling, ion mixing and surface roughening effects 7−114052
alloys, preferential sputtering theory, role of Gibbsian segregation 7−70963
ASDEX divertor tokamak, plasma-wall interaction, impurity release 7−69366
atom transport in gas discharge plasma, density calc. 7−117709
binary alloys, near-surface layer, ion bombardment-induced compositional changes 7−77741
binary cpd., total sputtering yield and etching rate calcs. *(Chinese)* 7−126269
biological tissues analysis by secondary ion mass spectroscopy, matrix effects obs. 7−101159
biomolecules, sputtering by impact of highly ionising particles 7−78999
cluster emission and bioorganic mol. desorpt. under heavy ion bombardment, shock wave mechanism model 7−76298
clusters and mols. internal and kinetic energy distribs., analytical expressions 7−77731
CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
collisional sputtering theory, energy spectrum 7−144222
computer simulations of sputtering 7−125885
condensed gases, sputtering, gas-flow model 7−85919
conference, Dresden, Germany, Feb. 1986 *(German)* 7−140475
depth profiling of solid surfaces, scanned ion and neutral beams diagnostics 7−109561
diatomic molecule sputtering, rovibr. excitation, quantum mechanical description 7−132396
direct recoil sputtering and secondary ion production, review 7−125889
electronic excitation in sputtered atoms and the oxygen effect, review 7−125891
erosion and growth of solids stimulated by atom and ion beams, conf., Heraklion, Crete, Greece (Sept. 1985) 7−66803
exotic atoms, search using sputter-initiated reson. ionisation spectroscopy 7−90453
frost free throttle valve for sputtering appl. 7−134780
frozen gas sputtering review 7−125895
fusion reactor limiter/wall materials, heavy ion bombardment, sputtering yields 7−138576
glycerol matrix, polyatomic ions sputtering, collision cascade model anal. 7−138566

sputtering continued
graphite, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
graphite, H^+ chem. sputtering yield meas. 7−77721
graphite, laser sputtering, fluorescence anal. 7−106251
graphite, light ion sputtering 7−106339
graphite thin film, C^+ self-sputtering yields meas. 7−77722
high fluence He irrad., surface deformation 7−119394
ice and ice mixture films, erosion by ion irradiation 7−92798
ICRH antenna Faraday shields, sputtering, RF waves effect 7−135554
impurity generation due to non-thermal electrons and its control by external bias 7−111257
incandescent light source with transparent heat mirror, design, construction and performance 7−141956
inert gases, hollow cathode discharge, optogalvanic spectra investig. 7−90026
Io, magnetospheric plasma sputtering of atm. 7−120301
ion, crater depth rel. to etching rate 7−77743
ion beam induced sputtering, secondary ion emission 7−113330
ion bombardment-induced topography formation, effects of surface impurities and diffusion 7−70051
ion implantation mechanisms and related computational issues 7−69728
ion sputtering profiling process, computer simulation *(Chinese)* 7−70955
ion-beam sputtering device for VUP-4 vacuum station 7−67424
laser sputtering in electronic excitation regime, review 7−125869
light impurities in TFTR plasmas, production and scaling 7−75849
low energy ion beams conf., Brighton, Sussex, England (April 1986) 7−66825
magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
mechanisms and theory of physical sputtering by particle impact, review 7−125884
metal surface, neutralisation of multiply charged ions 7−132395
metal targets and their cpds., composition of sputtered flux 7−70965
metallic alloys, amorphous, self-diffusion and impurity diffusion 7−105103
metals, physical sputtering 7−70962
molecules and clusters 7−125893
morphological control of STM probes by He cathode bombardment 7−83602
multicomponent materials, low-energy ion bombardment-induced preferential sputtering, statistical model calcs. 7−77732
negative ionisation of atoms sputtered from cesiated surface, vel. depend. 7−125890
non-conducting materials, neutral and ion beam SIMS 7−85936
normal and glancing incidences, hydrogen-wall relaxation, recombination processes 7−144225
particle and photon surface interactions, conf., Argonne, IL, USA, (Aug. 1986) 7−120696
periodic surface deformations caused by high dose ion bombard. induced lateral stresses 7−84063
polyatomic sputtered molecules, energy, angular distrib. 7−144212
refractory metals and silicides, sputtering targets develop. 7−119145
sapphire, K^+ ion bombardment, population of excited states 7−85929
sapphire substrate, ion induced adhesion of Cu films 7−92010
secondary neutral mass spectroscopy, laser based, yield, sensitivity 7−121290
self sustaining metal coatings on metal surfaces, charge transfer and sputtering 7−125896
semiconductor, ion direct writing, radiation damage and pattern resolution 7−99994
semiconductors, physical sputtering 7−70962
single cryst. sputtering and surface scatt. at oblique ion incidence, data anal. 7−119098
SOS films, cryst. quality improvement by self-implantation *(Chinese)* 7−124724
sputter initiated reson. ionisation spectroscopy review 7−92821
steel, stainless, sputter profiling of passive films, Auger electron spectroscopy, quantitative approach 7−138573
surface conversion H^- sources, importance of heavy ion bombardment 7−73465
surface erosion and growth, computational methods of anal. 7−70967
surface modification by plasma interaction, conf., Princeton, NJ, USA (May 1986) 7−102004
surface phenomena, reflection electron microscopy studies 7−95682
TFTR-conditioned graphite: laboratory testing of properties affecting Tokamak operations 7−67992
thin film deposition, use of ion beams, review 7−70150
transition metal monoxides, preferential sputtering and surface composition 7−119104
Ag, noble-gas ion sputtering yield, vel. to projectile energy and angle of incidence 7−70958
Ag, polycrystalline wires, sputtering yield, critical angle of incidence 7−106333
Ag-Cu eutectic alloy, low energy sputtering 7−125882
Al, K^+ ion bombardment, population of excited states 7−85929
Al-Li alloy, partial sputtering of Li, laser-induced fluorescence study 7−99990
Al(Li), sputtering during ion bombardment 7−84042
Ar^++Ti(Fe), differential sputtering yields meas. 7−77725
Au, angular distrib. of sputtered atoms *(Chinese)* 7−132397
Au, noble-gas ion sputtering yield, vel. to projectile energy and angle of incidence 7−70958
Au/GaAs, sputtering-controlled ion mixing 7−91664
Be, K^+ ion bombardment, population of excited states 7−85929
C atoms, velocity distrib. meas. by laser-induced fluoresc. 7−77726
C fibres, Ni coated, scanning Auger microscopy 7−76647
C foil, sputtered atoms by proton impact, Auger electrons 7−85918
C-W multilayers, Auger electron spectra depth profiling, anal. 7−125871
Co-Ni, surface segregation, preferential sputtering, Auger spectra computer simulation 7−137575
Cu, angular distrib. of sputtered atoms *(Chinese)* 7−132397
Cu crystal surface, sputtered atoms optical emission intensity, ion incidence ang. depend. 7−119099
Cu, diffusion of Au over wide temp. range 7−105127
Cu, polycrystal and single cryst., sputtering induced surface topography 7−106334
Cu, polycrystalline wires, sputtering yield, critical angle of incidence 7−106333
Cu, sputtering and lattice damage in self irradiated samples, orientation effects 7−113334

puttering continued
Cu-Li, high flux plasma sputtering yield, temp. and composition yield 7−106337
Cu-Li, sputtering temp. depend. 7−106338
Cu-Li alloys, plasma-flux elevated temp. sputtering, plasma emission spectroscopy 7−75874
Cu-Ni (Au)(Ag), surface damage, ion-induced segregation during sputtering 7−76222
Cu-Ni sputtering by Ar^+, low energy model 7−99996
Cu-Teflon adhesion, enhancement by presputtering prior to Cu deposition 7−119487
Cu-Zn, single- and two-phase brass, sputtering, ion bombardment effects 7−138578
$Cu_{0.7}Au_{0.3}$, angular distrib. of sputtered atoms *(Chinese)* 7−132397
Cu(100), Ar^+ bombardment, scattering and sputtering effects 7−85928
Fe (111), nitridation and oxidation, XPS and AES obs. 7−131407
Fe, ion implanted with Ti and C, surface characterisation, XPS and AES studies 7−76568
Fe, SN implantation, effects of ion sputtering *(Chinese)* 7−111630
Fe targets, RF sputtering, surface oxidation 7−113331
Fe-B-F films, magneto-optical props. 7−113149
$Fe_{40}Ni_{40}P_{14}B_6$ metallic glass, initial oxidation, Auger electron spectra and ion sputtering studies 7−86484
Fe_3O_4 film, sputtered with Ar^+, surface magnetism changes, photoelectron meas., 7−138295
$Fe_{0.5}Si_{0.5}$ (100), quantitative Auger anal., noble gas ion sputtering 7−125872
GaAs (100), space charge, electron energy loss studies 7−118551
GaAs (100), surface topography, Ar^+ beam sputtering 7−106332
GaAs/a-WSi_x, Schottky barrier formation 7−85044
GaSb, anomalous sputtering under Cs^+ ion bombardment 7−119093
Gd-Co amorphous sputtered films with anisotropic modulated superstructure 7−99514
Ge aspherical lens fabrication by ion milling 7−110617
Ge positive secondary ion sputtering yield, chem. bonding effects, XPS study 7−85924
H^+ implantation, sputtering and surface redeposition, local mixing model 7−74048
$Hg_{1-x}Cd_xTe$ and oxides, noble gas ion sputtering, preferential chemical reactions 7−125883
In atoms, sputtered by ion beam, selective laser ionisation 7−74781
In-borosilicate glass interface, adhesion, SIMS depth profiling 7−76713
InAs (111), In island form. due to ion sputtering *(Chinese)* 7−76654
InSb (111), In island form. due to ion sputtering *(Chinese)* 7−76654
$LaNi_3Mn_2$, surface props., H_2 storage material 7−98645
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, high T_c superconducting films, prep. conditions, optimisation 7−92867
Li-Ti-Cu, composites, sputtering and redistribution behaviour in tokamak environment 7−135563
MgO (100), Fe-covered, reaction of CO and H_2, UPS, EELS, SEELFS studies 7−86677
MgO, sputtering, damage and nucleation 7−138575
Mo, oxygen-exposed, sputter-erosion, yield and ang. distrib. meas. 7−77723
Mo, sputtering of chemisorbed N from single-crystal planes 7−70957
Mo thin films, cone form. following Ar^+ ion bombard. 7−85931
NbN, sputtering, damage and nucleation 7−138575
Ne^+ sputtering of chemisorbed O_2 on Ni(111) 7−144211
Ni foil, first wall materials, surface modification by ion implantation, thermal annealing 7−103176
Ni, sputtering, by single crystal, mag. phase transition effects 7−77745
Ni/Cr multilayers, AES sputter profiling, depth resolution improvement using two ion beams 7−77708
Ni-Co(Fe), surface damage, ion-induced segregation during sputtering 7−76222
Ni-Cr multilayered structures, microtopography induced during sputter depth profiling 7−70102
Ni-He, quantitative He anal., sputtered neutral mass spectrometry 7−138570
NiC, CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
Pd_2Si film on Si (100), struct. props., scanning tunnelling microscopy and PES studies 7−76648
Rh (111), detection of neutral sputtered atoms, ejection, surface struct., energy and angle resolved meas. 7−138569
Rh (111) with adsorbed O, detection of neutral sputtered atoms, ejection, surface struct., energy and angle resolved meas. 7−138569
S layers, high energy ion erosion 7−92797
S, sputtering by keV ions, appl. to Io-Jupiter magnetospheric plasma interaction 7−120269
S, sputtering by MeV He ions rel. to Jovian satellite Io 7−145870
S_2, sputtered mol., vibr. and rotational energy distrib. 7−144213
Si (100), interaction of adsorbed Sb monolayer, effect of ion bombard., TSD study 7−85933
Si detector, p-i-n type, surface protection using cathode sputtering technique 7−71401
Si, impurity segregation under O_2^+ bombardment, sputter depth profiling and SIMS studies 7−84294
Si, ion bombardment, by Ar^+ and N_2^+, angular distrib. of sputtered particles 7−77740
Si, ion-enhanced etching by XeF_2, importance of physical and chemical sputtering 7−113800
Si, multiple species implantation, atomic mixing 7−76181
Si, near threshold sputtering in Cl_2 environment 7−106327
Si positive secondary ion sputtering yield, chem. bonding effects, XPS study 7−85924
Si surface topology development during ion sputtering 7−106336
Si:As, shallow implants, SIMS depth profiling 7−137389
Si:Fe, surface analysis, reson. ionisation of sputtered atoms, TOF mass spectrometry 7−89298
Si-Ag, O_2^+ bombardment, Ag redistribution, oxide formation 7−113329
Si-He, quantitative He anal., sputtered neutral mass spectrometry 7−138570
SiCoTa dilute alloy, Ar^+ sputtering and surface composition changes *(Chinese)* 7−85920
SiO_2, near threshold sputtering in Cl_2 environment 7−106327
Ta_2O_5, preferential sputtering, He reemission and transient effects, AES meas. 7−70968
Ti, DC magnetron sputtering, pumping speed influence on V-A characts. 7−100058
sputtering continued
TiC deposited graphite, erosion yield of Ti by H in bombardment at high temps. 7−77729
TiN_x films, DC magnetron sputtering system, film props. 7−100060
TiNi compositionally modulated film, sputtering press., effect on structure and solid state reaction 7−100063
TiO_2, ion sputtering, restoration of real conc. profiles, Auger spectra 7−77739
TiO_x RF diode sputtering, stresses, stoichiometry, deposition rate and refractive index studies 7−144273
U, in soil, matrix effects, isotope dilution, SIRIS meas. 7−126520
U, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
UO_2, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
U_3O_8, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
V-Hf-Cr, He ion irrad., blistering and sputtering, 200-600°C 7−142847
VBe_{12}, sputtering and redistribution behaviour in tokamak environment 7−135563
VSi_2, sputtered with Ne/Kr, sputter rates *(German)* 7−144223
W alloys, sputtering, redeposition and plasma impurity reduction in mag. fusion devices 7−74049
W, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
W, sputtering of chemisorbed N from single-crystal planes 7−70957
ZnS, surface atom vacated state formation by H adsorption 7−76562
$Zr_{100-x}Cu_x$, amorphous sputtered alloys, low-energy excitations, struct. relaxation effects 7−143033
SQUIDs *see superconducting junction devices*
SREMP *see electromagnetic pulse*
stabilisation *see stability*
stabilisers *see controllers*
stability
see also flow instability; frequency stability; Lyapunov methods; mechanical stability; plasma instability
artificial satellites, inter-connected, effect of solar radiation press. on motion and stability of system 7−72254
binary stars, vibr. stability of double-star Roche model 7−120494
biomechanics, nonlinear reflex loop stability, arm appl. 7−114368
bolometric laser radiation detectors stability 7−108661
Brillouin scattering set-up, using triple-pass tandem Fabry-Perot interferometer 7−108644
cantilever column subject to intermediate periodic concentrated axial load, dynamic stability analysis 7−130580
controlled diffusion processes, stochastic stabilisability 7−89162
elasto-mechanical problems, branching soln. stability *(German)* 7−102169
finite quasineutral electron beam, space-time characts. of nonlinear unstable states 7−74833
gas lasers, instability modelling 7−136283
instabilities in laser systems at low pumping levels 7−136254
intracavity nearly-degenerate four-wave mixing, instabilities 7−136374
laser diodes, twin-stripe, instabilities 7−136305
laser electro-optic shutter control, w.r.t. luminance level of active medium 7−136360
liquid crystal cell, heating and temp. meas. combination 7−95566
liquid metal film pull-down annular flow by heat flux regulator 7−91222
magnetic film, stripe domain stabilisation by parallel grooves 7−70616
MIS structure RF capacitance stabilisation, using Q-meter 7−102454
NMR high current electromagnets, stabilisation circuit 7−121170
4,4′-n-octylcyanobiphenyl, viscous fingering patterns, stability 7−131017
optimal control of Stefan problem with state-space constraints 7−97533
parametric vibrations of a viscoelastic beam (Maxwell model) under steady axial load and transverse displacement excitation at one end 7−117517
photomultiplier gain instability and stabilisation 7−103333
plate, lying on viscous compressible liquid, vibrations, nonlinear stability 7−95325
positional servo for vibrationally isolated tables 7−121096
postural stability, toward a standard clinical meas. 7−114519
pressure transducer stability requirements, anal. *(German)* 7−73335
propellane, [1.1.1]- and [2.2.2]; bridgehead carbon interaction, ab initio studies 7−129557
rearfoot motion in running shoes analysis, with aid of computer 7−100953
recursive digital filters, stabilisation method 7−127507
rotating viscoelastic shafts, dynamic instability 7−120809
rotating-arc circuit breaker radial stability model *(French)* 7−130962
salt-gradient solar ponds, efficiency and stability 7−78677
scintillation detectors, using NaI(Tl) and CsI(Tl) 7−122310
semiconductor laser, compound cavity, asymmetrical coupling, locking and chaos 7−136306
semiconductors, instabilities 7−136414
single-domain triaxial particle magnetisation analysis *(Russian)* 7−143851
solar ponds with nonconstant temp. gradient, stability anal. 7−71642
temperature sensors for calorimetry *(German)* 7−121129
three parallel sheets system, stability of 1D gravitating system 7−72261
three-dimensional compressible boundary layers, linear stability anal. 7−117574
top, rotating rough horizontal plane, stability *(Chinese)* 7−120793
vortex amplifier characts., multivalued region elimination 7−103079
X-ray diffractometer, short-term instability revealed by statistical method 7−104489
AlN/GdTbFe/AlN/Al magneto-optical disc 7−74882
NH_3 lasers, far-infrared, instabilities and chaotic emission 7−136284
NbTi-Cu cable-in-conduit conductors, stability at short heat pulse duration 7−77185
a-Si p-i-n solar cell stability, deposition rate effects 7−144830
a-Si solar cells, stability anal. under illum. 7−144827
a-Si:H solar cells and modules, long term stability 7−133095
Te-Ge-Sn-Au phase change recording film for optical disk 7−76706
ZnTe, Au-Cu, Ag-Pt, Pt and Cu-Pt stable ohmic contacts, fabrication and expt. study 7−143612
stability of numerical methods *see convergence of numerical methods*
stacking faults
BCC metals with n-body interatomic potentials, point-defect and stacking fault props. 7−76117
α-Cu-Al, cold-worked FCC alloy, lattice imperfections, X-ray diffr. study 7−137375
diamond surface (111), microscopic planar defects, TEM obs. 7−118209

stacking faults continued
dislocation-free, precipitation form., cooperative bimodular mechanism 7−118100
electron scatt. from individual defects in crystals, computer simulation 7−98183
Inconel X-750, MC particles growth on stacking faults and dislocations 7−78025
$L1_0$-type superlattice structures, planar fault energies 7−111589
layer structure MX_3 cpds., stacking faults, diffuse X-ray scatt. calcs. *(German)* 7−104765
metals, FCC, deformed, point defect trapping obs. by PAC technique 7−104733
metals, FCC FCC, ion implanted, impurity-vacancy cluster form. 7−91631
metals, stacking fault interaction with nonspherical Fermi surface *(Russian)* 7−98179
metals and alloys, dynamic recrystn., high temp. mech. behaviour, study using torsion testing 7−93036
metals and alloys, void and vacancy cluster nucleation processes 7−98129
spinach ribulose bisphosphate carboxylase, cryst. struct., 1D disorder 7−139188
steel, austenitic stainless, stacking fault energy, temp. relationship, effect of struct. factors *(Russian)* 7−91602
steel, Cr, laser processed, wear induced hardening 7−100392
steel, Hadfield, hardening mechanism and stress-strain diagrams *(Russian)* 7−71205
superlattice of stacking faults, dynamic X-ray diffr. *(Russian)* 7−142798
superlattices of stacking faults, electron energy, pseudopotential approx. *(Russian)* 7−142799
Udimet 500, Ni-based superalloy, low cycle fatigue, strain rate effects and assoc. deform. mode 7−144534
Ag electron irradiated, point defect precipitation at dislocations, HVEM obs. 7−98249
Ag, polycrystalline, plastic deform., dynamic recovery 7−144434
Al-Fe-Si, direct chill casting, intermetallic phase form., TEM and EDAX 7−86155
Ar crystals, screw dislocation config., simulation 7−83955
Au, energetic heavy ion irrad., cascade cluster obs. 7−104871
Au, He solubility 7−118098
Au, positron lifetime, quenched-in vacancies and stacking faults 7−92772
$BeAl_2O_4:Cr^{3+}$ alexandrite crysts., Czochralski, growth, struct. defects, laser output 7−132437
BiI_3, cationic stacking fault magnetoabsorpt. spectra study 7−112194
BiI_3, with stacking faults, cryst. struct. anal. *(German)* 7−104766
$(Bi_2O_2)^{2+}$ $(A_{n-1}B_nO_{3n+1})^{2-}$, (A=Bi, Ba and B=Ti, Fe, W), perovskite layers, electron microscopy studies 7−142782
CU, electron irrad., point defect reactions, HVEM studies 7−98135
$CdBr_2$, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
CdI_2, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
CdTe MBE grown films, defect-related luminesc. 7−99925
CdTe-HgTe superlattice, defect observations, transmission electron microscopy study *(French)* 7−98164
Co alloys, positron-defect interactions arising during multilayer struct. form. *(Russian)* 7−124289
Co, image contrast characts. of stacking faults and perfect crystals using (1-11) HCP systematic set 7−104498
Co, metastable compact powder, stacking fault parameters and microstrains, X-ray diff. profile anal. 7−142797
Co, powder, stacking fault energies eval., high press. effects 7−98180
Co-Cr sputtered films, mag. props., microstruct. 7−85392
Co-Ni-Cr-Mo, austenitic, strain hardening *(Russian)* 7−113566
Co-Ni-Ti-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Co-TaC, microstruct. of different struct. transforms. induced by rapid quenching 7−92992
Cs_2UCl_6, synthesis, cryst. struct. refinement 7−98066
Cu, electrical resist./shear strain relationship, effect of tensile stress and stacking fault energy 7−112292
Cu, high energy He implanted, microstruct. evolution 7−76161
Cu, proton irradiated, periodic (001) defect walls 7−98273
Cu, vacancy clusters, efficient energy minimisation scheme calc. 7−98132
Cu-Al, stacking faults, dislocation density, hardness rel. to annealing 7−111586
Cu-Al crystals, mech. twinning mechanisms, stacking fault energy, slip 7−76143
Cu-Al single crystals, strain softening and plastic flow instability 7−78097
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7−78009
Cu-Al(Zn), electrical resist./shear strain relationship, effect of tensile stress and stacking fault energy 7−112292
Cu-Ni-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Cu-P (Ge), single crysts., dynamic recrystn. 7−126144
Cu-Si crystals, dilated surface layers, defects, electron microscope images 7−111563
Cu-Sn(Zn)(Ni), cold worked, twinning after annealing 7−78044
Cu-Zn films, defects and elec. props. 7−92035
CuMn, stacking fault energy, dislocation struct., transmission electron microscopy study 7−142788
Fe, cast, pearlitic lamellar graphite, surface residual stress relief, dislocation density and stacking fault probability obs. 7−106552
Fe-Cr-Ni-Co superalloy, Refractoloy 26, microstruct. and mech. props., effects of Co *(Chinese)* 7−144424
γ-Fe_2O_3 powder, starting faults in spinel struct., anomalous X-ray line broadening 7−111585
GaAs, defect formation, Al ion implantation 7−83993
GaAs defect struct. generated during MBE, growth temp. depend., TEM study 7−112138
GaAs epitaxial layers, crystallographic defect form. during MOCVD growth 7−104759
GaAs films, initial stages of MBE growth on Si (100) 7−84600
GaAs MBE layers on misoriented Si substrates, cryst. orientations and defect structs. 7−143282
GaAs, stacking fault energy, dopant and deformation temp. effects 7−142800
GaAs VPE layers, macroscopic cryst. defects, SEM investig. 7−131158
GaAs:Si, ion implanted, TEM obs. of defects 7−124273
GaAs:Si(Zn)(Cr), stacking fault energy, dopant and deformation temp. effects 7−142800
GaAs-Si interface, defect structs. after annealing 7−118278

stacking faults continued
GaP epitaxial films, defect displacements, anal. by convergent beam electron diffr. 7−70141
InSe, 2D defects, effect on transport and phototransport props. 7−105593
InSe, containing stacking faults, exciton photoluminesc. spectra, X-ray diffr. studies 7−113253
$(K,Na)AlSi_3O_8$ feldspars, (010)[001] dislocation fine struct., TEM, planar defect structural models 7−83960
β-$MgCl_2$, stacking faults, powder X-ray diffr. meas. 7−76146
$MoSi_2$, thin films, electronic transport props. 7−143644
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
$NbSe_2$ layer materials, struct. defects, TEM studies *(French)* 7−104761
Ni, high energy He implanted, microstruct. evolution 7−76161
Ni, proton irradiated, periodic (001) defect walls 7−98273
Ni:He, high energy ion implantation, microstructural evolution 7−117941
Ni-Co-Al, flow stress, γ' particles, Co content effect 7−78133
Ni-Cr thin films, X-ray diffr. characterisation 7−98756
Ni-Cr-Co, high temp. creep, stacking fault energy effect 7−100323
Ni-Cr-Co alloys, creep friction stress 7−113641
Ni-Ti, phase transform., in situ TEM obs. 7−77997
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7−113553
Ni_3Al, in situ straining in TEM 7−113602
PbI_2, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
Pd powder, synchrotron X-ray diffraction, line broadening anal. 7−111307
SI_3N_4-Si, point defects influence on LOCOS process 7−131143
Si (111), dimer-adatom-stacking fault model, calcs. 7−143156
Si, deep level defect electronic props., DLTS anal. 7−98911
Si, dislocation and oxidation stacking fault generation, influence of contamination 7−124291
Si, dislocation and stacking fault interactions 7−91629
Si, EFG ribbons, struct. defect generation mechanisms 7−83813
Si, electronic struct. of twin stacking faults 7−84765
Si, oxidation stacking faults at mechanically induced weak surface defects 7−69718
Si, oxidation-induced, TEM 7−91603
Si, oxidation-induced stacking faults, length, density and dislocation interactions model 7−98181
Si ribbons, grown by various methods, cryst. struct., X-ray topographic obs. 7−83971
Si, spherical particles, crystal growth by gas evaporation 7−70993
Si substrate, passivation-induced phenomena, book contrib. 7−106728
Si substrates, RIE damage, intrinsic gettering, scanning DLTS and EBIC studies 7−126338
Si surfaces, oxidation, dislocation generation at cracks 7−86495
Si:O, Czochralski grown, O-related defect generation 7−124315
Si:O, ion implanted wafers, annealing stacking faults form., SiO_2 precipitates dissolution 7−111587
Si:O,C, point defects influence on intrinsic gettering 7−111590
Si:P, ion implanted, lattice defects study 7−98182
Si:P, point defect generation during P diffusion, conc. above solid solubility 7−142766
Si:P single crysts., high energy ion implantation and annealing effects study 7−76169
Si:Sn, B, ion implantation and annealing, shallow junction form. 7−76173
Si/Ni thin films, stacking faults and F bubbles, dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
SiO_2-Si:P,B, thermal nitridation of SiO_2, effect on Si interstitial conc. 7−131140
$TiSi_2$ sputtered films, nucleation and growth, TEM studies 7−118295
WSi_2, thin films, electronic transport props. 7−143644
Xe crystals, screw dislocation config., simulation 7−83955
Y-Ba-Cu-O system, high T_c supercond., microstruct. study of phases 7−117939

Staebler-Wronski effect
a-Si solar cells, stability anal. under illum. 7−144827
a-Si:H, doped, thermally induced instabilities and Staebler-Wronski effect 7−143506
a-Si:H, kinetics of photostructural transformations 7−118533
A-Si:H, light induced effects on charge carrier generation and decay 7−143503
a-Si:H, light-induced deep defect generation 7−143409
a-Si:H, light-induced defects, electrorefl. study 7−144013
a-Si:H, light-induced metastable changes in donor and acceptor levels 7−143407
a-Si:H, Meyer-Neldel rule examined by temperature-modulated space-charge-limited current 7−84906
a-Si:H, photodegradation under long-time repeated light exposure 7−143505
a-Si:H, photoinduced degradation of device behaviour, elimination, solar cell appls. 7−131716
a-Si:H and a a-Si:H,P, light-induced changes, ENDOR-detected ESR study 7−143928
a-Si:H films, light-induced degradation and thermal recovery, rate equations 7−143513
a-Si:H films, low temp. cond. and Staebler-Wronski effect *(Chinese)* 7−105555
a-Si:H image sensors, physical props. 7−84983
a-Si:H p-i-n solar cells, O-contaminated, light-induced degradation 7−144829
a-Si:H solar cells, reversible light-induced changes 7−144820
a-Si:H solar cells and modules, long term stability 7−133095
a-SiGe:H,F, light-induced defect generation, electronic and optical props. 7−143502

staff *see personnel*

stagnation flow
axisymmetric cavity, shear layer, flow oscills. effect 7−83251
catalytic surface properties discontinuity, longitudinal diffusion allowance 7−113983
circular cylinder, hear transfer neat stagnation point, turbulence model 7−117572
circular cylinder, viscous shear flow, unsteady NS eqn. soln., integro-differential anal. 7−142268
cylindrical surface, axial, flow vortical flow zone visualisation, stroboscopic laser knife technique 7−137035
delta wing supersonic leading edges, press. distrib. calc. 7−69211
diffusion flame, stagnation point extinction at reduced gravity 7−139005

agnation flow continued
efflux from a slit in a vertical wall 7−75642
electrodeposition, mass transfer and current distribution in circular through-hole, impinging fluid jet effect 7−106450
fast dynamo action in a steady flow 7−137024
free-stream turbulence relationship with stagnation region heat transfer 7−110930
heat exchange between a stagnant fluid and a continuously moving surface of variable temperature and velocity 7−136845
incompressible fluid-slender wedge system, matched asymptotic expansion studies 7−130817
jet impinging on a flat plate, turbulent heat transfer study 7−75637
jets, impinging stagnation flows 7−91178
lubricated planar stagnation die flow with low viscosity liq. separating viscous material from solid wall 7−75504
methane-air flame, impingement forced convective heat transfer 7−130688
MHD flow through porous medium at rear stagnation point 7−97639
particle-shock interactions, dynamics, Basset term effect 7−123677
periodic dynamo model, boundary-layer soln. 7−83175
rarefied gas flow near an asymmetric plane stagnation point 7−142339
separation of laminar boundary layer from a flat surface 7−83169
stagnant liquid, drift-flux parameters for upward gas flow, reactor appl. 7−135462
supercomputers and fluid dynamics, conf. Nobeyama, Japan, (Sept. 1985) 7−120710
thermal energy meter errors, causes and performance improvement 7−102413
tube banks, finned and unfinned, fluid flow and heat transfer 7−75557
turbulent buoyant jets, discharge into stagnant medium, asymptotic anal. 7−97596
turbulent flows 7−130645
unsteady laminar incompressible second-order boundary-layer flow at a three-dimensional stagnation point, num. investig. 7−117558
unsteady MHD flow near asymm. 3D stagnation point 7−104353
vortex ring and filament interaction, 2D stagnation point 7−123657

tainless steel
see also austenitic stainless steel
17-4 PH, retardation of hydrogen embrittlement by sputtered coatings 7−71380
activity of surface-segregated Type 316, by mass spectrometry and Auger electron spectrosc. 7−139064
advanced superconducting cable conduits, laser beam welding 7−135636
aluminised, corrosion in sulphidising atmosphere, protective alumina scale 7−106699
austenitic-ferritic, high Mo content, precip. behaviour *(German)* 7−144423
austenitic-ferritic, high strength, corrosion behaviour effect of Mo *(German)* 7−144619
BCC, corrosion fatigue mechanisms 7−119396
bimetals, boiler steel-stainless steel, fatigue cracking *(Polish)* 7−138809
brazed first wall concept for NET 7−122115
cast, thermal ageing under LWR operating conditions 7−93044
cast, US NDE of microstruct. 7−126378
centrifugally cast, US defect detection and characterisation 7−126396
centrifugally cast PWR components, US characterisation 7−144677
composite sheets, stainless steel-Cu-stainless steel, fabrication and tensile behaviour *(Korean)* 7−78063
compound tube for resonant photoelectron and Auger electron appearance potential spectroscopy *(Chinese)* 7−126516
contaminant in Si, precipitate dissolution by rapid thermal processing 7−71219
corrosion, electrochem. behaviour under urea synthesis conditions 7−93153
corrosion, localised, in high-purity acid sulphate soln. 7−119399
corrosion behaviour, slow strain rate tension tests under various cathodic pots. *(Japanese)* 7−106680
corrosion resist. rel-to heat treatment 7−86427
corrosion resistance in Cl^--containing environments, test techniques 7−144646
creep, neutron and deuteron irrad. induced 7−141291
creep damage in notched specimens metallographical study and numerical modelling 7−144658
crevice corrosion, pot. meas. using ion exchange resin fibres 7−132842
crevice corrosion in nuclear steam generator environments of Types 347, 405, 409, 410 and 430 7−100449
deformation and fracture resistance comparison in independ. temp. and mech. loading and Coffin method 7−132863
dual phase, corrosion resist., phase transform., microstruct. 7−78343
duplex, cast, H embrittlement study *(Korean)* 7−126211
duplex, corrosion fatigue cracks, initiation and early growth mechanisms 7−78321
duplex, fatigue crack initiation rel. to ageing and grain size *(Japanese)* 7−93082
duplex, homogenised, ageing, precip. distrib. 7−132650
duplex, pitting corrosion resist. in simulated well conditions 7−126290
duplex, SCC mechanism, fractography *(Japanese)* 7−119413
duplex, SCC testing methods in hot chloride media, crit. study 7−119475
duplex, shear band development during necking 7−113604
duplex, sintered, mech. props. rel. to Si addition and σ phase precip. 7−126198
duplex δ-ferrite-austenite, microstruct. change during superplastic deform. 7−100304
dynamic tensile tests with superimposed ultrasonic oscillation 7−78413
electrode, dielec. breakdown in vac., area effect 7−69520
emittance meas. using portable device 7−121112
extra low interstitial superferritic, in chloride environments under galvanic coupling, corrosion behaviour 7−138878
fast reactor construction materials, corrosion temp. and oxygen content depend *(Czech)* 7−67909
fatigue crack growth rate, load cycle asymmetry and overloading influence 7−144514
fatigue failure, multiaxial, influence of strain-path 7−118027
ferrite stabilised, intergranular corrosion, effect of N 7−100431
ferritic, cladding on ultrahigh C steel, superplasticity 7−78123
ferritic, corrosion, influence of alloy diffusion processes 7−119403
ferritic, corrosion and sensitisation, effect of grain boundary struct. 7−126305
ferritic, corrosion behaviour in formic and acetic acids 7−93142

stainless steel continued
ferritic, corrosion in environment typical of coal gasification plants 7−86448
ferritic, Cr-Ti, oxidation resist., influence of Al and Si 7−86445
ferritic, creep, microstructural changes 7−100317
ferritic, dissolution in neutral and acid solns. 7−138871
ferritic, electron beam welded joint, incomplete penetration notches, fracture toughness *(Japanese)* 7−144524
ferritic, electron beam welded joints, incomplete penetration notches, fracture toughness *(Japanese)* 7−144525
ferritic, foils, H induced microtwinning, embrittlement mechanism, TEM obs. 7−76144
ferritic, fusion reactor material, magnetomechanical behaviour 7−109475
ferritic, H_2 gas embrittlement 7−71378
ferritic, short-circuit diffusion-assisted corrosion 7−119404
ferritic, SUS 405, ferromag. props. 7−99416
ferritic, thermomech. processing, struct. and substruct. obs. 7−113578
ferritic 7−117938
ferritic/martensitic, neutron irrad., microstruct., precip., swelling 7−84039
fibre reinforced Al matrix composites, *(Korean)* 7−138786
fine scale microstruct., APFIM and analytical electron microscopy obs. 7−138772
fracture morphology and softening behaviour 7−86354
fracture toughness testing of A533B 7−78440
hardened, fatigue strength, lapping effect 7−126243
heat transfer during arc welding, application to low and high boiling temp. materials 7−123433
heat-resistant, specimen thickness effect on cyclic crack resist. 7−78213
hot corrosion in molten sulphates, electrochemical obs. *(Japanese)* 7−93175
hot isostatic pressing and powder metallurgy production technology 7−119193
hot rolling deform., recrystallisation textures 7−100252
impurity depth profiling, bevelling technique and $d(^3He,p)^4He$ reaction cross section meas. method 7−78574
intercrystallite corrosion of fuel-element jackets 7−122002
interface structure, weak beam α-fringe electron microscopy study 7−105302
irradiated, residual elec. resist., recovery following annealing *(Russian)* 7−112294
limiter erosion and deposition in T-10 tokamak 7−103174
low-Cr, high-temp. oxidation resist., Al and Si alloying effect 7−78384
LWR components, corrosion assisted cracking, control and repair 7−93205
martensitic, corrosion fatigue cracks, initiation and early growth mechanisms 7−78321
martensitic, effect of laser rad. 7−86411
martensitic, erosion-corrosion susceptibility, vibratory cavitation in corrosive media 7−132769
martensitic, fusion reactor grade, additions effect on mech. props. and struct. 7−71225
martensitic, HT-9, microstruct.-mech. prop. relations 7−78187
martensitic, neutron irrad., effect on mech. props. 7−71257
martensitic, phase transformations during long-term ageing *(Russian)* 7−100254
martensitic, rapidly solidified and ion implanted, phase stability 7−76355
martensitic, SCC in conc. $MgCl_2$ solns. rel to tempering 7−86405
martensitic, strain induced austenite transform. 7−132612
martensitic, SUS 403, 410JI, TAF, ferromag. props. 7−99416
martensitic-austenitic, austenite stabilisation 7−78081
microdistrib. of Ce, grain boundary segregation 7−93021
neutron irrad., creep and creep fracture props. 7−71256
nuclear reactor fuel cladding, Cr electrodeposits, corrosion performance 7−116546
OTEC systems, metallic materials for heat exchangers 7−86813
oxidation, morphology, comp. and cation diffusion in scale 7−100426
oxidation resistance using Zr-Cr composite oxide films, electrochem. form. 7−106672
physical and chemical props., effects of rapid solidification 7−86163
pipes, stainless steel, crack depth meas., methods and reliability 7−126390
piping systems, nonlinear damping and response predictions 7−89623
plastic zone form. studied by digital image processing 7−93054
plate, liquid-solid and liquid-solid-liquid systems, non-specular effects, comparative anal. *(Japanese)* 7−124672
power plant electrochemical corrosion of carbon steel and stainless steel in flow of demineralised water 7−126322
precipitation hardened, impact toughness, grain boundary segregation, cooling rate 7−132750
pulsed slow positron beam lifetime measurements 7−144162
pure hysteresis behaviour props. 7−91695
PWR fuel claddings, long term burnup response, FRAPCON-1 calcs. 7−116586
semi-austenitic, fatigue and fracture toughness props. 7−144555
solar collector, selective film 7−126642
solar materials, high flux photodegradation 7−144584
solute segregation under focused electron beam irrad. 7−106518
spent nuclear fuel storage containers, safeguards aspects 7−103235
sputter profiling of passive films, Auger electron spectroscopy, quantitative approach 7−138573
stress, nondestructive meas., harmonic analysis of induced voltage 7−126382
structure, mechanical props., corrosion testing *(Chinese)* 7−86322
structure formation on cooling and heating 7−132618
sub-surface defects, thermal-wave detect. and charactn., steel and Al coated steel samples 7−93238
substrate for Fe_2O_3-Cr_2O_3-Fe spectrally selective surfaces produced by chemical conversion 7−86830
surface roughness meas. using He-Ne laser 7−134717
surface roughness of ion beam sputtered materials, 3S method for incidence angle influence 7−132812
surface treatments, characterisation for BWR recirculation piping 7−89613
thermal conductivity, thermal diffusivity and sp. ht. 7−143432
thermal conductivity data, assessment of uncertainties 7−76885
thermal desorption spectroscopy for type 304 7−137710
tubing in LWR primary circuit, surface anal., ESCA study 7−129185
type 304 in vacuum wall, H isotope exchange under RF glow discharge conditions 7−75804
US imaging, freq. and spatial compounding techniques 7−123406
vacuum arc coatings, corrosion eval. 7−71397

stainless steel continued
vacuum chamber, outgassing rate after filming with water 7−102422
wear, fatigue studies on N^+ ion overlap implanted GCr15 steel 7−104787
wear and unlubricated friction of $Fe_{50}Ti_{50}$ surface alloy, N ion implanted 7−126277
wear mechanism in hydrogen, delamination crack form. 7−93108
welded joints, defect detection by AE 7−86541
welded joints, dissimilar metal, low cycle fatigue behaviour at elevated temps. *(Japanese)* 7−100350
welded joints, dissimilar metal, prediction of low cycle fatigue life at elevated temps. *(Japanese)* 7−100351
welded specimens, tensile strength, cyclic temp. variations effect 293 to 77 K *(Polish)* 7−86341
wire reinforced Al alloy composite, interfacial shear strength rel. to annealing temp. 7−132673
yield stress dependence on surface layer thickness 7−78370
Young's modulus meas., apparatus improvement 7−120727
Al-steel bimetallic transition couplings for cryogenic service 7−73362
Cr, passivity breakdown studies with Cl^- ion addition 7−138904
Cr-Mn type, low-cycle fatigue at low temp. 7−78218
Cr-Ni, low-strain-primary dislocation creep, 873 to 1023 K 7−86253
He implanted, electron beam heating, bubble form. 7−84003
Mn, high strength nonmagnetic, strength increment by warm working 7−144448
Mo, martensitic, fatigue crack propag. 7−106608
Mo, tempering, carbide form. and growth, TEM obs. 7−113581
N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
N_2^+ implanted, wear behaviour 7−106635
N_2^+ ion implantation influence on fatigue props. 7−76286
NaCl coated, hot corrosion 7−78342
Si_3N_4/stainless steel multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
TiN coated, cavitation erosion resist. *(Japanese)* 7−100391

standard microphones *see microphones*

standard voltage generators *see signal generators*

standardisation
conference on radionuclide metrology, Rome, Italy, June 1987 7−134336
EEG for diagnosis of epilepsy, transient detection and classification 7−101119
French 900/1300 MW nuclear plants, standardization of instrumentation and control structure 7−135523
image quality standardisation 7−122862
optical fibers, single-mode, standardization 7−75123
optical fibres, CCITT standardisation for telecomm. systems 7−82831
optical single-mode fibres, cut-off wavelength and mode-field diam. meas., standardisation issues, trends 7−82827
positron emission tomography, standardization of labelling procedures 7−133412
radioactive material packagings, leak test methods, review of standardization and requirements 7−74223
single mode fibre measurements and standardization 7−130354
^{14}C standardization using liquid-scintillation coincidence counting technique 7−135787
^{109}Cd standardization by $4\pi e$-X coincidence method, activity determ. 7−135779
^{109}Cd standardization using 4π(LS)e-x method 7−135778
^{67}Ga standardization by live-timed $4\pi e$-γ anti-coincidence counting 7−135780
^{125}I standardization, activity meas., photon-photon coincidence counting and efficiency extrapolation 7−135775
^{201}Tl standardization using $4\pi\beta$-γ coincidence method, two-dimensional extrapolation 7−135777

standards
see also CAMAC; constants; measurement standards; units (measurement)
abbreviations, especially symbols for units of measure in technical documentation 7−73312
AC power circuit breaker sound pressure level meas., IEEE standard 7−117423
alloy 600 tubing for PWRs, caustic intergranular corrosion, eddy current testing standards 7−113850
alloy 690 tubing for PWRs, caustic intergranular corrosion, eddy current testing standards 7−113850
ANSI N14.5 leak test standard for radioactive material packages, revision 7−74256
BALANCE−a computer program for the handling and supervision of analytical standards 7−121082
building materials, possible standards of natural radioactivity 7−127015
colorimetric tristimulus values, CIE method for calc. 7−73400
defibrillator standard Canadian user views 7−94012
dosimetry of RF electromagnetic fields 7−79092
electrosurgical electrodes, paediatric dispersive, standard for thermal performance eval. 7−93846
environmental noise limits for the onshore oil and gas industry 7−114153
experiments automation 7−80758
film, ISO test characters No. 1 *(German)* 7−89288
HDTV standard setting using psychophysical bases 7−86983
hearing protectors in EEC, standards and recommendations 7−123325
industrial noise standards 7−142097
kidney, effective renal plasma flow calc., prep. of quantitative standards 7−93908
lens model by CODEV, translation into IGES input file 7−110526
lighting quality influence on human well-being and performance 7−87095
microfilm image stability, residual thiosulphate ion effect 7−78521
national and international nuclear industry-related QA standards 7−74013
noise meas., appl. to computer and business equip. industry 7−142130
nuclear power station Class 1E equipment seismic qualification, IEEE recommended practice 7−141249
nuclear power station Class IE equipment safe part replacement, IEEE standard 7−141250
nuclear safety and International Atomic Energy Agency *(Hungarian)* 7−135493
optical fibre technology, role of standards 7−142030
optical fibres, refractive index profiling and dimensional meas. 7−90815
PC management of Right-to-Know information and data 7−140683
radiation protection standards, biological bases and implications for policy 7−114501
radiation safety of medical electron accelerators, 1981 standard 7−114503

standards continued
radiation therapy accelerators, elec. and mech. safety, TRS 86 standard 7−114494
radiopharmaceuticals, hospital cyclotron-produced, guidelines for safety standards evaluation *(Japanese)* 7−107247
RF EM field exposure standards 7−87244
RF EM fields, environmental monitoring for human safety, ANSI standards compliance 7−93963
RF exposure, power densities from sources in the environment, health factors and standards 7−71819
RF safety standard, ANSI, rationale and some problems 7−87245
stationary source noise emission meas. standards 7−142131
structure-borne sound emission, standard meas. methods development 7−117399
surface chemical analysis standard data transfer format 7−128549
terrestrial photovoltaic units, standard solar spectrum for efficiency and electric parameters meas. 7−114105
X-ray tube assemblies, quality criteria as reflection of equipment standards 7−87157
^{14}C standard, radioactivity concentration meas., using $4\pi\beta$-γ coincidence, internal gas counting techniques 7−89188
Ge γ-ray detectors, IEEE standard test procedures 7−109659
^{131}I, gaseous standard, preparation, appl. in checking sampling lines in reactors *(Czech)* 7−81587
SO_2 emission and air quality standards in Europe and Yugoslavia *(Croatian)* 7−139159
$^{233}U/^{235}U/^{238}U$ 1/1/1 isotopic reference material, preparation 7−126050
$^{235}U(n,f)$, fission cross section standards measurements, detectors 7−81465

standby generators
USA, nuclear plant emergency diesel generator reliability 7−103084

standby power supply *see emergency power supply*

star formation
Ara OB1 association, interstellar H I and CO obs. rel. to stellar assoc. form. by energetic event 7−72547
in Arp 148, luminous merging galaxies, IR evidence for star form. in nucleus 7−107954
Arp 299 (IC 694-NEC 3690), interacting galaxy pair, compact mol. gas struct. rel. to star form. burst 7−80100
B335, Bok globule, struct. and dynamics rel. to central protostar 7−88564
bimodal star formation in elliptical galaxies, constraints from V−R colours at high redshift 7−140287
bimodal star formation models, appl to G-dwarf problem, white dwarfs, and local dark matter 7−88406
binary stars formation, binary fission via inviscid trajectories 7−80039
bipolar molecular outflow sources, obs. in NH_3 lines *(Japanese)* 7−140213
Bok globules, ^{12}CO (J=1-0) obs. rel to rot. vels. and gravit. stability 7−88595
in Bok globules, contrib. of protostar to globule thermal IR emission 7−140225
Bok globules, mag. field meas. in three large star-forming globules 7−146073
boson stars with non-minimal energy-momentum tensor, scalar fields coupled to gravity 7−140116
in 3C 368, high-redshift radio galaxy and optical obs. rel. to merger and starburst 7−120585
CMa R1 star formation region, shock-front compression of interstellar mag. field 7−140226
comets formation in wind-driven shells around protostars, theory 7−88203
in compact molecular clouds, evidence from HCO^+ survey of IRAS Print Source Catalogue sources 7−134292
in dense molecular clouds, spatial distrib. and spectral evolution of IRAS point sources 7−120532
diffuse molecular clouds thermal instabilities and form. of mol. cloud cores 7−115557
in disturbed galaxies, bifurcations and chaos in deterministic model for star form. bursts 7−115593
in Draco molecular cloud, optical survey of IRAS point sources fields 7−115627
early-type galaxies, star form. and IR emission charact. 7−140292
early-type galaxies with dust lanes, star form. and dust charact. 7−72620
efficiency in compact H II regions 7−140204
in elliptical galaxies, star form. bursts as source of UV light 7−101895
elliptical galaxies, X-ray coronae and stellar shells form. 7−140272
ESO 217-G09, peculiar galaxy, star form. rate from CCD photometry and Hα luminosity 7−140255
ESO 495-G21 (=He 2-10), starburst galaxy, photometric and spectroscopic study 7−134298
G10.6−0.4, ultracompact H II region, temp. and density struct. of collapsing mol. cloud core 7−146071
G34.3+0.2, G45.07+0.13, ultracompact H II regions, rot. and expansion assoc. with star form. 7−94981
galactic centre, dust emission and the evidence for star formation 7−120566
galactic centre stellar population 7−120572
in galactic centres, star form. efficiency determ from 1.3 mm continuum emission obs. 7−146089
in galactic nuclei, absorpt.-line spectra anal. rel. to star form. 7−140261
in galactic nuclei, implications of IR charact. of nuclei of normal galaxies 7−72608
in galactic nuclei, morphological studies from narrow-band imaging 7−80105
in galactic nuclei, results from IUE obs. of S0/E galaxies 7−80082
in galaxies, fractal dimension of star-forming sites 7−120576
in galaxies, influence of star form. history on correl. between radio and far-IR emission 7−120584
in galaxies, star form. rates determ. from UV photometry 7−120577
in galaxies, stellar initial mass function secular variability 7−134305
in Galaxy, constraints on star form. rate vars. from stellar nucleosynthesis and Galaxy chemical evolution 7−115586
in Galaxy, star form. rate rel. to Galaxy chemical evolution and dark matter problem 7−95022
galaxy formation, effects of star form. and mass loss 7−72623
general characteristics (book) 7−134381
GGD 27 IRS 2, polarimetric mapping of assoc. IR refl. nebula (zz) 7−94978
in giant molecular clouds, effects on cloud distrib. in global spiral struct. 7−101885

r formation continued
globular cluster stars, primordial enrichment model for chemical inhomogeneity 7−80058
halo photoclusters, chemical enrichment, mass functions 7−127984
Haro 2, nE blue compact dwarf galaxy, star form. charact., surface brightness and colour distrib. 7−95014
HH 46-47, obs. of NH_3 emission assoc. with exciting star 7−80077
in high-redshift giant elliptical galaxies, implications of colour evolution for star form. history 7−120595
Horsehead Nebula and associated nebulosity, features and star form. 7−146078
IC 4628, nearby dense compact globule and embedded star obs. 7−94989
IC 5070 star formation region, polarisation obs. of Herbig Ae/Be stars *(Russian)* 7−145958
initial mass function, solns. of coagulation eqn. with time-depend. coagulation rates 7−88376
interacting galaxies, star form. IR spectroscopy 7−95015
in interacting galaxies, star form. through gas clouds compression by hot intergalactic medium 7−128038
interacting spiral and irregular galaxies, influence of interactions on star form. rates 7−101916
interstellar cloud collapse, effect of poloidal mag. field on stability of rot. self-gravitating disk 7−120525
in interstellar clouds, equilibria of rotating isothermal gas clouds 7−120557
interstellar clouds fragmentation, magneto-gravit. stability of self-gravitating plasma 7−127702
in interstellar dark clouds, results from unbiased surveys of star formation regions *(Japanese)* 7−140214
interstellar dense gas assoc. with star-forming regions, morphology and kinematics 7−88567
interstellar gas clouds implosions, contrib. to star form. 7−72399
interstellar molecular disks, viscosity prescription for self-gravitating disk 7−88103
interstellar OH outflows in star-forming regions, 18-cm obs. 7−146072
interstellar rotating clouds, nonisothermal collapse and fragmentation 7−101890
intervening galaxy towards QSO PHL 957, star form. charact. 7−128111
ionization-regulated star formation in magnetized molecular clouds 7−127843
in IRAS galaxies, contrib. of starburst component to IR luminosity functions 7−128126
IRAS galaxies, star form. charact., IR lumin. and star form. 7−101944
IRAS sources 19520+2759 and 01133+6434, pre-main sequence stars in mol. clouds, CO mapping 7−72656
L1551-IRS 5, pre-main-sequence star, CS obs. rel. to existence of rotating mol. disk 7−140235
L1689N, dense mol. cloud core, mol. obs. rel. to misalignment between bipolar overflow and mag. field 7−140227
LDN 1642, high galactic latitude dark cloud, star form. charact. 7−127995
in LMC, IUE obs. of star clusters. rel. to active star form. phase 7−115532
luminous protostellar regions, sub-mm CO line study of warm dense gas 7−128008
luminous stars, star formation and dark matter 7−140033
in M82, far-IR spectroscopy of star form. regions 7−107950
in M82, implications of CO obs. in starburst nucleus 7−72612
M82, nucleus IR emission and star form. charact. 7−140271
M82, starburst galaxy, 11.3 μm and [Ne II] 12.8 μm line fluxes meas. rel. to dust thermal emission 7−72613
M83, SBb/SBc galaxy, nuclear star form. regions, H II Brackett recomb. lines obs. 7−101928
in M86, elliptical galaxy, star form from cooling gas as cause of optical distortion 7−88637
magnetic braking of interstellar molecular cloud cores, effect of ambipolar diffusion 7−88578
in Markarian 52, starburst-nucleus galaxy 7−140282
Markarian starburst galaxies, far-IR luminosities for individual galaxies 7−101940
massive pre-main-sequence stars in southern galactic plane, new IR detects. 7−101768
massive stars, conditions for form. 7−145940
massive stars form. in M31 (Andromeda Galaxy), relation to IR emission from interstellar dust 7−120578
massive stars in galaxies, star form. rates and initial mass functions 7−72426
molecular clouds, fragmentation and gravit. instability 7−140208
molecules existence and spectra 7−128026
in Mon OB1 molecular cloud, search for high-vel. gas assoc. with pre-main-sequence stars 7−88592
naked T Tau stars, low-mass pre-main sequence unveiled, photometric and spectroscopic obs. 7−72428
neutron stars, birth, general review 7−146020
in NGC 1068, Seyfert 2 galaxy, 10 μm obs. of nucleus rel. to jet-induced star form. 7−72609
NGC 1068, Seyfert 2 galaxy, mol. cloud ring obs. rel. to star form. burst 7−80101
NGC 1866, LMC globular cluster superluminous giant candidates, nature and form. 7−101862
in NGC 2623, luminous merging galaxies, IR evidence for star form. in nucleus 7−107954
NGC 3628, edge-on interacting galaxy, star form. and radio-IR central sources positions 7−72585
NGC 4449, star formation in Magellanic irregular galaxy 7−128068
in NGC 7531, ringed nonbarred spiral galaxy, surface photometry and kinematics rel. to star form. 7−115592
OB-type stars, number density evolution and influence on star birth rate 7−79947
OB-type stars formation in nucleus of spiral galaxy IC 342, NH_3 obs. of related hot interstellar gas 7−88624
OMC-1, chem. comp. and star form. effects 7−107936
OMC-1, evidence for new outflow source 1.5′ south of Orion-KL from SiO obs. 7−128021
Ori OB1 association, kinematics of star form. region from proper motion meas. *(Russian)* 7−145948
in Orion molecular cloud, star form. rel. to cloud filamentary struct. 7−80072
Orion Nebula OB association, form rel. to H II region interaction with Orion Molecular Cloud *(Japanese)* 7−140215

star formation continued
Orion Nebula region, massive star form. and IR sources 7−120632
in PG 1613+65 (Mkn 876), low-redshift QSO, evidence for star form. burst in interacting galaxy 7−146102
planetary systems formation, mass distribs. in nebulae of other star systems 7−88528
Population I B-type stars form. sites, NH_3 obs. 7−120537
Population III stars, wakes of moving cosmic strings 7−127977
pre-main-sequence evolution of mass-accreting stars, appl. of polytropic model 7−140045
pregalactic stars formation, contrib. of H_2 to radiative cooling of pregalactic shocks 7−128053
processes related to Sun and planets (book) 7−88751
propagating star formation in galaxies, relation to interstellar supershells 7−140224
protoplanetary disks, orbital migration of protoplanets due to tidal interaction 7−88137
protostars, angular momentum and form. 7−107931
protostars formation in rot. interstellar clouds, collapse and fragmentation with nonuniform initial conditions 7−140042
protostellar accretion disks, observational appearance 7−127844
protostellar cloud, charged dust particles distrib. 7−88563
Q 133494+2438, radio-quiet quasar, star form. burst model from 1300-μm detect. 7−134315
RCW 108, IR obs. of active star formation site 7−107918
in ring galaxies, star form. assoc. with growth and disruption of interstellar clouds 7−128055
in ring galaxies, star form. rates from IRAS obs. 7−72611
S0 and S0/a galaxies, H II regions and star form., Hα obs. 7−72600
self-gravitating gas flows, unsteady, spherically symmetric, qualitative theory 7−127716
Serpens reflection nebula, mag. field charact. and star form., imaging polarimetry obs. 7−128028
in Seyfert galaxies, evidence from far-IR 7−72610
solar neighbourhood, bimodal star form. charact. 7−79951
in spiral galaxies, IRAS obs. rel. to star form. in starburst and nonactive galaxies 7−120601
in starburst galaxies, H I 21-cm emission survey rel. to star form. burst 7−80088
in starburst galaxies, initial mass function for early-type stars 7−145935
in starburst galaxies, model for far-IR and optical props. 7−101906
starburst galaxies, star form. and IR emission 7−107963
stochastic self-propagating star form., implications of shapes of spiral arm filaments in late-type galaxies *(German)* 7−80083
submillimetre compact sources in dark clouds L1551 and B335, CO obs. of mol. counterparts 7−120529
T Tau stars, ang. momentum loss determ. from rot. vels. meas. 7−88410
triggering by expanding supernova shell shocks 7−140044
two-phase model with variable infall rate *(Russian)* 7−127849
Type II supernovae, search for evidence of assoc. massive star form. 7−127931
Vel R2 association, evidence for pre-main-sequence status of RCW 34 exciting star 7−120383
VV 32, ring galaxy, CCD photometry rel. to star form. 7−72589
in W3(OH), compact H II region, implications of H42α (86 GHz) recomb. line obs. 7−128023
in W51 molecular cloud, implications of HCO^+ obs. 7−94992
X-ray clusters of galaxies, cooling flows, star form. during accretion onto galaxies 7−140308
X-ray clusters of galaxies, star form. rates in cooling flows during accretion onto galaxies 7−140309
X-ray clusters of galaxies, star formation numerical modelling in cooling flows accreting onto galaxies 7−140310
CO clouds and assoc. radio H II regions in star form. models 7−107926
D burning onset, relation to IRAS obs. of exciting stars of Herbig-Haro objects 7−127742

Stark broadening *see Stark effect*

Stark effect
see also atomic spectra; molecular spectra
$^{2S+1}L_J$ level splitting in crystal field 7−96599
α-angelicalactone, internal rotation, microwave spectroscopy 7−122512
acetamide, microwave spectrum, internal axis method anal. 7−82085
acetylene-HF, IR spectra and vibr. predissoc. 7−103494
alkali metal atoms, Rydberg states, linear Stark effect 7−129653
alkali metals, reson. lines Stark broadening parameters 7−135877
asymmetric line shapes for weak transitions in strong standing-wave fields 7−96606
atomic ground state, self-polarisation influence on Zeeman and Stark effects 7−82039
atoms, frequency shifts, QED thermodynamics 7−68253
atoms, Rydberg states in parallel elec. and mag. fields 7−122408
bromomethane, FIR laser stabilisation using Stark effect 7−117186
centrosymmetric mols. in glassy matrix, linear Stark effect, hole burning profiles 7−77606
chlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
chlorin, matrix isolated, stark effect, spectral hole burning 7−96757
chloromethane, FIR laser stabilisation using Stark effect 7−117186
cyclopropenylidene (C_3H_2), elec. dipole moment meas. from Stark effect in microwave spectrum 7−120272
cyclotron electron, isola in three-photon optical excitation 7−141775
cytosine, photoexcited states, electronic struct., CNDO/S3 calcs. 7−68218
diatomic molecule, excited rigid polar molecule, Stark effect, Rayleigh-Schrodinger perturbation theory *(Russian)* 7−109969
diatomic molecules, adsorbed on metal surface, line on Stark effect 7−77515
diatomic mols. one-electron, elec. props., nonadiabatic calcs. 7−68380
5, 6-dihydro-2H-pyran-2-one, microwave spectrum, dipole moment and conform. investig. 7−109882
2,5-dihydrofuran, rot., spectrum and ring-puckering vibr. 7−109876
1,4-dihydroxyanthraquinone, S_1←S_0 transition, Stark effect 7−90236
ethylene, equilibr. geometric config., reson. stark effect 7−129758
fluoromethane-d_0(d_3), laser lines, asymmetry and line shape effects, IR-IR double reson. 7−122581
formaldehyde-d_2, ground state Stark shift, laser microwave double reson. 7−122580
formaldoxime, asymmetry and line shape effects, IR-IR double reson. 7−122581
formic acid-d_1, ν_3 fundamental band, laser Stark and Fourier transform spectroscopy 7−122588

Stark effect continued
formic acid-d_2, asymmetry and line shape effects, IR-IR double reson. 7−122581
graded gap quantum well, enhancement of quantum confined Stark effect 7−125694
Hamiltonians, scattering theory 7−129651
heavy atoms, parity violation, optical rot. and Stark-interference study 7−122459
heteronuclear molecules, electronic struct., double reson. investig. *(German)* 7−129757
high-temperature Stark and radiofrequency-microwave double-resonance microwave spectrometer 7−103688
hydrogen like ions, line shape fine struct. effect 7−103438
iminopyruvonitrile centrifugal distortion, Stark splittings, microwave spectra, rotation, vibration 7−135925
inverse hook method, AC Stark interaction 7−130145
isobacteriochlorin in n-octane crystal, photochemical hole-burning spectroscopy, Stark effect 7−82723
long-lived Stark states detected at a positive energy 7−82040
methanol, asymmetry and line shape effects, IR-IR double reson. 7−122581
methanol, dipole moments, Stark spectra 7−122589
methanol-d_3, laser Stark spectra 7−117002
3-methylcyclopent-3-enone, internal rot. barrier, microwave spectrum 7−109881
4-methylisoxazole, rot. isomerism, ^{14}N NQR, electric dipole moment, microwave spectra 7−96654
methylsilylsulfide, internal rot., struct., dipole moment and microwave spectra meas. 7−74569
Morse oscillator, dynamic Stark splitting 7−122442
multilevel systems, resonant excitation, AC Stark splitting, peak asymmetry 7−141520
multiply charged ions-atoms collisions, partial cross sections calcs., Stark and core effects 7−90404
octaethylchlorin, in soln., hole burning, moments, modulation Stark spectra 7−129759
one-dimensional electrified chains, ordered and disordered pots., Stark-ladder resonances calcs. 7−124940
optical Stark splitting in Doppler-broadened, nondegenerate multiwave mixing 7−123113
1,2,3-pentatriene, internal rotation barrier, dipole moment, microwave spectra 7−135928
plasma-ion broadening, spectral line asymmetry 7−142505
pot. energy surfaces 7−122413
quantum well structures, electric field dependence of optical props. 7−144032
rare earth 4f energy level sequences, phonon interference, anal. 7−70211
rearrangement collisions in the presence of a laser field 7−141652
rigid symmetric-top molecules, Stark shifts, equation branch point anal. 7−66951
semiconductor superlattices, quadratic electro-optic effect due to quantum-confined Stark effect 7−113133
stellar spectra, influence of quadratic Stark effect on accuracy of element abundances determ. 7−127834
stimulated Raman scattering, power-dependent dispersion effects 7−90698
submillimetre laser pumped by CO_2 laser, Stark effect appl. to stabilisation 7−90643
two-dimensional thin layer with a hydrogenic impurity, LoSurdo-Stark effect 7−70372
two-photon two-level media, multiwave mixing, quantum theory 7−96965
zinc tetrabenzoporphin, substituted, matrix isolated, stark effect, spectral hole burning 7−96757
$Al_2BeO_4:Cr^{3+}$, alexandrite, ESR study, pseudo-Stark effect 7−138312
$Al_xGa_{1-x}As$-GaAs coupled quantum wells, Stark effect 7−106136
Ar, Stark-broadened line profiles, escape factors eval. 7−129655
BCl_3, RF discharge, photodetachment and Stark effect 7−97844
Ba, Rydberg states with anisotropic ion cores, Stark effect 7−96600
$Ba_3LaM_3O_{12}:Eu^{3+}$ (M=Ta, Nb), struct. of lumin. centres 7−99922
$Ba_3LaTa_3O_{12}:Nd^{3+}(Eu^{3+})$ cryst., rhombohedral perovskite, spectral luminesc. props. 7−119050
BiI_3 crystals, Stark structure in absorption spectrum 7−144022
Cs, four-level atoms, Stark spectroscopy and Autler-Townes interactions 7−68251
Cs, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Cs, wavefront reversal in six-photon wave interaction investig. 7−109850
Cu I and II, plasma jet, Stark width meas. 7−90037
Cu(I), spectral line shifts and Stark broadening calc. 7−74509
$Eu(ReO_4)_3$.DDPA adduct, luminescence spectra and energy levels 7−77643
Fe^{q+} q=15, 23, 25, dielectronic recombination, distorted wave approx. 7−82355
Ga, Stark broadening of neutral and singularly ionized lines 7−103432
GaAs multiple-quantum-well structs., high-speed optical phenomena 7−92283
$GaAs/Al_xGa_{1-x}As$ MBE quantum wells, elec. field-induced photolum. props. study 7−125774
GaAs-$Al_xGa_{1-x}As$ quantum wells, light scatt. by intersubband transitions, Stark effect 7−125750
GaAs-$Al_xGa_{1-x}As$ quantum wells, excitonic transitions, optically excited transport 7−137988
GaAs-AlGaAs, quantum well intersubband transitions, Stark shift, obs. 7−77522
GaAs-AlGaAs coupled quantum well waveguides, electroabsorption 7−90775
GaAs-AlGaAs MQW structs., MOVPE-grown, quantum confined Stark shifts 7−138421
GaAs-AlGaAs quantum wells, stark states 7−84788
GaAs-GaAlAs MQW optical modulators, effect of residual doping on optimum structure 7−82766
GaAs-GaAlAs quantum wells, external electric field, optical spectroscopy 7−85833
GaAs-GaAlAs quantum wells, Stark shifts, photoluminesc. study 7−106138
GaAs-GaAlAs superlattices, high perpendicular electric fields, elec. struct., transport props. 7−118563
GaInAs-InP quantum wells, photolum. quenching, electric field depend. exciton energy 7−144093
H, electron impact excitation, time-dependent Stark perturbed Stokes parameters 7−122720
H, excited atom, combined static and microwave field effect 7−116905
Stark effect continued
H excited parabolic states, photoionisation spectrum threshold resonance props., Stark effect study 7−141522
H metastable state meas. using Stark effect-based photodetector 7−82009
H, photoionisation, continuum-state selectivity in Stark fields by charge-shape tuning 7−68382
H, photoionisation spectrum in strong DC elec. field 7−141539
H positive column thyratrons, recovery processes 7−97823
H, Stark effect, 1/n expansion 7−141521
H, Stark eigenvalues, coupled-channel eqns. 7−68250
H, Stark states, coherent excitation in fast beam in elec. field 7−82037
H, stochastic ionisation, static field effects 7−116920
H^-, $^1P^0$ shape reson. stability in moderate elect. fields 7−74510
H_2, Autler-Townes effect, low-press. 7−141613
HF, equilib. configuration, mol. beam electric reson., Stark, Zeeman and hyperfine props. 7−82242
He, glow discharge, elec. field profile, Rydberg state Stark spectroscopy 7−111299
$He+N^{7+}$, Stark-mixed states, autoionis. 7−90050
In, Stark broadening of neutral and singularly ionized lines 7−103432
InGaAs doped single modulation quantum well, electron density transition, absorption spectra 7−144144
InGaAs/InP multiple quantum wells, optical Stark effect 7−125692
InGaAs/InP quantum wells grown by MOCVD, quantum-confined Stark effect 7−92285
InGaAs-InP quantum wells, VPE grown, quantum-confined Stark effect 7−84785
InGaAsP-InP quantum well modulators, MBE grown 7−110552
$InP:Er^{3+}$, ESR study 7−132132
K, Stark broadening by electron, H^+ and Ar II impact 7−129652
k, wavefront reversal in six-photon wave interaction investig. 7−109850
KOH, nucl. quadrupole struct., RF-microwave double reson., Stark modulated 7−135979
Kr, hollow cathode discharge, Stark shift, optogalvanic spectra 7−129633
Li, Rydberg states in flames, Stark struct. obs. by laser-enhanced ionis. 7−74474
Li, wavefront reversal in six-photon wave interaction investig. 7−109850
LiH, energy expansion convergence, elec. field gradient effects 7−82241
$LiLuF_4:Pr^{3+}(Nd^{3+})(Er^{3+})$ tetragonal crysts., impurity ion luminesc., absorpt. and stimulated emission props. 7−85793
MgO, $B^1\Sigma^+$ and $X^1\Sigma^+$ states, electric dipole moments, Stark quantum-beat spectra 7−68379
NH_3, avoided crossing, microwave Stark meas. 7−82080
NHO_3, ν_2 fundamental band, IR laser Stark spectrum 7−122587
Na atomic beams, Autler-Townes effect in optical pumping expt. 7−103433
Na, degenerate atomic level splitting in external fields *(Russian)* 7−122441
Na, degenerate levels, rearrangement in nonreson. and reson. fields 7−82038
Na, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Na, optical transition saturation by phase-diffusing laser field 7−116906
Na Rydberg states, low field Stark levels, RF induced quantum interference 7−96601
Na, wavefront reversal in six-photon wave interaction investig. 7−109850
Nd glass laser, inversion dumping and amplification dynamics of ns pulses *(German)* 7−130122
Nd^{3+}:YAG, $^4F_{5/2}$ and $^2H2_{9/2}$ levels, radiative decay probabilities *(Japanese)* 7−130129
NdOCl, Stark levels, mag. splitting factors 7−70258
Ne I Stark effect splittings, energy matrix, wave functions, group theory, radial and spin-orbit effects 7−135878
OCS, dipole moments, laser stark spectra 7−122590
OCS, isotopic species, CO_2 laser sat. Stark spectra and global rovibr. anal. 7−96758
PH_3, dipole moment, Coriolis interaction, laser Stark spectra 7−122586
PH_B, equilibr. geometric config., reson. stark effect 7−129758
Rb, nd^2D states, two-photon resonant three-photon ionisation, photoelectron ang. distrib. 7−82054
Rb, wavefront reversal in six-photon wave interaction investig. 7−109850
SiF_4, ground state, second-order Stark effect, IR spectrosc. 7−122529
Sr, autoionising states and AC Stark shifts, multiphoton ionisation spectra anal. 7−90061
$YAG:Er^{3+}$ Stark level ballistic phonon energy reson. absorpt. coeff. meas. 7−69839
$ZnS:Tm^{3+}$, emission spectra, dissolution of 4f-4f transitions in phonon sidebands 7−92738

stars
see also stellar .....
see also dwarf stars; giant stars; magnetic stars; multiple stars; neutron stars; Sun; variable stars; Wolf-Rayet stars
3 $M_\odot$ star, evolution from main sequence to white dwarf stage 7−88372
A-type, properties and peculiarities 7−101787
A-type main-sequence stars, mass loss and effects on stellar evolution 7−88416
AC 211 in globular cluster M15, evidence for accretion disk corona 7−72537
κ' Ari, occultation by Periodic Comet Halley (1982i), spectral obs. 7−72372
astrometry, quaternions as plate consts. 7−72317
astrometry, use of non-rotating origin on instantaneous equator 7−115209
ATLDB: Astronomical Target Location Data Base for rapid digital image retrieval 7−127744
B2-B9.5 main-sequence stars of solar chemical comp., line identification in far-UV spectrum 7−79957
B-type rapidly-rotating stars, axial inclinations and differential rot. from absorpt. line profiles 7−127868
B-type stars in LMC, uvby β photometry rel. to LMC distance modulus 7−88638
B-type stars in open clusters NGC 869, 884 and 2264, atm. He abundances and atm. parameters *(Russian)* 7−72553
Barnard's star, planetary system status report 7−127865
BD+58°0109, emission spectra of unusual late-type stars 7−145990
BD+62°0161, emission spectra of unusual late-type stars 7−145990
BD+63°0003, emission spectra of unusual late-type stars 7−145990
Belgrade zenith stars; catalogues of declinations and proper motions of 36 stars 7−94673
large black holes, tidal influence and nuclear processes in closely approaching stars 7−80026

stars continued
blue horizontal branch stars cluster in Galactic halo, BV photometry and radial vels. 7−88555
blue stars in stellar associations and complexes in M33, UBV photometry 7−146058
blue stragglers in ω Cen, spectra and radial vels. 7−88399
blue stragglers in NGC 5466 globular cluster, discovery 7−127859
boson stars with non-minimal energy-momentum tensor, scalar fields coupled to gravity 7−140116
bright galaxies stars, gravit. microlensing of active galaxies X-ray emission 7−120605
bright stars, B−V colours and interstellar reddening 7−146066
Bright Stars Catalogue stars, photometric data catalogue 7−72331
bright stars in LMC globular clusters, spectral classification 7−88132
brightest stars catalogue, characts. and distribution *(French)* 7−127748
Carina nebula (NGC 3372) region, IR study of stellar population 7−127846
Carlsberg meridian catalogue−La Palma, Volume 2 (book) 7−66853
catalogue error effects, reduction in astrolabe determ. of station longitudes *(Chinese)* 7−120251
central star of NGC 40, IUE obs. of planetary nebula nucleus 7−120541
CERGA photoelectric astrolabe time and latitude results (1983 March 1 to 1984 December 31) *(French)* 7−88080
α CMa (Sirius), Copernicus UV spectral atlas 7−94870
α CMa (Sirius), review of props. *(French)* 7−120392
convection in interior, mixing-length theory of deep convection 7−88107
θ Crt, interstellar absorpt. features 7−94975
14 CVn, interstellar absorpt. features 7−94975
declinations absolute determ. using astrolabe pair 7−88081
degeneracy inhibition by intense mag. fields 7−145810
distance blue stars in southern Milky Way, cross-identifications and corrigenda 7−72333
DM stars in UBV photoelectric photometry catalogue (1986), problems and errors 7−127746
α Dra, metal-weak AO III star, abundance anals. 7−79964
early-type stars, 443 nm diffuse interstellar band intensities rel. to polarisation and UV extinction 7−128014
early-type stars, physical parameters determ. for circumstellar clouds from UV spectra 7−120373
early-type stars, polarisation of light scattered from stellar winds 7−140041
early-type stars in SMC, stellar winds props. from IUE spectra 7−134225
early-type stars in starburst galaxies, initial mass function from IUE obs. 7−145935
emission line stars with unusual spectra 7−145990
extremely H-deficient stars, radial vel. survey 7−94904
faint blue horizontal branch stars in ω Cen, evidence for surface He deficiency 7−88399
faint blue stars in southern external part of LMC, far-UV and UBV obs. 7−80085
faint object processing software, description and testing 7−139939
Fatchikhin catalogue of stellar proper motions, magnitude eqn. 7−88369
fermion soliton stars and black holes, nontopological solns. in general relativity 7−102243
field horizontal-branch A-type stars, UV spectra of four objects 7−72430
field star-solar system encounter, implications for Earth 7−120286
FK4 right ascension corrections, Borowiec and Bratislava catalogues 7−79851
FK4 stars, Right Ascensions corrections for 120 stars from anal. of Time obs. 7−145804
FK5 reference frame corrections 7−88082
Fornax dwarf galaxy, distance modulus and red stars photometric characts., finding charts and positions 7−101899
galactic centre, stellar distrib. cusp examined 7−120575
Galactic disk stars, hydrodynamic and turbulent rel. to interstellar mol. clouds 7−128050
Galactic disk stars, past and present metal abundance gradients determ. 7−145946
in galaxies, contrib. to apparent number density enhancement of nearby quasars due to gravit. lensing 7−115620
in galaxies, contrib. to apparent number density enhancement of nearby quasars due to gravit. lensing 7−115621
Galaxy, IR structure modelling 7−128090
gamma-ray bursts optical counterparts, photographic density profiles 7−107981
γ Gem (A0 IV), model-atmosphere study 7−140069
general star counts, appl. to dynamical model of Galaxy mass density 7−120580
globular cluster stars, new interpretation of clusters metallicity histogram 7−146060
globular cluster stars, nonradial oscills. spectra rel. to tidal binary systems form. 7−127969
halo stars, equivalent width data 7−72414
halo stars, Li abundances determ. 7−120396
HD 100340, early-type high galactic latit. star, non-LTE abundance anal. 7−115373
HD 128220, double-lined binary with subdwarf O star, spectroscopic orbit and subdwarf parameters 7−94871
HD 128220B, sdO star, wind characts., spectral obs. 7−72422
HD 148937, Of star, assoc. interstellar environment characts. 7−79974
HD 190073, early-type emission line star, multiple line form. regions in circumstellar envelope 7−145964
HD 64488, 109995, 161817 field horizontal-branch stars, element abundance anals. with coadded DAO spectrograms 7−94873
HD 64488, HD 109995, HD 161817, field horizontal-branch stars, atlas of co-added photographic spectra 7−115385
HD stars in UBV photoelectric photometry catalogue (1986), problems and errors 7−127746
Herbig-Haro objects in mol. cloud NGC 1333, obs. 7−94988
hidden mass, constraints on stars in satellites to Galaxy as dark matter 7−128048
high-latitude star counts, appl. to density normalisation of thick disk of Galaxy 7−120617
high-velocity stars, orbit computations using model of Galaxy mass distrib. 7−115604
horizontal-branch stars in globular clusters ω Cen, contrib. to diffuse UV emission 7−140190
hot luminous stars, statistical equilib. calcs. for H to Zn in radiation driven winds 7−145933
Hubble Space Telescope guide stars, close binaries fraction and observational consequences 7−94965
stars continued
IRAS 18059-3211 (Gomez's Hamburger), spectra, polarimetry and photometry 7−128124
IRAS sources in Draco mol. cloud region, optical survey of stars and galaxies 7−115627
KME 14, obs. of occultation by Uranus and rings (1982 April 22) 7−88177
KME 15, 1982 May 1 occultation by Uranus, planetary atm. and ring characts. 7−120311
late-type stars, appl. of narrow-band Hα photometry to estimation of chromospheric activity 7−120381
late-type stars, Si III 1892 Å/C III 1908 Å emission-line ratio 7−88383
late-type stars distrib. 7−72395
line-of-sight 578.0 and 579.7 nm diffuse interstellar features 7−128001
LMC, globular clusters stars, spectral classification catalogues and identification charts 7−72327
LMC disk globular clusters, dynamical characts. star counts anal. 7−88604
LMC emission-line stars in HD and HDE catalogues, identifications 7−72614
low-mass stars, abundances of very light elements (D, He, Li) and cosmological implications 7−146121
low-mass stars, element abundances rel. to chemical evolution of galaxies 7−146092
low-mass stars and nucleosynthesis in Galaxy, conference, New Delhi, India (November 1985) 7−140354
luminosity function determination, new derivation of Lynden-Bell C method 7−94669
luminous blue stars in galaxy M33, distrib. 7−72605
lunar grazing occultations from South Africa (1985 to 1986) 7−145802
α Lyr (A0 V), model-atmosphere study 7−140069
M56, globular cluster, spatial struct., star counts anal. 7−88549
M-type stars, appl. of information theory to IR photometry 7−115252
massive main-sequence stars, hydrodynamic simulations of collisions with white dwarfs 7−127847
massive stars, conditions for form. 7−145940
massive stars in galaxies, review 7−72426
metal-weak stars, MK_m spectral classifications rel. to Stromgren photometry 7−134223
mini-soliton stars, scalar field nontopological solns. in general relativity 7−102241
names, origins 7−66889
NGC 2440, planetary nebular central star, spectra and parameters 7−88419
NGC 3918, planetary nebula and central star abundances and plasma characts., spectral obs. 7−120552
NGC 4546, almost edge-on SB0 galaxy, retrograde gas motion rel. to stars 7−140267
in NGC 6121 (M4), photoelectric BVRI sequence 7−140200
NGC 6752, globular clusters, horizontal branch stars with He I lines, abundance 7−88413
normal disk galaxies, 40-120 μm fluxes, stellar contrib. 7−120593
North Galactic Pole region struct., UBV star count data anal. 7−72604
O3 giants in LMC, spectral classifications 7−94876
O9 to A0 stars, effective temps. from spectral energy distribs. and model atmospheres 7−127833
O-type stars, Galactic distrib. compared with Wolf-Rayet stars distrib. 7−134235
OB stars, IUE spectra, mass to line-strength relations 7−134227
OB stars in Orion Nebula region, radio emission 7−120632
OB-type stars, evolution without convective core overshooting 7−134221
OB-type stars, evolutionary models with mass loss and overshooting 7−134222
OB-type stars, number density evolution and influence on star birth rate 7−79947
OB-type stars formation in nucleus of spiral galaxy IC 342, NH_3 obs. of related hot interstellar gas 7−88624
OB-type stars with X-ray pulsar companion, intermittent stellar wind accretion and long-term activity 7−88517
occultation by small bodies, diffr. effects 7−127686
old disk stars, UVW vel. components using radial vels. in three cardinal galactic directions 7−79949
ON-type blue stragglers, role of bifurcation in massive stars evolution 7−115359
Oort cloud perturbations, relation to episodic comet showers and 30 Myr cyclicity in terrestrial record 7−127777
ζ Oph, interstellar CN absorpt. lines obs. rel to cosmic microwave background temp. 7−88689
ζ Oph, line-of-sight C I obs. 7−88566
ρ Oph dark cloud, radio-emitting young star search 7−101884
σ Ori, omission from various historical star charts 7−88135
photoelectric sequences in B and V to 22nd magnitude 7−72544
photoelectric UBV sequence in SA 184, magnitudes and colour indices 7−72543
photoelectric UBVRI sequences, determ. in region of Galactic globular clusters 7−120522
photometric near-IR standard stars, obs. at San Pedro Martir 7−115528
photometric zero-point stars in Magellanic Cloud clusters, photoelectric UBV obs. 7−94966
β Pic, broad-band imaging of circumstellar disk 7−140043
β-Pictoris, possible planetary system formation, IR obs. *(French)* 7−94877
PK 75+35°1, peculiar planetary nebulae, UV spectrum of central star 7−101892
planetary nebulae central stars, He diffusion in stellar outer layers 7−115372
planetary nebulae nuclei, mass distrib. and evolutionary scheme 7−88390
planetary nebulae nuclei in Magellanic Clouds, masses rel. tonebulae evolutionary relations 7−120560
PN 0345+499, 2212+657, senile nearby planetary nebulae, photometry of central stars 7−115543
polarisation measurements use for foreground mag. field struct. meas. 7−128000
polytropic stars, uniformly rotating, struct. parameters from third-order perturbation theory 7−115367
Population II kinematic data round dynamical models fitting 7−127980
Population II stars, dynamical models 7−88544
Population II stars, physical parameters determ. from optical-UV energy distribs. 7−145950
Population III, explosions, implications for microwave background and nucleosynthesis 7−146052
Population III, IR background radiation 7−72542

stars continued
Population III, main sequence positions and evolution 7−146053
Population III local black hole remnants causing gravit. lensing of quasars 7−115497
Population III stars, wakes of moving cosmic strings 7−127977
population in early-type galaxies, metallicity determ. 7−128045
populations in spiral galaxies, relation to radio continuum emission 7−120612
position measurement with CCD camera *(Chinese)* 7−101692
pregalactic stars, effects on cosmic background temp. anisotropy in minimal isocurvature model for galaxy form. 7−120659
pregalactic stars, statistical clustering and astrophysical consequences in cold dark matter cosmologies 7−88705
pregalactic stars formation, contrib. of H_2 to radiative cooling of pregalactic shocks 7−128053
pregalactic supermassive stars, influence on metallicity histogram of globular clusters 7−146060
pregalactic-primordial low-mass stars 7−146053
primordial stars, pre-main-sequence evolution 7−88543
protostars, angular momentum and form. 7−107931
QSO candidates, identification as stars 7−72648
radial velocities of 258 stars near α Per, implications for space vel. of cluster (C 0318+484) *(French)* 7−88368
radial velocity meas. at E.W. Fick Observatory, results (1976 to 1984) 7−115368
radio continuum emitting stars; catalogue 7−79848
reddened early-type stars, far-UV extinction determ. using Geneva photometric boxes 7−94976
relative position meas. using MAP, atmospheric limitations 7−134131
RGU photometric space densities in field near galactic centre, comparison with Galaxy models 7−88367
SA 193 field, RGU photometry and galactic struct. 7−115584
SA 57 in North Galactic Pole region, CCD photometry 7−72404
Santiago declination catalogue, positions in declination of 412 FK4 stars (equinox 1950.0) 7−72325
scalar soliton stars and black holes, nontopological solns. in general relativity 7−102242
ν Sco, line of sight struct., UV meas. 7−88568
τ Sco (O9.5 V), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933
sdB and sdO stars as non-Roche-lobe-filling He stars 7−101764
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
secondary standards of absolute UV flux 7−94658
Sh 2-106, bipolar nebula, dust bar characts. and assoc. source IRS 4 nature 7−127996
shell stars in the Geneva photometric system 7−94885
SIMBAD and Guide Star Catalogue data merging for Tycho Input Catalogue prod. 7−127745
in SMC, detect. of shell-like features in NE halo from star counts 7−140249
SN 1987H, misidentification of foreground star 7−88378
soliton stars, nontopological solns. in general relativity 7−102240
southern A, F, G and K-type field stars, photoelectric uvby obs. 7−120370
star formation, luminous stars, and dark matter 7−140033
strange matter stars, theory 7−135238
strange stars, implications of pulsar glitches 7−107868
supermassive stars form. in young elliptical galaxies, role of evolution of clumpy interstellar gas 7−140206
symbiotic stars, hot component as hot subdwarf 7−145972
synthetic horizontal branches, constraints on galactic globular cluster system 7−88387
tidal disruption of stars by a massive black hole 7−107888
time observations with Photoelectric Transit Instrument at Torino Observatory, (1980.3 to 1985.3) 7−119922
Tokyo Astronomical Obs., Time and Latitude Bulletins (October-December 1986) 7−94637
Tokyo PMC catalogue 85, positions of 1007 stars obs. with Tokyo Photoelectric Meridian Circle 7−134150
transit time recording by grating vibrator and ADP demodulator *(German)* 7−79832
trigonometric parallaxes, systematic and external errors 7−140037
UBV star count data toward North Galactic Pole, obs. and anal. 7−79950
UBVR sequences in M31 and M33, photoelectric photometry 7−134279
UV bright stars in elliptical galaxies, contribs. to galaxies UV light 7−101895
variable stars among comparison stars for Be stars photometry, list of 24 stars 7−145986
weak-lined stars, photometrically-selected, spectral classification and metal deficiencies 7−88377
Be-deficient F-type stars, element abundances determ. 7−88404
H II regions exciting stars, wind energy dissipation and diffuse X-ray emission in hollow H II regions 7−94977
H-burning stars in young star clusters, evolutionary constraints from luminosity function 7−140189
He stars (2-4 $M_\odot$), evolution characts. 7−115376
OH maser search at 1665 MHz between galactic longitudes 233° and 326° 7−80117

starters *see starting*

starting
see also actuators; exciters; ignition
electrostatic precipitator design, operation and maintenance guidelines 7−133161
Paks nuclear power plant, semi-axial water cooling pumps starting, partial immersion of running wheels *(Hungarian)* 7−109337
Romanian national grid, connection of wind farms *(Romanian)* 7−114069

startup *see starting*

state estimation
chemical processes, constrained, multivariable, on-line optimisation 7−78458
hyperthermia, limited temp. obs. to predict complete temp. fields 7−106988
Stefan systems, one-phase, stochastic, estimation problems 7−83013
underwater tracking, adaptive state estimation 7−123310

state of the art studies *see reviews*

state-space methods
hydrology, linear diffusion water model observability 7−107442
optical fiber preform collapse process, identification 7−90807
optimal control of Stefan problem with state-space constraints 7−97533

static (atmospherics) *see atmospherics*

static electricity *see electrostatics*

static electrification
see also triboelectricity
AC corona charging of particles, mobility statistics meas. 7−69499
dusty gas flow through metallic/insulating pipes, static electrificatio study *(French)* 7−142382
geostationary satellite solar array differential charging process and coun termeasures 7−144860
metals, static elec. fields and excess charge, accumulation layers, thermo dynamic anal. 7−137995
non-conducting materials, neutral and ion beam SIMS 7−85936
polymer/metal contacts, charge transfer 7−99165
polymers, surface charging by electron irrad., secondary emission yiel determ. 7−85052
HfO_2, dielec. thin film coatings, surface charging in laser damag 7−69753
MgF_2, dielec. surfaces and thin films, surface charging in laser damag 7−69753
SiO_2, fused silica surface, surface charging in laser damage 7−69753

static induction transistors *see field effect transistors*

statics
see also hydrostatics
No entries

stationery *see computer stationery*

stations, power *see power stations*

stations, radar *see radar stations*

statistical analysis
see also measurement errors; probability; random processes; statistica theory of nuclear reactions and scattering
accommodative facility testing reliability 7−93730
adsorbed particles, surface migration, concurrent mobile and localise adsorptions 7−76618
Aeolian vibrations of overhead conductors, statistical methods 7−69032
amino acid sequences in proteins, multivariate statistical anal. 7−114178
astronomical data processing by superposed epoch method, effect of quas iperiodicity on statistical significance 7−127738
astronomical pulsed emission searches, determ. of period and amplitud from epoch folding for sinusoidal signals 7−120281
astronomy, statistical derivation of true distrib. of parameter incorporatin limiting values 7−94666
astronomy appl. of L_1 statistics 7−139946
atmospheric precipitation, construction of precip. intensity distrib. func tions 7−133790
atmospheric random field velocity meas., correlation extremal system mean error 7−139772
auditory brainstem responses from intensive care nursery babies, norma response patterns 7−145083
authenticity analysis of spectrum-like experimental curves 7−80756
bearing estimation, error intensity measures 7−110637
brain bioelectric potential oscills. in 3D factor space, statistical relation 7−126795
α-brass, recrystallisation texture, discrete distrib. transform. analysi 7−78042
brittle materials, fracture stress, Weibull parameters estimation usin weight function 7−126215
ceramic materials, thermal fracture in water quench test, Weibull statisti cal analysis 7−119337
ceramics, testing and strength prediction for reciprocating internal com bustion engine appl. 7−86505
chocolate chip cookie, statistical investigation, educational 7−88769
closed-form passive source localisation using range difference meas. spherical interpolation method 7−110662
color discrimination by optical pattern recognition 7−82509
complex systems investig., turbulence fields statistical modelling of atmo sphere and sea wave motion 7−133894
composite advanced materials, design allowable props. determ. 7−126038
contact surfaces, roughness, statistical anal. 7−104225
cross-variograms, 2D experimental, calc. by FORTRAN 77 progran 7−145676
cylinder, neutron transport, use of stratified sampling, Monte Carlo appl 7−102359
diagnostic test performance, criterion-free parameter-free distrib.-independ index, appl. to glaucoma visual data 7−93983
Durbin-Watson correlation test, probability calc. 7−115769
experimental data analysis, 'metrological statistics' approach using biase estimators 7−89184
fatigue, scale effect, stat. model based on hypothesis of local volume 7−78217
fatigue crack growth, short, intermittent, statistical model 7−83106
fatigue crack propagation processes, cross-effect of uncertainty factor *(Japanese)* 7−78190
fetal QRS detection, weighted periodgram method 7−107292
Flamant and Boussinesq problems soln. using Weibull fracture statistic 7−130593
flood frequency analysis, statistical intercomparison of EV1 estimators b Monte Carlo simulation 7−139641
fractional two-level experiment, planning matrix, factor ordering 7−67294
fracture toughness data, statistical anal. 7−97424
fracture toughness of steel, large specimen results prediction 7−144556
galaxies active nuclei, statistical significance of relation between X-ra luminosity and variability timescale 7−134310
glass fibres, fracture statistics, flaw distrib., dia. variation 7−132847
grain structure model, linear intercept length distrib. with log-normal form dia. distrib. 7−138730
hadronic and e^+e^- multiplicity distributions, statistical descriptio 7−121524
hadronic negative binomial multiplicity distributions 7−67655
holographic fringe formation and localisation, stat. optics approach i terms of speckle concepts 7−117162
homogeneous mean values, weights and asymptotics 7−72924
images recording by interferometric method in IR band 7−89251
in optical system modelling, tolerance optimisation *(German)* 7−68806
inertial quantum counter, noise immunity as time interval mete 7−130028

statistical analysis continued
information-theoretic description of EM fields in complex environments 7−122787
inhomogeneous means, asymptotic behaviour 7−72923
insolation data for Algiers, first-order Markov process modelling 7−101452
international round robin in primary-accelerometer calibration 7−121079
ionic crystals, plastic deformation, yield stress, statistical anal. 7−98309
IR meteorological satellite image analysis using fractal dimension and lower-order statistics 7−139741
J-integral invariance in plastic deform., three point bending 7−110866
Japanese atomic bomb survivors cancer mortality, BEIR risk models 7−71820
Kevlar fibre reinforced epoxy composites, failure mechanism, AE peak amplitude distrib. 7−144672
land slope frequency distribution, determ. from digital elevation models 7−87646
Landsat-4 multispectral scanner and thematic mapper data classification accuracy, expts. 7−79713
laser radiation transmitted by turbulent atm., statistics 7−72152
lightning, impulsive radiation in USW band 7−101451
locomotor coordination in rock lobster, walking parameters 7−107105
logarithmic means, limit theorems 7−72925
magnetotail, 2D model stability analysis 7−107667
measurement theory, correlation and regression in analysis of qualitative phenomena *(Polish)* 7−95536
metallic porous systems, microstruct. form. rel. to pressing and sintering conditions 7−71112
microwave communications, rainfall rate duration and intensity 7−107502
missing observations anal. methods for ambient O_3 data 7−94448
molecular fluoresc. lifetime distribs. resolvability using phase fluorometry 7−93632
multivariate analysis of PIXE data set 7−87869
multivariate statistical methods and astronomical appls., annotated bibliographical catalogue 7−72335
multivariate statistical methods in astronomy, annotated bibliographic catalogue 7−88131
multivariate tests in climatology 7−145695
neuronal spontaneous discharge patterns for single rat mesencephalic reticular neurons, statistical anal. 7−126801
neutron activation analysis, precision estimation using statistical props. of nuclear source *(Romanian)* 7−144782
NMR imaging phase correction method based on autocorrelation and histogram analysis 7−79031
observation series in irregular sequence, statistical analysis 7−87832
operational comparability techniques for determ. of meteorological meas. realtime acceptability 7−127524
optical multimode fibres, statistical correlation of optical field, vibr. effect 7−104013
optical particle counters, count variance evaluation *(Japanese)* 7−89314
optical resonator, statistical analysis of position of axis of natural waves 7−110408
optoelectronic devices, impulse and transfer characts., error of expt. estimates 7−102374
ordinary least squares method in astrometry, statistical problems and appl. to Paris-Astrolabe data 7−139937
perception, neuronal models, flip-flops between states with strange attractors, statistical properties 7−133179
photoelectron counting, second-order statistics of integrated intensities 7−103783
pollutants dispersion anal., statistical approach to Gaussian plume model improvement 7−86867
polymer composites, wear statistics, anal. 7−98332
portable γ-ray spectrometer for K, U and Th cone. assaying counting statistics 7−120146
principal component anal., optimal use *(French)* 7−95282
proof test loading factor optimisation, Bayesian analysis, reliability utility function *(Japanese)* 7−78406
pulsars, radio luminosity growth in later stages, statistical anal. 7−94936
radiation risk estimates comparison, life-table methods 7−133478
rainflow counting method, new definition 7−78396
random processes, periodically correlated, interpolation of estimates of probability characts. 7−128435
Rayleigh backscatter statistics of single-mode fibre 7−68858
reactor cladding tubes, nondestructive testing, sample homogeneity 7−129175
reactor core graphite, tensile strengths, statistical characterization 7−141161
resonantly absorbing medium under bleaching conditions, selective light refl. statistical modelling 7−130271
response statistics of non-linear, second-order transformations to Gaussian loads 7−97300
RF and envelope-detected signals with medical ultrasound appls. 7−114435
rivers annual discharge variations, statistical modelling of influence of irrigation 7−133789
rolling friction processes rel. to struct. factor, statistical characts., 7−91043
scalar tests in climatology 7−145694
school of coherent optics, Ustron, Poland (Sept. 1985) 7−66804
secondary electron emission, energy- and angle-selected 7−80945
seismic velocity bounds determination, appl. of statistical estimates of τ(p) and X(p) 7−87482
seismology, use of data from similar regions for earthquakes magnitudes exceedance rate probability distrib. determ. 7−145340
short fibre composites, strength and fracture, statistical analysis 7−71277
single-harmonic oscillator, repeated quantum meas., photon statistics 7−141829
solar activity effects on tuberculosis disease dynamics 7−78957
solar radiation on variously oriented sloping surfaces, statistical anal. 7−79549
sonar, coherence and time delay estimation 7−68929
sound field decay in enclosure *(Chinese)* 7−123323
speckle interferometry, phase difference between two interfering speckle fields, statistical props. 7−90507
speckle patterns, light scatt., correlation props. 7−122825
sphere, photon absorption, use of stratified sampling, Monte Carlo appl. 7−102359
spherical distributions, performance of linear discriminant function 7−95284
statistical analysis continued
statistical properties, spectral analysis, quantum statistics coupled oscillators 7−141555
steel, austenitic stainless, SCC failure time probability distrib. $CaCl_2$ conc effect *(Japanese)* 7−71373
steel, C pipes, pitting corrosion, statistical characts. of pit depth *(Japanese)* 7−71372
steel plate, mean life cycle prediction, data averaging increment 7−71426
stellar magnetic fields measured by photographic techniques, appl. of significance tests to α Car 7−134146
stratospheric aerosol meas. by laser radar, calibration and error analysis *(Japanese)* 7−79692
surface EMG signal adaptive modelling and classification 7−87335
surface weather data, appl. to tropospheric delay estimation for microwaves 7−114975
systematic errors, processing method for physical data *(Chinese)* 7−80721
tectonic plate motion circuit closure statistical tests 7−127495
texture analysis of diagnostic X-ray images by use of fractals 7−93922
two-phase gas/liquid film flow obs., nonintrusive optical meas. technique *(German)* 7−123798
underwater signal processing, uncertainty tolerance 7−123305
US images, B-mode, local texture anal. and classification, pathological states of thyroid tissue 7−101021
ventricular dynamics, charactn. in dogs using computerised variables and their statistical treatment 7−87064
VHTR graphite components, statistical considerations for design allowable stress 7−141162
vocal tract parameter estimation, ARMA model compared to LPC 7−100928
water quality criteria establishment, statistical methodology 7−86846
water quality time series, fractionally differenced models 7−94313
weak natural vertical VLF magnetic field, charact. determ. by statistical modelling 7−101638
wear, composite materials by abrasive particle stream, prediction by statistical probability methods 7−131229
Wigner-function description of quantum noise in interferometers 7−136241
X-ray diffractometer, short-term instability revealed by statistical method 7−104489
AgBr layers, evaporated, developed Ag cluster distrib. 7−139019
Al_2O_3 ceramics, bending strength, grinding effect, multimodal Weibull distrib. function analysis *(Japanese)* 7−93087
Al_2O_3, ceramics, fatigue in rotating bending, Weibull distrib. *(Japanese)* 7−78189
Al_2O_3, fracture strength, effect of surface grinding, statistical anal. using Weibull's multimodal anal. 7−84110
C fibre reinforced epoxy composites, statistical analysis of axial load fatigue data *(Japanese)* 7−144651
C fibre reinforced thermoplastics, adhesion at fibre/matrix, interface 7−106579
Cu, recrystallisation texture, discrete distrib. transform. analysis 7−78042
GaAs, solid particle erosion, strength evaluation, statistical method 7−113730
Na_2O-CaO-SiO_2 glass, fracture strength rel. to polyaxial stress states 7−132721
Nb, diffusion of O, statistical analysis 7−143098
Si, activation characts. for P diffusion 7−143097
Si, solid particle erosion, strength evaluation, statistical method 7−113730

statistical distributions *see statistical analysis; statistics*

statistical mechanics
see also classical theories of fluid structure; lattice theory and statistics; Liouville equation; liquid theory; master equation; quantum statistical mechanics; renormalisation
ϕ_2^4 field theory, kink sector, differential geometry and statistical mechanics methods 7−134919
amorphous insulators, electron transport, statistical thermodynamics 7−92207
area-preserving twist maps, hyperbolic cantori with dimension zero 7−120921
asymptotic freedom beyond perturbation theory 7−67503
bimolecular reaction kinetics in condensed media with irradiation, statistical theory 7−100512
binary sequences, low autocorrelation type, statistical mechanics and config. space anal. 7−80582
Boltzmann equation, Chapman-Enskog treatment for fast variable elimination 7−73291
Boltzmann-Gibbs entropy in self-organization processes 7−80715
brillouin scattering from fluids subject to large thermal gradients 7−130828
Brownian quasi-particles and quantum quasi-particles 7−128430
canonical perturbation theory in statistical mechanics 7−73176
chaotic system with two kinds of interacting modes, direct interaction approx. 7−102301
charged particle solutions., transport processes, statistical mechanics, electrophoretic fluctuation dynamics 7−80693
chemically reactive fluids, solvent effects, statistical mech. study 7−100542
classical 1D systems with pairwise additive pots. in external field, thermodynamics and struct. 7−73177
classical chaos, mathematical models and simulation 7−89114
classical Coulomb systems, shape dependence of dielectric susceptibility 7−73182
classical fluids, nonuniform thermodynamic states, higher spatial dimensionality effects 7−104508
classical particles, symmetry and indistinguishability 7−134639
cluster expansions, Mayer, high temp. Gaussian 7−67191
coherent state path integrals, convergence props. 7−134637
completely analytical interactions, constructive description 7−95453
complexity, rate of energy exchanges and stochasticity 7−80584
composite systems, computational complexity, tree width of interaction scheme 7−134642
computer complexity theory application 7−80591
conf., Boston, MA, USA (Aug. 1986) 7−80158
conference on fluctuations and stochastic phenomena in condensed matter, Barcelona, Spain (May 1986) 7−134359
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
conformal invariance and critical behavior 7−80590
connected clusters at the percolation threshold, fractal dimensionalities 7−121008

statistical mechanics continued
constrained N-particle systems, Hamiltonians 7−89107
cosmological particle creation and spontaneous entropy generation, statistical subdynamics anal. 7−89095
Coulomb systems, Fluctuation-Dissipation theorems 7−128428
critical 2D statistical models, conformal invariance and finite size effects 7−134641
critical phenomena, coherent anomaly method 7−121035
critical phenomena, differential formulation of dynamic renormalisation group 7−121036
cryogenic expansion machines, thermodynamic anal. of nonequilibrium 2-phase flows 7−117648
crystal-melt interface, mol. theory, Ising model of melting, statistical mechanical study 7−76346
damped nonlinear oscillator, master eqn., classical statistical mechanics anal. 7−108305
degenerate diffusions, unique ergodicity 7−95524
dense noble gases, mean field model for many-body forces 7−80580
dense plasmas, thermodynamics, transport coeffs. and dynamic correlations, review 7−83430
discrete self-trapping eqn., chaos-order transition, Lyapunov exponents anal. 7−121041
disordered systems, phase transitions and critical phenomena, perturbative treatment 7−121039
DNA dynamics, soliton-like excitations, relative disorder and statistical mechanics 7−119704
dynamical factorization of the evolution superoperator in inhomogeneous systems 7−89106
dynamical system interacting with external time-dependent field, generalised correlation subdynamics 7−108388
dynamical systems, relation to statistical mechanics, recent developments 7−80589
dynamical systems, topological dimens. and local coords. from time series data 7−120922
dynamical systems and localization model, thermodynamic limit, Lyapunov exponent spectrum 7−120967
dynamical systems with relaxation time, K-mixing dynamical systems, Hamiltonian systems 7−120926
electron swarm in Ar-like gas, Monte Carlo simulation 7−80692
energy and quasi-energy spectra, universality of fluctuations 7−140595
energy exchanges and localized model in statistical thermodynamics *(French)* 7−140646
equilibrium polymerization in a solvent, Bethe lattice soln. 7−73257
Euler flow in 2D, invariant measures in the vorticity formalism 7−75595
explicit dissipative structures, class of 1D Hamiltonian systems of chaotic type 7−120920
Feigenbaum phenomenon, extended renormalisation group study 7−73213
ferromagnetic Ising model, master eqn. derivation from path probability method 7−85225
ferromagnetic lattice systems, decomposition property and equilibrium states 7−89138
finite Z-invariant six-vertex lattice model, partition fn. and Bethe ansatz 7−120982
four-scale Cantor set, singularity spectrum, thermodynamic formalism 7−95530
gasdynamic separation, statistical mechanics study *(Japanese)* 7−130765
gaseous expansion expt., comparison with statistical and classical thermodynamics *(French)* 7−140647
Gaussian random fields, peak correlations, N-point fns. 7−134650
generalized random energy model, thermodynamics study 7−73214
generic interactions, third law of thermodynamics 7−102292
Gibbs systems in 1D of molecular type, finitary isomorphism problem 7−128426
grand canonical ensemble, correlation functions, Vlasov limit 7−73184
Hamiltonian systems with an odd Poisson bracket 7−73192
Hamiltonians, time-depend., general dynamical invariants derivation 7−67180
hard disk fluids near hard wall, struct., $y_w(z)$ correl. function 7−108386
hard-sphere gas, mol. distrib. investig. 7−80229
hierarchical lattices, real space renormalization 7−67251
hierarchical structures, Vogel-Fulcher law for diffusion constant 7−73284
higher order moments and maximum entropy inference, thermodynamic limit approach 7−67261
ideal gas, D-dimensional, thermodynamic props., parastatistics anal. 7−134638
infinite atomic chain, intermediate quasiperiodic-random struct., Fourier spectrum 7−134635
infinite particle system with Frenkel-Kontorova potential, soln. of FK problem 7−72959
inhomogeneous hard rod systems, dynamics and Boltzmann eqn. 7−120925
interacting particles, influence of box size on ground state energy 7−120919
intertwining relation for collisions in finite volume 7−102220
irreversible kinetic coagulations in presence of source, Smoluchowski eqn., power-law distribs. 7−144761
irreversible processes, collision superoperator in subdynamics of inhomogeneous systems 7−80716
Ising system, inhomogeneous, statistical mechanics, correspondence with Eigen's evolution model 7−139177
isoperimetric problems, some identities 7−80586
Kac ring models, application to cellular automata 7−95452
kink-bearing systems with double well and asymmetric pots., class. stat. mech. 7−102177
knot invariants and crit. statistical systems 7−80665
Kuramoto-Sivashinsky eqn., spatio-temporal chaos, localised structures, statistical model 7−80616
lattice gas, inequalities to determine ground state 7−121004
lattice models, free energy calcs., boundary conditions 7−120977
lattice statistical mechanics, number theory in exactly solvable models 7−73270
Little-Hopfield model, exactly solvable asymmetric neural network 7−108428
Lyapunov exponents for $n=3$ discrete self-trapping eqn. 7−108424
m-dimensional diffusion, first hitting times and positions of concentric spheres, limit theorems, stat. appls. *(French)* 7−95510
magnetotail, 2D model stability analysis using statistical mechanics 7−107667
many body bound state problems, statistical features of effective Hamiltonian 7−140596
Markovian evolution in phase space of particles distrib. 7−120956
maximum entropy soln., Boltzmann-Gibbs approach 7−121027
Maxwell-Boltzmann equation, Cauchy problem 7−128427
McKean model, N-particle correlations 7−73178
mixtures, thermodynamic properties, conc. fluctuations method calc. 7−124551
molecular dynamics simulation of statistical mech. systems, Summer School, Varenna, Italy, (July-Aug. 1985) 7−66805
molecular systems, normal mode freqs., statistical mech. trajectory method 7−108100
multioscillator system, complex Hamiltonian, real symmetric random matrix correlation props. 7−140619
n-vector model, equation for pair correlation function 7−77189
nonequilibrium, dense monatomic fluid system 7−95455
nonequilibrium mechanics, time-dependent formulation of analytical continuation 7−80585
nonequilibrium statistical mechanics, role of initial conditions, hard spheres model *(French)* 7−140592
nonequilibrium statistical mechanics, time-local view, generalized Langevin eqns. 7−73180
nonequilibrium statistical mechanics, time-local view, transport and relaxation 7−73179
nonequilibrium statistical operator, derivation from extremum of von Neumann entropy 7−102370
nonferromagnetic lattice systems of continuous spins uniqueness 7−67221
noninteracting infinite particle systems, large deviations 7−95454
nonuniform classical fluids, pressure tensor definition 7−80581
periodically kicked rotor, level repulsion in chaotic time-dependent systems 7−67182
polaron effective mass, functional integral approach to statistical mechanical model 7−98826
polyacetylene, statistical mechanical model, existence and uniqueness of Gibbs states 7−73181
polymer chains, inhomogeneous, statistical weights for primary structs. 7−122754
polymer melts and glasses, statistical mechanics description 7−137201
power spectrum for renormalisation group eqns., universal scaling factors 7−120923
probabilistic method to calc. probability distrib. of gas 7−88772
quasi-integrable systems, transitional periodic orbit amplitudes and semiclassical energy spectrum 7−140594
random packings for atomic substances 7−83694
relation to quantum statistical mechanics, high temp. limit 7−89108
response theory, Green function approach 7−128429
self-organising systems, structural information 7−73183
self-organization and information 7−73303
self-similarity, dynamical and stochastic systems, statistical-thermodynamics formalism 7−128492
semi-Markov walk, with two delaying barriers, ergodic theorem *(Russian)* 7−120936
simple molecules, shock compression, statistical mechanical model 7−74727
sinh-Poisson eqn., vortex equilib. states, exact solns. 7−108389
Smoluchowski coagulation eqn., exact soln. 7−120924
Smoluchowski diffusion in infinite system, evolution and thermodynamics in Langevin model 7−95525
Smolukhovskii integral equation, transition to Einstein-Fokker-Planck equation, admissibility 7−108385
special purpose computers, statistical physics appls. 7−89104
spherically-symmetrical solar wind-like plasma systems, theoretical non-Maxwellian particle vel. distrib. functions 7−104383
stationary nonequilibrium states and phase transitions, statistical mechanics framework 7−134712
strange sets, scaling struct. and thermodynamics 7−128488
subdynamics in the time-dependent formalism 7−102368
system theory-statistical mechanics link through Kolmogorov entropy 7−134636
Temperley-Lieb algebra, direct sum representations 7−108438
thermodynamics, lagrangian submanifolds, singular, geometrical classification 7−115941
travelling salesman problem, simulated annealing algorithm for optimisation problems 7−80583
truncated Kramers-Moyal expansions, continuum approx. to Poisson process 7−80592
umbral calculus and the theory of multispecies non-ideal gases 7−67181
universal mass-ang. momentum relationship, thermodynamic origin 7−127700
unstable particle systems, transport approach, relation to statistical mechanics S-matrix formulation 7−140593
viscoelasticity, nonequilibrium classical statistical mechanical model 7−72991
Wilson's differential eqn., derivation, series solns., convergence of Mayer expansions 7−134462
N-Δ-π gas, classical, equilibrium characteristics, Δ isobar effects 7−140593
ν oscillations, statistical mechanics anal. 7−89412
Na vapour, transport props., second virial coeffs., Hulburt-Hirschfelder pot. calcs. 7−123827

statistical methods *see statistical analysis*

statistical models
2-dimensional critical statistical theories, correl. fns., conformal invariance, operator product expansion 7−121464
conformal anomaly, perturbative eval. at crit. points, appl. to random systems 7−121338
extended hadrons, phase transitions, critical behaviour, exponential growing mass spectrum 7−116139
hadronic multiplicity distributions, clan masses, negative binomial; distrib., compound Poisson-logarithmic distrib. 7−135169
intermittency model for rapidity particle density fluctuations 7−140902
lattice gauge theories, SU(2) and SU(3), overrelaxation and Monte Carlo simulation 7−121363
multiplicity distributions in high-energy collisions derived from the statistical bootstrap model 7−140903
repulsive core between fermion clusters, relative distance ambiguity, effective potential 7−135058
virial theorem, scale symmetry and the level spacings in the statistical model 7−128865
K^-p, 32 GeV/c, jetlike structure of final hadronic states, collective variables, e^+e^- data comparison *(German)* 7−128924
p binding energy as quarkonium system in the statistical model 7−73612

statistical models continued
$\bar{p}p$, 32 GeV/c, jetlike structure of final hadronic states, collective variables, e^+e^- data comparison *(German)* 7−128924
$\bar{p}p$ exclusive reactions 32 GeV leading (anti)proton properties, statistical model of independent particle emission 7−116196
$\bar{p}p \rightarrow$jets, low transverse energy, multiplicity distrib. 7−81253
$\bar{p}p \rightarrow X$, secondary hadron transverse momenta correlations 7−95952
$\pi^- p \rightarrow \pi^0 n$, charge exchange reactions, up to 200 GeV/c, modified coherent drop model 7−128914
$\bar{p}p$ collisions, fireballs, stochastic decay, limiting fragmentation 7−81244
$\bar{p}p \rightarrow X$, multiple prod. and multiplicity distrib., Monte Carlo simulation model 7−89533
$\bar{p}p \rightarrow X$, space-time development of transverse expansion of hadronic fluid, hydrodynamical model 7−89534

statistical tests *see statistical analysis*

statistical theory *see statistical analysis*

statistical theory of nuclear reactions and scattering 7−67825
anomalons in relativistic heavy-ion collisions, review 7−67864
chaotic motion and statistical nuclear theory 7−129015
complex particle emission probability, condensation probability, energy and mass dependence 7−129014
compound nucleus, statistical particle and gamma ray emission, temp. dependent effects 7−121926
compound nucleus reactions, Gaussian versus non-Gaussian statistics 7−81364
compound nucleus temperatures, level density parameter temp. dependence, partial widths, branching ratios 7−116368
conf. on quantum chaos and statistical nuclear physics, Cuernavaca, Mexico, Jan, 1986 7−128188
curvilinear coordinate hydrodynamics 7−134515
density-matrix approach to thermal equilibrium states 7−67782
direct two-body collisions, nucleon and momentum transport, Fermi gas model calcs. 7−116365
energy spectra identification of $\sigma(E,\Theta)$ 7−102855
excited compound nuclei, cluster emission, evaporation model, cross sections from (^{40}Ar,X); and (^{3}He,X) *(German)* 7−129092
excited nuclear states, model-free characts. from final-particle ang. correlations 7−135263
exciton model, preequilibrium γ rays with angular momentum coupling 7−67831
exciton model for slow particle emission in nuclear reactions 7−116370
exciton model particle-hole state densities, pairing corrections, reactor appls. 7−67791
Fermi gas model, level density parameters *(Chinese)* 7−109138
finite nuclei, classical analogues of RPA operators and Vlasov eqn. 7−135234
fission harmonic oscillatory potential and fission rate at large friction constant 7−96051
fragmentation of highly excited nucleus, statistical anal. 7−141081
fusion-fission processes, systematic features of statistical fission model 7−81363
giant resonance damping widths, nuclear response in Landau Vlasov dynamics 7−135281
Hauser-Feshbach compatible unified exciton model 7−121778
Hauser-Feshbach limit of statistical nuclear reaction theory, class of integrals 7−109137
heavy ion central collisions, classical molecular dynamics anal., fusion-fission, fragmentation, vaporisation 7−121911
heavy ion collision system, entropy, cascade model, temp. field, phase space partitioning *(German)* 7−129091
heavy ion collisions, baryon multiplicity distrib. in nucl. matter in stopping energy regime 7−89581
heavy ion collisions, double differential cross sections for α and d emission, coalescence model anal. 7−135351
heavy ion collisions, intermediate energy, dynamical and statistical aspects, review 7−121918
heavy ion collisions, intermediate energy, nonequilib. particle emission, quantum statistical aspects 7−141104
heavy ion collisions, intermediate energy, space-time evolution and thermodynamical aspects, fragment temps., multifragmentation model anal. 7−141079
heavy ion collisions, negative binomial multiplexity distributions, intranuclear cascade, distribution shape 7−129053
heavy ion collisions, pn and d emission, Hauser-Feshback anal. 7−121904
heavy ion collisions, relativistic, quark-gluon plasma formation, hydrodynamical model anal. 7−96090
heavy ion collisions, ultrarelativistic, parton system props. 7−109215
heavy ion high energy collisions, 4π observables in Vlasov-Uehling-Uhlenbeck theory, hadronic matter 7−121915
heavy ion reactions, exciton model approach to the moving source model 7−116369
heavy ion reactions, intermediate energy, statistical origin of complex particles 7−141038
heavy ion reactions, semi-classical dynamics based on Vlasov equation 7−81424
heavy ion-nucleus reactions, pairing, macroscopic description, superfluid nuclei pair transfer 7−129076
heavy-ion collisions, 0.4 to 10 GeV/nucleon, inclusive proton spectra, connection with reaction dynamics, hydrodynamical model anal. 7−121924
high energy collisions, cumulative p and nucl. fragment prod. mechanisms 7−135262
high energy collisions, pion prod. and nucl. eqn. of state 7−121923
high-energy heavy-ion collisions, space-time picture, scaling properties 7−109214
hot nuclei, statistical fragmentation, microcanonical Monte Carlo sampling 7−135291
hot nuclei, statistical fragmentation, microcanonical Monte Carlo anal. 7−141082
intranuclear cascade model for hadronic events 7−73747
isospin mixing in the unified exciton model 7−116264
large scale nuclear collective motion, local RPA and transport theory 7−140984
macroscopic approach to statistical phenomena 7−141037
multicomponent transport theoretical approach to ultrarelativistic heavy ion collisions 7−67874
multiparticle balance equation solution, intranuclear cascade method, quantum balance eqns. 7−121777
multistep compound nucleus reactions, probability flow 7−140621

statistical theory of nuclear reactions and scattering continued
$N \neq Z$ nuclei, dipole giant resonance in isospin channels and μ^- capture, TDHF calc. 7−135280
nuclear dissipation, Boltzmannian and second RPA approach unification, Hartree-Fock eqn. of motion 7−135236
nuclear level densities and level spacing distributions, statistical theory tests at low excitation energies 7−128961
nuclear matter with momentum-dependent interactions, generalised non-equilib. eqn. of state 7−135241
nuclear second moments for pre-equilib. reaction theories, level densities 7−141036
nucleon fusion probability in high energy collisions 7−73748
nucleus-nucleus collisions, high energy, rapidity distributions, hydrodynamical model anal. *(Chinese)* 7−102896
precompound angular distrib. model 7−116371
precompound nuclear reactions, statistical theory, Grassmann integration method 7−141039
prompt fission neutron emission, mechanisms, review 7−73804
reduced width-amplitude distrib., test 7−121779
relativistic heavy ion collisions, π emission, deconfinement transition, hydrodynamical eqns. 7−141063
relativistic nuclear hydrodynamics in curvilinear coords. 7−81362
temperature dependent effective interaction, Landau-Vlasov eqn. and Brueckner renormalisation 7−121761
temperature measurements in heavy ion collisions, distortions from fragment decay 7−81433
transverse momentum distributions in intermediate-energy heavy-ion collisions 7−96100
ultrarelativistic nuclear collisions, dilepton emission and multiplicity correl., deconfinement phase transition 7−116317
ultrarelativistic nuclear collisions, hydrodynamic scenario 7−81430
ultrarelativistic nuclear collisions, transverse hydrodynamics with first order phase transition 7−121880
unified pre-equilibrium and equilibrium reaction models, effects of angular-momentum conservation 7−109139
Vlasov theory, quantum effects, response fn. and excitation energies 7−109060
workshop on semiclassical and phase space approaches to nuclear dynamics, Aussois, France (Mar. 1987) 7−134349
(α,α), optical phase shift fn. in Glauber theory 7−135341
(α,f), K-distrib. in fission, γ-multiplicities, statistical anal. 7−109244
(α,p), on A=54-63, shell effect in transition matrix of exciton model 2-body residual interaction 7−116443
(α,ρ), shell effect in transition matrix element of two-body residual interaction 7−96082
(h, X), hadronization in projectile fragmentation region, outside-inside cascade, Lund model 7−135329
(h, X), scaling and mean normalised multiplicity 7−109173
(h,X), secondary slow π absorption, cascade-evaporative model calcs. 7−96075
(n,2n) cross sections, shell effect, integrated preequilibrium statistical model *(Chinese)* 7−96064
$(\vec{n},\vec{n})$, on A=112-126, 3 MeV, anal. powers and diff. cross section, optical anal. 7−102856
(n,n′), exciton model, multi-step energy correl., double-differential cross sections calcs. *(Chinese)* 7−116367
(N,X), exciton model, angular distributions and data comparison at medium energies, preequilibrium reactions 7−129052
(N,X) interaction at 70 GeV, pion energy distrib., fireball states 7−129030
(p, α), on A=27-232 nuclei, thermalisation process in inclusive reactions, hot source model 7−67818
(p, ^{3}He), on A=27-232 nuclei, thermalisation process in inclusive reactions, hot source model 7−67818
(p, n), giant resonance isospin energy splittings in hydrodynamic model 7−135289
(p,p), A=23-110, $E_p \sim 6$ MeV, threshold isotopic effect, contrib. to scatt. from compound nucleus, stat. anal. 7−121819
(p,p′), exciton model, multi-step energy correl., double-differential cross sections calcs. *(Chinese)* 7−116367
(p,X), 400 GeV, transverse energy distribs., folding model 7−135330
(p,X), negative binomial multiplexity distributions, intranuclear cascade, distribution shape 7−129053
(π^-, π^0), giant resonance isospin energy splittings in hydrodynamic model 7−135289
^{64}(^{12}C,X), 118 MeV, residue mass distrib., γ-ray spectra anal. 7−141101
Ag(^{40}Ar, X), 337 MeV, ^{4}He−^{1,2,3}H, ^{4}He−^{4}He energy, angular correlations, nuclear stratosphere, statistical model 7−121893
Ag(^{12}C, pX), 4.5 GeV/c/N, directional coherence of emitted protons, fireball, q-g cluster 7−129078
Ag(D,X), D=^{12}C, ^{18}O, E/A=30-84 MeV, isotope yields as probe of reaction dynamics 7−141073
Ag(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
Ag(p,X), 300-1400 MeV/c, charged particle multiplicity, negative binomial anal. 7−129031
^{27}Al (p,p′), E_p=200 MeV, exciton model reformulation to include energy-momentum coupling 7−129032
^{27}Al(^{40}Ar,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{27}Al(A,X), 42-151 MeV/nucleon, A=^{20}Ne, ^{40}Ar, fragment production 7−121905
^{27}Al(n,2n), cross sections near 14 MeV, meas. and partial statistical model comparison 7−102883
(^{40}Ar,X), 1.88 GeV/N, anomalon production in nuclear emulsion, projectile mean free path 7−135348
(^{40}Ar, X) in emulsion, 1.8 GeV/N, Z=2-18 fragment anomalous interaction mean free paths 7−141102
Ar(p,X), multiplicity distributions of produced particles and energy loss in proton-nucleus collisions at 200 GeV/c *(Chinese)* 7−102871
^{197}Au(^{40}Ar,X), E/A=60 MeV, two-particle correlations, excited state population, statistical model comparisons 7−121900
^{197}Au(^{56}Fe, X), 485 MeV, nuclear shape deformations, fusion-like fission, deep inelastic reactions 7−116246
^{197}Au(^{88}Kr, X), 10-18.2 MeV/u, excitation energy sharing in quasielastic reactions, energy spectra 7−102908
^{197}Au(A,X), 42-151 MeV/nucleon, A=^{20}Ne, ^{40}Ar, fragment production 7−121905
^{197}Au(D,X), D=^{12}C, ^{18}O, E/A=30-84 MeV, isotope yields as probe of reaction dynamics 7−141073

statistical theory of nuclear reactions and scattering continued
Be(p,X), 300 MeV, light fragment spectra to upper kinematic limits, model independ. anal. 7−81391
Br(^{12}C, pX), 4.5 GeV/c/N, directional coherence of emitted protons, fireball, q-g cluster 7−129078
Br($\bar{p}$,X), 300-1400 MeV/c, charged particle multiplicity, negative binomial anal. 7−129031
^{12}C(^{12}C, pX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{12}C, ppX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{12}C,X), below Coulomb barrier, semi-statistical formalism 7−129013
^{12}C(^{16}O, pX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{16}O, ppX), 25-85 MeV/A, light particle correlations, modified BUU theory 7−141091
^{12}C(^{20}Ne,αX), X=^{12}C, ^{16}O, ^{20}Ne, 157 MeV, projectile breakup and transfer reemission, stat. anal. 7−81434
^{12}C(^{24}Mg, ^{24}Mg), elastic and inelastic, fluctuations, statistical anal. 7−129089
^{12}C(^{6}Li,α), 30 MeV, direct and fusion components, cross section calcs., statistical model comparisons 7−121899
^{12}C($\bar{p}$,$\bar{n}$)X, cascade model calcs. 7−109168
Ca(Ca,X), 400, 1050 MeV/N, central collisions, relation between entropy and nucleosynthesis 7−81432
^{40}Ca(A,X), 42-151 MeV/nucleon, A=^{20}Ne, ^{40}Ar, fragment production 7−121905
^{48}Ca(γ,n), cross section meas., isospin components and statistical decay model 7−129017
^{48}Ca(γ,p), cross section meas., isospin components and statistical decay model 7−129017
^{252}Cf(n,n'f), neutron spectra, statistical model anal. 7−73804
C(p,X), pseudorapidity meas. and fireball model 7−96058
C(π,X), pseudorapidity meas. and fireball model 7−96058
^{52}Cr(^{208}Pb,X), symmetric mass fragmentation using fusion model 7−109219
^{52}Cr(d,2n), ^{52}Mn isomer excitation fn. meas., statistical model comparison 7−116411
^{52}Cr(d,2n), ^{52}Mn isomer prod., direct reaction plus statistical model anal. 7−116428
^{52}Cr(p,n), ^{52}Mn isomer excitation fn. meas., statistical model comparison 7−116411
^{63}Cu(α,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{69}Cu(p,X), fragment charge distributions, statistical model anal. 7−109182
Cu(p,X), pseudorapidity meas. and fireball model 7−96058
Cu(π,X), pseudorapidity meas. and fireball model 7−96058
^{168}Er(^{20}Ne,X), ang. momentum transfer symm. axes, dynamical and statistical models 7−116475
^{56}Fe(n,γ), γ-ray spectrum, exciton model 7−67831
^{58}Fe(^{208}Pb,X), symmetric mass fragmentation using fusion model 7−109219
Fe(n,X), 15-150 MeV, deep penetration expts. 7−89573
^{2}H(p,p), 1 GeV, cumulative processes, isobar role, kinematically forbidden region, intranuclear cascade method 7−121820
^{3}He induced reactions, nonequilibrium light particle emission 7−81410
^{4}He induced reactions, nonequilibrium light particle emission 7−81410
^{165}Ho(^{12}C,X), 300 MeV, precompound decay in heavy ion reactions via the hybrid model 7−96102
^{165}Ho(^{20}Ne, X); 30 MeV/N, energy and linear momentum dissipation in fusion 7−121983
^{165}Ho(^{20}Ne,X), 220, 292 MeV, precompound decay in heavy ion reactions via the hybrid model 7−96102
^{165}Ho(^{56}Fe,X), damped reaction, temps., energies and thermal equilibration of fragments 7−96105
^{165}Ho(α, xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
^{84}Kr(p,X), fragment charge distributions, statistical model anal. 7−109182
Kr(p, X), isotope distrib. of medium-sized nuclei, statistical multifragmentation model anal. 7−121837
^{24}Mg(^{24}Mg,^{20}Ne), 89.72-95.52 MeV, correlated structs., statistical fluctuation anal. 7−116480
^{24}Mg(^{24}Mg,^{24}Mg'), 89.72-95.52 MeV, correlated structs., statistical fluctuation anal. 7−116480
^{26}Mg(p,p), 5.5-17.5 MeV, optical potential description, compound nucleus scatt., OP parameters 7−121815
^{55}Mn(^{12}C,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{100}Mo(^{100}Mo,X), E≥2 MeV/N, binary versus ternary fragmentation processes, statistical multifragmentation model 7−135353
Nb(Nb,X), 400, 650 MeV/N, central collisions, relation between entropy and nucleosynthesis 7−81432
^{93}Nb(α, xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
^{93}Nb(α,n), ^{96}Tc spin assignments, decay schemes statistical methods anal. 7−89542
^{93}Nb(n,n'), exciton distrib. fns. and hybrid precompound decay model 7−96077
^{93}Nb(n,p), exciton distrib. fns. and hybrid precompound decay model 7−96077
^{20}Ne(^{20}Ne,X), fluctuations and clustering 7−73793
^{A}Ni(n,xα), 9.4, 11 MeV, A=58, 60, cross sections and spectra, Hauser-Feshbach anal. 7−67825
^{B}Ni(D,X), B=58, 64, D=^{12}C, ^{18}O, E/A=30-84 MeV, isotope yields as probe of reaction dynamics 7−141073
^{60}Ni(^{20}Ne,X), ^{7}Li production, Hauser-Feshbach calculations 7−81443
^{64}Ni(^{208}Pb,X), symmetric mass fragmentation using fusion model 7−109219
^{64}Ni(^{28}Si,X), cross section fluctuations and excitation fns. 7−116481
(^{16}O,X), 4.5 GeV/c/N, anomalon and fractional charge fragment search 7−67872
^{16}O(^{16}O,X), 12-20 MeV, cross section resonances in α_0, α_1 exit channels, excitation fns., statistical anal. 7−129101
^{16}O(^{16}O,X), mean field model of spallation and oscillations 7−81440
^{A}Pb(p,xn), A=204,206-8, E_p=25.5 MeV, preequilibrium neutron emission, shell effects, double shell closure 7−141052
^{208}Pb(^{86}Kr, X), 10-18.2 MeV/u, excitation energy sharing in quasielastic reactions, energy spectra 7−102908
statistical theory of nuclear reactions and scattering continued
^{208}Pb(α,α'n), 120 MeV, isoscalar giant monopole resonance decay 7−96040
^{209}Pb, neutron evaporation spectra, level density parameter and temperature dependence 7−121927
Pb(p,X), pseudorapidity meas. and fireball model 7−96058
Pb(π,X), pseudorapidity meas. and fireball model 7−96058
^{103}Pd, level structure, lifetime meas., level spin determ. using Hauser-Feshbach anal., mixing ratios 7−67691
^{239}Pu(n_{th},f), odd even effects, low energy, statistical pair breaking 7−129115
^{241}Pu(n,f), statistical model, Fermi gas model, fragment angular momenta, isomeric yield ratios 7−129122
^{A}Si(α,X), A=28,30, compound nucleus contribs., Hauser-Feshbach model 7−116442
^{116}Sn(d,p)^{117}Sn, 79 MeV, l=0 reaction mechanism, cross sections, proton polarization and anal. powers, adiabatic model anal. 7−129056
^{178}Sn (A,f), A=^{14}N, ^{20}Ne, 120, 138 MeV, fission fragment angular distrib., moment of inertia of nuclei at saddle points *(Chinese)* 7−102899
^{181}Ta(^{12}C,nX), 9 MeV/N, energy spectra and angular distributions for fast neutron emission *(German)* 7−129090
^{181}Ta(^{20}Ne,nX), 9 MeV/N, energy spectra and angular distributions for fast neutron emission *(German)* 7−129090
Ta(α,n), 40 MeV, neutron spectra meas. 7−81409
^{232}Th, giant quadrupole reson., statistical fission decay evidence 7−81463
^{232}Th(^{58}Ni, f), formation and decay of hot composite-like nuclei 7−135355
^{48}Ti(^{28}Si,X), cross section fluctuations and excitation fns. 7−116481
^{50}Ti(^{208}Pb,X), symmetric mass fragmentation using fusion model 7−109219
^{A}U(n_{th},f), A=233,235, odd even effects, low energy, statistical pair breaking 7−129115
^{238}U(α,f) statistical model, Fermi gas model, fragment angular momenta, isomeric yield ratios 7−129122
^{238}U(n,n'), double differential cross section and u spectra, statistical calcs. *(Chinese)* 7−96062
^{51}V(^{16}O,X), compound nucleus prod. and deexcitation, statistical model comparison 7−116458
^{51}V(α,xn), 10-120 MeV, nonequilibrium effects, preequilib. hybrid model anal. 7−102893
^{132}Xe(p,X), fragment charge distributions, statistical model anal. 7−109182
Xe(p,X), multiplicity distributions of produced particles and energy loss in proton-nucleus collisions at 200 GeV/c *(Chinese)* 7−102871
Xe(p,X), secondary fragment charge dispersion, statistical multifragmentation model 7−141048
^{89}Y(^{19}F,X), 135-143.25 MeV, cross-section correlated fluctuations, excitation functions 7−121912
^{68}Zn(^{40}Ar,X), 14.6-35 MeV/N, light charged particle emission, stat. models anal. 7−67873
^{90}Zr(p,X), sub-Coulomb energies, radiative capture, elastic and inelastic scatt., cross sections 7−81390

statistical thermodynamics *see statistical mechanics*

statistics
see also decision theory; error statistics; game theory; Monte Carlo methods; probability; queueing theory; time series
astronomical objects, bibliographical aspects of cited objects (1983-5) 7−72332
atmosphere circulation, statistics of blocking and persistence over N Atlantic and Australia-New Zealand 7−79558
attenuation statistics prediction model 7−94409
BE stars, statistics of IR excesses from IRAS obs. 7−101795
beach exposure and inundation statistics from published tide tables 7−145675
Berry-Esseen bounds for finite-population *U*-statistics 7−88931
cold dark matter cosmologies, statistical clustering of pregalactic objects, and astrophysical consequences 7−88705
cosmic microwave background fluctuations, statistical props. 7−95053
cosmological density fluctuations, statistics of peaks in 3D Gaussian noise 7−88704
crumpled paper balls, fractal geometry 7−120722
dispersive evolution equations, equilib. statistics 7−88995
dynamic flow meas., observations statistical props. for proving meters 7−91271
ensemble relative variance of random noise in reverberation room 7−97214
galaxy clustering, effects of nonlinear statistics and biasing 7−88652
general signed-rank statistic, second order linearity 7−80391
geophysical triplet, statistical stability 7−101454
intermediate quantile processes 7−80389
iterated logarithm for order statistics *(French)* 7−66981
lognormal and gamma distribs. testing, percentage point estimates 7−88929
maximum length sequences, cellular automata and random numbers, statistical props. 7−115771
maximum likelihood method for dependent observations *(French)* 7−95465
microearthquake occurrence in Messina area, Sicily, 1972 to 1983, limitations of Generalised Poisson model 7−127100
multiparameter Poisson and empirical processes, modulus of continuity, moments order of magnitude 7−80390
nighttime SHF scintillation studies using transmission from the Indian geostationary satellite 7−94573
non-Gaussian random fields, statistical props. rel. to cosmic microwave background temps. 7−140327
ocean surface, specular points statistics 7−136171
optimal algorithms for linear problems with Gaussian measures 7−66984
OTDRs coherent, backscatter statistics and range performance 7−121201
particle ensemble incident on ID finite-range potential, statistical parameters, pure states 7−108288
particle ensemble incident on ID finite-range potential, statistical parameters, localized states 7−108289
photoelectron counting distrib. computation by numerical contour integration 7−138587
polymer chains, ensemble of primary structures, statistics 7−122757
precipitation regime in Moscow, long-term statistical characts. (1881 to 1980) 7−139708
quantum mechanics, statistical interpretation and hidden variables problem 7−95389

statistics continued
quasars number counts, effects of finite source size on amplification bias by gravit. lensing 7−128116
radio sources, statistical anal. of multifreq. obs. of low frequency variable sources 7−72642
raindrop canting angles meas. 7−94412
random autoregression fields identification, structure of autocovariances in first order models *(Russian)* 7−80392
remote sensing, information content anal. of Landsat image data for compression 7−127503
Sahelian wind pump characteristics rel. to Weibull wind speed statistics 7−78599
satellite systems, low elevation angle, tropospheric scintillation model 7−94413
scale invariant systems, spectral statistics 7−128466
sensor array, wavenumber estimation using asymptotic statistics 7−110640
shot-noise light with arbitrary spectrum, approx. photocounting statistics 7−141821
shrinkage estimators of the location parameter for spherically symmetric distributions *(French)* 7−102141
single-variate probability distribs., algorithms for random sampling 7−140443
solar-type binary stars statistics, implications of Morbey-Griffin improved binary anal. 7−140167
sound field, logarithmic least mean square estimation 7−110666
space-time intensity correlation function of scintillation due to a deep random phase screen 7−134066
Stokes parameters, statistics 7−136195
sub-Poissonian photon statistics and higher-order squeezing in light amplifier with input binomial states 7−136247
subrefraction statistics estimation using surface synoptic meteorological data 7−139681
tensor products and probability weights, quantum theoretical appl. 7−95391
turbulence, high Reynolds number, analytical statistical theories *(French)* 7−97498
turbulent atmosphere, statistical characts. determ. 7−94522
undergraduate experiment, use of radioactive source and microcomputer 7−120723
uniaxial absorbing media, indicating surface of natural reflectance, charactn. 7−141787
uniaxial transparent media, indicating surface of natural reflectance 7−141786
unimolecular multiphoton dissociation with UV absorpt., quantum statistics 7−110046

stators
electrical machine stators, free vibrations, calcs. 7−97387
electrical machine stators, free vibrations, experimental studies 7−97388
induction motor stator cores natural frequencies, effect of coil on coupling vibration 7−82932
VL-MLP wind driven elec. power station with interlocked vertical blades and linear generator 7−100691

steady-state theory *see cosmology*

steam
condensation, condenser surface roughness effect, heat transfer anal. 7−76368
direct contact condensation on horizontal surface of water 7−69881
dropwise condensation, heat transfer meas. and condensation coefficient 7−104973
film condensation on horizontal finned tubes, fin spacing effect 7−69169
natural circulation heat only reactor, steam bubble entrainment *(German)* 7−103030
reactor steam explosion energetics for α-mode containment failure anal. 7−81678
steam-air laminar flow, wedge-shaped product dehydration 7−110912
steam-air mixture, dropwise condensation, air traces estimation 7−106857
steam-air mixtures, condensation in shell and tube exchanger at atmospheric and reduced press. 7−83009
steam-air mixtures, dropwise condensation, air traces determ. 7−97601
steam-water coolant circulation loop, pressure loss, coolant props. charge study 7−97599
steam-water stratified countercurrent flow, flooding and hysteresis effects study 7−73952
steam-water stratified flow in horizontal pipe, phase and vel. distrib. 7−91228
superheated steam, direct contact condensation on horizontal water surface, theoretical model 7−73951
superheated steam, direct contact condensation on water study 7−73950
thermal conductivity meas. at high temp. and press. including critical region 7−83397
water-steam, two-phase flow in horizontal pipe, press. drop, void fraction 7−91201
wet steam flow in pipe and annulus, holographic diagnostics 7−136967
wet steam in pipes, nonequilibr. slug flow diagnostics and struct. 7−137004
H_2+H_2O, thermodynamic capacity 7−126473

steam boilers *see boilers*

steam generators *see boilers*

steam plants
see also boilers
downward gas-film flow heat transfer rel. to LF flow-rate oscillations 7−75655
gravitational separation investigations using RBMK-1500 drum separator model, efficiency study for nuclear power generation *(Russian)* 7−135453

steam power stations
2 GW power station flue gas desulphurisation design and cost studies 7−139164
Plomin I and II (Yugoslavia) thermal power plant emission calc. model *(Croatian)* 7−144923
ultrasonic flowmeter for power station boiler *(Japanese)* 7−68962
SO_2 emission and air quality standards in Europe and Yugoslavia *(Croatian)* 7−139159
SO_2 ground-level concentration around Plomin I and II (Yugoslavia) thermal power plants *(Croatian)* 7−144937

steam turbine - gas turbine power stations *see combined cycle power stations*

steam turbines
see also turbogenerators
combined gas and steam turbine power plants, coal gasification methods *(German)* 7−86812
component embrittlement, grain boundary segregation evaluation 7−126394
history of steam power, 1884 7−80279
MHD power station, combustion chamber effectiveness as plasma generator combined with steam turbine 7−126638
nuclear wet steam turbine expansion curve determ. by radioactive tracer meas. of moisture *(Croatian)* 7−67943
nucleation and droplet growth study 7−130773
solar central receiver systems for steam turbine electric generation 7−71577
Superphenix, steam-water circuits and electrical generating system *(French)* 7−116645
VVER power station steam turbines, argument for initial superheating 7−116552
water droplet size measurement in steam turbine using optical fibre system 7−67284
wet steam turbine blades erosion, Monte Carlo method calcs., 7−83310
H_2 combustion technology-heating, jet propulsion techniques and internal combustion engines 7−126658

steel
see also alloy steel; austenitic steel; carbon steel; martensitic steel; stainless steel; tool steel
acid corrosion in H_2SO_4 soln., dimethyl formamide inhibition efficiency 7−138898
adsorption of benzene on fresh surface of Fe-C-Mn steel 7−70064
austenite transformation on high-speed and laser heating 7−86172
Bainite, three definitions comparison 7−132605
bainite reaction, interface motion and the mechanism of phase transformation 7−132604
ball, convex spherical reflector as laser beam expander, diverging wavefront aberrations 7−68809
barrels for rad. waste, corrosion resistance *(Czech)* 7−68014
bearing steel, N implanted, friction rel. to temp. and microstructure 7−106628
brittle fracture resist rel. to defect resist. 7−100362
BWR fuel elements, bending, guide tube radial spacing meas. and anal. *(German)* 7−129195
BWR pressure vessel segment, flaw density meas., NDT 7−89670
carbides coarsening simulation method 7−86186
cast, corrosion tests for basalt repository 7−100452
cast, refining, ductility, impact strength 7−77863
cathodically protected, corrosion fatigue in marine environments, modelling of crack tip and electrochem. processes 7−144626
cathodically protected, polarisation in sea water, time depend. prediction model 7−78308
circular cylinder, Rayleigh surface waves in nonuniform stress field, acoustoelastic effect *(Japanese)* 7−118224
clad Cu, compacts, rolling textures 7−78047
CO_2 lasers for thermal hardening of steels and cast irons 7−78310
coal gasification plant for hydrogen economy in developing countries, steel containers 7−93519
cold bent hollow structural section members, deforms. 7−71206
cold rolled, on-line X-ray texture analyser 7−138761
components, arc case hardening of working surfaces 7−138886
computer-aided heat treatment, phase transform. *(Korean)* 7−138766
continuous casting, rotary electromag. stirring, secondary flow study 7−104278
continuously cast TMCP, susceptibility to weld cold cracking 7−93094
corrosion by Li_2O 7−141270
corrosion by molten alkali, nitrate-nitrite mixtures *(French)* 7−78338
corrosion cracking tendency eval. method 7−132865
corrosion fatigue, appl. of scratching electrode method 7−144623
corrosion in hot conc. salt brines *(German)* 7−93202
corrosion in liq. He 7−141273
corrosion model for nuclear waste containers 7−106712
corrosion of type 316, by Pb-Li in N_2 atmosphere 7−141271
corrosion protection, $Zn_3(PO_4)_2$ film deposition, Mn^{2+} component influence *(Japanese)* 7−93178
corrosion resistance modification by rare earth ion implantation *(Chinese)* 7−132819
crack-arrest study of large specimens, fracture criteria, viscoplastic anal. 7−93101
cracks, symm. corner, detection and meas. by AC field method 7−138937
cylinder, behaviour under local load in elastic and elasto-plastic area, FEM 7−117469
cylinder, thick-walled, dynamic loading, thermoviscoplasticity by finite elements 7−90980
decarburised, grain size measurement using magnetic and acoustic Barkhausen noise 7−126121
delayed fracture susceptibility under combined effect of H and stresses, test method 7−132867
dendritic microsegregation, computer model develop. 7−106496
diffusion coating form. process 7−138903
diffusion layers on steels, tribotechnical characts. and tests 7−132756
dual phase, deform., modified Crussard-Jaoul analysis 7−126176
ductile, crack resist. determ. method, cylindrical specimen with circular groove for surfacing 7−113829
elastic unloading wave velocity recording method 7−126368
electrogalvanized sheet, Zn phosphating, heavy metal additions and cryst. modification effects 7−100441
electron beam rapid solidification and heat treatment, microcomputer controlled beam deflection 7−86154
EM field, influence of magnetic charact. in steel plates *(French, English)* 7−92458
energy dispersive electron probe microanal. using external peak to background ratios 7−100634
eutectoid, austenite form. during thermomech. treatment 7−71223
fast reactor construction materials, corrosion temp. and oxygen content depend *(Czech)* 7−67909
fatigue, low-cycle, thermal-mech. and isothermal, crack growth at elevated temps. 7−119368
fatigue crack growth rate testing 7−71296
fatigue failure, hardness, density, mag. inspections 7−71435
fatigue failure diagram, approx. of mean-amplitude section 7−78431

steel continued
fatigue fracture surfaces, struct., critical dislocation struct. *(Russian)* 7−104757
ferrite form. obs., interface migration 7−132609
ferritic steel, cyclic voltammetry in NaOH, stress corrosion crack growth appl. *(Czech)* 7−116548
ferritic steel, HT-9, fusion reactor material, permeability study, safety implications 7−131351
fibres, permeable, dynamic strength props. 7−78209
flame sprayed coatings on P/M materials, developments 7−119437
fracture of brittle particles in ductile matrix 7−69818
fracture toughness, wide-plate crack arrest test meas. 7−93236
friction in lubricated sliding 7−78250
friction of rubber against steel under 3D compression 7−93112
frictional contact zone embrittlement, S and Cl effect *(Russian)* 7−144561
galvanised reinforcements, corrosion in alkaline solns., electrochem. results. 7−113759
galvanised reinforcements, corrosion in alkaline solns., SEM and corrosion prod. identification 7−113760
Hadfield, hardening mechanism and stress-strain diagrams *(Russian)* 7−71205
hard facing, thermal sprayed powder coatings, adhesion, hardness, wear resist. 7−106702
heat treatment, temp. investig. using induction-probe magnetometric instrument 7−78430
heat treatment quality of components, inspection using remagnetisation losses 7−71449
heliostat design using stretched steel or Al membranes 7−133035
high strength, abrasive wear under different contact interaction conditions 7−132752
high strength, hot dip galvanised, coating adhesion rel. to coating bath comp. *(Japanese)* 7−78323
high strength steel, microstructure and toughness in weld metal and reheated zone 7−93095
hydroabrasive treatment, residual stresses 7−71360
ILW canisters in concrete, math. model of uniform corrosion of steel 7−74096
implanted N relocation due to tribological processes 7−76191
impurities, rel. ionis. yields in laser mass spectrometry 7−126495
inelastic buckling of tubes under cyclic bending 7−144499
inverse diffr. problem, delta functions, Gaussian distrib. *(Russian)* 7−104483
irradiated steel reactor components, in hot cell, robot for ultrasonic inspection 7−129177
laser hardening depth, latent heat influence of solid-phase transforms. 7−100427
laser surface hardening of thin slabs, mathematical model 7−113568
laser-induced breakdown spectroscopy analysis 7−114045
low C steels, Zn electrodeposit, hetero-epitaxial growth 7−132505
LWR steel containment buildings, behaviour during severe accidents 7−73989
machinability, effect of hard Ti alloy inclusions *(Spanish)* 7−86344
martensitic transform., thermodynamics *(Russian)* 7−113549
melt extracted fibres and particulate, prod., props., and appls. 7−92934
metals in solid steel, direct determ. by laser ablation DC Ar plasma emission spectrometry 7−114060
microdistribution of Ce, radioassay and autoradiography studies 7−71454
micromechanical model for cleavage-crack reinitiation 7−132737
natural gas pipelines, protection from corrosion dangerous voltages from overhead lines *(Danish)* 7−126294
nitrided, cavitation erosion in salt water and emulsion 7−126252
non-isothermal transformations, math. treatment 7−93005
nonmetallic inclusions, changes under effect of laser rad. and quenching 7−71213
nuclear fuel rod claddings, pulsed behaviour, CABRI expt. results *(German)* 7−129192
nuclear materials testing and safety, conf., Stuttgart, Germany (Oct. 1986) 7−120695
nuclear piping steel, fracture mechanics data base 7−88754
opacity coefficients, Thomas-Fermi model anal. 7−106115
orthotropic rolled sheet, tensile testing, stereo-photogrammetric method 7−86530
passivation in ammonium EDTA solns. 7−86408
pearlitic, irrad., residual elec. resist., recovery following annealing *(Russian)* 7−112294
phase superplasticity, investig. apparatus 7−78436
phase transitions obs., by high-speed dilatometry 7−144647
piezoelectric charge coeff. and mech. quality factor determ. using electric-line theory *(Japanese)* 7−125617
pipes, centrifugal casting, recirculating flows effect study 7−106501
pipes, nondestructive inspection using matrix array transducers 7−123424
piping and structural materials for power plants, flaw detection and assessment 7−129189
plate, neutron irrad., spectral meas. 7−137417
plate, pierced by cylindrical striker, impulse of forces 7−123550
plate, surface fracture, kinetic mechanism *(Japanese)* 7−119333
plates, laser heat processing, computational simulation 7−138890
plates, quenching in polyalkylene glycol, thermal stress and strain generation 7−113583
polished surface, friction and transfer behaviour of graphite *(French)* 7−106629
polyolefin-steel adhesion-bonded joints, localisation of cohesion failure front 7−78454
power plant steel heat exchanger protection by enamel against corrosion and gamma radiation 7−126323
pressure vessel, cylindrical, Bauschinger effect of reverse yield stress reduction on radial crack growth 7−69814
pressure vessel, irradiation embrittlement and postirradiation annealing study 7−89621
pressure vessel, pressurised thermal shock expt. with low ductile-tearing resistance material 7−93237
protective diffusion coating formation processes 7−126321
PWR steel specimens, fatigue crack growth study in PWR environments 7−89669
PWR weld metal with inserted defects, acoustic emission meas. 7−71456
quench ageing process, effect of P 7−86193
quenching with laser and electron beams, calc. of temp. and thermal stresses 7−71216
radioactive contaminated scrap, recovery and recycling at nucl. installations *(German)* 7−129437
rail steels, crack propag. and arrest behaviour, heat treatment and chemistry effect *(Japanese)* 7−86345
rapidly solidified particulate, sintering, consolidation and struct. studies 7−92917
reactor cladding tubes, nondestructive testing, sample homogeneity 7−129175
reactor pressure vessel, ductile-brittle transition, fine-scale separational events study 7−89620
reactor pressure vessel steels, fracture mechanics parameters, ductility transition and crack initiation parameter 7−126231
reactor steel components, reliability of NDT techniques for fission reactor structures 7−89667
recrystallisation during laser heating, plastic deform. effects *(Russian)* 7−138757
refractory, crack resist. under creep conditions 7−78165
reinforced quasimonolithic and quasilaminated, damping ability 7−113599
retained austenite, X-ray determ., interlaboratory test evaluation 7−86517
rough plate-cylinder contact width and compliance asperity deform. 7−69077
rough surface contact, run-in steel-steel, thermal conductance 7−91044
rubber/steel adhesive joints, bond strength, acousto-US NDE, stress wave factor technique 7−144666
SAW generation on surface *(Japanese)* 7−117432
scattered photon angular props. for Al, Pb and steel shields 7−135675
SCC rel. to retained austenite 7−132817
seizure resist. rel. to relaxation props. of hardened layer 7−86369
sheet, electrodeposited Zn-$ZnCl_2$ composite, corrosion resist. 7−93147
sheet, hot dip Zn-Al-Si coating, formability, tensile and bending props. *(Japanese)* 7−78110
shielding slabs, ang. props. of 6.13 MeV gamma rays 7−74215
silane coated panels, corrosion protection 7−126293
simultaneous multielement analysis, glow discharge mass spectrometer performance 7−132986
sintered, secondary porosity and its effect on product quality and consistency 7−144340
sliding wear, rate transitions and mechanisms 7−86364
solidification, liquid flow in mushy zone *(French)* 7−91768
spectrochemical anal. using laser-induced breakdown spectroscopy 7−132991
spherical steel reactor containments, HCDA, failure under excessive internal pressure 7−73990
static softening meas. by cold working props. 7−100246
steam turbine component embrittlement, grain boundary segregation evaluation 7−126394
steel-brass composite with macro- and microheterogeneous working surface, tribotech. props. 7−78266
strain hardening and heat treatment effect on uniform tensile strain and strain hardening coeff. 7−126194
structural, cold-formed, mech. props., effect of welding 7−132748
structural, composite crack profile model for CTOD determ., appl. to elastic-plastic crack growth situations 7−97408
structural, ductile-brittle transition, in fatigue crack growth 7−78156
structural, fracture in ductile-brittle regime, statistical charactn. 7−78226
structural, fracture toughness in transition region, large specimen results prediction 7−144556
structural, with defects, fracture toughness enhancement by warm prestressing 7−93097
structural, yield stress, effect of temp. and loading rate, prediction 7−100296
structure and properties, effect of powerful electron irrad. 7−84028
structure and welded joint reliability, neutron damage assessment *(Hungarian)* 7−122004
substrates, Cr_2O_3 or WC-Co hard coatings, props. 7−126301
surface, Sn^{4+} emission Mossbauer studies in corrosion protective coatings 7−99618
surface coating and alloying layer form., laser heat treatment *(Chinese)* 7−132789
surface hardening, by electron beam 7−78366
surface hardening, laser processing, behaviour of silica inclusions 7−78364
surface hardening quality inspection, resist. of mag. states of two-layer ferromag. to mag. fields 7−71450
surface inclusions, organic film extraction method, EDX and SEM obs. 7−106731
surface layer, effect of structure and props. on fatigue resistance 7−86352
surface layers, N ion implantation, X-ray diffr. anal. 7−84456
surface oxide films and wear 7−71394
surface treatment with powerful laser rad., exam. of energy losses due to reflection 7−126295
surfaces, liq. wetting, heat of adsorpt., lubrication 7−142904
tensile specimens, fracture eccentricity 7−86340
thermal fatigue damage, corrosion inhibitor containing emulsions appl. 7−93069
thermomechanical control process, separation effect on strength *(Japanese)* 7−86347
thermoplasticity, asymptotic stability when $t\to\infty$ *(German)* 7−138800
thickness measurement with electromag. US transducers at temps. up to 1200°C *(German)* 7−95544
thin films, Cr, Ti diffusion profile determ., appl. of X-ray chem. anal. technique 7−119608
tube to tubesheet junctions, evaluation 7−106590
unalloyed, erosion-corrosion rate estimation in alkalised boiler feedwater 7−113787
unstiffened welded cylindrical shells, interactive buckling tests 7−106589
vacuum arc melting, Mn evaporation kinetics 7−86146
weld joints, US echo signal amplitude, influence of dimens. of ang. reflector 7−132881
weld zone residual stresses relaxation in field of elastic vibrs. 7−126164
welded joints, fatigue crack growth under compressive appl. stresses 7−78174
wheel design using load history and fatigue damage accumulation *(French)* 7−138844
wire anode in low background organic type Geiger Muller tube 7−81889
Al alloy-steel friction couple, tribo-organometallic film, micromechanical props. 7−78268
B ion implantation, grain boundary segregation, SIMS 7−104776
Ca-containing, effect of Ba on mech. props 7−106596
Cr layer electrodeposition, crack form., AE obs. 7−126034
Cr, structural, struct. and mech. props., effect of rolling temp. *(Russian)* 7−93041

steel continued
Cr-Mo steel, tempering to reduce liquid metal embrittlement in fusion reactor materials 7−67979
Cr-W-Mn, grain refining, toughness strengthening by high temp. quench and tempering *(Chinese)* 7−78061
CrNi steel, magnetron sputtered on Cu, structure and phase structure, TEM study *(Chinese)* 7−76688
Cu-clad, compacts, rolling textures 7−78047
Cu-Ni-Cr, multilayer electroplated coatings, NDT methods and devices 7−132893
Cu-steel friction pair, features of struct. alloyed with O *(Russian)* 7−93104
Fe, ion implantation, corrosion-resistant surfaces 7−100415
Fe-Ni-Cr, ferritic, radiation enhanced phase transition, influence of vacancies 7−104745
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous ribbon/steel system, impact weldability domain 7−113851
H attack and protection problems 7−144587
H capture in swelling in first wall of fusion reactor 7−122064
H effects, review 7−93181
H embrittlement rel. to nonmetallic inclusions *(Japanese)* 7−119347
H permeation, unsteady boundary-value problem 7−105141
H-induced degradation, effect of S content 7−78199
N ion implantation, rel. to wear reduction 7−142853
N ion implantation, surface struct., wear resist. 7−104775
Ni, dual phase, electrical resistivity 7−124965
Ni-steel friction pair, O-doped struct. in contact friction zone *(Russian)* 7−93105
Ti-coated, hardening following B ion implantation 7−78353
Ti-overlaid 4145 steel, N implanted, microhardness temp. depend. 7−113699
TiC-steel-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7−93110
W-Cr-V, wear resistance enhancement by ion implantation *(Chinese)* 7−132820
Zn-Mn electroplated, corrosion resist. *(Japanese)* 7−119429
$Zn_3(PO_4)_2$ layers, interfacial adhesive bonding to polymeric topcoats, chemisorption, corrosion 7−71370
ZrN coatings, plasma spraying, controlled N_2 atmosphere, struct., hardness, thermal expansion 7−71383

steel manufacture
drum-type crop shear, cutting mechanism, computer-aided grid circle analyser study *(Japanese)* 7−78080
horizontal casting process development, for high grade steel 7−132597
Monju LMFBR, ultra-large austenitic stainless steel forgings, development, manufacture, props. 7−122008

stellar atmospheres
see also solar atmosphere
3A 0729+103, intermediate polar, X-ray emission from white dwarf magnetosphere-accretion stream interaction region 7−72465
AC 211 in globular cluster M15, evidence for accretion disk corona 7−72537
accreting neutron star with isothermal atmosphere, infalling plasma stopping mechanisms 7−107885
active cool stars, Li equivalent width var. 7−115370
Am stars, subphotospheric diffusion model rel. to Ca abundances 7−94905
λ And, RS CVn star, UV emission-line vars. to tidal influence on chromospheric struct. 7−94941
Ap Si stars, anal. of Si absorpt. in UV spectra 7−134239
Ap/Bp stars, model atm. and decay-induced Lorentz force 7−72466
32 Aqr, Am star, abundances, spectral and model atm. anal. 7−140078
Arcturus, chromospheric activity obs. in Ca II H and K lines (1984 February 14) *(Chinese)* 7−107816
UX Ari, RS CVn star, 1985/6 photometry and starspots 7−115524
AS 353A, T Tau star assoc. with HH 32, evidence for chromospheric radiation 7−101784
B-type stars in open clusters NGC 869, 884 and 2264, atm. He abundances and atm. parameters *(Russian)* 7−72553
B-type supergiants in LMC, model atmospheres rel. to UV-visual energy distribs. 7−72417
Be stars, effective temps. and energy distrib., spectrophotometric obs. 7−120412
binary stars, radiative equilib. eqn. numerical soln. 7−107909
α Boo, CO far-UV fluorescence 7−88397
TZ Boo, W UMa star, photometric elements 7−120495
α Boo (Arcturus), atmospheric convection rel. to periodic radial vel. vars. 7−140063
bursting neutron stars, X-ray spectra and atmospheric structures 7−140183
OY Car, nonmagnetic cataclysmic variable, obs. of X-ray emission from optically thin corona 7−115422
OY Car, SU UMa star, May 1985 superoutburst, extended coronal region detect., X-ray and UV obs. 7−115440
PV Cas, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
cataclysmic binary stars, corona form. above white dwarfs 7−115432
cataclysmic variable stars, appl. of steady-state accretion disk model to EUV and far-UV obs. 7−115424
cataclysmic variable stars, C grains form. in white dwarf atmosphere 7−120431
V677 Cen, contact binary, mass, radii and atm. charact., light curves anal. 7−140169
WX Cep, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
UV Cet, microwave emitting corona modelling, role of mag. structures 7−72447
chromosphere and corona processes rel. to Sun (book) 7−88751
chromospheric activity, estimation via narrow-band Hα photometry 7−120381
chromospheric emission lines, shapes classification 7−72392
chromospheric heating mechanisms, test for Alfvenic heating using rapidly oscillating Ap stars 7−134240
close binary systems, gravity-darkening exponents of Roche lobe-filling secondary components 7−134269
α CMa, atmospheric models and Mg II reson. lines 7−72411
δ CMa (F8 Ia), atmospheric props. and evolutionary parameters determ. from spectrum anal. 7−140068
κ CnC (HD 78316), Mn star, abundance anal. using line-blanketed model atmosphere 7−101794

stellar atmospheres continued
FK Com, rapidly rotating variable star, coronal streamers model for X-ray and radio emission 7−88425
RW Com, W UMa star, light curve modelling and system parameters 7−140168
Compton scattering in strong magnetic fields 7−88096
contact binary stars, asymmetric corona scatt. model for polarisation props. 7−88526
convection in polytropic atmos., numerical study of 2D compressible convection 7−130704
cool giant stars, SiO cooling instability in circumstellar envelopes 7−120398
cool star chromospheres, UV spectra study 7−127848
cool stars, chromospheric activity and rot. 7−94863
cooling neutron stars, model atmospheres 7−101836
corona, total emission measure and struct. 7−127837
coronae, temp. stratification and emission measures 7−120379
coronal X-ray emission, comparison between Einstein and EXOSAT obs. 7−120385
δ CrB, G-type giant star, photometric and spectroscopic evidence for active chromosphere 7−94875
20 CVn, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
α^2 CVn, Ap star, temp. difference over star and energy distribs 7−127881
RS CVn stars, chromospheres and transition regions physical parameters 7−120491
RS CVn stars, dark spots and evidence for circumstellar material, obs. anal. 7−140157
RS CVn stars, effects of starspots on Li abundance determ. 7−72412
RS Cvn stars, short-period, light curves anal. rel. to starspots and fundamental props. 7−146039
RS CVn stars, two-spot model for rot. modulation of V711 Tau, IL Peg and Ar Lac 7−101843
CW 1103+254, AM Her star, cyclotron line emitting region charact. and J-band polarisation 7−127949
V1764 Cyg=HD 185151, RS CVn star, ellipticity and starspots, photometric obs. 7−72517
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
V448 Cyg, eclipsing binary, atm. electron density determ. 7−127946
DA white dwarfs, temps. and absolute magnitudes 7−88395
DB-type white dwarfs, model atmospheres and comps. from UV and visual spectroscopy 7−145954
DBA white dwarf stars in Palomar-Green sample, atmospheric parameters from spectroscopic survey 7−107823
δ Del, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
detached classical eclipsing binaries, limb darkening 7−127948
detached close binary stars, giant and subgiant stars gravity darkening and atm. struct., photometric obs. 7−94943
dMe-type flare stars, flare power-coronal soft X-ray power relation 7−88405
AG Dra, symbiotic star, temperature charact. 7−145959
BY Dra, UV emission lines rot. modulation and flare activity 7−79966
dwarfs of F- and early G-type, atmospheres of F- and early G-type stars 7−145952
DZ stars, model atmospheres and synthetic spectra for different metal abundances 7−88388
early-type stars, gas accel. due to ensemble of spectral lines 7−115362
α Eri (Achernar), Be star, rot. modulation model for light spectrum and vel. vars. 7−107861
EUV emission lines in the atmospheres of cool stars 7−88420
evolved stars, $^{12}C/^{14}C$ ratio upper limit determ. from $^{14}C^{16}O$ meas., use for nucleosynthesis constraints 7−140091
F-K supergiants, Na overabundance and $^{12}C/^{13}C$ ratio *(Russian)* 7−140046
F-type stars of known age, Li abundances depend. on temp. 7−88393
G-type dwarf stars, ^{232}Th abundance use for chronology of stellar and galactic evolution 7−120401
RY Gem, Algol type star, temp. charact. 7−72518
γ Gem (A0 IV), model-atmosphere study 7−140069
GK-type main-sequence stars, IUE obs. of five stars rel. to chromospheres and coronae 7−88418
Gliese 890, rapidly-rotating spotted red dwarf flare star, spectrum, photometry and polarimetry 7−140052
globular cluster stars, model atmospheres rel. to predicted Thuan-Gunn photometry and theoretical isochrones 7−94973
HD 100340, early-type high galactic latit. star, non-LTE abundance anal. 7−115373
HD 112313, planetary nebula central star, G-type giant starspots 7−120386
HD 155555, RS CVn star, coronal plasma temp. from X-ray photometry 7−134273
HD 158393, late-type giant in binary system, orbital charact. and chromospheric activity 7−107828
HD 190603, B 1.5 Ia^+ supergiant, turbulent velocity and spectra *(Russian)* 7−127862
HD 199178, FK Com star, rot. inclination 7−101772
HD 26337, RS CVn type binary, request for VRI photometry rel. to spot model determ. 7−146047
HD 27130, eclipsing binary in Hyades, starspot charact. 7−127945
HD 32918, active chromosphere K2 III star, coronal mag. field strength from radio flare obs. 7−120400
HD 35914, variable central star of PN IC 418, effects of atmosphere optical thickness vars. 7−115386
HD 50896, WN5 star, empirical model for extended atmosphere 7−101802
V644 Her, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
52 Her, surface magnetic field strength and Fe, abundance in atmosphere *(Russian)* 7−140110
VW Hyi, nonmagnetic cataclysmic variables obs. of X-ray emission from optically thin corona 7−115422
HZ 43, DA white dwarf, atm. comp. and other parameters 7−88396
inverse radiative transfer with delta-Eddington phase function, unknown coefficients estimation 7−72275
EV Lac, UV Cet star, spot obs. photometric obs. 7−134247
late-type dwarf stars, chromospheric Ca II H emission line cores vars. and vel. field diagnostics 7−72413
late-type giant stars, atm. charact., EXOSAT and IUE obs. 7−79954
late-type giants and supergiants, activity, IUE survey 7−140061

stellar atmospheres continued
late-type stars, depend of UV chromospheric emission on rot. 7−127845
late-type stars, mag. struct. and rot.-activity relation 7−94852
late-type stars, Si III 1892 Å/C III 1908 Å emission-line ratio 7−88383
late-type synchronized binary stars, correl. anal. of stellar activity compared with single stars 7−127964
latitudinal temperature variations, effects of turbulent heat transport in rotating convective envelopes *(Russian)* 7−145918
ρ Leo (B1 Ib), atmospheric parameters and comp. from spectroscopic study 7−127864
lower main-sequence stars. objective characterisation methods for activity cycles and solar cycle anal. 7−115380
36 Lyn, He-weak Bp star, search for Hα emission rel. to extended atmosphere 7−79999
α Lyr (A0 V), model-atmosphere study 7−140069
M3 red giant branch, lumin. effective temp. diagram, appl. of IR flux method 7−101860
M-type dwarf stars, chromospheric fluxes and rot. 7−94864
magnetic white dwarfs, model atm. and decay-induced Lorentz force 7−72466
magnetogasdynamic cylindrical shock wave model in an optically thin atmosphere 7−145811
magnetospheric plasma of a pulsar, props. investig. 7−120485
metal-poor dwarf stars of solar neighbourhood, model atmospheres rel. to C and N abundances 7−134231
AU Mic, BY Dra star, UV emission lines, optical photometry and flaring 7−79966
molecular abundances determ., refined partition functions for H_2 and CO 7−134120
multidimensional radiative transfer in stratified atm. 7−139896
N-type C stars, IUE spectra and chromospheres study 7−107848
neutron stars, atmospheric model rel. to X-ray burst spectra 7−94937
neutron stars, electron cyclotron resonance instability of magnetised photosphere 7−94938
neutron stars, Fe spectral features form. in cooling spectrum of X-ray bursts 7−134274
neutron stars, neutrino-driven winds from young hot objects 7−88493
NGC 2213, LMC globular cluster, red giants comp. and temp. determ. from Washington CCD photometry 7−101697
NGC 3918, planetary nebula and central star abundances and plasma characts., spectral obs. 7−120552
NGC 752 open cluster, main sequence stars, Li comp. rel. to effective temp. 7−88553
nonmagnetic stars, abundance anomalies obs. 7−120382
O9 to A0 stars, effective temps. from spectral energy distribs. and model atmospheres 7−127833
opacities determ., astrophys. and fusion appls. 7−115230
order-of-magnitude theory 7−134393
α Ori, 2D images and atmospheric structure from speckle obs. 7−88402
α Ori, diameter and limb-darkening effects, speckle obs. 7−88401
VV Ori, eclipsing binary, hot component limb darkening 7−107892
α Ori, Hα chromosphere obs. using differential imaging technique 7−115379
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheric modulation 7−140064
partially ionised stellar plasmas, Planck-Larkin partition function, polarisation shifts and optical spectra 7−139905
43 Peg, hot Am star, model atmosphere anal. 7−127905
II Peg, RS, CVn star, line characts. and spots, CCD echelle obs. 7−140171
II Peg, RS CVn star, 1986 light curve interpretation with star pot models 7−120512
II Peg, RS CVn star, starspots distrib. from IR and visible photometry 7−127961
α Per cluster, rapidly rot. K-type dwarfs, photometric photometric var. and spot activity 7−127869
pinchrosphere as coolest layer in stellar atm., characts. 7−127842
plages, Ca II H and K line indices from spectra of solar plages 7−115339
plages, Hα line indices from spectra of solar plages 7−115340
Pleiades, rapidly rotating K-type dwarfs, photometric light curves anal. 7−127869
population II stars, effective temps. and surface gravities from optical-UV energy distribs. 7−145950
pre-main-sequence stars, contrib. of fossil mag. fields to chromospheric activity 7−127866
Procyon, F-type star, UV spectrum atlas (203.0 to 237.1 nm) and model atm. anal. 7−79960
PSR 1055−52, EXOSAT obs. and temp. determ. 7−127934
pulsar magnetosphere, electrodynamics and plasma props., self-consistent model 7−134265
pulsar magnetosphere, model return currents, radiative drag effects, modified Euler eqn. calcs. 7−101835
pulsar magnetospheres, computer simulation of particle acceleration 7−107881
pulsar magnetospheres, current sheets contrib. to radio emission 7−94933
pulsar magnetospheres, EM cascades as model for positron prod. near Galactic centre 7−101936
pulsar magnetospheres, freq. independence of microstructure phase struct. 7−88490
pulsar magnetospheres, influence of mag. field inhomogeneity on longit. waves excitation 7−127933
pulsar magnetospheres, photon capture in mag. fields rel. to polar gap models 7−72493
pulsar magnetospheres, tearing instability 7−120483
pulsar magnetospheres, two-beam model for triplicity of pulse profiles and orthogonal polarisation modes 7−94934
pulsars magnetospheres, cross-field particles and energy transport 7−83448
pulsation thermodynamics, origin of correl. between flux var./radius var. ratio and pulsation period 7−94855
ρ Pup, δ Sct star, continuum and line opacities rel. to spectrum vars. during pulsation cycle 7−134253
ζ Pup (O4 If), search for coronal line emission 7−115390
ζ Pup (O4f), photosphere model from optical line profiles 7−88433
radiation transfer in sphere with internal source, radiative heat flux eqn. 7−72272
radiative transfer, aberration and advection effects in plane-parallel medium in motion 7−139900
red giants and supergiants, chromospheric activity indicators and envelope gas/dust ratio 7−94869
stellar atmospheres continued
red giants temp. and abundances determ. use of Washington CCD photometry 7−101697
resonant line photons transfer in spherically accelerating envelopes 7−120260
ζ^1 and ζ^2 Ret, solar-type stars, He and heavy element abundances and atm. characts. 7−94867
V701 Sco, W UMa star, masses, radii and temps., photometric and spectral obs. 7−107903
R Sct, vel. structure of RV Tau star atmosphere 7−107845
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
α Ser, K-type giant, atm. chem. comp., spectral obs. 7−145949
SN 1983N and SN 1984L, Type Ib SN, He detect. and O obs., corresponding atm. models construction 7−127915
SN 1987A in LMC, contrib. of line blocking to computed UV spectra 7−140118
SN 1987A in LMC, implications of UV obs. for atmospheric comp. 7−101822
SN 1987A in LMC, photosphere evolution from broadband photometry and optical spectrum 7−146010
SN 1987A in LMC, photosphere expansion vel. from optical spectroscopy 7−101817
solar-type dwarf stars, X-ray emission correl. with chromosphere Ca II emission 7−107827
solar-type stars, ages and Ca II chromospheric activity 7−107806
solar-type stars, missing opacity and temp. calibration 7−140048
solar-type stars, relation between V−R and R−I colour indices and chromospheric activity 7−101786
solar-type stars in associations and clusters, chromospheric and transition region emission 7−107803
spectral line asymmetries, amplification by rotation 7−101757
spectral line characteristics as stellar atm. probes *(French)* 7−88370
spectral line formation in expanding spherical medium, effects of dust scatt. 7−120368
spectral line formation in stellar model atmospheres, implications for accuracy of element abundances 7−127834
statistical relations between spectral and lumin. classes and between effective temp. and lumin. 7−94854
stellar activity, COSPAR symposium, Toulouse France (June-July 1986) 7−128162
stratified atmospheres, radiative cooling by LTE and non-LTE spectral lines 7−79945
SwSt 1, young planetary nebula with central WC10 star, atm. temp. and comp. 7−128029
44 Tau, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
V471 Tau, white dwarf 9.25 minute pulsation and orbital phase depend. X-ray dips 7−88525
T Tau stars, general characts. determ. from spectral meas. 7−140056
T Tau stars, Hα emission-rot. vel. relation for low-mass stars 7−88410
thermal diffusion in partially ionized gases with unequal temps. 7−101760
thermal-convective instability of MHD-composite plasma in stellar atmosphere, effect of finite Larmor radius 7−127841
transition layers, temp. stratification and emission measures 7−120379
4U 2129+47, accretion disk corona props. from X-ray burst obs. 7−115519
ξ UMa, quadruple system, obs. of Li abundances and chromospheric activity 7−72541
W UMa, relation between photospheric enthalpy gradient and W-type light curves 7−127965
RT Vir, semi-regular variable star, shock wave model for H_2O maser outburst *(Russian)* 7−107865
BW Vul, β Cep star, spectroscopy of optical photosphere rel. to pulsation kinematics 7−140094
ER Vul, short-period RS CVn system, coronal loop heights from EXOSAT obs. 7−127972
white dwarf, with metallic line spectra, atm. comp. determ., spectrophotometric anal. 7−79956
white dwarfs, accreting, LTE model atmospheres rel. to soft X-ray-EUV spectra 7−94874
white dwarfs, effect of Balmer line pressure shifts on line profiles 7−101778
WN-type stars, modelling of extended atmospheres 7−101801
Wolf 630 system, coronal temps. from low-energy X-ray obs. 7−127968
Wolf-Rayet stars, He II synthetic spectra, grid of models 7−79968
X-ray and γ-ray emission reprocessing, time-dependent calcs. 7−107898
X-ray astronomy (book) 7−88759
X-ray bursters, X-ray spectra and atm. struct. modelling (appl. to MXB 1636−536) *(Japanese)* 7−146024
X-ray emission and magnetic activity 7−127816
XB 1254−690, low-mass X-ray binary, X-ray scatt. from accretion disk corona 7−88522
λ And, RS CVn star, starspots mag. fields from optical circular polarisation obs. 7−127897
C stars in Galactic disk, model atmospheres rel. to C, N and O abundances 7−115458
He diffusion in stellar outer layers, theory for planetary nebulae central stars 7−115372
He-peculiar stars, atm. He enrichment 7−145966

stellar binaries *see binary stars*

stellar clusters and associations
see also globular star clusters
Ap and He-weak stars in clusters and associations, photometric variability 7−120421
Ara OB1 association, interstellar H I and CO obs. rel. to stellar assoc. form. by energetic event 7−72547
axisymmetric Newtonian star clusters, simulations as prelude to 2+1 general relativistic calcs. 7−140192
blue clusters in external galaxies, misidentification as blue bright supergiants 7−140286
Bruck bipolar nebula, identification as small star cluster illuminating independent refl. nebulae, polarisation meas. 7−72552
Cep OB2 association, relation to giant interstellar IR bubble 7−128006
Cir OB1 association, UBV photometry and relation to nearly supernova remnant (MSH 15−52) 7−120535
CMa R1 association, linear polarisation obs. rel. to shock-front compression of interstellar mag. field 7−140226
Collinder 359, open cluster, UBVRI photometry 7−127989

stellar clusters and associations continued
CP-2 stars in Pleiades and Coma Berenices open clusters, Δa-photometry 7−101793
Cyg OB2 association, speckle interferometric obs. of early-type stars rel. to search for multiplicity 7−120406
Cyg OB4 assoc., spectral type surface distrib. study 7−101870
dark massive clusters, contrib. to dark matter in galactic haloes 7−120594
30 Dor cluster (NGC 2070), in LMC, photometry and spectra of Wolf-Rayet population 7−72443
formation, role of implosion of interstellar gas cloud 7−72399
G34.3+0.2, ultracompact H II region, evidence for rot. around central star cluster 7−94981
galactic centre region, Townes symposium, Berkeley, CA, USA (October 1986) 7−115671
galactic clusters, hydrodynamic and turbulent motion rel. to interstellar mol. clouds 7−128050
Galactic halo star cluster, BV photometry and radial vels. 7−88555
general characteristics (book) 7−134381
Hyades, eclipsing binary HD 27130, photometric charact. 7−127945
Hyades distance modulus 7−107911
Hyades open cluster and supercluster, search for brown dwarfs and late M-type stars 7−140066
IC 2488, UBV photometry of southern open cluster 7−134284
IC 2944, H II region field O-type ionising cluster 7−101864
Lindsay 1, populous SMC cluster, main-sequence turnoff photometry 7−80054
LMC clusters and emission-line objects in HD and HDE catalogues, identifications 7−72614
LMC globular clusters, spectral classification of bright stars 7−88132
LMC star clusters, UV obs. by IUE 7−115532
M31 galaxy star complexes and associations, UB obs. 7−146057
M33, galaxy, brightest blue stars as unresolved star groups, photometric data anal. 7−140264
M33, OB supergiant star charact. 7−79962
in M33, UBV photometry of blue stars in OB associations 7−146058
M67, CCD uvby photometry rel. to metallicity, distance modulus, reddening and age 7−80056
M67, old open cluster, C/N ratios along evolutionary sequence, implications for mixing 7−120377
M67, uvbyHβ photometry of main-sequence stars 7−80055
Magellanic Cloud clusters, photoelectric UBV obs. of photometric zero-point stars 7−94966
mass-losing red giants in open clusters 7−101777
metal-poor anticentre open clusters, Washington photometry of giants 7−134283
Mon OB1 (NGC 2264) association, unbiased survey for high-vel. gas in related mol. cloud 7−88592
nearby galactic clusters, kinematic origin rel. to Gould's belt expanding gas ring 7−120527
NGC 1502, reddened open cluster, combined UBV and uvby photometry 7−107910
NGC 1866, young LMC cluster, CCD light curves for seven Cepheid variables 7−88463
NGC 188, open cluster, contact binary stars obs. 7−120498
NGC 206, OB assoc. in M31, photometric charact. 7−72602
NGC 2070 (30 Dor cluster), in LMC, resolution of central supermassive star R136a *(French)* 7−79961
NGC 2122, young cluster in LMC, identifications of new O3 giant stars 7−94876
NGC 2162, NGC 2190, LMC star clusters, CCD photometry rel. to LMC distance modulus 7−88611
NGC 2264, young star LHα 25 spectral energy distrib. 7−127870
NGC 2287, open cluster, membership, photometry and astrometry 7−72548
NGC 2287 (M41), differential photometry of suspected variables 7−101871
NGC 2420, open cluster, giant stars radial rel. and abundances 7−72549
NGC 3766, young southern cluster, uvby β photometry 7−88557
NGC 5253, peculiar galaxy, nucleus ionising star cluster charact. 7−72630
NGC 6192, open cluster, distance and age determ. from CCD photometric obs. 7−115533
NGC 752 open cluster, main sequence stars, Li comp. rel. to effective temp. 7−88553
NGC 869,884,2264, open clusters, B-type stars, atm. He abundances and atm. parameters *(Russian)* 7−72553
OB association in NGC 1058, relation to supernova SN 1961V *(Russian)* 7−72488
OB associations, extinction curves and intrinsic colours 7−80053
OB associations, sequential supernovae and form. of supershells 7−127981
OB associations, stellar winds and supernovae vel. to interstellar supershells and propagating star form 7−140224
OB associations composition, effects of neutron capture nucleosynthesis during core He burning in W-R stars 7−107805
OB supergiant stars in M33 galaxy 7−79962
OB-associations, interaction of Type II supernovae with interstellar medium 7−107870
open clusters, age distrib. as function of linear dia. and age depend. of cluster masses 7−72551
open clusters, catalogue of UBV photometry and MK spectral types 7−72334
open clusters, colour excesses and photometric distances rel. to interstellar extinction and galactic struct. 7−94991
open clusters, metal abundances and galactic position *(German)* 7−72550
open clusters, obs. of yellow evolved stars 7−115382
open clusters, solar-type stars, ages and Ca II chromospheric activity 7−107806
Ori OB1 association, kinematics of star form. region from proper motion meas. *(Russian)* 7−145948
Orion Nebula OB association, form rel. to H II region interaction with Orion Molecular Cloud *(Japanese)* 7−140215
α Per cluster, rapidly rot. K-type dwarfs, photometric light curves anal. 7−127869
α Per cluster (C 0318+484), radial vels. of 258 stars near α Per *(French)* 7−88368
Per OB1 association, bifurcation in massive star evolution rel. to ON-type blue stragglers 7−115359
Per OB1 association, synthetic filter photometry and evolutionary status of two Be stars 7−79976
Pleiades, assoc. mol. cloud charact. determ. from reddening obs. 7−140194
Pleiades, evidence for evolutionary sequence from rapid to slow rotators 7−140197
Pleiades, IRAS surface brightness maps of reflection nebulae 7−115548
Pleiades, late-type B-stars, light variability, y photometry 7−72418
Pleiades, Merope dark cloud, charact. determ. from stellar photometry obs. 7−128005
Pleiades, polarization, reddening and interstellar matter distrib. 7−88552
Pleiades, rapidly rotating K-type dwarfs, photometric light curves anal. 7−127869
Pleiades, search for brown dwarfs and late M-type stars 7−140066
Pleiades, seventh star brightness in historical times 7−88135
Pleiades K and M-type dwarfs, rot. charact. 7−140053
Pleiades supercluster and galactic kinematics of M-dwarfs 7−107820
postcollapse star clusters, gravothermal oscills., analogous sphere anal. 7−101859
pregalactic stars, statistical clustering and astrophysical consequences in cold dark matter cosmologies 7−88705
R-associations near refl. nebulae, polarisation charact. 7−146056
RCW 108, IR obs. of active star formation site 7−107918
red clump stars in open clusters, theoretical evolutionary sequences 7−101779
Sco-Cen association, mag. obs. of Ap stars rel. to mag. fields time evolution 7−115459
Scorpius-Centaurus association, stellar multiplicity, orbital charact. 7−127988
Sh2-140, mol. cloud protostellar cluster, far-IR image restoration anal. 7−94972
solar-type stars in associations and clusters, chromospheric and transition region emission 7−107803
stellar distrib. in inner parsec of Galaxy 7−120565
taxonomical classification *(Russian)* 7−140199
Tr 14/16 clusters, in Carina nebula (NGC 3372), IR study of stellar population 7−127846
Trumpler 37, membership of young open cluster 7−134282
Ursa Major Group, space velocities determ. 7−101761
Vel R2 association, evidence for pre-main-sequence status of RCW 34 exciting star 7−120383
violent relaxation in stellar systems, existence of H-theorem inequality 7−88546
Wolf Rayet stars cluster in amorphous galaxy NGC 5253, elemental abundances 7−140291
young open clusters, interstellar extinction determ. 7−140198
young open clusters, kinematics rel. to Galaxy rot. curve 7−101861
young star clusters, evolutionary constraints from luminosity function of H-burning stars 7−140189
young star clusters in M31, props. from integrated UBVR photometry 7−95031
He-weak stars in clusters and associations, photometric variability 7−120421

stellar composition
see also solar composition
α Boo (Arcturus) C, N and O abundances compared with Sun and α CMi (Procyon) 7−120376
α CMi (Procyon), C, N and O abundances compared with Sun and α Boo (Arcturus) 7−120376
Am stars, Ca abundances for sample of 57 stars 7−94905
and CN mapping in circumstellar shell rel. to photochemical model 7−101790
Ap Si stars, LTE Si abundances from anal. of Si absorpt. in UV spectra 7−134239
32 Aqr, Am star, abundances, spectral and model atm. anal. 7−140078
asymptotic giant branch stars, $^{12}C/^{13}C$ and $^{16}O/^{17}O$ isotopic ratios 7−120397
B2-B9.5 main-sequence stars of solar chemical comp., line identification in far-UV spectrum 7−79957
B-type stars in open clusters NGC 869, 884 and 2264, atm. He abundances and atm. parameters *(Russian)* 7−72553
binary stars, comp. changes during evolution of intermediate mass Case B close binaries 7−115501
large black holes, tidal influence and nuclear processes in closely approaching stars 7−80026
bright large proper motion stars, lumin., abundances, motion and photometry 7−72397
CBS 78, second DBZ degenerate star with accreted Ca, optical spectrum and element abundances 7−88412
CD−38°245, extremely-metal-deficient giant star, relative elemental abundances 7−145957
Cepheids charact. within galactic metallicity gradient 7−101923
CIT 6, C-rich circumstellar envelope, HCN maser emission obs. 7−101947
classical novae, effects of C, N and O abundances on outbursts 7−120427
classical novae, heavy element abundances rel. to freq. of occurrence of O-Ne-Mg white dwarfs 7−88432
α CMa, Mg abundance 7−72411
δ CMa (F8 Ia), element abundances from model-atmosphere anal. 7−140068
α CMa (Sirius), Copernicus UV spectral atlas 7−94870
κ CnC (HD 78316), Mn star, abundance anal. using line-blanketed model atmosphere 7−101794
cool CP stars, lanthanide abundances 7−88431
CP stars, progress in detection and classification 7−127890
20 CVn, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
V442 Cyg, main sequence eclipsing binary, evolutionary charact., comp. and orbital charact., obs. anal. 7−146026
DB-type white dwarfs, C and H abundances from UV and visual spectroscopy 7−145954
DBA white dwarf stars in Palomar-Green sample, H/He ratios from spectroscopic survey 7−107823
δ Del, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
α Dra, metal-weak AO III star, abundance anals. 7−79964
dwarfs of F- and early G-type, diatomic molecules in atmospheres 7−145952
DZ stars, effects of metal abundances on synthetic spectra of cool He-rich white dwarfs 7−88388

stellar composition continued
element abundances determ. via model atmospheres, spectral line profiles calc. 7−127834
EI Eri (=HD 26337), RS CVn star, Li abundance 7−146028
evolved stars, $^{12}C/^{14}C$ ratio-upper limit determ. from $^{14}C^{16}O$ meas., use for nucleosynthesis constraints 7−140091
F, G and K-type dwarfs and subgiants, Li abundances determ. 7−72412
F-type stars of known age, Li abundances depend. on temp. 7−88393
field disk and halo stars, light elements and Ni abundances 7−115360
G-type dwarf stars, ^{232}Th abundance use for chronology of stellar and galactic evolution 7−120401
G-type dwarfs, low-metallicity stars problem rel. to white dwarfs and local dark matter 7−88406
Galactic chemical evolution, re-anal. of Galactic primary nucleosynthesis 7−120602
galactic chemical evolution, Z versus $\ln(1/\mu)$ relation with metal-poor gas infall 7−107952
Galactic disk stars, past and present metal abundance gradients determ. 7−145946
γ Gem (A0 IV), element abundances from model-atmosphere study 7−140069
giant stars, contrib. of core He flash to surface abundance anomalies 7−120378
giant stars in galactic disk, rel. dispersion-metallicity relation rel. to nature of thick disk component 7−128070
giant stars in Leo I dwarf spheroidal galaxy, metallicity from colour-magnitude diagram 7−120588
globular cluster giants, CN enrichment correl. with cluster ellipticities 7−115531
globular cluster stars, metal abundances determ. for five metal-rich clusters 7−120520
globular cluster stars, new interpretation of clusters metallicity histogram 7−146060
globular clusters, age and comp. determ. from stellar luminosity functions 7−127985
globular clusters, characts. and origin of chemical inhomogeneity 7−80058
globular clusters, metal rich, O abundances 7−94969
H1504+65, hot compact star devoid of H and He, optical, IV and X-ray obs. 7−88408
halo dwarf stars, abundances of light elements 7−120384
halo photoclusters, chemical enrichment, mass functions 7−127984
halo stars, Li abundances determ. 7−120396
halo subdwarf stars, Li abundances rel. to Li production in big bang 7−145943
HD 100340, early-type high galactic latit. star, non-LTE abundance anal. 7−115373
HD 204754, chemical composition of suspected Fe deficient B-star 7−88389
HD 50896, WN5 star, H^+/He^{++} ratio from empirical model 7−101802
HD 64488, 109995, 161817 field horizontal-branch stars, element abundance anals. with coadded DAO spectrograms 7−94873
HD 64488, HD 109995, HD 161817, field horizontal-branch stars, line identifications from atlas of spectra 7−115385
heavy-element abundances, determ. via stellar seismology 7−79952
V644 Her, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
52 Her, surface magnetic field strength and Fe, abundance in atmosphere *(Russian)* 7−140110
high-latitude field giants, metallicity determ. and comparison with Galaxy models 7−120371
HZ 43, DA white dwarf, atm. comp. and other parameters 7−88396
internal structure consts., effects of different chem. comp. 7−115363
IRAS 0937+1212, evolved mass-losing star, ice band identification in IR spectrum 7−101955
IRC+10216, C star, vibrationally-excited butadiynyl (C_4H) as source of new mm-wave doublets 7−134234
IRC+10216, chemical modelling of circumstellar mol. shell 7−145963
IRC+10216 (CW Leo), C star, detect. of circumstellar NaCl, AlCl, KCl and perhaps AlF 7−140051
IRC+10216 (CW Leo), detect. of vibrationally excited CS in circumstellar shell 7−140073
IRC+10216 (CW Leo), possible detect. of hexatriynyl radical (C_6H) in mm-wave spectrum 7−79969
ρ Leo (B1 Ib), spectroscopic study and element abundances 7−127864
light element abundances (Na to Ca) in disk and halo stars, implications for Galaxy chemical evolution 7−145945
Lindsay 1, populous SMC cluster, age and metallicity from main-sequence turnoff photometry 7−80054
LMC X-2, H depletion in accreting gas 7−127885
low-mass stars, abundances of very light elements (D, He, Li) and cosmological implications 7−146121
low-mass stars, element abundances rel. to chemical evolution of galaxies 7−146092
low-mass stars and nucleosynthesis in Galaxy, conference, New Delhi, India (November 1985) 7−140354
α Lyr (A0 V), element abundances from model-atmosphere study 7−140069
RR Lyr stars, UVbYβ electrophotometry and metallicity 7−107844
RR Lyr stars in globular clusters, Sandage period-shift effect 7−72444
M13, globular star cluster, spectra and composition of individual stars 7−101867
M13 II-67, O-poor giant star in M13, search for N overabundance 7−72427
m13 II-67, [O I] lines equivalent widths rel. to O deficiency 7−134232
M22, globular star cluster, spectra and composition of individual stars 7−101867
M4, globular star cluster, spectra and composition of individual stars 7−101867
M67, age and metallicity from uvbyHβ photometry of main-sequence stars 7−80055
M67, CCD uvby photometry rel. to metallicity, distance modulus, reddening and age 7−80056
M67, old open cluster, C/N ratios along evolutionary sequence, implications for mixing 7−120377
M71, globular cluster, abundances of metals, C, N, and O in five stars 7−72415
massive stars, surface C/N and O/N ratios in evolutionary models with mass loss and overshooting 7−134222
metal-deficient dwarf stars, S abundance determ. 7−101769
stellar composition continued
metal-poor dwarf stars of solar neighbourhood, C and N abundances 7−134231
molecular abundances determ., refined partition functions for H_2 and CO 7−134120
NGC 2213, LMC globular cluster, red giants comp. and temp. determ. from Washington CCD photometry 7−101697
NGC 2420, open cluster, giant stars radial rel. and abundances 7−72549
NGC 362, globular cluster, metallicity and He mass fraction from main-sequence CCD photometry 7−107912
NGC 6397, globular cluster, metallicity and age from CCD uvby photometry 7−120521
NGC 6752, globular clusters, horizontal branch stars with He I lines, abundance 7−88413
NGC 7099 globular cluster, metallicity characts. and age 7−140195
NGC 752 open cluster, main sequence stars, Li comp. rel. to effective temp. 7−88553
nonmagnetic stars, abundance anomalies obs. 7−120382
North Galactic Pole region, metal abundance gradient, photometry anal. *(Russian)* 7−128088
Nova Vul 1984 No. 2, 'Ne nova', IR photometry rel. to silicate grains condensation in ejecta 7−88439
novae, effect of elemental abundances on dust grains nucleation 7−120430
O and Of-type stars, obs. of near probable C III emission lines 7−101785
old super-metal-rich stars, effect of metallicity in theoretical isochrones 7−115381
ON-type blue stragglers, He and N enrichments prod. by rot.-induced mixing 7−115359
open clusters, metal abundances and galactic position *(German)* 7−72550
RS Oph, recurrent nova, ejecta composition during 1985 outburst 7−115425
43 Peg, hot Am star, model atmosphere anal. 7−127905
ϵ Peg, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
Pleiades K-type dwarf stars, Li abundances rel. to evolutionary sequence from rapid to slow rotators 7−140197
Population II stars, metallicities determ. from optical-UV energy distribs. 7−145950
populations with radial vel. (and $[Fe/H] \leq -0.6$) 7−80104
12 Pup, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
ζ Pup (O4f), He abundance from photospheric spectrum analysis 7−88433
red giants, Si isotopic abundances obs. 7−127858
red giants temp. and abundances determ. use of Washington CCD photometry 7−101697
ζ^1 and ζ^2 Ret, solar-type stars, He and heavy element abundances and atm. characts. 7−94867
S18/SMC, peculiar early-type emission-line supergiant, N overabundance rel. to internal mixing 7−101771
AL Scl (HD 224113), early-type double-lined eclipsing binary, age and heavy element content 7−120490
U Sco, recurrent nova, H depletion in accreting gas 7−127885
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
α Ser, K-type giant, atm. chem. comp., spectral obs. 7−145949
SN 1983I, 1983V, spectroscopic obs. rel. to abundance vars. in Type Ib supernovae 7−115474
SN 1983N and SN 1984L, Type Ib SN, He detect. and O obs., corresponding atm. models construction 7−127915
SN 1987A, metallicity determ. from computed UV spectra 7−140118
SN 1987A in LMC, contrib. of ^{56}Co to predicted X-ray, UV and IR spectra 7−140121
SN 1987A in LMC, implications of UV obs. for atmospheric comp. 7−101822
standard massive stars, surface chem. evol. modelling 7−72391
Sun, C, N and O abundances compared with α CMi (Procyon) and α Boo (Arcturus) 7−120376
Sun, comparison between mass-losing and standard solar models 7−145910
super-metal-rich stars, search for Galactic radial metallicity gradient 7−145947
SwSt 1, young planetary nebula, mass loss, radii and comp. characts. 7−128029
synthetic horizontal branches of various compositions 7−88387
44 Tau, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
Type I supernovae, optical−UV spectrum 7−115486
4U/MXB 1636−53, CNO abundances from energetics of Type I X-ray bursts 7−146041
ξ UMa, quadruple system, obs. of Li abundances and chromospheric activity 7−72541
PU Vul (Nova 1979), photometry, spectrophotometry, spectrum and polarisation (1981 to 1982) 7−140102
PW Vul (Nova 1984 No.1), line identifications from spectroscopic obs. 7−72435
weak-lined stars, photometrically-selected, spectral classification and metal deficiencies 7−88377
white dwarf, with metallic line spectra, atm. comp. determ., spectrophotometric anal. 7−79956
white dwarfs, rapidly rotating, limits on mass and comp. 7−140059
white dwarfs mass distrib. depend. on initial chem. comp. 7−145932
Wolf-Rayet stars, effects of neutron capture nucleosynthesis on core and surface abundances 7−107805
Ba stars, s-process elements comp., implications 7−127882
Be-deficient F-type stars, element abundances determ. 7−88404
C stars, envelopes C and O isotopic abundances, CO obs. 7−140095
C stars in Galactic disk, C, N and O abundances from IR spectra 7−115458
CN-strong giants, recognition and classification 7−140114
CNO abundances in dwarf and subdwarf stars, implications for Galactic nucleosynthesis 7−145944
He diffusion in stellar outer layers, theory for planetary nebulae central stars 7−115372
He-peculiar stars, atm. He enrichment 7−145966
Hg-Mn stars, UV spectral study *(Japanese)* 7−140082
Mg isotopes, abundance ratios in metal-poor and metal-rich stars 7−115361

stellar composition continued
N-rich metal-poor stars, Li abundances rel. to source of N enhancement 7−145956
Tc/Mo ratios in thermally pulsing AGB stars, implications for duration of third dredge-up phase 7−115222

stellar dimensions
accretion disks in semi-detached binary systems, effect of viscosity on disk radius 7−120375
angular diameters meas. by lunar occultation method, catalogue 7−145839
V1182 Aql, early-type eclipsing binary, masses and radii from photometric and spectroscopic study 7−88536
V1343 Aql (SS 433), jets Hα clouds dimensions and density *(Russian)* 7−145997
V1343 Aql (SS 433), stellar radius and X-ray jets length form obs. of X-ray and optical eclipse 7−140105
BW Aqr, detached eclipsing binary, masses and radii from photoelectric radial vels. and orbital elements *(French)* 7−120493
IU Aur, eclipsing triple system, up-to-date parameters determ. from UBV photometry 7−140155
CO Aur, peculiar double-mode Cepheid, radius determ. 7−120416
B-type supergiants in LMC, radii, luminosities and masses from UV-visual energy distribs. 7−72417
binary stars, radii of massive close binaries in and after mode Br mass-transfer phase 7−127959
TZ Boo, W UMa star, photometric elements 7−120495
AN Cam, double-lined eclipsing binary, masses and radii from photoelectric orbital elements *(French)* 7−72510
OY Car, eclipsing SU UMa star, masses and radii determ. 7−120417
XX Cas, B-type eclipsing binary, photoelectric elements and revised spectral types from UBV photometry 7−88530
PV Cas, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
V779 Cen=Cen X-3, O-type star dimensions 7−88502
V677 Cen, contact binary, mass, radii and atm. characts., light curves anal. 7−140169
WX Cep, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
EK Cep, detached eclipsing binary, masses and radii rel. to pre-main-sequence secondary component 7−115520
Cepheid variables in LMC, radii determ. rel. to distance of LMC *(French)* 7−79970
TX Cet, Algol type star, characts. determ. from photoelectric obs. anal. 7−72520
close binary stars, adiabatic radius var. rel. to thresholds for rapid mass transfer in polytropes 7−146038
Z CMa, Herbig Ae-Be star, circumstellar disk radius from resolution at near-IR wavelengths 7−134226
δ CMa (F8 Ia), mass, radius, luminosity and age from model-atmosphere anal. 7−140068
RW Com, W UMa star, light curve modelling and system parameters 7−140168
AI Cru, early-type eclipsing binary, mass and radii characts. 7−107902
20 CVn, δ Sct star, mass, radius, luminosity and age determ. 7−127904
RS CVn stars, short-period, light curves anal. rel. to starspots and fundamental props. 7−146039
MR Cyg, B-type eclipsing binary, light curve soln. using new parameter optimisation method 7−88510
V367 Cyg, evolved contact binary, radii determ. from light curves anal. 7−115517
V1143 Cyg, F-type eclipsing binary, spectroscopic orbit and absolute dimensions 7−72507
CG Cyg, short-period eclipsing RS CVn star, radii determ from light curves solns. 7−134276
δ Del, δ Sct star, mass, radius, luminosity and age determ. 7−127904
DM Del, A-type contact binary, photometric study and light curves anal. 7−72509
dwarf Cepheids, radii, masses, pulsation characts. and evolutionary status, VJK obs. 7−72467
1 E 1145-6141, X-ray pulsar, supergiant mass and radius from new orbital parameters 7−134277
eclipsing binary stars, effects of dissimilarity in form. on photometric perturbations inside minima 7−127960
EI Eri (HD 26337), RS CVn star, system characts. 7−146028
fully convective main-sequence star, rapid mass accretion effects on evol. and struct. 7−127838
γ Gem (A0 IV), mass, radius, luminosity and age from model-atmosphere study 7−140069
giant stars, core mass-radius relation as new test of stellar evolution theory 7−140058
HD 128220, double-lined binary with subdwarf O star, spectroscopic orbit and subdwarf parameters 7−94871
HD 27130, eclipsing binary in Hyades, mass, lumin. and radii determ. 7−127945
HD 35914, variable central star of PN IC 418, size changes as cause of light vars. 7−115386
HD 50896, WN5 star, core radius from empirical model 7−101802
V644 Her, δ Sct star, mass, radius, luminosity and age from model-atmosphere anal. 7−140104
BL Her, uvbyβ photometry and parameter determ. 7−140115
HZ 43, DA white dwarf, radius and lumin. 7−88396
IRC+10216 (CW Leo), C_2H and CN mapping in circumstellar shell rel. to photochemical model 7−101790
IRC+10216 (CW Leo), circumstellar shell geometry from IR speckle interferometry 7−79996
low-mass pre-main sequence stars, circumstellar shell characts. 7−107825
α Lyr (A0 V), mas, radius, luminosity and age from model-atmosphere study 7−140069
RR Lyr stars, radii, distances and absolute lumin. 7−115391
TZ Men, A-type eclipsing binary star, masses and radii from radial vels. and uvby light curves 7−80029
R Mon, pre-main-sequence star, small-scale struct. of circumstellar gas from CO obs. 7−88403
Neptune stellar occultation on 22 June 1987, stellar diameter and secondary minima 7−120310
neutron stars, masses and radii determ. from Fe features in X-ray burst spectra 7−134274
Ofpe/WN9 stars in Galaxy and LMC, linear sizes of resolved circumstellar shells 7−134237
order-of-magnitude theory 7−134393

stellar dimensions continued
α Ori, 2D images and atmospheric structure from speckle obs. 7−88402
α Ori, diameter and limb-darkening effects, speckle obs. 7−88401
α Ori, Hα chromosphere radius from imaging obs. 7−115379
CN Ori, Z Cam star, masses and radii from spectroscopic obs. 7−115447
α Ori (Betelgeuse), distance, diameter, light vars., and circumstellar shell 7−101776
IP Peg, eclipsing dwarf nova, dwarf star radius determ. 7−115413
43 Peg, hot Am star, mass, radius, luminosity and age from model atmosphere anal. 7−127905
S Per, OH-IR star, VLBI obs. rel. to dimensions and expansion vels. of H_2O and OH maser regions 7−72433
planetary nebulae with OH emission, masses, radii and temps. of central stars 7−101878
Population II stars, apparent ang. dias. from optical-UV energy distribs. 7−145950
primordial stars, luminosity and radius evolution during pre-main-sequence phase 7−88543
ζ Pup (O4f), mass and radius from photosphere model 7−88433
RZ Pyx, early-type marginal contact binary, masses and radii from photometric and spectroscopic study 7−120514
QPO sources, X-ray spectrum and hard-soft photons time lag. rel. to scatt. cloud size 7−120515
RCW 34 exciting star (Vel R2 25a), radius and luminosity from optical and IR obs. 7−120383
Sanduleak −69°202, radius of progenitor to SA 1987A 7−127924
Sanduleak −69°202, SN 1987A progenitor star, radius determ. from radio emission 7−115484
SAO 076608, angular diameter from photoelectric obs. of lunar occultation *(Chinese)* 7−120365
AL Scl (HD 224113), early-type double-lined eclipsing binary, absolute parameters determ. 7−120490
V701 Sco, W UMa star, masses, radii and temps., photometric and spectral obs. 7−107903
FG Sge, spectral type, radius and lumin. determ. from IR photometric obs. 7−145961
SN 1984E in NGC 3169, Type II-L supernova, circumstellar shell dimensions rel. to superwind 7−80020
SN 1987A in LMC, IR speckle and visual magnitudes (1987 June-July) 7−120473
SN 1987A in LMC, IR speckle obs. and photovisual magnitudes 7−94924
SN 1987A in LMC, photometry, bolometric lumin, and radius upper limits 7−88478
SN 1987A in LMC, photospheric radii from UV to IR energy distrib. 7−101821
SN 1987A in LMC, speckle obs. of diameter and expansion rate 7−146006
SN 1987A in LMC IR photometry rel. to effective radius increase 7−101816
stars, photoelectric observations of lunar occultations 7−134114
Sun, diameter increase during Maunder minimum 7−72388
Sun, diameter oscillations of long period, rel. to solar activity cycle *(French)* 7−140029
supermassive stars, power-law relations between mass, radius and central temp. 7−72408
SwSt 1, young planetary nebula, mass loss, radii and comp. characts. 7−128029
symbiotic novae evolution to classical symbiotic stars, size considerations 7−145972
44 Tau, δ Sct star, mass, radius, luminosity and age from model atmosphere anal. 7−140104
Z Tau, Mira variable, period vars. anal. and radius determ. 7−72457
HL Tau, pre-main-sequence star, small-scale struct. of circumstellar gas from CO and continuum obs. 7−88403
T Tau stars, general characts. determ. from spectral meas. 7−140056
tidal binary systems in globular clusters, luminosity and radius vars. due to tidal heating 7−127969
RR TrA, Algol type star, characts. determ. from photoelectric obs. anal. 7−72520
CF Tuc, eclipsing RS CVn star, radii determ. from light curves anal. 7−127955
4U 1746−37, X-ray binary in globular cluster NGC 6441, constraints on neutron star mass-radius relation 7−94954
4U 1915−05, X-ray burst source, mass and radius of optical companion star 7−94951
4U/MXB 1636−53, neutron star radius from energetics of Type I X-ray bursts 7−146041
FO Vir, pre-contact system, photometry and elements 7−115504
ER Vul, short-period RS CVn system, coronal loop heights from EXOSAT obs. 7−127972
WN-type stars, core radii from modelling of extended atmospheres 7−101801

stellar dynamics
axisymmetric Newtonian star clusters, simulations as prelude to 2+1 general relativistic calcs. 7−140192
axisymmetric stellar systems, rot. vel. determ. *(Spanish)* 7−115603
collisionless stellar systems, phase space simulation on massively parallel processor 7−94968
dark holes flattening 7−95020
differentially rotating systems, dynamical stability to non-axisymmetric perturbations 7−101672
Dirichlet problem and collisionless homogeneous gravitating ellipsoid 7−146054
disk galaxies and dynamical systems with non-negative curvature 7−127698
dynamical heating of stars as fuel for active galactic nuclei 7−80098
elliptical galaxies, isophotes shapes rel. to radio emission 7−101896
elliptical galaxies, struct. of Riemann S-ellipsoids with spheroidal halo 7−128040
elliptical galaxies with dark matter, vel. fields anal. 7−128079
elliptical galaxies with relativistically active nuclei, stellar orbits 7−115530
F-type stars with solar composition at North Galactic Pole, planar age-vel. dispersion relation 7−115374
galactic central 10 pc stellar kinematics from 2.3 μm CO profiles 7−120574
galactic centre kinematics 7−120573
Galactic chaos, implications for circular velocity at Sun 7−146086

stellar dynamics continued
galactic disk dynamics, modelling of collective relaxation processes by numerical expts. *(Russian)* 7−107967
Galactic disk stars, hydrodynamic and turbulent rel. to interstellar mol. clouds 7−128050
galactic disk stars, influence of massive mol. clouds on evolution of vel. dispersion 7−80051
galactic disks, stellar disks struct. for Schwarzschild distrib. function 7−128049
galactic spherical component, orbital eccentricity study of high-vel. stars 7−146055
galactic spheroid, kinematics and density from proper-motion stars 7−88615
galaxies, dynamics of tidal spiral arms in two-component galaxies 7−72591
in galaxies, physics of resonant disk-satellite interaction 7−88101
galaxies, resonant induction of spiral struct. by satellite galaxy *(Russian)* 7−107966
in galaxies, self-consistent equilib. models for perfect elliptical disk 7−128082
galaxies, variational principle for determining oscillations and stability of 3D stellar systems 7−101933
galaxies formation, dynamical development of flat rot. curves 7−95008
Galaxy, dynamical mass-density model constrained by general star counts 7−120580
Galaxy, mass distrib. model for stellar orbit computations 7−115604
globular cluster, effects of tidal heating on dynamical evolution 7−88551
globular cluster systems in galaxy clusters, dynamical evolution 7−101943
globular clusters, contrib. of anisotropic internal vel. distribs. to axial ratios 7−140191
globular clusters, dynamical evolution including degenerate component 7−140196
globular clusters, dynamics characts. determ. from millisecond pulsars rot. var. 7−88556
globular clusters, kinetic eqn. of finite Hamiltonian systems with integrable mean field 7−88554
globular clusters in SMC as mass segregation candidates 7−120523
globular clusters with finite numbers of core stars, post-collapse evolution 7−80057
globular star clusters, three-integral models 7−101865
gravothermal instability, Antonov criterion 7−140186
gravothermal oscillation in gravitational many-body systems 7−80052
highly-flattened elliptical galaxies with/without massive haloes, triaxial scale-free models 7−120591
interacting stellar systems, N-body simulations 7−115596
isotropic star cluster, gravit. Landau damping theory 7−88550
M13, globular cluster, dynamical characts. based on radial vel. and mass function 7−101866
M87, X-ray emitting radiogalaxy, general characts. and content 7−101924
M-dwarfs, galactic kinematics rel. to Pleiades supercluster 7−107820
Maclaurin disk of stars, bar-mode instability, effect of inhomogeneous halo 7−127978
N-body bar dissection 7−88545
N-body problem, regularisation of eqns. for simultaneous collision of n-bodies 7−107698
nearby galactic clusters, kinematic origin rel. to Gould's belt expanding gas ring 7−120527
NGC 5170, spiral galaxy, disk stellar vel. dispersion, visible and H I obs. 7−101902
non-Newtonian forces and the invisible mass problem 7−80138
one-dimensional self-gravitating systems, selective relaxation modelling 7−127979
perfect elliptical disk, nonuniqueness of self-consistent equilib. solns. 7−120519
period orbits in triaxial galaxies, stability anal. 7−134280
Population II stars, dynamical models 7−88544
postcollapse star clusters, gravothermal oscills., analogous sphere anal. 7−101859
radial velocity dispersion gradient for galactic disks 7−72582
relative chaos in stellar systems 7−140185
ring formation, halo effects, numerical simulation *(Chinese)* 7−120517
ring galaxies, dynamical study of expected frequency 7−95003
rotating stellar systems, complex instability of rotating oscillators around system rot. axis 7−120518
round dynamical models fitting to Population II kinematic data 7−127980
self-consistent models of box-shaped ellipticals 7−94967
self-gravitating classical systems with a phase space cutoff 7−72556
shell generation in elliptical galaxies, depend. on parameters of galaxy encounter 7−72587
spherical stellar systems evolution, dynamical effects of successive stellar mergers 7−146059
spherically symmetric stellar dynamics 7−72545
spiral galaxies, star-gas density waves dynamics 7−95006
spiral galaxies, stochasticity and regularity 7−72615
spiral galaxies-satellite galaxies interaction, orbital decay theory 7−95005
star system with central massive body, evolutionary path, dynamic systems theory calcs. 7−115529
stellar dynamics and dense galactic nuclei 7−72546
three parallel sheets system, stability of 1D gravitating system 7−72261
two-stream instability in infinite homogeneous and uniformly rotating stellar systems 7−134281
velocity dispersion and encounters with massive objects 7−140188
violent relaxation in stellar systems, existence of H-theorem inequality 7−88546

stellar envelopes *see circumstellar shells*

stellar evolution
see also solar evolution; star formation
3 $M_\odot$ star, evolution from main sequence to white dwarf stage 7−88372
A0620−00 (616 Mon), black hole binary system, evolutionary scenario 7−140154
A-type stars, properties and peculiarities 7−101787
accreting white dwarfs, evolution rel. to supernovae and cataclysmic variables 7−120393
ADS 9182, components masses and evolutionary status 7−127976
ages determination via stellar seismology, theory of acoustic oscills. freqs. 7−79952
Am stars, Ca abundances correl. with modified age parameter 7−94905
Ap-type stars in Sco-Cen association, mag. obs. rel. to mag. fields evolution 7−115459
V1182 Aql, early-type eclipsing binary, evolutionary status from photometric and spectroscopic study 7−88536
ε Aur, eclipsing binary, F0 Ia component evolutionary state 7−107899
Be stars, spectrophotometric obs. rel to masses and evolutionary status 7−72441
binary pulsars, mag. field decay characts. 7−72506
binary stars, evolution of intermediate mass Case B close binaries 7−115501
binary stars, intermediate-mass, merging of components through orbital ang. momentum loss 7−146042
binary stars, tidal resonances rel. to coupling of normal-mode oscills. with orbital motion 7−127974
binary stars formation, binary fission via inviscid trajectories 7−80039
large black holes, tidal influence and nuclear processes in closely approaching stars 7−80026
PV Cas, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
cataclysmic binary stars, cyclical evolution through dwarf nova and classical nova stages 7−145978
cataclysmic binary stars, influence of binary system parameters on hibernation model 7−145977
cataclysmic binary stars, period gap, dynamic instability model 7−140097
cataclysmic variable stars, absolute magnitudes rel. to cyclical evolution models 7−107860
cataclysmic variables, evolution of magnetic stars 7−127892
cataclysmic variables, orbital period and mag. field distribs. rel. to evolution 7−115450
WX Cep, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
TX Cet, Algol type star, characts. determ. from photoelectric obs. anal. 7−72520
Z Cha, dwarf nova, photometric and spectroscopic obs. rel. to struct. and evolutionary state 7−115448
Z Cha, dwarf nova, white dwarf cooling age from spectrophotometry during quiescence 7−88462
chromospherically active stars evolution characts. 7−146028
classical nova model, evolution through full accretion-outburst-accretion cycle 7−120429
close binary stars, evolution and radiative transfer characts. 7−127950
close binary stars, thresholds for rapid mass transfer in polytropic models 7−146038
close binary stars of evolution type 1C2COf and 1Nc2COf, evolution characts. 7−120496
δ CMa (F8 Ia), mass, radius, luminosity and age from model-atmosphere anal. 7−140068
contact binary stars in open cluster NGC 188, evol. characts. and CCD obs. 7−120498
cooling neutron stars, model atmospheres 7−101836
core collapse, physics of baryonic-to-hyperonic transition 7−88375
core He-burning stars in Magellanic Clouds, luminosities and masses rel. to Clouds distances 7−88609
AI Cru, early-type eclipsing binary, evolutionary aspects 7−107902
20 CVn, δ Sct star, mass, radius, luminosity and age determ. 7−127904
V442 Cyg, main sequence eclipsing binary, evolutionary characts., comp. and orbital characts., obs. anal. 7−146026
DA white dwarfs, lumin. function and evolutionary curves 7−88395
δ Del, δ Sct star, mass, radius, luminosity and age determ. 7−127904
dMe-type flare stars, secular evolution of flare mechanism 7−88405
AG Dra, rapid mass accretion onto hot component 7−107837
BY Dra stars, rot. braking model for evolution to marginal BY Dra stars 7−120395
dwarf Cepheids, radii, masses, pulsation characts. and evolutionary status, VJK obs. 7−72467
dwarf novae, evolution and struct. 7−115431
1E 1751+7046, FK Com candidate, evolutionary characts. 7−127880
extremely H-deficient stars, evidence for merged binary origin from radial vel. survey 7−94904
F, G and K-type dwarfs and subgiants, age rel. to Li abundance 7−72412
F-type stars with solar composition at North Galactic Pole, planar age-vel. dispersion relation 7−115374
fully convective main-sequence star, rapid mass accretion effects on evol. and struct. 7−127838
galaxies, active nuclei evolution, models without stellar evolution 7−101926
γ Gem (A0 IV), mass, radius, luminosity and age from model-atmosphere study 7−140069
general characteristics (book) 7−134381
giant stars, core mass-radius relation as new test of stellar evolution theory 7−140058
globular cluster giants, evidence for rot.-induced mixing model for CN enrichment 7−115531
globular cluster stars, effects of evolution and mergers on dynamical evolution of spherical systems 7−146059
globular cluster stars, theoretical isochrones using predicted Thuan-Gunn photometry 7−94973
globular clusters, age and comp. determ. from stellar luminosity functions 7−127985
gravimagnetic rotators, ecology (interaction with environment, and evolution) 7−94643
HD 12856, HD 13890, Be stars in Per OB1 association, synthetic filter photometry and evolutionary status 7−79976
HD 160641, extreme He star, nonradial pulsations anal. rel. to mass and evolution 7−127906
V644 Her, δ Sct star, mass, radius, luminosity and age from model-atmosphere anal. 7−140104
AM Her stars, evolutionary implications of soft X-ray excesses and deduced mass transfer rates 7−107905
Humason 1-2, Type I planetary nebula, dynamical age determ. 7−134288
initial-final mass relation for low and intermediate mass stars 7−145932
interacting He star-white dwarf pairs, possible type I supernova precursors 7−120468
intermediate polars, accretion rate vars. from white dwarf spin-up and spin-down rates 7−140107
intermediate-mass stars in close binaries 7−101764
internal structure consts. 7−115363
IRAS 16293−2422, source mass characts. and evolutionary status 7−94974

stellar evolution continued
IRAS 18059-3211 (Gomez's Hamburger), spectra, polarimetry and photometry rel. to evolutionary stage 7—128124
IRAS point sources around dense molecular clouds, spatial distrib. and spectral evolution 7—120532
IRAS sources in and near dense cores, stellar nature and obs. 7—140323
IRC+10216, C-star, inner envelope characts., CO lines modelling 7—140089
lifetimes, implications of fifth force 7—88087
Lindsay 1, populous SMC cluster, age from main-sequence turnoff photometry 7—80054
LMC X-2, spectral characts., similarities to U Sco, evidence for classes evolutionary link 7—127885
low-luminosity embedded sources, lumin. and evolutionary states 7—107826
low-mass close binaries with compact components, formation and evolution 7—115394
low-mass pre-main-sequence stars evolution, implications of obs. of naked T Tau stars 7—72428
luminosity variation with age 7—140174
α Lyr (A0 V), mas, radius, luminosity and age from model-atmosphere study 7—140069
RR Lyr stars in globular clusters, Sandage period-shift effect 7—72444
M67, age and metallicity from uvbyHβ photometry of main-sequence stars 7—80055
M67, CCD uvby photometry rel. to metallicity, distance modulus, reddening and age 7—80056
M67, old open cluster, C/N ratios along evolutionary sequence, implications for mixing 7—120377
magnetic cataclysmic binary stars, evolution 7—115449
magnetic CP stars, mag. flux distribs. from fossil mag. field evolution 7—94903
magnetic stars, time-dependent models for perpendicular rot. and mag. axes 7—94902
mass loss on main sequence, implications for stellar evolution 7—88416
mass loss rates, empirical fits examination 7—72401
mass-losing red giants in open clusters 7—101777
massive close binary systems, case-A evolution in and after mode Br mass-transfer phase 7—127959
massive stars, evolution without convective core overshooting 7—134221
massive stars, evolutionary models with mass loss and overshooting rel. to W-R stars props. 7—134222
massive stars, neutron capture nucleosynthesis during core He burning 7—107805
massive stars evolution, rot.-induced bifurcation rel. to ON-type blue stragglers 7—115359
TZ Men, A-type eclipsing binary star, age and evolutionary status determ. 7—80029
millisecond pulsars, rotation and evolutionary characts. 7—80021
Mira variables in interacting binaries, evolution and luminosities 7—140111
neutron stars, accreting, thermal evolution of interior rel. to occurrence of long X-ray bursts 7—107887
neutron stars, conversion into strange stars 7—115495
neutron stars, effects of viscous secular instability on rot. rate 7—140148
neutron stars, formation from accretion-induced gravit. collapse of old white dwarfs 7—127857
neutron stars spin evolution in wide low-mass X-ray binaries 7—72506
NGC 1502, reddened open cluster, age and distance from combined UBV and uvby photometry 7—107910
NGC 2162, NGC 2190, LMC star clusters, ages from deep CCD photometry 7—88611
NGC 362, globular cluster, age determ. from main-sequence CCD photometry 7—107912
NGC 6192, open cluster, distance and age determ. from CCD photometric obs. 7—115533
NGC 6397, globular cluster, metallicity and age from CCD uvby photometry 7—120521
NGC 7099 globular cluster, metallicity characts. and age 7—140195
Ofpe/WN9 stars in Galaxy and LMC, S Dor outbursts rel. to origin of circumstellar shells 7—134237
OH/IR 17.7—2.0, evolutionary status and dust shell nature 7—120411
old super-metal-rich stars, theoretical isochrones 7—115381
open clusters, age distrib. as function of linear dia. and age depend. of cluster masses 7—72551
peculiar interacting binary stars, evolutionary sequence for rapid mass outflow stage 7—88527
43 Peg, hot Am star, mass, radius, luminosity and age from model atmosphere anal. 7—127905
γ Per, evolutionary status 7—146025
planetary nebula central star, evol., effect on nebula, model-obs. comparison 7—80062
planetary nebula central star, evol., effect on nebula 7—80061
planetary nebula progenitors, importance of mag. fields for mass loss and proto-nebula struct. *(French)* 7—120548
planetary nebulae in Magellanic Clouds, new evolutionary relationships 7—120560
planetary nebulae nuclei, mass distrib. and evolutionary scheme 7—88390
Pleiades K-type dwarf stars, evidence for evolutionary sequence from rapid to slow rotators 7—140197
pre-main-sequence evolution of mass-accreting stars, appl. of polytropic model 7—140045
pre-main-sequence stars, primordial mag. field evolution rel. to surface mag. activity 7—127866
primordial stars, pre-main-sequence evolution 7—88543
protostellar evolution, D burning onset rel. to IRAS obs. of exciting stars of Herbig-Haro objects 7—127742
PSR 1821-24, millisecond pulsar in globular cluster M28, accretion-induced spinup model 7—140145
PSR 1913+16, binary pulsar, contrib. of self-energy losses to orbital period decrease 7—72492
PSR 1913+16, binary pulsar, new constraints on progenitor masses 7—88489
pulsars, birthrate and initial spin periods of single radio pulsars 7—140140
pulsars, characteristic times and ages 7—146015
pulsars, luminosity decay rel. to (P,$\dot{P}$) diagram 7—140138
pulsars, radio luminosity growth in later stages, statistical anal. 7—94936
pulsars, statistical distributions of periods, mag. field strengths, ages, and galactic plane heights 7—115487
pulsars, time var. in mag. obliquity 7—140144
stellar evolution continued
pulsars in supernova remnants, influence of rot. energy loss rate and age on remnant evolution 7—140218
pulsars-supernovae, apparent spatial coincidence, evidence for stellar evolutions 7—146016
ζ Pup (O4f), evolutionary status and initial mass from photosphere model 7—88433
RZ Pyx, early-type marginal contact binary, age and evolutionary status from photometric and spectroscopic study 7—120514
RCW 34 exciting star (Vel R2 25a), evidence for pre-main-sequence status from optical and IR obs. 7—120383
recurrent novae evolution to low mass X-ray binary stars 7—127885
red clump stars in open clusters, theoretical evolutionary sequences 7—101779
runaway stars with mass loss, evolution rel. to origin of Kepler's supernova remnant 7—146074
AL Scl (HD 224113), early-type double-lined eclipsing binary, age and heavy element content 7—120490
U Sco, recurrent nova, spectral similarities to LMC X-2, evidence for classes evolutionary link 7—127885
V701 Sco, W UMa star, temporary equilib. evolutionary state after Case A mass transfer 7—107903
V2022 Sgr, BL Her Star, evidence for evolutionary increase in pulsation period 7—72455
shell stars in the Geneva photometric system, evol. characts. 7—94885
SN 1987A, spectrum anal., luminosity meas. *(French)* 7—146013
SN 1987A in LMC, central pulsar theory and predictions 7—115482
SN 1987A in LMC, model of outburst 7—107878
solar-type dwarf stars, X-ray emission var. with age 7—107827
solar-type stars, ages and Ca II chromospheric activity 7—107806
solar-type stars in associations and clusters chromospheric and transition region emission and age 7—107803
standard massive stars, surface chem. evol. modelling 7—72391
Sun, comparison between mass-losing and standard solar models 7—145910
super-metal-rich stars, isochrone ages rel. to time depend. of SMR phenomenon 7—145947
supernovae, origin and causes *(French)* 7—72489
supernovae, subluminous Type I, rate in Galaxy and ellipticals 7—120470
symbiotic novae evolution to classical symbiotic stars, size considerations 7—145972
44 Tau, δ Sct star, mass, radius, luminosity and age from model atmosphere anal. 7—140104
T Tau stars, ang. momentum loss determ. from rot. vels. meas. 7—88410
RV Tau stars as post-asymptotic giant branch objects 7—88438
tidal binary systems in globular clusters, form. and evolution 7—127969
tidal capture X-ray binaries in globular clusters, evolution from 4U 2127+12 (M15) to 4U 1820—30 (NGC 6624) 7—127970
tidal circularization in massive binaries 7—107894
RR TrA, Algol type star, characts. determ. from photoelectric obs. anal. 7—72520
47 Tuc, age and evolutionary characts. 7—140193
Type II supernovae, evidence for evolution from massive progenitors 7—127931
4U 1820—30, in NGC 6624, form. by tidal capture and evolution to white dwarf-neutron star system 7—127970
4U 2127+12, in M15, form. by tidal capture and evolution to common envelope binary stage 7—127970
variable supergiants as binary system components 7—79983
white dwarf binary stars, fate of merging double white dwarfs 7—88394
white dwarfs, low-luminosity, enhanced cooling rel. to G-dwarf problem and local dark matter 7—88406
white dwarfs, luminosity function rel. to age of Galactic disk and Universe 7—120660
white dwarfs, mag. field evolution 7—88391
Wolf-Rayet stars, comparison of Galactic distribs. of W-R and O-type stars 7—134235
Wolf-Rayet stars in 30 Dor and surroundings, implications for masses of progenitor stars 7—72443
yellow evolved stars in open clusters, search for post-AGB stars 7—115382
young star clusters in M31, ages and luminosity function from integrated UBVR photometry 7—95031
young stellar objects, spectral evolution 7—72420
C star of 1.5 $M_\odot$ and M_{bol}=—4.4, form. modelling 7—79980
C stars with O-rich circumstellar dust shells, evolutionary characts. 7—88440
H-burning stars in young star clusters, evolutionary constraints from luminosity function 7—140189
He stars (2-4 $M_\odot$), evolution characts. 7—115376
OH-IR stars evolution to planetary nebulae, discoveries of two new OH emitting planetary nebulae 7—101878
^{232}Th in G-type dwarf stars as chronometer for Galaxy 7—120401

stellar formation *see star formation*

stellar interiors *see stellar internal processes*

stellar internal processes
see also solar interior; stellar evolution
A-type stars, localised instability in a Benard layer 7—69103
accreting white dwarfs, evolution rel. to supernovae and cataclysmic variables 7—120393
acoustic oscillations, appl. of freq. meas. to stellar ages determ. 7—79952
Am stars, subphotospheric diffusion model rel. to Ca abundances 7—94905
beta-decay rates of highly-ionised heavy atoms in stellar interiors, implications for s-process nucleosynthesis 7—101767
cataclysmic binary stars, accretion disk boundary layer-stellar interior interaction 7—115432
ZZ Cet stars, convective blocking driving mechanism for pulsations 7—120394
classical nova model, evolution through full accretion-outburst-accretion cycle 7—120429
classical nova outbursts, review of thermonuclear runaway models 7—120427
R CMi; thermally-pulsing AGB star, duration of third dredge-up phase from Tc/Mo ratio 7—115222
collapse of 8-10 $M_\odot$ stars, effect of electron capture in ^{24}Mg and ^{20}Ne 7—140120
collapsing stars, neutrino bursts 7—72291
convection in interior, mixing-length theory of deep convection 7—88107

stellar internal processes continued
convective zones, rotating, turbulent heat transport rel. to surface temp. latitudinal vars. *(Russian)* 7−145918
core collapse, eqn. of state of hot dense matter 7−140036
core collapse, implications of incompressibility of hot neutron-rich nuclear matter 7−139895
core collapse, neutrino-antineutrino annihilation around collapsar rel. to X-ray or γ-ray burst 7−80000
core collapse, numerical calcs. of trapped lepton fraction 7−115366
core collapse, physics of baryonic-to-hyperonic transition 7−88375
core collapse, shock wave propag. in radiating spherically symmetric mass distrib. 7−145814
core He flash in giant stars, contrib. to surface abundance anomalies 7−120378
CY Cyg, thermally pulsing AGB star, duration of third dredge-up phase from Tc/Mo ratio 7−115222
degeneracy inhibition by intense mag. fields 7−145810
degenerate Fermi gases in intense magnetic fields, mechanical stability 7−88373
degenerate stars, shear viscosity of dense matter 7−120263
AG Dra, Population II symbiotic star, H shell flash model for explosive phenomena 7−115389
electron screening effects on low-energy fusion cross sections, astrophysical aspects 7−141122
evolved stars, $^{12}C/^{14}C$ ratio-upper limit determ. from $^{14}C^{16}O$ meas., use for nucleosynthesis constraints 7−140091
F-type stars, nucl. processes. 7−94862
free-free opacities, effect of ion correls. 7−139904
fully convective main-sequence star, rapid mass accretion effects on evol. and struct. 7−127838
globular cluster giants, evidence for rot.-induced mixing model for CN enrichment 7−115531
globular cluster stars, internal mixing model for chemical inhomogeneity 7−80058
gravitational collapse, assoc. neutrinos energy spectra 7−140040
heavy elements production in M101, implications of radial abundance gradient determ. from H II region models 7−95009
RW Hya, symbiotic star, H shell burning model for hot star luminosity 7−127894
HZ 43, DA white dwarf, heavy elements downward diffusion 7−88396
LMC intermediate-mass stars, interior models rel. to LMC distance modulus determ. 7−88611
low-frequency oscillations of uniformly rotating stars, nonadiabatic anal. 7−88381
RR Lyr stars, Fourier anal. of dynamical evolution rel. to pulsation mode selection 7−127895
M67, old open cluster, C/N ratios along evolutionary sequence, implications for mixing 7−120377
magnetic CP stars, mag. flux distribs. from fossil mag. field evolution 7−94903
magnetic stars, time-dependent models for perpendicular rot. and mag. axes 7−94902
main sequence stars, struct. parameters and neutrino flux 7−94850
main sequence stars (types F5 to K0), Gray's const., convection zones and mag. fields 7−94866
massive stars, evolution without convective core overshooting 7−134221
massive stars, evolutionary models with mass loss and overshooting rel. to W-R stars props. 7−134222
massive stars, mixing length and convective overshooting 7−101763
massive stars, rot.-induced mixing rel. to bifurcation in evolution and ON-type blue stragglers 7−115359
merging white dwarfs, off-centre ignition of nuclear burning 7−107822
neutrino oscillations in solar interior, nonadiabatic 7−121402
neutron capture cross sections for s-process studies 7−95114
neutron capture nucleosynthesis, occurrence during core He burning in massive stars 7−107805
neutron star cooling, thermal conduction time scale effects 7−72498
neutron stars, accreting, thermal evolution of interior rel. to occurrence of long X-ray bursts 7−107887
neutron stars, beta stable, neutron rich nuclear matter, symmetry energy 7−121688
neutron stars, conversion into strange stars 7−115495
neutron stars, effects of viscous secular instability on rot. rate 7−140148
neutron stars, mean free paths of nondegenerate neutrinos 7−115493
neutron stars, nuclear reaction probability of molecular ions in strong mag. field 7−120274
neutron-rich equilib. nucleosynthesis, evidence from Cr isotopic anomalies in Allende meteorite 7−88184
novae, gamma-ray constraints on ^{22}Na yields 7−120439
nucleosynthesis, contrib. to Galaxy chemical evolution and dark matter problem 7−95022
nucleosynthesis, effects of variable star form. rate on Galaxy chemical evolution 7−115586
nucleosynthesis in stars and early Universe, review 7−107815
old super-metal-rich stars, internal opacities and mixing length parameter rel. to isochrones 7−115381
old white dwarfs, accretion-induced gravit. collapse to neutron stars 7−127857
RS Oph, recurrent nova, evidence for thermonuclear runaway on massive white dwarf 7−115425
ε Peg, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
plasmon→$\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
Population III, explosions, implications for microwave background and nucleosynthesis 7−146052
pregalactic supermassive stars, influence on metallicity histogram of globular clusters 7−146060
primary nucleosynthesis in Galactic disk, implications for stellar mass function 7−120602
protostars, D burning onset rel. toIRAS obs. of exciting stars of Herbig-Haro objects 7−127742
pulsars with extremely high space vel. motion due to anisotropic collapse of progenitor 7−115490
12 Pup, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
radiative transfer, relativistic free-free Gaunt factor of dense high-temp. stellar plasma 7−115228
radiative zones non-uniform rot. and mag. fields 7−94860
recurrent novae, thermonuclear runaway model for outbursts of T Pyx and U Sco 7−115445
stellar internal processes continued
recurrent novae, thermonuclear runaway model for T Pyx and U Sco 7−115456
red clump stars in open clusters, effect of internal mixing on evolution 7−101779
relativistic stars, gravitational radiation, off-parity fluid perturbations 7−80534
rotating polytropes, linear and nonlinear dynamic instability 7−107807
S18/SMC, peculiar early-type emission-line supergiant, N overabundance rel. to internal mixing 7−101771
s-process, pulsed neutron source models, parametric study 7−88374
s-process analysis from ^{34}S to ^{42}Ca, implications of ^{40}Ar neutron capture cross section 7−72268
s-process nucleosynthesis, Maxwellian-averaged neutron capture cross sections for ^{99}Tc and $^{95-98}Mo$ 7−115222
semi-detached binary stars, red star instability models 7−94955
shell source instability, occurrence conditions *(Chinese)* 7−107802
SN 1987A, in LMC, energetic neutrinos obs., acceleration probe 7−88488
SN 1987A in LMC, constraints on core collapse time from early optical obs. 7−134254
SN 1987A in LMC, evidence for black hole form. from neutrino obs. 7−120463
SN 1987A in LMC, light particle constraints from neutrino obs. 7−127929
SN 1987A in LMC, model of outburst 7−107878
SN 1987A in LMC, MSW effect rel. to (anti)neutrino fluxes 7−127927
SN 1987A in LMC, neutrino emission charact. and implications for interior processes 7−140125
SN 1987A in LMC, neutron star and black hole formation, neutrino evidence 7−127928
solar neutrinos, use in super microscopes supernovae 7−128877
structure consts. 7−115363
Sun, ν capture, effect of cosmic asymmetry on cold dark matter 7−72669
supermassive stars, power-law relations between mass, radius and central temp. 7−72408
supernovae, effects of core collapse on light curves of exploding Wolf-Rayet stars 7−127916
supernovae, Type II, neutrino annihilation rel. to stellar envelope ejection 7−101826
thermonuclear reaction rates in white dwarfs and neutron stars, effect of electron screening *(Russian)* 7−145820
triple α reaction, S-matrix calc. 7−127710
turbulent heat transport in rotating convective envelopes, effects on surface temp. latitudinal vars. *(Russian)* 7−145918
Type Ia supernova, bolometric light curve reconstruction from model of processes 7−107871
Type II supernovae, convection effects and neutrino emission charact. 7−140124
4U/MXB 1636−53, relation between amount of accreted fuel and strength of X-ray burst 7−146040
white dwarf, spin-up and mixing due to accretion, implications for novae 7−140085
white dwarf explosions, ^{56}Ni prod. rel. to Type I supernova light curves 7−120467
white dwarf-massive main-sequence star collisions in dense galactic nuclei, hydrodynamic simulations 7−127847
white dwarfs, contrib. of convection to pulsation of stars with thick H or He surface layers 7−140055
white dwarfs, deflagration and statistical props. of Type I supernovae 7−140122
white dwarfs, mag. field evolution 7−88391
X-ray burst sources, inward-propagating slow deflagration front model 7−101841
X-ray burst sources, Type I X-ray bursts energetics and nuclear fuel reservoir in stellar envelope 7−146041
X-ray busting neutron stars, contrib. of rapid α captures to nonradial g-mode oscills. 7−127938
$e^+e^-\rightarrow\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
$e^{\pm}\gamma\rightarrow e^{\pm}\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
$^{11}B(p,3\alpha)$, 22-1100 keV, cross sections, kinematically complete coincidence measurements, astrophysical S(E) factor 7−121848
Be-deficient F-type stars, mixing model for element abundances 7−88404
C star of 1.5 $M_\odot$ and $M_{bol}=-4.4$, form. modelling 7−79980
Fe cores collapse, effects of neutrino transport 7−145938
H-burning stars in young clusters, overall contraction phase location from luminosity function 7−140189
$^3H(\alpha,\gamma)$, 79-464 keV, astrophysical S(E) factor, ^7Li prod. rate 7−115229
He diffusion in stellar outer layers, theory for planetary nebulae central stars 7−115372
He stars (2-4 $M_\odot$), evolution charact. 7−115376
$^3He(^3He,2p)$, 17.9−342.5 keV, astrophysical S(E) factor at solar energies 7−107814
$^{25}Mg(P,\gamma)$ at stellar energies, astrophysical aspects, ^{26}Al abundance 7−107813
N-rich metal poor stars, Li abundances rel. to deep internal mixing model 7−145956
$^{13}N(p,\gamma)$, stellar energies, microscopic coupled channel approach, cross section 7−73759
$^{14}N(p,\gamma)$, 0.2−3.6 MeV, stellar reaction rate and H burning in massive stars 7−107812
Ne-O-F cycle of reactions in stellar interiors 7−88385
$^{22}Ne(p,\gamma)^{23}Na$ in H-burning stars, Na core enrichment *(Russian)* 7−140046
$^{14}O(\alpha,\gamma)^{18}Ne$ in stars 7−127704
$^{14}O(\alpha,p)^{17}F$ in stars 7−127704
^{80}Zn, β-decay, implications for shell structure and r-process nucleosynthesis 7−129002

stellar light curves *see stellar photometry*

stellar magnetism
see also solar magnetism
accretion disks, axisymmetric MHD flows theory 7−115227
activity rel. to Sun (book) 7−88751
Ap stars, appl. of significance tests to mag. field meas. by photographic technique 7−134146
Ap-type stars in Sco-Cen association, mag. obs. rel. to mag. fields evolution 7−115459
Ap/Bp stars, model atm. and decay-induced Lorentz force 7−72466

stellar magnetism continued
FO Aqr (H2215−086), DQ Her star, white dwarf spin-down rel. to mag. field strength 7−134250
AB Aur, Herbig Ae star, mag. field from short-term Ca II line vars. 7−88400
RW Aur, T Tau star, local mag. fields lifetimes form Balmer line vars. 7−127863
binary pulsars, mag. field decay characts. 7−72506
black hole accretion disk, MHD flows in Schwarzschild geometry 7−94649
black holes, accretion disks mag. precession 7−146021
α Car (Canopus), appl. of significance tests to mag. field meas. by photographic technique 7−134146
cataclysmic binaries, accretion and evidence for disks 7−115453
cataclysmic binary stars, influence of mag. field on evolution 7−115449
cataclysmic variables, evolution of magnetic stars 7−127892
cataclysmic variables, orbital period and mag. field distribs. rel. to evolution 7−115450
UV Cet, microwave emitting corona modelling, role of mag. structures 7−72447
FK Com, rapidly rotating variable star, mag. field strength from radio emission obs. 7−88425
composite stellar model with weak mag. field, linear adiabatic oscills. freqs. 7−127839
CP stars, mag. flux distribs. from fossil mag. field evolution 7−94903
CP stars, time-dependent models for perpendicular rot. and mag. axes 7−94902
RS CVn stars, chromospheres and transition regions physical parameters 7−120491
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
γ Cyg (F8 Ib), spectroscopic obs. rel. to pulsation model for 8-day mag. field period 7−140070
Cyg X-3, mag. steering effects and γ-ray emission 7−120516
degeneracy inhibition by intense mag. fields 7−145810
degenerate Fermi gases in intense magnetic fields, mechanical stability 7−88373
double-shell planetary nebulae, origin, anal. of NGC 2392 *(French)* 7−94984
dynamo model, calc. of self-consistent spherical dynamos 7−145818
E1114+182, AM Her star, EXOSAT obs. of X-ray emission from secondary mag. pole 7−72508
E 1405−451, AM Her star, mag. fields and accretion column absorpt. features, spectropolarimetric obs. 7−140164
EF Eri, AM Her star, 2-3 sec quasi-periodic oscills., role of mag. field 7−120492
EF Eri, AM Her star, simultaneous five-colour (UBVRI) polarimetry rel. to mag. field and accretion geometry 7−115506
EF Eri (2A 0311−277), AM Her star, circular polarisation rel. to mag. field strength in Hα emission line region 7−140153
EF Eri (2A 0311-227), AM Her star, accretion model rel. to mag-field struct. 7−127963
field strength detection using H spectra anal. 7−141505
fields synthesis from solar data and Fourier analysis scheme 7−72383
GD 229, magnetic white dwarf, mag. field characts. and H lines obs. 7−72407
GK-type main-sequence stars, MHD waves model for coronal heating 7−88418
gravimagnetic rotators, ecology (interaction with environment, and evolution) 7−94643
HD 32918, active chromosphere K2 III star, coronal mag. field strength from radio flare obs. 7−120400
52 Her, surface magnetic field strength and Fe, abundance in atmosphere *(Russian)* 7−140110
AM Her, white dwarfs mag. axis-rot. axis angle determ. from X-ray flux orbital curves 7−88503
AM Her stars, intensity and polarisation of mag. accretion columns with electron scatt. 7−115452
AM Her stars (magnetic close binary stars), swinging mag. dipoles model 7−115451
HS 1254+3430, magnetic DA white dwarf with distinct Hβ and Hα Zeeman triplets, spectroscopic and position obs. 7−140050
EX Hya, eclipsing dwarf nova, intermediate polar model from time-resolved spectrophotometry 7−120441
BL Hyi (H0139−68), AM Her star, accreting pole obliquity from polarimetry in high and low states 7−140177
late-type stars, mag. braking 7−94859
late-type stars, mag. struct. and rot.-activity relation 7−94852
low-mass stars, nonradial oscills. in presence of mag. field 7−120374
lower main-sequence stars. objective characterisation methods for activity cycles and solar cycle anal. 7−115380
RU Lup, RW Aur star, mag. field characts., spectral obs. 7−127867
RR Lyr, mag. field var. with pulsation period, spectral obs. *(Russian)* 7−72470
magnetic white dwarfs, model atm. and decay-induced Lorentz force 7−72466
magnetospheric plasma of a pulsar, props. investig. 7−120485
main sequence stars (types F5 to K0), Gray's const., convection zones and mag. fields 7−94866
neutron star magnetic field decay, flux expulsion from superconducting interior 7−146019
neutron stars, curvature synchrotron radiation model for gamma-ray pulsars 7−146105
neutron stars, electron cyclotron resonance instability of magnetised photosphere 7−94938
neutron stars, mag. field strengths 7−94945
neutron stars, nuclear reaction probability of molecular ions in strong mag. field 7−120274
neutron stars, quantised synchrotron radiation in strong mag. fields 7−145815
PG 1031+234, magnetic white dwarf, spectra photometry rel. to polarisation and mag. field struct. at >500 MGauss 7−88407
photographic measurements of stellar mag. fields, appl. of significance tests to α Car 7−134146
planetary nebulae, importance of mag. fields for proto-nebula *(French)* 7−120548
Pleiades K and M-type dwarfs, rot. characts., effects of mag. braking 7−140053
pre-main-sequence stars, contrib. of fossil mag. fields to chromospheric activity 7−127866

stellar magnetism continued
PSR 0809+74, single pulse intensity fluctuations obs. rel. to multipole mag. field of freq. dependence pulse profile *(Russian)* 7−72495
pulsar magnetospheres, current sheets contrib. to radio emission 7−94933
pulsar magnetospheres, EM cascades as model for positron prod. near Galactic centre 7−101936
pulsar magnetospheres, freq. independence of microstructure phase struct. 7−88490
pulsar magnetospheres, tearing instability 7−120483
pulsar magnetospheres, two-beam model for triplicity of pulse profiles and orthogonal polarisation modes 7−94934
pulsars, correl. between mag. field strength and initial spin period 7−140140
pulsars, influence of mag. field inhomogeneity on longit. waves excitation in magnetospheres 7−127933
pulsars, mag. field and radio luminosity decay time 7−140138
pulsars, magnetic dipole-rotation axes angle determ. methods 7−72490
pulsars, photon capture in mag. fields rel. to polar gap models 7−72493
pulsars, statistical distributions of periods, mag. field strengths, ages, and galactic plane heights 7−115487
pulsars, time var. in mag. obliquity 7−140144
pulsars magnetospheres, cross-field particles and energy transport 7−83448
VV Pup, AM Her star, dipole mag. field model from five-colour (UBVRI) polarimetry 7−115507
radiative zones non-uniform rot. and mag. fields 7−94860
rotating bodies, neutral, polarisation and magnetisation 7−79825
V1223 Sgr (4U 1849−31), intermediate polar, white dwarf mag. field from spin-down rate meas. 7−140107
sn stars, jet-like mass loss and mag. fields, IUE obs. 7−145967
supergiant OH-IR sources, mag. field strengths from polarised OH 1612 MHz maser emission obs. 7−88417
thermal-convective instability of MHD-composite plasma in stellar atmosphere, effect of finite Larmor radius 7−127841
Vel X-1, accretion disk form. in magnetosphere of wind-fed pulsar 7−140152
white dwarfs, accreting, effects of mag. field on LTE model atmospheres and soft X-ray excess 7−94874
white dwarfs, atomic data rel. to line formation in strongly magnetized stars 7−115378
white dwarfs, mag. field evolution 7−88391
white dwarfs, magnetic axis orientation determ. from X-ray flux orbital curves 7−88503
winds from hot stars, azimuthal vel. and magnetic force 7−72400
X-ray binary, asymmetric beam emission from neutron star, role of embedded off-centre mag. dipole field 7−115527
X-ray binary stars, boundary layer mag. field fluctuations rel. to power spectra of quasi-periodic oscills. 7−146037
X-ray binary stars, disk form. in magnetospheres of wind-fed pulsars 7−140152
X-ray binary stars, resonant Raman-cyclotron scatt. in very strong mag. fields 7−139901
X-ray emission and magnetic activity 7−127816
X-ray pulsars, directionality and spectrum of X-ray emission from uniformly heated mag. neutron star 7−127944
ZZ 7−94856
λ And, RS CVn star, starspots mag. fields from optical circular polarisation obs. 7−127897
He-peculiar stars, radiatively driven mass loss interaction with mag. fields 7−145966

stellar mass
A0620−00, black hole binary star, mass determ. from photometry and radial vels. 7−88511
A0620−00 (616 Mon), black hole binary system, initial masses from evolutionary scenario 7−140154
ADS 9182, components masses and evolutionary status 7−127976
Ap/Bp stars, possible secondaries upper mass limit determ., spectral obs. *(Russian)* 7−88465
V1182 Aql, early-type eclipsing binary, masses and radii from photometric and spectroscopic study 7−88536
V1343 Aql (SS 433), compact object/normal star mass ratio from obs. of X-ray and optical eclipse 7−140105
BW Aqr, detached eclipsing binary, masses and radii from photoelectric radial vels. and orbital elements *(French)* 7−120493
ε Aur, eclipsing binary, primary and secondary masses 7−107899
ε Aur, secondary disk rot. characts. and components masses, spectral obs. 7−107908
B-type supergiants in LMC, radii, luminosities and masses from UV-visual energy distribs. 7−72417
Be stars, spectrophotometric obs. rel to masses and evolutionary status 7−72441
binary stars, mass of He star remnant in intermediate mass Case B close binaries 7−115501
binary stars, mass-luminosity relations 7−80027
binary stars, masses of massive close binaries in and after mode Br mass-transfer phase 7−127959
binary stars, neutron stars and black hole candidates masses *(Russian)* 7−94962
binary stars masses determ., use of spaceborne interferometer 7−72302
black hole, critical mass, nontopological soliton soln. in general relativity 7−102240
AN Cam, double-lined eclipsing binary, masses and radii from photoelectric orbital elements *(French)* 7−72510
OY Car, eclipsing SU UMa star, masses and radii determ. 7−120417
RX Cas, component mass ratio from near IR obs. *(Russian)* 7−140179
PV Cas, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
cataclysmic binary stars, influence of binary system parameters on hibernation model 7−145977
V779 Cen=Cen X-3, modelling, components masses and orbit characts. 7−88502
V677 Cen, contact binary, mass, radii and atm. characts., light curves anal. 7−140169
WX Cep, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
EK Cep, detached eclipsing binary, masses and radii rel. to pre-main-sequence secondary component 7−115520
TX Cet, Algol type star, characts. determ. from photoelectric obs. anal. 7−72520
Z Cha, dwarf nova, masses determ. rel. to evolutionary state 7−115448

stellar mass continued
close binary stars, effect of initial mass ratio on stability against rapid mass transfer 7−146038
δ CMa (F8 Ia), mass, radius, luminosity and age from model-atmosphere anal. 7−140068
RW Com, W UMa star, light curve modelling and system parameters 7−140168
cool companions to Hyades and Pleiades white dwarfs, search, mass upper limits 7−140066
core He-burning stars in Magellanic Clouds, luminosities and masses rel. to Clouds distances 7−88609
CPD−58°2721, H-deficient binary star, mass function from vel. semi-amplitude 7−88538
AI Cru, early-type eclipsing binary, mass and radii characts. 7−107902
20 CVn, δ Sct star, mass, radius, luminosity and age determ. 7−127904
RS Cvn stars, short-period, light curves anal. rel. to starspots and fundamental props. 7−146039
CI Cyg, eclipsing symbiotic star, mass ratio *(Russian)* 7−127912
V367 Cyg, evolved contact binary, photometric mass ratio from light curves anal. 7−115517
V1143 Cyg, F-type eclipsing binary, spectroscopic orbit and absolute dimensions 7−72507
CG Cyg, short-period eclipsing RS CVn star, masses and radii determ 7−134276
δ Del, δ Sct star, mass, radius, luminosity and age determ. 7−127904
χ Dra, spectroscopic binary, stellar masses, luminosity and orbit 7−101849
dwarf Cepheids, radii, masses, pulsation characts. and evolutionary status, VJK obs. 7−72467
dwarf stars, mass function at low luminosities 7−88384
1 E 1145-6141, X-ray pulsar, masses and mass ratio from new orbital parameters 7−134277
early-type stars in starburst galaxies, initial mass function from IUE obs. 7−145935
EI Eri (HD 26337), RS CVn star, system characts. 7−146028
faint blue stars in southern external part of LMC, luminosity function and upper mass limit 7−80085
fermion soliton stars and black holes, nontopological solns. in general relativity 7−102243
Finsen 342, Hyades binary, orbital characts. and mass characts. 7−107911
RY Gem, Algol type star, masses and radii characts. 7−72518
γ Gem (A0 IV), mass, radius, luminosity and age from model-atmosphere study 7−140069
giant stars, core mass-radius relation as new test of stellar evolution theory 7−140058
Gliese 623, companion lumin. and mass characts. 7−140174
Gliese 866, M-type dwarf, hour-mass companion detect., components masses 7−127856
GX 339−4, constraints on neutron star mass from possible 1.13 millisecond periodicity 7−101853
halo photoclusters, chemical enrichment, mass functions 7−127984
HD 128220, double-lined binary with subdwarf O star, spectroscopic orbit and subdwarf parameters 7−94871
HD 128220B, sdO star, constraints on mass 7−72422
HD 12856, HD 13890, Be stars in Per OB1 association, masses and evolutionary status from synthetic filter photometry 7−79976
HD 160641, extreme He star, nonradial pulsations anal. rel. to mass and evolution 7−127906
HD 23838, spectroscopic binary, orbital characts. and mass ratio determ., spectral obs. *(French)* 7−80030
HD 27130, eclipsing binary in Hyades, mass, lumin. and radii determ. 7−127945
HD 47129 (Plaskett's star), orbital elements and mass function from UV radial vels. 7−94961
V644 Her, δ Sct star, mass, radius, luminosity and age from model-atmosphere anal. 7−140104
BL Her, uvbyβ photometry and parameter determ. 7−140115
V533 Her (Nova 1963), orbital elements and masses determ. from spectroscopic obs. 7−72472
AM Her stars, secondary orbital motion and evidence for low-mass white dwarfs 7−94956
Humason 1-2, Type I planetary nebula, central star mass determ. 7−134288
EX Hya, eclipsing intermediate polar, radial vels. and masses from time-resolved optical spectroscopy 7−140108
initial mass function, implications for Galaxy chemical evolution and dark matter problem 7−95022
initial mass function, implications of re-anal. of Galactic primary nucleosynthesis 7−120602
initial mass function, solns. of coagulation eqn. with time-depend. coagulation rates 7−88376
initial mass functions in elliptical galaxies, constraints on bimodal star form. from V−R colours at high redshift 7−140287
initial-final mass relation for low and intermediate mass stars 7−145932
IRAS 16293−2422, source mass characts. and evolutionary status 7−94974
IRAS point sources around dense molecular clouds, evolution of IR-emitting mass 7−120532
XY Leo, contact binary star, mass functions of BY Dra-like binary companion 7−140165
LMC planetary nebulae, precursor masses and dynamics 7−115600
lower mass limit, implications of protostars form. in nonuniform rot. interstellar clouds 7−140042
α Lyr (A0 V), mas, radius, luminosity and age from model-atmosphere study 7−140069
RR Lyr stars of Bailey type C, modelling 7−94888
M13, globular cluster, dynamical characts. based on radial vel. and mass function 7−101866
main-sequence stars, masses and ages determ. from stellar seismology 7−79952
main-sequence stars mass function, implications of mass loss on main-sequence 7−88416
mass loss rates, empirical fits examination 7−72401
massive stars in galaxies, star form. rates and initial mass functions 7−72426
TZ Men, A-type eclipsing binary star, masses and radii from radial vels. and uvby light curves 7−80029
mini-soliton stars, scalar field nontopological solns. in general relativity 7−102241
R Mon, pre-main-sequence star, circumstellar gas mass determ. 7−88403
neutron star, nonrotating, maximum mass in metric theories of gravitation 7−101837
neutron stars, masses and radii determ. from Fe features in X-ray burst spectra 7−134274
neutron stars, maximum mass, effects of uniform rapid rotation 7−120486
NGC 206, OB assoc. in M31, initial mass function determ. 7−72602
NGC 2440, planetary nebular central star, spectra and parameters 7−88419
novae, mass of white dwarf remnant from obs. of X-ray emission during outburst stage 7−115430
OB stars, IUE spectra, mass to line-strength relations 7−134227
Ofpe/WN9 stars in Galaxy and LMC, ionised masses of resolved circumstellar shells 7−134237
open clusters, age depend of cluster masses 7−72551
order-of-magnitude theory 7−134393
CN Ori, Z Cam star, masses and radii from spectroscopic obs. 7−115447
peculiar interacting binary stars, mass ratio reversal during rapid mass outflow stage 7−88527
IP Peg, eclipsing dwarf nova, orbital characts. and masses determ. 7−115413
43 Peg, hot Am star, mass, radius, luminosity and age from model atmosphere anal. 7−127905
γ Per, mass and absolute mag. characts., spectral anal. 7−146025
planetary nebulae nuclei, mass distrib. and evolutionary scheme 7−88390
planetary nebulae nuclei in Magellanic Clouds, masses rel. tonebulae evolutionary relations 7−120560
planetary nebulae nuclei mass rel. to nebulae mass 7−140203
planetary nebulae with OH emission, masses, radii and temps. of central stars 7−101878
Population III stars, wakes of moving cosmic strings 7−127977
preplanetary nebulae, possible mass distribs. 7−88528
PSR 1913+16, binary pulsar, new constraints on progenitor masses 7−88489
ζ Pup (O4f), mass and radius from photosphere model 7−88433
RZ Pyx, early-type marginal contact binary, masses and radii from photometric and spectroscopic study 7−120514
R136a, supermassive star in LMC, resolution into individual components *(French)* 7−79961
2S 0921−630, long period low-mass X-ray binary, companion mass characts. 7−94958
scalar soliton stars and black holes, nontopological solns. in general relativity 7−102242
AL Scl (HD 224113), early-type double-lined eclipsing binary, absolute parameters determ. 7−120490
V701 Sco, W UMa star, masses, radii and temps., photometric and spectral obs. 7−107903
Scorpius-Centaurus association, binary stars secondary masses 7−127988
in Sculptor dwarf spheroidal galaxy, evidence for mass function vars. from radial vels. of C stars 7−145965
RW Sex, UX UMa star, radial vel. and mass characts. 7−115417
V2022 Sgr, BL Her star, mass determ. from pulsation period increase 7−72455
SN 1987A in LMC, explosion of 20 $M_\odot$ star which experienced mass loss 7−146003
supermassive stars, power-law relations between mass, radius and central temp. 7−72408
supernovae, Type II, core mass limit from neutrino transport calcs. 7−145938
supernovae, Type II, upper mass limit rel. to star form. rate vars. and Galaxy chemical evolution 7−115586
44 Tau, δ Sct star, mass, radius, luminosity and age from model atmosphere anal. 7−140104
HL Tau, pre-main-sequence star, circumstellar gas mass determ. 7−88403
T Tau stars, general characts. determ. from spectral meas. 7−140056
RR TrA, Algol type star, characts. determ. from photoelectric obs. anal. 7−72520
triple stars, orbital characts. and masses, CORAVEL obs. 7−101844
CF Tuc, eclipsing RS CVn star, masses and spectral types from UBV photometry 7−127955
4U 1746−37, X-ray binary in globular cluster NGC 6441, constraints on neutron star mass-radius relation 7−94954
4U 1820−30, ultra-short period binary star, mass function from X-ray flux modulation *(Russian)* 7−107906
4U 1915−05, X-ray burst source, mass and radius of optical companion star 7−94951
AN UMa, AM Her star, mass ratio determ. 7−88504
BE UMa, detached binary star with unique reprocessing spectrum, white dwarf mass 7−127966
upper mass limit, conditions for form. of massive stars 7−145940
Vel X-1, orbital characts. and masses determ. 7−127947
FO Vir, pre-contact system, photometry and elements 7−115504
visual binary stars, mass ratios *(Russian)* 7−72540
DR Vul, eclipsing binary quadruple system, orbital characts. and masses, minima times anal. 7−72536
white dwarfs, accreting, X-ray and UV radiation from massive white dwarfs 7−88392
white dwarfs, mass of remnant of 3 $M_\odot$ initial mass star 7−88372
white dwarfs, rapidly rotating, lower bounds on masses 7−140059
white dwarfs mass distrib. depend. on initial chem. comp. 7−145932
Wolf 922 and Wolf 922 B, red dwarf binary, parallax, masses and luminosities 7−101762
Wolf-Rayet star progenitors, masses from Galactic distribs. of W-R and O-type stars 7−134235
Wolf-Rayet stars in 30 Dor and surroundings, implications for masses of progenitor stars 7−72443
X-ray binaries in hierarchical triple system., mass ratio determ. from binary separation vars. 7−120501

stellar models
A0620−00 (616 Mon), black hole binary system, evolutionary scenario 7−140154
V1343 Aql (SS 433), accretion disk model for moving spectral lines 7−127891
V1343 Aql (SS 433), dynamical model for jets precession 7−88429
ε Aur, twisted accretion disk model 7−88535
B-type supergiants in LMC, model atmospheres rel. to UV-visual energy distribs. 7−72417
Be stars, constraints on models from UV and IRAS meas. 7−127877
Be stars, model fitting of polarimetric data 7−101792

stellar models continued
binary stars, evolution of intermediate mass Case B close binaries 7−115501
binary stars, vibr. stability of double-star Roche model 7−120494
large black holes, tidal influence and nuclear processes in closely approaching stars 7−80026
AN Cam, double-lined eclipsing binary, masses and radii from photoelectric orbital elements *(French)* 7−72510
η Car, composite dust shell model from IR spectroscopy 7−120462
SU Cas, Cepheid, hydrodynamic models for various lumin. 7−120415
cataclysmic binaries, accretion disks, boundary layer 2D numerical models 7−115433
cataclysmic binaries, stream-accretion disk collision region modelling 7−115441
cataclysmic binary stars, accretion disks, viscosity-surface density relation 7−115434
cataclysmic binary stars, influence of binary system parameters on hibernation model 7−145977
cataclysmic binary stars, period gap, dynamic instability model 7−140097
cataclysmic binary stars, radiatively-driven shocked stellar winds model 7−115428
cataclysmic variable stars, appl. of steady-state accretion disk model to EUV and far-UV obs. 7−115424
cataclysmic variables, accreting white dwarf models 7−120393
V779 Cen=Cen X-3, modelling, components masses and orbit characts. 7−88502
UV Cet, microwave emitting corona modelling, role of mag. structures 7−72447
ZZ Cet stars, convective blocking driving mechanism for pulsations 7−120394
charged superdense star, charged analogue of the Vaidya-Tikekar solution 7−108333
classical nova model, evolution through full accretion-outburst-accretion cycle 7−120429
classical nova outbursts, review of thermonuclear runaway models 7−120427
close binary stars, thresholds for rapid mass transfer in polytropic models 7−146038
α CMa, atmospheric models and Mg II reson. lines 7−72411
Z CMa, Herbig Ae-Be star, scatt. dusty disk model from resolution at near-IR wavelengths 7−134226
κ CnC (HD 78316), Mn star, abundance anal. using line-blanketed model atmosphere 7−101794
RW Com, W UMa star, light curve modelling and system parameters 7−140168
composite stellar model with weak mag. field, linear adiabatic oscills. freqs. 7−127839
cooling neutron stars, model atmospheres 7−101836
R CrB, model involving occulting cloud and circumstellar shell 7−127913
α^2 CVn, Ap star, radiation distrib. and nonspherically symm. model 7−127881
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
SS Cyg, accretion disk struct., visible spectra obs. 7−115438
SS Cyg, dwarf nova, intermediate polar model for periodic vars. in IUE spectra 7−115429
Cyg X-3, flywheel model 7−88534
Cyg X-3, PeV and TeV γ-ray emission, model involving accretion disk 7−120516
Cyg X-3, radio and IR flares modelling 7−127957
AG Dra, quiescent energy distrib. rel. to models of symbiotic star 7−107839
dwarf nova outbursts, disk instability model, fine mesh calcs 7−115435
dwarf novae, accretion disk instability model, effects of thermal diffusion and parameter studies 7−79995
dwarf novae, accretion disk spectra modelling 7−115436
dwarf novae, accretion disks spectra modelling 7−115437
dwarf novae, disk instability models rel. to two types of outbursts 7−115446
dwarf novae, mass transfer instability models 7−115431
DZ stars, model atmospheres and synthetic spectra for different metal abundances 7−88388
Einstein equations, exact solutions, stellar model props. 7−115864
Emden-Chandrasekhar axisymmetric rigid-body rot. polytropes, n=5 exact configurations 7−140038
evolved stars, $^{12}C/^{14}C$ ratio-upper limit determ. from $^{14}C^{16}O$ meas., use for nucleosynthesis constraints 7−140091
fermion soliton stars and black holes, nontopological solns. in general relativity 7−102243
gamma-ray burst sources, X-ray emission, constraints on theoretical models 7−101957
gamma-ray pulsars, curvature synchrotron radiation model 7−146105
globular cluster stars, model atmospheres rel. to predicted Thuan-Gunn photometry and theoretical isochrones 7−94973
gravitational collapse, assoc. neutrinos energy spectra 7−140040
GX 17+2, tidal angular momentum loss, triple star model 7−72530
GX 301−2, slow X-ray pulsar, wind accretion model from obs. through two binary cycles 7−107897
HD 199178, FK Com star, rot. inclination 7−101772
HD 32918, active chromosphere K2 III star, gyrosynchrotron emission model for radio flares 7−120400
HD 50896, WN5 star, empirical model for extended atmosphere 7−101802
AM Her stars, models of optical-IR continuous spectrum 7−115509
AM Her stars (magnetic close binary stars), swinging mag. dipoles model 7−115451
Her X-1, pulse profile rapid change and high-state duration modelling 7−140173
AM Her-type stars, effects of inhomogeneous accretion columns 7−115511
EX Hya, eclipsing dwarf nova, intermediate polar model from time-resolved spectrophotometry 7−120441
hypergiant stars eruptions, opaque wind model for relation between apparent temp. and mass loss rate 7−120440
internal structure consts. 7−115363
Lane-Emden equation, topological study 7−94851
late-type stars, mag. braking 7−94859
late-type WR stars, circumstellar dust characts. and winds, modelling and IR photometry anal. 7−127878
LMC intermediate-mass stars, interior models rel. to LMC distance modulus determ. 7−88611
stellar models continued
low mass X-ray binaries, X-ray light curves modelling 7−101845
low-mass pre-main sequence stars, circumstellar dust IR emission modelling 7−107825
RR Lyr stars, appl. of time-depend. Fourier anal. to nonlinear pulsational models 7−140092
RR Lyr stars, linear second-overtone pulsation models 7−140093
RR Lyr stars, overtone pulsation models rel. to light curve shapes 7−115457
RR Lyr stars, pulsation mode selection theory 7−127895
RR Lyr stars in globular clusters, Sandage period-shift effect 7−72444
RR Lyr stars of Bailey type C, modelling 7−94888
magnetic stars, time-dependent models for perpendicular rot. and mag. axes 7−94902
main sequence stars, struct. parameters and neutrino flux 7−94850
massive stars, evolutionary models with mass loss and overshooting rel. to W-R stars props. 7−134222
metal-poor dwarf stars of solar neighbourhood, model atmospheres rel. to C and N abundances 7−134231
mini-soliton stars, scalar field nontopological solns. in general relativity 7−102241
neutron stars, atmospheric model rel. to X-ray burst spectra 7−94937
neutron stars, structure of massive models in Ni's theory of gravit. 7−140147
nova-like stars, accretion disk spectra modelling 7−115436
novae, hot white dwarf remnant model for X-ray emission during outburst stage 7−115430
novae, variable mass transfer rate scenario for classical nova outbursts 7−120428
O-type stars in Magellanic Clouds, wind models 7−72410
RS Oph, recurrent nova, episodic accretion model for outbursts 7−88434
order-of-magnitude theory 7−134393
RW Per, Algol binary system, flux distrib. rel. to optically thick accretion disk model 7−94963
GK Per, dwarf nova-like outbursts, accretion disk limit cycle mechanism 7−88441
PG 1031+234, magnetic white dwarf, oblique rotator model for polarisation and mag. field struct. at >500 MGauss 7−88407
planetary nebula central star, evol., effect on nebula, model-obs. comparison 7−80062
planetary nebula central star, evol., effect on nebula 7−80061
polytrope n=3, approx. soln. 7−107804
polytropic models, physical characts. of N-dimensional radially-symmetric polytropes 7−127695
pre-main-sequence stars, evolutionary track of mass-accreting polytropic model 7−140045
Procyon, F-type star, UV spectrum atlas (203.0 to 237.1 nm) and model atm. anal. 7−79960
pulsar magnetospheres, computer simulation of particle acceleration 7−107881
pulsars, ang. beaming model rel. to freq. independence of microstructure phase struct. 7−88490
pulsars, two-beam model for triplicity of pulse profiles and orthogonal polarisation modes 7−94934
pulsating stars, dynamic study 7−145974
ζ Pup (O4f), photosphere model from optical line profiles 7−88433
recurrent novae, observational props. and nature of outbursts 7−115445
relativistic model stars, calc. using Regge calculus 7−107809
relativistic stars, gravitational radiation, off-parity fluid perturbations 7−80534
Roche problem for stratified polytropes 7−115369
rotating Roche model, vibr. stability anal. 7−127840
s-process, pulsed neutron source models, parametric study 7−88374
scalar soliton stars and black holes, nontopological solns. in general relativity 7−102242
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
semi-detached binary stars, red star instability models 7−94955
SN 1604 progenitor, mass-losing runaway star model rel. to origin of supernova remnant 7−146074
SN 1983N and SN 1984L, Type Ib SN, He detect. and O obs., corresponding atm. models construction 7−127915
SN 1987A in LMC, central pulsar theory and predictions 7−115482
SN 1987A in LMC, explosion of 20 $M_\odot$ star which experienced mass loss 7−146003
SN 1987A in LMC, model of outburst 7−107878
SN 1987A in LMC, neutrino emission characts. and implications for interior processes 7−140125
soliton stars, nontopological solns. in general relativity 7−102240
standard massive stars, surface chem. evol. modelling 7−72391
static perfect fluid spacetimes, spherical symmetry, positive mass theorem, stellar model 7−107808
strange stars, implications of pulsar glitches 7−107868
Sun, dirty model rel. to power spectrum of long-period solar oscills. 7−127802
supernovae, Type I, accreting white dwarf models 7−120393
supernovae, Type I, light curve models from white dwarfs explosions 7−120467
supernovae, Type I, lowered energy for echo model of light curve 7−107869
supernovae, type Ib, binary system model with red supergiant companion 7−140119
symbiotic stars, increased mass loss model for outbursts 7−140075
symbiotic stars, modelling of line profiles 7−127886
Type Ia supernova, bolometric light curve reconstruction from model of processes 7−107871
4U 1145−619, neutron star-circumstellar shell interaction model for spectral vars. during outburst 7−127973
4U 1636−53 (MXB 1636−53), evidence for burst-induced accretion disk coronae, multi-peaked X-ray bursts anal. 7−120503
4U 1915−05, X-ray burst source, accretion disk bulge model for X-ray and optical light curves 7−94951
W UMa, appl. of hot secondary model to W-type light curves 7−127965
RT Vir, semi-regular variable star, shock wave model for H_2O maser outburst *(Russian)* 7−107865
PU Vul (Nova 1979), symbiotic nova, evidence for red giant-white dwarf model 7−115444
white dwarfs, accreting, LTE model atmospheres rel. to soft X-ray-EUV spectra 7−94874
white dwarfs, deflagration and statistical props. of Type I supernovae 7−140122

stellar models continued
WN-type stars, modelling of extended atmospheres 7−101801
Wolf-Rayet stars, He II synthetic spectra, grid of models 7−79968
X-ray binary stars, power spectra of quasi-periodic oscills. in beat-frequency model 7−146037
X-ray burst sources, non-LTE radiation-driven wind models in bursting neutron stars 7−101841
X-ray bursters, X-ray spectra and atm. struct. modelling (appl. to MXB 1636−536) *(Japanese)* 7−146024
C star of 1.5 $M_\odot$ and M_{bol}=−4.4, form. modelling 7−79980
C stars in Galactic disk, model atmospheres rel. to C, N and O abundances 7−115458
He stars (2-4 $M_\odot$), evolution characts. 7−115376

stellar motion
A0620−00, black hole binary star, photometric and radial vel. obs. 7−88511
A0620−00 (616 Mon), black hole binary system, initial orbital period from evolutionary scenario 7−140154
3A 1907+09, orbital characts., neutron star rot. characts. and pulse averaged spectra 7−72535
AC 211/X2127+119, X-ray binary in M15, CCD photometry rel. to 8.5-hr orbital period 7−115502
ADS 7251 A, B, radial rel. obs. rel. to reality of spectroscopic orbits 7−140166
ADS 9182, orbit characts. and parallax 7−127976
EU And, C star, radial vel. of H_2O maser as evidence for M-type companion 7−127896
Ap-type stars in Sco-Cen association, proper motions and radial vels. rel. to mag. fields evolution 7−115459
Ap/Bp stars, search for orbital var. *(Russian)* 7−88465
η Aql, Cepheid variable, pulsation period and radial vel. behaviour of H lines 7−79998
V1182 Aql, early-type eclipsing binary, radial vel. and photometric study 7−88536
V603 Aql, nova, positrons and proper motions 7−145985
U Aql, orbit of classical Cepheid from radial vel. obs. 7−140112
V1343 Aql (SS 433), photometry rel. to interdependence between orbital and precession periods 7−120444
BW Aqr, detached eclipsing binary, photoelectric radial vels. and orbital elements *(French)* 7−120493
EE Aqr, eclipsing binary star, period vars., 1940-85, from O−C diagrams 7−72523
FO Aqr (H2215−086), DQ Her star, improved orbital period from photometric obs. 7−134250
IU Aur, eclipsing triple system, orbital inclination var. from UBV photometry 7−140155
ϵ Aur, secondary disk rot. characts. and components masses, spectral obs. 7−107908
B-type stars, radial vel. calcs. 7−145951
BD+28°413, K-type dwarf star, spectroscopic binary orbit from photoelectric radial vels. 7−134275
BD+63°869, trigonometric parallax, Chinese determ. *(Chinese)* 7−120366
Belgrade zenith stars; catalogues of declinations and proper motions of 36 stars 7−94673
binary pulsars, proper motion effects on timing 7−94935
binary pulsars, spin and orbital periods anal. 7−72506
binary star and relativistic astrophysics *(Russian)* 7−94962
binary stars, apsidal motion rates and internal structure consts. 7−115363
binary stars, intermediate-mass, merging of components through orbital ang. momentum loss 7−146042
binary stars, tidal resonances rel. to coupling of normal-mode oscills. with orbital motion 7−127974
binary stars dynamics, role in globular cluster evol. 7−140196
blue stragglers in ω Cen, spectra and radial vels. 7−88399
UW Boo, eclipsing binary, UBV obs. and period anal. 7−127958
α Boo (Arcturus), evidence for periodic radial vel. vars. 7−140063
bright large proper motion stars, lumin., abundances, motion and photometry 7−72397
bright southern standard and reference stars, radial vel. determ. 7−72396
AS Cam, apsidal motion, implications of IEU spectral and photometric obs. 7−120510
AN Cam, double-lined eclipsing binary, orbital elements from photoelectric radial vels. *(French)* 7−72510
AD Cap, southern RS CVn star, orbital period from IR photometry 7−88501
OY Car, eclipsing binary stars, accretion disk characts. and orbit features 7−120417
Carlsberg meridian catalogue−La Palma, Volume 2 (book) 7−66853
β Cas, δ Sct star, radial vel. obs. by Si linear array camera of Vienna Observatory 7−101691
cataclysmic binary stars, influence of binary system parameters on hibernation model 7−145977
cataclysmic binary stars, orbital periods 7−115396
cataclysmic binary stars, period gap, dynamic instability model 7−140097
cataclysmic variables, orbital period and mag. field distribs. rel. to evolution 7−115450
V779 Cen=Cen X-3, modelling, components masses and orbit characts. 7−88502
U Cep, eclipsing binary star, min. light times (March to October 1986) 7−146043
CQ Cep, WR eclipsing binary, period change *(Russian)* 7−127911
Cepheid variables in LMC, radii determ. from radial vels. and UBV photometry *(French)* 7−79970
Cepheids, photometry and motion within galactic rot. model 7−101923
TX Cet, Algol type star, characts. determ. from photoelectric obs. anal. 7−72520
Z Cha, dwarf nova, accretion disk orbital vel. from emission lines obs. in quiescent state 7−88462
Z Cha, dwarf nova, radial vels. rel. to stellar population and evolutionary state 7−115448
close binaries, perturbed orbital elements due to tidal lag in longitude 7−146033
close binaries, rotationally-perturbed orbital elements 7−146035
close binary stars, effect of orbital plane precession on photometric obs. of apsidal motion 7−94942
close binary stars, period var., photometric anal. 7−146029
cluster in Galactic halo, BV photometry and radial vels. 7−88555
CPD−58°2721, H-deficient binary star, orbital period and vel. semi-amplitude 7−88538

stellar motion continued
ϵ CrA, W UMa star, photometric obs. rel. to period fluctuations 7−101847
R CrA star formation region, HH objects and visible stars velocities 7−107915
CTB 80, SNR, possible pulsar detect., motion characts. 7−140141
RS CVn-like stars as optical counterparts to X-ray sources, radial vel. obs. 7−107982
V1143 Cyg, F-type eclipsing binary, spectroscopic orbit and absolute dimensions 7−72507
V442 Cyg, main sequence eclipsing binary, evolutionary characts., comp. and orbital characts., obs. anal. 7−146026
SS Cyg, radial vel. discrepancies 7−115406
68 Cyg, search for spectral duplicity, visible spectral obs. *(Russian)* 7−88542
γ Cyg (F8 Ib), radial vel. meas. rel. to pulsation model for 8-day mag. field period 7−140070
HR Del, nova, positrons and proper motions 7−145985
BY Dra stars, radial vels. of four marginal objects 7−120395
dwarf novae, absolute magnitude−orbital period−outburst timescale relationships 7−115393
E1013−477, possible intermediate polar, photometric periods from I-band CCD obs. 7−80048
E1114+182, AM Her star, orbital period from EXOSAT X-ray light curves 7−72508
1E 1048.5+5421, new 114-minute AM Her binary, orbital and rot. period determ. 7−115518
1 E 1145-6141, X-ray pulsar, orbital parameters determ. from primary star spectra 7−134277
1E 1751+7046, FK Com candidate, search for binary motion 7−127880
equal mass triple systems, dynamical evolution in 3D 7−127688
BZ Eri, Algol-type binary, (O−C) values anal. rel. to orbital period vars. 7−72416
BZ Eri, Algol-type binary, accuracy of light minima rel. to reality of period vars. 7−72524
α Eri (Achernar), Be star, obs. of light, spectrum and radial vel vars. 7−107861
EI Eri (HD 26337), RS CVn star, system characts. 7−146028
EXO 023432−5232.3, new 114-min. AM Her-type binary, light curve and orbital period 7−80028
extremely H-deficient stars, radial vel. survey 7−94904
F-type stars with solar composition at North Galactic Pole, planar age-vel. dispersion relation 7−115374
faint red dwarfs, tangential vel. 7−107818
Fatchikhin catalogue of stellar proper motions, magnitude eqn. 7−88369
Finsen 342, Hyades binary, orbital characts., implications for Hyades distance modulus 7−107911
G-type stars at North Galactic Pole, radial vels. meas. 7−120372
galactic centre late-type stars, nature and radial vel. anal., IR spectral obs. 7−128060
galactic disk stars, influence of massive mol. clouds on evolution of vel. dispersion 7−80051
Galactic halo stars, evidence for imbalance in W velocity distrib. 7−120391
galactic space velocities determ. 7−101761
giant stars in galactic disk, rel. dispersion-metallicity relation rel. to nature of thick disk component 7−128070
Gliese 623, binary system orbital characts. 7−140174
Gliese 866, M-type dwarf, low-mass companion detect., separation and motion 7−127856
HD 112313, planetary nebula central star, giant star in triple system, orbital characts. 7−120386
HD 128220, double-lined binary with subdwarf O star, spectroscopic orbit and subdwarf parameters 7−94871
HD 158393, late-type giant in binary system, orbital characts. and chromospheric activity 7−107828
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 184279 (V1294 Aql), Be-shell star, long-term radial vel. vars. 7−140080
HD 187399, Be-type X-ray binary, radial vel. curve determ. 7−127872
HD 190073, early-type emission line star, radial rels. of circumstellar lines 7−145964
HD 193793, spectroscopic orbit for WC7+O4 binary 7−72445
HD 194056, late-type giant spectroscopic binary, orbital characts. 7−115526
HD 23838, spectroscopic binary, orbital characts. and mass ratio determ., spectral obs. *(French)* 7−80030
HD 35914, variable central star of PN IC 418, time scale of photospheric vel. changes 7−115386
HD 47129 (Plaskett's star), spectroscopic binary orbital elements from UV radial vels. 7−94961
HD 5303 (=CF Tuc), southern RS CVn star, orbital period form IR photometry 7−88501
HD 64488, HD 109995, HD 161817, field horizontal-branch stars, radial rels. from photographic spectral atlas 7−115385
TU Her, Algol system, period var. obs. *(Chinese)* 7−107890
DI Her, close binary star, orbital plane precession rel. to photometric obs. of apsidal motion 7−94942
DI Her, eclipsing binary, apsidal motion rate and photometric orbital elements *(Russian)* 7−88541
AM Her, orbital inclination determ. 7−88503
V533 Her (Nova 1963), spectroscopic obs. rel. to binary parameters 7−72472
AM Her stars, secondary orbital motion and evidence for low-mass white dwarfs 7−94956
AM Her stars (magnetic close binaries), radial vel. curves vars. in swinging mag. dipoles model 7−115451
Her X-1, 35 day period and neutron star precession *(Russian)* 7−88540
high-velocity field dwarf stars, binary frequency determ. from CCD meas. 7−145953
high-velocity stars, orbit computations using model of Galaxy mass distrib. 7−115604
Hipparcos system rotation rel. to inertial system, Tautenburg obs. 7−134115
HR 2554, ζ Aur star, spectral and photometric characts., eclipse predictions 7−88531
HR 5273, astrometric-spectroscopic binary, orbital characts. determ. 7−72521
HR 7041, M-type giant star, spectroscopic binary orbit from photoelectric radial vels. 7−94960

stellar motion continued
VZ Hya, eclipsing binary, new period determ. and period changes from light min. times 7−127956
EX Hya, eclipsing intermediate polar, radial vels. and masses from time-resolved optical spectroscopy 7−140108
VW Hyi, SU UMa star, spectral var. 7−115412
BL Hyi (H0139−68), AM Her star, improved orbital ephemeris and orbital inclination determ. 7−140177
RS Ind, eclipsing binary star, UBV light curves and period study 7−88499
IRAS 09371+1212, icy evolved mass-losing star with unique IR spectrum, CO radial vel. meas. 7−101955
IRAS C stars, radial vels. of assoc. CO and HCN sources 7−120408
Kpr 114 (HR 8629), visual binary star, revised orbit from photoelectric radial vel. obs. 7−88533
XY Leo, contact binary star, radial vel. curves for BY Dra-like binary companion 7−140165
LMC planetary nebulae, precursor masses and dynamics 7−115600
long-period Cepheids, detect. of groups 7−127884
RR Lyr stars in globular cluster M5, radial vel. and light curves rel. to cluster distance determ. 7−127986
M13, globular cluster, dynamical charact. based on radial vel. and mass function 7−101866
M2, globular cluster candidate members, proper motions and photometry 7−101863
M87 globular cluster system, dynamics and spectral obs. 7−101912
M-type dwarf stars, radial vel. study 7−127871
TZ Men, A-type eclipsing binary star, masses and radii from radial vels. and uvby light curves 7−80029
nearby galactic clusters, kinematic origin rel. to Gould's belt expanding gas ring 7−120527
NGC 1866, LMC globular cluster superluminous giant candidates, nature and form. 7−101862
NGC 2420, open cluster, giant stars radial rel. and abundances 7−72549
novae, contrib. of mass ejection and ang. momentum loss to variable mass transfer rate scenario 7−120428
novae, orbital eccentricity and luminosity modulation 7−127909
NSV 12040, new W UMa star, orbital period from photometric obs. *(French)* 7−140161
NSV 12615, eclipsing cataclysmic variable with ultrashort period, photometric obs. 7−88427
O-type stars, radial vel. calcs. 7−145951
old disk stars, UVW vel. components using radial vels. in three cardinal galactic directions 7−79949
VV Ori, eclipsing binary, orbital charact. 7−107892
ι Ori, giant binary system, radial vel. determ. from UV spectra 7−72402
CN Ori, Z Cam star, radial vel. curve semi-amplitude from spectroscopic obs. 7−115447
Ori OB1 association, kinematics of star form. region from proper motion meas. *(Russian)* 7−145948
GH Peg, eclipsing binary, period var., photometric anal. 7−120497
IP Peg, eclipsing dwarf nova, orbital charact. and masses determ. 7−115413
RX Peg, semi-regular variable star, proper motion meas 7−88453
BX Peg, W UMa star, improved ephemeris from photoelectric VI photometry 7−94953
1 Peg B, spectroscopic binary radial vel. anal. 7−72538
γ Per, mass and absolute mag. charact., spectral anal. 7−146025
GK Per, nova, positrons and proper motions 7−145985
populations with radial vel. (and [Fe/H]≤−0.6) 7−80104
proper motion stars, catalogue of VRI photometry, proper motion and radial vel. summaries 7−72329
PSR 0531+21, relativistic explanation of the pulsar drift 7−80023
PSR 0820+02, binary pulsar, orbital parameters and excess phase noise in JPL timing obs. 7−115489
PSR 1913+16, binary pulsar, contrib. of self-energy losses to orbital period decrease 7−72492
PSR 1913+16, binary pulsar, post-Newtonian dynamics and gravitational radiation 7−80022
PSR 2111+46, origin of extremely high space vel. 7−115490
pulsars, drift motion relative to supernova remnant, acceleration mechanism during stellar collapse 7−146018
pulsars, initial vel. distrib. rel. to ages and galactic plane heights 7−115487
ρ Pup, δ Sct star, radial rel. and spectral vars. rel. to pulsation charact. 7−134253
RZ Pyx, early-type marginal contact binary, photometric and spectroscopic study 7−120514
radial velocities, systematic differences between 'classical' meas. 7−101759
radial velocities of 258 stars near α Per, implications for space vel. of cluster (C 0318+484) *(French)* 7−88368
radial velocity meas. at E.W. Fick Observatory, results (1976 to 1984) 7−115368
radial vels. of stars in galactic central 2 pc, 2 μm and kinematics 7−120573
red horizontal branch candidates, line-of-sight vel. dispersion rel. to membership of thick disk population 7−79958
S-type symbiotic stars, spectra periodic var. and radial vel. 7−127887
AL Scl (HD 224113), early-type double-lined eclipsing binary, orbital elements and absolute parameters 7−120490
Sco X-1, orbital X-ray var. search using Ariel 5 data 7−72529
Scorpius-Centaurus association, stellar multiplicity, orbital charact. 7−127988
RW Sex, UX UMa star, radial vel. and mass charact. 7−115417
RW Sex (=BD−7°3007), UX UMa star, photometric charact. and orbital inclination 7−115418
Sirius, components apparent magnitudes and orbital charact. *(French)* 7−88507
SN 1987A in LMC, deceleration rate of broad Hα absorpt. line 7−72487
SN 1987A in LMC, Hα vel. struct. during first month of outburst 7−140117
SN 1987A in LMC, Hα vels. from spectroscopic obs. (1987 February 27 to March 12) 7−88474
SN 1987A in LMC, line polarisation meas. and radial vels. of P Cyg absorp. cores 7−80003
solar neighbourhood, circular vel. determ. from dynamical chaos in Galactic centre 7−146086
solar-type stars in associations and clusters chromospheric and transition region emission and velocities 7−107803
stellar motion continued
spectroscopic binaries among solar-type stars, reality of spectroscopic orbits 7−140166
supergiant OH-IR sources, narrow polarised components obs. in OH 1612 MHz maser emission 7−88417
symbiotic stars, modelling of line profiles, orbital effects 7−127886
V471 Tau, white dwarf 9.25 minute pulsation and orbital phase depend. X-ray dips 7−88525
T Tau stars, general charact. determ. from spectral meas. 7−140056
T Tau stars, rotational and radial vels. 7−88410
Taurus-Auriga region, pre-main sequence stars with Ca II emission, rot. and radial vel. meas. 7−107817
tidal circularization in massive binaries 7−107894
RR TrA, Algol type star, charact. determ. from photoelectric obs. anal. 7−72520
triple stars, orbital charact. and masses, CORAVEL obs. 7−101844
Trumpler 37, membership of young open cluster 7−134282
4U 1145-619, pulse timing charact., effects of orbital charact. in modelling 7−72534
4U 1820−30, ultra-short period binary star, Doppler effect as cause of X-ray flux modulation *(Russian)* 7−107906
4U 1915−05, X-ray burst source, orbital period from optical light curve 7−94951
4U 1957+11, 9.3 hour orbital period in potential black hole binary 7−72528
4U 2129+12, X-ray source in M15, discovery of 8.5-hour X-ray period 7−120505
AN UMa, AM Her star, orbital charact. and spectral obs. 7−88504
SW UMa, ultrashort-period dwarf nova/DQ Her star, orbital period determ. 7−88435
Ursa Major Group, space velocities determ. 7−101761
variable stars, AGK3 discordant proper motions 7−115471
AO Vel, B-type eclipsing binary in triple system, orbital charact. and photometric obs. 7−72512
Vel X-1, apsidal advance 7−120500
Vel X-1, eclipsing X-ray binary, orbital charact. 7−107891
Vel X-1, orbital charact. and masses determ. 7−127947
velocity dispersion and streaming fields in galaxies, determ. from self-consistent equilib. models for perfect elliptical disk 7−128082
FO Vir, pre-contact system, photometry and elements 7−115504
visual binary stars, meas. at Pic du Midi and Nice (1983 to 1986) *(French)* 7−140159
visual binary stars, semimajor axes *(Russian)* 7−72540
BW Vul, β Cep star, systemic rel. and photosphere kinematics from optical spectrum 7−140094
DR Vul, eclipsing binary quadruple system, orbital charact. and masses, minima times anal. 7−72536
WW Vul, Herbig Ae-type star, radial vel. vars. of Hα absorpt. component at max. luminosity 7−140067
PU Vul (Nova 1979), symbiotic nova, UBV photometry, spectroscopy, and orbital elements 7−115444
PW Vul (Nova 1984 No.1), stellar winds vels. from P Cyg lines absorpt. components 7−72435
PW Vul (Nova Vul 1984 No.1), possible orbital period from photometric obs. 7−88452
white dwarfs, magnetic axis orientation determ. from X-ray flux orbital curves 7−88503
WN-type binary stars, He II 468.6 nm line vars. rel. to motion of WN component 7−145996
Wolf 922 and Wolf 922 B, red dwarf binary, parallax, masses and luminosities 7−101762
X 1820−303 in globular cluster NGC 6624, orbital period 7−72533
X-ray binaries in hierarchical triple system., time var. of inner binary separation 7−120501
young open clusters, kinematics rel. to Galaxy rot. curve 7−101861
C stars in Sculptor dwarf spheroidal galaxy, accurate radial vels. 7−145965
Ca II emission line stars, statistical survey of duplicity 7−120442

stellar multicolour photometry *see stellar photometry*

stellar origin *see star formation*

stellar photometry
see also stellar radiation; stellar spectra
1354-64, Ginga X-ray nova, optical identification and obs. (1987 March) 7−80131
2138−543, new distant dwarf nova, photometric and spectroscopic obs. 7−134238
A0620−00, black hole binary star, photometric and radial vel. obs. 7−88511
A 0535+26, binary X-ray pulsar, search for UV variability 7−88537
A 0535+26(HDE 245770), optical study of Be/X-ray transient 7−94944
3A 0729+103, intermediate polar, X-ray emission regions discovery, EXOSAT and visible obs. 7−72465
AC 211/X2127+119, X-ray binary in M15, CCD photometry rel. to 8.5-hr orbital period 7−115502
AE 1, pure He I star, V obs. 7−72421
Ae/Be stars, obs. of rapid narrow-band photometric variability *(Russian)* 7−145999
AGK3-0°965, eclipsing central star of PN NGC 2346, photometry and eclipse models 7−115387
Am stars, Ca abundances from photometric k-indices and K-line spectral types 7−94905
Am stars, effects of flux excess at 478.5 nm on Stromgren colours 7−107862
HQ and HV And, polar candidates, photometric meas. (1970 to 1986) 7−115469
EG And, UBV photometry and revised period for symbiotic eclipsing binary 7−107836
DX And, unusual cataclysmic variable star, new outburst obs. and visual magnitude estimates (1987 May 5 and 7) 7−101804
OS And (Nova And 1986), UBV photometry and visual magnitude estimates 7−145982
Andromeda galaxy globular clusters, possibilities for photometry of individual stars with Space Telescope 7−115597
Ap and He-weak stars in clusters and associations, photometric variability 7−120421
Ap-type stars in Sco-Cen association, UBV photometry rel. to mag. fields time evolution 7−115459
V1182 Aql, early-type eclipsing binary, photometric and spectroscopic study 7−88536

stellar photometry continued
FY Aql, Mira variable in refl. nebula, search for assoc. with 1979 March 31 γ-ray burster 7−140087
V1343 Aql (SS 433), constraints on binary system from optical continuum spectrum obs. 7−88430
V1343 Aql (SS 433), photometric study of two periodicities over seven years 7−120444
V1343 Aql (SS 433), simultaneous obs. of X-ray and optical eclipse 7−140105
V1343 Aql (SS 433) rapid photometric and spectral var. 7−127883
RY Aqr, Algol-type eclipsing binary, uvby photometry 7−72511
BW Aqr, detached double-lined eclipsing binary, uvby photometry 7−72513
EE Aqr, eclipsing binary star, period vars., 1940-85, from O−C diagrams 7−72523
BS Aqr, short-period pulsating variable, light curve anal. to period of fundamental pulsation 7−94880
R Aqr, symbiotic star, obs. of linear polarization vars. 7−72473
VY Aqr, UBV photometry during 1987 July outburst 7−127899
FO Aqr (=H 2215−086), spin down of intermediate polar 7−115455
FO Aqr (H2215−086), DQ Her star, photometric obs. rel. to white dwarf spin-down 7−134250
VY Ar, dwarf nova, visual magnitude estimates during new outburst (1987 June 28 to July 1) 7−115465
TT Ari, b photoelectric photometry (1986 October) 7−115468
TT Ari, nova-like variable, simultaneous X-ray and optical study 7−115426
TT Ari, possible intermediate polar, photometric charact. 7−115416
UX Ari, RS CVn star, 1985/6 photometry and starspots 7−115524
AS 353A, T Tau star assoc. with HH 32, spectrophotometry 7−101784
IU Aur, eclipsing triple system, up-to-date parameters determ. from UBV photometry 7−140155
CO Aur, peculiar double-mode Cepheid, pulsation modes, radial vel. and photometry obs. 7−120416
RW Aur, T Tau star, Balmer-line and photometric vars. obs. 7−127863
SS Aur, U Gem star, visual behaviour (1907 to 1984) 7−72451
ε Aur, UBV photometry outside eclipse (March-April 1986) 7−145955
V356 Aur (=HD 37819), double-mode δ Sct star, pulsation charact. 7−127874
Automatic Photoelectric Telescope Service 7−139914
B-type stars in LMC, uvby β photometry rel. to LMC distance modulus 7−88638
BD+3°4138 B, flare activity discovery 7−140072
Be stars, effective temps. and energy distrib., spectrophotometric obs. 7−120412
BE stars, IR excesses 7−134241
Be stars, spectrophotometric obs. rel to masses and evolutionary status 7−72441
BE stars, statistics of IR excesses from IRAS obs. 7−101795
Be stars, wind charact. and spectrophotometry 7−127879
Be stars in southern hemisphere, UBV photometric survey 7−107864
Be stars in young southern cluster NGC 3766, uvby β photometry 7−88557
blue stars in stellar associations and complexes in M33, UBV photometry 7−146058
blue stragglers in NGC 5466 globular cluster, discovery 7−127859
UW Boo, eclipsing binary, UBV obs. and period anal. 7−127958
CK Boo, W UMa star, BV photometric charact. 7−146031
TZ Boo, W UMa star, photometric elements 7−120495
bright F, G, K and M-type stars, spectrophotometry of 60 southern and equatorial stars 7−120369
bright large proper motion stars, lumin., abundances, motion and photometry 7−72397
bright stars, B−V colours and interstellar reddening 7−146066
Bright Stars Catalogue stars, photometric data catalogue 7−72331
brightest blue stars as unresolved star groups, photometric data anal. 7−140264
Brun 276, T Tau star, IR photometric obs. 7−101783
AS Cam, apsidal motion, implications of IEU spectral and photometric obs. 7−120510
AY Cam, primary minimum, UBV photometry and period 7−101854
δ Cap, possible RS CVn binary star, photoelectric UBV photometry 7−101855
AD Cap, southern RS CVn star, IR photometry 7−88501
OY Car, eclipsing SU UMa star, multicolour photometry during quiescence 7−120417
OY Car, SU UMa star, May 1985 superoutburst, accretion disk struct. and photometric obs. 7−115439
Carina nebula (NGC 3372) region, IR study of stellar population 7−127846
ρ Cas, 1986 brightness increase, photometric obs. 7−115470
XX Cas, B-type eclipsing binary, photoelectric elements and revised spectral types from UBV photometry 7−88530
V523 Cas, BV photoelectric photometry of very short period eclipsing binary 7−80043
XY Cas, Cepheid variable, anal. of period and period vars. from archival plates 7−72454
PV Cas, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
HT Cas, eclipsing dwarf nova, photometric obs. rel. to accretion disk brightness distrib. 7−94879
TX Cas, uvby photometry of almost contact semi-detached system *(Chinese)* 7−120489
cataclysmic binaries, photometry and spectroscopy about period gap 7−115399
cataclysmic binaries in SGP white dwarf survey 7−115400
cataclysmic variable stars, short-period, photometry and spectroscopy 7−115460
cataclysmic variable stars, UV obs. by IUE satellite 7−115420
V677 Cen, contact binary, mass, radii and atm. charact., light curves anal. 7−140169
V644 Cen, UBV monitoring of fading (1981-4) 7−115467
V803 Cen (AE 1), photometry and spectroscopy of interacting binary white dwarf 7−120461
V779 Cen-Cen X-3, neutron star accretion disk model, photometry anal. 7−88502
WX Cep, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
EK Cep, detached eclipsing binary, BVR photometry rel. to pre-main-sequence secondary component 7−115520
stellar photometry continued
U Cep, eclipsing binary star, min. light times (March to October 1986) 7−146043
PX Cep, ephemeris for large amplitude eclipsing binary 7−146046
μ Cep, SRc star, BV photometry (1981 to 1986) 7−72452
CQ Cep, WR eclipsing binary, period change *(Russian)* 7−127911
Cepheid variables, BV photometry rel. to space distrib. in Galaxy *(Russian)* 7−72471
Cepheid variables in LMC, radii determ. from radial vels. and UBV photometry *(French)* 7−79970
Cepheid variables in LMC cluster NGC 1866, CCD light curves rel. to LMC distance modulus 7−88463
Cepheid variables in M33, comparison of Hubble photometry with CCD data 7−79975
Cepheids, reddenings in KHG system 7−72438
Cepheids, Type II with periods of 1 to 3 days, Fourier phases anal. 7−101797
TX Cet, Algol type star, charact. determ. from photoelectric obs. anal. 7−72520
RW Cet, eclipsing binary star, intrinsic light vars. obs. from BV photometry 7−72525
δ Cet, Pioneer 10 UV obs. of β Cep star 7−107847
UV Cet, UBVRI photometry of 1985 December flares 7−88454
Z Cha, dwarf nova, photometric and spectroscopic obs. rel. to struct. and evolutionary state 7−115448
Z Cha, dwarf nova, spectrophotometric study of emission lines in quiescent state 7−88462
Cir OB1 association, UBV photometry and relation to nearly supernova remnant (MSH 15−52) 7−120535
classical Cepheids, colour excess determ, from ubvy β photometry 7−127888
close binary stars, effect of orbital plane precession on photometric obs. of apsidal motion 7−94942
close binary stars, period var., photometric anal. 7−146029
cluster in Galactic halo, BV photometry and radial vels. 7−88555
EZ CMα, WN5 star, possible appearance of second photometric period 7−115388
Z CMa, Herbig Ae-Be star, resolution at near-IR wavelengths rel. to scatt. dusty disk model 7−134226
CMa R1 star formation region, polarisation survey rel. to shock-front compression of interstellar mag. field 7−140226
AD CMi, V photoelectric photometry and period change of δ Sct star *(Chinese)* 7−120402
AD Cnc, BVRI light curves of W UMa system 7−134272
RS Col, $BVRI_c$ photometry of probable A-type system 7−120513
Collinder 359, open cluster, UBVRI photometry 7−127989
colour excess use for interstellar extinction determ. *(Russian)* 7−128034
FK Com, five-colour (UBVRI) photopolarimetry 7−101772
EO and FV Com, RRab stars, pulsation periods and functional forms of (O−C) diagrams 7−72456
RW Com, W UMa star, light curve modelling and system parameters 7−140168
contact binary stars, polarisation props. 7−88526
cool C stars in Galactic anticentre region, positions, finding charts, and V-magnitudes 7−134151
Cousins and Kron VRI systems 7−139944
CP stars, photometric variability 7−140077
CP stars, progress in detection and classification 7−127890
CP-2 stars in Pleiades and Coma Berenices open clusters, Δa-photometry 7−101793
V394 CrA, spectral charact. and magnitudes (1987 July-August) 7−134244
ε CrA, W UMa star, photometric obs. rel. to period fluctuations 7−101847
V394 CrA (Nova 1949), spectrum and visual magnitudes during new outburst (August 1987) 7−127900
δ CrB, chromospherically active giant star, optical photometry and UV spectrum 7−94875
crowded-field stellar photometry, use of computer program DAOPHOT 7−94671
AI Cru, early-type eclipsing binary, photometric and spectroscopic characts. 7−107902
BI CVn, W UMa star, BV photometric charact. 7−146031
RS CVn stars, dark spots and evidence for circumstellar material, obs. anal. 7−140157
Rs CVn stars, IRAS obs. 7−94946
RS CVn stars, optical and UV rot. modulation of V711 Tau, IL Peg and Ar Lac 7−101843
RS Cvn stars, short-period, light curves anal. rel. to starspots and fundamental props. 7−146039
RS CVn-like stars as X-ray source optical counterparts, photometric obs. 7−107982
V1764 Cyg=HD 185151, RS CVn star, ellipticity and starspots, photometric obs. 7−72517
V1764 Cyg=HD 185151, RS CVn star, photometric obs. anal. 7−72516
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
MR Cyg, B-type eclipsing binary, light curve soln. using new parameter optimisation method 7−88510
SS Cyg, dwarf nova, IRAS obs. during outburst 7−94906
CI Cyg, eclipsing symbiotic star, IR var. *(Russian)* 7−127912
V367 Cyg, evolved contact binary, light curves anal. 7−115517
V442 Cyg, main sequence eclipsing binary, evolutionary characts., comp. and orbital characts., obs. anal. 7−146026
V1675 Cyg, no light var. in 1986, Nessa BV photometry 7−79988
CG Cyg., short-period eclipsing binary, JHK light curves 7−115522
CG Cyg, short-period eclipsing binary star, BVJK light curves 7−134271
CG Cyg, short-period eclipsing RS CVn star, solns. of 1979 and 1980 light curves 7−134276
SS Cyg, spectral and photometric characts. 7−115407
V367 Cyg, W Ser star, light curve var. 7−146030
V1727 Cyg (=4U 2129+47), X-ray binary star, optical behaviour (March to November 1986) 7−115523
V1500 Cyg (Nova Cyg 1975), possible AM Her star, photometric and spectroscopic obs. 7−115466
DB-type pulsating white dwarfs, temps. determ. from IUE obs. 7−88409
DM Del, A-type contact binary, photometric study and light curves anal. 7−72509
LS Del, BV light curves of W UMa system 7−80042
detached classical eclipsing binaries, limb darkening 7−127948

stellar photometry continued
detached close binary stars, giant and subgiant stars gravity darkening and atm. struct., photometric obs. 7−94943
differentially rotating stars, two-colour diagram 7−72403
AG Dra, Population II symbiotic star, spectroscopic and photometric obs. 7−115389
SW Dra, RR Lyr star, lumin. characts., use of photometry, radial vel. and Baade-Wesselink method 7−120437
AG Dra, symbiotic star, components characts., visible and IR photometry and spectrophotometry 7−145959
BY Dra, U photometry obs. 7−88457
BV and BW Dra, W UMa stars, light curves characts. 7−140158
BY Dra stars, UBV photometry of marginal objects rel. to light vars. 7−120395
dwarf Cepheids, radii, masses, pulsation characts. and evolutionary status, VJK obs. 7−72467
dwarf K and M stars, Hα photometry 7−134229
dwarf novae, accretion disk instability model and light curves 7−79995
dwarf novae, mass transfer instability models and outburst light curves 7−115431
dwarf novae, photometric evidence for two types of outbursts 7−115446
dwarf novae, visual magnitude estimates (July-August 1987) 7−134243
dwarf novae outbursts, multi-wavelength obs. of 33 objects 7−115404
E1013−477, possible intermediate polar, photometric periods from I-band CCD obs. 7−80048
E2003+225, AM Her star, optical and UV obs. rel. to new soft X-ray emission mode 7−120506
1E 0630+178, possible Geminga counterpart, field visible and IR obs. 7−140325
1E 1048.5+5421, new 114-minute AM Her binary, X-ray and optical obs. 7−115518
E 1405−451, AM Her star, optical 2 second var. 7−115505
early-type stars with IR excesses, circumstellar dust characts. 7−120644
eclipsing binaries, light changes anal. in freq. domain 7−72322
eclipsing binaries, semi-detached, light curves anal. rel. to gravity darkening of secondary components 7−134269
eclipsing binary stars, new parameter optimisation method in light curve solns. 7−88510
eclipsing dwarf novae, high-speed photometry 7−115401
BZ Eri, Algol-type binary, (O−C) values anal. rel. to orbital period vars. 7−72416
BZ Eri, Algol-type binary, accuracy of light minima rel. to reality of period vars. 7−72524
EF Eri, AM Her star, 2-3 sec quasi-periodic oscills., role of mag. field 7−120492
EF Eri, AM Her star, simultaneous five-colour (UBVRI) polarimetry 7−115506
EF Eri, AM Her star, X-ray and optical flickering 7−107901
CU Eri, supposedly constant star, photoelectric evidence for light vars. 7−72442
EI Eri (=HD 26337), RS CVn star, rot. characts. and photometric obs. 7−146027
α Eri (Achernar), Be star, photometric and spectroscopic obs. 7−107861
EXO 020528+1454.8, dMe stars pair as optical counterpart, X-ray and visible obs. 7−128128
EXO 023432−5232.3, new 114-min. AM Her-type binary, X-ray and optical obs. 7−80028
EXO 0748−676, eclipsing X-ray binary, variable light curve characts. 7−72515
EXO 2030+375, X-ray transient, CCD photometry of optical counterpart 7−134270
faint blue stars in southern external part of LMC, far-UV and UBV obs. 7−80085
faint red dwarfs and giants, BVI photometry 7−107818
field horizontal-branch A-type stars, UV spectral intensity distrib. 7−72430
Fornax dwarf galaxy, distance modulus and red stars photometric characts., finding charts and positions 7−101899
Fornax dwarf spheroidal galaxy, search for long period variables 7−107956
gamma-ray burst sources, photographic density profiles of suspected optical counterparts 7−107981
gamma-ray bursters, search for IR counterparts 7−88676
gamma-ray bursters, search for optical bursts 7−80125
RX Gem, Algol-type binary star, optical and UV spectrophotometric study 7−101858
Geneva photometric boxes, appl. to determ. of far-UV interstellar extinction in solar neighbourhood 7−94976
K giant stars of disk-population, spectrophotometric temperature indices 7−101775
giants in metal-poor anticentre open clusters, Washington photometry 7−134283
Gliese 890, rapidly-rotating spotted red dwarf flare star, spectrum, photometry and polarimetry 7−140052
globular cluster stars, predicted Thuan-Gunn photometry rel. to theoretical isochrones 7−94973
RZ Gru, UX UMa star, no evidence for periodicity from photometric obs. 7−120455
GX 339−4, BVI CCD photometry and double image 7−94949
GX 339−4, optical obs. of possible 1.13 millisecond periodicity 7−101853
GX 339−4 (V821 Ara), black hole candidate, optical variability obs. and limits on periodic modulation 7−127975
H1504+65, hot compact star devoid of H and He, optical, IV and X-ray obs. 7−88408
H 0139−68, X-ray and optical obs. of AM Her-type star 7−115514
HC 199178, FK Com star, five-colour (UBVRI) photopolarimetry 7−101772
HD 12856, HD 13890, Be stars in Per OB1 association, synthetic filter photometry and evolutionary status 7−79976
HD 155555, RS CVn star, X-ray photometry rel. to coronal plasma temp. 7−134273
HD 158393, late-type giant in binary system, orbital characts. and chromospheric activity 7−107828
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 160886, Be star, photometric obs. 7−72469
HD 166473, cool mag. Ap star, oscills. of 8.8 and 9.1 minutes period, photometric obs. 7−94901
HD 200775, Herbig Be star, interstellar extinction and polarimetric props. 7−115375
HD 200775, Herbig Be star, obs. of rapid spectral, photometric and polarimetric vars. *(Russian)* 7−72425
HD 213985; halo hot post-AGB star; evolutionary status and shell dust, spectral and photometric obs. 7−120387
HD 26337, RS CVn type binary, request for VRI photometry, (1987 December 15 through 30) 7−146047
HD 27130, eclipsing binary in Hyades, photometric characts. 7−127945
HD 33798, V photoelectric photometry of suspected variable 7−120457
HD 35914, variable central star of PN IC 418, simultaneous spectroscopic and photometric obs. 7−115386
HD 37836 in LMC, O-type supergiant, wind and disk characts., spectral and photometric obs. 7−127853
HD 5303 (=CF Tuc), southern RS CVn star, IR photometry 7−88501
HD 60435, p-mode spectrum of rapidly oscillating Ap star 7−101800
HD 6491, F2 IV-V star, photometric period determ. from UBVRI obs. 7−134249
HD 6532, Rapidly Oscillating Ap star, freq. soln. to light vars. rel. to l=1 oblique dipole oscill. 7−134248
HD 6532, rapidly oscillating Ap star, rot. period determ. from mean light vars. 7−134249
HD 89249 as peculiar Be+K-type stars, photometry and spectra 7−94882
HD 92664, Bp-Si star, no evidence for short-time-scale photometric vars. 7−140081
HD 97766, flares detect., UBV obs. 7−145991
HDE 270100, new long-period Cepheid in LMC, period and light curve from Walraven photometry 7−120456
HDE 283572, UBVRI and JHKL photometry of G-type pre-main-sequence star 7−107821
TU Her, Algol system, period var. obs. *(Chinese)* 7−107890
AK Her, BV light curves and period of W UMa-type system 7−146032
DI Her, eclipsing binary, apsidal motion rate and photometric orbital elements *(Russian)* 7−88541
68=u Her, eclipsing binary, photometric study 7−140163
AM Her, general props. *(French)* 7−107900
AM Her, polar, visual magnitude estimates (1986 September 21 to 1987 April 30) 7−94950
BL Her, uvbyβ photometry and parameter determ. 7−140115
ι Her (B3 IV-V), short-period light and spectrum vars. 7−101788
AM Her stars, secondary orbital motion and evidence for low-mass white dwarfs 7−94956
Herbig Ae/Be stars, UBVRI polarisation meas. *(Russian)* 7−145958
Herbig-Haro objects exciting stars, IRAS obs. 7−127742
high time resolution photometry, appl. of multichannel multicolour photometer 7−79840
HR 1063 (V396 Per), He-weak star, B-band photometry (1984 to 1985) 7−72453
HR 2554, ζ Aur star, spectral and photometric characts., eclipse predictions 7−88531
EZ Hya, BVRI$_c$ photometry of W-type system 7−120513
VZ Hya, eclipsing binary, new period determ. and period changes from light min. times 7−127956
EX Hya, eclipsing dwarf nova, time-resolved spectrophotometry 7−120441
EX Hya, intermediate polar, optical light curve periodic modulations 7−115419
VW Hya, secondary UV eclipse and ephemens 7−80044
RW Hya, symbiotic star, UV-optical spectrophotometry and IR photometry 7−127894
EX Hya, U Gem star, 1986 July-August outburst photoelectric obs. 7−145984
EX Hya, visual magnitude estimates (1987 May 4 and 6) 7−101805
VW Hyi, SU UMa star, long-term photometric obs. 7−115410
VW Hyi, SU UMa star, outbursts recurrence behaviour 7−115411
VW Hyi, X-ray SU UMa star, Walraven photometry 7−72461
BL Hyi (H0139−68), AM Her star, polarimetry in high and low states 7−140177
IC 2488, UBV photometry of southern open cluster 7−134284
IC 4628, nearby dense compact globule and embedded star obs. 7−94989
RS Ind, eclipsing binary star, UBV light curves and period study 7−88499
IR photometry, appl. of information theory 7−115252
IR photometry, sequence of near-IR standard stars observed at San Pedro Martir 7−115528
IR polarimetry of stars near large star-forming globules, appl. to globule mag. field meas. 7−146073
IRAS 15194−5115, identification with extreme C star, spectral and photometric obs. 7−88675
IRAS 18059-3211 (Gomez's Hamburger), spectra, polarimetry and photometry 7−128124
IRAS C stars with CO and HCN emission, IR photometry rel. to dust grains temps. 7−120408
IRAS fields in Draco mol. cloud region, optical survey 7−115627
IRAS sources in and near dense cores, stellar nature and obs. 7−140323
IRC+10216, C star, circumstellar dust opacity from optical-IR photometry 7−101796
irregular variable stars, colour characts. 7−145962
JHK stellar scintillation meas. above Observatorio del Teide 7−107507
K-type giants with very strong lines, DDO, Cousins R−I, and photomultiplier scanner data 7−101780
EV Lac, B photoelectric photometry of flare star (1983 August, October) 7−101812
EW Lac, Be star, photometric study rel. to multiperiodic light vars. 7−127889
EV Lac, flare freq. rot. modulation 7−94887
EV Lac, flare star, photoelectric obs. (1985 June 20 to September 8) 7−94900
EV Lac, UV Cet star, spot obs. photometric obs. 7−134247
late-type dwarf stars, chromospheric Ca II H emission line cores vars. and vel. field diagnostics 7−72413
late-type giants and supergiants, activity, IUE survey 7−140061
late-type stars, narrow-band photometry 7−72395
late-type stars toward LMC, BVR photometry 7−88130
late-type WR stars, circumstellar dust characts. and winds, modelling and IR photometry anal. 7−127878
R Leo, cool O-rich Mira variable, long-term pulsational behaviour 7−88423
R Leo, cool O-rich Mira variable pulsational long-term behaviour and brightness var. 7−101791
SS Leo, RR Lyr star, light curve characts. 7−145983

stellar photometry continued
Leo I dwarf spheroidal galaxy, colour-magnitude diagram of giant branch 7−120588
LHα 25(≡Walker 90), young star, broad-band spectral energy distrib., evidence for circumstellar disk 7−127870
Lindsay 1, populous SMC cluster, main-sequence turnoff photometry 7−80054
LMC Cepheids, light curves, Fourier decomposition 7−120409
LSI+61°303, radio-emitting Be star, long-term near-IR photometry 7−120407
luminous blue stars in galaxy M33, distrib. and photometric charact. 7−72605
τ^1 Lup, β Cep star, photometric obs. and freq. anal. 7−120422
BR Lup, superhumps during outburst of SU UMa-type star 7−145975
β Lyr, anal. of Cassini's early obs. (April to May 1671) 7−94964
MV Lyr, nova-like variable, optical brightening obs. (1987 March 28 to May 2) 7−88451
RR Lyr stars, UBVRI photometric and radial vel. data 7−115391
RR Lyr stars, $UV_bY\beta$ electrophotometry 7−107844
RR Lyr stars absolute magnitudes and distance moduli, H-photometric obs. anal. 7−107859
RR Lyr stars in globular cluster M5, radial vel. and light curves rel. to cluster distance determ. 7−127986
M2, globular cluster candidate members, proper motions and photometry 7−101863
M31, galaxy, gas/dust ratio determ. from globular clusters photometry and 21 cm line meas. 7−128046
M31, novae population and spatial distrib. 7−140266
M31 galaxy star complexes and associations, UB obs. 7−146057
M33 variable stars, visible and IR photometric obs. 7−101798
M3 red giant branch, lumin. effective temp. diagram, appl. of IR flux method 7−101860
M56, globular cluster, spatial struct., star counts anal. 7−88549
M5, deep UBV CCD photometry of globular cluster 7−127983
M67, CCD uvby photometry rel. to metallicity, distance modulus, reddening and age 7−80056
M67, uvbyHβ photometry of main-sequence stars 7−80055
M-type dwarf stars, search for circumstellar envelopes using IR speckle interferometry 7−140049
M-type Mira variables, single, visible light curve shape and H_2O 13.5 mm line detect. 7−127876
Magellanic Cloud supergiant stars, search for variability in BVRI obs. 7−101782
Magellanic Cloud supergiants, reddenings and intrinsic colours, BVRI photometric obs. 7−101781
Magellanic Clouds type II Cepheids, spectra and JHK photometry 7−120438
massive pre-main-sequence stars in southern galactic plane, new IR detects. 7−101768
TZ Men, A-type eclipsing binary star, masses and radii from radial vels. and uvby light curves 7−80029
TZ Men, detached double-lined eclipsing binary, photometric obs. 7−72514
Merope dark cloud, Pleiades, charact. determ. from stellar photometry obs. 7−128005
metal-weak stars, MK_m spectral classifications rel. to Stromgren photometry 7−134223
AU Mic, BY Dra star, UV emission lines, optical photometry and flaring 7−79966
Mira variable stars, anal. of visual obs. of R Ari, R Aur, X Aur, R Boo and S Boo 7−79992
naked T Tau stars, low-mass pre-main sequence unveiled, photometric and spectroscopic obs. 7−72428
narrow-band Hα photometry, appl. to estimation of chromospheric activity levels 7−120381
nearby stars of Gliese catalogue, UBVRI photoelectric photometry 7−72393
NGC 1502, reddened open cluster, combined UBV and uvby photometry 7−107910
NGC 188, open cluster, contact binary stars obs. 7−120498
NGC 206, OB assoc. in M31, photometric charact. 7−72602
NGC 2162, NGC 2190, LMC star clusters, CCD photometry rel. to LMC distance modulus 7−88611
NGC 2173, LMC globular cluster, age determ., photometric obs. anal. 7−94971
NGC 2213, LMC globular cluster, red giants comp. and temp. determ. from Washington CCD photometry 7−101697
NGC 2287, open cluster, membership, photometry and astrometry 7−72548
NGC 2287 (M41), differential photometry of suspected variables in open cluster 7−101871
NGC 288, 1851, 1904, 4590, 4833, 5946, 6139 and 7099, globular clusters, photoelectric UBVRI sequences 7−120522
NGC 362, metal-rich globular cluster, main-sequence CCD photometry 7−107912
NGC 3766, young southern cluster, uvby β photometry 7−88557
NGC 6121 (M4), photoelectric BVRI sequence 7−140200
NGC 6192, open cluster, distance and age determ. from CCD photometric obs. 7−115533
NGC 6397, globular cluster, appl. of CCD uvby photometry to main-sequence turnoff 7−120521
NGC 7099, globular cluster, charact. determ. from deep CCD photometry 7−140195
NLTT catalogue class in stars, VRI photometry and photometric parallaxes 7−72398
North Galactic Pole region, metal abundance gradient, photometry anal. *(Russian)* 7−128088
North Galactic Pole region struct., UBV star count data anal. 7−72604
Nova And 1986, photoelectric UBV photometry (1987 January 20 to 24) 7−72450
Nova And 1986, photographic magnitude and visual magnitude estimates 7−88443
Nova And 1986, UBV obs. 7−79989
Nova And 1986, visual magnitude estimates (1987 June 3 to 29) 7−120450
Nova Aql 1982, photometric and spectroscopic obs. by IUE, AAT and WRST 7−140106
Nova Cen 1986, IR and visual light curves (1986 November 24 to 1987 April 30) 7−127907
Nova Cen 1986, UBV photometry (1986 December 9 and 10) 7−79984

stellar photometry continued
Nova Cir 1987=X-ray nova 1354−64, photometry and spectroscopy 7−88444
Nova Cyg 1986, visual magnitude estimates (1987 June 3 to 29) 7−120451
Nova Cyg 1986, visual magnitudes estimates (1987 June 29 to August 2) 7−134246
Nova Her 1987, astrometry and possible identification with blue star on 1951 exposure of Palomar Sky Survey 7−134245
Nova Her 1987, K-band spectroscopy and JHKL'LM magnitudes (1987 May 9 and 19) 7−101809
Nova Her 1987, photoelectric photometry and visual magnitude estimates (May-June 1987) 7−107854
Nova Her 1987, photoelectric UBV photometry (1987 June 15 to 19) 7−120453
Nova Her 1987, spectral, photometric and visual magnitude estimates obs. 7−140098
Nova Her 1987, spectroscopic obs. and visual magnitude estimates (April to May 1987) 7−94893
Nova Her 1987, UBV photometry and visual magnitudes (1987 February-March) 7−72449
Nova Sgr 1987, JHK photometry and visual magnitude estimates (June 1987) 7−127901
Nova Sgr 1987, upper magnitude limits and visual magnitude estimates (1974 to 1987) 7−101808
Nova Vul 1984 No.2 visual magnitude estimates (1986 November 26 to 1987 April 1) 7−79986
Nova Vul 1984 No. 2, 'Ne nova', IR photometry rel. to silicate grains condensation in ejecta 7−88439
novae, UBV photometry, use for lumin. determ. 7−140079
novae, visual magnitude estimates (July-August 1987) 7−134243
NSV 12040, new W UMa star, visual and photoelectric obs. *(French)* 7−140161
NSV 12615, eclipsing cataclysmic variable with ultrashort period, photometric obs. 7−88427
NSV 6708, variable star, visual magnitude estimates (1987 June 30 to July 13) 7−120449
NSV 6708, variable star magnitudes and colours, March-July 1987 obs. 7−120452
O9 to A0 stars, effective temps. from spectral energy distribs. and model atmospheres 7−127833
OB associations, extinction curves and intrinsic colours 7−80053
OB stars, luminosities determ. from uvbyβ photometry 7−127836
old novae, spectroscopic and photometric obs. 7−120435
open clusters, catalogue of UBV photometry and MK spectral types 7−72334
V451 Oph, eclipsing binary, uvby photometry 7−88498
Y Oph, photometric obs. with Carlsberg Meridian Circle 7−115472
VV Ori, eclipsing binary, light curve anal., Hα obs. 7−107892
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheric modulation 7−140064
α Ori (Betelgeuse), SRc star, BV photometry (1981 to 1986) 7−72452
Orion population stars, V photometric search for periodicities 7−134228
DY Peg, dwarf Cepheid, period and light curve charact. 7−145993
GH Peg, eclipsing binary, period var., photometric anal. 7−120497
AG Peg, emission line profiles and UBVRI photometry during 1985 minimum 7−107841
γ Peg, Pioneer 10 UV obs. of β Cep star 7−107847
II Peg, RS CVn star, 1986 light curve interpretation with star pot models 7−120512
II Peg, RS CVn star, broad-band and narrow-band photometry (autumn 1981) 7−120511
II Peg, RS CVn star, IR and visible photometry 7−127961
II Peg, uvby photometry of spot cycle end-phase 7−146045
BX Peg, W UMa star, photoelectric light curves and improved ephemeris 7−94953
RW Per, Algol binary system, flux distrib. rel. to optically thick accretion disk model 7−94963
GK Per, dwarf nova-like outbursts, accretion disk limit cycle mechanism 7−88441
IZ Per, eclipsing binary, spectral-luminosity classification, colour vars., and β CMa-type variability 7−94947
UW Per, long-period U Gem star, search for historical outbursts (1935 to 1983) *(German)* 7−107832
X Per, X-ray Be star, discovery of 13.9-min optical periodicity *(Russian)* 7−107907
GK Per (Nova Per 1901), short-term optical vars. obs. during 1983 outburst 7−115443
UW Per A, UBV photometry rel. to relationship to cataclysmic variables *(German)* 7−107832
α Per cluster, rapidly rot. K-type dwarfs, photometric light curves anal. 7−127869
PG 1031+234, magnetic white dwarf, spectra photometry rel. to polarisation and mag. field struct. at >500 MGauss 7−88407
PG 1115+158 and 1351+489, extreme examples of compact pulsators 7−127860
PG 1346+082, exotic He variable, photometry and spectroscopy 7−101851
PG 2303+243, new pulsating DA-type white dwarf, photometric obs. 7−79955
AD Phe, $BVRI_c$ photometry of probable A-type system 7−120513
photoelectric observations of lunar occultations 7−134114
photoelectric sequences in B and V to 22nd magnitude 7−72544
photoelectric UBV sequence in SA 184, magnitudes and colour indices 7−72543
β Pic, broad-band imaging of circumstellar disk 7−140043
β-Pictoris, possible planetary system formation, IR obs. *(French)* 7−94877
PK 215 +3°1, planetary nebulae, central star eclipse charact. (1981 to 1986) 7−101857
plage activity indices, implications of Ca II H and K line obs. of solar plages 7−115339
plage activity indices, implications of Hα line obs. of solar plages 7−115340
Pleiades, assoc. mol. cloud charact. determ. from reddening obs. 7−140194
Pleiades, rapidly rotating K-type dwarfs, photometric light curves anal. 7−127869
Pleiades K and M-type dwarfs, spectral and photometric obs. 7−140053
Pleiades late-type B-stars, light variability, y photometry 7−72418
PN 0345+499, 2212+657, senile nearby planetary nebulae, photometry of central stars 7−115543

ellar photometry continued
pre-main sequence stars in dark cloud LDN 1642, spectral and photometric obs. 7−127995
proper motion stars, catalogue of VRI photometry, proper motion and radial vel. summaries 7−72329
UV Psc, eclipsing binary, IR photometric obs. 7−140162
AS Psc, U Gem star nature and implications for M33 halo *(Russian)* 7−128089
VZ Psc, very short period eclipsing binary star, photoelectric light curve 7−80045
PSR 0531+21 (Crab pulsar), secular decrease in optical luminosity 7−107882
PSR 0540−69, 50 ms LMC pulsar, optical colours, polarimetry, and timing meas. 7−107882
VV Pup, AM Her star, simultaneous five-colour (UBVRI) polarimetry 7−115507
RZ Pyx, early-type marginal contact binary, photometric and spectroscopic study 7−120514
R 130 in LMC, spectral and photometric study of triple system 7−88436
RCW 19 field, survey for Hα-emission line stars 7−139947
RCW 34 exciting star (Vel R2 25a), evidence for pre-main-sequence status from optical and IR obs. 7−120383
red giants temp. and abundances determ. use of Washington CCD photometry 7−101697
red horizontal branch candidates, DDO obs. rel. to use as probes of thick disk population 7−79958
RGU photometric space densities in field near galactic centre, comparison with Galaxy models 7−88367
RGU photometry and space densities in high-latit. field M101, comparison with multi-component Galaxy models 7−79948
SA 193 field, RGU photometry and galactic struct. 7−115584
SA 57 in North Galactic Pole region, CCD photometry 7−72404
Sanduleak −69°202 (progenitor of SN 1987A in LMC), photometric obs. rel. to K-type supergiant companion 7−80009
Sanduleak −69°202 (SN 1987A progenitor), in LMC, UBVRI photometry and astrometry 7−101813
Sanduleak −69°202 (SN 1987A progenitor), photometric behaviour, 1934-59, from Sonneberg Observatory plates 7−120479
SC stars and S stars, JHKL and 3 μm photometric obs. 7−79994
Schmidt plate photometry, calibration problems and treatment 7−88125
AL Scl, early type double-lined eclipsing binary, uvby obs. 7−115503
VZ Scl, eclipsing nova-like variable star, accretion disk characts., spectral and photometric obs. 7−72459
α Scl, He-weak star, possible rot. period determ. from mean light vars. 7−134249
AL Scl (HD 224113), early-type double-lined eclipsing binary, photometry and spectra rel. to absolute parameters 7−120490
U Sco, recurrent nova, visual magnitude estimates (1987 May 29 to June 3) 7−107853
V701 Sco, W UMa star, masses, radii and temps., photometric and spectral obs. 7−107903
Serpens-SVS 20, new young binary IR source, IR photometry, polarimetry and spectra 7−120526
RW Sex, UX UMa star, photometry and spectral obs. 7−115417
RW Sex (=BD−7°3007), UX UMa star, photometric characts. 7−115418
FG Sge, spectral type, radius and lumin. determ. from IR photometric obs. 7−145961
V2022 Sgr, BL Her Star, evidence for evolutionary increase in pulsation period 7−72455
V1288Sgr, RRab star, photometric evidence for possibly changing period 7−72458
V348 Sgr, WC11 planetary nebula central star, photometric obs. 7−115461
V1223 Sgr (4U 1849−31), intermediate polar, white dwarf spin-down rate from max. light times 7−140107
shell stars in the Geneva photometric system 7−94885
Sk −69°202 (SN 1987A progenitor) in LMC, implications of far-UV photometry of SN 1987A 7−101820
SMC, H II regions N83 and N84, fragmentation and exciting stars characts. 7−101879
SMC OB stars, colours and spectral classification 7−101922
SN 1961 V in NGC 1058, BV photometry of progenitor and relation to OB association *(Russian)* 7−72488
SN 1980K in NGC 6946, Hα emission flux in late-time spectrum 7−88468
SN 1983 I in NGC 4051, photographic magnitudes from discovery obs. (May 1983) 7−134261
SN 1983I, 1983V, optical and IR photometry rel. to abundance vars. in Type Ib supernovae 7−115474
SN 1984L in NGC 991, type Ib supernova, photometric obs. 7−120465
SN 1986G in Cen A (NGC 5128), interstellar polarisation meas. in dust lane 7−107962
SN 1986G in NGC 5128(Cen A), optical photometry and spectra of Type Ia object 7−140137
SN 1986G in NGC 5128 (Cen A), IR photometry and spectroscopy 7−120469
SN 1986J in NGC 891, pre-discovery detect. and photometry (1983 December 29) 7−120477
SN 1987A, in LMC, spectropolarimetry, spectroscopy, spectrophotometry and UBV photometry (1987 February 25 to March 2) 7−72476
SN 1987A, IR spectrum, hard X-ray/gamma-ray obs., and visual magnitude estimates 7−115476
SN 1987A in LMC, 8 to 13 μm spectrophotometry, BV photometry, and visual magnitude estimates 7−94913
SN 1987A in LMC, BV and IR photometry and visual magnitude estimates (1987 May 8 to 11) 7−94923
SN 1987A in LMC, BV and visual magnitude estimates (1987 May) 7−94927
SN 1987A in LMC, colour evolution from optical spectroscopy 7−101817
SN 1987A in LMC, continuum and line polarisation meas. 7−80003
SN 1987A in LMC, Cousins UBVRI photometry and visual magnitude estimates (May 1987) 7−101829
SN 1987A in LMC, daily mean visual magnitude estimates (1987 February 24 to March 31) 7−127922
SN 1987A in LMC, early optical obs. as constraints on neutrino expts. interpretation 7−134254
SN 1987A in LMC, early-phase obs. with IUE 7−101819
SN 1987A in LMC, IR photometry (1987 February 28 to March 16) 7−101816

stellar photometry continued
SN 1987A in LMC, IR spectrum, BV photometry, and visual magnitudes (1987 April) 7−94908
SN 1987A in LMC, IUE spectral and photometric obs. and visual magnitude estimate (March 1987) 7−80008
SN 1987A in LMC, JHKL photometry and fluxes and radial vel. determ. from H I lines obs. 7−80014
SN 1987A in LMC, KLMN photometry and visual magnitude estimates (1987 April 11 to 15) 7−80018
SN 1987A in LMC, light vars. from UBVRIJHKL and 10 μm photometry (February-March 1987) 7−80013
SN 1987A in LMC, neutrino and photometric obs. and search for progenitor X-ray flux 7−72481
SN 1987A in LMC, obs. of nearby compact H II region, and visual magnitude estimates 7−94917
SN 1987A in LMC, optical and UV photometry by IUE satellite 7−134257
SN 1987A in LMC, photoelectric BV photometry and visual magnitude estimates (1987 May 1 to 7) 7−101827
SN 1987A in LMC, photometric obs. (1987 February 24 to March 22) 7−101815
SN 1987A in LMC, photometric spectral and CCD obs. 7−80004
SN 1987A in LMC, photometry, bolometric lumin, and radius upper limits 7−88478
SN 1987A in LMC, photometry, pre-max. plateau, spectra and magnitudes 7−88473
SN 1987A in LMC, photosphere evolution from broadband photometry and optical spectrum 7−146010
SN 1987A in LMC, photospheric radii from UV to IR energy distrib. 7−101821
SN 1987A in LMC, polarimetric obs. (1987 March 6 and 7) 7−101814
SN 1987A in LMC, speckle search for companion object (May-June 1987) 7−140129
SN 1987A in LMC, spectra and photometry for first 50 days 7−127921
SN 1987A in LMC, total visual magnitude, photometry and neutrino-antineutrino obs. 7−80002
SN 1987A in LMC, U−B/B−V colour vars. and spectrum rel. to SN 1959D (in NGC 7331) 7−72485
SN 1987A in LMC, UBV photometry (February 24 to 26 1987) 7−115481
SN 1987A in LMC, UBV photometry and spectrum rel. to classification 7−72483
SN 1987A in LMC, UBV photometry magnitudes, but no soft X-rays (1987 May-September) 7−146008
SN 1987A in LMC, UBVRI and visual magnitude estimates (1987 June 16 to 25) 7−115479
SN 1987A in LMC, UBVRI photometry at CTIO (1987 July 30) 7−127918
SN 1987A in LMC, UBVRI polarimetry and visual magnitude estimates 7−72486
SN 1987A in LMC, UBVRI-JHKL photometry rel. to ejecta deceleration rate 7−72487
SN 1987A in LMC, unresolved assoc. source characts. and BV photometry 7−94925
SN 1987A in LMC, UV and visible flux, spectral and V magnitude characts. 7−88629
SN 1987A in LMC, UV flux and spectral features 7−115475
SN 1987A in LMC, UV photometric props. and comparison with Sk −69°202 components 7−101820
SN 1987A in LMC, visual magnitude and photometric obs. 7−140134
SN 1987A in LMC, visual magnitude estimates (1987 April 6 and 7) 7−88474
SN 1987A in LMC, visual magnitude estimates (1987 April 8 and 9) 7−88475
SN 1987A in LMC, visual magnitude estimates (1987 July 17 to 21) 7−120478
SN 1987A in LMC, visual magnitude estimates (1987 July 31 to August 11) 7−146004
SN 1987A in LMC, visual magnitude estimates (1987 July 9 to 13) 7−120474
SN 1987A in LMC, visual magnitude estimates (1987 June 24 to July 1) 7−115480
SN 1987A in LMC, VRI photometry (1987 February 28-March 10) 7−146009
SN 1987A in LMC, X-ray flux increase and BVIR photometry 7−140132
SN 1987A in LMC UBVRI photometry and visual magnitude estimates (June 1987) 7−107875
SN 1987C in Markarian 90, V-magnitude meas. (1987 April 10) 7−88485
SN 1987D in MCG +0-32-01, inferred max. light time from spectroscopic obs. 7−88484
SN 1987D in MCG +0-32-01, semi-accurate position, spectroscopic obs., and visual magnitude estimates 7−94916
SN 1987E in NGC 4725, semi-accurate position and BV photometry 7−94912
SN 1987F in NGC 4615, discovery, approximate position and photovisual magnitude 7−94911
SN 1987F in NGC 4615, photographic and spectral obs. 7−94918
SN 1987G=SN 1987D in UGC 7370, position, light curve and spectral characts. 7−94914
SN 1987H, misidentification of foreground star 7−88378
SN 1987M in NGC 2715, discovery, approximate position, and magnitude (1987 September 21) 7−146007
solar-type stars, relation between V−R and R−I colour indices and chromospheric activity 7−101786
southern A, F, G and K-type field stars, photoelectric uvby obs. 7−120370
southern early-type variable stars, uvby photometric obs. 7−115392
Southern Hemisphere long-period variables in binaries, period determ. 7−107830
spotted stars, direct photometric problem 7−145976
star clusters, interstellar extinction determ. towards young open clusters 7−140198
SwSt 1, young planetary nebula with central WC10 star, spectrophotometry and spectroscopy obs. 7−128029
V711 Tau, 1986 uvby light curve change, star spots 7−146044
θ^2 Tau, δ Sct star, pulsation characts., photometric obs. 7−79972
Z Tau, Mira variable, period vars. anal. rel. to max. and min. magnitudes vars. 7−72457

stellar photometry continued
SU Tau, R CrB star, visual magnitude estimate (1987 August 2) 7−134243
CE Tau, SRc star, BV photometry (1981 to 1986) 7−72452
V471 Tau, white dwarf eclipsing binary, photometric study *(Turkish)* 7−115521
DR Tau, YY Ori star, UBV photometric charact. *(Russian)* 7−72423
T Tau stars, near-simultaneous UV and optical spectrophotometry 7−88411
RV Tau stars, optical and IR photometry 7−107863
T Tau stars, simultaneous spectroscopic and photometric obs. of four stars 7−134233
T Tau stars, spectral form of IR excess component 7−79965
RR TrA, Algol type star, charact. determ. from photoelectric obs. anal. 7−72520
47 Tuc, BVI CCD photometry obs. 7−140193
CF Tuc, eclipsing RS CVn star, UBV photometry from light curves anal. 7−127955
Type Ia supernova, bolometric light curve reconstruction from model of processes 7−107871
type-II OH-IR stars, visible and IR photometric and spectral obs. 7−120411
4U 1145−619, binary X-ray pulsar, search for UV variability 7−88537
4U 1915−05 optical counterpart, identification and photometric obs. 7−94951
4U 2129+49(=V1727 Cyg), X-ray heating light curve, accretion disk effects 7−127954
UBV photoelectric photometry catalogue (1986), DM and HD stars problems and errors 7−127746
UBV photometry of stars with accurately known positions 7−72394
UBV star count data toward North Galactic Pole, obs. and anal. 7−79950
UBVR sequences in M31 and M33, photoelectric photometry 7−134279
UBVRI photometry at La Palma Observatory, photometric props. of atmospheric dust 7−94437
BE UMa, detached white dwarf-red dwarf binary with unique reprocessing spectrum, photometry and spectra 7−127966
SW UMa, detection of superhumps and quasi-periodic oscills. in SU UMa star 7−101799
CQ UMa, SrCrEu Ap star, rot. period determ., photometric anal. 7−101811
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
US 943, identification as halo cataclysmic variable from photometric obs. 7−79997
UV fluxes and extinction meas. 7−127747
(V1719)Cyg, uvbyβ photometry of RR Lyr star 7−79991
V 0332+53, JHKL′ photometry obs. 7−94959
variable stars, visual obs. (July to December 1985) 7−72448
variable stars among comparison stars for Be stars photometry, list of 24 stars 7−145986
VB 8, direct IR imaging rel. to existence of brown dwarf companion (VB 8B) 7−79959
AO Vel, B-type eclipsing binary in triple system, orbital charact. and photometric obs. 7−72512
Vel X-1, binary X-ray pulsar, search for UV variability 7−88537
Vel X-1, light curve modelling involving accretion disk and mass transfer to neutron star 7−127947
FO Vir, pre-contact system, photometry and elements 7−115504
AH Vir, W UMa star, BV photometric charact. 7−146031
Virgo Cluster elliptical galaxies, novae occurrence and charact. 7−140088
BW Vul, β Cep star, light curve anal. 7−94884
BW Vul, β Cep star, narrow-band light curve rel. to spectroscopy of optical photosphere 7−140094
DR Vul, eclipsing binary quadruple system, orbital charact. and masses, minima times anal. 7−72536
WW Vul, Herbig Ae-type star, Hα emission vars. at max. luminosity 7−140067
ER Vul, light curve vars., BV photometry (1981-2) 7−146036
PU Vul (Nova 1979), photometry, spectrophotometry, spectrum and polarisation (1981 to 1982) 7−140102
PU Vul (Nova 1979), symbiotic nova, UBV photometry, spectroscopy, and orbital elements 7−115444
PW Vul (Nova Vul 1984 No.1), possible orbital period from photometric obs. 7−88452
weak-lined stars, photometric detect. rel. to spectral classification 7−88377
white dwarf, with metallic line spectra, atm. comp. determ., spectrophotometric anal. 7−79956
white dwarfs in Hyades and Pleiades, use of IR photometry to search for cool companions 7−140066
white dwarfs with brown dwarf companions, negative KL photometric search 7−134230
Wolf-Rayet population in 30 Dor and surroundings, imaging, photometric and spectroscopic obs. 7−72443
WR 78 (=HD 151932), photometric variability of WN7 star 7−120454
X-ray binary stars optical counterparts, CCD obs. 7−127951
X-ray selected cataclysmic variables, UBV photometry 7−107855
yellow evolved stars in open clusters, photometric and spectroscopic search for superluminous giant stars 7−115382
Yunnan Observatory No. 1 CCD system, precision for stellar photometry and observable magnitudes *(Chinese)* 7−101688
zero-point stars in Magellanic Cloud clusters, photoelectric UBV obs. 7−94966
λ And, RS CVn star, discovery of optical circular polarisation 7−127897
C stars in Leo I dwarf spheroidal galaxy, location in colour-magnitude diagram of giant branch 7−120588
He-weak stars in clusters and associations, photometric variability 7−120421

stellar positions *see astrometry*

stellar pulsations
acoustic oscillations frequencies, appl. to seismological meas. of stellar ages 7−79952
Ap stars, rapidly oscillating, computed spectral line vars. for oblique non-radial pulsators 7−72436
η Aql, Cepheid variable, pulsation period and radial vel. behaviour of H lines 7−79998
BS Aqr, short-period pulsating variable, light curve anal. to period of fundamental pulsation 7−94880

stellar pulsations continued
CO Aur, peculiar double-mode Cepheid, pulsation modes, radial vel. and photometry obs. 7−120416
V356 Aur (=HD 37819), double-mode δ Sct star, pulsation charact. 7−127874
binary stars, tidal resonances rel. to coupling of normal-mode oscills. with orbital motion 7−127974
binary stars, vibr. stability of double-star Roche model 7−120494
α Boo (Arcturus), pulsation model for periodic radial vel. vars. 7−140063
β Cas, δ Sct star, radial vel. obs. by Si linear array camera of Vienna Observatory 7−101691
SU Cas, Cepheid, hydrodynamic models for various lumin. 7−120415
XY Cas, Cepheid variable, anal. of period and period vars. from archival plates 7−72454
μ Cen, Be star, obs. of mass ejection event assoc. with nonradial pulsations 7−145994
Cepheid variables, Population I and II, modal selection of radial pulsators 7−88371
Cepheid variables in LMC, radii determ. from radial vels. and UBV photometry *(French)* 7−79970
Cepheid variables in LMC cluster NGC 1866, CCD light curves rel. to LMC distance modulus 7−88463
Cepheids, Type II with periods of 1 to 3 days, Fourier phases anal. 7−101797
RW Cet, eclipsing binary star, intrinsic light vars. obs. from BV photometry 7−72525
ZZ Cet stars, convective blocking driving mechanism for pulsations 7−120394
classical Cepheids, colour-colour relations rel. to colour excess determ, from ubvy β photometry 7−127888
EZ CMa, WN5 star, second photometric period obs. rel. to nonradial pulsations 7−115388
EO and FV Com, RRab stars, pulsation periods and functional forms of (O−C) diagrams 7−72456
composite stellar model with weak mag. field, linear adiabatic oscills. freqs. 7−127839
τ Cyg, δ Sct star, Hα var. and pulsation charact. *(Russian)* 7−127910
α Cyg, pulsation charact., radial vel. obs. 7−115384
γ Cyg (F8 Ib), spectroscopic obs. rel. to pulsation model for 8-day mag. field period 7−140070
DB-type white dwarfs, instability strip location from temp. determs. using IUE obs. 7−88409
differentially rotating stars, dynamical stability to non-axisymmetric perturbations 7−101672
SW Dra, RR Lyr star, lumin. determ., use of radial vel. and photometric obs. 7−120437
dwarf Cepheids, radii, masses, pulsation charact. and evolutionary status, VJK obs. 7−72467
dynamics of pulsating stars 7−145974
α Eri (Achernar), Be star, nonradial oscill. model for light, spectrum and vel vars. 7−107861
excitation of oscillations in a stellar encounter 7−88379
flux variation amplitude/radius variation amplitude ratio, correl with pulsation period 7−94855
g-modes in zero-temperature neutron stars 7−120487
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 166473, cool mag. Ap star, oscills. of 8.8 and 9.1 minutes period, photometric obs. 7−94901
HD 60435, p-mode spectrum of rapidly oscillating Ap star 7−101800
HD 6532, Rapidly Oscillating Ap star, freq. soln. to light vars. rel. to l=1 oblique dipole oscill. 7−134248
HD 92664, Bp-Si star, no evidence for short-time-scale photometric vars. 7−140081
HDE 270100, new long-period Cepheid in LMC, period and light curve from Walraven photometry 7−120456
ι Her (B3 IV-V), short-period light and spectrum vars. 7−101788
hydrodynamic study of pulsation in low surface-gravity stars 7−107819
β Hyi, p-mode amplitude upper limit, spectral obs. 7−127835
EW Lac, Be star, nonradial pulsations model for periodic light vars. 7−127889
R Leo, cool O-rich Mira variable, long-term pulsational behaviour 7−88423
R Leo, cool O-rich Mira variable pulsational long-term behaviour and brightness var. 7−101791
LMC Cepheids, light curves, Fourier decomposition 7−120409
long-period and semiregular variables, predicted dates of maxima and minima (1987) 7−79982
low-frequency gravity modes, excitation of forced oscills. in rotating stars 7−79946
low-frequency oscillations of uniformly rotating stars, nonadiabatic anal. 7−88381
low-mass stars, nonradial oscills. in presence of mag. field 7−120374
τ^1 Lup, β Cep star, photometric obs. and freq. anal. 7−120422
RR Lyr, mag. field var. with pulsation period, spectral obs. *(Russian)* 7−72470
RR Lyr stars, amplitude modulation due to internal resons. as possible explanation of Blazhko effect 7−94878
RR Lyr stars, appl. of time-depend. Fourier anal. to nonlinear pulsational models 7−140092
RR Lyr stars, linear second-overtone pulsation models 7−140093
RR Lyr stars, modal selection of radial pulsators 7−88371
RR Lyr stars, overtone pulsation models rel. to light curve shapes 7−115457
RR Lyr stars, pulsation mode selection theory 7−127895
RR Lyr stars, pulsational charact. 7−88387
RR Lyr stars, UBVRI photometric and radial vel. data 7−115391
RR Lyr stars in globular cluster M5, radial vel. and light curves rel. to cluster distance determ. 7−127986
RR Lyr stars of Bailey type C, modelling 7−94888
Mira variable stars, anal. of visual obs. of R Ari, R Aur, X Aur, R Boo and S Boo 7−79992
neutron star oscillation damping, viscosity effect 7−107886
neutron stars, rotating, nonaxisymmetric normal modes and secular instabilities 7−94939
neutron stars in X-ray burst sources, non-radial g-mode oscills. rel. to quasi-periodic oscillations 7−127938
nonradial oscillations spectra of globular cluster stars, implications for tidal binary systems form. 7−127969
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheric modulation 7−140064

ellar pulsations continued
τ Peg , δ Sct star, Hα line vars. rel. to high-freq. radial oscills. *(Russian)* 7−107866
IZ Per, eclipsing binary, spectral-luminosity classification, colour vars., and β CMa-type variability 7−94947
PG 1115+158 and 1351+489, extreme examples of compact pulsators 7−127860
PG 2303+243, new pulsating DA-type white dwarf, photometric obs. 7−79955
ρ Pup, δ Sct star, radial rel. and spectral vars. rel. to pulsation characts. 7−134253
r-modes and rot. effects 7−140039
radial pulsations, modal selection 7−88371
rapidly oscillating Ap stars, use as test of stellar chromospheric heating mechanisms 7−134240
resonant oscillations coupled to gravitational waves 7−88386
rotating Roche model, vibr. stability anal. 7−127840
rotating star, numerical determ. of eigenfreq. 7−145936
δ Scr stars, pulsation-driven mass less and effects on stellar evolution 7−88416
semi-detached binary stars, red star instability models 7−94955
V2022 Sgr, BL Her Star, evidence for evolutionary increase in pulsation period 7−72455
V1288Sgr, RRab star, photometric evidence for possibly changing period 7−72458
shell source instability, occurrence conditions *(Chinese)* 7−107802
solar 160-minute oscillation, effects of quasiperiodicity on significance of data processing by superposed epoch method 7−127738
solar five-minute oscillations, stability, influence of Reynold tensor perturbation 7−79906
solar long-period mass vel. oscills. in chromosphere 7−145930
solar oscillation frequencies, rot. decomposition *(French)* 7−94845
solar oscillation modes coupling, generation of g-mode by two p-modes 7−145911
solar oscillations, gravity modes and press. modes 7−79905
solar oscillations, implications of fifth force 7−88087
solar oscillations, meas. with magneto-optical filter, importance of Faraday effect 7−145827
solar oscillations, phase shifts obs. using diode arrays 7−79910
solar oscillations, rot. splitting *(French)* 7−79920
solar oscillations, study using electrooptic Fabry-Perot filter in spectrophotometer 7−120276
solar oscillations (book) 7−80189
solar resonance oscillations and wave transform. 7−127693
Sun, 160-min oscillation rel. to stellar encounter 7−88379
Sun, 5-minute oscills. inverse problem soln. *(Russian)* 7−127817
sun, absorpt. of photosphere acoustic (*p*-mode) oscillations by sunspots 7−140022
Sun, convection zone inertial oscillations, effects of superadiabatic gradient and differential rot. 7−140010
Sun, coronal HF oscillations observed at 1983 June 15 Indonesia eclipse 7−145927
Sun, diameter oscillations of long period, rel. to solar activity cycle *(French)* 7−140029
Sun, dynamical quadrupole moment gravitational determ. from oscill. data 7−79943
Sun, effect of oscills. on centre-limb var. of asymmetries and shifts of K I 769.9 nm reson. line 7−107796
Sun, gravitational quadrupole moment from acoustic and gravity normal mode spectra 7−79944
Sun, intensity variability and oscillations, review 7−127822
Sun, intermediate-degree oscillation modes from Doppler images 7−88343
Sun, long-period oscills. power spectrum anal. rel. to theoretical solar models 7−127802
Sun, MHD modes of periodic mag. medium 7−145823
Sun, mode classification and wave propag. in magnetically-structured medium 7−140031
Sun, multiperiodic irradiance changes caused by *r*-modes and *g*-modes 7−127826
Sun, nonlinear mode interactions 7−127793
Sun, obs. and oscillatory props. of mesostructures in solar chromosphere 7−101754
Sun, obs. of 160-min brightness oscills. at millimetre wavelengths 7−127810
Sun, p-mode freq. shift, fibril magnetic field effects 7−88342
Sun, p-mode oscillation freqs. rel. to depth and latit. depend. of solar rot. 7−101755
Sun, r-mode oscills. rel. to solar irradiance vars. and active longitudes 7−127825
Sun, Scheuer-Thomas sunspot model, umbral oscills. spectrum 7−145931
Sun, search for p-mode freq. changes (1980 to 1985) 7−101750
supermassive stars, pulsation model for central power source in active galaxies 7−146091
θ^2 Tau, δ Sct star, pulsation characts., photometric obs. 7−79972
Z Tau, Mira variable, period vars. anal. rel. to pulsation mechanism irregularities 7−72457
V471 Tau, white dwarf 9.25 minute pulsation and orbital phase depend. X-ray dips 7−88525
variable supergiants as binary system components, not pulsators 7−79983
BW Vul, β Cep star, pulsation amplitude from spectroscopy of optical photosphere 7−140094
white dwarfs, pulsation of degenerate stars with thick H or He surface layers 7−140055
Wolf-Rayet stars, nonradial pulsations, lack of evidence 7−79981
ZZ 7−94856
C-type long-period variables, phase depend. of Balmer decrement rel. to source of violet depression 7−120443
OH-IR stars, depend. of I−K colour index on photometric period rel. to origin of polarisation 7−127873

stellar radiation
see also solar radiation; stellar photometry
1354-64, Ginga X-ray nova, optical identification and obs. (1987 March) 7−80131
A0535+26, X-ray pulsar, new X-ray outburst obs. (1987 February 20) 7−80041
accreting neutron stars, quasi-periodic oscillations in ms range 7−80049
accretion disks luminosities, determ. for different metric theories of gravitation 7−115371
AGB stars, lumin. function determ. 7−88610

stellar radiation continued
VY Agr, outburst discovery report and magnitudes (1987 June-July) 7−145968
Am stars, effects of flux excess at 478.5 nm on Stromgren colours 7−107862
EU And, C star, H_2O maser obs. as evidence of nearby O-rich circumstellar shell 7−127896
OS And (Nova And 1986), UBV photometry and visual magnitude estimates 7−145982
V1343 Aql (SS 433), disk radiation collimation rel. to jets parameters *(Russian)* 7−145997
V1343 Aql (SS 433), origin of stationary optical source 7−127891
V1343 Aql (SS 433), simultaneous obs. of X-ray and optical eclipse 7−140105
Aql X-1, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
R Aqr, EXOSAT and IUE obs. of symbiotic Mira during max. and min. 7−107840
R Aqr, symbiotic Mira variable, first unambiguous X-ray detect. 7−140096
VY Aqr, visual magnitude estimates (1987 July 2-5) 7−120447
TT Ari, nova-like variable, simultaneous X-ray and optical study 7−115426
AS 353A, T Tau star assoc. with HH 32, evidence for chromospheric radiation 7−101784
B1 V stars, intrinsic energy distributions 7−80053
B-type supergiants in LMC, model atmospheres rel. to UV-visual energy distribs. 7−72417
Be stars, effective temps. and energy distrib., spectrophotometric obs. 7−120412
Be stars, IR excesses meas. rel. to free-free emission from circumstellar ionised gas 7−101795
Be stars, model fitting of polarimetric data 7−101792
Be stars, wind and polarisation characts. 7−127879
binary stars, luminosities of massive close binaries 7−127959
binary stars, mass-luminosity relations 7−80027
binary stars, stability of triangular libration points in photogravit. three-body problem *(Russian)* 7−107700
black holes, effects of electron-positron pair opacity on spherical accretion luminosity 7−120488
TZ Boo, W UMa star, photometric elements 7−120495
bright large proper motion stars, lumin., abundances, motion and photometry 7−72397
AY Cam, primary minimum, UBV photometry and period 7−101854
OY Car, nonmagnetic cataclysmic variable star, X-ray emission obs. 7−115422
SU Cas, Cepheid, hydrodynamic models for various lumin. 7−120415
PV Cas, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
GG Cas, new period and period changes of eclipsing binary 7−107895
cataclysmic binary stars, emitted radiation spectral distrib. and accretion disk modelling 7−115433
cataclysmic binary stars, radiatively-driven shocked stellar winds model 7−115428
cataclysmic variable stars, absolute magnitudes 7−107860
cataclysmic variable stars, appl. of steady-state accretion disk model to EUV and far-UV obs. 7−115424
cataclysmic variable stars, EUV and FUV obs. 7−115423
cataclysmic variable stars, X-ray obs. 7−115421
cataclysmic variables, dust grains expulsion from white dwarf by radiation pressure 7−120431
ω Cen, globular cluster, contrib. of horizontal-branch stars to diffuse UV emission 7−140190
V834 Cen (=E 1405−451), X-ray light curve changes in AM Her-type star 7−115515
Cen X-4, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
WX Cep, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
PX Cep, ephemeris for large amplitude eclipsing binary 7−146046
UV Cet, flare star, dynamic spectra of microwave flares 7−88464
UV Cet, UBVRI photometry of 1985 December flares 7−88454
Z Cha, dwarf nova, gravit. radiation losses rel. to mass transfer rate 7−115448
circumstellar silicates, optical and near-IR emission pros. 7−145937
CIT 6, C-rich circumstellar envelope, HCN maser emission obs. 7−101947
classical nova outbursts, bolometric and visual luminosity vars. 7−120427
classical novae, radio survey 7−134251
classical symbiotic stars, components nature and outburst characts. 7−145972
close binary systems, gravity-darkening exponents of Roche lobe-filling secondary components 7−134269
δ CMa (F8 Ia), mass, radius, luminosity and age from model-atmosphere anal. 7−140068
α CMa (Sirius), origin of X-ray emission *(French)* 7−120392
AD Cnc, BVRI light curves of W UMa system 7−134272
AC Cnc, first radio detection at 6 cm wavelength 7−120445
cocoon stars, radiative forces on dust rel. to accretion inflow and form. of massive stars 7−145940
TV Col (2A 0526−328), DQ Her type star, X-ray pulse period and orbital light curve from EXOSAT obs. 7−115427
collapsars, neutrino-antineutrino annihilation rel. to X-ray or γ-ray burst 7−80000
collapsing stars, radiation from system for nonadiabatic gravit. collapse 7−72277
FK Com, rapidly rotating variable star, radio emission obs. 7−88425
RW Com, W UMa star, light curve modelling and system parameters 7−140168
cool giant stars, SiO cooling instability in circumstellar envelopes 7−120398
cool stars, chromospheric activity and rot. 7−94863
core He-burning stars in Magellanic Clouds, luminosities and masses rel. to Clouds distances 7−88609
corona, total emission measure and struct. 7−127837
coronae, temp. stratification and emission measures 7−120379
coronal X-ray emission, comparison between Einstein and EXOSAT obs. 7−120385
CP2 light wave analysis, surface inhomogeneity 7−134242
CP stars, flux distrib. in IR 7−127875
20 CVn, δ Sct star, mass, radius, luminosity and age determ. 7−127904

stellar radiation continued
α^2 CVn, Ap star, radiation distrib. and nonspherically symm. model 7−127881
RS CVn-type binaries, rotation period rel. to activity 7−146034
CW 1103+254, AM Her star, cyclotron line emitting region characts. and J-band polarisation 7−127949
V1500 Cyg, circular polarization of AM Her-type variable 7−120507
P Cyg, circumstellar Hα and [N II] intensity profiles rel. to stellar wind model 7−72434
SS Cyg, dwarf nova, IRAS obs. rel. to IR emission from hot circumstellar dust 7−94906
SS Cyg, dwarf nova, periodic vars. obs. in UV continuum 7−115429
CH Cyg, symbiotic star, X-ray emission obs. 7−101789
Cyg X-2, complex cross-spectra of X-ray intensity vars. 7−140172
Cyg X-2, HEAO A-1 X-ray obs. of 5 Hz quasi-periodic oscills. 7−72527
Cyg X-2, quasi-periodic oscillations, high time resolution medium energy data 7−80050
Cyg X-2, quasi-periodic oscills. obs. by Einstein (HEAO 2) observatory 7−88516
Cyg X-3, EXOSAT obs. of synchrotron X-ray halo 7−134320
Cyg X-3, simultaneous X-ray and IR obs. of flares 7−88520
Cyg X-3, supersymmetric cosmic accelerators, flux at Earth, companion stability, underground muons 7−127656
Cyg X-3, underground muon interpretation, cygnets, constraints on lifetime, mass, energy, charge *(German)* 7−134278
Cyg X-3 4.8-hour X-ray modulation, Tenma obs. 7−140182
Cyg X-3 source, underground obs. in >200 GeV range 7−88685
Cyg X-3 ultrahigh energy signal, EAS time delay 7−146051
DA white dwarfs, lumin. function 7−88395
DB-type white dwarfs, effective temps. from UV and visual spectroscopy 7−145954
degenerate stars, relativistic free-free Gaunt factor of dense high-temp. stellar plasma 7−115228
δ Del, δ Sct star, mass, radius, luminosity and age determ. 7−127904
LS Del, BV light curves of W UMa system 7−80042
dMe-type flare stars, flare power-coronal soft X-ray power relation 7−88405
AG Dra, radio structure at 6 cm wavelength 7−120445
SW Dra, RR Lyr star, lumin. characts., use of photometry, radial vel. and Baade-Wesselink method 7−120437
AG Dra, satellite and ground-based obs. of quiescent energy distrib. 7−107839
AG Dra, X-ray and UV obs. during quiescence and outburst 7−107838
4=CQ Dra (M3 III+cataclysmic binary), variable radio emission obs. 7−79979
dwarf novae, absolute magnitude−orbital period−outburst timescale relationships 7−115393
dwarf novae, outburst period-amplitude and period-energy relations 7−120433
dwarf novae outbursts, multi-wavelength obs. of 33 objects 7−115404
dwarf stars, bolometric luminosity function rel. to mass function at low luminosities 7−88384
E1114+182, AM Her star, X-ray light curves from EXOSAT obs. 7−72508
E2003+225, AM Her star, new soft X-ray emission mode 7−120506
early-type high galactic latitude stars, search for far IR emission 7−101770
early-type stars, polarisation of light scattered from stellar winds 7−140041
eclipsing binary stars, new parameter optimisation method in light curve solns. 7−88510
eclipsing binary stars, photometric perturbations of distorted systems inside minima 7−127960
EF Eri (2A 0311-227), AM Her star, Einstein obs. 7−127963
EXO 0748−676, transient low mass X-ray binary, 3.8 hour periodic intensity dips and eclipses 7−88512
EXO 0748−676, transient X-ray burst source, burst behaviour 7−88513
EXO 171224−6653.9, serendipitous X-ray source, EXOSAT obs. and optical counterpart identification 7−134273
fast pulsar candidate in globular cluster M28, VLA obs. 7−127935
Feige 24, hot white dwarf, EUV spectrum EXOSAT obs. 7−88414
gamma-ray burst emission, physics issues 7−88683
gamma-ray burst event, 1979 March 5, new synchrotron luminosity distance limit 7−88679
gamma-ray burst sources, X-ray emission, constraints on theoretical models 7−101957
gamma-ray bursters, search for IR counterparts 7−88676
gamma-ray bursters, search for optical bursts 7−80125
gamma-ray bursts, spectra from photon-deficient Compton scatt. by non-thermal electrons 7−88682
gamma-ray bursts, synchrotron emission models 7−88677
gamma-ray pulsars, curvature synchrotron radiation model 7−146105
gamma-ray sources, distances and luminosities from spatial distrib. of Galactic pulsars 7−140143
GBS 0526−66, 1979 March 5 gamma-ray burst source coordinated optical, radio and X-ray obs. 7−80126
GBS 0526−66, 1979 March 5 gamma-ray burst source location, EXOSAT obs. 7−80130
GBS 0526−66, ESO obs. during 1984-85 Burst Watch Campaign 7−80129
GBS 0526−66, gamma-ray burst source, detect. of possible optical burst 7−80127
GBS 0526−66, gamma-ray burst source, monitoring by optical telescope-camera system 7−79830
GBS 0526−66, gamma-ray burst source, search for radio pulses 7−80128
γ Gem (A0 IV), mass, radius, luminosity and age from model-atmosphere study 7−140069
GK-type main-sequence stars, radiative losses rel. to coronal heating requirements 7−88418
Gliese 623, companion lumin. and mass characts. 7−140174
globular cluster stars, theoretical luminosity functions rel. to cluster age and comp. 7−127985
gravitational wave fluxes, contrib. of sources with continuous and discrete spectra 7−101670
GX 301-2 (WRA 977), slow X-ray pulsar, X-ray obs. through two binary cycles 7−107897
GX 339−4, faint optical states (1981-6) 7−94952
GX 339−4 (4U 1658−48), X-ray and visible obs. of X-ray high state (1983 May) 7−88514
GX 3+1 (4U 1744−26), obs. of quasi-periodic oscills. in X-ray flux 7−94957
stellar radiation continued
GX 5−1, complex cross-spectra of X-ray intensity vars. 7−140172
GX 5−1, quasi-periodic oscills. and spectral state 7−80035
GX 5−1, quasi-periodic oscills. obs. by Einstein (HEAO 2) observatory 7−88516
H2252-035, intermediate polar, obs. of phase-dependent low-energy absorpt. and Fe line emission 7−115508
HD 128220, double-lined binary with subdwarf O star, spectroscopic orbit and subdwarf parameters 7−94871
HD 155555, RS CVn star, X-ray photometry rel. to coronal plasma temp 7−134273
HD 27130, eclipsing binary in Hyades, mass, lumin. and radii determ 7−127945
HD 32918, active chromosphere K2 III star, obs. of intense long-lasting radio flare 7−120400
HD 37836 in LMC, O-type supergiant, energy distrib. 7−127853
HD 50896, WN5 star, empirical model for continuum form. in extended atmosphere 7−101802
HD 8441, CP2 light curve analysis, surface inhomogeneity 7−134242
V644 Her, δ Sct star, mass, radius, luminosity and age from model-atmosphere anal. 7−140104
AK Her, BV light curves and period of W UMa-type system 7−146032
BL Her, uvbyβ photometry and parameter determ. 7−140115
AM Her, white dwarfs mag. axis-rot. axis angle determ. from X-ray flux orbital curves 7−88503
AH Her, Z Cam star, absolute visual magnitude and distance determ. 7−115408
AM Her stars, effect of soft X-ray excess on deduced mass transfer rates 7−107905
AM Her stars, electron scatt. effects on intensity and polarisation of cyclotron emission regions 7−115452
AM Her stars, models of optical-IR continuous spectrum 7−115509
AM Her stars (magnetic close binaries), light and polarisation curves vars. in swinging mag. dipoles model 7−115451
Her X-1, pulse profile rapid change and high-state duration modelling 7−140173
Her X-1, pulsed γ-rays detect. above 250 GeV 7−94948
Her X-1 (Hz Her), pulsed TeV gamma rays detect. during X-ray source eclipse 7−88523
AM Her-type stars, emission regions structure 7−115513
Herbig Ae/Be stars, polarimetry and shell characts. *(Russian)* 7−88421
high-speed stellar winds, aberration and advection effects in plane-parallel medium in motion 7−139900
hot luminous stars, statistical equilib. calcs. for H to Zn in radiation driven winds 7−145933
HS 1254+3430, magnetic DA white dwarf with distinct Hβ and Hα Zeeman triplets, effective temp. determ. 7−140050
Hubble-Sandage variables, luminosity study 7−101803
Humason 1-2, Type I planetary nebula, central star luminosity and effective temp. 7−134288
EX Hya, 1987 May outburst 7−94891
EX Hya, visual magnitude estimate (1987 May 5) 7−94892
VW Hyi, dwarf nova, soft X-ray oscills. obs. during superoutburst 7−134236
VW Hyi, nonmagnetic cataclysmic variable star, X-ray emission obs. 7−115422
VW Hyi, X-ray SU UMa star, flux and spectra in far-UV, Voyager obs. 7−72463
VW Hyi, X-ray SU UMa star, IUE fluxes and spectral characts. 7−72462
hypergiant stars eruptions, opaque wind model for relation between apparent temp. and mass loss rate 7−120440
HZ 43, DA white dwarf, radius and lumin. 7−88396
initial luminosity function, solns. of coagulation eqn. with time-depend. coagulation rates 7−88376
interstellar UV radiation field, grains scatt. rel. to correl. between IRAS cirrus and diffuse UV background 7−146063
IR excess supergiants, dust shell characts. and polarisation obs. 7−120388
IRAS 09371+1212, icy evolved mass-losing star with unique IR spectrum, CO(1-0) line obs. 7−101955
IRAS C stars with CO and HCN emission, correl. between integrated CO and IR sources 7−120408
IRAS point sources around dense molecular clouds, spatial distrib. and spectral evolution 7−120532
IRAS sources in and near dense cores, stellar nature and obs. 7−140323
EV Lac, flare star, photometric characts. of flare from photoelectric obs. 7−94900
late-type giants, contrib. to IR fluxes from optically-selected elliptical galaxies 7−95010
late-type giants and supergiants, polarimetric characts. 7−72405
late-type stars, mag. struct. and rot.-activity relation 7−94852
late-type synchronized binary stars, correl. anal. of stellar activity compared with single stars 7−127964
XY Leo, contact binary star, contrib. of BY Dra-like binary companion to X-ray luminosity 7−140165
LHα 25(=Walker 90), young star, broad-band spectral energy distrib., evidence for circumstellar disk 7−127870
ST LMi (=CW 1103+254), polarimetry of AM Her system 7−115516
long-period and semiregular variables, predicted dates of maxima and minima (1987) 7−79982
low mass X-ray binaries, X-ray light curves modelling 7−101845
low-luminosity embedded sources, lumin. and evolutionary states 7−107826
luminosity function determination, new derivation of Lynden-Bell C method 7−94669
BR Lup, superhumps during outburst of SU UMa-type star 7−145975
α Lyr (A0 V), mas, radius, luminosity and age from model-atmosphere study 7−140069
RR Lyr stars, amplitude modulation due to internal resons. as possible explanation of Blazhko effect 7−94878
RR Lyr stars, light curves and periods of second-overtone pulsation models 7−140093
RR Lyr stars, overtone pulsation models rel. to light curve shapes 7−115457
RR Lyr stars, radii, distances and absolute lumin. 7−115391
RR Lyr stars absolute magnitudes and distance moduli, H-photometric obs. anal. 7−107859
RR Lyr stars in globular cluster M5, mean absolute V-magnitude determ. rel. to cluster distance 7−127986
RR Lyr stars of Bailey type C, modelling 7−94888

ellar radiation continued
M3 red giant branch, lumin. effective temp. diagram, appl. of IR flux method 7−101860
M-type dwarf stars, chromospheric fluxes and rot. 7−94864
massive stars, evolutionary models with mass loss and overshooting rel. to W-R stars props. 7−134222
massive stars in galaxies, H-R diagrams and upper luminosity limit 7−72426
mean absolute magnitude and dispersion, approx. first-order soln. 7−140035
Mira variables in interacting binaries, evolution and luminosities 7−140111
MXB 1730−335 (Rapid Burster), EXOSAT obs. of new mode of behaviour during outburst 7−101846
Nemesis, accretion, high-energy radiation implications for Earth 7−120286
neutrino flows in collapsing stars: a two-fluid model 7−88469
neutrino flux from X-ray binary stars, upper limit determ. 7−107681
neutrino production and interactions in close X-ray binaries 7−88518
neutron star polar cap accretion, radiation gas dynamics 7−72496
neutron stars, accreting, long X-ray bursts as indicator of thermal evolution of interior 7−107887
neutron stars, accretion of comets rel. to X-ray bursts and gamma-ray bursts 7−88678
neutron stars, coupled neutrino-photon transport eqns. rel. to neutrino-driven stellar winds 7−88493
neutron stars, effect of electron cyclotron resonance instability of magnetised photosphere on critical luminosity 7−94938
neutron stars, mean free paths of nondegenerate neutrinos rel. to neutrino emission 7−115493
neutron stars, quantised synchrotron radiation in strong mag. fields 7−145815
neutron stars, rapidly rotating, X-ray burst spectra 7−94937
neutron stars, redshift database anal. using γ burst annihilation lines 7−80025
neutron stars, rotating, secular instabilities due to gravit. radiation reaction 7−94939
NGC 1333, mol. cloud, assoc. pre-main sequence stars lumin. 7−94988
Nova Cen 1986, absolute magnitude and distance from visual light curve 7−127907
Nova Cyg 1986, visual magnitude estimates (1987 April-June) 7−107856
Nova Her 1987, UBV photometry and visual magnitudes (1987 February-March) 7−72449
Nova Her 1987, visual magnitudes (1987 March 4-15) 7−88445
Nova Sgr 1987, discovery, magnitudes, position, and spectrum (1987 May) 7−101806
Nova Sgr 1987, visual magnitude estimates (1987 June) 7−107857
Nova Vul 1984 No.2, obs. of unusual early radio outburst 7−140076
Nova Vul 1984 No.2, visual magnitude estimates (1987 June-August) 7−140100
novae, EXOSAT obs. of X-ray emission during outburst stage 7−115430
novae, orbital eccentricity and luminosity modulation 7−127909
novae, outburst period-amplitude and period-energy relations 7−120433
novae, UBV photometry, use for lumin. determ. 7−140079
novae, visual magnitudes (1987) May-June) 7−127898
novae, X-rays during outburst stage, EXOSAT obs. 7−94883
NP 0532, Crab pulsar, 26.3 MHz flux density determ. from lunar occultation obs. 7−134296
NP 0532 (Crab pulsar), X-ray emission obs. by Astron automatic station 7−140221
OB stars, luminosities determ. from uvbyβ photometry 7−127836
OH/IR 286.50+0.06, Mira-type star, lumin., mass loss rate and spectral type 7−120411
old neutron stars in dense interstellar clouds, radiation signatures 7−88492
old super-metal-rich stars, theoretical isochrones 7−115381
RS Oph, recurrent nova, bolometric luminosity evolution during 1985 outburst 7−115425
RS Oph, recurrent nova, X-ray obs. from tenuous remnant 7−115421
order-of-magnitude theory 7−134393
α Ori, Hα chromosphere obs. using differential imaging technique 7−115379
NU Ori, M43 exciting star, contrib. to heating of dust in M43 and Orion Ridge 7−101886
α Ori, triple system, speckle imaging and polarisation characts. 7−88398
α Ori (Betelgeuse), distance, diameter, light vars., and circumstellar shell 7−101776
paraphoton-electron coupling strengths, astrophysical bounds from Sun and white dwarfs 7−127717
EQ Peg, EXOSAT and IUE obs. of 1984 December 7 flare 7−120418
43 Peg, hot Am star, mass, radius, luminosity and age from model atmosphere anal. 7−127905
γ Per, mass and absolute mag. characts., spectral anal. 7−146025
S Per, OH-IR star, interferometric obs. of H_2O and OH maser emission 7−72433
GK Per, visual magnitude estimates (1986 December-1987 April) 7−94889
X Per, X-ray pulse period, 1984 Tenma obs. 7−140181
period changes of early-type close binaries 7−80038
PG 1031+234, magnetic white dwarf, polarisation characts. at >500 MGauss 7−88407
PK 75+35°1, peculiar planetary nebulae, temp. of central star 7−101892
planetary nebulae nuclei, absolute magnitude-age relation rel. to mass distrib. and evolutionary scheme 7−88390
polarisation of continuum and line radiation 7−120261
Population II stars, physical parameters determ. from optical-UV energy distribs. 7−145950
pre-main sequence stars in dark cloud LDN 1642, lumin. 7−127995
pre-main-sequence stars, anisotropic radiation fields prod. by electron scatt. in thick accretion disks 7−72278
pre-main-sequence stars, evolutionary track of mass-accreting polytropic model 7−140045
pregalactic stars, effects on cosmic background temp. anisotropy in minimal isocurvature model for galaxy form. 7−120659
pregalactic stars in cold dark matter cosmologies, consequences of ionising radiation 7−88705
primordial stars, luminosity and radius evolution during pre-main-sequence phase 7−88543
protostars, emergent spectral energy distrib., rot. effects 7−94868
protostars in Bok globules, contrib. to globules thermal IR emission 7−140225

stellar radiation continued
PSR 0042−735 in SMC, discovery and parameters at 610 MHz 7−134262
PSR 0531+21 (Crab pulsar), high-energy gamma-ray emission anal. 7−72491
PSR 053+21, VHE γ-ray emission characts. 7−115492
PSR 0809+74, single pulse intensity fluctuations obs. rel. to multipole mag. field of freq. dependence pulse profile *(Russian)* 7−72495
PSR 0818−13, subpulse drift rate var. 7−134264
PSR 0833−45 (Vela pulsar), very high energy gamma rays obs. 7−115488
PSR 0834+06, orthogonal polarisation modes 7−120484
PSR 0834+06, PSR 1919+21, decametre-wavelength obs. 7−107884
PSR 1821-24, millisecond pulsar in globular cluster M28, discovery and pulse period 7−140145
PSR 1929+10, search for X-ray emission using EXOSAT 7−94931
PSR 1937+21, millisecond pulsar, improved pulse timing using real-time coherent dedispersion 7−107883
PSR 1951+32, 1408 MHz parameter determ. 7−140142
PSR 1951+32 in SNR CTB 80, discovery and UHF obs. 7−134263
pulsar drift and rotational collapse 7−101834
pulsar magnetospheres, current sheets contrib. to radio emission 7−94933
pulsars, excess phase noise in JPL timing obs. 7−115489
pulsars, flux slow variations and interstellar plasma inhomogeneities spectrum *(Russian)* 7−88601
pulsars, freq. independence of microstructure phase struct. 7−88490
pulsars, influence of mag. field inhomogeneity on longit. waves excitation in magnetospheres 7−127933
pulsars, luminosity decay rel. to (P,$\dot{P}$) diagram 7−140138
pulsars, photon capture in mag. fields rel. to radio luminosities and TeV gamma rays emission 7−72493
pulsars, pulse broadening by interstellar matter, galactic distrib. 7−128047
pulsars, pulse characteristics at 24 GHz 7−94932
pulsars, pulse width spectral behaviour, meas. at Culgoora circular array 7−146017
pulsars, radio luminosity growth in later stages, statistical anal. 7−94936
pulsars, radio luminosity statistics 7−115487
pulsars, two-beam model for triplicity of pulse profiles and orthogonal polarisation modes 7−94934
pulsars timing noise, constraints on string-dominated universe 7−120664
pulsars with triple profiles, drifting subpulse phenomenon 7−140139
RX Pup, symbiotic star, radiation props. of hot companion necessary to ionise wind 7−72446
ζ Pup (04 If), search for coronal line emission rel. to X-ray emission 7−115390
ζ Pup (O4f), effective temp. and absolute bolometric magnitude from photosphere model 7−88433
ζ Pup (O4f), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933
R-associations near refl. nebulae, polarisation characts. 7−146056
radiation transfer in sphere with internal source, radiative heat flux eqn. 7−72272
radio continuum emission from stars, catalogue 7−79848
radio emission from cataclysmic variables rel. to magnetized secondary 7−115398
RCW 34 exciting star (Vel R2 25a), radius and luminosity from optical and IR obs. 7−120383
recurrent novae, dynamical effect of radiative heat loss on remnants evolution 7−134252
red giants and supergiants, UV features and chromospheric flux 7−94869
relativistic stars, gravitational radiation, off-parity fluid perturbations 7−80534
Sanduleak-69°202 (stars 2 and 3), UV spectra and flux characts. 7−88477
Sanduleak-69° 202 magnitude prior to SN 1987A in LMC 7−72478
U Sco, visual magnitude estimates (1987 May 21-25) 7−101807
τ Sco (O9.5 V), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933
Sco X-1, intensity and source state depend. of quasi-periodic oscills. 7−127967
Sco X-1, orbital X-ray var. search using Ariel 5 data 7−72529
secondary standards of absolute UV flux 7−94658
FH Ser (Nova Ser 1970), evidence for optically thick wind and super-Eddington total luminosity 7−120404
RW Sex (=BD−7°3007), UX UMa star, photometric characts. and continuum energy distrib. 7−115418
FG Sge, spectral type, radius and lumin. determ. from IR photometric obs. 7−145961
Sh2-140, mol. cloud protostellar cluster, IR sources spectral distrib. 7−94972
SN1987A, neutrino events, Kamioka observations 7−120482
SN 1980K in NGC 6946, Hα emission flux in late-time spectrum 7−88468
SN 1987A, IR spectrum, hard X-ray/gamma-ray obs., and visual magnitude estimates 7−115476
SN 1987A in Large Magellanic Cloud, neutrino burst obs. 7−88486
SN 1987A in Large Magellanic Cloud, neutrino burst obs. 7−88487
SN 1987A in LMC, calc. of expected γ-ray flux due to ^{56}Co decay 7−140123
SN 1987A in LMC, computed UV spectra, 7−140118
SN 1987A in LMC, continuum fluxes in JHKLM bands 7−80007
SN 1987A in LMC, developments in 1987 February-March period 7−101831
SN 1987A in LMC, evidence for black hole form. from neutrino obs. 7−120463
SN 1987A in LMC, flux limits from hard X-ray/gamma-ray expt. 7−101827
SN 1987A in LMC, Hα emission behaviour and magnitudes (1987 March) 7−88470
SN 1987A in LMC, harmonic struct. of 1987 February 23.316 neutrino burst 7−120464
SN 1987A in LMC, identification as star 1 in pre outburst plates and UV characts. 7−88477
SN 1987A in LMC, implications for neutrino and γ-ray emission of limits on hadronic cosmic ray prod. 7−134095
SN 1987A in LMC, IR speckle and visual magnitudes (1987 June-July) 7−120473
SN 1987A in LMC, IR speckle obs. and photovisual magnitudes 7−94924

stellar radiation continued
SN 1987A in LMC, IR spectrum, BV photometry, and visual magnitudes (1987 April) 7−94908
SN 1987A in LMC, IUE obs. of spectral evolution and magnitudes 7−72482
SN 1987A in LMC, linear polarisation meas. (1987 March 21 to 27) 7−88474
SN 1987A in LMC, magnitude estimates (1987 February-April) 7−120423
SN 1987A in LMC, magnitudes, neutrino fluxes, light curves evolution 7−72478
SN 1987A in LMC, magnitudes (1987 March-April), neutrino periodicity 7−120466
SN 1987A in LMC, MSW effect rel. to (anti)neutrino fluxes 7−127927
SN 1987A in LMC, neutrino burst obs. rel to neutrino mass limits 7−107880
SN 1987A in LMC, neutrino emission characts. and implications for interior processes 7−140125
SN 1987A in LMC, neutrino periodicity interpretation 7−127926
SN 1987A in LMC, neutrino pulse obs. rel. to finite electron neutrino rest mass 7−101824
SN 1987A in LMC, neutrino signal detect. (1987 February 23) 7−72486
SN 1987A in LMC, photometry, bolometric lumin, and radius upper limits 7−88478
SN 1987A in LMC, photometry, pre-max. plateau, spectra and magnitudes 7−88473
SN 1987A in LMC, precise position and visual magnitude estimates (to 1987 May 25) 7−101828
SN 1987A in LMC, precise positions and magnitudes (1987 March) 7−80015
SN 1987A in LMC, predicted light max. epoch and magnitude 7−72483
SN 1987A in LMC, predicted UBV light curves from exploding 20 $M_\odot$ star model 7−146003
SN 1987A in LMC, predicted X-ray, UV and IR spectra 7−140121
SN 1987A in LMC, radio emission rel. to interaction with circumstellar matter and nature of progenitor star 7−115484
SN 1987A in LMC, radio emission upper limits (1987 July) 7−146005
SN 1987A in LMC, search for ^{37}Ar signal at Homestake neutrino detector 7−80003
SN 1987A in LMC, spectral features and evolution, magnitudes 7−72480
SN 1987A in LMC, UBV photometry magnitudes, but no soft X-rays (1987 May-September) 7−146008
SN 1987A in LMC, upper limits on γ-ray line emission 7−120474
SN 1987A in LMC, UV flux and spectral features 7−115475
SN 1987A in LMC, visual magnitude estimates (1987 May) 7−94926
Sn 1987A in LMC, visual magnitude estimates and spectropolarimetry 7−115477
SN 1987A in LMC, X-ray flux, archive brightness, and spectral evolution 7−80016
SN 1987A in LMC, X-ray flux increase and BVIR photometry 7−140132
SN 1987A in LMC, X-ray flux limit and spectrum vars. (1987 February 26 to March 9) 7−72485
SN 1987A in LMC gamma-ray flux limit (1987 April 19) 7−107875
SN 1987A in LMCm magnitude estimates (1987 July 22-29) 7−140128
SN 1987B in NGC 5850, visual magnitudes (1987 April 2) 7−94909
SN 1987D in MCG+0-32-01, discovery, position and magnitudes 7−94907
SN 1987D in MCG+0-32-01, magnitudes and sequence 7−120466
SN 1987J in ESO 601-26, discovery, position and magnitudes 7−140127
SN 1987K in NGC 4651 discovery position and magnitudes 7−140127
solar-type dwarf stars, X-ray emission characts. 7−107827
solar-type stars, ages and Ca II chromospheric activity 7−107806
solar-type stars in associations and clusters chromospheric and transition region emission 7−107803
starburst galaxies, model for far-IR and optical props. 7−101906
statistical relations between spectral and lumin. classes and between effective temp. and lumin. 7−94854
stellar activity, COSPAR symposium, Toulouse France (June-July 1986) 7−128162
Sugano's object in Orion association, 1970 and 1986 brightening 7−115383
supernovae, light amplification and polarisation by gravit. lensing 7−101825
supernovae, light curves of exploding Wolf-Rayet stars 7−127916
supernovae, scattered light echo 7−88467
supernovae, Type I, light curve models from white dwarfs explosions 7−120467
supernovae, Type I, lowered energy for echo model of light curve 7−107869
supernovae, Type Ib, absolute magnitudes and IR light curves 7−120465
supernovae, type Ib, contrib. of red supergiant companions to continuum and line emission 7−140119
symbiotic stars, cool components, spectral types and lumin. classes 7−107831
symbiotic stars, luminosity vars. for increased mass-loss rate model 7−140075
symbiotic stars, polarization and IR colours 7−120420
44 Tau, δ Sct star, mass, radius, luminosity and age from model atmosphere anal. 7−140104
HL Tau, pre-main-sequence star, small-scale struct. of circumstellar gas from CO and continuum obs. 7−88403
T Tau stars, accretion disk luminosity from spectral form of IR excess component 7−79965
T Tau stars, general characts. determ. from spectral meas. 7−140056
T Tau stars, linear polarisation rel. to jets and circumstellar dust distrib. 7−140054
T Tau stars, polarimetry and shell characts. *(Russian)* 7−88421
TAV 0723−03 in Monoceros, discovery, magnitudes, position, and sequence 7−120425
tidal binary systems in globular clusters, luminosity and radius vars. due to tidal heating 7−127969
transition layers, temp. stratification and emission measures 7−120379
47 Tuc, horizontal branch absolute magnitude 7−140193
Type II supernovae, radioactive decay mechanism for late-time luminosity and H I ionisation *(Russian)* 7−146011
4 U 0115+63, recurrent X-ray transient, new outburst obs. (February 1987) 7−72532
4U 0900−40 (HD 77581), massive X-ray binary, X-ray photoionisation effects on P Cyg line profiles 7−120502

stellar radiation continued
4U 1145−619, EXOSAT and Einstein obs. of pulsating X-ray binary 7−72531
4U 1145−619 (Hen 715), X-ray and optical spectral vars. during X-ray outburst 7−127973
4U 1636−53 (MXB 1636−53), evidence for burst-induced accretion disk coronae, multi-peaked X-ray bursts anal. 7−120503
4U 1820−30, ultra-short period binary star, Doppler effect as cause of X-ray flux modulation *(Russian)* 7−107906
4U 2129+12, X-ray source in M15, discovery of 8.5-hour X-ray period 7−120505
4U 2129+47, X-ray burst obs. 7−115519
4U/MXB 1636−53, relation between amount of accreted fuel and strength of X-ray burst 7−146040
4U/MXB 1820−30, EXOSAT obs. of double-peaked burst, radius expansion 7−107896
W UMa, appl. of hot secondary model to W-type light curves 7−127965
SW UMa, detection of superhumps and quasi-periodic oscills. in SU UMa star 7−101799
UV bright stars in elliptical galaxies, contribs. to galaxies UV light 7−101895
V 0332+53, IR emission, evidence for circumstellar gas 7−94959
variable star light curve analysis, nonadiabatic nonlinear one-zone model 7−107846
Vel X-1, accretion disk form. in magnetosphere rel. to X-ray pulse vars. 7−140152
RT Vir, semi-regular variable star, H_2O maser outburst obs. *(Russian)* 7−107865
ER Vul, short-period RS CVn system, EXOSAT obs. of 1.5 orbital cycles 7−127972
white dwarfs, accreting, LTE model atmospheres rel. to soft X-ray-EUV spectra 7−94874
white dwarfs, accreting, two-temp. treatment for X-ray and UV radiation 7−88392
white dwarfs, luminosity function rel. to age of Galactic disk and Universe 7−120660
white dwarfs, magnetic axis orientation determ. from X-ray flux orbital curves 7−88503
WN-type stars, continuous energy distrib. rel. to modelling of extended atmospheres 7−101801
Wolf 630 system, low-energy X-ray obs. 7−127968
Wolf-Rayet stars in 30 Dor and surroundings, absolute visual magnitudes 7−72443
X0142+614, soft X-ray source, obs. of 25-min X-ray modulation 7−95051
X-ray binaries, search for msec periodic and quasi-periodic pulsations 7−72526
X-ray binaries, smearing of beaming pattern by isotropic cloud rel. to nonpulsing sources 7−88509
X-ray binaries in hierarchical triple system., binary separation vars. rel. to luminosity bursts 7−120501
X-ray binary stars, asymmetric beam emission from neutron star 7−115527
X-ray binary stars, effect of electron scatt. cloud on X-ray oscills. produced by beaming 7−127971
X-ray binary stars, influence of physical phenomena on power spectra of quasi-periodic oscills. 7−146037
X-ray binary stars, origin of time lag between hard and soft X-ray photons in QPD sources 7−120515
X-ray binary stars, resonant Raman-cyclotron scatt. in very strong mag. fields 7−139901
X-ray binary stars, time-dependent calcs. of X-ray and γ-ray emission reprocessing 7−107898
X-ray binary stars in bulge of M31, X-ray spectral props. 7−120598
X-ray burst sources, effects of wind collimation by thick accretion disks 7−80036
X-ray burst sources, Fe spectral features form. in cooling burst spectrum 7−134274
X-ray burst sources, neutron star nonradial g-mode oscill. spectrum rel. to quasi-periodic oscills. 7−127938
X-ray burst sources, non-LTE radiation-driven wind models in bursting neutron stars 7−101841
X-ray burst sources, spectral energy distribs. and absorpt. line spectra *(Japanese)* 7−140160
X-ray burst sources, Type I X-ray bursts energetics and nuclear fuel reservoir in stellar envelope 7−146041
X-ray bursters, colour temp.-lumin. diagram characts. (appl. to MXB 1636−536) *(Japanese)* 7−146024
X-ray emission and magnetic activity 7−127816
X-ray low-mass binaries, delay meas. of quasi-periodic oscills. 7−146050
X-ray nova at $\alpha=13^h53.0^m$, $\delta=-64.4°$, discovery by Ginga all-sky monitor (February 1987) 7−72532
X-ray point sources in globular cluster ω Cen, flux vars. and spectral parameters 7−140190
X-ray pulsars, directionality and spectrum of X-ray emission from uniformly heated mag. neutron star 7−127944
X-ray pulsars in Population I binaries, intermittent stellar wind accretion and long-term activity 7−88517
XB 1254−690, low-mass X-ray binary, obs. of 3.9 hr periodic dips in X-ray intensity 7−88522
XB 1254−690, optical light curve of low-mass X-ray binary 7−101852
young IR sources, linear polarisation rel. to jets and circumstellar dust distrib. 7−140054
C stars, source of violet depression from Balmer decrement obs. in C-type long-period variables 7−120443
H-burning stars in young star clusters, evolutionary constraints from luminosity function 7−140189
OH-IR stars, depend. of I−K colour index on photometric period rel. to origin of polarisation 7−127873
OH-IR stars, radio continuum emission from two OH emitting planetary nebulae 7−101878

stellar rotation
see also solar rotation
3A 1907+09, orbital characts., neutron star rot. characts. and pulse averaged spectra 7−72535
accreting compact object, spin var. 7−107810
accretion disks, axisymmetric MHD flows theory 7−115227
accretion disks, max. orbital freq. determ. for different metric theories of gravitation 7−115371

llar rotation continued
accretion disks, viscosity prescription for ang. momentum transfer in self-gravitating disk 7−88103
Ap and He-weak stars in clusters and associations, photometric variability 7−120421
Ap stars, rapidly oscillating, rot. props. rel. to computed spectral line vars. for oblique nonradial pulsators 7−72436
V1343 Aql (SS 433), dynamical model for jets precession 7−88429
V1343 Aql (SS 433), photometry rel. to interdependence between orbital and precession periods 7−120444
FO Aqr (=H 2215−086), spin down of intermediate polar 7−115455
FO Aqr (H2215−086), DQ Her star, photometric obs. rel. to white dwarf spin-down 7−134250
AB Aur, Herbig Ae star, rot. period from short-term vars. in Ca II K line 7−88400
AB Aur, Herbig pre-main sequence star, wind rot. modulation, C IV and Mg II obs. 7−127855
ε Aur, secondary disk rot. characts. and components masses, spectral obs. 7−107908
RW Aur, T Tau star, rot. period from Balmer line vars. 7−127863
B-type rapidly-rotating stars, axial inclinations and differential rot. from absorpt. line profiles 7−127868
B-type stars in open clusters NGC 869, 884 and 2264, rot. vel. determ. *(Russian)* 7−72553
Be stars, shell ejection, ang. momentum transfer 7−94886
binary pulsars, spin and orbital periods anal. 7−72506
binary stars, effects of rot. on excitation of low-frequency gravity modes 7−79946
binary stars with eccentric orbits, evidence for rot. pseudosynchronisation 7−88524
bipolar planetary nebulae, progenitor rot. vel. *(French)* 7−120536
black holes, rot. rel. to stable circular geodesics with min. energy in extreme Kerr metric *(Russian)* 7−72502
cataclysmic binaries, effects of primary rot. 7−115433
Cir X-1, QPO, effects of accretion disk rot. and neutron star interactions 7−107904
circumbinary accretion disks, twisting and alignment theory and appl. to ε Aur 7−88535
close binaries, rotationally-perturbed orbital elements 7−146035
close binary stars, effect of nonperpendicular rot. axes on photometric obs. of apsidal motion 7−94942
κ Cnc (HD 78316), Mn star, rot. speed determ. from optical spectrum anal. 7−101794
TV Col (2A 0526−328), DQ Her type star, white dwarf rot. period from EXOSAT obs. 7−115427
convective zones rotation, turbulent heat transport rel. to surface temp. latitudinal vars. *(Russian)* 7−145918
cool stars, chromospheric activity and rot. 7−94863
δ CrB, chromospherically active giant star, rot. period from photometric obs. 7−94875
RS CVn stars, IUE obs. of rot. modulation of V711 Tau, IL Peg and Ar Lac 7−101843
RS CVn-type binaries, rotation period rel. to activity 7−146034
V1764 Cyg=HD 185151, rot. characts. 7−72516
V1143 Cyg, F-type eclipsing binary, absolute dimensions and rot. vels. 7−72507
Cyg X-3, neutron star accretion and rot. as power source 7−88534
differential rotation, effects on dynamical stability to non-axisymmetric perturbations 7−101672
differentially rotating stars, two-colour diagram 7−72403
BY Dra, UV emission lines rot. modulation and flare activity 7−79966
BY Dra stars, rot. braking model for evolution to marginal BY Dra stars 7−120395
E1013−477, possible intermediate polar, photometric periods from I-band CCD obs. 7−80048
1E 1048.5+5421, new 114-minute AM Her binary, orbital and rot. period determ. 7−115518
early-type stars, effects of uniform rot. on low-freq. oscills. 7−88381
eigenfrequencies of rotating star, numerical determ. 7−145936
EI Eri (=HD 26337), RS CVn star, rot. characts. and photometric obs. 7−146027
α Eri (Achernar), Be star, rot. modulation model for light spectrum and vel. vars. 7−107861
F, G and K-type dwarfs and subgiants, rot. vels. rel. to age and Li abundance 7−72412
F-type stars, rot. vel. characts. 7−94862
fast pulsar candidate in globular cluster M28, evidence for millisecond pulsar model 7−127935
Gliese 890, rapidly-rotating spotted red dwarf flare star, rot. period and axial inclination 7−140052
globular cluster giants, evidence for rot.-induced mixing model for CN enrichment 7−115531
gravimagnetic rotators, ecology (interaction with environment, and evolution) 7−94643
GX 339−4, optical obs. of possible 1.13 millisecond periodicity 7−101853
HD 158393, late-type giant star in binary system, synchronous rot. 7−107828
HD 184279 (V1294 Aql), Be-shell star, projected rot. vel. determ. 7−140080
HD 199178, FK Com star, rot. inclination determ. from five-colour (UBVRI) photopolarimetry 7−101772
HD 26337, RS CVn type binary, request for VRI photometry rel. to spot model determ. 7−146047
HD 64488, field horizontal-branch star, rot. vel. from coadded DAO spectrograms 7−94873
HD 6532, Rapidly Oscillating Ap star, freq. soln. to light vars. rel. to rot. freq. 7−134248
HD 6532, rapidly oscillating Ap star, rot. period determ. from mean light vars. 7−134249
HD 92664, Bp-Si star, rot. period and light curve from Geneva photometry 7−140081
AM Her, white dwarfs mag. axis-rot. axis angle determ. from X-ray flux orbital curves 7−88503
HR 1063 (V3q6 Per), He-weak star, rot. period determ. from photometric obs. 7−72453
EX Hya, eclipsing dwarf nova, white dwarf rot. period from time-resolves spectrophotometry 7−120441
EX Hya, intermediate polar, white dwarf rot. rate decrease 7−115419
VW Hyi, dwarf nova, white dwarf rot. rel. to soft X-ray oscills. 7−134236

stellar rotation continued
L1551-IRS 5, pre-main-sequence star, CS obs. rel. to existence of rotating mol. disk 7−140235
EV Lac, flare freq. rot. modulation 7−94887
late-type stars, depend of UV chromospheric emission on rot. 7−127845
late-type stars, mag. braking 7−94859
late-type stars, mag. struct. and rot.-activity relation 7−94852
late-type synchronised binary stars, depend. of stellar activity on rot. 7−127964
RR Lyr, rot. and Blazhko effect *(Russian)* 7−72470
M-type dwarf stars, chromospheric fluxes and rot. 7−94864
magnetic cataclysmic binary stars, evolution to rot. synchronisation 7−115449
magnetic stars, time-dependent models for perpendicular rot. and mag. axes 7−94902
massive stars, rot.-induced mixing rel. to bifurcation in evolution and ON-type blue stragglers 7−115359
TZ Men, A-type eclipsing binary star, rot. vels. determ. 7−80029
millisecond pulsars, rotation and evolutionary characts. 7−80021
millisecond pulsars in globular clusters, rot. var. due to neighbouring stars dynamics 7−88556
neutron star oscillation damping, viscosity effect 7−107886
neutron stars, effects of rapid rot. on X-ray burst spectra 7−94937
neutron stars, effects of viscous secular instability on rot. rate 7−140148
neutron stars, maximum mass, effects of uniform rapid rotation 7−120486
neutron stars, nonaxisymmetric normal modes and secular instabilities 7−94939
neutron stars spin evolution in wide low-mass X-ray binaries 7−72506
NP 0532 (Crab pulsar), X-ray pulse period and first derivative from Astron station obs. 7−140221
Orion population stars, V photometric search for periodicities 7−134228
α Per cluster, rapidly rot. K-type dwarfs, photometric light curves anal. 7−127869
PG 1031+234, magnetic white dwarf, oblique rotator model for polarisation and mag. field struct. at >500 MGauss 7−88407
PG 2303+243, new pulsating DA-type white dwarf, possible rot. splitting of pulsation freqs. 7−79955
Pleiades, rapidly rotating K-type dwarfs, photometric light curves anal. 7−127869
Pleiades K and M-type dwarfs, rot. characts. 7−140053
Pleiades K-type dwarf stars, evidence for evolutionary sequence from rapid to slow rotators 7−140197
polytropes, linear and nonlinear dynamic instability 7−107807
polytropic stars, effect of uniform. rot. on struct. parameters from third-order perturbation theory 7−115367
protostars, angular momentum and form. 7−107931
protostars, emergent spectral energy distrib., rot. effects 7−94868
PSR 0540−69, 50 ms LMC pulsar, optical colours, polarimetry, and timing meas. 7−107882
PSR 0818−13, subpulse drift rate var. 7−134264
PSR 1821-24, millisecond pulsar in globular cluster M28, discovery and pulse period 7−140145
PSR 1937+21, millisecond pulsar, improved pulse timing using real-time coherent dedispersion 7−107883
pulsar drift and rotational collapse 7−101834
pulsar glitches, implications for strange stars 7−107868
pulsars, (P,Ṗ) diagram rel. to luminosity decay 7−140138
pulsars, birthrate and initial spin periods of single radio pulsars 7−140140
pulsars, excess phase noise in JPL timing obs. 7−115489
pulsars, magnetic dipole-rotation axes angle determ. methods 7−72490
pulsars, statistical distributions of periods, mag. field strengths, ages, and galactic plane heights 7−115487
pulsars, two-beam model for triplicity of pulse profiles and orthogonal polarisation modes 7−94934
pulsars in composite supernova remnants, initial rot. periods 7−101889
pulsars in supernova remnants, influence of rot. energy loss rate and age on remnant evolution 7−140218
pulsars timing noise, constraints on string-dominated universe 7−120664
r-modes and rot. effects 7−140039
radiative zones non-uniform rot. and mag. fields 7−94860
rapidly oscillating Ap stars, rotationally-modulated chromospheric emission as test for Alfvenic heating 7−134240
Roche models, vibr. stability of rotating model 7−127840
α Scl, He-weak star, possible rot. period determ. from mean light vars. 7−134249
AL Scl (HD 224113), early-type double-lined eclipsing binary, evidence for nonsynchronous rot. 7−120490
Scorpius-Centaurus association membership rot. characts. 7−127988
V1223 Sgr (4U 1849−31), intermediate polar, white dwarf spin-down rate from max. light times 7−140107
solar-type dwarf stars, X-ray emission correl. with rot. vel. 7−107827
spectral line asymmetries, amplification by rotation 7−101757
spotted stars, direct photometric problem 7−145976
T Tau stars, axial inclinations 7−140065
T Tau stars, general characts. determ. from spectral meas. 7−140056
T Tau stars, rotational and radial vels. 7−88410
Taurus-Auriga region, pre-main sequence stars with Ca II emission, rot. and radial vel. meas. 7−107817
tidal-capture binary systems, effects of tidal resons. on stellar rot. 7−127974
time var. in mag. obliquity 7−140144
4U 1538−52, spectra and pulse period 7−120499
CQ UMa, SrCrEu Ap star, rot. period determ., photometric anal. 7−101811
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
Vel X-1, accretion disk form. in magnetosphere rel. to pulse period vars. 7−140152
white dwarf, spin-up and mixing due to accretion, implications for novae 7−140085
white dwarfs, rapidly rotating, lower bounds on masses 7−140059
winds from rotating magnetic hot stars, azimuthal vel. and magnetic force 7−72400
X-ray binary stars, accretion disk form. in wind-fed pulsars rel. to spin-up and spin-down episodes 7−140152
X-ray pulsars, directionality and spectrum of X-ray emission from uniformly heated mag. neutron star 7−127944
X-ray pulse periods, vars. due to wind accretion from companion star 7−101842

stellar rotation continued
Be-deficient F-type stars, effects of rapid rot. on element abundances 7−88404
He-weak stars in clusters and associations, photometric variability 7−120421

stellar size *see stellar dimensions*

stellar spectra
see also solar spectra; stellar photometry
623+71, cataclysmic binary surrounded by bow-shock-like emission nebula 7−140071
1354-64, Ginga X-ray nova, optical identification and obs. (1987 March) 7−80131
2138−543, new distant dwarf nova, photometric and spectroscopic obs. 7−134238
A 0535+26(HDE 245770), optical study of Be/X-ray transient 7−94944
3A 0729+103, intermediate polar, X-ray emission regions discovery, EXOSAT and visible obs. 7−72465
A-type stars, properties and peculiarities 7−101787
A-type supergiants, mass loss characts., UV high resolution spectra anal. 7−127854
absorption line computation, weighting-fn. method of solar and stellar spectra 7−88128
active cool stars, Li equivalent width var. 7−115370
Ae/Be stars, obs. of rapid vars. in Hα and Hβ emission lines *(Russian)* 7−145999
Am stars, Ca abundances from photometric k-indices and K-line spectral types 7−94905
Am stars, line blanketing by Fe-peak elements rel. to 478.5 nm flux excess 7−107862
EU And, C star, H_2O maser obs. as evidence of nearby O-rich circumstellar shell 7−127896
λ And, RS CVn star, UV emission-line vars. to tidal influence on chromospheric struct. 7−94941
Ap Si stars, anal. of Si absorpt. in UV spectra 7−134239
Ap stars, rapidly oscillating, computed spectral line vars. for oblique non-radial pulsators 7−72436
Ap/Bp stars, possible secondaries upper mass limit determ., spectral obs. *(Russian)* 7−88465
η Aql, Cepheid variable, pulsation period and radial vel. behaviour of H lines 7−79998
V1182 Aql, early-type eclipsing binary, photometric and spectroscopic study 7−88536
FY Aql, Mira variable in refl. nebula, search for assoc. with 1979 March 31 γ-ray burster 7−140087
V1343 Aql (SS 433), accretion disk model for moving spectral lines 7−127891
V1343 Aql (SS 433), Hα emission profiles of jets *(Russian)* 7−140109
V1343 Aql (SS 433) rapid photometric and spectral var. 7−127883
32 Aqr, Am star, abundances, spectral and model atm. anal. 7−140078
R Aqr, EXOSAT and IUE obs. of symbiotic Mira during max. and min. 7−107840
VY Aqr, spectral and magnitude obs. of dwarf nova 7−120448
R Aqr, subarc second continuum at 20 mm and SiO spectral obs. 7−88442
R Aqr, symbiotic Mira variable, UV spectrum of jet rel. to X-ray detect. 7−140096
Arcturus, chromospheric activity obs. in Ca II H and K lines (1984 February 14) *(Chinese)* 7−107816
AS 201, optical spectrum rel. to evolved central star of planetary nebula 7−107842
AS 353A, T Tau star assoc. with HH 32, spectrophotometry 7−101784
asymptotic giant branch stars, $^{12}C/^{13}C$ and $^{16}O/^{17}O$ isotopic ratios 7−120397
ε Aur, eclipsing binary, 2 μm CO lines obs. during eclipse 7−107899
AB Aur, Herbig Ae star, Hα line form. in wind 7−79967
AB Aur, Herbig Ae star, short-term vars. obs. ion Ca II K line 7−88400
AB Aur, Herbig pre-main sequence star, wind rot. modulation, C IV and Mg II obs. 7−127855
CO Aur, peculiar double-mode Cepheid, pulsation modes, radial vel. and photometry obs. 7−120416
ε Aur, secondary disk rot. characts. and components masses, spectral obs. 7−107908
AR Aur, spectral peculiarities of eclipsing Am-star 7−88461
RW Aur, T Tau star, Balmer-line and photometric vars. obs. 7−127863
automated spectral analysis use for separation of stars from extended objects and quasars 7−127740
B2-B9.5 main-sequence stars of solar chemical comp., line identification in far-UV spectrum 7−79957
B-type rapidly-rotating stars, axial inclinations and differential rot. from absorpt. line profiles 7−127868
B-type stars, radial vel. calcs. 7−145951
BD+3°4138 B, flare activity discovery 7−140072
BD+58°0109, emission spectra of unusual late-type stars 7−145990
BD+62°0161, emission spectra of unusual late-type stars 7−145990
BD+63°0003, emission spectra of unusual late-type stars 7−145990
Be stars, constraints on models from UV and IRAS meas. 7−127877
Be stars, effective temps. and energy distrib., spectrophotometric obs. 7−120412
Be stars, emission line spectroscopy 7−72432
Be stars, irregular variations, assoc. relation between visual polarisation and UV narrow absorpt. lines 7−127879
Be stars, rapid vars. in Hα and Hβ emission lines of γ Cas, ζ Tau and 66 Oph 7−140103
blue stragglers in ω Cen, spectra and radial vels. 7−88399
α Boo, CO far-UV fluorescence 7−88397
α Boo (Arcturus), evidence for periodic radial vel. vars. 7−140063
α Boo (Arcturus) C, N and O abundances compared with Sun and α CMi (Procyon) 7−120376
bright F, G, K and M-type stars, spectrophotometry of 60 southern and equatorial stars 7−120369
bright southern standard and reference stars, radial vel. determ. 7−72396
brightest blue supergiants in external galaxies, role as distance indicators 7−140286
bursting neutron stars, X-ray spectra and atmospheric structures 7−140183
AS Cam, apsidal motion, implications of IEU spectral and photometric obs. 7−120510
δ Cap, eclipsing binary; UBV photometry rel. to spectral types and RS CVn classification 7−101855
η Car, IR spectroscopy rel to composite dust shell model 7−120462

stellar spectra continued
GG Car, peculiar emission-line star, UV spectrum line identifications 7−72437
OY Car, SU UMa star, May 1985 superoutburst, extended coronal region detect., X-ray and UV obs. 7−115440
GG Car, UV spectral characts. and shell nature 7−80032
Carina nebula (NGC 3372) region, IR study of stellar population 7−127846
XX Cas, B-type eclipsing binary, photoelectric elements and revised spectral types from UBV photometry 7−88530
γ Cas, Be star, long-term variability of far-UV high-vel. components 7−140074
γ Cas, circumstellar nature of IR emission lines 7−140086
PV Cas, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
cataclysmic binaries, accretion disk mapping using line emission distrib. 7−115402
cataclysmic binaries, photometry and spectroscopy about period gap 7−115399
cataclysmic binaries in SGP white dwarf survey 7−115400
cataclysmic binary stars, radiatively-driven winds model rel. to UV P Cyg line profiles 7−115428
cataclysmic variable stars, short-period, photometry and spectroscopy 7−115460
cataclysmic variable stars, UV obs. by IUE satellite 7−115420
CBS 78, second DBZ degenerate star with accreted Ca, optical spectrum and element abundances 7−88412
CD−38°245, extremely-metal-deficient giant star, relative elemental abundances 7−145957
μ Cen, Be star, obs. of Hα emission event (March-April 1987) 7−145994
V803 Cen (AE 1), photometry and spectroscopy of interacting binary white dwarf 7−120461
Cen X-4, soft X-ray transient source, optical spectral type of compainon star 7−140151
central star of NGC 40, IUE obs. of planetary nebula nucleus 7−120541
WX Cep, detached early A-type eclipsing binary, parameters determ. from spectral and photometric meas. 7−72519
UV Cet, flare star, dynamic spectra of microwave flares 7−88464
Z Cha, dwarf nova, photometric and spectroscopic obs. rel. to struct. and evolutionary state 7−115448
Z Cha, dwarf nova, spectrophotometric study of emission lines in quiescent state 7−88462
chromospheric Ca II emission lines, statistical survey of relation to duplicity 7−120442
chromospheric emission lines, shapes classification 7−72392
circumstellar metal oxides and chlorides, EHF search 7−127998
circumstellar shells, props. of silicate emission features in low-resolution IRAS spectra 7−140322
CIT 6, C-rich circumstellar envelope, HCN maser emission obs. 7−101947
α CMa, atmospheric models and Mg II reson. lines 7−72411
HL CMa, dwarf nova, IUE obs. of P Cyg line profiles rel. to winds of cataclysmic variables 7−115428
δ CMa (F8 Ia), atmospheric props. and evolutionary parameters determ. from spectrum anal. 7−140068
FY CMa (HR 2855), Be star, spectral changes (April to May 1987) 7−94894
α CMa (Sirius), Copernicus UV spectral atlas 7−94870
BG CMi (=3A 0729+103), orbital period modulation of intermediate polar spectra 7−115454
α CMi (Procyon), C, N and O abundances compared with Sun and α Boo (Arcturus) 7−120376
κ CnC (HD 78316), Mn star, abundance anal. using line-blanketed model atmosphere 7−101794
composite stellar spectra, atlas of 12 subtle examples 7−94674
cool C stars in Galactic anticentre region, spectroscopic search and catalogue 7−134151
cool CP stars, lanthanide abundances 7−88431
cool giant stars, SiO cooling instability in circumstellar envelopes 7−120398
cool star chromospheres, UV spectra study 7−127848
cool stars, chromospheric activity and rot. 7−94863
coronae, temp. stratification and emission measures 7−120379
coronal X-ray emission, comparison between Einstein and EXOSAT obs. 7−120385
CP stars, progress in detection and classification 7−127890
V394 CrA, spectral characts. and magnitudes (1987 July-August) 7−134244
R CrA, spectrum vars. rel. to rapid vars. of assoc. refl. nebula (NGC 6729) 7−80076
V394 CrA (Nova 1949), spectrum and visual magnitudes during new outburst (August 1987) 7−127900
R CrA star formation region, HH objects and visible stars obs. 7−107915
δ CrB, chromospherically active giant star, optical photometry and UV spectrum 7−94875
R CrB, UV spectra during fading episode, assoc. model 7−127913
AI Cru, early-type eclipsing binary, photometric and spectroscopic characts. 7−107902
20 CVn, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
AM CVn, IUE evidence for hot wind in double degenerate system 7−107843
RS CVn stars, chromospheres and transition regions physical parameters 7−120491
RS CVn stars, dark spots and evidence for circumstellar material, obs. anal. 7−140157
RS CVn stars, IUE obs. of rot. modulation of V711 Tau, IL Peg and Ar Lac 7−101843
RS CVn-like stars as optical counterparts to X-ray sources, obs. 7−107982
CH Cyg, 1985-6 optical spectroscopy 7−107834
τ Cyg, δ Sct star, Hα var. and pulsation characts. *(Russian)* 7−127910
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
SS Cyg, accretion disk struct., visible spectra obs. 7−115438
SS Cyg, dwarf nova, obs. of periodic vars. in IUE spectra 7−115429
SS Cyg, echelle-Mepsicron time-resolved spectroscopy 7−115405
V448 Cyg, eclipsing binary, spectral characts. 7−127946
V832=59 Cyg, Hα profile variations of Be-star 7−88460
V442 Cyg, main sequence eclipsing binary, evolutionary characts., comp. and orbital characts., obs. anal. 7−146026

tellar spectra continued
α Cyg, pulsation characts., radial vel. obs. 7−115384
SS Cyg, radial vel. discrepancies 7−115406
68 Cyg, search for spectral duplicity, visible spectral obs. *(Russian)* 7−88542
SS Cyg, spectral and photometric characts. 7−115407
CH Cyg, spectral vars. during 1982 activity phase 7−107835
CH Cyg, symbiotic star, radio jet optical confirmation and high-resolution spectra 7−120413
CH Cyg, symbiotic star, soft X-ray spectrum 7−101789
CH Cyg, UV continuum, 1979-86 IUE obs. 7−107833
γ Cyg (F8 Ib), spectroscopic obs. rel. to pulsation model for 8-day mag. field period 7−140070
V1500 Cyg (Nova Cyg 1975), possible AM Her star, photometric and spectroscopic obs. 7−115466
Cyg OB4 assoc., spectral type surface distrib. study 7−101870
Cyg X-3, high energy γ-ray and hard X-ray emission obs. 7−80031
DB-type white dwarfs, UV and visual spectroscopy 7−145954
DBA white dwarf stars in Palomar-Green sample, spectroscopic survey 7−107823
δ Del, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
α Dra, metal-weak AO III star, abundance anals. 7−79964
AG Dra, Population II symbiotic star, spectroscopic and photometric obs. 7−115389
SW Dra, RR Lyr star, lumin. characts., use of photometry, radial vel. and Baade-Wesselink method 7−120437
AG Dra, symbiotic star, components characts., visible and IR photometry and spectrophotometry 7−145959
AG Dra, symbiotic star, H and He obs. 7−145960
BY Dra, UV emission lines rot. modulation and flare activity 7−79966
BY Dra stars, detect. of four marginal objects from spectroscopic survey 7−120395
dwarf Cepheids, spectral obs. 7−72467
dwarf novae, accretion disk spectra modelling 7−115436
dwarf novae, accretion disks spectra modelling 7−115437
DZ stars, synthetic spectra for cool He-rich white dwarfs with different metal abundances 7−88388
1E 1048.5+5421, new 114-minute AM Her binary, X-ray and optical obs. 7−115518
1 E 1145-6141, X-ray pulsar, orbital parameters determ. from primary star spectra 7−134277
E 1405−451, AM Her star, mag. fields and accretion column absorpt. features, spectropolarimetric obs. 7−140164
1E 1751+7046, FK Com candidate, radial vel. anal. 7−127880
early-type galactic supergiants, Hγ-line equivalent widths for comparison with SMC stars 7−120390
early-type stars, 443 nm diffuse interstellar band intensities rel. to polarisation and UV extinction 7−128014
early-type stars, gas accel. due to ensemble of spectral lines 7−115362
early-type stars, mass-UV linewidth relations rel. to initial mass function in starburst galaxies 7−145935
early-type stars, physical parameters determ. for circumstellar clouds from UV spectra 7−120373
early-type stars in SMC, IUE spectra rel. to stellar winds props. 7−134225
emission line stars with unusual spectra 7−145990
emission-line objects in M33 and IC 1613, objective-prism survey 7−72328
EF Eri (2A 0311−277), AM Her star, circular polarisation rel. to mag. field strength in Hα emission line region 7−140153
α Eri (Achernar), Be star, photometric and spectroscopic obs. 7−107861
EI Eri (HD 26337), RS CVn star, system characts. 7−146028
eruptive variable on Leo Minor-Ursa Major border (α=10h52m18.9s, δ=+37° 15.8′; 1950), nature 7−79990
EUV emission lines in the atmospheres of cool stars 7−88420
evolved stars, $^{12}C/^{14}C$ ratio upper limit determ. from $^{14}C^{16}O$ meas., use for nucleosynthesis constraints 7−140091
evolved stars, SiO maser emission and IR continuum 7−79973
EXO 023432−5232.3, new 114-min. AM Her-type binary, X-ray and optical obs. 7−80028
F, G and K-type dwarfs and subgiants, Li abundances determ. 7−72412
F-type stars, spectral characts. 7−94862
F-type stars of known age, Li abundances depend. on temp. 7−88393
faint blue horizontal branch stars in ω Cen, evidence for surface He deficiency 7−88399
fast pulsar candidate in globular cluster M28, spectral index determ. from VLA obs. 7−127935
Feige 24, hot white dwarf, EUV spectrum EXOSAT obs. 7−88414
field disk and halo stars, light elements and Ni abundances 7−115360
field horizontal-branch A-type stars, UV spectra of four objects 7−72430
G-type dwarf stars, ^{232}Th abundance use for chronology of stellar and galactic evolution 7−120401
galactic bulge sources, X-ray emission lines, Einstein obs. 7−88515
galactic centre kinematics from 2 μm spectra 7−120573
galactic centre late-type stars, nature and radial vel. anal., IR spectral obs. 7−128060
gaseous circumstellar disks, spectral obs. 7−94857
GD 229, magnetic white dwarf, mag. field characts. and H lines obs. 7−72407
GD 257(=Gr 289), DA white dwarf star, spectrophotometry obs. 7−101774
RY Gem, Algol type star, UV spectral characts. 7−72518
RX Gem, Algol-type binary star, optical and UV spectrophotometric study 7−101858
γ Gem (A0 IV), model-atmosphere study 7−140069
GK-type main-sequence stars, IUE obs. of five stars rel. to chromospheres and coronae 7−88418
Gliese 890, rapidly-rotating spotted red dwarf flare star, spectrum, photometry and polarimetry 7−140052
globular cluster stars, metal abundances determ. for five metal-rich clusters 7−120520
globular clusters, metal rich, O abundances 7−94969
GX 301−2, slow X-ray pulsar, X-ray spectral energy distrib. obs. through two binary cycles 7−107897
GX 339−4 (4U 1658−48), X-ray and visible obs. of X-ray high state (1983 May) 7−88514
GX 339−4 (V821 Ara), black hole candidate, He II line width rel. in orbital inclination and period 7−127975
GX 339−4 black hole candidate, Halpha spectra of optical counterpart 7−94940

stellar spectra continued
GX 3+1 (4U 1744−26), spectral hardness rel. to occurrence of quasi-periodic oscills. 7−94957
H1504+65, hot compact star devoid of H and He, optical, IV and X-ray obs. 7−88408
H2252-035, intermediate polar, obs. of phase-dependent low-energy absorpt. and Fe line emission 7−115508
H 0139−68, X-ray and optical obs. of AM Her-type star 7−115514
halo dwarf stars, abundances of light elements 7−120384
halo stars, equivalent width data 7−72414
halo stars, Li abundances determ. 7−120396
halo subdwarf stars, Li abundances rel. to Li production in big bang 7−145943
HD 100340, early-type high galactic latit. star, non-LTE abundance anal. 7−115373
HD 112313, planetary nebula central star, giant star in triple system, orbital characts. 7−120386
HD 128220, double-lined binary with subdwarf O star, spectroscopic orbit and subdwarf parameters 7−94871
HD 128220B, sdO star, wind characts., spectral obs. 7−72422
HD 12856, HD 13890, Be stars in Per OB1 association, synthetic filter photometry and evolutionary status 7−79976
HD 137613, early-type carbon star, IR spectral line identification 7−79993
HD 151932, WN7-A star, obs. of He I and Si IV lines vars. 7−120405
HD 156074, early-type carbon star, IR spectral line identification 7−79993
HD 158393, late-type giant in binary system, orbital characts. and chromospheric activity 7−107828
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 16523, HD 17638, identification as possible WO5-type Wolf-Rayet stars *(Russian)* 7−145998
HD 182040, early-type carbon star, IR spectral line identification 7−79993
HD 184279 (V1294 Aql), Be-shell star, long-term and mid-term spectrum vars. 7−140080
HD 187399, Be-type X-ray binary, spectroscopic investigation 7−127872
HD 190073, early-type emission line star, multiple line form. regions in circumstellar envelope 7−145964
HD 190603, B 1.5 Ia^+ supergiant, turbulent velocity and spectra *(Russian)* 7−127862
HD 193793, spectroscopic orbit for WC7+O4 binary 7−72445
HD 194056, late-type giant spectroscopic binary, orbital characts. 7−115526
HD 200775, Herbig Be star, obs. of rapid spectral, photometric and polarimetric vars. *(Russian)* 7−72425
HD 204754, chemical composition of suspected Fe deficient B-star 7−88389
HD 213985; halo hot post-AGB star; evolutionary status and shell dust, spectral and photometric obs. 7−120387
HD 23838, spectroscopic binary, orbital characts. and mass ratio determ., spectral obs. *(French)* 7−80030
HD 32918, active chromosphere K2 III star, spectral indices of long-lived radio flare 7−120400
HD 35914, variable central star of PN IC 418, simultaneous spectroscopic and photometric obs. 7−115386
HD 37836 in LMC, O-type supergiant, wind and disk characts., spectral and photometric obs. 7−127853
HD 43819, element identification in sharp-lined Si star 7−140113
HD 47129 (Plaskett's star), spectroscopic binary orbital elements from UV radial vels. 7−94961
HD 50896, WN5 star, empirical model for line form. in extended atmosphere 7−101802
HD 64488, 109995, 161817 field horizontal-branch stars, element abundance anals. with coadded DAO spectrograms 7−94873
HD 64488, HD 109995, HD 161817, field horizontal-branch stars, atlas of co-added photographic spectra 7−115385
HD 89249 as peculiar Be+K-type stars, photometry and spectra 7−94882
V644 Her, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
AM Her, general props. *(French)* 7−107900
AH Her, Z Cam star, primary and secondary spectral characts. 7−115408
ι Her (B3 IV-V), short-period light and spectrum vars. 7−101788
V533 Her (Nova 1963), spectroscopic obs. rel. to binary parameters 7−72472
AM Her stars, secondary orbital motion and evidence for low-mass white dwarfs 7−94956
AM Her-type stars, time-resolved optical spectroscopy 7−115512
AM Her-type stars, Zeeman features from accretion column 7−115510
Herbig Ae/Be stars, Balmer line profiles from envelope 7−72431
high-latitude field stars, spectroscopic survey and comparison with Galaxy models 7−120371
high-velocity field dwarf stars, binary frequency determ. from CCD meas. 7−145953
hot luminous stars, statistical equilib. calcs. for H to Zn in radiation driven winds 7−145933
HR 2554, ζ Aur star, spectral and photometric characts., eclipse predictions 7−88531
HR 5273, astrometric-spectroscopic binary, orbital characts. determ. 7−72521
HS 1254+3430, magnetic DA white dwarf with distinct Hβ and Hα Zeeman triplets, spectroscopic and position obs. 7−140050
EX Hya, AM Her star, 67 minute X-ray period, Einstein obs. 7−140156
EX Hya, eclipsing dwarf nova, time-resolved spectrophotometry 7−120441
EX Hya, eclipsing intermediate polar, time-resolved optical spectroscopy 7−140108
RW Hya, symbiotic star, UV-optical spectrophotometry and IR photometry 7−127894
β Hyi, p-mode amplitude upper limit, spectral obs. 7−127835
VW Hyi, SU UMa star, spectral var. 7−115412
VW Hyi, X-ray SU UMa star, flux and spectra in far-UV, Voyager obs. 7−72463
VW Hyi, X-ray SU UMa star, IUE fluxes and spectral characts. 7−72462
HZ 43, DA white dwarf, soft X-ray spectrum characts. 7−88396
interstellar 108.8 nm feature towards reddened stars, identification with Cl I 7−88584

stellar spectra continued
IRAS 09371+1212, icy evolved mass-losing star with unique IR spectrum, CO(1-0) line obs. 7—101955
IRAS 15194—5115, identification with extreme C star, spectral and photometric obs. 7—88675
IRAS 18059-3211 (Gomez's Hamburger), spectra, polarimetry and photometry 7—128124
IRAS C stars, CO and HCN lines obs. 7—120408
IRAS colours of normal stars 7—101773
IRAS stars, search for H_2O maser emission 7—72655
IRC+10216, 10 μm search for ethylene and methylene lines 7—107849
IRC+10216, $^2H_{1/2}$ state of 1,3,5-hexatriyne radical detect. 7—107867
IRC+10216, C star, detect. of C_2S and C_3S 7—120414
IRC+10216, C star, vibrationally-excited butadiynyl (C_4H) as source of new mm-wave doublets 7—134234
IRC+10216, C-star, inner envelope characts., CO lines modelling 7—140089
IRC+10216, shell HCO^+ and HCN 7—120367
IRC+10216, star, 1,3,5-hexatriyne radical obs. 7—120538
IRC+10216 (CW Leo), C_2H and CN mapping in circumstellar shell rel. to photochemical model 7—101790
IRC+10216 (CW Leo), C star, detect. of circumstellar NaCl, AlCl, KCl and perhaps AlF 7—140051
IRC+10216 (CW Leo), detect. of vibrationally excited CS in circumstellar shell 7—140073
IRC+10216 (CW Leo), possible detect. of hexatriynyl radical (C_6H) in mm-wave spectrum 7—79969
L_1 statistics, astronomy appl. 7—139946
EW Lac, Be star, shell spectra var. *(Chinese)* 7—107829
late-type dwarf stars, chromospheric Ca II H emission line cores vars. and vel. field diagnostics 7—72413
late-type emission line variable star in Draco (α=16h30m33.0s, δ=+53° 33.6'; 1950) 7—79990
late-type emission line variable star in Ursa Major (α=10h45m16.9s, δ=+52° 34.4'; 1950), nature 7—79990
late-type giant stars, atm. characts., EXOSAT and IUE obs. 7—79954
late-type giants and supergiants, activity, IUE survey 7—140061
late-type standard stars, 2.0-2.5 μm spectral features 7—101766
late-type stars, depend of UV chromospheric emission on rot. 7—127845
late-type stars, mass loss and spectra *(Polish)* 7—127850
late-type stars, Si III 1892 Å/C III 1908 Å emission-line ratio 7—88383
late-type synchronized binary stars, correl. anal. of stellar activity compared with single stars 7—127964
XY Leo, contact binary star, spectroscopic detect. of BY Dra-like binary companion 7—140165
ρ Leo (B1 Ib), spectroscopic study and element abundances 7—127864
line asymmetries, amplification by rotation 7—101757
line characteristics as stellar atm. probes *(French)* 7—88370
line formation in expanding spherical medium, effects of dust scatt. 7—120368
line formation in stellar model atmospheres, implications for accuracy of element abundances 7—127834
line identification using extended wavelength coincidence statistics 7—139936
line profiles calculation in spherically symmetric stellar winds, appl. of SEI method 7—115365
line profiles from moving spherical shells, analytical formulae 7—145934
LMC, globular clusters stars, spectral classification catalogues and identification charts 7—72327
LMC emission-line stars in HD and HDE catalogues, identifications 7—72614
LMC globular cluster bright stars, spectral classifications 7—115377
LMC globular clusters, spectral classification of bright stars 7—88132
LMC low mass X-ray binaries, evidence for mass flow onto black holes 7—127952
LMC X-2, spectral characts., similarities to U Sco, evidence for classes evolutionary link 7—127885
ST LMi (CW 1103+254), emission line behaviour in polar *(Russian)* 7—140178
low-luminosity young stellar objects, excess IR H line emission 7—72419
low-mass pre-main sequence stars, circumstellar dust IR emission modelling 7—107825
lower main-sequence stars, Ca II emission index meas. rel. to characterisation of stellar activity cycles 7—115380
γ Lup, detection of new Be-star 7—145995
RU Lup, RW Aur star, mag. field characts., spectral obs. 7—127867
36 Lyn, α Scl He-weak star, spectral line characts. 7—146000
36 Lyn, He-weak Bp star, search for Hα emission rel. to extended atmosphere 7—79999
RR Lyr, mag. field var. with pulsation period, spectral obs. *(Russian)* 7—72470
β Lyr, spectral analysis of interacting binary 7—80037
α Lyr (A0 V), model-atmosphere study 7—140069
RR Lyr stars, UBVRI photometric and radial vel. data 7—115391
RR Lyr stars in globular cluster M5, radial vel. and light curves rel. to cluster distance determ. 7—127986
M13, globular cluster, dynamical characts. based on radial vel. and mass function 7—101866
M13, globular star cluster, spectra and composition of individual stars 7—101867
M13 II-67, O-poor giant star in M13, search for N overabundance 7—72427
m13 II-67, [O I] lines equivalent widths rel. to O deficiency 7—134232
M22, globular star cluster, spectra and composition of individual stars 7—101867
M4, globular star cluster, spectra and composition of individual stars 7—101867
M67, old open cluster, C/N ratios along evolutionary sequence, implications for mixing 7—120377
M71, globular cluster, abundances of metals, C, N, and O in five stars 7—72415
M87 globular cluster system, dynamics and spectral obs. 7—101912
M-dwarfs, IR spectroscopic obs. 7—120399
M-type dwarf stars, chromospheric fluxes and rot. 7—94864
M-type dwarf stars, radial vel. study 7—127871
M-type Mira variables, single, visible light curve shape and H_2O 13.5 mm line detect. 7—127876
M-type stars in EIC-1 catalogue, IRAS obs. 7—88674
Magellanic Clouds type II Cepheids, spectra and JHK photometry 7—120438
Me stars, low-dispersion spectra of six objects *(Chinese)* 7—120403
metal-deficient dwarf stars, S abundance determ. 7—101769
metal-poor dwarf stars of solar neighbourhood, C and N abundance 7—134231
metal-rich globular clusters, giant stars spectral obs. 7—88547
AU Mic, BY Dra star, UV emission lines, optical photometry and flarin 7—79966
MK_m spectral classifications for metal-weak stars rel. to Stromgren pho tometry 7—134223
R Mon, pre-main-sequence star, small-scale struct. of circumstellar ga from CO obs. 7—88403
multidimensional radiative transfer in stratified atm. 7—139896
MXB 1730—335 (Rapid Burster), X-ray spectra assoc. with new behavi our mode 7—101846
N-type C stars, IUE spectra and chromospheres study 7—107848
naked T Tau stars, low-mass pre-main sequence unveiled, photometric an spectroscopic obs. 7—72428
neutron stars, gamma-ray burst spectra from accretion of comet 7—88678
NGC 1866, LMC globular cluster superluminous giant candidates, natur and form. 7—101862
NGC 2420, open cluster, giant stars radial rel. and abundances 7—72549
NGC 2440, planetary nebular central star, spectra and parameter 7—88419
NGC 6752, globular clusters, horizontal branch stars with He I lines abundance 7—88413
NGC 752 open cluster, main sequence stars, Li comp. rel. to effectiv temp. 7—88553
Nova Aql 1982, photometric and spectroscopic obs. by IUE, AAT an WRST 7—140106
Nova Cir 1987=X-ray nova 1354—64, photometry and spectroscop 7—88444
Nova Cyg 1986, IR spectral obs. 7—145981
Nova Her 1987, K-band spectroscopy and JHKL'LM magnitudes (198 May 9 and 19) 7—101809
Nova Her 1987, spectra observations for 5 June 1987 AD 7—145980
Nova Her 1987, spectral, photometric and visual magnitude estimates ob 7—140098
Nova Her 1987, spectroscopic obs. and visual magnitude estimates (Apr to May 1987) 7—94893
Nova Sgr 1987, discovery, magnitudes, position, and spectrum (198 May) 7—101806
Nova Vul 1984 No.2, spectrum during nebular phase 7—120436
Nova Vul 1984 No. 1 and No. 2, spectral evol. 7—115415
Nova Vul 1984 No. 2, 'Ne nova', IR spectrum rel. to O-Ne-Mg whit dwarf model 7—88439
nova-like stars, accretion disk spectra modelling 7—115436
novae, principal absorption systems form., role of high-vel. wind 7—120410
O3 giants in LMC, spectral classifications 7—94876
O and Of-type stars, obs. of new optical emission lines 7—101785
O-type stars, radial vel. calcs. 7—145951
OB stars, IUE spectra, mass to line-strength relations 7—134227
OB-type supergiant sequence, UV spectral morphology 7—72429
OH 231.8+4.2, OH-IR star, shocked bipolar outflow and assoc. HI objects obs. 7—72468
old novae, spectroscopic and photometric obs. 7—120435
open clusters, catalogue of UBV photometry and MK spectral type 7—72334
ζ Oph, interstellar CN absorpt. lines obs. rel to cosmic microwave back ground temp. 7—88689
RS Oph, recurrent nova, multi-freq. obs. of 1985 outburst 7—115425
α Ori, circumstellar CO obs. 7—88428
α Ori, circumstellar H I and mass loss characts. 7—107824
ι Ori, giant binary system, radial vel. determ. from UV spectra 7—72402
YY Ori, radial vel. calc. 7—145951
CN Ori, Z Cam star, spectroscopic obs. during outbursts and minimum phase 7—115447
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheri modulation 7—140064
partially ionised stellar plasmas, Planck-Larkin partition function, polarisa tion shifts and optical spectra 7—139905
IP Peg, eclipsing dwarf nova, time resolved spectral obs. 7—115413
AG Peg, emission line profiles and UBVRI photometry during 1985 min mum 7—107841
EQ Peg, EXOSAT and IUE obs. of 1984 December 7 flare 7—120418
43 Peg, hot Am star, model atmosphere anal. 7—127905
ϵ Peg, red supergiant star, abundance anal. rel. to occurrence of mil s-processing 7—94872
II Peg, RS, CVn star, line characts. and spots, CCD echelle ob 7—140171
τ Peg , δ Sct star, Hα line vars. rel. to high-freq. radial oscills. *(Russia* 7—107866
RW Per, Algol binary system, flux distrib. rel. to optically thick accretio disk model 7—94963
IZ Per, eclipsing binary, spectral-luminosity classification, colour vars and β CMa-type variability 7—94947
γ Per, mass and absolute mag. characts., spectral anal. 7—146025
ξ Per, O-type giant, wind struct., UV spectral obs. 7—127861
S Per, OH-IR star, interferometric obs. of H_2O and OH maser emissio 7—72433
PG 1031+234, magnetic white dwarf, spectra photometry rel. to polarisa tion and mag. field struct. at >500 MGauss 7—88407
PG 1346+082, exotic He variable, photometry and spectroscop 7—101851
β Pic, UV circumstellar absorpt. lines var. 7—72409
pinchrosphere as coolest layer in stellar atm., characts. 7—127842
PK 75+35°1, peculiar planetary nebulae, UV spectrum of central sta 7—101892
plages, Ca II H and K line indices from spectra of solar plages 7—11533
plages, Hα line indices from spectra of solar plages 7—115340
Pleiades K and M-type dwarfs, spectral and photometric obs. 7—140053
Pleiades K-type dwarf stars, Li abundances rel. to evolutionary sequenc from rapid to slow rotators 7—140197
Pleione (=BU Tau), variable shell strength, spectral obs. 7—145992
polarisation of continuum and line radiation 7—120261
pre-main sequence stars in dark cloud LDN 1642, spectral and photome tric obs. 7—127995
pre-planetary nebulae, CO obs. characts. 7—72406
Procyon, F-type star, UV spectrum atlas (203.0 to 237.1 nm) and mod atm. anal. 7—79960

ellar spectra continued
protostars, emergent spectral energy distrib., rot. effects 7−94868
PSR 0834+06, PSR 1919+21, low-freq. spectra from decametre wavelength obs. 7−107884
ρ Pup, δ Sct star, radial rel. and spectral vars. rel. to pulsation characts. 7−134253
12 Pup, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
ζ Pup (04 If), search for coronal line emission 7−115390
ζ Pup (O4f), photosphere model from optical line profiles 7−88433
ζ Pup (O4f), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933
RZ Pyx, early-type marginal contact binary, photometric and spectroscopic study 7−120514
QPO sources, X-ray spectrum and hard-soft photons time lag. rel. to scatt. cloud size 7−120515
R 130 in LMC, spectral and photometric study of triple system 7−88436
radial vel. shifts derivation new statistical method 7−101694
rapidly oscillating Ap stars, rotationally-modulated chromospheric emission as test for Alfvenic heating 7−134240
RCW 19 field, survey for Hα-emission line stars 7−139947
RCW 34 exciting star (Vel R2 25a), evidence for pre-main-sequence status from optical and IR obs. 7−120383
recurrent novae, spectroscopic criteria for nature of outburst 7−115456
red giants, Si isotopic abundances obs. 7−127858
red giants and supergiants, UV features and chromospheric flux 7−94869
red variable stars in IRAS Point Source Catalogue, spectral types 7−88455
resonant line photons transfer in spherically accelerating envelopes 7−120260
ζ^1 and ζ^2 Ret, solar-type stars, He and heavy element abundances and atm. characts. 7−94867
S18/SMC, peculiar early-type emission-line supergiant, optical and UV spectroscopic study 7−101771
S-type symbiotic stars, spectra periodic var. and radial vel. 7−127887
Sanduleak−69°202, IUE UV spectra, progenitor of SN 1987A supernova 7−127923
Sanduleak-69°202 (stars 2 and 3), UV spectra and flux characts. 7−88477
VZ Scl, eclipsing nova-like variable star, accretion disk characts., spectral and photometric obs. 7−72459
AL Scl (HD 224113), early-type double-lined eclipsing binary, photometry and spectra rel. to absolute parameters 7−120490
μ^1 Sco, IUE spectrum of early-type eclipsing binary 7−140184
U Sco, recurrent nova, spectral similarities to LMC X-2, evidence for classes evolutionary link 7−127885
V701 Sco, W UMa star, masses, radii and temps., photometric and spectral obs. 7−107903
τ Sco (O9.5 V), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933
Scorpius-Centaurus association, stellar multiplicity, orbital characts. 7−127988
R Sct, vel. structure of RV Tau star atmosphere 7−107845
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
α Ser, K-type giant, atm. chem. comp., spectral obs. 7−145949
LW Ser (Nova Ser 1978), optical spectrum during diffuse-enhanced phase 7−115442
Serpens-SVS 20, new young binary IR source, IR photometry, polarimetry and spectra 7−120526
RW Sex, UX UMa star, photometry and spectral obs. 7−115417
WZ Sge, mass transfer and line profiles 7−115414
FG Sge, spectral type, radius and lumin. determ. from IR photometric obs. 7−145961
Sk −69°202 (SN 1987A progenitor) in LMC, implications of far-UV photometry of SN 1987A 7−101820
SMC, H II regions N83 and N84, fragmentation and exciting stars characts. 7−101879
SMC brightest blue stars, Hγ-line equivalent widths and luminosity classes 7−120390
SMC NE arm, bright stars spectral types 7−140257
SMC OB stars, colours and spectral classification 7−101922
SMC Wing, bright stars, spectral types 7−140256
SN 1980K in NGC 6946, late-time spectrum obs. 7−88468
SN 1982V, 1984A, 1985A and 1985B, spectral obs. 7−72475
SN 1983I, 1983V, spectroscopic obs. rel. to abundance vars. in Type Ib supernovae 7−115474
SN 1983N and SN 1984L, Type Ib SN, He detect. and O obs., corresponding atm. models construction 7−127915
SN 1984E in NGC 3169, Type II-L supernovae, post-maximum spectrum rel. to superwind 7−80020
SN 1985G, SN 1985H, type II supernovae, spectroscopic obs. with new Faint Object Spectrograph 7−127914
SN 1986G in NGC 5128, echelle spectroscopy of complex Na absorpt. and interstellar diffuse bands 7−146001
SN 1986G in NGC 5128(Cen A), optical photometry and spectra of Type Ia object 7−140137
SN 1986G in NGC 5128 (Cen A), IR photometry and spectroscopy 7−120469
SN 1986J in NGC 891, CCD obs. rel. to Hα emission (1983 December 29) 7−120477
SN 1986J in NGC 891, radio and optical studies 7−134256
SN 1987 E in NGC 4725, spectral evidence for galactic M-type dwarf 7−94921
SN 1987 F in NGC 4615, spectra, Type II class and peculiarities 7−94922
SN 1987 in LMC, magnitude and spectral observations 7−80012
SN 1987A, in LMC, spectropolarimetry, spectroscopy, spectrophotometry and UBV photometry (1987 February 25 to March 2) 7−72476
SN 1987A, IR spectrum, hard X-ray/gamma-ray obs., and visual magnitude estimates 7−115476
SN 1987A, spectrum anal., luminosity meas. *(French)* 7−146013
SN 1987A in LMC, Balmer lines polarimetry (1987 March 6 to 7) 7−101814
SN 1987A in LMC, calc. of expected γ-ray flux due to ^{56}Co decay 7−140123
SN 1987A in LMC, computed UV spectra, 7−140118
SN 1987A in LMC, deceleration rate of broad Hα absorpt. line 7−72487
SN 1987A in LMC, detect. of foreground diffuse interstellar bands 7−134255

stellar spectra continued
SN 1987A in LMC, developments in 1987 February-March period 7−101831
SN 1987A in LMC, early-phase obs. with IUE 7−101819
SN 1987A in LMC, evolution of optical spectrum (1987 February 26 to March 31) 7−146010
SN 1987A in LMC, Hα emission behaviour and magnitudes (1987 March) 7−88470
SN 1987A in LMC, Hα vel. struct. during first month of outburst 7−140117
SN 1987A in LMC, Hα vels. from spectroscopic obs. (1987 February 27 to March 12) 7−88474
SN 1987A in LMC, identification as star 1 in pre outburst plates and UV characts. 7−88477
SN 1987A in LMC, implications of UV obs. 7−101822
SN 1987A in LMC, IR emission lines rel. widths 7−94913
SN 1987A in LMC, IR spectra (1987 February 28 to March 16) 7−101816
SN 1987A in LMC, IR spectrum, BV photometry, and visual magnitudes (1987 April) 7−94908
SN 1987A in LMC, IUE obs. of spectral evolution and magnitudes 7−72482
SN 1987A in LMC, IUE spectral and photometric obs. and visual magnitude estimate (March 1987) 7−80008
SN 1987A in LMC, JHKL photometry and fluxes and radial vel. determ. from H I lines obs. 7−80014
SN 1987A in LMC, line polarisation meas. and radial vels. of P Cyg absorp. cores 7−80003
SN 1987A in LMC, line profiles, polarisation and photometry meas. (March 13 to 23) 7−80011
SN 1987A in LMC, narrow emission lines obs. in UV spectrum 7−134257
SN 1987A in LMC, optical interstellar absorpt-spectrum obs. 7−101818
SN 1987A in LMC, optical spectra (1987 February 25 to March 19) 7−101817
SN 1987A in LMC, optical spectrum vars. (1987 March 22 to April 6) 7−88475
SN 1987A in LMC, photometric spectral and CCD obs. 7−80004
SN 1987A in LMC, photometry, pre-max. plateau, spectra and magnitudes 7−88473
SN 1987a in LMC, polarization and spectral observations 7−80001
SN 1987A in LMC, predicted gamma-ray line fluxes from exploding 20 $M_\odot$ star model 7−146003
SN 1987A in LMC, predicted X-ray, UV and IR spectra 7−140121
SN 1987A in LMC, prediction of UV emission lines from circumstellar matter 7−115484
SN 1987A in LMC, spectra and magnitudes, mid-March 1987 observations 7−80010
SN 1987A in LMC, spectra and photometry for first 50 days 7−127921
SN 1987A in LMC, spectral and visual magnitude obs (1987 march 5 to 17) 7−80007
SN 1987A in LMC, spectral evolution in far-UV (February to March 1987) 7−101821
SN 1987A in LMC, spectral features and evolution, magnitudes 7−72480
SN 1987A in LMC, UBV photometry and spectrum rel. to classification 7−72483
SN 1987A in LMC, upper limits on γ-ray line emission 7−120474
SN 1987A in LMC, UV and visible flux, spectral and V magnitude characts. 7−88629
SN 1987A in LMC, UV flux and spectral features 7−115475
SN 1987A in LMC, UV interstellar lines obs. by IUE 7−101823
SN 1987A in LMC, UV photometric props. and comparison with Sk −69°202 components 7−101820
Sn 1987A in LMC, visual magnitude estimates and spectropolarimetry 7−115477
SN 1987A in LMC, X-ray flux, archive brightness, and spectral evolution 7−80016
SN 1987A in LMC, X-ray flux limit and spectrum vars. (1987 February 26 to March 9) 7−72485
SN 1987B in NGC 5850, emission line spectrum 7−72477
SN 1987B in NGC 5850, spectroscopic classification and line widths 7−88484
SN 1987C in Markarian 90, spectroscopic classification and line widths 7−88485
SN 1987C in Mrk 90, spectral identification as Type II object 7−94915
SN 1987D in MCG+0-32-01, spectral identification as Type I object 7−94915
SN 1987D in MCG +0-32-01, semi-accurate position, spectroscopic obs., and visual magnitude estimates 7−94916
SN 1987D in MCG +0-32-01, spectroscopic classification and max. light time 7−88484
SN 1987D in MGC+0-32-01, spectral obs. 7−88483
SN 1987F in NGC 4615, photographic and spectral obs. 7−94918
SN 1987G=SN 1987D in UGC 7370, position, light curve and spectral characts. 7−94914
SN 1987I in IC 4963, discovery of Type I object 7−120472
SN 1987J in ESO 601-26, type II supernova, spectroscopic obs. and classification 7−127919
SN 1987J in ESO 601-G26, Type II spectra (1987 July 30-31) 7−127917
SN 1987K in NGC 4651, spectral features (1987 July 31) 7−127917
SN 1987K in NGC 4651, type II supernova, spectroscopic obs. and classification 7−127919
SN 1987L in NGC 2336, spectrum and Type Ia confirmation 7−140133
SN 1987L in NGC 2336 spiral galaxy, optical observations 7−134259
sn stars, jet-like mass loss and mag. fields, IUE obs. 7−145967
solar-type dwarf stars, X-ray emission correl. with chromosphere Ca II emission 7−107827
solar-type stars, Ca II near-IR triplet line profiles 7−120389
solar-type stars, chromospheric Ca II line fluxes rel. to V−R and R−I colour indices 7−101786
statistical relations between spectral and lumin. classes and between effective temp. and lumin. 7−94854
stratified atmospheres, radiative cooling by LTE and non-LTE spectral lines 7−79945
supergiant OH-IR sources, narrow polarised components obs. in OH 1612 MHz maser emission 7−88417
supernovae, type Ib, contrib. of red supergiant companions to continuum and line emission 7−140119
supernovae, Type Ib, observational props. and spectroscopic classification criteria 7−120465

stellar spectra continued
supernovae, Type II, photoionisation model for relative intensities of Mg II 279.8 nm and Hα *(Russian)* 7−146011
SwSt 1, young planetary nebula with central WC10 star, spectrophotometry and spectroscopy obs. 7−128029
symbiotic stars, cool components, spectral types and lumin. classes 7−107831
symbiotic stars, line profiles vars. for increased mass-loss rate model 7−140075
symbiotic stars, modelling of line profiles 7−127886
symbiotic stars, use of C III 190.9 nm/Si III 189.2 nm ratio as discriminant from planetary nebulae 7−139940
44 Tau, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
HL Tau, pre-main-sequence star, small-scale struct. of circumstellar gas from CO and continuum obs. 7−88403
RY Tau, T Tau star, Hα obs. during high brightness epochs *(Russian)* 7−72424
T Tau stars, general characts. determ. from spectral meas. 7−140056
T Tau stars, Hα emission-rot. vel. relation for low-mass stars 7−88410
T Tau stars, near-simultaneous UV and optical spectrophotometry 7−88411
T Tau stars, simultaneous spectroscopic and photometric obs. of four stars 7−134233
T Tau stars, spectral form of IR excess component 7−79965
Taurus-Auriga region, pre-main sequence stars with Ca II emission, rot. and radial vel. meas. 7−107817
transition layers, temp. stratification and emission measures 7−120379
triple stars, orbital characts. and masses, CORAVEL obs. 7−101844
CF Tuc, eclipsing RS CVn star, masses and spectral types from UBV photometry 7−127955
Type I supernovae, optical−UV spectrum 7−115486
type-II OH-IR stars, visible and IR photometric and spectral obs. 7−120411
4U 0900−40 (HD 77581), massive X-ray binary, search for rapid vars. of P Cyg line profiles 7−120502
4U 1145−619 (Hen 715), X-ray and optical spectral vars. during X-ray outburst 7−127973
4U 1538−52, spectra and pulse period 7−120499
AN UMa, AM Her star, orbital characts. and spectral obs. 7−88504
BE UMa, detached white dwarf-red dwarf binary with unique reprocessing spectrum, photometry and spectra 7−127966
ξ UMa, quadruple system, spectral types rel. to Li abundances and chromospheric activity 7−72541
SU UMa, spectroscopic study of dwarf nova 7−88437
SW UMa, SU UMa-DQ Her star system, nature 7−115409
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
UX UMa-type nova-like systems, continuum distribs. and line profiles 7−115403
Vel X-1, accretion disk form. in magnetosphere rel. to Fe line emission 7−140152
RT Vir, semi-regular variable star, H_2O maser outburst obs. *(Russian)* 7−107865
BW Vul, β Cep star, spectroscopy of optical photosphere rel. to pulsation kinematics 7−140094
WW Vul, Herbig Ae-type star, Hα emission vars. at max. luminosity 7−140067
PU Vul (Nova 1979), photometry, spectrophotometry, spectrum and polarisation (1981 to 1982) 7−140102
PU Vul (Nova 1979), symbiotic nova, UBV photometry, spectroscopy, and orbital elements 7−115444
PW Vul (Nova 1984 No.1), spectroscopic obs. (October-November 1984) 7−72435
WD 1910+047, white dwarf star (X-ray emitter), spectrophotometry obs. 7−101774
weak-lined stars, photometrically-selected, spectral classification and metal deficiencies 7−88377
white dwarf, with metallic line spectra, atm. comp. determ., spectrophotometric anal. 7−79956
white dwarfs, atomic data rel. to line formation in strongly magnetized stars 7−115378
white dwarfs, effect of Balmer line pressure shifts on line profiles 7−101778
white dwarfs, magnetic field strength detection using H spectra anal. 7−141505
WN-type binary stars, He II 468.6 nm line vars. rel. to motion of WN component 7−145996
WN-type stars, He I and He II line profiles rel. to modelling of extended atmospheres 7−101801
Wolf-Rayet population in 30 Dor and surroundings, imaging, photometric and spectroscopic obs. 7−72443
Wolf-Rayet stars, emission from outflowing gas, contrib. to He 2-10 galaxy emission 7−128092
Wolf-Rayet stars, He II synthetic spectra, grid of models 7−79968
X-ray burst sources, Fe spectral features form. in cooling burst spectrum 7−134274
X-ray burst sources, Fe XXVI transitions in non-LTE radiation-driven winds 7−101841
X-ray burst sources, origin of absorpt. lines in X-ray spectra *(Japanese)* 7−140160
X-ray bursters, X-ray spectra and atm. struct. modelling (appl. to MXB 1636−536) *(Japanese)* 7−146024
X-ray low-mass binaries, delay meas. of quasi-periodic oscills. 7−146050
X-ray pulsars, directionality and spectrum of X-ray emission from uniformly heated mag. neutron star 7−127944
X-ray selected cataclysmic variables 7−107855
X-ray selected stars, spectroscopic obs. 7−101956
XB 1254−690, low-mass X-ray binary, spectral changes during periodic X-ray intensity dips 7−88522
yellow evolved stars in open clusters, photometric and spectroscopic search for superluminous giant stars 7−115382
young stellar objects, spectral evolution 7−72420
Ba stars, search for Tc II in UV spectra 7−127882
Be-deficient F-type stars, element abundances determ. 7−88404
C stars, Balmer decrement obs. in C-type long-period variables rel. to source of violet depression 7−120443
C stars, envelopes C and O isotopic abundances, CO obs. 7−140095
C stars, O isotope abundances in N-type and J-type stars 7−127893
C stars identification for IRAS spectra 7−72440
C stars in Cassiopeia region, detect. and catalogue 7−94881

stellar spectra continued
C stars in Galactic disk, C, N and O abundances from IR spectr 7−115458
C stars in Sculptor dwarf spheroidal galaxy, accurate radial vels 7−145965
C stars with O-rich circumstellar dust shells, evolutionary characts 7−88440
CN-strong giants, recognition and classification 7−140114
CO 2.3 μm profiles rel. to galactic centre stellar kinematics 7−120574
CO spectra, refined partition functions determ. 7−134120
Fe group elements, complex spectra, regularities, rel. to stellar spectr 7−109827
Fe II lines of Hg-Mn and early A-type stars 7−127851
H_2 spectra, refined partition functions determ. 7−134120
He-peculiar stars, jets and UV reson. lines 7−145966
Hg-Mn stars, UV spectral study *(Japanese)* 7−140082
N-rich metal-poor stars, Li abundances rel. to source of N enhancemen 7−145956
O I forbidden line emission from steady stellar jets 7−88382
OH maser stars, OH masers far-IR excitation 7−88673
OH-IR stars, high-resolution 18 cm OH maser emission obs. 7−72439
ZrO, singlet systems and energy levels, stellar appl. 7−103517

stellar spectrophotometry *see stellar photometry; stellar spectra*

stellar structure
see also solar interior
accretion disk boundary layers, struct. and stability 7−115221
binary stars, vibr. stability of double-star Roche model 7−120494
OY Car, SU UMa star, May 1985 superoutburst, accretion disk struct and photometric obs. 7−115439
cataclysmic binary stars, accretion disks, viscosity-surface density relatio 7−115434
cataclysmic binary stars, emitted radiation spectral distrib. and accretio disk modelling 7−115433
collapsing cores, eqn. of state of hot dense matter 7−140036
collapsing stars, physics of baryonic-to-hyperonic transition 7−88375
α^2 CVn, Ap star, radiation distrib. and nonspherically symm. mode 7−127881
SS Cyg, accretion disk struct., visible spectra obs. 7−115438
DM Del, A-type contact binary, photometric study and light curves ana 7−72509
dense matter stars, thermodynamics of non-relativistic free quark ga 7−141006
dwarf novae, mass transfer instability models 7−115431
Emden-Chandrasekhar axisymmetric rigid-body rot. polytropes, n=5 exac configurations 7−140038
fermion soliton stars and black holes, nontopological solns. in genera relativity 7−102243
fully convective main-sequence star, rapid mass accretion effects on evo and struct. 7−127838
giant stars, core mass-radius relation as new test of stellar evolutio theory 7−140058
internal structure consts. 7−115363
internal structure determ. via stellar seismology, appl. to stellar ages mea 7−79952
Lane-Emden equation, topological study 7−94851
low-mass stars, struct. and oscills. in presence of mag. field 7−94856
RR Lyr stars, amplitude modulation due to internal resons. as possibl explanation of Blazhko effect 7−94878
magnetic CP stars, mag. flux distribs. from fossil mag. field evolutio 7−94903
main sequence stars, struct. parameters and neutrino flux 7−94850
massive accretion disks around white dwarfs in globular cluster core form. by collisions with main-sequence stars 7−145939
mini-soliton stars, scalar field nontopological solns. in general relativit 7−102241
neutron stars, accreting, long X-ray bursts rel. to presence of internal pio condensate or quark matter 7−107887
neutron stars, constraints on eqn. of state from possible 1.13 millisecon periodicity in X-ray binary (GX 339−4) 7−101853
neutron stars, redshift database anal. using γ burst annihilation line 7−80025
neutron stars, rotating, nonaxisymmetric normal modes and secular instab ilities of polytropic stars 7−94939
neutron stars, structure of massive models in Ni's theory of gravi 7−140147
Newtonian static star structure equations, group props. 7−88380
order-of-magnitude theory 7−134393
polytropic models, physical characts. of N-dimensional radially-symmetri polytropes 7−127695
polytropic stars, uniformly rotating, struct. parameters from third-orde perturbation theory 7−115367
pulsating stars, effect of polytropic index on forced low-frequency gravit modes in rot. star 7−79946
rapidly rotating stars, struct., use of 3D self-consistent field metho 7−101765
red clump stars in open clusters, H-burning shell profile rel. to evolutio 7−101779
Roche problem for stratified polytropes 7−115369
rotating polytropes, linear and nonlinear dynamic instability 7−107807
rotating Roche model, vibr. stability anal. 7−127840
scalar soliton stars and black holes, nontopological solns. in genera relativity 7−102242
SN 1987A in LMC, explosion of 20 $M_\odot$ star which experienced mass los 7−146003
soliton stars, nontopological solns. in general relativity 7−102240
strange stars, implications of pulsar glitches 7−107868
Sun, comparison between mass-losing and standard solar mode 7−145910
supernovae, incompressibility of hot neutron-rich nuclear matte 7−139895
synthetic horizontal branches for various assumptions of He core mass siz 7−88387
tidal binary systems in globular clusters, structural changes due to tida heating 7−127969
4U 1820−30, in NGC 6624, form. by tidal capture and evolution t white dwarf-neutron star system 7−127970
4U 2127+12, in M15, form. by tidal capture and evolution to commo envelope binary stage 7−127970

tellar structure continued
white dwarfs, effect of thick H or He surface layers on pulsations 7−140055
X-ray burst sources, Type I X-ray bursts energetics and nuclear fuel reservoir in stellar envelope 7−146041

tellar variables *see variable stars*

tellar winds
A-type supergiants, mass loss characts., UV high resolution spectra anal. 7−127854
accretion flow onto compact object fed by stellar wind in close binary 7−107810
AGB stars-planetary nebulae in Magellanic Clouds, new evolutionary relationships 7−120560
V1343 Aql (SS 433), dynamical model for jets precession 7−88429
V1343 Aql (SS 433), effect of radiative acceleration instability on jets struct. 7−139899
V1343 Aql (SS 433), mass-loss rate in high-speed jets *(Russian)* 7−145997
V1343 Aql (SS 433), relativistic pair plasma model for radio jets 7−127891
R Aqr, subarc second continuum at 20 mm and SiO spectral obs. 7−88442
R Aqr, symbiotic star, precessing jet model for linear polarization vars. 7−72473
asymptotic giant branch, mass loss effects on initial-final mass relation for low and intermediate mass stars 7−145932
asymptotic giant branch star, wind characts. effect on subsequent planetary nebula 7−80061
asymptotic giant branch star, wind interaction with subsequent planetary nebula 7−80062
AB Aur, Herbig Ae star, Hα line form. in wind 7−79967
AB Aur, Herbig Ae star, wind vel. struct. from vars. of Ca II K line 7−88400
AB Aur, Herbig pre-main sequence star, wind rot. modulation, C IV and Mg II obs. 7−127855
azimuthal vel. and magnetic force in winds from hot stars 7−72400
Be stars, constraints on models from UV and IRAS meas. 7−127877
Be stars, mass loss characts. 7−127879
bipolar flow in plane-parallel gas layer, form. by stellar wind action 7−79953
bipolar flows, magneto-gravit. stability of self-gravitating plasma flow through porous medium 7−127702
bipolar flows, obs. of NGC 2261/R Mon system rel. to mag. accel. model 7−107932
bipolar outflow sources, accel. and collimation, role of mag. fields 7−128028
bipolar outflows from young stars, morphology and kinematics of dense gas in star form regions 7−88567
bubbles, structure and kinematics 7−140034
γ Cas, Be star, long-term variability of far-UV high-vel. components 7−140074
cataclysmic binary stars, radiatively-driven shocked stellar winds model 7−115428
cataclysmic variable stars, terminal vels. of wind from accretion disk from UV reson. lines obs. 7−115420
μ Cen, Be star, obs. of mass ejection event assoc. with nonradial pulsations 7−145994
PV Cep, T Tau star, assoc. counterfan obs. 7−72562
in Cir OB1 association, stellar wind bubbles form. rel. to age and evolution of supernova remnant (MSH 15−52) 7−120535
circumstellar matter, modification and erosion by wind particles 7−94861
close binary stars, mass loss and shell masses 7−127950
core He burning stars in Magellanic Clouds, mass loss rel. to Clouds distances 7−88609
R CrA star form. region, gas outflow characts. 7−107915
AM CVn, IUE evidence for hot wind in double degenerate system 7−107843
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
V645 Cyg, assoc. high-vel. gas, CO mapping 7−94865
P Cyg, circumstellar Hα and [N II] intensity profiles rel. to stellar wind model 7−72434
CH Cyg, symbiotic star, interacting stellar winds model for X-ray emission 7−101789
4=CQ Dra (M3 III+cataclysmic binary), interacting winds model for variable radio emission 7−79979
early-type stars, polarisation of light scattered from stellar winds 7−140041
early-type stars in SMC, stellar winds props. from IUE spectra 7−134225
G 2.4+1.4, filamentary optical nebular nature, SHF obs. 7−72645
galaxy formation, effects of star form. and mass loss 7−72623
GGD 27 IRS 2, bipolar flow model for polarisation of assoc. IR refl. nebula (zz) 7−94978
GX 301−2, slow X-ray pulsar, wind accretion model from obs. through two binary cycles 7−107897
HD 128220B, sdO star, wind characts., spectral obs. 7−72422
HD 148937, Of star, assoc. interstellar environment characts. 7−79974
HD 35914, variable central star of PN IC 418, mass outflow rate changes rel. to light vars. 7−115386
HD 37836 in LMC, O-type supergiant wind and disk spectral characts. 7−127853
HD 50896, WN5 star, empirical model for extended atmosphere 7−101802
Herbig-Haro objects, radiative bow shock models rel. to spectral line profiles 7−128012
HH1-HH2 exciting star, NH_3 obs. rel. to stellar wind-mol. cloud interaction 7−101872
HH 46, 47A, 47B, Herbig-Haro object and connecting filament, T Tau star jet model for dynamical struct. 7−88598
HH 46-47 exciting star, implications of NH_3 obs. for jet collimation 7−80077
HH 52/53/54, high-latit. Herbig-Haro objects, bipolar outflow models for optical and H_2 emission 7−134285
HH 57 IRS, FU Ori star, contrib. of interstellar nozzle mechanism to assoc. HH object (HH 57) 7−128027
hot stars, X-ray emission effects on winds 7−80047
Hubble III, giant ring nebula in galaxy NGC 6822, Hα obs. 7−94990
RW Hya, symbiotic star, cool component luminosity and mass loss rate 7−127894

stellar winds continued
hypergiant stars eruptions, opaque wind model for relation between apparent temp. and mass loss rate 7−120440
interstellar IR bubble in Cepheus, stellar winds-supernova remnant model 7−128006
IRAS 16293−422 (L1689N), mol. obs. rel to misalignment between bipolar overflow and mag. field 7−140227
IRAS 16293-2422, pre-main-sequences star, high vel, mol. outflow sources, evidence for infall 7−88415
IRC+10216, C-star, inner envelope characts., CO lines modelling 7−140089
jet-like elongated structures near stars, projected cavities model 7−115561
L1551-IRS 5, effect of collimated winds on morphology and kinematics of CS emission 7−140235
L1551-IRS 5, millimetre and submillimetre mol. line obs. of SW outflow lobe 7−120530
late-type giant stars, contrib. of mass loss to form. of interstellar dark clouds 7−127852
late-type stars, mass loss and spectra *(Polish)* 7−127850
late-type WR stars, circumstellar dust characts. and winds, modelling and IR photometry anal. 7−127878
LDN 1551, bipolar outflow, CO mapping, evidence for expanding accelerated shell 7−140062
R Leo, cool O-rich Mira variable, mass loss characts. 7−101791
line-driven winds, instabilities, wave propag. for pure line absorpt. case 7−94858
low-luminosity embedded sources and their environments, IR, THF and EHF obs. 7−107826
low-luminosity outflow sources, IR line and radio continuum obs. 7−128011
Magellanic Clouds, stars' mass loss rates comparison 7−145932
mass loss on main sequence, implications for stellar evolution 7−88416
mass outflows from young stars, atlas of CCD images of Herbig-Haro objects 7−115253
massive stars, evolutionary models with mass loss and overshooting rel. to W-R stars props. 7−134222
massive stars, mass loss rate formalism rel. to evolution without convective core overshooting 7−134221
minimum mass loss rate for dust-driven winds 7−94853
molecular bipolar flow sources, OH emission and absorpt. obs. 7−101882
molecular outflow source 1.5′ south of Orion-KL, evidence from SiO obs. 7−128021
N62B, stellar wind bubble in LMC, interferometric obs. 7−80067
neutron stars, mass ejection due to electron cyclotron resonance instability of magnetised photosphere 7−94938
neutron stars, neutrino-driven winds from young hot objects 7−88493
neutron stars, quasi-static winds 7−72497
NGC 7538, H II region assoc. mol. cloud, mol. outflows near IR sources 7−80074
Nova Her 1987, ejection vels. from emission line widths 7−94893
Nova Vul 1984 No.2, interacting winds model for unusual radio outburst 7−140076
novae, contrib. of mass ejection and ang. momentum loss to variable mass transfer rate scenario 7−120428
novae, effect of ejected mass on dust grains nucleation 7−120430
novae, mass loss rate from obs. of X-ray emission during outburst stage 7−115430
novae, outburst frequency in Galaxy rel. to mass input to interstellar medium 7−120432
novae, principal absorption systems form., role of high-vel. winds 7−120410
O-type stars in Magellanic Clouds, wind models 7−72410
in OB associations, contrib. to interstellar supershells and induced star form 7−140224
OB-type stars, stellar wind effects on star birth rate in local interstellar medium 7−79947
OB-type stars in LMC, contrib. to H I sheets and supergiant H I shells 7−88596
OB-type stars with X-ray pulsar companion, intermittent stellar wind accretion and long-term activity 7−88517
OB-type supergiant sequence, stellar wind UV line profiles rel. to optical spectral classifications 7−72429
observational methods *(Polish)* 7−127850
OH 231.8+4.2, OH-IR star, shocked bipolar outflow and assoc. HH objects obs. 7−72468
OH/IR 286.50+0.06, Mira-type star, lumin., mass loss rate and spectral type 7−120411
ω Ori, Be star, wind characts. 7−127879
α Ori, circumstellar H I and mass loss characts. 7−107824
α Ori (Betelgeuse), pulsation-driven atmospheric modulation rel. to mass flow initiation 7−140064
Ori B mol. outflow, HCO^+ mapping and search for H_2S 7−94987
Orion IRc 2, assoc. mol. outflows 7−140232
Orion Nebula region, radio emission possibly due to winds from low-mass pre-main sequence stars 7−120632
peculiar interacting binary stars, evolutionary sequence for rapid mass outflow stage 7−88527
ξ Per, O-type giant, wind struct., UV spectral obs. 7−127861
S Per, OH-IR star, VLBI obs. rel. to dimensions and expansion vels. of H_2O and OH maser regions 7−72433
PK 75+35°1, peculiar planetary nebulae, terminal wind vel. from central star 7−101892
planetary nebula progenitors, importance of mag. fields for mass loss and proto-nebula struct. *(French)* 7−120548
planetary nebulae, shapes, role of wind interactions with shell 7−94995
planetary nebulae-wind interaction 7−145838
pre-main-sequence stars, obs. of bipolar flow sources in NH_3 lines *(Japanese)* 7−140213
pre-main-sequence stars in Mon OB1 mol. cloud, unbiased survey for high-vel. gas 7−88592
pre-planetary nebula stars, mass loss characts. 7−72406
processes rel. to Sun (book) 7−88751
protostar, bipolar jets in funnel formed along accretion tori rot. axis 7−79963
protostars, comets formation in wind-driven circumstellar shells 7−88203
RX Pup, symbiotic star, wind characts. and radio emission 7−72446
ζ Pup (04 If), search for coronal line emission rel. to wind X-ray emission 7−115390
ζ Pup (O4f), effect of wind blanketing on photospheric spectrum 7−88433

stellar winds continued
ζ Pup (O4f), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933
radiation-driven winds of hot luminous stars, statistical equilib. calcs. for H to Zn 7−145933
radiative transfer, aberration and advection effects in plane-parallel medium in motion 7−139900
recurrent novae, dynamical effect of radiative heat loss on remnants evolution 7−134252
red giants and supergiants, chromospheric activity indicators and envelope gas/dust ratio 7−94869
resonant line photons transfer in spherically accelerating envelopes 7−120260
S18/SMC, peculiar early-type emission-line supergiant, envelope model and mass loss rate 7−101771
Sanduleak −69°202, SN1987A progenitor star mass loss rate from supernova radio emission 7−115484
τ Sco (O9.5 V), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933
FH Ser (Nova Ser 1970), evidence for optically thick wind and super-Eddington total luminosity 7−120404
shock waves, research aspects 7−83248
SMC X-1, wind and X-ray emission 7−80047
SN 1604 progenitor, mass-losing runaway star model rel. to origin of supernova remnant 7−146074
SN 1984E in NGC 3169, Type II-L supernovae, post-maximum spectrum rel. to superwind 7−80020
SN 1987A in LMC, deceleration rate of broad Hα absorpt. line 7−72487
SN 1987A in LMC, effects of circumstellar medium on UV spectrum 7−101822
SN 1987A in LMC, explosion of 20 $M_\odot$ star which experienced mass loss 7−146003
SN 1987A in LMC, Hα vel. struct. during first month of outburst 7−140117
SN 1987A in LMC, Hα vels. from spectroscopic obs. (1987 February 27 to March 12) 7−88474
sn stars, jet-like mass loss and mag. fields, IUE obs. 7−145967
spectral line formation in expanding spherical medium, effects of dust scatt. 7−120368
spectral line profiles calculation in spherically symmetric stellar winds, appl. of SEI method 7−115365
spectral line profiles from moving spherical shells, analytical formulae 7−145934
steady jets emission 7−88382
Sun, comparison between mass-losing and standard solar models 7−145910
supernovae, type Ib, effects of mass ejection from red supergiant companions 7−140119
SwSt 1, young planetary nebula, mass loss, radii and comp. characts. 7−128029
symbiotic stars, binarity and mass loss characts. 7−107831
symbiotic stars, increased mass loss model for outbursts 7−140075
HL and XZ Tau, assoc. high vel. gas, CO mapping 7−94865
T Tau stars, linear polarisation rel. to jets and circumstellar dust distrib. 7−140054
4U 0900−40 (HD 77581), massive X-ray binary, wind photoionisation rel. to rapid vars. of P Cyg lines 7−120502
AN UMa, AM Her star, envelope due to mass loss 7−88504
PW Vul (Nova 1984 No.1), stellar winds vels. from P Cyg lines absorpt. components 7−72435
WN-type binary stars, He II 468.6 nm line vars. rel. to line-emitting region dynamics 7−145996
WN-type stars, modelling of extended atmospheres 7−101801
Wolf-Rayet stars, effects of neutron capture nucleosynthesis on stellar wind comp. 7−107805
Wolf-Rayet stars, emission from outflowing gas, contrib. to He 2-10 galaxy emission 7−128092
X-ray binaries, high-luminosity accretion in wind-driven objects 7−127962
X-ray binary stars, disk form. in magnetospheres of wind-fed pulsars 7−140152
X-ray binary stars, wind accretion rel. to X-ray pulse periods vars. 7−101842
X-ray burst sources, effects of wind collimation by thick accretion disks 7−80036
X-ray burst sources, non-LTE radiation-driven wind models in bursting neutron stars 7−101841
in young elliptical galaxies, contrib to evolution of clumpy interstellar gas 7−140206
young IR sources, linear polarisation rel. to jets and circumstellar dust distrib. 7−140054
young stars' jets, CCD imaging, long slit spectroscopy and data interpretation 7−140060
H II regions exciting stars, wind energy dissipation and diffuse X-ray emission in hollow H II regions 7−94977
He-peculiar stars, radiatively driven mass loss interaction with mag. fields 7−145966
OH-IR stars, mass loss characts. and OH maser 18 cm emission 7−72439

stellarators
Advanced Toroidal Facility, design, construction 7−135585
ATF, design and capabilities 7−69403
Auburn torsatron, magnetic surface mapping with emissive of filament technique 7−83543
boundary value problems with external currents 7−123947
coil configurations, mechanical behaviour 7−135639
compact torsatron reactor confinement and engineering aspects 7−69404
currentless, two-fluid lin. stability investig. 7−83523
ECRH systems for fusion plasmas, technical aspects 7−122081
hot plasma confinement in stellarator type toroidal traps 7−75844
ideal magnetohydrodynamics book 7−134382
L-2 stellarator, ECRH, Gaussian beam form. and transport 7−69379
L-2 stellarator, plasma radiation and electron energy balance 7−83508
magnetic configuration control, harmonic anal. 7−123937
reactors, convective equilib. and mixing-length theory 7−97713
ripple transport, Fokker-Planck eqn. soln. 7−123845
ripple transport, hybrid Monte Carlo simulation 7−142485
ripple transport, unified theory 7−97712
second harmonic electron cyclotron breakdown in stellarators 7−122072
SIRIUS-M, radiation streaming anal., shielding design appl. 7−103197

stellarators continued
stellarator L-2, electron cyclotron heating, microwave radiation, Raman scatt. 7−97761
toroidal plasmas, nonaxisymmetric, neoclassical fluxes in plateau regime 7−69425
toroidal stellarator, HF AC inductive heating 7−117752
toroidal stellarators, electromag. radiation propag. near electron cyclotron freq. 3-D ray tracing approach 7−69355
Vintotron, helical axis torsatron, engineering aspects 7−135584
W VII-AS stellarator, 70 GHz/1 MW long pulse ECRH system 7−122141
WENDELSTEIN VII-AS expt., nonplanar coils, vacuum vessel 7−122085
Wendelstein WVII-A5, plasma expt., modular coil system 7−89705

STEM *see scanning-transmission electron microscopy*

step motors *see stepping motors*

step-recovery diodes *see charge storage diodes*

Stepanov method *see crystal growth from melt*

stepped motors *see stepping motors*

stepping motors
aircraft wing oscillation drive with stepping motor *(French)* 7−91155

stereo amplifiers *see audio-frequency amplifiers*

stereoisomerism *see isomerism*

stereopsis *see visual perception*

stereoscopy *see vision*

stiffness constants *see elastic constants*

stimulated Brillouin scattering
amplifier and four-wave hypersonic phase-conjugating mirror, limiting sensitivity 7−123089
automated spectrometer for studying scattered light fine structure 7−102535
backward, with HF laser 7−110468
backward stimulated scattering, producing phase-conjugate wave *(Chinese)* 7−90722
Earth science, laser techniques in high-pressure geophysics 7−139812
fibres, single-mode, stimulated Brillouin scattering excited by two pump waves 7−142007
fibres single-mode, stimulated Brillouin scattering with laser diode pumping 7−123101
fluorozirconate glass, optical and elastic props., investig. using Brillouin scattering 7−130281
foam targets, Raman scatt. study using 0.35 μm laser beam 7−69397
gain obs. with dual spectral-line pump 7−123104
homogeneous plasma, stimulated Raman scatt., nonlinear evolution 7−123903
hypersonic waves generated, acoustic decay time meas. 7−75056
laser mirror using stimulated Brillouin scattering in tetrachloromethane 7−130168
laser-plasma detection by UHF electrical current production with modulated laser beam 7−111278
light beam self-reversal in parametric mode of stimulated Mandelstam-Brillouin scatt. 7−110463
long-scale-length plasmas, laser coupling, hydrodynamic phenomena 7−117744
Mandelstam-Brillouin scattering, anomalous line shift 7−82714
Mandelstam-Brillouin scattering, Stokes pulse compression and wavefront inversion 7−97082
mirrors, stimulated Brillouin scattering made of capillary waveguides 7−136443
mirrors, wavefront-reversing, in interferometer, characts. 7−140736
multimode fibres, stimulated Raman scattering components, influence of stimulated Brillouin scattering 7−130369
multiple stimulated Brillouin backscattering, optical turbulence 7−117266
nonlinear coupling of stimulated Raman and Brillouin scattering in laser-plasma interactions 7−123905
phase conjugation, nonfrequency-shifted by Brillouin-enhanced four-wave mixing 7−130263
phase locking by seeded Brillouin scatt. 7−68784
phase synchronism disruption in light absorbing media 7−130261
plasma, dissipative, two-ion species 7−123899
plasma, low temperature, phase conjugation in stimulated Brillouin scatt. 7−136448
plasma, stimulated Brillouin scattering, influence of radiation polarisation 7−141938
plasma diagnostics using stimulated Brillouin scattering of laser beam 7−136435
polarisation distortion correction using phase conjugation via stimulated Brillouin scattering 7−110474
polariton wave, time depend. Brillouin scatt. 7−70831
ring stimulated Brillouin scattering lasers, self-pumped, field structure 7−82642
rippled plasma, Raman backscattering, contrib. to half-harmonic splitting 7−123904
self-induced distributed feedback under stimulated Brillouin scattering conditions 7−141935
short pulse generation using truncated stimulated Brillouin scattering 7−90708
stimulated Raman scatt. in inhomogeneous density plasma, stimulated Brillouin scatt. effects 7−97752
transient light scattering by hypersound 7−97080
vibrating crystals and vibrating mols., ultrafast time-resolved spectroscopy of struct. phase transitions 7−110469
waveguide lasers, nonlinear conversion of CW radiation into short pulses 7−117244
windows, large, stimulated Brillouin scattering parasitics 7−103894
CS_2, phase conjugation by Brillouin-enhanced four-wave mixing 7−103902
InSb, solid-state plasma, magnetoactive, stimulated Brillouin scatt. of EM wave 7−113215
Nd: phosphate glass amplifying medium, stimulated Brillouin scattering of focused beams 7−136431
Nd:glass laser with composite active element and stimulated Brillouin scattering mirror 7−82643
Nd:YAG laser pulse shaping by stimulated Mandelstam-Brillouin scattering 7−68782
SiO_2-GeO_2(P_2O_5) single mode fibers, Brillouin-gain spectra 7−75143

imulated combination scattering *see stimulated Raman scattering*
imulated dielectric relaxation currents *see thermally stimulated currents*
imulated emission
see also laser theory; lasers; population inversion
amplification of light from an undulatory point of view 7−74899
atomic response to intense fs UV radiation study 7−141543
dielectric, stimulated EM shock radiation 7−132299
p-difluorobenzene+Ar, vibr. relax., stimulated emission pumping-single vibronic level fluoresc. investig. 7−74741
dye lasers, stimulated emission, molecular rotational diffusion effects 7−82547
free electron laser with linearly polarised wiggler, spontaneous and stimulated emission, influence of equilib. self-fields *(Chinese)* 7−74944
glyoxal, intramol. vibr. state mixing, stimulated emission pumping spectra meas. 7−136015
insulating crystals, lanthanide laser ion cryst.-field disorder, crystallochem. and stimulated emission props. 7−138475
Orbitron, MM wave generation interpretation as stimulated emission of bremsstrahlung 7−103789
relativistic quantum field theory, stimulated emission by external sources 7−89328
rhodamine 6G solns., stimulated laser emission quantum yield 7−130085
transition amplitudes due to external sources in field of quantum mech. pots. 7−134554
two-level system, interaction with two intense fields, absorptive response, dispersion profiles 7−141951
$Al_xGa_{1-x}As$ graded-gap layers, optically excited, stimulated radiation 7−92704
Ba vapour lasers, quasi-CW, self-terminating atomic transitions 7−90592
$BaEr_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
$BaHo_2F_8$, intracentre transition probabilities luminesc. self-quenching 7−70895
C discharge plasma impulsive flow, barrier interaction, stimulated emission 7−142531
$C^{18}O_2$ pulsed electron-beam-controlled laser, stimulated emission spectrum 7−122909
Ca^+, laser emission 7−96983
$Ca_2Ga_2SiO_7:Nd^{3+}$, gehlenite, crystal struct., spectral luminesc. and stimulated emission 7−106237
$Ca_3(Nb, Ga)_2Ga_3O_{12}:Nd^{3+}$, cation-deficient garnet, spectral luminesc. props. 7−106236
$Cd_{1-x}Sc_xF_{2+x}:Nd^{3+}$ solid soln. single crysts., growth from melt and low threshold stimulated emission 7−85777
$Er:YAlO_3$ laser, stimulated emission at 1.662, 1.677, 1.706 and 1.729 μm 7−68646
$GaAs/Al_xGa_{1-x}As$ single quantum wells, photoexcited, stimulated emission 7−70843
GaAs-AlGaAs lateral DH DFB surface-emitting laser diode 7−110383
GaAs-AlGaAs multiple quantum wells, stimulated emission, ultrafast absorpt. recovery 7−113216
GaSe, exciton-exciton scatt., picosec.-laser-excited photolum. studies 7−124873
GaSe, spontaneous and stimulated emission, laser-driven shock wave effects 7−106216
Ge hot hole inter-subband transitions for tunable far-IR laser 7−74934
Ge, hot holes, stimulated longwave IR radiation 7−85778
p-Ge, hot holes long wavelength IR stimulated emission spectra, Landau quantisation 7−125753
p-Ge hot-hole laser, directional stimulated emission obs. 7−136325
I_2, high sensitivity intracavity stimulated emission pumping, small optical gains meas. 7−129795
InAs-GaAs quantum well heterostructs. grown by atomic layer epitaxy, stimulated emission 7−92703
InAsSbP p-n structures, coherent emission at 3.9 μm 7−144085
LiF crystal laser with F_2^+ colour centres, flashlamp pumping 7−82574
$LiLuF_4:Pr^{3+}(Nd^{3+})(Er^{3+})$ tetragonal crysts., impurity ion luminesc., absorpt. and stimulated emission props. 7−85793
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
$Nd^{3+}:\beta''-Al_2O_3-Na_2O$ laser, single pass gain 7−82582
Ne I excited by discharge with hard component, inversion and stimulated emission due to 585.3 nm transition 7−96978
Rb vapour, stimulated emission during resonant multiphonon excitation, temporal characts. 7−82710
Sr^+, laser emission 7−96983
Xe-Cs mixtures, stimulated emission of UV radiation efficiency 7−136277
XeCl laser, stimulated emission spectrum 7−90591
XeCl, stimulated emission, quantum beats obs. 7−110014
$Xe_2^+Cl^-$, cooperative photogeneration in Cl_2/Xe solutions, stimulated emission and gain meas. 7−78516
$YAlO_3:Ho^{3+}$, orthorhombic crystal, lumin., stimulated emission 7−113228
$YAlO_3:Ho^{3+}(Er^{3+})$ orthorhombic crysts., luminesc. and multiwave stimulated emission obs. *(Japanese)* 7−119028
stimulated Mandelstam-Brillouin scattering *see stimulated Brillouin scattering*
stimulated Raman scattering
see also coherent antiStokes Raman scattering
acetone, stimulated Raman scattering, wavefront reversal 7−90705
benzene, Raman enhanced nondegenerate four-wave mixing 7−75059
benzene ($-d_6$), time-resolved stimulated Raman scattering in a diamond anvil cell 7−68310
coherence props. 7−123106
coherent pulse propagation in a collisionally-broadened Raman amplifier 7−90709
conference, Cambridge, NA, USA (Sept. 1986) 7−140365
cooperative Raman scattering, investig. 7−123088
double-resonance techniques for high-resolution Raman-spectroscopy 7−80898
dye laser frequency conversion by stimulated Raman scattering in alkali metal vapour 7−130257
Earth science, laser techniques in high-pressure geophysics 7−139812
electron plasma waves, steepening, in stimulated Raman backscattering 7−123885
far-off-resonant scattering power-dependent dispersion effects 7−90698
FEL based on stimulated Raman scatt., axial magnetic field effect *(Chinese)* 7−130131
femtosecond single-pass cascade Raman scatt. soliton generation at 1.5 μm 7−141996
fibre amplifier characts. for optical transmission systems 7−110451
fibres, soliton shaping by stimulated Raman process 7−136561
stimulated Raman scattering continued
foam targets, Raman scatt. study using 0.35 μm laser beam 7−69397
free-electron laser, exptl. study 7−82594
frequency conversion, numerical anal. and optimisation 7−110466
gain polarisation depend., rotationally invariant formalism 7−90710
guided wave scattering by polaritons in piezoelec. slab-waveguides *(German)* 7−90714
high resolution, mol. structs. and collision effects on line shapes investig. 7−80901
historical review 7−75064
homogeneous plasma, stimulated Raman scatt., nonlinear evolution 7−123903
hyper-Raman scattering of short optical pulses, linear theory 7−97078
laser electron accelerators, axially fed, plasma waves 7−74269
laser-plasma interactions, stimulated Raman scatt., review 7−69362
liquids, formation of highly compressed Brillouin scattering pulses 7−68781
methane, UV radiation stimulated Raman scatt. 7−129724
methane waveguide Raman laser, low-threshold operation at 1.54 μm 7−103799
methane-$^{13}C-d_4$, high resolution stimulated Raman spectrosc. 7−82159
molecular vibr., impulsive stimulated scatt., time-resolved study 7−103509
monomode fibres, stimulated Raman scatt. and nonlinear pulse broadening obs. at 1.32 μm 7−103888
multimode fibres, stimulated Raman scattering components, influence of stimulated Brillouin scattering 7−130369
nonlinear coupling of stimulated Raman and Brillouin scattering in laser-plasma interactions 7−123905
optical fibre Raman amplification, output moments and photon statistics 7−142002
optical fibres, self-phase modulation, stimulated Raman scatt., pulse walk-off effect 7−97155
organic compounds, resonance Raman scatt., CARS, vibronic interaction, polarisation obs. *(Japanese)* 7−129712
organic liquids, generation of excited vibrational states during stimulated Raman scattering 7−90707
period-doubling bifurcations in stimulated Raman scattering 7−68788
picosecond active Raman-scattering spectroscopy of biological objects 7−145289
plasma, 2-electron temp. 7−75797
plasma, inhomogeneous, stimulated Brillouin scatt. effects on stimulated Raman scatt. 7−97752
plasma, stimulated raman scattering in a nearly resonant density ripple 7−83438
polariton-Stokes wave anharmonic coupling on slab, stimulated Raman spectra 7−82718
pulse compression by fibre and grating, stimulated Raman scattering effect 7−103878
pulse compression of Raman-depleted ps pulses and spectrally windowed self-phase modulated pulses at 1.06 μm 7−103890
pumping radiation under saturation, effect of stimulated Raman scattering on coherence 7−90706
quartz glass, microdefects, rel. to stimulated Raman scatt. of optical fibres *(Japanese)* 7−132287
radiation generation, coherent and tunable, by scatt. processes 7−75065
rhodamine 6G, struct. rearrangements, reson. stimulated Raman scatt. *(German)* 7−129725
rippled plasma, Raman backscattering, contrib. to half-harmonic splitting 7−123904
rotational Raman gain coefficient ratio of H_2 and N_2 7−130260
semiconductor surface layers, local crystal-symmetry meas. by harmonic generation and stimulated reflection spectroscopy 7−136428
single mode fibre, self-phase modulation and stimulated Raman scatt., spectral and temporal characts. 7−103889
single-mode fibres, self-phase modulation and stimulated Rama scattering 7−136560
solid-state slab geometry lasers as tunable sources 7−68705
Stokes wavefront preservation in broad-band forward Raman amplification 7−90699
surfaces and composite materials, nonlinear optical props. 7−82699
time-domain vibrational spectroscopy 7−92687
time-resolved ionisation detected stimulated Raman scatt. mechanism 7−90164
two-level system, quantum theory of stimulated Raman scattering, time-depend. spectrum 7−103891
two-photon optical bistability obs. 7−97072
vibrating crystals and vibrating mols., ultrafast time-resolved spectroscopy of struct. phase transitions 7−110469
water, single droplets, stimulated Raman scatt. spectra 7−82717
wave-front replication versus beam cleanup by stimulated scattering 7−97077
waveguide lasers, nonlinear conversion of CW radiation into short pulses 7−117244
wavelength conversion developments for remote sensing appl. 7−75066
H_2, far UV reson. Raman spectroscopy 7−90174
p-H_2 laser radiation frequency conversion by four wave mixing 7−136438
H_2 stimulation vibrational Raman conversion of 1.06 μm radiation 7−110467
H_2, transient stimulated Raman scatt. theory 7−103513
H2, compressed gas, UV radiation stimulated Raman scatt. 7−129724
He-K, XUV laser radiation generation by stimulated Raman scattering 7−90697
InSb, solid-state plasma, extraordinary mode, stimulated Raman scatt. 7−84959
N_2, collisionally-narrowed isotropic Raman spectra, strong collision model calcs. 7−82177
N_2 in atmosphere, rotational Raman gain coeffs. model 7−133917
N_2, liquid, saturation effect in Raman scattering obs. 7−141931
N_2 Raman Q-branch transitions, self-density frequency shift measurements 7−82286
N_2, rot. relax. fitting laws, SRS Q-branch calc. 7−109905
Nd:YAG eye-safe laser rangefinder, Raman wavelength shifting 7−82615
O_2 liquid, vibrationally and electronically excited, nonlinear and luminesc. spectroscopy 7−141580
Pb vapor heat pipe as stimulated Raman convertor for XeCl lasers 7−123112
Rb-He vapour mixture, two-photon excitation, stimulated processes 7−123102
XeCl laser radiation, tunable VUV generation by anti-Stokes stimulated Raman conversion 7−123099
XeCl/H_2 Raman shifting to blue-green region 7−130249

stimulated Rayleigh scattering *see Rayleigh scattering; stimulated scattering*
stimulated scattering
see also stimulated Brillouin scattering; stimulated Raman scattering
5CB, nematic liquid cryst., stimulated scatt. studies 7−103892
depolarised light stimulated scatt. 7−117267
electron beam, stimulated Compton scattering, angular spread effect 7−90628
FEL, stimulated Compton scatt., electron trapping and phase area displacement of nonrelativistic electrons with EM wiggler 7−130136
gas, phase conjugation on stimulated thermal scattering 7−141946
image reconstruction by stimulated backscattering through two-lens system 7−110284
inhomogeneous magnetoactive plasma, beat disturbances, stimulated coherent EM wave scatt. *(Russian)* 7−69363
lasers, stimulated scattering as a nonstationary mechanism of distributed feedback 7−136440
light beam, phase conjugation by stimulated scatt. 7−123103
phase conjugation in stimulated scatt. 7−117272
relativistic electron beam, stimulated wave scatt., quasilin. theory 7−117216
ultrafast supercontinuum white laser source 7−110470
$BaTiO_3$, self-pumped phase conjugation 7−90725
CO_2 lasers, induced light scattering and beam divergence 7−136427
CS_2, liq., nonrelax. inertial motion, femtosec. time-resolved impulsive stimulated scatt. 7−99877
$LiNbO_3$:Fe, degenerate stimulated parametric scattering 7−110455
Na vapour, four-photon parametric scattering, spectral and energy characts. 7−141934
Rb-He vapour mixture, two-photon excitation, stimulated processes 7−123102
Stirling engines *see heat engines*
STO calculations
acrylic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7−119509
γ-aminobutyric acid and inhibitors of restricted conform., electrostatic pot. maps, biological activity, CNDO STO calcs. 7−78732
aniline-hemin complex, electronic structure, Mossbauer spectra 7−122623
anisole, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
atoms, Dirac-Fock-Slater pot., finite-basis set approach 7−122348
aziridine, saturated cycle struct., oscillatory anal. 7−141447
azo and azomethine cpds., thermal E/Z isomerisation, ab initio STO-3G calcs. 7−109746
benzaldehyde, geometry, barrier height, STO calcs. 7−129582
benzene derivatives, liq., electrostatic interactions, CNDO and ab initio STO-4G calcs. 7−74443
benzenes, monosubstituted, dipole moments, ab initio MO calcs. 7−109739
benzoic acid, decarboxylation in aq. soln., ab initio STO-3G calcs. 7−119509
benzyl alkyl ketones, conform., internal rot., PMR, ab initio MO calcs. 7−90191
bicyclo[2.2.1]heptanes, and derivatives, struct., ab initio HF MO calcs. 7−129583
bicyclo[3.3.1]nonane, conformers, ab initio STO-3G calcs. 7−109738
bifurans, mol. configs., STO calcs. 7−68201
biphenyl derivatives, long-term $^{13}C,^{19}F$ and $^{19}F,^{19}F$ coupling consts., mechanisms 7−82213
bond orbital parameters, direct calc. *(Chinese)* 7−122329
bond orbitals, approx. calc., applicability to solids *(Chinese)* 7−105353
borinine, struct., vibr., ab initio MNDO STO calcs. 7−89967
butane, fluorinated, core-level XPS spectra, ab initio calcs. 7−122327
(+)-car-3-ene, conform., fully optimised STO-3G structs. 7−109741
chloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
cyclopentadienyl cations, N and B substitution, mol. struct., ab initio MINDO/3, MNDO, STO calcs. 7−96547
cyclopropane, saturated cycle struct., oscillatory anal. 7−141447
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7−125725
diatomic molecules orbitals, relativistic Dirac-Fock-Slater calcs., basis set errors anal. 7−141452
dichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
2,5-dimercapto-1,3-4-thiodiazole, tautomeric forms struct., ab initio STO calcs. 7−96536
ethylbenzene, struct. and internal rot. in solns., PMR and MO investig. 7−103532
ethylene dimer and trimer cations, ab initio study, counterpoise correction 7−109743
fluorene, derivatives, long-term $^{13}C,^{19}F$ and $^{19}F,^{19}F$ coupling consts., mechanisms 7−82213
four-centre integral with Slater orbitals, anal. computer calcs. 7−103385
furylpyrroles, mol. configs., STO calcs. 7−68201
heterocycles, 3 member, N bearing, struct, oscillatory anal., ab initio calc. 7−141446
histamine and derivatives, tautomerism, ab initio MNDO and MINDO/3 calcs. 7−116855
hydrogen diformiate complex, active site model for aspartyl proteinases, ab initio calcs. 7−81960
N-hydroxy-2-alkenals, conform. and struct. analyses 7−86899
I-102, conform. and electrostatic props., ab initio PCILO calcs. 7−78733
methane, total energy, random walks, quantum chemistry 7−89934
3-methylene-1,4-pentadiene, mol. mechs., ab initio MO calcs. 7−81982
molecular electrostatic pot., multipole expansion technique, STO calcs. 7−74405
octatetraene, isoelectronic cpds., struct., longit. electric polarisability, ab initio STO calcs. 7−116847
overlap integrals, eval., Lowdin α-fn. method 7−74437
[5]paracyclophane, mol. struct., ab initio mol. quantum mech. calcs. 7−109709
phenol, para-substituted derivatives, internal rot. barriers, STO 3G MO calcs. 7−109753
phenylacetaldehyde, conform., internal rot., PMR, ab initio MO calcs. 7−90191
polyethylene surfaces, conform. signature, valence XPS, ab initio STO calcs. 7−92825
propanenitrile, H bonded complexes, ab initio calcs. 7−109730
pteridine, N-heterobicyclic π system, inter-ring coupling effects anal. 7−89916
STO calculations continued
small polyatomic molecules, angular geometry, ab initio STO-3G bond orbital calcs. 7−96502
tetrachloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
third-row diatomics, total and orbital energies and multipole moments, LCAO HF STO calcs. 7−81919
transition metal complexes, stability consts., extended CNDO/2 method calcs. 7−103396
trichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
two-centre Coulomb and hybrid integrals, unified anal. evaluation 7−89896
zerolites, bridging OH group vibr. freqs., struct. and chem. effects 7−111789
B to Ca, STF HF wave fns. calc. 7−81995
BaO, vapour phase, UV photoelectron spectra, orbital calcs., dissoc. energies, chemielectron spectra 7−141625
H^-, SCF calcs. using scaled STO basis sets 7−68196
HCN, H bonded complexes, ab initio calcs. 7−109730
H_3PO isomers, H^+ transfer, ab initio STO calcs. 7−93272
Li^+, SCF calcs. using scaled STO basis sets 7−68196
N_2, STF HF wave fns. calc. 7−81995
Ni-lite ions, excited state transitions, Slater-Condon-type calcs. 7−141451
P_2, STF HF wave fns. calc. 7−81995
PdX (X=C, Si, Ge Sn), LCGTO MP LSD calcs. 7−109694
S_4^{2+}, Lewis valence band struct., STO calcs. 7−109785
S_2N_2, Lewis valence band struct., STO calcs. 7−109785
Si^{12+}, doubly excited, atomic parameters, Hartree-Fock-Slater model calcs. 7−116876
SrO, vapour phase UV photoelectron spectra, orbital calcs., dissociation energies, chemielectron spectra 7−141625
$Te_2O_7H_6$ mol. cluster model of V_o centre, RHF-SCF electronic struct. calcs. 7−117113
Xe, slow electron elastic scatt., quasirelativistic calcs. 7−122381

stochastic processes
see also random processes
ϕ_6^3 theory, Langevin renormalization of Green's fns. 7−108808
acoustic pressure pulses in near subcavitating range, stochastic behaviour 7−130755
additive and multiplicative noise, Fokker-Planck model 7−80644
adiabatic thermal explosion, stochastic anal./molecular dynamics simulation comparisons 7−139012
aggregation, controlled, on square lattice 7−95497
anharmonic crystals and their surfaces, stochastic forces, phonon excitations 7−112054
anharmonic oscillator at finite temp., quantum and classical stochastic calcs. comparison 7−140608
anisotropic aligned fluids, Raman band shape anal. and mol. inertia motion 7−68328
approximation formulae for stochastic eigenvalues 7−128461
approximations of the 3-particle Toda lattice 7−67248
atmosphere circulation, effect of stochastic perturbations on low-order spectral model 7−79556
atoms, classically stochastic many-photon absorpt. processes, scaling 7−74525
autocatalytic reacting system, white noise perturbed, transient props 7−106782
autocatalytic reaction systems, stochastic model for quasistationary distribs. 7−78457
Bayesian estimation, nonlinearly interacting stochastic variables, partial obs. method 7−89124
Bernstein-Von Mises theorem convergence rate, diffusion processes 7−134705
birefringent fibre with periodic coupling, spatial polarisation chaos 7−82817
birth, death and immigration processes, linear surprisal, maximal entropy 7−80640
bistability driven by Gaussian coloured noise, first-passage times 7−95476
Blume's stochastic model approx. by asymptotic models for PAC relaxation anal. 7−118910
boson-fermion equivalence and stochastic calculus 7−80595
bosonic field theories, instantons in stochastic quantisation 7−102625
Brownian particles, escape over pot. barrier, Langevin eqn. solns. *(Chinese)* 7−95508
bubbling fluidised beds, generalised master eqn. appl. to bubble population 7−123735
CANDU-CANDU (Th/Pu)-LMFBR(PuO_2) nuclear power system, optimisation using stochastic approach 7−129133
cantori analytic fractal dimension 7−73222
cavitation, desinent, stochastic behaviour 7−69235
center manifold reduction and normal form transformations in systems with additive noise 7−108409
centre manifold treatment for subcritical inverted bifurcation, intrinsic fluctuations 7−120939
chaos, optical, definitions, measuring characteristics, review 7−134674
classical fluid, stochastic dynamics of a test particle in fluids with weak long-range forces 7−104512
coagulation equation, classes of exact solitons 7−72927
comets, stochasticity in the Kepler problem, dynamical chaos model 7−88209
complex fermionic and spin path integrals, alternative parametrisation 7−121345
complexity, rate of energy exchanges and stochasticity 7−80584
condensed phases, curve crossing phenomena, stochastic dynamic models 7−93249
conference, critical phenomena, random systems, gauge theories, Les Houches, France, (Aug.-Sept. 1984) 7−66826
conference on fluctuations and stochastic phenomena in condensed matter Barcelona, Spain (May 1986) 7−134359
continuum Euclidean Yang-Mills field theory, stochastic quantisation 7−73500
controlled diffusion processes, stochastic stabilisability 7−89162
convergence of measurement *(Polish)* 7−73309
convergence of nuclear and correlation operators in Hilbert space 7−115835
coordinated biological motion, nonequilibrium phase transitions 7−145123
cosmology, stochastic processes in radiation filled de Sitter universe 7−146125

stochastic processes continued
coupled rotators 2D system, phase transform., Lyapunov charact. exponents 7−121031
crack growth curves, const. probability, under const. amplitude loading 7−97414
diffusion, anomalous, stochastic pathway 7−95475
diffusion in symmetric bistable pot., variational approach 7−73287
diffusion processes with singular drift fields using stochastic differential eqns. 7−89157
disordered fermions, stochastic quantisation approach 7−102212
disordered nonequilibrium system, fluctuation-dissipation theorem 7−89121
dissipative, collective and stochastic motion in TDHF theory 7−89548
drain system for town, modelling of stormwater flow 7−120054
Duffing oscillator, resonance mechanism, analogue simulation 7−134676
Eden growth, surface width exponents, scaling behaviour 7−134684
Einstein-Cartan gravitational action, torsion term, stochastic geometry, N=1 supergravity 7−89082
enhanced diffusion, Levy dynamics, appl. to turbulence 7−69111
enhanced electron stochasticity from electrostatic waves in a sheared magnetic field 7−83458
far-from-equilibrium systems, homoclinic orbits and mixed-mode oscillations 7−134658
fast simulated annealing as stochastic process 7−120950
fatigue crack growth, retardation effects under random overloads 7−97418
fatigue life prediction under Gaussian load processes, rain flow cycle distrib. 7−138815
Fermi field, stochastic quantisation, fermions as solitons 7−67475
finite Markov chain, stationary distrib., aggregation/disaggregation methods 7−140617
finite temperature field theory from stochastic mechanics 7−81008
Fokker-Planck eqn., geometrical derivation from intrinsic Langevin eqn. and stationary distrib. 7−73288
fractal distribution of galaxies modeled by a cellular-automation-type stochastic process 7−115598
fracture trajectories, stochastic and fractal anal. 7−123531
functional integral approach to bistability in the presence of correlated noise 7−140602
general relativity, stochastic quantisation 7−67160
generalised Langevin eqn., chiral anomaly, stochastic derivation, fermion field, vector current conservation 7−128787
generalized Brownian motion and elasticity 7−134659
geodetic network observations, accuracy problems, stochastic model 7−79718
glass-forming liqs., stochastic processes, freezing, and viscosity calcs. 7−98538
grain growth model 7−111575
gravitational radiation background, obs. via terrestrial detectors 7−127713
groundwater flow with stochastic hydraulic conductivity 7−127307
Hamilton-Jacobi-Bellman eqns., asymptotic formula for solns. 7−80618
Hamiltonian systems, Liapunov exponents theory, transition from regular to irregular classical motion 7−115899
harmonic functions, stochastic approach to quasi-everywhere boundary convergence 7−80608
harmonic oscillator in a photon reservoir, stochastic evolution 7−102200
Henon-Heiles Hamiltonian, second-order adiabatic representation 7−128440
heterogeneous materials, fatigue crack growth, stochastic model 7−75417
hidden supersymmetry, equivalence of stochastic quantisation to field theory 7−108800
hydrodynamics, autonomous equations, microscopic origin, derivation and consequences 7−83163
hydromagnetic dynamo in random stream, mathematical theory *(Russian)* 7−102172
integro-differential problems of second order, Green function and invariant density *(French)* 7−66923
intramolecular energy redistribution and stochasticity, conf., Orsay, France (June-July, 1986) 7−134365
invariant circles in standard-like mappings, erratic behaviour 7−108421
invariant curves, existence in area-preserving maps 7−108192
ion movement in channels with single-ion occupancy, stochastic theory 7−133241
ionic reactions, diffusion controlled, in radiation-induced spurs, stochastic models 7−138993
irreversible beam dynamics in phase space, generalized Langevin eqn. *(Chinese)* 7−96416
Ising models, logarithmic Sobolev inequalities 7−95492
kinetic theory of gas molecules in EHV environment, stochastic model 7−137045
Kolmogorov entropy of the stadium billiard 7−134709
Kubo oscillator, numerical simulation algorithms for multiplicative noise 7−108404
Langevin dynamics in d-dimens., Fokker-Planck eqn. equivalence and imaginary time Schrodinger eqn. 7−134678
large deviation problems in stochastic differential eqns. 7−66965
lattice gauge theories, stochastic models 7−95767
lattice gauge theory, hybrid stochastic simulations 7−67476
lattice gauge theory, stochastic quantisation of Wilson fermions 7−134936
layered neural network, stochastic dynamics, exact soln. 7−134651
Levy walks, turbulence and chaos appl. 7−80636
linear chain and ring-type random walks, theoretical description of shape 7−128456
linear elastic beam, stochastic vibrs., correlation of exciter field process *(German)* 7−104202
linear stochastic eqn. with quadratic noise, anal. 7−108405
linear surprisal and stochastic process, Fokker-Planck equation 7−121017
liquid crystals, stochastic molecular orientational fluctuations, incoherent cold neutron scatt. studies 7−91431
Lorentz gas, lattice model, time-depend. props. 7−140640
Lorenz strange attractor, analogy with bistable stochastic oscillator 7−73208
m-dimensional diffusion, first hitting times and positions of concentric spheres, limit theorems, stat. appls. *(French)* 7−95510
magneto-turbulent plasma, charged particles relative spatial diffusion, global anal. 7−97709
measurement in stochastic electrodynamics *(French)* 7−140478
meteorology, integral time scale estimation from time series autocorrelations *(German)* 7−79536
minimal chaos and stochastic webs 7−80617

stochastic processes continued
Minkowski stochastic quantisation, thermal equilib. and Fokker-Planck distrib. 7−73232
molecular chains with chaotic traps, hopping excitation energy transport *(Russian)* 7−125806
molecular mechanics energy surfaces, stochastic exploration 7−109710
monotonicity property of various measures of entropy and directed divergence 7−67260
Morse oscillator driven by impulse interactions, dissociation dynamic 7−67212
motion-blurred image processing 7−96948
multicomponent systems, kinetic phase diagrams 7−124452
multiplicative stochastic processes involving the time derivative of a Markov process 7−67197
neutron counting statistics in nuclear assemblies, stochastic transport theory 7−73822
neutron stochastic transport theory with delayed neutrons 7−135389
non-Abelian gauge field theory, background field method in stochastic quantization 7−108767
non-Markovian processes, first-passage times and multivalued noise 7−128451
non-Markovian processes, relax. times, stochastic diff. eqns. 7−102308
non-negative reducible matrices, stochastic powers 7−95209
non-steady stochastic excitation processes, effects on system response variances *(German)* 7−102316
nonabelian gauge theories, stochastic regularisation, Yang-Mills appl. 7−89341
nonanalytic stochastic potential, for local codimension-two bifurcation 7−80622
nonequilibrium ensemble, entropy irreversible production 7−95529
nonequilibrium statistical mechanics, time-local view, generalized Langevin eqns. 7−73180
nonequilibrium systems, patterns, defects, microstructures, conf., Austin, TX, USA (March 1986) 7−115691
nonfull-rank multivariate stationary stochastic processes, predictor and generating function 7−128459
nonideal flow, unsteady-state age distrib., Fan-Nasser model appl. 7−123821
nonlinear damped mechanical systems, non-steady reaction to stochastic excitation *(German)* 7−102315
nonlinear dynamical systems, numerical simulation of weak colored noise effects 7−73211
nonlinear Fokker-Planck eqn., stable nonequilibrium probability density and phase transition in thermodynamic limit 7−73290
nonlinear irreversible processes and negative differential resistivity, variation principles, stochastic thermodynamics 7−108505
nonlinear kinetic Fokker-Planck eqn. soln. *(Russian)* 7−83391
nonlinear mechanical systems, transformation operator method in parametric identification problem 7−95302
nonlinear oscillations in physical systems, decomposition method 7−134664
nonlinear parabolic stochastic differential eqns. with noise, stochastic quantisation 7−89116
nonlinear random vibration problems, appl. of complex stochastic averaging 7−134468
nonlinear random vibration problems, generalisation of equivalent linearization method 7−134467
nonlinear stationary stochastic processes identification, identifiability conditions *(Russian)* 7−80393
nonlinear stochastically excited systems, linearisation methods applicability *(German)* 7−102319
nonMarkovian collision processes, abstract formalism and asymptotic props. 7−115900
nonrelativistic particles, depolarisation, isotropic nonmagnetic substance 7−143419
objective interpretations of quantum mechanics and the possibility of a deterministic limit 7−102198
ocean, turbulent motion theory *(Italian)* 7−139624
one-dimensional stochastic medium, radiation transfer 7−89161
optimal network kinetics, formulation of principle of least time, appl. to variable range hopping conduction 7−89123
oscillation perturbed by plane wave, stochastic layer and web formation 7−102307
oscillators, nonlinear chain, stochastic dynamics, Poincare method 7−72949
overdamped oscillator linked to adsorbing surface, Langevin dynamics 7−134565
parameter identification in quantum mech., filtering theory appl. 7−140504
parameter identification using stochastic mechanics, filtering theory appl. 7−140503
parametric oscillators, analogue simulation, expts. 7−80643
parametric oscillators, analogue simulation theory 7−80642
Parisi-Klauder algorithm for complex actions in stochastic quantisation 7−140538
parity-violating anomalies from stochastic quantization 7−116094
partial differential eqn., stochastic, with multiplicative noise 7−120949
periodic windows, symbolic dynamics and systematics 7−80635
perturbative nonlinear random diffusion from stochastic integral representations, statistical props 7−128504
phonon reservoirs, relax., thermal equilib. approach stochastic theory 7−128433
plasma passive advection transport by inhomogeneous turbulence, upper bounds 7−142466
plasma torus, stochastic stability 7−69344
pointlike sources, stochastic system, light propag. in weak gravit. field 7−140562
poloidal divertor separatrix, stochasticity 7−83520
polyacetylene, stochastic adaptation of microcanonical simulation method 7−89111
Polyakov string theory, stochastic quantization and random surface approach 7−108885
polymer insulators, nonequilib. charge carrier transport, stochastic description 7−124981
population dynamics in fluctuating environment, stochastic Verhulst eqn., perturbation calcs. 7−108401
probe absorption by an atom in a strong finite-linewidth laser field 7−74524
QCD_4, Langevin renormalization of Green's fns. 7−108808
quantisation, Parisi-Wu approach, quantum field theory, string theory, QED, review 7−140822

stochastic processes continued
quantisation, regularisation and renormalisation 7−73053
quantisation, symmetries and Ward identities 7−102596
quantisation of spin 3/2 field *(Chinese)* 7−102587
quantisation of system under constraints, phase space formulation 7−120874
quantum Langevin equation for Brownian particle coupled to heat bath 7−95460
quantum theory, stochastic mechanics, unified treatment of microscopic and macroscopic domains, macroscopic limit 7−120857
quasiperiodicity-chaos transition, perturbation theory anal. 7−80632
rain intensity, models of stochastic point processes 7−79545
random vibrations of mechanical structures, mathematics, book 7−128464
random-field Ising model, 1D, discrete stochastic mappings, fractal dimens., invariant measure 7−125294
relaxation properties of the mixmaster universe 7−115920
relaxation times in the presence of external dichotomous noise 7−140614
resonance overlap criterion and deformation of separatrices 7−89134
ring laser model, with swept parameter and additive coloured noise, postponed bifurcations 7−141900
sawtooth maps and cat maps, linear code 7−134479
school of coherent optics, Ustron, Poland (Sept. 1985) 7−66804
Schrodinger operator spectral theory, stochastic methods, Feynman-Kac formula, continuous spectra, Hilbert-Schmidt properties 7−140487
sea-wave crests, two-scale stochastic model 7−72100
second order Langevin equation and numerical simulations 7−80986
self-excited oscillator, chaotic modes, determinism 7−120965
self-similarity, dynamical and stochastic systems, statistical-thermodynamics formalism 7−128492
semiconductors, coherent nonlinear effects, optical turbulence and stochasticity, coherent excitons, photons and biexcitons 7−68742
Silov boundary, stochastic approach 7−140606
simultaneous linear model, limit theorem, simultaneous stochastic difference eqns. 7−102101
sine-Gordon solitons, energy emission, quasi-classical quantization and stochastic decay 7−115807
sine-Gordon type equations, intermittent oscillations *(Japanese)* 7−80641
Smoluchowski diffusion in infinite system, evolution and thermodynamics in Langevin model 7−95525
soliton motion in fluctuating parameters medium 7−128301
spectral representation of semistable processes, and semistable laws on Banach spaces 7−66983
specular gas reflection, stochastic law derivation 7−75742
spin systems, dissipative, dynamic crit. phenomena, centre-manifold renormalisation 7−102309
square integrable Hilbert-valued martingales, stochastic integration *(French)* 7−72920
stationary stochastic process in discrete time with discrete space, mean recurrence time 7−95469
Stefan problem, stochastic, one phase, optimal control 7−97279
Stefan systems, one-phase, stochastic, estimation problems 7−83013
stochastic differential equations, setwise convergence of solution measures 7−72922
stochastic dynamical systems, nonlinear, transient behaviour 7−128441
stochastic processes on fibre bundles 7−67084
stochastic quantisation and Killing symmetries of random systems 7−80623
stochastic Shilnikov maps, noise effects on chaotic dynamics 7−80613
stochastic transfer equation, perturbation method appls. *(Russian)* 7−108426
stochastic web and diffusion of particles in a magnetic field 7−104379
structural components, fatigue crack propag. under stationary random loading, reliability degradation 7−124384
SU(2) gauge theory, functional stochastic quantisation 7−116054
supersymmetric σ models, Euclidean superfield quantisation and noise in superinstanton eqns. 7−67492
surface Love wave propag. in random layered elastic medium 7−120821
symposium on statistical mechanics of phase transitions, Trebon, Czechoslovakia, (Sept. 1986) 7−120693
system theory-statistical mechanics link through Kolmogorov entropy 7−134636
temporal evolution, group theoretical formulation 7−80631
time-reversible Liouville equation, constraints, stochastic order parameter, Rayleigh-Benard cell 7−140613
toroidal magnetic confinement fusion device, mag. field lines struct., Hamiltonian stochasticity 7−130918
tropolone, tunnelling dynamics, fluctuations, stochastic Liouville eqn. 7−129626
two parameter Wiener space, stochastic integration formula 7−128460
two-level system, vibronic transition, stochastic description *(Chinese)* 7−129687
vector field theory, Minkowski stochastic quantisation appl. 7−108803
vibrations, simulation, estimation and stability *(German)* 7−102312
von Neumann algebra, finite dimensional, doubly stochastic operators 7−88824
wave transmission across a random medium, localisation, invariant imbedding approach 7−80442
weak natural vertical VLF magnetic field, charact. determ. by statistical modelling 7−101638
weakly coloured noise, stochastic calculus 7−95472
weakly random medium, HF coherence functions, diffr. theory 7−68531
Weyl formalism and quantum stochastic processes 7−67188
white noise excited mechanical systems, identification by positional quantities meas. *(German)* 7−102317
Wiener-Hopf factorisation operation, continuity 7−88927
Wigner-Weisskopf atom, quantum stochastic calculus, dilation scheme, two-level atom. 7−140508
Yang-Mills theory, stochastic quantisation, gauge-fixing parameter dependence, equilibrium limit, gluon-selfenergy 7−121362
Zwanziger gauge fixing, Langevin renormalization 7−108808
^{9}Be, neutron multiplicity in fusion blanket, stochastic processes 7−135544
GaAs:Cr, spontaneous stochastic current oscills., dynamic model studies 7−137992
$(GaAs)_{1-x}Ge_{2x}$, struct. model, energy gap, consequences of stochastic growth process 7−83923
$(GaSb)_{1-x}Ge_{2x}$, struct. model, energy gap, consequences of stochastic growth process 7−83923
H ground state as a zero-point-fluctuation-determined state 7−103377
YIG slab, domain wall generation in high-amplitude AD field, self-oscill. regime 7−118823

stochastic systems
see also random processes
astrophysical fluids, Alfven mode damping 7−88095
atmosphere circulation, effect of stochastic perturbations on low-orde spectral model 7−79556
Boltzmann eqn., approx. soln. using stochastic diff. eqns. *(Russian* 7−80709
climatology, periodic forcing rel. to long-term climatic variability an chaotic dynamics 7−79582
climatology, quadratic temp. iteration for El Nino/Southern Oscillatio 7−87660
degenerate diffusions, unique ergodicity 7−95524
geophysical prospecting, potential fields calc. for stochastic models of hete rogeneous geological objects 7−79653
glasses, impurity optical linewidths and photon echo decays, stochasti model anal. 7−75081
gravity field of horizontal layer of Poisson random sources, stochasti props. 7−87434
group theoretic approach to disordered systems 7−128447
magnetic field of horizontal layer of Poisson random sources, stochasti props. 7−87434
ordered struct. generation with symm. axis from Hamiltonian dynamic 7−80687
semiconductor nonparabolic band, cyclotron reson. absorpt. coeff. calc 7−70161
spiral galaxies, stochasticity and regularity 7−72615
Stefan systems, one-phase, stochastic, estimation problems 7−83013
stock control data processing
see also computerised materials handling
nuclear material loss detection in sequence of accounting period 7−109419
nuclear materials accountancy, diversion detection calcs. using SITMU sequence and Page's test 7−109423
nuclear materials accountancy, near real time in reprocessing plar 7−109418
nuclear materials accountancy, near real time with PROSA prograr 7−109422
nuclear materials accountancy computer package, CIMACT 7−109420
nuclear materials inventory control, near real time accountancy 7−10941
nuclear materials real time accountancy DP system, statistical ana evaluation 7−109416
Stockbarger method *see crystal growth from melt*
Stokes flow *see flow*
Stokes law (fluid mechanics) *see flow*
Stokes law (optical) *see luminescence*
Stokes lines *see spectra*
Stokes optical law *see luminescence*
Stoneley waves *see surface acoustic waves*
stopping of particles *see energy loss of particles*
storage media
In-Se based phase change reversible optical recording film 7−75090
magnetic recording media, conf., Parma, Italy (Sept. 1986) 7−80148
magneto-optical disc storage using polycarbonate substrates 7−110287
magneto-optical discs, amorphous C dielectric coatings 7−110288
magneto-optical discs, antireflection thin films 7−110290
magneto-optical storage, effect of incident angle on readout 7−103768
optical disc media defects effects on error detection and correction an disc longevity 7−75088
optical disc storage, birefringence effects 7−82504
optical disc storage, high-density frequency-domain optical recordin 7−82503
optical disc substrate, moulding compounds, minimal birefringenc 7−77506
optical discs, laser-induced hole formation, FEM model 7−110289
optical discs, PbTeSe thin films, optical write-read charact. with pit-edg recording 7−103772
optical discs, readout power dependence on thin-film magneto-optic medi properties 7−103767
optical frequency-domain storage, photon-gated materials 7−110292
optical mass data storage, conf., San Diego, CA, USA, (Aug. 1986 7−74879
optical organic dye-binder recording media, influence of melt viscosity o writing sensitivity 7−103914
optical storage, conductive polymers as active media 7−110490
optical storage, conf., Stateline, NV, USA (March 1987) 7−102017
optical storage, erasable and write-once phase-change media 7−103912
optical storage, erasable bilayer dye-polymer medium 7−110489
optical storage, erasable media, optical and thermal anal. 7−110291
optical storage, wavelength-multiplexed-recording materials, Japanes research 7−110493
optical storage, write-once phase-change media 7−103913
optical write-once phase-change recording in GaSb 7−103771
organic optical storage medium, dynamic laser marking 7−74881
polycarbonate substrate for magneto-optical disc, optical anisotropy effe on CNR 7−77507
AlN/GdTbFe/AlN/Al magneto-optical disc 7−74882
Bi/Se multilayer thin films, optical recording 7−74880
Fe-Tb multilayers, magnetic properties and structural charactn. 7−11290
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characteriz tion 7−77387
Sb-Se-Bi film, erasable optical disc media 7−75089
Te-Ge-Sn-Au phase change recording film for optical disk 7−76706
Te-TeO_2:Pd write-once media for optical discs 7−75087
storage modulus *see elastic moduli*
storage organisation *see file organisation*
storage rings
±16° superconducting beamline switching magnet, construction and tes ing 7−129487
advanced accelerator concepts, conference, Madison, WI, USA (Aug 1986) 7−120682
Aladdin, 1 GeV electron storage ring synchrotron light source 7−96408
Antiproton Collector, nonlinear betratron oscillations 7−81796
antiproton gravitational acceleration meas. at CERN LEAR facilit 7−96410
atomic physics experiments with stored cooled heavy ion beams 7−89808
atomic physics with synchrotron radiation and heavy-ion storage rin 7−110133
beam extraction with electron pick-up 7−96459
beam-beam effects 7−116749

storage rings continued
BESSY XUV synchrotron radiation facility 7−108722
Bonn electron accelerators and synchrotron radiation laboratories 7−108724
Celsius accelerator in Sweden *(Swedish)* 7−81775
CERN accelerator school on advanced accelerator physics, Oxford, England (Sept. 1985) 7−115668
CERN Large Hadron Collider 10 T superconducting dipole magnets, permanent magnet passive compensation 7−129471
CERN $\bar{p}$ accumulator, $\bar{p}$ production and accumulation 7−81772
CERN $\bar{p}$ accumulator ring and ACOL, design 7−81814
CERN $\bar{p}p$ collider complex, RF systems 7−81773
charged particle optics, conference. Albuquerque, NM, USA (May 1986) 7−128177
chromatic effects and their first-order correction 7−116746
chromaticity optimization by tuning in large collider rings, SSC and LEP appls. 7−68096
coasting beam, nonlinear saturation of longit. modes 7−135720
coherent instability modes 7−81804
combined heavy ion storage ring and synchrotron light source facility 7−96407
compact superconducting SR ring for X-ray lithography 7−96409
conference on heavy ion inertial fusion, Washington, DC, USA, (May (186) 7−66807
CRYRING ion accel/storage ring, ultrahigh vacuum considerations 7−135696
CRYRING project for at. and surface physics study 7−89827
Daresbury Synchrotron Radiation Source 7−108723
Derbenev-Kondratenko formula, generalisation to all values of g 7−129482
dynamic aperture calcs. 7−81798
dynamics of area-preserving maps 7−81800
ECFA Workshop on LEP 200, Aachen, Germany, (Sept.-Oct, 1986) 7−140381
electron, with localised wake force sources, bunch lengthening theory 7−141344
electron dynamics with radiation and nonlinear wigglers 7−116730
electron storage ring, large permanent magnet quadrupoles 7−135695
electron storage ring, synchrotron radiation axis vibration 7−81776
electron storage ring as standard of spectral photon flux *(German)* 7−73315
electron storage rings, equilibrium polarisation calcs. using Lie algebra 7−116741
electron storage rings, low emittance damping rings 7−122259
electron storage rings, statistical mechanics 7−81807
electron storage rings, Unruh effect and quantum fluctuations 7−74317
electron undulating ring for X-ray lithography 7−95695
electrons in cyclic accelerator, synchrotron radiation props. allowing for rectilinear gaps 7−141340
equilibrium polarisation eval. 7−116744
German heavy ion fusion program 7−67960
heavy ion storage and cooler ring project ESR at GSI 7−89810
heavy-ion storage-cooler ring for at. physics study 7−89302
heavy-ion storage-cooler rings, aims and perspectives 7−122267
Hefei National Synchrotron Radiation Laboratory, China 7−108725
Heidelberg Test Storage Ring, atomic physics expts. 7−89809
HERA, fast luminosity monitoring 7−103324
HERA project, prototype He transfer line 7−74301
HERA proton storage ring, cold yoke superconducting dipole magnet config. 7−129481
HIBALL heavy ion ICF scenario, Xe^+ beam losses in storage ring due to charge changing 7−81766
high gas loads in UHV systems, CERN LEAR experience 7−134781
HISTRAP proposal, Heavy Ion Storage Ring for Atomic Physics 7−89811
ion accelerator, study of a microparticle internal target for a cooler ring 7−109566
ion trapping study, photon factory storage ring, electron-ion bremsstrahlung meas. 7−74295
LEAR, low energy antiproton physics 7−89513
LEP, CERN high energy particle research *(German)* 7−96404
LEP, data logging and database management of geodetic meas. 7−74308
LEP, high precision geodesy applications 7−79721
LEP, physics at 100 GeV 7−95819
LEP, vertical deflections and geoidal undulations, computational methods 7−74304
LEP accelerator, RF synchronisation using feedback phase control system 7−116728
LEP at 200 GeV, scaling laws, performance, energy uncertainty, beam lifetimes, review 7−141346
LEP collider, underground geodesy 7−79722
LEP injection system, high tension burst pulse generator 7−74298
LEP installation, applied metrology, computing and anal. methods 7−74307
LEP installation, computer aided geodesy 7−74305
LEP installation, instrumentation and metrology 7−74306
LEP preinjector vacuum systems 7−135691
LEP trilateration network using GPS precision levelling 7−79719
LEP upgrading using superconducting cavities 7−141347
LHC at CERN, status of studies 7−122266
longitudinal dynamics in storage rings, single-particle equations of motion 7−141341
multiple head residual gas analyser for Daresbury SRS electron storage ring 7−134754
muon colliders, collection and cooling problems 7−122258
NESTOR, use in neutron lifetime meas. 7−68166
NSLS, UV and X-ray rings, vacuum performance 7−135690
NSLS vacuum chamber, photon stimulated desorption 7−135692
optics principles for design 7−81793
permanent magnet systems for special tasks, accelerator appl. 7−81811
photon factory, status 7−109550
photon stimulated desorption in vacuum duct, angular distrib. obs. using unidirectional detector 7−135693
polarisation origin and buildup 7−116743
proton storage rings, applications of particle tracking 7−116764
radiative polarisation of electrons and positrons 7−89822
relativistic beam bunch length in storage ring, vacuum chamber struct. interactions *(Japanese)* 7−129950
resonance injection method for the compact superconducting SR-Ring 7−96435
RF linac and storage ring system for high current expts. at GSI, ICF appls. 7−68036
scaling considerations in design 7−81767
scientific opportunities at the proposed 6-7 GeV Advanced Photon Source 7−89817
self-polarization of protons in storage rings 7−81825
short-wavelength operation of a storage ring free-electron laser 7−74943
SOR-RING, 0.38 GeV electron storage ring, operation, appls. 7−109549
SPS, peak luminosity and luminosity lifetime 7−81774
SSC 4.5 m reference design D dipole heater-induced quenches 7−129466
SSC 5 cm aperture dipole studies, design B dipoles 7−129474
SSC dipoles, transverse quench propagation measurement 7−129468
SSC dipoles end sections, field quality 7−129475
SSC full-scale dipole magnet cryostat thermal model, design, construction, and test 7−129465
SSC magnets, control of fields due to superconductor magnetisation 7−129469
SSC magnets, effects of filament magnetization in superconducting magnets as calculated by POISSON 7−129470
SSC magnets, suspension system design 7−74302
SSC reference design D dipole magnet, active quench protection strip heaters 7−129467
SSC superferric magnets, critical props. meas. monitoring 7−129472
strongly curved supercond. mag. effect on storage ring optics 7−89842
superconducting cavities for high energy accelerators, fundamental features 7−116731
Superconducting Super Collider, full-length dipole magnets, cold mass assembly construction 7−129478
Superconducting Super Collider, high field uniformity magnet development 7−129479
Superconducting Super Collider accelerator facility, development and programs 7−129476
Superconducting Super Collider dipole magnet, prototype test results 7−129477
Superconducting Super Collider model magnets, 1.8 K non-quench training study 7−129480
synchrobetatron sideband overlap in electron-positron colliding beams 7−81799
TARN-2 heavy ion acceleration and cooling ring for ICF expts. 7−67966
TRISTAN, 3 T superconducting solenoid for AMY particle detector 7−129473
ultrahigh vacuum systems for storage rings and accelerators 7−81769
UVSOR facility, Okazaki, Japan, beam lines 7−109551
vacuum chamber ConFlat joints, reliability limits in ultrahigh vacuum 7−135694
X-ray microdiffraction with synchrotron radiation 7−96434
Al vacuum chamber, synchrotron radiation induced gas desorption, cleaning techniques comparison 7−134760

storage tubes
see also image storage tubes
No entries

storms
see also thunderstorms
Appalachian 1980 January 13-14 ice storm, United States, 24 hr numerical simulation 7−133869
Appalachian ice storm due to cold-air damming, synoptic and mesoscale aspects 7−114968
Arabian Sea-Bay of Bengal region monsoon boundary layer temp. and wind characts. 7−101372
E Asia coastal cyclogenesis, numerical case study 7−114963
Australia, intense monsoon depressions 7−114956
Australia region, 1985-6 tropical cyclone season 7−139670
British Isles, appl. of satellite imagery to studies of cold fronts and cyclogenesis 7−114951
Canadian Atlantic Storms Program, meteorological field project 7−115015
Chinese marginal seas, influence of typhoons on China coastline 7−94195
CISK in a generalised continuous model 7−145612
coastal storm surge due to hurricane Gloria at N Carolina coastline 7−79447
coastal storm surges due to hurricanes, numerical forecast model 7−87701
Colorado, USA, convective storms, graupel melting studies, multiparameter radar meas. 7−79670
NE Colorado, USA, snowstorms, orographic effects 7−127393
N Colorado mountains, USA, cloud ice and precipitation during winter storms 7−145625
columnar vortices, review 7−120106
convective storms, deep convection and turbulence modelling 7−79504
convective storms, Doppler radar sampling limitations 7−127548
convective storms, dual-Doppler radar meas. 7−127549
convective storms, polarization radar studies of precipitation development 7−127438
convective storms, triple-Doppler radar meas. 7−127550
cumulus parameterization for use at mid-latitudes, incorporating cloudtop entrainment 7−127430
explosive cyclogenesis favorable environments, modified two-layer Eady model 7−101457
cyclone, role of convection 7−114928
cyclone of 1984 June 8-10 over European USSR, energetics 7−133860
cyclone of Bay of Bengal, radar study during 2-6 October 1983 event 7−114942
cyclones and anticyclones evolution, num. investig. 7−114863
cyclones and anticyclones over E Asia and W Pacific surface forecast comparisons 7−101435
cyclones and depressions over India (1985) 7−114927
cyclones motion, nested grid scheme for isolated vortex movement prediction in barotropic model in barotropic model of atmosphere 7−133856
Czechoslovakia, severe winds of 23-24 November 1984, observations 7−127450
deep convective storms, vertical vels., multiple-Doppler radar meas. accuracy 7−114871
dust storms in Australia (1957-84) 7−145582
England-Wales, 1986 November 20-21, Meteosat and radar rainfall imagery interpretation 7−79524
NW Europe continental shelf, extreme storm surge currents 7−145475
extended coastal frontogenesis, USA East Coast case study 7−101429
extraoptical cyclones, computer pattern analysis method for satellite images 7−115093

storms continued
extratropical cyclone over E China Sea and W Pacific, mid February 1975 AD 7−127428
extratropical cyclones of east coasts of continents, available potential energy and kinetic energy study 7−139698
flood control, hydrologic model use as policy statement 7−120042
S Florida, heavy rain embedded microburst, assoc. features 7−145638
forecasting, expert system knowledge representation 7−127344
Fort Wayne, Indiana, USA, precipitation chem. meas. from OSCAR high density network expt., inter-storm comparisons 7−94336
Greenland Sea, effect of storm on dynamics and thermodynamics of ice-upper ocean system 7−133715
Gulf Stream surface currents influenced by hurricanes, 3D model 7−127277
hail detection in Colorado convective storms, use of multiparameter radar meas. 7−79671
hail production, role of low-density riming growth 7−133836
hailstones, shape and size distrib., three parameter representation 7−145597
hailstorm parameters normalisation for cloud seeding evaluation 7−145623
hailstorms and hailstone growth, numerical model 7−94376
middle Huang He River area, China, July 1958 persistent rainstorm *(Chinese)* 7−133904
Hurricane Alicia 1983 at landfall, kinematic and thermodynamic changes 7−101428
Hurricane Alicia (1983), inner core vel. and precipitation struct., airborne Dopper radar meas 7−145606
Hurricane Debby (1982), large-scale circulation 7−134014
Hurricane Elena (1985), satellite obs. using VAS 6.7 μm water vapor channel 7−107466
Hurricane Elena (1985), tracking and forecasting with global anal.-forecasting system 7−107467
Hurricane Irene (1981) rainband, struct. and radar reflectivity 7−87858
Hurricane Josephine 1984, ocean swell age and source 7−133746
hurricane max. intensity rel. to climate 7−87863
hurricane path prediction using amateur radio 7−139780
hurricane subcloud layer, thermodynamic budget diagrams 7−127383
India, summer monsoon rainfall empirical prediction 7−127421
India east coast, storm surge model for Kalpakkam area 7−114722
Indian Ocean, water vapour transport during 1979 summer monsoon 7−127418
Indian southwest monsoon, variation of onset over Kerala with solar activity 7−133916
initiation of convective storms at radar-observed boundary-layer convergence lines 7−87854
intense extratropical cyclone system, adiabatic and diabatic forcing 7−133867
Israel, sand and dust storms, review 7−101467
Japan, 1983 July 23 storm, orographically forced upstream lifting effect on mesoscale precipitation 7−127374
Jebel Ali Sailing Club, United Arab Emirates, March 1986 tornadic waterspout, conditions of occurrence 7−101420
Karanja catchment, India, hydrometeorology of rainstorms 7−114824
Kazakhstan, USSR, long-range prediction of hazardous weather phenomena 7−120094
Kuril region, extreme weather and tidal fluctuations of sea level 7−107429
Lake Michigan, lake-induced mesoscale snowstorms, modelling 7−145595
lightning-associated precipitation Doppler spectra transient changes 7−139689
looping tropical cyclones over Indian seas 7−114931
Mahanadi river peak discharge due to heavy rainstorm 7−101385
Meiyu frontal system over Yangtze valley, China, heavy rain and echo struct. of mesoscale systems *(Chinese)* 7−133800
meso-α cyclones source, localized baroclinicity 7−94352
mesocyclone and tornado-like vortex generation by horizontal vel. tilting 7−75591
mesocyclones and tornadic vortex signatures real-time automated detect. 7−127371
mesocyclonic shear automatic detection using Doppler radar 7−127554
mesoscale and severe storm meteorology, review 7−120104
mesoscale convection along the dryline and storm generation 7−145610
METEOR: an artificial intelligence system for convective storm forecasting 7−115073
microburst beneath thunderstorm in Colorado, dynamics and kinematics 7−107459
microwave attenuation and cross polarization in dust storms 7−101384
Nagasaki storm rainfall, July 1982, debris flow statistical investig. *(Japanese)* 7−101353
North Sea, extreme storm surge currents 7−145475
ocean, wind-generated currents during severe storms estimation, use of XCP vel. data 7−79695
ocean coastal area flooding, 3D eqns. of motion in curvilinear coords. *(Russian)* 7−127227
ocean storms, suspended sediment stratification correction for combined wave and current flows 7−127261
ocean wave heights prediction, research and appls. involving directional wave spectra 7−94299
Okhotsk Sea, storm surge estimation by spectral regression 7−87691
Oklahoma downbursts and their asymmetry 7−133829
Oklahoma-Kansas Preliminary Regional Experiment for STORM-Central, results 7−79493
E Pacific, 1981 November 13 explosive cyclogenesis case study 7−87842
Pacific Ocean off California coast, continental shelf storm-dominated bottom boundary layer 7−87667
polar lows, conference, Sundvolden, Oslo, Norway (May 1986) 7−140371
precipitation development along edge of elevated mixed layer 7−101431
prediction of maximum precipitation and flooding in China *(Chinese)* 7−87753
Prescott, Arizona, USA, 1983 September 23-24 rainfall characts. 7−87845
radar monitoring of hailstorms, classification method for potential hailfalls 7−134017
radar reflectivity and surface rainfall correlation 7−145643
rainstorm events, models of spatial and temporal structure 7−72145
Sahara dust storms, 2D numerical anal. 7−94381
sand and dust storms in Israel, review 7−101467
satellite remote sensing for mesoscale and cyclone events 7−115022
severe storm, electricity, kinematics and precipitation of multicell storm 7−79518
storms continued
Sierra Nevada, USA, cloud seeding pot., climatic trends 7−133846
Sierra Nevada deep orographic storms, thermodynamic and kinematic struct. 7−114880
Sierra Nevada storms, precipitation processes 7−114881
NE South Africa, convective storms generation over escarpment 7−114959
South Park region, CO, USA, small mesoscale convective system internal struct. 7−127417
Sri Lanka, monsoon rainfall influenced by volcanic eruptions 7−114908
St. Louis, USA, urban-related nocturnal rainfall anomaly 7−94374
statistical tropical cyclone forecasting techniques for Southern Hemisphere 7−145639
surface runoff, appl. to upland soil erosion model 7−87722
Switzerland, hailstorms, supercooled liquid water drops and ice charact. 7−94395
synoptic-scale cyclogenesis, blocking and nonblocking planetary-scale circulation changes 7−114877
tornado funnels, electrical phenomena 7−133912
tornado hazard model for USA 7−94369
tornado outbreaks due to Hurricane Danny over south-central USA 7−127432
tornado simulations, effects of convection cell geometry 7−114878
tornado-like vortices by Rotunno's numerical model, boundary conditions 7−114906
torrential rain area prediction method *(Chinese)* 7−87751
Trafalgar storm, 1805 October 22 to 29, synoptic anal. 7−127412
E Transvaal, coalescence in convective clouds on flanks of storms 7−87795
tropical cyclone, air-sea interaction theory 7−114901
tropical cyclone, atmosphere/ocean boundary layer interaction 7−87837
tropical cyclone influence on ocean thermal structure 7−114789
tropical cyclone motion, beta effect 7−145604
tropical cyclone motion prediction 7−87851
tropical cyclone remote sensing by enhanced IR imagery *(Chinese)* 7−87754
tropical cyclone tracks in N Pacific, technique for present location 7−127426
tropical cyclones, contrib. of outward flow of ang. momentum to winds strengthening 7−133857
tropical cyclones, diurnal oscillations rel. to net radiation 7−94354
tropical cyclones, island terrain effects, numerical study 7−101430
tropical cyclones during 1986, verification of global model forecasts 7−127413
tropical depression to tropical storm transition, black body temp. and wind field vars. 7−79499
typhoon track forecast expert system, using reasoning based on dynamic knowledge 7−127621
E United States, evolution of 1971 March cyclone 7−87850
United States, N central region, prominent November coldwaves (since 1901) 7−139671
United States east coast continental shelf, suspended matter conc. during storms, optical charact. technique use 7−139581
VAS retrievals, evaluation of various forms for preconvective environment anal. 7−127608
Wadge Bank, Indian Ocean, current meas. over tidal cycle during monsoons 7−72044
Yangtze Valley, China, heavy rain forecast using numerical diagnostic analysis 7−127415

strain ageing
dynamic, review 7−71207
Inconel 625, serrated flow, strain ageing, ladders bands, solute migration to mobile dislocations 7−78138
solid solution alloys, creep ductility, influence of dynamic strain ageing 7−113631
steel, C, LWR piping fracture, NRC Degraded Piping Program−phase II 7−89672
steel, crack growth studies under selected temp.-strain histories 7−71269
steel, ferritic stainless, high temp. mech. twinning, plastic deform. mechanisms 7−117938
steel., low-alloy sheet, strengthening rel. to cyclic bending deform. temp. 7−78051
steel, strain aged, Bauschinger effect 7−126183
Zircaloy-4, cold worked and stress relieved, load relaxation 7−142908
Al-Zn-Mg, 7075, discontinuous deform. *(Japanese)* 7−126174
Mo alloys, particle strengthening, deform. mechanisms 7−71240
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567
α-Zr, load relaxation, strain ageing influence 7−144435
α-Zr, strain rate sensitivity, effect of dynamic strain ageing 7−113625

strain gauges
see also strain measurement
2D displacement transducer *(Japanese)* 7−80731
accelerometer sensor with quasi-planar spring structure and thin film strain gauges *(German)* 7−80753
biomechanical force-platform design based on strain gauges 7−87044
bonded foil strain gauge pressure transducer 7−80778
creep testing including US vibr. effect, vac. set-up with thermal control 7−132870
digital pressure gauge for static and slowly varying pressure meas. 7−121094
HDR reactor safety program, on-line surveillance instrumentation for thermal shock testing 7−122048
high temperature strain measurements, using resistance and capacitance gauges 7−140689
magnetoelastic, ultrasensitive amorphous ribbons, operational charact. 7−102397
microcomputer appl. in expt. stress analysis 7−97465
miniature pressure sensors and their temperature compensation 7−121099
multicomponent force sensor with cross sensitivity, calibration error effects *(Japanese)* 7−83145
nuclear component safety, strain gauge meas., radiation effects *(German)* 7−135498
piezoresistance gauges, dynamically loaded, resistive hysteresis 7−102398
pressure standard up to 500 MPa, using strain gauge 7−95570
residual strain meas. using hole-drilling strain gauge method, micrometer-zero setting determ. 7−123561
resistance-type, interaction with composite test material surface, opt. obs 7−71428

strain gauges continued
short-base strain gauge for measurement of circumferential deformations 7−104231
strain-gauge plethysmography in limb blood flow meas., tissue compressibility rel. to calibration 7−79157
tensoresistors characts. determ. 7−121092
thermal expansion coeff. meas. 7−140697
transducers, strain-in-gauge-type, strain meas., FEM *(German)* 7−80774
Fe-Cr-Al, melt-quenched, application as strain gauge sensor 7−84821
Fe-Cr-Si, melt-quenched, application as strain gauge sensor 7−84821
Si cantilever based pressure transducer, 1 to 1000 bar range appl. 7−95576
Si:B crystalline and polycrystalline films, piezoresistive props. 7−85539
Yb foil gauges in fused silica matrix, piezoresist. response under shock loading to 45 kbar 7−69078
strain hardening *see work hardening*
strain measurement
see also strain gauges
composite materials monitoring using fibre optic sensors 7−142017
creep testing including US vibr. effect, vac. set-up with thermal control 7−132870
DC measured sensing using single-mode optical fibre interferometry 7−75164
deformed random line elements length weighting for strain anal. 7−123563
digital analysis of nonuniform strain fields on basis of superposition holographic interferometers *(Japanese)* 7−128544
disks, rotating, optoelectronic strain meas. system 7−97464
electrodeposition, in situ strain meas. using optical fibre interferometer-based technique 7−67383
ESPI and moire methods for deform. meas. at very high temps. 7−117553
fatigue test rig, tension-torsion, elevated temps. 7−126360
fibre, synthetic, deformational rigidity meas. using dynamometric instrument 7−78437
fibre optic interferometer, two-polarisation, remote strain sensor appl. 7−75158
heterodyne holographic interferometry for strain meas. 7−96951
high temperature strain measurements, using resistance and capacitance gauges 7−140689
incremental testing technique evaluation, large strain 7−126363
laser speckle photography for inhomogeneous strain field studies *(French)* 7−140734
microcomputer appl. in expt. stress analysis 7−97465
microprocessor based apparatus for shape memory alloy characts. meas. 7−126364
nuclear component safety, strain gauge meas., radiation effects *(German)* 7−135498
optical fibers, longitudinal strain measurements, optical techniques 7−75124
optical strain and curvature determ. by phase shift principle *(German)* 7−128535
pipes, holographic NDT, predicted fringe patterns and exptl. results 7−119484
residual strain meas. using hole-drilling strain gauge method, micrometer-zero setting determ. 7−123561
shape memory alloy characts. meas., microprocessor based apparatus 7−126364
shearography determination of strains and moments in uniformly loaded triangular plate 7−142242
speckle applications 7−136768
structural testing on-line monitoring system for multipoint strains, development *(Japanese)* 7−75483
subsurface micro-lattice strain mapping, digital automated rocking curve topography 7−130983
transducers, strain-in-gauge-type, strain meas., FEM *(German)* 7−80774
ultrasonic deformation measurement system, computer controlled 7−82953
welded joint, residual stress distrib. meas. 7−93231
C fibre reinforced composites, strain analysis along curved boundary by birefringent-coating method 7−75485
PLZT diffr. grating, electrically controllable, piezoelec. strain meas. by He-Ne laser 7−143968
strain-optical coefficients *see piezo-optical effects*
strange particles
see also hyperons; kaons
baryon rich hadronic gas, redistribution of strangeness 7−95834
baryons, anal. using Coulomb-like plus exponent-type confinement potential *(Chinese)* 7−95842
dibaryon isodoublets with S=−3, quark model anal. 7−135045
dibaryons, expt. searches and bag model calcs. 7−67588
neutron stars, conversion into strange stars 7−115495
quark to hadron matter, strange/antistrange separation in phase transition 7−89551
self-bound quark matter model for strange matter 7−135238
strange condensate realignment in relativistic heavy ion collisions 7−116316
$D_s^+ \rightarrow \phi\pi^+(\bar{K}^{*0}K^+)$, lifetime meas. 7−89501
$e^+e^- \rightarrow \Sigma^\pm(1385)X$, (Ξ^-X), 29 GeV, total mean multiplicities 7−108926
K^-p interactions, branching ratios, strange and strangeonium meson prod. 7−102770
$K^-p \rightarrow \bar{K}^0\pi^+\pi^-n$, strange meson resonances obs. 7−135153
$\nu N \rightarrow \mu\mu X$, dimuon prod., nucleon strange quark content 7−73640
$(\bar{p}, X)$, annihilation in light nuclei, quark-gluon plasma droplet, meson spectra 7−141054
p, strange quark content and chiral symmetry breaking, model anal. 7−102640
P_{Ξ^0}, binding energy estimates 7−140893
$\bar{p}p \rightarrow$Vo pairs, strange particle correlations study for K_s^0, Λ and π prod. 7−140964
$e^+e^- \rightarrow D_s^\pm D_s^{*\mp}$, $\sqrt{s}$=4.14 GeV mass and mass differences 7−95919
strangeness *see strange particles*
stratified flow
see also multiphase flow
air flow over wavy pool, spray generation and interfacial stress model 7−111079
air-water flow patterns, horizontal pipes, pipe diameter effect 7−123755
air-water mixture, plug and annular flow drag study 7−83308
AMPTRACT modelling of pressure tube transients in stratified channel coolant conditions, CANDU appl. 7−96251
stratified flow continued
atmosphere, internal waves propag. in atmosphere stratified by Knudsen number *(Russian)* 7−145590
atmosphere, lee wave structures in stratified flow over 3D obstacles 7−79562
atmosphere, model study of pure katabatic flows 7−79561
atmosphere, press. and vel. response to action of horizontally extensive heat source 7−139705
atmosphere, stably stratified internal boundary layer for steady and variable offshore flow 7−101379
attenuation of gravity waves in the presence of a magnetic field in a turbulent conducting fluid 7−83301
Australian North West Shelf, internal hydraulic jumps and solitons at shelf break region 7−114756
baroclinic ocean, steady solns. where quasi-geostrophic pot. vorticity is const. along a flow streamline 7−72058
boundary layer separation prevention using Prandtl's revised theory in convergent-divergent duct 7−83170
coastal upwelling on sloping bottom, form. of plumes, jets and pinched-off cyclones 7−79442
cocurrent two-phase flow in horizontal tubes, condensation heat transfer 7−130763
conductivity salinometer for stratified fluids meas. 7−142410
convection, onset, solute conc. gradients effects 7−69158
convection over 7−97268
Cordova Channel, British Columbia, acoustic scintillation structure of turbulent tidal flow 7−114754
Couette flow, two-layers of immiscible fluid, thin-layer effect and interfacial stability 7−130633
countergradient heat flux in turbulent stratified flows 7−75570
Darcian fluid, thermally stratified, free convection from vertical flat plate 7−130702
differentially rotating systems, dynamical stability to non-axisymmetric perturbations 7−101672
dissipative instability of fluid flows with piecewise linear velocity profiles 7−142267
double-diffusive interleaving, effect of vertical temp. and salinity gradients 7−133695
droplet dynamics in vertical gas-liquid annular flow 7−130768
electrostatic wave dispersion in beam-plasma system immersed in inhomogeneous mag. field 7−123913
entrainment effect of a leading-edge vortex 7−130711
estuary-shelf waters interaction, two-layer density stratified flow modelling 7−133731
fluid in gravity field, differential eqn. soln. 7−136957
fluid layer penetration into stratified fluid, integral model 7−75598
forced shear layer, vorticity field and entrainment dynamics, vortex simulation study 7−91104
forced waves, generation and directed propag., oceanic appl. *(Russian)* 7−101319
fractal viscous fingering, expts. and models 7−83303
free convection from vertically heated surface in thermally stratified porous medium 7−123632
Freon-12, moving vapour condensation on horizontal tubes, heat transfer anal. 7−98412
Froude number effects on flow over topography 7−117640
gas-liquid flow, downwardly inclined pipes 7−123756
gas-liquid flows, interfacial waves influence 7−111063
gas-liquid stratified flow in horizontal pipe, wall and interfacial shear stress 7−91188
gas/liquid pipe flow, press. drop correl. 7−104330
gasdynamic separation, statistical mechanics study *(Japanese)* 7−130765
gases, acoustic wave interactions with mag. and internal modes 7−111006
Hamiltonian structures for compressible, stratified and incompressible fluids 7−83156
harmonic internal wave generators, energy characts. 7−104292
heatup of initially isothermal fluid in enclosure with semicond. boundaries 7−83224
homogeneous fluid, rot., meridional circulation, aspect ratio effect 7−83244
homogeneous incompressible fluid plane parallel flows, stability, external friction effects *(Russian)* 7−97494
ideal incompressible liquid in vessel, buoyancy operator spectrum *(Russian)* 7−83304
impulsively started, linearly stratified flow over long ridges 7−114873
internal wave diffraction at half-plane submerged parallel with compressible fluid free surface *(Russian)* 7−136960
internal waves from power source moving under layer of stratified fluid *(Russian)* 7−97598
jet, small-aspect-ratio elliptic, vortex induction and mass entrainment study 7−111050
Kelvin-Helmholtz instabilities in stably stratified atmospheric boundary layer, energy cascades 7−130643
latent heat thermal energy storage capsule, heat transfer study 7−78679
liquid, interaction of lee-wave and vortex in continuously stratified fluid *(Japanese)* 7−111058
MHD stratified shear flow stability of conducting fluid in mag. field 7−137017
mixing and flow characts., appl. to lakes and reservoirs 7−117643
mixing in stratified fluids, conf., Margaret River, WA, Australia (August 1985) 7−108016
motion of linearly stratified rotating fluids past capes 7−136959
multiphase flow, finite-element simulation 7−111056
multiple equilibria forced by nearly-resonant thermal driving *(Chinese)* 7−72140
mushroom-like currents under rot. and stratified conditions, oceanic appl. *(Russian)* 7−75646
natural circulation heat only reactor, steam bubble entrainment *(German)* 7−103030
natural convection, in stratified fluid between cylinders, flow model investig. 7−117600
nonlinear internal waves in a one-dimensional channel 7−101323
ocean, available potential energy of overturn as indicator of mixing in seasonal thermocline 7−114752
ocean, characts. of surface buoyant jet in Koombana Bay, Western Australia 7−114759
ocean, effects of fossil turbulence and intermittency in sampling of mixing processes 7−114755
ocean, pycnocline deformation during topographic cyclogenesis in two-layer fluid *(Russian)* 7−127230

stratified flow continued
ocean, suspended sediment stratification correction for combined wave and current flows 7−127261
ocean, time-dependent model for turbulent momentum transfer in stratified oceanic boundary layer 7−133712
ocean, transformation of long internal wave over underwater obstacle *(Russian)* 7−145487
ocean box model numerical soln., use of open boundary conditions *(French)* 7−87680
ocean thermocline, contrib. of advection and diapycnal mixing to seasonal cycle 7−114753
oceans, mixing efficiency is stably stratified grown turbulence 7−114762
oceans thermobaricity and cabbeling rel. to water-mass conversion 7−114760
Oldroyd liquids, stratified Couette flow, interfacial stability study 7−91181
orographic features in stratified rot. flows, appl. to mountain flow effects 7−111057
oscillatory Maragoni-Benard interfacial instability and capillary-gravity waves in single- and two-component liq. layers 7−130639
propane, turbulent diffusion flame, chemical reactions and mixing process effects 7−100565
rapidly rotating flow, response to pulsating topography 7−83239
Rayleigh-Taylor instability of rotating fluid in the presence of a vertical magnetic field 7−136802
rotating fluid, gravitational-gyroscopic waves, external initial-boundary problem *(Russian)* 7−104323
Saffman-Taylor instability with wetting fluids 7−83182
Saffman-Taylor problem, pattern formation 7−83822
shear dispersion, asymptotic conc. distrib., tilted Gaussian model 7−142249
shear layer, long internal wave propag., perturbation solution 7−130764
shear layer, spatial develop., nonlinear binary-mode interactions, Kelly's mechanism 7−111059
shear layer structural transitions, vorticity distrib. depend., contour dynamics study 7−136956
slurry, homogeneous, transitional Reynolds numbers, flow props. study 7−97579
solar pond wind-induced waves and liquid mixing 7−100753
Spencer Gulf, South Australia, episodic stratification and gravity currents in modulated turbulence environment 7−114761
sphere wake, vortex struct. in stratified fluid, shadow visualisation technique appl. 7−75597
splitting method for investigating flows of stratified fluid with free surface *(Russian)* 7−83305
stably stratified flows, length and scales and decay times of turbulence, comparison 7−72061
stably stratified shear flow response to diabatic heating 7−145609
steady inviscid general circulation in a rectangular basin on beta plane 7−145505
steam-water stratified countercurrent flow, flooding and hysteresis effects study 7−73952
steam-water stratified flow in horizontal pipe, phase and vel. distrib. 7−91228
stratified rotating disk flow, Navier-Stokes eqns., similarity solns. 7−142320
stratified rotating flow over and around isolated three-dimensional topography 7−136876
stratified shear flow instability, Richardson number investig. 7−75645
superposed fluids with viscosity discontinuity, Couette and shear flow instability 7−123582
thermal convection at large Rayleigh number, convection lines on heated bottom plate 7−110959
three-layer fluid, unsteady plane-parallel flow, turbulent struct. 7−130669
three-layer rotating fluid, explosive instability and Rossby waves three wave reson. interactions *(Russian)* 7−97542
transcritical two-layer flow over topography 7−91180
transient development of internal waves in stratified fluid with floor disturbances 7−111061
transition boundaries, high-viscosity liquids, pipe length effect 7−123704
transition phenomena and turbulence devel., oceanic appl. 7−117641
turbulence meas. 7−145602
turbulence review 7−117642
turbulent boundary layer on flat plate, hot-wire signal processing *(German)* 7−69128
turbulent front, expts. with oscillating grid 7−117644
turbulent front collapse in stratified fluid, nominally 2D evolution in narrow tank 7−114758
turbulent jet in confined cocurrent pipe flow 7−136955
turbulent plume, mean flow, entrainment, intermittency, anemometry study 7−91090
two immiscible liqs., Poiseuille flow stability, Navier-Stokes eqn. solns. 7−69248
two-layer fluid, large amplitude solitary internal wave study 7−136898
two-layer inviscid incompressible fluid system. surface gravity and solitary waves 7−123666
two-layer stratified flow, boundary-induced entrainment model 7−114757
two-layer system, convection onset, equilibr. instability, perturbation method 7−69135
two-phase stratified, flow model, linear stability anal. 7−91195
upstream blocking and airflow over mountains, book contrib. 7−101465
viscous critical layer, nonlinear stability of stratified shear flow 7−136958
viscous flow down open inclined channel with variable permeability bed 7−111060
viscous fluid, dynamics soln. *(Russian)* 7−104324
viscous fluid oscillations in elastic shell, root fns. completeness *(Russian)* 7−123705
vortex motion under gravity, Richardson criteria 7−83302
weak interaction process in stratified turbulent flow, analytical soln. 7−83195
H_2 turbulent jet, supersonic combustion with cotraveling air jet 7−100564

stratosphere
see also ozonosphere
acetonitrile abundance determ. in stratosphere, passive chem. ionization mass spectrometry method 7−120162
acetonitrile at tropopause altitudes 7−79543
acetonitrile in stratosphere, MAP/GLOBUS 1983 ion composition meas. 7−133888
aerosol in stratosphere, changes due to El Chichon volcanic eruption 7−139696
stratosphere continued
aerosol meas. by laser radar, calibration and error analysis *(Japanese)* 7−79692
aerosol remote sensing by Nd:YAG and ruby based lidar systems 7−72208
aerosols, comp. and size distrib. retrieval from SAGE II data 7−115052
aerosols, extinction coeff. wavelength depend. 7−87904
aerosols, optical charact. *(Russian)* 7−101482
aerosols assoc. with El Chichon eruption, Welsh lidar obs. 7−79584
Alaska, surface radiative regime, effects of El Chichon stratosphere dust cloud 7−87903
alkoxy radical extrusion reactions and importance for stratosphere O_3 layer depletion 7−141470
Antarctic atmosphere, trace gas abundances from IR spectra, spring 1986 obs. 7−139715
Antarctic stratosphere, aerosols, sulphate production and photochemistry 7−133873
Antarctic stratosphere, particulate content and water vapour budget 7−79566
Antarctica, decay of El Chichon stratospheric aerosol cloud 7−127333
Arctic tropopause folds, jetstreams and frontal zones 7−114960
background aerosols modelling, use of SAGE profiles 7−94382
breaking planetary waves, high resolution one-layer model 7−127433
circulation variability in January (1979-85) 7−94361
circumpolar wind springtime reversal, correl. with 27 kHz atmospherics spring enhancement 7−101463
climate change and stratosphere, conf., Toulouse, France (June-July 1986) 7−128164
condensation nuclei in stratosphere, fluctuations in vertical source 7−127341
cosmic ray intensity time depend. 7−88055
cosmic rays, daily variation 7−127660
cosmic rays, time-depend. short-range component (1958-83) 7−88054
cyclone in Gulf of Genoa, stratospheric intrusion observations 7−87822
diabatic circulation determ. using radiative transfer model 7−127385
dry air, formation and movement 7−127445
dynamics of middle atmosphere, review 7−120193
electric current systems perturbed by solar flare 7−145587
electrical conductivities in middle atmosphere over India, rocket-borne and balloon-borne meas. 7−127339
electrical measurements, implications for global cct. variability 7−114920
equatorial dynamics and tracer distribs., 2D model 7−127444
equatorial temp. response to solar activity (1971-82) 7−145645
N Europe, stratosphere large-scale processes and energy charact. in MAP-WINE period 7−114944
evidence for saturated spectrum 7−145611
FGGE 1978/9 winter momentum and heat transport *(German)* 7−101462
geopotential heights in midlatitude troposphere and stratosphere, effects of IMF sector struct. 7−101453
geostrophic approximation validity in winter stratosphere and troposphere 7−114897
global perturbations of 1982 El Chichon eruption 7−139719
global residual mean circulation for northern winters 7−145614
gravity wave forcing in middle atmosphere, 3D hydrostatic model 7−114904
gravity waves of short wavelength 7−114949
gravity waves propag. in equatorial atmosphere, ray paths anal. 7−127343
gust-like winds, balloon-borne meas. using Gill-type propeller anemometer 7−127557
Indian monsoon rainfall AD 1958 to 1985, rel. to tropical quasi-biennial oscill. 7−139682
ion conductivity at low latitude, balloon observations 7−94397
ion densities and mobilities in middle atmosphere over India, rocket-borne and balloon-borne meas. 7−127339
IR optical depth at 1 micron for polar stratosphere 7−120127
large scale struct. and circulation of N Hemisphere, MAP-WINE campaign 7−145594
lidar for atm. plume dispersion clouds and stratospheric aerosols anal. 7−133966
MAP/GLOBUS 1983, balloon-borne cyrogenic whole air samplers intercomparison 7−134022
MAP/GLOBUS 1983, synoptic analysis and trajectories 7−133875
MAP/GLOBUS campaign 1983: introduction 7−133938
MAP/WINE (Winter in N Europe), project overview 7−145665
methane and light hydrocarbons, vol. mixing ratios 7−94388
minor constituent vertical distrib. in tropical middle atmos., review 7−87990
minor constituents in mesosphere and upper stratosphere, review 7−120192
natural and anthropogenic perturbations, review 7−120109
negative ion composition, MAP/GLOBUS 1983 balloon-borne meas. 7−133889
North Pole region, stratospheric temp., sunspot numbers and quasi-biennial oscillation 7−120074
peroxyacetylnitrate in atm. large-scale distrib., STRATOZ III flights obs. 7−139687
planetary wave activity in troposphere and stratosphere in northern winter 7−101398
planetary wave latitude localization by stratospheric jets, model *(Russian)* 7−94343
planetary wave life cycles in southern winter 7−133821
planetary wave structure and vertical propagation in southern winter 7−133820
planetary-scale instabilities with fast motion in equatorial atmos. 7−107469
positive ion clusters in stratosphere and troposphere, appl. to determ. of trace gases concs. *(French)* 7−87762
potential vorticity associated with tropopause folds 7−87802
precipitated protons from radiation belt, propag. to stratospheric level 7−88002
quasi-biennial oscill. of equatorial stratosphere, theory 7−114858
radiative heating and cooling rates climatologies, implications for diabatically diagnosed net circulation fields 7−114915
radiative heating-cooling and energetics of stratosphere and mesosphere, review 7−120128
radiative transfer scheme for 3D dynamical model 7−127472
small-scale motions and mixing in tropical lower stratosphere 7−101399
solar constant changes and influences on Earth's atmos., conf., US (1985) 7−72696
solar UV changes, influences on middle atmos. at low-latitude 7−79510
solar UV induced variations 7−79509

stratosphere continued
solar UV variations causing O_3 and temperature changes to stratosphere, chemical model 7−79511
Southern Oscillation, N Hemisphere winter stratosphere anomalies and quasi-biennial oscill. 7−114954
stationary planetary waves forcing by orography and land-sea thermal contrast, linear models 7−79522
sudden warming event, quasi-geostrophic simulations and importance of middle atmosphere drag 7−101443
sudden warmings, effect of orographic gravity waves *(French)* 7−133811
temperature, altitude profile for aerospace vehicles design and operation 7−120183
temperature fluctuations of mesosphere and stratosphere, large scale coherence 7−145729
temperature of upper stratosphere and mesosphere over Aberystwyth at nighttime 7−87992
temperature sounding using partial interferograms, meas. technique and temp. profiles retrieval 7−87915
temperature trends in Northern Hemisphere stratosphere and lower mesosphere, meas. (1969 to 1978) 7−134034
temperature variations during winter above N Scandinavia 7−145730
temperatures, semiannual oscillation features 7−145596
temperatures in midlatitude troposphere and stratosphere, effects of IMF sector struct. 7−101453
total O_3, seasonal differences in trend, contrib. from troposphere and stratosphere 7−133866
trace constituents and dynamics, MAP/Globus 1983 campaign results 7−139667
trace gas emissions, balloon-borne IR spectrometry 7−133807
trace gas measurement by balloon instrumentation method, review 7−120166
trace gas mixing ratios MAP/GLOBUS 1983 disturbances 7−133887
1,1,2-trichloro- 1,2,2-trifluoroethane, balloon-borne sample analysis (1982-4) 7−133159
tropopause information inclusion in otherwise smooth 2D and 3D objective anal. 7−133975
troposphere-stratosphere coupling, due to mass exchange, dynamical, radiative and elec. processes, review 7−87777
turbulence field generated by linear gravity waves 7−115122
volcanic aerosols, effect on stratospheric radiance at 8 to 13 μm wavelength 7−120122
volcanic aerosols, lidar profiles at Mauna Loa, Hawaii (1985-6) 7−127461
wave motions rel. to solar activity 7−139718
wave-CISK in a baroclinic basic state 7−94346
winter tropical middle atm., temp. and wind perturbations 7−127395
zonal modulation in annual cosmic-ray vars. in lower atmosphere 7−88053
Br and Br cpds. in stratosphere over New Mexico, USA 7−87784
^{14}C, concentration variation in upper atmosphere in Japan since 1964 7−79540
ClO concentrations in Antarctic spring stratosphere, diurnal var. at low altitudes 7−139713
ClO concentrations in Antarctic spring stratosphere, secular var. at low altitudes 7−139714
HCN distribution, far-IR spectral obs. 7−120073
HNO_3 and NO_2 in atmosphere, distrib. from model using LIMS and SAMS data 7−79516
HNO_3, stratospheric distrib. forecast expts. 7−139166
H_2O vapour and O_3 concentrations during MAP-WINE Campaign 7−145738
H_2O_2 composition meas. 7−94383
H_2SO_4, MAP/GLOBUS 1983 ion composition meas. 7−133888
H_2SO_4, stratospheric content due to volcanoes, 220 year Antarctic ice record 7−107376
^{85}Kr in stratosphere, vertical profile 7−126674
N oxides in stratosphere during 1983 MAP/GLOBUS 7−133885
NO chemistry of lower, middle and upper atmospheres 7−87778
NO profiles, chemiluminescent balloon-borne sondes meas. 7−133882
NO_2 and HNO_3 in atmosphere, distrib. from model using LIMS and SAMS data 7−79516
NO_2 and NO_3 meas. during MAP/GLOBUS 1983, intercomparison 7−133883
NO_2 and O_3 in atmos. over McMurdo Station, Antarctica, spring 1986 observations 7−139691
NO_2, MAP/GLOBUS 1983 meas. by Solar Mesosphere Explorer 7−133884
NO_2, spectral absorpt. cross-sections for 426 to 450 nm region 7−135949
NO_3 in atmosphere above McMurdo Station, Antarctica, spring 1986 observations 7−139693
O_2, photodissociation in stratosphere and mesosphere, O production and isotope effects 7−120101
O_3 and CO in lower stratosphere, folded tropopause and maritime troposphere 7−87804
O_3 annual and semiannual oscills. in stratosphere 7−101448
O_3, changes, prod. and destruction chemistry and pollution effects 7−145650
O_3 concentration, influence of short-term solar radiation vars. *(Russian)* 7−145592
O_3 depletion over Antarctica, implications of kinetics of BrO+ClO reaction 7−139712
O_3 depletion over Antarctica, implications of high ClO concs at low altitudes 7−139713
O_3 depletion over Antarctica, implications of secular var. of ClO concs. at low altitudes 7−139714
O_3, equatorial profiles meas. from ground to 52 km during southern hemisphere autumn 7−114914
O_3 global total O_3, empirical model 7−107487
O_3 global transport, role of planetary waves, satellite obs. 7−94384
O_3, H_2O, HDO vertical profiles in stratosphere, from limb IR spectral obs. 7−139695
O_3, H_2O, methane, N_2O, stratosphere concs. from limb IR spectral obs. 7−139694
O_3, Hartley absorpt. band, reson. Raman spectra, time depend. anal. 7−122548
O_3 in stratosphere, above Antarctica, decrease due to lower stratosphere forcing 7−101381
O_3 in stratosphere and mesosphere above Switzerland, microwave radiometry obs. 7−107473
O_3 in stratosphere conc. changes due to El Chichon volcanic eruption 7−139696
stratosphere continued
O_3 in stratosphere of Antarctica, concs. rel. to quasi-biennial oscillation 7−145586
O_3 long term changes meas. by SBUV/2 radiometer 7−115061
O_3, NO_2 and aerosol vertical profile determ., by multispectral method 7−120158
O_3 over polar regions, seasonal variations rel. to meteorological parameters 7−114855
O_3 profile, theoretical determ. of vertical distrib. statistical charact. 7−107486
O_3 profile determ., SAGE 1, SBUV and Umkehr meas. methods 7−139804
O_3 quasi-biennial oscill. in tropical stratosphere 7−101394
O_3, solar cycle influence on atmos. total ozone 7−87809
O_3 stratospheric instrument calibration system based on preparation of O_3-N_2 gas mixture 7−107550
O_3 total content, influence of quasi-biennial cycle of circulation 7−107488
O_3 total content prediction based on Arosa AD 1932 to 1971 data 7−101447
O_3, transport by middle atmosphere flows 7−79568
OClO in atmosphere above McMurdo Sound, Antarctica, spring 1986 observations 7−139692
strays (atmospherics) *see atmospherics*
streak photography
cameras, two-dimensional sweeps expanding capability and appl. 7−95562
chronotomography: a new approach to high speed frame recording 7−96947
conference on high speed photography, videography and photonics, San Diego, CA, USA (Aug. 1986) 7−95086
developments in ultrarapid photoelectronic cameras *(German)* 7−128681
dye laser, picosecond, N_2-laser-pumped. Streak camera anal. 7−74916
femtosecond laser flashed frame imaging utilizing a femtosecond streak camera 7−95561
femtosecond streak tube, limiting factor of dynamic range obs. 7−95560
femtosecond streak tube 7−102394
frequency encoding on chirped pulse, principles of streak and framing photography 7−95563
laser facility at LLNL, streaked diagnostics triggering and monitoring 7−97806
laser plasma, X-ray emission spectra, atomic number depend. 7−104434
neutron streak camera, 14 MeV, with UO_2 photocathode, expt. charact. 7−96318
picosecond electronic framing camera 7−95666
picosecond image converter tube for frame and streak photography 7−95564
plasma, laser, *[$2\omega_0$]* harmonic emission struct., bandwidth effects, soliton generation theory 7−97749
soft X-ray streak cameras resolution charact. comparison 7−95713
vacuum discharge development, fast cathode processes 7−69519
H_2, plasma generation for beat wave expts., multiphoton ionisation, electron density anal. 7−104432
streamer chambers
electromagnetic streamer tube calorimeter, performance 7−81898
EM streamer tube calorimeter, muon detection 7−116776
gas counter, self-quenching streamer transitions induced by α- and β-rays 7−68145
holographic detection and small admixtures stabilizing discharge process 7−135762
laser streamer chamber for obs. on electrical discharges *(Japanese)* 7−103338
plastic streamer tubes, induced readout characteristics *(Chinese)* 7−103327
plastic streamer tubes with analog readout, resolution 7−135749
PVC-brass tube calorimeter, response to pions, muons and electrons 7−109628
self-quenching streamer properties of several kinds of mixed gases *(Chinese)* 7−103329
self-shunted streamer chamber, $\bar{p}^4He$ annihilation event meas. 7−109611
He streamer chamber, holographic, electron diffusion 7−68147
streamers *see discharges (electric)*
streaming, acoustic *see acoustic streaming*
street lighting
road tunnel illumination, visibility and adaptation rel. to speed and direction *(German)* 7−78854
strength (mechanical) *see mechanical strength*
stress *see internal stresses; stress effects; stress-strain relations; yield stress*
stress analysis
see also bending; crack-edge stress field analysis; photoelasticity; photoplasticity; strain gauges; thermal stresses; torsion; yield strength; yield stress
2D stationary thermoelasticity, stress intensity factor calc. using boundary-elements method 7−104145
adhesion-bonded joints, linear theory 7−75476
allowable stresses for earthquake and wind loads 7−68991
angle-ply laminates, edge effects, nonlinear anal. 7−83031
angular notches under complex stressed state conditions, Novozhilov brittle fracture criterion for breaking loads 7−75448
anisotropic cylinders, torsion using complementary variational principles 7−72982
anisotropic medium, problem of two plastic and heterogeneous inclusions 7−123453
antisymmetric angle-ply plastic plates under distributed load, analytic treatment *(German)* 7−104184
Araldite, photoelastic, stress freezing obs. 7−90950
axially cracked cylindrical shells, crack tip stress-strain field, stress intensity factors *(Chinese)* 7−142216
axisymmetric solids, enhancing finite element stress predictions, semi-analytical technique 7−97311
axisymmetric stress distrib., integrated photoelasticity method 7−97463
bars with triangular hollow cross section, torsion, stress anal. 7−130534
beam, loaded cantilever, stress and strain, FEM 7−104146
beam theory accuracy 7−130545
beams, flexure, stress oscills., field-consistency interpretation 7−83065
body with fixed edges, longit. shear problem, stress distrib. 7−83053
boundary element method for stress concentration and fracture problems 7−69068
boundary elements methods, conf., London, England (July 1986) 7−66840

stress analysis continued
boundary integral equations method, accuracy of solns. to elasticity problems 7−108235
boundary stresses in finite elements, determ. 7−95288
branch pipe intersection, internal pressure-external moment interaction 7−69002
Canadian Nuclear Society annual conference, Toronto, Ont., Canada, (June 1986) 7−88743
cavity in elastic solid, 2D elastostatic, null field approach 7−75290
circular nozzle corner crack, 3-D elastic anal. 7−69063
closed elastic strain path with stretching and shearing, stress using updated Lagrangian Jaumann formulation 7−104148
cometary nuclei, thermal stresses anal. 7−88204
composite, laminated, with two elliptical holes, stresses 7−83024
composite laminate, uniaxial loading, interlaminar stresses calc. 7−83051
composite rods for beam structures, load-bearing capacity, minimal weight design 7−68987
composite tubes, stresses and deform. due to circumferential temp. gradient 7−83052
composite wedge-like region, excitation of steady harmonic oscills. 7−75398
concrete strength and elasticity, modified classical theory *(German)* 7−75284
conference on graphite reactor component structural design and integrity, Tokai, Japan (Sept. 1986) 7−140378
conical shell stability, influence of axial tensile force and internal pressure 7−83038
consistent rigidity matrices in elasto-plasticity theory *(German)* 7−104178
contact problem, plane thermoelastic, with consideration of heat liberation 7−142237
convergence factors of multigrid methods for elasticity problems 7−80423
couple-stress theory and Reissner's plate theory, analogues relating plane problems 7−97327
crack interactions in anisotropic medium under longitudinal shear 7−75464
crack related problems, dislocated distrib., BEM 7−124272
cylinder, nonhomogeneous circular, periodic shearing stress, torsional vibr. study 7−142206
cylinder, nonhomogeneous circular, twisting, stress soln. 7−75317
cylinder, with spherical cavity, stressed state 7−134500
cylindrical beams with multiply connected cross sections, elastic torsion, numerical results 7−142173
cylindrical cavity face, coupled thermoelastic problem, Laplace transform anal. 7−75291
cylindrical shell with variable wall thickness, stress anal., bending 7−83021
cylindrical specimens with V-shaped notch, residual stresses determ. *(German)* 7−130556
cylindrical vessel with large opening, shallow shell equations 7−69001
damage evaluation through micro-hardness measurements *(French)* 7−91037
disc, anisotropic, pressing into curved hole of isotropic plate, contact stresses 7−91039
disc springs, 1st order internal stresses generation, numerical simulation *(German)* 7−104139
disc with curved edge, stress wave focusing *(German)* 7−104204
discrete-continual model of multilayered shallow shells and plates 7−104153
disk, rotating, nonhomogeneous annular, radial depend. Young's modulus, stress distrib. 7−142176
Earth crust, appl. of inhomogeneous stress (patch) model to complex subduction zone earthquakes 7−87479
Earth crust, geodynamic stress anal. in Altai-Sayan folded region, USSR 7−145386
Earth crust, stress estimates for Vancouver Island lithoprobe transect rel. to seismic instability 7−79240
Earth crust, stress orientation in NE Mexico inferred from stress-induced borehole elongations 7−87559
Earth crust, tectonic stress fields interrelationship at different structural levels *(Spanish)* 7−133618
elastic deform., linear eqns. of motion study 7−80422
elastic layer under tension, bonded contact problem 7−110875
elastic media, homogenization method 7−123447
elastic-plastic circular disc with nonlinear hardening, stress distrib. from circular heat source *(German)* 7−136720
elastic-plastic cross-sectional interference fits, joining operation effect on stress *(German)* 7−104182
elastic-plastic stress analysis using quadratic programming *(Japanese)* 7−136714
electromagnetomechanical interactions in deformable solids and structs., conf., Tokyo, Japan (Oct. 1986) 7−115692
ELESTRES code for CANDU fuel element axisymmetric behaviour, elastic-plastic stresses 7−96149
extended body with ellipsoidal inclusion, stress and displacement field 7−104156
extrusion, forward, anal. by grid method, with Lagrange's method 7−88973
FEAST, 2D nonlinear finite element code for CANDU fuel stress anal. 7−89607
fibre optic stress location sensor 7−75135
fibre reinforced composite, unidirectional short fibres, effective medium by self-consistent method 7−75289
fibre reinforced composite, viscoelastic matrix, ineffective fibre length determ. 7−69060
fibre reinforced composites, stresses on and around fibres 7−142167
fibre reinforced epoxy composites, unidirectional, stress field under tensile and thermal loading, approx. soln. *(Japanese)* 7−97309
fibrous composite, fibre anisotropy effect on thermal stresses 7−86244
filament shells, loaded by internal press. in field of centrifugal forces, optimal design 7−142159
finite anti-plane shear, stress conc. factors, numerical calc. and analytical estimates 7−123454
finite element methods, linear mechanics and boundary value problems 7−134488
finite elements, boundary elements method comparison 7−66989
fracture toughness, statistical distribution function 7−75463
freight train wheel design using load history and fatigue damage accumulation *(French)* 7−138844
fusion reactor first wall strength anal. *(Japanese)* 7−96309
gas-saturated porous media, eqns. of mechanics 7−95344
stress analysis continued
generalised displacements, principle of superposition, linear integral or integro-differential eqns. 7−97453
granular flow, collisional stress tensor, microstructure development effect 7−91183
granular materials, shear flow, balance laws, constitutive relations and boundary conditions 7−136985
granular materials, steady shear flow instability 7−91078
growing crack in perfect plasticity, tip asymptotic solns. with strong discontinuity *(French)* 7−97404
half-plane, elastic, in-plane indentation and separation of rigid stamp 7−83135
half-space, elastic, asymmetric wave propag. 7−123515
half-strip, orthotropic, singularities of state of stress 7−136697
heat exchanger U-tubes, nonlinear response to differential axial movement between two legs 7−141154
heated disc with rotational symmetry, elastic-plastic deformation *(German)* 7−75358
homogenized thermoelasticity with microlocal parameters 7−130536
HTGR graphite, core and structural materials, fracture criteria under multiaxial stress 7−141163
HTGR intermediate heat exchanger manifold header lifetime prediction *(Japanese)* 7−129134
HTR core, graphite bars, structural strength, stress and fracture anal. 7−141165
hubs, elastic-plastic deformation of interference fits with supercritical overdimensions *(German)* 7−104176
Hypercube machine, appl. to structural mechanics problems 7−83025
ideally elastic-plastic body, functional formulations of theory 7−72984
impact stress in elastoplastic regions using FEM *(Spanish)* 7−130606
impacting of pipes on elastic supports 7−69075
inclusion, flexible cylindrical, interaction with obliquely incident elastic waves 7−75374
inclusion, thin elastic, in piecewise homogeneous plane, singularity of stresses near face 7−75309
inclusion containing materials, strength criteria 7−75330
incompressible solid, nonlinear crack problem, J-integral perturbation soln. 7−123545
infinite solid with elliptical flaw, stress intensity factors, finite element alternating technique 7−83114
inhomogeneous media in polar coordinates, 2D inverse problem of elasticity theory 7−67019
intensity factors and improved convergence estimates at a corner 7−88980
internal friction conversion to intrinsic values, forced oscillations study 7−130610
IR-based stress anal. technique 7−75487
isoparametric quadratic boundary elements in 2-D, axisymmetric and 3-D stress analysis problems 7−69069
isotropic and anisotropic materials, limiting complex-stress states analysis method 7−97346
isotropic nonlinear viscoelastic bodies, bitensorial functions expansion in terms of directly reducible matrix groups 7−83057
laminate, edge effect, finite-difference approach 7−68997
laminate, symmetric, consistent refined theory for flexure 7−130546
laminated composite, nonlinear continuous mathematical model 7−90941
laminates, cross-ply and angle-ply, interlaminar stress fields, closed-form solns. 7−104141
laser-induced hole formation, FEM model 7−110289
linear viscoelastic oscillatory system, inner variables description *(German)* 7−104173
loading of chaotically vibrating mechanical systems *(German)* 7−102318
LWR fuel, pellet wheatsheaf growth during power ramps, effect on cladding stress conc. 7−109277
material rot., deform. and stress rate 7−90935
metals, thermoelastic stress analysis for testing and development of automotive components *(German)* 7−113598
microcomputer appl. in expt. stress analysis 7−97465
micropolar elastodynamics, solns. for displacement-rotations for harmonically varying mass loads 7−128289
micropolar medium, stress concentrations, cylindrical inclusion problem 7−80417
motions and homogeneous deforms. which preserve ellipsoidal holes 7−95336
multi-pass fixed tubesheet exchangers, tube axial load due to thermal effects 7−104143
NET, first wall designs, parametric stress analysis 7−122120
NET TF-coil, stress anal. of SIN conductor 7−122195
nets, bending stiffness, plane deform. study 7−90964
nonageing materials with fading memory, multiaxial nonlinear hereditary constitutive law 7−83066
nonlinear structural response, design sensitivity anal. and optimisation 7−130550
nonlinear-elastic compressible solid, isolated disclination 7−76123
notched member in corrosive environment, fatigue life estimates 7−104216
optical fibres, stress-induced polarisation-holding fibres, strength assurance 7−142004
orthotropic 2D elastic body, stress singularities anal. at notch 7−104152
ovalised cylindrical tubes under internal pressure, stress anal. 7−83023
pad type nozzles attached to spherical shell, membrane stresses 7−142169
pin-joined metal-composite, contact interaction problem 7−69074
Piola-Kirchhoff stress depend. on deformation gradient 7−72981
pipe bends, steady creep deformation, reference stress approach 7−69015
pipe outer wall, circumferential surface cracks, stress intensity factors for gradient loads *(German)* 7−104218
pipe tee, photoelastic assessment of finite element anal. 7−123559
plane-stress anisotropic plasticity, stress conc. problems 7−97333
plate, composite, subjected to heat cycling, delamination problem soln. 7−83118
plate, flat with hole, reinforcement, stress anal. 7−83048
plate, orthotropic, pin-loaded, stresses, effect of pin elasticity, clearance and friction 7−97456
plate, reinforcement of circular hole by equally deformed rod 7−97323
plate, stressed elastic, dynamic punching, isochromatic lines 7−83046
plate, thin rectangular cantilever, vibrating, hybrid stress analysis, FEM and holographic interferometry 7−97366
plate, transversally isotropic, bending, weakened by a curvilinear hole 7−110807
plate, uniaxially loaded with interference-fit disk, partial contact problems, elastic anal. 7−75293

stress analysis continued
plate bending analysis, efficient quadrilateral element, mixed variational principle 7−97316
plate bending by a boundary point method 7−117456
plate theory, matched asymptotic expansions *(French)* 7−75304
plate with local surface cylindrical damage, stress-strain state 7−69011
plate with partially reinforced curvilinear hole, elastic equilibrium 7−134507
plates, anisotropic, stresses around holes, limiting procedure, root modification scheme 7−90948
plates, clamped on Pasternak-type elastic foundation, bending study 7−75356
plates, laminate configs., in-plane responses 7−123474
plates, laminated, vibr., buckling, cylindrical bending transverse shearing 7−69003
plates, laminated rectangular, nonlinear finite element 7−117478
plates, moderately thick, generalisation of formulae 7−130540
plates, rectangular composite, static and transient response, shear deform. theory 7−117465
plates, thick laminated, interlaminar shear stresses 7−75285
plates, thick laminated, triangular finite element for analysis 7−97303
plates, thin quadrilateral bending element, discrete Kirchhoff theory, least-squares smoothed shape fns. 7−75333
plates with 6 kinematic degrees of freedom and large distortions, theory *(German)* 7−104140
plates with round hole, generalised contact problem 7−83129
Prager's kinematic hardening model, numerical implementation for elasto-plastic analysis 7−120804
pressure vessel recertification, stress analysis 7−71198
pressure vessels, allowable stresses for earthquake and wind loads 7−68991
pressure vessels, dished shell heads, asymptotic solutions 7−68993
pressure vessels, half-pipe heating channels, stress analysis 7−68992
prismatic solids, elastic, hybrid model, finite prism approach 7−83034
railroad wheel fracture, effect of brake shoe material and location *(French)* 7−138843
random vibration stresses, RMS fatigue curves 7−69067
rectangular orthotropic region under three-point bending, contact problem 7−83126
reinforced concrete slab element modeling near slab-column connections 7−106559
rigid fractal embedded in two-dimens. elastic medium 7−134504
rocks, post-failure behaviour, effects of stiffened testing machine on meas. 7−114706
rod under combined loads of bending, shearing and torsion, dynamic anal. 7−97315
sand, elastic-plastic response during unloading 7−117488
sandwich structures under changing temp. distribs., plastic zone expansion *(German)* 7−104181
second grade continuum, stress-fn. representation 7−117446
semi-infinite rod of nonhomogeneous material, elastic disturbance propagation 7−91000
sheets, elastic with circular holes, hoop stress distrib. 7−123472
shell, cylindrical, multilayer, matrix method of solving contact problems 7−69073
shell, cylindrical, orthotropic, spatial effects in deform. problems 7−142181
shell, cylindrical, shallow, of nonlinear material, elastoplastic bending exptl. investig. method 7−110810
shell, hyperbolic paraboloidal sectorial with cantilevered free edge; membrane stresses 7−117453
shell, layered spherical, representation of the general solution of the equations of equilibrium 7−117448
shell, multilayered cylindrical, with elastic filler, bending by local moments 7−69010
shell and spatial structures, computational aspects, conf., Leuven, Belgium (July 1986) 7−115689
shell of revolution, orthotropic, stress-strain state computer with allowance for transverse shear and reduction 7−83072
shells, approx. calc. of local stresses by combined method, double series and integrals 7−75300
shells, circular, cylindrical, radially loaded through central pad, expt. and finite element studies 7−130531
shells, closed, cylindrical, design with arbitrary cross section 7−110781
shells, cylindrical, local radial loads, assessment based on Sanders linear shell eqns. 7−130532
shells, structurally orthotropic cylindrical, constitutive eqns. 7−75325
shells, thin spherical, stresses due to axisymmetric imperfections 7−142160
shells, thin spherical, with local imperfections, stresses 7−117466
sliding contact stresses in 2D layered elastic half-space 7−104224
solid of revolution with cutouts breaching axial symmetry, stress and strain state analysis 7−110793
space, elastic, planar crack, shear stress intensity factors 7−83122
spade blade, half-plane model 7−130560
sphere and shell, nonhomogeneity effect on stresses 7−75318
sphere assemblies, inelastic in shear flow, stress calcs. 7−91184
spheres, dissimilar, contact, stress field anal. 7−117550
spheres and cylinders, incompressible elastic hollow, inflation, press. behaviour 7−104155
steel, austenitic stainless, notched, plastic zone form., digital image processing 7−71423
stress potentials on C^1 domains 7−95339
strip, cracked, Mode II loading energy anal. 7−75465
strip, with circular holes 7−134499
strip with circular holes, elastic, stress conc. 7−136694
structural collapse, finite element anal. 7−104144
structure subjected to dynamic loading, stress pattern anal. by thermal emission 7−83142
surface depressions on conformal and nonconformal contact press. distrib. 7−83134
thermal expansion coeff. meas. using strain gauges 7−140697
thermoelastic nonstationary 3D problem, boundary element method 7−75315
thermoelastic solids, material and load optimisation, numerical results 7−88972
thermoelasticity unsteady thermal stress anal. 7−75306
thermoelastoplasticity, creep, effective-stress-function algorithm 7−128291
thermoforming, free and constrained inflation of elastic membrane, axisymm. problems 7−97340
thermomechanical Zaremba schemes of hysteresis 7−80432
thermopiezoelectricity, linear, uniqueness theorem, stress discontinuities on layered media surfaces 7−132201
thin elastic disc, motion and stress state under radial impact load 7−104222
thin-walled piping, estimate of elastic follow-up 7−67915
thin-walled piping system, elastic follow-up estimate 7−67916
transversely isotropic medium with penny-shaped crack under transient loading, stress intensity factors 7−75469
tubes, cylindrical, thin-walled, laminated composite, bending anal. 7−142165
tubes, cylindrical, thin-walled, laminated composite, boundary value problems 7−142164
tubes, cylindrical, thin-walled, laminated composite, crit. speed anal. 7−142166
two-dimensional stress analysis combining high-frequency moire measurements with finite-element modeling 7−110890
unbounded isotropic space weakened by ellipsoidal inclusion, thermoelastic stresses 7−97321
uniaxial elastic follow-up, stress and strain behaviours 7−75294
V1 nuclear power plant primary circuit main valve, stress and lifetime calcs. *(Czech)* 7−116542
Venus interior, long-wave tangential stresses in lithosphere and mantle 7−88160
vertex of narrow inclusion, stress-strain state 7−97325
VHTR graphite components, statistical considerations for design allowable stress 7−141162
VHTR graphite subjected to internal heat generation and surface heating, 3D transient thermal stresses 7−81594
vibration problems, finite element-difference method appl. 7−130569
viscoelastic half-space, impact of rigid, axisymmetric indentor, integral eqn., num. soln. 7−69070
whole-field image processing method for photocarrier fringe pattern *(Chinese)* 7−123562
X-ray stress measurement, automated system 7−88974
Zircaloy cladding, in-reactor creepdown in LWRs, regression model, development and assessment. 7−109278
Al, response behaviour of internal friction to freq. and strain rates during plastic deformation *(Chinese)* 7−91721
Al_2O_3 ceramic adhesive joints, thickness, residual stresses, finite element analysis 7−71460
Cu, plasticity, 2D strain cycling 7−86298
SiC apparent strengthening by high-temp. macroscopic stress redistrib. and flaw blunting 7−132753

stress birefringence *see mechanical birefringence*

stress corrosion cracking
see also corrosion fatigue
Alloy 600, stress corrosion cracking in high temp. water, steam generator tubing test 7−144616
alloy 600 tubing, intergranular SCC susceptibility 7−93206
alloy 600 tubing in nuclear steam generators, stress corrosion cracking, remedial methods 7−144629
alloys, high temp., cyclic oxidation, thermal stresses, oxide scale spallation 7−119420
anodic solution contribution to corrosion fatigue crack growth rate 7−144592
boiling water reactor, H injection, rel. to radiation chemistry 7−89632
brass, cold rolled, annealed 7−78313
brass, SCC, transgranular, in cuprous NH_3 7−138894
BWR water chemistry control by H_2 dosing *(German)* 7−73940
ceramics, high temp. SCC, corrosive medium wetting mechanism 7−93131
crack growth kinetics 7−93150
crack start conditions rel. to stress-strain state and electrochem. conditions 7−86416
developed by powder metallurgy, high temp. strength and corrosion resist. props., review 7−92927
electrochemical potential at tip of stress corrosion crack 7−132822
ELESTRES code for CANDU fuel element axisymmetric behaviour, elastic-plastic stresses 7−96149
glass fibre reinforced composite in acidic media, chem. comp. depend. 7−113745
high-temperature strength materials, aggressive media pressure influence on softening, test unit 7−113832
HV distribution line wire disconnection by stress-applied corrosion cracking *(Japanese)* 7−113766
Inconel 600, grain boundary carbides link to corrosion cracking resistance, PWR tubing 7−141155
Inconel 600, steam generator tubes, effect of temp. on stress corrosion cracking 7−100456
Inconel X750, environmentally assisted cracking in simulated PWR water, heat treatments influence 7−144632
Inconel X-750, heat treatment, SCC, strength, ductility, PWR appls. 7−144447
low alloy, stress corrosion cracking set-up and methods 7−126362
LWR chemical decontamination using the CAN-DECON process, corrosion data 7−74015
minerals and rocks, crack growth theory and expts. 7−87624
Muhleberg BWR, recirculation pipework replacement 7−141241
Nimonic 80 A, high temp. SCC in presence of V containing corrodent 7−113782
nylon, stress cracking in aq. salt solns., craze-growth kinetics 7−113743
optical fibres, hermetic coating 7−142028
PMMA, chain entanglements, fracture behaviour investig. 7−118026
polymer-matrix composite, adhesion-bonded joints, interlayer corrosion cracking resist., metal-matrix composites comparison 7−144577
PWR primary side temp. reduction program for stress corrosion cracking improvements 7−103058
reactor process piping systems, automated ultrasonic inspection of intergranular SCC 7−135516
steel, austenitic stainless, BWR hydrogen water chemistry effects on Type 304 IGSCC 7−106707
steel, austenitic stainless, BWR pipelines, intercrystalline tension crack corrosion, US anal. *(German)* 7−86549
steel, austenitic stainless, BWR piping, stress corrosion cracking study 7−89668
steel, austenitic stainless, corrosion in aqueous environments 7−113785
steel, austenitic stainless, creep-corrosion interaction in molten NaCl-$CaCl_2$ at 570°C *(French)* 7−86474

stress corrosion cracking continued
steel, austenitic stainless, electrochemical potentiokinetic reactivation test for IGSCC anal. 7−129173
steel, austenitic stainless, intergranular attack in H_2SO_4, simulation 7−119400
steel, austenitic stainless, intergranular SCC, effect of fluid flow rate 7−138879
steel, austenitic stainless, irradiation assisted stress corrosion cracking in LWR materials 7−116579
steel, austenitic stainless, pipe, weld heat affected zone, low temp. sensitisation 7−138893
steel, austenitic stainless, SCC, dissolution rate contour maps in H_2SO_4 soln., halide ion effects 7−126279
steel, austenitic stainless, SCC, fluid flow effect of variable pH solns. 7−138880
steel, austenitic stainless, SCC, transgranular and intergranular cracking susceptibility in $MgCl_2$ soln., 100°C 7−138868
steel, austenitic stainless, SCC failure time probability distrib. $CaCl_2$ conc effect *(Japanese)* 7−71373
steel, austenitic stainless, SCC in molten NaCl-$CaCl_2$ at 570°C *(French)* 7−86471
steel, austenitic stainless, SCC susceptibility rel to cathodic reduction treatment *(Japanese)* 7−78325
steel, austenitic stainless, sensitised, intergranular SCC in high temp. high purity water environment *(Japanese)* 7−71281
steel, austenitic stainless, sensitised, SCC performance in chloride and sulphate solns., effect of N and C 7−93141
steel, austenitic stainless, sensitized, SCC in oxygenated Na_2SO_4 soln. at high temp. 7−126285
steel, austenitic stainless, storage cylinders for ^{85}Kr fission product, corrosion and embrittlement by stagnant liq. Rb 7−86424
steel, austenitic stainless, stress corrosion cracking, strain-rate effects 7−104903
steel, austenitic stainless, weld metal, SCC, effect of N content *(Korean)* 7−78318
steel, austenitic stainless *(Japanese)* 7−106678
steel, austentic stainless, cold worked single crysts., SCC in boiling $MgCl_2$ soln. *(Japanese)* 7−119414
steel, C, stress corrosion cracking in simulated radwaste salt repository environments 7−100481
steel, clad, surface condition of cladding layer influence on local corrosion 7−144596
steel, constructional, octyl ester of diethanolamine use as corrosion inhibitor 7−93163
steel, corrosion crack start conditions rel. to stress-strain state and electrochem. conditions 7−86416
steel, corrosion cracking tendency eval. method 7−132865
steel, Cr type, SCC inhibitor protection effectiveness eval. method 7−144586
steel, delayed fracture susceptibility under combined effect of H and stresses, test method 7−132867
steel, ferritic, cyclic voltammetry in NaOH, stress corrosion crack growth appl. *(Czech)* 7−116548
steel, H effects, review 7−93181
steel, high strength, SCC, threshold stress intensity factor, interlaboratory evaluation 7−71374
steel, high-strength, prestressing wires, hydrogen embrittlement under cathodic polarisation 7−100429
steel, HSLA, crack resist. in corrosive media after hydrogen impregnation, test temp. influence 7−144589
steel, intergranular SCC rel. to grain boundary segregation of P *(German)* 7−119455
steel, low alloy, H induced SCC *(German)* 7−119452
steel, low strength ferritic, SCC in CO_2 containing environments 7−86429
steel, martensitic stainless, SCC in conc. $MgCl_2$ solns. rel to tempering 7−86405
steel, mild, SCC under compressive stress in boiling nitrate soln. 7−126286
steel, mild, weld joints, corrosion cracking in H_2S media 7−144599
steel, Ni-Cr-Mo, SCC, microstruct. effects 7−132816
steel, Ni-Cr-Mo, ultra-high strength, H assisted fracture, loading mode effect 7−86311
steel, Ni-Cr-Mo-V, stress corrosion cracking in A471 turbine disc steel, dissolved O_2 and CO_2 effects 7−144627
steel, Nk-Cr-Ni, high strength, SCC under mode III loading *(Chinese)* 7−144580
steel, Pd modified low alloy, microstruct., SCC, H induced cracking 7−93022
steel, remelted under rare-earth metal based flux, corrosion and mech. props. 7−100416
steel, SCC rel. to retained austenite 7−132817
steel, stainless, duplex, SCC mechanism, fractography *(Japanese)* 7−119413
steel, stainless and low alloy, LWR components, corrosion assisted cracking, control and repair 7−93205
steel austenitic stainless, SCC, sensitisation, prior cold work *(Japanese)* 7−144606
steel pipe, SCC defect evaluation using X-ray CT scanner 7−126385
steels, stainless, SCC testing methods in hot chloride media, crit. study 7−119475
stress intensity factors for SSC and H-assisted cracking by holding-load and fractography test. *(Japanese)* 7−100473
test installation design 7−78438
VVER power station steam turbines, argument for initial superheating 7−116552
water reactor constructional materials, const. load and const. displacement tests 7−122011
Zircaloy LWR fuel claddings I stress corrosion cracking, materials technology 7−116583
Zircaloy-2 plates SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
Zircaloy-4, I induced SCC, elongation and bend tests 7−119412
Al alloys, high-strength, powder metallurgy, SCC behaviour 7−71379
Al alloys, SCC strength, vibr. stresses and gain anisotropy effects 7−100425
Al and alloys, corrosion mechanisms, tests and treatments *(French)* 7−119425
Al-Li-Cu-Zr alloy, microstruct. and SCC relationship 7−144611
Al-Mg alloys, intergranular SCC, Mg grain boundary segregation 7−86398
Al-Mg-Li alloys, corrosion resist., effect of alloying additions 7−93191

stress corrosion cracking continued
Al-Zn-Mg, SCC and corrosion fatigue in NaCl soln. 7−119442
Al-Zn-Mg, SCC crack growth under dynamic mixed mode loading conditions *(Japanese)* 7−119415
Al-Zn-Mg, SCC in aq. NaCl solns., organic adsorbants effect 7−86406
Al-Zn-Mg plates, weld toe cracking, stress field effect 7−78233
Al-Zn-Mg-Cu, microstruct. and props., effect of retrogression and reageing *(Chinese)* 7−132663
Al-Zn-Mg-Cu, SCC, grain boundary precip. *(German)* 7−119458
Bi-Cr-Fe, sensitised, intergranular SCC in high temp. high purity water environment *(Japanese)* 7−71281
Cu and Cu alloys, stress corrosion resist. testing *(German)* 7−144659
Fe, repassivation, straining electrode behaviour in high temp. and high press. borate buffer soln. 7−93200
Fe-Si (3 wt.%) single crystals, H induced cleavage cracking under mode 2 loading 7−78159
FeSi bicrystals, intergranular SCC, nucleation and growth rel. to slip 7−138907
H, injection in boiling water reactor, rel. to radiation chemistry 7−89632
Mg alloy, corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7−144588
Ni base superalloys, γ' precip. hardening, SCC resist. in high temp. water *(Japanese)* 7−93173
Ni-Cr-Fe, superni, hot corrosion by V, crack growth 7−144583
Ni-Cr-W, superalloy, creep behaviour, effect of salts *(Chinese)* 7−132699
Ni-Cu, high strength nonmagnetic alloy, SCC, H embrittlement in brines 7−86333
Si_3N_4/Al braze joint, fracture, bend strength, SCC 7−132731
Zr alloy, acoustic emission applic. during mech. and fracture testing 7−100479
Zr Nb fuel element claddings, in-reactor I stress corrosion study *(Russian)* 7−116580
Zr plates, SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
Zr WWER fuel cans, corrosion cracking under γ-radiation, CsI radiolysis effects 7−106657

stress effects
see also cavitation; deformation; elastic waves; heat treatment; high-pressure phenomena and effects; magnetomechanical effects; materials testing; mechanical properties of substances; mechanical testing; piezo-optical effects; piezoelectricity; piezoresistance; shock wave effects; stress analysis; stress measurement; stress-strain relations; tribology
A15 compounds, supercond. transition temp., stress effects 7−105779
A15 cpds., superconductivity under nonhydrostatic stress 7−105787
cometary nuclei, thermal stress cracking rel. to splitting and outbursts 7−88204
metals, irradiation in stressed state, point defect conc. in void vicinity 7−142764
Mossbauer impurities forming dislocation kinks, stress induced effects 7−117925
x-phthalocyanine crystals, dislocation array, TEM obs. 7−76131
trans-1,4-poly-1,3-pentadiene, cryst., isotactic, stress-induced conform. transitions 7−91472
polyisoprene, oxidative-degradative processes, mech. stress effects *(Russian)* 7−113915
precipitate shape evolution under applied stress, thermodynamics and kinetics 7−86188
rocks, rough surfaces under normal stress, contact area growth 7−120011
SAW quartz cryst. cuts with low stress and temp. sensitivity, theoretical study 7−90868
GaAs-$Ga_{1-x}Al_xAs$ quantum well, electronic struct., compressive uniaxial stress effects 7−138029
K_2ZnCl_4, anomalous thermal hysteresis, birefringence study 7−69891
LiF:OH, H in anion vacancies, ESR linewidth, temp. and stress depend. effects 7−70638
$NaNO_2$ powder, ^{14}N NQR, particle size and stress depend. studies 7−92542
Nb-Ti fibres, short sample training behaviour, 4.2 K 7−86376
Nb_3Sn multifilamentary superconductor, stress effects on critical currents 7−105871
Pb-acid battery negative plate mass vol. pulsation obs. 7−133070
Si (111) surface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
Si deep level electron emission, stress effects, shear deform. pot. const. determ. 7−112236
Si:Au, A-centre and impurity acceptor electron capture cross-section, uniaxial stress effects study 7−112363
a-Si:H, light-induced creation of defects, influence of mech. stress, photocond. study 7−118539
Si:Pd (Pt) (Au), impurity energy levels, uniaxial stress and hydrostatic press. depend. 7−105474
SiO_2/Si (111) interface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
Ta, stress-induced H states and enhanced diffusion 7−83980
Ti-base alloys, composite superconductors, phys. props., design and fabrication, book 7−108055
V, stress-induced H states and enhanced diffusion 7−83980
V, superdiffusion of H 7−105122
ZrO_2, partially stabilised, stress-induced monoclinic phase, 2D Raman obs. 7−70810
ZrO_2:Y_2O_3, stress-induced transformation, zone size, Raman microprobe obs. 7−70812

stress field analysis at cracks *see crack-edge stress field analysis*

stress measurement
backscattering of strain depend. US signals, dislocation damping 7−132900
biaxial elastic inclusion stressmeter anal. 7−87920
coatings, residual stress meas. on brittle substrates by indentation fracture 7−113814
differential IR thermography, NDT appl. 7−100491
digital image scanning, press.-sensitive film 7−110888
glass fabric reinforced epoxy laminates, residual stresses and warpage meas., projection moire technique 7−100467
heterophase materials, ground surface, residual stresses, X-ray diffraction 7−86292
metals, thermoelastic stress analysis for testing and development of automotive components *(German)* 7−113598
nondestructive method using strengthening sensors and specimens under biaxial tension 7−75489

stress measurement continued
piezoelectric stress gauge for dynamic stress meas. in soil and rock mediums *(Chinese)* 7−127479
piezoresistance gauges, dynamically loaded, resistive hysteresis 7−102398
plastic stress intensity factors in out-of-plane shear by reflected caustics 7−110844
PMMA bars, residual stress determ. by fracture mechanical relations *(German)* 7−86523
polycarbonate, favourable residual stresses, meas. 7−110887
PVC, internal stress determ., modified transient dip test 7−106729
rock, conf., Stockholm, Sweden (September 1986) 7−80149
rock stress measurement methods 7−87922
rocks, overcoring techniques for in-situ stress meas., finite element anal. 7−87921
speckle techniques for photomechanics and optical metrology 7−134846
steel, cold rolled strip, residual stress evaluation using X-rays and layer removal technique 7−126143
steel, cold rolled strip, residual stress state, neutron diffr. study 7−126142
steel, ferromag., stress, nondestructive meas., harmonic analysis of induced voltage 7−126382
steel, low C, textured, X-ray stress determ. using compliances calc. 7−132641
steel, mild, stress meas., Barkhausen noise and magnetisation rotation methods comparison 7−78412
surface residual stresses, nonuniform, nondestructive X-ray diffraction anal. 7−86547
welded joint, residual stress distrib. meas. 7−93231
welding internal stresses, meas. by e-field anal. and US method *(German)* 7−100498
welds, nondestructive testing using the 3MA-analyzer 7−126383
X-ray measurement of residual stress, use of oscillation on position-sensitive detectors 7−123556
X-ray measurement of triaxial stresses, Poisson's ratio and stress-free lattice spacing 7−142244
Au Fermi surface necks, uniaxial stress and strain derivatives 7−92486
Cu electroplating, stress meas. aided by PC 7−126359
Fe powder, X-ray microbeam stress meas., fatigue crack tip residual stress *(Japanese)* 7−144652
$Ni_{66}Cr_{34}$, duplex oxide-metallic substrate system, oxidation stress distrib. determ. by curvature method 7−86470
Si sheet, residual stress meas. by shadow moire interferometry 7−83138
Si_3N_4, plasma-enhanced deposited on Si (100), ion bombardment-induced mechanical stress meas. 7−71007
$Si_3O_3N_2$, plasma-enhanced deposited on Si (100), ion bombardment-induced mechanical stress meas. 7−71007
TiC CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162
TiN CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162
W alloy, W-2, dynamic response, determ. by commercial manganin stress gauges 7−144472

stress-optical effects *see piezo-optical effects*

stress relaxation
see also anelastic relaxation; creep; viscoelasticity
amorphous solids, activation energy spectra for structural polarization 7−104561
crack, slender, evolution under diffusion mass transfer 7−110856
dislocation loops, radiation-induced generation by inclusions 7−137391
elastomers, relaxational props. during network formation, meas. method *(Russian)* 7−83645
glass fibre reinforced polyester, beams, expt. relax. behaviour in three-point bending 7−83059
glass parts, viscous relax., thermal stresses, finite element calc. 7−71229
graphite fibre reinforced epoxy, hygrothermal damage 7−78298
Incoloy 800, γ' hardening, low cycle fatigue, creep, slip bands, microstruct. 7−106527
intervertebral disc, human, mech. model 7−145116
irradiation creep results, review 7−93055
magnetic lacquers, rheogram meas. with couette apparatus 7−91049
metal, weld zone residual stresses relaxation in field of elastic vibrs. 7−126164
metallic glasses, shape formation, structural relaxation 7−142604
metals, dynamic deform., elastic precursor propag., shortwave method anal. 7−98304
metals, recovery theory and its application to stress relaxation tests 7−119285
metals, speed of deformation effects on stress *(German)* 7−104186
micanite insulation for DC machines, stress relaxation during molding 7−98334
modulus and creep compliance interconnection formulae 7−98323
nitrocellulose-nitroglycerine mixtures, dynamic mechanical meas. 7−119304
Pb, bimodal stress relax., superconducting and normal state 7−86242
PET, oriented, relax. props. *(Russian)* 7−84124
plastics, speed of deformation effects on stress *(German)* 7−104186
polycarbonate, alcohol-assisted craze growth kinetics 7−119391
polyethylene, high density, $CaCO_3$ filler, stress relax. and creep study 7−100275
polyimide films, mech. relax., prehistories effects *(Russian)* 7−98338
polymer melts, visco-anelastic description 7−75505
polymer solutions, stress relaxation, diff. constitutive eqns., convected derivatives 7−110895
polymers, mech. and elec. relax., time-temperature superposition principle and scaling behaviour 7−113590
polymers, nonlinear characterisation of long-term behaviour 7−118033
polyphenyl quinoxaline films, mech. relax., prehistories effects *(Russian)* 7−98338
polypropylene block copolymers and elastomer blends, dynamic mech. props., morphology 7−119303
pressure sensor long-term accuracy, stress relaxation charact. expt. *(Japanese)* 7−128568
rubber, cured, nonlinear viscoelastic model for nonfactorisable time depend. behaviour 7−132658
rubber, natural, compression, stress relax., modulus enhancement factor 7−78089
scaling relation of expt. curves 7−136719
self-consistent stress relaxation model, logarithmic creep 7−104909
silica suspension, polyacrylamide soln., flocculation, rheological behaviour study 7−114009

stress relaxation continued
steel, austenitic, welded joint stress relaxation effects on local breakdown susceptibility 7−138777
steel, austenitic stainless, long term stress relax., carbide precip., residual stress *(Japanese)* 7−93050
steel, Cr-Mn-Si, temper embrittlement susceptibility, effect of thermobaric treatment 7−71273
steel, Cr-Mo, creep-fatigue behaviour, continuous damage evaluation, life prediction 7−106586
steel, Cr-Mo-V, high temp. creep as relax. processes 7−93067
tartaric acid composites, complex piezoelec. response 7−99688
triple grain junction, grain boundary sliding 7−76142
viscoelastic medium, num. shock profile 7−90988
Zircaloy-4, cold worked and stress relieved, load relaxation 7−142908
Al, stress relaxation in condition of cyclic electron irrad. 7−126155
Al, tricrystal, triple grain junction, grain boundary sliding 7−76142
Al-Cu-Mg, creep, relax., theoretical calc. for polycrystals 7−106575
Co polycrystal, stress relax. rate meas. 7−118003
$Co_{75}Fe_5Si_{15}B_{10}$ amorphous alloy, plastically deformed, stress relax. and microhardness *(Russian)* 7−126159
$CoSi_2$-Si MBE layers, strain relax. 7−143276
Cu, hot compression, recovery and recrystallisation during stress relax. 7−119281
Cu, static recrystallisation after hot working, stress-free or stress relaxation conditions, microscopic determ. 7−132635
Cu, tricrystal, triple grain junction, grain boundary sliding 7−76142
Cu-Ni-P amorphous alloys, stress relax. studies *(Russian)* 7−100270
Fe castings stress relief using vibration *(German)* 7−144454
Fe-Cr-Al, stress relaxation kinetics of growth during oxidation *(French)* 7−86473
Fe-Ni-B, amorphous alloys, relax. behaviour 7−98339
$Fe_{78-y}Co_ySi_9B_{13}$ metallic glasses, change in Young's modulus during struct. relax. 7−132659
$Fe_{40}Ni_{40}B_{20}$ metallic glass, homogeneous deform., stress relax. meas. 7−98319
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, creep, structural relax., wear, plastic flow model 7−86295
$Fe_{50}Ni_{30}Si_{10}B_{10}$ amorphous alloy, crystn. and relax. during pulse heating 7−71228
GaAs/(Ca,Sr)F_2 heteroepitaxial layers, MBE grown, crystalline defects 7−112127
H and D in metals and alloys, distrib. around trapping centres, statistical phenomenological model, inelastic relax. spectra anal. 7−84001
InP:S, single crysts., thermal activation of deform. 7−98307
LiF, gamma irrad., latent hardening, mobile dislocations and internal stresses 7−83967
Mn-Cu-Ni-Fe-Al, struct. transform. in specimens alloyed with Ni, Fe and Al 7−100221
Mo, single crysts., high temp. stress relax. 7−126163
Mo-Nb (3 wt.%) alloy single crysts., high temp. stress relax. 7−126163
Na_2O-CaO-SiO_2 glass, ion exchange strengthening, stress buildup and relax. 7−71139
Nb alloys, high strength, substruct. form. due to rolling, stress relax. *(Russian)* 7−144430
Ni-Cr-W superalloy single cryst., tensile stress relax., 973-1273K 7−132656
Ni-Nb metallic glasses, creep, free vol. annihilation and relax., isothermal dilatometry meas. 7−98324
$Ni_{55}Cr_5Nb_{40}$ metallic glass, thermal and mech. stability, Cr effects 7−144479
$Ni_{60}Nb_{40-x}Al_x$ metallic glasses, annealing effects 7−126149
Si, nonplanar oxidation and oxide leakage current reduction by rounding-off oxidation 7−132829
Si-SiO_2 interface, mechanical stresses 7−76585
Sn-Pb eutectic alloy in superplastic condition, stress relax. 7−126158
Ti alloy weld joints, stress-strain state stability during ageing 7−126154
Ti alloys, dislocation velocity-stress exponents, effect of H *(Chinese)* 7−132657
Ti-Al-V, stress relax. and notch fatigue 7−144550
TiC layers, CVD on Fe-C substrates, development and partial relax., of internal stresses 7−113773
W, single crysts., high temp. stress relax. 7−126163
α-Zr, load relaxation, strain ageing influence 7−144435
α-Zr, self-diffusion coeff. 7−111941
α-Zr, strain rate sensitivity, effect of dynamic strain ageing 7−113625

stress-strain curves *see stress-strain relations*

stress-strain diagrams *see stress-strain relations*

stress-strain relations
see also elastic constants; elastic limit; serrated yielding; yield point; yield stress
ADINA and nonlinear FEA, conf. Cambridge, MA, USA, (June 1987) 7−101995
anisotropic media, plastic flow theory, determining relationships 7−75347
arch, composite, nonlinear problem of thermal stresses, anal. 7−97338
Ariake clay subjected to shear failure and disturbance, strength variation *(Japanese)* 7−107404
aromatic-aliphatic epoxy mixtures, crosslinked, struct.-props. rels. 7−91483
axially cracked cylindrical shells, crack tip stress-strain field, stress intensity factors *(Chinese)* 7−142216
bar, elastic, embedded in elastic half-space, lateral harmonic motion 7−83037
bar, elastic, embedded in elastic half-space, longitudinal harmonic motion 7−83036
BCC polycrystals, stress-strain curves analysis 7−138801
beam, rigid-plastic, shear and bending response to partly distributed blast-type loading 7−75342
beams, nonlinear materials, elastic bending and stability 7−123489
binary mixture, solidification in axisymm. enclosures, approx. calcs. 7−104969
bone regenerate in tension, deform. and breaking 7−71808
Bree cylinder, alternating plasticity at surfaces subjected to in-phase and out-of-phase loading 7−97339
cavity in elastic plate, loaded circular, stress field, isochromatic curves calc. 7−117475
cellulose acetate, mech. props., temp. characteristics *(Japanese)* 7−137458
ceramic bending bar, outer fibre stress under primary creep conditions 7−144649
ceramics, crack shielding, stress intensity factor, continuum theory 7−119367

stress-strain relations continued
coated system, mech. props. 7−93027
collective modes in a viscoelastic medium. transformation 7−83074
composite, elastic-plastic materials, thermal expansion, stress-strain relations 7−83077
composite laminates, nonlinear stress-strain response, num. anal. *(Japanese)* 7−97348
composites, multiphase, static elastic and thermoelastic field fluctuation 7−69008
concrete strength and elasticity, modified classical theory *(German)* 7−75284
continuous media, elastic, free vibr. study *(French)* 7−123505
crack growth, steady, with linear strain hardening, asymptotic fields 7−69058
creep, primary, kinetic eqns. with account of softening, model 7−113637
criteria based on components of stresses or strains and energy density 7−75436
cross-linked elastomeric systems, large deforms., Mooney-Rivlin eqn. anal. 7−142885
crystal growth, stress, strain and fracture effects 7−91499
cubic crystals, orthotropically textured elastic aggregates 7−142877
curved anisotropic elastic layer, periodic struct., stress-strain state calcs. 7−142175
cylinder, hollow magnetoelastic, in liq. medium, dynamic reaction during impulsive excitation 7−123513
cylindrical shells, stress-strain state, composite eqn. method 7−75328
deformed random line elements length weighting for strain anal. 7−123563
description with Hooke's straight line, yield horizontal and strengthening clothoid *(German)* 7−132693
diamond, critical shear stress, fracture and deform., bending tests obs. *(Japanese)* 7−118018
disc with weakened central zone, fracture 7−75450
displacement prescribed loading, 1D softening with localisation 7−86230
dome, spherical thermoviscoelastic, steady-state thermomech. vibrs. under cyclical loading 7−97372
dual phase alloys, stress-strain relations, finite element analysis *(French)* 7−78129
ductile material, shear strength, effect on plane shock wave propag. 7−76297
ductile material under mixed mode loading, finite element study of near crack tip deform. 7−130595
dynamic penetration resist. to conical indenter 7−100363
elastic body, 2D internal stress appl. to crack growth in nonelastic materials 7−117541
elastomers, elongation, vol. and energy changes 7−84098
epoxide resins, monomer content and hardener effect on thermomech. props. 7−71243
epoxy binders, elasticity type effect on viscoelastic props. 7−138774
failure time in creep 7−123486
ferrimagnetic garnet epilayers, stress-strain distrib. around implantation boundaries, elastic models, continuum approx. calcs. 7−124379
fibre reinforced composite, unidirectional, stress state calculation in vicinity of struct. defects 7−136754
fibre reinforced composites, hybrid, unidirectional, dynamic tensile failure process simulation *(Japanese)* 7−97447
fibre reinforced composites, short, non-aligned fibres, stress-strain curve 7−111740
fibre reinforced glasses and glass-ceramics, development and props. 7−78143
fibre reinforced metal matrix composites, constitutive eqns. 7−90981
fission reactor fuel clads, computer code for strain-stress behaviour and collapse 7−102995
foam plastic, tough, relax. props. in compression, macrostruct. effect 7−71246
foam-plastics, phys. charact. features of deform. kinetics 7−86281
foams, rheology, polydispersity and liq. viscosity effects 7−130614
geologic materials, constitutive model with strain softening 7−133663
glass fibre reinforced epoxy, hybrid comp., behaviour under dynamic tension 7−71262
glass fibres, mechanical props. rel. to Al dispersoids 7−113620
glass joints made by optical contact, stress state, design and service factors effect on strength 7−75173
granular materials, particle contact anisotropy assoc. with shearing 7−90929
granular materials, semi-space, boundary value problems, soln. construction 7−117471
graphite fibre reinforced epoxy, fatigue life and damage 7−78177
graphite fibre reinforced epoxy, laminate, hygromechanical charactn. 7−117551
Haasen-Kelly effect type deformation phenomena, analytical description 7−75346
hysteretic systems under stationary random excitation, appl. of trace method 7−142186
ice, laboratory prepared and Antarctic core, tertiary creep rate studies 7−114821
inclusion containing materials, strength criteria 7−75330
inextensible networks, infinitesimal plane wrinkling 7−83068
infinite body with close gas-fitted disc-shaped cracks, limit equil. 7−110873
isotropic and anisotropic materials, limiting complex-stress states analysis method 7−97346
laminate, edge effect, finite-difference approach 7−68997
laminate, symmetric, consistent refined theory for flexure 7−130546
laminates, off-axis, prep. by folding technique, charactn. 7−144321
large elastoplastic deformations under high press., theory development 7−110812
limit loads of heterogeneous and homogenized structures, comparison *(French)* 7−123485
MBE growth, relax. of stresses 7−92015
membranes, elastic incompressible, subjected to dead-load tractions 7−83035
metal flow, plane strain, within specified plastic boundaries, FEA 7−142184
metal-polymer plates, two-layer, stress-strain state under cyclical loading 7−78109
metallic specimens, deform. under strain control, instabilities in hysteresis loops 7−132689
metals and single-phase alloys, plastic deform. to high strains, simple phenomenological expressions 7−98310
multiaxial cyclic problems, anal. with anisotropic hardening mode 7−104165
multilayered elastic half-space, transversely isotropic, 2D static response to surface loads 7−134495
nondestructive stress determination method 7−75489
nonlinear fracture mechanics using ADINA 7−110837
nonlinear structural response, design sensitivity anal. and optimisation 7−130550
nylon fibres, composite struct., mech. props. prediction 7−86291
organoplastic, unidirectionally reinforced, thermal and moisture ageing effect on deform. and failure, mechanolum. obs. 7−71248
orthotropic medium, elastodynamic crack problems 7−104214
piezoelectric composite ceramic, effective props. theory 7−77470
plane strain, Hutchinson-Tvergaard shear localisation eqns. 7−71239
plane torsion test, buckling conditions *(German)* 7−97355
plasticity, subcritical, critical and supercritical directions of loading 7−75341
plasticity, with non-associated laws, anal. of stress-strain relations 7−123482
plate, composite, subjected to heat cycling, delamination problem soln 7−83118
plate, impulsively loaded, large displacements calc. methods 7−110811
plate with local surface cylindrical damage, stress-strain state 7−69011
plate with stiffening ribs, middle-plane deform. effect on nonsteady stress-strain state 7−75349
plates, anisotropic laminar, with defects on interfaces, breaking resist 7−75452
plates, laminated, high-order theory with improved in-plane responses 7−75335
plates, multilayer orthotropic, bending allowing for transverse reduction 7−97342
plates, rectangular, uniaxial compression with unloaded edges clamped, stability in elastoplastic range 7−117497
plates, sandwich, nonlinear anal. 7−90973
poly(vinyl acetate-co-N-vinyl 2-pyrrolidone)-poly2-ethylhexyl acrylate-co-acrylic acid blend, compatibility and microstruct., IR spectra 7−117107
polyester fibres, composite struct., mech. props. prediction 7−86291
polyethylene-EPDM rubber binary blends, dynamic mech. behaviou 7−78087
polyimide film, in situ meas. of residual stress, Young's modulus and ultimate strain 7−124371
polyisobutylene networks, swelling, reinforcement generation in situ stress-strain isotherms 7−131058
polymer, oriented, nonlinear viscoelasticity in high-rate tension 7−78091
polymers, solid, multiaxial nonlinear viscoelasticity 7−118034
polymers glasses, stress-strain relationship 7−84097
polymyrcenes, hydroxy functionalised, form., appl. as rubber-toughening agents in glassy polyurethanes 7−86621
polypropylene - EPDM rubber binary blends, dynamic mech. behaviou 7−78087
polyurethane anionomers, glass transition and mechanical props 7−143010
polyurethane network, rubber toughened, composite materials 7−84096
porous, unequally strong and anisotropic media, applied theories of plasticity 7−75345
powder materials, sintered, form. and densification 7−138703
rigid-plastic materials, stress rate, subcrit., crit. and supercrit. directions 7−117473
rod, 3D stressed state under impact along lateral surface, numerical calcs 7−75376
rubber, crosslinked, uniaxial extension, true stress representation 7−78086
rubber elasticity models for finite element analysis 7−104147
sharp inclusion systems, stress-strain state, asymptotic behaviou 7−117481
shear band development incorporating heat conduction, anal. 7−90985
shear localisation in rate and temp. depend. solids, FEM anal. 7−90984
sheet materials, full strain curves construction method, specimen design 7−126367
shell, composite cylindrical and spherical, radial vibrations 7−69026
shell, cylindrical, closed, opening of nonthrough crack, δ_c model analogue appl. 7−75431
shell, cylindrical, orthotropic, spatial effects in deform. problems 7−142181
shell, cylindrical, shallow, of nonlinear material, elastoplastic bending exptl. investig. method 7−110810
shell, cylindrical, stress-strain state during heat treatment 7−113587
shell, cylindrical, three-layer, stress-strain state under effect of axisymmetric loads 7−83084
shell, multilayered cylindrical, with elastic filler, bending by local moments 7−69010
shell, ribbed, under a lateral pulsed load 7−90987
shell of revolution, orthotropic, stress-strain state computer with allowance for transverse shear and reduction 7−83072
shell structures, thermo-elastic-plastic and creep analysis. 7−104163
shells, conical, free vibrations study *(Japanese)* 7−110825
shells, laminated, lateral compression in static problems 7−110808
shells, thick elastic, arbitrary shape, general equation of motion *(Chinese)* 7−136687
shells of revolution, multilayer rib reinforced, nonaxisymmetric temp. force 7−97345
short fibre reinforced polypropylene, interfacial shear stress rel. to fibre orientation 7−106577
slabs, thick elastic, on elastic foundation 7−136696
smeared cracking, plasticity, creep, and thermal loading, unified approach 7−110839
solid of revolution with cutouts breaching axial symmetry, stress and strain state analysis 7−110793
sphere, conducting, deformation and motion, insertion in a magnetic field 7−136706
sphere, layered, from finite set of materials, optimisation of mass 7−68988
stainless steel clad ultrahigh C steel, superplasticity 7−78123
steel, austenitic stainless, constitutive eqns., and loading histories 7−138792
steel, austenitic stainless, cyclic deform., kinematic and isotropic hardening 7−138760
steel, austenitic stainless, deformation, theory of mobile dislocation density 7−69712
steel, austenitic stainless, strain hardening and softening, discrete memory description 7−78052

stress-strain relations continued
steel, austenitic stainless, strain induced austenite transform., temp. history effect 7−119271
steel, cold and hot rolled, shear band form. at high strain rates, temp. profile meas. 7−113571
steel, Cr type, sheet, stress concentrator effect on strength and ductility in biaxial tension 7−78128
steel, crack growth studies under selected temp.-strain histories 7−71269
steel, creep and tensile tests at high temp., uniform deforms. determ. 7−132869
steel, dual phase, deform., modified Crussard-Jaoul analysis 7−126176
steel, dual-phase, cyclic deform. effects of morphology and strength of martensite 7−100300
steel, Hadfield, hardening mechanism and stress-strain diagrams *(Russian)* 7−71205
steel, HSLA, dislocation cell size rel. to strain, similitude meas. 7−98165
steel, irreversibility and damage in uniaxial tension 7−71260
steel, low-alloy, welded joints, supporting capacity in low endurance region 7−100368
steel, medium C, temp. and strain rate influences on mech. props. *(Japanese)* 7−106588
steel, Mn-Cr-Si, dual-phase, tensile stress-strain anal. 7−126190
steel, pearlitic transform. kinetics during continuous cooling, stress effects 7−113541
steel, quenched plates, stress-strain generation, effect of surface condition 7−100299
steel, spring, hysteresis 7−126157
steel, stainless, Cr-Ni, low-strain-primary dislocation creep, 873 to 1023 K 7−86253
steel, stainless, strain induced austenite transform. 7−132612
steel, strain hardening and heat treatment effect on uniform tensile strain and strain hardening coeff. 7−126194
steel, welded joint strength in mech. and thermal cyclic loading, stress concentrators effect 7−113716
strain criteria in fracture mechanics 7−75421
strain softening constitutive model, anal. 7−130528
strain-life and stress-strain relationships, single expression inversion formula 7−83063
stress integration with finite rotations, accurate numerical algorithm 7−120807
stressed-membrane heliostats, wood and graphite composites, stress strain anal. using NASTRAN 7−144794
strip, magnetostrictive, longitudinally polarized, elastic vibrations by external magnetic field 7−97397
structural elements under cyclic loads, modelling nonuniform nonsteady thermal stress states 7−75462
structural material behaviour under nonproportional loading, struct. model approach 7−75348
structural materials, fatigue strength, freq. depend., microplastic deform. role 7−78216
structure life prediction at high temp. 7−132710
substepping schemes for numerical integration of elastoplastic stress-strain relations 7−97331
thermoelastoplasticity, creep, effective-stress-function algorithm 7−128291
thermoplastics, cold drawing mechanics, large deform. strain hardening modulus 7−119319
thin annular plate, stress-strain state in axisymmetric deformation 7−75339
thin films, sputter deposited, stress and microstruct., molecular dynamics simulations 7−143261
transformation toughening, mechanics 7−113547
unbounded isotropic space weakened by ellipsoidal inclusion, thermoelastic stresses 7−97321
viscoelasticity, nonlinear, ID, admissibility and stability 7−90965
von Mises kinematic hardening model, stress rate and Lagrangian formulation of finite strain plasticity 7−75334
water-granule mixture, parallel flow under gravity, continuum modelling 7−91185
yield functions, singular, integration of plasticity equations 7−123479
Zircaloy fuel sheaths, strain and failure in CANDU LOCA 7−129343
AL-Cu, fatigued, containing shearable precipitates, behaviour of persistent slip bands 7−111569
Al, electron scatt. by dislocations, US absorpt. meas. 7−91595
Al, plastic behaviour at low and medium temps., phenomenological study 7−86248
Al, strain rate change technique 7−86252
Al-Fe-Mn, microplastic surface deform. 7−78094
Al-Mg (5.8 at.%), strain rate change technique 7−86252
Al-Mg-Fe, 6061-T6 tensile specimens, thermal-mech. damage 7−93096
Al-Mn-C (30, 0.8 wt.%), hot deformability, influence of microstruct. 7−113642
Al-Si, thin film metallisations, mech. props. and microstructure 7−124786
Au Fermi surface necks, uniaxial stress and strain derivatives 7−92486
B fibre reinforced Al alloy, deform. of tensile coupon with central slot 7−119310
B fibre reinforced Al alloy, orthotropic elastic-plastic material, charactn. in nonlinear range 7−144473
B fibre reinforced Al matrix composites, impact strength, constitutive eqns. and dynamic tensile tests *(Japanese)* 7−93056
BN, sintered cubic, microstruct, and mech. props. 7−144476
C fibre reinforced epoxy, hybrid comp., behaviour under dynamic tension 7−71262
C fibre reinforced epoxy, material props. under compression *(Japanese)* 7−98317
C fibre reinforced epoxy composite, geometrical and material nonlinear props. 7−69805
C fibre reinforced plastic, thermal deformation and strength at high temp. 7−138789
C/glass fibre reinforced epoxy resin hybrid laminates, nonlinear deform., failure 7−138781
$Co_{80}Nb_{14}B_6$, $Co_{84}Nb_{10}B_6$ metallic glasses, martensite transform., plasticity, internal friction 7−106574
Cu, electrical resist./shear strain relationship, effect of tensile stress and stacking fault energy 7−112292
Cu, fatigued single crysts., persistent slip band nucleation 7−111568
Cu, polycrystalline, cyclic loading, transient response to strain rate changes 7−144484
Cu-Al single crystals, strain softening and plastic flow instability 7−78097
Cu-Al(Zn), electrical resist./shear strain relationship, effect of tensile stress and stacking fault energy 7−112292
stress-strain relations continued
Cu-Pb(O), fatigued with positive mean stress, fracture mechanism 7−113689
CuZnAl, coil spring reversible shape memory actuators, shape strain degradation model 7−100310
Fe-Ni-C, tensile tests, martensitic transform., AE, mag. suscept. 7−144665
GaAs crystals, mechanical properties 7−98308
GaAs, stress-strain model for EL2 defect formation 7−111538
GaAs, stress-strain model for EL2 defect, chemical principles 7−111539
GaAs:Ne(Si)(Te), ion implanted, nonlinear strain effects 7−142806
Ge whisker crystals, relax. of stresses 7−112155
LiF crysts., mechanical props., neutron small dose effect studies 7−69769
LiF-LiF:Mg layer crystals, plastic props. 7−131213
Nb-Ti short sample superconducting fibres, mechanical behaviour 7−86377
Ni-Cr-Co-Mo high-temp. alloy, creep rupture behaviour of weldments, local deform. behaviour *(German)* 7−100387
Ni-Fe-Cr-Mo superalloy, strain hardening and softening, discrete memory description 7−78052
SiC fibre reinforced Li_2O-$Al_2O_3SiO_2$ glass-ceramic, fatigue behaviour 7−78235
SiC fibre reinforced LiO_2-Al_2O_3-SiO_2 glass ceramic, fatigue, stress rupture 7−132729
Ti alloy VT16, strain rate effect on plastic deform. resist. 7−113638
Ti alloy weld joints, stress-strain state stability during ageing 7−126154
Ti, textured sheets, deform. behaviour in uniaxial tensile test, effect of twinning 7−144500
Ti-Al alloy, α-phase, deform. and failure in strong mag. fields, 293 to 4.2 K range 7−93052
Ti-Al-Sn, beta processed Ti5331s notched specimens, prediction of stress rupture life 7−132735
Ti-Al-V (6,4 wt.%), strain reduced hydride, crack propag., TEM obs. 7−78221
Ti-Mn, two-ductile phase alloys, stress-strain behaviour 7−78121
TiC single crystals, state variable analysis of inelastic deform. 7−113612
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567
Zr-Nb (2.5 wt.%) alloy, pilgered cold-worked press. tube, in-reactor deform. 7−96186
stress wave emission testing *see ultrasonic materials testing*
stresses, internal *see internal stresses*
stretch receptors *see mechanoception*
striations *see discharges (electric)*
striking *see impact (mechanical)*
string theory
see also quark models; supersymmetry; unified field theories
(1,0) supergravity in superspace, heterotic string 7−115888
β functions, equivalence with massless bosonic string field equations, bosonic nonlinear-model 7−116149
$\Delta I=1/2$ rule, scalar diquarks contrib., colour triplet particles, operator product expansion 7−134994
σ models with torsion, two-loop β-function 7−102601
σ-model, supersymmetric, gravitational β function, four-loop corrections, effective action, string amplitudes 7−108790
σ-model in 2D, two-loop β-function 7−128755
σ-model related to fine structure of strings 7−140795
σ-models, symmetry of the string background field equations 7−121351
σ-models and string theories 7−140792
ϕ^3 field theory, zero critical dimension, Polyakov string theory 7−73526
$N=1$ superconformal gauge theory in $d=2$ superspace 7−128418
Aharonov-Bohm effect, gravitational analogue in 3 and 4 dimens. 7−95437
algebras, lattices and strings 7−108890
amplitudes in critical dimension, formulae for 1-4 loop amplitudes in first-quantized theory 7−128870
anomalous dimensions and mass renormalization in string theory 7−81155
aspects of strings and superstrings 7−88810
asymmetric orbifolds 7−116140
Atkin-Lehner symmetry 7−134604
axions, cosmological bound relaxation in superstring models 7−135074
Becchi-Rouet-Stora-Tyutin quantization of superconformal theories 7−67607
big bang, processes and theories 7−101961
black holes, quantum properties, closed string calcs. 7−115499
Born-Infeld action from conformal invariance of the open superstring 7−95430
bosonic σ-model perturbation theory, UV fixed point, string background field, conformal anomaly 7−89459
bosonic closed string theory, BRST operator on Riemann surface 7−67602
bosonic knotted strings and cobordism theory 7−128867
bosonic nonlinear σ-model two-loop β-functions and low-energy string effective action 7−128756
bosonic string, d=26, covariant fermionic and heterotic strings, partition fns., superconformal ghost system 7−140849
bosonic string, gauge fixing and BRST transform 7−108884
bosonic string, gauge transformation parameters and BRST hamiltonian quantization 7−95869
bosonic string, gravitational first-order action 7−128394
bosonic string, torsion, incompatibility with the Gauss-Bonnet combination 7−121470
bosonic string field, interacting, gauge invariant action 7−67477
bosonic string field theory, gauge fixing, BRST invariance 7−128759
bosonic string field theory surface terms in the cubic action 7−121482
bosonic string measure, Manin's formula derivation 7−95872
bosonic string mechanics in harmonic world-sheet coords., gauge-fixed formalism 7−89462
bosonic string model, 26D, relationship to membrane models 7−95329
bosonic string on SO(N) group manifolds, crit. dimensions, path integral anal. 7−95796
bosonic string theory, conformal field theories with additional Z_N symmetry 7−89457
bosonic string theory, conserved BRST current 7−81148
bosonic string theory, g-loop amplitudes, branch points, partition function, correlation function, differential equations 7−116150
bosonic string theory, Grassmannian σ-models and extrinsic geometry 7−108905
bosonic strings, closed, interacting, noncommutative analytic geometry and field theory 7−73517

string theory continued
bosonic strings, closed/open, dilaton condensates and loop effects 7−81067
bosonic strings, coupling constants, path integral measure normalisation 7−73616
bosonic strings, NSR-models, explicit derivation, open and closed strings, Hilbert spaces 7−120895
bosonic strings, off-shell amplitudes and singular states 7−67599
bosonic strings, open and unoriented, Polyakov path integral formalism 7−116143
bosonic strings classical, appl. of Jordan algebras and Freudenthal triple systems in (D+2)-dimensional space-time 7−67536
bosonic strings in the harmonic gauge, BRST transformations and conformal anomaly 7−95867
bosonization in string theory 7−67597
BRS cohomology and Casimir operators 7−81161
BRS invariance of the Witten type vertex 7−108875
BRST current algebra, anomalous Schwinger terms 7−102717
BRST invariant, cyclic symmetric 3-(super)string vertex, (super)conformal field theory 7−120900
BRST quantization in Siegel gauge, free closed bosonic string field theory 7−134937
BRST symmetry and differential geometry in string theory 7−108882
BRST-invariant transitions, closed and open strings, scatt. amplitudes, Cremmer-Scherk-Higgs mechanism 7−121477
cancellation of dilaton tadpoles and two-loop finiteness in SO(32) type-I superstring theory 7−121483
Caneschi-Schwimmer-Veneziano and Witten vertices, operator construction 7−89466
canonical formalism for minimal surfaces, string theory for general relativity 7−67104
Casimir effect in conformal field theories 7−95749
chiral fermion theory bosonisation, determinants, string partition function 7−121468
chiral four-dimensional heterotic strings from self-dual lattices 7−89468
chordal gauge symmetry in string field theory, local gauge theory of extended objects 7−81163
closed bosonic string, construction of coherent states 7−89471
closed bosonic string, covariant eqns. of motion and conformal algebra consistency 7−67603
closed bosonic string, interaction vertex props. and gauge invariance 7−67604
closed bosonic string, string length differentials 7−81145
closed bosonic string, superadditive time coordinate, ringlike domain moduli on world sheet 7−135081
closed bosonic string and superstring with twisted boundary conditions 7−67548
closed bosonic string in curved space-time, Virasoro algebra and vertex operators 7−89480
closed bosonic string space, general relativity generalization, Einstein gravity, classical Lagrangian 7−134605
closed bosonic string with $E_8 \times E_8$ symmetry, covariant interacting field theory 7−89405
closed bosonic strings, off-shell propagators, scattering amplitudes, Riemann surfaces 7−116151
closed fermionic string models, construction in 5 dimens. 7−89472
closed string field theory, general relativity with non-abelian geometry 7−89091
closed string scattering diagrams, light-cone string theory anal., moduli space triangulation 7−73613
closed string-open string transitions and Witten's string field theory 7−121475
closed strings, bosonic, type II and heterotic, vertex operators 7−108883
closed strings, gauge invariant free actions, algebraic study 7−67600
closed strings, OSP(1,1|2) and Parisi-Sourlas supersymmetry, nonAbelian OSP(1,1|2) generators 7−135085
closed superstring field theory, contact interactions in light-cone gauge, negative energy states 7−134603
closed superstrings as soliton-type solns. of 26-dimens. bosonic strings 7−73630
closed-string four-scalar tree amplitude, high-energy unitarity, superstring SST II appl. 7−81066
closed-string interactions, Witten open-string field theory analogy, 3-string interaction vertex 7−135082
compactified $O(16) \times O(16)'$ heterotic string theory, supersymmetry restoration 7−73557
compactified superstrings, pure gauge sector 7−120906
complex geometry and the theory of quantum strings 7−102140
conf., Durham, England (Sept. 1986) 7−88749
conf., Sandhamn, Sweden, June 1986 7−95109
conference on quantum field theory and math. physics, Bechyne, Czechoslovakia, (June 86) 7−80147
conformal gravity in d=2, appl. to string theory 7−89088
conformal supergravity, d=2, structure and string covariant actions 7−140586
conformal superstring anomalies in superspace 7−128399
convariant higher spin vertex operators in the Ramond sector 7−140846
correspondence of Z_2−Orbifold string and torus string 7−121480
cosmic loops, gravitational field 7−89084
cosmic string, relativistic kinetic theory formalism and macroscopic props. 7−95865
cosmic string, straight, gravitational effects, appl. to quasar and galaxy images 7−102044
cosmic string interactions 7−72667
cosmic string theory and inflation, galaxy formation 7−115643
cosmic strings, nongravitational decay of loops 7−101977
cosmic strings, rel. to cosmic struct. 7−115642
cosmic strings, semiclassical gravitational effects 7−89093
cosmological constant in heterotic string theory, modular forms on moduli space 7−81149
cosmological strings, role in axionic laser formation at galactic nuclei 7−107979
cosmology, astronomical constraints on string-dominated universe 7−120664
cosmology, axionic domain walls and strings, intercommuting behaviour 7−115659
cosmology, superstring neutrino-dominated Universe model 7−107998
covariant formulation of strings, dilaton vertex operator 7−81074
covariant gauge string field theory, construction method, bosonic open string appl. 7−108876
covariant heterotic strings and odd self-dual lattices 7−81153
string theory continued
covariant N-string amplitude 7−89470
covariant quantization and the three-reggeon vertex, light cone string field theory 7−108892
covariant string field theory, loop amplitudes in perturbation theory 7−67605
covariant superstring field theories, space time SUSY transformations 7−81063
covariant superstring parametrization, bosonic and fermionic components, classical eqns. of motion 7−121407
covariant superstring theory, multiloop calcs., space-time SUSY current 7−108351
covariantly quantized string theories, physical state conditions 7−73622
curved space string dynamics, perturbatively renormalised vertex operator, Virasoro algebra 7−116152
curved spacetime sigma models, local renormalisation group eqn., diffeomorphisms, conformal invariance 7−89342
curved superspace σ-models, light cone gauge fixing, θ-expansion of superstring 7−73566
d=2 euclidean gravity, supersymmetric Regge calculus 7−134619
D^0-$\bar{D}^0$ mixing in superstring-inspired E_6 models 7−95436
Dirac and Majorana spinors on nonorientable Riemann surfaces, string theory 7−135064
Dirac and Weyl fermion determinants 7−102266
Dirac neutrino masses, calculable in superstring inspired model 7−73581
Dirac neutrino masses, E_6 superstring models 7−135006
Dirac neutrino masses in superstring theories 7−73580
double-Kerr-Schild equivalence and hyperheavens 7−89053
dual Peierls brackets for strings, Virasoro algebra, open and closed bosonic strings 7−135084
duality in statistical Mechanics and string theory 7−80563
$E_6 \times E_8$ superstring theory, SUSY breaking from group gaugino condensates 7−128803
E_6 neutral gauge boson detection through lepton pairs at hadron colliders 7−89408
E_6 signatures in atomic physics, neutral massive gauge boson effects, H atom appl. 7−81091
e_6 superpotentials and applications to heterotic superstring phenomenology 7−89100
E_6 superstring based model, Z′ mass limits and decays, Higgs masses and couplings 7−95802
E_6 superstring matter parity, lepton and baryon number violation operator elimination for d=3, 4 7−140850
E_6 superstring model with exotic quarks, CP violation 7−73577
E_6 superstring models, lepton-number nonconservation 7−121401
E_6 superstring models, particle dichotomy and left-right decomposition, Dirac neutrino, W′ boson 7−128815
E_6 superstring models, simple discrete symmetries 7−134613
E_6 superstring theory, Z-Z′ mixing, use of Z lepton asymmetry 7−128822
E_6-based supersymmetric theories, Higgs boson mass bound 7−89420
$E_8 \times E_8'$ heterotic string, coset spaces as alternatives to Calabi-Yau spaces in the presence of gaugino condensation 7−140577
$E_8 \times E_8'$ heterotic superstring theory, Clebsch-Gordan coeffs. for m_b/m_τ relation 7−89474
$E_8 \times E_8$ heterotic superstring theories, discrete symmetries, phenomenological clues 7−128405
$E_8 \times E_8$ superstring models, cosmological consequences, baryon asymmetry, supermassive shadow particles 7−115878
$e^+e^- \rightarrow$ hadrons, string-cluster model anal. 7−116187
early Universe, cosmological topological defects, phase transitions and causality 7−108001
early Universe, inflation from higher dimens. 7−108369
early Universe, oscillating solutions in higher-dimensional cosmology, superstring anal. 7−146128
early Universe, primordial inflation, superstrings and Theory of Everything 7−115660
early Universe, string induced phase transition, analytical approach 7−120672
effective actions and σ-model β-functions 7−121472
effective actions and variational methods 7−128738
effective field-theoretical model for a string with phase transition 7−135061
effective super-Higgs and Str M^2 from four-dimensional strings 7−140589
effective supergravity lagrangians for 4D superstring massless sector, underlying nonlinear σ model 7−135078
Eg×Eg heterotic strings, compactification for realistic string model and technicolor 7−128402
Einstein-Maxwell electrovacuum eqns., cylindrically symm. solns., cosmic string interpretation 7−102268
Einstein-Maxwell scalar theory with monopole compactification, cosmological implications 7−73121
Einstein-Yang-Mills system, strings and superspace, d=10 supergravity 7−108796
energy and momentum distribs., comparison with 3D slab 7−121473
evaluation map in anomaly calcs. 7−134910
exceptional modular invariant $A_1^{(1)}$ partition function realization 7−67484
exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
exotic Drell-yan processes at Tevatron and SSC, light and heavy bosons 7−134996
extended objects, local Heisenberg field quantisation, semiclassical approx. 7−134953
Faddeev-Popov procedure geometry, gauge-invariant function integration, Fubini theorem 7−121324
Fayet-Iliopoulos terms, vacuum destabilization 7−108877
fermionic closed strings, algebraic geometry and covariant scatt. amplitudes 7−121469
fermionic string, Tomonaga-Dirac-Schwinger formulation 7−135077
fermionic string in critical dimens., 2D superconformal field theory 7−134954
fermionic strings, multiloop contributions, Selberg trace formula superanalog 7−121465
fermionic strings, twisted and extended, BRST quantization, O(2) and SU(2) strings, ghost systems 7−121478
fermionic strings, zero modes and supermoduli 7−116145
fine structure of strings 7−67596
flavour mixing in the presence of a fourth down quark, E_6 superstring model 7−102267
flux tubes in SU(2) lattice gauge theory, string tension 7−102615
Fock space formulation of gauge invariant interacting field theories 7−102710

string theory continued
four-dimensional superstring models, cosmological constant vanishing, free string spectrum 7−134610
four-dimensional superstrings, factorisation and multiloop modular invariance constraints for closed strings 7−108340
four-generation models from superstring orbifold compactification, Yukawa couplings 7−108352
free bosonic string, gauged BRST symmetry from iterated Noether procedure 7−108881
free field theories with local gauge invariance, BRST quantisation of classical actions 7−73533
free heterotic string field theory, supersymmetry, gauge fixing and BRST formalism 7−108886
free Nambu string, new quantisations 7−128868
free open spinning string, diagonalisation, nonlinear sigma model critical dimens. 7−108379
free Ramond sector of Witten's covariant superstring action 7−80548
free strings, field theory in nonconformal gauges, BRST methods 7−108873
fundamental particle physics without accelerators 7−73110
galaxy formation due to cosmic strings 7−95029
gauge covariant string field theories 7−140904
gauge fixing, topological aspects, comparison with Yang-Mills theory 7−81023
gauge invariant bosonic string quantization 7−95866
gauge invariant free closed bosonic string field theory, Hamiltonian formalism 7−81156
gauge-invariant, string field theory for torus compactified closed string 7−89482
gauge-invariant action for open and closed bosonic string field theories 7−81164
gauge-invariant free open superstrings, consistency and component-field struct. 7−89403
geometrical methods in the quantum theory of fields and strings 7−108891
geometry, cosmology and compactification, future possibilities 7−108901
global gravitational anomalies and smooth 11-manifolds 7−102272
global strings in the early universe, evolution 7−140347
grassmanians and loop groups 7−95874
gravitating U(1) cosmic strings, discontinuity cylinder model 7−120667
gravitational particle production in the formation of cosmic strings 7−146130
gravitational stability of local strings 7−120914
gravity form bosonic, heterotic and SUSY strings 7−108358
Green-Schwarz superstring, covariant, first-quantized BRST charge, BRST Hamiltonian anal. 7−128802
Green-Schwarz superstring, loop calcs. and S-matrix elements 7−73625
Green-Schwarz superstring, quantisation 7−134612
GUT, QCD and Ising model appls. 7−108900
hadron cascades, vector meson dominance and Monte Carlo dual multistring 7−108924
hadron multiplicity, spectra, Froissart cross sections, for future energies 10^3-10^5 GeV 7−116204
Hamiltonian lattice string theory and the flux-tube model 7−128764
Hartle-Hawking prescription, ground state wave function 7−121476
Hawking-Unruh effect, reparametrization invariance analytic mappings 7−134623
heterotic and superstring theory, conformal techniques and tree-level amplitudes 7−89475
heterotic and superstrings, path integral measure and ghost supercurrent 7−102713
heterotic one-loop string amplitude, five graviton-like particle scattering, modular invariance 7−115876
heterotic string, σ model, Chern-Simons term 7−73518
heterotic string, Calabri-Yau compactification and D=4 N=1 supersymmetry 7−95797
heterotic string, graviton, antisymmetric tensor, gauge boson covariant scatt. amplitudes 7−89398
heterotic string, mag. moment calcs. at tree level 7−108902
heterotic string, modular subgroups, odd spin struct. and gauge invariance 7−135069
heterotic string, orbifold compactification, gauge group rank reduction 7−135075
heterotic string, orbifold compactification, N=1 SUSY $SU(3)\times SU(2)\times U(1)^n$ models construction 7−121400
heterotic string, orbifold compactification and Wilson lines, chiral matter states 7−81150
heterotic string, quartic effective action calc. 7−140906
heterotic string, spacetime versus world-supersymmetry 7−73140
heterotic string amplitudes, functional light-cone gauge construction 7−95875
heterotic string effective action, dilaton and quartic curvature terms 7−80549
heterotic string in arbitrary SUSY compactifications, Fayet-Iliopoulos D-terms calcs. 7−140845
heterotic string light-cone field theory on a torus 7−89460
heterotic string models, IOD, nonsupersymmetric, spectra 7−95798
heterotic string one-loop diagram, anomaly cancelling term 7−108879
heterotic string path integrals with the Green-Schwarz covariant action 7−73618
heterotic string theory, global anomalies 7−102709
heterotic string theory, low-energy effective Lagrangian 7−67608
heterotic string theory, modular invariance of one-loop N-point amplitudes 7−116146
heterotic string theory 7−108832
heterotic string theory on Calabi-Yau manifolds in the Green-Schwarz formalism 7−73621
heterotic string theory with three chiral fermion families 26/4 dimensional compactification 7−116101
heterotic strings, closed, one-loop modular invariant, nonexistence of anomalies 7−89406
heterotic strings, compactification from 26 to 4 dimensions via T^{22}/G 7−116100
heterotic strings from the bosonic string in 26 dimensions 7−81079
heterotic superstring compactification, 4 dimens. supergravity as low-energy limit 7−89476
heterotic superstring model, geometrical struct. in even dimens. 7−73142
heterotic superstrings, finiteness 7−80551
Higgs sector of superstring models, nondetermination of mass upper bound 7−80561
higher curvature supergravity and superstrings 7−108380
higher derivative super Yang-Mills theories 7−73523
higher dimensional black holes, spin degrees of freedom, massive string modes 7−127940
higher dimensional cosmology and the energy-momentum conservation law 7−128417
higher-derivative gravity, surface terms, Euler densities, surface geometry, boundary-value problem 7−120907
't Hooft-Polyakov magnetic monopoles from superstring models 7−95810
inflation mechanism, cosmic strings 7−95060
instantons and lattice confinement 7−121377
interacting bosonic strings, finite temp. path integral, modular invariance 7−135063
interacting bosonic strong theory, Lorentz covariant formulation 7−95876
interacting heterotic string theory, Lorentz-covariant Lagrangian formulation 7−108904
interacting open bosonic string, lagrangian density 7−73617
interacting string, covariant field theory 7−108895
interacting string field theory, operator formulation 7−89465
intermediate mass scales, radiative generation in superstring-inspired models 7−89402
Ising model in 3D, thermal critical index calc., fermion string representation 7−95494
Ising model on an irregular lattice as fermion string model 7−95506
Kac-Moody groups in two-dimensional field theory 7−80968
Kaluza-Klein cosmology, attractor universe in N=2 supergravity 7−73145
KP coordinate approach to string amplitudes 7−120822
lagrangian formulation of chiral scalars 7−121393
lattice gauge theories, charged surfaces, string tension analyticity properties, random surface methods 7−121334
lattice gauge theory, Ising model, fermion representation, sign factor, string theory 7−108762
lattice QCD, glueball masses and string tension 7−116124
lattice QCD, scaling and universality for string tension 7−73527
lepton flavour non-conservation, heterotic superstring inspired standard model 7−80553
leptoquarks, superstring models, production in e-p colliders 7−128404
light front string Green functionals 7−73619
light-cone gauge strings and superstrings, inexact modes, holomorphicity, modular invariance 7−108350
light-cone string field theory and fundamental domains 7−128801
Liouville superstring, open, five-dimensional 7−134988
loop gauge theory and group cohomology, fibre bundle approach to string theory 7−73499
loop space index theorems for Dirac-Ramond operator 7−108872
Lorentz generators in light-cone gauge superstring field theory 7−89404
Lorentzian algebra for the superstring 7−121481
low energy effective actions, ambiguities 7−95878
low-energy supergravity from 4D superstrings, fermionic formulation 7−102720
LUCIFER program for high p_T photoprod., QED and QCD Compton processes, meson prod. 7−140889
Marcel Grossmann meeting on general relativity, Rome, Italy (June 1985) 7−66831
massless field generation, relativistic field equations 7−135086
massless spinning particles in all dimensions and novel magnetic monopoles 7−116047
mathematical theory and statistical examples 7−89061
membrane models, instabilities, connections to tachyons in string models 7−95329
minimal curves in six dimensions 7−128866
minimal transverse operators in string field theory 7−102708
modular invariance for closed strings at the new critical dimensions 7−81152
modular invariant partition functions in two dimensions, string propagation 7−81143
moduli spaces, complex geometry 7−95879
multiloop closed superstring amplitudes, cancellation of leading divergence 7−80544
multiloop modular invariance and the cosmological constant 7−120904
multiloop superstring amplitudes in light-cone gauge, modular invariant and holomorphic construction 7−121408
multiple cosmic strings, Newtonian image 7−134325
N=1, d=4 supergravity, scalar pot. struct., appl. to superstring theory 7−80555
N=1 supergravity in 10D, string corrections to supersymmetry transformation 7−102285
N=1 supersymmetric GUT based on $SU(5)\times U(1)$ 7−140853
N=2 spinning string, 4D model, space dimens. from supersymmetry 7−102718
N=2 spinning string, space dimensions from SUSY, 4D model 7−89485
N=2 superconformal field theories, modular invariance, central charge character formulae 7−134978
N=2 superconformal invariance in 2D field theories 7−89352
$N=^1/_2$ supersymmetries, nonlinear σ model, (p, q) world sheet supersymmetry 7−134974
n-loop string amplitude; 7−108897
neutrino masses in superstring models with E_6 singlets 7−80559
Neveu-Schwarz string, three-Reggeon light-cone vertex 7−135073
no-scale supergravity models, inflationary scenarios, Kahler potential, phase transition, temperature-dependent barrier 7−120918
no-scale supergravity models, scale transformations and axion-like superstring symms. 7−140588
nonAbelian lattice gauge theory, string tension, tunneling and deconfinement 7−102607
noncommutative-geometry model for closed bosonic strings 7−116110
nonsupersymmetric heterotic strings, toroidal compactification 7−108345
nonsupersymmetric string theories, interactions 7−128869
NSR superstring, operator formulation of interacting string field theory 7−134989
O(16)⊗O(16) heterotic model, twisted bosonic strings 7−140905
O(2) generalized 3D model, phase structure, vortex string suppression/enhancement 7−121340
one and closed strings, field theory 7−108896
one-loop amplitudes and effective action in superstring theories 7−89409
one-loop amplitudes in string theory on orbifolds 7−81151
one-loop closed bosonic string amplitude, external gravitons, antisymmetric tensor fields, dilatons 7−115877
one-loop effective potential in $D=4$ theories consistent with classical symmetries of $D=10$ superstrings 7−95431

string theory continued
open and closed strings, effective interacting field, Reggeon-Pomeron vertex 7−81157
open bosonic string, BRST quantisation 7−95877
open bosonic string, planar tadpole operator, group theoretic method 7−140908
open bosonic string, Witten action gauge-fixing procedure, Siegel gauge anal. 7−89364
open bosonic string theory, off-shell vertex and twisted ghost fields 7−140909
open bosonic strings, BRS gauge-fixed actions from light-cone J^{1-} 7−81159
open string dynamics, partition function, critical dimensions 7−73620
open strings, zero-slope limit, factorization, tachyon emission, generating functional for S-matrix element 7−121479
open strings in background gauge fields 7−89458
open superstring, one-loop path integral description 7−73627
open superstring effective action, fermionic terms, massless modes, four-particle scattering amplitudes 7−115874
open superstring theory, Born-Infeld action, D=10 Maxwell theory, F^6 supersymmetric extension 7−115875
open superstring theory, effective lagrangian in zero-slope limit 7−108878
operator formulation on Riemann surfaces 7−95873
orbifold compactified superstring theories; gauge symmetry breaking 7−120899
orbifold compactified superstring theories, fermion generations 7−81073
orthonormal gauge and affine geometry in string theory 7−95809
OSp(1,1|2) string field theory with the world-sheet metric 7−121467
p-adic string, cohomology and vertex operator 7−128395
particle physics advances, solar neutrino oscillations and superstrings 7−116102
particle production diffractive component in dual multistring fragmentation model 7−73631
partition functions and Fermi-Bose equivalence for simply-laced groups on compact Riemann surfaces 7−116147
partition functions for open and/or oriented strings *(Hungarian)* 7−128406
Pati's superstring preon model, hierarchical structure, symmetry evol. *(Chinese)* 7−121459
perturbative, string S-matrix, group theoretic approach, string scattering, gauge properties, open bosonic tree 7−116148
perturbative and global anomalies in supergravity theories, string origin 7−95445
perturbative stability of smooth strings 7−116109
physical parameters and dynamical variables quantisation, wavefunction single-valuedness classical system discretisation 7−108279
Poincare algebra in Yang-Mills theory, general relativity and string field theory, symplectic geometry 7−121341
Polyakov string, closed bosonic, unitarity 7−140907
Polyakov string, interacting, nilpotent BRST invariance 7−67524
Polyakov string theory, stochastic quantization and random surface approach 7−108885
Pomeron exchange, preasymptotic corrections 7−73633
pure SU(2) gauge theory on 4×8^3 lattice, temp. phase transition, thermal string 7−73524
QCD, hadron field correlator calcs., Yang-Mills eqns. and relativistic string anal. 7−135048
QCD and θ- vacua, string theory description 7−73615
QCD flux tube modelling using massless relativistic string, hadronization anal. 7−116122
quantized string fields, gauge fixing and perturbation theory 7−89461
quantum geometry, linear real bundles, spinorial structs. and automorphic forms 7−108880
quantum kinematics and quantisation 7−135066
quantum string theory as integrable analytic geometry 7−108894
quantum topology of strings 7−95868
quark mixing, radioactive corrections scheme, superstring inspired model 7−80554
quark-gluon string model, inclusive spectra on nuclear targets, production mechanism sensitivity 7−129050
quark-lepton mass matrices in superstring inspired models, radiative corrections 7−95794
quarks at the ends of open strings, group theory 7−95858
quasiopen string, Nambu-Goto action, mass spectrum, Poincare invariance 7−89481
Ramond string fields, gauge invariance, OSp(1,1|2) method 7−67598
Ramond superstring, Parisi-Sourlas fermions, zero energy limit massive (0+1)-dimens. supergravity 7−134609
regularized bosonic strings, extrinsic curvature in triangulated random surface model 7−81162
relativistic point particles, interacting field theory 7−73626
relativistic string, BRST quantisation of bilocal model 7−81146
relativistic string theory, critical dimension derivation in path-integral formulation 7−140910
rigid string model, QCD sum rule comparison and string tension estimate 7−135080
rigid superstrings, one-loop contrib. to β-function, asymptotic freedom 7−95434
scaling of the string tension in a new class of regularized string theories 7−108888
Selberg's zeta function for compact Riemann surfaces 7−102712
semiclassical string-bag model, quark deconfinement, effective static quark-quark colour potential 7−121434
sheet field eqns. soln., Hamilton-Jacobi formulation, closed circular string 7−135067
SO(10) superstring models, unified, with intermediate $SU_R(2)$ breaking, SUSY particle spectrum 7−95814
SO(8192) open bosonic string theory, d=26, one-loop divergences cancellation 7−81158
softly-broken superconformal invariance, chaotic inflation possibility, complex scalar fields 7−140340
spacetime content of string-type field theory 7−81064
spin dependent potential for heavy fermions on the ends of a string 7−81144
spin-field correlators on Riemann surfaces and string nonrenormalization theorems 7−81068
spin-orbit coupling in the string model, meson spectrum 7−67609
spinors, Cartan approach, minimal surfaces and strings 7−89477
spontaneous compactification, classical stability 7−108368
spontaneous generation of string tension and quark potential 7−108887
SQCD, Wilson loops on 32^4 lattices and the $SU(3)$ potential 7−140896
string theory continued
state densities for strings at high and low temperatures, thermodynamic props. 7−89484
statistical mechanics of cosmic strings 7−88721
stochastic quantisation, Parisi-Wu approach, quantum field theory, string theory, QED, review 7−140822
string anomalies, path integral calc. 7−89407
string characters from KAC-Moody automorphisms 7−116142
string effective action, functional equation calcs. 7−140583
string field theory 7−108893
string field theory with chiral coordinates 7−135072
string loop corrections to beta functions 7−116059
string tension, spontaneous generation, deconfinement transition, membrane model anal. 7−95846
strings in background fields 7−108898
strong CP problem in superstring theory 7−108817
structure of a gluon string 7−102723
$SU(2)_L\times U(1)\times U(1)$ electroweak model, Higg's mechanisms, nonstandard neutral currents, neutral massive gauge bosons 7−128811
SU(2) gauge theory, string solutions with finite tension strings 7−140819
SU (3) lattice gauge theory, minimal surfaces and string tension from non-planar loops 7−80998
super $\mathrm{diff}(S^1)/S^1$ curvature, finite dimens. coset space techniques, infinity regularization 7−135083
super-Kahler geometry in supergravity and superstrings 7−73139
superconducting cosmic strings, dynamical props. 7−135070
superconducting cosmic strings, dynamics, covariant classical action and eqns. of motion 7−135071
superconducting cosmic strings, dynamics 7−108002
superconducting cosmic strings, electrodynamics 7−121474
superconducting cosmic strings, energy loss by plasma dissipation 7−140346
superconformal algebra, N=3 case, formulation for $N\geq1$, central operator, transformation rule, O(3) representation 7−116093
superdeterminant factorisation in (1,0) supergravity, heterotic string 7−73141
supergravity, (1,0), superfield quantization and the background field method, string action anomaly calcs. 7−73137
supergravity, higher curvature terms, group manifold approach, superstring compactification study 7−80572
superholomorphic anomalies and supermoduli space, superstring effective action in Faddeev-Popov determinant 7−140580
superparticle theory, covariant quantisation, S-matrix 7−73573
superspace spinning string spectres, isomorphism between potentials and ghost fields 7−89079
superstring, addition of holes and crosscaps to world-sheet, finiteness of O(32) theory 7−134990
superstring, free, twisted, with three, four six-dimensional supersymmetry 7−67548
superstring, SO(16)-SO(10) spin field scattering, one-loop amplitudes 7−73570
superstring, superspace supergravity 7−80545
superstring σ-models from bosonic model, four-fermion interactions on world sheet 7−120903
superstring and string theories, review 7−121484
superstring compactification, simplified model 7−134607
superstring compactification, space-time supersymmetry in large radius expansion 7−108344
superstring compactifications rel. to semisimple Lie algebras, topological invariants 7−135062
superstring cosmological model 7−101974
superstring E_6 model, CP violation and Yukawa couplings, four generation example 7−116108
superstring effective actions and Virasoro algebra central charge on Kahler manifold SUSY σ-model 7−80546
superstring effective theories, modifications of plane wave solns. from d=10 N=1 supergravity 7−120902
superstring flax, unidexterous superspace 7−120905
superstring generated N=1 supergravity model, duality and gaugino condensation 7−102719
superstring inspired models, gauge symmetry breaking 7−102264
superstring model for universe 7−95439
superstring models, axion energy and axionic domain wall problems 7−67543
superstring models, gaugino masses, one-loop corrections 7−108827
superstring models, rank-five, from $CP_3\times CP_3$ 7−128804
superstring models, role in quark-lepton flavour problem, particle mass origin and unification 7−95820
superstring models, supersymmetry breaking in observable sector 7−102263
superstring models challenged by rare processes 7−140578
superstring motivated gauge models based on a rank six subgroup of E_6 7−95816
superstring phenomenology, compactification and expt. signatures 7−108357
superstring spectroscopy, dynamics and particle internal struct. 7−102724
superstring theories, compactification, low energy phenomenology 7−67140
superstring theory, covariant BRST theory 7−89075
superstring theory, general remarks 7−108359
superstring theory, incorporating symmetry 7−108343
superstring theory, introduction, bosonic strings and tree approx. scatt. amplitudes, book 7−108059
superstring theory, loop amplitudes, anomalies, and phenomenology, book 7−108068
superstring theory, pregeometry 7−102265
superstring theory, review of recent developments 7−140575
superstring thermodynamics 7−88100
superstring with twisted boundary conditions 7−67548
superstring world sheet supergravity, prepotentials solns. 7−73624
superstring-inspired models, global symm., phenomenological roles 7−102721
superstring-inspired models, low-energy supersymmetry breaking through gaugino masses 7−81069
superstring-inspired $SU(3)\times SU(2)\times(U(1))^2$ models with SO(10) unification 7−128403
superstrings, 10D, quantum cosmology, evolution, dynamics and coupling constants 7−134621
superstrings, 4D, effective interactions of chiral families 7−140859
superstrings, bosonization in the light cone gauge 7−73629

ing theory continued
superstrings, fourth generation, renormalisation group scaling of gauge couplings 7−95870
superstrings, graded constraint algebras, OSP(1,1|2) symmetry, BRST invariance 7−134606
superstrings, low energy models, exotic coloured fields, rapid p decay 7−108903
superstrings, low-energy theory, localization and compactification 7−140912
superstrings, multiloop closed amplitudes, leading divergences cancellation 7−80552
superstrings, nonperturbative effects in sigma model 7−108342
superstrings, radiative corrections to N=1 supergravity model, nonperturbative supersymmetry breaking 7−135079
superstrings, sigma model interpretation, Siegel symmetry origin 7−102252
superstrings, singularities of one-loop amplitudes 7−102716
superstrings, standard model conf., Stanford, CA, USA, July 1986 7−102016
superstrings, total action, critical dimensionality and low-energy limit, review 7−140911
superstrings, type II amplitude finiteness 7−80550
superstrings, ultra-light neutrinos and R-parity 7−81147
superstrings and cosmological matter-antimatter asymmetry problem, late baryogenesis prediction 7−88710
superstrings and multidimensional cosmology, phase transitions 7−101983
superstrings and stability of canonically realized standard model 7−102650
superstrings and string theory, review 7−108889
superstrings and the unification of forces and particles 7−67139
superstrings from sigma models, bosonic string as example 7−102251
superstrings from the ((1,0) superspace)^2 nonlinear sigma model 7−80547
superstrong unification, gauge models from Kaluza-Klein compactification on CY manifolds 7−89422
superstrung theory, time evolution of extra spatial dimens. 7−89418
supersymmetric σ-model, resurrecting (2,0) compactifications 7−102711
supersymmetric Born-Infeld Lagrangian in d=4, appl. to supergravity and superstrings 7−80556
supersymmetric nonlinear σ-model, elliptic cohomology formulation 7−89319
supersymmetric radiative corrections to asymmetry meas. at Z^0 peak 7−134975
supersymmetry, D=10, N=1, superspace geometry and superstring effects 7−140843
supersymmetry and GUT's technical hierarchy problem 7−108811
supersymmetry breaking mechanism in superstring theory 7−81058
SUSY 10D spinning strings from bosonic string compactified on $E_8\times E_8'$ lattice 7−81154
SUSY string theories, structures of anomalies 7−108341
symmetric spaces, conformal subalgebra, Lie algebra 7−108765
symposium on statistical mechanics of phase transitions, Trebon, Czechoslovakia, (Sept. 1986) 7−120693
tachyon scattering amplitudes, open string anal. in Polyakov path-integral formalism 7−67679
Teichmuller deformations of super Riemann surfaces 7−95435
Thirring strings, toroidal compactifications, bosons and free fermions 7−108874
three-dimensional field models, string solutions 7−80994
three-generation model from heterotic superstring compactification, 27^3 Yukawa couplings 7−108353
three-generation superstring model, symmetry breaking and low-energy phenomenology 7−128401
three-generation superstring model, Yukawa couplings in (1,1) sector, instanton effects 7−134608
three-string vertices related by conformal transforms, rel. between open string field theories 7−95871
topological aspects of string theories 7−89469
topological quantization of mass in extended gauge theories with a monopole 7−89361
twin galaxies familiar form. by string loops 7−139910
twisted bosonic strings, three-string vertex, covariant formalism, oscillator basis 7−140581
twisted conformal fields, vertex operators, oscillator and bosonized forms 7−134992
twisted heterotic string, compactification, lattice parameters, one-loop cosmological constant 7−89467
twisted string theories on group manifolds, chiral models with Wess-Zumino terms 7−89464
twisted strings, orbifold approach to string compactification 7−108899
TWISTER program for QCD high p_T scatt. processes 7−140888
two-dimensional string models, conformal anomalies and the index theorem 7−73623
type I SO(32) open superstrings on orbifolds, propagation 7−95429
type I superstring theory, finiteness of parity-odd N-point functions 7−108346
type I superstring with O (32) gauge group, one-loop divergences 7−67544
type II and type III strings, spin struct. and world sheet supercurrents 7−102714
type II closed strings, one-loop modular invariant, nonexistence of anomalies 7−89406
type II superstrings, gravitons and dilatons, background black hole solns. 7−108367
type IIA superstring, supermembrane derivation and relation to D=11 supergravity 7−102715
type-I superstring amplitude, fixed-angle asymptotic behaviour 7−80558
type-I superstring theory, parity-violating one-loop six-point fn. 7−89479
type-I superstring theory, Pauli-Villars regularization and one-loop finiteness 7−73628
type-I superstring with external gauge bosons, parity violation 7−67606
type-I superstrings, Polyakov path integral formalism 7−115872
unification of fundamental interactions, conf., Marstrand, Sweden (June 1986) 7−108023
unitary statistical models and SU(2) current algebra 7−89463
Universe density matrix, quantum state, extension to string theory 7−115647
Universe formation, rotating superstring theory 7−88699
vacuum polarization in gravit. field of cosmic string 7−108354
vertex operator construction of superconformal ghosts and string field theory 7−116144

string theory continued
vertex operator in string theory on an orbifold, intertwining fields in Fock space representation 7−89483
Virasoro algebra anomalies and deformations of string theories 7−102271
Virasoro algebras with central charge c<1, Sugawara constructions, Kac-Moody algebras 7−121466
vortices on the string world sheet and constraints on toral compactification 7−102722
Wess-Zumino Lagrangian, anomaly-free quantisation, group manifold strings 7−80995
Weyl gauge fixing, BRS symmetry, D=26 requirement, intercept condition, BRS transform. anomaly 7−135068
Weyl invariance and covariant gauge fixing 7−135076
Witten's interacting string field theory, Bose-Fermi equivalence 7−89473
Witten's star algebra, point splitting regularisation 7−81160
world sheets with boundaries, laplacian determinants, N-string scatt. amplitudes 7−73614
world-sheet anomalies and loop geometry, string theory symmetries 7−116141
world-sheet dynamics of bosonic string theory 7−121471
Yukawa couplings and quark-lepton mass matrices on Z-orbifold 7−67601
Z_2 cosmic strings from symmetry breaking, string mass 7−120673
Z-orbifold model, three-generation orbifold compactified, $SU_C(3)\times SU_L\times U^2(1)$ reduced scheme 7−140861
b-quark interaction model, superstring alternative 7−116119
$e^-e^+\rightarrow W^+W^-$, effects of Z boson from $E_8\times E_8$ superstring 7−67629
$e^+e^-\rightarrow W^+W^-$, cross section calcs., $E_8\times E_8$ superstring theory with extra Z boson 7−108927
$e^+e^-\rightarrow X$, inclusive hadron production, cross-section ratios, comparison with Lund string model 7−81218
$e^+e^-D_0X$, D=new quark, cross sections, D signatures 7−140962
$ep\rightarrow D_0X$, D=new quark, cross sections, D signatures 7−140962
$ep\rightarrow Dx$, E_6 scalar leptoquark prod., E_6 superstring models, Yukawa interactions 7−140863
n and e dipole moments in superstring based models, CP violating interactions 7−81070
pN in nuclei, subthreshold K^+ prod. on multiquark configs., coloured string dynamics 7−67647
$pp\rightarrow D_0X$, D=new quark, cross sections, D signatures 7−140962
$\bar{q}q$ bound states, full and reduced Salpeter eqn. 7−135050
U(3.105) exotic state, ($\Lambda\bar{p}$+pions), M-baryonium, colour Casimir factor in string tension 7−73607
Z boson, mass and signature in E_6 superstring models 7−67621
$Z'\rightarrow w_h^+ + w_l^-\rightarrow l^+\bar{\nu}+l^-\bar{\nu}$, T-odd angular correlation, chargino, numerical examples in E_6 models 7−134995
$Z^{0\prime}\rightarrow Z^0H$, Higgs boson signals in superstring-inspired E_6 supergravity models 7−135119

strip line components
microstrip-microslot applicator, modelling 7−139210

strip lines
microstrip-microslot multiapplicator for microwave hyperthermia and radiometry 7−107226

stripping reactions
charged particle transfer 3-body approach 7−67789
heavy ion-nucleus reactions, two-particle excitation process, collective pair transfer, sum rules 7−116462
(d,p), sub-Coulomb stripping, asymptotic D/S ratio 7−116424
^{40}Ca(d,p), Coulomb effects, three-body problem study 7−96078
$^{48}Ca(^{16}O,^{14}C)^{50}Ti_{gs}$, 160 MeV, cross sections, shell model comparisons 7−129098
$^{48}Ca(^{36}S,^{33}Al)^{51}V$, 198 MeV, ^{33}Al mass meas. 7−109004
$^{A}Ni(^{32,36}S,P)$, A=58,64, one-proton stripping near Coulomb barrier 7−116478
$^{A}Ni(^{32,36}S,Si)$, A=58,64, two-proton stripping and α-stripping near Coulomb barrier 7−116478
$^{58}Ni(^{16}O,X)$, X=^{13}C, ^{13}N, 80 MeV, stripping reactions, OM pot. ambiguities in EFR-DWBA anal. 7−116485
$^{58}Ni(^{16}O,X)$, X=^{15}O, ^{15}N, 80 MeV, stripping reactions, j, l and π depends. in EFR-DWBA anal. 7−116486
$^{16}O(\alpha,p)^{19}F$, transition strength distrib., NN interaction calcs., HF anal 7−129070
^{31}P(d,n)^{32}S, 24.8 MeV, diff. cross sections, ^{32}S level study, DWBA anal. 7−102804
$^{208}Pb(^{16}O,^{15}N)$, GANIL study at 793 MeV 7−96109
$^{208}Pb(^{16}O,^{15}O)$, GANIL study at 793 MeV 7−96109
$^{208}Pb(\alpha,^3He)$, ^{209}Pb high spin, high lying subshells 7−109198
^{28}Si(d,p), Coulomb effects, three-body problem study 7−96078
^{116}Sn(d,p), three-body model, antisymmetrization corrections 7−116432
$^{120}Sn(^7Li,^6Li)$, tensor analyzing power meas., coupled channel anal. 7−116472

stroboscopes
see also velocity measurement
cylindrical surface, axial, flow vortical flow zone visualisation, stroboscopic laser knife technique 7−137035
movements analysis, human, biostereometric study, IR strobophotogrammetry 7−101038
pulse generator for holographic interferometry 7−108645

strong-coupling superconductors
anisotropic superconductors, with Shiba-Rusinov impurities, sp. ht. jump at T_c 7−77154
β-(BEDT-TTF)I_3 high temp. superconducting phase, critical field temp. depend. meas. 7−131941
critical temperature, disorder-induced increase and degradation, theory 7−112574
critical temperature, electron-phonon coupling strength effect 7−112568
dirty transition metal superconductors, T_c degradation 7−105809
high T_c electron-phonon superconductor, upper critical field 7−143734
high T_c oxides, Eliashberg theory 7−112632
high T_c supercond., case for strong coupling, 2D electron-phonon interaction 7−143688
high T_c superconductors, electron pairing by cooperation of superexchange and polaron effects 7−118690
high T_c superconductors, strong-coupling effects 7−112633
Kondo lattice model, d-wave supercond. 7−143685
oxides, high T_c, superconductivity mechanism 7−105821
periodic Anderson model, superconductivity, hybridisation and resonant pairing in strong electron-lattice coupling system 7−70465
transition metal impurity containing superconductors, strong-coupling theory 7−85182

strong-coupling superconductors continued
upper crit. field, depend. on electron-phonon spectral density for arbitrary impurity concentrations 7−70502
β-(BEDT-TTF)$_2$X crystals, (X=I_3IAuI), electron-phonon coupling and supercond. gap 7−131926
CuO_2 planes in high T_c supercond., antiferromag., localisation, pairing 7−118687
La-Sr-Cu-O break junction, tunnelling spectroscopy, evidence for strong-coupling superconductivity 7−105849
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., heat capacity and supercond. transition temp. 7−99332
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, point-contact tunnelling obs. 7−99352
$LiTi_2O_4$, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
Lu ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
Sc ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
Tc/Ta-TaO_x-Pb tunnel junction, energy gap and coupling strength, proximity electron tunnelling study 7−118732
Y ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
Y-Ba-Cu-O, high T_c supercond., oriented films and polycrystalline bulk samples, supercond. energy gaps study 7−118714

strong interactions, elementary particle *see elementary particle strong interactions*

strontium
see also nuclei with .....
atom, 3-photon ionis., triplet state 2-photon intermediate resons. excitation 7−74541
atom, autoionising states and AC Stark shifts, multiphoton ionisation spectra anal. 7−90061
atom, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
atom, multiphoton ionis. by ps laser light, electron spectrosc. obs. 7−74542
atom, Rydberg and autoionising series, reson. multiphoton photoionisation spectra anal. 7−90069
atomic, autoionising states transitions calcs. 7−129672
atoms, laser induced ionisation in air-acetylene flame, near-resonance effects 7−90054
autoionisation levels meas. by multistep excitation technique *(Chinese)* 7−90047
Bushveld Complex Upper Zone, S Africa, isotope evidence against magma addition 7−114659
ionisation in air-acetylene flame by reson. laser excitation 7−122464
lattice dynamics, pseudopotential approach of BCC Sr 7−137485
lattice mechanical props., pseudopotential theory calcs. 7−111448
liquid scintillation systems, β-spectroscopy, ^{90}Sr and ^{90}Y dosimetry appl. 7−107248
N Mariana Islands, volcanic rocks O, S, Sr and Pb isotopic var., implications for crustal recycling 7−127136
Neogene seawater Sr isotopic evolution 7−127280
Pacific basalts of mid-ocean ridge, isotope geochemistry 7−114666
plasma, superelastic collisional excitation, one- and two-photon laser pumping 7−68263
superconductivity and electronic struct. under high pressures *(German)* 7−118649
Eu-Sr vapour mixture, laser-induced collisional energy transfer, far-wing obs. 7−129859
KCl:Sr, Pb, optical spectroscopy of Pb^{2+}, detection of Sr precipitates 7−70945
La_2CuO_{4-y}:Sr, high T_c superconductors, prep. and characterisation 7−112563
NaCl:Sr, 340, 380 K glow peaks 7−138519
NaCl:Sr, optical and mechanical props. 7−104796
NaCl:Sr^{2+}, Eu^{2+}, 407 nm emission band, X-ray diffr. identification of secondary phase 7−85804
Sr II, $4D_{3/2}$ and $4D_{5/2}$ metastable states, lifetimes 7−74492
Sr II 407.8 nm in solar chromosphere eclipse spectrum, appl. of spicule model in middle chromosphere 7−79908
Sr IX, n=4, Δn=0 transitions 7−116898
Sr^+, absolute photoionisation cross section meas. 7−103446
Sr^+, ion recombination, ionisation equilibr., ICP study 7−122707
Sr^+, laser emission 7−96983
Sr^{q+} excited states, X-ray spectra anal. 7−141512
Sr+Ar, polarised radiation redistrib. quasiclassical description 7−110093
Sr+Ar(Kr)(Xe)(Ne)(He), electronic energy transfer, state-specific orbital alignment effects 7−117058
Sr+Kr(Xe), three-body collisional transfer between at. levels 7−129845
^{A}Sr, A=89, 90, determ. in WWER reactor primary coolant, method *(German)* 7−103032
^{A}Sr, A=89,90, distrib in Slovenia, Yugoslavia after Chernobyl accident 7−78689
^{82}Sr, preparation using SnO_2 continuous elution generator 7−101081
^{82}Sr production by cation exchange chromatography 7−101078
^{82}Sr production by RbCl irradiation and ion exchange 7−101079
^{82}Sr radioactive atoms, laser spectroscopy using photon burst technique 7−96581
^{82}Sr/^{82}Rb generator elution profiles, radioassay and dosimetry 7−101084
^{82}Sr/^{82}Rb generator system for clinical use 7−101083
^{87}Sr, radiogenic, in rare-element granitic pegmatites, mobility rel. to Rb-Sr fractionation trends 7−94224
^{87}Sr/^{86}Sr ratios in charts and other siliceous deposits, implications for cherts form. 7−94222
^{87}Sr/^{86}Sr ratios in marbles from N Mindoro, Philippine Islands, evidence for Palaeozoic age of metamorphic complex 7−133677
^{89}Sr, radionuclide therapy: dosimetric study using impulse response function anal. 7−119856
^{90}Sr and ^{90}Y, bone uptake and retention, effect of high ^{131}I doses 7−126927
^{90}Sr and ^{90}Y, tumourigenicity in mice, effect of high ^{131}I doses to thyroid gland 7−126928
^{90}Sr, determ. in water in Austria after Chernobyl accident 7−122221

strontium continued
^{90}Sr in aqueous soln., separation using adsorption column, activity determ. *(Chinese)* 7−141381
^{90}Sr, radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
$YCrO_3$:Sr, elec. cond., Seebeck coeff. 7−70342

strontium alloys
see also strontium compounds
Al-Si-Cu-Sr, evaporative pattern castings, mech. props., Sr addition effect 7−77970
Al-Si-Sr, elec. resist. rel. to Sr content, Si precip., eutectic microstruct. 7−131614
Al-Si-Sr, struct., mech. props., Sr content effect, solidification rate 7−86261
Al-Si-Sr(Sb), modification, influence of Sr or Sb additions *(Chinese)* 7−77961
Mg-Sr, molten alloys, complex form., glass form. 7−83731
$SrCu_{1-x}Cd_x$, pseudobinary systems, stacking variants, homogeneity 7−117861
$(Sr_{0.67}Eu_{0.33})_3Mg_{13}$, cryst. struct., polynuclear units, structural refinements and relationships, X-ray diffr. study 7−111449

strontium compounds
see also strontium alloys
dicalcium strontium propionate, deuterated, Brillouin scatt. 7−125758
monoalkylamides, laser spectroscopy 7−96715
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
rare earth doped O-defect perovskites, $La_{2-x-y}R_ySr_xCuO_{4-z}$, R=Pr, Nd, Sm, Eu, Gd, supercond., structural, mag. props. 7−112596
superconductivity onset and mag. susceptibility 7−131864
:$La_{1.8}Sr_{0.2}CuO_4$, high T_c-supercond. 7−112535
Al-$(Ba_{0.9}Sr_{0.1})TiO_3$-Si, I-V characteristics, polarisation hysteresis 7−92304
AlF_3-YF_3-GdF_3-CaF_2-SrF_4-BaF_2-$NaXF_6$, X=P, As, glasses, time-resolved lumin. and decay charact. 7−70878
(Ba, Ca, Sr)S:Cu,Bi phosphors for TLD 7−93957
BaO-SrO-SiO_2-TiO_2 system glass-ceramics, piezoelec. props. and microstruct. 7−99703
$Ba_{0.5}Sr_{1.5}K_{0.5}Na_{0.5}Nb_5O_{15}$, MM-wave dielec. props. at 77 and 300 K 7−99650
$Ba_{2-x}Sr_xK_{1-y}Na_yNb_5O_{15}$ photorefractive crystals, development and modification 7−113141
$Ba_{2-x}Sr_xK_{1-y}Na_yNb_5O_{15}$:Ce as self-pumped phase conjugator 7−90719
$BaSrNbO_3$, memory effect through discommensuration pattern, TEM obs. 7−111508
$Ba_{0.4}Sr_{0.6}Nb_2O_6$, cryst., electrooptic effect, temp. and field depend. 7−132241
$BaSrTiO_3$, sputtered thin films, domain struct., ferroelectric phase transition *(Chinese)* 7−132211
$Ba_{0.85}Sr_{0.15}TiO_3$ ferroelectric thin film, crystal struct. and dielectric props. study 7−70708
$Ba_{0.06}Sr_{0.94}TiO_3$, permittivity meas., deviations from Curie-Weiss behaviour, high hydrostatic press., quantum effects 7−125591
$(Ba_{0.4}Sr_{0.6})TiO_3$ films, current-conducting props., γ-irradiated defects effects 7−131188
$Ba_{0.65}Sr_{0.35}TiO_3$ ceramics, prep. from citrate precursors, dielec. and microstruct. props. 7−99648
Ba_2SrUO_6, cryst. struct., Rietveld refinement of neutron powder diffr. data 7−111466
$(Ba_{1-x}Sr_x)_2Zn_2Fe_{12}O_{22}$, single cryst. growth from high temp. soln. 7−113367
Bi-Sr-Cu-O system, superconductivity 7−143682
$Bi_4SrTi_4O_{15}$ ceramics, piezoelec. and ferroelec. props. 7−92604
(Ca,Sr)F_2 compositionally graded layers, growth and characterisation 7−113447
(Ca,Sr)F_2/(Al,Ga)As multilayer structures, MBE growth as broad-band high-reflectivity mirror 7−77825
(Ca,Sr)F_2/GaAs heteroepitaxial layers, MBE grown, crystalline defects 7−112127
(Ca,Sr)F_2-GaAs SIS structures, MBE grown, high resolution TEM study 7−118280
$CaCO_3$-$SrCO_3$ system, calcite bicrystals, chemically induced grain boundary migration 7−118158
$CaCl_2$-$SrCl_2$ solid soln., phase charactn. by X-ray powder diffr. 7−143020
CaF_2-SrF_2-BaF_2 graded IIa buffer layers for heteroepitaxy of Pb chalcogenides and CdTe on Si 7−77824
$Ca_{0.43}Sr_{0.57}F_2$/GaAs (100), epitaxial heterostructures, flash evaporation, charactn. 7−84537
$Ca_xSr_{1-x}F_2$, lattice matched epitaxial layer on GaAs (100), growth, characterisation 7−143253
$CaTiO_3$-$SrTiO_3$, phase diagram 7−106494
$Eu_{0.4}Sr_{0.6}S$, spin glass, temp. depend. of mag. VF noise 7−112821
$Eu_{0.4}Sr_{0.6}S$, spin glass, evidence for phase transition from dynamic susceptibility meas. 7−118800
$Eu_{0.44}Sr_{0.56}S$, spin glass, mag. reson. line shape 7−99555
$Eu_{0.54}Sr_{0.46}S$, reentrant spin-glass, spin-correlation lengths, elastic light scatt. 7−105933
$Eu_pSr_{1-p}S$ spin glass, random Ising model 7−77333
$Eu_pSr_{1-p}S_p$ insulating, specific heat, mag. transitions 7−125433
$Eu_xSr_{1-x}Te$, dil. antiferromagnet, spin glass behaviour, mag. meas. 7−112827
Fe/$La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form., reaction and disruption 7−143242
Fe/$La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form. and reaction, XPS study 7−143243
InAs/$Sr_{1-x}Ba_xF_2$/InAs structures, MBE growth 7−100088
KCl:$SrCl_2$ crystal, solid-phase impurity reactions initiated by heat treatment 7−137386
KCl:$SrCl_2$ crystals, solid-phase reactions initiated by heat treatment at surface 7−137378
$(La,M)_2CuO_4$ (M=Ba,Sr), 2D superconductivity, high critical temps. 7−70450
$(La,Sr)_2(Cu,M)O_{4-y}$ (M=Hg,Ag), high temperature superconductivity, composition dependence 7−70452
$(La, Sr)_2CuO_4$, high T_c layered supercond., single crystal growth 7−119127
La-(Ba, Sr, Ca)-Cu-O systems, high T_c supercond., bipolaron superconductivity 7−138115
La-Ba-Sr-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174

ontium compounds continued
La-Ba-Sr-Cu-O system, high T_c supercond., kinetic props. *(Russian)* 7−125285
La-Ba(Sr)-Cu-O system, high supercond., role of optical phonons, 1 K absorpt. study *(Russian)* 7−125722
La-Sr-Cu oxide, supercond. energy gap, for IR reflectivity meas. 7−99319
La-Sr-Cu oxide ceramics, high T_c supercond., struct. and electronic props. 7−105805
La-Sr-Cu oxides, high T_c superconductors, upper critical fields 7−92388
La-Sr-Cu-O, high T_c supercond., electron tunnelling study 7−99356
La-Sr-Cu-O, high-T_c superconductor, X-ray diffraction study 7−124230
La-Sr-Cu-O, superconducting critical mag. field, anisotropy 7−92392
La-Sr-Cu-O break junction, tunnelling spectroscopy, evidence for strong-coupling superconductivity 7−105849
La-Sr-Cu-O high T_c supercond., Hall coeff. studies 7−92209
La-Sr-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7−111470
La-Sr-Cu-O high T_c superconductivity study *(Russian)* 7−112540
La-Sr-Cu-O high T_c supercond., phase transformations and microstruct. 7−118084
La-Sr-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
La-Sr-Cu-O highT_c supercond., energy gap, electron tunnelling meas. 7−92377
La-Sr-Cu-O sputtered coatings, structural props., annealing effect 7−118672
La-Sr-Cu-O system, high T_c superconductor, critical current density, prep. by solidification 7−118621
La-Sr-Cu-O system, high T_c supercond., resistivity, upper limit *(Russian)* 7−125173
La-Sr-Cu-O system, high T_c supercond., tunnelling *(Russian)* 7−125265
La-Sr-Cu-O system, superconductivity 7−85171
La-Sr-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
La-Sr-Cu-O thin films, supercond., props. 7−105791
$La_{2-x}A_xCuO_4$, A=Ba, Sr, electron-phonon model tetragonal-to-orthorhombic instability, bond dimerization, T_c values 7−99360
$La_{2-x}(Ba,Sr)_xCuO_4$, high T_c supercond., electron-phonon interaction 7−118700
$La_{2-y}(Ba,Sr)_yCuO_4$ high T_c supercond., electronic band props. 7−118361
$La_{2-x}(BaSr)_xCuO_4$, high T_c supercond. 7−105752
$La_{2-x}(BaSr)_xCuO_4$ high Tc supercond., e-e correl. and scatt., band overlap in two-band model 7−118647
$(La_{1-x}Ln_x)_{2-y}(SrBa)_yCuO_4$, Ln=Pr,Nd,Y, high T_c supercond. behaviour systematics 7−118646
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr), high-T_c superconductor, critical mag. fields 7−70499
$La_{2-x}M_xCuO_{4-y}$, M=Ba, Sr, Ca, superconductivity anal. 7−99242
$La_{1.85-x}Pr_x(Eu_x)Sr_{0.15}CuO_4$ high T_c supercond., sharp-line lanthanide fluorescence obs. 7−113261
$(La_{1-y}R_y)_{2-x}(SrBa)_xCuO_4$, R=Pr,Nd,Eu,Gd, high T_c supercond., comp. and unit cell parameters w.r.t. T_c 7−143670
$(La_{1-x}Sr_x)$ CuO_4 high T_c supercond., O octahedron distortion, electronic origin 7−91547
$(La_{1-x}Sr_x)_2$ CuO_4 high T_c supercond., structural phase transition, neutron powder diffr. anal. 7−111869
$La_{2-y}Sr_{x-y}(BaCa)_yCuO_4$ high T_c supercond. behaviour systematics 7−118646
$LaSrCo_xAl_{1-x}O_4$, solid solns., synthesis, mag. susceptibility *(Russian)* 7−112773
$La_{1-x}Sr_xCoO_3$, rel. to catalytic oxidation of methane, Auger parameter in XPS 7−71547
$La_{1-x}Sr_xCr_{1-y}Mn_yO_3$ system, elec. and thermal transport props., cation substitution effect 7−92173
$LaSrCrO_4$, Cr at. interactions, mag. susceptibility obs. *(Russian)* 7−112774
$La_{1.8}Sr_{0.2}Cu_{1-x}Ag_xO_4$, supercond. transition temp. 7−112549
$La_{1.85}Sr_{0.15}Cu_{0.95}M_{0.05}O_{4-y}$ (M=Cu, Ag, Al), high T_c oxide superconductors, elec. studies 7−118615
LaSrCuO, evidence for high temp. superconductivity *(French)* 7−92385
LaSrCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118733
LaSrCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118739
LaSrCuO, high T_c supercond., evidence for incommensurate SDW in electron tunnelling studies 7−138155
LaSrCuO oxide ceramic superconds., development, review 7−118603
LaSrCuO/Al contact, I-V characts. meas. 7−105662
$LaSrCu_2O_{6+x}$ and $La_{2-x}Sr_xCu_4O_{4-x/2+y}$, mixed-valence capacitor electrodes, co-sintering with $BaTiO_3$ and dielec. props. 7−99773
$(LaSr)_2CuO_4$ high T_c superconductivity based on the 1D square planar $[CuO_4]_\infty$ bonding system 7−118630
$(LaSr)_2CuO_4$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$(La_{0.9}Sr_{0.1})_2CuO_4$, thermoelec. power meas., Sr dopant conc. and temp. dependences 7−105839
$(La_{0.9}Sr_{0.1})_2CuO_{4-y}$ high T_c supercond., lattice consts. and compressibility under press. 7−91699
$(La_{0.9}Sr_{0.1})_2CuO_{4-y}$, high T_c superconductor, high press. study, critical current 7−99378
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electron tunnelling of thin films 7−99353
$La_{1-8}Sr_{0.2}CuO_4$, high T_c superconductor, point-contact spectroscopy study *(Russian)* 7−99249
$La_{1-85}Sr_{0-15}CuO_4$, high T_c superconductor, phonon density of states determ. 7−104943
$La_{1-x}Sr_xCuO_4$, cryst. struct. determ., electron diffr. and microscopy 7−91544
$La_{1-x}Sr_xCuO_4$, high T_c supercond., internal friction and sound vel. anomalies 7−131897
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., phonons, inelastic neutron scatt. studies 7−91745
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. thin films, Hall effect meas. 7−92210
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transport props. and Fermi surface 7−92337
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., normal state and supercond. props. 7−92338
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., mag. susceptibility studies 7−92365
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical field, high field meas. 7−92390

strontium compounds continued
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., ^{139}La pure quadrupole resonance studies 7−92543
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., optical reflectivity spectra and band struct. 7−92631
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR absorption spectra studies 7−92665
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR spectra and vibr. props. 7−92668
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., crystallochemical studies 7−98081
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. single crysts., lattice vibrs., Raman scatt. studies 7−98363
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic distortion 7−98437
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., valence determ., XANES studies 7−98949
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin films, T_c meas. 7−99239
$(La_{1-x}Sr_x)_2CuO_4$, high T_c superconductivity, substitution effects 7−99268
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., sintering conditions dependence 7−99274
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., vacuum annealing effects 7−99275
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., complete Meissner effect AC mag. suscept. meas. 7−99322
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht., resist. and diamag. susceptibility 7−99331
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., heat capacity and supercond. transition temp. 7−99332
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., local tunnelling and energy gaps, STM meas. 7−99350
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, STM meas. 7−99351
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, point-contact tunnelling obs. 7−99352
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap anisotropy, far IR absorpt. spectra anal. 7−99833
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., IR active phonons, refl. spectra 7−99837
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR reflectivity and optic phonon modes 7−99847
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., X-ray absorption spectra studies 7−99974
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., absence of struct. transition, X-ray studies 7−99975
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon density of states 7−104934
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon dispersion curves 7−104935
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., optic breathing mode and resonant charge fluctuations 7−104936
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp., localisation and struct. transitions 7−105760
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sputter deposition and onset temp. 7−105792
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon props., far-IR meas. 7−105824
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, for IR meas. 7−105825
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon Raman scatt. studies 7−106182
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., two-phase struct., X-ray diffr., mag. suscept. and electroresist. temp. depend. study *(Russian)* 7−111469
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., cryst. struct. temp. depend., powder neutron diffr. study 7−111480
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic transition 7−111852
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., complex susceptibility and transition temp. 7−112558
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ultrasonic velocity and attenuation studies 7−112604
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. jump, critical temperature 7−112659
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. wires, critical temp. and critical current density 7−112710
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., mag. props. 7−112731
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma edge and optical phonon spectra 7−113117
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., single cryst. growth from high temp. solns. 7−117850
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. struct., low temp. electron diffr. and microscopy studies 7−117889
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., positron annihilation Doppler broadened lineshape study 7−119064
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., single cryst. growth and habit studies 7−119124
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., amorphous citrate process prep. and elec. props. 7−119204
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp., press. effects 7−125167
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., T_c press. depend. variation with composition 7−125181
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., chemical substituent effects 7−125211
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma oxidation and supercond. transition 7−126267
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. and phonon spectrum, neutron and Raman scatt. studies *(Russian)* 7−131327
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., galvanomag. effects studies *(Russian)* 7−131671
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., thermoelec. power and thermal cond. meas. *(Russian)* 7−131887
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct., X-ray emission spectra study *(Russian)* 7−132379
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., X-ray photoelectron spectra study *(Russian)* 7−132404
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., NMR and NQR studies 7−138345
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., passivation with Au overlayers, XPS and IPS spectra 7−138859
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp. and hole conc. 7−143675

strontium compounds continued
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., low-field mag. relaxation 7−143702
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., bulk and thin film studies 7−143711
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical fields and critical current density 7−143735
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., antiferromagnetic interactions 7−143815
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR active phonons, reflection spectra study 7−144065
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR spectra studies 7−144067
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., empty electronic states and surface stability, inverse photoemission study 7−144155
$(La_{1-x}Sr_x)_2CuO_4$ layered perovskite high T_c supercond., local phonon model 7−92335
$(La_{1-x}Sr_x)_2CuO_4$ superconducting single crystal, anisotropic props. 7−92389
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, cryst. struct. determ. 7−91542
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, effect of La ion substitutions on superconductivity 7−92334
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, high T_c superconductor, UPS study 7−92829
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, high T_c supercond., crit. temp. 7−99258
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, high T_c supercond. prep., residual water effects on superconductivity 7−99272
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7−112697
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ supercond. films, high T_c, screen printing method prep. 7−92915
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., electronic struct., photoemission meas. 7−99271
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., upper critical field meas. 7−99363
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., far IR transmission spectra meas. 7−99834
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., X-ray absorpt. spectra anal. 7−99972
$(La_{1-x}Sr_x)_2CuO_{4-y}$, high T_c supercond., soft X-ray absorpt. studies 7−144179
$(La_{1-x}Sr_x)_2CuO_{4-y}$, strongly correl. electronic states, XPS, UPS obs. 7−105446
$(La_{1-x}Sr_x)_2CuO_e$ high T_c supercond., annealing conditions effects study, mag. suscept. and X-ray diffr. meas. 7−143671
$(La_{1-x}Sr_x)_yCuO_4$ high T_c thin films, sputter prep. and transition temp. studies 7−92868
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, high T_c superconducting films, prep. conditions, optimisation 7−92867
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, superconducting thin films, sputter deposition 7−125179
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ceramic processing methods 7−119205
$La_{1.8}Sr_{0.2}CuO_4$, bulk superconductivity at 36 K 7−112572
$La_{1.8}Sr_{0.2}CuO_4$, ceramic, elastic moduli *(Russian)* 7−111728
$La_{1.8}Sr_{0.2}CuO_4$ ceramic, high T_c supercond., struct. and thermodynamic anomalies at T_c *(Russian)* 7−125171
$La_{1.8}Sr_{0.2}CuO_4$ high T_c film Josephson junctions 7−92380
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., energy gap, for IR meas. 7−99320
$La_{1.8}Sr_{0.2}CuO_4$, high T_c superconductor, prep. 7−100165
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., granular nature of bulk superconductivity 7−105866
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond. ceramics, prep. and props. 7−118671
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., oxidation state study 7−118715
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., thermal capacity *(Russian)* 7−125245
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond. in S-c-N point contacts, critical current density *(Russian)* 7−125286
$La_{1.8}Sr_{0.2}CuO_4$, high-T_c superconductor, lower critical field, vibrating reed measurements 7−131937
$La_{1.8}Sr_{0.2}CuO_4$, high T_c superconductors, aqueous electrochemistry 7−132946
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., temp. depend. of struct. 7−137348
$La_{1.8}Sr_{0.2}CuO_4$, high-T_c supercond., internal mag. fields from muon spin rotations expts. 7−138121
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., critical current densities 7−138176
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., microwave study 7−144185
$La_{1.8}Sr_{0.2}CuO_4$, partially substituted, high T_2 superconductivity 7−105802
$La_{1.8}Sr_{0.2}CuO_4$, peroxide and Cu^{1+} species, photoemission study 7−131894
$La_{1.8}Sr_{0.2}CuO_4$, prep., supercond. props. 7−118668
$La_{1.8}Sr_{0.2}CuO_4$ sintered high T_c supercond. props., resistivity and photoacoustic meas. 7−118683
$La_{1.8}Sr_{0.2}CuO_4$, struct. and superconductivity under press. 7−92355
$La_{1.8}Sr_{0.2}CuO_4$ superconductors, critical currents and fields 7−92394
$La_{1.8}Sr_{0.2}CuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
$La_{1.8}Sr_{0.2}CuO_4$, superconductivity thin films, synthesis and irradiation-induced defects 7−125218
$La_{1.8}Sr_{0.2}CuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_{1.8}Sr_{0.2}CuO_4$, weak flux pinning, 230 to 40 K 7−92393
$(La_{1.8}Sr_{0.2}Cu)_xO_y$, high T_c superconductor, preparation by oxidation of amorphous $La_{1.8}Sr_{0.2}Cu$ ribbon 7−99267
$La_{1.825}Sr_{0.175}CuO_4$, resistivity to 1100 K 7−137938
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., energy gap, Korringa const., determ. by NMR 7−132144
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., neutron irradiation, influence on supercond. props. *(Russian)* 7−143654
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., thermal expansion, longitudinal ultrasound velocity *(Russian)* 7−143709
$La_{1.85}Sr_{0.15}CuO_4$, elec. resist., Hall effect and thermoelec. power meas. in normal and supercond. states 7−105790
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, energy gap 7−92352
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., cryst. struct. above and below polymorphic T_c 7−98030
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., normal and supercond. state props. 7−99303
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., energy gap 7−99318
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond. resistivity upper limit 7−105782
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. props. 7−105833
strontium compounds continued
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, US and thermal expansion meas. 7−105838
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. penetration depth, flux-pinning effects, μSR study 7−112650
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductivity, mag. field penetration depth, μSR study 7−112651
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., optical props. 7−113191
$La_{1.85}Sr_{0.15}CuO_4$ high T_c superconds., T_c enhancement with hydrostatic pressure 7−118654
$La_{1.85}Sr_{0.15}CuO_4$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. screening and flux distrib. 7−118741
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., supercond. props. and microstructures 7−118756
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., shock-induced chemical synthesis 7−119220
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., formation of perovskite by oxidation of La-Sr-Cu alloy 7−119411
$La_{1.85}Sr_{0.15}CuO_4$, high-T_c superconductor, nonzero isotope effect 7−125202
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. susceptibility, hydrostatic press. 7−138126
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., thermodynamic and other props. 7−143707
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., spin-lattice relax. of ^{63}Cu and ^{139}La nuclei *(Russian)* 7−143920
$La_{1.85}Sr_{0.15}CuO_4$, hot-pressed and sintered, superconducting props. 7−99259
$La_{1.85}Sr_{0.15}CuO_4$, magnetic hysteresis 7−125239
$La_{1.85}Sr_{0.15}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$La_{1.85}Sr_{0.15}CuO_4$ single cryst., high T_c superconductor, prep. and props. 7−92364
$La_{1.85}Sr_{0.15}CuO_4$, superconducting, magnetisation 5 to 300 K 7−99321
$La_{1.85}Sr_{0.15}CuO_4$, superconducting transition temp., ^{18}O isotope shift 7−125203
$La_{1.85}Sr_{0.15}CuO_4$, tunnelling, point contact investigations 7−105859
$La_{1.85}Sr_{0.15}CuO_4$, ultrasound studies, high T_c superconductors 7−118718
$La_{1.85}Sr_{0.15}CuO_4$, upper critical fields, superconducting transition temp. 7−70442
$La_{1.85}Sr_{0.15}CuO_{4-\delta}$, upper critical field meas. in pulsed mag. field 7−99366
$La_{1.85}Sr_{0.15}CuO_{4-\delta}$, high T_c supercond., electrodynamic response 7−131896
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high temp. supercond., evidence against bulk superconductivity 7−125199
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high T_c supercond., O role in prep. 7−132539
$La_{1.85}Sr_{0.5}CuO_4$ bulk superconductivity meas., susceptibility and lattice distortion 7−118645
$La_{1.88}Sr_{0.12}CuO_4$, crystal structure, Jahn-Teller effect on CuO_6 octahedron *(French)* 7−98057
$La_{2-x}Sr_xCuO_4$ (x=0 to 0.2), high T_c supercond., electron-electron correlations 7−112656
$La_{2-x}Sr_xCuO_4$, Hall effect meas. at 77 K, implications for normal state electronic struct. 7−105840
$La_{2-x}Sr_xCuO_4$, high temp. superconductor, resistivity, mag. props. and specific heat 7−85189
$La_{2-x}Sr_xCuO_4$ high T_c supercond., photoemission studies 7−92839
$La_{2-x}Sr_xCuO_4$, high T_c supercond., structural instability, X-ray diffr. study, 15-298 K 7−98434
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic props. 7−99369
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Young's modulus, internal friction studies 7−105822
$La_{2-x}Sr_xCuO_4$, high T_c superconductor, experimental electronic struct. studies 7−106381
$La_{2-x}Sr_xCuO_4$, high T_c supercond., ab initio electronic band structure 7−112284
$La_{2-x}Sr_xCuO_4$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$La_{2-x}Sr_xCuO_4$, high T_c supercond., far-IR reflectivity 7−113192
$La_{2-x}Sr_xCuO_4$ high T_c supercond., electronic struct. and charge transfer excitations 7−118362
$La_{2-x}Sr_xCuO_4$ high T_c superconds., fabrication, mech. props., sp. ht. and O diffusion studies 7−119209
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. and elec. props., struct. transition preceding superconductivity *(Russian)* 7−124474
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic struct. determ. *(Russian)* 7−124821
$La_{2-x}Sr_xCuO_4$, high T_c supercond., EPR studies *(Russian)* 7−125527
$La_{2-x}Sr_xCuO_4$, high T_c superconductors, effect of low dimensionality on parameters 7−138129
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. and phase transitions *(Russian)* 7−142711
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. transformations *(Russian)* 7−142977
$La_{2-x}Sr_xCuO_4$, high T_c supercond., normal state props. 7−143995
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Raman and IR study of lattice vibrs. 7−144075
$La_{2-x}Sr_xCuO_4$, microstructural and electromagnetic characterisation 7−112644
$La_{2-x}Sr_xCuO_4$, Peierls distortion evidence from vibr. spectroscopy 7−85658
$La_{2-x}Sr_xCuO_4$, quasi-2D supercond., Fermi surface, van Hove saddle point singularity 7−92052
$La_{2-x}Sr_xCuO_4$, soft-phonon behaviour, hopping conduction 7−137546
$La_{2-x}Sr_xCuO_4$, struct. and high T_c supercond. 7−99252
$La_{2-x}Sr_xCuO_4$, structural phase diagram, X-ray study 7−119252
$La_{2-x}Sr_xCuO_4$, superconducting props., synthesis and struct. 7−92342
$La_{2-x}Sr_xCuO_4$ thin films, supercond. props., diamag. transition 7−118613
$La_{2-x}Sr_xCuO_{4-\delta}$, high T_c supercond., composition-depend. superconductivity 7−99302
$La_{2-x}Sr_xCuO_{4-\delta}$, high T_c supercond., transport props., electron deficiency, comparisons with $YBa_2Cu_3O_{9-\delta}$ 7−118609
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., upper crit. field 7−99370
$La_{2-x}Sr_xCuO_{4-y}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., upper critical field meas. 7−118745

rontium compounds continued
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., O vacancy behaviour, positron annihilation, O diffusion 7−142769
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., introduction of Bi 7−143681
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., X-ray absorption meas. 7−144178
$La_{2-x}Sr_xCuO_{4-y}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7−118607
$La_{2-x}Sr_xCuO_{4-y}$ solid solns., superconducting props., sp. ht. *(Russian)* 7−105756
$La_{2-x}Sr_xCuO_{4-y}$, superconducting props. at 40 K 7−112587
$La_{2-x}Sr_xCuO_{4-y}$, superconducting perovskites, rare-earth doping 7−118675
$La_{2-x}Sr_xCuO_{4-y}$ Z *(French)* 7−112707
$(La_{1.85}Sr_{0.15})Cu_{0.95}Sn_{0.05}O_4$, perovskite supercond., phonon and electron anomalies 7−92350
$La_{1-x}Sr_xFeO_{3-\delta}$, solid soln., thermodynamic quantities and defect equilib. 7−84320
$La_{1-x}Sr_xFeO_3(CoO_3)$ perovskite-type oxides, IR reflectivity and electronic states 7−144053
$La_{1-x}Sr_xMO_{3-z}$, (M=Cr,Mn,Fe,Co), perovskite electrodes for high temperature solid electrolyte fuel cells 7−114093
$LaSrMnO_3$, crystal growth and charact. 7−138645
$(LaY)_{2-x}Sr_xCuO_4$, high T_c supercond., localisation and supercond. charcts. 7−125208
La1.6Eu$_{0.25}$Sr$_{0.15}$CuO$_4$ bulk superconductivity meas., susceptibility and lattice distortion 7−118645
LiCl-$BaCl_2$-$SrCl_2$ system, phase diagram, meas. and calc. 7−138734
$Ln_{2-x}(BaSr)_xCuO_4$, Ln=Pr,Nd,Y, high T_c supercond. behaviour systematics 7−118646
Na_2CO_3:$SrCO_3$, ionic cond. and cryst. struct. studies 7−69963
NaCl-$SrCl_2$-H_2O, diffusion coefficients, Rayleigh interferometry, molarity ratio, Nernst-Hartley equation 7−143066
Na_2O-SrO-P_2O_5 glass, N dissolution in melts, thermal expansion, refractive index 7−93013
$Pb_{0.94}Sr_xLa_y(Zr_{0.52}Ti_{0.48})O_3$, X-ray struct. determ. 7−124193
$(Pb_{1-z}Sr_x)_2NaNb_5O_{15}$ ceramic, piezoelectric props. 7−113083
$Pb_{1-x}Sr_xTe$, MBE growth, diode laser appls. 7−131486
$(Pb_xSr_{1-x})TiO_3$, electrical second harmonic generation and TANDEL effect 7−132212
$Pb(Zn_{1/3}Nb_{2/3})O_3$-$SrTiO_3$-$PbTiO_3$ system, phase relations, dielec. and piezoelec. props. 7−92598
Si_2O_5-Sr, vermiculite, Raman spectra study 7−85700
$Sm_{0.5}Sr_{0.5}CoO_3$ perovskite oxide, p-type semiconductor, surface states, gas sensor material appl. 7−85025
$(Sr,Be,Y,La)CuO_{\Delta-y}$, high temp supercond., phonon interaction effects 7−118686
Sr cpds. and minerals, X-ray absorpt. spectra, K-edge shifts 7−70940
Sr-La-Cu-O, high T_c superconductivity model 7−105817
Sr-La-Cu-O high T_c superconds., upper critical fields and Ginzburg-Landau coherence lengths 7−99364
Sr-La-Cu-O system, prep. by coprecipitation, supercond. props. 7−99292
Sr-La(Y)-Cu-O high T_c supercond., prep. by coprecipitation method 7−113499
$Sr_2Al_6O_{11}$:Eu, phosphor, degradation under cathode ray excitation 7−92727
$Sr_3Al_2O_5Cl_2$ prep. and struct. determ., single cryst. X-ray diffr. study *(German)* 7−124218
$Sr_8(Al_{12}O_{24})(CrO_4)_2$, aluminate-chromate sodalite ceramics, prep. and dielec. meas. 7−92579
SrB_6, crystal dynamics, multichannel Raman spectra study 7−85710
$Sr_{0.75}Ba_{0.25}N_2O_6$:Ce self-pumped phase conjugate mirror, time response 7−103901
$(SrBa)Nb_2O_6$ ceramics, modified, effect of rare earth ions on props. 7−118935
$Sr_{0.61}Ba_{0.39}Nb_2O_6$, MM-wave dielec. props. at 77 and 300 K 7−99650
$Sr_{1-x}Ba_xNb_2O_6$ ferroelectric ceramics, doped, elec. cond. and dielec. props. 7−92186
$Sr_{1-x}Ba_xNb_2O_6$ photorefractive crystals, development and modification 7−113141
$Sr_{1-x}Ba_xNb_2O_6$, photorefractive props. 7−118968
$Sr_{1-x}Ba_xNb_2O_6$:Ce crysts., self-induced holographic gratings, coherent light oscillation obs. 7−123129
$Sr_xBa_{1-x}Nb_2O_6$:Ce as broadband self-pumped phase conjugate mirror 7−90726
SrBaYCuO high T_c supercond., possible 65 °C superconductivity obs. 7−125195
$Sr(BrO_3)_2.H_2O$, cryst., BrO_3^- ion dynamics, Raman spectrosc. obs. 7−70818
$(Sr_{1-z}Ca_z)_{0.15}La_{1.85}CuO_{4-y}$, high T_c superconductor, props., depend. on sintering atmosphere 7−92331
Sr_2CaUO_6, cryst. struct., Rietveld refinement of neutron powder diffr. data 7−111466
$SrCl_2$, force consts. determ. 7−68283
$SrCl_2$, onset of fast ionic conduction 7−76489
$SrCl_2$, pressed powder pellets, elec. cond., grain size and pelletising press. influence 7−84375
$SrCl_2$, superionic, defect conc. below the critical temperature 7−104749
$SrCl_2$ thermal expansion coeff., X-ray diffr., lattice vibr. freqs. 7−111803
$SrCl_2$, XANES analysis, multiple scattering study 7−138550
$SrCl_2$:Ce single crysts., photoluminesc. and absorpt. spectra 7−70894
$SrCl_2$-$EuCl_2(Cl_3)$ systems, preparation and phase characterisation 7−86136
$SrCo_3$, luminesc. rel. to prep. conditions 7−77633
$Sr_2Co_2O_5$, phase transitions, neutron thermodiffractometry study 7−91797
$SrCrO_4$, monazite type structures, cryst. struct. refinement 7−76104
SrF_2 crysts., singlet and triplet self-localised excitons, intrinsic excitation luminesc. spectra 7−77625
SrF_2, fluoride buffer layers for heteroepitaxy of Pb chalcogenides and CdTe 7−92874
SrF_2, onset of fast ionic conduction 7−76489
SrF_2 optical films, linear expansion coeffs. 7−103930
SrF_2 radioactive source capsules, Beneficial Uses Shipping System cask 7−74241
SrF_2:Ce, hopping ionic cond., ionic thermocurrent studies 7−91894
SrF_2:Ce, hopping ionic conductivity, complex dielec. const., impedance, meas. 7−91895
SrF_2:Ce^{3+} cryst., Ce^{3+} ion interaction with ^{19}F nuclei 7−98937
SrF_2:Cr^{3+}, optical props., absorpt. and emission spectra 7−92723
SrF_2:$Li^+(Na^+)(K^+)$, F_{2A} oscillator strengths 7−138478
SrF_2:Mn, local phase transitions with S state impurities 7−137538

strontium compounds continued
SrF_2:Pr^{3+}, D^-, spectral hole burning due to deuteron tunneling 7−141950
SrF_2:Tm^{3+}, excited impurity ions, vacuum UV absorpt. spectra 7−113237
SrF_2-Nd^{3+}, crystals, laser-excited fluorescence of Nd^{3+} 7−122439
SrF_4, isotropic hyperfine ligand interaction in clusters of ns' ions, influence of spin polarisation 7−131599
$SrFe_{1-x}Co_xO_3$, Curie temp. and Neel temp. 7−77289
$SrFeO_{3-y}$, first order transition, Fe mixed valence, Mossbauer spectra study 7−92560
$SrFe_{12}O_{19}$ 7−125461
$SrFe_{12}O_{19}$ ferrites, hyperfine interaction parameters and mag. props., Mossbauer spectra meas. 7−99622
$SrFe_{12}O_{19}$, hexaferrite, homogeneity region 7−105059
$SrFe_{12}O_{19}$ hexagonal ferrite particles for perp. recording, precursor method prep. 7−85366
$SrFe_{12}O_{19}$ permanent magnet, intrinsic coercivity, ang. depend. meas. 7−105957
$SrFeVO_6$, perovskite-like, struct. and mag. props. 7−143789
SrI_2, force consts. determ. 7−68283
$Sr_{0.15}La_{1.85}CuO_{4-\pi}$, high T_c supercond., far IR props. 7−119021
$Sr_{0.2}La_{1.8}CuO_4$ high T_c superconductor, diamag. shielding and Meissner effect meas. 7−92370
$Sr_{0.2}La_{1.8}CuO_4$, high T_c superconductor, electronic struct., UPS, inverse photoemission spectra studies 7−105368
$Sr_{0.2}La_{1.8}CuO_4$, high T_c superconductor, direct and universe photoemission 7−125250
$Sr_xLa_{2-x}CuO_{4-\delta}$, high T_c superconductor, mag. studies 7−105829
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., lattice const. press. depend. 7−92341
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., diamag. shielding and Meissner effect 7−92366
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., Cu valence, O deficiency 7−99293
$Sr_xLa_{2-x}CuO_{4-y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
$Sr_xLa_{2-x}CuO_{4-y}$, supercond. mech. in high T_c oxides 7−105821
$Sr_xLa_{2-x}CuO_{4-y}$ thin film high T_c supercond., sputter deposition prep. 7−92869
$Sr(Li_{2/5}W_{3/5})O_3$, cubic perovskites, prep. 7−100162
$Sr_{1-x}Lu_xF_{2+x}$, x=0.01-0.25, ion transport characts. 7−69965
$Sr_6M_2O_{11}$ (M=Nb,Ta), defect structure, transport properties 7−131139
$SrMn_2Fe_{16}O_{27}$ hexaferrite, mag. props., phase formation 7−138231
$Sr(NO_3)_2$, thermal hysteresis 7−76393
$Sr_2NaNb_5O_{15}$-$Pb_2KNb_5O_{15}(PbNb_2O_6)$ ceramics, struct. and ferroelec. props. 7−99760
$Sr(Na_{2/5}W_{3/5})O_3$, cubic perovskites, prep. 7−100162
$Sr_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes with disordered structures 7−91890
$Sr_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes, defect structure and conductivity 7−91891
SrO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
SrO, vapour phase UV photoelectron spectra, orbital calcs., dissociation energies, chemielectron spectra 7−141625
SrO:Bi^{3+} phosphor, photolum. and excitation spectra 7−85817
SrO:Co^{2+}, paramag. noncentral impurity ion, spin and electric-dipole polarisation effects 7−138313
SrO:Co^{2+}, reorientable dipole centre ESR lines, elec. field splitting, time depend. 7−143900
SrO:Mn^{2+}, zero-field splitting, uniaxial stress effects 7−112271
SrO-B_2O_3-Al_2O_3 glass struct., NMR study 7−91458
SrO-GeO_2 system, time-temp.-transform. diagram *(Japanese)* 7−132592
SrO-Si interfaces, MBE heteroepitaxial growth 7−118299
SrO-TiO_2-Ga_2O_3, phase diagram, crystallographic and leaching study 7−71158
$Sr(OG)_2$, pyrolysis in vacuum, thermal and emission processes 7−100530
$Sr_3(PO_4)_2$:Tb(Ce), luminesc., second phase form. 7−70890
$Sr_2P_2S_6$, vibr., Raman spectra *(German)* 7−106188
$Sr(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$SrRu_2P_2$, sintering prep. and cryst. struct. determ. 7−117887
SrS film growth by atomic layer epitaxy, X-ray diffr. and Auger spectra obs. 7−144299
SrS:Ce, Sm, thermally stimulated luminesc. 7−144133
SrS:Ce, X-ray luminescence using synchrotron radiation 7−132323
$SrSO_4$:Dy, X-ray luminescence using synchrotron radiation 7−132323
$SrSeO_4$, monazite type structures, cryst. struct. refinement 7−76104
Sr_2SiO_4, incommensurately modulated α'_L-phase, electron diffr. 7−84236
SrTe, optical response and band struct. under press. 7−98803
n-$SrTiO_3$ amorphous sputtered thin films, electronic processes, optical and photoelectrochem. props. 7−144141
$SrTiO_3$ carriers, transient polarisation currents and degradation effects 7−99658
$SrTiO_3$ cryst., band struct. change during cubic-tetragonal transition, two-photon absorpt. spectra 7−118360
$SrTiO_3$ doped and undoped ceramic anodes, photoeffects study 7−84991
$SrTiO_3$, fund. absorpt. edge meas. 7−106125
$SrTiO_3$, large cryst.-sized powder, molten salt synthesis 7−113483
$SrTiO_3$, light scatt., effect of photocarrier generating light 7−125757
$SrTiO_3$, negative intrinsic thermo-optical effect 7−99807
n-$SrTiO_3$ polycrystalline electrodes for photoelectrochromic switching of Prussian blue films 7−113136
n-$SrTiO_3$, Prussian Blue films, photochromism, spectroscopic and electrochem. studies 7−70836
$SrTiO_3$, RF dielectric dispersion, Debye relaxation and order-disorder transformations 7−132179
$SrTiO_3$, SAW propagation, nonlinear acoustic effects, region near struct. phase transition 7−70054
$SrTiO_3$ single crysts., light scatt., photoactive light effects study 7−144083
$SrTiO_3$, solid solution, photoelectrochem. behaviour 7−86647
$SrTiO_3$, sound velocity photoinduced changes in external elec. field 7−104919
$SrTiO_3$ ultrafine powders, hydrothermal preparation and catalysis of water photolysis 7−106459
$SrTiO_3$:H, impurity position, high resolution IR spectra 7−85652
$SrTiO_3$-$SrNb_2O_3$, glass ceramic, temperature autostabilisation 7−113072
Sr_2TiO_4, Raman active phonons, spectral meas. 7−106186
$Sr_3Ti_2O_7$, Raman active phonons, spectral meas. 7−106186
$Sr_4Ti_3O_{10}$, Raman active phonons, spectral meas. 7−106186
$SrWO_4$, crystal lattice and anion internal vibrs. calcs. 7−104929

strontium compounds continued
$Sr_xY_{1-x}CuO_{3-y}$, high T_c supercond. props., AC mag. suscept., elec. resist. meas. 7−112600
$Sr_2Zn_2Fe_{28}O_{46}$, hexagonal ferrite, mag. and Mossbauer study 7−112853
$^{90}SrCl_2$, single inhalation exposure in the beagle dog: haematological effects 7−101011
UO_2^{2+}:$SrSO_4$ phosphor, gamma-irrad., thermally stimulated free radical reactions, EPR and CIDNP 7−77428
Y-Ba-Sr-Cu-O, bulk high T_c supercond., inverse AC Josephson effect obs. 7−118730
Y-Ba-Sr-Cu-O system, high temp. superconductivity 7−112606
Y-Ba-(Sr-)Cu-O high T_c supercond., inverse AC Josephson effect studies 7−143722
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ high T_c supercond. ceramics, substitution effects study 7−118626
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ ceramics, high T_c supercond., annealing effect 7−143659
$YBa_{2-x}Sr_xCu_3O_7$ high T_c supercond., struct., resist. and Meissner effect studies 7−112532
$YBa_{2-x}Sr_xCu_3O_{7-\delta}$, high T_c supercond., alkali ion substitution effects study 7−119209
$YBa_{2-x}Sr_xCu_3O_{9-y}$, possible supercond. above 230 K 7−125169
$YBa_{2-x}Sr_xCu_3O_y$ high T_c superconductor props., comp. depend. studies 7−118658
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
$YSr_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$Y_{2-x}Sr_xCuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534

structural transformations *see solid-state phase transformations*

structure (chemical) *see chemical structure*

structure factors (crystals) *see crystal atomic structure*

structure functions
see also EMC effect
chiral bag model struct. fns., scaling and Regge behaviour 7−121455
deuteron magnetic form factor and meson exchange currents calcs. 7−81191
Feynman-x distribution of D mesons produced in hadronic collisions 7−128861
gluon structure fn. determ. in pp→γ+away-side jet, $\sqrt{s}$=63 GeV 7−95954
hadron valence constituents exclusive struct. functions 7−81138
massless QCD, infrared singularity and struct. fn. of transverse gluon propagator 7−102691
MIT bag model wave fn., Peierls-Yoccoz projected, deep inelastic struct. fn. calcs. 7−135055
multiquark clusters in nuclei, QCD scaling violation and struct. fns. 7−89555
nuclear structure functions, relativistic description 7−95979
nuclear structure functions and quantum chromodynamics 7−73651
nuclear valons distrib. distortion and the EMC effect 7−95977
nucleon structure function at high Q^2, QCD test and Λ meas. from scaling violations in μN 7−135125
p-forms and diffeomorphisms, hamiltonian formulation 7−121355
photon structure function and optimised perturbation theories 7−81188
photon structure function meas. in ee→eeX 7−81193
(e,e′), chiral bag model description of nuclear matter, struct. fns. 7−121692
(e,e′), pionic effects in elastic scatt. 7−135308
(e, e′X), y-scaling in inclusive scattering, structure function expansions 7−121753
ed→X, deep inelastic scatt., light front solution 7−67626
ed→X, quasielastic region scaling, inclusive spectra, struct. fns., 0.36 to 1.16 GeV^2 7−116184
$e^-N→e^-X$, polarisation phenomena structure function formalism 7−135136
γ N→X, polarisation phenomena structure function formalism 7−135136
γ structure function, sensitivity to QCD scale parameter 7−140940
γ structure function meas. and QCD tests 7−102703
γN→ψX, gluon struct. fn., small-x behaviour 7−102753
K structure function, rescaling, valon model anal. 7−116172
lN→ψX, gluon struct. fn., small-x behaviour 7−102753
lp, deep inelastic scatt., structure fn. calcs., pomerons 7−121518
μN→μ′X, 120-280 GeV, nucleon structure function high stats. meas. in carbon 7−135124
N, strange-quark sea, constraints on nonperturbative component 7−102700
N structure functions from deep inelastic μp, μd scattering data, QCD anal. 7−67622
νp, deep inelastic process, structure fns., twist-four corrections, Bjorken and Gross-Llewellyn Smith sum rules in QCD 7−67614
$\bar{p}p→\psi X$, ψ-hadroproduction, signals for B→ψX and χ→ψγ 7−73671
π form factor in instanton-vacuum model, structure function, spontaneous chiral invariance breaking 7−116175
$\pi^-N→\mu^+\mu^-X$, 140, 286 GeV, nuclear effects on nucleon structure functions 7−135123
^{12}C (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
$^{40}Ca(e,e'p)^{39}K$, bound nucleon response function 7−81376
(e,e′(p)), nuclear binding effects, structure fns. 7−116401
Fe(μ,μ′X), deep inelastic scatt., nuclear EMC effects, structure function ratio 7−96055
γγ physics at LEP 200, resonance excitation, meson period., structure functions 7−140971
^2H, elastic form factor and $A(q^2)$ struct. function 7−67706
^2H(e, e), quark cluster effects on the electromagnetic struct. fns. 7−81374
^2H(ē,e′n), nonrelativistic description, final state interactions and neutron electric form factor 7−121811
$^2H(\mu,\mu'X)$, deep inelastic scatt., nuclear EMC effects, structure function ratio 7−96055
^3H, variational Monte Carlo calculations of few-body nuclei 7−67703
^AH(e,X), A=2, 3, struct. fns. and meson exchange currents 7−135305
^2He(e,X), quasielastic region scaling, inclusive spectra, struct. fns., 0.36 to 1.16 GeV^2 7−116184
^3He (e,pn), 0.7 GeV^2, electrodisintegration spectrum and struct. factor meas. 7−135304
^3He(e,X), electrodisintegration, struct. fns. and meson exchange currents 7−135305
^3He(e,e′), 538 MeV, struct. factor meas. 7−135304
^AHe, A=3,4, variational Monte Carlo calculations of few-body nuclei 7−67703

structure functions continued
N, deep inelastic scatt. structure function calc., bag model anal. 7−116176
^{16}O, (γ,γ), elastic and inelastic scatt. in Δ-resonance region 7−109144
^{16}O(ē,e′X), 130 MeV, fifth structure function, HF and RPA calcs. 7−121808

structure of alloys, crystal *see crystal atomic structure of alloys*

structure of elements, crystal *see crystal atomic structure of elements*

student experiments *see demonstrations*

student laboratory apparatus
accelerated motion with variable weight 7−128222
brass, Young's modulus meas., apparatus improvement 7−120727
bullet speed meas. using photogate timer 7−134404
Cavendish balance automatic recording for gravitation const. meas. 7−134403
Compton energy and wavelength shift, laboratory expt. 7−80240
computerized rotation experiment, for error study 7−88800
Earth's magnetic field meas., use of electronic integrator 7−80267
earth Lab: a local network for collaborative classroom science 7−88786
emission spectroscopy with use of Polaroid films 7−108107
fibre-optic communication lab. for undergraduates 7−102070
flame table, 2D, visual demonstration of acoustic modes 7−128215
fluorescent lamp plasma, microwave interactions, density shift meas. using cavity reson. method 7−108086
indication tests for CO_2, acidity, starch and chloride 7−108103
light velocity meas., laser beam modulation in Pockels cell 7−108084
microcomputer based labware, classroom experience 7−88785
Newtonian gravitational const. meas. 7−128212
pendulums, underdamped motion study using videotaping 7−108088
Physics Lab Help Ware, software package 7−108120
physics laboratory, microcomputer-based aid to physical intuition 7−115719
pulser circuit for speed of light meas. 7−134402
rainbow hologram prod. set-up 7−108082
rainwater sulphate determ. method 7−108106
real-time interferogram prod. in undergraduate laboratory 7−134396
rolling unrestrained brachistochrone 7−134400
self-scanning photodiode array for optical diffr. pattern meas. 7−134399
signal integration, microcomputer-controlled for signal-to-noise ratio improvement 7−80247
soil, cations mobility, pH and Cl^- conc. effects study 7−108105
soil pH measurement as introduction to quantitative anal. 7−108104
sound-induced window vibrations, laser detection system 7−80269
stainless steel, Young's modulus meas., apparatus improvement 7−120727
statistics and errors, undergraduate experiment, use of radioactive source and microcomputer 7−120723
wind velocity and temp. meas. from audio phase shift 7−128227
Cu, Young's modulus meas., apparatus improvement 7−120727
$Cu_{50}Zr_{50}$ amorphous ribbon, torsion spring for gravitational const. meas. 7−80268
KBr, F centres, soft X ray irradiated, UV-visible meas. of optical absorpt. band 7−80248

studios
see also radio studios
broadcast studio partition design 7−123335
sound signal processing, delay system implementation *(German)* 7−130474

SU_2 theory
1D quantum systems, SU(2) dynamical symmetry, exact solvability 7−128353
baryon elastic scattering cross sections in the Skyrme model 7−80980
baryon number conservation in lattice gauge theory, SU(2) and $SU_c(2)\times U_B(1)$ models 7−81016
charge conjugation, automorphisms and conformal states 7−89384
compact matrix pseudogroups, Haar measures for the twisted SU(2) group 7−134965
compositeness below 1 TeV in the strongly coupled standard model 7−102687
conformally invariant SU(2) σ model, finite operator algebras 7−81007
continuous Heisenberg XYZ model with one ion anisotropy, generalized coherent states 7−73267
Dirac quantisation rule, mass and dual mass, gravitational magnetic monopoles 7−140574
dual pairs and representations of scattering amplitudes 7−81142
dynamical supersymmetry of Pt-Au pairs 7−128780
Einstein-Maxwell equations, SU(,1) invariance, linear problem 7−67143
Einstein-Yang-Mills theory, spontaneous compactification to non-symmetric coset spaces 7−128398
electroweak interaction model with SU(2)×SU(2)×U(1) symm., quark and lepton masses 7−102653
electroweak interactions, spontaneously broken gauge symmetry, review *(Rumanian)* 7−81090
electroweak model, non-standard self-interactions of the weak vector bosons and their phenomenological implications 7−73567
exceptional modular invariant $A_1^{(1)}$ partition function realization 7−67484
exotic Drell-yan processes at Tevatron and SSC, light and heavy bosons 7−134996
exotic skyrmions *(Hungarian)* 7−128766
extended conformal SUSY, group theoretical approach, function space, invariant diff. operators 7−128779
fermionic QCD simulation, dynamical algorithm appl. to SU(3) lattice gauge theory 7−81123
fermionic strings, twisted and extended, BRST quantization, O(2) and SU(2) strings, ghost systems 7−121478
flux tubes in SU(2) lattice gauge theory, string tension 7−102615
four-generation SU(2)×U(1) model, Yukawa couplings, CP violating mixing matrix 7−140856
fractional photons, squeezed and coherent states 7−68605
gauge field on torus, chromomagnetic energy calcs. 7−108775
gauge fields, SO(4) trivialisable, geometry and topology 7−102633
gauge fields, SU(2), non-Abelian, produced by infinite coloured plane 7−89381
gauge theory, finite temp. phase transition, Monte Carlo renormalisation group study 7−95750
gauge theory, functional stochastic quantisation 7−116054
gauge theory, string solutions with finite tension strings 7−140819
gauge theory anomalies, loop corrections, Lagrangian symmetry breaking, regularization in ultraviolet region 7−134956
gauge theory with fermions, extended solns. 7−102617
gauge-invariant objects from Wilson loops 7−95753
gauged chiral SU(2) action, skyrmion-baryon phenomenology 7−108755

S_1 theory continued
generalized Holstein-Primakoff squeezed states for SU(n) 7−81055
geometrized dynamics and search of structural instabilities in SU(2) models 7−96003
glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
gluon condensate calc., SU(2) lattice gauge theory anal. *(Chinese)* 7−102689
hadron structure, theoretical and expt. developments since 1950 7−102076
heavy fermions, effective Lagrangean, nonlinear realisation 7−121410
Higgs' model, on SU(2) lattice 7−108760
Higgs model, attempered renormalisation group scheme in 4D 7−108788
Higgs model, symm. restoration at finite temp. 7−102644
Higgs particles, influence of mixing angles on testing, mass spectrum, production, decay rates 7−116104
higher derivative gravity, new variable formalism, SU(2) gauge invariant form, O(4) field variables 7−128415
horizontal gauge interaction as the primary source of CP violation 7−81056
Kaluza-Klein theory, light-fermion-mass generation, Minkowski space, perturbation theory, Yukawa couplings 7−120909
lattice electromagnetic form factors, symmetrical source method 7−95755
lattice gauge field, entropy pure adjoint action, mixed fundamental action 7−121364
lattice gauge theories, SU(2) and SU(3), overrelaxation and Monte Carlo simulation 7−121363
lattice gauge theory, coupling <1, glueball mass, Monte Carlo variational study 7−140817
lattice gauge theory, critical exponents of deconfinement transition 7−89335
lattice gauge theory, effective pot. and essential instability 7−102692
lattice gauge theory, free energy of higher representation sources 7−121359
lattice gauge theory, gluon condensate calcs. 7−102605
lattice gauge theory, hybrid stochastic simulations 7−67476
lattice gauge theory, lagrangian formalism, variational-cumulant expansion 7−89346
lattice gauge theory, mean field anal. at finite temp. 7−95728
lattice gauge theory, modified MK transform., single plaquette action 7−134915
lattice gauge theory, numerical simulation of the partition function 7−81009
lattice gauge theory, phase transitions, Wilson action, rel. to continuum confinement 7−108789
lattice gauge theory, simulation using hybrid differential equations and fermion fields 7−81001
lattice gauge theory, spin-spin and spin-orbit potential, SU(2) and SU(3) colour groups 7−73602
lattice gauge theory, SU(2)$_n$ with dynamical fermions, hybrid stochastic simulations 7−73507
lattice gauge theory, topological susceptibility, high statistics computation algorithm 7−140807
lattice gauge theory, vacuum state in 2+1 dimens. 7−128753
lattice gauge theory, variational method with third order corrections, Wilson model 7−134914
lattice gauge theory in 4D, continuum limit 7−89323
lattice gauge theory in 5D, continuum limit, Monte Carlo simulation 7−80999
left-right Pati-Salam model, P invariance and isospin breaking, SO(10) model 7−128812
left-right symmetric models, CP violation through Higgs-boson exchange 7−102657
left-right symmetry model with the Wess-Zumino-Witten effective action 7−134986
low composite scale preon model with complementarity 7−73611
meron and the Wu-Yang solution 7−67500
mixed action SU(2) lattice gauge theory, Bell-Mann-Low function, Migdal-Kadanoff determination, scaling parameter 7−108766
modular invariant partition functions in two dimensions, string propagation 7−81143
monopole-antimonopole pair solution of the classical SU(3) Yang-Mills theory 7−102616
multiflavour Gross-Neveu model, exact soln. and renormalization group β function 7−67485
N=1 supergravity, SU(5) and SU(2)XU(1) radiative breakings 7−102287
N=2 linearised Poincare supergravity in terms of SU(2)-extended superfields 7−108375
N=2 superconformal field theories, modular invariance, central charge character formulae 7−134978
neutrino magnetic moment in SU(2)$_L$×U(1)$_Y$, N=1 supergravity and SU(2)$_L$×SU(2)$_R$×U(1)$_{B-L}$ models 7−102744
Nielsen-Olesen unstable modes, stability anal., SU(2) Yang-Mills gauge theory, energy density 7−116070
no-scale supergravity, radiative SU(2)×U(1) gauge symm. breaking, renormalisation framework 7−108378
nonAbelian field of flat colour wave, exact solns. of quark eqns. of motion 7−140799
nontrivial quark mixing at finite temp. in SU(2)×U(1) symmetric standard model phase 7−89415
normal product expansion of rot. operators, coherent state method 7−115817
path integration over compact and noncompact rotation groups 7−134968
Pati-Salam group induced by supergravity, symmetry-breaking hierarchies 7−128421
pure SU(2) gauge theory, low lying energies up to 5 glueball masses 7−121396
pure SU(2) gauge theory on 4×8^3 lattice, temp. phase transition, thermal string 7−73524
QCD ground state, gluon condensate in SU(2) model, vacuum state upper bound 7−128849
QCD phase transitions, renormalization group anal. for SU$_n$, n=2, 3, 4 gauge theory 7−95854
quantum optics, SU(2) and SU(1,1) time-ordering theorems and Bloch-type equations 7−74892
quantum SU(2) theory, comparison between Drinfeld's and Woronowicz' constructions *(French)* 7−72801
quenched lattice QCD with staggered fermions, meson spectrum and flavour symm. restoration 7−67574

SU_2 theory continued
resonant dynamics, classical, quantum mechanical and semiclassical representations 7−108283
Schwinger mapping and the interacting boson model 7−73714
see-saw mechanism for quark and lepton masses, SU(2)×SU(2)×U(1) electroweak model 7−135002
self-interacting gluon gas, effective potential model 7−102726
semiclassical treatment of spin system by means of coherent states 7−81042
simple SU(2) lattice gauge model, caustics and ground state wave function 7−73549
Skyrme model, soliton interaction, interaction energy between topological centres, factorization ansatz 7−128773
Skyrme soliton model for baryons in SU(2)×SU(2) chiral theory 7−67590
Skyrme solitons with vector mesons, electromagnetic and axial props., nonlinear chiral theory 7−108757
Skyrme-model Lagrangian, quantum mechanical struct. and collective coord. quantisation 7−89372
Skyrme-type quark model, g_A value using chiral SU$_2$×SU$_2$ symmetry, skyrmions 7−116132
SO(10) superstring models, unified, with intermediate SU$_R$(2) breaking, SUSY particle spectrum 7−95814
SO(6) representations, symmetric, SU(2)×SU(2)×U(1) basis, generator matrix elements 7−81043
spontaneous CP violation in the SU(2)$_L$×U(1)$_Y$ model with two Higgs doublets 7−108826
string theory, unitary statistical models and SU(2) current algebra 7−89463
SU(2,2), indecomposable representations appl. to Weyl graviton-photon system 7−67516
SU(2,2/1) subgroups, invariance of field supermultiplets 7−108815
SU(2, 2|1, 1) supergravity and N=2 supersymmetry with arbitrary cosmological constant 7−102279
SU(2)$_L$×U(1)$_Y$×SU(n)$_{family}$, Cabibbo angle and meson masses, charge-commutation-rel. approach 7−128819
SU(2)$_L$×U(1)×U(1) electroweak model, Higg's mechanisms, nonstandard neutral currents, neutral massive gauge bosons 7−128811
SU(2)$_T$×SU(2)$_I$×U(1)$_Y$, extended gauge model, neutral current study 7−67539
SU(2)×SU(2) on 2D random lattice, Monte Carlo simulation *(Chinese)* 7−102642
SU(2)×U(1)×S$_4$ model, mass matrix, mixing angles 7−108828
SU(2)×U(1)×U(1)′, general anomaly-free gauge-invariant model, Higgs structs. 7−128821
SU(2)×U(1) model, strong corrections to flavour changing neutral current vertex 7−81201
SU(2) adjoint Higgs model, mean field approx., phase structure, Monte Carlo comparisons 7−128752
SU(2) average plaquette energy, effect of virtual quark loops 7−116121
SU(2) Einstein-Yang-Mills-Higgs model, wormhole solutions, iterative method, black holes 7−108742
SU(2) Georgi-Glashow model, monopole-fermion interaction including core excitations 7−134921
SU(2) lattice gauge theory, departures from scaling, Monte Carlo anal. 7−89360
SU(2) Yang Mills theory, 3D, glueball mass calcs., scaling props. 7−95844
SU(3)$_C$×SU(2)$_L$×SU(2)$_N$×U(1)$_y$×(1)$_{Y'}$ models, E$_8$×E$_8$′ based, properties 7−140860
SU(3)$_C$×SU(2)$_L$×U(1)$_Y$,[×(U(1))^2,×U(1)] models with two, one, no Z bosons, gauge symmetry breaking, particle spectrum 7−73569
SU(3)×SU(2)×U(1)^n N=1 SUSY models, construction from heterotic string orbifold compactification 7−121400
SU(3)×SU(2)×U(1) model, from N=1 supergravity, top-quark mass bounds 7−128805
SU(3)×SU(2)×U(1) model, probing the desert by the two-loop renormalization-group equations 7−102659
SU(3)×SU(2)×U(1) standard model, canonically realized, stability and superstrings 7−102650
SU(9)⊃SO(9)⊃SO(5)×SU$_1$(2)×SU$_2$(2), physical basis for group chain 7−134973
superstring-inspired SU(3)×SU(2)×(U(1))^2 models with SO(10) unification 7−128403
supersymmetric GUT, SO(4)→SU(2)^R global symm. props. 7−134993
supersymmetric theory quantisation, quantum hamiltonian ambiguities, σ-model and SU(2) Yang Mills theory appls. 7−140836
supertwistors and superfields 7−81036
symmetry conserving linear chiral soliton model for N and Δ 7−95762
temporal gauge, dyon solutions, non-Abelian gauge field tensor, Higg's-triplet field 7−121371
tensor algebra for the icosahedral group 7−95221
time periodic SU(2) background, isospinor fermions 7−73515
Toda molecule equations, finite energy monopole solutions 7−67547
twisted N=2 superconformal algebra and SU(2) Kac-Moody algebra connections 7−134977
vortex solution in two different ansatze, energy comparison 7−116077
Weyl gravitation with SU(2) gauge group, coupling constants and asymptotic freedom 7−95438
Weyl gravity theory, asymptotic effective action, renormalisable theories, asymptote calculation with SU(2) field interaction 7−115886
Wigner coefficients, recursion relations for SU(2) and SU(3) 7−120851
Yang-Mills equations, Lorentz-invariant solns. in Minkowski space 7−80981
Yang-Mills theory, variational calcs. 7−121356
Yang-Mills theory with scalar field, nonself-dual instantons solns. 7−108739
$e^+e^-\rightarrow\gamma\gamma$, radiative correction calcs. in standard Su(2)×U(1) theory 7−73638
$e^+e^-\rightarrow Z'$, resonance prod., standard model with broken SU(2)×U(1)×U(1) gauge symm. 7−135000
ep→Eh+X, heavy E$_6$ fermions prod., SU(2)$_I$ gauge group 7−135138
mass, Majorons, electroweak SU(2)×U(1) gauge theory 7−135001
μ decay, double Majoron emission, electroweak SU(2)×U(1) gauge theory 7−135001
$\psi\rightarrow$baryons, SU(2) and SU(3) violation 7−135102
W propagator, radiative corrections due to supersymmetry effects, SUSY SU$_{2,L}$×U$_{1,Y}$ anal. 7−73572
$Z'\rightarrow w_h^+ + w_l^- \rightarrow l^+\tilde{\nu} + l^-\tilde{\nu}$, T-odd angular correlation, chargino, numerical examples in E$_6$ models 7−134995
$\gamma\gamma\rightarrow\gamma\gamma$, finiteness and gauge invariance in SU(2)×U(1) model 7−81264

SU_3 theory
$\Delta I=1/2$ rule, scalar diquarks contrib., colour triplet particles, operator product expansion 7−134994
baryon number violation by chiral colour axiinstantons 7−140855
baryon octet as SU(3)-subgroup Skyrmions 7−81057
baryon structure, effective chiral field theories, Skyrme model 7−81115
baryon-baryon multiple scattering matrix elements, colour states, SU(3) theory 7−128843
baryons, static props. in SU(3) Skyrme model 7−121429
boson second quantisation techniques, calculation of electron scatt. form factors 7−109069
Calabi-Yau manifolds as complete intersections in products of complex projective spaces 7−67515
composite gluons and effective nonabelian gluon dynamics in a unified spinor-isospinor preon field model 7−73582
compositeness below 1 TeV in the strongly coupled standard model 7−102687
continuous Lie groups, functionally independent invariants 7−121390
deconfinement transition in SU(3) with heavy dynamical quarks, mean field anal. 7−108850
dipole resonances in SU(3) nuclei, dynamic collective model and dipole boson model comparison 7−141035
dissipative, collective and stochastic motion in TDHF theory 7−89548
E_6 GUT, superheavy 27-multiplet fermions in $E_6\times SU(3)$ model 7−135005
E_6 superstring models, particle dichotomy and left-right decomposition, Dirac neutrino, W′ boson 7−128815
$E_8\times E_8$ superstring models, cosmological consequences, baryon asymmetry, supermassive shadow particles 7−115878
Einstein-Yang-Mills theory, spontaneous compactification to non-symmetric coset spaces 7−128398
exceptional modular invariant $A_1^{(1)}$ partition function realization 7−67484
exotic Drell-yan processes at Tevatron and SSC, light and heavy bosons 7−134996
finite temperature QCD, lattice Monte Carlo studies, deconfinement 7−108852
free massless fields with spin 5/2 and 3/2, gauge transformation and gravit. interaction 7−89353
Gallagher-Moszkowski band analogs in IBFFM, spectrum-generating supersymmetry 7−121674
gauge theory on a torus, weak coupling expansion of low-lying energy values 7−73513
gauge-invariant objects from Wilson loops 7−95753
generalized Holstein-Primakoff squeezed states for SU(n) 7−81055
glueball calculations with the t expansion, SU(3) lattice gauge theory 7−81108
glueball condensate vacuum, pions as collective modes, chiral symmetry breaking 7−128848
gluon thermodynamics on Euclidean lattices, transport coeffs., thermal Green's functions method 7−81120
hadron structure, theoretical and expt. developments since 1950 7−102076
hadronic spectrum of the quark plasma 7−121376
heterotic string, orbifold compactification and Wilson lines, chiral matter states 7−81150
hidden gauge theory, classical solns. and the H-dibaryon 7−102609
hybrid molecular dynamics algorithms for QCD numerical simulation 7−81121
IBM, SU(3), O(5), O(6) anal., Casimir operator calcs. *(Chinese)* 7−96000
intermediate mass scales, radiative generation in superstring-inspired models 7−89402
Kaluza-Klein theory, $SU(3)\times SU(2)\times U(1)$ from CP^2 coset space 7−73117
lattice gauge theories, SU(2) and SU(3), overrelaxation and Monte Carlo simulation 7−121363
lattice gauge theory, hybrid stochastic simulations 7−67476
lattice gauge theory, minimal surfaces and string tension from non-planar loops 7−80998
lattice gauge theory, phase transitions, Wilson action, rel. to continuum confinement 7−108789
lattice gauge theory, spin-spin and spin-orbit potential, SU(2) and SU(3) colour groups 7−73602
lattice gauge theory, topological charge 7−121360
lattice gauge theory, topological fluctuations and susceptibility 7−81031
lattice gauge theory, topology, Chern number computation, gauge fixing, winding numbers 7−140808
lattice gauge theory, U(1) problem solution 7−95772
lattice gauge theory of QCD, thermodynamics 7−89433
lattice QCD, dynamical quark loops, Monte Carlo calc. 7−89441
light meson systems, SU_3 expectation values for quark vacuum condensates 7−89443
low composite scale preon model with complementarity 7−73611
monopole-antimonopole pair solution of the classical SU(3) Yang-Mills theory 7−102616
neutron-proton IBA model, SU(3) limit, mag. dipole props. 7−81313
neutron-proton IBM, M1 selection rules, SU(3), O(6) like Hamiltonians 7−116216
nuclear shell model, embedding method for Lie subalgebra chain determ. 7−116299
octet baryon mag. moment, quark model with SU(3) term 7−121511
octet-baryon magnetic moments, SU(3) (flavour)-tensor, degree of freedom, isospin symmetry 7−128892
odd-mass nuclei, asymmetric deformation, boson-fermion dynamical SU(3) symmetry, U(16) core 7−140990
orbifold compactified superstring theories; gauge symmetry breaking 7−120899
overrelaxed heat-bath and metropolis algorithms for accelerating pure gauge Monte Carlo calculations, lattice SU(3) appl. 7−108794
Pati-Salam group induced by supergravity, symmetry-breaking hierarchies 7−128421
pseudoscalar meson form factors, SU(3) breaking mechanism, constituent quark model 7−135121
QCD, high-temperature, nonperturbative length scale 7−73593
QCD phase transitions, renormalization group anal. for SU_n, n=2, 3, 4 gauge theory 7−95854
QCD vacuum, strange $q\bar{q}$ pair condensates, partial chiral symm. restoration 7−135029
quantum rotor, algebraic realisation in terms of SU(3)→SO(3) algebra 7−95398
quark state masses, calc. in chiral bag model 7−140897

SU_3 theory continued
quark-gluon plasma, SU(3)-multiplet sources at phase transition, QCD lattice approx., 7−121447
quark-lepton mass matrices in superstring inspired models, radiative corrections 7−95794
quaternion fields, Fock representation and quantum mechanics 7−95760
rare-earth nuclei, band termination and E2 collectivity loss, algebraic fermion model 7−81274
self-interacting gluon gas, effective potential model 7−102726
Skyrme model, octet dominance of the hadron weak transition, matrix elements 7−89378
SO*(8) enveloping algebra, decomposition and SU(3) tensor operators 7−115746
Sp(6,R) model, spin-orbit and tensor interactions, collective model appl. 7−81318
spontaneously broken quintet baryon model for strong interactions 7−95720
SQCD, Wilson loops on 32^4 lattices and the $SU(3)$ potential 7−140896
$SU(2)_L\times U(1)\times U(1)$ electroweak model, Higg's mechanisms, nonstandard neutral currents, neutral massive gauge bosons 7−128811
$SU(3)_C\times SU(2)_L\times SU(2)_N\times U(1)_y\times(1)_{y'}$ models, $E_8\times E_8'$ based, properties 7−140860
$SU(3)_C\times SU(2)_L\times U(1)_Y$,$[\times(U(1))^2,\times U(1)]$ models with two, one, no Z bosons, gauge symmetry breaking, particle spectrum 7−73569
$SU(3)_F\times SU(3)_C\times SU(3)_L\times U(1)_{YR}\times U(1)_{I(3R)}$ coupling of chiral fermion families to supergravity/gauge fields 7−116101
$SU(3)\times SU(2)\times U(1)^n$ N=1 SUSY models, construction from heterotic string orbifold compactification 7−121400
$SU(3)\times SU(2)\times U(1)$ model, from N=1 supergravity, top-quark mass bounds 7−128805
$SU(3)\times SU(2)\times U(1)$ model, probing the desert by the two-loop renormalization-group equations 7−102659
$SU(3)\times SU(2)\times U(1)$ standard model, canonically realized, stability and superstrings 7−102650
$SU(3)\times SU(2)\times U(1)$ standard model, nonperturbative contribs. via local QCD sum rule 7−140841
$SU(3)\times SU(3)$ chiral colour group, QCD originator 7−95805
SU(3) lattice gauge theory, topological fluctuations and susceptibility, vacuum anal. 7−116060
SU(3) phenomenological model Hamiltonian, ^{164}Er states appl. 7−121649
SU(3) sine action, Monte Carlo simul. using discrete subgroup 7−116043
SU(3) Skyrme model, baryon mass spectrum calcs. 7−81024
superstring-inspired $SU(3)\times SU(2)\times(U(1))^2$ models with SO(10) unification 7−128403
supersymmetric chiral nonabelian gauge theories, effective zero-mode Hamiltonian 7−89348
SUSY left-right gauge model, Higgs boson struct., neutral current anal. 7−128820
transformation matrix, polynomial anal. 7−134969
Wigner coefficients, recursion relations for SU(2) and SU(3) 7−120851
D→mesons, analysis based on SU(3) symmetry and final-state interactions 7−102735
G(1590) scalar resonance, exotic nature, hadronic decays, mass spectra in π^-p and K^-p 7−116166
$K_{S(L)}^0\to\gamma\gamma$, chiral $SU(3)\times SU(3)$ anal. 7−95912
KN scattering predictions in $SU(3)\times SU(3)$ generalisation of cloudy bag model 7−121537
NN interaction, colour SU(3) gauge invariance, constituent quark model calcs. 7−108866
$\pi N\to\eta N$, chiral SU(3) cloudy bag model anal., quark structure identification with N(1535), N(1650), N(1440) 7−95938
$\psi\to$baryons, SU(2) and SU(3) violation 7−135102
$\Sigma^+\to p\gamma$, symmetry relations, Hara's theorem, asymmetry parameter in SU(3) limit 7−140942
^{178}Hf, collective level energies, SU(3) symm. in sdg boson model 7−96002
$\tau\to\pi\eta\nu$ ($K\bar{K}\nu$), scalar interaction from branching ratio. inequalities 7−128889
^{234}U, collective level energies, SU(3) symm. in sdg boson model 7−96002

SU_4 theory
hyperon nonleptonic decays SU(4) chiral soliton and 20″ dominance 7−121503
low composite scale preon model with complementarity 7−73611
Pati-Salam group induced by supergravity, symmetry-breaking hierarchies 7−128421
QCD phase transitions, renormalization group anal. for SU_n, n=2, 3, 4 gauge theory 7−95854
supersymmetric $SU(4)\times SU(2)\times SU(2)$ partial unification group, spontaneous symm. breaking and mass spectra calcs. 7−108834
unifiable chiral color with natural Glashow-Illiopoulos-Maiani mechanism 7−95811
B→pseudoscalar mesons, SU(4) relations in the standard model 7−121496
$\eta_c(2980)$ existence in SU(4) symmetry 7−67528

SU_5 theory
boson-fermion group chain decomposition 7−141004
Clebsch-Gordan coefficients for SU(5) models 7−67540
CP invariance spontaneous breakdown, Fritzsch matrices, Kobayashi-Maskawa angles calculation 7−116112
GUTs, U(1) generation symmetry, quark, lepton and neutrino masses and mixings, mirror particles 7−140851
heterotic string, orbifold compactification and Wilson lines, chiral matter states 7−81150
Higgs potentials with high rank representations, stable absolute minima, SU(5) model appl. 7−140847
inflationary Universe, baryogenesis in late reheating phase, SU(5) model 7−115661
minimal SU(5) GUT, Dirac neutrino generation 7−140867
N=1 supergravity, SU(5) and SU(2)XU(1) radiative breakings 7−102287
N=1 supersymmetric GUT based on $SU(5)\times U(1)$ 7−140853
preon models, chiral, with SU(N) metacolour, SU(5), SO(10) quark-lepton predictions 7−108871
scalar-tensor theory for induced gravity 7−89076
standard model, W and Z masses, weak neutral current 7−140866
supersymmetric chiral nonabelian gauge theories, effective zero-mode Hamiltonian 7−89348
supersymmetric GUT with automatic fine adjustment 7−95813
unique SU(5) and SO(10) unification with complete dynamical symmetry breaking 7−116103

U_5 theory continued
e stability in SU(5) model 7−67541
$p \rightarrow e^+\pi^0$, relativistic SU(5) model anal., B-S eqn. based 7−135117

U_n theory
see also elementary particle symmetry; O groups; SO groups; SU_2 theory; SU_3 theory; SU_4 theory; SU_5 theory
σ models, soliton solns., inverse scatt. method and n-step superpotential 7−89369
Adler-Bardeen theorem in path integral formulation 7−128767
axisymmetric stationary vacuum space-times, fourth-order eqn. 7−67108
baryon octet as SU(3)-subgroup Skyrmions 7−81057
biorthogonal systems and analytical inversion symm. 7−72810
biorthogonal systems for $SU_4 \supset SU_2 \times SU_2$, $SU_n \supset SO_n$ and $Sp_4 \supset U_2$ and the symmetry of analytical inversion 7−95778
Bose-Fermi equivalence on the two-dimensional torus for simply-laced groups 7−108772
boson-fermion group chain decomposition 7−141004
chiral SU(6)⊗SU(6) symmetry breaking and the pseudoscalar meson masses 7−81059
chromomagnetic background field at high temp., effective Lagrangian calc. for pure Yang-Mills theory 7−67579
coherence-preserving Hamiltonians, time-ordering techniques 7−73558
compact matrix pseudogroups, Haar measures for the twisted SU(2) group 7−134965
complex fermionic and spin path integrals, alternative parametrisation 7−121345
critical Ising-type models, composite fields and null vectors 7−108748
Eguchi-Kawai model with new lattice actions, Monte Carlo study 7−102591
extended conformal SUSY, group theoretical approach, function space, invariant diff. operators 7−128779
external state labelling problem based upon U(n−1,n−1) group 7−66917
gauge-invariant objects from Wilson loops 7−95753
generalized Holstein-Primakoff squeezed states for SU(n) 7−81055
global family symm. and Peccei-Quinn symm., connections, breaking and familons 7−81076
glueball masses as a test of the $1/N$ expansion 7−89440
graded Schwinger realization for dynamical supersymmetry 7−73711
hadron wave functions, quark model 7−73600
hadronic spectrum of the quark plasma 7−121376
Landau-Lifshitz equation, hidden symm., dual eqn. for asymm. chiral field 7−138182
large-N theories, review 7−67576
lattice gauge theory, SU(N), correlation fn. calcs. from probability densities 7−140785
lattice gauge theory, weak coupling expansion at two-loop level 7−95715
light quarks confined to a box, energy levels, SU(N) quantum mech. anal. 7−95847
low-energy supergravity from 4D superstrings, fermionic formulation 7−102720
meson-meson interaction with a flip-flop model for quark confinement 7−128844
non-Abelian charged vortices, gauge equivalence of two Ansatze in SU(N) gauge theories 7−102622
non-abelian chiral theory in two dimens., consistent quantisation, SU(N) gauge model 7−134979
nonAbelian gauge dynamics, slowly moving fermions, gauge invariant potential, gluon exchange 7−128776
nonAbelian lattice gauge theory, string tension, tunneling and deconfinement 7−102607
nonAbelian SU(N) gauge theory, Stokes theorem and Bianchi identities, path-ordered phase factors 7−134905
nonlinear σ model coupled with gauge fields, topologically stable soliton solns. 7−89371
preon models, chiral, with SU(N) metacolour 7−108871
QCD, lattice SU(N) at finite temp. and density, strong coupling limit 7−89447
quantum optics, SU(2) and SU(1,1) time-ordering theorems and Bloch-type equations 7−74892
quark masses and hierarchies, electroweak symmetry breaking, SU(7)×SU(7) chiral preon model 7−95815
Schwinger terms and Slavnov-Taylor identities 7−89363
$(SU(1,1))^3$ supergravity model, dynamical relaxation of θ and supergravity 7−73138
$SU(5)_L \otimes SU(5)_R$ hybrid unification 7−108819
SU(6) broken quark-diquark model, baryon masses and mag. moments, charmed baryon masses 7−81133
SU(6/M) supergenerators, IBFM form for microscopic foundation, graded Schwinger realization 7−135230
su(8) model for superconductivity, charge and spin density wave unification 7−112616
$SU(9) \supset SO(9) \supset SO(5) \times SU_1(2) \times SU_2(2)$, physical basis for group chain 7−134973
SU(N) lattice Higgs model at strong gauge coupling 7−89338
SU(N,1)/SU(N)×U(1) σ model, dynamical gauge boson generation 7−108793
SU(N) gauge theories, gribov problem in perturbation theory 7−81002
SU(N) gauge theories with fermions, distinguishing confining and deconfining phases 7−81014
SU(N) massless Thirring model, free boson equivalence from nonabelian bosonisation 7−89379
SU(N) self-dual gauge theory, Belinsky-Zakharov method, soliton solns. 7−80972
SUSY Wess-Zumino action and U(1) gauge fields, SU(N) anomaly 7−95740
SUSY Wess-Zumino-Witten model, superconformal Ward identities 7−89389
U(∞) lattice gauge theories, gauge-invariant master field, strong and weak coupling phases 7−121339
unitary SU(N) ordered exponentials in strong coupling limit 7−116091
Wess-Zumino consistency conditions for chiral SU(L)×SU(L), abnormal parity solutions 7−108735
Weyl group and tensor operators for hadron-type SU(n) representations 7−134972
NN interactions, quark model description with flavour SU(6) wave functions 7−67577

sub-lepton models *see composite models of elementary particles*
sub-quark models *see composite models of elementary particles*
subboundary structure
heterogeneous materials, microstruct. anal., combined X-ray microdiffr. and topography study 7−78400
high-field high-current superconductors, critical current density, grain boundary effects 7−105869
kinetics of substructure instabilities *(Russian)* 7−126150
metallic specimens, deform. under strain control, instabilities in hysteresis loops 7−132689
room and elevated temp. mech. behaviour, additions influence 7−100243
steel, ferritic, directional strain softening 7−78040
steel, ferritic stainless, creep, microstructural changes 7−100317
steel, ferritic stainless, thermomech. processing, struct. and substruct. obs. 7−113578
steel, martensitic, Ni-Cr-Mo, microstruct., effect of intercritical heat treatment *(Chinese)* 7−144507
steel, subeutectoid, Widmanstatten ferrite substruct., effect on crack propag. *(Chinese)* 7−71266
steel, Ti treated deep drawing hot rolled strip, liq. metal embrittlement during brazing 7−78195
Al, deformed to very large steady-state creep strains, dislocation microstruct. 7−100305
Al, dislocation emission from grain- and sub-boundaries during recrystallisation 7−76137
Al-Al_2O_3(-Si), creep behaviour and dislocation struct. 7−100319
Al-Al_4C_3, dispersion hardened materials, mech. props. at elevated temps. 7−126180
Al-Mg (3 wt.%), rolled single crysts., microstruct., shear band form. 7−113606
$Cd_xHg_{1-x}Te$, sub-grain boundary struct. 7−132647
CdTe, sub-grain boundary struct. 7−132647
Fe-Ni-C, martensitic transform., effect of solution strengthening of austenite *(Chinese)* 7−144395
Fe-Si (3 wt.%), single crystals, prep. of highly perfect samples by thermal cyclic annealing 7−125963
Nb alloys, high strength, substruct. form. due to rolling, stress relax. *(Russian)* 7−144430
$Nb_2C_{0.74}$, hot isostatically pressed, kinetics and mechanisms of creep 7−71263
Ni-W-Cr, single cryst., high temp. creep, γ' phase subgrain boundaries, TEM 7−78139
Si SOI films, large area, seeded electron beam recrystn. with striped encapsulation 7−124768
SmS substruct. form. after isomorphous high press. phase transition, X-ray diffr. study 7−69921
Ti alloys, martensitic transformations, computer simulation *(Chinese)* 7−71180
Ti-Al-Mo, $\alpha+\beta$, substruct. changes during hot working 7−78067
Ti-Al-V (6,4 wt.%) creep behaviour at room temp., effect of H 7−126191
subgrain structure *see subboundary structure*
sublimation
see also heat of sublimation
Hiroshima Torus-1, reversed field pinch expts., plasma-wall interaction causing impurity activity *(Japanese)* 7−137104
II-VI and III-V semiconductors, laser photosublimation, light guiding structure formation 7−98236
monatomic dilute gas in narrow gap channels, asymptotic flow 7−111109
nonequilibrium evaporation due to nonradiative recombination of electron-hole pairs near crystal surface 7−69883
porous medium, semi-infinite, sublimation, convection effects study 7−98422
subliming vapour suction through permeable wall, effect on heat exchange process 7−75565
surface phenomena, reflection electron microscopy studies 7−95682
vacuum drying, phase transform. surface stability 7−138953
CO_2-He(N_2), gas mixtures, surface desublimation study 7−137534
CdTe single crystals and epitaxial layers, laser annealing, photoinduced sublimation 7−91646
CdTe-CdS-SnO_2:F thin film solar cells prep. by CVD and close-space sublimation 7−133097
GeTe, glass-based coatings, to protect from sublimation *(Russian)* 7−113810
α-HgI_2 platelets, growth 7−113361
MgO refractory materials sublimation investigation by gravimetric and mass spectrometric methods *(Russian)* 7−86521
PbS, galena single crystals, cleaved surfaces, sublimation 7−69884
PbSe, glass-based coatings, to protect from sublimation *(Russian)* 7−113810
PbTe, glass-based coatings, to protect from sublimation *(Russian)* 7−113810
S layers, high energy ion erosion 7−92797
SO_2 atmosphere of Io, condensation and sublimation 7−94688
Si surface, O removal via reaction with adsorbed Ge 7−71398
β-SiC films, epitaxial growth by laser-induced sublimation *(Japanese)* 7−84574
SiO sublimation mechanism for Si loss during $TiSi_2$ form in Ti-Si diffusion couple 7−118073
$(SmO)_2Te$, thermodynamics of vaporisation and form. 7−78473
Ti-Mo alloy wire, outgassing evaluation using quadrupole mass spectrometer 7−134751
Zn complex, 2,3-naphthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758
Zn complex, phthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758
Zn, single crystals, cleaved surfaces, sublimation 7−69884
$ZnCl_2$, sublimation thermodynamics, mass spectra 7−76375
ZnSe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnTe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
submarine cables
Jupiter-Settlement Point cable across Straits of Florida, voltages rel. to tides 7−94289
optical fibre strength improvement for submarine cables, preform treatment and drawing conditions 7−68877
seabed sensors and their applications to earthquake prediction *(Japanese)* 7−79673
submarines *see marine systems*
submillimetre conductivity *see high-frequency effects*

submillimetre waves *see microwaves*

suboptimal control *see optimal control*

subroutines
acoustic emission point source location on thin spherical shell, computation subroutines in FORTRAN 7−104076
geomagnetic and gravity anomalies due to polygon, algorithms and Fortran subroutines 7−94056
millisecond interval timer and auditory reaction time programs for the IBM PC 7−78866
single-variate probability distribs., algorithms for random sampling 7−140443
transilient turbulent algorithms to model mixing across finite distances 7−87770

subsets (mathematics) *see set theory*

substitution reactions *see chemical exchanges*

substrates
see also semiconductor device manufacture
brittle substrates, residual stress meas. in coatings by indentation fracture 7−113814
graphite for plasma enhanced CVD of AlN protective coatings 7−71074
ice substrate, freezing of drops in high speed collision 7−84213
II-VI single crystal substrates, orientation, X-ray determination 7−118308
III-V single crystal substrates, orientation, X-ray determination 7−118308
impurities effect on film layering transitions 7−143289
lossy substrates, zero-refl. homogeneous layers and high spatial-freq. surface-relief gratings 7−130307
magneto-optical disc storage using polycarbonate substrates 7−110287
optical disc substrate replication master 7−90842
optical discs, readout power dependence on thin-film magneto-optic media properties 7−103767
optical substrates for transmissive and reflective optics, laser design 7−75010
plastic for a-Si solar cells, continuous fabrication on polymer substrates 7−126615
plastic substrates, electroplated coatings *(German)* 7−92901
polyimide substrates for continuous-mode fabrication of a-Si:H solar cells 7−133100
sapphire substrate, ion induced adhesion of Cu films 7−92010
SAW reflection from periodic shallow grooves *(Japanese)* 7−118223
semi-insulating, production techniques, GaAs rel. to InP *(French)* 7−76925
Si, substrate, MBE, IC appl. 7−138662
Space Shuttle tile, new millimeter and microwave substrate for aerospace applications 7−115206
steel, mild, substrate, laser deposited austenitic stainless steel cladding, surface finish, struct. 7−138901
thermal and thermal deflection analyses during coating deposition 7−124787
wetting, binary liquid mixtures on chemically altered substrates 7−137664
AlN substrate, highly thermal conductive, green sheet technology development 7−131379
Al_2O_3 as substrate for deposition of LB films 7−113457
Al_2O_3 for Si solar cells using laser crystallised films *(Japanese)* 7−119649
B_2O_3-SiO_2 glass surface, chem. control of wetting transition 7−98626
$Ba_2Si_2TiO_8$ piezoelectric glass-ceramics as low temperature-coefficient SAW substrate materials 7−99694
C-Si-O(B) thin films, plasma CVD, X-ray mask substrate appl. 7−100105
CO_2 laser beam fused powder cladding of alloy substrate 7−113791
CdS substrate diffusion waveguides, fabrication and props. *(Russian)* 7−75116
CdTe, growth and characterisation, modified horizontal Bridgman technique 7−132442
CdTe printed films, pulse electron-beam induced synthesis 7−111675
$Cd_{1-x}Zn_xTe$, lattice-matched substrate, MBE of HgTe-CdTe multilayer structures, TEM study 7−131462
Fe magnetic substrate, ultra thin film interface probing using FMR at 73.55 GHz 7−77407
GaAs (001) substrates, in situ chem. etching by gaseous HCl prior to MBE growth 7−143274
GaAs (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
GaAs (100)-cut, SAW slowness surface meas. 7−124666
GaAs, atomic struct. of HgTe and CdTe epitaxial layers, high resolution TEM 7−132473
GaAs, isothermal contact with multicomponent liq. phase, Auger anal. 7−76576
GaAs, MBE, substrate temp. and growth rate meas. by IR spectroscopy 7−71015
GaAs MBE of Si film 7−105685
GaAs, semi-insulating, high-sensitivity microanalysis of impurities using multielement doped GaAs standard samples 7−100646
GaAs, semi-insulating, production techniques *(French)* 7−76925
GaAs substrate, AlGaAs/GaAs stripe laser diode fabrication by MOCVD, lasing characts. comparison with Si substrate 7−122975
GaAs substrate charactn. by photoluminesc. topography *(Japanese)* 7−125791
GaAs substrates, cleaning by H radical beam irrad. 7−71415
GaAs substrates, IR absorpt. and scatt. microscopy charactn. *(Japanese)* 7−125743
GaAs substrates, IR absorpt. and scatt. microscopy charactn. *(Japanese)* 7−125744
GaAs substrates, in situ deoxidation by HCl gas, MBE appl. 7−71414
GaAs substrates, radiationally heated, behaviour and characts. 7−143275
GaAs surface after contact with unsaturated Al-Ga-As melt 7−76699
GaAs:In semi-insulating single crystals, growth of 50 mm low dislocation density substrates 7−85976
GaAs:Si,In, LEC growth and LED characts. study 7−138643
GaP, isothermal contact with multicomponent liq. phase, Auger anal. 7−76576
GaP, MBE of Si film 7−105685
$GaPO_4$, N and B conc. determ., activation anal. meas. *(Chinese)* 7−105327
Ge coating on Si, substrate for GaAs epitaxial growth 7−86058
Ge, MOCVD grown GaAs heteroepitaxial layers deep levels 7−70235
InAs, isothermal contact with multicomponent liq. phase, Auger anal. 7−76576
InP (001) substrates, in situ chem. etching by gaseous HCl prior to MBE growth 7−143274

substrates continued
InP (100) oriented substrate, surface cleaning before MOCVD, SIMS obs 7−86494
InP substrate protection and cleaning for LPE, laser fabrication 7−71416
InP ultra-flat substrates produced by chemo-mechanical polishing 7−100457
InP wafers, polishing processes, damaged layer evaluation, X-ray diffr studies 7−106722
InSb substrate, low temp. ultrasonic meas. using ZnO sputtered film transducer 7−117431
$LiNbO_3$, (0001) substrate surface, electron diffr. studies of phase formation 7−137670
$LiNbO_3$ integrated optical substrates, refractive index meas. by TIR prism coupling method 7−125662
$LiNbO_3$, plate homogeneity, SHG anal., optical substrate appls 7−123086
$LiNbO_3$ substrate, outdiffusion during waveguide fabrication 7−136636
Si (100), electron irradiated, deposition of Si films 7−77832
Si (100) substrates, BP (100) epitaxially grown layers, cryst. props. and growth conditions *(Korean)* 7−84565
Si, AlGaAs/GaAs laser fabrication by MOCVD 7−122976
Si, AlGaAs/GaAs stripe laser diodes fabrication by MOCVD, lasering characts. 7−122975
Si bifacial solar array alternative module configuration for low Earth orbi 7−144844
Si film, MBE, substrate cleaning, layer nucleation, in situ light scatt 7−77817
Si, Ge-coated, for thin film GaAs solar cell fabrication by CVD 7−78647
Si heteroepitaxy of III-V semiconductors *(Japanese)* 7−70143
Si, MBE, developments review 1984-86 7−77816
Si, passivation-induced phenomena, book contrib. 7−106728
Si, reactive ion-plasma sputtering of SiO_2 and Si_3N_4 dielectric films 7−86501
Si substrate, (001), local oxidation, film-edge-induced dislocation generation 7−112131
Si substrate, Ge coated, for GaAs epitaxial growth 7−86058
Si substrate for GaAs epitaxial growth, effect of heat treatment 7−86034
Si substrate for heteroepitaxy, conf., Palo Alto, CA, USA (April 1986) 7−80174
Si substrate with GaAs epitaxial films, misfit dislocations, atomic resolution electron microscopy 7−84548
Si substrates, film stresses and critical glide forces determ. by HVEM technique 7−111567
Si substrates, film-edge-induced dislocation generation 7−112130
Si substrates, RIE damage, intrinsic gettering, scanning DLTS and EBIC studies 7−126338
Si substrates for GaP film MBE heteroepitaxy *(Japanese)* 7−119651
Si surface, epitaxial growth, props. and applications of transition metal silicides 7−86022
Si surfaces, silicide films and double heterostructures formation 7−86021
Si wafers, laser evaporated Mg_2SiO_4 coatings, morphology 7−71027
Si-O, Langmuir monolayers of fatty acid salts, mean free path of electrons 7−77707
SiC substrate with Ge overlayer increase in SiC reflectance 7−106281
SiO_2, binding energy of Si adatoms, interface struct. simulation 7−105293
SnO_2, for ultrathin tetraphenylporphyrin film, depend. of luminesc quenching on substrate conductivity 7−106254
W(001), (011), oxidised, electron stimulated desorption of metal atoms and ions 7−91990
ZnS substrate diffusion waveguides, fabrication and props. *(Russian)* 7−75116

sudden commencement *see magnetic storms*

Suhl effect
No entries

sulphur
see also nuclei with .....
adlayer on Ge (100)(2×1), LEED, AES and photoemission surface core level spectra studies 7−106364
adsorbed (2×2) layer on Ir (110)-(1×2) reconstructed surface 7−105266
adsorbed on Cu (100), surface phonon dispersion, inelastic electron scatt obs. 7−143175
adsorbed on Cu (100)-(2×2), surface struct., LEED study 7−131421
adsorbed on Ni (001), core level photoelectron diffraction 7−144229
adsorbed on Pd, passivation, interaction of H atoms 7−76620
adsorbed on Si surface, nuclear quadrupole interactions studies 7−112270
adsorption on Cu (001), surface geometry, angle resolved photoemission extended fine struct. 7−98692
Antarctic ice, acidity and S budget, contrib. of methanesulphonat 7−79476
atom, 1s ionisation energies, relativistic corrections 7−90078
atom, photoabsorpt. spectrum, photoionisation cross section 7−74528
atom, photoexcited Kα X-ray satellites spectra 7−135873
chemisorbed on Fe (001), bonding systematics 7−70083
chemisorbed on ferromag. Ni (110)c(2×2), spin resolved photoemissio 7−132411
chemisorbed overlayers on Ni (100), struct. 7−84522
diamond:S, type Ib, singly ionised S centre, ESR obs. 7−98187
dimer, effective valence shell Hamiltonian, electronic struct. and bon length depend. 7−81929
electrical conductivity and compressibility, high pressure meas. 7−98340
fine particle concs. in St. Louis area rel. to wind flow direction 7−10077
geological S deposits associated with volcanoes, geotechnical prospectin methods 7−101509
hydrogenic and He-like, diagnostic tracer, X-ray emission spectral determ of plasma parameters 7−96594
impurity, adsorbed on metal surface, Mo effects on electrochemical pas sivation *(French)* 7−144746
inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bom bardment 7−90372
interstellar abundance characts. 7−88569
Io, IUE detect. of O I and S I emissions 7−139957
layers, high energy ion erosion 7−92797
N Mariana Islands, volcanic rocks O, S, Sr and Pb isotopic var., implica tions for crustal recycling 7−127136
metal-deficient dwarf stars, S abundance determ. 7−101769
molecular clouds-H II regions neutral interfaces, S II and C II layer characts. 7−128004
monolayers on W (110), influence on methanation 7−144753

ulphur continued
negative atomic ions, electron affinities, CI(SD), CEPA, MC SCF, and MC CI(SD) calcs. 7−109792
negative ion, laser photodetachment spectroscopy, cross section meas. 7−68262
NGC 4151, 3516, 5548 and 6814, Seyfert galaxies, He and S emission line profiles near 1 μm obs. 7−80107
overlayer on Ge (111), surface struct. determ. by angle-resolved photoemission fine struct. 7−91985
poisoned Pd catalyst, analytical electron microscopy with dedicated STEM 7−100676
polymeric liquid, viscosity 7−126454
prechemisorbed on Pt (111), effect on H electrochemical adsorpt. and recomb. reactions 7−143211
production by thermal decomp. of H_2S over V_2S_3 or MoS_2 7−86583
radiation induced segregation in Ni, resistivity and SIMS studies 7−105050
scavenging in mesoscale model with quasi-spectra microphysics, 2D results for continental and maritime clouds 7−94386
sound velocity meas., fixed-path pulse-echo method 7−136658
sputtering by keV ions, appl. to Io-Jupiter magnetospheric plasma interaction 7−120269
sputtering by MeV He ions rel. to Jovian satellite Io 7−145870
United States, long-range fine particulate S transport episode, case study 7−133155
W48, mol. cloud-H II region interface, struct., S, C, He and H125α obs. 7−120633
white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
S^{2-} sensor, fibre optic, based on 2,6-dichlorophenol-indophenol immobilized on XAD-2 7−123208
$Co_{50}Ni_{50}$-S system, surface segregation, effect of S 7−76571
$CsCaCl_3$:Gd^{3+}, S^{2-}, cubic-tetragonal phase transition, EPR of Gd^{3+}-S^{2-} pair 7−92501
GaAs:S, activation and characterisation of MeV implants 7−104792
GaAs:S, impurity local struct., fluoresc. EXAFS study 7−76149
GaAs:S, impurity local struct., EXAFS investig. 7−138546
GaAs:S, local structure of impurity sites 7−105480
GaP:C,S, minority impurity electronic Raman scatt., B-line splitting obs., Jahn-Teller effect 7−77554
GaP:N, S epitaxial layers, prep. by VPE CVD method 7−86037
GaP:S, defects, positron annihilation study 7−142759
H II regions in Seyfert galaxies, abundance characts. 7−140277
InP:S, LEC growth, automatic dia. control system 7−125948
InP:S, MBE grown, S incorporation and desorption 7−76674
InP:S, photoluminescence study 7−99921
InP:S, single crysts., thermal activation of deform. 7−98307
InP:Si,S,O, donor impurity incorporation, O_2 effects, spectroscopic evidence 7−98184
InP:Sn,S neutron transmutation doping, photothermal ionisation photocond. studies 7−124300
InP:Zn,S, deform., dislocation generation and movement 7−131215
KCl:S, X-irradiated single crysts., thermolum. and optical absorpt. spectra studies 7−125814
KCl:S^{2-}, F-centre formation by photoconversion 7−113263
Na-S accumulator, development *(German)* 7−126590
Na-S battery cathode additive effectiveness test by cyclic voltammetry 7−119636
Na-S battery system development 7−71597
Na-S battery with ceramic electrolyte for electric vehicles *(German)* 7−139100
Na-S cell, numerical simulation of dual mat S electrode 7−114086
Na-S cells, porous S electrodes, electrochemical reaction rate, 2D distribution 7−71594
PtRh:S alloys, surface segregation, cosegregation with S impurities, composition depth profiles 7−119100
S I, EUV emission lines in the atmospheres of cool stars 7−88420
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287
S II, electron impact excitation, effective collision strengths 7−81987
S isotopic composition in mineral deposits studied using SHRIMP ion microprobe 7−119599
S on Pd(100), adsorbate reson. enhancement in optical surface second-harmonic generation 7−98672
S VII-XIV spectra, wavelengths, oscill. strengths and energy levels 7−109825
S VIII, ground state, electron impact excitation, CI calcs., R-matrix method 7−117077
S XI in solar spectrum, electron collisional excitation and reson. photoexcitation 7−88349
S XIV, laser produced plasma, population inversion, ab initio spectra 7−69392
S^+, identification in cometary IUE spectra 7−139980
S^{10+}, radiative rates and collision strengths, configuration calcs. 7−116875
S-I_2 mixture, sound velocity meas., fixed-path pulse-echo method 7−136658
S+N_2 excitation-transfer, rate consts. investig. 7−93276
S^{15+}+H_2, K X-ray coincidences, simultaneous capture and excitation, separated resonances 7−96865
S^{16+}+Ar, charge transfer, impact parameter depend. 7−103645
S^{7+}+He(H_2), charge transfer, UV and X-ray spectra anal. 7−90022
S^{q+}+Ar, K-shell excitation probabilities meas. 7−90365
S_2 formation in comets from UV photolysis of H_2S in interstellar grain mantles 7−120320
S_2, identification in cometary IUE spectra 7−139980
S_2 photochemistry and interstellar grains in comets 7−94753
$S_{2,3}$ sputtered mol., vibr. and rotational energy distrib. 7−144213
S_4^{2+}, Lewis valence band struct., STO calcs. 7−109785
S_6 ring, mol. valence calcs. 7−116859
S_7 ring, mol. valence calcs. 7−116859
S_8, chemically reactive liquids, kinetics 7−86567
S_8 ring, mol. valence calcs. 7−116859
S(IV) oxidation by H_2O_2, methylhydroperoxide, peroxyacetic acid, kinetics study 7−120086
Si:Ge, S, H, IR spectral hole burning of S-H deep donors 7−136455
Si:P,S, chalcogen double donors, hydrogen neutralisation 7−131572
Si:S, deep level defects, optical cross sections, tight binding calcs. 7−99894
Si:S, defect pairing, electronic struct. and total energy calcs. 7−83982
Si:S, pseudo-Jahn-Teller instability 7−84784

sulphur continued
Si:S,Se,Te, electronic struct. of mixed chalcogenide pairs *(Chinese)* 7−118401
Si:Te, Se, S, double donors, IR absorption, Hall effect and DLTS studies 7−98905

sulphur compounds
in comets, identification of SO, SH and CS in IUE spectra 7−139980
graphite:SO_3 film, prep. by pyrolysis of polymers, phys. props. 7−86611
polyacetylene:SO_3, EPR study 7−70639
proton bombardment, mol. effects determ. 7−98271
sulphate aerosol scavenging by clouds 7−79563
sulphate aerosols in atmosphere, size distribs. 7−78700
sulphate formation in power plant plume model 7−133148
sulphate scavenging by snow over Greenland Ice Sheet 7−93582
sulphates, wet deposition in Schleswig-Holstein, N Germany 7−100781
As-S amorphous film, photosensitivity during CW, ns pulse and ps pulse laser illum. 7−130282
$As_{40}Se_{30}S_{30}$ chalcogenide glasses, refractive index dispersion 7−85569
CO_2-SF_6, diffusional separation by sinusoidal oscills. 7−83393
CO_2-SO_2-H_2O, phase behaviour meas. 7−111821
CsI:IO_3, SO_4, Tl, infrared absorption spectrum of complex impurity ions 7−132258
CsX:Sh^-, (X=Cl,Br,I), phonon sidebands 7−137489
$GaCl_3$-$SOCl_2$-$ErCl_3$ aprotonic system, luminesc. spectra of Er^{3+} 7−119049
Ge-As-S thin films, refractive index and absorption coefficient 7−85872
Ge-S-In(Ga) glasses, appls. in microelectronics and optics 7−103915
He-SF_6 compressed gas mixtures, breakdown in uniform field 7−83562
KBr:SH^-, phonon sidebands 7−137489
Li/$SOCl_2$ cells, chemical reactions, kinetics and thermodynamics 7−71589
Li/$SOCl_2$ cells, discharge products, in situ microRaman obs. 7−78583
Li/$SOCl_2$ small chemical current sources compared with other primary cells 7−78624
Li-SO_2 batteries, start-up times at low temp. 7−133069
Li-SO_2 high reliability long-life cells 7−126572
Li-$SOCl_2$ cells, in situ micro-Raman study of discharge products 7−126576
Li-$SOCl_2$ cells, LiCl solid electrolyte layers, growth on Li electrode 7−126574
Li-$SOCl_2$ cells, passivation of porous C cathodes 7−133067
Li-$SOCl_2$ cells, voltage delay reduction, polymers with chlorine substituent groups 7−126575
$LiAlCl_4$-$SOCl_2$ electrolyte, appl. in Li electrode passivation films 7−133060
S containing species, ^{33}S NMR chemical shieldings, ab initio coupled HF perturbation theory calcs. 7−109719
S-containing molecules (ions), adsorpt. on Ag(Cu) electrodes 7−91967
SCN^-, interaction with H_2O mols., calcs. and NMR 7−89944
SCNH+Xe(Ar)(Kr), chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
$SCN^-.SO_2$, solvated ion, prereson. Raman effect 7−82149
SCO+Xe(Ar)(Kr), chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
SCl_2, K-shell X-ray absorpt. spectra 7−109925
S_2Cl_2, K-shell X-ray absorpt. spectra 7−109925
SF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
SF_6, 6-donating substituent, ab initio calcs. 7−129697
SF_6 addition to HgBr and HgCl lasers to improve performance 7−122936
SF_6 admixtures, influence on efficiency of Xe laser 7−130057
SF_6 and air circuit breakers, gas flow calc. in extinguishing chamber *(Czech)* 7−130734
SF_6, arc plasma, continuum radiation study 7−74536
SF_6, breakdown phenomena, inhomogeneous large rod-plane gaps under 50 Hz AC and positive impulse voltages 7−124012
SF_6 circuit-breaker rotating arc spectrum *(French)* 7−130961
SF_6, cluster size, temp. and struct., electron diffr. investig. 7−141736
SF_6, constrained force consts. 7−81946
SF_6, electric hyperfine interaction, TDPAC meas. 7−113014
SF_6, electrical leader discharge development in a point-plane gap 7−130959
SF_6, electron impact dissoc., 3p→3s line emissions, absolute cross section determ. 7−90440
SF_6, electron impact dissoc. metastable fragment prod. 7−117086
SF_6, electron-ion pair formation by α-particle, energy requirements 7−117061
SF_6 expanding-gaps and rotating-arc circuit breaker optical diagnostics *(French)* 7−130963
SF_6, fluid coexistence curves, three-body interactions, scaling variables, singular diameters 7−124466
SF_6, fluid interface struct. near critical point, optical reflectivity anal. 7−137662
SF_6 gas electric breakdown, physical processes *(Croatian)* 7−117696
SF_6 gas mixtures for reactive ion etching 7−71403
SF_6, glow discharges, diffuse and constricted 7−97834
SF_6, IR absorbing gas, appl. for transparent thermal insulation 7−142152
SF_6, IR absorp. spectra, picosecond dynamical temporal evolution 7−129710
SF_6, IR multiphoton excitation dynamics study 7−74597
SF_6 in inert gases, electron distrib. functions, electron attachment depend. 7−117690
SF_6, inner valence levels, photoionisation partial cross section and asymmetry parameters 7−74715
SF_6, ionospheric chemical release expt. 7−145768
SF_6, isotope selective dissoc. using q-switched CO_2 laser 7−78530
SF_6, isotope separation by IR multiphoton dissoc. 7−68414
SF_6, laser radiation phase conjugation by three-beam interaction 7−136444
SF_6, low temperature solid phase struct., neutron diffraction expts. 7−124043
SF_6 molecules, free jet expansion 7−110135
SF_6 multicentre Lennard-Jones mols., tetrahedral and octahedral model fluids, thermodynamic perturbation theory 7−69852
SF_6, multiple-photon excitation and dissoc. book 7−88755
SF_6, nonlinear dispersion meas. 7−136405
SF_6, phase, nucleation, electron diffr. investig. 7−98380
SF_6 plasma, standard thermodynamic fn. calcs. for diatomic components. 7−97699
SF_6, props. of streamers and streamer channels 7−69300

sulphur compounds continued
SF_6, pulsed high-voltage discharge, electrodes dielectric barriers stability effects 7−130967
SF_6, pyrolysis and oxidation, thermochemical data 7−80193
SF_6, rotational states collisional broadening, Anderson-Tsao-Curnutte theory calcs. 7−116938
SF_6, supercritical, solvent props. solute UV spectral line shift obs. 7−103411
SF_6 under arcing or partial discharge conditions, electric breakdown products 7−97846
SF_6, vibr. relax. rate consts. meas. 7−110084
SF_6, vibrational excitation, IR absorpt. spectra, ps pulse duration depend. study 7−109886
SF_6, vibrationally highly excited, nonlinear relaxation processes studied by interferometry 7−82325
SF_6^-, ion-ion recomb. reactions, rate coeff. meas. 7−106781
SF_6/difluorodichloromethane gas mixtures, ionisation and attachment coeffs. meas. 7−137140
SF_6/methane gas mixtures, ion-ion recombination 7−96849
SF_6/N_2/dichlorodifluoromethane gas mixtures, electron transport props., Boltzmann eqn. anal. 7−97691
SF_6/trichlorotrifluoroethane gas mixtures, ionisation and attachment coeffs. 7−104479
SF_6-Ar(He)(Xe), mixture, vibr. relax. rate, time-resolved IR multiphoton absorpt. spectra anal. 7−74599
SF_6-He gaseous mixture dynamics, Rayleigh-Brillouin spectra anal. 7−122552
SF_6-N_2 mixtures, decay of wall stabilised arcs 7−69502
SF_6-N_2 mixtures, electron-ion pair formation by α-particle, energy requirement 7−117061
SF_6+C, radioactive recoil atom reactions, review 7−106818
SF_6+CO_2, near reson,. V-V energy transfer blow 300 K 7−90349
$SF_6+Ca(^3P)$, reaction dynamics, excitation functions 7−144712
SF_5Br, gas phase mol. struct., electron diffr.-microwave study 7−129697
SF_6−Ar(He)$(D_2)(N_2)$(propane), vibr.-translational relax. times anal. 7−103633
SH^-, total and orbital energies and multipole moments, LCAO HF STO calcs. 7−81919
SH^-, vertical electron affinities calc. using direct versus indirect many-body methods 7−109696
SH_3^+ in hollow cathode discharge, IR spectrum, mol. consts., rot. transition freq. 7−74578
SH_5^+, H_2 decomposition barriers and pathways, ab initio calcs. 7−68190
$(SN)_x$, positron annihilation Doppler broadening study 7−92778
S_2N_2, Hartree-Fock instabilities 7−116842
S_2N_2, Lewis valence band struct., STO calcs. 7−109785
$(SO_2)_2^-$, negative ion clusters, photodissoc. dynamics 7−122642
SO molecules, isotope effects 7−96567
SO_2, absorpt. and reactions in dimethylaniline soln., kinetics 7−91963
SO_2 adsorption on Ag powder surfaces, SERS study, nearly environmental conditions 7−70065
SO_2 atmosphere of Io, condensation and sublimation 7−94688
SO_2, bonding, d orbitals, CNDO/2 parameters 7−81984
SO_2 clusters, ion series mass spectra, attachment cross sections, resonance 7−136117
SO_2 conc. meas. using passive permeation device, appl. 7−133172
SO_2, core-level photoionisation, asymmetry parameter, VUV absorpt. spectra 7−135964
SO_2, detection using sulphation plates, performance evaluation 7−133169
SO_2 dry deposition fluxes, averaging strategies assoc. with day/night sampling 7−139690
SO_2 electrolytes, Li passivation kinetics using AC impedance technique 7−126573
SO_2, electron impact, UV and visible fluoresc. 7−129885
SO_2, electron impact dissoc. excitation, fluoresc. 7−110121
SO_2, electron-impact excitation, mol. emission determ. 7−82377
SO_2 emission and air quality standards in Europe and Yugoslavia *(Croatian)* 7−139159
SO_2 emission control by $Ca(OH)_2$-based in-duct scrubbing 7−133163
SO_2 emission from White Island volcano, New Zealand 7−101251
SO_2, fluoresc. from vac. UV dissoc. excitation of SO_3 7−109991
SO_2 ground-level concentration around Plomin I and II (Yugoslavia) thermal power plants *(Croatian)* 7−144937
SO_2, high-energy electron impact, inner shell excitation, EELS 7−129886
SO_2, IR laser multiphoton excitation, time-dependent SCF approach 7−129818
SO_2, in atmos. of India, trace gas concs. at urban, industrial and rural sites 7−101449
SO_2 in atmos. of NW Atlantic near to USA 7−127325
SO_2 in atmosphere, sulphate particle form. rate in oil sands extraction plant plume 7−78701
SO_2 in lower troposphere over eastern USA during autumn 7−79512
SO_2 in lower troposphere at neighboring alpine stations 7−127399
SO_2 in polar organic solvents, vapour-liq. equilibria 7−98413
SO_2 interaction with TiO (110), surfaces, XPS, UPS and LEED studies 7−91986
SO_2, liquid-vapour coexistence line, Lennard-Jones pot., reference interaction site model study 7−142553
SO_2, mol. beams, photodissoc., translational energy and angular distrib. meas. 7−136022
SO_2 on Europa, evidence from IUE obs. of 260 to 320 nm absorpt. band 7−134174
SO_2 on surface of Io (satellite to Jupiter), adsorbed onto solids 7−115286
SO_2 oxidation rates catalysed by Mn(II) and Fe(III), at atmospheric conditions 7−127320
SO_2 oxidation to sulphate in aerosols 7−93579
SO_2, removal from gases by electron beam irradiation *(Chinese)* 7−86656
SO_2 transport and oxidation in foggy San Joaquin Valley 7−133146
SO_2, van der Waals clusters, electron attachment investig. 7−90468
SO_2 wet removal from flue gas, reverse osmosis of wash waters 7−139157
SO_2^{2+}, electronic states, SCF CI calcs. 7−135851
SO_2/SO_3 gases, $CaF_2/CaSO_4$ solid-state galvanic sensor 7−121101
SO_2-H_2O, phase behaviour meas. 7−111821
SO_2-O_2^+, weakly bound clusters photodissoc. dynamics 7−93344
SO_2+Al, reactive scatt. using pulsed crossed supersonic mol. beams 7−144707
SO_2+Ar^{13+}, impact ionisation and fragmentation, TOF mass spectra 7−122679
SO_2+SO_3, partial dissociation, thermodynamic capacity 7−126473
SO_3, absorpt. and fluoresc. spectra, vac. UV dissoc. excitation 7−109991
SO_3, vibr. assignment, force const. calc. 7−116935

sulphur compounds continued
SO_3^-, combination reaction, radical pair CIDEP 7−90223
SO_3-soft Lewis base interactions, IR matrix isolation spectra 7−68301
SO_{4_2}, UV reson. Raman enhancement cross section meas. 7−74625
$SO_{4_2}^{2-}$, adsorbed on Pt electrode, mol. vibr., IR spectra 7−98679
SO_4^+, interference in Mo determ. by AAS, prevention 7−114021
SO_n, first derivatives of SCF energies, basis set depend., Rys polynomia method 7−116826
SO_x and NO_x removal from combustion gases by pulse-induced plasma chemical process 7−75896
S_2O, visible absorption spectrum spectrographic techniques, laser optoacoustic techniques 7−122558
$S_2O_6^{2-}$, bond props., kinetic consts. method calcs. 7−81916
$SOCl_2$ electrolyte in Li/$SOCl_2$ small chemical current sources compared with other primary cells 7−78624
$SOCl_2$, K-shell X-ray absorpt. spectra 7−109925
$SOCl_2$/$LiAlCl_4$ microelectrode studies of Li/Li^+ couple 7−144724
$SOCl_2$-Li primary cylindrical cells, high rate, thermal modeling 7−100702
SO_2Cl_2 electrolytes, water traces, IR spectroscopic anal. 7−100583
SO_2Cl_2, K-shell X-ray absorpt. spectra 7−109925
$SO_2(SO_2^+)$, geometry, dynamics, supersonic molecular beam photoelectron spectra 7−136003
Se-S system, glasses, prep., struct. and optical props. 7−83715
Te-S system, glasses, prep., struct. and optical props. 7−83715

sum frequency generation (optical) *see optical frequency conversion*

sum rules
Aharonov-Bohm quantum billiard, circular, spectral sum rules 7−73020
axial charmed meson in QCD sum rules 7−73605
baryon magnetic moment determ., QCD sum rule method 7−135128
electric dipole photoabsorpt sum rules in constituent quark model, nucleon struct. 7−67592
exotic baryon resonance prod. in hadronic processes 7−95881
four-quark condensates, contribs. to QCD sum rules for ρ and A_1 7−116097
glueball mass estimate, gluon bound state waved fns., Bethe-Salpeter eqns., QCD sum rules method 7−135038
heavy ion-nucleus reactions, two-particle excitation process, collective pair transfer, sum rules 7−116462
hermaphrodite mesons, light, spectra and couplings, QCD sum rule anal. 7−95855
hybrid mesons, coupled QCD sum rules 7−67532
hyperon radiative decay amplitudes from QCD sum rules, decay probabilities 7−128898
o^{++} trigluonium sum rules 7−128845
QCD, asymptotically similar series, external field problems, renormalisation, N mag. moment 7−108862
QCD, dynamical symmetry breaking, quark masses, decay const., renormalisation group corrections, meson masses 7−135039
QCD, potential and sum rule anal. 7−108863
QCD order parameters, phenomenological potentials 7−81124
QCD sum rule anal. of four quark condensate and L=1 mesons 7−67580
QCD sum rules, modifications 7−95857
QCD sum rules and vector-meson masses and widths 7−89451
quark antisymmetrisation effects in schematic model of nucleus 7−81305
relativistic constituent quark model, distribution amplitude 7−95839
rigid string model, QCD sum rule comparison and string tension estimate 7−135080
strange quark mass and vacuum condensate, SVZ sum rules 7−95851
$SU(2)_L \times U(1)_Y \times SU(n)_{family}$, Cabibbo angle and meson masses, charge-commutation-rel. approach 7−128819
$SU(3) \times SU(2) \times U(1)$ standard model, nonperturbative contribs. via local QCD sum rule 7−140841
Thomas-Reiche-Kuhn sum rule in finite nuclei, effective interactions 7−135217
trinucleon system with central and tensor interactions, geometrical structure coefficients, sum rules 7−116295
weak hadronic charmed meson decay, D and F mesons, QCD sum rules, decay partial widths 7−128887
0^{+-} exotic scalar meson from QCD sum rules 7−73604
$\bar{b}b$ system, study of Coulomb type interaction 7−135036
$\chi_0 \rightarrow \psi\gamma$ (2γ) $(e^+e^-\gamma)$, gluonic power corrections to QCD sum rules 7−73654
(e,e'), short-range correlation effects on nucleon sum rule 7−116389
$e^+e^- \rightarrow$hadrons, low energy QCD predictions from non perturbative methods 7−81221
$\bar{e}N \rightarrow e'X$, deep-inelastic process, sum rules and axial anomaly 7−121519
K^0-$\bar{K}^0$ mixing parameter, QCD sum rule calcs. 7−116123
Λ magnetic moment determ. using QCD sum rules 7−135126
$\Lambda\Lambda$ dibaryon mass determ. using QCD sum rules 7−95853
N magnetic moments, QCD sum rule calcs., gluon-field contribs., Wilson coeff. 7−135127
νN, parton model sum rules, two-loop QCD corrections, coeff. fns. of asymptotic operator expansions 7−67591
νp, deep inelastic process, structure fns., twist-four corrections, Bjorken and Gross-Llewellyn Smith sum rules in QCD 7−67614
(π,γ), sum rule anal. for 1p shell nuclei 7−102919
$qq\bar{q}$ model with charm and colour for inclusive processes, sum rule cross section predictions 7−116116
$\Sigma^+ \rightarrow p\gamma$, QCD sum rule anal. 7−135115

Sun
see also solar .....
160-min oscillation rel. to stellar encounter 7−88379
160-min pulsation period rel. to planetary rotation periods 7−88359
160-minute oscillation, effects of quasiperiodicity on significance of data processing by superposed epoch method 7−127738
160-minute oscillations, obs. of assoc. 160-min pulsations in geomag. AE-index 7−127635
160-minute pulsations, obs. of assoc. brightness oscills. at millimetre wavelengths 7−127810
acoustic oscillations of frequencies, implications for solar age and comp. 7−79952
astrometric observations with CERGA astrolabe (1984 to 1985) *(French)* 7−79915
Birmingham University Department of Space Research, role in solar and heliosphere research 7−88362
convection in interior, mixing-length theory of deep convection 7−88107
cylindrical plasma, MHD instabilities realistic energy eqn. 7−111192
diameter increase during Maunder minimum 7−72388
differential rotation based on angular momentum transport by compressible convection 7−145817

sun continued
digital solar edge tracker for the Halogen Occultation Experiment 7−127609
dynamical quadrupole moment gravitational 7−79943
five minute oscillations, inverse problem soln. *(Russian)* 7−127817
five-minute oscillations, stability, influence of Reynold tensor perturbation 7−79906
galactic motion, determ. from kinematics of young open clusters 7−101861
galactic orbit, circular vel. determ. from dynamical chaos in Galactic centre 7−146086
general magnetic field unbalance evidence from anomalies in interplanetary mag. field (1970 to 1981) 7−127803
giant convective rolls causing modulation of solar differential rotation 7−134205
global circulation currents from solar-limb temperature variations 7−127813
gravitational quadrupole moment from acoustic and gravity normal mode spectra 7−79944
Gravity Probe B Relativity Gyroscope Expt., flight mission approach, Rigel distance 7−73149
light deflection due to three-space curvature 7−128226
light passing close to the Sun, anomalous deflection and polarization effects 7−134593
long-period oscillations, power spectrum anal. rel. to theoretical solar models 7−127802
mass loss from early Sun, implications for early solar system 7−88416
mass-losing solar models, comparison with standard solar model 7−145910
Nemesis, accretion, high-energy radiation implications for Earth 7−120286
neutrino emission due to interactions with dark matter particles 7−94616
neutrinos from Sun, detection via $^{81}Br(\nu,e^-)^{8}$ Kr reaction technique 7−94849
oblateness, 1985 meas. and evidence for variability 7−140006
oscillation frequencies, rot. decomposition *(French)* 7−94845
oscillation modes coupling, generation of g-mode by two p-modes 7−145911
oscillation modes of intermediate degree from Doppler images 7−88343
oscillations, gravity modes and press. modes 7−79905
oscillations, implications of fifth force 7−88087
oscillations, long period diameter variations, activity correlations *(French)* 7−140029
oscillations, meas. with magneto-optical filter, importance of Faraday effect 7−145827
oscillations, mode classification and wave propag. in magnetically-structured medium 7−140031
oscillations, nonlinear mode interactions 7−127793
oscillations, obs. in mesostructures in solar chromosphere 7−101754
oscillations, phase shifts obs. using diode arrays 7−79910
oscillations, rot. splitting *(French)* 7−79920
oscillations (book) 7−80189
p-mode oscillation freqs., obs. rel. to depth and latit. depend. of solar rot. 7−101755
p-mode oscillations, search for freq. changes (1980 to 1985) 7−101750
photographic features, mean lifetime determ. method 7−79845
photosphere acoustic (*p*-mode) oscillations, evidence for absorpt. by sunspots 7−140022
photosphere oscillations, effects on centre-limb var. of asymmetries and shifts of K I 769.9 nm reson. line 7−107796
r-mode oscillations, contrib. to solar irradiance vars. and active longitudes 7−127825
radius, determ. from timing of total solar eclipse (1984 November 23) 7−115210
red giant envelope and Earth orbital decay 7−101172
Solar-A Wolter type I soft X-ray telescope, optical props. 7−79836
sunspot cycle bimodality, implications for duration of cycle 21 (1976 to 1987) 7−115356
teaching, children's conceptions of the Earth, Sun and Moon 7−80221
total eclipses, March 1988 and July 1991, eclipse tracks and meteorological prospects *(French)* 7−120252
total solar eclipse, 1988 March 18, prediction of circumstances 7−120253
Tunguska phenomena in Siberia, due to ejected solar plasma blob 7−87649
Ulysses, out-of-ecliptic mission for solar and interplanetary obs. 7−101655
variability and oscillations, review 7−127822
X-ray emission mechanism, implications for stars 7−127816
young Sun, calculated UV fluxes compared with UV spectrophotometry of T Tau stars 7−88411
C, N and O abundances, comparison with α CMi (Procyon) and α Boo (Arcturus) 7−120376

sunlight
see also atmospheric optics; sky brightness
Alaska, surface radiative regime, effects of El Chichon stratosphere dust cloud 7−87903
albedo determination for ground reflected sunlight 7−145652
Algiers, insolation data adjustment by first-order Markovian model 7−101452
anisotropic solar irradiance model for tilted surfaces comparison with engng. algorithms 7−93535
arid and semi-arid regions, comparison of models for incident radiation 7−114860
artificial satellites motion, existence of libration points in generalised photogravitational restricted three-body problem 7−72258
Athens, Greece, direct and diffuse solar radiation correlations for tilted surfaces 7−79551
atmosphere, sunlight heating rate in water vapour bands 7−87902
atmosphere boundary layer, testing of Simple Biosphere model using point micrometeorological and biophysical data 7−145630
atmospheric water vapour, integral transmission function, solar radiation models 7−87905
attenuation by atm. aerosols 7−139758
boundary layer, solar radiation absorpt. by particles and H_2O vapour 7−139677
boundary layer solar radiation absorpt. influenced by water vapour 7−139754
China, abnormal weather due to Mt. St. Helens eruption *(Chinese)* 7−87748
climate Milankovitch forcing and ice age cycle modelling 7−145659

sunlight continued
cloud-radiation interactions, anal. using 3D nephanalysis and Earth radiation budget data bases 7−115010
cloudiness effects on solar UV radiation at surface 7−133809
cloudy conditions, solar radiation received at surface influenced by multiple land−cloud reflections 7−101485
cometary atmospheres, effects of solar radiation transfer on dusty gas outflow from nucleus *(Russian)* 7−107757
cometary dust comae, single and multiple light scatt. 7−134184
compound parabolic concentrator collector with time dependent input function, transient anal. 7−78613
Cretaceous-Tertiary boundary impacts, effect on atm. and biosphere 7−127455
daily global irradiation values monthly probability distribution functions, tropical and temperate locations 7−79550
differential absorption lidars with Raman lasers for O_3 meas., evaluation of solar blind effect 7−120132
diffuse, global radiation model and angular distrib. *(Japanese)* 7−119653
diffuse fraction, relation to global to extraterrestrial radiation ratio 7−145653
diffuse fraction of hourly global radiation in Norway, solar energy utilization 7−79554
diffuse radiation, improved model with correction for atmospheric backscattering 7−79600
diffuse radiation prediction from sunshine duration 7−87882
diffuse solar radiation meas., near-equatorial comparisons of pyranometers 7−139814
direct insolation determ. using pyranometers 7−134029
Doha, Qatar global solar radiation meas. 7−127346
Earth surface, Meteosat meas. of solar irradiance 7−133830
Earth surface radiative properties and fluxes, parametrization of land-surface processes 7−133864
equatorial regions, spectral anal. for climatic/weather variation predictions 7−87952
EUV flux, 160-min. modulation rel. to 160-min pulsations of geomag. AE-index 7−127635
flux variations over time scales of solar rot. 1978 to 1982, statistical anal. 7−114913
Geminid meteoroid stream, dispersal by radiative effects 7−94829
global horizontal solar radiation estimation using Angstrom type correl. 7−114861
global irradiance probability density model, hourly total on arbitrarily orientated planes 7−145654
global radiation at ground from ISCCP reduced data sets 7−120081
global radiation for Indian stations, correl. with daily and hourly diffuse radiation 7−87877
global radiation prediction using numerical and satellite modelling 7−127448
global solar radiation estimation from sunshine hours, geographical and meteorological parameters 7−87878
global solar radiation on Romanian territory, accuracy of model by Barbaro et al. 7−79552
Greece, direct, diffuse and global solar radiation estimation on arbitrarily inclined plane 7−139721
Guatemalan solar map presentation 7−127449
horizontal global radiation model and ang. distrib. of diffuse irradiance, solar-cell perform. eval. 7−78642
Hudson and James Bay areas, Canada, coastal climate and atmos. energy budget 7−114997
humid tropics, total irradiation and sunshine duration relationship 7−94399
Hungary, relation between cloudiness and global radiation 7−101445
insolation and Pleistocene climate var. 7−127460
insolation determination for spherical body, derivation from pyranometer meas. *(German)* 7−79537
insolation estimation over Pacific Ocean using cloudiness from satellite observations 7−139722
insolation values, freq. distrib., appl. in solar system perform. prediction 7−145655
IR longwave atmospheric radiation computation, simplified technique 7−133905
IR photometer for atm. aerosol studies 7−127540
Iraq, solar radiation calculation, distrib. mapping 7−145634
irradiance measurements, extrapolation to exoatmospheric levels 7−107564
irradiance variations, contrib. of global r-mode oscills. 7−127825
iso-radiation map for Arab region 7−87879
Italy, incident short-wave radiation at surface, Meteosat data anal. 7−101442
Italy, mean monthly insolation rel. to solar energy appls. of Si photocells *(Italian)* 7−93503
layer clouds, radiative-turbulent transfer interactions 7−145605
Mars, mean seasonal daily insolation at surface during global dust storms, oblateness effect 7−127756
mean radiative fluxes, sensitivity to vars. of broken cloudiness parameters *(Russian)* 7−145593
modified Perez diffuse irradiance model for tilted surfaces 7−139723
monthly average daily diffuse-global correl., depend. on cloudiness and turbidity 7−79547
monthly average global solar radiation on horizontal surface, correlations, comparison 7−133853
monthly average hourly diffuse, global and direct radiation distrib., depend. on turbidity and cloudiness 7−79548
monthly average hourly global, diffuse and direct radiation estimation 7−87881
Moscow region, USSR, smoke haze effect on sunlight and natural illumination at surface 7−127467
Moscow region, USSR, smoke-filled atm. aerosol spectral optical thicknesses and radiation heating 7−127468
natural illumination calc. under clear sky, opposite building consideration 7−86759
Nigeria University site (Nsukka), insolation correlated to wind speed 7−72127
ocean, role of shortwave radiation in summer decay of sea ice cover 7−133716
oceans, influence of subsurface illumination and nutrients transport on marine biota production 7−139638
Ohio, satellite-based insolation estimates evaluation 7−87794
photothermal capability of dye solutions for solar convertors, figure of merit correlation 7−144906
planet atmosphere laser activity, solar excited effects 7−103805

sunlight continued
radiance distrib. in deep water inc. fluorescence effects 7—114715
radiation budget experiment, pyrheliometer charact. 7—133945
radiation pressure, effect on motion and stability of two interconnected satellites 7—72254
reflection and transmission by horizontally inhomogeneous optically thick layer *(Russian)* 7—87901
reflective surfaces and dielectrics, surface contamination caused by space and terrestrial effects 7—103919
Saturn, rings effect on atm. upper boundary insolation 7—127763
sensor for radiation distrib. 7—134027
short-term luminosity variations, influence on atmospheric O_3 concs. *(Russian)* 7—145592
W Siberia, raised marshes evaporation and radiation regime 7—127404
solar collector, evaluation of optimum tilt angle for maximum sunlight collection 7—126646
solar constant changes in AD 1968 to 1985 period, on time scales of minutes to years 7—79924
solar disk image below horizon observed from outer space, specular refl. anal. 7—133926
solar energy reaching Earth's atm., computational anal. 7—87883
solar heating rates, calc. by extended ESFT method appl. 7—139756
solar insolation monitoring method in remote regions 7—94398
solar radiation and sunshine correl. 7—87880
solar radiation maps for Pakistan 7—87884
spherical reference radiometers testing and study 7—80874
Spitsbergen, solar radiation spectral distrib., for various atmos. conditions 7—133928
statistical analysis of solar radiation on variously oriented sloping surfaces 7—79549
stratosphere, climatologies of radiative heating and cooling rates rel. to diabatically diagnosed net circulation fields 7—114915
surface radiation flux, relation to near-ground temp. profile meas. by two laser beams 7—115071
surface reflected solar radiation meas. *(German)* 7—139732
terrestrial early atmosphere, troposphere thermal struct. due to CO_2 and incident sunlight 7—94424
terrestrial photovoltaic units, standard solar spectrum for efficiency and electric parameters meas. 7—114105
terrestrial response (book) 7—88751
thermopile pyrheliometer, linearity and temp. compensation testing 7—145718
tilted south-facing surfaces, computation of monthly solar global radiation 7—145588
tilted surfaces, monthly average daily insolation calc., comments and reply 7—133126
turbulence and solar energy, effect on climate *(Italian)* 7—139743
UK, solar radiation on slopes, daily/hourly global computation 7—79576
UV flux vars., atmospheric temp. response to solar cycle 7—120110
UV irradiance and NO_2 photodissociation rate coeff. determ. 7—94447
volcanic effects on turbidity and irradiances and their dependence on surface wind direction 7—133923
window shading from sunlight using eggcrate-type projections 7—142053
CO_2, effects on Earth climate, human influence *(Italian)* 7—79578
Si solar cell arrays, short-circuit current and efficiency variation in tropical conditions 7—71604

sunshine *see sunlight*

sunspots
see also solar activity
1982 observations at Istanbul 7—127820
1983 observations from Istanbul University Observatory 7—145919
1984 observations from Istanbul University Observatory 7—145920
1985 AD observations at Istanbul University Observatory 7—127821
acoustic (*p*-mode) oscillations absorption by sunspots, evidence from vel. field obs. 7—140022
active regions locations, relation to photospheric global horizontal circulation 7—140025
active spots, area peaks rel. to solar constant variation 7—145928
AR 421, assoc. radio source struct. at 1.35-cm wavelength from eclipse obs. (1982 December 15) 7—127809
auroral frequency in relation to sunspot number, latit. depend. 7—134048
bipolar magnetic regions, contrib. to evolution of polar mag. fields during sunspot cycle 21 (1976 to 1984) 7—107798
cycle 231 duration, implications of bimodality of solar cycle 7—115356
cycle characteristics determ. from sedimentary layers in Pichi-Richi Pass rocks, Australia 7—133678
cycle prediction of the maximum annual mean sunspot number in the coming solar maximum epoch, max. annual mean sunspot number prediction 7—120364
cyclical changes, 1944 to 1979, search for assoc. cosmic ray intensity vars. 7—120225
development, role of mag. diffusion instability *(Chinese)* 7—107785
effective global sunspot number, eval. *(Japanese)* 7—101758
electric current systems in active regions 7—145922
eleven-year cycle, appl. of sunspot area index to anal. of solar and stellar cycles 7—115380
Evershed effect rel. to photospheric line equivalent width 7—140032
fine structure of active regions, Hα morphology 7—127806
fluctuations of sunspot activity, anal. for solar cycles 12 to 19 (1878 to 1964) 7—140024
groups distribution in Waldmeier classification scheme, var. 7—79942
growing sunspots., cooling time scales 7—72385
historical observations catalogue (165 BC to 1684 AD) 7—134415
magnetic fields, Fourier analysis deconvolution scheme 7—72383
magnetic fields and vel. gradients determ. method 7—145836
magnetic flux measurement, spurious var. assoc. with sunspot group decay 7—101753
maximum sunspot number, relation to heliosheet thickness at previous sunspot min. 7—134073
microwave sources, polarisation inversion obs. rel. to coronal mag. fields meas. 7—107801
neutrino flux, time variation magnetic moment postulate 7—79941
NOAA 4263 active region, flare and filament activation in distorted mag. field configuration 7—115353
numbers rel. to stratosphere dynamics 7—139718
overlying atmosphere slow wave resonator 7—127693
photographic image analysis, automatic log spectrum restoration of atmospheric seeing 7—72316
plage areas (Ca type) rel. to size of sunspot areas 7—79927

sunspots continued
radiation blocking function, vars. over time scales of solar rot. (1978 t 1982) 7—114913
radiative intensities and mag. field large scale parameters 7—120347
recurrent single sunspots, obs. rel. to determ. of solar rot. elements (i an Ω) 7—72378
Scheuer-Thomas sunspot model, umbral oscill. spectrum 7—145931
solar constant changes due to sunspots and faculae 7—79926
solar constant due to sunspots and faculae 7—79925
spiral spots, statistical charact. 7—134206
TA activity report (1987 February) 7—88339
TA activity report (1987 February-March) 7—120350
TA activity report (1987 January) 7—79916
TA activity report (1987 July) 7—145907
Ta activity report (1987 June) 7—145906
TA activity report (1987 March-April) 7—120351
TA activity reports (1987 April-May) 7—140001
tearing mode instability above sunspots *(Chinese)* 7—101748
umbrae, mag. field and temp. charact. determ. from Mg I 457.1 nm lin Stokes profiles 7—140013
umbral oscillations, obs. in Mg II k-line 7—107799
Wolf numbers, relation to short-term solar radiation vars. and atmospheri O_3 concs. *(Russian)* 7—145592

superaerodynamics *see rarefied fluid dynamics*

superalloys
Alloy 600, pit growth kinetics in high temp. chloride solns. 7—132795
Alloy 600, stress corrosion cracking in high temp. water, steam generato tubing test 7—144616
alloy 600 nuclear steam generator tubes, cold leg thinning, wear an corrosion 7—109287
alloy 600 PWR steam generator tubing, pitting, causes and correctiv action 7—144630
alloy 600 steam generator tubes, crevice solns., pH and corrosion pots 7—129187
alloy 600 steam generator tubing, crevices, corrosive field condition 7—129188
alloy 600 tubing for PWRs, caustic intergranular corrosion, eddy curren testing standards 7—113850
alloy 690 steam generator tubes, crevice solns., pH and corrosion pots 7—129187
alloy 690 steam generator tubing, crevices, corrosive field condition 7—129188
alloy 690 tubing for PWRs, caustic intergranular corrosion, eddy curren testing standards 7—113850
Alloy 718, crack growth during quenching 7—93071
Alloy 718, FBR structural material, fast neutron irrad., fracture toughnes 7—86328
alloy 718, neutron irrad., fatigue crack propag., 650°C 7—100345
Alloy 800 H, oxidation, scale struct. and comp., EPMA obs. *(Germa* 7—138908
alloy 800 steam generator tubing, crevices, corrosive field condition 7—129188
applications, chemical analyses and mechanical properties *(Spanish* 7—86085
blade materials, low cycle fatigue, 700-1000°C 7—144539
component lifing 7—144654
corrosion reactions in molten sulphates 7—119418
cyclic oxidation, thermal stresses, oxide scale spallation 7—119420
dispersion-stabilised, alternative approaches to processing 7—86084
gas turbine engine disc materials development 7—144336
Hastelloy X, non-isothermal fatigue crack growth 7—113657
Hastelloys and Inconels, weld metal, solidification microstruct., PHAC OMP calcs. 7—77971
high temp. corrosion, conf., London, England (Feb. 1986) 7—115678
high temp. corrosion, conf., Marseille, France (Jul. 1986) 7—80156
high temp. corrosion, process mechanisms 7—119416
high-temperature sheet materials for gas turbine applications 7—144337
hot corrosion, vanadic and chloride attack mechanisms 7—119421
hot isostatic pressing and powder metallurgy production technolog 7—119193
IN738LC, aluminide coating, high temp. corrosion 7—78341
IN 100, case turbine blade superalloy, creep data analysis 7—144490
IN 100 superalloy, micro-initiation and micro-propag., differential damag rule *(French)* 7—100477
IN 738LC, directionally solidified Ni-base superalloy, creep data anal 7—106592
Inco 718, pure hysteresis behaviour props. 7—91695
Incoloy 800, γ' hardening, low cycle fatigue, creep, slip bands, micros truct. 7—106527
Incoloy 904, magneto-acoustic and Barkhausen emission from domain-wal interactions with precipitates 7—112920
Inconel 600, neutron irrad., microstruct., precip., swelling 7—84039
Inconel 600, vanadate induced corrosion of Ni and MCrAlY coatings 7—119424
Inconel 617, Ni-base superalloy, high temp. corrosion in He containing impurities 7—86447
Inconel 625, marine crevice corrosion resist., effect of Nb conten 7—113755
Inconel 625, serrated flow, strain ageing, ladders bands, solute migratio to mobile dislocations 7—78138
Inconel 625 superalloy, transient oxides formed on aluminide coating TEM obs. 7—100443
Inconel 713C, rapidly quenched using twin-roll technique, aging behaviou 7—93031
Inconel 718, creep crack initiation and growth at 650°C 7—126210
Inconel 718, creep rate rel. to γ'' precip. size 7—86279
Inconel 718, environmentally assisted cracking, microstruct. effec 7—78309
Inconel 718, expt. comparison of several current viscoplastic models a elevated temp. 7—119324
Inconel 718, high temp. embrittlement, effect of environment 7—93189
Inconel 718, mixed mode small crack growth 7—111753
Inconel 718, Ni-base superalloy, steady-state creep deform. 7—86276
Inconel 718 powder, dynamically-compacted, heat-treatment respons 7—86208
Inconel MA 6000, oxide dispersion strengthened superalloy, cyclic creep lower stress level effect 7—132680
Inconel X-750, heat treatment, SCC, strength, ductility, PWR appls 7—144447

superalloys continued
Inconel X-750, MC particles growth on stacking faults and dislocations 7−78025
Inconel X-750, Ni-base superalloy, plastically strained, high-misfit, dislocation-precip. interaction during coarsening 7−78024
industrial appls. 7−144338
industrial gas turbine appls. 7−144335
laminated and reinforced metal composite manufacture and properties *(Spanish)* 7−86094
MAR-M 002, aluminide coating, high temp. corrosion 7−78341
MAR-M 247, superlattice of β-phase in aluminised coatings 7−86477
mechanical behavior, conf., London, England (Jan. 1986) 7−140360
Nimocast 713, hot corrosion in molten salt mixture 7−119423
Nimonic 75, corrosion in prototype nuclear process He and wet He under special flow conditions 7−86451
Nimonic 80 A, high temp. SCC in presence of V containing corrodent 7−113782
Nimonic 80A, laser surface treatment *(French)* 7−93185
Nimonic PE16, Ni-base superalloy, coarsening of intergranular Γ' 7−100230
Nimonic PE 16, grain boundary struct. during post-recrystn. anneals, influence of strong grain boundary pinning by particles 7−111578
Nimonic PE 16, Ni-base superalloy, precip., quantitative anal. 7−100238
protective coating by diffusion *(French)* 7−86460
Rene 80, Ni-base superalloy, coated and uncoated, creep, fatigue and their interaction 7−86337
Rene 95, Ni-base superalloy, rapidly quenched, phase form. during ageing 7−93032
Rene N4 superalloy/Pt interface, ion beam mixing, RBS/AES studies 7−111696
review of developments 7−144334
steel, austenitic stainless, Alloy 800, creep, const. strain rate testing, 650-800°C 7−78131
steel, austenitic stainless, creep characts. rel. to ion implanted He and H saturation 7−113635
steel, austenitic stainless, SiO_2 coatings, plasma assisted vapour deposition, carburisation prevention 7−86463
turbine blade materials, high temp. fatigue crack growth 7−144540
Udimet 500, Ni-based superalloy, low cycle fatigue, strain rate effects and assoc. deform. mode 7−144534
Co based superalloys, strengthening mechanisms, hot corrosion resist., gas turbine appls. 7−86461
Co-Cr-Al-Y, hot corrosion by molten sulphate-vanadate deposits 7−78336
Co-Cr-Mo, Stellite 21 coatings on steel, damage kinetic in thermal fatigue *(French)* 7−119427
Co-Cr-Ni-W superalloy MM-509, coated and uncoated, creep strain-time parameters, 293-1255K 7−86293
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7−113577
Co-Cr-W-C superalloy, cavitation erosion rel. to Ti implantation 7−119382
Co-Ni-Cr superalloy, relax. internal friction peak of C *(Chinese)* 7−71226
Fe-based superalloys, high temp. oxidation and corrosion 7−93165
Fe-Cr-Ni, complex liq. alloys, N solubility 7−76418
Fe-Cr-Ni, superalloy, low cycle fatigue life, influence of various environments *(Chinese)* 7−132700
Fe-Cr-Ni-Co superalloy, Refractoloy 26, microstruct. and mech. props., effects of Co *(Chinese)* 7−144424
Fe-Ni-Co superalloy, IN 903, fracture toughness, effect of H_2 7−138828
Ni base alloys, vapour phase siliconizing, corrosion stability 7−78319
Ni base super alloys, oxidation-sulphidation behavior 7−86439
Ni base superalloy, aluminide coatings, corrosion resist. rel. to Cr content 7−86468
Ni base superalloys, creep-corrosion interactions modelling 7−119422
Ni base superalloys, fatigue crack propag., microstruct., temp, effects 7−144541
Ni base superalloys, γ' precip. hardening, SCC resist. in high temp. water *(Japanese)* 7−93173
Ni base superalloys, high temp. corrosion in nuclear process heat He, η' carbide form. 7−86444
Ni base superalloys, mech. props. requirements for aero gas turbines 7−144489
Ni based superalloy, γ' precipitates, dislocation shearing 7−100235
Ni based superalloys, unconstrained, morphological evolution, γ/γ' interface *(French)* 7−144417
Ni based ternary alloys and superalloys, hot corrosion, gas turbine appl. 7−93149
Ni, dendritic arrays, oriented solidification, image anal. *(French)* 7−119256
Ni, γ-γ' microstructure morphology, automatic image anal. *(French)* 7−119276
Ni-base cast superalloy turbine blades, lifetime prediction under constant load creep conditions 7−93233
Ni-base melt-spun alloys, cellular solidification 7−92982
Ni-base multicomponent alloys, solidification range, approx. methods of prediction 7−100201
Ni-base superalloy, cast, fatigue fracture surfaces 7−86314
Ni-base superalloy, directionally solidified, primary dendritic spacing, effect of gravity level 7−77974
Ni-base superalloy, heterogeneous, microstruct. anal., combined X-ray microdiffr. and topography study 7−78400
Ni-base superalloy, M38, laser beam irrad., hot corrosion behaviour 7−126302
Ni-base superalloy, PWA 1480, γ' dislocation pairs 7−124280
Ni-base superalloy, vibr. fatigue props. of laserglazed specimens 7−119374
Ni-base superalloy compacts, coarse-grained, modelling of plastic flow under isothermal forging 7−113609
Ni-base superalloys, CMSX-2 and Cotac 784, mech. props., influence of protective coatings 7−86275
Ni-base superalloys, oxidation or hot corrosion, effect of creep or low cycle fatigue 7−93190
Ni-base superalloys, tertiary creep, anal. of expt. data and theoretical synthesis 7−144458
Ni-base superalloys, thermal resistance prediction on basis of short-term tests 7−100286
Ni-based superalloys, localised corrosion in chlorine environments 7−93208
Ni-Co-Cr, corrosion fatigue strength at high temp. *(Japanese)* 7−71280
Ni-Co-Cr superalloy, cast, microstruct. and mech. props., effect of prolonged ageing *(Chinese)* 7−132662

superalloys continued
Ni-Co-Cr superalloy, GH49, coarse grain form. after critical deform. *(Chinese)* 7−144464
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7−71250
Ni-Cr, Pd coating form. mechanism and kinetics 7−144594
Ni-Cr-Co, alloy 617, 72 *(German)* 7−138908
Ni-Cr-Co superalloy, diffusion alitized layers, US effect, microstruct., microhardness 7−132800
Ni-Cr-Co superalloy, grain boundary splitting as primary recrystallisation nucleation mechanism 7−106537
Ni-Cr-Co superalloy, laser beam irrad., hot corrosion 7−119457
Ni-Cr-Co-Mo high-temp. alloy, creep rupture behaviour of weldments, local deform. behaviour *(German)* 7−100387
Ni-Cr-Fe, corrosion by molten salt mixtures *(French)* 7−78340
Ni-Cr-Nb (16, 2 wt.%), superalloy, hot corrosion, internal sulphidation-oxidation mechanism 7−106694
Ni-Cr-W, superalloy, creep behaviour, effect of salts *(Chinese)* 7−132699
Ni-Cr-W, superalloy, microstruct. and strength after laser rad. surface fusion-solidification *(Chinese)* 7−132787
Ni-Cr-W superalloy, grain boundary precip. strengthening, nuclear heat exchanger appl. 7−106526
Ni-Cr-W superalloy single cryst., tensile stress relax., 973-1273K 7−132656
Ni-Cr-W-Ti-Al superalloy, γ' precip. strengthened, alloy design *(Korean)* 7−78037
Ni-Cr(-Mo) based alloys, HLW canister appl., corrosion resist. 7−103205
Ni-Fe base superalloys, crack growth, creep-fatigue interactions, environmental effects 7−144542
Ni-Fe-Cr-Mo superalloy, strain hardening and softening, discrete memory description 7−78052
Ni-Ta-Cr, single cryst. superalloy, yielding and deform., 20-1093°C 7−71251
Ni-W-Co superalloy, β-phase precip. 7−86185
Ni-W-Co-Cr single cryst., high temp. fatigue crack growth 7−93091
Ni-W-Co-Cr single crysts., fatigue crack growth 7−93090
ZrO_2 thermal barrier coating on Ni base superalloy, durability rel. to bond coating *(Korean)* 7−132776

superconducting cables
bending for planar and nonplanar magnets, geometrical considerations 7−135637
critical currents meas. as function of temp. and magnetic field 7−95610
pulsed superconducting magnets, partially stabilised *(Japanese)* 7−126661
SSC dipoles, keystoned flat superconducting cables, manufacture 7−129463
NbTi strands extracted from coreless Rutherford cables, electromechanical props. 7−131964

superconducting coils *see superconducting magnets*

superconducting critical currents *see critical currents*

superconducting critical field
anisotropy effects in superconductors down to millikelvin temperatures 7−131931
β-(BEDT-TTF)$_2I_3$, high T_c supercond. state and normal state cond. anisotropy study 7−77140
α_t-(BEDT-TTF)$_2I_3$, stable superconducting state at 8 K 7−125217
β-(BEDT-TTF)$_2I_3(AuI_2)$ salts, superconducting critical field, press. depend. 7−77177
(BEDT-TTF)$_3Cl_2H_2O$, superconductivity under press. 7−143679
β-(BEDT-TTF)I_3 high temp. superconducting phase, critical field temp. depend. meas. 7−131941
CDW and SDW type superconductors, thermodynamics, Δ/T_c ratio, paramag. limit 7−112626
β-(ET)$_2I_3$, organic supercond., exceeding paramag. limit of H_{c2} 7−138160
β-(ET)$_2IBr_2(AuI_2)$, vol. superconductivity, DC low field magnetisation meas. 7−77152
fractal multilayered superconductors, upper parallel crit. field meas. 7−70500
heavy fermion systems, Kondo lattice props. 7−92164
high T_c electron-phonon superconductor, upper critical field 7−143734
high T_c superconductors, critical fluctuations 7−143713
high T_c superconductors, strong-coupling effects 7−112633
high temperature superconductors, transition temps. and excitonic mechanisms *(Russian)* 7−125207
high-temperature superconductors, recent Dutch laboratory results 7−131874
Josephson modulated junction, supercond. props. 7−112704
localised superconductivity in system with anisotropic dispersion law for electrons 7−92351
multilayers, Josephson and proximity-coupled, upper critical fields 7−138147
networks, superconducting, continuum limit on upper critical field 7−99368
nontrivial superconductivity, phys. props., defect contribution 7−105832
rare earth−$Ba_2Cu_3O_x$ high T_c supercond., struct. and upper critical fields studies 7−125278
rare earth cpds., R-Ba-Cu-O, R=Sm-Ho, supercond. props. 7−105803
rare earth Z 7−125277
ternary superconductors, struct. and elec. props., review 7−125219
thermodynamic behaviour of type II superconductors at low induction for arbitrary temperature and impurity content 7−131942
Toxen relation for supercond. energy gap 7−70463
upper crit. field, depend. on electron-phonon spectral density for arbitrary impurity concentrations 7−70502
$AgMo_6S_8$ superconducting thin films, critical current densities and critical fields 7−131970
Al/rare earth oxide interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
$Al_{52.4}Cu_{12.6}Mg_{35}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
$Al_{20.2}Zn_{40.3}Mg_{39.5}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
Ba-La-Cu-O mixed valence high T_c superconductors, struct., mag. suscept., and critical field studies *(French)* 7−112707
Ba-Y-Cu-O high T_c superconds., upper critical fields and Ginzburg-Landau coherence lengths 7−99364
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7−138111
$Ba_{0.5}Y_{0.5}Cu_1O_x$, high-T_c superconductor 7−99266
$Ba_{1-x}Y_xCuO_{3-y}$, prep. by sintering, supercond. props. 7−99286
Ce-Cu_2Si_2 heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497

superconducting critical field continued
$CeCu_2Si_2$, superconducting Kondo lattice, upper critical field, angular depend. 7−77174
Co-Si-B-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
$Cu_{1.8}Mo_6S_{8-x}O_x$, Chevrel cpd., superconducting props., O doping effects 7−125180
$Cu_{1.8-x}Ni_xMo_6S_8$, supercond. props. and normal state resist. *(Russian)* 7−70443
$DyBa_2Cu_3O_{7-\delta}$ high T_c and H_{c2} superconductivity transition and cryst. struct. studies 7−105770
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., anisotropic upper critical field 7−143733
$ErBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$EuBa_2Cu_3O_x$, high T_c supercond., electronic and mag. props. 7−143705
Fe-P-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
$GdBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$Hf_{90}Mo_{10}$, weak localisation effects on upper critical field 7−99371
$Hg_{3-\delta}SbF_6$, supercond. transitions, magnetisation meas. 7−70473
$HoBa_2Cu_3O_{7-\delta}$, high T_c supercond., anisotropic upper critical field 7−143733
$HoBa_2Cu_3O_{8-\delta}$, superconductivity 7−131847
In-Ge films, supercond. upper crit. fields, transition temps. 7−70501
$InSn_4$ small spheres, anisotropy of upper critical field 7−85211
$(La,M)_2CuO_4$ (M=Ba,Sr), 2D superconductivity, high critical temps. 7−70450
La-Ba-Cu oxide, high T_c supercond., very high upper critical field 7−99362
La-M-Cu-O (M=Sr, Ba), superconducting critical mag. field, anisotropy 7−92392
La-Sr-Cu oxides, high T_c superconductors, upper critical fields 7−92388
$(La_{0.925}Ba_{0.075})_2CuO_{4-y}$, upper crit. field meas. 7−99376
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., thermal anomalies of latt. props. *(Russian)* 7−125172
La_2CuO_4, superconductivity below 40 K, exptl. study *(French)* 7−99361
La_2CuO_4-type cpds., high Tc supercond., 2D Hubbard model calcs. 7−118689
$(La_{1-x}M_x)CuO_4$ (M=Sr, Ba) high T_c supercond., mag. susceptibility studies 7−92365
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr), high-T_c superconductor, critical mag. fields 7−70499
$La_{1.85}M_{0.15}CuO_4$ (M=Ba,Sr), upper critical fields, superconducting transition temp. 7−70442
$La_{2-x}M_xCuO_4$ high T_c superconducting ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., normal state and supercond. props. 7−92338
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical field, high field meas. 7−92390
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., mag. props. 7−112731
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical fields and critical current density 7−143735
$(La_{1-x}Sr_x)_2CuO_4$ superconducting single crystal, anisotropic props. 7−92389
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., upper critical field meas. 7−99363
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., granular nature of bulk superconductivity 7−105866
$La_{1.8}Sr_{0.2}CuO_4$, high-T_c superconductor, lower critical field, vibrating reed measurements 7−131937
$La_{1.8}Sr_{0.2}CuO_4$ superconductors, critical currents and fields 7−92394
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., neutron irradiation, influence on supercond. props. *(Russian)* 7−143654
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., normal and supercond. state props. 7−99303
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. props. 7−105833
$La_{1.85}Sr_{0.15}CuO_4$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., thermodynamic and other props. 7−143707
$La_{1.85}Sr_{0.15}CuO_4$, magnetic hysteresis 7−125239
$La_{1.85}Sr_{0.15}CuO_{4-\delta}$, upper critical field meas. in pulsed mag. field 7−99366
$La_{2-x}Sr_xCuO_4$, high temp. superconductor, resistivity, mag. props. and specific heat 7−85189
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic props. 7−99369
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., upper crit. field 7−99370
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., upper critical field meas. 7−118745
$La_{2-x}Sr_xCuO_{4-y}$ Z *(French)* 7−112707
$Li_{0.9}Mo_6O_{17}$, localisation and superconductivity 7−76903
$LuRh_{1.2}Sn_4$, supercond. props. and magnetism 7−92325
$Lu_5T_4X_{10}$, (T=Ir,Rh; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
MoN thin films, hexagonal struct., formation, supercond. props. and ion irradiation effects study 7−131844
$NaHg_4$, supercond., surface magnetisation 7−125240
Nb, field depend. of mag. permeability in flux flow state 7−92391
Nb, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
Nb-Ti alloys, superconductivity and structural instability study 7−105008
Nb_3Al wires, powder metallurgy processed, supercond. props. 7−131936
NbCN superconducting films, upper critical field meas. and penetration depth determ. 7−131881
$NbC_{1-x}N_x$ coatings on C fibres, superconductivity 7−138167
Nb_3Ge films, CVD grown, high field superconducting props. 7−112720
Nb_3Ir, A15 superconductor, radiation damaged, weak localisation 7−105783
NbN sputtered films, electron microscopy study, superconducting props. 7−105341
NbN thin films, microstruct., resistivity, anisotropy of upper critical field 7−131934
NbN type Bl superconductors, critical inductances *(Turkish)* 7−105863
NbNi disordered alloys, upper critical field 7−77176
NbS_2, 2H polytype, upper critical field anisotropy and elec. resist. 7−138159
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7−131973
Nb_3Sn:Ti wires fabricated by internal Sn diffusion method, Ti addition effects 7−131953

superconducting critical field continued
$(NbTa)_3Sn$ multifilamentary wires, high field supercond. props. 7−131840
NbTi alloys, enhanced upper critical fields 7−77178
NbTi-Cu superconducting composite wires with fine filaments, supercond. props. 7−131966
$Nb_{0.53}Ti_{0.47}$-Ge multilayers, disordered, anisotropic upper crit. fields 7−143732
$Nb_{0.8}Ti_{0.2}$, ion implanted He porosity and supercond. props. *(Russian)* 7−99243
$Nb_{0.5-x}Ti_{0.5-x}Fe_{2x}$, supercond. critical temp. and upper critical field 7−77179
NbZn single filament superconducting wire stability, real transition characteristic effects 7−143730
$NdRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_c meas. 7−112647
Pb-Sn-Bi-In-Sb, low melting pt. alloys, elec. props. at 4.2 K 7−112293
$Pb_xMo_6S_{8-y}$ Chevrel phase, supercond. props., stoichiometry effects studies 7−85170
$Pb_{1-x}Sn_xMo_6S_8$, current carrying capacity, superconducting props 7−70506
PbTe:Tl MBE film, supercond. transition props. study 7−131853
$Pd_{1-y}Cu_yH_x$, influence of Cu on supercond. props. 7−112713
$PrRh_4B_4$ high press. prep. and superconducting props. 7−143657
$RBa_2Cu_3O_{7-y}$ (R=Y,Nd,Eu,Gd,Dy,Ho,Er,Tm), high T_c supercond., upper critical fields, anisotropy limits 7−131939
$Sc_5T_4X_{10}$, (T=Co,Rh,Ir; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
$SmRh_4B_4$ antiferromag. supercond., reentrant behaviour, microscopic mechanisms, Ginzburg-Landau approach 7−105816
$SmRh_4B_4$ antiferromagnetic superconductor, penetration depth and H_c meas. 7−112647
Sr-La-Cu-O high T_c superconds., upper critical fields and Ginzburg Landau coherence lengths 7−99364
Ta, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
Ti-transition metal superconducting alloys, metallurgy and phys. props. book 7−108050
Tm-Ba-Cu-O high T_c supercond., supercond. critical field anisotropy 7−125281
$TmBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7−118740
$TmBa_2Cu_3O_{9-x}$, high T_c supercond., magnetisation and lower crit. field 7−125183
UBe_{13} heavy fermion superconductors, critical mag. fields and sp. hts. review 7−70497
UBe_{13}, heavy fermion superconducting props. investigations 7−105801
UBe_{13}, magnetoresist. and upper critical mag. field under press. 7−77172
UBe_{13}, upper critical field and Hall effect temp. depend. meas. 7−70498
U_6CO, high-field superconductivity, weak coupling WHHM model anal 7−77175
U_6Fe, high-field superconductivity, weak coupling WHHM model anal 7−77175
UPt_3, anisotropic supercond., AC susceptibility studies 7−77173
UPt_3 superconducting props., cryst. symmetry effects 7−92387
$U_{0.97}Th_{0.03}Be_{13}$, lower critical field, coexisting supercond. order parameter 7−77148
$U_{1-x}Th_xBe_{13}$, $(0.02<x<0.06)$ phase diagram, specific heat, critical field 7−77149
V, supercond., strained at 4.2 K, crit. fields and defect struct. *(Russian)* 7−92386
V, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
V/Mo superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V/Si superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V-Ag multilayered structures, proximity coupled, upper crit. field meas. 7−99372
V-Ag multilayered superconductors, mag. field penetration depth, material parameters 7−105828
V_3Ga superconducting multifilamentary wire, technology development 7−131932
V_3Ga, superconductor for generating magnetic fields over 18 T 7−77184
V_3Ga very thin supercond. films, critical fields and spin polarised tunnelling meas. 7−131935
VN thin films, ion irrad. prep., supercond. and elec. props. 7−76226
$V_{1-x}Si_x$ supercond. amorphous alloys crit. mag. field, evidence for weak localisation effects 7−99367
Y-Ba-Cu oxide, high T_c superconductor, vibrating sample magnetometry study 7−99325
Y-Ba-Cu-O, high T_c superconductor, superconductivity and magnetism 7−85217
Y-Ba-Cu-O, wire type supercond. with high T_c, crit. current density meas 7−99380
Y-Ba-Cu-O high T_c, supercond., critical fields and currents up to 20 T 7−125280
Y-Ba-Cu-O high T_c supercond., upper critical field temp. depend. meas 7−105864
Y-Ba-Cu-O high T_c supercond. single cryst., anisotropic upper critical field study 7−105865
Y-Ba-Cu-O high T_c supercond., upper critical field and transition temp. mag. field effects 7−112560
Y-Ba-Cu-O high T_c supercond., upper critical field, elec. resist. meas 7−112709
Y-Ba-Cu-O high T_c supercond., electronic anisotropy 7−112724
Y-Ba-Cu-O high T_c supercond., upper critical field comp. depend. meas 7−118742
Y-Ba-Cu-O high T_c supercond., coexisting phase structs., upper critical field meas. 7−118743
Y-Ba-Cu-O high T_c supercond. single crysts., H_{c2} anisotropy obs 7−118744
Y-Ba-Cu-O high T_c supercond., critical current meas. in high applied fields 7−118748
Y-Ba-Cu-O high T_c supercond., lower critical fields, complex susceptibility meas. 7−125275
Y-Ba-Cu-O high T_c supercond., upper critical fields anisotropy charactn 7−125279
Y-Ba-Cu-O high T_c supercond., mag. props. 7−143704
Y-Ba-Cu-O mixed phase system, superconductivity at 93 K at ambien press. 7−77129
Y-Ba-Cu-O system, high T_c superconductor, magnetisation meas 7−99324

superconducting critical field continued
Y-Ba-Cu-O system, high T_c supercond., high field props. 7−99365
Y-Ba-Cu-O system, high T_c superconductivity 7−118606
Y-Ba-Cu-O systems, high T_c supercond., elec. and mag. props. 7−118622
$YBa_2Cu_2O_{7-y}$ high T_c supercond., upper critical field meas. 7−118745
$YBa_2Cu_3O_7$, extreme type II supercond., magnetisation meas. 7−138124
$YBa_2Cu_3O_7$, high T_c supercond., specific heat jump and critical field 7−112645
$YBa_2Cu_3O_7$, high T_c supercond., connective nature of superconductivity 7−118662
$YBa_2Cu_3O_7$, high-T_c supercond., single-phase, upper critical field 7−131933
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., anomalous temp. depend. of H_{c1} 7−143698
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., critical current density determ. 7−143740
$YBa_2Cu_3O_{7-\delta}$, upper critical field meas. in pulsed mag. field 7−99366
$YBa_2Cu_3O_{7-x}$, high T_c supercond., H_{c2} anisotropy, resistive transition 7−131938
$YBa_2Cu_3O_{8-y}$, supercond. props., effects of comp. var. and annealing in O_2 7−105788
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7−118740
$YBa_2Cu_3O_{9-x}$, high T_c supercond., mag. props. 7−138123
$YBa_2Cu_3O_x$, high T_c supercond., struct., transport and mag. props. 7−99373
$YBa_2Cu_3O_x$, high T_c supercond. transport critical current charact. 7−118754
$YBa_2Cu_3O_x$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$Y_{0.4}Ba_{0.6}CuO_y$, upper critical field meas. in pulsed mag. field 7−99366
$Y_1Ba_2Cu_3O_{7-x}$, high temp. supercond., single cryst., anisotropic nature of supercond. 7−131940
$Y_{1.2}Ba_{0.8}CuO_4$ high T_c superconducting ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
$Y_{2-x}Ba_xCuO_{4-y}$, high T_c supercond., upper critical fields 7−99374
$YBa_3Cu_3O_{7-x}S_x$ T_c supercond., magnetism and critical fields 7−143736
$Y_{0.1}Gd_{0.9}Ba_2Cu_3O_{8-\delta}$, superconductivity 7−131847
$Y_{0.75}R_{0.25}Ba_2Cu_3O_7$ (R=La, Lu), high-temperature superconductivity 7−138100
$Y_5T_4X_{10}$, (T=Ir,Rh,Os; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
$Zr_{70}Cu_{30}$, amorphous superconductor, lower critical field, vibrating reed measurements 7−131937
ZrM (M=Ni,Mo,W) amorphous alloys, supercond. and struct. props. 7−85176
$Zr_{100-x}Ni_x$ amorphous superconducting alloys, critical mag. fields, spin-orbit interaction 7−125276
$Zr_{70}Ni_{30}$, weak localisation effects on upper critical field 7−99371
$Zr_{75}Rh_{25}$, weak localisation effects on upper critical field 7−99371

superconducting critical temperature *see superconducting transition temperature*

superconducting devices
see also cryotrons
cavities for high energy accelerators, fundamental features 7−116731
CEBAF superconducting accelerator cryomodule 7−129458
CEBAF superconducting linac cavity, optimised input waveguide 7−129459
heavy-ion acceleration, superconducting half-wave resonator, cryogenic test 7−109541
high-speed superconducting foil breakers 7−121150
induction detectors for cosmic-ray monopole detection 7−134140
metastable superconducting grain based radiation detector, feasibility 7−129535
modulator for extremely sensitive voltage meas. across multifilamentary supercond. wires 7−134803
proton synchrotron, superconducting secondary beam line 7−109584
ruby maser oscillator, superconducting cavity stabilized, performance 7−130036
solenoid, coaxial, magnetic field distrib. with coaxial superconducting shield 7−102464
superheated superconducting detector for WIMPs missing mass candidates 7−129513
varactor resonator calibration for dielectric measurements 7−95619
$BaPb_{1-x}Bi_xO_3$ superconducting polycrystalline thin film, quick microwave switch appl. 7−131846
Nb sheet and sputter coated cavity meas. comparison 7−131893
Nb superconducting cavities, microwave surface resistance rel. to oxide layers 7−131892

superconducting energy gap
A-15 superconductors, T_c and energy gap calcs. *(Russian)* 7−112614
CDW and SDW type superconductors, thermodynamics, Δ/T_c ratio, paramag. limit 7−112626
cooper Pairs of d_{γ}-symmetry in simple square lattices 7−112635
critical temperature, electron-phonon coupling strength effect 7−112568
Cu ternary metallic oxides, high T_c supercond. and structural chemistry considerations 7−112641
determination in NIS junction, tunnelling method calcs. 7−138151
generalised periodic Anderson model with strong local attraction, superconductivity 7−118696
heavy electron materials, superconducting props., cryst. symmetry effects 7−92387
high T_c supercond., resonating valence bond state, mean field theory 7−125231
high T_c superconducting oxides, status report 7−118663
high T_c superconductors, energy gap, rel. to crit. temp. 7−112607
Kondo lattice, theory of superconductivity *(Chinese)* 7−112612
paramagnons, effects in proximity sandwich 7−70488
pressure-sensitive systems, new form of pair interaction in superconductivity 7−112622
spectroscopy using tunnelling microscope 7−112676
superconductivity mechanism, review 7−112629
superconductivity superlattices, transition temp., single electron density of states and sp. ht., BCS theory calcs. 7−99317
superconductor tunnelling junctions, nonequilibrium phenomena, electron-electron interaction effects calcs. *(Russian)* 7−112680
thin films, supercond., proximity effect and thermodynamic props. 7−112639
Toxen relation for supercond. energy gap 7−70463
tunnel junction with nonequilibrium quasiparticle distrib. function, absolute negative resist. 7−99355

superconducting energy gap continued
tunnelling junction, current jump, real-axis gap function functional derivatives calc. method 7−92357
β-(BEDT-TTF)$_2$X crystals, (X=I_3IAuI), electron-phonon coupling and supercond. gap 7−131926
$CeCu_2Si_2$, heavy fermion supercond., Knight shift meas. 7−85193
$CeCu_2Si_2$, unconventional even parity superconductivity, nucl. relax. rate 7−70470
Cu-oxide ceramic high T_c superconds., perovskite struct., studies on bulk and thin film samples 7−118656
high T_c excitonic superconductor, electron-phonon coupling, thermodynamic props., isotope effect calcs. 7−143691
In films, supercond. quantum size effect 7−70487
La-Ba-Cu oxide, supercond. energy gap, for IR reflectivity meas. 7−99319
La-Ba-Sr-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174
La-Sr-Cu oxide, supercond. energy gap, for IR reflectivity meas. 7−99319
La-Sr-Cu-O, high T_c supercond., electron tunnelling study 7−99356
La-Sr-Cu-O break junction, tunnelling spectroscopy, evidence for strong-coupling superconductivity 7−105849
La-Sr-Cu-O highT_c supercond., energy gap, electron tunnelling meas. 7−92377
La-Sr-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., surface impedance meas. 7−105823
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$(La_{1-x}M_x)_z$ CuO_4 (M=Ba,Sr), high T_c supercond., amorphous citrate process prep. and elec. props. 7−119204
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electron tunnelling of thin films 7−99353
$La_{1-\delta}Sr_{0.2}CuO_4$, high T_c superconductor, point-contact spectroscopy study *(Russian)* 7−99249
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., local tunnelling and energy gaps, STM meas. 7−99350
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, STM meas. 7−99351
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, point-contact tunnelling obs. 7−99352
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap anisotropy, far IR absorpt. spectra anal. 7−99833
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon props., far-IR meas. 7−105824
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, for IR meas. 7−105825
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7−112697
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., far IR transmission spectra meas. 7−99834
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., energy gap, for IR meas. 7−99320
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., energy gap, Korringa const., determ. by NMR 7−132144
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., energy gap 7−99318
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, US and thermal expansion meas. 7−105838
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., thermodynamic and other props. 7−143707
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., spin-lattice relax. of ^{63}Cu and ^{139}La nuclei *(Russian)* 7−143920
$La_{1.85}Sr_{0.15}CuO_4$, tunnelling, point contact investigations 7−105859
$La_{2-x}Sr_xCuO_4$, high T_c superconductor, experimental electronic struct. studies 7−106381
$(Li_{0.65}Na_{0.35})_{0.9}Mo_6O_{17}$ single cryst., superconductivity, electron tunnelling study 7−112703
$LiTi_2O_4$, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
NbN granular superconducting films, energy gap, STM images 7−99341
NbN single cryst. films, surface stability, effect on superconducting props. 7−112030
NbN superconducting microbridges, current-volt. charact. 7−70481
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
$Sr_{0.15}La_{1.85}CuO_{4-x}$, high T_c supercond., far IR props. 7−119021
Tc/Ta-TaO_x-Pb tunnel junction, energy gap and coupling strength, proximity electron tunnelling study 7−118732
ThIrSi, point contact spectroscopy 7−77167
α-$ThSi_2$, point contact spectroscopy 7−77167
UBe_{13}, unconventional even parity superconductivity, nucl. relax. rate 7−70470
UIr_3, anisotropic singlet state supercond. 7−77127
UPt_3, anisotropic singlet state supercond. 7−77127
Y-Ba-Cu-O, high T_c supercond., single-phase, point-contact charact. 7−112722
Y-Ba-Cu-O, high T_c supercond., oriented films and polycrystalline bulk samples, supercond. energy gaps study 7−118714
Y-Ba-Cu-O, high T_c supercond., electron tunnelling 7−143726
Y-Ba-Cu-O high T_c supercond. tunnelling, energy gap obs. 7−99345
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling and IR meas. 7−105826
Y-Ba-Cu-O high T_c supercond., point-contact electron tunnelling 7−105851
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling studies 7−105852
Y-Ba-Cu-O high T_c supercond., break junction tunnelling meas. 7−105853
Y-Ba-Cu-O high T_c supercond., polycrystalline ceramic, far IR refl. studies 7−113193
Y-Ba-Cu-O high T_c supercond. phonon struct., far IR reflectance study 7−113194
Y-Ba-Cu-O high T_c supercond., reflectivity meas. 7−125668
Y-Ba-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174
Y-Ba-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
YB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
$YBa_2Cu_3O_{6.5+x}$, high T_c supercond., far IR props. 7−119021
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7−112697
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., for IR spectroscopy 7−119012

superconducting energy gap continued
$YBa_2Cu_3O_{7-x}$ thin films, fabrication and props. of supercond. device structures 7−143716
$YBa_2Cu_3O_{7-y}$, high T_c supercond., far IR reflectivity spectrum, temp. depend. 7−132278
$(Y_{0.6}Ba_{0.4})_2CuO_{4-y}$, high T_c supercond. props., FIR transmission spectra 7−113204
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
ZrN films and tunnel junctions, struct. and physical props. 7−131917
ZrN/I/Pb tunnel struct., energy gap, proximity effect, T_c and I-V characts. meas. 7−70482

superconducting junction devices
automated torque magnetometer for use in a 13 T superconducting solenoid 7−80826
biomedical superconducting magnetometer system for detecting lung contaminants 7−139322
cosmic neutrino detectors, feasibility of devices based on coherent neutrino-electron interactions 7−145832
DC SQUID, integrated magnetometer 7−108586
DC SQUID, low noise, coupled to high Q gravitational radiation detector 7−128424
edge-junction type nanometer bridge 7−99342
electrochemical corrosion, SQUID magnetometry 7−132801
electrochemical potential difference in gravitational field, SQUID measurements 7−128423
gradiometer, 7-channel DC-SQUID, for brain research, design 7−78916
gradiometer for magnetic fluctuations measurement from seismic waves 7−133955
gravity gradiometer, SQUID-based design, fabrication and calibration 7−102291
gravity gradiometer, SQUID-based theoretical model 7−102290
Helmholtz resonator and SQUID reading device for superfluid flow obs. through aperture 7−73365
high field nuclear magnetometer 7−80830
high temperature superconductivity, review, implications for elec. engineering industry *(Dutch)* 7−118617
high temperature superconductors, conf., Anaheim, CA, USA (April 1987) 7−108049
inductive detector for cosmic magnetic monopoles, using RF SQUID sensors 7−134142
injection lasers using IR pulse Fourier spectroscopy, radiation spectrum dynamics investig. 7−97029
Josephson, with finite capacitance, external synchronisation *(German)* 7−92383
Josephson junction, current biased, phase difference quantum behaviour 7−85202
Josephson junction, nonperiodic perturbations and bifurcations, Melnikov's method 7−70489
Josephson junction, phase locking to external microwave source 7−112684
Josephson junction, quantum effects in the current-voltage characteristic 7−85203
Josephson junction parametric amplifiers, nonlinear effects of noise 7−138148
Josephson junctions, 2D arrays, dynamic conductance 7−138144
Josephson junctions, 2D arrays of superconducting weak links, vortex dynamics study 7−112706
Josephson junctions, macroscopic quantum effect, appl. to single electron transfer detector *(Japanese)* 7−143721
Josephson junctions, nanoampere, current-voltage characts. 7−131920
Josephson junctions, physical effects and applications, conf., Torino, Italy (Sept. 1985) 7−102018
Josephson junctions, variable-thickness bridges, fabrication by RF sputter etching *(Japanese)* 7−125269
Josephson junctions with Si interlayer and arrays, DC and microwave props. 7−131909
Josephson long junction with surface losses, anal. and numerical results 7−138142
Josephson long junctions, phase shift effects of I-V characts. of zero-field current spikes 7−138141
Josephson transmission line, direct obs. of fluxon reflection 7−99348
Josephson transmission line, resistively coupled, fluxon-propagation threshold properties 7−85204
Josephson transmission lines, anal. solns. for bunched two-fluxon states 7−112696
Josephson triode for MM-wave heterodyne detect., anal. 7−125261
Josephson weak links, quasi-2D, stationary props. 7−70485
light induced current modifications, appl. in Josephson tunnel junctions as light-sensitive barriers 7−76993
low-noise superconductor-insulator-superconductor heterodyne receiver at 230 GHz, design for radioastronomical appls. 7−134132
microstrips, current-biased, phase-slip states in normal-supercond. relax. 7−70478
multiloop SQUID for magnetic induction measurement 7−121161
phase-quantum-tunnel junction, dielectric flux quantisation 7−138145
quantum systems, integral and fractional quantisation 7−124814
RF SQUID, tests of superheated superconducting colloids 7−129514
RF-biased Josephson junction, phase lock global stability near chaotic crisis, digital simulation 7−112686
semiconductors, energy-level struct. determ. using superconducting photorelaxation spectroscopy *(Japanese)* 7−76734
SNS bridges, fabrication by sputter deposition and anodic oxidation *(Japanese)* 7−125270
SQUID, DC, Nb-Pb Josephson junctions fabrication appl. *(Japanese)* 7−99357
SQUID galvanometer for quantum Hall resistance meas. 7−108572
SQUID gradiometers evaluation, using spatial Fourier transform 7−128603
SQUID magnetometer, RF, for biomag. field detection, digital control unit 7−79122
SQUID magnetometer use for thermally fluctuating mag. field meas. of normal metals at low temp. 7−73383
SQUID magnetometers, uses in medicine 7−87130
SQUID magnetometric apparatus for dynamic mapping of heart 7−87297
SQUID sensors, DC, integrated thin film, design and appl. 7−128599
SQUID-based planar gradiometer for non-destructive testing of ferromagnetic plates 7−132894
SQUID-based rock magnetometer with open-ended horizontal room-temperature access 7−139787

superconducting junction devices continued
SQUID-magnetoencephalography system, mech. performance of GFRP dewar with spherical bottom 7−79123
SQUIDs, biomagnetic measurements with a third order gradiometer 7−133336
Stanford octagonal magnetic monopole detector 7−135736
superconducting FET, critical current induced by proximity effect, carrier conc. depend. 7−105850
superconducting films, non-Josephson energy generation, quasi-particle transport and struct. effects *(Russian)* 7−77164
superconductor-insulator-normal metal proximity junctions near T_c, temp depend. of critical Josephson current 7−85201
superconductor-insulator-superconductor receiver, low noise broadband for radioastronomy obs. 7−127722
superconductor-insulator-superconductor receiver, low noise 230 GHz astronomical appl. 7−127723
superconductor-inversion layer-superconductor junction, microscopic theory of the supercurrent 7−70491
superconductor/insulator superlattices propagation and generation of Josephson radiation 7−138146
surface flaw detection and sizing using SQUID-based eddy current probe 7−100490
transition edge device, acoustic detector for neutrino experiments and dark matter searches 7−129512
weak links, quasiparticle injected, RF response 7−85199
GdBaCuO high T_c supercond. Josephson junctions, DC SQUID operation 7−143718
In microbridges, phase-slip centres 7−143715
Nb based light-sensitive planar interferometers 7−128652
Nb electrode Josephson tunnel junctions with a-Si barriers, fabrication and props. 7−131904
$Nb/AlO_x/Nb$ Josephson junction, fabrication, lift-off processes 7−70484
$Nb-Al_2O_3-Nb$ SIS tunnel junctions, fabrication 7−138150
Nb-Cu-Nb SNS bridges, directional sputter deposition and anodic oxidation 7−85200
$Nb-Nb_2O_5-PbBi(PbAuIn)$ tunnel junctions, electron trap states and LF noise 7−131919
$Nb-NbO_x-Pb(In)$ tunnel barrier contact parameters 7−143720
NbN based SIS junction, heterodyne mixing expts., for radiotelescopes 7−120277
NbN nanobridge in DC-SQUID, effective mag. flux 7−70483
NbN supercond. broad bridges, transition to resistive state 7−105858
NbN/BN granular films−a novel broadband bolometric detector for pulsed far infrared radiation 7−128653
NbN/MgO/NbN Josephson tunnel junctions, temperature-dependent props. 7−131918
$NbN-Al_2O_3-NbN$ tunnel junction series arrays, processing 7−131908
NbN-MgO-NbN tunnel junctions, characts., appl. in submillimeter wave heterodyne receivers 7−131913
NbN-Nb/PbSb Josephson tunnel junction prep. in single vac. cycle 7−143719
$NbN-NbO_x-Pb$ Josephson junctions, AC props. 7−132448
NbN-Si-Nb based Josephson junctions with unoxidised Si barriers 7−131907
Sn 7−92378
Y-Ba-Cu-O, high T_c supercond., AC Josephson effect obs. at 77 K 7−118731
Y-Ba-Cu-O high T_c supercond. ceramic Josephson junctions, DC SQUID operation at 77 K 7−105845
Y-Ba-Cu-O high T_c supercond., thin film and SQUID fabrication 7−119155
Y-Ba-Cu-O high T_c supercond. weak link, light detection appls 7−121224
Y-Ba-Cu-O thin films and tunnel junctions, high T_c supercond., struct. stability, kinetic processes 7−118737
YBaCuO high T_c supercond. Josephson junctions, DC SQUID operation 7−143718
$YBa_2Cu_3O_7$ high T_c supercond. thin film based SQUIDs, fabrication and operation 7−112725
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond. based Josephson point contact, elec. characts. 7−118738
$YBa_2Cu_3O_{7-x}$ thin films, fabrication and props. of supercond. device structures 7−143716
$YBa_2Cu_3O_{8-y}$, SQUID behaviour 7−118736
$Y_{1.2}Ba_{0.8}CuO_4$, ceramic high-temp. superconductor, RF SQUID construction 7−105847
ZrN films and tunnel junctions, struct. and physical props. 7−131917

superconducting lenses *see magnetic lenses*

superconducting logic circuits
He fast open-cycle cryocooler for cryogenic high-speed signal processing circuits 7−128584

superconducting machines
armature, three-phase, windings and cryostat design and construct 7−73359
level detector of liquid He 7−73366

superconducting magnets
see also superconducting machines
1 GW underground superconducting-magnet energy storage plant prospects 7−93549
2D magnetic resonance imaging principles and system configuration, medical appl. *(Japanese)* 7−107207
3 Tesla superconducting solenoid for the AMY particle detector at TRISTAN 7−129473
5-GWh SMES utility-scale plant conceptual design 7−133134
accelerator magnets, epoxy-free winding and assembly of cos θ coils 7−129489
air-core superconducting solenoid as nuclear-reaction-product spectrometer tests 7−141389
Argonne bubble chamber supermagnet 7−129511
ASTROMAG, superconducting particle astrophysics magnet Facility for NASA Space Station 7−134141
beamline switching magnet, construction and testing 7−129487
cables, bending for planar and nonplanar magnets, geometrical considerations 7−135637
CERN Large Hadron Collider 10 T superconducting dipole magnets 7−129471
cold yoke superconducting dipole magnet config. for HERA proton storage ring 7−129481
conf. on fusion technology, Avignon, France, Sept. 1986 7−120706

superconducting magnets continued
cooling by supercritical He in Tokamaks using mechanical and jet forced flow pumps 7−67336
cooling using liquid He, Mirror Fusion Test Facility study 7−129394
cryogenic system for superconducting magnetic separator 7−67338
cryostat disk coils, cooldown modelling 7−134744
cryostat of superconducting magnets for mag. resonance imaging systems *(Japanese)* 7−133411
DC pump system, magnetohydrodynamic aspects 7−117678
dilution refrigerators and superconducting/hybrid magnets in physics research 7−67331
fusion reactor coils, 30 kA vapour-cooled current leads development 7−74080
fusion reactors and particle accelerators, superconducting magnets, requirements 7−74026
gyroscope, cryogenic, using superconducting magnetic suspensions, force characts. 7−73380
helical coil demountable multipin joint contact resistance 7−129382
helical coil for heliotron, contact resistance of demountable multi-pin joint 7−135653
HERA project, prototype He transfer line 7−74301
High Field Laboratory for Superconducting Materials, research overview 7−105862
JFT-2M tokamak, high-power mm-wave transmitter, superconducting magnets 7−135596
JOSEF g-factor studies, supercond. mag. design 7−121610
Large Coil Task, cooldown of superconducting magnet coils 7−122193
Large Coil Task, EURATOM coil, design, construction, operation, fusion appls. 7−129385
Large Coil Task, pool-boiling cooled magnet, single-coil and design point tests at IFSMTF 7−129388
Large Coil Task, Swiss coil, design and testing, fusion appls. 7−129386
Large Coil Task, testing US coils, fusion reactor appls. 7−129383
Large Coil Task project, superconducting toroidal field coil for nuclear fusion facility 7−74024
Large Coil Tasks, Japanese coil design and testing, fusion appls. 7−129384
LCT coils and instrumentation, testing electrical insulation 7−135655
LEP upgrading using superconducting cavities 7−141347
level detector of liquid He 7−73366
medical NMR imaging systems, mobile, superconductive magnets, operational experience 7−71846
multipole magnets for particle accelerators, coil end configurations 7−141343
NET, coil system, design 7−122096
NET, poloidal field coil power supply 7−135592
NET, toroidal field coil, mechanical design 7−122192
NET TF-coil, stress anal. of SIN conductor 7−122195
NMR imaging, magnets with reduced stray fields, considerations in design 7−139337
NMR imaging and spectroscopy, magnet design 7−145177
pancake wound superconducting magnets, effectiveness of acoustic emission technique 7−106751
particle accelerator appl., magnetic field meas., SSC magnet design 7−81810
poloidal field coils, low loss superconducting cable 7−122191
pool-boiling coils, IFSMTF full array tests, Large Coil Task study 7−129389
pulse coil technology, demonstration coils for Fusion Experimental Reactor appls. 7−129395
pulsed, partially stabilised *(Japanese)* 7−126661
pulsed, R&D summary *(Japanese)* 7−123998
pulsed coil, CAD system for fusion reactors 7−122189
pulsed SMES for space appls. 7−133132
ribbon superconductors, magnetic flux discontinuities meas apparatus 7−134819
ripple shielding coils for accurate resistivity meas. in hybrid magnets 7−105531
SCIN synchrotron, superconducting magnets, magnetostatic field calcs., algorithms *(Russian)* 7−116745
six coil test for Swiss Large Coil Test study, preliminary results 7−129391
SMES, two-layer, heat transfer in He II 7−133136
SMES structure, friction anal. 7−133133
solenoids constant determ., by nuclear induction 7−134821
split type superconducting magnet for stress effect measurement of superconducting materials 7−105871
SSC, suspension system design 7−74302
SSC 4.5 m reference design D dipole heater-induced quenches 7−129466
SSC 5 cm aperture dipole studies, design B dipoles 7−129474
SSC dipoles, keystoned flat superconducting cables, manufacture 7−129463
SSC dipoles, mag. field measurements 7−129464
SSC dipoles, transverse quench propagation measurement 7−129468
SSC dipoles end sections, field quality 7−129475
SSC full-scale dipole magnet cryostat thermal model, design, construction, and test 7−129465
SSC magnets, control of fields due to superconductor magnetisation 7−129469
SSC magnets, effects of filament magnetization in superconducting magnets as calculated by POISSON 7−129470
SSC reference design D dipole magnet, active quench protection strip heaters 7−129467
SSC superferric magnets, critical props. meas. monitoring 7−129472
strongly curved supercond. mag. effect on storage ring optics 7−89842
superconducting pulse magnet for energy storage and its nonmetallic cryostat for diurnal energy control 7−133135
Superconducting Super Collider accelerator facility, development and programs 7−129476
Superconducting Super Collider model magnets, 1.8 K non-quench training study 7−129480
supercritical He cooled superconducting coil, thermal characts. and fluid conditions of He 7−67332
supercritical He cooled superconducting test magnet, cryogenic aspects 7−67335
superfine magnets for accelerator, design and testing 7−129488
synchrotron dipole magnet for Superconducting Super Collider, prototype test results 7−129477
synchrotron dipole magnets, for Superconducting Super Collider, cold mass assembly construction 7−129478
superconducting magnets continued
synchrotron magnet, development of high field uniformity type for Superconducting Super Collider 7−129479
synchrotrons, superconducting magnets for future large accelerators 7−141345
TESPE-S magnet system, safety expt. 7−135657
TF coils, forced flow He II cooled cables 7−122194
Tohoku Hybrid Magnet System 7−102465
Tokamak T-15, gyrotron plasma heating, supercond. magnet systems investig. 7−74079
tokamak T-15 installation, supercond. toroidal mag. system, conductor behaviour 7−91373
TOPAZ superconducting solenoid cryostat, multilayer insulation with aluminised dimpled polyester 7−74303
TOPAZ thin superconducting solenoid cryogenic system, design and testing 7−67333
Tore Supra, manufacture and transport of large poloidal field coils 7−135648
Tore Supra, toroidal field coil tests 7−135647
Tore Supra, toroidal field coils, fabrication of conductor, test results 7−135646
Tore Supra toroidal field coils, dimensional manufacturing accuracies 7−135652
toroidal coils, internal connections, manufacturing process *(French)* 7−135642
toroidal field coils, response to internal heating 7−135654
torque magnetometer using high field superconducting magnets for anisotropy meas. 7−95625
torquer for Infrared Satellite Observatory camera 7−67328
two-phase He flow for cooling scheme, pressure drop investig. 7−67334
VENUS detector, excitation of a superconducting large thin solenoid magnet 7−129515
whole-body NMR imaging, optimal design 7−133497
windings for superhot plasmas *(German)* 7−97817
He two-phase flow in superconducting rotor 7−67337
^{4}He, superfluid, heat transfer anal. using finite differences for magnet cooling appls. 7−73371
Nb-Ti cable-in-conduit conductor, stability, expt. results for magnet coils 7−135573
$Nb_3Al_{1-x}Ge_x$ supercond. tape prep. by electron beam annealing, high-field props. study, magnet appl. 7−132518
Nb_3Sn force cooled superconducting coil, development 7−135650
Nb_3Sn, high field superconducting coils for Mirror Fusion Test Facility 7−129393
Nb_3Sn, supercond. magnet, full array Large Coil Task tests 7−129387
Nb_3Sn:Ti in-situ wire, effect of Ti additions 7−131976
Nb_3Sn:Ti wires fabricated by internal Sn diffusion method, Ti addition effects 7−131953
Nb_3Sn-Cu cable-in-conduit superconductor for fusion appls., testing at IFSMTF 7−129392
NbTi film for mag. shield, thickness depend. of screened mag. fields 7−77147
NbTi, forced-flow cooled coil, IFSMTF tests for Large Coil Task program 7−129390
NbTi, high field superconducting coils for Mirror Fusion Test Facility 7−129393
NbTi multifilamentary superconducting coil, loss meas. 7−77159
NbTi, supercond. magnet, full array Large Coil Task tests 7−129387
NbTi-Cu cable-in-conduit conductors, stability at short heat pulse duration 7−77185
NbTi-Cu superconductor, Al-stabilised, for use in large magnets 7−77169
V_3Ga, superconductor for generating magnetic fields over 18 T 7−77184

superconducting materials
see also composite superconductors; dirty superconductors; magnetic superconductors; organic superconductors; strong-coupling superconductors; superconducting semiconductors; superconducting thin films; type I superconductors; type II superconductors
anisotropic superconductors, reson. impurity scatt., effects of phase shifts and particle hole asymmetry 7−112670
ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
high-T_c superconductor, model involving electron-phonon interactions 7−112630
metal superlattices, collective electronic phenomena *(Russian)* 7−137836
metallic glasses, sound absorption, two-level systems relaxation 7−118040
rare earth oxides, $RBa_2Cu_3O_{6+x}$ (R=Y,La,Nd,Sm,Eu,Gd,Ho,Er,Lu), square planar cpds., superconductivity above 90 K 7−105795
rare earths and actinides, anomalous, conf., Grenoble, France, (July 1986) 7−72697
review of new superconducting materials 7−131828
superconductor-insulator mixtures, conductivity exponent 7−85187
surface EM losses meas. using calorimeter 7−134820
AlSi alloy, superconducting study using ion beam mixing 7−85159
AlSi disordered alloy prodn. by ion beam mixing, T_c enhancement 7−84074
Ba-Sm-Cu-O, high Tc conductivity, polycrystalline samples, perovskite phase 7−143744
$Ba_2Eu_{0.9}Y_{0.1}Cu_3O_x$, superconducting cuprate perovskites 7−105794
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7−138111
$Ba_2YCu_3O_{9-\delta}$, single phase perovskite, 91 K bulk supercond. 7−85165
C_8K, graphite intercalation cpd., supercond. of high-press. phases 7−105806
$Cu_xMo_6S_8$, x=1.8, 3.2, Chevrel phase supercond., phonon energies and symmetries, Raman study 7−132276
$Hg_{3-\delta}AsF_6$, sp. ht. and diamag. susceptibility above supercond. transition temp. 7−99397
La_2CuO_4:Ba superconductive glass state, flux-trapping, mag. moment and diamag. suscept. meas. 7−77150
$La_{2-x}Sr_xCuO_4$, Peierls distortion evidence from vibr. spectroscopy 7−85658
$Li(M_xTi_{2-x})O_4$, (M=Li^+, Al^{3+} and Cr^{3+}), cation-substituted, supercond.-semicond. transition 7−112611
Lu-Ba-Cu-O, superconductivity near 90 K 7−105793
δ-MoN, high-press., high-temp. expts. 7−104620
MoN_x, supercond., prep. by isostatic direct nitriding at high press. and high temp. 7−105765
$PbMo_6S_8$ Chevrel phase supercond., phonon energies and symmetries, Raman study 7−132276
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102

superconducting materials continued
Pr, self-consistent band struct. under press 7−143330
Sm-Ba-Cu-O, high Tc conductivity, polycrystalline samples, perovskite phase 7−143744
$SnMo_6S_8$ Chevrel phase supercond., phonon energies and symmetries, Raman study 7−132276
$Sn_{33}Pb_{67}$, ultradisperse superconductors, coherent phenomena *(Russian)* 7−138152
UBe_{13} heavy-electron superconductor, quadrupolar Kondo effect 7−137914
V-Ru-H system, superconductivity and cryst. struct. of high-press. phases 7−138095
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$, 90 K superconductor, switching phenomena 7−85190
$Zr_{100-x}Cu_x$ amorphous superconducting sputtered alloy, low-temp thermodynamic props. 7−138128

superconducting quantum interference devices *see superconducting junction devices*

superconducting semiconductor materials *see superconducting semiconductors*

superconducting semiconductors
high magnetic field superconductivity 7−85183
high T_c superconductivity and the metal-semiconductor transition 7−118611
mixed valence doped superconducting semiconductors, excitonic theory 7−118694
rare earth cpds., $RBa_2Cu_3O_{7-x}$, R=Y, La-Lu, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
$Ba_2YCu_3O_6$, structure and properties 7−104685
CdS, anomalous diamagnetism, paramagnetism and superconducting behaviour 7−112613
CdS, superconductivity and soft modes, e-p coupling and mag. props., variational calcs. 7−143690
GaAs-$Ga_{0.77}Al_{0.23}As$ heterojunction, field-periodic magnetoconductance oscills., supercond. transition 7−112669
GaSb, amorphous, superconductivity under press. *(Russian)* 7−77122
GeTe, amorphous, press.-induced superconductivity and metal-insulator transition *(Russian)* 7−112542
GeTe high-press. superconducting state investigation 7−77123
La-Ba-Cu-O high T_c supercond. and semicond., cryst. struct. studies 7−117902
$La_{1.85}Sr_{0.15}CuO_4$, elec. resist., Hall effect and thermoelec. power meas. in normal and supercond. states 7−105790
$Li(M_xTi_{2-x})O_4$, (M=Li^+, Al^{3+} and Cr^{3+}), cation-substituted, supercond.-semicond. transition 7−112611
PbTe:In(Tl), impurity mixed-valence behaviour on superconductivity mechanism 7−92143
$Pb_{1-x}Tl_xTe$, system with localised pairs and free electrons, superconductivity 7−118695
SnTe:In(Tl), impurity mixed-valence behaviour on superconductivity mechanism 7−92143
$YBa_2Cu_3O_x$ high T_c supercond. and semicond. samples, electronic struct., stoichiometry effects 7−143342

superconducting thin films
Al_xO_{1-x} superconducting film, proximity coupling of SAWs, expt. study 7−131916
amorphous films, supercond. transition temp. 7−105799
excess current and the dynamics of vortices in broad superconducting films 7−105872
fractal multilayered superconductors, upper parallel crit. field meas. 7−70500
granular films, supercond. onset and quantum-phase fluctuations, effect of quasiparticle tunnelling 7−99338
granular films, superconducting state, quasiparticle tunnelling 7−105843
granular supercond. films, quantum fluctuations and dissipation 7−92375
granular type, average grain size determ. 7−131502
high temperature superconductivity, review, implications for elec. engineering industry *(Dutch)* 7−118617
magnetic flux-flow in resistive domains, dynamics *(Russian)* 7−112716
matched pinning systems, flux vortex dynamics and elec. fields 7−125282
metal superlattices, collective electronic phenomena *(Russian)* 7−137836
multilayer superconductor with alternate conducting and insulating layers, excitonic superconductivity model 7−85180
non-Josephson energy generation, quasi-particle transport and struct. effects *(Russian)* 7−77164
nonlinear properties with localised resistive state 7−85208
oxide films, high T_c supercond., prep. on ceramic substrates 7−113501
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
proximity contacts, pair pot., tunnelling density of states, self-consistent calcs. 7−99349
proximity effect and thermodynamic props. 7−112639
quasiperiodic layered structures, supercond., crit. indices, Ginzburg-Landau approx. 7−105815
$AgMo_6S_8$ superconducting thin films, reactive sputtering 7−118619
$AgMo_6S_8$ superconducting thin films, critical current densities and critical fields 7−131970
Al thin films and narrow wires, localisation and supercond. fluctuations 7−70479
Al:Au(Pd), superconducting films, metal-insulator transition 7−125185
Al/magnetic insulator contact, density of states, Zeeman splitting, spin polarised tunnelling studies 7−131915
Al/rare earth oxide interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
Au-Nb ultrathin films on Si, resistance decrease and diamagnetism increase above 77 K 7−70432
$BaPb_{1-x}Bi_xO_3$ superconducting polycrystalline thin film, quick microwave switch appl. 7−131846
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7−138111
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond., bulk and thin film studies 7−143711
$Ba_2YCu_3O_{7-y}$, epitaxial thin films, anisotropic superconducting critical current 7−118750
Be amorphous sputtered thin films, critical currents and flux pinning, Abrikosov vortex memory appl. 7−112719
Be films, ion beam sputtered, superconducting crit. temp. 7−70446
Be superconducting films, ion beam sputtered, props. study 7−131845
$CeCu_2Si_2$ films, lattice disorder effects on superconductivity and electrical resistivity, fast ion irradiation 7−70495
$CeCu_2Si_2$ thin films, ion irrad., heavy fermion superconductivity 7−77126
$CoSi_2$, ultrathin epitaxial films, low temp. transport props. 7−125143

superconducting thin films continued
Cu-oxide ceramic high T_c superconds., perovskite struct., studies on bulk and thin film samples 7−118656
$DyBa_2Cu_3O_{7-x}$ high T_c supercond. film, MBE growth and props. 7−143245
Er-Ba-Cu-O RF sputtered supercond. films, high T_c superconductivity 7−143658
HfV_2 films, ion-plasma deposition, annealing, supercond., struct. *(Russian)* 7−137750
In films, supercond. quantum size effect 7−70487
In, superconducting thin film, domain struct., Anderson localisation, He both boiling study 7−85210
In-Ge films, supercond. upper crit. fields, transition temps. 7−70501
$In\text{-}In_xO_y$ thin film supercond., influence of mag. field on 2D phase transition 7−143739
$In\text{-}InO_x$ disordered composite supercond. film, microstruct., dimensionality and transition temp. depression studies 7−77134
$In\text{-}InO_x$ supercond. film, SAW attenuation *(Japanese)* 7−125258
La-S films, sputter deposition, structural and transport props. 7−76691
La-Sr-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
La-Sr-Cu-O thin films, supercond., props. 7−105791
$(La_{1-x}M_x)_yCuO_4$ (M=Sr, Ba, Ca) high T_c thin films, sputter prep. and transition temp. studies 7−92868
$(LaSr)_2CuO_4$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electron tunnelling of thin films 7−99353
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. thin films, Hall effect meas. 7−92210
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin films, T_c meas. 7−99239
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sputter deposition and onset temp. 7−105792
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., bulk and thin film studies 7−143711
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ supercond. films, high T_c, screen printing method prep. 7−92915
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, high T_c superconducting films, prep. conditions, optimisation 7−92867
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, superconducting thin films, sputter deposition 7−125179
$La_{1.8}Sr_{0.2}CuO_4$ high T_c film Josephson junctions 7−92380
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond. ceramics, prep. and props. 7−118671
$La_{1.8}Sr_{0.2}CuO_4$, superconductivity thin films, synthesis and irradiation-induced defects 7−125218
$La_{2-x}Sr_xCuO_4$ thin films, supercond. props., diamag. transition 7−118613
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
MoN films, synthesis by active N sputtering, expt. study 7−132452
MoN thin films, hexagonal struct., formation, supercond. props. and ion irradiation effects study 7−131844
MoN_x films, formation by ion beam and vapour deposition method 7−92875
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
Nb films grown in UHV MBE system, epitaxial relations and supercond. props. 7−76687
Nb laser plasma deposited superconducting thin films, T_c determ., film thickness and deposition conditions depend. 7−118641
Nb superconducting foils in a transverse field, nonuniform critical current distrib. 7−125287
Nb variable thickness bridge array, prep. and props. 7−118725
Nb/Pb Josephson tunnel junctions, fabrication by electron beam evaporation 7−138139
Nb-Ge high T_c superconducting film, prep. and surface study 7−125187
Nb-Sn thin film, A15 supercond., sp. ht. meas. 7−112662
Nb-Ta superlattices, hydrogenated, elec., struct. and supercond. props. 7−112577
NbC films, prepared by reactive laser sputtering, supercond. props., X-ray and chem. anal. 7−99250
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
NbCN superconducting films, MOCVD deposited, struct. and props. study 7−131842
NbCN superconducting films, upper critical field meas. and penetration depth determ. 7−131881
$NbC_{1-x}N_x$ coatings on C fibres, superconductivity 7−138167
NbC_xN_{1-x} high T_c superconducting films, high-rate synthesis by hollow target sputtering 7−100062
NbC_xN_{1-x} superconducting films, reactively sputtered in (Ar, N_2, C_2H_4) mixtures, charactn. 7−131843
Nb_3Ge films, CVD grown, high field superconducting props. 7−112720
Nb_3Ge layers, CVD controlled by gas phase diffusion, supercond. transition temp. 7−112609
Nb_3Ge superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
a-Nb_3Ge:Ar, sputtered films, bias threshold for Ar bubble growth 7−117817
Nb_3Ge:Ar sputtered amorphous films, impurity bubbles, flux pinning and TEM studies 7−131138
NbN film, critical current density, Ambegaokar-Baratoff-Ginzburg-Landau crossover effects 7−92396
NbN granular superconducting films, energy gap, STM images 7−99341
NbN high-field supercond. sputter deposited on complex substrates 7−131841
NbN single cryst. films, surface stability, effect on superconducting props. 7−112030
NbN sputtered coatings on practical substrates, high field supercond. props. study 7−131957
NbN, sputtered film, fabrication, struct. and supercond. props. *(Japanese)* 7−112537
NbN sputtered films, electron microscopy study, superconducting props. 7−105341
NbN sputtered thin films, microwave surface resistance 7−131731
NbN supercond. broad bridges, transition to resistive state 7−105858
NbN supercond. thin films, RF surface resistance 7−138120

superconducting thin films continued
NbN superconducting thin films, sputter deposition, optical emission spectroscopy 7−132450
NbN thin films, microstruct., resistivity, anisotropy of upper critical field 7−131934
NbN-BN granular cermet films, transport props. study 7−131852
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
Nb_3Sn supercond. thin films, RF surface resistance 7−138120
Nb_3Sn superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
NbTi for mag. shield, thickness depend. of screened mag. fields 7−77147
$Nb_{0.8}Ti_{0.2}$, ion implanted He porosity and supercond. props. *(Russian)* 7−99243
NbZr supercond. thin films, RF surface resistance 7−138120
NiB film phase-quantum-tunnel junction, dielectric flux quantisation 7−138145
Pb-Bi superconducting films, pin influence on mixed state 7−131945
$PbMo_6S_8$ supercond. thin films, defect struct., high resolution electron microscopy 7−112123
PbTe:Tl MBE film, supercond. transition props. study 7−131853
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
PtSi thin wires, localisation and electron-electron interaction effects 7−125152
RuN films, synthesis by active N sputtering, expt. study 7−132452
Sn-Au, superconducting Sn films with Au overlayers, fluctuation induced conductivity 7−112552
Sn-Ge granular system, supercond. transitions *(Russian)* 7−92324
$Sr_xLa_{2-x}CuO_{4-y}$ thin film high T_c supercond., sputter deposition prep. 7−92869
TaC_x thin films, CVD, optical profile, superconducting transition 7−125826
V/Ag multilayered films with artificial superstruct., prep and supercond. 7−112677
V/Mo superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V/Si superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V-Ag multilayered structures, proximity coupled, upper crit. field meas. 7−99372
V-Ga thin film, A15 supercond., sp. ht. meas. 7−112662
V-Si thin film, A15 supercond., sp. ht. meas. 7−112662
V_3Ga very thin supercond. films, critical fields and spin polarised tunnelling meas. 7−131935
VN thin films, ion irrad. prep., supercond. and elec. props. 7−76226
V_3Si films, reactive diffusion formed, superconducting transition temps. 7−112553
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
Y-Ba-Cu-O, supercond. coatings, plasma sprayed, transition temp. above 77 K 7−112565
Y-Ba-Cu-O films, constricted, Josephson effects 7−143727
Y-Ba-Cu-O high T_c supercond. thin films, 89 K T_c and Meissner effect obs. 7−105750
Y-Ba-Cu-O high T_c supercond. films, DC magnetron sputtering prep. and props. study 7−118604
Y-Ba-Cu-O high T_c supercond. sputtered film charactn. 7−118627
Y-Ba-Cu-O high T_c supercond. thin films, Meissner effect obs. 7−118704
Y-Ba-Cu-O high T_c supercond. plasma powder sprayed coating props. 7−119133
Y-Ba-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
Y-Ba-Cu-O high T_c supercond. thin films, RF magnetron sputtering prep. 7−119139
Y-Ba-Cu-O high T_c supercond. thin film, dual magnetron sputtering prep. 7−119140
Y-Ba-Cu-O high T_c supercond., thin film and SQUID fabrication 7−119155
Y-Ba-Cu-O high T_c supercond. weak link, light detection appls. 7−121224
Y-Ba-Cu-O high T_c supercond., pulsed laser evaporation prep. 7−126026
Y-Ba-Cu-O high T_c supercond. sputtered films, struct. and supercond. props. studies 7−131832
Y-Ba-Cu-O high T_c supercond. film, struct. and supercond. props. 7−143290
Y-Ba-Cu-O high T_c supercond. thin film prep. by DC magnetron sputtering and props. 7−144272
Y-Ba-Cu-O high T_c supercond. films, chemical etching props. study 7−144575
Y-Ba-Cu-O high temp. supercond. film on $SrTiO_3$, epitaxial ordering 7−131833
Y-Ba-Cu-O superconducting thin films, formation on $SrTiO_3$ substrate 7−144290
Y-Ba-Cu-O thin films, supercond., props. 7−105791
Y-Ba-Cu-O thin films and tunnel junctions, high T_c supercond., struct. stability, kinetic processes 7−118737
YBaCuO high T_c supercond. multilayer e-beam deposited thin film props. 7−138090
YBaCuO high T_c supercond., thin film, pulsed laser etching study 7−138858
YBaCuO superconducting thin films, high T_c, sputter deposition method and superconducting props. 7−92345
$YBa_2Cu_3O_7$, high T_c supercond. ceramics, prep. and props. 7−118671
$YBa_2Cu_3O_7$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$YBa_2Cu_3O_{7-x}$, epitaxial film, high T_c supercond., critical current meas. 7−112723
$YBa_2Cu_3O_{7-x}$ high T_c supercond. film prep. by RF magnetron sputtering 7−144352
$YBa_2Cu_3O_{7-x}$ thin films, fabrication and props. of supercond. device structures 7−143716
$YBa_2Cu_3O_x$ ceramic high T_c supercond., prep. and props. 7−118608
$YBa_2Cu_3O_x$ plasma and hypersonic flame powder spraying prep. and props. 7−119132
$YBa_2Cu_3O_x$ supercond. thin films, high T_c, prep. and transition temps. 7−131469
$YBa_2Cu_3O_x$ thin films, ion implanted, radiation damage effects on supercond. and structural props. 7−112531
Yb-Ba-Cu-O high T_c supercond. thin films, sputter deposition 7−112554

superconducting thin films continued
Yb-Ba-Cu-O high T_c supercond. film, screen printed, transition temps. 7−112556
$Zr_{100-x}Cu_x$ amorphous superconducting sputtered alloy, low-temp thermodynamic props. 7−138128
ZrN thin films, DC reactively magnetron sputtered, structural, superconducting and optical props. 7−99276
ZrN/I/Pb tunnel struct., energy gap, proximity effect, T_c and I-V charact. meas. 7−70482

superconducting transition temperature
A15 compounds, supercond. transition temp., stress effects 7−105779
A15 cpds., defect-induced effect on superconducting transition temp. *(Russian)* 7−99248
A15 cpds., superconductivity under nonhydrostatic stress 7−105787
A15 superconductors, neutron irrad., transition temp. and critical currents 7−105776
A-15 superconductors, T_c and energy gap calcs. *(Russian)* 7−112614
ab initio calculation principles, book contrib. 7−85175
alloys, stability and superconductivity connections 7−131829
amorphous films, supercond. transition temp. 7−105799
Anderson localisation and universal degradation 7−138101
anisotropic singlet superconductivity for systems with strongly correlated electrons 7−131873
aperiodic networks, supercond. phase boundary in mag. field 7−112715
$Ba_2RCu_3O_{9-\delta}$, R=Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb,Lu, high T_c superconductivity obs. 7−118659
BCS superconductor, mixed-valence impurities, reduced transition temp. and sp. ht. jump, Brillouin-Wigner perturbation calcs. 7−85185
β-(BEDD-TTF)$_2I_3$, self-consistent band struct. calcs. using local density approx. 7−118357
β-(BEDT-TFF)$_2I_3$, high T_c superconductivity, anion alloying and solvent effects 7−77142
β-(BEDT-TTF)$_2AuI_2$, mag. and high press. cond. meas. 7−85172
β-(BEDT-TTF)$_2I_3$, direct detect. of supercond. β-1.5-β-8 phase transition 7−99308
β-(BEDT-TTF)$_2I_3$, high T_c supercond. state and normal state cond. anisotropy study 7−77140
β-(BEDT-TTF)$_2I_3$, high-and low-T_c superconducting phases study 7−77141
β-(BEDT-TTF)$_2I_3$, phase stability, DTA studies 7−118058
α_t-(BEDT-TTF)$_2I_3$, stable superconducting state at 8 K 7−125217
β-(BEDT-TTF)$_2I_3$, supercond., temperature-stress phase diagram 7−85173
β-(BEDT-TTF)$_2I_3$ organic supercond., resist. and magnetoresist. 7−99312
β-(BEDT-TTF)$_2I_3$ quasi-2D metal, spin susceptibility and ESR line profile *(Russian)* 7−143894
β-(BEDT-TTF)$_2I_3$ quasi-2D organic metal supercond., conductivity anisotropy and T_c meas. 7−137886
β-(BEDT-TTF)$_2I_3$ single crysts., low temp. cond. under electron irrad. *(Russian)* 7−84868
β-(BEDT-TTF)$_2I_3$ supercond., low temp. struct. transition 7−124497
β-(BEDT-TTF)$_2IAuI$, superconductor, reson. Raman spectra 7−106190
(BEDT-TTF)$_2XI_2$ salts, X=Au, Br, electronic struct., props., polarised IR reflectance spectra 7−113189
(BEDT-TTF)$_3Cl_2H_2O$, superconductivity under press. 7−143679
β-(BEDT-TTF)I_3, superconductivity mechanism 7−70459
bis(ethylenedithiolo)tetrathiofulvalene iodide of β-(ET)$_2I_3$, supercond. transition temp. of β phase, influence of press. 7−138096
CDW and SDW type superconductors, thermodynamics, Δ/T_c ratio, paramag. limit 7−112626
ceramic high T_c supercond., Fermi liquid theory 7−125226
ceramic superconductors, high T_c, 2D electron system model 7−112619
ceramic superconductors, powder processing for microstructural control 7−119183
cooper Pairs of $d\gamma$-symmetry in simple square lattices 7−112635
correlation with structural phase transition temp. in new and classical superconductors 7−112528
Cu ternary metallic oxides, high T_c supercond. and structural chemistry considerations 7−112641
d-wave superconductivity, Anderson model instability, slave-boson exchange pairing mechanism 7−70467
dirty transition metal superconductors, T_c degradation 7−105809
disorder-induced increase and degradation, theory 7−112574
(DMET)$_2AuBr_2$, superconductivity, semiconductor to metal transition 7−125186
electron-fluctuating distortion interaction in the new high T_c superconductors 7−85168
electron-phonon coupling strength effect 7−112568
Eliashberg eqn., analytical solns. 7−85162
enhancement by excitonic negative-U centres, Monte Carlo simulation 7−77135
fractal multilayered superconductors, upper parallel crit. field meas. 7−70500
generalised Hubbard model *(Russian)* 7−125178
generalised periodic Anderson model with strong local attraction, superconductivity 7−118696
glass formation by mech. alloying 7−113472
heavy fermion superconductors, Landau's Fermi liq., theory and periodic Anderson model Hamiltonian correls. and calcs. 7−105810
high T_c oxide superconds., interband effects, two-band model calcs. 7−138118
high T_c oxide superconductors, effect of intra-mol. vibrations on transition temp. 7−143677
high T_c oxide superconductors, T_c enhancement due to SDW instabilities 7−99283
high T_c oxides, Eliashberg theory 7−112632
high T_c supercond., resonating valence bond state, mean field theory 7−125231
high T_c supercond., transition temp., localisation and struct. transitions 7−105760
high T_c supercond., transport props., electron deficiency 7−118609
high T_c superconducting oxides, status report 7−118663
high T_c superconductivity, charge transfer excitations, supercond. pairing mechanism 7−105818
high T_c superconductors, critical fluctuations 7−143713
high T_c superconductors, doped Mott insulator description 7−125233
high T_c superconductors, energy gap, rel. to crit. temp. 7−112607
high T_c superconductors, strong-coupling effects 7−112633
high temp supercond. oxides, T_c and lattice parameters press. depend., Cyrot model calcs. 7−125194

superconducting transition temperature continued
high temperature supercond., crit. temp. enhancement by metal-semicond. transition 7−92348
high temperature superconductivity, superexchange mechanism, mean-field model, EHT calcs. 7−112623
high temperature superconductors, conf., Anaheim, CA, USA (April 1987) 7−108049
high temperature superconductors, transition temps. and excitonic mechanisms *(Russian)* 7−125207
high-T_c superconductor, model involving electron-phonon interactions 7−112630
high-temperature superconductors, recent developments *(German)* 7−125197
Kondo lattice, theory of superconductivity *(Chinese)* 7−112612
$(La_{0.9}Ba_{0.1})_2CuO_{4-y}$, superconductivity at 52.5 K 7−77139
Landau-Ginzburg model, spontaneous phase transitions, complex order parameter kinetics eqn., anal. and soln. 7−131901
localised superconductivity in system with anisotropic dispersion law for electrons 7−92351
low dimensional superconductors, critical temps., high T_c 7−105786
low temperature physics, book 7−80208
magnetic field effect, demonstration expt. 7−115713
magnetic superconductors, electronic heat capacity, effect of spin scatt. and mag. order 7−85191
metal hydrides obtained by low temp. H implantation, structural, vibr. and electronic props. 7−83674
metals, disordered, superconductivity, magnetism and surface reconstruction 7−84472
metals, nontransition, heavily-compressed, electron-phonon interaction parameters *(Russian)* 7−92343
mixed valence Cu oxides, high T_c superconductors, double exchange processes effects *(French)* 7−125166
mutual inductance bridge for the measurement of superconducting transition temperatures and magnetic susceptibility 7−140704
nearly magnetic itinerant fermions, enhanced triplet pairing superconducting temps. 7−125221
normal-zone propagation in composite superconductors 7−131836
oxide ceramic high-T_c superconductors, review 7−105767
oxide superconductors, high T_c, discovery and development 7−131849
oxide superconductors, inter-layer Cooper pairing of 2D electrons 7−105808
oxide superconductors, transition temp., inelastic scatt. and pair breaking 7−112624
oxide superconductors, with high T_c, 123 struct. and comp. 7−118669
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
paramagnons, effects in proximity sandwich 7−70488
Pb, bimodal stress relax., superconducting and normal state 7−86242
periodic struct, normal-superconducting material, critical temp., order parameter and free-energy fns. calcs. 7−77120
perovskite high T_c superconductors, review 7−112548
proximity contacts, pair pot., tunnelling density of states, self-consistent calcs. 7−99349
proximity effect sandwich, with nonmag. localised states, specific heat jump 7−70490
quantum interferences, in superconducting arrays 7−77137
quasiperiodic layered structures, supercond., crit. indices, Ginzburg-Landau approx. 7−105815
rare earth−$Ba_2Cu_3O_x$ high T_c supercond., struct. and upper critical fields studies 7−125278
rare earth borides, $RRuB_4$, R=Gd-Tm, Lu, mag. suscept., elec. resist. meas., low temp. mag. order 7−92408
rare earth cpds., $Ba_{1-x}R_xCuO_{3-y}$, R=La-Nd, Sm-Er, Yb, supercond. and structural props. 7−99287
rare earth cpds., $R_2Ba_4Cu_6O_{14+y}$, R=La-Nd, Sm-Lu, high T_c supercond. props., elec. resist., X-ray diffr. meas. 7−99297
rare earth cpds., R-Ba-Cu-O, R=Sm-Ho, supercond. props. 7−105803
rare earth cpds., $RBa_2Cu_3O_6$ (R=La, Nd, Sm, Eu, Gd, Ho, Er, Lu, Y), superconductivity above 90 K 7−118650
rare earth cpds., $RBa_2Cu_3O_{7-x}$, R=Y, La-Lu, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth doped O-defect perovskites, $La_{2-x-y}R_ySr_xCuO_{4-z}$, R=Pr, Nd, Sm, Eu, Gd, supercond., structural, mag. props. 7−112596
rare earth oxides, $RBa_2Cu_3O_{6+x}$, superconductivity above 90 K, magnetisation meas. 7−118653
rare earth oxides, $RBa_2Cu_3O_{6+x}$ (R=Y,La,Nd,Sm,Eu,Gd,Ho,Er,Lu), square planar cpds., superconductivity above 90 K 7−105795
rare earth oxides, $RBa_2Cu_3O_{9-\delta}$, R=La-Lu except Pm, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
rare earth-Ba-Cu-O cpds., high T_c supercond. obs. 7−99270
rare earth-Ba-Cu-O high T_c supercond. powder fabrication and critical temp. determ. 7−118624
rare earth-Ba-Cu-O system, $RBa_2Cu_3O_{6+y}$, high T_c supercond., mag. characts. 7−118705
rare-earth-like elements, electronic factors influencing superconductivity and beginning of rare-earth series 7−112534
semiconductors and semimetals, high magnetic field superconductivity 7−85183
simple square lattices, dγ-symmetry Cooper pairs, effect of mag. frustrations 7−112636
space technological experiments performed with superconducting and mag. alloys 7−71457
spin liquids and spin crystals, 1e and 2e superconductivity 7−105811
spin-fluctuation-mediated superconductivity, T_c estimation 7−138117
strong correlation, anal. 7−92333
superconductivity mechanism, review 7−112629
superconductivity onset and mag. susceptibility 7−131864
superconductivity superlattices, transition temp., single electron density of states and sp. ht., BCS theory calcs. 7−99317
superconductivity theory, development since 1957 *(French)* 7−92385
ternary superconductors, struct. and elec. props., review 7−125219
thick supercond. plate, heat capacity and proximity effect 7−125246
Toxen relation for supercond. energy gap 7−70463
transition metal impurity containing superconductors, strong-coupling theory 7−85182
transition metal solid solns., electron sp. ht. and T_c comp. depend. calcs. *(Russian)* 7−131838
$TTF(Ni(dmit)_2)_2$, supercond. transition temp., effect of press. 7−70455
TTF-analogs, superconductivity mechanism 7−70459
superconducting transition temperature continued
$TTF[Ni(dmit)_2]_2$, superconductive molecular complexes, synthesis, properties and structure 7−99310
twinning-plane superconductivity, review 7−143683
$Yb_{1-x}Y_xBa_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$YBa_2Cu_3O_{9-x}$, AC Josephson effect obs. 7−99343
$:La_{1.8}Sr_{0.2}CuO_4$, high T_c-supercond. 7−112535
$AgMo_6S_8$ superconducting thin films, reactive sputtering 7−118619
Al, granular, quasireentrant superconductivity near metal-insulator transition 7−143676
Al:Si, ion implantation effect on low temp. props. 7−142815
Al-In-Sn alloys, directionally solidified in high and low gravit. fields 7−138736
Al-Si-Ge ribbons, ion implantation effect on low temp. props. 7−142815
$Al_{52.4}Cu_{12.6}Mg_{35}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
AlH_2, supercond., electron-phonon coupling 7−99254
AlSi alloy, superconducting study using ion beam mixing 7−85159
AlSi disordered alloy prodn. by ion beam mixing, T_c enhancement 7−84074
AlSi superconductivity following liq. He temp. ion beam mixing 7−125198
$(Al_xY_{1-x})Ba_2Cu_3O_{6.5+\delta}$, high T_c supercond. obs. 7−131854
Ba, superconductivity and electronic struct. under high pressures *(German)* 7−118649
Ba-Gd-Cu-O high T_c supercond., cryst. struct. and transition temp. 7−112603
Ba-La-Cu-O, high T_c superconductivity model 7−105817
Ba-La-Cu-O mixed valence high T_c superconductors, struct., mag. suscept., and critical field studies *(French)* 7−112707
Ba-La-Cu-O system, high T_c phase, two-subsystem model 7−92353
Ba-R-Cu-O (R=Yb, Lu, Y, La), high-T_c superconductivity 7−99263
Ba-Y-Cu-O, high-T_c superconducting phase 7−105764
Ba-Y-Cu-O high T_c superconds., upper critical fields and Ginzburg-Landau coherence lengths 7−99364
Ba-Y-Cu-O high T_c supercond., prep. and struct. determ. by lattice imaging 7−104701
Ba-Y-Cu-O system, bulk superconductivity at 107.6 K 7−105762
Ba-Y-Cu-O system, bulk superconductivity at 107.6 K 7−112561
Ba-Y-Cu-O systems, resist., anomalous temp. depend. 7−99285
$Ba_2EuCu_3O_7$, ^{18}O isotope effect in high T_c supercond., phonon freq. Raman spectra meas. 7−105796
$Ba_2EuCu_3O_{7.1}$, high T_c superconductor, electronic struct. of Eu, Mossbauer study 7−106069
$Ba_2Eu_{0.9}Y_{0.1}Cu_3O_x$, superconducting cuprate perovskites 7−105794
$Ba_{0.1}La_{1.9}Ag_xCu_{1-x}O_{4-y}$, high T_c supercond., comp. depend. of T_c 7−99291
$Ba_{0.6}M_{0.4}CuO_{3-x}$ M=Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb,Lu, superconductivity, transition temps. 7−99280
$Ba_2MCu_3O_7$, M=Y,La, high T_c superconductivity based on the 1D square planar $[CuO_4]_\infty$ bonding system 7−118630
$BaMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
Ba(Pb-Bi)P granular superconductor, heat treatment effects 7−93117
$BaPb_{1-x}Bi_xO_3$ supercond., solution growth and transition temp. *(Japanese)* 7−113372
$BaPb_{1-x}Bi_xO_3$, supercond., props. and appls., review 7−138111
$BaPb_{1-x}Bi_xO_3$:Ag solid inclusion solns., high T_c superconductivity study *(Russian)* 7−112540
$BaPb_{1-x}Bi_xO_3$-La_2O_3 system, superconductive oxide, synthesis by sintering 7−70453
$Ba_2RCu_3O_{7-x}$ (R=lanthanide), superconducting and mag. props. 7−125215
$Ba_2RCu_3O_{9-x}$ (R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb), high T_c supercond., prep. and characts. 7−118660
$Ba_2SmCu_3O_{9-x}$, high temp. supercond., electron and X-ray diffr., XPS studies 7−112597
BaYCuO-Nb Josephson point contact junction, IV characteristics 7−112699
$Ba_{0.5}Y_{0.5}Cu_1O_x$, high-T_c superconductor 7−99266
$Ba_{0.7}Y_{0.3}CuO_x$, high T_c superconductor, identification of phases 7−91543
$Ba_{1-x}Y_xCuO_{3-y}$, prep. by sintering, supercond. props. 7−99286
$Ba_{1-x}Y_xCuO_{3-y}$, supercond. props. 7−112530
$Ba_{1-x}Y_xCuO_{3-z}$ high T_c supercond., transition temp. 7−92339
$Ba_2YCu_3O_{6.5+x}$, superconducting, O content 7−125216
$Ba_2YCu_3O_{6.9}$, high T_c supercond., electronic structs., contribution to high T_c 7−112590
$Ba_2YCu_3O_7$, ^{18}O isotope effect in high T_c supercond., phonon freq. Raman spectra meas. 7−105796
$Ba_2YCu_3O_7$, high T_c superconducting oxide ceramic, fabrication 7−118677
$Ba_2YCu_3O_7$, high temperature superconductor, microstructure 7−105747
$Ba_2YCu_3O_{7-\delta}$, high T_c supercond., electron diffr. and microscopy study 7−112589
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. wire fabrication by molten oxide processing 7−138711
$Ba_2YCu_3O_{7-x}$, high T_c supercond., processing-property relations 7−119213
$Ba_2YCu_3O_{7-x}$ high T_c supercond., low temp. thermal processing 7−119214
$Ba_2YCu_3O_{7+y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
$Ba_2YCu_3O_{8-y}$, prep., high T_c supercond. props. 7−99288
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., Raman scatt. above and below T_c 7−119022
$Ba_2YCu_3O_{9-\delta}$, single phase perovskite, 91 K bulk supercond. 7−85165
$Ba_2YCu_3O_{9-\delta}$, valence band photoelectron spectra studies 7−106367
$Ba_2YCu_3O_x$ high T_c supercond., high temp. resistivity meas., O content depend. 7−137919
$Ba_2YCu_3O_x$, high-T_c superconductor, stoichiometry 7−105775
$Ba_xY_{1-x}CuO_3$, high T_c supercond., electronic struct., XPS study 7−112598
$Ba_xY_{1-x}CuO_{3-y}$ high T_c supercond., magnetisation and Meissner effect 7−92367
$Ba_xY_{1-x}CuO_{3-y}$, high T_c superconductivity 7−105807
$Ba_2YCu_3O_{9-\delta}$, high T_c superconductor, cryst. struct. determ. 7−111506
$Ba_{0-6}Y_{0.4-x}Sc_xCu$ oxides, effect of Sc on superconductivity, high T_c supercond. 7−112592
Be films, ion beam sputtered, superconducting crit. temp. 7−70446
Be superconducting films, ion beam sputtered, props. study 7−131845
Bi-Sr-Cu-O system, superconductivity 7−143682

superconducting transition temperature continued
C_8K, graphite intercalation cpd., supercond. of high-press. phases 7−105806
$Ca_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
$CeCu_2Si_2$ films, sensitivity of T_c to lattice defects, superconductivity and resistivity study 7−70495
$CeCu_2Si_2$, heavy fermion supercond., Knight shift meas. 7−85193
$CeCu_2Si_2$, supercond. transition temp., press. depend. 7−125165
$CeCu_2Si_2$ thin films, ion irrad., heavy fermion superconductivity 7−77126
Ce_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
Co-Si-B-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
$CoSi_2$, ultrathin epitaxial films, low temp. transport props. 7−125143
Cu oxide high T_c superconductors sp. ht. and T_c meas. 7−112601
Cu oxide layered perovskite high T_c superconductors, struct. props. 7−118651
Cu oxides, high T_c superconductivity, theorist's view, review 7−112610
Cu oxides, high T_c supercond., theory 7−112625
Cu oxides, mixed-valent, high temp. supercond. rel. to Cu^{3+}/Cu^{2+} ratio 7−118648
Cu superconducting oxides, mixed valence, high T_c, bidimensional electronic model calcs. *(French)* 7−124849
$(Cu\text{-}M)_{100-x}(Pb_{0.6}Bi_{0.4})_x$, M=Al, Si or Sn, rapidly quenched alloys containing immiscible Pb and Bi elements, microstruct. and supercond. props. 7−99255
$Cu_{1.8}Mo_6S_8$, high press. elec. resist., supercond. transition temp. 7−105560
$Cu_2Mo_6S_8$ Chevrel phase supercond., laser-induced shock damage and disorder effects on T_c 7−104824
$Cu_2Mo_6S_8$, shock press.-disordered, supercond. transition temp. meas. 7−143673
$Cu_{1.8}Mo_6S_{8-x}O_x$, Chevrel cpd., superconducting props., O doping effects 7−125180
$Cu_{1.8-x}Ni_xMo_6S_8$, supercond. props. and normal state resist. *(Russian)* 7−70443
CuO-Y_2O_3-BaO phase diagram, resistivity and superconductivity distributions 7−105745
Dy-Ba-Cu-O, high T_c supercond., transition temp., diamagnetism, mag. suscept. meas. 7−112595
Dy-Ba-Cu-O high T_c supercond., zero resist. temp. and cryst. struct. 7−125210
$DyBa_2Cu_3O_{7-\delta}$ high T_c and H_{c2} superconductivity transition and cryst. struct. studies 7−105770
$DyBa_2Cu_3O_{7-x}$ high T_c supercond. film, MBE growth and props. 7−143245
Er-BA-Cu-O, high T_c superconductivity 7−99277
Er-Ba-Cu-O high T_c supercond., metamorphic phases and transition temperatures 7−118637
Er-Ba-Cu-O high T_c supercond., zero resist. above 90 K 7−125209
Er-Ba-Cu-O RF sputtered supercond. films, high T_c superconductivity 7−143658
$ErBa_2Cu_3O_{6+x}$ high T_c supercond., complex mag. suscept. study 7−125241
$ErBa_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$ErBa_2Cu_3O_7$, high T_c supercond., mag. fluctuations, 2D ordering 7−131884
$ErBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$ErBa_2Cu_3O_{7-\delta}$, sharp supercond. transition at 94 K, resist., mag. suscept. meas. 7−99296
$ErBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$ErBa_2Cu_3O_{9-\delta}$, high T_c superconductor, single phase cpd., transport and struct. props. 7−105784
$ErBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$ErBa_2Cu_3O_y$ high T_c ribbon, melt-spinning, struct. and supercond. props. study 7−126056
$Er_{0.5}Y_{0.5}Ba_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$Er_xY_{1-x}Rh_4B_4$, low temp. heat capacity, mag. and supercond. phase diagrams 7−92372
$Er_xY_{1-x}Rh_{1.1}Sn_{3.6}$ system, superconductivity and mag. ordering 7−125205
$EuBa_2Cu_3O_{6+\delta}$, superconductivity at 230 K 7−112566
$EuBa_2Cu_3O_x$, high T_c supercond., electronic and mag. props. 7−143705
Fe-P-Pb-Bi, ferromagnetic amorphous alloys, superconductivity 7−112543
$Fe_{20}Zr_{80}$ superconducting metallic glass, sp. ht. and elec. resist. meas. 7−137889
GaAs-$Ga_{0.77}Al_{0.23}As$ heterojunction, field-periodic magnetoconductance oscills., supercond. transition 7−112669
GaSb, amorphous, superconductivity under press. *(Russian)* 7−77122
Gd-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
$GdBa_2(Cu_{0.94}Fe_{0.06})_3O_{9-\delta}$, mag. ordering below supercond. transition temp. 7−143799
$GdBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$Gd_xBa_{1-x}CuO_{3-y}$, high T_c supercond. above 92 K 7−112594
Gd_2O_3-BaO-CuO system, subsolidus phase relationships and high T_c superconductivity 7−144375
$Gd_xY_{1-x}Ba_2Cu_3O_{7-\delta}$ high T_c supercond. props., comp. depend. effects 7−125191
GeTe, amorphous, press.-induced superconductivity and metal-insulator transition *(Russian)* 7−112542
HfMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
$Hg_{3-\delta}SbF_6$, supercond. transitions, magnetisation meas. 7−70473
high T_c excitonic superconductor, electron-phonon coupling, thermodynamic props., isotope effect calcs. 7−143691
Ho-Ba-Cu oxide, high T_c mag. superconductor 7−92329
Ho-Ba-Cu oxide, high T_c superconductor, mag. and struct. props. 7−92363
Ho-Ba-Cu-O high T_c supercond., transport and struct. props. 7−112533
$HoBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$HoBa_2Cu_3O_{7-\delta}$, sharp supercond. transition at 94 K, resist., mag. suscept. meas. 7−99296
$HoBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
superconducting transition temperature continued
In, doped, electronic topological transitions, electron scatt. *(Russian)* 7−92694
In-Ge films, supercond. upper crit. fields, transition temps. 7−70501
In-InO_x disordered composite supercond. film, microstruct., dimensionality and transition temp. depression studies 7−77134
In-InO_x supercond. film, SAW attenuation *(Japanese)* 7−125258
InSb films, metastable metal phase, supercond. transition, conductivity mechanism 7−138105
$K_{0.3}MoO_3$ blue bronze, Frohlich, supercond. sliding CDW without damping 7−124890
$(La,Ba)_2(Cu,M)O_{4-y}$ (M=Hg,Ag), high temperature superconductivity, composition dependence 7−70452
$(La,Ba)_2CuO_{4-y}$, high T_c supercond., mag. susceptibility and resist. meas. 7−70448
$(La,Ba)_2CuO_{4-y}$, high-T_c superconducting oxides, elec. resistivity, O deficiency effects 7−70451
$(La,M)_2CuO_4$ (M=Ba,Sr), 2D superconductivity, high critical temps. 7−70450
$(La,Sr)_2(Cu,M)O_{4-y}$ (M=Hg,Ag), high temperature superconductivity, composition dependence 7−70452
La Ba CuO_4, cryst. struct. determ., electron diffr. and microscopy 7−91544
La-Ba-Cu-O, high T_c superconductivity 7−70447
La-Ba-Cu-O, high T_c supercond., physical and chemical properties 7−131855
La-Ba-Cu-O, perovskite-related oxides, high-temperature superconductivity 7−125206
La-Ba-Cu-O, structural, electronic props., thermal expansion meas. 7−118672
La-Ba-Cu-O high T_c superconductor, determ. of charge carriers by thermoelectric meas. 7−112573
La-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
La-Ba-Cu-O system, high T_c superconductor, cryst. struct. determ. 7−98084
La-Ba-Cu-O system, high T_c superconductor, struct. identification 7−98087
La-Ba-Cu-O system, superconductivity 7−85171
La-Ba-Sr-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174
La-Ba(Sr)-Cu-O high T_c superconductivity study *(Russian)* 7−112540
La-Ca-Cu-O system, superconductivity 7−85171
La-Cu-O, supercond. transition, annealing effect 7−99294
La-M-Cu-O layered perovskite system, (M=La, Ba, Sr, Pb), high T_c supercond., transition temp. 7−99304
La-S films, sputter deposition, structural and transport props. 7−76691
La-Sr-Cu oxides, high T_c superconductors, upper critical fields 7−92388
La-Sr-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
La-Sr-Cu-O system, high T_c superconductor, critical current density, prep. by solidification 7−118621
La-Sr-Cu-O system, superconductivity 7−85171
La-Sr-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
La-Sr-Cu-O thin films, supercond., props. 7−105791
$La_{2-x}A_xCuO_4$, A=Ba, Sr, electron-phonon model tetragonal-to-orthorhombic instability, bond dimerization, T_c values 7−99360
LaBaCuO, high T_c superconductivity obs. 7−105754
$LaBaCu_2O_{5+x}$, high T_c supercond., cryst. struct. and superconductivity 7−131128
$LaBa_2Cu_3O_7$ high T_c supercond. props. and struct. study 7−125193
$LaBa_2Cu_3O_{8-x}$, superconductivity, crystal structure *(French)* 7−99241
$LaBa_2Cu_3O_{9-\delta}$, high T_c supercond., effect of struct. changes on T_c 7−131859
$(La_{1-x}Ba_x)CuO_4$, high T_c supercond., elec. resist. studies 7−70449
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., crystallochemical studies 7−98081
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., sp. ht anomaly at supercond. transition 7−99333
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond. prep. 7−144354
$(La_{1-x}Ba_x)_2CuO_4$ layered perovskite high T_c supercond., local phonon model 7−92335
$(La_{1-x}Ba_x)_2CuO_{4-y}$, Balacuo, exciton exchange percolated superconductivity 7−125200
$(La_{1-x}Ba_x)_2CuO_{4-y}$, crystallographic, mag. and superconductive transitions 7−92332
$(La_{1-x}Ba_x)_2CuO_{4-y}$, effect of hydrostatic press. on T_c 7−92330
$(La_{1-x}Ba_x)_2CuO_{4-y}$ high T_c supercond., transport props. and sp. ht. 7−92371
$La_{1+x}Ba_{2-x}Cu_3O_y$, high T_c supercond., charge carriers, doping 7−143661
$La_1Ba_2Cu_3O_{9-\delta}$ high T_c supercond., effect of structural changes on T_c, X-ray diffr. study 7−118655
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., thermal anomalies of latt. props. *(Russian)* 7−125172
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., 180 K tetragonal-to-orthorhombic phase transition, anomalous struct. 7−112579
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., wide temp. instability, US absorpt., vel. meas., possible glassy state 7−112671
$La_{1.85}Ba_{0.15}CuO_{4-y}$ system, metastable mag. phase detection, high T_c supercond. 7−125404
$La_{1.9}Ba_{0.1}CuO_4$, high T_c superconductor, temp. depend. X-ray studies 7−111507
$La_{2-x}Ba_xCuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_{2-x}Ba_xCuO_4$, electronically driven instabilities, superconductivity, using La_2CuO_4 results 7−77133
$La_{2-x}Ba_xCuO_4$, lattice instability, high T_c supercond., elec. resist., mag. susceptibility meas. 7−77131
$La_{2-x}(BaSr)_xCuO_4$, high T_c supercond. 7−105752
$La_{2-x}(BaSr)_xCuO_4$ high Tc supercond., e-e correl. and scatt., band overlap in two-band model 7−118647
$La_{2-x}Ba_x(Sr_x)CuO_4$, high-T_c superconductors, hybridisation-induced wide-band bipolaron model 7−105780
$(La_{1-x}Ca_x)_2Cu_2O_4$, sp. ht., superconductivity 7−92328
$La_{2-x}Ca_xCuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
La_2CuO_4 based compounds, supercond., phase transitions, resonating valence bond theory 7−112582
La_2CuO_4, doped high T_c superconductor, cooperative bipolaron tunnelling 7−99279
La_2CuO_4, electronic struct., APW calc. 7−92051
La_2CuO_4, superconductivity below 40 K, exptl. study *(French)* 7−99361

superconducting transition temperature continued
La_2CuO_4, superconductivity 7−112581
La_2CuO_4-type cpds., high Tc supercond., 2D Hubbard model calcs. 7−118689
La_2CuO_{4-y}:Ca(Ba)(Sr), superconducting, high T_c cpds., prep. and characterisation 7−112563
La_2CuO_{4-y}, high T_c supercond., resistivity, thermopower meas. 7−138109
La_2CuO_x high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137985
$(LaM)_2CuO_4$, M=Ba,Sr,Ca, high T_c superconductivity based on the 1D square planar $[CuO_4]_\infty$ bonding system 7−118630
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr), high-T_c superconductor, critical mag. fields 7−70499
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Sr) high T_c supercond., transport props. and Fermi surface 7−92337
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., absence of struct. transition, X-ray studies 7−99975
$(La_{1-x}M_x)_2CuO_4$ (M=Ca,Sr,Ba) high T_c supercond., O octahedron distortion, electronic origin 7−91547
$(La_{1-x}M_x)_2CuO_4$ (M=Sr, Ba, Ca), high-T_c oxide superconductors *(Japanese)* 7−105778
$(La_{1-x}M_x)_2CuO_4$, high T_c superconductor, Fermi surface instability, phase diagram 7−99262
$(La_{1-x}M_x)_2CuO_4$ high T_c supercond., T_c enhancement due to Peierls instability 7−112578
$(La_{1-x}M_x)_2CuO_{4-\delta}$, high T_c supercond., (M=Ba, Sr), crit. temp. 7−99258
$(La_{1-x}M_x)_yCuO_4$ (M=Sr, Ba, Ca) high T_c thin films, sputter prep. and transition temp. studies 7−92868
$La_{1.85}M_{0.15}CuO_4$ (M=Ba,Sr), upper critical fields, superconducting transition temp. 7−70442
$La_{1.85}M_{0.15}CuO_4$, M=Ca,Sr,Ba, high T_c superconds., T_c enhancement with hydrostatic pressure 7−118654
$La_{2-x}M_xCuO_4$ (M=Ca,Sr,Ba), superconducting props., synthesis and struct. 7−92342
$La_{2-x}M_xCuO_4$ (M=Ca, Sr, Ba), superconducting transition temperatures and lattice parameters 7−105774
$La_{2-x}M_xCuO_4$ (Mz Ba, Sr, Pb), high T_c superconductivity, mechanism 7−118616
$La_{2-x}M_xCuO_4$ high T_c superconducting ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
$La_{2-x}M_xCuO_{4-y}$, M=Ba, Sr, Ca, critical temp., BCS theory calcs. 7−99242
$La_xMo_6S_y$, superconductivity and nonstoichiometry 7−105773
$(La_{1-y}R_y)_{2-x}(SrBa)_xCuO_4$, R=Pr,Nd,Eu,Gd, high T_c supercond., comp. and unit cell parameters w.r.t. T_c 7−143670
$LaRu_2P_2$, sintering prep., cryst. struct. and T_c determ. 7−117887
$La_{1.8}Sr_{0.2}Cu_{1-x}Ag_xO_4$, supercond. transition temp. 7−112549
$La_{1.85}Sr_{0.15}Cu_{0.95}M_{0.05}O_{4-y}$ (M=Cu, Ag, Al), high T_c oxide superconductors, elec. studies 7−118615
$(LaSr)_2CuO_4$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$(La_{0.9}Sr_{0.1})_2CuO_{4-y}$, high T_c superconductor, high press. study, critical current 7−99378
$La_{1-\delta}Sr_{0.2}CuO_4$, high T_c superconductor, point-contact spectroscopy study *(Russian)* 7−99249
$La_{1-x}Sr_xCuO_4$, cryst. struct. determ., electron diffr. and microscopy 7−91544
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., normal state and supercond. props. 7−92338
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical field, high field meas. 7−92390
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., crystallochemical studies 7−98081
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic distortion 7−98437
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin films, T_c meas. 7−99239
$(La_{1-x}Sr_x)_2CuO_4$, high T_c superconductivity, substitution effects 7−99268
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., sintering conditions dependence 7−99274
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., vacuum annealing effects 7−99275
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., heat capacity and supercond. transition temp. 7−99332
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR reflectivity and optic phonon modes 7−99847
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon density of states 7−104934
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sputter deposition and onset temp. 7−105792
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., complex susceptibility and transition temp. 7−112558
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ultrasonic velocity and attenuation studies 7−112604
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. jump, critical temperature 7−112659
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. wires, critical temp. and critical current density 7−112710
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp., press. effects 7−125167
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., T_c press. depend. variation with composition 7−125181
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., chemical substituent effects 7−125211
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma oxidation and supercond. transition 7−126267
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. and phonon spectrum, neutron and Raman scatt. studies *(Russian)* 7−131327
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., galvanomag. effects studies *(Russian)* 7−131671
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., thermoelec. power and thermal cond. meas. *(Russian)* 7−131887
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp. and hole conc. 7−143675
$(La_{1-x}Sr_x)_2CuO_4$ layered perovskite high T_c supercond., local phonon model 7−92335
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, effect of La ion substitutions on superconductivity 7−92334
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, high T_c superconductor, UPS study 7−92829
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ supercond. films, high T_c, screen printing method prep. 7−92915
superconducting transition temperature continued
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., electronic struct., photoemission meas. 7−99271
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., upper critical field meas. 7−99363
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., far IR transmission spectra meas. 7−99834
$(La_{1-x}Sr_x)_2CuO_e$ high T_c supercond., annealing conditions effects study, mag. suscept. and X-ray diffr. meas. 7−143671
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, superconducting thin films, sputter deposition 7−125179
$La_{1.8}Sr_{0.2}CuO_4$, bulk superconductivity at 36 K 7−112572
$La_{1.8}Sr_{0.2}CuO_4$ ceramic, high T_c supercond., struct. and thermodynamic anomalies at T_c *(Russian)* 7−125171
$La_{1.8}Sr_{0.2}CuO_4$ high T_c film Josephson junctions 7−92380
$La_{1.8}Sr_{0.2}CuO_4$, high T_c superconductor, prep. 7−100165
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., granular nature of bulk superconductivity 7−105866
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., ceramics, prep. and props. 7−118671
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., microwave study 7−144185
$La_{1.8}Sr_{0.2}CuO_4$, partially substituted, high T_2 superconductivity 7−105802
$La_{1.8}Sr_{0.2}CuO_4$, prep., supercond. props. 7−118668
$La_{1.8}Sr_{0.2}CuO_4$ sintered high T_c supercond. props., resistivity and photoacoustic meas. 7−118683
$La_{1.8}Sr_{0.2}CuO_4$, struct. and superconductivity under press. 7−92355
$La_{1.8}Sr_{0.2}CuO_4$ superconductors, critical currents and fields 7−92394
$La_{1.8}Sr_{0.2}CuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
$La_{1.8}Sr_{0.2}CuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$(La_{1.8}Sr_{0.2}Cu)_xO_y$, high T_c superconductor, preparation by oxidation of amorphous $La_{1.8}Sr_{0.2}Cu$ ribbon 7−99267
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., neutron irradiation, influence on supercond. props. *(Russian)* 7−143654
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., thermal expansion, longitudinal ultrasound velocity *(Russian)* 7−143709
$La_{1.85}Sr_{0.15}CuO_4$, elec. resist., Hall effect and thermoelec. power meas. in normal and supercond. states 7−105790
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, energy gap 7−92352
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., cryst. struct. above and below polymorphic T_c 7−98030
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., normal and supercond. state props. 7−99303
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. props. 7−105833
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, US and thermal expansion meas. 7−105838
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. penetration depth, flux-pinning effects, μSR study 7−112650
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductivity, mag. field penetration depth, μSR study 7−112651
$La_{1.85}Sr_{0.15}CuO_4$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., shock-induced chemical synthesis 7−119220
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., formation of perovskite by oxidation of La-Sr-Cu alloy 7−119411
$La_{1.85}Sr_{0.15}CuO_4$, high-T_c superconductor, nonzero isotope effect 7−125202
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. susceptibility, hydrostatic press. 7−138126
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., thermodynamic and other props. 7−143707
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., spin-lattice relax. of ^{63}Cu and ^{139}La nuclei *(Russian)* 7−143920
$La_{1.85}Sr_{0.15}CuO_4$, hot-pressed and sintered, superconducting props. 7−99259
$La_{1.85}Sr_{0.15}CuO_4$, superconducting, magnetisation 5 to 300 K 7−99321
$La_{1.85}Sr_{0.15}CuO_4$, superconducting transition temp., ^{18}O isotope shift 7−125203
$La_{1.85}Sr_{0.15}CuO_4$, ultrasound studies, high T_c superconductors 7−118718
$La_{1.85}Sr_{0.5}CuO_4$ bulk superconductivity meas., susceptibility and lattice distortion 7−118645
$La_{2-x}Sr_xCuO_4$ (x=0 to 0.2), high T_c supercond., electron-electron correlations 7−112656
$La_{2-x}Sr_xCuO_4$, Hall effect meas. at 77 K, implications for normal state electronic struct. 7−105840
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic props. 7−99369
$La_{2-x}Sr_xCuO_4$, struct. and high T_c supercond. 7−99252
$La_{2-x}Sr_xCuO_4$, structural phase diagram, X-ray study 7−119252
$La_{2-x}Sr_xCuO_4$ thin films, supercond. props., diamag. transition 7−118613
$La_{2-x}Sr_xCuO_{4-\delta}$, high T_c supercond., composition-depend, superconductivity 7−99302
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., upper crit. field 7−99370
$La_{2-x}Sr_xCuO_{4-y}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., introduction of Bi 7−143681
$La_{2-x}Sr_xCuO_{4-y}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7−118607
$La_{2-x}Sr_xCuO_{4-y}$ solid solns., superconducting props., sp. ht. *(Russian)* 7−105756
$La_{2-x}Sr_xCuO_{4-y}$, superconducting props. at 40 K 7−112587
$La_{2-x}Sr_xCuO_{4-y}$, superconducting perovskites, rare-earth doping 7−118675
$La_{2-x}Sr_xCuO_{4-y}$ Z *(French)* 7−112707
$(La_{1.85}Sr_{0.15})Cu_{0.95}Sn_{0.05}O_4$, perovskite supercond., phonon and electron anomalies 7−92350
La_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$(LaY)_{2-x}Sr_xCuO_4$, high T_c supercond., localisation and supercond. characts. 7−125208
$La1.6Eu_{0.25}Sr_{0.15}CuO_4$ bulk superconductivity meas., susceptibility and lattice distortion 7−118645
Li, HCP, superconductivity at high press. 7−77124
$Li(M_xTi_{2-x})O_4$, (M=Li^+, Al^{3+} and Cr^{3+}), cation-substituted, supercond.-semicond. transition 7−112611
Lu-Ba-Cu-O, superconductivity near 90 K 7−105793

superconducting transition temperature continued
$Lu_5Ir_4Si_{10}$ supercond., electronic phase transition suppression by hydrostatic press. 7−125220
$LuRh_{1.2}Sn_4$, supercond. props. and magnetism 7−92325
$Mg_3Zn_3Al_2$, icosahedral supercond., sp. ht. meas. 7−112663
Mo-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
MoN films, synthesis by active N sputtering, expt. study 7−132452
δ-MoN, high-press., high-temp. expts. 7−104620
MoN sheet, superconducting transition temp. 7−85161
MoN, supercond. props. *(Japanese)* 7−99309
MoN thin films, hexagonal struct., formation, supercond. props. and ion irradiation effects study 7−131844
MoN_x films, formation by ion beam and vapour deposition method 7−92875
MoN_x, supercond., prep. by isostatic direct nitriding at high press. and high temp. 7−105765
MoRhB amorphous alloys, NMR studies and superconductivity 7−99313
MoRhP amorphous alloys, NMR studies and superconductivity 7−99313
Nb, deformed, supercond. transition temp., US interaction and annealing effects 7−99251
Nb films grown in UHV MBE system, epitaxial relations and supercond. props. 7−76687
Nb laser plasma deposited superconducting thin films, T_c determ., film thickness and deposition conditions depend. 7−118641
Nb, ultra-high purity, supercond. transition temp. 7−105798
Nb-Ge high T_c superconducting film, prep. and surface study 7−125187
Nb-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
Nb-Sn thin film, A15 supercond., sp. ht. meas. 7−112662
Nb-Ta alloys, short range order and superconductivity 7−85166
Nb-Ta superlattices, hydrogenated, elec., struct. and supercond. props. 7−112577
Nb-Ti alloys, superconductivity and structural instability study 7−105008
Nb-Ti two-phase composite superconds., critical temp. suppression, proximity effects study 7−131830
$Nb_3(Al,Ge)$ composite tapes, electron beam irrad. prep., struct., supercond. props. *(Japanese)* 7−99253
$Nb_3(Al,Ge)$ prepared by continuous rapid quenching, high-field superconducting props. 7−77183
$Nb_3(Al,Si)$ prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3Al composite tapes, electron beam irrad. prep., struct., supercond. props. *(Japanese)* 7−99253
Nb_3Al prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3Al wires, powder metallurgy processed, supercond. props. 7−131936
$Nb_3Al_{1-x}Ge_x$ composite tape fabrication by laser irrad. powder metallurgy process, supercond. props. study 7−132514
NbC films, prepared by reactive laser sputtering, supercond. props., X-ray and chem. anal. 7−99250
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
NbC superconducting microparticle composite wire, fabrication and props. 7−138175
NbCN superconducting films, MOCVD deposited, struct. and props. study 7−131842
NbC_xN_{1-x} high T_c superconducting films, high-rate synthesis by hollow target sputtering 7−100062
NbC_xN_{1-x} superconducting films, reactively sputtered in (Ar, N_2, C_2H_4) mixtures, charactn. 7−131843
Nb_3Ge layers, CVD controlled by gas phase diffusion, supercond. transition temp. 7−112609
Nb_3Ge superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
Nb_3Ge superconducting tapes, CVD synthesis, H_2/Cl_2 ratio effects 7−126003
Nb_3Ir, A15 superconductor, radiation damaged, weak localisation 7−105783
NbN and NbCN, RF sputtered films, thermal annealing effects 7−132451
NbN high-field supercond. sputter deposited on complex substrates 7−131841
NbN single cryst. films, surface stability, effect on superconducting props. 7−112030
NbN, sputtered film, fabrication, struct. and supercond. props. *(Japanese)* 7−112537
NbN sputtered films, electron microscopy study, superconducting props. 7−105341
NbN, supercond. props. *(Japanese)* 7−99309
NbN superconducting thin films, sputter deposition, optical emission spectroscopy 7−132450
NbN-BN granular cermet films, transport props. study 7−131852
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
NbNi disordered alloys, upper critical field 7−77176
NbPS, superconducting, bonding, electronic struct., TBC 7−70187
Nb_3Si, A15 phase, high T_c material, high press. synthesis 7−77121
Nb_3Sn, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7−131973
Nb_3Sn multifilamentary supercond. wire, layer form., lattice parameter, critical props. 7−77182
Nb_3Sn powder, prep., supercond. critical temp. 7−106462
Nb_3Sn superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
Nb_3Sn superconductors, magnetic measurements using $Cd_xHg_{1-x}Te$ Hall probes 7−73377
Nb_3Sn-Cu supercond. wire prep. by liq. phase sintering, supercond. props. study 7−132515
$Nb_{3+x}Sn_{1-x}$, supercond. non-stoichiometric, electronic struct. 7−105383
$(NbTa)_3Sn$ multifilamentary wires, high field supercond. props. 7−131840
NbTe-Ge multilayers, superconductivity in weakly localised regime 7−112591
NbTi-Cu multifilamentary superconductor, electrical and magnetic props. below T_c 7−77143
NbTi-Cu superconducting composite wires with fine filaments, supercond. props. 7−131966
$Nb_{0.8}Ti_{0.2}$, ion implanted He porosity and supercond. props. *(Russian)* 7−99243
$Nb_{0.5-x}Ti_{0.5-x}Fe_{2x}$, supercond. critical temp. and upper critical fields 7−77179
$(Nb_{1-x}Zr_x)_3Sn$ layers, segregation of Zr and effects 7−77144
Nd-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
$NdBa_2Cu_3O_{8-\delta}$, high T_c supercond., props. 7−138108
Ni-H, high press. phase, supercond. transitions 7−125204
Ni-Zr metallic glasses, props. rel. to melt temp. and quench rate 7−83766
NiZr amorphous alloy, superconducting transition temp. determ. by AC susceptibility meas. 7−85160
P, simple cubic metal, electronic band struct. and T_c calcs. 7−137794
Pb, dislocation interactions in supercond., intermediate and normal states *(Russian)* 7−112539
$PbMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$PbMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
$PbMo_6S_8$, thermal expansion studies by X-ray diffr., temp 10 to 200 K 7−111919
$PbMo_6S_8$ thin films, metal-semiconductor transition, ion irradiation and annealing, effect on elec. props. 7−105406
$PbMo_6S_8$:Al doping and heat treatment effects on phase comp., lattice consts. and Tc 7−83987
$Pb_{0.92}Mo_6S_{7.5}$ Chevrel phase superconductor, ^{207}Pb electron environment, mag. props., NMR study *(Russian)* 7−143921
$Pb_xMo_6S_{8-y}$ Chevrel phase, supercond. props., stoichiometry effects studies 7−85170
$Pb_{1-x}Sn_xMo_6S_8$, current carrying capacity, superconducting props. 7−70506
PbTe:In(Tl), impurity mixed-valence behaviour on superconductivity mechanism 7−92143
PbTe:Tl MBE film, supercond. transition props. study 7−131853
Pd-T, phase boundaries, solubility, superconducting temp. ^3He precipitation 7−91821
$PdCuH_x$ superconducting transition, low temp. ion beam mixing and implantation effects 7−105749
$Pd_{1-y}Cu_yH_x$, influence of Cu on supercond. props. 7−112713
$Pd_{1-y}Cu_yH_x$, T_c enhancement on addition of Cu *(Russian)* 7−99247
PdH_x superconducting transition, low temp. ion beam mixing and implantation effects 7−105749
$Pd_{1-y}Ni_yH_x$ films, localisation, magnetism and superconductivity 7−138102
Pr, high pressure bandstruct. and electronic props. 7−105388
Pr, self-consistent band struct. under press 7−143330
$PrRh_4B_4$ high press. prep. and superconducting props. 7−143657
PtSi thin wires, localisation and electron-electron interaction effects 7−125152
R-Ba-Cu-O system (R=Y, Ho, Er), high T_c supercond., superconducting props. 7−138107
$RBa_2Cu_3O_{6+x}$ (R=Y,Yb,Ce,Pr), possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
$RBa_2Cu_3O_{7+y}$, high T_c supercond., superconducting props. *(Russian)* 7−143653
$RBa_2Cu_3O_x$, (R=Y,Gd,Er,Yb), high T_c supercond., press. dependencies of T_c 7−131856
Re-H, high press. phase, supercond. transitions 7−125204
Rh-H, high press. phase, supercond. transitions 7−125204
Ru-H, high press. phase, supercond. transitions 7−125204
RuN films, synthesis by active N sputtering, expt. study 7−132452
Sm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Sm-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
$Sm_xBa_{1-x}CuO_{3-y}$, high T_c superconductivity 7−138106
Sn-Au, superconducting Sn films with Au overlayers, fluctuation induced conductivity 7−112552
Sn-Ge granular system, supercond. transitions *(Russian)* 7−92324
$SnMo_{6-x}Nb_x(Ta_x)S_{8-y}$, superconductivity and struct. *(Russian)* 7−99245
$SnMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$SnMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
SnTe:In(Tl), impurity mixed-valence behaviour on superconductivity mechanism 7−92143
$(Sr,Be,Y,La)CuO_{4-y}$, high temp supercond., phonon interaction effects 7−118686
Sr, superconductivity and electronic struct. under high pressures *(German)* 7−118649
Sr-La-Cu-O, high T_c superconductivity model 7−105817
Sr-La-Cu-O high T_c superconds., upper critical fields and Ginzburg-Landau coherence lengths 7−99364
Sr-La-Cu-O system, prep. by coprecipitation, supercond. props. 7−99292
SrBaYCuO high T_c supercond., possible 65 °C superconductivity obs. 7−125195
$(Sr_{1-z}Ca_z)_{0.15}La_{1.85}CuO_{4-y}$, high T_c superconductor, props., depend. on sintering atmosphere 7−92331
$Sr_{0.2}La_{1.8}CuO_4$ high T_c superconductor, diamag. shielding and Meissner effect meas. 7−92370
$Sr_xLa_{2-x}CuO_{4-\delta}$, high T_c superconductor, mag. studies 7−105829
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., lattice const. press. depend. 7−92341
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., diamag. shielding and Meissner effect 7−92366
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., Cu valence, O deficiency 7−99293
$Sr_xLa_{2-x}CuO_{4-y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
$Sr_xLa_{2-x}CuO_{4-y}$ thin film high T_c supercond., sputter deposition prep. 7−92869
$Sr_xY_{1-x}CuO_{3-y}$, high T_c supercond. props., AC mag. suscept., elec. resist. meas. 7−112600
Ta-Ru-H high press. phases, superconductivity and cryst. struct. 7−70444
TaC_x thin films, CVD, optical profile, superconducting transition 7−125826
TaN, cubic, form. with plasma jet *(Japanese)* 7−119223
$Ta_yNb_{1-y}Se_3$, quasi-1D cpd., elec. props. 7−131629

superconducting transition temperature continued
TaS_2 intercalation cpds., 2H polytype, electronic structs. 7−137775
Tc-C amorphous films, superconducting transition temp., density of electron states 7−70445
Tc-Si amorphous films, superconducting transition temp., density of electron states 7−70445
$Th_{5-x}Ba_xM_{2-0.5x}Cu_5O_{13+y}$(M=Pb,Zr), high-Tc superconductivity 7−105763
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
TiCo, electronic struct., mag. props. *(Russian)* 7−98793
TiH system, phase transformations at high press. 7−86166
TiMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
Tm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Tm-Ba-Cu-O high T_c supercond., cryst. struct., X-ray diffr. studies 7−117899
Tm-Ba-Cu-O high T_c supercond., supercond. critical field anisotropy 7−125281
Tm-Ba-Cu-O system, high T_c superconductor, cryst. struct. determ. 7−98083
$TmBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7−118740
$TmBa_2Cu_3O_{9-x}$, high T_c supercond., magnetisation and lower crit. field 7−125183
U-based systems, heavy electron materials, phys. props., supercond., electron itineracy 7−105758
UBe_{13}, Hall effect, magnetoresist. and supercond. critical temp. 7−76893
UBe_{13}, heavy fermion superconducting props. investigations 7−105801
UBe_{13}, impurities, superconducting transition temperature depression 7−77125
UBe_{13}, magnetoresist. and upper critical mag. field under press. 7−77172
U_6Fe, supercond. transition, ^{57}Fe Mossbauer studies 7−92554
UM_2Ge_2 (M=Rh, Ir), struct., mag. and elec. props. 7−117878
UPt_3, heavy fermions supercond., mass renormalisations 7−118688
$U_{0.97}Th_{0.03}Be_{13}$, lower critical field, coexisting supercond. order parameters 7−77148
$U_{1-x}Th_xBe_{13}$, ($0.02<x<0.06$) phase diagram, specific heat, critical field 7−77149
$U_{1-x}Th_xBe_{13}$, inherent spin-density-wave instability in heavy-fermion superconductivity 7−112580
$U_{1-x}Th_xBe_{13}$, phenomenological model of superconductivity 7−85164
V, supercond., strained at 4.2 K, crit. fields and defect struct. *(Russian)* 7−92386
V/Mo superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V/Si superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V-Ga thin film, A15 supercond., sp. ht. meas. 7−112662
V-Nb alloys, short range order and superconductivity 7−85166
V-Os system, electronic and supercond. props. 7−112605
V-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
V-Ru system, electronic and supercond. props. 7−112605
V-Ru-H system, superconductivity and cryst. struct. of high-press. phases 7−138095
V-Si thin film, A15 supercond., sp. ht. meas. 7−112662
V-Ta alloys, short range order and superconductivity 7−85166
V_3Ga superconducting multifilamentary wire, technology developments 7−131932
V_3Ga, superconductor for generating magnetic fields over 18 T 7−77184
VN thin films, ion irrad. prep., supercond. and elec. props. 7−76226
V_3Si films, reactive diffusion formed, superconducting transition temps. 7−112553
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
V_2Zr, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Y-Ba-C-O, granular supercond. at 100-160 K 7−112583
Y-Ba-Ca-Cu-O high T_c supercond., transition temp. studies 7−125168
Y-Ba-Cu oxide, high T_c superconductor, vibrating sample magnetometry study 7−99325
Y-Ba-Cu oxide superconductors, identification of phase responsible for high T_c superconductivity 7−92344
Y-Ba-Cu oxides, superconductivity, high T_c, Meissner effect 7−92362
Y-Ba-Cu-O, high T_c superconductor, superconductivity and magnetism 7−85217
Y-Ba-Cu-O, high T_c superconductivity 7−99277
Y-Ba-Cu-O, high T_c superconductors, 90 K, critical current densities at 77 K 7−99278
Y-Ba-Cu-O, high T_c supercond., resistive transition, heterovalent ion doping effect 7−99298
Y-Ba-Cu-O, high T_c superconductor, critical currents and crystal structure 7−99377
Y-Ba-Cu-O, high T_c supercond., substitutional effect on T_c 7−118643
Y-Ba-Cu-O, high T_c supercond., mixed phase, fabrication, aging 7−138091
Y-Ba-Cu-O, high temp. superconductor, Meissner effect, X-ray diffr. 7−112646
Y-Ba-Cu-O, high temperature superconductor, powder preparation and sintering 7−118678
Y-Ba-Cu-O, high transition temperature superconductor 7−99260
Y-Ba-Cu-O, high-T_c superconductivity and diamagnetism 7−99261
Y-Ba-Cu-O, perovskite-related oxides, high-temperature superconductivity 7−125206
Y-Ba-Cu-O, reverse AC Josephson effect obs. at 240 K 7−112698
Y-Ba-Cu-O, structural, electronic props., thermal expansion meas., prep. effect 7−118672
Y-Ba-Cu-O, supercond. coatings, plasma sprayed, transition temp. above 77 K 7−112565
Y-Ba-Cu-O, superconductivity above liquid N_2 temp. 7−99264
Y-Ba-Cu-O, superconducting transition temperatures 7−99265
Y-Ba-Cu-O, wire type supercond. with high T_c, crit. current density meas. 7−99380
Y-Ba-Cu-O, with transition metal impurities, effects on supercond. props. 7−105789
Y-Ba-Cu-O ceramic superconductor with critical temp. of 93.7 K; 7−112544
Y-Ba-Cu-O ceramics, high T_c supercond., processing study 7−119211
Y-Ba-Cu-O compounds, high T_c supercond., compositionally depend. T_c, DC resist. meas. 7−112569

superconducting transition temperature continued
Y-Ba-Cu-O high T_c, supercond., multiphase mixtures and transition temp. 7−118631
Y-Ba-Cu-O high T_c, supercond., critical fields and currents up to 20 T 7−125280
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−92336
Y-Ba-Cu-O high T_c supercond., transition temp. studies 7−92340
Y-Ba-Cu-O high T_c supercond. obs. and cryst. struct. determ. 7−99269
Y-Ba-Cu-O high T_c supercond., press. effects study 7−99273
Y-Ba-Cu-O high T_c supercond. tunnelling, energy gap obs. 7−99345
Y-Ba-Cu-O high T_c supercond. thin films, 89 K T_c and Meissner effect obs. 7−105750
Y-Ba-Cu-O high T_c supercond., T_c meas., Sr addition effects study 7−105768
Y-Ba-Cu-O high T_c supercond., orthorhombic struct., prep. and props. 7−105771
Y-Ba-Cu-O high T_c supercond. transition props., quench temp. depend. studies 7−105772
Y-Ba-Cu-O high T_c supercond., break junction tunnelling meas. 7−105853
Y-Ba-Cu-O high T_c supercond., optimum prep. conditions determ., thermal and X-ray analyses 7−106475
Y-Ba-Cu-O high T_c supercond., cryst. struct. and supercond. props. 7−111489
Y-Ba-Cu-O high T_c supercond., transition at 105 K 7−112538
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−112555
Y-Ba-Cu-O high T_c supercond., transition temp., conc. ratio and prep. effects 7−112559
Y-Ba-Cu-O high T_c supercond., upper critical field and transition temp., mag. field effects 7−112560
Y-Ba-Cu-O high T_c supercond., sp. ht. jump at 92 K 7−112658
Y-Ba-Cu-O high T_c supercond., 3D, thermodynamic fluctuations obs. 7−112675
Y-Ba-Cu-O high T_c supercond., upper critical field, elec. resist. meas. 7−112709
Y-Ba-Cu-O high T_c supercond., polycrystalline ceramic, far IR refl. studies 7−113193
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7−117873
Y-Ba-Cu-O high T_c supercond., rapid solidification, supercond. transition temp. 7−118060
Y-Ba-Cu-O high T_c supercond., Cu^{3+}/Cu^{2+} ratio, lattice parameters and onset temp. determ. 7−118116
Y-Ba-Cu-O high T_c supercond. props. and struct., O deficiency depend. study 7−118120
Y-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
Y-Ba-Cu-O high T_c supercond. films, DC magnetron sputtering prep. and props. study 7−118604
Y-Ba-Cu-O high T_c supercond., oxidation treatment, stoichiometry and lattice parameters w.r.t. T_c 7−118605
Y-Ba-Cu-O high T_c supercond. sputtered film charactn. 7−118627
Y-Ba-Cu-O high T_c supercond., Cu valence and O deficiency, sintering atmosphere effects 7−118628
Y-Ba-Cu-O high T_c supercond., cryst. struct., transforms. and transport props. 7−118629
Y-Ba-Cu-O high T_c supercond., transition temp., annealing temp. depend. 7−118632
Y-Ba-Cu-O high T_c supercond., zero resistance temp. and AC Josephson effect 7−118633
Y-Ba-Cu-O high T_c supercond., O content-transition temp. relations 7−118635
Y-Ba-Cu-O high T_c supercond., diamagnetism and transition temp., O effects 7−118636
Y-Ba-Cu-O high T_c supercond., elec. and mag. props. meas. 7−118702
Y-Ba-Cu-O high T_c supercond., critical current meas. in high applied fields 7−118748
Y-Ba-Cu-O high T_c supercond. critical current density and temp. in highly oxidised cpds. 7−118749
Y-Ba-Cu-O high T_c supercond., EPR spectrum, zero-field effects 7−118855
Y-Ba-Cu-O high T_c supercond. plasma powder sprayed coating props. 7−119133
Y-Ba-Cu-O high T_c supercond. large area plasma spray deposited thick films props. 7−119134
Y-Ba-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
Y-Ba-Cu-O high T_c supercond. thin films, RF magnetron sputtering prep. 7−119139
Y-Ba-Cu-O high T_c supercond. thin film, dual magnetron sputtering prep. 7−119140
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond., colloidal method prep. and transition temp. 7−119218
Y-Ba-Cu-O high T_c supercond. tape, surface diffusion method prep. 7−119219
Y-Ba-Cu-O high T_c supercond., mixed and single phase ceramics, X-ray diffr. and EPMA studies 7−119250
Y-Ba-Cu-O high T_c supercond., struct. and supercond. props., annealing effects 7−124188
Y-Ba-Cu-O high T_c supercond., cryst. struct. distortions 7−124189
Y-Ba-Cu-O high T_c supercond., struct. behaviour and superconductivity 7−124226
Y-Ba-Cu-O high T_c supercond., annealing conditions depend., struct. and elec. resist. studies 7−125188
Y-Ba-Cu-O high T_c supercond., crystalline phases in melt quenched and annealed samples 7−125189
Y-Ba-Cu-O high T_c supercond., lower critical fields, complex susceptibility meas. 7−125275
Y-Ba-Cu-O high T_c supercond., pulsed laser evaporation prep. 7−126026
Y-Ba-Cu-O high T_c supercond. prep. by oxidation of alloy foil, T_c and J_c studies 7−126055
Y-Ba-Cu-O high T_c supercond., plasma oxidation and supercond. transition 7−126267
Y-Ba-Cu-O high T_c supercond. film, struct. and supercond. props. 7−143290
Y-Ba-Cu-O high T_c supercond., conductivity anomalies at 40 K and 100 K under high press. 7−143468
Y-Ba-Cu-O high T_c superconds. and substituted systems, materials charactn. 7−143666

superconducting transition temperature continued
Y-Ba-Cu-O high T_c superconds., comp. depend. studies 7−143669
Y-Ba-Cu-O high T_c supercond., mag. props. 7−143704
Y-Ba-Cu-O high T_c supercond. thin film prep. by DC magnetron sputtering and props. 7−144272
Y-Ba-Cu-O high T_c supercond. films, chemical etching props. study 7−144575
Y-Ba-Cu-O mixed phase system, superconductivity at 93 K at ambient press. 7−77129
Y-Ba-Cu-O multi-phase samples, superconductivity above 100 K 7−92354
Y-Ba-Cu-O sintered cpds., high T_c superconductor, elec. resistivity, critical currents, cryst. orientation 7−99379
Y-Ba-Cu-O superconducting cpd. system, high press. effects on supercond. transition temp. 7−77130
Y-Ba-Cu-O system, antiphase domain boundaries in superconducting phase, high T_c superconductor 7−104689
Y-Ba-Cu-O system, high supercond. transition temp., elec. resist., mag. meas., heat treatment effects 7−99257
Y-Ba-Cu-O system, high T_c superconductor, struct. identification 7−98087
Y-Ba-Cu-O system, high T_c superconductor, Meissner effect, resistivity 7−99323
Y-Ba-Cu-O system, high T_c supercond., high field props. 7−99365
Y-Ba-Cu-O system, high temp. superconductivity 7−112606
Y-Ba-Cu-O system, high T_c superconductivity 7−118606
Y-Ba-Cu-O system, high T_c superconductivity, phase diagram 7−118612
Y-Ba-Cu-O system, high T_c supercond., struct., physical props. *(Russian)* 7−125170
Y-Ba-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174
Y-Ba-Cu-O system, regions of possible cpd. formation, high T_c superconductivity 7−112571
Y-Ba-Cu-O system, superconductivity at 91 K 7−112551
Y-Ba-Cu-O systems, high T_c supercond., elec. and mag. props. 7−118622
Y-Ba-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
Y-Ba-Cu-O thin films, supercond., props. 7−105791
Y-Ba-Cu-O:F, high-T_c superconductors 7−138104
Y-Ba-Sr-Cu-O system, high temp. superconductivity 7−112606
Y-Ce-Ba-Cu-O high T_c supercond., transition temp. studies 7−125168
$YBa_2(Ag_xCu_{1-x})_3O_{9-y}$, high T_c supercond., comp. depend. of T_c 7−99290
YBaAlCuO high T_c superconductivity studies 7−105769
$YBa_2Cu_{3-y}Ni_yO_{7-\delta}$, superconducting props., Cu site effects 7−112557
$YBa_2Cu_3O_x$, high T_c supercond., synthesis under O_2 press. and superconductivity 7−143664
$YBa_2Cu_{3(1-y)}Fe_{3y}O_7$, high T_c supercond., effect of substitution of Cu by Fe 7−143672
$YBa_2(Cu_{1-x}M_x)_3O_{7-\delta}$ (M=Fe, Co, Ni, Zn, Ga) high-T_c superconductivity 7−118638
$Y_{1.2}Ba_{0.8}Cu_{0.95}M_{0.05}O_{4-y}$ (M=Cu, Ag, Al), high T_c oxide superconductors, elec. studies 7−118615
YBaCuO, grain boundary superconductivity 7−118679
YBaCuO, high T_c superconductivity obs. 7−105754
YBaCuO high T_c supercond. multilayer e-beam deposited thin film props. 7−138090
$YBa_2Cu_3O_6$ layered tetragonal perovskite struct., high T_c supercond. 7−98079
$YBa_2Cu_3O_{6+x}$, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
$YBa_2Cu_3O_{68}$, high T_c supercond., electromag. effects 7−138131
$YBa_2Cu_3O_{6.5}$, prep., supercond. props. 7−118668
$YBa_2Cu_3O_{6.9}$, high T_c superconductor, microstruct., O ordering, planar defects 7−111499
$YBa_2Cu_3O_7$, 93 K superconductor, cryst. struct. at 298 and 79.5 K 7−104690
$YBa_2Cu_3O_7$, high T_c superconductor, 94 K, press. depend. of transition temp. 7−105785
$YBa_2Cu_3O_7$, high T_c superconductor, solid state chemistry 7−112564
$YBa_2Cu_3O_7$, high T_c supercond., specific heat jump and critical field 7−112645
$YBa_2Cu_3O_7$, high T_c supercond., connective nature of superconductivity 7−118662
$YBa_2Cu_3O_7$, high T_c supercond. ceramics, prep. and props. 7−118671
$YBa_2Cu_3O_7$, high T_c supercond., processing and props. 7−119212
$YBa_2Cu_3O_7$, high T_c supercond., bulk modulus anomalies at T_c 7−131898
$YBa_2Cu_3O_7$, high T_c supercond., photoemission study through supercond. transition, O dimerisation 7−132408
$YBa_2Cu_3O_7$ high T_c supercond., isotope effect absence w.r.t. phonon-mediated pairing mechanism 7−143674
$YBa_2Cu_3O_7$, high temperature superconductor, preparation and characterisation 7−105746
$YBa_2Cu_3O_7$, supercond. transition temp., press. effect 7−99301
$YBa_2Cu_3O_7$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$YBa_2Cu_3O_7$, ultrasound studies, high T_c superconductors 7−118718
$YBa_2Cu_3O_{7-\delta}$, ^{18}O isotope effect in high T_c supercond. 7−105797
$YBa_2Cu_3O_{7-\delta}$ and substituted systems, high T_c supercond. prep. 7−144354
$YBa_2Cu_3O_{7-\delta}$, heat capacity at superconducting transition temp. 7−131890
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., X-ray diffr. and ESR studies 7−124214
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., sp. ht. anomaly at superconducting transition 7−131891
$YBa_2Cu_3O_{7-\delta}$, high temperature superconductor, O mobility and isotope effect 7−118680
$YBa_2Cu_3O_{7-\delta}$, rapidly solidified supercond., preparation, crystallisation and props. 7−143663
$YBa_2Cu_3O_{7-\delta}$, struct. phase transition, role of dimensionality for high T_c superconduction 7−112588
$YBa_2Cu_3O_{7-\delta}$, superconductivity, stoichiometry and normal-state props. 7−138099
$YBa_2Cu_3O_{7-x}$, epitaxial film, high T_c supercond., critical current meas. 7−112723
$YBa_2Cu_3O_{7-x}$ high T_c superconductor, variation of stoichiometry, cell symmetry on temp. and press. 7−111498
$YBa_2Cu_3O_{7-x}$, high T_c superconductor, cryst. struct., cryst. chemistry 7−111500
$YBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
superconducting transition temperature continued
$YBa_2Cu_3O_{7-x}$, high T_c supercond., sp. ht. study 7−138130
$YBa_2Cu_3O_{7-x}$, high T_c supercond., O ordering and orthorhombic to tetragonal phase transition 7−142995
$YBa_2Cu_3O_{7-x}$ high T_c supercond. film prep. by RF magnetron sputtering 7−144352
$YBa_2Cu_3O_{7-x}$, high temp. supercond., zero elec. resist. at 106 K 7−105777
$YBa_2Cu_3O_{7-x}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7−118607
$YBa_2Cu_3O_{7-x}$, superconducting perovskites, rare-earth doping 7−118675
$YBa_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$YBa_2Cu_3O_{7\pm\delta}$, identification of high temp. superconducting phase 7−85169
$YBa_2Cu_3O_{8-y}$, mixed valence copper perovskite with O defect, high temp. superconductor at 91 K *(French)* 7−99240
$YBa_2Cu_3O_{8-y}$, supercond. props., effects of comp. var. and annealing in O_2 7−105788
$YBa_2Cu_3O_{8-y}$, superconducting phase identification 7−112545
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., transport props., electron deficiency, comparison with $La_{2-x}Sr_xCuO_{4-\delta}$ 7−118609
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7−118740
$YBa_2Cu_3O_{9-\delta}$ high T_c supercond., props., microstruct. and resistive transitions 7−137578
$YBa_2Cu_3O_{9-\delta}$, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
$YBa_2Cu_3O_{9-\delta}$, RF superconductivity at 3 GHz, obs., high T_c supercond. 7−112547
$YBa_2Cu_3O_{9-y}$, high T_c supercond., effect of prep. on phys. props. 7−131835
$YBa_2Cu_3O_{9-x}$, high T_c supercond., forbidden change in elastic modulus at T_c 7−131857
$YBa_2Cu_3O_{9-x}$, relationship between processing, struct. and high T_c supercond. props. 7−118670
$YBa_2Cu_3O_{9-y}$ single phase cpd., supercond. at 95 K 7−85167
$YBa_2Cu_3O_{9-y}$ single phase cpd., high T_c superconductor at 95 K 7−118661
$YBa_2Cu_3O_{9-y}$ single phase cpd., high temp superconducting behaviour 7−118667
$YBa_2Cu_3O_x$ ceramic high T_c supercond., prep. and props. 7−118608
$YBa_2Cu_3O_x$, high T_c supercond. transport critical current charact. 7−118754
$YBa_2Cu_3O_z$, high T_c supercond., variation of T_c with O content 7−125182
$YBa_2Cu_3O_x$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$YBa_2Cu_3O_x$ plasma and hypersonic flame powder spraying prep. and props. 7−119132
$YBa_2Cu_3O_x$, single cryst., supercond. and struct. 7−92349
$YBa_2Cu_3O_z$ single crysts., high T_c supercond., growth, transition temp. 7−138632
$YBa_2Cu_3O_z$, single crystal growth, with supercond. transition above 90 K 7−144265
$YBa_2Cu_3O_x$, superconducting oxide, electron microscopy and microanalysis 7−125164
$YBa_2Cu_3O_x$ supercond. thin films, high T_c, prep. and transition temps. 7−131469
$YBa_2Cu_3O_x$ thin films, ion implanted, radiation damage effects on supercond. and structural props. 7−112531
$YBa_2Cu_3O_x$:F, high T_c supercond., zero resistance at 148.5 K 7−143678
$YBa_2Cu_3O_y$, high T_c supercond., 90 K supercond., critical O conc., phase diagrams 7−142994
$YBa_2Cu_3O_y$, high temp. supercond., ultrasound anomaly at T_c 7−118716
$YBa_2Cu_3O_y$ superconducting ceramics, transition temps, N_2 exposure effects 7−125196
$YBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$(Y_{0.4}Ba_{0.6})CuO_3$, high-temp. supercond. 7−105748
$Y_{0.4}Ba_{0.6}CuO_y$, supercond. transition temp., press. effect 7−99289
$(Y_{0.6}Ba_{0.4})_2CuO_{4-y}$, high T_c supercond. props., FIR transmission spectra 7−113204
$Y_{0.7}Ba_{0.3}CuO_{2.3+\delta}$ high T_c supercond., resistive investigations, possible superconductivity at 140 K 7−143668
$Y_{1-x}Ba_xCuO_y$, single-phase, superconductivity at 91 K 7−105766
$(Y_{1-x}Ba_x)_2CuO_4$, high temp. supercond. 7−105761
$(Y_{1-x}Ba_x)_2CuO_4$, high T_c superconductivity liquid N_2 temps. 7−112562
$(Y_{1-x}Ba_x)_2CuO_{4-\delta}$ 7−112535
$(Y_{1-x}Ba_x)_3Cu_3O_{7-y}$, supercond., structural, electronic and mag. props., comp. depend. 7−99295
$(Y_{1-x}Ba_x)_3Cu_3O_{8-\delta}$, high T_c supercond., transition temp., crit. current density, persistent current at 77 K 7−99299
$Y_{12}Ba_{0.8}CuO_4$, supercond. phase transition obs. 7−112536
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., single-phase, superconductivity and thermoelec. power meas. 7−131889
$Y_{1.2}Ba_{0.8}CuO_4$ high T_c superconducting ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$Y_{1.2}Ba_{0.8}CuO_4$, multi-phase, struct. and superconductivity under press. 7−92355
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$, 90 K superconductor, switching phenomena 7−85190
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$ high T_c supercond. characts., annealing conditions depend. study 7−143667
Y_2BaCuO_5, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
$Y_{2-x}Ba_xCuO_{4-y}$, high T_c supercond., upper critical fields 7−99374
$Y_{2-x}Ba_xCuO_{4-y}$, multiphase oxide, superconductivity at 90 K 7−112570
$Y_{3-x}Ba_{3+x}Cu_6O_{14}$, perovskite oxide, high-T_c superconductivity 7−105781
$Y_{3-x}Ba_xCu_3O_{9-y}$ high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
$Y_xBa_{1-x}CuO_{2.3}$, supercond. transition temp., press. effect 7−99300
$Y_xBa_{1-x}CuO_{3-\delta}$, high T_c superconductivity 7−143680
$YBa_2Cu_3(O_{1-x}S_x)_y$, superconducting transition at 108 K 7−105744
$YBa_2Cu_3O_{7-x}S_x$, high T_c supercond., effect of substitution of O by S 7−143672
$YBa_{2-x}M_xCu_3O_{9-y}$ (M=Sr, Ca), possible supercond. above 230 K 7−125169
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ high T_c supercond. ceramics, substitution effects study 7−118626
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ ceramics, high T_c supercond., annealing effect 7−143659

superconducting transition temperature continued
$YBa_{2-x}Sr_xCu_3O_7$ high T_c supercond., struct., resist. and Meissner effect studies 7−112532
$YBa_{2-x}Sr_xCu_3O_y$ high T_c superconductor props., comp. depend. studies 7−118658
$Y_{2-x}Ce_xBa_{1-y}La_yCu_3O_7$ high T_c supercond., transition temp., La and Ce substitution effects 7−118634
YCu_2O_z high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
$Y_xEr_{1-x}Ba_2Cu_3O_{6+y}$, high T_c supercond., superconducting transition 7−143660
$Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$, high T_c supercond., electronic effects on superconductivity 7−118640
$Y_{0.75}R_{0.25}Ba_2Cu_3O_7$ (R=La, Lu), high-temperature superconductivity 7−138100
$YRuB_4$, mag. suscept., supercond. transition temp. meas. 7−92408
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
$YSr_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$(Y_{1-x}Yb_x)_2Ba_4Cu_6O_{14+y}$, high T_c supercond., X-ray diffr. and elec. resist. studies 7−118625
Yb high pressure bandstruct. and electronic props. 7−105388
Yb-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Yb-Ba-Cu-O, high T_c supercond., critical current meas. 7−118755
Yb-Ba-Cu-O high T_c supercond. thin films, sputter deposition 7−112554
Yb-Ba-Cu-O high T_c supercond. film, screen printed, transition temps. 7−112556
Yb-Ba-Cu-O high T_c supercond., zero resist. above 90 K 7−125209
$(Yb_{1-x}Ba_x)_3Cu_2O_{7-\delta}$, superconductivity at 95 K 7−92327
$Yb_xEr_{1-x}Ba_2Cu_3O_{6+y}$ high T_c supercond., comp. depend. and struct. studies 7−125190
$Yb_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
$YBa_2Cu_3F_2O_y$, 155 K supercond., flux trapping, Meissner effect 7−125201
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
$Zr_{100-x}Cu_x$ amorphous superconducting sputtered alloy, low-temp thermodynamic props. 7−138128
ZrM (M=Ni,Mo,W) amorphous alloys, supercond. and struct. props. 7−85176
ZrMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
ZrN thin films, DC reactively magnetron sputtered, structural, superconducting and optical props. 7−99276
ZrN/I/Pb tunnel struct., energy gap, proximity effect, T_c and I-V charcts. meas. 7−70482
$Zr_{67}Ni_{33}$-based metallic glasses, mag. susceptibility and superconductivity 7−85265
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
ZrV_2 intermetallic cpd., phase transitions effect on neutron irrad. of introduction of H *(Russian)* 7−126104
ZrV_2, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
$ZrZn_2$, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
Zr−Ni, amorphous, supercond., structural relax., crystallisation 7−104584

superconductive tunnelling
see also Josephson effect; proximity effect; superconducting junction devices; tunnelling spectra; tunnelling spectroscopy
circular symmetric superconducting tunnel junctions, sine-Gordon eqn., periodic soln. 7−125260
current driven tunnel junction, positive and negative differential resistance 7−70321
energy-gap spectroscopy using tunnelling microscope 7−112676
granular films, supercond. onset and quantum-phase fluctuations, effect of quasiparticle tunnelling 7−99338
granular films, superconducting state, quasiparticle tunnelling 7−105843
granular tunnel junctions, discrete correlated single-electron tunneling 7−138154
heavy-fermion superconductors, tunnelling effect 7−112678
high-temperature superconductors, recent Dutch laboratory results 7−131874
Josephson junction with periodic dissipation, coherent and incoherent tunnelling calcs. 7−131925
junction, current jump, real-axis gap function functional derivatives calc. method 7−92357
junction, single electron and Bloch oscills., temp. effect *(Russian)* 7−92379
junction with nonequilibrium quasiparticle distrib. function, absolute negative resist. 7−99355
junctions, nonequilibrium phenomena, electron-electron interaction effects calcs. *(Russian)* 7−112680
metastable state lifetime, level quantisation effects 7−70493
multiquantum ionisation and tunnelling in stochastic fields 7−103453
polycrystalline superconductors, anisotropic singlet pairing, far IR absorpt. and tunnelling calcs. 7−105820
pre-scanning tunnelling microscopy tunnelling 7−92256
quantum tunnelling, coherent, friction and temperature effects 7−112689
rare earth oxides, R-Ba-Cu-O, high T_c supercond., mag. and nonmag. impurity effects 7−112637
spectroscopy and Josephson effect, review 7−131905
subgap harmonic structure 7−125267
superconducting energy gap determ., tunnelling method calcs. 7−138151
superconductor/insulator/normal metal tunnel junctions, low-voltage resistance, supercurrent effects calcs. 7−92360
superconductor/insulator/superconductor junctions, subgap harmonic structure 7−125267
Al/rare earth oxide interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
Al_2O_3, RF sputter deposited films, high quality artificial tunnel barriers 7−131738
β-(BEDT-TTF)$_2$X crystals, (X=I_3IAuI), electron-phonon coupling and supercond. gap 7−131926
$BaPb_{1-x}Bi_xO_3$ granulated superconductor, Cooper pair fluctuational tunnelling cond. obs. 7−85207
Be superconducting films, ion beam sputtered, props. study 7−131845
$CeCu_2Si_2$ heavy fermion supercond., single particle tunnelling spectra studies 7−105855

superconductive tunnelling continued
Cu-oxide ceramic high T_c superconds., perovskite struct., studies on bulk and thin film samples 7−118656
In films, supercond. quantum size effect 7−70487
La-Sr-Cu-O, high T_c supercond., electron tunnelling study 7−99356
La-Sr-Cu-O break junction, tunnelling spectroscopy, evidence for strong-coupling superconductivity 7−105849
La-Sr-Cu-O highT_c supercond., energy gap, electron tunnelling meas. 7−92377
La-Sr-Cu-O system, high T_c supercond., tunnelling *(Russian)* 7−125265
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
LaSrCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118733
LaSrCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118739
LaSrCuO, high T_c supercond., evidence for incommensurate SDW in electron tunnelling studies 7−138155
$(LaSr)_2CuO_4$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electron tunnelling of thin films 7−99353
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., local tunnelling and energy gaps, STM meas. 7−99350
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, STM meas. 7−99351
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, point-contact tunnelling obs. 7−99352
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7−112697
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$La_{1.85}Sr_{0.15}CuO_4$, tunnelling, point contact investigations 7−105859
$(Li_{0.65}Na_{0.35})_{0.9}Mo_6O_{17}$ single cryst., superconductivity, electron tunnelling study 7−112703
$LiTi_2O_4$, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
Nb-Al_2O_3-Nb SIS tunnel junctions, fabrication 7−138150
Nb-Nb_2O_5-PbBi(PbAuIn) tunnel junctions, electron trap states and LF noise 7−131919
NbN based tunnel junctions, RF sputtered, thermal annealing effects 7−132451
NbN granular superconducting films, energy gap, STM images 7−99341
NbN-MgO-NbN sputter deposited superconductor-insulator junctions, insulator interface effects 7−125268
NbN-MgO-NbN tunnel junctions, characts. 7−131913
NbN-MgO(Al_2O_3)-NbN, tunnel junction fabrication 7−131912
ThIrSi, point contact spectroscopy 7−77167
α-$ThSi_2$, point contact spectroscopy 7−77167
UBe_{13}, heavy fermion supercond., point contact spectra 7−131923
UPt_3, heavy fermion supercond., point contact spectra 7−131923
V_3Ga very thin supercond. films, critical fields and spin polarised tunnelling meas. 7−131935
Y-Ba-Cu-O, high T_c superconductor, tunnelling spectroscopy 7−99347
Y-Ba-Cu-O, high T_c supercond., electron tunnelling 7−143726
Y-Ba-Cu-O high T_c supercond. tunnelling, energy gap obs. 7−99345
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling and IR meas. 7−105826
Y-Ba-Cu-O high T_c supercond., point-contact electron tunnelling 7−105851
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling studies 7−105852
Y-Ba-Cu-O high T_c supercond., break junction tunnelling meas. 7−105853
Y-Ba-Cu-O system, high T_c supercond., tunnelling *(Russian)* 7−125265
YB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
YB_6 supercond. cluster cpd., electron tunnelling 7−138140
YBaCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118733
YBaCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118739
$YBa_2Cu_3O_7$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7−112697
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
ZrM (M=Ni,Mo,W) amorphous alloys, supercond. and struct. props. 7−85176

superconductivity
see also BCS theory; coherence length; composite superconductors; Cooper pairs; critical currents; dirty superconductors; fluctuations in superconductors; Ginzburg-Landau theory; magnetic superconductors; Meissner effect; organic superconductors; penetration depth (superconductivity); strong-coupling superconductors; superconducting critical field; superconducting devices; superconducting energy gap; superconducting materials; superconducting transition temperature; superconductive tunnelling; type I superconductors; type II superconductors
2D electron gas, implications of IR instability for high T_c superconductivity 7−112164
AC superconductors, thermal stability and zone propagation calcs. 7−77162
amorphous superconducting materials, pinning forces, defects, critical currents 7−70505
antiferromagnetic singlet pairs and high freq. phonons, model for high T_c superconductors 7−105812
applications, review *(Italian)* 7−112527
applied research, European international collaboration 7−131827
applied research, international collaboration in Europe 7−131824
applied superconductivity, conf., Baltimore, MD, USA (Sept. 1986) 7−128170
applied superconductivity research, international cooperation and collaboration 7−131826
bipolaron system, 1D, with random pots., superconductivity, competition with CDWs 7−112617
breakthroughs in superconductivity 7−120758
ceramic high T_c supercond., repulsive interactions due to breathing modes 7−125227
condensed excited states, influence of collective effects on lifetimes 7−76721

perconductivity continued
condensed matter physics, open problems 7−76717
condensed matter physics conference, Stockholm, Sweden (March 1986) 7−72705
cooled superconductors, stability margins, semiempirical calcs. 7−131868
cosmic strings, supercond., EM radiation 7−79822
dielectric-breakdown models at surface, resistor-network approach to growth probability, supercond. aggregates 7−132197
dynamic behaviour of a superconductor under time-dependent external excitation 7−125238
electronegativity and superconductivity 7−85163
elements, superconductivity criterion *(Chinese)* 7−112529
EM wave excitation by acoustic wave-electron interaction *(Russian)* 7−112403
extraordinary current in superconductors of pyroelectric symmetry 7−125223
general relativistic models for normal and super current in thin wire systems based on a two component theory *(German)* 7−92359
gravitational wave detection using superconducting circuits 7−73170
heavy fermion systems, BCS theory, no p-wave superconductivity 7−70458
heavy fermion systems, giant Migdal effects 7−112628
heavy fermion systems, superconducting instability, Coqblin-Schrieffer model, large N-limit calcs. 7−70462
heavy fermions, effective mag. moments and Kondo lattice Wilson ratio 7−112739
high field-high current, discovery 7−128234
high T_c, resonating valence bond state and solitons 7−105813
high T_c perfect conductors in 2D, possible non-pairing mechanism 7−138113
high T_c supercond., phonon freq. changes and spin density waves 7−125232
high T_c superconductivity, electron hopping model 7−138112
high T_c superconductors, review *(Japanese)* 7−125212
high temp. superconductivity mechanism, two-conduction band model calcs. 7−125228
high temperature supercond., plasmon models 7−112620
high temperature superconductivity, review, implications for elec. engineering industry *(Dutch)* 7−118617
high-temperature superconductors, review 7−138092
highly anisotropic superconductor, thermodynamic props. in external mag. field *(Russian)* 7−99330
history of research, 1908-1914 7−128236
history of research, 1933-1957 7−128237
impure metals, conference, Braunschweig, Germany (Aug. 1984) 7−66829
industrial technology, Japanese international cooperation 7−131825
interband pairing in mixed valence and heavy fermion systems 7−105505
interlayer coupling, contribution to superconductivity in high T_c oxides 7−112593
low temp. props., conference, Moscow, USSR (May 1986) 7−102010
metal crysts., twinning plane superconductivity, (H,T) phase diagram meas. 7−105800
metal oxide complexes, electronic transfer of local pairs, high T_c superconductivity *(Russian)* 7−125177
metallic superlattices, model systems, struct., elec., and mag. phenomena 7−105349
metals, electron scatt. by quantum defects, infrared divergences study *(Russian)* 7−112615
multilayer superconductor with alternate conducting and insulating layers, excitonic superconductivity model 7−85180
neutron star, paramagnetic effects 7−145807
nonmagnetic Kondo lattices, electronic and supercond. props. 7−124975
oxide superconductors, high T_c, role of interlayer coupling 7−131869
p-wave superconductor under externally applied weak field, order parameters, current 7−92358
parabolic systems, positively invariant regions study 7−102357
phonon anomalies and soft modes, band struct. anal. 7−111808
phonon emission, order parameter dynamics effects calcs. 7−85179
plasma superconductivity in a 2-D electron system 7−70347
quantum mechanical electron theory of metals, development, 1928-33 7−66888
repulsion Fermi systems, variable valence and correlation pairing of current carriers, appl. to high T_c supercond. *(Russian)* 7−125234
resonant valence-bond state, numerical simulation 7−112621
review of superconductivity mechanism 7−112629
slave boson large degeneracy expansion for the lattice Anderson model 7−112157
solid state, quantum field theory renormalization 7−76718
solid state science, book contrib. 7−102035
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
spin liquids and spin crystals, 1e and 2e superconductivity 7−105811
su(8) model for superconductivity, charge and spin density wave unification 7−112616
superconducting intermediate valence systems, longitudinal ultrasound attenuation, periodic Anderson model calcs. 7−70476
superconducting state formation, nonlinear excitations in strongly anharmonic lattices *(Russian)* 7−143655
superconducting superlattice, penetration depth 7−70474
tensor-boson condensation in superconductivity of heavy-fermion systems 7−131870
ternary and multinary cpds., conf., Snowmass, CO, USA (Sept. 1986) 7−120711
theory, historical review 7−128233
transition metal dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728
transition temp., generalised Hubbard model *(Russian)* 7−125178
triplet superconductors, quantum theory 7−112634
twinning-plane superconductivity, review 7−143683
ultrasonic attenuation in impure anisotropic p-wave superconductors 7−105837
valence bonds, pair-pair correlations, model for superconductivity 7−112631
$BaPb_{1-x}Bi_xO_3$, metal-semiconductor transition, dimerisation model, Raman study 7−70192
$Ba_2RCu_3O_{9-x}$ (R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb), high T_c supercond., prep. and characts. 7−118660
$Ba_{0.4}Y_{0.6}CuO_{3-y}$, persistent current in liquid N_2 7−131858
$Hg_{3-\delta}AsF_6$, superconductivity, effect of annealing and anisotropy 7−138110

superconductivity continued
In weakly coupled superconducting particles, resistive state, superconductivity destruction 7−118618
NbH_x, tunnelling states of H in normal and superconducting Nb 7−84365
Pd-Se system, phase relations, superconductivity 7−113519
Si, superconductivity of high press. phases 7−77136
$Sn_{33}Pb_{67}$ disperse system, mag. field, influence on superconductivity 7−70471
Y-Ba-Cu-O, high T_c supercond., electron tunnelling 7−143726
Y-Ba-Cu-O cpds., orthorhombic and tetragonal phases, O deficiency, high T_c supercond. 7−118682
$YBa_2Cu_3O_7$, single phase high T_c supercond., thin superconducting shells 7−118664

superconductors *see superconducting materials; superconductivity*

supercooling
alloy melts, supercooled, solidification, fundamental aspects 7−92980
alloys, equiaxed dendrite growth at small supercoolings 7−77975
alloys, rapid solidification, interface morphology 7−92981
cholesterol-cholesteryl oleate binary mixtures, X-ray diffr. study 7−75987
Czochralski cryst. growth, ultimate pull rate limitation, constitutional supercooling and dopant accumulation effects 7−100048
galvinoxyl radical mixed crystals and hydrogalvinoxyl cpd., diamag.-paramag. phase transition, thermodynamic props. 7−138239
glycerol, glass transition, freq.-depend. shear modulus meas. 7−124511
heterogeneous systems, supercooling and superheating effects 7−136679
liquid, medium range order theory 7−97969
liquid, soft-sphere model, mol. dynamics study 7−75954
liquids, microdynamics, diffusion and struct. relax. 7−137202
metal droplets, atomised, solidification, nucleation catalysed by spherically-shaped oxide particles 7−119262
metals and alloys, liq., undercooling produced by rapid quenching 7−77981
multicomponent systems, kinetic phase diagrams 7−124452
needle crystals, solidification, vel. selection, nonlocal model 7−84612
orographic clouds, supercooled liquid water content over S Utah 7−133835
plasma, one-component, glass transition, dynamic correlations, generalised viscoelastic formalism 7−105027
n-propanol, internal press. var. with temp. 7−104914
quasiliquid crystal films, supercooled, polar ordering, electrostatic field effects, optical SHG study 7−137210
shaped thin-walled semi-transparent crystals pulled from melt, heat transfer 7−83808
solidification, rapid, struct. form. mechanisms 7−100197
steel, Mo-W high-speed, fracture toughness, retained austenite effect 7−100381
o-terphenyl, supercooled, dielec. relax., press. effects 7−143962
water, supercooled, self-diffusion coeff. meas. to 300 MPa 7−137605
water, supercooled, solidification, kinetics study 7−91767
water, supercooled, thermodynamic props. at 1 atm. 7−111913
Ag-Au droplets, undercooled, microscopic observations 7−126093
Ag-Cu, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
Al-Mg-Mn alloy powders, rapidly solidified, microstruct. charactn. 7−86156
Al-Si, undercooled, solidification struct. development 7−77984
In-Bi, solidified from highly undercooled liq. at atm. press., high press. phase form. 7−77986
$InAs_{1-x}Sb_x$ LPE on GaSb substrates, supercooling effects study 7−137742
InGaAs/InP layers, thin-melt multi-slice LPE, constitutional supercooling 7−144311
InGaAsP on GaAs, phase diagram and LPE 7−100131
Mg-Zn, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7−77982
Nb-Ge, undercooling in 100 m drop tube 7−77987
Ni-Ag (2 wt.%), bulk undercooled, grain refinement 7−77985
Ni-Mo, eutectic alloys, microstruct. rel. to undercooling 7−92975
Ni-Sn, undercooled, dendritic growth, recalescence, high speed optical temp. meas. 7−100208
Ni-Sn, undercooled, solidification, dendritic growth, high speed cinematography 7−100207
O_2 supercooled liquids and solids in porous sol-gel glasses 7−98406
Pb-Bi, undercooled droplets, crystn. kinetics during rapid solidification 7−77983
Pb-Sb, undercooled, solidification struct. development 7−77984
Te, supercooled liquid, local order and semiconductor-metal transition, neutron scatt. study 7−137182
Te thin films, laser induced phase transformations, transient cond. studies 7−117969
YIG films, optimisation of flux composition in LPE growth 7−138691

superexchange interactions
anisotropic superexchange, Kramers degeneracy of ground state of interacting mag. ions in insulators 7−143781
high T_c superconductors, anisotropic Cooper pairs 7−99315
high T_c superconductors, electron pairing by cooperation of superexchange and polaron effects 7−118690
high temperature superconductivity, superexchange mechanism, mean-field model, EHT calcs. 7−112623
layered oxide systems, Jahn-Teller effect-mediated superconductivity 7−112643
polymers, superexchange interaction, mag. props. 7−85278
semiconductors, dilute magnetic, magnetic properties, review 7−125391
simple square lattices, dγ-symmetry Cooper pairs, effect of mag. frustrations 7−112636
$Cd_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
$(Cd_{1-x}Mn_x)_3As_2$, semimagnetic semiconductor, preparation, structure and mag. props. 7−70532
Cu oxide high T_c superconds., Cu^{2+} effective exchange integrals, ab initio MO calcs. 7−125229
$Fe_{80}M_3B_{17}$ (m=transition metals), amorphous alloys, influence of transition metal additives on transport props. 7−137892
$xFe_2O_3(PbO.2B_2O_3)$, mag. interactions, ESR and FMR spectra 7−125531
FeS:Mn, M=3d transition metal, mag. and crystallographic transitions, Mossbauer, X-ray studies 7−132006
$Hg_{1-x-y}Cd_yFe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414

superexchange interactions continued
$Hg_{1-x}Fe_xSe$, semimagnetic semicond., mag. suscept., sp. ht. meas. 7−92414
KMF_3, M=Mn, Co, Ni, superexchange interaction, Madelung correction effect calcs. 7−143782
$Li_{0.5}Fe_{2.5}O_4$, superexchange interactions 7−143783
LiZnTi ferrite, hyperfine field, relaxation effect, Mossbauer study 7−124941
Mn (III) fluorides, chain compounds, mag. behaviour *(French)* 7−105910
$Ni_{77}M_3B_{20}$ (M=transition metals), amorphous alloys, influence of transition metal additives on transport props. 7−137892
$Y_3Fe_5O_{12}$, superexchange interactions 7−143783

superfluid helium-3
see superfluid helium-3
A phase, f-wave effects, quasiparticle collision contribs. 7−118189
A phase, Shankar monopole behaviour 7−124624
A-B interface, order parameter, symmetry considerations 7−111997
A-phase, dynamic orbital ang. momentum, effective action 7−98610
A-phase, ion mobility along superfluid vortices 7−143127
A-phase, ion mobility anisotropy and superfluid energy gap 7−143126
A-phase, microscopically derived Wess-Zumino action 7−131383
A-phase, textures, mag. deformation in a narrow slab 7−84429
A-phase, total ang. momentum conservation 7−137648
A-phase, vortex states obs. by use of negative ions 7−76526
B phase, critical superfluid spin current 7−124623
B phase, dipole interactions and NMR freq. 7−124619
B phase, finite size effects, shear viscosity 7−111998
B phase, spin current flow, phase slippage obs. 7−124622
B- and 2D-phases, static spin suscept. at nonzeroth mag. field 7−137646
B-phase, critical current in confined geometry 7−84431
B-phase, J=$^-$1 collective mode, ultrasonic attenuation meas. 7−137652
B-phase, metastable vortex studies, Ginzburg-Landau eqn. anal. 7−112000
B-phase, thin layers, mag. reson. and spin waves 7−70018
B-phase, vortex-free state in rotating cylinder, CW NMR spectra 7−137654
B-phase, with ^{3}He-^{4}He mixture as weak link for Josephson effects 7−70016
collective boson modes, correspondence with gravitational waves in general relativity 7−84437
comparison with heavy fermion superconductivity props. 7−70015
continuous vortices in rotating system 7−76528
critical current and superfluid transition temp. in cylindrical channel 7−84430
healing length from fourth sound techniques, pressure depend. 7−111999
high field nuclear magnetometer 7−80830
low temp. props., conference, Moscow, USSR (May 1986) 7−102010
low temperature physics, book 7−80208
motional states in K-L zeolite 1D channels, sp. ht. and heat of sorption studies 7−137649
negative ion thermometer 7−121118
nonlinear NMR props. *(Russian)* 7−76524
order parameter, spatial depend. at A-B phase boundary 7−84436
paramagnetic instability phenomenon in strong mag. field 7−137647
Peshkov transducer in superfluid ^{3}He 7−137651
quantized vortices, vortex-core transition and NMR studies of ferromagnetism, review 7−143129
rotating, vortices, Ginzburg-Landau description, book contrib. 7−84438
rotating superfluids, vortex oscillations and hydrodynamics, review 7−70012
shear viscosity, transport props. near liquid-vapour critical point 7−84415
singular behaviour at T=0, quantum field theory 7−84433
spin current vortices 7−76523
superfluid glass modelling, variational wave fn. anal. 7−105170
topological charge and chiral anomalies 7−143125
topologically nontrivial loop defects classification 7−115768
two-domain precessing magnetic struct. studies 7−105172
vortex state decay, mutual friction 7−84434
vortex structure in rotating ^{3}He-A 7−84432
^{3}He NMR and superfluidity in ^{3}He-^{4}He solns. 7−131384

superfluid helium-4
adsorption and capillary condensation on Nuclepore 7−124627
cavitational boiling, investig. 7−76374
charged, electrokinetic effect, metrology appl. 7−124613
coated surface, spin polarised H relax. rate, substrate mag. particles effects 7−84445
coherent states and symmetry breaking 7−98602
condensate atoms, density., upper limit 7−124616
condensate fraction and chemical potential 7−84424
cooling superconductors, stability margins, semiempirical calcs. 7−131868
cooling systems, IR telescope appl. 7−115236
crystallisation, liq.-solid interface roughening transitions study 7−112002
cylindrical standing surface waves 7−76516
density in narrow gaps near λ-point temp. depend. 7−70011
dilution refrigerator using circulating ^{4}He 7−80798
discrete dissipative events in microorifice, temp. depend. 7−137642
electrokinetic phenomena 7−70008
fifth sound and elementary excitation spectrum calcs. 7−91910
film, fourth and fifth sound vels., temp. depend. eval. 7−91908
film, temp. variation of first and second sound 7−70006
film, third sound and superflow on a striped substrate 7−84425
film boiling at low hydrostatic pressures 7−76522
films, 1D acoustic localisation in the presence of a flow field 7−84420
films, vortex dynamics 7−84419
fixed slit geometry phase separator, space appls. 7−67313
flow between rotating cylinders, appearance of vortices 7−84414
flow through porous plug phase separator 7−111992
flow velocities in rotating cylinder, during spin-up, first and second sound transit time meas. *(German)* 7−76521
flow visualisation and laser Doppler velocimetry applic. 7−73364
flowing through narrow channel, temp. distrib. 7−70013
fountain effect pumps, loss mechanisms 7−67317
fountain effect pumps for circulating pressurised superfluid ^{4}He 7−67316
fountain effect-based thermodynamic cycles and related changes of state 7−67318
heat exchanger design using saturated and underheated superfluid He-II 7−83220
heat pulse propag. and quantised vortices generation 7−118187
heat transfer anal. using finite differences 7−73371
heat transfer by transient forced convection 7−75252

superfluid helium-4 continued
heat transport propag. 7−91907
Helmholtz resonator and SQUID reading device for superfluid flow obs. through aperture 7−73365
hydrodynamic Josephson effect expt., focused ion-beam milling of submicron aperture 7−137640
Josephson effect, AC analog, dynamical model 7−118186
layered struct. at supercritical motion, energy and density operator calcs. 7−105166
low temp. props., conference, Moscow, USSR (May 1986) 7−102010
magnetic cooling with forced flow of superfluid ^{4}He, investig. 7−67315
microgravity environment on Spacelab 2, invest. of props. 7−70014
motional states in K-L zeolite 1D channels, sp. ht. and heat of sorption studies 7−137649
mutual friction parameters, freq. and vel. depend., calc. 7−70007
neutron scattering at very large momentum transfer 7−84418
nonlinear vapour-liq. phase separation, microgravity effects 7−70005
phase separator operation in zero gravity 7−67314
plane laminar shear region at wall, development with time, numerical calcs. *(German)* 7−124617
porous plug type phase separators, design limits 7−67312
pressurized, plastic dewar flash 7−95596
quantized vortices, turbulence, two dimens. transitions 7−76519
Raman spectra *(Japanese)* 7−76520
rotating superfluids, vortex oscillations and hydrodynamics, review 7−70012
roton-like excitation, thermodynamic behaviour 7−143124
second sound nonlinear wave interactions *(Russian)* 7−124612
second sound velocity, precision meas. 7−137641
shear viscosity, transport props. near liquid-vapour critical point 7−84415
SMES, two-layer, heat transfer 7−133136
solar neutrino detection using superfluid He 7−115343
sound propagation in porous media 7−111991
space cryostats, dynamic behaviour, computer simulation 7−67324
Space Infrared Telescope Facility cryogenic systems, comparison of He and He-solid H_2 7−67322
Spacelab 2 superfluid ^{4}He cryostat, cryogenic performance 7−67321
specific heat and entropy calcs. near λ point 7−124615
specific ht. and phonon dispersion from elementary excitation spectrum in ring diagram approx. 7−91909
stability between rotating concentric cylinders 7−118184
subcritical and supercritical nonturbulent flow of mass and entropy 7−70010
supercurrent flow, healing, nonlocal theory 7−105167
superfluid fraction from 1.5 K to T_λ(P) and from vapour press. to melting curve 7−76515
superfluid-crystal interface, roughening transitions and shape relax. time study 7−105179
surface, sticking of spin-polarised H atoms 7−112006
T-I-T-II transition, noise-induced bistability 7−142300
thermal conductivity in capillaries, kinetic theory 7−105168
thermal shock struct. 7−91911
transport in phonon systems, book 7−72740
turbulence, plug motion in tube flow with nonuniform temp. profile 7−84427
turbulence redistrib. processes in capillary flow 7−84426
turbulent flow in superfilters, fountain effect pump limitations 7−67311
turbulent flow through different narrow channels 7−111993
two-dimensional, rotating, equilib. vortex density 7−84413
ultrasonic attenuation near the λ point 7−84421
use in fluid-saturated porous media for meas. dynamic permeability and tortuosity 7−75667
vortex layers, self-expansion *(German)* 7−137645
vortex line density intrinsic fluctuations in superfluid turbulence 7−70009
^{3}He dilute solns. in superfluid ^{4}He, transverse acoustic impedance 7−70021
^{3}He-^{4}He mixtures, solid-superfluid interface phenomena 7−105173

superfluidity
see also quantum fluids; superfluid helium-3; superfluid helium-4; vortices
Bose gas, one-dimensional superfluidity *(Russian)* 7−76514
boson gas, 1D, localized-superfluid transition, electron gas analogy 7−105435
charged superfluid, hydrodynamic eqns. 7−143122
condensed matter physics conference, Stockholm, Sweden (March 1986) 7−72705
dressed boson systems, macroscopic props. 7−98606
Fermi superfluid, p-wave, polar state anal. 7−70019
hydrodynamic equation, symmetric form, thermodynamic conditions 7−124614
hydrodynamics in weak EM fields of superfluid 7−84417
interacting Bose gas, weak external field, van der Waals limit 7−105162
Lorentz-like transform., nonrelativistic field theory 7−128277
molecular hydrodynamics, two-time Green's fn. method 7−137643
quadrupolar nuclei, NMR spectra line narrowing, appl. of supercritical fluid solvents 7−109942
rotating superfluids, vortex oscillations and hydrodynamics, review 7−70012
superconducting neutron star, paramagnetic effects 7−145807
superconductivity in a Kondo lattice *(Chinese)* 7−112612
He, liquid, superfluid turbulence, imperfect pitchfork bifurcation with weak noise 7−134645
^{3}He-^{4}He films, third sound detection of superfluid transitions 7−124626
^{3}He-^{4}He liq. mixtures, thermodynamic props. between 0-20 atm at 0 K 7−70022
^{3}He-^{4}He mixtures, superfluid, two-phase sound 7−98612
^{3}He-^{4}He superfluid, hydrodynamic flow equations, viscous force and mutual friction force 7−76529
^{3}He-He II, mode-locking and chaos in Rayleigh-Benard convection 7−76530

superfluorescence *see superradiance*

supergiant stars
see also OH-IR stars
A-type supergiants, mass loss characts., UV high resolution spectra anal. 7−127854
ϵ Aur, eclipsing binary, 2 μm CO lines obs. during eclipse 7−107899
ϵ Aur, twisted accretion disk model 7−88535
ϵ Aur, UBV photometry outside eclipse (March-April 1986) 7−145955
B-type supergiants in LMC, model atmospheres rel. to UV-visual energy distribs. 7−72417

supergiant stars continued
bright F, G, K and M-type stars, spectrophotometry of 60 southern and equatorial stars 7−120369
brightest blue supergiants as distance indicators, complications 7−140286
η Car, IR spectroscopy rel to composite dust shell model 7−120462
GG Car, peculiar emission-line star, UV spectrum line identifications 7−72437
α Car (Canopus), appl. of significance tests to mag. field meas. by photographic technique 7−134146
ρ Cas, 1986 brightness increase, photometric obs. 7−115470
μ Cep, SRc star, BV photometry (1981 to 1986) 7−72452
Cepheid variables in M33, comparison of Hubble photometry with CCD data 7−79975
circumstellar shells, props. of silicate emission features in low-resolution IRAS spectra 7−140322
circumstellar silicates, optical and near-IR emission pros. 7−145937
δ CMa (F8 Ia), atmospheric props. and evolutionary parameters determ. from spectrum anal. 7−140068
CPD−58°2721, H-deficient binary star, orbital period and vel. semi-amplitude 7−88538
R CrB, UV spectra during fading episode, assoc. model 7−127913
P Cyg, circumstellar shell detect. by direct CCD imaging 7−72434
V448 Cyg, eclipsing binary, spectral characts. 7−127946
P Cyg, extended radio emission obs. 7−120419
α Cyg, pulsation characts., radial vel. obs. 7−115384
γ Cyg (F8 Ib), spectroscopic obs. rel. to pulsation model for 8-day mag. field period 7−140070
S Dor stars, outbursts rel to circumstellar shells around Ofpe/WN9 stars in Galaxy and LMC 7−134237
1 E 1145-6141, X-ray pulsar, supergiant mass and radius from new orbital parameters 7−134277
early-type galactic supergiants, Hγ-line equivalent widths for comparison with SMC stars 7−120390
early-type stars in Cyg OB2 association, speckle interferometric obs. rel. to search for multiplicity 7−120406
early-type stars in SMC, stellar winds props. from IUE spectra 7−134225
early-type supergiants, polarisation of light scattered from stellar winds 7−140041
emission-line objects in M33 and IC 1613, objective-prism survey 7−72328
EUV emission lines 7−88420
F-K atmospheres, Na overabundance and $^{12}C/^{13}C$ ratio *(Russian)* 7−140046
galactic centre supergiants density 7−128060
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 190603, B 1.5 Ia^+ supergiant, turbulent velocity and spectra *(Russian)* 7−127862
HD 213985; halo hot post-AGB star; evolutionary status and shell dust, spectral and photometric obs. 7−120387
HD 37836 in LMC, O-type supergiant, wind and disk characts., spectral and photometric obs. 7−127853
HD 77581 (Vel X-1), accretion disk form. in magnetosphere of wind-fed pulsar 7−140152
HD 77581 (Vel X-1), obs. of UV variability due to B-type supergiant components 7−88537
HDE 270100, new long-period Cepheid in LMC, period and light curve from Walraven photometry 7−120456
HR 2554, ζ Aur star, spectral and photometric characts., eclipse predictions 7−88531
Hubble-Sandage variables, luminosity study 7−101803
hydrodynamic study of pulsation in low surface-gravity stars 7−107819
hypergiant stars eruptions, opaque wind model for relation between apparent temp. and mass loss rate 7−120440
IR excess supergiants, dust shell characts. and polarisation obs. 7−120388
IRAS 09371+1212, icy evolved mass-losing star with unique IR spectrum, CO(1-0) line obs. 7−101955
late-type giants and supergiants, activity, IUE survey 7−140061
late-type giants and supergiants in southern Milky Way, coincidences with IRAS point sources 7−72333
late-type supergiant + B-star binaries in Milky Way and LMC, expected ang. separations 7−80034
late-type supergiants, polarimetric characts. 7−72405
late-type supergiants SiO maser emission and IR continuum 7−79973
ρ Leo (B1 Ib), spectroscopic study and element abundances 7−127864
long-period and semiregular variables, predicted dates of maxima and minima (1987) 7−79982
M-type stars in EIC-1 catalogue, IRAS obs. 7−88674
Magellanic Cloud supergiant stars, search for variability in BVRI obs. 7−101782
Magellanic Cloud supergiants, reddenings and intrinsic colours, BVRI photometric obs. 7−101781
massive stars, mixing length and convective overshooting 7−101763
massive stars in galaxies, review 7−72426
O9 to A0 stars, effective temps. from spectral energy distribs. and model atmospheres 7−127833
O and Of-type stars, obs. of new optical emission lines 7−101785
OB high luminosity stars in M33 galaxy, characts. 7−79962
OB-type supergiant sequence, UV spectral morphology 7−72429
α Ori, 2D images and atmospheric structure from speckle obs. 7−88402
α Ori, circumstellar CO obs. 7−88428
α Ori, circumstellar H I and mass loss characts. 7−107824
α Ori, diameter and limb-darkening effects, speckle obs. 7−88401
α Ori, Hα chromosphere obs. using differential imaging technique 7−115379
α Ori, triple system, speckle imaging and polarisation characts. 7−88398
α Ori (Betelgeuse), distance, diameter, light vars., and circumstellar shell 7−101776
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheric modulation 7−140064
α Ori (Betelgeuse), SRc star, BV photometry (1981 to 1986) 7−72452
ϵ Peg, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
S Per, OH-IR star, interferometric obs. of H_2O and OH maser emission 7−72433
12 Pup, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
ζ Pup (04 If), search for coronal line emission 7−115390
ζ Pup (O4f), photosphere model from optical line profiles 7−88433
ζ Pup (O4f), statistical equilib. calcs. for H to Zn in radiation-driven wind 7−145933

supergiant stars continued
R136a, supermassive star in LMC, resolution into individual components *(French)* 7−79961
R 130 in LMC, spectral and photometric study of triple system 7−88436
red supergiant 7−140119
red supergiants, mass loss characts. and UV emission 7−94869
red supergiants formation, upper mass limit from evolutionary models with mass loss and overshooting 7−134222
Rigel, distance meas. using Gravity Probe B 7−73149
S18/SMC, peculiar early-type emission-line supergiant, optical and UV spectroscopic study 7−101771
Sanduleak−69°202, IUE UV spectra, progenitor of SN 1987A supernova 7−127923
Sanduleak−69°202, radius of progenitor to SA 1987A 7−127924
Sanduleak−69°202 (SN 1987A progenitor), interacting binary model in which Sk−69°202 companion explodes 7−127925
Sanduleak−69°202 in LMC (SN 1987A progenitor), observations indicating multiple nature 7−80012
Sanduleak −69°202, archival brightnesses (1899-1986) rel. to SN 1987A 7−80016
Sanduleak −69°202, astrometric position of SN 1987A progenitor 7−88482
Sanduleak −69°202, progenitor of SN 1987A, circumstellar gas density determ. from radio emission 7−115484
Sanduleak −69°202, recovery in range shortwards of 200 nm (after SN 1987A) 7−80008
Sanduleak −69°202, supernova prompt explosion mechanism 7−127930
Sanduleak −69°202 (progenitor of SN 1987A in LMC), photometric obs. rel. to K-type supergiant companion 7−80009
Sanduleak −69°202 (SN 1987A progenitor), in LMC, astrometric obs. 7−101813
Sanduleak −69°202 (SN 1987A progenitor), photometric behaviour, 1934-59, from Sonneberg Observatory plates 7−120479
Sanduleak −69° 202 and SN 1987A in LMC, IUE obs. of spectral evolution and magnitudes 7−72482
Sanduleak −69° 202 and SN 1987A in LMC, possible binary star progenitor, position 7−94929
Sanduleak −69° 202 and SN 1987A in LMC, precise positions 7−80015
Sanduleak-69°202 (star 1), identification as SN 1987A progenitor 7−88477
Sanduleak-69°202 and SN 1987A in LMC, developments in 1987 February-March period 7−101831
Sanduleak-69° 202 magnitude prior to SN 1987A in LMC 7−72478
α Sco A, precise optical position (1982 to 1985) 7−94636
R Sct, vel. structure of RV Tau star atmosphere 7−107845
FG Sge, spectral type, radius and lumin. determ. from IR photometric obs. 7−145961
Sk−69°202 (SN 1987A in LMC), explosion of 20 $M_\odot$ star which experienced mass loss 7−146003
Sk −69°202 (SN 1987A progenitor) in LMC, implications of far-UV photometry of SN 1987A 7−101820
Sk −69°202 (SN 1987A progenitor) in LMC, implications of UV obs. of supernova 7−101822
SMC brightest blue stars, Hγ-line equivalent widths and luminosity classes 7−120390
SN 1604 progenitor, mass-losing runaway star model rel. to origin of supernova remnant 7−146074
SN 1987A in LMC, progenitor characts. 7−146014
supermassive stars, model for central power source in active galaxies 7−146091
supermassive stars, power-law relations between mass, radius and central temp. 7−72408
SU Tau, R CrB star, visual magnitude estimate (1987 August 2) 7−134243
SU Tau, R CrB type star, observations of recovery from fading 7−88448
CE Tau, SRc star, BV photometry (1981 to 1986) 7−72452
RV Tau stars, optical and IR photometry 7−107863
RV Tau stars as post-asymptotic giant branch objects 7−88438
RV Tau type stars in Magellanic Clouds 7−120438
4U 0900−40 (HD 77581), massive X-ray binary, search for rapid vars. of P Cyg line profiles 7−120502
variable supergiants as binary system components 7−79983
PU Vul (Nova 1979), supergiant-like spectrum of hot component 7−140102
yellow evolved stars in open clusters, search for superluminous giant stars 7−115382
SiO cooling instability in envelopes of cool giant stars, contrib. to dust grains form. 7−120398

supergravity
(1,0) supergravity, superfield quantization and the background field method 7−73137
(1,0) supergravity in superspace, heterotic string 7−115888
$N=1$ superconformal gauge theory in $d=2$ superspace 7−128418
Abelian anisotropic cosmological models in 11-dimensional supergravity 7−107991
Abelian anisotropic cosmological models in eleven-dimensional supergravity 7−108383
anomaly-free theories beyond superstrings containing N=1 supergravity and Yang-Mills matter 7−95795
antinucleons from decaying gravitinos in supersymmetric cosmology 7−102284
antisymmetric tensor field with Green-Schwarz mechanism 7−80574
antisymmetric tensor gauge field coupling to supergravity-matter system 7−134630
asymptotically anti-de Sitter universes in arbitrary space-time dimens. 7−73116
Bianchi identities in the absence of third-class constraints 7−134632
Born-Infeld action from conformal invariance of the open superstring 7−95430
casimir effect in supergravity theories and the quantum birth of the Universe with non-trivial topology 7−102280
Chern-Simons forms, invariance properties 7−67169
Chern-Simons forms and four-dimensional $N=1$ superspace geometry 7−140587
conformal supergravity, d=2, structure and string covariant actions 7−140586
conformal superstring anomalies in superspace 7−128399
covariant canonical formalism for group manifold 7−67170
curved superspace σ-models, light cone gauge fixing, θ-expansion of superstring 7−73566

supergravity continued
D=10 N=2a supergravity, superspace formulation, SUSY transformations 7−95446
d=11 supergravity, compactification, gauge-invariant vacuum solns., Stiefel manifold, SO(5), SO(3) 7−128422
d=11 supergravity, spectrum and symmetry breaking, quotient of manifolds by discrete groups 7−67166
D=11 supergravity, supermembrane propagation, action calc. 7−95447
dilaton classical soln. and supersymmetry breaking evolution in expanding universe 7−67167
duality transformation and non-Kahler couplings and potentials in an $N=1$ supergravity theory 7−73144
dynamical relaxation of θ and supergravity, $(SU(1,1))^3$ model 7−73138
e_6 superpotentials and applications to heterotic superstring phenomenology 7−89100
effective super-Higgs and Str M^2 from four-dimensional strings 7−140589
effective supergravity lagrangians for 4D superstring massless sector, underlying nonlinear σ model 7−135078
Einstein-Cartan gravitational action, torsion term, stochastic geometry, N=1 supergravity 7−89082
Einstein-Maxwell scalar theory with monopole compactification, cosmological implications 7−73121
Einstein-Yang-Mills supergravity, d=10, N=1, plane wave solns., modifications in superstring effective theories 7−120902
Einstein-Yang-Mills system, strings and superspace, d=10 supergravity 7−108796
extended supergravities, spontaneous breaking 7−67172
four-dimensional superstrings, factorisation and multiloop modular invariance constraints for closed strings 7−108340
free heterotic string field theory, supersymmetry, gauge fixing and BRST formalism 7−108886
free open spinning string, diagonalisation, nonlinear sigma model critical dimens. 7−108379
free Ramond sector of Witten's covariant superstring action 7−80548
gauge-invariant free open superstrings, consistency and component-field struct. 7−89403
gauged d=7 N=2 supergravity with Chern-Simons form 7−67165
gaugino and sfermion mass correls. in N=1 supergravity models 7−120917
Goldstone-type gravitation with Poincare translation gauge fields, extension to supergravity 7−140585
graded bundles and their moduli spaces, Ogevietsky-Sokatchev model of supergravity and instantons 7−102286
Grassmann models and existence of nonlocal currents, canonical structure 7−67174
gravity form bosonic, heterotic and SUSY strings 7−108358
heterotic string, quartic effective action calc., reduction to superstring N=1 supergravity sector 7−140906
heterotic string, spacetime versus world-supersymmetry 7−73140
heterotic string effective action, dilaton and quartic curvature terms 7−80549
heterotic superstring compactification, 4 dimens. supergravity as low-energy limit 7−89476
heterotic superstring model, geometrical struct. in even dimens. 7−73142
Higgs boson in supersymmetric models, existence in T-meson decays 7−73644
higher curvature supergravities, group manifold approach, superstring compactification study 7−80572
higher curvature supergravity and superstrings 7−108380
higher dimensional cosmology and the energy-momentum conservation law 7−128417
Kahler manifolds with vanishing chiral potential 7−81084
Kaluza-Klein Casimir cosmology and thermal equilibrium 7−128155
Kaluza-Klein cosmology, attractor universe in N=2 supergravity 7−73145
Kaluza-Klein program and supergravity 7−80578
Kaluza-Klein supergravity, positive energy theorem for 11D 7−67173
Landau-Zener probability, solar-neutrino oscillation 7−108829
light-front dynamics of topologically massive supergravity 7−102281
Lorentz generators in light-cone gauge superstring field theory 7−89404
low-energy supergravity and superstring-inspired models, gauge symmetry breaking 7−73569
low-energy supergravity from 4D superstrings, fermionic formulation 7−102720
massless high spin (s>2) fields, noncontradictory gravitational interaction 7−95444
Maxwell-Einstein supergravity, new class of chiral d=6 theories 7−67171
mesonic rare decays in N=1 supergravity 7−80577
minimal low energy supergravity, R-parity breaking and the top quark mass 7−89099
minimal N=2 supergravity, chiral actions 7−108376
N=16 supergravity, integrability 7−140590
N=1, d=4 supergravity, scalar pot. struct., appl. to superstring theory 7−80555
N=1, self-consistent construction on the basis of universal nonlinear equations 7−102283
N=1 supergravity, Kahlerian higher-derivative couplings, flat pot. struct. 7−80576
N=1 supergravity, SU(5) and SU(2)XU(1) radiative breakings 7−102287
N=1 supergravity coupled to supersymmetric Yang-Mills fields in superspace 7−73143
N=1 supergravity in 10D, string corrections to supersymmetry transformation 7−102285
N=1 supergravity in 10D, with Lorentz-Chern-Simons term, supersymmetrisation 7−80573
N=1 supergravity in 4D, higher derivatives 7−95449
N=1 supergravity with matter couplings, duality transformation breakdown 7−140591
N=2 linearised Poincare supergravity in terms of SU(2)-extended superfields 7−108375
N=2 supergravity, matter couplings 7−108377
N=2 tensor multiplets, interactions and duality transform., general action functional, conformal supergravity 7−128790
N=Z supergravity, topological terms for nonsemisimple groups 7−108381
neutrino magnetic moment in $SU(2)_L \times U(1)_Y$, N=1 supergravity and $SU(2)_L \times SU(2)_R \times U(1)_{B-L}$ models 7−102744
no-scale supergravity, invisible axion in hidden sector 7−67168
no-scale supergravity, radiative SU(2)×U(1) gauge symm. breaking, renormalisation framework 7−108378

supergravity continued
no-scale supergravity models, inflationary scenarios, Kahler potential, phase transition, temperature-dependent barrier 7−120918
no-scale supergravity models, scale transformations and axion-like superstring symms. 7−140588
non-abelian superalgebras, higher-spin symmetry 7−134627
non-compact symmetries and scalar masses in superstring-inspired models 7−134629
O'Raifeartaigh model, nonlinear, in four dimensions, spectator fields, low energy limit 7−108818
one-loop effective potential in $D=4$ theories consistent with classical symmetries of $D=10$ superstrings 7−95431
Pati-Salam group induced by supergravity, symmetry-breaking hierarchies 7−128421
perturbative and global anomalies in supergravity theories, string origin 7−95445
pseudo-Majorana-Weyl spinor in 12D 7−67175
quantum interference effects in Einstein-Maxwell, supergravity and non-Abelian Kaluza-Klein theories 7−102261
Ramond superstring, Parisi-Sourlas fermions, zero energy limit massive (0+1)-dimens. supergravity 7−134609
reducible supergravity multiplets, construction 7−67163
rigid superstrings, one-loop contrib. to β-function, asymptotic freedom 7−95434
Salam-Sezgin cosmology, classical and quantum solutions 7−88706
simplicial quantum gravity 7−67149
singularities, avoidance by dilaton emission 7−128419
six-, ten-dimensional SUGRA, Weil triviality and pure Lorentz anomalies 7−73519
SO(16) invariance in 110 supergravity 7−80575
spin 3/2 fields on stationary black holes 7−73107
spontaneous R parity violation, model for solar neutrino oscillations 7−134631
spontaneously broken gauge theory of local Poincare group 7−134934
SU(2, 2|1, 1) supergravity and N=2 supersymmetry with arbitrary cosmological constant 7−102279
$SU(3)_F \times SU(3)_C \times SU(3)_L \times U(1)_{YR} \times U(1)_{I(3R)}$ coupling of chiral fermion families to supergravity/gauge fields 7−116101
$SU(3) \times SU(2) \times U(1)$ model, from N=1 supergravity, top-quark mass bounds 7−128805
SU(5) supersymmetric GUT with automatic fine adjustment 7−95813
SUGRA+SUSY Yang Mills theory, 10D, superspace formulation 7−89083
super-Kahler geometry in supergravity and superstrings 7−73139
superalgebras of higher spins in de Sitter space 7−134628
superdeterminant factorisation in (1,0) supergravity, heterotic string 7−73141
supergravity, superspace constraints, off-shell superspace R^2-action in six dimensions 7−128420
superspace actions and duality transformations for $N=2$ tensor multiplets 7−108382
superspace spinning string spectres, isomorphism between potentials and ghost fields 7−89079
superstring, superspace supergravity 7−80545
superstring generated N=1 supergravity model, duality and gaugino condensation 7−102719
superstring theory, general remarks 7−108359
superstring theory, introduction, bosonic strings and tree approx. scatt. amplitudes, book 7−108059
superstring theory, loop amplitudes, anomalies, and phenomenology, book 7−108068
superstring theory, review of recent developments 7−140575
superstring world sheet supergravity, prepotentials solns. 7−73624
superstrings, radiative corrections to N=1 supergravity model, nonperturbative supersymmetry breaking 7−135079
superstrings, sigma model interpretation, Siegel symmetry origin 7−102252
superstrings, type I, heterotic, massless field effective action, superspace formulation 7−140844
superstrings from sigma models, bosonic string as example 7−102251
superstrings from the $((1,0)$ superspace$)^2$ nonlinear sigma model 7−80547
supersymmetric Born-Infeld Lagrangian in d=4, appl. to supergravity and superstrings 7−80556
supersymmetric radiative corrections to asymmetry meas. at Z^0 peak 7−134975
supersymmetric systems, Casimir stress in plane geometry 7−89395
supersymmetry, D=10, N=1, superspace geometry and superstring effects 7−140843
supersymmetry and GUT's technical hierarchy problem 7−108811
supersymmetry and supergravity, review 7−89394
test particle motion in a supergravity plane wave soln. 7−102282
three-generation superstring model, symmetry breaking and low-energy phenomenology 7−128401
type I SO(32) open superstrings on orbifolds, propagation 7−95429
type IIA superstring, supermembrane derivation and relation to D=11 supergravity 7−102715
type-I superstring amplitude, fixed-angle asymptotic behaviour 7−80558
unification of fundamental interactions, conf., Marstrand, Sweden (June 1986) 7−108023
velocity-dependent inertial induction, supergravity shift at solar limb 7−79823
Yang-Mills-matter-supergravity action from superspace Kahler transformations 7−95448
$B \rightarrow K^* \gamma$, squark and gluino mass constraints, spontaneously broken minimal supergravity 7−135103
W leptonic and hadronic decay widths in supergravity models 7−73678
$Z^{0\prime} \rightarrow Z^0 H$, Higgs boson signals in superstring-inspired E_6 supergravity models 7−135119

superheating *see heat transfer*

superheavy nuclei
see also nuclei with mass number 220 or higher
A=250, 251, deformation energy role in superheavy nuclei, heavy ion reactions, fission barrier 7−121934
conference on nuclear physics, Harrogate, England, (Aug. 1986) 7−120701
dynamic deformation model of structure and fission 7−121580
even-even nuclei, half-lives, peninsula of stability 7−81304
heavy atom detection, IBM DP system *(German)* 7−141710
Z>100 nuclei, synthesis and study 7−121919

erheterodyne receivers
Josephson triode for MM-wave heterodyne detect., anal. 7−125261
superconductor-insulator-superconductor receiver, low noise broadband for radioastronomy obs. 7−127722
superconductor-insulator-superconductor receiver, low noise 230 GHz, astronomical appl. 7−127723
superheterodyne channel of microwave EPR spectrometer 7−121177

erionic conducting materials
see also ionic conduction in solids; mixed conductivity
binary rare earth fluoride oxides, prep., comp., struct., and elec. cond. study 7−84387
crystal growth, conf. Calcutta, India (Jan. 1986) 7−134342
diffusion, autoradiography, math. anal. 7−76471
N,N-dimethylmorpholinium pentaiodotetraargentate, ID solid electrolyte, crystal struct. and elec. cond. 7−105112
dynamic conductivity, freq. and temp. behaviour 7−105106
fluoride solid electrolytes, thermal depolarisation phenomena 7−105116
fluorite-type crystals, ionic cond., ordering 7−91887
fluorites, onset of fast ionic conduction 7−76489
heterogeneous solid electrolytes, defect chemistry, ionic conductivity 7−143083
ionic transport studies of solid electrolytes using microcomputer controlled instrumentation 7−137618
magnetic field effect on cond. mode 7−76472
β-Na_2O-K_2O-Al_2O_3, thermodynamics of mixing 7−76416
NASICON, superionic cond. and intermediate structure 7−142743
NASICON ionic cond., microstruct. and water reactivity, comp. and processing parameters depend. 7−118154
oxide glasses, electrically conducting, glass-solution interface, effects of nonuniformity 7−99049
polyether complex with Li salt, amorphous electrolytic conduction 7−143091
polyethylene oxide-KSCN complexes, morphology and ion cond. meas. 7−124587
polymer-alkali metal salt complexes, solid electrolytes, struct. design to increase ionic cond. 7−98576
protonic solid-electrolyte fuel cell gas phase relations 7−119644
Prussian blue containing Nafion composite film as rechargeable battery 7−144814
solid electrolyte cells, voltage measurements, ionising radiation effects 7−95620
solid electrolyte potentiometry for electrochemical measurements of O_2 activity on Pt electrodes *(German)* 7−100591
solid electrolytes, electronic component of electrical conductivity 7−143524
thin film solid electrolyte fuel cells, preparation technology *(Japanese)* 7−139109
transition metal dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728
transport activation entropy and activation enthalpy correls., enhanced low temp. ion hopping rate calcs. 7−84383
$(Ag_{1-x}Cu_x)_2Se$, solid solns., ionic conductivity, thermoelectric power 7−143081
Ag_7GeS_5I superionic cond. and struct. studies *(French)* 7−124221
$Ag_7GeS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7−84382
AgI, first-order phase transitions, defect conc. independ., model-free theory 7−124492
α-AgI, Haven ratio, Monte Carlo calc. 7−98574
AgI, molten, partial struct. factors, hypernetted chain approx. calc. 7−104521
β-AgI, resonance Raman scatt. study 7−132260
AgI superionic conductor, phases, phase transitions and excitons, diffuse reflectance spectra studies 7−118091
AgI-Ag_2MoO_4 glass, AC conductivity 7−98575
AgI-Ag_2O-V_2O_5-P_2O_5, vitreous electrolytes, glass form. and elec. cond. 7−131362
Ag_5I_8 (BEDT-TTF) and $Ag_4(CN)_5$ (BEDT-TTF), polymeric-anion derivatives, elec. props. 7−99010
$Ag_7I_4VO_4$ solid electrolyte thin film electrodeposition, cond. and permittivity obs. 7−131354
Ag_2MoO_4+HgI_2, solid-state ionic reaction, kinetics and mechanism 7−105111
Ag_2O-B_2O_3-based superionic glasses, elastic behaviour under pressure 7−124374
$AgPO_3$-PbI$_2$, vitreous electrolyte, small angle, quasielastic and inelastic neutron scatt. 7−98573
Ag_4RbI_5 superionic conductor, transient baroelectric effects study 7−77466
Ag_2S, superionic conductor, ion dynamics, inelastic neutron scatt., anal. 7−131357
$(Ag_2S)_{0.3}(AgI)_{0.55}(HgI_2)_{0.15}$, cationic superionic conductor, transport props. 7−76488
$(Ag_2Se)_{0.452}(AgI)_{0.258}(HgI_2)_{0.290}$ superionic cond., thermoelec. props. study 7−137615
$Ag_7SiS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7−84382
$Ag_7SnS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7−84382
Ag_2X, X=S, Se, Te, superionic cond., sp. ht. 7−111908
β''-Al_2O_3/Na interface, O_2 activity and asymmetric polarisation 7−105109
Al_2O_3-dispersed CaF_2 solid electrolyte for Gibbs energy of formation meas. 7−144736
β/β''-Al_2O_3-H_3O^+ polycrystalline solid electrolyte for reversible H_2/O_2 fuel and steam electrolysis cell 7−100715
β-Al_2O_3-Na_2O, cond. mech. 7−137619
β''-Al_2O_3-Na_2O, H_2O and H_3O^+ contaminants influence on ionic cond. 7−143085
β''-Al_2O_3-Na_2O, stabilised with selected ions, microstruct. and ionic cond. 7−143086
β''-Al_2O_3-Na_2O ceramic electrolyte, asymmetric polarisation rel. to comp. and surface treatment 7−92580
β''-Al_2O_3-Na_2O isomorphs, chemical analysis 7−139069
δ-B_2O_3, oxygen ion conductor, disorder, computational simulation 7−124257
B_2O_3-Li_2O-LiCl glasses, ionic conductivity, Sn and SiC dispersoids effects 7−105113
B_2O_3-Li_2O-LiCl glasses containing ZrO_2 dispersion, enhanced ionic cond. 7−111951

superionic conducting materials continued
$BaCl_2$:$Li^+(Na^+)(K^+)(Rb^+)(Cs^+)$, solid electrolyte characts., dopant effect *(Japanese)* 7−84378
$BaCl_2$-$PbCl_2$ sintered mixtures as solid electrolytes, characts. *(Japanese)* 7−111942
$BaCl_2$-$PbCl_2$-KCl sintered mixtures as solid electrolytes, characts. *(Japanese)* 7−111942
$Ba_{1-x}La_xF_{2+x}$, x=0.393, superionic region, Brillouin scatt. meas. 7−85761
$Ba_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes with disordered structures 7−91890
$Ba_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes, defect structure and conductivity 7−91891
δ-Bi_2O_3, oxygen ion conductor, charge migration, computational simulation 7−124258
δ-Bi_2O_3, oxygen ion conductor, static lattice models, computational simulation 7−124259
Bi_2O_3-MoO_3 system, melt quenched films, thermal stability 7−84567
Bi_2O_3-WO_3 system, melt quenched films, thermal stability 7−84567
$BiO_{0.1}F_{2.8}$, tysonite-like solid electrolyte, NMR study of anion mobility 7−91889
$(Bi_2O_3)_{1-x}(M_2O_3)_x$, (M=Y, Er, Yb), oxide ion conductors, structural comparison 7−83895
Bi_2WO_6-Bi_2MoO_6, phase diagram, crystalline phases, electrophysical props. 7−92967
$Ca(H_2PO_4)_2.H_2O$, proton conductor, solid-state high-temp. reactions under steam pressure 7−144703
CdP_2, tetragonal single crystals, superionic conductivity 7−98566
CeO_2:Sc^{3+}, anelastic and dielectric relaxation 7−98336
$CeO_2.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
CsH(D)SeO_4, superionic phase transition, neutron diffr. investigation 7−124487
$CsHSO_4$, normal and deuterated, IR and Raman vibr. spectra obs. 7−106165
$CsHSO_4$, struct. phase transitions, influence of water and thermal and mech. treatment 7−137552
$CsHSO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
$CsHSO_4$ superionic phase, struct., neutron diffr. studies 7−104692
$CsHSO_4$ superionic conductor, phase transition and proton cond. mechanisms, Raman scatt. study 7−125739
$CsHSO_4$, superionic protonic conductor, mechanism and proton dynamics 7−143093
$CsHSO_4$-type proton superionic conductors, ferroelastic phase transition 7−124477
$CsHSeO_4$, superionic conductor, vibr. spectra and struct. transform., neutron scatt. studies 7−69895
$Cu_xMo_6S_{8-y}/Rb_4Cu_{16}I_7Cl_{13}/Cu_xMo_6S_{8-y}$, rechargeable all solid-state cell 7−144817
Cu_6PS_5I, superionic phase transition, dielec. and optical props. 7−69966
Cu_2Se superionic conductor, low temp. phase superstructural ordering, single cryst. X-ray and electron diffr. studies 7−83928
Fe_2O_3-TiO_2-Na_2O, X-ray fluorescent Fe Kβ_5 spectra 7−106311
Ga_2O_3-GeO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
Ga_2O_3-SiO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
Ga_2O_3-TiO_2-K_2O, solid electrolytes, elec. props., struct. 7−105108
$H_2Sb_4O_{11}.3H_2O$, motions, 4-163 K, wide-line PMR spectra 7−112979
$HUO_2AsO_4.4H_2O$, H ion disorder, high resolution neutron powder diffr. studies 7−111398
$HZr_2(PO_4)_3$, protonic cond. behaviour 7−111950
$KAl_{0.33}W_{1.67}O_6$, defective pyrochlores, superionic conductivity 7−84380
$K_{1-x}Bi_xO_zF_{1+2x-2z}$ solid solution, elec. props. *(French)* 7−105115
$KGaO_2$, solid electrolytes, elec. props., struct. 7−105108
KN6WO_6, defective pyrochlores, superionic conductivity 7−84380
$KTi_{0.5}W_{1.5}O_6$, defective pyrochlores, superionic conductivity 7−84380
$LaCrO_3$, crystn. kinetics, effect of comp. and nucleating agent 7−144568
$La_{0.5}Pb_{0.2}MnO_3$, electrical props., effect of Pb additives 7−84369
$La_{1-x}Sr_xMO_{3-z}$, (M=Cr,Mn,Fe,Co), perovskite electrodes for high temperature solid electrolyte fuel cells 7−114093
Li^+ conducting solid polymer electrolytes, appl. to solid-state storage cells 7−114091
β-LiAl fast mixed conductor, photovoltaic effects study 7−137614
LiCl solid electrolyte layers, growth on Li electrode in Li-$SOCl_2$ cells 7−126574
Li_4GeO_4-Li_2SO_4 solid solns., solid electrolytes, struct. and elec. props. 7−111944
$Li_{3-x}Ge_xV_{1-y}O_4$, fast ion conductors, high press. studies 7−137613
LiI-Al_2O_3 composite electrolyte, ^{7}Li NMR study 7−70664
LiI-PEO mixture polymer electrolyte film, ionic cond., comp. and temp. depend. studies 7−84386
Li_2MgCl_4, superionic Li^+ conductor, molecular dynamics study of ion transport 7−137616
Li_3N, electronic struct. and nuclear quadrupole interactions 7−112178
Li_2O-B_2O_3 films, vacuum deposition, evaporation and condensation mechanism *(Japanese)* 7−100082
Li_2SO_4-LiCl, mixed crystal and multiphase system, fast ion transport 7−143089
Li_4SiO_4-Li_3BO_3 glasses, rapidly quenched, mixed anion effect in cond. 7−131363
γ_{II}-$Li_{3.4}Si_{0.4}V_{0.6}O_4$, sintering, ionic cond. *(Japanese)* 7−132548
$Li_{16-2x}Zn_x(GeO_4)_4$, fast ion conductors, high press. studies 7−137613
Mg-montmorillonite-V_2O_5 cathode interface, Mg^{2+} migration 7−69974
$MgZr_4(PO_4)_6$ solid electrolyte, Mg ion conduction study 7−84389
$(NH_4)_4Fe(CN)_6.H_2O$, high pressure proton NMR studies, diffusion obs. 7−106037
Na β alumina crysts. and electrolytes, surface comp. and struct., water adsorption and diffusion, conc. profiles studies 7−84463
Na liq.-β-alumina/$NaAlCl_4$-(Fe,Ni)Cl_2 Zebra battery cell 7−139101
Na^+ conducting solid polymer electrolytes, appl. to solid-state storage cells 7−114091
Na^+ ionic conducting glasses for batteries and wave-guide devices 7−106479
$NaCu_2ZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
$Na_3In_2P_3O_{12}$, superionic conductor, electrophysical props. 7−98561
$Na_2La_{1-x}Fe_xZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
$Na_2LaMZrP_3O_{12}$ (M=Co,Al,Cr), superionic conductors, synthesis and characts. 7−137611
γ-$Na_3M_2(PO_4)_3$ (M=Sc,Fe,Cr), superionics, elec. props. 7−91892
$NaM_2ZrP_3O_{12}$ (M=Ni,Cu), superionic conductors, synthesis and characts. 7−137611

superionic conducting materials continued
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}:Cr^{3+}(Rh^{2+})$, beta″-alumina, optical spectroscopy 7−92725
β-Na_2O-Al_2O_3 composites, introduction of compressive surface stresses into brittle materials 7−100343
β''-Na_2O-K_2O-Al_2O_3, mixed alkali, elec. conductivity 7−76487
$\beta'(\beta'')$-Na_2O-K_2O-Al_2O_3, mixed-phase aluminas, structural determ. 7−142739
Na_2O-SiO_2 vitreous electrolytes, corrosion by molten S 7−144579
$Na_2OAl_2O_3$-Na_2CO_3 solid electrolyte potentiometric CO_2 gas sensors 7−80777
Na_3PO_4-Na_2SO_4, solid electrolytes, cond., phase diagrams, lattice parameters 7−131359
Na_2SO_4-Li_2CO_3 system, elec. cond., comp. depend. studies 7−84384
Na_2SO_4-$M_2(SO_4)_3$ (M=La, Dy, Sm, In) and Na_2SO_4-Na_2WO_4 systems, ionic transport 7−98570
Na_2SO_4-$Y_2(SO_4)_3$-Al_2O_3 solid electrolyte, electrical, thermal and phase props. studies 7−84381
$NaTi_2(PO_4)_3$, NASICON-type phase, intercalation electrode 7−106804
$Na_4TiP_2O_9$, superionic conductor, phase transition 7−69968
$Na_{5+x}YAl_xSi_{4-x}O_{12}$ ceramics, cond., struct., density 7−76480
$Na_{3+3x-y}Y_{1-x}Si_{3-y}P_yO_9$, ionic cond. props. 7−111943
$Na_{1+x}Zr_2Si_xP_{3-x}O_{12}$:MgO(CaO) NASICON superionic ceramics, chem. comp. and phase homogeneity, sintering conditions effects 7−119191
$Na_3Zr_2Si_2PO_{12}$/$Na_2Zr_4Si_{16}P_8O_{61}$, NASICON/glass composite ceramics, conductivity and microstruct. *(French)* 7−131361
$Na_3Zr_2Si_2PO_{12}$-Na_2CO_3 solid electrolyte CO-CO_2-O_2 conc. cell, EMF and elec. cond. meas., partial press. depend. 7−86641
$Na_3Zr_2Si_2PO_{12}$-$NaCO_3$ solid electrolyte potentiometric CO_2 gas sensors 7−80777
$Nb_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
Nd chromites, electrode materials 7−131720
$Nd_{1-x}Ca_xF_{3-x}$ solid electrolyte, diffusion mechanism of F ions 7−69967
β-PbF_2, order-disorder transition and fast-ion transition, X-ray diffr. obs. of thermal props. 7−131291
PbF_2:LiF, pure and doped, superionic props. 7−91886
$Pb_{1-x}La_{(2x/3)-y}Li_{3y}Nb_5(Ta_5)O_6$ electrophys. props., superionic cond. characts. obs. 7−84368
$Pd_xCd_{1-x}F_2$ mixed superionic crystals, lattice dynamics, modified rigid ion model 7−104937
$RbAg_4I_5$, coloured single crysts., superionic conductor, photolum. study 7−144101
$RbAg_4I_5$ ionic conductivity meas., by electrodeless method, temp. dependence 7−124588
$RbAg_4I_5$ solid electrolyte, effect of Pb, Cs and Cl impurities on elec. props. 7−111945
$RbAg_5I_4$ superionic crysts., photolum. and excitation spectra temp. depend. 7−77624
$RbAl_{0.33}W_{1.67}O_6$, defective pyrochlores, superionic conductivity 7−84380
$RbGa_{0.33}W_{1.67}O_6$, defective pyrochlores, superionic conductivity 7−84380
$RbNbWO_3$, defective pyrochlores, superionic conductivity 7−84380
$RbZn_{0.25}W_{1.75}O_6$, defective pyrochlores, superionic conductivity 7−84380
Sm chromites, electrode materials 7−131720
$SrCl_2$, pressed powder pellets, elec. cond., grain size and pelletising press. influence 7−84375
$SrCl_2$, superionic, defect conc. below the critical temperature 7−104749
$SrCl_2$ thermal expansion coeff., X-ray diffr., lattice vibr. freqs. 7−111803
$Sr_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes with disordered structures 7−91890
$Sr_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes, defect structure and conductivity 7−91891
$Ta_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
$TiNbWO_3$, defective pyrochlores, superionic conductivity 7−84380
$V_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
Zn-montmorillonite-V_2O_5, cathode interface, Zn^{2+} migration 7−69974
ZnP_2, tetragonal single crystals, superionic conductivity 7−98566
$Zr(HPO_4)_2.H_2O$, cryst. and amorphous, elec. props. in humid atm. 7−131355
ZrO_2-Gd_2O_3, fluorite and pyrochlore phases, EXAFS studies 7−125856
ZrO_2-Y_2O_3-Al_2O_3 ceramic electrolytes, ionic cond., thermal shock resist., mech. props. 7−76479
ZrO_2-$YO_{1.5}$, superionic conductor, defect-induced Raman spectra 7−99857

superlattices
see also semiconductor superlattices
alkali halide solid solutions, atomic-scale struct. 7−111512
bimetallic layered systems with randomness, electronic struct., CPA study 7−105667
bimetallic layered systems with randomness, infinite order perturbation theory 7−105668
channelling radiation, comment and reply 7−76247
conducting, optical props., plasma wave effects calcs. 7−144004
coupled-mode phonon gaps in superlattice structs. 7−124417
cubic, sagittal elastic waves, Green's function studies 7−143168
diffraction, effect of layer thickness fluctuations 7−124731
disordered dielectric superlattices, photon localisation 7−113104
elastic waves, propagation in periodically layered media 7−105222
ferromagnetic superlattice, compositionally modulated, mean field theory 7−70606
ferromagnetic/antiferromag. superlattice, spin-wave props. calcs. 7−125354
hierarchical heterostructs., 1D Schrodinger problem, tight-binding model calcs. 7−143306
inhomogeneous disordered systems, Goldstone modes 7−84777
isotopic superlattices and isotope ordering in solids 7−91494
Josephson superlattices, soliton behavior 7−131924
$L1_0$-type superlattice structures, planar fault energies 7−111589
lattice-mismatched interfaces, energetics, determ., epitaxial growth, roles of axial commensuration and strain 7−118285
layered structures and interfaces, response functions 7−85049
linear layered struct., TE hyperbolic surface wave propag. 7−137999
metal superlattices, collective electronic phenomena *(Russian)* 7−137836
metal-semiconductor superlattice, IR absorpt. from adsorbed CO molecules 7−85670
metal-semiconductor superlattices, with adsorbed diatomic mol. layer, IR absorpt. study 7−99849
metallic, Brillouin scatt. obs. 7−85760
metallic, EELS, electron scatt. by folded longitudinal plasmons, jellium model calcs. 7−144193

superlattices continued
metallic, electronic transport, interface roughness and boundary scatt. model calcs. 7−85054
metallic superlattices, model systems, struct., elec., and mag. phenomena 7−105349
N-layered continuous superlattices, interface response theory 7−92013
nonhomogeneous electrostatic oscillations in 2D systems 7−85050
nonlinear periodic structures, gap solitons 7−122794
one-dimensional exciton density superlattice, form. threshold and stability calcs. 7−70198
phonon structure, effect of randomness in layer thickness 7−76315
piezoelectric superlattices, dynamic, shear horizontal waves, effective medium approx. 7−105223
plasmon dynamic form factor, electron and photon scatt. 7−98847
polymers, conducting, synthetic metal superlattices 7−105664
powder mixtures, regular, macrodislocational mechanism of deform. 7−77860
quasi-periodic superlattice, electronic structure 7−137779
quasi-two-dimensional electron systems, excited vibr. and excited states, plasmon and electron-hole pair damping 7−99147
spin-orbit coupling Hamiltonian derivation, zone folding effects 7−105501
stacking fault superlattice, dynamic X-ray diffr. *(Russian)* 7−142798
stacking fault superlattice, electron energy, pseudopotential approx. *(Russian)* 7−142799
strongly anisotropic 2D systems, one-particle density of states, electron-electron interaction corrections 7−112425
superconducting, transition temp., single electron density of states and sp. ht., BCS theory calcs. 7−99317
superconducting superlattice, penetration depth 7−70474
superconductor-insulator superlattices, propagation and generation of Josephson radiation 7−77165
superconductor/insulator superlattices propagation and generation of Josephson radiation 7−138146
surface and interface vibrs., EELS studies, review 7−77713
surface polaritons, attenuated total refl. 7−131556
tetramethylammonium cobalt tetrachloride, single cryst., phase transitions, laser Raman study 7−144059
transition metal coordination compounds, superlattice form. by selective coordination epitaxy 7−71063
transverse elastic waves, free electrons and polaritons, dispersion relations 7−98824
transverse elastic waves, propagation along symmetry directions 7−105224
ω-tricosenoic acid-docosylamine ultrathin superlattices, pyroelec. effect 7−92613
truncated, surface magnetoplasmon polariton mode calcs. 7−124876
twist boundary, dislocation superlattice, X-ray diffraction, plane-wave image profiles 7−91598
twist boundary, screw dislocation superlattice, X-ray diffraction, superstructure factor 7−91597
two-dimensional thin layer with a hydrogenic impurity, LoSurdo-Stark effect 7−70372
uniaxial crystals, polariton modes in superlattices 7−76316
X-ray diffr. in real crystals using Ambartsumian's invariance principle 7−104485
Ag-Mg long period superlattice, commensuration process, in situ TEM obs. 7−76391
Ag-SiO ultrathin superlattices, DC elec. cond. switching 7−92294
Ag(111)-Fe(110) epitaxial superlattices, growth and examination 7−113032
Al/Nb multilayer structure, SIMS depth profiling using Ne, Ar, Kr and Xe ions and neutral species 7−77744
Al-Fe multilayered films, ion beam mixing, icosahedral quasicrystal phase form, electron diffr. 7−84566
Au-Cr superlattices, surface waves, interface struct., elastic props., X-ray diffr., Brillouin scatt. studies 7−105221
Ba_3UO_6, superlattice struct., electron diffr. obs. 7−111488
Bi_2O_3-$Nb_2O_5(Ta_2O_5)(MoO_3)(WO_3)(V_2O_5)$, solid soln., ordered phases 7−69858
C-W layered synthetic microstructures, AES sputtering depth profile anal. 7−84557
CdTe-HgTe, defect observations, transmission electron microscopy study *(French)* 7−98164
Co-Cr thin films, artificial superlattice struct., magnetism, struct. 7−76667
Co-Cu multilayer electrodeposit structs., mag. props. study 7−125508
$Co_{0.005}Fe_{0.995}S$, mag. study of superlattice transition 7−70528
CoO-NiO superlattices, mag. structure, neutron diffr. studies 7−125312
Cu-Ni, compositionally modulated films, optical anisotropy, spectroscopic ellipsometry 7−99952
Cu-Ni [100] oriented superlattices, mag. props. study 7−125334
Cu-Ni compositionally modulated superlattice films, enhanced modulus effect, continuum elasticity anal. 7−84608
Cu-Ti, modulated structures, X-ray side band profiles 7−69661
CuMn-based composition-modulated spin glass multilayers, mag. suscept. and reson. studies 7−125396
Dy-Y superlattices, long-range helimagnetic order 7−125321
Dy-Y superlattices, mag. and struct. charact. 7−125506
Dy-Y superlattices, mag. struct., neutron diffr. study 7−99409
Fe/Mg sub-monolayered superlattice, mag. props. 7−112867
Fe/SiO_2, composition modulated films, sputter deposition system 7−100065
Fe/SiO_2, compositionally modulated films, mag. props. 7−99524
Fe/V superlattices, atomic configuration near interface, substrate temp. depend. 7−112102
Fe-Al-Mo-Ti-Si, DO_3 superlattice transition temp. rel. to comp. 7−113546
Fe-Ge interface electronic struct. and mag. effects 7−118835
Fe-Pd, ordering, elec. resist., X-ray diffr., TEM obs. *(Japanese)* 7−93004
$Fe_{1-x}Cu_xCr_2S_4$, superlattices, struct., cation distrib., hyperfine interaction props., neutron diffr., Mossbauer spectra 7−98061
Gd-Y superlattices, RKKY interaction calcs. 7−125366
Gd-Y superlattices, synthetic, modulated mag. props. 7−99525
Gd-Y synthetic superlattices, polarised neutron diffr. studies 7−125322
graphite-$SbCl_5$ intercalation cpd., ordering kinetics obs. by ESR 7−137544
$LiNbO_3$:Mg, doped and undoped, fundamental absorpt. edge, spectral depend., superlattice model 7−92636
Mo/Ni superlattices, magnetisation and anisotropy, torque meas. 7−112785
Mo/Ta superlattice elastic consts., Brillouin scatt. study 7−112048
Mo-Ni magnetic-superlattices, interfacial anisotropy 7−118795

perlattices continued
Mo-Ta interface, sputter deposited, sticking coeff., struct., RBS, X-ray diffr. studies 7−105296
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
Nb-Ta superlattice, critical behaviour of H, in situ X-ray scattering study 7−137727
Nb-Ta superlattices, cryst. direction depend. of interfacial mixing 7−105156
Nb-Ta superlattices, hydrogenated, elec., struct. and supercond. props. 7−112577
NbCe superlattice systems, total energy, interface effect, LMTO band calc., density functional theory 7−77046
Ni/Cr multilayers, AES sputter profiling, depth resolution improvement using two ion beams 7−77708
Ni/Cu/Ni(100) sandwich struct., resonant electron transmission 7−131742
Ni-C multilayer sputtered films, mag. props. study 7−125509
Ni-C multilayer X-ray mirror, spectral characts. meas. using Be recombining laser plasma emission spectra 7−125843
Ni-Cr multilayered thin films, mag. props., dimensional effects study 7−125507
Ni-Cu-Ni quantum wells, low-energy electron transmission 7−138562
Ni-Mo magnetic superlattice prep. and structural props. study 7−124726
$Ni_3Fe_{0.7}Nb_{0.3}$, Permalloy, K-state, annealing, struct., neutron diffr. study, elec. resist. meas. *(Russian)* 7−112295
Pd/Co multilayers, mag. interface anisotropy 7−99520
Pd/Fe multilayers, mag. interface anisotropy 7−99520
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7−105548
Rb_2ZnBr_4, incommensurate superlattice, TEM study 7−137342
$Sc_2V_3Ge_4$ and related cpds., cryst. structures, X-ray diffr. study 7−104637
$Si-SiO_2$ amorphous multilayered structures, quantum dimensional effect 7−85126
a-$Si-SiO_x$ evaporated superlattices, struct. meas. 7−131477
TiC_x, N effect on order-disorder transition, nonmetallic defect superlattice *(Russian)* 7−144394
TiN-VN strained layer superlattices, growth, struct., hardness 7−119137
W/Mo epitaxial superlattices, strain relax. by ion beam mixing 7−76231
Y/Dy multilayers, long-range incommensurate mag. order, neutron diffr. studies 7−70524

superluminescence *see superradiance*

supernova remnants
adiabatic supernova remnants, optical emission stratification obs. 7−140220
barrel-shaped supernova remnants 7−140210
3C 58, radio flux density increase 7−72573
Cas A, C recomb. lines due to line-of-sight mol. clouds *(Russian)* 7−72577
Cas A, discovery of fast-moving N-rich ejecta 7−88565
Cas A, evidence for cyclic variability of radio spectrum 7−140219
Cas A, physical processes and IR emission 7−107934
Cas A, radio observations of ejecta expansion details 7−115558
Cas A, VLA resolution of compact radio knots 7−107933
Cas Z, consistent model calcs. for complex struct. 7−140207
CMa R1 star formation region, supernova shock-front compression of interstellar mag. field 7−140226
cosmic ray acceleration model, relation to cosmic ray gradients in outer Galaxy 7−120224
Crab Nebula, 22-64 keV emission characts. 7−140229
Crab Nebula, emission line spectra of filaments rel. to chemical comp. 7−127991
Crab Nebula, He I 587.6 nm/Hβ line emission ratio distrib. 7−127999
Crab Nebula, lunar occultation obs. at metre and decametre wavelengths 7−134296
Crab Nebula, upper limit to neutrino flux 7−107681
Crab Nebula, X-ray obs. of nebula and pulsar NP 0532 by Astron automatic station 7−140221
Crab Nebula and Pulsar, gamma-ray fluxes in 10^{13} to 10^{14} eV range 7−134321
Crab Nebula and pulsar, high-energy gamma-ray emission anal. 7−72491
CTB 80, detect. of pulsar-like emission, SHF and UHF obs. 7−140141
CTB 80, discovery of PSR 1951+32 and UHF obs. 7−134263
Cygnus Loop, form. of fine struct. of emission filaments 7−127990
in ESO 495-G21 (=He 2-10), starburst galaxy, contrib. of supernova remnants to radio continuum 7−134298
evolution of remnants with central pulsar, evolutionary sequence determ. 7−140218
G0.9+0.1, composite supernovae remnant, multifreq. radio obs. 7−101889
G5.4-1.2, 843 MHz map characts. 7−72646
G 2.4+1.4, filamentary optical nebular nature, SHF obs. 7−72645
Galactic centre cosmic ray interactions, implications for brightness of Crab Nebula and Cas A 7−88046
HB 3 (G132.6+1.5), 408 MHz obs. of shell SNR 7−134291
IC 443, IR spectroscopy 7−115547
IC 443, SNR shock-mol. cloud interaction, mol. line obs. 7−72559
interstellar clouds interaction, attrition shocks rel. to cloud condensation and ejection 7−101875
interstellar IR bubble in Cepheus, stellar winds-supernova remnant model 7−128006
interstellar shock waves, time-depend. struct. rel. to grain destruction in interstellar medium 7−146069
Kepler's supernova remnant, origin through blast wave interaction with circumstellar gas 7−146074
LMC supernova remnants, model calcs. 7−72561
LS I+61°303, variable radio star, assoc. extended radio emission nature, UHF obs. 7−128102
mass-loaded flows model, appl. to struct. of supernova remnants and local soft X-ray background 7−140245
middle-aged supernova remnants, sheet description of optical, X-ray and radio emission 7−101888
MSH 10−53, SNR interacting with molecular clouds 7−88579
MSH 15−52, discovery of thermal H II region and relation to Cir OB1 association 7−120535
N132D, in LMC, X-ray morphology 7−101887
N49 (GBS 0526−66), gamma-ray burst source, monitoring by optical telescope-camera system 7−79830

supernova remnants continued
N49 in LMC, coordinated optical, radio and X-ray obs. of 1979 March 5 gamma-ray burst source 7−80126
number-diameter relations, ambient density effect 7−140205
OB associations, sequential supernovae and form. of supershells 7−127981
in outer Galaxy, CO survey for related mol. clouds 7−88582
PKS 1209−52, EXOSAT obs. 7−72572
plerionic supernova remnants, 32 GHz radio continuum obs. 7−120547
Pup A, forbidden coronal Fe line images rel. to cloud evaporation and shocked cloud models 7−115551
radio emission from young supernova remnants, effect of hot plasma radiation *(Russian)* 7−72578
radio sources, extended, from 2695 MHz Effelsberg galactic plane survey, multifreq. radio continuum obs. 7−120630
radio spectral index distribs. in supernova remnants and spiral galaxies, effect of second-order Fermi accel. 7−115614
radioemission and lack of IR dust emission 7−101941
RCW 86, relation to Chinese guest star (AD 185) 7−127932
shell fragmentation model, implications for mass distribs. in nebulae of other star systems 7−88528
SMC SNRs, contrib. to synchrotron emission 7−101901
SN 1006 remnant, high-velocity Hα emission obs. 7−120561
SN 1572 remnant, high-velocity Hα emission obs. 7−120561
VRO 42.05.01, SNR re-energising interstellar cavity 7−107935
in young elliptical galaxies, contrib to evolution of clumpy interstellar gas 7−140206
(p,X), in supernova remnants, limits on hadronic cosmic ray prod. by young pulsars 7−134095
Pup A, shock front forbidden coronal Fe lines emission, effects of inhomogeneities 7−140222

supernovae
see also supernova remnants
blast wave and soft X-ray background inside 7−88686
Cas A supernova, implications of discovery of fast-moving N-rich ejecta 7−88565
in Cir OB1 association, supernova frequency rel. to assoc. between remnant MSH 15−52 and pulsar (PSR 1509−58) 7−120535
collapse of 8-10 $M_\odot$ stars, effect of electron capture on ^{24}Mg and ^{20}Ne 7−140120
collapse trigger for solar nebula, evidence from anomalous ^{50}Ti in refractory inclusions of Murchison carbonaceous chondrite 7−88332
comets survival near supernovae, implications for X-ray bursts and gamma-ray bursts 7−88678
computational physics symposium, Amsterdam, Netherlands (Oct. 1986) 7−101996
core collapse, eqn. of state of hot dense matter 7−140036
core collapse, implications of incompressibility of hot neutron-rich nuclear matter 7−139895
core collapse, neutrino-antineutrino annihilation around collapsar rel. to X-ray or γ-ray burst 7−80000
core collapse, numerical calcs. of trapped lepton fraction 7−115366
core collapse, physics of baryonic-to-hyperonic transition 7−88375
core collapse, shock wave propag. in radiating spherically symmetric mass distrib. 7−145814
detonation wave outward propagation and subsequent dispersion into vacuum 7−101830
in early-type galaxies, contrib. to heating of X-ray emitting gas 7−72606
expanding shell shocks, induced star formation 7−140044
in galaxies, interactions with interstellar medium and gaseous halo 7−107870
general characteristics (book) 7−134381
gravitational lensing, prediction of light amplification and polarisation 7−101825
gravitational wave fluxes, contrib. to continuous and discrete gravit. wave spectra 7−101670
guest star, 14th century BC, possible identification with gamma-ray source (2CG 353+16) 7−115631
hyperon and pion role, neutron star matter eqn. of state 7−127939
initial mass range, implications of re-anal. of Galactic primary nucleosynthesis 7−120602
in LMC, contrib. to high-vel. H I sheets and supergiant H I shells 7−88596
in Markarian 52, starburst-nucleus galaxy, supernova-driven wind model for emission line profiles 7−140282
N132D, supernova remnant in LMC, X-ray morphology rel. to supernova explosion in H II region 7−101887
neutrino bursts and transform. 7−72291
neutrino flows in collapsing stars: a two-fluid model 7−88469
neutrino flux, matter oscillation effects 7−140852
neutrinos, massive, exclusion in supernovae 7−107715
neutron-rich equilib. nucleosynthesis, evidence from Cr isotopic anomalies in Allende meteorite 7−88184
NGC 3448, amorphous galaxy, supernova rate characts. 7−101918
in NGC and IC galaxies through 1985, checklist 7−72336
nucleosynthesis, effects of variable star form. rate on Galaxy chemical evolution 7−115586
in OB associations, contrib. to interstellar supershells and induced star form 7−140224
OB associations, sequential supernovae and form. of supershells 7−127981
OB-type stars explosions, influence on star birth rate in local interstellar medium 7−79947
occurrence rate for SMC 7−101901
origin and causes *(French)* 7−72489
peculiar type I supernovae, binary system model with red supergiant companion 7−140119
polarisation meas, radial vels., and search for neutrino emission 7−80003
Population III, explosions, implications for microwave background and nucleosynthesis 7−146052
pre-galactic supernovae, influence of shock waves on density perturbations evolution 7−134309
pregalactic stars in cold dark matter cosmologies, consequences of supernova explosions 7−88705
PSR 1913+16, binary pulsar, supernova explosion models rel. to progenitor masses 7−88489
pulsars production, birthrate and initial spin periods of single radio pulsars 7−140140
pulsars with extremely high space vel. motion due to anisotropic collapse of progenitor 7−115490
pulsars-supernovae, apparent spatial coincidence, evidence for stellar evolutions 7−146016

supernovae continued
relativistic stars, gravitational radiation, off-parity fluid perturbations 7−80534
Sanduleak−69°202, IUE UV spectra, progenitor of SN 1987A supernova 7−127923
Sanduleak−69°202 (SN 1987A progenitor), interacting binary model in which Sk−69°202 companion explodes 7−127925
scattered light echo 7−88467
in Shapley-Ames galaxies, surveillance times of supernova search (1980 to 1985) 7−146012
shell fragmentation model, implications for mass distribs. in nebulae of other star systems 7−88528
simulations, computational and numerical problems 7−107872
SN1987A, ν mass limits, model-independent anal. 7−107714
SN1987A, Geograv gravitational wave data analysis, neutrino mass limit 7−102288
SN1987A, neutrino events, Kamioka observations 7−120482
SN 1006, high-velocity Hα emission obs. in remnant 7−120561
SN 1230, possible identification with gamma-ray source (2CG 054+01) 7−115631
SN 1572, high-velocity Hα emission obs. in remnant 7−120561
SN 1604 (Kepler's supernova), blast wave interaction with circumstellar gas rel. to struct. of remnant 7−146074
SN 185, location and duration of guest star and implications for remnant (RCW 86) 7−127932
SN 1961 V in NGC 1058, location determ. and relation to stellar OB association *(Russian)* 7−72488
SN 1970 G, Type II supernova, radioactive decay mechanism for late-time luminosity and H I ionisation *(Russian)* 7−146011
SN 1980K in NGC 6946, late-time spectrum obs. 7−88468
SN 1982V, 1984A, 1985A and 1985B, spectral obs. 7−72475
SN 1983 I in NGC 4051, photographic magnitudes from discovery obs. (May 1983) 7−134261
SN 1983I, 1983V, spectroscopic obs. rel. to abundance vars. in Type Ib supernovae 7−115474
SN 1983N and SN 1984L, Type Ib SN, He detect. and O obs., corresponding atm. models construction 7−127915
SN 1984E in NGC 3169, Type II-L supernovae, post-maximum spectrum rel. to superwind 7−80020
SN 1985G, SN 1985H, type II supernovae, spectroscopic obs. with new Faint Object Spectrograph 7−127914
SN 1986G in Cen A (NGC 5128), interstellar polarisation meas. in dust lane 7−107962
SN 1986G in NGC 5128, echelle spectroscopy of complex Na absorpt. and interstellar diffuse bands 7−146001
SN 1986G in NGC 5128, photometry, light echo effect 7−120475
SN 1986G in NGC 5128(Cen A), optical photometry and spectra of Type Ia object 7−140137
SN 1986G in NGC 5128 (Cen A), IR photometry and spectroscopy 7−120469
SN 1986J in NGC 891, pre-discovery detect. and photometry (1983 December 29) 7−120477
SN 1986J in NGC 891, radio and optical studies 7−134256
SN 1986N in NGC 1667, precise position 7−79977
SN 1987 E in NGC 4725, spectral evidence for galactic M-type dwarf 7−94921
SN 1987 F in NGC 4615, spectra, Type II class and peculiarities 7−94922
SN 1987 in LMC, magnitude and spectral observations 7−80012
SN 1987 in LMC, optical spectra (1987 February 25 to March 19) 7−101817
SN 1987A, in LMC, energetic neutrinos obs., acceleration probe 7−88488
SN 1987A, in LMC, spectropolarimetry, spectroscopy, spectrophotometry and UBV photometry (1987 February 25 to March 2) 7−72476
SN 1987A, interstellar spectrum features 7−88599
SN 1987A, Mont Blanc event anal., consistency with supernova event 7−107873
SN 1987A, Mont Blanc Kamiokande II observations, double neutrino burst interpretation 7−107874
SN 1987A in Large Magellanic Cloud, neutrino burst obs. 7−88486
SN 1987A in Large Magellanic Cloud, neutrino burst obs. 7−88487
SN 1987A in LCM, spectra and visual magnitude estimates (March 4 to 13 1987) 7−80005
SN 1987A in LMC, 14, 15 and 16 March 1987, visual magnitudes 7−80006
SN 1987A in LMC, 1987 07 visual magnitude estimates 7−120471
SN 1987A in LMC, 22 GHz microwave emissions and V magnitude decline, June 1987 obs. 7−107876
SN 1987A in LMC, 22 GHz radio intensities and visual magnitudes 7−134258
SN 1987A in LMC, 6 to 8 March 1987, visual magnitudes 7−72484
SN 1987A in LMC, 8 to 13 μm spectrophotometry, BV photometry, and visual magnitude estimates 7−94913
SN 1987A in LMC, ν_e mass, upper limit 7−88106
SN 1987A in LMC, $\nu\nu$ cross section and sneutrino coupling const. limits 7−120481
SN 1987A in LMC, astrometric position of supernova and Sk −69°202 7−88482
SN 1987A in LMC, astrometry of supernova and progenitor (Sanduleak −69°202) 7−101813
SN 1987A in LMC, black-hole formation 7−140135
SN 1987A in LMC, Brazilian balloon-launching facility and ejecta deceleration rate 7−72487
SN 1987A in LMC, BV and IR photometry and visual magnitude estimates (1987 May 8 to 11) 7−94923
SN 1987A in LMC, BV and visual magnitude estimates (1987 May) 7−94927
SN 1987A in LMC, calc. of expected γ-ray flux due to ^{56}Co decay 7−140123
SN 1987A in LMC, central pulsar theory and predictions 7−115482
SN 1987A in LMC, colour diagrams and UV observations 7−72479
SN 1987A in LMC, computed UV spectra, 7−140118
SN 1987A in LMC, constraints on neutrino expts. interpretation by optical obs. 7−134254
SN 1987A in LMC, Cousins UBVRI photometry and visual magnitude estimates (May 1987) 7−101829
SN 1987A in LMC, daily mean visual magnitude estimates (1987 February 24 to March 31) 7−127922
SN 1987A in LMC, detect. of foreground diffuse interstellar bands 7−134255

supernovae continued
SN 1987A in LMC, developments in 1987 February-March period 7−101831
SN 1987A in LMC, discovery account and progenitor search 7−88466
SN 1987A in LMC, discovery account and supernova review 7−101833
SN 1987A in LMC, discovery and initial observations 7−115473
SN 1987A in LMC, early-phase obs. with IUE 7−101819
SN 1987A in LMC, evidence for black hole form. from neutrino obs. 7−120463
SN 1987A in LMC, evidence for finite electron neutrino rest mass 7−101824
SN 1987A in LMC, evolution of optical spectrum (1987 February 26 to March 31) 7−146010
SN 1987A in LMC, explosion of 20 $M_\odot$ star which experienced mass loss 7−146003
SN 1987A in LMC, Feb. and March polarization observations 7−88472
SN 1987A in LMC, gamma-ray flux limit, UBVRI photometry, and visual magnitude estimates 7−107875
SN 1987A in LMC, gamma-ray observational results 7−88476
SN 1987A in LMC, general discussion 7−134260
SN 1987A in LMC, Hα emission behaviour and magnitudes (1987 March) 7−88470
SN 1987A in LMC, Hα vel. struct. during first month of outburst 7−140117
Sn 1987A in LMC, hard X-ray obs., photoelectric BV photometry, and visual magnitude estimates 7−101827
SN 1987A in LMC, harmonic struct. of 1987 February 23.316 neutrino burst 7−120464
SN 1987A in LMC, identification as star 1 in pre outburst plates and UV characts. 7−88477
SN 1987A in LMC, implications for neutrino and γ-ray emission of limits on hadronic cosmic ray prod. 7−134095
SN 1987A in LMC, implications of UV obs. 7−101822
SN 1987A in LMC, interacting binary model in which Sk−69°202 companion explodes 7−127925
SN 1987A in LMC, IR photometry (1987 February 28 to March 16) 7−101816
Sn 1987A in LMC, IR speckle and visual magnitudes (1987 June-July) 7−120473
SN 1987A in LMC, IR speckle obs. and photovisual magnitudes 7−94924
SN 1987A in LMC, IR spectrum, BV photometry, and visual magnitudes (1987 April) 7−94908
SN 1987A in LMC, IR spectrum, hard X-ray/gamma-ray obs., and visual magnitude estimates 7−115476
SN 1987A in LMC, IUE obs. of spectral evolution and magnitudes 7−72482
SN 1987A in LMC, IUE spectral and photometric obs. and visual magnitude estimate (March 1987) 7−80008
SN 1987A in LMC, IUE UV spectra of Sk−69°202 progenitor 7−127923
SN 1987A in LMC, JHKL photometry and fluxes and radial vel. determ. from H I lines obs. 7−80014
SN 1987A in LMC, June 1987 UV spectra and visual magnitudes 7−115478
SN 1987A in LMC, KLMN photometry and visual magnitude estimates (1987 April 11 to 15) 7−80018
SN 1987A in LMC, large explosion energy, prompt-explosion mechanism 7−127930
SN 1987A in LMC, light particle constraints from neutrino obs. 7−127929
SN 1987A in LMC, light vars. from UBVRIJHKL and 10 μm photometry (February-March 1987) 7−80013
SN 1987A in LMC, light-curve model 7−127924
SN 1987A in LMC, line profiles, polarisation and photometry meas. (March 13 to 23) 7−80011
SN 1987A in LMC, magnitude estimates (1987 February-April) 7−120423
SN 1987A in LMC, magnitude estimates (1987 July 22-29) 7−140128
SN 1987A in LMC, magnitudes, neutrino fluxes, light curves evolution 7−72478
SN 1987A in LMC, magnitudes (1987 March-April), neutrino periodicity 7−120466
SN 1987A in LMC, mid-May 1987 visual magnitudes 7−94928
SN 1987A in LMC, MSW effect rel. to (anti)neutrino fluxes 7−127927
SN 1987A in LMC, neutrino and photometric obs. and search for progenitor X-ray flux 7−72481
SN 1987A in LMC, neutrino burst anal. 7−115485
SN 1987A in LMC, neutrino detections 7−101832
SN 1987A in LMC, neutrino emission characts. and implications for interior processes 7−140125
SN 1987A in LMC, neutrino emission due to supernova collapse 7−80019
SN 1987A in LMC, neutrino fluxes, temperatures and oscillations 7−107879
SN 1987A in LMC, neutrino mass limits from neutrino burst obs. 7−107880
SN 1987A in LMC, neutrino observations 7−140126
SN 1987A in LMC, neutrino observations constraints on neutrino mass and mixing 7−139912
SN 1987A in LMC, neutrino periodicity interpretation 7−127926
SN 1987A in LMC, neutrino pulse bimodal struct. due to gravitation lensing 7−115483
SN 1987A in LMC, neutrino signal detect., UBVRI polarimetry, and visual magnitude estimates 7−72486
SN 1987A in LMC, neutron star and black hole formation, neutrino evidence 7−127928
SN 1987A in LMC, obs. of nearby compact H II region, and visual magnitude estimates 7−94917
SN 1987A in LMC, optical and UV photometry by IUE satellite 7−134257
SN 1987A in LMC, optical interstellar absorpt-spectrum obs. 7−101818
SN 1987A in LMC, optical spectrum vars. and visual magnitude estimates (1987 March 22 to April 9) 7−88475
SN 1987A in LMC, outburst model 7−107878
SN 1987A in LMC, photographs before and after the explosion 7−127920
SN 1987A in LMC, photometric, spectral and CCD obs. 7−80004
SN 1987A in LMC, photometric behaviour of progenitor, 1934-59, from Sonneberg Observatory plates 7−120479

ernovae continued
SN 1987A in LMC, photometric obs. (1987 February 24 to March 22) 7−101815
SN 1987A in LMC, photometric obs. of possible progenitor Sanduleak −69°202 (1973-77) 7−80009
SN 1987A in LMC, photometry, bolometric lumin. and radius upper limits 7−88478
SN 1987A in LMC, photometry, pre-max. plateau, spectra and magnitudes 7−88473
SN 1987A in LMC, polarimetric obs. (1987 March 6 and 7) 7−101814
SN 1987a in LMC, polarization and spectral observations 7−80001
SN 1987A in LMC, possible binary star progenitor, position 7−94929
SN 1987A in LMC, precise position and visual magnitude estimates (to 1987 May 25) 7−101828
SN 1987A in LMC, precise positions and magnitudes (1987 March) 7−80015
SN 1987A in LMC, predicted X-ray, UV and IR spectra 7−140121
SN 1987A in LMC, prompt radio burst detection 7−94930
SN 1987A in LMC, prospects for future IR and γ-ray emission 7−146014
SN 1987A in LMC, radio emission rel. to interaction with circumstellar matter and nature of progenitor star 7−115484
SN 1987A in LMC, radio emission upper limits (1987 July) 7−146005
SN 1987A in LMC, relativistic jet from central pulsar 7−120480
SN 1987A in LMC, speckle obs. of diameter and expansion rate 7−146006
SN 1987A in LMC, speckle observations indicating existence of nearby bright feature 7−94920
SN 1987A in LMC, speckle search for companion object (May-June 1987) 7−140129
SN 1987A in LMC, spectra, polarisation meas., and visual magnitude estimates 7−88474
SN 1987A in LMC, spectra and magnitudes, mid-March 1987 observations 7−80010
SN 1987A in LMC, spectra and photometry for first 50 days 7−127921
SN 1987A in LMC, spectral and visual magnitude obs (1987 march 5 to 17) 7−80007
SN 1987A in LMC, spectral evolution in far-UV (February to March 1987) 7−101821
SN 1987A in LMC, spectral features and evolution, magnitudes 7−72480
SN 1987A in LMC, spectrum anal., luminosity meas. *(French)* 7−146013
SN 1987A in LMC, TeV and PeV gamma-ray processes in supernova interior 7−139870
SN 1987A in LMC, total visual magnitude, photometry and neutrino-antineutrino obs. 7−80002
SN 1987A in LMC, UBV photometry (February 24 to 26 1987) 7−115481
SN 1987A in LMC, UBV photometry and spectrum rel. to classification 7−72483
SN 1987A in LMC, UBV photometry magnitudes, but no soft X-rays (1987 May-September) 7−146008
SN 1987A in LMC, UBVRI and visual magnitude estimates (1987 June 16 to 25) 7−115479
SN 1987A in LMC, UBVRI photometry at CTIO (1987 July 30) 7−127918
SN 1987A in LMC, unresolved assoc. source characts. and BV photometry 7−94925
SN 1987A in LMC, UV and visible flux, spectral and V magnitude characts. 7−88629
SN 1987A in LMC, UV flux and spectral features 7−115475
SN 1987A in LMC, UV interstellar lines obs. by IUE 7−101823
SN 1987A in LMC, UV photometric props. and comparison with Sk −69°202 components 7−101820
SN 1987A in LMC, visual magnitude and photometric obs. 7−140134
SN 1987A in LMC, visual magnitude estimates (1987 August) 7−140130
SN 1987A in LMC, visual magnitude estimates (1987 July 17 to 21) 7−120478
SN 1987A in LMC, visual magnitude estimates (1987 July 31 to August 11) 7−146004
SN 1987A in LMC, visual magnitude estimates (1987 May) 7−94926
SN 1987A in LMC, visual magnitude estimates (July 1987) 7−120476
SN 1987A in LMC, visual magnitude estimates and search for γ-ray line emission 7−120474
SN 1987A in LMC, visual magnitude estimates and spectropolarimetry 7−115477
SN 1987A in LMC, VRI photometry (1987 February 28-March 10) 7−146009
SN 1987A in LMC, X-ray flux, archive brightness, and spectral evolution 7−80016
SN 1987A in LMC, X-ray flux increase and BVIR photometry 7−140132
SN 1987A in LMC, X-ray flux limit and spectrum vars. (1987 February 26 to March 9) 7−72485
SN 1987A in LMC secondary source position and visual magnitude estimates 7−115480
SN 1987B in NGC 5850, discovery report, position, and magnitude sequence 7−146002
SN 1987B in NGC 5850, emission line spectrum 7−72477
SN 1987B in NGC 5850, spectroscopic classification and line widths 7−88484
SN 1987B in NGC 5850, visual magnitudes (1987 April 2) 7−94909
SN 1987C in Markarian 90, corrected position for galaxy 7−80017
SN 1987C in Markarian 90, March 1987 supernova discovery 7−88471
SN 1987C in Markarian 90, spectroscopic obs., galactic nucleus offset, and V-magnitude 7−88485
SN 1987C in Mrk 90, spectral identification as Type II object 7−94915
SN 1987D in MCG+0-32-01, April and May 1987 magnitudes 7−107877
SN 1987D in MCG+0-32-01, discovery, position and magnitudes 7−94907
SN 1987D in MCG+0-32-01, magnitudes and sequence 7−120466
SN 1987D in MCG+0-32-01, spectral identification as Type I object 7−94915
SN 1987D in MCG +0-32-01, magnitude and astrometric position 7−88479
SN 1987D in MCG +0-32-01, semi-accurate position, spectroscopic obs., and visual magnitude estimates 7−94916
SN 1987D in MCG +0-32-01, spectral obs. 7−88483
SN 1987D in MCG +0-32-01, spectroscopic classification and max. light time 7−88484
SN 1987E in NGC 4725, discovery report 7−94910

supernovae continued
SN 1987E in NGC 4725, foreground star and not a supernova 7−94919
SN 1987E in NGC 4725, semi-accurate position and BV photometry 7−94912
SN 1987E in NGC 4725, visual magnitude estimates 7−88480
SN 1987F in NGC 4615, discovery, approximate position and photovisual magnitude 7−94911
SN 1987F in NGC 4615, photographic and spectral obs. 7−94918
SN 1987G=SN 1987D in UGC 7370, position, light curve and spectral characts. 7−94914
SN 1987H, misidentification of foreground star 7−88378
SN 1987H in NGC 5363, supernova discovery observations 7−88481
SN 1987I in IC 4963, discovery of Type I object 7−120472
SN 1987J in ESO 601-26, discovery, position and magnitudes 7−140127
SN 1987J in ESO 601-26, type II supernova, spectroscopic obs. and classification 7−127919
SN 1987J in ESO 601-G26, Type II spectra (1987 July 30-31) 7−127917
SN 1987K in NGC 4651, spectral features (1987 July 31) 7−127917
SN 1987K in NGC 4651, type II supernova, spectroscopic obs. and classification 7−127919
SN 1987K in NGC 4651 discovery position and magnitudes 7−140127
SN 1987L in NGC 2336, spectrum and Type Ia confirmation 7−140133
SN 1987L in NGC 2336, Type Ia SN identification and spectral characts. 7−140131
SN 1987L in NGC 2336, visual magnitude estimates and astrometric meas. 7−140294
SN 1987L in NGC 2336 spiral galaxy, optical observations 7−134259
SN 1987M in NGC 2715, discovery, approximate position, and magnitude (1987 September 21) 7−146007
SN 437, Chinese observations 7−88135
solar neutrinos, use in super microscopes supernovae 7−128877
subluminous Type I, rate in Galaxy and ellipticals 7−120470
Type I, optical−UV spectrum 7−115486
Type I supernovae, accreting white dwarf models 7−120393
Type I supernovae, fate of merging double white dwarfs 7−88394
Type I supernovae, light curve models from white dwarfs explosions 7−120467
Type I supernovae, local environment in spiral and irregular galaxies 7−127931
Type I supernovae, lowered energy for echo model of light curve 7−107869
Type I supernovae, off-centre ignition of nuclear burning in merging white dwarfs 7−107822
Type I supernovae, statistical props. and deflagrating white dwarfs 7−140122
Type I supernovae precursors, interacting He star-white dwarf pairs 7−120468
Type Ia supernova, bolometric light curve reconstruction from model of processes 7−107871
Type Ib supernovae, observational props. and spectroscopic classification criteria 7−120465
type II, large explosion energy, prompt-explosion mechanism 7−127930
Type II, neutrino signature, resonant neutrino oscillations 7−140136
Type II, supernovae, neutrino annihilation rel. to stellar envelope ejection 7−101826
Type II SN, assoc. neutrinos energy spectra 7−140040
Type II supernovae, convection effects and neutrino emission characts. 7−140124
Type II supernovae, implications of mol. clouds obs. near supernova remnants in outer Galaxy 7−88582
Type II supernovae, implications of neutrino-driven winds from young hot neutron stars 7−88493
Type II supernovae, influence of central pulsar on evolution of remnant 7−140218
Type II supernovae, radioactive decay mechanism for late-time luminosity and H I ionisation *(Russian)* 7−146011
Type II supernovae, search for evidence of assoc. massive star form. 7−127931
Wolf-Rayet stars explosions, light curves 7−127916
X-ray astronomy (book) 7−88759
Fe cores collapse, effects of neutrino transport 7−145938

superparamagnetism
see also magnetic properties of fine particles
blocking temperature in superparamag. model, field depend. calc. 7−70598
colloid superparamagnetic particles, anomalous susceptibility, in alternating mag. field 7−112866
ferrofluid, Mossbauer study of superparamag. amorphous alloy particles 7−118923
hyperfine struct. of anomalous Mossbauer spectra 7−106060
magnetic fluids, conf., Tokyo, Japan (July-Aug. 1986) 7−80152
magnetic fluids, physical props. 7−77372
particles, magnetic hyperfine splitting 7−138288
CdS:Cl, press. quenched, elec. and anomalous mag. transitions 7−112732
Co, colloidal ferromag. metals, prep., mag. props. 7−77375
Co particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Co(AlMn) alloys, struct. and mag. props. 7−132069
$(Co_{78}Fe_{22})_3V$, low temp. sp. ht. 7−118803
CrO_2 fine particles, mag. moment 7−85369
Cu-Ni-Fe single-domain particles, superparamag.-ferromag. transition 7−125470
$Cu_{69-x}Au_{30}Fe_{1+x}$, x=0,2, nuclear spin-lattice relaxation in single domain particles 7−118882
Er, nanocrystalline, prep., mag. transitions, suscept. meas. 7−125478
Fe colloidal ferromag. metals, prep., mag. props. 7−77375
Fe particles, phase separated in BN matrix, metal-insulator transition, mag. props. 7−125479
Fe ultrafine particles in Fe-SiO_2 granular solids, spontaneous magnetisation, temp. depend. 7−125475
Fe-Ni-Cr, austenitic, ageing, low temp. mag. props. rel. to precipitated γ′ phase particles *(Japanese)* 7−105958
Fe-SiO_2 granular solids, mag. props. 7−125476
$Fe_{70}Al_{30-x}M_x$, (M=Cr,Mn,Co), mag. studies 7−125394
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ devitrified metallic glass, fine particle superparamagnetic props. 7−143860
α-Fe_2O_3 annealed submicronic monodispersed particles, Morin temp. particle size depend. meas. 7−85290
Fe_3O_4 small ferromag. particles, correlation spectroscopy study 7−70599

superparamagnetism continued
$Ga_{0.6}Fe_{0.4}NiCrO_4$, anomalous Mossbauer lineshapes and AC susceptibility 7−99425
Hg-Fe ferrofluid, Mossbauer spectra studies 7−77435
Ni colloidal ferromag. metals, prep., mag. props. 7−77375
$(Y_{0.97}Hf_{0.03})Fe_2$, hyperfine interactions, influence of hydrogenation 7−99626

superplasticity
brass, microduplex, 60/40, two-phase superplastic alloys, cavitation criterion 7−132676
ceramics, crystalline, single phase, structural superplasticity 7−132668
deformation mechanisms, role of struct. transformations *(Russian)* 7−137445
diffusional cavity growth, model 7−76271
duplex materials, static annealing and superplastic deform., anal. of grain-growth data 7−106580
grain boundary sliding under structural superplasticity, materials accommodation 7−111584
hydrostatic pressure effects 7−142886
limit strain, influence of variation of strain rate sensitivity 7−76276
material, superplastic elongation, rate sensitivity, tensile test instability *(Japanese)* 7−93062
stainless steel clad ultrahigh C steel, superplasticity 7−78123
steel, duplex δ-ferrite-austenite, microstruct. change during superplastic deform. 7−100304
steel, phase superplasticity, investig. apparatus 7−78436
Al-Ca-Zn (5,5 wt.%), superplastic behavior 7−144488
Al-Cu, superplastic eutectic alloy, strain sensitive flow, contrib. of concurrent grain growth 7−86286
Al-Cu-Li-Mg-Zr, superplastic forming, cavitation 7−86277
Al-Li alloy, room and elevated temp. mech. behaviour, additions influence 7−100243
Al-Li-Zr (4, 0.2 wt.%), rapid solidification processed, superplastic forming 7−144494
Al-Mg-Zr (10, 0.1 wt.%), warm rolling, superplastic flow, microstruct. 7−144481
Al-Zn (1 wt.%), deformed at room temp., AE study 7−78117
Al-Zn-Mg, 7475, superplastic, solid-state bonding 7−93246
Al-Zn-Mg, with and without SiC reinforcement, high strength, powder metallurgy, superplasticity 7−100303
Al-Zn-Mg-Cu, superplastic deform., photoemission electron microscopy 7−113823
Cd-Zn eutectic electrodeposited coatings, superplastic behaviour *(Russian)* 7−78105
Cr-Co-Ti-V-Si-Fe, microstruct. and superplasticity *(Russian)* 7−71238
Cu-Al-Si-Co, superplastic deform., cavity alignment 7−71249
Cu-Zn, superplastic alloy, deform. activation energies, hot microhardness obs. 7−113617
Fe-Cr-Ni-B, crystallised glassy alloy, superplasticity 7−126171
Fe-Ni-Cr, superplasticity due to isothermal martensitic transform., phenomenological anal. *(Japanese)* 7−100294
$Fe_{43}Cr_{25}Ni_{20}B_{12}$ crystallised glasses, grain size and superplasticity studies 7−91706
Mg alloy, dynamic recrystallisation, hardening and plasticity *(Russian)* 7−100244
Ni-Co, electrodeposited, tensile props. rel. to heat treatment 7−71254
Ni-Co-Cr, powder metallurgy, hot extrusion, stable struct. form., superductility 7−126049
NiTi, superplastic, stress-induced transform. *(Chinese)* 7−78003
Pb-Sn, eutectic, superplastic and as-cast, cavitation and cracking during high-temp. fatigue 7−119338
Pb-Sn eutectic alloy, superplastic, strain rate transients 7−100314
Sn-Pb eutectic alloy in superplastic condition, stress relax. 7−126158
Ti-Al-Mo-Zr, superplastic deform., stress induced H diffusion 7−132686
Ti-Al-V (6,4 wt.%), superplastic, post-forming tensile props. 7−100302
Ti-Al-V (6,4 wt.%), superplastic deform., photoemission electron microscopy 7−113823
α-U, anisotropic polycrystals. internal stress superplasticity 7−86288
W-Cu finely divided mixture, kinetic of densification and growth of refractory phase grain in sintering 7−119198
Zn, anisotropic polycrystals. internal stress superplasticity 7−86288
Zn-Al, superplastic alloy, deform. activation energies, hot microhardness obs. 7−113617
Zn-Al alloy (1.1 wt.%), superplasticity, temp. depend. 7−131212
Zn-Al eutectic alloy superplastic, circular-die hydraulic bulge deformation *(Japanese)* 7−110802
Zn-Al eutectoid, two-phase superplastic alloys, cavitation criterion 7−132676
Zn-Al-Cd alloys, superplasticity, long term ageing and Cd influence study 7−119308

superradiance
see also acoustic superradiance
atomic systems, superradiance and subradiance study 7−68271
atoms, superfluorescence threshold condition 7−122487
biphenyl crysts., superradiance of guest pyrene molecules, effect of struct. transitions *(Russian)* 7−99888
Cassegrainian amplifiers, amplified spontaneous emission 7−103790
coumarin 450 laser dye, simultaneous dual superradiance from planar and twisted conformations 7−110053
crystalline layer, planar superradiation dynamics 7−122886
crystals, superradiance, phenomena and appls. 7−122885
cyclotron superradiance as classical analog of Dicke superradiance 7−122801
discrete periodic resonant medium, coherent interaction of light 7−68762
dye DFB laser, enhanced spontaneous emission and quantitative calc. at threshold *(German)* 7−90600
dye ultrashort ASE pulses generated by transversal travelling wave pumping *(Chinese)* 7−103808
FEL klystron, superradiant harmonic emission, 3D modelling and numerical anal. 7−130137
FEL program at Naval Research Laboratory, mm-cm wavelength 7−130132
free-electron laser amplified spontaneous emission, guided modes 7−97026
impurity crysts. with intensive zero-phonon lines as superradiance source *(Russian)* 7−106215
inhibited spontaneous emission in solid-state physics and electronics 7−90559
inhomogeneous line broadening 7−103788
Kiton red 610 dye laser, Na vapour optical pumping and UV emission 7−122423

superradiance continued
metallic resonator, electrodynamics and thermodynamics 7−70844
molecular multiple-photon excitation and dissoc. book 7−88755
Raman free-electron laser, exptl. study 7−82594
resonator-free amplification of spontaneous radiation under recombination pumping conditions 7−122893
semiconductor electron beam pumped lasers, amplified spontaneous emission 7−68647
single-pulse superradiance output waveform *(Chinese)* 7−103781
squeezing with Rydberg atoms 7−136248
superluminescent diodes, 0.83 μm, Fabry-Perot spectral modulation 7−141894
two-level atomic medium, nondegenerate multiwave mixing, quantum theory 7−90557
two-level atoms, excited, superradiance Weisskopf-Wigner eqn. 7−103455
visible atomic spontaneous emission in confocal resonator 7−116914
Ar_2 excimer laser, electron beam pumping using backscattering reflector 7−117229
CdSe single crystals, dense exciton gas depth of penetration, optical studies 7−70199
Ga degenerate levels, cascades, superradiance and subradiance 7−82061
Hg, two-photon-resonant frequency conversion, amplified spontaneous emission effects 7−141939
I_2, multilevel cooperative amplified spontaneous emission 7−129824
$KCl:O_2^-$, superfluorescence-amplified spontaneous emission transition, transition dipole dephasing rate 7−136250
Li_2 diffuse violet bands, 4000 Å region, intense spontaneous amplified emission 7−122555
Na, competition between amplified spontaneous emission and the four-wave-mixing process 7−68600
Ti:sapphire tunable laser system evaluation 7−68659

supersaturation control *see chemical variables control*

supersaturation measurement *see chemical variables measurement*

supersonic flow
see also shock waves
2D Keplerian flows, non-linear waves, accretion disks appl. 7−117624
airfoil flows, multigrid approximate factorization scheme 7−142332
airfoils, oscillating, life and moment coeffs. in supersonic flow 7−83265
atoms on surfaces, heterogeneous recomb. probability, supersonic flow interaction 7−139041
axisymmetric shock wave-turbulent boundary-layer interaction flow, holographic interferometry 7−83366
base flow, with thermal action on wake, numerical anal. 7−75610
biomolecules, reson. 2-photon ionis. using laser desorpt., mass spectrometry 7−106970
boat-tailed heat shield, supersonic flow simulation 7−97473
boundary layer stability, wave struct. study 7−136924
boundary layer turbulence, heat transfer, strong Reynolds analogy study 7−110955
boundary layer-external flow interaction, asymptotic theory, matrix-pass algorithm calc. *(Russian)* 7−136797
chemically nonequilib. flow around blunt bodies *(Russian)* 7−83267
Coanda jets, flat supersonic nozzles 7−136915
compressible gas flow through subsonic and supersonic nozzles, Mach number distrib. equalisation 7−111014
compressible jets in supersonic flow, maximum instabilities study 7−69244
compressible supersonic compression corner shock wave/turbulent boundary-layer interaction 7−111022
condensation transient in nozzle cascades with contracting channels 7−83299
convex corner, shock wave interactions, num. simulation 7−97573
cryogenic gases, supersonic flow *(French)* 7−91163
delta wing supersonic leading edges, press. distrib. calc. 7−69211
delta wings, in quasi-transonic flow, theory 7−136913
diazabenzenes, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7−82256
distributed injection over permeable plane surface, press. distrib. scaling law study 7−111023
electropositive gas, longitudinal discharge model in supersonic flow 7−124031
Flakner-Skan problem for interacting boundary layers, similarity solns., triple deck theory *(German)* 7−123674
flared cylinder, axisymm. laminar boundary layer interaction, triple-deck solns. 7−111025
flow resistance of body in rarefied gas supersonic flow, surface pot. and mag. field effect 7−69213
gas superheating in two section forechamber of blowdown wind tunnel 7−136917
gas-particle mixture, nozzle theory inverse problem soln. 7−111077
gasdynamics, conservative eqns., implicit boundary treatment 7−123579
high-speed inlet analysis, lower-upper implicit scheme 7−130733
ideal fluid, supersonic flow about bodies, turbulent shear layer 7−130739
ideal gas, 3D supersonic flow past revolving bodies, flow pattern investig. 7−117625
ideal gas flows, supersonic, internal shock waves past wedge-plate and cone-cylinder configurations 7−97574
ideal gas supersonic flow about axisymmetric solids of revol., coupled heat transfer study 7−75580
jet, overexpanded viscous supersonic, interaction with unilateral barrier 7−83295
jet, turbulent mixing layer, quasiparticle detection and size determ. 7−83293
jets, interaction with shock waves, boundary soln. 7−117637
jets, supersonic submerged isobaric, mixing intensity, Mach number depend., vortices struct. model 7−142348
laminar flow development in square duct 7−69210
LWR pipe rupture, homogeneous flow model of two-phase jet impingement 7−89599
metal surface evaporation intensity investig. 7−130745
MHD converter duct, boundary-layer region, fluid flow, heat transfer, numerical soln. 7−75889
monatomic rarefied gas, streamline flow round circular rot. cylinder *(Russian)* 7−123686
Navier-Stokes eqns., unfactored implicit scheme with multigrid acceleration soln. 7−110911
nonequilibrium critical gas flow in Laval nozzle 7−111055
nonequilibrium gas, supersonic flow, monotonous second order approx. system *(Russian)* 7−83268
nozzle flow of gas-particle mixture, num. anal. 7−91179

ersonic flow continued
nozzles, supersonic concentric, center plug shapes study 7−83297
oblique shock wave/laminar boundary layer interaction, press. distrib. 7−83272
organised structures in supersonic, turbulent boundary layer 7−142294
particle sampling in supersonic streams with a thin-walled cylindrical probe 7−130766
plasma, density determ. by electrostatic double probes 7−83424
plasma, electrically floating obstacle in supersonic flow, near wake self-similar pot. 7−69327
plastic material erosion by gas-particle flow, surface instability, mathematical model 7−69107
radial diffuser, acoustic aspects 7−123327
scoop inlet, flow field, 2D numerical calcs. 7−136779
separated flow about circular cone shock- and shed-vorticity 7−69186
shock wave intersections in supersonic gas flow, num. simulation 7−117626
shock wave starting process in shaped nozzle of large-diameter shock tube 7−136922
shock-free cascades design, hodograph-based method 7−97566
shock-induced separated flows on the lee surface of delta wings 7−97564
slim profiles, 2D frictionless supersonic flows, transonic flows *(German)* 7−136914
slit pulsed valve for generation of long-path-length supersonic expansions 7−97567
sphere in wake of blunt cylinder, supersonic flow 7−136920
spiked sphere, axisymm. supersonic flow, surface heat flow distrib. 7−97530
steady supersonic vortex flow, aerosol particle motion, method of characteristics solutions 7−136923
streamline flow past deformed shells, num. soln. *(Russian)* 7−136925
supersonic free jet, 2D focusing by rectangular orifice 7−123700
surface pressure fluctuations in 3D shock wave/turbulent boundary interaction 7−69123
surface roughness influence on transition from regular to Mach reflection in pseudo-steady flows 7−75611
three-dimensional bodies in supersonic flow, radiative heat fluxes anal. 7−97531
three-dimensional bodies in supersonic gas flow, optimisation *(Russian)* 7−123675
total pressure loss in supersonic nozzle flow with condensation *(Japanese)* 7−111054
turbulent boundary layer interactions with compression corners study 7−142338
turbulent flow development in square duct 7−104302
two-dimensional steady flow over concave corner, shock formation distance in radiative magnetogasdynamics 7−75708
two-phase, thermoerosive action modeling 7−111024
viscous compressible fluid flows, prediction using segregated approach 7−123670
viscous gases, supersonic streamline flow around blunt bodies, shock layers eqns. *(Russian)* 7−104303
waverider shape 7−136918
wind tunnel study of shock wave/boundary interaction, using holographic interferometry 7−97661
Ar, free jets, homogeneous condensation 7−98418
CO, chem. laser, supersonic flow, gain characts. 7−117190
CO, supersonic nozzle, overtone band, IR emission spectra 7−74608
Cl, heat transfer in supersonic flow through nozzle *(Russian)* 7−83266
$Fe(CO)_5$, CO stretching ν_6 fundamental, free jet IR absorption spectrosc. 7−122534
H_2 turbulent jet, supersonic combustion with cotraveling air jet 7−100564
H_2O, free jets, homogeneous condensation 7−98418
H_2O, vap., free jets, condensation onset meas. 7−142335
N arc, 2 kA DC, in supersonic nozzle, conservation eqns. solved 7−83566
N_2, free jets, homogeneous condensation 7−98418

personics *see supersonic flow*

perstrings *see string theory*

persymmetric particles *see sparticles*

persymmetry
see also supergravity
(1,0) supergravity in superspace, heterotic string 7−115888
2D supersymmetric mag. field system, stationary two-body scatt. theory 7−128373
(4, 0) supersymmetric σ-models, finiteness, harmonic superspace formalism 7−102578
$\Delta I=1/2$ rule, scalar diquarks contrib., colour triplet particles, operator product expansion 7−134994
σ models, Euclidean superfield quantisation and noise in superinstanton eqns. 7−67492
σ models, soliton solns., inverse scatt. method and n-step superpotential 7−89369
σ-model, resurrecting (2,0) compactifications 7−102711
σ-model, supersymmetric, gravitational β function, four-loop corrections, effective action 7−108790
σ-model in $E_8/E_7\times U(1)$ manifold 7−102664
σ-models, softly broken, ultraviolet behaviour 7−134941
σ-models with torsion, two-loop renormalisation, bosonic and supersymmetric cases 7−134933
$N=1$ superconformal gauge theory in $d=2$ superspace 7−128418
A=130 mass region, U(6/20) supersymmetry, wave function, EM transition rates, spectra 7−96012
Adler-Bardeen theorem and regularization by dimens. reduction, axial current anomaly 7−128761
algebra for massive free fields 7−89383
anomalous in supersymmetric gauge theories, operator expansion soln. 7−102635
anomaly superfield and supermultiplet in two dimens. 7−89355
anti-de Sitter supersymmetry, radiative mass term generation 7−67490
anti-de Sitter supersymmetry, spontaneous breaking, Wess-Zumino model 7−73560
anti-Higgs effect in two-dimensional gauge theories 7−128412
Ashkin Teller model, 2D, superconformal invariance 7−128482
Ashkin-Teller model, partition function derivation, appearance of N=2 supersymmetry on critical line 7−108298
axions, cosmological bound relaxation in superstring models 7−135074
big bang, processes and theories 7−101961
Born-Infeld action from conformal invariance of the open superstring 7−95430

supersymmetry continued
Born-Infeld Lagrangian in d=4, appl. to supergravity and superstrings 7−80556
boson-fermion group chain decomposition 7−141004
bound state potentials at arbitrary energy 7−121391
BRST invariant, cyclic symmetric 3-(super)string vertex, (super)conformal field theory 7−120900
cancellation of dilaton tadpoles and two-loop finiteness in SO(32) type-I superstring theory 7−121483
canonical formulation, auxiliary field disappearance, Hamiltonian formalism 7−116092
canonical superspace 7−67514
Casimir stress in plane geometry 7−89395
charge conjugation, automorphisms and conformal states 7−89384
Chern-Simons forms and four-dimensional $N=1$ superspace geometry 7−140587
chiral four-dimensional heterotic strings from self-dual lattices 7−89468
chiral gauge theory, effective action for dynamical SUSY breaking 7−81048
chiral nonabelian gauge theories, effective zero-mode Hamiltonian 7−89348
closed fermionic string models, construction in 5 dimens. 7−89472
closed strings, OSP(1,1|2) and Parisi-Sourlas supersymmetry, nonAbelian OSP(1,1|2) generators 7−135085
closed superstring field theory, contact interactions in light-cone gauge, negative energy states 7−134603
closed superstrings as soliton-type solns. of 26-dimens. bosonic strings 7−73630
compactified $O(16)\times O(16)'$ heterotic string theory, supersymmetry restoration 7−73557
compactified superstrings, pure gauge sector 7−120906
composite operators, supersymmetry versus most attractive channel conjecture 7−128782
conf., Durham, England (Sept. 1986) 7−88749
conference on quantum field theory and math. physics, Bechyne, Czechoslovakia, (June 86) 7−80147
conformal superstring anomalies in superspace 7−128399
convariant higher spin vertex operators in the Ramond sector 7−140846
cosmic accelerators, flux at Earth, companion stability, underground muons 7−127656
cosmology, superstring neutrino-dominated Universe model 7−107998
covariant gauge fields, arbitrary spin, D=4 superspace formulation 7−128760
covariant superstring field theories, space time SUSY transformations 7−81063
covariant superstring theory, multiloop calcs., space-time SUSY current 7−108351
CP^{N-1} model, solitons, exact factorised S-matrix, 1/N expansion, antiparticles 7−121370
critical Ising-type models, composite fields and null vectors 7−108748
curved superspace σ-models, light cone gauge fixing, θ-expansion of superstring 7−73566
D=10, N=1 supersymmetry, superspace geometry and superstring effects 7−140843
d=2 euclidean gravity, supersymmetric Regge calculus 7−134619
D=2 N=1 supergraphs and explicitly broken supersymmetries 7−95783
D=4 bilocal current algebra, supersymmetric extension, Fritzsch-Gell-Mann light cone algebra 7−134983
D=4 supersymmetry for gauge fields of any spin 7−81046
D^0-$\bar{D}^0$ mixing in superstring-inspired E_6 models 7−95436
dilaton classical soln. and supersymmetry breaking evolution in expanding universe 7−67167
Dirac and Majorana spinors on nonorientable Riemann surfaces, string theory 7−135064
Dirac and Weyl fermion determinants 7−102266
Dirac neutrino masses, E_6 superstring models 7−135006
Dirac quantisation of supersymmetry field theory, component fields consistency 7−134982
disordered 1D systems, effective eqns. 7−134675
duality between topologically massive and self-dual vector fields 7−102639
duality transformation and non-Kahler couplings and potentials in an $N=1$ supergravity theory 7−73144
dynamical supersymmetry of Pt-Au pairs 7−128780
$E_6\times E_8$ superstring theory, SUSY breaking from group gaugino condensates 7−128803
E_6 neutral gauge boson detection through lepton pairs at hadron colliders 7−89408
E_6 signatures in atomic physics, neutral massive gauge boson effects, H atom appl. 7−81091
e_6 superpotentials and applications to heterotic superstring phenomenology 7−89100
E_6 superstring based model, Z′ mass limits and decays, Higgs masses and couplings 7−95802
E_6 superstring matter parity, lepton and baryon number violation operator elimination for d=3, 4 7−140850
E_6 superstring model with exotic quarks, CP violation 7−73577
E_6 superstring models, particle dichotomy and left-right decomposition, Dirac neutrino, W′ boson 7−128815
E_6 superstring models, simple discrete symmetries 7−134613
E_6 superstring theory, Z-Z′ mixing, use of Z lepton asymmetry 7−128822
E_6-based supersymmetric theories, Higgs boson mass bound 7−89420
$E_8\times E_8'$ heterotic superstring theory, Clebsch-Gordan coeffs. for m_b/m_τ relation 7−89474
$E_8\times E_8$ heterotic superstring theories, discrete symmetries, phenomenological clues 7−128405
$E_8\times E_8$ superstring models, cosmological consequences, baryon asymmetry, supermassive shadow particles 7−115878
early Universe, primordial inflation, superstrings and Theory of Everything 7−115660
effective super-Higgs and Str M^2 from four-dimensional strings 7−140589
effective supergravity lagrangians for 4D superstring massless sector, underlying nonlinear σ model 7−135078
Einstein-Maxwell scalar theory with monopole compactification, cosmological implications 7−73121
Einstein-Yang-Mills system, strings and superspace, d=10 supergravity 7−108796
electrodynamics, vacuum, SUSY restoration, chiral superfield fluctuations 7−67529
elementary introduction to supersymmetry 7−88809
enlargeable graded Lie algebras of supersymmetry 7−81041

supersymmetry continued
Euclidean supersymmetrization of instantons and self-dual monopoles 7−95782
exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
exotic Drell-yan processes at Tevatron and SSC, light and heavy bosons 7−134996
extended conformal SUSY, group theoretical approach, function space, invariant diff. operators 7−128779
extended Poincare supersymmetry in D-dimensional space-time 7−89385
fermionic strings, multiloop contributions, Selberg trace formula superanalog 7−121465
fermionic strings, twisted and extended, BRST quantization, O(2) and SU(2) strings, ghost systems 7−121478
finite quantum field theories and supersymmetry 7−134920
flavour mixing in the presence of a fourth down quark, E_6 superstring model 7−102267
four-dimensional superstring models, cosmological constant vanishing, free string spectrum 7−134610
four-dimensional superstrings, factorisation and multiloop modular invariance constraints for closed strings 7−108340
four-generation models from superstring orbifold compactification, Yukawa couplings 7−108352
free heterotic string field theory, supersymmetry, gauge fixing and BRST formalism 7−108886
free Ramond sector of Witten's covariant superstring action 7−80548
Gallagher-Moszkowski band analogs in IBFFM, spectrum-generating supersymmetry 7−121674
gauge theory, extended theory of SU(N) symmetry 7−121373
gauge-invariant free open superstrings, consistency and component-field struct. 7−89403
gauged d=7 N=2 supergravity with Chern-Simons form 7−67165
generalised complex superspace, superfield involutions in σ-commutative algebras 7−140830
generalised non-renormalisation theorems, Konishi anomaly 7−128781
globally supersymmetric theories, complexification of character of internal symmetry group 7−73552
goldstino frequency fn. in broken global supersymmetry 7−95779
Goldstone bosons and superpartners in supersymmetric theories 7−95788
graded Schwinger realization for dynamical supersymmetry 7−73711
graded spinors as an underlying geometry for extended supersymmetries 7−134971
gravity form bosonic, heterotic and SUSY strings 7−108358
Green-Schwarz superstring, loop calcs. and S-matrix elements 7−73625
Green-Schwarz superstring, quantisation 7−134612
GUT, $SO(4)\rightarrow SU(2)^R$ global symm. props. 7−134993
GUT's technical hierarchy problem 7−108811
harmonic oscillators with symm. breaking 7−108822
heterotic and superstring theory, conformal techniques and tree-level amplitudes 7−89475
heterotic and superstrings, path integral measure and ghost supercurrent 7−102713
heterotic string, Calabri-Yau compactification and D=4 N=1 supersymmetry 7−95797
heterotic string, spacetime versus world-supersymmetry 7−73140
heterotic string in arbitrary SUSY compactifications, Fayet-Iliopoulos D-terms calcs. 7−140845
heterotic string light-cone field theory on a torus 7−89460
heterotic string one-loop diagram, anomaly cancelling term 7−108879
heterotic string theory on Calabi-Yau manifolds in the Green-Schwarz formalism 7−73621
heterotic superstring compactification, 4 dimens. supergravity as low-energy limit 7−89476
heterotic superstring model, geometrical struct. in even dimens. 7−73142
heterotic superstrings, finiteness 7−80551
hidden supersymmetry, equivalence of stochastic quantisation to field theory 7−108800
Higgs sector of superstring models, nondetermination of mass upper bound 7−80561
high energy QCD interactions, N=2 extended SUSY calcs., $2\rightarrow 2$ processes 7−102694
higher curvature supergravity and superstrings 7−108380
higher derivative super Yang-Mills theories 7−73523
holomorphic and real Euclidean supersymmetries in three and four dimensions 7−81037
't Hooft-Polyakov magnetic monopoles from superstring models 7−95810
IBFM, U(6/12) supersymmetry scheme and nuclear wave fn. 7−135229
instanton calc. in chiral gauge theories, dynamically broken SUSY 7−108769
interacting boson fermion model, SUSY as formal prop. of Schwinger-type boson-fermion mapping 7−67747
interacting fermions, supersymmetry 7−95746
interacting heterotic string theory, Lorentz-covariant Lagrangian formulation 7−108904
intermediate mass scales, radiative generation in superstring-inspired models 7−89402
jets, inclusive production cross sections, power decrease, leading logarithmic approx., 7−128926
Kahler manifolds with vanishing chiral potential 7−81084
Kaluza-Klein cosmology, attractor universe in N=2 supergravity 7−73145
Klein-Gordon equation in nonstandard superspace 7−89356
Kosterlitz-Thouless phase transition, critical exponent classification 7−67510
Landau level, density of states, supersymmetric formalism with Φ^4 interaction 7−70160
Landau-Zener probability, solar-neutrino oscillation 7−108829
lattice gauge model, finite temp. phenomenon at strong-coupling limit 7−80965
left-right gauge model, Higgs boson struct., neutral current anal. 7−128820
left-right Pati-Salam model, P invariance and isospin breaking, SO(10) model 7−128812
lepton flavour non-conservation, heterotic superstring inspired standard model 7−80553
leptoquarks, superstring models, production in e-p colliders 7−128404
Lie superalgebra extensions and SUSY Abelian gauge fields 7−128786
Lie superalgebras and extended Dynkin diagrams, regular subalgebras 7−67518
Lie superalgebras and Lie algebras square roots 7−81038
light front dynamics of the gravitini superfields 7−67161
supersymmetry continued
light-cone gauge strings and superstrings, inexact modes, holomorphicity, modular invariance 7−108350
light-front dynamics of topologically massive supergravity 7−102281
Liouville superstring, open, five-dimensional 7−134988
local supersymmetry, Lorentz symm., vierbein formalism 7−128789
locally supersymmetric sigma models with conformal invariance in 2D 7−73530
Lorentz generators in light-cone gauge superstring field theory 7−89404
Lorentzian algebra for the superstring 7−121481
Marcel Grossmann meeting on general relativity, Rome, Italy (June 1985) 7−66831
mass degeneracy and the super-Higgs mechanism 7−108816
massive Dirac ν, electromagnetic props. in supersymmetry and standard model 7−95791
minisuperspace approximation of quantum cosmology, extension to infinite dimensions 7−72676
multichiral free superfields with one central charge for $N=2, 4, 6, 8$ 7−81052
multiloop closed superstring amplitudes, cancellation of leading divergence 7−80544
multiloop superstring amplitudes in light-cone gauge, modular invariant and holomorphic construction 7−121408
N=1, d=4 supergravity, scalar pot. struct., appl. to superstring theory 7−80555
N=1 centrally extended sigma model, exact SUSY S-matrix, central charges for O(2N) 7−121342
N=1 super Yang-Mills theory, operator regularization and the divergence of the supercurrent 7−140796
N=1 super-Wess-Zumino model, operator algebra 7−67483
N=1 supergravity, Kahlerian higher-derivative couplings, flat pot. struct. 7−80576
N=1 supergravity coupled to supersymmetric Yang-Mills fields in superspace 7−73143
N=1 supergravity in 10D, string corrections to supersymmetry transformation 7−102285
N=1 supersymmetric gauge theories, ultraviolet regularization, softly broken extended supersymmetry 7−128774
N=1 supersymmetric GUT based on $SU(5)\times U(1)$ 7−140853
N=2 relaxed hypermultiplet superspace quantization, real compensator superfield, Yang-Mills multiplet 7−140806
N=2 spinning string, 4D model, space dimens. from supersymmetry 7−102718
N=2 spinning string, space dimensions from SUSY, 4D model 7−89485
N=2 superconformal algebra, character formula of $c<1$ unitary representation 7−108802
N=2 superconformal algebras, unitarizable highest weight modules 7−80543
N=2 superconformal field theories, modular invariance, central charge character formulae 7−134978
N=2 superconformal invariance in 2D field theories 7−89352
N=2 superelectrodynamics with D term, potential, infinitely degenerate vacuum, gauge symmetry breaking 7−128829
N=2 supersymmetric and gauge invariant interactions from harmonic superspace with central charges 7−140793
N=2 supersymmetric nonlinear sigma model, five-loop divergences 7−89347
N=2 tensor multiplets, interactions and duality transform., general action functional, conformal supergravity 7−128790
N=4 SUSY theory, finiteness, light cone gauge counter-terms 7−73556
N=4 Yang-Mills theory, spontaneous symmetry breaking in quasi-superrenormalisable models 7−73514
$N=^1/_2$ supersymmetries, nonlinear σ model, (p, q) world sheet supersymmetry 7−134974
negative dimensional integration, path integrals, fermionic equivalence, harmonic oscillators, Parisi-Sourlas supersymmetry 7−115838
neutrino masses in superstring models with E_6 singlets 7−80559
Nicolai map, supersymmetry breaking at finite temp. 7−95790
non-abelian superalgebras, higher-spin symmetry 7−134627
nonAbelian chiral anomaly, noncovariant heat kernel calcs. 7−89345
nonAbelian self-consistent chiral supersymmetric anomaly, explicit form 7−73559
nonlinear σ-model, elliptic cohomology formulation 7−89319
nonlinear σ-model, hyperkahler metrics from (4,0) superspace 7−95744
nonlinear σ-model on Riemannian manifold in superspace, Dirac quantisation 7−73547
nonlinear σ-models, 2 D, UV behaviour, off-shell superfields 7−108770
nonlinear Schrodinger equation, complete integrability, Painleve criterion, fermionic and bosonic fields 7−140506
nonlocal current algebra and N=2 superconformal field theory 7−81061
nonpolynomial oscillator, exact solns., supersymmetry 7−108301
normal-ordered products with Grassmann operators 7−108814
nuclear potentials, deep-shallow states supersymmetry 7−109131
O'Raifeartaigh model, nonlinear, in four dimensions, spectator fields 7−108818
one-loop amplitudes and effective action in superstring theories 7−89409
one-loop effective potential in $D=4$ theories consistent with classical symmetries of $D=10$ superstrings 7−95431
one-loop N=2 supercurrent anomaly, superspace calcs. 7−81051
open string dynamics, partition function, critical dimensions 7−73620
open superstring, one-loop path integral description 7−73627
open superstring effective action, fermionic terms, massless modes, four-particle scattering amplitudes 7−115874
open superstring theory, Born-Infeld action, D=10 Maxwell theory, F^6 supersymmetric extension 7−115875
open superstring theory, effective lagrangian in zero-slope limit 7−108878
operator product expansion in supersymmetric scalar field theories 7−81047
orbifold compactified superstring theories; gauge symmetry breaking 7−120899
orbifold compactified superstring theories, fermion generations 7−81073
OSp(M/N), Young diagrams, supercharacters and modification rules 7−140833
OSp(N,4) supersymmetry, semiclassical solns. 7−140837
particle physics advances, solar neutrino oscillations and superstrings 7−116102
particles and interactions, theory 7−108820
path integration, supersymmetric, in SUSY quantum mechanics 7−128348
Pati's superstring preon model, hierarchical structure, symmetry evol. *(Chinese)* 7−121459

persymmetry continued
perturbative, string S-matrix, group theoretic approach, string scattering, gauge properties, open bosonic tree 7−116148
perturbative and global anomalies in supergravity theories, string origin 7−95445
potential calcs., in 1D quantum mechanics 7−67075
preon dynamics through local supersymmetry 7−73610
preon models, constraints 7−102641
QCD, gauge independence of the dynamical quark mass 7−95833
QCD, gluon fusion, lowest order perturbation theory 7−102693
QCD in large N_c limit, low energy effective action 7−140883
QCD-based dynamical model for composite quarks and leptons 7−128863
QED, constant field strength effective Lagrangian in 2+1 dimensional space-time 7−135014
QED, gauge invariant formulation 7−128824
QED, perturbation corrections to effective zero-mode hamiltonian 7−116113
quantum hamiltonian ambiguities, σ-model and SU(2) Yang Mills theory appls. 7−140836
quantum harmonic oscillator, symmetries and supersymmetries 7−80477
quantum mechanics, degree of Nicolai map 7−134558
quantum mechanics, index theorem for arbitrary Lorentz irreps 7−102638
quantum mechanics, supersymmetric, Hamiltonian spectra and inverse scatt. problem 7−134578
quantum mechanics, supersymmetric, stochastic representation of arbitrary fermion sectors 7−73039
quark mixing, radioactive corrections scheme, superstring inspired model 7−80554
quark-lepton mass matrices in superstring inspired models, radiative corrections 7−95794
quasi Nambu-Goldstone models, spontaneous internal symm. breaking and mass splittings 7−95789
$R\times S^3$ space-time, global N=1 SUSY on surface of 4D sphere 7−73554
radiative corrections to asymmetry meas. at Z^0 peak 7−134975
Ramond sector of the supersymmetric minimal models 7−134981
Ramond superstring, Parisi-Sourlas fermions, zero energy limit massive (0+1)-dimens. supergravity 7−134609
rigid superstrings, one-loop contrib. to β-function, asymptotic freedom 7−95434
scalar particles as radiation zeros, local chiral transformation form 7−81045
Schwinger's action principle quantization, Dirac quantisation equivalence, Lagrange undetermined multipliers 7−134959
semiclassical quantization rule in SUSY quantum mechanics, exactness 7−89036
sigma models with torsion, β-functions and central charge 7−73531
sine-Gordon equation and infinite dimensional superalgebras, prolongation structures 7−108168
singly-charged scalar field, family mixing and lepton-number breaking, supersymmetric case 7−128798
sl(1,2), irreducible finite-dimensional representations in Gel'fand-Zeitlin basis 7−102637
sl(1,3), finite-dimensional representations in Gel'fand-Zetlin basis, nontypical representations 7−67517
SO(10) superstring models, unified, with intermediate $SU_R(2)$ breaking, SUSY particle spectrum 7−95814
SO(16) invariance in 110 supergravity 7−80575
softly broken supersymmetric theories, massless Higgs boson 7−89390
softly-broken superconformal invariance, chaotic inflation possibility, complex scalar fields 7−140340
sparticle with N=1,2 supersymmetry, quantization with irreducible constraints 7−95780
spectral shift function and Fredholm determinants in supersymmetric quantum mechanics 7−80485
spin 3/2 fields on stationary black holes, local supersymmetry transformations 7−73107
spin-field correlators on Riemann surfaces and string nonrenormalization theorems 7−81068
spl (2,1) superalgebra, orthogonality conditions for tensor product representations 7−89401
spontaneous breaking at finite temp., order parameter, Witten index and Nicolai map temp. depend. 7−108813
standard model, BRS symmetry limit, effect of noncovariant/nonsupersymmetric gauges 7−134987
standard model, supersymmetric extension, tree-level unitarity violation for large Higgs mass 7−128797
standard model, W and Z masses, weak neutral current 7−140866
statistical mechanics of cosmic strings 7−88721
stochastic quantisation, Parisi-Wu approach, quantum field theory, string theory, QED, review 7−140822
stochastically quantized non-Abelian field theory, radiation corrections and supersymmetry 7−121380
string and superstring theories, review 7−121484
string field theory with chiral coordinates 7−135072
string theory, Becchi-Rouet-Stora-Tyutin quantization of superconformal theories 7−67607
string theory, Fayet-Iliopoulos terms, vacuum destabilization 7−108877
strong CP problem in superstring theory 7−108817
SU(2, 2|1, 1) supergravity and N=2 supersymmetry with arbitrary cosmological constant 7−102279
$SU(2)_L\times U(1)\times U(1)$ electroweak model, Higg's mechanisms, nonstandard neutral currents, neutral massive gauge bosons 7−128811
$SU(3)\times SU(2)\times U(1)^n$ N=1 SUSY models, construction from heterotic string orbifold compactification 7−121400
$SU(4)\times SU(2)\times SU(2)$ partial unification group, spontaneous symm. breaking and mass spectra calcs. 7−108834
SU(5) supersymmetric GUT with automatic fine adjustment 7−95813
SU(6/*M*) supergenerators, IBFM form for microscopic foundation, graded Schwinger realization 7−135230
SU(m/n) and OSP (m/2p) groups, generalized atypical supertableaux 7−95776
super $\mathrm{diff}(S^1)/S^1$ curvature, finite dimens. coset space techniques, infinity regularization 7−135083
super Yang-Mills theory, reconciliation between SUSY and the lattice 7−128783
super-Kahler geometry in supergravity and superstrings 7−73139
super-Riemann surfaces, N=2, O(N) and SO(N) surfaces 7−73555
super-Yang-Mills model, N=1, analytic supersymmetric regularization 7−73516
superalgebras of higher spins in de Sitter space 7−134628
superalgebras sl(m/n), structure of atypical representations 7−67521

supersymmetry continued
superconformal algebra, N=3 case, formulation for N≥1, central operator, transformation rule, O(3) representation 7−116093
superconformal models, modular invariance, constraints anal. 7−73509
supercurrents and superconformal symm., variational formulation 7−89392
superfield commutators for D=4 chiral multiplets and their applications 7−95777
superfield operator regularization, one-particle irreducible Green's fns. 7−108781
supergauge theories in harmonic superspace in 6D 7−73545
supergravity, D=10, N=2a, superspace formulation, SUSY transformations 7−95446
supergravity, higher curvature terms, group manifold approach, superstring compactification study 7−80572
supergravity, spontaneous R parity violation, model for solar neutrino oscillations 7−134631
supergroups, generalised quasispin 7−89388
superholomorphic anomalies and supermoduli space, superstring effective action in Faddeev-Popov determinant 7−140580
superinvariant chiral and vector fields, SU(2,2/1) subgroup invariance 7−108815
superparticle in light-cone harmonic superspace, Dirac quantization 7−67513
superparticle theory, covariant quantisation, S-matrix 7−73573
superspace, canonical quantisation formalism 7−95370
superspace actions and duality transformations for $N=2$ tensor multiplets 7−108382
superspace constraints, off-shell superspace R^2-action in six dimensions 7−128420
superspace Kahler transformations and Yang-Mills-matter-supergravity action calc. 7−95448
superspace spinning string spectres, isomorphism between potentials and ghost fields 7−89079
superspace Yang-Mills and gravitational systems, Witten index 7−128413
superstring, superspace supergravity 7−80545
superstring σ-models from bosonic model, four-fermion interactions on world sheet 7−120903
superstring compactification, simplified model 7−134607
superstring compactification, space-time supersymmetry in large radius expansion 7−108344
superstring compactifications rel. to semisimple Lie algebras, topological invariants 7−135062
superstring E_6 model, CP violation and Yukawa couplings, four generation example 7−116108
superstring flax, unidexterous superspace 7−120905
superstring generated N=1 supergravity model, duality and gaugino condensation 7−102719
superstring inspired models, gauge symmetry breaking 7−102264
superstring models, supersymmetry breaking in observable sector 7−102263
superstring models challenged by rare processes 7−140578
superstring motivated gauge models based on a rank six subgroup of E_6 7−95816
superstring phenomenology, compactification and expt. signatures 7−108357
superstring spectroscopy, dynamics and particle internal struct. 7−102724
superstring theories, compactification, low energy phenomenology 7−67140
superstring theory, covariant BRST theory 7−89075
superstring theory, general remarks 7−108359
superstring theory, incorporating symmetry 7−108343
superstring theory, introduction, bosonic strings and tree approx. scatt. amplitudes, book 7−108059
superstring theory, loop amplitudes, anomalies, and phenomenology, book 7−108068
superstring theory, pregeometry 7−102265
superstring theory, review of recent developments 7−140575
superstring theory, supersymm. breaking mechanism 7−81058
superstring thermodynamics 7−88100
superstring world sheet supergravity, prepotentials solns. 7−73624
superstring-inspired models, global symm., phenomenological roles 7−102721
superstring-inspired models, low-energy supersymmetry breaking through gaugino masses 7−81069
superstring-inspired $SU(3)\times SU(2)\times (U(1))^2$ models with SO(10) unification 7−128403
superstrings, 10D, quantum cosmology, evolution, dynamics and coupling constants 7−134621
superstrings, 4D, effective interactions of chiral families 7−140859
superstrings, bosonization in the light cone gauge 7−73629
superstrings, fourth generation, renormalisation group scaling of gauge couplings 7−95870
superstrings, graded constraint algebras, OSP(1,1|2) symmetry, BRST invariance 7−134606
superstrings, low energy models, exotic coloured fields, rapid p decay 7−108903
superstrings, low-energy theory, localization and compactification 7−140912
superstrings, multiloop closed amplitudes, leading divergences cancellation 7−80552
superstrings, nonperturbative effects in sigma model 7−108342
superstrings, radiative corrections to N=1 supergravity model, nonperturbative supersymmetry breaking 7−135079
superstrings, sigma model interpretation, Siegel symmetry origin 7−102252
superstrings, singularities of one-loop amplitudes 7−102716
superstrings, standard model conf., Stanford, CA, USA, July 1986 7−102016
superstrings, total action, critical dimensionality and low-energy limit, review 7−140911
superstrings, type I, heterotic, massless field effective action, superspace formulation 7−140844
superstrings, type II amplitude finiteness 7−80550
superstrings, ultra-light neutrinos and R-parity 7−81147
superstrings and string theory, review 7−108889
superstrings and the unification of forces and particles 7−67139
superstrings from sigma models, bosonic string as example 7−102251
superstrung theory, time evolution of extra spatial dimens. 7−89418
supersymmetry and supergravity, review 7−89394
supertwistors and superfields 7−81036

supersymmetry continued
SUSY 10D spinning strings from bosonic string compactified on $E_8 \times E_8'$ lattice 7−81154
SUSY gauge theories, anomalies, consistency 7−108821
SUSY GUTs, light Higgs doublets 7−95799
SUSY quantum mechanics, Witten index, axial anomaly and Krein's spectral shift fn. 7−108287
SUSY string theories, structures of anomalies 7−108341
SUSY Yang-Mills theories with compact Lie groups, gauge-fermion condensation 7−121343
Taub-NUT, hyperkahler generalization from harmonic superspace 7−95781
Teichmuller deformations of super Riemann surfaces 7−95435
three-generation model from heterotic superstring compactification, 27^3 Yukawa couplings 7−108353
three-generation superstring model, symmetry breaking and low-energy phenomenology 7−128401
three-generation superstring model, Yukawa couplings in (1,1) sector, instanton effects 7−134608
topological aspects of string theories 7−89469
toponium-stoponium mixing 7−95786
twisted N=2 superconformal algebra and SU(2) Kac-Moody algebra connections 7−134977
two-loop Gell-Man-Low function, operator product expansion and calc. 7−67501
type I SO(32) open superstrings on orbifolds, propagation 7−95429
type I superstring theory, finiteness of parity-odd N-point functions 7−108346
type I superstring with O (32) gauge group, one-loop divergences 7−67544
type II and type III strings, spin struct. and world sheet supercurrents 7−102714
type II superstrings, gravitons and dilatons, background black hole solns. 7−108367
type IIA superstring, supermembrane derivation and relation to D=11 supergravity 7−102715
type-I superstring amplitude, fixed-angle asymptotic behaviour 7−80558
type-I superstring theory, parity-violating one-loop six-point fn. 7−89479
type-I superstring theory, Pauli-Villars regularization and one-loop finiteness 7−73628
type-I superstring with external gauge bosons, parity violation 7−67606
type-I superstrings, Polyakov path integral formalism 7−115872
U(M/N), composite Young diagrams, supercharacters and modification rules 7−140834
unification of fundamental interactions, conf., Marstrand, Sweden (June 1986) 7−108023
unification supersymmetry of elementary particles 7−89396
Universe age, supersymmetric particle theory aspects 7−128159
Universe formation, rotating superstring theory 7−88699
vacuum struct. in chiral supersymmetric QED 7−67560
vector-boson production in supersymmetric QCD 7−128850
vertex operator in string theory on an orbifold, intertwining fields in Fock space representation 7−89483
very early universe, scalar and spinor fields 7−101969
Wess-Zumino action and U(1) gauge fields, SU(N) anomaly 7−95740
Wess-Zumino model, one-loop pot. and supersymmetry renormalisation 7−81029
Wess-Zumino-Witten model, superconformal Ward identities 7−89389
Yang-Mills theory, N=3,4 in 4D, superconformally covariant linear system 7−95745
Yang-Mills theory, supersymmetric, 6D/10D, pure gauge anomalies 7−73519
Yukawa coupling consts., new supersymmetric theory 7−121412
Z(N) model, supersymmetric, factorizable, S-matrix 7−121385
$B \rightarrow K^* \gamma$, squark and gluino mass constraints, spontaneously broken minimal supergravity 7−135103
B^0-$\bar{B}^0$ mixing, CP violation in supersymmetric models, squark and gluino masses 7−128807
$e^-e^+ \rightarrow \tau^+\mu^-$, scalar-lepton mixing, softly broken supersymmetric model 7−135094
$e^-e^+ \rightarrow W^+W^-$, effects of Z boson from $E_8 \times E_8$ superstring 7−67629
$e^+e^- \rightarrow W^+W^-$, cross section calcs., $E_8 \times E_8$ superstring theory with extra Z boson 7−108927
$ep \rightarrow \tilde{D}x$, E_6 scalar leptoquark prod., E_6 superstring models, Yukawa interactions 7−140863
$K^+ \rightarrow \pi^+ \tilde{\nu}\tilde{\nu}^c$, reaction anal. 7−108910
$\mu N \rightarrow eN$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
n and e dipole moments in superstring based models, CP violating interactions 7−81070
$\tilde{p}p \rightarrow$ gaugino pair, production rate calcs. 7−89528
$\tilde{p}p \rightarrow \tilde{w} + X(\tilde{z} + X)$, first order supersymmetric QCD corrections to rapidity, massless partons 7−135168
$\pi^0 \rightarrow \tilde{\gamma}\tilde{\gamma}(\gamma\tilde{\gamma}\tilde{\gamma})$, light photino search, branching ratios 7−116179
$\pi^+ \rightarrow \nu e^+$, effective contact interactions and supersymmetry breaking, supercomposite models 7−135059
σ model, geometry and anomaly struct. study 7−80966
$\tilde{\tau}_1$, top squark prod. and decay at e^+e^- colliders 7−128905
W propagator, radiative corrections due to supersymmetry effects, SUSY $SU_{2,L} \times U_{1,Y}$ anal. 7−73572
Z boson, mass and signature in E_6 superstring models 7−67621
Z^0 flavour changing decays, SUSY models, minimal SUSY standard model 7−89502
$Z^0 \rightarrow H^0\gamma$ ($H^0\mu^+\mu^-$), supersymmetric Higgs boson production, branching ratios, supersymmetric fermion virtual exchange 7−140936
$Z' \rightarrow w_h{}^+ + w_l{}^- \rightarrow l^+\tilde{\nu} + l^-\tilde{\nu}$, T-odd angular correlation, chargino, numerical examples in E_6 models 7−134995
$Z^0 \rightarrow Z^0H$, Higgs boson signals in superstring-inspired E_6 supergravity models 7−135119
Cu, odd-odd nuclei, $U^B(5)$ boson limit, spin $^{BF(\pi\nu)}(5)$ boson-fermion symmetry 7−121673
$e^+e^- \rightarrow$ supersymmetric particles, LEP 200 search, mass limits estimation 7−140923
Eu-Gd region, partially violated U(3) limits of U(6/12) dynamical supersymmetry *(Chinese)* 7−121699
$^A Ir(t,\alpha)^{A-1}Os$, A=191,193 implications for supersymmetry tests 7−129058
supply systems (electric) *see power systems*
suppression wavemeters *see wavemeters*
suppressors (surge) *see surge protection*
surface acoustic wave devices
see also acoustic microwave devices; acoustic parametric amplifiers; acoustic parametric devices; acoustic parametric oscillators
acousto-electro-optic modulation of coherent light in SAW device 7−90908
acousto-optical processors, transform domain filter effects anal., simulation 7−82495
acoustoelectronic devices, conversion efficiency improvement by Rayleigh SAW propag. on deposited dielectric film 7−130509
charge transport devices overview 7−123370
complex spectrum and inverse implementation 7−110747
convergent acoustic waves, laser generation, appl. to materials evaluation 7−123374
delay line behavior in liq. 7−123386
film adhesion characterisation using scanning acoustic microscopy 7−123401
filters, low-loss, using single-phase unidirectional transducers 7−82988
focused SAW imaging modality, resolving power and detection ability 7−123397
focusing system, V(Z) function 7−123391
frequency to voltage converter using Lamb waves *(Japanese)* 7−68964
fundamentals, materials and design 7−110692
HF piezoelectric resonators and transducers 7−97254
insertion loss of acoustoelectronic SAW devices *(Slovak)* 7−110738
integrated optic frequency shifters with SAWs 7−104049
isothermal measurements and thermal desorption of organic vapors using SAW devices 7−82974
Lamb wave scattering by asymmetric dislocations in elastic plate waveguide, FEM 7−90867
LMS time-delay estimator 7−82954
magnetic sensors based on garnet films 7−82980
matching of interdigital transducers with a field of surface acoustic waves in delay lines and filters 7−123416
miniaturized bulk and surface acoustic wave quartz oscillators used as sensors 7−82985
multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
nonhomogeneous SAW, effects on interdigital transducers *(Slovak)* 7−90906
optical detection of transient mech. displacements 7−121072
Peaky Lamb wave transducer, performance at liquid-solid interface 7−110739
phthalocyanine, substituted, Langmuir-Blodgett films in acoustoelectric devices 7−123414
piezoelectric thin films, epitaxial growth, SAW and optoelectronic appls. 7−99720
plate-mode ultrasonic oscillator sensors for vapour detection 7−82977
resonator, wider tuning range with interdigital reflector 7−82905
RF spectrum analyser/channelizer using acoustic wave diffraction 7−82942
SAW device incorporating conducting Langmuir-Blodgett films 7−80763
sensors for pressure, temp., force and acceleration *(Czech)* 7−121100
signal processing appls., construction and operation, review 7−82965
slanted chirped transducer spectrum analyser *(Japanese)* 7−117424
spectrum analyser for use with mm-wave radiometer 7−108571
TCNQ, Langmuir-Blodgett films in acoustoelectric devices 7−123414
touch panel using SAW technology 7−82981
trace chemical vapor detection using SAW delay line oscillators 7−82978
ω-tricosenoic acid, Langmuir-Blodgett films in acoustoelectric devices 7−123414
ultrasonics, conference, Williamsburg, VA, USA (Nov. 1986) 7−115688
unidirectional transducers, types and appls. 7−123415
variable delay lines for microstrip phased array antennas 7−104123
Al-quartz gratings, surface transverse wave propag. *(Japanese)* 7−117426
CdS thin film growth for SAW appls. 7−100089
GaAs-GaAlAs planar waveguide acoustooptic Bragg cells fabrication and characts. 7−123199
H_2S gas detector using SAW technology 7−82976
$LiNbO_3$ acoustooptic modulators guided wave interaction efficiency for selected cuts 7−136493
$LiNbO_3$ plates, ferroelec. domain inversion, appl. to piezoelec. devices 7−125653
$LiNbO_3$ SAW H_2S gas detector 7−123378
$LiNbO_3$:Ti graded index waveguide 7−136523
$LiNbO_3$:Ti integrated optic strip waveguide phase modulator driven by SAW 7−82767
NO_2 gas concentration meas. using SAW chemosensor 7−82975
surface acoustic waves
see also acoustic waves; Rayleigh waves; surface acoustic wave devices; surface phenomena
acoustic microscope using line-focus-beam for film thickness meas. 7−136649
acoustoelectric pulse diffraction at edge of screen 7−75193
acoustoelectronic devices, conversion efficiency improvement by Rayleigh SAW propag. on deposited dielectric film 7−130509
Al_xO_{1-y}, superconducting film, proximity coupling of SAWs, expt. study 7−131916
Bleustein-Gulayev surface wave propag. in piezoelectric material 7−90866
Bleustein-Gulyaev wave diffr. at periodic struct. of shallow grooves of piezoelec. Cryst. 7−76584
Bleustein-Gulyaev wave diffr. by piezoelec. cryst. surface imperfections 7−76583
ferroelectric domain layer mode, theoretical anal. *(Japanese)* 7−125654
garnet films, SAW propagation, magnetoelastic gain 7−125512
generalized eigenvalue problem and acoustic surface wave computations 7−136637
generation on surface of arbitrary materials *(Japanese)* 7−117432
graphite, SAW, Brillouin spectroscopy using tandem-multipass Fabry-Perot interferometer *(Japanese)* 7−108671
Gulyaev-Bleustein shear SAW in piezoelectric media 7−76587
historical review and Polish-research activity *(Polish)* 7−97189
interferometer, high sensitivity detector for phase modulated photoacoustics 7−90900
Lamb wave scattering by asymmetric dislocations in elastic plate waveguide, FEM 7−90867
Lamb waves, thermoelastic generation 7−123421
Lamb waves in unsupported thin films, Brillouin scatt. 7−98299

urface acoustic waves continued
layered semiconductor, acoustoelectric interaction with SAWs 7−85009
layered structures, SAW velocity dispersion and power distribution 7−137686
light diffraction by SAW at parallel interfaces 7−90497
liquid-solid and liquid-solid-liquid systems, non-specular effects, comparative anal. *(Japanese)* 7−124672
loaded inhomogeneous plate, damped/undamped wave interaction 7−82926
metal substrates, SAW damping, gas loading effects *(Russian)* 7−70053
metal surfaces, laser irrad., SAW and EM wave combined excitation 7−131412
mode shape in arrays of reflecting grooves, continuous representation 7−130428
multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
multilayered piezoelectric semiconductors, SAW propagation, acoustoelectric interaction 7−85011
multilayered semicond., acoustoelectric interaction and transverse acoustoelectric voltage 7−125058
neutron diffraction by surface acoustic waves 7−112049
online ultrasonic inspection system for the press working industry 7−123411
periodic shallow grooves, SAW refl. *(Japanese)* 7−118223
periodic waveguides, SAW propag., finite element solution 7−130408
piezoelectric substrate with in-depth direction inhomogeneity, coupled EM-SAW anal. 7−143169
piezoelectric superlattices, dynamic, shear horizontal waves, effective medium approx. 7−105223
piezoelectric-semiconductor layered structs., nonlinear acoustoelec. effects at high surface wave intensities 7−70055
PMMA, acoustic emission signals propag., theoretical expt. study 7−124669
polyethylene, acoustic emission signals propag., theoretical expt. study 7−124669
quantum well 2D electron gas transport relax. time, SAW scatt. effects calcs. 7−112366
quartz, surface wave slowness curve meas. using acoustic microscope 7−123394
quartz cryst. cuts with low stress and temp. sensitivity, theoretical study 7−90868
reflection by arrays of reflecting grooves, variational anal. *(Japanese)* 7−117371
reflection scanning acoustic microscope contrast, consequences of resonant surface-wave excitation 7−75227
resonance in weak critical inhomogeneous medium, prop. normal to inhomogeneity gradient 7−142071
resonator, wider tuning range with interdigital reflector 7−82905
SAW device materials inhomogeneity detection, line focus beam acoustic microscope appl. 7−123396
self-induced light diffraction by surface acoustic waves 7−82994
semiconductor layered structure, liquid-filled, acoustoelectrical interaction 7−92235
sinusoidally corrugated surface, SAW reflection coefficient calculation 7−142074
solids, isotropic, nonlinear Stoneley waves *(Japanese)* 7−123300
stress-compensated cuts 7−117377
submillimetre wave resonators, low-mode, for piezoelec. surface excitation of sound 7−110740
superconducting thin films, granular type, average grain size determ. 7−131502
surface magnetostatic waves, noncollinear inelastic scattering by SAWs 7−143779
thin films, DC magnetoresist. and high freq. Rayleigh wave attenuation correls. 7−112915
two dimensional Fresnel type IDT for focusing underwater ultrasonic wave *(Japanese)* 7−97195
Ag film, surface plasmon enhanced Brillouin scatt., double reson. effect obs. 7−125759
As_2Se_3 glassy films, SAW propag. vel. and elastic consts., photo-induced variations study *(Russian)* 7−85593
Au-Cr superlattices, surface waves, interface struct., elastic props., X-ray diffr., Brillouin scatt. studies 7−105221
$Ba_2Si_2TiO_8$ piezoelectric glass-ceramics as low temperature-coefficient SAW substrate materials 7−99694
$Bi_{12}GeO_{20}$ cubic piezoelec. crysts., backward Lamb's waves dispersion eqns. calcs. and meas. *(Russian)* 7−84474
CdS, photocond. piezoelec., optical generation of sound 7−84144
Cu-GeO-CdS-$LiNbO_3$, MIS-piezoelectric struct., SAW convolver, efficiency 7−137990
$Fe_{78}Si_{10}B_{12}$, RF sputtered thin films, SAW attenuation *(Japanese)* 7−124671
GaAs (100)-cut, SAW slowness surface meas. 7−124666
GaAs:Cr, semi-insulating, transient-type inversion under strong illum., nondestructive SAW detection 7−124921
GaAs-AlAs superlattice, acoustoelectric effects, separate medium struct. 7−131717
GaSe, SAW, Brillouin spectroscopy using tandem-multipass Fabry-Perot interferometer *(Japanese)* 7−108671
In-InO_x supercond. film, SAW attenuation *(Japanese)* 7−125258
$Li_2B_4O_7$, crystal growth, piezoelec., dielec., elastic, and acoustic props. 7−99711
$LiNbO_3$-SiO film structure, surface acoustic cnoidal waves and solitons 7−70056
$LiNbO_3$, leaky surface wave propag. characts. *(Japanese)* 7−118221
$LiNbO_3$, optical recording of standing SAW 7−70745
$LiNbO_3$, SAW velocity meas. with interdigital transducer 7−117425
$LiNbO_3$, surface wave slowness curve meas. using acoustic microscope 7−123394
$LiNbO_3$ waveguides, annealed proton-exchanged, surface wave studies 7−90792
$LiNbO_3$, Y-Z, SAW propagation, bifurcation and chaos 7−91954
$LiTaO_3$, 36° YX cut, leaky SAW propagation, metallic grating effects 7−97233
Mo/Ta superlattice elastic consts., Brillouin scatt. study 7−112048
$NH_{4(1-x)}D_{4x}H_{2(1-x)}D_{2x}AsO_4$ crysts., light diffr. by SAW, isotope effects studies 7−138406
Ni-Co alloy thin films, spin wave reson. obs. 7−106033
P, black, low freq. surface dynamics, Brillouin scatt. 7−84473
PZT piezoceramics, modified, dielec., piezoelec., and SAW props. 7−99710

surface acoustic waves continued
$RbMnCl_3$, ferroelastic, surface sound waves near phase transitions 7−131411
Si, Rayleigh waves, nonlinear optical excitation 7−112050
Si, single crystal damaged surface layer, nondestructive meas. using reflection acoustic microscope 7−138927
a-Si:H films, drift mobility, acoustoelectric meas. 7−105627
SiO_2 (glass)-ZnO-SiO_2(glass)(Si), boundary acoustic waves propag. *(Japanese)* 7−118222
SiO_2, quartz monocrystal, double modulation of X-rays by surface acoustic waves 7−138414
SiO_2, quartz monocrystal, X-ray diffraction by surface acoustic waves 7−138415
$SrTiO_3$, SAW propagation, nonlinear acoustic effects, region near struct. phase transition 7−70054
Ta_2O_5 thin films, sputter deposition, struct., piezoelec. and SAW props. studies 7−106406
YIG film, surface magnetostatic waves scatt. by anisotropy-induced acoustic waves 7−118792
ZnO layer in sandwich struct., boundary acoustic wave prop. *(Japanese)* 7−70057
ZnO/Si layered piezoelec.-semicond. struct., acoustoelectronic bistability phenomena 7−112405

surface activity *see surface energy*

surface-atomic beam collisions *see atom-surface impact*

surface charging *see static electrification*

surface chemistry
see also chemisorption; corrosion; oxidation
ab initio calculations on molecules modelling zeolite-type systems 7−71530
acid rain effects on stone monuments 7−108102
adsorbed, atom, influence of laser irradiation on surface chemistry 7−78547
aerosil surface, modification by organo-silicon cpds., reactions, ^{29}Si NMR study 7−78551
Al surface, (111), clean and O-predosed, adsorpt. and thermal decomp. of water 7−113984
alkali metal overlayers, interfacial structural transitions *(Japanese)* 7−76642
alkenes, polymerisation kinetics on zeolites 7−139038
alloys, hot corrosion, thermodynamic analysis 7−119417
atoms on surfaces, heterogeneous recomb. probability, supersonic flow interaction 7−139041
benzene hydrogenation on Ru(001), desorpt. studies 7−106831
bimolecular surface reactions, Monte-Carlo simulation 7−71529
1,2-butanethiol, chemisorption on aq. Ag sol surface, SERS study 7−125734
characteristic features, synchrotron radiation investig. *(German)* 7−132972
coal, steam gasification, overlapped grain model 7−126478
coal, steam gasification, surface area change obs. 7−126477
coal fly ash particle characterisation by micro-surface analytic techniques 7−78591
combustion system surfaces, reaction monitoring using Raman scatt. 7−113936
copper formate complexes, form. at surface, Raman spectrosc. obs. 7−74632
cyclohexene decomp. on Ru (001), desorpt. studies 7−106831
desorption kinetics, electron transfer process role 7−98680
dialkylaminopyridine, acylation catalysis; synthesis, attachment to polymer support 7−93312
diiodomethane, adsorbed molecules, photodissociation and desorption 7−143188
dilute solute mass transfer with chemical reaction on nonuniform surface 7−132966
dye aggregate-semiconductor interface, exciton migration and chemical reactions 7−98816
energetic ion bombardment role in Si-F_2 chemistry 7−125898
feldspar-radionuclide interactions, surface chemistry 7−100617
glycine, thermal decomposition on solid surfaces, mol. beam studies 7−100613
gypsum crystal surface, adsorption of additives, determ. of surface coverage required for growth inhibition 7−86672
gypsum crystal surface, adsorption of additives, interfacial bond energy determ. 7−86671
high temperature corrosion, thermochemical diagrams appl. 7−78331
hydrocarbons on O_2 film, ion-mol. surface reactions induced by slow electrons 7−119575
ice, disordered surfaces, chemical reactivity 7−119573
isobutylene, photocatalytic oxidation, impurity centers 7−126482
Langmuir-Blodgett films, chemical reactivity *(French)* 7−118307
laser-induced gas detrapping, chemical reactions, diffusion and desorption, model 7−132381
layered phosphates, modification by low-energy ion bombardment, chemical factors 7−93307
liquid metals, surface reaction, mass transfer determ. 7−113982
liquid surface, convective struct. form. under laser radiation, holographic interferometry 7−130684
low energy ion bombardment phenomena, successes and outstanding problems 7−125897
metal surfaces, molecular bonding and decomposition of adsorbates 7−126484
metallic glass surfaces, CO interactions, XPS and UPS studies 7−144754
metallic solid solutions, chem. comp. and reactivity of interfaces 7−86670
metals, oxidation, nonstationary, heterogeneous, model 7−139042
methylamine, surface reaction pathways, on Ni (111), Auger electron spectroscopy and TPD investig. 7−78542
molecular beam system for real-time reactive scattering from solid surface obs. 7−106351
organic films, multilayer thermodesorption spectra 7−118263
PMMA films, plasma-modified, multitechnique surface spectroscopic studies 7−70040
PMMA/PMAA films, plasma modified, multitechnique surface spectroscopic studies 7−70041
polyethylene, irradiated, radiation oxidised layer thickness evaluation *(Russian)* 7−139031
polyethylene terephthalate films, direct fluorination 7−93377
polyphenylene oxide, laser irrad., dynamic thermal field creation in surface layers, chem. transform. 7−137400

surface chemistry continued
polyvinyl alcohol−$FeCl_3$ complex growth of polypyrrole films on surface 7−78485
self-propagating wave regimes in heat-conducting inert medium with chemically active boundaries 7−113981
steel, austenitic stainless, corrosion resistance in wet oxidation environment *(Japanese)* 7−132798
superalloys, corrosion reactions in molten sulphates 7−119418
superalloys, high temp. corrosion, conf., London, England (Feb. 1986) 7−115678
surface treatment of materials with elec. arc of two-jet plasma torch 7−138861
thiophene on Si (111), desulphurisation process study 7−114001
thiosemicarbizide, complex form. and struct. on Ag and Cu surfaces, SERS spectra anal. 7−74630
transition metal surfaces, bond-order conservation criteria, surface reactions 7−144755
Ag (111), H_2O and O coadsorpt., H_2O-OH-O surface chem. and interactions, LEED and desorpt. studies 7−143212
Ag colloid adsorbed acrylamide, polymerisation, SERS 7−144056
Ag halide surface, effect on adsorbed Ag clusters, quantum chemical calcs. 7−118274
Ag monolayer, adsorbed on Pt substrate, SERS study 7−119005
Ag surfaces, reaction and absorption of Cl_2, X-ray and ion radiation effects, XPS and Auger spectra studies 7−119579
Ag/AgS_2 scale interface reaction effects on sulphidation kinetics, modified Wagner's pellet method 7−119576
Al (100), coadsorption and decomposition of CO with Na or K, temp. depend. study 7−91975
Al-GaSb interface, thin film reactions 7−86680
Al-InSb (110) interface, exchange reaction clustering and surface segregation 7−138601
Al_2O_3, acidified, benzene adsorpt., UV-visible reflectance spectra 7−98683
Al_2O_3-Si_2O-X_2O mixture (X=Li, Na, Rb, K), F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
γ-Al_2O_3-SiO_2, surface struct., catalysis and electronic state 7−131408
AlZnMg alloys, surface degradation in NaCl solns. under appl. pot. 7−126289
As_2S_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
As_2Se_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
B_2O_3-SiO_2 glass surface, chem. control of wetting transition 7−98626
Ba-Y-Cu-O systems, high T_c supercond. reactions with aqueous media. appls. in struct. charact. 7−119558
BeF_2 glass surface, hydration, IR absorbance spectra 7−106157
C, activated, o-xylene chemisorption, oxidative catalysis 7−78550
C fibres, surface chemistry, use of XPS and labelling techniques 7−86700
C surfaces, modification in cold plasma 7−130878
CO and H adsorbate methanation reaction on single cryst. Ru (001), FTIRAS studies 7−144751
CO dissociation reactions on Fe and Fe_3O_4, Raman-ellipsometry spectroscopy obs. 7−86667
CO on catalytic surface, percolation transition in an irreversible-surface reaction model 7−139044
CO oxidation, on pt, molecular beam/infrared emission spectroscopy 7−144759
CO oxidation on Pt/SiO_2, integrated kinetic modelling and transient FTIR studies 7−126421
$CaO.Al_2O_3$ cement, surface state in presence of phosphoric acid soln. 7−86673
n-CdS, photoelectrochemical kinetics of hydroquinone oxidation 7−99192
Co/CoS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
Cs films, oxidation, UPS 7−71526
Cu (001), O chemisorption, many-electron embedding theory 7−93373
Cu (111), methyl mercaptan and dimethyl disulphide reactions, UPS studies 7−144757
Cu powder, produced by autoclave method, surface-active agents effect on props. 7−77878
Cu, vapour deposited films, structure and growth morphology, O effects 7−118321
Cu^{2+} cpds., oxide supported, XPES and ESR study 7−99560
Cu/Cu_2S scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
Fe (110), ethylene and acetylene adsorption, Auger spectra studies 7−118271
Fe, carburisation in CO-N_2 atm. 7−93199
Fe foil, corrosion layers, Mossbauer spectroscopic study of Fe fluoride layers 7−77439
Fe, interaction of adsorbed dimethyl methylphosphonate, effect of coadsorbed water, TPD, AES studies 7−71522
Fe, ultrafine particles, prepared by reduction of uniform Fe_2O_3 particles, mag. characts. 7−125480
Fe/FeS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
$Fe/La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form., reaction and disruption 7−143242
$Fe/La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form. and reaction, XPS study 7−143243
Fe-Mn-Ni-Si alloys, oxidation-induced transformations, kinetics 7−106670
Fe-Ni-Cr-W, gas-metal reactions in He and H_2-CH_4-H_2S atm., 700 to 950°C 7−86452
$Fe_{82}B_{18}$ rapidly quenched amorphous ribbon, surface struct. and catalytic activity 7−84453
$Fe(CO_5)$, adsorbed on Ag (110), UV-induced photochem. 7−119560
GaAs/Co interface, cpd. form., AES, TEM and X-ray diffr. studies 7−98712
GaAs-Ti (Cr), interface movement, temperature dependent reaction 7−124732
p-GaP/electrolyte interfaces, charge transfer processes, surface decomposition intermediates effects 7−112482
GaP-Au, interaction during heat treatment in vacuum 7−131404
H^- ion source, surface conversion type, using heavy ion impact 7−73465
H_2 dissociation below 1 K in discharge tube 7−71476
H_2 generation, photoassisted, using separately supported Pt and CdS 7−114133
HF, removal of quartz shell on fibre-optical waveguide, effect on props *(Russian)* 7−117333
H_2S, thermal decomp. over V_2S_3 or MoS_2 in reactors 7−86583

surface chemistry continued
He_2^+, excited state, electron-stimulated desorption from electrode grid 7−70952
HgCdTe-Ti interfacial reactions, $TiTe_x$ form., Hg and Cd depletion, photoelectron spectra study 7−118279
InP/Ni interface, amorphous and crystalline ternary phase form 7−98711
InSb anodic oxide growth kinetics, anion migration and distrib. calcs 7−119471
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
Ir (III) conducting surface with absorbed CsBr molecules, molecular orientation, photodissociation study 7−82304
Ir (110), alkanes dissoc. adsorpt., dynamics study 7−106825
Ir (111), adsorption of acetylene and ethylene, high resolution EELS, XPS studies 7−86678
Ir (111), interaction of acetylene with adsorbed O 7−119578
Ir (111), interaction of ethylene with adsorbed O 7−119578
LiF, decoration with In_2O_3 and SnO_2 by spraying technique 7−71340
Mg alloy-Al_2O_3 metal matrix-ceramic fibre composites, Auger analysis 7−78548
Mg-Al_2O_3 metal matrix-ceramic fibre composites, Auger analysis 7−78548
Mg-Al-rare earth alloys, H interaction, electron microscopy and X-ray study 7−106514
$Mg_xNi_{1-x}O$ and NiO, H_2 reduction on spherical C particles 7−106828
MgO (100), Fe-covered, reaction of CO and H_2, UPS, EELS, SEELFS studies 7−86677
Mo (100), interaction of B, surface chemistry, XPS and UPS study 7−144237
MoS_2 surface, thiophene adsorption and hydrodesulphurisation, electronic factors 7−144748
N_2, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
NH_3 chemisorption on γ-Al_2O_3, multinuclear solid state NMR investigation 7−70662
NH_3 dissociation on O_2 covered Pd studied with H_2 sensitive Pd-MOS device and mass spectrometry 7−106830
NO, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
N_2O, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
NaCl, decoration with In_2O_3 and SnO_2 by spraying technique 7−71340
NaCl, laser fragmentation investig. 7−119537
Na_2O-SiO_2-Al_2O_3 glass, surface composition, chemical and thermal treatment 7−131406
NaOH, aq. soln. and coating, TiO_2: NiO catalyst, photocatalytic decomposition study 7−71523
Nb/Al_2O_3 metal-ceramic interface, struct., chemistry and diffusion bonding 7−98723
Ni (100), methyl mercaptan and dimethyl disulphide reactions, UPS studies 7−144757
Ni (100) H_2 and O_2 chemisorption and dissoc., one-electron effective core pot. 7−86668
Ni (111), preadsorbed K, IR reflection absorpt. spectra 7−106826
Ni (111) with adsorbed S, methoxy decomposition kinetics 7−144752
Ni, oxidised surface, anodic O_2 evolution, intermediates adsorpt. behaviour eval. 7−91976
Ni powder, adsorption of PO_4 ions, anal. using radiotracer technique 7−91920
Ni/NiS_x scale interface reaction effects on sulphidation kinetics, modified Wagner pellet method 7−119577
Ni-P amorphous coatings, form., role of excitonic-like states in autocatalytic processes 7−93380
$Ni_{1-x}Al_x(OH)_{2+x}$, Ni reduction kinetics, density and specific surface meas. 7−86588
O_2, adsorbed on W(100)-p(5×1)-c surface, dissoc. energetics 7−137705
OH, adsorbed on Pt (111), HREELS charactn. of H_2O form. intermediate 7−86669
PH_3 pyrolysis, effect on morphology and growth rate of InP grown by hydride VPE 7−71051
Pb-Cd-Al-Li fluoride glass, resistance to chem. degradation by water, low loss optical fibre appls. 7−71336
Pd (100) with adsorbed methanol, oxidation, H transfer pathways 7−86679
Pd small particles, CO oxidation and desorption, SIMS studies 7−119580
Pd small particles, struct. and CO adsorption 7−119581
Pd_n+CO, electronic struct, pseudopot. CI calcs., relationship between surface and organometallic chemistry 7−113901
Pd(poly), adsorption of NO and CO, interactions, spectroscopic methods appls. 7−144760
Pt (100), catalytic oxidation of CO, kinetic oscills. appl. 7−113986
Pt (110) 1×2, adsorbed CO oxidation, reaction dynamics 7−144750
Pt (111), ethylene and ethylidyne laser-driven thermal reactions, mass spectral investig. 7−113979
Pt (111), ethylidyne form., IR spectra studies 7−144756
Pt (111), H electrochemical adsorpt. and recomb. reactions, prechemisorbed S effects 7−143211
Pt (111), ketene adsorption, surface chemistry, TPD and SIMS studies 7−105269
Pt (111), ketene adsorption, surface chemistry, HREELS and TPD studies 7−105270
Pt catalyst, C and CO oxidation, statistical energy partitioning 7−119561
Pt electrode, oxidation of CN^- and OCN^-, IR spectra 7−93370
Pt electrode, SO_4^{2-} adsorpt., mol. vibro, IR spectra 7−98679
Pt overlayers on NB (110), electronic struct., chemisorption of CO, surface struct., photoelectron spectra, LEED, AES studies 7−99146
Pt surface, ammonia oxidation, laser initiation 7−78540
Rb chemical reaction and chemisorpt. on dichlorodimethylsilane-treated glass surface, effects on spin-relax. props. 7−126481
Rh (100), CO, H_2O and O coadsorpt., EELS, LEED and TPRS investig. 7−118236
Rh (100), formate production from coadsorbed CO, H_2O, O 7−144747
Rh surface, NO and CO adsorption, reactions of NO with H and CO, surface struct. effect 7−71521
Ru (001), adsorbed methanol, decomposition, laser induced thermal desorption study 7−132967
Ru (001), H diffusion coeff. transition state theory calcs. 7−93367
Ru (001), preadsorbed H, acetylene adsorpt. EELS and thermal desorption mass spectrometry 7−71524
Ru (001), water desorption, isotope effects 7−118269
Si (100), NH_3 dissociation, XPS and UPS studies 7−86606
Si (100), O adsorption and reaction, mol. beam and XPS studies 7−143195

surface chemistry continued
Si initial oxidation states under electron bombardment, AES studies 7−119470
Si, plasma etching, parametric studies 7−113809
Si, polycrystalline layer growth during pyrolysis, kinetics and mechanism *(Russian)* 7−125939
Si surface, O removal via reaction with adsorbed Ge 7−71398
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
a-Si:H, growth processes in plasma CVD *(Japanese)* 7−118317
a-Si:H films, photo-CVD, surface reaction and recombination of SiH_3 radical. 7−71041
a-Si:H natural oxidation kinetics 7−126344
a-Si:H thin film growth, Monte Carlo simulations 7−92027
Si/Cr interface, ion-induced reactions, ion channelling studies 7−78545
Si/metal interface reactions, high energy ion scatt./channelling studies 7−113998
Si/Mo interface, $MoSi_2$ form. by ion beam mixing 7−76239
Si_{39}^+ surface, reactivity of NH_3, Fourier transform-ion cyclotron reson. spectra 7−139037
SiC, friction and wear in water, hydrodynamic lubrication at low sliding speeds 7−78246
β-SiC-Fe reactions, Fe_3C interfacial layer, Auger study 7−106316
Si_3N_4, friction and wear in water, hydrodynamic lubrication at low sliding speeds 7−78246
Si_3N_4 plasma-enhanced CVD films in $Si/SiO_2/Si_3N_4$ system, ESCA/AES analysis 7−131483
SiO_2/Si interface, defect microchemistry, oxide decomposition reaction 7−119525
Si−SiO_2 structures, interfacial P_{b0} defects, low temp. EPR obs. 7−112950
Si(100), O_2 adsorption and SiO desorption studies 7−118266
SnO_2 films, Na^+ adsorpt. from aq. soln., film hydration and ion exchange activity determ. 7−143210
Ti plate, self-sustaining exothermic oxidation kinetics in gas flow 7−71463
Ti plate, self-sustaining exothermic reaction, multipulse light initiation 7−106813
Ti single crystal, TiC epitaxial layer formation, LEED and AES studies 7−124785
Ti-Al(Cr)(Si), oxide film adherence, influence of nature of alloying elements 7−126312
Ti-Si_3N_4, thin film reaction 7−86666
TiC, CVD coatings on superalloys, thermodynamical approach 7−144301
TiC, surface deactivation upon carburisation 7−144749
TiC+H_2^+ (D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiN, CVD coatings on superalloys, thermodynamical approach 7−144301
TiN+H_2^+(D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiO_2 (110) surfaces, interaction with SO_2, UPS, XPS and LEED studies 7−91986
TiO_2 particle, assoc. of 9-anthracene-carboxylic acid, triplet-triplet energy transfer 7−93368
TiO_2+H_2^+(D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
VO_2, formation by oxidation of V, kinetics, stability 7−100603
W CVD, selectivity loss mechanisms 7−113428
W, CVD on SiO_2, temp. programmed desorption study 7−112148
W films, CVD, reaction kinetics of H_2 reduction of WF_6 7−113430
WC, surface deactivation upon carburisation 7−144749
WC:Pt substrates, catalytic activity modified by ion implantation and ion beam mixing 7−93379
Y-Ba-Cu-O high T_c supercond. tape, surface diffusion method prep. 7−119219
$YBa_2Cu_3O_x$, high temp supercond., environmental and solvent effects 7−119557
$Y_{2.0}Ca_{1.0}Ge_{0.9}Fe_{4.1}O_{12.0}$ reduced garnet film, FMR spectra study 7−112890
Zn electrodes in aq. alkali and carbonate solns., oxidation and reduction, cyclic voltammetry study 7−100586
Zn electrodes in aq. alkali and carbonate solns., oxide film form. and dissolution, cyclic voltammetry study 7−100587
Zn, transport through supported liquid membrane using mobile carrier 7−119568
ZnSe epitaxial growth on GaP and GaAs substrates, growth rate limitations and surface morphologies 7−105316
Zr-Ni intermetallic alloy catalysts, XPS and AES studies 7−144235

surface composition *see surface structure*

surface conductivity
see also surface scattering
amorphous films, supercond. transition temp. 7−105799
antiferromagnetic superconductors, AFMR, effect of indirect exchange interaction 7−99580
conductor surface impedance, acoustic wave effects calcs. *(Russian)* 7−77012
ice, surface ionic cond., charge carrier mobility 7−98565
ice/Pd interface, proton exchange processes 7−99199
Langmuir-Blodgett films from glycerol subphase, elec. and optical props. 7−124766
metallic rough surfaces, geometrical props., effective resistance and wall losses *(Spanish)* 7−112027
metallic thin films, frequency depend. current density 7−105731
mica, humid, transient dielec. response, surface cond. meas. 7−85039
polycrystalline semiconductors, minority carrier lifetime, 1D nonequilibrium steady state anal. 7−125008
polymers, drift-diffusion model for absorption and resorption currents 7−99155
porous media, charact. pore sizes and transport 7−95519
quartz X-cut, electrical conductance and capacitance meas. 7−118155
semiconductor, with surface states, generation-recombination noise 7−84925
spatially dispersive conductive boundaries, hydrodynamic models 7−99164
surface current detection during light reflection from a diffraction grating 7−143516
surface mobility fluctuations in MOSFETs, 1/f noise 7−85118
Teflon FEP corona charged insulating films, natural decay 7−70704
thin metal films, surface scattering process, independence in framework of multidimensional conduction models 7−118594
transparent plastics with surface conductivity, fabrication and charact. 7−85040

surface conductivity continued
$Al_xGa_{1-x}As$ crystals, surface photocurrent due to optical electron orientation 7−137982
Al_2O_3 humidity sensor, elec. props., surface conduction mechanisms 7−102419
As_2Se_x, chalcogenide glassy semiconductors, electronic processes on surface, photoexcitation 7−84986
Cr_2O_3 surface props. studies 7−131395
Cu wire, immersed in fluid, surface conductance at high press. 7−131732
GaAs:Be p-n junctions, ion implanted and rapid thermal annealed, surface recombination currents 7−112451
GaAs:Cr, semi-insulating, transient-type inversion under strong illum., nondestructive SAW detection 7−124921
GaP (111), surface photovoltage spectroscopy 7−77036
Ge, cleaved under He, two-dimensional hole gas 7−77037
Ge surface, carrier exclusion, current-volt. characts. 7−76972
He liquid, free surface charges, mobility, Sommer technique anal. 7−84411
$Hg_{1-x}Cd_xTe$ crystals, H^+ irradiated, electrophysical props. 7−70330
InP, recombination, surface states and Fermi level pinning 7−99152
InSb/SiO_2/poly-Si structures, InSb surface conductivity 7−105712
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., surface impedance meas. 7−105823
$(La_{1-x}M_x)_z$ CuO_4 (M=Ba,Sr), high T_c supercond., amorphous citrate process prep. and elec. props. 7−119204
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon props., far-IR meas. 7−105824
NH_4ClO_4, burning surface, copper and sodium salicylate impurities elec. cond. meas. 7−100567
NbN sputtered thin films, microwave surface resistance 7−131731
Si, microwave conductivity of perturbed near-surface layer 7−112426
Si wafer, anal. of laser pulse interaction, bulk lifetime and surface recomb. vel. determ. 7−118536
a-Si:H, charge transfer from adsorbates to the bulk 7−99157
a-Si:H,B(P)-(quinone-hydroquinone), liquid Schottky barrier, charact. 7−77039
Si:P(As)(Sb), implanted impurity distrib. after pulsed electron annealing 7−131169
SiO_2, surface elec. cond., water adsorption effects and control 7−143553
TiO_2 (110) Ti-rich surfaces, spectral, cond. and annealing studies 7−85041
W, skin effect under high mag. field, surface defect layer effect *(Russian)* 7−92215

surface diffusion
see also sorption
adsorbates, surface diffusion, formation of an ordered state, simulation 7−98708
adsorbed monolayers, insulator-conductor transition, effect of particle diffusion 7−124718
adsorbed particles, surface migration, concurrent mobile and localised adsorptions 7−76618
ceramics, microstructure, compositional control, review 7−71133
crystal surface diffusion and structural props., effective temp. derivation 7−98638
diffusion coatings on Fe and steel, form. processes 7−126321
electromigration-induced surface and grain boundary diffusion and capillarity 7−98589
ethane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
FCC (110) surface under stress, structural and thermodynamical behaviour, molecular dynamics simulation 7−76582
graphite substrate with adsorbed sorbic acid, vibr. spectra, scanning tunnelling microscopy study 7−105245
In on Cu (100), surface elec. field gradient probe, PAC study 7−112269
intergranular corrosion by surface diffusion, differential eqn. soln. *(French)* 7−138867
ion bombardment-induced topography formation, effects of surface impurities and diffusion 7−70051
laser-induced gas detrapping, chemical reactions, diffusion and desorption, model 7−132381
metal surface, chemisorption, lattice-gas model, review 7−124716
metals, oxidation and O penetration barriers 7−124594
methane 2D absorbed phase, mobility, quasi-elastic neutron scatt. studies 7−143232
numerical simulation of surface diffusion on a rigid substrate 7−91870
$PbTiO_3$, thermostimulated Ti surface segregation and layer form., intersite diffusion model, Auger spectra 7−98640
refractory metals, surface self-diffusion anisotropy 7−112044
selective molecular transfer using resonance laser radiation 7−112092
single crystal, surface, vicinal free reconstruction, effects of directed mass transport 7−76575
spheroidal surface, fixed or freely rotating, nucl. spin relax., lateral diffusion 7−125553
steel, austenitic stainless, D ion driven permeation, surface struct. and O conc. effects, Auger electron spectra 7−76221
steel, stainless, solute segregation under focused electron beam irrad. 7−106518
surface flow, adsorpt. energy gradient effect 7−91961
thin films, percolation of interacting particles deposited onto a planar substrate 7−124794
transition metal monoxides, preferential sputtering and surface composition 7−119104
ultrasonic effects on diffusion at electrode *(German)* 7−124565
vitamin B12, sorption from aq. soln. 7−105241
wetting, rel. to solid surface tension, surface reaction-diffusion process *(French)* 7−112015
Ag interlayers in polyimide film, sintering process and charactn., laser writing appl. 7−119187
AgBr (100), Ag^+ and Ag adsorpt., latent image form., quantum chem. investig. 7−131450
C monolayer on Ru (001), H surface diffusion, laser-induced thermal desorpt. study 7−137698
Co-Cr films, perpendicular mag. recording, grain boundary segregation and coercivity 7−143876
Co-Fe-Si-B submicron surface layers, diffusion, X-ray spectral microanal. 7−124584
CoO-Fe_2O_3 particle series, mag. and struct. props., effect of annealing in N_2 7−85367
Cu, embrittlement by surface mobility mechanism 7−119330
Cu-Sn, thin film, surface diffusion, 90-180 °C 7−70107

surface diffusion continued
Fe, field evaporation in Ne and H, rate-controlling process, FIM study 7−85963
GaAs, MBE, surface diffusion, RHEED 7−70118
GaAs, surface As oxide formation 7−78390
H_2 diffusion rates on W (110) surfaces, anomalous isotope depend., implications of lattice-hydrogen interactions 7−70067
KCl (100) surfaces, growth spirals, step vel. meas., molecular beam method 7−83815
KCl cryst. evaporation in AC and DC fields, pot. gradient, temp. and surface diffusion 7−137535
KCl-$PbCl_2$ solid soln. system, X-ray diffr. study of interdiffusion 7−137633
MgO(110) surface, diffusion of ^{57}Co, influence of ionic charge 7−98463
$Mn_{1-x}Zn_xFe_2O_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7−77912
Mo, irradiated, He-saturated, form. and growth of gas-filled pores during annealing *(Russian)* 7−111537
Nb/Al/Nb Josephson junction structs., TEM, SEM and AES studies 7−105291
Ni (100), adsorbed H and D, surface diffusion, isotope effects 7−118265
Ni (100), CO coverage depend. diffusion, laser-induced desorption study 7−91973
Ni bicrystals, H at surface and grain boundaries, SIMS study 7−143094
Pd (100), O metastable ordered surface phase, diffusion/adsorption competition 7−124704
Pd surface, chemisorbed CO, bonding and diffusion, NMR study 7−77429
Pt (100), H_2O chemisorption, precursor states and adatom mobility *(Chinese)* 7−112056
Pt surface, CO(NO) adsorption, laser-induced desorption studies 7−143187
Rh surface, CO(NO) adsorption, laser-induced desorption studies 7−143187
Ru (001), binding of RuO_n, struct., stability, diffusion barriers, molecular orbital study 7−84530
Ru (001), H diffusion coeff. transition state theory calcs. 7−93367
Si (111) surface, adatom diffusion and adatom-ledge interaction, semiempirical pot. energy function 7−143179
a-Si:H thin film growth, Monte Carlo simulations 7−92027
W (110), Ni atom clustering and diffusion 7−143230
W films, excimer laser initiated CVD growth on SiO_2 and Si substrates, phys. props. 7−118297
Y-Ba-Cu-O high T_c supercond. tape, surface diffusion method prep. 7−119219

surface discharges
see also corona
air discharges, elec. breakdown, EM wave emission 7−69501
capillary discharge, high temp., ionisation composition 7−124016
cryogenic flashover ion sources, anode plasma form. 7−67433
cylindrical shock wave production by sliding discharge device 7−83483
electron gun, surface microdischarges under high vacuum *(Japanese)* 7−137141
highly directional single-channel gliding discharge 7−137144
Joshi effect, surface sensitivity, influence of KCl coatings 7−142519
Joshi effect, surface sensitivity, influence of paraffin wax coatings 7−142519
Joshi effect, surface sensitivity, influence of surface contamination by CuS 7−142520
Macor glass ceramic vacuum surface flashover voltage meas., electrode geometry effects study 7−104471
nanosecond development, computer simulation 7−97829
PMMA, electron beam irrad., Kerr electro-optic field mapping meas. 7−99795
polyethylene films treated by corona discharge, wetting hysteresis *(French)* 7−117725
pyroelectric crystals, temperature variance, luminescence, dielectric breakdown, charge-carrier recombination 7−144134
spacecraft surface charge control, using hollow cathode plasma source 7−102458
surface wave discharge in a conical tube 7−117780
Teflon vacuum surface flashover voltage meas., electrode geometry effects study 7−104471
CO_2-N_2-He, volume discharge initiated by barrier discharge distrib. on cathode surface 7−97843
H^- form. on convertor surface, Cs ion bombardment effects 7−104472
O_3, production by surface and glow discharges at cryogenic temps. 7−75912
a-Si:H photoreceptor film, dark discharge props. study 7−143647

surface electron states
see also interface electron states; surface plasmons; surface scattering
1D crystal, surface state, Green's function method calc. *(Chinese)* 7−77020
2D classical electron liquid, viscoelastic effects 7−112418
actinide containing systems, photoelectron spectra, review 7−77754
adsorbate layers, surface photoionis. processes, time evol. 7−137997
adsorbate structs. with glide symmetry electron spectroscopy 7−91981
adsorbate-surface interactions, local models 7−131417
adsorption of Sm, struct. and electronic struct. 7−131438
charge transfer theory for surfaces and interfaces 7−125067
core-level binding-energy shifts at surfaces and in solids, photoelectron spectroscopy obs., review 7−113353
crystal violet chloride adsorbed layer, on transition metal surface, Raman spectra study 7−77571
diamond (100) surface, oxidised, MNDO anal. 7−105212
dielectric formalism, fluctuation-dissipation theorem 7−76591
electrochemical interface, models for struct., review 7−124706
ferroelectric incommensurate phase surface electron lattice and CDW 2D electron lattice models 7−76797
formate species on Cu (110), struct. and electronic energy levels study 7−105651
graphite surface, empty electronic states obs. by local tunnelling spectroscopy 7−77022
graphite surface, scanning tunnelling microscopy and electronic struct. calcs. 7−91947
heterogeneous surfaces, characterisation using photoemission techniques 7−125933
III-V semiconductor relaxed (110) surface, chemical core level shift theory 7−112423
III-V semiconductors, anodic oxide film form., optical and photoelec. props. *(Russian)* 7−125822
III-V semiconductors, surface (110), optical transitions between intrinsic electron states 7−131729
image and surface states, inverse photoemission spectra, appl. to Cu (111) and (001) surfaces 7−138538
image force and stopping power of a fast moving ion near a metal surface 7−105649
image potential-induced electron bands, 2D lifetimes 7−105647
image states, binding energy and effective mass correction, self-energy calcs. 7−99149
image states and surface states, energy dispersion near surface Brillouin zone boundary 7−85028
image states at surfaces, binding energies, many-body effects 7−85037
inverse photoelectron spectroscopy of bulk and surface electron state *(Japanese)* 7−70975
ion-surface and atom-surface scatt., charge exchange process, band effects 7−119103
ion-surface scatt., effect of localised surface states 7−106345
ionic crystal, surface electron props. 7−118375
linear layered struct., TE hyperbolic surface wave propag. 7−137999
low dose implanted layers, four-point probe monitoring 7−117955
lubricated friction, race of elec. phenomena *(French)* 7−104905
metal clusters, free and supported, core-electron binding energies 7−70375
metal corrugated surfaces, image states, photoemission and STM appls. 7−99148
metal optical constants determ. by surface polariton excitation using attenuated total reflection *(German)* 7−113306
metal substrate with an impurity, change in density of states due to chemisorption 7−105652
metal surface, ions with K-shell vacancies, slow glancing collisions study 7−85921
metal surface, lattice relax. in tight-binding calc. 7−105638
metal surface, self-consistent electron densities in strong static elec. fields 7−105642
metal surface image pot., density functional theory calcs. 7−143545
metal surface-atom, van der Waals interaction, quadrupolar contribs., density functional calcs. 7−124885
metal surfaces, SHG, density functional approach 7−117270
metal surfaces, vibr. resons., pseudoband gaps and geometric struct. 7−124675
metal-electrolyte interface electron screening phenomena, self-consistent anal. in density functional formalism 7−118586
metallic glasses, bulk and surface electronic struct. 7−98790
metallic surfaces, Thomas-Fermi-von Weizsacker approach, self-consistent soln. 7−143550
MINP solar cells, surface recomb. vel. 7−106910
MIS structures, charge transfer kinetics modelling *(Japanese)* 7−131789
MIS structures, surface pot., screening of fluctuations 7−105710
molecular solids, surface electronic and vibr. studies 7−77027
nondegenerate 2D electron gas, localisation, magnetoresistance meas. 7−105648
organic solids, electronic struct., photoemission study 7−125926
photoemission, core levels, valence states *(French)* 7−112417
physisorbed mols. on metal surface, screened van der Waals interaction calcs. 7−112420
plasmon satellites, photoemission, coupled-channel Schrodinger eqn. 7−125924
polar crystals, electron-phonon coupling effect on surface donor state, variational calc. 7−104942
positronium form. at surfaces, quantum theory 7−112422
positronium formation with surface electrons, energy and ang. distrib. calcs. 7−92248
quartz, surface polariton dispersion determ., effective refractive index meas., interference method 7−85564
rare earth compounds, photon- and electron-stimulated desorpt. study 7−143235
rare earth metals surfaces, resonant transitions, soft X-ray appearance pot. spectra study 7−143552
rare earth systems, giant resonances, electron energy loss spectra anal. 7−144200
rare earths, f-states, core level spectroscopy 7−92784
reconstructed (111) surface, periodic MINDO/3 study 7−105218
resonance tunnelling of electrons in system with 2D disordered distrib. of scatterers 7−100022
scanning tunnelling microscopy, electronic processes, Green's function calcs. 7−130989
Schottky barrier solar cells, effects of inhomogeneity 7−78633
Schottky-barrier solar cell characts. *(Russian)* 7−78635
self sustaining metal coatings on metal surfaces, charge transfer and sputtering 7−125896
semiconductor, with surface states, generation-recombination noise 7−84925
semiconductor nonuniform carrier distrib. from Hall meas., surface-depletion effect correction 7−105589
semiconductor surface, excitonic resonances, coherent wave approach calcs. 7−77021
semiconductor surface electronic topography study, combined photoacoustoelec. method 7−92243
semiconductor surfaces and interfaces, recombination velocities and surface states 7−131730
semiconductors, surface and surface space charge region, luminescence 7−144119
semiconductors, surface two-dimens. excitonic states, spectral characteristics *(Russian)* 7−118971
strongly anisotropic 2D systems, one-particle density of states, electron-electron interaction corrections 7−112425
subgroup VIa transition metal carbides, nitrides and oxides, electronic props., theory and expt., review 7−112181
surface optical polarons, mag. field effects 7−137814
surface-ejected positronium 2D momentum distrib. calcs. 7−124933
transition metal carbonyls adsorbed layers, core electron excitations, VUV photoelectron spectra 7−122614
transition metal systems, giant resonances, electron energy loss spectra anal. 7−144200
transition metals, surfaces and interfaces, magnetism and electronic struct. *(Japanese)* 7−77199
two-dimensional thin layer with a hydrogenic impurity, LoSurdo-Stark effect 7−70372

urface electron states continued
Xe physisorbed on Au, Al and Cu (111) surfaces, inverse photoemission, final state screening obs. 7−144151
AlN/GaAs, low temp. CVD, surface state density, ICTS and C-V charcts. 7−126024
Ag (100), image potential surface states, inverse photoemission 7−138000
Ag (110), adsorbed Na and K, empty electronic states, inverse photoemission studies 7−85032
Ag (110), Xe adsorption on low and high work function metals 7−131419
Ag (110), Xe-Kr monolayer system, conduction band structure, unoccupied electron levels, inverse photoemission investig. 7−131728
Ag (111), surface electron state photoemission cross section resonances 7−100012
Ag halide surface, effect on adsorbed Ag clusters, quantum chemical calcs. 7−118274
Ag overlayer on Cu (001), 3D valence band struct. development, ARPES obs. 7−125068
Al (100), angle-resolved positronium emission spectroscopy study 7−77026
Al (100), surface phase transitions, ARPES study 7−144239
Al (110), surface electronic struct., tight-binding anal. 7−118548
Al surface, lattice relax., self-consistent linear-electronic-response approach 7−84485
AlN, solid Al^+ ion source 7−85937
AlN/InP, low temp. CVD, surface state density studies 7−126024
γ-Al_2O_3-SiO_2, surface struct., catalysis and electronic state 7−131408
Al(111) with Na overlayers, unoccupied electron band struct., IPES study 7−125071
As overlayer on Ge(111), surface states many-body calc. 7−85033
Au (110), tunneling current through localized surface states 7−92257
Au surface, scanning tunneling microscopy 7−91404
Au-Cu ordered surface alloy, atomic and electronic struct., LEED and photoemission meas. 7−84462
$Ba_2SmCu_3O_{9-x}$, high temp. supercond., electron and X-ray diffr., XPS studies 7−112597
$C_4RbTl_{1.5}$, ternary donor graphite intercalation cpd., photoemission, electronic struct. 7−85948
CaS, traps, anomalous TSC meas. 7−99090
$Cd_{1-x}Hg_xS$ surfaces, electronic struct., CPA calc. *(Chinese)* 7−112412
$Cd_{0.27}Hg_{0.73}Te$, B^+ ion implantation, surface radiation damage 7−91619
$Cd_xHg_{1-x}Te$-metal contacts, electrophysical props. 7−99197
$Cd_{1-x}Mn_xTe$, shallow energy surface states 7−70371
Cd_3P_2, surface pot., nonlinear-optical electroreflection meas. 7−85596
CdS crysts., reson. elastic light scatt. from surface exciton pot. fluctuations 7−85754
CdS, electron irradiation, influence on surface recomb. velocity, cathodolum. intensity 7−143539
CdS, excitonic surface polaritons, luminescence 7−113241
CdSe films, negative differential cond. study *(Russian)* 7−92319
CdSe, I_S luminesc. line behaviour 7−70861
n-CdTe:In crystals, heat treated, DLTS studies 7−98862
Cl_2 layer on Pt substrate, Cl^- dissociative attachment in electron stimulated desorpt. 7−138557
Co, polycrystalline, work function variations with temp. and phase transforms 7−85047
Co_3O_4, anodic O_2 evolution electrocatalysis, surface intermediate states preps. 7−113942
Cr/Au buried epitaxial interface, surface state-interface state evolution, XPS studies 7−85031
Cu (001), adsorbed Cl, ARUPS, layer KKR calcs. 7−92828
Cu (100), surface state energy and localisation behaviour in elec. field and image pots. 7−77031
Cu (110), clean and O covered, Auger neutralisation spectroscopy by metastable noble gas atom deexcitation 7−113321
Cu (110), image states and surface states, energy dispersion near surface Brillouin zone boundary 7−85028
Cu monolayer and film, with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
Cu surface, O_2 adsorption, UPS studies 7−124686
Cu surfaces, He atom diffr., theoretical potentials 7−106341
Cu(100), virtual image- and field-induced electronic states 7−99150
Fe (001) with chemisorbed S, P, C or H, bonding systematics 7−70083
Fe (111) and (110) with adsorbed CO_2, EELS study of electronically excited states 7−118257
Fe, BCC epitaxial layers on Cu (100), surface electronic behaviour 7−144238
Fe, paramagnetic, dilute impurities, surface segregation and electronic struct. 7−84301
Fe, polycrystalline, electronic struct., UV photoemission study 7−106359
Fe-Si (111) surfaces, angle resolved UV photoelectron spectroscopy study 7−138598
Fe_xNi_{100-x} surface, electronic struct., UV photoemission study 7−106359
Fe_3Pt (001) Invar, ordered spin-resolved angle-depend. photoemission study 7−119108
GaAs (100), space charge, electron energy loss studies 7−118551
GaAs (110), H adsorption, effect on surface props. 7−131435
GaAs (110), O adsorbed layer, local state density, long range screening 7−85034
GaAs (110)-1×1, with adsorbed Sb overlayer, surface state bands, angle-resolved photoelectron spectra 7−125072
GaAs, EL2 deep level, sub band-gap surface photovoltage spectra 7−100003
GaAs, heavily doped, surface states, investigation by Kelvin probe 7−77029
GaAs passivation in N multipolar plasma, photoemission study 7−119469
GaAs polycrystalline films, MOCVD grown, AC and dielec. props. 7−70438
GaAs, semi-insulating surface props., CW electro-optic probing technique 7−99794
GaAs surface, oxide film, trap form. and recharging 7−92249
n-GaAs surface-state density meas. by photoemission quantum-yield spectroscopy, apparatus 7−67436
GaAs, surfaces, local density of states, LCAO Green's function calcs. 7−125066
a-GaAs:H, O_2 adsorption, photoelectron spectroscopy 7−138582
GaAs:H (110) surface; filled and empty states, EELS and photoemission studies 7−143544
GaAs/Au Schottky diode, semicond. surface minority-carrier trap levels, DLTS study 7−112489
GaAs-Ge interface, electronic struct. tight binding calcs. 7−85073

surface electron states continued
$(GaAs)_{1-x}(SiC_2{:}H)_{1-x}$ polycrystalline films, MOCVD grown, AC and dielec. props. 7−70438
GaP (110) with Sb overlayer, bonding and surface electronic struct. 7−118260
GaP (111), surface photovoltage spectroscopy 7−77036
GaP (111)-1×1 surface, Ga 3d chem. shift, UPS study *(Chinese)* 7−105639
GaP:N, laser-induced surface defects, influence on photolum. 7−144100
GaSb surfaces, O_2 sorption, work function and photovoltage measurements 7−125073
GaSe, surface structure, scanning tunnelling microscopy studies 7−76579
Ge (110) mechanically damaged (110) surface, polarised anisotropic electroreflectance spectra study *(Russian)* 7−76581
Ge (111), adsorption and growth of Ag and Au, photoelectron spectra, RHEED 7−85945
Ge, electron capture by real surface, low temp. irradiation conditions 7−143540
Ge surface pot. and photo-memory, dopant effects *(Russian)* 7−77035
He, liquid, surface bound electron states in laser field 7−111990
He liquid film on solid substrate, surface electrons, RPA calcs. 7−118192
^{4}He liq. surface, 2D Wigner cryst., ripplonic polaron DC magnetocond. calcs. 7−76518
^{4}He, liquid, surface electron binding energy *(Russian)* 7−124610
$Hg_{0.8}Cd_{0.2}Te$, subband physics in electric quantum limit 7−138001
$Hg_{1-x}Cd_xTe$ (100) surface states, surface enhanced alloy effects, site depend. CPA calc. 7−85029
InAs (110), bulk and surface electronic states, inverse photoemission spectra 7−85885
InAs, heavily n-doped, surface 2D electron gas subband struct., cond. and scatt. mechanisms study 7−99154
InAs MOS struct. fabrication by electrochem. oxidation, effect of F^- ions in electrolyte 7−112504
InP (−1−1−1) clean surface, dangling bond state, ARUPS study 7−77751
InP (100) 4×2, surface reconstruction, H chemisorption 7−76567
InP (110), bulk and surface electronic states, inverse photoemission spectra 7−85885
InP (111), dangling bond electronic state 7−85959
InP, radiative surface states, photolum., XPS studies 7−77023
InP, recombination, surface states and Fermi level pinning 7−99152
InSb (110), bulk and surface electronic states, inverse photoemission spectra 7−85885
InSb MOS struct. fabrication by electrochem. oxidation, effect of F^- ions in electrolyte 7−112504
InSb, photoconductivity, surface photovoltage, deep bulk levels 7−77005
InSb surface, EELS analysis, plasmon and phonon loss intensities 7−119081
InSb surfaces, (111) electronic struct., UV photo-emission spectroscopy study 7−138597
InSb:Ge, grain boundaries, n-inversion layer cyclotron resonance 7−138331
InSe, 2D defects, effect on transport and phototransport props. 7−105593
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
Ir (111), photofield emission from surface states 7−106366
La, FCC, (100) and (110) surfaces, electron struct. surface stator and resonances *(Russian)* 7−124842
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., passivation with Au overlayers, XPS and IPS spectra 7−138859
MgO-type crystals, surface electronic struct., variable pot. method 7−112415
Mo (100), photofield emission from surface states 7−106366
MoS_2, lithographically textured, edge surfaces 7−124663
Na (110), photoemission, calc. 7−119112
NaCl, vapour deposited on Ni (111), XPS studies 7−85955
Ni (100), adsorbed CO, H and CO-H, inverse photoemission obs. 7−119063
Ni (100), electronic structures and surface magnetism at finite temps. 7−77024
Ni (100), tunneling current through localized surface states 7−92257
Ni (110), CO adsorption, two-dimensional π-d bands, direct observation 7−131727
Ni (110), image states and surface states, energy dispersion near surface Brillouin zone boundary 7−85028
Ni (110)c(2×2) ferromag., with chemisorbed S, spin resolved photoemission 7−132411
Ni (111), adsorption of CO, electronic struct., EELS study, 125-475 K 7−91993
Ni (111), electronic struct., UV photoemission study 7−106359
Ni (111) with adsorbed H, scanning tunnelling microscopy 7−91944
Ni surface, (110) (1×2)-H reconstructed, angle-resolved photoemission at 80 K 7−125912
Ni surfaces, band struct., low energy elastic electron reflection meas. 7−105390
Ni(115), structure, He diffr. study, hard and soft wall corrugation fns. calcs. 7−92822
O adsorbed layer on Cu (111), two-photon photoemission from adsorbate-induced states 7−77765
O_2 adsorbed layers on Si (100) 2×1 and Cs or Na overlayer, electronic props., photoemission spectra studies 7−113344
Pb (100), surface phase transitions, ARPES study 7−144239
Pb monolayers on Ge (111), photo-emission study of valence band 7−125914
$Pb_{1-x}Sn_xSe(Te)$, surface states due to band inversion 7−118546
PbTe epitaxial layers, photocond. kinetics 7−84973
Pd (111), band struct., angle-resolved two-photon photoemission spectra study 7−144236
Pd (111), clean and O covered, Auger neutralisation spectroscopy by metastable noble gas atom deexcitation 7−113321
Pd (111), H adsorption, role of surface resonances in vibr. cross section enhancements 7−124719
Pd surface, scanning tunneling microscopy 7−91404
Pd surfaces, adsorbed H, surface resonances and nondipole excitations 7−143543
Pt (100) and (110), surface energy and surface core level shifts 7−118228
Pt (111) surface, CO scatt., electron-hole pair and phonon excitation study 7−144202
Pt overlayers on NB (110), electronic struct., chemisorption of CO, surface struct., photoelectron spectra, LEED, AES studies 7−99146

surface electron states continued
(Rb, Cs)Na_2KSb photocathode with improved photosensitivity and green-red response *(Chinese)* 7−77748
Re surface, clean and oxygenated, core level binding energy shift 7−92244
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
Ru (0001), with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
Ru (001), clean and chemically modified surfaces, adsorpt. of N_2, role of σ bending 7−105646
Ru (001), Na adsorption and coadsorption with O, EELS study, electronic excitations 7−98700
S adlayer on Ge (100)(2×1), LEED, AES and photoemission surface core level spectra studies 7−106364
a-$Se_{1-x}Te_x$ field-assisted thermal hole emission from deep mobility gap states, xerographic dark discharge meas. 7−119115
Si (001), inversion layers, electron effective mass changes 7−118552
Si (001) clean surfaces, surface state band, deformations due to roughening and misorientation 7−85035
Si (001)(2×1), metallic surface state, angle-resolved UPS study *(Chinese)* 7−105640
Si (100), electron trapping defects, STM studies 7−77033
Si (100), O_2 adsorption, roughness effect of dangling bond band 7−144240
Si (100) and (111), atomic scale defect electronic struct. and STM imaging 7−112037
Si (100) with K monolayer, inverse photoemission study 7−144152
Si (100)-2×1, with adsorbed As overlayer, surface state bands, angle-resolved photoelectron spectra 7−125072
Si (111), adsorption and growth of Ag, photoelectron spectra, RHEED 7−85945
Si (111), benzene adsorption, valence and core states, photoemission obs. 7−118248
Si (111), dimer-adatom-stacking fault model, calcs. 7−143156
Si (111), electronic props., influence of disorder 7−92247
Si (111), imaging electronic surface states in real space 7−143546
Si (111), with adsorbed In overlayer, surface state bands, angle-resolved photoelectron spectra 7−125072
Si (111) (7×7), complex alcohol and carboxylic acid adsorbates, NEXAFS study 7−106308
Si (111) $\sqrt{3}\times\sqrt{3}$, Al, Ga and In adatoms, empty surface states and adatom geometries, IPES study 7−112421
Si (111) and (001), electronic and geometric struct., STM studies 7−77034
Si (111) and (100), chemisorption of Ni, cluster model and DV-Xα calcs. *(Chinese)* 7−105243
Si (111) buckled surface, dangling bond states 7−85038
Si (111)-Ga, surface core level shifts 7−125927
Si (111)2×1, tunnelling current in scanning tunnelling microscopy 7−77032
Si (111)$\sqrt{3}\times\sqrt{3}$-Ag surface, photoelectron spectra, surface and core-level shifts 7−85949
Si (111)$\sqrt{3}\times\sqrt{3}$-Bi surface, angle resolved UV photoelectron spectra 7−125907
Si bulk and (001) surface electronic structure *(Korean)* 7−143549
Si clusters, charge transfer in secondary ion emission, tight binding model 7−113336
Si inversion layer, tunnelling in high mag. fields 7−131804
Si MBE grown doping structs., carrier profiles, spreading resistance anal., model calcs. 7−85024
Si, reactive ion etching prod. defects, photoluminesc. study 7−99145
Si, relaxation of photoexcited charge carriers, reflectivity and transmittance studies, picosecond time domain 7−99084
Si surface, 2D electron-hole system, optical studies on mag. phenomena 7−138426
Si surface, adsorbed halogens and chalcogens, nuclear quadrupole interaction studies 7−112270
Si, surface and deep states induced by rapid thermal processing, electrical effects 7−92106
Si: As (111) surface, As terminated, electronic and atomic struct., passivation 7−98651
a-Si:H films, surface and bulk defect densities, photothermal and photoconductive determ. 7−105492
a-Si:H thin film surface cell structs., band bending, optical, elec. and photoelec. props. 7−131801
Si:O clusters, charge transfer in secondary ion emission, tight binding model 7−113336
Si-SiO_2-Al, mobile charge, effects of doping Al with Cu, Zn or Si 7−85123
SiC, surface and bulk valence band photoemission 7−113349
a-$Si_{1-x}C_x$:H films, valence electron props., UPS, EELS studies 7−85941
SiO_2, plasma enhanced LPCVD on Si and InP, growth and in situ luminesc. charactn. 7−113408
n-Si(111), surface composition, rel. to adsorption of Gd, AES study 7−91992
$Sm_{0.5}A_{0.5}CoO_3$ (A=Ca, Sr, Ba), perovskite oxide, p-type semiconductor, surface states, gas sensor material appl. 7−85025
SnO_2, electronic struct. of O vacancies 7−143547
Ta (100), covalent bonding of adsorbed Na atoms, angle resolved UPS study 7−106357
Ta, surface and bulk core level lineshapes, linear coupling approx. 7−105444
Te, cathodic deposition, surface states effects 7−92893
Th, FCC, electron struct. and optical props. of (100) and (110) surfaces *(Russian)* 7−143548
TiN, substoichiometric, (100) surface, angle-resolved photoemission, vacancy-induced state 7−125913
TiN_x (100), nonstoichiometric, evidence of vacancy-induced surface states 7−92246
TiO_2 (110), electronic struct. of O vacancies 7−143547
TiO_2 (110) Ti-rich surfaces, spectral, cond. and annealing studies 7−85041
$TiSe_2$, photoemission spectra, final-state effects 7−144233
UO_2 (111), valence-band photoemission near 5d reson. photon energy 7−92831
V adlayers on Ag (111), minority-spin states, momentum-resolved inverse photoemission studies 7−113307
V_2Si (100), electronic struct., photon stimulated desorpt. of H_2, O_2 and ethene 7−118252
W (001), surface electronic structure, attractive interaction between atoms 7−92245
surface electron states continued
W (001), surface phonon instabilities and electronic surface states 7−84478
W (100), clean and H covered, inverse photoemission studies 7−144150
W (100), photofield emission from surface states 7−106366
W (100)-5×1-C, CO adsorpt. struct. and bonding, EELS, XANES 7−137694
W surface, chemisorption of H, local space approx. 7−105643
W, surface and bulk core level lineshapes, linear coupling approx. 7−105444
W surfaces, polycrystalline, clean and H or O covered, Auger neutralisation spectroscopy by metastable noble gas atom deexcitation 7−113321
W(111), surface core level spectra, identification of core level components 7−125917
Xe (111), valence and conduction bands, spin-polarised photoemission studies 7−118549
Xe, physisorbed multilayers, valence levels, ionization energies 7−112424
Xe, structural phases, VUV photoemission study 7−122615
Y (0001), angle resolved UV photoemission, surface state effects 7−92840
$YBa_2Cu_3O_{6-9}$, high T_c supercond., unoccupied electron states surface phenomena, inverse PES study 7−144154
Yb_4Bi_3, valence fluctuation, UPS study 7−92141
Yb_4Sb_3, valence fluctuation, UPS study 7−92141
ZnO, Bardeen state and elec. props. 7−85026
ZnS cleavage surfaces, atomic and electronic structs. 7−137996
$ZrN_{0.93}$ (100) surface, electronic struct., bulk band struct., angle resolved photoelectron spectra 7−105644

surface energy
see also surface electron states; surface energy measurement
adhesion, conf., Williamsburg, VA, USA (Feb. 1987) 7−134346
adsorbent surface area, from surface energy of vapour mixture, monolayer form. 7−105244
alkali metal liq. drops, energy charact., density functional theory *(Russian)* 7−111349
axisymmetric sessile liq. drop equilib. on thin elastic plate, interfacial free energy, contact angle 7−76545
BCC-FCC interfacial energy, epitaxial preferred orientations 7−70135
bimetallic interfaces, adhesive forces 7−124736
binary alloys, surface segregation, electronic theory, CPA calcs. 7−91936
ceramics, green body strength theory 7−86308
contact angle measurements with one liq., unsuitability for solid surface free energy derivation 7−118227
crystal facet edge, terrace-step-kink model calcs. 7−76590
crystalline solids and surfaces, struct. energies, pseudopot. approaches 7−131084
diamond powder particle nucleation in RF methane plasma, struct. 7−98009
dielectric formalism, fluctuation-dissipation theorem 7−76591
electron gas, interatomic interactions, total energy calc., effective medium theory 7−118398
eutectic systems, solid solubility 7−111895
FCC (110) surface under stress, structural and thermodynamical behaviour, molecular dynamics simulation 7−76582
free energy of crystalline solids 7−84486
free liquid-gas interface, surface free energy for wetting transition 7−105193
geometric criteria for low interfacial energy 7−131414
hydrophobic particles, surface energy characterisation method 7−112022
interaction energy between solids, struct. registry condition 7−105234
interfacial mechanical response, surface energy as indicator 7−76592
liquid crystal alignment by plasma-polymerised films 7−69586
liquid-surface, atmospheric layer as representation of real solid surface *(French)* 7−105187
marble/organic liquid film/water droplet system, contact angle interpret. 7−98625
measurement of surface energy of solids 7−70063
metal contacts, interfacial energy 7−112442
metallic surfaces, Thomas-Fermi-von Weizsacker approach, self-consistent soln. 7−143550
metals, quasi-brittle, effect of gas adsorption on resistance to cracking 7−137448
1-methylnaphthalene, separation from dodecane using liq. membrane, surfactant effects 7−113988
nematic liquid crystal, azimuthal anchoring energy at grooved interface 7−137236
nematic liquid crystals, surface coupling coeff. meas. for various substrates 7−97909
nematic surface-like volume energy and surface energy, 1D and 3D variation 7−137232
particle assemblies, elasticity theory and surface energy 7−131415
4-n-pentyl-4′-cyanobiphenyl, nematic liquid cryst., anchoring strength at SiO interface, temp. depend. 7−98621
polar semiconductor surfaces, ab initio theory, appl. to GaAs (111) (2×2) reconstructions 7−124677
polyethylene fibres, adhesion to epoxy resin, pull out test, surface treatment effect 7−144576
polyethylene-ethyl acrylate, film, adhesion rel. to grafting *(French)* 7−105236
polymer surface treatment by low-temp. plasma *(French)* 7−132782
rubber, contact adhesion against glass 7−105235
solid-liquid interface, density-functional theory, surface free energy 7−137720
solid-liquid phase boundary struct., Stefan problem with surface energy 7−104955
surfaces, wear, adhesion and elec. breakdown phenomena *(French)* 7−104904
thin film growth mode models 7−137744
two-layer system with surface-active material thermogravitation convection develop. 7−136668
unloaded crystal shear bands 7−111588
wetting, of solid surface, dynamics of spreading *(French)* 7−112011
Ag-SiO_2 interface, preferred orientations 7−124793
Al surface, lattice relax., self-consistent linear-electronic-response approach 7−84485
α-Al_2O_3, morphology, surface relax. importance 7−98642
Al_2O_3 powder, surface energy determ. from elasticity meas. 7−131415
$Al_{85}Si_1Mn_{14}$ quasicrysts., thermal transform. to conventional crysts., two-step mechanism 7−105002

surface energy continued
Al(100) with adsorbed O, Auger and XPS studies, relaxation energies 7−92837
Au(110) reconstructed surface, geometry determ. with first principles total-energy calcs. 7−143138
C, adsorbed atoms on metallic surfaces, surface binding energy, calc. 7−91960
C fibres, surface energy, microwave plasma treatment effect 7−84484
Cu surface (115), topography and roughening 7−118202
Cu-Ni, surface and grain boundary solutions, heats of adsorption and mixing 7−84297
Cu-Ti system, laser irrad., nucleation temp. modelling 7−86160
Fe, field evaporation in Ne and H, rate-controlling process, FIM study 7−85963
α-Fe_2O_3, morphology, surface relax. importance 7−98642
γ-Fe_2O_3 powders for mag. recording, surface props. 7−84482
GaAs (-1-1-1), (2×2) reconstructions, related phase transitions, ab initio theory 7−124678
GaAs (110), surface reconstruction calc., energy model 7−98635
H, adsorbed atoms on metallic surfaces, surface binding energy, calc. 7−91960
KCl surface, electrostatic potential calcs. 7−131428
K_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
LiF crystals, charging of crack edges, work done in fracture 7−69816
Li_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
MgO-type crystals, surface electronic struct., variable pot. method 7−112415
NaCl, vapour deposited on Ni (111), XPS studies 7−85955
Na_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
NbCe superlattice systems, total energy, interface effect, LMTO band calc., density functional theory 7−77046
Ni_3Al, appl. of embedded atom method 7−69697
O, adsorbed atoms on metallic surfaces, surface binding energy, calc. 7−91960
Pd-Cu-Si metallic glass, solid-undercooled liq. interfacial energy 7−76558
Pt (100) and (110), surface energy and surface core level shifts 7−118228
Ru (0001) surface, struct. props. calc. 7−70045
Si (100), interaction of adsorbed Sb monolayer, effect of ion bombard., TSD study 7−85933
Si (111), dimer-adatom-stacking fault model, calcs. 7−143156
Si (111) surface, kink-site form. energies using semiempirical pot. energy function 7−143176
SiO_2 powder, surface energy determ. from elasticity meas. 7−131415
Si(111), long range ledge-ledge interactions, surface stress tensor 7−118217
Ti films on nonwetted sapphire, laser produced bond percolators, surface free energy 7−98667
TiO_2 powder, surface energy determ. from elasticity meas. 7−131415
U_6Fe amorphous, crystallisation and nucleation limited stability 7−97938
UO_2 fuel pellets, sintered, fracture toughness, fracture surface energy, Vickers hardness 7−78186
UO_2, surface energy meas., errors, critical review 7−84483
ZrO_2 powder, surface energy determ. from elasticity meas. 7−131415

surface energy measurement
polymer solids, surface energy estimation by contact angle methods 7−137692

surface enhanced Raman scattering
acrylamide, adsorbed on Ag colloids, polymerisation, SERS 7−144056
acrylic acid, polymerisation on Ag colloids surfaces, SERS spectra anal. 7−74798
adenine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
adenosine, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
adsorbates at metals, SERRS and SUERS, quantum-mechanical model 7−99811
adsorbed layer, metal single cryst. surface, SERS anal. discussion 7−77569
adsorbed mols. on metal surface, Raman line shift model calcs. 7−82136
Ag electrode, imidazole and imidazolium ion adsorpt., SERS 7−131433
aniline adsorpt. on Ag electrode in acidic soln., SERS study 7−77578
aromatic amino acids adsorbed on Ag particles, SERS studies 7−106962
ATP molecules, adsorbed on Ag, SERS spectra, voltage and concentration depend. 7−122544
benzoic acid, adsorbed on Ag colloids, SERS spectra study 7−74631
benzoic acid, chemisorbed on Ag sol, SERS 7−96708
2,2′-bipyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7−77582
BPDE-DNA adduct on Ag-coated cellulose substrate, SERS study 7−133217
1-butanethiol, chemisorption on Ag sol, SERS 7−96704
1,2-butanethiol, chemisorption on aq. Ag sol surface, SERS study 7−125734
conference, Eugene, OR, USA (Sept. 1986) 7−72726
crystal violet adsorbed layer, Ag colloids, reason. SERS and fluoresc. spectra coverage depend. 7−74629
crystal violet adsorbed layer, Ag island film, reson. SERS spectra study 7−77572
CTAB, thin films adsorpt. on nonmetallic surface, SERS 7−77583
cyanomethaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7−78779
cytochrome C, spin and REDOX equilib. at Ag electrode/electrolyte interface, SERS spectra anal. 7−78778
DABCO, at Ag electrode, SERS, photon-driven charge transfer 7−76628
dielectric spheres on a substrate, 2D array, enhancement of local field 7−138454
1,1′-diethyl-2,2′ cyanine dye, adsorbed on Ag colloids, SERS 7−68314
electrode surface, electron transfer processes, strong and weak overlap 7−113941
electrode surfaces, surface-enhanced Raman microspectrosc. obs. 7−85614
energy transfer induced gain, quantum-mechanical model 7−77574
flavoproteins on Ag colloid, SERS 7−99821
giant Raman scatt., intensity of inelastic background 7−144049
guanine and methylated derivatives adsorbed layers, Ag electrode surface, SERS spectra study 7−77576
guanine series, adsorbed on Ag sol, SERS 7−132265

surface enhanced Raman scattering continued
local electromag. fields effects, Poisson eqn., Feynman path integral soln. 7−77570
metallic grating, bare, reson. response to S-polarised light, review 7−75104
molecules, aggregated, Raman bands, excitation wavelength depend. 7−96701
oxyhaemoglobin, adsorbed on aq. Ag colloids, reson. SERS spectra study 7−78779
oxyhaemoglobin, adsorbed on colloidal Ag, surface enhanced reson. Raman obs. 7−93644
perylenetetracarboxylic dianhydride films, mol. organisation, spectrosc. obs. 7−106159
polariton based description, local field and chemisorption effects study 7−77568
poly(4-vinylpyridine), adsorption on Ag electrode, SERS monitoring study 7−77577
polyethylene films, ion-implanted, with Ag island film substrate, SERS spectra anal. 7−77581
polystyrene, adsorption on Ag electrode, SERS monitoring study 7−77577
pyridazine adsorbed on Ag electrode, vibr. freq. shifts, SERS 7−74620
pyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7−77582
pyridine, adsorbed mols., voltage-induced energy level shifting 7−74633
pyridine, adsorpt. on Ag island films, SERS charge-transfer band investig. 7−77580
pyridine adsorbed layer on Ag film, SERS, cavity model discussion 7−77573
pyridine adsorbed layer on Ag-Pd films, SERS spectra, electromag. quenching and enhancement study 7−77575
pyridine adsorbed on Ag, charge transfer band, SERS mechanism 7−92676
pyridine adsorbed on Ag, surface enhanced Raman scatt., collective fermi resonance nature 7−77555
pyridine adsorbed on AgCl colloids, SERS, enhancement origin 7−82140
pyridine adsorbed on Ni(110) and Ni(100) surfaces, SERS 7−96702
pyridine and dye-1555 adsorbed on AgBr colloids, SERS 7−82139
pyridine coadsorbed with Ag on cold Cu films, SERS study 7−138444
pyridine coadsorbed with Cu on cold Ag films, SERS study 7−138444
pyridine-methylpyridine coadsorption on Ag electrode, SERS investig. 7−74634
rhodamine 6G adsorbed layer, Ag colloids, reason. SERS and fluoresc. spectra coverage depend. 7−74629
surface enhancement factors, electromag. theory 7−68241
thiosemicarbizide, complex form. and struct. on Ag and Cu surfaces, SERS spectra anal. 7−74630
Ag aggregates, on Ag halides and coated electrodes, SERS obs. 7−77584
Ag, colloidal, in stretched polyvinyl alcohol films, lin. dichroism 7−132256
Ag, electric field enhancement near surface irregularities 7−132284
Ag, electrode, adsorbed ATP, SERS protonation effects 7−114188
Ag, electrode, ethylenediaminetetracetic acid, SERS 7−99810
Ag electrode, HCN adsorpt. SERS, soln. effect 7−77541
Ag electrode, in electrochem. cell, SERS mechanism 7−77587
Ag, electrodes, adsorbed H_2O, OH^- and H_3O^+ SERS 7−99809
Ag film, obliquely evaporated, SERS studies 7−138450
Ag films, SERS active, preparation method 7−76709
Ag monolayer, adsorbed on Pt substrate, SERS study 7−119005
Ag substrate, coupled to Ag or dielec. sphere, optical response, surface plasmon polariton excitation 7−106160
Ag surface, SERS of adsorbed benzoic acid, attenuated-total-reflection geometry 7−125748
Ag thin films with organic overlayers, SERS, short-ranged EM fields 7−125756
C:H hard amorphous thin film on Si and Ge, Raman scatt. study 7−125727
CO vapour deposited layer, Ag film, SERS, electromag. field enhancement study 7−77567
Cr_2O_3, thin film substrates, SERS obs. 7−77585
Cu, electrode, ethylenediaminetetracetic acid, SERS 7−99810
Cu electrode, imidazole and imidazolium ion adsorpt., SERS 7−131433
Fe complex, Fe(2,2′-bipyridyl)$_3^{2+}$, adsorption on Ag colloids, SERS spectra anal. 7−77579
HCN, at Ag electrode, SERS 7−77542
Ru complex, Ru(2,2′-bipyridyl)$_3^{2+}$, adsorption on Ag colloids, SERS spectra anal. 7−77579
SO_2 adsorption on Ag powder surfaces, SERS study, nearly environmental conditions 7−70065
TiO_x thin films, SERS obs. 7−77593

surface hardening
boride diffusion coatings, operational characts. improvement by laser treatment 7−100448
carbonization layers, props. relevant to plasma-surface interaction 7−104419
CO_2 lasers for thermal hardening of steels and cast irons 7−78310
conference, surface engineering, Brighton, England (June 85) 7−72724
diffusion layers on steels, tribotechnical characts. and tests 7−132756
first wall C coating, H conc. effects 7−135553
hardened layers in rims, subjected to repeated rolling contacts, elastic-plastic anal. 7−97458
HF nonequilibrium discharge for surface modification, theoretical exam. and special features of appl. 7−138885
HF Plasma 401 unit for tools hardening 7−100413
ion implantation for component wear charact. improvement 7−71375
JAERI research on wall material development, surface technology 7−135555
metal, ion implantation induced surface hardening, precipitation on bulk defects 7−93195
metal, yield stress dependence on surface layer thickness 7−78370
metal films, nitridation by ion implantation, structural transformations 7−71388
metallic and ceramic materials surface treatment using high-power CO_2 laser 7−71338
metals, surface hardening with laser beams *(German)* 7−106655
nitrocarburising, austenitic 7−93164
plasma nitriding and plasma nitrocarburising, surface heat treatment using DC plasma, plant description *(German)* 7−138884
polyimide high resolution ion implantation masks, thin film surface morphology and dielec. props. study 7−69723

surface hardening continued
quartz single crystal, surface props. rel. to chemico-mechanical polishing 7−132774
repair and reclamation, conf., London, England (Sept. 1984) 7−108041
steel, alloy, carbonitrided, fatigue life, influence of retained austenite *(French)* 7−119331
steel, austenite transformation on high-speed and laser heating 7−86172
steel, austenitic, high Mn, explosion hardened, residual stress distrib. rel. to repeated impact loading *(Japanese)* 7−93035
steel, austenitic stainless, carburisation in liq. Na, electrochemical potentiokinetic anal. *(Czech)* 7−73856
steel, austenitic stainless, N implanted, friction and wear 7−78260
steel, austenitic stainless, nitrided, micrograin struct., Auger electron microprobe obs. 7−100438
steel, austenitic stainless, nitrided, TiN dispersion strengthened, creep 7−138791
steel, austenitic stainless, surface props., effect of plasma nitriding temp. 7−119444
steel, B, case hardenability and B redistrib. in carbonised and carbonitrided case *(Chinese)* 7−71345
steel, by electron beam 7−78366
steel, C, $TiCrB_2$ coating, diffusion interaction under glow discharge, adhesion, microhardness, wear resist. 7−106701
steel, C tool and martensitic stainless, effect of laser rad. 7−86411
steel, construction shot blasted, fatigue strength, residual stresses evolution w.r.t. strain type *(French)* 7−119426
steel, Cr, case hardening, carbide phase growth 7−106662
steel, Cr, laser processed, wear induced hardening 7−100392
steel, Cr bearing, N ion implantation, wear, surface struct., Auger spectra 7−119379
steel, Cr type, parts hardened by surface deform., hot galvanising influence on fatigue resist. 7−144598
steel, Cr-Mo-V, martensitic, superheater tube corrosion and embrittlement *(German)* 7−138892
steel, Cr-Ni-Mo type, for fast neutron reactors, crack resist. in carburisation in Na 7−144593
steel, damping capacity, treatment, microstruct. 7−138776
steel, hard facing, thermal sprayed powder coatings, adhesion, hardness, wear resist. 7−106702
steel, high speed, cutting life rel. to surface treatment 7−138852
steel, high-strength, fatigue resist. improvement using bulk and surface treatments 7−126308
steel, hot forging due, fractography of high temp. fracture surface *(Japanese)* 7−119349
steel, laser hardening depth, latent heat influence of solid-phase transforms. 7−100427
steel, laser surface hardening of thin slabs, mathematical model 7−113568
steel, laser-processed, behaviour of silica inclusions 7−78364
steel, martensitic, surface plastic deformation effect on Barkhausen effect parameters, nondestructive inspection method 7−132878
steel, medium C, laser treatment, surface struct., abrasive wear resist. 7−71390
steel, mild, laser treated hardfaced coatings, cavitation wear resist. 7−138851
steel, mild, mech. prop. and substruct. changes with US loading 7−100437
steel, N ion implantation, surface struct., wear resist. 7−104775
steel, Ni-Cr-Mo, carburised-quenched, transform. plasticity, simulation method *(Japanese)* 7−78114
steel, Ni-Cr-Mo, nitriding, phase distrib., residual stresses, treatment conditions effect *(French)* 7−86479
steel, Ni-Cr-W, case-hardened layer, phase comp. and contact fatigue strength 7−106598
steel, nitrided, cavitation erosion in salt water and emulsion 7−126252
steel, nitrided parts, partial cooling and repeated heating in hardening effect on struct. and props. 7−126306
steel, nitrocarburising treatment, Nitrotec process technology review 7−78326
steel, nonmagnetic, nitriding temp. and gas mixture comp. effect on struct., comp. and props. 7−126307
steel, rotor, surface plastic deform. effect on fatigue crack initiation 7−78369
steel, stainless, hardened, fatigue strength, lapping effect 7−126243
steel, structural, thermochem. treatment effect on wear resist. 7−78348
steel, sulphonitriding in CS_2-NH_3 atm. 7−126325
steel, surface electrospark alloyed, wear resist. in abrasive medium 7−93161
steel, surface phase transforms. under pulsed effect of high-press. plasma 7−71361
steel, Ti-coated, hardening following B ion implantation 7−78353
steel, tool, laser melt injection of BN powders, microhardness, struct. 7−78375
steel, tool, W surface alloying by laser, Co addition effect, hardness, microstruct. *(Korean)* 7−138889
steel, W-Cr-V, bearing, N ion implantation, wear, friction, hardness, surface struct. 7−119378
steel, yield stress dependence on surface layer thickness 7−78370
steel components, arc case hardening of working surfaces 7−138886
steel components, surface hardening quality inspection, resist. of mag. states of two-layer ferromag. to mag. fields 7−71450
steel plates, laser heat processing, computational simulation 7−138890
steel surface, ion implanted, wear behaviour 7−71392
steel surface layers, N ion implantation, X-ray diffr. anal. 7−84456
steel tools, high speed, laser hardening *(Chinese)* 7−91648
steels, ion implanted, tribological props. 7−106633
TEXTOR surface conditioning by carbonization, H-recycling, wall pumping 7−135551
tool steel hardening in high temp. HF induction plasma 7−78311
US characterisation of surface modified layers 7−86545
wear resistance improvement of stamping tool by ion nitriding 7−132759
Al alloys, rapidly solidified by electron beam surface melting, struct. and mech. props. 7−93211
Al, N_2^+ ion implantation, surface layer charactn. 7−106681
Al_2O_3:Ti, Zr, Sapphire single cryst., ion implantation, microstruct., friction, hardness 7−78299
C coating films produced by ECR plasmas 7−135552
C film on wall of JIPP-T-IIU tokamak, H, D content 7−103179
CO_2 laser beam fused powder cladding of alloy substrate 7−113791
Cr electrodeposited films, surface modification by ion implantation 7−106689
surface hardening continued
Fe alloy borided layers, hardness, C, Cr and Ni effect 7−100440
Fe, boride coating growth, hardness, crystallographic order 7−86423
Fe cast, damping capacity, treatment, microstruct. 7−138776
Fe, cast, diffusion impregnation with Cr and Al, coating struct. and props. 7−78349
Fe, cast, grey, friction surface hardening by scanning laser beam 7−132760
Fe, cast, seizure resist. rel. to relaxation props. of hardened layer 7−86369
Fe, cast, surface hardening with CO_2 laser rad. using absorbing coatings 7−86415
Fe, cast, white, plasma-arc surface hardening 7−78350
Fe, grey, subject to laser melting treatment, surface quality *(Chinese)* 7−106658
Fe, ion nitriding, nitride form. and growth 7−132810
Fe, pure, nitrocarburizing, compound layer form. and growth, microstructural evolution kinetics 7−138900
Fe surface, laser melting, struct., electrochemical props. *(German)* 7−78378
Mg-Al alloy ML8, fatigue in bending with rot., effect of surface hardening and casting method 7−126235
Ni, yield stress dependence on surface layer thickness 7−78370
Ni-Cr-Co superalloy, diffusion alitized layers, US effect, microstruct., microhardness 7−132800
NiTi coating on Ti, wear resist. 7−132761
SiC, surface modification by ion implantation 7−71344
Ti alloy, complex iron boride coatings, improved wear resist. 7−78347
Ti alloys, α-, pseudo-α-, and $\alpha+\beta$-types, struct. form. in nitrided layers 7−78345
Ti alloys, ion implantation, wear, fatigue and oxidation resist., biomaterial appls. 7−138902
Ti alloys, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7−144595
Ti, electroerosion, high-energy impulse-discharge, in nitrogen, electrode surface effects 7−132814
Ti surface hardness enhancement by ion implantation technique 7−71387
Ti, surface layer modification, large current N^+ ion implantation machine *(Japanese)* 7−126316
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti-Al-Cr-Mo alloy VT3-1, yield stress dependence on surface layer thickness 7−78370
Ti-Al-V (6,4 wt.%), ion implantation, tribological props. 7−119380
Ti-Al-V alloy, component surface condition effect on working capacity after annealing in different atm. 7−126309
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
TiN treated Al-Si alloy, by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
TiO_2 coating on Ti, wear resist. 7−132761
surface-ion beam collisions *see ion-surface impact*
surface ionisation
analytical expressions and amplitude of ionisation distrib. 7−139055
aniline, UV laser-induced surface ionis., TOF mass spectra 7−92786
n-iodopropane, scatt. from diamond (111), kinetic energy induced surface dissociative ionis. 7−77719
metal surface, ions with K-shell vacancies, slow glancing collisions study 7−85921
Al_2O_3-Si_2O-X_2O mixture (X=Li, Na, Rb, K), F_2 and Cl_2 stimulated surface ionisation of alkali metals 7−139036
Be film on Pt substrate, secondary electron spectra K-shell ionisation lines intensity, elastic scatt. effects *(Russian)* 7−70950
Ce, isotope ratios, surface ionis. mass spectrometer determ. 7−136083
H_3, $3p^2A''_2$ metastable state, tot. scatt., surface ionis. and photonis. 7−103588
La, isotope ratios, surface ionis. mass spectrometer determ. 7−136083
surface magnetism *see magnetic surface phenomena*
surface-molecular beam collisions *see molecule-surface impact*
surface phenomena
see also surface.....
see also atom-surface impact; capillarity; crazing; crystal surface and interface vibrations; emissivity; field evaporation; interface phenomena; ion-surface impact; magnetic surface phenomena; molecule-surface impact; sorption; surface acoustic waves
Armco iron, explosive loading, rarefaction shock waves 7−78163
boiling, surface microrelief, effects on heat transfer *(Russian)* 7−83011
α-brass, single crysts., oriented for easy glide, interaction of surface and interior to produce Bauschinger behavior 7−132685
chemical analysis standard data transfer format 7−128549
classical one-component plasma model, surface props. 7−83632
composite materials, surface effects, percolation and compression 7−90930
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
corrugated thin films and surfaces with transition layer, EM modes 7−122795
critical and noncritical roughening of surfaces 7−84193
critical behaviour at surfaces, field-theoretical approach, book contrib. 7−137515
critical phenomena at first-order phase transitions 7−124431
dislocations, inclined, elastic field and electron microscope images, effect of surface *(Russian)* 7−124270
drop evaporation, pure and binary liqs., surface phase mechanism, holographic interferometry meas. 7−76544
electron spectroscopy, perturbations caused by vicinity of surface 7−89304
EM fields, validity of Makinson-Landau argument, dielec. function 7−92092
fatty acid fluorinated monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
FCC (110) surface under stress, structural and thermodynamical behaviour, molecular dynamics simulation 7−76582
fracture surface of toughness test specimen, exoelectron emission *(Japanese)* 7−78188
frictional heating, intensive, thermal diffusivity rel. to time 7−76292
heterogeneous and solid-phase reactions, seminar, Zenigorod, USSR (May 1985) 7−134344
interaction between arrays of line source dilatant centers near free surfaces 7−76200
ionic cryst. surface layer, steady state theory 7−98641

surface phenomena continued
lappability of end gauges and mechanical properties of their near-surface layers 7−108543
liquid crystals, conference, Berkeley, CA, USA (June-July 1986) 7−72700
liquid phase controlled gas-liquid transport process, effect of mechanically generated turbulence and interface films 7−78549
liquid surface, convective struct. form. under laser radiation, holographic interferometry 7−130684
metallic glasses, heavy and light ion bombardment, near-surface and bulk props. 7−142851
metallic particles in infinite dielec. medium, surface plasma oscills. spectrum *(Russian)* 7−84616
metallic surface, pitting under effect of IR laser pulse 7−84023
metals, H permeation, surface effects *(Japanese)* 7−76491
mica surfaces in aq. KNO_3 soln., interaction meas. 7−112428
microasperity deformation, surface, film damage during predisplacement, using contact electr. resist. meas. 7−131220
microelectronic structures, 2D surface erosion and deposition process simulation 7−144572
multicomponent systems, segregation profiles, evaluation from regular soln. model 7−126124
Newns-Anderson model, time-depend., eqn. of motion method, dynamical processes 7−84481
optical second harmonic generation, local and nonlocal nonlinearities 7−103895
order-disorder transition on BCC(110) surface 7−118214
phase transitions, dynamics and struct. evolution 7−124439
phase transitions and critical phenomena, book 7−134379
phospholipid monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
photothermal surface deformation of solids with pulsed laser excitation 7−124330
polymer surface ageing estimation from change of contact angle 7−113748
quantum reflection and dissipation 7−106343
semiconductors, amorphous, conference, Balatonszeplak, Hungary (Sept. 1986) 7−80153
semiconductors, surface screening and short range dielec. function props. 7−98852
small spherical particles, surface atom redistribution 7−104951
solid surface and drop interaction 7−118233
solid surface deformation by intensity modulated laser beam 7−124331
solid surfaces, radiation 7−69750
solidification, pulsed laser control 7−77976
St. 3, explosive loading, rarefaction shock waves 7−78163
steel, austenitic stainless, H diffusion, permeation and surface reaction 7−106679
steel, Ni-Cr-Mo, carburised, with internal oxides near surface, fatigue behaviour 7−71284
steel, Ni-Cr-Mo, failure modes under cyclic torsion rel. to surface flaws 7−100328
steel and cast Fe, wear resistance improvement by surface plastic deform. 7−138847
surface engineering with ion-assisted coatings 7−112039
surface intergranular cracking in large strain fatigue 7−113650
surface science investigations, mag. reson. techniques 7−108613
temperature meas. equipment, accuracy and response-speed improvements *(Russian)* 7−108553
thermoviscoelastoplastic material damage model, appl. to spalling failure 7−75329
thin layer activation, material loss monitoring technique during high temp. surface degradation processes 7−93243
unscreened surfaces of fractal patterns, scaling props. 7−115908
vacuum and surface science, conference, Baltimore, MD, USA (Oct. 1986) 7−140358
vacuum technology and ion physics, conf., Debrecen, Hungary (Oct. 1985) 7−115686
VLSI, surface and interface effects, book 7−80185
Al-Cu-Fe, 2219, two-stage microplastic surface deform. 7−86249
Al-Fe-Mn, microplastic surface deform. 7−78094
C fibres, inverse gas chromatography *(French)* 7−112031
Cd, electric field gradient on 5sp impurities, SC molecular/cluster calcs. 7−112257
Cu, surface electromagnetic waves, broadband IR spectra 7−77558
Cu-Al bronze, worn surfaces, triaxial normal residual stresses, X-ray diffr. 7−126257
Cu-Ge, surface electromagnetic waves, broadband IR spectra 7−77558
Fe, cast, pearlitic lamellar graphite, surface residual stress relief, dislocation density and stacking fault probability obs. 7−106552
Fe spalling failure in cryogenic temp, range, free surface vel. recording 7−78162
Fe-H, neutron irrad., impurity-defect interactions, positron annihilation spectra 7−84015
$Fe_{100-x}B_x$, amorphous, surface crystn., Mossbauer studies 7−76018
$Fe_{80}B_{20}$, crystn. location by conversion electron Mossbauer spectroscopy 7−76023
$Fe_{100-x}P_x$, amorphous, surface crystn., Mossbauer studies 7−76018
GaAs, band-gap photolum., degradation 7−92715
HgCdTe, phys. props., handbook of datareviews 7−134373
Kr surface, premelting, mol. dynamics studies 7−142963
γ-$LiAlO_2$, surface physico chemical props 7−141276
Pd-Si metallic glasses, surface-induced crystn., DSC study 7−111405
$Pd_{77}Si_{23}$ metallic glasses, crystn. kinetics, effect of surface 7−117830
SiC, laser heated surface temp. distribs., expt. determ. 7−111652

surface phonons *see crystal surface and interface vibrations*

surface plasmons
conducting superlattices, optical props., plasma wave effects calcs. 7−144004
double heterostructures, coupled intra- and inter-subband plasmon-phonon modes 7−85030
EELS analysis, plasmon and phonon loss intensities 7−119081
electron beam stimulation of wear-rib plasmons 7−83476
electron gas, 2D, dispersion relation of surface plasmons 7−77074
electron gas, plane-bounded, surface plasmon dispersion relation 7−70228
electron self-energy, metal-metal gap, near metallic slab 7−124895
EM wave plasmon surface polariton fields vs. TIR evanescent waves 7−137806
Faraday rotation, dilute suspension of small particles 7−85602

surface plasmons continued
fast electrons, interaction with metal surfaces, plasmon excitation 7−76798
graphite intercalation cpds. 7−112214
image states at surfaces, binding energies, many-body effects 7−85037
Langmuir-Blodgett films, optical props. 7−125825
liquid layers bound to Au surface supporting surface plasmon-polariton 7−137668
metal film examination using surface plasmon microscopy 7−140743
metal optics near the plasma freq., book 7−80188
metal particle supported systems, surface plasmon frequencies 7−143551
metal-insulator boundaries, corrugated, dispersion anomalies of surface plasmons 7−85027
metal-insulator composites, surface plasmon modes, AC dielec. response and scaling behaviour 7−124894
metal-insulator interface, electrons, interaction with polarisation modes, anal. 7−112215
metal-insulator superlattices, effective medium description, nonlocal effects 7−85129
metal-oxide-metal tunnel diode, surface plasmon dispersion anal., visible, UV and near IR emission 7−131567
metallic small particles, EM props., quantum mechanical approach 7−124893
metallic spheres, plasmon dispersion, dipole mode 7−143383
metallic thin film surface plasma waves with damping, optical effects 7−118393
metals, anisotropic, surface plasmon frequency 7−124899
multipolar response of small metallic spheres, nonlocal theory 7−98849
n-type semiconductors, surface plasmons, influence of depletion and accumulation layers 7−125070
nematic liquid cryst., anchoring props., attenuated total reflection studies, volt. depend. 7−113140
nematic liquid crystal, surface director reorientation 7−91425
nonreciprocal surface waves in magnetic systems, review 7−118789
optical emission from coupled surface plasmons 7−106252
patterned laser induced CVD dynamics 7−118296
polaritons excitation, in attenuated total reflection arrangements, electromagnetic field distribution *(German)* 7−105415
polyethylene films, ion-implanted, with Ag island film substrate, SERS spectra anal. 7−77581
pyridine adsorbed layer on Ag-Pd films, SERS spectra, electromag. quenching and enhancement study 7−77575
quasi-two-dimensional electron systems, excited vibr. and excited states, plasmon and electron-hole pair damping 7−99147
range extension by dielectric layers 7−105437
satellites, photoemission, coupled-channel Schrodinger eqn. 7−125924
semiconducting multilayered materials, polariton struct. and spectral reflectance 7−76782
semiconductor double heterostructures, dynamical screening, collective excitations, electron-phonon interaction 7−112211
semiconductor superlattices, charge density excitations dispersion relation calcs. 7−143574
semiconductor superlattices, plasmon polaritons, dispersion and damping props. 7−143596
semiconductor surfaces, periodic structure evolution due to laser beam interaction 7−131182
semiconductor thin films in the Faraday config., magnetoplasma modes 7−98820
SIS finite layered structures, interface excitations, appl. mag. field effect 7−99220
superlattices, plasmon dynamic form factor, electron and photon scatt. 7−98847
supported metal particle surface plasmon excitation with external electron beam, EELS 7−132392
supported metal particles, generation of surface plasmon excitation by external electron beam 7−132393
surfaces and layered structures, Raman spectrosc. using optical waveguides and surface plasmons 7−77588
22-tricosenoic acid, thin Langmuir-Blodgett films, surface plasmon-polaritons study 7−84590
truncated superlattices, surface magnetoplasmon polariton mode calcs. 7−124876
two-dimensional electron gas, magnetoplasmons, strip geometry depend. 7−118394
two-dimensional systems, nonhomogeneous electrostatic oscillations 7−85050
Ag, electric field enhancement near surface irregularities 7−132284
Ag film, surface plasmon enhanced Brillouin scatt., double reson. effect obs. 7−125759
Ag foils, surface-plasmon excitation by electrons in microlithographically produced channels 7−85909
Ag island films, annealed, surface plasmon spectra, substrate effects 7−98850
Ag particulate over $Al/Al_2O_3/Au$ tunnel junction, surface plasmon mode obs. 7−84725
Ag substrate, coupled to Ag or dielec. sphere, optical response, surface plasmon polariton excitation 7−106160
Ag surface, polystyrene adsorption kinetics, meas. by surface plasmon oscillations 7−98706
Al/insulator/Au light-emitting tunnel junction, two-mode radiation studies 7−143635
$Al-Al_2O_3$-Ag tunnel junctions, surface plasmons, optical detection 7−105725
$Al-Al_2O_3$-Al(Ag), planar tunnel junction photodetectors, electromag. resonance enhanced photoabsorption 7−73417
AlGaAs/GaAs interface, FIR emission from 2D plasmons *(Japanese)* 7−85081
$Al_xGa_{1-x}As$:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
AlO_x oxidised thin films, photoemission EXAFS studies 7−144171
Au thin film/fluid interface, surface plasmon-polariton studies 7−138532
EuO(S)(Se)(Te) (100), EELS spectra 7−113325
GaAs:Be MBE layers, coupled hole plasmon-LO phonon modes, Raman scatt. studies 7−99846
GaAs:H (110) surface; filled and empty states, EELS and photoemission studies 7−143544
GaAs:Si (100), MBE grown, high resolution EELS, As desorption, plasmon and phonon modes 7−125877
n-GaAs/Al Schottky diodes, surface plasma-enhanced internal photoemission 7−118550

surface plasmons continued
GaAs-AlGaAs interface, edge magnetoplasmons under quantum Hall effect conditions 7−99187
Ge amorphous, optical consts. from EELS, Kramers-Kronig anal. 7−144192
^{4}He liq., surface Wigner crystal, coupled plasmon-ripplon resonances and the Debye-Waller factor 7−84416
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
Ni thin films, surface magnetoplasmons, long-range, props 7−138298

surface potential
charge transport meas. in high resistivity materials, xerographic discharge techniques 7−124982
charged dielectric, surface potential decay 7−105654
dielectric, secondary electron emission coeff., space charge form. effects 7−119079
2,6-diphenyl-4-(2,4,6-triphenyl-l-pyridinio)phenoxide, lipid membranes, interfacial solvent props. and surface pot. determ. 7−93664
electron tunnelling, image potential, many-body self-energy formalism 7−118547
fatty acid fluorinated monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
flow resistance of body in rarefied gas supersonic flow, surface pot. and mag. field effect 7−69213
gas-water interface, thin film studies using null ellipsometer 7−80850
graphite (0001), He scatt., ΣY-6D pot. model calcs. 7−92823
image and surface states, inverse photoemission spectra, appl. to Cu (111) and (001) surfaces 7−138538
image force and stopping power of a fast moving ion near a metal surface 7−105649
metal image pot., density functional theory calcs. 7−143545
MIS structures, charge transfer kinetics modelling *(Japanese)* 7−131789
MIS structures, surface pot., screening of fluctuations 7−105710
modulated structure in 1D, surface effects and lock-in transitions 7−84231
pentanol-sodium dodecyl sulphate micelles, surface pot. meas. 7−85043
phospholipid monolayers, colloidal nature, surface press. and pot. meas., domain movement, fluoresc. meas. 7−86683
physisorbed systems, adsorbate densities and surface pots., density-functional approach 7−137717
piezoelectric-semiconductor layered structs., nonlinear acoustoelec. effects at high surface wave intensities 7−70055
polar semiconductor surfaces, ab initio theory, appl. to GaAs (111) (2×2) reconstructions 7−124677
polydichloro-p-xylylene electrets, surface potential isothermal discharge 7−143957
polyethylene film, highly elongated, surface potential decay and residual voltage 7−70697
polymers, conducting, surface pot. decay meas., doping effect 7−70275
polystyrene, thermalisation and trapping of electrons 7−99087
Schottky surface layers, pot. distrib., analytical expression *(German)* 7−105657
Schottky-barrier solar cell characts. *(Russian)* 7−78635
semiconductor surface photovoltage study apparatus with bimorphous piezoelectric Kelvin probe 7−67348
semiconductor surface reconstruction, electrostatic charge interaction effects calcs. *(Russian)* 7−112046
semiconductors, SIMS depth profiling, rapid automatic compensation for charging effects 7−80929
Teflon FEP with saturable deep traps, corona charged, electron transport 7−76971
thin films, defect chemistry and ionic conductivity, thickness depend. anal. 7−84588
water, structure, between metals, Monte Carlo simulation 7−97895
XLPE, thermally stimulated surface pot. meas. using temp. gradient, trapped carrier polarity 7−125601
Ag (110) and (111) surfaces, low energy He atom scatt., effective two-body pot. 7−85932
Ag (111), He inelastic scatt., interaction pot. calc. 7−92792
Ag halide surface, effect on adsorbed Ag clusters, quantum chemical calcs. 7−118274
C monolayer on Ru (001), H surface diffusion, laser-induced thermal desorpt. study 7−137698
Cd_3P_2, surface pot., nonlinear-optical electroreflection meas. 7−85596
CdSe films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7−105641
Cu (100), surface state energy and localisation behaviour in elec. field and image pots. 7−77031
Cu (110), image states and surface states, energy dispersion near surface Brillouin zone boundary 7−85028
Cu (111), He inelastic scatt., interaction pot. calc. 7−92792
Cu surfaces, He atom diffr., theoretical potentials 7−106341
GaAs (-1-1-1), (2×2) reconstructions, related phase transitions, ab initio theory 7−124678
GaAs heterojunction laser diode, potentiometry and scanning tunnelling microscopy studies 7−99169
GaAs, interfaces, STM and potentiometry studies 7−76649
GaAs, surface potential, electron irradiation effects 7−131736
GaAs-AlGaAs heterojunctions, resonant subband-Landau level coupling, cyclotron reson. study 7−138057
Ge surface pot. and photo-memory, dopant effects *(Russian)* 7−77035
H adsorbed layer on LiF (001), vibr. surface states, SCF calcs. 7−137699
HfO_2, dielec. thin film coatings, surface charging in laser damage 7−69753
InSb MIS structures, capacitance-voltage characteristics, deep bulk level effects, computer simulation 7−143631
InSb, photoconductivity, surface photovoltage, deep bulk levels 7−77005
MgF_2, dielec. surfaces and thin films, surface charging in laser damage 7−69753
MgO (001), adsorption of Ar and methane, pot. energy calcs. 7−118231
Na (110), photoemission, calc. 7−119112
Ni (110), image states and surface states, energy dispersion near surface Brillouin zone boundary 7−85028
Ni(115), structure, He diffr. study, hard and soft wall corrugation fns. calcs. 7−92822
Pt (111) surface, CO scatt., electron-hole pair and phonon excitation study 7−144202
SbSI-Si junctions, effective polarisation charges and interface states from HF C-V hysteresis meas. 7−99218

surface potential continued
a-$Se_{1-x}Te_x$ field-assisted thermal hole emission from deep mobility gap states, xerographic dark discharge meas. 7−119115
Si pin diodes, solitary current filaments 7−143591
Si, pulsed laser melting, mol. dynamics calcs. 7−138555
n-Si wafers, oxidised, surface charge and interface trap densities, AC surface photovoltages 7−85116
a-Si:H films, minority carrier diffusion length and surface barrier width determ. from surface photovoltage meas. 7−105641
a-Si:H photoreceptor film, dark discharge props. study 7−143647
a-Si:H thin film surface cell structs., band bending, optical, elec. and photoelec. props. 7−131801
a-Si:H-Si p-n junction, built-in pot., interface pot., and depletion widths 7−77087
SiO_2, fused silica surface, surface charging in laser damage 7−69753
SiO_2-Si system, contact pot. and surface photovoltage kinetics, Kelvin method 7−99207

surface roughness *see surface topography*

surface scattering
used for carrier scattering by surfaces
see also surface conductivity
degenerate semicond. thin films, elec. cond. size effect calcs. under specular surface scatt. conditions 7−99236
metal film with a rough surface, electron states broadening in an external longitudinal magnetic field 7−85138
metal films, granular with rough surfaces, transport props. 7−131813
metal films, surface scattering, Fermi surface geometry effects 7−138080
metallic thin films, frequency depend. current density 7−105731
metallic thin films and wires, electrical resistivity, quantum reflectivity of random rough surfaces 7−131811
metallic thin samples, galvanomagnetic size effects *(Russian)* 7−143434
nonlinear I-V characteristic, thin metal plate with nondiffusely scattering faces *(Russian)* 7−105506
thin metal films, surface scattering process, independence in framework of multidimensional conduction models 7−118594
thin metal wires, longitudinal magnetoresist., simple anal. 7−118461
thin wires, longitudinal magnetoresistance 7−105536
Au, polycrystalline films, SiO_2-covered, temperature-dependent resistivity 7−125150
Au, resistivity, grain diameter and temp. depend. 7−143643
Co-Fe thin films, anisotropic magnetoresist. 7−143640
GaAs-$Al_{0.3}Ga_{0.7}As$:Si quantum wells, electron transport, substrate orientation and impurity effects 7−143572
InAs, heavily n-doped, surface 2D electron gas subband struct., cond. and scatt. mechanisms study 7−99154
$NbSe_3$, Frohlich conduction, size-depend. threshold field, CDW pinning by cryst. surface 7−84850
W, thin plates, conduction electron surface scatt., influence on impedance oscillations in mag. field *(Russian)* 7−98951

surface structure
see also interface structure; surface texture; surface topography
abrasive wear, deform. and fracture 7−86368
acrylic acid, polymerisation on Ag colloids surfaces, SERS spectra anal. 7−74798
adsorbate growth statics on ID surface, surface defect/impurity influence on epitaxial overgrowth struct. 7−98686
adsorbate structure, pulsed laser optoacoustic spectrosc. 7−116011
adsorbed layer, metal single cryst. surface, SERS anal. discussion 7−77569
adsorbed molecules on graphite, struct. and dynamics 7−143233
adsorbed particles, surface migration, concurrent mobile and localised adsorptions 7−76618
aggregation, diffusion-limited, stability of characteristic surface angles 7−142948
alkali halide crysts., surface morphology rel. to evaporation 7−105203
alloys, binary ordering, surface layer atom distrib. *(Russian)* 7−143139
alloys, equilibrium surface composition, anisotropy 7−137675
alloys, high temp., cyclic oxidation, thermal stresses, oxide scale spallation 7−119420
alloys, mechanical props. and struct. modifications w.r.t. pulsed ion beam effects 7−117988
alloys, oxidation, review of key principles 7−119419
alloys, oxide scale, lamellar morphology, comp. 7−86437
aluminide coatings on Ni and Ni base superalloy substrates, corrosion resist. rel. to Cr content 7−86468
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
analytical techniques, conf., Dayton, Ohio (June 1986) 7−108027
anthracene, molecular crystals, surface phonons, electro-optical parameters 7−76589
arachidate chains on Langmuir-Blodgett monolayers on Si (111), orientation 7−143216
arc cathodes, work function and surface structure 7−112431
atom probe FIM, material science appl. review 7−132853
atomic force microscopy, surface profiling, sub 100 Å resolution 7−116006
atomic force microscopy of liquid covered surfaces, atomic resolution images. 7−143137
atomic step contrast in reflection electron microscopy 7−104500
benzene-CO coadsorbed layers Rh, LEED analysis 7−124679
benzoic acid, adsorbed on Ag colloids, SERS spectra study 7−74631
binary alloys, diffusional growth of multiphase scales 7−86432
binary alloys, near-surface layer, ion bombardment-induced compositional changes 7−77741
binary alloys, surface segregation, electronic theory, CPA calcs. 7−91936
2,2′-bipyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7−77582
Bleustein-Gulyaev wave diffr. at periodic struct. of shallow grooves of piezoelec. Cryst. 7−76584
Bleustein-Gulyaev wave diffr. by piezoelec. cryst. surface imperfections 7−76583
brass, special, wear, alloying effects, metallography 7−113732
brass rubbing surface, periodic changes of electron work function rel. to fatigue damage 7−100396
butyloxybenzylidene octylaniline, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7−104543
carbon tetraioide, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
cathode surface charactn. using Raman scatt. 7−126501
ceramic surfaces and subsurfaces, NDE 7−126401

surface structure continued
ceramic wear surface, ion mixing modified, Auger electron spectroscopy 7−112033
chemical analysis, desorpt.-nonreson. multiphoton ionisation mass spectra 7−93462
chemical state depth profiling, SIMS, energy distrib. curves, factor anal. 7−139071
chrome coatings on steel, composition and chemical binding, XPS studies 7−126297
cold neutron scatt. at rough boundary between homogeneous media, surface roughness effects 7−83595
condensed matter physics, open problems 7−76717
condenser surface roughness effect on steam condensation, heat transfer anal. 7−76368
conference, Garmisch-Partenkirchen, Germany (Sept. 1985) 7−95090
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
conversion electron Mossbauer spectroscopy, plasma induced surface modification anal. 7−106068
crystal facet edge, terrace-step-kink model calcs. 7−76590
crystal facet under small supersaturation, steps behavior 7−76566
crystal growth rates, surface disorder and interfacial velocity anisotropy investig. 7−83806
crystal melt growth, surface impurity conc. profiles 7−104603
crystal surface, microdefects, elastic field, X-ray diffusion scatt. *(Russian)* 7−142787
crystal surface diffusion and structural props., effective temp. derivation 7−98638
crystal violet chloride adsorbed layer, on transition metal surface, Raman spectra study 7−77571
crystallographic information, handbook 7−140393
damaged layers of crystals, X-ray scatt. profiles under asymptotic Bragg diffr. 7−69535
defect characterisation, conference, Boston, MA, USA (Dec. 1986) 7−134363
defects., Rayleigh to bulk mode conversion, laser study 7−124668
depth profiling using ^{19}F multicharged ion beam elastic recoil detection 7−106329
diamond, reconstructed (111) surface, periodic MINDO/3 study 7−105218
diamond (100) surface, oxidised, MNDO anal. 7−105212
diamond surface (111), microscopic planar defects, TEM obs. 7−118209
dielectrics, local surface analysis, secondary-ion mass spectrometry 7−131409
dynamics and structures, high resolution He atom scattering 7−144204
electron microscopy, high resolution, N-beam phase contrast effect 7−124047
electron spectroscopy, perturbations caused by vicinity of surface 7−89304
electron-stimulated desorptions, mechanisms and appls. 7−119082
Elinvar, surface layer formation during electrospark treatment, effect on tuning fork sensor characts. 7−78351
erosion and growth of solids stimulated by atom and ion beams, conf., Heraklion, Crete, Greece (Sept. 1985) 7−66803
erosion or growth, surface reproducibility 7−112040
ESCA, angular depend., surface depth profiles construction algorithms 7−143268
EXAFS spectroscopy, method and applications 7−85900
exoemission, optically stimulated, role of O_2 7−106388
extended energy loss fine struct. spectroscopy, surface struct. characterisation 7−144197
FCC (110) surface under stress, structural and thermodynamical behaviour, molecular dynamics simulation 7−76582
$Fe_{70}Cr_{10}P_{13}C_7$ amorphous strip, surface composition, AES studies 7−124648
film surface modification, plasma chemistry 7−91932
flaw detection and sizing using SQUID-based eddy current probe 7−100490
fractal scaling 7−98729
$Ga_{0.47}In_{0.53}As$−InP atomic ordering, TEM study 7−124661
glass fibres, surface molecular orientation layer, IR spectrosc. obs. 7−85613
granitic surface fracture, morphology, geostatistical methods *(French)* 7−120155
graphite, Kish, surface atomic corrugations, STM studies 7−98650
graphite, surface modification by H bombardment 7−104418
graphite, thermal desorpt. and surface roughness following H_3^+ ion beam irrad. 7−76603
graphite (0001) surface, highly asymmetric atomic struct. in STM images 7−118211
graphite surface, high resolution study using atomic force microscope 7−105200
graphite surface, See desorpt., mass spectral and atomic absorpt. study 7−143219
graphite surface, STM images, tip size effects 7−131400
graphite surface reactivity modification by low energy ion bombardment 7−93378
graphite-supported Pt particles, catalysts, X-ray diffr. evidence of preferential orientation 7−118218
H_2 blistering and bubble form. 7−76223
heterogeneity and absolute surface area 7−78543
heterogeneous surfaces, characterisation using photoemission techniques 7−125933
hierarchical random surfaces 7−120959
high fluence He irrad., surface deformation 7−119394
high resolution electron microscopy of surfaces and surface reactions 7−111323
high-resolution UHV electron microscopy on atomic level 7−124654
hydrodesulphurisation catalysts, high resolution TEM and microanalysis studies 7−100677
ice, disordered surfaces, chemical reactivity 7−119573
ice, equilibrium liquid like layer origin 7−118204
ice, physics and chemistry, conf., Grenoble, France (Sept. 1986) 7−95079
ice, surface struct. and evolution, low temp. adsorption studies 7−118205
ice accretions, density and surface struct. 7−131398
ice crystal surface, transition layer ellipsometry 7−98643
ice surface structure just below melting point, ellipsometric study 7−118203
ice-water interface, density and orientation profiles, diffusion consts., TIP4P model 7−137281

surface structure continued
ideal surfaces and interfaces, discrete surface Green's function matching approach 7−91942
ion implantation, on non-semiconductors, conf., China (Jan. 1985) *(Chinese)* 7−72704
ion sputtering profiling process, computer simulation *(Chinese)* 7−70955
ionic cryst. surface layer, steady state theory 7−98641
Kapton-H surface morphology development by sputter etching 7−144578
kinetics of fast steps 7−143160
laser desorption and reson. ionisation mass spectrometry study 7−92787
laser ionisation mass spectrometry, nonresonant multiphoton ionisation of desorbed species 7−137674
laser irradiation, periodic surface structure formation 7−111664
laser micromass spectrometry, surface layer anal. 7−126508
laser-induced periodic structs. 7−69759
layer medium exposed to laser radiation, struct. changes on surface 7−124327
layered imaging of photoacoustic microscopy by phase selecting 7−95656
LEED study of high temp. and laser quenched surface structs. 7−112041
LEED surface crystallography, unconstrained optimisation 7−143164
light element surface comp. anal., Ar^+ elastic bombardment study *(French)* 7−100002
$LiNbO_3$, surface etching studies, RHEED anal. 7−71333
local surface modifications, transition from tunnelling regime to point contract using scanning tunnelling microscopy 7−124049
low energy alkali ion scatt. as surface struct. probe 7−125888
low energy electron microscopy, surface imaging 7−130987
lubricated friction, race of elec. phenomena *(French)* 7−104905
magnetic and nonmagnetic solids, spin polarised electron emission 7−132403
materials surface analysis, AES appls. 7−132384
materials surface modification by plasma bombardment 7−106692
medium-energy electrostatic analyser, surface analysis appl. 7−80946
metal, H conc. with atomic and mol. flux impact, surface depend. 7−77720
metal, ion implantation induced surface hardening, precipitation on bulk defects 7−93195
metal restructuring procedure, Monte Carlo model 7−124657
metal surface, chemisorption, lattice-gas model, review 7−124716
metal surface layer, effect of structure and props. on fatigue resistance 7−86352
metal surfaces, laser irradiated, periodic structures 7−111654
metal surfaces, vibr. resons., pseudoband gaps and geometric struct. 7−124675
metallic glasses, surface damage by Ar ion bombardment 7−76224
metallic island films, ion irrad. and island removal 7−125879
metallic island films, surface and interface struct. 7−124761
metallic surface, ductile, treatment with polisher with embedded abrasive, relationships governing wear 7−86413
metals, disordered, superconductivity, magnetism and surface reconstruction 7−84472
metals, laser irrad., small scale surface relief, polariton mechanisms 7−105211
metals, stretching and bending damage and defect charactn. using polarised light scatt. 7−106200
metals, surface analysis and corrosion inhibition mechanisms 7−119454
metals, surface modification by ion beams, conf., Kingston, Ontario, Canada (Jul. 1986) 7−102001
metals, surface structure, scanning tunnelling microscope and transverse electron focusing studies 7−76570
metals and alloys, high power ion beam modified, struct. anal. methods 7−117985
MgO (100) surfaces, high resolution CTEM studies *(Japanese)* 7−124653
Mo, microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
morphological evolution of surfaces under multiple processes 7−118206
morphology changes due to energetic atom bombardment, geometric methods of anal., review 7−70966
naphthalene crystals, kinetic roughening and step free energy, solid-on-solid model 7−76050
near-surface analysis and depth profiling by FT-IR photoacoustic spectroscopy 7−142912
nondestructive electron probe anal. of depth distrib. of near-surface struct. irregularities *(Russian)* 7−76569
nonmetallic materials, defect properties and processing, conf., Boston (USA), Dec. 1985 7−66833
octyloxycyanobiphenyl, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7−104543
β-paradichlorobenzene, molecular crystals, surface phonons, electro-optical parameters 7−76589
$PbTiO_3$, thermostimulated Ti surface segregation and layer form., intersite diffusion model, Auger spectra 7−98640
Penning ionisation electron spectroscopy *(Japanese)* 7−77711
periodic surface deformations caused by high dose ion bombard. induced lateral stresses 7−84063
permeation apparatus for H_2, UHV 7−121138
PET surface reactivity modification by low energy ion bombardment 7−93378
phase transitions, and surface struct., book contrib. 7−137683
phase transitions and critical phenomena, book 7−134379
photoelectron diffr. data, fixed geometry, scanned photon energy, anal. 7−92838
photostimulated surface reconstruction, oscillatory effects 7−70050
PMMA films, plasma-modified, multitechnique surface spectroscopic studies 7−70040
PMMA/PMAA films, plasma modified, multitechnique surface spectroscopic studies 7−70041
polar semiconductor surfaces, ab initio theory, appl. to GaAs (111) (2×2) reconstructions 7−124677
poly(ethylene oxide), grafted on silica, effect of grafting ratio on chain conformation *(French)* 7−110154
polyacetylene films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polyethylene films, ion-implanted, with Ag island film substrate, SERS spectra anal. 7−77581
polyethylene films treated by corona discharge, wetting hysteresis *(French)* 7−117725
polyimide:Ar^+(Cu^+)(Zn^+) films, ion-implanted, structure and morphology 7−91938
polyimide films, Au containing, surface anal. 7−118208

surface structure continued
polyimide films, surface characterisation, high resolution EELS studies 7−143141
polyimide high resolution ion implantation masks, thin film surface morphology and dielec. props. study 7−69723
polyphenylene oxide, laser irrad., dynamic thermal field creation in surface layers, chem. transform. 7−137400
polyphenylquinoxaline base antifriction self-lubricating plastic, surface layer props. and struct. rel. to friction temp. 7−71307
polypyrrole films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polyselenophene electrochemically grown films, comp., surface morphology and elec. cond. temp. depend. studies 7−118481
PPDPC-DPPC Langmuir-Blodgett film, excimer form., UV fluoresc. spectra anal. 7−100824
PVC-copolyester elastomer blends, abrasive wear resist., SEM obs. 7−132765
pyridine, adsorbed layer on Ag colloids, struct. and solvent effects, SERS spectra anal. 7−77582
quantitative surface anal., secondary neutral and secondary ion mass spectrometry, calibration, comparative study 7−134875
quartz single crystal, surface props. rel. to chemico-mechanical polishing 7−132774
reflection electron microscopy, double contours of monoatomic steps 7−143166
reflection electron microscopy methods for surface structure studies 7−143140
reflection electron microscopy studies 7−95682
rough surface fractal dimension, solid-on-solid interface model, Monte Carlo simulation comment 7−140638
rough surface fractal dimension, solid-on-solid interface model, Monte Carlo simulations comment and reply 7−140639
rough surfaces, fractal characterisation using secondary electrons 7−131403
rough surfaces for solar energy conversion, determ. of characterising parameters 7−143162
roughening transition 7−91931
rubber friction against metal, surface changes, temp.-time method of recording 7−93114
scanning optical microscopy and its applications in materials science 7−132852
scanning tunnelling microscopy, surface reconstruction algorithm 7−91405
scanning tunnelling microscopy, surface studies and instrumentation *(Japanese)* 7−130991
scanning tunnelling microscopy, theory and appl. review 7−130990
semiconductor formation and charactn. on lipid bilayer membranes 7−105204
semiconductor growth, bulk crystals for IR optoelectronic devices 7−132422
semiconductor interface and surface structure, high resolution electron microscopy 7−98661
semiconductor surface reconstruction, electrostatic charge interaction effects calcs. *(Russian)* 7−112046
SERS, polariton based description, local field and chemisorption effects study 7−77568
shot peened surfaces, fatigue behaviour 7−119447
silica synthetic materials, porosity 7−111902
single cryst., disordered surface layers, X-ray diffr. *(Russian)* 7−142533
single cryst. surface layer spacing meas. using ion beam specular reflection 7−137677
single crystal, vicinal free reconstruction, effects of directed mass transport 7−76575
solid surface deformation by intensity modulated laser beam 7−124331
soliton dislocations, structural and dynamical props., He beam scattering 7−137685
spinel, surface step faceting, on low-index planes 7−70052
sputter initiated reson. ionisation spectroscopy review 7−92821
steel, austenitic stainless, Alloy 800 H, oxidation, scale struct. and comp., EPMA obs. *(German)* 7−138908
steel, austenitic stainless, D ion driven permeation, surface struct. and O conc. effects, Auger electron spectra 7−76221
steel, austenitic stainless, nitrided, micrograin struct., Auger electron microprobe obs. 7−100438
steel, austenitic stainless, SCC susceptibility rel to cathodic reduction treatment *(Japanese)* 7−78325
steel, austenitic stainless, strain induced martensite form., surface struct., Mossbauer spectra 7−86174
steel, austenitic stainless, surface layer after irrad. with 2 MeV electrons, X-ray electron spectroscopy 7−84029
steel, austenitic stainless, surface props., effect of plasma nitriding temp. 7−119444
steel, austenitic stainless, surface segregation of P and S, ageing effect 7−70043
steel, austenitic stainless, TiC film adherence 7−144681
steel, C, pitting corrosion, Al cation induction mechanism in NaCl soln. 7−71376
steel, C, sintered, pulsed laser treatment, effect on struct. and props. 7−93194
steel, corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
steel, Cr, laser processed, wear induced hardening 7−100392
steel, Cr bearing, N ion implantation, wear, surface struct., Auger spectra 7−119379
steel, Cr-Mo, erosion, microstruct., tempering effect 7−138849
steel, Cr-Mo, high temp. oxidation, layered oxide struct. 7−106696
steel, double ion implanted with O^+ and Ti^+, surface layer characterisation 7−76158
steel, frictional contact zone embrittlement, S and Cl effect *(Russian)* 7−144561
steel, hot dip galvanizing, struct., addition elements effect *(French)* 7−86478
steel, hot forging due, fractography of high temp. fracture surface *(Japanese)* 7−119349
steel, hydroabrasive treatment, residual stresses 7−71360
steel, low alloy, corrosion by Co_2/brine mixtures 7−126281
steel, low C, corrosion inhibition and accel. in NaCl soln. 7−132794
steel, medium C, laser treatment, surface struct., abrasive wear resist. 7−71390
steel, mild, laser treated hardfaced coatings, cavitation wear resist. 7−138851
steel, N ion implantation, surface struct., wear resist. 7−104775
surface structure continued
steel, Ni-Cr-Mo, nitriding, phase distrib., residual stresses, treatment conditions effect *(French)* 7−86479
steel, stainless, ion implantation of N, C, P phase composition determ. of surface 7−78301
steel, stainless, structure, fracture surface morphology *(Chinese)* 7−86322
steel, stainless, tubing in LWR primary circuit, surface anal., ESCA study 7−129185
steel, surface inclusions, organic film extraction method, EDX and SEM obs. 7−106731
steel, tool, laser melt injection of BN powders, microhardness, struct. 7−78375
steel, tool, W surface alloying by laser, Co addition effect, hardness, microstruct. *(Korean)* 7−138889
steel, W-Cr-V, bearing, N ion implantation, wear, friction, hardness, surface struct. 7−119378
steel hydrogenation in friction with friction plastic, influence of heat treatment 7−71317
steel surface layers, N ion implantation, X-ray diffr. anal. 7−84456
stepped surface, RHEED intensity studies 7−143165
stepped surfaces, adsorption, adsorbate conc. profiles, induced work function change 7−105255
structure determ. using grazing incidence X-ray crystallography 7−142536
substitutional impurity near a surface, segregation energies 7−91941
superalloys, protective coating by diffusion *(French)* 7−86460
surface analysis, etching rate and crater depth, resputtering influence 7−131410
surface analysis for semicond., packaging and storage technology 7−98663
surface analytical techniques, advances and appls. 7−86732
surface bonding concepts, correlation with SEXAFS determined bond lengths and coordination numbers 7−98655
surface engineering with ion-assisted coatings 7−112039
surfaces, wear, adhesion and elec. breakdown phenomena *(French)* 7−104904
Swedish nuclear waste glasses, leachability rel. to comp., SIMS obs. 7−109490
Teflon, FAB-MS spectra, peak pattern development with increasing bombarding dose 7−119594
tetraiodoethylene, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
TGS film and single cryst., surface layer thickness determ., far IR spectra study 7−99815
thin crysts., structural imperfections and surface layer amorphisation, inverse photoemission method appl. 7−125840
transition metal monoxides, preferential sputtering and surface composition 7−119104
transition metal surfaces, bond-order conservation criteria, surface reactions 7−144755
transparent surface, laser action mechanism, impurity redistribution 7−76207
treatment, ion beam processes, review 7−119393
tribology, correl. of scientific studies and practice 7−137462
vertical positron beam for low-temperature surface studies 7−128711
X-ray diffr. under condition of nearly normal incidence *(Japanese)* 7−104494
X-ray standing wave method for surface and interface structure analysis *(Japanese)* 7−70044
XPS, materials science appls. 7−132407
Ag (110), Cl covered, domain wall and incommensurate structs., SEXAFS study 7−143145
Ag surface, ion bombarded, morphology development 7−69784
Ag-Ni, very dil. alloys, surface sandwich segregation, mean field approach 7−105210
Ag-Zn films, electrodeposition, annealing, corrosion in H_2S atmosphere, surface layer charactn. *(Japanese)* 7−78316
Al (100), surface phase transitions, ARPES study 7−144239
Al (110), struct., LEED and mol. dynamics studies 7−143144
Al alloys, adhesive wear, metallography 7−78411
Al alloys, rapidly solidified by electron beam surface melting, struct. and mech. props. 7−93211
Al black films, vacuum deposition, struct. and optical props. 7−132470
Al coating on Ni alloys, phase inhomogeneity, X-ray spectral microanal. 7−124651
Al, corrosion and passivity in dil, Na_2SO_4 solns. 7−132790
Al, high purity foil, AC electrochemical etching in HCl, pretreatment effect *(Japanese)* 7−78322
Al, N_2^+ ion implantation, surface layer charactn. 7−106681
Al, surface, interaction of CCl_4 vapour, adsorption and desorption 7−78546
Al surface, lattice relax., self-consistent linear-electronic-response approach 7−84485
Al:N^+, surface modification by nonmass analyzed N^+ beam 7−105206
Al-Ag, phase transform. mechanism, surface relief obs. 7−132608
Al-Be alloys, surface segregation and oxidation 7−113788
Al-Mg sheet samples, microcrack accumulation due to uniaxial stretching *(Russian)* 7−100332
Al-Mg-Sc (2, 0.4 at.%), surface layer after irrad. with 2 MeV electrons, X-ray electron spectroscopy 7−84029
Al-Si, mild wear during unlubricated sliding, surface structs., debris 7−144560
Al-Si, rapid solidification, excimer laser rad. induced 7−119260
Al-Zn-Mg, powder metallurgy, pitting corrosion, secondary phase precip., microstruct. 7−126282
AlGaAs MBE growth on lenticular GaAs substrates, surface morphology and photolum. props. 7−124797
$Al_{0.3}Ga_{0.7}As$ MBE growth, parameter effects, high energy electron diffr. study 7−92025
$Al_xGa_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Al_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
AlMgSiP alloy, fracture surface, XPS, Auger electron and ion scatt. spectroscopy study 7−138591
AlN, gas-phase epitaxy on sapphire substrates, growth kinetics and struct. 7−70106
AlN, wurtzite struct., nonpolar surfaces, relax. 7−137679
Al_2O_3 anodic barrier layer, scanning tunnelling microscopy 7−91406
Al_2O_3 ceramics, fracture strength rel. to indentation flaw size 7−71275
α-Al_2O_3, morphology, surface relax. importance 7−98642

surface structure continued
α-Al_2O_3, surface step faceting, on low-index planes 7−70052
Al_2O_3:Ti, Zr, Sapphire single cryst., ion implantation, microstruct., friction, hardness 7−78299
β''-Al_2O_3-Na_2O ceramic electrolyte, asymmetric polarisation rel. to comp. and surface treatment 7−92580
γ-Al_2O_3-SiO_2, surface struct., catalysis and electronic state 7−131408
AlZnMg alloys, surface degradation in NaCl solns. under appl. pot. 7−126289
Au (011) surface elastic props. and reconstruction calcs. 7−143167
Au (110), low energy ion scatt., struct. anal. 7−91940
Au (110), surface reconstruction and relax., ion scatt. study 7−143147
Au (110)-(1×2), reconstructed surface struct. determ. using ion backscatt. 7−143149
Au (111), reconstructed, misfit dislocations, double-sine-Gordon soliton 7−112043
Au (111), reconstructed surface, inelastic scatt. of He atoms 7−85935
Au (111) surface, soliton reconstruction 7−124665
Au (334), structure and thermal stability, STM study 7−105198
Au (334) surface in air, scanning tunnelling microscopy 7−70047
Au single crystal (111) and (100) UHV-prepared surfaces, stability in aq. electrolyte, LEED and electrochem. anal. 7−105216
Au, small particles, change in lattice constant in near-surface region 7−76578
Au surface, ion bombarded, morphology development 7−69784
Au, surface structure, scanning tunnelling microscopy obs. 7−73482
Au-Cu ordered surface alloy, atomic and electronic struct., LEED and photoemission meas. 7−84462
Au-ZnO, interaction with He and Ne metastable atoms, effects on electron emission and cond. 7−92295
Au(110), electron total energy calcs. 7−118213
Au(110) reconstructed surface, geometry determ. with first principles total-energy calcs. 7−143138
B, polycrystalline, surface extended energy loss-fine struct. study 7−143153
B_4C, surface layer struct. rel. wear and friction 20-1400 °C 7−106636
Ba-Ti-O system, grain boundary and surface segregation 7−93018
$BaTiO_3$-TiO_2 ceramics, sintering, annealing, surface phase identification 7−91930
Bi, laser-evaporated surfaces, stochastic structures 7−111656
C fibres, inverse gas chromatography *(French)* 7−112031
C fibres and epoxy resin composites, anodic fibre surface treatment, XPS obs. 7−112032
C, heat treated, grinding, struct., X-ray diffr. 7−126272
C surface, with physisorbed Kr, spatial struct. in commensurate-incommensurate transition 7−124439
C0-B glass, melt spun ribbons, surface crystallisation 7−131053
Ca-Ni based alloys, cyclic response in H_2, effect of Al and mischmetal, Auger spectra *(Japanese)* 7−98687
Ca_2AlFeO_5, surface comp., electron and optoacoustic spectroscopy 7−105201
$Ca_3Al_2O_6$, surface comp., electron and optoacoustic spectroscopy 7−105201
CaF_2, fluorine depth analysis using Rutherford backscattering 7−93423
$CdBr_2$ single cryst. growth by zone refining 7−92859
CdHgTe surface and interface defect prodn., AES and XPS studies 7−111541
$Cd_{0.27}Hg_{0.73}Te$, B^+ ion implantation, surface radiation damage 7−91619
CdS, photocond., air-sintered pellets, surface occurrence of impurity phases 7−86500
CdS, polished surface, struct., emissivity and annealing dynamics 7−77775
$CdSe_{1-x}S_x$, anomalous exciton reflection spectra and surface fluctuations 7−76560
CdTe (110), LEED surface crystallography, unconstrained optimisation 7−143164
CdTe, crystallographic effects on photoelectrochemical etching 7−119462
CdTe, epitaxial growth on clean GaAs (100), orientation control, precursor surface reconstruction 7−112120
CdTe pulsed laser evaporated films on glass and (100) GaAs substrates, refl. spectra 7−84560
$CdTe_{0.95}Se_{0.05}$ prepared surfaces, for bulk struct. X-ray charactn. 7−126333
Co black, selective solar absorber surfaces, comparison of different forms 7−144911
Co-Cr, high temp. oxidation rel. to surface applied reactive oxides 7−78330
Co-Cr-Si, isothermal oxidation rel. to dispersed Si_3N_4 particles 7−119430
Co-Cr-W-C, high fluence Ti or N ion implantation, surface layer microstruct. 7−104774
Co-Mn, oxidation, 1273-1473 K, scale struct. 7−106695
Co-Ni, surface segregation, preferential sputtering, Auger spectra computer simulation 7−137575
Co-Rh alloys, high temp. surface segregation, Auger electron spectra study 7−91949
$Co_{70}Fe_5Si_{15}B_{10}$ amorphous ribbons, surface quality and thickness effects, recording head appls. 7−77888
$Co_{50}Ni_{50}$-S system, surface segregation, effect of S 7−76571
CoO single cryst. wafer, growing surface morphology under O chemical pot. gradient 7−119441
CoO-Fe_2O_3 particle series, mag. and struct. props., effect of annealing in N_2 7−85367
Co_3O_4, surface area, crystallite size, X-ray diffr. anal. 7−76563
^{58}Co slow positron beams for probing surface struct. disorders 7−132370
Cr (110), Br and Cl adsorpt. and surface phase transitions, AES, TDS and LEED studies 7−105276
Cr deposited Fe, Ar^+ ion beam mixing surface modification, temp. depend. 7−104878
Cr, oxidation, NaCl induced accel. 7−106698
Cr solar absorber coatings, rough surfaces, characteristic parameters 7−143162
Cr, sulphidation kinetics, scale structures, 973-1173 K 7−119434
Cr-Ni-Cu, laser mixed Cr-Ni films on Cu, microstruct. studies 7−70039
Cr_2O_3 surface props. studies 7−131395
$CrSi_2$ ellipsometry and struct. studies 7−138404
Cu (001), adsorption of S, surface geometry, angle resolved photoemission extended fine struct. 7−98692
Cu (100), Nd adsorption and growth modes, LEED studies 7−118220
Cu (100), spin-polarised LEED surface struct. anal. 7−124656
Cu (100) LEED and low energy positron diffr. meas. 7−70046
Cu (100) with epitaxially grown Fe, LEED meas. 7−84467

surface structure continued
Cu (100)-(2×2), adsorbed S, surface struct., LEED study 7−131421
Cu (110)-(2×1), reconstructed surface struct. determ. using ion backscatt. 7−143149
Cu (111), chemisorbed Cl, struct., X-ray standing-wave technique 7−84502
Cu (111), sharp structures in very LEED studies 7−84470
Cu {111}, C^+-implanted, radiation damage, TEM study 7−111600
Cu alloys, wear resistance and struct. metastability, laser treatment influence, XPS obs. 7−93109
Cu films, atmospheric corrosion 7−78379
Cu, N_2^+ reflected ion survival fraction, rel. to surface struct. 7−92818
Cu Ni, solid solution, small particles, radial distrib. of elements 7−91943
Cu, patina formed in a atmosphere, metallography 7−113762
Cu surface, ion bombarded, morphology development 7−69784
Cu, vapour deposited films, structure and growth morphology, O effects 7−118321
Cu wires, cone shaped, ion beam induced morphological evolution 7−104863
Cu-Au ordered surface, LEED, XPS, ARUPS, Auger effect and ion scatt. studies 7−98656
Cu-Sn-Pb-Zn, bearing bronze, annealed, surface integrity in machining 7−78373
Cu-Zn, diffusion induced recrystn., nucleation 7−100251
Cu-Zn, single- and two-phase brass, sputtering, ion bombardment effects 7−138578
$Cu_3Au(001)$, critical wetting and surface-induced continuous phase transition 7−70049
$Cu_xCo_{3-x}O_4$, surface composition of polycrystalline spinel obtained by thermal decomposition 7−70970
Cu_xNi_{1-x} (110), Cu surface segregation, ion scatt. spectra and photoemission of adsorbed Xe studies 7−92836
CuO_2, ethanol adsorpt. selectivity and sensitivity, surface struct. effects, Pd overlayer effects *(Russian)* 7−76626
CuO_2, H_2O vapour adsorpt. selectivity and sensitivity, surface struct. effects *(Russian)* 7−76626
CuO_2, NH_3 adsorpt. selectivity and sensitivity, surface struct. effects *(Russian)* 7−76626
CuO_2, O_2 adsorpt. selectivity and sensitivity, surface struct. effects *(Russian)* 7−76626
CuO_x solar absorber coatings, rough surfaces, characteristic parameters 7−143162
$Cu_{50}Ti_{50}$ amorphous alloy, XPS study 7−85962
Cu(100) and (110), O adsorption and superstructures, relation with stable stepped Cu faces 7−92001
Cu(410) stepped surface, edge-atom depression 7−131405
Fe (001), chemisorbed O, giant adsorption induced surface relaxation 7−105261
Fe (111), nitridation and oxidation, XPS and AES obs. 7−131407
Fe, boride coating growth, hardness, crystallographic order 7−86423
Fe, cast, grey, laser surface melting, cavitation erosion in distilled and salt water 7−132767
Fe, cast, nodular, surface alloyed with WC, microstruct. and prope. 7−119445
Fe, cast, seizure resist. rel. to relaxation props. of hardened layer 7−86369
Fe corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
α-Fe ferromagnetic films, MBE growth on ZnSe (001), (110) 7−76686
Fe, ion implanted with Ti and C, surface characterisation, XPS and AES studies 7−76568
Fe, ion nitriding, nitride form. and growth 7−132810
Fe on Cu (100), closely-lying energy states, magneto-optic and photoemission meas. 7−143875
Fe, paramagnetic, dilute impurities, surface segregation and electronic struct. 7−84301
Fe, pure, nitrocarburizing, compound layer form. and growth, microstructural evolution kinetics 7−138900
Fe surface, laser melting, struct., electrochemical props. *(German)* 7−78378
Fe surfaces, vapour phase corrosion inhibitors interaction, ellipsometry 7−119456
Fe:N_2^+, ion beam implantation, struct., Auger electron and photoelectron spectra 7−132383
Fe-Al alloys, oxidation, surface segregation of AlO_x, S effects *(French)* 7−71371
Fe-B thin films, amorphisation during B^+ ion implantation *(Russian)* 7−91450
Fe-Cr-Ce, high temp. oxidation, protective oxide scale morphology and adhesion 7−119453
Fe-Cr-Mo (100), O-induced Fe surface segregation, AES studies 7−144409
Fe-Cr-Mo-P-C alloys, vitrification by laser surface melting treatment 7−86487
Fe-Si (10 at.%) single cryst. with graphite overlayer, desegregation kinetics, AES study 7−84515
Fe-Si alloy single crystals, orientation dependent surface segregation 7−78029
Fe-Sn (1.3 wt.%), (111) surface, Sn segregation, struct. transitions 7−143154
$Fe_{80}B_{20}$, surface extended energy loss-fine struct. study 7−143153
$Fe_{82}B_{18}$ rapidly quenched amorphous ribbon, surface struct. and catalytic activity 7−84453
$Fe_{78}B_{13}Si_9$, metallic glass, surface oxidation, annealing, AES obs. 7−106709
$Fe_{67}Co_{18}B_{14}S_1$ metallic glass, surface oxide layers, AES and XPS studies 7−143161
$Fe_{67}Co_{18}B_{14}Si$ metallic glass, struct., Mossbauer spectra, electrochemical props. 7−100450
$FeNi_3$ (100), (110), (111), surface lattices, dynamical characteristics 7−84479
$Fe_{40}Ni_{40}B_{20}$, metallic glass, effect of H^+ irradiation, on surface morphology 7−124343
$Fe_{40}Ni_{40}B_{20-x}Al_x$ metallic glasses, crystn., influence of Al 7−76029
FeNiBSi-based metallic glasses props., process parameters depend. 7−144565
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ amorphous ribbon alloy, laser radiation enhancement of corrosion resistance 7−71369
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, H_2 blistering and bubble form. 7−76223
α-Fe_2O_3, morphology, surface relax. importance 7−98642
γ-Fe_2O_3 powders, particle perfection influence on mag. props. 7−85374

surface structure continued
FeTi, activation for H absorption 7−105045
Fe(100), oxidised, adsorbed O layers, surface struct. anal. by low energy ion scatt. 7−91951
GE (100), surface struct., study by He diffraction 7−118212
GaAs (-1-1-1), (2×2) reconstructions, related phase transitions, ab initio theory 7−124678
GaAs (001), surface disorder-induced Kikuchi features in RHEED 7−143142
GaAs (100), atomic struct. of reconstructed surfaces 7−143152
GaAs, (100) and (111) B faces, domains, facets and reconstructions 7−137671
GaAs (110), atom selective imaging by scanning tunnelling microscope 7−98653
GaAs (110), H adsorption, effect on surface props. 7−131435
GaAs (110), orientation depend. of H_2S adsorption, defect-titration study 7−98705
GaAs (110), surface geometry, determ. using total energy and force methods 7−91950
GaAs (110), surface reconstruction calc., energy model 7−98635
GaAs (110), Xe hyperthermal scatt., stochastic classical trajectory simulations 7−138568
GaAs (111), (2×2) reconstructions, ab initio theory 7−124677
GaAs, anodic oxides, phase composition, frustrated multiple internal reflection 7−78391
GaAs, capless annealing at high temps., As ambient conditions preventing surface degradation 7−132831
GaAs epitaxial layers, crystallographic defect form. during MOCVD growth 7−104759
GaAs films, initial stages of MBE growth on Si (100) 7−84600
GaAs films, MBE on Si, structural and optical props. 7−84599
GaAs films grown by MOMBE, defects 7−76673
GaAs, ion bombarded, defects, annealing effects, Raman studies 7−138465
GaAs, ion bombarded, phonon shifts, Raman spectra meas. 7−91959
GaAs, ion implantation, disordering, oxide film thickness 7−76183
GaAs, laser-stimulated desorption, of O_2 and C compounds 7−76617
GaAs MBE, surface defects anal. 7−76659
GaAs MBE growth, parameter effects, high energy electron diffr. study 7−92025
GaAs MBE growth on Si(100), initial stages and domain struct. 7−70137
GaAs passivation in N multipolar plasma, photoemission study 7−119469
GaAs, patterned MBE layers on Si, microstructural characterisation 7−137729
GaAs, substrate, isothermal contact with multicomponent liq. phase, Auger anal. 7−76576
GaAs substrates, in situ deoxidation by HCl gas, MBE appl. 7−71414
GaAs surface, Ar ion irrad., struct. anal. 7−124649
GaAs, surface struct. after oxidation, asymptotic Bragg X-ray diffr. 7−76561
GaAs wafer, altered phase due to Nd:YAG laser local heating effects 7−91650
GaAs:In, substrate for thin film appls., growth of MBE GaAs layers 7−91937
GaAs:Si, LPE, temp. difference method 7−126030
GaAs/Ge composite layer growth on Si and SiO_2/Si substrates 7−84601
GaAs-AlGaAs, etch and etch stop reactions in dichlorodifluoromethane plasma 7−119463
GaAs-on-Si, MBE grown, ion implantation and annealing props. 7−143284
$GaAs_{0.6}P_{0.4}$, anodic oxides, phase composition, frustrated multiple internal reflection 7−78391
$GaAs_{1-x-y}Sb_xP_y$ epitaxial layers, direct obs. of high resist. regions 7−85150
$Ga_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Ga_xIn_{1-x}As_yP_{1-y}$−InP, atomic ordering, TEM study 7−124661
GaP (111)B surface disordering by Ar^+ bombardment, Auger, disappearance pot. and ionisation spectra studies 7−76219
GaP, anodic oxides, phase composition, frustrated multiple internal reflection 7−78391
GaP single cryst. wafer face comp., X-ray photoemission obs. 7−124652
GaP, substrate, isothermal contact with multicomponent liq. phase, Auger anal. 7−76576
GaP-Au, interaction during heat treatment in vacuum 7−131404
GaP(111), surface struct. modification, electronic excitation induced, laser pulses 7−118216
GaSb (111), surface struct., X-ray determ. 7−124664
GaSe, surface structure, scanning tunnelling microscopy studies 7−76579
Ge (100), ab initio molecular dynamics 7−98652
Ge (110) mechanically damaged (110) surface, polarised anisotropic electroreflectance spectra study *(Russian)* 7−76581
Ge (111), continuous phase transition, LEED studies 7−84458
Ge (111), surface termination by adsorbed As, X-ray angle-resolved photoemission meas. 7−125920
Ge epitaxial crystallisation on Si using electron beam evaporation and recrystallisation techniques 7−84605
Ge, epitaxial growth, on Si, surface reconstruction 7−76577
Ge surface, 2D determ. of atomic positions, three-beam X-ray standing wave anal. 7−69541
H_2O, at surface, Monte Carlo calcs. 7−83621
^{4}He crystal-superfluid interface, roughening transitions and shape relax. time study 7−105179
^{4}He, surface structure, growth kinetics 7−76536
HgCdTe, laser annealing, effects on mercury loss and surface damage 7−131542
Hg_2Cl_2 single crystals, surface layers 7−112034
HgMgTe, laser annealing, effects on mercury loss and surface damage 7−131542
HgTe, epitaxial layers, chem. composition, effects of surface treatment 7−84460
HgZnTe, laser annealing, effects on mercury loss and surface damage 7−131542
In-Pb alloys, solid and liquid states, surface segregation 7−84471
$In_{0.52}Al_{0.48}As$ MBE growth, parameter effects, high energy electron diffr. study 7−92025
InAs (001) surface, commensurate and incommensurate transitions, lattice consts., chem. pot. 7−124659
InAs (100) SIMS analysis of surface prep. 7−86491
InAs (111), In island form. due to ion sputtering *(Chinese)* 7−76654
surface structure continued
InAs, substrate, isothermal contact with multicomponent liq. phase, Auger anal. 7−76576
$In_{0.53}Ga_{0.47}As$ MBE growth, parameter effects, high energy electron diffr. study 7−92025
InGaAsP, LPE growth on GaAs substrates 7−124779
InP (100) 4×2, surface reconstruction, H chemisorption 7−76567
InP (111), dangling bond electronic state 7−85959
InP wafers, polishing processes, damaged layer evaluation, X-ray diffr. studies 7−106722
InP:Zn surfaces, Zn diffusion, crystal defects 7−118167
InSb (110), atomic geometry, LEED study 7−98658
InSb (111), In island form. due to ion sputtering *(Chinese)* 7−76654
InSb (111), reconstructed surface structure, synchrotron X-ray diffr. study 7−142536
InSb, lapping, abrasive surface damage, X-ray Laue diffraction 7−76573
InSb single crystals, effect of laser radiation in liquid N_2 medium *(Japanese)* 7−132382
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
Ir (001) surface reconstruction by pulsed-laser heating, FIM study 7−118210
Ir (110), surface reconstruction, movement of atoms 7−84466
Ir (110), surface reconstruction and relax., ion scatt. study 7−143147
Ir (110)-(1×2) reconstructed surface, (2×2) S adsorbed layer, structure 7−105266
Ir (111), angle resolved LEED study, effects of spectrometer aperture and loss profile 7−98654
Ir (111), H chemisorpt., desorption mass spectra, LEED and contact pot. study 7−137701
Ir single cryst. surface reconstructions, FIM obs. 7−143148
Ir surface, ion bombarded, morphology development 7−69784
Ir surface reconstruction, FIM study 7−143150
Ir surface reconstruction, atomic steps and atomic structs., direct FIM obs. 7−143151
KCl (100) surfaces, growth spirals, step vel. meas., molecular beam method 7−83815
Kr surface, premelting, mol. dynamics studies 7−142963
$LaMO_3$ (M=Cr,Mn, Fe, Co, Ni, Rh), nonstoichiometric surface behavior, XPS study 7−70971
$LaNi_5$, hydrogen cycling, near surface modifications 7−98644
$LaNi_{5-x}Al_x$, hydrogen cycling, near surface modifications 7−98644
$LaNi_3Mn_2$, surface props., H_2 storage material 7−98645
$LiNbO_3$, (0001) substrate surface, electron diffr. studies of phase formation 7−137670
$LiNbO_3$, Czochralski grown, solid-liq. interface micromorphology 7−98674
$LiNbO_3$:Fe, selective chem. etching, effects of dopant 7−106642
MgF_2, fluorine depth analysis using Rutherford backscattering 7−93423
MgO (001), adsorption of Ar and methane, pot. energy calcs. 7−118231
MgO, Pd particles form., refl. electron microscopy obs. 7−143140
MgO, surface struct., electron microscopy studies 7−124047
MgO surface struct., in situ deposition of Cu and Pd particles, scanning reflection electron microscopy study 7−105219
Mn-Nb, high temp. sulphide corrosion, scale growth and morphology 7−86438
MnO(100), thermally induced surface reconstruction 7−105217
MnZn ferrite thin film with soft mag. props., sputter prep. 7−85389
Mo (110) surface, defect interactions with positrons 7−113311
Mo, pseudoblistering, D_2^+ ion irradiation, surface cleanness 7−84073
Mo surfaces, high energy α-bombardment, SEM obs. 7−104864
Mo thin films, cone form. following Ar^+ ion bombard. 7−85931
Mo-Zr-W, ion implantation of N, C, P phase composition determ. 7−78301
MoS_2 (001), current image diffr. patterns 7−98657
MoS_2, lithographically textured, edge surfaces 7−124663
$MoSi_2$, ellipsometry and struct. studies 7−138404
NaCl (100) single crystal, radiational and thermal annealing of surface 7−137410
NaI(Tl) hardened phosphor crysts., surface struct., etching studies 7−98639
Na_2O-MgO-CaO-SiO_2 glass, dissoln. in aq. HF soln. 7−100408
Na_2O-SiO_2-Al_2O_3 glass, surface composition, chemical and thermal treatment 7−131406
Nb, ion implantation of N, C, P phase composition determ. 7−78301
Nb, microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
Nb surface oxides, angle resolved XPS and supercond. studies 7−113352
NbN single cryst. films, surface stability, effect on superconducting props. 7−112030
NbN(C) surface oxides, angle resolved XPS and supercond. studies 7−113352
2H-$NbSe_2$, surface corrugation, scanning tunnelling microscopy studies 7−70042
Ni (001), c(2×2)O overlayer growth to saturated NiO, surface struct., X-ray photoelectron diffr. study 7−143157
Ni (001), ordered surface, effects of inelastic scatt. on He diffr. lineshapes 7−98659
Ni (001), with adsorbed Se, surface phases, refl. electron diffr., AES, transfer matrix scaling studies 7−84514
Ni (100), (113) and (115), step form. and roughening transition temp. calcs. 7−143146
Ni (100), adsorbed C, SEXAFS studies of C K-edge 7−85898
Ni (110), adsorbed H, LEED studies 7−118264
Ni (110)-(2×1), reconstructed surface struct. determ. using ion backscatt. 7−143149
Ni corrosion under V_2O_5 coating, oxide scale morphological charactn. using AES, SEM and X-ray diffr. *(French)* 7−93193
Ni, epitaxial growth, RHEED beam intensity oscills. 7−84577
Ni, ion implantation of N, C, P phase composition determ. 7−78301
Ni particles, ultrafine, oxidation, appl. of Fourier transform. IR photoacoustic spectroscopy 7−113775
Ni, passivation in aq. solns., surface film comp. 7−132791
Ni, passivation in aq. solns., electrochemical polarisation obs. 7−132792
Ni surface, ion bombarded, morphology development 7−69784
Ni:Si, ion implantation, phase stability rel. to radiation damage, 25-650°C 7−104867
Ni/Si(111) $\sqrt{19}$ surface, surface modifications induced by low overage adsorbates 7−124699
Ni-Al, ion implantation, equilib. phase diagram, conc. profiles, Auger spectra, IR emissivity obs. 7−106483

surface structure continued
Ni-Al coating, β-phase instability, scale resist. of surface layer 7−78344
Ni-B glass, melt spun ribbons, surface crystallisation 7−131053
Ni-Cr, high temp. oxidation rel. to surface applied reactive oxides 7−78330
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
Ni-Cr-Co, alloy 617, 72 *(German)* 7−138908
Ni-Cr-Co superalloy, diffusion alitized layers, US effect, microstruct., microhardness 7−132800
Ni-Cr-Co superalloy, laser beam irrad., hot corrosion 7−119457
Ni-Cr-Si-Ce, oxide scale adherence rel. to Ce additions 7−78328
Ni-Pt single crystal alloys, multilayer segregation 7−105214
NiAl (110), multilayer rippled surface structure, medium energy ion scattering study 7−105213
NiAl coatings, oxidation resist. on Ni base superalloys, Hf effect *(French)* 7−86469
NiCr thin films, elec. props., substrate surface roughness effect 7−118596
Ni_xCu_{1-x} alloys, H_2 adsorbed, surface segregation, thermodynamics 7−76596
NiO, growth in electrolyte cells, structural depend., XANES and EXAFS spectra anal. 7−68341
NiS solar selective absorbing films fabrication by dip and dry technique 7−126643
$NiSi_2$ epitaxial film, surface struct., low energy ion scatt. studies 7−118219
$NiSi_2$ layers grown on Si (111) by MBE and SPE 7−76679
Ni(111), adsorption and desorption of H_2, role of surface defects 7−131443
Ni(111), ion neutralisation spectra calc., contrast with W(110) 7−144217
Ni(115), structure, He diffr. study, hard and soft wall corrugation fns. calcs. 7−92822
Pb (100), surface phase transitions, ARPES study 7−144239
Pb, laser-evaporated surfaces, stochastic structures 7−111656
Pb-Cd-Al-Li fluoride glass, resistance to chem. degradation by water, low loss optical fibre appls. 7−71336
PbO_2, Kr-bombardment induced secondary ion emission spectra study 7−85915
PbS, galena single crystals, cleaved surfaces, sublimation 7−69884
$Pb_{0.8}Sn_{0.2}Te$ laser-doped crysts., ESCA obs. of comp. of near-surface domain 7−133018
$PbTiO_3$ (100), surface segregation of Ti, 300-1200 K 7−76574
Pd (100), O dissociative adsorpt., nonequilib. percolative c(2×2) ordering, 8-site model 7−137700
Pd (100), O metastable ordered surface phase, diffusion/adsorption competition 7−124704
Pd (110), clean and C contaminated, LEED studies 7−84468
Pd (110)-(1×2), reconstructed surface struct. determ. using ion backscatt. 7−143149
Pd catalyst, S-poisoned, analytical electron microscopy with dedicated STEM 7−100676
Pd surface, ion bombarded, morphology development 7−69784
Pd-Ag, surface struct. and segregation, calc. 7−143155
Pd-Au, surface struct. and segregation, calc. 7−143155
Pd-Cu, surface struct. and segregation, calc. 7−143155
Pd-Ni, plated, tribological props., roughness, hardness *(German)* 7−138855
Pd_2Si film on Si (100), struct. props., scanning tunnelling microscopy and PES studies 7−76648
Pd(111), adsorbed H, theory of subsurface occupation, ordered structures and order-disorder transitions 7−70080
Pt (011) surface elastic props. and reconstruction calcs. 7−143167
Pt (100), adsorbate covered, nucleation and growth, STM obs. 7−76625
Pt (100), H_2 adsorbate induced surface reconstruction, effect on TDS 7−84512
Pt (110), surface reconstruction, movement of atoms 7−84466
Pt (110)-(1×2), reconstructed surface struct. determ. using ion backscatt. 7−143149
Pt (111), struct.-property relations for surface processes at metal/soln. interface 7−143158
Pt electrodes, preferred orientation, fast square wave potential perturbations 7−106803
Pt overlayers on NB (110), electronic struct., chemisorption of CO, surface struct., photoelectron spectra, LEED, AES studies 7−99146
Pt particles on γ-Al_2O_3 support, struct., TEM and STEM studies 7−137672
Pt particles supported on a TiO_2/Ti plate, scanning tunnelling microscopy 7−91406
Pt single cryst. surface reconstructions, FIM obs. 7−143148
Pt supported catalyst particle surface morphology, heat treatment effects, TEM study 7−105215
Pt surface reconstruction, atomic steps and atomic structs., direct FIM obs. 7−143151
Pt surfaces, vapour phase corrosion inhibitors interaction, ellipsometry 7−119456
Pt-Ni, surface sandwich segregation, mean field approach 7−105210
Pt-Rh (111) and (100) surfaces, plasma induced erosion 7−113780
$Pt_{0.5}Ni_{0.5}$ (110), surface sandwich segregation, multilayer relax., LEED meas. 7−105207
PtRh:S alloys, surface segregation, cosegregation with S impurities, composition depth profiles 7−119100
PtSi, ellipsometry and struct. studies 7−138404
Pt(100), ethylene adsorption, evidence for vinylidene formation 7−131444
Re (1010), adsorbed Na and Li, struct., work function, thermal stability 7−76619
Re with epitaxially grown Eu crystallites, surface atomic struct. 7−143265
RePd sputtered alloys, work function w.r.t. surface comp., appearance pot. spectra studies 7−143555
Rh (110), H_2 adsorption, isotope effects 7−131418
Rh (111), detection of neutral sputtered atoms, ejection, surface struct., energy and angle resolved meas. 7−138569
Rh (111) with adsorbed O, detection of neutral sputtered atoms, ejection, surface struct., energy and angle resolved meas. 7−138569
Rh surface, NO and CO adsorption, reactions of NO with H and CO, surface struct. effect 7−71521
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
Rh_2O_3-metal interface compositional anal., image atom probe mass spectroscopy 7−131394
Ru (0001) surface, struct. props. calc. 7−70045
surface structure continued
Ru (001), Fe overlayer epitaxial growth, CO and NH_3 adsorpt., AES, TDS and LEED studies 7−105337
Ru(001), adsorbed CO, surface imperfections, influence on photodesorption of O^+ ions 7−91996
S overlayer on Ge (111), surface struct. determ. by angle-resolved photoemission fine struct. 7−91985
Si (III), vicinal surface, facetting induced by Pd *(French)* 7−112035
Si (001), 2×1 reconstruction, bilayer-high steps 7−98648
Si (001), RHEED intensity calcs. for stepped surfaces for interpretation of oscills. during MBE growth 7−84464
Si (001), vibr. excitations, surface reconstruction 7−84476
Si (001)2×1 vicinal surface, monolayer and bilayer high steps 7−124655
Si (100), atomic steps, electron diffr. studies 7−143143
Si (100), clean surfaces, step structures, annealing effects, UHV-BEM studies 7−98649
Si (100), electron irradiated, deposition of Si films 7−77832
Si (100), nucleation of GaAs, multilayer step formation after As adsorption 7−105309
Si (100), order-disorder transition *(Japanese)* 7−118215
Si (100) and (111), atomic scale defect electronic struct. and STM imaging 7−112037
Si (110), vicinal, reconstructed, domain form., LEED obs. 7−143163
Si (111), adsorbed Br, lattice location, transmission channelling studies 7−143191
Si (111), cleavage surface, (2×1) reconstruction processes 7−118207
Si (111), dimer-adatom-stacking fault model, calcs. 7−143156
Si (111), imaging electronic surface states in real space 7−143546
Si (111), N_2 chemisorpt., ion scatt., LEED and temp.-programmed desorpt. studies 7−143199
Si (111), new reconstruction, STM obs. 7−76580
Si (111), Pb^+ ion implantation, surface layer struct., after high temp. treatment 7−84461
Si (111), roughening under high temp. thermal cycling 7−124646
Si (111), single cryst. electrode, surface structural symmetry, electrochem. process effects, SHG investig. 7−91953
Si (111), terrace size and edge roughness high resolution surface-sensitive electron diffr. meas. 7−91934
Si (111), topographies obtained by scanning tunnelling microscopy, effect of tip morphology 7−137676
Si (111) and (001), electronic and geometric struct., STM studies 7−77034
Si (111) and (100) surface termination by adsorbed As, X-ray angle-resolved photoemission meas. 7−125920
Si (111) surface, kink-site form. energies using semiempirical pot. energy function 7−143176
Si (111) surface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
Si (111)$\sqrt{3}\times\sqrt{3}$-Bi, atomic structure, X-ray photoelectron diffraction 7−137713
Si (112), scanning tunnelling microscopy study 7−98660
Si (331), chemisorption of O_2, surface reconstruction, LEED, UPS, AES *(Chinese)* 7−124682
Si, amorphous surface layer form. by ion bombardment, crystallisation 7−84457
Si, denuded zone formation, generation lifetime *(Korean)* 7−137954
Si, dopant distrib., cathodoluminescent monitoring, surface oxide layers 7−77660
Si film, on amorphous substrate, X-ray diffraction, total external reflection 7−84578
Si initial oxidation states under electron bombardment, AES studies 7−119470
Si ion implanted, surface defect state, contact angle and wetting meas. *(Russian)* 7−124647
Si, lapping, abrasive surface damage, X-ray Laue diffraction 7−76573
Si, laser-stimulated desorption, of O_2 and C compounds 7−76617
Si, oxidation stacking faults at mechanically induced weak surface defects 7−69718
Si, oxidation-induced stacking faults, length, density and dislocation interactions model 7−98181
Si, porous, specific surface, effects of anodic reaction and high temp. annealing 7−93222
Si single cryst. surface, struct. after ion-chem. etching 7−105199
Si single cryst. wafers, cut surface morphology, environmental fluids and temp. effects 7−105202
Si, single crystal, amorphisation, millisecond pulsed laser irradiation 7−76206
Si surface, atomic struct. and reconstructions, direct obs. by FIM 7−84459
Si, surface, laser-induced form. of longit. microrelief 7−85903
Si surface, scanning CW CO_2 laser beam irradiated, dislocation structure 7−111661
Si surface, small-scale capillary wave struct. generated by picosec. laser pulse irrad. 7−70048
Si surface (111), Ar ion etching, chemically bonded states, Auger electron spectra 7−119089
Si surface topology development during ion sputtering 7−106336
Si surfaces, atomic structures, FIM studies 7−137673
Si V-groove structure geometry obs. by SEM, sensors appl. 7−130992
Si wafers, thin film chem. growth processes, integrated system 7−138678
Si: As (111) surface, As terminated, electronic and atomic struct., passivation 7−98651
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
Si:B, H, surface layer swelling on H implantation at different doping concentrations 7−124350
Si:B implanted laser-annealed layer, impurity distrib. and unidirectional lattice contraction, dechannelling study 7−76253
Si:Fe, surface analysis, reson. ionisation of sputtered atoms, TOF mass spectrometry 7−89298
Si:Ni, doping props. *(German)* 7−76817
Si:O, metal impurity surface segregation, O effects 7−124528
Si:P, SHG, total freq. with refl., cryst. struct. randomisation 7−90713
Si/Pt interface, heat treatment form., XPS investigation 7−131460
a-$Si_{1-x}Ge_{0.2}Si_{0.8}$, interfacial superstructure, synchrotron X-ray diffr. study 7−84545
SiC, oxidized polycrystalline surface, adsorbed hydrocarbons, angle resolved XPS 7−98634
SiC, polytypic struct., electron probe microanalysis 7−76101
α-SiC powders, plasma exposure, surface morphology 7−71335
SiC single crystals, surface struct., effect of machining 7−71359
SiC surfaces, ion irradiation effects 7−117981

surface structure continued
SiCoTa dilute alloy, Ar^+ sputtering and surface composition changes *(Chinese)* 7−85920
Si(III), surface atomic displacements, X-ray scattering study 7−131401
Si_3N_4 ceramics, ion beam modified, friction and wear 7−119381
Si_3N_4, hot pressed bars, oxidation, cristobalite form., EPMA obs. *(Japanese)* 7−132786
Si_3N_4 plasma-enhanced CVD films in $Si/SiO_2/Si_3N_4$ system, ESCA/AES analysis 7−131483
Si_3N_4, reactive ion-plasma sputtering, on Si 7−86501
Si_3N_4 surfaces, ion irradiation effects 7−117981
SiO_2 glass, surface, struct. anal., mol. dynamics computer simulation 7−91935
SiO_2, native oxide on Si surface, TEM and STM studies 7−137678
SiO_2, reactive ion-plasma sputtering, on Si 7−86501
SiO_2-PbO-Al_2O_3-B_2O_3, breakdown voltage, surface composition 7−137681
SiO_x film on NaCl (001), struct. and growth morphology 7−118322
SiO_x obliquely deposited layers, surface struct. and liq. cryst. alignment 7−124079
Si(111), long range ledge-ledge interactions, surface stress tensor 7−118217
n-Si(111), surface composition, rel. to adsorption of Gd, AES study 7−91992
Si; vicinal (111) surface, phase separation 7−124660
SnO, Kr-bombardment induced secondary ion emission spectra study 7−85915
SnO_2, Kr-bombardment induced secondary ion emission spectra study 7−85915
SnO_2, mech. activated, interaction with CO 7−93376
Steel, Cr-Mn, electron flux irrad., surface layer local anal. 7−124650
Ta foils, blistering during α-particle bombardment 7−69777
Ta, microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
Ta thin film, oxidation, grain boundary particle effects 7−119451
Ta_2O_5, sputter profiling, energy distrib. curves, factor anal. 7−139071
TbO_x, dynamic edge and surface processes, HREM studies 7−98662
Ti alloys, α-, pseudo-α-, and $\alpha+\beta$-types, struct. form. in nitrided layers 7−78345
Ti alloys, ion implantation, wear, fatigue and oxidation resist., biomaterial appls. 7−138902
Ti films on nonwetted sapphire, laser produced bond percolators, surface free energy 7−98667
Ti, large current N^+ ion implantation machine *(Japanese)* 7−126316
Ti, oxidation kinetics in laser irrad., scale phase transform. 7−144585
Ti, oxide film form. in brine, corrosion, γ-radiation effect 7−78305
Ti single crystal, TiC epitaxial layer formation, LEED and AES studies 7−124785
Ti surface, scanning tunnelling microscopy 7−91406
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti-Al-Nb-Ta-Mo, fractal charactn. of fractured surfaces 7−113648
Ti-Al-V-Zr, fractal charactn. of fractured surfaces 7−113648
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
TiC coated Mo, fusion limiter material exposed to high heat flux, surface anal., SEM, AES, EPMA 7−137684
TiC coating layers on graphite PDX wall armor tiles, surface damage and redeposition investig. 7−67990
TiC-NbC-TaC-WC-Co cemented carbide, gamma phase layer form., growth kinetics and microstruct. rel. to sintering atmosphere 7−77929
$Ti_{62}Cu_{33}P_5$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7−144615
TiFe, oxidised layers, semiconductor photoelectrodes, surface composition and topology 7−98646
TiFe-misch metal, hydrogen storage material, surface props. 7−98647
TiN coatings, surface struct. changes during diamond burnishing 7−86414
$Ti_{60}Ni_{36}P_4$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7−144615
TiO_2 (110) surfaces, interaction with SO_2, UPS, XPS and LEED studies 7−91986
TiO_2 films, n-type semicond., sol-gel prep., photoelectrochemical props. 7−131710
TiO_2 films, thermally grown, surface struct. 7−113776
TiO_2, ion sputtering, restoration of real conc. profiles, Auger spectra 7−77739
U, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
UNiAl, electron binding energies, oxidation behaviour 7−99160
UO_2, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
U_3O_8, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
V-Hf-Cr, He ion irrad., blistering and sputtering, 200-600°C 7−142847
VO_2 films, metallic phase conductivity meas., growth technique and structure effects 7−118367
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7−125979
V_2O_5, laser-evaporated surfaces, stochastic structures 7−111656
V_2O_5, surface struct., Fourier transform IR spectral investig. 7−84454
W (001), c(2×2) reconstruction, distortion and phonon spectrum calcs. 7−105209
W (001), surface electronic structure, attractive interaction between atoms 7−92245
W (001), surface phonon instabilities and electronic surface states 7−84478
W (100), reconstruction soft surface phonon mode, He scatt. study 7−112042
W (100)-5×1-C, CO adsorpt. struct. and bonding, EELS, XANES 7−137694
W, and alloys, surface damage, induced by arc discharge plasma 7−78367
W, microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
W single crystals, cold-worked surfaces, investig. by SEM and X-ray diffr. *(German)* 7−113837
W, skin effect under high mag. field, surface defect layer effect *(Russian)* 7−92215
WO_3 amorphous thin films, struct., optical and elec. props. studies 7−143287
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535

surface structure continued
W(100) with strained Pt overlayers, struct. aspects 7−131446
W(110), ion neutralisation spectra calc. contrast with Ni(111) 7−144217
Xe, structural phases, VUV photoemission study 7−122615
Y, surface reconstruction, LEED and UPS studies 7−131399
YNiAl, electron binding energies, oxidation behaviour 7−99160
Zn, single crystals, cleaved surfaces, sublimation 7−69884
ZnHgTe surface and interface defect prodn., AES and XPS studies 7−111541
ZnO, morphology and surface defects 7−131396
ZnO:Bi varistors 7−138591
Zn_3P_2 film, flash evap., growth morphology and opt. props. 7−100086
ZnS, alternating current electroluminophors, $Cu_{2-x}S$ surface elemental composition 7−70038
ZnS cleavage surfaces, atomic and electronic structs. 7−137996
ZnS, surface atom vacated state formation by H adsorption 7−76562
ZnS, wurtzite struct., nonpolar surfaces, relax. 7−137679
ZnSe epitaxial growth on GaP and GaAs substrates, growth rate limitations and surface morphologies 7−105316
ZnSe MBE layers, surface phase diagram, RHEED study 7−137749
$ZnSnP_2$, vacuum grown thin films, characterisation 7−112137
Zr (0001), adsorbed N, surface struct., LEED studies 7−143220
Zr (0001), adsorption of O, lowest coverage surface struct., LEED intensity anal. 7−91994
Zr (0001), H_2S and O_2 adsorpt., Auger electron spectroscopy and LEED 7−76595
Zr, surface, H and D profiling, oxidation effect 7−86425
Zr-Nb (2.5 wt.%), surface, H and D profiling, oxidation effect 7−86425
Zr-Ni intermetallic alloy catalysts, XPS and AES studies 7−144235
ZrNiAl, electron binding energies, oxidation behaviour 7−99160
ZrO_2 ceramics, ion beam modified, friction and wear 7−119381
ZrO_2 films, ion-assisted deposition, ion scattering spectroscopy 7−77835
ZrO_2-Y_2O_3, phase transform., low temp. annealing, humidity control, fracture strength, surface struct. *(Japanese)* 7−71182

surface tension
alkanes, liquid, solvation forces between smooth surfaces meas. 7−137660
alveolar liquid pressure in excised dog lung lobes, micropuncture meas. 7−107118
Benard-Marangoni convection with deformable interface, buoyancy-thermocapillary instability 7−142310
bubble flow in Z 7−91205
chemo-hydrodynamic wave propag. surface tension influence 7−105183
chemothermocapillary effect for motion of drop in liq. 7−123616
cholesteryl pelargonate at glycerin interface, surface tension, temp. depend. 7−131393
colloidal particles, deformable, in applied external fields 7−78552
concentric non-Newtonian fluids stability in circular pipe flow 7−69222
condensation on horizontal finned tubes, heat transfer 7−142301
condenser tubes, horizontal, fin spacing and drainage strips effects 7−69268
crystal growth, phantom controlled, models with surface tension 7−124139
crystal growth rates, surface disorder and interfacial velocity anisotropy investig. 7−83806
crystal-melt boundary instability, surface tension effects, critical wavelength calcs. *(Japanese)* 7−118053
cyclohexane-methanol, fluid interface struct. near critical point, optical reflectivity anal. 7−137662
drop formation at conical tips, anal. 7−105188
drop formation at conical tips, exptl. study 7−105189
drops, condensation, 2D profiles, departure sizes 7−69253
electrical double layer problem for restricted primitive model electrolytes, generalised van der Waals theory 7−70380
electrolyte solutions, meniscus-wetting film transition zone, on quartz surface 7−112020
epitaxial films, layer by layer film growth and morphological transitions, continuum model 7−137764
equilibrium crystal shapes, gravity effects, droplets hung on a wall 7−83833
equilibrium shape and stability of menisci formed between two touching cylinders 7−76549
ethane surface tension and capillary const. meas. in liq.-vapour coexistence range *(Russian)* 7−112025
ether lipids from archaebacteria, monolayers, surface behaviour study 7−78715
ferroelectric and ferroelastic materials, domain wall vibrations, dispersion laws 7−131413
fluid-state parameters, temp. dependence 7−84174
free boundary fluid with surface tension, Navier-Stokes equation, small-time existence 7−130620
gas-water interface, thin film studies using null ellipsometer 7−80850
glycerol monooleate monolayers on liq. surfaces, light scatt. study of thermotropic transitions 7−76553
hard sphere fluid, eqn. of state calc. 7−137170
Hele-Shaw cell, bubble stability surface tension affect 7−142362
Hele-Shaw cell, finger shape, thin film variation and transverse curvature 7−143134
Hele-Shaw cell, gravitationally unstable interface nonlinear growth 7−83183
Hele-Shaw cell, narrow fingers, dendritic instability 7−143133
homogeneous solids, deflagration, two-phase flow influence 7−86628
horizontal liquid layers, surface tension and buoyancy mechanism interaction 7−136806
hydrocarbons, nucleation in pyrolysis, thermodynamic-potential minimisation 7−106773
hydrophobic particles, surface energy characterisation method 7−112022
immiscible fluids in constructed tube, slow displacement by counter-current in spontaneous imbibition *(French)* 7−91922
inhomogeneous fluid, pressure tensor, Irving-Kirkwood formula transformation 7−97884
inhomogeneous liquid metals, surface props., calc., variational perturbation theory 7−105182
interfaces, renormalisation group theory, book contrib. 7−137667
interfacial forces for two-phase flow calcs. 7−137666
interfacial tension determ. by pendant drop method, optimisation *(German)* 7−76557
intermetallic compound, dihedral angles, grain boundary and solid-liq. interfacial tension 7−118200
ionogenic surfactants, multicomponent soln., adsorpt. isotherms at interface with air 7−76555

rface tension continued
Ising model, surface tension critical exponent, renormalisation group calc. 7−91927
laminar film condensation of outside of vertical circular cylinder 7−91779
laser-induced capillary waves, surface tension and viscosity 7−111000
light-capillary phenomena, laser irradiation of interface boundary 7−142827
liquefied gases, acoustic and thermodynamic studies 7−69826
liquid, superheated, evaporation, hydrodynamic stability anal. 7−91926
liquid alloys, binary, surface tension 7−98629
liquid alloys, volumetric and surface props., effect of trace elements 7−105185
liquid bridge shape and interfacial tension rel. to microgravity expts. 7−118195
liquid bridges, nonisothermal, surface deform., capillary instability 7−123596
liquid film flow down inclined plane, surface and shear instability modes 7−83186
liquid metals, dimensional analysis of physical quantities near melting point *(Japanese)* 7−97907
liquid metals, surface tension, nonlocal pseudopot. calc. 7−76546
liquid streams, surface tension driven instabilities, vacuum behaviour 7−104316
liquid thin film, Marangoni effect determ. 7−69133
magnetic liquid interfacial layer, surface hydrodynamics 7−91253
magneto-convection, surface tension and buoyancy driven, temp. gradient effect 7−75249
Marangoni convection, internal heat generation and variable viscosity effects 7−117437
Marangoni convection in elec. cond. liq. in mag. field 7−117582
Marangoni convection in spherical liq. system, anal. for nonsymmetrical temp. distrib. 7−136831
Marangoni flows, in zero gravity environments, theory and exptl. results 7−117580
Marangoni flows, onset of oscillatory regimes 7−130637
Marangoni light-induced effect for recording dynamic diffraction lattices 7−124644
Marangoni-type flow 7−97532
melts, directional solidification in zero gravity conditions, compensation of Marangoni's thermocapillary effect 7−126089
membrane models with bending rigidity, effective potential stability 7−95329
membranes, liquid, supported, lifetime, interfacial, chemical and water transport effects 7−119564
metals, liq., Marangoni flow regions 7−69131
microemulsion, interfacial tensions, phase diagram and Hamiltonian, phenomenological model 7−84451
microemulsions, simple microscopic model, three-component mixture, surface tension 7−139054
microgravity, materials and fluid sciences, conf., Stockholm, Sweden (Oct. 1985) 7−66806
minimum effect on convective motion of fluid in microgravity 7−117581
Mullins-Sekerka instability, conc. effects 7−105186
multiphase drops, growth and collapse heat transfer study 7−123716
negative entropy, energy and heat capacity, relation to surface tension 7−124635
nematics, surface tension anisotropy *(Polish)* 7−69590
nonlinear variations, related problems 7−70028
oil-water microemulsions, interfaces between phases in lattice model 7−71542
partially immersed obstacle, capillary-gravity wave reflection 7−97552
particle coordination number, meas. by film surface area 7−144762
plate, vertically oscillating in fluid, radiated wavetrain prod. 7−123665
plateau border flow 7−104331
Poiseuille flow, plane three-layer, viscosity and density stratification 7−130796
polar fluids, liq.-vapour interface, computer simulation 7−76548
polar fluids liquid-vapour interface, struct. and surface tension, integro-diff. eqn. and perturbation theory 7−76547
porous media, immiscible displacements, statistical anal. modes 7−111088
porous media, immiscible fluid displacement, wettability influence models 7−111087
quasi-binary mixtures, tricritical phenomena, extended classical treatment 7−91758
Rayleigh wave propag., elastic solid, effect of surface stresses and voids 7−69030
respiratory dynamics, surface tension influence 7−100968
Saffman-Taylor fingers, discrete set selection 7−112023
saffman-Taylor fingers with anisotropic surface tension 7−91928
Saffman-Taylor problem, solvability theory, quantitative test 7−117652
semiconductor epitaxial layers, substrate stressed state, effects on film quality and electrophysical characts. 7−112152
sessile drops on nonhorizontal solid substrates 7−112017
short surface wave propag. on longer gravity waves 7−87662
simple fluids, generalised van der Waals anal. of crit. drops and cavities 7−111329
solid-fluid interfaces, mol. dynamics simulation of wetting and drying 7−118199
solid-liquid interfacial tension of BCC elements, Ginzburg-Landau theory 7−131392
solid-liquid slurries, surface tension 7−91189
Stokes system on plane, boundary value problems with free boundaries 7−123570
surface shear near the contact line of a binary evaporating curved thin film 7−76542
surfactant, soln., expanding adsorbed layer viscosity and dynamic surface tension 7−112077
suspension, solid particles, three-phase sparged reactors, physical props. effects 7−98620
symmetric Saffman-Taylor finger in Hele show cell, analytic theory 7−130779
thermocapillary convection in axisymmetric liq. bridge 7−123625
thermocapillary instability of an infinite Prandtl number fluid with negligible gravitational effects 7−70029
thermohydrodynamic recording of IR holograms on thin liq. layers 7−68595
transient thermocapillary flow in rectangular tanks with phase change 7−110755
two-layer system with surface-active material thermogravitation convection develop. 7−136668
two-phase stratified, flow model, linear stability anal. 7−91195

surface tension continued
viscous fingering with imposed uniaxial anisotropy in radial Hele-Shaw cell 7−70034
water, meniscus-wetting film transition zone, on quartz surface 7−112020
wetting, droplet spreading, analytical paradoxes, long-range forces study 7−131386
wetting, rel. to solid surface tension, surface reaction-diffusion process *(French)* 7−112015
Young relation, partial to complete wetting, microscopic derivation, SOS model, Gaussian models 7−124640
Al-Cu binary alloys, liq., Al-rich, surface tension 7−124641
Al-Si melts, modification and surface tension, effect of vibr. 7−71168
Al-Sn alloys, interfacial tension 7−76556
(Bi-Sn-Pb-Cd)-(Bi_2Te_3-Sb_2Te_3), wettability, adhesion energy and contact resistance 7−112008
Ca salts, aqs. solns., He(I) photoelectron spectra 7−77750
Hg-H_2SO_4 electrolysis, axisymm. surface-tension driven flow study 7−100582
$LaCl_3$-KCl mixture, molten, molar vol., surface tension 7−124645
Li-Ba liq. alloy, density, compressibility, heat capacity and surface tension 7−137436
LiF-BeF_2-ThF_4-UF_4 mixtures, density and surface tension 7−142867
SF_6, fluid interface struct. near critical point, optical reflectivity anal. 7−137662
Si nuclei, crit. size, size depend. surface tension calc. 7−69639
SiO_2 glass, toughness rel. to surface stresses 7−100339
Sn, tilt boundaries surface tension near the special-general boundary phase transition 7−83970
Zn crystals VLS grown from Zn-Bi monotectic droplets, morphology and growth mechanism 7−137283

surface tension measurement
asymmetric free falling film, dynamic surface tension meas. 7−112016
automatic meas. of surfactant solutions 7−131391
drop weight data, alternative determination methods 7−112018
immiscible liquids of equal density, variation of interfacial tension with temp. 7−70027
orthobaric surface temp. meas. at cryogenic temps. 7−91923
polymer solids, surface energy estimation by contact angle methods 7−137692

surface texture
adsorbates, photoprocesses, surface geometry effects 7−112029
analysers, error sources *(Polish)* 7−134720
anisotropic rough surface, average and mean summit curvatures and heights of asperities 7−137463
computational techniques for grain-orientation determinations using surface traces of crystal planes of any indices 7−113818
polyethylene, sepiolite filled, mech. and morphological props., effect of filler-polymer interface 7−78127
pyramidally textured surfaces, light trapping props., solar cell and photovoltaic energy conversion appls. 7−118966
rough surface microasperity, plastic deform. study 7−136764
space within profiles 7−112045
sputter depth profiling of solid surfaces, scanned ion and neutral beams diagnostics 7−109561
steel, quenched plates, stress-strain generation, effect of surface condition 7−100299
steel bearing parts, medium influence on surface layer physicomech. props. in contact interaction 7−144558
thin metal films, Hall coefficient and magnetoresist., surface roughness and transverse mag. field depend. 7−143438
Al alloy, ultrasonic pole figure for texture 7−113840
Al RF bias sputtered films for metallisation appls., charactn. 7−124803
$BaFe_{12}O_{19}$ thin films for high density recording, microtexture and crystallographic characts., effect of sputtering gas press. 7−85384
CdS films, surface texture, NH_3 solution treatment effects 7−105323
Cu (001), adsorption of S, surface geometry, angle resolved photoemission extended fine struct. 7−98692
Cu surface, seed texturing with Ta seed 7−118201
β-Cu-Zn-Al, surface orientation, modulated microstructure 7−78049
Fe, cast, grey, surface relief correl. with cavitation erosion periods 7−126255
Fe films, columnar struct. and texture, prep. at varied evaporation rates 7−84592
Fe-Cr-Ni alloys, prod. by laser surface alloying using mixed powder feed, charactn. 7−119446
Fe-Si (3 wt.%) alloy, deformed H impregnated, corrosion-electrochem. behaviour in H_2SO_4 electrolyte 7−144591
GaAs epitaxial layers on Si substrates, high volume production growth 7−86059
GaAs, low press. plasma etching, surface texture, damage and contamination, XPS study 7−106721
In_2O_3:Sn film degradation in H and Ar glow discharge plasmas 7−144634
Ni-Fe, electrodeposited protective-decorative layers, dissolution kinetics in acidic media 7−86402
Pt, surface texture, heavy Kr ion bombard., ion reflection analysis 7−105205
p-Si substrates, oxide layer form. kinetics from porous surface layer 7−144635
Si:O, interstitial O conc. by IR method, influence of back surface roughness 7−113209
Si-SnO_2 solar cells, light scatt. model 7−126620
SnO_2 natively textured film for optical confinement-type a-Si:H solar cell 7−70110
ZrO_2, Y_2O_3 stabilised ultrafine powders, crystallinity, surface texture rel. to prep. and thermal treatment 7−76564

surface topography
acoustic emission, during friction, effects of surface profile 7−76311
adhesion, contemporary theory review 7−138954
adsorbates, photoprocesses, surface geometry effects 7−112029
Alloy 600, pit growth kinetics in high temp. chloride solns. 7−132795
$Ba(NO_3)_2$ crysts., soln. growth induced lattice defects, surface topography 7−98015
Bainite, three definitions comparison 7−132605
boiling, surface microrelief, effects on heat transfer *(Russian)* 7−83011
chemomechanical polishing in aq. solns., STM images 7−106717
contact surfaces, roughness, statistical anal. 7−104225
crystal, boiling soln. growth criteria 7−132428
Cu (110), thermal roughness, X-ray diffraction study 7−124662

surface topography continued
cylinder-rough plate contact width and compliance asperity deform. 7−69077
diacetylenic acid Langmuir-Blodgett films, STM investigations 7−76624
diamond, brown and type II, abrasion resist., surface roughness, dislocation density 7−144564
elastoplastic contact of rough surfaces, thermal conductance 7−91044
electrochemical electrode surfaces, scanning tunnelling microscopy 7−93336
electron microprobe analysis, surface topography influence on X-ray intensity 7−126524
FCC and BCC surfaces, step profiles, modified point-ion model 7−105208
feature-specific surface roughness meas. in SEM images 7−108710
ferroelectric crysts., microstructural phenomena, high resolution electron microscopic studies 7−97867
graphite, corrugation and resolution in scanning tunnelling microscopy *(French)* 7−70037
graphite, surface meas. using low-temperature scanning tunneling microscope 7−83613
graphite surface, scanning tunnelling microscopy and electronic struct. calcs. 7−91947
graphite surface topography, scanning tunneling microscopy 7−91948
hard-body surface asperities, 2D model, contracting process 7−91952
ion beam 3S sputtering method induced surface topography, SEM investig. 7−132813
ion beam sputtered materials, 3S method for incidence angle influence 7−132812
ion bombardment-induced topography formation, effects of surface impurities and diffusion 7−70051
main-chain liquid crystal polymer, solidification, elec. fields, surfaces and mesophase ageing effects 7−91480
metallic glass ribbons, mag. anisotropy, oriented surface roughness effects 7−105914
metallic glasses, surface damage by Ar ion bombardment 7−76224
metallic rough surfaces, geometrical props., effective resistance and wall losses *(Spanish)* 7−112027
metals, stretching and bending damage and defect charactn. using polarised light scatt. 7−106200
metals, surface modification by ion beams, conf., Kingston, Ontario, Canada (Jul. 1986) 7−102001
microanalysis correction calcs., effect of surface topography *(French)* 7−106868
nitrocellulose film, periodic surface microrelief, effects of laser irradiation 7−76572
optical components surface roughness classification and evaluation *(Czech)* 7−90843
optical element manufacturing tolerances, surface quality 7−123285
optical glass, grinding with diamond tools, subsurface damage depth rel. to surface roughness 7−117355
optical thin film interface roughness effect on coherence loss 7−122833
peripheral roughening in a monolayer 7−124701
Permalloy, ion implanted, mag. recording material, struct. changes *(Chinese)* 7−131402
polyethylene fibres, adhesion to epoxy resin, pull out test, surface treatment effect 7−144576
quartz, monocrystalline surfaces, roughness characterisation 7−84469
reducing topographic contrast in X-ray maps 7−142543
rolling friction processes rel. to struct. factor, statistical charact., 7−91043
rough surface in vacuum, thermal cond. of elastic contact 7−70002
rough surface of condensed media, anomalously high absorptivity and anomalously fast laser heating 7−124326
rough surfaces contacting through a polymer layer 7−71306
rough-wall turbulent boundary layers in the transition regime 7−136826
roughening transition, static and dynamic renormalisation theory 7−76565
roughness signals, spectrum analysis with STM 7−83616
scanning tunnelling microscopy studies, free-electron model 7−124658
scattering from uneven surface in lamellar medium *(Russian)* 7−74817
semiconductor surface, regular relief form. under millisec. laser pulse irrad. *(Russian)* 7−137682
semiconductors, hummock formation, suppression by ion milling 7−137680
solidification interface shape, freezing in plane channel flow with wall cooling 7−142959
statistical structure of rough absorbing surfaces, investig. by vector-polarisation method 7−141802
steel, mild bright, subsurface struct., US backscatt. monitoring, surface roughness effect 7−113813
steel, stainless, 3S method induced surface topography, SEM investig. 7−132813
steel, stainless, hardened, fatigue strength, lapping effect 7−126243
steel, stainless, ion beam sputtered materials, surface roughness, 3S method for incidence angle influence 7−132812
stepped surface, roughening kinetics, anal. 7−131397
subsurface defects imaging of samples with rough surfaces, acoustic microscopy 7−123398
surface relief grating, SEM study, moire fringes appl. 7−83601
surface roughness and elastic hysteresis, influence on rolling friction charact. 7−132757
synchrotron radiation optics, surface roughness property survey 7−95705
TCR, deviation from Matthiessen's rule in combined Soffer-Cottey model 7−105730
thin film growth and surface roughness, computer simulation 7−137751
transparent solids, periodic surface microrelief, effects of laser irradiation 7−76572
VLSI double-level metal systems, electromigration study using polymer dielectrics 7−98590
Ag (100), hyperthermal Xe atom scatt. study 7−138580
Ag, electric field enhancement near surface irregularities 7−132284
Ag layers, hot hollow cathode deposition, bonding to austenitic stainless steel 7−70131
Ag surface microscopic roughness meas. by second harmonic intensity variation anal. 7−121068
Al, 3S method induced surface topography, SEM investig. 7−132813
Al films for VLSI applications, low pressure CVD 7−71052
Al, ion beam sputtered materials, surface roughness, 3S method for incidence angle influence 7−132812
Al-Ag, phase transform. mechanism, surface relief obs. 7−132608
Al-Zn-Mg, fatigue crack closure in vacuum, crack-surface roughness effects *(French)* 7−100369

surface topography continued
AlGaAs, MBE growth instabilities and roughening rates on misoriented substrates, RHEED study 7−131490
$Al_xGa_{1-x}As$, surface segregation, growth interface roughening 7−85952
As_2S_3, spin-coated multilayer thin films, growth, optical characterisation 7−85883
Au (111), ordered step surface reconstruction, obs. by scanning tunnelling microscopy 7−84465
Au, soft X-ray scattering from rough surfaces 7−122788
Au surface, scanning tunneling microscopy 7−91404
B_2O_3-SiO_2 glass films, sol-gel prep., surface roughness, optical transparency rel. to prep. atmosphere 7−132510
barium stearate Langmuir-Blodgett films, STM investigations 7−76624
C fibres, surface energy, microwave plasma treatment effect 7−84484
C film on O_2 gas, synchrotron radiation-induced etching 7−93121
$(Ca,Sr)F_2$-GaAs SIS structures, MBE grown, high resolution TEM study 7−118280
CaF_2 coating on Si, scatter charact. and surface smoothing effects 7−141969
Cr/Ni thin film multilayer struct., depth resolution, substrate roughness effects 7−131500
Cr-Ni multilayer thin films on Si, Auger electron spectra depth profiles, influence of sample roughness 7−138572
Cu (115), stepped surface, roughening transition 7−76559
Cu, lubricated surfaces with controlled asperity sizes, friction charact. 7−126258
Cu mirrors, ion beam smoothing 7−117949
Cu, polished surface, effect of vacuum annealing on topography 7−78368
Cu, polycrystal and single cryst., sputtering induced surface topography 7−106334
Cu surface (115), topography and roughening 7−118202
Cu, surface topography influence on X-ray intensity in electron microprobe analysis 7−126524
Cu surfaces, He atom diffr., theoretical potentials 7−106341
Cu-Zr, polished surface, effect of vacuum annealing on topography 7−78368
$CuInSe_2$ chalcopyrite sputtered film, structural, electronic and optical props. 7−118327
Dy thin films, ion alloyed, corrosion, adsorption, surface topography 7−78361
Fe, cast, grey, surface relief correl. with cavitation erosion periods 7−126255
Fe, cast, surface hardening with CO_2 laser rad. using absorbing coatings 7−86415
Fe, electrode, impedance in acid solns., surface roughness effect 7−86401
Fe, grey, subject to laser melting treatment, surface quality *(Chinese)* 7−106658
Fe, infrared SEW spectroscopy 7−77557
Fe polycrystal topography, scanning tunnelling microscopy study using CrCo mag. tip 7−105220
Fe, pure, unlubricated wear, sliding conditions, SEM obs. 7−71326
Fe-Fe_4N-$Fe_xO_yN_z$, characterisation of oxynitride-nitride double layers, AES depth profiles 7−71347
Fe-Ni based 7−86090
GaAs (100), surface topography, Ar^+ beam sputtering 7−106332
GaAs (110), hyperthermal Xe atom scatt. study 7−138580
GaAs epitaxial layers on Si, growth, props. and applications to FETs and LEDs 7−86034
GaAs, MBE growth, asymm. interface roughness, computer simulation 7−143159
GaAs, photoconductive scanning tunnelling microscopy obs. 7−77009
GaAs:Cr photocond. and photolum. spectra, anisotropically etched surface microrelief effects *(Russian)* 7−137989
n^+-GaAs/MGe, M=Au, Ag, Al, ohmic contacts, laser/furnace annealed, resistance, surface morphology study 7−143613
Ge (100), hyperthermal Xe atom scatt. study 7−138580
Ge, optical absorpt. apparent value, effect of surface smoothness *(Chinese)* 7−125660
He solid/liquid interface, phonon transmission, surface roughness effects 7−84440
^{4}He, HCP, surface roughening transition 7−76533
^{4}He liq. surface, 2D Wigner cryst., ripplonic polaron DC magnetocond. calcs. 7−76518
InAs-GaAs heterostructure, interface and surface roughness, X-ray reflectivity study 7−124723
InP ultra-flat substrates produced by chemo-mechanical polishing 7−100457
MgO crystal, direct obs. by high resolution SEM 7−84455
Mo mirrors, ion beam smoothing 7−117949
NH_4Br, crystal growth, surface roughness and anti-caking props. 7−70997
Nb-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
NbN granular superconducting films, energy gap, STM images 7−99341
NbN, surface meas. using low-temperature scanning tunneling microscope 7−83613
$NbSe_2$-2H surface images using STM 7−83604
Ni (110) with adsorbed CO, electron-stimulated desorption, influence of surface corrugations 7−70082
Ni (111) with adsorbed H, scanning tunnelling microscopy 7−91944
Ni, surface roughening under ion implantation, 300-700°C 7−104772
Pd surface, scanning tunneling microscopy 7−91404
Pd-Ni, plated, tribological props., roughness, hardness *(German)* 7−138855
Pt electrode surfaces with different preferred crystallographic orientations, scanning tunnelling microscopy 7−91946
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
Si (001) clean surfaces, surface state band, deformations due to roughening and misorientation 7−85035
Si (111), surface topography changes during MBE growth, microprobe RHEED study 7−98636
Si (111), terrace size and edge roughness high resolution surface-sensitive electron diffr. meas. 7−91934
Si (111) surface topography after Ar^+ bombardment and thermal annealing, RHEED and electron microscopy studies *(French)* 7−112036
Si epitaxial film surface microscopic roughness meas. by second harmonic intensity variation anal. 7−121068
Si film, MBE, substrate cleaning, layer nucleation, in situ light scatt. 7−77817
Si, optical absorpt. apparent value, effect of surface smoothness *(Chinese)* 7−125660

urface topography continued
Si, radiative melting, surface roughness and SiO_2 effects 7−104961
Si surfaces, Ne^+ ion bombard., implantation, spectroscopic ellipsometry study 7−84062
Si-SiO_2 interface roughness evolution 7−112107
β-SiC, dry etching in fluorinated gases, surface charcts 7−126352
Si_3N_4 ceramics, joining by hot-pressing 7−86555
SiO_2, beadblasted fused silica, surface damage evolution and optical performance 7−71318
SiO_2, fused, oblique Ar^+ ion beam bombardment, erosion topographies 7−70960
SiO_2, reactive ion etching, lattice damage and polymer coating form., TEM study 7−144573
Ta-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
Ti, 3S method induced surface topography, SEM investig. 7−132813
Ti, ion beam sputtered materials, surface roughness, 3S method for incidence angle influence 7−132812
V-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
W, selective CVD eval. using surface temp. meas. 7−113429
Zn electrodeposit hetero-epitaxial growth on low-C steel sheets 7−132505
Zn electrodeposition, by impinging flow, suppression of dendrites nd roughness 7−144312

surface topography measurement
2 MHz photoacoustic meas. technique 7−82979
acquisition and representation of object surface data 7−95546
amplitude interferometry using phase retrieval, surface measurements appl. 7−73411
aspheric surface contours, direct phase measurement 7−90855
aspheric surface ultrahigh accuracy 3-D profilometer using laser heterodyne interferometer 7−103917
aspherical surfaces, scanning with focus-wavelength encoded profilometer 7−90844
automated electronic speckle pattern interferometry for inspection 7−80739
automated surface metrology, optical methods 7−80738
backscattered electron signal in SEM 7−142542
biostereometrics, automated contour ordering in moire topograms 7−101036
biostereometrics, automatic meas. of 3D shape of human body surfaces 7−114593
biostereometrics, conf., Cannes, France (Dec. 1985) 7−95084
biostereometrics, transform. of irregularly sampled data points into regular grid, surface interpolation, smoothing 7−114536
contact profile meters, sensor tips control, gauge marks fabrication *(Slovak)* 7−121065
corneal parameters meas. and diagnosis using real-time analysis keratometer 7−145170
curved surfaces, glossiness meas. using CCD line sensor 7−108523
data processing method for checking flatness, iteration approach *(Chinese)* 7−73324
defect detection and meas. by automatic fringe anal. 7−102387
dental restoration wear meas., difference moire contour-mapping system 7−101043
digital interferogram analysis and DIN norms 7−110616
diode laser, appl. in an ESPI system 7−67384
electronic speckle interferometry fringes, optimisation with limited laser power 7−102501
electronic speckle pattern interferometry, present state w.r.t. automatic inspection 7−80869
error sources *(Polish)* 7−134720
facial data, equipment for photogrammetric acquisition 7−101040
fibre optic instrument for extremely small roughness meas. 7−136580
frequency response characteristics of an optical scatterometer and a surface profilometer 7−141794
glancing incidence scatt. meas. interpretation, X-ray and UV mirror testing appls. 7−97117
grazing-incidence optics surface characterisation for use in extreme UV and X-ray regions 7−95704
heterodyne interferometer for surface profile measurements in the Angstrom region 7−134843
heterodyne interferometry for surface shape high-precision meas. *(Japanese)* 7−67281
High Precision Optical Surface Sensor for diamond-turned metal mirror surface roughness *(Japanese)* 7−82873
interferometer calibration using liquid mirror as flatness standard 7−128644
interferometer for inspecting surface shape of large optical components 7−128643
interferometer for optical surface meas., design and fabrication *(Chinese)* 7−73405
interferometric high-sensitivity laser probe for photothermal measurements 7−128636
ion beam sputtered materials, 3S method for incidence angle influence 7−132812
laser speckle spectral density appl. to surface roughness evaluation 7−90857
lens, aspherical, generating, grinding and figuring, direct contact profilometry meas. 7−110615
lever for metrology of grazing incident optics 7−90858
metallic mirrors, roughness parameters, ellipsometric meas. 7−123140
micro-indentation tester for hardness testing *(Italian)* 7−93226
microrough surfaces, optical characterisation, limitations and success of theory 7−80737
microscopic roughness meas. by second harmonic intensity variation anal., appl. to Si and Ag surfaces 7−121068
moire topograms, automated contour ordering 7−121213
moire topograms, ordinary, photometric ordering 7−116001
multi-aperture white light speckle photography, applications 7−73454
nondestructive electron probe anal. of depth distrib. of near-surface struct. irregularities *(Russian)* 7−76569
nondestructive inspection methods and development trends 7−100483
optical cylindrical surfaces, testing 7−136630
optical elements, large aspherical direct contact profilometry 7−90854
optical measurement of the RMS roughness of ion-implanted surfaces 7−108516
optical microprofilometry and roughness measurement *(German)* 7−128537

surface topography measurement continued
optical profilometry, Angstrom resolution for microscopic objects 7−116005
optical surface coating quality assessment using total integrated scatter meas. system 7−123286
optical surface inspection, subjective versus objective methods 7−104070
optical surface metrology, statistical and signal processing concepts 7−90856
phase shifting interferometer, common-path using polarisation technique, suitable for surface structure meas. 7−80855
pick-up tube for X-ray topography, using amorphous Se-As electrode *(Czech)* 7−108731
polyethylene, low density, sharkskin defect studied using flow birefringence and roughness meas. 7−75494
polyethylene, Vickers hardness indentations depth meas. by interference microscopy 7−113820
profilograph system for rough surface, 3D image, plotting software 7−67285
range finding and surface characterization using high-frequency air transducers 7−82983
Rank Taylor Hobson Talyrond 300 roundness and surface meas. system 7−108521
Reflex Microscope and Metrograph, direct 3D meas., dentistry, medicine and anthropology appls. 7−101039
roughness, quantitative measurements by the Schlieren method 7−134719
roughness meas. methods *(Spanish)* 7−89196
scanning optical microscopy and its applications in materials science 7−132852
scoliotic spines, vertebral rot. meas. and shape analysis from single plane radiographs 7−114477
selective diffraction order based lens plane grating shearing interferometer for the study of bent plates 7−91045
SEM stereoscopic technique for mapping surface contours, appl. to teeth erosion due to polishing 7−80944
skin surface, human, image analysis and 3D profilometry 7−107330
speckle method for surface roughness meas. *(German)* 7−67276
spheres, full, sphericity measurements using subaperture optical testing techniques 7−121069
steel, stainless, surface roughness meas. using He-Ne laser 7−134717
step height meas. using two-wavelength phase-shifting interferometry 7−121206
stereometric measurement system for quantification of object forms 7−101041
stereoscopic white-light speckle photography for in-plane surface displacements meas. 7−67407
substrates, coated and uncoated, roughness characterisation using scatt. distrib. meas. 7−123163
texture meas. devices including stylus type tracer 7−95547
thermal microscopy, high resolution, temp. mapping and surface profiling appl. 7−121114
three-dimensional measurements on human body using a scanning laser beam *(French)* 7−101037
trachea model dynamic deform. mapping by grating projection technique 7−100951
ultraprecision surface profile measurement by laser *(Japanese)* 7−80862
wear, optical profilometry study using 3D image processing *(French)* 7−95543
Al-MgF_2 replicated coating aspheric mirrors for far UV, quality control and ageing tests 7−103928
MgO films, nondestructive depth profiling by spectroscopic ellipsometry 7−130298
Ni, surface roughness meas. using He-Ne laser 7−134717
Pt surface, electrochem. activated, nm topography, scanning tunnelling microscopic obs. 7−91933
Si wafer surface quality assessment using total integrated scatter meas. system 7−123286
WO_3/Ag, dielec. grid patterns on metal film, examination using surface plasmon microscopy 7−140743
ZnS films, nondestructive depth profiling by spectroscopic ellipsometry 7−130298

surface treatment
see also etching; polishing; surface hardening
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
boiling, surface microrelief, effects on heat transfer *(Russian)* 7−83011
ceramics, ion beam modified, friction and wear behaviour 7−106630
conference, surface engineering, Brighton, England (June 85) 7−72724
decoration, step nucleation processes 7−119474
Electricite de France transmission network, tower maintenance and protection against corrosion 7−86486
Elinvar, surface layer formation during electrospark treatment, effect on tuning fork sensor charcts. 7−78351
high fluence He irrad., surface deformation 7−119394
HL-1 Tokamak, wall conditioning 7−75816
in situ reactive glow discharge cleaning of X-ray optical surfaces 7−102574
Incoloy 800H, pre-oxidised, Y-ion implanted, sulphidation props. 7−93186
industrial components, surface modification by ion implantation 7−117947
ion beam 3S sputtering method induced surface topography, SEM investig. 7−132813
ion beam processes, review 7−119393
JFT-2M tokamak, Taylor, glow and ECR discharges, cleaning effects 7−75892
JIPP T-IIU, in situ C coating 7−75893
JT-60 wall materials, secondary electron yield meas. using Auger electron spectrometer *(Japanese)* 7−74054
laser beam appls. *(French)* 7−97059
laser surface treatment, state of the art *(German)* 7−93123
laser treatment of materials, exam. of energy losses due to reflection 7−126295
material machining by laser, advantages *(French)* 7−106538
material surface, thermal treatment with concentrated solar energy, parameters determ. 7−100255
medical prostheses, ion beam appls. 7−79138
metal deposition on low-Z samples during ECR and glow discharge cleaning in TEXTOR 7−75812
metal overlayers on stainless steel and Ni-Fe substrates, surface alloying by pulsed laser irradiation, RBS/channelling studies 7−113769

surface treatment continued
metal/polymer interface system, surface modification appls. *(French)* 7−113761
metallic and ceramic materials surface treatment using high-power CO_2 laser 7−71338
metals, ion-implanted, aq. corrosion 7−106687
metals, laser microprocessing fundamentals, review 7−78360
metals, surface modification by ion beams, conf., Kingston, Ontario, Canada (Jul. 1986) 7−102001
microelectronic structures, 2D surface erosion and deposition process simulation 7−144572
micromechanical structures, ion beam machining 7−126275
models, ion implantation and ion assisted coating 7−71391
nematic liquid crystals, surface coupling coeff. meas. for various substrates 7−97909
Nimonic 80A, laser surface treatment *(French)* 7−93185
nonuniform residual stresses, nondestructive X-ray diffraction anal. 7−86547
nuclear power plant component decontamination by ice-blasting *(Japanese)* 7−129446
optical components, US precision cleaning prior to and after vacuum coating 7−104067
plasma torch, two-jet, surface treatment of materials with elec. arc 7−138861
PMMA films, plasma-modified, multitechnique surface spectroscopic studies 7−70040
PMMA/PMAA films, plasma modified, multitechnique surface spectroscopic studies 7−70041
polyethylene fibres, adhesion to epoxy resin, pull out test, surface treatment effect 7−144576
polyimide film, surface activation with strong bases 7−113747
polymer surface treatment by low-temp. plasma *(French)* 7−132782
production of surface alloys by laser irrad. *(French)* 7−93184
rubber, modified bulk and surface SKN-26, C filled, antifriction props., 7−93113
sapphire substrate, ion induced adhesion of Cu films 7−92010
semiconductor surface cleaning using modular ultrasound equipment with piezoceramic transducers 7−75238
shot peened surfaces, fatigue behaviour 7−119447
solar cell protective surface automatic cleaning 7−114103
steam generator galvanic corrosion during chem. cleaning, finite element modelling 7−71377
steel, annealed, surface treatment method for deleterious deposit removal 7−138876
steel, austenitic, grazing incidence X-ray diffraction N-ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
steel, austenitic stainless, low energy N_2^+ ion implanted, XPS studies 7−71393
steel, austenitic stainless, SCC susceptibility rel to cathodic reduction treatment *(Japanese)* 7−78325
steel, austenitic stainless Y^+ ion implanted, Rutherford backscatt.-channelling study before and after oxidation 7−106684
steel, C, sintered, pulsed laser treatment, effect on struct. and props. 7−93194
steel, carbonitriding gear, with retained austenite, contact fatigue strength improvement *(Chinese)* 7−78145
steel, constructional, cyclic life and wear resist. after grinding with super-hard materials 7−93162
steel, corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
steel, Cr, rapid solidification of surface layers melted by CO_2 laser 7−93210
steel, Cr type, parts hardened by surface deform., hot galvanising influence on fatigue resist. 7−144598
steel, decarburisation kinetics, stochastic math. model *(Chinese)* 7−132788
steel, decarburising, effect of heating characts., thermodynamic anal. 7−132646
steel, diffusion coating form. process 7−138903
steel, galvanised, phosphatizing, surface characterisation *(French)* 7−106668
steel, high C, Sn implanted, thermal oxidation, effects of ion implantation and radiation enhanced Sn diffusion 7−126315
steel, high C, WC surface alloyed layer by Co_2 laser *(Korean)* 7−138888
steel, hot dip galvanizing, struct., addition elements effect *(French)* 7−86478
steel, hydroabrasive treatment, residual stresses 7−71360
steel, magnetite coated, oxidation and corrosion rel. to chemical cleaning 7−78315
steel, mild, N_2^+ ion implantation, treatment initiating sustained oxidative wear 7−106691
steel, mild, N ion implanted, oxidation and diffusion during wear 7−78358
steel, stainless, austenitic, LOMI decontamination of oxide layers *(Finnish)* 7−96185
steel, stainless, ion implantation of N, C, P phase composition determ. of surface 7−78301
steel, stainless, N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
steel, stainless, surface treatments, characterisation for BWR recirculation piping 7−89613
steel, surface impregnation with Cr, V and Al, degree of transform. for exchange reactions eval. 7−78346
steel, tool, N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
steel and other workpieces, surface modification using elec. discharge machining, corrosion and oxidation resist. *(Japanese)* 7−132808
steel electrogalvanized sheet, Zn phosphating, heavy metal additions and cryst. modification effects 7−100441
steels; surface coating and alloying layer form., laser heat treatment *(Chinese)* 7−132789
submicron metallic features, direct writing with a scanning tunnelling microscope 7−126266
superalloys, protective coating by diffusion *(French)* 7−86460
transition metals, vapour phase siliconizing, corrosion stability 7−78319
Ag contact surface, contaminant film growth, ellipsometric anal. 7−113790
Ag surface, corrosion resistance, microhardness and contact resistance, effect of B ion implantation 7−78356
Al, adhesive joining, surface prep., bond form. 7−144612
Al alloys with different types of coatings, fatigue resist. 7−113783
Al foil, chemically treated, surface states 7−132803
surface treatment continued
Al surface ion implanted with Ti^+ or V^+, anodic polarisation behaviour in NaCl electrolyte 7−78354
Al_2O_3 ceramics, bending strength, grinding effect, multimodal Weibull distrib. function analysis *(Japanese)* 7−93087
Al_2O_3, fracture strength, effect of surface grinding, statistical anal. using Weibull's multimodal anal. 7−84110
β''-Al_2O_3-Na_2O ceramic electrolyte, asymmetric polarisation rel. to comp. and surface treatment 7−92580
As_2S_3-Zn, photostimulated change in Zn deposition rate 7−100077
BN films, ion-beam-synthesised, charactn. 7−106682
C fibres, surface energy, microwave plasma treatment effect 7−84484
C fibres and epoxy resin composites, anodic fibre surface treatment, XPS obs. 7−112032
$Cd_xHg_{1-x}Te$, photoconductivity, energy band parameters, influence of surface treatment 7−112395
CdS films, surface texture, NH_3 solution treatment effects 7−105323
CdS substrate diffusion waveguides, fabrication and props. *(Russian)* 7−75116
CdTe, surface modification, Raman scatt. studies 7−126341
CeB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
Co-Cr-W/steel surface alloys, laser processed, microstruct. and wear 7−119459
Cu surface, corrosion resistance, microhardness and contact resistance, effect of B ion implantation 7−78356
Fe (111), nitridation and oxidation, XPS and AES obs. 7−131407
Fe, Armco, galvanising, liquid Zn attack 7−119443
Fe, Armco, protection from oxidation and sulphidation by silicization, heat treatment and aluminisation *(French)* 7−86462
Fe, cast, grey, laser surface melting, cavitation erosion in distilled and salt water 7−132767
Fe, cast, nodular, surface alloyed with WC, microstruct. and prope. 7−119445
Fe, cast, sliding wear process in laser surface melted and as-cast forms 7−71320
Fe corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
Fe, diffusion coating form. process 7−138903
Fe, high purity, zone melting, chem. characterisation 7−144267
Fe, nitridation by pulsed excimer laser treatment under liquid NH_3, Mossbauer study 7−113751
Fe, vacuum chromising, mechanism and kinetics 7−119450
Fe-B-(N), oxidation inhibition by deposited and ion-implanted B 7−106685
Fe-Cr, Cr^+ ion-implanted, electrochem. props. 7−106688
Fe-Cr-Mo-P-C alloys, vitrification by laser surface melting treatment 7−86487
Fe-Fe_4N-$Fe_xO_yN_z$, characterisation of oxynitride-nitride double layers, AES depth profiles 7−71347
Fe-Si (3 wt.%) alloy, deformed H impregnated, corrosion-electrochem. behaviour in H_2SO_4 electrolyte 7−144591
Fe-Si steel, highly permeable, forsterite ground layer effect on mag. props. 7−77353
GaAs (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
n-GaAs, high resolution photoelectrochem. etching using scanning electrochemical tunnelling microscope 7−106724
GaAs, LEC grown, dislocation density inspection, reference face prep. *(Chinese)* 7−131150
GaAs substrates, cleaning by H radical beam irrad. 7−71415
$Ga_{0.47}In_{0.53}As$ (100), epitaxial, XPS study of chemical cleaning 7−106718
InAs (100) SIMS analysis of surface prep. 7−86491
InP (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
InP, electron beam modifications 7−144640
InP, native sulphide films, In-P-S phase diagram *(French)* 7−126345
InP, plasma-assisted sulphidation *(French)* 7−119473
InP substrate protection and cleaning for LPE, laser fabrication 7−71416
KCl, effect on vacuum deposition of phthalocyanine *(Japanese)* 7−77829
LaB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
LiF, decoration with In_2O_3 and SnO_2 by spraying technique 7−71340
Mn-Zn-Ti ferrite single crysts., Barkhausen jumps study 7−138284
Mo, plate, siliconising, $MoSi_2$ layer deposition, corrosion and abrasion resist. 7−78320
Mo, pseudoblistering, D_2^+ ion irradiation, surface cleanness 7−84073
Mo, surface oxide form. by O ion implantation 7−138887
Mo-Zr-W, ion implantation of N, C, P phase composition determ. 7−78301
NaCl, decoration with In_2O_3 and SnO_2 by spraying technique 7−71340
Na_2O-SiO_2-Al_2O_3 glass, surface composition, chemical and thermal treatment 7−131406
Nb, ion implantation of N, C, P phase composition determ. 7−78301
Nb, surface coated by laser treatment, high temp. oxidation 7−100428
Nb-W (Hf), interaction with N_2 at high temps. 7−106664
Ni base alloys, vapour phase siliconizing, corrosion stability 7−78319
Ni, ion implantation of N, C, P phase composition determ. 7−78301
Ni-base superalloy, vibr. fatigue props. of laserglazed specimens 7−119374
Ni-Cr (10, 20 wt.%), high temp. oxidation of Cr_2O_3-forming alloys, influence of laser surface treatment 7−93187
Ni-Cr-Co superalloy, diffusion alitized layers, US effect, microstruct., microhardness 7−132800
Ni-Cr-W, superalloy, microstruct. and strength after laser rad. surface fusion-solidification *(Chinese)* 7−132787
Ni-Fe, electrodeposited protective-decorative layers, dissolution kinetics in acidic media 7−86402
NiO, scales, grain boundary diffusion, rel. to surface preparation *(French)* 7−111947
PLZT ceramic electrodes by laser chem. processing, dielec. props. 7−100410
PLZT ceramics, surface treatment influence on phase transition diffusion *(Polish)* 7−77480
PZT ceramics, surface treatment influence on phase transition diffusion *(Polish)* 7−77480
PZT-epoxy composites, interfacial adhesion determ., surface treatments and mechanical testing 7−100504
Pd_2Si film on Si (100), struct. props., scanning tunnelling microscopy and PES studies 7−76648
Si detector, p-i-n type, surface protection using anode oxidation technique 7−71401

irface treatment continued
Si films, solid phase epitaxial growth, substrate-surface cleaning 7−124767
Si, ion implanted, thermal nitridation 7−86504
Si, native oxide films, phys., chem., and elec. props. 7−113811
Si, near threshold sputtering in Cl_2 environment 7−106327
Si substrate for GaAs epitaxial growth, effect of heat treatment 7−86034
Si surface, O removal via reaction with adsorbed Ge 7−71398
Si, surface alloying by laser aluminothermy 7−113805
Si, surface nitridation, synchrotron radiation induced 7−71399
Si, surface oxidation, cleaning procedure effects 7−106723
Si-Ag, O_2^+ bombardment, Ag redistribution, oxide formation 7−113329
SiC, ceramics in Ar plasma jet, ablation study 7−138866
SiC fibre reinforced Al composites, pitting and corrosion protected surfaces 7−138860
α-SiC powders, plasma exposure, surface morphology 7−71335
Si_3N_4, ceramics in Ar plasma jet, ablation study 7−138866
Si_3N_4 joining with Al braze, pre-heat-treatment effects 7−86383
Si_3N_4, reactive ion-plasma sputtering, on Si 7−86501
Si_3N_4, sintered, surface condition effect on flexural strength 7−132778
SiO_2, near threshold sputtering in Cl_2 environment 7−106327
SiO_2, reactive ion-plasma sputtering, on Si 7−86501
SiO_2 thin films, gate insulators, high temp. thermal nitridation, low temp. electron beam enhanced nitridation 7−93134
SmB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
Ta, H embrittlement, influence of Pt^+ ion implantation 7−106690
Ti, N-ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
Ti, oxidation, effects of Sn^+ and N_2^+ ion implantation 7−106686
Ti single crystal, TiC epitaxial layer formation, LEED and AES studies 7−124785
Ti-Al-V, N-ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
Ti-Al-V alloy, component surface condition effect on working capacity after annealing in different atm. 7−126309
Ti-Al-V/polyethylene tribological couple, wear behaviour, effect of metal surface prep. and N implantation 7−79139
TiC-NbC-TaC-WC-Co cemented carbide, gamma phase layer form., growth kinetics and microstruct. rel. to sintering atmosphere 7−77929
WC-Co, VK-8 hard alloy, surface struct. changes in pulsed laser treatment zone 7−86412
YB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
ZnS substrate diffusion waveguides, fabrication and props. *(Russian)* 7−75116

urface vibrations *see crystal surface and interface vibrations*

urface waves (fluid)
see also liquid waves; oceanography
air fence response, pressure waves, underwater explosions 7−136888
air flow over wavy pool, spray generation and interfacial stress model 7−111079
air-water interface, large-amplitude waves, computation 7−91151
Alfven surface waves, dispersive and stability characts. along plasma column 7−97736
Bragg scattering by periodic sandbars 7−91149
carbon tetrachloride liquid surface, capillary wave and intrinsic thicknesses 7−84449
chaotic behaviour of resonantly forced surface water waves 7−104283
chemo-hydrodynamic wave propag. surface tension influence 7−105183
compressible differentially rotating cylinders, stability of acoustic and surface waves 7−134126
conducting liquid, nonlin. surface waves in MHD, modulational instability 7−83177
deep-water wave, 2D, conc. oscillatory force 7−104286
dispersive waves in shallow water, canonical structures 7−108253
electrical instability of the capillary waves for the Newton finite-depth liquid *(Russian)* 7−117681
equatorial ocean waves, mean circulation effects 7−127224
ferromagnetic fluids, surface waves studied using ray method or geometrical optics 7−104290
fine structure of wind-wave surfaces, laboratory expts. 7−107418
free-surface oscillations of fluid in closed basins 7−130726
image sequence analysis of complex physical objects: nonlinear small scale water surface waves 7−117621
incompressible cylindrical shells surface wave instability 7−69191
incompressible fluid, large-time behaviour of viscous surface waves 7−75604
liquid, long surface wave propag. calcs., nonlinear dispersion model, tsunami wave appl. 7−110993
liquid film, wavy, diffusion, num. soln. 7−98632
liquid film flow along inclined surface, stability, viscosity variation effects, finite wavelength anal. 7−83253
liquid layer, nonstationary problem soln. method, mixed boundary conditions 7−104291
liquid surface oscills., parametric resonance-induced regular structures 7−83254
liquid-drop vibration, mode-selection 7−76554
lobe structures, num. examples 7−91152
long nonlinear water wave excitation by moving press. distrib., 3D effects 7−83250
magnetic fluids, surface nonlinear waves and fluid instability 7−75688
membrane surface waves on wedge-shaped boundary, sound field generation 7−90863
monomolecular film on sea surface, wave damping due to Marangoni effect 7−107426
motion in rotating containers, boundary fitted coord. system 7−110995
multimode dissipative systems, parametric excitation 7−117619
nonlinear axisymmetric flows with free surface, numerical simulations 7−91148
nonlinear deep water wave evolution in horizontal directions 7−97553
nonlinear gravity standing wave anal. 7−136892
nonlinear wave packets propag. in shear flow with free surface 7−111007
ocean surface, gravity-capillary waves spectrum, nonlinear interactions, Lagrangian theory 7−145491
ocean surface gravity waves, Lagrangian moments, mass transport, accelerometer buoys appl. 7−111002
ocean wave energy extraction system dynamics *(Portuguese)* 7−78601
partially immersed obstacle, capillary-gravity wave reflection 7−97552
pipe flow US meas., using clamp-on Rayleigh wave transducers 7−123802
plasma source, surface wave sustained, expt. study at microwave and RF freqs. *(German)* 7−130891

surface waves (fluid) continued
plasma source, surface wave sustained, processes and modeling *(German)* 7−130892
plastic material erosion by gas-particle flow, surface instability, mathematical model 7−69107
plate, vertically oscillating in fluid, radiated wavetrain prod. 7−123665
reactor fuel cladding films, molten, thermocapillary-induced breakup 7−129179
rigid boundary, surface capillary-gravity wave damping 7−123664
rotating stratified fluid, gravitational-gyroscopic waves, external initial-boundary problem *(Russian)* 7−104323
shallow water waves over step, edge layer theory, soliton reflection, transmission 7−97550
short surface wave propag. on longer gravity waves 7−87662
short-crested waves in water of finite depth, props. 7−110999
sloshing, nonlinear responses, shallow water wave theory 7−130728
solitary wave, liq. vel. meas. by laser Doppler velocimetry 7−83376
solitary wave profile, series expansion diagonal Pade approximants convergence anal. 7−111003
solitary waves overtaking collisions, water-wave eqn. anal. 7−104284
solitons in a channel emerging from three-dimensional initial wave, theory 7−79444
standing waves in 3D basin, secondary bifurcation, nonlinear periodic free oscills. 7−123663
submerged moving body, stratified fluid, gravity waves vertical propag., surface effects study 7−142325
transient wave prod. by moving press. distrib. in 3D channel flow 7−104285
two-dimensional body submerged beneath surface waves, classical hydrodynamical problem 7−75603
two-layer inviscid incompressible fluid system. surface gravity and solitary waves 7−123666
viscous fluid flow on curved surface, stability and surface waves *(French)* 7−75526
viscous incompressible fluid, surfactant covered, parametric instability 7−69197
water, surface nonlinear cross-waves, transverse mode number shifts, geometry effects study 7−111005
water, transient free-surface flows generated by moving vertical plate 7−83256
water surface waves trapped by shores and bottom relief irregularities, asymptotic behaviour 7−114718
water wave propagation across shearing current 7−101327
water waves, eigenvalue placement by linear feedback 7−75600
water waves in straits of varying depths and widths, integrable nonlinear eqns. 7−104287
water waves refraction diffraction by an island 7−120027
water waves reson. refl. in long channel with corrugated boundaries, harbour resonator appl. 7−111001
water-wave dispersion relations, simple model 7−80237
wave effects on compound axisymmetrical obstacles *(Russian)* 7−97548
wavy thin film flow, interfacial vel. characterisation 7−97549
wind driven short scale water waves 7−69199

surge absorbers *see surge protection*

surge arresters *see surge protection*

surge protection
US east coast lightning detection network, magnetic direction finding network 7−127336

surge suppressors *see surge protection*

surgery
see also laser applications in medicine
3D imaging applications to surgical and radiation therapy planning 7−114482
air temperature within external auditory meatus during surgery and anaesthesia, rel. to esophageal temp. 7−119732
anaesthesia, use of neurophysiologic monitoring 7−126805
angioscopic monitoring of in vivo laser angioplasty 7−79047
antiarrhythmia surgery, interactive cardiac mapping system 7−107299
blood vessel laser welding 7−114453
brain tumour surgery, US imaging, experiences with conventional and holographic B-imaging 7−126990
cardiovascular surgery, laser use overview 7−87151
cerebral probe implantation method, spatial viewing, simulator using floating line concept 7−114551
closed loop control of blood pressure, ventilation and anesthesia delivery 7−114549
contact lens photostimulator for surgical monitoring 7−101125
contact probes for the Nd:YAG laser 7−79048
cranial anomalies, detection, 3D reconstruction from CT scans 7−145221
craniofacial surgery planning, pseudoforamina reduction in images 7−107295
craniofacial surgical planning system 7−107296
cryoneedle, surgical, precooled, spring-driven for cryohaemorrhoidectomy 7−79127
cryosurgical operations, thermal contact between probe and tissue 7−144976
CT, 3D internal structures modelling, appl. using CAD technique 7−114480
CT three-dimensional images, manipulation and display for surgical planning 7−93919
EEG feature extraction and clustering during surgical anaesthesia 7−119895
EEG mapping in the operating room during general anaesthesia 7−107303
electroneurophysiologic monitoring, intraoperative 7−78836
electrosurgery, surface burns avoidance 7−93845
electrosurgery power output meter 7−114546
electrosurgical current, tissue stimulation cause 7−93847
electrosurgical electrodes, paediatric dispersive, standard for thermal performance eval. 7−93846
endarterectomy of expt. atheromas, fibre optic versus direct laser delivery 7−79049
endometriosis videolaseroscopic treatment 7−114454
eye, optimal incision diameter in YAG laser capsulotomy 7−107190
fibre optic ECG monitoring unit for use in operating room 7−119894
fibre optic techniques in medicine and biology, endoscopy, diagnostics and power transmission 7−79041
fibre optics and lasers in medicine 7−87145
fluoride glass IR optical fibres in medicine and biology 7−79042
force transducer to meas. force required to close surgical wound 7−71925

surgery continued
intra-operative continuous monitoring of cardiac output, Doppler US based instrument 7−87357
intraoperative cardiac activation mapping, integrated system 7−114547
intraoperative cardiac arrhythmias mapping unit for the operating room 7−107301
intraoperative cardiac mapping, 128 lead online computer system 7−107300
intraoperative cardiac mapping 7−107298
intravascular delivery of laser energy via optical fibers 7−114455
laser applications in medicine 7−79061
laser beam modelling, CO_2 integrated computer-based control problem soln. 7−71840
laser ocular surgery, review *(Italian)* 7−93861
laser output safety interlocking prior to optical fibre burnback 7−79093
laser surgical instrument surfaces, diffuse laser light refl. 7−114438
lasers, surgical appls., status report 7−114443
mid-IR solid state laser with fiber optics as an ideal medical scalpel 7−114452
neuromuscular function monitoring in postoperative period 7−126806
neurosurgical intensive care, evoked pot. monitoring 7−107304
neurosurgical retractor system using IR emitter and detector for ischaemia prevention 7−101138
occluded artery recanalisation using CO_2 lasers and IR optical fibres 7−79046
open heart surgery, patient monitoring during and after by deep body thermometer 7−139402
optical fibre coupled CO_2 laser for medical use 7−79054
optical fibre technology in medicine 7−79055
optical fibres in medicine and biology, conf., San Diego, CA, USA (Aug. 1985) 7−72708
scoliosis, instrumentation to evaluate surgical corrections 7−119898
Sheffield stereotactic radiosurgery unit: phys. characts. and principles of operation 7−139354
skin wound healing rates, electrostimulation percutaneum influence 7−107036
stereotactic neurosurgery, microcomputer based system, integrated stereoscopic view of CT data and angiograms 7−93920
vascular tissue ablation by laser beams, time resolved photoacoustic studies 7−87131
As_2S_3 IR glass fibre with Teflon cladding, CO laser power delivery for medical appls. 7−79044
CO_2 laser surgery 7−145175
Nd:YAG laser and sapphire contact probe surgical appls. *(Japanese)* 7−126995
ZnSe optical fibre for CO_2 laser medical appls. 7−79043

surgical operations *see surgery*

surveying
3D adjustment of terrestrial geodetic network, collocation soln. 7−94052
airborne inertial surveying using laser tracking and profiling techniques 7−115099
conference, Baltimore, Maryland, USA (March-April 1987) 7−128190
data logging and database management of geodetic meas. for LEP installation 7−74308
datum parameters determ. from observations, classical adjustment model extension *(German)* 7−101183
electro-optical distance measurement nets, Second Order Design weights and field meas. 7−94058
geodetic control surveys in North America, 1983 to 1986, review 7−133546
geodetic inertial surveying method, errors in gradiometer-accelerometer eqn. 7−119929
geodetic levelling, evidence of suppression of unequal ref. error 7−87425
geodetic levelling networks, continuous analogons 7−79193
geodetic network observations, accuracy problems, stochastic model 7−79718
geodetic networks, local reference system, 3D adjustments 7−79724
GPS, codeless dual-band, three-coordinate positioning within 1 part in 10 million 7−79188
GPS, precise positioning, measurement reduction techniques 7−79716
GPS engineering type networks, comparison with Terrameter results 7−79720
GPS for high precision geodetic surveys, highlights and problem areas 7−79189
GPS navigation system, civilian use 7−79714
GPS orbit determination using the double difference phase observable 7−79717
GPS precision levelling for LEP trilateration network 7−79719
GPS receiver technology for geodetic positioning 7−79715
S Hokuriku District, Japan, levelling surveys across Sabae fault *(Japanese)* 7−87641
Indonesia, land-related information systems and education 7−88761
inertial geodetic surveying, simulation of gravity-induced effects 7−94059
land slope frequency distribution, determ. from digital elevation models 7−87646
land surveying, use of European datum 1987 (ED87) as control network *(German)* 7−101181
large particle accelerators, applied geodesy school, Geneva, Switzerland (April 1986) 7−72733
LEP, high precision geodesy applications 7−79721
LEP installation, applied metrology, computing and anal. methods 7−74307
LEP installation, computer aided geodesy 7−74305
LEP installation, instrumentation and metrology 7−74306
levels, modern trends in development, review 7−102488
Long Valley caldera, E California, crustal deform. from trilateration and levelling 7−87568
marine acoustic surveying with sub-m accuracy 7−134006
metrology approach of Applied Geodesy Group at CERN 7−79723
North Nashwaaksis Stream, New Brunswick, Canada, channel changes in short channelised reach 7−87718
Parkfield, California, geodetic meas. (1959-1984) 7−87424
satellite positioning, appls. of laser ranging, TRANSIT positioning and GPS 7−133554
scanning lidar bathymeter for water depth measurement 7−79368
society and surveying, conf., Nurnberg, Germany (September 1986) 7−102015
tacheometers (electronic), angle measurement interpolation using frequency dividers 7−101553

surveying continued
terrain-following coordinate systems, horizontal finite differences calc. with variable vertical mesh sizes *(German)* 7−79538
underground geodesy for LEP accelerator 7−79722
Zeiss Ni-1 level instruments, empirical calibration of mag. errors 7−94060

susceptance, electric *see electric admittance*
susceptance, electric, measurement *see electric admittance measurement*
susceptibility, dielectric *see optical susceptibility*
susceptibility, magnetic *see magnetic susceptibility*
susceptibility, optical *see optical susceptibility*
suspensions
automatic counter for particles suspended in a liquid 7−123793
average particle size meas. in emulsions and suspensions, wide-range meter 7−102386
axisymmetric brownian particle suspension, kinetic theory 7−86684
charged spherical particles, suspensions in electrolyte solns., permittivity meas. 7−106839
chlorella suspension growing in sloped-stepped solar unit, temp. conditions 7−83311
coagulating suspension, nonaqueous media, rheological study 7−100631
coagulation, Monte Carlo simulation 7−114016
coal, heterodisperse suspensions, of fine particles, flocculation 7−93386
coarse-grained particles in suspension, prediction of minimum stirrer ang. velocities 7−123710
colloid particles, strongly-flocculated, rheology and sedimentation study 7−93395
dense suspension rheology, computer simulations appls. 7−93383
diffusion of dispersed medium, virtual inertia effects 7−80691
dilute colloidal suspension, two-component mixture, struct. factor 7−126491
dilute suspensions of slender rods in weak flows, rheology 7−136771
dilute suspensions of solid spheres, cylindrical Couette flow, anisotropic particle distrib. 7−111080
dipolar axisymmetric Brownian particles, Newtonian solvent, rheology, external field effects 7−114010
droplet migration in electrically conducting fluid in microgravity environment, eddy current induced 7−71458
dust cloud, ignition by spark 7−75904
electric particulate suspension, particle speed distrib. meas. 7−80754
electromagnetodynamics of polar liquids and suspensions 7−70004
electrorheological suspensions, struct. and viscoelastic props. in electric field *(Russian)* 7−106563
equi-sized spheres, conductivity bounds using Volterra-Wiener series 7−137994
erythrocytes, flowing, inhomogeneous mag. field effects 7−93785
Faraday rotation, dilute suspension of small particles 7−85602
ferromagnetic particle suspension, torque and rot. hysteresis 7−91251
ferronematic suspension, orientational struct. and mag. props. 7−105969
ferrosuspension, magnetisation, Fokker-Planck eqn. soln. 7−125488
filtration, flux enhancement, solution destabilisation effects 7−113994
fine grained particles suspensions, boundary layer flow 7−123703
flocculated suspensions, floc breakage, dynamic response of particle size distrib. 7−93385
fluidised, fluid dynamic stability, particle bed model 7−123738
glass spheres motion meas. in electrodynamic balance, electrode design effects 7−123796
glycerin, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7−142189
hard-core interacting Brownian particles, generalised Smoluchowski eqn. 7−102320
horizontal slurry flow, large solid particle transport, Bagnold theory 7−136821
hydrodynamics in Brownian dynamics, periodic boundary conditions for computer simulations 7−111332
incompressible multiphase particulate suspensions, mechanics and thermodynamics 7−94311
incompressible pulsatile flow of particle suspension in rigid tube, iterative soln. 7−142376
isotropic phase of nematic liquid crystal, diffusion of brownian particles 7−111930
Kallodoc bead suspensions, non-Newtonian behaviour study 7−100632
kaolin, aq. slurry containing NaOH, laminar falling film absorpt. of CO_2 7−91962
kaolinite in aqueous suspension, shock wave front pressure intensification study 7−136932
kaolinite-carbamide intercalates, conc. suspensions, rheological props. 7−75510
laser diffraction spectrometry, Fraunhofer diffraction and Mie scatt. 7−108519
lipid multilamellar aqueous suspensions, phase transitions and chain packing 7−114177
liquid suspension, laser-induced optical effects 7−68752
macro-ionic suspensions, static correlations, HNC-mean spheric approx. 7−100627
magnetorheological suspension, turbulent flow and heat transfer study 7−123719
montmorillonite-Na-water system, selective absorption of Cs, Sr, and Ca 7−126493
multiple water drops, simultaneous suspension technique for small vertical wind tunnel 7−123715
N suspended particles, hydrodynamic interaction, simulation 7−136995
non-dilute, transport props., renormalisation studies 7−111066
non-Newtonian suspension, flow potentials in viscometer channel 7−111040
ordered suspension of small drops, effective viscosity 7−132983
particle interactions in concentrated suspensions, particle surface roughness effects 7−117645
particle shape determ. using magneto-optical method 7−71540
particles suspended in liquid, separation by nonuniform travelling field 7−111074
particulate sols and emulsions, electrically induced concentration bonding 7−93388
penetrable spheres at nondilute conc., bulk and shear moduli 7−119585
pipe flow, horizontal, critical vel. calc. for maintaining solids in suspension 7−142354
plant leaf subcellular organelles, flow cytometry, light scatt. and fluoresc. obs. 7−93679
polydisperse suspension, gravitational separation, diffusion-convection model 7−83313

spensions continued
polymer latex particles in suspensions, colloid crysts., 2D Fourier anal. 7−106834
polymers, pigmented particles, triboelectric charging 7−112435
polystyrene microspheres, colloidal suspension, collective effects, density fluctuation dynamics, inelastic light scatt. anal. 7−106835
polystyrene spheres, monodisperse, deionised suspensions, microscopic obs. of crystallites 7−114003
PTFE, dye-tagged latexes, transient electrofluorescence study 7−92745
PTFE latex particles, fluoresc., polarised components, appl. to optical switches 7−99935
quartz, suspensions, in univalent-univalent electrolyte solns., elec. cond. 7−78554
red mud slurry, rheological props. and flow characteristics 7−104347
rheological behaviour, Hooke'e elasticity influence *(Russian)* 7−97470
rigid rods, shear flow, stress growth, Galerkin method calcs. 7−114011
screened Coulomb system colloidal suspension, two-stage melting 7−98407
settling velocity in fluidised bed, particle conc. depend. calc. 7−97618
shear-induced self-diffusion in conc. suspensions of spheres 7−83317
sheared suspensions, ordering and viscosity study using elliptical shear cell 7−142409
silica suspension, polyacrylamide soln., flocculation, rheological behaviour study 7−114009
slurry flow, horizontal pipes 7−123754
solid particle-gas system, turbulence, local phenomenological props. 7−83306
solid particles suspension, three-phase sparged reactors, physical props. effects 7−98620
solid suspension, yielding, heterogeneous behaviour 7−75507
solids, suspended, hydraulic transport in horizontal pipeline, press. gradients calcs. 7−91224
sphere, water-suspended homogeneous, trapped by focused laser beam, scatt. laser beam forward far-field pattern 7−74841
spheres, monodisperse suspension, cond. from planar wall with uniform temp. 7−142146
spheroidal mag. particles, dilute polydispersive suspension, mechanical description 7−75683
spheroidal particles, light scatt. study 7−122829
styrene-acrylamide copolymer particles, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7−142189
turbulent two-phase suspension flow, dil., particle drag 7−91199
turbulent two-phase suspension flow in vertical pipe, flow struct. 7−91198
viscoelastic fingering effects of water injected into concentrated clay particle suspensions 7−110896
viscosity modelled by shear depend. maximum packing fraction 7−69229
viscous liq., nonlinearly, vel. field, suspension model 7−130792
Al_2O_3, suspensions, pseudoplastic flow, solid conc. and ζ-pot. effects 7−142189
$Al(OH)_3$ electrolytic coagulation in mud water, ultrasonic irradiation effects *(Japanese)* 7−117393
CdS crystallites, electronic processes 7−70327
β-FeOOH particles, colloidal suspension, light scattering studies 7−113212
PbI_2, disordered microcryst. prod. from colloidal suspension, Raman obs. 7−85721
Y-Ba-Cu-O high T_c superconducting filament prep. by suspension spinning method 7−144353

swelling
agent for solid-gas mass transfer meas. 7−75261
corneal stroma and articular cartilage, kinetics of chem. induced nonequilib. swelling, electromech. model 7−114351
egg-lecithin-H_2O system, phospholipid bilayer, interbilayer force calc. 7−93667
elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7−93127
ethylene-propylene-rubber-base elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7−93127
extrudate swell, non-isothermal non-Newtonian, mixed boundary element and finite element method 7−110900
ferritic alloys, irrad., dimensional stability, strength, toughness, fusion reactor appl. 7−103170
fibre reinforced composites, cross-ply laminates, anti-symmetric shapes, effect of moisture induced swelling 7−78287
glycerol mono-oleate bilayer interactions, interferometric investig. 7−93669
graphite fibre reinforced epoxy, hygrothermal damage 7−78298
graphite fibre reinforced epoxy, laminate, hygromechanical charactn. 7−117551
Inconel 600, neutron irrad., microstruct., precip., swelling 7−84039
N-isopropylacrylamide, ionised gels, volume-phase transitions 7−119586
N-isopropylacrylamide gels in mixed solvents, reentrant vol.-phase transition 7−69885
paraffinic crude oils, swelling factors and bubble points, impurity effects 7−124443
PMMA film dissolution and swelling behaviour in solvent/nonsolvent mixtures, in situ ellipsometric charactn. 7−124520
poly(2-hydroxyethyl methacrylate) microparticles, crosslinked struct. determ. 7−117831
poly(vinyl acetate), swollen gel, elastic moduli meas. 7−118016
poly(vinyl acetate-co-N-vinyl 2-pyrrolidone)-poly2-ethylhexyl acrylate-co-acrylic acid blend, compatibility and microstruct., IR spectra 7−117107
polyacrylonitrile, swelling, struct. changes, wide-angle X-ray scatt. obs. 7−91479
polyethylene structures, swell drawing mfg. 7−119236
polyethylene-PAA copolymers, radiation grafted, small angle neutron scatt. obs. *(Russian)* 7−97996
polyethylenes, irradiation- and peroxide-crosslinked, struct. and tensile behaviour 7−78398
polymeric fractals, in solns., swollen and condensed states 7−131010
polystyrene based crosslinked resins, swelling and deswelling, hysteresis-like behaviour 7−93126
polystyrene transient swelling, iodohexane sorption, case-II diffusion regime 7−118164
radiation swelling, analytical equations develop. 7−69752
rubber, natural, compression, stress relax., modulus enhancement factor 7−78089
stable open porosity, simplified model 7−73855
steel, austenitic stainless, neutron irrad. creep, void swelling 7−86269
steel, H capture in swelling in first wall of fusion reactor 7−122064
steel, stainless, neutron irrad., microstruct., precip., swelling 7−84039
surfactant-alcohol-brine lyotropic lamellar phases, X-ray scatt. study 7−83659
Tsuruga BWR fuel, post-irradiation exam. at JAERI, creep and swelling tests *(Japanese)* 7−96180
VVER-type assemblies, probability model of flow area blockage under accident conditions 7−129314
Fe-Cr-Mn(-Ni), neutron irrad., void swelling, phase stability 7−86132
Fe-Mn, neutron irrad., void swelling, phase stability 7−86132
$LiAlO_2$, neutron irradiated, swelling and cracking expt. 7−129415
Li_2ZrO_3, neutron irradiated, swelling and cracking expt. 7−129415
Lu $T_{0.13}$ ^{3}He bubble formation 7−91852
Mo, void-lattice form., swelling, temp. depend. 7−83949
$NbT_{0.59}$, ^{3}He bubble formation 7−91852
Ni, void-lattice form., swelling, temp. depend. 7−83949
Ni-Cr, neutron irrad., swelling, order-disorder transform. 7−86168
Pd-T, ^{3}He precipitation, bubbles, swelling 7−91821
Si:B, H, surface layer swelling on H implantation at different doping concentrations 7−124350
$VT_{0.02}$, ^{3}He bubble formation 7−91852

swept-frequency reflectometry
No entries

swirling flow
see also vortices
axisymmetric turbulent boundary layer with pressure gradient 7−91099
bubble-driven flow in axisymmetric container, num. model 7−104329
burner-quarl-furnace system, recirculation zone, flame stabilisation 7−113928
confined vortices in flow machinery, book contrib. 7−97544
cyclone stream, gas motion and heat transfer 7−136853
fluid dynamics, annual review, book 7−95112
gas suspension in pipe, swirling flow, heat transfer 7−111096
hypersonic viscous shock layer in swirling gas flow on permeable surface 7−142334
incompressible coaxial contraswirling jet in suddenly expanding confinement 7−69238
internal flows, turbulence models and their appls. 7−91091
inviscid incompressible liq. film over cylinder, swirl flow, eigenvalue problem 7−110992
jet discharge into swirling crossflow, laser Doppler anemometry 7−111046
nozzle flow blocking effect, appl. to aerodynamic laser window design *(Chinese)* 7−104279
slightly heated free swirling jets, turbulent flow, heat transfer 7−136950
steel, continuous casting, rotary electromag. stirring, secondary flow study 7−104278
turbulent buoyant jets, discharge into stagnant medium, asymptotic anal. 7−97596
turbulent jet flow, eddy viscosity model 7−136866
turbulent swirling flow in rectangular channel, large eddy simulation and k-ε model *(Japanese)* 7−142284
turbulent swirling flow in straight pipe, modified k-ε model 7−91138
vaned diffuser, rectangular flow cross-sections, visualisation study 7−83372
variable area ducts, entrance-flow velocity nonuniformity effects 7−117614
viscous fluid inside surface of revolution, axisymmetric motion 7−123653
von Karman swirling flows, book contrib. 7−97546
vortices, axisymmetric breakdown in rotating conical pipes 7−75589

switchboxes *see switchgear*

switched mode power supplies *see power supplies to apparatus; power supply circuits*

switches
see also plasma switches; relays; semiconductor switches; time switches
beamsplitter, nematic liq.-cryst.-clad electro-optic waveguide 7−130299
cryogenic motorized waveguide switch 7−95598
electron microscopes, Philips series, low dose microscopy facilitation 7−128718
fibre-optic circuit switch, thermooptic bulk deflector, theoretical and expt. behaviour 7−142003
fibre-optic switches, magnetic domain grating 7−136488
foot switch, thin, gait parameters determ. appl. 7−133522
integrated electro-optic modulators and switches, state-of-the-art 7−68826
Mach-Zehnder interferometer, compact all-fibre, as elec. activated switch 7−104008
optical modulator for integrated optics, based on electric capillarity *(German)* 7−130314
optical switch using thermo-optical effect 7−97172
photonic switching, conf., Incline Village, NV, USA (March 1987) 7−102019
pneumatic shutter for high power arc lamps, optical annealers appl. 7−128554
PTFE latex particles, fluoresc., polarised components, appl. to optical switches 7−99935
rail-gap switches triggered by semiconductor edge discharges 7−97845
semiconductor active directional coupler, optical switching by saturation-induced phase changes 7−117256
single-mode optical-fibre switch 7−90828
total-internal-reflection switch crosstalk analysis *(Chinese)* 7−117314
$LiNbO_3$ based electro-optical devices, modelling and BPM calcs. 7−104045
$LiNbO_3$ directional coupler optical switch at 1.3 μm, compact design and performance 7−75170
$LiNbO_3$ polarization independent integrated optics switches 7−136618
$LiNbO_3$ tree-structured optical switch matrix, geometrical design 7−82865
$LiNbO_3$:Ti electro-optic waveguide switch, optical intensity modulation to 40 GHz 7−117305
$LiNbO_3$:Ti nonblocking 4×4 switch array for optical switching system 7−136617
$LiNbO_3$:Ti single-mode waveguide crossings and switches, design rules and appls. 7−104046
PLZT thin films, for high speed total internal reflection optical switches 7−103989

switchgear
see also circuit breakers; switches
magnetostatic current fields calc. 7−136124
plasma erosion opening switch operation at long conduction times 7−69492

switching
see also electrical conductivity transitions; ferroelectric switching; magnetic switching; Q-switching; switches
bistable semiconductor lasers, cascadable optical triggering scheme using photoconductors 7−90638
DFB diode laser, multielectrode type with saturable absorber, tunable optical-wavelength conversion 7−141883
Fabry-Perot bistable device, biased multibeam cascadable type, optimum control beam angle 7−97062
Fabry-Perot semicond. laser amplifier, high-speed all-optical gate switching expt. 7−129991
laser diodes, bimodal switching 7−136303
nonlinear ion-exchanged semiconductor-doped-glass waveguide, optical switching during prism coupling 7−82683
solar energy conversion and lighting technology, materials and optics conf., San Diego, CA, USA (Aug. 1986) 7−120700
$BaTiO_3$, photorefractive effect, ferroelectric polarisation reversal 7−68755
GaAs-AlAs barrier structs., impedance switching effects, expt. study 7−131744
$K_xWO_{3+x/2}$-IrO_2 complementary electrochromic windows, optical switching 7−123134
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7−125979
WO_3-IrO_2 complementary electrochromic windows, optical switching 7−123134

switching circuits
see also choppers (circuits)
five-channel time switch for physics expts. 7−121151

switching functions
see also Boolean functions
ERS-1 altimeter, automatic tracking mode switching algorithm 7−101663

switching systems
intersatellite and fiber-optic communication with stripe domains 7−75169
optical switching devices, third-order integrated optics appls. *(Romanian)* 7−141927

switching transitions *see electrical conductivity transitions*

symbiotic stars
EG And, UBV photometry and revised period 7−107836
R Aqr, EXOSAT and IUE obs. of symbiotic Mira during max. and min. 7−107840
R Aqr, obs. of linear polarization vars. 7−72473
R Aqr, subarc second continuum at 20 mm and SiO spectral obs 7−88442
R Aqr, symbiotic Mira variable, first unambiguous X-ray detect. 7−140096
AS 201 as evolved central star of planetary nebula 7−107842
classical symbiotic stars, components nature and outburst characts. 7−145972
cool components, spectral types and lumin. classes 7−107831
CH Cyg, 1985-6 optical spectroscopy 7−107834
CI Cyg, eclipsing symbiotic star, IR var. *(Russian)* 7−127912
CH Cyg, radio jet optical confirmation and high-resolution spectra 7−120413
CH Cyg, spectral vars. during 1982 activity phase 7−107835
CH Cyg, UV continuum, 1979-86 IUE obs. 7−107833
CH Cyg, X-ray emission obs. 7−101789
AG Dra, components characts., visible and IR photometry and spectrophotometry 7−145959
AG Dra, Population II symbiotic star, spectroscopic and photometric obs. 7−115389
AG Dra, radio structure at 6 cm wavelength 7−120445
AG Dra, rapid mass accretion onto hot component 7−107837
AG Dra, satellite and ground-based obs. of quiescent energy distrib. 7−107839
AG Dra, spectral characts. and components nature 7−145960
AG Dra, X-ray and UV obs. during quiescence and outburst 7−107838
RW Hya, UV-optical spectrophotometry and IR photometry 7−127894
Mira variables in interacting binaries, evolution and luminosities 7−140111
modelling of line profiles 7−127886
outbursts, luminosity and spectral vars. for increased mass-loss rate model 7−140075
AG Peg, emission line profiles and UBVRI photometry during 1985 minimum 7−107841
polarization and IR colours 7−120420
RX Pup, wind characts. and radio emission 7−72446
reference catalogue and atlas of galactic novae 7−115258
S18/SMC, peculiar early-type emission-line supergiant, optical and UV spectroscopic study 7−101771
S-type symbiotic stars, spectra periodic var. and radial vel. 7−127887
symbiotic novae evolution to classical symbiotic stars, size considerations 7−145972
PU Vul (Nova 1979), photometry, spectrophotometry, spectrum and polarisation (1981 to 1982) 7−140102
PU Vul (Nova 1979), symbiotic nova, evidence for red giant-white dwarf model 7−115444
C III 190.9 nm/Si III 189.2 nm ratio as planetary nebula-symbiotic star diagnostic 7−139940

symbol manipulation
CAI for problem-solving skills in algebra, expert system based 7−88790
MuMATH computer algebra system for 1st order kinetic eqns. 7−132909
Steiner tree associated with three quarks 7−121451
symbolic algebraic manipulation method for kinetics of complex reactions 7−126408

symbols *see nomenclature*

synchrocyclotrons
Celsius accelerator in Sweden *(Swedish)* 7−81775

synchronisation
biological oscillator, topological patterns of synchronization 7−119703
CAMAC-compatible automation of microwave relaxometer using IZOT TsLANP-0270 computer system 7−128592
direct-detection optical communication systems, symbol and frame synchronisation 7−68571
Josephson junction with capacitance, external synchronisation *(German)* 7−92383
LASSO experiment on Meteosat P2 for clocks intercontinental synchronisation 7−79803
LEP accelerator, RF synchronisation using feedback phase control system 7−116728

synchronisation continued
microcomputer data acquisition synchronisation with WWV time, use in asteroid occultation photometry 7−80266
self-synchronization of nonlinear oscillators in acoustics 7−123291
speech robustness against noise, timing-synchrony meas. 7−114296

synchronism *see synchronisation*

synchronous machines
superconducting armature, three-phase, windings and cryostat design and construct. 7−73359
H_2 coolant chromatographic anal. for Fe or Cu faults detection *(Russian)* 7−71548

synchroscopes *see cathode-ray oscilloscopes*

synchrotron radiation
active extragalactic sources, spectra from near-simultaneous obs. from 20 cm to 1400 Å 7−88664
Aladdin, 1 GeV electron storage ring synchrotron light source 7−96408
alkylamine clusters, H-bonded, photoionis. mass spectrosc. 7−136115
amorphous materials, atomic arrangements, synchrotron-radiation-based techniques 7−142585
atomic photoionisation, Daresbury Synchrotron Radiation source expts. 7−90056
atomic physics expts. 7−96436
atomic physics with synchrotron radiation and heavy-ion storage ring 7−110133
beam position monitor for X-ray synchrotron radiation facilities 7−81826
beamstrahlung from electron pulse collision, quantum treatment 7−129947
BESSY XUV synchrotron radiation facility 7−108722
Bonn electron accelerators and synchrotron radiation laboratories 7−108724
characteristic features, synchrotron radiation investig. *(German)* 7−132972
chemical analysis methods based on nucl. principles, review *(Italian)* 7−86688
Coma galaxy cluster, in-situ accel. model for diffuse radio emission 7−140307
combined heavy ion storage ring and synchrotron light source facility 7−96407
compact superconducting SR ring for X-ray lithography 7−96409
compact synchrotron radiation source for X-ray lithography, status of development *(Japanese)* 7−116039
computerized microtomography using synchrotron radiation from the NSLS 7−93911
cylindrical element monochromators for synchrotron radiation, concept and design procedure 7−110546
Daresbury Synchrotron Radiation Source 7−108723
double-crystal monochromator, UHV, for synchrotron radiation, construction and use 7−134904
electron energy loss formula, corrections from conservation laws for cyclotron radiation 7−101671
electron eqn. of motion at relativistic velocities 7−122803
electron storage ring, synchrotron radiation axis vibration 7−81776
electron synchrotron radiation in the fat infrared 7−82448
electrons in cyclic accelerator, synchrotron radiation props. allowing for rectilinear gaps 7−141340
extraterrestrial material, synchrotron X-ray fluorescence trace element anal. 7−100661
FIR spectroscopy of solids using synchrotron radiation *(Japanese)* 7−73445
galactic plane radio emission, linear polarisation survey of area $4.9° \leq l \leq 7.6°$ $(-1.5° \leq b \leq 1.5°)$ 7−120583
galaxies, radio continuum obs. of nearby objects 7−128083
gamma-ray burst emission, synchrotron inverse Compton model 7−88683
gamma-ray burst event, 1979 March 5, new synchrotron luminosity distance limit 7−88679
gamma-ray bursts, synchrotron emission models 7−88677
gamma-ray pulsars, curvature synchrotron radiation model 7−146105
grazing incidence mirror design, thermal loading considerations 7−95707
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986) 7−95085
grazing incidence optics for synchrotron-radiation insertion-device beams 7−95706
HD 32918, active chromosphere K2 III star, gyrosynchrotron emission model for radio flares 7−120400
Hefei National Synchrotron Radiation Laboratory, China 7−108725
high resolution synchrotron excited soft X-ray core level spectroscopy at NSLS 7−95698
highly charged ions prod. and accumulation, synchrotron rad. atomic physics appl. 7−96433
hydrocarbons, radiolysis singlet and triplet yields, mag. field effects in fluoresc. 7−71508
inner shell photoionisation of atomic and molecular gases 7−96632
Jupiter, synchrotron maser instability model for decametric radio emission 7−94685
Kratky block-collimation small-angle X-ray diffractometer for synchrotron radiation 7−121316
LMC, 45 MHz emission mapping rel. to symmetric but warped struct. 7−101908
Markarian 421, BL Lac object, simultaneous multifreq. obs. rel. to synchrotron source model 7−128059
microradiography, coarsening studies of liq.-solid mixtures 7−86528
microwave radiation from dense magneto-active plasma, gyrosynchrotron model for solar flares 7−145904
mildly relativistic shocks, mag. fields and synchrotron radiation 7−137082
mirror super high-precision machining to give high quality images *(Japanese)* 7−117356
mirror super-high accuracy profile meas. for machining *(Japanese)* 7−117357
molecular clusters, photoionisation mass spectrometry using synchrotron radiation, review 7−90474
nondestructive position monitor for synchrotron radiation 7−116791
optics, surface roughness property survey 7−95705
Pic A, radio galaxy, obs. of bright optical synchrotron counterpart of western radio hot spot 7−101935
polarisation corrections 7−122809
quantised synchrotron radiation in strong mag. fields, radiative transition rates 7−145815
quartz monocrystal, synchrotron radiation modulation by acoustical oscillations 7−138417

nchrotron radiation continued
quasars, optical spectral indices rel. to optically thick synchrotron source model 7−120637
quasars, synchrotron self-Compton model for luminosity depend. of X-ray/IR emission ratio 7−128110
radiation intensity of monoenergetic electron near circular orbit 7−82446
radiation spectra of moving charges in classical electrodynamics, high-freq. asymptotic behavior 7−122810
radio galaxies nuclei, influence of relativistic electrons on photoionised gas cloud 7−139897
relativistic particle with parallel velocity, cyclotron radiation, ang. distrib. 7−129946
resonance injection method for the compact superconducting SR-Ring 7−96435
scientific opportunities at the proposed 6-7 GeV Advanced Photon Source 7−89817
SLC energy spectrum monitor using synchrotron radiation 7−68119
solid surfaces, angle-resolved photoelectron spectra using synchrotron radiation *(Japanese)* 7−77762
SOR-RING, 0.38 GeV electron storage ring, operation, appls. 7−109549
source for quantitative XPS, advantages, consequences 7−138596
spiral galaxies, second-order Fermi accel. rel. to radio spectral index distribs. 7−115614
SRIXE, method for selecting detector apertures 7−144774
supernova remnants, second-order Fermi accel. rel. to radio spectral index distribs. 7−115614
time resolved spectroscopy in vacuum UV region with synchrotron radiation 7−134860
topography appl. to single crystal dynamic processes 7−91562
trace element measurements using white synchrotron radiation 7−100660
trace elements in human nasal cavity bones 7−94034
two-photon spectroscopy, UV, using synchrotron radiation 7−128679
use in vacuum UV spectroscopy and radiometry 7−102543
UVSOR facility, Okazaki, Japan, beam lines 7−109551
VUV spectrometer-detector system, comparison of methods for second-order detect. efficiency determ. 7−95660
X-ray chemical analysis appls. 7−86735
X-ray haloes around gamma-ray sources, contrib. of high-energy X-ray fluxes 7−134320
X-ray lithography using electron undulating ring 7−95695
X-ray microdiffraction with synchrotron radiation 7−96434
X-ray microscopy with synchrotron radiation 7−67446
X-ray powder diffractometer for synchrotron radiation studies at X13A 7−111309
X-ray scatt., appl. to magnetism *(Japanese)* 7−118851
X-ray synchrotron radiation, focusing using synthetic multilayer mirrors 7−81827
X-ray synchrotron radiation monochromators, diffraction props., optical systems and dynamical theory 7−128729
X-rays, sub-nm wavelength, single-slit diffraction patterns 7−95694
Al vacuum chamber, synchrotron radiation induced gas desorption, cleaning techniques comparison 7−134760
C film on O_2 gas, synchrotron radiation-induced etching 7−93121
CS_2, valence satellites, double ionisation continua, photoelectron spectra 7−136004
Fe_2O_3, synchrotron radiation nuclear Bragg scatt. 7−111314
He, $1s^2\ ^1S_0$-$1snp\ ^1P_1^0$ series, spectrum 7−109826
$Si_xN_yH_z$ film, synchrotron-radiation excited CVD 7−77839

ynchrotrons
see also cosmotrons
atomic physics experiments with stored cooled heavy ion beams 7−89808
atomic physics with synchrotron radiation and heavy-ion storage ring 7−110133
beam position monitor for X-ray synchrotron radiation facilities 7−81826
CERN, history from 1940s to 1960s, book 7−108054
CERN accelerator school on advanced accelerator physics, Oxford, England (Sept. 1985) 7−115668
CERN $\bar{p}p$ collider complex, RF systems 7−81773
CERN $p\bar{p}$ project 7−81771
CERN SPS, vacuum chambers in composite material 7−135703
chromaticity optimization by tuning in large collider rings, SSC and LEP appls. 7−68096
controller for pulse generator thyristors of betatron 7−134729
CRYRING project for at. and surface physics study 7−89827
dipole magnet optimum arrangement to minimise closed-orbit distortions 7−68097
eight-channel gas threshold Cherenkov counter for GIPERON spectrometric system 7−81881
electron synchrotrons, polarisation and spin kinetics in stationary mag. field 7−116763
electron-nuclear and photonuclear reactions study 7−109553
electrons in cyclic accelerator, synchrotron radiation props. allowing for rectilinear gaps 7−141340
Elektron setup specification 7−129503
European Hadron Facility, equipment and expts. 7−103311
heavy ion ICF expts. on the ISIS synchrotron 7−67967
high intensity proton synchrotrons and the EHF project 7−74300
hospital based synchrotron for proton radiation therapy, scaling rules 7−93914
INS 1 GeV electron synchrotron, 3D neutron dose distrib. 7−127010
nonlinear resonances, Hamiltonian dynamics 7−116729
optics principles for design 7−81793
proton accelerator for medical applications 7−89819
proton synchrotron, induced radioactivity and relation to beam losses 7−109585
proton synchrotron, superconducting secondary beam line 7−109584
proton synchrotrons, polarisation and spin kinetics in stationary mag. field 7−116763
PS-booster, coherent betatron oscillation accompanying the extraction bump orbit 7−122263
RF accelerating voltage shaper for ring injector, initial-frequency generator 7−129483
RF acceleration and synchrotron motion 7−116748
SCIN synchrotron, superconducting magnets, magnetostatic field calcs., algorithms *(Russian)* 7−116745
space charge effects, tune shifts and resonances 7−81797
SPS, CERN high energy particle research *(German)* 7−96404
SPS, peak luminosity and luminosity lifetime 7−81774
SSC, search for Higgs boson 7−74294

synchrotrons continued
SSC dipoles, keystoned flat superconducting cables, manufacture 7−129463
SSC dipoles, mag. field measurements 7−129464
SSC dipoles end sections, field quality 7−129475
superconducting magnets for future large accelerators 7−141345
Superconducting Super Collider, full-length dipole magnets, cold mass assembly construction 7−129478
Superconducting Super Collider, high field uniformity magnet development 7−129479
Superconducting Super Collider accelerator facility, development and programs 7−129476
Superconducting Super Collider dipole magnet, prototype test results 7−129477
Superconducting Super Collider model magnets, 1.8 K non-quench training study 7−129480
synchro-betatron resonances 7−116750
TEAPOT, thin-element accelerator program for optics and tracking 7−141383
TEAPOT tracking code, Lie algebraic maps and invariants 7−141382
UHV valve protection system for National Synchrotron Light Source 7−134749
e^-e^+ and $p\bar{p}$ colliders, relative merits, advantages/disadvantages vis-a-vis fixed target machines 7−109548

synthetic metals
Used for chemical compounds, having metallic properties, that are distinguishable from naturally occurring metals and alloys
see also one-dimensional conductivity
β-(BEDD-TTF)$_2I_3$, self-consistent band struct. calcs. using local density approx. 7−118357
β-(BEDT-TTF)$_2I_3$, anisotropic Knight shifts and spin density distrib. 7−70660
(BEDT-TTF)$_2I_3$, CESR, press. depend., 80-300 K 7−70645
α-(BEDT-TTF)$_2I_3$, quasi-2D metal, light scatt. by plasmons 7−77530
α-(BEDT-TTF)$_2I_3$ 2D conductor, vibronic props., IR polarised refl. spectra 7−77565
β-(BEDT-TTF)$_2I_3$ organic supercond., resist. and magnetoresist. 7−99312
β-(BEDT-TTF)$_2I_3$ quasi-2D metal, spin susceptibility and ESR line profile *(Russian)* 7−143894
β-(BEDT-TTF)$_2I_3$ quasi-2D organic metal supercond., conductivity anisotropy and T_c meas. 7−137886
β-(BEDT-TTF)$_2I_3$ single crysts., low temp. cond. under electron irrad. *(Russian)* 7−84868
β-(BEDT-TTF)$_2$X, (X=I_3, IBr_2), quasi-2D metals, spin relax. and diffusion 7−92491
(BEDT-TTF)$_3$(NO$_3$)$_2$((ClO$_4$)$_2$), 2D organic metal, elec. anisotropy, polarised IR refl. meas. 7−76875
1,3-butadiyne in deoxycholic acid and apocholic acid canals, inclusion polymerisation, struct., elec. and optical props. 7−86623
β-carotene, conducting, UPS meas. 7−70982
conducting polymers, appl. in electronic and optoelectronic devices 7−97106
conducting polymers, charging capacitive effect, rel. to electrochemical doping 7−76869
conducting polymers from heteroaromatic bicyclic compounds, synthesis and physico-chemical charact. 7−78487
conductive polymer electrodes, electroactive, appl. to nonaqueous secondary batteries, review 7−93494
conductive polymers, post polymerisation processing 7−91485
conductive polymers based on graphite, thermal prop. change, effect of surfactants 7−98599
conductivity polymers with conjugated bonds, H_2^+ ion implantation, effect on elec. cond. 7−83788
cyanocobalt(III)phthalocyanine, cryst. struct. and elec. cond. 7−98958
DMET DSDTF radical cation salts, metallic elec. props. and cryst. struct. 7−84807
electret forming polymers, struct. and physical props. 7−97993
electrically conducting plastics for battery electrodes *(German)* 7−119634
ethynyl-copper compounds, I_z doping 7−131167
graphite, high quality, from polyoxadiazole 7−84803
graphite fibre-HNO_3 intercalation cpd., props. and struct. 7−84305
graphite fibres and films, highly conductive, intercalated with AsF_5, synthesis and preps. 7−86054
graphite film, plasma CVD and props. 7−86055
graphite film, prep. by pyrolysis of polymers, phys. props. 7−86611
graphite intercalation compound with $CuCl_2$, synthesis by molten salt method 7−113910
graphite intercalation compound with K-benzene, structure 7−111515
graphite intercalation compounds with $NiCl_2(CoCl_2)(CuCl_2)$, second-stage, magnetoresistance 7−112304
graphite intercalation compounds with $NiCl_2$-$FeCl_3$, synthesis 7−113911
graphite intercalation cpds. of strong oxidizers, elec. conductivity 7−105510
layered chalcogenides, CDW, scanning tunnelling microscopy studies 7−98841
low dimensional conductors, electrical cond. temp. depend., use of Fermi function derivative as probability density function 7−76866
magnetic polymer design, radical mol. clusters, intramol. effective exchange integrals, ab initio GMO calcs. 7−74804
MEM(TCNQ)$_2$, far IR transmission and lattice dynamical calcs. 7−84160
napthalene based cation radical salts, donor synthesis 7−98957
optical storage, conductive polymers as active media 7−110490
organic conducting films, Langmuir-Blodgett deposition 7−98755
organic conducting magnets, intermol. effective exchange interaction, MO cluster calcs. 7−74805
organic polymer batteries, critical aspects 7−93497
phenyl-containing polymers, conducting, UPS meas. 7−70982
phthalocyanatonickel salts, prep., struct. and elec. props. 7−98111
phthalocyaninato stacked bridged metal complexes, synthesis and elec. cond. 7−99026
phthalocyanines, polymeric, ion implementation, effect on optical props., DC cond. 7−83789
poly-p-phenylene, conducting, formed from anodic oxidation of biphenyl in aprotic solvents 7−125967
poly-p-phenylene sulphide, conducting, UPS meas. 7−70982
poly-p-phenylene vinylene, conducting, UPS meas. 7−70982
poly-p-phenylene vinylene films, photoconductivity, carrier transport meas., depend. on heat treatment temp. 7−70359
polyacetylene, segmented, transport and mag. props. 7−70273

synthetic metals continued
polyacetylene, WCl_6-doped, photoelectron spectroscopy 7−70980
polyacetylene batteries, scaling up and problems 7−93499
polyacetylene battery with unsymmetrical tetraalkyl ammonium salt 7−93495
polyacetylene films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polyaniline, metallic, thermopower and conductivity 7−137905
polyaniline films, spectroelectrochemistry, display and battery appl. 7−93338
polyconjugated systems for intrinsically conductive polymers, elec. props. and synthesis 7−86610
polydiacetylene, acceptor-type, synthesis and electric conduction 7−71492
polydiacetylene, chemically modified soluble, absorption spectra 7−82407
polydiacetylene, urethane-substituted, elec. props. 7−84851
polydiacetylene single crystals, transient negative and positive reflectance changes 7−85776
polydiacetylenes, nonlinear spectroscopy 7−82715
polydimethylsilane, conducting, UPS meas. 7−70982
polyfluorocarbon, conducting polymeric thin films, cathodic electropolymerisation 7−132935
polymers, conducting, surface pot. decay meas., doping effect 7−70275
polymers, electrodes for neural prosthetic applications 7−79143
polymetacyclophane, polyconjugated system, synthesis, struct. and elec. props. 7−86624
polyphenylene vinylene films, doped, metallic cond., polarised IR spectra, dichroic ratio meas. 7−70274
polyphenylenesulphide film, doped, cond. mechanism, electronic struct., XPS, IR spectra, NMR, CNDO calc. 7−70983
polypyrrole, conducting polymer, ESR study of polarons and bipolarons 7−76791
polypyrrole based conducting polymers, electronic struct., EELS study 7−76749
polypyrrole bromide, conducting, local struct., X-ray absorption spectra 7−76038
polypyrrole composite films, elec. cond. and transmittance 7−98960
polypyrrole containing ferrous cyanide anions, synthesis and spectroscopic charact. 7−77559
polypyrrole copolymers, phys. and elec. props. 7−76872
polypyrrole film on Hg electrode, growth, elec. cond. and struct. 7−78512
polypyrrole films, AC impedance anal. 7−76874
polypyrrole films, conducting, transport props. charact. 7−76870
polypyrrole films, conducting polymer, struct. charact. by small angle neutron scatt. 7−76039
polypyrrole films, elec. cond., effect of organic dopants 7−76873
polypyrrole films, highly conducting, synthesis and Mossbauer spectroscopy charact. 7−78483
polypyrrole films grown on surface of polyvinyl alcohol-$FeCl_3$ complex 7−78485
polypyrrole prepared by electrochemical polymerisation of α-bipyrrole, synthesis and props. 7−78484
polypyrrole salts, chemistry and conductivity 7−76868
polypyrrole structure, growth instability in diffusion controlled polymerization 7−78482
polypyrrole-Fe complex system, film and powder synthesis, Mossbauer and IR spectra charactn. 7−118999
polypyrrole-polyelectrolyte composite membrane, charge-controllable 7−100592
polypyrroles, elec. cond. and thermoelec. power 7−76871
polythiophene:BF_4^- film, conducting polymer, elec. and optical props. of polaronic states 7−77403
polythiophene:I_2 conducting polymer, radiation induced effect 7−91654
polythiophenes, conducting, enhancement of mean conjugation length 7−78488
polyyne infinite linear C chain, defect states, dynamics, photoexcitation and coherent anharmonicity 7−143448
pyropolymer, highly conductive, from polyoxadiazole 7−84803
pyrrole in aqueous solns., electrochemical polymerisation and conductivity 7−78486
$(TMTSF)_2ClO_4$, low temp. metallic phase, rapid mag. quantum oscills. obs. 7−143440
$(TMTSF)_2ClO_4(PF_6)$ conductors, high field magnetoresistance studies *(German)* 7−124968
TMTSF salts, 2D open orbit edge states, quantum oscillation 7−137784
transition metal dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728
transition metal layered dichalcogenides, elec. resist. and spin susceptibility 7−98959
two-dimensional, elec. cond., hydrodynamic effects 7−105512
Ce_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
Cu_2Te-Cr_2Te_3 solid soln., mag. props. and metallic cond. 7−125380
La_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$Na_{0.9}Mo_6O_{17}$, purple bronze, struct. determ., rel. to two-dimensional cond. 7−131116
NbS_2, 2H polytype, upper critical field anisotropy and elec. resist. 7−138159
$NbSe_2$ layer materials, struct. defects, TEM studies *(French)* 7−104761
Ni complex, bis(difluoroborondiphenylglyoximato)NiII, partial oxidation with I_2 7−100544
Ni complex, Ni(phthalocyanine)$(ClO_4)_y$, mol. metal, band filling and counterion ordering effects 7−143450
P, black, intercalated with I, synthesis and charact. 7−84806
$(SiH)_n$, polysilane, substitutional doping using thermal neutron irradiation 7−91660
TaS_2, 1T polytype, 2D conductor, submillimeter spectra of dynamic conductivity 7−144184
TaS_2 intercalation cpds., 2H polytype, electronic structs. 7−137775
TaS_2 intercalation cpds., 1T polytype, mobile electron bond order 7−142721
$TaSe_2(S_2)$, charge density waves, STM studies 7−98844
$UAs_{1-x}Se_x$, elec. resist. meas., deduction of mag. phase diagram 7−76867

synthetic rubber *see rubber*

system generated electromagnetic pulse *see electromagnetic pulse*

systems analysis
light-growth response of double mutants of Phycomyces 7−107158
light-growth response of Phycomyces with Gaussian white-noise test stimuli 7−107156
light-growth response of single mutants of Phycomyces 7−107157

systems design *see systems analysis*

systems programming *see systems analysis*

Szilard-Chalmers reactions *see radiochemistry*

T invariance
artificial vacuum for T-violation expt. 7−121394
chaotic systems, spectral fluctuations and time-reversal invariance 7−128465
Dirac equation with separable potential, C-, P-, T-invariant, Coulomb potential $1s_{1/2}$, $2p_{1/2}$ eigenvalues 7−128747
discrete space-time symmetry violation study 7−67522
Glauber model, unitarity and total cross sections 7−67783
Hamiltonian period doubling and time reversal invariance 7−72945
neutrino billiards, T-breaking without magnetic fields, Dirac eqn. soln. 7−108801
nuclear transition strength fluctuations, time-reversal invariance bounds, random matrix methods 7−141021
polarized neutron precession expt. for T invariance meas. 7−67530
(n,n), time party violation, aligned nuclei, T-odd, p-even correlation, experimental methods 7−116413
$\vec{n}\rightarrow pe\vec{\nu}_e$, triple correlation coefficient meas. and T invariance 7−67620
n spin, PNC and TNC rotations through nuclear targets 7−67531
NN interaction, T-invariance bound and spectral fluctuations 7−128465
$np\rightarrow de^+e^-$, T-invariance violation, form factors and threshold amplitudes 7−108932
$np\rightarrow d\gamma$, T-invariance violation, form factors and threshold amplitudes 7−108932
TIF, time reversal invariance limits from hyperfine struct. 7−136092

Ta *see tantalum*

table lookup
see also data handling
acoustic imaging recognition system for intelligent robots 7−123366
nuclear power plant dynamic simulation, multirate integration methods and table lookup techniques 7−96175
position-coded residue look-up table using laser diodes 7−74856
wind remote sensing by radar scatterometry, ERS-1 data conversion 7−101493

table-top computers *see microcomputers*

tables (data) *see collections of physical data*

tachometers
see also angular velocity measurement
No entries

tachyons
see also special relativity
causal paradoxes in tachyon kinematics 7−80409
compactification, generalization to 5D and Kruskal anal. 7−89085
curved space string dynamics, perturbatively renormalised vertex operator, Virasoro algebra 7−116152
Einstein-Maxwell theory in 10D, unstable compactification, chiral fermions and tachyonic modes 7−108356
general relativistic extended manifold, tachyon/antiparticle production 7−80530
majorana tachyon neutrino, existence discussion 7−140868
membrane models, instabilities, connections to tachyons in string models 7−95329
open strings, zero-slope limit, factorization, tachyon emission, generating functional for S-matrix element 7−121479
Polyakov string theory, stochastic quantization, tachyonic mass and scatt. amplitude 7−108885
scattering amplitudes, open string anal. in Polyakov path-integral formalism 7−67679
spin-1/2 wave eqns., solns. with complex energies 7−73494
superluminal Lorentz transformations, tachyon theory 7−128278
superstrings, total action, critical dimensionality and low-energy limit, review 7−140911
tachyonic approach to hadrons, p, n and Δ, beta decay 7−135087
tachyonic models of e^- and μ, unresolved problems 7−135088

tackiness *see adhesion*

tactile sense *see mechanoception*

tactile sensors
polyvinylidene fluoride transducer arrays for Braille cell appls. 7−101147

TADMR *see microwave-optical double resonance*

tandem accelerators *see electrostatic accelerators*

tantalum
see also nuclei with .....
anelastic relaxation due to trapped D tunnelling, internal friction meas. 7−100274
atom, $4f^{13}6d$-7p transitions, spectral investig. 7−103526
atom, electronic transitions, multiconfig. Dirac-Fock calcs. 7−116874
atom, K-electron capture, X-ray intensity ratio 7−129642
atom, K-shell relativistic electron impact ionis. cross section meas. 7−110111
BCC, point-defect and stacking fault props. 7−76117
corrosion-resistant layers form. by electrodeposition or electrowinning 7−119407
elastic scattering of ^{152}Eu and ^{154}Eu γ-rays 7−74520
electric field gradient at ^{181}Ta, O-induced non-axially symmetric, orientation 7−118900
electron irrad., defect reactions, muon spin relax. studies 7−92563
electron irrad., vacancy-impurity interactions, positron annihilation studies 7−91567
electronic excitations, EELS 7−70954
emissivity, hemispherical from 300 to 1000 K 7−98526
fail, pure source for molecular-beam epitaxy 7−106390
film, on Cu, Xe^{2+} ion beam mixing 7−124347
foils, blistering during α-particle bombardment 7−69777
homocontact, electron-phonon interactions, point contact spectroscopy studies *(Russian)* 7−112438
isotope separation by thermochromatographic method *(Chinese)* 7−90448
K-shell ionisation by protons and deuterons 7−86714
low temp. proton irrad. defect recovery, internal friction study 7−98272
metal shadowing, high melting point, for high resolution freeze replica 7−87395
microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
multimicroelectrode for neural impulse meas., fabricated by Si dry etching 7−114569
online mass separator targets, beam heating calcs. 7−96443
oxidation, bulk Ta_2O_5 form. below 35 K 7−100435

ntalum continued
phonon electrical resist., relativistic calcs. 7−137912
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
refractory, lattice imperfections, FIM studies 7−91588
seed texturing of Cu with Ta seed 7−118201
sputtered films, lattice expansion and contraction due to H charging 7−124778
stage II-recovery reactions in BCC transition metals 7−104732
stress-induced H states and enhanced diffusion 7−83980
superconducting, anisotropy effects down to millikelvin temp. range 7−77171
surface (100) 7−106357
surface and bulk core level lineshapes, linear coupling approx. 7−105444
T, D, H, heat of transport meas., T diffusion under thermal gradient 7−131367
texture of corrosion layers rel. to stratification *(French)* 7−86446
thermal diffusivity and conductivity, anomalies near melting points 7−69997
thermally activated and electron stimulated desorption of implanted gases 7−105240
thin film, oxidation, grain boundary particle effects 7−119451
vapour phase siliconizing, corrosion stability 7−78319
work function determ. by Fowler's method 7−70376
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7−112902
Fe-Ta thin film multilayers on Si, sputter depth profiling with LEIS and LENRS 7−84559
H embrittlement, influence of Pt^+ ion implantation 7−106690
HfH_x:^{181}Ta, nuclear relaxation, H-diffusion, TDPAC study 7−118912
Mo/Ta superlattice elastic consts., Brillouin scatt. study 7−112048
Nb-Ta superlattice, critical behaviour of H, in situ X-ray scattering study 7−137727
Nb-Ta superlattices, cryst. direction depend. of interfacial mixing 7−105156
Nb-Ta superlattices, hydrogenated, elec., struct. and supercond. props. 7−112577
$NbSe_3$:Ta, CDW depinning field at low temps. 7−98839
$NbSe_3$:Ta, low freq. broadband noise, impurity effects 7−99144
Ni-Ta structure on Si, ion-beam mixing, ballistic effects 7−76217
Pt-Ta multilayer system, struct. stabilities 7−124730
Ta:H(D), diffusion dynamics at 10 mK, PAC study 7−118907
Ta/UBe_{13}, negative s-wave proximity effect obs., comment and response 7−112700
Ta-Au heterocontact, electron-phonon interactions, point contact spectroscopy studies *(Russian)* 7−112438
Ta-Co system, segregation of Co atoms at Ta grain boundaries, Mossbauer spectra study *(Russian)* 7−106062
Ta-Cu heterocontact, electron-phonon interactions, point contact spectroscopy studies *(Russian)* 7−112438
Ta-Cu-Ta Josephson sandwiches, thermoelec. phenomena study *(Russian)* 7−112306
Ta-GaAs Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
Ta-Mo interface, sputter deposited, sticking coeff., struct., RBS, X-ray diffr. studies 7−105296
Ta-Ti, sandwich film, H_2 depth profiles, by $^1H(^{15}N,\alpha\gamma)^{12}C$ reaction 7−98218
Ta+C combustion, outgassing macrokinetics in reaction chambers 7−100571
Ta+H^+(D^+), K-shell ionisation cross sections 7−136050
$TaH_{0.07}$ single cryst., impurity tetrahedral site occupancy, channelling study 7−83981
Ta_2H, inelastic neutron scatt., single particle pot. *(German)* 7−131131
^{181}Ta pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096
^{181}Ta, pionic atoms, X-ray spectra study of level widths and shifts 7−110146
Tb:^{181}Ta, elec., mag. interaction, TDPAC meas. 7−118427
Tc/Ta-TaO_x-Pb tunnel junction, energy gap and coupling strength, proximity electron tunnelling study 7−118732
VO_2:Ta, thermochromic materials research for optical switching 7−125979

antalum alloys
see also tantalum compounds
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7−113577
Co-Cr-Ta films for mag. recording, magnetostriction 7−99537
Co-Cr-Ta sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural props. 7−92482
Co-TaC, microstruct. of different struct. transforms. induced by rapid quenching 7−92992
FeTaCoB amorphous alloys, mag. props., thermal stability, wear and corrosion resist. meas. 7−92466
GaAs-$Ni_{60}Ta_{40}$, interfacial reactions, phase separation 7−143111
Hf-Nb-Ni-Ta system, phase equilib., glass form. *(German)* 7−137260
$Hf_{1-x}Ta_xV_2$, lattice instability, TDPAC studies 7−111855
Mg-Ta implanted system, elec. field gradients, TDPAC studies 7−113009
Nb-Ta alloys, short range order and superconductivity 7−85166
Nb_3Sn-Ta_3Sn multifilamentary wires powder metallurgy 7−131880
Nb_3SnTa multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7−131956
$(NbTa)_3Sn$ multifilamentary wires, high field supercond. props. 7−131840
β-Ni-Al-Ta, second phase precipitates struct. 7−78030
Ni-Al-Ta alloy, thin sample quantitative microanalysis, X-ray absorpt. correction 7−97873
Ni-base superalloy, directionally solidified, primary dendritic spacing, effect of gravity level 7−77974
Ni-base superalloy, PWA 1480, γ' dislocation pairs 7−124280
Ni-Co-Cr-Al-Y-Ta coatings, low press. plasma sprayed, oxidation, 850°C *(French)* 7−86466
Ni-Ta amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta-Cr, single cryst. superalloy, yielding and deform., 20-1093°C 7−71251
Ni-Ta-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta-P amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Ta-P amorphous alloys, corrosion in hot conc. H_3PO_4 7−138873

tantalum alloys continued
Ni-TaC based eutectic composite, ageing, fatigue life rel. to test freq. 7−132697
Ni-TiC-TaC system, phase equilib. 7−100180
NiTa metallic alloy glasses, X-ray and neutron diffr. meas. 7−76012
Re-Ta-H, amorphous films, elec. resistance, superconducting transition in mag. field 7−112585
Se-^{181}Ta system, nuclear quadrupole interaction and elec. field gradient 7−113013
SiCoTa dilute alloy, Ar^+ sputtering and surface composition changes *(Chinese)* 7−85920
Ta-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
Ta-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Ta-Ni, corrosion-resistant layers form. by electrodeposition or electrowinning 7−119407
Ta-Ru-H high press. phases, superconductivity and cryst. struct. 7−70444
Ta_xCu_{1-x} amorphous alloy films, diffusion barriers for Au/GaAs system 7−105307
TaH_x, H ordering symmetry and Landau free energy 7−131075
$TaH_x(D_x)$, low temp. diffusion, perturbed angular correlation spectra 7−84361
Ti-Al-Nb-Ta-Mo, fractal charactn. of fractured surfaces 7−113648
Ti-Ta, electrospark alloying for improved corrosion resist. of Ti 7−144597
Ti-Ta-Si, silicide formation with codeposited Ti-Ta alloys 7−131372
TiC-NbC-TaC-WC-Co cemented carbide, gamma phase layer form., growth kinetics and microstruct. rel. to sintering atmosphere 7−77929
V-Ta, anodic polarisation and corrosion in H_2SO_4 and NaCl solns. 7−100422
V-Ta alloys, short range order and superconductivity 7−85166

tantalum compounds
see also tantalum alloys
$AgTa_xNb_{1-x}O_3$, solid solns., phase transitions, X-ray diffr. study 7−76390
Ag_xTaS_2, intercalated cpd., photoemission studies 7−77761
Al_2O_3-Ta_2O_5 composite RF sputtered films, dielec. props. study 7−99678
Al_2O_3-Ta_2O_5 medium-index mixed-oxide layers for antireflection coatings 7−103933
$Ba_3LaTa_3O_{12}$:Nd^{3+}(Eu^{3+}) cryst., rhombohedral perovskite, spectral luminesc. props. 7−119050
$Co_{1.5}Pt_{0.5}Ta_6PtSe_{16}$ quaternary layered cpd., structural charactn. 7−142724
$CuTaS_3$, cryst. struct., X-ray diffr. study 7−111461
$HTaO_3.0.5H_2O$ pyrochlore struct. ceramic acid, protonic temp. depend. meas. 7−84370
$KTaF_7$, crystal struct., lumin. studies 7−83894
$KTaO_3$, ferroelectric crystal, soft modes, Raman spectra study 7−85706
La_2O_3-CoO-Ta_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
La_2O_3-MnO-Ta_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
La_2O_3-NiO-Ta_2O_5, ternary oxides, characterisation of rhombic perovskite 7−83878
Li_2CO_3-Ta_2O_5, reaction mechanism, solid phase sintering, liberation of CO_2 7−86075
Li_2O-Ta_2O_5-MgO ferroelec. ceramic, Mg cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
Li_2O-Ta_2O_5-ZnO ferroelec. ceramic, Zn cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
Li_2O-Ta_2O_5-$(WO_3)_2$, nonstoichiometry and ferroelec. props. at 1250°C and atmospheric press. 7−84304
$Li_{1-x}Ta_{1-x}Fe_{2x}O_3$, ferroelec. transitions 7−118960
Li_xTaSe_2, intercalation cpd., charge transfer obs. by Mossbauer spectroscopy 7−99615
$Mo_{0.5}Ta_{0.5}S_2$, 3s-type, preparation 7−142715
Na_2O-B_2O_3-Al_2O_3-Ta_2O_5 glass ceramic, heat treatment, sintering, leaching, struct., porosity 7−71141
Nb-Ta-H, phase equilibria calc., first principle, model and empirical methods 7−104988
$((Nb_{1-x}Ta_x)Se_4)_3I$, localisation effect in thermopower and resistivity 7−137930
Pb_2ScTaO_6 single cryst. prep. from soln. in melt, ionic order, crystn. temp. depend. study 7−83805
$RbTa(PO_4)_2$, layered structure, symmetry 7−104659
Si-$TaSi_2$ eutectic composite structures, DLTS studies 7−112487
Si-$TaSi_2$ semiconductor-metal eutectic composites, in situ junctions, charge collection SEM study 7−92288
Ta-C-Cl system, solid-gas equilibria., thermodynamic anal. of isothermal chemical transport 7−111849
Ta-H-T, electromigration of T, effective valency rel. to thermodynamic factor 7−91905
TaC, decomposition in presence of ion irradiation in high-temp. conditions 7−144735
TaC, heat treatment, effect on defect formation and props. 7−100247
TaC, target material study for ISOLDE on-line mass separator 7−96442
TaC_x, from electrical explosion of $TaH_{0.58}$-graphite mixtures in water 7−93330
TaC_x thin films, CVD, optical profile, superconducting transition 7−125826
$Ta_2C_xO_y$, from electrical explosion of $TaH_{0.58}$-graphite mixtures in water 7−93330
$TaCl_5$-graphite intercalation compound, electric quadrupole nuclear orientation 7−124943
$Ta_2Cl_6(NH_3)_4$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
$Ta_2Cl_6(NH_3)_4^-$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
TaF_6^- ions, intercalation into HOPG using Hg^{2+} and Hg_2^{2+} salts 7−137340
$Ta_{1-x}Fe_xS_3$, 1D, CDW, Mossbauer studies 7−125577
$TaH_{0.1}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
$TaH_{0.58}$-graphite, electrical explosion in water, phase composition of products 7−93330
$TaH(D)_{0.5}$, elec. field gradient, calorimetric determ. 7−98492
TaN, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7−71120
TaN, cubic, form. with plasma jet *(Japanese)* 7−119223
TaN, oxidation by CO_2-CO mixtures *(French)* 7−144570
TaN sputtered films, thermal oxidation, dielec. props. 7−113746

tantalum compounds continued
$Ta_yNb_{1-y}Se_3$ Peierls-CDW state, interplay between disorder and impurity distrib. $2k_F$-regularity effects 7—112311
$Ta_yNb_{1-y}Se_3$, quasi-1D cpd., elec. props. 7—131629
TaO, photoelectron spectra, bands, ionisation energies, HES calcs. 7—141624
TaO_x thick film, electron hopping and tunnelling cond. investigations 7—137939
TaO_x thick films, electronic cond. and tunnelling 7—105742
Ta_2O_5, amorphous, electrically stimulated structural changes, X-ray anal. and optical microscopy 7—132655
Ta_2O_5 anodic films, form. in H_3PO_4 electrolytes, dielec. props., struct. 7—113080
Ta_2O_5 anodic films, low temp. photoconductivity 7—99238
Ta_2O_5, bulk form. on oxidation of Ta below 35 K 7—100435
Ta_2O_5 CVD films, growth and elec. props., appl. to MIS capacitors 7—92323
Ta_2O_5 films, reactively sputtered, electrical, optical and structural props. 7—70707
Ta_2O_5, hot pressing, $\beta \rightarrow \alpha$ phase transition 7—93003
Ta_2O_5 layers obtained by ion assisted deposition, growth, optical study, optical filter appls. 7—125970
Ta_2O_5 MIS capacitors, dielec. characts., effect of SiO_2 at Ta_2O_5-Si interface 7—118934
Ta_2O_5, preferential sputtering, He reemission and transient effects, AES meas. 7—70968
Ta_2O_5 single-layer films, localisation of optical absorption losses 7—77671
Ta_2O_5, sputter profiling, energy distrib. curves, factor anal. 7—139071
Ta_2O_5 sputtered films, optical losses, light scatt. and absorpt. meas. 7—113301
Ta_2O_5 thin films, sputter deposition, struct., piezoelec. and SAW props. studies 7—106406
Ta_2O_5-SiO_2-GaAs waveguide, acoustooptic interaction 7—136517
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7—70706
Ta_2O_5-WO_3 system, polycryst. ceramic prep., low thermal expansion 7—143057
$Ta_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7—143090
$TaPO_5$, allotropic, preparation lattice parameters *(French)* 7—91533
TaS, disordered systems, diffuse intensity loci, optical transforms 7—137148
TaS_2, 1T and 2H polytypes, CDW images obtained with scanning tunnelling microscopy 7—92090
TaS_2, 1T polytype, 2D conductor, submillimeter spectra of dynamic conductivity 7—144184
TaS_2 intercalation cpds., 2H polytype, electronic structs. 7—137775
TaS_2 intercalation cpds., 1T polytype, mobile electron bond order 7—142721
IT-TaS_2 layered crysts., Debye-Waller factors, anisotropy and reduced dimensionality effects, X-ray diffr. study 7—111804
TaS_2, polymorphic transition, CDWs 7—111870
TaS_3, CDW material, cond. and low freq. damping 7—98843
TaS_3, CDW state, shear modulus meas. 7—137442
TaS_3, orthorhombic, non-Ohmic 1D cond. and narrow band noise 7—99028
TaS_3 orthorhombic, Peierls transition, cryst. defect effects 7—98811
TaS_3, orthorhombic single whisker, thermal cond. studies 7—98600
TaS_3, pinned CDW, hysteresis and condensate quakes 7—143455
$TaS_2(NH_3)$, low temp. spin-lattice relax. 7—112989
$TaSe_2$, 1T and 2H polytypes, CDW images obtained with scanning tunnelling microscopy 7—92090
2H-$TaSe_2$, incommensurate CDW phase eigenmode freqs., McMillan-Landau theory calcs. 7—118088
2H-$TaSe_2$, orthorhombic stripe incommensurate CDW phase, phasons, amplitudons, McMillan-Landau theory calcs. 7—118468
$TaSe_3$ quasi-1D conductor normal state elec. resistivity 7—143447
$TaSe_3$, thermoelec. power and elastoresistance 7—84843
$Ta_4Se_{16}Br_2$, chain-like structures, X-ray diffr. studies 7—76092
$(TaSe_4)_2I$, single cryst., semicond.-metal phase transition, radiometric detect. 7—80841
$(TaSe_4)I$, 1D conductor, lattice dynamics, inelastic neutron scatt. studies 7—98365
$(TaSe_4)_2I$, CDW material, cond. and low freq. damping 7—98843
$(TaSe_4)_2I$, CDW system, Hall effect meas. 7—105541
$(TaSe_4)_nI$, phase transitions, amplitude and soft modes, Raman spectra study 7—85701
$TaSe_2(S_2)$, charge density waves, STM studies 7—98844
$TaSi_2$, localized epitaxial growth on Si(001) and (111) by rapid thermal annealing 7—143254
$TaSi_2$, low-temperature plasma anodization, RBS studies 7—113770
$TaSi_2$, selective CVD for submicron IC structs. 7—113432
$TaSi_2$:As(B)(P), ion implanted, dopant diffusion into Si, SIMS anal. and elec. charactn. 7—143113
$TaSi_2$-Si:Sb(B), point defect generation, enhanced impurity diffusion 7—124591
$TaSi_2$-WSi_2, solid solutions, phase diagrams and resistivities 7—111823
$TaSi_x$ sputtered films on polycryst. Si, stress-temp., behaviour study 7—105350
Ta_5Si_3, silicide formation by Ar^+ ion implantation 7—142816
$TaTe_4$, commensurately modulated structure determination 7—124174
$TaTe_4$, modulated struct., high resolution electron microscopic anal. 7—142737
$Ta_2Te_2O_9$, cryst. growth, struct., IR spectra, pyrolysis studies 7—83920
$Ta_2Te_2O_9$, cryst. struct., 3D array, alternating Ta-O and Te-O layers 7—131115
Ta_2WO_8, $Ta_{30}W_2O_{81}$, polycryst. ceramic prep., low thermal expansion 7—143057
Tc/Ta-TaO_x-Pb tunnel junction, energy gap and coupling strength, proximity electron tunnelling study 7—118732
TiB_2-TaB_2-CoB hot pressed bodies from fine powders, transverse rupture strength *(Japanese)* 7—93099

tantalum electrolytic capacitors *see electrolytic capacitors*

tape recorders
see also magnetic heads; magnetic recording
190 Mb oceanographic data acquisition and storage system 7—79611
airborne remote sensing, modular versatile data acquisition, recording and preprocessing system 7—134030
photogrammetric data logger, COORDIMETER-H and MTU 5300/P type deck 7—121254

taste *see chemioception*

Taylor instability *see flow instability*

TBDF *see data privacy*

TDM *see time division multiplexing*

teaching
see also demonstrations; education; student laboratory apparatus; training
2D systems, intermol. forces and spatial struct., teaching approach 7—140399
accelerated motion with variable weight 7—128222
acid rain effects on stone monuments 7—108102
acoustic Doppler effect and shock wave cones, diagram construction 7—80241
adiabaticity, quantum mech. and thermodynamical 7—102066
AIP Center for History of Physics, activities and resources 7—66881
air mass calc. for basketball, contrib to moment of inertia 7—66875
allotropes and polymorphs study 7—108097
angular momentum in static elec. and mag. fields 7—128224
antenna formula, single-slit diffr. theory appl. 7—80255
areal vel. derivation 7—128221
astronomy packages for Apple Macintosh 7—120746
Atwood machine, cpd., 'diagonalisation' 7—95134
ball, bouncing, strange attractors 7—80249
Bell's theorem, quantum mechs., relativity 7—128210
bicycle riding, dynamical stability curves calc. 7—120742
Biot-Savart's law for discontinuous current 7—88781
black hole as gravitational lens 7—102049
Brewster's law, scatt. interpretation 7—66876
Brewster condition from extinction theorem 7—88780
Brillouin-Wigner series, derivation algorithm 7—120735
capillarity, rel. to epistemology of physics 7—72753
Carnot engine, nonideal, freq.-depend. performance 7—102048
Casimir effect investig. 7—80225
charge distributions, coeffs. of pot. system of conductors, electrostatic equilib. 7—102056
charged conductor, charge density relation with surface curvature 7—134401
charged particle deflection, Gantmakher's and rot. formulas 7—128218
chemical equilibrium, Gibbs free energy minimum, stability 7—95152
children's conceptions of the Earth, Sun and Moon 7—80221
classical mechanics, isynchronous motion 7—128213
climate classification with BASIC computer program 7—128230
clock and light pulse behaviour behind event horizon 7—120734
cosmic string, straight, gravitational effects, appl. to quasar and galaxy images 7—102044
Coulomb-Kepler problem and the harmonic oscillator, Kustaanheimo-Stiefel transform. 7—66868
crumpled paper balls, fractal geometry 7—120722
crystallographic symmetry point group notation flow chart, rel. to mol. struct. 7—95155
cubic, Landen's soln., hyperbolic forms of the roots 7—80264
current mag. field, limits and average values 7—80234
Dirac eqn., delta function pot. study 7—128216
disappearing rod, extreme use of simple model 7—80242
DNA, recombinant, technology, industrial appls. 7—102068
Earth rotation, teaching approach 7—95156
Earth satellite, orbital velocity explanation 7—66874
effective elastic constant and effective mass of an oscillating spring: an energy approach 7—80243
electricity and magnetism, quality and organisation of knowledge 7—95129
electricity in elementary physics 7—95157
electromagnetic fields duality rotations and relativistic charged-particle motions 7—80256
electromagnetic induction, teaching, historical approach 7—72752
electromagnetic wave interference, omnidirectional phenomena 7—95148
electrostatic problems, Laplace's eqn. soln. using spreadsheets 7—134395
engineering physics, integration of CDC physics coursewave 7—88763
equipartition of energy law, elementary derivation 7—80244
error function and its inverse, simple approx. 7—128228
expert systems, chemical laboratory teaching appls. 7—102067
extraordinary ray location, analytical method 7—120725
factorial n, analytical approxs. 7—128223
Fermi-Dirac and Bose-Einstein distributions and the interaction of light with matter 7—95137
ferromagnetic metals, electrical resistivity meas. 7—66879
finite heat source and sink, effectiveness of Maxwell's demon 7—128211
finite tilted quantum well, approx. methods anal. 7—80263
fixed points in torque—angular momentum relations 7—102054
floating plank on fluids 7—134391
Football, North American, rigid body dynamics 7—102046
geometrical optics, Hamiltonian formulation 7—134398
graphical methods in geometric and Gaussian optics 7—80250
graphs in physics, student difficulties in interpretation 7—95133
gravitational Poynting vector and energy transfer 7—80259
gravitational red shift, semiclassical derivation, gravit. pot. energy anal. 7—102057
hard-sphere gas, mol. distrib. investig. 7—80229
heat capacity of solids, teaching approach, using computer 7—140400
heat engines, thermal efficiency at max. work output, engine size depend. 7—108076
Hertz potentials in electromagnetism 7—80262
hydrogenic atoms, probability distrib., classical limits 7—88773
inorganic compounds, expanded octets, Lewis struct. from mol. formula study 7—108096
interactive video for modeling motion of athletes in physics teaching 7—88787
intercontinental ballistic missile range semi-Keplerian soln. 7—102050
introductory special relativity teaching using quasars 7—66860
Kaluza-Klein program and supergravity 7—80578
Kepler problem, transverse velocity transform. and invariant velocities appl. 7—80226
kinematics, velocity and acceleration concepts, observation and graphical methods study 7—102045
lattice vibrs., specific heat meas. 7—66866
light scattering, Mueller matrix elements for Rayleigh, Rayleigh-Gans and Mie spheres 7—95145
light scattering, multiple, theory and observable consequences 7—95138
limelight construction 7—102065
linear regression using a simple linear algorithm 7—88802
logic software for physics class 7—88796

ching continued
Lorentz invariant radiation, energy spectrum, Doppler effect and aberration 7−80260
Lorentz transformation, Levy-Leblond derivation 7−80239
magnetic braking, theory and expt. 7−95132
magnetic force on charge due to current-carrying wire, relativistic study 7−102047
materials, in A-level physics course 7−72749
materials curriculum development 7−108073
materials science training and research programmes in France *(French)* 7−108072
materials teaching, case study approach 7−108091
Maxwell's demon, operation in low entropy system 7−80258
Maxwell's equations, algebraic formulation 7−108079
mechanics, computer simulation and laboratory work 7−72755
mechanics, student understanding, population survey 7−128209
mechanics, teaching approach, derived from traffic accident investigation 7−140398
Mercury perihelion procession, special relativity 7−128225
metal ion complexes, stability ruler 7−108095
microcomputer data acquisition synchronisation with WWV time, use in asteroid occultation photometry 7−80266
microwave tubes, electron beam velocity modulation, water bag model anal. 7−108085
minimum-energy charge configurations 7−80230
misfocused vision, Fresnel diffr. effects, num. calc. 7−66871
mixing process, thermodynamics and irreversibility 7−128214
molecular π-energy levels and characteristic polynomial calcs. using graph theory 7−95154
molecular systems, normal mode freqs., statistical mech. trajectory method 7−108100
musical scales, num. investig. 7−66863
nonuniform linear acceleration, computer simulation 7−88795
nonuniform string, transverse modes, eigenvalues WKB approx. 7−80235
object fall rate in gravitation field 7−88777
optical computer interfacing 7−88797
organic cyclic molecule, number of rings formula 7−108094
particle, elastic bounding in polygonal path, centripetal force 7−95139
particle in a square well with a δ-function perturbation 7−80238
particle quantum mechanical motion, classical trajectory, Ehrenfest theorem 7−134392
path-integral formulation of quantum mechanics, classical limit in density matrix terms 7−80231
pendulum, inverted, stability conditions derivation 7−120741
perturbed Kepler problem, expectation value formulation 7−108083
phase shifts and bound states in one-dimensional problems 7−66877
physics, classical, theory 7−80273
physics, formalisation methods at high school level 7−72754
physics, industrial research experience 7−72750
physics, science-fiction based approach 7−95159
physics and religious, humanist view 7−140411
physics course, university, use of computers 7−88784
physics course, use of programming for teaching 7−88801
physics teaching, 'humanised', framework 7−72751
physics teaching, educational software buyer's guide 7−88798
physics textbooks 7−80220
planetarium projector, 'Space Voyager' equipment and computer system 7−79853
polyatomic molecular motion study using generator orbital approach 7−108098
Poynting vector distrib. in a simple transformer 7−102055
practical physics course, automation facilities 7−66882
probabilistic method to calc. probability distrib. of gas 7−88772
probability current, correspondence principle, appl. to H and harmonic oscillators 7−80227
projectile motion, maxima problems 7−128220
quanticule theory 7−102074
quantum action-angle-variable analysis of basic systems 7−66870
quantum and classical electrons, one-dimens. infinite pot. well, static electric field 7−102053
quantum mechanics, degeneracy removal 7−120743
quantum mechanics, foundations since Bell inequalities 7−134390
quantum mechanics of chargeless spinning particle in periodic mag. field 7−95143
quantum strings and canonical quantisation method 7−80252
quantum theory, many-worlds interpretation 7−120733
quaternion quantum mechanical treatment of an electron in a magnetic field 7−120732
radiation detectors, upgrading using Commodore 64 7−88803
Rayleigh-Schrodinger perturbation theory, energy corrections 7−66872
Rayleigh-Schrodinger series, derivation algorithm 7−120735
real image form. by converging lens or concave mirror, student understanding investig. 7−80222
relativistic mass depend. on vel. 7−128217
resonant frequencies in sinusoidally driven system, zero reactance condition study 7−108077
rolling friction, introductory course 7−66865
rotating sphere, tidal disruption, appl. to cosmic catastrophes 7−80233
rubber, elasticity, entropic versus kinetic viewpoints 7−128219
rubber elasticity and elastomeric network characterisation 7−134409
Runge-Lenz vector and Einstein perihelion precession 7−80232
Sadi Carnot and the theory of heat, teaching *(Italian)* 7−134416
satellites, geosynchronous, ground trajectories and the analemma 7−95142
School Physics in Engineering Project case studies 7−108123
science education using television 7−134411
semiconductor superlattice, band struct. model 7−102052
simulation games in science education, efficiency investig. 7−80270
snowflake impaction car windshields, fluid flow and particle trajectories 7−80228
sorption hysteresis, rel. to laws of thermodynamics 7−95153
space-time curvature and the sources of gravity 7−120736
special relativity, reference frames 7−66869
special relativity, teaching approach using Michelson-Morley expt. 7−140397
spectrochemical analysis using the near-IR, appl. to polymers 7−108112
speed of light, student's spontaneous ideas 7−80271
sphere rolling on track demonstrations 7−134397
spherical aberration of thick lens, focal points location meas. 7−66867
spontaneous symmetry breaking, second order phase transition, everyday geometric model 7−102051
stabilization parachutes: a rigid body treatment 7−95140

teaching continued
stellar sky as seen from the vicinity of a black hole 7−80253
stellar struct., order-of-magnitude theory 7−134393
stereographic projections, appl. to general rot. eigenvector 7−80236
Sun, light deflection due to three-space curvature 7−128226
telemetry, relativistic, theory 7−95135
temperature, thermodynamic concept, Carnot's fn. 7−80223
thermodynamics, elementary course using entropy and temp. 7−66861
tool software for use by high school physics teacher 7−88794
transverse wave in a string, momentum storage and energy transport study 7−108078
uncertainty, propagation, numerical treatment 7−95136
uncertainty relation for charged particle in constant mag. field 7−80265
unidimensional spaceship, dynamics 7−88783
universe, beginning and age, conceptual basis 7−95131
vertical collisions, velocity amplification demonstration 7−80245
video networking system for computer laboratory aids learning 7−95150
water-wave dispersion relations, simple model 7−80237
wave equation, one-dimens., derivation method 7−102058
wavefunction collapse, ensemble interpretation anal. 7−66864
Wigner-Eckart theorem, demonstration 7−88778
wind velocity and temp. meas. from audio phase shift 7−128227
Ge tunnel diodes, I-V characts., temp. depend. 7−88775
H, Coulomb interaction, momentum representation 7−120738
H, one dimens., struct., Schrodinger, Klein-Gordon and Dirac eqns. 7−102043
H_2O, mol. struct., van der Waals repulsion effects 7−102062
He isoelectronic sequence, two-parameter wave functions 7−102063
O_3 chemistry with chlorofluorocarbons, Antarctica ozone hole 7−108092

teaching approaches to particular topics *see teaching*

teaching demonstrations *see demonstrations*

teaching machines *see computer-aided instruction*

technetium
see also nuclei with .....
$^{99}Tc^{m}$-diagnostic agents, radiochemical purity, comparison of chromatographic quality control procedures 7−93401
atom, trace amounts detection, reson. multiphoton ionisation and TOFMS anal. 7−90066
atoms, chemical behaviour of recoil implanted ions in metal acetylacetonates 7−86630
basalt-synthetic groundwater system, Tc behaviour as function of temp. and initial O content, radwaste appls. 7−103270
elemental abundance in galactic cosmic rays, appl. as cosmic-ray clock 7−139871
geochemistry for radwaste disposal and containment 7−103274
isotope ratio meas., reson. ionisation mass spectrometry 7−90063
migration in peat, sorption coeff. determ. 7−100763
Ba stars, search for Tc II in UV spectra 7−127882
Fe:^{99}Tc, hyperfine field temp. depend. 7−118421
Tc/Ta-TaO_x-Pb tunnel junction, energy gap and coupling strength, proximity electron tunnelling study 7−118732
Tc-C amorphous films, superconducting transition temp., density of electron states 7−70445
Tc-Si amorphous films, superconducting transition temp., density of electron states 7−70445
^{99}Tc measurement in LLW using $^{99}Tc^{m}$ as a tracer 7−103203
^{99}Tc, permeability in HTR fuel element graphite, spent fuel depository implications 7−135422
^{99m}Tc, breast milk excretion of radioiodine and pertechnetate, rel. to radiation dosimetry 7−93935
^{99m}Tc DTPA, radiation absorbed dose obs. 7−133460
^{99m}Tc, leukocyte labelling by phagocytic engulfment, factors affecting and optimal technique development 7−79084
^{99m}Tc, source and dose calibrator for survey meters at 140 keV 7−71872

technetium alloys
see also technetium compounds
No entries

technetium compounds
see also technetium alloys
complexes, matrix physical state influence on ^{95m}Tc decay 7−113970
Tc complexes, $Tc(acac)_3$ and $^{99m}TcO_2(acac)_2$, chemical behaviour of recoil implanted ions 7−86630
^{99m}Tc-pyrophosphate, bone and acute myocardial imaging agent study 7−119844
$TeOL_5^{2-}$, where L=Cl, Br, modified Urey-Bradley and valence force fields 7−109887

technical information centres *see information services*

technical presentation
abbreviations, especially symbols for units of measure in technical documentation 7−73312
communicating an understanding of technology 7−88765

technicians *see personnel*

technicolour model *see colour model*

technological forecasting
see also research and development management
energy demand forecasting in industry, structural changes 7−114063
fuel cell development status and prospects *(Dutch)* 7−78627
fusion research, status, future developments 7−106890
light source technology development trends *(Japanese)* 7−123138
nuclear fusion, European Economic Community approach *(Italian)* 7−133042
photovoltaic generators in space, 5th European Symposium, The Hague/Scheveningen, Netherlands (Sept.-Oct. 1986) 7−140377
solar thermal dynamic power system for 21st century 7−71583
wind, energy conversion, recent progress and future prospects 7−78594

tectonics
3D-convection model at low Rayleigh numbers, surface deform., gravity and geoid 7−127171
Acadian orogeny of USA and Canada, rates of relative plate motion 7−145428
accretionary tectonics and structural geology, appl. of palaeomagnetism 7−139461
accretionary wedges, theory of noncohesive critical Coulomb wedges 7−94185
Adavale Basin, E Australia, lower crust involvement in upper crust thrusting 7−79285
Adriatic region, seismic characts. and relationship to Africa 7−139512
Aegean arc subduction, constraints placed by gravity anomaly data 7−71996

tectonics continued
Afar-plateau margin, volcanism and tectonics of Triassic and Jurassic 7—119976
S Africa, diversion of heat by Archaean cratons, geochemical and geodynamical mechanism 7—145382
W Africa, magmatism and geodynamics of Pan-African intra-cratonic rifts *(French)* 7—87520
Africa-Sicily sill, heat flow, age and tectonic origin 7—72000
East African Rift area in Kenya, gravity anomalies and isostatic compensation 7—119994
Aguaviva area, Spain, geology map, struct., detachment tectonics 7—114680
Alboran domain, Straits of Gibraltar, structural trends *(French)* 7—94178
Aleutian subduction zone, double to single Wadati-Benioff zone transition 7—87475
Alexander Terrane of SE Alaska and W Canada, geology and tectonic evolution 7—101266
Alma-Ata Prognostic Testing Grounds, MASSA Project explosion, hydrogeochemical and hydrogeodynamic effects 7—79305
Alpine Fault in New Zealand, construction method for shear strain profiles 7—94171
alpine thrusting in the eastern Pyrenees *(French)* 7—101257
W Alps, rifting and tilted blocks, Early Cretaceous age, relation to Atlantic rifting *(French)* 7—145418
E Alps, superposed deformations, model from strain anal. and microfabrics 7—127209
W Alps, tectonic implications of high-press. metamorphism 7—127182
Altai-Sayan folded region, USSR, geodynamic characts. of Earth crust 7—145386
Altyn Tagh and N Tibet region, geomorphological evidence for active faulting 7—139562
S Amorican shear zone, flower structure model *(French)* 7—94174
Ancash earthquake, Peru, 1946 November 10; evidence for low-angle normal faulting 7—145346
Anegada Passage, Virgin Islands, Seabeam survey and wrench tectonics *(French)* 7—79344
Antarctica-Australia-Pacific plate circuit, geological constraints on Cenozoic relative plate motion 7—145423
S Antilles region, geodynamics over past 20 my 7—79350
Appalachian Ultra-Deep Core Hole, seismic refl. data tectonic implications 7—87546
Appalachian Ultra-Deep Core Hole site study, regional Vibroseis profiling 7—87545
Appalachian Ultradeep Core Hole, tectonics and heat flow 7—94141
S Appalachians, Alleghanian deform., metamorphism and granite emplacement in central Piedmont 7—145450
N Appalachians, Maine, United States, crustal migrated seismic refl. profiles anal. 7—87548
Appalachians, Quebec-Maine region, Grenville basement location and characts., seismic anal. 7—87549
Aquitaine shelf (Bay of Biscay), deep seismic profiling rel. to tectonic struct. 7—79269
Arabian Shield ophiolites and Late Proterozoic microplate accretion 7—139565
Arctic Alaska Microplate, geological evol. and hydrocarbon habitat 7—79397
Arctic islands of USSR and Taimyr, major magmatic events and Riphean-Mesozoic magmatic formations 7—87566
Ardenne and Brabant massifs (France-Belgium), palaeomagnetism and tectonic rotations 7—107343
aspherical Earth shape due to poloidal-toroidal coupling in mantle 7—94184
Assegaai greenstone belt, Transvaal, deform. of supracrustal rocks and adjoining granitoids 7—72020
S Atlantic, relative plate motions from Seasat altimeter data 7—145431
E Atlantic off Africa, abyssal plain forming ocean-continent crust boundary 7—145401
mid-Atlantic Ridge south of Kane fracture zone, seafloor geology and extensional tectonics 7—133653
Atotsugawa fault, Japan, elec. and mag. anomalies and fault activity 7—114681
Austroalpine basement of Koralpe region, E Austria, Cretaceous nappe tectonics 7—94189
Avalon zone SE New England, USA, xenocrysts zircons and plate tectonics 7—87533
b and b_0 values and implications for regional crystal deformation 7—133581
back-arc spreading in Proterozoic time, implications of oceanic plates thermal model 7—145435
Bahamas, subsidence history, crustal thinning and plate tectonics 7—133643
Baikal Rift Zone, focal mechanisms of Angarakan earthquake swarm 7—145342
Baja California, fault plane solns. for 1982-1984 seismicity of N Peninsular Ranges 7—87457
Baja California peninsula, Mexico, Miocene palaeomagnetism and tectonic setting 7—87439
Baltic Shield Precambrian geology, conf., Helsinki, Finland (March 1985) 7—88734
outer Banda arc, effect of Australian continental crust subduction on free-air gravity anomalies 7—139441
NW Banda Arc, Indonesia, heat flow and seismic obs. rel. to tectonic movements 7—87558
Great Banda Sea earthquake, 4 Nov 1963, rupture process and tectonic significance 7—94111
Banon graben, France, tilted blocks, submarine passes *(French)* 7—79339
Barbados Ridge accretionary complex, tectonic fabric mapping 7—79354
Barberton greenstone belt, S Africa, Archaean synsedimentary tectonic deform., comparison with Quaternary 7—133645
Barberton Sequence, South Africa, Archean foredeep sedimentation and crustal shortening 7—94190
W Barents Sea, tectonic implications of deep seismic refl. profiles 7—79265
Bay of Biscay, northern margin formation and crust struct. 7—101245
S Belledonne Range, French Alps, pre-orogenic magmatism and Variscan tectono-metamorphic evolution *(French)* 7—101290
Benioff zone, dip angle sharp changes rel. to earthquake focal processes 7—119955
Bermuda Rise, dynamic uplift due to mantle plume convective upwelling 7—127139
BIRPS unsolved problems review 7—87474

tectonics continued
Black Forest, SW Germany, seismic refl. survey rel. to Variscan and Mesozoic tectonics 7—79272
S Bolivia, evidence for Paleocene deformation *(French)* 7—101258
Brazil deep trough, S Atlantic Ocean, structural features of oceanic crust 7—79365
British Columbia, Canada, crust deform. and regional metamorphism 7—139542
Broggerhalvoya, Spitsbergen, Z 7—72001
Builth Ordovician Inlier, Mid-Wales, kinematics of strike-slip faulting 7—127213
Bulgaria, fault length distrib. compared to magnitude-freq. relations 7—114649
Burmese arc subduction zone, seismicity and stress state *(Chinese)* 7—101256
California, central region, evidence for subducted sedimentary materials, seismic meas. 7—139563
California, central region, thermal maturity of Cambrian slab (trench-slope basin) 7—139513
central California, Mesozoic accretionary margin, struct. 7—87540
California-Nevada orogenic belts and Late Triassic thrusting 7—139564
Cameroon Line, Central Africa, new tectonic model 7—139580
Campania-Lucania earthquake of S Italy, crust stress determ. from aftershocks 7—133640
Campos Basin, offshore Brazil, deep seismic reflectors characts. 7—87543
E Canada, crust stress directions from borehole observations 7—114684
W Canada-NE Pacific convergent margin struct., seismic profiling study 7—79256
Canadian high Arctic, influence of block faulting on landscape evolution 7—139655
Cariboo Mountains, British Columbia, geometry, kinematics and tectonic implications of suprastructure-infrastructure transition 7—72021
Carpathian Frontal Foredeep, tectonics rel. to heat flow in Upper Silesian Coal Basin 7—101244
Cascadia subduction zone, NW United States, earthquake hazards 7—114647
Lesser Caucasus Mountains, character of arcuate structs. on Oktemberyan-Leninakan-Gukasyan profile 7—79387
Celtic Sea, relation between lower crustal layering and crustal extension 7—79325
Central Range, Taiwan, Plio-Pleistocene westward thrusts and Miocene submeridian longitudinal displacement *(French)* 7—133642
Charleston (South Carolina) earthquake, tectonic implications of aftershocks epicentres locations (1886-1889) 7—87480
Chichijima region, Bonin Islands, earthquake swarm characts, and tectonic features *(Japanese)* 7—139499
Chile (29 to 30.5 degrees south), Tertiary magmatism rel. to subduction history 7—119977
Chile coastal cordillera, palaeomagnetic constraints on tectonic evolution 7—94183
SW China, mean stress axes directions, determ. from microearthquake data 7—114679
China, palaeomag. constraints on collision and rot. of North and South China 7—107346
China, plate tectonic history, basin development and petroleum geology 7—139530
S China, tectonic struct. and evol. 7—79347
N China Basin, tectonic implications of Tangshan aftershock sequence 7—87483
China-Japan geodetic baseline distance, VLBI radioastronomical determ. 7—94064
Chow Bahir rift, failed rift in S Ethiopia, K-Ar ages and tectonic setting 7—139600
S Colorado Plateau, USA, tectonic boundary 7—87590
Columbia River basalts, Washington, USA, in situ stress distrib. 7—119979
Comoe Unit (Birrimian) of Ivory Coast, Eburnean deformations *(French)* 7—87632
conference, Strasbourg, France (April 1987) 7—95087
conference, Utrecht, Netherlands (April 1985) 7—72720
Congo People's Republic, geochronology rel. to tectonic events *(French)* 7—87556
conjugate fault system, stress axis identification, separation, determination *(French)* 7—79342
contemporary plate motions and crustal deform, review 7—133654
continent-arc collisions, tectonic collision processes after plate rupture 7—139578
continental crust, differential stresses responsible for seismicity and faulting 7—87585
continental lithosphere, thermal and seismic implications of two extension configurations 7—139517
continental lithosphere flow props. and mechanically weak zones 7—87589
continental palaeorifts, quantitative approach to rock formations anal. in E Transbaikal 7—145452
continental rifts, subsidence history rel. to struct. of sedimentary fill 7—79388
continents fit in late Precambrian, evidence from distrib. of Ediacaran fauna 7—107380
convective cooling of lithosphere, calc. of temp. depend. mantle convection 7—101236
convergent plate boundaries, large deep-focus shocks and significant volcanic eruptions (1900 to 1980) 7—145437
convergent plate margins, sequences and clusterings of significant volcanic eruptions (1900 to 1980) 7—145414
E-Cordillera, Central Peruvian Andes, granitoids, K-Ar radiochronological data *(French)* 7—94176
core internal waves in rotating stratified spherical shell, asymptotic solns. 7—101237
covariance matrix theory for plate rotations and reconstructions 7—120001
creep transition in fine-grained granitic aggregates and high-temp. and high-pressure 7—127206
Cretaceous epeirogeny and eustatic sea-level changes, for central and W USA 7—114686
Criffel granodiorite-granite zoned pluton (SW Scotland), oblique diapirism emplacement model 7—127210
crust movements meas. with data acquisition and telemetry system *(Japanese)* 7—145667
crust stress field due to tangential forces, mathematical model 7—71998
crustal deformation by rotating parallel faults, 'bookshelf' mechanism 7—139610

tonics continued
crustal movements studies, geodetic networks 7—79191
crustal stress fields interrelationship at different structural levels, example from Pamirs-Tien Shan transition zone *(Spanish)* 7—133618
central Cuba, Quaternary vertical movements 7—79329
Cuddapah Basin, India, tectonic model and crust struct. 7—94191
Czechoslovakia, seismotectonic model of upper crust 7—101220
Daribi Range, Mongolia, Precambrian rise 7—79349
Daurskii regional gravity minimum (Transbaikal), tectonic disintegration rel. to local gravity anomalies 7—145307
W Deccan traps, India, stratigraphy and struct., volcanological and tectonic control 7—101226
deformation of rocks, boundary value problem 7—94204
diapirs in mantle, melt segregation and flow 7—94182
discontinuous fault zones, effects of nonuniform 3D stress fields 7—72015
displacement efficiency of faults and fractures, relation to displacement gradients 7—127202
Dolomites (Southern Alps, N Italy), tectonic evolution 7—79393
Lower Durance, France, Quaternary tectonics *(French)* 7—94180
dynamically supported topography and gravity anomalies, for fluid with depth-depend. viscosity 7—119993
dynamics of differentially rotating core 7—94074
earthquake source, extended, in laterally varying struct., assoc. strong ground motion 7—87447
S Eastern Desert, Egypt, uplift phase and cooling history of Silurian-Cretaceous alkaline ring complexes 7—127170
W Ecuador, rotated oceanic blocks, palaeomagnetic meas. 7—119996
Ecuador and N Peru, deep seismically active fracture zones 7—114690
Egypt, Central Eastern Desert, significance of Pan-African lineaments 7—94216
N Ellesmere Island, Arctic Canada, U-Pb ages and tectonic implications 7—94125
en-echelon faults, study of fault deformation and instability *(Chinese)* 7—94086
Ethiopia, geology, geochronology and geodynamic implications of Cenozoic magmatic province 7—133638
Europe, MAGSAT anomalies anal. rel. to large-scale geotectonic structs. 7—127077
NW European continent and shelf, gravity anomalies and geotectonic imaging 7—127076
European platform, stress fields at time of Africa-Eurasia collision 7—101265
expansion of Earth interior as basis of physical model of geotectonic cycle 7—127176
extensional basins of half graben type, structural-stratigraphic models 7—120005
extensional tectonics and continental crust evolution seismic refl. profiling evidence 7—79323
Fairview Peak-Dixie Valley, Nevada, USA, AD 1954-9 earthquakes 7—145365
fault (rectangular) in viscoelastic half-space, quasi-static deformations study 7—87583
fault gouge superplastic flow 7—119997
fault inversion, gravity anomaly, calc. by Marquardt's method, BASIC program 7—145677
fault juncture zones activation conditions 7—87581
fault structures, magnetotelluric method resolution *(Japanese)* 7—79690
fault surfaces corrugation and bifurcation, role of cross-slip 7—79377
fault with asperities, theory of slip-softening instability 7—87491
faulting, frictional heating effects on thermal, hydrologic and mechanical response 7—119960
faulting, laboratory model expts., two glass plates in concrete block 7—145430
faulting in layered elastic half-space, 2D crack model 7—133639
Fennoscandia, gravity change and land uplift (1966 to 1984) 7—114603
Fennoscandian Long Range profile, magnetotelluric transfer functions and crustal struct. 7—94140
filtering procedure and fabric diagrams applied to analysis of orientational data *(French)* 7—87575
Finmark, N Norway, thrust transport directions and thrust sheet restoration in Caledonides 7—127212
Fish Springs fault, Owens Valley fault zone, California, Late Quaternary vertical displacement rate 7—87588
fold and thrust belts, theory of noncohesive critical Coulomb wedges 7—94185
fold development in overthrust terranes, geometrical anal. 7—79395
foreland fold-thrust belts, use of fault cut-offs and bed travel distance in balanced cross-sections 7—79396
fractal geometry of multiscale fault systems *(Japanese)* 7—145372
fracturing and seismic energy release, conf., Liblice, Prague, Czechoslovakia (Oct.-Nov. 1985) 7—80166
France, age and origin of crustal laminations observed in deep seismic profiles 7—79268
France, operations and main results of ECORS project 7—79266
N France, tectonic features and struct., seismic profile anal. 7—120004
French maritime Alps, alpine history and tectonic inversion *(French)* 7—139596
French-Italian Alps, tectonics, lithostratigraphic, paleogeographic, geodynamic aspects *(French)* 7—139555
Friuli seismic area, Italy, crust strain direction observations 7—87586
Fuyu oil field, China, deformation of cased boreholes *(Chinese)* 7—145373
Galapagos propagating rift at 95°30′W, magnetic anomaly study of tectonics 7—133651
Galicia passive continental margin, Spain, rift tectonics, seismic meas. 7—79353
Gargano massif, Italy, carbonate platform-to-basin transition model controlled by tectonic phenomena *(French)* 7—79343
Garm Region, Tadzhikistan, USSR, tectonic deformation, crust struct., seismicity 7—139568
geodesy, appls. of radio VLBI interferometry 7—133551
geodetic surveying for tectonic deformation, use of repeated angular and vertical measurement 7—127489
geodynamic implications of mantle convection 7—127144
geophysical fields, nature and geological interpretation, conference, Moscow, USSR (August 1984) 7—115088
Germany, crustal reflectivity, crustal age, heat flow, viscosity interrelations 7—133571
East Germany, gravity strength variations rel. to crustal movements 7—139566
glacial rebound and relative sea-level variations 7—107419

tectonics continued
Gondwana glaciation in Chile, possible glacial deposits and palaeogeographic conditions 7—79336
Gondwanan glaciation during late Palaeozoic, triggering by Namurian orogenic uplift 7—79471
Gorda Rise-Mendocino fracture zone area of Pacific, earthquake relocations, seismicity, tectonics 7—107358
GPS relative geodesy, ionosphere effects 7—79709
GPS-based geodesy in California, Mexico and the Caribbean 7—79708
Gramscatho basin, Cornwall, England, tectonic environment from geological evidence 7—127178
Grand Banks region, Atlantic Ocean, continental margin refl. profiling within Lithoprobe East 7—87552
W Great Basin, Nevada, growth faulting in Dunlap Formation rel. to Jurassic extensional tectonism 7—145458
E Great Basin, open-system two-layer crustal stretching model 7—127185
Great Plains (USA) foreland basin, evidence for buoyant sub-surface loading of lithosphere 7—107379
E Greenland, continental margin rel. to N Atlantic tectonic evolution 7—127179
E Greenland, fracture propag. assoc. with dyke emplacement at Skaergaard intrusion 7—72025
W Greenland, Late Archaean tectonics in Faeringehavn-Tre Brodre area, south of Buksefjorden 7—145462
Gresigne folded structure, France, initiation of a duplex in slightly deformed strata. *(French)* 7—94172
Gulf of Elat (Aqaba), crustal heat flow and tectonics 7—79332
Gulf of Maine, lower crust seismic struct. and tectonic charcts. 7—87551
Haiyuan fault (China), displacement assoc. with great Haiyuan earthquake (1920 December 16) 7—87453
Hasteinen region, Norway, tectono-magmatic signature of old red sandstone and pre-Devonian strata 7—139541
Hatton Bank (Rockall Plateau), continental margin struct. from seismic profiles 7—79264
Hawaii, age of tilted reefs rel. to volcanoes construction and subsidence 7—87603
Hawaii, tectonic setting of volcanoes 7—127162
Hawaii earthquake, 1975 November 29, apparent stresses, stress drops, and amplitude ratios of preceding and following earthquakes 7—87451
Hebrides of NW Scotland, Jurassic tectonic subsidence history and sea-level changes 7—139569
Hercynian anatectic granite, Velay, French Massif Central, emplacement *(French)* 7—94179
high-velocity subducted slab, seismic waveform effects 7—119995
Himalaya central portion, active transverse features 7—94192
Himalayas, structure and evolution 7—94188
S Hokuriku District, Japan, tectonics and seismicity of Sabae fault *(Japanese)* 7—87641
central Honshu, implications of seismicity before and after Tonankai Earthquake (1944 December 7) *(Japanese)* 7—87506
horizontal lithostatic stresses, effect on tectonic waves 7—87582
hotspot motions in Pacific, Atlantic and Indian oceans since Late Cretaceous, plates motions anal. 7—107381
Huang-yuan overturned fold in China, finite-element analysis, model 7—127190
Hyderabad area of India, crustal stress from borehole observations 7—127183
Iceland, episodic evidence for rifting 7—79328
SW Iceland, Vogar fissure swarm of Reykjanes Peninsula 7—127166
Idaho, U-Pb geochronology of two augen gneiss terranes, and tectonic implications 7—79317
Illinois, USA, stress history of granite with heated microcracks 7—79358
India, Curie depth and lithospheric thickness var. determ., tectonic implications 7—71985
W India, Kerala area geomorphology, crustal development and lineaments 7—101268
India western marginal basins, regional tectonic framework and struct. 7—79359
India-Asia collision, crustal fracturing rel. to distinctive pattern of geomag. induction in NW India 7—139466
India-Asia collision zone, NW India, tectonic inferences from O isotopic studies 7—139574
India-Eurasia convergence 7—139562
Indian Ocean, intraplate crustal deformation 7—114685
Indian Ocean, Seasat gravity undulations rel. to tectonics 7—145312
Indian sub-crustal lithosphere, degeneration since Gondwanaland breakup, geophys. evidence 7—145433
intracrustal waveguide existence and geodynamic consequences 7—101203
intraplate stress due to secular cooling and contraction of Earth 7—127173
inverted Mesozoic sedimentary basins in Alpine foreland, symposium, Strasbourg, France (April 1985) 7—101267
isostatic equilibrium studies, new empirical relations between gravity anomaly and elevation 7—127073
Isthmus of Corinthos and Gulf, Greece, Quaternary deform. 7—139560
Italy, Central Apennines tilt obs. and seismicity 7—127120
Italy, segmentation of subducted lithosphere as control on thrust-belt and foredeep-basin evolution 7—145424
S Italy, tectonic stress distrib. deduced from 23 Nov. 1980 earthquake 7—79357
Italy geomag. provinces rel. to tectonic evolution 7—145334
Iturup Island region, Kuril Island arc, March 1978 earthquakes, aftershock hypocentres distrib. and seismotectonic processes 7—94104
central Japan, interplate seismic coupling 7—127191
SW Japan, Permian-Triassic orogeny, continental subduction 7—139559
Japan, precursory activity in seismic belts containing focal regions of forthcoming large intraplate earthquakes 7—139503
Japan geodetic VLBI expts., instrumentation and results 7—94494
SW Japan region, clockwise rot., palaeomagnetic data anal. 7—145421
Japan Sea, Miocene rotational opening 7—139444
central Japan triple junction, 3D model of geometry 7—127186
Japan-China VLBI experiment, equipment and meas. 7—94493
central-western Jebilet, Hercynian belt, Morocco, flower structure model *(French)* 7—94175
Jordan, Wadi Arab fault studies using Landsat TM data 7—101269
Jordan-Dead Sea rift tectonics, relation to crustal struct. derived from seismic refr. data 7—145407
E Jura Mountains, Switzerland, Recent stress field and neotectonics 7—79356
Kalgoorlie greenstones, Western Australia, evidence for structural repetition rel. to tectonic setting 7—139603

tectonics continued
Kamchatka island arc, geodynamic characts., lavas petrology and geochem. as indicators 7−127174
Kanto-Tokai area, Japan, borehole in-situ stress measurements 7−79360
Kerala region of India, lineaments in Cannanore district 7−127184
kink-band formation in shear zones and faults, stick-slip model 7−139609
E Klamath Mountains (N California), Palaeozoic and Mesozoic magmas comp. rel. to geodynamic evolution of W North America 7−139606
Kohistan (N Pakistan), tectonic history and implications for Himalayan struct. 7−145429
Kopet-Dagh Mts. (East of Caspian Sea), palaeomagnetism and tectonics 7−94081
S Korea, Cretaceous palaeomagnetism and tectonic situation 7−94076
Kyushu, Japan, rotation during middle Miocene, deformation *(French)* 7−101259
laccolith intrusions, centrifuge modelling 7−72026
Lake Tanganyika trough, neotectonics and associated sedimentation *(French)* 7−87574
Laurasian paleomagnetism and tectonics, conf., Prague, Czechoslovakia (Aug. 1985) 7−115685
Limpopo Mobile Belt, southern Africa, tectonics of shear zones bounding central zone 7−79390
lithosphere tectonic disturbances; fracturing 7−79346
lithosphere tectonic segregation, origin of major tectonic forms rel. to metallogeny 7−79330
lithosphere thermal thinning, asymptotic soln. 7−145394
Long Valley caldera, California, USA, geodimeter crustal deformation study 7−145413
Long Valley caldera, E California, crustal deform. from trilateration and levelling 7−87568
lower continental crust, evidence for superplastic flow from deform. in high-temp. quartz-feldspar mylonite 7−139594
Macaya Massif, geochemistry of volcanism rel. to tectonic evolution *(French)* 7−94137
NW Macedonia, Greece, extensional tectonics since Late Miocene 7−120003
Madagascar-East Africa, plate tectonic reconstruction 7−145432
magma upward migration forming blister shaped magma regions 7−127167
magmatism early evol. 7−120288
mantle, time-depend. convection in 2D Rayleigh-Benard cells 7−101262
mantle convection rel. to distribution of tectonic plates *(French)* 7−79338
mantle flow, Helmholtz waves in two-layer model of upper mantle 7−145427
mantle plume fed by a boundary layer, analytical model 7−107378
mantle plume formation in D″-layer, numerical model 7−114688
upper mantle rheology, determ. from peridotite xenoliths from southernmost South America 7−101241
mantle short-term rheology, determ. from tidal dissipation anal. 7−79178
mantle xenoliths in W Eifel, W Germany, temp. history and mantle diapirism 7−139528
marginal sea spreading mechanism 7−71999
N Mariana Islands, volcanic rocks O, S, Sr and Pb isotopic var., implications for crustal recycling 7−127136
Massif Central, France, Argentat fault, evidence for dextral shearing *(French)* 7−139556
Massif Central, France, Carboniferous Palaeomagnetic evolution and tectonics 7−87428
Matsumoto Basin, Japan, thrust fault system characts., gravity data anal. 7−114676
Mauritanide-Bassaride-Rokelide orogens (W Africa), geodynamic evolution 7−139604
Mayombian belt, W Africa, oceanic origin of metabasites *(French)* 7−114669
Mecca Hills, San Andreas fault zone, mag. stratigraphy and test for Quaternary block rot. 7−71963
mechanism of plate movements involving 2 states of asthenosphere-lithosphere system 7−119998
Medina Wrench zone in the Mediterranean, the last 5 Ma 7−87578
Mediterranean, Pliocene to Quaternary tectonic evolution 7−133641
E Mediterranean Sea, evidence from S Turkey rel. to Neogene tectonics and plate convergence 7−139599
SE Mediterranean Sea, superposed tectonic patterns along continental margin 7−139579
E Mediterranean Sea region, kinematics and WEGENER-MEDLAS Project 7−87907
Meghalaya Plateau, India, crust struct. and geomorphologic evolution 7−101310
melt extraction at mid-ocean ridges and island arcs, 2D modelling 7−127172
Menai Strait fault system, early Caledonian terrane boundary in N Wales 7−145459
Merida Andes, Venezuela, Hercynian deformation, microtectonic anal. *(French)* 7−79341
NE Mexico, stress orientations inferred from stress-induced borehole elongations 7−87559
microstructures in rock due to biaxial loading, laboratory expts. on PMMA *(French)* 7−120016
mid-ocean-ridge volcanic segment migration 7−94187
mid-plate swell apparent compensation 7−87580
midocean ridge crest processes, review 7−139539
Mongol-Okhotsk seismic belt, seismogeology and geophysical fields rel. to earthquake prediction 7−71967
Monte Rosa nappe, W Alps, kinematics of ductile shearing 7−127189
Morimoto Fault, Japan, fault movement rel. to Kanazawa earthquake (1799 June 29) *(Japanese)* 7−87509
Moroccan Rif, origin of major cross-element zone 7−145461
Morocco, permanence of structural lines from Precambrian to Recent 7−119999
Morocco, W Palaeozoic High Atlas, Permian compressive episode *(French)* 7−127169
Mount Cameroon, active volcano of Cameroon Line, relation to Adamaoua strike-slip fault zone 7−87567
N Mozambique, ore body detection in Monapo area rel. to Precambrian tectonics 7−101301
mullion structures, finite strain effects in expt. mullions 7−79376
Najd fault system, two-way strike-slip orogen in Saudi Arabian Shield, tectonics and chronology 7−72023
Namaqua Province, South Africa, tectonic deformation along eastern boundary 7−107409

tectonics continued
Nazca and South American plates, relative motion since Late Cretaceous 7−139572
SW Nebraska, tectonic uplift model for microearthquakes near Sleepy Hollow oil field 7−87454
neotectonic activation process, thermal model of S Tien-Shan 7−133614
Nestos sedimentary basin, in N Greece, geophys., study of geothermal field 7−139523
S Nevada, palaeomagnetism and crustal rotations along Las Vegas Valley Shear Zone 7−127091
W-central Nevada, paleomag. and structural evidence for Mid-Tertiary counterclockwise block rotation 7−133646
Nevada Test Site area, USA, regional stress from faulting data 7−101264
New Britain earthquake in SW Pacific, 10 May 1985 event and tectonics 7−145366
S New Brunswick, Canada, Precambrian evolution of Avalon terrane 7−145460
New Caledonia, overthrust emplacement of ophiolite, geophysical evidence 7−139571
New Guinea seismotectonics, model 7−127188
New Mexico, tectonic implications of carbonatites in Lemitar Mountains 7−101292
New Zealand, Central Volcanic Region, struct., asymmetric back-arc spreading and heat flux 7−145383
New Zealand, island arc tectonics rel. to $^3He/^4He$ in gas 7−145422
New Zealand, North Island, ophiolite obduction and emplacement from gravity obs. 7−127159
New Zealand, North Island, seismic velocity struct. and descending slab segmentation 7−127119
New Zealand orocline age and origin rel. to Alpine Fault movement 7−127181
Newfoundland, Canada, geological interpretation of onshore and offshore gravity anomalies 7−87419
E Newfoundland, palaeomag. study of meta basalts of Harbour Main Group 7−145335
Newport-Inglewood fault zone, Los Angeles basin seismotectonics 7−114630
Niger, W. Africa, Palaeomagnetism, age, tectonics of mid-Palaeozoic ring complexes 7−133562
North America, Central Plains region, Precambrian struct. and gravity patterns 7−133612
S North Sea, seismic refls. from mid-crustal shears at edge of London Platform 7−79262
North Yemen earthquake, 1982 December 13, broadband body-wave anal. rel. to rupture complexity 7−87449
N Norway, tectonic evolution model for Finnmarkian Caledonides 7−114677
Norwegian and E Greenland continental margins, seismic study of crust struct. 7−139493
Norwegian continental margin, ODP drilling results 7−139533
Oban Massif, SE Nigeria, structure and geology by radar mapping 7−119975
obduction, a new hypothesis *(French)* 7−72002
oceanic lithosphere, appl. of optimal shape design method to thermal thinning near hot spots 7−101276
oceanic lithosphere, elastic drag forces rel. to upper mantle convection 7−133649
oceanic lithosphere flexure near Hawaii, correl. with vars. in layer 2 elastic vels. 7−87604
oceanic spreading centres, appraisal of evidence for vars. in magma prod. near fracture zones 7−133655
middle Okinawa Trough, central grabens region, topography and geology, evidence for tectonic struct. 7−79314
middle Okinawa Trough, DELP 1984 cruises results 7−79312
ophiolite complex of E Sayan Mountains, tectonic setting from marianite-boninite series rocks 7−145454
Oregon High Cascades, stratigraphic, sedimentologic and petrologic record of Late Miocene subsidence 7−139598
Oregon Plateau, USA, crustal genesis 7−119978
Osen-Roa thrust sheet, Oslo Region, lateral and vertical changes of deformation style 7−127211
Ouachita system, Mexico, tectons-stratigraphic provinces characts. 7−139576
overturned fold modeled using finite-element analysis 7−127190
Pacific Ocean, lithosphere elastic thickness, geodetic constraints 7−145384
NW Pacific Ocean and continental margin, stages of tectonic transformations 7−79351
Pacific plate, motion detect. from 1984-5 VLBI meas. 7−94186
East Pacific Rise at 19°S, hydrothermal deposition rel. to volcanotectonics 7−127177
East Pacific Rise axis, structural evolution 7−87563
Early Palaeozoic oceans, Nd, Sr isotopes of marine fossils and tectonic and circulation inferences 7−114802
paleo-geographic maps for computations of paleo-tides, ocean circulation, climate and marine geodesy 7−133539
W-Paleozoic High-Atlas, Variscan dextral wrenching couple superimposed on a Middle Cambrian graben *(French)* 7−139557
Palomares brittle-ductile Shear Zone, S Spain, Neogene tectonic evolution 7−79391
Pamirs-Tien Shan transition zone, stress fields interrelationship at different structural levels *(Spanish)* 7−133618
Pangea, 3D seismic velocity struct. 7−101213
W Pangea, breakup, evidence from equatorial Atlantic fracture zones 7−133644
N Peru, deep seismically active fracture zones 7−145436
S Peru, regional stress determination from earthquake focal mechanism data 7−87579
Philippines, palaeomagnetism and tectonic rotations 7−71961
plate motion circuit closure, statistical tests 7−127495
plate motions and polar motion *(Chinese)* 7−101173
plate tectonics, Signorini problem with friction in linear thermoelasticity 7−139554
polar wander and paleomagnetic reference pole controversies 7−139462
Polfluchtkraft (pole-fleeing force), influence of gravit. energy of continental elements 7−127168
preliminary fracture distribution, before large fault occurrence 7−127175
process rates, effects of measured time interval 7−139516
Project Kaiko 7−127141

ctonics continued
Puget Lowland, Washington, Late Holocene sea-level record rel. to tectonic subsidence 7−87698
pulsation tectonics, contrib. to control of long-term stratigraphic cycles 7−133658
Purgatory Conglomerate, Rhode Island, volume change, real strains and sedimentary shape factor from press.-soln. deform. 7−79375
N Pyrenean metamorphic belt, hydraulic breccia origin *(French)* 7−94181
N Pyrenean zone, Jurassic and Cretaceous geodynamic evolution *(French)* 7−145416
W Pyrenees, crustal scale balanced cross section, intraplate rift *(French)* 7−87576
quartz petrofabric analysis, correction and verification of spherical electron channelling pattern map 7−79378
Quebec-Ontario-New York area, seismotectonics 7−139473
Queensland, Australia, Palaeozoic tectonic activity determ. from zircon dating 7−145378
Rand thrust, S California, early history and reactivation 7−79394
Ray-Iz Massif, USSR, tectonic features, rock and mineral anal. 7−145425
Red Sea, fault pattern and crustal spreading from sonar obs. 7−94170
Red Sea, Space Shuttle and Landsat obs. rel. to role of fracture zones during early rifting 7−145463
Red Sea continental shelf of Egypt, gravity anomalies and tectonics of Safaga area 7−133650
regional metamorphism, assoc. PT parameters and tectonic regimes 7−120009
regional stress determination from earthquake focal mechanism data 7−87579
Rhodopian nappes complex, Greece, structure *(French)* 7−145451
rift valleys, struct. and sedimentation 7−145457
rifting of continents 7−114689
rock deformation, appl. of kinematic vorticity number as measure of non-coaxiality 7−72016
rock deformation analysis, two-dimensional strain determination by inverse SURFOR wheel 7−72017
rock deformation principles, book 7−134380
rock fabric due to deformation, flow modelling theory 7−87639
rock fabric indicator of deformation history, orientation of marks in 2D shear strain 7−87638
rock fracture instabilities accompanying dyke intrusion, implications for volcanic earthquakes 7−87621
rock melting on fault plane, artificial pseudotachylyte generation using friction welding apparatus 7−72024
rock rheology, upper limits of power law creep 7−87630
Rockall Bank rifted margin, DSDP heat flow and tectonics 7−145400
rotation of crustal inclusions about vertical axis, model 7−114678
rotation of tectonic plates, alternative calc. method 7−145434
rotation of tectonic plates, use of statistical theory for observational data 7−120002
Roussillon Basin, France, Pliocene series sedimentation and tectonics *(French)* 7−94134
Sabaloka, Sudan, evidence for pan-African continental margin, granulites dating anal. 7−145419
E Saharan Craton, Proterozoic deform. in SE Libya, S Egypt and N Sudan 7−139607
San Andreas fault, displacement estimates in central California from palaeobathymetry and palaeogeography 7−133647
San Andreas fault, geodetic obs. of deformation, AD 1982 to 1986 period 7−114682
San Andreas fault, seismic potential for area SE of San Francisco 7−114641
San Andreas Fault, temporal changes in microseismicity and creep near Parkfield, California 7−107362
San Andreas fault in Mexico, on-land spreading episode 7−87584
San Andreas fault slip, geodetic meas. near Parkfield, California (1959-1984) 7−87424
Sanbagawa metamorphic belt, Skikoku, SW Japan, evolution rel. to subduction *(French)* 7−127134
Santa Rita fault zone, SE Arizona, large-magnitude earthquakes with very long recurrence intervals 7−87452
Sardinia, W Mediterranean, aeromagnetism, paleomagnetism and tectonic rotation 7−87429
E Sayan region, Cenozoic basalt associations as indicators of orogenic regime 7−139548
seafloor generation rate, relation to ocean ridge volume and inversion using long-term sea-level change 7−145439
seamount loading of compressible viscoelastic plate, analytical soln. 7−133652
secular tilt in Charlevoix seismic region 7−139433
sedimentary basins of continental margins, tectonics of oil and gas occurrence 7−79364
sedimentary basins within continental rift zones, conference, Ramot Village, Israel (April-May 1985) 7−145438
seismic fault rupture, energy approach to problem of continual destruction of solid body 7−133665
seismic source, extended representation in propagator-based formalism 7−87448
seismic sources, appl. of inhomogeneous stress (patch) model to complex subduction zone earthquakes 7−87479
seismic sources spatio-temporal extent, determ. from stopping phases in seismograms 7−87450
Senya Fault, Akita Prefecture, Japan, Holocene activities and near surface struct. *(Japanese)* 7−79337
Sevan-Akera ophiolite zone, Lesser Caucasus Mountains, tectonic evolution 7−79386
Shanxi Graben and earthquake zone in N China, tectonics and seismicity *(Chinese)* 7−145415
shear strain profiles across brittle ductile shear, calc. method 7−94171
Shillong Plateau, NE India, microseismicity and source mechanism study 7−87458
Shimanto zone, Kyushu, Japan, northward ductile phase *(French)* 7−94177
Siberian platform, horizontal displacement in Triassic, palaeomag. data anal. 7−79348
West Siberian Platform, tectonic zonation of basement from geological and geophysical data 7−139597
Siberian Platform (southern edge), overthrust-associated folding 7−101260
central Sierra Nevada, California, extent of Late Jurassic Nevadan orogeny 7−133676

tectonics continued
Simplon line, Central Alps, kinematics from structural study 7−79355
N Snake Range, Nevada, ductile and brittle deforms. anal. 7−79392
N Somalia, shear zone tectonics 7−120000
South Africa, Palaeozoic apparent polar wander path, palaeomagnetic study 7−133556
South island, New Zealand, seismotectonic comparison with Transverse Ranges, California 7−139502
Southern Pampean Ranges, Argentina, basement tectonics evolution 7−139573
Southern Vanoise mesozoic cover, technogenetic model for thrusting *(French)* 7−94173
Soviet tectonics, current problems 7−79345
SE Spain, response of Aguas and Feos river systems to differential epeirogenic uplift 7−145529
N Spain, tectonic history from Cretaceous redbeds paleomagnetism 7−127092
N Spain, tectonic implications of palaeomagnetism of Permo-Triassic redbeds from Asturias and Cantabric Chain 7−139465
Spitsbergen, tectonic implications of age of Tertiary formations 7−79398
Sri Lanka, vein-type mineral deposits tectonic environment 7−79352
stress and interearthquake time distribution 7−71973
stress characteristics before and after earthquakes 7−71969
stress field around fault area 7−114674
stress-strain-rate relation for transversely isotropic incompressible fluid 7−94110
structural geology, cross-section drawing through folded layers using sequentially rotated cubic interpolators 7−127605
Subalpine Basin, France, fault-controlled continental and marine sedimentation *(French)* 7−94197
subducted lithospheric material spread along mid-mantle boundary 7−145420
subducting lithosphere seismotectonics and slab pull 7−101263
subduction zone decollement horizon, fluids expulsion from depth 7−87562
NE Syria, implications of olistostrome rocks in core of Abd-el-Aziz anticline 7−79385
Taiwan, earthquake aftershocks rel. to forearc sliver plate movement 7−127111
Tangshan region, China, crustal stress changes due to AD 1976 earthquake 7−87587
W Tasmania, tectonic setting of Cambrian rifting, volcanism and ophiolite form. 7−139608
tectonomagnetism and tectonoelectricity 7−139570
Thingvellir fissure swarm, SW Iceland, morphology and tectonics 7−71997
thrust sequences by geometric models 7−127180
thrust sheet motion and earthquake mechanisms 7−127101
thrust sheet movement, energy balance for large thrust-sheets and fault-bend folds 7−127203
thrust-fault propagation, alternative model 7−133675
Tibet, regional stress determination from earthquake focal mechanism data 7−87579
S Tibet during India-Asia collision, change from Late Tertiary compression to quaternary extension 7−139575
Tibet Plateau, seismic velocity struct. of crust and upper mantle 7−79284
Tokai region, Japan, recent seismic activity near location of predicted large earthquake 7−145369
Torei Basin (Chita Oblast, USSR), tectonic struct. rel. to genesis of lakes 7−133673
Trans-Hudson Orogen in N Saskatchewan, Canada, U-Pb geochronology 7−101229
Transantarctic Mountains, uplift history and geology, from age of basement apatites 7−87577
Transverse Ranges, California, seismotectonic comparison with South Island, New Zealand 7−139502
Truchas and Palomares shear zones in Spain, construction method for shear strain profiles 7−94171
TTT-type triple junction stability and evolution 7−127187
Tunisia, the Aptian Crisis, palaeostruct. of the Atlas and N-S Axis junction *(French)* 7−145417
Tunisian African margin, palinspastic reconstruction, Tethyian oceanic accretion *(French)* 7−79340
W Turanian plate, USSR, tectonics of pre-Jurassic sedimentary complex 7−145426
two degree-of-freedom earthquake model with static-dynamic friction 7−139498
Tyrrhenian Sea area, plate tectonic opening and crust struct. 7−114673
central Ufa amphitheatre, central Urals, tectonic struct. 7−79384
UK Southwestern Approaches, deep seismic refl. events rel. to post-Carboniferous extension phase 7−79261
United Kingdom, heat flow, heat prod., and thermo-tectonic setting 7−127151
SE United States, COCORP seismic profiling 7−87544
SE United States margin, plate model 7−139577
uplift due to volume expansion within the Earth, calc. method 7−101261
uplift rate determination methods using tide gauge data 7−79361
Urakawa-oki earthquake, Japan, fault model of AD 1982 event 7−127123
USA, Cretaceous epeirogeny and eustatic sea-level changes 7−114686
eastern USA, crust stress directions from borehole observations 7−114684
western USA, plate deformations, constraints from geodesy, neotectonics etc. 7−114683
eastern USA and Canada, black shale spatial distrib. and tectonic implications 7−145428
eastern USA and Canada, rift basins date of origin, palynological study 7−127157
USSR, deep faults rel. to anomalous H_2 concs. in subsurface fluids 7−79464
Valhalla complex, BC, Canada, Eocene structural development 7−101246
Vancouver Is., Canada, geodetic uplift obs. for AD 1930 to 1985 period 7−114605
Vancouver Island subduction zone, anal. of seismic instability of lithoprobe transect 7−79240
Vanuatu arc, Pacific, island uplift events from coral reef emergence data 7−114687
Variscide orogenic belt in Germany, results of DEKORP 2-S and other refl. profiles 7−79271
Vendee nappes, S Brittany, France, Variscan strain and deform. mechanisms 7−72022
vertical crustal movements, role of Helmholtz waves in two-layer model of upper mantle 7−145427

tectonics continued
N Victoria Land, Antarctica, granitoid origin and tectonic setting 7−87516
Viking Graben, North Sea, seismic struct. and hydrocarbon prospects 7−79333
Viso massif, W Alps, eclogites tectono-metamorphic evolutions *(French)* 7−87573
Watchung Mts., Newark Basin, USA, palaeomagnetism and tectonics 7−101190
Wellington region, New Zealand, local earthquakes coda duration temporal var. 7−139495
Welsh Basin sedimentation and tectonics, conf., Aberystwyth, Wales (April 1986) 7−95074
Western Australia shield, continental rifting and Archaean-Proterozoic transition 7−139561
Western Cascades, Oregon, USA, plate convergence and volcanic eruption rates 7−101254
Whipple Mountains, California, crustal struct., seismic refr. study 7−87541
Wopmay Orogen, Canada, geology of Proterozoic syn-metamorphic uplift 7−87635
Xianshuihe fault, SW China, fault creep theoretical modelling *(Chinese)* 7−87572
Zambesi belt, NE Zimbabwe, strains and vorticity beneath tabular batholith 7−145469
Zenisu ridge, Japan, intraplate microearthquakes and tectonics 7−145364
Zenkoji fault, Japan, config., gravity meas. 7−114675
zonal relaxation, physical model investigation 7−133648
TEGFET *see high electron mobility transistors*
tektites
Late Eocene impact microspherules, stratigraphy, age, and geochemistry 7−139614
Late Eocene microtektites, major element comp. var. within and between strewn fields 7−139615
Lonar Crater, India, tektite-like bodies geochemistry and implications for tektites origin 7−101309
moldavite origin, new chemical evidence 7−127216
telecommunication
see also optical communication; radiocommunication; telecommunication channels; telecommunication networks; voice communication
room acoustics for telecommunication services *(French)* 7−130468
telecommunication cables
see also coaxial cables; optical cables; submarine cables; underground cables
closed circuit TV-video cable with high tamper resistance 7−122061
telecommunication channels
see also channel capacity
English verification of the STI method for estimating speech intelligibility of a communications channel 7−130481
HF channel, combined eval. and simulation system 7−107638
multichannel radio biotelemetric system design 7−79106
telecommunication networks
see also broadband networks; computer networks; radio networks; telephone networks
optical data transmission system with variable priority of integrated information for nuclear plants *(Japanese)* 7−116664
optical fibres, CCITT standardisation for telecomm. systems 7−82831
optical fibres, props. and manufacture *(Polish)* 7−68887
telecommunication systems
see also data communication systems; digital communication systems; radio systems; switching systems; telephone systems; television systems
rain cell model, propagation appls., expt. background 7−114851
telecommunication theory *see information theory*
telecommunications computer control
see also telecommunications computing
VHF sporadic-E propagation, ionisation patch sizes investig. 7−107639
telecommunications computing
see also telecommunications computer control
HF channel, combined eval. and simulation system 7−107638
HF field strength prediction, microcomputer program 7−94574
PACS system, interactive surface display system of three-dimens. object 7−145273
radar rain patterns, automatic extraction, collection and description for modelling 7−114852
single-mode optical fibres, CAD calc. method *(French)* 7−130343
telecommunications industry *see telecommunication*
telecontrol
see also alarm systems; telemetering
calibration device for displacement transducers 7−80771
Giotto telemetry and tracking system 7−79804
LMFBRs, remote equipment and techniques for inspection 7−135501
NMR probe, crossed coils, remotely controlled 7−95628
remote control in astronomy 7−79831
submersible ROVs in offshore oil industry, sonar positioning methods 7−134010
THTR spent fuel, handling and transport system 7−74163
Windscale advanced gas-cooled reactor decommissioning, radiation-resistant cutting and handling robot 7−74020
telecontrol equipment
JET remote maintenance during active operation 7−74035
LMFBRs, remote equipment and techniques for inspection 7−135501
remote handling system for JET tokamak 7−89724
remote handling tools for JET 7−122198
telefilming
electron beam picture recording on 35 mm film for HDTV 7−67403
telemetering
biotelemetry, possibilities and problems *(German)* 7−79154
chemical sensing using fibre optics and UV-VIS-NIR spectroscopy 7−100636
extensometry, telemetry appl. *(Spanish)* 7−80732
Giotto telemetry and tracking system 7−79804
nighttime SHF scintillation studies using transmission from the Indian geostationary satellite 7−94573
RAFOS neutrally buoyant subsurface float, acoustic tracking, data acquisition and telemetry 7−133971
relativistic, theory 7−95135
telephotometer, two-channel optoelectronic 7−102493
tracking array calibration underwater, remote monitoring 7−123308
telemetering equipment
differential pressure flowmeter transducer using ceramic material *(German)* 7−97656
digital pressure gauge for static and slowly varying pressure meas. 7−121094
multichannel radio biotelemetric system design 7−79106
Portable Automated Mesonet II system 7−133962
powder mixing rate instrumentation system *(Japanese)* 7−113465
universal acoustic deep ocean transceiver with RF command data link 7−79612
wide-band monopulse sonar, remote seafloor profiling appl. 7−127496
telemetering systems
biological application, telemetry system for heart rate and blood temp. using a microcomputer 7−114597
intelligent data logger in data acquisition and telemetry system for crustal movements meas. *(Japanese)* 7−145667
magnetically coupled coils in medical telemetry systems, numerical determ. of perform. 7−101117
microcomputer-based automatic observation system for the physical environment of the coastal sea 7−127607
near-surface currents meas. using satellite telemetering buoy 7−101608
neural biotelemetry implant for powered prostheses 7−114560
pacemaker's coil design using numerical model 7−107317
penetrator telemetry for high-level nuclear waste sea burial 7−96388
Spectrasat system, design for ocean waves meas., assoc. communications and ground support 7−134110
underwater sound telemetry system, high-performance 7−123319
telemeters *see telemetering equipment*
telemetry *see telemetering*
telephone directory enquiry systems *see telephone systems*
telephone networks
multimode fibre design, trends 7−142023
textophone and telephone service for deaf people in Poland *(Polish)* 7−101145
telephone sets
handicapped people, special telephone set *(Polish)* 7−101143
hearing aids, audiofrequency signal reception from magnetic field *(Polish)* 7−101144
textophone and telephone service for deaf people in Poland *(Polish)* 7−101145
textphone for telephone communication for deaf subscribers *(Polish)* 7−101146
telephone systems
tele-electrocardiogram−electrocardiogram by telephone, by radio and by audio cassette *(Slovenian)* 7−139397
textophone and telephone service for deaf people in Poland *(Polish)* 7−101145
textphone for telephone communication for deaf subscribers *(Polish)* 7−101146
telephones *see telephone sets*
telephony
hearing aids, audiofrequency signal reception from magnetic field *(Polish)* 7−101144
telerecording *see video recording*
telescopes
see also astronomical telescopes
directed radiation field, equivalent transform. 7−117288
dispersive resonator selectivity anal., telescope system *(Russian)* 7−68813
far UV spectroscopic explorer (FUSE) telescope, optical surface anal. code (OSAC) anal. 7−101687
glancing incidence, surface equations 7−68804
grazing incidence confocal unstable resonator for FEL, tilt sensitivity 7−68712
HIPPARCOS astrometric telescope optical design 7−115243
HIPPARCOS telescope beam combiner, design, manufacture and testing 7−110537
holographic sector telescope for grazing diffraction 7−130021
mirrors large, low mass, for space telescopes, design 7−115244
nuclear fuel identification using underwater telescope, development and experience 7−116594
phased array optical systems, operation and design 7−110509
phased array system, arbitrary config., performance degradation due to system jitter 7−110513
phased array system, zero opt. path difference, Ar laser spectral content effect 7−110514
phased array systems, diffr. limited multiple aperture, alignment constraints 7−110506
phased array systems, polarisation-related coherence losses 7−110504
phased array systems, technique for aligning and phasing of multiple apertures 7−110505
reimaging wide field-of-view, design and optical performance 7−110508
Space Infrared Telescope Facility cryogenic systems, comparison 7−67322
synthetic aperture optical system, multiline focal plane phase measurement, algorithm 7−110512
synthetic aperture telescope configurations for coherent imaging applics., parametric study 7−110511
Technology Mirror Assembly (TMA), mirror quality requirements and achievements 7−95703
thermal imager using CVROS scanner and SPRITE detector 7−110604
three-field IR telescope, specification, optical and mechanical design 7−123151
X-ray hybrid telescope systems, design and performance considerations 7−95702
zoom lens system for CO_2 laser, precalc. and final design 7−123150
teletypes *see interactive terminals*
television applications
adaptive real-time pattern recognition using a liquid crystal TV based joint transform correlator 7−90512
analogue input unit for picture processing *(Czech)* 7−103754
apparent motion perception under light-adapted condition *(Japanese)* 7−114262
closed-circuit TV reading machines and optical aids, comparative study in use for visual disability patients 7−133510
laser radiation spectral characts. meas., using Fabry-Perot interferometer 7−123049
medical pulsed digital radiography, TV camera readout rate optimisation 7−133432
meteor observation system using SIT TV camera *(Japanese)* 7−79843

levision applications continued
movements analysis, human, biostereometric study, IR strobophotogrammetry 7−101038
noise monitoring using an Apple II, sound meters and movie camera 7−97230
nuclear materials safeguards, containment and surveillance systems, development 7−122012
nuclear materials safeguards, modular integrated video system 7−122015
ophthalmoscopy, compensation of random eye motion 7−79032
videodiscs in instructional environments 7−88767
vision research, stereoscopic stimuli presentation using 1 monitor 7−139425
xy-coordinates meas. system with TV camera, for astron. plates *(Japanese)* 7−79844

levision broadcasting
Baird intermediate film process 7−121268

levision camera tubes
see also image storage tubes
interferometric phase measurement using pyroelectric vidicons 7−108641
optical and resolution features *(German)* 7−89289

levision cameras
see also colour television cameras
auroral TV camera, appl. to monochromatic auroral images obs. at Syowa Station, Antarctica 7−101616
CCD TV camera, appl. to telescope guiding 7−94663
field standard facilities and requirements, modulator for motion picture camera *(Czech)* 7−130316
lenses, specification and testing 7−136479
lenses with integrated digital control electronics *(French)* 7−130402
meteor observation system using SIT TV camera *(Japanese)* 7−79843
portable TV cameras, electromechanical devices for optical components control *(Russian)* 7−130303
solid-state, soft X-ray imaging 7−80960
strobe light for high speed photography/videography, Cu vapour laser appl. 7−73455
xy-coordinates meas. system with TV camera, for astron. plates *(Japanese)* 7−79844
zoom lens, optics primer 7−121247

elevision equipment
see also video and audio discs
electronic imaging conf., Arlington, VA, USA (Oct. 1986) 7−134348
HDTV programmes and production equipment, origination 7−80916
liquid crystal television display as spatial light modulator for optical processing 7−82770
projection display technology, review 7−136473
Rank Cintel equip. development 7−121269
TV spatial light modulator, distortion correction with real-time joint transform correlator, liquid crystal television 7−136446

elevision receivers
Feedback Instruments Ltd WSR524 weather satellite receiver 7−107546
HDTV standard setting using psychophysical bases 7−86983
liquid crystal TV spatial light modulator, distortion correction with real-time joint transform correlator 7−136446

elevision reception
HDTV programmes and production equipment, origination 7−80916
liquid crystal TV spatial light modulator, distortion correction with real-time joint transform correlator 7−136446

elevision reception quality *see television reception*

elevision signals *see video signals*

elevision systems
see also closed circuit television
HDTV programmes and production equipment, origination 7−80916

ellurium
see also nuclei with .....
acceptor de-excitation two-phonon processes, interf. reson. 7−98361
amorphous, highly disordered elemental semiconductors, DC electrical conductivity 7−131646
cathodic deposition, surface states effects 7−92893
covalent clusters in zeolites, electronic and vibr. spectra 7−125723
crystal, helical structure, Landau theory, even and odd distortion modes 7−142696
equilibrium segregation coefficient and liquid diffusion coeff. of some impurities 7−111925
film, vacuum deposited, room temp. semiconducting props. 7−70433
fission product release in severe LWR accident 7−74011
impurity segregation coeffs. during zone refining 7−105051
liquid, supercooled, local order and semiconductor-metal transition, neutron scatt. study 7−137182
LWR, Te behavior under accident conditions 7−135509
microdendritic layers formation during CdTe electrodeposition, A7 lattice type 7−119178
permittivity, press. depend. 7−118937
Se-Te liq. mixtures, heat capacity temp. depend., cond. and bonding rearrangement 7−76426
solubility, in PbTe, 873-1168 K 7−84273
solubility, in PbTe, temp. inversion 7−98462
thin films, elec. cond., effects of electrodes and high fields 7−70439
thin films, laser induced phase transformations, transient cond. studies 7−117969
thin films, photo-oxidized photoconduction 7−85005
transverse magneto-Seebeck coeff. magnetophonon oscills. 7−99099
VPE on uniaxial oriented semi-crystalline polymers 7−86031
Al-Al_2O_3-Te thin film struct., I-V characts., effect of top electrode, test needle *(French)* 7−105720
AlGaAs:Te, DX centres, trapping characts. and anal. 7−98895
n-AlGaAs:Te, DX centres, admittance anal. 7−137837
AlGaAs:Zn, Te-GaAs:Zn, Te, superlattice surfaces, simultaneous Zn, Te diffusion, appl. for quantum well lasers 7−105142
$Al_xGa_{1-x}As$:Te, electrical conductivity in alternating heating elec. fields 7−92316
$Al_xGa_{1-x}As$:Te, uniaxial stress effect on photoconductivity 7−131700
AlGaSb:Te-GaSb, characts. of deep electron traps 7−105490
Bi:Te, highly doped, anomalies of electronic and lattice props. 7−99096
CS_2-Te optical disk, high-density recording 7−136213
Cd-Te thin film couples, grain boundary interdiffusion, CdTe formation 7−98587
CdS/Te thin film diodes, structure and composition 7−118286
CdS-Te system, film deposition, cothermolysis of chelates of Cd(Te) organometallic cpds. 7−113401

tellurium continued
GaAlAs:Te, DX centres, environmental effects 7−98893
GaAs:Cr,Te, luminescence at 0.844 eV, Zeeman spectra studies 7−106249
GaAs:Te, defect struct. around Te implants, solid phase epitaxial regrowth 7−98205
GaAs:Te, doping during liquid phase epitaxy from Bi melt 7−71088
GaAs:Te, highly doped, far IR optical props. 7−70758
GaAs:Te, ion implanted, nonlinear strain effects 7−142806
GaAs:Te, lattice site location, electronic struct. 7−118408
GaAs:Te-GaAs:C(Mg)-$Al_xGa_{1-x}As$ 7−119659
GaAsP:Te, DX centres, trapping characts. and anal. 7−98895
$GaAs_{0.6}P_{0.4}$:Te, impurity centre emission rate, temp. and elec. field depend., DITS study 7−112237
$GaAs_{0.6}P_{0.4}$:Te p^+n and Schottky diodes, RTA and Zn implementation, electron traps, DLTS study 7−131575
InP:Te, MOVPE, carrier conc. rel. to doping 7−124301
InSb:Te, deep levels 7−84747
InSb:Te Czochralski-grown, Te distrib., face effect 7−69731
Li-Te junction humidity sensors, thin-film, props. 7−95601
Si:P,Te, chalcogen double donors, hydrogen neutralisation 7−131572
Si:S,Se,Te, electronic struct. of mixed chalcogenide pairs *(Chinese)* 7−118401
Si:Te, defect pairing, electronic struct. and total energy calcs. 7−83982
Si:Te, impurity diffusion and penetration profile meas. 7−111967
Si:Te, Se, S, double donors, IR absorption, Hall effect and DLTS studies 7−98905
Si:Te (111), doping under pulsed laser irradiation, He^+ backscattering 7−91620
Te V, reson. transitions, oscillator strength meas. 7−96604
Te-PbTe, interphase struct., epitaxial relationships 7−76646
Te-TeO_2:Pd write-once media for optical discs 7−75087
Te_2 transitions, potential energy curves and Franck-Condon factors *(Spanish)* 7−122621
^{121}Te lattice and grain-boundary diffusion in Ag 7−105128
^{130}Te, spectral intensities of laser-induced fluoresc. 7−122604
^{201}Tl, Auger emitter, restricted dose mean LET calcs. 7−93931

tellurium alloys
see also tellurium compounds
$TlCu_3Te_2$, prep. and cryst. struct. *(German)* 7−69648
$Al_{23}Te_{77}$, metallic glasses, double glass transition phenomena and fractional crystn. 7−84271
$As_{0.4}Se_{0.3}Te_{0.3}$, chalcogenide glass, electrical conduction and switching process 7−124988
Bi-Te dil. alloys, electron irradiated, vacancy recovery, positron lifetime meas. 7−104839
Bi_2Te_3, Seebeck coeff. determ. by potentiometric meas. 7−80813
BiTeSb, p branch, thermoelectric efficiency, extrusion effect 7−131621
BiTeSe, n branch, thermoelectric efficiency, extrusion effect 7−131621
CdHgTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
(CdHg)Te, semicond. film vap. deposition, chem. reaction model 7−119169
$Cd_xHg_{1-x}Te$, molecular beam epitaxial growth, thermodynamic modelling 7−98748
CdTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
CdTe-HgTe superlattice, defect observations, transmission electron microscopy study *(French)* 7−98164
Co-Te, liq., electrical conductivity 7−84808
Co-Te films and foils, ion implanted, amorphous phase form., RBS, TEM studies 7−84061
Cr-Te, liq., electrical conductivity 7−84808
Cr-Te alloys, phase transformations, mass spectra studies 7−105001
Fe-Te, liq., electrical conductivity 7−84808
Fe-Te alloys, phase transformations, mass spectra studies 7−105001
Fe-Te films, sputtered, struct., Mossbauer spectra 7−112134
Ga-Te, liq. alloy, activity meas., EMF method using solid electrolyte 7−71154
Ga-Te melt, enthalpy of mixing, exothermic minima comp. *(German)* 7−138750
Ge-As(Se,Te), liq., Knight shift, anomalous behaviour 7−118878
$Ge_xAs_{0.2}Te_{0.8-x}$ glassy semiconductor, atomic distrib. models 7−124113
GeTe-Bi_2Te_3, physicochem. examination *(German)* 7−69904
$Ge_{20}Te_{80}$, metallic glasses, double glass transition phenomena and fractional crystn. 7−84271
HgTe, molecular beam epitaxial growth, thermodynamic modelling 7−98748
Mn-Te, liq., electrical conductivity 7−84808
n-Te, liq., Schottky-type excess specific heat and metal-nonmetal transition 7−84308
Ni-Te, liq., electrical conductivity 7−84808
$NiTe_2$, thermodynamic props., EMF meas. 7−105078
Ni_xTe_{1-x}, partial and integral molar thermodynamic props. 7−143048
$Pb_{1-x}Sn_xTe$, solid soln., isoenergetic surfaces and Hall factor anisotropy determ. *(Bulgarian)* 7−76887
Se-Te, liq., liq., Schottky-type excess specific heat and metal-nonmetal transition 7−84308
Se-Te system, structural phase transitions in the liq. state and the melting enthalpy 7−76377
a-$Se_{1-x}Te_x$ field-assisted thermal hole emission from deep mobility gap states, xerographic dark discharge meas. 7−119115
a-$Se_{1-x}Te_x$-Se double layer xerographic photoreceptors, carrier drift mobility 7−105572
SnTe-Bi_2Te_3, metal atom ordering, Mossbauer investig. 7−83877
Te-Ge-Pb chalcogenide glasses, struct. relaxation, enthalpy changes, DSC study 7−142622
Te-Ge-Sn-Au phase change recording film for optical disk 7−76706
$Te_{90}Ge_{10}$, phase transformation kinetics, laser power, pulse width, laser-induced phase change cycling 7−104819
$Te_{80}Sn_{20}$, phase transformation kinetics, laser power, pulse width, laser-induced phase change cycling 7−104819
Ti-Te, liq., electrical conductivity 7−84808
Tl-Te-Bi liq. system, electron localisation, NMR studies 7−98787
V-Te, liq., electrical conductivity 7−84808

tellurium compounds
see also tellurium alloys
LWR, Te behavior under accident conditions 7−135509
Ag-As-Se-Te glasses, ionic and electronic cond. and Ag diffusion 7−137617

tellurium compounds continued
$As_{17}Ge_{23}Se_{20}Te_{40}$, amorphous chalcogenide glasses, EXAFS struct. study 7−124109
$As_2Te_3(GeTe)_n$, mixed-layer compounds, electron microscopy anal. of homologous series *(French)* 7−137333
Cs_2TeCl_6 luminesc., octahedron distortion effects study 7−113248
Ge-Sb-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
Ge-Se-Te glasses for optical fibres, appl. to power transmission at 10.6 μm, optimum composition 7−106120
Ge-Se-Te-Tl glasses, thermal and IR transmittance props. 7−104574
GeS_2-Tl_2S glasses, identification of non-bridging S atoms 7−111413
$Ge_x(Se_{1-y}Te_y)_{1-x}$ glasses, prep., for optical appl. 7−106119
Ge_xTe_{1-x} based sandwich struct., fast switching 7−105727
Ge_xTe_{100-x} glasses, bulk, crystn. studies 7−124108
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., thermoelec. power and band struct. studies 7−137970
HgCdTe oxide films, composition determ. by NAA 7−93429
In-AgInTe$_2$ liquid system, electronic props. 7−137972
KCl-KBr-TeO_2, phase diagram, thermographic effects *(Russian)* 7−111830
$K_4P_4O_{12}.Te(OH)_6.2H_2O$, monoclinic cryst. struct. 7−124183
P_2O_5-TeO_2 glass, internal friction, network struct. 7−93049
Rb_2TeCl_6 luminesc., octahedron distortion effects study 7−113248
Sb_2Se_2Te, bulk disordered system, threshold switching, nonlinear I-V behaviour 7−112346
Sb_2Se_2Te, elec. transport props. 7−137926
Se-Te, semiconductor glasses, XANES and EXAFS study, short range disordering 7−143324
Se-Te glasses, XANES study at Se K-absorpt. edge, metal-semiconductor transition 7−144175
Se-Te-Sb:Cl alloys, electrophotographic props. *(Japanese)* 7−84969
$Se_{1-x}Te_x$, amorphous photoreceptor films, thermal and mech. props. of single and double layers 7−84606
$Se_{1-x}Te_x$ semiconducting glasses, optical energy gap meas., photoacoustic studies 7−144001
$Se_{80}Te_{20}$, polycrystalline thin films, vacuum deposition, amorphous-crystalline transition, elec. cond. 7−112331
$Si_{12}Te_{48}As_{30}Ge_{10}$ chalcogenide vitreous semicond., threshold switching, highly conductive filament formation 7−105634
$Ta_2Te_2O_9$, cryst. struct., 3D array, alternating Ta-O and Te-O layers 7−131115
Te (IV) coordination octahedron compounds, luminesc., distortion influence 7−113248
Te complex, bis(pyridinium)hexachlorotellurate, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Te-Ge, semiconductor glasses, XANES and EXAFS study, short range disordering 7−143324
Te-S system, glasses, prep., struct. and optical props. 7−83715
Te-TeO_2:Pd write-once media for optical discs 7−75087
TeF_6, electric hyperfine interaction, TDPAC meas. 7−113014
TeF_6, nuclear spin-lattice relax. meas., nuclear shielding 7−96732
TeF_{6_2} phase, nucleation, electron diffr. investig. 7−98380
TeF_6^{2-}, in nonoctahedral geometries, mol. struct., ab initio SCF studies 7−129589
TeH, electron affinities, electron propagator theory appl. 7−122340
TeH, electron states, relativistic CI calcs. 7−89991
TeH_2, bonding, d orbitals, CNDO/2 parameters 7−81984
TeO, bonding, d orbitals, CNDO/2 parameters 7−81984
TeO_2 amorphous evaporated films, optical and elec. props. studies 7−144142
TeO_2, bonding, d orbitals, CNDO/2 parameters 7−81984
TeO_2, elastic props., temp. depend. 7−131208
TeO_2 paratellurite crysts., nonlinear optical activity meas. *(Russian)* 7−85589
TeO_2, polymorphism and compression at high pressure 7−142682
TeO_2, wideband acousto-optical interaction 7−125688
TeO_2:Cr, ESR of Cr^{5+} 7−77399
TeO_2:Pt, paramag. Pt centres study 7−132131
TeO_2-Fe_2O_3-R_2O_3, R=La, Dy, Sm, Eu or Gd, rare earth tellurite glasses, phys. props. 7−84882
TeO_2-V_2O_5-Fe_2O_3 glasses, structure and glass transition temp. 7−98450
TeO_2-V_2O_5-Fe_2O_3 glasses, DC elec. cond. 7−137925
TeO_2-WO_3, binary tellurite glasses, elastic behaviour under press. 7−111731
TeO_2-$ZnCl_2$, binary tellurite glasses, elastic behaviour under press. 7−111731
TeO_2-$ZnCl_2$ vitreous system, struct. and US props. 7−104556
$Te(OH)_6$-Na_2SO_4, vibr. IR and Raman spectra 7−113172
$Te(OH)_6$-Tl_2SO_4, vibr. IR and Raman spectra 7−113172
$Te_2O_7H_6$ mol. cluster model of $V_o^{\cdot}$ centre, RHF-SCF electronic struct. calcs. 7−117113
$Te(OH)_6.2NH_2CH_2COOH.H_2O$, thermal and vibr. props. 7−69840
$2TeO_2.V_2O_5$-$Li_2O.V_2O_5$-$2TeO_2$ system, phase diagram and IR spectrum 7−77956
ZnO-TeO_2-Nd_2dO_3 (Ho_2O_3), oxide glass, laser props., calc. 7−68649
TEM *see transmission electron microscopy*
temper brittleness *see brittleness*
temperature
see also atmospheric temperature; boiling point; critical points; Debye temperature; ferroelectric Curie temperature; magnetic transition temperature; melting point; plasma temperature; superconducting transition temperature; temperature scales
antigravity heat pipe, temp. field, influence of geometric parameters of capillary struct. 7−111108
interstellar molecular clouds, dust temps. from IRAS obs. 7−128031
negative Kelvin temperatures, anal. *(Chinese)* 7−89172
soil, parameterisation of effect of surface roughness on microwave brightness temps. 7−127218
solar wind, He^{2+}/H^+ temp. ratio in slow wind regions 7−134103
steel cylindrical storage ampule, dynamic pressure conditions, walls final temp. meas. 7−97286
thermodynamic concept, Carnot's fn. 7−80223
Van der Waals forces between bodies heated to different temperatures 7−122656
temperature compensation *see compensation*
temperature control
see also thermostats
adiabatic laser calorimeter for weak absorption meas. in optical thin films 7−108615
temperature control continued
Apple II microcomputer-based programmable temperature controller 7−80767
automatic temperature control of developing solution in processing machines *(Russian)* 7−108691
body temp. monitoring/control system, structural element anal. 7−79108
capacitors as temperature sensors 7−108554
chemical reactors, catalyst decay, distrib. control for optimal temp. 7−93366
computer-interfaced temperature controller for FT-IR diffuse reflectance cell 7−140750
creep testing including US vibr. effect, vac. set-up with thermal control 7−132870
crucible heater for ion source 7−102404
crystal diffraction spectrometer, analyser crystal temp. stabilisation controller *(German)* 7−142534
digital thermometer and controller, wide-range digit, p-n junction thermosensitivity based *(Chinese)* 7−73345
DLTS system, sequential four-rate-window design 7−84739
dyeing process, cascading heat process solar system with computerised control 7−71651
gas chromatograph, portable, microprocessor-based PID temp. controller 7−133021
glass annealing process, knowledge-based simulation 7−78083
hygrometry with temperature stabilization 7−127555
hyperthermia heating equipment, 430 MHz, with digital decoupling controller 7−107212
intracavitary hyperthermia, control by microwave thermometry *(Russian)* 7−79038
laser absorption cell, digital device for temp. meas. and control 7−123007
liquid crystal cell, heating and temp. meas. combination 7−95566
MBE, linearly graded comp. or doping profiles 7−144282
MBE artificially layered struct., automatic process control 7−138663
multi-stage programmable temperature ramp generator for ceramics fabrication 7−128560
permanent magnet castings, thermomag. treatment regimes optimisation 7−77872
pulmonary oedema treatment chamber temp. and pressure control improvements 7−119892
radiation thermometer for temperature control of thin samples during PIXE analysis 7−80790
robot-controlled microwave hyperthermia system, non-invasive IR thermometry 7−107222
semiautomated PVT facility for fluids and fluid mixtures 7−95567
silicon web, growth, computer controlled thermal environment, solar cell efficiency 7−93507
thermoregulator with high power and low noise 7−108541
thermostats design, mathematical models study 7−128558
triple cell for spectral, photophysical and photochemical experiments 7−108548
X-ray diffractometer attachment, for polycrystals studies at temp. −120 to 500°C 7−121314
CO closed-cycle multikilowatt laser development *(Japanese)* 7−130161
GaAs substrates, radiationally heated, behaviour and charact. 7−143275
^4He space cryostats, dynamic behaviour, computer simulation 7−67324
temperature distribution
NEWArabian Sea, thermal response to summer monsoon 7−101321
arc welding, stationary processes, inverse finite element method anal. 7−69508
midlatitude North Atlantic, upper thermocline temp. time sequences 7−94277
binary gas mixtures, convection effect on light ray propag. 7−69140
body temp. meas., whole-day variations, skin heat-flow compensation technique 7−79103
boiling heat transfer from a fin, 1D temp. distrib. 7−75254
brillouin scattering from fluids subject to large thermal gradients 7−130828
Brinkman-porous medium, film condensation and natural convection 7−130685
buoyant plume-driven adiabatic ceiling jets, temperature investig. 7−69245
circular tube laminar flow, vel. and temp. distribs., orthogonal collocation method *(Japanese)* 7−83355
circular tube nonsteady turbulent heat transfer calc. allowing for heat flow in wall 7−117607
coating thickness determ. using photothermal heating 7−121071
combined heat transfer over initial segment of a plate in a flow 7−104266
composite tubes, cross-ply, asymm. heating, temp. and deflection data 7−117483
contact problem, plane thermoelastic, with consideration of heat liberation 7−142237
convective heat transfer from vertical rectangular body 7−97515
cosmic microwave background, hot spots assoc. with random Gaussian fluctuations 7−128133
cosmic microwave background temps., statistical props. of non-Gaussian random fields 7−140327
cryostat CAD, thermal analysis and optimisation 7−73361
dome, spherical thermoviscoelastic, steady-state thermomech. vibrs. under cyclical loading 7−97372
dynamically propagating mode III crack, temp. field at tip 7−83120
elastic body, 2D internal stress appl. to crack growth in nonelastic materials 7−117541
field-ion emitter, pulsed laser irradiation, temp. distribution, numerical calc. 7−138613
field-ion emitter, pulsed laser irradiation, temp. distribution, numerical calc. 7−138614
flame in cylindrical tube, double-exposure holographic interferometry temp. meas. 7−103773
flash temperature at contact spots between sliding solids 7−142238
flash temperature at plastic contact points 7−142239
flat finned surfaces, transverse flow, coupled heat transfer, eddy form. conditions 7−136860
fluid under stationary heat flux, fluctuations, Brillouin lines and nonequilib. sound modes 7−75263
fluidised beds, surface-particle contact discontinuity, heat transfer anal. 7−75664
frontogenesis in a continuously varying potential vorticity fluid 7−123648
gas mixture, filtrated, steady wall combustion, heat and mass transfer 7−139009

mperature distribution continued
heat exchange in furnaces and reaction rooms confined by cooled walls 7−90924
heat flux gauges, convection calibration method 7−110771
hemispherical bowl with free surface and temp. gradient, natural convection 7−69171
human body, interior temp. distrib., RF heating system anal. 7−133240
human body models inhomogeneous cylindrical type, thermal radiation anal. at UHF freqs. 7−126724
hyperthermia, localised deep, using a 27 MHz ridged waveguide, evaluation of temp. distrib. calcs. 7−114196
ice layer, melting by temp. and conc. effect of aqua-solvents 7−98408
interstitial hyperthermia, temp. distrib. prod. by 3 systems 7−78780
inverse heat conduction problems, ID, approx soln. *(Polish)* 7−83001
Lamb waves, thermoelastic generation 7−123421
laminar flow past sinusoidal cavity, velocity and temp. fields, viscous flow eqns. 7−97486
laminated bodies, temp. distrib., heat conduction modelling 7−90917
material parameters variation within fixed domain, sensitivity analysis in thermal problems 7−90925
melt layer form., quasisteady flow and heat transfer study 7−137529
metal foils, electrically heated, surface heat flux uniformity study 7−75250
microwave irradiated material, temp. runaway 7−130522
microwave irradiated tissue, temp. distrib. perturbation due to metallic thermometers 7−133238
microwave radiometric data, inversion for biological temp. retrieval 7−127025
monogroove heat pipe, susceptibility to boiling, cross-sectional temperature distribution determination 7−136672
multilayer insulations at low boundary temps., heat transfer investigs. 7−73363
multizone physical vapor transport, thermal and solutal convection, 2D model 7−98017
nonisothermal body in fluid-saturated porous medium, free convection 7−110979
nonstationary temperature field process in axially symmetrical area with mobile heat source anal. *(Polish)* 7−68984
oceanic temperature spectra in stably stratified turbulence 7−94286
orthotropic region, doubly connected with heat generation, Rayleigh-Schmidt approach 7−73891
tropical Pacific, 20°C isotherm topography, obs. and model 7−87683
plane, piecewise-uniform, with cracks, singular integral eqns. of plane thermal cond. and thermoelasticity 7−142223
plate, composite, subjected to heat cycling, delamination problem soln. 7−83118
polyacrylonitrile fibrous canvas-polyethylene gauze system, thermal math. model of filter materials prep. 7−71147
polyhedron, convex, with inclusions, thermoelastic equil. problem 7−142224
polyhedron, convex, with system of thin inclusions, thermoelastic problem 7−83112
polyphenylene oxide, laser irrad., dynamic thermal field creation in surface layers, chem. transform. 7−137400
polypropylene film casting, heat cond. calcs., multizonal integral method 7−113529
porous layer, inclined, constant heat flux, natural convection study 7−75663
pulsed vacuum arc, multi-cathode-spot, peak temp. and energy flux distrib. 7−69525
PWR LOCA, laminar flow and temp. distrib. 7−129226
radiant heat whole-body hyperthermia, temp. distrib., dog obs. 7−114195
relativistic heat transmission eqns., linear momentum and energy conservation *(Portuguese)* 7−121018
RF irradiation of human body for hyperthermic therapy, temp. distrib. study 7−126996
rugate optical film coatings subject to CW and pulsed lasers, transient temp. distrib. model, CW case 7−124328
rugate optical film coatings subject to CW and pulsed lasers, transient temp. distrib. model, repetitive pulsed case 7−124329
salt gradient solar ponds, time-temperature variations in storage zone 7−93537
semiconductor films, temp. fields and thermoelastic stresses under ion implantation conditions 7−142852
shaped crystals grown from melt, temp. field and thermal stresses, asymptotic calc. 7−83810
shell-like products made of fibrous composites, buckling and thermoviscoelasticity problem soln. 7−83085
sidewall effects in a double diffusive system 7−123593
SOI unseeded recrystallisation using moving line heat source, 1D numerical model 7−76660
solar hot-water supply system, heat regime in thermal-storage tanks 7−100760
steel, cold and hot rolled, shear band form. at high strain rates, temp. profile meas. 7−113571
stellar atmospheres, temp. stratification and emission measures of transition layers and coronae 7−120379
submerged moving body, stratified fluid, gravity waves vertical propag., surface effects study 7−142325
sudden expansion flow in ducts, reattachment region heat transfer 7−110950
surface tension, problems related to nonlinear variations 7−70028
temperature field development in turbulent flow 7−104276
thermal inspection sensitivity calc. on basis of one-dimens. problem of heating of three-layer sheet 7−132884
thermoelasticity, coupled and dynamic, nonclassical behaviour of temp. 7−95337
thermohaline systems, gradient zone erosion, physical model 7−130689
thin films, laser heating, temp. profile calcs. 7−91647
thin liquid layer, surface temp. distrib. due to thermocapillary convection 7−69129
three layer wall, internal cooling and surface heating, heat transfer study 7−136673
time-periodic temp. fields, stability study 7−104250
transient thermal convection in rotating porous medium 7−83211
transient thermal stresses due to heat source moving over elastic slab 7−90957
tumour blood flow from thermal clearance curves, discussion of math. model 7−144975
turbulence temperature field above heated planes, struct. 7−130656

temperature distribution continued
turbulent boundary layer longitudinal vortex, heat transfer effects 7−110940
two-phase freezing due to axisymm. cold spot, temp., moving boundary 7−134710
US hyperthermia, temp. distrib., nonlinear propag. and tissue interfaces effect 7−126984
vertical cylindrical fin in saturated porous medium, natural convection study 7−97266
water, natural convection transience adjacent to suddenly heated vertical surface 7−110758
XLPE, thermally stimulated surface pot. meas. using temp. gradient, trapped carrier polarity 7−125601
Al alloys, controlled solidification, effect of magnetically damped convection 7−77787
GaAs, liquid encapsulate Czochralski growth, heat flow model 7−138638
GaAs substrates, radiationally heated, behaviour and charact. 7−143275
He plasma, prod. near ceramic surfaces, temp. and electron density distrib. 7−75872
InP, LEC growth, thermoelastic stress, effect of ambient temp. gradient *(Chinese)* 7−124150
InP synthesis using radiant heat to control P temp. thermal field anal. *(Chinese)* 7−125954
$LiNbO_3$:Ti optical waveguide form. by CO_2 laser annealing 7−90795
Nd:glass laser active element, thermo-optical distortion, temp. field distrib. study 7−103827
Si melt, flow asymm. and temp. distrib., 3D simulation of Czochralski bulk flow in mag. field 7−98012
Si sheet growth, rate limits, vertical and horizontal growth methods 7−85993
Si sheet growth, transverse temp. field nonuniformity effects on stress 7−83809
Si vertical asymmetric sheet EFG, finite element modelling 7−85995
Sn alloys, controlled solidification, effect of magnetically damped convection 7−77787

temperature measurement
see also pyrometers; spectral methods of temperature measurement; temperature scales; thermocouples; thermometers
acoustic method of temp. meas. in biological tissues during local heating *(Russian)* 7−79022
acoustic surface wave sensors for pressure, temp., force and acceleration *(Czech)* 7−121100
atmospheric instrumentation comparison 7−127537
biomedical temperature measurement by CT *(Japanese)* 7−119876
biomedical temperature measurement by microwaves *(Japanese)* 7−119827
body temp. meas., whole-day variations, skin heat-flow compensation technique 7−79103
body temp. monitoring/control system, structural element anal. 7−79108
brittle materials temp. rise in rotating friction mill 7−144559
calibration techniques for range −40°C to 600°C 7−115962
cold film near free surface of water stream, vel. and temp. profiles 7−91272
composite materials monitoring using fibre optic sensors 7−142017
converse thermal cond. problem soln., thermocouple influence 7−140698
digital measured value processing sensor for press. and temp. *(German)* 7−128555
distributed fibre optic temp. sensor using Raman anti-Stokes OTDR and single photon counting detect. 7−90797
Doppler, in magnetically confined plasmas, high-spectral resolution photon counting detector 7−83545
ethanol layer uniformly heated from below, heat transfer and statistical charact. of temp. field 7−117595
fibre optic prism configuration internally referenced temperature sensor 7−123206
fibre optic refractive index and temp. sensor, nonambiguous evanescent-wave 7−75139
fibre optic sensors, developments and appls., review *(Italian)* 7−90805
fibre optic techniques and instruments 7−115964
fibre optic temp. sensor 7−141999
fibre optic temperature distribution monitoring, performance 7−82854
fibre optic temperature sensor using Hg cladded fibres 7−130365
fibre optic temperature sensor utilising thermally induced bending loss *(Japanese)* 7−108556
fibre optic temperature sensors having calibration-free operation, appls. 7−121120
fibre optic thermometer for biomedical appls. 7−79050
fibre-optic temperature sensor using IR-to-visible conversion phosphor *(Japanese)* 7−110582
field focusing NMR-CT for noninvasive thermometry, temp. resolution study 7−101032
film resistance thermometers, sensitivity and appls. *(German)* 7−89222
fission reactor fuel rod performance code qualification, temp. meas. variability 7−67913
flame in cylindrical tube, double-exposure holographic interferometry temp. meas. 7−103773
flames and gases, temp, meas. methods comparison 7−115961
fluids temperature meas., low-drift cct. 7−97654
fluoroptic thermometry system, Luxtron 3000 E, preclinical evaluation 7−107220
friction pair element, temp. meas. in near-surface layer by microthermocouples 7−137466
gas temp. distrib. meas. using nonlinearity in ultrasonics *(Japanese)* 7−128579
geopotential height fluctuations, microwave radiometry 7−114988
hypersonic wind tunnel, heat transfer meas. using surface thermocouples improved data reduction 7−123819
hyperthermia, noninvasive temp. mapping by applied pot. tomography 7−87352
induction-probe magnetometric instrument for temp. investig. during heat treatment 7−78430
industrial hot-wire pyrometers, calibration and testing *(German)* 7−73351
interference-type dilatometer, meas. errors calc. 7−121062
interferometric signal processing scheme, extended range dual-wavelength FMCW 7−80870
interstitial EM applicator/temperature probes 7−107214
intracavitary hyperthermia, control by microwave thermometry *(Russian)* 7−79038
ion temp. meas. based on neutral beam scattering, comment on discrepancies 7−123993

temperature measurement continued
ion temp. meas. based on neutral beam scattering, spatial and temporal resolution, comment 7−123992
IR thermography, what wavelength to choose? *(French)* 7−108549
laser absorption cell, digital device for temp. meas. and control 7−123007
liquid crystal cell, heating and temp. meas. combination 7−95566
low temp. meas. using thermometers and thermocouples *(Czech)* 7−128577
low-temp. meas. using oscillator with low dissipation 7−80800
mechanical resonator, high-Q, for remote mech. excitation, temp. meas. appl. 7−123381
medical temperature transducers and digital clinical thermometers 7−101106
meter-wavelength range, distributed cosmic radio radiation, brightness temp. meas. 7−128134
microwave radiometric data, inversion for biological temp. retrieval 7−127025
molecular aerodynamic acceleration obs. using ceramic nozzle 7−141717
multi-spot system for measurement of cryogenic temperatures *(Russian)* 7−108569
multilayer plate heated under boundary conditions of first kind, temp. field calc. 7−117441
multimode optical fibre sensors appl. 7−130360
mutual inductance bridge for the measurement of superconducting transition temperatures and magnetic susceptibility 7−140704
natural convection loop, fluid temp. meas. 7−123631
Neil Brown Mark III CTD, algorithm for combining separately digitised fast and slow temp. signals 7−133948
NMR lineshape thermometry at low temps. 7−89243
noncondensible gas fractions determ. at elevated temp. and press. using wet and dry bulb temp. meas. 7−111085
noncontact temp. and emission props. determ., radiation meas. procedures *(German)* 7−102410
noninvasive thermometry using NMR for hyperthermia, temp. resolution 7−101031
nuclear power station resistance temperature detectors, in-situ response time testing 7−129260
ocean temperatures, evaluation of Rapid-Sampling Vertical Profiler 7−127565
optical meas. of temp., using optical fibres and photodiodes *(German)* 7−80787
portable PC based data acquisition system for water quality monitoring 7−126683
PWR power plant, in-core neutron flux meas., mobile detectors *(French)* 7−73935
quartz frequency appl. *(German)* 7−121123
radiation pyrometers for temperature meas. during Al processing 7−108562
radiation thermometry principle, advantages and appl. 7−108555
radiosonde humidity and temp. errors anal. 7−127551
rapid thermal processing, uniformity characterisation 7−106550
reactor fuel assembly blockage diagnosis, temp. monitoring method *(Japanese)* 7−81605
remote sensing, meas. of radiant temperatures of sparse plant canopies and soil via IR thermometry 7−127506
resistance sensor self-heating and self-cooling effects on temp. meas. *(Polish)* 7−140701
reversed field pinch plasma diagnostics, beam probing system 7−83546
ruby fluorescence wavelength division fiber-optic temperature sensor 7−123267
scales, standards and instruments, for temp. meas. 7−115959
sea surface temperature meas., comparison of satellite-derived temps. with in situ skin meas. 7−94270
Sea-Bird temp. and cond. probes, dynamic response calibration 7−127545
sensor, high-speed, Si-Ge solid solution appl. 7−134741
sensors for measured quantities *(German)* 7−134730
shock, compressed gas between colliding plates, temp. meas. 7−136930
singular system anal., microwave radiometric data inversion for temperature retrieval 7−139349
skin, elec. admittance, blood flow and temp., simultaneous meas., probe design 7−107323
Smotrich-4P and 5P digital pyrometers *(Russian)* 7−80795
solar heating with distributed storage, microprocessor-based control 7−133118
sounding thermometer, identification by Prony's method 7−93996
surface temp. meas. equipment, accuracy and response-speed improvements *(Russian)* 7−108553
surface temp. meas. of particles under thermal plasma conditions, using two-colour pyrometer 7−108563
thermal indicators based on cholesteric liquid crystals, optical parameters obs., biomedical appl. 7−125821
thermal microscopy, high resolution, temp. mapping and surface profiling appl. 7−121114
thermal sensors based Seebeck effect, review 7−73343
thermistor anemometer for velocity and temp. meas. in thermally stratified rotating fluid 7−83375
thermistor dynamic response functions, velocity scaling obs. 7−121121
thermistor thermometry errors, induced by forced convection 7−95587
thermoelectric convertors, sodium-steel, for sodium temperature meas., sources of error 7−73884
thermometer, multi-grafted, charact., expt. *(Japanese)* 7−73349
thermometer calibration techniques for range −40°C to 600°C 7−115962
thermometric phase change detector, liquid crystal transitions meas. appl. 7−80781
thermometry sheet materials for radiometric meas. *(French)* 7−67371
thick film temperature sensors, development, charact. and appl. *(Polish)* 7−95586
thin film temperature and flow sensors, design and charact. *(German)* 7−108536
transient temperature meas. at centre of glass sphere, using Cu-constantan thermocouple 7−80788
transmitters of temperature meas., design 7−115963
transparent solids, temp. distrib meas. using holographic interferometry 7−80857
triple point evaluation of 1,3-dioxolan-2-one 7−89220
tumour perfusion during microwave hyperthermia, tissue thermal props. meas. 7−107166
turbulent boundary layers, temperature-dissipation meas. 7−75540
ultralinear stress-compensated temperature sensor using quartz crystal 7−82986

temperature measurement continued
utility boiler system temp. meas. by acoustic wave velocity digital signal processing 7−123410
vertically rising microstructure profiler, data acquisition and processing hardware and software 7−115060
visible and near IR radiation thermometers, spectral responsivity distrib. meas. *(Japanese)* 7−108557
visualization of temp. maps using liquid crystals 7−134740
water, natural convection transience adjacent to suddenly heated vertical surface 7−110758
wind velocity and temp. meas. from audio phase shift 7−128227
CO-Ar mixtures, temp. meas. behind shock waves, line broadening 7−111030
FeB amorphous sputtered film temp. sensor 7−89212
Ga triple-point temp. meas. using resistance thermometer, reproducibility *(Japanese)* 7−140700
GaP, LEDs, capacitance thermometry appls. 7−102412
H_2O vapour, nonequilibr. dispersed two-phase flow, Raman scatt. 7−129720
He, liquid, temperature mapping of spots using distributed multiplexers and amplifiers 7−73368
K and Cs seeded combustion plasmas in MHD generators, temp., ion density and conductivity meas. 7−71628
Kf-B_2O_3-MoO_3 system, liquidus surface melting point meas. 7−111832
Mg-air flames, anomalous brightness 7−106800
Ni film electrical resistance meas., electroformed 7−80791
Pt resistance temp. detectors, processing conditions effects 7−128578
Si wafer temp. meas. during RF Ar^+ plasma etching 7−119465
SiC, laser heated surface temp. distribs., expt. determ. 7−111652
W, selective CVD eval. using surface temp. meas. 7−113429
WSi_x film sheet resistance, temp. profile meas. in rapid thermal annealers 7−106551

temperature scales
IPTS-66 scale fixed pts., influence of pressure *(Polish)* 7−134746
IPTS-68, discontinuity meas. in dt/dt_{68} at 630.74°C 7−89221
radiance temp., meas. methods and instrumentation 7−95588
specific heat meas., errors and disrepancies determ. due to temp. scales 7−121105
standards, instruments and scales, for temp. meas. 7−115959
triple point evaluation of 1,3-dioxolan-2-one 7−89220

tempering
hysteresis motors, thermal treatment and tempering optimum conditions to decrease costs *(Russian)* 7−100256
mechanical tempering of optical fibres 7−138728
metal surface layer, effect of structure and props. on fatigue resistance 7−86352
plates, thin glass, stress-optimal loading in radiant heat transfer 7−117533
steel, austenitic stainless, carbide precipitates, electron microscopy study *(Chinese)* 7−78013
steel, austenitic stainless, welded joints, residual stress level and props., influence of heat treatment 7−86225
steel, C, NDE using acoustic and mag. Barkhausen signals, effect of carbide precip. and hardness 7−113838
steel, Cr, secondary hardening, strength and toughness, influence of Si and Mn 7−100357
steel, Cr-Mo, erosion, microstruct., tempering effect 7−138849
steel, Cr-Mo, low-C, heat treatment effect on machining charact. *(Chinese)* 7−126153
steel, Cr-Mo-V, microstruct. and mech. props. 7−144493
steel, Cr-Mo-V, precip. hardening, bainite brittleness, effect of Ni and Mn additions 7−100337
steel, Cr-Ni, two-phase, δ-ferrite transform. during tempering 7−86224
steel, Cr-Ni-Mn-Mo, heating and cooling, transform. behaviour *(Serbian)* 7−71173
steel, Cr-W-Mn, grain refining, toughness strengthening by high temp. quench and tempering *(Chinese)* 7−78061
steel, die, hot work, ductility and abrasive wear resist. 7−126260
steel, die, quenching and tempering temp. effect on mech. props. and struct. *(Chinese)* 7−126151
steel, dual-phase, austenite form. from tempered martensite *(Korean)* 7−78064
steel, ferritic stainless, creep, microstructural changes 7−100317
steel, hardenability, austenitic grain size, heat treatment parameters 7−132649
steel, high strength, near threshold fatigue crack propag., temper microstruct. 7−100361
steel, HSLA, intercritically annealed, austenite retention 7−78072
steel, low alloy, A533B, slow bend tests, fracture induced AE 7−144669
steel, low alloy, Hg and H embrittlement comparison 7−113649
steel, low alloy, normalising, hardening, tempering, toughness, impact strength, ductile fracture 7−78204
steel, low alloy, quench and temper hardening, static indentation process analysis 7−113698
steel, low alloy dual phase, intercritical annealing, retained austenite mech. stability rel. to microstruct. 7−71183
steel, low C sheet, tempering, recrystallisation texture, plastic anisotropy 7−144441
steel, martensitic stainless, erosion-corrosion susceptibility, vibratory cavitation in corrosive media 7−132769
steel, martensitic stainless, SCC in conc. $MgCl_2$ solns. rel to tempering 7−86405
steel, martensitic-austenitic, austenite stabilisation 7−78081
steel, Mn-Cr, carbide precipitation and reversible temper brittleness *(Russian)* 7−138746
steel, Mo-W high-speed, fracture toughness, retained austenite effect 7−100381
steel, Ni-Cr-Mo, ultra-high strength, H assisted fracture, loading mode effect 7−86311
steel, Ni-Cr-Mo-W, effect of quenching and tempering on props. 7−132645
steel, non-isothermal transformations, math. treatment 7−93005
steel, quenched and tempered, fatigue crack propag. under periodic overstressing *(Japanese)* 7−119345
steel, stainless, dual phase, corrosion resist., phase transform., microstruct. 7−78343
steel, stainless, martensitic, fusion reactor grade, additions effect on mech. props. and struct. 7−71225
steel, stainless, Mo, tempering, carbide form. and growth, TEM obs. 7−113581

empering continued
steel, tool, high speed, electron beam rapid solidification and transient tempering 7—119267
steel, tool, high-speed, heat treatment with continuous laser rad. with various power density distrib. 7—71214
steel components, heat treatment quality inspection using remagnetisation losses 7—71449
steel hardening by martempering 7—138764
Al-Li-Cu, small fatigue crack growth mechanisms 7—100379
Al-Li-Cu-Mg, corrosion rel. to comp. and microstruct. 7—126292
Cr-Mo steels, tempering to reduce liquid metal embrittlement in fusion reactor materials 7—67979
Fe, cast, austempered ductile, erosion behaviour of high Si bainitic structures 7—71321
Fe, cast, lower bainitic nodular, austempered foils, polishing, TEM obs. 7—78071
Fe, cast, nodular, quenched martensite struct., self-tempering 7—86222
Fe-Al-C alloys, struct. of athermal and isothermal martensites in low temp. tempering 7—106542
Fe-Al-C permanent mag. alloys, structural characterisation 7—78065
Fe-Co-Cr system, highly coercive, struct., phase transform. 7—144392
Fe-Ni-Al-Ti semi-hard mag. alloy, precipitation phases during tempering *(Chinese)* 7—126119
Fe-Si-Mn(Ni), high Si steel, erosion behaviour with austempering 7—71322
$(Ni,Cr,Fe)_{75}Si_{25}$ amorphous film, temp. coeff. of resist., rel. to tempering temp. and noncrystallinity 7—98973
Zr-Ti, struct. after quenching and tempering *(Russian)* 7—71218

enacity *see tensile strength*

ensile strength
see also fracture; yield strength
alloy wires prod. by in-rotating-water-spinning process. props. 7—77891
anisotropic solids, homogeneous, mixed mode crack propag. 7—97426
aramide-fibre unidirectional organoplastic, tensile strength, matrix props. effects 7—142883
aromatic-aliphatic epoxy mixtures, crosslinked, struct.-props. rels. 7—91483
atmospheric ice, comparative study of tensile and compressive strengths *(French)* 7—114923
brass, microduplex, 60/40, two-phase superplastic alloys, cavitation criterion 7—132676
bronze-ferrochrome composite, comp. and prod. conditions effect on mech. and tribotech. props. 7—78267
cellulose fibre reinforced polyester composites, water sensitivity, mech. props. to chemical treatment 7—144497
ceramic fibres from hydridopolysilazane, prep. and props. 7—77893
ceramics, chemically bonded, new strong cement materials 7—113502
circular specimens, tensile testing in 290 to 2000 K range, test unit 7—113833
composite sheets, stainless steel-Cu-stainless steel, fabrication and tensile behaviour *(Korean)* 7—78063
composites, polymer and metal matrix, thermal effects 7—138795
concrete, crack propagation, strain rate effect 7—119365
conference on graphite reactor component structural design and integrity, Tokai, Japan (Sept. 1986) 7—140378
elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7—93127
epoxide resins, monomer content and hardener effect on thermomech. props. 7—71243
epoxy based polymers, heat-treatment effect on residual stresses and strength props. 7—138769
epoxy matrices, residual stresses and physicomech. props, in tension and compression 7—71245
epoxy resin, torsional fatigue props. *(Japanese)* 7—93085
epoxy resin composites, mech. props., effects of SiO_2 powder or glass beads *(Japanese)* 7—126165
ethylene-propylene-rubber-base elastomer, sorption of low mol. wt. liq. influence on mech. and electrophys. characts. 7—93127
fibre reinforced metal matrix composites, constitutive eqns. 7—90981
fibre reinforced polymers, unidirectional, longitudinal tensile strength, effect of interfacial shear strength, theoretical modelling 7—97308
fibre reinforced thermoplastic composites, discontinuous fibres, fracture studies 7—106611
fibres containing two types of flaws, tensile strength., influence on tensile behaviour of metal matrix composites 7—126205
fusion reactor materials, thermal shock evaluation, simulated disruption test *(German)* 7—109485
GFRP composites, fatigue life, effect of ambient temp. 7—86343
glass fibre reinforced epoxy, hybrid comp., behaviour under dynamic tension 7—71262
glass fibre reinforced plastic, strength characts. prediction by acoustic emission method 7—144674
glass fibre/sphere, polyester tensile, flexural and shear strengths, 7—78126
glass joints made by optical contact, stress state, design and service factors effect on strength 7—75173
graphite fibre reinforced epoxy, prep. from pristine and Br intercalated fibres, mech. and elec. props. 7—144451
graphite fibre reinforced PEEK, crystallinity and mech. props., effect of cooling rate 7—91473
graphite fibres, intercalated, elec. cond., mech. props. and stability 7—86243
graphite particle reinforced Al-Ni, cast, deform. into wires 7—126203
HTGR graphite, core and structural materials, fracture criteria under multiaxial stress 7—141163
HTGR graphite, fine-grained isotropic, oxidation effects on fatigue strength *(Japanese)* 7—135426
IG-110 graphite for VHTR appl., high temp. Young's modulus study 7—141167
immobilized intermediate level wastes, mechanical props. 7—73873
Invar, thermal expansion and mech. props., effects of P and S 7—113626
Kevlar 29 yarns, epoxy impregnated, twist effects on mech. behaviour 7—119314
Kevlar aramid fibres, tensile strength variability, modified weakest link model 7—86262
liquid, tensile instability, single branched isochore, thermodynamic behaviour study 7—76256
material properties data base for high temperature design 7—119279
materials, resistance to partial extension and compression 7—137449
metal matrix composites, tensile strength of fibres containing two types of flaws, influence on tensile behaviour of composite 7—126205

tensile strength continued
metal matrix computer simulation of strength with reaction layer at interface 7—100360
metallic filament reinforced composites with epoxy resin and polyether ether ketone matrices, mech, props. 7—113618
miniaturisation of specimens. for mech. testing 7—71431
Nichrome, Nb alloyed, heat treatment effect on strength and tribotech. props. 7—78265
nuclear plant insulating materials, gamma-radiation stability *(Czech)* 7—98241
nylon fibres, composite struct., mech. props. prediction 7—86291
optical fibre strength and fatigue props., coating adhesion effects 7—136594
optical fibre strength improvement for submarine cables, preform treatment and drawing conditions 7—68877
optical fibre with high tensile strength 7—68876
optical fibres, tensile strength, modified Weibull distrib. function 7—144471
optical glass fibres, tensile strength anal. using modified Weibull-type function 7—124367
organic glasses, damage and failure in alternating long-term and cyclic loading 7—78160
PMMA, microscopic deform. under uniaxial tensile stress, radiation and impurity effects *(Japanese)* 7—98316
poly(butene-1)-ethylene-propylene blends, phys. charactn. 7—76032
poly-4-methyl-pentene-1, uniaxial draw by solid-state coextrusion 7—93043
polyacetal, torsional fatigue props. *(Japanese)* 7—93085
polycarbonate, torsional fatigue props. *(Japanese)* 7—93085
polycarbonate/ABS blends, props. 7—137267
polyester fibres, composite struct., mech. props. prediction 7—86291
polyester-chopped sunhemp fibre composites, tensile and impact strengths 7—91709
polyethylene, lin., hydrostatically extruded, mechanical props. meas. 7—104889
polyethylene, perfectly ordered and oriented, theoretical strength, weak-link chain defects influence 7—83787
polyethylene, sepiolite filled, mech. and morphological props., effect of filler-polymer interface 7—78127
polyethylene, tensile and melt flow meas., antioxidants influence 7—142869
polyethylene, tensile and melt flow meas., UV stabilisers influence 7—142870
polyethylene and crosslinked elastomer combined dispersion, struct. correl. with phys., and mech. props. 7—71233
polyethylene blown films, orientation and props., processing conditions effect 7—69796
polyethylenes, highly drawn, tensile strength rel. to mol. wt., Flory model 7—144475
polymer-coated optical fibres, mechanical reliability considerations 7—142027
polymers, electron beam irrad. under a load, mech. props. 7—104834
polypropylene, isotactic, proton beam modification 7—117984
polypyrrole film, electrochemically prepared, mech. props., temp. dependence 7—111747
polystyrene and poly 2,6-dimethyl-1,4-phenylene oxide blends, diffuse shear band zone props. 7—137452
polythiophene films, electrochemical polymerisation under ultrasonic fields 7—78489
polyurethane elastomers, aliphatic, performance props. 7—137270
powder, fine, autohesion and limiting shear resistance rel. to temp., particle size and press. 7—77861
proppants, microstruct., strength and environmental degradation 7—106646
PVC, struct. and props., X-ray diffr. 7—119320
reactor core graphite, tensile strengths, statistical characterization 7—141161
rice husk ash filled-polyester resin composites, development, tensile and impact props., 7—113681
steel, austenitic, stainless, 316L, mechanical props., irrad. effects 7—141275
steel, austenitic, stainless, type 316 LN, tensile and fatigue props at 4 K 7—141284
steel, austenitic alloy, fracture, plastic deform. and ageing effects *(Russian)* 7—138817
steel, austenitic stainless, mech. props., effect of Rb 7—132811
steel, austenitic stainless, miniaturisation and irrad. effects on mech. props. 7—69772
steel, bainitic, HSLA, containing Si, tensile deform. 7—100301
steel, C-Mn-Si, dual-phase, transition fatigue life 7—78225
steel, Cr type, sheet, stress concentrator effect on strength and ductility in biaxial tension 7—78128
steel, Cr-Mo-V, microstruct. and mech. props. 7—144493
steel, dual-phase, mech. props., bainite effect 7—100318
steel, ferritic-creep-fatigue behavior, influence of long-term thermal aging 7—138837
steel, high C, mech. props. rel. to thermomech. processing *(Japanese)* 7—119317
steel, low alloyed, struct. form. and mech. props., effect of deform. and subsequent cooling processes 7—100245
steel., low-alloy sheet, strengthening rel. to cyclic bending deform. temp. 7—78051
steel, maraging, 18% Ni, consolidated by hot isostatic pressing, microstruct. and mech. props. 7—144341
steel, martensite-bainite, low C, weldable, improvement of mech. props. 7—100335
steel, martensitic stainless, neutron irrad., effect on mech. props. 7—71257
steel, medium-C constructional, US treatment effect on long-term strength of welded joints 7—113711
steel, microalloyed structural, high temp. props. in continuous casting, cooling conditions and strain rate effect *(German)* 7—100383
steel, mild, mech. prop. and substruct. changes with US loading 7—100437
steel, Mo-Ni, for reactor pressure vessels, segregation behaviour under neutron irradiation *(German)* 7—135439
steel, Ni-Cr-Mo, microstruct. and tensile props., effect of quench rate 7—71253
steel, powdered, C introduction method effect on mech. props. 7—77875
steel, stainless, duplex, sintered, mech. props. rel. to Si addition and σ phase precip. 7—126198

tensile strength continued
steel, stainless, martensitic, fusion reactor grade, additions effect on mech. props. and struct. 7−71225
steel, stainless, tensile, impact strength testing *(Chinese)* 7−86322
steel, stainless, welded specimens, tensile strength, cyclic temp. variations effect 293 to 77 K *(Polish)* 7−86341
steel, stainless cast, thermal ageing under LWR operating conditions 7−93044
steel, structural, cold-formed, mech. props., effect of welding 7−132748
steel, structural elements with cracks, strength calc. 7−91022
steel, tensile specimens, fracture eccentricity 7−86340
steel Fe-Ni(Mn)-Cr-Al wires, melt spun into rotating water, mech. strengths and corrosion resist. meas. 7−91707
steel fibre reinforced Al matrix composites, *(Korean)* 7−138786
steel sheet, hot dip Zn-Al-Si coating, formability, tensile and bending props. *(Japanese)* 7−78110
steels, sintered, secondary porosity and its effect on product quality and consistency 7−144340
structural elements with cracks, strength calc. 7−91022
superalloys, high-temp., high-cycle fatigue *(Japanese)* 7−106617
superalloys, review of developments 7−144334
thick composites, impact damage, remaining strength prediction using US evaluation and fracture mech. 7−126399
transition metal-metalloid based metallic glasses, physical props. rel. to processing conditions 7−113534
water, tensile strength, static and dynamic measurements 7−131200
AgMgSi, proton irrad., microstructure, mech. props. 7−69780
Al powder, sintering characts., effects of oxidation 7−144339
Al-Al_4C_3, dispersion strengthening mechanism *(German)* 7−132634
Al-base alloys, age hardening, effect of US vib. 7−132632
Al-Be-Li (10, 2 wt.%), rapidly solidified, mech. props. at elevated temps. 7−78224
Al-Be-Mg alloy, eutectic, struct. parameters correl. with mech. props. 7−126199
Al-Cr-Fe(Co)(Ni), rapidly solidified, microstruct. and mech. props. *(Korean)* 7−77966
Al-Cu, hardness, wedge shaped indenter, strength and anisotropy *(Japanese)* 7−78193
Al-Cu alloy powder rapidly solidified by rotating water atomisation, hot extrusion and struct. study 7−92928
Al-Fe (0.2 to 6 wt.%), cold-worked, damping capacity 7−144456
Al-Ge, deform. precip., grain size, 298-598 K 7−78140
Al-Li alloy, binary, fatigue props., solution treated and aged conditions 7−100386
Al-Li alloy, room and elevated temp. mech. behaviour, additions influence 7−100243
Al-Ni (0.2 to 12 wt.%), cold-worked damping capacity 7−144457
Al-Ni-Mg, eutectic, mech. props. rel. to Mg addition 7−71242
Al-Pb, vacuum rheocasting, microstruct., mech. props. 7−71171
Al-Si, thin film metallisations, mech. props. and microstructure 7−124786
Al-Si (7 wt.%) castings, tensile props. rel. to porosity 7−78119
Al-Si alloy powder rapidly solidified by rotating water atomisation, hot extrusion and struct. study 7−92928
Al-Si-Cu, (6.5, 3.5 wt.%), evaporative pattern castings, mech. props., Sr addition effect 7−77970
Al-TiC, cast, dispersion hardening with high TiC content 7−106523
Al-Zn-Mg, with and without SiC reinforcement, high strength, powder metallurgy, superplasticity 7−100303
AlMg, proton irrad., microstructure, mech. props. 7−69780
Al_2O_3 fibre reinforced Al-Mg-Si, weldability, interface struct., tensile strength 7−113854
Al_2O_3, hot pressed, specimen size-tensile strength relations 7−100280
Al_2O_3 layered-granular ceramic, porosity and fracture props., prep. conditions depend. study 7−86320
Al_3O_3 fibre reinforced Mg composites, tensile props. rel. top processing parameters 7−86284
B fibre reinforced Al, strength and failure mechanisms, effect of physico-chem. interaction between components 7−71272
B fibre reinforced Al matrix composites, tensile strength, constitutive eqns. validity 7−90981
B fibre reinforced Al matrix composites, impact strength, constitutive eqns. and dynamic tensile tests *(Japanese)* 7−93056
C fibre reinforced Al, with various C fibre coatings, strength 7−86315
C fibre reinforced cement, fibre-matrix interactions 7−78236
C fibre reinforced epoxy, hybrid comp., behaviour under dynamic tension 7−71262
C fibre reinforced epoxy, fibre bending strength and elastic modulus determ. method 7−78423
C fibre reinforced Mg-Al matrix composite, Ni coated fibre, interface reactions, tensile strength, TEM obs. 7−113634
C fibre reinforced plastic, thermal deformation and strength at high temp. 7−138789
C fibre reinforced polymer, influence of interface on performance, micromechanics anal. 7−90933
C fibre reinforced thermoplastics, adhesion at fibre/matrix, interface 7−106579
C fibres, Al film CVD, degradation, tensile obs. *(Japanese)* 7−106431
C fibres, structure-property relationships 7−86237
C fibres, vapour-grown, mech. props. 7−86238
Co-Ni-Cr-Mo, austenitic, strain hardening *(Russian)* 7−113566
$Co_{75}Si_{15}B_{10}$, amorphous alloy, anisotropy of tensile props. 7−86233
Cr laminate electroplating with microprocessor control 7−119176
Cu, MOB, welded specimens, tensile strength, cyclic temp. variations effect 293 to 77 K *(Polish)* 7−86341
Cu, tensile props, neutron irrad. effects 7−141281
Cu-Nb, continuous fibre composites, thermal behaviour and strength 7−113613
Cu-Nb composite, heavily cold-worked, strength and microstruct. charactn. 7−144459
Cu-Nb in-situ composites, heavily cold worked, strength and microstruct., influence of Nb dendrite size 7−132690
Cu-Zn-Al-B shape memory alloys, mech. props., martensitic temps. rel. to B addition and aging 7−119323
Cu-Zr(Fe)(Ni), rapidly solidified, microstruct. and mech. props. 7−92993
CuCrZr, tensile props, neutron irrad. effects 7−141281
Fe, cast, compacted vermicular graphite, mech. props. at elevated temps. *(Korean)* 7−132725
Fe, cast, ductile, fracture and tensile props. rel. to heat treatment 7−78220
Fe, cast, ferritic, ductile, fracture toughness behaviour 7−106605
tensile strength continued
Fe, cast, spheroidal graphite, fatigue crack propag. characts. *(Japanese)* 7−106615
Fe, cast, spheroidal graphite, fatigue props., high-cycle, rel. to matrix structs. *(Korean)* 7−132723
Fe-Al-C system, cast Fe, microstruct. and mech. props., effect of Al content props. *(Korean)* 7−77967
Fe-Fe_2Ti system, transient liq. phase sintering, strength, elongation 7−77864
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7−138784
Fe-Si-Mn(Ni), high Si steel, erosion behaviour with austempering 7−71322
$K_2O.6TiO_2$ whisker reinforced Al, prep. and characteris., strength improvement 7−71113
$LaS_{1.4}$, tensile strength and struct. 7−98306
Mg-Al(-Si), rapidly solidified, microstruct. and props. 7−78125
Mo single crysts., electron beam welded, tensile props. *(Japanese)* 7−100291
Nb_3Sn compound, tensile strength rel. to grain size in bronze processed multi-filamentary supercond. 7−106581
Nb_3Sn multifilamentary supercond. composites, tensile strength, elongation, fracture 7−106582
Ni base superalloys, mech. props. requirements for aero gas turbines 7−144489
Ni-base superalloy, PWA 1480, γ' dislocation pairs 7−124280
Ni-Co, electrodeposited, tensile props. rel. to heat treatment 7−71254
Ni-Co-Cr superalloy, cast, microstruct. and mech. props., effect of prolonged ageing *(Chinese)* 7−132662
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7−71250
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
Ni-Cr-Ce, ductility and fracture rel. to trace Ce additions 7−132740
Ni-Cr-W, superalloy, microstruct. and strength after laser rad. surface fusion-solidification *(Chinese)* 7−132787
Ni-Si-B metallic glass system, thermomechanical behaviour, liquid metal corrosion 7−86361
Ni-Sn deposits from pyrophosphate plating bath, tensile fracture 7−138833
Ni_3Al-Ni_3Mn, $L1_2$-type intermetallic cpd., high-temp. strength and ductility 7−113622
$Ni_{75}Si_8B_{20}$, amorphous alloy, anisotropy of tensile props. 7−86233
PZT, hot pressed, specimen size-tensile strength relations 7−100280
Pb-Sn solder/Cu joints, tensile behaviour 7−119312
Si-O-N fibres, prep. and mech. props. *(Japanese)* 7−126070
SiC fibre and particle reinforced Al composites, mech. props. 7−138819
SiC fibre reinforced Si_3N_4, mech. props. 7−78242
SiC fibres, Nicalon, mech. props., effect of curing conditions 7−113623
SiC yarn, thermomech. props. 7−78282
SiC-C fibres, synthesis of precursors by co-pyrolysis of polysilane and pitch *(Japanese)* 7−119225
Si_3N_4 fibres, synthesis by polycarbosilane nitridation, tensile strength 7−132537
Si_3N_4, sintered, tensile strength 7−126251
Si_3N_4, sintered, tensile strength, high temp. testing *(Japanese)* 7−144477
Si_3N_4-SiC material, oxidation effect on strength and thermal stability 7−113749
Si_3N_4-SiC-MgO reaction-sintered, oxidation in presence of salts, effect on strength 7−119392
SiO_xN_y fibres, synthesis by polycarbosilane nitridation, tensile strength 7−132537
Sn-Pb solder, Cu_6Sn_5 whisker precipitates, mech. props. 7−119311
Ti alloy VT16, strain rate effect on plastic deform. resist. 7−113638
Ti alloys, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7−144595
Ti, commercial quenched at high cooling rates, effect of plastic deform. on strength 7−100285
Ti-Al-V, optimising conditions for deform. in order to increase mech. props. 7−106541
Ti-Al-V (6,4 wt.%), superplastic, post-forming tensile props. 7−100302
Ti-Al-V alloy, for porous-coated implant devices, post-sintering treatment effect on mech. props. 7−86254
Ti-V-Cr-Al (13,11,3 wt.%), cold working, ageing, ductility and strength 7−78041
Ti-V-Cr-Al-Sn (15,3,3,3 wt.%), hot-rolled, mech. props., microstruct. 7−78153
V-5Ti, tensile props, he and neutron irrad. effects 7−141274
V-Cr-Ti, neutron and α-particle irrad., tensile props. 7−69773
W alloy wires, Ni plated, recrystallisation, tensile strength rel. to comp. *(Japanese)* 7−106572
W wire, doped, ductile-brittle props. rel. to working and process annealing 7−71241
W-Ni-Fe (7, 3 wt.%), heavy alloys, mech. props., influence of heat treatment *(German)* 7−100320
Y, hot shortness 7−86319
Zn-Al eutectoid, two-phase superplastic alloys, cavitation criterion 7−132676
Zn-Al-Cu-Mg, cast in metal moulds, solidification structs. and mech. props. 7−144389
Zn-Al-Cu(-Si), mech. props., lubricated wear rel. to ageing 7−132766

tensile testing
anisotropic materials, off-axes, test analysis 7−86530
circular specimens, tensile testing in 290 to 2000 K range, test unit 7−113833
coaxiality of load application to specimen 7−113831
data acquisition with mobile laboratory computer *(German)* 7−86524
elastomers, finite elasticity, Poisson function 7−86246
epoxidised natural rubber-PVC blends, compatibility investig. 7−84296
filamentary crystals universal test rig for mech. and elec. props. meas. 7−132871
glass fibre reinforced plastic, tubular specimens, strength determ. in plane strained state, working clamps design 7−78433
glass fibre reinforced specimen, US detection of stress concentration factor 7−100488
machine adaptation for torsional testing system 7−86520
materials, resistance to partial extension and compression 7−137449
metal ductility, assessment as function of stress state using optimum extrapolation method 7−132670
metals, adhesive joint strength estimation method 7−138917

ensile testing continued
metals, dynamic tensile testing technique using low inertia extensometer 7—93232
miniaturisation of specimens. for mech. testing 7—71431
plane torsion test, buckling conditions *(German)* 7—97355
polyethylenes, irradiation- and peroxide-crosslinked, struct. and tensile behaviour 7—78398
polymer, hydrostatic press. depend. of crack resist., investig. method 7—78432
polymer, reverser design for complex tests 7—78439
polymeric high performance fibres, compressive strength, tensile recoil meas. 7—78399
PVC, internal stress determ., modified transient dip test 7—106729
solids study by radiation physics, apparatus for comprehensive meas. 7—108732
steel, creep and tensile tests at high temp., uniform deforms. determ. 7—132869
steel, low alloy, stress corrosion cracking set-up and methods 7—126362
steel, mild, void nucleation and growth is ductile fracture 7—78232
steel, orthotropic rolled sheet, tensile testing, stereo-photogrammetric method 7—86530
steel, stainless, dynamic tensile tests with superimposed ultrasonic oscillation 7—78413
steel, tensile specimens, fracture eccentricity 7—86340
strand, seven-wire, axially loaded, wire tension and bending moments 7—144656
stress determination using strengthening sensors and specimens under biaxial tension 7—75489
superconducting materials, tensile testing machine, design 7—105871
thermoplastic products, tensile impact tests, life time estimation *(German)* 7—138920
torsion testing device for materials at high hydrostatic press. 7—78434
Al-Cu film adhesion on polyimide, electromagnetic tensile test 7—71462
Al-Mg-Si, age hardened, tensile props. and anisotropy, double ligament test method 7—132851
Al-Si hypereutectic, tensile props. and anisotropy, double ligament test method 7—132851
Al-Zn-Mg, age hardened, tensile props. and anisotropy, double ligament test method 7—132851
C fibre reinforced epoxy, fibre bending strength and elastic modulus determ. method 7—78423
Si_3N_4, sintered, tensile strength, high temp. testing *(Japanese)* 7—144477
Zr alloy, acoustic emission applic. during mech. and fracture testing 7—100479

ensimeters *see vapour pressure measurement*

ensors
β functions, equivalence with massless bosonic string field equations, bosonic nonlinear-model 7—116149
barrelled locally convex spaces, book 7—88926
boson stars with non-minimal energy-momentum tensor, scalar fields coupled to gravity 7—140116
Casimir effect, real time, free field approximation, electromagnetic field strength tensor, boundary conditions. 7—128826
coherent vortex structures in turbulent flows, tensor characts. 7—136884
complex permittivity tensor meas., rectangular waveguide standing-wave method 7—115976
composites, tensor properties, symmetry, generalised Curie principle 7—106755
curvature tensor near space-time singularities 7—73093
discrete 2D Fourier transforms, tensor representation, orthogonal functions 7—67290
elastoplastic finite deformations, FEMs 7—142185
Feynman-Dyson algebras, time-ordered operators 7—108836
finite elastodynamics, ductility principle of conservation laws, tensor method 7—134496
general relativity, Killing-Yano tensors, idealised space-times 7—115853
general relativity, metrics, Killing tensor components using computer algebra system SHEEP 7—140559
general relativity, pseudotensors, conserved quantities, asymptotic coordinates, Schutz-Sorkin gravitational Noether operator 7—108321
GEOCALC, curvature tensor calcs., Schwarzschild appl. 7—95183
gravitational field equations, fourth order, static asymptotically flat solution, Bach-Einstein theory 7—128376
irreducible invariants of fourth-order tensors 7—66905
isotropic nonlinear viscoelastic bodies, bitensorial functions expansion in terms of directly reducible matrix groups 7—83057
jet fields, connections and second-order differential equations 7—134542
killing tensors in the classical mechanics of a single particle. . *(German)* 7—88958
Lagrangian dynamical systems, separability theorem 7—134473
linear operations theory, book 7—88842
metric spinor and frame field concomitants equivalence, lorentz invariance 7—140565
N=2 tensor multiplets, interactions and duality transform., general action functional, conformal supergravity 7—128790
N-sphere symmetric tensor spherical harmonics, SO(N,1) de Sitter group appl. 7—108328
NMR, multiple quantum, spin-3/2 nuclei, tensor operator approach quadrupole asymmetry term 7—68354
polarisability tensors, differentiation of spherical tensors 7—68551
quantum space-time, tensor analysis and curvature, Einstein eqn. 7—95441
shear-free perfect fluids, Petrov type N Weyl tensor, Einstein field eqn. solns. 7—140567
space-time curvature and the sources of gravity 7—120736
spin fluids in stationary axis-symmetric space-times, perfect fluid/spin-fluid tensor equivalence 7—108331
symmetric and unitary groups tensors 7—88833
temporal gauge, dyon solutions, non-Abelian gauge field tensor, Higg's-triplet field 7—121371
three-nucleon potential, two-pion exchange, tensor forms 7—135216
trinucleon system with central and tensor interactions, geometrical structure coefficients, sum rules 7—116295
viscoelastic equation, with non-periodic coeffs., homogenisation, stress tensor 7—115790
Weyl and energy momentum tensors, metric uniqueness, Einstein theory general space-time 7—140564

terbium
see also nuclei with .....
direct current plasma atomic emission spectroscopy determ., Tb in rare earth phosphor matrices 7—71557
glass:Tb, high-field Faraday effect above paramag. saturation 7—138430
K-shell ionisation by protons and deuterons 7—86714
B_2O_3-SiO_2:Tb, FR-5, glass, HF Faraday rotation 7—106141
$Ba_3(PO_4)_2$:Tb, luminesc., second phase form. 7—70890
$BaRb_9O_{16}$:Ce^{3+}(Tb^{3+}) (R=La, Gd, Ce), luminescence props. 7—70891
CaF_2:Tb^{3+}, anisotropic electron-nuclear interaction 7—137876
Fe-Tb multilayers, magnetic properties and structural charactn. 7—112907
Gd_2O_2S:Tb, filter for oral panoramic radiology, patient dose reduction, image quality 7—71894
Gd_2O_2S:Tb, X-ray phosphors, development, parameters, future outlook 7—77647
$LaCl_3$:Tb, fluorescence line narrowing, competitive technique to EPR 7—70885
LaOBr:Eu,Tb phosphors, thermoluminescence, capture centres 7—132352
$LiNaY_2F_8$:Tb^{3+}, luminescence *(French)* 7—106258
$Sr_3(PO_4)_2$:Tb, luminesc., second phase form. 7—70890
Tb^{3+}, activation of glass-forming matrices, spectral-luminescence props. 7—99900
Tb:^{181}Ta, elec., mag. interaction, TDPAC meas. 7—118427
Tb-$Fe_{95}Co_5$ multilayer thin films, struct. and ferromag. resonance 7—112961
Y:^{160}Tb, nuclear orientation meas. 7—118428
Y_2O_2S:Eu,Tb, phosphors, thermoluminescence, capture centres 7—132352
ZnO:Tb films, spray pyrolysis and photoluminesc. props. 7—100054
ZnS:Tb, F electroluminescent thin films, RF magnetron sputtered, annealing effects 7—99939
ZnS:Tb, thin films, growth and characts. 7—70130
ZnS:Tb,F thin films, electron-beam evaporated and RF magnetron sputtered, electroluminesc. 7—125809
ZnS:Tb,F thin-film electroluminescent devices, Tb-F emission centres 7—113290
Zr-Fe/Tb-Fe compositionally modulated multilayered films, sputtered, mag. props. 7—99518

terbium alloys
Gd-Tb-Co-Fe amorphous films; biaxial oblique mag. anisotropy, Hall characts. 7—143868
Ag-Tb binary liquid alloys, thermodynamic props. 7—118132
AlN/GdTbFe/AlN/Al magneto-optical disc 7—74882
Dy-Tb-Fe, microstruct., mag. props. and precipitates 7—71221
$Dy_{0.5}Tb_{0.5}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7—77425
$Dy_{0.1}Tb_{0.1}Gd_{0.8}$ magnetically ordered alloys, NMR spin echo studies *(Russian)* 7—77425
Fe-Tb amorphous alloys, co-sputtered, direction of easy-axis 7—112886
Fe-Tb-C(O) magnetooptic thin films, sputtered, mag. props. characterization 7—77387
$Fe_{100-2x-y}Tb_yLa_xB_y$ amorphous alloys, domain struct. and anisotropy studies 7—99494
Gd-Tb-Co amorphous films, mag. and magnetooptical characts., influence of sputtering conditions 7—132098
Gd-Tb-Co-Fe amorphous thin films, mag. characts. rel. to magneto-optical recording appls. 7—143867
Gd-Tb-Fe films, magneto-optical effects, bias voltage depend. 7—144041
Gd-Tb-Fe magneto-optical disc film, mag. anisotropy distrib. meas. using Hall method 7—143787
Gd-Tb-Fe-Co amorphous films, mag. props. control for magneto-optical recording 7—92481
$Gd_{1-x}Tb_xAl_2$, noncollinear rotation of Gd^{3+} and Tb^{3+} mag. moments 7—125353
GdTbCo films, RF diode sputtered, prep. conditions effect on mag. props. and ageing behaviour 7—125498
$(Gd_{0.2}Tb_{0.8})_3Co$, crystallisation under microgravity, influence on mag. props. *(Russian)* 7—106753
$(Gd_{0.2}Tb_{0.8})_3Co$, space technological experiments performed with superconducting and mag. alloys 7—71457
GdTbFe:ONH_2O sputtered film mag. props., impurity effects study 7—112887
$Gd_{27}Tb_{10}Fe_{63}$ amorphous film, mag. anisotropy and thermal stability, effect of annealing 7—70604
$Ho_{90}Tb_{10}$ single crysts., commensurable helical struct., magnetic excitations, inelastic neutron scatt. 7—125327
Mg-Tb alloys, short range order, X-ray diffraction and pseudopotential approx. study 7—117866
$Nd_{2-x}Tb_xFe_{14}B$, magnetocrystalline anisotropy 7—99438
$Ni_{80}Fe_{20}$-FeMn(α-Fe_2O_3)(TbCo), exchange coupled alloys, temp. stability 7—125514
$Ni_{0.95}Tb_{0.05}$ amorphous sputtered films, struct., neutron diffr. study 7—104557
Tb-Co amorphous sputtered films, struct. and mag. props. 7—132096
Tb-Co magneto-optical disc prep. by RF sputtering 7—144036
Tb-Co sputtered films, mag. and magneto-optical props., stability in air 7—144043
Tb-Co sputtered films, saturation magnetisation and comp., Ar press. depend. *(Japanese)* 7—112906
Tb-Dy alloy, mag. phase transition, press. effects *(Russian)* 7—143792
Tb-Dy magnetocaloric effect in antiferro. to ferromagnetic transition, magnetoelastic contrib. 7—92431
Tb-Fe amorphous alloys, spin ordering, small angle neutron scatt. studies 7—125323
Tb-Fe amorphous films, stability of mag. props. 7—92480
Tb-Fe amorphous sputtered films, struct. and mag. props. 7—132096
Tb-Fe amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7—112895
Tb-Fe sputtered films, saturation magnetisation and comp., Ar press. depend. *(Japanese)* 7—112906
Tb-Fe-Co amorphous films, magnetic and magneto-optical props. 7—113159
Tb-Fe-Co amorphous films, mag. and magneto-optical props., recording appls. 7—144038
Tb-Fe-Co amorphous thin films, prep. by plasma-free high rate sputtering, struct., mag. characts., saturation Kerr rot. meas. 7—125499
Tb-Fe-Co films, magneto-optical effects, bias voltage depend. 7—144041
Tb-Fe-Co magneto-optical disc prep. by RF sputtering 7—144036
Tb-Fe-Co sputtered films, mag. and struct. props., influence of H_2 partial press. 7—132097

terbium alloys continued
Tb-Fe-Co-Bi amorphous films, mag. and magneto-optical props. 7−144040
$TbAl_2$, paramag. phase, anisotropy, high rank suscept. tensor components 7−99398
TbCo amorphous films, density and magnetooptical props., effect of sputtering conditions 7−132243
TbCo amorphous films, prep. mag. anisotropy, effects of sputtering conditions 7−132095
TbCo sputtered films, mag. and struct. charact., effects of Ar press. and substrate bias 7−132094
$TbCu_2$, sublattice magnetisation, temp. depend. 7−138281
$Tb_{0.22}Cu_{0.78}$ amorphous alloy, short and medium range mag. order, neutron scatt. obs. 7−85323
$Tb_{0.27}Dy_{0.73}Fe_{1.95}$ single cryst., anisotropic magnetostriction study 7−106001
$Tb_{0.27}Dy_{0.73}Fe_2$ polycryst., domain struct. in region of optimum magnetoelastic props. 7−105952
$Tb_{0.27}Dy_{0.73}Fe_2$, single cubic Laves phase cpd., magnetostriction 7−118847
$Tb_{0.3}Dy_{0.7}Fe_2$, single cryst., growth, Bridgman and float zone techniques, dendritic struct., twin-boundaries 7−86006
TbFe amorphous films, laser-written mag. domains, Lorentz microscopy obs. 7−125517
TbFe, amorphous films, magnetisation reversal rel. to microstruct. 7−132114
TbFe, amorphous films, sputter deposition, magneto-optical and mag. props 7−132105
TbFe amorphous sputtered films, effective comp., thickness depend. 7−143248
TbFe amorphous sputtered films, remanence 7−143873
TbFe amorphous thin films for perp. recording, magnetooptic study 7−92477
TbFe, amorphous thin films, sputter deposited, overcoated, dielec. tensor, magneto-optical props. 7−132199
TbFe, evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
TbFe films, amorphous, magnetic surface props. 7−138294
TbFe thin film magnetisation orientation determ., Hall effect meas. 7−105978
$TbFe_2$, NMR study, distrib. of super-thin fields *(Russian)* 7−91449
$TbFe_2$ polycrystalline films, magnetisation reversal charact. *(Russian)* 7−70603
$Tb_{72}Fe_{28}$, amorphous alloys, struct. and local anisotropy 7−97970
Tb_xFe_{1-x} amorphous films, anomalous Hall resistivity, comp. depend. meas. 7−143442
TbFeCo evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
$Tb_2Fe_{14-x}Co_xB$, magnetism 7−131998
$TbFe_2H_x$, local, macroscopic structural and mag. props., rhombohedral distortion effect 7−99446
TbFeIn amorphous films, highly stable, appl. for magneto-optic memory 7−113752
$Tb_{1-x}Ho_xCo_2$, mag. props. and cryst. struct. *(Russian)* 7−138275
$Tb_xNd_y(FeCo)_{1-x-y}$ anisotropy and magnetooptical props. for storage appls. 7−113155
$Tb_2Ni_{17-x}Al_x$, mag. behaviour in the ferrimagnetic and paramagnetic regions 7−99498
$TbPt_2In$, cryst. struct. studies 7−69655
$TbPt_2Sn$, cryst. struct. studies 7−69655
$TbRh_{2-x}Ir_xSi$, cryst. struct., mag. props. 7−132001
$TbRh_{2-x}Ru_xSi_2$, cryst. struct., mag. props. 7−132001
Tb_xSi_{1-x}, amorphous, neutron scatt. study of atomic local order 7−75996
TbT_4B, T=Fe, Co, amorphous and crystallised alloys, coercivity and ordering temp. meas. 7−132064
$Th_{1-x}Tb_x$ dilute alloys, 4f-instability, sp.ht., mag. suscept., and resist. meas. 7−76848
YTb_3, XY spin glass, rotation of anisotropy direction 7−112813

terbium compounds
see also terbium alloys
oxide/Al interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
trifluoromethanesulphonate nonahydrate, mag. props. 7−125382
$BaTb_2Mn_2O_7$, synthesis, cryst. struct., orthorhombic to tetragonal phase transition 7−69896
$CsTbW_2O_8$, luminescent props. 7−131121
$Gd_{65-x}Tb_xCo_{35}$, anisotropic spin glass, mag. transitions 7−112810
$Li_2B_4O_7$:$TbCl_3$ crystallised glasses, X-irradiated at liq. N_2 temp., TSEE and thermolum. 7−85967
SiO_x:TbF_3 films, comparative study of doped and undoped samples, comp., struct., elec. and optical props. 7−105332
$Sm_{0.55}Tb_{0.45}FeO_3$ orthoferrite, susceptibility anisotropy 7−143849
$Tb_3Al_5O_{12}$, time resolved electronic Raman and fluoresc. spectra 7−113166
$TbAsO_4$ orthorhombic, exchange-relativistic modulated mag. structs. 7−99403
Tb_2CoGe_2, cryst. struct. 7−131103
$Tb_{1.8}Eu_{0.2}(MoO_4)_3$ single crystal, hypersensitive and forbidden Eu^{3+} transitions 7−144122
TbF_3, fluoresc. dynamics, effect of ferromag. order 7−113276
$TbFe_2H_x$ phase diagram, structural and magnetic props., neutron diffr. study *(French)* 7−83902
$Tb_xGd_{1-x}VO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
$Tb_2Mo_2O_7$, elec. resist. meas., 4.2-300 K 7−112287
TbO_2, giant resonances, X-ray spectra, line resolution study 7−141601
TbO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
TbO_2 localised and extended f states in 3d X-ray absorpt. spectra 7−144176
TbO_2, specific valence, X-ray absorption spectra studies 7−76841
TbO_x, dynamic edge and surface processes, HREM studies 7−98662
Tb_2O_2S, oxidation to $Tb_2O_2SO_4$, equilib. oxygen potentials, 900-1480 K 7−132961
$Tb_{1/3}UO_2PO_4$, lamellar solids, excited state props. 7−70881
$TbVO_3$ cryst. struct., neutron diffraction study 7−104654
$(TbY)_3(FeAl)_5O_{12}$ ferrimag. epilayers, Neel line kinks, optical microscopy obs. 7−70613
$(TbY)_3Fe_5O_{12}$ LPE films for optical mag. field sensors 7−80823

terbium compounds continued
$(Tb_xY_{1-x})_3Fe_5O_{12}$, sensitivity consts., appl. for mag. field sensors 7−108583
$Y_{3-x}Tb_xFe_5O_{12}$, elastic and magnetoelastic props. in spin reorientation region 7−143887
$(Yb,Tb,Bi)_3Fe_5O_{12}$, Bi-substituted epitaxial garnet films, magneto-optical props. 7−113151
ZnS:TbF_3, materials for electroluminescent thin films 7−77657

terminals, interactive *see interactive terminals*

ternary semiconductors
for pseudobinary semiconductors, see II-VI semiconductors, III-V semiconductors, III-VI semiconductors, IV-VI semiconductors and semiconductor materials
see also chalcogenide glasses
$A^{II}B^{III}{}_2X^{IV}{}_4$ cpds., nonmagnetic defective, struct. and lattice dynamics, review 7−124215
bulk single cryst. growth, review 7−119118
chalcogenide compounds, electrophysical and photoelectric props. 7−99052
chalcopyrite cpds., thermal expansion anisotropy, individual bond expansion coeffs. 7−124558
chalcopyrite semicond., band gap anomaly, role of p-d hybridisation 7−105397
chalcopyrite semiconductors, effective electron mass in ultrathin films, theoretical anal. 7−76743
chalcopyrite type, props. and appls. *(Japanese)* 7−70313
$CuInS_2$, thin layers, structural/optical props., for $CdS/CInS_2$ solar cell *(French)* 7−143292
I-III-VI_2 chalcopyrite semiconductors, phys. prop. rel. to mean at. weight, materials design *(Japanese)* 7−131089
I-III-VI_2 compounds, electron energy structure 7−143337
I-III-VI_2 semiconductor growth, bulk crystals for IR optoelectronic devices 7−132422
I-III-VI_2 semiconductors, transition metal impurities, optical spectra studies 7−124926
I-III-VI semiconductors and their solid solns., microhardness and Debye temp. 7−131225
(II-IV-V_2)-(III-V) semicond. heterojunctions, epitaxial growth, electrophysical props., review 7−112455
II-IV-V_2 cpds., band struct., optical props. 7−113219
II-IV-V_2 cpds., birefr., gyrotropy charact. 7−113122
II-IV-V_2 cpds., lattice dynamics, chem. binding, IR absorpt. and refl. spectra, Raman scatt., rigid ion model 7−113174
II-IV-V_2 phosphides, semicond., optical refl. spectra, optical functions, band calcs. 7−113220
II-IV-V_2 semicond. cpds., electron energy spectrum, kinetic and optical props., uniform press. effect 7−112179
II-IV-V_2 semicond. cpds., radiation defects, survey 7−111648
II-VI-V_2 and I-III-VI_2 cpds., early work 7−124859
photovoltaic advanced R&D, conf., Denver, CO, USA (May 1986) 7−128184
polarimetric photodetectors, prep. principles, photopleochromism, review 7−113123
semimagnetic semicond., electronic props., photoemission survey 7−138599
ternary and multinary cpds., conf., Snowmass, CO, USA (Sept. 1986) 7−120711
ternary materials for photovoltaic appls., deposition and characterisation 7−126633
tetrahedral compounds, struct. distortions and polymorphic behaviour 7−124156
$ZnSiP_2$, refraction and birefringence indexes, dispersion 7−99784
$AgGaS_2$, uppermost valence bands splitting by crystal field and spin-orbit interactions 7−76831
$AgGaS(Se)_2$ chalcopyrite ternary semiconds., fundamental energy gap temp. depend., refl. meas. 7−76774
$AgGaS_2(Se_2)$, IR freq. generation 7−75068
$AgGaSe_2$ thin films, optical props. 7−99962
$AgGaSe_2$-Al Schottky barrier diodes, thin film, elec. charact. 7−105658
AgInSe, photoelectrochemical cells, photovoltaic activity 7−126637
n-$AgInSe_2$ vacuum evaporation and semicond. props. study 7−119154
BiSeI, single cryst. growth from vapour 7−77784
p-$CdCr_2Se_4$, photoelectrochemical behaviour studies 7−118540
$CdCr_2Se_4$, photoferromagnetic effect, nonstoichiometry effects 7−92406
$CdCr_2Se_4$, pure and In doped spinel, NMR of innerdomain ^{53}Cr nuclei *(Russian)* 7−138342
$CdCr_2Se_4$ ferromag. semicond., carrier relax. via mag. interactions, photogenerated carrier recomb. time 7−112368
$CdGaInS_4$ layered crystals, photoconductivity sensitising centres 7−99122
$CdGaInS_4$ layered cpds., asymmetries of Raman scatt. 7−106196
$CdGaInS_4$, layered crystals, fundamental absorpt. edge study 7−106214
$CdGaInS_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$CdGa_2S_4$, cathodoluminescence spectra, nonstoichiometry effects *(Japanese)* 7−125811
$CdGa_2Se_4$ localised levels and recomb. props., photolum. spectra study 7−118400
$CdGa_2Se_4$:Co^{2+}, pure and doped, optical energy gaps, temp. depend. 7−138411
$CdGa_2Se_4$:Fe^{3+}, cryst. paramag. reson. 7−77402
n-$CdGeAs_2$ chalcopyrite semiconductors, effective electron mass in ultrathin films, theoretical anal. 7−76743
$CdGeAs_2$ crystals, SHG of NH_3 laser radiation 7−141937
n-$CdGeAs_2$, degenerate ternary chalcopyrite semicond., screening length, carrier degeneracy effect 7−76927
$CdGeAs_2$, effective electron mass in n-channel inversion layers 7−76744
$CdGeAs_2$, ultrathin films, Einstein relation, carrier diffusivity to mobility ratio 7−99233
$CdGeP_2(As_2)$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$Cd_4GeS_6(Se_6)$ solid solns., physicochem. and photoelec. props. *(Japanese)* 7−125046
$CdIn_{0.3}Cr_{1.7}S_4$ spin glass, thermoremanent magnetisation, aging and relax., field effects 7−125400
$CdInGaS_4$, photoluminescence props. 7−125805
$CdIn_{2-x}Ga_xS_4$ single crysts., thermal expansion temp. depend. studies 7−124560
$CdIn_2O_4$, thin conducting and transparent films, electrical props. 7−85139
$CdIn_2S_4$, single crysts., growth from soln. in a melt 7−85979

ernary semiconductors continued
$CdIn_2S_4$ single crysts., fundamental absorpt. edge and photolum. temp. depend. studies 7−119052
$CdIn_2S_4$ single crysts., optical gain, photolum. meas. 7−132326
$CdIn_2S_4$, slow recomb. centres, optical quenching 7−143478
$CdIn_2S_4$, thermal stability, stoichiometric and doping effects 7−78386
$CdIn_2S_4$, time resolved photolum. 7−106232
$CdIn_2S_2Se_2$, layered crystals, fundamental absorpt. edge study 7−106214
$CdInSbS_4$, single crystals, growth, volt-ampere characteristics 7−91534
$CdIn_2Se_4$, photolum., radiative recomb. at local centres 7−106235
$CdIn_2Se_4$ structural props., local-density-functional total energy calcs. 7−117908
p-$CdIn_2Te_4$ Schottky diodes, current transport 7−138003
CdM_2Se_4 (M=Ga,In), absorpt. edge, temp. depend. 7−70732
n-$Cd_{0.95}Mn_{0.05}Se$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
CdS-$CuInSe_2$ solar cells, photovoltaic research and appl., state-of-the-art 7−78638
CdS-$CuInSe_2$ solar cells, optimum interface thickness, modelling 7−144836
$CdSiAs_2$, vacancy defects, luminescent props. 7−92722
$CdSiP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$CdSnAs_2$, electron energy spectrum, kinetic and optical props., uniform press. effect 7−112179
Cd_2SnO_4 thick films, Burstein effect 7−125824
Cd_2SnO_4, thin conducting and transparent films, electrical props. 7−85139
$CdSnP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$CdSnP_2$ polycryst. thin film, MOCVD, structural and compositional charactn. 7−119167
$CdSnP_2$, refraction and birefringence indexes, dispersion 7−99784
CdSn(Pb)P_{14} diamagnetic semicond. prep., struct. and bandgap studies 7−83905
$CoCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$CoGaInS_4$, Co(II) ion coordination geometry, XPS determ. 7−132410
$Co_xZn_{1-x}In_2S_4$, Co(II) ion coordination geometry, XPS determ. 7−132410
Cu ternary chalcopyrite semiconductors, defect chemistry 7−124250
Cu ternary cpd., semiconductors, struct. props. 7−124231
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crystalline solid solns., lattice parameter determ., X-ray powder diffr. 7−117906
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crysts., optical and elec. props. study 7−118542
$Cu_{1-x}Ag_xIn_5S_8$ solid soln., struct., elec. and optical props., comp. depend. study 7−118109
$CuAlTe_2$, molar heat capacity temp. depend. at const. press., lattice anharmonicity effects 7−98490
$Cu_{0.45}Co_{0.55}Cr_2S_{4-y}Se_y$ ferrimagnetic spinel props. 7−99503
$CuGa_{1-x}In_xS_2$, photoelectric props. 7−125055
$CuGaIn_{1-x}Se_2$ single crystals, props. for photovoltaic appls. 7−131707
$CuGa_{1-x}In_xSe_2$, X-ray absorpt. study, near edge struct. 7−125858
$CuGa_xIn_{1-x}Se_2$, EXAFS study, optical gap nonlinearity 7−125860
$CuGaS_2$, CVD using chloride sources 7−138680
$CuGaS_2$ epitaxial layers, MOCVD growth 7−126016
$CuGaS_2$, lumin. kinetics of donor-acceptor pairs 7−119036
$CuGaS_2$ single crystals, absorption edge study 7−85769
$CuGaS_2$:Zn, off-stoichiometry, optical studies 7−124542
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7−118325
$CuGaSe_2$ crystal growth from the melt 7−119126
$CuGaSe_2$, photocond. at room temp. 7−84989
$CuGaSe_2$, photoconductivity, valence band struct. 7−125054
$CuGaTe_2$, near-stoichiometric, elec. props., acceptor level, DTA study 7−124925
$CuGe_2P_3$, sp. ht. Gruneisen fn. 7−98493
CuIn-Se_2-CdZnS solar cells, health and safety aspects in research and production 7−86801
$CuIn_{1-x}Ga_xSe_2$-ZnCdS thin film polycrystalline solar cells, deposition and characts. 7−126634
$CuInS_2$ films in electrochemical photovoltaic cells, performance and stability in polysulfide and polyiodide electrolytes 7−139113
$CuInS_2$, fundamental energy gap, electrolyte electroreflectance study 7−125702
$CuInS_2$ phase diagram, allotropic transitions, DTA and X-ray diffr. studies 7−118093
$CuInS_2$, photoconduction, strongly sublinear depend. on excitation strength 7−84967
$CuInS_2$:P, defect struct., molecularity and stoichiometry anal. 7−124251
$CuInS_2$:P, defects and nonstoichiometry 7−117921
n-$CuInS_2(Se_2)$ aqueous polysulphide (polyiodide) photoelectrochem. cells, solution composition effects 7−100736
$CuInS_{2y}Se_{2-2y}$ single crystals, props. for photovoltaic appls. 7−131707
$CuInSe_2$ chalcopyrite sputtered film, structural, electronic and optical props. 7−118327
$CuInSe_2$ chemically deposited thin films, prep. and charactn. 7−84586
$CuInSe_2$ chemically deposited thin films, prep. and charactn. 7−84587
$CuInSe_2$, chemically deposited thin films, composition and struct. 7−113458
$CuInSe_2$ electrodeposited films, heat treatment effects on struct. and comp. 7−84585
$CuInSe_2$ film, amorphous, deposition, conductivity and energy gap 7−137928
$CuInSe_2$ film, polycryst., excess In effect on elec. props. 7−99228
$CuInSe_2$, films, reactive sputtering, fundamental processes, appl. to solar cell fabrication 7−132457
$CuInSe_2$ prep. by electrodeposition and selenisation, solar cell appls. 7−119180
$CuInSe_2$, props. and appls. of ternary chalcopyrite type semiconductors *(Japanese)* 7−70313
$CuInSe_2$, selective electrochemical etching, influence on photovoltaic performance 7−126356
$CuInSe_2$, semicond. film vap. deposition, chem. reaction model 7−119169
$CuInSe_2$ single crystals, absorpt. edge 7−125681
$CuInSe_2$ solar cells, photovoltaic research at SERI, current status 7−126619
$CuInSe_2$ thin films, DC triode sputtering conditions rel. to elec. and optical props., solar cell appls. *(Japanese)* 7−100069
$CuInSe_2$ thin films, rheotaxial growth 7−106418
$CuInSe_2$ thin films, elec. characts., stoichiometry and O effects 7−125161

ternary semiconductors continued
$CuInSe_2$ thin films and devices, effect of stoichiometry and O_2 on elec. characts. 7−131819
$CuInSe_2$, type conversion on deposition of CdS, appl. for solar cells 7−125118
$CuInSe_2$/CdS junction, elec. characts., stoichiometry and O effects 7−125161
$CuInSe_2$/CdS solar cells, time-dependent open-circuit voltage 7−100725
$CuInSe_2$-CdS thin film solar cells, development and characts 7−126632
$CuInSe_2$-CdS thin film solar cells, low cost production methods 7−133096
$CuInSe_2$-CdZnS high efficiency thin film solar cells, design criteria, theory and practice 7−133093
$CuInSe_2$-Si:H hybrid tandem multijunction photovoltaic module research 7−133099
$CuInSe_2(S_2)$ thin film comp. determ., electrochem. methods 7−118329
$CuInSe_2(Te_2)$ crystal growth from the melt 7−119126
CuInTe melt grown crysts., elec. characts. 7−125026
$CuInTe_2$ films, electrodeposition 7−138695
$CuInTe_2$, melt grown crystals, electrical characts. 7−76986
$CuInTe_2$:Fe, optical absorption spectra 7−77611
$CuInX_2$ (X=S, Se, Te), X-ray absorpt. near edge struct. study 7−125859
$CuInX_2$ (X=Se,Te), thermal conductivity data 7−124609
$Cu_xLi_{1-x}InTe_2$ epitaxial layers on III-V substrates, lattice misfit 7−124792
$CuMSe_2$ (M=In,Ga), thin films, ESCA study, appl. for solar cells, segregation influence 7−125934
$FeCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
HgCdTe films, ion beam sputter deposition and epitaxy 7−138655
$HgCr_2Se_4$, ferromagnetic semiconductor, spin wave damping 7−85267
$HgCr_2Se_4$, mag. semicond., magnetostatic and spin wave intensification 7−85273
p-$HgCr_2Se_4$, mag. semicond., elec. field effect on elec. cond. 7−99078
$HgCr_2Se_4$:Ag single crysts., FMR lineshape and anisotropy meas. 7−85443
HgMnTe, acceptor binding energy, photoconductivity and magnetoconductivity meas. *(German)* 7−124927
p-$Hg_{0.915}Mn_{0.085}Te$, semimagnetic semiconductors, magnetic field driven insulator-metal transition *(German)* 7−124869
$Hg_{1-x}Mn_xTe$, magnetoresistance and Hall effect, quantum oscill. phase differences *(German)* 7−125027
HgSn(Pb)P_{14} diamagnetic semicond. prep., struct. and bandgap studies 7−83905
InGaAs/InP and InAlAs/InP heterostructures, chemical etching 7−132827
$LiInS_2(Se_2)(Te_2)$, heat capacity, 200 to 550 K 7−84310
$LiInSe_2$, pressure-induced phase transformation 7−84230
$LiInSe_2$ thin film hot wall epitaxy and structural charactn., RBS, SEM and AES studies 7−118328
$MgGeP_2$, possible nonexistence, rel. to prep. X-ray diffraction and SEM study 7−131122
$MgIn_2S_4$ spinel, structural props., ab initio total energy approach calcs. 7−117907
$MnCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$MnIn_2S_4$, lattice parameter and thermal expansion coeff. variation at elevated temp. 7−84329
$NiCr_{2-x}Ga_xSe_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$(Pb_{1-x}Cd_x)S_{1-y}$, ternary solid soln. semicond., comp. and stoichiometry, laser diode appl. *(Japanese)* 7−122979
Si:H-$CuInSe_2$, solar cells, thin film, perform. aspects 7−126618
n-SnO_2-n-$CdGeP_2$:In isotypic heterojunction, photoelectric props. 7−131763
$Sn_2P_2Se_{6-x}S_x$ evaporated thin films optical consts. near ferroelec. transition 7−85869
Tl_3AsSe_3 single crystal filter for IR source for spectrochemical anal. of flue gases 7−126502
$TlBiSe_2$, prep., characterisation, electrical props. *(French)* 7−70311
$TlBiSe_2$ single crystals, growth and struct. 7−137287
$TlInS_2$ crystals, second optical harmonic, temperature relation 7−82713
$TlSbS_2$, long wavelength phonons, far IR spectra, polarisation depend. 7−85661
$TlSbS_2$ photoelectrodes, photoconductivity measured at the solid-electrolyte interface 7−70411
$TlSbS_2$ ternary layered semicond. crysts., dielec. spectra meas., ferroelec. transition determ. 7−77449
$TlSbTe_2$, solid and molten states, thermal conf. temp. depend. study 7−137635
$Zn_xCd_{1-x}In_2S_4$ synthesis and charactn. 7−143021
$ZnGaInS_4$, layered cpds., asymmetries of Raman scatt. 7−106196
$ZnGeAs_2$ MBE growth on GaAs 7−77822
$ZnGeP_2$ crystal for CO laser emission frequency doubling 7−141936
$ZnGeP_2$, electron irrad., elec. and optical props. 7−111672
$ZnGeP_2$, electron radiation effects during isochronous annealing 7−142842
$ZnIn_2S_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$ZnIn_2S_4$ layered cpds., asymmetries of Raman scatt. 7−106196
$ZnIn_2S_4$ single cryst., SiO_x antirefl. coating designed for increased photocurrent 7−123158
$ZnIn_2(S_xSe_{1-x})_4$ mixed crystals, optical and electronic props. 7−106151
$ZnIn_2Te_4$, thin film growth and struct. props. 7−138688
$Zn_{1-x}Mn_xSe$, magnetospectroscopy studies *(German)* 7−125028
$ZnSiAs_2$, elec. resist., Hall effect, rel. to defect props. *(French)* 7−84892
$ZnSiAs_2$, Hall mobility meas. rel. to defect props. *(French)* 7−84939
$ZnSiAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSnAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSnAs_2$ semicond. crysts., interatomic interaction dynamics, phase transition, intrinsic point defect formation 7−137539
$ZnSnP_2$ chalcopyrite LPE on GaAs sphalerite substrate, orientation depend. and related defects 7−118326
$ZnSnP_2$ conductivity type conversion by In doping, diffusion and heat treatment 7−85016
$ZnSnP_2$, vacuum grown thin films, characterisation 7−112137
ZnSn(Pb)P_{14} diamagnetic semicond. prep., struct. and bandgap studies 7−83905

terrestrial age *see geochronology*

terrestrial atmosphere
see also air; air pollution; air pollution detection and control; atmospheric acoustics; atmospheric chemistry; atmospheric composition; atmospheric electricity; atmospheric electromagnetic wave propagation; atmospheric humidity; atmospheric ionisation; atmospheric movements; atmospheric optics; atmospheric precipitation; atmospheric pressure and density; atmospheric radiation; atmospheric radioactivity; atmospheric spectra; atmospheric structure; atmospheric techniques; atmospheric temperature; atmospheric thermodynamics; atmospherics; clouds; fog; stratosphere; troposphere; upper atmosphere
angular momentum resonances and damped oscillator model of 50 day oscillation *(Chinese)* 7−119921
biosphere of the Earth, evolution through geological time, book 7−80213
Biosphere-Atmosphere Transfer Scheme, sensitivity to soil characts. 7−120118
comets, radiolysis effects, rel. to early Earth struct., chemistry and dosimetry 7−94656
early atmosphere, surface temp., radiative effects of CO_2 and methane 7−94424
global C balance and atmospheric CO_2 conc. (1860-1981) 7−139749
global perturbations of 1982 El Chichon eruption 7−139719
meteors at high altitude, 2 MHz radar observations 7−88326
nonsphericity of Earth's atmosphere, determ. from astronomical refer. meas. at different lunar phases *(Russian)* 7−127475
ocean-atmosphere coupling and short term fluctuations of Earth rotation 7−87684
Precambrian atmosphere, theoretical constraints on O_2 and CO_2 concs. 7−79544
solar energy reaching Earth's atm., computational anal. 7−87883
sunlight, response of atm. (book) 7−88751
UV spectral albedo, Nimbus 7 SBUV meas. 7−139617

terrestrial composition *see Earth composition*

terrestrial electricity
1D magnetotelluric response function, Frechet differentiability 7−71959
2D time domain EM scattering by underground inhomogeneities, numerical modelling 7−101199
3D EM response of buried conductors, hybrid calcs. 7−94072
4th Australian Society of Exploration Geophysicists Meeting, Sydney, Australia (September 1985) 7−134341
Alpha Ridge, Arctic Ocean, magnetotelluric obs. of crust and mantle 7−79217
Antarctic ice, DC cond. profiles, relationship to chemistry 7−120050
apparent resistivity sounding technique, new inversion method 7−72169
archaeology, exploration methods for use prior to excavation 7−88818
Atotsugawa fault, Japan, elec. and mag. anomalies and fault activity 7−114681
audiomagnetotelluric sounding method using Schumann resonances 7−139801
Bohemian Massif, Czechoslovakia, anomalous induction zone near eastern margin 7−79221
borehole EM logging, theory of induction sondes in elliptical holes 7−101508
borehole logging, induced polarization response of 4-electrode array 7−107532
Campidano graben, Sardinia, elec. cond. struct., MT study 7−107344
Canadian Rocky Mts. near 53°N, magnetotelluric soundings 7−107339
Caucasus Minor, USSR, deep elec. cond., magnetotelluric meas. 7−114651
ceramics of porous alumina, dielectric anomaly of, saturated with electrolyte 7−133667
chalcocite (Cu_2S), ferroelectric properties 7−87613
complex resistivity of Earth interior, physical model 7−139445
conductivity of lower mantle, determ. from shielding of spherical harmonics of 60-year vars. 7−87432
conductivity profile computed from geomagnetic field changes in Australia 7−87426
conference, Canberra, Australia (May 1985) 7−101998
Cook Strait, New Zealand, induced currents channelling 7−71958
core-mantle EM coupling and Earth rotation speed changes 7−139436
crust microwave brightness temp., effect of elec. and thermal props. 7−107412
Czechoslovakia, numerical modelling of geoelectrical structs. 7−79222
Daurskii regional gravity minimum (Transbaikal), electrical sounding rel. to nature of local gravity anomalies 7−145307
DC field characts. on line of intersection of interfaces of homogeneous anisotropic media 7−139447
deep DC-soundings, numerical modelling 7−119937
deep electrical conductivity model, generalised results from global mag. var. sounding 7−87433
dipolar, Wenner and 2-electrode curves transformation to Schlumberger apparent resist. sounding curves 7−101517
direct current geoelectric methods pot. gradient mapping and magnetometric resist. combination 7−101516
directional magnetotelluric sounding, inverse problem 7−94483
downhole magnetometric resistivity response of a half-plane conductor 7−94467
earthquake geoelectric precursor measuring apparatus 7−145710
earthquake light emission and unsaturated ground water vaporisation 7−71969
earthquake precursory electric field changes 7−94120
earthquake precursory magnetic and electric signals, study of Japanese data 7−107359
frequency elecromagnetic sounding FEM, method using a vertical magnetic dipole 7−79651
electromagnetic depth sounding for highly conducting layers, theory of technique *(German)* 7−79655
electrotelluric geophysical prospecting instrumentation for mineralogy 7−127514
EM anomaly interpretation by method of moments 7−87436
EM core-mantle coupling torque effects on rotation 7−133535
EM exploration methods, inverse problem solns. 7−107557
EM exploration technique for crust struct., EM migration algorithm 7−79682
EM induction in irregular layer overlying the Earth 7−107341
EM induction in radially and laterally inhomogeneous Earth, spectral theory 7−101195
EM induction studies, review 7−139464
EM modelling, appl. of fast algorithms to numerical modelling 7−79200

terrestrial electricity continued
EM sounding, conjugate gradient algorithm for geophysical image inversions 7−101200
EM sounding of seafloor using towed transient dipole-dipole system 7−139802
EM sounding using grounded elec. dipole, influence of surface inhomogeneities 7−107338
fault structures, magnetotelluric method resolution *(Japanese)* 7−79690
faults and fractures, magnetotelluric field numerical model 7−79202
Fennoscandian Long Range profile, magnetotelluric transfer functions and crustal struct. 7−94140
field generation from source grounded in cased borehole, influence of borehole casing 7−145323
fluid caused elec. cond. anomalies, of 2 types? 7−79224
frequency EM sounding method using impedance apparent resistivity *(Chinese)* 7−101500
full transmitter waveform transient electromagnetic modeling and inversion for soundings over coal measures 7−94070
geological mapping by electrical prospecting 7−119942
geophysical fields, nature and geological interpretation, conference, Moscow, USSR (August 1984) 7−115088
global magnetovariational sounding 7−79644
granite, elec. resistivity changes for rock undergoing creep 7−87490
NE Greece, geothermal prospecting at Genisea by geoelectric sounding 7−79326
ground conductivity, influence on ratio of horizontally to vertically polarised components of atmospherics 7−127338
ground TEM method, primary field waveform anal. and improvement 7−79652
groundwater surveying by elec. resist. and EM cond. method 7−120150
Hatchobaru geothermal area, Japan, magnetotelluric interpretation *(Japanese)* 7−79322
NW Himalaya, transverse elec. conductivity struct. 7−79218
horizontally layered Earth model for elec. prospecting the thin-sheet approx. 7−79203
ice, evidence for pseudopiezoelectric effects 7−99684
ice cores, antarctic, dielec. logging technique 7−101533
impact-generated lower crustal faults, detect., use of elec. current flow 7−145683
NW India, geomagnetic induction studies using perturbation arrows and hypothetical event analysis 7−79219
N India, induced magnetic variation studies at Shillong and Gulmarg 7−127090
NW India, interpretation of distinctive pattern of geomag. induction 7−139466
S India and adjacent oceanic crust, geoelectric induction models 7−79220
induced current in long wire due to vertical elec. dipole above dissipative ground, closed-form expression 7−101197
induced polarisation and resistivity sounding of 3D bodies of arbitrary shape, theory 7−79199
induced polarization prospecting method, theory *(Chinese)* 7−79614
inductive mining prospecting, Neumann's problem soln. appl. 7−119940
Kamchatka, USSR, earthquake precursory electrotelluric phenomena 7−94121
Kola Peninsula, USSR, crust and upper mantle struct., EM sounding obs. 7−79682
layered half-space transient response, apparent resist. inversion problems 7−79201
Loran-C radionavigation in contiguous USA, conductivity map for radio propagation 7−79575
magnetotelluric 2D data inversion by numerical method, models with variable geometry 7−79683
magnetotelluric and telluric sounding, importance of phase behaviour in interpretation of meas. 7−127081
magnetotelluric excitation of extended conductive zones in Earth's crust and asthenosphere, numerical modelling *(Spanish)* 7−133565
magnetotelluric problem, inversion theory in 1D 7−127086
magnetotelluric prospecting method, the 2D effect *(Japanese)* 7−114612
magnetotelluric sounding, E-field perpendicular polarisation response of two thin sheets in horizontally stratified half-space 7−127085
magnetotelluric sounding, freq.-depend. shielding behaviour of upper crustal formations 7−127080
magnetotelluric sounding, noise-degraded curves smoothing method 7−127079
magnetotelluric sounding of electrically dispersive ID Earth 7−79649
magnetotelluric strike rules 7−94069
magnetovariational field recorded by magnetometer array, wavenumber domain analysis method 7−115089
lower mantle, elec. conductivity inhomogeneities calc. using seismic data 7−133560
mid-mantle elec. cond., equivalent scalar magnetotelluric response functions calc. 7−71984
mantle electrical properties 7−107347
mapping of induced elec. currents, by use of simple function 7−119941
marine resistivity probe with four ring electrodes 7−127497
mathematical analysis methods and appl. (book) 7−128205
Mauritanides orogenic belt, West Africa, magnetotelluric traverse 7−145391
median transient EM sounding method, appl. to prediction of oil and gas reservoirs 7−139446
metal detection (buried pipes), signal processing methods for subsurface radars 7−72170
Michigan Basin, USA, geomagnetic induction soundings 7−145333
mineral conductors in W Kenya greenstone belt, detection 7−114613
mineral deposits, effective electrical cond., anisotropic medium with ellipsoidal inclusions model 7−119946
minerals at high-temperature, electrical conductivities over extended time periods 7−79379
SE Missouri, USA, aeromagnetism and basement geology of Rolla quadrangle 7−94068
Mytilene castle, Lesbos, electrical resistance and resistivity meas. and mag. mapping of archaeological relics 7−127082
Nestos sedimentary basin, in N Greece, geophys., study of geothermal field 7−139523
SW Nigeria, geology and elec. cond. struct. of Basement Complex 7−119942
Occam's inversion, algorithm for generating smooth models from EM sounding data 7−94071
ocean, Absolute Velocity Profiler for motional elec. currents meas. 7−127526

terrestrial electricity continued
ocean, electrical conductivity microstructure meas. equipment for thermohaline characts. determ. 7−115049
S Onikobe Caldera, Japan, resist. struct., magnetotelluric obs. 7−107368
Pan-Xi rift area of China, crust and mantle struct. *(Chinese)* 7−101186
permittivity profiles determ. for layered Earth, appl. of wider and meas. of surface impedance 7−101198
phase-field imaging of resistivity 7−115042
piezoelectric method of seismic prospecting, elastic wave scattering integrodifferential eqns. 7−139790
piezoelectric textures of quartz bearing rocks, rel. to stress state 7−133664
porous solid-brine mixtures under compression, elec. resistivities 7−94067
prospecting by direct current method, soln. to inverse problem 7−120149
prospecting by inductive methods, theory, book 7−115702
prospecting method apparent resistivity and conductivity curves in near zone 7−127083
prospecting over weathered rock area, formula for resistivity transform function 7−139785
prospecting using electrode array, lateral response functions in half-space theory 7−107520
quasi-layered conductive structures imaging by transient EM data processing 7−120145
Que River (Tasmania) ore body, TEM case study 7−119936
radiowave emission from rocks undergoing fracture 7−107388
resistance geoelectrics, soln. of boundary value problems 7−101196
resistivity data interpretation using kernel function exponential approx. 7−115038
resistivity inversion with a priori information 7−115039
resistivity modelling, truncation error suppression in nonuniform grids 7−79669
resistivity profiles determ. for layered Earth, appl. of wider and meas. of surface impedance 7−101198
resistivity prospecting by DC method, depth of investigation characts. 7−107521
resistivity sounding, response of homogeneous Earth with finite-length contained vertical conductor 7−127084
resistivity soundings interpretation for seawater intrusions in NE Spanish coast 7−119939
riccati inversion of magnetotelluric data 7−145687
Rio Grande rift, New Mexico, USA, magnetotelluric modeling and deep crust struct. 7−79223
rivers, EM flow meas., interference sources *(Polish)* 7−139810
rock electrical conductivity determ., based on Hg injection expts. 7−72184
rock electrical props., complex freq. depend. EM props. 7−133669
rock rupture due to explosion, EM radiation pulse production *(Chinese)* 7−87610
rocks from Indian Subcontinent, electrical conductivities 7−114709
Rokuhara, Japan, upper mantle conductive structures magnetotelluric meas. 7−107369
sandy-clay type lithologies, formation electrical resistivity physical model 7−107335
Schlumberger sounding, appl. of low-pass filtering to noisy field curves for hydrogeological investigations 7−127078
Sea-Bird temp. and cond. probes, dynamic response calibration 7−127545
seafloor elec. conductivity mapping, theory for EM systems 7−94464
seafloor influence on underwater subLF radiowaves 7−133570
seismic refl. profiling and MT method, combined exploration technique 7−79646
seismic waves causing magnetic fluctuations, piezomagnetic effect, superconducting gradiometer meas. equipment 7−133955
seismic waves giving rise to EM oscillations 7−87435
self-potential method 7−139456
Shaanxi region of China, magnetotelluric study of crust and mantle *(Chinese)* 7−79195
snow, microwave dielectric and scatt. behaviour 7−101357
snowpack layers, dielec. consts. and FM-CW microwave system obs. 7−101561
sounding, importance of phase behaviour in interpretation of meas. 7−127081
sulphide dyke prospecting by electrical induction method, study of corrections 7−127494
surface electric field variations between lightning flashes, effects of ion prod. by corona discharge 7−114919
surface EM field reconstruction using impedance tensor 7−133564
Tasman Sea, elec. pot. differences and ocean current transport 7−133696
tectonomagnetism and tectonoelectricity 7−139570
S Tien-Shan, Uzbekistan, USSR, elec. conductivity anomaly 7−139448
Tohoku district, NE Japan, magnetotelluric study of resistivity struct. 7−139451
transient EM common-loop anomalies, interpretation by response characts. 7−101189
transient EM sounding, transmitter turn-off time effect 7−119938
transient EM soundings over 3D structures for central loop config. 7−94065
under-the-sea-surface radiocommunication, influence of seabed on subLF radiowaves 7−133570
United States, electrical conductivity map of crust surface layer 7−79225
vertical geoelectric sounding curves, computer-aided interpretation *(Croatian)* 7−79620
vertically rising microstructure profiler for temp. and cond. meas. 7−115060
VLF atmospherics, vertical mag. field component as influenced by Earth interior props. 7−101638
VLF radiowaves from transmitter, used for shallow mineralization exploration 7−133557
water inclusions in soil and snow, permittivity fluctuations and microwave propag. 7−96932
well logging by EM method, spectral method for inverse problem 7−94463
well logging for electrical conductivity, Taylor's expansion of Green's function *(Chinese)* 7−79615
Yumura hot spring, SW Japan, magnetotelluric survey rel. to faults location *(Japanese)* 7−79383
Zeehan, Tasmania, Australia, prospecting of mineral deposits by VLF radiowave method 7−133557
$BaTiO_3$, single cryst., elec. cond., mantle appl. 7−118485

terrestrial heat
see also volcanology
1st Afro-Asian Geothermal Seminar, Conf., Chiang Mai (November 1985) 7−108013
3D-convection model at low Rayleigh numbers, surface deform., gravity and geoid 7−127171
accumulating sediments surface, deep heat flux evaluation 7−94160
S Africa, thermal environment, effects of Archaean cratons 7−145382
Africa-Sicily sill, heat flow, age and tectonic origin 7−72000
Alberta, Canada, crystal heat flow and heat generation 7−139522
Alps of Austria, vertical temp. gradient in crust 7−133632
W Alps ophiolites, T-P conditions assoc. with blueschist and eclogite transforms. in Fe-Ti gabbros 7−101295
Appalachian Ultradeep Core Hole, tectonics and heat flow 7−94141
aquifier undergoing water injection and extraction, model of heat exchange 7−107372
Ascension fracture zone, geoid anomalies and lithosphere cooling 7−127075
atolls, contrib. of geothermal gradient to seawater convection and dolomitisation 7−101273
Axial Seamount, Juan de Fuca Ridge, microseismicity assoc. with hydrothermal vent fields 7−87456
NW Banda Arc, Indonesia, heat flow and seismic obs. rel. to tectonic movements 7−87558
basaltic magma chamber dynamics, laboratory investigation of roof rock assimilation 7−101307
Beowawe Geysers geothermal area, Nevada, USA, hydrothermal-convection system 7−139656
Berias-Volga stage, W Siberia, USSR, oil fields thermal struct. modelling 7−145393
Bermuda Rise, dynamic uplift due to mantle plume convective upwelling 7−127139
Black Sea, crustal heat flow and lithosphere thickness 7−119973
Botswana and Namibia, crustal heat flow obs. 7−119981
Bouvet mantle plume, effect on surrounding regions, comp. anal. 7−107367
British Columbia, Canada, crust deform. and thermal history 7−139542
Bushveld hydrothermal system, South Africa 7−145449
California, central region, thermal maturity of Cambrian slab (trench-slope basin) 7−139513
W Canadian basin, radiogenic heat generation in Precambrian basement 7−94145
SW China, heat flow and production in Panxi palaeorift zone 7−94146
continental crust, compositional heterogeneities and thermal structure 7−94157
continental crust heat production, bounds and linear programming theory 7−119971
continental lithosphere, thermal and seismic implications of two extension configurations 7−139517
continental Moho, relationship to crust-mantle boundary, seismic and thermal characts. anal. 7−139515
convective cooling of lithosphere, calc. of temp. depend. mantle convection 7−101236
core during planetary accretion stage, thermal effects and temperature evolution 7−139525
crust microwave brightness temp., effect of elec. and thermal props. 7−107412
crustal heat flow-heat production relationship 7−94158
crustal melting, relation to CO_2 streaming and granulite metamorphism 7−107406
Dead Sea, AD 1979 to 1984 salinity and temperature changes 7−114813
Dianchi Lake, China, thermal characts. *(Chinese)* 7−79473
Earth central temperature, constraints from melting curve of Fe to 250 GPa 7−114670
S Eastern Desert, Egypt, uplift phase and cooling history of Silurian-Cretaceous alkaline ring complexes 7−127170
Mt Etna, Sicily, heat flow determ. from ground temp. observations 7−94169
NW Europe, thermal events during Lower Lias, clay mineral evidence *(French)* 7−94135
faulting, frictional heating effects on thermal, hydrologic and mechanical response 7−119960
Florida Current at 27°N, struct. and var. (April 1982 to July 1984) 7−145495
forsterite (Mg_2SiO_4), phonon density of states and specific heat at Earth mantle conditions 7−133670
W France, heat flow and production rel. to granite depth 7−94147
France, heat flow increase model for crustal laminations observed in deep seismic profiles 7−79268
frictional heating and pore pressure rise due to a fault slip 7−71969
geophysical fields, nature and geological interpretation, conference, Moscow, USSR (August 1984) 7−115088
geothermal energy sources location, appl. of Rn mapping 7−79679
geothermal reservoir on an oblique fault plane, heat extraction model 7−86752
Germany, crustal reflectivity, crustal age, heat flow, viscosity interrelations 7−133571
granites in UK, heat production distribution factors 7−94153
NE Greece, geothermal prospecting at Genisea by geoelectric sounding 7−79326
Gulf of Elat (Aqaba), crustal heat flow and tectonics 7−79332
Gulf Stream off Georgia coast, USA, bottom temperatures 7−127232
Hatchobaru geothermal area, Japan, magnetotelluric interpretation *(Japanese)* 7−79322
Hawaii, post-erosional alkalic lava origin, thermal model 7−87564
heat production in continental lithosphere, depth dependence 7−94156
Himalayas, granite belt spatial distrib. explained by thermal model 7−114661
horizontal cylinder in homogeneous half-space, anomalous temp. field theory 7−133617
hotspot motions in Pacific, Atlantic and Indian oceans since Late Cretaceous, plates motions anal. 7−107381
Hyderabad granite batholith, geothermal studies rel. to crustal thermal struct. of Southern Indian Shield 7−139543
hydrothermal systems, anomalous H_2 concs. in subsurface fluids rel. to deep faults in USSR 7−79464
India, Curie depth and lithospheric thickness var. determ. from geothermal obs. 7−71985
NW India, partial crustal melting model for distinctive pattern of geomag. induction 7−139466

terrestrial heat continued
S Indian Shield, crustal thermal struct. from geothermal studies in Hyderabad granite region 7−139543
intracrustal seismic waveguide, thermal nature 7−71982
intraplate stress due to secular cooling and contraction of Earth 7−127173
NE Japan accretionary prism, crustal heat and water flow 7−94162
Japan Sea, crustral temp. profiles determ. by 16-channel heat flow measuring system *(Japanese)* 7−87970
Juan de Fuca Ridge, Pacific Ocean, vent fields hydrothermal plumes charcts. 7−145485
Kakkonda geothermal power plant, Japan, production well build-up tests 7−139081
Kanam-Kanjera area, Kenya, geochemistry of rocks and spring waters rel. to elements mobility and uptake 7−87557
Larderello geothermal field, Italy, stable isotope study of reinjection processes 7−94322
Lascar volcano, N Chile, thermal anomaly detect. by Landsat Thematic Mapper 7−133635
Limousin, France, soil identification, use of thermal airborne remote sensing 7−107584
lithosphere cooling rate, influence of mantle convection due to cooled lithosphere 7−101236
lithosphere thermal thinning, asymptotic soln. 7−145394
lithospheric heating by mantle plumes 7−145390
Louisiana Gulf Coast sediments, kilometre-scale thermohaline overturn of pore waters 7−107449
lower continental crust, evidence for superplastic flow from deform. in high-temp. quartz-feldspar mylonite 7−139594
mafic xenoliths from I- and S-type granitoids, radioactive heat production 7−94154
Maine, basement heat flow and radioactivity 7−94142
mantle, energetics evaluation and convection speed *(Russian)* 7−79318
lower mantle, geothermal gradient 7−107370
upper mantle, geothermal gradient and rheology beneath southernmost South America 7−101241
mantle convection, analytical formulation for spherical body 7−134121
mantle convection structure, effect of lithosphere 7−127144
mantle convective heat transfer laws, at high Rayleigh numbers 7−145402
mantle xenoliths in W Eifel, W Germany, temp. history and mantle diapirism 7−139528
mathematical analysis methods and appl. (book) 7−128205
Mauna Kea, cooling of volcanic cinder cone by atmospheric hyperventilation 7−101250
melts, crystallisation dynamics, assoc. thermodynamic conditions 7−119990
metamorphic petrology thermodynamic characts. 7−120018
mid-ocean ridge gabbros, two-phase separation and fracturing (above 700°C) 7−127193
minerals, fission track annealing and closure temps., crystal composition effects 7−94226
Namaqua mobile belt, S Africa, heat flow and heat production 7−119980
Neil Brown Mark III CTD, algorithm for combining separately digitised fast and slow temp. signals 7−133948
neotectonic activation process, thermal model of S Tien-Shan 7−133614
Nestos sedimentary basin, in N Greece, geophys., study of geothermal field 7−139523
New Zealand, Central Volcanic Region, struct., asymmetric back-arc spreading and heat flux 7−145383
Niger Delta; geothermal gradient meas. rel to clay minerals buried diagenesis 7−87633
Norway and Sweden, Precambrian crust radiogenic heat production 7−94143
ocean, electrical conductivity microstructure meas. equipment for thermohaline characts. determ. 7−115049
ocean, large thermal anomalies evolution and shock waves form. 7−133732
ocean heat flux to atm. through sea ice *(Japanese)* 7−107427
ocean upper mantle, effects of lithosphere elastic drag forces on temp. and vel. fields 7−133649
oceanic crust of spreading zone, thermal evolution influenced by sediment accumulation 7−133634
oceanic lithosphere, appl. of optimal shape design method to thermal thinning near hot spots 7−101276
middle Okinawa Trough, DELP 1984 cruises results 7−79312
middle Okinawa Trough, heat flow meas. (during DELP-84) 7−79313
Olkaria geothermal field; Kenya, well performance and reservoir depletion 7−71989
Olkaria geothermal field, Kenya, energy production and pressure decline 7−71988
palaeotemperature determination, using goethite O and H isotopes 7−79624
plume flow measurements from hydrothermal vent field, total heat flow and max. plume height 7−87602
Precambrian domes, radioelement vertical distrib. and heat production 7−94144
Proterozoic oceanic plates, thermal models rel. to back-arc spreading 7−145435
Puhimau thermal area, Kilauea Volcano, Hawaii, CSAMT survey 7−114671
radiogenic heat production of crustal rocks, geochemical data 7−94152
Rayleigh waves propagation, effect of initial stress on generalised thermo-elastic problem in infinite cylinder 7−83090
regional metamorphism, assoc. PT parameters and tectonic regimes 7−120009
rifting of continents 7−114689
rock fracture toughness in pressurised water at high temps., evaluation via AE technique 7−133668
rock melting on fault plane, artificial pseudotachylyte generation using friction welding apparatus 7−72024
Rockall Bank rifted margin, DSDP heat flow and tectonics 7−145400
Ryukyu Arc region, heat flow meas. on R/V Sonne 7−79315
sea surface temperature fields, method for data processing and display, use of VAS multispectral data 7−139773
Sea-Bird temp. and cond. probes, dynamic response calibration 7−127545
seismic reflective zones in lower crust rel. to surface heat flow 7−107371
seismic waves propagation, generalised thermoelastic problem in infinite cylinder under initial stress 7−83090
E Siberia, heat conductivity of crust in southern area 7−127148
terrestrial heat continued
Upper Silesian Coal Basin, heat flow determ. with effects of lithology 7−101244
Sohm abyssal plain, Atlantic Ocean, heat flow and depth versus age 7−127139
soil, freezing, heat and moisture transfer, self-simulating problem 7−145531
soil, remote sensing of thermal inertia rel. to hydraulic parameters discrimination 7−107453
soil moisture estimation from diurnal surface temp. obs. 7−107455
soil physical properties effect on surface temp. meas. 7−107414
soil surface, heat balance 7−72189
soil thermal inertia and fluxes remote sensing 7−107413
soil thermal model for remote sensing application 7−79331
spectrometer for geological field use, thermal emission instrument 7−134020
sub-continental lithosphere flow 7−117592
subduction zone decollement horizon, pore-water chem., temp. anomalies and struct. 7−87562
submarine geothermal sources, large-scale influence on ocean abyssal flow 7−94268
subsea saline permafrost melting, thermal simulation 7−79363
Superior Province, heat production model of shield area 7−94149
surface statistics evaluation, use of HCMM and GOES satellite temps. 7−101547
Tattapani hot spring area, Sarguja district, India, geothermal studies 7−139524
thermal plumes from D″-layer, contrib. to pulsation tectonics and long-term stratigraphic cycles 7−133658
UK, heat flow-production and granite batholiths 7−94148
underground cavities localisation, use of temperature anomalies 7−101515
United Kingdom, heat flow, heat prod., and thermo-tectonic setting 7−127151
Uzon caldera (Kamchatka), comp. of spontaneous gases of geothermal field 7−145408
vertically rising microstructure profiler for temp. and cond. meas. 7−115060
volcanic post eruptive system, heat transfer by geothermal systems 7−139550
White Island volcano, New Zealand, thermal power output 7−101251
world ocean, rate of change of heat storage 7−133735
Yumura hot spring, SW Japan, geophysical survey rel. to faults location *(Japanese)* 7−79383
Zambesi belt, NE Zimbabwe, thermal gradients rel. to strains and vorticity beneath tabular batholith 7−145469
$BaTiO_3$, single cryst., elec. cond., mantle appl. 7−118485

terrestrial magnetic field *see geomagnetism*

terrestrial magnetism *see geomagnetism*

test equipment
see also automatic test equipment; battery testers
20 MN multiaxial loading rig for nuclear structure integrity testing 7−93225
abrasive wear resistance of hard facings under sliding impact conditions, test machine 7−78435
acoustic emission point contact transducer, broadband 7−71456
aggressive media pressure influence on softening of materials at high temp., test unit 7−113832
clamps design for fastening composite material tubes in Instron testing machine 7−78433
dielectric meas. in infra-low frequency band 7−95609
dielectric waveguide sensor for nondestructive inspection of sheet dielectrics by freq. props. analysis 7−132874
dynamometer for deformational rigidity meas. of technical synthetic fibres 7−78437
eddy current flaw detector with rot. core in superimposed transducer 7−71448
eddy current transducer, synthesis according to specified mag. field struct. in inspection zone 7−71447
eddy current transducer interaction with corrosion damaged product 7−132877
electroacoustic transducer, hardness meas. from reson. freq. 7−126369
galvanic coatings NDT, using X-ray fluorescence analyser *(German)* 7−86536
HV elec. equipment insulation breakdown, early detection using discharge testers and ultrasonic detectors 7−123359
hydraulic-impact tester, unsteady press. distrib. in working chamber 7−123565
hydrocyclone apparatus for investigation of hydrobrasive wear 7−73338
induction-probe magnetometric instrument for temp. investig. during heat treatment 7−78430
internal friction and dynamic elastic modulus meas. installation for glass fibres 7−78424
liquid metal ion source, alloy fabrication and mass spectroscopy anal., test bed system 7−134889
low alloy, stress corrosion cracking set-up and methods 7−126362
microhardness gauge for indentation kinetics determ. 7−106733
NUKEM ultrasonic rotary head equipment ROTA-40/90R(F) and ROTA system *(Japanese)* 7−68968
optical fibre testers review 7−123268
pacemaker testing instrument for external cardiac devices 7−127040
phase superplasticity investigation apparatus 7−78436
precision mechanical-optical devices, test instruments selection *(German)* 7−82871
radiometric NDT devices, nonlinear conversion of pulses of spectrometric flaw detector 7−71438
reverser for complex tests of materials 7−78439
rotating disc apparatus for cavitation resist. determ. of materials 7−78425
SCC tendency determination, test installation design 7−78438
solar cell forward and reverse I-V characteristic test equipment 7−144887
sound analyser for today's and tomorrow's demands 7−82964
stiffened testing machine effect on meas. of post-failure behaviour of rocks 7−114706
strain gauge, resistance-type, interaction with composite test material surface, opt. obs. 7−71428
strengthening sensors use for nondestructive stress determ. 7−75489
thermoelectric NDT instruments *(Polish)* 7−138952
torsion testing device for materials at high hydrostatic press. 7−78434
US, disc transducer, radiation field, laser probe investig. with tomographic scanning 7−132879

st equipment continued
US detection method for low refl. factor flaws, transducer design 7−71443
US inspection units adjustment, ang. reflector dimens. influence on echo signal amplitude 7−132881
US twin probe characteristics for NDT 7−100489
X-ray, MIRA-2D pulsed, optimum regime determ. 7−71441
st facilities
see also aerospace test facilities; anechoic chambers; reverberation chambers
FEMO-technique for remote operation and maintenance of nuclear fuel reprocessing modules 7−89624
hydrodynamic test facilities at LLNL, high-speed camera control system 7−95667
nuclear electrical equipment qualification *(French)* 7−109372
ROSA IV Large Scale Test Facility, test program *(Japanese)* 7−73954
solar thermosyphons with heat exchangers, test facility to compare with active systems 7−78670
SPASOLAB equipment for solar cell space qualification 7−144893
sters *see test equipment*
sting
see also automatic testing; electronic equipment testing; environmental testing; impulse testing; inspection; integrated circuit testing; life testing; machine testing; materials testing; mechanical testing; nondestructive testing; optical testing; production testing; program testing
air heating collectors, transient test method for performance eval. 7−100756
AVR 15 MW experimental nuclear power station with pebble-bed high temp. reactor 7−73887
control gyrometer testing methods *(Rumanian)* 7−89213
cup anemometers, operating principles rel. to testing method 7−127571
dead weight pressure calibration instruments, test procedure 7−80760
glass tubes solar collector testing 7−86823
HENDEL, in-core struct. test section, construction and testing 7−141141
HTR blower, magnetically supported, catchment bearing development and testing *(German)* 7−129274
industrial hot-wire pyrometers, calibration and testing *(German)* 7−73351
knee replacement, load transfer evaluation, test methodology 7−133514
Large Coil Task, full array coil test results 7−129387
Large Coil Task, pool-boiling cooled magnet, single-coil and design point tests at IFSMTF 7−129388
Large Coil Task project, superconducting toroidal field coil for nuclear fusion facility 7−74024
liquid metal ion source, alloy fabrication and mass spectroscopy anal., test bed system 7−134889
magnetic disks, lubrication film thickness meas. by external reflection spectroscopy 7−67394
mathematical model of volumetric flow rate generators for liquids with stepped plunger drive 7−142404
natural circulation solar water heater for arid areas, improvements, performance and testing 7−71638
nuclear power station resistance temperature detectors, in-situ response time testing 7−129260
nuclear reactors, high-tech testing of process and safety equipment 7−129283
onsite fuel cell cogeneration system field test 7−119646
solar collector parameter identification by step input test procedure 7−71645
SP-100 space nucl. reactor subsystem, site design for ground engineering test 7−67902
spherical reference radiometers testing and study 7−80874
superconducting magnet, six coil test preliminary results, Swiss Large Coil Test study 7−129391
superconducting pool-boiling coils, IFSMTF full array tests 7−129389
Superphenix nuclear power station, organisation and testing *(French)* 7−119630
Superphenix nuclear reactor, internal structure, low freq. vibr., hydraulic testing *(French)* 7−116551
torquemeter, phase-measuring, electronic system for calibration and testing *(Polish)* 7−67303
unsaturated fly ash landfill moisture content and pressure potential instrument evaluation 7−114160
WWER fuel assemblies, preoperational testing device *(Czech)* 7−116547
Ge γ-ray detectors, IEEE standard test procedures 7−109659
Nb_3Sn-Cu cable-in-conduit superconductor for fusion appls., testing at IFSMTF 7−129392
NbTi, forced-flow cooled coil, IFSMTF tests for Large Coil Task program 7−129390
Pu, electroreoxidation during purification cycle, ROXI cell test *(German)* 7−129219
esting apparatus *see test equipment*
esting equipment *see test equipment*
esting machines *see test equipment*
etraneutrons *see neutrons*
etrodes
Tore Supra, ICRH, high power tetrode design 7−122142
ext processing *see word processing*
extile fibres *see fibres*
extile industry
dyeing process, cascading heat process solar system with computerised control 7−71651
exture
see also recrystallisation texture; surface texture
alkali metal halides with substitutional OH^- and CN^- defects, microscopic models 7−111642
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7−77499
automatic description of microstructures, phase particle classification using shape descriptors 7−78404
automatic description of microstructures, region classification using texture descriptors 7−78403
automatic description of microstructures, segmentation techniques for localisation of microstruct. regions 7−78402
Boolean random functions, simulation, texture analysis *(French)* 7−117146
ceramics, crystalline, single phase, structural superplasticity 7−132668
Cr, vacuum condensates, texture 7−71204
crystal symmetry, texture analysis from incomplete pole figures in low symmetry cases 7−137299
cubic crystals, orthotropically textured elastic aggregates 7−142877
texture continued
cubic materials, textures, comparison of complete and reduced orientation distrib. functions 7−78056
cubic textured materials, diffr. intensity and strain pole figures, surface spherical harmonics 7−75914
cubic unit cell and tetrahedron, orientation 7−76066
deformation texture development, evaluation of effect of initial texture 7−78053
echographic equipment, speckle and texture, imaging performance 7−126957
lamellar eutectics, texture and lamellae distrib. functions 7−78417
magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
magnetic films for perpendicular recording, texture formation, influence on props. 7−76700
metals, FCC, plane strain deform., texture softening and strain instability 7−144427
metals, FCC, shear band angles 7−119283
metals, sheet, crystallographic texture, anisotropic yield surfaces and forming limits 7−113572
microstructure, random textures models, image anal. *(French)* 7−118113
orientation distribution function, complete, determ. by zero-range method 7−78054
orientation distributions, representations 7−126146
polycrystalline metal characterization using US method 7−113845
polycrystalline textural materials, crystallite orientation distrib. function, bounds 7−118114
polycrystals, textured, yield locus calc. using Taylor and relaxed Taylor theory 7−76278
polycrystals, textured, yield surfaces, analytical approach 7−76272
rock salt, texture anal., neutron diffraction methods 7−86508
spatial frequency channels and perceptual grouping in texture segregation 7−86982
steel, cold rolled, on-line X-ray texture analyser 7−138761
steel, cold rolled strip, residual stress state, neutron diffr. study 7−126142
steel, ferritic, directional strain softening 7−78040
steel, low C, textured, X-ray stress determ. using compliances calc. 7−132641
Steel, Nb, low C, transform texture, proeutectoid ferrite nucleation 7−78000
steel, prestrained, plastic shearing 7−132688
steel clad Cu, compacts, rolling textures 7−78047
terephthal-bis-butylaniline, smectic H phase, texture and conoscopic interference figure 7−137235
thermosets, unfilled, fracture surface characts. 7−132745
translational sample holder for reflection pole figure meas. 7−78418
trifluoroacetoxypropylcellulose, thermotropic, band texture, optical microscopy 7−83661
two-dimensional automated X-ray detector for diffraction experiments 7−109653
X-ray measurement of residual stress, use of oscillation on position-sensitive detectors 7−123556
Zircaloy-2 plates SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
Zircaloy-4 sheets, cold-rolled, evidence of pyramidal slip mode 7−69711
$[Al_2Li(OH)_6]_2CO_3.nH_2O$, precip., hydrothermal treatment, textural props. 7−86227
Al alloy, eutectic binary, automatic description of microstruct. 7−78402
Al alloy, eutectic binary, automatic description of microstruct. 7−78403
Al alloy, eutectic binary, automatic description of microstruct. 7−78404
Al alloys, tensile props. and anisotropy, double ligament test method 7−132851
Al alloys, wrought, anisotropy, texture and microstruct. contrib. 7−86209
Al and alloys, melt-spun, rel. between solidification morphology and texture 7−92985
Al melts, solidification in Evaporator-M equipment 7−126088
Al polycrystals, channel die tests, prestrain history effects on further large strain texture 7−119282
Al sheet, rolled, grain reorientations, constraints model predictions comparison 7−86202
Al wires, hard drawn, corrosion rel. to texture and struct., TEM obs. 7−100439
Al-Cu melts, solidification in Evaporator-M equipment 7−126088
Al-Mn-Fe alloy, quasicrystalline phase ageing, phase natural struct. 7−144443
AlN coatings, plasma enhanced CVD on graphite substrates 7−71074
Be-Fe, technical purity, Fe containing phases, Mossbauer studies 7−142954
$Bi_{0.88}Sb_{0.12}$, extruded samples, struct. and thermoelectric props. 7−70341
CdSe heteroepitaxial films deposited on cryst. and amorphous substrates by hot-wall technique, struct. obs. 7−70132
Cr, electrolytic plating, texture form. 7−86205
Cu clad steel, compacts, rolling textures 7−78047
Cu, creep cavities, US vel. and composite-modelling study 7−142752
Cu, polycrystalline, deform. texture development, model predictions 7−138793
Cu polycrystals, channel die tests, prestrain history effects on further large strain texture 7−119282
Cu, textured tubing, small strain biaxial yield, cryst. slip modelling 7−86282
Cu/Ni system, low energy grain boundaries, determ. by rotating-sphere-on-plate method 7−142789
Cu-Ni (12.5, 27 wt.%), rolling texture development 7−100249
$CuCr_2Te_4$ films, synthesis, texture, mag. props. 7−98731
Fe, fine particles, morphology, porous texture, mag. props, haematite reduction prep. 7−77868
Fe, polycrystalline, rolling textures, stable end orientation 7−113574
Fe-Si, nonoriented, texture study 7−126140
Fe-Si alloy, hot rolled, texture changes due to deformation and heat treatment *(Russian)* 7−78060
$Fe_{40}Ni_{40}B_{20-x}Al_x$ metallic glasses, crystn., influence of Al 7−76029
Fe_3O_4 particles in ferrofluid, initial suscept. meas., 80-300 K 7−125474
FeSi grain orientated sheets, stray field profile 7−105962
^3He superfluid A phase, textures, mag. deformation in a narrow slab 7−84429
$KI:OH^-$, press. induced preferred orientation transition, microscopic models 7−111642
$La_{0.85}M_{0.15}CoO_3$ (M=Ca,Ba,Ce), porous struct. rel. to prep. method 7−71123
$LaMO_3$ (M=Fe,Co,Ni,Cr), porous struct. rel. to prep. method 7−71123
Mn-Al magnets, texture, neutron TOF diffraction 7−106529

texture continued
Mo alloys, deformed by upsetting, texture 7−106534
Mo alloys, fibre textured, microstruct. and strength anisotropy 7−78228
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
Nb, texture of corrosion layers rel. to stratification *(French)* 7−86446
Nd-Fe-B magnets, texture, anal. on basis of easy growth axis determ. of $Nd_2Fe_{14}B$ single crystals 7−132078
Pd-Xe thin films, texture studies using synchrotron radiation and energy dispersive diffr. 7−92014
Si, texture analysis, heterogeneous morphology, neutron diffr. studies 7−124541
Si:P films, CVD, crystallographic and elec. props. charactn. 7−138676
$SmCo_5$ powder magnet, mag. struct. and texture state influence 7−77381
Ta, texture of corrosion layers rel. to stratification *(French)* 7−86446
Ti alloys, thick hot rolled strip, mechanism of texture formation *(Russian)* 7−106530
Ti, texture of corrosion layers rel. to stratification *(French)* 7−86446
Ti, textured sheets, deform. behaviour in uniaxial tensile test, effect of twinning 7−144500
Ti-Al-V (6,4 wt.%), superplastic, post-forming tensile props. 7−100302
Ti-Al-V-Mo_y hot rolled, annealing induced texture, softening *(Russian)* 7−113565
Ti-Mo-Cr, rolled sheets, texture and struct., β to α transform. 7−144432
TiC CVD coatings on steel, effect of Cr in substrate 7−113412
TiN, vacuum plasma condensates, special features of substruct. 7−86028
VC-C compact, hot pressing, graphite inclusions texture, elec. resist. meas. 7−106477
Y-Ba-Cu-O high T_c supercond., sinter-forging technique 7−119207
Zr and alloys, polycryst. aggregates, elastic anisotropy 7−71230
Zr plates, SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
α-Zr, texture form. due to rolling *(Russian)* 7−144428
Zr-Nb (2.5 wt.%), hydrostatically extruded tube, texture *(Chinese)* 7−71203
ZrO_2-Y_2O_3, rapidly quenched, cubic to tetragonal transform., effect of external stress 7−86170

texture, surface *see surface texture*

TGA *see thermal analysis*

thallium
see also nuclei with .....
adsorbed on Ag, optical SHG 7−82706
atom, energy levels. fine and hyperfine struct., E1 transition amplitude, correl., pot. method 7−81997
atom, isotope shift, HFS, Doppler free two-photon laser spectra 7−74515
atom, $K\alpha_3/K\alpha_1$ X-ray intensity ratio meas. 7−109832
atom, parity nonconservation, CI approach 7−122386
atom, parity nonconservation 7−109736
atom, parity nonconserving electric dipole transition amplitudes, Dirac-H-F calcs. 7−89949
atoms, parity nonconservation, TDHF calc. 7−116849
atoms, press. effects of Ne and Ar collisional broadening and shift of 535 nm line 7−103423
atoms 7−122407
determination, by flame and graphite furnace AAS 7−114022
doped PbTe and SnTe, impurity mixed-valence behaviour on superconductivity mechanism 7−92143
electric field gradients, phenomenological approach 7−112259
flux to atm. from volcanoes 7−107468
submonolayers, adsorbed on Cu (111) single cryst. electrodes, struct. determ. 7−98670
thermoelectric power up to 6 GPa 7−84833
As_2S_3-As_2Se_3:Tl, thin films, optical absorpt. edge, Tl doping effects 7−113226
BaFCl:Tl single crysts., electrolum., temp. depend. 7−119055
$C_4RbTl_{1.5}$, ternary donor graphite intercalation cpd., photoemission, electronic struct. 7−85948
$CaSO_4$:Tm(UD-200S)-TLD, self-irrad. obs. *(Japanese)* 7−133477
CdTe:Tl, deep acceptors, elec. activity *(Russian)* 7−124907
CdTe-Tl, alloying, solubility and diffusion studies *(Russian)* 7−124517
CsI:IO_3, SO_4, Tl, infrared absorption spectrum of complex impurity ions 7−132258
CsI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
$(GeSe_x)Tl_y$, chalcogenide semiconductors, vitreous and crysts., struct., IR obs. 7−113207
KCl:Tl, excited states, absorpt. bands study 7−119031
KCl:Tl, hyperfine field interaction calc. 7−118441
KCl:Tl, upper excited states, visible spectra 7−70850
KCl:Tl gamma irradiated single crysts., colour centre absorpt. and luminesc. bands *(Russian)* 7−83954
KCl:Tl with $Tl^0V_a^+$ centres, lasing, passive laser gate use *(German)* 7−130126
KCl:Tl^0, impurity centre vibrational props. resonant Raman scatt. study 7−113198
KCl:Tl^+, moments of A-absorpt. and A_T emission bands, hydrostatic press. effects 7−132304
KCl(Br):Tl, colour centre dynamics and electronic props., reson. Raman scatt. study 7−106179
KD_2PO_4:Tl^{2+}, paraelectric hyperfine couplings and ferroelec. symm. signals, EPR study 7−99572
KH_2PO_4:Tl^{2+}, paraelectric hyperfine couplings and ferroelec. symm. signals, EPR study 7−99572
KI:Tl, roentgenoluminescence, rel. to powder dispersity degree *(Russian)* 7−85808
$KLiSO_4$:Tl^{2+} phase transitions, ESR temp. depend. study 7−124482
KT:Tl, crystallophosphors, energy transfer by luminescence centres 7−132345
$LiNbO_3$ crystals, ion-exchange processes study during optical waveguide struct. form. 7−71484
NaCl:Tl, excited states, absorpt. bands study 7−119031
NaCl:Tl, impurity states, photoluminesc. study *(Russian)* 7−85838
NaCl(Tl), cryst., neutron irradiation 7−124339
NaI:Tl, crystallophosphors, energy transfer by luminescence centres 7−132345
NaI:Tl, ionising radiation detector, photochem. and radiational colouring 7−129516
NaI(Tl) FD-71 scintillation radiometer, characts. *(Chinese)* 7−81876
NaI(Tl) hardened phosphor crysts., surface struct., etching studies 7−98639
NaI(Tl), optical and thermoluminescent props., impurity effects 7−85859
NaI(Tl) scintillation grade crystals, growth, material considerations 7−71000
NaI(Tl) scintillation detector, proton registration efficiency calc. 7−109655
Na_2O-SiO_2-Al_2O_3:Tl glasses, struct., lumin. studies, optical basicity 7−91460
$Pb_{1-x}Ge_xSe$:Tl, phase transition, X-ray diffr., elec. resist., Tl impurity effect 7−111853
PbTe:Tl, interaction of gaseous dopants with PbTe single crystals 7−69980
PbTe:Tl MBE film, supercond. transition props. study 7−131853
PbTe:Tl whisker crystals, thermoelectric power, magnetoresistance 7−105600
RbCl:Tl, colour centre dynamics and electronic props., reson. Raman scatt. study 7−106179
Tl^{2+}, excited state formation in electron+Tl^+ collisions *(Russian)* 7−110115
Tl^+-type ion in octahedral cubic field, secular eqn. referring to energy matrix for sp-configuration 7−137873
Tl+Ne(Ar), $8p^2P_{1/2,3/2}$-$7s^2S_{1/2}$, collisional broadening and shifts 7−129657
^{A}Tl, A=189-194,201,203,205, hyperfine props. collinear laser spectroscopy 7−121286
^{201}Tl standardization using $4\pi\beta$-γ coincidence method, two-dimensional extrapolation 7−135777
^{205}Tl, parity nonconservation, time depend. HF calcs. 7−135833
ZnSe:Tl single crysts. solvent growth, morphology, photolum. 7−144254

thallium alloys
see also thallium compounds
$TlCu_3Te_2$, prep. and cryst. struct. *(German)* 7−69648
Er-Tl system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
Hg-Tl binary alloy systems at high press. 7−100183
Ho-Tl system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
In-Tl, electronic struct. in vicinity of face centred tetragonal-FCC transition, positron annihilation study *(Russian)* 7−112174
In-Tl, liq., O dissolution, thermodynamic study 7−78537
Pb-Tl alloy (30 wt.%), upward solidification, thermosolutal convection-induced morphologies of solid-liq. interface 7−100198
Tl-Te-Bi liq. system, electron localisation, NMR studies 7−98787
$Tl_6Ag_{20-x}Se_{14-y}$, cryst. struct. four-circle diffractometer data *(German)* 7−69650
$TlAsPd_5$, cryst. struct. rel. to Cu_2Sb 7−69682
Yb-Tl system, phase diagram and mag. props. 7−144368

thallium compounds
see also thallium alloys
double sulphates, langbeinite structure, electronic spectra 7−113227
halides, interionic pots. based on charge-transfer model, cohesive energy, mol. consts. and ionicity calcs. 7−76071
halides, Schottky defect form. energy calcs., many-body effects 7−124255
lithium thallium tartrate, low temp. phase transition, critical fluctuations, Raman spectra anal. 7−85713
lithium thallium tartrate, thermally unstable mode, submillimetre spectrum 7−77472
n-tetradecanoate, heat capacity and thermodynamic functions 7−84312
As_2S_3-Tl_2S, glass, chem. atomic order, structural units 7−83709
$EuTlS_2$, physical props. *(French)* 7−77206
Ge-Se-Te-Tl glasses, thermal and IR transmittance props. 7−104574
Ge-Tl-S glassy chalcogenide semiconds., photoinduced paramagnetic centres, ESR study 7−143896
In-Se-Tl films, phase-change optical media, single-beam overwrite expt. 7−75091
$In_{1-x}Ti_xTe$ alloys, energy spectrum, cond. in a mag. field, press. depend. 7−131672
$In_{1-x}Tl_xTe$ solid solns., transport effects, percolation 7−70333
$NaNO_3$-$TlNO_3$, molten mixture, internal mobilities, density and elec. cond. meas. 7−91863
$(NaNO_3)_{0.9}(TlNO_3)_{0.1}$ melt against Na_2O-SiO_2 glass, ion exchange 7−93302
$Pb_{1-x}Tl_xTe$, system with localised pairs and free electrons, superconductivity 7−118695
Sb_2S_3-As_2S_3-Tl_2S and Sb_2S_3-Sb_2O_3-Tl_2S, chalcogenide glasses, synthesis and props. *(French)* 7−111416
$Te(OH)_6$-Tl_2SO_4, vibr. IR and Raman spectra 7−113172
$Th(Ru, Os)_2B_2$, cryst. struct. determ. 7−83897
Tl-S, thin film formation, amorphous and crystalline 7−70111
Tl-Sb-Se, quasi-binary sections 7−106492
$(Tl\text{-}V\text{-}VI_2)_{1-x}(2\text{-}IV\text{-}VI)_x$ solid solns., semicond., energy band struct. 7−84664
$TlAlF_4$, ferroelastic, struct. phase transitions and cryst. struct. 7−111858
$TlAlF_4$, high temp. displacive phase transitions, Raman spectra anal. 7−85714
Tl_4AsS_4 acousto-optic Bragg cells, performance 7−82482
TlAsSe used for CO_2 TEA laser radiation SHG 7−103885
Tl_3AsSe_3 IR acousto-optic tunable filter for multi-gas stack emission monitoring 7−133177
Tl_3AsSe_3 single crystal filter for IR source for spectrochemical anal. of flue gases 7−126502
$TlBiSe_2$, prep., characterisation, electrical props. *(French)* 7−70311
$TlBiSe_2$ single crystals, growth and struct. 7−137287
$TlBiSe_2$-$TlBiTe_2$, growth and characterisation, X-ray diffr. studies 7−131129
TlBr, luminescence of direct- and indirect-gap electron-hole plasma 7−85829
TlBr, Schottky defect formation energies, three-body force shell model calcs. 7−131146
TlBr, thermal conductivity, temp. and press. effects 7−143116
TlBr-TlI, ion intensity ratio meas., mass spectra, mathematical representation 7−122738
$TlBr_xCl_{1-x}$ crystalline solid solns., US studies 7−84136
$TlBr_{1-x}I_x$ surfaces, adhesion stability of metal films 7−112153
$TlBr_xI_{1-x}$ crystalline solid solns., US studies 7−84136
TlCl, electronic struct. calc., intermediate neglect of differential overlap method *(Russian)* 7−84673
TlCl, Schottky defect formation energies, three-body force shell model calcs. 7−131146
TlCl, thermal conductivity, temp. and press. effects 7−143116

allium compounds continued
TlCl-Ne lasers, helical hollow cathode, high-current regime 7—74906
TlCl-TlBr, ion intensity ratio meas., mass spectra, mathematical representation 7—122738
Tl_2Cl_6, mixed valence, cond. and positron annihilation lifetime meas., effect of crushing crysts. 7—112280
$TlClO_4$, NMR spin lattice relax. time temp. depend. meas 7—92537
$(TlCl)_x(TlI)_{1-x}$, mass spectrometry and thermodynamics 7—76439
TlD_2AsO_4, dielectric and thermal props. 7—70722
TlD_2PO_4, dielec. and thermal props., temp. and freq. depend. 7—106104
TlF, rot. spectra, mol. consts. and break-down of Born-Oppenheimer approx. 7—90106
TlF, time reversal invariance limits from hyperfine struct. 7—136092
$Tl_{1-x}Ga_xS_2(Se_2)$, solid solns., Tl enriched 7—84274
$TlGaSe_2$, heat capacity studies, 4.2 to 350 K 7—105067
$TlH_{2-x}D_xAsO_4$, partially deuterated cryst. struct. study 7—83867
TlI, orthorhombic, multiple LO phonon scatt. 7—125736
$TlInS_2$ crystals, second optical harmonic, temperature relation 7—82713
$TlInS_2$, ferroelectric transitions, Brillouin scatt. study 7—143987
$TlInS_2$, solid solns., Tl enriched 7—84274
$TlInSe_2$:Li intercalation cpd., elec. and photoelec. props. *(Japanese)* 7—124984
$TlInTe_2$-$TlRTe_2$ (R=La, Ce, Pr) solid solutions, elec. props. and X-ray anal. 7—92172
α-$TlMnCl_3$, weak ferromagnet, reorientation of mag. moment 7—143794
$Tl_4Mo_8P_{12}O_{52}$ crysts., layer and tunnel structs. studies 7—142726
$TlNb_2U_2O_{11.5}$ single cryst. growth from melt and struct. determ. *(French)* 7—83903
$TlNbWO_6$, dielectric optical props., ionic conductivity, phase transitions 7—98433
Tl_3PSe_4, single crystal, growth and characterisation 7—132444
Tl_4PbCl_6 single cryst. acousto-optical and elasto-optical props. 7—113130
Tl_3PdCl_5, cryst. struct. determ., prep. *(German)* 7—117876
Tl_2S, vac. deposited film, electron diffr. examination 7—76662
$TlSbS_2$, long wavelength phonons, far IR spectra, polarisation depend. 7—85661
$TlSbS_2$ photoelectrodes, photoconductivity measured at the solid-electrolyte interface 7—70411
$TlSbS_2$ ternary layered semicond. crysts., dielec. spectra meas., ferroelec. transition determ. 7—77449
$TlSbTe_2$, solid and molten states, thermal conf. temp. depend. study 7—137635
Tl_2Se-As_2Se_3 system, aligned structures 7—86152
Tl_2Se-$CuGaSe_2 \rightleftarrows TlGaSe_2 + CuTlSe$ reciprocal system, phase diagram 7—92966
Tl_2SnS_3 crystals, growth, photoelectric props. 7—85992
$Tl_xV_6S_8$, low temp. phase transition, PES study 7—98430
TlX, X=H, H^+, H_3, props. , relativistic and correlation effects, pseudo-pot. calcs. 7—122383
$Tl_2InPrTe_4$, X-ray diffr. and electrophysical investigation 7—91535

hawing *see melting*

heoretical mechanics *see mechanics*

hermal analysis
acetylene, adsorbed on Ni (100), chemisorption, thermal decomp. 7—137707
acrylic polymers, with phenyl benzoate side groups, mesophase obs. *(Russian)* 7—137199
adamantanamine hydrochloride, solid, phase transition and mol. rot. investig. 7—77543
alkali metal, hydridoaluminates, prep., thermodynamic and structural props. 7—83817
N(p-n-alkoxybenzilidene)-p-n-alkylanilines, nematic-smectic and smectic-smectic phase transitions 7—137558
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7—77499
alunite, water containing, optical, thermal and X-ray characterisation 7—69663
amorphous alloys, consolidated, strengthening mechanisms 7—113644
amorphous powder, mechanically alloyed, form. and consolidation 7—113474
anthracene-TCNB, phase transitions, Brillouin scatt. and calorimetric studies 7—142998
application software trends 7—95579
BABA mixtures, smectic C-nematic transitions, DSC studies 7—105019
β-$(BEDT\text{-}TTF)_2I_3$, phase stability, DTA studies 7—118058
3,5-bis-[4-(trans-4-n-propylcyclohexyl)phenyl]-1,2,4-thiadiazol, liq. cryst., thermal and X-ray study 7—124507
bisphenol-A polycarbonate-PMMA blends, miscibility, DSC obs. 7—132622
1,6-bis[4-(trans-4-n-propylcyclohexyl)phenyl]-hexane, liq. cryst., thermal and X-ray study 7—124507
boundary elements methods, conf., London, England (July 1986) 7—66840
box-type solar cooker, thermal performance, transient anal. 7—119676
cadmium and selenium diethyldithiocarbamates, simultaneously heated, behaviour, IR spectra 7—113173
cadmium arachidate, order disorder transition, trace water effects 7—104617
caesium pentadecafluorooctanoate-water system, lyotropic mesomorphism, phase diagram 7—142560
cellulose-polyacrylonitrile blend films, struct. from N,N-dimethylacetamide-LiCl solns. 7—111430
chiral liquid crystal polymers, struct. characterisation of thermotropic polyesters 7—111383
cholestanyl fluoroalkanoates, phase transitions 7—111876
cholesterol, fibrous crysts., growth in silica gel 7—113368
cholesterol-cholesteryl oleate binary mixtures, X-ray diffr. study 7—75987
cholesteryl, α,α,ω-trihydrofluoroalkylcarbonates, homologous series, phase transitions, DSC studies 7—111882
cholesteryl 4-n-alkoxy-3-methoxybenzoates, synthesis, thermal props. 7—137213
composite propellants, fracture props. correl. with dynamic mech. relax. 7—91714
compound parabolic concentrator, nonimaging secondary, design, testing 7—144792
compound-parabolic concentrating solar-energy collectors, math. model for thermal behaviour 7—78675
computer-aided thermodynamics 7—67259
counter-flow regenerators, thermal performance prediction, noniterative method 7—93520
cycloalkanes, chain folding and mesomorphic states DSC anal. 7—117105

thermal analysis continued
cycloheptimidazoles, 2,6-disubstituted, liq. cryst. transition temps., DSC 7—124502
cyclooctanol, phase behaviour at temp. 100 K, 370 K and press. up to 300 MPa 7—137541
design of equipment for probing thermal effects of substances *(Russian)* 7—121107
di-n-dodecyl quaternary ammonium salts, thermotropic liq. cryst. props. 7—124091
diacetylene crystal, irradiated, inherent phase transition and polymerisation mech. 7—86622
p-dichlorobenzophenone, phase transitions, Brillouin scatt. and calorimetric studies 7—142998
dielectric and DTA study 7—70691
differential scanning calorimeter, specific heat data correction method 7—95591
differential scanning calorimetry, high-temp. 7—95590
differential scanning calorimetry and complex admittance analysis of proton-conducting polymer blends 7—126525
dimethylsiloxane-ethylene oxide copolymer network, elec. cond., ^{23}Na NMR study 7—99590
5,6-dioxycarbonyl(2.2.1)bicyclohept-2-ene, phase transition, temp. depend., plastic crystal phase form. 7—137542
dipalmitoylthiophosphatidylcholine, chiral, thermotropic props., config. effect 7—71706
dysprosium tartrate hydrate, gel grown, characteris. and thermal behaviour 7—111525
eicosane-poly(1-octadecene-co-maleic anhydride) blend, crystallisation, props. investig. 7—76033
electret forming polymers, struct. and physical props. 7—97993
epoxidised natural rubber-PVC blends, compatibility investig. 7—84296
ethylene, adsorbed on Ni (100), chemisorption, thermal decomp. 7—137707
ethylene, phase diagram up to 10 kbar, DSC studies 7—91762
ethylenediammonium molybdate, prep., cryst. struct., thermal behaviour 7—83938
ferromagnets, crystalline and amorphous, intrinsic mag. props., DTMG and DTA studies 7—143785
fibre reinforced polyphenylene sulphide, injected moulded, fracture toughness, microstruct. details and effect of testing conditions 7—78184
first wall materials, plasma induced defects, tensile props. 7—141285
flowing-film liquid direct solar absorption receiver, expt. investigation 7—144903
glassy polymers, structural changes, thermal anal. and mechanical tests 7—98451
glycerol, glass form. by linear cooling, isothermal enthalpy relax. meas. 7—84318
graphite oxidation products, thermal decomposition, DSC studies 7—106648
heavy metal fluoride glasses, melting, DSC studies 7—104965
helical-type, roughened, double pipe heat exchangers, thermal anal. 7—93521
N(p-n-heptyloxy benzylidene) p′-n-octylaniline, structural and phase transition studies of mesophases 7—111377
hexa-O-alkanoyl-scyllo-inositoles, struct., X-ray study 7—104546
N-4-hexadecylpyridinium chloride, anhydrous, mesomorphic behaviour 7—111376
n-hexane-toluene mixture, excess molar enthalpies, isothermal flow calorimeter meas. 7—118106
high melting ionic solid glasses, twin roller quenching technique and prep. 7—144355
high-pressure differential thermal analysis/dilatometric apparatus based on an Instron capillary rheometer 7—102407
ice, phases V and VI, phase transitions, heat flow calorimetry obs. 7—131293
IN 718, direct aged Ni-base superalloy, microstruct. charactn. and elemental partitioning 7—126122
In-Se based phase change reversible optical recording film 7—75090
isothermal thermogravimetric analysis, microcomputer based system 7—114025
kinetic-plane method for parameters calc. 7—115956
$Li_2Ti_3O_7$, cryst. growth, phase transitions and props. 7—92856
lipid bilayers, phase transitions, Raman and calorimetric obs. 7—71674
liquid crystal droplet-polymer light control film, struct., optical and thermal props. 7—123133
liquid crystal droplet-polymer light control film, struct. and optical props. 7—123132
liquid-crystalline poly(β-thioester)s containing *p*-oxybenzoate triads, DTA and optical polarising microscopy 7—83668
low-molecular cpds., in micropores of oriented polymer matrices, melting thermodynamics *(Russian)* 7—137595
mitochondrial membranes, physicochem. props., DSC anal. *(Japanese)* 7—100829
NASICON, superionic cond. and intermediate structure 7—142743
Nimocast 713, hot corrosion in molten salt mixture 7—119423
organosilicon films, plasma polymerised, phase transition effects 7—131290
oscillating travelling waves at thermal decomposition reactions 7—93261
passive solar space heating comparisons for seven houses in Birmingham, UK 7—78615
PET films, high-energy in implantation 7—83782
PET thermotropic liq. cryst. copolyester, drawing behaviour 7—71255
plastic film solar air and water heaters, thermal performance 7—119686
PMMA-polystyrene-co-acrylonitrile blends, miscibility window, laser light scatt. obs. 7—91825
poly(butene-1)-ethylene-propylene blends, phys. charactn. 7—76032
poly(ether sulphone)-poly(dimethylsiloxane) alternating block copolymers, Pt-catalysed hydrosilylation study 7—113923
poly α-chloroacrylates, smectic C* liq. cryst. side-chain polymers 7—111365
poly L-alanine, struct., heat treatment effect, DTA, X-ray diffr., IR spectra 7—111427
poly-2,6-dimethyl-1,4,-phenylene oxide, miscibility with styrene-tetramethylpiperidinyl methacrylate copolymers 7—98457
poly-4-methyl-pentene-1, uniaxial draw by solid-state coextrusion 7—93043
poly-N-5-n-alkyloxycarbonyl-n-pentyl maleimides, γ-transition, functional group effects 7—90461
polyacrylate-phenoxy blends, exchange reactions, phys. and mechanical behaviour 7—75491

thermal analysis continued
polyacrylonitrile, swelling, struct. changes, wide-angle X-ray scatt. obs. 7−91479
polybutadiene dielectrics, cyclized, thermal and mech. props. *(French)* 7−124561
polybutylene terephthalate-liq. cryst. polyester blend, phase transitions, crystn., DSC obs. 7−124501
polycarbonate phenoxy blends, physical behaviour, interchange reactions in melt-processing conditions 7−77936
polydiacetylene, urethane substituted, solid-state phase transitions 7−142991
polydiacetylenes, cryst. struct., thermal studies 7−97990
polydimethylsiloxanes, cyclic and linear, low temp. props., viscometric and calorimetric obs. 7−89225
polyesters, thermotropic with rigid chains, thermal props. 7−69572
polyetheretherketone matrices, crystallisation kinetics 7−76037
polyethylene, brominated, crystallisable, location of comonomer units 7−91481
polyethylene, tensile and melt flow meas., antioxidants influence 7−142869
polyethylene blends, mixing, morphology, rheology, mech. props. 7−126197
polyethylene copolymers, cross-fractionation according to copolymer comp. and mol. wt. 7−83781
polyethylene oxide-PMMA blends, nonisothermal crystallisation 7−69870
polyethylene oxide-water system, phase anal. *(Russian)* 7−84228
polymer blends, intermolecular interaction, crack healing study 7−117833
polymer matrices and composites, thermal sonic anal. 7−100177
polymer miscible blends, prep. from two cryst. polymers, thermodynamic polymer-polymer interaction determ. 7−84289
polymethacrylates, smectic C* liq. cryst. side-chain polymers 7−111365
polyphosphazenes, struct., thermodynamic, thermal behaviour 7−117835
β-polypropylene, premelting and recrystallisation behaviour 7−118068
polypropylene, syndiotactic, thermophysical props. 7−98593
polythiophenes, structure, ^{13}C NMR and Fourier transform IR studies 7−76041
polyureas, polymerisation, IR spectra, thermal anal. and glass transition temp. meas. 7−125737
polyurethanes, polymerisation, IR spectra, thermal anal. and glass transition temp. meas. 7−125737
polyurethanes, struct., props., flexible segments comp. effects *(Russian)* 7−137272
polyvinylidenefluoride, melting, electron irrad., DSC obs. 7−69872
polyvinylidine fluoride, increase in crystallinity by electron beam irrad. 7−84032
propane, phase diagram up to 10 kbar, DSC studies 7−91762
β-propiolactone-polyethylene glycol copolymers, synthesis and characterisation 7−93323
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth metal chlorides, melting, liq. molar vols. 7−124461
residential building thermal energy storage effectiveness rel. to convection coeffs. at massive exterior walls 7−139136
roof as solar collector/storage system, thermal performance, comparative studies 7−119677
rubber, natural and synthetic, cold crystallisation, chain microstruct. effects 7−92522
smectic C liq. cryst., doping induced helical struct., ferroelec. props. 7−99749
sodium cellulose sulphate-water system, phase transform., calorimetry 7−118097
solar cookers, box-type, thermal test procedures 7−144909
solar heating system collectors, thermal losses coeff. and effective absorptivity 7−86821
steel, Fe-Cr, martensitic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, Fe-Ni-Cr, ferritic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, stainless, NaCl coated, hot corrosion 7−78342
steel electrogalvanized sheet, Zn phosphating, heavy metal additions and cryst. modification effects 7−100441
TCNQ metallic salts, elec. cond. and mag. props., solvent inclusion effects 7−84862
terephthalylidene-bis-p-n-decylaniline, structural and phase transition studies of mesophases 7−111377
tetraethyleneglycol diacrylate, photopolymerisation, thermal and mechanical anal. 7−119529
tetramethylammonium tetrabromoplatinate(II), cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tetrahalogenometallate (II), solid soln. single crystals, phase transitions 7−124471
tetramethylammonium tetrahalopalladate(II) cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
$(TMTSF)_2ClO_4$, mag. field induced SDW transitions, DTA study 7−92069
transition metal aluminides, thin film reaction couples, interconnect fabrication 7−118318
Triton X-114-H_2O, lamellar phase to isotropic liq. transition, phase diagram determ., DSC anal. 7−111871
zero-method heat flux sensor, thermal fields study 7−128575
Ag_2CrO_4, single cryst. gel growth, thermoanalytical and morphological studies 7−69662
Ag_7GeS_5I superionic cond. and struct. studies *(French)* 7−124221
Ag_2HgI_4, elec. cond., α-β transition, prep. technique effect 7−105114
Ag_3O_4 cryst. struct. and prep. by anodic oxidation of aq. solns., thermal anals. *(German)* 7−83906
Al ingots, grain refinement in heating oscillator *(Japanese)* 7−93039
Al-Cu-Mg-Si, thermodynamics, unidirectional solidification 7−77979
Al-Ge-Cr(Mn), quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al-Kr, Kr ion implanted in Al films, precipitation, phase stability of Kr in cavities 7−106519
Al-Mg, high temp. ageing, DSC study 7−138768
Al-Mg, melt spun, metastable phase, TEM and DSC obs. 7−113523
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Si-Cr(Mn), quasicrystals, rapid quenching, microstruct., thermal stability, elec. resist. 7−111396
Al-Zn (29 at.), α/β interfacial energy, DSC meas. 7−144374
Al-Zn-Mg system, phase equilib. in Al corner 7−132573
Al-Zn-Sn, phase diagram, isothermal diffusion in ternary system 7−100187

thermal analysis continued
Al_6CuMg_4, endothermic quasicrystalline-crystalline transition, electron microscopic and DSC studies 7−111868
Al_6CuMg_4, endothermic quasicryst.-cryst. phase transition 7−131301
$Al_{86}Mn_{14}$ quasicrystals, struct- and crystallisation, DSC obs. 7−97937
$Al_{70}Ni_{15}Si_{15}$, amorphous, crystallization study, DTA, resistivity anal. *(French)* 7−75994
Al_2O_3 powder, transition, ultrafine spherical particles, high temp. characts. 7−132541
Al_2O_3, stored energy from irrad. and mechanical deformation 7−141283
Al_2O_3-ZrO_2 powder, characts. rel. to synthesis chemistry 7−106474
$Al_{85}Si_1Mn_{14}$ quasicrysts., thermal transform. to conventional crysts., two-step mechanism 7−105002
As-Sb-Se glass ceramics, crystallisation and microstructures 7−104575
B, crystalline powders, oxidation, DTA and TGA studies 7−106720
Ba-Ag, phase diagram, cryst. struct., thermal anal., metallography, X-ray diffr. 7−77940
Ba-La system, phase diagram 7−106481
$BaMoO_4$-$Ce_2(MoO_4)_3$ system, synthesis, physicochemical props. 7−98006
$Ba_8Mo_{20}O_{65}(OH)_6.12H_2O$, synthesis and props. 7−69677
BaO-B_2O_3-GeO_2 amorphous system, crystallisation studies *(Chinese)* 7−117816
BaO-V_2O_5-Fe_2O_3, barium vanadate glasses, IR spectroscopic and DC resistivity studies 7−137934
$Ba(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
$BaTiO_3$-$Nd_2Ti_2O_7$ pseudobinary system, X-ray phase and thermal analyses and electrophysical characteristics 7−91764
$Ba_2YCu_3O_{6.5+x}$ single crystals, prep., struct., TGA, X-ray powder diffr. methods 7−98019
$Ba_2YCu_3O_{7-x}$, high temp. supercond., thermal analysis, 700-1000°C 7−119591
$Ba_2YCu_3O_x$, high temp. supercond., charact. rel to O_2 partial press., thermoanal. meas. 7−118057
$BaZnGeO_4$, powder calcination, phase transitions, DTA, dielec. meas., X-ray diffr., SEM obs. 7−126107
Bi molybdates, synthesis, electrophysical props. 7−99135
$Bi_{26}O_{38}F_2$, synthesis and cryst. struct. determ. 7−83899
$Bi_{12}TiO_{20}$, solid-state synthesis, DTA and X-ray diffr. studies *(Japanese)* 7−126039
$Ca_2Pt_3O_8$ hydrothermal synthesis and structural charactn., X-ray and neutron diffr. 7−83909
$Ca_3(VO_4)_2$-$Pb_3(VO_4)_2$ solid solns., nonlinear props., optical structural, dielec. and thermal meas. *(French)* 7−124527
$CdAs_2$, temperature and enthalpy of melting, DSC studies 7−91769
$CdIn_2S_4$, single crysts., growth from soln. in a melt 7−85979
$Cd(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
CeD_x single crysts., magnetic order and structural transformations studies 7−112745
$CeFe_2$ Laves phase intermetallic cpd., amorphisation by H absorpt. 7−142581
CeH_x, phase relationships and transitions in homogeneity range 7−84201
$Ce(PO_3)_3$-$RbPO_3$ system, composition diagrams, X-ray, thermal and IR anal. *(Japanese)* 7−124448
Co, heat capacity in region of aligned phase transitions *(Russian)* 7−143034
Co-Fe-Si-B metallic glass, current pulse heating, crystallisation, elec. resist. 7−83722
Co-Ge alloy films, vacuum deposited, struct. 7−124753
Co-Mn, oxidation, 1273-1473 K, scale struct. 7−106695
Co-Ni, melt-spun alloys, martensitic transform. 7−93012
Co-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7−83687
$Co_{80}Nb_{14}B_6$, $Co_{84}Nb_{10}B_6$ metallic glasses, martensite transform., plasticity, internal friction 7−106574
Cr, sulphidation kinetics, scale structures, 973-1173 K 7−119434
$Cr_{23}C_6$, sulphidation props. at 1073 K in H_2-H_2S atm. of 10^{-6} to $10^{3.5}$ Pa S press. 7−126273
$Cr_{1-t}Mn_tAs$, paramag.-helimagnetic transition, struct. and mag. characts 7−132020
$CsHSO_4$, struct. phase transitions, influence of water and thermal and mech. treatment 7−137552
$CsHSO_4$, superionic protonic conductor, mechanism and proton dynamics 7−143093
$CsHSO_4$, water adsorpt., phase transitions, calorimetry and thermogravimetry study 7−105013
$Cs_6H_2(W_3O_{10})_4$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
Cs_2NaRBr_6(R=Dy, Ho, Tm), rare earth bromo-elpasolites, soft rotary mode and structural phase transition 7−142987
CsOH(D), low temp. antiferroelectric ordering transition studies 7−85551
Cu (II) complex, IR, Raman, UV and visible spectra, thermal anal. 7−99860
Cu complex, Cu(II) alkanoate, crystalline and columnar phase structs. 7−111526
Cu, flow stress 7−144463
Cu-Fe-Sn ternary system, phase diagram *(Chinese)* 7−132560
Cu-In system, solid-liq. equilib. on Cu-rich side of phase diagram, DTA obs. *(German)* 7−100193
Cu-In-Se ternary system, phase relations 7−111824
Cu-Mn (20 at.%), ordering and solute segregation to dislocations 7−86184
Cu-Nb-Sn, amorphous alloy prep. by mech. alloying of elemental powders 7−144331
Cu-Ru-Ni, effect of Ni addition on Cu-Ru system, phase diagrams, physicochemical anal. 7−100184
Cu-Ti, amorphous alloys, crystn. 7−83747
Cu-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
Cu-Zr amorphous alloys, liq. quenched and sputtered, struct. relax and glass transition, comparison 7−97981
$CuGaTe_2$, near-stoichiometric, elec. props., acceptor level, DTA study 7−124925
CuI, thermodynamic data, report 7−111915
Cu(II) complexes, stereochem., struct. phase transition 7−105010
$CuInS_2$ phase diagram, allotropic transitions, DTA and X-ray diffr. studies 7−118093
$(CuInTe_2)_{1-x}(MnTe)_x$ diluted mag. system, phase relationships 7−124451
$CuSO_4.5(H, D)_2O$, H/D abundance ratio of D_2O, thermogravimetric anal. 7−136081
$CuSO_4.5H_2O$, dielectric and DTA study 7−70691
CuTi-NiTi quasi-binary eutectic system phase diagram 7−106485

ermal analysis continued
Cu_xY_{1-x}, amorphous metallic glasses, form., crystn. 7—77867
Er-El system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7—100192
$ErBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7—118657
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7—118797
$Eu_x(NH_3)_yTiS_2$, mixed valence intercalation cpds., synthesis, characterisation, mag. props. 7—85352
$EuTiS_2$, physical props. *(French)* 7—77206
Fe, pure, nitrocarburizing, compound layer form. and growth, microstructural evolution kinetics 7—138900
Fe-Al (38 to 52 at.%), high temp. mag. meas. *(German)* 7—77263
Fe-Al-C system, cast Fe, microstruct. and mech. props., effect of Al content props. *(Korean)* 7—77967
Fe-based metallic glasses, initial stage crystn. struct. and morphologies 7—83743
Fe-C system, double eutectic equilibrium corroboration 7—126100
Fe-CR-C-B amorphous alloys, crystn. rel. to comp., DSC, X-ray diffr. *(Korean)* 7—137250
Fe-Cr, σ-phase, phase transform. *(French)* 7—86164
Fe-Cr-C-Nb system, white cast Fe, phase equilib., solidification and solid-state phase transforms. 7—132578
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7—83746
Fe-Ge alloy films, vacuum deposited, struct. 7—124753
Fe-Ni-B-Si metallic glasses, reversible structural relax., DSC and X-ray diffr. 7—131054
Fe-Ni-S system, thermodynamic props., phase equilib., 700-900°C, thermogravimetry 7—119241
Fe-rare earth-B powder oxidation during permanent magnet prep., DSC study 7—132804
Fe-X (X=P, Si, C, B), amorphous alloys, thermodynamic and kinetic stability rel. to local order *(French)* 7—83687
Fe-Y compositionally modulated films, thermal anal. 7—99512
FeB annealed glasses, fracture strength 7—86359
$Fe_{100-x}B_x$, amorphous alloys, crystallisation, Curie temp., mag. props., Mossbauer spectra *(Japanese)* 7—92425
$Fe_{82}B_{18}$ rapidly quenched amorphous ribbon, surface struct. and catalytic activity 7—84453
$Fe_{78}B_{22-x}Si_x$, metallic glasses, crystn. and thermal stability 7—83745
$Fe_{81}B_{13.5}Si_{3.5}C_2$, amorphous alloy, crystallisation kinetics, DSC, X-ray diffr. 7—76006
$Fe_{83}B_{14}Si_{1.5}C_{1.5}$ metallic glass, struct. evolution during crystn. 7—83744
$Fe_{81}B_{13.5}Si_3C_2$, Metglas 2605 SC, crystallisation kinetics 7—142634
$Fe_{74}Co_5Cr_5B_{16}$, $Fe_{74}Co_{10}B_{16}$ metallic glasses, structural relax. and embrittlement rel. to comp. 7—106607
$(Fe_{1-x}Co_x)_{75}Si_{15}B_{10}$, metallic glasses, thermoelec. and calorimetric studies 7—137904
FeCrCPSi metallic glass, Curie temp. determ., quench rate effects on structural state, DSC study *(French)* 7—99458
$Fe_{71.5}Mn_8B_{9.5}Si_{11}$, amorphous, Curie temp., influence of struct. relax. 7—97977
$Fe_{40}Ni_{40}B_{20}$, $Fe_{40}Ni_{40}P_{20}$, metallic glasses, struct. relax. kinetics, calorimetric and resistometric studies 7—97976
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, isothermal reversible relax., calorimetric investig. 7—97975
$Fe_{40}Ni_{40}B_{20-x}Al_x$ metallic glasses, crystn., influence of Al 7—76029
$Fe_{40-x}Ni_{40}Cr_xB_{20}$ metallic glasses, thermal stability, exoelectron study, crystallisation 7—131024
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous ribbon/steel system, impact weldability domain 7—113851
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, crystallisation and struct. relaxation study 7—83707
$Fe_{50}Ni_{30}Si_{10}B_{10}$ amorphous alloy, crystn. and relax. during pulse heating 7—71228
Fe_2O_3, impulse treatment, phase composition and packing defects anal. 7—98425
Fe_yO, solid wustite thermodynamic props., subdomain stability boundaries, numerical results *(French)* 7—124555
$Fe_{80}Si_xP_{20-x}$ amorphous alloys, crystn. *(Korean)* 7—131046
$Fe_{1-x}Ti_x$, amorphous alloys, prod. by vap. quenching, thermal stability 7—83671
FeZrBiSiB amorphous alloy, relax. phenomena mag. props. 7—111408
Ga-Ge-Se-Te films for reversible optical recording 7—68801
n-GaAs, vacancy-interstitial pair, stored energy released in recombination under electron irrad. 7—104750
$Ga_xIn_{1-x}P$, thermochemical props., calorimetric and Knudsen effusion obs. 7—111896
$Gd_{63.2}Co_{36.8}$, glass-forming eutectic, thermodynamic props. 7—118135
$(Ge_2S_3)_{1-x}(Sn_2S_3)_x$ chalcogenide glasses, molecular struct., crystallisation 7—91459
$GeSe_2$, glassy, phys. props., influence of O traces 7—104567
$GeSnSe_3$ glass, exception to Ioffe-Regel rule, scanning calorimetry, Mossbauer spectra and molar vol. meas. 7—83725
Ge_xTe_{100-x} glasses, bulk, crystn. studies 7—124108
H_2O, liquid to ice transition, DSC anal. 7—69868
H_3PO_4-CaO-Al_2O_3-SiO_2, hardened bodies, thermal changes, microhardness 7—113682
$H_4Si(W_3O_{10})_4$, polytungstic acid, preparation and physical props. 7—106202
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7—119247
HgTe-Bi system, constitution diagram 7—92968
Ho-Tl system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7—100192
In_2S_3, single crysts., growth from soln. in a melt 7—85979
KCl-$BiCl_3$ mixtures, molar enthalpy of mixing, high-temp. calorimetry determ. 7—118104
$KNiAsO_4$, mica analogue, ion-exchange reactions and phys. props. studies 7—144700
$K_2RhH_2OCl_5$ thermal transforms., differential-thermal and X-ray diffr. phase anals. 7—86587
KVO_3, heat capacity meas. 7—118124
$Kr_2Pb_4Nb_{10}O_{30}$, formation reactions, thermogravimetric and X-ray diffr. studies 7—126432
La-Ba-Cu-O, high T_c supercond., physical and chemical properties 7—131855
$LaAsO_4$, dielec. and thermal props. 7—131722
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., crystallochemical studies 7—98081
thermal analysis continued
$LaNi_5$-H_2 system, intrinsic degradation, thermal H_2 absorption-desorption cycling effects 7—86839
$LaNi_5$-MNi_5, M=Pr, Ce, Nd, phase rel. and H adsorpt. props. *(Chinese)* 7—71149
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., crystallochemical studies 7—98081
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp., localisation and struct. transitions 7—105760
$La_{2-x}Sr_xCuO_{4-y}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7—118657
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7—100160
LiF-PbF_2 system, phase diagram, TG-DTA methods 7—86137
$LiFeSi_2O_6$-$CaMgSi_2O_6$ glass system, pyroxene solid soln. crystallisation 7—76003
$LiIO_3$ powder α to γ to β phase transitions, neutron thermodiffraction study 7—84248
$LiMS(Se)_2$ (M=La, Ce, Nd, Sm, Gd, Tb, Dy, Ho, Er, Y), synthesis, order-disorder transition, mag. props. 7—111862
Li_2O-SiO_2 glass ceramic, crystn. kinetics 7—142596
MV_2O_6, M=Mg,Ca,Mn,Co,Ni,Cu,Zn,Cd, polymorphism, X-ray and DTA studies 7—142683
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., charact. 7—132546
$Mg_xNi_{1-x}O$ and NiO, H_2 reduction on spherical C particles 7—106828
MgO, stored energy from irrad. and mechanical deformation 7—141283
Mn-Fe-O spinels, Mn cation, deficient, reduction-reoxidation behavior, TGA, elec. cond. meas. 7—113903
Mn-Nb, high temp. sulphide corrosion, scale growth and morphology 7—86438
$Mn_{1-t}Cr_tAs$, helimag. states transitions, phase diagram and strong mag. field effects studies 7—118809
MoB_2, single cryst. prep. from Al flux, props. 7—132429
Mo_xNi_{1-x}, amorphous, crystn. temp. and activation energy, DTA 7—75995
NH_4IO_4, heat capacity meas., adiabatic calorimetry 7—118123
$(NH_4)_xMgP_yO_z$ system, heat treatment products, IR and X-ray diffr. obs. *(Japanese)* 7—126431
$(NH_4^+)_{0.24}(NH_3)_{0.23}TiS_2^{0.24-}$, deintercalation and reintercalation energies 7—86605
$(NH_4)_2SO_4$, structural changes 7—76394
NO, adsorpt., decomp. and desorpt. on Rh (100), EELS and TPD investig. 7—112069
$(Na_2B_4O_7)_{80}$-$(Pb_3O_4)_{20-x}$-$(CuO)_x$ glasses, IR spectra, optical absorpt., DSC obs. 7—104568
$Na_4H_2(H_2(W_3O_{10})_4)$, polytungstic acid salt, synthesis, structure and physical props. 7—106203
$Na_3In_2P_3O_{12}$, superionic conductor, electrophysical props. 7—98561
$Na_2LaMZrP_3O_{12}$ (M=Co,Al,Cr), superionic conductors, synthesis and characts. 7—137611
$NaM_2ZrP_3O_{12}$ (M=Ni,Cu), superionic conductors, synthesis and characts. 7—137611
$Na_{0.7}MnO_2$ bronze, defect struct. w.r.t. electrochem. cathode pot., elec. cond., thermoelec. and thermogravimetric meas. 7—119536
$NaNO_2$, ferroelectric, paraelectric transition, surface charge layer effect *(Korean)* 7—143983
Na_2O-Y_2O_3-GeO_2 system ceramic ionic conductor, prep. by solid state reaction and activation energy meas. 7—84388
Na_2SO_4-$Y_2(SO_4)_3$-Al_2O_3 solid electrolyte, electrical, thermal and phase props. studies 7—84381
$Na_{5+x}YAl_xSi_{4-x}O_{12}$ ceramics, cond., struct., density 7—76480
Nd-Zn, alloying behaviour, phase diagrams 7—77941
$Nd(Co_{1-x}M_x)_5$ M=Ni, Cu, Al, struct. and phase equilibria 7—118078
Ni (II) complex, IR, Raman, UV and visible spectra, thermal anal. 7—99860
Ni-Al intermetallic cpds., vacancy diffusion mechanism, DSC and positron annihilation studies 7—105104
Ni-Al-W system, cast, phase equilib. 7—132569
Ni-based metallic glasses, initial stage crystn. struct. and morphologies 7—83743
Ni-Be-Ti, β-phase dissoln., influence of soln. treatment *(Chinese)* 7—71186
Ni-Fe-La system, phase equilib. and H absorpt. *(Chinese)* 7—144364
Ni-Ge alloy films, vacuum deposited, struct. 7—124753
Ni-Mo, eutectic alloys, microstruct. rel. to undercooling 7—92975
Ni-P films, electrodeposited, amorphous, crystn. *(Chinese)* 7—131039
Ni-P-B metallic glasses, melt quenched, crystallisation, elec. transport props 7—83758
Ni-Ti, thermal cycling, precip., martensitic transform. 7—113560
Ni-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7—106467
Ni-Zr metallic glasses, thermal stability, struct. relax. 7—104585
Ni-Zr thin film multilayers, solid state amorphisation, differential scanning calorimetry study 7—75992
$Ni_{1-x}Al_x(OH)_{2+x}$, Ni reduction kinetics, density and specific surface meas. 7—86588
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$, metallic glass, thermal stability, internal friction, TEM, DTA 7—69598
$Ni_{55}Cr_5Nb_{40}$ metallic glass, thermal and mech. stability, Cr effects 7—144479
$Ni_{73}M_5Si_{10}B_{12}$ metallic glasses, M=Ti, V, Cr, Mn, Fe, Co, Ni or Cu, thermal stability effect of transition metal admixture 7—83757
$Ni_{60}Nb_{40-x}Al_x$ metallic glasses, annealing effects 7—126149
$Ni_{60}Nb_{40-x}Cr_x$, amorphous, crystallisation, DSC, X-ray diffr. 7—69603
$Ni_{81}P_{19}C$ metallic glass, crystallisation characterisation 7—111397
$Ni_{78}Si_xB_{22-x}$ metallic glasses, thermal stability, crystallisation, exoelectron emission study 7—131025
$Ni_{33}Ti_{67-x}V_x$ alloys, amorphous, stability and elec. transport props. 7—104571
NiZr amorphous wires, formation by mechanical deformation and solid state reaction 7—86091
Np-O system, phase relationships 7—86140
Pb-Bi, undercooled droplets, crystn. kinetics during rapid solidification 7—77983
PbO-SiO_2-B_2O_3-GeO_2, glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7—91845
$Pb(ReO_4)_2$, thermal, dielectric and elec. transport props. 7—104992
PbTe-Ga_2Te_3 system, $PbGa_6Te_{10}$ phase existence, X-ray and thermal anal. *(Japanese)* 7—124449
$Pb_3V_2O_8$:Cu^{2+}, undoped and doped, struct., EPR, DSC, photoacoustic spectrum 7—125530
Pd-Se system, phase relations, superconductivity 7—113519

thermal analysis continued
Pd-Si, rapidly quenched, comparison with form. by mech. alloying 7−113476
Pd-Si metallic glasses, surface-induced crystn., DSC study 7−111405
Pd(II) complexes, planar monosubstituted oxamides, vibrational spectra 7−122536
PdSi-base amorphous alloys, thermal expansion and vol. effect on transform. *(Chinese)* 7−143054
Pr-Co-B ternary phase diagram, Co rich portion 7−144366
Pr-Fe binary system, phase diagram *(Chinese)* 7−132561
Pr-Fe-B ternary system, X-ray diffraction and thermal anal. 7−113525
Pt (111), coadsorption of HF and H_2O, surface H_3O^+ identification 7−91999
RbH_2PO_4, water adsorpt., phase transitions, calorimetry and thermogravimetry study 7−105013
RbI-AgI-CsI, phase diagram, DTA and X-ray investig. *(Russian)* 7−111831
Re oxides, catalysts, interaction with decomposition products of NH_4ReO_4 and silica 7−139043
Ru(1010), coadsorbed CO and Na, interactions 7−92000
Sb-Sn system, peritectic alloys, solidification, microsegregation 7−132593
Se, electroradiographic plates, DTA analysis 7−89293
SeO_2-V_2O_5 glass system, phase diagram 7−111414
$Se_{1-x}Te_x$, amorphous photoreceptor films, thermal and mech. props. of single and double layers 7−84606
Se_xTe_{100-x} glasses, struct. and electronic props., differential scanning calorimetric study 7−142612
SiC fibre/whisker reinforced osumilite glass-ceramic, thermal conductivity/diffusivity 7−131378
SiC yarn, thermomech. props. 7−78282
Si_3N_4 based bodies, nature of sialon joints 7−113857
$SmMn_2Ge_2$, P-T mag. phase diagram 7−132018
$SmNi_2$ Laves compound, H-induced amorphisation 7−76001
SrO-GeO_2 system, time-temp.-transform. diagram *(Japanese)* 7−132592
$Sr(ReO_4)_2$, thermal, dielectric and elec. transport props. 7−104992
Te-Ge-Pb chalcogenide glasses, struct. relaxation, enthalpy changes, DSC study 7−142622
Te-Ge-Sn-Au phase change recording film for optical disk 7−76706
TeO_2-V_2O_5-Fe_2O_3 glasses, structure and glass transition temp., DSC studies 7−98450
$Te(OH)_6.2NH_2CH_2COOH.H_2O$, thermal and vibr. props. 7−69840
$2TeO_2.V_2O_5$-$Li_2O.V_2O_5$-$2TeO_2$ system, phase diagram and IR spectrum 7−77956
Th-Ag system, phase diagram 7−144365
Ti-Ni-Cu, amorphous alloys, thermal devitrification kinetics 7−131049
Ti-Pd, rapidly quenched, comparison with form. by mech. alloying 7−113476
Ti-transition metal alloys, mechanically alloyed, glass form. 7−142643
Ti-Zr-Be metallic glasses, amorphous phase separation, re-evaluation 7−91466
TiF_2 with fluorite struct., high press. synthesis and cryst. struct., thermal stability 7−132445
TiNi alloy, cold working, heat treatment, phase transform., DSC obs. 7−71184
TiO_2-MgO-M_2O, M=Li, K, Rb, phases in region of hollandite crystn., cryst. chem., elec. cond. meas. 7−98388
$TlAlF_4$, ferroelastic, struct. phase transitions and cryst. struct. 7−111858
TlD_2PO_4, dielec. and thermal props., temp. and freq. depend. 7−106104
V-P-Mo-O system, preparation and characterisation 7−104664
V_2O_5-Bi_2O_3 glasses, prep. and charactn. 7−111411
WC based cemented carbide systems, sintering, binder comp., phase equilib., mech. props. 7−71151
Y-Ba-Cu-O high T_c supercond., optimum prep. conditions determ., thermal and X-ray analyses 7−106475
Y-Ba-Cu-O high T_c supercond., polymorph phase relations, X-ray studies 7−111827
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7−117873
Y-Ba-Cu-O high T_c supercond., orthorhombic to tetragonal transition, thermogravimetric and X-ray diffr. studies 7−118083
Y-Ba-Cu-O high T_c supercond., nonstoichiometric phase, press. and temp. depend. studies 7−118112
Y-Ba-Cu-O high T_c supercond., Cu^{3+}/Cu^{2+} ratio, lattice parameters and onset temp. determ. 7−118116
Y-Ba-Cu-O high T_c supercond., O nonstoichiometry and struct. 7−118117
Y-Ba-Cu-O high T_c supercond., O content-transition temp. relations 7−118635
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond. ceramics, struct. and resistivity, heat treatment effects 7−126148
Y-Ba-Cu-O high temp. superconductivity, structural and thermogravimetric analyses 7−143665
YBaCu(Nb)O high T_c superconds., lattice instability, ultrasonic meas. 7−138132
$YBa_2Cu_3O_7$, high T_c supercond., thermogravimetry and thermal anal. 7−112645
$YBa_2Cu_3O_{7-x}$ high T_c superconductor, variation of stoichiometry, cell symmetry on temp. and press. 7−111498
$YBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$YBa_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$YBa_2Cu_3O_{9-y}$ single phase cpd., high temp superconducting behaviour 7−118667
$Y_{100-x}Fe_x$ metallic glass ribbons, H absorption 7−84302
$YSr_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
Yb-Tl system, phase diagram and mag. props. 7−144368
ZnO-SiO_2-B_2O_3-P_2O_5 glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845
$ZnTiO_3$, form. and transform. 7−98427
Zr citrate, thermal decomposition, ZrO_2 prep. 7−77854
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
Zr-based metallic glasses, amorphous hydrides, comparison of thermal stabilities 7−111418
Zr-Rh(Pd)-H, crystalline-to-amorphous transformation, thermal analysis 7−97929
ZrO_2, MgO partially stabilised, gel-derived, phase transforms. 7−77996
ZrO_2, polycrystalline ceramics, thermal diffusivity and cond., sp. ht. 7−98591
ZrO_2 powders, monodisperse fine particles, processing, thermal analysis 7−132536

thermal analysis continued
ZrO_2, pure and CaO stabilised, liq. mix. synthesis, phase analysis 7−119216
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
Zr−Ni, amorphous, supercond., structural relax., crystallisation 7−104584

thermal blooming
No entries

thermal capacity *see specific heat*

thermal conductivity
see also Kapitza resistance; Lorenz number; thermal conductivity of gases; thermal conductivity of liquids; thermal conductivity of solids; thermal diffusivity; thermal insulating materials
air-Cu plasma, composition and concl. *(French)* 7−83434
amorphous ribbons, casting conditions 7−75255
channels containing porous filler, heat exchange and resistance 7−111095
consolidated materials, heat and mass transfer study *(French)* 7−75258
cryogenic fluids, transport properties, review 7−124579
disordered interacting electron system near metal-insulator transition, thermal conductivity and diffusion calcs. 7−136678
eutectic mixture screening, latent heat thermal energy storage materials, 200-1500°C *(Japanese)* 7−144918
fluidised beds, thermal behaviour, mag. stabilisation effect 7−123739
glass-reinforced plastics, thermal conductivity below 80 K 7−111988
granular materials, saturated and unsaturated, effective thermal cond., effective continuous media approx. 7−110767
heat conduction separability with spatially-varying thermal cond. 7−136677
heterogeneous multiphase systems, phase orientation and thermal conduction 7−97288
nonlinear heat equation, identification of thermal conductivity 7−123432
optical baffle materials, spacecraft thermal control, UV and visible BRDF data 7−141796
packed bed, effective thermal cond. estimation 7−97285
packed beds, thermal cond., review 7−142153
solid phase condensation heat transfer on a cold surface 7−136834
temperature meas. model for thermal cond. problem soln. 7−140698
thermoelectric generators, thermal systems classification 7−97261
tubular flow apparatus with packed bed, heat transfer, mathematical models, thermokinetic parameters 7−75659
two-phase systems, porous and dispersed, phase orientation, thermal cond. 7−75257
H_2, liquid, filled foam, thermal conductivity 7−111987

thermal conductivity measurement
anisotropic materials, thermal imbalance error calc. 7−80785
ceramics, thermal cond. coeff. determ., hot-wire method *(Russian)* 7−140694
composite sample configurations under pressure 7−95585
composites, thermal conductivity meas. using heat flow sensors 7−73342
electrolytic solutions, thermal cond. meas., transient hot wire method, leakage current anal. 7−95581
fluids, heat capacity and density, transient hot wire measurements 7−95580
flux calorimeter for meas. thermophysical props., of solids, triglycine sulphate meas. appl. 7−108561
gases, desorbed air contaminant effect corrections 7−83399
liquids, transient hot wire technique meas. 7−66873
microgravity physical vapour transport expt., vacuum outgassing and gas phase thermal conduction 7−138664
rock thermal conductivity meters, programmed digital design 7−101536
solid body and plasma spray coating thermal cond. meas. apparatus 7−142154
standards, organic liquid samples 7−102403
thin fibres thermal conductivity meas. apparatus, low-temp. 7−140695
thin films and foils, thermal conductivity and diffusivity meas. 7−140696
transient hot wire method, computer-controlled, liquids meas. 7−140690
tumour perfusion during microwave hyperthermia, tissue thermal props. meas. 7−107166
vertically rising microstructure profiler, data acquisition and processing hardware and software 7−115060

thermal conductivity of gases
binary gas mixtures, convection effect on light ray propag. 7−69140
compressed gas, heat-transfer processes, thermal flux relaxation and thermal cond. influence 7−111153
corresponding states model 7−69994
ethane, thermal conductivity meas. in critical region 7−83398
gas mixtures, binary, two-fluid Chapman-Enskog theory 7−123830
Hilbert expansion of BGK eqn. and Navier Stokes steady state hydrodynamic eqn. 7−91055
measurement, desorbed air contaminant effect corrections 7−83399
methanol vapour, thermal diffusivity and cond. meas. 7−75745
mixtures, heat cond. in flame combustion 7−97684
polyatomic gases, thermomag. effects in transition regime 7−130823
steam, thermal conductivity meas. at high temp. and press. including critical region 7−83397
H gas, thermal conductivity, absolute meas. 7−75750
H_2, gaseous, o- and p-, viscosity, heat cond. and thermal diffusion coeffs. determ. 7−142429
^2H, high density, sp.ht., resistivity, thermal cond., sound vel. and viscosity calc. 7−103183
He gas, thermal conductivity, absolute meas. 7−75750
He-N_2, gas mixture, thermal cond., effective collision cross-sections determ. 7−83400
K plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172
K-Ar plasma, momentum transfer cross section, elec. and thermal cond. meas. 7−111172

thermal conductivity of liquids
^3He, arbitrarily polarised, low T transport calcs. 7−124620
alloys, binary containing secondary solid solns., thermal cond. and electrical resistivity calcs. 7−124957
binary liquid mixtures, mixture constant eval. from thermal conductivity, multi-component mixture extension *(Japanese)* 7−118178
binary liquid mixtures, thermal cond. prediction 7−111982
binary liquid mixtures, thermal conductivity prediction eqn. *(Japanese)* 7−118177
dense hard-sphere fluid, Enskog theory corrections for viscosity and thermal cond. 7−83630
ethane, thermal conductivity meas. in critical region 7−83398
ferrofluids with Co particles, thermal conductivity meas. 7−76506

rmal conductivity of liquids continued
ferrofluids with Fe particles, thermal conductivity meas. 7−76506
Lennard-Jones liq., thermal cond. determ. by mol. dynamics calcs. 7−118176
liquid thermal conductivity, measurement by computer-controlled instrument 7−140690
lubricant flow in bearing curved gap, pseudo-plastic variable consistency effects *(German)* 7−142342
magnetic fluids, conf., Tokyo, Japan (July-Aug. 1986) 7−80152
methane, liq., thermal cond. meas. 7−91906
oct-1-ene, liquid, thermal conductivity, 307 to 360 K, 0.5 GPa 7−131373
oil, corresponding states model 7−69994
organic polar pure liquids, thermal conductivity prediction 7−137634
pentane, normal dense liq., thermal cond. meas. 7−84405
perfluoromethylcyclohexane-methylcyclohexane, anomalous thermal cond. near upper critical soln. point 7−111983
thermophysical props. determ. 7−130520
transient hot wire technique meas. 7−66873
transport coefficient determ. in liquids and solids, nonstationary optical methods 7−118183
water thermal conductivity calc. in critical region 7−69995
Ar liquid, thermal conductivity meas. using transient hot-wire technique 7−105159
Ar, liquid, thermal conductivity, transient hot wire method meas. 7−143115
Ar-Kr mixture, equilib. mol. dynamics using Lennard Jones pot., thermal cond. 7−83627
Fe_3O_4, magnetite, mag. fluids, thermal conductivity 7−76505
^{3}He-^{4}He, dilute mixtures, normal phase, thermal transport props. 7−124625
^{4}He II, thermal conductivity in capillaries, kinetic theory 7−105168
^{4}He, thermal conductivity meas. near Lambda point 7−118185
$TlSbTe_2$, solid and molten states, thermal conf. temp. depend. study 7−137635

rmal conductivity of solids
see also thermal magnetoresistance
alkali halides, laser irrad., thermal relax. processes, gap vibr. effects 7−76204
alkali halides, thermal conductivity, calc. 7−76509
amorphous solids, thermal conductivity above the plateau 7−98596
anisotropic materials meas., thermal imbalance error calc. 7−80785
ceramics, structural, tailoring of thermal transport props. and thermal shock resist. 7−78243
ceramics for heat engines, development, QA procedures 7−104888
composite materials, continuous fibre, thermal conductivity prediction and meas. 7−84407
composites, effective thermal conductivity, thermal contact resistance effect 7−110769
composites, with interfacial thermal barrier resist., effective thermal cond. 7−143118
conductive polymers based on graphite, thermal prop. change, effect of surfactants 7−98599
diacetylenes, anisotropic heat conduction 7−84408
diamond film growth from vapour phase, characterisation *(Japanese)* 7−71082
disordered electronic systems near Anderson transition, energy diffusion 7−137798
flux calorimeter for meas. thermophysical props., of solids, triglycine sulphate meas. appl. 7−108561
food grains, effective thermal cond. at interstitial air pressures. 7−98594
granular materials with metal filler, thermal cond. calc. 7−110768
graphite IG-110, fine-grained isentropic, high temp. neutron irradiation effects, reactor appls. 7−142844
HTGR graphite, radiation effects on props. 7−141176
ice, saline, accreted, de-icing and thermal props. 7−133787
ice and ice clathrate, thermal conductivity 7−111986
Inconel, thermal conductivity, thermal diffusivity and sp. ht. 7−143432
Invar, highly porous, thermophysical characteristics and heat transfer *(German)* 7−131606
isotropic anharmonic crysts., dislocation-phonon scatt. calcs. 7−76337
metallic films, evaporation, 3D model, quantitative anal. 7−84222
metals, electron scatt. by kinks on dislocation line 7−70283
metals, thermal cond., rel. to characteristic temps. 7−131377
metals and alloys, commercial, thermal conductivity data, assessment of uncertainties 7−76885
multiphase systems, cond. at varying interstitial air pressures 7−118182
nonlocal thermal conduction in insulators 7−70003
polyethylene chain, thermal conductivity 7−105161
polymer/graphite mixture simulating conductive polymers, heat pulse technique for evaluation 7−98598
polymers, heat relaxational processes, temp. waves method appls. *(Russian)* 7−84410
polymers, thermal parameters, meas. by photoacoustic technique 7−131245
polypropylene, syndiotactic, thermophysical props. 7−98593
polystyrene, low temp. thermal cond. 7−124607
porous material thermal conduction model accounting for inclusion shape and orientation 7−75243
rough surface elastoplastic contact, thermal conductance 7−91044
rough surface in vacuum, thermal cond. of elastic contact 7−70002
semiconductor, deformable, extrinsic, heat and charge carrier flux, coupled evolution eqns., EIT theory 7−70299
semiconductor quantum well structs., quasi-one-dimensional, electronic therm. cond. 7−138037
semiconductors, complex lattice structure, amorphisation problem 7−131033
silica aerogels, specific heat and thermal conductivity meas., fractal model anal. 7−100621
single-impurity Anderson model, transport coeffs., 1/N expansion 7−84801
snow, thermal convection and conductivity, experimental study *(French)* 7−111985
solid body and plasma spray coating thermal cond. meas. apparatus 7−142154
steel, stainless, thermal conductivity, thermal diffusivity and sp. ht. 7−143432
system, elec. and thermal transport props., cation substitution effect 7−92173
test particle to particle bed heat transfer, size and cond. ratios effect 7−97265

thermal conductivity of solids continued
tetrahydrofuran clathrate hydrate, thermal conductivity 7−118181
thin fibres thermal conductivity meas. apparatus, low-temp. 7−140695
thin films, laser heating, temp. profile calcs. 7−91647
thin films, thermal transport meas., anal. of heat pulse method 7−95584
thin films femtosecond nonequilibrium electron heat transport 7−92312
thin metal films, electronic thermal conductivity, temp. effects 7−105733
TMTSF compounds, Bechgaard salts, field induced SDWs in presence of normal impurities 7−70551
transparent insulation materials, minimum thermal conductivity, determ. 7−143120
transport coefficient determ. in liquids and solids, nonstationary optical methods 7−118183
AlN single crysts., intrinsic thermal cond. by phonons, temp. depend. study 7−118180
AlN substrate, highly thermal conductive, green sheet technology development 7−131379
Al_2O_3, anodic coatings on Al, thermal conductivity 7−76711
$Al_2O_3(Cr_2O_3)_x(Fe_2O_3)_y$ solid solns., thermal cond., comp. depend. study 7−105160
Au-Pd-Cr alloys, anomalous thermal resist. *(Chinese)* 7−131375
β-BN:Se, elec. and thermal cond. rel. to defects 7−84878
BaB_2O_4, optical, mechanical and thermal props. 7−141919
$Bi_{0.88}Sb_{0.12}$, thermal cond., size effect 7−76508
C fibre composite, thermal conductivity prediction and meas. 7−84407
C fibre reinforced glassy C composites, thermal consts., temp. depend. *(Japanese)* 7−131381
C fibre reinforced Li_2O-Al_2O_3-SiO_2 glass ceramic, thermal diffusivity, sp. ht., thermal cond. 7−69999
C fibres, pristine and intercalated, characterisation and defect struct., low temp. elec. and thermal cond. meas. 7−84406
$CaCO_3$ granules, thermal dissoc., porosity and density change study 7−100528
Ce compounds, thermal conductivity and Lorenz number of the heavy electron 7−76882
$CeCu_5$, Kondo lattice showing mag. order, phys. props. meas. 7−77210
$CeCu_6$, low temp. transport props. 7−70279
$CeCu_6$, thermodynamic and transport props. 7−137584
CeInAu, sp. ht., mag. susceptibility, transport props. 7−77247
$CeInAu_2$, sp. ht., mag. susceptibility, transport props. 7−77247
$(Ce_xLa_{1-x})Cu_6$, thermal conductivity 7−70280
$CsDy(MoO_4)_2$ sp. ht. and thermal cond., temp. depend. 7−124544
$CsGd(MoO_4)_2$ sp. ht. and thermal cond., temp. depend. 7−124544
Cu wire, immersed in fluid, surface conductance at high press. 7−131732
Cu-Nb(NbTi) interface, proximity-effect-induced superconductivity at millikelvin temperatures 7−77166
$CuInS_{2x}Se_{2(1-x)}$, thermal conductivity 7−76510
$CuInX_2$ (X=Se,Te), thermal conductivity data 7−124609
D, high density, thermodynamic props. and thermal cond. 7−69931
Fe, cast, graphite, compacted vermicular, thermal props. rel. to microstruct. *(Korean)* 7−131338
$Fe_{80}Si_6B_{14}$, electrical and thermal conductivities at low temp. *(Russian)* 7−124953
GaAs: Cr, plastically deformed, dislocations, thermal conductivity meas. 7−98595
GaAs:Si layers, Si ion implanted, photoacoustic optical and thermal characterisation 7−111777
GaAs/AlGaAs heterostruct., thermal conductance, quantum magneto-oscillations 7−143119
He, solid, phonon thermal cond. 7−105178
In, film heat transfer mechanism 7−70430
KF, thermal conductivity and thermal diffusivity, press. range 0 to 3.8 GPa 7−70001
KH_2PO_4, thermal and dielectric props. at low temp. 7−70692
$La_{1-x}Sr_xCr_{1-y}Mn_yO_3$ system, elec. and thermal transport props., cation substitution effect 7−92173
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., thermoelec. power and thermal cond. meas. *(Russian)* 7−131887
$La_{3-x}Te_4$, thermal cond., flash-diffusivity method 7−69998
LiH, Li(D, T), pressed compacts, thermal cond. 7−70000
Li_2O-CaO-MgO-Al_2O_3-SiO_2 glasses, thermal conductivity study, crystalline products 7−137637
MgO-graphite, two-phase powder system, thermal cond. 7−69996
Mo, thermal and electrical conductivity meas., pulsed laser heating method 7−137899
Mo-Ni alloys, highly porous, thermophysical characteristics and heat transfer *(German)* 7−131606
NH_4Br, high press. phase diagram, thermal cond. studies 7−111825
NbS_3, orthorhombic single whisker, thermal cond. studies 7−98600
$(NbSe_4)_3I$, thermal cond. and thermal capacity 7−98601
$Ni_{1+2x}Fe_{2-3x}Sb_xO_4$, spinel ferrite, sp. ht., thermal conductivity and thermal diffusivity 7−92433
$Pb(Sc_{0.5}Nb_{0.5})O_3$, polycrystalline ferroelectric, glasslike behaviour at low temp. 7−125588
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
Pd-U-Si glassy and icosahedral alloys, low temp. thermal cond. meas. 7−70276
Si layers, Si ion implanted, photoacoustic optical and thermal characterisation 7−111777
Si, semiconductor evaluation technique using heat pulses 7−98597
Si thin films, optical excitation of nonequilib. acoustic phonons, heat pulses 7−137636
SiC fibre/whisker reinforced osumilite glass-ceramic, thermal conductivity/diffusivity 7−131378
SiC whisker reinforced Si_3N_4, thermal props. *(Japanese)* 7−69942
p-SiGe, heat content, thermal diffusivity, cond. 7−143117
SiGe/GaP, heat content, thermal diffusivity, cond. 7−143117
TaS_3, orthorhombic single whisker, thermal cond. studies 7−98600
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
TiB_2 particle reinforced SiC, microstruct. and material props. 7−78148
TiS_2, intercalated with transition metals, transient thermoelec. effects 7−112378
TlBr, thermal conductivity, temp. and press. effects 7−143116
TlCl, thermal conductivity, temp. and press. effects 7−143116
$TlSbTe_2$, solid and molten states, thermal conf. temp. depend. study 7−137635
UBe_{13}, sp. ht. and thermal cond. quasiexponential temp. depend. studies 7−69930
UO_2 packed sphere beds, thermal conductivity, temp. jump distances, thermal accommodation coeffs. 7−109279

thermal conductivity of solids continued
UO_2-PuO_2, mixed oxide nuclear fuel, thermal behaviour, porosity and microfissure effects *(German)* 7−129191
V, superconducting, phonon scatt. by Abrikosov vortex filaments 7−70503
Y-Ba-Cu-O, high T_c supercond., thermal conductivity 7−143708
Y-Ba-Cu-O high T_c supercond., thermal cond., strong electron-phonon coupling 7−125248
$YBa_2Cu_3O_{9-\Delta}$, high T_c supercond., thermal cond. and elec. resist. 7−112661
$(Y_{1-x}Lu_x)_3Al_5O_{12}$, resonance phonon-impurity scatt. 7−76317
Zn, thermal conductivity minimum, elec. resist., Lorenz fn. 7−137898
ZnO-graphite, two-phase powder system, thermal cond. 7−69996
Zr-Cu, sputtered, struct. relax., low temp. thermal cond., X-ray scatt. 7−105346
ZrC-ZrO_2 based composite multilaminate insulations, thermal cond. 7−124608
ZrO_2, polycrystalline ceramics, thermal diffusivity and cond., sp. ht. 7−98591

thermal convection *see convection*

thermal decomposition *see pyrolysis*

thermal diffusion
see also thermal diffusion in gases; thermal diffusion in liquids
aerosols, absorbing, thermophoresis 7−119583
binary fluid mixture, Soret separation disturbed by convective motion, numerical simulation 7−117587
binary mixtures, thermodiffusion, nonlinear convective motion 7−69136
halfspace, thermodiffusive, surface wave study 7−75402
mixed boundary-initial value problem for the equations of thermodiffusion in solid body 7−83015
needle cryst. growth from melt, nonlinear diffusion, free boundary problem 7−117851
one-component plasma in external field mode coupling contrib. to transverse transport coeffs. 7−75771
Soret effect in multi-component systems 7−98549
thermophoretic forces acting on a bispherical system 7−80700
turbulent channel flow, thermal diffusion, anisotropic k-ε-k model *(Japanese)* 7−142283
Fe-Ni-C, enthalpy contribution to heat of transport 7−111959

thermal diffusion in gases
binary gas mixtures, convection effect on light ray propag. 7−69140
binary gas mixtures, large mass disparity, kinetic theory, Boltzmann eqns. asymptotic limit 7−91277
chamber for horizontal-gradient continuous flow studies 7−127556
gas mixtures, binary, two-fluid Chapman-Enskog theory 7−123830
methanol vapour, thermal diffusivity and cond. meas. 7−75745
partially ionized gases with unequal temps., diffusion coeffs. 7−101760
tetrafluoromethane-He(Ne), diffusion coeffs. and thermal diffusion factors 7−91278
thermodiffusional separation of gas mixtures in the field of a sound wave 7−97680
transmission line modeling appl. to thermal diffusion 7−130820
^{36}Ar-^{40}Ar mixture, concentration profiles in thermal diffusion column, convection-diffusion equation 7−117091
CO_2, thermal diffusivity in critical region 7−142427
CS_2, laser excitation, energy relax., probe beam deflection meas. 7−91279
H_2, gaseous, o- and p-, viscosity, heat cond. and thermal diffusion coeffs. determ. 7−142429
N_2-CO mixture, comp. depend., inversion, temp. depend. 7−123833
NO_2-N_2O_4, laser excitation, energy relax., probe beam deflection meas. 7−91279

thermal diffusion in liquids
^{112}Sn, thermomigration in Sn under microgravity 7−117576
benzene, isotopically substituted mixtures, thermal diffusion in liqs. study 7−91860
liquid mixture in inclined cavity, free convection effects on thermodiffusion 7−136830
long-scale thermodiffusional convection 7−142309
metal alloys, thermomigration, microgravity expts. 7−117576
methanol, thermal diffusivity, photon correl. spectroscopy 7−76464
microemulsion, thermal diffusion meas. near crit. end point 7−114008
needle cryst. growth from melt, nonlinear diffusion, free boundary problem 7−117851
super-critical states of double-diffusive convection under time-periodic heating 7−123437
thermophysical props. determ. 7−130520
toluene, thermal diffusivity, photon correl. spectroscopy 7−76464
viscoelastic thermodiffusion, eqns., rel. to theory of mixtures *(Polish)* 7−130682
Ag, thermomigration in Sn under microgravity 7−117576
AgI−KI mixture, convection in cylindrical thermal diffusion cell, 3D numerical study 7−130703
Ar-Kr, liq., cross thermodiffusion, nonequilib. mol. dynamics 7−105090
H_2-Ne(Ar)(Kr)(Xe), mixtures, diffusion coeffs. and thermal diffusion factors meas. 7−84337

thermal diffusivity
4-n-alkyl-4′-cyanobiphenyls, n CB, nematic-isotropic phase transition, thermal diffusivity, crit. behaviour 7−98446
benzophenone melting transition, opto-thermal transient emission radiometry 7−91854
ceramics, structural, tailoring of thermal transport props. and thermal shock resist. 7−78243
composite materials, meas. apparatus for 300 to 1100 K range 7−102405
epoxy resin in cylindrical mould, cure process, kinetic and thermal parameters effect 7−126453
fluids, heat capacity and density, transient hot wire measurements 7−95580
Inconel, thermal conductivity, thermal diffusivity and sp. ht. 7−143432
ion implantation, 2D modelling based on Boltzmann transport eqn. 7−98194
liquid crystals, thermal diffusivity measurement, heat pulse method 7−131374
measurement, AC calorimetric method 7−80792
measurement, Angstrom's method 7−134734
measurement of materials with low conductivity, using modified Angstrom method 7−102406
multilayer plate heated under boundary conditions of first kind, temp. field calc. 7−117441
polymer foils, thermal diffusivity, photoacoustic meas. 7−108547
polymer solutions, viscoelastic turbulent pipe flows, heat eddy diffusivity 7−97520

thermal diffusivity continued
polymers, thermal parameters, meas. by photoacoustic technique 7−131245
polypropylene, syndiotactic, thermophysical props. 7−98593
polypyrrole film, electrochemically prepared, mech. props., temp. dependence 7−111747
polyvinyl phenolic GE-7031 varnish, air dried sample, thermal diffusivity meas. 7−118179
semiconductors, electron wind, high temp. gradient caused by laser treatment 7−69978
soil, heat eqn. and thermal diffusivity in dynamical temp. field *(Japanese)* 7−142155
soil, thermal diffusivity, water content effect 7−114134
steel, stainless, thermal conductivity, thermal diffusivity and sp. ht. 7−143432
surface, intensive frictional heating, thermal diffusivity rel. to time 7−76292
thermoacoustic instability with forced motion of heat-transport medium 7−130521
thin films, thermal properties, contactless study method 7−131376
thin films, thermal transport meas., anal. of heat pulse method 7−95584
thin films and foils, thermal conductivity and diffusivity meas. 7−140696
three-phase porous materials, thermal diffusivity meas. 7−84409
triglycine sulphate study, flux calorimeter for meas. thermophysical props., of solids appl. 7−108561
Ag, stationary nonequilib. vacancies during thermotransport 7−98121
Ag-Sb alloys, stationary nonequilib. vacancies during thermotransport 7−98121
C fibre reinforced glassy C composites, thermal consts., temp. depend. *(Japanese)* 7−131381
C fibre reinforced Li_2O-Al_2O_3-SiO_2 glass ceramic, thermal diffusivity, sp. ht., thermal cond. 7−69999
$CsCdCl_3$, liq., thermal diffusivity meas. 7−111984
Fe, cast, graphite, compacted vermicular, thermal props. rel. to microstruct. *(Korean)* 7−131338
$Fe_{85}B_{15}$, metallic glasses, relax., thermophys. investig. 7−97980
KF, thermal conductivity and thermal diffusivity, press. range 0 to 3.8 GPa 7−70001
LiH, Li(D, T), pressed compacts, thermal cond. 7−70000
Nb, thermal diffusivity and conductivity, anomalies near melting points 7−69997
$Ni_{1+2x}Fe_{2-3x}Sb_xO_4$, spinel ferrite, sp. ht., thermal conductivity and thermal diffusivity 7−92433
$Pd_{82}Si_{18}$, metallic glasses, relax., thermophys. investig. 7−97980
Si wafer, thermal diffusivity lengths, ion implantation effects, mirage effect meas. 7−98592
SiC fibre/whisker reinforced osumilite glass-ceramic, thermal conductivity/diffusivity 7−131378
p-SiGe, heat content, thermal diffusivity, cond. 7−143117
SiGe/GaP, heat content, thermal diffusivity, cond. 7−143117
Si_3N_4, reaction bonded, thermal diffusivity, effect of oxidation 7−76507
Ta, thermal diffusivity and conductivity, anomalies near melting points 7−69997
V, thermal diffusivity and conductivity, anomalies near melting points 7−69997
ZrO_2, polycrystalline ceramics, thermal diffusivity and cond., sp. ht. 7−98591

thermal effects in magnetism *see magnetocaloric effects*

thermal expansion
see also Gruneisen coefficient
$AgInS_2(Se_2)(Te_2)$, anisotropy of thermal expansion, X-ray diffr. data 7−131341
alkali halide crystals, microcrack nucleation kinetics, light scatt. study, acoustic phonons 7−131222
anthracene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
β-$(BEDT\text{-}TTF)_2I_3$, thermal expansion meas., structural phase transition 7−85192
benzene, adsorbed on SiO_2 gel, capillary condensation, thermophysical props. determ. 7−91777
bimetallic jumping disc, using different thermal expansion coeffs. 7−108122
cholesteryl erucate, smectic liquid crystal, ultrasonic waves propagation, specific volume 7−91727
CMZ coverglass optical and physical characteristics for solar arrays 7−144869
composite, elastic-plastic materials, thermal expansion, stress-strain relations 7−83077
composite tubes, stresses and deform. due to circumferential temp. gradient 7−83052
composites, multiphase, static elastic and thermoelastic field fluctuation 7−69008
composites, polymer and metal matrix, thermal effects 7−138795
coolant R12, isentropic expansion study *(German)* 7−91280
deuteromethane-Kr solid solns., thermal expansion anomaly, X-ray diffr. study *(Russian)* 7−76459
diamond, temperature coeff. of linear expansion determ. 7−142535
dimethylnaphthalene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
disappearing rod, extreme use of simple model 7−80242
ethylene oxide clathrate hydrates, thermal expansion, unit cell parameter 7−118137
ethylene oxide hydrate, struct. I, thermal expansion obs. 7−143058
ferromagnetic metals, magnetic props., thermal expansion effects 7−125414
fibre reinforced composites, coated short fibres, thermal stress, effect of thermal expansion 7−76462
fibre reinforced epoxy composites, unidirectional, stress field under tensile and thermal loading, approx. soln. *(Japanese)* 7−97309
fibre reinforced epoxy matrix composites, cryogenic failure mechanisms, γ-irrad. effect, energy appls. 7−144548
garnets, thermal expansion data 7−105086
glass fabric reinforced epoxy laminates, residual stresses and warpage meas., projection moire technique 7−100467
glass-forming melts, two-level model, nonisobaric conditions 7−98448
graphite, local heating of discs, thermal shock testing, thermal stresses *(Japanese)* 7−110788
graphite, recrystallised, rad. stability 7−84036
graphite IG-110, fine-grained isentropic, high temp. neutron irradiation effects, reactor appls. 7−142844
HCP lattice, hindered rot. of impurity diatomic mols. *(Russian)* 7−76043

rmal expansion continued
heavy fermion systems, electron-phonon coupling, review 7−70212
HTGR graphite, radiation effects on props. 7−141176
inorganic compounds, thermal expansion coefficients and melting points, relationships 7−91850
Invar, thermal expansion and mech. props., effects of P and S 7−113626
liquefied gases, acoustic and thermodynamic studies 7−69826
metals, Curie temp. of electron liq. under const. press. *(Russian)* 7−112787
naphthalene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
organic aqueous non-electrolytes, thermodynamic parameter studies 7−111770
organosilicon films, plasma polymerised, phase transition effects 7−131290
oxides, complex, thermal expansion data 7−105086
pipes, holographic NDT, predicted fringe patterns and exptl. results 7−119484
PMMA, gamma irrad., thermal expansion coeff., IR spectra 7−118138
poly(4-methyl-pentene-1), uniaxially drawn, struct., thermal expansion 7−117841
poly(ethylene terephthalate) films, thermo-mechanical anal. *(Japanese)* 7−98743
poly(vinyl acetate), equation of state 7−118051
polyamides, cryst. lattice, thermal expansion obs. *(Russian)* 7−111921
polybutadiene dielectrics, cyclized, thermal and mech. props. *(French)* 7−124561
polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
polymer composites, decomposing, expanding, thermal response, math. model 7−104142
polymer films, supported, mech. props. determ., double bending beam technique 7−124377
polymeric film, laser marking, pit form., thermal expansion and flow model, optical disc appl. 7−124123
polymers vitrification temp. determ., using dilatometer 7−143008
polyoxymethylene, γ-irrad., thermal expansion coeff. meas. 7−91847
polypropylene, drawn, anisotropic thermal expansion 7−69939
polystyrene, γ-irrad., thermal expansion coeff. 7−104832
polyvinylidene fluoride, highly oriented, primary and secondary pyroelec. 7−92609
polyvinylidene fluoride, thermal expansion rel. to glass transition temp. 7−84333
power plant equipment welded joint physical props., production technology develop. *(Russian)* 7−93048
PTFE, γ-irrad., thermal expansion, 80-340 K, crystallinity 7−131340
PVC, physical props., rel. to elec. fluctuations, temp. depend. *(Russian)* 7−99102
quartz ceramics, heat treatment, thermal and mech. props. 7−78077
rare earth alloys, $R_2Fe_{14}B$, spontaneous volume magnetostriction 7−143889
rotor molecule in atomic cryomatrix, renormalised cryst. field calc. *(Russian)* 7−137867
rubber, natural, physical props., rel. to elec. fluctuations, temp. depend. *(Russian)* 7−99102
semicarbazide hydrochloride, and deuterated single cryst., dielec. props. and thermal expansion 7−85521
sheet, stress-free planar temperature distribs. from conformal mappings 7−90916
shells of revolution, multilayer rib reinforced, nonaxisymmetric temp. force 7−97345
silicate glasses, thermal expansion and coordination numbers 7−69940
sodium oleate-potassium oleate micellar solns., photon correlation spectroscopy 7−71541
squaric acid, Brillouin scatt. under uniaxial stresses 7−85752
steel, austenitic Cr-Ni, thermal expansion anomalies *(German)* 7−98524
structural shape variation in heat transfer problems 7−90915
structure II clathrate cryst., thermal expansion, const. press. mol. dynamics 7−105085
styrene-isoprene-styrene block copolymers, thermally stimulated polarisation currents, effect of thermal expansion 7−85528
substances with negative expansion coeff., thermodynamic potentials and their derivatives 7−124549
Synroc, thermal expansion, 20-1100°C 7−81722
terephthalylidene-p-n-decylaniline smectic liq. cryst., transitions and density studies 7−124366
ternary chalcopyrite cpds., thermal expansion anisotropy, individual bond expansion coeffs. 7−124558
ternary semiconductors, II-VI-V_2 and I-III-VI_2 cpds., early work 7−124859
tetrahedral compounds, thermal properties 7−143060
tetrahydrofuran clathrate hydrates, thermal expansion, unit cell parameter 7−118137
thermoacoustic instability with forced motion of heat-transport medium 7−130521
thiourea, orthorhombic ferroelectric, thermoelastic and third-order elastic constants, thermal expansion coefficients 7−76270
$(TMTSF)_2ClO_4$, thermal expansion meas. 7−85192
$(TMTSF)_2PF_6$, thermal expansion meas. 7−85192
truxene derivatives, disc-like mesogens, phase diagrams, dilatometric and thermobarometric studies 7−98445
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. phase transition, struct. study 7−99763
water, thermal expansion in fine pores in silica gel 7−111918
wire explosions, fragmentation mechanism 7−69504
$[Pt(NH_3)_4][PtX_2(NH_3)_4](HSO_4)_4$, X=Br,Cl, valence fluctuations and negative thermal expansion 7−84334
Al (100), positron deformation pot. and work function temp. depend. 7−112430
Al particles, thermal expansion 7−111920
Al sheet/C fibre reinforced plastic multilayered hybrid composite, thermal expansion *(Japanese)* 7−143059
$Al_2(TiO_3)_2$ ceramics, grain boundary microcracking due to thermal expansion anisotropy 7−144519
AlAs, sp. ht., thermal expansion coeff. calcs. 7−105068
Al_2O_3 ceramic adhesive joints, thickness, residual stresses, finite element analysis 7−71460
Al_2O_3 ceramic adhesive joints, thickness, residual stress, fracture toughness 7−71461
AlP, sp. ht., thermal expansion coeff. calcs. 7−105068
AlSb, sp. ht., thermal expansion coeff. calcs. 7−105068
$Al_2(TiO_3)_3$-mullite composite, thermal shock resist *(Japanese)* 7−71299

thermal expansion continued
Al_2TiO_5 ceramics, microstruct., bending strength, thermal expansion, additives effect 7−126201
Al_2TiO_5, microstructure and props., effects of excess Al_2O_3 and TiO_2 7−71131
Ar-O_2, solid HCP and FCC solns., thermal expansion determ. *(Russian)* 7−91848
As_2O_3 based heavy metal oxide glasses, struct. and optical props. 7−137251
BaB_2O_4, optical, mechanical and thermal props. 7−141919
BaF_2 optical films, linear expansion coeffs. 7−103930
$Ba_2YCu_3O_{7-x}$, orthorhombic-tetragonal transform., thermal expansion coeff., X-ray powder diffr. study 7−98432
$Ba_2YCu_3O_x$, high T_c supercond., orthorhombic tetragonal transition, depend. on O content 7−118076
C fibre reinforced epoxy composite, stiffness, thermal expansion coeff., fibre aspect ratio effect 7−91851
C fibres, stiffness-thermal expansion relationship 7−78084
$Ca_2Al_{1.5}Fe_{0.5}SiO_7$, gehlenite-like silicate, synthesis and physical props. 7−91536
$CdGeP_2(As_2)$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$CdIn_{2-x}Ga_xS_4$ single crysts., thermal expansion temp. depend. studies 7−124560
$CdSiP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$CdSnP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7−98489
$CeAg_{1-x}In_x$, anomalous magnetostriction 7−125522
$CeCu_6$, lattice distortion 7−69893
$Ce(Cu_{1-x}Ni_x)_5$, elec. cond., thermoelec. power and thermal expansion 7−98978
CeH_x, phase relationships and transitions in homogeneity range 7−84201
$Ce_xLa_{1-x}Al_2$, Kondo system, negative thermal expansion 7−76461
$CeNi_2$ cubic Laves phase, vacancy-induced anomalies in lattice spacing, hardness and thermal expansion 7−76116
Co, thermodynamic props., critical evaluation, mag. contribution 7−131335
Co-B-Si glasses, thermal expansion, sp. ht. 7−118804
Cr magnetoelastic props. and Neel temp. 7−118850
Cr-Al, aluminides, temp. coeff. of linear expansion 7−84326
Cr-Ge dil. alloys, elastic constants and thermal expansion 7−77392
Cr-Mn alloys, mag. phase diagram near triple point 7−77287
CrB-FeB, phase diagram, magnetovolume effect 7−85399
CrB_2 itinerant-electron antiferromagnet, magneto-vol. effects 7−106007
$CrSbO_4$, thermal expansion coeffs., lattice parameters, X-ray diffr. obs. 7−111917
Cs_2O-Nb_2O_5-Al_2O_3 glasses, struct. and props. 7−137252
Cu, thermal expansion of grain boundaries 7−117933
Cu-Zn-Al, shape memory alloy, appl. 7−126108
$Cu_2CO_3(OH)_2$, malachite, thermal deformation and pseudolayering 7−91849
$Cu_{40}Zr_{60}$, thermal expansion, 20-400 K 7−98525
$Dy_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
$DyVO_4$ cryst., thermal expansion in external mag. field, Jahn-Teller domains influence 7−85398
Fe, cast, graphite, compacted vermicular, thermal props. rel. to microstruct. *(Korean)* 7−131338
Fe-Al, aluminides, temp. coeff. of linear expansion 7−84326
Fe-B amorphous ribbons, linear thermal expansion anomaly *(Russian)* 7−69941
Fe-Co-Si-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
Fe-Ni-P-B metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
FeB amorphous sputtered film temp. sensor 7−89212
$Fe_{100-x}B_x$ amorphous alloys, heat treatment, changes in struct. and volume *(Russian)* 7−104550
$Fe_{82}B_{18-x}Si_x$ amorphous alloys, magnetoelastic behaviour, localised moment model explanation 7−99549
$Fe_{80-x}Ni_xCr_{20}$, magnetovol. effects, thermal expansion meas. 7−138305
Fe_3O_4 magnetostriction and thermal expansion near Verwey transition temp. 7−143886
Fe_7S_8, pyrrhotite, thermal expansion meas. 7−84332
Fe_xTiSe_2 electronic characts. and cryst. dimensionality, Mossbauer, mag. suscept. and X-ray diffr. meas. 7−142725
G d_xAg_{1-x}, amorphous, magnetostriction, thermal expansion meas. 7−99544
$Gd(Cu_{1-x}M_x)_2$ (M=Ni, Co, Al), mag. struct. changes and thermal expansion, anomalies *(Russian)* 7−99402
Ge, high temp., sp. ht. 7−137586
GeTe-Bi_2Te_3, physicochem. examination *(German)* 7−69904
$Ho_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
KCl: Li^+, low temp. heat capacity and thermal expansion meas. 7−84309
La-Ba-Cu-O, structural, electronic props., thermal expansion meas. 7−118672
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., thermal anomalies of latt. props. *(Russian)* 7−125172
$La_{1.9}Ba_{0.1}CuO_4$, high T_c superconductor, temp. depend. X-ray studies 7−111507
$La_{1-x}Ce_xB_6$, single-ion Kondo effect, thermal expansion coeff. 7−77212
$La_3Ga_5SiO_{14}$ single crystals, temp. depend. of elastic props. 7−69799
$LaMgAl_{11}O_9$, laser and phosphor host, cryst. struct., thermal expansion determ. 7−84327
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic distortion 7−98437
$La_{1.8}Sr_{0.2}CuO_4$ ceramic, high T_c supercond., struct. and thermodynamic anomalies at T_c *(Russian)* 7−125171
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., thermal expansion, longitudinal ultrasound velocity *(Russian)* 7−143709
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, US and thermal expansion meas. 7−105838
$LiGaO_2$, thermal expansion coeffs., temp. depend., 298 to 1113 K 7−84330
Li_2GeO_3, elastic, dielectric and piezoelectric constants, thermal expansion, 62-600 K 7−84085
$LiIO_3$, thermal expansivity by neutron thermodiffractometry 7−143061
$LiKSO_4$, high-pressure transition and phase diagram *(Chinese)* 7−111767
$LiNbO_3$ single cryst., thermal expansion and transitions study 7−124559

thermal expansion continued
Li_2O-CdO-SiO_2 system, glasses and glass-ceramics, density, thermal expansion, mech, props. 7−144511
MgO-Al_2O_3-SiO_2, cordierite, lattice thermal expansion, neutron diffr. obs. 7−98521
MgO-Al_2O_3-SiO_2 glass, dissolved Si_3N_4 influence on phys. and mech. props., Si_3N_4 processing role 7−71142
Mn-Ge-Zr(Nb), antiferromag., elastic props. and thermal expansion 7−144455
Mn-Ge-misch metal alloys, Invar charact., machinability *(Japanese)* 7−76460
$MnCl(Br)(I)_2$ photolum. and absorpt. spectra temp. depend. study 7−85823
$MnIn_2S_4$, lattice parameter and thermal expansion coeff. variation at elevated temp. 7−84329
$MnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
Na-P-O-N glasses, prep., N dissolution kinetics, softening temp., thermal expansion, refractive index, microhardness 7−93016
$NaNO_3$, mode Gruneisen parameters and thermal expansion 7−76334
Na_2O-MO-P_2O_5 glasses (M=Mg, Ca, Sr, Ba), N dissolution in melts, thermal expansion, refractive index 7−93013
$Na_{1-x}Zr_2P_{3-x}Si_xO_{12}$, high temp. cryst. chemistry 7−137341
Nb-Mo, thermal expansion, elastic props. 7−98522
Nd chromites, electrode materials 7−131720
Nd-Fe-B magnets, sintered, hardness and thermal expansion, temp. depend. *(Chinese)* 7−132702
$NdAl_2$, thermal expansion, X-ray studies 7−131339
$Nd_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
$Nd_2(Fe_{1-x}M_x)_{14}B$ (M=Co, Al), thermal expansion anomalies, mag. props. 7−111916
Ni-Al, aluminides, temp. coeff. of linear expansion 7−84326
Ni-base superalloys, CMSX-2 and Cotac 784, mech. props., influence of protective coatings 7−86275
Ni-P, microcrystalline and amorphous, thermal expansion and structural relax. 7−84331
Ni-Ti, shape memory alloy, appl. 7−126108
$NiSb_2O_4$, struct. evolution under press., anisotropic compressibilities, magnetic order *(French)* 7−85248
$Ni_{78}Si_8B_{14}$, thermal expansion, 20-400 K 7−98525
$Ni_{0.28}Zn_{0.72}Fe_2O_4$, mag. transformations, thermal expansion 7−77277
$Ni_{24}Zr_{76}$, thermal expansion, 20-400 K 7−98525
Np, thermal expansion 7−143056
β-PbF_2, order-disorder transition and fast-ion transition, X-ray diffr. obs. of thermal props. 7−131291
$PbMo_6S_8$, thermal expansion studies by X-ray diffr., temp 10 to 200 K 7−111919
$PbMo_6S_8$:Al doping and heat treatment effects on phase comp., lattice consts. and Tc 7−83987
$Pb_{1-x}Sn_xTe$, stressed quantum well epitaxial films, photolum. 7−113251
Pd-Si metallic glasses, viscous flow behaviour thermal expansion and crystn. 7−98320
PdSi-base amorphous alloys, thermal expansion and vol. effect on transform. *(Chinese)* 7−143054
$Pd_{30}Zr_{70}$, thermal expansion, 20-400 K 7−98525
$PrAl_2$, thermal expansion, X-ray studies 7−131339
$RBa_2Cu_3O_x$, (R=Y,Gd,Er,Yb), high T_c supercond., press. dependencies of T_c 7−131856
$ReSi_2$-Si, localised epitaxial growth of $ReSi_2$ on Si (111) and (001) 7−118302
Si, crystalline, amorphous and liq., phase diagram studies 7−118059
Si, high temp., sp. ht. 7−137586
a-Si:H and a-SiO_2 plasma deposited films, thermal expansion and elastic props. 7−91846
SiC particle reinforced Al-Mg-Fe, internal stress/strain, X-ray diffr. study 7−86197
SiC polytypes, thermal expansion anisotropy 7−131337
SiC whisker reinforced Si_3N_4, thermal props. *(Japanese)* 7−69942
SiC whisker reinforced ZrO_2-toughened ceramics, fabrication and mech props. 7−78240
SiC whisker reinforced Al composite, stiffness, thermal expansion coeff., fibre aspect ratio effect 7−91851
Si_3N_4 ceramics, liq. phase bonding 7−100505
Si_3N_4/stainless steel multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
Si_3N_4-MgO, thermal expansion coeff., effects of CaF_2 conc. 7−105084
Sm chromites, electrode materials 7−131720
$Sn_2P_2(Se_xS_{1-x})_6$, ferroelectric phase transition splitting, phenomenological anal. 7−125636
$SrCl_2$ thermal expansion coeff., X-ray diffr., lattice vibr. freqs. 7−111803
SrF_2 optical films, linear expansion coeffs. 7−103930
Ta_2WO_8, $Ta_{30}W_2O_{81}$, polycryst. ceramic prep., low thermal expansion 7−143057
TeO_2, elastic props., temp. depend. 7−131208
ThF_4 optical thin films, synergistic radiation effects, photothermal effects 7−99959
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
$Ti_{50}Be_{40}Zr_{10}$, thermal expansion, 20-400 K 7−98525
TiNi, electronic struct. close to martensitic transform. point *(Russian)* 7−126113
TiO_2-SiO_2 glass-ceramic, porous, thermal and chem. props. 7−113742
$Tl_2InPrTe_4$, X-ray diffr. and electrophysical investigation 7−91535
TmSe, nonstoichiometric and stoichiometric samples, anomalous thermal expansion 7−98523
$TmVO_4$, Jahn-Teller cryst., mag. field, influence on struct. phase transition *(German)* 7−132122
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7−69927
URu_2Si_2, mag. and thermal props., crystal field effect calcs. 7−112253
V_3As, lattice thermal expansion 7−84328
V_3Ga, thermal expansion, 299-691 K 7−91853
W/ZrO_2 multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
WC-Co cemented composites, thermal contraction stresses 7−113633
Y-Ba-Cu-O, structural, electronic props., thermal expansion meas., prep. effect 7−118672
$YBa_2Cu_3O_7$ supercond. ceramic, thermal expansion 7−143062
$YBa_2Cu_3O_{7-x}$, supercond., high temp. X-ray powder diffr., 298-1300 K 7−142997

thermal expansion continued
$Y_1Ba_2Cu_3O_7$, high T_c supercond., resistivity between 80 and 1240 K 7−137915
$Y_{1-x}Ce_xAl_2$ intermetallics, high temp. lattice parameters and thermal expansion 7−118136
$Y(Mn_{1-x}Al_x)_2$, characteristic spin fluctuations, thermal expansion and susceptibility meas. 7−132034
ZnO-SiO_2-B_2O_3-P_2O_5 glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845
ZnS optical films, linear expansion coeffs. 7−103930
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe optical films, linear expansion coeffs. 7−103930
$ZnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
ZrN coatings, plasma spraying, controlled N_2 atmosphere, struct., hardness, thermal expansion 7−71383
ZrO_2-P_2O_5 based ceramics, solid soln., thermal expansion, microcracking, Ta_2O_5 and Nb_2O_5 additions 7−143055

thermal expansion measurement
automatic dilatometric system for glass 20-900°C range 7−128528
composite polymer materials, automated meas. of coeff. of linear thermal expansion 7−140661
dilatometers checking by using standard measures 7−128526
electro-optical dilatometer for differential thermal expansion analysis 7−67279
graphite fibre reinforced resin matrix composite systems, thermal expansion rel. to electron radiation 7−84033
linear expansion coeff. meas., Soviet state primary standard 7−121059
linear expansion coeff. standard, KLR-1.1 glass 7−121063
polymers vitrification temp. determ., using dilatometer 7−143008
standard materials exam. 7−121064
strain gauges appl. 7−140697
ultra-low thermal expansion meas. using push-rod dilatometers, dial gauge and laser speckle appl. 7−128530
X-ray dilatometry, linear expansion coeff. of refractory materials meas., at high temp. 7−124037

thermal fatigue *see thermal stress cracking*

thermal imaging *see infrared imaging*

thermal insulating materials
see also thermal conductivity
barrier coatings, NDE of thickness, adhesion, porosity 7−126379
ceramics, thermal cond. coeff. determ., hot-wire method *(Russian)* 7−140694
granular aerogel systems, superinsulating spacers, thermal loss coeffs. 7−144916
multilayer insulations at low boundary temps., heat transfer investigs. 7−73363
transparent insulation, appl. in radiative energy transmission, thermal collection and long-term storage 7−126560
transparent insulation material, solar transmission 7−144917
two-layer thermoprotective material, pyrolysis, porous reacting body model anal. 7−100525
Al coated dimpled polyester film insulation for TOPAZ supercond. solenoid cryostat 7−74303
SiO_2 aerogel, superinsulating spacers, thermal loss coeffs. 7−144916
ZrO_2−Yb_2O_3, plasma-sprayed coatings, thermal barrier appl. 7−106403

thermal insulation
foam insulation, radiation heat transfer 7−68981
gas-cooled reactor, thermal insulation tests in high pressure channel *(German)* 7−129273
metal-cryostat for liquid He using superinsulation as a thermal shield, trial construction *(Japanese)* 7−80805
multilayer dimpled insulation for TOPAZ supercond. solenoid cryostat 7−74303
multilayer insulation, cracks 7−95594
multilayer insulations at low boundary temps., heat transfer investigs. 7−73363
multilayer thermal insulation, crack effects 7−90922
porous material thermal conduction model accounting for inclusion shape and orientation 7−75243
spaceborne dewars, optimised support systems 7−80796
transparent insulation materials, minimum thermal conductivity, determ. 7−143120
ZrC-ZrO_2 based composite multilaminate insulations, thermal cond. 7−124608

thermal magnetoresistance
Cu cylindrical metal bars, contactless method for magnetoresistivity measurements 7−131610

thermal noise
distributed resistor-capacitor systems, 1D and 2D, Johnson noise calcs. 7−92240
fractal lattice, Nyquist and flicker noise meas. 7−80604
Josephson junctions, noise and chaos, review 7−77168
metal, normal, thermally fluctuating mag. field meas. at low temp. using SQUID magnetometer 7−73383
microphone thermal noise limits 7−130507
resistive films, current noise, thermal coupling effects 7−118545
RF-biased Josephson junction, phase lock global stability near chaotic crisis, digital simulation 7−112686
semiconductors, nondegenerate, nonequilibrium current fluctuations, Boltzmann eqn., Green function approach 7−125064
superconducting thermometer for bolometric appls. 7−108551
GaAs structures, $1/f^{3/2}$ noise, thermal surface noise model 7−131725

thermal properties of substances
see also magnetocaloric effects; Scott effect; specific heat; thermal conductivity; thermal diffusivity; thermal expansion; thermal variables measurement
air-water mixture, laminar pipe flow, coupled heat transfer calcs., statistical narrow-band model 7−75562
building materials, thermophysical props. determ. technique 7−97291
graphite, thermomechanical behaviour electron beam study, fusion reactor material 7−109476
graphite-metal system, thermomechanical behaviour electron beam study fusion reactor material 7−109476
infinite piezoelectric rod, propag. of disturbances by randomly moving heat source 7−83004
minerals, fission track annealing and closure temps., crystal composition effects 7−94226

rmal properties of substances continued
oceans and lakes, thermal stratification, one-dimensional modelling 7—120026
polyimide, thermal prop. and radiation resistance, acid dianhydride chem. struct. effect 7—97991
polyurethanes, dynamical mechanical, thermal and electrical props. 7—69795
α-quartz, struct., props., energy, crystal chemical modelling 7—83836
trans-4,4′-stilbenedicarboxylic acid-1,3-propanediol copolyester, thermal and mechanical props. 7—75975
temperature-dependence, inverse nonlinear heat cond. eqn. soln. 7—97287
thin films, thermal properties, contactless study method 7—131376
CO_2, solid (dry ice), surface temp, under cloud seeding conditions 7—133851
Cu alloy, thermomechanical behaviour electron beam study, fusion reactor material 7—109476
HgCdTe, phys. props., handbook of datareviews 7—134373

ermal quenching *see quenching (thermal)*

ermal radiation *see heat radiation*

ermal resistance
differential scanning calorimeter, specific heat data correction method 7—95591
heat pipe, porous surface, liq. evap. heat transfer study 7—98410
AgBr:I, optically excited, immersed in He bath, heat transfer rate determ. 7—138489
Cu-^{3}He, Kapitza resist. temp. depend. meas. 7—143130
TiNi, synthesis, struct. and mech. props. 7—111903

ermal resistance measurement
laser diode chips, thermal impedance meas., elec. method 7—123002
Rh:Fe/sapphire interface meas., between 0.4 and 170 K 7—95597

ermal resistivity *see thermal conductivity*

ermal shock
ATP, cellular, extraction, microwave method 7—94029
ceramic materials, thermal fracture in water quench test, Weibull statistical analysis 7—119337
ceramics, low at. number, limiter materials for fusion appls. 7—122206
ceramics, structural, tailoring of thermal transport props. and thermal shock resist. 7—78243
cylinder, hollow, subjected to thermal shock, stress intensity factors for axial cracks 7—97427
fusion reactor materials, thermal shock evaluation, simulated disruption test *(German)* 7—109485
graphite, thermomechanical behaviour electron beam study, fusion reactor material 7—109476
graphite HCB-18, potential first wall material, neutron radiation effects on thermal shock resistance/toughness 7—138821
graphite IG-11, neutron irradiated, degradation of thermal shock resistance and fracture toughness 7—138821
graphite limiters, high heat flux tests 7—141288
HDR reactor safety program, on-line surveillance instrumentation for thermal shock testing 7—122048
local heating of discs, thermal shock testing of graphite, thermal stresses *(Japanese)* 7—110788
reactor graphite, thermal shock resistance and fracture toughness degradation, neutron irradiation effects 7—141168
refractories, electron beam disruption simulation 7—141287
steel, austenitic stainless, reactor vessel cladding, surface cracks anal., pressurised thermal shock accident 7—89671
steel pressure vessel, pressurised thermal shock expt. with low ductile-tearing resistance material 7—93237
VHTR, graphite materials, notch sensitivity testing 7—141170
Al_2O_3 layered-granular ceramic, porosity and fracture props., prep. conditions depend. study 7—86320
$Al_2(TiO_3)_3$-mullite composite, thermal shock resist *(Japanese)* 7—71299
Al_2TiO_5-Al_2O_3-SiO_2 mullite composite, synthesis, thermal shock resist. 7—86120
BN composites, microstruct., thermal shock behaviour 7—119341
^{4}He, superfluid, thermal shock struct. 7—91911
$MgCr_2O_4$-ZrO_2 composites, fracture surface energy rel. to ZrO_2 inclusions 7—132728
SiC whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7—86017
SiC whisker reinforced Al_2O_3 composite, thermal shock behaviour 7—100342
Si_3N_4 whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7—86017
W, H^+-beam bombardment, thermal shock tests 7—113662
ZrO_2-Y_2O_3-Al_2O_3 ceramic electrolytes, ionic cond., thermal shock resist., mech. props. 7—76479

hermal shock failure *see thermal stress cracking*

hermal spikes *see crystal defects; radiation effects*

hermal stress cracking
2D stationary thermoelasticity, stress intensity factor calc. using boundary-elements method 7—104145
Alloy 718, crack growth during quenching 7—93071
alloys, high temp., cyclic oxidation, thermal stresses, oxide scale spallation 7—119420
ceramic, failure in local thermal loading 7—126237
ceramic materials, thermal fracture in water quench test, Weibull statistical analysis 7—119337
ceramics, structural, tailoring of thermal transport props. and thermal shock resist. 7—78243
Coffin and independ. temp. and mech. loading methods comparison for deform. and fracture resist. 7—132863
cometary nuclei, thermal stress cracking rel. to splitting and outbursts 7—88204
damage summation for thermal fatigue, creep and low cycle fatigue 7—111762
fibre reinforced composite articles, transversely reinforced, monolithic integrity, design algorithm 7—142232
fibre reinforced epoxy matrix composites, cryogenic failure mechanisms, γ-irrad. effect, energy appls. 7—144548
fusion reactor materials, thermal shock evaluation, simulated disruption test *(German)* 7—109485
graphite limiters, high heat flux tests 7—141288
notch bar impact bending test specimens for mechanical fracture values determ. *(German)* 7—138840
plate, centre-cracked, combined thermal and mech. loading, post-yield fracture mechanics anal. 7—69053

thermal stress cracking continued
plate, composite, subjected to heat cycling, delamination problem soln. 7—83118
plates, thin glass, stress-optimal loading in radiant heat transfer 7—117533
PMMA, laser damage mechanism 7—69757
refractories, electron beam disruption simulation 7—141287
solidification cracking, review 7—71169
steel, austenitic and ferritic, crack growth during quenching 7—93071
steel, austenitic stainless, fatigue resist. rel. to thermal cycling 7—113702
steel, austenitic stainless, neutron irrad., long term thermal cycling resist., strength and ductility 7—113701
steel, austenitic stainless, reactor vessel cladding, surface cracks anal., pressurised thermal shock accident 7—89671
steel, C, cracked, secondary temp. fluctuation in monotonically loaded specimen 7—91032
steel, constructional, fatigue crack growth at increase temps. 7—86316
steel, Cr-Mo, thermal cycling, oxide scale cracking, AE obs. 7—78196
steel, crack growth studies under selected temp.-strain histories 7—71269
steel, deformation and fracture resistance comparison in independ/. temp. and mech. loading and Coffin method 7—132863
steel, heat-resistant, crack propag. under thermal-mech. loading, struct. aspects 7—113713
steel, heat-resistant, test temp. effect on crack resist. 7—78166
steel, near eutectoid, thermal fatigue, microstruct. instability and transform. 7—144532
steel, thermal fatigue damage, corrosion inhibitor containing emulsions appl. 7—93069
steel, welded joint strength in mech. and thermal cyclic loading, stress concentrators effect 7—113716
steel pressure vessel, pressurised thermal shock expt. with low ductile-tearing resistance material 7—93237
stress intensities induced by direct resist. heating 7—110857
stress intensity factor for transient thermal stresses in a transversely isotropic infinite body with an external circular crack 7—117526
strip, single edge cracked, under thermal shock, fracture anal. 7—136757
structural elements under cyclic loads, modelling nonuniform nonsteady thermal stress states 7—75462
subcritical creep crack growth kinetics, temp. depend., calc.-exptl. engng. method 7—97451
thermal stability of rectangular refractory ceramic plates when subject to unilateral linear heating *(Russian)* 7—86386
transient thermoelastic crack problems in transverse isotropy 7—130600
Zircaloy fuel sheaths, strain and failure in CANDU LOCA 7—129343
Al-Fe alloy, heat-resistant, compact semiproducts prep. from powders obtained by rapid solidification of melt 7—77880
Al-Mg-Fe, 6061-T6 tensile specimens, thermal-mech. damage 7—93096
Al_2O_3, layered granular material, fracture process 7—78205
BN composites, microstruct., thermal shock behaviour 7—119341
C fibre reinforced Li_2O-Al_2O_3-SiO_2 glass ceramic, thermal diffusivity, sp. ht., thermal cond. 7—69999
Co-Cr-Mo alloy, Stellite 21 coatings on steel, damage kinetics in thermal fatigue *(French)* 7—119427
Ni alloy, creep-resisting, freq. and temp. effect on fatigue resist. 7—100366
Ni alloy, heat-resistant, protective coatings effect on high-temp. fatigue 7—113784
Ni alloy EI826, thermal cycling endurance, effect of thermal stressed state inhomogeneity 7—113718
Ni alloys, continuous casting, secondary cooling criteria for stress cracking prevention *(German)* 7—100212
Ni, continuous casting, secondary cooling criteria for stress cracking prevention *(German)* 7—100212
Ni-base superalloy, vibr. fatigue props. of laserglazed specimens 7—119374
Ni-Si-B metallic glass system, thermomechanical behaviour, liquid metal corrosion 7—86361
Si_3N_4 ceramics, liq. phase bonding 7—100505
Si_3N_4-SiC material, oxidation effect on strength and thermal stability 7—113749
W, H^+-beam bombardment, thermal shock tests 7—113662
W-Cu duplex structure, fusion divertor plate material, thermal cycling durability test, hardness and SEM study 7—109477
ZrC, failure in local thermal loading 7—126237
ZrO_2 thermal barrier coating on Ni base superalloy, durability rel. to bond coating *(Korean)* 7—132776
ZrO_2-Y_2O_3, tetragonal zirconia polycrysts., thermal fatigue behaviour *(Japanese)* 7—71298

thermal stresses
see also thermal stress cracking; thermoelasticity
alloys, high temp., cyclic oxidation, thermal stresses, oxide scale spallation 7—119420
arch, composite, nonlinear problem of thermal stresses, anal. 7—97338
coated system, mech. props. 7—93027
cometary nuclei, thermal stresses anal. 7—88204
composite, elastic-plastic materials, thermal expansion, stress-strain relations 7—83077
composite tubes, cross-ply, asymm. heating, temp. and deflection data 7—117483
composites, advanced, thermal stress anal. methods, validation 7—75288
composites, polymer and metal matrix, thermal effects 7—138795
contact problem, plane thermoelastic, with consideration of heat liberation 7—142237
cylinder, infinite composed of two materials, unsteady thermal stresses 7—90954
cylinder, transient thermoelastic contact problem 7—90955
Czochralski cryst. growth, thermal stresses near solid-liq. interface 7—100041
Czochralski grown FCC single crystal, pulling direction effect on resolved shear stress 7—98014
elastic micropolar half space, thermal shock on boundary, Laplace transform appl. 7—75292
epoxy fibre reinforced composite plate, thermal bending, num. results 7—75432
fibre reinforced composite articles, transversely reinforced, monolithic integrity, design algorithm 7—142232
fibre reinforced composites, coated short fibres, thermal stress, effect of thermal expansion 7—76462
fibre reinforced epoxy composites, unidirectional, stress field under tensile and thermal loading, approx. soln. *(Japanese)* 7—97309

thermal stresses continued
fibrous composite, fibre anisotropy effect on thermal stresses 7−86244
fusion reactor first wall subjected to plasma disruption, thermomechanical behaviour 7−109473
glass fabric reinforced epoxy laminates, residual stresses and warpage meas., projection moire technique 7−100467
glass parts, viscous relax., thermal stresses, finite element calc. 7−71229
graphite, outgassing behaviour, heat shock resistance, thermochem. props. 7−103178
graphite fibre reinforced epoxy composites, radiantly heated, thermal response 7−93026
half-space, asymmetrically heated, thermoelastic stresses 7−75313
half-space with heat sources, temp. stresses 7−75299
Kevlar fibre reinforced epoxy composites, radiantly heated, thermal response 7−93026
laminates, angle-ply, thick, antisymm., thermal buckling 7−110819
local heating of discs, thermal shock testing of graphite *(Japanese)* 7−110788
metal and alloy sheet forming in space 7−117972
metals, recovery theory and its application to stress relaxation tests 7−119285
metals, thermal mechanism of unstable plastic deform. *(Russian)* 7−111738
multi-pass fixed tubesheet exchangers, tube axial load due to thermal effects 7−104143
multilayer wall, surface heat source, temp. fields, thermal stress and strain calc. 7−130700
multilayered plate, thermal strains and stresses, elastic calc. 7−130543
optical fibres, stress-applied polarisation maintaining type, birefringence calc. using vector anal. 7−141997
plane, piecewise-uniform, with cracks, singular integral eqns. of plane thermal cond. and thermoelasticity 7−142223
plane elasticity, numerical solns. based only on harmonic functions 7−83042
plane with ellipsoidal crack, contact problem of thermoelasticity 7−83108
plate, composite, subjected to heat cycling, delamination problem soln. 7−83118
plate, crack motion, effect of internal stresses caused by high-temp. local heating 7−110872
plate, dynamic deformation under pulsed thermal action, numerical solution 7−117464
plate, flat, subjected to conductive heat transfer with thermal boundary conductance, thermal stress anal. 7−110782
plate, nonhomogeneous, flat, transient thermal stress 7−97307
plate, thin circular under temp,. loading in adhesive contact with elastic half-space 7−90956
plate, thin orthotropic, with Griffith crack, transient thermal stress problem 7−136744
plates, elastic, with reinforced edges, thermal stresses and buckling 7−110820
polyhedron, convex, with inclusions, thermoelastic equil. problem 7−142224
polyhedron, convex, with system of thin inclusions, thermoelastic problem 7−83112
polymer, thermal ageing tests, end-point transformations *(German)* 7−93234
polymer composites, decomposing, expanding, thermal response, math. model 7−104142
polyphenylene oxide, laser irrad., dynamic thermal field creation in surface layers, chem. transform. 7−137400
RF structures, thermal stress and 3-D finite element heat transfer anal. 7−89843
rubber, thermoelasticity and stress-temp. behaviour 7−118005
semi-infinite transversely isotropic body, thermal stresses and thermoelastic strain 7−110794
semiconductor films, temp. fields and thermoelastic stresses under ion implantation conditions 7−142852
shaped crystals grown from melt, temp. field and thermal stresses, asymptotic calc. 7−83810
shear localisation in rate and temp. depend. solids, FEM anal. 7−90984
sheet, stress-free planar temperature distribs. from conformal mappings 7−90916
shell, cylindrical, stress-strain state during heat treatment 7−113587
shell-like products made of fibrous composites, buckling and thermoviscoelasticity problem soln. 7−83085
shells of revolution, kinetics of deformation during nonproportional loading 7−90986
short-fiber composites, effective thermoelastic props. calc. 7−119300
sliding systems, thermo mechanical analysis 7−110877
solids of revolution, nonaxisymmetric load over a small-curvature deformation trajectory 7−90962
spherical-shell-rod-circular-plate system, thermal stress state 7−97302
steel, austenitic stainless, reactor vessel cladding, surface cracks anal., pressurised thermal shock accident 7−89671
steel, Cr-Mo, oxidation behaviour, study using AE technique 7−144604
steel, quenching with laser and electron beams, calc. of temp. and thermal stresses 7−71216
structural elements under cyclic loads, modelling nonuniform nonsteady thermal stress states 7−75462
structural shape variation in heat transfer problems 7−90915
substrates, thermal and thermal deflection analyses during coating deposition 7−124787
transient thermal stresses due to heat source moving over elastic slab 7−90957
transversely isotropic elastic solid weakened by external circular crack 7−91024
tubes, angle-ply composite, thermally induced stresses and deform. 7−136712
unbounded isotropic space weakened by ellipsoidal inclusion, thermoelastic stresses 7−97321
VHTR graphite subjected to internal heat generation and surface heating, 3D transient thermal stresses 7−81594
weakly ionised plasma, thermostress flow study 7−69322
C fibre reinforced plastic, thermal deformation and strength at high temp. 7−138789
Cu conductor carrying alternating current thermo-electrolyte stresses 7−83032
GaAs, Czochralski growth, liquid encapsulated, thermal stress model 7−138639
GaAs, LEC growth, thermal stresses, liq. encapsulant natural convection and thermal transparency effect 7−138637

thermal stresses continued
InP, LEC growth, thermoelastic stress, effect of ambient temp. gradient *(Chinese)* 7−124150
$LiNbO_3$ crysts., optical anomalies, tertiary pyroelec. effect, thermal stress model anal. 7−125656
Nd:phosphate glass lasers, Ar laser pumping, thermally induced stresses 7−74931
Si, crystal ribbon growth, stress-free, numerical simulation 7−85989
Si intense ion irrad.-initiated plastic deform. and thermal stresses study 7−117986
Si ribbon growth, dislocation motion and multiplication 7−117845
Si ribbon growth, thermal viscoplastic buckling 7−90995
Si ribbons, prep. and thermal residual stress anal. *(French)* 7−125962
Si ribbons, RTR, cryst. defects, charact. and influence on ribbon cell performance 7−86015
Si sheet growth, rate limits, vertical and horizontal growth methods 7−85993
Si sheet growth, transverse temp. field nonuniformity effects on stress 7−83809
Si web crystal growth, plastic deform. analysis 7−84093
Si web type ribbon growth, dislocation dynamics 7−83965
Si_3N_4/stainless steel multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
$TaSi_x$ sputtered films on polycryst. Si, stress-temp., behaviour study 7−105350
α-U, spallation target material for SNS, proton irradiated, thermostresses, thermal cycling effects 7−131196
W/ZrO_2, multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
WC-Co cemented composites, thermal contraction stresses 7−113633

thermal transformations *see phase transformations*

thermal variables control
see also temperature control
fluid heat exchange process adaptive control 7−93536
heating rate controller for thermoluminescence and thermally stimulated conductivity meas. in semiconductors 7−80815

thermal variables measurement
see also bolometers; calorimeters; calorimetry; temperature measurement; thermal conductivity measurement; thermocouples; thermometers
adsorption heat, differential scanning calorimeter modifications 7−80783
design of equipment for probing thermal effects of substances *(Russian)* 7−121107
diffusivity, heat capacity and density, transient hot wire measurements 7−95580
diffusivity measurement, Angstrom's method 7−134734
diffusivity of composite materials, apparatus for 300 to 1100 K range 7−102405
diffusivity of materials with low conductivity, by modified Angstrom method 7−102406
emittance meas. using portable device 7−121112
energy meter errors, causes and performance improvement 7−102413
fluidised bed immersed surface, instantaneous heat transfer coeffs. meas. 7−95583
geological thermal emission spectrometer for geological field use 7−134020
heat capacity under hydrostatic pressure, low-temperature measurement technique 7−108568
heat of fusion, microsecond-resolution transient technique 7−142960
heat-flow sensor for study of magnetic phase transitions in adsorbates 7−121109
hypersonic wind tunnel, heat transfer meas. using surface thermocouples, improved data reduction 7−123819
IR radiation thermometer 7−67393
IWK autarkon heat and flow meas. systems using static meas. methods 7−123790
liquid crystal heat flux indicators study 7−95582
liquid crystal heat-indicating mixtures, expt. study *(Russian)* 7−102408
micro-foil heat flow sensor design and appls. 7−121113
microcalorimeter, gas-solution, heat binding curves determ. 7−80793
multilayer thin film heat transfer gauges, theory 7−128572
multimirror optical stand for calibrating sensors of high-intensity radiant fluxes 7−108544
non-isothermal cavity methods for determining the emittance of solids *(Chinese)* 7−124563
nondestructive inspection methods and development trends 7−100483
nonintrusive, in microgravity fluid science expts. 7−115955
polymer foils, thermal diffusivity, photoacoustic meas. 7−108547
simulation modeling for estimation of the characteristics of measurement errors 7−108546
specific heat meas., errors and disrepancies determ. due to temp. scales 7−121105
specific heat of gases, const. vol. meas. *(Italian)* 7−73341
spherical bodies, surface film conductance meas. method 7−82997
thin films, thermal transport meas., anal. of heat pulse method 7−95584
total-radiation radiometers and pyrometers study 7−95592
wide-frequency specific heat spectrometer 7−128574
windward laminar heating meas. on biconic in hypervelocity flows 7−142261
zero-method heat flux sensor, thermal fields study 7−128575

thermal wave imaging *see photothermal effects*

thermally stimulated capacitor discharge *see thermally stimulated currents*

thermally stimulated currents
0 7−124292
1D insulators, isothermal and nonisothermal carrier transport 7−84870
alkaline earth sulphide phosphors, doped with Ce and Sm, thermally stimulated luminesc. 7−144133
carnauba wax, electret formation, mag. field effects 7−138377
carrier escape probability, pre-exponential factor 7−99944
casein hydration, TSDC studies 7−139184
computer controlled apparatus for thermally stimulated current meas. 7−102457
fluoride solid electrolytes, thermal depolarisation phenomena 7−105116
glass, electric charge accumulation by γ-irrad., TSC, thermolum. *(Japanese)* 7−131187
ice:H.Cl(NH_4OH), pure and doped, thermally stimulated depolarisation studies 7−99656
ice, Ih, dielectric relax. time multiplicity at low temps. 7−99664
ice, Ih phase, dielec. relax. and TSC 7−113074
ice microcrystals, dispersed, multiplicity of dielec. relax. times 7−106840

ermally stimulated currents continued
.ice systems, dipolar dielec. relax., thermally stimulated depolarisation studies 7—99665
impurity-vacancy dipoles, ionic thermocurrent meas. 7—132186
LDPE, space charge polarisation in divergent AC field, role of atmospheric gases 7—125608
LDPE films, charge trapping and cond., modification by additives 7—84917
oxide glass, ionic cond., dielec. relax., cond. polarisation 7—76484
PEBAX, polyether-polyamide copolymer, anelastic, dielectric props. 7—118941
Pebax copolymer, molecular relax parameters, thermally stimulated current technique 7—70326
PET films, ionic space charge thermocurrent meas. 7—92581
polyamide 12, dielectric relaxations, TSC investig. 7—118938
polybutadienes, halato telechelic, cond. and thermally stimulated processes 7—99655
polyether ether ketone films, dielec. and cond. props. 7—85532
polyethylene, γ-irradiated, linear low density, carrier traps. TSC study 7—92320
polyethylene, AC elec., ageing phenomena, thermally stimulated discharge current meas. 7—85529
polyethylene, low density, I_2-doped, reversal TSC *(Japanese)* 7—112365
polyethylene-(ethyl-vinyl acetate copolymer) interface, elec. props. 7—125609
polymer insulators, carrier injection, space charge, and elec. breakdown 7—125607
polymeric glasses, secondary relax. and glass transition 7—97985
polypropylene thick films, thermally stimulated current and charge decay studies 7—92582
polystyrenesulfonic acid films, TSC analysis 7—132194
polyvinylidene fluoride, pyroelectric and relaxation phenomena, thermal current anal. 7—138387
polyvinylidene fluoride, thermally stimulated depolarisation current, dipolar interaction 7—113070
PVC films, corona-charged, current transients 7—138378
PVDF electret, thermal stimulated current charact. due to space charge *(Korean)* 7—143961
semiconductors, photothermally stimulated excitation 7—118499
semiconductors, TSC spectra anal. 7—112414
styrene-isoprene-styrene block copolymers, thermally stimulated polarisation currents, effect of thermal expansion 7—85528
tetracene films, trapped charge transfer excitons, TSC spectra obs. 7—131661
thermoelectrets, charge and polarisation relax. 7—92583
XLPE, thermally stimulated surface pot. meas. using temp. gradient, trapped carrier polarity 7—125601
n-AlGaAs-GaAs heterostructs., thermally stimulated persistent conductivity studies 7—143570
$BaTiO_3$ ceramics, transient polarisation currents and degradation effects 7—99658
$BaTiO_3$, thermally-stimulated polarisation/depolarisation current meas. 7—99657
$Bi_{12}GeO_{20}:Al^{3+}(Fe^{3+})(Zn^{2+})(Cd^{2+})$, thermally stimulated currents, thermoluminescence 7—84920
$Bi_{12}SiO_{20}:Al^{3+}(Fe^{3+})(Zn^{2+})(Cd^{2+})$, thermally stimulated currents, thermoluminescence 7—84920
CaS, traps, anomalous TSC meas. 7—99090
CdS, luminescence and photocond., ultrasound-stimulated changes 7—76302
CdTe crystals, TSC rate equations, numerical integration 7—112359
CdTe, pure and Cl,Cu doped defect and impurity levels, γ irrad. effects, TSC and PICTS studies 7—105484
GaAs, deep levels, capture cross sections, TSC studies 7—98866
GaAs, EL2 defect metastability, TSC, photocond. meas. 7—92097
p-GaAs, EL2 electron trap, double donor state 7—131583
GaAs, EL2 metastability, photodissociation model, obs. of EL2 props. 7—98884
GaAs, gamma-irradiated, radiation defects, low temp. reaction 7—124333
GaAs:Sb monocrystals, TSC studies 7—92196
GaSe:Co single crystals, hole traps, optical absorpt. and photocond. spectra, TSC meas. 7—99091
$Gd_3Ga_5O_{12}$ single crystals, thermally stimulated depolarisation, thermo- and photo-electret states 7—138375
$Gd(MoO_4)_3$ ferroelectric ferroelectric, regular oriented domain struct. form. 7—125649
HgI_2, photoelectronic props. 7—112396
KCl:Pb, X-ray induced relax. bands, ionic thermocurrents 7—143964
$KCl_{1-x}Br_x:Eu^{2+}$ mixed crysts., EPR ionic thermocurrent, optical absorpt. and emission spectra meas. 7—124292
KH_2PO_4, polarised below 123 K, thermally stimulated electron emission 7—106080
$Li_2B_4O_7$ crystallised glass, quenched, TSEE 7—85964
$Mg_xCd_{1-x}Se$, recomb. processes under conditions of maximum charge transfer between local centres 7—84916
$Na_4Al_3Si_3O_{12}X$ (X=Br, I), ceramic, elec. props. *(Russian)* 7—143080
NaCl:Eu crystals, ageing, precip., photolum., TSC, mech. response 7—69913
$NaCl:Eu^{2+}$, impurity cation-vacancy dipoles, aggregation kinetics 7—137390
$Nd_3Ga_5O_{12}$, photo- and thermodepolarisation 7—113068
Ni/GaP Schottky barrier diodes, current flow mechanism study *(Russian)* 7—99205
$Pb_4(NO_3)_2(PO_4)_2$ single cryst., DC cond., 313 to 700 K, charge transport mechanism 7—118505
Si-SiO_2 MOS, structs., RF-annealing, impurity activation and trap annealing, TSC meas. *(Russian)* 7—138068
SiO_2 layers on Si, mobile ions, book contrib. 7—105140
SiO_2-Si, thermally grown films, ionic current study 7—77103
$SrTiO_3$ carriers, transient polarisation currents and degradation effects 7—99658
V_2O_5-P_2O_5-based MIM structs., high temp. TSC peak study *(Russian)* 7—77107
YIG:Ca, Ge epitaxial films, elec. props., excitation effects 7—125154
YIG:Si, elec. relaxation processes and photomag. props., thermostimulated depolarisation study *(Russian)* 7—125606
$Zn_xCd_{1-x}S$ layers, photoelec. and optical props. 7—105619
$Zn_xCd_{1-x}Se$ single crystals, energy spectrum of local centres, elec. charcts. 7—112357

thermally stimulated depolarisation *see thermally stimulated currents*
thermally stimulated discharge *see thermally stimulated currents*
thermally stimulated ionic currents *see thermally stimulated currents*
thermally stimulated polarisation *see thermally stimulated currents*
thermally stimulated relaxation currents *see thermally stimulated currents*
thermionic cathodes
emissivity of hot cathode determ. during arc discharge, by laser reflectometry 7—121202
magnetically insulated electron flow in cylindrical thermionic diode 7—83553
LaB_6 hollow cathode arc, electron density and current components 7—111300
Os-coated cathodes for very high emission-density appls. in FEL 7—97025
ZrO/W (100) thermal-field emission cathode *(Japanese)* 7—77746
thermionic conversion
diode collector, gas filled, work function determ. 7—93517
emitter sheath ion reflection and trapped ion effect on thermionic converter performance 7—111283
energy convertors *(Dutch)* 7—100740
nuclear reactor systems for space appl. 7—67956
output current charcts. anal. *(Japanese)* 7—71629
sandwich type thermionic converter, output I-V charcts., expt. and SIMCON code calc. *(Japanese)* 7—139124
thermionic electron emission
see also Schottky effect; thermionic cathodes
metal-electron flux system, parameter-oscillation mechanism 7—98245
MIS structs., relaxation spectroscopy of boundary states, tunnel transitions of carriers 7—131791
step p-n heterojunctions, minority-carrier leakage 7—77080
TGS crysts., well-defined domain struct., thermally stimulated electron emission 7—106353
p^+-$In_{0.53}Ga_{0.47}As$/n-InP heterojunctions, thermionic currents and acceptor diffusion studies 7—143575
LaB_6 directly heated cathodes ion source operation 7—67430
LaB_6 thermionic electron emitter surfaces, electric field distrib. 7—70986
Os-coated cathodes for very high emission-density appls. in FEL 7—97025
a-$Se_{1-x}Te_x$ field-assisted thermal hole emission from deep mobility gap states, xerographic dark discharge meas. 7—119115
ZrO/W (100) thermal-field emission cathode *(Japanese)* 7—77746
thermionic emission
see also thermionic electron emission; thermionic ion emission
No entries
thermionic generators *see thermionic conversion*
thermionic ion emission
AlN, solid Al^+ ion source 7—85937
KCl sample, K isotopic ratio, use of pencil thermoemission ion source, mass spectra anal. 7—86695
thermionic power generation *see thermionic conversion*
thermionic tubes
see also cathode-ray tubes; electron-wave tubes; gas-discharge tubes; rectifier tubes; vacuum tubes
magnetically insulated electron flow in cylindrical thermionic diode 7—83553
thermionic valves *see thermionic tubes*
thermistors
10 GHz band power standard, dry type calorimeter *(Japanese)* 7—67345
anemometer for velocity and temp. meas. in thermally stratified rotating fluid 7—83375
biomedical application, self-heated thermistor based meas. of blood perfusion 7—101107
digital temperature compensation of thermistor flowmeter 7—97653
ferroelectric applications, conf., Bethlehem, PA, USA (June 1986) 7—88741
medical temperature transducers and digital clinical thermometers 7—101106
microcomputer attachment, thermistor probe construction 7—115958
nonlinearity error minimisation of semiconductor thermistor thermometer 7—108552
radiosonde humidity and temp. errors anal. 7—127551
skin probe for simultaneous meas. of elec. admittance, blood flow and temp. at same site 7—107323
thermometry errors, induced by forced convection 7—95587
towed thermistor spar 7—101604
transducer for atmospheric moisture content meas. *(Swedish)* 7—127485
velocity scaling of thermistor dynamic response functions 7—121121
Ni-Mn-O thermistors, form. and elec. props., X-ray diffr., SEM and AES studies 7—92176
NiO-Mn_3O_4 mixture, resist. and I-V meas. of Mn_3O_4 and nickel manganite depend. on Mn_3O_4 content, thermistor use 7—143465
$Pb(Ti,Mn)O_3$ and $(Pb,Ba)(Ti,Mn)O_3$ PTC and NTC effects 7—131649
thermo-EMF *see thermoelectricity*
thermo-optical effects
see also thermoreflectance
chiral mixtures with injected smectic phases, thermochromism 7—99808
Fabry-Perot cavities, metal mirrored containing thermo-optic materials, optical bistability 7—75044
fibre optic temp. sensor with thermochromic transducer, thermometry 7—123248
fibre-optic circuit switch, thermooptic bulk deflector, theoretical and expt. behaviour 7—142003
fibres temperature-phase sensitivity, sensor appl. 7—141999
II-IV-V_2 cpds., birefr., gyrotropy charcts. 7—113122
liquids, thermooptic coeff. meas. by interferometry *(Korean)* 7—92648
nematic liquid crystal, thin layer, laser radiation reflection, thermooptical modulation 7—75008
optical storage, erasable media, optical and thermal anal. 7—110291
optical switch using thermo-optical effect 7—97172
poly 3-alkylthienylene. solns., thermochromism and solvatochromism, chain conform. 7—85611
polysiloxane, liquid crystalline, laser addressed thermo-optic effect 7—142561
quartz optical fibres, thermochromism in luminous and solar radiation transmission 7—117323
refractive-index change due to thermo-optic effect, meas. technique 7—121198
N-salicylidene-2-thenylamines, solid state photochromism and thermochromism 7—85557
soda-lime glass, thermo-optic effects and applications 7—136468

thermo-optical effects continued
solar cell coverglass and second surface mirror coating improvements 7—144870
spatial coherence under thermal self-interaction, statistics anal. 7—90734
tetrahydrophenanthridine hydroxynitrostyrils. absorpt, spectra 7—141568
thermal lensing systems, nonlinear effects in light scattering 7—123079
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7—124775
BaB_2O_4, optical, mechanical and thermal props. 7—141919
GdScGG:Cr,Nd laser host material, refr. index and $\Delta n/\Delta T$ at 1064 nm 7—68645
Nd:glass laser active element, thermo-optical distortion, temp. field distrib. study 7—103827
$Sr_{1-x}Ba_xNb_2O_6$:Ce crysts., self-induced holographic gratings, coherent light oscillation obs. 7—123129
$SrTiO_3$, negative intrinsic thermo-optical effect 7—99807
VO_2 thermochromic films for energy efficient windows 7—125994
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7—125979
$ZnIn_2(S_xSe_{1-x})_4$ mixed crystals, optical and electronic props. 7—106151
ZnSe nonlinear interference filter, thermally induced optical bistability model 7—90683

thermochemical energy conversion *see chemical energy conversion*

thermochemistry
see also chemical reactions
acetylene, thermal plasma prod., equilib. calcs. 7—130831
atomic absorption thermochemical research method 7—116013
ethylene, on Pt (111), laser-driven thermal reactions, mass spectral investig. 7—113979
ethylidyne, on Pt (111), laser-driven thermal reactions, mass spectral investig. 7—113979
graphite, outgassing behaviour, heat shock resistance, thermochem. props. 7—103178
high temperature corrosion, thermochemical diagrams appl. 7—78331
organic molecules, conformational struct., transition energies, thermochemical parameters, all valence electron approx. calcs. 7—109759
reversible chemical reactions, optical bistability 7—90679
solar photothermochemistry for fuels and chemicals production 7—144904
thermal rate consts., time-depends calc. method 7—86558
tool steel hardening in high temp. HF induction plasma 7—78311
$Ba_2YCu_3O_x$, high temp. supercond., charact. rel to O_2 partial press., thermoanal. meas. 7—118057
Cd, thermochromatography, on-line studies 7—100662
$EuNbO_2$, thermochemistry, mass spectrometric obs. 7—126471
$EuNbO_3$, thermochemistry, mass spectrometric obs. 7—126471
$EuNb_2O_6$ thermochemistry, mass spectrometric obs. 7—126471
Fe-Mn system, thermochem. and phase equilib. data 7—131333
HCN, thermal plasma prod., equilib. calcs. 7—130831
$H^+(HCl)_2$ dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7—109809
$H^+(H_2S)_2$, dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7—109809
$H_xMoO_3.H_2O$ insertion cpds., thermochemical props. studies 7—86664
$H^+(PH_3)_2$, dimers, form., struct., Moller-Plesset perturbation method, electron correl. effects calcs. 7—109809
$H_xWO_3.n(H_2O)$, (n=1,2), insertion cpds., thermochemical props. studies 7—86664
KOH-H_2O systems, thermochem. characts. *(French)* 7—119554
Li-Si-Be-O system for fusion reactor blanket, thermochemical anal. 7—135607
$Mu+H_2(D_2)$, thermal reaction rate const. meas. 7—113890
$N^++H_2(HD)(D_2)$, thermochem., kinetic isotope effects and energy depend., cross section meas. 7—93251
NH_3, thermal plasma prod., equilib. calcs. 7—130831
NaI-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7—126472
NaOH-H_2O systems, thermochem. characts. *(French)* 7—119554
NbO, thermochemistry, mass spectrometric obs. 7—126471
NbO_2, thermochemistry, mass spectrometric obs. 7—126471
Ni-Mg olivine solid soln., thermodynamics 7—143043
ScI_3-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7—126472
SiC, thermal plasma prod., equilib. calcs. 7—130831
Si_3N_4, powders, thermal plasma prod., synthetic routes survey 7—130832
Si_3N_4, thermal plasma prod., equilib. calcs. 7—130831
TiC, thermal plasma prod., equilib. calcs. 7—130831
Zn, thermochromatography, on-line studies 7—100662

thermochromism *see thermo-optical effects*

thermoclines *see temperature distribution*

thermocouples
see also thermopiles
analogue precision lineariser 7—80780
converse thermal cond. problem soln., thermocouple influence 7—140698
fabrication of compact thermocouples in hermetic sheaths 7—134736
HDR reactor safety program, on-line surveillance instrumentation for thermal shock testing 7—122048
hypersonic wind tunnel, heat transfer meas. using surface thermocouples improved data reduction 7—123819
interference-type dilatometer, meas. errors calc. 7—121062
low temp. meas. using thermometers and thermocouples *(Czech)* 7—128577
micro-foil heat flow sensor design and appls. 7—121113
microwave heating, sintering, design principles 7—71108
portable microprocessor-based thermocouple and RTD simulator 7—102409
pressure dependent EMF 7—134739
sheath-type sensors for reactor safety and control systems *(Czech)* 7—81557
temperature instability effects 7—140691
thermal microscopy, high resolution, temp. mapping and surface profiling appl. 7—121114
thermoelectric materials Seebeck coeff. determ., by potentiometric meas. 7—80813
thermoelectric power measuring system for high-pressure studies 7—89228
thermometer, multi-grafted, characts., expt. *(Japanese)* 7—73349
Bi_2Te_3 thermoelectric radiation detector with fast response 7—128576
Cu-constantan, transient temperature meas. at centre of glass sphere 7—80788
Pd-Cr-Os/Cu-Fe, magnetic field effect on thermo EMF 7—134737

thermocouples continued
Pt-Ir thin film thermocouple, high-temp., with fast time response 7—95593
Pt-Mo thermocouple for VHTR in-core temp. meas., high-temp. characteristics 7—135456
Pt-RhPt, discontinuity meas. in dt/dt_{68} at 630.74°C in IPTS-68 7—89221

thermocurrents *see thermally stimulated currents*

thermodiffusion *see thermal diffusion*

thermodynamic changes of state *see phase transformations*

thermodynamic cooling *see cooling*

thermodynamic equations of state *see equations of state*

thermodynamic potential *see free energy*

thermodynamic properties
see also critical points; enthalpy; entropy; free energy; Gruneisen coefficient; latent heat; specific heat
2-chloro-6-(trichloromethyl)pyridine, heat capacity and thermodynamic props. 7—98515
activity calculation from phase diagram involving intermediate cpd. using entropy of form. 7—76453
air, plasma, thermodynamic props. Calc. 7—69310
alkali halides, solns., in water-acetamide mixtures, ion-solvent interactions volume 7—111336
n-alkanenitriles, critical temps. and pressures, investig. 7—104976
n-alkoxyethanol-di-n-butylether mixtures, excess props. 7—143041
bis(di-n-alkylammonium)tetrachlorometallates, conformational disorder 7—129898
alloys, hot corrosion, thermodynamic analysis 7—119417
aluminosilicates, energetics and thermodynamics 7—111909
associating systems, thermodynamics of systems formed by any number of associating components 7—76437
BCC metals-H, Monte Carlo calcs., hard core lattice gas 7—105040
benzene-ethyl acetate, excess volumes, calcs. and meas. 7—86658
binary gas monolayers on homogeneous solid surface, Monte Carlo study 7—84487
binary solutions, thermodynamic props., Legendre polynomial expansions 7—76454
biphenyl-d_{10}, cryst., successive phase transitions, calorimetric obs. 7—104985
bromobenzene, derived thermodynamic data, high press. 7—142943
1-butene, Henry's consts. determ. 7—69934
butyl rubber solutions, viscosity, thermodynamic props. at low temps. *(Russian)* 7—84349
cellulose triacetate, acetic acid solns., macromol. conform. changes, temp. effects *(Russian)* 7—82410
cetyltrimethylammonium bromide, monolayers, adsorpt. thermodynamic fns. investig. 7—70075
chemical exergy of elements and compounds, based on Earth crust conc. 7—86657
chemical mixture, interaction press. definition 7—106822
chemically curved crystals, thermodynamic stability of elastic material, Ginzburg-Landau theory 7—137596
1-chlorohexane-hexane isomers mixtures, excess vols. 7—84319
chloromethylsilane-pyridazine (pyrazine) phase diagrams, thermodynamic functions *(German)* 7—91776
cholesterol-generated liquid membranes, electrokinetic energy conversion 7—119567
classical molecular fluid mixtures, α-exp-6 pot. interactions, excess thermodynamic eqn. of state 7—111327
coherent solids, inapplicability of Gibb's phase rule 7—124553
combustion products, thermodynamic calcs. 7—78505
component activity coefficients, anal. of soln. of groups method 7—98498
contact, friction and wear, thermodynamical model, constitutive eqns. for friction, wear and frictional heat 7—98520
contact, friction and wear, thermodynamical model, governing eqns. 7—98518
contact friction and wear, thermodynamical model, constitutive eqns. for friction, wear and frictional heat 7—98519
CVD, thermodynamic model *(Polish)* 7—137587
cyclic alcohols, high press. thermodynamic and dielec. props. *(Japanese)* 7—131336
cyclohexane-ethyl acetate, excess volumes, calcs. and meas. 7—86658
dense fluids, kinetic theory and irreversible thermodynamics with external elec. field 7—123826
di-n-dodecyl quaternary ammonium salts, thermotropic liq. cryst. props. 7—124091
diastereomeric noncovalent electron transfer complexes, conform., thermodynamics 7—82018
4,13-diaza-18-crown-6, N,N'-disubstituted, complexes with NaI(KI), cryptand-like behavior, X-ray cryst. struct. 7—117913
disordered materials, survey of amorphous solids 7—111402
disordered solids thermal and dielectric props. at low temp. 7—77463
DNA, salt dependence, preferential interaction coefficient, Donnan coefficients, Poisson-Boltzmann cell model Monte Carlo solutions 7—136105
electrolyte solutions, thermodynamic props., Kirkwood-Buff approach 7—91840
electrolytes, thermodynamic properties, Monte Carlo calcs. 7—111911
EM fields, thermodynamic charact. 7—103713
ethane, Henry's consts. determ. 7—69934
ethene, Henry's consts. determ. 7—69934
ethyl ether-chloroform, excess volumes, calcs. and meas. 7—86658
ethylbenzene-alkanol mixture, excess volumes 7—143044
fatty acids, long-chain, solid-liquid phase relations in organic solvents 7—124454
para-Fermi gas, interacting in mag. field, thermodynamic and mag. props. 7—102297
fluid, 2D, microcomputer simulation expts., to study effects of repulsive and attractive forces 7—88779
fluids, crossover from singular to regular thermodynamic behavior in critical region 7—143052
formamide, liq., mol. dynamics simulations, test particle model pot. 7—91417
four-component systems, calc. of isotherms of spinodal 7—106489
gas, nearest-neighbour lattice, revised scaling variables, thermodynamic perturbation theory calcs. 7—104368
gas and liquid solns., thermodynamic props. calc. 7—123835
gas mixtures, thermodynamic capacity 7—126473
gas properties simulation using Benedict-Webb-Rubin equation, Applesoft program 7—75746
gas superheating in two section forechamber of blowdown wind tunnel 7—136917

rmodynamic properties continued
glass, stabilisation temperature memory effect, structure-kinetic interpretation 7−97949
glass forming liquids, ideal glass transition temp. and thermodynamic props. 7−143012
glass-forming melts, two-level model, nonisobaric conditions 7−98448
glycyl peptides, partial molar vol. and adiabatic compressibilities calc. 7−76450
hard body fluids, correl. functions, thermodynamic props. 7−83625
hard spheres, thermodynamic props., mol. dynamics investig. 7−83623
hard-sphere fluid within thermodynamically consistent theory, low density props. 7−83628
heptanol, density, specific heat, thermodynamic props. 7−143038
heteronuclear transition metal dimer ions, photodissoc. 7−129807
hexafluorobenzene-benzene-n-tetradecane mixtures, vapour press. and excess vols. calcs. 7−105077
hexafluorobenzene-n-tetradecane mixtures, vapour press. and excess vols. calcs. 7−105077
hole lattice model, thermodynamic props., eqns. of state 7−124069
hydrocarbon dications, stability, spectroscopic constants and thermodynamic functions 7−96520
hydrocarbons, nucleation in pyrolysis, thermodynamic-potential minimisation 7−106773
hydrocarbons, vapours, absorpt. in polyethylene films, thermodynamics 7−118239
hydrophilic solutes, aq. solns., stepwise hydration, thermodynamic model 7−93364
hydrophilic solutes, aq. solns., stepwise hydration, thermodynamic model of binary nonelectrolytes 7−93365
ice/water interface layer, kinetic processes, crystal growth 7−120048
ideal gas, D-dimensional, thermodynamic props., parastatistics anal. 7−134638
ideal gas, general, under shear, thermodynamics 7−83402
II-VI semiconductor pseudobinary alloys, local bonding, thermodynamic props., EXAFS studies 7−106309
III-V semiconductor quaternary solid solutions, thermodynamic theory 7−143049
III-V zinc-blende semiconductor, atomic struct. and ordering 7−137833
III-V zinc-blende semiconductor, atomic struct. and ordering 7−137834
inert gas fluids, thermodynamic props. calcs. 7−137592
inhomogeneous fluids, hard sphere plus attractive mean field approximation 7−124062
interacting Bose gas, weak external field, van der Waals limit 7−105162
intramolecular mixed excimer form., time depend. fluoresc., kinetic and thermodynamic studies 7−122601
intrinsic semiconds., chem. pot. and Fermi level near absolute zero temp. 7−84639
inversion layers, quasi-one-dimensional, transport props. and density of states 7−125093
ionic fluids, vapour and critical region props., restricted primitive model 7−83401
ionic mixture in dipolar solvent, mean spherical approx., anal. soln. 7−111326
ionic mixture in dipolar solvent, pair correlation fns., thermodynamics, mean spherical approx. 7−137171
Ising model, spin=1, effective field theory 7−85224
lattice stabilities, new method of describing 7−111820
Lennard-Jones fluid, small wave vectors, transverse current autocorrelation function 7−69569
Lennard-Jones particle system, coding, computer simulation 7−137526
Lennard-Jones particle systems, melting, computer simulation 7−137525
linear polyatomic fluids, integral eqn., thermodynamic props. 7−91408
liquid, tensile instability, single branched isochore, thermodynamic behaviour study 7−76256
liquid alloys, thermodynamic study of associated soln. model 7−131331
liquid crystals, guest-host systems with high conc. of pleochroic dyes, melting and clearing point 7−137226
liquid metal-ionocovalent oxide, estimation of thermodynamic adhesion and contact angle *(French)* 7−112013
liquid systems with compound-forming tendencies and miscibility gap, appl. of Hoch-Arpshofen model 7−137564
liquids, static properties, Monte Carlo FORTRAN 200 program for CYBER 205 7−142548
low-molecular cpds., in micropores of oriented polymer matrices, melting thermodynamics *(Russian)* 7−137595
magnetic superconductors, electronic heat capacity, effect of spin scatt. and mag. order 7−85191
membrane, bioreactors, mixing, minimizing dilution effects 7−93670
metal matrix composites, infiltration 7−126051
metal oxides, dissolving in aqueous media 7−84282
metallic glasses, formation, methods and techniques 7−143011
metallic melts, thermodynamics and kinetics of amorphisation *(Russian)* 7−124114
metals, critical point data using Hoch-Arpshofen method 7−67266
methanol, liq., mol. dynamics calcs., flexible three-site model 7−137191
methanol-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7−124465
methanol-water mixtures, excess molar enthalpies and thermodynamic props. 7−98504
2-methylbutan-2-ol-n-hexadecane, excess enthalpies and excess vols. meas. 7−143040
2-methylbutan-2-ol-n-hexane, excess enthalpies and excess vols. meas. 7−143040
N-methylpyrrolidinone-tetrahydrofuran, mixtures, density, viscosity and thermodynamics 7−98496
mixed solvent electrolyte solns., activity coefficients 7−98499
α-Mn:C, dilute soln. thermodynamics 7−105080
molecular fluid mixtures, equilib. props. in semiclassical limit 7−124061
multicentre Lennard-Jones mols., tetrahedral and octahedral model fluids, thermodynamic perturbation theory 7−69852
nonisothermal coadsorption processes, thermodynamics 7−112058
nucleic acid base pairs, H-bonded, free energy increments 7−119550
one-component system, crit. phenomena, appl. of Hoch-Arpshofen model 7−67265
organic monomolecular layers, struct., phase transitions *(Japanese)* 7−76697
partially miscible liquid system equilibrium, computation by total Gibbs energy minimisation *(Chinese)* 7−98514
phase diagrams, ternary, calc. with binary data 7−132562
phase rule and independent components 7−76354
phenol blue, mol. interactions in dil. supercritical fluid solns. 7−122655

thermodynamic properties continued
phonons in disordered solids, thermodynamic props. 7−84169
PMMA film dissolution and swelling behaviour in solvent/nonsolvent mixtures, in situ ellipsometric charactn. 7−124520
PMMA-high density polyethylene blends, sorption and diffusion of low-mol. cpds. *(Russian)* 7−98709
PMMA-polybutylmethacrylate blend, filled, thermodynamic interaction, filler and prehistory effects *(Russian)* 7−137594
poly(phenylmethylsiloxane)-poly(styrene) mixture, static struct. factor, mutual diffusion coeff., light scatt. meas. 7−91859
polyacetylene, neutral and electrochemically doped, secondary radiation emission 7−70906
polyamides, cryst. lattice, thermal expansion obs. *(Russian)* 7−111921
polyamidobenzimidazoles, props., unit struct., rel. to monomer asymmetry *(Russian)* 7−91489
polyatomic molecules, normal vibr. freqs., MINDO/3 calcs. 7−109867
polyethylene, composite form., stretching, strain, thermodynamic anal. *(Russian)* 7−100176
polymer, thermal ageing tests, end-point transformations *(German)* 7−93234
polymer blends glass transition, theory 7−137563
polymer miscible blends, prep. from two cryst. polymers, thermodynamic polymer-polymer interaction determ. 7−84289
polymer mixture, Flory-Huggins lattice model, crit. props. 7−108432
polymer solutions, sol-gel transition, thermodynamic theory 7−91843
polymers, quasi-one-dimensional conductors, bipolaron lattice theory 7−98998
polymers, thermodynamic properties, van der Waals and Tonks models 7−84322
polymers and polyelectrolytes, anisotropic equilibrium conformations, electric field effect, thermodynamic model 7−75962
polyphosphazenes, struct., thermodynamic, thermal behaviour 7−117835
polystyrene, high-filled, thermodynamics of interphase interactions *(Russian)* 7−84325
polystyrene-PMMA blend, filled, thermodynamic interaction, filler and prehistory effects *(Russian)* 7−137594
precipitate shape evolution under applied stress, thermodynamics and kinetics 7−86188
propane, Henry's consts. determ. 7−69934
propanol, coexistence curve diameter temp. depend. near critical point, scaling eqn. approx. *(Russian)* 7−67267
propene, Henry's consts. determ. 7−69934
propylene carbonate-acetonitrile, mixtures, density, viscosity and thermodynamics 7−98496
protonic acids, in water-organic media, dissoc. thermodynamics 7−119508
pure substances, critical amplitude models 7−137508
PVC-polyacrylate, miscibility, thermodynamic and phase behaviour 7−91824
PVC/polyepichlorohydrin, mixing, free energy *(French)* 7−124120
QED, thermal props. and confinement in 2+1 dimens. 7−95825
quadrupolar binary fluid mixtures critical lines from a hard-sphere Lennard-Jones quadrupolar molecular model 7−117793
quantum statistics, series representations, grand potential 7−115893
quantum statistics, series representations, particle energy averages and thermodynamic props. 7−115894
quark gas, nonrelativistic free, para-Fermi statistics of order three, thermodynamic props. 7−141006
quartz, heat capacities, 340-1000 K, revised values for thermodynamic props. 7−124543
quasiperiodic layered structures, supercond., crit. indices, Ginzburg-Landau approx. 7−105815
rare earth compounds, thermodynamic characts., microscopic theory anal. 7−124550
rare earth impurity systems, thermodynamic props., f-d Coulomb repulsion effects 7−76448
refractory metal nitrides, combustion synthesis theoretical analysis 7−71115
relativistic Bose gas with pair prod., thermodynamic prop. finite-size scaling 7−105163
Riemann space-time, local quantum statistics 7−80601
semiconductors, interaction with strong resonance EM field 7−138539
semiconductors, ultrafast relax. phenomena, nonequilib. statistical operator method appl. 7−119044
simple liquid metals and alloys, thermodynamic theory 7−105070
simple liquids, thermodynamic properties, van der Waals and Tonks models 7−84322
smectic E-smectic B transition, Monte Carlo computer simulation studies 7−111874
smectic-A mesophase, hard rod lattice model *(Russian)* 7−111387
sodium acid urate, precip. from electrolyte solns., chem. pot. diagrams 7−126474
sorption hysteresis, rel. to laws of thermodynamics 7−95153
square-well fluid of variable width, short-range expansion 7−124057
steel, decarburising, effect of heating characts., thermodynamic anal. 7−132646
steel, Nb-V microalloyed, solution treatment, rolled, isothermal holding, carbonitride precip. 7−86187
steel, NbCN solubility, thermodynamic calc. 7−86128
steel, surface impregnation with Cr, V and Al, degree of transform. for exchange reactions eval. 7−78346
substances with negative expansion coeff., thermodynamic potentials and their derivatives 7−124549
succinonitrile-neopentyl alcohol, eutectic mixture, solidification 7−117847
superalloys, high temp. corrosion, conf., London, England (Feb. 1986) 7−115678
superconducting thin films, proximity effect and thermodynamic props. 7−112639
ternary, prediction by appl. of R function 7−131330
ternary, quaternary and larger systems, appl. of Hoch-Arpshofen model 7−137517
ternary intermetallic phases, triple defect. struct., thermodynamic props. 7−77949
ternary systems, R function, calc. and appl. 7−137518
ternary thermodynamic properties, prediction using new soln. model 7−137590
1,1,2,2-tetrachloroehtane-n-hexane, excess molar enthalpies, molar vols. and vapour pressures 7−98505
tetracyclines, solns., US and thermodynamic obs. 7−98342
thermosyphon, optical phenomena in thermodynamic critical region *(German)* 7−69178

thermodynamic properties continued
Thirring model at finite temp. and density, thermodynamic pot. 7−128769
titanite ($CaTiSiO_5$), implications of leaching studies using secondary ion mass spectrometry 7−94221
$(TMTSF)_2ClO_4$ Bechgaard salt, field-induced SDW Green's function calcs. 7−77312
TMTSF compounds, Bechgaard salts, field induced SDWs in presence of normal impurities 7−70551
transition metal alloys, multicomponent, energy of form. 7−105033
two-dimensional solid, melting transition, edge pinning effects, mol. dynamics simulation 7−118065
two-level system with nonlinear coupling 7−84619
uric acid dihydrate, precip. diagrams and solubility 7−126475
uric acid-NaOH-HCl-water system, computed phase diagrams, dissolution and precip. 7−126476
water, ideal gas thermodynamic functions 7−97687
water, supercooled, thermodynamic props. at 1 atm. 7−111913
water-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7−124465
water-soap-alcohol system, phase equilib., thermodynamic model 7−69862
weakly ionized plasma in continuous field, thermodynamic props., dissipative mech. *(French)* 7−142439
wetting, rel. to solid surface tension, surface reaction-diffusion process *(French)* 7−112015
Ag amalgams, thermodynamic props., calorimetric obs. *(French)* 7−115965
Ag-Sn, liq., thermodynamic props. 7−143053
Al-Cl-N-H-Ar, precip. of AlN, thermodynamic model 7−100599
Al-Cu, liq., Al-rich, viscosities 7−143075
Al-Cu binary alloys, liq., Al-rich, surface tension 7−124641
Al-Cu-Mg-Si, thermodynamics, unidirectional solidification 7−77979
Al-Li, liq. alloys, binary and ternary, thermodynamic props. *(Korean)* 7−76447
Al-Mn system, phase equilib., stable and metastable 7−86134
Al-Zn-Ag, early stage precip., anomalous X-ray scatt. 7−144401
Al-Zr-V phase diagram calc. *(Korean)* 7−132577
Al_2O_3, layers, CVD, reaction gas environment, thermodynamic calcs. 7−71044
Al_2O_3-Cr_2O_3 and $FeAl_2O_4$-$FeCr_2O_4$ solid solns., phase relations at 1823 K 7−132585
n-alkane in n-alkane solvent, partial molar volumes at 298.15 K 7−98508
B and $B/B_4C(SiC)$ fibre reinforced Al, brittle phases form. at. fibre/molten Al interphase boundary 7−77892
BN, adsorpt. props., gas chromatographic obs. 7−76608
Bi-In-Pb-Sn system, thermal props. 7−132575
Bi-S systems, thermodynamic anal. by associated soln. model 7−132584
CO adsorbed on NaCl film, IR spectra and thermodynamic meas. 7−105278
CO+CO_2 thermodynamic capacity 7−126473
CO_2, integral eqn., thermodynamic props. 7−91408
CO_2, thermodynamic props. in crit. region, scaled fundamental eqn. 7−123834
CO_2-toluene mixtures, excess molar enthalpies and volumes meas. 7−143045
CS_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
$Ca_3(Si_{1-x}Al_x)(O_{5-x}F_x)$, stable solid solns., 1050 to 1250°C 7−105053
Cd halides, thermodynamics of sublimation, mass spectrometric obs. 7−143046
Cd-Sn-Zn, liq., thermodynamic studies at 773 K 7−69938
CdTe-HgTe ultrathin semicond. superlattice structs., thermodynamic instability, total energy pseudopot. calcs. 7−76644
Ce mixed valence cpds., thermodynamic and PES parameters, Anderson model study 7−143333
CeO_{2-x}, O_2 chem. pot., comp. and temp. depend. determ., solid electrochem. method 7−105072
β-(Co,Ni)Ga, ternary B2 phases with triple defects, thermodynamic props. 7−76456
Co, polycrystalline, work function variations with temp. and phase transforms 7−85047
$Co_{69}Fe_{4.5}Cr_2Si_{2.5}B_{22}$ long-time tunnelling at He temps. 7−76463
CoO_x, anion vacancies, mol. dynamics and static simulations 7−142767
Cr-C system, thermodynamic props. 7−137589
Cr-Fe system, phase equilib. and thermodynamic props. 7−113518
Cr-Si system, 953 to 1133 K 7−119243
Cs, liquid, electronic and thermodynamic props., high temp. and press. 7−105513
$CsCuCl_3$ cooperative Jahn-Teller system, first-order struct. phase transformation, pseudospin-phonon model 7−112255
$CsNO_3$ molten cpd., sound vel. meas., determ. of high press. thermodynamic props. 7−84321
Cu powder pellet recovery, kinetics and thermodynamics 7−138707
Cu-Cr system, phase diagram, thermodynamic characts, 7−144372
Cu-Fe-Ni, liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-Mg-Al(Zn), liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-NI system, thermodynamic evaluation 7−126086
Cu-Ni-Sn, liq. systems, thermodynamics, appl. of Hoch-Arpshofen model 7−138731
Cu-O, non-ideal liq. solns., thermodynamic capacity 7−126473
Cu-O-Sn, non-ideal liq. solns., thermodynamic capacity 7−126473
Cu-Sb-S, liq. alloy, thermodynamics, mass spectrometry, Knudsen method 7−71150
Cu-Si system, phase equilib., thermodynamic assessment 7−132565
Cu-Sn-Pb, dil. solns., Pb activity calcs. 7−132583
Cu-Zn-Fe(Co)(Ni), liq., Zn activity in dil. soln., third element interactions 7−76457
CuO-MgO system, thermodynamic activities using solid-state galvanic cell 7−111912
$Dy_xW_yO_z$, thermodynamic props. investig. 7−98503
Fe, cast, white, laws of geometric thermodynamics of graphitising 7−78050
Fe, wettability, by liquid AgM alloys, M=Cu, Ni, Sn, Pb *(French)* 7−112014
Fe-Ag-Al(Ce), Al and Ce distrib. between Ag and Fe, effect of Ca *(Chinese)* 7−71148
Fe-C alloys, bainitic transform., thermodynamics *(Chinese)* 7−131328
Fe-C solid solutions, C-C interaction energy 7−118129
thermodynamic properties continued
Fe-C system, C solubilities in Fe at elevated temps., anal. by statistical thermodynamics 7−98475
Fe-C-Si, third-component segregation 7−106512
Fe-C-V melts, thermodynamic activity interaction coeff. 7−98517
Fe-Cr system, thermodynamic description and phase relationships 7−113516
Fe-Cr system, thermodynamic description and phase relationships 7−113517
Fe-Cr-C melts, enthalpy of graphite soln., effect of Cr 7−105034
Fe-Cr-Co(-Mo)(-W)(-Nb), stratification process, thermodynamic study *(Russian)* 7−125386
Fe-Mn system, thermochem. and phase equilib. data 7−131333
Fe-Mn-C, martensitic transform., thermodynamic calcs. of M_s and driving force *(Chinese)* 7−132611
Fe-N-Ce(Y), interaction of N with Ce or Y in liq. Fe, thermodynamic study *(Chinese)* 7−131329
γ-Fe-Ni-C, interaction of Ni with C, temp. depend. 7−77943
Fe-Ni-C system, thermodynamic evaluation 7−137588
Fe-Ni-Cr phase diagram, thermodynamic anal. and calc. 7−100188
Fe-Ni-N system, with up to 30 wt.% Ni, N activity and solubility 7−126083
Fe-Ni-S system, thermodynamic props., phase equilib., 700-900°C, thermogravimetry 7−119241
Fe-Ni-W-C, phase diagram assessment 7−77952
Fe-Pb phase diagram, solubility-temp. relationship *(Chinese)* 7−132559
Fe-Rh-N, austenite solid solutions, thermodynamic functions 7−98512
Fe-Si system, thermodynamic anal. and formulation of A2/B2/DO3 atomic ordering energy 7−138733
Fe-V-C system, austenitic, cubic VC solubility, thermodynamic calc. 7−98461
$Fe_{80}B_{14}Si_6$ long-time tunnelling at He temps. 7−76463
$FeGe_2$, mag. phase transitions and mag. struct., neutron scatt. studies *(Russian)* 7−138228
Ga-Sb, liq. alloy, activity meas., EMF method using solid electrolyte 7−71154
Ga-Te, liq. alloy, activity meas., EMF method using solid electrolyte 7−71154
GaAs:Si, Bridgman growth , thermodynamic analysis 7−132438
GaAs-AlAs ultrathin semicond. superlattice structs., thermodynamic instability, total energy pseudopot. calcs. 7−76644
GaP:O(S)(Se)(Te), liquid phase epitaxy, thermodynamic anal. of doping 7−91606
$Gd_{63.2}Co_{36.8}$, glass-forming eutectic, thermodynamic props. 7−118135
H, spin polarised atomic, interatomic interactions, thermodynamic and mag. props., book contrib. 7−84446
H_2, solid, diffusion Monte Carlo simulation 7−98603
H_2+CO_2, thermodynamic capacity 7−126473
H_2+H_2O, thermodynamic capacity 7−126473
H_2+H_2S, partial dissociation, thermodynamic capacity 7−126473
HCl, aq. soln. enthalpy of dilution, thermodynamic props. 7−143047
H_2O, sorption by swelling hydrophilic sorbent, thermodynamic parameters calc. 7−131425
^{3}He, liq., thermodynamic props., press. depend., Gutzwiller-Hubbard lattice gas model 7−98609
^{3}He-^{4}He liq. mixtures, thermodynamic props. between 0-20 atm at 0 K 7−70022
^{3}He-^{4}He solid solutions, phases and structures, X-ray diffr. meas. 7−124632
^{4}He liq., diffusion Monte Carlo simulation, Lennard-Jones pot. 7−98603
^{4}He, superfluid, condensate fraction and chemical potential 7−84424
^{4}He, superfluid, vortex line density intrinsic fluctuations in superfluid turbulence 7−70009
HgCdTe, phys. props., handbook of datareviews 7−134373
$Hg_kPb_{1-k}Se_lTe_{(1-l)}$, quasiternary system, thermodynamic props. 7−91844
high T_c excitonic superconductor, electron-phonon coupling, thermodynamic props., isotope effect calcs. 7−143691
I_2, thermodynamic parameters determ., biamperometric investig. 7−78531
In-Na-Sb liquid alloys, nuclear quadrupole relax. and thermodynamics 7−85482
In-Pb, liq., O dissolution, thermodynamic study 7−78537
in-Pb-Sb, liq. alloys, thermodynamic activities, EMF obs., 873-1073 K *(Japanese)* 7−124552
In-Tl, liq., O dissolution, thermodynamic study 7−78537
InAs (001) surface, commensurate and incommensurate transitions, lattice consts., chem. pot. 7−124659
$KHCO_3$-H_2O, binary and ternary mutual diffusion coeffs. meas. at 25°C 7−76465
$LaCl_3$, aq. soln., isothermal transport coeff. 7−76451
$La_{1-x}Sr_xFeO_{3-\delta}$, solid soln., thermodynamic quantities and defect equilib. 7−84320
LiCl-$BaCl_2$-$SrCl_2$ system, phase diagram, meas. and calc. 7−138734
$LiCsSO_4$, cryst., low temp. thermodynamic props. 7−143042
$LiNO_3$ in DMSO soln., IR and Raman spectra, ion pairing and solvation depend. on soln. temp. 7−82095
$LiRbSO_4$, cryst., low temp. thermodynamic props. 7−143042
Mn_2O_7, force consts. and thermodynamic fns. calc. *(German)* 7−74561
N_2, lig., perturbation theory for studying thermodynamic props. 7−124554
N_2, microclusters, nucleation and thermodynamic props. 7−96907
NH_3/H_2 gas mixture for neutral gas absorption refrigerator, BASIC-2 listing to compute enthalpy/mass fraction diagram 7−97683
Na-O-H system, phase relations for reactions of H_2 with Na_2O between 500 and 900°C 7−69861
NaCl, activity determ. using dual-gate ISFET probe 7−105069
NaCl-$CaCl_2$, aq. electrolyte mixture, activity coeffs., mean spherical approx. 7−71519
NaCl-HCl, aq. electrolyte mixture, activity coeffs., mean spherical approx. 7−71519
$(NaCl)_x(NaBr)_{1-x}$, thermodynamic props., 840 K, mass spectrometric obs. 7−105075
Na_xGaSe intercalation, chem. pot. conc. depend. studies 7−137593
$NaHCO_3$-H_2O, binary and ternary mutual diffusion coeffs. meas. at 25°C 7−76465
NaI-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
Na_xInSe intercalation, chem. pot. conc. depend. studies 7−137593
$NaNo_3$, molten cpd., sound vel. meas., determ. of high press. thermodynamic props. 7−84321
Nb-C system, phase equilibr., crystallographic and thermodynamic data, review 7−77942

ermodynamic properties continued
Nd-Zn, alloying behaviour, phase diagrams 7−77941
Ni, diffusion and solubility of O, thermodynamics 7−71192
Ni-base liquid alloys, ternary and multicomponent, N and H solubility, equivalent influence of alloying elements *(German)* 7−111900
Ni-Cr liquid alloys equilibrated with Cr_2O_3, thermodynamic study using EMF method 7−143023
Ni-Cr-Fe (15, 10 wt.%), S solubility and diffusion, thermodynamic studies 7−76449
Ni-Mg olivine solid soln., thermodynamics 7−143043
Ni_xCu_{1-x} alloys, H_2 adsorbed, surface segregation, thermodynamics 7−76596
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7−144350
$NiTe_2$, thermodynamic props., EMF meas. 7−105078
Ni_xTe_{1-x}, partial and integral molar thermodynamic props. 7−143048
O_2, molecular liquids, Rayleigh light scatt., higher order interaction induced effects 7−132292
Pb-Al system, thermodynamics and solubilities 7−124557
Pb-S system, thermodynamic anal. and phase diagram calc. 7−77957
PbI_2, dissoc. thermodynamics, PbI(A-X) laser-induced fluoresc. 7−135998
PbTe, solubility of Te, 873-1168 K 7−84273
$RbNo_3$ molten cpd., sound vel. meas., determ. of high press. thermodynamic props. 7−84321
SF_6 plasma, standard thermodynamic fn. calcs. for diatomic components. 7−97699
SO_2+SO_3, partial dissociation, thermodynamic capacity 7−126473
ScI_3, high-purity, calorimetric meas. 7−76443
ScI_3-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
Si:Ag, Ag solubility, diffusion and thermodynamic props. 7−137567
Si:B epitaxial layers, doping suppression in presence of HCl 7−69719
Si-B system, thermodynamic data for borides, optimisation 7−131332
Si-C-O system, thermodynamics, relevance to SiC and Si prod. 7−143051
$(SiC)_{1-x}(AlN)_x$ epitaxial layers, deposition and struct. props. *(Russian)* 7−126006
Si_2H_4 isomers, thermodynamic functions 7−142430
Si_3N_4-ZrO_2 system, phase reactions, influence of atm. 7−77954
SiO_2, pure and Ge-doped optical fibres, E′ centre thermodynamic props., drawing conditions depend., EPR study 7−98146
SiO_2, silicalite, thermodynamic props. 7−105079
Ti alloys with group IIIB and IVB metals, thermodynamic props. 7−124556
Ti-H system, thermodynamic anal. 7−131334
TiC, CVD coatings on superalloys, thermodynamical approach 7−144301
TiFe, oxidised layers, semiconductor photoelectrodes, surface composition and topology 7−98646
TiN, CVD coatings on superalloys, thermodynamical approach 7−144301
TiO_{2-x}, stoichiometric and nonstoichiometric rutile, chem. vapour transport using $TeCl_4$, $SeCl_4$ or CCl_4 7−85974
$(TlCl)_x(TlI)_{1-x}$, mass spectrometry and thermodynamics 7−76439
$U_{1-y}Gd_yO_{2-x}$, nonstoichiometric multicomponent oxides, thermodynamic props. 7−98511
UO_{2+x}, nonstoichiometry, thermodynamic parameters, EMF obs. 7−98510
V-Si system, vaporization thermo-dynamics in V-rich region, high temp. Knudsen cell mass spectrometry 7−111845
Zn-based systems, thermodynamic props. and phase equilib., applicability of various formalisms 7−138732
$Zr_{100-x}Cu_x$ amorphous superconducting sputtered alloy, low-temp thermodynamic props. 7−138128

hermodynamics
see also atmospheric thermodynamics; critical phenomena; entropy; equations of state; Joule-Thomson effect; statistical mechanics
acetylene, synthesis in H plasma jet, thermodynamic models 7−97697
adiabaticity, quantum mech. and thermodynamical 7−102066
alkyl polyoxyethylene micellar solutions cloud curve phase separation, perturbation theory, Flory-Huggins theory, low critical volume fractions 7−143039
application to synergetics and life phenomena 7−89178
atomic transport in crystalline solids, statistical theories 7−98586
Boltzmann statistics of quantum friction 7−102296
Bose gas in 1D, current correlation functions 7−102299
Bose-Einstein condensation and thermodynamic pot. in compactified spaces 7−108396
Brayton cycle in solar/fuel-assisted power generating loop, theoretical anal. 7−78658
Carnot engine, nonideal, freq.-depend. performance 7−102048
Carnot gas cycles and piston machines, minimum energy consumption *(German)* 7−95527
chain molecules, pressure equation 7−110058
charged particle solutions., transport processes, statistical mechanics, electrophoretic fluctuation dynamics 7−80693
chemical reaction systems, nonequilibrium thermodynamics, algebraic symmetry 7−119491
chemical system, instability in linear region, theorem of minimum internal entropy change 7−106761
chemical vapour transport, thermodynamic model 7−85973
chiral molecule-solvent interaction, ordering mechanism, conflict with second law of thermodynamics 7−110009
chiral protein-nonpolar solvent interaction, thermodynamic behaviour 7−110010
classical 1D systems with pairwise additive pots. in external field, thermodynamics and struct. 7−73177
classical Coulomb systems, shape dependence of dielectric susceptibility 7−73182
classical fluids, nonuniform thermodynamic states, higher spatial dimensionality effects 7−104508
Clausius inequality, relation to atmosphere global thermodynamics and entropy radiation 7−79497
coherent light interaction, thermodynamic aspects discussion 7−74894
coherent mixed states, generalised P representation, Glauber harmonic oscillator, Hilbert space expansion 7−140518
colloidal dispersion, complex viscosity meas., relax. behaviour anal. 7−100630
colloids, rheological props., nonequilib. process linear Onsager theory 7−114006
complex restricted systems, thermodynamic eqns., computer derivation 7−89174
computer-aided 7−67259

thermodynamics continued
conf., Boston, MA, USA (Aug. 1986) 7−80158
conference on phase transitions and disorder phenomena, Amalfi, Italy (June 1986) 7−120709
coolant R12, isentropic expansion study *(German)* 7−91280
cosmo-physical principle of increasing order, derivation from Second Law of Thermodynamics *(French)* 7−102363
cosmology, thermodynamic equilib. constraints on 'ino' particles composing galactic haloes 7−115577
Coulomb systems, quantum statistics, thermodynamic functions and phase transitions 7−80600
crossover scaling for moments in multifractal systems 7−120954
cryogenic expansion machines, thermodynamic anal. of nonequilibrium 2-phase flows 7−117648
cryopump cryosorption process, thermodynamical treatment 7−134771
cylindrically blunted wedges, low-density hypersonic flow, direct simulation 7−136782
dense fluids, kinetic theory and irreversible thermodynamics with external elec. field 7−123826
dense fluids, partition function estimation by micro-potential method 7−140598
dense noble gases, mean field model for many-body forces 7−80580
dense plasmas, thermodynamics, transport coeffs. and dynamic correlations, review 7−83430
diesel fuel, vapour-liq. equilib. continuous thermodynamics appl. 7−111848
dipolar interaction spin systems, thermodynamic props in high field 7−106034
discharge plasmas, radiative processes, local thermodynamic equilib. *(German)* 7−130842
dissipative structures characterisation by thermodynamic pots. *(German)* 7−89182
dynamical metastability, master eqn., exact soln. 7−128512
dynamical systems and localization model, thermodynamic limit, Lyapunov exponent spectrum 7−120967
Eden clusters in 2D, Wulff construction and anisotropic surface props. 7−80648
elastoplastic media, nucleation, thermodynamic theory 7−69857
2:2 electrolytes, hypernetted chain pair correlations fns. approx. 7−137172
elementary course using entropy and temp. 7−66861
entropy, application to black holes and other scientific issues 7−89179
entropy, irreversibility criterion in classical thermodynamics *(French)* 7−73300
entropy function for characteristic exponents 7−73304
equations of state, regularisation method 7−89181
equilibrium polymerization in a solvent, Bethe lattice soln. 7−73257
Ericsson-cycle mag. refrigerator, rot., thermodynamic simulation 7−134745
exothermic reaction front in condensed phase stability 7−100529
extended irreversible thermodynamic description of isotropic semiconductors 7−76924
ferroelectrics, uniaxial, heterophase fluctuations 7−77475
finite heat source and sink, effectiveness of Maxwell's demon 7−128211
four-scale Cantor set, singularity spectrum, thermodynamic formalism 7−95530
gas evolving in thermostated box, probabilistic-informational anal., Jaynes's principle 7−89176
generalised second law of thermodynamics 7−108499
generalized random energy model, thermodynamics study 7−73214
generic interactions, third law of thermodynamics 7−102292
Gibbs systems in 1D of molecular type, finitary isomorphism problem 7−128426
Gibbsian equilibrium thermodynamics, fundamental functions 7−121021
Ginzburg-Landau lattice model in 1D, hydrodynamic limit 7−108460
hadron matter, velocity of sound, confined and deconfined phases, thermodynamical description 7−135056
hadron thermodynamics, nonextensivity problems 7−73302
hadronic matter at ultrarelativistic temps., thermodynamics, multiple hadron prod. effects *(Russian)* 7−81324
hard cyclic hexamers, 2D system, elastic props., Monte Carlo calcs. 7−123469
heat balance integral method, enthalpy formulation 7−76356
heat exchange absence between phases in 2 phase flow, thermodynamic estimation 7−83315
heat pumps, thermodynamic efficiency comparison with conventional heat generation *(Slovak)* 7−100744
hereditary bodies, electrically conducting, cyclic action in mag. field, mechanicothermoelectromagnetic processes 7−100264
higher dimensional black holes, spin degrees of freedom 7−127940
higher order moments and maximum entropy inference, thermodynamic limit approach 7−67261
ideal gas, equilib., thermodynamics, differential geometry 7−75749
ideal gas, fast adiabatic vol. change thermodynamics *(French)* 7−97685
impurity system critical thermodynamics, phase transitions, fluctuating field interaction effects *(Russian)* 7−89180
incompressible multiphase particulate suspensions, mechanics and thermodynamics 7−94311
increase of entropy, theoretical reformulation and new interpretation of law *(French)* 7−121023
inequalities between means, negative heat capacities 7−95531
inverse black body radiation problem, Fourier transform method 7−140649
ionic mixture in dipolar solvent, pair correlation fns., thermodynamics, mean spherical approx. 7−137171
irreversibility, conceptual foundations 7−121024
irreversibility, definition, nonexistence of perpetual motion *(German)* 7−108495
irreversibility, definition, rel. to 2nd law *(German)* 7−108494
irreversibility, definition *(German)* 7−108493
irreversibility, implicate order and Prigogine's notions 7−121025
irreversibility and fluctuation-dissipation relations 7−80714
irreversibility of separation processing, modelling *(German)* 7−73307
irreversible processes, collision superoperator in subdynamics of inhomogeneous systems 7−80716
Ising and N-vector spin glasses, long-range, high temperature phase 7−92446
Kac model of irreversibility, nonlinear, entropy condition 7−128509
Kelvin bodies, phenomenological nonequilibrium theory 7−108501
Kelvin temp. concept derived from energy, entropy and deformation *(Portuguese)* 7−73306

thermodynamics continued
kinetic theory of gases, irreversibility concepts, H-functionals and Boltzmann eqn. 7−73185
kink-bearing systems with double well and asymmetric pots., class. stat. mech. 7−102177
lagrangian submanifolds, singular, geometrical classification 7−115941
laws formulation, fundamental concepts struct. 7−134711
Liapunov exponents in high-dimensional symplectic dynamics 7−73210
liquid metal MHD power conversion expts. in Israel 7−93514
Lorentz gas, lattice model, time-depend. props. 7−140640
Loschmidts paradox, irreversible behaviour in reversible dynamics 7−115946
Lyapunov exponent and bounds for the Hausdorff dimension of Julia sets of polynomial maps 7−121029
magnetic fluid coded seal, thermodynamic process modelling 7−97671
many-body Wick theorems, thermodynamical and Green function theorems 7−67189
many-particle systems, energy theorems 7−67258
massless ϕ^4 model, thermodynamic limit, Borel summability by phase space expansion 7−89318
Maxwell's demon, operation in low entropy system 7−80258
metal-semiconductor contacts, thin film diffusion barriers 7−111979
metallic glasses, struct. relaxation, long-range diffusion processes, thermodynamics 7−143862
metals, static elec. fields and excess charge, accumulation layers, thermodynamic anal. 7−137995
micelles and bilayers, mol. organisation, statistical thermodynamics 7−114007
multiconnected neural network models, Hopfield model generalisation, model thermodynamics 7−134690
multifractal phase transitions in thermodynamic formalism 7−95532
neo-Gibbsian equilib. thermodynamics, basic struct., philosophical methodological problems 7−88816
non-equilibrium thermodynamics, renormalization group techniques appl., 1D spin model 7−108497
non-ideal gases, extended thermodynamics 7−111154
nondifferentiable potentials for nonequilibrium steady states 7−108500
nonequilibrium convective systems, local equilibrium assumption 7−121028
nonequilibrium processes, thermofield dynamics formalism 7−120934
nonequilibrium stationary states, generalised Onsager symmetry 7−115944
nonequilibrium statistical mechanics, time-local view, transport and relaxation 7−73179
nonequilibrium statistical operator, derivation from extremum of von Neumann entropy 7−102370
nonequilibrium structures and instabilities, conf., Valparaiso, Chile (Dec. 1985) 7−108046
nonequilibrium systems, patterns, defects, microstructures, conf., Austin, TX, USA (March 1986) 7−115691
nonequilibrium thermodynamics, adiabatic theorem and Green's fn. methods 7−108503
nonequilibrium thermodynamics, thermal equilib. corrections, adiabatic theorem 7−108504
nonlinear dissipative wave propag. in viscoanelastic media, thermodynamic theory 7−80452
nonlinear extended kinetic equations, reciprocity 7−108502
nonlinear Fokker-Planck eqn., stable nonequilibrium probability density and phase transition in thermodynamic limit 7−73290
nonlinear irreversible processes and negative differential resistivity, variation principles, stochastic thermodynamics 7−108505
oceans and lakes, thermal stratification, one-dimensional modelling 7−120026
Onsager regression variables, time evolution, microscopic theory 7−128513
organophilic silicate surfaces, in alcohol (surfactant)-water-electrolyte media, adhesion, thermodynamics 7−112021
phase equilibria prediction model based on thermodynamic perturbation theory, anal. of industrial use 7−124433
phase space measure, entropy of response of system to probe 7−120927
phenylcyclohexane, cryogenic trapping, conformer, NMR, thermodynamics 7−68351
plasma electrical conductivity, self energy and vertex corrections, linear response theory 7−137054
polyacetylene, statistical mechanical model, existence and uniqueness of Gibbs states 7−73181
polyatomic fluid, time evolution eqns. derivation by extended irreversible thermodynamics 7−80712
polydisperse fluids, flash calculations, variational approach 7−124463
Prigogine-Defay ratio for systems with single order parameter *(German)* 7−89183
pulsating stars atmospheres, origin of correl. between flux var./radius var. ratio and pulsation period 7−94855
QCD, transverse plasmon effect, nonexistence, high-temp. approx. anal. 7−135030
quantal spin interacting with heat bath, eqn. of motion for linear response 7−80689
quantum lattice system, KMS condition and stability props. 7−115942
quantum thermodynamic of nonequilibrium, Onsager reciprocity and dispersion-dissipation relations 7−89175
random graph bipartitioning, spin glasses, mean-field replica-symmetric theory, Ising ferromagnet 7−143827
relativistic extended thermodynamics, material coeffs. 7−134713
relaxation of a resonantly driven nonlinear oscillator 7−102371
relaxation properties of the mixmaster universe 7−115920
rock melt and mineral thermodynamics, review 7−139593
Sadi Carnot and the theory of heat, teaching *(Italian)* 7−134416
saturated vapour press. w.r.t. thermal radiation, applicability limits of ideal gas eqn. *(Russian)* 7−75256
second law, derivation of microscopic props. 7−121026
second law, formulation 7−95526
second law, irreversible processes, analytic approach 7−121022
second law of thermodynamics, entropy of meas. and erasure, quantum theory 7−108496
self-organization and information 7−73303
self-similarity, dynamical and stochastic systems, statistical-thermodynamics formalism 7−128492
semiconductor cpds., point defect density, impurity solubility, thermodynamical evaluation 7−131145
Sherrington-Kirkpatrick spin glass model, configuration averaging of thermodynamic variables 7−105945
Smoluchowski diffusion in infinite system, evolution and thermodynamics in Langevin model 7−95525
soil, heat eqn. and thermal diffusivity in dynamical temp. field *(Japanese)* 7−142155
solar evaporative air conditioner water heater, thermodynamic anal. 7−86820
solid particle motion induced by thermodynamic forces 7−89177
spin systems, discrete, residual entropy and third law of thermodynamics 7−121032
spin systems, dissipative, dynamic crit. phenomena, centre-manifold renormalisation 7−102309
stationary nonequilibrium states and phase transitions, statistical mechanics framework 7−134712
statistical and classical thermodynamics, comparison with gas expansion expt. *(French)* 7−140647
statistical dynamics of molecular field systems 7−118805
statistical mechanical models, free energy calcs., boundary conditions 7−120977
statistical mechanical systems, mol. dynamics simulation, Summer School, Varenna, Italy, (July-Aug. 1985) 7−66805
statistical thermodynamics, energy exchanges and localized model *(French)* 7−140646
strange sets, scaling struct. and thermodynamics 7−128488
structural materials, corrosion resist. in liq. Li and Na containing nonmetallic impurities, thermodynamic model 7−132799
subdynamics in the time-dependent formalism 7−102368
supercritical fluid chromatography, press. effect on retention 7−114032
superstring thermodynamics 7−88100
superstrings, closed, thermodynamics and very early universe anal. 7−88723
system theory-statistical mechanics link through Kolmogorov entropy 7−134636
temperature, thermodynamic concept, Carnot's fn. 7−80223
temperature relaxation between systems with negative Kelvin temperatures 7−104135
theory of heat and temp. *(German)* 7−102366
thermal radiation anisotropy, aberration effect in accelerated detectors 7−108498
thermomagnetoelectric discrete and continuous metallic interfaces, transport props., nonequilib. thermodynamics anal. 7−84831
Thirring-sine-Gordon model, thermodynamics, Bethe ansatz variational anal. 7−128431
time-dependent systems, decay of quasistationary state, spin thermodynamics 7−125410
tunnel model, current calcs., nonequilib. formulation and thermal Green's fn. techniques 7−95407
two-component model, exactly soluble model of phase transition with cubic anisotropy 7−102369
two-dimensional anisotropic interface fluctuation thermodynamics, equilib. cryst. shape geometry 7−92007
two-phase coherent solids, phase equilib. 7−132580
ultradisperse systems, high-energy media, physicochemical aspects, thermodynamics 7−111910
universal mass-ang. momentum relationship, thermodynamic origin 7−127700
viscoelastic media with finite deforms., relax.-type eqns. 7−69013
XXZ Heisenberg model with arbitrary spin, ground state and excitation spectrum 7−85229
XXZ Heisenberg model with arbitrary spin, thermodynamics 7−85339
zero-temperature scaling and combinatorial optimization 7−95482
^{4}He, liquid-solid interface mobility 7−76517
Hg transport and distribution in geothermal reservoir fluids, model and estimation methodology 7−106883
Si, swirl defect form. thermodynamics and kinetics *(German)* 7−111554

thermoelasticity
see also thermal stresses
2D stationary thermoelasticity, stress intensity factor calc. using boundary-elements method 7−104145
acceleration wave properties in isotropic thermoelastic media 7−97313
alloys, shape memory and pseudoelasticity 7−137456
anisotropic, nonhomogeneous, nonlinear, constitutive eqns. 7−110790
anisotropic shells, boundary-value problem solutions 7−136688
asymmetric, generalised, integral representation 7−90952
BEM, use of coupled fundamental solns. 7−110786
Cattaneo-Maxwell thermoelasticity, entropy function, uniqueness *(Italian)* 7−72971
coatings, critical dimensions of defects, heat cond., thermal elasticity 7−132709
composites, multiphase, static elastic and thermoelastic field fluctuation 7−69008
composites, nonlinear thermoelasticity, homogenised models 7−117458
contact problem, plane, with consideration of heat liberation 7−142237
coupled and dynamic thermoelasticity, nonclassical behaviour of temp. 7−95337
coupled constituent diffusion in thermoelastic solids, finite element anal. 7−105094
cubic crystals, plane harmonic wave propag., generalized thermoelastic theory 7−108256
cylinder, circular, magnetothermoelastic stress waves 7−91001
cylinder, infinite composed of two materials, unsteady thermal stresses 7−90954
cylinder, transient thermoelastic contact problem 7−90955
cylindrical cavity face, coupled thermoelastic problem, Laplace transform anal. 7−75291
diagnosing thermoelastic medium, mathematical model 7−136699
disperse systems, thermoelastic effects 7−110787
dome, spherical thermoviscoelastic, steady-state thermomech. vibrs. under cyclical loading 7−97372
effective absolutely stable algorithm for numerical solution of thermoviscoelasticity and thermoviscoplasticity problems 7−104170
elastic micropolar half space, thermal shock on boundary, Laplace transform appl. 7−75292
elastin, model chains, thermoelastic props. 7−87066
elastomers, elongation, vol. and energy changes 7−84098
generalised thermoelastic problem in infinite cylinder under initial stress, Rayleigh waves propag. 7−83090
generalised thermoelasticity, 2D problem of moving heated punch 7−90953
half-space, asymmetrically heated, thermoelastic stresses 7−75313

ermoelasticity continued
half-space with heat sources, temp. stresses 7—75299
Hamilton's principles and internal constraints 7—123456
hemitropic micropolar medium, one-dimensional elastostatic and thermoelastostatic problems 7—83030
holographic interferometry, thermal wave visualisation 7—122869
homogeneous medium, generalised thermoelastic waves, LF and HF behaviour 7—90942
homogenized thermoelasticity with microlocal parameters, linearized problems 7—130537
homogenized thermoelasticity with microlocal parameters 7—130536
incremental thermoelasticity, asymptotic behaviour 7—95340
interactions, temp.-rate dependent, in infinite solid, due to point heat source 7—104150
IR-based stress anal. technique 7—75487
isotropic thermoelastic electrically conducting plate, EM thermomech. vibrs. in mag. field 7—104191
Lagrange identity method in linear thermoelasticity 7—120810
Lamb waves, thermoelastic generation 7—123421
linear, asymptotic partition of energy 7—136700
linear coupled thermoelasticity, uniqueness, boundary initial value problem 7—83041
linear thermoviscoelastic equation of state of thermorheologically simple media 7—104164
linear uncoupled thermo-elastodynamics, minimum principles *(Chinese)* 7—90939
locally-inhomogeneous bodies, plane-strained state *(Russian)* 7—130539
material and load optimisation of thermoelastic solids, numerical results 7—88972
material and load optimisation of thermoelastic solids, sensitivity analysis 7—88971
Maxwell's relation in linear thermoelasticity 7—123463
metals, thermoelastic stress analysis for testing and development of automotive components *(German)* 7—113598
metals, thermoelastic-plastic transition and dislocation dynamics by deform. calorimetry 7—118021
micropolar elastic semi-space, action of periodically varying heat source 7—68995
micropolar theory, mixed boundary value problems 7—83029
micropolar thermoelasticity, performance criterion sensitivity anal. 7—90943
nonlinear thermoviscoelasticity, governing equations for periodic deformations 7—110809
nonstationary 3D problem, boundary element method 7—75315
nonstationary thermoelasticity, optimal design and sensitivity anal. problems 7—97324
parallelepiped, rectangular, boundary-effect operators for uncoupled dynamic problem of thermoelasticity 7—136691
photothermal surface deformation of solids with pulsed laser excitation 7—124330
plane, piecewise-uniform, with cracks, singular integral eqns. of plane thermal cond. and thermoelasticity 7—142223
plane with ellipsoidal crack, contact problem of thermoelasticity 7—83108
plate, dynamic deformation under pulsed thermal action, numerical solution 7—117464
plate, elastic, axisymmetric indentation by flat annular punches 7—130549
plate, thin, thermoelastic wave propag. 7—90936
plate tectonics, Signorini problem with friction in linear thermoelasticity 7—139554
plates, double-layer anisotropic, asymptotic solutions of mixed 3D problems 7—136698
PMMA, oriented, yield and thermoelastic props. 7—69810
polyethylene, high and low density, Gruneisen and thermoelastic coeffs. at high hydrostatic press. 7—106557
polyhedron, convex, with inclusions, thermoelastic equil. problem 7—142224
polyhedron, convex, with system of thin inclusions, thermoelastic problem 7—83112
polymers, vol. change and nonlinearly thermoviscoelastic constitution 7—131235
rubber, thermoelasticity, phenomenological theory 7—83045
rubber, thermoelasticity and stress-temp. behaviour 7—118005
semi-infinite transversely isotropic body, thermal stresses and thermoelastic strain 7—110794
shaped crystals grown from melt, temp. field and thermal stresses, asymptotic calc. 7—83810
shell structures, thermo-elastic-plastic and creep analysis. 7—104163
shell-like products made of fibrous composites, buckling and thermoviscoelasticity problem soln. 7—83085
short-fiber composites, effective thermoelastic props. calc. 7—119300
sliding systems, thermo mechanical analysis 7—110877
solids of revolution, nonaxisymmetric load over a small-curvature deformation trajectory 7—90962
solids of revolution under harmonic loading, problems of thermoelectroviscoelasticity 7—92603
steel, thermoplasticity, asymptotic stability when $t \to \infty$ *(German)* 7—138800
stratified incompressible solids, thermoelastic waves, propag. *(Italian)* 7—75369
stress intensity factor for transient thermal stresses in a transversely isotropic infinite body with an external circular crack 7—117526
structure subjected to dynamic loading, stress pattern anal. by thermal emission 7—83142
surface waves on general viscoelastic media, in presence of thermal field and gravity 7—142212
temperature rate-dependent thermoelasticity, instantaneous heat sources 7—75314
thermal-stress intensity factors for an insulated crack in a semi-infinite medium with a thin conductive stiffener 7—90960
thermoacoustic microscope, sound generation in semi-infinite solid 7—123368
thermoelastic constant and parameter, temp. and stress depend. 7—142878
thermomicroelasticity in a half-space, mixed boundary value problem 7—142182
thermoviscoelastic solid in magnetic field, plane wave propagation 7—69028
thermoviscoelastoplastic material damage model, appl. to spalling failure 7—75329
thermoviscoplastic rod, impact-induced temp. rise 7—69016
thiourea, orthorhombic ferroelectric, thermoelastic and third-order elastic constants 7—76270

thermoelasticity continued
tissue phantom absorpt. and thermal expansion, thermoelastic signatures 7—71701
transient thermal stresses due to heat source moving over elastic slab 7—90957
transient thermoelastic crack problems in transverse isotropy 7—130600
transversely isotropic elastic solid weakened by external circular crack, thermal stresses 7—91024
transversely isotropic medium with penny-shaped crack under transient loading, stress intensity factors 7—75469
unbounded isotropic space weakened by ellipsoidal inclusion, thermoelastic stresses 7—97321
uniqueness and stability study 7—83047
unsteady thermal stress anal. 7—75306
wave propag. in media with long-range cohesive forces 7—91012
wave propagation and evolution through thermoelastic solids *(Italian)* 7—83086
waves in transversely isotropic medium with cylindrical hole 7—91002
Cu conductor carrying alternating current thermo-electrolyte stresses 7—83032
Cu-Al-Ni, reverse martensitic and intermartensitic transformations, thermal effects *(Russian)* 7—113551
CuAlNi, shape memory alloys, thermoelastic martensitic transform. 7—78006

thermoelectrets
charge and polarisation relax. 7—92583
waxes, thermo-electrets, dielectric props., electrical DC cond. determ. 7—118939
$Nd_3Ga_5O_{12}$, photo- and thermodepolarisation 7—113068

thermoelectric conversion
see also thermoelectric devices
building outer enclosure, thermal conditions regulation 7—100739
generators, thermal systems classification 7—97261
MSM, cooling thermoelements, influence of size effects 7—133110
multistage thermoelectric generator of n and p-type stacks 7—86811
radioisotope thermoelectric generator modules using Si-Ge alloy technology 7—93516
solar thermal energy systems, experience gained 7—78651
solar thermal-to-electric conversion potential for near-Earth spacecraft 7—144896
solar thermoelectric generator operation on combined heat source 7—100738
SP-100 nucl. power systems, load following and reliability studies 7—67903
space vehicle nuclear power system concepts comparison, thermoelectric conversion 7—67901
C fibre/HNO_3 thermocell, performance 7—114115

thermoelectric devices
see also thermocouples; thermoelectric conversion; thermopiles
heat pump with heat removal through uninsulated surfaces 7—119671
MSM, cooling thermoelements, influence of size effects 7—133110
NDT instruments *(Polish)* 7—138952
refrigerator for gas analyser 7—134735
semiconductor injection lasers, appl. of thermoelectric coolers to improve power and efficiency *(Russian)* 7—90644
thermoelectric convertors, sodium-steel, for sodium temperature meas., sources of error 7—73884
vacuum gauge, pressure meas. accuracy increase 7—134796
Si diodes, miniature, thermoelectric characts. 7—73350

thermoelectric effect *see thermoelectricity*

thermoelectric effects in metals and alloys
amorphous metallic alloys, incipient localisation, thermopower analogue of Mooij correl. 7—70292
conductors with N-shaped I-V characts., current and temp. nonlinear oscills., sp. ht. determ. 7—98993
disordered metals, strongly scattering, electronic transport 7—92150
glassy alloys, low temperature resist. and thermoelec. power *(Russian)* 7—137888
heavy fermion cpds., Seebeck coefficient 7—70291
heavy fermion systems, Kondo lattice props. 7—92164
measurement of thermo-EMF of metals, at low-temp, and high pressure 7—124969
metal films, granular with rough surfaces, transport props. 7—131813
metal thin films, continuous, resistivity, temp. coeff. of resistivity and thermoelec. power, review 7—125148
metal thin films, continuous, resistivity, temp. coeff. of resistivity and thermoelec. power, expt. data processing 7—125149
metallic glasses, nonmagnetic, Hall coeff., thermoelectric power 7—143439
metallic glasses, thermoelec. power, electron-phonon interactions, appl. to $Mg_{64}Al_{18}Ga_{18}$ 7—70293
metallic superlattice, electronic transport, interface roughness and boundary scatt. model calcs. 7—85054
normal metal electrodes, vac. tunnelling thermopower 7—70294
phonon drag magnetothermal EMF in open Fermi surface *(Russian)* 7—76897
(rare earth)$_3Co_2Sn_7$, cryst. struct., mag. suscept., elec. resist. and thermopower meas. *(Russian)* 7—98048
thermomagnetoelectric discrete and continuous metallic interfaces, transport props., nonequilib. thermodynamics anal. 7—84831
Be, thermoelectric power, high temp., anomalous anisotropy 7—112307
Bi-Sb, transport props., effect of homogenisation 7—78279
Bi-Se, liq., electronic props., diamagnetism 7—92148
$Bi_{1-x}Sb_x$, thin film alloys produced by ion beam mixing, thermoelectric props 7—137566
BiTeSb, p branch, thermoelectric efficiency, extrusion effect 7—131621
BiTeSe, n branch, thermoelectric efficiency, extrusion effect 7—131621
Ce alloys, unstable 4f-shell, transport props.—quasielastic neutron spectra linewidth correls. anal. 7—118460
Ce, α- and β-phases, thermopower and resistivity temp. depend. meas. 7—76898
Ce-Y dilute impurity system, thermoelec. power, Anderson model calcs. 7—105547
$CeCu_5$, Kondo lattice showing mag. order, phys. props. meas. 7—77210
$CeCu_6$, thermodynamic and transport props. 7—137584
$CeCuAl_3$, Kondo lattice, elec., mag., and thermal props. 7—138201
$CeCu_3Al_3$, heavy fermion behaviour at low temp. 7—118464
$CeCu_4Al$, nonmagnetic, heavy fermion behaviour, elec. resist, thermopower, sp. ht. meas. 7—92154
$Ce(Cu_{1-x}Ni_x)_5$, elec. cond., thermoelec. power and thermal expansion 7—98978

thermoelectric effects in metals and alloys continued
$Ce(Ga_yNi_{1-y})_5$, thermoelectric power, influence of unstable valence state 7—143443
CeInAu, sp. ht., mag. susceptibility, transport props. 7—77247
$CeInAu_2$, sp. ht., mag. susceptibility, transport props. 7—77247
$(Ce_{1-x}La_x)$-Ni(In) dilute Kondo-type systems, thermoelec. power meas. 7—76900
$Ce_xLa_{1-x}Cu_6$, heavy fermion system, electrical and mag. props. 7—70278
$(Ce_{1-x}La_x)Ni$ single crysts., elec. resist., lattice consts., and thermopower temp. depend. meas. 7—76901
$Ce(Ni_xCo_{1-x})_2$, thermoelectric power, influence of unstable valence state 7—143443
$Ce_{1-x}Y_xPd_3$, unstable valence state and conduction electron hybridisation, thermoelec. power meas. 7—76899
Cu, liquid, thermoelec. power, struct. factor depend. 7—98995
Cu thin film thickness influence on resistivity, TCR and thermoelectromotive force *(Japanese)* 7—138073
Cu-3d element alloys, Kondo and spin glass effects correl. *(Russian)* 7—76918
$EuCu_2(Si_xGe_{1-x})_2$, Kondo-lattice type state 7—84794
Fe-Cr-Al, melt-quenched, application as strain gauge sensor 7—84821
Fe-Cr-Si, melt-quenched, application as strain gauge sensor 7—84821
$Fe_{74}Co_{10-y}Cr_yB_{16}$, metallic glasses, influence of Cr content on elec. resist. and thermoelec. power 7—137891
$(Fe_{1-x}Co_x)_{75}Si_{15}B_{10}$, metallic glasses, thermoelec. and calorimetric studies 7—137904
$Fe_{72}Co_3Si_{15}B_{10}$, glassy alloy, Mossauer, elec. and mag. studies 7—99632
$Fe_{80-x}Cr_x(PC)_{20}$, low temp. resist. and thermoelec. power 7—137894
FeMnB metallic glasses, near linear temp. depend. of thermopower 7—84832
FeNiBSi-based metallic glasses props., process parameters depend. 7—144565
FeNiCrMoSiB, amorphous, electronic transport studies 7—137895
$GdFe_2$ films, struct., elec. resist., temp. depend. 7—92311
In, with N-shaped I-V characts., current and temp. nonlinear oscills., sp. ht. determ. 7—98993
$In\text{-}AgInTe_2$ liquid system, electronic props. 7—137972
Mg-based metallic glasses, electron transport props. and related electronic struct. 7—98792
Na-Cs liq. alloys., resistivity and thermopower calcs. Faber-Ziman formalism with finite mean free path correction 7—112288
Na-Sn liq. alloys., resistivity and thermopower calcs. Faber-Ziman formalism with finite mean free path correction 7—112288
Nd high press. FCC to double HCP phase transition, elec. resist. meas. 7—98439
$Nd_{0.04}Fe_{0.94}B_{0.02}$ amorphous films, thermoelec, power 7—92308
$Nd_{0.06}Fe_{0.94}$ amorphous films, thermoelec, power 7—92308
Ni complex, Ni(phthalocyanine)$(ClO_4)_y$, mol. metal, band filling and counterion ordering effects 7—143450
Ni thin film thickness influence on resistivity, TCR and thermoelectromotive force *(Japanese)* 7—138073
Ni-H, low temp. annealed, H diffusion, thermoelectric study 7—105456
Ni-Nb amorphous alloys, electronic transport and magnetisation meas. 7—98969
Ni-P-B metallic glasses, melt quenched, crystallisation, elec. transport props 7—83758
$Ni_{60}Nb_{40-x}Cr_x$, metallic glasses, influence of Cr content on elec. resist. and thermoelec. power 7—137891
Pr, high pressure bandstruct. and electronic props. 7—105388
Pt, with N-shaped I-V characts., current and temp. nonlinear oscills., sp. ht. determ. 7—98993
Sb-Se, liq., electronic props., diamagnetism 7—92148
Ta-Cu-Ta Josephson sandwiches, thermoelec. phenomena study *(Russian)* 7—112306
Tl, thermoelectric power up to 6 GPa 7—84833
URu_2Si_2 heavy fermion system, 17.5 K transition, thermopower and elasticity studies 7—98994
W dilute alloys, excess resistivity and thermopower, temp. depend. 7—105545
W dilute alloys, excess resistivity and thermopower, two-band model 7—105546
Y-Er-H, dissociative pressure, thermodynamic and physical props. 7—105043
Y-H, dissociative pressure, thermodynamic and physical props. 7—105043
Yb alloys, unstable 4f-shell, transport props.—quasielastic neutron spectra linewidth correls. anal. 7—118460
Yb high pressure bandstruct. and electronic props. 7—105388
$Yb_{80}X_{20}$ (X=Cu, Ag, Au), amorphous alloys, transport props., mag. susceptibility, sp. ht. 7—98968

thermoelectric effects in semiconductors and insulators
Anderson-Mott insulators, thermoelectric power, exponential density of states distrib. 7—131695
degenerate semimetals, phonon drag thermoelec. power sign anisotropy, diffusion-size effect calcs. 7—76988
insulating media, thermoelectric effects near a phase transition 7—143495
MOSFET, quantum Hall effect, thermoelec. power effects 7—125132
PMMA, elec. fluctuations, heat treatment effects *(Russian)* 7—99101
polyacenic materials, elec. cond. and thermoelectric power 7—84954
PVC, physical props., rel. to elec. fluctuations, temp. depend. *(Russian)* 7—99102
quantum superlattices, nondissipative thermomag, effects study 7—143493
quasi-2D semiconductor quantum well structs., quantum theory of thermopower 7—76990
rubber, natural, physical props., rel. to elec. fluctuations, temp. depend. *(Russian)* 7—99102
Seebeck coeff. determ., by potentiometric meas. 7—80813
semiconductor heterojunction, 2D electron gas low temp. thermopower calcs. 7—105601
semiconductors, amorphous, transport phenomena near the mobility edge 7—84951
semiconductors, thermoelectric power of hot carriers, acoustic instability threshold 7—70340
SOS films, heavily doped, electrical props. 7—77116
system, elec. and thermal transport props., cation substitution effect 7—92173
TCNQ salt, N-n propyl quinoxalinium $TCNQ_2$, struct., cond., triplet spin excitons 7—105570
thermoelectric power and elec. conductivity near melting point, temp. depend. 7—99097

thermoelectric effects in semiconductors and insulators continued
$(Ag_2Se)_{0.452}(AgI)_{0.258}(HgI_2)_{0.290}$ superionic cond., thermoelec. props. study 7—137615
α-Ag_2Te impurity-carrier scatt. mechanism, Hall coeff., thermo-EMF and elec. cond. meas. 7—84871
As_2Se_3, addition effect of Tl on elec. and thermal transports 7—137933
$Ba_{0.5}La_{0.5}Fe_{1-x}Cu_xO_{2.75-(x/2)+\delta}$, struct., oxidation states, elec. props., chem. anal., X-ray diffr., electron diffr., Mossbauer spectra, mag. suscept. meas. 7—84891
$BaZrO_3$:Li, low sintering and electrical conductivity meas., X-ray diffraction study 7—131693
Bi films, obliquely deposited, structure and thermoelec. props. 7—92315
Bi:Te, highly doped, anomalies of electronic and lattice props. 7—99096
Bi-Sb alloys, thermoelec. power anisotropy in quantising mag. field 7—137969
Bi-Sb semiconducting alloys, thermoelectric power, heavy hole bands 7—112377
$Bi_{0.88}Sb_{0.12}$, extruded samples, struct. and thermoelectric props. 7—70341
$Bi_{2-x}Sb_xTe_3$ films, transport props. and valence band edge struct. studies 7—138083
Bi_2Se_3, melt, electrophysical props. 7—99098
Bi_2Te_3, melt, electrophysical props. 7—99098
$Bi_2Te_{3-x}Se_x$ alloys, instability to air annealing 7—93218
Cd_3As_2, amorphous films, elec. and thermoelec. props 7—124996
CoO, high defect content, elec. cond., defect interactions 7—70319
CoO:In, elec. props. meas., 1270-1470 K 7—137971
$CrSi_2$:Fe powder, slip casting, sintering, thermoelec. props. *(Japanese)* 7—77902
$CrVO_4$, elec. transport props. 7—105602
$CsBiS_2$, $CsBiSe_2$, $CsBi_3S_5$, electrophysical and photoelectric props. 7—99052
$(Cu_2GeSe_3)_x(CdSe)_{1-x}$ solid solns., electrophysical props. 7—84879
$Cu_{1.8}Mo_6S_{8-y}Te_y(Se_y)$, Chevrel cpds., electron-phonon interaction and thermopower nonlinearities 7—84952
CuV_2O_6, elec. cond., thermoelec power, dielec const. 7—137973
$Fe_{1-x}Mn_xO$, high temp. elec. props., defect struct., comp. depend. and semicond.-metal transition obs. 7—118491
$Fe_2(MoO_4)_3$, elec. transport props. 7—131692
$Fe_{1-y}O$, high temp. transport props. 7—143527
$Fe_{1-y}O$ monocrysts., thermoelec. power temp. and O press. depend. anal. 7—118520
GaAs:Cr semi-insulating, mixed conductivity, pot. fluctuations 7—85020
Gd_2Te_3, cryst. chem. and thermoelec. props. 7—83881
Ge, piezothermoelectric power tensor, symmetry 7—143494
$(GeS_{3.5})_{100-x}Bi_x$, solid and liq. states, electronic conductivity 7—76945
$Ge_xSb_{10}Sb_{90-x}$, conduction mechanisms in bulk amorphous system 7—137929
GeSe, solid and liquid states, electrophysical props. 7—131634
Ge_xSe_{1-x} alloys, DC conductivity and thermoelectric power studies 7—137931
$(GeSe_{3.5})_{100-x}Bi_x$, solid and liq. states, electronic conductivity 7—76945
GeTe, glass-based coatings, to protect from sublimation *(Russian)* 7—113810
GeTe: Ag, effect of electromigration and temp. gradients on impurity distrib. 7—84010
$(GeTe)_{1-x}((Ag_2Te)_{1-y}(Sb_2Te_3)_y)_x$ solid solns., thermoelec. power and band struct. studies 7—137970
$Ge_{16}Te_{80}As_4(Cu_4)(In_4)$, solid and liquid disordered states, charge transport 7—76946
$Hg_{0.8}Cd_{0.2}Te$, far infrared thermomodulation and cyclotron resonance *(German)* 7—125056
In-Se amorphous films, variable-range hopping conduction 7—99059
$KBiS_2$, $KBiSe_2$, KBi_3S_5, electrophysical and photoelectric props. 7—99052
$(La_{1-x}Ba_x)_2CuO_{4-y}$ high T_c supercond., transport props. and sp. ht. 7—92371
$La_{1-x}Ca_xCr_yCo_{1-y}O_3$ solid soln., prep. and elec. props. *(Japanese)* 7—124983
La_2CuO_4, superconductivity 7—112581
La_2CuO_{4-y}, physical props., O defect effects 7—142756
$(La_{1-x}M_x)_z$ CuO_4 (M=Ba,Sr), high T_c supercond., amorphous citrate process prep. and elec. props. 7—119204
$LaMn_{1-x}Ni_xO_3$, prep. and electrical props. 7—92912
$La_{1-x}Sr_xCr_{1-y}Mn_yO_3$ system, elec. and thermal transport props., cation substitution effect 7—92173
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., thermoelec. power and thermal cond. meas. *(Russian)* 7—131887
$La_{1.85}Sr_{0.15}CuO_4$, elec. resist., Hall effect and thermoelec. power meas. in normal and supercond. states 7—105790
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7—99246
$LiBiS_2$, $LiBiSe_2$, $LiBi_3S_5$, electrophysical and photoelectric props. 7—99052
$MnFe_2O_4$, electrical properties at the Neel temp. 7—125032
$Mn_{0.863}Fe_{2.137}O_4$ ferrite, elec. cond., thermoelec. power, cation distrib. 7—118479
$Mn_xFe_{3-x}O_4$ ferrite, anomalous elec. props. 7—143496
Mn_3Ge_5, high press. synthesis, cryst. struct., elec. resist., thermoelec. power meas. 7—112334
$Mn_xHg_{1-x}Te$, thermo-EMF meas., mag. field effects study *(Russian)* 7—125033
MnO, high defect content, elec. cond., defect interactions 7—70319
$Mn_{1-x}Te_x$ liqs., elec. cond., thermopower and electronic struct. studies 7—105562
$NaBiS_2$, $NaBiSe_2$, $NaBi_3S_5$, electrophysical and photoelectric props. 7—99052
$Na_{0.7}MnO_2$ bronze, defect struct. w.r.t. electrochem. cathode pot., elec. cond., thermoelec. and thermogravimetric meas. 7—119536
$((Nb_{1-x}Ta_x)Se_4)_3I$, localisation effect in thermopower and resistivity 7—137930
$Pb_{2-x}Gd_xCu_{2/3}Nb_{4/3}O_{7-y}$ ceramic system, thermoelec. props. 7—112379
PbSe, glass-based coatings, to protect from sublimation *(Russian)* 7—113810
PbSe, n- and p-type, hole cond. and defect form. 7—76932
$Pb_{1-x}Sn_xSe$, Seebeck effect, mechanism of isovalent and acceptor doping 7—118519
PbTe films, anomalous thermoelectric power, transport coeffs. 7—143646
n-PbTe films, effect of γ-irrad. on thermoelectric props. 7—84955
PbTe films, thermoelectric props., effect of γ irradiation and annealing 7—84953
PbTe:Tl whisker crystals, thermoelectric power, magnetoresistance 7—105600

hermoelectric effects in semiconductors and insulators continued
PbTe-CrTe, quasibinary system, temp. depend. of CrTe solubility 7−92961
$RbBiS_2$, $RbBiSe_2$, $RbBi_3S_5$, electrophysical and photoelectric props. 7−99052
Sb_2Se_2Te, elec. transport props. 7−137926
Sb_2Te_3, melt, electrophysical props. 7−99098
$(Sb_2Te_3)_{1-x}(Nd(Gd)Te)_x$ solid solns., elec. props. temp. and comp. depend. meas. 7−84881
Si inversion layers, p-channel, thermoelectric power under strong mag. quantisation 7−99100
Si inversion layers, thermopower 7−131795
Si, piezothermoelectric power tensor, symmetry 7−143494
a-Si:H-Ge:H superlattices, band edge alignment, quantum size effects 7−131764
SiAs, electrophysical and optical props. 7−76936
Sm_4Bi_3, valence transition critical point, thermoelec. power meas. 7−137880
SmS semiconducting single crysts., resist. and thermoelec. power meas. 7−76939
SmS single crysts., mixed valence state, thermoelec. power meas. under press. 7−84950
SmSb thin films, electrophysical props. 7−70334
SnSe, solid and liquid states, electrophysical props. 7−131634
SnSe-Bi, solid solutions, thermo-EMF, elec. cond. rel. to density 7−92960
SnTe-Ni_3Te_2, interaction, temp. depend. of thermoEMF 7−86138
TiO-MgO sintered mixtures, elec. props. *(Japanese)* 7−76928
$TlBiSe_2$, prep., characterisation, electrical props. *(French)* 7−70311
$Tl_2InPrTe_4$, X-ray diffr. and electrophysical investigation 7−91535
U_3X_4 (X=P, As, Sb), electronic struct., external hydrostatic press. depend. 7−76772
Y-Ba-Cu-O high T_c supercond., thermal cond., strong electron-phonon coupling 7−125248
$YCrO_3$:Ca(Mg)(Sr)(Ba), elec. cond., Seebeck coeff. 7−70342
YIG, elec. cond., thermoelec. power meas., small polaron model 7−99051

hermoelectric generators *see thermoelectric conversion*

hermoelectricity
see also Peltier effect; Seebeck effect; thermocouples; thermoelectrets; thermoelectric effects in metals and alloys; thermoelectric effects in semiconductors and insulators; thermomagnetic effects; thermopiles; Thomson effect
Au-SiO, thin cermet film, elec. cond. and thermopower 7−143538
BEDT-TTF unsymmetrical derivative, DIMET, radical cation salts 7−99005
dilute impurity system, thermoelec. power, Anderson model calcs. 7−105547
disordered 2D system, thermoelec. effects in quantum Hall regime 7−131694
DMET DSDTF radical cation salts, metallic elec. props. and cryst. struct. 7−84807
$DMTM(TCNQ)_2$, thermoelec. power, elec. cond. and first order phase transition 7−84835
heterogeneous media, thermoelectric props. 7−70290
hopping thermoelectric power for localised electron states, field-theoretic anal. 7−99057
IR laser radiation receiver, low-inertia, based on thermoelec. phenomena 7−128655
nondestructive inspection methods and development trends 7−100483
$(perylene)_2M(mnt)_2$ family, (M=Pt, Au, Pd), thermoelec. power 7−84834
perylene-metal-bis(1,1-dithio 2,2-dicyanoethylene)-based conductor, elec. cond. 7−84856
polyacetylene, cis- and trans-, transport props., mol. wt. depend. 7−99039
polyaniline, metallic, thermopower and conductivity 7−137905
polyaniline, NMR and transport props., water vapour pressure dependence 7−70656
polypyrrole films, conducting, transport props. charact. 7−76870
polypyrroles, elec. cond. and thermoelec. power 7−76871
polythiophene: $FeCl_4$ films, synthesis and elec. props. 7−76907
quasi-two-dimensional electrons coupled to 3D phonons, phonon drag contrib. to thermopower, appl. to GaAs-AlGaAs heterojunctions 7−92083
quasi-two-dimensional electrons coupled to 3D phonons, thermopower, phonon drag contrib. 7−92082
single-impurity Anderson model, transport coeffs., 1/N expansion 7−84801
synthetic metals, two-dimensional, elec. cond., hydrodynamic effects 7−105512
TCNQ complexes, AzaTCNQ, organic conductors, elec. and struct. props. 7−84863
TCNQ salted conducting polymer, elec. transport 7−131622
thermopiezoelectricity, linear, uniqueness theorem, stress discontinuities on layered media surfaces 7−132201
thermopiezoelectricity, linear uniqueness theorem, boundary conditions 7−132200
thermopower calcs., partial particle-hole conjugation symm. 7−143445
zinc bis(oxalato(platinate, $Zn_{0.81}[Pt)C_2O_4)_2].6H_2O$, 1D conductor, transport props. and phase transitions 7−105552
$(Ag_{1-x}Cu_x)_2Se$, solid solns., ionic conductivity, thermoelectric power 7−143081
$(Ag_2S)_{0.3}(AgI)_{0.55}(HgI_2)_{0.15}$, cationic superionic conductor, transport props. 7−76488
C, glassy, thermoelectric power 7−77015
^4He, superfluid, electrokinetic phenomena 7−70008
La-Ba-Cu-O high T_c superconductor, determ. of charge carriers by thermoelectric meas. 7−112573
$(La_{0.9}Ba_{0.1})_2CuO_4$, thermoelec. power meas., Ba dopant conc. and temp. dependences 7−105839
La_2CuO_{4-y}, high T_c supercond., resistivity, thermopower meas. 7−138109
$(La_{0.9}Sr_{0.1})_2CuO_4$, thermoelec. power meas., Sr dopant conc. and temp. dependences 7−105839
$La_{1.85}Sr_{0.15}CuO_4$, elec. resist., Hall effect and thermoelec. power meas. in normal and supercond. states 7−105790
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7−105548
$RBa_2Cu_3O_{7-y}$, (R=Y,Gd), high T_c supercond., normal state props., electron correlations 7−143441
$Rb_3(H_3O)_{0.2}Pt(CN)_4(O_3SOHOSO_3)_{0.5}.0.8H_2O$, 1D platinum chain cpd., conductivity and thermopower 7−131623
Sm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804

thermoelectricity continued
$TaSe_3$, thermoelec. power and elastoresistance 7−84843
TiS_2, intercalated with transition metals, transient thermoelec. effects 7−112378
Tm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
$YBa_2Cu_3O_7$, high T_c superconductor, thermopower 7−125247
$YBa_2Cu_3O_{7-\delta}$, thermoelec. power and electron-phonon coupling 7−112660
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., single-phase, superconductivity and thermoelec. power meas. 7−131889
$Y_{0.75}R_{0.25}Ba_2Cu_3O_7$ (R=La, Lu), high-temperature superconductivity 7−138100
Yb-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804

thermography *see infrared imaging; microwave imaging*

thermogravimetry *see thermal analysis*

thermoluminescence
activation energy determ. method 7−85855
Antarctic meteorites, natural thermoluminesc. meas. rel. to ^{26}Al content 7−101746
carrier escape probability, pre-exponential factor 7−99944
dating of archaeological and geological materials by thermoluminescence method 7−127484
dosimetry materials, production mechanisms 7−87233
fading of thermoluminescence in materials with second order kinetics 7−92751
geochronological dating method for glaciolacustrine sediments of Pleistocene age, thermoluminescence technique 7−101504
glass, electric charge accumulation by γ-irrad., TSC, thermolum. *(Japanese)* 7−131187
glasses, thermoluminescence energy yield, ion track studies 7−132348
Hiroshima atomic bomb, thermoluminesc. dosimetry at distances 1.27 to 1.48 km from hypocentre 7−93933
ionic crystals, ion-limited electron-hole recombination 7−131657
ionising radiation and luminescent detectors, conf., Tallin, USSR (April 1985) 7−128172
kinetics, fractional recombination probability 7−132358
localised transition model of anomalous fading 7−85864
loess at Rocourt, Belgium, thermoluminesc. dating 7−145389
materials TLD-700 and TLD-600, responses variation with LET, 20-200°C 7−87237
minerals sphere and epidote, glow curve analysis, radiation damage 7−87629
model of trap creation and filling during irrad. 7−85863
ordinary chondrites, type 3, thermoluminesc. rel. to metamorphism 7−94834
phosphorescence decay curve shape, kinetic parameters 7−85847
Late Pleistocene alluvial deposits near Sydney, Australia, comparison of thermoluminesc. and ^{14}C age determs. 7−127156
Pleistocene travertine from Bad-Cannstatt, Stuttgart, South West Germany: thermoluminesc. dating 7−87963
polycarbonate, doped with triphenyl methane and xanthene dyes, thermolum. 7−132355
polyester resin, acrylate modified, radioluminesc. meas. 7−99946
polyethylene, extended chain crystals 7−132357
polyethylene fibre, γ-irrad., thermolum. glow peak at 158°C 7−132353
polystyrene, electron traps, activation energy distribs., thermally stimulated luminesc. anal. 7−84918
pyroelectric crystals, temperature variance, luminescence, dielectric breakdown, charge-carrier recombination 7−144134
quartz, synthetic, vac. UV radiation induced defects, optical adsorpt., photoluminesc. and thermoluminesc. meas. 7−119043
quartz, thermoluminescence, defect dynamics, predose effect 7−113294
quartz glasses excited by light of 200 to 800 nm wavelength 7−138522
quartz thermoluminescent spectra glow peak, activation energy determ. method 7−85855
ruby:Cr^{3+}, colour centre charge modification under UV irrad. *(Russian)* 7−124266
sediments, thermoluminesc. dating 7−87959
semiconductors, heating rate controller for thermoluminescence and thermally stimulated conductivity meas. 7−80815
tetrachlorophthalic anhydride-hexamethylbenzene, fluoresc., phosphoresc. and delayed fluoresc. 7−138496
TLD-100 sensitivity, large enhancement in reactor core 7−122312
zircon inclusions in pottery, auto-regenerative thermoluminesc. dating, dose obs. 7−87961
Al_2O_3, corundum, UV spectra, effects of X-rays and electron irradiation *(Russian)* 7−85770
α-Al_2O_3, X-irradiated, photo-induced thermolum., dosimetric props. 7−87236
$Al_2O_3:Li^+$, implanted, electron beam induced TL 7−92750
$Al_2O_3:Li^+$, impurity depth profile determ. using electron beam excited thermolum. 7−91626
Al_2SiO_5, kyanite, monochromatic thermoluminescence glow curve, glow peak study 7−138521
(Ba, Ca, Sr)S:Cu,Bi phosphors for TLD 7−93957
(Ba, Ca)S:Cu phosphors for TLD 7−93957
$BaFCl:Eu^{2+}$, thermolum. mechanism 7−85856
$Be_3Al_2O_4$:Cr alexandrite crystal fluorescent decay for fibre optic temp. sensor 7−123218
BeO thin film dosemeters, thermolum. rel. to thermally stimulated exoelectron emission 7−85866
$Bi_{12}GeO_{20}:Al^{3+}(Fe^{3+})(Zn^{2+})(Cd^{2+})$, thermally stimulated currents, thermoluminescence 7−84920
$Bi_{12}SiO_{20}:Al^{3+}(Fe^{3+})(Zn^{2+})(Cd^{2+})$, thermally stimulated currents, thermoluminescence 7−84920
CaB_4O_7:Dy(Eu)(Pb)(Cu) sintered TLD material, thermoluminesc. 7−93956
CaB_4O_7:Pb(Eu)(Dy), sintered, X-ray irrad. thermolum., thermally stimulated exoelectron emission 7−77666
CaF_2:Ce, photo-reversible charge-transfer processes and thermoluminescence 7−85858
CaF_2:Gd,Mn, thermostimulated luminescence, sensitised mechanism 7−132350
CaF_2:MN, rare earth impurities, thermoluminesc. and optical absorpt. 7−138520
CaF_2:Mn(Ce)(Mn,Ce), dosimetry phosphor, optical absorpt., thermolum. 7−87235
CaF_2:Tm detectors, radiation induced thermoluminescence 7−77664

thermoluminescence continued
$Ca_5(PO_4)_3Cl$:Ag, Na^+, thermoluminesc. under X-ray irradiation 7−106279
CaS, traps, anomalous TSC meas. 7−99090
CaS:Ce phosphor, thermoluminescent UV, X-ray and γ-ray dosimeter 7−81742
$CaSO_4$ thermoluminescent phosphors for radiation dosimetry, comparative study 7−71891
$CaSO_4$:Dy, EPR of defect centres, thermolum. models, dosimetry appl. 7−85425
$CaSO_4$:Dy, TLD preparation and response characteristics *(Korean)* 7−81861
$CaSO_4$:Dy crystals, thermolum. glow curve peaks, interstitial vacancy recomb. 7−85861
$CaSO_4$:Dy single crysts., thermolum. mechanisms, EPR obs. 7−85862
GaP single cryst., polarised photoluminescence and thermoluminescence 7−77661
$GdBa_2Cu_3O_x$, high T_c supercond., thermally stimulated luminesc. 7−132356
$Ho_{1.5}Ba_{1.5}Cu_2O_x$, high T_c supercond., thermally stimulated luminesc. 7−132356
$KAlSi_3O_8$, microcline, feldspar, kinetics and emission spectra of thermoluminescence 7−106278
KBr, plastically deformed prior to gamma irrad., F-centre annealing, thermolum. studies 7−85857
$K_2Ca_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7−138523
KCl crystals, transformation of energy traps, plastic deformation, thermolum. studies 7−113293
KCl F centre resonant secondary emission polarisation correl., picosec. time-resolved spectra 7−106244
KCl, pure X-irradiated crysts., thermolum. and optical absorpt. spectra studies 7−125813
KCl:Ca powders, γ-irradiated, Z_1 centres growth, particle size depend. 7−76209
KCl:S, X-irradiated single crysts., thermolum. and optical absorpt. spectra studies 7−125814
$K_2Mg_2(SO_4)_3$ phosphor, thermolum. and reflectance spectra meas. 7−138523
K_2SO_4, pure and Sm_2O_3 or Dy_2O_3 doped, annealed and recrystallised, thermally stimulated exoelectron emission glow curves 7−77774
LaOBr:Eu,Tb, phosphors, thermoluminescence, capture centres 7−132352
$Li_2B_4O_7$ crystallised glass, quenched, TSEE 7−85964
$Li_2B_4O_7$ crystallised glasses, X-irradiated at liq. N_2 temp., TSEE and thermolum. 7−85967
$Li_2B_4O_7$, single cryst., excitons, UV absorpt. and luminesc. study 7−125816
$Li_2B_4O_7$:Cu crystallised glass, thermolum. and thermally stimulated exoelectron emission 7−85865
LiF, gamma-irradiated comparison of piezoluminescence and thermoluminescence 7−70919
LiF, single cryst., optical absorpt. and thermoluminesc., X-ray irradiation and DC field effect 7−77662
LiF TLD, thermoluminescence sensitivity enhancement effects below 10 Gy 7−119859
LiF TLD-100, heavily annealed, TL and PTTL flow curves 7−99945
LiF TLD-100, sensitivity, annealing effects 7−107258
LiF, thermolum. mechanism, 77-293 K 7−85860
LiF: Mg, thermoluminescence peak anal. 7−125812
LiF:Mg, Ti TLD chips, annealing effects 7−107257
LiF:Mg,Ti, alpha particle thermolum. dose response, microdosimetric track interaction model 7−87239
LiF:Mg,Ti, defect complexes, annealing effects, thermolum. study 7−119057
LiF:Mg,Ti, TLD chip, relative TL response for X- and γ-rays 7−77665
LiF:Mg,Ti, thermostimulated luminescence, activation energy and freq. factor 7−132349
LiF:Mg,Ti,O, thermostimulated luminescence and photoluminescence 7−132351
LiF:Mg^{2+}, thermoluminescence, Mg^{2+}-V^- dipoles 7−85854
LiF:Ti, thermoluminescence peak anal. 7−125812
LiF:Ti crystals, thermolum. glow curve peaks, interstitial vacancy recomb. 7−85861
MgB_4O_7:Dy, UV response, γ-ray dose estimation using phototransferred thermoluminescence technique 7−92749
MgO, thermochemically reduced, electron trapping, luminescence studies 7−92197
MgS:Eu,Sm phosphors for TLD 7−93957
$NaAlSi_3O_8$, albite, feldspar, kinetics and emission spectra of thermoluminescence 7−106278
NaCl, TLD props. 7−87228
NaCl:Sr, 340, 380 K glow peaks 7−138519
NaI(Tl), optical and thermoluminescent props., impurity effects 7−85859
$NaMgCl_3$, flux cryst. growth and thermolum. glow curves 7−132354
$NaMgF_3$ crystals, thermoluminescence, kinetics and trapping parameters 7−106277
PbFCl crystals, growth and glow curves 7−113295
PbI_2, thermoluminescence peaks *(Russian)* 7−113296
SiO_2:Na, SiO_4/Na centre, thermoluminescence and phosphorescence studies 7−125817
YAG:Nd^{3+}, excitons, thermoluminesc. study 7−125815
YAG:Nd^{3+} X-ray excited phosphoresc. kinetics model *(Russian)* 7−70911
Y_2O_2S:Eu,Tb, phosphors, thermoluminescence, capture centres 7−132352
Y_2SiO_5:Ce thin films, cryst. and amorphous, struct. effects on absorpt. and luminesc. props. *(Russian)* 7−85884
ZnS, doped phosphor, thermoelectroluminesc. study 7−85850
$ZrSiO_4$:Dy single crysts., electron and hole centres produced by X-irrad., thermolum. studies 7−77663

thermoluminescent dosimeters
β radiation response rel. to irrad. geometry 7−87195
albedo dosemeter systems using automatic readout, evaluation techniques 7−81745
automated laser heated thermoluminescence dosimetry system 7−93942
automatic TLD system to meet current international specifications, design philosophy 7−87222
background control in production 7−87230
clinical TLD systems variability, multi-institutional study 7−101090
conference, Oxford, England (Aug. 1986) 7−80167
country-wide environmental radiation monitoring using thermoluminescence dosemeters 7−96394

thermoluminescent dosimeters continued
differential proton spectra meas. on Space Shuttle, thermoluminescent dosimetry system 7−96483
energy and ang. response for β-ray dosimetry 7−87196
environmental γ radiation, a TLD that estimates dose and energy distrib. 7−87217
environmental measurements with TLDs, trends and issues 7−86871
environmental TLDs, European intercomparison 7−87216
extremity dosemeter monitoring service using Vinten dosimeter 7−87203
geochronological and geothermal information, computer controlled TLD appl. 7−101534
glasses, thermoluminescence energy yield, ion track studies 7−132348
glow curve evaluation algorithms, influence on reproducibility of dosimeter readings 7−93947
glow curve use for dosimeter evaluation 7−103287
high natural background radiation levels at Cox's Bazar, Bangladesh, TLD meas. 7−96395
individual monitoring systems, international intercomparisons, ICRU dose quantities 7−87184
instrumentation in thermoluminescence dosimetry 7−87221
integrating thermoluminescent Rn daughter personal dosimeter 7−71874
KDT-02, thermoluminescent dosimeters, calibration in latent energy units 7−141331
laser heating, thermal and optical aspects 7−93941
low energy β radiation, mean energy meas. using thermolum. and TSEE 7−87198
materials, responses to β radiation and low energy photons 7−87197
materials for TLD, review 7−93949
materials TLD-700 and TLD-600, responses variation with LET, 20-200°C 7−87237
mixed β-γ radiation dose meas. 7−87200
mixed field multi-element beta/gamma dosemeter design 7−87187
optical readout method for solid state dosemeters 7−93944
personal dosimetry systems, reliability, technical merit, economic factors 7−87182
personnel dosimeters response, comparative study 7−87191
personnel monitoring, ICRU 39 quantities appl. 7−87183
personnel monitoring appl. in India 7−87189
photon response, energy and angle depend., ICRU quantities 7−87185
porcelain slices as a stable thermoluminescence dosemeter up to 500°C 7−81746
production mechanisms 7−87233
radiation exposure detection limits for nuclear power station operation, environmental TLD obs. 7−129444
radiation protection service using an energy discriminating thermoluminescence dosemeter 7−87188
radiation workers, occupational monitoring, technical and administrative anomalies, 1981-5 7−87186
reader incorporating CO_2 laser heater, design 7−93943
reader system upgrade conversion to microprocessor technology 7−87224
synthetic diamonds as in vivo radiation detectors 7−133471
thick, methods of rapidly heating, comparison 7−93939
thin layer detectors, hot pressed, dosimetry, energy response to photon and electron irrad. 7−87194
TLD-100 chips, relative TL response for X- and γ-rays 7−77665
TLD-100 sensitivity, large enhancement in reactor core 7−122312
TLD-200 dosimeters, responses to α particles, fast electrons, β, X and γ rays 7−71890
Al_2O_3:Mg,Y TLD phosphor, dosimetric characts. 7−93953
(Ba, Ca, Sr)S:Cu,Bi phosphors for TLD 7−93957
(Ba, Ca)S:Cu phosphors for TLD 7−93957
BeO TLD material, multiple dose re-assessment 7−93948
BeO TLDs use for high-dose dosimetry in radiation hardness testing 7−89783
BeO thin film detectors for thermally stimulated exoelectron emission dosimetry, state-of-the-art, review 7−93950
BeO thin film dosemeters, thermolum. rel. to thermally stimulated exoelectron emission 7−85866
CaB_4O_7:Dy(Eu)(Pb)(Cu) sintered TLD material, thermoluminesc. 7−93956
CaF_2:Dy (TLD-200) dosimeters, annealing procedures obs. 7−71893
CaF_2:Mn TLD phosphor, dosimetric characts. 7−93953
$Ca_5(PO_4)_3Cl$:Ag, Na^+, thermoluminesc. under X-ray irradiation 7−106279
CaS:Ce phosphor, thermoluminescent UV, X-ray and γ-ray dosimeter 7−81742
$CaSO_4$ TLD material, multiple dose re-assessment 7−93948
$CaSO_4$:Dy, TLD preparation and response characteristics *(Korean)* 7−81861
$CaSO_4$:Dy base TLD, personnel monitoring, performance tests 7−87190
$CaSO_4$:Dy phosphor, TLD glow curves, radiation exposure estimation 7−119862
$CaSO_4$:Dy TLD, Na removal during polycryst. growth 7−145250
$CaSO_4$:Dy Teflon dosemeters for environmental monitoring, computerised glow curve anal. 7−96393
$CaSO_4$:Dy Teflon pellets, thermoluminescent for β radiation detection 7−107256
$CaSO_4$:Dy thermoluminesc. efficiencies at high laser heating rates 7−93940
$CaSO_4$:Tm(UD-200S)-TLD, self-irrad. obs. *(Japanese)* 7−133477
$Li_2B_4O_7$ TLD material with various activators, props. 7−93954
$Li_2B_4O_7$:Cu TLD material, props 7−93954
LiF detectors, dose independent use in mixed neutron-γ radiation fields 7−81744
LiF detectors for γ-ray dose determ. over wide range 7−103285
LiF reader-annealed TLDs, preirradiation sensitivity loss 7−135680
LiF TLD, thermoluminescence sensitivity enhancement effects below 10 Gy 7−119859
LiF TLD material, multiple dose re-assessment 7−93948
LiF TLD-100, sensitivity, annealing effects 7−107258
LiF TLD-100 glow peak V, isothermal decay 7−103289
LiF TLD-700 chips, annealing and reusability characts. 7−145249
LiF thermoluminescence dosimeter powder, decay characteristic of γ-ray dose in TRIGA core 7−109524
LiF thermoluminescent detectors, chemiluminescent signal growth 7−129518
LiF:Mg, Cu, P TLD materials, props 7−93951
LiF:Mg, Ti TLD chips, annealing effects 7−107257
LiF:Mg, Ti thermoluminesc. efficiencies at high laser heating rates 7−93940

ermoluminescent dosimeters continued
LiF:Mg, Ti-TLD, automatic method for evaluating elapsed time between irrad. and readout 7−87210
LiF:Mg,Cu,P, TLD chips, dosimetric characts. 7−87229
LiF:Mg,Ti, alpha particle thermolum. dose response, microdosimetric track interaction model 7−87239
LiF:Mg,Ti hot-pressed thin layer detectors for integrating dosimeters, dosimetric props. 7−93952
LiF:Mg,Ti TLD, computerised glow curve deconvolution technique 7−93946
LiF:Mg,Ti TLD materials, props 7−93951
LiF:Mg,Ti TLD phosphor, dosimetric characts. 7−93953
LiF(TLD-700) response to a mixed thermal neutron and γ field 7−139374
MgB_4O_7 TLDs, performances 7−93955
MgB_4O_7:Dy TLD phosphor, dosimetric characts. 7−93953
MgS:Eu,Sm phosphors for TLD 7−93957
NaCl, TLD props. 7−87228

ermomagnetic effects
metals, phonon drag magnetothermal EMF in open Fermi surface *(Russian)* 7−76897
Onsager's theorem, weak mag. field tensors 7−105542
Onsager relation in strong mag field, results 7−105544
Onsager relations in strong mag. field, formulation 7−105543
polyatomic gases, thermomag. effects in transition regime 7−130823
polyvinylidene fluoride film, mag. polaris., press. effects 7−105947
quantum superlattices, nondissipative thermomag, effects study 7−143493
semiconductors, nondissipative thermomagnetic effects, quantising mag. field 7−131691
semiconductors, surface recombination rates, thermogradient magnetoconcentration effect 7−99156
semiconductors, thermomagnetic phenomena in quantising mag. field 7−84949
thermomagnetoelectric discrete and continuous metallic interfaces, transport props., nonequilib. thermodynamics anal. 7−84831
type II superconductors, thermodynamic cross effects 7−131930
Voight-type material half-space, thermomagneto-viscoelastic wave propag. 7−83064
As_xSb_{1-x}, energy spectra and transport effects in quantising mag. field *(Russian)* 7−70285
$(Fe_xNi_{1-x})_{75}P_{16}B_6Al_3$, x=0.06, 0.1, thermal magnetic fluctuations in metallic spin glasses 7−105931
$Ge_{1-x}Te$, two-electron donor level, effect on transport coeffs. 7−112227
LiZnTi spinel ferrite, high magnetisation limit 7−125453
Nd-Fe-Co-B-Mo alloy, coercivity anisotropy field and thermomag. props. study 7−125445

ermomagnetic recording
rare earth-transition metal alloy thin films, amorphous, coercive force, thermomagnetic recording, magnetisation reversal model 7−125444
rare earth-transition metal amorphous alloys, thermomagnetic switching parameters, time and radial depend. calcs. 7−118801
CrO_2 tape, thermomag. recording by electron beam, space-time characts. 7−85300
Gd-Tb-Co-Fe amorphous thin films, mag. characts. rel. to magneto-optical recording appls. 7−143867
Gd-Tb-Fe-Co amorphous films, mag. props. control for magneto-optical recording 7−92481
Mn-Bi films, prep. by multilayering, write-in characts. 7−143870
Tb-Co and Tb-Fe-Co magneto-optical disc prep. by RF sputtering 7−144036
Tb-Fe-Co amorphous films, mag. and magneto-optical props., recording appls. 7−144038

ermomagnetic torque *see Scott effect*

ermomagnetic treatment
see also magnetic annealing; magnetocaloric effects
hereditary bodies, electrically conducting, cyclic action in mag. field, mechanicothermoelectromagnetic processes 7−100264
permanent magnet castings, thermomag. treatment regimes optimisation 7−77872
Fe-Si, domain struct. and mag. props., thermomechanomagnetic treatment effects *(Russian)* 7−138265
Fe-Si-B alloys, amorphous and cryst., magnetic losses, thermomag. treatment effects *(Russian)* 7−99437
$Fe_{95-x}W_5B_x$, amorphous alloys, thermomagnetic and crystallisation behaviour 7−77258

ermomechanical processing *see thermomechanical treatment*

ermomechanical treatment
see also hot pressing; hot working
diagnosing thermoelastic medium, mathematical model 7−136699
granular structure, anisotropy characterisation, image anal. *(French)* 7−119289
graphite, recrystallised, rad. stability 7−84036
hereditary bodies, electrically conducting, cyclic action in mag. field, mechanicothermoelectromagnetic processes 7−100264
Inconel X-750, Ni-base superalloy, plastically strained, high-misfit, dislocation-precip. interaction during coarsening 7−78024
metallic glasses, shape formation, structural relaxation 7−142604
poly(ethylene terephthalate) films, thermo-mechanical anal. *(Japanese)* 7−98743
polyethylene, low density/high density blends, mech. and flow props. 7−137268
powder bonding under thermoplastic deform. 7−144325
shell, cylindrical, stress-strain state during heat treatment 7−113587
steel, austenitic stainless, annealing twin control 7−111576
steel, Cr and Cr-V types, transform. to pearlite from hot-deformed and austenitised austenite 7−100260
steel, eutectoid, austenite form. during thermomech. treatment 7−71223
steel, eutectoid, post thermomechanical treatment transform. struct. of ferrite in pearlite 7−100218
steel, ferritic stainless, thermomech. processing, struct. and substruct. obs. 7−113578
steel, high C, mech. props. rel. to thermomech. processing *(Japanese)* 7−119317
steel, high-strength, fatigue resist. improvement using bulk and surface treatments 7−126308
steel, Mn, bainitic, thermomechanical treatment, mech. props., microstruct. *(Polish)* 7−71267
steel, Mn, Hadfield, thermomech. treatment, deform temp., wear resist. *(German)* 7−119299

thermomechanical treatment continued
steel, Mo maraging, thermomechanical treatments development for yield strengths above 3 GPa 7−100266
steel, Nb microalloyed austenite, precip., comp., thermomech. processing 7−78021
steel, ultra high strength, development based on spinodal decomp. 7−86229
steel plate for offshore structures, thermomech. processing of Cu bearing age hardenable materials *(Japanese)* 7−144446
superalloys, gas turbine engine disc materials development 7−144336
Al-Cu-Mn, as-extruded and soln.-soaked structs., effect of thermomech. process 7−100261
Al-li (1.8 wt.%), thermomech. treatment, fatigue, deform. bands, dislocation struct. *(Japanese)* 7−93081
Al-Mg-Mn alloy powders, rapidly solidified, microstruct. charactn. 7−86156
B_4C-SiC composite ceramics, synthesis, thermomechanical props. *(French)* 7−100151
Fe, cast, nodular graphite, volume damage, thermomechanical cycling *(French)* 7−119290
Fe-Si, domain struct. and mag. props., thermomechanomagnetic treatment effects *(Russian)* 7−138265
Nb-Ti alloys, superconductivity and structural instability study 7−105008
SiC, nonequilib. phase transitions induced by thermomechanical treatment, obs. 7−131289
Ti alloys, wrought, annealing temp. effect on resist. to low levels of plastic deform. 7−126152

thermometers
see also pyrometers; resistance thermometers; temperature measurement; thermocouples; thermopiles
adiabatic colorimeter, computer controlled with pyroelec. thermometer, sp. ht. meas. 7−108560
calibration techniques for range −40°C to 600°C 7−115962
capacitance thermometers, magnetic field dependence at liquid ^{3}He temp. 7−102418
digital thermometer and controller, wide-range digit, p-n junction thermosensitivity based *(Chinese)* 7−73345
fiber optic microwave power probe 7−67349
fibre optic sensors *(Italian)* 7−97150
fibre optic techniques and instruments for temp. meas, 7−115964
fibre optic temp. sensor with thermochromic transducer, thermometry 7−123248
fibre optic thermometer, linearity stabilised, using pseudo-heterodyne phase detection 7−123234
fibre optic thermometer for biomedical appls. 7−79050
hand-held digital thermometers developments 7−121124
industrial radiation thermometry 7−67304
IR thermometer for medical use based on pyroelec. polymer film 7−114457
low temp. meas. using thermometers and thermocouples *(Czech)* 7−128577
medical temperature transducers and digital clinical thermometers 7−101106
microwave heating, sintering, design principles 7−71108
miniature globe thermometer for mean radiant temp. estimation and comfort modelling 7−93588
Model 2455 digital thermometer with custom LSI *(Japanese)* 7−108558
multi-grafted, characts., expt. *(Japanese)* 7−73349
nuclear orientation thermometry, accuracy, book contrib. 7−95589
radiation thermometer calibration using standard blackbody furnace *(Japanese)* 7−128580
radiation thermometers, interpolation eqn. for exponent *(Japanese)* 7−140699
radiation thermometry, principles and instruments 7−115960
radiation thermometry when radiometer's field of view contains more than one type of material *(Japanese)* 7−73348
scales, standards and instruments, for temp. meas. 7−115959
sounding thermometer, identification by Prony's method 7−93996
space cryogenics, conf., Noordwijk, Netherlands (April 1986) 7−66811
superconducting thermometer for bolometric appls. 7−108551
surface temp. meas. equipment, accuracy and response-speed improvements *(Russian)* 7−108553
infrared thermometer for atmos. temp. determ., low-temp. calibration method 7−139800
transmitters of temperature meas., design 7−115963
visible and near IR radiation thermometers, spectral responsivity distrib. meas. *(Japanese)* 7−108557
^{3}He, superfluid, negative ion thermometer 7−121118
Ni film electrical resistance meas., electroformed 7−80791
Si diode thermometer with IC instrumentation package, for 77.5 to 290 K 7−121133
Si diodes, miniature, thermoelectric characts. 7−73350
Zr-N sputtered films, cryogenic thermometer 7−121116

thermometric conductivity *see thermal diffusivity*

thermonuclear devices *see plasma devices*

thermonuclear reactions *see nuclear fusion*

thermooptical effects *see thermo-optical effects*

thermopiles
IR sensor with thermopile *(Dutch)* 7−140745
micro-foil heat flow sensor design and appls. 7−121113
pyrheliometer, linearity and temp. compensation testing 7−145718
radiation thermometer for temperature control of thin samples during PIXE analysis 7−80790
SP-100 nucl. power systems, load following and reliability studies 7−67903
PbS photodetector with thermoelectric cooling for 0.8 to 2.5 μm band 7−102524
Si thermal sensors based Seebeck effect, review 7−73343

thermopower *see thermoelectricity*

thermoreflectance
getinaks, heated by CO laser radiation, reflection coeff., temp. depend. 7−111923
$Ga_{1-x}Al_xAs$ optical filters, thermo-optical effects 7−70755
GaSe, excitons near fund. absorpt. edge, thermoreflectance spectra study 7−125713
Pb thermoreflectance meas. appl. to optical constant determ. 7−77520
$Pb_{1-x}Ge_xTe$, thermoreflectance study in cubic and rhombohedral phases 7−70754

thermosphere
chemical composition at middle latitudes, storm-induced changes 7−120188
chemistry and composition, review 7−120191
composition and F-region storms 7−139848
density model of global thermosphere, from Intercosmos satellite drag data 7−139825
dynamics, determ. from obs. of Na reson. fluoresc. line with tunable Nd:YAG lasers 7−72210
dynamics during 1979 March 22 magnetic storm, model simulations 7−115125
dynamics during magnetic storm of 22 March 1979, theory and obs. 7−115126
electrical conductivity, height-integrated Pedersen and Hall cond. patterns from TIROS-NOAA satellite data 7−134058
electron energy deposition from magnetosphere 7−115152
emission features, spectra study 2000 to 8000 Å 7−79733
energetics and dynamics, review 7−120190
equatorial seasonal vars. from F_1-layer obs. 7−87988
evidence for saturated spectrum 7−145611
gravity wave interactions in midlatitude approx., ionospheric effects 7−145773
gravity wave source and propagation 7−120187
gravity wave-tidal model to explain momentum flux observations 7−115123
gravity waves, quartic dispersion eqn. 7−139822
gravity waves effect on F_2-layer 7−88006
gravity waves generation by transient heating during high-power wave propag. 7−139835
Joule heating during 13 July 1982 solar proton event 7−115127
mean-mass transport at high latits. during polar night, determ. from O/O_2 ratio *(German)* 7−134042
mesopause, summer, background winds and waves struct., bistatic radar obs. 7−139809
mesopause region gravity waves over Adelaïde, Australia, MF radar meas. 7−127625
mid-latitude temperature and auroral oval nighttime location 7−79731
MSIS-86 empirical model of thermosphere temperature, density and composition 7−107597
neutral composition, interaction with polar ionosphere using coupled ionosphere-thermosphere model 7−134041
normal modes 7−115124
numerical modeling of ionosphere and thermosphere; using imaginary source method 7−145754
polar mesopause gravity wave activity in Na and OH nightglow 7−94533
solar activity level changes, influence on thermosphere 7−134036
solar constant changes and influences on Earth's atmos., conf., USA (1985) 7−72696
solar EUV induced changes in Earth's thermosphere, review 7−79729
temperature and meridional winds during SAR-arc 7−139826
temperature perturbations evolution, 3D heat conduction eqn. theory 7−134035
thermosphere, vibr.-rot. emission bands, appl. to aurora and airglow 7−79727
tidal wind observations by radar and rockets 7−145732
turbulence and small scale struct. at high latitude in winter 7−145736
wave phenomena global excitation, response characts. for Joule heating and elec. field momentum sources 7−134040
wind profiles at gravity waves at 3 locations in dusk auroral oval 7−107596
wind variations during eclipses, effect on E-region plasma parameters 7−88004
Hα nightglow, intensity distribs. and line profiles from multiple scatt. theory 7−134045
N_2 LBH emission and far UV vehicle glow of S3-4 satellite 7−127627
NO chemistry of lower, middle and upper atmospheres 7−87778
NO density profiles at solar cycle 21 diminishing phase 7−79730
O atom concentration, in lower thermosphere above Palestine, Texas, USA 7−120185
O+O atomic elastic and inelastic collisions, the ^1D and ^3P states 7−90383
OH nightglow at polar mesopause, effects of atmospheric disturbances 7−134047

thermostats
see also cryostats; temperature control; thermistors
automatic temperature control of developing solution in processing machines *(Russian)* 7−108691
creep testing including US vibr. effect, vac. set-up with thermal control 7−132870
crucible heater for ion source 7−102404
design, mathematical models study 7−128558
heater-type thermostat, design parameters 7−140692
model for device design 7−108545
passive low temp. thermostat. millikelvin temp. stability, space appls. 7−67310
thermostat equation, periodic solns. 7−108542

theta pinch *see pinch effect*

thick film circuits
pH sensor, hybrid 7−126526

thick film devices
force (pressure) sensors fabrication 7−128565
sensors and transducers, design, manufacture and characts. *(Italian)* 7−89209
temperature sensors, development, characts. and appl. *(Polish)* 7−95586
InSnO-Si heterojunction solar cells prep. by thick film techniques 7−119663
SnO_2:Sb gas sensor, H_2 and CO responses obs. 7−128566

thick film resistors
resistance thermometers for use below 1 K, heat capacity obs. 7−102416
BaB_6-LaB_6 solid soln. based thick films, powder dispersion effect on electrophys. props. 7−77927

thick films
resistance, equivalent resistance and TCR network, temp. and comp. depend. model approx. 7−131630
BaB_6-LaB_6 solid soln. based thick films, powder dispersion effect on electrophys. props. 7−77927
Bi-containing Fe garnet thick films, LPE 7−76701
CdTe printed films, pulse electron-beam induced synthesis 7−111675
SnO_x thick films, electronic cond. and tunnelling 7−105742

thick films continued
TaO_x thick film, electron hopping and tunnelling cond. investigations 7−137939
TaO_x thick films, electronic cond. and tunnelling 7−105742

thickness control
evaporation monitoring system featuring 'software' trigger points and on line evaluation of refractive indices 7−104065
optical coating automated processes with optical thickness monitoring 7−104063
optical thickness monitoring fully automated system for thin film prod. 7−104064
Sn plating, thickness monitoring and regulation by microprocessor *(French)* 7−126036

thickness measurement
acoustic microscope using line-focus-beam 7−136649
apparatus for simultaneous inner/outer diameter meas. using X-ray sensitive image sensor *(Japanese)* 7−95548
ATR technique, scanned, for film thickness meas. 7−80852
coating thickness determ. using photothermal heating 7−121071
convergent acoustic waves, laser generation, appl. to materials evaluation 7−123374
dielectric waveguide sensor for nondestructive inspection of sheet dielectrics by freq. props. analysis 7−132874
differential confocal optical ranging for distance meas. 7−108511
eddy current methods, analogy with long transmission line *(Czech)* 7−106748
ellipsometer, single-element rotating-polariser, for thickness determ. 7−67375
external reflection spectroscopy, selection of optimum parameters for thin films on smooth metal surfaces 7−67394
film, automatic meas., double twin path laser interferometer 7−116002
film thickness meas. by eccentricity of X-ray goniometer 7−134721
foil thickness determination by convergent beam electron diffraction in the kinematical approximation 7−73320
Kossel-Mollenstedt diffraction patterns, online foil thickness measurements 7−140670
laser applications in manufacturing, conf., Los Angeles, USA (Jan. 86) 7−80159
layer thickness meas. using pseudo-Sezawa waves 7−121073
material, standard reference, film thickness and refractive index, calibrated by ellipsometry and profilometry 7−121047
microinterferometry, variable wavelength, for thickness and refr. index meas. of sections, layers and films 7−128639
miniature standardless echo pulse thickness meter measuring the speed of sound 7−128523
multifrequency method of parameters determ. of dielectrics, data processing effectiveness 7−132875
multilayer thin films, thickness, density, stoichiometry meas. 7−108517
multilayer thin films, thickness determ., variable exit angle ultrasoft X-ray fluoresc. spectrometry 7−134722
neurons in optical microscope sections, thick, device for computer quantification of depth meas. 7−145299
nonquarterwave film thicknesses in multilayer struct. fabrication, optical monitoring using turning point method 7−130396
null ellipsometer for the studies of thin films at gas-water interface 7−80850
oil film thickness meas., US equipment development *(German)* 7−136655
on-line thickness meas. using radiation beams, dynamic effects 7−115951
optical coatings, non-optical characterisation techniques 7−123161
optical thickness monitoring, sensitivity improvement using graphical methods 7−67363
plasma sprayed coatings, thickness and subsurface defect detection, thermal wave interferometry 7−100495
plastic film thickness measurement using angle-scanning laser interferometer 7−80868
polymer coating on metallic components, contactless inspection of thickness in prod. line 7−71445
polymer coating on metallic substrate, albedo thickness gauging 7−71439
protective and thermal barrier coatings, NDE of thickness, adhesion, porosity 7−126379
quarterwave multilayers, optical monitoring of thickness *(French)* 7−97179
quartz crystal thin-film thickness monitor and growth rate meter 7−67278
quartz sensor of film thickness, sensitivity 7−102399
radiometric ellipsometry method of surface layer thickness and dielec. props. meas., error calc. 7−132873
radiometric NDT devices, nonlinear conversion of pulses of spectrometric flaw detector 7−71438
scintillation detector, beta particles detection with minimal response to bremsstrahlung 7−96463
TEM, foil thickness meas. 7−144653
thin film thickness meas. by X-ray multiple beam interference *(French)* 7−80729
thin film thickness meas. with white light fringes 7−121066
thin films, non-absorbing, optical analysis by immersion spectroscopic reflectometry 7−80853
thin films, thickness measurement by substrate-to-film X-ray peak intensity ratioing 7−80741
two-phase gas/liquid film flow obs., nonintrusive optical meas. technique *(German)* 7−123798
US twin probe characteristics for NDT 7−100489
ventricular wall thickening, meas. using scatt. and fluoresc. radiation 7−71851
X-ray fluorescence appl. to thickness gauge for plating layers *(Chinese)* 7−89198
X-ray fluorescence spectrometry, Cu-Ni films on steel 7−76702
Al disk packs, mag. layer thickness meas. by X-ray fluorescence anal. *(Chinese)* 7−80733
Al film, using double twin path laser interferometer 7−116002
Cu_2O, electrodeposited films, optical absorption coeff. and thickness meas. 7−144145
He-Ne double-wave laser interferometer for thin-film optical constants *(Chinese)* 7−115998
Si, single crystal damaged surface layer, nondestructive meas. using reflection acoustic microscope 7−138927
SiO_2 films, thickness and refr. index meas., ellipsometric method 7−128534
Sn plating, thickness monitoring and regulation by microprocessor *(French)* 7−126036

thickness measurement continued
TiN, thin hard coatings on tool steel, thickness, adhesion, microhardness QC 7−138925
ZnS ALE films, ellipsometric meas. of thickness and refractive index 7−128631
thin film capacitors
No entries
thin film circuits
electronic devices using Langmuir-Blodgett thin film method with resist materials *(Korean)* 7−124691
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
thin film devices
see also magnetic thin film devices
hypersonic wind tunnel, heat transfer meas. using surface thermocouples improved data reduction 7−123819
low-temperature use, electrical contacts fabrication using Au wire bonding machine 7−128597
multilayer thin film heat transfer gauges, theory 7−128572
optical discs, PbTeSe thin films, optical write-read characts. with pit-edge recording 7−103772
SQUID sensors, DC, integrated thin film, design and appl. 7−128599
temperature and flow sensors, design and characts. *(German)* 7−108536
thermometer, Al, 77-350°K range 7−102411
thin film thermocouple, high-temp., with fast time response 7−95593
thin layer detectors, hot pressed, dosimetry, energy response to photon and electron irrad. 7−87194
Al-V_2O_5-Al, thin film devices, negative capacitance 7−131806
In thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
InO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
Li-Te junction humidity sensors, thin-film, props. 7−95601
Pt thin-film resistance thermometer development and manufacture *(Swedish)* 7−121119
Si:H-$CuInSe_2$, solar cells, thin film, perform. aspects 7−126618
Si:H-SiGe:H solar cells, thin film, perform. aspects 7−126618
Sn thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
SnO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
ZnO film surface conductivity, influence of absorbed gases *(Chinese)* 7−112517
thin film electroluminescent displays *see electroluminescent displays*
thin film resistors
NiCr:Si stable thin film resistors, structural and elec. props. studies 7−138075
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
thin film transistors
Er_2O_3−$CdS_{1-x}Se_x$, TFTs, fabrication and characterisation 7−100087
a-Si:H CVD initial transient phenomena, effect on device props. 7−144294
$Si/CoSi_2$ epitaxial structures, MBE, Si overgrowth, permeable base transistor appl. 7−77818
thin film triodes *see thin film transistors*
thin films
see also coatings; dielectric thin films; epitaxial layers; insulating thin films; magnetic thin films; metallic thin films; semiconductor thin films; semimetallic thin films; sputtered coatings; substrates; vapour deposited coatings
absorbing, optical anal. 7−92754
adhesion meas. 7−138955
amorphous, simulation of high resolution electron microscope images 7−69565
amorphous films, computer simulation of growth mechanism 7−84569
amorphous films, self-sustaining crystn. phases 7−131470
amorphous metals and semiconductors, conf., Hyderabad, India (Dec. 1986) 7−140359
aromatic hydrocarbon thin films, laser-induced photocond. study 7−143507
cermet thin films, microstruct., transport and optical props. 7−85136
compressible thin layers, explosions, nature 7−100575
condensation, fractal scaling 7−98729
corrugated thin films and surfaces with transition layer, EM modes 7−122795
crystalline layer, planar superradiation dynamics 7−122886
defect chemistry and ionic conductivity, thickness depend. anal. 7−84588
deposition, in-situ RBS analysis, sample holder 7−115967
diamond thin films and particles, thermal CVD synthesis *(Japanese)* 7−132487
diamond-like films, sputtered, wear and friction behaviour *(Japanese)* 7−132755
dichromium tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
dimolybdenum tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
ditungsten tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
DNA, polynucleotide films far-IR vibr. modes meas., lattice dynamical model anal. 7−93647
elastic fracture, model 7−137766
elasticity and adhesion, mechanical resonance studies 7−124805
electron backscattering 7−77716
emission, reflection and transmission spectroscopy 7−98751
erosion and growth of solids stimulated by atom and ion beams, conf., Heraklion, Crete, Greece (Sept. 1985) 7−66803
ESCA, angular depend., surface depth profiles construction algorithms 7−143268
external reflection spectroscopy, selection of optimum parameters for thin films on smooth metal surfaces 7−67394
external reflection spectroscopy for recording thin-film 7−80891
galvanic coatings NDT, using X-ray fluorescence analyser *(German)* 7−86536
graphite, C^+ bombardment, self-sputtering yields meas. 7−77722
graphite thin film synthesis by CVD 7−100113
growth, computer simulation 7−137751
growth, role of incident kinetic energy of adatoms, molecular dynamics simulations 7−98753
thin films continued
growth mode models 7−137744
ice and ice mixture films, erosion by ion irradiation 7−92798
inhomogeneous, quantum E-type waves *(Russian)* 7−77108
inhomogeneous thin films, anharmonic crystals and their surfaces, stochastic forces, phonon excitations 7−112054
interdiffusion studies, appl. of Auger electron depth profile anal. 7−76498
island films, fibered space description 7−124760
Lamb waves in unsupported thin films, Brillouin scatt. 7−98299
lamellar eutectic growth, steady state, random-walk model 7−118066
laser diagnostics, conf., Albuquerque, NM, USA (Feb. 1987) 7−102022
laser heating, temp. profile calcs. 7−91647
laser microfabrication of thin films 7−71006
light scattering by thin films with a grating surface 7−141788
lubricating films, bonded, two and three component, tribological behaviour 7−113733
materials for electroluminescent thin films 7−77657
microfocussed ion beams for surface and thin film anal. 7−134888
multilayer, optimum design selection in relation to production errors 7−119135
multilayer thin films, mol. orientation, Raman spectrosc. obs. using integrated optics 7−77591
nuclear targets conference, Chalk River, Ont., Canada (Sept. 1986) 7−108020
nucleation and growth modes, Monte Carlo simulation 7−105336
optical constants, use of He-Ne double-wave laser interferometer *(Chinese)* 7−115998
optical parameters from spectrophotometric transmission curves 7−125836
optical thin films, non-absorbing, optical analysis by immersion spectroscopic reflectometry 7−80853
organic dye thin films, electroluminescence *(Japanese)* 7−113289
organic films deposition, microgravity physical vapour transport expt. 7−138664
organic thin films on surfaces, unenhanced Raman spectrosc. 7−77590
organosilicon films, plasma polymerised, phase transition effects 7−131290
percolation of interacting particles deposited onto a planar substrate 7−124794
perylenetetracarboxylic dianhydride films, mol. organisation, spectrosc. obs. 7−106159
phase and morphological transform. kinetics 7−112133
phthalocyanine thin films, third harmonic generation study 7−123091
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
production by plasma, conf., Japan (Nov. 1986) *(Japanese)* 7−142516
production by rapid expansion of supercritical solns. 7−106402
property modification and synthesis by low energy particle bombardment concurrent with film growth 7−91672
Raman spectrometric obs. 7−77589
seed diffusion growth, in external periodic field, first order phase transitions 7−143293
shear layers, turbulent, traversed by laser beam, optical props. *(Chinese)* 7−122822
solid film lubrication, review 7−106632
substrate impurities effect on film layering transitions 7−143289
surface films and powders, Fourier transform IR spectra using metal light pipe 7−132990
surface films and powders, metal light pipe Fourier-transform IR spectroscopy theory 7−132989
thermal conductivity and diffusivity meas. 7−140696
thermal properties, contactless study method 7−131376
thermal transport meas., anal. of heat pulse method 7−95584
thickness, density, stoichiometry meas. 7−108517
thickness meas. by X-ray multiple beam interference *(French)* 7−80729
thickness meas. with white light fringes 7−121066
thickness measurement, automatic, double twin path laser interferometer 7−116002
thickness measurement by substrate-to-film X-ray peak intensity ratioing 7−80741
thickness measurement using scanned ATR technique 7−80852
two-dimensional thin layer with a hydrogenic impurity, LoSurdo-Stark effect 7−70372
ultrasonic pulse signal interference *(Korean)* 7−142917
vapour phase film growth, ion-surface interactions role, review 7−125968
X-ray diffraction total external reflection, rel. to film thickness 7−84578
AgCl-Ag thin films, light induced periodic structures 7−124763
Ag_xTiS_2 films, intercalation, UPS studies 7−143270
Ag_3VO_4 thin films, photoinduced phase transition 7−118092
$BaCl_2$, thin film, preparation as chlorine target 7−109569
Bi-Se multilayer thin films, optical wiring characteristics 7−122853
C deposition behaviour on Fe at high temps. and high C pot. in methane-H_2 mixtures *(Japanese)* 7−92903
C film on O_2 gas, synchrotron radiation-induced etching 7−93121
C films, glow discharge deposited, H recycle and isotope exchange study 7−75805
C films, Raman scattering spectra 7−125754
C, struct., ion deposition 7−76705
a-C:H films, chem. erosion by H impact, atomic and ion beam techniques meas. 7−77727
C:H hard amorphous thin film on Si and Ge, Raman scatt. study 7−125727
$^{248}CmF_3$, deposition on C foils for nuclear target fabrication 7−109572
Cr-SiO cermet thin films, prep. and elec. props. 7−132469
$Cu_{3+\delta}Mo_6S_{7.9}$, appl. in Li secondary cells 7−133074
H_xWO_3 bronze thin films, optical props., nonmetal-metal transition 7−99963
MnSb thin films, magneto-optical effects, waveguide appls. 7−123197
Nb_2O_5 thin films less than 1 μm, hardness testing 7−100478
O_2 film, on graphite, identification of para-positronium production 7−125846
P_4Se_{10} amorphous thin films, photoinduced changes in optical and struct. props. 7−132362
Pr_6O_{11}, struct., optical props. 7−105312
TiN film deposition on Fe substrate with simultaneous ion bombardment, transition layer form. simulation 7−119174
TiN thin film form. by rapid thermal annealing, elec. and phys. props. 7−118332
TiN_x, plasma deposition parameters, Auger spectra, thin films 7−144293
TiO_{2-x}, thin oxide coatings on Ti, photopolarisation studies 7−105612
Xe thin film, low energy electron transmission and reflection, Monte Carlo simulations 7−142857

third-order optical susceptibility *see nonlinear optical susceptibility*
thixotropy
relaxed joints of rats, mechanism of thixotropic behaviour 7−126878
solid suspension, yielding, heterogeneous behaviour 7−75507
Thomas-Fermi model
adsorbed mols. on metal surface, Raman line shift model calcs. 7−82136
atoms, ground state energy, electronic correl., semiclassical method 7−81991
atoms, ground-state energy, Thomas-Fermi model 7−103393
atoms, upper bound on ground state energy 7−81975
charged particle inelastic scatt. cross-sections, Thomas-Fermi statistical method 7−96823
closed-shell atoms, Wigner phase-space functions, Hartree-Fock approximation 7−129579
collective excitations in nuclear hydrodynamics, extended Thomas-Fermi approx. 7−135175
confined atom Thomas-Fermi eqn. with nonspherical boundary conditions, finite element anal. 7−88936
deformation energy surfaces for axial and nonaxial quadrupole variables, microscopic approach 7−116291
deformed nuclei, Thomas-Fermi approach to nuclear mass formula 7−135193
diamagnetic susceptibilities of cryst. ions, modified Thomas-Fermi model 7−99395
extended Thomas-Fermi model with Skyrme-type force, mass formula 7−121635
fission barriers, Thomas-Fermi approach to nuclear mass formula 7−135193
ground state properties, angular momentum projected semiclassics 7−102815
hard core effect inclusion in Thomas-Fermi method 7−95996
heavy ion collisions, multifragmentation, Thomas-Fermi and site-bond percolation model study 7−109203
implanted ions, impact parameter dependent electronic energy losses 7−137433
inhomogeneous electron gas, quantum density, local oscillator approx. 7−128434
intercalation compounds, two-dimensional band electrons, Coulomb potential screening 7−143388
metal-electrolyte interface electron screening phenomena, self-consistent anal. in density functional formalism 7−118586
metallic surfaces, Thomas-Fermi-von Weizsacker approach, self-consistent soln. 7−143550
metals, ground states of light impurities 7−118405
metals, positron annihilation at a vacancy, analytical models 7−119065
metals, Thomas-Fermi-Dirac theory of impurity screening, nonlocal density approx. 7−105441
microscopic nucleon-nucleus optical pot., semiclassical expansion using Green's fn. method 7−116353
nuclear desaturation effects, variational calcs. in liq. drop model and Thomas-Fermi approach 7−140989
opacity coefficients, Thomas-Fermi model anal. 7−106115
positive ions in strong mag. field, Thomas-Fermi eqn. soln. 7−103394
relativistic Thomas-Fermi-Dirac-Weizsacker model, field theoretical approach 7−108843
rigorous modified Thomas-Fermi theory for atomic systems, continuous electron density 7−89958
small device barrier height fluctuations dopant discreteness and distrib. effects 7−118397
spurious continuum effects on excited giant resonances, Thomas-Fermi model 7−73741
Thomas-Fermi equation, imbedding in class of ordinary diff. eqns. 7−129595
Ar, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Ca XX resonance lines, dielectronic satellite lines, atomic parameter calcs. 7−96589
$^{40}Ca(^{40}Ca,X)$, heavy ion optical potential, temp. dependence anal. 7−121890
Cu, thermodynamics, band struct. effects 7−137505
GaAs Thomas-Fermi-Dirac dielectric function 7−84721
GaAs/GaAlAs interface 2D electron gas, impurity pot. screening effects, RPA and Thomas-Fermi approx. calcs. 7−118578
GaP Thomas-Fermi-Dirac dielectric function 7−84721
H_2^+, bond weakening 7−86608
Kr, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Ne, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Ni, thermodynamics, band struct. effects 7−137505
$^{208}Pb(^{208}Pb,X)$, heavy ion optical potential, temp. dependence anal. 7−121890
Xe, first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
Zn, 2D ang. correlation of positron annihilation radiation 7−106301
Thomson effect
Pb, Thomson coefficient, conflict concerning zero value 7−143444
thorium
see also nuclei with .....
airborne, measurement, precision estimation using statistical props. of nuclear source *(Romanian)* 7−144782
Allende meteorite, actinide chemistry in Ca-Al rich inclusions 7−94831
atom, relative intensities and cross section in X-ray fluoresc. 7−135874
CANDU Th-U fuel evaluation based on optimal fuel management 7−73862
distribution in Precambrian domes 7−94144
FCC, electron struct. and optical props. of (100) and (110) surfaces *(Russian)* 7−143548
G-type dwarf stars, ^{232}Th abundance use for chronology of stellar and galactic evolution 7−120401
ions, X-ray energy shifts and electron binding energies, single-config. Dirac-Fock-Slater calcs. 7−90004
L X-ray line widths 7−74499
Norway, γ-radiation meas. in Th-rich area 7−107254
phonon spectrum, (Sd)-f hybridisation contrib. 7−111796
portable γ-ray spectrometer for K, U and Th cone. assaying counting statistics 7−120146
radioactive, estimation method in rocks using gamma ray spectrometry 7−79664
redistribution in shallow plutons 7−94151
thorium continued
relaxations due to vacancy, formation energy, binding energy of divacancy, calcs. 7−76119
Santa Monica Basin, Th isotopes in dissolved and particulate form., profiles 7−145522
seawater and suspended sediment particles, Th scavenging and vertical flux 7−72104
specific activities, dose rates 7−74207
specific heat meas., 298-700 K 7−76432
Venus, rocks at Vega-1 and 2 landing sites, U, Th and K abundances 7−101713
XPS 5s-5p spectra, Green's function calcs. 7−82055
Bi, liquid equilibrium distributions of Th and Ra, FBR coolant appl. 7−81527
LiCl-LiF molten salt, equilibrium distributions of Th and Ra, FBR coolant appl. 7−81527
Th+C(F)(Mg)(Si)(S)(Cu) ions, L-M-N multiple ionis. 7−141510
^{A}Th, A=228,230,232, concs. and activity ratios in surface air, NW Pacific 7−145632
^{A}Th, A=230, 232, partitioning in waste streams of coal field utilities 7−87253
^{230}Th in coral, abundance, use for precise dating of last interglacial period 7−127460
$^{234}Th/^{238}U$ disequilib. in sediments of Buzzards Bay, Massachusetts, implications for particle transport 7−94200
thorium alloys
$Ce_{0.7}Th_{0.3}$, Kondo vol. collapse and α-γ transition, XPS and BIS studies 7−77760
$Ce_{0.74}Th_{0.26}$, mixed valence alloy, γ-α valence transition, paramag. response, neutron scatt. study 7−70263
$Ce_{1-x}Th_x$, mixed valence phase, determ. 7−98946
$Ce_{1-x}Th_x$ mixed valent alloy, dynamic susceptibility, neutron scatt. studies 7−124948
$Gd_{72-x}Th_xGa_{18}B_{10}$, spin glass system, double transition behaviour, effect of alloying elements 7−112809
Ni-Cr-Th_2 alloy, cold worked, dispersion hardened, proton irrad., creep, microstruct. 7−100293
Th-Ag system, phase diagram 7−144365
$ThAl_2$, AlB_2 to Laves phase transition under press. 7−76396
$ThBe_{13}$ compressibility and high press. behaviour, X-ray diffr. study 7−69824
$ThBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
$Th_{1-x}Ce_x$ BCS superconductor, mixed-valence impurities, reduced transition temp. and sp. ht. jump, Brillouin-Wigner perturbation calcs. 7−85185
$Th_2Fe_{14}B$, exchange and crystal elec. field interactions 7−125365
$Th_2Fe_{14}B$ magnetic props., 3d magnetism 7−70530
ThIrSi, point contact spectroscopy 7−77167
ThM_4Al_8 (M=Mn,Cr), mag. props. 7−77252
$ThMB_2$ (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
$ThPt_3$, valence level photoelectron spectra 7−106362
$Th_{1-x}Tb_x$ dilute alloys, 4f-instability, sp.ht., mag. suscept., and resist. meas. 7−76848
$Th_{1-x}U_x$ BCS superconductor, mixed-valence impurities, reduced transition temp. and sp. ht. jump, Brillouin-Wigner perturbation calcs. 7−85185
Th_xUBe_{13}, superconducting transition temperature depression 7−77125
Th_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
$U_{0.97}Th_{0.03}Be_{13}$, lower critical field, coexisting supercond. order parameters 7−77148
$U_{0.97}Th_{0.03}Be_{13}$, Seebeck coefficient 7−70291
$U_{1-x}Th_xBe_{13}$, ($0.02<x<0.06$) phase diagram, specific heat, critical field 7−77149
$U_{1-x}Th_xBe_{13}$, inherent spin-density-wave instability in heavy-fermion superconductivity 7−112580
$U_{1-x}Th_xBe_{13}$, phenomenological model of superconductivity 7−85164
$U_{1-x}Th_xBe_{13}$, phenomenological model of heavy-fermion superconductivity 7−118719
$U_xTh_{1-x}Be_{13}$, normal metal to heavy fermion system transition, elec. props. 7−137913
$U_{1-x}Th_xCu_2Si_2$, effect of Th substitution on magnetism 7−125456
$U_xTh_{1-x}Zn_{8.5}$ system, mag. anisotropy 7−112736
thorium compounds
fluoride glass, Ho^{3+} or Er^{3+} doped, laser and luminesc. props. 7−136312
rocksalt-structure compounds, X-ray diffr. and absorption edge meas. 7−77696
BaF_2-InF_3-ZnF_2-YbF_3-ThF_4 glass, phase and IR props. 7−104572
BaF_2-ThF_2:Yb^{3+}, Er^{3+} glass, IR to visible fluoresc. upconversion efficiency and multiphonon relaxation study 7−117264
BaF_2-ThF_4-based glasses, chem. durability, reaction with water 7−100406
Co-ThO_2-ZSM-5, physically admixed catalysts, zero field NMR studies 7−112967
InF_3-BaF_2-ThF_2 glasses, EPR and X-ray diffr. studies, structural model *(French)* 7−124116
$La_{1-x}Th_xCoO_3$, prep., mag. props. 7−77207
LiF-BeF_2-ThF_4-UF_4 mixtures, density and surface tension 7−142867
$(Th,U)O_2$ high density pellet preparation by a powder metallurgy method 7−67921
Th $(NO_3)_4$ extraction by DHPSO from HNO_3 soln., nonlinear optimisation program 7−129205
$Th_{5-x}Ba_xM_{2-0.5x}Cu_5O_{13+y}$(M=Pb,Zr), high-Tc superconductivity 7−105763
ThC_2, cryst. struct. line profile refinements, neutron powder diffr. data 7−111482
ThC_2, target material study for ISOLDE on-line mass separator 7−96442
$ThCl_4$:U^{4+}, incommensurate struct., obs. by optical spectroscopy, U^{4+} probe 7−85783
ThF_4 optical thin films, synergistic radiation effects, photothermal effects 7−99959
ThF_4-ZnF_2-YF_3-BaF_2-ZrF_4-NaF-LiF-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
$Th(NO_3)_4$ solns. in water, ultrasonic relax. meas. 7−69825
$Th(NO_3)_4.4H_2O$, monoclinic cryst. struct. *(French)* 7−124180
ThO, visible and UV bands, rot. anal. 7−82200
ThO_2 ceramic microspheres, sol gel prod. process using low viscosity sols 7−96235
ThO_2, dose effect on release of ion-implanted Xe and Kr 7−96211
ThO_2, release of ion-implanted I, Kr, Rb, and bubble formation 7−96212

thorium compounds continued
ThO_2 sol-gel microspheres, sintering behaviour 7−71118
ThO_2 surface, adsorpt. of H_2O and methanol. STEM and Fourier transform IR spectra 7−98682
ThO_2, target material study for ISOLDE on-line mass separator 7−96442
ThO_2-UO_2, advanced HTR fuel, design, fission products release *(German)* 7−129198
$ThOF_2$, F sublattice exchange mechanisms study *(French)* 7−84377
$ThSe_3$, electronic props., vibr. Raman spectra study 7−85715
α-$ThSi_2$, point contact spectroscopy 7−77167
$U_{0.1}Th_{0.9}C_2$, cryst. struct. line profile refinements, neutron powder diffr. data 7−111482

three-phase flow *see multiphase flow*

three-photon spectra *see multiphoton spectra*

three-term control
gas chromatograph, portable, microprocessor-based PID temp. controller 7−133021

threshold elements
adaptive optical threshold gates, algorithm 7−82489
optical binary processors, design aspects 7−82490

threshold logic
surface-emitting-type optical threshold device, operation anal. *(Japanese)* 7−110358

throat microphones *see microphones*

thulium
see also nuclei with .....
atom, autoionisation states, laser photoionis. spectrosc. 7−116918
atom, Ne matrix isolated, spectral and temporal charact. 7−68245
atom, relative intensities and cross section in X-ray fluoresc. 7−135874
K-shell ionisation by protons and deuterons 7−86714
$BaF_2:Tm^{3+}$, excited impurity ions, vacuum UV absorpt. spectra 7−113237
$CaF_2:Tm^{3+}$, excited impurity ions, vacuum UV absorpt. spectra 7−113237
Cr,Tm,Ho:$GdScGa_5O_{12}$ cascade laser action 7−122990
Ho,Tm:YAG laser, CW operation at 2.1 μm 7−141872
Ho^{3+}, Tm^{3+}, Cr^{3+}:$(Y,Sc)_3Ga_5O_{12}$ lasing at room temp. 7−68651
K_2SO_4-$ZnSO_4$:Tm glass, spectral studies 7−70883
LaOBr:Tm, X-ray phosphors, development, parameters, future outlook 7−77647
Li_2SO_4-$ZnSO_4$:Tm, glasses, spectral studies 7−70849
$LiYF_4:Tm^{3+}$ cryst., electron-deform. interaction, press.-induced linear dichroism meas. 7−70743
Na_2SO_4-$ZnSO_4$:Tm glasses, spectral studies 7−70849
$POCl_3$:$SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
$SrF_2:Tm^{3+}$, excited impurity ions, vacuum UV absorpt. spectra 7−113237
Tm, Rydberg and autoionisation states investigated by three step laser excitation and electric field ionisation method 7−90289
Tm^+, electron-impact ionisation, giant reson. effects 7−82371
Tm^{3+}, Ho^{3+}:YAG laser, diode pumped, CW room-temp. operation at 2.1 μm 7−97017
^{164}Tm and ^{141}Sm nuclear isomers, laser separation and resonance photoionisation spectroscopy 7−67726
YIG:Bi,Tm, anomalous effective g-value, temp. depend. ferromag. resonance study 7−112960
ZnS:Cu-Tm, cryst., electroluminescence, quantum yield, freq. depend. *(Japanese)* 7−132343
ZnS:Tm, thin films, growth and charact. 7−70130
ZnS:Tm crystals, donor-type centres 7−84758
ZnS:Tm^{3+}, emission spectra, dissolution of 4f-4f transitions in phonon sidebands 7−92738
ZnSe:Cu,Tm, conduction band, characteristic features, electrolum. study 7−144135

thulium alloys
Gd−$^{166}Tm(^{169}Y)$, nuclear orientation meas. γ-ray anisotropies 7−118895
Tm_2Co_{17}, cryst. field effects, Mossbauer study 7−118924
$Tm_{2-x}Dy_xFe_{14}B$, effect of Dy substitution on spin-reorientation temp. 7−143802
Tm_2Fe_{17}, cryst. field effects, Mossbauer study 7−118924
$Tm_2Fe_{14}B$, ^{169}Tm Mossbauer spectroscopy, hyperfine fields and quadrupole splittings 7−138361
$Tm_2Fe_{14-x}Co_xB$, effect of Co substitution on spin-reorientation temp. 7−143802
$TmGa_3$, antiferroquadrupolar and antiferromag. structs., neutron diffr. studies 7−118775
$TmGa_3$, crystalline electric field and magnetic structure 7−98942
$TmGa_3$, paramag. phase, magnetoelasticity and quadrupolar interactions study 7−99541
$Tm_{1-x}Lu_xCu_2Si_2$, mag. props. and sp. ht. studies 7−118778
$TmPt_2Sn$, cryst. struct. studies 7−69655

thulium compounds
see also thulium alloys
dilute mixed valence system, perturbative theory calcs. 7−76856
ethyl sulphate, Van Vleck paramag., impurity centre relax. 7−70518
$Tm_{0.76}Se$, blue phase, cryst. struct., determ. 7−98074
BaTmCuO high T_c ceramic superconductor point contacts, AC Josephson effect RF power depend. 7−118723
$Ba_{0.6}Tm_{0.4}CuO_{3-x}$, superconductivity, transition temps. 7−99280
$Ba_2TmCu_3O_{9-x}$, high T_c supercond., prep. and charact. 7−118660
$Ba_2TuCu_3O_7$, high-T_c supercond., struct. props. 7−142736
$(BiTm)_3(FeGa)_5O_{12}$ film on $Gd_3Ga_5O_{12}$ substrate, mag.-moment flip wave during magnetisation reversal 7−132080
$(BiTm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
$(BiTm)_3(FeGa)_5O_{12}$ film, stripe domain struct. resonance vibrations obs. 7−143880
$La_{1-x}Tm_xSe$ mixed valence single crysts., Kondo-type resist., mag. suscept. and magnetoresist. meas. 7−76921
Tm complex, cis,syn,cis-dicyclohexyl-18- crown-6 thulium (III) nitrate, cryst. struct. determ. 7−124209
Tm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Tm-Ba-Cu-O cpds., high T_c supercond. obs. 7−99270
Tm-Ba-Cu-O high T_c supercond., cryst. struct., X-ray diffr. studies 7−117899
Tm-Ba-Cu-O high T_c supercond., supercond. critical field anisotropy 7−125281

thulium compounds continued
Tm-Ba-Cu-O system, high T_c superconductor, cryst. struct. determ. 7−98083
$TmBa_2Cu_3O_{7-y}$, high T_c supercond., upper critical fields, anisotropy limits 7−131939
$TmBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7−118740
$TmBa_2Cu_3O_{9-x}$, high T_c supercond., magnetisation and lower crit. field 7−125183
$TmCl_3.6H_2O$, orbitally correlated crystal field parametrisation calc. 7−105497
Tm_2O_3, photon- and electron-stimulated desorpt. study 7−143235
$TmPO_4$, cooperative Jahn-Teller effect, struct transitions mag. field effect 7−124494
TmS, optical props., spectrum of ground electronic states 7−98848
TmS(Se)(Te), intermediate valence cpds., L_{III} X-ray absorption spectra 7−92781
TmSe mixed valence cpd., light absorpt. and refl., optical density of states calcs. 7−143997
TmSe, nonstoichiometric and stoichiometric samples, anomalous thermal expansion 7−98523
$TmSe_{0.45}Te_{0.55}$, under high pressure, magnetic structure determ., neutron scatt., AC susceptibility, resistivity meas. 7−138191
$TmSe_{1-x}Te_x$, semicond. to metal valence transition, high press. low temp. resist. meas. 7−76850
$TmVO_3$, cryst. struct., neutron diffraction study 7−104654
$TmVO_4$, Jahn-Teller cryst., mag. field, influence on struct. phase transition *(German)* 7−132122
$Tm_xY_{3-x}Fe_5O_{12}$, magnetisation study 7−138277
$(YSmTmCa)_3(FeGa)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
$Y_{2.4-x}Tm_xBi_{0.6}Fe_{5-y}Ga_yO_{12}$, substituted garnet epitaxial films, Faraday rotation 7−113152
$Yb_{0.9}Tm_{0.1}S_{0.8}Se_{0.2}$, valence state of Tm 7−84797
$Yb_{1-x}Tm_xSe_{1-y}S_y$ chalcogenides, Tm valence systematics, lattice parameter, mag. suscept. and resist. meas. 7−76849

thunderstorms
see also lightning
bow wave of thunderstorm, by boundary layer wave theory 7−114900
cloud-to-ground lightning activity in mesoscale convective complexes 7−87843
clouds elec. characts., influence of corona particles 7−120075
corona discharge from melting hailstone surface, influence of elec. field and water film thickness 7−139710
downburst from weak thunderstorm in Australia, meteorological tower obs. 7−127431
electricity, kinematics and precipitation of multicell storm 7−79518
energy distribution of lightning discharges in summer thunderstorms 7−94405
Central Europe, thunderstorm activity and 27 kHz atmospherics spring enhancement 7−101463
finite difference scheme for rainstorm simulation, stability and conservative property *(Japanese)* 7−139703
global thunderstorm foci, location from meas. of regular noise background in VLF radiation 7−87772
inflow regions, moisture and wind studies by const. altitude aircraft meas. 7−127531
kinetic energy generation function behaviour over N India during western disturbance 7−114937
lighting statistics, comparison in frontal and air-mass storms 7−133858
lightning location relative to storm struct., meas. in supercell storm and multicell storm 7−114922
mesoscale and severe storm meteorology, review 7−120104
Montana thunderstorm, 1981 July 19, numerical modelling study of nonelectrical aspects 7−114917
Montana thunderstorm, 1981 July 19, numerical modelling study and obs. of electrical aspects 7−114918
Oklahoma-Kansas Preliminary Regional Experiment for STORM-Central, results 7−79493
outflow dynamics, 2D numerical simulation sensitivity 7−133818
pollution vertical transport by thunderstorms 7−87876
radar reflectivities and Doppler vels. in VHF and UHF 7−114868
rain intensity, models of stochastic point processes 7−79545
Rocky Mts. of Colorado, USA, genesis zones for thunderstorms 7−114962
surface electric field variations between lightning flashes, effects of ion prod. by corona discharge 7−114919
Sweden, thunderstorms of 7 Aug. 1982, radar echo characts. and lightning parameters 7−133908
tornadic thunderstorms, dynamics and fluid processes, book contrib. 7−101466
V-shaped clouds, dynamics, appl. of airflow over isolated heat source calc. 7−79508
vegetation corona discharge influence on thundercloud elec. field 7−120076
Weibull distribution appl. to thunderstorm characts. 7−145624
X-rays from thunderclouds, estimate of fluxes 7−94332

thyratrons
excimer laser, magnetic pulse generator with thyratron switch anal. 7−82637
SLAC linear collider, modulator system and power supply 7−81762
H positive column thyratrons, recovery processes 7−97823

thyristor applications
ASDEX Upgrade ohmic heating circuit 7−122155
automatic temperature control of developing solution in processing machines *(Russian)* 7−108691
DC thyristor switching elements for fusion experiments 7−122153
FTU power supply system, final design 7−122151
pulse betatrons, losses in electromagnets of pulse magnetic field shapers *(Russian)* 7−96405
testing machine with programmable loading 7−132872
water-cooled magnet power source and cooling system 7−102460

thyristors
controller for pulse generator thyristors of betatron 7−134729

tidal power stations
600 MW Mersey tidal power station feasibility prospects 7−139079
alternative and renewable energy sources conf., Reading, England (April 1987) 7−72735
Annapolis Royal (Nova Scotia) tidal power plant availability achievement 7−139080

tidal power stations continued
energy from tidal streams, modelling of horizontal and vertical structures 7−86750
Severn barrage construction and economics 7−86749
Severn Barrage Development project, aims and benefits 7−144785
UK and world's developments 7−93474
UK development trends 7−100693
USSR contributions to high-capacity tidal power plant construction 7−100694
worldwide projects, private sector capital fund investment 7−86748

tides
age vars. in global oceans 7−133750
atmosphere, effects of tides on polar mesopause OH nightglow emissions 7−134047
atmosphere, gravity wave-tidal model, for mesosphere and lower thermosphere 7−115123
atmosphere, lunar tides in middle and upper atmos., at Saskatoon 7−94532
atmosphere, tidal wind observations by radar and rockets 7−145732
atmospheric diurnal tide in mesosphere, calc. of background wind effect 7−134039
Australian North West Shelf, internal hydraulic jumps and solitons at shelf break region 7−114756
beach exposure and inundation statistics from published tide tables 7−145675
Bristol Channel, UK, Ocean Surface Current Radar (OSCR) vector meas. on inner continental shelf 7−94243
N California coast, barotropic semidiurnal tidal currents during CODE 7−94264
N California continental slope and deep-sea basin, tidal current obs. 7−94265
Celtic Sea, sediment transport by internal tides 7−114691
Chinese marginal seas, influence of tides on China coastline 7−94195
constant tides in normal gravity field definition 7−145316
continental shelves with longshore topographic variations, tide theory 7−114717
Cordova Channel, British Columbia, acoustic scintillation structure of turbulent tidal flow 7−114754
Earth, tidal dissipation and short-term rheology 7−79178
Earth tides, review of publications (1983 to 1986) 7−133548
Fishing Master electronic tide calculator development using dual-CPU system *(Japanese)* 7−87933
Florida Current tidal transport rel. to tidal heights and cable voltages 7−94289
forecasting of ocean tides, estimate of number of harmonics required 7−127222
Greenland Sea, influence of tides on ice and water vels. in marginal ice zone 7−133713
NW Gulf of Alaska, numerical model of M_2 and K_1 tides 7−145504
Hangzhou Bay, China, tidal currents, turbulent stress and drag coeffs. 7−101320
Hangzhou Bay, East China Sea, sedimentation distrib. and 2D tidal waves *(Chinese)* 7−79450
harmonic constants computation from hourly data, Fortran program 7−127223
Hudson Bay, ocean bottom friction coeff. determ. from Seasat-alt data, tidal effects 7−72043
Indian Arm, Canada, internal tide and reson. 7−120031
Italian seas, tidal characts. *(Italian)* 7−101314
Kilauea Volcano, Hawaii, tidal analysis of geodetic tiltmeter observations 7−107333
Koombana Bay, Western Australia, characts. of surface buoyant jet 7−114759
Kuril region, extreme weather and tidal fluctuations of sea level 7−107429
M2 tide long term trend 7−94237
M_2 tide, Poincare waves obliquely incident to continental shelf 7−72041
mathematical analysis methods and appl. (book) 7−128205
mesosphere, tidal influences on vertical diffusion and O_3 diurnal variability 7−115128
mesosphere tidal winds in Na layer, daytime lidar observations 7−145742
nightglow from OH, tidally driven intensity fluctuations 7−145745
North Sea, Kelvin wave refl. model at oscillating boundary 7−94240
Northumberland Strait, semidiurnal tidal node drift 7−87654
observational array systematic design and tide gauges example 7−145698
ocean, characteristics determ. from sedimentary layers in Pichi-Richi Pass rocks, Australia, astronomical implications 7−133678
ocean, tidally induced residual current, effects of mean and tidal current interactions 7−127266
ocean, tide-gauge records of sea level, appl. of eigenanalysis 7−139777
ocean, topographically rectified tidal flow, horizontal profile 7−117612
ocean nearshore tidal and residual circulation, fine struct., HF radar obs. 7−127267
oceans, liquid transport by traveling solitary waves 7−114725
E Equatorial Pacific Ocean, M_2 tidal currents meas. 7−114737
palaeo-tides computation using palaeo-geographic maps 7−133539
river networks, dendritic, tide simulation using numerical model 7−133791
solid Earth tide data analysis, method for elimination of earthquake noise *(Chinese)* 7−87909
solid Earth tides, fluid core influence on diurnal tides *(Chinese)* 7−79177
South China Sea, tides and tidal currents distrib. *(Chinese)* 7−79449
Spencer Gulf, South Australia, tidal modulation of turbulence rel. to episodic stratification 7−114761
stars, tidal interactions in globular clusters rel. to binary systems form. and evolution 7−127969
Straits of Gibraltar, internal waves tide generated 7−101323
Suisun Bay, California, tidal circulation 7−72102
Sulu Sea tide-generated internal waves and Palawan Island coastal seiches 7−120029
tidal and secular tilt from an earthquake zone: thresholds for detection of regional anomalies 7−139433
topographic effects on tidal strains and tilts 7−145317
upper atmosphere, lunar tides, radar wind meas. 7−134038
Venus, tides in atmos. 7−101712
waves and tides meas. with double transmission line *(Spanish)* 7−94509
Yermak Plateau, tidal oscills. assoc. with seamount rel. to high-freq. internal waves 7−133707

tight-binding calculations
see also recursion method
1D Hamiltonians with incommensurate pot., multifractal props. of wave fns. 7−131503
1D quasi-periodic lattices, electronic states, tight binding Fibonacci model calcs. 7−76735
2D electron gas, implications of IR instability for high T_c superconductivity 7−112164
actinide-transition metal alloys, magnetism, electron-electron interactions, hybridisation effects 7−77243
amorphous semiconds., optical absorpt. and dielec. const., two-band tight binding model calcs. 7−143994
amorphous semiconductors, electronic props., lattice topology effects 7−112171
Anderson disordered tight-binding model, AC cond. and energy level correl. function calcs. 7−84802
Anderson model, conductivity of a random electron chain renormalization group approach 7−70269
Anderson transition in two dimensions in the presence of spin-orbit coupling 7−92041
β-(BEDT-TTF)$_2$I$_3$(IBr$_2$) refl. spectra temp. depend., conductivity spectrum TBA calcs. 7−77501
binary alloy, Liapunov exponent, large-coupling constant behaviour, Anderson model anal. 7−137767
binary alloys, surface segregation, electronic theory, CPA calcs. 7−91936
bis(propylenedithio)tetrathiofulvalene-ICl$_2$ salt, crystal struct., elec. cond. and band struct. 7−137354
conjugated organic polymers, nonlin. susceptibilities, tight-binding calcs. 7−103373
dangling bonds, energy determ., role at Schottky barriers and semiconductor junctions 7−125101
diamond, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
electron gas, 2D, quantum mechanical Hall effect 7−131680
electron motion, differential eqns. for local Green fn. 7−124810
fermion pairing, real space tight-binding model calcs. 7−70468
field evaporation, microscopic theory 7−106384
group VI elements, cubic phases, Fermi surface and electron spectrum 7−137782
half-filled electron-lattice system, soliton levels, density coupling effects, tight binding calcs. 7−131559
hierarchical heterostructs., 1D Schrodinger problem, tight-binding model calcs. 7−143306
ideal surfaces and interfaces, discrete surface Green's function matching approach 7−91942
III-V semiconductor relaxed (110) surface, chemical core level shift theory 7−112423
III-V semiconductors, point defect electronic props., tight binding investigation 7−137855
intermetallic cpds., electronic theory for vacancies and interstitials 7−104746
metal surface, lattice relax. in tight-binding calc. 7−105638
metals, amorphous and liq., electronic struct., effective medium theories 7−105377
metals, amorphous and liquid, electronic struct. and transport 7−84648
metals, one-dimensional univalent, collective state electrons, phonon spectrum renormalisation *(Russian)* 7−70209
model binary transition metal alloys, effective pair interaction calcs., coordination number effects, density of states approximations 7−84716
multinary semiconductor cpds., tight-binding theory 7−105373
one-dimensional disordered systems, universal scaling near band edge 7−76826
one-dimensional nearest-neighbour tight-binding models, localised eigenstates, numerical algorithm 7−124813
one-dimensional quasiperiodic pot., resistance and eigenstates calcs. 7−105359
Penrose tiling lattice, electronic props. in a mag. field 7−84621
polyacetylenes, electronic struct., INDO/S framework, ^{13}C NMR chem. shift 7−110158
polyoxymethylene ^{13}C NMR spectra, chemical shift, electronic structure, solid state, tight-binding calcs. conformation 7−143317
polyperylene and poly(p-phenylene), substituted polymers with metallic props., design 7−131522
polythiophene, doped, polarons and bipolarons 7−118383
polyyne infinite linear C chain, defect states, dynamics, photoexcitation and coherent anharmonicity 7−143448
quantised Hall effect and localised electron states on lattices, tight-binding model calcs. 7−84942
quantum interference localisation and metal-insulator transition 7−70194
quasi-periodic superlattice, electronic structure 7−137779
quasicrystals, one-dimensional, electron spectrum calcs. 7−105369
quaternary semicond. alloys, electronic struct., CPA calcs. 7−84672
random alloys, electron states, canonical description, appl. to Ag_xPf_{100-x} 7−70182
semiconductor electrode interfaces, chemical processes, charge transfer distrib. 7−137998
semiconductor heterojunction (110) interfaces, band discontinuities, tight-binding calc. 7−85095
semiconductors, bonding and ionicity 7−124162
semiconductors, deep level defects, optical cross sections, tight binding calcs. 7−99894
semiconductors, tetrahedral, force constant models, tight-binding theory 7−124370
sp-bonded solids, structural props., cryst. stability, semiempirical tight-binding method 7−124489
substitutional alloys, Altshuler-Aronov anomalies in density of states 7−137772
substrate with an impurity, change in density of states due to chemisorption 7−105652
superlattice semiconductors, tight binding band struct. calcs., inclusion of spin-orbit coupling 7−92050
symmetric barrier-well-barrier pot., resonant tunnelling, single-band tight-binding model calcs. 7−105666
through bond coupling, ligand length dependence, Schrodinger equation, electron transfer, tight binding approximation 7−141673
(TMTSF)$_2$ClO$_4$ Bechgaard salt, field-induced SDW Green's function calcs. 7−77312
(TMTSF)$_2$X salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677
(TMTTF)$_2$X salts, dimerisation, vibronic structures, optical gaps., IR props. 7−85677

tight-binding calculations continued
transition metal impurities in semicond., band lineups, Schottky barriers 7−118413
transition metal solid solns., electron sp. ht. and T_c comp. depend. calcs. *(Russian)* 7−131838
transition metal surface, H chemisorption, Anderson model 7−71527
Al (110), surface electronic struct., tight-binding anal. 7−118548
AlAs-GaAs thin layer superlattices, photorefl. and low temp. photolum. 7−70922
$Ba_2YCu_3O_{9-\delta}$, valence band photoelectron spectra studies 7−106367
C, density of states calcs., recursion method 7−143308
$CaAl_2Si_2$, band struct., 2D models 7−124857
$Cd_{1-x}Hg_xS$ surfaces, electronic struct., CPA calc. *(Chinese)* 7−112412
$Cd_{1-x}Mn_xTe$, Mn 3d states in photoelectron spectra, electronic struct., parametrised tight-binding model 7−92833
CdTe, electronic struct. of Cd vacancy 7−92117
CdTe-HgTe heterojunctions, valence band discontinuity, face orientation depend. 7−85072
CuZr, amorphous, electronic struct. and chemical short-range order 7−105378
Fe, paramagnetic, dilute impurities, surface segregation and electronic struct. 7−84301
Fe-Ge interface electronic struct. and mag. effects 7−118835
$FeNi_3$, spin-polarised bands via the recursion method 7−125302
$Ga_{1-x}Al_xAs$, band struct., semiempirical tight-binding calcs. 7−70190
GaAs, EL2 trap, double anion antisite, tight binding, superlattice calcs. 7−70233
GaAs transition metal substitutional ions, tight binding calcs. 7−98871
GaAs/(Al, Ga)As multiple quantum wells, photoreflectance 7−131751
GaAs-AlAs heterojunctions, valence band discontinuity, face orientation depend. 7−85072
GaAs-AlAs heterojunction valence-band discontinuities, tight-binding calcs. 7−125094
GaAs-AlAs superlattices, electronic structure, layer thickness effects 7−92261
GaAs-AlAs superlattices, electronic struct., folding effects 7−118571
GaAs-AlGaAs quantum well with compositionally graded interface, energy levels, envelope function approx. 7−92272
GaAs-Ge interface, electronic struct. tight binding calcs. 7−85073
$(GaAs)_n/(AlAs)_n$ superlattices, band structure, tight binding calc. 7−99181
$(GaAs)_{1-x}(Ge_2)_x$, metastable semicond., energy band struct. calc. *(Chinese)* 7−124847
Ge, density of states calcs., recursion method 7−143308
Ge, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
HF chains, transfer and Green matrix methods 7−81962
H_2O chains, transfer and Green matrix methods 7−81962
HgTe-CdTe heterojunction valence-band discontinuities, tight-binding calcs. 7−125094
InSb surfaces, (111) electronic struct., UV photo-emission spectroscopy study 7−138597
$La_{2-x}(Ba,Sr)_xCuO_4$, high T_c supercond., electron-phonon interaction 7−118700
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Sr) high T_c supercond., transport props. and Fermi surface 7−92337
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Ca, Sr) high T_c supercond., optical reflectivity spectra and band struct. 7−92631
$LaNi_5$ electronic struct., tight-binding recursion method calcs., DOS anal. and comparison with $LaNi_5H_7$ 7−84667
$LaNi_{5-x}Co_x$, enthalpies of formation and hydrogenation 7−100602
$LaNi_5H_7$ electronic struct., tight-binding recursion method calcs., DOS anal. and comparison with $LaNi_5$ 7−84667
Li chains, transfer and Green matrix methods 7−81962
LiBC, band struct., 2D models 7−124857
LiH chains, transfer and Green matrix methods 7−81962
$LuCo_2$, intermetallic compounds, metamagnetic transition 7−132022
Nb-Ta alloys, short range order and superconductivity 7−85166
$Nb_{1-x}M_xH_y$ (M=Y,Zr,Mo), impurity-H and H-H binding energies, tight-binding calcs. 7−84742
NbPS, superconducting, bonding, electronic struct., TBC 7−70187
Ni (001), chemisorbed O_2, interaction energy 7−70068
Ni complexes, superconducting, molecular designing analysis 7−84638
Ni-transition metal alloys, solid-soln. hardening, extra contrib. of transition-metal solutes 7−71202
NiH_x electronic struct., ab initio band struct. calcs., generalised Slater-Koster fit 7−84655
NiH_x, H diffusion mechanism 7−84374
NiZr, amorphous, electronic struct. and chemical short-range order 7−105378
P, black, lattice dynamics, electron-lattice interaction 7−124418
Pd-Ag disordered alloys, electronic states, tight-binding CPA calcs. 7−124844
Pd-Au disordered alloys, electronic states, tight-binding CPA calcs. 7−124844
Pd-Cu disordered alloys, electronic states, tight-binding CPA calcs. 7−124844
PdH_x, H diffusion mechanism 7−84374
$ScCo_2$, intermetallic compounds, metamagnetic transition 7−132022
Si (001), vibr. excitations, surface reconstruction 7−84476
Si (111), dimer-adatom-stacking fault model, calcs. 7−143156
Si (111), electronic props., influence of disorder 7−92247
Si clusters, charge transfer in secondary ion emission, tight binding model 7−113336
Si, dangling bonds coupling 7−70246
a-Si, density of states calcs., CPA 7−84622
Si, density of states calcs., recursion method 7−143308
Si divacancy electronic struct., tight binding study 7−98872
Si, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
Si small semicond. clusters, struct. and bonding, tight-binding-density functional theory calcs. 7−124833
Si, structural stability in tight binding models 7−91520
Si, tilt grain boundaries, symm. ⟨001⟩ type, structures and energies calcs. 7−111582
Si transition metal substitutional ions, tight binding calcs. 7−98871
a-Si:As (P), donor states, local disorder effects 7−124929
Si:H, bonding or antibonding position of H, covalent two-electron bond theory 7−117858
a-Si:H, electronic struct., tight binding calcs. 7−84624
Si:O, H, B, substitutional off-centre and small aggregate defects, electronic struct. 7−98870

tight-binding calculations continued
Si:O (100), secondary ion emission, dynamical charge transfer processes 7−125902
Si:O clusters, charge transfer in secondary ion emission, tight binding model 7−113336
Si:S,Se,Te, electronic struct. of mixed chalcogenide pairs *(Chinese)* 7−118401
Si-Ge ultrathin strained superlattices, new optical transitions, tight-binding calcs. 7−143592
SiC band struct. and native defect electronic props., tight binding and recursion method calcs. 7−124855
SiC, native defects, electronic struct. calcs., cluster recursion method 7−98920
SiO_2, neutral O-vacancy centre. π-bonded model, tight-binding total energy calcs. 7−92107
α-Sn, density of states calcs., recursion method 7−143308
Sn, electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
$SnBi_2Te_4$, Sn and Bi atom distrib., Mossbauer studies 7−124232
TiC, surface deactivation upon carburisation 7−144749
$Ti_{1-y}Nb_yH_x$, substitutionally disordered, electronic struct., tight-binding CPA calcs. 7−84668
TiO_2, polymorphs, struct.-electronic rels., powder neutron diffraction obs. 7−131105
$TiSe_2$ (1T), electronic struct., effect of Frenkel defects 7−70165
$Ti_{1-y}V_yH_x$, substitutionally disordered, electronic struct., tight-binding CPA calcs. 7−84668
V-Nb alloys, short range order and superconductivity 7−85166
V-Ta alloys, short range order and superconductivity 7−85166
$V_{1-x}M_xH_y$ (M=Sc,Ti,Cr,Mn), impurity-H and H-H binding energies, tight-binding calcs. 7−84742
W (001), rare earth metal adsorpt., recursion method calcs. 7−118232
W (001), surface electronic structure, attractive interaction between atoms 7−92245
W (001), surface phonon instabilities and electronic surface states 7−84478
WC, surface deactivation upon carburisation 7−144749
Y-Ba-Cu-O high T_c supercond., band struct., rough tight-binding anal. *(French)* 7−124848
ZnSe/Al/Ge heterojunction with monolayer intralayer, tight-binding calcs. 7−99203
$Zr_{70}Cu_{30}$, amorphous, struct. relax., effect on electronic props. 7−83693
ZrM (M=Ni,Mo,W) amorphous alloys, supercond. and struct. props. 7−85176

tilt (Earth) *see geodesy*

tilt boundaries
bicrystals, grain boundary atomic struct., electron microscopy obs. 7−124287
strain energy, difference between misorientation dependences of tilt and twist boundaries 7−98176
Au, hierarchical grain-boundary dislocation structs., TEM obs. 7−137369
Au thin film, low-angle and twin boundaries, HREM obs. 7−98177
Cu/Ni system, low energy grain boundaries, determ. by rotating-sphere-on-plate method 7−142789
FeSi bicrystals, intergranular SCC, nucleation and growth rel. to slip 7−138907
GaAs bicrystal, low-angle and twin boundaries, HREM obs. 7−98177
$Nb_2C_{0.74}$, hot isostatically pressed, kinetics and mechanisms of creep 7−71263
Ni-S system, intergranular segregation, grain boundary plane 7−83975
Ni-W-Cr, single cryst., high temp. creep, γ' phase subgrain boundaries, TEM 7−78139
NiO bicrystals, tilt grain boundaries, atomic resolution electron microscopy studies 7−98178
NiO, tilt grain boundaries, atomic resolution studies 7−69716
Si, tilt grain boundaries, symm. ⟨001⟩ type, structures and energies calcs. 7−111582
Sn, tilt boundaries surface tension near the special-general boundary phase transition 7−83970
Sn, tilt boundary migration in vicinity of grain boundary phase transition *(Russian)* 7−111960
Zn bicrystals, grain boundary glide and intragrain slip *(Russian)* 7−76135

tilting control *see attitude control*

timber *see wood*

time and latitude
see also time measurement
astrolabe determ. of station longitude difference, star catalogue error effects reduction *(Chinese)* 7−120251
CERGA photoelectric astrolabe time and latitude results (1983 March 1 to 1984 December 31) *(French)* 7−88080
coordinated Universal Time *(Japanese)* 7−108507
Earth rotation, pole position and day-length variations 7−133552
FK4 right ascension corrections, Borowiec and Bratislava catalogues 7−79851
Global Positioning System use for international time comparisons, error analysis *(Japanese)* 7−79186
Conventional Inertial Reference System, based on VLBI and Schmidt camera methods 7−139435
latitude determination from Sun's position, BASIC computer program 7−94497
Pecny Geodetic Observatory circumzenithal meas. (1970-83) 7−79813
short-period vars. of pole coordinates, calc. using Maximum Entropy Spectral Anal. and Ormsby filter 7−139429
time observations with Photoelectric Transit Instrument at Torino Observatory, (1980.3 to 1985.3) 7−119922
Tokyo Astronomical Obs., Time and Latitude Bulletins (October-December 1986) 7−94637
Torino Observatory, Time obs. rel. to Right Ascension corrections for 120 stars 7−145804
Universal Time definition for non-rotating origin on instantaneous equator 7−115209

time delay circuits *see delay circuits*

time delays *see delays*

time division multiplexing
fibre-optic sensors, interferometric arrays, appl. of TDM, anal. 7−123242
nearly geostationary satellites, diurnal error bound in predicted ranges 7−79802
SQUID magnetometer, RF, for biomag. field detection, digital control unit 7−79122

time-domain analysis
colour flow mapping, vel. estimator *(Japanese)* 7−126966
EM field 2D absorption problem for biological bodies, comparison of numerical techniques 7−87088
fibre optic sensing systems, intensity modulation, time domain referencing 7−123261
lightning 3-D time domain modelling 7−127337
monolithic US phased array, US transmission, time domain modelling 7−123387
time-domain quantitative anal. 7−93995
weakly dispersive spectral theory of transients 7−82433
wind speed time component analysis procedures 7−78598

time-domain reflectometry
coherent OTDR instrument development for fault location in fibres 7−97154
Debye dielectric, computer-based permitt. meas. and microwave power absorpt. anal. 7−80811
distributed fibre optic temp. sensor using Raman anti-Stokes OTDR and single photon counting detect. 7−90797
fibre, single-mode, optical time domain reflectometry signatures interpret. 7−123263
integrated optic components, alignment and evaluation using OTDR 7−136612
optical, 1.5 μm range, using laser diode and cooled InGaAs-InP APD 7−108631
optical fault location system based on interferometry for optical waveguide devices 7−104000
optical fibre testers review 7−123268
optical on/off signals detection by time-domain reflectometry *(French)* 7−128632
optical reflectometry data review 7−108632
optical time domain reflectometry in 1.5 μm range using LD and APD *(Japanese)* 7−140731
OTDR, explanation of working principles 7−73404
OTDRs coherent, backscatter statistics and range performance 7−121201
single-mode fibres, dispersion-optimised, highly accurate charactn. 7−90810
tissue characterization with microscopic resolution *(Japanese)* 7−126978

time interval measurement *see time measurement*

time invariance *see T invariance*

time lag *see delays*

time measurement
see also clocks; frequency measurement; streak photography; time and latitude; time resolved spectroscopy
acoustic well logging, time interval meas. apparatus *(Russian)* 7−79642
atomic clocks for measurement of time and of frequency *(French)* 7−73313
comparisons via Global Positioning System, error anal. *(Japanese)* 7−79186
conference, La Chaux-de-Fonds, Switzerland (Oct. 1986) 7−72729
cyclopropylmethyl free radical clock, calibration, 30-89°C 7−71471
dielectric track detectors, heavy nuclei registration time determ. 7−81878
dispersion distortion removal from pulsar radio signals 7−88124
exponential processes, time constant meas. *(Russian)* 7−121075
femtosecond light pulses *(Dutch)* 7−90569
four-channel time-interval meter with picosecond resolution 7−128539
geophysical surveys based on time and frequency service means 7−145689
inertial clock for precision measurements 7−80750
interval meas. by difference-period quantisation, instrumentation errors 7−102390
laser range finding, time-of-flight meas. method 7−80736
LASSO experiment on Meteosat P2 for clocks intercontinental synchronisation 7−79803
millisecond interval timer and auditory reaction time programs for the IBM PC 7−78866
pendulums, underdamped motion study using videotaping 7−108088
portable standards, time standards accuracy, unit definitions 7−73311
quartz clock for geophysical investigations 7−145702
sound's speed measurement using computers in school context 7−89202
speech robustness against noise, timing-synchrony meas. 7−114296
standards, efficiency determ. of meas. information processing algorithms 7−140673
standards, time-scale service in the vicinity of the Earth 7−102389
time lag, experimental errors, estimation 7−95551
transient response settling time meas., dynamic characts. meas. of DAS channel 7−140653
variable star observations timing, adoption of solar system barycentre as reference point 7−88123

time of flight mass spectra
acetone, fragmentation by excitation in O K edge region 7−82298
actinides, trace amounts detection, reson. multiphoton ionisation and TOFMS anal. 7−90066
allyl radicals, gas phase, vibronic spectrum, multiphoton ionis. 7−135909
aniline, UV laser-induced surface ionis., TOF mass spectra 7−92786
benzene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
benzene-methane(-methane-d_4)(carbon tetrachloride), clusters, van der Waals modes 7−103472
biomolecular ions, fast ion induced desorption, sample thickness effect 7−124348
biomolecules, pulsed laser desorpt., reson. two-photon ionis. detect. 7−117028
biomolecules, reson. 2-photon ionis. using laser desorpt., mass spectrometry 7−106970
chemical analysis, reson. ionisation spectroscopy, medical and biological appls. 7−94042
cluster beams, generation and detect., time-of-flight mass spectra 7−96905
diethylbenzenes, supersonic mol. jet spectroscopy 7−141592
N,N-dimethyl-acetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7−90294
ethylbenzene, supersonic mol. jet spectroscopy 7−141592
ethylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
ethyltoluenes, supersonic mol. jet spectroscopy 7−141592
historical overview of time of flight mass spectrometry 7−115720
ion formation in spontaneous desorption TOF mass spectra 7−106319
ion-surface impact, desorbed material, multiphoton reson. ionisation-TOF mass spectra anal. 7−92820

time of flight mass spectra continued
isoquinoline van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
ISOTRACE high resolution accelerator based mass spectroscopy 7−121282
laterally and longitudinally dispersive recoil mass separators 7−121271
liquid SIMS, molecular ion intensities as function of primary ion pulse freq. 7−121289
N-methylacetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7−90294
methylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
molecules, large involatile, reson. ionisation, TOF mass spectrometry anal. 7−90293
multilayer films and monolayers, fast heavy ion-induced biomolecule desorption 7−86902
Munich high-frequency recoil spectrometer 7−121276
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
organic ion detection by secondary electron prod. 7−106318
photofragment dynamics, product correls 7−122631
plasma desorption mass spectrometry, secondary ion beam transport props. 7−80928
PMMA, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
polyatomic molecules, surface-induced dissoc., TOF mass spectra 7−126430
polystyrene, laser ablation, ps UV laser ionisation TOF mass spectra study 7−71503
n-propylbenzene, torsional motion, conform. anal., TOF mass and dispersed emission spectra 7−109859
propyltoluenes, supersonic jet, dispersed emission and TOFMS 7−129771
pyridazine van der Waals clusters, chromophore electronic struct., TOF mass spectra 7−103705
quantitative microanalysis by time-of-flight laser probe mass spectrometry 7−100666
secondary neutral mass spectroscopy, laser based, yield, sensitivity 7−121290
short-lived isotopes, on-line reson. ionisation mass spectra anal. 7−90072
spectrometer systems, development 7−116016
surface vibrational studies, He time of flight spectrometry 7−142927
TOFI spectrometer, exotic light nuclei direct mass meas. 7−121274
TOFI spectrometer reaction-product transport line 7−121273
toluene, supersonic jet, dispersed emission and TOFMS 7−129770
trace element anal., laser reson. ionisation spectrometer 7−93457
transition metal clusters, photoionisation threshold, H_2 chemisorpt. effect 7−96900
trifluoroethylene, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
velocity compaction ion focusing for time of flight mass spectrometers 7−116017
vinylchloride, multiphoton ionisation-fragmentation pattern, TOFMS 7−122625
Wiley-McLaren time of flight analysers, modification for laser desorption 7−116020
xylenes, supersonic jet, dispersed emission and TOFMS 7−129770
Ar^{13+}+simple molecules, impact ionisation and fragmentation, TOF mass spectra 7−122679
Ar^{q+}+H, electron capture, translational energy spectra anal. 7−90393
Ba^+, ion Rydberg states, laser-microwave ionisation mass spectroscopy 7−68235
Bi/Sb free intermetallic compound clusters, stability 7−110174
C_n^+ cluster, photodissoc., fluence depend. meas. 7−90297
CO, core electron excitations, VUV photoelectron and TOF mass spectra 7−122614
^{252}Cf plasma desorption time of flight mass spectrometer for high mass studies 7−116018
F+Br_2, reactive scatt. complex, time-of-flight mass spectra study 7−100541
F+Cl_2, reactive scatt. complex, time-of-flight mass spectra study 7−100540
Fe-Al, B2→DO_3 ordering, atom probe FIM, TEM obs. 7−138741
Kr atom counting, reson. ionisation-TOF mass spectra anal. 7−93453
Mg, $^1P_1$ resonances photoionisation cross sections 7−135896
Mo, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
N_2, multielectron dissociative ionis., femtosecond dynamics 7−110027
Nb, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
Nb_x (x=1-15) clusters, reactivity with benzene, photoionis. TOF mass spectra detect. 7−132971
Pb/Sb free intermetallic compound clusters, stability 7−110174
Si:Fe, surface analysis, reson. ionisation of sputtered atoms, TOF mass spectrometry 7−89298
Tc, trace amounts detection, reson. multiphoton ionisation and TOFMS anal. 7−90066
Xe, trace amounts detect., reson. ionisation-TOF mass spectra anal. 7−93452
Zr, first ionis. pots., reson. ionis. TOF mass spectra 7−90080

time of flight spectra
see also atom probe field ion microscopy; time of flight mass spectra
adsorbed on Fe (100), surface struct. anal. by low energy ion scatt. 7−91951
aniline, multiphoton dissociation, reaction rate const., TOF spectra 7−139032
ASDEX, low energy neutral particle fluxes, TOF method 7−69412
fusion neutron sources at POSEIDON plasma focus, time resolved neutron spectra 7−97804
iodoethane, photofragmentation dynamics spectroscopy 7−68418
ion counting technique for studying multiphoton ionization processes of mols. 7−90304
metals, dissimilar, positronium time of flight spectroscopy 7−99986
metastable atom reactions, product rotational alignment 7−141489
methyl nitrite, mol. beam photodissoc., translational spectra 7−74721
methyl nitrite photodissoc. in second UV absorpt. band, photofragment TOF spectra 7−116984
molecular beam, time-of-flight signal meas., photoelectronic method 7−74785
neutron energy spectra, meas. in plasma focus, time resolution 7−69469
photofragment dynamics, product correls 7−122631

time of flight spectra continued
plasma diagnostics, neutral atom time of flight anal. 7−123974
polycarbonate: TDP, single-trap-controlled transient hopping, time-of-flight meas. 7−118486
i-propyl iodide, photofragmentation dynamics 7−122646
recoiled particles, time of flight spectra 7−70956
reconstructed (111) surface, inelastic scatt. of He atoms 7−85935
steel, stainless, type 316, NDT performance of defective butt welds 7−126392
tetramethyltin, photodissoc. at 193 nm 7−110049
time-of-flight ion charge state diagnostic 7−141385
trifluoroiodoethane, photofragmentation dynamics spectroscopy 7−68418
$AlPO_4$, calcined powder, time of flight neutron powder diffr. study 7−137330
$Ba_2YCu_3O_{7-x}$ high T_c supercond., cryst. struct., X-ray and TOF neutron diffr., Rietveld anal. *(Japanese)* 7−142734
CN^- form. by dissoc. electron attachment of C_2N_2 7−90435
CO adsorption/desorption on Pt (111), molecular beam study using pulse shape anal. 7−84520
Cu surface, initial adsorption kinetics of O 7−131439
D+M_2, mol. beam reactions, absolute scatt. cross sections 7−132914
Ge, clusters, supersonic beam, TOF UPS 7−117109
H, electron impact ionis. cross sections meas. 7−136066
H photofragments, from H_2O photodissoc., time-of-flight spectra 7−122635
H^++$CO_2(N_2O)$, inelastic and charge transfer collisions, vibr. excitation, mode conservation 7−129847
H^++Na, electron capture cross sections, initial state pop., TOFS anal. 7−90402
He+H_2^+, cross sections, vibr. state depend., threshold photoelectron/photoion coincidence study 7−100514
InGaAs-InP heterostruct., carrier diffusion and trapping, optical time-of-flight meas. 7−138482
$La_3Ba_3Cu_6O_{14+x}$, nonsuperconducting, struct. determ., relation to high T_c supercond. $YBa_2Cu_3O_{7-\delta}$ 7−111503
N^{7+}+H_2, electron capture, differential cross sections, TOFS anal. 7−90396
N^{7+}+He(Ar)(Xe), electron capture, differential cross sections, TOFS anal. 7−90396
NaF (001) surface phonon mode folding, He atom inelastic scatt. TOF meas. 7−91957
$NbH_{0.31}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
Ne^{q+}+Ne, charge transfer, coincidence TOFS anal. 7−90400
Ne^*+H_2, thermal energy collisions, crossed beam investig. 7−129860
O^{8+}+He, electron capture, differential cross sections, TOFS anal. 7−90396
O_2, position energy loss spectra meas. using TOF method 7−82378
a-$Se_{1-x}Te_x$-Se double layer xerographic photoreceptors, carrier drift mobility 7−105572
Si, clusters, supersonic beam, TOF UPS 7−117109
Si etching reaction with XeF_2, SiF_4 desorpt., TOF spectra 7−137696
Si, free exciton transport properties, time-of-flight investig. 7−85819
$TaH_{0.1}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
TiH_2, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
UMn_2, cubic-orthorhombic transformation, rhombohedral precursor 7−98431
$VH_{0.33}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
Xe, above threshold ionisation, photoelectron ang. distrib. 7−103450
Xe^+, ion cloud stored in RF trap, time-of-flight investig. 7−122737

time of flight spectrometers
air-core superconducting solenoid as nuclear-reaction-product spectrometer, tests 7−141389
beam compression and beam multiplexing in a time-of-flight mass spectrometer 7−95673
cold-neutron selector 7−128709
DUBNA double-arm time-of-flight spectrometer for heavy-ion reaction products 7−109594
elastic recoil spectrometry, quantitative, mass and energy dispersive, resolution, review 7−116024
heavy ion mag. spectrometer 7−135730
highly stable fast-neutron time-of-flight spectrometer 7−81845
low-energy neutral particle analyser for plasma expts. 7−80926
mass spectrometer, ion optics 7−128705
microcomputer interface board for time-resolved multichannel scaling 7−129902
molecular beam diagnostics, using CAMAC time-of-flight analyser 7−103689
NE912 ^6Li glass spectrometer for low energy fission neutrons 7−81848
neutron time of flight high resolution meas. with CYRIC 7−109593
quantitative microanalysis by time-of-flight laser probe mass spectrometry 7−100666
scintillation TOF counters for VENUS detector 7−109601
three-dimensional sinograms of time-of-flight positron emission tomograph, construction function 7−145237
TOFI, isochronous TOF mass spectrometer 7−128706
trace element anal., laser reson. ionisation spectrometer 7−93457
He atom detector for surface phonon meas. 7−105231
Sb cluster produced by inert-gas aggregation, size distrib. determ. 7−108694
Si:Fe, surface analysis, reson. ionisation of sputtered atoms, TOF mass spectrometry 7−89298

time projection chamber *see position sensitive particle detectors; proportional counters*

time resolved spectra
alcohols, liquid, dielectric relaxation, time domain spectroscopy *(Japanese)* 7−113071
1-aminoalkyl-2-naphthols, excited state H^+ transfer, fluoresc. study 7−90256
aniline radical cation, vibr., time resolved reson. Raman spectra 7−90139
anilino radical, vibr., time resolved reson. Raman spectra 7−90139
anthracene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
anthracene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
anthraquinone, laser photolysis, photoreduction, time-resolved spectra, charge transfer, polarisation, hydrogen transfer, solvents 7−141608
time resolved spectra continued
anthraquinone derivatives, photochem., time-resolved reson. Raman spectrosc. obs. 7−68311
4-(9-anthryl)-N,N-dimethylaniline, time residual spectra, solvent dependence, charge transfer, reorientation, relaxation, laser spectroscopy 7−141480
aromatics in solution, microscopic solvation dynamics, time-resolved spectroscopic meas. 7−93288
atomic neutral fragments, cooperative fluoresc. theory 7−116904
azanaphthalenes, triplet state reson. Raman spectroscopy 7−82132
azoalkane, gas-phase, sequential bond cleavage, time-resolved CARS obs. 7−68309
bacteriorhodopsin, kinetic studies, reson. Raman spectra 7−78777
benzene (-d_6), time-resolved stimulated Raman scattering in a diamond anvil cell 7−68310
9,9′-bianthyl, alcohol soln., picosec. excited state solvation dynamics 7−119516
biomolecule reorientational motion determ. by fluoresc. anisotropy decay, interpret. complexities 7−114166
3-carboxyethyl-7-ethylthioxanthone, energy and electron transfer, time resolved UV spectra 7−82206
β-carotene isomers, excited triplet-state, transient reson. Raman spectra 7−90161
chlorobenzene ion, time-resolved photodissoc. 7−96804
chloroplasts, lettuce, photosynthesis, time-resolved fluoresc. obs. 7−71680
complex molecules in liquids, fluoresc. decay and orientational relaxation, simultaneous determ. 7−110140
γ-cyclodextrin, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
cyclohexane, liq., pulse radiolysis, radical form., time-resolved EPR meas. 7−113968
delayed-choice experiments in quantum interference 7−141823
deoxy-2-aminopurine, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
4,4′− diaminophenyl sulphone, intramol. charge transfer state, time-resolved fluoresc. spectra 7−129783
1,4-diazabicylo[2.2.2]octane, vap., internal conversion rates meas., subpicosecond IR transient absorpt. spectra 7−135934
3,3′- diethyl-6,6′-diphenyl-9-enthyloxacarbocyanine iodine, time-resolved fluoresc. spectra, solvent depend. 7−82252
difluoromethylene+$Br_2(Cl_2)(H_2)$, reaction rate consts., IR diode laser spectroscopy 7−78466
2,5-dimethyl hexatriene, lowest excited triplet states struct., time resolved reson. Raman spectra 7−90162
2,5-dimethyl-1,3,5-hexatriene, isomers, UV absorpt. and Raman spectra 7−74624
4-2′-(dimethylamino)-6′-naphthoylcyclohexanecarboxylic acid, dynamic fluoresc. study 7−117009
α-(4-dimethylaminophenyl)-ω-(9-phenanthryl) alkanes, exciplex fluoresc., mag. field effects 7−90245
4-(2′,4′-dinitrobenzyl)pyridine, time resolved resonance Raman studies 7−85637
dinitrotoluenes, solns., picosec. transient absorpt. 7−68331
dipalmitoylphosphatidylcholine, in fused salt, phase transitions, X-ray diffraction, subcell arrangement 7−142973
disordered system, density expansion, steady state four-wave mixing spectrum 7−136091
durene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
dye molecules, adsorbed on vesicle surface, excitation energy transfer 7−118242
dye solution, fluoresc. profiles calc. 7−90253
electron-hole plasma, second condensed phase 7−112384
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342
fusion neutron sources at POSEIDON plasma focus, time resolved neutron spectra 7−97804
glass ceramics:Cr, time resolved spectroscopy, emission lifetimes 7−99881
2,3,6,7,10,11-hexa-n-hexyloxytriphenylene, thermotropic columnar phases, time resolved luminesc. 7−99897
hexatriene,, lowest excited triplet states struct., time resolved reson. Raman spectra 7−90162
1,3,5-hexatriene, isomers, excited triplet states, time-resolved reson. Raman spectra 7−74596
high-mass ion fragmentation, time- and mass-resolved 7−134871
hopping disordered systems with electrical bias, photoluminescence 7−85800
horseradish peroxidase intermediates, time-resolved Raman spectra 7−78763
2-hydroxy-4,5-benzotropone, in inert gas matrices and ethanol solns., H^+ transfer 7−71478
3-hydroxyflavone, intramol. excited state proton transfer, picosecond transient absorpt. study 7−74655
2-(2′-hydroxyphenyl)benzothiazole, nitro-derivatives, photophys., photochem., solvent effects 7−117012
hydroxypropyl cellulose, pyrene labelled, aq. soln. excimer form. 7−136110
indole, fluoresc. quenching, transient effects, freq. domain fluorometric meas. 7−109992
indolinospironaphthoxazine derivatives, photochromic effect, time-resolved spectra 7−129784
intramolecular mixed excimer form., time depend. fluoresc., kinetic and thermodynamic studies 7−122601
laser plasmas, X-ray emission spectra study 7−103424
light scattering, time-resolved spectra, non-Markovian effect 7−119025
liquids, rotational dynamics, time-resolved CARS obs. 7−122543
metal carbonyls, coordinatively unsaturated, gas phase transient IR spectrosc. 7−129707
methane, liq. and gas, time-resolved coherent Raman spectra 7−90166
methyl radical+alkanes, high temp. reactions, H abstraction 7−126417
2-methyl-l-(4-methylthiophenyl)-2-morpholinopropan-l-one, energy and electron transfer, time resolved UV spectra 7−82206
9−methyladenine, aq. soln., excimers, time-resolved fluoresc. 7−129765
N-(methylpyrolidinone)$_2H^+PW_{12}O_{40}^{3-}$, photochem., picosec. spectrosc. 7−126461
methylviologen, solvent cage escape yields following electron transfer quenching 7−82076
micelles, dipole-dipole energy transfer, time resolved spectra, probe induced perturbations, solubilization sites 7−142550
molecular vibr., impulsive stimulated scatt., time-resolved study 7−103509

time resolved spectra continued
naphthalene, mol. cryst., phonon dynamics, time-resolved coherent Raman scatt. 7−85723
nematic liquid crystal, time resolved fluorescence depolarisation 7−124093
neutron energy spectra, meas. in plasma focus, time resolution 7−69469
nitrobenzene, single and collective particle correlation kinetics, time resolved picosec. phase conjugation 7−110478
oil-in-water microemulsions, aerosol OT stabilised, time-resolved fluoresc. 7−100623
oxazine 17, fluoresc. in H^+ donor and aprotic solvents, steady-state and picosec. excitation 7−117017
phenylbenzothiazole derivatives, photophysics, photochem., solvent effects 7−116943
photofragments, nanosec. time-resolved CARS spectrosc. 7−82155
pinacyanol, photoisomerisation, time-resolved reson. CARS 7−129719
plasma, laser, $/2\omega_0/$ harmonic emission, time resolved spectra anal. 7−97750
plasma, laser, $/2\omega_0/$ harmonic emission struct., bandwidth effects, soliton generation theory 7−97749
PLT tokamak plasma, impurities, time-resolved X-ray spectra 7−97790
PMMA, intramol. charge transfer fluoresc. as mobility probe 7−90263
polar mol., solvation dynamics, fluoresc. line shapes probe 7−82251
polar molecules, solvation dynamics and vibr. relax., hole-burning spectroscopy 7−82326
trans-polyacetylene, nanosecond time-resolved photoinduced absorption 7−77545
polyacetylene, picosec. Raman transients obs. 7−85735
polydiacetylene-pTS relaxation dynamics, transient gratings, singlet and triplet excitons 7−135958
polymethine dyes, S_1-state deactivation, time resolved fluoresc. and absorpt. investig. 7−103572
polymethine dyes, struct. parameters, fluoresc. lifetimes and quantum yields 7−90266
porphycene, photoexcited triplet state, time-resolved EPR spectroscopy 7−103548
PRODAN, intramolecular reaction, time resolved spectroscopy 7−122594
pyrene, excimer form. in crown ether surfactant micelles 7−109816
pyrene cryst., transient free-exciton luminesce. and exciton-lattice interaction 7−92719
pyrene-pyromellitic anhydride solns., charge recomb. dynamics, picosec laser spectrosc. obs. 7−68291
ω-(1-pyrenyl)-α-N,N-dimethylaminoalkanes, intramol. exciplex form. photophys. 7−74480
radical pairs, spin-correlated, photosynthetic reactions, EPR study 7−133220
reaction products, nanosec. time-resolved CARS spectrosc. 7−82155
all-trans and 9-cis-retinal, triplet state, configuration relax., picosecond time-resolved absorpt. spectra 7−74650
rhodamine 6G, ethanol solution, dynamic Stokes shift, fluoresc. spectrum, stochastic behaviour 7−82249
rotating molecules, time resolved CARS and CSRS, response function theory 7−90137
salicylideneaniline, nitro-derivatives, photophys., photochem., solvent effects 7−117012
salicylideneaniline, photophysics, photochem., solvent effects 7−116943
semiconductors, coherent excitations, time-resolved CARS meas. 7−85683
sodium dodecyl sulphate micelle, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
sodium salicylate, luminesc., VUV, X-ray and β particle excited, time depend. 7−113262
steel, laser-induced breakdown spectroscopy analysis 7−114045
t-stilbene, intramol. vibr. redistrib., time-resolved fluoresc. spectra, photochem. timing meas. 7−117055
t-stilbene, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82260
symmetric top mol., Coriolis coupling effect on time-resolved two-photon ionisation 7−141632
synthetic polymers in soln. excimer form., time-resolved fluoresc. 7−90455
tetracyanobenzene-methylated benzene exciplexes, time-resolved mol. luminesc. 7−109975
tetranitromethane, electronically excited, transient species and product form. 7−68234
tetraphenylporphyrin-polypeptide complexes, model photosynthetic system, fluoresc. props. 7−129766
Ti^{20+} X-ray spectra, appl. in JIPP-T-II-U Tokamak diagnostics 7−123987
time-resolved ionisation detected stimulated Raman scatt. mechanism 7−90164
trihydroxybenzenes, aq., pulse radiolytic oxidation, time-resolved reson. Raman spectra 7−90165
2,4,6-triisopropylbenzophenones, lowest triplet states, rot. relax., picosecond laser spectroscopy investig. 7−129690
tropone, decarbonylation, time depend. mass spectra, breakdown graphs 7−93273
tryptophan residue, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
vibrating crystals and vibrating mols., ultrafast time-resolved spectroscopy of struct. phase transitions 7−110469
vibrational dephasing time meas., CSRS with incoherent light 7−90170
$Al_2O_3:Cr^{3+}$, time-resolved excited-state electronic Raman spectrum 7−85615
Ar, excited state collisional quenching, pulse radiolysis 7−68403
Ar-F_2 mixtures, electron beam irrad., electron density, time-resolved interferometry 7−103656
Ar_2, excimer, excited state collisional quenching, pulse radiolysis 7−68403
Be-Cu alloy, time resolved laser-induced breakdown spectrometry analysis 7−114046
Br_2 matrix isolated, time resolved fluoresc. spectra 7−82245
CH, $A^2\Delta$ state, collisionally induced rot. energy transfer 7−96829
CO oxidation, on pt, molecular beam/infrared emission spectroscopy 7−144759
CO_2, solid, Fermi diad, time-resolved CARS studies *(Japanese)* 7−132289
CS photofragment IR laser kinetic spectra 7−93343
$CdGaInS_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$Cd_{1-x}Mn_xSe(Te)$, magnetic polaron form. dynamics, picosec. photolum, study 7−99433
$Cd_{1-x}Mn_xTe$, semimagnetic semiconductor, transient luminescence, automatic picosecond single-photon-counting spectroscopy *(Japanese)* 7−108670
time resolved spectra continued
CdSe, exciton-biexciton transition, optical nonlinearity and phase coherence 7−136395
Cl, diffusion coeffs. in inert mols., time-decay chemiluminesc. 7−97681
CrO_4^{2-} in H_2O, time resolved quenched phosphoresc. detection using paired-ion reversed phase liq. chromatography 7−119696
Cs_2, optically excited levels, mag. field effects, reson. fluoresc. study 7−129772
CsBr cryst., electron irrad., F-centre and self-localised excitation form. 7−98147
Cu porphyrin-free base porphyrin dimer, triplet-triplet energy transfer 7−135864
D_2 plasma focus, neutron energy spectrum, time resolved meas. 7−69470
Eu I, radiative lifetimes, time resolved fluoresc. decay 7−103430
$Fe(CO)_2(ethylene)_3$, dissociative substitution, transient IR spectrosc. 7−90113
$Ga_{1-x}Al_xAs$ and $Ga_{1-x}In_xAs$, Frohlich interaction, picosecond Raman studies 7−104940
$Ga_{1-x}Al_xAs$, carrier relaxation processes, sub-picosecond Raman spectra 7−132281
GaAs, carrier relaxation, subpicosec. Raman spectrosc. 7−85682
GaAs, carrier relaxation processes, sub-picosecond Raman spectra 7−132281
GaAs crystal, nonlinear absorpt. and optical activity, picosec. polarisation spectroscopy study 7−97071
GaAs, hot carrier energy relaxation, photoluminescence study 7−125005
GaAs, hot carriers, femtosecond collision times, picosecond time-resolved light scatt. 7−113199
GaAs, hot electron-hole plasma cooling, carrier lifetime influence 7−99107
GaAs, ion bombarded, struct. changes and defects 7−137426
GaAs, nonequilibrium carriers and phonons, time-resolved Raman spectrosc. 7−85685
GaAs quantum wells, below-gap photoexcitation dynamics 7−92286
GaAs/AlGaAs MQW structs., photolum. and energy loss rates under high density excitation 7−144103
GaAs-GaAlAs MQW struct., 2D e-h plasma dynamics, time-resolved Raman scatt. meas. 7−125107
GaInAs/AlInAs multiple quantum wells, carrier cooling, photoluminescence obs. 7−138030
$Ga_{0.47}In_{0.53}As/Al_{0.48}In_{0.52}As$ MQW struct., e-h plasma cooling, time-resolved photolum. meas. 7−125095
GaSb-AlSb multi quantum well structures, direct-indirect cross-over, time resolved spectroscopy 7−85074
GaSe, dynamics of excitons localised by stacking disorder, photoluminescence study 7−70202
GaSe, exciton-exciton scatt., picosec.-laser-excited photolum. studies 7−124873
$GeSe_2$, amorphous, laser-induced crystallisation and medium range order 7−83698
$a\text{-}Ge_xSe_{1-x}$ system, photoluminescence transients 7−85802
GeTe, amorphous, laser-induced crystallisation, time-resolved study 7−137259
H, excitation-ionisation spectra, Balmer spectrum, EBK-method, quasi-Landau resonances 7−135866
H_2, rovib. population in H^- ion source, CARS time-resolved meas. 7−82161
H_2O, liq., OH stretch vibr., computer mol. dynamics study 7−92679
$He+H_2^+$, cross sections, vibr. state depend., threshold photoelectron/photoion coincidence study 7−100514
ICN, A state, I* quantum yields, laser gain-vs.-absorpt. spectra 7−93342
ICl, laser photolysis, 530 nm, time-resolved LMR obs. 7−122576
InGaAsP films, dense e-h plasma, time-resolved photolum. studies 7−70896
InP, photoexcited phonon-plasmon modes, time resolved Raman scatt. spectra 7−70779
InSb, photoexcited, spin depend. props., far-IR magneto-optical studies 7−113160
$K+N_2O$, absolute rate const., time-resolved atomic reson. absorpt. spectroscopy 7−100561
KCl F centre resonant secondary emission polarisation correl., picosec. time-resolved spectra 7−106244
$KNdP_4O_{12}:Pr^{3+}$, inhomogeneous broadening and energy transfer 7−106242
$N+He(Ne)(Ar)(Kr)(Xe)(N_2)$, $3p^4D^0$ state, radiative lifetime and quenching 7−90327
N_2+K+O_2, third-order rate const., temp. depend., time-resolved atomic reson. absorpt. spectroscopy 7−100644
N_2^++He, rot. and vibr. relax. rate consts. determ. 7−82323
NCl_3, photolysis, spectra, time profiles 7−139028
$NS+He(H_2)(N_2)(O_2)(SF_6)(N_2O)(CO_2)(NH_3)$(methane), $B^2\Pi$ state, collisional quenching and energy transfer rate const. meas. 7−103630
$NaCl:Eu^{2+}$, aggregation processes, fractal and percolative features, time resolved spectra study 7−84757
$NaNO_3$-Na_2SO_4, aq. soln., mixing processes, time resolved Raman spectra 7−92689
Ne, pure and doped, self-trapped exciton luminesc., time-resolved study 7−106274
$Ne+Cl^{11+}(Br^{14+})$, recoil ion source, time-resolved VUV study 7−90333
Ni II, radiative lifetimes, time-resolved laser-induced fluoresc. 7−122436
O_2, singlet, triplet-sensitized form., time-resolved luminesc. meas. 7−109986
O_3, photodissoc., CARS spectra 7−129816
OH radicals in flame, absolute density meas. by time-resolved laser-induced fluorescence 7−71493
OH+HONO, gas-phase reaction kinetics 7−132915
P, amorphous, red, time-resolved photoluminescence studies 7−144112
P, amorphous, time-resolved photoluminescence 7−85799
a-P, initial photolum. decay rates 7−144125
$POCl_3:SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
Pu laser-induced fluoresc. in inductively coupled plasma nuclear fuel reprocessing analytical control appl. 7−144767
$Re_2Cl_8^{2-}$, $\delta\delta^*$ excited electronic state, time-resolved reson. Raman spectra 7−82143
Ru complexes, $Ru(bpy)_3^{2+}$, temp. and mag. field depend. in luminesc. 7−70856
$(Ru(bpy)_3)^{2+}$, time-resolved photoselection and exciton hopping in excited state 7−103477
SO_3^-, combination reaction, radical pair CIDEP 7−90223

ne resolved spectra continued
Si, electron-hole plasma lateral expansion, picosec. time-resolved Raman study 7−112383
Si, picosecond laser pulse-generated high-density plasma kinetics simulation 7−105605
Si thermal donor related luminescence lines, time resolved studies 7−99927
$Tb_3Al_5O_{12}$, time resolved electronic Raman and fluoresc. spectra 7−113166
Ti plasma, He-like, time resolved spectra 7−69465
Xe III, fluorescence, short-wavelength from X-ray excited ions, time-resolved meas. in laser prod. plasma 7−141519
$ZnIn_2S_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$Zn_{1-x}Mn_xS$, low energy emission bands 7−138504

me resolved spectroscopy
see also streak photography
2D fluorescence, Fourier transform based pattern recognition algorithm 7−102533
alloy analysis using time resolved laser-induced breakdown spectrometry 7−114046
analytical potential of laser-induced breakdown spectroscopy and time resolved LIBS 7−114047
atmospheric turbulence spectra, refr. index profiles and crosswind vel., remote sensing, opt. inversion technique 7−115100
brain microtubules, flow orientation obs, by linear dichroism 7−86932
CARs, appls. to photophys. and photochem. 7−80902
collective ion acceleration, ion beam probe diagnostics and time-resolved mass spectrosc. 7−129460
complex molecules in liquids, fluoresc. decay and orientational relaxation, simultaneous determ. 7−110140
computer-controlled picosecond single-photon-counting spectroscopy *(Japanese)* 7−108670
computerised high-speed spectroscope for time-varying optical spectrum analysis 7−121238
Daresbury Synchrotron Radiation Source 7−108723
EPR, microsecond time resolution using 200 kHz magnetic field modulation 7−95630
FIR spectroscopy with subpicosecond elec. pulses on transmission lines 7−140764
high-mass ion fragmentation, time- and mass-resolved 7−134871
large molecules, rot. coherence effect, time-resolved sub-Doppler fluoresc. 7−82259
laser spectrofluorimeter with nanosecond time resolution and automated data processing 7−89265
metals analysis using laser-induced breakdown spectroscopy 7−114045
microcomputer interface board for time-resolved multichannel scaling 7−129902
mixing devices for time-resolved Raman spectroscopy 7−89272
mixing times and concentrations, time-resolved Raman spectroscopy obs. 7−102546
multiplexed single-photon instrument for routine measurement of time-resolved fluorescence anisotropy 7−82393
nanosecond transmission electron microscopy and diffraction 7−95685
optical, linear prediction least-squares fitting appl. 7−128667
organometallic intermediates, IR spectroscopy analytical techniques 7−86738
photomultiplier, side-window type, pulsing-off circuit 7−80888
photon-counting detectors in time-resolved imaging mode: image recentring and selection algorithms 7−101689
picosecond flash photolysis apparatus, appl. to photosynthesis 7−71505
polydiacetylene-pTS relaxation dynamics, transient gratings, singlet and triplet excitons 7−135958
sources and detectors for picosecond/femtosecond spectroscopy 7−134857
spontaneous arc breaking mechanisms *(French)* 7−130964
streak cameras, two-dimensional sweeps expanding capability and appl. 7−95562
submicrosecond region of weak emission *(Japanese)* 7−102536
subpicosecond luminescence spectroscopy using sum freq. generation 7−95654
transmission system, high dispersion multi-Gbit, 1.53 μm DFB laser evaluation 7−68899
vacuum UV region with synchrotron radiation 7−134860
N_2 laser flash photolysis using dye fluorescence as a monitoring source 7−128668

ime series
aerosol meas. by PIXE, time series analysis by ARIMA 7−86868
atmospheric pressure at Darwin, Australia, time series rel. to strange attractor for Southern Oscillation 7−87886
CLEAN use for time series spectral anal. in astronomy 7−107726
cloud field morphology analysis using time series models 7−120152
cosmic rays, search for intensity variations generated by heliosphere pulsations 7−120225
dynamical systems, topological dimens. and local coords. from time series data 7−120922
electronystagmogram description by means of stochastic difference models 7−126813
gamma-ray astronomy, time smoothing technique for periodicity searches 7−79847
hydrologic information system for the Valtellina Region, Italy 7−120129
Italy rainfall intensity meas., correlation props. 7−133812
medical consulting system for slow vertex response electric response audiometry 7−107033
meteorology, integral time scale estimation from time series autocorrelations *(German)* 7−79536
numerical series anal. in geophysics, filtering and periodicities anal. 7−79617
observation series in irregular sequence, statistical analysis 7−87832
ocean, temperature and vel. time series, correction for current meter mooring motion 7−127587
palaeoclimatology, Late Quaternary climate change in S France from multivariate pollen time series 7−145662
precipitation at Nauru, time series rel. to existence of strange attractor for Southern Oscillation 7−87886
river flow, mixed gamma ARMA (1,1) model 7−72118
rivers annual discharge variations, statistical modelling of influence of irrigation 7−133789
sampling distribution of time between effectively independent samples, meteorological appl. 7−127425

time series continued
sea surface temp. at Puerto Chicama, Peru, time series rel. to strange attractor for Southern Oscillation 7−87886
serial rank statistics, weak convergence, time series and Markov processes appl. *(French)* 7−108399
vocal tract parameter estimation, ARMA model compared to LPC 7−100928
water quality time series, fractionally differenced models 7−94313
time switches
five-channel time switch for physics expts. 7−121151
time varying parameters *see time-varying systems*
time-varying systems
nonstationary point process analysis by time-dependent correlation and recurrence time functions 7−93612
parabolic time-periodic system, spatially varying parameter identification 7−127226
timing *see time measurement*
timing circuits
star transit time recording by grating vibrator and ADP demodulator *(German)* 7−79832
subnanosecond timing system using ECL circuitry with microstrip techniques 7−96479
time marker for a printer, calorimetric transducers certification appl. 7−102376
tin
see also nuclei with .....
$^{117}Sn/^{122}Sn$, isotopic fractionation, thermal ionisation mass spectrometry meas. 7−86696
α phase, ^{119}Sn Mossbauer isomer shifts 7−85498
α-phase form. by chem. sputtering of β-Sn target in H_2 plasma 7−92870
β- to α-phase transition at low temp., electron microscopic study 7−76400
β-phase, ^{119}Sn Mossbauer isomer shifts 7−85498
adsorbed liquid layers on Ge (111), struct. anomaly, RHEED study 7−143218
AE signal analysis, pattern recognition appl. 7−144670
atom, γ-ray differential incoherent scatt. cross-section 7−82047
atom, autoionising Rydberg series, spectral line shapes 7−122447
atom, Compton scatt. of 279.2 keV γ-rays by K-shell electrons 7−122458
atom, electron impact excitation cross sections 7−129877
clusters, laser vaporisation photoionisation dynamics, abundance patterns 7−141730
cubic α-phase, dipping LPE on InSb substrate 7−138694
differential coherent scattering cross-section measurements 7−74518
elastic scattering of ^{152}Eu and ^{154}Eu γ-rays 7−74520
electrodeposits, whisker growth inhibition for electronic appls. 7−144319
electron configuration, Mossbauer effect 7−76799
electronic struct., Hartee-Fock calcs. with LMTO method 7−84643
electroplated on steel, diffusion meas. 7−76504
EXAFS study through the solid-liq. transition 7−77692
high purity single crysts., low-temp. plasticity, Peierls relief *(Russian)* 7−78106
high rate vacuum evaporation from heated graphite crucibles 7−106422
island film growth kinetics 7−124762
large angle elastic scattering 7−141497
liquid, self-diffusion, space expts. 7−105089
liquid metals, nonsimple, static structure factor 7−83650
liquid metals, static struct. factor, temp. depend. 7−137205
low energy photon emission following γ-ray Compton scatt. 7−74523
metal, freezing point determ. 7−124455
metal-glass thin film interlayers, electric field assisted bonding below 200°C, XPS study 7−71459
metastable superconducting grain based radiation detector, feasibility 7−129535
microbridge, origin of irregular hysteresis and voltage characts. 7−92378
molten, boiling fragmentation interaction with water study 7−75612
nonequilibrium phonon drag effect study 7−104941
particles in ferrofluid composite, props. at MM wave freqs., mag. absorpt. 7−125864
plating, thickness monitoring and regulation by microprocessor *(French)* 7−126036
polycrystalline films, effect of grain boundary scatt. on electrical resistivity 7−92310
single cryst., β-phase, plastic deformation anisotropy *(Russian)* 7−71237
small angle Compton scattering of ^{152}Eu and ^{154}Eu γ-rays 7−74522
surface, low energy He^+ scatt., charge exchange and reionisation 7−144220
surface, slow He^+ collisions, oscillatory neutralisation prob. calcs., analytical model 7−99998
thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
tilt boundaries surface tension near the special-general boundary phase transition 7−83970
tilt boundary migration in vicinity of grain boundary phase transition *(Russian)* 7−111960
ultradisperse superconductors, coherent phenomena *(Russian)* 7−138152
VPE on uniaxial oriented semi-crystalline polymers 7−86031
whisker growth after low temp. implantation 7−76715
white crystal, dislocation reactions 7−98153
$Al_xGa_{1-x}As$:Sn, epitaxial layer, photoluminescence *(Korean)* 7−144118
$Al_xGa_{1-x}As$:Sn-$Al_xGa_{1-x}As$:Ge LPE junctions, Ge-related DX level 7−98897
α-phase, density of states calcs., recursion method 7−143308
Cu/Sn thin films, intermetallic cpds., formation kinetics *(French)* 7−84594
Cu/Sn thin films, surface morphology, whisker and hillock formation *(French)* 7−124790
$CuFeO_2$:Sn, photoconductivity, band edge positions, optical transitions 7−84990
Fe, SN implantation, effects of ion sputtering *(Chinese)* 7−111630
Fe:^{119}Sn, high dose implantation, hyperfine fields, Mossbauer spectra 7−118422
GaAlAs:Sn, highly doped, resonant DX centres under hydrostatic press. in mag. field 7−112245
$Ga_{1-x}Al_xAs$:Sn MOVPE film, carrier density, growth temp. depend., Hall meas. 7−85149
n-GaAs:Si,Sn,Dx centre, mobility, free electron density 7−131578
GaAs:Sn, electron beam induced Sn diffusion from dopant emulsions, backscatt. study 7−143101
GaAs:Sn, form. by pulsed ruby laser interdiffusion, props. and elec. characts. for FET contact structs. 7−76151

tin continued
GaAs:Sn, heavily implanted, annealing effects 7−98195
GaAs:Sn, LEC grown, Sn segregation and donor compensation 7−91817
GaAs:Sn, MBE grown, low resist. nonalloyed ohmic contacts 7−131783
GaAs:Sn, mechanism for electrically activating Sn implants 7−83996
GaAs:Sn, metalorganic VPE grown, Mossbauer spectroscopy 7−143938
GaAs:Sn, n-layer fabrication and characts. by open-tube diffusion process 7−124306
GaAs:Sn MBE grown in hydrogen presence, DLTS and photolum. 7−70239
GaAs-$Ga_{0.72}Al_{0.28}As$:Sn,B superlattices, Sn-induced interdiffusion, influence of B 7−76501
Ge/Sn heterostructures, growth, initial stages of interface formation 7−84552
In_2O_3:Sn film degradation in H and Ar glow discharge plasmas 7−144634
In_2O_3:Sn thin films, DC sputtered, microstruct. study, annealing 7−105339
In_2O_3:Sn transparent films as IR filters 7−82761
InP:Sn, photoluminescence study 7−99921
InP:Sn,S neutron transmutation doping, photothermal ionisation photocond. studies 7−124300
InSb:Sn, ion implanted, defect structs., Mossbauer study 7−99625
KBr:Sn crystal, A_T emission of $Sn^{2+}v_c^-$ centres, effect of mag. field *(Russian)* 7−142775
KI:Sn^{2+}, doped S^2 ions, emission spectrum fine struct. 7−132296
$Li_{0.5}Fe_{2.5}O_4$:Sn, Mossbauer spectra, hyperfine mag. fields study 7−132177
Ni/Su, Ni-P/Sn and Ni-B/Sn interfaces, Ni_3Sn_4 form. kinetics and struct. 7−111977
a-Si:H,Sn films, impurity diffusion studies 7−84392
Si:Sn, B, ion implantation and annealing, shallow junction form. 7−76173
Si:Sn, high conc. implants, incoherent light annealing 7−98231
Si:Sn, O, C, irradiated, optical band at 3942 cm^{-1} 7−99842
Si:Sn^+, pre-implantation amorphisation by group IV ion bombardment 7−76227
Sn III and IV, energy level lifetimes, beam-foil meas. 7−90040
Sn^{4+} introduced into corrosion protective coatings by cathodic polarisation, emission Mossbauer studies 7−99618
Sn:Co, atomic fluoresc. anal. with vacuum electrothermal atomisation *(Russian)* 7−132984
Sn/GaAs, ion beam mixing, ballistic and radiation enhanced regimes 7−76241
Sn/SnO_x/Sn small Josephson tunnel junctions, charging energy and phase delocalisation studies 7−112701
Sn-Au, superconducting Sn films with Au overlayers, fluctuation induced conductivity 7−112552
α-Sn-CeTe (110) interface, characterisation by angle resolved XPS 7−84546
Sn-Ge granular system, supercond. transitions *(Russian)* 7−92324
Sn-InP contacts, elec. transport, LO phonon oscills., electron freeze-out 7−125124
Sn+Cl, bremsstrahlung, isotope shifts, X-ray spectra anal. 7−122427
$Sn_n^{(+,-,0)}$ ($7 \leq n \leq 30$), valence electronic struct. determ. 7−122767
^{A}Sn, A=108-111, nuclear spins, moments and charge radii from hyperfine splittings and isotope shifts 7−67714
^{112}Sn, thermomigration in Sn under microgravity 7−117576

tin alloys
see also tin compounds
bronze, nondestructive analysis using fundamental parameter method *(Chinese)* 7−86546
bronze, resistivity determ. by eddy current decay method, hollow circular cylindrical geometry 7−105522
bronze-ferrochrome composite, comp. and prod. conditions effect on mech. and tribotech. props. 7−78267
bronze-ferrochromium composites, comp. influence on tribotech. characts. 7−119385
Nb_3Sn composite with distributed internal Sn 7−131952
Pn-Sn colloidal catalysts with accelerators for electroless Cu deposition, TEM studies 7−71091
rare earth alloys, RFe_6Sn_6, R=Gd-Ho, cryst. struct., X-ray diffr. studies 7−98037
rare earth-transition metal alloys, RM_2In or RM_2Sn, R=La, Sm, Gd-Tm, Lu, cryst. struct., X-ray diffr. 7−91527
solidification, effect of magnetically damped convection 7−77787
transition metal alloys, ScM_2X, M=Co-Cu, Pd, Pt, Ag, Au, X=Al, Ga, In, Sn, cryst. struct., X-ray diffr. 7−91527
Ag-In-Sn, liq. state, ternary systems, enthalpy of mixing *(German)* 7−98479
Ag-M-Sn dil. alloys, (M=Rh, Pd, Pt), interaction of ^{119}Sn probe with impurities 7−106066
Ag-Mg-Sn, out-of-step distance, substitutional element effects 7−142708
Ag-Sn, ^{99}Rh hyperfine interaction, PAC meas. 7−118440
Ag-Sn, amorphous alloys, density of states of Fermi energy, struct.-induced min., influence of noble-metal content 7−92058
Ag-Sn, liq., thermodynamic props. 7−143053
Ag-Sn, peritectic solidification, nonequilib. γ-phase form., homogenisation kinetics 7−113524
Ag-Sn-Sb, liq. state, ternary systems, enthalpy of mixing *(German)* 7−98479
AgSn alloys, excess entropy in vacancy-impurity binding 7−105082
Al-In-Sn alloys, directionally solidified in high and low gravit. fields 7−138736
Al-Sn (5 wt.%), liq.-solid mixtures, coarsening study using synchrotron rad. microradiography 7−86528
Al-Sn alloys, interfacial tension 7−76556
Al-Sn dil. alloys, grain boundary internal friction peak, strain amplitude depend. 7−104908
Al-Sn ion implanted alloy, defect-impurity interactions 7−91633
Al-Sn liquid, grain boundary wetting, inclusion size effects 7−91919
Al-Zn-Sn, phase diagram, isothermal diffusion in ternary system 7−100187
Au-An, phase diagram, peritectic reactions 7−144373
Au-AuSn-Pb partial ternary system, constitution 7−144371
Au-Sb dilute alloys, vacancy-solute interactions, ^{119}Sb Mossbauer studies 7−92558
Bi-Cd-Sn phase diagrams, ternary, calc. with binary data 7−132562
Bi-In-Pb-Sn system, thermal props. 7−132575
Bi-Sn dil. alloys, electron irradiated, vacancy recovery, positron lifetime meas. 7−104839

tin alloys continued
(Bi-Sn-Pb-Cd)-(Bi_2Te_3-Sb_2Te_3), wettability, adhesion energy and contact resistance 7−112008
$CaCu_{1-x}Sn_x$, pseudobinary systems, stacking variants, homogeneity 7−117861
$Ca_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
Cd-Pb-Sn phase diagrams, ternary, calc. with binary data 7−132562
Cd-Sn-Zn, liq., thermodynamic studies at 773 K 7−69938
Ce-Sn alloys, struct. and mag. props. correls., comp. depend. 7−76083
$Ce(Pb_{1-x}Sn_x)_3$, heavy fermion to mixed valence system, resistivity, susceptibility, sp. ht. 7−112822
$CeSn_3$, acoustic de Haas-van Alphen effect study 7−76741
Ce_2Sn_5, mag. susceptibility, sp. ht. meas. 7−70533
Ce_3Sn, Kondo lattice system, elec. resist. press. depend. 7−92165
Co-Sn alloys, α-martensite 2H-struct, 1D disorder, dimension factor effect *(Russian)* 7−91531
Co-Sn dilute ion implanted alloy, Sn-vacancy complexes, Mossbauer studies 7−91639
Co_2ScSn, Heusler alloy, mag. and Mossbauer studies 7−118433
$Co_{40}Sn_{60}$, mechanically alloyed, ultrasonic velocity changes 7−69832
$Co_{75}Sn_{25-x}As_x(In_x)(Sb_x)$, struct., and struct. transformations, alloying addition effects 7−104641
$Co_2TiAl(Ga,Sn)$, Heusler alloys, mag. hyperfine fields 7−118434
$Co_2ZrAl(Sn)$, Heusler alloys, mag. hyperfine fields 7−118434
Cu-Cr-Sn, age hardening kinetics rel. to Sn addition *(Japanese)* 7−106525
Cu-Cr-Sn system, isothermal phase diagrams of Cu-rich corner 7−113522
Cu-Fe-Sn alloys, γ-Fe particle precip. *(Polish)* 7−138745
Cu-Fe-Sn ternary system, phase diagram *(Chinese)* 7−132560
Cu-M-Sn dil. alloys, (M=Rh, Pd, Pt), interaction of ^{119}Sn probe with impurities 7−106066
Cu-Nb-Sn, amorphous alloy prep. by mech. alloying of elemental powders 7−144331
Cu-Ni-Sn single cryst. yield stress asymmetry *(Russian)* 7−138780
Cu-Sn, amorphous alloys, density of states of Fermi energy, struct.-induced min., influence of noble-metal content 7−92058
Cu-Sn, cold worked, twinning after annealing 7−78044
Cu-Sn, comparison of structs. prod. by ion implantation and rapid solidification 7−92923
Cu-Sn, friction rel. to surface hardness and strain hardening rate 7−138853
Cu-Sn, hot ductility rel. to alloying additions, grain boundary segregation, Auger spectra *(Japanese)* 7−106571
Cu-Sn, thin film, surface diffusion, 90-180 °C 7−70107
Cu-Sn, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Cu-Sn, vacuum condensates, phase conversion during annealing *(Russian)* 7−93042
Cu-Sn abrasive composite, elec. discharge sintering, struct., mech, props. 7−106465
Cu-Sn alloys, rapidly quenched shape memory alloys 7−86162
Cu-Sn coatings, magnetron sputtered, topography and microstructure 7−138660
Cu-Sn liquid rapidly quenched alloys, shape memory effects 7−86301
Cu-Sn powder compacts, sintering, Sn melt flow, porosity, comp. inhomogeneity 7−119201
Cu-Sn thin films, obs. of non-equilib. HCP phase 7−131095
Cu-Sn-Pb, dil. solns., Pb activity calcs. 7−132583
Cu-Sn-Pb-Zn, bearing bronze, annealed, surface integrity in machining 7−78373
Cu-Sn-Ti-Ni system, struct. form. mechanism in sintering, contact interaction of Ti-Ni and Cu-Sn 7−119200
Cu-Sn-ferrochromium system, vol. shrinkage accompanying sintering 7−77874
$ErPd_2Sn$ cubic Heusler superconducting alloy, antiferromag. struct., neutron scatt. meas. 7−112743
$ErPd_2Sn$, hyperfine field, low temp. Mossbauer study 7−138362
$Er_xY_{1-x}Rh_{1.1}Sn_{3.6}$ system, superconductivity and mag. ordering 7−125205
Fe-Sn (1.3 wt.%), (111) surface, Sn segregation, struct. transitions 7−143154
Fe-Sn dilute alloy, s-p impurity element interaction, Mossbauer studies 7−131161
$(Fe_{100-x}Cr_x)_{99}Sn$, ^{119}Sn-site hyperfine field changes, Mossbauer effect spectra 7−92134
FeSn, antiferromagnet, muon spin precession spectra 7−85515
$FeSn_2$ low temp. canted mag. struct., Mossbauer and neutron diffr. meas. 7−99411
$(Fe_{100-x}V_x)_{99}Sn$, ^{119}Sn-site hyperfine field changes, Mossbauer effect spectra 7−92134
Ga-In-Sn liquid alloy, electron field emission 7−125935
Ge-Sn, rapidly quenched, unusual elec. resist characts. 7−70335
$Ge_{1-x}Sn_x$ films, sputter deposition, ion beam collisional mixing, metastable single cryst. growth 7−113386
HfNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7−98983
In-Sn liquid alloys, interdiffusion, space expts. 7−105089
$InSn_4$ small spheres, anisotropy of upper critical field 7−85211
$LuRh_{1.2}Sn_4$, supercond. props. and magnetism 7−92325
Mg-AG-Sn powders, local X-ray spectral anal. 7−126507
$Mg_{70}Zn_{30-x}Sn_x$, metallic glasses, electron transport props. and related electronic struct. 7−98792
Na-Sn liq. alloys., resistivity and thermopower calcs. Faber-Ziman formalism with finite mean free path correction 7−112288
NaSn alloys, results of diffuse neutron scattering *(Dutch)* 7−69542
Nb-CuSn diffusion couple, form. of Nb_3Sn *(Chinese)* 7−69988
Nb-Sn, metastable, phase transforms. 7−93008
Nb-Sn thin film, A15 supercond., sp. ht. meas. 7−112662
Nb_3Sn AlS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Sn A15 multifilamentary supercond. form., solid state reaction and transform. kinetics 7−106466
Nb_3Sn A15 superconductors, neutron irrad., transition temp. and critical currents 7−105776
Nb_3Sn binary and alloyed multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7−131956
Nb_3Sn binary and Ti-alloyed superconds., fabrication by hot extrusion and high-field props. study 7−132516
Nb_3Sn, bronze-processed multifilamentary superconductor, crit. current., influence of two-stage annealing 7−112717
Nb_3Sn bronze-processed multifilamentary supercond. composite, supercond. and mech props., neutron irrad. effects study 7−131190

alloys continued
Nb_3Sn, bronze-processed tapes, study of shape anisotropy in critical current densities 7—131959
Nb_3Sn composite superconductor with very fine filaments, development and power freq. appls. 7—138173
Nb_3Sn compound, tensile strength rel. to grain size in bronze processed multi-filamentary supercond. 7—106581
Nb_3Sn, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7—112657
Nb_3Sn, form. during diffusion in Nb-CuSn couple *(Chinese)* 7—69988
Nb_3Sn, high field superconducting coils for Mirror Fusion Test Facility 7—129393
Nb_3Sn, high-current density supercond., role of defects within flux-line lattice 7—118746
Nb_3Sn jelly roll wire, superconducting phase, critical current density 7—105870
Nb_3Sn layer, form., effect of small alloying additions *(Chinese)* 7—132772
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7—131973
Nb_3Sn multifilamentary supercond. wire, layer form., lattice parameter, critical props. 7—77182
Nb_3Sn multifilamentary superconductor, stress effects on critical currents 7—105871
Nb_3Sn multifilamentary supercond. composites, tensile strength, elongation, fracture 7—106582
Nb_3Sn multifilamentary supercond. wires, resistive transition, shape depend. on composite inhomogeneity 7—138168
Nb_3Sn multifilamentary superconducting wires, design and fabrication, tube technique 7—138708
Nb_3Sn powder, prep., supercond. critical temp. 7—106462
Nb_3Sn, space technological experiments performed with superconducting and mag. alloys 7—71457
Nb_3Sn, supercond., T_c limited by grain-boundary flux-shear 7—138163
Nb_3Sn, supercond. magnet, full array Large Coil Task tests 7—129387
Nb_3Sn supercond. thin films, RF surface resistance 7—138120
Nb_3Sn supercond. wires, fractography and mech. props. at cryogenic temps. *(Japanese)* 7—113687
Nb_3Sn supercond. wires for AC use, development 7—138172
Nb_3Sn superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7—99244
Nb_3Sn superconducting surface, angle resolved XPS studies of oxides 7—138584
Nb_3Sn superconducting wires effect of filament diameter and spacing on T_c 7—138170
Nb_3Sn superconductor, flux pinning, grain boundary effects 7—105869
Nb_3Sn superconductors, magnetic measurements using $Cd_xHg_{1-x}Te$ Hall probes 7—73377
Nb_3Sn:Ti in-situ wire, effect of Ti additions 7—131976
Nb_3Sn:Ti wires fabricated by internal Sn diffusion method, Ti addition effects 7—131953
Nb_3Sn-Cu cable-in-conduit superconductor for fusion appls., testing at IFSMTF 7—129392
Nb_3Sn-Cu supercond. wire prep. by liq. phase sintering, supercond. props. study 7—132515
Nb_3Sn-Ta_3Sn multifilamentary wires powder metallurgy 7—131880
Nb_3Sn-Ti composite supercond. wires, new fabrication process, and props. 7—132519
Nb_3Sn-Ti-Cu multifilamentary conductors with high-field critical values 7—131954
$Nb_{3+x}Sn_{1-x}$, supercond. non-stoichiometric, electronic struct. 7—105383
Nb_3Sn(Ti) superconductor for 21 Tesla fields, powder metallurgy 7—131955
$(NbTa)_3Sn$ multifilamentary wires, high field supercond. props. 7—131840
$(Nb_{1-x}Zr_x)_3Sn$ layers, segregation of Zr and effects 7—77144
$NdSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7—105920
Ni-Sn, dilute ion implanted alloy, Sn-vacancy complexes, Mossbauer studies 7—91639
Ni-Sn, undercooled, dendritic growth, recalescence, high speed optical temp. meas. 7—100208
Ni-Sn, undercooled, solidification, dendritic growth, high speed cinematography 7—100207
Ni-Sn alloys, electrocatalytic props. in H_2 evolution reaction 7—86835
Ni-Sn deposits from pyrophosphate plating bath, tensile fracture 7—138833
NiMnSn alloys, crystallographic and mag. struct., neutron diffr. studies 7—69651
Ni_3Sn_4 intermetallic compound form. at interfaces, growth kinetics and struct. 7—111977
Pb-Sb-Sn (10, 3 wt.%), near eutectic, solidification in elec. field, microstruct. 7—119253
Pb-Sn, cavitation at migrating boundaries during high temp. fatigue 7—119359
Pb-Sn, columnar-dendritic, interdendritic liq., permeability for flow 7—77977
Pb-Sn, cyclic creep, fracture, freq. depend., microstruct. effect 7—144498
Pb-Sn, electrodeposition from sulphamate soln. 7—144320
Pb-Sn, eutectic, superplastic and as-cast, cavitation and cracking during high-temp. fatigue 7—119338
Pb-Sn, hypoeutectic alloys, dendrite coring and eutectic content, influence of cooling rate 7—86142
Pb-Sn, liq., crystallisation under microgravity and uniform compression conditions 7—71160
Pb-Sn, Sn determ. by detection of characteristic K X-rays by PIXE 7—93409
Pb-Sn, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7—105057
Pb-Sn (5 wt.%), discontinuous precip., low undercooling instability in cellular mechanism 7—78032
Pb-Sn alloys, Ag, Au and Cu diffusion and electromigration 7—118166
Pb-Sn alloys, static mag. field, influence on cast structs., dendritic cell parameter *(Russian)* 7—105352
Pb-Sn coatings, ion-plated, friction and wear behaviour 7—119377
Pb-Sn eutectic alloy, superplastic, strain rate transients 7—100314
Pb-Sn solder/Cu joints, tensile behaviour 7—119312
Pb-Sn system, space technological experiments performed with superconducting and mag. alloys 7—71457
Pb-Sn-Bi-In-Sb, low melting pt. alloys, elec. props. at 4.2 K 7—112293
Pb-Sn-Ni alloys, Ni diffusion and electromigration 7—118147
PbSn-$YBa_2Cu_3O_7$ point contact junctions, AC-Josephson effect 7—112705

tin alloys continued
$Pb_{1-x}Sn_xTe$, solid soln., isoenergetic surfaces and Hall factor anisotropy determ. *(Bulgarian)* 7—76887
Pd_2DySn, Heusler alloy, mag. struct., powder neutron diffr. study 7—92404
Pd_2HoSn, Heusler alloy, mag. struct., powder neutron diffr. study 7—92404
Pd_2MnSn, Heusler alloys, hyperfine mag. field meas. 7—118431
Pd_3Sn, O adsorption, XPS and SIMS studies 7—138592
PdX (X=C, Si, Ge Sn), LCGTO MP LSD calcs. 7—109694
RPt_2Sn (R=Tb, Y, Tm) cryst. struct. studies 7—69655
Ru_2FeSn, Heusler alloys, hyperfine mag. field meas. 7—118431
Sb-Sn system, peritectic alloys, solidification, microsegregation 7—132593
$SmSn_3$, phase transitions in vicinity of Neel temp., elect. resist. study 7—105920
Sn-Ag(Au) single crystals, electromigration and Soret effect 7—143114
Sn-Bi, hypoeutectic alloys, dendrite coring and eutectic content, influence of cooling rate 7—86142
Sn-Bi alloys, vaporisation and photoionis., cluster ions form. 7—69877
Sn-Bi eutectic solder for Cu/brass joints, mech. props. and microstruct. of joints 7—100506
Sn-Bi melts, interdiffusion coeffs., contact fusion determ. 7—111928
Sn-Co, heterojunction formed by diffusion, corrosion protection 7—76497
Sn-In, temp. depend. of Young's modulus 7—100273
Sn-In alloys, US study of phase transitions, Young's modulus 7—98349
Sn-Ni electrodeposited alloy coatings, anodic oxidation, optical and electrochem. studies 7—106705
Sn-PB eutectic alloy, fine-grained, creep and const. speed compression 7—126187
Sn-Pb alloys, solidification, columnar to equiaxed transition 7—144390
Sn-Pb eutectic alloy in superplastic condition, stress relax. 7—126158
Sn-Pb polycrystalline films, effect of grain boundary scatt. on electrical resistivity 7—92310
Sn-Pb solder, Cu_6Sn_5 whisker precipitates, mech. props. 7—119311
γ-$Sn_{0.8}In_{0.2}$, lattice dynamics, electron-phonon interactions 7—142936
$SnMg_2$, ^{119}Sn Mossbauer isomer shifts 7—85498
$Sn_{33}Pb_{67}$ disperse system, mag. field, influence on superconductivity 7—70471
$Sn_{33}Pb_{67}$, fine-dispersed system, superconductivity, mag. field effect 7—125242
$Sn_{33}Pb_{67}$, ultradisperse superconductors, coherent phenomena *(Russian)* 7—138152
$SnTe$-Bi_2Te_3, metal atom ordering, Mossbauer investig. 7—83877
Te-Ge-Sn-Au phase change recording film for optical disk 7—76706
$Te_{80}Sn_{20}$, phase transformation kinetics, laser power, pulse width, laser-induced phase change cycling 7—104819
Ti-Al-Sn, beta processed Ti5331s notched specimens, prediction of stress rupture life 7—132735
Ti-Al-Sn-Zr-Mo, O solid solns., microhardness and lattice parameter calibrations 7—138830
Ti-Al-Sn-Zr-Mo-Si, Ti-6242s, ion irrad., phase transform. 7—69775
Ti-Al-V-Sn, rapidly solidified, consolidation by hot pressing 7—86083
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7—100307
Ti-Sn-La, rapidly solidified, second phase coarsening 7—93024
Ti-V-Cr-Al-Sn (15,3,3,3 wt.%), hot-rolled, mech. props., microstruct. 7—78153
TiNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7—98983
$U(In,Sn)_3$, heavy fermion behaviour, mag. and mixed valence props. 7—92426
USn_3, valence level photoelectron spectra 7—106362
$U(Sn_{1-x}Pb_x)_3$, Mossbauer study of mag. state 7—113040
YFe_6Sn_6, cryst. struct., X-ray diffr. study 7—98037
Yb-Rh-Sn, superconducting, Yb valence fluctuations, X-ray absorption studies 7—77688
$Yb_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7—125184
Zn-Sn system, thermodynamic props. and phase equilib., applicability of various formalisms 7—138732
Zn-Zn, grain boundary wetting as function of Sn conc. 7—119254
Zr-Fe-Sn, ternary amorphous alloys, production, stability rel. to comp. 7—131029
Zr-Sn, electron irradiated, influence of Sn additions on recovery, positron annihilation study 7—106302
ZrNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7—98983

tin compounds
see also tin alloys
hexacyanoferrates, spherical sorbents, homogeneity, synthesis by sol-gel method 7—84488
phosphates, spherical sorbents, homogeneity, synthesis by sol-gel method 7—84488
solar concentrator materials development 7—71580
tetramethyl tin, isolated in Ar matrix, rotational tunnelling 7—141643
$Ag_7SnS_5(Se_5)Cl(Br)(I)$ superionic conductors, synthesis, struct., and elec. props. studies 7—84382
Al/SnO_x trilayer systems, optical props., ellipsometry studies 7—144005
Al-$Sn_2P_2S_6$-Si structs., voltage-capacitance characts. 7—131799
Al_2O_3-SnO_2 composite plasma-synthesized powders 7—113510
C-Sn amorphous thin films, semicond., optical and elec. props. 7—70318
$C_{1-x}Sn_x$:H, amorphous films, sputter-assisted plasma chemical deposited, structural and optical props. 7—125838
$Cd_{0.1}Ni_{0.9}Sn_yFe_{2-2y}O_4$ ferrite, Mossbauer study 7—125568
$CdSnAs_2$, electron energy spectrum, kinetic and optical props., uniform press. effect 7—112179
Cd_2SnO_4, thin conducting and transparent films, electrical props. 7—85139
$CdSnP_2$ chalcopyrite crysts., heat capacity and lattice anharmonicity meas. 7—98489
CdTe-CdS-SnO_2:F thin film solar cells prep. by CVD and close-space sublimation 7—133097
Co_2SnO_4, AC mag. suscept. meas. 7—92438
Co_2SnTe_4, amorphous, mag. props. 7—132024
Co_2SnTe_4, amorphous cpd., chemical control of electronic props. 7—112335
Cr_2SnTe_4, chalcogen, spin glass and mag. behaviour 7—112832
$CsSnCl_3$, Raman spectra, vibr. modes, phase transitions 7—138461
Cu-O-Sn, non-ideal liq. solns., thermodynamic capacity 7—126473
Cu_2SnS_3 thin films, photovoltaic characts. 7—143518
Cu_2SnTe_4, amorphous cpd., chemical control of electronic props. 7—112335

tin compounds continued
α-Fe_2O_3-SnO_2 fine particles, residual surface SO_4^{2-} ions 7−104670
Fe_2SnTe_4, amorphous cpd., chemical control of electronic props. 7−112335
Fe_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
Fe_2SnTe_4, spin glass state, photoinduced mag. bubbles 7−85304
Ga-Sn-Sb, composition diagrams of GaSb-Sn and GaSb-SnSb, 985-600 K 7−106491
Ge-Sn-Se glasses, potential fluctuations and density of gap states 7−84653
Ge-Sn(Pb)-Te phase diagram, GeTe-SnTe and GeTe-PbTe sections 7−106487
$(Ge_2S_3)_{1-x}(Sn_2S_3)_x$ chalcogenide glasses, molecular struct., crystallisation 7−91459
$GeSnSe_3$ glass, exception to Ioffe-Regel rule, scanning calorimetry, Mossbauer spectra and molar vol. meas. 7−83725
$Ge_{1-x}Sn_xSe_2$ glasses, phase separation 7−83724
InSnO/p-Si solar cells using conductive polymer 7−86783
InSnO-Si heterojunction solar cells prep. by thick film techniques 7−119663
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
$In_{2-x}Sn_xO_{3-y}$ evaporated films, transport props., temp. dependence 7−85156
$In_{2-x}Sn_xO_{3-y}$ films, DC magnetron sputtering, resist. and light transmission *(Japanese)* 7−138657
$In_{2-x}Sn_xO_{3-y}$, ion beam sputtered films, XPS anal. 7−106361
$In_{2-x}Sn_xO_{3-y}$/GaAs near-ideal quasi-Schottky barrier formation 7−125086
$In_{2-x}Sn_xO_{3-y}$/InGaAsP, n-p solar cell on GaAs substrate, conversion efficiency 7−71612
$In_{2-x}Sn_xO_{3-y}$/p-InSe/Au solar cells, elec. and photovoltaic props. 7−139111
$In_{2-x}Sn_xO_{3-y}$/Si photovoltaic junction solar cells 7−119664
$In_2Sn_3S_7$ cryst. struct. determ., Mossbauer spectra and X-ray diffr. studies *(French)* 7−124217
$KO_{1/2}$-GeO_2-SnO_2 glass, struct. and T_g, SnO_2 substitution, Raman spectra *(Japanese)* 7−91464
KSnAs(Sb) cryst. struct., puckered hexagonal nets, X-ray powder diffr. study 7−83912
$(La_{1.85}Sr_{0.15})Cu_{0.95}Sn_{0.05}O_4$, perovskite supercond., phonon and electron anomalies 7−92350
$LiO_{1/2}$-SnO_2-GeO_2 glass, struct. and T_g, SnO_2 substitution, Raman spectra *(Japanese)* 7−91464
Mn_2SnTe_4, amorphous cpd., chemical control of electronic props. 7−112335
Mn_2SnTe_4, chalcogen, spin glass and mag. behaviour 7−112832
NaI-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
Ni-Sn intermetallics, electrocatalytic props. in H_2 evolution reaction 7−86835
Ni_2SnTe_4, amorphous, mag. props. 7−132024
$NiZnFe_2O_4$:GeO_2, SnO_2 ferrites, disaccommodation spectra 7−105971
$POCl_3$:$SnCl_4$, Tm^{3+}, intense blue luminescence spectra and lifetimes 7−70874
$POCl_3$-$SnCl_4$:Pr^{3+}, electronic relax. of $^3P_0$ and $^1D_2$ states of Pr^{3+} 7−70875
$Pb_{1-x-y}Mn_xSn_ySe$, semiconductor laser diodes, g-factor, compositional depend. 7−70172
PbSe-SnSe superlattices, X-ray diffraction study 7−112122
$(PbSe)_{0.8}(SnTe)_{0.2}$-$PbSe_{0.32}Te_{0.68}$ heterostruct for IR magnetoplasma injection laser 7−103818
(PbSnMn)Te, ferromagnetism under high pressure 7−99449
$Pb_{1-x}Sn_xMo_6S_8$, current carrying capacity, superconducting props. 7−70506
$Pb_{1-x}Sn_xS$, energy levels associated with intrinsic defects 7−143392
PbSnSe laser, 16 μm CW tunable, high-resolution spectroscopy appl. 7−136296
PbSnSe/PbSSe/PbS heterostruct. laser with quantum-well active region 7−110357
PbSnSe/PbSSe/PbS heterostruct. laser, separate electron and optical confinement 7−141864
$Pb_{0.875}Sn_{0.125}Se$, electron irradiated, metal-insulator transition, press. induced 7−143347
$Pb_{1-x}Sn_xSe$, Seebeck effect, mechanism of isovalent and acceptor doping 7−118519
$Pb_{1-x}Sn_xSe$(Te), surface states due to band inversion 7−118546
$Pb_{1-x}Sn_xTe$-PbTe, superlattices, properties *(Polish)* 7−131770
PbSnTe-PbTeSe lattice matched single heterostructure diode lasers 7−74923
$Pb_{0.8}Sn_{0.2}Te$ epitaxial thin film MIS structs., field effect studies 7−143621
$Pb_{0.76}Sn_{0.24}Te$:Cd single crystals, photoconductivity, long wavelength IR spectrum 7−70349
$Pb_{0.8}Sn_{0.2}Te$ laser-doped crysts., ESCA obs. of comp. of near-surface domain 7−133018
$Pb_{0.8}Sn_{0.2}Te$ thin films in MIS structs., elec. props., effect of laser irrad. 7−99237
$Pb_{1-x}Sn_xTe$, Bridgman-grown single crysts., precip. study by TEM 7−91818
$Pb_{1-x}Sn_xTe$ crystals, narrow-gap, transformation of defects, laser irradiation 7−98857
$Pb_{1-x}Sn_xTe$ epitaxial film, cond. and plasma refl. spectra, lattice vibr.-induced localisation effects 7−85141
$Pb_{1-x}Sn_xTe$ epitaxial films, MBE deposited, study 7−144281
$Pb_{1-x}Sn_xTe$, film, molecular beam epitaxy, on Ge, Si, GaAs, InSb and BaF_2 substrates 7−77830
$Pb_{1-x}Sn_xTe$, inverted contact and linear zero-mass spectrum 7−85097
$Pb_{1-x}Sn_xTe$, liquid phase epitaxy, layer thickness rel. to deposition parameters 7−92020
$Pb_{1-x}Sn_xTe$ narrow gap semicond., band struct., Faraday magnetooptical effect study *(Russian)* 7−98808
$Pb_{1-x}Sn_xTe$, narrow-gap, laser irrad. transform of intrinsic and impurity defects, elec. and optical props. change 7−112325
$Pb_{1-x}Sn_xTe$, stressed quantum well epitaxial films, photolum. 7−113251
$Pb_{1-x}Sn_xTe$:F^+, impurity depth profiles, resonance nuclear reaction studies 7−142817
$Pb_{1-x}Sn_xTe$:In, admixture electron capture effect on Gunn domains 7−99077
$Pb_{1-x}Sn_xTe$(Se), free-carrier absorption spectra 7−77528

tin compounds continued
$Pb_{1-x}Sn_xZrO_3TiO_3$, spatial distrib. of polarisation and space charge, meas. by laser intensity modulation method 7−125600
PbTe-$Pb_{1-x}Sn_xTe$ superlattices, envelope fn., electronic struct. and symm. props. 7−143597
PbTe-SnS, solid solutions, epitaxial films, thermal evaporation in vacuum 7−106417
ScI_3-SnI_2, equilib. vapour, mass spectrosc. and thermochemistry 7−126472
Si-SnO_2, polycrystalline solar cell, antireflection coating investig. 7−126621
Si-SnO_2 solar cells, light scatt. model 7−126620
Si-TiN-SnO_2:F, transparent conducting electrodes 7−118554
Si-TiO_2-SnO_2:F, transparent conducting electrodes 7−118554
Sn complex, bis(pyridinium) hexa-chlorometallates, phase transform., X-ray and ^{35}Cl NQR study 7−124228
Sn complex, Sn(II) amides, natural abundance ^{15}N NMR, INEPT pulse sequence study 7−90210
Sn/SnO_x/Sn small Josephson tunnel junctions, charging energy and phase delocalisation studies 7−112701
Sn-As-Si, phase separation, viscosity and elec. cond. studies *(Russian)* 7−124516
$SnBi_2Te_4$, Sn and Bi atom distrib., Mossbauer studies 7−124232
$SnBr_4$, crystn., IR and Raman spectra 7−132269
$SnBr_4$, lattice dynamics, force constant model 7−76322
$SnCl_4$-benzoyl chloride, substituted, complexes, ^{35}Cl NQR spectra 7−141610
SnF_2-SnO-PbF_2-P_2O_5 glass containing acridine dyes, nonlinear optical props. 7−123124
SnF_3 ion, IR spectra, normal coordinate anal. 7−68295
SnF_4 intercalation compounds with graphite, intercalation mech. and in-plane elec. cond. 7−84805
$Sn_xGe_{1-x}Se_{2.5}$ and other chalcogenide alloy glasses and liquids, optical absorption tails and struct. disorder 7−85774
SnH_4, edge inversion process, spectrosc. props. 7−109870
SnH_4, miniature hydride generator with microwave induced plasma-atomic emission spectrometry study 7−133014
SnH_4, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
SnH_4^+, spin-orbit coupling, ab initio CI calcs. 7−103398
SnI_2-AgI system, elec. conductivity of solid phases 7−143087
$SnMo_{6-x}Nb_x(Ta_x)S_{8-y}$, superconductivity and struct. *(Russian)* 7−99245
$SnMo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$SnMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$SnMo_6S_8$, Chevrel phase, electronic struct., vacancies effect 7−117923
$SnMo_6S_8$ Chevrel phase supercond., phonon energies and symmetries, Raman study 7−132276
$SnMo_6S_8$, normal and superconducting, NMR studies 7−106054
$SnMo_6S_8$, supercond., Chevrel phase cpds., anharmonicity of cation modes, upper limit 7−124416
$SnMo_6S_8$, supercond. ribbons, prepared using vapor transport techniques, high field props. 7−131971
$SnMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
$SnMo_6S_xO_2$, Chevrel phase, O substitution, stoichiometry 7−137577
SnO, Kr-bombardment induced secondary ion emission spectra study 7−85915
SnO_2, ^{119}Sn Mossbauer isomer shifts 7−85498
SnO_2 (110) crystal gas detector, chemical, electronic and structural props. obs. 7−133003
SnO_2 antireflection coating for PbS selective absorbers 7−86829
SnO_2, bent and straight whiskers morphology 7−124806
SnO_2, chemical bonding, ion irradiation effects CEMS study 7−142690
SnO_2, electron beam evaporated thin films, electrical and optical props. 7−85155
SnO_2, electronic struct. of O vacancies 7−143547
SnO_2 epitaxially grown thin films, cryst. struct. considerations 7−84593
SnO_2 films, CVD, evidence of CL removal by annealing in H_2 atmosphere 7−71055
SnO_2 films, Na^+ adsorpt. from aq. soln., film hydration and ion exchange activity determ. 7−143210
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
SnO_2, Kr-bombardment induced secondary ion emission spectra study 7−85915
SnO_2, mech. activated, interaction with CO 7−93376
SnO_2 natively textured film for optical confinement-type a-Si:H solar cell 7−70110
SnO_2 photoelectrochemical cells, rhodamine B sensitised, doping effects 7−93513
SnO_2, reactively sputtered thin films, flammable gas sensing charact. 7−114024
SnO_2 spectrally selective coatings for porcelain enamelled absorbers in solar collectors 7−106928
SnO_2 substrate, for ultrathin tetraphenylporphyrin film, depend. of luminesc. quenching on substrate conductivity 7−106254
SnO_2 tunnel electrode-dye solution interface, acceptor state density distrib. meas. *(Japanese)* 7−131781
SnO_2, wide-gap semicond., acceptors and donors, PAC studies 7−98902
SnO_2:Au(Ir)(Pd)(Pt), gas sensing props., dopant effect *(Japanese)* 7−80773
SnO_2:Cd, time-dependent hyperfine interactions, TDPAC studies 7−113015
SnO_2:F,Na films, optical and elec. props., influence of aging and impurities 7−144146
SnO_2:F spray pyrolysis coating, optically allowed transitions 7−106289
SnO_2:Sb, high purity, elec. cond. as function of temp. 7−76940
SnO_2:Sb films, DC reactive sputtered, annealing, elec. resist., struct. 7−92860
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
SnO_2:Sb films, photo-CVD growth of transparent and conducting films 7−71064
SnO_2:Sb gas sensor, H_2 and CO responses obs. 7−128566
SnO_2:Sb(In), film, reactively evaporated, prep. and props. 7−112518
SnO_2/rhodamine dye solution interface, laser-induced photoelectrochem. transients 7−70409
SnO_2/SiO_2/Si, spray-deposited solar cells, short-circuit photocurrent v. open circuit voltage characteristics 7−126603

compounds continued
n-SnO_2-n-$CdGeP_2$:In isotypic heterojunction, photoelectric props. 7−131763
SnO_2-Sb_2O_3, semicond. glaze, elec. props., microstruct. 7−131643
SnO_2-SiO amorphous thin films, AC elec. props. rel. to annealing 7−143620
SnO_2-TiO_2, tetragonal system, spinodal decomp. 7−113556
SnO_2-ZnS:Cu-As_2S_x-Al, x=3, 5, electroluminescent and stability props. 7−138515
SnO_x, artificial dielectric films on crystalline quartz, optical props. 7−125839
SnO_x thick films, electronic cond. and tunnelling 7−105742
SnO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
SnO_x-Pd MIS capacitor as O_2 gas sensor 7−80765
$SnO_2(H_2O)_n$, Raman light scatt. spectra, size effects 7−119020
$Sn_2P_2(S_xSe_{1-x})_6$ uniaxial ferroelectrics; critical behaviour near Lifshitz point 7−118961
$Sn_2P_2Se_{6-x}S_x$ evaporated thin films optical consts. near ferroelec. transition 7−85869
$Sn_2P_2(Se_xS_{1-x})_6$, ferroelectric phase transition splitting, phenomenological anal. 7−125636
$(Sn_xPb_{1-x})_2P_2(S_ySe_{1-y})_6$ ferroelectrics, soft phonon spectrum, phase diagram, Raman spectra study 7−132261
SnS single crystal, optical energy gap calc. from absorpt. coeff., temp. depend. 7−85563
SnS thin films, chemical deposition and optical props. 7−126037
SnS-Cu, surface absorbers, selection criteria *(Spanish)* 7−86816
SnS_2 (Se_2), conduction band states, bremsstrahlung-isochromat studies 7−124824
SnS(Se)(Te), electronic props. and bonding, modified Phillips-Van Vechten dielec. theory, comment 7−76795
SnSb, ^{119}Sn Mossbauer isomer shifts 7−85498
SnSb, electronic struct., ^{121}Sb isomer shift, LMTO calc. 7−106064
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
SnSe, solid and liquid states, electrophysical props. 7−131634
SnSe thin films, elec. resist., influence of gas adsorption and temp. 7−138087
SnSe-Bi, solid solutions, thermo-EMF, elec. cond. rel. to density 7−92960
SnSe-Nd_2Se_3, phase diagram, congruent melting compounds 7−71156
SnSe-Pr_2Se_3, phase diagram, congruent melting compounds 7−71156
Sn_xTaS_2 intercalation cpds., 2H polytype, electronic structs. 7−137775
SnTe, ^{119}Sn Mossbauer isomer shifts 7−85498
SnTe (001), specular reflection of MeV protons, energy losses 7−84078
SnTe (001) surface, reflected light ions, angular distribs. at glancing incidence 7−119096
SnTe (001) surface, specularly reflected light ions, energy losses 7−124358
SnTe, effective mass, conc. depend., two-valence bands model calcs. 7−98784
SnTe, ferroelectric props., shell-model study using renormalised harmonic approximation 7−84153
SnTe, glassy thin film, structural characterisation 7−142606
SnTe MOS diodes, current-voltage spectra, expt. 7−99215
SnTe MOS diodes, current-voltage spectra, analysis 7−99216
SnTe, nonstoichiometric, impurity limiting solubility calcs., crystallochem. anal. 7−84275
SnTe thin films, synthesis by solid-state reactions 7−100057
SnTe:In(Tl), impurity mixed-valence behaviour on superconductivity mechanism 7−92143
SnTe-CdSe, section of ternary reciprocal system 7−71157
SnTe-Ni_3Te_2, interaction, temp. depend. of thermoEMF 7−86138
$(SnTe)_{1-x}(EuTe)_x$, mag. susceptibility, effect of Eu doping on physical props. 7−105881
SnX_4 (X=F, Cl, Br, I), Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
Tl_2SnS_3 crystals, growth, photoelectric props. 7−85992
ZnO-SnO_2 mixtures, heat treatment, struct., elec. cond., green luminesc. 7−86228
$ZnSnAs_2$, high-temp. sp. ht., lattice anharmonicity 7−69923
$ZnSnAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSnAs_2$ semicond. crysts., interatomic interaction dynamics, phase transition, intrinsic point defect formation 7−137539
$ZnSnP_2$ conductivity type conversion by In doping, diffusion and heat treatment 7−85016
$ZnSnP_2$, vacuum grown thin films, characterisation 7−112137
ZrO_2-Y_2O_3-SnO_2, tetragonal phase, elec. props. effect of SnO_2 additions 7−98567

tanium
see also nuclei with .....
α-phase, attempted mag. transition obs., sound rel. and elec. resist. temp. depend. meas. 7−118808
α-phase, O solid solns., microhardness and lattice parameter calibrations 7−138830
adiabatic shear, critical loading parameters 7−78142
anodic films, photoelectrochem. anal. 7−71364
anodic oxide film, dissolution kinetics in H_3PO_4 soln. 7−93146
atom, Kα satellites in X-ray emission spectra 7−74500
atom, plasma, He-like, time resolved spectra 7−69465
cathode, vacuum arc, erosion plasma jet spatial distrib. study 7−69511
coating on steel, hardening following B ion implantation 7−78353
coatings, vapour deposition, grain size rel. to thickness 7−138650
cold worked, neutron irrad. damage, annealing, dislocation loops, voids 7−104848
commercial quenched at high cooling rates, effect of plastic deform. on strength 7−100285
Compton profiles 7−77676
corrosion in brine, Γ radiolysis effect 7−78306
corrosion in hot conc. salt brines *(German)* 7−93202
corrosion inhibition in H_2SO_4 by cupferron 7−93138
corrosion resistance for nuclear fuel waste disposal conditions 7−89774
cyclic deform., 3D shape of loop patches 7−86278
defect levels in GaAs and InP, band-edge deform. pots. determ. 7−137849
deposition on JIPP T-IIU tokamak limiter wall by sputtering, investig. 7−67988
diamond, Ti ion implanted, electrical props., target temp. depend. 7−92182
dislocation velocity-stress exponents, effect of H *(Chinese)* 7−132657

titanium continued
ductility loss, high temp., model 7−86289
EFG temp. depend., PAC meas. 7−118442
electroerosion, high-energy impulse-discharge, in nitrogen, electrode surface effects 7−132814
electron density model functional, elastic props. *(Russian)* 7−76262
electroplating in molten fluoride media 7−119175
electrospark alloying for improved corrosion resist. 7−144597
erosion rate rel. to grain size 7−132754
film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152
films, evaporated, oxidation, surface struct 7−113776
fractured surface, fractal characts. 7−86325
gas absorbers, He lattice sorption 7−98675
gettered surface, H_2O, O_2 interactions in UHV conditions 7−139072
hydrothermal oxidation, TiO_2 powder form. 7−126061
impurities in Fe, muon trapping at substitutional Ti 7−106072
internal friction and elasticity modulus meas. method 7−132868
ion implantation, He trapping to O sites, nuclear reaction anal. 7−84005
ion implantation, surface layer modification *(Japanese)* 7−126316
ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
ion implanted in low alloy steel, effect on corrosion resistance *(Chinese)* 7−132821
laser irradiated, zone of diffusion combustion 7−104825
lattice stability, heat capacity, transform. enthalpy 7−84315
layers in continuous current tokamak, removal 7−75821
Murchison carbonaceous chondrite, refractory inclusions ^{50}Ti anomalies, implications for solar nebula collapse 7−88332
online mass separator targets, beam heating calcs. 7−96443
overlayers on TiO_2 (110), spectral, cond. and annealing studies 7−85041
oxidation, adhesion of thermal oxide films 7−132904
oxidation, defects produced by Ar^+ bombardment 7−91991
oxidation, effect of alloying 7−106665
oxidation, effects of Sn^+ and N_2^+ ion implantation 7−106686
oxidation, O dissolution rel. to alloying elements, microhardness 7−86422
oxidation kinetics in laser irrad., scale phase transform. 7−144585
oxidation mechanism 7−93160
oxide film form. in brine, corrosion, γ-radiation effect 7−78305
passivated, self-activation in H_2SO_4 soln. *(Japanese)* 7−93177
plate, self-sustaining exothermic oxidation kinetics in gas flow 7−71463
plate, self-sustaining exothermic reaction, multipulse light initiation 7−106813
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
pure, fatigue crack propag., stress freq. effect *(Japanese)* 7−78191
pure β-phase crystals, recrystallisation, annealing of wires, dislocations, synchrotron X-ray topography 7−98166
segregation, in $PbTiO_3$(100), 300-1200 K 7−76574
self-diffusion in β-phase via vacancies 7−105099
sheets, ductile fracture rel. to strain path 7−93092
single crystal, TiC epitaxial layer formation, LEED and AES studies 7−124785
solid state tunable laser crystal host systems 7−68657
sponge, energy characts. of dynamic densification 7−77879
sputtered films, lattice expansion and contraction due to H charging 7−124778
steel, thin films, Cr, Ti diffusion profile determ., appl. of X-ray chem. anal. technique 7−119608
substitutional solid soln. hardening, screw dislocation motion 7−132633
Sun, Ti I photosphere spectra, LTE anal. evidence for non-LTE in excitation 7−120346
surface, 3S method induced surface topography, SEM investig. 7−132813
surface, heavy-ion induced desorption of D, inhibition by foreign atoms 7−76593
surface, scanning tunnelling microscopy 7−91406
surface, spectral emissivity meas., polymorphic transformations effect 7−137599
surface (0001), effective Debye temp., LEED meas. 7−118226
surface hardness enhancement by ion implantation technique 7−71387
surface roughness of ion beam sputtered materials, 3S method for incidence angle influence 7−132812
T, D, H, heat of transport meas., T diffusion under thermal gradient 7−131367
texture of corrosion layers rel. to stratification *(French)* 7−86446
textured sheets, deform. behaviour in uniaxial tensile test, effect of twinning 7−144500
thin films, proton induced K-shell X-ray cross sections 7−144183
thin films, struct. and optical props. meas. 7−144136
thin films evaporated on Si and SiO_2, ion modification of props. 7−91673
Ti^{20+} X-ray spectra, appl. in JIPP-T-II-U Tokamak diagnostics 7−123987
tube to tubesheet junctions, evaluation 7−106590
US imaging, freq. and spatial compounding techniques 7−123406
vacancies and small vacancy clusters, computer simulation studies 7−98133
vapour phase siliconizing, corrosion stability 7−78319
wear resistance rutile and NiTi gasothermal coatings on Ti 7−132761
wire, coated with Cu or Ti-Cu, state of sintering, diffusion microstructure *(Japanese)* 7−126045
Al-Ti bimetallic transition couplings for cryogenic service 7−73362
α-Al_2O_3:Fe,Ti, polycrystalline, elec. cond., creep 7−111948
Al_2O_3:Ti^{3+}, vibr. transitions, $^2E_g E_{3/2}$ electronic state, picosecond excite-and-probe absorpt. meas. 7−106152
Au-Ti, thin film interactions, RBS and X-ray diffr. studies 7−69991
$BeAl_2O_4$:Ti^{3+}, lasing and optical props. 7−97018
Fe/Ti multilayers, amorphous alloy form. by ion beam mixing 7−76233
GaAs:Ti, impurity states, optical spectra studies 7−105468
HgCdTe-Ti interfacial reactions, $TiTe_x$ form., Hg and Cd depletion, photoelectron spectra study 7−118279
InP:Ti, donor levels, elec. and optical props. 7−105470
InP:Ti, impurity states, optical spectra studies 7−105468
InP:Ti,Hg, growth and charactn. 7−125950
LiF:Mg, Ti TLD chips, annealing effects 7−107257
LiF:Mg, Ti thermoluminesc. efficiencies at high laser heating rates 7−93940
LiF:Mg, Ti-TLD, automatic method for evaluating elapsed time between irrad. and readout 7−87210
LiF:Mg,Ti, alpha particle thermolum. dose response, microdosimetric track interaction model 7−87239
LiF:Mg,Ti, defect complexes, annealing effects, thermolum. study 7−119057

titanium continued
LiF:Mg,Ti, thermostimulated luminescence, activation energy and freq. factor 7−132349
LiF:Mg,Ti,O, thermostimulated luminescence and photoluminescence 7−132351
LiF:Mg,Ti hot-pressed thin layer detectors for integrating dosimeters, dosimetric props. 7−93952
LiF:Mg,Ti TLD, computerised glow curve deconvolution technique 7−93946
LiF:Mg,Ti TLD materials, props 7−93951
LiF:Mg,Ti TLD phosphor, dosimetric charact. 7−93953
LiF:Ti, thermoluminescence peak anal. 7−125812
LiF:Ti crystals, thermolum. glow curve peaks, interstitial vacancy recomb. 7−85861
$LiNbO_3$ Ti-indiffused optical waveguide fabrication, Ti implantation, shallow perturbation 7−136633
$LiNbO_3$:Ti, H combined optical and acoustic strip waveguides for efficient collinear acousto-optical interactions 7−136620
$LiNbO_3$:Ti, MgO TE-TM mode convertors 7−117353
$LiNbO_3$:Ti, positive index waveguide fabrication by ion implantation 7−69786
$LiNbO_3$:Ti, TEM study of struct. faults 7−69696
$LiNbO_3$:Ti, Ti diffusion effect on refractive index profile *(Korean)* 7−144003
$LiNbO_3$:Ti, Ti-diffused struct. faults 7−69717
$LiNbO_3$:Ti channel waveguides, z-axis oriented, optical damage effects 7−90791
$LiNbO_3$:Ti channel waveguides, optical parametric fluorescence 7−103898
$LiNbO_3$:Ti channel waveguides, optical mode intensity meas., two dimens., comparison with numerical calcs. 7−104051
$LiNbO_3$:Ti electro-optically tunable narrowband wavelength filter 7−97177
$LiNbO_3$:Ti electro-optic waveguide switch, optical intensity modulation to 40 GHz 7−117305
$LiNbO_3$:Ti graded index waveguide 7−136523
$LiNbO_3$:Ti guided wave devices, reliability considerations 7−141989
$LiNbO_3$:Ti integrated optic strip waveguide phase modulator driven by SAW 7−82767
$LiNbO_3$:Ti integrated-optical absorbers 7−136607
$LiNbO_3$:Ti Mach-Zehnder interferometer, frequency dispersion charactn. *(German)* 7−136535
$LiNbO_3$:Ti modified 1×2 directional coupler modulator with low drive voltage 7−90768
$LiNbO_3$:Ti nonblocking 4×4 switch array for optical switching system 7−136617
$LiNbO_3$:Ti optical waveguide form. by CO_2 laser annealing 7−90795
$LiNbO_3$:Ti optical waveguides, wavelength dispersions as function of diffusion parameters 7−110565
$LiNbO_3$:Ti optical waveguides, Ti conc. inhomogeneities, electro-optical charact. 7−136513
$LiNbO_3$:Ti single-mode waveguide crossings and switches, design rules and appls. 7−104046
$LiNbO_3$:Ti travelling wave interferometer modulator for instrument appls. 7−90769
$LiNbO_3$:Ti travelling wave interferometric modulator, 1.3 μm, low insertion loss 7−103960
$LiNbO_3$:Ti waveguide, reflection mode integrated optical Fabry-Perot modulator 7−136502
$LiNbO_3$:Ti waveguide with SiO_2 film coating, oscillatory optical bistability in Mach-Zehnder interferometer 7−68763
$LiNbO_3$:Ti waveguide interferometric modulators, charact. *(Chinese)* 7−75110
$LiNbO_3$:Ti waveguide technology and devices 7−90790
$LiNbO_3$:Ti waveguide bends for integrated optics 7−103979
$LiNbO_3$:Ti waveguide mode control via fingering of Ti strips 7−136530
$LiNbO_3$:Ti waveguide modulators, props. 7−142048
$LiNbO_3$:Ti waveguides with suppressed Li_2O outdiffusion, props. 7−68842
$LiNbO_3$:Ti waveguides, high index low loss, fabrication 7−82785
$LiNbO_3$:Ti waveguides, planar, photorefraction 7−90788
$LiNbO_3$:Ti waveguides, proton exchanged, parametric oscill. numerical model 7−103896
$LiNbO_3$:Ti waveguides, SHG, phase matching via periodic structures 7−103897
$LiNbO_3$:Ti waveguides, photoinduced TE-TM mode conversion 7−130333
$LiNbO_3$:Ti waveguides, implantation and integrated optical devices 7−136626
$LiNbO_3$:Ti waveguides, refr. index step induced by wet atm. diffusion 7−136634
$LiNbO_3$:Ti:MgO waveguides, bend loss reduction through double diffusion 7−117351
$LiNbO_3$:Ti-InGaAsP narrow-linewidth electro-optically tunable extended cavity laser 7−123037
$LiNbO_3$:Ti(H^+) optical waveguides, refractive index profiles 7−123279
$LiNbO_3$:Ti directional coupler polarisation splitter, design, operation and charact. 7−97178
$LiNbO_3$:Ti, ion-implanted, solid-phase epitaxy, optical waveguide fabrication 7−97132
Nb_3Sn:Ti in-situ wire, effect of Ti additions 7−131976
Nb_3Sn:Ti wires fabricated by internal Sn diffusion method, Ti addition effects 7−131953
Ni-Ti, ion bombardment induced amorphisation, cross-sectional TEM studies 7−111697
Si:P(As)/Ti interface disilicide form., growth rate dopant conc. depend., depth profiling, sheet resist. and TEM studies 7−118173
Si:Ti^+, ion implanted, stresses and radiation damage 7−142848
Si-Ti, silicide formation, surface extended energy loss fine struct. and extended appearance pot. fine struct. studies 7−143112
Si-Ti diffusion couples, $TiSi_2$ form. and Si loss via SiO sublimation 7−118073
SiC-Ti, effects of N_2^+ and Ar^+ implantation on atomic mixing and hardness 7−137421
Ta-Ti, sandwich film, H_2 depth profiles, by $^1H(^{15}N,\alpha\gamma)^{12}C$ reaction 7−98218
Ti, D ion implanted, fusion material, accumulation and desorption, exptl. study 7−131451
Ti, DC magnetron sputtering, pumping speed influence on V-A charact. 7−100058
Ti films on nonwetted sapphire, laser produced bond percolators, surface free energy 7−98667
Ti ions, beam-foil spectra, intercombination lines of Mg I-, Al I- and Si I-like ions 7−74748
titanium continued
Ti mask, phase diffr gratings fabricated by ion exchange, charact. 7−117304
Ti X, θ-pinch plasma, electron-impact excitation, spectral line intensities study 7−91286
Ti^+, $z^4D_{5/2}{}^0$ level, lifetime meas. 7−129649
Ti^{9+}, lifetime determ. beam-foil investig. 7−129664
Ti:Al_2O_3 laser, flashlamp pumped efficiency 7−68660
Ti:Al_2O_3 laser performance pumped by doubled Nd:YAG laser, cavity configs. 7−68661
Ti:Al_2O_3 laser pumped by a frequency doubled Nd:YAG laser 7−68662
Ti:Al_2O_3 sapphire laser crystal growth 7−77791
Ti:As-Si, silicidation by halogen lamp annealing, effect of As 7−99992
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti:sapphire laser material charact. 7−141868
Ti:sapphire lasers, tuning 7−82583
Ti:sapphire ring laser using acousto-optic modulator as electronically selectable unidirectional device 7−141978
Ti:sapphire tunable laser system evaluation 7−68659
Ti:sapphire tunable lasers for differential LIDAR 7−74981
Ti/Al bilayer microstruct., annealing and Cu addition effects, TEM study 7−98715
Ti/Co interface system, ion beam mixing, layer struct. and composition 7−76640
Ti/CoCr film/sublayer system, struct. and mag. props. 7−112905
Ti/$LiNbO_3$ interface, Ti diffusion and surface layer superstruct. form. 7−69989
Ti/Si, ion beam mixing, thermal oxidation studies 7−78359
Ti/Si interface, TiSi silicide form. by ion beam mixing 7−76641
Ti/Si sputtered multilayers, Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti/Si thin layer system, ion implantation and struct. 7−137419
Ti/Si:As silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
Ti/SiC(Si_3N_4) systems, high-energy ion beam mixing, TEM and RBS studies 7−98269
Ti-Al_2O_3 cermet, percolation model *(Chinese)* 7−91444
Ti-GaAs, interface movement, temperature dependent reaction 7−124732
Ti-MgO composite films, electron microscopy 7−70139
Ti-O, diffusion coeffs. of O *(Russian)* 7−111961
Ti-overlaid 4145 steel, N implanted, microhardness temp. depend. 7−113699
Ti-p-Si MIS diodes, Mott-Schottky characteristics, temp. dependence 7−112498
Ti-Si (111) interface, silicide formation, Schottky barrier formation 7−84404
Ti-Si system, silicide form. under thermal and laser annealing *(Chinese)* 7−105153
Ti-Si_3N_4, thin film reaction 7−86666
Ti-SiO_2, ion mixing at low temp., chemical effects 7−76499
Ti-SiO_2-Si system, silicide form. under thermal and laser annealing *(Chinese)* 7−105153
Ti-TiO_2, oxide films, growth and dissolution during laser-assisted combustion 7−78300
Ti-TiO_2, thermal oxidation of Ti, influence of anodic TiO_2 films 7−126300
Ti-TiO_2-electrolyte, electronic conduction 7−118584
Ti-$W_{60}N_{40}$ bilayer, thermal stability and N redistrib. 7−118174
Ti+$^3He^+$, inner-shell physics: application to K-shell ionization 7−96835
Ti+Ar^+, differential sputtering yields meas. 7−77725
Ti+C combustion, outgassing macrokinetics in reaction chambers 7−100571
Ti+Cl^{q+}, K to K electron transfer calcs. 7−122690
Ti^{19+}+H_2, electron reson. transfer and excitation 7−90409
TiH system, phase transformations at high press. 7−86166
TiO_2-Ti hot gas sprayed coatings, high-speed heat treatment, exam. of thermal conditions 7−125964
TiO_{2-x}, thin oxide coatings on Ti, photopolarisation studies 7−105612
YAG:Ti, optical transitions 7−85795

titanium alloys
see also titanium compounds
β-phase, adiabatic shearing at high strain rate *(Chinese)* 7−78098
$_{50}Ni_{10}Au_{40}$, martensitic transformations, shape memory effect 7−138744
AE, 3D source location, microcrack nucleation, inclusion breaking 7−132899
arc melt spinning, heat flow analysis 7−86088
beta phase, metastable precipitation during isothermal ageing *(Russian)* 7−78018
composite superconductors, phys. props., design and fabrication, book 7−108055
corrosion kinetics transient Tafel polaris. and decay 7−93168
electrospark alloying for improved corrosion resist. 7−144597
erosion by solid particles, laser meas. 7−106625
fatigue failure diagram, approx. of mean-amplitude section 7−78431
interface phase formation 7−100239
internal friction and elasticity modulus meas. method 7−132868
ion implantation, medical appl. 7−104788
ion implantation, wear, fatigue and oxidation resist., biomaterial appls. 7−138902
martensitic transformation induced by plastic deformation, multistage nature *(Russian)* 7−104982
martensitic transformations, computer simulation *(Chinese)* 7−71180
nitriding of α-, pseudo-α-, and α+β-type alloys, struct. form. 7−78345
OTEC systems, metallic materials for heat exchangers 7−86813
phase transitions exam. in single crysts. using X-ray diffr. method 7−132862
plastic deformation resistance of alloy VT16, effect of strain rate 7−113638
rapidly solidified, mechanical props. and potential applications 7−86302
shells with laminated polymer composites, energy dissipation in bending oscillations 7−110834
steel, grain boundary segregation of P 7−138748
steel machinability, effect of hard Ti alloy inclusions *(Spanish)* 7−86344
superalloy applications, chemical analyses and mechanical properties *(Spanish)* 7−86085
superalloy blade materials, low cycle fatigue, 700-1000°C 7−144539
surface, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7−144595
surface modification processes, HF nonequilib. discharge, theoretical exam. and special features of appl. 7−138885

ium alloys continued
thick hot rolled strip, mechanism of texture formation *(Russian)* 7−106530
Ti_3Cu, H absorption and solubility, thermodynamics 7−69911
$Ti_{50}Au_{50}$, martensitic transformations, shape memory effect 7−138744
(Ti,Hf,Zr)Be ternary alloys, glass forming range prediction 7−83734
Ti-Al-V, N-ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
wear resistance improvement by Fe electrodeposition followed by boriding 7−78347
weld joints, stress-strain state stability during ageing 7−126154
wrought, annealing temp. effect on resist. to low levels of plastic deform. 7−126152
$Y_2(Fe_{1-x}Ti_x)_{14}B$ alloys, magnetic and crystallographic props., comp. depend. study 7−125448
Al-Li-Ti, duplex precip. hardening, struct., mech. props. 7−138755
Al-Mg-Ti ternary phases, struct. investigation 7−117864
Al-Si-Ti, sputtered films, hillock, grain and cryst. orientation, substrate temp. depend. 7−137746
Al-Ti, rapidly quenched, microstruct. 7−119263
Al-Ti, rapidly solidified, microstruct. and thermal stability 7−92997
Al-Ti, sputtered films, hillock, grain and cryst. orientation, substrate temp. depend. 7−137746
Al-Ti, thermodynamics props., reviews 7−80197
Al-Ti-B, grain refinement rel. to B content 7−93040
Al-Ti-B, grain refining wires, metallographic prep. *(German, English)* 7−86529
Al-Ti-B, rapidly quenched, microstruct. 7−119263
Al-Ti-Bi, stressed solidification of Bi inclusions 7−100374
Al-Ti-C, cast grain refiners, prep., struct. 7−78068
Al-TiC, cast, dispersion hardening with high TiC content 7−106523
Al-TiC, dispersion hardened, cast, mech. hardening *(Russian)* 7−126134
Al_3Ti, plastic deform., 25-860°C 7−86290
B fibre reinforced Al-Ti composite-metal joint element failure in stress conc. conditions 7−71283
$Be_{37.5}Ti_{62.5}$ metallic glass, struct., X-ray and neutron diffr. 7−97962
Co-Ni-Ti-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Co-Ti amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Ti amorphous thin films, mag. anisotropy, domain struct. 7−112914
Co-Ti powders, amorphous, mechanically alloyed, form. and consolidation 7−113474
Co-Ti-Nb (3 2 wt.%), dil. ternary alloy, discontinuous precip. 7−144408
$Co_xNb_yTi_z$-SiO_2 double layered mag. films, domain wall structs. 7−99529
Co_3Ti single crysts., plastic flow under compression, temp., orientation and comp. depend. 7−119307
$Co_{86}Ti_{14}$, soft ferromag. amorphous thin films, with induced uniaxial anisotropy, nucl. signal enhancement 7−92549
$Co_2TiAl(Ga,Sn)$, Heusler alloys, mag. hyperfine fields 7−118434
Cr-Co-Ti-V-Si-Fe, microstruct. and superplasticity *(Russian)* 7−71238
$Cr_{40}Ti_{60}$ spontaneous vitrification during low temp. furnace annealing 7−117824
Cu-Al-Ni-Ti, shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7−126109
Cu-Al-Ni-Ti shape memory alloys, grain refined, X-phase struct. and comp. 7−86192
Cu-NbTi interface, proximity-effect-induced superconductivity at millikelvin temperatures 7−77166
Cu-Sn-Ti-Ni system, struct. form. mechanism in sintering, contact interaction of Ti-Ni and Cu-Sn 7−119200
Cu-Ti, amorphous, short range order, bond energy, charge transfer model 7−97943
Cu-Ti, amorphous alloys, crystn. 7−83747
Cu-Ti, electron irradiation, dislocation loop kinetics 7−98155
Cu-Ti, modulated structures, X-ray side band profiles 7−69661
Cu-Ti, sintered precipitation hardening, prep. and characteris. 7−78038
α-Cu-Ti alloys, electron irrad.-induced spinodal decomp. study 7−104843
Cu-Ti amorphous alloys, Hall effect and resistivity 7−131810
Cu-Ti metallic glass electrode system, thermodynamic fn. evaluation 7−143050
Cu-Ti system, laser irrad., nucleation temp. modelling 7−86160
Cu-Ti system, melt spun ribbon, glass forming ability 7−83737
Cu-Ti-Al-Ni, adhesion active alloys, interaction with synthetic diamond 7−132903
Cu-Ti-Zr, Cu-Ti alloys, glass form., competing cryst. structures 7−83738
CuNbTi superconds., fabrication by hot extrusion and high-field props. study 7−132516
CuTi alloys, TiH_2 aggregate form., fractal struct., neutron scatt. obs., comment and response 7−137571
CuTi, amorphous, low temperature elec. resist., quantum corrections 7−98964
CuTi amorphous alloys, Hall effect, temp. depend. 7−98990
Cu_3Ti, phase changes, X-ray diff. and pseudopots. investig. 7−142980
$Cu_{35}Ti_{65}$ metallic glasses, crystalline particles, deform.-induced amorphisation 7−111417
$Cu_{50}Ti_{50}$, amorphous, melt spun, radiation damage, short range ordering, elec. resist. 7−104845
$Cu_{50}Ti_{50}$ amorphous alloy, XPS study 7−85962
$Cu_{50}Ti_{50}$, amorphous struct., neutron- and X-ray diffr. study 7−91454
$Cu_{64}Ti_{36}$, amorphous alloys, thermally embrittled, restoration of ductility under neutron irrad. 7−78092
$Cu_{67}Ti_{33}$ metallic glass, struct. relax., crystallisation, elastic modulus, internal friction 7−106568
$CuTiH_x$ metallic glasses, struct., neutron diffr. studies 7−142642
Fe-Al-Mo-Ti-Si, DO_3 superlattice transition temp. rel. to comp. 7−113546
Fe-Al-Ti, hot ductility, S segregation, Ti additions effect 7−78132
Fe-Al-Ti, phase relations, transform. temps., microstruct. 7−92959
Fe-Cr-Ti-Mo, ferritic, creep, precip., strengthening intermetallic phase, high temp. appls 7−138803
Fe-Fe_2Ti system, transient liq. phase sintering, strength, elongation 7−77864
Fe-Ni-Al-Ti semi-hard mag. alloy, precipitation phases during tempering *(Chinese)* 7−126119
Fe-Ni-Cr-Ti, welded joints, heat treatment and HAZ props. 7−78074
Fe-Ni-Ti, aging alloy, martensite to austenite transform. 7−106507
Fe-Ti, grain boundary segregation of P 7−138748
Fe-Ti (0.5 wt.%), H-dislocation interaction, internal friction meas. 7−76195
Fe-Ti alloys, Ti carbonitride precipitated grain inclusions, elemental distrib. studies 7−86178

titanium alloys continued
Fe-Ti amorphous and crystalline alloys, elec. and mag. props. 7−84820
Fe-Ti films, amorphous, compositionally modulated, struct. relax. and interdiffusion 7−111934
Fe-Ti films, hydrogenated multilayer, ion beam mixing, Rutherford backscatt. obs. 7−104862
Fe-Ti liquid alloys, high temp. viscosity meas., oscillating viscosity isotherm pattern obs. *(Russian)* 7−91869
Fe-Ti powders, amorphous, mechanically alloyed, form. and consolidation 7−113474
Fe-Ti-P rapidly quenched glassy alloys, corrosion resistance, effect of P 7−86489
$Fe_xM_{70-x}Ti_{30}$, (M=Co, Ni, Cu) amorphous alloys, enhanced magnetism on Fe substitution 7−112851
$Fe_{0.9}Mn_{0.1}Ti$, H storage alloys, absorptive behaviour 7−126660
$Fe_{0.8}Ni_{0.2}TiH_{1.24}$, H diffusion, Mossbauer studies 7−84362
$Fe_{1-y}Ni_yTiH_x$, H-diffusion, Mossbauer spectroscopy study 7−118162
FeTi activated powders, H absorption, Mossbauer spectra studies 7−118272
FeTi, activated surface layers, H_2 absorption, conversion electron Mossbauer spectroscopy 7−99621
FeTi, activation for H absorption 7−105045
FeTi alloy, XPS anal. for activation for H_2 uptake 7−86836
FeTi, β X-ray excitation, chem. anal. technique 7−119608
FeTi, H storage alloys, absorptive behaviour 7−126660
FeTi, heat of hydride formation, rel. to density of states and Fermi level 7−98470
FeTi, muon trapping at substitutional impurities, μSR study 7−113053
FeTi-H, H profiling, nuclear reaction anal., $^{15}N(^1H, ^4He)^{12}C$, 4.43 MeV γ rays 7−105047
$Fe_{1-x}Ti_x$, amorphous alloys, prod. by vap. quenching, thermal stability 7−83671
$Fe_{50}Ti_{50}$, ion beam mixed surface alloy on stainless steel, N implantation, unlubricated friction and wear 7−126277
$Fe_{80-x}Ti_xB_{20}$, amorphous alloys, Curie and crystallization temps. 7−132012
$\alpha Fe_{0.94}TiCe_{0.06}H_{0.03}$, neutron diffr. study of cryst. struct. 7−83845
$FeTiH_x$ and $FeTi_{1.15}H_x$, hydriding behaviour, ease of activation, β-phase skipping 7−98469
$Fe_{73}Ti_{27}H_x$ amorphous alloys, mag. props., Mossbauer studies 7−143942
MO-TiC, highly dispersed composite material, plasmochemical prep., thermodynamic analysis 7−132531
Mg-Ti, mechanical alloying, for hydrogen storage 7−93542
Mo-TiC eutectic composite, lamellar struct. stability under low vacuum at high temps. 7−144621
Nb-Ti, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Ti (46.5 wt.%), precip. at low strains, two-phase region, critical current rel. to heat treatment 7−131316
Nb-Ti alloys, nanometer scale structs., development, influence on supercond. critical current density 7−131949
Nb-Ti alloys, superconductivity and structural instability study 7−105008
Nb-Ti cable-in-conduit conductor, stability, expt. results for magnet coils 7−135573
Nb-Ti composite superconductors, critical current densities 7−85214
Nb-Ti fibres, short sample training behaviour, 4.2 K 7−86376
Nb-Ti filamentary spirals, elec. field and crit. current 7−85216
Nb-Ti fine filament superconductors in Cu-Ni matrix, AC losses 7−138165
Nb-Ti multifilamentary superconductors, current densities, spacing effects 7−85215
Nb-Ti multifilamentary superconductors, review 7−99359
Nb-Ti multifilamentary superconductors, current density improvement 7−125284
Nb-Ti short sample superconducting fibres, mechanical behaviour 7−86377
Nb-Ti superconductors, supermagnet materials, review 7−99358
Nb-Ti two-phase composite superconds., critical temp. suppression, proximity effects study 7−131830
Nb_3Sn-Ti composite supercond. wires, new fabrication process, and props. 7−132519
Nb_3Sn-Ti-Cu multifilamentary conductors with high-field critical values 7−131954
Nb_3SnTi multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7−131956
Nb_3SnTi superconds., fabrication by hot extrusion and high-field props. study 7−132516
Nb_3Sn(Ti) superconductor for 21 Tesla fields, powder metallurgy 7−131955
NbTe-Ge multilayers, superconductivity in weakly localised regime 7−112591
NbTi alloys, enhanced upper critical fields 7−77178
NbTi film for mag. shield, thickness depend. of screened mag. fields 7−77147
NbTi fine filament superconductors, anomalous low field magnetization 7−131882
NbTi fine filament superconductors, fabrication techniques 7−132521
NbTi, forced-flow cooled coil, IFSMTF tests for Large Coil Task program 7−129390
NbTi, high field superconducting coils for Mirror Fusion Test Facility 7−129393
NbTi multifilamentary superconducting coil, loss meas. 7−77159
NbTi multifilamentary superconductor, critical current rel. to axial stress 7−131963
NbTi strands extracted from coreless Rutherford cables, electromechanical props. 7−131964
NbTi, supercond. magnet, full array Large Coil Task tests 7−129387
NbTi supercond. wires, fractography and mech. props. at cryogenic temps. *(Japanese)* 7−113687
NbTi superconducting composites, very high current density, effect of heat-treatment temp. 7−131965
NbTi superconductor, flux-pinning, subboundary struct. effects 7−105869
NbTi superconductors, ultra-fine filament, AC losses 7−131967
NbTi ultrafine filamentary supercond. wires, AC losses calc. 7−131946
NbTi ultrafine filament superconductors for SSC, prototype fabrication 7−138171
NbTi-Cu, cryostatic stability of miniaturized composite conductors 7−131961
NbTi-Cu cable-in-conduit conductors, stability at short heat pulse duration 7−77185

titanium alloys continued
NbTi-Cu composite superconducting properties characts and struct. 7—131962
NbTi-Cu multifilamentary superconductor, electrical and magnetic props. below T_c 7—77143
NbTi-Cu multifilamentary superconducting wire, AC losses 7—77161
NbTi-Cu superconducting composite wires with fine filaments, supercond. props. 7—131966
NbTi-Cu superconductor, Al-stabilised, for use in large magnets 7—77169
$Nb_{0.53}Ti_{0.47}$-Ge multilayers, disordered, anisotropic upper crit. fields 7—143732
$Nb_{0.8}Ti_{0.2}$, ion implanted He porosity and supercond. props. *(Russian)* 7—99243
$Nb_{21}Ti_{79}$ temp. dependence of resistivity above 20 T 7—105531
$Nb_{0.5-x}Ti_{0.5-x}Fe_{2x}$, supercond. critical temp. and upper critical fields 7—77179
$Nd_{2-x}Ti_xFe_{14}B$-based system, magnetisation, Curie temp. and anisotropy 7—138218
$Nd_{1.9}Ti_{0.1}Fe_{12}Co_2B$, mag. props., material for permanent magnets 7—118830
Ni-Be-Ti, β-phase dissoln., influence of soln. treatment *(Chinese)* 7—71186
Ni-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7—119428
Ni-Ta-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7—119428
Ni-Ti, amorphous phase crystallisation by ion-implantation 7—91616
Ni-Ti, phase transform., in situ TEM obs. 7—77997
Ni-Ti, rapidly quenched shape memory alloys 7—86162
Ni-Ti, shape memory alloy, appl. 7—126108
Ni-Ti, shape memory effect, stepwise phase transform. *(German)* 7—100224
Ni-Ti, thermal cycling, precip., martensitic transform. 7—113560
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7—113553
Ni-Ti films, hydrogenated multilayer, ion beam mixing, Rutherford backscatt. obs. 7—104862
Ni-Ti mechanically alloyed amorphous powder, thin foil prep. and TEM obs. of amorphisation 7—144332
Ni-Ti powder, amorphous, mechanically alloyed, form. and consolidation 7—113474
Ni-Ti-B glassy alloys, crystn. kinetics and mechanism rel. to eutectic comp. 7—131038
Ni-Ti-C mechanical props. and struct. modifications w.r.t. pulsed ion beam effects 7—117988
Ni-Ti-TiB_2 coatings, sputtered, erosion resist. rel. to comp. and process parameters 7—132764
Ni-TiC-MC system, M=Zr, Hf, Nb or Ta, phase equilib. 7—100180
Ni_3(Al,Ti), mixed mode fracture, {111} cracking 7—78222
Ni_3(Al,Ti) single crysts., flow stress rel. to strain rate *(Japanese)* 7—100290
Ni_3(Al, Ti) single crysts., high temp. yielding *(Japanese)* 7—126173
Ni_3Si-Ti, intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7—126170
NiTi alloy, two-stage yielding 7—78134
NiTi coating on Ti, wear resist. 7—132761
NiTi, superplastic, stress-induced transform. *(Chinese)* 7—78003
NiTi, wear resistance following light interstitial implantation 7—126254
$Ni_{35}Ti_{65}$, amorphous, H diffusion, NMR relax. rates 7—105145
$Ni_{35}Ti_{65}$ metallic glass, short range and stress-induced directional ordering phenomena 7—98441
$Ni_{33}Ti_{67-x}V_x$ alloys, amorphous, stability and elec. transport props. 7—104571
Pd-Ti, atomic short-range order, investig. by diffr. methods 7—142703
Pt-Ti alloys, form. by high-temp. reduction of Pt:TiO_2 catalyst 7—71479
Pt_xTi, ordering phenomena, electron diffr., high resolution electron microscopy 7—138740
SiC fibre reinforced Ti-Al-V alloy, TiC and TiN interlayers effect on reaction zone *(German)* 7—92935
Te-Er_2O_3, prod. of ultrafine rare earth oxides by rapid solidification 7—92926
α-βTi alloys, high temp. ductility losses, model 7—86289
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7—86283
Ti alloys with group IIIB and IVB metals, thermodynamic props. 7—124556
Ti-6Al-4V alloy for anatomic hip prostheses, cast and heat treated, fatigue props. 7—145276
Ti-Al, α-phase, deform. and failure in strong mag. fields, 293 to 4.2 K range 7—93052
Ti-Al, oxidation, O dissolution rel. to alloying elements, microhardness 7—86422
Ti-Al, thin film reaction couples, interconnect fabrication 7—118318
Ti-Al, thin film system, diffusion coeffs., 773-923 K *(Russian)* 7—143079
Ti-Al (W)(Sn)(Ge)(Si)(Ni), oxidation, effect of alloying 7—106665
Ti-Al (4 wt.%), phase comp. change under nonequil. stress field 7—126127
Ti-Al (7.5 wt.%), deform. mode rel. to injected He 7—119316
Ti-Al alloys, attempted mag. transition obs., sound rel. and elec. resist. temp. depend. meas. 7—118808
Ti-Al-Cr-Mo, complex iron boride coatings, improved wear resist. 7—78347
Ti-Al-Cr-Mo, VT3-1, yield stress dependence on surface layer thickness 7—78370
Ti-Al-Cr-Mo VT3-1 alloy, surface props. and endurance limit 7—113707
Ti-Al-Cr-Mo VT3-1 alloy, fatigue failure model with account of anomalous surface props. 7—113708
Ti-Al-Cr-Mo VT3-1 alloy, lamellar struct. parameters effect on mech. props. *(Chinese)* 7—126225
Ti-Al-Cu pseudo-α PT3V alloy, deep cooling effect on low-cycle fatigue 7—113709
Ti-Al-Mo, $\alpha+\beta$, substruct. changes during hot working 7—78067
Ti-Al-Mo-Cr two-phase alloy, struct. after deformation and annealing *(Russian)* 7—71235
Ti-Al-Mo-Zr, superplastic deform., stress induced H diffusion 7—132686
Ti-Al-Nb, as-cast and deformed samples, dislocations 7—124274
Ti-Al-Nb, ordered β phase, atom site occupation, channelling enhanced micro-analysis 7—98045
Ti-Al-Sn, beta processed Ti5331s notched specimens, prediction of stress rupture life 7—132735

titanium alloys continued
Ti-Al-Sn-Zr-Mo, O solid solns., microhardness and lattice parameter calibrations 7—138830
Ti-Al-Sn-Zr-Mo-Si, Ti-6242s, ion irrad., phase transform. 7—69775
β-Ti-Al-V, α precip., obs. of superledges formed on sideplates 7—144421
Ti-Al-V, component surface condition effect on working capacity after annealing in different atm. 7—126309
Ti-Al-V, dislocation velocity-stress exponents, effect of H *(Chinese)* 7—132657
Ti-Al-V, for porous-coated implant devices, post-sintering treatment effect on mech. props. 7—86254
Ti-Al-V, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7—144595
Ti-Al-V, optimising conditions for deform. in order to increase mech. props. 7—106541
Ti-Al-V, stress relax. and notch fatigue 7—144550
Ti-Al-V, struct. form. in nitrided layers 7—78345
Ti-Al-V, suitability of ion-plated metallic coatings at fretting fatigue loads *(German)* 7—126326
Ti-Al-V (6, 4 wt.%), H induced cracking rel. to microstruct. *(Japanese)* 7—119346
Ti-Al-V (6, 4 wt.%), short surface fatigue crack propag., microstructural barriers 7—100384
Ti-Al-V (6,4 wt.%), Al ion irrad., rad-induced precip. 7—69776
Ti-Al-V (6,4 wt.%), ion implantation, tribological props. 7—119380
Ti-Al-V (6,4 wt.%), strain reduced hydride, crack propag., TEM obs. 7—78221
Ti-Al-V (6,4 wt.%), superplastic, post-forming tensile props. 7—100302
Ti-Al-V (6,4 wt.%), superplastic deform., photoemission electron microscopy 7—113823
Ti-Al-V (6,4 wt.%) creep behaviour at room temp., effect of H 7—126191
Ti-Al-V alloy stem, bio-composite advanced material research and development, artificial hip joint appl. 7—133506
Ti-Al-V solution-treated alloy, microstruct. charact. 7—138747
Ti-Al-V VT6 alloy, threshold stress intensity factors determ. from fatigue tests using R-criterion *(Chinese)* 7—126365
Ti-Al-V/polyethylene tribological couple, wear behaviour, effect of metal surface prep. and N implantation 7—79139
Ti-Al-V-Mo, hot rolled, annealing induced texture, softening *(Russian)* 7—113565
Ti-Al-V-Sn, rapidly solidified, consolidation by hot pressing 7—86083
Ti-Al-V-Zr, fractal charactn. of fractured surfaces 7—113648
Ti-Al-Zr, annealing, cryst. struct., hardness *(Japanese)* 7—93078
Ti-Al-Zr, dwell sensitive fatigue, microstruct., creep 7—86350
Ti-Al-Zr, surface crack front change kinetics in axially symmetric bending 7—100364
Ti-Al-Zr-Mo-Si, low cycle fatigue rel. to silicide precip. 7—100371
Ti-Al-Zr-Mo-Si, near-alpha, dwell-sensitive fatigue 7—119340
Ti-Al-Zr-Mo-Si-based alloys, α_2 phase precipitation and embrittlement *(Russian)* 7—144405
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7—100307
Ti-Al-Zr-W system, phase equilib. 7—86131
Ti-Al-Zr-W system, phase equilib. of Ti-rich alloys 7—100181
Ti-Al(-V)(-Zr), high strength, fatigue behaviour at elevated temps. 7—113722
Ti-Au-Al ternary system, phase relationships at 775 K 7—119239
Ti-base alloys, rapid solidification, current status 7—126090
Ti-base alloys containing Er and C, rapidly solidified, microstruct. and props. 7—119264
Ti-C, C redistrib., effect of pulsed laser rad. 7—69755
Ti-C, metal-graphite systems, eutectic temps. in metal-rich regions 7—100186
Ti-Cr, oxidation, O dissolution rel. to alloying elements, microhardness 7—86422
Ti-Cr alloys, irradiation-induced phase transformation, cascade-driven structural interface migration 7—111681
Ti-Cr disordered alloys, electronic phase transition and lattice props. anomalies 7—85021
Ti-Cu, amorphous alloys, electronic density of states 7—92055
Ti-Cu, porous, state of sintering, diffusion microstructure *(Japanese)* 7—126045
Ti-Er, thermal stability of Er_2O_3 when annealed above α/β transus 7—119297
Ti-Fe disordered alloys, electronic phase transition and lattice props. anomalies 7—85021
Ti-H solid solns. at 673 K, bulk modulus, relation with electronic struct. 7—98295
Ti-H system, thermodynamic anal. 7—131334
Ti-Hf alloys, interdiffusion in BCC β-phase *(French)* 7—143110
Ti-Mg pseudoalloys, H capacity and sorption kinetics 7—78362
Ti-Mn, fracture surfaces during tensile separation, investig. of unusual features caused by adiabatic shear 7—144551
Ti-Mn, two-ductile phase alloys, stress-strain behaviour 7—78121
Ti-Mo, anodic dissolution in H_2SO_4, ageing, ω-phase form. effect 7—126283
Ti-Mo, dislocation velocity-stress exponents, effect of H *(Chinese)* 7—132657
Ti-Mo (30 wt.%), plastic deform. in BCC alloys induced by H conc. gradients 7—113632
Ti-Mo alloy, as-quenched omega-phase, structure, HREM studies 7—124169
Ti-Mo alloy wire, outgassing evaluation using quadrupole mass spectrometer 7—134751
Ti-Mo-Cr, rolled sheets, texture and struct., β to α transform. 7—144432
Ti-Mo(Nb), internal friction spectrum in β-phase caused by impurities, effect of nitrogenation 7—100271
Ti-N-H solid solutions H and N localisation, vibr. freqs. *(Russian)* 7—137314
Ti-Nb alloys, cold deform. mechanisms 7—86256
Ti-Ni, deform., fracture, electron microscopy obs. *(Russian)* 7—113659
Ti-Ni, temp. spectra of internal friction and shear modulus, effect of pre-annealings 7—100278
Ti-Ni (52 at.%), aged, Ti_2Ni_3 precipitates, phase transform. 7—100232
Ti-Ni (5.5 wt.%), rapidly solidified microstruct. and precip. 7—93001
Ti-Ni alloy wire, pseudoelastic, basis of displacement sensor 7—140685
Ti-Ni composite powders, state of sintering by eutectic reaction *(Japanese)* 7—138706
Ti-Ni single crystals, martensitic transform., crystallography 7—119269
Ti-Ni-Cu, amorphous alloys, thermal devitrification kinetics 7—131049

anium alloys continued
Ti-Ni-Fe (44, 1 wt.%), phase transform., internal friction, elec. resist., 190-300 K 7−86169
Ti-Ni-Mo system, phase equilib. investig. at 1200°C 7−86130
Ti-Pd, rapidly quenched, comparison with form. by mech. alloying 7−113476
Ti-Si, ion implanted, thermal oxidation studies 7−78359
Ti-Si, oxidation, O dissolution rel. to alloying elements, microhardness 7−86422
Ti-Si, solid solns., itinerant antiferromagnetism, mag. susceptibility meas. 7−138198
Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti-Si-Al, low-energy ion bombardment-induced preferential sputtering, statistical model calcs. 7−77732
Ti-Sn-La, rapidly solidified, second phase coarsening 7−93024
Ti-Ta-Si, silicide formation with codeposited Ti-Ta alloys 7−131372
Ti-Te, liq., electrical conductivity 7−84808
Ti-transition metal alloys, mechanically alloyed, glass form. 7−142643
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
Ti-V-Cr-Al, metallurgical condition effect on creep behaviour at 650°C 7−119313
Ti-V-Cr-Al (13,11,3 wt.%), cold working, ageing, ductility and strength 7−78041
Ti-V-Cr-Al (13,11,3 wt.%), fracture behaviour study with in-situ obs. of SEM and AE simultaneous meas. *(Japanese)* 7−78152
Ti-V-Cr-Al-Sn (15,3,3,3 wt.%), hot-rolled, mech. props., microstruct. 7−78153
Ti-V-H system, struct., phase diagram, H solubility, band struct. 7−77946
Ti-W/Si(100) interface, Schottky barrier height 7−112427
Ti-Y-Y_2O_3, oxide-dispersion hardened alloys, prep. by rotating electrode process 7−77869
Ti-Zr, oxide scale, lamellar morphology, comp. 7−86437
Ti-Zr-B ternary amorphous alloys, preparation by single-roller melt-spinning 7−119194
Ti-Zr-Be metallic glasses, amorphous phase separation, re-evaluation 7−91466
TiAl alloy, electronic struct. and atomic ordering, LMTO and CPA calcs. *(Russian)* 7−76750
TiAl, cleavage fracture mechanism, dislocation reactions 7−86349
TiAl, crystn., heat treatment, struct., phase comp. 7−144440
TiAl, microalloyed with N and W, microstruct., heat treatment, compressive strength 7−138788
TiAl, rapidly solidified, microstruct. development 7−86158
TiAl single crystals, deform. at 77 K, dislocation struct. 7−83963
Ti_3Al, as-cast and deformed samples, dislocations 7−124274
Ti_3Al, intermetallic cpd., dissoc. of superdislocations 7−83964
Ti_3Al-Nb, intermetallic compounds, prod. from powders, struct., props. and pot. appls. 7−126170
$TiBe_2$, low temp. transport props., single component Fermi liquid theory 7−137897
$TiBe_2$, spin fluctuations, heat capacity, mag. and elec. props. 7−125407
$Ti_{50}Be_{40}Zr_{10}$, amorphous, phase separation and loss of ductility 7−91827
$Ti_{50}Be_{40}Zr_{10}$, thermal expansion, 20-400 K 7−98525
TiC-NbC-TaC-WC-Co cemented carbide, gamma phase layer form., growth kinetics and microstruct. rel. to sintering atmosphere 7−77929
TiC-Ni hardmetals, CVD of Ti_xC layers 7−132485
TiC-NiMo cermet, wear surface, ion mixing modified, Auger electron spectroscopy 7−112033
TiC-steel-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7−93110
TiC-TiNi hard alloy with B addition, inelastic props. determ. by US pulsed method 7−78090
TiCo, electronic struct., mag. props. *(Russian)* 7−98793
$Ti_4Co_7Ge_6$ cryst. struct., magnetic suscept. temp. depend. and elec. resist. meas. *(Russian)* 7−92401
$TiCoH_x$, struct., electronic props., comparison with $TiFeH_x$, X-ray diffr., PMR meas. 7−98772
Ti_2Cu, H(D) absorpt., X-ray and neutron diffr. studies 7−84283
TiCuGe, cryst. struct., X-ray diffr. study 7−98036
$Ti_{61}Cu_{23}Ni_{16}$, metallic glasses, struct. changes 7−91467
$Ti_{62.5}Cu_{12}Ni_{23}Si_{2.5}$, metallic glasses, struct. changes 7−91467
$Ti_{62}Cu_{33}P_5$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7−144615
TiFe amorphous alloy thin films, heat treatment effects 7−95693
TiFe, oxidised layers, semiconductor photoelectrodes, surface composition and topology 7−98646
TiFe-misch metal, hydrogen storage material, surface props. 7−98647
Ti_xFe_{100-x} thin films, H_2 storage charact. *(Japanese)* 7−71657
$TiFeH_x$, struct., electronic props., comparison with $TiCoH_x$, X-ray diffr., PMR meas. 7−98772
TiH_x, Compton profiles 7−77676
TiH_x, tracer diffusion coeffs. for H, NMR spin echo meas. 7−84360
Ti_3Ir, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7−76333
TiMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
$TiMn_2$, Laves phase, electron density and struct. determ. 7−124172
Ti_xMn_{1-x} alloys, magnetic transition, elec. resist. and independent electron subsystem states, conc. depend. meas. 7−70549
$Ti_{80}Nb_{10}V_{10}$, temp. coeff. of resist., β-phase decomp. effect 7−106517
TiNi alloy, cold working, heat treatment, phase transform., DSC obs. 7−71184
TiNi, alloyed, shape memory effect and martensitic transform. *(Chinese)* 7−126115
TiNi alloys, elastic energy dissipation and acoustic emission 7−118039
TiNi compositionally modulated film, sputtering press., effect on structure and solid state reaction 7−100063
TiNi, electronic struct. close to martensitic transform. point *(Russian)* 7−126113
TiNi films, ion mixing on glass substrates 7−69781
TiNi, ion bombard., amorphisation kinetics 7−104866
TiNi, martensitic transformations, computer simulation *(Chinese)* 7−71179
TiNi, powdered, inert additions effect on superelastic behavior 7−119196
TiNi, shape memory alloys, near-equiatomic, precip. processes, TEM studies 7−144410

titanium alloys continued
TiNi, synthesis, struct. and mech. props. 7−111903
TiNi-TiPd intermetallic compound system, valence band evolution and structural instability 7−84659
$Ti_{49.5}Ni_{48}Cr_{2.5}$, phase transform., TEM study 7−126116
$Ti_{0.5}Ni_{0.5-x}Cu_x$, martensitic transformations, sound emission studies *(Russian)* 7−100219
TiNiFe, martensitic alloys, structural transformations and phonon anomalies 7−144400
$Ti_{60}Ni_{36}P_4$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7−144615
$Ti_{70}Ni_{25}Si_5$, metallic glass, electron phenomena before and after crystallisation 7−125847
$Ti_{75}Ni_{20}Si_5$ alloys, amorphous and crystalline, acid corrosion 7−100444
TiNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7−98983
Ti_xW_{1-x} films, diffusion barriers against Al-Si interdiffusion 7−118337
Ti_xW_{1-x}/Si contacts, barrier height and contact resistance 7−118585
TiZr alloy mag. props., Fermi level shift, mag. suscept. meas. 7−99420
U-Ti (0.75 wt.%), depleted, determ. of dynamic elastic moduli as function of temp. by piezoelec. US composite oscillator technique 7−113596
V-5Ti, tensile props, he and neutron irrad. effects 7−141274
V-Cr-Ti, D permeation and reemission rates meas. in fusion power device 7−74045
V-Cr-Ti, neutron and α-particle irrad., tensile props. 7−69773
V-Ti, H and D diffusion coeffs., temp. depend., 230-473 K 7−84395
V-Ti solid solution, H diffusion 7−143108
$V_{15}Cr_5Ti$, fusion blanket structural material, corrosion behaviour *(German)* 7−132826
$V_{15}Cr_5Ti$, fusion reactor material, permeability study, safety implications 7−131351
$V_{1-x}Ti_xH_y$ solid solns., H diffusivity temp. and comp. depend., cell model anal. 7−118149
V_3TiSi, fusion blanket structural material, corrosion behaviour *(German)* 7−132826
WC-Co-TiC, sintered, internal friction, speed of sound 7−144449
Zn-Al-Ti, solidified, eutectic struct. rel. to cooling rate and Ti addition 7−113538
Zr-Ti, struct. after quenching and tempering *(Russian)* 7−71218
$Zr_{1-x}Ti_xCrFe_y$-H_2 system, hyperstoichiometric, crystallographic, thermodynamic and kinetic parameters 7−83853
$Zr_{1-x}Ti_xM_2$ (M=Mn, Fe, Co) Friauf-Laves phases 7−117863

titanium compounds
see also titanium alloys
Al_2O_3-TiO_2, sintering, effects of excess on microstructure and props. of Al_2TiO_5 7−71131
anatase, hydrated, UV irrad., EPR obs. 7−138314
betalomonosovite cryst. struct., X-ray diffr. meas. and refinement 7−124205
ceramics, VK 94-1, voltage-ampere charact. and temp. coeff. of resistance 7−124985
hexacyanoferrates, spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
minerals, XANES, effects of Ti bonding distances, Ti valence, and site geometry 7−119068
phosphates, spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
polyester-urethane-TiO_2 composite viscoelastic behaviour 7−137439
silicides, CTR for cryst. growth 7−138619
silicides, formation by high dose ion implantation 7−142814
TiN coating of a Zn-Al eutectic alloy by thermoelectron activation RE ion plating method *(Japanese)* 7−113446
$Ag_{0.35}TiS_2$, second-order phase transition, X-ray study, order parameters 7−84239
$Ag_{0.35}TiS_2$, superspace-group description 7−76053
Ag_xTiS_2, electrochemical formation at 300 K 7−100590
Ag_xTiS_2 films, intercalation, UPS studies 7−143270
Ag_xTiS_2 intercalation cpd., Z 7−99855
Al_2O_3:Ti^{3+}, cryst., output in continuous and quasicontinuous lasing regimes *(Japanese)* 7−130128
$(Ba,Cs)_xAl_{2x}Ti_{8-x}O_{16}$ synthetic hollandite, ^{137}Cs immobilisation, radiation damage effects following β decay 7−142841
Ba-Ti-O system, grain boundary and surface segregation 7−93018
$BaFe_{12-2x}Co_xM_xO_{19}$, M=Ti, Mo, ferrite particles, synthesis, characterisation 7−125466
$BaFe_{12-2x}Co_xTi_xO_{19}$ fine particles, coprecipitation tempered, mag. props. 7−125481
$Ba_{1-x}M_xTi_{1-x}Mg_xO_{3-3x}F_{3x}$, M=Na, K, solid soln. ceramics, dielec. and pyroelec. props. study *(French)* 7−125598
$Ba(Mn,Ti)_xFe_{12-x}O_{19}$, cryst. growth from soln., struct., Curie temp., chem. anal. 7−83818
BaO-B_2O_3-TiO_2 glasses, crystallisation for glass ceramics 7−104573
BaO-TiO_2-Nb_2O_5 phase diagram, cryst. chem. and struct. studies 7−83904
BaO-TiO_2-Nb_2O_5 system, phase equilibria, cryst. chem. and struct. 7−111486
$Ba_{0.85}Sr_{0.15}TiO_3$ ferroelectric thin film, crystal struct. and dielectric props. study 7−70708
$BaTiO_3$ ceramic, electrical conductivity, effect of excess TiO_2, reduction 7−84880
$BaTiO_3$ ceramics, electronic struct. and second phase distrib., cathodolum. studies 7−137796
$BaTiO_3$ semiconducting ceramics, elec. cond. mechanism, extended model 7−137950
$BaTiO_3$:Sm hot-pressed ferroelectric ceramics, elec. cond. study *(Japanese)* 7−131645
$BaTiO_3$-TiO_2 ceramics, sintering, annealing, surface phase identification 7−91930
Bi_2O_3-TiO_2, sillenites, electroreflectance spectra, fundamental absorpt. edge 7−144017
$Bi_5Ti_3FeO_{15}$, superstructures, determ. 7−69672
$Bi_7Ti_3Fe_3O_{21}$, superstructures, determ. 7−69672
Bi_3TiNbO_9, heterovalent ion substitution, ferroelec. props. *(Japanese)* 7−124196
C fibre reinforced C/TiC matrix composites, prep, compression props. 7−78101
$Ca_4Fe_2Ti_2O_{11}$, perovskite-type cpd., synthesis, charactn. by X-ray diffr., electron microscopy 7−111483
$CaTiSiO_5$ (titanite), leaching studies using secondary ion mass spectrometry 7−94221

titanium compounds continued
$CoTiF_6.6D_2O$, rhombohedral-monoclinic transition, ^2D NMR study 7−124475
$CoTiF_6.6D_2O$ struct. phase transitions, ^2H NMR 7−91795
Co_2TiO_4, disordered spinel ferrite, spin glass behaviour, AC mag. suscept. meas. 7−92438
$CoTiS_2$, intercalation cpd., press. depend. of electrical resistivity 7−76957
Co_xTiS_2, mag. phase diagram 7−85307
$Co_{12}Zn_{0.8}TiO_4$, AC mag. suscept. meas. 7−92438
$(Cr_{1-x}Ti_x)_3Se_4$, cation distrib. and site preference, neutron diffr. and Rietveld anal. 7−83914
$Cs_2Ti_5O_{11}$, fibrous struct. and intergrowth defects, electron microscopy charactn. 7−142728
$Cu_yTi_{1-y}H_x$, amorphous, conc. depend. of H mobility 7−91899
$Eu_x(NH_3)_yTiS_2$, mixed valence intercalation cpds., synthesis, characterisation, mag. props. 7−85352
Fe-Ti spinels, mag. suscept. aftereffect and cation diffusion studies 7−118831
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
Fe_2O_3-TiO_2-Na_2O, X-ray fluorescent Fe $K\beta_5$ spectra 7−106311
$Fe_{1.75}Ti_{1.25}O_5$ pseudo-brookite spin glass, muon spin relax. study 7−125398
$FeTiS_2$, intercalation cpd., press. depend. of electrical resistivity 7−76957
Fe_xTiS_2, intercalation cpd., linear and nonlinear AC mag. suscept. 7−138199
Fe_xTiSe_2 electronic characts. and cryst. dimensionality, Mossbauer, mag. suscept. and X-ray diffr. meas. 7−142725
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7−119247
$Hf_xTi_{1-x}Se$, photoemission and transport studies 7−85943
$Hk_2Ti_5NbO_{14}.H_2O$, topotactic dehydration to $K_4Ti_{10}Nb_2O_{27}$ 7−111487
K_2O-Al_2O_3-P_2O_5-TiO_2, crystallisation tendency, effects of TiO_2 additions 7−97948
K_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
$K_2O.6TiO_2$ whisker reinforced Al, prep. and characteris., strength improvement 7−71113
$K_4Ti_{10}N_2O_{27}$, prep. by topotactic dehydration of $HK_2Ti_5NbO_{14}.H_2O$, struct., electron and X-ray studies 7−111487
$KTiO_3$ whisker filled nylon 12 as optical fibre secondary jacketing material *(Japanese)* 7−117342
$KTiOPO_4$, flux-grown, SHG and accurate index of refr. meas. 7−110448
$KTiOPO_4$ high-temp. soln. growth, viscosity and density of solns. 7−100032
$KTiOPO_4$ SHG crystals, hydrothermal growth technique 7−77786
$KTiOPO_4$, single cryst., IR reflectivity spectrum 7−119003
$La_{1-x}Pb_xCo_{1-x}Ti_xO_3$ solid soln. prep. and charactn. 7−142731
$La_3TaO_4Cl_6$, luminescence props. 7−77644
Li-Ti-Cu, composites, sputtering and redistribution behaviour in tokamak environment 7−135563
Li-Ti-Zn spinel ferrites, mag. and cryst. struct., polarised neutron diffr. study 7−138193
Li-TiS_2 secondary cells, organic electrolyte solns. study 7−133080
$Li_{1.125}$ $Ti_{1.25}$ $Fe_{0.625}O_4$ spinel ferrite, transverse spin component, relax. 7−85351
$LiTi_2O_4$ spinel electrodes for Li batteries, review 7−139097
$Li_{1+x}Ti_{2-x}O_4$, Seebeck coeff. 7−143497
$Li_{1+x}Ti_{2-x}O_4$:V, paramag. suscept. meas. 7−131986
$Li_xTi_{1+y}S_2$, intercalation cpds., preparation by solid-state process 7−111495
LiZnTi ferrite, hyperfine field, relaxation effect, Mossbauer study 7−124941
LiZnTi spinel ferrite, high magnetisation limit 7−125453
Mg-TiO_2 admixtures, hydriding and dehydriding kinetics 7−71528
Mn-Zn-Ti ferrite single crysts., Barkhausen jumps study 7−138284
$MnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
$MnTiS_2$, intercalation cpd., press. depend. of electrical resistivity 7−76957
$(NH_4^+)_{0.24}(NH_3)_{0.23}TiS_2^{0.24-}$, deintercalation and reintercalation energies 7−86605
Na_2O-CaO-SiO_2-TiO_2 silicate glasses, gamma-irrad., elect. cond. 7−143084
Na_2O-P_2O_5-TiO_2 phosphate glass, optical and spectromagnetical props., ESR and visible-UV absorpt. investig. 7−85421
Na_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
Na_2TiF_6, cryst. struct., pseudotrigonal polar phases in double hexafluorides 7−69686
$NaTi_2(PO_4)_3$, NASICON-type phase, intercalation electrode 7−106804
$Na_4TiP_2O_9$, superionic conductor, phase transition 7−69968
$Na_xW_{3-x}Ti_xO_{9-2x}F_{5+2x}$, crystallographic, thermal and dielectric meas. *(French)* 7−92618
$NiTiS_2$, intercalation cpd., press. depend. of electrical resistivity 7−76957
Ni_xTiS_2 intercalation cpd., electron and hole cond., elec. resist., Hall coeff. meas. 7−92214
P_2O_5-Nb_2O_5-TiO_2-Fe_2O_3 semicond. glasses, struct. and props. 7−83718
PbO-TiO_2 system, sol-gel processing, pH and temp. effects 7−71114
$Pb(Ti,Mn)O_3$ and $(Pb,Ba)(Ti,Mn)O_3$ PTC and NTC effects 7−131649
$PbTiO_3$, perovskite, microwave sintering, capacitor appls. 7−138702
Pt:TiO_2 catalysts, high-temp. reduction, Pt-Ti alloy form. 7−71479
Si-TiN-SnO_2:F, transparent conducting electrodes 7−118554
Si-TiO_2-SnO_2:F, transparent conducting electrodes 7−118554
SiO_2-TiO_2 fibre prep. from polytitanosiloxanes 7−92947
SiO_2-TiO_2 glass planar optical waveguides, fabrication by soot deposition process 7−97129
SnO_2-TiO_2, tetragonal system, spinodal decomp. 7−113556
SrO-TiO_2-Ga_2O_3, phase diagram, crystallographic and leaching study 7−71158
Ta_2NiS_5, intercalation cpds. with hydrazine, 1,2-diaminoethane and 1,3-diaminopropane 7−111494
(Ti, Al)N coatings, prod. by high rate sputter deposition, props. 7−119143
$(Ti,V)O_2$ rutile solid solns., XANES, of Ti and V 7−70939
Ti metallocenes, paramagnetic, in dil. frozen solns., ENDOR study, hyperfine struct. 7−143930
Ti-B system, simultaneous synthesis and forming by self-propagating reaction *(Japanese)* 7−126067
Ti-N system, phase diagram and homogeneity ranges, neutron diffr. obs. *(Russian)* 7−124445
Ti-N system, phase equilibria, metastable phases 7−119249

titanium compounds continued
Ti-O system, ordering and phase relationships in TiO existence area 7−77958
Ti-TiO_2, oxide films, growth and dissolution during laser-assisted combustion 7−78300
Ti-TiO_2, thermal oxidation of Ti, influence of anodic TiO_2 films 7−126300
Ti-TiO_2-electrolyte, electronic conduction 7−118584
$Ti_{1-x}Al_xN$ solid solution with NaCl-type structure, RF sputter deposition 7−106407
TiB_2 ceramics, ion implanted, struct. and mechanical props. 7−91831
TiB_2 ceramics, sintering, densification, grain growth, O contamination 7−144345
TiB_2, combustion synthesized, sintering kinetics, 1800-2100°C, densification, grain size 7−113485
TiB_2, high temp. deform., Hall-Petch relation, TiC precip. effect 7−113615
TiB_2 particle reinforced SiC, hot-pressed, mech. props. and oxidation behaviour 7−78147
TiB_2 particle reinforced SiC, microstruct. and material props. 7−78148
TiB_2, powders, laser induced vapour phase synthesis 7−71116
TiB_2 single crystal growth 7−104605
TiB_2-TaB_2-CoB hot pressed bodies from fine powders, transverse rupture strength *(Japanese)* 7−93099
TiB_x, bulk resistivity, composition depend. 7−92175
TiC, Ar^+ bombardment, velocity distrib. meas. by laser-induced fluoresc. 7−77726
TiC, CVD coatings on superalloys, thermodynamical approach 7−144301
TiC CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162
TiC, cast, gas abrasive wear resist. 7−100395
TiC ceramic wear surface, ion mixing modified, Auger electron spectroscopy 7−112033
TiC coated Mo, fusion limiter material exposed to high heat flux, surface anal., SEM, AES, EPMA 7−137684
TiC coating, plasma spraying, density, deposition efficiency, particle size distrib. 7−138651
TiC coating layers on graphite PDX wall armor tiles, surface damage and redeposition investig. 7−67990
TiC coatings, CVD on tool steel substrates 7−113419
TiC, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
TiC coatings, D ion bombardment, thermal cycling, fatigue, comp. analysis 7−84046
TiC, decomposition in presence of ion irradiation in high-temp. conditions 7−144735
TiC deposited graphite, erosion yield of Ti by H in bombardment at high temps. 7−77729
TiC, directionality of metallic bonding, CNDO calc. method 7−142688
TiC, EELS, core loss edge structure 7−85907
TiC epitaxial layer form on Ti, LEED and AES studies 7−124785
TiC films, adherence on austenitic stainless steels 7−144681
TiC, floating zone melting, evaporation comp. and rate 7−100050
TiC interlayers effect on reaction zone of SiC fibre reinforced Ti-Al-V alloy *(German)* 7−92935
TiC layers, CVD on Fe-C substrates, development and partial relax., of internal stresses 7−113773
TiC, powder spheroidisation in low temp. plasma 7−86102
TiC produced by melting of TiO_2+C charge, microstruct. and strength 7−77911
TiC, single cryst. prep. from self-combustion rod by floating zone method 7−144266
TiC single crystals, state variable analysis of inelastic deform. 7−113612
TiC surface, particle removal with pump limiter ALT-I, geometry effects 7−68001
TiC, surface deactivation upon carburisation 7−144749
TiC, thermal plasma prod., equilib. calcs. 7−130831
TiC, TiCN, hard material coatings on steel substrates 7−77844
TiC whiskers, growth, struct., Ni effect 7−84610
TiC:H_n^+ (He^+), irradiation effects, SEM and TEM investig. 7−76153
TiC:H(He), ion implanted, amorphisation at 15 K 7−84059
TiC-TiB_2, cast, gas abrasive wear resist. 7−100395
TiC-TiB_2 two-phase powder mixtures, densification behaviour during sintering 7−77926
TiC-TiN, cast, gas abrasive wear resist. 7−100395
TiC+H_2^+ (D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiC_{1-x}, comp., defect struct. and bonding 7−83876
TiC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
TiC_x, disordered, elec. props. anomalies, conduction electron-tunnelling level interactions 7−84877
TiC_x, N effect on order-disorder transition, nonmetallic defect superlattice *(Russian)* 7−144394
Ti_3C layers, CVD on TiC-Ni hardmetals 7−132485
TiCN, form. kinetics at high temps. 7−86103
$TiCuD_x$, amorphous and cryst., charactn. by deuteron mag. resonance 7−118876
TiF_2 with fluorite struct., high press. synthesis and cryst. struct., thermal stability 7−132445
$TiFeD_{\approx 2}$, cryst. struct., neutron powder diffr. profile anal. 7−83885
TiH, EFG temp. depend., PAC meas. 7−118442
$TiH_{0.71}$ metastable superconducting ε phase, H interstitial octahedral position, inelastic neutron-scatt. meas. 7−83951
TiH_2 aggregate form in CuTi alloys, fractal struct., neutron scatt. obs., comment and response 7−137571
TiH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
TiH_2, hydridation of Ti, AES and EELS studies 7−106314
TiH_2, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
TiH_2, muon spin relax. study, comparison with YH_2 7−85510
TiH_2 ultrafine particles, H_2 gas evaporation, martensitic transformation 7−70995
TiH_x, He implanted, N_2 pre-implantation effect 7−137385
TiI_4, spectral emissivity meas., polymorphic transformations effect 7−137599
TiN, AES data analysis using filter-fit method *(Japanese)* 7−138556
TiN based protective films production with use of cylindrical low energy ion gun and charact. 7−71040
TiN, CVD coatings on superalloys, thermodynamical approach 7−144301
TiN CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162

anium compounds continued
TiN coated stainless steel, cavitation erosion resist. *(Japanese)* 7−100391
TiN coating, sputter ion plating, internal stress, microstruct. 7−138658
TiN coatings, adhesion meas. by automatic scratch tester with AE detector *(Japanese)* 7−78401
TiN, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
TiN coatings, surface struct. changes during diamond burnishing 7−86414
TiN, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7−71120
TiN, crystal growth with preferred orientation by dynamic mixing method 7−124148
TiN diffusion barrier in GaAs-metal contacts 7−105157
TiN, EELS, core loss edge structure 7−85907
TiN fibres, nitridation of TiO_2 prep. by sol-gel method 7−77903
TiN film, optical consts. 7−106293
TiN film deposition on Fe substrate with simultaneous ion bombardment, transition layer form. simulation 7−119174
TiN films, hollow cathode discharge ion plating 7−106439
TiN films, ion beam modification during vapour deposition 7−119152
TiN films deposited on steel by reactive ion plating, struct. and props., effect of substrate temp. and N_2 press. *(Korean)* 7−77846
TiN films plasma-enhanced CVD from $TiCl_4$-N_2-H_2 gas mixtures 7−113425
TiN, high-temp. synthesis from nitriding of Ti and TiH_x powders, struct. of particles 7−119221
TiN interlayers effect on reaction zone of SiC fibre reinforced Ti-Al-V alloy *(German)* 7−92935
TiN layer in stable Si solar cells with high temp. survivability 7−78645
TiN layers, PVD, metallography, SEM obs. *(German, English)* 7−132447
TiN, N^+ ion implantation; high current ion source *(Japanese)* 7−121298
TiN, phase comp. change of Ti films when processed by N plasma *(Russian)* 7−126029
TiN polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
TiN, pulse chemical vapour infiltration into porous C 7−71099
TiN reactively sputtered films, deposition, contact, and electromigration props. 7−118331
TiN sputtered films as glue layers for blanket W deposition 7−113437
TiN, substoichiometric, (100) surface, angle-resolved photoemission, vacancy-induced state 7−125913
TiN thin film form. by rapid thermal annealing, elec. and phys. props. 7−118332
TiN, thin hard coatings on tool steel, thickness, adhesion, microhardness QC 7−138925
TiN thin-films, optical constants 7−125833
TiN treated Al-Si alloy, by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
TiN, vacuum plasma condensates, special features of substruct. 7−86028
TiN-GaAs contacts, thermal stability and barrier height enhancement 7−70412
TiN-TiB_2, Ti(CN)-TiB_2, sintered ceramics, frictional props. 7−100390
TiN-VN strained layer superlattices, growth, struct., hardness 7−119137
TiN+H_2^+(D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiN_x (100), nonstoichiometric, evidence of vacancy-induced surface states 7−92246
TiN_x (100), substoichiometric, vacancy-induced structures in ARUPS 7−92830
TiN_x films, DC magnetron sputtering system, film props. 7−100060
TiN_x films, sputter deposited, CaF_2-type structure, X-ray characterisation 7−124788
TiN_x, ion beam enhanced electron beam deposition, wear props. 7−113395
TiN_x layers, sputter deposited, strain gradients, X-ray anal. 7−112144
TiN_x, vacancy ordering, neutron diffr. study 7−131077
TiN_xO_y thin films, optical absorption 7−99954
$Ti_{1-y}Nb_yH_x$, substitutionally disordered, electronic struct., tight-binding CPA calcs. 7−84668
$Ti_{1-x}Nb_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
$TiNbWO_3$, defective pyrochlores, superionic conductivity 7−84380
TiNx, plasma deposition parameters, Auger spectra, thin films 7−144293
TiO, electronic states, configs., ab initio CI calcs. 7−109789
TiO transition rates for β, δ, ϕ, γ', γ, and α systems 7−82282
TiO-MgO sintered mixtures, elec. props. *(Japanese)* 7−76928
TiO_2 (110), electronic struct. of O vacancies 7−143547
TiO_2 (110) surfaces, interaction with SO_2, UPS, XPS and LEED studies 7−91986
TiO_2 (110) Ti-rich surfaces, spectral, cond. and annealing studies 7−85041
TiO_2 acid waste discharges in North Sea, results of Dutch monitoring programme 7−139152
TiO_2, adsorbed H_2O, dielectric relax. obs. 7−92584
TiO_2, adsorbed H_2O, dielectric permittivity and loss meas. 7−92585
TiO_2, adsorpt. of alcohols, struct. effects, IR spectra 7−98684
TiO_2, amorphous films, anatase crystals, oriented growth 7−97930
TiO_2 bombarded with protons and deuterons, ion implantation effects 7−91613
TiO_2, bulk crystallization of Li_2O-Al_2O_3-SiO_2 glass, sintering 7−106478
TiO_2, catalyst, photocatalytic hydrogenation of methylacetylene, size effect 7−139030
TiO_2 cathode, Li diffusion coefficient 7−126583
TiO_2 ceramics, crystalline, single phase, structural superplasticity 7−132668
TiO_2 ceramics, synthesis from isopropoxide, laser-driven pyrolysis 7−100164
TiO_2, charge density, anharmonicity, incipient ferroelec. transition, X-ray and γ-ray diffr. 7−111458
TiO_2 coating on Ti, wear resist. 7−132761
TiO_2 colloid, conduction band electron reduction of acceptor relay species 7−93369
TiO_2, EELS, core loss edge structure 7−85907
n-TiO_2 electrodes, O electroreduction, charge transfer mechanisms 7−113944
TiO_2, fibre formation by unidirectional freezing of gel 7−113479
TiO_2 fibres, hydrated, cryst., immobilisation of rare earth metal ions from aq. soln. 7−135672
TiO_2 fibres, prep. by sol-gel method, nitridation to give TiN 7−77903
TiO_2 films, doped, CVD growth and elec. props. 7−71077

titanium compounds continued
TiO_2 films, n-type semicond., sol-gel prep., photoelectrochemical props. 7−131710
TiO_2 films, particle precip. aided CVD 7−113423
TiO_2 films, thermally grown, elec. cond. 7−105736
TiO_2 films, thermally grown, surface struct. 7−113776
TiO_2 films, with various Pd^+ ion implantation profiles, electrochem. studies 7−104779
TiO_2 for photocatalytic oxidation, solar-electric water purification 7−100754
TiO_2, hydrous, granulated with polyacrylic hydrazide, U absorption from seawater 7−109307
TiO_2, hydrous, U adsorption props. in seawater 7−118241
TiO_2 ion implanted films, photoelectrochemical investigations of disorder 7−104789
TiO_2, ion sputtering, restoration of real conc. profiles, Auger spectra 7−77739
TiO_2, ionic crystals, variable atom parameters, determ. by electrostatic calcs. 7−83828
n-TiO_2, laser-induced photopot. meas. with or without current doubling reagent 7−99109
TiO_2, optical thickness monitoring fully automated system for thin film prod. 7−104064
TiO_2, oxidation of Ti, adhesion of thermal oxide films 7−132904
TiO_2 particle, assoc. of 9-anthracene-carboxylic acid, triplet-triplet energy transfer 7−93368
TiO_2 particles, on colloidal SiO_2, photosensitised evolution of H_2 from water 7−132953
TiO_2 particles, prep. by wire exploding method *(Japanese)* 7−126071
TiO_2 polycrystalline photoelectrodes in acidic solutions, electrochemical reduction effects. 7−126459
TiO_2, polymorphs, struct.-electronic rels., powder neutron diffraction obs. 7−131105
TiO_2 powder, surface energy determ. from elasticity meas. 7−131415
TiO_2 powder form. by hydrothermal oxidation 7−126061
TiO_2, reduction by Ar^+ bombardment, adsorption of O_2 7−91991
TiO_2, rutile, d-transition metal oxide doped, physical props. 7−92569
TiO_2, rutile surfaces, adsorption, IR studies 7−76598
TiO_2, rutile/water interface, specific adsorption of alkaline-earth cations 7−76599
TiO_2, sensitisation in visible light region, using Zn porphyrins 7−99193
TiO_2 single-layer films, localisation of optical absorption losses 7−77671
TiO_2 supported Pt, adsorbed CO layers, transmission IR spectra, combination bands obs. 7−90124
TiO_2 supported transition metal cations, electronic spectra 7−141507
TiO_2 surface, butanol, chlorobutane and heptane adsorption, isotherm meas. 7−112071
TiO_2 thin film photoelectrochem. cells, quantum efficiency for back or front side refl. 7−86808
TiO_2, time-of-flight effects in presence of space-charge-limited currents 7−92192
TiO_2, UV illuminated, use as method for destruction of impurities in water 7−100765
TiO_2:Cr, electrical conductivity, isothermal variations, comparison of doping concentration *(French)* 7−92169
TiO_2:NiO catalyst, NaOH, aq. soln. and coating, photocatalytic decomposition study 7−71523
TiO_2:Sb, rutile, Sb oxidation state and elec. props. 7−105558
TiO_2/2-propanol interface, electron transfer dynamics, transient grating investig. 7−92287
TiO_2/SiO_2 dielectric multilayer reflector for GaAs surface-emitting laser 7−110380
TiO_2/SiO_2 multicavity filter stability 7−123176
TiO_2/SiO_2 multilayer Bragg reflector for GaAlAs/GaAs surface emitting laser 7−68684
TiO_2-Ag(Cu), energy efficient coating props. study 7−125995
TiO_2-Al ceramic, electrical conductivity after quenching 7−92180
TiO_2-based photoelectrodes in photoelectrochemical cells, O_2 evolution and performance 7−93512
TiO_2-Fe_2O_3-MgO solubility in mullite 7−132617
TiO_2-M_2O_3, M=Sc, Y, Er, diffusion zone microstruct., interface morphology, isoconc. profile 7−92008
TiO_2-MgF_2 antireflection coatings, optical monitoring strategies rel. to reproducibility of completed layer systems 7−104066
TiO_2-MgO-M_2O, M=Li, K, Rb, phases in region of hollandite crystn., cryst. chem., elec. cond. meas. 7−98388
TiO_2-Nb_2O_5 solid solns., lattice parameter variation for rutile 7−111476
TiO_2-Nb_2O_5-B_2O_3-Na_2O-SiO_2 glass for nonlinear optical waveguides, synthesis and charactn. 7−136469
TiO_2-Pt composite electrodes by dispersion plating, photoelectrochem. behaviour *(Japanese)* 7−86639
TiO_2-Sb_2O_3, doped and undoped, anatase to rutile transform. 7−100214
TiO_2-Se thin film solar cells, fabrication and charactn. 7−93502
TiO_2-SiO_2 glass-ceramic, porous, thermal and chem. props. 7−113742
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7−125834
TiO_2-SiO_2 wideband antireflection coating design by the random research approach 7−103932
TiO_2-Ti hot gas sprayed coatings, high-speed heat treatment, exam. of thermal conditions 7−125964
TiO_2+H_2^+(D_2^+)(He^+), surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiO_{2-x}, stoichiometric and nonstoichiometric rutile, chem. vapour transport using $TeCl_4$, $SeCl_4$ or CCl_4 7−85974
TiO_n films, Pd implantation, high energy defect migration 7−111597
TiO_x films, thermally oxidised, threshold conduction switching 7−131808
TiO_x RF diode sputtering, stresses, stoichiometry, deposition rate and refractive index studies 7−144273
TiO_x thin films, SERS obs. 7−77593
TiO_xH_y, electronic and crystallochem, characts., quantum chem. modelling 7−143345
$Ti_{0.97}Ru_{0.03}O_2$ pyrolytic films on Ti, XPS studies 7−106378
TiS_2 crystal, layered, point-contact spectroscopy 7−112206
TiS_2, intercalated with transition metals, transient thermoelec. effects 7−112378
TiS_2 intercalation compounds with 3d transition metals, photoemission studies 7−125905
TiS_2, investig. of Li intercalation materials in electrolytes 7−133059
$Ti_{6.9}S_9$, crystal struct., unit cells 7−98073
$Ti_{8.2}S_{11}$, crystal struct., unit cells 7−98073

titanium compounds continued
TiSe structural transforms., microscopic theory, electron-lattice interaction matrix element calcs. 7−76389
$TiSe_2$ (1T), electronic struct., effect of Frenkel defects 7−70165
$TiSe_2$, photoemission spectra, final-state effects 7−144233
$TiSi_2$ amorphous thin films on Si and SiO_2 substrates, phase transformations, X-ray diffr., elec. resist., TEM 7−70114
$TiSi_2$, C49 to C54 transformation temperature, grain size effects 7−113544
$TiSi_2$ films, composite sputtering and rapid thermal annealing 7−125983
$TiSi_2$ form. at Si:As(P)/Ti interface, growth rate dopant conc. depend., depth profiling, sheet resist. and TEM studies 7−118173
$TiSi_2$ form. in Ti-Si diffusion couple, Si loss via SiO sublimation 7−118073
$TiSi_2$ formation by ion beam mixing, effect of implant and rapid thermal annealing temps. *(French)* 7−124353
$TiSi_2$ formation on Si process control using rapid thermal processing 7−105326
$TiSi_2$ sputtered films, nucleation and growth, TEM studies 7−118295
$TiSi_2$ thin film form. by high temp. solid state interaction *(Chinese)* 7−105152
$TiSi_2$:As/Si silicide form., impurity implantation and redistrib. effects, electron diffr. and RBS studies 7−76638
$TiSi_2$:C-Si interface, C implantation to stabilise $TiSi_2$ during thermal annealing 7−83990
$TiSi_2/p^+n$ Si junctions, elec. props., post-silicidation annealing effects 7−143610
$TiSi_2$/Si, p-n shallow junction form. by impurity ion implantation and drive-in method 7−104769
$TiSi_2$-GaAs Schottky contacts, stoichiometry changes, TEM obs. 7−98720
$TiSi_x$, bulk resistivity, composition depend. 7−92175
Ti_3SiC_2, CVD deposition 7−144305
$TiTe_x$ form. at HgCdTe-Ti interface, photoelectron spectra study 7−118279
$(TiVAl)O_2$ film for photoelectrochemical cell, XPS characterization and photoelectrochemical behaviour 7−86807
$Ti_{1-y}V_yH_x$, substitutionally disordered, electronic struct., tight-binding CPA calcs. 7−84668
$Ti_{1-x}V_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
tiH_2 self-consistent electronic energy band struct. calcs. 7−84669
ToC_x hypostoichiometric, ordering of C atoms, rel. to lattice energies 7−98093
V-Ti oxide, anatase-type solid-state soln., evidence of formation 7−84291
$(V_{1-x}Ti_x)_{1-y}Fe_yH_2$, heat pump, enthalpy and entropy of formation 7−93525
$V_{1-x}Ti_xH_2$ electronic struct., NMR spin-lattice relax., Knight shift and mag. suscept. meas. 7−84666
$ZnTiF_6.6D_2O$, rhombohedral-monoclinic transition, ^2D NMR study 7−124475
$ZnTiF_6.6D_2O$ struct. phase transitions, ^2H NMR 7−91795
$ZnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
ZrO_2-Al_2O_3-SiO_2-TiO_2, toughened mullite ceramic composites, sintering, microstruct., phase comp. 7−77930
ZrO_2-Y_2O_3-TiO_2, tetragonal phase, elec. props. effect of TiO_2 additions 7−98567

TJS lasers *see semiconductor junction lasers*

TLD *see thermoluminescent dosimeters*

Toda lattice *see lattice theory and statistics*

Tokamak devices
AAEC rotamak, equilib. config., props. determ. 7−75886
Alcator C, photon counting detector for Doppler temp. meas. 7−83545
ASDEX, electronics for data preparation and diagnostics control 7−122169
ASDEX, low energy neutral particle fluxes, TOF method 7−69412
ASDEX, neutralizer plates, construction of water-cooled plates for long-pulse heating 7−135578
ASDEX, plasma-graphite limiter interaction, photoacoustic anal. 7−69364
ASDEX and W VII-A ICRF long-pulse heating, development and testing of components 7−135593
ASDEX discharge, C and O impurities, radiation losses, VUV diagnostics 7−91366
ASDEX divertor, pellet and gas puff refuelling, recycling study 7−69411
ASDEX divertor tokamak, plasma-wall interaction, impurity release 7−69366
ASDEX long-pulse neutral injection system design, development, performance 7−122084
ASDEX Upgrade, AMOS/D data analysis system 7−122168
ASDEX Upgrade, insulation gap in vacuum vessel, design concept and calcs. 7−122128
ASDEX Upgrade, long-pulse neutral injection system design, development, performance 7−122084
ASDEX Upgrade, technical features and progress 7−122087
ASDEX Upgrade vacuum vessel, numerical anal. of eddy currents and mag. forces 7−122114
ASDEX-Upgrade, AMOS/D data acquisition system, diagnostic subsystems, communications network 7−122176
ballooning modes, energetic particle stabilisation 7−123938
blanket opening effects on nuclear characts., Monte Carlo calcs. 7−67984
boundary determination of plasma pinch from mag. meas. data 7−111292
burn control of an ignited Cat-D tokamak by compression-decompression and fuel injection 7−122068
CASTOR Tokamak, radiative power losses, density depend. study 7−117705
central mass and current density measurements in Tokamaks using the discrete Alfven wave spectrum 7−83469
centrifugal pellet injector with direct solid D_2 feed 7−81712
CLEO, electrostatic and EM turbulence, anomalous transport study 7−111179
compact ignition experiments, physics and design issues 7−135546
Compact Ignition Tokamak, baseline concept 7−122103
compact ignition Tokamak, physics aspects study 7−103181
Compact Ignition Tokamak, vacuum, conceptual design and analysis 7−122130
compact ignition tokamaks, high-heat flux components, magnetic vapour shielding 7−103187
COMPASS, ECRH system 7−135594
COMPASS control and engineering monitoring system 7−122167
COMPASS Data System 7−122166

Tokamak devices continued
COMPASS magnetic field coils and structure systems 7−122190
conf. on fusion technology, Avignon, France, Sept. 1986 7−120706
configuration, maintenance and assembly schemes 7−122199
continuous current drive operation, review 7−69387
controlled nuclear fusion, problems and future prospects 7−109479
core-boundary layer plasma transport in Tokamaks, simulation 7−75870
cyclic tokamak operation in the WT-2 device, LH current drive 7−123939
decoupling controllers for plasma current and equilibrium in Tokamaks 7−74037
density drift in TEXTOR with a graphite pumped limiter 7−68002
depth profiling experiments on JET wall samples, Auger spectroscopy anal. 7−69368
DIII-D, vessel wall and graphite limiters, initial conditioning 7−67991
DIII-D tokamak, ICRF reson. cavity launcher coupling anal. 7−111256
DIII-D tokamak, start-up performance 7−122099
DITE, ECRH system 7−135594
DITE limiters, wall loading, Monte Carlo neutral particle transport code 7−69365
DITE tokamak, gas puffed impurities toroidal dispersal 7−69414
DITE tokamak, time series anal. of signal data 7−96323
Doublet III, electron cyclotron heating in overdense plasma 7−130888
Doublet III, H-mode outside divertor, NBI heating efficiency 7−97777
Doublet III tokamak, pellet fuelled discharges, penetration and ablation 7−130887
EBT, confinement, fluctuations and electric field effects 7−91355
EBT particle and energy confinement times, Monte Carlo estimates 7−91357
ECRH systems for fusion plasmas, technical aspects 7−122081
edge plasma study 7−123959
edge region density asymmetries of a tokamak plasma, Langmuir probes diagnostics 7−75831
edge region diagnostics and transport in the TEXT tokamak 7−75828
electromagnetic actions on the windings of tokamaks 7−137134
electromagnetic radiation propag. near electron cyclotron freq., 3-D ray tracing approach 7−69355
electron and ion orbits in rotamak fields 7−91283
electron energy distrib. by cyclotron radiation into Tokamak plasmas investig. 7−75864
electron temperature meas. errors using Langmuir probe in mag. field 7−83422
energy confinement in JET ohmically heated plasmas 7−111178
erosion-redeposition and impurity transport in the scrape-off layer of the FT tokamak 7−75819
European Fusion Technology Program, evolution towards NET 7−122077
FCTR, environmental effects 7−126663
field coils, high current density, cryogenically cooled sliding electrical joint development 7−74078
first wall materials, structural defects and material fatigue 7−96325
Frascati Tokamak plasma, 14 MeV neutron emission meas. by activation techniques 7−75858
Frascati Torus, BF_3 proportional chambers for time resolved neutron yield meas. 7−74071
free electron laser, high gain, for heating and current drive in ALCATOR tokamak 7−136340
FTU, manufacture of N_2 cooled toroidal coils 7−135644
FTU, prototype of poloidal coils, design, construction and test 7−135651
FTU control system, development status 7−122179
FTU device, design 7−122086
FTU vacuum chamber, surface conditioning technique 7−122125
fuel pellet injection, m=1, n=1 oscillations in tokamak 7−123944
Fusion Experimental Reactor, radiation streaming through narrow gaps 7−81711
fusion reactor coil power supply with power convertors 7−89704
fusion reactor graphite limiters, H and D changeover rates meas. 7−74047
fusion research overview 7−68011
generalized moments for low-frequency modes in tokamaks and their application to drift and ballooning instabilities 7−104390
glow discharge carbonisation in JET, probe anal. by Auger spectroscopy 7−69457
graphite, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
graphite, pyrolytic, H^+ impact, methane prod., flux and energy depend. 7−75890
graphite erosion and deposition in JET wall surfaces, SIMS anal. 7−75809
graphite thin film, C^+ self-sputtering yields meas. 7−77722
gyrotron plasma heating, supercond. magnet systems investig. 7−74079
HAIFA multichannel modular spectroscopic diagnostic 7−123991
helical mesh RF current drive for tokamaks 7−124000
high-field toroidal magnet design, fusion applications 7−135545
high-speed, high-voltage shunt regulator, ion source as load for Tokamak reactor 7−75897
highly-ionised atoms, spectral lines, fusion plasma diagnostics 7−111274
Hiroshima Torus-1, MHD activity and peripheral plasma electrostatic charact. *(Japanese)* 7−137105
Hiroshima Torus-1, reversed field pinch expts., plasma-wall interaction causing impurity activity *(Japanese)* 7−137104
ICRF heating of large tokamaks, coupler impedance calcs. 7−123940
ICRF heating technology for large Tokamak heating systems 7−135597
ideal magnetohydrodynamics book 7−134382
impurity influx behaviour in JET tokamak, visible spectra anal. 7−75848
impurity recycling at the JET limiters 7−75811
impurity transport in TCA-Tokamak, integral collection probes investig. 7−69422
INTOR, feasibility study, design update 7−74038
ion Bernstein wave propagation, magnetic probe obs. 7−130857
JET, belt limiter design 7−135577
JET, control and diagnostic systems, equipment and data transmission techniques 7−122177
JET, D-D plasma, ^3He and ^3H ions burn up meas. 7−104374
JET, design, construction and operation of major systems 7−74028
JET, electromagnetic system, development 7−122094
JET, evolution, present status and prospects 7−74027
JET, hot ion regime, α particle heating study 7−104428
JET, ICRF heating sawtooth behaviour, 15 MeV $^1H^+$ emission spectra anal. 7−104429
JET, ICRF power plant, operation and development 7−122098
JET, isotope exchange expt. modelling 7−69416

kamak devices continued
JET, mag. fluctuations and confinement, anomalous transport 7−111265
JET, magnet power supplies and plasma control systems 7−74029
JET, microwave reflectometer for plasma density profile meas. 7−83539
JET, plans for current profile control 7−123972
JET, plasma behaviour, initial results, impact on fusion development 7−123971
JET, plasma transport expts., TIBER II comparisons 7−103185
JET, plasma-graphite limiter interaction, photoacoustic anal. 7−69364
JET, pneumatic pellet injectors, design, operation 7−122164
JET, robotics equipment and special purpose tools 7−122091
JET cryopump system, operation and performance 7−122119
JET development program, technical aspects 7−122093
JET in-vessel inspection system 7−122197
JET ion cyclotron resonance heating, boundary layer conditions, Langmuir probe diagnostics 7−75827
JET Neutral Beam Injector, control, safety and interlock system, operation 7−122175
JET plasma, Ne-like and adjacent ion recombination 7−75862
JET pulse termination network 7−122170
JET Tokamak, plasma confinement and heating 7−69430
JET Tokamak, turbulence, heating, fluctuation meas. 7−111231
JET tokamak test reactor, plasma confinement *(Dutch)* 7−123936
JET wall concepts and density control 7−122095
JFT-2M, H-mode phenomena during ICRF heating 7−130906
JFT-2M, H-mode transition, electron cyclotron emission, peripheral electron temp. 7−97704
JFT-2M, high-power mm-wave transmitter 7−135596
JFT-2M tokamak, confinement and fuelling during additional heating phase 7−69417
JFT-2M tokamak, electron heating and current drive by fast waves, numerical study 7−69390
JFT-2M Tokamak, radial distrib. of plasma current driven by lower hybrid waves 7−91312
JFT-2M tokamak, Taylor, glow and ECR discharges, cleaning effects 7−75892
JIPP T-IIU, in situ C coating 7−75893
JIPP T-IIU tokamak, ICRF heating, radiation loss and impurity abundance, spectroscopic and bolometric meas. 7−75837
JIPP T-IIU tokamak, wall material sputter deposition on limiter 7−67988
JIPP-T-II-U Tokamak, diagnostics using time-resolved Ti^{20+} X-ray spectra 7−123987
JT-60, divertor pumping system, operation in ohmically heated divertor discharges 7−135581
JT-60, in-vessel inspection system 7−122196
JT-60 central control system 7−89711
JT-60 diagnostic instrumentation system 7−91365
JT-60 feedback control system, appl. of fast array processor 7−122173
JT-60 ICRF launching system, impedance matching and power test 7−81713
JT-60 mag. fusion devices, high-power RF heating system design 7−135571
JT-60 neutral beam injection system 7−91339
JT-60 project, construction and testing 7−89708
JT-60 project, overview 7−89707
JT-60 RF heating system 7−91340
JT-60 tokamak, design and construction 7−89709
JT-60 tokamak power supplies 7−89710
JT-60 vacuum vessel, vacuum quality control during assembly *(Japanese)* 7−135550
limiter discharger, plasma performance, self-consistent plasma-wall interaction model 7−75822
limiters, metallic contamination anal. in JET 7−69424
low-Z-fusion relevant materials, fluoresc. spectroscopy 7−75810
magnetic fusion materials production reactor, fusion technology for tokamak and mirror drivers 7−89712
magnetic fusion materials production reactor, T and Pu prod., economic anal. 7−89713
magnetic fusion materials production reactor, toroidal concept selection 7−89714
magnetic fusion production reactor, mechanical design concepts 7−89716
magnetic fusion production reactor for Pu and T breeding, design and anal. 7−89717
magnetic vapor shield mechanism for Tokamak flux component protection 7−74050
Maryland spheromak diagnostics, broadband calibration for magnetic probes 7−123990
metal redistrib., JET vessel wall surface anal. 7−69369
NET, central solenoid, hybrid configuration *(French)* 7−135643
NET, coil system, design 7−122096
NET, double null configuration, divertor plate design *(Russian)* 7−135582
NET, EM effects on first wall caused by plasma disruption 7−122121
NET, first wall and Li-Pb blanket system accident anal. 7−135625
NET, first wall concepts with welded steel structures 7−135576
NET, first wall design criteria thermal fatigue and creep experiments and theoretical modelling 7−122122
NET, first wall designs, parametric stress analysis 7−122120
NET, maintenance of in-vessel components 7−122097
NET, safety analysis related to the possible release of activated erosion dust in fusion reactors 7−135624
NET, solid ceramic breeder blanket, design and thermohydraulic optimisations 7−135619
NET, toroidal field coil, mechanical design 7−122192
NET, use for ferromagnetic materials, EM effects 7−135591
NET, vacuum chamber, evacuation process, parametric calcs. 7−122126
NET, water cooled liquid breeder blanket, design and analysis 7−135618
NET materials requirements 7−69480
NET project, planning 7−122066
NET TF-coil, stress anal. of SIN conductor 7−122195
NET vacuum vessel and bulk shield design 7−135574
neutral beam heating in JT-60, energy confinement and profile characteristics 7−123970
next generation tokamaks, TF coil performance, impact on cost and compactness 7−122106
nuclear fusion expt. using Tokamak, computerised control *(German)* 7−130942
outgassing in ISX and TFRT, Cr gettering residual effects 7−74046
passive stabilization of axisymmetric modes in an elongated tokamak 7−123877
PBX, impurity accumulation, diffusion coeff., diagnostics 7−69420

Tokamak devices continued
pellet injection on the ZT-40M reversed field pinch 7−130915
peripheral plasma, oscillating elec. fields spectroscopic method obs. and anal. 7−83466
Petula-B Tokamak electron density profile determ., using extraordinary mode microwave reflectometry 7−83547
plasma diagnostics using duo-multichannel soft X-ray spectrometer 7−142509
plasma parameters determ., IR and FIR laser polarimetry appl. 7−117762
plasma physics, conf., Lucas Heights, NSW, Australia (Feb. 1987) 7−80175
plasma physics, conf., Oxford, England (July 1986) 7−66820
plasmas, α particle effects, conf., Aspenasgarden, Sweden (June 1986) 7−102009
PLT, particle transport and confinement, density depend. 7−69413
PLT rotatable limiter, power deposition and thermal response 7−67995
PLT tokamak plasma, impurities, time-resolved X-ray spectra 7−97790
poloidally asymmetric electrostatic potentials in closed line bumpy toroids 7−91356
positron deposition in plasmas by positronium beam ionization and transport of positrons in Tokamak plasmas 7−97760
power balance, props. of working temp. 7−122201
pre-disruption MHD activity in the LT-4 tokamak 7−123943
probe wake study in DITE tokamak using spatially scanning Langmuir probe 7−75802
pulsed superconducting magnets, partially stabilised for ohmic heating *(Japanese)* 7−126661
pulsed superconducting magnets, R&D summary *(Japanese)* 7−123998
purity requirements for tokamak fuel 7−103168
R-tokamak, low activation design 7−74059
R-tokamak, second phase design and stability anal. 7−74060
R-tokamak, vacuum system design 7−74063
radial transport simulation in CT-6B tokamak during gas puffing 7−83426
Reacting Plasma Project, high power ion source and neutral beam injector development 7−74312
reversed field pinch plasma diagnostics, beam probing system 7−83546
scrape-off layer in TCA tokamak, Alfven wave heating study, Langmuir probe diagnostics 7−75832
sheath pot. in tokamak edge plasma using retarding field analyser 7−75826
SPICA II, high-beta, plasma current measurements by Faraday rotation in a single-mode fiber 7−111268
superconducting magnet windings for superhot plasmas *(German)* 7−97817
T-10 tokamak plasma, energy confinement during electron cyclotron heating *(German)* 7−137107
T-15, near wall plasma diagnostics, surface anal. station 7−130936
T-15 engineering system manufacture and assembly, status 7−135590
T-15 installation, supercond. toroidal mag. system, conductor behaviour 7−91373
T-3M tokamak limiter, C emission from different grades of graphite 7−75891
TBR-1 plasma column cross-section shape diagnostic system 7−137130
TCA tokamak, mag. and density fluctuations, probe meas. 7−111280
TCV tokamak, equilibrium and axisymmetric stability 7−137119
TEXT, Ar XII-XVI ionisation and recombination rates, time resolved spectroscopy 7−123988
TEXT, biased limiter expts. 7−67998
TEXT, density, plasma current, toroidal field, recycling meas. 7−69418
TEXT, intra-island scoop limiter expt. tests 7−67999
TEXT confinement, particle transport and electrostatic turbulence, Langmuir probe study 7−130904
TEXT edge turbulence and density fluctuations, far IR laser scatt. and Langmuir probe study 7−130873
TEXT tokamak, fluctuations and transport meas. 7−111185
TEXTOR, fast signal acquisition system for the Lyman-α diagnostic 7−122178
TEXTOR, ICRH system compatible with ALT-II 7−135595
TEXTOR, impurity sources, emission spectroscopy 7−69419
TEXTOR, in situ calibration of electrical double probes in magnetized plasmas 7−104456
TEXTOR liner, supporting structure for ALT-II 7−135579
TEXTOR neutral beam injectors, control system 7−122171
TEXTOR tokamak, ICRH antenna array anal., generator matching study 7−69380
TEXTOR Tokamak, Langmuir probe meas. during ALT-I pump limiter expt. 7−97803
TEXTOR tokamak, neutral beam-injection system 7−122101
TFR, ECRH transmission system 7−135598
TFR, heating, LF turbulence, density fluctuations 7−111263
TFR, internal disruptions, electron density fluctuations, microwave scatt. 7−111186
TFR graphite tiles, metal coverage effect on plasma impurity content 7−75817
TFR tokamak, pump limiter expts. 7−68000
TFTR, α particle heating and diagnostics study 7−104427
TFTR, diagnostic neutral beam for active charge-exchange meas., simulation 7−74039
TFTR, eight-shot pneumatic pellet injection system 7−122075
TFTR, electron temp. profile shape study 7−142441
TFTR, high temp. plasmas, neutral beam injection 7−74073
TFTR, neutron spectral distrib. from internal 14 MeV source, Monte Carlo transport comparisons 7−74043
TFTR, ohmic and neutral beam heating, global particle recycling 7−69415
TFTR, plasma transport expts., TIBER II comparisons 7−103185
TFTR, plasma-wall interaction results, limiter design and construction 7−122080
TFTR, pneumatic pellet injectors, design, operation 7−122164
TFTR, radiation streaming through small penetrations, 3D coupled Monte Carlo calcs. 7−103196
TFTR, vessel conditioning investig. 7−67993
TFTR control systems for protection and for normal control of magnetic field coils 7−135638
TFTR discharges, impurity behaviour 7−130929
TFTR discharges, ohmic and neutral-beam heated, impurity transport 7−69421
TFTR edge turbulence meas., Langmuir probes, D-alpha imaging, microwave scatt. and mag. pickup loops 7−75830

Tokamak devices continued
TFTR full power pumped limiter, designs 7−135580
TFTR movable limiter and first wall particle inventories calcs. 7−75806
TFTR neutral beam injectors, multiple track Doppler-shift spectroscopy 7−130933
TFTR scrape-off plasma with neutral beam injection, Langmuir probe diagnostic study 7−75829
TFTR-conditioned graphite: laboratory testing of properties affecting Tokamak operations 7−67992
TIBER II, two fluid plasma transport modelling, JET/TFTR comparisons 7−103185
Tiber II configuration and structural design 7−122205
TIBER-II, tritium breeding potential, shield modifications, effects on magnet damage and cost 7−103189
TNT-A tokamak, ion Bernstein waves, ray trajectories and damping 7−83515
Tokamak de Varennes, construction status in June 1986 7−89725
Tokamak de Varennes, long pulse operation, TF coil temp. and current density, 2D model 7−89728
Tokamak de Varennes, mechanical and structural design aspects 7−141304
Tokamak de Varennes, role in Canadian and international fusion research *(French)* 7−141300
Tokamak de Varennes, technical overview and electrical design 7−141303
Tokamak edge plasma, resistivity-gradient driven turbulence, impurity dynamics effects 7−97741
Tokamak impurity influx reduction, limiter geometry optimisation 7−75823
Tokamak limiter scrape-off layer study using a Mach number probe 7−75833
tokamak physics, overview 7−122078
Tokamak plasma heating by wave damping, review 7−97765
Tokamak reactor design, α particle effects study 7−103180
Tore Supra, manufacture and transport of large poloidal field coils 7−135648
TORE SUPRA, modular multijunction launchers for lower hybrid heating expts 7−135599
Tore Supra, status report 7−122089
Tore Supra, toroidal field coil tests 7−135647
Tore Supra, toroidal field coils, fabrication of conductor, test results 7−135646
TORE SUPRA control computer system 7−122172
TORE SUPRA data acquisition system, architecture 7−122180
Tore Supra pump limiter, engineering and preliminary designs 7−135583
Tore Supra toroidal field coils, dimensional manufacturing accuracies 7−135652
Tore-Supra, plasma position and shape control, magnetic field meas. and control loop 7−137120
torus magnetic field meas., by rapid-frequency-scan laser spectroscopy 7−142507
TOSCA, electrostatic and EM turbulence, anomalous transport study 7−111179
TOSCA tokamak, density fluctuations, far forward laser scatt. 7−111243
TOSCA tokamak, turbulent transport, diagnostics 7−111184
TRTR, record fusion neutron yield meas. 7−103184
Tuman-3, pulsed gas puffing system, plasma density control 7−135575
turbulent transport processes energetics in Tokamaks, kinetic description 7−75795
UNITOR, Be release and transport 7−75768
vacuum vessel components, resistive disruptions effects, DSTAR model 7−75894
Versator II tokamak, lower-hybrid current drive, particle confinement 7−123966
vertical plasma position, stability limit of feedback control in tokamaks 7−123875
wall conditioning in JT-60 7−75818
wall probes current-voltage characts., study in TEXTOR tokamak, secondary electron emission effects 7−75803
Wendelstein VII-AS, long-pulse neutral injection system design, development, performance 7−122084
X-ray imaging on Varennes Tokamak, image reconstruction techniques for computed tomography 7−117761
Be limiter surface composition in UNITOR, RBS, PIXE, AES and SEM/EIXE anal. 7−67989
C coatings influence on window materials in fusion-experimental devices 7−70134
C fibre reinforced 7−122129
a-C:H films, chem. erosion by H impact, atomic and ion beam techniques meas. 7−77727
DT plasmas, isotropic comp. control method in tokamaks 7−67986
H, retention in JET limiters, nucl. reaction techniques and laser induced mass anal. 7−69456
HCN lasers, plasma beat frequency stabilization by phased locked loop 7−123996
H(D), retention in JET wall samples, surface layer meas. 7−69367
^{3}He transport in TFTR, time evolution 7−123983
Li-Pb liquid alloy blanket with He cooling for DEMO reactor 7−135616
Li-Pb liquid alloy for NET, use as both breeder and coolant 7−135617
$LiAlO_2$-Be solid breeder blanket, He cooled for NET 7−135620
Ni, He-like, satellite spectra, wavelength and line intensities determ., obs. in TFTR 7−96593
Se emission lines, Tokamak Fusion Test Reactor 7−130924
T production and processing in a tokamak reactor 7−122090
TiC surface, particle removal with pump limiter ALT-I, geometry effects 7−68001
W, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
Zn-like ions in PLT tokamak, intercombination line study 7−117760

token passing *see protocols*

tomography, computerised *see computerised tomography*

tone generators (computer peripherals) *see acoustic generators; electronic music*

tool steel
austenitic hot work, grain coarsening, effect of alloying elements *(Chinese)* 7−144361
hardening in high temp. HF induction plasma 7−78311
high speed, cutting life rel. to surface treatment 7−138852
high speed, effects of Al, Ti and Si on struct. and hardness props. 7−126228

tool steel continued
high speed, electron beam rapid solidification and transient tempering 7−119267
high speed, fatigue rel. to powder metallurgy 7−126233
high speed, quantitative metallography by SEM 7−78416
high speed, rapidly solidified, struct. 7−92990
high speed, T6, directly sintered and wrought, strength, toughness and stiffness 7−100358
high-speed, cleavage fracture stress, temp. and plastic strain depend. 7−100333
high-speed, heat treatment with continuous laser rad. with various power density distrib. 7−71214
high-speed, integrated rapid solidification and heat treatment using computerised electron beam processing 7−119261
high-speed, P/M, elasticity modulus temp. depend., rel. to struct. 7−126160
high-speed, R18 and R6M5 superiority to tungstenless low-alloy types 7−126048
high-speed, TiN coatings, thickness, adhesion, microhardness QC 7−138925
hydrogenation in friction with friction plastic, influence of heat treatment 7−71317
ion implanted, tribological props. 7−106633
joining by cold sintering, heat treatment, transverse rapture strength, hardness, grain growth 7−126403
laser melt injection of BN powders, microhardness, struct. 7−78375
martensite, butterfly morphology, form. 7−138729
sliding and rolling wear, high temp. test rig 7−113836
substrate, CVD of TiC coatings 7−113419
surface analysis and corrosion inhibition mechanisms 7−119454
wear resistance improvement of stamping tool by ion nitriding 7−132759
C, effect of laser rad. 7−86411
Cr, rapid solidification of surface layers melted by CO_2 laser 7−93210
Cr-Mo-W-V mechanical props. and struct. modifications w.r.t. pulsed ion beam effects 7−117988
Cr-W, effect of laser rad. 7−86411
Mo-W high-speed, fracture toughness, retained austenite effect 7−100381
N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
TiN and TiC ion plating films on die tool steel, friction and wear *(Japanese)* 7−119376
W surface alloying by laser, Co addition effect, hardness, microstruct. *(Korean)* 7−138889
WC-Co hard metal/tool steel, diffusion bonding *(Japanese)* 7−78453

tools
see also machine tools
HF Plasma 401 unit for tools hardening 7−100413

topography, surface *see surface topography*

topography (Earth)
see also geomorphology
East African Rift area in Kenya, gravity anomalies and isostatic compensation 7−119994
airborne inertial surveying using laser tracking and profiling techniques 7−115099
Antarctica, influence of ice sheets topography on surface wind field 7−114973
Antarctica, zonally-averaged topography rel. to barotropic Rossby waves 7−94401
Askervein Hill Project, South Uist, Scotland, 3D flows 7−127329
aspherical Earth shape due to poloidal-toroidal coupling in mantle 7−94184
Equatorial Atlantic Ocean, hindcasts of sea surface dynamic height (1982 to 1984) 7−114730
atmosphere, impulsively started, linearly stratified flow over long ridges 7−114873
atmosphere boundary layer pollutant concentrations over complex terrain 7−101369
atmospheric dispersion over and around steep obstacle for varying thermal stratification 7−94334
atmospheric turbulence in mountainous regions 7−145602
Australia, NE region, inland trough modelling, role of orography and thermodynamic characts. 7−139668
baroclinic flows with and without two-wave bottom topography 7−79502
Black Hills, South Dakota, anal. of large format camera images for topographic and thematic mapping 7−114609
Brush Creek Valley, CO, USA katabatic winds dynamics 7−114879
Canada, W coast, marine air onshore surge, topographic effects 7−87859
Catalina Eddy, USA, role of topography in eddy form., effect on air pollution 7−133156
NE Colorado, USA, snowstorms, orographic effects 7−127393
continental palaeorifts morphology determ., quantitative anal. of sedimentary formations in E Transbaikal 7−145452
digital 7−79606
digital elevation data banks, accuracy 7−119932
digital elevation models, quality control of photogrammetrically sampled models 7−101179
Digital Photogrammetry System, stereo-push-broom scanner system characts. 7−101557
digital terrain models, large, manipulation, microcomputer program 7−114606
digital terrain models automatic generation from satellite images 7−101498
digitization method alpine geomorphology, for computer-assisted mapping 7−133537
dynamically supported topography and gravity anomalies, for fluid with depth-depend. viscosity 7−119993
East Kimberley region, NW Australia, sandstone landforms anal. 7−101308
effective roughness lengths for areally averaged flow 7−120070
NW European continent and shelf, topography and bathymetry rel. to geotectonic imaging 7−127076
fractal interpretation rel. to other planets 7−101177
frequency-domain reduction of potential field measurements to a horizontal plane 7−120136
geodetic levelling measurements, evidence of suppression of unequal ref. error 7−87425
Great Plains (USA) foreland basin, topography rel. to buoyant sub-surface loading of lithosphere 7−107379
hills, airflow turbulence modelling *(German)* 7−79525

ography (Earth) continued
Ice Stream B, W Antarctica, correl. between surface topography and strain rates 7−145538
ice streams A, B and C, West Antarctica, morphology and surface elevations 7−145537
ice streams B and C, W Antarctica, surface elevations and ice vels. 7−145539
Indonesian Borneo, slope props., slope processes and soil erosion risk in tropical rain forest 7−87647
Ishigaki and Iriomote islands, rainfall distrib. and orographic effects on low level atm. water vapour transport *(Japanese)* 7−79494
island terrain effects on tropical cyclones, numerical study 7−101430
isostatic equilibrium studies, new empirical relations between gravity anomaly and elevation 7−127073
Japan, 1983 July 23 storm, orographically forced upstream lifting effect on mesoscale precipitation 7−127374
land altimetry systems evaluation 7−107334
land slope frequency distribution, determ. from digital elevation models 7−87646
linearised shallow water equations on various grids, topographically-induced stationary solutions 7−127423
Los Angeles, USA, elevated air pollution layers, orographic effects 7−86851
mapping from SPOT imagery, practical aspects 7−101180
Midway Atoll, atoll surface lowering rel. to Miocene sea-level falls estimation 7−139601
mixed atmosphere layer over very rough terrain, virtual heat entrainment 7−101374
mountain effects on large scale atm. motion systems, laboratory simulation 7−111057
orographic gravity waves effect on sudden stratospheric warmings *(French)* 7−133811
equatorial Pacific Ocean, sea level trends (1974-75 to 1981) 7−114742
parallax bar heighting in photogrammetry, accuracy anal. via numerical simulation 7−101178
photogrammetric measurements, off-line compilation of stereo models using digital image correl. 7−145311
radar mapping; line integral approach to radar clinometry 7−94457
radar remote sensing method, Seasat radar altimetry application 7−101601
radar stereo mapping method for topography mapping, using crossing flight lines 7−72164
Radfeld, Austria, mountain boundary layer above valley during mountain and valley wind *(German)* 7−79534
remote sensing, topography mapping by stereo imaging, digital image correlation errors 7−72160
remote sensing of topography, combined LANDSAT TM and MOMS-01 low solar elevation observation method 7−94479
Rhine valley, upper region, topography effects of atm. during MESOKLIP *(German)* 7−79526
Rutford Ice Stream, W Antarctica, surface and bedrock topography and ice stream movement 7−145545
satellite altimetry, oceanographic and geophysical appls. 7−133553
satellite remote sensing of land surface (with SPOT), accuracy of automatic parallax meas. 7−72161
scalar roughness and scalar transfer coeff. over snow and sea ice 7−101375
sinusoidal mountains and valleys, press. drag and effective roughness length 7−120069
SIR-B stereo radar images and topographic mapping 7−107562
society and surveying, conf., Nurnberg, Germany (September 1986) 7−102015
STAR-1 SAR data and digital terrain mapping 7−107563
stratified rapidly rotating flow, response to pulsating topography 7−83239
surface relief rel. to crustal morphostructure under Asia 7−133615
surface roughness parameter estimated with a drag technique 7−87924
terrain correction for gravity meas. using digital terrain model 7−119923
terrain corrections to gravity meas., improvement using numerical integration techniques and bicubic spline interpolation 7−127072
terrain relief, texture analysis of digital image data using spatial cooccurrence 7−115028
terrain topography rel. to lithospheric stress 7−145406
tidal strains and tilts, topographic effects 7−145317
time derivative of height anomaly, combination with gravity and pot. coeffs. data for determ. of geoid changes 7−101184
upstream blocking and airflow over mountains, book contrib. 7−101465
wavy plateau, intensification of wave energy on Lee side 7−139729
wind standard deviation for upstream roughness, memory 7−101373

ology
see also catastrophe theory; differential geometry; graph theory
abelian monopoles and Lie algebra extensions 7−134942
anatomical surface structures rendering using fractal interpolation 7−114484
associated heat kernel and elliptical operator, asymptotic expansion coefficient 7−66979
asymptotic Morse inequalities, heat equation proof 7−88883
B*-algebra, quasi-strict topology on space of quasi-multipliers 7−72789
barrelled locally convex spaces, book 7−88926
biological oscillator, topological patterns of synchronization 7−119703
bosonic knotted strings and cobordism theory 7−128867
boundary-value problems, third order, existence theorems and topological transversality 7−108179
Calabi-Yau manifolds as complete intersections in products of complex projective spaces 7−67515
Campbell-Baker-Hausdorff-Dynkin formula and solutions of differential equations 7−88884
Cauchy-Riemann structures in optical geometry 7−67142
center manifolds and contractions on a scale of Banach spaces 7−88916
chemical graphs, family, stereotopological indices 7−140418
chemical phenomena, modelling using topological indices 7−141416
circle maps, scaling exponents, relations and order dependence 7−108472
classes of unbounded commutants of unbounded operator families 7−134444
compact Riemannian symmetric space, geometry of orbits of isotropy group 7−88924
compact spaces associated with C(K) subspaces *(French)* 7−66985
complex analytic singularities, book 7−128204
complex Banach spaces, biholomorphic maps between circular domains 7−102135
conference, Les Houches, France, June 1983 7−80169

topology continued
conference on homotopy theory, Kyoto, Japan, (Dec. 1984) 7−128199
conformally minimal coordinates on 3D Riemannian manifold 7−73087
conical intersections, Jahn-Teller crossing, topology, application to standard model 7−141476
connections for vector bundles over quaternionic Kahler manifolds 7−88918
continuous system in one comoving frame of reference, translation of evolution laws 7−73094
cosmic censorship and topology change in general relativity 7−72290
covariant Lorentz anomalies, path integral and topological methods with Weyl fermions 7−128788
derivative strings, contravariant aspect 7−102138
diagonal maps between sequence spaces 7−72765
differentiable manifold, symm. linear connection, totally geodesic plane axiom 7−95274
differential topological networks, nonadditive scattering invariants in classical mechanics, quantum theory 7−140507
discontinuous dual billiards, global stability 7−120767
dyadic compact topological space, coabsolute props. *(Russian)* 7−108189
dynamical systems, topological dimens. and local coords. from time series data 7−120922
early Universe, cosmological topological defects, phase transitions and causality 7−108001
early Universe, topological defects, winding numbers 7−88702
Eberlein spaces and related spaces, internal topological characterisation 7−72910
edge length properties of random Voronoi polygons 7−113825
effective homology methods in algebraic topology *(French)* 7−72771
Einstein-Maxwell equations, effective construction of topologically non-trivial solutions 7−95428
entropy function for characteristic exponents 7−73304
equicontinuous structure relation and extension of continuous equivariant functions 7−66962
Euclidean spaces, immersion of manifolds, cohomology anal. 7−95272
expansive mappings of compact topological space, nonunique fixed point 7−72914
Fermi superfluids, topological charge and chiral anomalies 7−143125
fermionic condensate, influence of space-time topology in four-fermion interaction model 7−89435
field theory and strings, evaluation map in anomaly calcs. 7−134910
fine topology, Silov boundary, and $(dd^c)^n$ 7−88917
foliated manifold, holonomic imperative and homotopy groupoid 7−88923
Fourier restriction theorems for degenerate curves 7−72916
free massless scalar field on Riemann surface, thermal event horizon, boson operator formalism 7−134931
Friedmann cosmologies, changes in Bianchi symmetry 7−101968
function space as a generalisation of Iyer's space of integral functions 7−88852
fuzzy supratopological spaces, supracontinuity and supracompactness 7−88914
fuzzy topology, topological results 7−88920
gauge theories, quantized, topological studies 7−81032
gauge theories on compact 4-manifolds, topology 7−67463
gauge theory, Chern-Simons form, topological origin of ang. momentum 7−134932
Gauss-Codazzi-Ricci equations, general relativity, analogy with Kaluza-Klein theory 7−115860
general relativity, sectional curvature function, symmetries, space topological structure, Lorentz metrics 7−140556
generalised QED_3, conductivity quantisation by topological struct. of energy-momentum space 7−89427
geometrical methods in the quantum theory of fields and strings 7−108891
gravitation, Hamiltonian form, dimensional continued 7−128397
gravitational field with toroidal topology, Einstein eqns., axially symmetric solns. 7−140558
gravitational plane waves colliding, vacuum Einstein eqns., exact soln. for space-time 7−80532
gravitational singularities, topological transitions in Wheeler-De Witt superspace 7−140579
Hamiltonian mechanics, topology of 3D manifolds *(Russian)* 7−128261
Hawking-Unruh effect in Rindler manifold of arbitrary dimension 7−89098
heat kernel expansion coefficient 7−66978
heat kernel expansion in geometric fields, Riemann-Cartan spacetime 7−134943
heterotic string theory, global anomalies 7−102709
heterotic string theory on Calabi-Yau manifolds in the Green-Schwarz formalism 7−73621
higher dimensional theories, stability of compactified vacuum 7−80541
higher dimensional unification, dimensional reduction by isometry 7−80542
hypersurface in Euclidean space, pinching theorems of nonexistence for stable currents 7−95281
immersions of manifolds and stable normal bundles 7−88925
implicitly defined two-dimensional surfaces, algorithm for piecewise linear approx. 7−88947
integral manifolds, topological structure and period doubling bifurcation 7−72918
interstellar dark clouds, fractal dimension of Lynds dark nebulae 7−128002
invariant circles in standard-like mappings, erratic behaviour 7−108421
invariant curves, existence in area-preserving maps 7−108192
Kac-Moody groups, topology of the Dirac determinant bundle, and fermionization 7−88834
KDV flows, geometry 7−95396
kink and skyrmion fields, homotopy conservation laws and extension theorems 7−80988
knotted periodic orbits in suspensions of annulus maps 7−102137
Lagrange multipliers in MC-SCF theory, topological conditions and hermiticity 7−80386
lattice QCD, topological excitation, U(1) problem, quark and meson propagators, Atiyah-Singer index 7−121444
level spaces of R(I), and I(I), complete characterisation 7−66980
Lie groups space, 7−146124
linearised Regge calculus, fundamental theorem 7−95793
locally convex spaces of vector-valued continuous fns., operators 7−95273
locally semimetrizable closed spaces 7−72911
magnetosphere, mag. topology of analytic mag. field model 7−94578

topology continued
magnetosphere, topology of magnetotail field lines and current lines 7−72220
manifolds, topology and homotopy, appl. to n-field models 7−80388
marginal 2-surfaces, topology and stability 7−66971
molecular distance matrix, algorithm construction 7−116808
molecular graphics, appl. of algebraic topology 7−144958
molecular graphs as topological objects in space 7−116811
molecular path codes applied to comparability and similarity 7−129551
N=Z supergravity, topological terms for nonsemisimple groups 7−108381
nonlinear field theory, two dimensional theories, one-loop corrections to solitons, ϕ^4 kink 7−121368
nonlinear Schrodinger equation, continuous dependence near blow-up time *(French)* 7−95383
nonperturbative conformal quantum gravity 7−128410
nonrelativistic spinning particle, superoscillatory integrals and path integral 7−88895
nontrivial loop defects classification in condensed media 7−115768
operator formulation on Riemann surfaces 7−95873
ordinary differential equations in the complex domain via topological transversality 7−66933
organised structures in turbulent plane wake, topology 7−130658
pairwise locally semi-connected spaces 7−102132
para-uniformities, para-proximities, and *H*-closed extensions 7−66961
parallel transport in determinant line bundle, nonzero index case 7−108188
parallel transport in determinant line bundle 7−121322
Partial *-algebras of closed operators and commutants, bicommutants and commutants 7−95374
partial *-algebras of closed operators and commutants, general structure 7−95373
particle motion in Coulombic periodic potentials, ergodic and topological props. 7−89159
periodic elliptic operator, spectrum along orbits of R^n actions 7−102130
phase transition, first-order, topological defect dynamics 7−137516
pipe flow, matrix methods *(Spanish)* 7−97634
Polyakov random surfaces with arbitrary genus, entropy, susceptibility critical exponent 7−80624
polyhexes, computer enumeration, compact naming approach 7−141438
polymer, crosslinked, graph represent. and topological gelation criterion 7−97984
polymer chains, study using numerical simulations 7−103698
primordial black hole, wave function in $S^1 \times S^2$ topology 7−73109
pure states, time evolution, Hilbert space representation, information topology 7−120841
QCD on lattice, β=5.7, staggered fermions and topological susceptibility 7−140890
quantisation, manifolds, topology, localisation, configuration spaces, imprimitivity, Borel kinematics 7−140486
quantitative measures of geometric and topological structure as generated by dynamics 7−72917
quantum adiabatic phase, topological investigation, non-trivial gauge bundles, homotopically non-trivial mappings 7−120837
quantum coherence that allows non-simply connected manifolds 7−134624
quantum kinetics, extension beyond mechanics 7−134548
quantum theory, topological and global aspects 7−80521
quotients of differential groupoids *(French)* 7−66976
$R \times S^3$ topology field theory, gravitation 7−89074
random walks on Cayley trees, first passage time, continued fraction expansion 7−120966
restricted 3-body problem, topology of Jacobi levels with no zero velocity curves 7−73233
rib of an open set of a euclidean space *(French)* 7−102131
Riemann surfaces of finite type, moduli spaces 7−102134
Riemann-Finsler subspaces. struct. eqns. 7−95275
s-closed spaces, equivalence to Cd-compactness and weak RS-compactness 7−72912
S-unimodular maps with zero entropy, limit sets 7−120769
scalar electrodynamics in three dimensions with topological mass terms 7−134950
semi-classical Einstein equations, constant curvature solns., graviton and topology contrib. 7−128414
Siegel disks of arbitrary rot. number, universal small-scale struct. near boundary 7−108193
simplicial quantum gravity and unruly topology 7−67151
Singular-value decomposition and embedding dimension 7−134475
Skyrmion geometry, energy functional geometrical interpretation, conformal transformations, chiral symmetry breaking 7−121325
small universe model, topological struct. of space-time 7−73071
SO(3,R) images and quotients, van der Waerden theorem 7−88839
space-time topological modifications leading to spinor struct., gravit. mag. monopoles 7−115856
special relativity on $R \times S^3$ topology 7−72965
spin manifolds, Killing spinors and universality of the Hijazi inequality 7−108191
spin manifolds and universality of the Hijazi inequality 7−72909
spin substructure of space-time 7−95279
string theory, loop space index theorems for Dirac-Ramond operator 7−108872
strings, minimal curves in six dimensions 7−128866
strings, quantum kinematics and quantisation 7−135066
strings, quantum topology 7−95868
strongly α-irresolute mappings 7−72846
SU(2) gauge fields, SO(4) trivialisable, geometry and topology 7−102633
SU(2) lattice gauge theory, topological susceptibility, high statistics computation algorithm 7−140807
SU(3) lattice gauge theory, topological fluctuations and susceptibility, vacuum anal. 7−116060
SU(3) lattice gauge theory, topology, Chern number computation, gauge fixing, winding numbers 7−140808
SU(3) lattice gauge theory, U(1) problem solution 7−95772
subsequential limit points of a sequence of iterates, continuous selfmaps 7−102096
subspaces of extensions, connectedness and local connectedness 7−72913
subspaces of integral functions which are differentiation-invariant 7−88869
super-Riemann surfaces, N=2, O(N) and SO(N) surfaces 7−73555
superstring compactifications rel. to semisimple Lie algebras, topological invariants 7−135062
supersymmetric σ-model, geometry and anomaly struct. study 7−80966
topology continued
SUSY quantum mechanics, Witten index, axial anomaly and Krein's spectral shift fn., topological invariance 7−108287
Teichmuller deformations of super Riemann surfaces 7−95435
temperature, periodicity and horizons 7−134625
tempered microlocalisation functors, construction *(French)* 7−95241
three-generation Calabi-Yau manifold, Ricci-flat Kahler manifolds, topological numbers 7−115873
travelling salesman problem on tetrahedrally coordinated random networks, appl. to a-Si modelling 7−142586
turbulence structure in cylinder wake 7−130710
unstable EM field problems, topological approach 7−110199
Weyl-Dirac equation for conformally invariant gravit. and electromagnetism 7−73108
Yang-Mills fields, topological aspects in curves spaces 7−73496
^{3}He, superfluid, quantized vortices, topological identification 7−143129
^{3}He, superfluid, topological charge and chiral anomalies 7−143125
torque
see also Scott effect
circular shaft, exact versus approximate determination of structural reliability 7−117476
cryogenic positioner using DC torque motor 7−67329
Earth rotation, appl. of torque method to atmospheric circulation effects *(Japanese)* 7−139428
fixed points in torque−angular momentum relations 7−102054
torsion, Saint Venant boundary value problem *(German)* 7−104161
torque measurement
see also dynamometers
No entries
torque meters *see torquemeters*
torquemeters
phase-measuring, electronic system for calibration and testing *(Polish)* 7−67303
Torrey oscillations (NMR) *see double nuclear magnetic resonance*
torsion
see also stress analysis
n-alkanes, torsional and CCC bend frequencies, crystal analyzer spectrosc. 7−136079
anisotropic cylinders, torsion using complementary variational principles 7−72982
asymptotic behavior of stress function near the vertex of a crack in the problem of torsion under steady-state creep 7−136753
bar, elasto-plastic, torsion via dislocation method 7−123493
bars, short, with sections with only one axis of symmetry, nonuniform torsion 7−117484
bars, straight, kinetic stability, torsion with regard to external damping *(German)* 7−97356
bars with triangular hollow cross section, torsion, stress anal. 7−130534
beams, monosymm., with initial curvature, lateral instability 7−117498
brittle materials, fracture toughness and fatigue testing, double torsion method 7−100466
circumferentially cracked pipes in torsion, J-integral and tearing modulus estimates 7−69065
composite box beam analysis, expt. and theory 7−90979
composite rods for beam structures, load-bearing capacity, minimal weight design 7−68987
constructional materials, static and low cycle strength, plane stressed state, test unit and method 7−106734
cylinder, hollow, multilayered, Lame and torsion problems, elasticity anal. 7−128290
cylinder, nonhomogeneous circular, periodic shearing stress, torsional vibr. study 7−142206
cylinder, nonhomogeneous circular, twisting, stress soln. 7−75317
cylinder, thin-walled nonlinear isotropic, universal relations 7−83040
cylindrical beams with multiply connected cross sections, elastic torsion, theoretical considerations 7−142172
cylindrical beams with multiply connected cross sections, elastic torsion, numerical results 7−142173
differential equation for torsion of plane rectangular plate *(French)* 7−90934
elastic torsion problems, boundary elements methods, Green's generalized theorem, R-fn. anal. 7−72974
epoxy resin, torsional fatigue props. *(Japanese)* 7−93085
eversion of spherical shell, Poynting problem 7−83049
fatigue failure, multiaxial, influence of strain-path 7−118027
fatigue test rig, tension-torsion, elevated temps. 7−126360
fatigue under out-of-phase bending and torsion 7−84106
flow localisation, effect of material imperfections 7−98314
glass fibre reinforced plastic, tubular specimens, strength determ. in plane strained state, working clamps design 7−78433
high speed torsion tests, direct temp. meas. 7−119371
hollow cylinder, elastic, dielectric, perturbational torsion about a finite extension, electroelasticity 7−110795
hollow-core solids of revolution 7−130535
members, thin-walled, buckling loads in torsion and torsion-bending, accurate evaluation 7−142194
membrane, initially cylindrical, reinforced with inextensible cords, finite axisymm. deform. with torsion 7−123452
metal ductility, assessment as function of stress state using optimum extrapolation method 7−132670
nucleophilic addition reactions, carbonyl group, steric effects 7−126446
pancratic elastase, porcine, and acetyl-alanine-proline-alanine complex, mol. dynamics simulation 7−144946
perforated plates, bending and torsion 7−68999
plane torsion test, buckling conditions *(German)* 7−97355
plates whose material props. vary through thickness, effective props. determ. *(German)* 7−83078
polyacetal, torsional fatigue props. *(Japanese)* 7−93085
polycarbonate, torsional fatigue props. *(Japanese)* 7−93085
polyethylene, double torsion testing of high velocity crack resistance 7−86511
polymer, reverser design for complex tests 7−78439
prism, micropolar elastic with square cross-section 7−97318
quasilinear elliptic problems, soln., location of maxima of gradient, Saint Venant problem 7−95334
rod, elastic, torsional wave propag., adjacent fluid density study 7−83144
rod under combined loads of bending, shearing and torsion, dynamic anal. 7−97315
rods, naturally twisted, bending, extension and torsion 7−75311
rods, pretwisted, nonlinear coupled bending-torsion 7−110796

orsion continued
rotating bodies, forced torsional vibr. 7−75370
shear centre of thin-walled cross-sections and beams *(German)* 7−75332
shells, cylindrical, reinforced, stability under torsion 7−110821
shells, cylindrical cross-ply, postbuckling behaviour under torsion 7−123497
stainless steel, pure hysteresis behaviour props. 7−91695
steel, austenitic stainless, low-cycle, biaxial fatigue life, effect of axial-torsional straining at 550°C *(Japanese)* 7−106616
steel, low C, fatigue crack growth rate, stress biaxiality effect *(Japanese)* 7−93084
steel, Ni-Cr-Mo, failure modes under cyclic torsion rel. to surface flaws 7−100328
steels, torsional fatigue strength, effect of artificial small defect 7−119370
strand, seven-wire, axially loaded, wire tension and bending moments 7−144656
superalloy, pure hysteresis behaviour props. 7−91695
tensile test machine adaptation for torsional testing system 7−86520
terminal twisting moments, torsion, unique centre of twist 7−120814
testing device for materials at high hydrostatic press. 7−78434
two-dimensional torsion problem in elasticity, integral eqns. appl. 7−95343
Al, deformed to very large steady-state creep strains, dislocation microstruct. 7−100305
Al_2O_3 ceramic rods, fatigue pre-cracked, torsional fracture 7−144522
Cu, high purity, tension, compression or torsion deform. texture, recrystallisation temp., flow strength *(German)* 7−100321
Cu, hot compression, recovery and recrystallisation during stress relax. 7−119281
Cu-Ni-Fe, torsional fatigue behaviour, influence of environment 7−93089
$Cu_{50}Zr_{50}$ amorphous ribbon, torsion spring for gravitational const. meas. 7−80268
Fe, cast, high-strength, endurance limit determ. under combined bending and torsion 7−113714
α-Fe, electron irrad., internal friction orientation depend. in recovery stages I_E and III 7−98337
SiC whisker reinforced Al alloys, hot working behaviour 7−78070

torsion loading *see torsion*

torsional waves *see elastic waves*

touch *see mechanoception*

towers *see poles and towers*

town and country planning
drain system for town, modelling of stormwater flow 7−120054
Klaipeda city air pollution reduction programme *(Russian)* 7−144936
urban area power structure optimisation model including ecological aims *(Croatian)* 7−139144

Townsend coefficient *see Townsend discharge*

Townsend discharge
dichlorodifluoromethane-N_2 mixtures, steady-state Townsend conditions, electron swarm props. 7−104474
difluorodichloromethane/SF_6 gas mixtures, ionisation and attachment coeffs. meas. 7−137140
He, glow discharge, cathode sheath, electron motion, simulation 7−130953
He, Townsend discharges, spatial nonuniformity at low pressure 7−111294
Ne, Townsend discharges, spatial nonuniformity at low pressure 7−111294
SF_6/trichlorotrifluoroethane gas mixtures, ionisation and attachment coeffs. 7−104479

tracers
see also radioactive tracers
air pollution, use of Pb isotopes as tracer of Pb pollution sources 7−139174
diffusion in alkane solvents, correlation to rough hard-sphere theory 7−137601
metal deposition, mass transfer coefficients, electrochemical tracer studies 7−100132
methane -d_4 as atmospheric tracers 7−94452
oceanographic tracers for remote sensing of surface flow 7−94469
pentafluorobenzene, vibrational energy transfer, Hg tracer UV absorpt. spectra anal. 7−135956
perfluorocarbon tracer verification of trajectory models 7−119700
H_2O, interaction of Ag with humates and other species, gel permeation chromatography anal. 7−100654
Lu tracer technique, fissile material, mass determ. in input accountability tank of reprocessing plant 7−109322
Lu, use in volumetric calibration of $Pu(NO_3)_4$ holding tanks 7−109321
OH radical in atmosphere, possibility of reactive tracer chemical to monitor OH concs. 7−145673

track visualisation, particle *see particle track visualisation*

tracking
see also radar
bearing estimation, error intensity measures 7−110637
closed-form passive source localisation using range difference meas., spherical interpolation method 7−110662
hexagonal detector arrays for point-source location 7−79842
passive multipath target tracking in inhomogeneous acoustic medium 7−110661
passive sonar, continuous gain adaptive trackers design 7−110658
Pioneer 11 tracking data, use in search for giant waves in 30-2000 seconds period range 7−139880
Sakigake and Suisei, Japanese deep space probes, tracking and orbit determ. *(Japanese)* 7−127685
satellite altimeter tracking systems 7−107589
telescope sidereal drive corrector 7−88116
transuranic waste transportation tracking system 7−109497
underwater sources, parameter estimation from multipath delay information 7−123309
zoom lenses for IR appls. 7−110530

tracking (insulation) *see surface discharges*

tracking (sonar) *see sonar*

tracking systems
see also ground support systems; radar systems
automatic meteor track radar system and station design *(Russian)* 7−79687
calibration of multiple-array underwater tracking system, remote monitoring 7−123308

tracking systems continued
composite polymer materials, automated meas. of coeff. of linear thermal expansion 7−140661
ERS-1 altimeter, automatic tracking mode switching algorithm 7−101663
motion tracking and analysis systems, state of art 7−95557
moving targets automatic tracking in three dimensions 7−95670
passive sonar, continuous gain adaptive trackers design 7−110658
RAFOS neutrally buoyant subsurface float, acoustic tracking, data acquisition and telemetry 7−133971
smooth pursuit eye movement, limiting velocity determ. from retinal image 7−126817
solar, automatic, determ. of tracking error using composite parabola 7−126561
solar energy concentrator automatic tracking schemes and systems *(Romanian)* 7−114080
space tracking system, computer-based, Strategic Defense Initiative 7−72245

tracks, particle *see particle tracks*

trade *see commerce*

trade fairs *see exhibitions*

trade shows *see exhibitions*

training
see also education; teaching
advanced computer based training for nuclear power plant personnel 7−96140
aerial image display systems in simulation 7−139276
CAL conference Ottawa, Ont., Canada, (May 1986) 7−88742
Fort Calhoun nuclear power station, computerized training program 7−128229
locomotor rehabilitation, progressive partial weight bearing training system 7−107314
Loviisa PWR, process computer system replacement, simulator upgrade 7−116637
LWR training simulator, 3D nodal coupling coeff. calcs. 7−96250
motor operator valve trainer for nuclear industry 7−103042
nuclear criticality simulator for safety training 7−96296
nuclear criticality simulator for safety training 7−103095
nuclear operations personnel computer based training 7−129268
nuclear plant training simulator validation using engineering computer codes 7−135411
nuclear power plant off-site training in CEGB, history and development 7−115717
nuclear power plant operator errors during simulator training 7−74014
nuclear power plant operator training simulator, Grafenrheinfeld PWR plant 7−81473
nuclear power plant simulator qualification using the EPRI methodology 7−135416
nuclear power plant simulators, continuous real-time survey 7−121999
nuclear power plant systems interaction, training course 7−102955
nuclear reactor control rooms, expert systems as intelligent operator aids 7−81910
plant analyzers for training, operating support and safety analysis 7−96139
power plant training simulator fidelity 7−135417
PWR compact analyser, interactive simulator for operator training and eval. 7−89603
reactor coolant pump seal mock-ups, team training 7−103096
satellite remote sensing, scientists and engineers inservice training as information transfer method 7−95161
Spanish nuclear emergency planning, information and training programs 7−109383
Super Phenix fast breeder plant, emergency systems training simulators 7−67906
Torness AGR simulator for commissioning and operator training 7−102069
UNB universal myoelectric trainer 7−127043
visual simulation, how the eye sees real world and simulator 7−93765

trajectory control *see position control*

tramcars *see road vehicles*

transborder data flow *see data privacy*

transceivers
impedance matched fibre optic transceivers for microwave signal transmission 7−90831
multinuclear transceiver/digitizer for high-resolution NMR spectrometer 7−95631
optical circulator for fibre optic transceivers 7−136539
US wideband transceiver using HV MOSFET pulse generator *(Spanish)* 7−90898

transducers
see also accelerometers; acoustic transducers; actuators; extensometers; Hall effect transducers; piezoelectric transducers; pressure transducers; strain gauges
acousto-optic Bragg cells for signal processing 7−75210
amorphous alloys, appl. to mag. transducers 7−89211
birefringence errors in magnetooptical high-current converters 7−102448
calorimetric transducers certification, time marker for a printer 7−102376
eddy current, synthesis according to specified mag. field struct. in inspection zone 7−71447
eddy current 7−132892
eddy current flaw detector with rot. core in superimposed transducer 7−71448
eddy current installation, automated, for flaw detection in fuel element cans 7−67908
eddy current transducer interaction with corrosion damaged product 7−132877
ferroelectric applications, conf., Bethlehem, PA, USA (June 1986) 7−88741
flow-rate meter, sensitivity limits of EM meter, magnetic field of transducer *(Russian)* 7−75725
magnetoelastic measuring transducer using a thin ferromagnetic film 7−102395
multicomponent force sensor with cross sensitivity, calibration error effects *(Japanese)* 7−83145
multilayer end-on magnetoresistive transducers, signal-noise performance 7−128559
optical position transducer, simple, low-cost design 7−108538
optical sensors and transducers for vibr. meas. *(Danish)* 7−128525
optically powered, transducer with optical fibre data and power link *(Japanese)* 7−128569

transducers continued
optron converter of small displacements having coaxially arranged emitter and photoreceiver 7−108540
position transducer, inductive with transverse excitation *(German)* 7−80740
pyrooptic converter, device sensitivity estimations 7−121222
second-order measuring transducers, scope *(Russian)* 7−121103
sensor classification scheme 7−80768
silicone transducer for gas flow meas. *(Swedish)* 7−83369
solar heating with distributed storage, microprocessor-based control 7−133118
static errors correction, synthetic methods *(Chinese)* 7−73327
superposed eddy current transducers with windings of arbitrary length 7−132890
surface temp. meas. equipment, accuracy and response-speed improvements *(Russian)* 7−108553
surface texture meas. devices including stylus type tracer 7−95547
thermistor transducer for atmospheric moisture content meas. *(Swedish)* 7−127485
thermochromic transducer in fibre optic temp. sensor 7−123248
thermoelectric vacuum gauge, pressure meas. accuracy increase 7−134796
thick film force (pressure) sensors fabrication 7−128565
thick film sensors and transducers, design, manufacture and charact. *(Italian)* 7−89209
translation mechanisms for physical instruments, design and assessment 7−128552
tubes, crossflow force meas. 7−123788
CdTe-CdS heterosystem, rear-barrier photoelectric transducer, preparation and props. *(Russian)* 7−95649
$Fe_{40}Ni_{40}B_{20}/Fe_{81}B_{13.5}Si_{3.5}C_2$ amorphous ribbon AC two-core transducer, displacement meas. 7−140686
Si based sensors and transducers, conf., London, England (Dec. 1986) 7−95099

transductors *see saturable core reactors*

transfer functions
see also optical transfer function
coded aperture sensors design 7−108537
Czochralski growth, temp. oscillation influence on measured cryst. weight, transfer function 7−125951
light-growth response of double mutants of Phycomyces 7−107158
photoacoustic cells calibration 7−102539
variable-pressure sensors identification, fine-domain method 7−102396

transferred electron devices *see Gunn devices*

transferred electron effects *see Gunn effect*

transferred electron oscillators *see Gunn oscillators*

transfluxors *see magnetic cores*

transformations, phase *see phase transformations*

transformer insulation
see also insulating oils
15 to 200 MVA power transformers, ultrasound testing for insulation faults 7−97234

transformer iron *see iron alloys; silicon alloys*

transformer steel *see iron alloys; silicon alloys*

transformer windings
power transformer Cu winding strength improvement by cold working 7−100250

transformers
see also power transformers; pulse transformers
Poynting vector distrib. in a simple transformer 7−102055

transforms
see also Fourier transforms; Laplace transforms; Z transforms
2-D Hilbert transform, appl. in interpretation of remotely sensed potential field data 7−107578
2D speech/ECG signal processing using Wigner-Ville distribution 7−79109
(ψ,β)-differentiable functions, approximating props. *(Russian)* 7−88849
Abelian and Tauberian theorems, Stieltjes transform, generalised functions, quasiasymptotics 7−140428
adiabatic gas dynamics, soliton propag. and inverse scatt. transform 7−108243
adjoint operation uniqueness, transformations of Hilbert space 7−115758
AKNS hierarchies, symmetries and constants of motion 7−108169
analytic disc construction and appls. *(French)* 7−102089
Anosov diffeomorphisms, periodic orbits of 2D torus 7−134447
B*-algebra, quasi-strict topology on space of quasi-multipliers 7−72789
Backlund transformation eqns. for 2D nonlinear evolution eqns. 7−128246
Backlund transformations, prolongation techniques 7−66953
Backlund transformations derivation for Ernst eqn., general method 7−102237
Backlund transformations for AKNS systems, Darboux matrices 7−115725
Backlund transformations for the generalized two-dimensional Toda lattice 7−108462
basin boundaries of one-dimensional maps 7−89122
Bianchi-Backlund construction for affine minimal surfaces 7−108170
bimodal maps, bifurcation structure 7−134668
Block equations and the Korteweg-de Vries hierarchy 7−120843
Bogolubov-Valatin transforms on a Hilbert bundle, implementation 7−102128
Bondi integration functions transform. rules, ang. mom. transform. props. 7−102244
bosonic string, gauge fixing and BRST transform 7−108884
boundary distortion under conformal mappings and Hausdorff dimensionality *(Russian)* 7−80328
C*-algebras with continuous trace, derivations from subalgebras 7−88828
cauchy problem, slow and quasi-slow solutions of differential inclusions 7−80358
chaotic Anosov motion, Arnold-Sinai cat maps, arithmetical props. 7−73229
chaotic mappings, dynamics, asymptotically periodic behaviour 7−128458
classes of Sakaguchi functions and Hadamard products 7−88903
compact metric space, nonexpansive self-maps, fixed points 7−72915
compact Riemannian manifold, conformal transformation of the scalar curvature *(French)* 7−66949
conformal maps, boundary smoothness 7−88898
contractive type multivalued mappings, fixed points 7−88851
convolution operators in a fading memory space 7−80380
cortex transform: rapid computation of simulated neural images 7−139250

transforms continued
cosine transform coding incorporating human visual system model 7−93728
coupling sensitivity of chaos, theory and further numerical evidence 7−80621
CT image reconstruction, three-dimens., from line integrals 7−145214
cylindrical cavity face, coupled thermoelastic problem, Laplace transform anal. 7−75291
Darboux-Crum-Krein transformations on Schrodinger eqn. 7−134575
diagonal maps between sequence spaces 7−72765
differential equation, Lie symmetry generators, maximum number calc. 7−140431
differential equations, singularities in complex-analytic manifolds, analytic transform method *(Russian)* 7−72839
discontinuous dual billiards, global stability 7−120767
discrete soliton equations, Fredholm determinant method, lattice eqns. appl. 7−115918
dispersive long wave equation, spectral transform of 2D extension 7−120818
dissipative chaos, time averages using modified maps 7−120963
dynamical systems, renormalisation scheme 7−73219
effective generating functions for quantum canonical transformations 7−67077
elastic media with microstructure, reciprocity and variational theorems, Laplace transform appl. 7−72975
elastic micropolar half space, thermal shock on boundary, Laplace transform appl., 7−75292
energy of harmonic maps between spheres 7−66959
expansive mappings of compact topological space, nonunique fixed point 7−72914
exponential mapping, measurable dynamics *(Russian)* 7−80327
fermion quantization in soliton field, implementation of gauge transformations 7−67471
Feynman path integral, formulation as path integral of determinants using time transformation 7−80518
finite Abelian groups, duality, Jordan normal form of integer matrices 7−95213
finite semigroups of transformations, ranks 7−72811
Finsler spaces with (α,β) metric, conformal transformation 7−88913
fixed point theory and complementary problems in Hilbert space 7−95231
form recognition using moment invariants for 3D perspective transformations 7−110278
Fourier-Plancherel transform as a spectral representation of a rigged Hilbert space 7−72879
Fueter mappings and their Jacobians, characterisation 7−72849
Gauss's continued-fraction map, relaxation time, Hilbert-space anal. 7−108171
generalized Householder transformation and sparse matrices 7−95218
geometric moments from optical cosinusoidal transform, hybrid optical/digital method 7−103758
gluing bifurcations in critical flows: the route to chaos in parametrically excited surface waves 7−89127
group-invariant solutions of differential equations 7−95266
Hadamard transform photothermal deflection imaging, resolution, dynamic range 7−102402
Hamiltonian systems, equilibria linear stability boundaries calcs. 7−128252
heat conduction, quasi-steady periodic linear inverse, periodic B-splines and integral transforms anal. 7−110751
holomorphic mappings around a polar set *(French)* 7−72825
holomorphically projective transformations of Hermitian and Kahlerian manifolds *(French)* 7−72833
hybrid optical system for linear transformation processing 7−103962
implicitly defined two-dimensional surfaces, algorithm for piecewise linear approx. 7−88947
infinite-dimensional algebras of any linearization systems 7−88830
infinitesimal invariance transformations, classification 7−134435
integrable mappings and Lie algebras *(Russian)* 7−81039
inverse Radon transform, implementation for seismic data processing 7−127098
iterated maps, 10, on real axis, renormalization group method 7−134445
Kadomtsev-Petviashvili equation, discrete and periodic spectral transforms 7−80329
KdV equation, Backlund transforms, periodic fixed points 7−134442
KdV equation in 2D, spectral transform 7−80437
KdV hierarchy of isospectral transformations, recurrence relations study 7−115756
Kelvin-Helmholtz wave equation, soln. generation using Darboux transformations 7−134534
Klein-Gordon equations, nonlinear, prolongation structure and Backlund transformations 7−80454
knotted periodic orbits in suspensions of annulus maps 7−102137
Kodomtsev-Petviashvili equation, Lax pair and Backlund transformation 7−102121
Kustaanheimo-Steifel transformation, constraint anal., functional approach 7−95375
Kustaanheimo-Stiefel transformation in a spinor representation 7−134448
Laplace transform and asymptotic behavior of strongly continuous semigroups 7−72845
Levi-Civita, Kustaanheimo-Stiefel and other transformations 7−95270
light intensity fluctuation distrib. from photon counting distribs., Poisson transform inversion 7−82517
linear inverse problems, strong regularisability *(Russian)* 7−80289
linear systems theory, wild quiver 7−115736
Liouville-Green approximations, Riccati transformation 7−95253
local surjection property 7−88888
locally convex spaces, fixed point index 7−115767
locally semimetrizable closed spaces 7−72911
logistic map, analyticity-destroying term introduction, basin boundaries obs. 7−73235
logistic maps, coupled, symmetry and self-similarity investig. 7−73234
long-time behaviour of dynamical systems, effects of phase space discretisation 7−72883
Lotka-Volterra map, 3D. transition to chaos, bifurcations 7−128457
LSS transport equations, coordinate transformation method 7−108492
Lyapunov exponent and bounds for the Hausdorff dimension of Julia sets of polynomial maps 7−121029
mechanics, scaling relation of expt. curves 7−136719
Mellin transforms of correlation integrals, generalised dimens. of strange sets 7−120957

ransforms continued
micropolar elastostatic equations, linear, for isotropic homogeneous solid, solution using Fourier transform 7−72972
molecular crystals, dynamical coordinates generation 7−76313
multi-dimensional Toda lattice, duality and Backlund transformation 7−89136
multidimensional Hilbert transformation for general integral eqn. *(Russian)* 7−108150
multiple Kronecker products, generating relations for reducing matrices 7−134431
multivalued mappings, measurable selectors and the mass transfer problem *(Russian)* 7−72837
multivariable hypergeometric orthogonal polynomials and hypergeometric series in U(n), Whipple's transformation 7−80309
NMR Fresnel transform imaging using a scannable nonlinear field gradient *(Japanese)* 7−108609
noncompact mappings, fixed point theorems of expansion and compression 7−102122
nonlinear evolution equations, solutions and linearisation, Hirota's bilinear transformation method 7−128502
nonlinear hydrodynamic equations, gauge transformation 7−75518
nonlinear integral inequalities for functions defined in partially ordered topological spaces 7−80357
nonlinear response and its behavior in transient and stationary processes 7−128310
nonuniform chaotic map, effects of noise 7−128446
optical computing, electrooptical processing of signal transforms 7−68566
pendulum, differential equation with variable gravity and damping, harmonic maps construction *(French)* 7−72947
periodic orbits of quadratic map, analytical solutions 7−108147
periodic points for mappings 7−102094
photoacoustic microscopy, two-dimensional Hadamard transform appl. 7−123372
piecewise linear iterated maps, ergodic theorem for intermittency 7−140611
plane multiply-connected domains, conformal mapping, determ. of function constants 7−80323
Poincare map, fixed point equivalence to quasi-periodic solutions 7−72884
polygonal billiard, growth rate of number of singular and periodic orbits 7−108148
polynomials, local field transformation, algorithm *(Russian)* 7−108137
positive semidefinite matrices, properties of the cone 7−95212
projective hypersurfaces, dual and hessian mappings 7−72785
q-Bessel functions, integral representation and transformation props. 7−95259
quantum Noether theorem, convergence of local charges and continuity properties of W^*-inclusions 7−89326
quasi-conformal mappings, functionals, extremal problems 7−88904
quasiconformal mappings, variational problems, geometrical theory of functions *(Russian)* 7−80326
quasiperiodicity, transition to chaos, supercritical sine circle map 7−95464
radiative transfer problems, general integral operator 7−72274
Radon transform for diffraction tomography, reconstruction algorithm 7−139398
Radon transforms on Grassmann manifolds 7−72857
Radon-Hadamard and Walsh transform 7−102129
relaxation processes in chaotic states of one dimensional maps 7−89135
Riemannian manifolds, totally geodesic mappings, theorems 7−89062
rooted outerplanar maps with vertex partition 7−102119
S-unimodular maps with zero entropy, limit sets 7−120769
satellite image processing, detection of linear networks 7−87976
sawtooth maps and cat maps, linear code 7−134479
Schrodinger equations, connection between the KDV and the AKNS spatial transforms 7−80464
self-dual Yang-Mills fields, strong Backlund transformations 7−128735
semicontinuous operators on compact metric space 7−72842
sine-Gordon equation, Backlund transformation and gauge field copies 7−128746
Sine-Gordon equation, discrete backlund transformation 7−73003
single-photon emission computed tomography by inverting the attenuated Radon transform with least-squares collocation 7−87318
singular measures without restrictive intervals 7−88845
Singular-value decomposition and embedding dimension 7−134475
space transformation in the simulation of multidimensional random fields 7−139807
speckle photography fringe anal., fast transforms, comparison 7−103756
spectral transform from $\bar{\partial}$-approach, general evolution 7−120777
square lattice Ising model, equiscale transformations in same universality class, critical lines 7−128481
Steenrod operation, induced by A_∞ ring homomorphism 7−72878
strongly α-irresolute mappings 7−72846
subsequential limit points of a sequence of iterates, continuous selfmaps 7−102096
superspace Kahler transformations and Yang-Mills-matter-supergravity action calc. 7−95448
symmetric and nonsymmetric coupled logistic maps 7−95478
symmetric Hamiltonian systems, existence of periodic solutions 7−88956
symmetric maps, Feigenbaum consts. determ. 7−73218
sympletic maps, linear stability 7−80353
thermoelasticity, locally-inhomogeneous bodies, plane-strained state *(Russian)* 7−130539
Toda lattice, Laplace in 2D, Backlund and gauge transformations 7−140633
two-dimensional integrable eqns., bilocal recursion structure 7−134446
two-dimensional mapping with three parameters, period-adding phenomena 7−73193
Volterra equations with periodic kernel, Floquet decomposition, linear recursion eqns. transform approach 7−88879
Walsh transform application to nuclear spectral data anal., GAMWAL code 7−109096
Wigner transform, 1D model for nuclear many-body systems 7−109054

transient capacitance spectroscopy *see deep level transient spectroscopy*

transient response
beams, Timoshenko, on elastic foundations, vibrations 7−97368
fluid dynamics, adaptive finite element scheme 7−83150
Ice Stream C, W Antarctica, finite-element continuity model for transient behaviour and present low vel. 7−145544
light-growth response of Phycomyces with Gaussian white-noise test stimuli 7−107156
light-growth response of single mutants of Phycomyces 7−107157

transient response continued
p-n junction, transient behaviour, asymptotic anal. 7−131759
p-n junction space-charge region, minority carrier accumulation at base edge under short-circuit conditions 7−126631
packed bed thermal energy store with convecting gas vapour mixture, transient response 7−133128
passive dendritic tree transient potential response determ., continuous cable method 7−107018
perfectly conducting sphere, transient-response anal. of scattered EM waves *(Japanese)* 7−103720
radiation detector response, difference from transient input-signal charact. *(Russian)* 7−80876
ulnar nerve stimulation, transient and continuous responses of neuromag. fields 7−133260
underground shallow solar pond water heater, transient anal. 7−71648

transient stability *see stability*

transient voltages *see transients*

transients
AMPTRACT modelling of pressure tube transients in stratified channel coolant conditions, CANDU appl. 7−96251
CANDU reactor, poison injection model 7−96297
CANDU reactor, pressure tube asymmetric ballooning effects, NUBALL code validation 7−96226
CANDU reactor, pressure tube integrity anal. using SMARTT code 7−96298
circular cylinder, infinite perfectly conducting, numerical evaluation 7−96920
constant-capacitance voltage transient meas., method to improve speed and sensitivity 7−80821
deep level transient spectroscopy, energy resolution optimisation techniques 7−143395
Diablo Canyon reactor, RETRAN model validation using start-up test data 7−129255
double-pipe heat exchanger coupled to flat-plate solar collector, transient anal. 7−71636
electrochemical systems, transient phenomena in step variation of electrode voltage *(Romanian)* 7−139096
heat conduction, nonlinear transient problems, boundary element anal. 7−123431
high-voltage solar array, cct. transients due to arcs 7−71609
hybrid photovoltaic simulator for utility interactive studies 7−114108
Kewaunee PWR, high energy line break anal. 7−129320
lightning, high energy transients, protective measures *(French)* 7−114978
LMFBR core transient anal., faster-than-real-time, TREAT TS-1C validation expt. 7−103097
MOS structures, carrier lifetime meas., photo-accelerated C-t transient method 7−131796
Mossbauer gamma radiation, transmission and scatt. switching transient effects *(Russian)* 7−106061
nonequilibrium two-phase flow, 1D, anal. using control volume method *(Japanese)* 7−116630
nonlinear response and its behavior in transient and stationary processes 7−128310
nuclear power, TOMCAT, transient and operational microcomputer based code for thermal hydraulic modelling 7−96171
p-n junction solar cells and diodes, lifetime and surface recomb. vel. determ. by transients obs. 7−67347
polycarbonate: TDP, single-trap-controlled transient hopping, time-of-flight meas. 7−118486
polydiacetylene-bis-p-toluene sulphonate, fast transient photocond. 7−112401
polypropylene transient absorpt. currents and surface leakage, impurity ion conduction 7−113077
Prairie Island Plant transients, best estimate anal. using Dynode-P 7−96174
PWR, anticipated transient without scram, use of passive safety and shutdown system 7−129234
PWR, plugging of steam generator tubes and consequences for plant operation, steady state, transient effects 7−129248
reactor piping, fracture mechanical props., J-integral calcs. *(German)* 7−109468
regenerative catalytic reactor dynamics modelling 7−93381
ROSA IV Large Scale Test Facility, test program *(Japanese)* 7−73954
seismometric long-period channels 7−120177
settling time meas., dynamic characts. meas. of DAS channel 7−140653
steam generator depressurization transients, CATHENA code predictions 7−96301
stochastic dynamical systems, nonlinear, transient behaviour 7−128441
temperature meas. at centre of glass sphere, using Cu-constantan thermocouple 7−80788
transient conduction problems with convective boundaries, appl. of adjacent cell coupling technique 7−103045
TREAT code, validation against plant data 7−96176
U-tube steam generator, dynamic model, validation tests 7−96252
vertical solar still, transient simulation 7−119682
vortex amplifier characts., multivalued region elimination 7−103079
weakly dispersive spectral theory, spectral integral eval. 7−108248
weakly dispersive spectral theory of transients 7−82433
CdTe, pure and Cl,Cu doped defect and impurity levels, γ irrad. effects, TSC and PICTS studies 7−105484
GaAs, structures, near- and submicron length, role of boundary conditions, book contrib. 7−85098
GaAs, transient spectroscopy of traps using Hall effect 7−112370
GaAs:B/Au Schottky barriers, implantation levels anal. using optical isothermal transient spectroscopy 7−112238
$GaAs_{0.6}P_{0.4}$:Te, impurity centre emission rate, temp. and elec. field depend., DITS study 7−112237
GaP red-emitting LED's, nonexponential dark capacitance transients, comment 7−92103
HgI_2:SbI_3 single crysts., dark current transients meas. 7−92174
Ni-Cd cells, discharged and shorted, open-circuit voltage recovery transient 7−119637
α-Si:H, carrier mobility-lifetime estimates from transient and steady-state photocond. meas. 7−118507
a-Si:H film, transient phototransport mechanism study 7−92222
a-Si:P,H, hole trap transport parameters charactn. 7−92195

transistor-transistor logic
see also logic circuits
hardware digital correl. scheme for US nondestructive testing 7−123380

transistors
see also bipolar transistors; phototransistors; thin film transistors
$In_{0.53}Ga_{0.47}As$, hot-electron transport, Monte Carlo simulation, transistor appls. 7−143472
transit time devices
see also IMPATT diodes
No entries
transit time noise *see random noise*
transition metal alloys
see also alloys of individual transition metals e.g. nickel alloys
see also copper alloys; gold alloys; silver alloys; transition metal compounds
actinide-transition metal alloys, magnetism, electron-electron interactions, hybridisation effects 7−77243
Al-transition metal alloys, energetics of icosahedral phase stability 7−104640
amorphous, d-band occupancy, EELS studies 7−99989
amorphous, mag. props., amorphisation effects, review 7−85264
amorphous, magnetooptical phenomena 7−92647
amorphous and crystalline, Hall effect and elec. resist. *(Russian)* 7−76888
bonding in transition metal-P alloys 7−131081
chemisorption, phenomenological model 7−112086
dilute alloys, electronic contribution to electric field gradient 7−112275
electric field gradient in transitional dilute alloys 7−118451
hard magnets, rare earth-transition metal, disclinations and magnetism 7−111559
interatomic interaction problem, pseudopotential method 7−105442
Laves phase cpds., electronic structures and mag. props., review *(Japanese)* 7−84660
Laves phase intermetallic cpds., AT_2, (A=rare earth or transition metal, T=Ni,Co,Fe,Mn), magnetism, review *(Japanese)* 7−85319
metallic glasses, containing Hf or Y, electronic struct. 7−92054
metallic glasses, XANES and EXAFS study 7−77697
metalloid-transition metal based metallic glasses, physical props. rel. to processing conditions 7−113534
model binary alloys, effective pair interaction calcs., coordination number effects, density of states approximations 7−84716
multicomponent, energy of form. 7−105033
rare earth-M intermetallics, depend. of R-M exchange interactions on nature of R atom 7−125364
rare earth-transition metal alloy thin films, amorphous, coercive force, thermomagnetic recording, magnetisation reversal model 7−125444
rare earth-transition metal alloys, RM_2In or RM_2Sn, R=La, Sm, Gd-Tm, Lu, cryst. struct., X-ray diffr. 7−91527
rare earth-transition metal amorphous alloys, ion mixing form., mag. props. 7−76234
rare earth-transition metal Laves phase alloys, band struct. experimental anal. 7−70178
rare earth-transition metal-Si(Ge) systems, valence, EXAFS and X-ray studies 7−77689
silicide films on Si, epitaxial growth, props. and applications, review 7−86022
solid solns., electron sp. ht. and T_c comp. depend. calcs. *(Russian)* 7−131838
spin-orbit effects, chem. bonding and 5d orbital occupancy, X-ray absorption meas. 7−138544
spin-polarised bands via the recursion method 7−125302
strain sensitivity coeff. of resist., theory 7−124962
substitutional alloys, binary, ground state phase stability diagrams, segregation and order 7−111818
superconductors containing transition-metal impurities, strong-coupling theory 7−85182
T-rare earth amorphous alloys, thermomagnetic switching parameters, time and radial depend. calcs. 7−118801
transition metal-metalloid amorphous alloys, short range order in relaxed and unrelaxed models 7−97944
transition metal-metalloid glasses, local and medium range structure 7−142607
Al-transition metal alloys, impurity diffusion anomalies 7−98578
Al-transition metal alloys, rapid solidification, microstruct. characts. 7−113537
$Al_{86}M_{14}$, M=transition metal, icosahedral and ordered alloys, stability, electron state density 7−131100
CO-transition metal alloys, cryst. struct., FCC-HP phase transition effects *(Russian)* 7−137313
CeM_2Si_2 (M=transition metal), reentrant Kondo-mixed valent-Kondo regime behaviour 7−124974
CeM_2Si_2, M=Fe-Cu, Ce core level XPS spectra 7−132412
Cu-3d element alloys, Kondo and spin glass effects correl. *(Russian)* 7−76918
M-rare earth amorphous alloy films for magneto-optic recording 7−132366
M-Si rapidly solidified alloys, 3D modulated struct., quasicryst. form. 7−117868
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$, M=Sc-Mn, Co, Ni, permanent magnet cpds., mag. props. study 7−92422
Ni-transition metal alloys, solid-soln. hardening, extra contrib. of transition-metal solutes 7−71202
$Ni_{73}M_5Si_{10}B_{12}$ metallic glasses, M=Ti, V, Cr, Mn, Fe, Co, Ni or Cu, thermal stability effect of transition metal admixture 7−83757
$PuMB_2$ (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
ScM_2X, M=Co-Cu, Pd, Pt, Ag, Au, X=Al, Ga, In, Sn, cryst. struct., X-ray diffr. 7−91527
$ThMB_2$ (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
Ti-M superconducting alloys, metallurgy and phys. props., book 7−108050
Ti-transition metal alloys, mechanically alloyed, glass form. 7−142643
UMB_2 (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
transition metal complexes *see transition metal compounds*
transition metal compounds
see also compounds of individual transition metals e.g. nickel compounds
see also copper compounds; gold compounds; silver compounds; transition metal alloys
3d transition metal intercalation cpds., M_xTiSi_2 (M=V, Cr, Mn, Fe, Co, Ni), mag. props. 7−118825
borides, pions, atomic Coulomb capture ratios, chemical bond depend. 7−74790
carbides, powder spheroidisation in low temp. plasma 7−86102
transition metal compounds continued
carbonyl complexes, vibrational energy lifetimes meas., picosecond-IR sat.-recovery expts. 7−74577
carbonyls, temporary anion states studied by electron transmission spectroscopy and Xalpha calcs. 7−141459
carbonyls adsorbed layers, core electron excitations, VUV photoelectron spectra 7−122614
chlorophyll-like molecules, triplet state quenching kinetics, back electron transfer 7−136001
chromophore as sensitive tag for proteins 7−144970
clusters, bonding strength, EHMO calcs. 7−109781
complexes, binuclear, multiple metal-metal bond strength, density functional calcs. 7−89959
complexes, bond energies, HFS MO calcs. 7−96540
complexes, coordination compounds, selective coordination epitaxial growth *(Japanese)* 7−105328
complexes, stability consts., extended CNDO/2 method calcs. 7−103396
complexes of 3-phenyl-4-acetyl-5-isoxazolone, synthesis, struct., IR and PMR spectra 7−99859
coordination compounds, selective coordination epitaxy, Buerger precision method 7−131491
coordination compounds, superlattice form. by selective coordination epitaxy 7−71063
d^0 transition metal tetroxo anions, metastable triplet states, Jablonski diagram 7−113243
d-metal compounds, electronic structs., rel. to ideal crysts., defects and impurities 7−143319
dichalcogenide intercalation complexes, electronic, optical, magnetic and structural props. 7−76728
dichalcogenides, layered, charge density wave phase transitions, Raman spectra anal. 7−85703
N,N-dimethylmonothio-oxamide complexes, vibr. spectra 7−96643
first row transition metals, inorganic and organometallic compound props. mol. orbital theory 7−141435
hexagonal layer cpds., interfacial properties, static and time-resolved nonlinear optical props. 7−75052
hydrides, cryst. struct. vol. effects 7−83890
hydrides, electronic struct. and bonding, photoelectron spectra studies 7−106380
hydrides, high-press. phase transition calcs. 7−84125
hydrides positive ions, spectroscopic parameters and dissoc. energies, CI calcs. 7−116869
intercalation compounds, M_xTiS_2, (M=Mn, Fe, Co, Ni), photoemission studies 7−125905
ions, aq. soln., metal binding with melanin, use of CTPO assay, ESR spectra anal. 7−74675
layered dichalcogenides, elec. resist. and spin susceptibility 7−98959
localised excitations, XPS 7−125921
M_2L_6 cpds., with $6^2\pi^4$ config. triple bonds, electronic absorpt. spectra 7−90100
$M(XY)_6$ complexes, isotope and temp. depend. of transition metal shielding 7−103533
magnetic structure, neutron diffr. meas. 7−138190
metal-ethene complexes, 7−99861
metal-H system, interstitial H uniform bonding mechanism, EHT calcs. 7−69641
monopnictides and monochalcogenides, structural transforms., microscopic theory, electron-lattice interaction matrix element calcs. 7−76389
monoxides, ground state spectroscopic consts., ab initio pseudopot., SCF and CI calcs. 7−74460
monoxides, point defect agglomeration, XANES studies 7−137365
monoxides, preferential sputtering and surface composition 7−119104
multidecker sandwich complexes, electronic complexes 7−74454
nitrides, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7−71120
oxide semiconducting glasses, dielec. props. freq. depend. model 7−143951
oxides, diatomic, atom superposition and electron delocalisation MO theory 7−135825
oxides, first series, bonding in bulk and diatomics 7−137302
oxides, localised 3p excitations, EELS and photoelectron spectra studies 7−106325
pentlandite, cryst., polyhedral clusters, electronic struct. 7−143336
3-phenyl-4-benzoyl-s-isoxazolone, metal(II) complexes, synthesis, structure, IR spectral studies 7−125755
second row transition metals, inorganic and organometallic compound props., mol. orbital theory 7−141436
selenides, $(M'_xM_{1-x})_3Se_4$, (M,M'=3d transition metal), phase diagrams 7−113526
silicides, anodic oxidation, low temp. form. of insulating layers 7−132784
silicides, CTR for cryst. growth 7−138619
sulphides, first series, bonding in bulk and diatomics 7−137302
valency or ligands, ESR dating appl. 7−108602
Co complex, Raman and IR spectra 7−85664
Mn complex, Raman and IR spectra 7−85664
P-containing, struct, reactivity, ^{31}P NMR, review 7−93308
Pt group nitrile complexes, liq. cryst. and cryst. struct. 7−111360
RMSi(Ge) phases, M=transition metal, Ni-Ti-Si-type and ZrBeSi-type, struct. aspects of chemical bonding 7−117875
Y-Ba-Cu-M-O, M=Ti, Cr-Cu, impurity effects on supercond. props. 7−105789
transition metals
see also the individual transition metals e.g. nickel
see also copper; gold; silver
3d, with orbital degeneracy, Auger spectra 7−77702
amorphous and liquid states, electrical resistivity, calc. in diffraction model *(Russian)* 7−105515
BCC, defect-sensitive props. *(German)* 7−124245
BCC, phonon dispersion curves, Finnis-Sinclair pot. calc. 7−118045
body-centred cubic, improved N-body semi-empirical pot. model calcs. 7−137504
cations, supported on TiO_2, electronic spectra 7−141507
chemisorption, phenomenological model 7−112086
clusters, photoionisation threshold, H_2 chemisorpt. effect 7−96900
cohesion at high press. 7−104628
dimer, multiple metal-metal bond strength, density functional calcs. 7−89959
doped glasses, optical transition, homogeneous line broadening, review 7−75075
doped inorganic glasses, fluoresc. line narrowing, review 7−77632

ransition metals continued
electron gas, interatomic interactions, total energy calc., effective medium theory 7−118398
enhancement factor with d-like electrons in 4d transition metals 7−106296
fast neutron irrad., low temp., defects, X-ray diffr. studies 7−104852
ferromagnets, spin-polarized Auger-electron spectroscopy, review 7−85904
first row transition metals, inorganic and organometallic compound props. mol. orbital theory 7−141435
first-row atoms, approx. GTO wave functions 7−103362
giant resonances, electron energy loss spectra anal. 7−144200
heteronuclear transition metal dimer ions, photodissoc. 7−129807
I-III-VI_2 semiconductors, transition metal impurities, optical spectra studies 7−124926
image potential-induced electron bands, 2D lifetimes 7−105647
impurities in compound semiconductors, review 7−98867
impurities in semicond., band lineups, Schottky barriers 7−118413
impurities in ZnS, multiplet structures 7−84745
impurity in ZnS, impurity-induced nonradiative recomb. processes, EPR study 7−112364
ion complexes, generation in gas phase by fast atom bombardment 7−119499
large angle elastic scattering 7−141497
localised 3p excitations, EELS and photoelectron spectra studies 7−106325
localised excitations, XPS 7−125921
modified Finnis-Sinclair pots., defect energetics and cohesive energy calcs. 7−124161
N-shell core-level widths, photoelectron spectroscopy studies 7−124902
noble metal like films, optical props. 7−106293
noble metals, impurity diffusion, divacancy contrib. 7−105125
noble metals, low temp. acoustic phonon behaviour 7−124403
oxides, diffusion of transition metal ions, influence of d-shell configuration 7−69981
refractory metal sputtered films, diffusion barrier props. 7−118175
refractory metals, VLSI appls., conf., Palo Alto, CA, USA (Nov. 1986) 7−108045
refractory metals and silicides, sputtering targets develop. 7−119145
second row transition metals, inorganic and organometallic compound props., mol. orbital theory 7−141436
self-interstitial props. 7−98122
spin-orbit effects, chem. bonding and 5d orbital occupancy, X-ray absorption meas. 7−138544
stage II-recovery reactions in BCC transition metals 7−104732
strain sensitivity coeff. of resist., theory 7−124962
surface, crystal violet chloride adsorbed layer, Raman spectra study 7−77571
surface, H chemisorption, Anderson model 7−71527
surfaces, bond-order conservation criteria, surface reactions 7−144755
surfaces and interfaces, magnetism and electronic struct. *(Japanese)* 7−77199
transition metal clusters, struct. props. from empirical interatomic pot. scheme, size depend. 7−110173
vapour phase siliconizing, corrosion stability 7−78319
X-ray absorption spectroscopy for 500 to 2000 eV 7−125853
zone structure, calc. by pseudopot. method *(Russian)* 7−124843
FeS:Mn, M=3d transition metal, mag. and crystallographic transitions, Mossbauer, X-ray studies 7−132006
GaAs transition metal substitutional ions, tight binding calcs. 7−98871
InP:MH (M= transition metals), optical absorpt., P-H bond vibrational mode, chemical shift 7−125732
InP:transition metals, deep donor levels, Hall effect meas. 7−105469
Pt metal nuggets in mag. deep sea cosmic spherules, element abundances and microstruct. 7−101742
Pt-group metals, influence of S and O_2 fugacities on differentiation in ultramafic magmas *(French)* 7−101231
Sc to Hg, valence orbitals, model pot., sd-MP set 7−103367
Sc to Hg, valence orbitals, model pots., spd-MP set 7−103368
Si transition metal substitutional ions, tight binding calcs. 7−98871
Si: transition metals, nonradiative recombination via deep impurity levels 7−119041
Si:3d transition metals, hyperfine interaction constants, ENDOR 7−98900
Si:M, M=transition metal, deep impurity states, calc. *(Japanese)* 7−118414
Si:transition metals, interstitial 3d impurities, ab initio cluster studies 7−105475
T-H(D) systems, anelastic relax., H and D tunnelling between trap sites, two level system-electron interactions 7−84122

transition moments
aminoanthraquinones, intramolecular orientation, transition moment, fluoresc. 7−82273
9,10-anthraquinone aligned in stretched polyethylene, IR spectra, vibr., symmetry assignments 7−82124
aromatic molecules, radiative singlet-triplet transitions, nonadiabatic channel study 7−117023
atoms with one valence electron, wave fns., many-body perturbation theory calcs. 7−140387
1,2-benzanthracene, IR and UV linear dichroism, fluoresc., transition moments 7−96655
1,3-butadience, s-cis and gauche conformers, planarity, matrix isolation IR obs. 7−90114
chiral molecules, permanent moments effect, differential multiphoton absorpt. 7−103606
diatomic mols., electronic-vibr. interactions, electron transition moments calcs. 7−74559
3,3′-diethylthiacarbocyanine bromide, vibr. modes, CARS, transform theory appl. 7−141584
formaldehyde-$d_1(d_2)$, vibr. energy transfer, time-resolved IR-UV double reson. 7−90342
formaldehyde-d_2, spectroscopic consts. determ., FTIR spectra 7−82102
indoles, substituted, in polyethylene films, UV absorpt. spectra 7−96728
methyl nitrite, mol. beam photodissoc., translational spectra 7−74721
molecules, multiphoton processes, coupled eqns. approach 7−129820
molecules with long flexible substituents, orientation in polymer matrix 7−103481
multiphoton processes, coupled eqns. approach 7−129820
octaethylporphine, in Ne matrix, nondestructive photoorientation, IR and visible obs. 7−68297
phthalimides, intramolecular orientation, transition moment, fluoresc. 7−82273

transition moments continued
polyacetylenes, soluble, reson. Raman spectra, depolarisation ratio dispersion 7−85737
polyatomic molecules, highly vibr. excited, IR absorpt. spectrosc. 7−74579
polycyclic aromatics, in polymer films, transition moments, absorpt. anisotropy 7−103531
polyenes, in polymer films, transition moments, absorpt. anisotropy 7−103531
polymers, flexible, conjugated, absorpt. spectra in weak-disorder limit 7−136104
pyrenes, 4, 9−disubstituted, liq. cryst. hosts, fluoresc. polarisation 7−129763
vibrational magnetic dipole transition moments and rot. strengths 7−90092
AlH, pot. curves, dissoc. energies, complete active space SCF calcs. 7−89936
BH, $A^1\pi$ state, transition moment and radioactive lifetime calc. 7−110004
C_2, $A^1\Pi_u$ state lifetime, dipole transition moment, CI calcs. 7−81988
CH radical, $C^2\Sigma^+ - X^2\Pi$ system, transition probabilities, laser induced fluoresc. 7−96781
CS_2, V^1B_2 state, fluoresc. and Zeeman quantum beat spectra 7−90240
CS_2, valence satellites, double ionisation continua, photoelectron spectra 7−136004
F_2^n (n=+ or 0), Rydberg states, pot. energy curves, CI calcs. 7−109790
H, Doppler profile angular depend. following H_2 electron impact dissoc. 7−136072
H_2, electronic transition, spectral moments, quasiclassical 7−68292
HCl^+, $A^2\Sigma^+$ to $X^2\Pi$ system, emission spectra, electronic transition moments 7−82207
H_2O, core photoelectron spectrum, Stieltjes imaging appl. 7−109999
H_2S, spectrum in 1.6 μm region 7−96678
I_2, fluoresc. intensities, lifetimes, electronic transition moments 7−96784
I_2, Ω doubling in 1_g state, electronic transition moments 7−96522
NO, Rydberg series, double reson. multiphoton ionisation, quantum defect anal. 7−68375
O_2, UV photoabsorpt. cross-section, pot. curves 7−129735
O_3, ν_1 and ν_3 bands, line positions and intensities, Fourier transform spectra 7−74555
OH^+, $b^1\Sigma^+$ state, spin-forbidden radiative transition in presence of intersystem crossing 7−82244
SiH, pot. curves, transition probabilities ab initio SCF CI calcs. 7−89994
TiO transition rates for β, δ, φ, γ′, γ, and α systems 7−82282
Xe:Cl, impurity centers, cooperative optical transitions 7−117940

transition probability, nuclear *see nuclear energy level transitions*

transition probability (atoms and molecules) *see radiative lifetimes*

transition radiation
coherent transition radiation, prod. meas. 7−96432
waveguide, inhomogeneous filling, charged particle transit, transition radiation 7−74822

translation (language) *see language translation*

translators (repeaters) *see repeaters*

transmission
see also acoustic wave transmission; electromagnetic wave transmission; power transmission
elastic solid, periodic distribution of cracks, time harmonic longitudinal wave propagation 7−142215
inhomogeneous media with curved interfaces, Gaussian wave packets 7−108257

transmission electron microscope examination of materials
see also transmission electron microscopy
ammonium hydrogen tartrate single crystals, dislocation tracing 7−83957
amorphised polycrystalline films on SiO_2, crystallisation parameters, temp. depend. 7−143257
amorphous film, MBE deposited, solid phase crystal growth 7−143262
analytical electron microscopy 7−100476
artificially structured thin-film materials and interfaces 7−113397
brass, thin corrosion layers prep. method for TEM 7−132850
carbonization layers, props. relevant to plasma-surface interaction 7−104419
ceramics formed by pyrolysis of organometallic polymer precursor, TEM charactn. 7−91448
crystals, atomic inner shell excitation by fast electrons, appl. to TEM microanal. 7−106323
cytoskeletons, sputter coating technique 7−127065
decagonal quasicrystals, forbidden tenfold symmetry, synthesis, characterisation, struct. modelling 7−142677
diamond powder particle nucleation in RF methane plasma, struct. 7−98009
diamond surface (111), microscopic planar defects, TEM obs. 7−118209
dipoles of basal dislocations 7−98154
epoxy-polyethylene oxide-salt complexes, ionic conducting interpenetrating networks, synthesis, mech. props. 7−86125
film formation on Al by anodic polarisation 7−106703
foil thickness meas. in TEM 7−144653
foodstuffs, examination using electron microscopy *(Italian)* 7−128716
fractal multilayered superconductors, upper parallel crit. field meas. 7−70500
$Ga_{0.47}In_{0.53}As-InP$ atomic ordering, TEM study 7−124661
garnets, Fe^+ ion implantations 7−91612
graphite, high quality, from polyoxadiazole 7−84803
H_2 blistering and bubble form. 7−76223
hydrodesulphurisation catalysts, high resolution TEM and microanalysis studies 7−100677
Inconel 600, neutron irrad., microstruct., precip., swelling 7−84039
Inconel 625 superalloy, transient oxides formed on aluminide coating, TEM obs. 7−100443
Inconel 713C, rapidly quenched using twin-roll technique, aging behaviour 7−93031
Inconel 718, Ni-base superalloy, steady-state creep deform. 7−86276
Inconel MA 6000 powder, dispersion strengthened Ni-base superalloy, charactn. 7−100154
ion bombarded, struct. changes and defects 7−137426
ion implanted, microstruct. obs., correlation with optical meas. 7−104791
ion implanted, recrystallisation kinetics 7−119130
laryngotracheal epithelium in salamanders, correlated light and electron microscopic obs. 7−78808
low press. CVD of β-W contacts on patterned Si, microstruct. obs. 7−71042

transmission electron microscope examination of materials continued
metal multiple layers, amorphisation induced by ion mixing 7−76232
metallic alloy films, prod. by laser breakdown CVD and ion implantation 7−119165
metallic thin films, morphological parameters, transmission electron microscopic investig. 7−92016
metals, neutron irrad., defect struct. development, cascade energy overlapping 7−104851
MgO (100) surfaces, high resolution CTEM studies *(Japanese)* 7−124653
microstructure of reorientation bands, high strength Nb alloys with ultradisperse nonmetallic particles *(Russian)* 7−105058
MOVPE, novel reactor and charactn. of multilayer structures 7−104499
mullite-zirconia composites and mullite, prep. and mech. props. 7−86118
mullite-ZrO_2-(Al_2O_3), tough ceramic composites, microstruct. 7−78058
multilayer semiconductors, charactn. using TEM 7−75950
myocardial debris ultramicroscopical anal., myocardial dose response to Ar laser irrad. in saline and blood 7−78973
nanocrystalline materials, atomic struct. study 7−142675
Nimonic 75, creep deform. rel. to high temp. prestrain 7−100322
Nimonic PE 16, Ni-base superalloy, precip., quantitative anal. 7−100238
nuclear reactor construction material exam. *(French)* 7−100464
patterned MBE layers on Si, microstructural characterisation 7−137729
PEEK thin films, melt-spun, plastic deform. 7−76712
x-phthalocyanine crystals, dislocation array, TEM obs. 7−76131
PMMA, electron resists evaluation, mass loss meas. 7−100595
polycarbonate-styrene acrylonitrile copolymer blends, injection moulding, props. and morphology 7−137266
polyethylene, semi-cryst., epitaxial crystn. and interfaces 7−83778
polyimide:$Ar^+(Cu^+)(Zn^+)$ films, ion-implanted, structure and morphology 7−91938
polypropylene-PMMA thin film composites, refl.-absorpt. IR spectra, TEM, chem. labelling 7−71546
polysilicon-SiO_2 transition layers, Hubbard subband cond. 7−125136
polystyrene-acrylonitrile-polycarbonate blends, phase separated thin films, shear yielding, crazes 7−132675
preparation of high-quality graphite from polyoxadiazole 7−84803
proppants, microstruct., strength and environmental degradation 7−106646
quasicrystals, alloys containing s, p and d elements, TEM and X-ray diffr. studies 7−124170
Rene 95, Ni-base superalloy, rapidly quenched, phase form. during ageing 7−93032
semiconductors and their defects, high resolution TEM 7−97868
sol-gel glasses, porous, chemistry and physics 7−126078
SOS films, cryst. quality improvement by self-implantation *(Chinese)* 7−124724
static recrystallisation after hot working, stress-free or stress relaxation conditions, microscopic determ. 7−132635
steel, armour, microstruct. transform. induced by adiabatic shearing 7−86247
steel, austenitic, Mn, containing Ms, microstruct. modification and props. 7−92987
steel, austenitic stainless, B in $M_{23}X_6$ precipitates, identification by EELS 7−86180
steel, austenitic stainless, H-induced cracking, related phase changes 7−144502
steel, austenitic stainless, ion implantation, martensitic transformations, Mossbauer and TEM studies 7−78007
steel, austenitic stainless, low cycle fatigue deform. and dislocation struct. at elevated temp. *(Japanese)* 7−100348
steel, austenitic stainless, N implanted, friction and wear 7−78260
steel, austenitic stainless, oxide scale, transverse microstructure, TEM/STEM anal. 7−113786
steel, austenitic stainless, pipe, weld heat affected zone, low temp. sensitisation 7−138893
steel, Cr-Mo, H trapping, electron microscope autoradiography *(Japanese)* 7−76189
steel, Cr-Mo, heat-resistant, low alloy, complex silicate form. after long-term high-temp. service 7−100262
steel, double ion implanted with O^+ and Ti^+, surface layer characterisation 7−76158
steel, dual-phase, austenite form. from tempered martensite *(Korean)* 7−78064
steel, ferritic stainless, creep, microstructural changes 7−100317
steel, ferritic stainless, foils, H induced microtwinning, embrittlement mechanism, TEM obs. 7−76144
steel, HSLA, combined TEM and opt. metallographic study of microstruct. after welding 7−86516
steel, HSLA, Ti containing, precipitates, thermal stability 7−144414
steel, low alloy, ultra high strength, martensite-austenite and bainite struct. *(Chinese)* 7−78002
steel, low C, austenite form., TEM study *(Chinese)* 7−71209
steel, low C, cyclic softening and cyclic creep mechanisms 7−144533
steel, magnetron sputtered on Cu, structure and phase structure, TEM study *(Chinese)* 7−76688
steel, maraging, Ni_3Ti precip. sequence 7−132625
steel, martensitic, Ni-Cr-Mo, microstruct., effect of intercritical heat treatment *(Chinese)* 7−144507
steel, martensitic stainless, HT-9, microstruct.-mech. prop. relations 7−78187
steel, micro alloyed, low C, intercrit. heat affected zone, struct.-prop. relationship 7−144538
steel, N ion implantation, surface struct., wear resist. 7−104775
Steel, Nb, low C, transform texture, proeutectoid ferrite nucleation 7−78000
steel, Ni-Cr-Mo, arc weldments, struct.-prop. correl. 7−132736
steel, Ni-Cr-Mo, microstruct. and tensile props., effect of quench rate 7−71253
steel, stainless, Mo, tempering, carbide form. and growth, TEM obs. 7−113581
steel, stainless, neutron irrad., microstruct., precip., swelling 7−84039
steel, tool, high speed, electron beam rapid solidification and transient tempering 7−119267
styrene films containing Au particles, ESCA and TEM study 7−106795
SYNROC-FA ceramic waste, leaching, phase analysis and microstruct. 7−81721
thin sputtered films, spectrally selective coatings, influence of deposition parameters 7−144276
transition metal-metalloid metallic glasses, wear mechanism 7−113725
Udimet 500, Ni-based superalloy, low cycle fatigue, strain rate effects and assoc. deform. mode 7−144534

transmission electron microscope examination of materials continued
zirconia-mullite composites, reaction sintered with MgO and CaO additions, TEM study 7−132556
zone axis diffr. conditions, localisation, ALCHEMI, X-ray fluorescence spectra 7−97866
AL-Si-Mn, melt spun, icosahedral and glassy phases, form., struct., X-ray scatt., TEM studies 7−97958
Ag interlayers in polyimide film, sintering process and charactn., laser writing appl. 7−119187
Ag, localised secondary grain boundary dislocations in (001) twist boundaries, TEM study 7−124285
Ag-Mg long period superlattice, commensuration process, in situ TEM obs. 7−76391
Ag-Si thin film, prep. by ion assisted deposition *(Chinese)* 7−132499
AgMgSi, proton irrad., microstructure, mech. props. 7−69780
Al, cold worked, recovery spectrum 7−105527
Al, dislocation structures in polycrystals fatigued at 77 K 7−76134
Al, magnetron sputtered on Cu, structure and phase structure, TEM study *(Chinese)* 7−76688
Al, N_2^+ ion implantation, surface layer charactn. 7−106681
Al powder, segregation free, prod. by US gas atomisation 7−92925
Al powder particles, thinning for TEM obs. 7−78409
Al single crysts., quenched, plastic deform., slip bands, dislocation loops *(Japanese)* 7−100289
Al, solidification of Ar bubbles 7−144378
Al wires, hard drawn, corrosion rel. to texture and struct., TEM obs. 7−100439
Al:N^+, surface modification by nonmass analyzed N^+ beam 7−105206
Al-Ag alloys, precipitate plate growth mechanisms study 7−137569
Al-Al_4C_3, dispersion hardened materials, mech. props. at elevated temps. 7−126180
Al-base alloys, age hardening, effect of US vib. 7−132632
Al-Co (26 wt.%), melt spun, decagonal phase, TEM obs. 7−83856
Al-Cr quasicrystal film form., RF sputtering, investig. 7−137762
Al-Cr thin films, Al electromigration lifetime, comp. depend., TEM study 7−69993
Al-Cr-Si quasicrystals, with high Si conc., formed by rapid quenching, thermal and elec. props. 7−100200
Al-Cu-Mg, ageing S′-phase precipitate crystallography and morphology, TEM study 7−86191
Al-Fe, deform., precip. 298-698 K 7−78141
Al-Fe melt spun alloys, rel. between microstruct. and processing 7−92983
Al-Fe-Ni rapidly solidified alloys, microstruct. and mechanical props. at elevated temps. 7−86194
Al-Fe-Si, direct chill casting, intermetallic phase form., TEM and EDAX 7−86155
Al-Gd, rapidly solidified, microstruct. and props. 7−93033
Al-Ge, sputtered thin films, laser irrad., metastable phase form. 7−113387
Al-Ge alloy films, metastable phase prod. and transform. by rapid crystn. and annealing treatments 7−75991
Al-H alloy, subthreshold electron irrad. damage, TEM study 7−124337
Al-Kr, Kr ion implanted in Al films, precipitation, phase stability of Kr in cavities 7−106519
Al-li (1.8 wt.%), thermomech. treatment, fatigue, deform. bands, dislocation struct. *(Japanese)* 7−93081
Al-li alloys, precipitation dynamics, Ostwald ripening, TEM study 7−71194
Al-Li-Cu-Mg-Zr alloy, yield stress, temp. and strain rate depend. 7−138797
Al-Li-Cu-Mg-Zr alloy powders, rapidly solidified, gas-atomised solidification microstructs. 7−86150
Al-Li-Mn, elastic modulus, effect of ageing 7−113593
Al-Mg, high temp. ageing, DSC study 7−138768
Al-Mg, melt spun, metastable phase, TEM and DSC obs. 7−113523
Al-Mn (27 wt.%) ribbons, rapid solidification, microstruct., crystallisation 7−77969
Al-Si, deform., precip. 298-698 K 7−78141
Al-Si, thin film metallisations, mech. props. and microstructure 7−124786
Al-Ti, rapidly solidified, microstruct. and thermal stability 7−92997
Al-Ti-Bi, stressed solidification of Bi inclusions 7−100374
Al-V thin films, Al electromigration lifetime, comp. depend., TEM study 7−69993
Al-Zn, phase separation kinetics, SAXS and TEM study 7−113515
Al-Zn single cryst., strain anneal growth, creep testing, dislocation gliding, TEM obs. 7−98167
Al-Zn-Mg, 7075, hardness and yield strength as function of retrogression time 7−78202
Al-Zn-Mg, age hardened, fracture, deform., H enhanced dislocation mobility 7−132661
Al-Zn-Mg, quenched-in dislocation loops 7−100268
Al-Zr vapour deposited coatings, metastable phases, TEM, electron diffr. obs. 7−70147
Al_6Co, rapidly solidified, decagonal phase, TEM studies 7−142704
AlGaAs-GaAs:Se(Mg) quantum well heterostructs., doping effects, thermal annealing and photolum. meas. 7−143573
$Al_xGa_{1-x}As$-GaAs:Se superlattices, layer interdiffusion 7−137630
AlH_x films, implanted, in situ TEM study 7−98197
AlInAs-GaInAs quantum wells, optical spectra, atomic scale struct. 7−138508
AlMg, proton irrad., microstructure, mech. props. 7−69780
AlMnSi quasicrystals, disorder, X-ray diffr. and TEM studies 7−142709
$Al_{72}Mn_{22}Si_6$ rapidly quenched quasicrystalline alloy, fracture process obs. 7−142902
Al_2O_3 anodic film formed on Al, direct obs. by HRTEM 7−92017
Al_2O_3 film growth by anodic oxidation of Al, TEM study 7−119436
Al_2O_3 powder, transition, ultrafine spherical particles, high temp. characts. 7−132541
Al_2O_3, sintering, plastic flow, TEM obs. 7−77899
α-Al_2O_3, surface step faceting, on low-index planes 7−70052
α-Al_2O_3:Fe^+, sapphire, ion implantation effects 7−91609
Al_2O_3-SiO_2-ZrO_2, amorphous, rapid quenching, crystallisation, lattice parameters, phase separation *(Japanese)* 7−131036
Al_2O_3-SnO_2 composite plasma-synthesized powders 7−113510
Al_2O_3-ZrO_2, duplex ceramics, toughening mechanism 7−86200
$AlPO_4$ α-berlinite, TEM obs. of lattice defects and water precip. 7−142786
$Al_{60}Si_{20}Cr_{20}$, new quasicryst., form. and struct. 7−83858
Au electroformed island film diodes, TEM studies under bias 7−124777
Au films, deposited in substrate laser-irradiated zone, structure and morphology 7−112141

transmission electron microscope examination of materials continued
Au, hierarchical grain-boundary dislocation structs., TEM obs. 7−137369
Au, localised secondary grain boundary dislocations in (001) twist boundaries, TEM study 7−124285
Au, monocrystalline thin films, hole size and shape 7−124789
$Au/AlO_x/Al$ semicontinuous tunnel junctions, conductance oscills. 7−105726
Au/In composite films, grain boundaries, thermal grooving 7−112143
Au/Ni bilayers on Cu substrates, diffusion behaviour 7−105151
Au-Si interface, TEM specimen heating during ion beam thinning, microstruct. instability 7−130994
BN composites, microstruct., thermal shock behaviour 7−119341
$(Ba,M)TiO_3$ ceramics (M=Ca,Y), microstruct. rel. to processing conditions 7−98487
$Ba_2NaNb_5O_{15}$, incommensurate phase, influence of irradiation defects 7−117976
$BaO-B_2O_3-TiO_2$ glasses, crystallisation for glass ceramics 7−104573
$BaSrNbO_3$, memory effect through discommensuration pattern, TEM obs. 7−111508
$BaTiO_3$ ceramics, (111) twin form. 7−142791
$BaTiO_3$ ceramics, coincidence site boundary, high-resolution TEM study 7−137370
$BaTiO_3$:Ca ceramics, ferroelec. transition, effect of octahedrally coordinated impurity 7−92620
$BaTiSO_3-Ba_6Ti_{17}O_{40}$ orientation rel., topotaxy 7−143237
Be single crystals, deformed by prismatic slip, dislocation struct. 7−111562
Be single crysts., critical resolved shear stress for prismatic slip, TEM obs. 7−132660
$BeAl_2O_4:Cr^{3+}$ alexandrite crysts., Czochralski, growth, struct. defects, laser output 7−132437
$BiGeO_3$ single cryst., microscopic defects, TEM, SEM and optical microscopy studies 7−131135
Bi_2MoO_6 struct., high-resolution TEM study 7−83911
C, cementite dispersed, cementite dispersed, synthesised from ferrocene, vinylferrocene and divinylbenzene systems, mag. props. 7−77853
C fibre reinforced Mg-Al matrix composite, Ni coated fibre, interface reactions, tensile strength, TEM obs. 7−113634
a-C:H films, prep. by plasma deposition, struct., optical and elec. props. *(Chinese)* 7−131494
$(Ca,Ba)_2CuO_4$ high T_c supereond., struct. defect-type, TEM study 7−124243
$(Ca,Sr)F_2$-GaAs SIS structures, MBE grown, high resolution TEM study 7−118280
CaF_2 epitaxial layers on Si, electrical props. and structural defects 7−85134
CaF_2-MSi_2-Si (111) structs. (M=Co, Ni), MBE growth 7−144285
$Ca_{0.43}Sr_{0.57}F_2$/GaAs (100), epitaxial heterostructures, flash evaporation, charactn. 7−84537
$Ca_xSr_{1-x}F_2$, lattice matched epitaxial layer on GaAs (100), growth, characterisation 7−143253
$CaTiO_3$ powders, prep. by hydrothermal method, props. of sintered ceramics 7−77857
Cd-Cu, rapidly quenched, icosahedral, new cryst. and glassy phases, TEM obs. 7−83859
$CdF_2-LiF-AlF_3-PbF_2$ glasses, phase stability 7−131044
$Cd_{0.66}Hg_{0.34}Te$, plasticity, TEM obs. of dislocations 7−98161
$Cd_{1-x}Mn_xTe$ epitaxial films, hot-wall evaporation 7−126000
CdTe epitaxial layers on GaAs (100) and (111) and CdTe (111), MOCVD grown, defect struct. 7−98726
CdTe MBE grown films, defect-related luminesc. 7−99925
CdTe, MBE on GaAs substrate, high resolution TEM 7−132473
CdTe, thermal oxidation, kinetics and oxide composition 7−138912
CdTe-HgTe superlattice, defect observations, transmission electron microscopy study *(French)* 7−98164
$Cd_{1-x}Zn_xTe$, MBE grown, phase separation 7−131487
$CeFe_2$ Laves phase intermetallic cpd., amorphisation by H absorpt. 7−142581
Co-Cr sputtered film, segregated microstruct. revealed by wet etching, appl. for mag. recording 7−76666
Co-Cr sputtered films, mag. props., microstruct. 7−85392
Co-Cr thin film microstruct., TEM study, mag. recording appl. 7−105314
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7−113577
Co-Cr-W-C, high fluence Ti or N ion implantation, surface layer microstruct. 7−104774
Co-Ge alloy films, vacuum deposited, struct. 7−124753
Co-Sb films and foils, ion implanted, amorphous phase form., RBS, TEM studies 7−84061
Co-Si sputtered alloy film, struct. and mag. props., Si content depend. 7−112916
Co-Te films and foils, ion implanted, amorphous phase form., RBS, TEM studies 7−84061
Co-Zr, amorphisation by ion beam mixing and other techniques 7−75998
CoCr sputtered thin films, struct. and mag. props., TEM and SEM studies 7−105973
CoCr thin film recording media, mag. anisotropy and struct. 7−125490
CoP, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
$Co_{1-x}P_x$, amorphous, electrodeposited, structural relax., elec. resist., SAXS 7−105520
$CoSi_2$ form. at Co/Si interface, self-aligned process and elec. characts. 7−98714
$CoSi_2$-Si (111), MBE of $CoSi_2$, in situ TEM study 7−137731
$CoSi_2$-Si MBE layers, strain relax. 7−143276
$Co_{1-x}Zn_xFe_2O_4$ magnetic pigments, particle size distrib. meas. by TEM 7−85378
Cr, epitaxial layer on Ni {111} substrates, orientation and morphology, TEM, electron diffraction anal. 7−92037
Cr, VPE grown on hot Cu substrates, orientation and morphology of deposits, TEM electron diffr. studies 7−70148
Cr-C amorphous alloys sputtered, form. and crystn. 7−83754
Cr-Ni-Cu, laser mixed Cr-Ni films on Cu, microstruct. studies 7−70039
CrO_2 magnetic pigments, particle size distrib. meas. by TEM 7−85378
$CrSi_2$ ellipsometry and struct. studies 7−138404
Cr_5Si_3, amorphous films, cryst., elec. resist., TEM obs. 7−131034
Cu {11}, C^+-implanted, radiation damage, TEM study 7−111600
Cu, electroless deposition using Pn-Sn colloidal catalysts with accelerators, TEM studies 7−71091
Cu film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152

transmission electron microscope examination of materials continued
Cu, high energy He implanted, microstruct. evolution 7−76161
Cu, high energy heavy ion irrad., defect production and accumulation 7−104870
Cu, ion implantation with Al, damage studies 7−76163
Cu, low energy self ion-irrad., defects, TEM studies 7−104869
Cu, proton irradiated, periodic (001) defect walls 7−98273
Cu, pure, cold rolled, nucleation of recrystallisation, TEM obs. 7−86217
Cu, vapour deposited films, structure and growth morphology, O effects 7−118321
Cu:Xe impurity bubble evolution, TEM study *(French)* 7−131137
Cu-Al alloy thin films, vapour deposited, intrinsic stress and struct. study 7−137756
Cu-Al-Ni-Ti shape memory alloys, grain refined, X-phase struct. and comp. 7−86192
Cu-Ce alloys, dislocation glide, in situ TEM study 7−83959
Cu-Co alloys, precipitation dynamics, Ostwald ripening, TEM study 7−71194
Cu-Fe-Sn alloys, γ-Fe particle precip. *(Polish)* 7−138745
Cu-Ge, thermally induced FCC to HCP martensitic transform., TEM obs. 7−78005
Cu-Ge-Al dilute alloys, neutron irrad., high-damage regions, TEM studies 7−104850
Cu-Mg (3.5 wt.%), ageing, decomp., equilib. phase form., TEM obs. 7−113559
Cu-Mn, FCC solid soln., anomalous dislocation densities, TEM study 7−76133
Cu-Nb composite, heavily cold-worked, strength and microstruct. charactn. 7−144459
Cu-Nb composite wires, microstruct. anal. mechanical strength 7−104502
Cu-Ni (12.5, 27 wt.%), rolling texture development 7−100249
Cu-Ni compositionally modulated films, electrodeposited, mag. props. 7−118843
Cu-Ni-Fe (10, 8 wt.%), rapidly solidified, thermal effect 7−113536
Cu-Sn, thin film, surface diffusion, 90-180 °C 7−70107
Cu-Te crystals, solid state growth and transform. 7−113380
Cu-Zn-Al fatigued shape-memory alloys, dislocation struct., TEM study 7−91593
Cu-Zu-Al, shape memory alloys, ordered struct., thermal cycling effect 7−71185
CuAu particles, morphology and structure 7−69654
Cu_3Au, recrystallisation during annealing, TEM studies *(Russian)* 7−144429
CuMn, stacking fault energy, dislocation struct., transmission electron microscopy study 7−142788
$Cu_{35}Ti_{65}$ metallic glasses, crystalline particles, deform.-induced amorphisation 7−111417
Fe, cast, lower bainitic nodular, austempered foils, polishing, TEM obs. 7−78071
$Fe:N^+$, microstruct. study 7−91614
Fe-Al, B2→DO_3 ordering, atom probe FIM, TEM obs. 7−138741
Fe-Al bilayers, ion beam induced at. mixing, RBS, TEM, SIMS, resist. meas. 7−84069
Fe-Al-C permanent mag. alloys, structural characterisation 7−78065
Fe-Al-Mn-C (8.7, 29.7, 1.04 wt.%), austenitic fatigue, dislocation microstruct., TEM obs. 7−113697
Fe-Al-Mn-Cr, morphology of A12 α-Mn precip. 7−144420
Fe-Al-Ti, phase relations, transform. temps., microstruct. 7−92959
Fe-C, cold rolled polycryst., nucleation of {111} recrystallised grain at grain boundary 7−93037
Fe-C-P alloys, quench aging process, effect of P 7−86193
Fe-CR-Mn-C, laser clad alloys, microstruct. and wear props. 7−78256
Fe-Cr, ferritic alloys, irrad. and alloy elements effect 7−86196
Fe-Cr-Ni alloys, prod. by laser surface alloying using mixed powder feed, charactn. 7−119446
Fe-Cu multilayered films, magnetron sputtered, mag. props. 7−99516
Fe-Cu-C, proeutectoid cementite precip., Cu effect 7−78022
Fe-Ge, BCC system, miscibility gap rel. to ordering 7−132579
Fe-Ge alloy films, vacuum deposited, struct. 7−124753
Fe-Mn-C (12, 0.8 wt.%), pearlite-austenite growth interface 7−77991
Fe-N, α′-$Fe_{16}N_2$ and γ″-Fe_4N precip., TEM study 7−78010
Fe-Ni alloys, martensitic transform., effect of austenite ordering *(Chinese)* 7−71178
Fe-Ni mag. fluids, prep. and props. 7−77374
Fe-Ni-Al-C alloys, rapidly solidified, lattice modulation and form. of lamellar duplex ferrite/carbide microstruct. 7−100206
Fe-Ni-Al-Ti semi-hard mag. alloy, precipitation phases during tempering *(Chinese)* 7−126119
Fe-Ni-C (24, 0.5 wt.%), melt spun ribbons, austenite decomp., metallography 7−100233
Fe-P, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
Fe-Pd, ordering, elec. resist., X-ray diffr., TEM obs. *(Japanese)* 7−93004
Fe-Si-Al Sendust alloy ribbons, mag. props., heat treatment effects 7−100399
$Fe-SiO_2$ granular solids, mag. props. 7−125476
Fe-Tb amorphous alloys, co-sputtered, direction of easy-axis 7−112886
Fe-V, equiatomic, sigma phase form. mechanism 7−93007
Fe-Zr, amorphisation by ion beam mixing and other techniques 7−75998
Fe-Zr, amorphous, sputtered and solid-state-reacted films, phase separation 7−98744
Fe-Zr amorphous alloys, ion beam mixed, mag. and elec. transport props. 7−113024
FeAl, B2-structured alloy, dynamic recrystn, and grain boundary migration, obs. 7−138759
$Fe_{80}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{86}B_{14}$ metallic glass, crystn. kinetics and mechanism 7−76024
$Fe_{78}B_{22-x}Si_x$, metallic glasses, crystn. and thermal stability 7−83745
$Fe_{100-x}C_x$ amorphous alloys, sputtered, crystn. 7−76021
$Fe_{67}Co_{18}B_{14}Si$, metallic glass, annealing and crystn. behaviour 7−76030
$Fe_{78}Cr_2B_{12}Si_8$, amorphous, quenched, annealed, ferromag. reson. 7−112962
$Fe_{14}(NdDy)_2B$ permanent magnet alloy, thermal treatment effects, positron annihilation study 7−132372
$Fe_{40}Ni_{40}B_{20}$ amorphous ribbons, thickness, influence on mechanical props., neutron irradiation, annealing 7−86232
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{40}Ni_{38}Mo_4B_{18}$, metallic glass, H_2 blistering and bubble form. 7−76223
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, struct. regularities of deformation and fracture 7−86363
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, annealed, struct. study 7−91463

transmission electron microscope examination of materials continued
$Fe_{40}Ni_{40}P_{14}B_6$, amorphous alloys crystn. product, interlamellar spacing var. 7−97960
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, interlamellar spacing variation 7−142631
$Fe_{50}Ni_{30}Si_{10}B_{10}$ amorphous alloy, crystn. and relax. during pulse heating 7−71228
γ-Fe_2O_3 magnetic pigments, particle size distrib. meas. by TEM 7−85378
γ-Fe_2O_3 recording particles, high-field magnetism 7−85368
GaAs crystals, mechanical properties 7−98308
GaAs defect struct. generated during MBE, growth temp. depend., TEM study 7−112138
GaAs, dislocation substructure and plasticity below 400°C as function of doping 7−98158
GaAs epitaxial films, growth and characterisation 7−84603
GaAs films, initial stages of MBE growth on Si (100) 7−84600
GaAs films, MBE growth on Si, dislocation density and carrier mobility 7−84598
GaAs layer, MBE on (100)-oriented Si substrate, preheating effect, charactn. 7−113394
GaAs layers, MBE on Si, structural evolution 7−84602
GaAs MBE film grown on Si (001) RHEED studies and interface anal. 7−76670
GaAs MBE growth on high temp. H annealed (100) Si substrates, expt. study 7−144279
GaAs MBE growth on Si, charactn. 7−70126
GaAs, MBE growth on Si(100), dislocation accommodation 7−100084
GaAs MBE layers on misoriented Si substrates, cryst. orientations and defect structs. 7−143282
GaAs, MOCVD layers on Si substrates, misfit and threading dislocations 7−70138
GaAs, nucleation, MBE growth stages on Si(100), 3D critical transition 7−111814
GaAs, plastically deformed, dislocation struct. 7−98157
GaAs, proton implanted, damage structs., cross sectional TEM studies 7−137427
GaAs, semi-insulating, partial dislocation mobility under high stress 7−98162
GaAs, solid particle erosion, strength evaluation, statistical method 7−113730
GaAs, TEM specimen preparation by ion milling, radiation damage 7−111698
GaAs:In, high temp. plastic deform., TEM obs. of dislocations 7−98159
GaAs:In LEC crystals, grown-in dislocations 7−137367
GaAs:In semi-insulating cryst., precipitates, TEM study 7−124529
GaAs:Si, ion implanted, TEM obs. of defects 7−124273
GaAs:Si/Si, ion implanted structure, defects and donor activation, rapid thermal annealing 7−91604
GaAs:Sn, heavily implanted, annealing effects, channelling/RBS studies 7−98195
GaAs/$(Ca,Sr)F_2$ heteroepitaxial layers, MBE grown, crystalline defects 7−112127
GaAs/$Al_xGa_{1-x}As$ superstructure, MOCVD grown, composition analysis by thickness fringe method 7−98717
GaAs/AlGaAs quantum well, ion implantation damage, annealing behaviour, TEM and cathodolum. studies 7−117982
GaAs/Au/Cr/Au/Ge ohmic contacts, alloying reactions, TEM, AES and elec. studies 7−70414
GaAs/Co interface, cpd. form., AES, TEM and X-ray diffr. studies 7−98712
GaAs/GaAlAs, composition fluctuations, TEM study *(French)* 7−131456
GaAs/GaAlAs buried laser, p-dopant implanted stripe, LPE regrowth 7−136348
GaAs/metal contacts, interface reactions and elec. characteristics 7−125121
GaAs/Pd/Ge nonalloyed ohmic contacts by solid phase epitaxy 7−143637
GaAs-Al Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-AlAs superlattices grown by MBE, struct. props., TEM and X-ray diffr. obs. 7−70123
GaAs-AlAs superlattice, comparison of exptl. and simulated lattice images 7−131458
GaAs-Au Schottky contacts, stoichiometry changes, TEM obs. 7−98720
GaAs-CdTe (001), MOCVD grown, TEM of dislocations at interface 7−112098
GaAs-GaAlAs, growth and interface characterisation 7−98747
GaAs-GaAlAs, quantum well wires and boxes, quantum size effects 7−85084
GaAs-Ir, interfacial interactions 7−143082
GaAs-Ni(Pd)(Pt), interfacial structures, compositions and reaction morphologies, TEM and RBS studies 7−98716
GaAs-Si interface, defect structs. after annealing 7−118278
GaAs-$TiSi_2$ Schottky contacts, stoichiometry changes, TEM obs. 7−98720
$Ga_{0.47}In_{0.53}As$-InP epitaxial superlattices, absorpt., photolum. and photocurrent spectra 7−70384
$Ga_{0.47}In_{0.53}As$-InP quantum wells and superlattices, CBE growth, TEM, IR absorpt., photocond. and photolum. charactn. 7−126023
$Ga_xIn_{1-x}As_yP_{1-y}$−InP, atomic ordering, TEM study 7−124661
$Ga_{0.5}In_{0.5}P$-GaAs(001), metalorganic VPE grown, existence of ordered state, relation to band gap 7−76652
$Ga_{16}Mg_{32}Zn_{52}$, new quasicryst., form. and struct. 7−83858
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
$(Gd_{20}Co_{80})As$ amorphous thin films, ion mixing form. 7−84070
GdGG:Fe^+, single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
Ge epitaxial films, growth and characterisation 7−84603
a-Ge film, laser-induced phase transformations, nanosecond exposure electron microscopy 7−131186
Ge, MBE growth on Si(100), crystalline quality, thermal annealing effects 7−100085
Ge-Si (111), dislocation struct., transmission electron microscopy 7−84542
Ge-Si ordered superlattices, struct., optical transitions, TEM, Schottky barrier electroreflectance studies 7−112096
GeSi-Si strained layer superlattices, growth using limited reaction processing, struct., TEM, AES, RBS 7−118300
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
Ge_xSi_{1-x}/Si (001) heteroepitaxial system, MBE growth, RHEED oscillations 7−100083
Hf/Al bilayer microstruct., annealing and Cu addition effects, TEM study 7−98715
HgCdTe, MBE on GaAs substrate, high resolution TEM 7−132473
transmission electron microscope examination of materials continued
HgTe, growth on GaAs substrate, high resolution TEM 7−132473
HgTe/CdTe multilayers, low temp. MOCVD, TEM and SEM studies 7−119159
HgTe-CdTe, multilayer structures, on $Cd_{1-x}Zn_xTe$ 7−131462
Ho-Ba-Cu-O, high T_c supercond., structural props., TEM study 7−98090
InAs, MBE on (001) GaAs, monolayer stage, island form., TEM obs. 7−70120
InAs-GaAs strained-layer superlattices, HRTEM, X-ray diffr. and photolum. meas. 7−70095
InGaAs-GaAsP strained layer superlattices, growth and characterisation 7−118304
InGaAs-InP quantum well structs., thermal stability, growth by gas source MBE 7−86219
$In_xGa_{1-x}As$ MBE thin crystals, LRO study 7−137732
$In_xGa_{1-x}As$-GaAs strained-layer superlattices, dislocation struct. 7−142785
InGaAsP/InP etched-mesa BH lasers, sidewall interfaces, LPE regrowth 7−110356
InP:Ga,Fe, double doped, LEC grown, X-ray topography and TEM study 7−86005
InP:S, single crysts., thermal activation of deform. 7−98307
InP:Zn surfaces, Zn diffusion, crystal defects 7−118167
InSb dislocation glide, in situ TEM study 7−91592
InSb thin films, application and properties for highly sensitive magnetoresistance elements *(Japanese)* 7−125158
InSb-CdTe heterojunctions, interface characterisation and MBE growth *(Polish)* 7−132475
$(K,Na)AlSi_3O_8$ feldspars, (010)[001] dislocation fine struct., TEM, planar defect structural models 7−83960
K_2O-Al_2O_3-SiO_2, feldspar, growth twinning mechanisms 7−104762
La-S films, sputter deposition, structural and transport props. 7−76691
La-Sr-Cu-O high T_c supercond., phase transformations and microstruct. 7−118084
Li-Cu-Al large-grain quasicrystals, obs. of dislocationlike images 7−117929
Li_2-Al_2O_3-SiO_2 glass-ceramics, oxide nucleation mechanism 7−142598
$LiNbO_3$ optical waveguides, microstructs., TEM exam. 7−90796
$LiNbO_3$:Ti, TEM study of struct. faults 7−69696
$LiNbO_3$:Ti, Ti-diffused struct. faults 7−69717
$(Mg,Fe)_2SiO_4$, olivine, planar OH-bearing defects and mantle flow 7−119983
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., charact. 7−132546
MgF_2, electron irradiated, defect clusters, ordered arrays *(Japanese)* 7−111670
MgF_2 films, optical props., influence of ion assistance 7−85868
MgH_2 single crystals and whiskers, electron beam induced decomposition 7−111676
MgO, Pd particles form., refl. electron microscopy obs. 7−143140
MgO single crysts., cyclic deform., recovery process, TEM obs. 7−86207
MgO, structural transforms, in $Mg(OH)_2$ and $MgCO_3$ decomposition, TEM obs. 7−100227
MgO:Na, ion beam mixing-induced phase modification 7−76236
MgO:Ni crystals, heat treated, TEM obs. 7−76409
MgO:Ni crystals, plastically deformed, metallic colloids formation 7−113236
MgO-ZrO_2 partially stabilised zirconia, microstruct. changes during aging 7−100267
Mg_2Si transform, during TEM foil prep. 7−138923
Mn oxidation states in solids, determ. by EELS 7−132391
Mn-Zn ferrite single crysts., haematite second phase form., SEM and TEM obs. 7−113561
Mo, cold worked single crystal, He trapping, TEM study 7−78048
Mo, irradiated, He-saturated, form. and growth of gas-filled pores during annealing *(Russian)* 7−111537
Mo LPCVD films, microstruct. charactn. 7−118330
Mo, low energy self ion-irrad., defects, TEM studies 7−104869
Mo, radiation damage by protons and α-particles, TEM obs. 7−142845
Mo-GaAs, oriented growth of metal films, microstruct. 7−118303
Mo-GaAs interface, structural change after 500°C annealing, high resolution TEM, electron diffr. studies 7−76631
$MoSi_2$, ellipsometry and struct. studies 7−138404
$MoSi_2$, hexagonal, growth kinetics at Mo-Si(001) interface, cross-sectional TEM study 7−112104
NB, neutron irrad., mech. props. *(Japanese)* 7−93060
Na_2O-B_2O_3-SiO_2 glasses, phase separation, elec. cond., TEM obs. *(Japanese)* 7−132629
Na_2O-B_2O_3-SiO_2 glass, phase separation, effect of MoO_3 addition *(Japanese)* 7−138749
Nb/Al/Nb Josephson junction structs., TEM, SEM and AES studies 7−105291
Nb-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
Nb-GaAs, oriented growth of metal films, microstruct. 7−118303
Nb-Si, rapid solidification, microstruct., phase analysis 7−86153
Nb-Ti alloys, superconductivity and structural instability study 7−105008
Nb-V, H embrittlement, dislocation substructure, deform. twinning 7−78181
Nb-V, neutron irrad., mech. props. *(Japanese)* 7−93060
Nb-V foils, tensile deform., dislocation substruct., H embrittlement 7−78113
NbC_x, hot isostatically pressed, steady-state creep 7−144480
$Nb_2C_{0.74}$, hot isostatically pressed, kinetics and mechanisms of creep 7−71263
a-Nb_3Ge:Ar, sputtered films, bias threshold for Ar bubble growth 7−117817
Nb_3Ge:Ar sputtered amorphous films, impurity bubbles, flux pinning and TEM studies 7−131138
$NbSe_2$ layer materials, struct. defects, TEM studies *(French)* 7−104761
NbTi-Cu composite superconducting properties charcts and struct. 7−131962
Nd-Fe-B hot-pressed and die-upset magnets, microstruct., electron microscopy studies 7−131322
NdDyFeBNb sintered magnets, microstruct., precipitation and coercivity, electron microscopy studies 7−69912
NdFeB magnets microstruct., hot-pressed and die-upset, TEM study 7−143027
$Nd_{15}Fe_{77}B_8$:Dy_2O_3 magnets, mag. surface hardening, microstructural evidence 7−125467
Ni based superalloy, γ' precipitates, dislocation shearing 7−100235
Ni, creep deform. rel. to high temp. prestrain 7−100322

ansmission electron microscope examination of materials continued
Ni, high energy He implanted, microstruct. evolution 7−76161
Ni, oxidation and sulphidation, scale structs. 7−106706
Ni polycrystalline thin films, ion irradiation induced grain growth, TEM study 7−84056
Ni, proton irradiated, periodic (001) defect walls 7−98273
Ni:He, high energy ion implantation, microstructural evolution 7−117941
Ni:He, high energy ion implantation, damage annealing, microstruct., elec. resist., dilatometry 7−119287
Ni:He, ion implanted, gas bubble growth 7−117946
Ni/InP interface, amorphous and crystalline ternary phase form. 7−98711
Ni-Al, Al^+ ion implanted Ni, elevated temp. microstruct. stability 7−144363
Ni-Al, amorphous alloy formation under shock-wave loading 7−77856
Ni-Al, $\gamma'(Ni_3Al)$ precip. under proton irrad. during ageing 7−84045
Ni-Al_2O_3 metal-ceramic composites, magnetic and TEM studies 7−77924
Ni-base superalloy, PWA 1480, γ' dislocation pairs 7−124280
Ni-base superalloy, single cryst., yield stress, effect of ageing 7−113630
Ni-Co-Cr superalloy, struct., mech. props. rel. to B, C and Zr content 7−71250
Ni-Cr alloy, oxidation and sulphidation, scale structs. 7−106706
Ni-Cr films on Si, pulsed ion beam irradiation, silicide formation 7−104860
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
Ni-Cr-Be alloys, dental, cast, solidification struct. 7−113535
Ni-Cr-Mo-Fe-W, precipitated phase formation, effect of precipitates on corrosion resistance *(Chinese)* 7−132621
Ni-Cr-Th_2 alloy, cold worked, dispersion hardened, proton irrad., creep, microstruct. 7−100293
Ni-Cr-W superalloy single cryst., tensile stress relax., 973-1273K 7−132656
Ni-Cu-Si(Cr), modulated struct. during initial transform., TEM study *(Chinese)* 7−144438
Ni-Ge alloy films, vacuum deposited, struct. 7−124753
Ni-Mo, rapidly quenched, faulted structs. 7−76113
Ni-P, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
Ni-P electroless deposited coatings, activation and coating study using TEM and electron diffraction 7−132508
Ni-S amorphous alloy film, electroplating, struct. 7−86070
Ni-Ti, ion bombardment induced amorphisation, cross-sectional TEM studies 7−111697
Ni-Ti, phase transform., in situ TEM obs. 7−77997
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7−113553
Ni-Ti mechanically alloyed amorphous powder, thin foil prep. and TEM obs. of amorphisation 7−144332
Ni-W-Cr, single cryst., high temp. creep, γ' phase subgrain boundaries, TEM 7−78139
$Ni_3(Al,Nb)$ single crystals, cyclic deform. at ambient and elevated temps. 7−144503
$Ni_3(Al,Nb)$ single crystals, fatigued at ambient and elevated temps, dislocation struct. 7−144504
NiAl films, low temp. amorphisation by intracascade processes 7−104872
Ni_3Al, in situ straining in TEM 7−113602
Ni_3Al-B-Fe, microstructs. and mech. props., influence of Fe additions 7−144492
$(Ni_{0.75}Al_{0.25})_{100-x}B_x$, rapid solidification, microstruct. 7−86161
NiCr:Si stable thin film resistors, structural and elec. props. studies 7−138075
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$, metallic glass, thermal stability, internal friction, TEM, DTA 7−69598
NiFe films, dual ion-beam sputtering, mag. and struct. props. 7−125502
Ni_3Fe $L1_2$ ordered alloy single crysts., cross-slip and Kear-Wilsdorf locks, TEM study 7−137368
Ni_xFe_{1-x} evaporated thin films, structural and mag. props. studies 7−98736
Ni_xNb_{x-1}, amorphisation by mechanical alloying 7−124102
NiO, point defects and high-temp deformation 7−69812
Ni_2P sputtered films, structure 7−119144
NiTi, superplastic, stress-induced transform. *(Chinese)* 7−78003
α-Np, twinning study using TEM and X-ray diffr. 7−76139
PZT ceramics, morphotropic phase boundary comp., SEM, TEM, and X-ray diffr. study 7−91800
PZT, modified, ceramic, ferroelec. domain config. 7−77484
$Pb_{0.7}La_{0.3}TiO_3$, ferroelectric ceramics, min. grain size for domain form. and twinning 7−126082
$Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics, microstruct. and dielec. props., influence of powder purity 7−92577
$Pb_{1-x}Sn_xTe$, Bridgman-grown single crysts., precip. study by TEM 7−91818
$PbTiO_3$, crystal growth, phase transform., and microcracking 7−100038
$Pb_3(VO_4)_2$, low temp. phase, electron diffr. study 7−69899
Pd polycrystalline thin films, ion irradiation induced grain growth 7−118301
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Se system, phase relations, superconductivity 7−113519
Pd_3Mn, disorder-order system, elec. resist. anomalies, H solubilities 7−76883
Pd_3Mn-H system, reversible transitions between ordered structs. 7−132610
Pd_2Si-Si, submicron epitaxial islands, formation 7−76500
Pt particles on γ-Al_2O_3 support, struct., TEM and STEM studies 7−137672
Pt supported catalyst particle surface morphology, heat treatment effects, TEM study 7−105215
Pt-Si reaction, silicide formation, elec. meas. 7−99195
PtSi, ellipsometry and struct. studies 7−138404
PtSi-Si (111) interface and epitaxial growth of PtSi and Si (111), electron microscopy 7−76643
Rb_2ZnBr_4, incommensurate superlattice, TEM study 7−137342
Ru, heavy-ion damage, vacancy-loop crystallography 7−111693
Sb_2S_3 films, deposited in substrate laser-irradiated zone, structure and morphology 7−112141
a-Se, crystallisation caused by Al diffusion through Se-Al interface *(Japanese)* 7−83673

transmission electron microscope examination of materials continued
Si (001), 2×1 reconstruction, bilayer-high steps 7−98648
Si (111) surface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
Si, as grown and process-induced defects, TEM charact. 7−124247
Si bicrystals, deformation mechanisms, TEM and X-ray obs. 7−124735
Si, EFG ribbons, cryst. defect studies 7−111544
Si, EFG ribbons, struct. defect generation mechanisms 7−83813
Si, epitaxial films, plasma CVD growth at low temps. 7−126015
Si epitaxial layers on buried Si_3N_4 produced by ion implantation, props. 7−85131
Si, grain boundary electrical activity, struct. and chemical origin *(French)* 7−124919
Si, impurity-induced microstruct. of grain boundaries, elec. props. 7−124288
Si, ion implantation, formation mech. and structures of buried SiO_xNy layers 7−69726
Si, ion implanted with Si^+, damage annealing 7−124294
Si MBE, particulate behaviour 7−143278
Si, MBE grown, influence of substrate misorientation and temp. 7−76671
Si, MBE growth, delta-function doping layer 7−91623
Si MBE on GaP and GaAs 7−105685
Si oxidation and amorphisation via crystalline SiO_2 interface layer, TEM modelling 7−124733
Si, oxidation stacking faults at mechanically induced weak surface defects 7−69718
Si polycrystal, e-h grain boundary recomb., scanning transmission EBIC methods 7−111320
Si powder, ultra-fine, prod. by arc plasma method 7−106472
a-Si, pulsed laser annealing, inhomogeneous solidification 7−69754
Si, reactive ion etching, microstructural studies 7−113801
Si, reactive sputter etching damage removal methods 7−144642
Si ribbons, RTR, cryst. defects, characts. and influence on ribbon cell performance 7−86015
Si, slip, nondissociation of Lomer-Cottrell dislocations 7−131455
Si, solar cells prepared from polycrystals grown by RAD technique, defects 7−86000
Si, solid particle erosion, strength evaluation, statistical method 7−113730
Si, stacking faults, oxidation-induced, TEM 7−91603
Si, twin boundaries, electronic properties, heat treatment effects *(French)* 7−124918
Si:Ag, implant regrowth, redistrib., range and shape factors, TEM study 7−69733
Si:As, Ge, implantation effect on defect anneal kinetics 7−117952
Si:As, heavily doped, phase transformation, post-rapid-thermal annealing, TEM and Rutherford backscatt. study 7−142982
Si:As, implant redistrib., activation and diffusion during rapid thermal annealing 7−86214
Si:As, implanted, growth mechanism of dislocation loops 7−98156
Si:As implanted polycrystalline films on Si, epitaxial realignment by rapid thermal annealing 7−112114
Si:As^+, shallow n^+p junction formation, characts. 7−118565
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
Si:B, solid phase epitaxial regrowth, low press. CVD 7−137736
Si:B films, low pressure CVD grown, microstructure 7−106434
Si:B predamaged, preamorphised and cryst. wafers, implant diffusivity during rapid thermal annealing, enhancement factor determ. 7−84020
Si:B^+(BF_2^+) diffusion and elec. props. charactn. after rapid thermal annealing 7−86215
Si:BF_2^+ self-annealed implantation, electrical and structural characterisation 7−83989
Si:BF_2^+ thin films, microstructural defects and solid-phase epitaxy, dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
Si:B(P), dislocation loops, effect of free surface and interface on thermal annealing 7−142784
Si:B(P), ion implantation during MBE growth 7−142809
Si:Fe, intrinsic gettering 7−91627
Si:H single crysts., hydrogenation-induced defects studies 7−111542
Si:He, He bubble desorption/permeation, void production mechanisms 7−117917
Si:He^+, ion implantation induced damage structure 7−76165
Si:Kr^+(P^+), hot implant induced hexagonal phase 7−76166
Si:N, defects related to N ion implantation 7−98204
Si:N, implantation producing SOI struct., microstruct. study 7−83997
Si:N, single crystals, defects related to N implantation 7−137839
Si:O, Czochralski grown, O-related defect generation 7−124315
Si:O, Fe(Cr)(Pt), transition metal solubility, O precipitate effects 7−98476
Si:O, oxide precipitates in ion-implanted Si, morphologies, TEM study 7−98221
Si:O films, ion implanted and rapid thermal annealed, microstruct. studies 7−105060
Si:P, implantation effect on defect anneal kinetics 7−117951
Si:P, point defect generation during P diffusion, conc. above solid solubility 7−142766
Si:P, RAD growth, doping induced dislocations, TEM obs. *(French)* 7−111560
Si:P^+ implantation self annealing and ion beam assisted recrystn. studies 7−84053
Si:P(As)/Ti interface disilicide form., growth rate dopant conc. depend., depth profiling, sheet resist. and TEM studies 7−118173
a-Si/$AlSi_x$/a-Si, silicide formation 7−92788
Si/$CoSi_2$ epitaxial structures, MBE, Si overgrowth, permeable base transistor appl. 7−77818
Si/Ni thin films, stacking faults and F bubbles, dynamical changes, cross-sectional TEM study with intermittent annealings 7−124765
Si/$Si_{1-x}Ge_x$ heterojunctions, MBE, elec. characts., cond. band discontinuity 7−77071
Si/SiO_2 interface, high-resolution TEM obs. 7−76632
Si-C-O-N, oxynitride ceramics, dense, low cost, microstruct. 7−77894
a-Si-Ni_xSi, silicide formation, TEM study 7−111974
Si-Si_xGe_{1-x} strained layer interface, misfit dislocation struct. 7−143238
Si-SiN_x-Si structure formed by ion implantation, structural characterisation 7−76634
Si-SiO_2 interface and Si, oxidation, HRTEM and ellipsometry studies 7−100459
Si-SiO_2 interface microstructure, observation and electronic props. 7−131461
Si-SiO_2 interface roughness evolution 7−112107

transmission electron microscope examination of materials continued
Si-SiO_2 SOI layers, formation by ion implantation, nondestructive characterisation 7−124742
Si-SiO_2-Si buried layer structure, formation by ion implantation and annealing 7−76637
Si-SiO_w multilayer planar structures formed by ion synthesis 7−99211
a-Si-SiO_x evaporated superlattices, struct. meas. 7−131477
SiC cubic single crystal films on Si, growth and characterisation 7−143267
SiC fibre reinforced Li_2O-Al_2O_3-SiO_2 glass-ceramic, interfacial charactn. 7−78234
SiC, ion beam mixing of B, Cr and ZrO_2 layers 7−106330
α-SiC, ion bombardment induced amorphisation, cross-sectional TEM studies 7−111697
β-SiC, reaction sintered, neutron irrad., isochronal annealing, recovery 7−119292
SiC, surface modification by ion implantation, RBS/channeling meas. 7−71344
SiC surfaces, ion irradiation effects 7−117981
SiC whisker reinforced Al_2O_3, processing and mech. props. 7−77915
SiC whisker reinforced Si_3N_4 and Al_2O_3 ceramic matrix composites, struct. rel. to processing 7−77922
SiC whisker reinforced Si_2N_4, fabrication and props. 7−78241
SiC whisker reinforced Al_2O_3, ceramic toughening by whiskers 7−100373
SiC whisker reinforced Al-Mg-Cu, void nucleation at fibre ends 7−100375
SiC:B, hot pressed, sintered, β to α phase transform., feather form. 7−86167
SiC-AlN ceramics, modulated structs. 7−132619
Si_3N_4 based bodies, nature of sialon joints 7−113857
Si_3N_4, ion beam mixing of Y and Cr layers 7−106330
Si_3N_4 powders, hot isostatic pressing sintering without additives *(Japanese)* 7−126064
Si_3N_4 powders sinterability and charactn. of sintered material 7−138719
Si_3N_4 surfaces, ion irradiation effects 7−117981
Si_3N_4-Al, interfacial reaction, TEM study 7−131454
Si_3N_4-Ti, thin film reaction 7−86666
SiO_2 films, 5 nm thick, post-oxidation anneal and reoxidation effects 7−126355
SiO_2, fused, α-cristobalite, TEM obs. 7−97953
SiO_2, native oxide on Si surface, TEM and STM studies 7−137678
SiO_2, reactive ion etching, lattice damage and polymer coating form., TEM study 7−144573
SiO_2/Si (111) interface, tensile strain induced 5×5 reconstruction, high resoln. TEM study 7−112038
SiO_2-Si:Fe interface, catastrophic oxide breakdown, impurity behaviour effects 7−143624
SiO_x thin films, obliquely evaporated, columnar struct., depend. on deposition angle and condensation rate 7−84570
$SmNi_2$ Laves compound, H-induced amorphisation 7−76001
SnO_2 films, Na^+ adsorpt. from aq. soln., film hydration and ion exchange activity determ. 7−143210
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
SnO_2 natively textured film for optical confinement-type a-Si:H solar cell 7−70110
$SrTiO_3$ ultrafine powders, hydrothermal preparation and catalysis of water photolysis 7−106459
Ta-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7−70706
$TaSi_2$, selective CVD for submicron IC structs. 7−113432
$TaSi_2$-WSi_2, solid solutions, phase diagrams and resistivities 7−111823
TbFe amorphous films, laser-written mag. domains, Lorentz microscopy obs. 7−125517
Ti alloys, beta phase, metastable precipitation during isothermal ageing *(Russian)* 7−78018
Ti film-ceramic interfaces, modifications by low energy ion/atom bombardment 7−70152
Ti/Al bilayer microstruct., annealing and Cu addition effects, TEM study 7−98715
Ti/Si sputtered multilayers, Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti/Si thin layer system, ion implantation and struct. 7−137419
Ti/SiC(Si_3N_4) systems, high-energy ion beam mixing, TEM and RBS studies 7−98269
Ti-Al-Nb, as-cast and deformed samples, dislocations 7−124274
Ti-Al-Sn-Zr-Mo-Si, Ti-6242s, ion irrad., phase transform. 7−69775
Ti-Al-V (6,4 wt.%), Al ion irrad., rad-induced precip. 7−69776
Ti-Al-V (6,4 wt.%), strain reduced hydride, crack propag., TEM obs. 7−78221
Ti-Al-V solution-treated alloy, microstruct. charact. 7−138747
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7−100307
Ti-base alloys containing Er and C, rapidly solidified, microstruct. and props. 7−119264
Ti-based metallic glasses, struct. changes 7−91467
Ti-Sn-La, rapidly solidified, second phase coarsening 7−93024
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
Ti-Y-Y_2O_3, oxide-dispersion hardened alloys, prep. by rotating electrode process 7−77869
Ti-Zr-Be metallic glasses, amorphous phase separation, re-evaluation 7−91466
TiAl single crystals, deform. at 77 K, dislocation struct. 7−83963
Ti_3Al, as-cast and deformed samples, dislocations 7−124274
TiC single crystals, state variable analysis of inelastic deform. 7−113612
TiC:H_n^+ (He^+), irradiation effects, SEM and TEM investig. 7−76153
TiC:He, ion implanted, amorphisation at 15 K 7−84059
TiN, crystal growth with preferred orientation by dynamic mixing method 7−124148
TiN-VN strained layer superlattices, growth, struct., hardness 7−119137
TiNi, shape memory alloys, near-equiatomic, precip. processes, TEM studies 7−144410
$Ti_{49.5}Ni_{48}Cr_{2.5}$, phase transform., TEM study 7−126116
TiO_2 bombarded with protons and deuterons, ion implantation effects 7−91613
$TiSi_2$ amorphous thin films on Si and SiO_2 substrates, phase transformations, X-ray diffr., elec. resist., TEM 7−70114
$TiSi_2$ sputtered films, nucleation and growth, TEM studies 7−118295
V films, vacuum evaporated, struct. and optical props. 7−143269

transmission electron microscope examination of materials continued
V-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
V-Ga alloys, rapidly solidified, microstruct. and phase transform. 7−119265
V-Ni-Si, rapidly solidified, two-dimensional quasicrystal with eightfold rotational symmetry 7−137317
V_5Si_3/V_3Si oriented eutectic interphase interface, TEM study *(French)* 7−71166
W films, abnormal-glow-discharge deposition 7−92879
W, selective deposition on $CoSi_2$ by LPCVD 7−113431
W-Cu pseudoalloy, sintered, failure features rel. to processing conditions 7−78208
W-Ni alloys, rapidly solidified, microstruct. 7−119268
W-Si:B, W CVD, reduction of Si p^+-n interfacial tunnel defects 7−138062
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567
WC single cryst., N ion implantation, subsurface modification 7−76159
WC-Co, high temp. creep deform. 7−86266
WSi_2-Si, silicide thin films, deposition and charact., TEM study 7−113396
Xe bubbles in Si and Al matrices, press., lattice parameters and solid-fluid phase transforms. 7−84018
Y-Ba-Cu-O, high T_c superconductor, electron diffr. study 7−137332
Y-Ba-Cu-O high T_c supercond., defects, high resolution TEM studies 7−111549
Y-Ba-Cu-O high T_c supercond. perovskite, cryogenic TEM study 7−117789
Y-Ba-Cu-O high T_c supercond., defects, TEM obs. 7−117934
Y-Ba-Cu-O high T_c supercond., twins, dislocations and phase comp., TEM study 7−117935
Y-Ba-Cu-O high T_c supercond., electron beam radiation damage studies 7−117975
Y-Ba-Cu-O high T_c supercond., phase transformations and microstruct. 7−118084
Y-Ba-Cu-O high T_c supercond. cryst., TEM and SEM microanal. 7−118111
Y-Ba-Cu-O high T_c superconds. and substituted systems, materials charactn. 7−143666
Y-Ba-Cu-O system, antiphase domain boundaries in superconducting phase, high T_c superconductor 7−104689
Y-Ba-Cu-O system, high T_c supercond., microstruct. study of phases 7−117939
Y-Ba-Sc-Cu-O high T_c supercond., struct. and microstruct. obs. 7−112602
YAG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
Y_3Al_5, new intermetallic cpd. 7−131097
$YBa_2Cu_3O_{6.9}$, high T_c superconductor, microstruct., O ordering, planar defects 7−111499
$YBa_2Cu_3O_{6.9}$, high T_c supercond., microstructure, O ordering, TEM study 7−117919
$YBa_2Cu_3O_7$, superconducting ceramic oxygen ordering, TEM study 7−137343
$YBa_2Cu_3O_{9-\delta}$ high T_c supercond., props., microstruct. and resistive transitions 7−137578
$YBa_2Cu_3O_{9-x}$, perovskite oxide superconductor, crystallography and microstructure 7−111467
$YBa_2Cu_3O_x$, superconducting oxide, electron microscopy and microanalysis 7−125164
YIG:Fe, implantation, thermal annealing and solid phase reepitaxy, TEM study 7−142801
YIG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
YSi_{2-x}-Si, epitaxial silicide, vacuum annealing 7−124740
Zn, anisotropic hexagonal single crysts., Burgers vector, SEM obs. 7−131149
Zn single cryst., elec. resist., struct. state effects 7−137896
$ZnIn_2Te_4$, thin film growth and struct. props. 7−138688
ZnO-Na_2O-B_2O_3-SiO_2:$CdSe_xS_{1-x}$, quantum confinement effects of impurity microcrysts., optical props. study 7−106224
ZnSe-GaAs (100), plastic deformation in MBE grown ZnSe layers 7−76668
ZnSe-ZnTe strained-layer superlattice, growth and charactn., photolum. and TEM obs. 7−76682
Zr-Nb (2.5 wt.%) pressure tube alloy, cold worked, annealed, dislocation networks 7−98152
ZrO_2, MgO partially stabilised, sintering, behaviour of impurity silicate phase 7−92944
ZrO_2, MgO partially stabilised, eutectoid decomp. 7−132586
ZrO_2 polycrystals, fine grained, high temp. deform., TEM obs. 7−126178
ZrO_2-Al_2O_3-SiO_2-TiO_2, toughened mullite ceramic composites, sintering, microstruct., phase comp. 7−77930
ZrO_2-SiO_2 system, sol-gel prep., precip. ZrO_2 transform., fracture toughness *(Japanese)* 7−132614
ZrO_2-Y_2O_3, tetragonal phase, elec. props. effect of TiO_2, SnO_2 and Al_2O_3 additions 7−98567
Zr_3RhH_x, amorphous, produced by solid-state reaction, thermal props. 7−84317
$ZrSiO_4$, zircon, alpha-decay fracturing and crystalline-metamict state transitions 7−124352

transmission electron microscopes
see also transmission electron microscopy
autofocus method for a TEM 7−95692
moire method for study of magnetic fields in transmission electron microscope 7−108712
qualitative element analysis and crystal atomic structure obs. *(Japanese)* 7−95680

transmission electron microscopy
see also transmission electron microscope examination of materials; transmission electron microscopes
3D C black chain structure reconstruction using automated stereographic technique 7−78415
analytical electron microscopy 7−100476
atomic configuration at semiconductor interfaces, high resolution TEM determ. 7−112097
characteristic electron energy losses in TEM 7−121300
core-excitation spectra, removing multiple-scatt., mean free path variation 7−130993

ransmission electron microscopy continued
crystals, dynamical electron diffraction, phase-object functions 7−142538
dual ion beam accel. with TEM for in situ obs. of radiation induced effects 7−109543
EELS, near-edge fine struct., chemical cpd. identification using TEM 7−130995
energy-selecting, top-bottom effect 7−130996
films, ion beam processing, TEM technique 7−119141
foil supports for C films, rapid prep. method 7−79164
grain boundary and interfacial films characterisation using TEM Fresnel diffraction-based method 7−75952
high resolution, semiconductor struct. imaging, MBE growth of HgCdTe on GaAs 7−132473
high resolution, signal-to-noise ratio improvement 7−134900
high resolution imaging, determ. of 3D lattice parameters of nanometer sized single crystals 7−104501
high-resolution analytical electron microscopy, accelerated volt. and analytic functions *(Japanese)* 7−73470
interface science, TEM/STM meas., review 7−137658
low voltage, energy filtering *(French)* 7−108708
magnetic domain wall imaging, TEM using Fresnel and Focault techniques 7−108707
microcleavage TEM, interfacial struct. of multilayers, microstruct. of small particles on substrate 7−105288
moire method for study of magnetic fields in transmission electron microscope 7−108712
nanosecond transmission electron microscopy and diffraction 7−95685
plant cell image analysis, computer-assisted three-dimens. reconstruct., interactive graphics applic. 7−145295
reflection electron microscopy methods for surface structure studies 7−143140
sputter coating of cytoskeletons technique 7−127065
structure imaging, semiconductor multilayer structures grown by MBE, interface sharpness 7−131462
three dimensional reconstruction of objects by direct Fourier method, restoration by method of convex projections 7−133526
tomography, varifocal mirror for three-dimens. display 7−133527

ransmission line theory
eddy current methods, analogy with long transmission line *(Czech)* 7−106748
electrooptic travelling-wave modulators, broad-band, transmission line aspects of design 7−82768
Maxwell eqns., finite-difference time-domain and transmission-line matrix methods, comparisons 7−141740
multilayered meander-line polariser with normal and oblique plane-wave incidences, analytical model 7−110204
nonlinear transmission line, cusp solitons, shock waves and envelope solitons, evol. eqn. 7−102178
radial transmission line, anal. and simulation of short pulses, accelerator concept 7−81758
US transducers, composite piezoelectric eval. 7−90909
vocal field oscillation, simulation using lumped mass-spring approach 7−126849

ransmission lines
see also cables (electric); power transmission lines; waveguides
FIR spectroscopy with subpicosecond elec. pulses on transmission lines 7−140764
magnetically insulated, energy losses due to microparticles 7−104424
multilayered meander-line polariser with normal and oblique plane-wave incidences, analytical model 7−110204
pulse REB generation system 7−97766

ransmission networks
see also telecommunication networks
Electricite de France transmission network, tower maintenance and protection against corrosion 7−86486
Romanian national grid, connection of wind farms *(Romanian)* 7−114069
shrouded wind unit testing for connection to Romanian national grid *(Romanian)* 7−114070

ransmission wavemeters *see wavemeters*

ransmitters
see also radio transmitters; transceivers; transponders
integrated digital optical transmitter and receivers, high performance 7−82863
optical beam in troposphere, radius of curvature, measured transmitter launch angle derived 7−67286
optical transmitter/receiver, boresight alignment 7−75018
polarisation controlling coatings for optical communication appls. 7−136604
sonar transmitter, high power flexible, design 7−97200

ransmitting *see transmission*

ransonic flow
see also compressible flow; supersonic flow
airfoil flows, multigrid approximate factorization scheme 7−142332
airfoils, transonic wave drag prediction method 7−142333
boundary-value problems, soln. non-uniqueness 7−91159
cascade flows, approximate factorisation scheme 7−75608
compressible flow, 2D Navier-Stokes eqns., multigrid method soln. *(French)* 7−91162
condensation transient in nozzle cascades with contracting channels 7−83299
delta wings, in quasi-transonic flow, theory 7−136913
diffuser flow, self-excited oscills., Navier-Stokes eqn. simulation 7−136910
experimental developments 7−104301
explicit finite-difference multigrid solution for the Euler equations 7−111020
external spatial streamline problems, boundary value methods for nonlinear differential eqns. 7−97560
gas-particle mixture, nozzle theory inverse problem soln. 7−111077
global relaxation procedure for compressible solutions of the steady-state Euler equations 7−91160
graphical representation of complex flows *(Italian)* 7−83164
high-speed inlet analysis, lower-upper implicit scheme 7−130733
ideal gas transonic flow over bodies of revol., computational procedure convergence 7−69208
inverse problem soln. for S_2 surface, elliptic algorithm 7−111018
inviscid 2D transonic flow through compressor and turbine cascades, numerical soln. 7−97563
inviscid transonic projectile aerodynamics, self-adaptive gridding calcs. 7−136912

transonic flow continued
mixed finite element approximation of the vector potential 7−97561
Navier-Stokes eqns., unfactored implicit scheme with multigrid acceleration soln. 7−110911
nonlinear singular integral equation, existence of continuous solns. 7−69209
oscillating airfoils, Mach number one, anal. 7−83264
passive shock wave/boundary layer control, porosity strength effect 7−104306
passive shock-wave/boundary-layer control on a wall-mounted model 7−83262
past oscillating thin body, numerical solution in 3D 7−117623
perfect gas, transonic flow, velocity pot. eqn. soln. 7−97562
potential flow through 2D cascade 7−75609
potential flows, numerical simulation using pseudo-unsteady methods 7−111021
pressure fluctuation measurements with passive shock/boundary-layer control 7−91158
pressure meas. of airfoils using digital holographic interferometry 7−97662
separated flow predictions, eddy-viscosity/Reynolds-stress closure model 7−83261
shock-wave-boundary layer interaction, turbulence model validation *(French)* 7−111032
slim profiles, 2D frictionless supersonic flows, transonic flows *(German)* 7−136914
supercritical wing theory, computer codes 7−130736
transonic disk accretion revisited 7−140047
unsteady aerodynamics computation, truncation error injection 7−136911
unsteady cascade flow, rapid computation 7−104300
upwind finite element multigrid scheme for the Euler equations appl. to transonic channel flow *(French)* 7−91068
vapour-droplet flow in 3D nozzle, transonic flow study 7−111019
viscous compressible flow simulations using supercomputers 7−123581
viscous flow separation simulation using boundary-layer eqns. 7−111017
vortex shedding behind a square cylinder in transonic flows 7−91161
wind tunnel, dual plate thermoplastic recording device for holographic interferometry appl. 7−96959
wings, back- or forward-swept, root regions transonic flow study 7−83263
SF_6 and air circuit breakers, gas flow calc. in extinguishing chamber *(Czech)* 7−130734

transparence *see transparency*

transparency
see also light transmission; optical constants; self-induced transparency
atmosphere over India, transparency meas. (1957-75) 7−101487
film, periodic surface microrelief, effects of laser irradiation 7−76572
film refractive index determ. by spectrophotometry, ellipsometry and Abeles method 7−102496
halide glasses, ultratransparent, optical fibres appls. 7−82732
nitrocellulose film, periodic surface microrelief, effects of laser irradiation 7−76572
noble metal like films, optical props. 7−106293
plastic scintillators transparency meas. 7−129524
plastics with surface conductivity, fabrication and characts. 7−85040
poly-3 methylthiophene based transport conducting composites, one-step fabrication, rel. to props. 7−100557
polymers, fluorinated, optical props. *(Japanese)* 7−103911
polythiophene derivatives, solutions, optical props. 7−138403
press irradiation with He-Ne laser light *(Chinese)* 7−103740
quartz, glass ceramic with unidirectional heating, state transform. temp. 7−137597
solids, transparent temp. distrib meas. using holographic interferometry 7−80857
surface, laser action mechanism, impurity redistribution 7−76207
thin film on transparent substrate, reflectances at oblique incidence 7−68556
uniaxial transparent media, indicating surface of natural reflectance 7−141786
$AgGaS_2(Se_2)$, chalcopyrite, crystal growth, nonlinear IR appl. 7−68783
As_2Se_3 glassy films, photoabsorption and photorefraction under pulsed excitation 7−106118
$Ba_3LaNb_3O_{12}$, optically transparent, synthesis, decolorisation 7−86014
a-$BaTiO_3$ RF sputtered film dielec. and optical props., active display device appls. 7−143967
C film, transparent, mass-separated negative-carbon-ion-beam deposition 7−113443
In_2O_3 films, reactively evaporated, amorphous-to-crystalline transition 7−137759
In_2O_3 transparent conducting coating for IR region, activated reactive evaporation 7−86032
In_2O_3:Sn transparent films as IR filters 7−82761
$In_{2-x}Sn_xO_{3-y}$ evaporated films, transport props., temp. dependence 7−85156
IrO_x films, prep. by high deposition rate technique, appl. to optical attenuator 7−106412
$KPbI_3$-Al(Au)(Ni)(Cu)(glass), vacuum deposited films for photothermal conversion 7−85585
O_2, liquid, magneto-volume and field induced transparency effects *(Japanese)* 7−99545
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
SnO_2:Sb films, photo-CVD growth of transparent and conducting films 7−71064
TeO_2 amorphous evaporated films, optical and elec. props. studies 7−144142
YAG ceramics, prep., microstruct., mech. and optical props. 7−138713
$ZnGeP_2$, electron irrad., elec. and optical props. 7−111672
ZnO films, transparent and conducting, activated reactive evaporation 7−119150
ZnO:Al films, transparent and heat reflecting, reactively sputtered, optical props. 7−125819

transpiration
see also flow through porous media
boreal forest drainage basin, evapotranspiration determ. using energy balance/eddy correl. technique 7−101503
evapotranspiration meas., IR remote sensing 7−145671
laminar incompressible flow in semiporous 2D channel, nonuniform transpiration 7−83345
Mali, thermal inertia and evapotranspiration mapping, use of Meteosat 7−87785

transponders
subsea positioning and control in hydrocarbons exploration, use of transponder network 7−75199
transport *see transportation*
transport equation *see Boltzmann equation*
transport phenomena *see transport processes*
transport processes
see also biotransport; Boltzmann equation; cellular transport and dynamics; diffusion; electrical conductivity; Liouville equation; master equation; neutron transport theory; photon transport theory; plasma transport processes; Senftleben-Beenakker effect; thermal conductivity; thermal diffusivity; viscosity
1D insulators, isothermal and nonisothermal carrier transport 7−84870
3/2 dimensional transport codes, flux anal., appl. of Fourier harmonic technique 7−115935
acid-salt separation by dialysis through ionic epoxide membranes 7−119566
alkali metal cations, H^+ coupled transport by crown macrocycle in liq. membrane system 7−100608
atomizer, enclosed type, travelling wave anal., modelling 7−71566
Broadwell model in 1+1 dimensions, exact solutions 7−108482
Carnot gas cycles and piston machines, minimum energy consumption *(German)* 7−95527
carrier diffusion in semiconductors, simulation with random walks 7−118503
charged particle in mag. field vlasov eqn. soln. *(Russian)* 7−83437
charged particle solutions., transport processes, statistical mechanics, electrophoretic fluctuation dynamics 7−80693
coefficients, mol. dynamics calcs. 7−95518
crown macrocycle, H^+ coupled transport of alkali metal cations in liq. membrane systems 7−100608
discrete dynamics and metastability, mean first passage times and escape rates 7−134660
disordered media, collective transport, friction and forced flow 7−143454
disordered system, density expansion, steady state four-wave mixing spectrum 7−136091
dispersed systems, effective continuous medium, struct. anal. and flux modification 7−130780
dispersion in porous media, advection-diffusion 7−136996
dynamical disorder model in uniform electric field, kinetic eqn. calcs. 7−128501
finite element methods 7−134702
finite elements, physics applications, summer school, Lausanne, Switzerland (Sept. 1986) 7−134339
Fokker-Planck, particle scattering in isotropic environment, dual Lanczos transform. theory 7−73281
Fokker-Planck equation, fluctuation coefficient-transport coefficient relation *(Chinese)* 7−115931
gas with large shear rate, transport coeffs. 7−123828
hydrodynamic dispersion of tracer flow in porous medium, self-similar geometry 7−83332
interacting particles, transport in random networks in external field, random walks 7−128443
intrinsic fluctuations determined by the existence of a centre manifold 7−108481
ion-neutral carrier transport in open and closed systems 7−95514
Lorentz gas models, heat transport coeff. calcs. 7−75748
LSS transport equations, coordinate transformation method 7−108492
macromolecular dynamics, simulation, random constraint cage 7−103700
memory effects in transport theory: an exact model 7−128506
monensin, liquid membrane, reverse transport, membrane pot. and ion flux 7−119563
Monte Carlo particle transport processes, adjoint function anal. 7−141126
moving material, multigroup particle transport 7−140644
multicomponent gases, Eulerian and Lagrangian hydrodynamic eqns. 7−75741
multizone vapour transport, thermal and solutal convection, numerical model 7−117588
neutrino transport in stellar interiors, effects on stellar Fe cores collapse 7−145938
nonequilibrium stationary states, generalised Onsager symmetry 7−115944
nonlinear conduction-diffusion equation, unknown coeff. determ., num. expt. design 7−134703
nonlinear mass transport equation, property of classical soln. 7−73283
nonlinear wave propagation, local frequency spectra, transport eqn. derivation 7−134533
nonMarkovian diffusion-like equation for transport processes with anisotropic scatt. 7−89167
ocean transport through Canadian Arctic Archipelago, implications of oceanographic conditions in Baffin Bay 7−79452
optically thick diffusive regimes, asymptotic solutions of numerical transport problems 7−80694
optimal bounds for conduction in two-dimensional, two-phase, anisotropic media 7−134706
equatorial Pacific Ocean, water transport rel. to sea level trends (1974-75 to 1981) 7−114742
particle slowing down problem, operational method, homogeneous medium appl. 7−76246
particulate technology, conf., Manchester, England, (April 1987) 7−88727
percolation transport exponents in a generalized Swiss-cheese model and a generalized inverted Swiss-cheese model for a conductive substance 7−95515
phonon systems, transport, book 7−72740
polymer solutions, hydrodynamic radius, Kirkwood-Riseman model, renormalisation group method 7−124071
polymers 7−111420
porous media, charact. pore sizes and transport 7−95519
radionuclide transport by concentrated brine in porous medium, radwaste disposal 7−103277
random lattices, transport props., systematic density expansion 7−80685
random resistor network, noise exponents 7−80628
random walk dynamics, anomalous fluctuations 7−134662
sediment transport on E India coast, suspended and bed load contribs. at Puri and Madras 7−139587
self-consistent mode-coupling theory of excitation transport with long-range transfer rates in solution 7−117792
silacrown ionophores, metal ion transport efficiency 7−113993
solid particle motion induced by thermodynamic forces 7−89177
transport processes continued
solids, suspended, hydraulic transport in horizontal pipeline, press. gradients calcs. 7−91224
solute transport across liquid-liquid interfaces, capillary tube method 7−105252
square lattice Ising model, energy transport in Q2R cellular automaton 7−108461
stratosphere, climatologies of radiative heating and cooling rates rel. to inert tracers transport 7−114915
synthetically accelerating discontinuous finite element transport anal., linear method 7−102929
thermosphere, high-latitude, mean mass transport during polar night from O/O_2 ratio *(German)* 7−134042
twist maps, area as a devil's staircase 7−134704
ultrarelativistic gas, infinitesimal disturbance propag., elementary soln. method 7−75740
water transport in frozen soil, effects of temp. 7−94312
with special emphasis on Fram Strait 7−139633
Al slab, streaming ray formulation of electron transport 7−67254
Cr VI ions, separation using tri-n-octylamine xylene based transport membranes 7−119574
$KCl-KH_2PO_4-H_3PO_4$ mixtures, aq., quaternary diffusion 7−84340
U mine-tailings material, wind-generated suspension of particulate matter from tailings disposal area 7−101378
Zn, transport through supported liquid membrane using mobile carrier 7−119568
transport properties *see transport processes*
transport theory *see transport processes*
transport theory of neutrons *see neutron transport theory*
transport through biomembranes *see biomembrane transport*
transportation
see also aircraft; marine systems; rail traffic; road traffic
AGN 1 spent fuel transport cask, quality assurance aspects of fabrication and transport 7−74226
ANSI N14.5 leak test standard for radioactive material packages, revision 7−74256
Breeder Spent Fuel Handling and Transportation Program of US DOE 7−74149
Brookhaven spent nuclear fuel, legal, political and operational problems involved in transportation 7−74105
CASKETSS code for radioactive material packaging thermal and struct. anals. 7−74253
Castor series transport casks for radioactive materials, manufacturing experience 7−74251
Central Electricity Generating Board flask test project 7−74177
commercial spent reactor fuel, rail transport in USA 7−109495
concrete storage and transport cask for spent pebble bed reactor fuel 7−74144
conf., Davos, Switzerland, June 1986 7−72723
conference on radioactive waste management, Winnipeg, Canada, Sept. 1986 7−95091
criticality codes for large arrays of fissile material packages, validation exercise 7−74108
defective LWR spent fuel transportation, radioactivity leakage, double containment system 7−74252
DHLW cask, hypothetical accident condition loads with initial pressure 7−74188
DHLW truck shipping cask, design verification 7−74182
Dry-Cap spent fuel storage and transport cask 7−74157
Duke Power Company spent fuel storage and transportation experience 7−109491
environmental impact of nuclear waste transportation, analytical methodology 7−74118
failed PWR fuel transport, R62 package appl., water radiolysis parametric expts. *(French)* 7−74198
flask containing irradiated LWR fuel, thermal response following loss of coolant water 7−74179
HLW and spent fuel packagings, design, safety anal. and tests 7−74152
HLW and spent fuel transportation casks, US DOE acquisition programme status 7−141314
HLW transportation in UK, flask design 7−74164
immobilized radioactive waste transportation, safety regulations 7−74146
irradiated CANDU fuel transport cask, design and testing 7−109494
irradiated fuel transport casks, thermomechanical tests and studies *(French)* 7−74197
LLW, transport from Taiwan to off-shore repository 7−89745
LR56 Type B(U)F package for liquid radwaste effluents, design and mock-up tests *(French)* 7−74159
LWR spent fuel packagings, internal arrangement design for casks 7−74161
Mostram systems for collection, transportation and storage of radwaste 7−74143
multipurpose container construction for transporting radioactive materials 7−74158
nuclear fuel transportation in Brazil, regulatory role of CNEN in quality assurance 7−74101
nuclear fuel transportation in Japan, safety regulations and emergency responses, status 7−74104
nuclear material packaging manufacture, quality assurance, spent fuel casks 7−74109
nuclear materials, high temperature testing of structurally damaged impact and puncture package protection systems 7−74185
nuclear materials, safeguards samples, practical problems in transportation *(French)* 7−74135
nuclear materials cask analysis, phase change models 7−74192
nuclear materials cask design specifications, evaluation using CAPSIZE program 7−74193
nuclear materials casks, target hardness comparisons 7−74191
nuclear materials from reprocessing facilities, transportation experience 7−74133
nuclear materials transport, small quantities, experience 7−74137
nuclear materials transport and packaging for Japanese safeguards anal. 7−74134
nuclear materials transport by sea, proposed emergency response system 7−74139
nuclear materials transportation, risk 7−141335
nuclear materials transportation systems, shock and vibration road simulator tests 7−74187
nuclear materials transportation systems, thermal benchmarking 7−74184
nuclear waste and spent fuel transport in Switzerland 7−74098

ansportation continued
nuclear waste repository siting, transportation considerations 7−74175
nuclear waste research and management, transport implications, Swiss perspective 7−74097
NuPac 125-B rail cask, design and scale model testing 7−74190
Ontario Hydro tritiated heavy water transportation package 7−74250
packaging, high-speed impact test 7−74180
radiation exposures in UK from transport of Tc generators and ILW 7−74232
radioactive material packages under vehicle accident conditions, tie-down systems 7−74100
radioactive material packages with 2 containment barriers, radioactive gas release calcs. *(French)* 7−74254
radioactive material transport, evaluation of dose received by workers and general public *(French)* 7−74239
radioactive material transport in China 7−74121
radioactive material transport in FRG, R & D work, spent fuel casks 7−74115
radioactive material transport in FRG, risk assessment with INTERTRAN 7−74230
radioactive material transport in the GDR, regulations, experience and surveillance practices 7−73872
radioactive material transport packagings, safety factors under severe fire conditions *(French)* 7−74228
radioactive material transportation, projected environmental impacts 7−89744
radioactive material transportation, risks and regulations *(French)* 7−96398
radioactive material transportation experience in the USA 7−74126
radioactive material transportation to 1st US repository site, projected environmental impacts 7−74117
radioactive material Type A packages, costs and effectiveness of safety measures for road tunnel transit 7−74127
radioactive materials, annual worldwide shipments, estimate 7−74120
radioactive materials, barge transportation of Type B quantities 7−74103
radioactive materials, low activity, transportation experience and regulatory compliance assurance 7−74122
radioactive materials, small quantities, transportation in Italy 7−74136
radioactive materials, transport by road, eval. of accident probabilities *(French)* 7−74231
radioactive materials, transportation accidents, historical summary 7−89743
radioactive materials transport, IAEA class 7 requirements and Type B(U) packages 7−74102
radioactive materials transport, methodologies for radiological impact assessment 7−74233
radioactive materials transport in Europe, role of EEC 7−74099
radioactive materials transport in India, experience in regulation 7−74106
radioactive materials transport in Italy, data bank 7−74128
radioactive materials transport in Japan, safety research 7−74114
radioactive materials transportation in USA, federal, state and local activities 7−74227
radioactive waste, central storage of used fuel, computer modeling 7−89749
radioactive waste, transportation by sea, design of special-purpose vessels 7−74148
radioactive waste cask drop testing at the Oak Ridge National Laboratory 7−74173
radioactive waste cask handling system, use of robotics 7−74183
radioactive waste transportation, IAEA Safety Series No.6 regulations 7−74261
radioactive waste transportation impact on systems decisions 7−74172
radiological impact of transport accidents and incidents in UK over 20 year period 7−74234
radiopharmaceutical product transport in France *(French)* 7−74119
reactor decommissioning waste transport in UK, preliminary risk assessment 7−74116
reprocessing wastes, transport criteria 7−74160
rescue container system for defective UF_6 cylinders 7−74138
rubber neutron shields for radwaste packaging, expt. props. and Monte Carlo calcs. 7−74243
shielded containers for reactor waste sea transport system 7−74242
shipping cask development for chopped nuclear fuel transportation 7−74151
shipping casks under accident conditions, thermal analysis computer code Q/TRAN 7−74181
Shippingport Station Decommissioning Project, barge transportation of waste, economic and safety aspects 7−103154
shock-absorbing packaging materials for radwaste transport 7−74166
SNM transport system, safety anal., USA DOE/PNC joint programme 7−74112
spent CANDU fuel, road, rail and water transportation systems 7−109496
spent fuel assemblies in a dry cask, heat transfer from WWER fuel 7−74110
spent fuel costs, SCALE code anal. 7−74178
spent fuel element transportation and storage containers, Ni plating 7−74145
spent fuel rail shipping campaign in the USA 7−74129
spent fuel shipping casks, shielding methods for versatility eval., KWIK-DOSE code 7−109529
spent fuel storage and transportation experience for the Idaho National Engineering Laboratory 7−109498
spent fuel transport, industrial, technical, safety and economic aspects 7−74124
spent fuel transport flask finned surface, fire testing of intumescent coating 7−74196
spent fuel transport from Loviisa power plant to the USSR 7−74123
spent fuel transport in the USSR, experience and regulations for safety and personnel protection *(Russian)* 7−74130
spent fuel transport packaging, maintenance experience 7−74165
spent fuel transportation by rail in the USA 7−74132
spent LWR fuel, response to extreme environments, releases from cask accident 7−74258
spent LWR fuel shipment, cask performance and interface specifications 7−74150
spent LWR fuel shipping cask, database for hypothetical sabotage attack 7−74202
spent nuclear fuel dry shipping/storage casks, fuel pin surface temps. 7−74194

transportation continued
spent nuclear fuel flasks, thermal anal., use of FLUFF fin heat transfer code 7−74195
spent nuclear fuel packages, comparison of nodular cast Fe and forged C steel 7−74205
spent nuclear fuel shipping cask design using depleted U shielding 7−74244
spent nuclear fuel shipping casks, microcomputer based thermal and impact code system 7−74199
spent nuclear fuel shipping containers, impact anals., static and dynamic FEA comparison 7−74201
spent nuclear fuel shipping vessel, dose rate distribs., on-board expts. and anal. 7−74237
spent nuclear fuel transport cask, 100 ton class, demonstration test for accidents 7−74113
spent nuclear fuel transportation cask design, fracture mechanics approach 7−74203
spent-fuel shipping cask, criticality effect of neutron channelling between B_4C granules in Boral 7−103021
Super-Phenix fuel elements and absorber rods, transport and storage container development *(French)* 7−74141
Swedish spent fuel sea transportation system 7−74131
THTR spent fuel, handling and transport system 7−74163
TMI-2 core, preparations to transport, receive and store 7−89742
TMI-2 fuel debris, transportation to INEL 7−74162
TN-1300 transport/storage cask performance 7−74169
TN-24 spent fuel cask, design and demonstration under active conditions 7−74155
TN-8L and TN-9 spent fuel shipping casks, experience 7−74154
TN-BRP and TN-REG spent fuel transport/storage casks, design and fabrication 7−74156
transport packaging and shroud for irradiated monitoring assemblies from the Creys-Malville fast reactor *(French)* 7−74245
transuranic waste transportation tracking system 7−109497
TRUPACT-I, containment anal. 7−74189
TRUPACT-I, TRU waste package transporter, containment, H_2 buildup, hypothetical accidents 7−74204
TRUPACT-I transuranic transporter, impact, puncture and thermal testing 7−74186
Type B(U) radioactive material packages, fracture safety philosophies effects 7−74257
Type B packages, radiological limits in IAEA transport regulations, spent fuel 7−74236
Type B spent fuel flasks, quality assurance 7−74107
USA DOT Specification 6M radioactive fissile material package, nuclear criticality safety reeval. 7−74247
used UF_6 shipping packages, testing and eval. of Model 30B cylinders 7−74255
vitrified high level radwaste, transport and storage cask development 7−74142
^{10}B content determ. in fuel element shipping casks, nondestructive test method 7−73874
H_2 gas generation in radioactive waste packages 7−74200
^3H, storage and transportation 7−89740
Pu, air transportable package development 7−74153
Pu, metallic, qualified air transport packaging 7−74248
Pu transportation, packaging design 7−74240
Pu transportation, SAFPAK and SAFKEG high integrity packages 7−74147
Pu transportation risks, comparative literature survey 7−74229
PuO_2 packaging system for air transport 7−74246
T_2O transport packages, polyurethane foam filled, impact anal. 7−74168
U transportation, SAFPAK and SAFKEG high integrity packages 7−74147
UF_6 in transport accidents, radiological and chemical risks 7−74235
UF_6 transport container, extra fire tests in Japan, numerical anal. comparison 7−73878
UF_6 transport overpacks, specification 21PF-1, update and insulation testing 7−74249

transportation networks *see transportation*

transportation services *see transportation*

transportation systems *see transportation*

transputer systems *see multiprocessing systems; parallel processing*

transputers *see microprocessor chips*

transverse junction stripe lasers *see semiconductor junction lasers*

transverse rupture strength *see bending strength*

trapeziodal wave generators *see function generators*

trapped electron centres *see F-centres*

trapped free radicals *see free radicals*

trapped hole centres *see V-centres*

traps, electron *see electron traps*

traps, hole *see hole traps*

travelling salesman problems *see operations research*

travelling-wave-tubes
see also backward-wave tubes
No entries

treatment, heat *see heat treatment*

treatment, patient *see patient treatment*

treatment, surface *see surface treatment*

treatment, water *see water treatment*

treeing (electrical) *see electric breakdown*

trees (mathematics)
chemical structures, acyclic, physical trees, computer enumeration and generation 7−141418
composite systems, computational complexity, tree width of interaction scheme 7−134642
homogeneous tree, Cauchy laws for ends *(French)* 7−66892
nuclear pore complexes cluster anal. in mammalian cells 7−139235
passive dendritic tree transient potential response determ., continuous cable method 7−107018
random walks on Cayley trees, first passage time, continued fraction expansion 7−120966
Steiner tree associated with three quarks 7−121451

triacs *see semiconductor switches; thyristors*
triangular wave generators *see function generators*
triboelectric emission *see electron emission*
triboelectricity
see also static electrification
polymers, pigmented particles, triboelectric charging 7−112435
tribology
see also friction; lubrication; mechanical contact; wear
conference, Lulea, Sweden (Jun. 1986) 7−108030
ion implantation, on non-semiconductors, conf., China (Jan. 1985) *(Chinese)* 7−72704
scientific studies and practice, correl. 7−137462
steel, C, sintered, pulsed laser treatment, effect on struct. and props. 7−93194
surface texture, space within profiles 7−112045
world achievements in tribology 7−131227
Fe, cast, seizure resist. rel. to relaxation props. of hardened layer 7−86369
MoS_2 sputtered films, props. and prep. 7−100070
MoS_2, thin layers, struct. and tribotechnical props., effect of substrate temp. 7−84581
TiN based protective films production with use of cylindrical low energy ion gun and charact. 7−71040
triboluminescence
mechanoemission and mechanoluminescence in flaw inspection, review 7−132885
molecular crystals, fluorescent and phosphorescent, effect of temperature on mechanoluminescence intensity 7−77667
organoplastic, unidirectionally reinforced, thermal and moisture ageing effect on deform. and failure, mechanolum. obs. 7−71248
rocks and glass undergoing fracture, light and radiowave emissions 7−107388
triethylammonium tetrakis(dibenzoylmethanato) europate, cryst. disorder and triboluminesc. 7−106280
LiF, gamma-irradiated comparison of piezoluminescence and thermoluminescence 7−70919
SiO_2, amorphous, struct. defects and triboluminescence excitation 7−138524
triode sputter deposition *see sputter deposition*
triode sputtered coatings *see sputtered coatings*
triode sputtering *see sputtering*
triodes
corona triode, radial current-density distributions 7−104475
triple point *see critical points*
triplet absorption detection of magnetic resonance *see microwave-optical double resonance*
triplet state
L-alanine, D NMR, methyl group dynamics, ^2H spin-lattice relax. 7−92535
alkali halides, ^3B, luminesc. of AsO_2^- centres, temp. depend. study 7−125777
alkali halides, mercury-like centres, triplet excited state *(Russian)* 7−143355
alkylbenzenes, vibr. excited triplet lifetimes, 2-colour photoionis. obs. 7−117011
anthracene, cryst., triplet exciton process, thermal effects, fluoresc. 7−92073
anthracene, triplet exciton fusion at edge dislocations, delayed fluoresc. anal. 7−137801
anthracene-tetracyanobenzene cryst., triplets annihilation, reaction yield detected mag. reson. line shape study 7−92075
anthraquinone-2, 6-disulphonate, solution-phase photoreaction transient intermediates, reson. Raman spectra anal. 7−82192
aromatic cpds, liq. soln., triplet excimer phosphoresc., review 7−68404
aromatic hydrocarbons, solns., triplet-triplet annihilation *(Japanese)* 7−129624
aromatic hydrocarbons, triplet states quenching by tertiary amines 7−68392
aromatic molecules, heavy atom perturbers in rigid solns., kinetics of excited states 7−96775
aromatic molecules, radiative singlet-triplet transitions, nonadiabatic channel study 7−117023
azanaphthalenes, triplet state reson. Raman spectroscopy 7−82132
azanaphthalenes, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
azoaromatic compounds, electron-excited, $n\pi^*$ triplet state deactivation 7−110091
bacterial reaction centres, special pair triplet states, localisation and charge transfer character 7−114209
BEDT-$TTF_3Ta_2F_{11}$, optically enhanced phase transition, ESR studies 7−99558
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7−116977
benzophenone, triplet, quenching rate const. determ. 7−96780
2,2′-bipyridine, phosphoresc. and ODMR meas. 7−82250
bis(phenylmethylenyl)[2.2]paracyclophanes, isomeric, spin states 7−103544
1-bromo-4-chloronaphthalene, triplet-triplet energy transfer, double reson. and laser line narrowing obs. 7−112997
β-carotene isomers, excited triplet-state, transient reson. Raman spectra 7−90161
α-chloroanthraquinones, lowest excited triplet states, EPR ODMR and phosphoresc. spectra study 7−106010
chloroanthraquinones, triplet states, visible absorpt. and phosphoresc. spectra anal. 7−103521
chlorophyll-like molecules, triplet state quenching kinetics, back electron transfer 7−136001
9-cyanoanthracene, fluoresc. quenching 7−68394
γ-cyclodextrin, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
μ-(η^5:η^5-cyclooctatetraene)bis(η^2-cyclopentadienyl)vanadium, ab initio calcs. 7−89933
cyclopentadienyl cations, excited states, polarisability, CI and PPP calcs. *(French)* 7−116872
cyclopentadienyl cobalt complex, planar conform., triplet state, ab initio MO-SCF calcs. 7−116818
d^0 transition metal tetroxo anions, metastable triplet states, Jablonski diagram 7−113243
triplet state continued
diazabenzenes, jet cooled, fluoresc. polaris., partial K mixing in triplet manifold. 7−82256
dibenzofuran, single crysts., doped, triplet energy transport and excitation density 7−70675
dibromonaphthalene, triplet excitons, impurity and phonon scatt., optical line broadening 7−132294
dichlorobenzene-dibromobenzene mixed cryst., nondiffusive triplet energy transport 7−132328
dihydrophenazine, doped in mol. cryst., excited states characterisation 7−96571
2,5-dimethyl hexatriene, lowest excited triplet states struct., time resolved reson. Raman spectra 7−90162
2,5-dimethyl-1,3,5-hexatriene, isomers, UV absorpt. and Raman spectra 7−74624
trans-3,3-dimethyl-1-(2-naphthyl)-1-butene, photoisomerisation in presence of electron acceptors, mag. field effects 7−93265
3,4-dimethylenefuran, and rel. diradicals, singlet-triplet energy separation ab initio calcs. 7−68192
dimethylenepolycyclobutadienes, non-Kekule alternant hydrocarbon structs. 7−89929
dinitrotoluenes, solns., picosec. transient absorpt. 7−68331
diphenylchlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
α,ω-diphenylopolyenes, lowest excited state, CARS spectra 7−90167
disordered organic solids, aromatic mol. photoexcited triplet state zero field electron spin-lattice relax. meas. 7−85429
dye sensitised fluoresc. label in triplet state, dynamic contacts of macromols. study appl. 7−144963
dye solns., triplet-triplet annihilation *(Japanese)* 7−129624
eosin in aqs. micellar dispersions, flash photolysis 7−86646
ferrocene, T_1 state, quantum yield determ. 7−103518
flavins, one-electron oxidation, flush photolysis and pulse radiolysis obs. 7−71480
hexatriene,, lowest excited triplet states struct., time resolved reson. Raman spectra 7−90162
1,3,5-hexatriene, isomers, excited triplet states, time-resolved reson. Raman spectra 7−74596
hydrocarbons, radiolysis singlet and triplet yields, mag. field effects in fluoresc. 7−71508
keto sulfides, triplet, intramol. charge-transfer interactions investig. 7−113883
ketones, triplet state, matrix interactions phosphoresc. kinetics 7−68390
metal-metal quadruple bonds, δ-δ^* transition energies and intensities 7−90099
metal-tetrabenzoporphyrin-halomethane systems, donor-acceptor electron transfer, spectral hole burning 7−130270
metallobacteriochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
metallochlorin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
metalloporphin, excitation energies, oscillator strengths, screened pot. MO calcs. 7−89938
O-methylacetophenone and related cpds., photochemistry, ESR study 7−119540
methylene, triplet ν, and ν_3 ab initio calcs. and vibrationless singlet-triplet splitting determ. 7−129609
methylfluorosilanes-N_2O_2 exciplexes, singlet and triplet states, enthalpies, MNDO calcs. 7−89960
methylviologen, solvent cage escape yields following electron transfer quenching 7−82076
molecular crystals, excited states, decay channels, autoionization 7−105412
molecular crystals, triplet exciton interactions 7−112185
molecules, triplet exciton ESR line shapes, local exciton-phonon interaction temp. depend. calc. 7−99554
naphthalene, triplet excimers, conform. and phosphoresc., radiative and nonradiative decay rates 7−82267
naphthalene, triplet excitation zero-field ODMR 7−90233
naphthalene, triplet state, exchange interactions, number of effective dimensions 7−105408
naphthalene, triplet states, proton hyperfine struct., ESR spectra anal. 7−74674
naphthalene-benzophenone system, nonradiative triplet-doublet energy transfer meas. 7−109913
octaethylporphyrins, resonance coherent Raman scatt. 7−132249
palladium etioporphyrin, triplet state, conc. quenching, phosphoresc. study 7−68397
1,3-perinaphthadiyl diradical, spin-forbidden H^+ tunnelling 7−78471
phenazine, triplet-triplet absorpt. and polarisation spectra 7−96716
phenylbenzenes, triplet states, zero field splitting parameters 7−135977
phenyldichlorocarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
photoinduced electron transfer reactions, triplet state 7−113957
poly(N-(vinyloxy)carbonyl)carbazole and its monomeric analogue, triplet exciton processes, laser pulse-probe study 7−93347
polydiacetylene single crystal, pulsed ESR meas. of photoexcited triplet-soliton pairs 7−70624
porphycene, photoexcited triplet state, time-resolved EPR spectroscopy 7−103548
porphyrin dimers, covalently linked, hybrid, triplet state sensitisation, intramol. triplet energy transfer 7−78523
4H-pyran-4-thione in solns., phosphoresc., quantum yields and triplet lifetimes 7−96767
pyrazine, $^1B_{3u}$ state, fluoresc. quantum yield 7−90251
pyrazine, $^1B_{3u}$ state, high resolution lifetime meas. of perturbed $J^1=0$ levels 7−82254
pyrazine, jet-cooled, two-colour fluoresc., multiphoton ionisation spectra 7−90244
pyrido(2,3-b)pyrazine, $^3n\pi^*$ triplet state optical and mag. props. 7−90257
pyromellitic dianhydride-phenanthrene, charge transfer cryst., delayed fluoresc. study 7−77616
rare earth complexes with pyrene tetrasulphonate, energy deactivation study 7−125787
all-trans and 9-cis-retinal, triplet state, configuration relax., picosecond time-resolved absorpt. spectra 7−74650
rubrene, soln., triplet states, thermally activated intersystem crossing 7−68405
semiconducting ferroelectrics and ferroelectric mag. materials, interband electron excitations, elec., mag. and toroidal oscills., optical props. 7−99732

iplet state continued
Si irradiated crysts., defect triplet centres, spin-depend. photocond. and optical nuclei polarisation study 7−98818
singlet-triplet ferromagnets, two-magnon light absorpt. by surface collective excitations 7−92420
sodium dodecyl sulphate micelle, spin polarisation through triplet-triplet energy transfer, time resolved ESR study 7−141606
static spin correls. in singlet states via triplet overlap integrals 7−122364
TCNQ salt, Cs_2 (TCNQ)$_3$, low temp. organic semiconductor, ESR studies 7−70625
tetracene, soln., triplet states, thermally activated intersystem crossing 7−68405
tetrachlorophthalic anhydride-hexamethylbenzene, fluoresc., phosphoresc. and delayed fluoresc. 7−138496
tetramethylcyclobutane-1,3-dithione crystal, defect trap phosphoresc. spectra and lifetimes 7−144095
three-body complex on a lattice, mass formula 7−84687
tricarbocyanine dyes, triplet state yield and photosensitisation of singlet O_2 *(French)* 7−117027
2,4,6-triisopropylbenzophenones, lowest triplet states, rot. relax., picosec-cond laser spectroscopy investig. 7−129690
1,3,3-trimethyl-6′-nitro-spiro(indoline-2,2′-[2H-1]benzopyran), open, phosphoresc. polaris. 7−77655
triphenylcarbenium ions, lowest excited triplet state, phosphoresc. and ODMR obs. 7−103561
triplet intermediates, spin-orbit coupling, mag. field effects 7−109951
tris(dimethylamino)cyclopropenium 2,3-dichloro -5,6-dicyanobenzoquinonide, triplet spin excitons 7−112190
vinyl aromatic polymer soln., intramol. triplet exciton migration model 7−70195
xanthene dyes, photochem., anionic micelle characterisation 7−119544
α-(xanthene-2-carbonyloxy)-ω-(xanthene-2-carbonyloxy)alkanes, intramol. H abstraction, mag. field effects 7−113878
As_2Se_3, crystalline and amorphous, triplet excited states 7−70899
Ba, 3-photon ionis., triplet state 2-photon intermediate resons. excitation 7−74541
Be ethylene, exciplexes, triplet state, reaction hypersurfaces 7−68236
C_2, statistical equilibrium, 10-level model including singlet-triplet transitions 7−122325
CO, trapped in rare gas cryst., triplet states, vibr. progressions obs. 7−106240
CS_2, singlet and triplet channels, photofragment spectroscopy 7−141637
CS_2, vibrational level relax., UV fluoresc. spectra anal. 7−96722
$Cs(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
Cu porphyrin-free base porphyrin dimer, triplet-triplet energy transfer 7−135864
GaP:Li,Cu(Zn), IR photoluminesc., ODMR study 7−113000
H_2CN^+, low-lying triplet and singlet states, ab initio SCF and MP MOC calcs. 7−109703
HD, triplet 3s,3d complex, laser photofragment spectroscopy 7−141588
HD, triplet Rydberg states, fast neutral-beam photofragment spectroscopy 7−90010
H_2O^{2+}, dissoc., singlet and triplet state pot. energy surfaces calc. 7−122366
H_2O^{2+}, low-lying electronic states, singlet-triplet splitting, HF calcs. 7−135828
H_2P_2, protonation, ab initio calcs. 7−86578
He 2 S excited states, K-L intershell correlation effects 7−122370
He, 3^3P state, electron impact excitation, spin-exchange amplitudes 7−96882
He, metastable states, two-photon ionisation 7−135895
He+H^+(D^+), triplet levels excitation study 7−117063
He+N_2, state alignment, decay rate const. determ. 7−129840
Hg arc plasma, triplet lines, intensity current and mag. field depend., visible spectra 7−137126
KBr:Sn crystal, A_T emission of $Sn^{2+}v_c^-$ centres, effect of mag. field *(Russian)* 7−142775
KI, thin crystals, excitonic structures 7−85157
$K(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
N, triplet state population in low-press. He-N_2 plasma 7−141518
N_2O_2, singlet and triplet states, enthalpies, MNDO calcs. 7−89960
O_2, nightglow triplet emissions, vibr. levels attitude distribution 7−79732
phenanthrene in low temp. alcohol glasses, quenching of fluorescence and phosphorescence 7−99912
RbI, thin crystals, excitonic structures 7−85157
$Rb(NH_3)_xC_{24}$ intercalation cpd., PMR study 7−132146
Rh complex, [Rh(2,2′-bipyridine)$_3$]Cl$_3$, triplet state, optically detected spin coherent transients 7−138352
Rh^{3+} complex, rhodium(III) tris(bipyridine), phosphoresc. and ODMR meas. 7−82250
Ru (II) acylpyridine complexes, slow triplet energy transfer to lower excited states 7−90309
SO_2, electron-impact excitation, mol. emission determ. 7−82377
Sc, triplet centres, spin depend. phenomena, ESR, optical nuclear polarisation study 7−138327
Si, neutral complex defects, bound excitons, electronic struct. studies 7−98877
a-Si:H, triplet exciton recombination, ODMR 7−84681
a-$Si_{1-x}C_x$:H, triplet exciton recombination, ODMR 7−84681
a-$Si_{1-x}N_x$:H, triplet exciton recombination, ODMR 7−84681
Sr, 3-photon ionis., triplet state 2-photon intermediate resons. excitation 7−74541
Zn complexes, tetranapthoporphines, triplet-triplet absorpt. spectra 7−109874
ZnS:Mn^{2+}, orbit-lattice coupling coeff., ligand field theory 7−124936
ZnS:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7−124935
ZnSe, electron irrad., close Frenkel pairs, ODMR obs. 7−98142
ZnSe:Mn^{2+}, orbit-lattice coupling coeff., ligand field theory 7−124936
ZnSe:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7−124935

ritium
atom, spin polarized, ground state energy calcs. using LOCV method 7−96493
atom densities, NMR studies 7−138334
biological radiation effects of ^{3}H-labelled 5-fluorouracils *(Japanese)* 7−133397
BS method for T-bearing water solidification *(German)* 7−129439
bulk getters for tritium storage 7−81718

tritium continued
Canadian contributions to the safety and environmental aspects of fusion 7−141310
Canadian Fusion Fuels Technology Project 7−141301
Canadian research on fusion reactor materials, review 7−141309
charged-particle identification by energy release meas. in thick scintillator 7−81902
chromatograph for T purity analysis, gas handling system design 7−106873
collection in R-tokamak getter materials 7−74063
concentration determ., optimised cell for liquid scintillation radiometer 7−106871
conf. on tritium technology, Tokyo, Japan, 1986 7−128200
CRNL tritium laboratory for pure T_2 packaging 7−81719
D-T plasma with injected beams, distrib. and α particle prod., coupled model eqns. 7−104375
dispersion in the atmosphere, computer code 7−87259
electret dosemeters for tritium beta rays 7−81747
electrolysis cell for T recovery from HTO, development 7−122184
electromigration in metals meas., sample cell design 7−124606
formation and chemical behaviour in molten LiF-BeF_2 mixture 7−81710
fusion blankets, factors affecting T residence time, modelling 7−129411
fusion fuel cleanup systems, CRNL research 7−141307
fusion fuel production blankets, concepts 7−89729
fusion fuel research activities of universities in Japan 7−129407
gas permeation through austenitic stainless steel, reduction by Al ion implantation 7−91897
graphite, T retention in various graphites, expt. 7−129416
in groundwater, T concs. meas. in Naka Terrace, Ibaraki Prefecture, Japan 7−94327
hand contamination at radioisotope lab. of a medical school 7−79098
handling requirements and design approaches for NET 7−135634
handling technology development in the R-project 7−74064
isotopic enrichment for analytical and production purposes *(Rumanian)* 7−81749
JAERI TPL, tritium expts. program 7−129417
JAERI tritium research program, overview 7−129405
JET, tritium safety programme, releases, exposures and waste 7−81715
laser isotope separation by multiphoton dissociation of organic cpds. *(Romanian)* 7−144734
lean fuels for fusion reactor concept 7−122203
local breeding measurements in advanced benchmark experiments 7−67980
magnetic fusion materials production reactor, T and Pu prod., economic anal. 7−89713
magnetic fusion production reactor, design and anal. 7−89717
magnetic fusion production reactor, feasibility study 7−89715
magnetic fusion production reactor, mechanical design concepts 7−89716
measurement using liquid scintillation spectrometer *(Czech)* 7−116800
monitoring by liquid scintillation counting, Scotch tape method 7−103283
on-line monitoring in air in HWR 7−116718
Ontario Hydro Research Division tritium handling system 7−81716
Ontario Hydro tritiated heavy water transportation package 7−74250
Pacific Ocean, tropical region, T as tracer of water motion 7−145494
permeation studies, exptl. apparatus 7−129419
pine needle concentrations in Japan, environmental sources 7−93568
preparation for large area sources for document imaging 7−109574
production in mag. fusion production reactor, fusion technology 7−89712
production sources *(Rumanian)* 7−81748
Purex process, T and Zr separation *(German)* 7−129216
quadrupole mass spectrometer and Bayard-Alpert gauge for H_2 isotope measurements 7−102435
recovery and separation from blanket coolants 7−135630
recovery and separation from inert glove box atmospheres 7−135631
recovery from liquid fusion blankets, mathematical model 7−67981
release from neutron irrad. Li_2O single crysts. 7−109481
separation from fusion waste water by IR multiple-photon dissociation 7−129896
separation from LiPb blankets 7−135632
solubility, in Pd-Au alloys, low H conc. 7−105039
spin-polarised, press. and compressibility, LOCV calcs. 7−137044
steel, austenitic, first wall material, for NET, tritium inventory, permeation and release calcs. 7−122187
steel, martensitic, first wall material for NET, tritium inventory, permeation and release calcs. 7−122187
storage and transportation 7−89740
storage container design for T-bearing water disposal *(German)* 7−129438
thermal desorption from Fe, activation energy, trapping sites *(Japanese)* 7−76601
tracer displacement during river water infiltration to groundwater 7−127311
tritiated H_2 gas, internal dosimetry following in-vivo conversion to tritiated water 7−127013
tritiated waste solidification in polystyrene and cement, tritium release rates 7−122214
US magnetic fusion tritium research program, overview 7−129406
vacuum systems, T compatible *(Japanese)* 7−115972
waste management system 7−96369
β-spectrum, HeH^+ contributions 7−116885
dtμ molecule, J=0 levels, nuclear shift and broadening calcs. 7−122752
Al-Cu-Li alloy, quenched, macroscopic quasicrystals 7−111451
D-T alloy, formation rate of muonic molecules 7−122742
D-T fusion, T anal. and meas. using mass spectrometry, ionization gauge and secondary electron multiplier 7−130941
D-T plasma, α particle diagnostics study 7−104452
D-T plasma, fast α-particle energy deposition, angular dispersion term effect 7−83497
D_1^+-D_2^+-T_1^+ ratio, obs. in deuteron accelerator using TOF technique 7−109587
DT plasmas, isotropic comp. control method in tokamaks 7−67986
^{3}H monitoring near nuclear power station during operation 7−93569
$^3H_2$, safe handling and storage 7−109525
^{3}H-labelled gas, radioactivity meas. using proportional counter, elimination of end effect 7−89884
^{3}H-labelled methane, radioactivity meas. 7−89861
Li based ceramics for fusion blanket appls., irradiation tests, T releases 7−89727
$LiAlO_2$, neutron effects, T release expts. from solid breeder materials 7−129412
γ-$LiAlO_2$, out of pile tritium release expts. 7−122186
$LiAlO_2$:MgO, out of pile tritium release expts. 7−122186

tritium continued
$LiAl_5O_8$, out of pile tritium release expts. 7−122186
$LiF-PbF_2$ fusion blanket material, T release props., phase diagram 7−129413
Li_2O, neutron irradiated, T release expts. from solid breeder materials 7−129412
$Li_{17}Pb_{83}$, neutron irradiated, tritium release, reaction kinetics expt. 7−122183
$Li_{17}Pb_{83}$, T recovery by pumping, bubble nucleation effects 7−122185
Li_7Pb_2, neutron irradiated, tritium release, reaction kinetics expt. 7−122183
^{A}Li, A=6,7, tritium production rate discrepancies, 2D cross-section sensitivity/uncertainty anal., fusion blanket appl. 7−103194
Mo, divertor armour material, for NET, tritium inventory, permeation and release calcs. 7−122187
T fueling for ICF pellet target 7−129408
T production from neutron-irradiated ^{6}LiAl by heating 7−129895
T separation from gas streams under various conditions 7−129894
T-D fusion, μ catalyzed, μ transfer rate meas. 7−109249
$T_2 \rightarrow$HTO, effects of water vapour and catalysts, first-order rate constant meas. 7−132974
T_2, vibrational states, spontaneous Raman spectra anal. 7−82164
V-T, phase diagram, 100-473 K 7−105044
W divertor armour material for NET, tritium inventory, permeation and release calcs. 7−122187

tritium compounds
crypts of mouse small intestine, [^{3}H]thymidine incorporation, influence of irrad. or thymidine 7−78805
HTO, T recovery using electrolysis cell 7−122184
^{3}H laser isotope separation, IR laser-induced multiphoton dissoc. technique 7−106817
T_2O long-term exposure, cloning of mouse B- and T-lymphocytes in vibro *(Russian)* 7−93683

triton interactions *see triton-nucleus reactions*

triton-nucleus reactions
for inelastic triton-nucleus scattering, see "triton-nucleus scattering"
see also nuclear fusion
(t,α), gross struct. study 7−109201
(t,d), gross struct. study 7−109201
(t,pf), even-even nuclei, fission characts. and parity effects 7−96127
^{12}C(t,^{7}Li)^{8}Bi, cluster transfer angular distrib., DWBA calcs. 7−129062
^{12}C(t,p), 33 Mev, ^{14}C excitation energies study 7−121623
^{48}Ca(t,α), spectroscopic factors and proton core excitation meas. 7−81405
^{A}Cd(t,p), A=112, 114, intruder-ground state mixing 7−102836
^{19}F(t,X), cluster transfer angular distrib. 7−129062
^{A}Gd(t,p), 17 MeV, A=154, 156, 158, 160, L=0 strengths to excited states 7−129059
^{3}H(t,nnμ)^{4}He, muon-catalyzed fusion, kinetics 7−141117
^{A}Ir(t,α)$^{A-1}$Os, A=191,193 implications for supersymmetry tests 7−129058
^{6}Li(t,p)^{8}Li, 2-10 MeV, highly excited states in ^{9}Be, exptl. study 7−121612
^{26}Mg(t,^{3}He), 36 MeV, differential cross sections, energy spectra, mass meas. and energy levels, DWBA and coupled channel calcs. 7−121858
^{16}O(t,n)^{18}F, recoil charged particle induced reactions, yields, average cross-sections 7−89571
^{208}Pb(t,p)^{210}Pb, two-particle pairing excitations 7−116362
^{36}S(t, pγ), 3.2 MeV, ^{38}S, confirmation of 2805 keV level, γ-decay 7−116282
^{76}Se(t,p)^{78}Se, 17 meV, excitation energies, angular distrib., J^π assignments 7−67716
^{A}Si(t,^{3}He), 36 meV, A=28,30, differential cross sections, energy spectra, mass meas. and energy levels, DWBA and coupled channel calcs. 7−121858
(t,α), 36 MeV, use as spectroscopic tool 7−102806
(t,d), 36 MeV, use as spectroscopic tool 7−102806
^{51}V(t,d), 33 MeV, ^{52}V energy levels determ. 7−128960

triton-nucleus scattering
^{40}Ca(t,t)^{40}Ca, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
(t,t'), gross struct. study 7−109201
^{27}Al(t,t)^{27}Al, differential cross-sections near Coulomb barrier 7−109185
^{16}O(t,t)^{16}O, spin-orbital potentials, microscopic study of ^{3}He and t 7−121865
(t,t'), 36 MeV, inelastic scatt., spectroscopic tool 7−102806

triton scattering *see triton-nucleus scattering*

tritons
binding energy, three-body forces effect, variational calc. 7−116235
two-pion exchange three-nucleon force, momentum space methods 7−128362

trolleybuses *see road vehicles*

troposphere
see also atmospheric boundary layer; tropospheric electromagnetic wave propagation
2D global gas transport-photochemistry model 7−139724
500 mbar heights, modified time-longit. diagram along 50° north and south 7−79557
500-mbar geopotential heights, implications for blocking and persistence over N Atlantic and Australia-New Zealand 7−79558
1979 Asiatic summer monsoon, planetary scale changes 7−101410
acetone, in troposphere, chemistry, sources and sinks 7−120089
acetonitrile at tropopause altitudes 7−79543
aerosol, lidar probing study 7−107492
aerosol backscattering coeff. fluctuations, correl. functions and spectra *(Russian)* 7−101483
aerosol concentrations, time-depend transform of vertical aerosol distrib. in lower troposphere *(Russian)* 7−127355
aerosol remote sensing by Nd:YAG and ruby based lidar systems 7−72208
ageostrophic wind and upper troposphere divergence 7−133872
air-sea interaction stability in equatorial region 7−94252
airborne cloud-physics projects, 1974 through 1984, review 7−79492
Antarctic winter circulation, sensitivity to sea ice changes 7−114952
Arctic tropopause folds, jetstreams and frontal zones 7−114960
S Atlantic Ocean-Brazil region, summer upper tropospheric cyclonic vortices origin 7−127394
Australasia, low latitude, ocean-atmosphere interactions 7−139636
Australian summertime cold fronts, stably stratified internal boundary layer with offshore flow 7−101379

troposphere continued
baroclinic waves, multiplicity of equilibria in quasi-geostrophic model 7−94402
BMRC Australian Monsoon Experiment (AMEX), background, objectives and operations 7−79491
bulk model of the well-mixed boundary layer 7−145578
circulation variability in January (1979-85) 7−94361
cloud fields spatial power spectra, problems in interpretation 7−114912
composition, SO_2, NO and NO_x at neighboring alpine stations 7−127399
dew point deficit, operational objective analysis system 7−107484
electrical conductivities over India, rocket-borne and balloon-borne meas. 7−127339
evidence for saturated spectrum 7−145611
fluorocarbons as tracers of air motion 7−139684
general circulation, integrations of numerical weather prediction models during FGGE 7−94404
geopotential height fluctuations, microwave radiometry 7−114988
geopotential heights in midlatitude troposphere and stratosphere, effects of IMF sector struct. 7−101453
geostrophic approximation validity in winter stratosphere and troposphere 7−114897
gravity currents, 2D numerical study of evolution and external influences 7−87768
gravity waves of short wavelength 7−114949
gravity waves propag. in equatorial atmosphere, ray paths anal. 7−127343
horizontally inhomogeneous heat release in stably stratified atmosphere, 3D press. and wind fields adjustment *(Russian)* 7−127353
India, midtropospheric circulation 7−127421
India, tropospheric temperatures var. (1944 to 1985) 7−133914
Indian monsoon trough zone, heat and moisture during 1979 monsoon 7−101416
Indian summer monsoon winds, effects of orographic forcing 7−87766
ion densities and mobilities over India, rocket-borne and balloon-borne meas. 7−127339
light propagation, relation between total light scatt. and backscatter *(Russian)* 7−127462
linear wave theory in low-latit. atmosphere, appls. to temp., press. and wind fields 7−139704
low-order unforced inviscid barotropic model, chaotic behaviour 7−101444
mesoscale convective systems, results from Oklahoma-Kansas Preliminary Regional Experiment for STORM-Central 7−79493
mesoscale eddy mapping method, involving radar obs. of sea surface 7−134016
methane and light hydrocarbons, vol. mixing ratios 7−94388
Northern Hemisphere, spring and autumn circulation and temp. 7−145658
ocean-atmosphere moisture exchange, mathematical model 7−114943
orographic gravity waves effect on sudden stratospheric warmings *(French)* 7−133811
peroxyacetylnitrate in atm. large-scale distrib., STRATOZ III flights obs. 7−139687
planetary wave activity in troposphere and stratosphere in northern winter 7−101398
planetary wave life cycles in southern winter 7−133821
planetary wave structure and vertical propagation in southern winter 7−133820
planetary waves, finite-amplitude stability of topographically-forced wave with Ekman dissipation 7−94400
positive ion clusters in stratosphere and troposphere, appl. to determ. of trace gases concs. *(French)* 7−87762
potential vorticity associated with tropopause folds 7−87802
Project MASSA, lower atm.-ionosphere-magnetosphere relationships during seismoacoustic events 7−79607
radar method for tropopause height determination 7−127591
radar methods for tropopause height determination 7−127599
rain cells, horizontal structure, data and theory for new model for propagation appls. 7−114977
remote free troposphere, HNO_3 and ionic aerosol species var. 7−94385
stationary eddies in upper troposphere, linear and nonlinear diagnostic models 7−101388
stationary planetary waves forcing by orography and land-sea thermal contrast, linear models 7−79522
stratosphere-troposphere coupling, due to mass exchange, dynamical, radiative and elec. processes, review 7−87777
subtropical quasi-stationary vortices in N summer upper troposphere *(Chinese)* 7−133798
temperature and wind profile, acoustic, wavefront anal. 7−94523
temperature response to solar cycle UV flux vars. 7−120110
temperature sounding using partial interferograms, meas. technique and temp. profiles retrieval 7−87915
temperatures in midlatitude troposphere and stratosphere, effects of IMF sector struct. 7−101453
thermal regime, rel. to solar activity *(Russian)* 7−127347
topographic Rossby waves over Antarctica, struct. and dispersion relations 7−94401
total O_3, seasonal differences in trend, contrib. from troposphere and stratosphere 7−133866
tracer study of vertical exchange by cumulus clouds 7−87792
tropopause information inclusion in otherwise smooth 2D and 3D objective anal. 7−133975
turbulent penetrative convection, theoretical model *(Russian)* 7−127354
vorticity area index, IMF sector boundary effects 7−145799
water vapour DIAL meas., correction for Rayleigh scattering effects 7−133919
wave-CISK in a baroclinic basic state 7−94346
wind flow over India during 1979 summer monsoon, diurnal var. 7−114941
wind measurement by VHF radar, spaced antenna method used at Adelaide 7−94484
wind shear studies using forward scattering sodar over New Delhi 7−101408
wintertime fluctuations, 3D structure and temporal evolution 7−101436
Al_2O_3 particles from Shuttle booster rocket exhausts in troposphere 7−100779
CO_2 concentration at Mauna Loa, interannual variation in seasonal cycle 7−114911
CO_2, sources, sinks and global transport, conference, Kandersteg, Switzerland (September 1985) 7−102013
^{14}C, concentration variation in upper atmosphere in Japan since 1964 7−79540

posphere continued
HCl and HF meas. during MAP/GLOBUS 1983, column densities 7−133886
^{85}Kr atmospheric distribution, simulation with general circulation model 7−139163
NO chemistry of lower, middle and upper atmospheres 7−87778
NO in atmosphere of NE Pacific, tropospheric and boundary layer observations 7−87799
NO in Pacific atmosphere, boundary layer and troposphere obs. 7−87798
NO_x in atmosphere, production rates in electrified clouds 7−87806
O_3 and aerosol profile of tropopause fold over western USA 7−87803
O_3 and CO in lower stratosphere, folded tropopause and maritime troposphere 7−87804
O_3 distribution 7−139685
O_3, equatorial profiles meas. from ground to 52 km during southern hemisphere autumn 7−114914
O_3 in boundary layer of N Atlantic, concs. and origin 7−114948
O_3 photochem. production in N Pacific troposphere 7−87805
O_3 production rate in NO_x polluted rural troposphere 7−120088
O_3, transport by middle atmosphere flows 7−79568

pospheric electromagnetic wave propagation
10.6 μm laser radiation absorpt. *(Russian)* 7−79588
12 GHz band, atmospheric attenuation meas. using radiometry, results for 1976-85 *(Czech)* 7−139720
aerosol, lidar probing study 7−107492
attenuation from log-normal and Weibull raindrop size distrib. 7−101383
cloud lidar returns for large number of scatterings, formula 7−79589
clouds, downcoming microwave radiation meas. rel. to liq. water profiles determ. *(Russian)* 7−114983
clouds, microwave radiometers meas. for liquid water and precipitable water vapour determ. 7−127335
CM-waves, rain attenuation characts. 7−87812
dust storm modelling for the calculation of attenuation and probability of fading in microwave systems 7−139738
dynamic wet troposphere, radio interferometric meas. 7−101701
India, radiowave propagation climate 7−94411
laser beam wandering variance in turbulent atm. 7−72151
laser ranging in turbulent atmosphere, meas. errors *(Polish)* 7−68735
Mauna Kea Observatory, Hawaii, atmospheric opacity meas. at λ=1.1 mm 7−107470
microwave, refractivity gradient calcs. 7−139737
microwave atmospheric attenuation at 11 and 18 GHz obtained by dual freq. Sun tracker meas., anal. 7−120111
microwave attenuation due to rain, for 135 GHz satellite to ground propagation 7−94407
microwave backscatter due to rain, polarized X- and Q-bands 7−94410
microwave delay time, estimation from surface weather data 7−114975
microwave Earth-space paths, model for attenuation statistics prediction 7−94409
microwave link rain attenuation, radiometeorological data logging and processing system for freq. over 10 GHz *(Polish)* 7−72200
microwave paths, subrefractive fading model using surface synoptic meteorological data 7−139680
microwave propagation in 13 GHz band, fadings, rain and hail effects *(Czech)* 7−114980
microwave propagation in Great Lakes area of N America, degradation due to atmos. boundary layer 7−72146
microwave SAR degradation effects of rain 7−114991
mm-waves propagating through rain, distortion calcs. 7−139740
modelling, waveguide mode method 7−94421
multipath microwave propagation, angle of arrival and amplitude of rays determ. 7−87775
multipath propagation for broadband methods *(German)* 7−133810
multipath propagation in clear air, cross-polarisation discrimination and copolarised attenuation distrib. 7−133891
optical beam in troposphere, radius of curvature, measured transmitter launch angle derived 7−67286
optical communication through nonuniform clouds, model 7−133930
parameters prediction, comprehensive meteorologically oriented methodology, appls. beyond 10 GHz 7−114976
radar echoes from continental cumulus clouds, obs. of seeded and non-seeded clouds 7−145628
radar reflectivity anal., appl. to functional box-counting and multiple elliptical dimensions in rain 7−114979
radar reflectivity of developing convective clouds 7−127438
radar reflectivity-rain rate relationships in Brazil 7−133988
radio refractive index meas., instrumentation comparison 7−127537
radiowave propagation constraints in ionized and non-ionized media 7−88016
radiowave propagation in India, meteorological aspects, review 7−87776
radiowave refraction from meteorological atmospheric soundings *(Polish)* 7−72137
radiowave scintillation model for low elevation angle satellite systems 7−94413
radiowave tropospheric dispersion *(Spanish)* 7−145649
rain attenuation measurement, anal. of dual-wavelength surface reference radar techniques 7−127500
rain attenuation of microwave signals, for Earth-space path 7−107498
rain attenuation rel. to AUSSAT link 7−145657
rain causing 4 GHz microwave depolarization and simultaneous ionosphere scintillation impairment 7−94572
rain cells, horizontal structure, data and theory for new model for propagation appls. 7−114977
rain outage performance for route diversity radiocommunication systems 7−133893
raindrop velocity, altitude adjustment for Doppler radar analysis 7−127363
raindrops causing microwave depolarisation, study of droplet canting angles 7−94412
satellite-Earth links, attenuation prediction in European region 7−139679
slant path amplitude radio scintillations, depend. on meteorological parameters 7−94414
slanted microwave paths, influence of rain props. 7−139739
subrefraction statistics estimation using surface synoptic meteorological data 7−139681
thunderstorm radar reflectivities and Doppler vels. in VHF and UHF 7−114868
transhorizon anomalous propagation conditions, modelling 7−94420
tropical environment, EM wave propagation, 1 to 300 GHz, rain induced depolarisation 7−87780

tropospheric electromagnetic wave propagation continued
tropospheric refractivity meter for radiocommunication links 7−145688
water vapour attenuation, meas. from 1 to 350 GHz over Indian sub continent 7−127340

TSC *see thermally stimulated currents*
TSCD *see thermally stimulated currents*
TSD *see thermally stimulated currents*
tsunami *see ocean waves; seismic waves*
TTL *see transistor-transistor logic*
tube flow *see pipe flow*
tubes (electronic) *see electron tubes*
tuners *see tuning*

tungsten
see also nuclei with .....
12-atom complex, visibility and stability in STEM 7−69566
activated electrode, surface anal., Auger electron spectroscopy and ion etching 7−117783
adsorption, of Fe(Mn)(Ni), on stepped surface, work function meas. *(Russian)* 7−112090
BCC, point-defect and stacking fault props. 7−76117
body forces, elastic consts., phonon dispersion 7−69844
cathode, Cs covered, emission of electron and ion sources 7−141380
Coulomb scatt. effects in field and photofield emission 7−92841
crack resistance optimisation, hardening schedule 7−113586
crystal lattice defects, FIM investig. *(German)* 7−142547
crystals, relativistic electron radiation loss studies *(Japanese)* 7−117989
CVD, selectivity loss mechanisms 7−113428
CVD films, adhesion to SiO_2 7−112151
CVD films, chem. comp. and interfacial props. 7−124802
CVD films, interaction with metal underlayers 7−112150
CVD films produced by Si reduction of WF_6, microstructs. 7−112149
CVD on SiO_2, temp. programmed desorption study 7−112148
CVD on thermal oxide, model for nucleation 7−112147
defect-sensitive props. *(German)* 7−124245
deformation, elec. resist. recovery, grain boundary recrystallisation 7−144433
deformation pot., Fermi surface data anal. *(Russian)* 7−70167
diffusion of Cr, SIMS study of isotope effect 7−105129
divertor armour material for NET, tritium inventory, permeation and release calcs. 7−122187
elastic scattering of ^{152}Eu γ-rays 7−74521
electrode, electrochromic form. of WO_3 anodic film, IR reflection and Raman spectroscopies 7−99812
electron emitter surfaces, electric field distrib. 7−70986
electron irradiation with energy of 21 MeV, generation cross section of recoil atoms 7−137405
emissivity, hemispherical from 300 to 1000 K 7−98526
fast neutron irrad., low temp., defects, X-ray diffr. studies 7−104852
Fermi surface, local parameters calcs. *(Russian)* 7−76751
fibre reinforced Al, effective moduli, binary mixture theory 7−86245
fibres in Y_2O_3-ZrO_2 matrix, low voltage field emission 7−138615
field emitters in built-up state, field emission current fluctuations 7−70987
film, on Cu, Xe^{2+} ion beam mixing 7−124347
films, abnormal-glow-discharge deposition 7−92879
films, CVD, reaction kinetics of H_2 reduction of WF_6 7−113430
films, excimer laser initiated CVD growth on SiO_2 and Si substrates, phys. props. 7−118297
films for VLSI applications, low pressure CVD 7−71052
foil, L-shell photoionisation, election correls. 7−122478
force const. models, surface dynamical props. 7−124676
fractionally charged particle search in matter, technique, results 7−116040
high temperature vacancy migration enthalpy 7−91575
incandescent lamp, vapour convection, num. model 7−97267
interstitial-dislocation interactions, pinning processes *(Russian)* 7−137392
ion induced Auger electron spectra, energy thresholds 7−138571
ion milled tips for scanning tunnelling microscopy 7−73469
ions traversing Fe, transient fields 7−131600
lamp, press. and temp. profiles, CARS meas. 7−80900
laser-induced CVD, stripe morphology and elec. props. studies 7−126008
low index surfaces, field emission parameters, combined field and photofield emission method 7−106387
low press. CVD of β-W contacts on patterned Si, microstruct. obs. 7−71042
LPCVD blanket deposition using TiN and Al as glue layers 7−113437
metal shadowing, high melting point, for high resolution freeze replica 7−87395
microcrystals, modified surfaces, fine struct., obs. by pulsed field emission electron microscopy 7−112028
particles injected into thermal plasma reactor, heating and movement *(Chinese)* 7−91335
phonon dispersion curves 7−124415
phonon dispersion curves using modified general tensor force model 7−84158
phonon electrical resist., relativistic calcs. 7−137912
photochemical deposition on InP, (Ga,In)As and GaAs for ohmic contacts 7−92883
photofield emission for needle in the ps regime 7−77763
photofield emitted electron yield determ. 7−113345
plasma-enhanced CVD on Si substrate 7−126005
polycrystalline surface, $N^{q+}(Ne^{q+})$ impact, pot. emission yield meas. 7−92802
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
powder, carburisation kinetics, diffusion model 7−132544
powder, particle size rel. to oxide phase precursor 7−132523
power and filings, fine struct. parameters determ. by harmonic analysis of X-ray diffr. lines 7−78427
proton channelling, RBS, Coulomb excitation and X-ray prod. 7−124361
refractory, lattice imperfections, FIM studies 7−91588
selective and blanket deposition by atm. press. CVD 7−113434
selective CVD, flow config. effect on deposition props. 7−113433
selective CVD eval. using surface temp. meas. 7−113429
selective deposition by hot-wall LPCVD, importance of HF partial press. 7−119168
selective deposition in batch cold wall CVD system 7−113435
selective deposition in Varian/Torrex 5101 cold wall CVD reactor 7−113436
selective deposition on $CoSi_2$ by LPCVD 7−113431

tungsten continued
single crystals, cold-worked surfaces, investig. by SEM and X-ray diffr. *(German)* 7−113837
skarn deposits discovery using Landsat imagery and surficial geochemistry 7−101303
skin effect under high mag. field, surface defect layer effect *(Russian)* 7−92215
sputter coating of cytoskeletons for electron microscopy 7−127065
stage II-recovery reactions in BCC transition metals 7−104732
stress relaxation, high temp., in single crysts. 7−126163
subpicosecond laser-produced plasma, soft X-ray emission 7−111252
surface, (001), adsorbed H, detection using $^{1}H(^{15}N, \alpha\gamma)^{12}C$ reaction 7−131431
surface, (001), adsorbed H, He atom beam scattering 7−143186
surface, (001), c(2×2) reconstruction, distortion and phonon spectrum calcs. 7−105209
surface, (001), electronic structure, attractive interaction between atoms 7−92245
surface, (100), adsorbed H, reconstructive phase transitions and adsorbate-adsorbate interactions 7−105259
surface, (100), chemisorbed H, vibrational spectra, EELS/LEED quantitative analysis 7−144196
surface, (100), photofield emission from surface states 7−106366
surface, (110), Cs covered, Li^- form. in Li^+-surface scatt., parallel vel. effect 7−85930
surface, (110), ferromagnetic order in Fe (110) monolayer, Mossbauer spectroscopy 7−138300
surface, (110), N_2 and methane dissociative chemisorpt. dynamics 7−139034
surface, (110), scatt. of Na, charge exchange, 3 electronic state system 7−82344
surface, (110), with adsorbed Re monomers and dimers, possible magnetism 7−82020
surface, Auger electron emission from slow multicharged ions near surface 7−144203
surface, bombard. by slow highly charged ions, electron emission 7−106344
surface, chem. sputtering by O_2, desorption rate determ., appl. to plasma impurities 7−77728
surface, chemisorbed N, ion-induced desorption and particle refl., Monte Carlo simulation 7−105275
surface, chemisorption of H, local space approx. 7−105643
surface, Cs covered, Li^- form. in Li^+ beam scatt. 7−117088
surface, field-assisted photodesorption of ions 7−131422
surface, interaction with Ar^{9+}, secondary electron energy distribs. meas. 7−92790
surface, sputtering of chemisorbed N from single-crystal planes 7−70957
surface (001), low energy photoelectron diffr. study, single scatt. model 7−132416
surface (001), rare earth metal adsorpt., recursion method calcs. 7−118232
surface (001), surface phonon instabilities and electronic surface states 7−84478
surface (001) with Ni monolayer, H adsorption, bonding, linear APW calcs. 7−124712
surface (100), clean and H covered, inverse photoemission studies 7−144150
surface (100), H(D) chemisorption, IR spectra 7−131416
surface (100), reconstruction soft surface phonon mode, He scatt. study 7−112042
surface (100) with Pt overlayers, N_2 chemisorption 7−131445
surface (100) with strained Pt overlayers, struct. aspects 7−131446
surface (100)-5×1-C, CO adsorpt. struct. and bonding, EELS, XANES 7−137694
surface (110), adsorbed Na, repulsive dipole phase diagram 7−112072
surface (110), chemisorbed O, ordering kinetics, scaling relationship 7−118251
surface (110), Gd adsorption, monolayers and thin films, ferromagnetic order, critical exponent, ESR studies 7−132091
surface (110), H_2 diffusion rates, anomalous isotope depend., implications of lattice-hydrogen interactions 7−70067
surface (110), influence of S coverage on methanation 7−144753
surface (110), ion neutralisation spectra calc., contrast with Ni (111) 7−144217
surface (110), Ni atom clustering and diffusion 7−143230
surface (110) with adsorbed CS, neutralisation of scatt. alkali ions, local work fn. effects 7−119101
surface (110) with adsorbed Cu layers, CO adsorption, work fn. and LEED studies 7−124711
surface (111), Ba (La) adsorption, struct., work fn. and thermal stability studies 7−112066
surface (111), core level spectra, identification of core level components 7−125917
surface (211), photofield emission, band struct. anal. 7−119116
surface and bulk core level lineshapes, linear coupling approx. 7−105444
surface damage, induced by arc discharge plasma 7−78367
surfaces, (001), (011), oxidised, electron stimulated desorption of metal atoms and ions 7−91990
surfaces, (110) and (111), photofield emission energy distrib., band struct. effects 7−92842
surfaces, (111) and (110), desorption rate of Xe, lateral interactions, image theory 7−84509
surfaces, polycrystalline, clean and H or O covered, Auger neutralisation spectroscopy by metastable noble gas atom deexcitation 7−113321
surfaces (100), (110) and (111), angular resolved secondary electron emission, effect of band struct. 7−70949
surfaces (100) and (110), NO chemisorption, UPS and Auger electron spectra studies 7−91997
surfaces (110) and (100), NO chemisorpt., UPS study 7−143202
thermal expansion meas. standards 7−121064
thin film, resistance oscillations and nonstationary effects 7−105734
thin plates, conduction electron surface scatt., influence on impedance oscillations in mag. field *(Russian)* 7−98951
thin wire emitter for field ionization, preparation using drop-etching method 7−116021
tip, polyatomic Cs ion field desorption, mass spectra studies 7−112085
ultrarelativistic electron beam scatt. near crystallographic axes, radiation emission angular distrib. 7−80459
vacancies and self-interstitials, thermal He desorption studies 7−91983
vacancy formation, positron lifetime meas. 7−91573
vacancy formation entropy, Green's function calcs. *(Russian)* 7−98115
vapour phase siliconizing, corrosion stability 7−78319
VLSI appls., conf., Palo Alto, CA, USA (Nov. 1986) 7−108045
whisker growth and removal during heating in I vapour 7−98759
wire, doped, ductile-brittle props. rel. to working and process annealing 7−71241
wire anode in low background organic type Geiger Muller tube 7−81889
wires, Ni plated, recrystallisation, tensile strength rel. to comp. *(Japanese)* 7−106572
C-W layered synthetic microstructures, AES sputtering depth profile anal. 7−84557
C-W multilayers, Auger electron spectra depth profiling, anal. 7−125871
$CsDy(MoO_4)_2$:W^{6+}, structural phase transitions, birefraction and interlayer parameter meas. *(Swedish)* 7−124476
Cu/W matrix/marker layer system, ion irrad., layer shifts 7−76228
Fe/W multilayers, collective magnetostatic spin wave excitation obs. 7−112777
$K_{0.3}MoO_3$:W(Rb), 1D conductor, CDW transport and struct. props. 7−99031
VO_2:W, thermochromic materials research for optical switching 7−125979
W, selective CVD on Al for multilevel interconnect appls. 7−126025
W^+, electron-impact ionisation, giant reson. effects 7−82371
W:F-Si contact structs., LPCVD formed, F conc., thermal stability, silicide formation 7−106424
W:H, H interaction with In vacancy clusters, PAC study 7−117963
W/Al superlattice, cubic, sagittal elastic waves, Green's function studies 7−143168
W/Mo epitaxial superlattices, strain relax. by ion beam mixing 7−76231
W/Si/GaAs contacts, Schottky characts. and chemical interdiffusion, Si layer effects study 7−131734
W/ZrO thermal-field emission cathode *(Japanese)* 7−77746
W/ZrO_2, multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
W-Al_2O_3, oriented growth of ultrathin W films on sapphire substrates 7−118305
W-C multilayers, temp. stability at high temps. 7−98746
W-C X-ray multilayer mirrors, sputter deposited, performance 7−121315
W-Cu duplex structure, fusion divertor plate material, thermal cycling durability test, hardness and SEM study 7−109477
W-Ni point contact diode, far infrared harmonic generation and mixing 7−82703
W-Si:B, W CVD, reduction of Si p^+-n interfacial tunnel defects 7−138062
W-SiO_2, nucleation of W on insulator, selective CVD 7−86039
W-W triple bonds in cpds., diamagnetic anisotropy 7−129628
W-WSi_x-Si contact structs., charactn. under thermal annealing 7−124737

tungsten alloys
see also tungsten compounds
carbide-hardened high-drawn wire, fine struct. and props. 7−138756
crack resistance optimisation, hardening schedule 7−113586
dilute alloys, excess resistivity and thermopower, temp. depend. 7−105545
dilute alloys, excess resistivity and thermopower, two-band model 7−105546
dynamic response, determ. by commercial manganin stress gauges of W-2 alloy 7−144472
MAR-M 002, aluminide coating, high temp. corrosion 7−78341
sputtering, redeposition and plasma impurity reduction in mag. fusion devices by W alloys 7−74049
stellites, wear resistant, development by liq. phase sintering 7−92920
surface damage, induced by arc discharge plasma 7−78367
wires, Ni plated, recrystallisation, tensile strength rel. to comp. *(Japanese)* 7−106572
Co-Cr-Ni-W superalloy MM-509, coated and uncoated, creep strain-time parameters, 293-1255K 7−86293
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7−113577
Co-Cr-W sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-Cr-W/steel surface alloys, laser processed, microstruct. and wear 7−119459
Co-Cr-W-C, high fluence Ti or N ion implantation, surface layer microstruct. 7−104774
Co-Ni-W sputtered films, mag. and recording props. for high-density appls. 7−92473
Co-W, amorphous alloy films, electroplating, corrosion resist., crystallisation temp. 7−86069
Co-W, coatings, N ion implantation, wear resist. 7−144563
Co-W alloys, N_2 implantation 7−104771
Co-W electrodeposited thin films, mag. props. study 7−143871
Co-W-V thin films, electrocrystn. during deposition *(Russian)* 7−105325
Fe-Ni-Cr-W, gas-metal reactions in He and H_2-CH_4-H_2S atm., 700 to 950°C 7−86452
Fe-Ni-W-C, phase diagram assessment 7−77952
Fe-Ni-W-C, phase diagram calc., bonded WC tool comp. selection 7−132568
Fe-Ni-W-C phase diagram at 1273 K, diffusion-couples heat treatment, Gibbs energy anal. 7−132567
Fe-W, amorphous alloy films, electroplating, corrosion resist., crystallisation temp. 7−86069
Fe-W-C system, thermodynamic evaluation 7−86133
Fe-W-Ni, struct., phase composition and precipitates *(Russian)* 7−71189
$Fe_{78}Si_{10}B_{12}$, WC particle dispersed amorphous composites, spray dispersion melt spinning, struct., mag. props. 7−86095
$(Fe_{1-x}W_x)_{80}B_{20}$, amorphous alloy, conc. depend. of resist. and magnetoresist. 7−98975
$(Fe_{100-x}W_x)_{0.83}B_{17}$, metallic glasses, mechanical props. 7−86360
$Fe_{95-x}W_xB_5$ amorphous alloys, thermomagnetic and crystallisation behaviour 7−77258
Mo-V-W phase diagrams, ternary, calc. with binary data 7−132562
Mo-Zr-W, surface, ion implantation of N, C, P phase composition determ. 7−78301
Nb-W, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-W, interaction with N_2 at high temps. 7−106664
Ni base superalloys, high temp. corrosion in nuclear process heat He, η' carbide form. 7−86444
Ni-Al-W system, cast, phase equilib. 7−132569
Ni-base superalloy, oxide dispersion strengthened, abnormal grain growth 7−100242

gsten alloys continued
Ni-base superalloy, single cryst., yield stress, effect of ageing 7−113630
Ni-base superalloy, vibr. fatigue props. of laserglazed specimens 7−119374
Ni-Cr-W, superalloy, creep behaviour, effect of salts *(Chinese)* 7−132699
Ni-Cr-W, superalloy, microstruct. and strength after laser rad. surface fusion-solidification *(Chinese)* 7−132787
Ni-Cr-W superalloy, grain boundary precip. strengthening, nuclear heat exchanger appl. 7−106526
Ni-Cr-W superalloy single cryst., tensile stress relax., 973-1273K 7−132656
Ni-Cr-W-Ti-Al superalloy, γ' precip. strengthened, alloy design *(Korean)* 7−78037
Ni-W hardenable electrodeposits, X-ray anal. of structural props. 7−131497
Ni-W-C system, thermodynamic evaluation, sublattice model 7−77951
Ni-W-Co superalloy, β-phase precip. 7−86185
Ni-W-Co-Cr single cryst., high temp. fatigue crack growth 7−93091
Ni-W-Co-Cr single crysts., fatigue crack growth 7−93090
Ni-W-Cr, single cryst., high temp. creep, γ' phase subgrain boundaries, TEM 7−78139
Ni-W-P, undercoating layers for prep. of electroless Co alloy films *(Japanese)* 7−92898
Ni_3FeW, structural and mag. ordering, impurity effects 7−85284
Os-W in Os-coated cathodes for very high emission-density appls. in FEL 7−97025
Ti-Al-Zr-W system, phase equilib. 7−86131
Ti-Al-Zr-W system, phase equilib. of Ti-rich alloys 7−100181
Ti-W/Si(100) interface, Schottky barrier height 7−112427
TiC-NbC-TaC-WC-Co cemented carbide, gamma phase layer form., growth kinetics and microstruct. rel. to sintering atmosphere 7−77929
Ti_xW_{1-x} films, diffusion barriers against Al-Si interdiffusion 7−118337
Ti_xW_{1-x}/Si contacts, barrier height and contact resistance 7−118585
V-Cr-W, anodic polarisation and corrosion in H_2SO_4 and NaCl solns. 7−100422
V-W, anodic polarisation and corrosion in H_2SO_4 and NaCl solns. 7−100422
W-Cr single cryst. system, Cr diffusion, isotopic effects, SIMS studies *(Russian)* 7−143078
W-Cu, infiltration of liq. in sintered W 7−92921
W-Cu finely divided mixture, kinetic of densification and growth of refractory phase grain in sintering 7−119198
W-Cu powder mixtures, liq. phase sintering, densification localisation, structural inhomogeneity 7−106464
W-Cu pseudoalloy, sintered, failure features rel. to processing conditions 7−78208
W-K powder, particle size and internal strain meas., X-ray methods study 7−100147
W-Mo powder compacts, green strength of interface, Re addition effect 7−78108
W-Ni, liquid phase sintering, distribution effects *(German)* 7−144343
W-Ni, sintering, liq. phase and solid-state, influence of dislocation density 7−92922
W-Ni alloys, rapidly solidified, microstruct. 7−119268
W-Ni powder compact, sinterability rel. to Ni chemical state 7−100156
W-Ni powder compact, sintering, microstruct., densification mechanism 7−144342
W-Ni-Fe, sintered materials, liq. phase, microstructure, image anal. *(French)* 7−119190
W-Ni-Fe (7, 3 wt.%), heavy alloys, mech. props., influence of heat treatment *(German)* 7−100320
W-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
W-Re alloys, strain hardening and dislocation structure *(Russian)* 7−78045
W-Re alloys prep. by powder metallurgy, Re distrib. 7−86177
W-Y_2O_3-HfO_2, dispersion strengthened, fracture mechanisms, 20 to 2750°C 7−78210
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567
WAg/W, film, microstructure, elec. props., interaction with GaAs 7−143615
WC based cemented carbide systems, sintering, binder comp., phase equilib., mech. props. 7−71151
WC powders, microstruct. study 7−100155
WC-Co, cavitation erosion rel. to Ti implantation 7−119382
WC-Co, deform., crack nucleation, slip transfer, plastic incompatibility 7−86250
WC-Co, high temp. creep deform. 7−86266
WC-Co, sintering, grain growth rel. to inhomogeneous milling 7−71136
WC-Co, toughness, model predictions comparison with compact tensile obs. 7−113685
WC-Co, VK-8 hard alloy, surface struct. changes in pulsed laser treatment zone 7−86412
WC-Co alloys, fracture mechanics, expt. study 7−144546
WC-Co cemented alloys with B as sintering additive 7−132554
WC-Co cemented composites, thermal contraction stresses 7−113633
WC-Co cermets, slurry erosion, comp. and microstruct. depend. 7−78273
WC-Co composites, Palmqvist toughness, ductile-brittle transition 7−113684
WC-Co composites, Palmqvist indentation toughness 7−126216
WC-Co hard coatings on Al or steel substrates 7−126301
WC-Co hard metal, ultrafine grain size, Hertzian indentation 7−132849
WC-Co hard metal/tool steel, diffusion bonding *(Japanese)* 7−78453
WC-Co hardmetal, fatigue fractography, SEM and EDAX obs. *(Japanese)* 7−119344
WC-Co hardmetal, ion beam C deposition, diamond like layers, microhardness, wear 7−119352
WC-Co hardmetal, tension-compression fatigue *(Japanese)* 7−93083
WC-Co layer on steel, surface alloying by Co_2 laser *(Korean)* 7−138888
WC-Co-TiC, sintered, internal friction, speed of sound 7−144449
WC-Ni/Fe-Cr-C, infiltrated alloys, wear resist. 7−132555
WC-Ni-Cr-Fe hardmetals, mech. props. *(Korean)* 7−126212
(WC-Co)-SiC composite, densification kinetics in hot pressing 7−77925
WRe-C multilayers, temp. stability at high temps. 7−98746
WSi_2, thin films, electronic transport props. 7−143644
ZrW amorphous alloys, supercond. and struct. props. 7−85176

ngsten compounds
see also tungsten alloys
carbides, electronic props., theory and expt., review 7−112181

tungsten compounds continued
nitrides, electronic props., theory and expt., review 7−112181
oxides, electronic props., theory and expt., review 7−112181
polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
BaO-WO_3, amorphous, caged CO_2 molecules 7−75997
$Ba(R_{2/3}W_{1/3})O_3$, cubic perovskites, prep., thermal stability 7−69673
Bi_2O_3-WO_3 system, melt quenched films, thermal stability 7−84567
$CaWO_4$, reorientation of hole centres, optical absorption and EPR studies 7−137854
$Cs_6H_2(W_3O_{10})_4$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
$Cs_3W_2Cl_9$, effects of cation change on complex anion geometry 7−131120
$FeW_{1-x}Nb_xO_4$, Fe valence fluctuation, XANES study 7−98950
$H_4Si(W_3O_{10})_4$, polytungstic acid, preparation and physical props. 7−106202
H_xWO_3, electrochromic mirrors with variable reflectance 7−144028
K_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
Li_2O-Ta_2O_5-$(WO_3)_2$, nonstoichiometry and ferroelec. props. at 1250°C and atmospheric press. 7−84304
Li_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
$Na_4H_2(H_2(W_3O_{10})_4)$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
Na_2O-WO_3 system, glass form., neutron diffr. structural study 7−97954
$NaWO_3$, electronic band struct., self-consistent semirelativistic LMTO calcs. 7−105400
Na_xWO_3, conductivity, O deficiency, surface activity and O^{2-} diffusion 7−92238
$Na_5W_{3-x}Ti_xO_{9-2x}F_{5+2x}$, crystallographic, thermal and dielectric meas. *(French)* 7−92618
SiO_2-WSi_2-Si structure, dopant redistrib. modelling 7−91628
Ta_2O_5-WO_3 system, polycryst. ceramic prep., low thermal expansion 7−143057
$TaSi_2$-WSi_2, solid solutions, phase diagrams and resistivities 7−111823
TeO_2-WO_3, binary tellurite glasses, elastic behaviour under press. 7−111731
Ti-$W_{60}N_{40}$ bilayer, thermal stability and N redistrib. 7−118174
W complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
W-B system, form. of borides by solid state reaction between W and B powders 7−144349
W-Mo: In, trace anal. line selectivity in inductively coupled plasma-AES 7−133011
W-WSi_x-Si contact structs., charactn. under thermal annealing 7−124737
WB, synthesis and reaction sintering *(Japanese)* 7−126068
WBr_6 rhombohedral cryst. struct. *(German)* 7−124185
WC, adsorpt. of $N_2O(NO)(N_2)(O_2)$, dissoc. energetics 7−137705
WC, carbides, energy band structure and chemical bonds *(Russian)* 7−124851
WC cylinder, fretting wear of sintered alumina 7−71319
WC, N ion implantation, rel. to wear reduction 7−142853
WC, N_2 implantation 7−104771
WC phase growth, W powder carburisation kinetics, diffusion model 7−132544
WC, powder spheroidisation in low temp. plasma 7−86102
WC powders, microstruct. study 7−100155
WC powders, microstruct., X-ray diffr. and SEM study *(Chinese)* 7−132532
WC single cryst., N ion implantation, subsurface modification 7−76159
WC single crysts., N ion implantation, ductile-brittle transition 7−119351
WC, surface deactivation upon carburisation 7−144749
WC:Pt substrates, catalytic activity modified by ion implantation and ion beam mixing 7−93379
$W(CO)_5$, complexes, $^1A_1$-^1E transition rel. to π acceptor ability 7−90097
$W(CO)_6$ absolute laser photodeposition rate meas. using quartz cryst. microbalance 7−119160
$W(CO)_6$, adsorbed on Si (111), laser interaction mechanisms, HREELS, TDS and AES investig. 7−91974
$W(CO)_6$, excited states, EELS anal. 7−103670
$W(CO)_6$, photoelectron spectrosc. photoionis. cross-sections 7−141623
WCl_6-doped polyacetylene, photoelectron spectroscopy 7−70980
WF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
WF_6, ionisation energies, UPS study 7−136006
WN-GaAs contacts, thermal stability and barrier height enhancement 7−70412
WN_x reactively sputtered films, elec. and phys. props. 7−118333
WN_x/GaAs Schottky contacts, reactive RF sputtering 7−77040
WO_2 metallic single crysts. with dynamic disorder, resistivity saturation, temp. depend. study 7−105530
WO_2-$LiCoO_2$ 7−114087
WO_3, amorphous film, short range atomic ordering, oxidising pyrolysis of organometallic compounds 7−75999
WO_3 amorphous films, electrochromic indicator, effect of electrode area ratio on reaction kinetics 7−85601
WO_3 amorphous thin films, short range and medium range struct. 7−84572
WO_3 amorphous thin films, struct., optical and elec. props. studies 7−143287
a-WO_3, colouring development study of H permeability of metals 7−118168
WO_3 electrochromic coatings, DC reactive sputtering, struct. and optical props. 7−144026
WO_3, electrochromic form. of anodic film on W electrode, IR reflection and Raman spectroscopies 7−99812
WO_3 film electrochromic behaviour obs., prepared by anodic oxidation 7−125695
WO_3 films, electrochromic behaviour, Raman spectrosc. obs. 7−77594
WO_3 films, optical props., stoichiometry influence, XPS and LIMA anal. 7−138533
WO_3, high contrast layers, electrochromic response time 7−144025
h-WO_3, intercalation cpds., H-containing, NMR obs. 7−112977
WO_3, monolayer on silica particles, hydrolysis, electrochemical measurements, electronic props. 7−138082
WO_3 powder, characteristic vibrs., force consts. and bond length, IR and Raman spectra study 7−85644
WO_3, powder diffraction pattern, alternative to Rietveld method-separation of peaks 7−142537
WO_3 sputtered films, electrochromic, preparation and aging 7−144019
WO_3 thin films, CVD deposited, structure and optical props. 7−70928
WO_3 thin films, CVD prepared, electrochromic effect 7−144027

tungsten compounds continued
WO_3 thin films for electrochromic windows 7−123135
WO_3:Cu^{2+}, EPR study of Cu^{2+} impurity centre 7−85418
WO_3/Ag, dielec. grid patterns on metal film, examination using surface plasmon microscopy 7−140743
WO_3/Al_2O_3 supported system, XANES and Raman obs. 7−132375
WO_3-H_2O layers, gel deposition and layer anisotropy 7−100053
WO_3-IrO_2 complementary electrochromic windows, optical switching 7−123134
WO_3-R_2O_3, transparent amorphous films, prep. by ultrafast quenching 7−106457
WO_3-thionine(3,3',9-triethyl-4,5,4',5'-dibenzothiacarbocyanine bromide), photoelectrochem. memory effect 7−70408
$WO_3.xH_2O$ powder, characteristic vibrs., force consts. and bond length, IR and Raman spectra study 7−85644
p-WS_2 polycrystalline electrodes, preparation and photoelectrochem. props. 7−105703
$W_{21}S_8$, formation by H_2 reduction of WS_2, Chevrel phase synthesis 7−104673
WSe_2, electronic struct., band struct. calcs., photoelectron spectra 7−84675
WSe_2, electronic struct., nature of optical band gaps 7−84676
WSe_2:Ca (Mg), thin films, synthesis, surface characterisation and photoelectrochemical studies 7−119535
$W_{1.02}Se_2$, optical consts. from reflectivity meas. 7−85566
WSi_2, band struct. model calc. 7−143313
WSi_2 film growth by low press. CVD method 7−138684
WSi_2, grain sizes, X-ray diffr. peak broadening meas. in cosputtered WSi_x films 7−76656
WSi_2, plasma sprayed coatings, corrosion and oxidation resist. 7−78372
WSi_2, selective and blanket deposition by atm. press. CVD 7−113434
WSi_2, silicide, spectroscopic ellipsometry and reflectometry studies 7−92635
WSi_2-Si, silicide thin films, deposition and charact., TEM study 7−113396
WSi_x, CVD coatings on Si and SiO_2, composition 7−131482
WSi_x cosputtered films, grain sizes of WSi_2, X-ray diffr. peak broadening meas. 7−76656
WSi_x films, CVD from $WF_6+Si_2H_6$ 7−106430
WSi_x films, Si-rich, effects of annealing 7−113391
WSi_x, multilayer-derived, microstruct., elec. and surface props. studies 7−137581
WSi_x:F CVD coating, impurity diffusion effects on SiO_2 film electric breakdown 7−118944
WSi_x:F-polySi composite gate struct., CVD, F distrib. 7−91622
a-WSi_x-GaAs, Schottky barrier formation 7−85044
W(V) complexes, multifrequency ESR spectra 7−103543
W(VI) polyoxoanions, charge transfer absorpt. spectra 7−90098

tuning
see also laser tuning; receivers; resonance
Gbit/s tuned optical receivers, noise performance 7−82855
thermoelectrically tunable DBR laser, monolithically integrated 7−141861
tunable fibre Fabry-Perot interferometer filters 7−117330
$LiNbO_3$:Ti electro-optically tunable narrowband wavelength filter 7−97177
Tl_3AsSe_3 IR acousto-optic tunable filter for multi-gas stack emission monitoring 7−133177

tuning forks *see vibrating bodies*

tunnel diode oscillators
No entries

tunnel diode storage devices *see tunnel diodes*

tunnel diodes
see also tunnelling
cascade solar cells, new design using tunnel diode interfaces 7−71615
Ge tunnel diodes, I-V charact., temp. depend. 7−88775

tunnel effect *see tunnelling*

tunnel triodes *see thin film transistors*

tunnelling
see also scanning tunnelling microscopy; superconductive tunnelling; tunnelling spectra; tunnelling spectroscopy
1D rectangular double-barrier system, symmetrical, reson. tunnelling condition and transmission coeff. 7−77043
2D scalar field theory, tunneling at finite temperature 7−89357
adiabatic theorems, quantum Hall effect appl. 7−92205
alkali metal halides with substitutional OH^- and CN^- defects, microscopic models 7−111642
amorphous solids, hole burning spectroscopy and relax. dynamics at low temp., phonon assisted tunnelling 7−136457
amorphous solids, optical dephasing and impurity homogeneous optical band, tunnelon theory 7−77609
aromatic molecules, excited, stereospecific quenching by electron acceptors 7−122606
atomic diffusion in solids, thermal hopping to quantum tunneling crossover, microscopic model 7−76474
Bloch electrons in spatially homogeneous elec. field, quantum transport 7−124951
CDW depinning in quasi-1D metals, tunnelling model development 7−76913
chemical system, local and global single Gaussian approx. 7−126406
coherence destruction in quantum systems with dissipation 7−131740
composite materials, tunnelling and nonuniversal conductivity 7−143426
conductor-insulator-conductor struct., Landauer conductance formula generalization 7−70427
conference on fluctuations and stochastic phenomena in condensed matter, Barcelona, Spain (May 1986) 7−134359
coupled XH_3-type torsional oscillators in cryst. field, energy spectrum and eigenfunctions 7−124133
current calcs., nonequilib. formulation and thermal Green's fn. techniques 7−95407
damped double well, quantum-classical crossover and transition rate 7−131352
defects, static tunneling recombination decay at long times 7−91873
di(tetramethylammonium) tetraiodo cadmate, mol. dynamics, PMR study 7−92538
diamond-like lattice with excess host atom, migration, quasimolecular model 7−105095
disordered systems, small polaron mobility, intersite tunnelling percolation 7−76934
dissipative driven systems, Zener transitions 7−138007
dissipative quantum tunnelling, temp. effects, Brownian motion approach 7−134581
double barrier diodes, resonant tunnelling and sequential tunnelling 7−92265
double barrier quantum well structures, transport mechanism, freq. limit 7−77068
dynamical image forces in three-layer systems and field emission 7−125936
electrode-dye solution interface, acceptor state density distrib. meas. *(Japanese)* 7−131781
electron transfer between impurities, selection rules, fractional parentage coeffs. method 7−92109
electron tunnelling, image potential, many-body self-energy formalism 7−118547
electron-phonon interacting systems, electronic relaxation, non-Markovian theory 7−112201
electronic cond. in insulating films, book contrib. 7−105743
epoxy resin, exptl. study of low-temp. long-time relax. 7−111907
field-ion tips shaping technique for SEM 7−102571
friction role, muon SR and Mossbauer study 7−118908
glasses, impurity optical linewidths and photon echo decays, stochastic model anal. 7−75081
graphite, c-axis resistivity, press. depend. 7−105511
high T_c superconducting oxides, status report 7−118663
ice and ice clathrate, thermal conductivity 7−111986
III-V semiconductors, deep impurity centres, tunnelling in elec. fields 7−76810
incoherent tunneling in a double well 7−134568
inelastic electron tunnelling spectra, signal-to-noise ratios, modulation source props. 7−74757
inert gas solids, self-trapped excitons adiabatic pot. surface, tunnelling 7−137802
interaction potential of a charged particle in a plane-sphere geometry 7−111318
ion beam induced sputtering, secondary ion emission 7−113330
ion-surface and atom-surface scatt., charge exchange process, band effects 7−119103
isotope shift of phonon mode coupled to tunnelling system 7−111784
lithium acetate, press. depend. of tunnelling and librational modes of coupled methyl groups 7−69635
lithium acetate dihydrate, coupled methyl groups, proton spin conversion 7−91496
metal, containing H, US absorption 7−137478
metal-insulator-metal small tunnel junction, voltage-charge relations calcs. 7−143634
metastable state, decay rate, prefactor dissipation influence 7−105665
methane: Kr, rot. excitation, orientational order, neutron scatt. study 7−104598
2-methyl acetophenone derivatives, isomerisation, tunnelling model 7−132913
methylhalides, polycryst., methyl rot., inelastic incoherent neutron scatt. 7−83795
methylnitrite ions, unimolecular decomposition, rate consts. and kinetics study 7−126425
MINP solar cells, surface recomb. vel. 7−106910
MIS diodes, AC cond., contribs. of recomb. and tunnelling at interface states 7−85128
molecular cryst. dynamics, conf., Grenoble, France (June-July 1986) 7−128193
molecular organizates, trigger props., tunnel transport in donor-acceptor systems with strong electron-deformation interaction 7−103651
MOS emitter with tunneling-thin oxide, injection capacity at high current densities 7−125135
MOS thin structures, reson. tunnelling, mag. field depend. 7−85119
multiquantum ionisation and tunnelling in stochastic fields 7−103453
narrow-gap semiconductors, inversion layers, subband levels broadening by interband tunnelling 7−77094
nematic liquid crystal, isotropic phase, laser induced helical structure 7−131014
non-adiabatic effect for heavy particles in metals 7−98764
non-crystalline structures, hierarchy and disorder 7−111399
noncrystalline solids, irradiation induced processes, mechanisms and kinetics 7−69749
norbornyl cation, NMR spectrum, tunneling effects 7−122567
organic low temperature glasses, struct. relax. and hole burning 7−142649
parabolic pot. barrier transmission coeff., generalised WKB approach calcs. 7−77044
percolating systems, localisation and tunnelling effects 7−84732
1,3-perinaphthadiyl diradical, spin-forbidden H^+ tunnelling 7−78471
planar channeling radiation for positrons, classical description *(Chinese)* 7−92254
polysilicon oxide film growth by rapid thermal processing 7−86496
polysilicon-SiN_xO_y-Si_3N_4-SiO_2-Si structs., cond. props. of oxide layers 7−105728
potential barrier, transfer matrix and transmission coeff. calc., perturbative anal. 7−128336
pre-scanning tunnelling microscopy tunnelling 7−92256
propargyl alcohol, overtone excitations, classical and quantum dynamics 7−109871
protein electron tunnelling paths, quantum path integral Monte Carlo method 7−126702
proteins, electron tunneling through covalent and noncovalent pathways 7−86885
quantum diffusion, mode mixing 7−73286
quantum mechanical degenerate energy levels, multidimensional tunnelling, instanton method 7−115846
quantum tunneling in dispersive optical bistability 7−68757
quantum tunnelling, coherent, friction and temperature effects 7−112689
quantum well, tunneling current, negative differential resistance effects 7−99173
random solids, geminate pair recombination dynamics, Monte Carlo simulation 7−131660
resonance tunnelling of electrons in system with 2D disordered distrib. of scatterers 7−100022
resonant tunneling electron spectroscopy 7−92282
resonant tunnelling, 3D, differential conductance 7−125082
resonant tunnelling, ABCBA-type double barrier structs. 7−138008
resonant tunnelling in 1D, asymmetry effects 7−92255
resonant tunnelling in heterostructures, coherence 7−125099
resonant tunnelling in magnetic fields, space charge buildup 7−125081

nelling continued
resonant tunnelling through rectangular double-barrier struct., mass variation 7−85053
rotor molecule in atomic cryomatrix, renormalised cryst. field calc. *(Russian)* 7−137867
Schottky barrier nonideal structures, photocapacitance kinetics, tunnelling effects 7−77038
semiconductor resonant-tunnelling device, Wigner-function model 7−138024
semiconductor tunnel structures, I-V characts. calc. simulation model 7−125085
semiconductor-based, double-barrier resonant-tunnelling struct., intrinsic bistability obs. 7−105691
semiconductor-metal contacts, fluctuation excess currents, temp. depend., calc. 7−131782
semiconductors, tunnelling in k-space, appl. to degenerate valence band in infinite spin-orbit interaction limit 7−105584
Si polycrystalline p-n junctions, photoelec. props., tunnelling and noise, grain boundary struct. effects *(Russian)* 7−85096
single-electron charging effects obs. in small tunnel junctions 7−118556
SIPOS-Si heterojunctions, elec. characts., cond. mechanisms 7−85080
spin depolarization of particles in tunnelling states 7−85511
squeezed states, chaotic tunnelling in double-well pot., fractal anal. 7−74483
stearic acid Langmuir Blodgett films on metal and semiconductor substrates, transport mech. 7−99166
step p-n heterojunctions, minority-carrier leakage 7−77080
strongly anisotropic 2D systems, one-particle density of states, electron-electron interaction corrections 7−112425
submicron Josephson junctions, charged defect states, lifetime meas. 7−85206
surface electromagnetic waves phenomena from electron collisions with metal-dielectric interface *(Japanese)* 7−131785
symmetric barrier-well-barrier pot., resonant tunnelling, single-band tight-binding model calcs. 7−105666
tetracene in alcohol glass, tunnelling dynamics, photophysical hole burning system anal. 7−97098
thermoluminescence, localised transition model of anomalous fading 7−85864
transition metal-H(D) systems, anelastic relax., H and D tunnelling between trap sites, two level system-electron interactions 7−84122
tropolone, tunnelling dynamics, fluctuations, stochastic Liouville eqn. 7−129626
tunnel-activated motion of a string across a potential barrier *(German)* 7−131741
uniaxial antiferromagnet, quantum tunnelling at first order phase transitions 7−138234
van der Waals mols. vibr. predissoc. and prereaction, collinear quantal study 7−122645
variably spaced superlattice energy filter, appl. to devices 7−85093
wave packets, transmission and reflection times for scatt. off tunnelling barriers 7−89008
XY_8 and XY_6 para-elastic tunnelling systems, ground state energy and self-trapping transition 7−131261
$Pt/SiO_2/n$-Si photoelectrodes in I and Br aq. solns., elec. props. and thermal oxide growth 7−100585
Ag particles, incremental charging by single electrons, tunnelling study 7−131739
$AgBr_xCl_{1-x}$, trapped excitons, ODMR study 7−106058
$Al/AlO_3/Al$ layered film system, tunnelling probe studies 7−112512
$Al\text{-}Al_2O_3\text{-}Ag$ tunnel junctions, surface plasmons, optical detection 7−105725
Al-oxide-Al tunnel junctions, tunneling resistance and magnetoresistance 7−143636
$Al\text{-}SiO_2\text{-}Si$ structures, switching thin-oxide Si MOS 7−70419
AlAs-GaAs double quantum well reson. tunnelling struct., elastic tunnelling traversal times 7−92280
AlAs-GaAs triple barrier diodes, resonant tunnelling of holes 7−85055
AlAs-GaAs-AlAs heterostructures, resonant tunnelling via X-point states 7−92264
AlAs-GaAs-AlAs heterostructures, tunnelling under hydrostatic press. 7−143581
AlGaAs/GaAs, double-barrier resonant tunnelling structures, charge transport 7−112459
$AlGaAs\text{-}In_xGa_{1-x}As$ double barrier structs., resonant tunnelling 7−138051
AlGaAs-InGaAs resonant tunnelling structs., MBE growth 7−144286
$Al_xGa_{1-x}As\text{-}GaAs$ capacitor structures, obs. of bulk Landau levels in transverse magnetotunnelling 7−125114
$Al_xGa_{1-x}As\text{-}GaAs$ superlattices, tunneling cyclotron reson. studies 7−137788
$Al_xGa_{1-x}As\text{-}GaAs\text{-}Al_xGa_{1-x}As$ double barrier structs., resonant tunnelling current, depend. on Al content 7−105671
$Al_{0.48}In_{0.52}As\text{-}Ga_{0.47}In_{0.53}As$, resonant Zener tunnelling between valence and conduction band quantum wells 7−138012
Al_2O_3, RF sputter deposited films, high quality artificial tunnel barriers 7−131738
ArD_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
ArH_3^+, weakly bound ionic cluster, high resolution rot. spectra 7−74575
AsH_3, tunnelling instability and molecular struct. in quantum mech. 7−68212
$Au/AlO_x/Al$ semicontinuous tunnel junctions, conductance oscills. 7−105726
$Cd_xHg_{1-x}Te$ p-n junctions, transport mech. 7−77052
CdS polycryst. films, elec. cond., theory 7−118600
CdS:In polycryst. film, elec. cond., theory and expt. comparison 7−118601
CdSE single crysts., photocond. fatigue obs. under IR illumination, tunnelling model calcs. *(Russian)* 7−77010
Co, ferromagnetic, spin polarisation of secondary electrons 7−119077
$Co_{69}Fe_{4.5}Cr_2Si_{2.5}B_{22}$ long-time tunnelling at He temps. 7−76463
$CoSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
CrOOH, neutron inelastic scatt., IR spectra, double Morse pot. model 7−144052
Fe, coherent hopping and 4T tunnelling state, μ^+SR study 7−113057
Fe, ferromagnetic, spin polarisation of secondary electrons 7−119077
Fe, field evaporation in Ne and H, rate-controlling process, FIM study 7−85963
$Fe_{80}B_{14}Si_6$ long-time tunnelling at He temps. 7−76463
Fe_3O_4, magnetite, rapid electron exchange by cationic vacancies *(French)* 7−76947

tunnelling continued
^{57}Fe ionisation states in rare gas matrices, Mossbauer studies 7−122422
GaAs, plastically deformed, EL2 defect metastability 7−131585
$GaAs/Al_{0.3}Ga_{0.7}As$ single quantum well, exciton parameter calcs., well shape and elec. field effects 7−105407
GaAs/AlAs superlattices, tunnelling, indirect-gap electron states 7−92274
GaAs/AlGaAs heterojunctions and $n^+n^-n^+$ sandwich structs., tunnelling and hopping cond. 7−143599
n-GaAs/Au tunnel junctions photo-resistive effect during plasma refl. of laser light 7−70413
GaAs/Au/Cr/Au/Ge ohmic contacts, alloying reactions, TEM, AES and elec. studies 7−70414
$GaAs/Ga_{1-x}Al_xAs$ superlattices, periodic negative conductance by sequential reson. tunnelling 7−112470
$GaAs\text{-}Al_xGa_{1-x}As$ double barrier heterostructures, resonant tunnelling 7−85090
$GaAs\text{-}Al_xGa_{1-x}As$ struct., space change effects, importance in resonant tunnelling devices 7−77058
GaAs-AlAs barrier structs., impedance switching effects, expt. study 7−131744
GaAs-AlAs resonant tunnelling struct., quantum interf. effects 7−112477
GaAs-AlAs superlattice barrier heterostruct., reson. tunnelling 7−112476
GaAs-AlGaAs heterojunction, press. effects on tunnelling current 7−131758
GaAs-AlGaAs heterostructures, electron tunnelling, calc. 7−85061
GaAs-AlGaAs tunnel junction, current oscillations and oscillatory density of states, Frohlich polaron anal. 7−98827
GaAs-AlGaAs-InGaAs quantum well heterostructure, resonant tunnelling 7−112447
$GdAl_2$ thin film, tunnelling to spin glass, zero bias anomaly, density of states 7−138072
p-Ge/Ni contact with radial charge carrier flow, elec. props. 7−92293
Ge-Se-Sb, amorphous films, temperature dependence of AC and DC conductivity 7−137935
H^-, $^1P^0$ shape reson. stability in moderate elect. fields 7−74510
H^+ transfer in lasers and spectroscopy 7−113867
$H+H_2$, rate consts. calc., Wigner threshold law behavior 7−106758
H_2, double minimum EF state tunnelling resonances, isotopic species, ab initio pots. calcs. 7−122336
HD+O, tunneling, intramol. kinetic isotope effect, laser-induced fluoresc. meas. 7−86575
^3He BCC crysts., dislocation tunnelling, penetrating Fermi particles, massive Thirring model calcs. 7−76534
HgTe-CdTe, multilayer structures, on $Cd_{1-x}Zn_xTe$, TEM study 7−131462
InAlAs/InGaAs resonant tunneling barrier structures, MBE grown, negative differential resistance 7−70395
$In_{0.52}Al_{0.48}As/In_{0.53}Ga_{0.47}As$ resonant tunnelling barriers, MBE grown, negative differential resistance 7−70397
InAs MIS structs., field-induced ion drift 7−70421
$InAs\text{-}SiO_2$, transverse conduction mechanism, at low temps. 7−85122
$InAs_{1-x-y}Sb_xP_y$ epitaxial diode structs., electrophysical and photoelectric props. 7−99112
InGaAs-InAlAs MQW laser diodes, optically bistable operation using reson. tunnelling effect 7−123056
$In_{0.53}Ga_{0.47}As/AlAs$ resonant tunnelling barrier, pseudomorphic structure 7−138021
$In_{0.53}Ga_{0.47}As\text{-}InP$ double barrier tunnelling structures, conduction, depend. on mesa-etching 7−85057
$In_xGa_{1-x}As\text{-}GaAs$ superlattices, inter-quantum-well diffusion 7−118569
$KBr{:}NH_3D^+$, rotational levels and tunnelling levels 7−76046
$KBr{:}NH_4^+$, impurity ion rot. states, neutron scatt. intensities calcs. 7−83797
$KCl{:}Li^+$, IR and Raman spectra, anomalous isotope shift, spin-phonon system 7−111784
KH_2PO_4 type crystals, order-disorder models, review 7−113092
KH_2PO_4 type ferroelectrics, proton tunnelling model, review 7−113093
KH_2PO_4 type mixed ferroelec.-antiferroelec. crystals, proton glass phase, tunnelling 7−113087
KH_2PO_4-type crystals, US expts., review 7−111778
KH_2PO_4-type crystals, phase transition, negative evidence for proton-tunnelling mechanism 7−143985
$\alpha\text{-}KIO_3HIO_3$, ferroelectricity disappearance under hydrostatic pressure 7−132209
$(ND_4)_2SnCl_6$ single cryst., ammonium ion rotational tunnelling and reorientation, NMR studies 7−91497
NH_3, (A^1A_2'') state, dissoc. dynamics 7−122638
NH_3, clusters, IR dissoc. spectra 7−110031
NH_3 dimer, tunnelling-rot. energy levels classification in mol. symm. group 7−109878
NH_3, tunnelling instability and molecular struct. in quantum mech. 7−68212
NH_4^+ cpds., rotational pot. function derivation 7−91493
$(NH_4)_2(Co(H_2O)_6)(SO_4)_2$, IR struct. holeburning and orientation tunnelling of NH_3D^+ ions 7−138975
Nb-oxide-Pb junction tunnel barrier, voltage induced variations 7−131805
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
$NbSe_3$, CDW conduction dynamics in high mag. fields 7−99027
Ni, ferromagnetic, spin polarisation of secondary electrons 7−119077
Ni/GaP Schottky barrier diodes, current flow mechanism study *(Russian)* 7−99205
Ni-H system, diffusion- and tunnelling, fast Fourier transform and Monte Carlo method calcs. 7−69976
$NiSi_2$ epilayers on Si:As, tunnelling spectroscopy 7−85111
O_2^+, $c^4\Sigma_u^-$ state, predissoc., isotope effect 7−110047
PbAuIn-SiO-PbBi Josephson junction, RF plasma oxidised, annealing and aging phenomena 7−118722
$Pb_{1-x}Ge_xTe$ low temp. resistivity, Kondo-like effect of off-centre Ge ion tunnelling, two-level system interaction calcs. 7−76948
Pt surface, electrochem. activated, nm topography, scanning tunnelling microscopic obs. 7−91933
Si (001), inversion layers, electron effective mass changes 7−118552
Si inversion layer, tunnelling in high mag. fields 7−131804
Si MOS structs., oxide trapping under spatially variable oxide electric field 7−131788
a-Si:H, charge transfer from adsorbates to the bulk 7−99157
$a\text{-}Si{:}H\text{-}Si_3N_4{:}H$ double barrier structs., resonant tunnelling through quantised states 7−131800
$a\text{-}Si{:}H\text{-}Si_3N_4{:}H$ double-barrier structures, reson. tunnelling 7−118593
Si:P, coupled exciton tunnel dissociation in elec. field 7−143364

tunnelling continued
a-Si-metal contact, space charge region, tunneling 7−125123
Si-SiO_2 interface, cycling of defects between trapped negative charge and interface states 7−99206
Si-SiO_2 MIS, gate currents and space charge under electron beam irrad. 7−70420
Si-SiO_2 MOS structures, degradation by Fowler-Nordheim tunnelling 7−99214
a-Si-SiO_x barriers, tunnelling via localised states, microscopic study 7−70423
SiO_2, electron trap centre generation due to hole trapping, Fowler-Nordheim tunnelling stress 7−131786
SiO_2-Si:Fe interface, catastrophic oxide breakdown, impurity behaviour effects 7−143624
SnO_x thick films, electronic cond. and tunnelling 7−105742
SnTe MOS diodes, current-voltage spectra, expt. 7−99215
Ta, anelastic relaxation due to trapped D tunnelling, internal friction meas. 7−100274
Ta, oxidation, bulk Ta_2O_5 form. below 35 K 7−100435
TaO_x thick film, electron hopping and tunnelling cond. investigations 7−137939
TaO_x thick films, electronic cond. and tunnelling 7−105742
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7−70706
$Y_1Ba_2Cu_3O_7$, high T_c supercond., resistivity between 80 and 1240 K 7−137915

tunnelling spectra
cytochrome c, tunnelling disorder mode, reson. Raman spectra 7−78775
di-isopropyl ether, tunnelling rotation, of methyl groups 7−142664
dimethyl ether, tunnelling rotation, of methyl groups 7−142664
dimethyl sulphide, tunnelling rotation, of methyl groups 7−142664
heterocyclic molecular crystal, quantum tunnelling, methyl group motion, NMR studies 7−143923
ketones, homologous series, potential barriers hindering reorientation of methyl groups 7−142657
metal tip-metal surface system with chemisorbed mols., inelastic electron tunnelling 7−118557
nitromethane, methyl group rotational potential 7−142665
phonons, theory and expts., book 7−80187
surface electromagnetic waves phenomena from electron collisions with metal-dielectric interface *(Japanese)* 7−131785
tetramethyl tin, isolated in Ar matrix, rotational tunnelling 7−141643
GaAs quantum wells, resonant tunnelling spectroscopy of hot minority electrons 7−92260
Si:P p^+nn^+ structs., investigation of impurity states by tunnel spectroscopy 7−143566
SrF_2:Pr^{3+}, D^-, spectral hole burning due to deuteron tunneling 7−141950
Y-Ba-Cu-O, high T_c superconductor, tunnelling spectroscopy 7−99347
Zn-ZnO-Pb, effect of methanol, benzoic and acetic acids doped on oxide layer 7−70428

tunnelling spectroscopy
adsorbed layers, IETS, freq. shifts 7−143558
electron tunneling spectroscopy in magnetic materials *(Polish)* 7−131737
graphite surface, empty electronic states obs. by local tunnelling spectroscopy 7−77022
IETS, vibrational mode energy, bias voltage polarity depend. 7−143557
quantum well, hot electron reson. tunnelling spectroscopy 7−112475

tunnels, wind *see wind tunnels*

turbidimeters *see turbidimetry*

turbidimetry
multimode optical fibre sensors appl. 7−130360
smoke generation system for fluid dynamics research 7−111131
AgBr emulsion dissociation charactn., stopped-flow turbidity 7−139025

turbidity
see also turbidimetry
Angstrom turbidity coefficient, determination from total direct radiation measurements 7−127610
Barents Sea, suspended matter distribution and dynamics 7−133657
brain microtubules, flow orientation obs. by linear dichroism 7−86932
chloromethylsilane-pyridazine (pyrazine) phase diagrams, thermodynamic functions *(German)* 7−91776
films, translucent, refractive index correction 7−136197
Kelvin-Helmholtz billows form., instability, mixing, gravity currents 7−91089
laser beam off-axis multiple scatt. in turbid media 7−68559
liquid, nonlinear distortions improvement in turbidity meas. *(Japanese)* 7−141804
opacity coefficients, Thomas-Fermi model anal. 7−106115
NE Pacific off USA coast, suspended particulate matter study 7−94262
photon migration model in turbid biological media 7−78962
polyethylene oxide-water system, phase anal. *(Russian)* 7−84228
river shore zone, turbidity caused by breaking waves due to small motorboats 7−114825
seawater, effect of turbidity on surface emissivity 7−79453
subaquatic density and turbidity currents, self-preserving solns. 7−94193
suspension clouds motion, paleoslope reconstruction 7−94194
Ba plasma, laser prod., opacity effects on near reson. Rayleigh scatt. 7−97794
SiO_2 aerogel foam, liq. D-T addition, opacity and shrinkage, ICF target appl. 7−96311

turbine generators *see turbogenerators*

turbines
see also compressors; gas turbines; hydraulic turbines; steam turbines; turbogenerators; wind turbines
Francis turbine cavitation anal. using digital acoustic emission 7−68970
generator sets, structure-borne noise for monitoring and condition diagnosis *(German)* 7−104116
laminated and reinforced metal composite manufacture and properties *(Spanish)* 7−86094
time-of-flight laser anemometer for turbine appl. 7−121080
transonic flow through compressor and turbine cascades, numerical soln. 7−97563
Wells air turbine, inlet flow distortion, turbulence study 7−133033

turboalternators *see turbogenerators*

turbogenerators
North Sea offshore 3 MW horizontal-axis aerogenerator design 7−78600
Ormat closed-cycle organic vapour turbogenerators, energy conversion appls. 7−93476
turbogenerators continued
plasma-gasified coal as fuel in turbogenerators, KATEK power system optimisation *(Russian)* 7−104466
Susetter Hill (Shetland) 750 kW demonstration wind turbine 7−139078
Cu conductors in turbogenerator rotor windings, fatigue characts. 7−100325
H_2 coolant chromatographic anal. for Fe or Cu faults detection *(Russian)* 7−71548
He two-phase flow in superconducting rotor 7−67337

turbulence
see also atmospheric turbulence; boundary layer turbulence; cavitation; laminar to turbulent transitions; plasma turbulence; shear turbulence; turbulent diffusion; vortices
2D, generalized spectral law for inverse energy cascade 7−123600
2D, inverse cascade of energy 7−130655
2D MHD turbulence, sensitivity to Alfven waves and correls. 7−130798
3D isotropic turbulence, temp. variance, kinetic energy decay 7−110929
3D Navier-Stokes eqn., Kolmogorov similarity 7−123603
3D turbulent natural convection, in cubical enclosure, numerical calcs. 7−69161
$f^{-\beta}$ power spectrum and stable distrib. 7−95468
AC corona charging of particles, mobility statistics meas. 7−69499
adiabatic wall plumes, struct. 7−75536
air, computation of turbulent flow over scale model in wind tunnel using random vortex method 7−130665
air flow around cubic model, 3D large eddy simulation 7−91095
air flow in curved 90° ducts, uniform inlet, rel. to aspect ratio 7−111112
air flow over moving curved surface, numerical model 7−136817
air jet, weak deflection 7−83189
air wall jet in duct, buoyancy forces effect 7−111049
air-H_2 (methane) mixtures, turbulent combustion, kinetic calcs. 7−75706
airfoil aerodynamics, stall hysteresis, acoustic and turbulent influences 7−69201
amorphous alloy ribbons, single roller casting process, small hump form. mechanism *(Japanese)* 7−106504
angle type safety valves, flow patterns, elimination of jamming 7−137003
anisotropic small-scale flow, large-scale struct. generation 7−110928
aqueous drops in organic liquids, turbulent dispersion 7−130664
astrophysical jets, collimation by turbulence viscosity 7−101932
asymmetric vortex merger in 2D turbulent flow 7−142322
asymptotic chaotic solutions 7−134671
atmospheric inhomogeneous 2D turbulence 7−133913
attenuation of gravity waves in the presence of a magnetic field in a turbulent conducting fluid 7−83301
attractor dimension for turbulent pipe flow 7−123761
axially rotating pipe, laminarisation of turbulent flow in inlet region 7−91139
axisymmetric bluff bodies, turbulent near wake flow characts., active model 7−123642
axisymmetric choked jet, sound source distribution *(Chinese)* 7−123324
axisymmetric contraction flow, acoustic disturbance effects 7−104260
axisymmetric diffusion, nonsteady-state turbulent flow 7−83190
axisymmetric turbulent jet mixing layer, orthogonal decomp., azimuthal depend. 7−130762
axisymmetric water jet ablation of frozen ice-solids and wax-solids mixtures 7−123696
binary mixture near critical point, turbulent, light scatt. study 7−70828
bootstrapping in turbulence computation 7−123605
boundary layer transition on rotating cones in axial flow with free stream turbulence 7−97543
bubble columns, turbulent circulation 7−110926
bubbly condensing jets, struct. 7−69246
bubbly two-phase flow, turbulence struct. and phase distrib. meas. 7−97606
buoyant plume, impingement region convective heat transfer 7−110978
buoyant recirculating flows with sudden expansion, mathematical modelling *(Chinese)* 7−91088
Burgers fluid, forced turbulence between walls, quasistationary structs. 7−104255
cascade processes in 2D turbulent convection modelling 7−75579
centrifugal conduction pump, turbulence characts. *(Romanian)* 7−137031
channel and Couette flows, anisotropic k-ϵ model 7−110925
channel flow, ejection characts., visualisation study 7−123758
channel flow, nonlinear models, Reynolds stresses prediction 7−91092
channel flow, numerical simulation, low spatial resolution, time-dependent Navier-Stokes eqns. *(German)* 7−123763
channel flow, thermal diffusion, anisotropic k-ϵ-k model *(Japanese)* 7−142283
channel flow, turbulent, bifurcation model 7−123753
charged particles, turbulent flow, electrostatic precipitation, asymptotic description 7−136810
chemically nonequilibrium turbulent pipe flow, heat and mass transfer, eigenvalue problem *(Russian)* 7−104357
chlorella suspension growing in sloped-stepped solar unit, temp. conditions 7−83311
circular ducts, momentum, energy and mass transfer 7−117671
circular pipe, turbulent flow, algebraic design eqn. for combining, parallel and reverse flow manifolds 7−91227
coagulation and recombination eqn. soln. 7−130670
coherent structs., intermittency and helicity fluctuations 7−104256
coherent structures 7−130657
coherent structures in wall layer, models 7−130659
coherent turbulent structures, eddy scale behaviour 7−136814
coherent velocity oscillations in detached flows and planar turbulent mixing layers 7−75537
coherent vortex structures in turbulent flows, tensor characts. 7−136884
cold vapour direct contact hygroscopic-condensation, heat and mass transfer 7−97613
collapse of turbulent front in stratified fluid, nominally 2D evolution in narrow tank 7−114758
combined forced and natural convection heat transfer for upward flow in a uniformly heated, vertical pipe 7−69147
combustion following turbulent mixing in muzzle flows, slip surface form. investig. 7−97644
complex geometries, finite volume-approach calcs. 7−110924
compressible gas turbulent fluctuations, heat transfer allowance 7−136832
compressible Navier-Stokes eqns., finite-element soln. 7−136902
computational fluid dynamics, selected topics and mathematical techniques 7−140454

tulence continued
conducting liq. turbulent flow, vel. profile, cross correl. function *(Romanian)* 7−136818
conference on fluctuations and stochastic phenomena in condensed matter, Barcelona, Spain (May 1986) 7−134359
confined mixing layer, large-scale vortices, visualisation study 7−91263
convection, visualisation, holographic interferometry, digital fringe processing 7−102502
convective heat transfer characteristics, in narrow vertical rectangular water channel 7−117599
cooling towers, flow and plumes spreading numerical calcs. 7−110931
Couette flow, floc stability study *(German)* 7−75531
Couette flow, plane, large eddy simulation, Reynolds no. effects *(Japanese)* 7−142281
countergradient heat flux in turbulent stratified flows 7−75570
cranial bruit produced by turbulent blood flow, method for detect. and anal. 7−71827
cylinders in flow, convective heat transfer, wall effects 7−97514
Czochralski crystal puller with axial mag. field, melt motion study 7−144264
decaying 2D turbulence, computer simulation 7−130654
diffuser channels, cavitation and turbulent separation model study 7−136945
directional sensitivity of unplated slanted-wire probes 7−97663
discrete relative multiple spatial dynamics, onset of turbulence 7−104251
disperse phase formation by nonstationary condensation in turbulent medium 7−69109
disperse system turbulent liq. flow in pipelines, bubble size study 7−111065
dissociating gas flow in heat-releasing rod bundles, heat and mass transfer calcs. *(Russian)* 7−104275
drift flows, passive impurity spreading from point source 7−130668
dual frequency ultrasonic flowmeter for turbulent flow *(Japanese)* 7−130816
duct flow with streamwise nonuniform heating at duct flow, num. investig. 7−69263
ducts, cross-shaped cross-section, turbulent flow and heat transfer 7−69267
dye lasers, single-mode good-cavity, chaos due to turbulent dye flow 7−103810
electric charge convection in turbulent flows *(French)* 7−142275
electrostatic precipitator, electrohydrodynamic simulation of electrostatic precipitator *(French)* 7−142276
electrostatic precipitators, EHD origin of turbulence 7−137020
EM waves and turbulence 7−136144
enhanced diffusion, Levy dynamics, appl. to turbulence 7−69111
FBR cold plenum, flow calcs. using N3S 3D code *(French)* 7−109334
film boiling heat transfer, forced turbulent-flow, semiempirical theory 7−69876
flame, nonpremixed, second-order conditional model 7−132936
flame front turbulence growth 7−69284
flame propag. and spark ignition, hydrodynamic mathematical model 7−132938
flames, laminar and turbulent, burning vel. and propag. vel. data 7−78500
flames, premixed, turbulent, calcs. using probability density function methods 7−78499
flames, premixed, turbulent, Klimov-Williams criterion 7−78498
flexible polymers in dilute solution, scaling theory of drag reduction 7−83278
flocculated suspensions, floc breakage, dynamic response of particle size distrib. 7−93385
flow development in wall subchannels of rod bundle, mean velocity, wall shear stress 7−129241
flow in tubes, structure parameters, spin effect, radially induced vortices *(German)* 7−123762
flow measurement, pitot probe shape effects 7−142401
flow measurements, statistical bias elimination 7−111125
flow over 2D backward-facing step, finite element calc. 7−75533
flow over curved hill and wing, internal boundary layer growth study 7−142293
flow simulation, empirical consts. of k-ε 2-equation model *(Japanese)* 7−142255
flow simulation of channel flow with distorted geometry using spectral code 7−97476
fluid dynamics, annual review, book 7−95112
fluids, pipe flow, heat transfer investig. 7−69141
forced convection duct flow, evaporative mass transfer 7−75549
forced convection from circular cylinder, yaw effect, wind tunnel study 7−75561
free convection, attractors for Benard problem, fractal dimens. bounds 7−136856
free-stream turbulence relationship with stagnation region heat transfer 7−110930
fuel-rod bundle, three-subchannel geometry, effect of mixing vane 7−129238
fully developed, 3D, computer simulation 7−69116
fully developed channel flow at low Reynolds number 7−83348
fully developed flow in eccentric annulus momentum and heat transfer 7−69119
fully developed turbulence and complex time singularities 7−130651
Galactic disk, hydrodynamic and turbulent motions in stellar and interstellar components 7−128050
gas suspension in pipe, swirling flow, heat transfer 7−111096
gas-agitated liq. reactor, buoyancy-induced flow simulation 7−111070
gas-droplet turbulent isothermal polydisperse jet study 7−136949
gas-liquid flow in channel with rod bundle, hydraulic resistance, turbulators effect 7−136819
gas-particle flow in pipes, mixing length model 7−91203
gas-stirred metallurgical reactor, bubble driven flow, K-E turbulence model calcs. 7−104328
Gaussian light beam propagation through heated turbulent plane jet *(Russian)* 7−82468
geophysical and astrophysical, theory 7−130653
Greenland Sea, dynamics and thermodynamics of ice-upper ocean system in marginal ice zone 7−133715
grid generated, high Reynolds numbers, transform. invariance of longitudinal vel. correl. 7−136811
Hangzhou Bay, China, tidal currents, turbulent stress and drag coeffs. 7−101320

turbulence continued
Hausdorff dimension of attractor for homogeneous decaying turbulence 7−123599
heat transfer coefficient chart for a rectangular finned flat surface 7−75582
heat transfer in corrugated-wall channels 7−110974
heptane, subcooled boiling and convective heat transfer in annulus 7−69167
high Reynolds number turbulence, analytical statistical theories *(French)* 7−97498
high Reynolds number turbulent flow, 2D Navier-Stokes anal., statistical props and vorticity 7−69108
holographic interferometry, appl. to turbulent convective heat transfer, review 7−122874
holographic interferometry, problems in resolving 4-D character of turbulence, image and data processing 7−122849
holographic interferometry, problems in resolving 4D character of turbulence 7−123792
homogenizers and agitated tanks, physical interpretation of drop sizes 7−142346
Hopf space-time functional formalism, closure methods 7−69110
horizontal, concentric tube annulus, mixed convection heat transfer for transitional flow conditions 7−110953
horizontal slurry flow, large solid particle transport, Bagnold theory 7−136821
hot wire anemometer for meas. in boundary layers and wakes 7−123818
hot-wire measuring technique, static nonlinear effects 7−142418
hot-wire technique for simultaneous measurement of instantaneous velocities in 3D flows 7−111132
hydraulic drag in turbulent coolant flow in a porous cable 7−97526
hydrodynamic eqns., ϵ expansion 7−123602
hydrodynamical turbulence, classical phenomenology 7−123604
hypersonic flow meas., laser velocimeter requirements 7−123803
hysteresis effect associated with flow in an annular channel with a sudden expansion 7−111110
impulsively started jet, turbulent struct., image processing 7−75635
inclined film flow, turbulent and inertial roll waves 7−111004
incompressible fluid, 2D turbulent convection cascade model 7−69114
incompressible plane mixing layer, temporal and spectral anal. 7−130663
incompressible stabilised turbulent flow through square ducts 7−69113
incompressible turbulent channel flow, helicity fluctuations, numerical simulations 7−142278
incompressible turbulent flow, diffusion, fractal dynamics in mean field theory approach 7−136906
inductive MHD pump, ID turbulent flow model *(Romanian)* 7−137032
industrial appls., recent progress and future *(French)* 7−142285
integral skin friction prediction for turbulent separated flows 7−69117
intensity distributions, cylinder surface, simulated smooth glaze ice formations, local heat transfer coefficients 7−136813
intermittency and De Bruijn's oscillations 7−115797
internal flows, turbulence models and their appls. 7−91091
internal turbulent flows with longitudinal pressure gradients, heat exchange and friction 7−117598
interstellar molecular clouds, CO lines form. in turbulent vel. field with finite correl. length 7−101874
isothermal-walled circular tube, turbulent heat transfer 7−123760
nearly isotropic turbulence generation by grids 7−130666
isotropic velocity and temp. turbulent length scales, Reynolds and Prandtl nos. effects 7−130652
jet, 3D conc. determination by scanning laser method 7−130812
jet, two-equation models, similarity solns. 7−142277
jet discharge into swirling crossflow, laser Doppler anemometry 7−111046
jet impinging on a flat plate, turbulent heat transfer study 7−75637
jet injected into confined cross flow, 3D flow field, visualisation 7−123699
jets, static press.−vel. field 7−111047
k-epsilon model and algebraic stress model *(French)* 7−110943
Kelvin-Helmholtz billows form., instability, mixing, gravity currents 7−91089
kinetic energy dissipation rate, transport eqn., statistical model 7−91097
kinetic energy eqn., third-order velocity correl. closure model, curvature effect 7−91096
Kolmogorov-Obukhov 2/3 law cryst. determ. 7−104257
Lagrangian renormalised approx. inertial range struct. 7−142279
laminar subsonic flow past airfoil compressible reduced Navier-Stokes eqns. 7−136798
large eddy structure in turbulent flows, theoretical and expt. investig. 7−97649
laser anemometry, turbulence-induced spectral bias 7−83367
laser calorimetric spectroscopy on flows 7−130803
laser Doppler anemometry meas. in turbulent flame, statistical bias 7−75715
combined laser-Doppler anemometer/laser induced fluoresc. system for turbulent transport meas. 7−110932
Levy walks, turbulence and chaos appl. 7−80636
liquid holdup measurements in turbulent bed contactors, tracer technique 7−91206
liquid jet, condensation, heating study 7−136948
liquid jet incident on vessel, additive mixing effect 7−69115
liquid phase controlled gas-liquid transport process, effect of mechanically generated turbulence and interface films 7−78549
liquid-metal two-phase flows, transverse magnetic field effects on phase distrib. 7−103031
local gas holdup, mean liquid velocity and turbulence in an aerated stirred tank using hot-film anemometry 7−97648
local heat transfer and pressure loss in annular helical channel in air flow *(Russian)* 7−83225
local heat transfer in turbulent flow around pipe bend 7−110973
local oscillations, traveling waves, and chaos in Rayleigh-Benard convection 7−110965
magnetorheological suspension, turbulent flow and heat transfer study 7−123719
mass transport in turbulent Couette-Taylor flow 7−130650
material frame-indifference of turbulence closure models 7−117570
matter flow on to crystal surface under turbulent natural convection 7−106391
maximum turbulent heat transfer coefficient in reattachment flow region, correl. 7−130648
mean field MHD, in anisotropic turbulent medium 7−91246
membrane operation, mass transfer under turbulent cross flow 7−86674
methane, nonpremixed flames, spontaneous Raman scatt. study 7−86627

turbulence continued
methane-air mixtures, turbulent combustion. combustion products and water vapour addition 7−75702
methanol, turbulent combustion, engine compression stroke simulation 7−100563
MHD, two-dimens. turbulence expt. and num. simulation 7−91257
MHD transport coeffs., self-consistent calc. 7−75535
mixing in stratified fluids, conf., Margaret River, WA, Australia (August 1985) 7−108016
mixing layer, large eddy simulation calcs. *(Japanese)* 7−142282
mixing layer, time-developing eddy simulation 7−130625
mixing processes in 2D channel flows, num. simulation 7−117557
monolithic damp coatings interaction with turbulent flow 7−136816
multifractals, spatial correl. functions 7−115904
multiple-grid algorithm, concurrent-processing adaptations, appl. to viscous flows 7−142246
Navier-Stokes eqns., Reynolds averaged, soln. in general curvilinear coordinates, appl. to vehicular dynamics 7−97483
Navier-Stokes equations, nonstationary, determinacy principle violation for large Reynolds numbers 7−134521
Navier-Stokes fluid turbulence, Lagrangean/Hamiltonian formalism 7−83161
near-wall turbulence structure 7−130660
near-wall turbulent flow coefficients 7−130649
Newtonian fluid, bubble columns, volumetric mass transfer coeff. calcs. 7−142341
noise, pipe flow turbulence effects *(German)* 7−82930
non-Newtonian fluid, bubble columns, volumetric mass transfer coeff. calcs. 7−142341
non-Newtonian fluids, viscous, heat transfer and press. drop in turbulent flow through rectangular passages 7−123691
non-Newtonian turbulent flow in circular ducts. friction factor, explicit eqn. *(German)* 7−104311
nonequilibrium systems, pattern formation, Rayleigh-Benard convection 7−136787
nonequilibrium turbulent recirculating two-phase flow, computational modelling 7−91192
nonMarkovian covariance evolution eqns., soln. 7−104254
nonsteady jets, turbulent mixing 7−69239
numerical fluid simulation and appls. 7−69085
numerical modelling of turbulent flow with two scales 7−97499
numerical simulation, difference schemes *(Japanese)* 7−142280
numerical simulation *(French)* 7−83192
ocean, effects of fossil turbulence and intermittency in sampling of mixing processes 7−114755
ocean, influence of mesoscale eddies on Levantine Intermediate Water circulation in Algerian Basin 7−127262
ocean, time-dependent model for turbulent momentum transfer in stratified oceanic boundary layer 7−133712
ocean, turbulent motion theory *(Italian)* 7−139624
ocean surf zone turbulence, kinetic energy anal. 7−114748
ocean turbulence, available potential energy of overturn as indicator of mixing in seasonal thermocline 7−114752
ocean turbulence, suspended sediment stratification correction for combined wave and current flows 7−127261
ocean turbulence measurement, evaluation of Rapid-Sampling Vertical Profiler 7−127565
ocean turbulent layer in shear-free flow, thermal stabilisation *(Russian)* 7−107433
ocean turbulent tidal flow, acoustic scintillation struct. 7−114754
oceanic quasi-geostrophic turbulence forced by stochastic wind fluctuations 7−114783
oceans, mixing efficiency is stably stratified grown turbulence 7−114762
oceans, small synoptic/mesoscale eddies and energetic variability in E Levantine basin 7−107430
optical mutuality theorem for scattering media, corollary 7−141803
organised structures in turbulent plane wake, topology 7−130658
oscillatory flow over rough beds, velocity meas. 7−142273
overpressure during emergency relief venting in bubbly and churn-turbulent flow 7−133023
parallel heated discs, radial flow, local heat-transfer performance and mechanism 7−136793
particle transport by turbulent flow, material line ang. dispersion 7−110927
particles migration in turbulent nonisothermic flow, gas viscosity temp. depend. effects 7−142360
particulate phases in turbulent tube flow, state and transport anal. 7−111082
path-integrated refractive turbulence irradiance scintillations, probability density 7−68560
PERSEPHONE 3D model for electric arc heater turbulent jet mixing with blast furnace air supply *(French)* 7−111048
phase spectral evidence for vortex structures in turbulent mixing 7−123430
phosphate schlamms, pipe flow and rheological behaviour charactn. *(French)* 7−75671
pipe contraction press. loss coeff. for incompressible turbulent flow 7−130667
pipe flow, coherent structures 7−130661
pipe flow, eddy viscosity model for near-wall region 7−75532
pipe flow, fully developed, prod. using perforated plates, flowmeter meas. accuracy 7−97655
pipe flow, horizontal, critical vel. calc. for maintaining solids in suspension 7−142354
planar vertical layer, turbulent free convection flow 7−69139
plane 2D mixing layer, unsteady Navier-Stokes eqn. soln. 7−83176
plane channel with moving walls, turbulent flow modelling 7−137000
plane Couette flow, at transitional Reynolds no., direct numerical simulation 7−91076
plume, mean flow, entrainment, intermittency, anemometry study 7−91090
point vortices modelling of turbulent transfer in channel 7−75539
Poiseuille flow, turbulent spots, wave struct. investig. 7−91233
polyacrylamide aq. soln. turbulent flow, press. drop 7−97580
polymer associations, enhanced drag reduction study 7−83276
polymer solutions, turbulent flow in tubes, friction reduction, mathematical model *(Russian)* 7−97501
polymer solutions, viscoelastic turbulent pipe flows, heat eddy diffusivity 7−97520
premixed flames, phenomena and governing eqns., book contrib. 7−100576
turbulence continued
premixed rod-stabilised, internal struct., approach flow turbulence and equivalence ratio effects 7−111126
premixed turbulent flames modeling, fractals appl. 7−113931
primitive solar nebula, role of turbulent convection 7−120284
prosthetic heart valve, caged-ball, numerical study of turbulent blood flow using a boundary-fitted coordinate system 7−71932
pseudoturbulence models, simulated, unsteady lift and drag predictions 7−110923
pulsatile pipe flow, turbulent slug and vel. field in inlet region 7−97633
PWR, fuel rod bundle with 90% blockage, flow distrib. anal. 7−141198
radial flow pump impellers, laser velocimeter turbulence meas. 7−83371
rapid distortion theory for turbulence, recent developments, book contrib. 7−97500
Rayleigh-Benard roll chain, convective pattern deformations under mean flow stress 7−83179
reattached fluid flow downstream of fence, heat transfer 7−69121
recirculation region boundaries study for turbulent jet impingement on screen in external flow 7−83288
rectangular cavities, captive eddies meas. and computation 7−123805
rectangular channel with sudden contraction and expansion, flow meas. 7−111111
relative dispersion laws in 2D, non-selfsimilar formulation *(French)* 7−117577
renormalisation group anal., theory 7−104253
response to large amplitude oscills. in channel flow 7−142388
rod bundles, equiv. annular channel, unsteady-state convective heat transfer study 7−97518
room air flow, large eddy simulation *(Japanese)* 7−142253
rotating machinery, flow meas. using 2D laser Doppler anemometer system *(Chinese)* 7−142399
rotating turbulent channel flow, algebraic Reynolds stress model 7−136865
rotors, unsteady thickness noise source 7−142089
roughness element effects on insulated wall for heat transfer 7−110975
second order turbulence flow closure model 7−69180
secondary flow effects in high tip speed free convection 7−110976
secondary flow patterns in curved pipe, visualisation study 7−111135
self-organization in systems without simple attractors 7−142250
self-similar invariant families, Navier-Stokes eqns. 7−123601
semi-lagrangian numerical scheme for two-dimensional turbulence 7−142272
separated and reattaching flow, turbulence effect 7−91093
shear layers, turbulent, traversed by laser beam, optical props. *(Chinese)* 7−122822
sinusoidal wavy channel flow field, vortices in turbulent flow *(Japanese)* 7−136815
skin friction meas. in 2D and 3D turbulent flows with separation 7−142417
slightly heated free swirling jets, turbulent flow, heat transfer 7−136950
solar energy and turbulence, effect on climate *(Italian)* 7−139743
solar nebula, primitive, role of turbulent convection 7−120285
solar pond wind-induced waves and liquid mixing 7−100753
solar-powered air conditioning system investigation using finite element method 7−126556
solid particle shape factor meas. by volumetric flow rate in packed bed 7−83330
solid particle-gas suspension, non-Newtonian flow, eddy viscosity and mixing length distrib. 7−69226
solid particle-gas system, turbulence, local phenomenological props. 7−83306
solid-liquid two-phase flow, turbulence, laser Doppler velocimeter *(Japanese)* 7−97665
species concentration in complex turbulent flow, Rayleigh meas. 7−132985
spectral line profile of turbulent gas 7−103579
spectral methods in fluid dynamics, book contrib. 7−97509
Spencer Gulf, South Australia, episodic stratification and gravity currents in modulated turbulence environment 7−114761
spinning cylinder near wake, flow visualisation, image processing 7−142420
square ducts, turbulent flow parameters study 7−83342
stability analysis using tensor-viscosity method 7−91087
stability to 3D perturbations 7−91243
stable salinity gradient heated from below, layered struct. form. 7−145492
stably stratified flows, length and scales and decay times of turbulence, comparison 7−72061
stagnating turbulent flows 7−130645
static struct. function, Navier-Stokes eqn. anal. 7−91098
stellar winds, effect of turbulence on spectral line profiles in spherically symmetric winds 7−115365
Stokes flow problem, alternate rot. eccentric cylinders, Lagrangian turbulence study 7−91141
strange attractors, chaos and turbulence *(French)* 7−89115
stratified fluid, review 7−117642
stratified fluid turbulent front, expts. with oscillating grid 7−117644
stratified fluids, mixing and flow characts., appl. to lakes and reservoirs 7−117643
stratified fluids, transition phenomena and turbulence devel., oceanic appl. 7−117641
structure in cylinder wake 7−130710
subcooled liquid. in circular tube, forced turbulent flow film boiling 7−69122
submerged moving body, stratified fluid, gravity waves vertical propag., surface effects study 7−142325
submerged subsonic turbulent jet, gasdynamic struct., conc. meas. 7−97593
subsurface ocean turbulence meas., design of dye-dispensing towed vehicle 7−94513
sudden expansion flow in ducts, reattachment region heat transfer 7−110950
supercomputers and fluid dynamics, conf. Nobeyama, Japan, (Sept. 1985) 7−120710
superfluid He II, T-I-T-II transition, noise-induced bistability 7−142300
supersonic flow development in square duct 7−104302
supersonic jet, turbulent mixing layer, quasiparticle detection and size determ. 7−83293
sweeps, identification using instantaneous vel. gradient 7−130662
swirling flow in rectangular channel, large eddy simulation and k-ϵ model *(Japanese)* 7−142284

rbulence continued
swirling flow in straight pipe, modified k-ε model 7−91138
swirling jet flow, eddy viscosity model 7−136866
Taylor bubbles in laminar and turbulent flows, mass transfer study 7−97600
temperature field above heated planes, struct. 7−130656
temperature field development in turbulent flow 7−104276
thermal convection at large Rayleigh number, convection lines on heated bottom plate 7−110959
thermally developing turbulent flow, through parallel-plate channel, radiation and forced convection 7−69175
three-dimensional flows, development and testing of static press. probes 7−91094
three-dimensional homogeneous turbulence, Hopf characteristic functional eqn., Monte Carlo approach 7−75534
three-layer fluid, unsteady plane-parallel flow, turbulent struct. 7−130669
trailing flap, attached flow, asymmetric wake, press. and vel. charact. 7−136863
transition by spatio-temporal intermittency, probabilistic cellular automata *(French)* 7−89139
transonic diffuser flow, self-excited oscills., Navier-Stokes eqn. simulation 7−136910
transonics shock-wave-boundary layer interaction, turbulence model validation *(French)* 7−111032
tube, arc-shaped turbulence promoters, heat transfer augmentation 7−69120
tube bundles in cross-flow, heat transfer rate, row number and turbulence intensity influence *(German)* 7−69270
tubes, crossflow force meas. 7−123788
turbulent boundary-layer wall pressure spectrum near the acoustic wavenumber 7−130676
turbulent bursts, spots and slugs in a generalized Ginzburg-Landau equation 7−80428
turbulent flow, synergetics, selfsimilarity and computer graphics investig. 7−75538
turbulent jet in confined cocurrent pipe flow 7−136955
turbulent jet noise, press. law derivation 7−97590
turbulent two-component vertical bubbly flow, skin friction and heat transfer anal. 7−97503
turbulent two-phase flow meas., laser-fluoresc. technique 7−97651
twisted tubes in heat exchanger, vortex structure of flow 7−83221
two-dimensional flow, num. simulation of transition to turbulence 7−91063
two-phase suspension flow, dil., particle drag 7−91199
two-phase suspension flow in vertical pipe, flow struct. 7−91198
unconfined turbulent diffusion flames, deterministic modelling 7−69118
universal-equilibrium-range spectrum of turbulence *(Chinese)* 7−142271
unsteady flow simulation at high Reynolds numbers *(French)* 7−97480
unsteady turbulence, dispersion in free-convective conditions, stochastic models of particle trajectories 7−136812
unsteady turbulent free flows, stereophotometry study 7−91262
vapour-gas mixture, turbulent, heat and mass transfer in film condensation 7−104252
velocity skewness measured in grid turbulence 7−83191
vertical nonisothermal turbulent jet in an Archimedes force field 7−75638
viscous flow calculations, nonorthogonal curvilinear coordinates, pressure correction methods 7−123583
viscous incompressible liq., flow and heat transfer, local-similarity study 7−97528
vortex ring and filament interaction, 2D stagnation point 7−123657
vorticity covariance rate of change in turbulence 7−142316
vorticity field structure in homogeneous turbulent flows 7−75592
wake, cylinder, turbulent energy dissipation study 7−110986
wake, passive trace component, turbulent pattern degeneration 7−142313
wake of a flat plate 7−130646
wall jets along strongly concaved surface, mean flow and turbulence characts. 7−117639
wall vel. gradient fluctuations 7−142345
water, natural convection transience adjacent to suddenly heated vertical surface 7−110758
wedgeshaped cracks, induction of piping erosion 7−136799
Wells air turbine, inlet flow distortion, turbulence study 7−133033
wind turbines, aerodynamic loads on unit elements with vertical rotation axis 7−119619
wrinkled laminar flame, probability distrib. of the flame front 7−139014
yield-power-law fluids, non-Newtonian turbulent flow anal. 7−111037
Ar gas, convection and turbulence, transition to chaos 7−75575
H-air diffusion flame, turbulent, spectral and total radiation props. 7−113937
H_2 turbulent jet, supersonic combustion with cotraveling air jet 7−100564
He gas, from chaos to turbulence in Benard convection 7−137047
He, liquid, superfluid turbulence, imperfect pitchfork bifurcation with weak noise 7−134645
He, two-phase flow, optical measurements 7−111128
He-N_2 variable density mixing layer, second-order modelling 7−136824
^{4}He, superfluid, heat transport propag. 7−91907
^{4}He, superfluid, turbulent flow in superfilters, fountain effect pump limitations 7−67311
^{4}He, superfluid, vortex line density intrinsic fluctuations in superfluid turbulence 7−70009
^{4}He superfluid turbulence, plug motion in tube flow with nonuniform temp. profile 7−84427
^{4}He superfluid turbulence redistrib. processes in capillary flow 7−84426
^{4}He, turbulent flow through different narrow channels 7−111993
N_2O_4, turbulent flow not in chemical equilib., correls. for unsteady state heat transfer 7−117571

turbulence, atmospheric *see atmospheric turbulence*

turbulence in shear flow *see shear turbulence*

turbulent diffusion
aerosols, charged, turbulent diffusion of traveling wave 7−97510
chemically reactive flow, turbulent mixing, coupled integrodifferential eqns. soln. 7−75707
circular tube nonsteady turbulent heat transfer calc. allowing for heat flow in wall 7−117607
free-shear flow, turbulent diffusion, one-eqn. model 7−110944
Lagrangian analysis of turbulent diffusion 7−139635
Levy walks, turbulence and chaos appl. 7−80636
liquid metal mixing during costing, solidification and liq. alloy form. study 7−106500

turbulent diffusion continued
Martian atmosphere, eddy diffusivity from viscous model predictions for Hadley circulation 7−134164
mixed convection in turbulent boundary layer flow along vertical plate 7−110985
ocean surface layers, bubble clouds and temp. anomalies obs. rel. to turbulent diffusion 7−114791
particle transfer in field of turbulence, general algebraic methods 7−104259
passive scalars in homogeneous turbulence, vel. based mixing model 7−123614
point source of nonbuoyant plume, grid-generated water turbulence, diffusion process investig. 7−91107
propane, turbulent diffusion flame, chemical reactions and mixing process effects 7−100565
Rayleigh-Benard convection cell, diffusive transport 7−117603
relaxing boundary layer, calc. using Reynold's stress model *(German)* 7−136828
turbulent boundary layer, shear driven, transverse strain effect, laser Doppler velocimetry 7−69125
turbulent boundary layers, temperature-dissipation meas. 7−75540
wake flow, turbulent heat diffusion, model relations anal. 7−136829

turbulent flow *see turbulence*

turntables *see gramophones*

twin boundaries
characterisation using X-ray Buerger precession camera 7−97857
hexabromobenzene crysts., twin boundary laws, reciprocal space partitions and symm. 7−98173
martensites, dynamics, coherent twinning array, tetragonal-to-orthorhombic displacive transition 7−137372
mixed layer compounds, electron diffraction effects 7−130986
polytwin crystals, mag. domain struct. rel. to stack thickness *(Russian)* 7−112846
steel, austenitic stainless, annealing twin control 7−111576
steel, austenitic stainless, corrosion pitting behaviour, effect of carbide precip. *(Korean)* 7−78317
steel, austenitic stainless, recrystallisation annealing, plastic props., twin boundaries 7−132667
superconductive glassy state and extrinsic critical currents in high T_c oxides 7−143743
thick supercond. plate, heat capacity and proximity effect 7−125246
wall of elastic domains, dislocation representation 7−131153
Al, annealing twin morphology 7−76141
$AlPO_4$ α-berlinite, TEM obs. of lattice defects and water precip. 7−142786
Au crystals, small, high resoln. electron microscopy 7−111447
Au thin film, low-angle and twin boundaries, HREM obs. 7−98177
$BiVO_4$, twin domain wall, NMR study *(Korean)* 7−142889
Cr_7C_3, defect microstruct., electron microscopy, X-ray and electron diffr. studies 7−137371
Cu, annealing twin morphology 7−76141
Cu twin boundaries examination using Fresnel-fringe intensity methods 7−75951
Cu-Al, annealing twin morphology 7−76141
Cu-Ge, thermally induced FCC to HCP martensitic transform., TEM obs. 7−78005
Cu-Zn films, defects and elec. props. 7−92035
Fe-Cr-Ni-Co superalloy, Refractoloy 26, microstruct. and mech. props., effects of Co *(Chinese)* 7−144424
Fe-Ni-Cr, P segregation, depend. on grain boundary crystallography 7−113555
Fe_7C_3, defect microstruct., electron microscopy, X-ray and electron diffr. studies 7−137371
FePt polytwin crysts., mag. domain struct. and magnetisation reversal *(Russian)* 7−99487
GaAs bicrystal, low-angle and twin boundaries, HREM obs. 7−98177
KH_2PO_4 crystal, phase boundaries and twinning domain walls struct. 7−143026
$KLiSO_4$, twin domains and twin boundaries optical, pyroelectric and X-ray topographic studies 7−83968
K_2O-Al_2O_3-SiO_6 feldspar crysts., twin boundary laws, reciprocal space partitions and symm. 7−98173
K_2SO_4 crysts., twin boundary laws, reciprocal space partitions and symm. 7−98173
$LiRbSO_4$, elec. field-induced ferroelastic transform. twin struct., X-ray diffr. and polarising microscope obs. 7−77469
$PbCO_3$ cerussite crysts., twin boundary laws, reciprocal space partitions and symm. 7−98173
Si, bicrystal and polycrystalline, grain boundaries, EBIC and conductance meas. 7−125010
Si, EFG ribbons, struct. defect generation mechanisms 7−83813
Si ribbons, grown by various methods, cryst. struct., X-ray topographic obs. 7−83971
Si ribbons, RTR, cryst. defects, charact. and influence on ribbon cell performance 7−86015
Si shaped ribbon 7−85999
Si, twin boundaries, electronic properties, heat treatment effects *(French)* 7−124918
Si:Sn, B, ion implantation and annealing, shallow junction form. 7−76173
SiO_2, natural amethyst, Brazil twins, X-ray study 7−124286
$Tb_{0.3}Dy_{0.7}Fe_2$, single cryst., growth, Bridgman and float zone techniques, dendritic struct., twin-boundaries 7−86006
TbO_x, dynamic edge and surface processes, HREM studies 7−98662
TiAl, crystn., heat treatment, struct., phase comp. 7−144440
V, supercond., strained at 4.2 K, crit. fields and defect struct. *(Russian)* 7−92386
Y-Ba-Cu-O high T_c supercond., cryst. and defect struct., electron microscopy studies 7−117895
Y-Ba-Cu-O high T_c supercond., defects, TEM obs. 7−117934
Y-Ba-Cu-O high T_c supercond., twins, dislocations and phase comp., TEM study 7−117935
$YBa_2Cu_3O_{6.9}$, high T_c superconductor, microstruct., O ordering, planar defects 7−111499
$YBa_2Cu_3O_7$, high T_c supercond., shear transformation, twin formation 7−137374

twinning
see also twin boundaries
BCC derivative structs., twinning 7−131156
calcium oxalate monohydrate, contact and penetration twinning 7−142792
crystal twinning, new classification scheme 7−111581

twinning continued
crystalline solids, stress-induced cleavage microcracking, micromech. theories 7−97430
α-Cu-Al, cold-worked FCC alloy, lattice imperfections, X-ray diffr. study 7−137375
FCC, twinning and fracture, cracks rel. to grain boundary cohesion strengths *(Russian)* 7−113660
FCC derivative structs., twinning 7−131156
metal crysts., twinning plane superconductivity, (H,T) phase diagram meas. 7−105800
multiple twinning particles, lattice type identification 7−124282
phase determ. of twinned structures, isomorphous replacement method 7−75932
pseudo-merohedry, derivation of twin laws by coset decomp. 7−137292
quartz, twinning, effect of neutron and gamma irradiation 7−69715
quasicrystals, twinning mechanism *(French)* 7−142790
rare earth bromate enneahydrates, $R(BrO_3)_3.9H_2O$, R=La, Pr, Nd, Sm-Lu, optical biaxiality, twinning, struct. studies 7−104650
SOS epitaxial films, rapid thermal processing 7−70103
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
stearic acid, twinned crystal form. 7−124281
steel, austenitic Mn, Hadfield's work hardening, deform. twinning 7−113569
steel, austenitic stainless, annealing twin control 7−111576
steel, bainitic, HSLA, containing Si, tensile deform. 7−100301
steel, Fe-Ni-Mn, structure and mech. props., carbide intermetallic strengthening *(Russian)* 7−78103
steel, ferritic stainless, foils, H induced microtwinning, embrittlement mechanism, TEM obs. 7−76144
steel, ferritic stainless, high temp. mech. twinning, plastic deform. mechanisms 7−117938
steel, Mn-Mo-Nb, bainitic transform., microphase struct. 7−77999
structure refinement of twinned crystal data 7−83973
superconductivity, twinning-plane, review 7−143683
$(TSeT)_2I$ crystals, chirality and microtwinning 7−91551
Ag-Sb alloy deposits from ferrocyanide-thiocyanate electrolytes, structure and phase composition obs. 7−71152
Al, annealing twin morphology 7−76141
Al based metallic glasses, comp. choice, chemical twinning model 7−83736
Al-Fe rapidly cooled alloys decagonal quasicrystal and tenfold twins 7−104763
Al-Si eutectic alloy, Si cryst. growth, effect of twinning 7−77980
AlN epitaxial layers on R-plane sapphire, origin of $(1\bar{2}16)$-orientation 7−124750
$AlPO_4$ α-berlinite, TEM obs. of lattice defects and water precip. 7−142786
$AlPO_4$, berlinite, crystal growth and investigation *(Chinese)* 7−132431
Al_3Ti, plastic deform., 25-860°C 7−86290
Au crystals, small, high resoln. electron microscopy 7−111447
$BaTiO_3$ ceramics, (111) twin form. 7−142791
$Ba_2YCu_{3-x}O_{7-y}$, orthorhombic single cryst. supercond., twinning, polymorphic transform., X-ray diffr. study 7−98175
$Ba_2YCu_3O_{7-x}$, high T_c supercond., twinning 7−142794
$BiVO_4$, ferroelastic, twin struct., NMR, X-ray diffr. studies 7−91599
$CaCo_3$, calcite, mechanical twinning criteria 7−124283
CdTe epitaxial layers on GaAs (100) and (111) and CdTe (111), MOCVD grown, defect struct. 7−98726
CoPt polytwin systems, $L1_0$ type ordering, mag. domain structs., Kerr effect study *(Russian)* 7−105949
Cu, annealing twin morphology 7−76141
Cu-Al, annealing twin morphology 7−76141
Cu-Al, stacking faults, dislocation density, hardness rel. to annealing 7−111586
Cu-Al crystals, mech. twinning mechanisms, stacking fault energy, slip 7−76143
Cu-Al-Co-Sb, FCC, twinning and fracture, cracks rel. to grain boundary cohesion strengths *(Russian)* 7−113660
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7−78009
Cu-Ni (12.5, 27 wt.%), rolling texture development 7−100249
Cu-P (Ge), single crysts., dynamic recrystn. 7−126144
Cu-Sn(Zn)(Ni), cold worked, twinning after annealing 7−78044
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7−138784
Fe-Ni-C, martensitic transform., effect of solution strengthening of austenite *(Chinese)* 7−144395
Fe-Ni-C (24, 0.5 wt.%), melt spun ribbons, austenite decomp., metallography 7−100233
FePt polytwin systems, $L1_0$ type ordering, mag. domain structs., Kerr effect study *(Russian)* 7−105949
GaAs MBE layers on misoriented Si substrates, cryst. orientations and defect structs. 7−143282
$GaAs/(Ca,Sr)F_2$ heteroepitaxial layers, MBE grown, crystalline defects 7−112127
Ge epitaxial crystallisation on Si using electron beam evaporation and recrystallisation techniques 7−84605
Ho-Ba-Cu-O, high T_c supercond., structural props., TEM study 7−98090
InSe, containing stacking faults, exciton photoluminesc. spectra, X-ray diffr. studies 7−113253
$KAlGeO_4$, cryst. struct. refinement 7−76102
$KLiSO_4$, twin domains and twin boundaries optical, pyroelectric and X-ray topographic studies 7−83968
K_2O-Al_2O_3-SiO_2, feldspar, growth twinning mechanisms 7−104762
$LaNbO_4$ domain wall temp. depend. and ferroelastic twinning w.r.t. spontaneous strain 7−111744
$Li_3Fe_2(PO_4)_3$, monoclinic modification 7−83969
$LiKSO_4$ crystal, structure refinement of twinned crystal data 7−83973
Mg_2NiD_4, low temp. struct., X-ray and neutron diffr. studies 7−83892
Mg_2NiH_4, bonding, quantum chem. description, electron microscopy obs. 7−83837
NB, neutron irrad., mech. props. *(Japanese)* 7−93060
$NaNO_3$, phase transitions and twinning 7−132208
Nb, deformed, supercond. transition temp., US interaction and annealing effects 7−99251
Nb-V, H embrittlement, dislocation substructure, deform. twinning 7−78181
Nb-V, neutron irrad., mech. props. *(Japanese)* 7−93060
Ni-Ti, phase transform., in situ TEM obs. 7−77997
Ni-Ti (50.8 at.%), shape memory alloys, phase transform., elec. resist., TEM obs. 7−113553

twinning continued
$Ni_{80}B_{20}$, metallic glasses, structural model, chemical twinning 7−97967
Ni_3V alloys, cross slip of partial dislocations, stair-rod mode, zigzag propagation of deformation microtwins 7−91596
α-Np, twinning study using TEM and X-ray diffr. 7−76139
$Pb_{0.7}La_{0.3}TiO_3$, ferroelectric ceramics, min. grain size for domain form. and twinning 7−126082
Si (111), Pb^+ ion implantation, surface layer struct., after high temp. treatment 7−84461
Si, multiply-twinned particles, decahedral, gas evaporation 7−70994
Si, solar cells prepared from polycrystals grown by RAD technique, defects 7−86000
Si, spherical particles, crystal growth by gas evaporation 7−70993
Si, twinned growth in chill modified Al-Si eutectic, electron diffr. 7−100045
Si:B films, low pressure CVD grown, microstructure 7−106434
SiC:B, hot pressed, sintered, β to α phase transform., feather form. 7−86167
Ti alloys, martensitic transformations, computer simulation *(Chinese)* 7−71180
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7−86283
Ti, pure β-phase crystals, recrystallisation, annealing of wires, dislocations, synchrotron X-ray topography 7−98166
Ti, textured sheets, deform. behaviour in uniaxial tensile test, effect of twinning 7−144500
Ti-Al (7.5 wt.%), deform. mode rel. to injected He 7−119316
Ti-Al alloy, α-phase, deform. and failure in strong mag. fields, 293 to 4.2 K range 7−93052
Ti-Nb alloys, cold deform. mechanisms 7−86256
Ti-Ni single crystals, martensitic transform., crystallography 7−119269
TiH_2 ultrafine particles, H_2 gas evaporation, martensitic transformation 7−70995
TiO_2 bombarded with protons and deuterons, ion implantation effects 7−91613
Y-Ba-Cu-O, high T_c superconductor, electron diffr. study 7−137332
Y-Ba-Cu-O high T_c supercond. single crysts., H_{c2} anisotropy obs. 7−118744
Y-Ba-Cu-O system, high T_c supercond., microstruct. study of phases 7−117939
$YAlO_3$ doped single cryst., growth and struct. props. 7−132434
$YBa_2Cu_3O_7$, cryst. struct. of high-temp. superconductor 7−111501
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., critical current density determ. 7−143740
$YBa_2Cu_3O_{7\pm e}$, high T_c supercond., orthorhombic twins, oriented domains 7−142795
$YBa_2Cu_3O_{9-x}$, perovskite oxide superconductor, crystallography and microstructure 7−111467
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., microstruct., crystal symmetry and possible near cpds. 7−117853
α-Zr, texture form. due to rolling *(Russian)* 7−144428
Zr-Ti, struct. after quenching and tempering *(Russian)* 7−71218
ZrO_2-SiO_2 system, sol-gel prep., precip. ZrO_2 transform., fracture toughness *(Japanese)* 7−132614
ZrO_2-Y_2O_3 system, crystallography of cubic to tetragonal phase transform. 7−132613

twist boundaries
dislocation superlattice, X-ray diffraction, plane-wave image profiles 7−91598
strain energy, difference between misorientation dependences of tilt and twist boundaries 7−98176
structure ab initio determination by simulated quenching 7−117936
twist boundary, screw dislocation superlattice, X-ray diffraction, superstructure factor 7−91597
Ag, localised secondary grain boundary dislocations in (001) twist boundaries, TEM study 7−124285
Al bicrystals, tensile deform., {111} twist grain boundary recrystallisation 7−132653
Au, localised secondary grain boundary dislocations in (001) twist boundaries, TEM study 7−124285
$BaTiO_3$ ceramics, coincidence site boundary, high-resolution TEM study 7−137370
Cu/Ni system, low energy grain boundaries, determ. by rotating-sphere-on-plate method 7−142789
FeSi bicrystals, intergranular SCC, nucleation and growth rel. to slip 7−138907
Ni-W-Cr, single cryst., high temp. creep, γ′ phase subgrain boundaries, TEM 7−78139
ZnS, crystal whiskers, struct. and twist, X-ray topography studies 7−143302

twistors *see magnetic storage*

two-dimensional digital filters
interferograms, anal. using MIDAS image processing system 7−134847
microscopic acoustic holography, signal processing and image reconstruction 7−123350

two dimensional electron gas field effect transistors *see high electron mobility transistors*

two-dimensional spectra
coenzyme B_{12}, base-off form, soln. behaviour, 2-dimens. NMR 7−74671
desertomycin, antibiotic, mol. struct., 2D NMR investig. 7−68345
lysozyme, hen egg white, 2D heteronuclear chem. shift correl. 7−68479
octahydroindoles, 2D NMR 7−96745
organs, human, normal and pathological, phase-encoding ^{31}P NMR obs. 7−133338
ploybutadiene-dihalocarbene adducts, 2D NMR study 7−91471
polycrystalline solids, heteronuclear bond distances, NMR 7−132139
polyurethane-polystyrene-co-styrene sulphonic acid. H^+ transfer, NMR obs. 7−90217
proteins, 2D NOE spectra, simplification by ^{13}C labelling 7−78755
proteins, ring-current shifts interpretation 7−90460
proteins, structure and interactions, sequential NMR assignments and isotope labelling 7−93639
pure absorption 2D spectroscopy using complex Fourier transformation in both dimensions 7−89236
retinyl Schiff bases, 2-photon, ^{13}C and 2D ^1H NMR 7−90199
trimedlure-Y, ^{13}C and ^1H chemical shift assignments and conformation confirmation, 2-D NMR 7−122574
Ge-substituted silicate cages, ^{29}Si 2D NMR 7−90197

o-dimensional spectra continued
Na, 2-D laser-induced fluorescence detection system for MHD combustion gas plasma 7−142510
ZrO_2, partially stabilised, stress-induced monoclinic phase, 2D Raman obs. 7−70810

o-dimensional spectroscopy
antisymmetric two-dimensional NMR spectra 7−89232
composite pulses in multiple-quantum NMR 7−67355
double-quantum filtered COSY expts., decoupling, excitation, NMR 7−67357
fluorescence, Fourier transform based pattern recognition algorithm 7−102533
Fourier transform ion cyclotron reson. mass spectrometry 7−115980
heteronuclear spin systems, Overhauser expts., T_1 determ. 7−108606
hexane, partially oriented, conformational probabilities, dipolar couplings assignment, 2D NMR 7−109930
NMR, cross-peak fine struct. simulation 7−128612
NMR signal convolution by digital signal processing 7−67358
rotating frame NMR spectroscopy, separation of cross-relax. and J cross-peaks 7−73385
total luminescence spectroscopy, appls. 7−108666
two-dimensional homonuclear multiple-quantum spectroscopy, ω_1-scaling pulse sequences 7−121169

o-phase flow
1D two-phase flow characts., effect of particle volume changes 7−117651
aerated agitated water tank, relation between mass transfer and sound spectra 7−142356
aeration, deaeration, and flooding of fine particles 7−91193
aerosol streams, degree of dispersion, electrohydrodynamic method 7−136962
aerosols, ultrafine, deposition in human respiratory tract 7−126856
air flow over wavy pool, spray generation and interfacial stress model 7−111079
air-mineral oil system, two-phase downflow, flow patterns 7−91200
air-solid flow through return bends, press. loss study 7−91202
air-water flow, tomographic reconstruction of the density field using radial polynomials 7−130778
air-water flow in horizontal pipe, press. drop meas. 7−142352
air-water horizontal two-phase flow, wall press. fluctuations 7−142353
air-water interface in horizontal tube, behaviour after step change of air flow 7−75650
air-water mixture, plug and annular flow drag study 7−83308
air-water system, tomographic reconstruction of the density distribution using direct fan-beam algorithms 7−111081
air-water two-phase flow in air-lift system 7−121087
annular mist flow in vertical pipes, mechanistic model 7−130767
atomised liquid fuel self-ignition in shock-compressed gas, gas temp. depend. 7−100568
blunt body, dusty hypersonic flow, boundary layer struct. particle effects 7−136921
boiling front propag. in vertical superheated liq. column 7−98415
boiling of underheated liquid with forced motion study 7−136984
boiling two-phase flow, thermohydraulic instability due to vapour blockage 7−91235
Boltzmann equation and kinetic theory anal. *(Chinese)* 7−123706
bubble boundary layer on electrode of conduction MHD channel 7−123720
bubble column, with paraffin wax liquid medium, flow regime transitions 7−123712
bubble flow in Hele-Shaw cell, surface tension depend., num. soln. 7−91205
bubble-driven flow in axisymmetric container, num. model 7−104329
CANDU PHWR, stagnation feeder breaks, initial discharge rate calcs. 7−96299
CANDU reactor pumps, mechanistic model for two-phase behaviour 7−102970
cavity, square, 2D, flow visualisation and numerical calcs. 7−75712
charged particles, turbulent flow, electrostatic precipitation, asymptotic description 7−136810
CIBEX heat exchanger, flow, two phase equations of motion 7−136981
circular cylinder, unsteady flow of a dusty fluid, flux and drag 7−97632
cocurrent vertical two-phase nonboiling flows, heat transfer 7−123708
coherent velocity oscillations in detached flows and planar turbulent mixing layers 7−75537
condensation models in presence of noncondensable gas 7−73934
condensation nuclei, expansion counter, size distribution effect on pressure 7−136975
condensing vapour in tubes, heat transfer 7−136968
conductivity in magnetic field *(French)* 7−123770
contact gas-liquid heat exchangers, heat and mass transfer 7−136835
continuous flow systems, mass transfer, boundary conditions 7−69249
crater bed combustor, operation and scale up limitations 7−97643
critical two-phase flow through pipes 7−104343
cryogenic expansion machines, thermodynamic anal. of nonequilibrium 2-phase flows 7−117648
cylinder, vertical, dusty viscous drainage film profiles 7−130781
cylindrical enclosure for gas/soot mixture, radiative and convective transfer 7−111118
diffuser channels, cavitation and turbulent separation model study 7−136945
disks, elastic circular, plane flow, balance laws and constitutive relations 7−117655
disperse systems, polyhedral, hydrodynamics, kinetics under spontaneous breakdown conditions 7−114014
dispersed systems, effective continuous medium, struct. anal. and flux modification 7−130780
downward gas-film flow heat transfer rel. to LF flow-rate oscillations 7−75655
droplet dynamics in vertical gas-liquid annular flow 7−130768
droplet sizing interferometry comparison of visibility and phase/Doppler techniques 7−108509
drops of rainwater falling through atmosphere, shape theory 7−145619
dust flow, reflected particle surface screening 7−97611
dusty gas flow through metallic/insulating pipes, static electrification study *(French)* 7−142382
dusty viscoelastic liquid, unsteady flow between two oscillating plates 7−104333
electrical impedance method for measuring 2-phase flow, void fractions and bubble sizes 7−67931

two-phase flow continued
emulsion phase, in fluidised beds, gas bubble hold-up and axial dispersion coeff. 7−123733
FBR, steady state and transient sodium boiling experiments in a 37-pin bundle 7−73918
fibrous filters, electrostatically enhanced, for dust deposition 7−111092
flashing flow in horizontal duct 7−111064
fluid sphere translating in quiescent medium, eqns. of motion soln. 7−83316
foam in vertical tubes *(German)* 7−83320
gas suspension in pipe, swirling flow, heat transfer 7−111096
gas-agitated liq. reactor, buoyancy-induced flow simulation 7−111070
gas-droplet turbulent isothermal polydisperse jet study 7−136949
gas-liquid bubbly flow, water hammering anal., transient press. profiles 7−75647
gas-liquid flow in channel with rod bundle, hydraulic resistance, turbulators effect 7−136819
gas-liquid flow in vertical pipe, volumetric fractions of each phase 7−83318
gas-liquid flow through pipe bends 7−111069
gas-liquid stratified flow in horizontal pipe, wall and interfacial shear stress 7−91188
gas-particle flow in pipes, mixing length model 7−91203
gas-particle mixture, nozzle theory inverse problem soln. 7−111077
gas-particle system, shock wave propag., particle fusion 7−75617
gas-solid mixtures, flow stability, continuum-discrete model 7−75657
gas-solid pipe flow, laser anemometry study *(French)* 7−91265
gas-solid system pressure drop correlations evaluation 7−97609
gas-stirred metallurgical reactor, bubble driven flow, K-E turbulence model calcs. 7−104328
gas/liquid film flow obs., nonintrusive optical meas. technique *(German)* 7−123798
gas/liquid pipe flow, press. drop correl. 7−104330
granular flow, binary mixtures of spherical particles, kinetic theory 7−91182
granular flow, collisional stress tensor, microstructure development effect 7−91183
granular flow with rough inelastic particles, kinetic theory 7−117656
granular materials, shear flow, balance laws, constitutive relations and boundary conditions 7−136985
heat exchange absence between phases in 2 phase flow, thermodynamic estimation 7−83315
heatup of initially isothermal fluid in enclosure with semicond. boundaries 7−83224
heavy-particle flow in light gas, relax. differential collision operator reliability 7−117646
Hele-Shaw cell, bubble stability surface tension affect 7−142362
Hele-Shaw cell, finger shape, thin film variation and transverse curvature 7−143134
Hele-Shaw cell, narrow fingers, dendritic instability 7−143133
heterogeneous media, detonation wave, stationary zone and relax, instability 7−75705
homogeneous solids, deflagration, two-phase flow influence 7−86628
horizontal annular two-phase flow modelling developments 7−91196
horizontal flow boiling of pure and mixed refrigerants 7−110957
horizontal separator, two-phase flow, motion of heavy pellets *(Chinese)* 7−91187
horizontal tube banks, natural convection, gas release at walls effect 7−97517
horizontal tube bundles, flow pattern and heat transfer of evaporating two phase flow *(Japanese)* 7−130708
ideal fluid potential flow, hydrodynamic particle interactions 7−130770
incompressible medium flow, 2-phase boundary layer calc. 7−117649
induction channel furnace, metal movement 7−137030
inhomogeneous dust-gas mixture, shock propag., numerical modelling 7−130740
interaction of spheres in subsonic low-density flows 7−83307
interfacial forces for two-phase flow calcs. 7−137666
interphase surface effect in problems on mixing displacement of multicomponent systems, num. modeling 7−111076
inverted annular flow film boiling; convective heat-transfer coeffs. study 7−97607
Kallodoc bead suspensions, non-Newtonian behaviour study 7−100632
kaolin, aq. slurry containing NaOH, laminar falling film absorpt. of CO_2 7−91962
LINK RETACT code for TMI-1 advanced simulator 7−96154
liquid and gas, opposing film flows, combined heat and mass transfer 7−83312
liquid dispersed-film boiling in channels, heat transfer 7−136964
liquid foams, flowing in pipes, visco-elastic aspects appl. 7−91190
liquid fuel-oxidant bubble systems, detonation, self-sustaining regimes 7−117622
liquid metal MHD power conversion expts. in Israel 7−93514
liquid rapid decompression, mass transfer-controlled bubble growth 7−97602
liquid-drop radiator, transient radiative cooling, separation of variables soln. 7−110764
liquid-gas foams, bubble size distrib. in pipe flow 7−130772
liquid-liquid-solid fluidised beds, dispersed phase hydrodynamic characts., mass transfer 7−97617
liquid-metal two-phase flows, transverse magnetic field effects on phase distrib. 7−103031
liquid-solid filtration, flow-inhibiting boundary layer form. kinetics 7−130769
liquid-solid flow in vertical pipe, volumetric fractions of each phase 7−83318
LMFBR, fuel pin bundles, transient two-phase flow, BACCHUS-3D/TP program 7−73915
local void fraction meas. in two-phase flow, using fibre optic sensor *(German)* 7−97163
loosely packed granular media, vertical shaft, shear flow, plug flow, energy transport *(German)* 7−123728
LWR hot-leg U-bend two-phase flow, simulation expts. for small break LOCA 7−81490
LWR pipe rupture, homogeneous flow model of two-phase jet impingement 7−89599
macromolecular reagents of flotation, hydrodynamic mechanism 7−136963
magnetised particle rot. in elec. cond. viscous medium *(Romanian)* 7−136873
metal powders, dry cohesionless, rapid shearing flow study 7−75733

two-phase flow continued
metal surface evaporation intensity investig. 7−130745
multi-phase flow, conf., The Hague, Netherlands (May 1987) 7−95096
multispecies solid-gas flows, wall friction modeling 7−69251
Navier-Stokes eqns., Reynolds averaged, soln. in general curvilinear coordinates, appl. to vehicular dynamics 7−97483
non-intrusive measurement of solids mass flow in pneumatic conveying 7−130804
non-Newtonian suspension, flow potentials in viscometer channel 7−111040
noncondensible gas fractions determ. at elevated temp. and press. using wet and dry bulb temp. meas. 7−111085
nonequilibrium turbulent recirculating two-phase flow, computational modelling 7−91192
nonequilibrium two-phase flow, 1D, anal. using control volume method, reactor appl. *(Japanese)* 7−116630
nonideal solutions, dissoln. kinetics monodisperse system of particles in laminar flow, mol. diffusion and surface renewal 7−76417
nonscattering particle-laden flow, cell model for estimating radiative heat transfer 7−111084
nuclear thermal hydraulics problems, multifield methods 7−97614
oil-water separation by vortex in stirred draining vessel 7−123646
one-component two-phase bubbly flow, shocks, transient press. profiles 7−75649
parallel flat plates, vapour flow, vapour condensation mechanism, flow field characteristics 7−136982
partial differential eqn. modelling, nonlinear periodic waves, perturbation anal. 7−134520
particle bearing gas flow in nozzle and jet, radiant heat transfer 7−123726
particle concentration, drag depend. 7−91210
particle effects on free jet entrainment 7−123695
particle sampling in supersonic streams with a thin-walled cylindrical probe 7−130766
particle transfer in field of turbulence, general algebraic methods 7−104259
particles suspended in liquid, separation by nonuniform travelling field 7−111074
particulate phases in turbulent tube flow, state and transport anal. 7−111082
passive solute dispersion in laminar pipe flow, closure model *(French)* 7−123718
phenol, oxidation in aq. media in jet-shear mixer two-phase reactor 7−91260
plastic material erosion by gas-particle flow, surface instability, mathematical model 7−69107
plateau border flow 7−104331
polyethylene, two-phase extensional flow, fibrous crystals form. 7−97902
polymers, adsorbed on spherical particles, effects on fluid dynamics 7−91204
pool boiling heat transfer from GEWA surfaces in water and R-113 7−97535
porous media, remarks on Darcy law *(French)* 7−97620
powder flow, discrete particle-wall interactions 7−91036
pulsatile blood flow through arterioles, vascular deformability effect anal. 7−145126
PWR LOCA, reflood chimney effect, two-dimens. phase separation study 7−96268
PWR reflood phase, two-phase flow meas. in upper plenum 7−81575
PWR test facility, CATHENA simulation of two-phase thermosiphoning 7−96295
PWR-LOCA, cross-flow rate during reflood phase 7−89637
random media, transient two-phase flow synthesis 7−79408
rarefaction waves in liquid and gas-liquid media 7−97554
reactor coolant boiling, interpretation of acoustic signals using electrical models *(German)* 7−103033
reactor thermal hydraulic behaviour, modified drift-flux model and weir model for two-phase flow 7−81489
reciprocating plate columns, axial mixing and scale-up 7−123750
Rivlin-Ericksen fluid, dusty, MHD flow through confocal elliptical ducts 7−69274
rod bundle, steam-water two-phase flow, pre- and post-dryout heat transfer 7−103037
Saffman-Taylor problem, solvability theory, quantitative test 7−117652
secondary flow effects in high tip speed free convection 7−110976
slurry flow, horizontal pipes 7−123754
slurry pipeline flow, local solid concs., cond. probe meas. 7−97608
small particle motion in viscous flow past many square cylinders 7−75648
snowflake impaction car windshields, fluid flow and particle trajectories 7−80228
solid bodies suspended in mag. liq. in homogeneous mag. field *(Romanian)* 7−137029
solid particle migration in shear flow, local instabilities 7−136961
solid particle-gas suspension, non-Newtonian flow, eddy viscosity and mixing length distrib. 7−69226
solid particle-gas system, turbulence, local phenomenological props. 7−83306
solid-gas two phase flow modelling and appl. to fluidised bed *(French)* 7−123717
solid-liquid slurries, surface tension 7−91189
solid-liquid systems for transportation of solids, flow behaviour *(German)* 7−83319
solid-liquid two-phase flow, turbulence, laser Doppler velocimeter *(Japanese)* 7−97665
solidification interface shape, freezing in plane channel flow with wall cooling 7−142959
solids, suspended, hydraulic transport in horizontal pipeline, press. gradients calcs. 7−91224
solids flow velocity profiles in mass flow hoppers 7−91194
soot aerosol, evolution is counterflow diffusion flame 7−104332
soot from premixed flat flame, radiation props. 7−104370
sphere assemblies, inelastic in shear flow, stress calcs. 7−91184
spherical drops, coalescence eqn. collision integral invariants calcs. *(Russian)* 7−123727
spherical particle motion in cellular flow field 7−123721
spherical particle motion in viscous fluid Stokesian flowfield, Stokes and Saffman force correction 7−111071
stagnant liquid, drift-flux parameters for upward gas flow, reactor appl. 7−135462
static bed, solvent recirculation and longit. mixing, solvent extraction 7−130775
two-phase flow continued
steady film condensation and boiling over arbitrary shape body in porous medium 7−130774
steady supersonic vortex flow, aerosol particle motion, method of characteristics solutions 7−136923
steady-state models, trajectories and singular points 7−123714
steam-air mixture, dropwise condensation, air traces estimation 7−106857
steam-air mixtures, dropwise condensation, air traces determ. 7−97601
steam-water coolant circulation loop, pressure loss, coolant props. charge study 7−97599
steam-water stratified countercurrent flow, flooding and hysteresis effects study 7−73952
steam-water stratified flow in horizontal pipe, phase and vel. distrib. 7−91228
stratified, flow model, linear stability anal. 7−91195
stratified cocurrent two-phase flow in horizontal tubes, condensation heat transfer 7−130763
stratified gas-liquid flows, interfacial waves influence 7−111063
supersonic, thermoerosive action modeling 7−111024
supersonic nozzle flow of gas-particle mixture, num. anal. 7−91179
suspensions, non-dilute, transport props., renormalisation studies 7−111066
symmetric Saffman-Taylor finger in Hele shaw cell, analytic theory 7−130779
Taylor bubbles in laminar and turbulent flows, mass transfer study 7−97600
thermal-hydraulic systems, equation of state, rate form 7−96253
thermogravitational and thermocapillary convection heat transfer in concentric and eccentric horizontal, cylindrical annuli filled with two immiscible fluids 7−69143
thermosiphons, liquid-vapour countercurrent flow, choking 7−136971
total pressure loss in supersonic nozzle flow with condensation *(Japanese)* 7−111054
transient flow in steam-generating channel 7−136972
transient multidimensional thermohydraulic flow problems in complex geometries, COMMIX-2/KfK program 7−73916
TREAT code, validation against plant data 7−96176
trickle beds, pulsing flow, mathematical modeling 7−111104
turbulent bubbly two-phase flow, turbulence struct. and phase distrib. meas. 7−97606
turbulent circulation in bubble columns 7−110926
turbulent two-component vertical bubbly flow, skin friction and heat transfer anal. 7−97503
turbulent two-phase flow meas., laser-fluoresc. technique 7−97651
turbulent two-phase suspension flow, dil., particle drag 7−91199
turbulent two-phase suspension flow in vertical pipe, flow struct. 7−91198
two-dimensional body submerged beneath surface waves, classical hydrodynamical problem 7−75603
two-layer fluid, plane steady wave existence prediction 7−117618
two-phase flow in vertical heated tubes, two-dimens. model calcs. 7−97604
two-phase mixture unsteady flow in heated duct, appl. to reactor coolant 7−109338
van der Waals fluid, vanishing viscosity-capillarity approach to Riemann problem 7−136907
vapour-droplet flow in 3D nozzle, transonic flow study 7−111019
vapour-gas mixture, turbulent, heat and mass transfer in film condensation 7−104252
vapour-liquid flow, adiabatic boiling and flashing flow study 7−111072
vertical heated tube, two-dimens. model 7−97603
vertical upward flow patterns, transition criteria study 7−97605
viscous incompressible two-phase flow around 2D cylinder 7−104326
wall to liquid mass transfer and hydrodynamics of two-phase Couette-Taylor-Poiseuille flow *(French)* 7−111068
water, boiling heat transfer, N_2 dissolution effect 7−136837
water drops in free fall, coalescence charge effects 7−104334
water-granule mixture, parallel flow under gravity, continuum modelling 7−91185
water-granule mixture, parallel gravity free surface and channel flows 7−91186
water-steam (air), two-phase flow in horizontal pipe, press. drop, void fraction 7−91201
wet steam flow, unheated horizontal pipes, hydraulic drag eqn. 7−83309
wet steam flow in pipe and annulus, holographic diagnostics 7−136967
wet steam in pipes, nonequilibr. slug flow diagnostics and struct. 7−137004
wet steam turbine blades erosion, Monte Carlo method calcs., 7−83310
wet-steam, mathematical model of transients occurring in multiple forced circulation loop 7−117647
CO_2 two-phase flow gasdynamic laser, optimum performance, determ. 7−110319
CO_2-BNi, gas-solid mixture, spectral emission meas. 7−111083
H_2+liquid O_2 spray, detonation wave, unidimens. stability 7−97570
H_2O vapour, nonequilibr. dispersed two-phase flow, Raman scatt. 7−129720
He flow for cooling scheme, pressure drop investig. 7−67334
He, two-phase flow, optical measurements 7−111128
He two-phase flow in superconducting rotor 7−67337
He, two-phase flow in vertical channels, heat transfer 7−136852
Hg-H_2SO_4 electrolysis, axisymm. surface-tension driven flow study 7−100582
^{192}Ir 6-channel γ densitometer application *(German)* 7−130771
N_2, two-phase flow in vertical channels, heat transfer 7−136852
N_2-BNi, gas-solid mixture, spectral emission meas. 7−111083
N_2O_4 liq. flow, flashing study 7−111843
Na heated evaporator, theoretical considerations of boiling under high heat flux conditions *(French)* 7−109335

two-phonon processes *see phonon-phonon interactions*

two-photon spectra
alkyl iodide and substituted alkyl iodides, photodissoc., two-photon VUV laser induced fluoresc. detection 7−90242
aniline, two-color photoionis. spectra 7−110018
aromatic molecules, microsolvation, spectroscopic investig. 7−129823
atomic ions in closed 2-D trap, two-photon absorp. 7−129678
atomic one- and two-photon excitation, parametric wave mixing, quantum statistics 7−103454
atomic photon correlation and resonance fluorescence in bichromatic field 7−103429
atomic targets, electron scatt., two-photon transition, mixed-gauge representation 7−68270

o-photon spectra continued
benzene, ground state, a_{2g} mode, two-photon fluoresc. spectra 7−122599
benzene, ground state, harmonic force field 7−136028
benzenes, monosubstituted, two-photon thermal lensing spectrosc. 7−68289
collision-induced two-photon absorption of ultrashort light pulses 7−122484
corrections to two-photon Honl-London factors 7−117036
cycloheptatrienes, fast internal conversions investigated by multiphoton ionisation 7−96797
N,N-dimethyl-acetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7−90294
fluoroform-d_1, IR multiphoton excitation dynamics study 7−74597
high-symmetry molecules, two-photon spectrosc. 7−109869
iodomethane-$d_0(d_3)$, photoacoustic spectrometer for nonradiative relaxation detection 7−102538
methane-d_4, IR multiphoton excitation dynamics study 7−74597
methane-NO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
N-methylacetamide, amide groups, UV reson. two-photon ionisation, TOFMS anal. 7−90294
2-methylnaphthalene, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
molecules, cooperative mean-freq. absorpt., two-beam two-photon process 7−82305
naphthalene ions, supersonic beam, reson. ion dissoc. spectroscopy 7−141638
optical anisotropy near a two-photon resonance induced by a linearly polarized coherent pulse 7−141642
ozone, IR multiphoton excitation dynamics study 7−74597
phenetole, two-color photoionis. spectra 7−110018
phenetole ions, laser-induced dissoc., appearance energies determ. 7−110032
phenol, two-color photoionis. spectra 7−110018
radiation-molecule interactions, mol. QED, book 7−134377
Raman processes, two-photon optical bistability obs. 7−97072
retinal, two-photon absorpt. spectra and polaris. *(Japanese)* 7−129694
retinyl acetate, two-photon absorpt. spectra and polaris. *(Japanese)* 7−129694
retinyl Schiff bases, 2-photon, ^{13}C and 2D ^{1}H NMR 7−90199
semiconductor crysts., direct and indirect two-photon absorpt. processes, perturbation calcs. 7−77489
symmetric top mol., Coriolis coupling effect on time-resolved two-photon ionisation 7−141632
three-state model, driven by two laser beams 7−122651
triptycene, electronic states, two-photon UV excitation spectra, polarisation depend. 7−68335
two discrete states, stability against radiative decay and photoelectron spectra 7−103448
two-level system, interaction with two intense fields, absorptive response, dispersion profiles 7−141951
two-photon two-level media, multiwave mixing, quantum theory 7−96965
Al, isotope shift, HFS, Doppler free two-photon laser spectra 7−74515
Ar, energy level determ. by 2-photon reson. spectrosc. 7−103419
Ar, two-photon reson. spectra 7−116925
Ba neutral atoms, double Rydberg spectroscopy, two-step two-photon laser excitation 7−109830
Be-like ions, two-photon magnetoelectric transitions 7−122483
benzene-Ar complex, zero kinetic energy photoelectron spectra, ionisation energy determ. 7−96789
Br_2, ion-pair state investigated by state-selective spectroscopy using sequential two-photon transitions 7−96714
CS_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
Cs, frequency upconversion from 10 μm atm. window to visible, third-order nonlinear susceptibility *(Japanese)* 7−97088
Cu, two step excitation, radiative lifetimes, UV spectra anal. 7−116901
DCl, resonantly-enhanced UV two-photon spectra 7−96810
Ga, isotope shift, HFS, Doppler free two-photon laser spectra 7−74515
H, Lamb shift, CW two-photon spectra 7−116928
H, photoionisation, continuum-state selectivity in Stark fields by charge-shape tuning 7−68382
H_2, high singlet np Rydberg states, multiphoton excitation 7−74723
H_2, Rydberg states, field ionisation threshold study 7−136019
H_2 sensitive detection by two-photon excited laser-induced fluoresc. 7−103684
H_2, two-photon absorptivities, CI expansion technique calc. 7−74722
HBr, photodissoc. kinetic and internal energy distribs. determ. 7−122644
HCl, resonantly-enhanced UV two-photon spectra 7−96810
$H_2O(D_2O)$, sensitive quantum state selective detection by (2+1) reson. enhanced multiphoton ionisation 7−117032
H_2S, photodissoc. kinetic and internal energy distribs. determ. 7−122644
Hg, two-photon-resonant frequency conversion, amplified spontaneous emission effects 7−141939
I_2, vibrational spectrum, single- and two-photon absorpt., laser photoacoustic spectroscopy 7−141589
K resonance effect in two photon absorption using intraresonator laser spectroscopy 7−109849
KCl, extension to vacuum UV, using synchrotron radiation 7−128679
Kr crystals, pure and doped, two-photon absorpt. coeff. power depend. studies 7−77491
Kr, energy level determ. by 2-photon reson. spectrosc. 7−103419
Kr, two-photon reson. spectra 7−116925
KrNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
N_2+CO, rovibronic energy transfer, laser REMPI spectroscopy investig. 7−129850
NO_2 photodissoc., photofragments, ang. distribs. 7−86654
NO_2, two-photon dissoc., photofragments, ang. distribs. 7−86653
NO_2, two-photon photodissoc. dynamics 7−110044
Na atoms, two-photon excited parametric emission 7−130248
Na, cascade system, two-photon-induced saturated dispersion at glass-vapour interface 7−68268
Na, frequency upconversion from 10 μm atm. window to visible, third-order nonlinear susceptibility *(Japanese)* 7−97088
Na two-photon change in picosecond pulse polarization 7−90079
Na, vapour, UV emission under tunable dye laser pumping 7−122423
Na_3, vibr. ground-state level, two-photon ionisation spectrum 7−110052
NaCl, extension to vacuum UV, using synchrotron radiation 7−128679
NaF:Cu^+, ^3E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922

two-photon spectra continued
NaK, $C(3)^1\Sigma^+$ state, laser-induced fluoresc. and two-photon ionis. spectroscopy 7−129801
O adsorbed layer on Cu (111), two-photon photoemission from adsorbate-induced states 7−77765
O_3, strong laser field absorpt., vibr.-rot. transitions, IR spectra study 7−74605
OH, two-photon absorptivities, CI expansion technique calc. 7−74722
Pd (111), band struct., angle-resolved two-photon photoemission spectra study 7−144236
Rb-He vapour mixture, two-photon excitation, stimulated processes 7−123102
RbBr:Ag^-, two photon absorpt. of Ag^- centres, luminesc. obs. 7−138497
SF_6, IR multiphoton excitation dynamics study 7−74597
Si, picosecond laser pulse-generated high-density plasma kinetics simulation 7−105605
$SrTiO_3$ cryst., band struct. change during cubic-tetragonal transition, two-photon absorpt. spectra 7−118360
Tl, isotope shift, HFS, Doppler free two-photon laser spectra 7−74515
Xe crystals, pure and doped, two-photon absorpt. coeff. power depend. studies 7−77491
XeNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301

two-photon spectroscopy
frequency-modulated dye laser used for Doppler-free absorption spectroscopy 7−140753
molecular beams, laser spectroscopy with sub-Doppler resolution study 7−96646
photoacoustic spectrometer for nonradiative relaxation detection 7−102538
polarisation modulated two-photon spectroscopy 7−134851
reactive transients detect. in flames, laser spectroscopic techniques *(German)* 7−132997
vacuum UV, using synchrotron radiation 7−128679

two-term control
total artificial heart, microcomputer-based self-tuning PI control system 7−119901

TWT *see travelling-wave-tubes*

Tyndallometry *see turbidimetry*

type I superconductors
see also intermediate state
anisotropy effects in superconductors down to millikelvin temperatures 7−131931
nonuniform state relax. *(Russian)* 7−92356
parametric models, non-local, using material eqns. *(Russian)* 7−143684
Pb, bimodal stress relax., superconducting and normal state 7−86242
Al, granular, absence of supercond. 7−131860
Al, granular, quasireentrant superconductivity near metal-insulator transition 7−143676
Al superconducting thin film/magnetic insulator contact, density of states, Zeeman splitting, spin polarised tunnelling studies 7−131915
Al, superconductor, prohibited band, neutron groups and anisotropy, temp. depend. calc. *(Spanish)* 7−118356
Al thin films and narrow wires, localisation and supercond. fluctuations 7−70479
Al:Au(Pd), superconducting films, metal-insulator transition 7−125185
Al:Si, ion implantation effect on low temp. props. 7−142815
Al/rare earth oxide interface, magnetic proximity effect obs., spin-polarised electron tunnelling study 7−112682
AlH_2, supercond., electron-phonon coupling 7−99254
Ba, superconductivity and electronic struct. under high pressures *(German)* 7−118649
Be films, ion beam sputtered, superconducting crit. temp. 7−70446
Be superconducting films, ion beam sputtered, props. study 7−131845
GeTe, amorphous, press.-induced superconductivity and metal-insulator transition *(Russian)* 7−112542
In, doped, electronic topological transitions, electron scatt. *(Russian)* 7−92694
In, doped and undoped, intermediate and superconducting states, collective excitation modes 7−125254
In films, supercond. quantum size effect 7−70487
In microbridges, phase-slip centres 7−143715
In, superconducting thin film, domain struct., Anderson localisation, He both boiling study 7−85210
In weakly coupled superconducting particles, resistive state, superconductivity destruction 7−118618
$(Li_{0.65}Na_{0.35})_{0.9}Mo_6O_{17}$ single cryst., superconductivity, electron tunnelling study 7−112703
Nb, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
P, simple cubic metal, electronic band struct. and T_c calcs. 7−137794
Pb, dislocation interactions in supercond., intermediate and normal states *(Russian)* 7−112539
Pb, doped and undoped, intermediate and superconducting states, collective excitation modes 7−125254
Pb, superconducting, US attenuation of longitudinal and shear waves 7−105836
PbTe:Tl MBE film, supercond. transition props. study 7−131853
Sn/SnO_x/Sn small Josephson tunnel junctions, charging energy and phase delocalisation studies 7−112701
Sn-Ge granular system, supercond. transitions *(Russian)* 7−92324
Sr, superconductivity and electronic struct. under high pressures *(German)* 7−118649
Su, ultradisperse superconductors, coherent phenomena *(Russian)* 7−138152
Ta, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
V, superconducting, anisotropy effects down to millikelvin temp. range 7−77171

type II superconductors
see also magnetic superconductors; mixed state
A15 multifilamentary supercond. form., solid state reaction and transform. kinetics 7−106466
A15 superconductors, fabrication techniques, review 7−126047
A15 superconductors, neutron irrad., transition temp. and critical currents 7−105776
AC losses, surface barrier effects 7−105868
anisotropic dirty type II superconductors, flux pinning by varying electron mean free path calcs. 7−131947

type II superconductors continued
anisotropy effects in superconductors down to millikelvin temperatures 7−131931
anomalous behavior of superconducting samples with a fixed number of vortices 7−143738
$Ba_2RCu_3O_{9-\delta}$, R=Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb,Lu, high T_c superconductivity obs. 7−118659
β-(BEDD-TTF)$_2I_3$, self-consistent band struct. calcs. using local density approx. 7−118357
(BEDT=TTF)$_2$X salts, superconductors, structural phase transitions 7−84252
β-(BEDT-TFF)$_2I_3$, high T_c superconductivity, anion alloying and solvent effects 7−77142
β-(BEDT-TTF)$_2AuI_2$, mag. and high press. cond. meas. 7−85172
(BEDT-TTF)$_2I_3$, α- and β-phases, intermolecular contact directions rel. to magneto-effects 7−85197
β-(BEDT-TTF)$_2I_3$, direct detect. of supercond. β-1.5-β-8 phase transition 7−99308
β-(BEDT-TTF)$_2I_3$, high T_c supercond. state and normal state cond. anisotropy study 7−77140
β-(BEDT-TTF)$_2I_3$, high-and low-T_c superconducting phases study 7−77141
(BEDT-TTF)$_2I_3$, mol. vibrs., Raman spectra study 7−85675
β-(BEDT-TTF)$_2I_3$, organic supercond., nuclear mag. relax. 7−70475
β-(BEDT-TTF)$_2I_3$, phase stability, DTA studies 7−118058
β-(BEDT-TTF)$_2I_3$, supercond., electronic props., PMR anal. 7−85474
β-(BEDT-TTF)$_2I_3$, supercond., temperature-stress phase diagram 7−85173
β-(BEDT-TTF)$_2I_3$, thermal expansion meas., structural phase transition 7−85192
β-(BEDT-TTF)$_2I_3(AuI_2)$ salts, superconducting critical field, press. depend. 7−77177
β-(BEDT-TTF)$_2I_3$ organic supercond., resist. and magnetoresist. 7−99312
β-(BEDT-TTF)$_2I_3$ supercond., low temp. struct. transition 7−124497
(BEDT-TTF)$_2IBr_2$, mol. vibrs., Raman spectra study 7−85675
(BEDT-TTF)$_2XI_2$ salts, X=Au, Br, electronic struct., props., polarised IR reflectance spectra 7−113189
β-(BEDT-TTF)I_3 high temp. superconducting phase, critical field temp. depend. meas. 7−131941
ceramic high temperature superconductors *(German)* 7−143728
ceramic superconducting powder prep. by freeze-drying 7−119184
ceramic superconductor materials, discoveries and possible applications *(German)* 7−138094
ceramic superconductors, high T_c, 2D electron system model 7−112619
ceramic superconductors, powder processing for microstructural control 7−119183
copper oxides, superconducting, antiferromagnetism and crystal field effects *(French)* 7−131834
current distribution calc. in filament carrying AC/DC transport current 7−77170
electron-phonon coupling, review 7−70212
EPR spectra, inhomogeneously broadened and hyperfine split, theory 7−77157
β-(ET)$_2I_3$, organic supercond., exceeding paramag. limit of H_{c2} 7−138160
β-(ET)$_2IBr_2(AuI_2)$, vol. superconductivity, DC low field magnetisation meas. 7−77152
Ginzburg-Landau-Abrikosov-Gorkov theory 7−131927
heavy fermion superconductivity, comparison with ^{3}He superfluidity props. 7−70015
heavy fermion superconductors, collective modes, hydrodynamic description 7−112640
heavy fermion superconductors, SDW instability 7−125225
heavy fermion superconductors, vortices with half mag. flux quanta 7−112711
heavy fermion systems, anisotropic Cooper pairing, antiferromagnetic spin fluctuations, effects on transport props. 7−70464
heavy fermion systems, Kondo lattice props. 7−92164
heavy fermion systems, nonlocal impurity perturbations, s-wave scatt. calcs. 7−70461
heavy fermion systems, nuclear and muon hyperfine techniques 7−118929
heavy fermions compounds, superconductivity investig. 7−85178
heavy-electron superconductors, Kondo lattice phonon mediated f-electron attractive interaction calcs. 7−76786
heavy-fermion superconductors, expt. identification 7−112584
High Field Laboratory for Superconducting Materials, research overview 7−105862
high T_c electron-phonon superconductor, upper critical field 7−143734
high T_c oxide superconds., interband effects, two-band model calcs. 7−138118
high T_c oxide superconductors, effect of intra-mol. vibrations on transition temp. 7−143677
high T_c oxides, upper bound on sp. ht. jump 7−143706
high T_c supercond., transport props., electron deficiency 7−118609
high T_c superconductivity, excitonic mechanism reformulation 7−138119
high T_c superconductivity and the metal-semiconductor transition 7−118611
high T_c superconductor, spin singlet d wave hole pairing 7−118684
high T_c superconductors, breakdown of BCS theory 7−118699
high T_c superconductors, effect of low dimensionality on parameters 7−138129
high T_c superconductors, LO strong coupling superconductivity theory 7−138116
high T_c superconductors, resist., linear temp. behaviour 7−143689
high T_c superconductors, role of acoustic plasmons 7−118644
high T_c superconductors, soft plasmon theory 7−138114
high T_c superconductors, strong-coupling effects 7−112633
high T_c superconductors may not need phonons, isotope effect absence expts. 7−112627
high temperature supercond., crit. temp. enhancement by metal-semicond. transition 7−92348
high temperature superconductivity, review, implications for elec. engineering industry *(Dutch)* 7−118617
high temperature superconductors, conf., Anaheim, CA, USA (April 1987) 7−108049
high temperature superconductors, development and applications 7−143656
high temperature superconductors, general review 7−105861
high temperature superconductors, symmetry classification of states 7−131072
high-field superconductors, computer modelling of mag. flux primarily by grain boundaries 7−138162

type II superconductors continued
high-temperature superconductors, discovery 7−92346
high-temperature superconductors, recent developments *(German)* 7−125197
high-temperature superconductors, recent Dutch laboratory results 7−131874
$(La_{0.9}Ba_{0.1})_2$ CuO_{4-y}, superconductivity at 52.5 K 7−77139
layered oxide systems, Jahn-Teller effect-mediated superconductivity 7−112643
magnetic pinning in inhomogeneous type II superconductors 7−105867
matched pinning systems, flux vortex dynamics and elec. fields 7−125282
metal hydrides obtained by low temp. H implantation, structural, vibr. and electronic props. 7−83674
metallic elements, magnetic ordering and supercond. at microkelvin temps. *(German)* 7−112567
mixed valence Cu oxides, high T_c superconductors, double exchange processes effect *(French)* 7−125166
mixed valence doped superconducting semiconductors, excitonic theory 7−118694
Nb_3Sn composite with distributed internal Sn 7−131952
nonlinear thermomagnetic waves 7−70496
normal-zone propagation in composite superconductors 7−131836
oxide ceramic high-T_c superconductors, review 7−105767
oxide ceramic superconds., development, review 7−118603
oxide films, high T_c supercond., prep. on ceramic substrates 7−113501
oxide high T_c superconductors, electron-phonon interactions, exchange enhancement 7−112618
oxide superconductors, developments *(Norwegian)* 7−131839
oxide superconductors, high T_c, discovery and development 7−131849
oxide superconductors, inter-layer Cooper pairing of 2D electrons 7−105808
oxide superconductors, transition temp., inelastic scatt. and pair breaking 7−112624
oxide superconductors, with high T_c, 123 struct. and comp. 7−118669
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
oxides, high T_c supercond., structure-property relations 7−98483
oxides, high T_c superconductivity, charge transfer excitations, supercond. pairing mechanism 7−105818
oxides, high T_c superconductors, Cu valence, XPS core level spectra 7−125930
oxides, high T_c superconductors, microscopic and macroscopic studies 7−131862
oxides, high temperature superconductivity, IBM research 7−125214
oxides, high-temperature superconductors, review 7−131865
parametric models, non-local, using material eqns. *(Russian)* 7−143684
$PbMo_6S_8$ superconducting wires, thermally induced pre-stress and critical current density 7−131968
perovskite high T_c superconductors, review 7−112548
rare earth−$Ba_2Cu_3O_x$ high T_c supercond., struct. and upper critical fields studies 7−125278
rare earth borides, $RRuB_4$, R=Gd-Tm, Lu, mag. suscept., elec. resist. meas., low temp. mag. order 7−92408
rare earth cpds., $Ba_{1-x}R_xCuO_{3-y}$, R=La-Nd, Sm-Er, Yb, supercond. and structural props. 7−99287
rare earth cpds., $R_2Ba_4Cu_6O_{14+y}$, R=La-Nd, Sm-Lu, high T_c supercond. props., elec. resist., X-ray diffr. meas. 7−99297
rare earth cpds., R-Ba-Cu-O, R=Sm-Ho, supercond. props. 7−105803
rare earth cpds., R-Ba-Cu-O, supercond. ceramics, prep. using yttria concentrate *(Japanese)* 7−126074
rare earth cpds., $RBa_2Cu_3O_6$ (R=La, Nd, Sm, Eu, Gd, Ho, Er, Lu, Y), superconductivity above 90 K 7−118650
rare earth cpds., $RBa_2Cu_3O_{7-x}$, R=Y, La-Lu, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
rare earth cpds., $RBa_2Cu_3O_7$, R=Ho-Lu, high T_c supercond. props., phase stability 7−118674
rare earth doped O-defect perovskites, $La_{2-x-y}R_ySr_xCuO_{4-z}$, R=Pr, Nd, Sm, Eu, Gd, supercond., structural, mag. props. 7−112596
rare earth oxides, R-Ba-Cu-O, high T_c supercond., anomalous magnetism, temp. depend. 7−112648
rare earth oxides, R-Ba-Cu-O, high T_c supercond., mag. and nonmag. impurity effects 7−112637
rare earth oxides, $RBa_2Cu_3O_{6+x}$, superconductivity above 90 K, magnetisation meas. 7−118653
rare earth oxides, $RBa_2Cu_3O_{9-\delta}$, R=La-Lu except Pm, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
rare earth ternary borides, superconducting critical fields 7−125277
rare earth ternary systems, superconductivity and ferromagnetism coexistence, review 7−77138
rare earth-Ba-Cu-O cpds., high T_c supercond. obs. 7−99270
rare earth-Ba-Cu-O cpds., $RBa_2Cu_3O_x$ (R=Gd, Er, Dy), high T_c supercond., mag. and supercond. properties 7−131888
rare earth-Ba-Cu-O high T_c supercond. powder fabrication and critical temp. determ. 7−118624
rare earth-Ba-Cu-O system, $RBa_2Cu_3O_{6+y}$, high T_c supercond., mag. characts. 7−118705
semimetals, high T_c superconductivity, electron-exciton interactions 7−112642
space technological experiments performed with superconducting and mag. alloys 7−71457
spin kinetics and EPR in superconductors 7−77156
steel, Cr-Ni-Mn-Mo, tensile and fracture data 7−78144
superconductive glassy state and extrinsic critical currents in high T_c oxides 7−143743
tapes, flux cutting and flux jump losses 7−77180
thermodynamic behaviour of type II superconductors at low induction for arbitrary temperature and impurity content 7−131942
(TMTSF)$_2ClO_4$, elec. cond., temp. depend. model 7−84842
(TMTSF)$_2ClO_4$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
(TMTSF)$_2ClO_4$, polarised single cryst. specular reflectance spectra 7−113224
(TMTSF)$_2ClO_4$, supercond. state, proton spin-lattice relax. rate meas. 7−85194
(TMTSF)$_2ClO_4$, thermal expansion meas. 7−85192
(TMTSF)$_2PF_2O_2$, supercond., competing phase transitions 7−84252
(TMTSF)$_2PF_6$, cooperative phenomena, SDW transition, NMR spin-lattice relax. rate meas. 7−85475
(TMTSF)$_2PF_6$, PMR lineshape anal., nesting vector incommensurability, order parameter, anisotropy 7−85451
(TMTSF)$_2PF_6$, supercond., electronic props., PMR anal. 7−85474

e II superconductors continued
$(TMTSF)_2PF_6$, supercond. organic salt, low temp. and high press. struct. 7−124238
$(TMTSF)_2PF_6$, thermal expansion meas. 7−85192
$(TMTSF)_2ReO_4$, elec. cond., temp. depend. model 7−84842
$(TMTSF)_2ReO_4$, supercond., press. induced anion ordering transform. 7−84252
$(TMTSF)_2X$ crystals, Bechgaard's salts, type of superconductivity 7−99337
$(TMTSF)_2X$ salts, collective modes 7−84853
$(TMTSF)_2X$ salts, intermolecular contact directions rel. to magneto-effects 7−85197
$(TMTSF)_2X$ salts, quasi-one-dimensional systems, anisotropic supercond., NMR relax. rate calc. 7−85195
$(TMTSF)_2X$ salts, superconductors, structural phase transitions 7−84252
transition metal solid solns., electron sp. ht. and T_c comp. depend. calcs. *(Russian)* 7−131838
triplet superconductors, elementary quantum physical description 7−131866
two-dimensional electrons in periodically modulated mag. field 7−77025
vortex state, microscopic calcs. 7−143731
wedge, mag. pinning force 7−70504
wires, critical currents meas. as function of temp. and magnetic field 7−95610
$Yb_{1-x}Y_xBa_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$YBa_2Cu_3O_{7-x}$, high T_c supercond., Raman scatt. 7−119011
$YBa_2Cu_3O_{9-x}$, AC Josephson effect obs. 7−99343
$:La_{1.8}Sr_{0.2}CuO_4$, high T_c-supercond. 7−112535
$AgMo_6S_8$ superconducting thin films, reactive sputtering 7−118619
$AgMo_6S_8$ superconducting thin films, critical current densities and critical fields 7−131970
Al-In-Sn alloys, directionally solidified in high and low gravit. fields 7−138736
Al-Si-Ge ribbons, ion implantation effect on low temp. props. 7−142815
$Al_{52.4}Cu_{12.6}Mg_{35}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
AlSi superconductivity following liq. He temp. ion beam mixing 7−125198
$(Al_xY_{1-x})Ba_2Cu_3O_{6.5+\delta}$, high T_c supercond. obs. 7−131854
$Al_{20.2}Zn_{40.3}Mg_{39.5}$, quasicrystalline and cryst. phases, transport and supercond. props. 7−70456
Au-Nb ultrathin films on Si, resistance decrease and diamagnetism increase above 77 K 7−70432
Ba-Gd-Cu-O high T_c supercond., cryst. struct. and transition temp. 7−112603
Ba-La-Cu oxide, high T_0 supercond., mag. props. 7−99328
Ba-La-Cu-O, high T_c superconductivity model 7−105817
Ba-La-Cu-O, high T_c superconductivity, mechanism 7−138093
Ba-La-Cu-O high T_c supercond., low-field mag. relaxation 7−143702
Ba-La-Cu-O mixed valence high T_c superconductors, struct., mag. suscept., and critical field studies *(French)* 7−112707
Ba-La-Cu-O system, high T_c phase, two-subsystem model 7−92353
Ba-R-Cu-O (R=Yb, Lu, Y, La), high-T_c superconductivity 7−99263
Ba-R-Cu-O system (R=Y,Nd,Sm,Dy,Er,Yb) high T_c supercond., Meissner state 7−118706
Ba-Y-Cu-O, high T_c supercond., crit. current density, diamag. suscept., charactn. by X-ray diffr. 7−99381
Ba-Y-Cu-O, high-T_c superconducting phase 7−105764
Ba-Y-Cu-O, sintered high T_c supercond., crit. current densities 7−143741
Ba-Y-Cu-O ceramics, high T_c superconductors, AC Josephson effect, point contacts 7−99346
Ba-Y-Cu-O high T_c superconds., upper critical fields and Ginzburg-Landau coherence lengths 7−99364
Ba-Y-Cu-O high T_c supercond., prep. and struct. determ. by lattice imaging 7−104701
Ba-Y-Cu-O high T_c supercond., electronic band props. 7−118361
Ba-Y-Cu-O high T_c supercond., Josephson effects up to 90 K 7−118735
Ba-Y-Cu-O high T_c supercond. perovskite phase synthesis, O partial press. depend. *(Japanese)* 7−132553
Ba-Y-Cu-O system, bulk superconductivity at 107.6 K 7−105762
Ba-Y-Cu-O system, bulk superconductivity at 107.6 K 7−112561
Ba-Y-Cu-O system, high T_c superconductor, cryst. struct., Rietveld anal. 7−98082
Ba-Y-Cu-O systems, high T_c supercond. reactions with aqueous media. appls. in struct. charact. 7−119558
Ba-Y-Cu-O systems, resist., anomalous temp. depend. 7−99285
$Ba_2Cu_3O_{7-\delta}$-based high T_c superconds., electronic and sp. ht. props. 7−118652
$Ba_2Cu_3YO_7$, high T_c supercond., bulk modulus and Young's modulus 7−118008
$Ba_2EuCu_3O_7$, ^{18}O isotope effect in high T_c supercond., phonon freq. Raman spectra meas. 7−105796
$Ba_2EuCu_3O_{7.1}$, high T_c superconductor, electronic struct. of Eu, Mossbauer study 7−106069
$Ba_2EuCu_3O_x$, high temp. supercond., O stoichiometry as function of temp. 7−118110
$Ba_2GdCu_3O_x$, high temp. supercond., O stoichiometry as function of temp. 7−118110
$Ba_2HoCu_3O_{7-x}$ high T_c supercond., cryst. struct., neutron diffr. anal. 7−124202
$Ba_{0.1}La_{1.9}Ag_xCu_{1-x}O_{4-y}$, high T_c supercond., comp. depend. of T_c 7−99291
BaLaCuO, evidence for high temp. superconductivity *(French)* 7−92385
BaLaCuO, high T_c supercond., research at IBM's Zurich Research Lab. *(Japanese)* 7−112608
$Ba_3La_3Cu_6O_{14}$, high temp. supercond., perovskite type, microstruct. 7−131136
$Ba_{0.6}M_{0.4}CuO_{3-x}$ M=Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb,Lu, superconductivity, transition temps. 7−99280
$Ba_2MCu_3O_7$, M=Y,La, high T_c superconductivity based on the 1D square planar $[CuO_4]_\infty$ bonding system 7−118630
$BaMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$Ba_2NdCu_3O_{7-\delta}$ high T_c supercond. single cryst. growth from soln. 7−142673
BaO-Y_2O_3-CuO system, synthesis, characterisation and fabrication of high T_c supercond. oxides 7−119215
Ba(Pb-Bi)P granular superconductor, heat treatment effects 7−93117
$BaPb_{1-x}Bi_xO_3$ ceramic Josephson medium, coherence props. and current transport 7−70492
$BaPb_{1-x}Bi_xO_3$ ceramic, microwave signal mixing 7−85188

type II superconductors continued
$BaPb_{1-x}Bi_xO_3$, high T_c supercond., phonons, inelastic neutron scatt. studies 7−91745
$BaPb_{1-x}Bi_xO_3$ supercond., solution growth and transition temp. *(Japanese)* 7−113372
$BaPb_{1-x}Bi_xO_3$:Ag solid inclusion solns., high T_c superconductivity study *(Russian)* 7−112540
$BaPbO_3$, high T_c supercond., temp. depend. NMR study 7−138136
$Ba_2RCu_3O_7$, (R=Y,Er,Ho), high T_c supercond., X-ray absorption meas. 7−144178
$Ba_2RCu_3O_7$, (R=Y,Pr,Sm,Eu,Gd,Dy,Ho,Er,Tm), high-T_c supercond., struct. props. 7−142736
$Ba_2RCu_3O_{7-x}$ (R=lanthanide), superconducting and mag. props. 7−125215
$Ba_2RCu_3O_{9-x}$ (R=La,Nd,Sm,Eu,Gd,Dy,Ho,Er,Tm,Yb), high T_c supercond., prep. and charact. 7−118660
$Ba_2SmCu_3O_{9-x}$, high temp. supercond., electron and X-ray diffr., XPS studies 7−112597
BaTmCuO high T_c ceramic superconductor point contacts, AC Josephson effect RF power depend. 7−118723
BaYCuO high T_c ceramic superconductor point contacts, AC Josephson effect RF power depend. 7−118723
BaYCuO-Nb Josephson point contact junction, IV characteristics 7−112699
$Ba_{0.4}Y_{0.6}CuO_{3-y}$, persistent current in liquid N_2 7−131858
$Ba_{0.5}Y_{0.5}Cu_1O_x$, high-T_c superconductor 7−99266
$Ba_{0.7}Y_{0.3}CuO_x$, high T_c superconductor, identification of phases 7−91543
$Ba_{1-x}Y_xCuO_{3-y}$, prep. by sintering, supercond. props. 7−99286
$Ba_{1-x}Y_xCuO_{3-y}$, supercond. props. 7−112530
$Ba_{1-x}Y_xCuO_{3-z}$ high T_c supercond., transition temp. 7−92339
$Ba_2YCu_{2.89}O_{6.8}$, high T_c superconductor, cryst. struct. determ. 7−98089
$Ba_2YCu_{2.89}O_{6.8}$, small single crystals, Meissner effect meas., struct., X-ray diffr. method 7−99326
$Ba_2YCu_{3-x}O_{7-y}$, orthorhombic single cryst. supercond., twinning, polymorphic transform., X-ray diffr. study 7−98175
$Ba_2YCu_3O_6$, structure and properties 7−104685
$Ba_2YCu_3O_{6.26}$, high T_c supercond., cryst. struct. by neutron diffr. 7−131110
$Ba_2YCu_3O_{6.5+x}$ single crystals, prep., struct., TGA, X-ray powder diffr. methods 7−98019
$Ba_2YCu_3O_{6.5+x}$, superconducting, O content 7−125216
$Ba_2YCu_3O_{6.9}$, high T_c supercond., electronic structs., contribution to high T_c 7−112590
$Ba_2YCu_3O_7$, ^{18}O isotope effect in high T_c supercond., phonon freq. Raman spectra meas. 7−105796
$Ba_2YCu_3O_7$ high T_c supercond., electronic struct., XPS meas. 7−98799
$Ba_2YCu_3O_7$, high T_c superconductor, crystal structure, 5-300 K neutron diffraction anal. 7−104656
$Ba_2YCu_3O_7$, high T_c supercond., composite wire fabrication 7−112718
$Ba_2YCu_3O_7$, high T_c superconducting oxide ceramic, fabrication 7−118677
$Ba_2YCu_3O_7$, high T_c supercond., NQR studies 7−143712
$Ba_2YCu_3O_7$, high temperature superconductor, microstructure 7−105747
$Ba_2YCu_3O_7$, high temp. supercond., cryst. struct. by X-ray and neutron powder diffr. 7−137347
$Ba_2YCu_3O_7$, high-T_c superconductor, crystal structure 7−124229
$Ba_2YCu_3O_7$, superconducting coils, fabrication 7−118681
$Ba_2YCu_3O_{7-\delta}$, high T_c supercond., electron diffr. and microscopy study 7−112589
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. wire fabrication by molten oxide processing 7−138711
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond., bulk and thin film studies 7−143711
$Ba_2YCu_3O_{7-\delta}$ high temp. supercond., stress and field depend of crit. current 7−131951
$Ba_2YCu_3O_{7-\delta}$, supercond., struct. between 25°C and 750°C 7−142738
$Ba_2YCu_3O_{7-x}$, high T_c superconductor, cryst. struct., Rietveld refinement 7−98088
$Ba_2YCu_3O_{7-x}$, high T_c supercond., X-ray powder characterisation 7−117869
$Ba_2YCu_3O_{7-x}$, high T_c supercond., processing-property relations 7−119213
$Ba_2YCu_3O_{7-x}$ high T_c supercond., low temp. thermal processing 7−119214
$Ba_2YCu_3O_{7-x}$ high T_c supercond., cryst. struct., X-ray and TOF neutron diffr., Rietveld anal. *(Japanese)* 7−142734
$Ba_2YCu_3O_{7-x}$, high T_c supercond., twinning 7−142794
$Ba_2YCu_3O_{7-x}$, high temp. supercond., thermal analysis, 700-1000°C 7−119591
$Ba_2YCu_3O_{7-x}$, high-temp. supercond., plasma and UV optical transition studies 7−113327
$Ba_2YCu_3O_{7-x}$, orthorhombic-tetragonal transform., thermal expansion coeff., X-ray powder diffr. study 7−98432
$Ba_2YCu_3O_{7-x}$, rapidly quenched high T_c supercond., X-ray studies 7−117870
$Ba_2YCu_3O_{7-y}$, epitaxial thin films, anisotropic superconducting critical current 7−118750
$Ba_2YCu_3O_{7+x}$, high T_c supercond., photoemission resonances 7−113346
$Ba_2YCu_3O_{7+y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
$Ba_2YCu_3O_{8-y}$, prep., high T_c supercond. props. 7−99288
$Ba_2YCu_3O_{9-\delta}$, cryst. struct., vacancy distrib., neutron powder diffr. study 7−104691
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., instabilities driven by pulsed elec. current 7−112674
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., Raman scatt. above and below T_c 7−119022
$Ba_2YCu_3O_{9-\delta}$ high T_c supercond., ceramic processing methods 7−119205
$Ba_2YCu_3O_{9-\delta}$, high T_c superconductors, aqueous electrochemistry 7−132946
$Ba_2YCu_3O_{9-\delta}$, valence band photoelectron spectra studies 7−106367
$Ba_2YCu_3O_x$, high T_c supercond., orthorhombic tetragonal transition, depend. on O content 7−118076
$Ba_2YCu_3O_x$ high T_c supercond., high temp. resistivity meas., O content depend. 7−137919
$Ba_2YCu_3O_x$, high temp. supercond., charact. rel to O_2 partial press., thermoanal. meas. 7−118057

type II superconductors continued
$Ba_2YCu_3O_x$, high temp. supercond., O stoichiometry as function of temp. 7−118110
$Ba_2YCu_3O_x$, high-T_c superconductor, stoichiometry 7−105775
$Ba_2YCu_3O_x$, single cryst. prep. from nonstoichiometric melts, struct., elec. resist. meas. 7−98020
$Ba_xY_{1-x}CuO_3$, high T_c supercond., electronic struct., XPS study 7−112598
$Ba_xY_{1-x}CuO_{3-y}$ high T_c supercond., magnetisation and Meissner effect 7−92367
$Ba_xY_{1-x}CuO_{3-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Ba_xY_{1-x}CuO_{3-y}$, high T_c superconductor, valence and coordination of Cu ions 7−99973
$Ba_xY_{1-x}CuO_{3-y}$, high T_c superconductivity 7−105807
$Ba_2YCu_3O_{9.\delta}$, high T_c superconductor, cryst. struct. determ. 7−111506
$Ba_{0-6}Y_{0.4-x}Sc_xCu$ oxides, effect of Sc on superconductivity, high T_c supercond. 7−112592
$BdBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
Be amorphous sputtered thin films, critical currents and flux pinning, Abrikosov vortex memory appl. 7−112719
Bi-Sr-Cu-O system, superconductivity 7−143682
$(Ca,Ba)_2CuO_4$ high T_c supercond., struct. defect-type, TEM study 7−124243
$Ca_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
CdS, anomalous diamagnetism, paramagnetism and superconducting behaviour 7−112613
Ce-Cu_2Si_2 heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497
$CeAl_3$, specific heat, pressure depend. 7−69926
$CeCu_2Si_2$ films, sensitivity of T_c to lattice defects, superconductivity and resistivity study 7−70495
$CeCu_2Si_2$ heavy fermion superconductor, phonon density of states, comparison with $LaCu_2Si_2$ 7−69845
$CeCu_2Si_2$, heavy fermion supercond., Knight shift meas. 7−85193
$CeCu_2Si_2$ heavy fermion supercond., single particle tunnelling spectra studies 7−105855
$CeCu_2Si_2$, mag. and superconducting props., composition depend. 7−70555
$CeCu_2Si_2$, resonant photoemission, partial density of states 7−125906
$CeCu_2Si_2$, supercond. transition temp., press. depend. 7−125165
$CeCu_2Si_2$, superconducting Kondo lattice, upper critical field, angular depend. 7−77174
$CeCu_2Si_2$ thin films, ion irrad., heavy fermion superconductivity 7−77126
$CeCu_2Si_2$, unconventional even parity superconductivity, nucl. relax. rate 7−70470
$Ce_xLa_{1-x}Cu_2Si_2$, heavy fermion state and supercond., elec. resist., Kondo temp. 7−92326
$Ce_xLa_{1-x}Mo_6S_8$ Chevrel cpd., superconducting and mag. props., resist. and mag. suscept. meas. 7−77222
$CePb_3$, heavy fermion behaviour, mag. and mixed valence props. 7−92426
$CePb_3$, heavy fermion system, mag. field induced superconductivity 7−131867
Ce_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$CoSi_2$, ultrathin epitaxial films, low temp. transport props. 7−125143
Cu oxide high T_c superconductors sp. ht. and T_c meas. 7−112601
Cu oxide high T_c superconds., role of exciton interactions 7−118693
Cu oxide high T_c superconds., Cu^{2+} effective exchange integrals, ab initio MO calcs. 7−125229
Cu oxide high temp superconds., mixed valency, phenomenological model *(French)* 7−124946
Cu oxide layered perovskite high T_c superconductors, struct. props. 7−118651
Cu oxides, high T_c superconductivity, theorist's view, review 7−112610
Cu oxides, high T_c supercond., theory 7−112625
Cu oxides, high T_c superconductors, electronic struct. 7−119113
Cu oxides, mixed-valent, high temp. supercond. rel. to Cu^{3+}/Cu^{2+} ratio 7−118648
Cu superconducting oxides, mixed valence, high T_c, bidimensional electronic model calcs. *(French)* 7−124849
Cu ternary metallic oxides, high T_c supercond. and structural chemistry considerations 7−112641
Cu-Nb multifilamentary composites, critical current density meas., strain effects 7−92395
Cu-Nb-Sn, amorphous alloy prep. by mech. alloying of elemental powders 7−144331
Cu-O based high T_c superconductors, practical preparation methods 7−143729
Cu-O-based high T_c supercond., prep. by coprecipitation method 7−113499
Cu-oxide ceramic high T_c superconds., perovskite struct., studies on bulk and thin film samples 7−118656
$(Cu-M)_{100-x}(Pb_{0.6}Bi_{0.4})_x$, M=Al, Si or Sn, rapidly quenched alloys containing immiscible Pb and Bi elements, microstruct. and supercond. props. 7−99255
CuCl, anomalous diamagnetism, paramagnetism and superconducting behaviour 7−112613
$Cu_{1.8}Mo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$Cu_{1.8}Mo_6S_8$, high press. elec. resist., supercond. transition temp. 7−105560
$Cu_2Mo_6S_8$ Chevrel phase supercond., laser-induced shock damage and disorder effects on T_c 7−104824
$Cu_2Mo_6S_8$, shock press.-disordered, supercond. transition temp. meas. 7−143673
$Cu_{1.8}Mo_6S_{8-x}O_x$, Chevrel cpd., superconducting props., O doping effects 7−125180
CuNb binary and Ti-alloyed superconds., fabrication by hot extrusion and high-field props. study 7−132516
$Cu_{1.8-x}Ni_xMo_6S_8$, supercond. props. and normal state resist. *(Russian)* 7−70443
CuO-Y_2O_3-BaO phase diagram, resistivity and superconductivity distributions 7−105745
CuO_2 planes in high T_c supercond., antiferromag., localisation, pairing 7−118687
Dy-Ba-Cu-O, high T_c supercond., transition temp., diamagnetism, mag. suscept. meas. 7−112595
Dy-Ba-Cu-O high T_c supercond., zero resist. temp. and cryst. struct. 7−125210

type II superconductors continued
$DyBa_2Cu_3O_{7-\delta}$ high T_c and H_{c2} superconductivity transition and cryst. struct. studies 7−105770
$DyBa_2Cu_3O_{7-x}$ high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
$DyBa_2Cu_3O_{7-x}$ high T_c supercond. film, MBE growth and props. 7−143245
$DyBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$DyBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
Er-BA-Cu-O, high T_c superconductivity 7−99277
Er-Ba-Cu-O high T_c supercond., metamorphic phases and transition temperatures 7−118637
Er-Ba-Cu-O high T_c supercond., zero resist. above 90 K 7−125209
Er-Ba-Cu-O RF sputtered supercond. films, high T_c superconductivity 7−143658
ErBaCuO-Nb high T_c supercond. point contacts, AC Josephson effect freq. depend. study 7−125271
$ErBa_2Cu_3O_{6+x}$ high T_c supercond., complex mag. suscept. study 7−125241
$ErBa_2Cu_3O_{6+x}$ high T_c bulk superconductivity, mag. suscept. meas. 7−143697
$ErBa_2Cu_3O_7$, high T_c supercond., mixed phase behaviour study 7−118610
$ErBa_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$ErBa_2Cu_3O_7$, high T_c supercond., mag. fluctuations, 2D ordering 7−131884
$ErBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$ErBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct., X-ray powder diffr. study 7−104674
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., resistivity, magnetisation, critical current density 7−143699
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., anisotropic upper critical field 7−143733
$ErBa_2Cu_3O_{7-\delta}$, sharp supercond. transition at 94 K, resist., mag. suscept. meas. 7−99296
$ErBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$ErBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$ErBa_2Cu_3O_{7-x}$, transient superconductivity near 260 K 7−131848
$ErBa_2Cu_3O_{9-\delta}$, high T_c superconductor, single phase cpd., transport and struct. props. 7−105784
$ErBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. props. 7−118703
$ErBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$ErBa_2Cu_3O_y$ high T_c ceramic supercond., O deficiency, quenching study 7−124538
$ErBa_2Cu_3O_y$ high T_c ribbon, melt-spinning, struct. and supercond. props. study 7−126056
$ErPd_2Sn$, hyperfine field, low temp. Mossbauer study 7−138362
$Er_{0.5}Y_{0.5}Ba_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$Er_xY_{1-x}Rh_4B_4$, low temp. heat capacity, mag. and supercond. phase diagrams 7−92372
$Er_xY_{1-x}Rh_{1.1}Sn_{3.6}$ system, superconductivity and mag. ordering 7−125205
$EuBa_2(Cu_{1-7}M_7)_3O_{9-x}$, M=Gr, Mn, Fe, Co, Ni, Zn, high T_c supercond., EPR, magnetisation studies 7−138320
$EuBa_2Cu_3O_{6+\delta}$, superconductivity at 230 K 7−112566
$EuBa_2Cu_3O_{6+x}$, high T_c supercond., thermodynamic desorption of O 7−131427
$EuBa_2Cu_3O_{6+y}$, high T_c supercond., flux pinning, critical current density 7−131948
$EuBa_2Cu_3O_7$, high T_c supercond., local chem., vibr. behaviour, Mossbauer spectra study 7−113046
$EuBa_2Cu_3O_7$, superconducting Mossbauer study 7−125257
$EuBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct. determ. 7−124204
$EuBa_2Cu_3O_{7-x}$, high T_c supercond., Raman scatt. 7−119011
$EuBa_2Cu_3O_{7-x}$, high T_c supercond., mag. props. 7−131886
$EuBa_2Cu_3O_x$, high T_c ceramic superconductor, preparation by rapid solidification and oxidation 7−126052
$EuBa_2Cu_3O_x$, high T_c supercond., electronic and mag. props. 7−143705
$Fe/La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form., reaction and disruption 7−143242
$Fe/La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form. and reaction, XPS study 7−143243
FeZr amorphous alloys, magnetoresist. and superconductivity 7−98966
$Fe_{20}Zr_{80}$ superconducting metallic glass, sp. ht. and elec. resist. meas. 7−137889
GaAs-$Ga_{0.77}Al_{0.23}As$ heterojunction, field-periodic magnetoconductance oscills., supercond. transition 7−112669
GaSb, amorphous, superconductivity under press. *(Russian)* 7−77122
Gd-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
$GdBa_2(Cu_{0.94}Fe_{0.06})_3O_{9-\delta}$, mag. ordering below supercond. transition temp. 7−143799
GdBaCuO high T_c supercond. Josephson junctions, DC SQUID operation 7−143718
$GdBa_2Cu_3O_{6+\delta}$, high T_c supercond., calorimetric evidence of antiferromagnetism 7−112834
$GdBa_2Cu_3O_7$ high T_c supercond., lattice instabilities, Raman and IR spectra studies 7−144068
$GdBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct. determ. 7−124204
$GdBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$GdBa_2Cu_3O_{7-x}$, normal and superconducting states, mag. props. 7−125244
$GdBa_2Cu_3O_{7-x}$, supercond. and normal samples, pres. and field depend. of mag. transition 7−132021
$GdBa_2Cu_3O_x$, high T_c superconductor, mag. behaviour, superconductivity 7−118620
$GdBa_2Cu_3O_x$, high T_c supercond., thermally stimulated luminesc. 7−132356
$Gd_1Ba_2Cu_3O_z$, high T_c supercond., magnetisation and susceptibility, 1.5 to 270 K 7−112652
$Gd_xBa_{1-x}CuO_{3-y}$, high T_c supercond. above 92 K 7−112594
Gd_2O_3-BaO-CuO system, subsolidus phase relationships and high T_c superconductivity 7−144375
$Gd_xY_{1-x}Ba_2Cu_3O_{7-\delta}$ high T_c supercond. props., comp. depend. effects 7−125191

type II superconductors continued
HfMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
$Hf_{90}Mo_{10}$, weak localisation effects on upper critical field 7−99371
HfV_2 films, ion-plasma deposition, annealing, supercond., struct. *(Russian)* 7−137750
$Hg_{3-\delta}AsF_6$, 1D BCS Hamiltonian, electron-phonon interactions 7−99316
$Hg_{3-\delta}AsF_6$, bulk superconductivity, Meissner effect 7−99329
$Hg_{3-\delta}AsF_6$, superconductivity, effect of annealing and anisotropy 7−138110
$Hg_{3-\delta}SbF_6$, supercond. transitions, magnetisation meas. 7−70473
high T_c excitonic superconductor, electron-phonon coupling, thermodynamic props., isotope effect calcs. 7−143691
Ho-Ba-Cu oxide, high T_c mag. superconductor 7−92329
Ho-Ba-Cu oxide, high T_c superconductor, mag. and struct. props. 7−92363
Ho-Ba-Cu-O, high T_c supercond., structural props., TEM study 7−98090
Ho-Ba-Cu-O high T_c supercond., transport and struct. props. 7−112533
$HoBa_2Cu_3O_7$, high T_c supercond., mag. props., cryst. struct. *(Russian)* 7−143695
$HoBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$HoBa_2Cu_3O_{7-\delta}$, high T_c supercond., anisotropic upper critical field 7−143733
$HoBa_2Cu_3O_{7-\delta}$, sharp supercond. transition at 94 K, resist., mag. suscept. meas. 7−99296
$HoBa_2Cu_3O_{7-x}$, high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
$HoBa_2Cu_3O_{7-x}$, mag. supercond., electronic and mag. props. of rare-earth ions 7−132032
$HoBa_2Cu_3O_{8-\delta}$, superconductivity 7−131847
$HoBa_2Cu_3O_x$ high T_c supercond. cryst. struct. determ., X-ray powder diffr. study 7−117891
$HoBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$Ho_{1.5}Ba_{1.5}Cu_2O_x$, high T_c supercond., thermally stimulated luminesc. 7−132356
In-Ge films, supercond. upper crit. fields, transition temps. 7−70501
In-In_xO_y thin film supercond., influence of mag. field on 2D phase transition 7−143739
In-InO_x supercond. film, SAW attenuation *(Japanese)* 7−125258
$InSn_4$ small spheres, anisotropy of upper critical field 7−85211
$K_{0.3}MoO_3$ blue bronze, Frohlich, supercond. sliding CDW without damping 7−124890
$(La,Ba)_2(Cu,M)O_{4-y}$ (M=Hg,Ag), high temperature superconductivity, composition dependence 7−70452
$(La,Ba)_2CuO_{4-y}$, high T_c supercond., mag. susceptibility and resist. meas. 7−70448
$(La,Ba)_2CuO_{4-y}$, high-T_c superconducting oxides, elec. resistivity, O deficiency effects 7−70451
$(La,M)_2CuO_4$ (M=Ba,Sr), 2D superconductivity, high critical temps. 7−70450
$(La,Sr)_2(Cu,M)O_{4-y}$ (M=Hg,Ag), high temperature superconductivity, composition dependence 7−70452
$(La, Sr)_2CuO_4$, high T_c layered supercond., single crystal growth 7−119127
La Ba CuO_4, cryst. struct. determ., electron diffr. and microscopy 7−91544
La based metaloxides, high T_c supercond., temp. depend. of ultrasonic velocity *(Russian)* 7−125251
La-(Ba, Sr, Ca)-Cu-O systems, high T_c supercond., bipolaron superconductivity 7−138115
La-Ba-Cu oxide, high T_c supercond., very high upper critical field 7−99362
La-Ba-Cu oxide, supercond. energy gap, for IR reflectivity meas. 7−99319
La-Ba-Cu-O, high T_c superconductivity 7−70447
La-Ba-Cu-O, high T_c supercond., physical and chemical properties 7−131855
La-Ba-Cu-O, perovskite-related oxides, high-temperature superconductivity 7−125206
La-Ba-Cu-O, structural, electronic props., thermal expansion meas. 7−118672
La-Ba-Cu-O compounds, high T_c supercond., electronic struct. and electron-phonon coupling 7−99306
La-Ba-Cu-O high T_c superconductor, determ. of charge carriers by thermoelectric meas. 7−112573
La-Ba-Cu-O high T_c supercond., cryst. struct., X-ray and electron diffr. studies 7−117894
La-Ba-Cu-O high T_c supercond. and semicond., cryst. struct. studies 7−117902
La-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
La-Ba-Cu-O superconductors, electronic struct., bonding, and electron-phonon interactions 7−118363
La-Ba-Cu-O system, high T_c superconductor, cryst. struct. determ. 7−98084
La-Ba-Cu-O system, high T_c superconductor, struct. identification 7−98087
La-Ba-Cu-O system, superconductivity 7−85171
La-Ba-Sr-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174
La-Ba-Sr-Cu-O system, high T_c supercond., kinetic props. *(Russian)* 7−125285
La-Ba(Sr)-Cu-O high T_c superconductivity study *(Russian)* 7−112540
La-Ba(Sr)-Cu-O high temp. supercond., plasmons 7−105814
La-Ba(Sr)-Cu-O system, high supercond., role of optical phonons, 1 K absorpt. study *(Russian)* 7−125722
La-based ceramics, high T_c supercond., latt. parameters, charge density *(Russian)* 7−124194
La-Ca-Cu-O system, superconductivity 7−85171
La-Cu-O, supercond. transition, annealing effect 7−99294
La-Cu-O system, layer structures, rel. to high T_c superconductors 7−91548
La-M-Cu-O (M=Sr, Ba), superconducting critical mag. field, anisotropy 7−92392
La-M-Cu-O layered perovskite system, (M=La, Ba, Sr, Pb), high T_c supercond., transition temp. 7−99304
La-S films, sputter deposition, structural and transport props. 7−76691
La-Sr-Cu oxide, supercond. energy gap, for IR reflectivity meas. 7−99319
La-Sr-Cu oxide ceramics, high T_c supercond., struct. and electronic props. 7−105805

type II superconductors continued
La-Sr-Cu oxides, high T_c superconductors, upper critical fields 7−92388
La-Sr-Cu-O, high T_c supercond., electron tunnelling study 7−99356
La-Sr-Cu-O, high-T_c superconductor, X-ray diffraction study 7−124230
La-Sr-Cu-O break junction, tunnelling spectroscopy, evidence for strong-coupling superconductivity 7−105849
La-Sr-Cu-O high T_c supercond., Hall coeff. studies 7−92209
La-Sr-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7−111470
La-Sr-Cu-O high T_c supercond., phase transformations and microstruct. 7−118084
La-Sr-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
La-Sr-Cu-O highT_c supercond., energy gap, electron tunnelling meas. 7−92377
La-Sr-Cu-O system, high T_c superconductor, critical current density, prep. by solidification 7−118621
La-Sr-Cu-O system, high T_c supercond., resistivity, upper limit *(Russian)* 7−125173
La-Sr-Cu-O system, high T_c supercond., tunnelling *(Russian)* 7−125265
La-Sr-Cu-O system, superconductivity 7−85171
La-Sr-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
La-Sr-Cu-O thin films, supercond., props. 7−105791
$La_{2-x}A_xCuO_4$, A=Ba, Sr, electron-phonon model tetragonal-to-orthorhombic instability, bond dimerization, T_c values 7−99360
$La_{2-x}(Ba,Sr)_xCuO_4$, high T_c supercond., electron-phonon interaction 7−118700
$La_{2-y}(Ba,Sr)_yCuO_4$ high T_c supercond., electronic band props. 7−118361
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., structure, high resolution X-ray diffr. studies 7−98094
LaBaCuO, high T_c superconductivity obs. 7−105754
$LaBaCu_2O_{5+x}$, high T_c supercond., cryst. struct. and superconductivity 7−131128
$LaBa_2Cu_3O_7$ high T_c supercond. props. and struct. study 7−125193
$LaBa_2Cu_3O_{8-x}$, superconductivity, crystal structure *(French)* 7−99241
$LaBa_2Cu_3O_{9-\delta}$, high T_c supercond., effect of struct. changes on T_c 7−131859
$LaBa_2Cu_3O_y$, high T_c supercond., cryst. struct., orthorhombic phase, Rietveld anal., X-ray diffr. 7−142733
$LaBa_2Cu_3O_y$, high T_c supercond., orthorhombic-tetragonal phase transition 7−142993
$(La_{0.9}Ba_{0.1})_2CuO_4$, thermoelec. power meas., Ba dopant conc. and temp. dependences 7−105839
$(La_{0.9}Ba_{0.1})_2CuO_{4-y}$, high T_c supercond., mag. and thermal meas. 7−112665
$(La_{0.925}Ba_{0.075})_2CuO_{4-y}$, upper crit. field meas. 7−99376
$(La_{1-x}Ba_x)CuO_4$, high T_c supercond., elec. resist. studies 7−70449
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., IR and Raman spectra studies 7−92666
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., crystallochemical studies 7−98081
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., sp. ht anomaly at supercond. transition 7−99333
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., surface impedance meas. 7−105823
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., monovalent Cu-induced O 2p valence band holes 7−124856
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., competition with magnetic order, NQR study, comp. depend. 7−138134
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., magnetic ordering, NQR study 7−138135
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond. prep. 7−144354
$(La_{1-x}Ba_x)_2CuO_4$ layered perovskite high T_c supercond., local phonon model 7−92335
$(La_{1-x}Ba_x)_2CuO_{4-\delta}$, cryst. struct. determ. 7−91542
$(La_{1-x}Ba_x)_2CuO_{4-y}$, Balacuo, exciton exchange percolated superconductivity 7−125200
$(La_{1-x}Ba_x)_2CuO_{4-y}$, crystallographic, mag. and superconductive transitions 7−92332
$(La_{1-x}Ba_x)_2CuO_{4-y}$, effect of hydrostatic press. on T_c 7−92330
$(La_{1-x}Ba_x)_2CuO_{4-y}$ high T_c supercond., transport props. and sp. ht. 7−92371
$(La_{1-x}Ba_x)_2CuO_{4-y}$, IR spectrum, temp. depend. 7−92667
$La_{1+x}Ba_{2-x}Cu_3O_y$, high T_c supercond., charge carriers, doping 7−143661
$La_1Ba_2Cu_3O_{9-\delta}$ high T_c supercond., effect of structural changes on T_c, X-ray diffr. study 7−118655
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., thermal anomalies of latt. props. *(Russian)* 7−125172
$La_{1.8}Ba_{0.2}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., vibr. anomalies, neutron inelastic scatt. studies 7−91741
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., 180 K tetragonal-to-orthorhombic phase transition, anomalous struct. 7−112579
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., wide temp. instability, US absorpt., vel. meas., possible glassy state 7−112671
$La_{1.85}Ba_{0.15}CuO_{4-y}$ system, metastable mag. phase detection, high T_c supercond. 7−125404
$La_{1.9}Ba_{0.1}CuO_4$, high T_c superconductor, temp. depend. X-ray studies 7−111507
$La_{2-x}Ba_xCuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_{2-x}Ba_xCuO_4$, electronically driven instabilities, superconductivity, using La_2CuO_4 results 7−77133
$La_{2-x}Ba_xCuO_4$ high T_c superconductor, orthorhombic phase electronic struct. study 7−118364
$La_{2-x}Ba_xCuO_4$, lattice instability, high T_c supercond., elec. resist., mag. susceptibility meas. 7−77131
$La_{3-x}Ba_{3+x}Cu_6O_{14+\delta}$, high T_c superconductivity and structure 7−131863
$La(Ba_{2-x}La_x)Cu_3O_{7+\delta}$, O ordering and superconductivity 7−131850
$La_{2-x}(BaSr)_xCuO_4$, high T_c supercond. 7−105752
$La_{2-x}(BaSr)_xCuO_4$ high Tc supercond., e-e correl. and scatt., band overlap in two-band model 7−118647
$La_{2-x}Ba_x(Sr_x)CuO_4$, high-T_c superconductors, hybridisation-induced wide-band bipolaron model 7−105780
$La_{2-x}Ba_x(Sr_x)CuO_4$ high T_c supercond., electronic struct. and charge transfer excitations 7−118362
$(La_{1-x}Ca_x)_2Cu_2O_4$, sp. ht., superconductivity 7−92328
$La_{2-x}Ca_xCuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
LaCuO, DC elec. cond. and mag. phase transitions 7−124994

type II superconductors continued
La_2CuO_4 2D antiferromag. props., neutron scatt. meas., relevance to high T_c superconds. 7−143763
La_2CuO_4 based compounds, supercond., phase transitions, resonating valence bond theory 7−112582
La_2CuO_4, doped high T_c superconductor, cooperative bipolaron tunnelling 7−99279
La_2CuO_4 doped high T_c supercond., local struct. distortion 7−124227
La_2CuO_4, electronic struct., APW calc. 7−92051
La_2CuO_4 high T_c supercond., electronic struct., LMTO-ASA method calcs. 7−118358
La_2CuO_4 high T_c supercond., antiferromag. transition, suscept. and elec. resist. meas. 7−125335
La_2CuO_4, high temp. superconductor and resonating valence bond state 7−131872
La_2CuO_4, superconductivity below 40 K, exptl. study *(French)* 7−99361
La_2CuO_4, superconductivity 7−112581
La_2CuO_4:Sr, point contact, AC Josephson effect obs. 7−99343
La_2CuO_4-based high T_c supercond., anisotropic transport, band theory anal. 7−143687
La_2CuO_4-type cpds., high Tc supercond., 2D Hubbard model calcs. 7−118689
La_2CuO_{4-y}:Ca(Ba)(Sr), superconducting, high T_c cpds., prep. and characterisation 7−112563
$La_2CuO_{4-\delta}$ single cryst., antiferromagnetism and O deficiency, neutron diffr. study 7−112752
La_2CuO_{4-y} antiferromag. ordering, neutron polarisation anal. 7−112751
La_2CuO_{4-y}, high T_c supercond., resistivity, thermopower meas. 7−138109
La_2CuO_x high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137985
$(La_{1-x}Ln_x)_{2-y}(SrBa)_yCuO_4$, Ln=Pr,Nd,Y, high T_c supercond. behaviour systematics 7−118646
$(La_{1-x}M_x)_z$ CuO_4 (M=Ba,Sr), high T_c supercond., amorphous citrate process prep. and elec. props. 7−119204
$(LaM)_2CuO_4$, M=Ba,Sr,Ca, high T_c superconductivity based on the 1D square planar $[CuO_4]_\infty$ bonding system 7−118630
$(La_{1-x}M_x)CuO_4$ (M=Sr, Ba) high T_c supercond., mag. susceptibility studies 7−92365
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr), high-T_c superconductor, critical mag. fields 7−70499
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Sr) high T_c supercond., transport props. and Fermi surface 7−92337
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Sr), high T_c supercond., ^{139}La pure quadrupole resonance studies 7−92543
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Ca, Sr) high T_c supercond., optical reflectivity spectra and band struct. 7−92631
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., sp. ht., resist. and diamag. susceptibility 7−99331
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., X-ray absorption spectra studies 7−99974
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., absence of struct. transition, X-ray studies 7−99975
$(La_{1-x}M_x)_2CuO_4$ (M=Ba, Sr) high T_c supercond., optic breathing mode and resonant charge fluctuations 7−104936
$(La_{1-x}M_x)_2CuO_4$ (M=Ca,Sr,Ba) high T_c supercond., O octahedron distortion, electronic origin 7−91547
$(La_{1-x}M_x)_2CuO_4$ (M=Sr, Ba, K, Ce) high T_c supercond., IR absorption spectra studies 7−92665
$(La_{1-x}M_x)_2CuO_4$ (M=Sr, Ba) high T_c supercond., valence determ., XANES studies 7−98949
$(La_{1-x}M_x)_2CuO_4$ (M=Sr, Ba, Ca), high-T_c oxide superconductors *(Japanese)* 7−105778
$(La_{1-x}M_x)_2CuO_4$, high T_c superconductor, Fermi surface instability, phase diagram 7−99262
$(La_{1-x}M_x)_2CuO_4$ high T_c supercond., T_c enhancement due to Peierls instability 7−112578
$(La_{1-x}M_x)_2CuO_4$, M=Sr,Ba, high T_c supercond. struct., low temp. electron diffr. and microscopy studies 7−117889
$(La_{1-x}M_x)_2CuO_{4-\delta}$, high T_c superconds., (M=Ba, Sr), crit. temp. 7−99258
$(La_{1-x}M_x)_yCuO_4$ (M=Sr, Ba, Ca) high T_c thin films, sputter prep. and transition temp. studies 7−92868
$La_{1.85}M_{0.15}CuO_4$, M=Ca,Sr,Ba, high T_c superconds., T_c enhancement with hydrostatic pressure 7−118654
$La_{2-x}M_xCuO_4$, (M=Ba, Sr, Ca), high T_c superconductors, magnetisation studies 7−99327
$La_{2-x}M_xCuO_4$ (M=Ca, Sr, Ba), superconducting transition temperatures and lattice parameters 7−105774
$La_{2-x}M_xCuO_4$ (M=Sr, Ba), high T_c superconductors, photoemission 7−125249
$La_{2-x}M_xCuO_4$ (Mz Ba, Sr, Pb), high T_c superconductivity, mechanism 7−118616
$La_{2-x}M_xCuO_4$ high T_c superconducting ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
$La_{2-x}M_xCuO_{4-y}$ (M=Ca, Sr, Ba), superconductivity onset and mag. susceptibility 7−131864
$La_{2-x}M_xCuO_{4-y}$, M=Ba, Sr, Ca, superconductivity anal. 7−99242
$La_xMo_6S_y$, superconductivity and nonstoichiometry 7−105773
$La_{1.85-x}Pr_x(Eu_x)Sr_{0.15}CuO_4$ high T_c supercond., sharp-line lanthanide fluorescence obs. 7−113261
$(La_{1-y}R_y)_{2-x}(SrBa)_xCuO_4$, R=Pr,Nd,Eu,Gd, high T_c supercond., comp. and unit cell parameters w.r.t. T_c 7−143670
$LaRu_2P_2$, sintering prep., cryst. struct. and T_c determ. 7−117887
$(La_{1-x}Sr_x)_2$ CuO_4 high T_c supercond., structural phase transition, neutron powder diffr. anal. 7−111869
$La_{2-x}Sr_{x-y}(BaCa)_yCuO_4$ high T_c supercond. behaviour systematics 7−118646
$La_{2-x}Sr_x(Ba_x)CuO_4$, quasi-2D supercond., Fermi surface, van Hove saddle point singularity 7−92052
$La_{1.8}Sr_{0.2}Cu_{1-x}Ag_xO_4$, supercond. transition temp. 7−112549
$La_{1.85}Sr_{0.15}Cu_{0.95}M_{0.05}O_{4-y}$ (M=Cu, Ag, Al), high T_c oxide superconductors, elec. studies 7−118615
LaSrCuO, evidence for high temp. superconductivity *(French)* 7−92385
LaSrCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118733
LaSrCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118739
LaSrCuO, high T_c supercond., evidence for incommensurate SDW in electron tunnelling studies 7−138155
LaSrCuO oxide ceramic superconds., development, review 7−118603
LaSrCuO/Al contact, I-V characts. meas. 7−105662

type II superconductors continued
$(LaSr)_2CuO_4$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$(La_{0.9}Sr_{0.1})_2CuO_4$, thermoelec. power meas., Sr dopant conc. and temp. dependences 7−105839
$(La_{0.9}Sr_{0.1})_2CuO_{4-y}$ high T_c supercond., lattice consts. and compressibility under press. 7−91699
$(La_{0.9}Sr_{0.1})_2CuO_{4-y}$, high T_c superconductor, high press. study, critical current 7−99378
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electron tunnelling of thin films 7−99353
$La_{1.8}Sr_{0.2}CuO_4$, high T_c superconductor, point-contact spectroscopy study *(Russian)* 7−99249
$La_{1-85}Sr_{0-15}CuO_4$, high T_c superconductor, phonon density of states determ. 7−104943
$La_{1-x}Sr_xCuO_4$, cryst. struct. determ., electron diffr. and microscopy 7−91544
$La_{1-x}Sr_xCuO_4$, high T_c supercond., internal friction and sound vel. anomalies 7−131897
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., phonons, inelastic neutron scatt. studies 7−91745
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. thin films, Hall effect meas. 7−92210
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., normal state and supercond. props. 7−92338
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical field, high field meas. 7−92390
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR spectra and vibr. props. 7−92668
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., crystallochemical studies 7−98081
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. single crysts., lattice vibrs., Raman scatt. studies 7−98363
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic distortion 7−98437
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin films, T_c meas. 7−99239
$(La_{1-x}Sr_x)_2CuO_4$, high T_c superconductivity, substitution effects 7−99268
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., sintering conditions dependence 7−99274
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., vacuum annealing effects 7−99275
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., complete Meissner effect AC mag. suscept. meas. 7−99322
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., heat capacity and supercond. transition temp. 7−99332
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., local tunnelling and energy gaps, STM meas. 7−99350
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, STM meas. 7−99351
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, point-contact tunnelling obs. 7−99352
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap anisotropy, far IR absorpt. spectra anal. 7−99833
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., IR active phonons, refl. spectra 7−99837
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR reflectivity and optic phonon modes 7−99847
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon density of states 7−104934
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon dispersion curves 7−104935
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp., localisation and struct. transitions 7−105760
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sputter deposition and onset temp. 7−105792
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon props., far-IR meas. 7−105824
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., energy gap, for IR meas. 7−105825
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., phonon Raman scatt. studies 7−106182
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., two-phase struct., X-ray diffr., mag. suscept. and electroresist. temp. depend. study *(Russian)* 7−111469
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., cryst. struct. temp. depend., powder neutron diffr. study 7−111480
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic transition 7−111852
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., complex susceptibility and transition temp. 7−112558
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ultrasonic velocity and attenuation studies 7−112604
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. jump, critical temperature 7−112659
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. wires, critical temp. and critical current density 7−112710
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., mag. props. 7−112731
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma edge and optical phonon spectra 7−113117
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., single cryst. growth from high temp. solns. 7−117850
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., positron annihilation Doppler broadened lineshape study 7−119064
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., single cryst. growth and habit studies 7−119124
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp., press. effects 7−125167
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., T_c press. depend. variation with composition 7−125181
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., chemical substituent effects 7−125211
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma oxidation and supercond. transition 7−126267
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sp. ht. and phonon spectrum, neutron and Raman scatt. studies *(Russian)* 7−131327
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., galvanomag. effects studies *(Russian)* 7−131671
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., thermoelec. power and thermal cond. meas. *(Russian)* 7−131887
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct., X-ray emission spectra study *(Russian)* 7−132379

type II superconductors continued
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., X-ray photoelectron spectra study *(Russian)* 7−132404
$(La_{1-x}Sr_x)_2CuO_4$, high T_c supercond., NMR and NQR studies 7−138345
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., passivation with Au overlayers, XPS and IPS spectra 7−138859
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp. and hole conc. 7−143675
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., low-field mag. relaxation 7−143702
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., bulk and thin film studies 7−143711
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., critical fields and critical current density 7−143735
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., antiferromagnetic interactions 7−143815
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR active phonons, reflection spectra study 7−144065
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., IR spectra studies 7−144067
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., empty electronic states and surface stability, inverse photoemission study 7−144155
$(La_{1-x}Sr_x)_2CuO_4$ layered perovskite high T_c supercond., local phonon model 7−92335
$(La_{1-x}Sr_x)_2CuO_4$ superconducting single crystal, anisotropic props. 7−92389
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, cryst. struct. determ. 7−91542
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, effect of La ion substitutions on superconductivity 7−92334
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, high T_c superconductor, UPS study 7−92829
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ high T_c supercond. prep., residual water effects on superconductivity 7−99272
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7−112697
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$ supercond. films, high T_c, screen printing method prep. 7−92915
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., electronic struct., photoemission meas. 7−99271
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., upper critical field meas. 7−99363
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., far IR transmission spectra meas. 7−99834
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., X-ray absorpt. spectra anal. 7−99972
$(La_{1-x}Sr_x)_2CuO_{4-y}$, high T_c supercond., soft X-ray absorpt. studies 7−144179
$(La_{1-x}Sr_x)_2CuO_{4-y}$, strongly correl. electronic states, XPS, UPS obs. 7−105446
$(La_{1-x}Sr_x)_2CuO_e$ high T_c supercond., annealing conditions effects study, mag. suscept. and X-ray diffr. meas. 7−143671
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, high T_c superconducting films, prep. conditions, optimisation 7−92867
$(La_{1-x}Sr_x)_yCuO_{4-\delta}$, superconducting thin films, sputter deposition 7−125179
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ceramic processing methods 7−119205
$La_{1.8}Sr_{0.2}CuO_4$, bulk superconductivity at 36 K 7−112572
$La_{1.8}Sr_{0.2}CuO_4$ ceramic, high T_c supercond., struct. and thermodynamic anomalies at T_c *(Russian)* 7−125171
$La_{1.8}Sr_{0.2}CuO_4$ high T_c film Josephson junctions 7−92380
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., energy gap, for IR meas. 7−99320
$La_{1.8}Sr_{0.2}CuO_4$, high T_c superconductor, prep. 7−100165
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., granular nature of bulk superconductivity 7−105866
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond. ceramics, prep. and props. 7−118671
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., oxidation state study 7−118715
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., thermal capacity *(Russian)* 7−125245
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$La_{1.8}Sr_{0.2}CuO_4$, high-T_c superconductor, lower critical field, vibrating reed measurements 7−131937
$La_{1.8}Sr_{0.2}CuO_4$, high T_c superconductors, aqueous electrochemistry 7−132946
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., temp. depend. of struct. 7−137348
$La_{1.8}Sr_{0.2}CuO_4$, high-T_c supercond., internal mag. fields from muon spin rotations expts. 7−138121
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., critical current densities 7−138176
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., microwave study 7−144185
$La_{1.8}Sr_{0.2}CuO_4$, partially substituted, high T_2 superconductivity 7−105802
$La_{1.8}Sr_{0.2}CuO_4$, peroxide and Cu^{1+} species, photoemission study 7−131894
$La_{1.8}Sr_{0.2}CuO_4$, prep., supercond. props. 7−118668
$La_{1.8}Sr_{0.2}CuO_4$ sintered high T_c supercond. props., resistivity and photoacoustic meas. 7−118683
$La_{1.8}Sr_{0.2}CuO_4$, struct. and superconductivity under press. 7−92355
$La_{1.8}Sr_{0.2}CuO_4$ superconductors, critical currents and fields 7−92394
$La_{1.8}Sr_{0.2}CuO_4$, supercond. transition, DC mag. suscept., elec. resist. meas. 7−99256
$La_{1.8}Sr_{0.2}CuO_4$, superconductivity thin films, synthesis and irradiation-induced defects 7−125218
$La_{1.8}Sr_{0.2}CuO_4$, synthesis, characterisation and high T_c superconductivity at 40 K. 7−85174
$La_{1.8}Sr_{0.2}CuO_4$, weak flux pinning, 230 to 40 K 7−92393
$(La_{1.8}Sr_{0.2}Cu)_xO_y$, high T_c superconductor, preparation by oxidation of amorphous $La_{1.8}Sr_{0.2}Cu$ ribbon 7−99267
$La_{1.825}Sr_{0.175}CuO_4$, resistivity to 1100 K 7−137938
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., energy gap, Korringa const., determ. by NMR 7−132144
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., neutron irradiation, influence on supercond. props. *(Russian)* 7−143654
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., thermal expansion, longitudinal ultrasound velocity *(Russian)* 7−143709
$La_{1.85}Sr_{0.15}CuO_4$, elec. resist., Hall effect and thermoelec. power meas. in normal and supercond. states 7−105790
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, energy gap 7−92352
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., cryst. struct. above and below polymorphic T_c 7−98030
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., normal and supercond. state props. 7−99303
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., energy gap 7−99318
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond. resistivity upper limit 7−105782

type II superconductors continued
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. props. 7−105833
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, US and thermal expansion meas. 7−105838
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, mag. penetration depth, flux-pinning effects, μSR study 7−112650
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductivity, mag. field penetration depth, μSR study 7−112651
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., optical props. 7−113191
$La_{1.85}Sr_{0.15}CuO_4$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. screening and flux distrib. 7−118741
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., supercond. props. and microstructures 7−118756
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., shock-induced chemical synthesis 7−119220
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., formation of perovskite by oxidation of La-Sr-Cu alloy 7−119411
$La_{1.85}Sr_{0.15}CuO_4$, high-T_c superconductor, nonzero isotope effect 7−125202
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., mag. susceptibility, hydrostatic press. 7−138126
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., thermodynamic and other props. 7−143707
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., spin-lattice relax. of ^{63}Cu and ^{139}La nuclei *(Russian)* 7−143920
$La_{1.85}Sr_{0.15}CuO_4$, hot-pressed and sintered, superconducting props. 7−99259
$La_{1.85}Sr_{0.15}CuO_4$, magnetic hysteresis 7−125239
$La_{1.85}Sr_{0.15}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$La_{1.85}Sr_{0.15}CuO_4$ single cryst., high T_c superconductor, prep. and props. 7−92364
$La_{1.85}Sr_{0.15}CuO_4$, superconducting, magnetisation 5 to 300 K 7−99321
$La_{1.85}Sr_{0.15}CuO_4$, superconducting transition temp., ^{18}O isotope shift 7−125203
$La_{1.85}Sr_{0.15}CuO_4$, tunnelling, point contact investigations 7−105859
$La_{1.85}Sr_{0.15}CuO_4$, ultrasound studies, high T_c superconductors 7−118718
$La_{1.85}Sr_{0.15}CuO_{4-\delta}$, upper critical field meas. in pulsed mag. field 7−99366
$La_{1.85}Sr_{0.15}CuO_{4-\delta}$, high T_c supercond., electrodynamic response 7−131896
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high temp. supercond., evidence against bulk superconductivity 7−125199
$La_{1.85}Sr_{0.15}CuO_{4-y}$, high T_c supercond., O role in prep. 7−132539
$La_{1.85}Sr_{0.5}CuO_4$ bulk superconductivity meas., susceptibility and lattice distortion 7−118645
$La_{1.88}Sr_{0.12}CuO_4$, crystal structure, Jahn-Teller effect on CuO_6 octahedron *(French)* 7−98057
$La_{2-x}Sr_xCuO_4$ (x=0 to 0.2), high T_c supercond., electron-electron correlations 7−112656
$La_{2-x}Sr_xCuO_4$, Hall effect meas. at 77 K, implications for normal state electronic struct. 7−105840
$La_{2-x}Sr_xCuO_4$, high temp. superconductor, resistivity, mag. props. and specific heat 7−85189
$La_{2-x}Sr_xCuO_4$ high T_c supercond., photoemission studies 7−92839
$La_{2-x}Sr_xCuO_4$, high T_c supercond., structural instability, X-ray diffr. study, 15-298 K 7−98434
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic props. 7−99369
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Young's modulus, internal friction studies 7−105822
$La_{2-x}Sr_xCuO_4$, high T_c superconductor, experimental electronic struct. studies 7−106381
$La_{2-x}Sr_xCuO_4$, high T_c supercond., ab initio electronic band structure 7−112284
$La_{2-x}Sr_xCuO_4$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$La_{2-x}Sr_xCuO_4$, high T_c supercond., far-IR reflectivity 7−113192
$La_{2-x}Sr_xCuO_4$ high T_c superconds., fabrication, mech. props., sp. ht. and O diffusion studies 7−119209
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. and elec. props., struct. transition preceding superconductivity *(Russian)* 7−124474
$La_{2-x}Sr_xCuO_4$, high T_c supercond., electronic struct. determ. *(Russian)* 7−124821
$La_{2-x}Sr_xCuO_4$, high T_c supercond., EPR studies *(Russian)* 7−125527
$La_{2-x}Sr_xCuO_4$, high T_c superconductors, effect of low dimensionality on parameters 7−138129
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. and phase transitions *(Russian)* 7−142711
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. transformations *(Russian)* 7−142977
$La_{2-x}Sr_xCuO_4$, high T_c supercond., normal state props. 7−143995
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Raman and IR study of lattice vibrs. 7−144075
$La_{2-x}Sr_xCuO_4$, microstructural and electromagnetic characterisation 7−112644
$La_{2-x}Sr_xCuO_4$, soft-phonon behaviour, hopping conduction 7−137546
$La_{2-x}Sr_xCuO_4$, struct. and high T_c supercond. 7−99252
$La_{2-x}Sr_xCuO_4$, structural phase diagram, X-ray study 7−119252
$La_{2-x}Sr_xCuO_4$ thin films, supercond. props., diamag. transition 7−118613
$La_{2-x}Sr_xCuO_{4-\delta}$, high T_c supercond., composition-depend, superconductivity 7−99302
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., upper crit. field 7−99370
$La_{2-x}Sr_xCuO_{4-y}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., upper critical field meas. 7−118745
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., O vacancy behaviour, positron annihilation, O diffusion 7−142769
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., introduction of Bi 7−143681
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., X-ray absorption meas. 7−144178
$La_{2-x}Sr_xCuO_{4-y}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7−118607
$La_{2-x}Sr_xCuO_{4-y}$, superconducting props. at 40 K 7−112587
$La_{2-x}Sr_xCuO_{4-y}$, superconducting perovskites, rare-earth doping 7−118675
$La_{2-x}Sr_xCuO_{4-y}$ Z *(French)* 7−112707
$(La_{1.85}Sr_{0.15})Cu_{0.95}Sn_{0.05}O_4$, perovskite supercond., phonon and electron anomalies 7−92350

type II superconductors continued
La_xTaS_2, intercalation cpd., synthesis, transport and supercond. props. 7−99311
$La_{2-y}X_yCuO_4$, electronic band props., superconductivity, using La_2CuO_4 results 7−77132
$(LaY)_{2-x}Sr_xCuO_4$, high T_c supercond., localisation and supercond. characts. 7−125208
$La1.6Eu_{0.25}Sr_{0.15}CuO_4$ bulk superconductivity meas., susceptibility and lattice distortion 7−118645
$LiTi_2O_4$, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
$Ln_{2-x}(BaSr)_xCuO_4$, Ln=Pr,Nd,Y, high T_c supercond. behaviour systematics 7−118646
Lu ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
$Lu_5Ir_4Si_{10}$ supercond., electronic phase transition suppression by hydrostatic press. 7−125220
$LuRh_{1.2}Sn_4$, supercond. props. and magnetism 7−92325
$Lu_5T_4X_{10}$, (T=Ir,Rh; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
$Mg_3Zn_3Al_2$, icosahedral supercond., sp. ht. meas. 7−112663
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546
MoN films, synthesis by active N sputtering, expt. study 7−132452
MoN sheet, superconducting transition temp. 7−85161
MoN, supercond. props. *(Japanese)* 7−99309
MoN thin films, hexagonal struct., formation, supercond. props. and ion irradiation effects study 7−131844
MoN_x films, formation by ion beam and vapour deposition method 7−92875
MoRe films, superconducting energy gap, vacuum tunnelling spectroscopy 7−92382
MoRhB amorphous alloys, NMR studies and superconductivity 7−99313
MoRhP amorphous alloys, NMR studies and superconductivity 7−99313
$NaHg_4$, supercond., surface magnetisation 7−125240
Nb, critical field, field depend. of mag. permeability in flux flow state 7−92391
Nb, deformed, supercond. transition temp., US interaction and annealing effects 7−99251
Nb films grown in UHV MBE system, epitaxial relations and supercond. props. 7−76687
Nb, flux-pinning effect of ferromagnetic overlayers, magneto-optical obs. 7−143737
Nb, high purity, RF superconductivity, production 7−131928
Nb nonequilibrium supercond., crystallographic and mag. field effects 7−112712
Nb point contact Josephson junction for DC voltage unit standard 7−105857
Nb sheet and sputter coated cavity meas. comparison 7−131893
Nb, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
Nb superconducting cavities, microwave surface resistance rel. to oxide layers 7−131892
Nb superconducting foils in a transverse field, nonuniform critical current distrib. 7−125287
Nb, superconducting surface, angle resolved XPS studies of oxides 7−138584
Nb, superconductivity and oxidation 7−99340
Nb surface oxides, angle resolved XPS and supercond. studies 7−113352
Nb, ultra-high purity, supercond. transition temp. 7−105798
Nb variable thickness bridge array, prep. and props. 7−118725
Nb/Al/Nb Josephson junction structs., TEM, SEM and AES studies 7−105291
Nb-Al superconductors, Nb_3Al phase form. by powder process, critical current density 7−131960
Nb-Ge high T_c superconducting film, prep. and surface study 7−125187
Nb-Pb Josephson junctions, fabrication process study *(Japanese)* 7−99357
Nb-Sn thin film, A15 supercond., sp. ht. meas. 7−112662
Nb-Ti (46.5 wt.%), precip. at low strains, two-phase region, critical current rel. to heat treatment 7−131316
Nb-Ti alloys, nanometer scale structs., development, influence on supercond. critical current density 7−131949
Nb-Ti alloys, superconductivity and structural instability study 7−105008
Nb-Ti composite superconductors, critical current densities 7−85214
Nb-Ti fibres, short sample training behaviour, 4.2 K 7−86376
Nb-Ti filamentary spirals, elec. field and crit. current 7−85216
Nb-Ti multifilamentary superconductors, current densities, spacing effects 7−85215
Nb-Ti multifilamentary superconductors, review 7−99359
Nb-Ti multifilamentary superconductors, current density improvement 7−125284
Nb-Ti short sample superconducting fibres, mechanical behaviour 7−86377
Nb-Ti superconductors, supermagnet materials, review 7−99358
Nb-Ti two-phase composite superconds., critical temp. suppression, proximity effects study 7−131830
$Nb_3(Al,Ge)$ composite tapes, electron beam irrad. prep., struct., supercond. props. *(Japanese)* 7−99253
$Nb_3(Al,Ge)$ prepared by continuous rapid quenching, high-field superconducting props. 7−77183
$Nb_3(Al,Si)$ prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3Al AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Al composite tapes, electron beam irrad. prep., struct., supercond. props. *(Japanese)* 7−99253
Nb_3Al multifilamentary wires, AC losses measured by magnetisation 7−77153
Nb_3Al prepared by continuous rapid quenching, high-field superconducting props. 7−77183
Nb_3Al wires, powder metallurgy processed, supercond. props. 7−131936
$Nb_3Al_{1-x}Ge_x$ composite tape fabrication by laser irrad. powder metallurgy process, supercond. props. study 7−132514
$Nb_3Al_{1-x}Ge_x$ supercond. tape prep. by electron beam annealing, high-field props. study, magnet appl. 7−132518
$Nb_3Al_{1-x}Ge_x(Si_x)$ supercond. tape prep. by continuous liquid quenching method 7−132517
NbC films, prepared by reactive laser sputtering, supercond. props., X-ray and chem. anal. 7−99250

type II superconductors continued
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
NbC superconducting microparticle composite wire, fabrication and props. 7−138175
NbC superconducting surface, angle resolved XPS studies of oxides 7−138584
NbCN superconducting films, MOCVD deposited, struct. and props. study 7−131842
NbCN superconducting films, upper critical field meas. and penetration depth determ. 7−131881
$NbC_{1-x}N_x$ coatings on C fibres, superconductivity 7−138167
NbC_xN_{1-x} high T_c superconducting films, high-rate synthesis by hollow target sputtering 7−100062
NbC_xN_{1-x} superconducting films, reactively sputtered in (Ar, N_2, C_2H_4) mixtures, charactn. 7−131843
Nb_3Ge AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Ge films, CVD grown, high field superconducting props. 7−112720
Nb_3Ge layers, CVD controlled by gas phase diffusion, supercond. transition temp. 7−112609
Nb_3Ge superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
Nb_3Ge superconducting tapes, CVD synthesis, H_2/Cl_2 ratio effects 7−126003
Nb_3Ge superconducting tapes, CVD fabrication and critical current densities 7−138166
Nb_3Ge:Ar sputtered amorphous films, impurity bubbles, flux pinning and TEM studies 7−131138
Nb_3Ir AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Ir, A15 superconductor, radiation damaged, weak localisation 7−105783
NbN and NbCN, RF sputtered films, thermal annealing effects 7−132451
NbN based SIS junction, heterodyne mixing expts., for radiotelescopes 7−120277
NbN film, critical current density, Ambegaokar-Baratoff-Ginzburg-Landau crossover effects 7−92396
NbN granular superconducting films, energy gap, STM images 7−99341
NbN high-field supercond. sputter deposited on complex substrates 7−131841
NbN single cryst. films, surface stability, effect on superconducting props. 7−112030
NbN sputtered coatings on practical substrates, high field supercond. props. study 7−131957
NbN, sputtered film, fabrication, struct. and supercond. props. *(Japanese)* 7−112537
NbN sputtered thin films, microwave surface resistance 7−131731
NbN supercond. broad bridges, transition to resistive state 7−105858
NbN, supercond. props. *(Japanese)* 7−99309
NbN supercond. thin films, RF surface resistance 7−138120
NbN superconducting microbridges, current-volt. characts. 7−70481
NbN superconducting surface, angle resolved XPS studies of oxides 7−138584
NbN superconducting thin films, sputter deposition, optical emission spectroscopy 7−132450
NbN thin films, microstruct., resistivity, anisotropy of upper critical field 7−131934
NbN type Bl superconductors, critical inductances *(Turkish)* 7−105863
NbN-BN granular cermet films, transport props. study 7−131852
NbN-MgO-NbN sputter deposited superconductor-insulator junctions, insulator interface effects 7−125268
NbN-MgO(Al_2O_3)-NbN, tunnel junction fabrication 7−131912
NbN(C) surface oxides, angle resolved XPS and supercond. studies 7−113352
NbN_xC_y, superconducting thin films for microelectronic appls., ion beam deposition 7−132449
NbNi disordered alloys, upper critical field 7−77176
NbPS, superconducting, bonding, electronic struct., TBC 7−70187
NbS_2, 2H polytype, upper critical field anisotropy and elec. resist. 7−138159
Nb_3Si, A15 phase, high T_c material, high press. synthesis 7−77121
Nb_3Sn AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
Nb_3Sn binary and alloyed multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7−131956
Nb_3Sn binary and Ti-alloyed superconds., fabrication by hot extrusion and high-field props. study 7−132516
Nb_3Sn, bronze-processed multifilamentary superconductor, crit. current., influence of two-stage annealing 7−112717
Nb_3Sn bronze-processed multifilamentary supercond. composite, supercond. and mech props., neutron irrad. effects study 7−131190
Nb_3Sn, bronze-processed tapes, study of shape anisotropy in critical current densities 7−131959
Nb_3Sn composite superconductor with very fine filaments, development and power freq. appls. 7−138173
Nb_3Sn compound, tensile strength rel. to grain size in bronze processed multi-filamentary supercond. 7−106581
Nb_3Sn, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Nb_3Sn force cooled superconducting coil, development 7−135650
Nb_3Sn, high field superconducting coils for Mirror Fusion Test Facility 7−129393
Nb_3Sn, high-current density supercond., role of defects within flux-line lattice 7−118746
Nb_3Sn jelly roll wire, superconducting phase, critical current density 7−105870
Nb_3Sn microcomposites, hot-powder-metallurgical prep., supercond. props., Ti-alloying effects studies 7−131973
Nb_3Sn multifilamentary supercond. wire, layer form., lattice parameter, critical props. 7−77182
Nb_3Sn multifilamentary superconductor, stress effects on critical currents 7−105871
Nb_3Sn multifilamentary supercond. composites, tensile strength, elongation, fracture 7−106582
Nb_3Sn multifilamentary supercond. wires, resistive transition, shape depend. on composite inhomogeneity 7−138168
Nb_3Sn powder, prep., supercond. critical temp. 7−106462
Nb_3Sn, supercond., T_c limited by grain-boundary flux-shear 7−138163
Nb_3Sn, supercond. magnet, full array Large Coil Task tests 7−129387

type II superconductors continued
Nb_3Sn supercond. thin films, RF surface resistance 7−138120
Nb_3Sn supercond. wires, fractography and mech. props. at cryogenic temps. *(Japanese)* 7−113687
Nb_3Sn supercond. wires for AC use, development 7−138172
Nb_3Sn superconducting films with periodic inhomogeneity, critical temp. *(Russian)* 7−99244
Nb_3Sn superconducting surface, angle resolved XPS studies of oxides 7−138584
Nb_3Sn superconducting wires effect of filament diameter and spacing on T_c 7−138170
Nb_3Sn superconductor, flux pinning, grain boundary effects 7−105869
Nb_3Sn superconductors, magnetic measurements using $Cd_xHg_{1-x}Te$ Hall probes 7−73377
Nb_3Sn:Ti wires fabricated by internal Sn diffusion method, Ti addition effects 7−131953
Nb_3Sn-Cu cable-in-conduit superconductor for fusion appls., testing at IFSMTF 7−129392
Nb_3Sn-Cu supercond. wire prep. by liq. phase sintering, supercond. props. study 7−132515
Nb_3Sn-Ti composite supercond. wires, new fabrication process, and props. 7−132519
Nb_3Sn-Ti-Cu multifilamentary conductors with high-field critical values 7−131954
$Nb_{3+x}Sn_{1-x}$, supercond. non-stoichiometric, electronic struct. 7−105383
Nb_3Sn(Ti) superconductor for 21 Tesla fields, powder metallurgy 7−131955
$(NbTa)_3Sn$ multifilamentary wires, high field supercond. props. 7−131840
NbTi alloys, enhanced upper critical fields 7−77178
NbTi film for mag. shield, thickness depend. of screened mag. fields 7−77147
NbTi fine filament superconductors, anomalous low field magnetization 7−131882
NbTi fine filament superconductors, fabrication techniques 7−132521
NbTi, forced-flow cooled coil, IFSMTF tests for Large Coil Task program 7−129390
NbTi, high field superconducting coils for Mirror Fusion Test Facility 7−129393
NbTi multifilamentary superconducting coil, loss meas. 7−77159
NbTi multifilamentary superconductor, critical current rel. to axial stress 7−131963
NbTi strands extracted from coreless Rutherford cables, electromechanical props. 7−131964
NbTi, supercond. magnet, full array Large Coil Task tests 7−129387
NbTi supercond. wires, fractography and mech. props. at cryogenic temps. *(Japanese)* 7−113687
NbTi superconducting composites, very high current density, effect of heat-treatment temp. 7−131965
NbTi superconductor, flux-pinning, subboundary struct. effects 7−105869
NbTi superconductors, ultra-fine filament, AC losses 7−131967
NbTi ultrafine filamentary supercond. wires, AC losses calc. 7−131946
NbTi ultrafine filament superconductors for SSC, prototype fabrication 7−138171
NbTi-Cu, cryostatic stability of miniaturized composite conductors 7−131961
NbTi-Cu cable-in-conduit conductors, stability at short heat pulse duration 7−77185
NbTi-Cu composite superconducting properties charcts and struct. 7−131962
NbTi-Cu multifilamentary superconductor, electrical and magnetic props. below T_c 7−77143
NbTi-Cu multifilamentary superconducting wire, AC losses 7−77161
NbTi-Cu superconducting composite wires with fine filaments, supercond. props. 7−131966
NbTi-Cu superconductor, Al-stabilised, for use in large magnets 7−77169
$Nb_{0.53}Ti_{0.47}$-Ge multilayers, disordered, anisotropic upper crit. fields 7−143732
$Nb_{0.8}Ti_{0.2}$, ion implanted He porosity and supercond. props. *(Russian)* 7−99243
$Nb_{0.5-x}Ti_{0.5-x}Fe_{2x}$, supercond. critical temp. and upper critical fields 7−77179
NbZn single filament superconducting wire stability, real transition characteristic effects 7−143730
NbZr supercond. thin films, RF surface resistance 7−138120
$(Nb_{1-x}Zr_x)_3Sn$ layers, segregation of Zr and effects 7−77144
Nd-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
$NdBa_2Cu_3O_{7-x}$, high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
$NdBa_2Cu_3O_{8-\delta}$, high T_c supercond., props. 7−138108
Ni-H, high press. phase, supercond. transitions 7−125204
Ni-Zr metallic glasses, props. rel. to melt temp. and quench rate 7−83766
NiZr amorphous alloy, superconducting transition temp. determ. by AC susceptibility meas. 7−85160
Pb superconducting thin films, granular type, average grain size determ. 7−131502
Pb-Bi superconducting films, pin influence on mixed state 7−131945
$PbMo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$PbMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$PbMo_6S_8$ Chevrel phase wires, supercond. props. 7−131972
$PbMo_6S_8$ cold powder metallurgy processed superconducting wires with Nb sheaths 7−113467
$PbMo_6S_8$, supercond., Chevrel phase cpds., anharmonicity of cation modes, upper limit 7−124416
$PbMo_6S_8$, supercond. ribbons, prepared using vapor transport techniques, high field props. 7−131971
$PbMo_6S_8$ superconductors, chevrel phase, critical current density, depend. on grain size, expt. study 7−131958
$PbMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
$PbMo_6S_8$, thermal expansion studies by X-ray diffr., temp 10 to 200 K 7−111919
$PbMo_6S_8$ wires, Chevrel-phase, supercond. props. 7−99382
$PbMo_6S_8$:Al doping and heat treatment effects on phase comp., lattice consts. and Tc 7−83987
$Pb_{0.92}Mo_6S_{7.5}$ Chevrel phase superconductor, ^{207}Pb electron environment, mag. props., NMR study *(Russian)* 7−143921
$Pb_xMo_6S_{8-y}$ Chevrel phase, supercond. props., stoichiometry effects studies 7−85170

type II superconductors continued
$PdCuH_x$ superconducting transition, low temp. ion beam mixing and implantation effects 7−105749
$Pd_{1-y}Cu_yH_x$, influence of Cu on supercond. props. 7−112713
$Pd_{1-y}Cu_yH_x$, T_c enhancement on addition of Cu *(Russian)* 7−99247
PdH_x superconducting transition, low temp. ion beam mixing and implantation effects 7−105749
Pr, high pressure bandstruct. and electronic props. 7−105388
$PrRh_4B_4$ high press. prep. and superconducting props. 7−143657
PtSi thin wires, localisation and electron-electron interaction effects 7−125152
R-Ba-Cu-O system (R=Y, Ho, Er), high T_c supercond., superconducting props. 7−138107
$RBa_2Cu_3O_{6+x}$ (R=Y,Yb,Ce,Pr), possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
$RBa_2Cu_3O_{7-y}$ (R=Y,Nd,Eu,Gd,Dy,Ho,Er,Tm), high T_c supercond., upper critical fields, anisotropy limits 7−131939
$RBa_2Cu_3O_{7-y}$, (R=Y,Gd), high T_c supercond., normal state props., electron correlations 7−143441
$RBa_2Cu_3O_{7+y}$, high T_c supercond., superconducting props. *(Russian)* 7−143653
$RBa_2Cu_3O_x$, (R=Y,Gd,Er,Yb), high T_c supercond., press. dependencies of T_c 7−131856
Re-H, high press. phase, supercond. transitions 7−125204
Re-Ta-H, amorphous films, elec. resistance, superconducting transition in mag. field 7−112585
Rh-H, high press. phase, supercond. transitions 7−125204
Ru-H, high press. phase, supercond. transitions 7−125204
RuN films, synthesis by active N sputtering, expt. study 7−132452
Sc ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
$Sc_5T_4X_{10}$, (T=Co,Rh,Ir; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
Sm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Sm-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
$SmBa_2Cu_3O_{7-\delta}$ high T_c supercond., cryst. struct. determ. 7−124204
$SmBa_2Cu_3O_{7-x}$, high T_c supercond., Raman scatt. 7−119011
$Sm_xBa_{1-x}CuO_{3-y}$, high T_c superconductivity 7−138106
$SmRh_4B_4$ antiferromag. supercond., reentrant behaviour, microscopic mechanisms, Ginzburg-Landau approach 7−105816
$SnMo_{6-x}Nb_x(Ta_x)S_{8-y}$, superconductivity and struct. *(Russian)* 7−99245
$SnMo_6S_8$, Chevrel phase supercond., Raman spectra study 7−85712
$SnMo_6S_8$, Chevrel phase, lattice instability and superconductivity 7−99305
$SnMo_6S_8$, Chevrel phase, electronic struct., vacancies effect 7−117923
$SnMo_6S_8$, normal and superconducting, NMR studies 7−106054
$SnMo_6S_8$, supercond., Chevrel phase cpds., anharmonicity of cation modes, upper limit 7−124416
$SnMo_6S_8$, supercond. ribbons, prepared using vapor transport techniques, high field props. 7−131971
$SnMo_6S_8$ tapes, fabrication, metallurgical charact. and supercond. props. 7−131969
$Sn_{33}Pb_{67}$, fine-dispersed system, superconductivity, mag. field effect 7−125242
$(Sr,Be,Y,La)CuO_{\Delta-y}$, high temp supercond., phonon interaction effects 7−118686
Sr-La-Cu-O, high T_c superconductivity model 7−105817
Sr-La-Cu-O high T_c superconds., upper critical fields and Ginzburg-Landau coherence lengths 7−99364
Sr-La-Cu-O system, prep. by coprecipitation, supercond. props. 7−99292
SrBaYCuO high T_c supercond., possible 65 °C superconductivity obs. 7−125195
$(Sr_{1-z}Ca_z)_{0.15}La_{1.85}CuO_{4-y}$, high T_c superconductor, props., depend. on sintering atmosphere 7−92331
$Sr_{0.15}La_{1.85}CuO_{4-x}$, high T_c supercond., far IR props. 7−119021
$Sr_{0.2}La_{1.8}CuO_4$ high T_c superconductor, diamag. shielding and Meissner effect meas. 7−92370
$Sr_{0.2}La_{1.8}CuO_4$, high T_c superconductor, electronic struct., UPS, inverse photoemission spectra studies 7−105368
$Sr_{0.2}La_{1.8}CuO_4$, high T_c superconductor, direct and universe photoemission 7−125250
$Sr_xLa_{2-x}CuO_{4-\delta}$, high T_c superconductor, mag. studies 7−105829
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., lattice const. press. depend. 7−92341
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., diamag. shielding and Meissner effect 7−92366
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., Cu valence, O deficiency 7−99293
$Sr_xLa_{2-x}CuO_{4-y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
$Sr_xLa_{2-x}CuO_{4-y}$ thin film high T_c supercond., sputter deposition prep. 7−92869
$Sr_xY_{1-x}CuO_{3-y}$, high T_c supercond. props., AC mag. suscept., elec. resist. meas. 7−112600
Ta, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
Ta/UBe_{13}, negative s-wave proximity effect obs., comment and response 7−112700
Ta-Cu-Ta Josephson sandwiches, thermoelec. phenomena study *(Russian)* 7−112306
Ta-Ru-H high press. phases, superconductivity and cryst. struct. 7−70444
TaN, cubic, form. with plasma jet *(Japanese)* 7−119223
$Ta_yNb_{1-y}Se_3$, quasi-1D cpd., elec. props. 7−131629
TaS_2 intercalation cpds., 2H polytype, electronic structs. 7−137775
Tc/Ta-TaO_x-Pb tunnel junction, energy gap and coupling strength, proximity electron tunnelling study 7−118732
$Th_{5-x}Ba_xM_{2-0.5x}Cu_5O_{13+y}$(M=Pb,Zr), high-Tc superconductivity 7−105763
ThIrSi, point contact spectroscopy 7−77167
α-$ThSi_2$, point contact spectroscopy 7−77167
Ti-base alloys, composite superconductors, phys. props., design and fabrication, book 7−108055
Ti-transition metal superconducting alloys, metallurgy and phys. props., book 7−108050
TiH system, phase transformations at high press. 7−86166
$TiH_{0.71}$ metastable superconducting ε phase, H interstitial octahedral position, inelastic neutron-scatt. meas. 7−83951

type II superconductors continued
TiMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
Tm-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Tm-Ba-Cu-O high T_c supercond., cryst. struct., X-ray diffr. studies 7−117899
Tm-Ba-Cu-O high T_c supercond., supercond. critical field anisotropy 7−125281
Tm-Ba-Cu-O system, high T_c superconductor, cryst. struct. determ. 7−98083
$TmBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7−118740
$TmBa_2Cu_3O_{9-x}$, high T_c supercond., magnetisation and lower crit. field 7−125183
U-based systems, heavy electron materials, phys. props., supercond., electron itineracy 7−105758
UBe_{13}, Hall effect, magnetoresist. and supercond. critical temp. 7−76893
UBe_{13} heavy fermion superconductor, coherence and pair-breaking effects, extended BCS theory 7−70466
UBe_{13}, heavy fermion superconductivity and magnetic props. 7−70472
UBe_{13} heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497
UBe_{13}, heavy fermion supercond., sp. ht. under press. 7−77155
UBe_{13} heavy fermion superconductor, optical props. 7−92630
UBe_{13}, heavy fermion superconducting props. investigations 7−105801
UBe_{13} heavy fermion supercond., NMR study 7−118875
UBe_{13}, heavy fermion supercond., point contact spectra 7−131923
UBe_{13}, impurities, superconducting transition temperature depression 7−77125
UBe_{13}, low temp. ^9Be spin-lattice relax. rate meas. in heavy fermion superconductor 7−70477
UBe_{13}, magnetoresist. and upper critical mag. field under press. 7−77172
UBe_{13}, specific heat, pressure depend. 7−69926
UBe_{13}, superconducting state, resonant impurity scatt., sp. ht. 7−105834
UBe_{13}, triplet pairing, proximity Josephson effect meas. 7−112683
UBe_{13}, ultrasonic attenuation and supercond. props., cryst. symmetry effects 7−92387
UBe_{13}, unconventional even parity superconductivity, nucl. relax. rate 7−70470
UBe_{13}, upper critical field and Hall effect temp. depend. meas. 7−70498
U_6CO, high-field superconductivity, weak coupling WHHM model anal. 7−77175
U_6Co, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
U_6Fe, high-field superconductivity, weak coupling WHHM model anal. 7−77175
U_6Fe, supercond. transition, ^{57}Fe Mossbauer studies 7−92554
UIr_3, anisotropic singlet state supercond. 7−77127
U_6Mn, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
UPt_3, anisotropic singlet state supercond. 7−77127
UPt_3, anisotropic supercond., AC susceptibility studies 7−77173
UPt_3 heavy fermion cpd., unconventional s-wave superconductivity 7−112664
UPt_3, heavy fermion metal anal. of anomalous US attenuation 7−77158
UPt_3, heavy fermion superconductivity and magnetic props. 7−70472
UPt_3 heavy fermion superconductor, antiferromag. spin fluctuations, inelastic magnetic neutron scatt. studies review 7−70534
UPt_3, heavy fermion supercond., sp. ht. under press. 7−77155
UPt_3, heavy fermion superconductor, Raman scatt. from spin fluctuations and phonons 7−92675
UPt_3, heavy fermion supercond., US attenuation, phase study 7−99336
UPt_3, heavy fermion supercond., ^{195}Pt Knight shift 7−112666
UPt_3, heavy fermion supercond., point contact spectra 7−131923
UPt_3, heavy fermions supercond., mass renormalisation 7−118688
UPt_3, longitudinal sound meas. in a mag. field 7−112672
UPt_3, neutron scattering studies of heavy fermion systems 7−112747
UPt_3, specific heat, pressure depend. 7−69926
UPt_3, supercond., transverse sound in mag. field 7−99335
UPt_3 superconducting props., cryst. symmetry effects 7−92387
$U(Pt_{1-x}Pd_x)_3$ pseudobinary heavy fermion systems, sp. ht., resist. and mag. suscept. meas. 7−69929
URu_2Si_2 7−112747
URu_2Si_2 heavy-electron supercond., magnetic excitations and ordering 7−85271
URu_2Si_2 single cryst. heavy fermion system, Fermi surface reconstruction, Hall effect meas. 7−131616
$U_{0.97}Th_{0.03}Be_{13}$, lower critical field, coexisting supercond. order parameters 7−77148
$U_{1-x}Th_xBe_{13}$, $(0.02<x<0.06)$ phase diagram, specific heat, critical field 7−77149
$U_{1-x}Th_xBe_{13}$, inherent spin-density-wave instability in heavy-fermion superconductivity 7−112580
$U_{1-x}Th_xBe_{13}$, phenomenological model of superconductivity 7−85164
$U_{1-x}Th_xBe_{13}$, phenomenological model of heavy-fermion superconductivity 7−118719
U_2Zn_{17}, neutron scattering studies of heavy fermion systems 7−112747
V Josephson junctions, mag. penetration depth determ. 7−77151
V, supercond., strained at 4.2 K, crit. fields and defect struct. *(Russian)* 7−92386
V, superconducting, anisotropy effects down to millikelvin temp. range 7−77171
V/Ag multilayered films with artificial superstruct., prep and supercond. 7−112677
V/Mo superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V/Si superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V-Ag multilayered structures, proximity coupled, upper crit. field meas. 7−99372
V-Ga thin film, A15 supercond., sp. ht. meas. 7−112662
V-Os system, electronic and supercond. props. 7−112605
V-Ru system, electronic and supercond. props. 7−112605
V-Si thin film, A15 supercond., sp. ht. meas. 7−112662
V_3Ga AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
V_3Ga superconducting multifilamentary wire, technology developments 7−131932
V_3Ga, superconductor for generating magnetic fields over 18 T 7−77184
V_3Ga very thin supercond. films, critical fields and spin polarised tunnelling meas. 7−131935

type II superconductors continued
$V_2(Hf-Zr)$ Laves phase superconductor, prep., manufacturing techniques development 7−132520
VN thin films, ion irrad. prep., supercond. and elec. props. 7−76226
$V_{1-x}Si_x$ supercond. amorphous alloys crit. mag. field, evidence for weak localisation effects 7−99367
V_3Si 7−131609
V_3Si films, reactive diffusion formed, superconducting transition temps. 7−112553
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
V_3SiH_x polycryst. superconductor, sp. ht. temp. depend., H interstitial effects study 7−69925
V_2Zr, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Y ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
Y-B-Cu-O high T_c mixed phase superconductor, electron probe microanalysis 7−99282
Y-Ba-C-O, granular supercond. at 100-160 K 7−112583
Y-Ba-Ca-Cu-O high T_c supercond., transition temp. studies 7−125168
Y-Ba-Cu oxide, high T_c supercond., cryst. struct. studies 7−91545
Y-Ba-Cu oxide, high T_c superconductor, vibrating sample magnetometry study 7−99325
Y-Ba-Cu oxide superconductors, identification of phase responsible for high T_c superconductivity 7−92344
Y-Ba-Cu oxides, superconductivity, high T_c, Meissner effect 7−92362
Y-Ba-Cu-O, high T_c superconductivity 7−99277
Y-Ba-Cu-O, high T_c superconductors, 90 K, critical current densities at 77 K 7−99278
Y-Ba-Cu-O, high T_c supercond., resistive transition, heterovalent ion doping effect 7−99298
Y-Ba-Cu-O, high T_c superconductor, tunnelling spectroscopy 7−99347
Y-Ba-Cu-O, high T_c superconductor, critical currents and crystal structure 7−99377
Y-Ba-Cu-O, high T_c superconductor, ^{89}Y NMR study 7−106038
Y-Ba-Cu-O, high T_c supercond. shells, microstruct. effects 7−112653
Y-Ba-Cu-O, high T_c supercond., single-phase, point-contact charact. 7−112722
Y-Ba-Cu-O, high T_c supercond., Raman study of lattice modes 7−113190
Y-Ba-Cu-O, high T_c supercond., substitutional effect on T_c 7−118643
Y-Ba-Cu-O, high T_c supercond., AC susceptibility, freq. and field depend., microstruct. 7−118707
Y-Ba-Cu-O, high T_c supercond., oriented films and polycrystalline bulk samples, supercond. energy gaps study 7−118714
Y-Ba-Cu-O, high T_c supercond., AC Josephson effect obs. at 77 K 7−118731
Y-Ba-Cu-O, high T_c supercond., crit. current meas. 7−118752
Y-Ba-Cu-O, high T_c superconductivity *(Japanese)* 7−125213
Y-Ba-Cu-O, high T_c supercond., phonon density of states, neutron scatt. study 7−131247
Y-Ba-Cu-O, high T_c supercond. props. w.r.t. lattice distortion and cooling conditions 7−131831
Y-Ba-Cu-O, high T_c supercond., normal and supercond. phases, microwave absorpt., ESR studies 7−132129
Y-Ba-Cu-O, high T_c superconductor, electron diffr. study 7−137332
Y-Ba-Cu-O, high T_c supercond., mixed phase, fabrication, aging 7−138091
Y-Ba-Cu-O, high T_c supercond., thermal conductivity 7−143708
Y-Ba-Cu-O, high T_c supercond., electron tunnelling 7−143726
Y-Ba-Cu-O, high temp. superconductor, Meissner effect, X-ray diffr. 7−112646
Y-Ba-Cu-O, high temperature superconductor, AES and EELS spectra 7−106315
Y-Ba-Cu-O, high temperature superconductor, powder preparation and sintering 7−118678
Y-Ba-Cu-O, high transition temperature superconductor 7−99260
Y-Ba-Cu-O, high-T_c superconductivity and diamagnetism 7−99261
Y-Ba-Cu-O, mixed compound, low resistance state up to 210 K 7−131851
Y-Ba-Cu-O, perovskite-related oxides, high-temperature superconductivity 7−125206
Y-Ba-Cu-O, Raman spectra of high T_c supercond. $YBa_2Cu_3O_7$ and semicond. $YBa_2Cu_3O_6$ 7−125726
Y-Ba-Cu-O, reverse AC Josephson effect obs. at 240 K 7−112698
Y-Ba-Cu-O, reverse AC Josephson expts. at 240 K 7−118734
Y-Ba-Cu-O, structural, electronic props., thermal expansion meas., prep. effect 7−118672
Y-Ba-Cu-O, supercond. coatings, plasma sprayed, transition temp. above 77 K 7−112565
Y-Ba-Cu-O, superconductivity onset at 100 K, mag. and resist. meas. 7−92347
Y-Ba-Cu-O, superconductivity above liquid N_2 temp. 7−99264
Y-Ba-Cu-O, superconducting transition temperatures 7−99265
Y-Ba-Cu-O, wire type supercond. with high T_c, crit. current density meas. 7−99380
Y-Ba-Cu-O, with transition metal impurities, effects on supercond. props. 7−105789
Y-Ba-Cu-O ceramic, high T_c supercond., cryst. struct. study 7−111505
Y-Ba-Cu-O ceramic high T_c supercond., improved low contact resistance 7−118751
Y-Ba-Cu-O ceramic superconductor with critical temp. of 93.7 K; 7−112544
Y-Ba-Cu-O ceramics, high T_c supercond., processing study 7−119211
Y-Ba-Cu-O compounds, high T_c supercond., compositionally depend. T_c, DC resist. meas. 7−112569
Y-Ba-Cu-O cpds., orthorhombic and tetragonal phases, O deficiency, high T_c supercond. 7−118682
Y-Ba-Cu-O films, constricted, Josephson effects 7−143727
Y-Ba-Cu-O films, high T_c supercond., prep. and substrate reactions 7−138653
Y-Ba-Cu-O high T_c, supercond., multiphase mixtures and transition temp. 7−118631
Y-Ba-Cu-O high T_c, supercond., critical fields and currents up to 20 T 7−125280
Y-Ba-Cu-O high T_c oxide superconductors, Josephson effects obs. *(Japanese)* 7−138157
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−92336
Y-Ba-Cu-O high T_c supercond., transition temp. studies 7−92340

type II superconductors continued
Y-Ba-Cu-O high T_c supercond. phase struct. determ., electron microscopy study 7−98080
Y-Ba-Cu-O high T_c superconductor, revised struct. model, Rietveld anal. 7−98085
Y-Ba-Cu-O high T_c supercond., phase identification, X-ray meas. 7−98392
Y-Ba-Cu-O high T_c supercond. obs. and cryst. struct. determ. 7−99269
Y-Ba-Cu-O high T_c supercond., press. effects study 7−99273
Y-Ba-Cu-O high T_c supercond. tunnelling, energy gap obs. 7−99345
Y-Ba-Cu-O high T_c supercond., low temp. struct., neutron diffr. study 7−104675
Y-Ba-Cu-O high T_c supercond., cryst. struct., neutron diffr. anal. 7−104676
Y-Ba-Cu-O high T_c supercond. thin films, 89 K T_c and Meissner effect obs. 7−105750
Y-Ba-Cu-O high T_c supercond., zero resist. at 91.5 K, mag. suscept. meas. 7−105751
Y-Ba-Cu-O high T_c supercond., T_c meas., Sr addition effects study 7−105768
Y-Ba-Cu-O high T_c supercond., orthorhombic struct., prep. and props. 7−105771
Y-Ba-Cu-O high T_c supercond. transition props., quench temp. depend. studies 7−105772
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling and IR meas. 7−105826
Y-Ba-Cu-O high T_c supercond. ceramic Josephson junctions, DC SQUID operation at 77 K 7−105845
Y-Ba-Cu-O high T_c supercond., point-contact electron tunnelling 7−105851
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling studies 7−105852
Y-Ba-Cu-O high T_c supercond., break junction tunnelling meas. 7−105853
Y-Ba-Cu-O high T_c supercond., macroscopic quantum phenomena 7−105854
Y-Ba-Cu-O high T_c supercond., upper critical field temp. depend. meas. 7−105864
Y-Ba-Cu-O high T_c supercond. single cryst., anisotropic upper critical field study 7−105865
Y-Ba-Cu-O high T_c superconds., IR reflectivity spectra, sintering temp. depend. study 7−106170
Y-Ba-Cu-O high T_c supercond., optimum prep. conditions determ., thermal and X-ray analyses 7−106475
Y-Ba-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7−111470
Y-Ba-Cu-O high T_c supercond., cryst. struct. and supercond. props. 7−111489
Y-Ba-Cu-O high T_c supercond., X-ray single cryst. struct. anal. 7−111490
Y-Ba-Cu-O high T_c supercond., struct. and morphology studies 7−111514
Y-Ba-Cu-O high T_c supercond., defects, high resolution TEM studies 7−111549
Y-Ba-Cu-O high T_c supercond., vacancy order-disorder transformation 7−111550
Y-Ba-Cu-O high T_c supercond., Cu-O bond-stretching vibrs., Raman and IR absorpt. spectra 7−111790
Y-Ba-Cu-O high T_c supercond., polymorph phase relations, X-ray studies 7−111827
Y-Ba-Cu-O high T_c supercond., metamorphic phase characterisation 7−111828
Y-Ba-Cu-O high T_c supercond., transition at 105 K 7−112538
Y-Ba-Cu-O high T_c supercond., persistent current obs. 7−112550
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−112555
Y-Ba-Cu-O high T_c supercond., transition temp., conc. ratio and prep. effects 7−112559
Y-Ba-Cu-O high T_c supercond., upper critical field and transition temp., mag. field effects 7−112560
Y-Ba-Cu-O high T_c supercond., mag. props. study 7−112655
Y-Ba-Cu-O high T_c supercond., sp. ht. jump at 92 K 7−112658
Y-Ba-Cu-O high T_c supercond., electromagnetic response in 90 K range 7−112668
Y-Ba-Cu-O high T_c supercond., 3D, thermodynamic fluctuations obs. 7−112675
Y-Ba-Cu-O high T_c supercond. point contacts, AC Josephson effect 7−112679
Y-Ba-Cu-O high T_c supercond., inverse AC Josephson effect observations 7−112702
Y-Ba-Cu-O high T_c supercond., upper critical field, elec. resist. meas. 7−112709
Y-Ba-Cu-O high T_c supercond., electronic anisotropy 7−112724
Y-Ba-Cu-O high T_c supercond., magnetic props., positive muon studies 7−112791
Y-Ba-Cu-O high T_c supercond., ESR and mag. susceptibility studies 7−112939
Y-Ba-Cu-O high T_c supercond., polycrystalline ceramic, far IR refl. studies 7−113193
Y-Ba-Cu-O high T_c supercond. phonon struct., far IR reflectance study 7−113194
Y-Ba-Cu-O high T_c supercond., coprecipitation and solid diffusion method prep. 7−113500
Y-Ba-Cu-O high T_c supercond. perovskite, cryogenic TEM study 7−117789
Y-Ba-Cu-O high T_c supercond., new phase obs., struct. and symm., electron diffr. and microscopy 7−117872
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7−117873
Y-Ba-Cu-O high T_c supercond., high resolution neutron diffr. struct. anal. 7−117874
Y-Ba-Cu-O high T_c supercond. struct., perfect, disordered and amorphous phases, electron diffr. and microscopy studies 7−117886
Y-Ba-Cu-O high T_c supercond. phase diagram and struct. charactn., comp. and sintering conditions depend. 7−117888
Y-Ba-Cu-O high T_c supercond. phase, cryst. struct. and reactivity with water 7−117890
Y-Ba-Cu-O high T_c supercond., cryst. struct., electron microscopy studies 7−117892
Y-Ba-Cu-O high T_c supercond., cryst. struct., neutron diffr. obs. 7−117893
Y-Ba-Cu-O high T_c supercond., cryst. and defect struct., electron microscopy studies 7−117895

type II superconductors continued
Y-Ba-Cu-O high T_c supercond., orthorhombic cryst. struct. 7−117896
Y-Ba-Cu-O high T_c supercond., tetragonal cryst. struct., neutron diffr. studies 7−117897
Y-Ba-Cu-O high T_c supercond., unit cell dimensions and O contents 7−117898
Y-Ba-Cu-O high T_c supercond., space groups, convergent beam electron diffr. studies 7−117900
Y-Ba-Cu-O high T_c supercond., local struct. and Cu valence, O vacancy effects 7−117901
Y-Ba-Cu-O high T_c supercond., defects, TEM obs. 7−117934
Y-Ba-Cu-O high T_c supercond., twins, dislocations and phase comp., TEM study 7−117935
Y-Ba-Cu-O high T_c supercond., electron beam radiation damage studies 7−117975
Y-Ba-Cu-O high T_c supercond. single crysts., fracture toughness meas. 7−118025
Y-Ba-Cu-O high T_c supercond., phase relationships and compatibilities 7−118056
Y-Ba-Cu-O high T_c supercond., rapid solidification, supercond. transition temp. 7−118060
Y-Ba-Cu-O high T_c supercond., orthorhombic to tetragonal transition, thermogravimetric and X-ray diffr. studies 7−118083
Y-Ba-Cu-O high T_c supercond., phase transformations and microstruct. 7−118084
Y-Ba-Cu-O high T_c supercond. cryst., TEM and SEM microanal. 7−118111
Y-Ba-Cu-O high T_c supercond., nonstoichiometric phase, press. and temp. depend. studies 7−118112
Y-Ba-Cu-O high T_c supercond., Cu^{3+}/Cu^{2+} ratio, lattice parameters and onset temp. determ. 7−118116
Y-Ba-Cu-O high T_c supercond., O nonstoichiometry and struct. 7−118117
Y-Ba-Cu-O high T_c supercond. props. and struct., O deficiency depend. study 7−118120
Y-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
Y-Ba-Cu-O high T_c supercond., electronic struct., LMTO-ASA method calcs. 7−118358
Y-Ba-Cu-O high T_c supercond., electronic struct. and charge transfer excitations 7−118362
Y-Ba-Cu-O high T_c supercond. films, DC magnetron sputtering prep. and props. study 7−118604
Y-Ba-Cu-O high T_c supercond., oxidation treatment, stoichiometry and lattice parameters w.r.t. T_c 7−118605
Y-Ba-Cu-O high T_c supercond. sputtered film charactn. 7−118627
Y-Ba-Cu-O high T_c supercond., Cu valence and O deficiency, sintering atmosphere effects 7−118628
Y-Ba-Cu-O high T_c supercond., cryst. struct., transforms. and transport props. 7−118629
Y-Ba-Cu-O high T_c supercond., transition temp., annealing temp. depend. 7−118632
Y-Ba-Cu-O high T_c supercond., zero resistance temp. and AC Josephson effect 7−118633
Y-Ba-Cu-O high T_c supercond., O content-transition temp. relations 7−118635
Y-Ba-Cu-O high T_c supercond., diamagnetism and transition temp., O effects 7−118636
Y-Ba-Cu-O high T_c supercond., elec. and mag. props. meas. 7−118702
Y-Ba-Cu-O high T_c supercond. thin films, Meissner effect obs. 7−118704
Y-Ba-Cu-O high T_c supercond., complex suscept. loss meas. near T_c 7−118708
Y-Ba-Cu-O high T_c superconds., NMR and EPR studies 7−118710
Y-Ba-Cu-O high T_c supercond., search for reverse AC Josephson effect 7−118721
Y-Ba-Cu-O high T_c supercond. Josephson junctions, critical currents meas. 7−118724
Y-Ba-Cu-O high T_c supercond., weak link Josephson junction studies 7−118726
Y-Ba-Cu-O high T_c supercond., upper critical field comp. depend. meas. 7−118742
Y-Ba-Cu-O high T_c supercond., coexisting phase structs., upper critical field meas. 7−118743
Y-Ba-Cu-O high T_c supercond. single crysts., H_{c2} anisotropy obs. 7−118744
Y-Ba-Cu-O high T_c supercond., critical current meas. in high applied fields 7−118748
Y-Ba-Cu-O high T_c supercond. critical current density and temp. in highly oxidised cpds. 7−118749
Y-Ba-Cu-O high T_c supercond., EPR spectrum, zero-field effects 7−118855
Y-Ba-Cu-O high T_c supercond., positron annihilation Doppler broadened lineshape study 7−119064
Y-Ba-Cu-O high T_c supercond., single cryst. growth from high temp. solution 7−119120
Y-Ba-Cu-O high T_c supercond., prep., cryst. struct. and elec. props. 7−119125
Y-Ba-Cu-O high T_c supercond. plasma powder sprayed coating props. 7−119133
Y-Ba-Cu-O high T_c supercond. large area plasma spray deposited thick films props. 7−119134
Y-Ba-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7−119136
Y-Ba-Cu-O high T_c supercond. thin films, RF magnetron sputtering prep. 7−119139
Y-Ba-Cu-O high T_c supercond. thin film, dual magnetron sputtering prep. 7−119140
Y-Ba-Cu-O high T_c supercond., thin film and SQUID fabrication 7−119155
Y-Ba-Cu-O high T_c supercond., manufacture and testing 7−119206
Y-Ba-Cu-O high T_c supercond., sinter-forging technique 7−119207
Y-Ba-Cu-O high T_c supercond. ceramic wire prod., powder-in-tube process and props. 7−119208
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond., colloidal method prep. and transition temp. 7−119218
Y-Ba-Cu-O high T_c supercond. tape, surface diffusion method prep. 7−119219
Y-Ba-Cu-O high T_c supercond., phase equilibria and cryst. Chem. 7−119245
Y-Ba-Cu-O high T_c supercond. system, 950°C subsolidus phase diagram 7−119246

type II superconductors continued
Y-Ba-Cu-O high T_c supercond., mixed and single phase ceramics, X-ray diffr. and EPMA studies 7−119250
Y-Ba-Cu-O high T_c supercond. ceramic, phase diagram determ. 7−119251
Y-Ba-Cu-O high T_c supercond. struct. and props., annealing effects study 7−119293
Y-Ba-Cu-O high T_c supercond. weak link, light detection appls. 7−121224
Y-Ba-Cu-O high T_c supercond., struct. and supercond. props., annealing effects 7−124188
Y-Ba-Cu-O high T_c supercond., cryst. struct. distortions 7−124189
Y-Ba-Cu-O high T_c supercond., cryst. struct. determ. 7−124199
Y-Ba-Cu-O high T_c supercond., localised electrons and cryst. struct. determ. 7−124203
Y-Ba-Cu-O high T_c supercond., heavy atom disorder, electron microscopy and diffr. studies 7−124225
Y-Ba-Cu-O high T_c supercond., struct. behaviour and superconductivity 7−124226
Y-Ba-Cu-O high T_c supercond., local struct. distortion 7−124227
Y-Ba-Cu-O high T_c supercond., O removal, temp. programmed desorption 7−124692
Y-Ba-Cu-O high T_c supercond., band struct., rough tight-binding anal. *(French)* 7−124848
Y-Ba-Cu-O high T_c supercond., high temp. elec. props. study 7−124866
Y-Ba-Cu-O high T_c supercond., annealing conditions depend., struct. and elec. resist. studies 7−125188
Y-Ba-Cu-O high T_c supercond., crystalline phases in melt quenched and annealed samples 7−125189
Y-Ba-Cu-O high T_c supercond., max. elec. resist., Meissner effect studies 7−125243
Y-Ba-Cu-O high T_c supercond., thermal cond., strong electron-phonon coupling 7−125248
Y-Ba-Cu-O high T_c supercond., lower critical fields, complex susceptibility meas. 7−125275
Y-Ba-Cu-O high T_c supercond., upper critical fields anisotropy charactn. 7−125279
Y-Ba-Cu-O high T_c supercond., trapped mag. flux spatial distrib. study 7−125283
Y-Ba-Cu-O high T_c supercond., Gd ESR spectra studies 7−125534
Y-Ba-Cu-O high T_c supercond., reflectivity meas. 7−125668
Y-Ba-Cu-O high T_c supercond. single crysts., Raman scatt study 7−125738
Y-Ba-Cu-O high T_c supercond., $L_{2,3}$ XANES studies 7−125855
Y-Ba-Cu-O high T_c supercond., pulsed laser evaporation prep. 7−126026
Y-Ba-Cu-O high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
Y-Ba-Cu-O high T_c supercond. prep. by oxidation of alloy foil, T_c and J_c studies 7−126055
Y-Ba-Cu-O high T_c supercond., prep. and physical props. 7−126058
Y-Ba-Cu-O high T_c supercond. ceramics, struct. and resistivity, heat treatment effects 7−126148
Y-Ba-Cu-O high T_c supercond., plasma oxidation and supercond. transition 7−126267
Y-Ba-Cu-O high T_c supercond. sputtered films, struct. and supercond. props. studies 7−131832
Y-Ba-Cu-O high T_c supercond., Raman scatt. study, evidence for O vacancies 7−132277
Y-Ba-Cu-O high T_c supercond., growth charact., SEM studies 7−132424
Y-Ba-Cu-O high T_c supercond., single cryst. prep. from CuO melts 7−132436
Y-Ba-Cu-O high T_c supercond., atomic local coordination and multivalent states 7−137336
Y-Ba-Cu-O high T_c supercond. film, struct. and supercond. props. 7−143290
Y-Ba-Cu-O high T_c supercond., conductivity anomalies at 40 K and 100 K under high press. 7−143468
Y-Ba-Cu-O high T_c superconds. and substituted systems, materials charactn. 7−143666
Y-Ba-Cu-O high T_c superconds., comp. depend. studies 7−143669
Y-Ba-Cu-O high T_c supercond., longitudinal and transverse magnetoresist. 7−143693
Y-Ba-Cu-O high T_c supercond., large anisotropic critical magnetisation currents 7−143703
Y-Ba-Cu-O high T_c supercond., mag. props. 7−143704
Y-Ba-Cu-O high T_c supercond., aligned crystalline grain prep. 7−143742
Y-Ba-Cu-O high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
Y-Ba-Cu-O high T_c supercond., quasi-particle excitations, light scatt. temp. depend. obs. 7−144082
Y-Ba-Cu-O high T_c supercond. thin film prep. by DC magnetron sputtering and props. 7−144272
Y-Ba-Cu-O high T_c superconducting filament prep. by suspension spinning method 7−144353
Y-Ba-Cu-O high T_c supercond. films, chemical etching props. study 7−144575
Y-Ba-Cu-O high temp supercond., metal composite monoliths, shock-compression fabrication 7−126057
Y-Ba-Cu-O high temp. supercond. film on $SrTiO_3$, epitaxial ordering 7−131833
Y-Ba-Cu-O high temp. superconductivity, structural and thermogravimetric analyses 7−143665
Y-Ba-Cu-O high-temperature superconductors, EPR and NMR meas. 7−118711
Y-Ba-Cu-O mixed phase system, superconductivity at 93 K at ambient press. 7−77129
Y-Ba-Cu-O multi-phase samples, superconductivity above 100 K 7−92354
Y-Ba-Cu-O sintered cpds., high T_c superconductor, elec. resistivity, critical currents, cryst. orientation 7−99379
Y-Ba-Cu-O superconducting cpd. system, high press. effects on supercond. transition temp. 7−77130
Y-Ba-Cu-O superconducting thin films, formation on $SrTiO_3$ substrate 7−144290
Y-Ba-Cu-O superconductor, high T_c, crystallographic description of phases 7−98095
Y-Ba-Cu-O system, antiphase domain boundaries in superconducting phase, high T_c superconductor 7−104689
Y-Ba-Cu-O system, high supercond. transition temp., elec. resist., mag. meas., heat treatment effects 7−99257
Y-Ba-Cu-O system, high supercond., role of optical phonons, 1 K absorpt. study *(Russian)* 7−125722

type II superconductors continued
Y-Ba-Cu-O system, high T_c superconductor, struct. identification 7−98087
Y-Ba-Cu-O system, high T_c superconductor, estimation of filling factor 7−98775
Y-Ba-Cu-O system, high T_c superconductor, Meissner effect, resistivity 7−99323
Y-Ba-Cu-O system, high T_c superconductor, magnetisation meas. 7−99324
Y-Ba-Cu-O system, high T_c supercond., high field props. 7−99365
Y-Ba-Cu-O system, high temp. superconductivity 7−112606
Y-Ba-Cu-O system, high T_c supercond., effects of crystal lattice distortions on superconductivity 7−117882
Y-Ba-Cu-O system, high T_c supercond., microstruct. study of phases 7−117939
Y-Ba-Cu-O system, high T_c superconductivity 7−118606
Y-Ba-Cu-O system, high T_c superconductivity, phase diagram 7−118612
Y-Ba-Cu-O system, high T_c supercond., phase dependent superconductivity 7−118642
Y-Ba-Cu-O system, high T_c supercond., struct., physical props. *(Russian)* 7−125170
Y-Ba-Cu-O system, high T_c supercond., resistivity, upper limit *(Russian)* 7−125173
Y-Ba-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174
Y-Ba-Cu-O system, high T_c supercond., peculiarities of resistive state *(Russian)* 7−125175
Y-Ba-Cu-O system, high T_c supercond., tunnelling *(Russian)* 7−125265
Y-Ba-Cu-O system, high T_c supercond., kinetic props. *(Russian)* 7−125285
Y-Ba-Cu-O system, high T_c supercond., EPR studies *(Russian)* 7−125527
Y-Ba-Cu-O system, regions of possible cpd. formation, high T_c superconductivity 7−112571
Y-Ba-Cu-O system, superconductivity at 91 K 7−112551
Y-Ba-Cu-O systems, high T_c supercond., elec. and mag. props. 7−118622
Y-Ba-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
Y-Ba-Cu-O systems high T_c supercond., lattice distortions and superconductivity effect of O content 7−143662
Y-Ba-Cu-O thin films, high T_c supercond., prep by RF magnetron sputtering 7−144274
Y-Ba-Cu-O thin films, supercond., props. 7−105791
Y-Ba-Cu-O thin films and tunnel junctions, high T_c supercond., struct. stability, kinetic processes 7−118737
Y-Ba-Cu-O:F, high-T_c superconductors 7−138104
Y-Ba-Sc-Cu-O high T_c supercond., struct. and microstruct. obs. 7−112602
Y-Ba-Sr-Cu-O, bulk high T_c supercond., inverse AC Josephson effect obs. 7−118730
Y-Ba-Sr-Cu-O system, high temp. superconductivity 7−112606
Y-Ba-(Sr-)Cu-O high T_c supercond., inverse AC Josephson effect studies 7−143722
Y-Ba(Sr)-Cu-O high temp. supercond., plasmons 7−105814
Y-based ceramics, high T_c supercond., latt. parameters, charge density *(Russian)* 7−124194
Y-Ce-Ba-Cu-O high T_c supercond., transition temp. studies 7−125168
YB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
YB_6 supercond. cluster cpd., electron tunnelling 7−138140
$YBa_2(Ag_xCu_{1-x})_3O_{9-y}$, high T_c supercond., comp. depend. of T_c 7−99290
YBaAlCuO high T_c superconductivity studies 7−105769
$YBa_2Cu_{3-y}Ni_yO_{7-\delta}$, superconducting props., Cu site effects 7−112557
$YBa_2Cu_3O_x$, high T_c supercond., synthesis under O_2 press. and superconductivity 7−143664
$YBa_2Cu_{3(1-y)}Fe_{3y}O_7$, high T_c supercond., effect of substitution of Cu by Fe 7−143672
$YBa_2(Cu_{1-x}M_x)_3O_{7-\delta}$ (M=Fe, Co, Ni, Zn, Ga) high-T_c superconductivity 7−118638
$Y_{1.2}Ba_{0.8}Cu_{0.95}M_{0.05}O_{4-y}$ (M=Cu, Ag, Al), high T_c oxide superconductors, elec. studies 7−118615
YBaCu(Nb)O high T_c superconds., lattice instability, ultrasonic meas. 7−138132
YBaCuO, break junction, Josephson effect above 77 K 7−125259
YBaCuO, grain boundary superconductivity 7−118679
YBaCuO, high T_c ceramic supercond., positron annihilation study 7−144158
YBaCuO, high T_c superconductivity obs. 7−105754
YBaCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118733
YBaCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118739
YBaCuO high T_c supercond. multilayer e-beam deposited thin film props. 7−138090
YBaCuO, high T_c supercond., LO strong coupling superconductivity theory 7−138116
YBaCuO high T_c supercond., thin film, pulsed laser etching study 7−138858
YBaCuO high T_c supercond. Josephson junctions, DC SQUID operation 7−143718
YBaCuO oxide ceramic superconds., development, review 7−118603
YBaCuO superconducting thin films, high T_c, sputter deposition method and superconducting props. 7−92345
YBaCuO/Nb tunnel type Josephson junctions, fabrication and charact. 7−143717
YBaCuO-Nb high T_c supercond. point contacts, AC Josephson effect freq. depend. study 7−125271
$YBa_2Cu_2O_{7-y}$ high T_c supercond., upper critical field meas. 7−118745
$YBa_2Cu_{2.9}O_{9-x}$, high T_c supercond., valence fluctuations and O dimerisation from XPS 7−144245
$YBa_2Cu_3O_6$ layered tetragonal perovskite struct., high T_c supercond. 7−98079
$YBa_2Cu_3O_{6-9}$, high T_c supercond., unoccupied electron states surface phenomena, inverse PES study 7−144154
$YBa_2Cu_3O_{6+\delta}$ high T_c supercond., positron annihilation lifetime and Doppler broadening energy spectra 7−144159
$YBa_2Cu_3O_{6+x}$, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
$YBa_2Cu_3O_{6+x}$, high T_c supercond., thermodynamic desorption of O 7−131427
$YBa_2Cu_3O_{6+x}$, high-T_c supercond., surface impedance meas. 7−118713
$YBa_2Cu_3O_{6+x}$, photoemission spectroscopy 7−143710

type II superconductors continued
$YBa_2Cu_3O_{6+y}$, high T_c supercond., flux pinning, critical current density 7—131948
$YBa_2Cu_3O_{68}$, high T_c supercond., electromag. effects 7—138131
$YBa_2Cu_3O_{6.5}$, prep., supercond. props. 7—118668
$YBa_2Cu_3O_{6.5+x}$, high T_c supercond., far IR props. 7—119021
$YBa_2Cu_3O_{6.7}$, strongly correl. electronic states, XPS, UPS obs. 7—105446
$YBa_2Cu_3O_{6.84}$, high T_c supercond., overstoichiometric defects, HREM study 7—111635
$YBa_2Cu_3O_{6.84}$, high T_c supercond., O substoichiometry and cationic disorder, HREM study 7—111636
$YBa_2Cu_3O_{6.9}$, high T_c superconductor, microstruct., O ordering, planar defects 7—111499
$YBa_2Cu_3O_{6.9}$, high T_c supercond., microstructure, O ordering, TEM study 7—117919
$YBa_2Cu_3O_{6.9}$-Fe, high T_c supercond., reaction and intermixing at Fe interface 7—137631
$YBa_2Cu_3O_7$, 93 K superconductor, cryst. struct. at 298 and 79.5 K 7—104690
$YBa_2Cu_3O_7$, ceramic processed, superconducting critical props. 7—118753
$YBa_2Cu_3O_7$, cryst. struct. of high-temp. superconductor 7—111501
$YBa_2Cu_3O_7$, electron struct., ground-state props. and photoemission spectra 7—138588
$YBa_2Cu_3O_7$, extreme type II supercond., magnetisation meas. 7—138124
$YBa_2Cu_3O_7$, high T_c superconductor, 94 K, press. depend. of transition temp. 7—105785
$YBa_2Cu_3O_7$, high T_c superconductor, UPS, reson. photoemission studies 7—106368
$YBa_2Cu_3O_7$, high T_c superconductor, solid state chemistry 7—112564
$YBa_2Cu_3O_7$, high T_c supercond., thermal anal., X-ray and neutron diffraction study 7—112645
$YBa_2Cu_3O_7$ high T_c supercond. thin film based SQUIDs, fabrication and operation 7—112725
$YBa_2Cu_3O_7$, high T_c supercond., cryst. struct. by single-cryst. X-ray diffr. 7—117903
$YBa_2Cu_3O_7$, high T_c supercond., connective nature of superconductivity 7—118662
$YBa_2Cu_3O_7$, high T_c supercond. ceramics, prep. and props. 7—118671
$YBa_2Cu_3O_7$, high T_c supercond., absorption of EM radiation 7—118712
$YBa_2Cu_3O_7$, high T_c supercond., prep. methods 7—119122
$YBa_2Cu_3O_7$, high T_c supercond., processing and props. 7—119212
$YBa_2Cu_3O_7$, high T_c superconductor, thermopower 7—125247
$YBa_2Cu_3O_7$, high T_c supercond., temp. depend. bond length change, XPS study 7—131088
$YBa_2Cu_3O_7$, high T_c supercond., O isotope effect 7—131861
$YBa_2Cu_3O_7$, high T_c supercond., bulk modulus anomalies at T_c 7—131898
$YBa_2Cu_3O_7$, high T_c supercond., photoemission study through supercond. transition, O dimerisation 7—132408
$YBa_2Cu_3O_7$, high T_c supercond., struct. at elevated temps., orthorhombic-tetragonal transition 7—137344
$YBa_2Cu_3O_7$, high T_c supercond., shear transformation, twin formation 7—137374
$YBa_2Cu_3O_7$, high T_c supercond., critical current densities 7—138176
$YBa_2Cu_3O_7$, high T_c supercond., NMR and NQR studies 7—138345
$YBa_2Cu_3O_7$ high T_c supercond., isotope effect absence w.r.t. phonon-mediated pairing mechanism 7—143674
$YBa_2Cu_3O_7$ high T_c supercond., lattice instabilities, Raman and IR spectra studies 7—144068
$YBa_2Cu_3O_7$ high T_c supercond., valence band and O(1s) region photoemission studies 7—144241
$YBa_2Cu_3O_7$, high temp. superconductor, EPR study 7—85196
$YBa_2Cu_3O_7$, high temperature superconductor, preparation and characterisation 7—105746
$YBa_2Cu_3O_7$, high-T_c supercond., single-phase, upper critical field 7—131933
$YBa_2Cu_3O_7$, orthorhombic-tetragonal phase transition, X-ray powder diffr. study 7—117857
$YBa_2Cu_3O_7$, resistivity to 1100 K 7—137938
$YBa_2Cu_3O_7$, single crystals, growth and high T_c superconductivity 7—118639
$YBa_2Cu_3O_7$, single phase high T_c supercond., thin superconducting shells 7—118664
$YBa_2Cu_3O_7$, supercond. transition temp., press. effect 7—99301
$YBa_2Cu_3O_7$, superconducting phase, water interaction 7—125237
$YBa_2Cu_3O_7$, superconducting ceramic oxygen ordering, TEM study 7—137343
$YBa_2Cu_3O_7$ supercond. ceramic, thermal expansion 7—143062
$YBa_2Cu_3O_7$ thin films, electron beam deposition, structural, supercond. props. 7—118335
$YBa_2Cu_3O_7$, ultrasound studies, high T_c superconductors 7—118718
$YBa_2Cu_3O_7$-PbSn point contact junctions, AC-Josephson effect 7—112705
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., bonds, bands, charge transfer excitations and supercond. 7—124829
$YBa_2Cu_3O_{7-\delta}$, ^{18}O isotope effect in high T_c supercond. 7—105797
$YBa_2Cu_3O_{7-\delta}$ and substituted systems, high T_c supercond. prep. 7—144354
$YBa_2Cu_3O_{7-\delta}$, electronic structure and excitonic-enhanced superconductivity 7—138103
$YBa_2Cu_3O_{7-\delta}$, heat capacity at superconducting transition temp. 7—131890
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., struct. comparison to $La_3Ba_3Cu_6O_{14+x}$ 7—111503
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7—112697
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond. based Josephson point contact, elec. characts. 7—118738
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., for IR spectroscopy 7—119012
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., X-ray diffr. and ESR studies 7—124214
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., electronic struct. and props. 7—124828
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., US study of elastic props. 7—125252
$YBa_2Cu_3O_{7-\delta}$, high T_c superconductivity and structure 7—131863
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., sp. ht. anomaly at superconducting transition 7—131891
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond. film, crit. current densities and transport 7—131950
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., thermal and mag. props. 7—138127
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., ultrasonic attenuation meas. 7—138133
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., Cu and Y NQR and NMR 7—138137
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., anomalous temp. depend. of H_{c1} 7—143698

type II superconductors continued
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7—143701
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., critical current density determ. 7—143740
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., IR spectra studies 7—144067
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond. ceramic sinters, improving inter-grain contact 7—144327
$YBa_2Cu_3O_{7-\delta}$, high temperature superconductor, O mobility and isotope effect 7—118680
$YBa_2Cu_3O_{7-\delta}$, high temp. supercond., interrelation of struct., dimensionality and superconductivity 7—131837
$YBa_2Cu_3O_{7-\delta}$, high-T_c supercond., internal mag. fields from muon spin rotations expts. 7—138121
$YBa_2Cu_3O_{7-\delta}$, rapidly solidified supercond., preparation, crystallisation and props. 7—143663
$YBa_2Cu_3O_{7-\delta}$, single-phase high-temperature superconductor, crystal structure 7—117871
$YBa_2Cu_3O_{7-\delta}$, struct. phase transition, role of dimensionality for high T_c superconduction 7—112588
$YBa_2Cu_3O_{7-\delta}$, superconductivity, stoichiometry and normal-state props. 7—138099
$YBa_2Cu_3O_{7-\delta}$, thermoelec. power and electron-phonon coupling 7—112660
$YBa_2Cu_3O_{7-\delta}$, upper critical field meas. in pulsed mag. field 7—99366
$YBa_2Cu_3O_{7-x}$, cryst. struct. of high-temp. superconductor 7—111502
$YBa_2Cu_3O_{7-x}$, epitaxial film, high T_c supercond., critical current meas. 7—112723
$YBa_2Cu_3O_{7-x}$, excitonic absorption and superconductivity 7—125253
$YBa_2Cu_3O_{7-x}$ high T_c superconductor, variation of stoichiometry, cell symmetry on temp. and press. 7—111498
$YBa_2Cu_3O_{7-x}$, high T_c superconductor, cryst. struct., cryst. chemistry 7—111500
$YBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7—118657
$YBa_2Cu_3O_{7-x}$, high T_c supercond., correlated valence fluctuation model 7—118685
$YBa_2Cu_3O_{7-x}$, high T_c supercond., microstructural effects on magnetisation 7—118701
$YBa_2Cu_3O_{7-x}$, high T_c supercond., H_{c2} anisotropy, resistive transition 7—131938
$YBa_2Cu_3O_{7-x}$, high T_c supercond., orthorhombic-tetragonal transition, order-disorder model 7—137551
$YBa_2Cu_3O_{7-x}$, high T_c supercond., sp. ht. study 7—138130
$YBa_2Cu_3O_{7-x}$, high T_c supercond., O ordering and orthorhombic to tetragonal phase transition 7—142995
$YBa_2Cu_3O_{7-x}$ high T_c supercond., single cryst. resistivity anisotropy and Hall const. meas. 7—143488
$YBa_2Cu_3O_{7-x}$ high T_c supercond., magnetic penetration depth, polarised neutron refl. meas. 7—143700
$YBa_2Cu_3O_{7-x}$ high T_c supercond. film prep. by RF magnetron sputtering 7—144352
$YBa_2Cu_3O_{7-x}$, high temp. supercond., zero elec. resist. at 106 K 7—105777
$YBa_2Cu_3O_{7-x}$, high-temperature superconductor, laboratory synthesis 7—112649
$YBa_2Cu_3O_{7-x}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7—118607
$YBa_2Cu_3O_{7-x}$, superconducting perovskites, rare-earth doping 7—118675
$YBa_2Cu_3O_{7-x}$, superconducting microstructure and crit. current 7—131974
$YBa_2Cu_3O_{7-x}$, supercond., high temp. X-ray powder diffr., 298-1300 K 7—142997
$YBa_2Cu_3O_{7-x}$ thin films, fabrication and props. of supercond. device structures 7—143716
$YBa_2Cu_3O_{7-y}$, high T_c supercond., microstructural irregularities 7—118115
$YBa_2Cu_3O_{7-y}$, high T_c supercond., free carrier relax. dynamics in normal state, reflectivity study 7—131662
$YBa_2Cu_3O_{7-y}$, high T_c supercond., far IR reflectivity spectrum, temp. depend. 7—132278
$YBa_2Cu_3O_{7+\delta}$, high T_c supercond., structure-property relations 7—98483
$YBa_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7—99284
$YBa_2Cu_3O_{7\pm\delta}$, identification of high temp. superconducting phase 7—85169
$YBa_2Cu_3O_{7\pm e}$, high T_c supercond., orthorhombic twins, oriented domains 7—142795
$YBa_2Cu_3O_{8-x}$, 90 K bulk superconductor, room temp. cryst. struct. 7—98096
$YBa_2Cu_3O_{8-y}$, mixed valence copper perovskite with O defect, high temp. superconductor at 91 K *(French)* 7—99240
$YBa_2Cu_3O_{8-y}$, SQUID behaviour 7—118736
$YBa_2Cu_3O_{8-y}$, supercond. props., effects of comp. var. and annealing in O_2 7—105788
$YBa_2Cu_3O_{8-y}$, superconducting phase identification 7—112545
$YBa_2Cu_3O_{9-\Delta}$, high T_c supercond., thermal cond. and elec. resist. 7—112661
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., transport props., electron deficiency, comparison with $La_{2-x}Sr_xCuO_{4-\delta}$ 7—118609
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7—118740
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. penetration depth, temp. depend., s-wave pairing 7—131885
$YBa_2Cu_3O_{9-\delta}$ high T_c supercond., props., microstruct. and resistive transitions 7—137578
$YBa_2Cu_3O_{9-\delta}$, high temp. supercond. props., elec. resist., mag. suscept. meas. 7—112599
$YBa_2Cu_3O_{9-\delta}$, normal and supercond., NMR of ^{89}Y 7—118717
$YBa_2Cu_3O_{9-\delta}$, RF superconductivity at 3 GHz, obs., high T_c supercond. 7—112547
$YBa_2Cu_3O_{9-\delta}$, superconductor, soft X-ray emission spectra 7—105835
$YBa_2Cu_3O_{9-y}$, high T_c supercond., effect of prep. on phys. props. 7—131835
$YBa_2Cu_3O_{9-x}$, elasticity and X-ray diffr. studies, 90-260 K 7—131895
$YBa_2Cu_3O_{9-x}$, high T_c supercond., forbidden change in elastic modulus at T_c 7—131857
$YBa_2Cu_3O_{9-x}$, high T_c supercond., mag. props. 7—138123
$YBa_2Cu_3O_{9-x}$, perovskite oxide superconductor, crystallography and microstructure 7—111467
$YBa_2Cu_3O_{9-x}$, relationship between processing, struct. and high T_c supercond. props. 7—118670
$YBa_2Cu_3O_{9-y}$, high T_c superconductor, photoemission studies 7—106382

type II superconductors continued
$YBa_2Cu_3O_{9-y}$, high T_c supercond., orthorhombic and tetragonal phases 7−118077
$YBa_2Cu_3O_{9-y}$, high T_c supercond., mag. hysteresis phenomena 7−131876
$YBa_2Cu_3O_{9-y}$ single phase cpd., supercond. at 95 K 7−85167
$YBa_2Cu_3O_{9-y}$ single phase cpd., high T_c superconductor at 95 K 7−118661
$YBa_2Cu_3O_{9-y}$ single phase cpd., high temp superconducting behaviour 7−118667
$YBa_2Cu_3O_{\sim 7}$, high T_c supercond., Cu 3d level localisation, XPS study 7−138611
$YBa_2Cu_3O_{\sim 7}$, high-T_c superconductor, delocalised Cu states, XANES study 7−125256
$YBa_2Cu_3O_x$, bulk sintered high T_c supercond., transport critical current 7−118747
$YBa_2Cu_3O_x$ ceramic high T_c supercond., prep. and props. 7−118608
$YBa_2Cu_3O_x$, high T_c supercond., struct., transport and mag. props. 7−99373
$YBa_2Cu_3O_x$, high T_c supercond., elec., mech. and US props. 7−118709
$YBa_2Cu_3O_x$, high T_c supercond. transport critical current charact. 7−118754
$YBa_2Cu_3O_x$, high T_c supercond., supercond. props. and microstructures 7−118756
$YBa_2Cu_3O_x$, high T_c supercond., polycrystalline, fracture props. 7−119329
$YBa_2Cu_3O_x$, high T_c supercond., variation of T_c with O content 7−125182
$YBa_2Cu_3O_x$ high T_c supercond., Madelung pots. calcs. 7−142689
$YBa_2Cu_3O_x$, high T_c supercond., band struct. and O vacancy distrib. 7−143316
$YBa_2Cu_3O_x$ high T_c supercond. and semicond. samples, electronic struct., stoichiometry effects 7−143342
$YBa_2Cu_3O_x$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$YBa_2Cu_3O_x$, perovskite superconductor, phonon spectra 7−104930
$YBa_2Cu_3O_x$ plasma and hypersonic flame powder spraying prep. and props. 7−119132
$YBa_2Cu_3O_x$, single cryst., supercond. and struct. 7−92349
$YBa_2Cu_3O_x$ single crysts., high T_c supercond., growth, transition temp. 7−138632
$YBa_2Cu_3O_x$, single crystal growth, with supercond. transition above 90 K 7−144265
$YBa_2Cu_3O_x$, supercond., weak field magnetisation rel. to microstructure 7−105831
$YBa_2Cu_3O_x$, superconducting oxide, electron microscopy and microanalysis 7−125164
$YBa_2Cu_3O_x$ supercond. thin films, high T_c, prep. and transition temps. 7−131469
$YBa_2Cu_3O_x$ thin films, ion implanted, radiation damage effects on supercond. and structural props. 7−112531
$YBa_2Cu_3O_x$:F, high T_c supercond., zero resistance at 148.5 K 7−143678
$YBa_2Cu_3O_y$, extruded wires, superconducting crit. currents 7−131975
$YBa_2Cu_3O_y$, high T_c superconductor, X-ray and electron microscopy studies, struct. and composition 7−98086
$YBa_2Cu_3O_y$, high T_c supercond., Raman spectrum temp. depend. 7−119010
$YBa_2Cu_3O_y$, high T_c supercond., electrodynamic response 7−131896
$YBa_2Cu_3O_y$, high T_c supercond., 90 K supercond., critical O conc., phase diagrams 7−142994
$YBa_2Cu_3O_y$, high T_c supercond., orthorhombic and tetragonal phases, valency of Cu ions, X-ray absorpt. edge 7−144174
$YBa_2Cu_3O_y$, high temp. supercond., ultrasound anomaly at T_c 7−118716
$YBa_2Cu_3O_y$ superconducting ceramics, transition temps, N_2 exposure effects 7−125196
$YBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$Y_{0.2}Ba_{0.8}CuO_x$, high T_c supercond., paramag. reson. of Cu^{2+} ions 7−112667
$Y_{0.4}Ba_{0.6}CuO_{2.22}$ high T_c supercond., cryst. struct. studies 7−91546
$(Y_{0.4}Ba_{0.6})CuO_3$, high-temp. supercond. 7−105748
$Y_{0.4}Ba_{0.6}CuO_y$, supercond. transition temp., press. effect 7−99289
$Y_{0.4}Ba_{0.6}CuO_y$, upper critical field meas. in pulsed mag. field 7−99366
$(Y_{0.6}Ba_{0.4})_2CuO_{4-y}$, high T_c supercond. props., FIR transmission spectra 7−113204
$Y_{0.7}Ba_{0.3}CuO_{2.3+\delta}$ high T_c supercond., resistive investigations, possible superconductivity at 140 K 7−143668
$Y_{0.9}Ba_{2.1}Cu_3O_6$, cryst. struct. of oxide not exhibiting superconductivity 7−104686
$Y_{1-x}Ba_xCuO_y$, single-phase, superconductivity at 91 K 7−105766
$(Y_{1-x}Ba_x)_2CuO_4$, high temp. supercond. 7−105761
$(Y_{1-x}Ba_x)_2CuO_4$, high T_c superconductivity liquid N_2 temps. 7−112562
$(Y_{1-x}Ba_x)_2CuO_{4-\delta}$ 7−112535
$(Y_{1-x}Ba_x)_3Cu_3O_{7-y}$, supercond., structural, electronic and mag. props., comp. depend. 7−99295
$(Y_{1-x}Ba_x)_3Cu_3O_{8-\delta}$, high T_c supercond., transition temp., crit. current density, persistent current at 77 K 7−99299
$Y_{1.2}Ba_{0.8}CuO_4$, supercond. phase transition obs. 7−112536
$Y_1Ba_2Cu_3O_7$, high T_c supercond., resistivity between 80 and 1240 K 7−137915
$Y_1Ba_2Cu_3O_7$ high T_c superconductor, valence electronic struct. study 7−143341
$Y_1Ba_2Cu_3O_{7-\delta}$, high T_c composite cpd, mag. behaviour 7−138125
$Y_1Ba_2Cu_3O_{7-x}$, high temp. supercond., single cryst., anisotropic nature of supercond. 7−131940
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., microstruct., crystal symmetry and possible near cpds. 7−117853
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., phase transitions 7−118081
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., single-phase, superconductivity and thermoelec. power meas. 7−131889
$Y_1Ba_2Cu_3O_x$ high T_c supercond., formation via metallic alloy precursor 7−144333
$Y_1Ba_2Cu_3O_x$, high temp supercond., environmental and solvent effects 7−119557
$Y_{1.2}Ba_{0.8}CuO_4$, ceramic high-temp. superconductor, RF SQUID construction 7−105847
$Y_{1.2}Ba_{0.8}CuO_4$ high T_c superconducting ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., resistivity, Hall effect, mag. susceptibility, temp. depend. *(Russian)* 7−125176

type II superconductors continued
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$Y_{1.2}Ba_{0.8}CuO_4$, high-T_c supercond., flux quantisation 7−92384
$Y_{1.2}Ba_{0.8}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$Y_{1.2}Ba_{0.8}CuO_4$, multi-phase, struct. and superconductivity under press. 7−92355
$Y_{1.2}Ba_{0.8}CuO_4$, superconducting, macroscopic quantum interference at 60 K *(Russian)* 7−112541
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$ high T_c supercond. charact., annealing conditions depend. study 7−143667
$Y_{1.2}Ba_{0.8}CuO_{4-y}$, high T_c supercond., O role in prep. 7−132539
Y_2BaCuO_5, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
Y_2BaCuO_{5-x}, high T_c supercond., space group, electron diffr., chemical anal. 7−137331
$Y_{2-x}Ba_xCuO_{4-y}$, high T_c supercond., upper critical fields 7−99374
$Y_{2-x}Ba_xCuO_{4-y}$, multiphase oxide, superconductivity at 90 K 7−112570
$Y_{3-x}Ba_{3+x}Cu_6O_{14}$, perovskite oxide, high-T_c superconductivity 7−105781
$Y_{3-x}Ba_xCu_3O_{9-y}$ high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
$Y_4Ba_2Cu_3O_y$, single-phase, supercond. above liq. N_2 temp. 7−105757
$Y_xBa_{1-x}CuO_{2.3}$, supercond. transition temp., press. effect 7−99300
$Y_xBa_{1-x}CuO_{3-\delta}$, high T_c superconductivity 7−143680
$YBaCuO_{3-x}$ plates, sintered, supercond. sub-struct., magnetisation meas. 7−143696
$YBa_2Cu_3(O_{1-x}S_x)_y$, superconducting transition at 108 K 7−105744
$YBa_2Cu_3O_{7-x}S_x$, high T_c supercond., effect of substitution of O by S 7−143672
$YBa_3Cu_3O_{7-x}S_x$ T_c supercond., magnetism and critical fields 7−143736
$YBa_{2-x}M_xCu_3O_{7-\delta}$, M=Sr,Ca, high T_c supercond., alkali ion substitution effects study 7−119209
$YBa_{2-x}M_xCu_3O_{9-y}$ (M=Sr, Ca), possible supercond. above 230 K 7−125169
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ ceramics, high T_c supercond., annealing effect 7−143659
$YBa_{2-x}Sr_xCu_3O_7$ high T_c supercond., struct., resist. and Meissner effect studies 7−112532
$YBa_{2-x}Sr_xCu_3O_y$ high T_c superconductor props., comp. depend. studies 7−118658
$Y_{2-x}Ce_xBa_{1-y}La_yCu_3O_7$ high T_c supercond., transition temp., La and Ce substitution effects 7−118634
YCu_2O_z high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
$Y_xEr_{1-x}Ba_2Cu_3O_{6+y}$, high T_c supercond., superconducting transition 7−143660
$Y_{0.1}Gd_{0.9}Ba_2Cu_3O_{8-\delta}$, superconductivity 7−131847
$Y_{0.75}Lu_{0.25}Ba_2Cu_3O_7$, high temp. superconductor, EPR study 7−85196
$Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$, high T_c supercond., electronic effects on superconductivity 7−118640
$Y_{0.75}R_{0.25}Ba_2Cu_3O_7$ (R=La, Lu), high-temperature superconductivity 7−138100
$YRuB_4$, mag. suscept., supercond. transition temp. meas. 7−92408
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
$YSr_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$Y_{2-x}Sr_xCuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
$Y_5T_4X_{10}$, (T=Ir,Rh,Os; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
$(Y_{1-x}Yb_x)_2Ba_4Cu_6O_{14+y}$, high T_c supercond., X-ray diffr. and elec. resist. studies 7−118625
Yb high pressure bandstruct. and electronic props. 7−105388
Yb-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Yb-Ba-Cu-O, high T_c supercond., critical current meas. 7−118755
Yb-Ba-Cu-O high T_c supercond. cryst. struct., X-ray diffr. Rietveld anal. 7−104677
Yb-Ba-Cu-O high T_c supercond. thin films, sputter deposition 7−112554
Yb-Ba-Cu-O high T_c supercond. film, screen printed, transition temps. 7−112556
Yb-Ba-Cu-O high T_c supercond., zero resist. above 90 K 7−125209
Yb-Rh-Sn, superconducting, Yb valence fluctuations, X-ray absorption studies 7−77688
$(Yb_{1-x}Ba_x)_3Cu_2O_{7-\delta}$, superconductivity at 95 K 7−92327
$Yb_xEr_{1-x}Ba_2Cu_3O_{6+y}$ high T_c supercond., comp. depend. and struct. studies 7−125190
$Yb_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184
$Yba_2Cu_3F_2O_y$, 155 K supercond., flux trapping, Meissner effect 7−125201
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
$Zr_{70}Cu_{30}$, amorphous superconductor, lower critical field, vibrating reed measurements 7−131937
ZrM (M=Ni,Mo,W) amorphous alloys, supercond. and struct. props. 7−85176
ZrMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
ZrN thin films, DC reactively magnetron sputtered, structural, superconducting and optical props. 7−99276
$Zr_{100-x}Ni_x$ amorphous superconducting alloys, critical mag. fields, spin-orbit interaction 7−125276
$Zr_{67}Ni_{33}$-based metallic glasses, mag. susceptibility and superconductivity 7−85265
$Zr_{70}Ni_{30}$, weak localisation effects on upper critical field 7−99371
$Zr_{75}Rh_{25}$, weak localisation effects on upper critical field 7−99371
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
ZrV_2 intermetallic cpd., phase transitions effect on neutron irrad. of introduction of H *(Russian)* 7−126104
ZrV_2, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
$ZrZn_2$, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
Zr−Ni, amorphous, supercond., structural relax., crystallisation 7−104584

U-centres
alkali halides, F- and U_2-centres interaction calcs. 7−124319
alkali metal:H, interstitial U_2 centres, UHF MC INDO calcs. 7−137853

U-centres continued
disordered semiconductors with negative U-centres, steady-state photocond. 7−105607
weak bond-dangling bond conversion 7−124104
UART *see computer interfaces; data communication equipment*
UHF tubes *see ultra-high-frequency tubes*
ULA *see integrated logic circuits*
ultimate tensile strength *see tensile strength*
ultra-high-frequency tubes
see also microwave tubes
No entries
ultracentrifuges *see centrifuges*
ultrafiltration *see filtration*
ultrasonic absorption
(1-) chloro-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
acetamide, hypersonic attenuation, Brillouin light scatt. obs. 7−84134
aerosil-water disperse system, ultrasonic wave absorption mechanism 7−82921
alkali halide crystals, microcrack nucleation kinetics, light scatt. study, acoustic phonons 7−131222
anisotropic superconductors, reson. impurity scatt., effects of phase shifts and particle hole asymmetry 7−112670
biological solutions, US absorpt. mechanism 7−126912
bis(tetramethylammonium) zinc tetrachloride, normal-incommensurate-commensurate phase transition *(Japanese)* 7−131562
1-bromo-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
cholesteryl oleyl carbonate-chloride mixtures, liq. cryst. transition, US study 7−105021
crystals at low temps., plastically deformed, amplitude depend. ultrasonic attenuation, yield stress 7−142913
dimethyl sulphoxide/water binary liquid system, ultrasonic studies 7−124399
2,3-dimethylbutane, rot. isomerism, US investig. at high press. 7−98346
dimethylformamide-cyclohexane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
duchenne muscular dystrophy carrier detection using US attenuation meas. 7−133402
egg white, US spectroscopy using plano-concave resonator method *(Japanese)* 7−126913
elastooptic coeff. of transparent meas., using optical heterodyne method 7−138420
electron-phonon coupling, review 7−70212
ferrites, ultrasonic attenuation and magnetoacoustic echo props. 7−131242
ferroelectrics, ultrasonic study of incommensurate transitions 7−125628
formamide, hypersonic attenuation, Brillouin light scatt. obs. 7−84134
heavy fermion superconductors, collective modes, hydrodynamic description 7−112640
high absorption liquids, US variables meas. 7−82961
hybrid glass fibre/zirconia/epoxy composite, cumulative damage, ultrasonic detection 7−144673
inhomogeneous plane wave propagation in anisotropic medium *(French)* 7−104073
liquid crystals, phase transitions, ultrasonic studies 7−105020
liquid US absorption meas. using backed transducer 7−90892
liver, US backscatter and attenuation coeff. enhancement with solid particles *(Japanese)* 7−126967
liver acoustic attenuation coeff. slope, influence of pathological state 7−87118
liver attenuation coeff., freq. depend. 7−126956
magnetic fluids, physical props. 7−77372
magnetic fluids, ultrasonic velocity and attenuation, mag. effects 7−77370
measurement, acoustooptic technique 7−104112
metal, modified Bragg refl. force implications for US propag. 7−69836
metals, BCC, effect of dislocations on microplasticity *(Russian)* 7−69710
metals, heavy fermion, US attenuation, temp. depend. 7−104917
metals, low temp. acoustic phonon behaviour 7−124403
metals, low temp. EM wave generation of ultrasound 7−104920
metals containing H, low temp. tunnelling 7−137478
N-methylcaprolactam-n-octane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
N-methylpyrolidone-n-hexane, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
naphthalene molecular crystals, US relaxation absorption crystals *(Chinese)* 7−104921
nitrobenzene/n-heptane binary mixtures, ultrasonic attenuation studies 7−111773
nitromethane-butan-l-ol, ultrasonic absorpt. meas. above upper crit. mixing points *(German)* 7−110669
off-ring-pulse differential method for measurement of ultrasound velocity and attenuation in fluids 7−104118
p-wave superconductors, US attenuation due to order parameter collective modes 7−125255
polycrystalline material, grain size, hysteresis const. and scatt. factor, determ. using US attenuation 7−126374
polymers, thermoacoustical parameter calcs. 7−131238
polysiloxanes, US and hypersonic dispersion 7−84135
polystyrene solutions, fluctuations, ultrasonic absorpt. spectra 7−137187
n-propanol, internal press. var. with temp. 7−104914
quartz, relaxation ultrasonic attenuation, two-level systems in neutron irradiated quartz, influence of heat treatment 7−84143
rod, thin, acoustic channel for US vel. and attenuation meas. 7−132883
semiconductor, ultrasound attenuation, strong EM wave effects 7−137473
semiconductors, noncrystalline, nonlinear absorption of ultrasound under hopping conduction conditions 7−84137
superconducting intermediate valence systems, longitudinal ultrasound attenuation, periodic Anderson model calcs. 7−70476
superconductors, impure anisotropic p-wave, ultrasonic attenuation 7−105837
tissue, human, US propag. parameters *(Japanese)* 7−126916
tissue, soft, US absorpt. and attenuation *(Japanese)* 7−126914
tissue characterisation, specific absorbing acoustic lens to reduce artifacts 7−126968
2,2,4-trimethylpentane, rot. isomerism, US investig. at high press. 7−98346
β-AgSI polycryst., ultrasonic vel. and attenuation, pulse-echo-overlap meas. 7−76306
ultrasonic absorption continued
Ag_3SbS_3, broad phase transition near T∼150 K, permitt., US meas. 7−69888
Al-Si(Ag), dilute alloys, US peak doublets and tilted mixed dumbell cages 7−91734
AlN, sintered, US absorpt. and vel. meas., two-level tunnelling system model anal. 7−84141
C-C composites, US attenuation and porosity determ. 7−126398
Cr, dislocations, dynamic behaviour at mag. transitions, internal friction meas. 7−111570
$Er_{1-x}Ho_xRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
Fe, US attenuation in microwave mag. field 7−125060
GaAs:V, acoustic absorpt. study, 200 MHz-2 GHz 7−91732
H_2O-DMSO, structural relax. times, Brillouin spectra 7−99876
^{3}He-B superfluid, J=−1 collective mode, ultrasonic attenuation meas. 7−137652
^{4}He, liq., ultrasonic attenuation near the λ point 7−84421
$HoRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
In, doped and undoped, intermediate and superconducting states, collective excitation modes 7−125254
InSB, free electron density, determ. by ultrasonic absorpt. 7−112324
InSb, compensated, US absorpt., impurity breakdown effect, mag. field depend. 7−99133
KH_2PO_4-type crystals, US expts., review 7−111778
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., wide temp. instability, US absorpt., vel. meas., possible glassy state 7−112671
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ultrasonic velocity and attenuation studies 7−112604
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, US and thermal expansion meas. 7−105838
$LiNbO_3$ ceramic pellets, dielec. and ultrasonic props. studies 7−85525
$LiTaO_3$, 36° YX cut, leaky SAW propagation, metallic grating effects 7−97233
NaF(Cl)(Br) dielec. crysts., ultrasonic attenuation temp. depend. calcs. 7−76309
$NaNbO_3$-SiO_2 glass, ultrasonic vel. and attenuation, pulse-echo meas. 7−142916
Ni, US attenuation in microwave mag. field 7−125060
Pb, doped and undoped, intermediate and superconducting states, collective excitation modes 7−125254
Pb, superconducting, US attenuation of longitudinal and shear waves 7−105836
Rb_2ZnCl_4, phase transition, ultrasonic studies 7−98350
a-Se, ultrasonic investigation of dynamic props. 7−76305
SiC, sintered, with AlN additives, US absorpt. and vel. meas., two-level tunnelling system model anal. 7−84141
Ti-Cr disordered alloys, electronic phase transition and lattice props. anomalies 7−85021
Ti-Fe disordered alloys, electronic phase transition and lattice props. anomalies 7−85021
TiC-TiNi hard alloy with B addition, inelastic props. determ. by US pulsed method 7−78090
$TlBr_xCl_{1-x}$ crystalline solid solns., US studies 7−84136
$TlBr_xI_{1-x}$ crystalline solid solns., US studies 7−84136
UBe_{13}, heavy fermion superconductivity and magnetic props. 7−70472
UBe_{13}, ultrasonic attenuation and supercond. props., cryst. symmetry effects 7−92387
UPt_3 heavy fermion cpd., unconventional s-wave superconductivity 7−112664
UPt_3, heavy fermion metal anal. of anomalous US attenuation 7−77158
UPt_3, heavy fermion supercond., US attenuation, phase study 7−99336
UPt_3, longitudinal sound meas. in a mag. field 7−112672
UPt_3 longitudinal ultrasonic attenuation peak, heating phenomenon, large Gruneisen parameters 7−69835
W, deformation pot., Fermi surface data anal. *(Russian)* 7−70167
YAG, phonon-phonon interaction, microwave US wave attenuation 7−84140
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., ultrasonic attenuation meas. 7−138133
$YBa_2Cu_3O_{9-x}$, elasticity and X-ray diffr. studies, 90-260 K 7−131895
$YBa_2Cu_3O_x$, high T_c supercond., elec., mech. and US props. 7−118709
ZnO sputtered film transducer for low temp. ultrasonic meas. on InSb substrate 7−117431

ultrasonic applications
see also biomedical ultrasonics; ultrasonic materials testing; ultrasonic welding
acousto-optical laser emission divider based on diffraction and US wave propagation 7−130162
acoustoelastic method for determining stresses *(French)* 7−142241
aqueous solution, air bubble size meas., ultrasonic pulse reflection method, development 7−142402
average particle size meas. in emulsions and suspensions, wide-range meter 7−102386
axial path flowmeter designs 7−123800
BWR pressure vessel, fill level control, ultrasonic technique *(German)* 7−129374
ceramic, US machining effectiveness, abrasive material props. influence 7−78295
Doppler flowmeter analysis 7−130801
Doppler ultrasonic flowmeter for disturbed blood flow meas. 7−93839
Doppler ultrasonic velocimeter for bubble flow meas. *(French)* 7−104115
echo sounding, appl. to geophysical investigations off Vijaydurg Bay, Maharashtra, W India 7−139585
elastic anisotropy, change with plastic compressive deformation, US studies 7−97244
elastic wave velocities meas. in solids, using US apparatus 7−136656
flowmeter for liq. He flow meas. 7−75732
food processing and chemical processing, ultrasonic and low frequency applications 7−90872
gas analyser for binary gas composition determ. 7−86701
gas flow velocity distrib. meas. system using nonlinear effects of ultrasonics *(Japanese)* 7−142411
gas temp. distrib. meas. using nonlinearity in ultrasonics *(Japanese)* 7−128579
graphite electrode production for electrodischarge machines, by ultrasonic machining 7−90912
high-power US appl. using multiple transducers and vibr. systems 7−123383
imaging system using 64 K microcomputer 7−130495

ultrasonic applications continued
low-gravity sensing of liquid/vapor interface and transient liquid flow 7−82955
marine sedimentation, ultrasonic effects *(French)* 7−104087
mobility aids for the blind using ultrasound *(Japanese)* 7−145282
oil film thickness meas., US equipment development *(German)* 7−136655
oil well logging, US meas. techniques 7−127620
optical components, US precision cleaning prior to and after vacuum coating 7−104067
pattern recognition appl. 7−90904
phase detection technique using ultrasonic transducers, undergraduate demonstrations 7−120728
plastic welding, acoustic load resistance meas. *(Japanese)* 7−142143
polygonisation process, US stimulation 7−71197
resin matrix composites processing using high intensity ultrasound 7−126080
semiconductor surface cleaning using modular ultrasound equipment with piezoceramic transducers 7−75238
signal-to-clutter ratio in pseudo random Doppler flowmeter 7−97241
sing-around ultrasonic flowmeters, new vel. algorithm 7−130800
structural diagnostics, 1D model 7−90902
TDC-1 type bidirectional ultrasonic Doppler blood flow detector *(Chinese)* 7−133400
tracking of moving target, US meas. system 7−90896
tracking of moving target, US meas. system 7−90897
two glider ultrasonic ranging module interface for the Apple IIe 7−120724
underwater sound telemetry system, high-performance 7−123319
vehicular traffic speed monitoring system 7−82951
wind tunnels, US laser method for flow field meas. 7−123816
Al powder, segregation free, prod. by US gas atomisation 7−92925

ultrasonic attenuation *see ultrasonic absorption*

ultrasonic delay lines
acoustic charge transport devices overview 7−123370
crystalline acoustic lines, acoustic waves attenuation, appl. to ultrasonic delay lines 7−82966
SAW delay line behavior in liq. 7−123386
$LiNbO_3$ SAW H_2S gas detector 7−123378

ultrasonic devices
see also ultrasonic delay lines; ultrasonic transducers
acoustic wave viscosity sensor 7−104111
electronic scanner array, grating lobe intensity, theoretical anal. 7−123388
fibre acoustic waveguides anal. meas. *(Japanese)* 7−123408
vibration amplitude meas. of power ultrasonic sources, laser interferometer investig. 7−75228

ultrasonic diffraction
edge diffraction of a compressional beam 7−142055
finite amplitude ultrasonic fields, optical obs. 7−136644
pulsed, lossless media, Fourier domain approach 7−117369

ultrasonic dispersion
attenuation, impedance and dispersion, artefact-free meas. 7−126982
ferroelectric domain layer mode, theoretical anal. *(Japanese)* 7−125654
polysiloxanes, US and hypersonic dispersion 7−84135

ultrasonic effects
acoustic cavitation threshold meas. 7−130427
agar based gels, US induced gas bubble prod., expt. obs. 7−139311
agar based gels, US induced gas bubble prod., theoretical anal. 7−139312
algae, US effects on morphology, survival, mitotic percent, and chlorophyll content 7−100976
bioeffects of microsonation, gas-body activation and related cavitationlike phenomena 7−126921
central nervous system, non-invasive stimulation using US irradiation 7−100978
creep testing including US vibr. effect, vac. set-up with thermal control 7−132870
crystal growth from melts and soln., ultrasound effect 7−137279
cultured cells in vitro, pulsed ultrasound or γ-ray effects, flow cytometric studies 7−126923
diffusion at electrode, US effects *(German)* 7−124565
discoid platelets, US-induced orientation and simultaneous changes in light transmission 7−107151
Drosophila, effect of pulsed US on survival 7−79027
electrical pain threshold perception in humans, effects of MHz US 7−107153
erythrocyte membrane, human, antigenic activity 7−126757
erythrocyte membrane-bound and free acetylcholinesterase, comparative study on therapeutic US effects 7−126920
fungi, US irrad. effect on citric acid prod. 7−71814
impurity oscillator excitation by nonequilib. lattice phonons, implications for impurity diffusion in crysts. *(Russian)* 7−69842
liquid penetration into capillary channels, ultrasonic vibr. influence 7−69265
lymphocyte chromosomes, combined effects of US and γ-rays 7−126917
magnetofluid plane surface instability under ultrasound action 7−91249
mammals, exposure levels for US cavitation 7−100979
modulating X-ray diffraction by US oscillations 7−138416
Mossbauer radiation monochromatization by coherent US oscillations 7−138359
muscle, simulated human, temp. profile due to US heating 7−71829
oblique incidence light diffraction by US, calcs. 7−97256
platelet suspensions, US-induced light transmission change as an indirect meas. of platelet morphology 7−107152
polythiophene films, electrochemical polymerisation under ultrasonic fields 7−78489
saccharides, γ-irradiated, subjected to post-irradiation ultrasonic treatment, lyoluminescence obs. 7−144132
sand, ultrasonic shaking, test system for large landslide physics 7−91170
SHG of laser radiation, noncollinear interaction, US diffraction effects 7−75063
single crystals, photocond., nucl. radiation and ultrasound influence 7−131711
sonoluminescence threshold meas. using cavitation studies 7−130426
steel, medium-C constructional, US treatment effect on long-term strength of welded joints 7−113711
steel, mild, mech. prop. and substruct. changes with US loading 7−100437
steel, stainless, dynamic tensile tests with superimposed ultrasonic oscillation 7−78413
superovulated mouse ovaries exposed to ultrasound, SEM study 7−126922

ultrasonic effects continued
thermal self-action of sound beams in viscous liquids: self-focusing and acoustic self-induced transparency 7−130417
urinary stones, US acceleration of chemical dissolution 7−87094
visual evoked potentials in the hypoxic cat, effects of therapeutic level US 7−107154
X-ray focusing, defocusing under thermal gradient with US oscillations 7−137156
Al-base alloys, age hardening, effect of US vib. 7−132632
$Al(OH)_3$ electrolytic coagulation in mud water, ultrasonic irradiation effects *(Japanese)* 7−117393
Ca salt crystals, chemical dissolution in chelating agents using ultrasonic irradiation 7−97206
CdS, luminescence and photocond., ultrasound-stimulated changes 7−76302
Co island films, FCC to HP transition, phase diagram 7−124155
$K_{0.95}Rb_{0.05}Cl{:}NCO^-$, mol. impurity centre, ultrasonic excitation, IR absorption spectra 7−132301
Mg, dipoles of basal dislocations 7−98154
NaCl, defect control by light diffr. effects on US vibrs. *(Russian)* 7−85594
Nb, deformed, supercond. transition temp., US interaction and annealing effects 7−99251
Ni, fatigue fracture induced by ultrasound *(Russian)* 7−126224
Ni-Cr-Co superalloy, diffusion alitized layers, US effect, microstruct., microhardness 7−132800
SiO_2, quartz, radiation monochromatization by coherent US oscillation 7−138359

ultrasonic equipment
ALOK phased-probe-array inspection technique 7−126388
ALOK ultrasonic testing system for nuclear plants 7−122051
axial path flowmeter designs 7−123800
bladder distension sensor using US technique for handicapped 7−126980
blood cell separator based on superposition of oppositely travelling waves 7−87411
clinical Doppler equipment, survey of acoustic output 7−93840
elastic wave velocities meas. in solids, using US apparatus 7−136656
EMAT system for tube inspection with guided ultrasonic waves 7−126389
flowmeter for liq. He flow meas. 7−75732
flowmeter for power station boiler *(Japanese)* 7−68962
focused SAW imaging modality, resolving power and detection ability 7−123397
medical, hyperthermia, apparatus and technical auxiliaries *(Russian)* 7−79021
medical Doppler flowmeters, spectral broadening due to unsteady flow 7−93843
medical linear array system for deep vessel explorations 7−107177
microscope, scanning type with pin probe 7−123407
nuclear materials containers, ultrasonic tamper indicator 7−122217
oil film thickness meas., US equipment development *(German)* 7−136655
planar focusing lens for reflection-mode acoustic microscope 7−123395
polyvinylidene fluoride, piezoelectric coaxial cable 7−123384
process units design 7−136650
pulse-echo systems, prediction error filtering and elec. pulse shaping techniques *(Japanese)* 7−123403
reactor pressure vessels, ultrasonic apparatus developments for in-service inspection 7−122050
respiratory flowmeter, pulsed diagonal-beam US 7−79020
robots, acoustics appl. to kinematic and dynamic behaviour control 7−123376
stress waves, optical fibre modal domain detection *(Japanese)* 7−123270
wideband transceiver using HV MOSFET pulse generator *(Spanish)* 7−90898

ultrasonic holography *see acoustic holography*

ultrasonic imaging *see acoustic imaging*

ultrasonic materials testing
1D inverse Born technique for ultrasonic signal processing, investig. 7−75208
3D space, flaw location using transmitter-receiver system 7−78448
acoustic holography for high axial resolution profile and deformation measurements 7−123351
advanced US systems for reactor preservice and in-service inspections 7−93244
advanced UT systems for the nuclear industry, status 7−126384
ALOK phased-probe-array inspection technique 7−126388
ALOK ultrasonic testing system for nuclear plants 7−122051
austenitic welded joints in nucl. power station, flaw detection using US monitoring *(Russian)* 7−71452
axial resolution power enhancement *(German)* 7−78443
backprojection imaging with scanning laser acoustic microscope 7−123399
BWR pressure vessel segment, flaw density meas., NDT 7−89670
cAMAC-based ultrasonic data-acquisition workstation 7−138939
computer based modelling of test arrangements *(German)* 7−86542
concrete, US anal. techniques 7−123405
contactless ultrasonic data unit for discrete materials in a vertical pipe feeder *(Russian)* 7−110729
convergent acoustic waves, laser generation, appl. to materials evaluation 7−123374
crack depth measurement in corners using US Rayleigh waves 7−138938
crack detection, elastic waves and continuous-medium model *(Japanese)* 7−100501
defect location and sizing, developments over 15 years 7−126372
digital tester for concrete strength 7−138935
disc transducer, radiation field, laser probe investig. with tomographic scanning 7−132879
disk shaped void in isotropic elastic body, US scatt. 7−132886
divided ring array for 3D beam steering 7−138942
elastic wave radiation field directivity rel. to clamping press. of straight beam transducer 7−106739
electronic aids for manual NDT 7−104119
EMAT system for tube inspection with guided ultrasonic waves 7−126389
fastener threaded parts, crack detection by US method 7−71442
feature mapping of Y-shaped cracks using a ray-tracing interpretation 7−113849
fibre reinforced composite, exptl. methods for elastic charcts. determ. 7−86527
fission reactor fracture mechanics specimens, crack depth meas., ultrasonic amplitude modulation method 7−126387

ultrasonic materials testing continued
flaw detection, portable equipment with computer-aided documentation 7−68969
flaw detection, quantitative nondestructive eval. 7−86551
flaw detection apparatus, setting systems of automatic time regulation of amplification without reference specimens 7−106738
flaw detection method for low refl. factor flaws, transducer design 7−71443
flow imaging with mode converted waves 7−106750
gas pipeline leak location by acoustic method *(Japanese)* 7−86550
glass fibre reinforced plastic, US detection of stress concentration factor 7−100488
glass fibre reinforced plastic composite, cumulative damage eval., by US method 7−144660
glass fibre reinforced plastics, fatigue life prediction using acousto-US technique 7−113844
glass fibre/ZrO_2 particle reinforced epoxy, hybrid composite, fatigue life study using US technique 7−78172
graphite fibre reinforced epoxy, subjected to combined fatigue-impact loadings, US characts. 7−138932
graphite fibre reinforced epoxy composites, US backscattered waves, digital signal processing methods 7−126397
graphite fibre reinforced epoxy composites, US wave propag. microstructure effect *(Japanese)* 7−124410
heavy reactor components, automated multi-function ultrasonic testing 7−129299
high temp. flaw detection 7−100497
HTGR graphites, nondestructive testing, pulsed ultrasonic and X-ray computed tomography methods *(Japanese)* 7−141171
HV elec. equipment insulation breakdown, early detection using discharge testers and ultrasonic detectors 7−123359
hybrid glass fibre/zirconia/epoxy composite, cumulative damage, ultrasonic detection 7−144673
inspection of tubes by ultrasonic echo detection *(French)* 7−68965
inspection procedures by field mapping with optical probe 7−126373
inspection units adjustment, ang. reflector dimens. influence on echo signal amplitude 7−132881
irradiated steel reactor components, in hot cell, robot for ultrasonic inspection 7−129177
jute-glass fibre reinforced hybrid composites hydrothermal ageing, flexural strength, acousto-US obs. 7−106645
LWRs, real-time SAFT-UT system for inservice inspection 7−89664
magnetic fluid ultrasonic NDT applications 7−78442
matrix array transducer and flexible matrix array transducer 7−123424
metal foil adhesion to substrate, failure detection using EM US generation *(Japanese)* 7−126400
metals, dynamic deform., elastic precursor propag., shortwave method anal. 7−98304
metals, subsurface stress detection using ultrasound and time-varying temp. gradients 7−123375
Muhlheim-Karlich nuclear power plant, damaged fuel elements, ultrasonic testing *(German)* 7−129200
NDE capability enhancement by computer-based technologies 7−119486
NDT in hazardous environments, hardware digital correl. scheme 7−123380
NDT pulse compression system, microcomputer-based 7−100500
nuclear materials testing and safety, conf., Stuttgart, Germany (Oct. 1986) 7−120695
NUKEM ultrasonic rotary head equipment ROTA-40/90R(F) and ROTA system *(Japanese)* 7−68968
online ultrasonic inspection system for the press working industry 7−123411
pipes, stainless steel, crack depth meas., methods and reliability 7−126390
plasma cutting torch nozzle defect detection 7−86537
plates, elastic wave diffr. by plates, calculated arrival strengths for point force and thermoelastic sources of ultrasound 7−138934
polycrystalline material, grain size, hysteresis const. and scatt. factor, determ. using US attenuation 7−126374
polycrystalline metal characterization using US method 7−113845
PWR vessel safety injection nozzle welds, ultrasonic flaw sizing 7−129172
railway equipment acoustic diagnosis 7−97240
reactor pressure vessels, ultrasonic apparatus developments for in-service inspection 7−122050
reactor process piping systems, automated ultrasonic inspection of intergranular SCC 7−135516
reactors, loose parts localisation by structure sound velocities determ. *(German)* 7−81604
review of mech. and EM NDT methods *(Italian)* 7−86534
rock fracture meas. by seismic techniques 7−113843
rod, thin, acoustic channel for US vel. and attenuation meas. 7−132883
rubber/steel adhesive joints, bond strength, acousto-US NDE, stress wave factor technique 7−144666
SAW device materials inhomogeneity detection, line focus beam acoustic microscope appl. 7−123396
scanning acoustic microscopy, principles and materials science appls. 7−132896
shear acoustic wave rheology meas. 7−86538
single crystals, US quality control for acoustoelectronic appls. 7−132887
sintered parts, US waves meas. of case depth 7−123382
Siracus, expert system for ultrasonic nondestructive testing 7−106752
split spectrum processing techniques 7−110733
steel, austenitic stainless, BWR pipelines, intercrystalline tension crack corrosion, US anal. *(German)* 7−86549
steel, austenitic welded joints, US inspection, geometry and manufacture effects 7−93241
steel, mild bright, subsurface struct., US backscatt. monitoring, surface roughness effect 7−113813
steel, stainless, cast, US NDE of microstruct. 7−126378
steel, stainless, centrifugally cast, US defect detection and characterisation 7−126396
steel, stainless, centrifugally cast PWR components, US characterisation 7−144677
steel, stainless, type 316, NDT performance of defective butt welds 7−126392
steel, weld joints, US echo signal amplitude, influence of dimens. of ang. reflector 7−132881
steel pipes, nondestructive inspection using matrix array transducers 7−123424
steel products, thickness meas. with electromag. US transducers at temps. up to 1200°C *(German)* 7−95544
stress meas. by backscattering of strain depend. US signals, dislocation damping 7−132900
subsurface defects imaging of samples with rough surfaces, acoustic microscopy 7−123398
surface modified layers, US charactn. 7−86545
Surry Power Station PWR, fuel inspection and reconstitution experience 7−141149
thick composites, impact damage, remaining strength prediction using US evaluation and fracture mech. 7−126399
twin probe characteristics for NDT 7−100489
ultrasonic pole figure for texture 7−113840
ultrasonics, conference, Williamsburg, VA, USA (Nov. 1986) 7−115688
US imaging, freq. and spatial compounding techniques 7−123406
utility poles, NDT eval., speed of sound meas. and spectral anal. of sonic waves 7−97245
welded constructions, fitness-for-purpose assessment by NDT, conf., London, England (Nov. 1984) 7−95097
welding internal stresses, meas. by ε-field anal. and US method *(German)* 7−100498
Al and alloys, porosity, automatic US mapping in semifinished and finished products 7−126377
C, automated US 20 dB drop pulse echo technique for crack flaw detection 7−126395
C-C composites, elastic anisotropy during fabrication process 7−126166
C-C composites, US attenuation and porosity determ. 7−126398
Cu, creep cavities, US vel. and composite-modelling study 7−142752
Fe, cast, grey, tubes inside surface corrosion, computer aided US testing *(German)* 7−86543
GaAs:Cr, semi-insulating, transient-type inversion under strong illum., nondestructive SAW detection 7−124921
PZT:Ba piezoceramic, US investig. of elastic and piezoelec. const., time variation 7−132880
SiC, sintered modulus of rupture bars, crack size, US surface wave meas. 7−132898
Si_3N_4, sintered ceramic, void charactn, by scanning laser acoustic microscopy 7−138943
U-Ti (0.75 wt.%), depleted, determ. of dynamic elastic moduli as function of temp. by piezoelec. US composite oscillator technique 7−113596

ultrasonic measurement
see also ultrasonic velocity measurement
arterial diameter, human, noninvasive meas. using US echoes with prefiltered waveforms 7−71831
blood, US signals, fluctuation rate *(Japanese)* 7−126973
cancellous bone, elastic props.: US method for meas. 7−114373
coordinates determ. of towed submarine apparatus using seismoacoustic splits *(Russian)* 7−123361
Doppler spectra velocimetry theory for arbitrary beam and flow config. *(Japanese)* 7−126974
Doppler ultrasonic flowmeter for disturbed blood flow meas. 7−93839
echocardiographic ventricular images, semiautomated border tracking 7−145162
egg white, US spectroscopy using plano-concave resonator method *(Japanese)* 7−126913
EM ultrasonic transducers and systems for in-service inspection of gas pipelines 7−75239
epoxy resins, rheological props. meas. using ultrasound 7−123358
graphite fibre reinforced epoxy composites, US wave propag. microstructure effect *(Japanese)* 7−124410
interferometric detection at rough surfaces using optical phase conjugation 7−97232
layer thickness meas. using pseudo-Sezawa waves 7−121073
light diffraction tomography, appl. to US field meas. 7−117413
liquids sound absorption coeff. determ. by US resonator method 7−130496
nondestructive inspection methods and development trends 7−100483
oxazine dyes, US mol. jet, luminesc. and visible-UV spectra 7−68402
phase-insensitive arrays for US meas. of tissue characts., directivity and sensitivity 7−126955
pipe flow, using clamp-on Rayleigh wave transducers 7−123802
polyarylene ether, glass transition temp., acoustic meas. 7−123404
polymethyl methacrylate, glass transition temp., acoustic meas. 7−123404
polysulphone, glass transition temp., acoustic meas. 7−123404
polyvinylidene fluoride receiving array for US field measurements 7−130492
rod, thin, acoustic channel for US vel. and attenuation meas. 7−132883
sintered parts, US waves meas. of case depth 7−123382
tissue, nonlinear parameter B/A meas. US techniques *(Japanese)* 7−127068
tissue, soft, US absorpt. and attenuation *(Japanese)* 7−126914
track force monitoring using acoustic signature inspection 7−97236
ultrasonic vibrations amplitude meas., optical dynamic holography technique 7−117221
xanthene dyes, US mol. jet, luminesc. and visible-UV spectra 7−68402
C-C composites, elastic anisotropy during fabrication process 7−126166

ultrasonic microscopes *see acoustic microscopes*

ultrasonic microscopy *see acoustic microscopy*

ultrasonic paramagnetic resonance *see acoustic paramagnetic resonance*

ultrasonic propagation
see also ultrasonic diffraction; ultrasonic dispersion; ultrasonic reflection; ultrasonic refraction; ultrasonic relaxation; ultrasonic scattering; ultrasonic transmission
anisotropic soft tissues, US propag., linear elastic theory appl. 7−87091
asymptotic anal. of ultrasonic beams and interface problems *(French)* 7−97207
bone fracture and diseases, sonic diagnosis, time series and freq. anal. 7−126979
coherent to incoherent ultrasonic wave conversion in heterogeneous media 7−110634
collimation studies in waveguides 7−110724
deformed isotropic solid, US wave propag. vel., stress depend. 7−98353
elastic wave velocities meas. in solids, using US apparatus 7−136656
fibre acoustic waveguides, perturbation anal. of guided modes 7−68926
fibre acoustic waveguides anal. meas. *(Japanese)* 7−123408
finite amplitude ultrasonic fields, optical obs. 7−136644
fluid/solid alternating layers 7−110619
graphite fibre reinforced epoxy composites, US wave propag. microstructure effect *(Japanese)* 7−124410

ultrasonic propagation continued
heavy fermion superconductors, collective modes, hydrodynamic description 7−112640
high temperature superconductors, conf., Anaheim, CA, USA (April 1987) 7−108049
hyperthermia, temp. distrib., nonlinear propag. and tissue interfaces effect 7−126984
inhomogeneous plane wave propagation in anisotropic medium *(French)* 7−104073
Josephson junction, US wave interaction, contact coherent binding energy 7−125273
liquids, modification of law of corresponding states 7−137469
magnetic fluids, hydrodynamics, sedimentation, US propag. and pipe flow 7−75685
metal, modified Bragg refl. force implications for US propag. 7−69836
numerical model for nonlinear and attenuative propagation and reflection of an ultrasonic bounded beam 7−82903
n octanol binary liq. mixtures, US studies 7−124401
piezoelectric semiconductor, US wave amplitude, dependence on crystal conductivity 7−77467
polystyrene gels, Brillouin scatt. study 7−113213
radiation coupling for noncoaxial alignment and unequal size transmitter and receiver *(Japanese)* 7−123409
Rayleigh wave propagation in deformed orthotropic materials 7−82928
relative anisotropies of plane waves and guided modes in thin orthorhombic plates: implication for texture characterization 7−97191
relaxing fluids, sound pulse diagnostics, mathematical bases 7−117392
ruby crystals, hypersound self-focusing, APR hysteresis study *(Russian)* 7−91737
SH waves, circumferential propag. in hollow cylinders 7−82894
short pulse propag. in solids, model 7−82892
solid-state physics, conf., Pastnagar, India (Dec. 1986) 7−102006
steel, US wave propag. vel., third order elastic consts. 7−98354
thin film, pulse signal interference *(Korean)* 7−142917
tissue, human, US propag. parameters *(Japanese)* 7−126916
As-Sb-Se glasses, low temp. elastic behaviour studies 7−104896
$Er_{1-x}Ho_xRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
Ge-Sb-Se glasses, low temp. elastic behaviour studies 7−104896
He, ultrasound propag. in Ne soln. 7−131382
$HoRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
K single cryst., direct EM ultrasound generation, mag. field and polarisation depend. meas. 7−124404
$NiFe_2O_4$ polycryst., ultrasound mag. birefringence and dichroism obs. 7−99547
$YBa_2Cu_3O_y$, high temp. supercond., ultrasound anomaly at T_c 7−118716

ultrasonic radiation *see ultrasonic waves*

ultrasonic reflection
attenuation, impedance and dispersion, artefact-free meas. 7−126982
back reflection at liquid-solid interface, leaky wave amplitude calcs. 7−82922
cepstral peaks in random reflected US signals 7−75209
echographic equipment, speckle and texture, imaging performance 7−126957
focal shift of convergent ultrasonic beams reflected from a liquid-solid interface 7−82923
liquid-solid and liquid-solid-liquid systems, non-specular effects, comparative anal. *(Japanese)* 7−124672
metal/dielectric boundary, ultrasonic wave refl., ellipticity and polarisation plane rot., mag. field depend. calcs. *(Russian)* 7−111779
numerical model for nonlinear and attenuative propagation and reflection of an ultrasonic bounded beam 7−82903
SAW focusing system, V(Z) function 7−123391
surface roughness induced attenuation of reflected and transmitted ultrasonic waves 7−123320
surface wave reflection by arrays of reflecting grooves, variational anal. *(Japanese)* 7−117371

ultrasonic refraction
No entries

ultrasonic relaxation
(1-) chloro-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
1-bromo-2-methylpropane, conform. equilib., pure and dissolved states, ultrasonic absorpt. and relax. spectra anal. 7−69935
sym-dibenzo-16-crown-5-oxyacetic acid, soln., mol. relax. dynamics 7−118041
fluids, sound pulse diagnostics, mathematical bases 7−117392
naphthalene molecular crystals, US relaxation absorption crystals *(Chinese)* 7−104921
polyisoprene rubber, US relax. studies of glass transition 7−69837
semiconductors, noncrystalline, nonlinear absorption of ultrasound under hopping conduction conditions 7−84137
$Er_{1-x}Ho_xRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
GaAs:V, acoustic absorpt. study, 200 MHz-2 GHz 7−91732
$HoRh_4B_4$, US relaxation attenuation, temp. depend. *(Japanese)* 7−124411
$LiClO_4$ solns. in 2-methyltetrahydrofuran, mols. relax. dynamics and struct. 7−104516
$NaNbO_3$-SiO_2 glass, ultrasonic vel. and attenuation, pulse-echo meas. 7−142916
a-Se, ultrasonic investigation of dynamic props. 7−76305
$Th(NO_3)_4$ solns. in water, ultrasonic relax. meas. 7−69825

ultrasonic scattering
1D inverse Born technique for ultrasonic signal processing, investig. 7−75208
blood, US signals, fluctuation rate *(Japanese)* 7−126973
breast tissues, normal and pathological, orientation and freq. dependence of backscatt. coeff. 7−78963
concrete, US anal. techniques 7−123405
disk shaped void in isotropic elastic body, US scatt. 7−132886
Doppler spectra velocimetry theory for arbitrary beam and flow config. *(Japanese)* 7−126974
echographic equipment, speckle and texture, imaging performance 7−126957
graphite fibre reinforced epoxy composites, US backscattered waves, digital signal processing methods 7−126397
hypersonic wave scattering by cylindrical inclusion in ferrite 7−130443
liver, US backscatter and attenuation coeff. enhancement with solid particles *(Japanese)* 7−126967

ultrasonic scattering continued
myocardial backscatter parameter with maximal sensitivity to cyclic variation *(Japanese)* 7−126971
pulse backscattering, spectral effects 7−130508
Raman scattering of sound in sound in solids, Mossbauer spectroscopy 7−137475
random medium, backscattering coeff. meas. using echoes, diffr, correction *(Japanese)* 7−126972
red blood cell suspensions, US scattering data 7−145140
skin thermal injury determ., HF US imaging and backscatter attenuation techniques 7−126981
soft tissue, computer model of acoustic wave scatt. 7−93841
soft tissue US scattering, computer simulation 7−87089
tissue, soft, US absorpt. and attenuation *(Japanese)* 7−126914
tissue characterisation, 2D US power spectrum anal. *(Japanese)* 7−126975
tissue characterization with microscopic resolution *(Japanese)* 7−126978
tissues and soft phantoms, US scatt., nonlinear charact. study *(Japanese)* 7−126915

ultrasonic transducers
2 MHz photoacoustic meas. technique 7−82979
3 MHz pulse ceramic transducers, design, construction and experimental investigation 7−110746
3D underwater imaging method based on synthetic aperture image holography using acoustic lens *(Japanese)* 7−110657
acoustic microscope lenses with shear wave transducers 7−123394
acoustic microscopy, bow-tie transducers for anisotropic materials meas. 7−123393
adaptive US sensor for object identification 7−123379
array design, 3D equivalent circuit for tall parallelepiped piezoelectric 7−123419
attenuation, impedance and dispersion, artefact-free meas. 7−126982
austenitic welded joints in nucl. power station, flaw detection using US monitoring *(Russian)* 7−71452
axial path flowmeter designs 7−123800
capacitance stable transducer 7−110745
capacitative transducer array design *(Spanish)* 7−123418
ceramic composite piezoelecs. for US transducers 7−92605
ceramics, fractured piezoelectric elements for broadband US composite transducers 7−126075
ceramics, piezoelectric charge coeff. and mech. quality factor determ. using electric-line theory *(Japanese)* 7−125617
composite piezoelectric eval. 7−90909
composite transducer calibration 7−123423
convex surface EM transducer, impulse sound radiation 7−123428
disc transducer, radiation field, laser probe investig. with tomographic scanning 7−132879
dual frequency ultrasonic flowmeter for turbulent flow *(Japanese)* 7−130816
echo pattern calcs., appl. to sound vel. det. 7−142137
echographic equipment, speckle and texture, imaging performance 7−126957
EM ultrasonic transducers and systems for in-service inspection of gas pipelines 7−75239
EMAT system for tube inspection with guided ultrasonic waves, transducer design 7−126389
fast breeder reactors, ultrasonic flowmeter for Na flow in pipes *(Japanese)* 7−122029
flow imaging for multicomponent pipe flow meas. 7−130815
flowmeter development and characteristics *(Swedish)* 7−123787
flowmeter for liq. He flow meas. 7−75732
focusing, spatial distribution of sound field, noncontact method 7−82971
Fourier optics implementation in US transducer design 7−123425
Fresnel zone IDT with US wave focusing, design method and field anal. *(Japanese)* 7−104122
HF piezoelectric resonators and transducers 7−97254
high-power US appl. using multiple transducers and vibr. systems 7−123383
image processing for flow measurement, using correlation method 7−104366
inspection units adjustment, ang. reflector dimens. influence on echo signal amplitude 7−132881
level meas. difficulties and transducer develop. *(Swedish)* 7−121054
liquid US absorption meas. using backed transducer 7−90892
magnetic fluid ultrasonic NDT applications 7−78442
magnetostrictive transducer output stage *(Russian)* 7−110741
matrix array transducer and flexible matrix array transducer 7−123424
metals, low temp. EM wave generation of ultrasound 7−104920
minimum detectable effective cross-section for ultrasonic motion sensor, mathematical model 7−136661
modular ultrasound equipment with piezoceramic transducers for semiconductor structure cleaning 7−75238
multi-element transducer with single acoustic lens for acoustic microscope 7−123392
nonhomogeneous SAW, effects on interdigital transducers *(Slovak)* 7−90906
NUKEM ultrasonic rotary head equipment ROTA-40/90R(F) and ROTA system *(Japanese)* 7−68968
optical detection of transient mech. displacements 7−121072
phase-insensitive arrays for US meas. of tissue charact., directivity and sensitivity 7−126955
phased array element acousto-electric response meas., diffr. effects 7−123426
phased array sector scanner, dynamic focusing scheme 7−68961
piezoceramic transducers, spatial field charact. optimisation 7−123427
piezoceramic-polymer composites for US biomedical transducers 7−92606
piezoelectric composite transduces for US diagnostic appls. 7−97252
piezoelectric structure anal., three-dimensional finite elements formulation 7−125615
piezomagnetic 2-window transducers, resonant freq. design *(Polish)* 7−110744
pipe flow US meas., using clamp-on Rayleigh wave transducers 7−123802
plate-mode ultrasonic oscillator sensors 7−82977
polyvinylidene fluoride piezoelec. transducers for US dosimetry appls. 7−97255
polyvinylidene fluoride piezoelectric sensors for robot gripper control system 7−123377
polyvinylidene fluoride receiving array for US field measurements 7−130492
polyvinylidene fluoride US transducers 7−130499

ultrasonic transducers continued
presence sensors with wide range and high local resolution 7−82982
principles and appls. of ultrasonic sensors *(Japanese)* 7−142141
pulse backscattering, spectral effects 7−130508
pulse-echo systems, prediction error filtering and elec. pulse shaping techniques *(Japanese)* 7−123403
PVDF transducers, transient pressure fields 7−123417
PZT-4 transducer surface motion, relation to underwater far field beam patterns 7−82967
radiation coupling for noncoaxial alignment and unequal size transmitter and receiver *(Japanese)* 7−123409
range finding and surface characterization using high-frequency air transducers 7−82983
RF power amplifier and coupling ccts. design for US imaging 7−68953
SAW filters, low-loss, using single-phase unidirectional transducers 7−82988
SAW focusing system, V(Z) function 7−123391
SAW unidirectional transducers, types and appls. 7−123415
separate-combined transducer design for detection of low refl. factor flaws 7−71443
solid surface, fast photoacoustic probing 7−123371
steel products, thickness meas. with electromag. US transducers at temps. up to 1200°C *(German)* 7−95544
stripes mode vibration-plate device *(Japanese)* 7−68972
tapered phased array ultrasound transducer for hyperthermia treatment 7−130502
two dimensional Fresnel type IDT for focusing underwater ultrasonic wave *(Japanese)* 7−97195
ultrasound technical units, economy improvements 7−75237
vinylidene fluoride-trifluoroethylene copolymer thin films, electromech. props., US transducer fabrication 7−117430
wideband underwater transducer arrays with single acoustic matching plate 7−123318
wideband US transmitting transducer with piezoelectric layered ring *(Chinese)* 7−75236
Cu-epoxy one-dimensional composite, acoustic wave transmission 7−123389
GaAs-GaAlAs planar waveguide acoustooptic Bragg cells fabrication and characts. 7−123199
$LiNbO_3$ piezoelectric IDT, admittance calcs. *(French)* 7−104121
$LiNbO_3$ plates, ferroelec. domain inversion, appl. to piezoelec. devices 7−125653
$LiNbO_3$ SAW H_2S gas detector 7−123378
$LiNbO_3$, SAW velocity meas. with interdigital transducer 7−117425
PZT flow-through transducers; testing techniques for sonochemistry 7−97247
PZT monolithic multilayer piezoelectric ceramic transducers 7−97253
PZT solid-porous-solid sandwich composite broadband US transducer 7−90910
PZT-epoxy composites for US transducer appls., acoustic props. 7−98359
PZT-polymer composite piezoelec. materials for medical US imaging transducers 7−99690
$PbNb_2O_6$ piezoceramics for US transducer design, prep. and charactn. 7−99709
$PbTiO_3$ piezoceramics for US transducer design, prep. and charactn. 7−99709
$PbTiO_3$-based piezoceramics, processing and transducer appls. 7−99721
Si US phased array transducer for acoustic imaging 7−123422
Tl_3AsSe_3 IR acousto-optic tunable filter for multi-gas stack emission monitoring 7−133177
ZnO multilayer thin film acoustic transducers for microwave freqs. 7−123420
ZnO sputtered film transducer for low temp. ultrasonic meas. on InSb substrate 7−117431

ultrasonic transmission
liquid-solid and liquid-solid-liquid systems, non-specular effects, comparative anal. *(Japanese)* 7−124672
monolithic US phased array, US transmission, time domain modelling 7−123387
surface roughness induced attenuation of reflected and transmitted ultrasonic waves 7−123320
Cu-epoxy one-dimensional composite, acoustic wave transmission 7−123389
^4He, solid, kinetic growth coeff. determ., US transmission meas. 7−70024

ultrasonic velocity
see also ultrasonic dispersion
alkali halide crystals, microcrack nucleation kinetics, light scatt. study, acoustic phonons 7−131222
aniline-carboxylic acids mixtures, US vel., excess vols., heat capacities and compressibilities *(German)* 7−91728
binary liq. mixtures, excess free length evaluation 7−84129
bone mechanical properties, acute change after intense phys. activity, use of US to determ. 7−133349
n-Bu_4NI/sulpholane binary solutions, US studies 7−84130
t-butanol, aq. soln., compressibility, US rel. meas. 7−84079
2-butoxyethanol. liq. mixtures, US vels. apparent molar vols., compressibilities 7−104913
cholesteryl erucate, smectic liquid crystal, ultrasonic waves propagation, specific volume 7−91727
coal measure rocks from Sydney Basin, New South Wales, compressional and shear wave vels. 7−120008
collagen-apatite composite bone system, elastic consts., density resist., dielec. props., US vel. obs. 7−71803
cumene/alcohol mixtures, excess thermodynamic and transport props., US studies 7−131239
p-cyanophenyl trans-4-propylcyclohexane carboxylate, phase transitions, specific vol., US vel. meas. 7−124078
cyclohexane-xylene mixtures, US vel. eval. at 25 to 50°C 7−69828
deformed isotropic solid, US wave propag. vel., stress depend. 7−98353
1,2-dibromoethane-ketone mixtures, US vel. and isentropic compressibilities at 303.15 K 7−69829
2,3-dimethylbutane, rot. isomerism, US investig. at high press. 7−98346
1,4-dioxane in benzene and cyclohexane, intermol. interactions, ultrasonic velocity meas. 7−137470
dioxane/D(+) tartaric acid aqueous mixtures, US studies 7−84133
elastic moduli of a machinable ceramic, determ., room temp. to 800°C 7−131204
electrolytic solutions, aqueous, sound vel. and energy of crystalline lattice 7−111771

ultrasonic velocity continued
electrorheological suspensions, struct. and viscoelastic props. in electric field *(Russian)* 7−106563
ethylene glycol, aq. soln., compressibility, US rel. meas. 7−84079
ferroelectrics, ultrasonic study of incommensurate transitions 7−125628
fibre reinforced composite, exptl. methods for elastic characts. determ. 7−86527
gases, US velocity meas. at high press. 7−137048
glycerol, aq. soln., compressibility, US rel. meas. 7−84079
glycerol, excitations above liquid-glass transition, Brillouin scatt. study 7−92698
n-hexane and n-heptane mixtures with dichloromethane and dichloroethane, sound vel. and molar compressibility, 304.15 K 7−98348
N(p-n-hexyloxy benzylidene) p-n-octyl aniline, liq. cryst. transitions 7−124506
liquefied gases, acoustic and thermodynamic studies 7−69826
liver diffuse disease, sound speed correlation with tissue constituents 7−133403
magnetic fluids, conf., Tokyo, Japan (July-Aug. 1986) 7−80152
magnetic fluids, ultrasonic velocity and attenuation, mag. effects 7−77370
magnetic fluids, ultrasonic velocity anisotropy 7−77365
mesitylene binary mixtures, ultrasonic study 7−118036
metal, modified Bragg refl. force implications for US propag. 7−69836
metals, low temp. EM wave generation of ultrasound 7−104920
metals, subsurface stress detection using ultrasound and time-varying temp. gradients 7−123375
monochloroacetic acid, in aq. ethanol, US vel., temp. and conc. depend. 7−98345
nucleic acids/nucleotides, hydration in aqueous ethanolic solns., US meas. 7−91726
n-octane-hexane isomer mixtures, US vel. and isentropic compressibilities meas. 7−98343
n octanol binary liq. mixtures, US studies 7−124401
organic aqueous non-electrolytes, thermodynamic parameter studies 7−111770
PBZT ceramic, ultrasonic characterization of elastic and piezoelectric props. 7−131244
phenol-ethylacetate mixtures, US studies 7−84132
piperidine, liquid, hypersonic speed, isentropic compressibility, Brillouin spectroscopy 7−118038
poly(propylene glycol), low mol. wt., hypersonic props., mol. wt. depend. 7−104520
polyethylene, Mo powder filled, cubic strain and acoustic props. 7−76308
polyethylene mixtures, dynamic viscoelastic props., mol. nature of temp. transitions 7−71231
polymers and liquids, thermoacoustic and nonlinear props. 7−124400
polystyrene gels, Brillouin scatt. study 7−113213
polystyrene-ethylene-propylene-diene rubber blends, compatibility studied using ultrasonic method 7−124121
porous lava samples with saturation and vel. anisotropy, longitudinal ultrasonic wave vel. var. 7−107385
n-propanol, aq. soln., compressibility, US rel. meas. 7−84079
pyridine, liquid, hypersonic speed, isentropic compressibility, Brillouin spectroscopy 7−118038
pyridine-carboxylic acids, mixtures, US vel., excess vols., heat capacities and compressibilities *(German)* 7−91728
quartz, synthetic, ultrasonic characterization of elastic and piezoelectric props. 7−131244
rabbit liver, dependence of US vel. on water content and tissue structure 7−114380
ruby:Cr, inertial self-focusing of hypersound 7−111780
semimetal/semiconductor melts, US vel. and compressibility polytherms 7−131240
steel, US wave propag. vel., third order elastic consts. 7−98354
tetracyclines, solns., US and thermodynamic obs. 7−98342
transducer echo pattern calcs., appl. to sound vel. det. 7−142137
2,2,4-trimethylpentane, rot. isomerism, US investig. at high press. 7−98346
Ag_2O-B_2O_3-based superionic glasses, elastic behaviour under pressure 7−124374
β-AgSI polycryst., ultrasonic vel. and attenuation, pulse-echo-overlap meas. 7−76306
Ag_3SbS_3, broad phase transition near T∼150 K, permitt., US meas. 7−69888
Al alloy, ultrasonic pole figure for texture 7−113840
AlN, sintered, US absorpt. and vel. meas., two-level tunnelling system model anal. 7−84141
$BaPb_{1-x}Bi_xO_3$, first order structural phase transition and scaling law 7−91799
$Cd_2Nb_2O_7$, US vel., elec. field effect 7−77013
CdP_2, sound speed, temperature dependence 7−91733
$CeCu_6$, Kondo cpd., elastic props. 7−69801
$CeRu_2Si_2$ heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
$Co_{40}Sn_{60}$, mechanically alloyed, ultrasonic velocity changes 7−69832
Cu, creep cavities, US vel. and composite-modelling study 7−142752
CuMn, spin glass, ultrasonic velocity meas. 7−76303
GaSb, semiconductor-metal transition, elastic props. under high press. 7−111781
N-(p-n-hexyloxybenzylidene)-p-n-toluidine, liquid cryst. transitions, US studies 7−105022
p-InSb, low temp. magnetocond., ultrasonic vel. study 7−76984
$KC_2H_3O_2$-acetic acid-water mixtures 7−111772
KH_2PO_4-type crystals, US expts., review 7−111778
K_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
La based metaloxides, high T_c supercond., temp. depend. of ultrasonic velocity *(Russian)* 7−125251
$La_{1.85}Ba_{0.15}CuO_4$, high T_c supercond., wide temp. instability, US absorpt., vel. meas., possible glassy state 7−112671
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., ultrasonic velocity and attenuation studies 7−112604
$La_{1.83}Sr_{0.17}CuO_4$, high T_c supercond., thermal expansion, longitudinal ultrasound velocity *(Russian)* 7−143709
$La_{1.85}Sr_{0.15}CuO_4$, high T_c superconductor, US and thermal expansion meas. 7−105838
$La_{1.85}Sr_{0.15}CuO_4$, ultrasound studies, high T_c superconductors 7−118718
MoO_3-P_2O_5 glass, US vel., temp. depend., 4-600 K, anelastic and elastic effects 7−76304
$(MoO_3)_x(P_2O_5)_{1-x}$ phosphate glasses, elastic behaviour and vibr. anharmonicity 7−104945

ultrasonic velocity continued
NH_4LiSO_4, C_{66} discrepancy, Brillouin scatt. and ultrasonic meas. 7−98293
$NaC_2H_3O_2$-acetic acid-water mixtures 7−111772
$NaNbO_3$-SiO_2 glass, ultrasonic vel. and attenuation, pulse-echo meas. 7−142916
Na_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
P_2O_5 glasses, water addition effects on struct. characts., US vel. obs. 7−69827
PZT:Ba piezoceramic, US investig. of elastic and piezoelec. const., time variation 7−132880
PZT-epoxy composites for US transducer appls., acoustic props. 7−98359
$Pb_5Ge_3O_{11}$, elastic, piezoelec. props., US vel. meas. *(Korean)* 7−92602
$PbMoO_4$ single crystals, elastic const. calcs. using US vel. data *(Chinese)* 7−104915
Rb_2ZnCl_4, phase transition, ultrasonic studies 7−98350
SiC, sintered, with AlN additives, US absorpt. and vel. meas., two-level tunnelling system model anal. 7−84141
Sn-In alloy, temp. depend. of Young's modulus 7−100273
Sn-In alloys, US study of phase transitions, Young's modulus 7−98349
TeO_2-$ZnCl_2$ vitreous system, struct. and US props. 7−104556
$TlBr_xCl_{1-x}$ crystalline solid solns., US studies 7−84136
$TlBr_xI_{1-x}$ crystalline solid solns., US studies 7−84136
UPt_3 heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
$YBa_2Cu_3O_7$, high T_c supercond., bulk modulus anomalies at T_c 7−131898
$YBa_2Cu_3O_7$, ultrasound studies, high T_c superconductors 7−118718
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., US study of elastic props. 7−125252
$YBa_2Cu_3O_{7-\delta}$ high T_c supercond., ultrasonic attenuation meas. 7−138133
$ZnCl_2$/LiI aqueous complexes, acoustic and volumetric investigations 7−111769
ZnP_2, sound speed, temperature dependence 7−91733

ultrasonic velocity measurement
acoustooptic technique 7−104112
aortic flow velocity, Doppler US obs. on dogs, computer anal. system 7−87126
1-butanol-acetone, liq., mol. interactions, ultrasonic velocity meas. 7−75229
1-butanol-benzene, liq., mol. interactions, ultrasonic velocity meas. 7−75229
1-butanol-tetrachloromethane, liq., mol. interactions, ultrasonic velocity meas. 7−75229
elastic wave velocities meas. in solids, using US apparatus 7−136656
elastooptic coeff. of transparent meas., using optical heterodyne method 7−138420
flow velocity metering, based on transit time differentials 7−97652
fused quartz, temp. coeff. determ. near room temp. 7−142133
high absorption liquids, US variables meas. 7−82961
high pressure gas apparatus 7−136652
liquids, ultrasonic velocity meas., sensitive measuring system 7−123367
miniature standardless echo pulse thickness meter measuring the speed of sound 7−128523
off-ring-pulse differential method for measurement of ultrasound velocity and attenuation in fluids 7−104118
piperidine, liquid, hypersonic speed, isentropic compressibility, Brillouin spectroscopy 7−118038
polycrystalline metal characterization using US method 7−113845
pulse superposition method, automatic control *(Japanese)* 7−117421
pyridine, liquid, hypersonic speed, isentropic compressibility, Brillouin spectroscopy 7−118038
rod, thin, acoustic channel for US vel. and attenuation meas. 7−132883
tissue, human, US propag. parameters *(Japanese)* 7−126916
wearplate and transducer coupling layer thickness effects 7−110735
$LiNbO_3$, nonlinear constants determ. *(Japanese)* 7−125618

ultrasonic wave propagation *see ultrasonic propagation*

ultrasonic waves
see also surface acoustic waves; ultrasonic propagation
convergent acoustic waves, laser generation, appl. to materials evaluation 7−123374
finite amplitude ultrasonic fields, optical obs. 7−136644
radiation coupling for noncoaxial alignment and unequal size transmitter and receiver *(Japanese)* 7−123409
stress waves, optical fibre modal domain detection *(Japanese)* 7−123270
time-domain finite difference calculations for interaction of an ultrasonic wave with a surface-breaking crack 7−90871
YBaCu(Nb)O high T_c superconds., lattice instability, ultrasonic meas. 7−138132

ultrasonic welding
high-power US appl. using multiple transducers and vibr. systems 7−123383
polycarbonates, thermal emission analysis 7−90911
Si spacecraft solar cell US welding equipment 7−144843

ultrasonics
see also acousto-optical effects; ultrasonic applications; ultrasonic devices; ultrasonic equipment; ultrasonic waves
conference, Williamsburg, VA, USA (Nov. 1986) 7−115688
Al polycrystal elastic props. at high temps., ultrasonic meas. 7−118011
$CePb_3$ heavy fermion system, high field elastic const. meas. 7−69802
UPt_3 heavy fermion system, high field elastic const. meas. 7−69802

ultrasonography *see biomedical ultrasonics*

ultraviolet astronomical observations
A 0535+26, binary X-ray pulsar, search for UV variability 7−88537
λ And, RS CVn star, UV emission-line vars. to tidal influence on chromospheric struct. 7−94941
Ap Si stars, anal. of Si absorpt. in UV spectra 7−134239
R Aqr, EXOSAT and IUE obs. of symbiotic Mira during max. and min. 7−107840
R Aqr, symbiotic Mira variable, UV spectrum of jet rel. to X-ray detect. 7−140096
AB Aur, Herbig pre-main sequence star, wind rot. modulation, C IV and Mg II obs. 7−127855
B2-B9.5 main-sequence stars of solar chemical comp., line identification in far-UV spectrum 7−79957
AS Cam, apsidal motion, implications of IEU spectral and photometric obs. 7−120510
OY Car, SU UMa star, May 1985 superoutburst, extended coronal region detect., X-ray and UV obs. 7−115440
GG Car, UV spectral characts. and shell nature 7−80032

ultraviolet astronomical observations continued
γ Cas, Be star, long-term variability of far-UV high-vel. components 7−140074
cataclysmic binaries, photometry and spectroscopy about period gap 7−115399
cataclysmic binaries in SGP white dwarf survey 7−115400
cataclysmic variable stars, EUV and FUV obs. 7−115423
cataclysmic variable stars, UV obs. by IUE satellite 7−115420
ω Cen, globular cluster, X-ray and UV obs. with EXOSAT 7−140190
δ Cet, Pioneer 10 UV obs. of β Cep star 7−107847
Z Cha, dwarf nova, spectrophotometric study of emission lines in quiescent state 7−88462
α CMa, atmospheric models and Mg II reson. lines 7−72411
HL CMa, dwarf nova, IUE obs. of P Cyg line profiles rel. to winds of cataclysmic variables 7−115428
α CMa (Sirius), Copernicus UV spectral atlas 7−94870
BG CMi (=3A 0729+103), orbital period modulation of intermediate polar spectra 7−115454
Comet Bradfield (1980 XV), possible H_2 emission detect. in UV 7−72373
P/ Comet Giacobini-Zinner (1985 XIII), IUE UV obs. of CS emission 7−88294
P/Comet Giacobini-Zinner (1985 XIII), UV spectrometry during ICE encounter 7−115309
P/Comet Halley(1982i), Astron UV obs. before and after perihelion *(Russian)* 7−88210
P/Comet Halley (1982i), C distrib. m coma, rocket-borne far-UV obs. 7−88271
P/Comet Halley (1982i), emission lines and H_2O and OH band spectra 7−88277
P/Comet Halley (1982i), far UV objective spectra, rocket-borne obs. 7−88270
P/ Comet Halley (1982i), H I Lymanα imagery from rockets 7−88266
P/Comet Halley (1982i), high resolution spectral obs. 7−88249
P/ Comet Halley (1982i), IUE UV obs. of CS emission 7−88294
P/ Comet Halley (1982i), UV features observed by Suisei 7−88265
P/Comet Halley (1982i), UV spectra, molecular abundances 7−94750
P/Comet Halley (1982i), Vega 2 spectroscopic obs. 7−88275
P/Comet Halley (1982i), water prod. rate, UV spectral meas. 7−107761
P/Comet Halley (1982i) UV spectrum evolution (1985 September to 1986 July) 7−88250
comets, identifications of S compounds in IUE spectra 7−139980
contrib. to UV continuum of Herbig-Haro objects (HH1 and HH2) 7−128013
δ CrB, chromospherically active giant star, optical photometry and UV spectrum 7−94875
R CrB, UV spectra during fading episode, assoc. model 7−127913
AM CVn, IUE evidence for hot wind in double degenerate system 7−107843
RS CVn stars, chromospheres and transition regions physical parameters 7−120491
RS CVn stars, IUE obs. of rot. modulation of V711 Tau, IL Peg and Ar Lac 7−101843
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
SS Cyg, dwarf nova, obs. of periodic vars. in IUE spectra 7−115429
CH Cyg, UV continuum, 1979-86 IUE obs. 7−107833
DB-type pulsating white dwarfs, temps. determ. from IUE obs. 7−88409
DB-type white dwarfs, UV and visual spectroscopy 7−145954
diffuse UV background, correl. with IRAS cirrus 7−146063
AG Dra, satellite and ground-based obs. of quiescent energy distrib. 7−107839
BY Dra, UV emission lines rot. modulation and flare activity 7−79966
AG Dra, X-ray and UV obs. during quiescence and outburst 7−107838
dwarf novae, photometric evidence for two types of outbursts 7−115446
dwarf novae outbursts, multi-wavelength obs. of 33 objects 7−115404
E2003+225, AM Her star, optical and UV obs. rel. to new soft X-ray emission mode 7−120506
early-type stars in SMC, IUE spectra rel. to stellar winds props. 7−134225
Europa, temporal and spatial characts. of 260 to 320 nm absorpt. band from IUE obs. 7−134174
faint blue stars in southern external part of LMC, far-UV and UBV obs. 7−80085
Feige 24, hot white dwarf, EUV spectrum EXOSAT obs. 7−88414
field horizontal-branch A-type stars, UV spectra of four objects 7−72430
galactic disk and halo highly-ionised interstellar gas distrib., UV spectral obs. 7−107948
galaxies, UV photometry rel. to star form. rates 7−120577
RY Gem, Algol type star, UV spectral characts. 7−72518
RX Gem, Algol-type binary star, optical and UV spectrophotometric study 7−101858
giant stars, EUV emission lines 7−88420
GK-type main-sequence stars, IUE obs. of five stars rel. to chromospheres and coronae 7−88418
HD 100340, early-type high galactic latit. star, non-LTE abundance anal. 7−115373
HD 128220B, sdO star, wind characts., spectral obs. 7−72422
HD 158393, late-type giant in binary system, orbital characts. and chromospheric activity 7−107828
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 190073, early-type emission line star, multiple line form. regions in circumstellar envelope 7−145964
HD 200775, Herbig Be star, interstellar extinction and polarimetric props. 7−115375
HD 213985; halo hot post-AGB star; evolutionary status and shell dust, spectral and photometric obs. 7−120387
HD 37836 in LMC, O-type supergiant, wind and disk characts., spectral and photometric obs. 7−127853
HD 47129 (Plaskett's star), spectroscopic binary orbital elements from UV radial vels. 7−94961
VW Hyi, X-ray SU UMa star, flux and spectra in far-UV, Voyager obs. 7−72463
VW Hyi, X-ray SU UMa star, IUE fluxes and spectral characts. 7−72462
interstellar 108.8 nm feature towards reddened stars, identification with Cl I 7−88584
interstellar absorpt. features towards 14 CVn and θ Crt 7−94975
interstellar abundances in reddened lines of sight, UV evidence for density-dependent depletion 7−88580
interstellar local H and D characts. 7−107939

ultraviolet astronomical observations continued
interstellar UV extinction, relation to polarisation and intensity of 443 nm diffuse interstellar band 7−128014
interstellar UV extinction bump parameters, correl. with dust grains temps. from IRAS data 7−72560
Io, IUE detect. of O I and S I emissions 7−139957
late-type giant stars, atm. characts., EXOSAT and IUE obs. 7−79954
late-type stars, depend of UV chromospheric emission on rot. 7−127845
LMC low mass X-ray binaries, evidence for mass flow onto black holes 7−127952
LYMAN UV space telescope 7−145829
Markarian 421, simultaneous multifreq. obs. of BL Lac object 7−101930
AU Mic, BY Dra star, UV emission lines, optical photometry and flaring 7−79966
N-type C stars, IUE spectra and chromospheres study 7−107848
NGC 2440, planetary nebular central star, spectra and parameters 7−88419
NGC 3393, Seyfert 2 galaxy, nucleus multifrequency obs. 7−72632
NGC 3918, planetary nebula and central star abundances and plasma characts., spectral obs. 7−120552
NGC 40 planetary nebula nucleus 7−120541
NGC 4151, Seyfert 1 galaxy, new outflowing component in Mg II line profile 7−88635
NGC 7662, planetary nebula, ionisation struct. 7−88574
OB stars, IUE spectra, mass to line-strength relations 7−134227
OB-type supergiant sequence, UV spectral morphology 7−72429
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheric modulation 7−140064
EQ Peg, EXOSAT and IUE obs. of 1984 December 7 flare 7−120418
γ Peg, Pioneer 10 UV obs. of β Cep star 7−107847
RW Per, Algol binary system, flux distrib. rel. to optically thick accretion disk model 7−94963
ξ Per, O-type giant, wind struct., UV spectral obs. 7−127861
PG 1031+234, magnetic white dwarf, spectra photometry rel. to polarisation and mag. field struct. at >500 MGauss 7−88407
β Pic, UV circumstellar absorpt. lines var. 7−72409
PK 75+35°1, peculiar planetary nebulae, UV spectrum 7−101892
planetary nebulae nuclei, absolute magnitude-age relation rel. to mass distrib. and evolutionary scheme 7−88390
Population II stars, physical parameters determ. from optical-UV energy distribs. 7−145950
Q 0405−123 and Q 1202+281, quasars, emission lines var. in UV 7−72653
Q 0957+561 A,B, UV light curve anal. and Hubble const. determ. 7−72654
Q 1327−206, QSO-galaxy pair, absorpt. line systems anal. rel. to extent of low-ionisation galactic haloes 7−120636
quasars of intermediate redshift, UV spectra 7−101953
rapidly oscillating Ap stars, IUE obs. rel. to chromospheric heating mechanisms 7−134240
red giants and supergiants, UV features and chromospheric flux 7−94869
reddened early-type stars, far-UV extinction determ. using Geneva photometric boxes 7−94976
S0/E galaxies, star formation in galactic nuclei from IUE obs. 7−80082
S18/SMC, peculiar early-type emission-line supergiant, optical and UV spectroscopic study 7−101771
Sanduleak−69°202, IUE UV spectra, progenitor of SN 1987A supernova 7−127923
μ^1 Sco, IUE spectrum of early-type eclipsing binary 7−140184
sdB stars, atm. C, N and Si abundances, implications for models 7−140057
Seyfert galaxies, IV spectra compared with intermediate-redshift quasars 7−101953
Sk −69°202 (SN 1987A progenitor) in LMC, implications of far-UV photometry of SN 1987A 7−101820
SN 1987A in LMC, colour diagrams and UV observations 7−72479
SN 1987A in LMC, early-phase obs. with IUE 7−101819
SN 1987A in LMC, implications of UV obs. 7−101822
SN 1987A in LMC, IUE obs. of spectral evolution and magnitudes 7−72482
SN 1987A in LMC, IUE spectral and photometric obs. and visual magnitude estimate (March 1987) 7−80008
SN 1987A in LMC, June 1987 UV spectra and visual magnitudes 7−115478
SN 1987A in LMC, optical and UV photometry by IUE satellite 7−134257
SN 1987A in LMC, photometric spectral and CCD obs. 7−80004
SN 1987a in LMC, polarization and spectral observations 7−80001
SN 1987A in LMC, spectral evolution in far-UV (February to March 1987) 7−101821
SN 1987A in LMC, UV and visible flux, spectral and V magnitude characts. 7−88629
SN 1987A in LMC, UV flux and spectral features 7−115475
SN 1987A in LMC, UV interstellar lines obs. by IUE 7−101823
SN 1987A in LMC, UV photometric props. and comparison with Sk −69°202 components 7−101820
sn stars, jet-like mass loss and mag. fields, IUE obs. 7−145967
solar flux variations over time scales of solar rot. 1978 to 1982, statistical anal. 7−114913
star clusters in LMC, UV obs. by IUE 7−115532
starburst galaxies, initial mass function for early-type stars from IUE obs. 7−145935
Sun, active regions radiative intensities and mag. field obs. 7−120347
Sun, erupting prominence, EUV Skylab obs. 7−94843
Sun, homologous flares, energy release, mag. field struct. and spatial morphology, UV and X-ray obs. 7−140007
Sun, nonpotential features obs. in mag. field of active region 7−115336
Sun, SMM obs. of flares and transient brightenings 7−88353
Sun, transition region UV brightenings, Si IV and O IV obs. 7−72384
Sun, UV irradiance (200 to 358 nm) meas. 7−134134
sunspots, umbral oscills. obs. in Mg II k-line 7−107799
supergiant stars, EUV emission lines 7−88420
T Tau stars, near-simultaneous UV and optical spectrophotometry 7−88411
4U 0900−40 (HD 77581), massive X-ray binary, search for rapid vars. of P Cyg line profiles 7−120502
4U 1145−619, binary X-ray pulsar, search for UV variability 7−88537
UX UMa-type nova-like systems, continuum distribs. and line profiles 7−115403
Uranus, atm. struct. and Raman scatt. Lyman α emission 7−120309

ultraviolet astronomical observations continued
Uranus rings, Voyager UVS and Earth-based IR stellar occultation obs. 7−134176
Vel X-1, binary X-ray pulsar, search for UV variability 7−88537
III Zw 77, high-ionisation Seyfert 1 galaxy, UV and optical emission-line spectrum 7−128057
Ba stars, search for Tc II in UV spectra 7−127882
Fe XXI 135.41 nm line profiles of solar flares, SMM-UVSP obs. 7−88354
Hg-Mn stars, UV spectral study *(Japanese)* 7−140082

ultraviolet astronomy
see also ultraviolet sources (astronomical)
220-nm extinction hump source, implications of 8 to 13 μm spectra of LMC N44A and SMC N88A 7−134293
A-type supergiants, mass loss characts., UV high resolution spectra anal. 7−127854
active galactic nuclei, accretion disks viscosity and UV var. 7−72628
Ap Si stars, anal. of Si absorpt. in UV spectra 7−134239
ϵ Aur, eclipsing binary, mass transfer and UV continuum from accretion disk 7−107899
Be stars, constraints on models from UV and IRAS meas. 7−127877
Be stars, irregular variations, assoc. relation between visual polarisation and UV narrow absorpt. lines 7−127879
α Boo, CO far-UV fluorescence 7−88397
GG Car, peculiar emission-line star, UV spectrum line identifications 7−72437
cool star chromospheres, UV spectra study 7−127848
diffuse UV background, correl. with IRAS cirrus 7−146063
DZ stars, synthetic spectra for cool He-rich white dwarfs with different metal abundances 7−88388
early-type stars, mass-UV linewidth relations rel. to initial mass function in starburst galaxies 7−145935
early-type stars, physical parameters determ. for circumstellar clouds from UV spectra 7−120373
elliptical galaxies, interpretation of UV light 7−101895
emission-line spectra of late-type stars, Si III 1892 Å/C III 1908 Å ratio 7−88383
Endeavour GAS electronics unit, manufacture and flight qualification 7−139926
Extreme Ultraviolet Explorer mirror optical tests and results 7−97183
Extreme UV Explorer satellite grazing incidence metal mirror details 7−97115
far UV spectroscopic explorer (FUSE) telescope, optical surface anal. code (OSAC) anal. 7−101687
galactic ultraviolet astronomy, review 7−79854
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986) 7−95085
HD 128220, double-lined spectroscopic binary with subdwarf O-type star, orbit, UV obs. anal. 7−94871
high resolution astronomical imaging by Space Telescope, appl. of roll deconvolution of imaging data 7−79846
HR 2554, ζ Aur star, spectral and photometric characts., eclipse predictions 7−88531
imaging XUV telescope calibration, upper limit to refr. index thermal coeff. of fused silica at 184.9 nm 7−72301
integrated diffuse far-UV radiation field, contrib. of QSOs 7−107977
International Ultraviolet Explorer, appls. 7−79807
interplanetary Lyman α var., Pioneer Venus obs. 7−127665
interstellar 108.8 nm feature towards reddened stars, identification with Cl I 7−88584
interstellar 217.0 nm band equivalent widths, second catalogue 7−127747
interstellar 217.4 nm extinction bump and mid-IR excess 7−80060
interstellar diffuse clouds, wavelength-dependent attenuation effects on UV spectra 7−134295
interstellar extinction, efficiencies determ. for submicron amorphous C grains in 100 nm to 300 μm wavelength range 7−140212
interstellar extinction in solar neighbourhood, determ using Geneva photometric boxes 7−94976
interstellar S, abundance characts. 7−88569
interstellar UV extinction, relation to polarisation and intensity of 443 nm diffuse interstellar band 7−128014
interstellar UV extinction bump, observational constraints on carriers from IRAS data 7−72560
ionising background at high-redshift 7−72619
ionising radiation field in Galactic halo, appl. to photoionisation models 7−88583
IRC+10216, UV photoionisation rel. to chemical modelling of circumstellar mol. shell 7−145963
IUE, nine years of UV astronomy, review 7−101654
IUE SWP and LWR cameras in low dispersion mode, recalibration 7−94658
IUE trailed mode observations, appl. to obs, of UV variability of binary X-ray pulsars 7−88537
late-type giants and supergiants, activity, IUE survey 7−140061
line identification in far-UV spectra of B2-B9.5 main-sequence stars, automatic recognition procedure 7−79957
Lyman and ESA Horizon 2000 Programme 7−145800
LYMAN UV space telescope 7−145829
microchannel-plate position sensitive detectors for UV astronomy 7−72306
narrow emission line active galaxies, UV to IR continuum characts. 7−72627
NGC 4151, Seyfert galaxy, nucleus UV emission lines, predictions from duelling wind model 7−72629
NGC 4736, UV surface brightness profiles and spectra, extrapolation to high red-shift 7−140269
NGC 5253, peculiar galaxy, nucleus UV spectral characts. 7−72630
NGC 5548, Seyfert I galaxy, nucleus optical and UV spectral characts. 7−72631
normal galaxies, UV props. 7−140258
ι Ori, giant binary system, radial vel. determ. from UV spectra 7−72402
planetary nebulae, spectral characteristics for C, N and O *(Swedish)* 7−128025
planetary nebulae, use of C III 190.9 nm/Si III 189.2 nm ratio 7−139940
Procyon, F-type star, UV spectrum atlas (203.0 to 237.1 nm) and model atm. anal. 7−79960
quasars, Hubble diagram construction using 154.8 nm magnitudes 7−101959
quasars, nuclei X-ray/UV emission *(Chinese)* 7−101894

ultraviolet astronomy continued
quasars of low red-shift, IUE characts. 7−95043
reflectance spectra of terrestrial, lunar and meteoritic powders and frosts, 92 to 1800 nm 7−87615
Rosat Wide Field Camera for EUV, design and testing 7−88113
Sanduleak-69°202 (stars 2 and 3), UV spectra and flux characts. 7−88477
υ Sco, line of sight struct., UV meas. 7−88568
Seyfert 1 galaxies, nuclei X-ray/UV emission *(Chinese)* 7−101894
SN 1987A in LMC, identification as star 1 in pre outburst plates and UV characts. 7−88477
solar Fe XII emission lines, electron excitation of fine-struct. transitions within ground $3s^23p^3$ configuration 7−145816
solar quiescent prominences, 1-D models of Lyman-α line form. with standard partial redistrib. 7−145905
solar-type stars in associations and clusters, chromospheric and transition region emission 7−107803
speckle masking, appl. to optical long-baseline interferometry and aperture synthesis 7−101695
spectrometer of Solar Spectrum Experiment on Spacelab-1 (December 1983) 7−134134
stars, secondary standards of absolute UV flux 7−94658
stellar UV polarimetry, polarisation of light scattered from winds of early-type stars 7−140041
stratospheric balloon UV detectors, design and S/N ratio *(Spanish)* 7−88108
Sun, high-resolution spectrum atlas (117.5 to 171.0 nm) 7−79849
Sun, low-latitude coronal hole, vel. fields anal. C IV obs. with SMM 7−127794
Sun, transition region, UV Al III emission lines 7−120352
symbiotic stars, use of C III 190.9 nm/Si III 189.2 nm ratio as discriminant from planetary nebulae 7−139940
W UMa, far-UV light curves rel to hot secondary model for W-type light curves 7−127965
He-peculiar stars, jets and UV reson. lines 7−145966
S I-III, dipole allowed transitions, oscillator strengths calc. Io plasma torus obs. appl. 7−115287

ultraviolet communication *see optical communication*

ultraviolet detectors
UV aurora imaging CCD camera onboard Viking satellite 7−107522
far ultraviolet detector standards 7−116008
LYMAN UV space telescope 7−145829
MCP detectors, quantum efficiencies 7−136598
microchannel-plate position sensitive detectors for UV astronomy 7−72306
phosphor film charactn. meas., vacuum UV, using multichannel detector 7−138480
Rosat Wide Field Camera for EUV, design and testing 7−88113
VUV radiation detection up to 160 nm 7−81887
VUV spectrometer-detector system, comparison of methods for second-order detect. efficiency determ. 7−95660

ultraviolet lamps *see lamps*

ultraviolet laser effects *see laser beam effects*

ultraviolet lithography *see photolithography*

ultraviolet photoelectron spectra
actinides, laser induced photoionis., photoelectron spectroscopy 7−90076
p-aminophenol group, electronic struct., biological activity, UV PES anal. 7−78751
benzene, adsorbed on Pt (111), mol. distortion, angle resolved UPS study 7−82281
benzene, valence shells, photoelectron dynamics 7−103575
benzyl alcohol, gas and liq., He(I) photoelectron spectra meas. 7−103574
carbon tetraioide, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
β-carotene, conducting, UPS meas. 7−70982
conference, Lund, Sweden (Aug. 1986) 7−120698
coverage on Ni (111), influence on H_2O adsorption behaviour 7−84521
Crystal Violet, organic dye, UPS and XPS spectra 7−103577
p-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
closo-dicarbadodecaboranes and 9-halogeno derivatives, He I photoelectron spectra 7−110002
dichromium tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
dimolybdenum tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
1,3-diphenyl-2-pyrazoline, UV photoelectron spectra, substituent effect 7−74711
1,3-diphenyltetrahydro-1,2-diazine 7−74711
1,3-dithiane derivatives, orbital interactions, UV photoelectron spectra, MNDO calcs. 7−122359
ditungsten tetraacetate, metal-metal binding, thin films UPS investig. 7−109998
epitaxial BCC layers on Cu (100), surface electronic behaviour 7−144238
formamide, gas and liq., He(I) photoelectron spectra meas. 7−103574
haloethenes, valence shell photoelectron spectra, electron correl. effects 7−117019
1-hydroxy-1,2,3-triazole, prototropy, UV photoelectron spectrosc. obs. 7−96793
inert gas atom, multiphoton ionisation, electron energy distrib. 7−68260
inert gases, UV multiphoton electron spectroscopy 7−96630
inverse photoelectron spectroscopy of bulk and surface electron state *(Japanese)* 7−70975
lanthanides, laser induced photoionis., photoelectron spectroscopy 7−90076
LYMAN UV space telescope 7−145829
metallic glass surfaces, CO interactions, XPS and UPS studies 7−144754
metallic glasses, bulk and surface electronic struct. 7−98790
metals and alloys electronic structure, angle resolved UPS studies 7−77766
methanol adsorption on O_2-covered Zn (0001), UPS study 7−91980
3-methyl-4-cyano-N,N-dimethylaniline, electronic struct. and twisted intramol. charge transfer, CNDO/S3 model 7−129598
methylstannane, VUV and UPS ab initio CI calcs. 7−129787
molecular solids, surface electronic and vibr. studies 7−77027
organic molecular solids, dynamic effects in VUV and X-ray photoelectron spectra 7−125923
organic solids, UV photoemission study 7−125925
phenol, gas and liq. He(I) photoelectron spectra meas. 7−103574
phenyl radical, vac. UV photoelectron spectra and ab initio CI calcs. 7−117020
phenyl-containing polymers, conducting, UPS meas. 7−70982
poly-p-phenylene sulphide, conducting, UPS meas. 7−70982
poly-p-phenylene vinylene, conducting, UPS meas. 7−70982
polyanilines, photoelectron spectroscopy relevant to chemical and electronic struct. 7−70984
polydimethylsilane, conducting, UPS meas. 7−70982
polyimide-Cu(Cr) interface, struct. and chemistry, PES studies 7−144228
rare earth alloys, RCu_6 (R=Ce, Pr, Nd, Sm, Ce_xLa_{1-x}), 4f partial states, VUV studies 7−106376
rare earth halides, metal-metal bonding and interstitials 7−91519
surface (110) with adsorbed O, angle resolved UPS, 2D electronic energy bands 7−119111
surface (111), monatomic O adsorption, theoretical study of UPS spectra 7−77768
tetraiodoethylene, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
tetramethyl-p-phenylenediamine, gas and liq., He(I) photoelectron spectra meas. 7−103574
transition metal carbonyls adsorbed layers, core electron excitations, VUV photoelectron spectra 7−122614
trimethylamine, excited state, ionis. and internal conversion, photoelectron spectra 7−74710
Ag (111), surface electron state photoemission cross section resonances 7−100012
$Ag_{1-x}Mn_x$ dil. alloys, UPS study of Mn local moment 7−70976
Ag_xTiS_2 films, intercalation, UPS studies 7−143270
Al (111)-Cu, growth mode and electronic struct. of Cu films 7−98754
AlN with Cu overlayers, electronic struct. determ. 7−124823
Ar, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
BaO, vapour phase, UV photoelectron spectra, orbital calcs., dissoc. energies, chemielectron spectra 7−141625
$Ba_2YCu_3O_{9-\delta}$, valence band photoelectron spectra studies 7−106367
C_8Cs, intercalation compound, electronic band struct., UV photoelectron spectra 7−124827
CO, core electron excitations, VUV photoelectron and TOF mass spectra 7−122614
$C_4RbTl_{1.5}$, ternary donor graphite intercalation cpd., photoemission, electronic struct. 7−85948
Ca, partial photoionis. cross sections and reson. struct. determ. 7−141541
$Cd_{1-x}M_xF_2$ (M=Ca,Pb,Mn) crystals, electronic structure, photoemission studies 7−105401
$Cd_{1-x}Mn_xTe$, temp. depend. photocond., photolum. and UPS studies 7−85794
CdSe, wurtzite, valence and cond. band electronic struct., UPS, inverse photoelectron spectra studies 7−70189
CdTe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
$CeSi_2$, Kondo resonance, high temp. collapse, UV photoemission meas. 7−113347
CoSi-Si permeable base transistors, role of epitaxially grown silicide films 7−137747
Cs films, oxidation, UPS 7−71526
CsI, electron-phonon scatt. effects UPS study 7−143370
Cu (001), adsorbed Cl, ARUPS, layer KKR calcs. 7−92828
Cu (001), photoelectron distribs., reciprocal space imaging 7−85950
Cu (100), (110) and (111), CN adsorption, quantum mechanical studies 7−105282
Cu (100), (110) surfaces, formate chemisorption, quantum chemical studies 7−105271
Cu (111), methyl mercaptan and dimethyl disulphide reactions, UPS studies 7−144757
Cu surface, O_2 adsorption, UPS studies 7−124686
Cu/MnO interface, photoemission 7−138581
Cu-Al_2O_3, room temp. interfacial reactions, bonding, UPS study 7−138589
Cu-AlN, room temp. interfacial reactions, bonding, UPS study 7−138589
Cu-Au ordered surface, LEED, XPS, ARUPS, Auger effect and ion scatt. studies 7−98656
D_2O^+, $\tilde{B}^2B_2$ states, photoelectron and photoion coincidence spectra 7−82300
Fe, polycrystalline, electronic struct., UV photoemission study 7−106359
Fe-Si (111) surfaces, angle resolved UV photoelectron spectroscopy study 7−138598
Fe-Sn (1.3 wt.%), (111) surface, Sn segregation, struct. transitions 7−143154
$Fe_{82}B_{18}$ rapidly quenched amorphous ribbon, surface struct. and catalytic activity 7−84453
Fe_xNi_{100-x} surface, electronic struct., UV photoemission study 7−106359
GaAs:Si MBE layers, valence band structs., UPS study 7−132406
GaP $(\bar{1}\bar{1}\bar{1})$-1×1 surface, Ga 3d chem. shift, UPS study *(Chinese)* 7−105639
Ge (111), surface termination by adsorbed As, X-ray angle-resolved photoemission meas. 7−125920
Ge, clusters, supersonic beam, TOF UPS 7−117109
HCl, inner valence ionis., UPS 7−82280
H_2O^+, $\tilde{B}^2B_2$ states, photoelectron and photoion coincidence spectra 7−82300
H_2Se, photoionis. photoelectron spectra meas. 7−90268
He discharge, far UV spectra, Ne and He photoelectron spectra study 7−108111
He, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
HfS_2, 1T polytype, angle resolved UPS, band struct. 7−92064
Hg, autoionis. region, spin-polarisation meas., UPS 7−82058
Hg, photoelectron spectra, ang. distrib. parameter 7−74535
I-diethylether (diethylsulphide) complexes, UPS, electron states 7−96791
InAs (110), O_2 adsorption, oxidation, Auger spectra, EELS and UPS studies 7−118258
InP (−1−1−1) clean surface, dangling bond state, ARUPS study 7−77751
InP (100) 4×2, surface reconstruction, H chemisorption 7−76567
InP (111), dangling bond electronic state 7−85959
InSb surfaces, (111) electronic struct., UV photo-emission spectroscopy study 7−138597
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419

ultraviolet photoelectron spectra continued
Ir (111), photofield emission from surface states 7−106366
Ir/Si interface, silicides form., Schottky-barrier form., XPS and UPS studies 7−125076
K_3MoO_3:Fe, CDW state, EPR, Mossbauer and UPS studies 7−98842
Kr, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
$La_{2-x}M_xCuO_4$ (M=Sr, Ba), high T_c superconductors, photoemission 7−125249
$(La_{1-x}Sr_x)_2CuO_{4-\delta}$, high T_c superconductor, UPS study 7−92829
$(La_{1-x}Sr_x)_2CuO_{4-y}$, strongly correl. electronic states, XPS, UPS obs. 7−105446
$La_{1.8}Sr_{0.2}CuO_4$, prep., supercond. props. 7−118668
MgO (100), Fe-covered, reaction of CO and H_2, UPS, EELS, SEELFS studies 7−86677
Mo (100), interaction of B, surface chemistry, XPS and UPS study 7−144237
Mo (100), photofield emission from surface states 7−106366
N_2 adsorbed on Ba-promoted Fe surfaces, combined XPS-UPS-EELS study 7−77749
NO on W (100) and (110) surfaces, UPS and Auger electron spectra studies 7−91997
Na on Ta (100), covalent bonding, angle resolved UPS study 7−106357
NaCl crystals, electron-phonon relax., XUV electron emission, computer expt. *(Russian)* 7−142935
Ne, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
Ni (100), methyl mercaptan and dimethyl disulphide reactions, UPS studies 7−144757
Ni (110). N_2 chemisorpt., kinetic parameters, thermodynamic quantities and struct., multitechnique approach, review 7−70086
Ni (111), electronic struct., UV photoemission study 7−106359
NiAl (110), angle resolved UV normal photoemission calcs., surface relax. and correl. effects 7−106365
NiC, CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
NiO (111), O_2, H_2O, and CO adsorption and interaction, UPS study 7−143201
NiO, CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
Ni_3Zr polycrystalline, CO adsorpt., UV photoelectron spectra 7−105286
$Ni_{64}Zr_{36}$, glassy, CO adsorpt., UV photoelectron spectra 7−105286
Re-Pd, sputter-deposited, UPS studies 7−144230
Rh (111), azimuthal orientation of adsorbed benzene molecules, ARPES study 7−100016
Ru (001), coadsorption of O and K, K−O cpds., form. study 7−124690
Ru (001), Mn covered, adsorption of H_2, O_2 and CO simple molecules 7−143207
Ru-Cu surface, physisorpt. of Xe, photoemission obs. 7−100010
Si (001)(2×1), metallic surface state, angle-resolved UPS study *(Chinese)* 7−105640
Si (111), NH_3 adsorption, Si-H bond production, UPS study 7−105273
Si (111)$\sqrt{3}\times\sqrt{3}$-Bi surface, angle resolved UV photoelectron spectra 7−125907
Si (331), chemisorption of O_2, surface reconstruction, LEED, UPS, AES *(Chinese)* 7−124682
Si, clusters, supersonic beam, TOF UPS 7−117109
Si wafers, thin film chem. growth processes, integrated system 7−138678
Si:B-Ag(Al)(Ni), vacuum annealed surfaces, elect. props. 7−138004
Si/Cr interface, silicide form. on annealing, electronic and struct. props. 7−84541
a-$Si_{1-x}C_x$:H films, valence electron props., UPS, EELS studies 7−85941
SiO_2/Si interface, anomalous bonding configurations, UV photoemission spectra study 7−118283
Sm_4As_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Sm_4Bi_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
$Sr_{0.2}La_{1.8}CuO_4$, high T_c superconductor, electronic struct., UPS, inverse photoemission spectra studies 7−105368
$Sr_{0.2}La_{1.8}CuO_4$, high T_c superconductor, direct and universe photoemission 7−125250
SrO, vapour phase UV photoelectron spectra, orbital calcs., dissociation energies, chemielectron spectra 7−141625
TiN_x (100), nonstoichiometric, evidence of vacancy-induced surface states 7−92246
TiN_x (100), substoichiometric, vacancy-induced structures in ARUPS 7−92830
TiO_2 (110) surfaces, interaction with SO_2, UPS, XPS and LEED studies 7−91986
TiO_2, reduction by Ar^+ bombardment, adsorption of O_2 7−91991
U_3As_4, highly correlated electron systems, UV photoemission spectra meas. 7−138608
UMn_2, electronic struct., reson. photoemission meas. 7−96790
U_3P_4, highly correlated electron systems, UV photoemission spectra meas. 7−138608
W (100), photofield emission from surface states 7−106366
W (110) and (100), NO chemisorpt., UPS study 7−143202
WF_6, ionisation energies, UPS study 7−136006
Xe, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
Xe, Rydberg atoms, time domain effects, UV spectrosc. 7−141538
Xe, structural phases, VUV photoemission study 7−122615
Y (0001), angle resolved UV photoemission, surface state effects 7−92840
Y, surface reconstruction, LEED and UPS studies 7−131399
$YBa_2Cu_3O_{6.5}$, prep., supercond. props. 7−118668
$YBa_2Cu_3O_{6.7}$, strongly correl. electronic states, XPS, UPS obs. 7−105446
$YBa_2Cu_3O_7$, high T_c superconductor, UPS, reson. photoemission studies 7−106368
$YBa_2Cu_3O_7$, high T_c supercond., photoemission study through supercond. transition, O dimerisation 7−132408
$YBa_2Cu_3O_{9-y}$, high T_c superconductor, photoemission studies 7−106382
Yb_4Bi_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Yb_4Bi_3, valence fluctuation, UPS study 7−92141
$YbCu_2$, valence fluctuation, Anderson model calcs., XPS and UPS meas. 7−124949
ultraviolet photoelectron spectra continued
Yb_4Sb_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Yb_4Sb_3, valence fluctuation, UPS study 7−92141
ZnSe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
ZnSe-MnSe-ZnSe heterojunctions, valence band discontinuities, UPS meas. 7−112445
$ZrN_{0.93}$ (100) surface, electronic struct., bulk band struct., angle resolved photoelectron spectra 7−105644
ultraviolet radiation effects *see radiation effects*
ultraviolet radiation effects, biological *see biological effects of ultraviolet radiation*
ultraviolet radiometry *see photometry*
ultraviolet sources *see light sources*
ultraviolet sources (astronomical)
2138−543, new distant dwarf nova, photometric and spectroscopic obs. 7−134238
A 0535+26, binary X-ray pulsar, search for UV variability 7−88537
AC 211 (=4U 2129+12), in M15, discovering of 8.5 hour X-ray period 7−120505
accreting compact objects, spectra assoc. with hypercritical spherical accretion 7−88093
accreting white dwarfs in globular clusters, massive accretion disk form. by collision with main-sequence stars 7−145939
active galactic nuclei, spectral energy distribs. between 0.1 and 100 microns 7−88614
Be stars, near-UV and near-IR excesses detect. 7−120412
3C 273, quasar, radio to X-ray continuum emission and temporal vars. 7−101949
cataclysmic variable stars, appl. of steady-state accretion disk model to EUV and far-UV obs. 7−115424
cataclysmic variable stars, EUV and FUV obs. 7−115423
cataclysmic variable stars, UV obs. by IUE satellite 7−115420
ω Cen, globular cluster, X-ray and UV obs. with EXOSAT 7−140190
contrib. to UV continuum of Herbig-Haro objects (HH1 and HH2) 7−128013
elliptical galaxies, interpretation of UV light 7−101895
galaxies with UV excesses, seventh Kiso survey 7−134149
H1504+65, hot compact star devoid of H and He, optical, IV and X-ray obs. 7−88408
HH 7 to 11 complex of Herbig-Haro objects, velocity field and struct. 7−101883
Kiso UV excess galaxies, sixth list 7−94672
NGC 4319, disturbed spiral galaxy, UV knot assoc. with nearby quasar (Mrk 205) 7−140279
Nova Aql 1982, photometric and spectroscopic obs. by IUE, AAT and WRST 7−140106
RS Oph, recurrent nova, multi-freq. obs. of 1985 outburst 7−115425
PG 1211+143, quasar, X-ray spectrum rel. to origin of X-ray-UV excess 7−115622
PK 75+35°1, peculiar planetary nebulae, UV spectrum 7−101892
quasars, contrib. to integrated diffuse far-UV radiation field 7−107977
quasars, UV light-echo model for luminous arcs in clusters 7−140306
SN 1987A in LMC, circumstellar shell photoionisation model for UV emission-line spectrum 7−134257
SN 1987A in LMC, computed UV spectra, 7−140118
SN 1987A in LMC, predicted X-ray, UV and IR spectra 7−140121
starburst galaxies, initial mass function for early-type stars from IUE obs. 7−145935
4U 1145−619, binary X-ray pulsar, search for UV variability 7−88537
BE UMa, detached white dwarf-red dwarf binary with unique reprocessing spectrum, photometry and spectra 7−127966
Vel X-1, binary X-ray pulsar, search for UV variability 7−88537
white dwarfs, accreting, LTE model atmospheres rel. to soft X-ray-EUV spectra 7−94874
white dwarfs, accreting, two-temp. treatment for X-ray and UV radiation 7−88392
ultraviolet spectra of diatomic inorganic molecules *see spectra of diatomic inorganic molecules*
ultraviolet spectra of inorganic liquids and solutions *see spectra of inorganic liquids and solutions*
ultraviolet spectra of inorganic solids *see visible and ultraviolet spectra of inorganic solids*
ultraviolet spectra of organic molecules and substances *see visible and ultraviolet spectra of organic molecules and substances*
ultraviolet spectra of organic solids *see visible and ultraviolet spectra of organic molecules and substances*
ultraviolet spectra of polyatomic inorganic molecules *see spectra of polyatomic inorganic molecules*
umklapp process
classical impurity diffusion on a lattice, perturbation theory anal. 7−124583
high T_c supercond., transition temp., localisation and struct. transitions 7−105760
Cu (001), adsorbed Cl, ARUPS, layer KKR calcs. 7−92828
InSb surfaces, (111) electronic struct., UV photo-emission spectroscopy study 7−138597
Ni (110)c(2×2) ferromag., with chemisorbed S, spin resolved photoemission 7−132411
Si-Ge_xSi_{1-x} strained-layer superlattices, folded acoustic phonons 7−70059
Zn, thermal conductivity minimum, elec. resist., Lorenz fn. 7−137898
uncertainty principle *see indeterminancy*
uncommitted logic arrays *see integrated logic circuits*
underground cables
cathodic corrosion protection of underground power cables, influencing possibilities *(German)* 7−113767
underwater acoustics *see underwater sound*
underwater cables *see submarine cables*
underwater sound
see also hydrophones; oceanography; sonar
3-D inhomogeneous waveguide with rough fluid bottom, sound scattering 7−82915
3D ocean sound propagation, math. model 7−68928
3D underwater imaging method based on synthetic aperture image holography using acoustic lens *(Japanese)* 7−110657
Absolute Velocity Profiler with acoustic Doppler capability for reference vel. meas. in ocean 7−127526

underwater sound continued
acoustic backscattering by ocean bubbles, meas. rel. to bubbles spatial distrib. 7—127260
acoustic gravity waves, nonlin. eqn. 7—82907
acoustic multipath signal processing in inhomogeneous ocean water *(Portuguese)* 7—130478
active underwater acoustics, time delay estimation by autoregressive modelisation 7—110659
adiabatic transforms for spectral analysis and synthesis of weakly range-dependent shallow ocean Green's functions 7—82916
Arctic ambient noise in the Beaufort Sea: seasonal space and time scales 7—142080
array beamformers, Wagstaff-Berrou vs. max. entropy method 7—82941
NW Atlantic Ocean, mesoscale sound speed field determ. by ocean acoustic tomography 7—114735
Australian maritime defence, appls. 7—110650
Azores Fixed Acoustic Range expts. 7—142078
bandlimited system interrogation signals 7—82937
beam output interference cancellation for line arrays 7—117407
beamforming a planar non-linear array by estimating the sensor positions 7—90884
beamforming with aperture extrapolation (APEX)—performance in practice 7—117408
beluga echolocation signal propag. 7—145102
bistatic cross sections and the resonance order: the Rayleigh wave dipole resonance 7—117386
bottlenose dolphins, time resolution definitions for biosonar 7—126853
bottom absorption, normal mode attenuation model 7—82914
bottom attenuation effects, modified ray theory 7—130434
bounded beam/plate interactions *(French)* 7—142076
bowhead whales off Pt. Barrow, Alaska, acoustic source levels 7—145103
broadband source at hydrophone array, combined detection and source motion estimation, thresholds 7—104089
buoy-mounted acoustic Doppler current profiler meas. of Somali Current 7—120154
burst noise, mixture models, bivariate density representation 7—123303
channel modeling and threshold signal processing in underwater acoustics: an analytical overview 7—123302
channel propagation, effects of uniform horizontal currents in the parabolic approximation method 7—130437
coherent clutter textures with arbitrary spectra, simulation 7—123313
coherent underwater acoustic imaging systems, motion estimation technique 7—104090
communication through the underwater channel—the multipath problems and the coding approach 7—123348
composite signal amplitude and time-delay parameters estimation 7—123312
coordinates determ. of towed submarine apparatus using seismoacoustic splits *(Russian)* 7—123361
deep ocean bottom sound scattering, sediment volume inhomogeneities 7—82912
degree of determinacy of wave fields in multimode waveguides with random inhomogeneities 7—130432
disturbed water in tank first subharmonic of sound 7—82901
diver voice communications, adaptive noise cancelling appl. 7—110683
eigenray finding and time series simulation in a layered-bottom ocean 7—82917
eigenvalue/eigenvector interpretation of surface reverberation rejection performance 7—117409
elastic tube sound resonances *(French)* 7—104084
energy and correlation characteristics of low-frequency sound waves in underwater sound channels 7—82909
extrapolation procedure for transient reflection measurements made on thick acoustical panels composed of lossy, dispersive materials 7—110651
factorization and path integration of the Helmholtz equation: numerical algorithms 7—110652
fish target strengths for use in echo integrator surveys 7—142079
fishes' reaction to stimuli, study using acoustics 7—127061
fluctuations of the levels, angles, and time differences of the arrivals of sound signals received over separate paths in the ocean 7—130429
Fram Strait, underwater acoustic tomography in marginal ice zone area 7—127256
Fram Strait marginal ice zone, ocean dynamics and acoustic fluctuations 7—133771
gas bubbles in liquid, sound emission meas. 7—88776
geoacoustic scattering from seafloor features 7—117384
E Greenland Sea, acoustic propagation through sea ice edge eddy 7—127255
Greenland Sea, ice edge noise 7—142082
grid-search, optimization and tracking for passive sonar localization in shallow water 7—123346
high freq. coherence functions propagated along ray paths, 2nd moment evaluation 7—82918
high freq. coherence functions propagated along ray paths 7—130442
high-frequency under-ice reverberation, simulation model 7—117388
homogeneous waveguides, scattering calcs. 7—117367
horizontally stratified waveguide, distributed harmonic source field 7—82911
infrasonic noise theory for atmospheric turbulence near ocean surface 7—82920
joint estimation of close delays and application to underwater acoustics 7—90870
layered ocean, sound field calcs. by method of normal modes, fast algorithm 7—82913
LF underwater acoustic propagation and sediment depth, meas. 7—97205
line array detection in a flow-noise dominated environment 7—117406
liquid state EM transducers 7—130503
LPI techniques in the underwater acoustic channel 7—75200
marine acoustic surveying with sub-m accuracy 7—134006
marine sedimentation, ultrasonic effects *(French)* 7—104087
metal cylinder, in water, scattering of steady acoustic waves *(Russian)* 7—75189
mode behavior in a waveguide for different forms of the sound-velocity depth distribution in water (numerical analysis) 7—82908
mode coupling and the environmental sensitivity of shallow-water propagation loss predictions 7—123316
non-Gaussian noise detection, using sequential adaptive detectors 7—123304
nonlinear shock wave analysis 7—130420
ocean, acoustic method for currents meas. 7—79696
ocean, matched-field processing in deep-water Pacific environment 7—123307
ocean acoustic tomography: use of surface refl. rays *(French)* 7—104088
ocean acoustic tomography, critique of Munk-Wunsch method for performance evaluation 7—114743
ocean acoustic tomography by Hamiltonian methods including the adiabatic approximation 7—101548
ocean bottom zone, acoustic lateral waves due to concentrated sound source near ocean bottom 7—133765
ocean boundary surface inhomogeneities, scattering effects 7—130436
ocean mesoscale eddy determ. by acoustic tomography method 7—127602
ocean sound field, effect of large-scale current 7—130430
ocean technology electronics, conf., Edinburgh, Scotland (March 1987) 7—95103
ocean waveguide, angular spectrum, modes and interference orders 7—82891
ocean waves, acoustic pseudonoise pulse reflection from wavy surface of ocean 7—72099
ocean wedge with penetrable bottom, 3-D field calcs. 7—123314
one-way equations, pseudodifferential operators operating orders, marching algorithms, path integrals 7—142083
optimum time domain signal transmission and source location in a waveguide 7—75198
parallel Kalman filtering for heave compensation using higher order models 7—123349
passive array treatment: detection of signals and estimation of the spectral matrix of the noise 7—90883
passive multipath target tracking in inhomogeneous acoustic medium 7—110661
passive ranging in a multipath dominated environment 7—110660
passive sonar, continuous gain adaptive trackers design 7—110658
path-integral treatment of intensity behavior for rays in a sound channel 7—142077
perturbative inversion methods for obtaining bottom geoacoustic parameters in shallow water 7—142081
polyvinylidene fluoride, piezoelectric coaxial cable 7—123384
porous sea/ice water interface, sand refraction and reflection 7—117390
positioning system, high precision short range, development 7—97204
propagation, acoustical effects of ocean current shear structures in the parabolic approximation 7—130438
propagation, higher-order parabolic wave equation 7—130440
propagation, intensity fluctuations in a quadratic channel 7—130441
propagation, postprocessing method for removing phase errors in the parabolic equation 7—123317
propagation, standard parabolic equation solutions, geometrical description *(French)* 7—104086
PZT-4 transducer surface motion, relation to underwater far field beam patterns 7—82967
RAFOS neutrally buoyant subsurface float, acoustic tracking, data acquisition and telemetry 7—133971
rain-generated, influence of wind 7—117387
random-bottom structural and topographical effects on sound transmission in a shallow channel 7—75197
range and depth estimation using ambiguity function methods, appl. of high-resolution processing 7—142109
reflection and scattering, randomly irregular surface calcs. 7—110653
scattering, effect of random vel. fluctuations 7—75196
scattering by plane multilayer structure, calcs. *(French)* 7—104085
scattering from bubble clouds in upper ocean, relation to temp. anomalies 7—114791
scintillation structure of turbulent tidal flow, meas. off British Columbia coast 7—114754
scintillations of partially coherent signals in nonscattering channels 7—110655
sea-bottom attenuation, effect on optimum sound propag. freq. 7—117389
seafloor acoustic mapping system 7—127622
shallow ocean technique for determining vertical directionality of ambient noise 7—82919
shallow sea, spatial correlation of surface noise 7—130433
shallow water, 2-D bottom backscattering coeffs. meas. *(Chinese)* 7—123301
shallow water sound field, calc. using approx. soln. of 1D wave eqn. *(Chinese)* 7—136643
shallow water time-series simulation using ray theory 7—130435
shallow water wedge mode propag., numerical modelling 7—123315
ship mechanical features detection 7—110663
signal detection problem for undersea noise 7—75211
signal fluctuations, prediction using a distribution of Gaussian correlation functions 7—117385
signal processing, uncertainty tolerance 7—123305
single scattering of an acoustic signal by internal waves in an underwater sound channel 7—82910
sonar workstation, design and construction for oceanography appl. 7—79698
Southwest Pacific Ocean, low freq. attenuation meas. 7—79439
split-step algorithm, dig. filter approach for density variations 7—123347
Straits of Florida, effect of bathymetry on sound transmission loss 7—110654
stratified moving media over impedance boundary, sound propagation theory *(Russian)* 7—127350
stratified ocean sediments, sound scattering calcs. 7—130431
subcritical penetration of narrow Gaussian beams into sediments 7—130439
subsea positioning and control in hydrocarbons exploration, use of transponder network 7—75199
telemetry system, high-performance 7—123319
time domain formulation for pulse propagation including nonlinear behavior at a caustic 7—110656
track parameter estimation from multipath delay information 7—123309
tracking, adaptive state estimation 7—123310
tracking array calibration underwater, remote monitoring 7—123308
two dimensional Fresnel type IDT for focusing underwater ultrasonic wave *(Japanese)* 7—97195
universal acoustic deep ocean transceiver with RF command data link 7—79612
wave propag. problem, numerical treatment 7—133692
wide-band monopulse sonar, remote seafloor profiling appl. 7—127496
wideband underwater transducer arrays with single acoustic matching plate 7—123318

underwater sound continued
wideband US transmitting transducer with piezoelectric layered ring *(Chinese)* 7−75236
wind-induced deep ocean noise, observed and theoretical responses of a horizontal line array 7−145490
undulator radiation
atomic physics with synchrotron radiation and heavy-ion storage ring 7−110133
electron motion in helical undulator, radiation acceptance 7−68535
laser harmonics, external field, generation by electron beam in multicomponent undulator with axial magnetic field *(German)* 7−130256
micropole undulator with 726 μm period, modelling and charact. 7−81817
optical klystron or undulator, Monte Carlo simulation of harmonic generation 7−130139
Raman FEL, power and sideband studies 7−130133
relativistic electron beam in electrostatic undulator, stimulated radiation angular depend. 7−117130
soft X-ray undulator, optical matching with condenser Fresnel zone plates 7−67448
tapered, high strength, field certification 7−136352
unidirectional solidification *see directional solidification*
unified field theories
see also neutron oscillations; SU_3 theory; supergravity; Weinberg model
17 KeV neutrino models, Goldstone bosons, 'triplet'-Majorons, familons, singlet Higgs fields 7−135009
γ_5 anomaly, nonlocality source, unitary microcausal theory, massive vector field interactions with fermions 7−128775
$\Delta I=1/2$ rule, scalar diquarks contrib., colour triplet particles, operator product expansion 7−134994
ε'/ε isospin breaking contribs., π^0-η-η' mixing and QED Penguin operators 7−116106
ε'/ε value from lattice calc. of weak Hamiltonian matrix elements 7−116105
$N=1$ superconformal gauge theory in $d=2$ superspace 7−128418
Abelian gauge theories, renormalization-group-improved Yennie-Frautschi-Suura theory, Z^0 physics 7−128765
Aharonov-Bohm effect, gravitational analogue in 3 and 4 dimens. 7−95437
Albert Einstein and the problem of unification of fundamental interactions *(Polish)* 7−67138
algebras, lattices and strings 7−108890
anisotropic inflation, instability of scalar field 7−102262
anisotropic universes, inflation, Higgs fields, local isotropy 7−146116
anomalous baryon number nonconservation and GUT mechanism for baryogenesis 7−102654
anomalous baryon number violation in high temp. electroweak theory 7−140854
anomaly-free theories beyond superstrings containing N=1 supergravity and Yang-Mills matter 7−95795
asymptotically anti-de Sitter universes in arbitrary space-time dimens. 7−73116
Atkin-Lehner symmetry 7−134604
axion domain walls, topological mass terms, interactions with photons, electrons and monopoles 7−102655
baryogenesis and heavy quarks, nonequilibrium condition 7−80560
baryogenesis in superstring unification 7−146129
baryon asymmetry of the universe in standard electroweak theory 7−89411
baryon number conservation in lattice gauge theory, SU(2) and $SU_c(2)\times U_B(1)$ models 7−81016
Bianchi I space-time and zero-curvature Friedmann-Robertson-Walker model, solns. 7−115868
Bianchi type-I universe, torsion as expansion source in self-consistent Einstein-Cartan theory 7−88714
big bang, processes and theories 7−101961
black holes, hoop conjecture, models of fluid spheres with nonvanishing stresses 7−67134
black holes, quantum properties, closed string calcs. 7−115499
Born-Infeld action from conformal invariance of the open superstring 7−95430
Born-Infeld type electrodynamics admitting a nonnull Killing vector 7−67132
Bose-Einstein condensation and thermodynamic pot. in Kaluza-Klein background geometries 7−108396
bosonic string, d=26, covariant fermionic and heterotic strings, partition fns., superconformal ghost system 7−140849
bosonic string on SO(N) group manifolds, crit. dimensions, path integral anal. 7−95796
bosonic strings, closed/open, dilaton condensates and loop effects 7−81067
bosonic strings, NSR-models, explicit derivation, open and closed strings, Hilbert spaces 7−120895
Brans-Dicke cosmology with a scalar field dependent cosmological term 7−72662
BRST invariant, cyclic symmetric 3-(super)string vertex, (super)conformal field theory 7−120900
canonical formalism for minimal surfaces, string theory for general relativity 7−67104
charged rotating black hole, five dimensional physical fields, unified geometrical meaning, Kerr solution 7−134266
charged superdense star, charged analogue of the Vaidya-Tikekar solution 7−108333
charm decays, theoretical description 7−102787
Chern-Simons term by spontaneous symmetry breaking in an abelian Higgs model 7−128796
chiral four-dimensional heterotic strings from self-dual lattices 7−89468
closed superstring field theory, contact interactions in light-cone gauge, negative energy states 7−134603
closed-string four-scalar tree amplitude, high-energy unitarity, superstring SST II appl. 7−81066
cold universe, inflationary fluctuations, entropy generation and baryogenesis 7−134331
compactified superstrings, pure gauge sector 7−120906
complex potentials for coupled gravitational and electromagnetic perturbations 7−128400
complex-real vector space formulation of unified field theory 7−73115
composite gluons and effective nonabelian gluon dynamics in a unified spinor-isospinor preon field model 7−73582
composite Z effective theory, haplon bound state, hypercolour quantum number, electromagnetic couplings 7−135060
unified field theories continued
composite-technicolor standard model 7−89414
compositeness below 1 TeV in the strongly coupled standard model 7−102687
conf., Burdwan, India, Dec. 1985 7−115694
conf., Durham, England (Sept. 1986) 7−88749
conf., Sandhamn, Sweden, June 1986 7−95109
conference, Les Houches, France, June 1983 7−80169
conference on quantum field theory and math. physics, Bechyne, Czechoslovakia, (June 86) 7−80147
contortion 7−140573
convariant higher spin vertex operators in the Ramond sector 7−140846
convariant Klein-Gordon eqn. on Schwarzschild metric, asymptotic behaviour 7−95424
cosmic loops, gravitational field 7−89084
cosmic string, relativistic kinetic theory formalism and macroscopic props. 7−95865
cosmic string, straight, gravitational effects, appl. to quasar and galaxy images 7−102044
cosmic string interactions 7−72667
cosmic strings, rel. to cosmic struct. 7−115642
cosmic strings, superconducting, with massive fermions 7−101975
cosmological constant dynamical adjustment, cosmons, fifth force 7−134611
cosmological constant in heterotic string theory, modular forms on moduli space 7−81149
cosmological models with GUT phase transition, bulk viscosity and inflation 7−115663
cosmology, axionic domain walls and strings, intercommuting behaviour 7−115659
cosmology, mag. monopole abundance from first-order GUT phase transition of early Universe 7−107986
cosmology, superstring neutrino-dominated Universe model 7−107998
covariant heterotic strings and odd self-dual lattices 7−81153
covariant superstring field theories, space time SUSY transformations 7−81063
covariant superstring parametrization, bosonic and fermionic components, classical eqns. of motion 7−121407
covariant superstring theory, multiloop calcs., space-time SUSY current 7−108351
D^0-$\bar{D}^0$ mixing in superstring-inspired E_6 models 7−95436
deformed internal space, self-consistent soln., massless scalar fields minimally coupled to gravity 7−120908
DeWitt monopole particle detectors for thermal states in static space-times 7−89376
Dirac and majorana fermions, minimal rephrasing-invariant CP-violating parameters 7−128814
Dirac and Majorana spinors on nonorientable Riemann surfaces, string theory 7−135064
Dirac and Weyl fermion determinants 7−102266
Dirac dyon electric charge, CP violating quantum radiative corrections 7−81077
Dirac neutrino mass calcs. 7−81085
Dirac neutrino masses, calculable in superstring inspired model 7−73581
Dirac neutrino masses, E_6 superstring models 7−135006
Dirac quantisation rule, mass and dual mass, gravitational magnetic monopoles 7−140574
Dirac spinors in quantum space with torsion, quantized fiber-bundled spaces, spin connection, neutrino oscills. 7−134923
duality in statistical Mechanics and string theory 7−80563
dyonium, Paschen-Back effect 7−121399
$E_6\times E_8$ superstring theory, SUSY breaking from group gaugino condensates 7−128803
E_6 based mechanism for generation of fermion electric dipole moments 7−95907
E_6 electroweak gauge group, production, decays and forward-backward asymmetries 7−81083
E_6 GUT, superheavy 27-multiplet fermions in $E_6\times SU(3)$ model 7−135005
E_6 GUTs, supersymmetric, light Higgs doublets 7−95799
E_6 neutral gauge boson detection through lepton pairs at hadron colliders 7−89408
E_6 signature in $\sin^2\theta_W$ meas., anal. 7−121403
E_6 signatures in atomic physics, neutral massive gauge boson effects, H atom appl. 7−81091
E_6 signatures in atomic physics 7−95804
e_6 superpotentials and applications to heterotic superstring phenomenology 7−89100
E_6 superstring based model, Z′ mass limits and decays, Higgs masses and couplings 7−95802
E_6 superstring matter parity, lepton and baryon number violation operator elimination for d=3, 4 7−140850
E_6 superstring model with exotic quarks, CP violation 7−73577
E_6 superstring models, lepton-number nonconservation 7−121401
E_6 superstring models, particle dichotomy and left-right decomposition, Dirac neutrino, W′ boson 7−128815
E_6 superstring models, simple discrete symmetries 7−134613
E_6 superstring theory, Z-Z′ mixing, use of Z lepton asymmetry 7−128822
E_6-based supersymmetric theories, Higgs boson mass bound 7−89420
$E_8\times E_8'$ heterotic string, coset spaces as alternatives to Calabi-Yau spaces in the presence of gaugino condensation 7−140577
$E_8\times E_8$ heterotic superstring theories, discrete symmetries, phenomenological clues 7−128405
$E_8\times E_8$ superstring models, cosmological consequences, baryon asymmetry, supermassive shadow particles 7−115878
early Kaluza-Klein Universe, existence of massive relics 7−89087
early universe, inflation and Planck era, soln. using unified models 7−115653
early Universe, inflation from higher dimens. 7−108369
early Universe, light neutrinos as cold dark matter, majoron model 7−115646
early Universe, oscillating solutions in higher-dimensional cosmology, superstring anal. 7−146128
early Universe, primordial inflation, superstrings and Theory of Everything 7−115660
early Universe, string induced phase transition, analytical approach 7−120672
ECFA Workshop on LEP 200, Aachen, Germany, (Sept.-Oct, 1986) 7−140381
effective potential for Kaluza-Klein radius, gauge depend., self-consistent dimens. reduction 7−73113

unified field theories continued
Eg×Eg heterotic strings, compactification for realistic string model and technicolor 7−128402
Einstein−Maxwell eqns., assoc. plane-symmetric metrics study 7−80538
Einstein's unified field theory, Born-Infeld theory 7−89077
Einstein field equations, Cartan ideal, prolongation and Painleve property 7−73080
Einstein vacuum field eqns., axially symm. solns. and Geroch group 7−73061
Einstein-Cartan gravitational action, torsion term, stochastic geometry, N=1 supergravity 7−89082
Einstein-Maxwell electrovacuum eqns., cylindrically symm. solns., cosmic string interpretation 7−102268
Einstein-Maxwell eqns., solns from 5-dimens. theory 7−140572
Einstein-Maxwell eqns. for nonnull electromagnetic fields, conformal Ricci collineations 7−115857
Einstein-Maxwell equations, colliding waves with time-like singularities 7−73112
Einstein-Maxwell equations, effective construction of topologically non-trivial solutions 7−95428
Einstein-Maxwell equations, Kerr-like cosmological solns. 7−102260
Einstein-Maxwell equations, soln. representing cosmic string and charged black hole in equilibrium 7−67128
Einstein-Maxwell equations, SU(,1) invariance, linear problem 7−67143
Einstein-Maxwell scalar system stability in 8 dimensions 7−89078
Einstein-Maxwell scalar theory with monopole compactification, cosmological implications 7−73121
Einstein-Maxwell spacetimes, type-D, potentials for perturbations 7−67127
Einstein-Maxwell theory, EM field props. on curved spacetime 7−115879
Einstein-Maxwell theory, spacetime as a membrane in higher dimensions 7−89080
Einstein-Maxwell theory in 10D, unstable compactification, chiral fermions and tachyonic modes 7−108356
Einstein-Yang-Mills system, strings and superspace, d=10 supergravity 7−108796
Einstein-Yang-Mills theory, spontaneous compactification to non-symmetric coset spaces 7−128398
electric monopole in Kaluza-Klein theory 7−80536
electron motion, rel. to nonlocality 7−108297
electroweak asymmetries, studies at PETRA 7−102686
electroweak interaction model with SU(2)×SU(2)×U(1) symm., quark and lepton masses 7−102653
electroweak interaction process, charged and neutral currents, review 7−89400
electroweak interactions, approximate global symmetries 7−121406
electroweak interactions, spontaneously broken gauge symmetry, review *(Rumanian)* 7−81090
electroweak model, exptl. tests 7−95818
electroweak model, non-standard self-interactions of the weak vector bosons and their phenomenological implications 7−73567
electroweak physics at the Z^0 pole, above W pair thresholds, LEP review 7−95819
electroweak scale generation by nonperturbative effects, natural mech., gauge hierarchies 7−89421
electroweak theory, baryon asymm. of the universe generation mechanism 7−81087
electroweak theory, PEP experimental study 7−102648
electroweak theory, sphalerons, small fluctuations, baryon-number violations, transition rate damping in plasma 7−121409
electroweak theory, testing $O(\alpha)$ corrections 7−81081
electroweak theory in nonlinear gauge, renormalisation 7−81082
electroweak theory of finite temp. and density phase, transitions, W-boson condensation 7−73574
Eotvos experiment, vector coupling to baryon number constraints, U(1) gauge symmetry 7−108830
equatorial geodesics in magnetic universes 7−73079
Ernst equation in general relativity, generalization to Einstein-Maxwell fields 7−80525
Euler invariant-type higher derivative gravity, mass spectrum of $M_4 \times S^D$ soln. 7−80568
exotic down quark, flavour mixing constraints, mixing angles, kaon mass differences 7−135011
exotic Drell-yan processes at Tevatron and SSC, light and heavy bosons 7−134996
expanding universe, geometrical foundation for unified field theory 7−115667
extended hypercolour models, dynamical mass decreases as possible cure to difficulties 7−81080
extended technicolour model with composite and elementary fermions and technifermions 7−134997
false vacuum decay rate at high temps. 7−116111
Fermi decays, $O(Z\alpha^2)$ corrections, conserved vector current predictions and universality 7−102844
fermion masses, universal seesaw mechanism 7−121411
fermion-monopole interaction, baryon number violation 7−135116
fermionic strings, twisted and extended, BRST quantization, O(2) and SU(2) strings, ghost systems 7−121478
fifth fundamental force, theoretical principles and torsion balance expts. *(French)* 7−121488
finite temperature and density effect on symmetry breaking by Wilson loops 7−102647
finite temperature and density effects in higher dimensions with and without compactifications 7−120910
five-dimensional classical unified field theories, Abelian principle bundles, energy positivity 7−115870
flavour mixing in the presence of a fourth down quark, E_6 superstring model 7−102267
four-dimensional superstring models, cosmological constant vanishing, free string spectrum 7−134610
four-dimensional superstrings, factorisation and multiloop modular invariance constraints for closed strings 7−108340
four-generation models from superstring orbifold compactification, Yukawa couplings 7−108352
four-generation SU(2)×U(1) model, Yukawa couplings, CP violating mixing matrix 7−140856
fourth generation lepton mass from E_6 theories 7−102660
fourth-generation charged lepton, mass, bounds and associated neutrino 7−95803
free massless fields with spin 5/2 and 3/2, gauge transformation and gravit. interaction 7−89353
unified field theories continued
free Ramond sector of Witten's covariant superstring action 7−80548
Friedmann-Robertson-Walker cosmological models, perfect fluid, solitonic perturbations, Kaluza-Klein anal. 7−72661
Fritzsch mass matrix phenomenology 7−128794
fundamental particle physics without accelerators 7−73110
fundamental principles 7−67065
gauge and gravitational anomalies in two-dimens., Feynman diagram methods 7−67489
gauge theories and symmetries, introduction 7−95817
gauge-invariant free open superstrings, consistency and component-field struct. 7−89403
Gauss-Codazzi-Ricci equations, general relativity, analogy with Kaluza-Klein theory 7−115860
generalised Kaluza-Klein equations, Lagrangian 7−102254
geometric space-time perturbation, gauge invariance, Kaluza-Klein association 7−67102
geometrical unified EM-gravitation theory in Weyl space-time 7−95426
Glashow-Weinberg-Salam model, variational approach 7−102649
global family symm. and Peccei-Quinn symm., connections, breaking and familons 7−81076
gravitational field, nonlocalised by internal variable, nonRiemannian structure 7−108348
gravitational particle production in the formation of cosmic strings 7−146130
gravity form bosonic, heterotic and SUSY strings 7−108358
Green-Schwarz superstring, covariant, first-quantized BRST charge, BRST Hamiltonian anal. 7−128802
Green-Schwarz superstring, quantisation 7−134612
GUTs, U(1) generation symmetry, quark, lepton and neutrino masses and mixings, mirror particles 7−140851
hadron physics at intermediate energy physics, conf., Folgaria, Italy (Feb. 1986) 7−72727
hadron wave functions, quark model 7−73600
Hawking effect, quantum covariant Klein-Gordon eqn. on Schwarzschild spacetime 7−73132
heavy fermion production in the effective W approximation 7−73568
heavy fermions, effective Lagrangean, nonlinear realisation 7−121410
heavy neutrino detection in electron capture processes 7−81340
Hermitian theory of relativity, equilibrium of forces 7−89049
heterotic one-loop string amplitude, five graviton-like particle scattering, modular invariance 7−115876
heterotic string, Calabri-Yau compactification and D=4 N=1 supersymmetry 7−95797
heterotic string, orbifold compactification, N=1 SUSY $SU(3)\times SU(2)\times U(1)^n$ models construction 7−121400
heterotic string, orbifold compactification and Wilson lines, chiral matter states 7−81150
heterotic string, quartic effective action calc. 7−140906
heterotic string effective action, dilaton and quartic curvature terms 7−80549
heterotic string in arbitrary SUSY compactifications, Fayet-Iliopoulos D-terms calcs. 7−140845
heterotic string models, IOD, nonsupersymmetric, spectra 7−95798
heterotic string theory 7−108832
heterotic string theory with three chiral fermion families 26/4 dimensional compactification 7−116101
heterotic strings, compactification from 26 to 4 dimensions via T^{22}/G 7−116100
heterotic strings from the bosonic string in 26 dimensions 7−81079
heterotic superstrings, finiteness 7−80551
Higgs boson production at intermediate mass, equivalent vector boson approx. 7−95806
Higgs mass prediction in standard model, Monte Carlo renormalisation group 7−128795
Higgs particles, influence of mixing angles on testing, mass spectrum, production, decay rates 7−116104
Higgs sector of superstring models, nondetermination of mass upper bound 7−80561
Higgs vacuum in gravitational theory 7−73128
Higgs-boson decay into Z pairs, improved transverse-mass variable for decay detection 7−128890
higher curvature supergravity and superstrings 7−108380
higher dimensional cosmology and the energy-momentum conservation law 7−128417
higher dimensional field theories, internal-external space splitting problem 7−67130
higher dimensional theories, stability of compactified vacuum 7−80541
higher dimensional unification, dimensional reduction by isometry 7−80542
homogeneous anisotropic cosmological models in 11D, dynamics 7−115666
homogeneous isotropic cosmological model driven by a scalar field with exponential pot. 7−80140
ideas beyond the Standard Model 7−73565
indefinite metric and positive probabilities in particle physics 7−73583
inflationary universe, historical independence, perturbations within de Sitter universe 7−115639
inflationary universe, monopole problem and primordial black hole problem 7−88700
inflationary Universe. self-consistent explanations 7−146117
inhomogeneous cosmological models, no hair theorem and de Sitter soln. 7−115664
interacting electromagnetic shock waves in general relativity 7−120901
intermediate bosons, longitudinally polarized, scatt. in symm. breaking sector, low energy theorems 7−135004
intermediate energy studies of quark and lepton flavour mixing 7−73561
intermediate mass scales, radiative generation in superstring-inspired models 7−89402
internal gravitons in higher-dimensional unified theories, nonlinear σ-model 7−80570
isometric compactifications 7−108332
Jordan's formulation for unification of gravit. and electroweak interactions 7−73114
Kahler manifolds with vanishing chiral potential 7−81084
Kaluza theory in 8D, origin of SO_3 spinors 7−67135
Kaluza-Klein ansatz, quadratic curvature theory and gauge coupling constant 7−108355
Kaluza-Klein Casimir cosmology and thermal equilibrium 7−128155
Kaluza-Klein cosmologies, phase space classification 7−95427

unified field theories continued
Kaluza-Klein cosmologies, vacuum inhomogeneous, non-oscillatory behaviour 7−101987
Kaluza-Klein cosmology, Friedmann models with phenomenological matter 7−89071
Kaluza-Klein cosmology, unstable solutions above five dimensions 7−140345
Kaluza-Klein cosmology with double compactification, spontaneous symm. breaking by Higgs fields 7−108362
Kaluza-Klein cosmology with Lovelock lagrangian, field eqns. and curvature tensor 7−108363
Kaluza-Klein electromagnetism, charge quantisation without superheavy masses 7−134602
Kaluza-Klein model, D=2N+2,3, Euler-Poincare Lagrangians 7−95432
Kaluza-Klein model of cosmological compactification, quantum effects 7−107999
Kaluza-Klein models, Pauli couplings and chiral anomalies 7−67131
Kaluza-Klein monopole mass, 5D Einstein eqn. solns. 7−108347
Kaluza-Klein program and supergravity 7−80578
Kaluza-Klein theory, Cauchy problem and Jordan-Thiry extension 7−73119
Kaluza-Klein theory, consistent ansatz 7−67141
Kaluza-Klein theory, cosmological consequences 7−73118
Kaluza-Klein theory, cosmological monopole solns. 7−73111
Kaluza-Klein theory, equivalence of spin and ang. momentum 7−73120
Kaluza-Klein theory, light-fermion-mass generation, Minkowski space, perturbation theory, Yukawa couplings 7−120909
Kaluza-Klein theory, mag. monopole stability in Euclidean background metric 7−95423
Kaluza-Klein theory, nonAbelian Wong eqns. in curved space-time 7−73122
Kaluza-Klein theory, nonlinear electrodynamics *(French)* 7−89073
Kaluza-Klein theory, smooth oscillating cosmological solution 7−80540
Kaluza-Klein theory, $SU(3)\times SU(2)\times U(1)$ from CP^2 coset space 7−73117
Kaluza-Klein theory, time evolution of extra spatial dimens. 7−89418
Kaluza-Klein theory, truncation of 4D spectrum of states to finite subsector 7−73135
Kaluza-Klein viscous universe, entropy prod. due to grav. wave viscosity 7−72683
Kerr-Newman black hole metrics, Killing-Maxwell system separability, angular momentum constant 7−108339
Kerr-Newman metric in cosmological background of closed Robertson-Walker universe, Einstein-Maxwell eqns. 7−80139
Kerr-Newman solns. of Einstein-Maxwell eqns. in deSitter space-time 7−128393
Lagrangian classes, variational techniques, canonical procedures, conserved quantities, Einstein-Maxwell eqns. 7−134588
left-right symmetric models, CP violation through Higgs-boson exchange 7−102657
left-right symmetry model with the Wess-Zumino-Witten effective action 7−134986
LEP/SLC precision measurements, virtual very heavy top effects, virtual corrections 7−140864
lepton flavour non-conservation, heterotic superstring inspired standard model 7−80553
lepton plasma kinetics in the standard model 7−81086
leptonic mass spectrum calculation in rel. BS model 7−102651
leptoquarks, superstring models, production in e-p colliders 7−128404
leptoquarks in lepton-quark collisions 7−128800
light particle families, dynamical composite model anal. 7−140842
light-cone gauge strings and superstrings, inexact modes, holomorphicity, modular invariance 7−108350
Liouville superstring, open, five-dimensional 7−134988
Lorentz generators in light-cone gauge superstring field theory 7−89404
low composite scale preon model with complementarity 7−73611
magnino experimental constraints and consequences, stable weakly interacting massive particle 7−128808
majorana tachyon neutrino, existence discussion 7−140868
Marcel Grossmann meeting on general relativity, Rome, Italy (June 1985) 7−66831
massive Dirac ν, electromagnetic props. in supersymmetry and standard model 7−95791
massive unitary renormalisable Yang-Mills theory without Higgs bosons, one-loop corrections 7−108791
massive unitary renormalisable Yang-Mills theory without Higgs bosons 7−108792
massless Kaluza-Klein gauge fields and scalar-induced space-time compactification 7−134599
membrane model, Casimir energy calc. and massless particle generation 7−67549
minijets, QCD, and unitarity 7−89442
minimal SU(5) GUT, Dirac neutrino generation 7−140867
mixmaster models, multidimensional, high temp. quantum effects, chaotic behaviour 7−134598
momentum-scale-dependent bounds on masses in two models with more than one Higgs multiplet 7−108831
multiloop closed superstring amplitudes, cancellation of leading divergence 7−80544
multiloop modular invariance and the cosmological constant 7−120904
multiloop superstring amplitudes in light-cone gauge, modular invariant and holomorphic construction 7−121408
N=1, d=4 supergravity, scalar pot. struct., appl. to superstring theory 7−80555
N=1 supersymmetric GUT based on $SU(5)\times U(1)$ 7−140853
N=2 spinning string, 4D model, space dimens. from supersymmetry 7−102718
N=2 spinning string, space dimensions from SUSY, 4D model 7−89485
N=2 superconformal algebras, unitarizable highest weight modules 7−80543
$N={}^1/_2$ supersymmetries, nonlinear σ model, (p, q) world sheet supersymmetry 7−134974
neutral spherically symmetric systems, electromagnetic mass models, Einstein-Maxwell eqns. 7−140557
neutrino decay based cosmological scenario 7−146118
neutrino magnetic moment in $SU(2)_L\times U(1)_Y$, N=1 supergravity and $SU(2)_L\times SU(2)_R\times U(1)_{B-L}$ models 7−102744
neutrino mass and missing mass, SN 1987A observational constraints 7−139912
neutrino mass from β spectrum 7−141028
neutrino mass limits from supernova SN1987A 7−107880
unified field theories continued
neutrino masses in superstring models with E_6 singlets 7−80559
neutrino masses in superstring theories 7−73580
neutrino oscillations, Majorana mass term, Dirac neutrinos, selection rules, mass eigenstates 7−135010
neutrino oscillations, nonadiabatic, anal. 7−121402
neutrino properties in field models 7−73564
neutron electric dipole moment lower bound in spontaneous DP nonconservation models 7−81189
Newman-Penrose equations *(Rumanian)* 7−80564
no-scale supergravity models, inflationary scenarios, Kahler potential, phase transition, temperature-dependent barrier 7−120918
non-weak interactions between neutrinos, renormalisable model, strong Yukawa interaction 7−128823
nonAbelian anomaly from Wilson's fermion formulation in lattice field theory 7−67494
nonAbelian gauge field, Dirac eqn. for fermion field in covariant formalism 7−89354
nonchaotic Kaluza-Klein cosmology 7−140338
nonradiatively decaying neutrinos, mass and lifetime, primordial nucleosynthesis with γ_τ 7−73575
nonsupersymmetric heterotic strings, toroidal compactification 7−108345
nonsymmetric Kaluza-Klein theory, minimal coupling, CP nonconservation, fermion electric dipole moment 7−116048
nonsymmetric nonAbelian Kaluza-Klein theory, spinor fields in minimal coupling scheme 7−108336
nontrivial quark mixing at finite temp. in $SU(2)\times U(1)$ symmetric standard model phase 7−89415
NSR superstring, operator formulation of interacting string field theory 7−134989
nucleosynthesis versus mirror universe, hypothetical forces, particles, universe coupling, positronium decay anomaly 7−120665
on mass-shell renormalisation conditions for particles with mixing 7−128793
one-loop amplitudes and effective action in superstring theories 7−89409
one-loop amplitudes in string theory on orbifolds 7−81151
one-loop closed bosonic string amplitude, external gravitons, antisymmetric tensor fields, dilatons 7−115877
one-loop effective potential in $D=4$ theories consistent with classical symmetries of $D=10$ superstrings 7−95431
open superstring, one-loop path integral description 7−73627
open superstring effective action, fermionic terms, massless modes, four-particle scattering amplitudes 7−115874
open superstring theory, Born-Infeld action, D=10 Maxwell theory, F^6 supersymmetric extension 7−115875
orbifold compactified superstring theories; gauge symmetry breaking 7−120899
orbifold compactified superstring theories, fermion generations 7−81073
Parker limit for flux of multiply charged monopoles 7−95808
particle physics advances, solar neutrino oscillations and superstrings 7−116102
particle physics concepts, basic theories, book 7−108061
particle physics concepts, QED, QCD, unification, hadronic spectroscopy, book 7−108062
Pati's superstring preon model, hierarchical structure, symmetry evol. *(Chinese)* 7−121459
Pati-Salam group induced by supergravity, symmetry-breaking hierarchies 7−128421
perturbative, string S-matrix, group theoretic approach, string scattering, gauge properties, open bosonic tree 7−116148
physical constants theory *(Rumanian)* 7−81089
plasmon→$\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
preon model and cosmological quantum-hyperchromodynamic phase transition 7−120674
projective field theory, generalized Backlund transformation and solitons 7−102256
proton decay in nuclei, Fermi-like corrections 7−95902
QCD, asymptotically similar series, external field problems, renormalisation, N mag. moment 7−108862
quantum gravity and particle physics 7−73125
quantum interference effects in Einstein-Maxwell, supergravity and non-Abelian Kaluza-Klein theories 7−102261
quark and Higgs-Boson mass predictions in the nonperturbative grand-unification framework 7−95812
quark generations, weak mixing angle anal. 7−81266
quark mass matrices, special forms, phenomenological constraints 7−95859
quark masses and hierarchies, electroweak symmetry breaking, $SU(7)\times SU(7)$ chiral preon model 7−95815
quark mixing, radioactive corrections scheme, superstring inspired model 7−80554
quark mixing in weak interactions, charm and beauty decays and CP violations 7−121398
quark-lepton mass matrices in superstring inspired models, radiative corrections 7−95794
radiating charge embedded in a de Sitter universe, Einstein-Maxwell theory 7−95067
radiatively decaying neutrinos, reexam. of evidence in electroweak models 7−81199
Ramond superstring, Parisi-Sourlas fermions, zero energy limit massive (0+1)-dimens. supergravity 7−134609
random dynamics in standard model 7−108833
relativistic waves in five dimensions, Klein (1926) paper 7−73124
relativity, Hermitian theory, equilibrium conditions, field equations, colour four-currents 7−108334
right-handed gauge bosons, masses from renormalisation group equations 7−134998
rigid superstrings, one-loop contrib. to β-function, asymptotic freedom 7−95434
rotating bodies, neutral, polarisation and magnetisation 7−79825
scalar field evolution eqn. in new inflationary universe 7−101981
scalar-tensor theory for induced gravity 7−89076
scale invariance and spontaneous symmetry breaking 7−134999
see-saw mechanism for quark and lepton masses, $SU(2)\times SU(2)\times U(1)$ electroweak model 7−135002
self-dual Taub-NUT metric, monopole scatt. and hidden symm. 7−81075
self-interacting scalar and gravit. fields, spontaneous symm. breaking 7−102258
semileptonic neutrino scatt. experiment analysis, $\overline{MS}$ and on-shell renormalisation schemes 7−95889

unified field theories continued
simplicial quantum gravity 7−67149
singly-charged scalar field, family mixing and lepton-number breaking, supersymmetric case 7−128798
SO(10) from supersymmetric E_6, spontaneous symmetry breaking anal. 7−95784
SO(10) models, light neutrino masses and mixing angles 7−89410
SO(10) superstring models, unified, with intermediate $SU_R(2)$ breaking, SUSY particle spectrum 7−95814
SO(10) unified field theory, neutrino masses 7−102652
SO(2) spin operators, n-point correlation functions on a torus 7−73570
SO(3,1) ø U(1) gravitation-Maxwell gauge model, anal. 7−134614
SO(3) invariant Landau pots., minimization for spin four 7−95800
softly-broken superconformal invariance, chaotic inflation possibility, complex scalar fields 7−140340
space-time compactification induced by nonlinear sigma models, gauge fields and submersions 7−95425
special relativistic flat spacetime electromagnetic fields, Volterra series for post-Maxwellian corrections 7−72967
spin-field correlators on Riemann surfaces and string nonrenormalization theorems 7−81068
spl (2,1) superalgebra, orthogonality conditions for tensor product representations 7−89401
spontaneous CP violation in the $SU(2)_L \times U(1)_Y$ model with two Higgs doublets 7−108826
standard electroweak model, quark mixing matrix measurables as invariant fns. of mass matrices 7−73571
standard model, BRS symmetry limit, effect of noncovariant/nonsupersymmetric gauges 7−134987
standard model, CP nonconservation and other expt. probes 7−102666
standard model, electron stability anal. 7−67541
standard model, nonlinear evolution of Yukawa couplings, fermion masses and mixing angles 7−128806
standard model, parameters, predictions and future development 7−102665
standard model, quark family mixing and reduction of couplings 7−128799
standard model, supersymmetric extension, tree-level unitarity violation for large Higgs mass 7−128797
standard model, W and Z masses, weak neutral current 7−140866
standard model conf., Stanford, CA, USA, July 1986 7−102016
standard model extension to include invisible axions and majorons 7−121405
standard model re-examination in the light of B_d^0-$\bar{B}_d^0$ and B_s^0-$\bar{B}_s^0$ mixing 7−116107
standard six-quark model, $|\varepsilon'/\varepsilon|$ implications, K_L-K_S mass difference, CP-nonconservation 7−67538
Standard Theory of particle interactions 7−73563
statistical mechanics of cosmic strings 7−88721
strangeness-changing neutral currents, gluino induced effects, SUSY standard model anal. 7−95890
string and superstring theories, review 7−121484
string anomalies, path integral calc. 7−89407
string theory, GUT, QCD and Ising model appls. 7−108900
string theory, higher-derivative gravity, surface terms, Euler densities, surface geometry, boundary-value problem 7−120907
string theory, orthonormal gauge and affine geometry 7−95809
string-type field theories, spacetime content 7−81064
strong CP problem in superstring theory 7−108817
strong interactions, dual field theory 7−135065
strongly coupled quarks in standard model, Yukawa couplings, linear σ model 7−135003
structure of matter in elementary particle physics and unification theories 7−73636
$SU_{2,L} \times U_{1,Y}$ model, supersymmetric, radiative corrections to W propagator 7−73572
$SU_L(2) \times U_e(1) \times U_\mu(1) \times U_\tau(1)$ standard model extension, ν masses and e-μ-τ universality 7−89419
$SU(2)_L \times U(1)_Y \times SU(n)_{family}$, Cabibbo angle and meson masses, charge-commutation-rel. approach 7−128819
$SU(2)_L \times U(1) \times U(1)$ electroweak model, Higg's mechanisms, nonstandard neutral currents, neutral massive gauge bosons 7−128811
$SU(2)_T \times SU(2)_I \times U(1)_Y$ extended gauge model, neutral current study 7−67539
$SU(2) \times U(1) \times S_4$ model, mass matrix, mixing angles 7−108828
$SU(2) \times U(1)$ model, strong corrections to flavour changing neutral current vertex 7−81201
$SU(3)_C \times SU(2)_L \times SU(2)_N \times U(1)_y \times (1)_{y'}$ models, $E_8 \times E_8'$ based, properties 7−140860
$SU(3)_C \times SU(2)_L \times U(1)_Y$,$[\times (U(1))^2, \times U(1)]$ models with two, one, no Z bosons, gauge symmetry breaking, particle spectrum 7−73569
$SU(3) \times SU(2) \times U(1)^n$ N=1 SUSY models, construction from heterotic string orbifold compactification 7−121400
$SU(3) \times SU(2) \times U(1)$ model, from N=1 supergravity, top-quark mass bounds 7−128805
$SU(3) \times SU(2) \times U(1)$ model, probing the desert by the two-loop renormalization-group equations 7−102659
$SU(3) \times SU(2) \times U(1)$ standard model, canonically realized, stability and superstrings 7−102650
$SU(3) \times SU(2) \times U(1)$ standard model, nonperturbative contribs. via local QCD sum rule 7−140841
$SU(3) \times SU(3)$ chiral colour group, QCD originator 7−95805
SU(3) theory, baryon number violation by chiral colour axiinstantons 7−140855
$SU(5)_L \otimes SU(5)_R$ hybrid unification 7−108819
SU(5) model, CP invariance breakdown, Fritzsch matrices, Kobayashi-Maskawa angles calculation 7−116112
SU(5) model, electron stability anal. 7−67541
SU(5) model, minimal, top-quark mass bound 7−128806
SU(5) models, Clebsch-Gordan coefficients 7−67540
SUGRA+SUSY Yang Mills theory, 10D, superspace formulation 7−89083
superconducting cosmic strings, dynamical props. 7−135070
superconformal algebra, N=3 case, formulation for N≥1, central operator, transformation rule, O(3) representation 7−116093
superheavy grand unified magnetic monopoles in cosmic rays 7−80562
superholomorphic anomalies and supermoduli space, superstring effective action in Faddeev-Popov determinant 7−140580
supermassive charged particle detection, extremely slow proton electronic excitation 7−129534
superparticle in light-cone harmonic superspace 7−67513
unified field theories continued
superparticle theory, covariant quantisation, S-matrix 7−73573
superspace spinning string spectres, isomorphism between potentials and ghost fields 7−89079
superstring, addition of holes and crosscaps to world-sheet, finiteness of O(32) theory 7−134990
superstring, free, twisted, with three, four six-dimensional supersymmetry 7−67548
superstring, superspace supergravity 7−80545
superstring's, naturalness of discrete symmetries 7−89417
superstring σ-models from bosonic model, four-fermion interactions on world sheet 7−120903
superstring compactification, simplified model 7−134607
superstring compactification, space-time supersymmetry in large radius expansion 7−108344
superstring cosmological model 7−101974
superstring E_6 model, CP violation and Yukawa couplings, four generation example 7−116108
superstring effective actions and Virasoro algebra central charge on Kahler manifold SUSY σ-model 7−80546
superstring effective theories, modifications of plane wave solns. from d=10 N=1 supergravity 7−120902
superstring flax, unidexterous superspace 7−120905
superstring inspired models, gauge symmetry breaking 7−102264
superstring model for universe 7−95439
superstring models, axion energy and axionic domain wall problems 7−67543
superstring models, gaugino masses, one-loop corrections 7−108827
superstring models, rank-five, from $CP_3 \times CP_3$ 7−128804
superstring models, role in quark-lepton flavour problem, particle mass origin and unification 7−95820
superstring models, supersymmetry breaking in observable sector 7−102263
superstring models challenged by rare processes 7−140578
superstring motivated gauge models based on a rank six subgroup of E_6 7−95816
superstring multiloop amplitudes, fundamental domains and light-cone string field theory 7−128801
superstring phenomenology, compactification and expt. signatures 7−108357
superstring spectroscopy, dynamics and particle internal struct. 7−102724
superstring theories, compactification, low energy phenomenology 7−67140
superstring theory, covariant BRST theory 7−89075
superstring theory, general remarks 7−108359
superstring theory, incorporating symmetry 7−108343
superstring theory, introduction, bosonic strings and tree approx. scatt. amplitudes, book 7−108059
superstring theory, loop amplitudes, anomalies, and phenomenology, book 7−108068
superstring theory, pregeometry 7−102265
superstring theory, review of recent developments 7−140575
superstring thermodynamics 7−88100
superstring with twisted boundary conditions 7−67548
superstring-inspired models, low-energy supersymmetry breaking through gaugino masses 7−81069
superstring-inspired $SU(3) \times SU(2) \times (U(1))^2$ models with SO(10) unification 7−128403
superstrings, 4D, effective interactions of chiral families 7−140859
superstrings, closed, thermodynamics and very early universe anal. 7−88723
superstrings, graded constraint algebras, OSP(1,1|2) symmetry, BRST invariance 7−134606
superstrings, multiloop closed amplitudes, leading divergences cancellation 7−80552
superstrings, nonperturbative effects in sigma model 7−108342
superstrings, sigma model interpretation, Siegel symmetry origin 7−102252
superstrings, SUSY breaking mechanism 7−81058
superstrings, type I, heterotic, massless field effective action, superspace formulation 7−140844
superstrings, type II amplitude finiteness 7−80550
superstrings and cosmological matter-antimatter asymmetry problem, late baryogenesis prediction 7−88710
superstrings and multidimensional cosmology, phase transitions 7−101983
superstrings and string theory, review 7−108889
superstrings from sigma models, bosonic string as example 7−102251
superstrings from the $((1,0)$ superspace$)^2$ nonlinear sigma model 7−80547
superstrong unification, gauge models from Kaluza-Klein compactification on CY manifolds 7−89422
supersymmetric σ-model in $E_8/E_7 \times U(1)$ manifold 7−102664
supersymmetric Born-Infeld Lagrangian in d=4, appl. to supergravity and superstrings 7−80556
supersymmetric GUT, $SO(4) \rightarrow SU(2)^R$ global symm. props. 7−134993
supersymmetric GUT with automatic fine adjustment 7−95813
supersymmetric left-right Pati-Salam model, P invariance and isospin breaking, SO(10) model 7−128812
supersymmetric radiative corrections to asymmetry meas. at Z^0 peak 7−134975
supersymmetric $SU(4) \times SU(2) \times SU(2)$ partial unification group, spontaneous symm. breaking and mass spectra calcs. 7−108834
supersymmetry, D=10, N=1, superspace geometry and superstring effects 7−140843
supersymmetry and GUT's technical hierarchy problem 7−108811
supersymmetry and supergravity, review 7−89394
supersymmetry of elementary particles 7−89396
SUSY 10D spinning strings from bosonic string compactified on $E_8 \times E_8'$ lattice 7−81154
SUSY GUTs, light Higgs doublets 7−95799
SUSY left-right gauge model, Higgs boson struct., neutral current anal. 7−128820
SUSY string theories, structures of anomalies 7−108341
SUSY theory of particles and interactions 7−108820
tachyonic compactification, generalization to 5D and Kruskal anal. 7−89085
technicolor composite standard model of quarks 7−140900
technicolour model with composite gauge bosons, Higgs and vector particles, mass formulae 7−135008
technicolour theories, flavour changing neutral currents 7−121427
technipionium bound state formation and decays into W^+W^-, $\gamma\gamma$, $Z\gamma$ 7−73576

unified field theories continued
tepid inflation, entropy prod., GUT monopole dilution below obs. limit 7−88712
Teukolsky-Press relations in arbitrary space-times, EM field 7−80539
three Higgs doublets models, mass-matrix ansatz and flavour nonconservation 7−102658
three-generation Calabi-Yau manifold, Ricci-flat Kahler manifolds, topological numbers 7−115873
three-generation model from heterotic superstring compactification, 27^3 Yukawa couplings 7−108353
three-generation superstring model, symmetry breaking and low-energy phenomenology 7−128401
three-generation superstring model, Yukawa couplings in (1,1) sector, instanton effects 7−134608
Toda molecule equations, finite energy monopole solutions 7−67547
top and Higgs mass from cancellation conditions 7−73584
topological aspects of string theories 7−89469
twin galaxies familiar form. by string loops 7−139910
twisted bosonic strings, three-string vertex, covariant formalism, oscillator basis 7−140581
twisted conformal fields, vertex operators, oscillator and bosonized forms 7−134992
twisted heterotic string, compactification, lattice parameters, one-loop cosmological constant 7−89467
two-loop effect on the heavy quark mass near the fixed point 7−102662
type I SO(32) open superstrings on orbifolds, propagation 7−95429
type I superstring theory, finiteness of parity-odd N-point functions 7−108346
type-I superstring amplitude, fixed-angle asymptotic behaviour 7−80558
type-I superstring theory, Pauli-Villars regularization and one-loop finiteness 7−73628
type-I superstrings, Polyakov path integral formalism 7−115872
unifiable chiral color with natural Glashow-Illiopoulos-Maiani mechanism 7−95811
unification of fundamental interactions, conf., Marstrand, Sweden (June 1986) 7−108023
unified gauge theories 7−89422
unified gravity, group manifold approach 7−80565
unique SU(5) and SO(10) unification with complete dynamical symmetry breaking 7−116103
Universe formation, rotating superstring theory 7−88699
Universe homogeneity at the time of a GUT phase transition 7−88716
vacuum polarization in gravit. field of cosmic string 7−108354
vertex operator in string theory on an orbifold, intertwining fields in Fock space representation 7−89483
very early cosmologies with irreversibility and the monopole dominance 7−67144
weak and EM interactions in nuclei 7−89399
Weinberg angle correction in GUT's, Pade approximation anal. 7−67550
Wess-Zumino model, one-loop pot. and supersymmetry renormalisation 7−81029
Weyl gravitation with SU(2) gauge group, coupling constants and asymptotic freedom 7−95438
Weyl-Dirac equation for conformally invariant gravit. and electromagnetism 7−73108
wormhole production in decay of false vacuum, conformal coupling theory 7−134332
Yang-Mills cryst. form. in electroweak theory at zero temp. and high fermion density 7−81022
Yukawa coupling consts., new supersymmetric theory 7−121412
Z_2 cosmic strings from symmetry breaking, string mass 7−120673
Z-orbifold model, three-generation orbifold compactified, $SU_C(3)\times SU_L\times U^2(1)$ reduced scheme 7−140861
$B\rightarrow Kl^+l^-(K\nu\bar{\nu})$ implications for heavy t quark and fourth generation 7−81172
$B\rightarrow K\mu^+\mu^-$, branching ratio and light Higgs, three- and four-generation models 7−140927
B→pseudoscalar mesons, SU(4) relations in the standard model 7−121496
B^0-$\bar{B}^0$ mixing, CP violation in supersymmetric models, squark and gluino masses 7−128807
B^0-$\bar{B}^0$ mixing, Cabibbo-Kobayashi-Maskawa matrix elements 7−95801
B_d^0-$\bar{B}_d^0$ mixing, ARGUS meas., implications 7−135007
B_d^0-$\bar{B}_d^0$ mixing, CP violation searches, top quark mass, bound on KM angles 7−140865
B_d^0-$\bar{B}_d^0$ oscillations and t quark mass, ARGUS data and standard theoretical anal. 7−140858
$D\bar{D}\rightarrow q\bar{q}$, $l\bar{l}$, $\nu\bar{\nu}$ (D=E_6 quark), weak interaction decay rates 7−89499
$d\gamma\rightarrow pn$, relativistic gauge-invariant model, unified description, box diagrams 7−116181
e-μ mass ratio 7−108824
$e^-e^-\rightarrow\tau^+\mu^-$, scalar-lepton mixing, softly broken supersymmetric model 7−135094
$e^-e^+\rightarrow W^+W^-$, effects of Z boson from $E_8\times E_8$ superstring 7−67629
$e^-e^+\rightarrow X$, light Higgs scalar bosons, production cross section calcs. 7−81215
$e^+e^-\rightarrow\gamma Z^0$, electroweak radiative corrections to differential cross-section in Glashow-Salam-Weinberg model 7−102761
$e^+e^-\rightarrow\gamma\gamma$, radiative correction calcs. in standard Su(2)×U(1) theory 7−73638
e^+e^- interactions, strong and electroweak props. of quarks 7−135012
$e^+e^-\rightarrow\mu^+\mu^-$, extra Z's from E_6, exotic physics in heavy quarkonium decays 7−128818
$e^+e^-\rightarrow\mu^+\mu^-\gamma$, differential and total cross sections, electroweak interaction anal *(Russian)* 7−116157
$e^+e^-\rightarrow\nu_e\bar{\nu}_eH^0$, 0.1-4 TeV, Higgs-boson prod., heavy-quark effect, bremsstrahlung effect, superheavy quarks 7−128875
$e^+e^-\rightarrow\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
$e^+e^-\rightarrow$quark pairs, asymmetry tests for E_6 theories 7−81220
$e^+e^-\rightarrow W^+W^-$, E_6 models with additional Z' neutral gauge bosons 7−128817
$e^+e^-\rightarrow W^+W^-$, mass determ. for total cross-sections 7−102760
$e^+e^-\rightarrow W^+W^-$, vector boson self couplings 7−95918
$e^+e^-\rightarrow X$, charge asymmetry observations and electroweak theory comparisons 7−67630
$e^+e^-\rightarrow Z_2\rightarrow W^+W^-$, W pair prod. at heavy Z resonance, cross section calc. 7−89491
$e^+e^-\rightarrow Z'$, resonance prod., standard model with broken $SU(2)\times U(1)\times U(1)$ gauge symm. 7−135000
$e^+e^-D_0X$, D=new quark, cross sections, D signatures 7−140962
unified field theories continued
$e^\pm\gamma\rightarrow e^\pm\nu\bar{\nu}$, Weinberg-Salam model anal. of neutrino emission, stellar internal process 7−95882
ep collisions, production of exotic E_6 leptons at HERA and LEP energies 7−89509
$ep\rightarrow D_0X$, D=new quark, cross sections, D signatures 7−140962
$ep\rightarrow Dx$, E_6 scalar leptoquark prod., E_6 superstring models, Yukawa interactions 7−140863
$ep\rightarrow Eh+X$, heavy E_6 fermions prod., $SU(2)_I$ gauge group 7−135138
$ep\rightarrow X$, cross-sections, effects of extra Z^0 from E_6 GUT 7−102759
$\eta'\rightarrow\eta H$, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
fermion mass matrix, permutation symmetry S_4, Kobayashi-Maskawa matrix elements mass patterns and mixings, solar neutrino problem, fermion mass matrix 7−108823
$gg\rightarrow ZZ$, contrib. to pp inclusive interactions, box diagram. calcs. 7−135166
$H\rightarrow\gamma\gamma$ 7−128886
$K\rightarrow\pi l^+l^-$, decay amplitudes, chiral perturbation theory in standard model 7−135099
$K\rightarrow\pi\pi$, consistent anal. of $\Delta I=1/2$ rule, descript. in standard model 7−116158
$K^+\rightarrow\pi^+H$, gluonic mechanisms in Higgs-light hadron interactions 7−81173
$K_L\rightarrow\pi^0e^+e^-$, CP violation in standard model 7−81169
$\lambda\phi^4$ theory and scalar electrodynamics, effective action with torsion in de Sitter space 7−89070
mass, Majorons, electroweak SU(2)×U(1) gauge theory 7−135001
μ (g-2), strongly coupled standard weak interaction model anal. 7−67537
μ decay, double Majoron emission, electroweak SU(2)×U(1) gauge theory 7−135001
$\mu^-N\rightarrow e^-N$ (e^+N) in Ti, neutrinoless conversion search 7−135134
n and e dipole moments in superstring based models, CP violating interactions 7−81070
n-n′ oscillations, detection problems 7−67551
ν, induced electric charge in dispersive medium 7−81190
ν mass, electroweak model with pseudo-scalar coupling 7−108824
ν mass upper bounds from τ decay and see-saw mechanism 7−89416
ν oscillations, statistical mechanics anal. 7−89412
ν resonant oscillations of three ν generations 7−73579
ν_e mass, upper limit from SN 1987A obs. 7−88106
$\bar{\nu}_e$ mass upper limit from INS expt. on ^3H β-decay 7−81343
$\nu_H\rightarrow\nu_L+\gamma$, exotic fermions, right-handed currents in E_6 grand unified theories 7−128813
$\nu_H\rightarrow\nu\mu e$, heavy neutrino decay search, neutrino mass mixing elements 7−128809
$\nu_\mu(\bar{\nu}_\mu)e$, accelerator lepton number conservation, Dirac neutrino one-loop correction 7−140862
$\nu_\mu e\rightarrow\mu^-\nu_e$, muon energy spectrum, one-loop electroweak corrections 7−89495
$p\rightarrow e^+\pi^0$, relativistic SU(5) model anal., B-S eqn. based 7−135117
$\bar{p}p$ collisions, search for (B-L) gauge boson, standard model anal. 7−116197
$pp\rightarrow D_0X$, D=new quark, cross sections, D signatures 7−140962
$\bar{p}p\rightarrow W$, Z, light neutrons, t-quark mass limits, standard model comparisons 7−95947
$\bar{p}p\rightarrow W+2$ jets, large p_T W prod., standard model processes, 0.6-2.0 TeV calc. 7−116198
$pp\rightarrow X$, anomalous baryon number nonconservation 7−102773
$pp\rightarrow X$, spin 3/2 lepton prod., cross sections and coupling in composite model 7−135164
$\bar{p}p\rightarrow X$, W and Z production, comparison with standard model 7−89535
$pp\rightarrow ZZ+X$, contrib. from gg interactions, box diagram calcs. 7−135166
q electric dipole moment and induced θ term, Kobayashi-Maskawa model 7−95908
t 7−67612
t 7−108925
t quark mass bound from B_d-$\bar{B}_d$ mixing data and standard model 7−140857
$t\bar{t}$-Z^0 mixing effects 7−102667
τ lepton, general relativity consideration 7−89081
$\tau\rightarrow\nu_\tau\eta\pi(2\pi)$, decays involving η-meson in standard model 7−102740
$\Upsilon'\rightarrow\bar{\Upsilon}H$, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
$\Upsilon'\rightarrow\Upsilon H$, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
V_e magnetic moment, restrictions, standard model extension anal. 7−121506
W boson, anomalous magnetic dipole and quadrupole moments, heavy fermion contributions 7−102663
$W\rightarrow e\nu$, meas. of standard model parameters 7−89504
$W\rightarrow e\nu$, standard model parameter meas. and perturbative QCD tests at UA2 7−102741
$Z\rightarrow e^+e^-$, meas. of standard model parameters 7−89504
$Z\rightarrow e^+e^-$, standard model parameter meas. and perturbative QCD tests at UA2 7−102741
Z electromagnetic couplings in a composite model 7−128864
Z^0 flavour changing decays, SUSY models, minimal SUSY standard model 7−89502
$Z^0\rightarrow H^0\gamma$ ($H^0\mu^+\mu^-$), supersymmetric Higgs boson production, branching ratios, supersymmetric fermion virtual exchange 7−140936
Z^0 quark and lepton flavour violating decays in E_6 GUTs 7−89413
$Z'\rightarrow w_h^-+w_l^-\rightarrow l^+\bar{\nu}+l^-\bar{\nu}$, T-odd angular correlation, chargino, numerical examples in E_6 models 7−134995
$Z'\rightarrow W^+W^-$, mixing effects, standard model with broken gauge symm. 7−135000
$Z'\rightarrow W^+l^-\bar{\nu}_l$, single W prod. in E_6 theories, branching ratio 7−116170
$Z'\rightarrow Z^0H$, mixing effects, standard model with broken gauge symm. 7−135000
$^{26}Al^m$, beta-decay, right handed currents bounds 7−89559
e^+e^- annihilation, 34 GeV, lepton and hadron prod. cross sections ratio, electroweak and QD effects 7−135090
e^+e^- at LEP 200 energies, electroweak radiative corrections, calcs. and appls. 7−140944
$e^+e^-\rightarrow H^0Z^0$ at LEP 200 energies, Higgs search, QCD and standard model event topologies 7−140922
$e^+e^-\rightarrow W^+W^-$, standard model test at LEP 200, W helicity, beam pol. effects 7−140921
e^-e^+−A Higgs pair, E_6 models, tree level calcs. 7−102755
$\eta'\rightarrow\eta H$, gluonic mechanisms in Higgs-light hadron interactions 7−81173
$\tilde{\gamma}$ lower bound on mass, constraints from superlight gravitino 7−108835

unified field theories continued
^{3}H, beta decay, neutrino mass effects, differential probabilities of allowed transitions 7−121720
$K^+ \rightarrow \pi^+ \nu\bar{\nu}$, standard model with four generations, banding ratio upper limit 7−121493
ν_e, ν_μ, ν_τ, masses and decay rates, see-saw mechanism, cosmological bounds 7−140848
^{30}P, beta-decay, right handed currents bounds 7−89559
$\bar{p}p$ annihilation, W and Z^0 discovery, comparison with standard model *(Polish)* 7−67672
τ-neutrino, singlet majoron model 7−81072
W mass measurement at LEP 200, standard model test 7−140871
W-boson anomalous magnetic and quadrupole moments in two-Higgs doublet model 7−128893
$WW \rightarrow l\nu l\nu(l\nu qq)(qqqq)$, branching ratios, charged current universality test at LEP 200 7−140939

unimolecular layers *see monolayers*

uninterruptible power supply *see emergency power supply*

units (measurement)
see also constants; dimensions; measurement; nomenclature
abbreviations, especially symbols for units of measure in technical documentation 7−73312
candela standard in USSR, based on radiometer/black body combination 7−140656
coordinated Universal Time *(Japanese)* 7−108507
fundamental physical constants and standards development 7−102377
Josephson voltage standard at NPL 7−105857
length unit realisation, using He-Ne laser comparator 7−108513
man-sievert, value as a unit in X-ray diagnosis 7−119855
NPL contribution to scientific and industrial constants and units 7−95540
PEL calculable capacitor, ohm derivation 7−108573
photometry and radiometry, explanation of units 7−121042
portable standards, time standards accuracy, unit definitions 7−73311
quantum Hall effect explanation and impact on electrical metrology 7−67350
review *(Italian)* 7−80720
Shore D hardness unit reproduction 7−128570
SI units, report 7−80722
SI units of frequency, angular velocity, Planck's constant and $\hbar$ 7−89186
unsolved problems in fundamental metrology 7−102375
visible red light, speed, redefinition of meter 7−95537

universal asynchronous receiver/transmitter *see computer interfaces; data communication equipment*

Universe *see cosmology*

untuned power amplifiers *see power amplifiers*

unwinding *see winding (process)*

upper atmosphere
see also airglow; atmospheric elementary particle precipitation; aurora; exosphere; ionosphere; magnetosphere; mesosphere; thermosphere
aeronomy, introduction 7−120189
aeronomy and ionosphere irregularities, conf., Sopron, Hungary (April 1985) 7−120681
airglow, minimum cross-entropy inversion of satellite photometer data 7−115133
antimatter meteors, vel.-height relation 7−94828
automatic meteor track radar system and station design *(Russian)* 7−79687
chemical composition at middle latitudes, storm-induced changes 7−120188
chemically active gases released into upper atmos., actions of O_2,N_2,NO,NO_2 releases 7−145727
chemistry and composition, review 7−120191
coupled ionosphere-thermosphere model, appl. to interactions between neutral thermosphere comp. and polar ionosphere 7−134041
density model of global thermosphere, from Intercosmos satellite drag data 7−139825
density scale height and zonal wind speed 7−79808
drag effects on Cosmos 1402 satellite 7−72248
dynamics during magnetic storm of 22 March 1979, theory and obs. 7−115126
Ekman layer stationary model *(Russian)* 7−127624
energetics and dynamics, review 7−120190
geostrophic circulation and mean pressure field in meteoric zone 7−115132
gravity wave momentum fluxes and mean flow accelerations at Adelaide, Australia 7−107593
gravity wave resonant parametric interactions 7−139821
gravity wave-tidal model to explain momentum flux observations 7−115123
gravity waves, quartic dispersion eqn. 7−139822
gravity waves seen in OI, NA and OH nightglow emission data 7−94534
gravity waves study using tilting filter spectrometer 7−133943
ionised meteor track, anisotropy of parameters assoc. with mol. processes in atmosphere 7−87989
ionization and O_2 $^1\Delta_g$ state depletion during solar proton events 7−139827
Joule heating during 13 July 1982 solar proton event 7−115127
LAGEOS geodetic satellite, orbit decay due to IR radiation from Earth 7−79805
lunar tides, radar wind meas. 7−134038
lunar tides in middle and upper atmos., at Saskatoon 7−94532
mean mass transport in high-latitude, upper atmosphere during polar night, determ. from O/O_2 ratio *(German)* 7−134042
meteorological control of D-region electron conc. and dynamics 7−145750
meteors at high altitude, 2 MHz radar observations 7−88326
MSIS-86 empirical model of thermosphere temperature, density and composition 7−107597
noctilucent clouds, charact. and observability from the British Isles 7−134044
numerical modeling of ionosphere and thermosphere; using imaginary source method 7−145754
particles in Space Shuttle environment, spectral signatures 7−133178
radiowave scattering from meteor trails, spectral broadening of monochromatic waves 7−145726
satellite drag due to atmosphere, contraction of high eccentricity orbits 7−94632
satellite orbital changes due to meridional winds 7−94633
solar activity level changes, influence on thermosphere 7−134036

upper atmosphere continued
solar constant changes and influences on Earth's atmos., conf., USA (1985) 7−72696
solar EUV induced changes in Earth's thermosphere, review 7−79729
solar terminator causing waves of acoustic-gravity type, model 7−107472
synoptic analysis of 95 km altitude winds, rel. to stratosphere parameters 7−145728
temperature and meridional winds during SAR-arc 7−139826
temperature perturbations evolution, 3D heat conduction eqn. theory 7−134035
temperature remote sensing of upper atmosphere, by 15 microns infrared method *(Russian)* 7−127517
tidal wind observations by radar and rockets 7−145732
Transit satellite air-drag perturbation, orbit improvement *(Chinese)* 7−120249
turbulence and small scale struct. at high latitude in winter 7−145736
turbulence regime at D-region altitudes, for 1983-4 winter 7−145725
turbulent energy dissipation rates and eddy diffusion, in situ obs. 7−145737
UV airglow at 102.6 nm and scattering of solar radiation 7−145743
WAMDII for upper atmosphere studies, optical system design 7−127612
wind fluctuations attributable to internal gravity waves 7−94528
wind profiles at gravity waves at 3 locations in dusk auroral oval 7−107596
winds in mesopause region, long-period changes and possible solar cycle influence 7−87991
winds observed by meteor radar, above Kyoto 7−107594
X-ray emission due to electron precipitation event at start of substorm 7−79764
H atom concentration, 73 to 93 km altitude over White Sands Missile Range, USA 7−120184
HgCdTe MW photovoltaic detectors, thermoelectrically cooled, for Halogen Occultation Expt. 7−87957
NO chemistry of lower, middle and upper atmospheres 7−87778
O atom concentration, in lower thermosphere above Palestine, Texas, USA 7−120185
O I 98.9 nm emission, differential and integral electron excitation cross-sections from 20 to 200 eV 7−129874
O, O_2, O_3 and OH composition of mesosphere and upper atmos. 7−145740
O+He $(N_2)(O_2)$, collision differential cross-sections relevant to ionosphere O^+ precipitation 7−110064
O+O atomic elastic and inelastic collisions, the ^{1}D and ^{3}P states 7−90383
O_2, UV absorpt. cross-sections and band oscillator strengths 7−135962
O_2^+ dissociative recombination in upper atmos., O ^{1}S state production 7−113933
O_3 and O in 70 to 178 km altitude range, concs. on 10 Feb. 1984 AD 7−145739
OH airglow and vibrationally excited states vertical profile 7−139830

UPS *see ultraviolet photoelectron spectra*

Upsilon meson resonances
bound $\bar{b}b$ systems, spectroscopy 7−102685
decay, strong coupling constant meas. and QCD tests 7−102703
decays, momentum dependent effects 7−135098
heavy quarkonium, phenomenological pot. and decay props. 7−81132
spectroscopy, energy levels, decay widths and E1 transition rates 7−73598
$\bar{b}b$ system, study of Coulomb type interaction 7−135036
$e^+e^- \rightarrow T\bar{X}$, high resolution spectroscopy at ARGUS 7−102762
Υ, mass spectrum, decay-widths, anal. using local equivalent Schrodinger eqn. with relativistic kinematics 7−67615
$\Upsilon(1\,^1P_1)$, mass and QCD scale parameter, asymptotic behaviour 7−135044
$\Upsilon(1S)$ decay, baryon decay rate enhancements 7−67636
$\Upsilon(1S) \rightarrow e^+e^-(\mu^+\mu^-)$, branching ratio meas. 7−140930
$\Upsilon(2S) \rightarrow \Upsilon(1S)\pi^+\pi^-(\mu^+\mu^-)(\eta)$, branching ratio meas. 7−140930
$\Upsilon(2S) \rightarrow \gamma\chi_b$, χ_b states spin meas., $e^+e^- \rightarrow \Upsilon$ cascade study 7−73662
$\Upsilon(4S) \rightarrow B^0\bar{B}^0$, observation of B^0-$\bar{B}^0$ mixing 7−116160
$\Upsilon(9460) \rightarrow X\gamma$, limits on Higgs bosons and scalar quarkonia 7−81197
$\Upsilon \rightarrow \gamma X$, branching ratio meas. 7−102734
$\Upsilon \rightarrow \gamma X$, Crystal Ball expts. 7−102747
$\Upsilon \rightarrow \gamma X$, search for light gluinos 7−73643
$\Upsilon \rightarrow H$+hadrons, light Higgs boson in supersymmetric models 7−73644
$\Upsilon \rightarrow \mu^+\mu^-(e^+e^-)$, χ_b spin states meas., $e^+e^- \rightarrow \Upsilon(2S) \rightarrow \gamma\chi_b$ $(\chi_b \rightarrow \gamma\Upsilon)$ cascade study 7−73662
$\Upsilon \rightarrow \mu\mu$, branching ratio meas. 7−102734
$\Upsilon' \rightarrow \tilde{\Psi}H$, QCD trace anomaly, decay probabilities, light Higgs processes 7−128886
$\Upsilon'' \rightarrow \mu\mu$, branching ratio meas. 7−108911
QQ potential model from QCD and data anal., $\bar{c}c$, $\bar{b}b$ and $\bar{t}t$ masses and decays *(Chinese)* 7−121441

uranium
see also nuclei with .....
see also fission of uranium
adsorption on hydrous TiO_2 in seawater 7−118241
Allende meteorite, actinide chemistry in Ca-Al rich inclusions 7−94831
alpha phase, incommensurately modulated struct. determ. below 37 K 7−104633
alpha spectroscopic determ. of ^{232}U, ^{233}U relative amounts in irradiated ThO_2 *(Chinese)* 7−81546
anisotropic polycrystals. internal stress superplasticity 7−86288
assay by delayed neutron technique, safeguards inspections 7−109433
atom, $L\alpha_1$ satellite struct. in X-ray emission 7−68246
atom, relative intensities and cross section in X-ray fluoresc. 7−135874
atom, three-step photoionisation 7−135894
atomic, autoionising transition cross section determ. through laser induced photoionis. 7−90074
Australian attitudes to U mining and export 7−86770
AVLIS enrichment technique, market implications 7−81550
Canadian U mine, errors in meas. of unattached fractions of Rn and Tn progeny using wire screen methods 7−145255
CANDU Th-U fuel evaluation based on optimal fuel management 7−73862
cleaned surface, high temp., XPS study 7−132413
conversion industry, U reprocessing and fuel enrichment 7−81551
coupled U cylinders, subcriticality meas. using ^{252}Cf driven neutron noise anal. 7−67911
critical analysis of soft X-ray cross section data 7−77695
deep-sea hydrothermal deposits, anomalous $^{234}U/^{238}U$ ratios 7−72004
defect inspection by X- and α-radiography 7−138940

uranium continued
demand, effects of advanced nuclear fuel assembly design and performance 7−109302
determination in Ganges water in UP Himalayas 7−114814
dissolving in Asse salt mine radwaste repository *(German)* 7−129433
distribution in Precambrian domes 7−94144
elastic scattering of ^{152}Eu and ^{154}Eu γ-rays 7−74520
enriched U extraction from waste soln. of fission ^{99}Mo production 7−129203
enriching services and markets from international suppliers perspective 7−103001
enrichment, AVLIS technology development 7−81549
enrichment determ. using microcomputer controlled spectrometric technique 7−109430
enrichment enterprise, US marketplace reestablishment 7−103002
enrichment facility, safeguards system 7−109409
enrichment future costs, technology and economics 7−73876
enrichment in gaseous centrifuge header pipes, collimator design 7−109308
enrichment verification in centrifuge, sequential probability ratio test 7−116611
environmental contamination, conc. ratios of natural U for cattail pollen 7−71903
environmental distrib. determ. by thermal ionization mass spectrometry 7−103297
evaporation-thermal denitration process for solidification and storage 7−129424
exploration, application of α-card method *(Chinese)* 7−94503
exploration and mining operations in central and western Africa 7−87986
fission reactor materials, U concentration meas., neutron activation anal. *(Japanese)* 7−73853
French nuclear fuel cycle industry in 1986 *(French)* 7−89615
fuel pins, U contamination, α-, β-flux determ., error anal. 7−73852
GASSY program for γ-ray spectra calcs., nuclear fuel appl. *(German)* 7−129220
geology, U concentrations, conf., Nancy, France (Oct. 1985) 7−101994
geophysical prospecting, application of self-potential method 7−72183
groundwater system dating for Canadian Shield, U dating of calcite deposits 7−94318
groundwater U isotope dating method, using U in mineral deposits 7−94453
homogenising procedure on microscale in powdered samples 7−100665
human urine analysis by isotope dilution thermal ionisation mass spectrometry 7−87255
impurities in metals, j-j coupling scheme, Anderson model 7−76813
international market supplies 7−103004
inventory verification exercise at enrichment fabrication facility 7−109431
isotope separation, appl. of laser-induced photodecomposition of uranyl formate monohydrate 7−106788
isotopic analysis by mass spectroscopy, ribbon ion source for accuracy and speed improvement 7−126522
isotopic ratios and abundances, high resolution γ-spectrometry, nuclear safeguards appl. 7−103147
isotopic ratios determ. from PWR spent fuel burnup, BURN code 7−73861
lignite deposits (uraniferous) at Serres Graben, N Greece, depositional sedimentary model 7−79335
market from US producers viewpoint 7−102999
McClean unconformity related U deposits, Saskatchewan, Canada, isotope dating 7−87518
mill tailings, ^{226}Ra and ^{222}Rn in particle size fractions 7−87252
mill tailings, acidification and radionuclide leaching 7−89767
mill tailings, environmental benefits from regulatory compliance 7−89753
mill tailings, management of wastes in vicinity of mill 7−89754
mill tailings, PRA of long-term environmental effects 7−89765
mill tailings area at Rabbit Lake, cost-benefit anal. of decommissioning options 7−96373
mill tailings pile stabilization, UMTRA Project 7−96370
mill tailings piles, criteria for remedial work 7−89755
mine and mill waste management systems, licensing process 7−89752
mines and mills, decommissioning 7−89758
mining, exploration and reprocessing, conf., London, England, Sept. 1986 7−80181
mining and development of the Cigar Lake deposits 7−87985
mining by in situ leach, technology and potential 7−87987
mining experience and radiological protection 7−81750
mining experience in Canada, radiation protection standards 7−87249
mining in Saskatchewan, environmental regulation 7−89757
Moon, bulk U content and thermal struct. model of Moon 7−94679
natural, activity concs. and temporal vars. in surface air, Munich, Germany 7−145631
neutron cross-section dependence on energy 7−121990
neutron irrad., point defect clustering 7−98139
nuclear fuel, world market, conf., Brugge, Belgium, Oct. 1986 7−108047
nuclear fuel capability in Spain 7−81544
nuclear fuel recycling industry in Europe 7−109330
nuclear materials safeguards, U assay, mass spectrometer tests 7−116025
ore exploration using fission track method *(Chinese)* 7−94505
plasma, oscillator strengths, emission spectrum 7−97842
portable γ-ray spectrometer for K, U and Th conc. assaying counting statistics 7−120146
production using plasma torch 7−96228
radioactive, estimation method in rocks using gamma ray spectrometry 7−79664
redistribution in shallow plutons 7−94151
Salt Lake City UMTRA Project, geotechnical and construction considerations 7−96372
sediments, anomalous U concentration *(French)* 7−79319
separation from thorium based spent fuel *(Chinese)* 7−109309
spallation target material for SNS, proton irradiated, thermostresses, thermal cycling effects 7−131196
specific activities, dose rates 7−74207
spent fuel, isotopic composition determ., fission product gamma-spectrometry meas. 7−82389
spent fuel solutions, U, Pu isotopic dilution assay, resin bed and multi-isotopic tracer technique appl. *(French)* 7−119616
spent nuclear fuel shipping cask design using depleted U shielding 7−74244
spring waters, CO_2-rich, from Vals-les-Bains (France), U and rare earth elements geochemistry 7−94323
supply to US market 7−103000

uranium continued
surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
surfaces, clean and O covered, interaction of H_2O vapour 7−85958
tailings, disposal facilities, seepage and transport modelling 7−89766
transportation, SAFPAK and SAFKEG high integrity packages 7−74147
U^{6+} hydrolysis in $NaNO_3$ soln. 7−106867
UMTRA project, conceptual design for stabilization of former processing sites 7−96371
United States U producers in the world market 7−86767
vapour, hollow-cathode discharge, Zeeman effect. optogalvanic detection 7−122443
vapour, XUV photoabsorption spectrum 7−82030
Venus, rocks at Vega-1 and 2 landing sites, U, Th and K abundances 7−101713
wastes, CHINTEX model for environmental impact 7−89768
B_2O_3-SiO_2 supercooled melt, U^{6+} diffusion, appl. for nuclear waste glasses 7−131345
CaF_2:U^{6+}, aq. soln. heat-treated coprecipitates, luminesc. and EPR spectra anal. 7−106872
LiF:U, Mg^{2+} related centres, selective excitation and emission 7−144111
$ThCl_4$:U^{4+}, incommensurate struct., obs. by optical spectroscopy, U^{4+} probe 7−85783
^{234}Th/^{238}U disequilib. in sediments of Buzzards Bay, Massachusetts, implications for particle transport 7−94200
U ion in metal, large j.j coupling, ground state 7−112282
U ions beams emerging from thin solid targets, multiple inner-shell ionisation 7−68448
U^{3+} stability in HCl(H_2O) tri-butyl phosphate extraction system, oxidation rate meas. 7−100507
U^{90+}, QED test using Lamb shift meas. 7−122456
U-Pu fuel anal., glove box line design and construction *(Czech)* 7−141334
U+U(Pb), time delay effects on K X-ray prod. probab. 7−121910
U^{75+}+inert gas atom 7−90360
U^{92+}+U^{92+}, inner-shell electron capture, electron-positron pair prod. 7−103646
U^{92+}+U^{92+} relativistic collisions, inner-shell capture, muon pair prod. 7−103619
U(VI)+tropolone reaction, extraction-spectrophotometric determ. 7−100657
^{233}U and ^{235}U fuel storage safety, neutron spectral reactivity comparison 7−103007
^{233}U/^{235}U/^{238}U 1/1/1 isotopic reference material, preparation 7−126050
^{235}U content in samples, γ-ray spectra meas. and Monte Carlo simulation *(German)* 7−103014
$^{235}U^{m}$, target preparation on gold coated polyimide foils 7−109573
^{238}U, cathode metal selection for proportional gas counter 7−129525
^{238}U, Doppler effect meas. *(German)* 7−109294
^{238}U in amang samples, radioactive equilib. determ. 7−89880
^{238}U in dental porcelain powders and dose induced in oral mucosa 7−139384
^{238}U partitioning in waste streams of coal fired utilities 7−87253
^{238}U solutions, chem. and radiation effects on developing Misgurnus fossilis eggs *(Russian)* 7−133391
^{238}U(n, xn), 1-70 MeV, direct channel for U isotope prod. in nuclear fuel 7−102987

uranium alloys
5f-band width and resonant photoemission 7−138604
band structure, effect of localising f-orbitals 7−76755
heavy electron materials, chem. trends rel. to their formation 7−105066
heavy electron materials, phys. props., supercond., electron itineracy 7−105758
hybridisation effects, evolution from nonmagnetic to mag. behaviour 7−105917
intermetallic compounds, heavy-fermion, low temp. electronic heat capacity, effective mass anal. 7−112173
narrow band f-electron materials, photoelectron spectra 7−106358
NEXAFS study 7−85896
valence and core states, XPS studies 7−77758
AlMnFeCrUSi, pentagonal symmetry *(Dutch)* 7−91516
Ni-U alloys, U determ. by selective precipitation and α-counting 7−109285
Ni-U fission product source, preparation and characterisation for Super Phenix 7−109284
Pd-U, disordered alloy, absorption of H_2, pressure-composition isotherm 7−105038
Pd-U-Si glassy alloys, electronic struct., photoelectron spectra 7−98791
Pd-U-Si glassy and icosahedral alloys, low temp. thermal cond. meas. 7−70276
$Pd_{58.8}Si_{20.6}U_{20.6}$, icosahedral and glassy, low-energy modes, neutron inelastic scatt. 7−118048
Pd_3U, absorption of H_2, pressure-composition isotherm 7−105038
$Pd_{58.8}U_{20.6}Si_{20.6}$ icosahedral alloy, quasicrystallinity 7−104638
Ta/UBe_{13}, negative s-wave proximity effect obs., comment and response 7−112700
$Th_{1-x}U_x$ BCS superconductor, mixed-valence impurities, reduced transition temp. and sp. ht. jump, Brillouin-Wigner perturbation calcs. 7−85185
U equiatomic ternary cpds., mag. and elec. props. 7−132031
α-U-^{111}Cd system, elec. field gradient, temp. depend., TDPAC studies 7−113008
U-Cu-Pd system, mag. and electrical props. 7−77215
U-Pt system, point contact expts. 7−77048
U-Ti (0.75 wt.%), depleted, determ. of dynamic elastic moduli as function of temp. by piezoelec. US composite oscillator technique 7−113596
UAl_2, 5f density of states near Fermi surface, μSR study 7−112160
UAl_2, anomalous Hall effect 7−98985
UAl_2, heavy fermion system, Hall effect 7−70288
UAl_2, muon spin rot. and relax. 7−77444
UAl_x, fission gas bubbles 7−73865
UAu_3, valence level photoelectron spectra 7−106362
UBe^{13}, polarised light scatt. study 7−85650
UBe_{13} compressibility and high press. behaviour, X-ray diffr. study 7−69824
UBe_{13}, Hall effect, magnetoresist. and supercond. critical temp. 7−76893
UBe_{13} heavy fermion mixed valence systems, energy scales, high press. effects 7−70262
UBe_{13} heavy fermion superconductor, coherence and pair-breaking effects, extended BCS theory 7−70466
UBe_{13}, heavy fermion superconductivity and magnetic props. 7−70472

uranium alloys continued
UBe_{13} heavy fermion superconductors, critical mag. fields and sp. hts., review 7−70497
UBe_{13}, heavy fermion supercond., sp. ht. under press. 7−77155
UBe_{13} heavy fermion superconductor, optical props. 7−92630
UBe_{13}, heavy fermion superconducting props. investigations 7−105801
UBe_{13} heavy fermion supercond., NMR study 7−118875
UBe_{13}, heavy fermion supercond., point contact spectra 7−131923
UBe_{13} heavy-electron superconductor, quadrupolar Kondo effect 7−137914
UBe_{13}, impurities, superconducting transition temperature depression 7−77125
UBe_{13}, low temp. ^{9}Be spin-lattice relax. rate meas. in heavy fermion superconductor 7−70477
UBe_{13}, magnetoresist. and upper critical mag. field under press. 7−77172
UBe_{13}, magnetoresistance, specimen quality effects 7−105539
UBe_{13} normal state heavy fermion system, ^{9}Be NMR Knight shift meas. 7−70657
UBe_{13}, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
UBe_{13}, Seebeck coefficient 7−70291
UBe_{13}, sp. ht. and thermal cond. quasiexponential temp. depend. studies 7−69930
UBe_{13}, sp. ht. Schottky anomaly and cryst.-field splitting studies 7−69928
UBe_{13}, specific heat, pressure depend. 7−69926
UBe_{13}, superconducting state, resonant impurity scatt., sp. ht. 7−105834
UBe_{13}, triplet pairing, proximity Josephson effect meas. 7−112683
UBe_{13}, ultrasonic attenuation and supercond. props., cryst. symmetry effects 7−92387
UBe_{13}, unconventional even parity superconductivity, nucl. relax. rate 7−70470
UBe_{13}, upper critical field and Hall effect temp. depend. meas. 7−70498
UBe_{13}, X-ray photoemission spectrum calcs. 7−70977
UBe_{13}-Pt, point-contact spectra 7−77050
U_6CO, high-field superconductivity, weak coupling WHHM model anal. 7−77175
$(U_xCe_{1-x})_2Zn_{17}$ alloys, magnetotransport 7−112301
U_6Co, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
UCu_5, heavy electron cpd., Hall effect, magnetoresistance, meas. at ambient press. and 1 GPa 7−76892
UCu_5 heavy fermion mixed valence systems, energy scales, high press. effects 7−70262
UCu_2P_2, cryst. struct., X-ray diffr. study 7−76081
$U_4Cu_4P_7$, synthesis and crystal struct. 7−142699
UFe_2 (Co_2) (Mn_2), Laves phase, electronic struct., LMTO calcs. 7−76761
U_6Fe amorphous, crystallisation and nucleation limited stability 7−97938
U_6Fe, high-field superconductivity, weak coupling WHHM model anal. 7−77175
U_6Fe, supercond. transition, ^{57}Fe Mossbauer studies 7−92554
$U(Fe_{1-x}Co_x)_2$ alloys, ordering temp., mag. moments and hyperfine field, ^{57}Fe Mossbauer study 7−113018
$U(Ga_{1-x}Ge_x)_3$ hybridised f-electron system, magnetic to nonmagnetic transition studies 7−112789
UGaM (M=Co,Ir,Ni,Pt,Rh,Ru) mag. behaviour studies 7−77298
$U(In,Sn)_3$, heavy fermion behaviour, mag. and mixed valence props. 7−92426
UIr, mag. struct. neutron diffr. and magnetisation meas. 7−131990
UIr_3, anisotropic singlet state supercond. 7−77127
UIrGe heavy fermion cpd., low temp. susceptibility and sp. ht. 7−125389
$UIr_3(Pt_3)(Au_3)$, XPS spectra, single site approx. calcs. 7−77757
UIr_2Si_2, point contact spectroscopy 7−77167
$U_{1-x}La_xAl_2$, anomalous Hall effect 7−98985
$(U_xLa_{1-x})_2Zn_{17}$, conc. Kondo system, magnetism and electronic transport 7−85243
UM_4Al_8 (M=Mn,Cr), mag. props. 7−77252
UMB_2 (M=Tc, Re, Ru and Os), phase equilib., cryst. struct. 7−119240
UMn_2, cubic-orthorhombic transformation, rhombohedral precursor 7−98431
U_6Mn, exchange enhanced supercond., NMR, spin-lattice relaxation meas. 7−99334
UNiAl, electron binding energies, oxidation behaviour 7−99160
UPd_3, anomalous Hall effect 7−98985
UPt_3, anisotropic singlet state supercond. 7−77127
UPt_3, anisotropic supercond., AC susceptibility studies 7−77173
UPt_3, anomalous Hall effect 7−98985
UPt_3 compressibility and high press. behaviour, X-ray diffr. study 7−69824
UPt_3, Fermi surface within local-density approx. 7−98783
UPt_3 heavy fermion cpd., unconventional s-wave superconductivity 7−112664
UPt_3, heavy fermion metal anal. of anomalous US attenuation 7−77158
UPt_3, heavy fermion superconductivity and magnetic props. 7−70472
UPt_3 heavy fermion superconductor, antiferromag. spin fluctuations, inelastic magnetic neutron scatt. studies review 7−70534
UPt_3, heavy fermion supercond., sp. ht. under press. 7−77155
UPt_3, heavy fermion superconductor, Raman scatt. from spin fluctuations and phonons 7−92675
UPt_3, heavy fermion supercond., US attenuation, phase study 7−99336
UPt_3, heavy fermion supercond., ^{195}Pt Knight shift 7−112666
UPt_3, heavy fermion supercond., point contact spectra 7−131923
UPt_3 heavy fermion system, high field elastic const. meas. 7−69802
UPt_3, heavy fermion system, Hall effect 7−70288
UPt_3, heavy fermion system, high press. magnetisation studies 7−77355
UPt_3 heavy fermion systems, induced-interaction model, review 7−92040
UPt_3 heavy fermion systems, magnetoacoustic effects obs., comment 7−137783
UPt_3, heavy fermions supercond., mass renormalisations 7−118688
UPt_3, longitudinal sound meas. in a mag. field 7−112672
UPt_3 longitudinal ultrasonic attenuation peak, heating phenomenon, large Gruneisen parameters 7−69835
UPt_3, low temp. transport props., single component Fermi liquid theory 7−137897
UPt_3, neutron scattering studies of heavy fermion systems 7−112747
UPt_3 normal state heavy fermion system, thermal, magnetic and transport props., review 7−69927
UPt_3, resistivity T^2 term mag. field depend. study 7−70281
UPt_3 single cryst., heavy quasiparticle obs., de Haas-van Alphen oscills. study 7−70170

uranium alloys continued
UPt_3 single crysts., electronic struct., low energy optical reflectivity meas. 7−70173
UPt_3, specific heat, pressure depend. 7−69926
UPt_3, supercond., transverse sound in mag. field 7−99335
UPt_3 superconducting props., cryst. symmetry effects 7−92387
UPt_5, valence level photoelectron spectra 7−106362
U_2PtC_2 heavy fermion system, coherent-state Hall effect and elec. resist. 7−143437
$U(Pt_{0.95}Pd_{0.05})_3$, mag. order 7−77350
$U(Pt_{1-x}Pd_x)_3$ heavy-fermion alloys, superconductivity and antiferromagnetism, phase diagram determ. 7−112790
$U(Pt_{1-x}Pd_x)_3$ pseudobinary heavy fermion systems, sp. ht., resist. and mag. suscept. meas. 7−69929
UPt_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URh_3B, mag. susceptibility, elec. resist. meas., hybridisation weakening 7−77251
URu_2Si_2 7−112747
URu_2Si_2, cryst. elec. field effects, mag. props. 7−85260
URu_2Si_2, heavy fermion system, high press. magnetisation studies 7−77355
URu_2Si_2, heavy Fermion system, Hall effect and resistivity study 7−98988
URu_2Si_2 heavy fermion system, 17.5 K transition, thermopower and elasticity studies 7−98994
URu_2Si_2, mag. and thermal props., crystal field effect calcs. 7−112253
URu_2Si_2, mag. excitation, temp. depend. 7−77233
URu_2Si_2 single cryst. heavy fermion system, Fermi surface reconstruction, Hall effect meas. 7−131616
USi_x, elec. resist., temp. variation 7−92153
USn_3, valence level photoelectron spectra 7−106362
$U(Sn_{1-x}Pb_x)_3$, Mossbauer study of mag. state 7−113040
$U_{0.97}Th_{0.03}Be_{13}$, lower critical field, coexisting supercond. order parameters 7−77148
$U_{0.97}Th_{0.03}Be_{13}$, Seebeck coefficient 7−70291
$U_{1-x}Th_xBe_{13}$, $(0.02<x<0.06)$ phase diagram, specific heat, critical field 7−77149
$U_{1-x}Th_xBe_{13}$, inherent spin-density-wave instability in heavy-fermion superconductivity 7−112580
$U_{1-x}Th_xBe_{13}$, phenomenological model of superconductivity 7−85164
$U_{1-x}Th_xBe_{13}$, phenomenological model of heavy-fermion superconductivity 7−118719
$U_xTh_{1-x}Be_{13}$, normal metal to heavy fermion system transition, elec. props. 7−137913
$U_{1-x}Th_xCu_2Si_2$, effect of Th substitution on magnetism 7−125456
$U_xTh_{1-x}Zn_{8.5}$ system, mag. anisotropy 7−112736
$U_xY_{1-x}Al_2$ heavy fermion alloys, single-site effects, resonant photoemission studies 7−138605
$U_xY_{1-x}B_4$, spin-glass-like behaviour, obs. 7−77297
U_2Zn_{17}, antiferromag. heavy-fermion system, spin fluctuations 7−77238
U_2Zn_{17}, cryst. chem., struct., X-ray diffr. study 7−91528
U_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
U_2Zn_{17}, μ^+SR study of Kondo and RKKY interactions 7−113058
U_2Zn_{17}, neutron scattering studies of heavy fermion systems 7−112747

uranium compounds
see also uranium alloys
heavy fermion systems, electronic struct., giant resonances, PES study 7−143334
hybridisation effects, evolution from nonmagnetic to mag. behaviour 7−105917
hybridising systems, anisotropic mag. behaviour 7−77242
monochalcogenide pseudobinary single crystals, magnetism 7−105894
monopnictide pseudobinary single crystals, magnetism 7−105894
NEXAFS study 7−85896
rare earths and actinides, anomalous, conf., Grenoble, France, (July 1986) 7−72697
rocksalt-structure compounds, X-ray diffr. and absorption edge meas. 7−77696
uranyl complex, volatile, natural abundance, thermal stability and selective photodissoc. 7−90446
uranyl compounds, magneto-optical props., condensed phase internal fields effects 7−113163
B_2O_3-SiO_2-UO_2 glasses, luminescent solar concentrators 7−144915
Ba_2SrUO_6, cryst. struct., Rietveld refinement of neutron powder diffr. data 7−111466
Ba_3UO_6, superlattice struct., electron diffr. obs. 7−111488
$CaUMo_4O_{16}$ cryst. struct., X-ray diffr. study 7−83916
Cs_2SnCl_6:UCl_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Cs_2UCl_6, synthesis, cryst. struct. refinement 7−98066
Cs_2ZrBr_6:UBr_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Cs_2ZrCl_6:UCl_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
$HUO_2AsO_4.4H_2O$, H ion disorder, high resolution neutron powder diffr. studies 7−111398
$La_yU_{1-y}O_{2+x}$ mag. meas., dilution effect 7−112786
LiF-BeF_2-ThF_4-UF_4 mixtures, density and surface tension 7−142867
Sr_2CaUO_6, cryst. struct., Rietveld refinement of neutron powder diffr. data 7−111466
$(Th,U)O_2$ high density pellet preparation by a powder metallurgy method 7−67921
$(U,Y)O_{2+x}$ solid solutions, magnetic studies 7−77259
U heavy fermion cpds., mean-boson field theory 7−112159
U-oxides, chemistry of colloids in groundwater environment 7−89779
U-Pu-O, O to metal ratio, X-ray diffraction 7−124190
UAs, 5f density of states near Fermi surface, μSR study 7−112160
UAs, muon spin rot. and relax. 7−77444
U_3As_4, highly correlated electron systems, UV photoemission spectra meas. 7−138608
UAsS single crysts. elec. resist. anisotropy temp. depend. meas 7−84895
$UAs_{1-x}Sb_x$, f-electron band, electronic transition, mag. ordering, sp.ht. study 7−105935
$UAs_{1-x}Sb_x$, sp. ht. meas., 1.5-11 K 7−76434
$UAs_{1-x}Se_x$, elec. resist. meas., deduction of mag. phase diagram 7−76867
$U(BH_4)_4$, second crystalline form, cryst. struct. determ. 7−137328
UBr_4, electronic struct., XPS 7−100007
UBr_n (n=1 to 5), gaseous equilibria, bond dissoc. energies and form. enthalpies determ. 7−86661

uranium compounds continued
UC_2 online mass separator targets, beam heating calcs. 7−96443
UC, dissolution for chemical quality control 7−129206
UC_2, cryst. struct. line profile refinements, neutron powder diffr. data 7−111482
UC_2, target material study for ISOLDE on-line mass separator 7−96442
$(UCe)O_2$ pellets, sol-gel microsphere pelletization process, porosity, density microstruct. 7−77906
$U_{1-y}Ce_yO_{2-x}$, two-phase behaviour, cryst. struct., neutron powder diffr. studies 7−111497
UCl_3, ionic crystals, variable atom parameters, determ. by electrostatic calcs. 7−83828
UCl_3, synthesis, cryst. struct. refinement 7−98066
UCl_4, struct. transitions anticipating melting 7−84229
UCl_4, synthesis, cryst. struct. refinement 7−98066
UCl_4, valency, neutron scatt. study 7−104623
$UCuAs_2$, cryst. struct. determ. 7−98064
$UCuP_2$, prep. and cryst. struct. 7−98075
α-UF_5, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
α-UF_5, polycryst., hyperfine interaction, ^{19}F NMR 7−143918
UF_6, ^{19}F spin-lattice relax., intermol. pot. anal. 7−96739
UF_6 cascade header pipe test loop for international safeguards in a gas centrifuge enrichment plant 7−109415
UF_6, charge exchange, ionis and fragmentation reactions, rate consts. and product yields meas. 7−93248
UF_6, conversion to UO_2, new semidry process 7−103016
UF_6 cylinder mass verifications, 20 ton capacity load cell based weighing system 7−109426
UF_6 cylinders, gas phase sampling in safeguards verification 7−109427
UF_6 enrichment plants, non-destructive verification techniques 7−109411
UF_6 in transport accidents, radiological and chemical risks 7−74235
UF_6 pressure and temperature sensing by fiber optic laser system 7−123249
UF_6, thermal neutron source device for safeguards determ. *(French)* 7−109412
UF_6 transport container, extra fire tests in Japan, numerical anal. comparison 7−73878
UF_6 transport overpacks, specification 21PF-1, update and insulation testing 7−74249
UF_6^-+Ar, ionic fragmentation, internal excitation depend. 7−110066
U_2F_9, low-dimens., low-temp. phase transitions and mag. susceptibilities 7−143452
$U_{1-y}Gd_yO_2$, heat capacity, 310-1500 K 7−118125
$U_{1-y}Gd_yO_{2-x}$, nonstoichiometric multicomponent oxides, thermodynamic props. 7−98511
$U_{1-x}La_xTe$, x=0.1, 0.2, Kondo effect, mag. meas., press. effects 7−77214
UM_2Ge_2 (M=Rh, Ir), struct., mag. and elec. props. 7−117878
$U_4M_7Ge_6$ (M=Ru, Os), struct., mag. and elec. props. 7−117878
UMn_2, electronic struct., reson. photoemission meas. 7−96790
UN-Li-NbZr(Mo), fuel-coolant-cladding of SP-100 reactor, compatibility studies 7−67919
U_2NiC_3, cryst. struct. refinement 7−69683
UO, absorption, emission, lases fluorescence spectra 7−129726
UO, relativistic MO calcs. 7−109761
UO_2, 3-K mag. struct. anal., magnetoelastic and quadrupolar interactions 7−99406
UO_2 (S), high press. optical reflection spectra studies 7−77604
UO_2 (111), valence-band photoemission near 5d reson. photon energy 7−92831
UO_2, amorphous, solubility and mononuclear hydrolysis consts. 7−96384
UO_2, antiferromagnet, spin wave relaxation *(Russian)* 7−125344
UO_2 CANDU fuel, oxidation and dissolution mechanisms 7−96188
UO_2 CANDU fuel residing in air, model for heat transfer 7−96205
UO_2 complexes with N-thiosemicarbazide, struct., composition, force consts., spectral and thermal study 7−138442
UO_2, debris beds, capillary pressure meas. 7−129310
UO_2, densification at low burn-up 7−81525
UO_2, determ. of alkaline earth impurities by the ICP-AES method *(Chinese)* 7−141185
UO_2, dielec. const. below Neel point 7−99646
UO_2, fission product release from nuclear fuel by recoil and knockout 7−73854
UO_2 fuel fabrication by IDR process 7−81531
UO_2 fuel fabrication for LWRs, Fragema and FBFC experience *(French)* 7−116612
UO_2 fuel pellets, H conc. determ. by inert gas fusion 7−67912
UO_2 fuel pellets, sintered, fracture toughness, fracture surface energy, Vickers hardness 7−78186
UO_2, graphite disc CANDU fuel, high burnup behaviour, commercial reactor experience 7−116587
UO_2 LWR fuel pellets, oxidative sintering, NIKUSI process 7−116613
UO_2 natural, airborne exposure, ICRP Publication 30 lung model-based predictions rel. to measured bioassay data 7−139380
UO_2 oxidation behaviour in air and steam with relevance to fission product releases 7−96210
UO_2, oxidation in air, fission product release 7−96209
UO_2 PHWR fuel bundle, split spacer design, joining of appendages 7−116588
UO_2, PWR fuel, power ramp performance testing 7−96182
UO_2 packed sphere beds, thermal conductivity, temp. jump distances, thermal accommodation coeffs. 7−109279
UO_2 pellet manufacture for CANDU fuel 7−96234
UO_2 pellets, high density, grain growth kinetics 7−81526
UO_2 photocathode for 14 MeV neutron streak camera 7−96318
UO_2 powder, moisture meas. by neutron moderation 7−116620
UO_2 production at Port Hope, Canada, chronological history 7−96233
UO_2, radiation induced dissolution 7−96220
UO_2, release of ion-implanted I, Kr, Rb, and bubble formation 7−96212
UO_2 spent fuel, oxidation in groundwater products 7−96219
UO_2 spherical fuel grain, diffusional fission gas release, calc. methods and algorithms 7−109280
UO_2, spherical fuel particle prep., sol. gel process 7−81543
UO_2, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
UO_2, surface energy meas., errors, critical review 7−84483
UO_2, unirradiated, solubility in granitic groundwater 7−89778
UO_2, used CANDU fuel, effect of radiolysis of water on oxidation 7−89777
UO_2 used fuel, aqueous solutions in contact, modelling of alpha radiolysis 7−89775

uranium compounds continued
UO_2^{2+} ion-neutral base complexes, vibr. freqs. anal. 7−116941
UO_2^{2+}:$SrSO_4$ phosphor, gamma-irrad., thermally stimulated free radical reactions, EPR and CIDNP 7−77428
UO_2/Zr-Nb, friction characteristics, in-reactor study 7−122001
UO_2-Gd_2O_3 burnable absorber, use in LWR fuel assembly design 7−116556
UO_2-Gd_2O_3 integrated fuel burnable absorber for PWR appl. 7−116570
UO_2-Gd_2O_3 PWR fuel, interdiffusion coeff. meas. 7−116591
UO_2-PuO_2, French Mox fuel fabrication program 7−81530
UO_2-PuO_2, LWR fuel fabrication, remote handling device implementation 7−116617
UO_2-PuO_2, LWR Mox fuel fabrication 7−81545
UO_2-PuO_2, MOX fuel, gel microsphere fabrication 7−116577
UO_2-PuO_2, MOX fuel concepts for LWRs 7−116585
UO_2-PuO_2, mixed oxide nuclear fuel, thermal behaviour, porosity and microfissure effects *(German)* 7−129191
UO_2-PuO_2, nuclear fuel recycling, technical and economic aspects 7−109328
UO_2-PuO_2 MOX fuel, world market, conf., Brugge, Belgium, Oct. 1986 7−108047
UO_2-PuO_2 MOX fuel fabrication processes and post-irradiation examination 7−116578
UO_2-PuO_2 MOX fuel fabrication, economics and performance study 7−116619
UO_2-PuO_2 mixed oxide fuel system for Fast Flux Test Facility 7−102998
UO_2-PuO_2 water reactor fuel development, conf., Stockholm, Sweden, Sept. 1986 7−115690
UO_2-ThO_2, advanced HTR fuel, design, fission products release *(German)* 7−129198
UO_2-Zircaloy LWR fuel rod, behaviour during severe accidents 7−129293
UO_2-Zircaloy-4 interactions, effect of CANLUB graphite and SILOXANE coatings 7−96196
UO_2-ZrO_2, TMI-2 lower vessel debris examination 7−81540
UO_{2+x}, nonstoichiometry, thermodynamic parameters, EMF obs. 7−98510
U_3O_8 aerosol, influence of moisture during LWR accident sequence 7−81668
U_3O_8, surface analysis, sputter atomisation-reson. ionisation mass spectrometry 7−93463
$UO_2HPO_4.4H_2O$, $UO_2HAsO_4.4H_2O$, gel-grown crystals of isomorphous uranyl layer cpds., morphological comparison 7−119119
$UO_2(NO_3)_2$, mass transfer rate coeffs. meas., reprocessing appl. 7−73871
$UO_2(NO_3)_2$ solution, dynamic subcriticality meas. using ^{252}Cf-driven neutron noise method 7−103023
$UO_2(NO_3)_2$ solution, 3 interacting tanks, ^{252}Cf driven neutron noise meas., criticality safety 7−103024
$UO_2(NO_3)_2$-Gd$(NO_3)_3$-HNO_3 and $UO_2(NO_3)_2$-HNO_3 solns., density eqns. for criticality safety 7−116609
$UO_2(NO_3)_2.6H_2O$, pyroelec. single crysts., phase transitions, Raman spectrosc. obs. 7−70807
$UO_2(NO_3)_2.6H_2O$ solution, density meas., safeguards appl. *(French)* 7−109320
UP, ^{31}P NMR, dynamic mag. behaviour study, paramag. state 7−125551
U_3P_4, highly correlated electron systems, UV photoemission spectra meas. 7−138608
UP(As), elec. resist., mag. field effects, transitions and anisotropy 7−70336
$UP_{0.8}S_{0.2}$ single crysts., neutron diffr., magnetisation, incommensurate and ferrimag. phases 7−112748
$UP_{1-x}S_x$, x=0.2, 0.25, mag. phase diagram, neutron diffr. study 7−77284
UP(Sb)(Te), press. - vol. behaviour, equation of state and Kondo effect 7−76341
$(U_{0.8}Pu_{0.2})O_{2-x}$, chemical diffusion of O, 1400°C *(French)* 7−96184
$U_6Rh_{20}P_{13}$, prep., cryst. struct., X-ray diffr. study 7−83921
URu_2Si_2 heavy-electron supercond., magnetic excitations and ordering 7−85271
US, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
US_3, electronic excitations, phonons, mag. ordering, Raman scatt. 7−92660
USb (Se) single crystal, elastic props. 7−76269
U_3Sb_4 single crysts., Hall effect and high field magnetisation studies, microscopic spin model anal. 7−118514
$USb_{1-x}Te_x$, sp. ht. meas., 1.5-11 K 7−76434
USe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
USe single domain ferromagnet, spin-wave polarisation, inelastic neutron scatt. study 7−125349
USe_3, electronic excitations, phonons, mag. ordering, Raman scatt. 7−92660
USe_3, electronic props., vibr. Raman spectra study 7−85715
U_3Si, low enriched, in MTR fuel plates, phase diagram *(German)* 7−129222
UTe, ferromagnetic, static and dynamic mag. props. C_{44} elastic const., localised model. 7−77250
UTe_3, electronic excitations, phonons, Raman scatt. 7−92660
$U_{0.1}Th_{0.9}C_2$, cryst. struct. line profile refinements, neutron powder diffr. data 7−111482
U(VI) complexes, chemisorpt. on ion exchange resins, average charge and standard reduction pot. strength *(Japanese)* 7−116608
U_3X_4 (X=P, As, Sb), electronic struct., external hydrostatic press. depend. 7−76772
$(U_{0.3}Y_{0.7})O_{2-x}$ semiconducting solid soln. as O_2 sensor 7−115954
$U_xY_{1-x}Se$, ferromagnetic transition, effect of Y substitution 7−77292
Uf_6 gas centrifuge enrichment, monitors for safeguards and process control 7−109410

Uranus
8-14 and 17-23 μm spectral features 7−120312
1982 May 1 occultation of KME 15 at Mount Stromlo Observatory, rings and atm. characts. 7−120311
Ariel, geological terrain and crater freq. 7−101729
atmosphere, radiative-convective dynamical model of seasonal meridional energy balance and thermal struct. 7−88176
atmosphere, Raman scatt. Lyman α emission 7−120309
atmosphere structure models and (3-0) H_2 quadrupole line profiles 7−120313
Bordeaux Observatory meridian obs., comparison with ephemerides 7−115293

Uranus continued
electroglow, effect of magnetospheric charge exchange 7−88179
equatorial coordinates (1975 to 1985) from Danjon astrolabe, Santiago, Chile 7−72353
internal structure models and rot. rate implications for planetary accretion 7−120314
IR radiometry using NASA IRTF 7−115296
kilometric radiation beaming, Voyager 2 obs. and implications for planetary mag. field 7−120308
magnetosphere, low-energy plasma observations by Voyager 2 7−107748
magnetosphere, Voyager explorations 7−88173
magnetospheres of outer planets, review 7−127762
Miranda, astrometric CCD obs. (1981 to 1985) 7−107747
Miranda, warming during chaotic rotation 7−120315
Miranda (satellite of Uranus), voyager 2 observations 7−88178
review of 1983-6 scientific progress 7−115298
rings, occultations of stars, diffr. effects 7−127686
rings, resonance nature, shepherd satellite effects 7−145874
rings, resonance with satellites, Voyager-2 obs. *(Russian)* 7−88180
rings, Voyager UVS and Earth based IR stellar occultation obs. 7−134176
rings shepherding, role of 1986 U 7 and 1986 U 8 satellites 7−72355
rings shepherding kinematics, role of 1986 U 7 and 1986 U 8 satellites 7−72354
satellite orbits, for 1985U1 and 1986U1 to U9 7−101728
satellite system, occurrence of central peak craters 7−127765
satellites, eccentricities and longitudes of pericentre, semi-analytical soln. 7−127764
satellites, Voyager-2 results 7−120316
satellites cratering records, Voyager 2 results rel. to origin of impacting objects 7−134179
stellar occultation, 1982 April 22, by Uranus and rings, ring profile fits and atmospheric temp. profile 7−88177
Voyager 2 mission, January 1986, aerospace technology and results 7−72245
Voyager-2 data, implications for solar system struct. and origin 7−115297
Voyager-2 encounter, results for mag. field atm., rot. and heat source 7−79867

urban planning *see town and country planning*

user friendliness *see user interfaces*

user interfaces
atomic emission spectroscopy, ICP, human processor interface 7−102529
disabled, conf., London, England (Mar. 1987) 7−80178
disabled persons and computer technology, conf., Northridge, CA, USA (Oct. 1985) 7−95092
electromagnetic waves for disabled persons communication *(Italian)* 7−87361
ERFIS information system at Vermont Yankee nuclear plant, emergency response 7−116685
IBM PC data system 7−140677
ICP mass spectroscopy, computerised reference manual for spectral data and interferences 7−102557
Laboratory Workbench data acquisition user interface 7−140678
map production from photogrammetric data, software interface design, for Automap system 7−119935
meteorological data display, animated 3D 7−94454
microprocessor-based instrumentation for nuclear power plants 7−116640
NMR imaging, pulse programming assistant 7−107102
NPRDS, nuclear plant reliability data system, natural language interface 7−102982
Rankine-cycle heat engines, water-based, direct manipulation interface 7−126641
visual simulation, how the eye sees real world and simulator 7−93765
VM/CMS in the HEP community (HEPVM) 7−135794
ZnSe optically bistable element arrays, appl. as man-machine interface 7−90681

user manuals
BETCY code in ARMP-02 package, PWR reload fuel anal., code manual 7−102986
CPM-2 code for LWR fuel behaviour, user manual for ARMP-02 documentation 7−109265
MKENO-DAR code system for criticality safety anals., user manual 7−67896
MUTUAL code for criticality safety using solid angle method, user's manual 7−81481
PDQ7-E code for LWR core simulation, user manual in ARMP-02 documentation 7−109266
THYDE-P2 code for large-break LOCA anal., thermal-hydraulic calcs., user manual 7−129150

user ports *see computer interfaces*

UTS *see tensile strength*

UV astronomy *see ultraviolet astronomy*

UV detectors *see ultraviolet detectors*

UV lithography *see photolithography*

UV spectra of diatomic inorganic molecules *see spectra of diatomic inorganic molecules*

UV spectra of inorganic liquids and solutions *see spectra of inorganic liquids and solutions*

UV spectra of inorganic solids *see visible and ultraviolet spectra of inorganic solids*

UV spectra of organic molecules and substances *see visible and ultraviolet spectra of organic molecules and substances*

UV spectra of polyatomic inorganic molecules *see spectra of polyatomic inorganic molecules*

V_k-centres *see colour centres*

V-centres
see also H-centres
activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
KBr:Sn crystal, A_T emission of $Sn^{2+}v_c^-$ centres, effect of mag. field *(Russian)* 7−142775
KBr:$Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
KCl:Na, electronic excitation localised near Na ion *(Russian)* 7−143391
KCl:Tl with $Tl^0V_a^+$ centres, lasing, passive laser gate use *(German)* 7−130126

V-centres continued
KI:$Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
RbI, gamma irradiated ultrapure single crystals, laser Raman spectra 7−113168

V_H-centres *see H-centres*

V-VI semiconductors *see semiconductor materials*

vacancies (crystal)
see also Frenkel defects; impurity-vacancy interactions; Schottky defects; vacancy condensation loops; vacancy-dislocation interactions
0 7−124292
adamantane, high temp. phase, mol. rotational processes 7−142668
Al, quenched, annealing, defect studies, positron lifetime and PAC meas. 7−98225
alkali halide:M^{2+}, M=Zn, Fe, Cd, Ba, Pb, impurity-vacancy complex binding energy calcs. 7−124905
alloys, binary, BCC and FCC, mutual diffusion processes, ordering effects *(Russian)* 7−76476
amethyst, Brazil twins, X-ray study 7−124286
atomic transport in crystalline solids, statistical theories 7−98586
BCC metals with n-body interatomic potentials, point-defect and stacking fault props. 7−76117
binary alloys, short range ordering suppression kinetics 7−124252
binary metallic alloys, vacancy formation energies, vacancy-solute interaction 7−137304
corundum, electron irradiated, F- and F^+-centres accumulation kinetics, absorpt. meas. 7−124263
crack, slender, evolution under diffusion mass transfer 7−110856
cubic metals EFG due to vacancies and interstitials 7−118450
d-metal compounds, electronic structs., rel. to ideal crysts., defects and impurities 7−143319
diamond, neutral vacancy, cathodoluminesc. decay time studies 7−92747
diffusing atoms including fluctuating hyperfine interactions, Mossbauer spectrum 7−118909
diffusion profiles associated with Onsager matrix in non-equilib. with A-A*-vacancy and A-B-vacancy solns. 7−84350
dislocation loops, radiation-induced generation by inclusions 7−137391
dislocation structure, irradiated, spatial instability 7−105146
elastic field interaction of point defects with spherical sinks under irradiation 7−69737
elementary semiconductors, radiation-enhanced diffusion, microkinetic theory 7−105118
enhanced vacancy accumulation near planar sinks, diffusion mechanisms 7−98136
exoemission, optically stimulated, role of O_2 7−106388
FCC crysts., vacancy diffusion, jump freq. and isotope effect calcs. 7−98551
FCC metals, rapidly quenched, lattice defects 7−92986
FCC metals, self-diffusion, monovacancy and divacancy contributions 7−76478
fluorites, onset of fast ionic conduction 7−76489
formation energies of vacancies in intermetallic cpds. 7−104735
freely-migrating defect production during irradiation 7−104812
grain boundary diffusional creep interaction with void growth 7−76140
hard sphere crystals, elastic constants, density functional and molecular dynamics calcs. 7−137443
high T_c supercond., transition temp., localisation and struct. transitions 7−105760
III-V semiconductors, point defect electronic props., tight binding investigation 7−137855
imbalanced vacancies, relaxation process, mutual diffusion investig. 7−91578
incommensurate structure with no average lattice a 1D quasicrystal 7−76045
intermetallic cpds., diffusion, disordering and vacancies 7−105147
intermetallic cpds., electronic theory for vacancies and interstitials 7−104746
isotropic crystals, vacancy formation entropy, Green's function calcs. *(Russian)* 7−98115
liquid structure, vacancy formation energy, and criteria for liq.-solid phase transitions, review 7−137527
metal FCC crysts., atomic jump processes, randomisation theory calcs. 7−98550
metal oxides, vacancy and defect structs., local density theory anal. 7−131142
metal single crystals, He desorption of defects 7−76614
metals, cubic, formation and evolution of dislocation structures during irradiation 7−76201
metals, electron irrad., vacancy-impurity interactions, positron annihilation studies 7−91567
metals, HCP, strained, anisotropic point-defect diffusion, continuum eqn. calcs. 7−84402
metals, HCP, vacancies and small vacancy clusters, computer simulation studies 7−98133
metals, irradiation in stressed state, point defect conc. in void vicinity 7−142764
metals, neutron irrad., defect struct. development, cascade energy overlapping 7−104851
metals, point defect formation energies, pseudopot. theory 7−124253
metals, point defects, perturbed angular correlation and Mossbauer studies 7−91564
metals, positron annihilation at a vacancy, analytical models 7−119065
metals, self-ion irrad., displacement cascade damage, computer simulation *(Japanese)* 7−131192
metals, vacancies and self-interstitials, thermal He desorption studies 7−91983
metals, vacancy and divacancy migration, positron effects 7−91876
metals and alloys, BCC VI B, anomalous self-diffusion and mode softening 7−98557
metals and alloys, low temperature neutron irrad., defects, diffuse X-ray scatt. studies 7−98260
metals and alloys, void and vacancy cluster nucleation processes 7−98129
molecular solids, defects, positron studies 7−142757
Ni thin films, quenching effects in pulsed heat treatment 7−71215
NMR free induction decay of spins in periodic lattice with vacancy diffusion 7−85468
noble metals, impurity diffusion, divacancy contrib. 7−105125
oxides, adhesion to metal films, vacancy effects 7−111546
phase stability under irradiation, disordering, diffusion, segregation and precipitation 7−104815

ıcancies (crystal) continued
poly-N-epoxypropylcarbazole, electrophotographic layers, photodischarge kinetics 7−82734
pore lattice as dissipative structure 7−84022
positron annihilation studies 7−137363
α-quartz, E_i centre and O vacancy charge states, MINDO calcs. in cluster simulation 7−105478
quasicrystals, twinning mechanism, flat rhombohedron vacancy *(French)* 7−142790
quenching for vacancy cluster formation, ultrahigh vacuum techniques *(Japanese)* 7−138762
random alloys, dil., atomic transport, phenomenological coeff. 7−111935
refractory BCC metals, atomic-defect mechanisms for diffusion 7−105098
semiconductors, deep level defects, optical cross sections, tight binding calcs. 7−99894
semiconductors, point defects and diffusion mechanisms 7−104751
semiconductors and metals, defect structs., perturbed angular correlation studies 7−138367
solid, maximum defect conc. before dissociation 7−91757
steel, austenitic stainless, ion irradiation, structural effects 7−111699
steel, Fe-Cr, martensitic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, Fe-Ni-Cr, ferritic, radiation enhanced phase transition, influence of vacancies 7−104745
steel, stainless, martensitic, rapidly solidified and ion implanted, phase stability 7−76355
steels, ferritic and austenitic, nonequilib. solute segregation to austenite grain boundaries 7−86189
ternary and multinary cpds., simple theory of defects 7−104752
transition metals, BCC, stage II-recovery reactions 7−104732
well-annealed materials, point defect concs., rate eqn. applicability 7−91565
Ag, stationary nonequilib. vacancies during thermotransport 7−98121
Ag, thermal vacancies, positron lifetime meas. 7−91570
Ag vacancy diffusion, Monte Carlo studies 7−91875
Ag:In,O, vacancy struct. following α-bombardment, PAC study 7−117964
Ag-Al, electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
α-Ag-As, nonlinear solvent diffusion enhancement 7−131353
Ag-Cd/Ag diffusion couple, interdiffusivity and ratio of intrinsic diffusivities 7−111978
Ag-Cu boundary, atom mixing processes under Ar ion bombard. 7−84068
Ag-Mo boundary, atom mixing processes under Ar ion bombard. 7−84068
Ag-Sb alloys, stationary nonequilib. vacancies during thermotransport 7−98121
AgAl alloys, electron irradiated, SRO kinetics, elec. resistivity study 7−104739
AgBr crystals, theoretical and expt. study of ionic motion 7−69972
AgMg β-electron cpds., lattice disorder and defects study 7−104729
$AgNO_3$, metastable phase III, ferroelectricity 7−99742
Al, annealed and electron irrad., vacancy props., positron lifetime meas. 7−142768
Al, electron irrad., defect reactions, muon spin relax. studies 7−92563
Al, proton and neutron irrad., vacancy-gas agglomerates 7−98261
Al single crystals, vacancy generation and dislocation loops 7−91569
Al, stage III annealing, positron annihilation studies 7−99969
Al, vacancies, positron lifetime spectroscopy and trapping 7−92771
Al-Cu, age-hardenable, zone form. kinetics, influence of rapid solidification 7−100210
Al-In dilute alloys, In segregation, vacancy trapping 7−118101
Al-Li-Cu-Mg, quenched in vacancies, annealing, elec. resist. obs. 7−119298
Al-Si (Mg), rapidly quenched, excess vacancies 7−92995
Al-Zn alloys, pre-aging effects, elec. resist. study 7−138770
Al-Zn-Mg, 7075, discontinuous deform. *(Japanese)* 7−126174
Al-Zn-Mg, Guinier-Preston zones and onset strain of serrated flow 7−144487
Al-Zn-Mg, quenched-in dislocation loops 7−100268
n-$Al_xGa_{1-x}As$ epitaxial layers, photoluminesc., electron irrad. effects *(Russian)* 7−77650
$Al_xGa_{1-x}As$-GaAs:Si, index guided quantum well lasers, vacancy-enhanced impurity induced layer disordering 7−76186
$Al_xGa_{1-x}Sb$, LPE grown, acceptor and defect levels, photoluminesc. spectra 7−113283
AlIn, quenched, annealing, defect studies, positron lifetime and PAC meas. 7−98225
Al_2O_3-SiO_2, corundum in mullite, solid solutions, crystal-chemical model 7−104661
α-Al_2O_3, corundum, irradiation with high energy O and C ions, electron microscopy 7−142846
Ar, solid, vacancy diffusion, Monte Carlo studies 7−91875
Au electron irrad. dilute alloys, vacancy clustering, impurity effects, positron lifetime studies 7−91636
Au, positron lifetime, quenched-in vacancies and stacking faults 7−92772
Au, proton irrad., instability zone of radiation defects 7−104853
Au, quenched, vacancy formation, migration energy *(Korean)* 7−84813
Au, thermal vacancies, positron lifetime meas. 7−91570
Au-Ag, quenched, vacancy formation, migration energy *(Korean)* 7−84813
Au-Ag alloys, electron irradiated, kinetics of SRO formation, resistivity change 7−104738
Au-Ag alloys, short-range ordering by low temp. electron irrad. 7−69761
Au-Cu, quenched, vacancy formation, migration energy *(Korean)* 7−84813
Au-Pd concentrated alloys, vacancies and vacancy behaviour, SRO kinetics, elec. resistivity meas. 7−104736
δ-B_2O_3, oxygen ion conductor, disorder, computational simulation 7−124257
$BaCeO_3$:Dy, synthesis, impurity oxidation state, Mossbauer spectra 7−92553
$Ba_{0.5}La_{0.5}Fe_{1-x}Cu_xO_{2.75-(x/2)+\delta}$, struct., oxidation states, elec. props., chem. anal., X-ray diffr., electron diffr., Mossbauer spectra, mag. suscept. meas. 7−84891
$Ba_6M_2O_{11}$ (M=Nb,Ta), defect structure, transport properties 7−131139
$Ba_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes, defect structure and conductivity 7−91891
$BaTiO_3$ ceramic, ferroelec. domains, SEM direct imaging, secondary electron and cathodolum. studies *(German)* 7−85556
$BaTiO_3$ ceramics, electronic struct. and second phase distrib., cathodolum. studies 7−137796

vacancies (crystal) continued
$Ba_2YCu_{2.89}O_{6.8}$, small single crystals, Meissner effect meas., struct., X-ray diffr. method 7−99326
$Ba_2YCu_3O_{9-\delta}$, cryst. struct., vacancy distrib., neutron powder diffr. study 7−104691
δ-Bi_2O_3, oxygen ion conductor, charge migration, computational simulation 7−124258
δ-Bi_2O_3, oxygen ion conductor, static lattice models, computational simulation 7−124259
$BiO_{0.1}F_{2.8}$, tysonite-like solid electrolyte, NMR study of anion mobility 7−91889
CU, electron irrad., point defect reactions, HVEM studies 7−98135
CaO, O vacancy defects in phosphorescent spin quartet state, ODMR studies 7−138354
CaO:H^{2-} crysts., anion vacancy photoconversion, metastable impurities, luminesc. study 7−125798
$CaSO_4$:Dy crystals, thermolum. glow curve peaks, interstitial vacancy recomb. 7−85861
$CaSO_4$:Dy single crysts., thermolum. mechanisms, EPR obs. 7−85862
Cd, positron lifetime, quenched-in vacancies and stacking faults 7−92772
Cd, vacancy migration, perturbed angular correlation studies 7−91879
Cd_3As_2, acceptor level broadening with cation vacancy ordering *(Russian)* 7−84767
$CdSiAs_2$, vacancy defects, luminescent props. 7−92722
CdTe, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
CdTe, electronic struct. of Cd vacancy 7−92117
CdTe, electronic struct. and positron states at vacancies 7−98879
CdTe, proton implantation induced defects, photoluminescence obs. 7−98274
CdTe, vacancy formation energies 7−131541
CdTe:Cu, Ag, Au, impurity and cation vacancy electronic struct. 7−98873
CdTe-Tl, alloying, solubility and diffusion studies *(Russian)* 7−124517
$CeNi_2$ cubic Laves phase, vacancy-induced anomalies in lattice spacing, hardness and thermal expansion 7−76116
Co, vacancy form. in thermal equilib., positive muon spin rotation studies 7−91571
Co-Ga B2 ordered alloys, vacancy and antistruct. atom conc. and diffusion, NMR study 7−105105
Co-Sb(In), mag. hyperfine fields in vacancy-associated defect structs. 7−118447
CoO_x, anion vacancies, mol. dynamics and static simulations 7−142767
CoV_4S_8, orientation and translation domains, struct. variants *(French)* 7−111475
$Cs_xBa_yAl_{x+2y}Ti_{8-x-y}O_{16}$ hollandites, electron irradiation structural effects 7−142840
$CsCaCl_3$:Gd^{3+}, impurity spin Hamiltonian parameters, EPR spectra 7−85423
Cu, high energy He implanted, microstruct. evolution 7−76161
Cu ion beam irradiated, increased wear resistance, positron annihilation 7−142854
Cu, low energy self ion-irrad., defects, TEM studies 7−104869
Cu point defect concentration, high temp. expt. interpretation 7−91568
Cu, proton irrad., instability zone of radiation defects 7−104853
Cu, proton irradiated, periodic (001) defect walls 7−98273
Cu, stage III annealing, positron annihilation studies 7−99969
Cu, thermal vacancies, positron lifetime meas. 7−91570
Cu, vacancy clusters, efficient energy minimisation scheme calc. 7−98132
Cu, vacancy complexes, form. energies, struct., computer simulation study 7−111545
Cu, vacancy diffusion, Monte Carlo studies 7−91875
Cu:He, migration and agglomeration, PAC meas. 7−118160
Cu-Al, diffusion, vacancy and interstitialcy enhancement during electron irradiation 7−105148
Cu-Al (15 at.%), electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
Cu-Au, diffusion, vacancy and interstitialcy enhancement during electron irradiation 7−105148
Cu-Mn (13 at.%), electron irrad. at 77 K, annealing, defect recovery, short range order, elec. resist. meas. 7−98246
Cu-Zn alloys, diffusion, vacancy and interstitialcy enhancement during electron irradiation 7−105148
Cu-Zn-Al, shape memory effects, effect of martensite ordering 7−144486
Cu-Zr-Mg-Ni-Si, microalloyed, elec. resist. recovery, after low temp. deform. 7−100287
CuAu, vacancy props., positron annihilation studies 7−104741
Cu_3Au FCC alloys, recovery stages after high energy irradiation, ordering through vacancies, interstitials and crowdions 7−104737
Cu_3Au, vacancy props., positron annihilation studies 7−104741
$CuGaS_2$:Zn, off-stoichiometry, optical studies 7−124542
CuIn alloy, positron annihilation, effect of vacancies and precipitation 7−106299
CuIn dilute alloy, lattice defect trapping at ^{111}In atoms, PAC studies 7−91635
CuIn dilute alloys, vacancies and precipitation, positron lifetime studies 7−91576
$DyBa_2Cu_3O_x$, cryst. struct., X-ray diffr. study 7−98091
DyH_x, $x\approx2,3$, EFG, PAC determ. 7−99619
EuO thin films, O vacancy diffusion and elec. cond. 7−118156
Fe, impurity diffusion activation energy calcs., vacancy and interstitial mechanisms *(Russian)* 7−124599
Fe, self-diffusion and V impurity diffusion 7−98560
Fe, vacancy complexes, form. energies, struct., computer simulation study 7−111545
α-Fe, vacancy migration and form., positron annihilation studies 7−91572
α-Fe, vacancy mobility, high-volt. electron microscopy studies 7−91878
Fe-Cr-Ni alloy, local ordering by interstitial defect migration 7−105149
Fe-Mo (3 at.%), trapping of interstitials and vacancies, ion-channelling/lattice-location studies 7−104731
Fe-Sb(In), mag. hyperfine fields in vacancy-associated defect structs. 7−118447
FeAl ordered BCC alloys, vacancy form. and conc., positron annihilation studies 7−104747
FeAl, vacancy interaction energy, frozen pot. approx., first principles calcs. 7−104805
FeNiCr alloys, dynamics of point defect populations 7−104743
$Fe_{1-x}O$, wustite, crystal structure *(Japanese)* 7−124198
Fe_3O_4, magnetite, rapid electron exchange by cationic vacancies *(French)* 7−76947

vacancies (crystal) continued
FeV_4S_8, orientation and translation domains, struct. variants *(French)* 7−111475
Fl, vacancy form. in thermal equilib., positive muon spin rotation studies 7−91571
GaAs, antisite and vacancy defects, electronic struct. 7−98878
n-GaAs, As anti-site formation by electron irradiation 7−76213
GaAs, As antisite-vacancy complex, EPR study 7−99574
GaAs, EL2 defect config., atomic model 7−70244
GaAs, electronic struct. and positron states at vacancies 7−98879
GaAs, isolated Ga vacancy, bistability and metastability 7−98881
GaAs, nonstoichiometric defects 7−142770
GaAs semi-insulating cryst. defects, small-angle laser beam scatt. study 7−117922
GaAs, vacancy defects in as-grown and electron irradiated GaAs, positron annihilation study 7−99971
n-GaAs, vacancy-interstitial pair, stored energy released in recombination under electron irrad. 7−104750
GaAs:Si, electron traps, rapid thermal processing 7−118502
GaAs/AlGaAs quantum well, ion implantation damage, annealing behaviour, TEM and cathodolum. studies 7−117982
$GaAs_{1-x}P_x$, irrad., 1.0 eV absorption centres 7−92706
GaP (111)B surface disordering by Ar^+ bombardment, Auger, disappearance pot. and ionisation spectra studies 7−76219
GaP, antisite and vacancy defects, electronic struct. 7−98878
GaP, ENDOR study of Ga vacancy 7−99606
GaP LPE crysts., electron irrad. defects, EPR and ENDOR studies 7−98254
$Gd_{1-x}Se$, vacancy ordering 7−104672
Ge, localised and reson. states of defects, Green's function calc. 7−105455
Ge, proton irrad., instability zone of radiation defects 7−104853
Ge:Cu, diffusion mechanisms and thermal equilib. defects, review 7−98568
Ge:Cu, Sb, electron irrad. induced defect form., elec. props. 7−104836
Ge_xSi_{1-x}, electron radiation defect form., near edge IR absorpt. spectra study 7−137407
$Ge_{1-x}Te$, two-electron donor level, effect on transport coeffs. 7−112227
He, solid, ion motion, vacancies and impurities, book contrib. 7−84443
^{3}He, BCC, vacancies at high molar volumes 7−98615
^{3}He, solid, mag. polarons 7−70025
^{4}He, BCC, thermal vacancies, X-ray meas. 7−105175
HgCdTe, electronic props., vacancy formation energy, rel. to HgZnTe 7−131541
$Hg_{0.8}Cd_{0.2}Te$, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
$Hg_{1-x}Cd_xTe$, cryst. struct., Hall effect, vacancy conc. *(Korean)* 7−91549
α-HgI_2 cryst., photoluminescence spectra obs. 7−138488
HgTe, detect. of nonstoichiometric vacancy defects, positron annihilation study 7−98919
HgTe, vacancy formation energies 7−131541
HgZnTe, electronic props., vacancy formation energy, rel. to HgCdTe 7−131541
$HoBa_2Cu_3O_x$, cryst. struct., X-ray diffr. study 7−98091
InP, electron irrad.-induced defects, thermal transformation and optical props. 7−98252
KCl phosphor, excitation and emission spectra 7−138470
$KCl_{1-x}Br_x:Eu^{2+}$ mixed crysts., EPR ionic thermocurrent, optical absorpt. and emission spectra meas. 7−124292
$KGaO_2$, solid electrolytes, elec. props., struct. 7−105108
$K_3Na(SO_4)_2$, ESR of SO_4^- centres 7−85430
$(La_{1-x}Ba_x)_2CuO_{4-y}$, Balacuo, exciton exchange percolated superconductivity 7−125200
$La_2CuO_{4-\delta}$ single cryst., antiferromagnetism and O deficiency, neutron diffr. study 7−112752
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. thin films, Hall effect meas. 7−92210
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. props., vacuum annealing effects 7−99275
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., transition temp. and hole conc. 7−143675
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., O vacancy behaviour, positron annihilation, O diffusion 7−142769
$La_yU_{1-y}O_{2+x}$, mag. meas., dilution effect 7−112786
LiCl:Fe, X-irradiated, electron-trapped centres 7−83953
LiF:OH, H in anion vacancies, ESR linewidth, temp. and stress depend. effects 7−70638
LiF:Ti crystals, thermolum. glow curve peaks, interstitial vacancy recomb. 7−85861
$LiIO_3$ crysts., dielec. dispersion and ionic cond., defect structural model 7−143949
βLiIn, defect, struct., mech. props. 7−144482
$LiNbO_3$, defect chemistry 7−91579
$Li_{1-x}VO_2$ struct. refinement, neutron diffr. study 7−83907
MgF_2, electron irradiated, defect clusters, ordered arrays *(Japanese)* 7−111670
MgO, thermochemically reduced, electron trapping, luminescence studies 7−92197
MnO, high temp. deform. 7−78093
Mo, cold worked single crystal, He trapping, TEM study 7−78048
Mo film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
Mo, low energy self ion-irrad., defects, TEM studies 7−104869
Mo, modified Finnis-Sinclair pots., defect energetics and cohesive energy calcs. 7−124161
Mo single crysts., electron irrad., vacancy defects, positron studies 7−98137
Mo, vacancy formation, positron lifetime meas. 7−91573
Mo, void-lattice form., swelling, temp. depend. 7−83949
$NaAl_3(PO_4)_2(OH)_4$, brasilianite, hole centres, GPR 7−106025
NaCl, γ-irrad., fracture, electron emission 7−76210
NaCl:Tl, impurity states, photoluminesc. study *(Russian)* 7−85838
$NaNbO_3$, antiferroelectric transition, influence of reduction of Nb ions valency 7−92619
Na_3PO_4-Na_2SO_4, solid electrolytes, cond., phase diagrams, lattice parameters 7−131359
Nb, deformed, supercond. transition temp., US interaction and annealing effects 7−99251
Nb, electron irrad., defect reactions, muon spin relax. studies 7−92563
Nb film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
vacancies (crystal) continued
NbC, heat treatment, effect on defect formation and props. 7−100247
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
NbC_x, electronic struct., influence of vacancies, local atomic displacements 7−76733
NbN-based compounds, zone struct. *(Russian)* 7−124852
NbS, disordered systems, diffuse intensity loci, optical transforms 7−137148
Ne, pure and doped, self-trapped exciton luminesc., time-resolved study 7−106274
Ni, cavity distribution induced by Ne, He, and Ni self damage 7−122159
Ni, high energy He implanted, microstruct. evolution 7−76161
Ni, laser surface melted, defects, PAC studies 7−137364
Ni, lattice vacancies introduced by electron irrad., quenching and cyclic deformation 7−91574
Ni, proton irradiated, periodic (001) defect walls 7−98273
Ni, quenched vacancy migration, positron studies 7−91877
Ni, stage III and Stage IV defects, recovery and migration 7−91566
Ni thin films, vacancy redistrib. on quenching 7−98116
Ni, void-lattice form., swelling, temp. depend. 7−83949
Ni:He, high energy ion implantation, microstructural evolution 7−117941
Ni:He, high energy ion implantation, damage annealing, microstruct., elec. resist., dilatometry 7−119287
Ni-Al intermetallic cpds., vacancy diffusion mechanism, DSC and positron annihilation studies 7−105104
Ni-base superalloy, cast, fatigue fracture surfaces 7−86314
Ni-In-H-D dilute alloy, H and D decoration of In-vacancy complexes, effective-medium theory calcs. 7−84751
Ni-Sb(In), mag. hyperfine fields in vacancy-associated defect structs. 7−118447
Ni-Si (Ge)(Sb), dilute electron irrad. alloys, void nucleation, solute atom effects 7−91591
NiAl ordered BCC alloys, vacancy form. and conc., positron annihilation studies 7−104747
NiAl, vacancy interaction energy, frozen pot. approx., first principles calcs. 7−104805
Ni_3Al polycrystalline alloys, positron annihilation spectroscopy of vacancies 7−106303
NiO (111), O_2, H_2O, and CO adsorption and interaction, UPS study 7−143201
$NiSi_2$ epitaxial film, surface struct., low energy ion scatt. studies 7−118219
NiV_4S_8, orientation and translation domains, struct. variants *(French)* 7−111475
O overlayer on Ni (100) vibr. spectra EELS 7−91971
PLZT ceramics, research programme at Shanghai Institute of Ceramics 7−92616
Pb-$Fe_{1/2}Nb_{1/2}O_3$-$PbFe_{1/2}Ta_{1/2}O_3$-Li_2CO_3 ceramics, low-temperature sintered, dielectric props. 7−77451
Pb-S system, thermodynamic anal. and phase diagram calc. 7−77957
PbSe, quasilocal states, vacancies, impurity bands, optical absorpt. spectra 7−106218
$Pb_{1-x}Sn_xTe$, narrow-gap, laser irrad. transform of intrinsic and impurity defects, elec. and optical props. change 7−112325
PbTe, comp. stability limits, Hall effect, cond. meas. 7−125022
$PbZrO_3$ single crysts., pyroelec. and dielec. props., transient phase study 7−99751
Pd-Al_2O_3 interface, wetting and adhesion *(French)* 7−112106
PdIn β-electron cpds., lattice disorder and defects study 7−104729
Pt, laser surface melted, defects, PAC studies 7−137364
Pt, thermal vacancies, positron lifetime meas. 7−91570
Pt/Si(Si:As), interface, growth kinetics and microstructure of Pt_2Si and PtSi 7−76698
$Pt_{0.5}Ni_{0.5}$ (110), surface sandwich segregation, multilayer relax., LEED meas. 7−105207
Pu-H, equilib. and structural props. 7−104954
Sb, electron irrad., vacancies, positron annihilation studies 7−92774
Se trigonal crysts., positron annihilation Doppler line broadening meas. 7−77684
Si, chalcogen and vacancy pairs, electronic struct. and stabilities 7−98869
Si, defects, high temp. positron annihilation studies 7−99970
Si, defects and O impurities, positron studies 7−144161
Si, divacancies, spectral studies 7−70847
Si divacancy electronic struct., tight binding study 7−98872
Si, divacancy study, neutron, proton and deuteron irradiated 7−98914
Si, electron irrad., divacancy production, DLTS studies 7−104748
Si, electron irradiated, intrinsic point defects, props. and interactions with impurities 7−124260
Si, electronic struct. and positron states at vacancies 7−98879
Si, fast neutron irradiated, low temp., optical and electrophysical props. 7−113232
Si, ion-implantation induced vacancy profiling using slow positron beams 7−111677
Si, irradiated with γ-rays or neutrons, radiation defects, divacancy energy levels 7−112224
Si, light-ion implantation, beam-induced annealing of defects 7−84071
Si, localised and reson. states of defects, Green's function calc. 7−105455
Si, neutron transmutation doped high resist. state, photoinduced current transient spectra 7−112243
Si, plastically deformed, pentavacancies, EPR studies 7−106021
Si, proton irrad., instability zone of radiation defects 7−104853
Si self-ion implanted, vacancy and interstitial distribs. 7−83950
Si vacancy migration energy, self-consistent Green's function method 7−98569
Si:B, B diffusion, influence of implant induced vacancies and interstitials 7−124592
Si:B, impurity diffusion in inert and oxidising ambients 7−105138
Si:C, O, electron irrad. damage effects, defect centres 7−137413
Si:C,O, electron irrad., divacancy accumulation kinetics, impurity effect, IR absorpt. spectra 7−104837
Si:C(Ge), impurity complex local electron density of states calcs. *(Russian)* 7−98929
Si:D, ion implanted Si, beam-induced annealing of defects 7−98275
Si:Ge,B, Ge impurity diffusion, B doping effects study 7−111966
Si:Ge solid solns., electron irrad. defect form. processes charcts. 7−137406
a-Si:H, positron lifetime meas. interpretation 7−132371
Si:O, ion implanted, PAC study., EFG-surface charge relationship 7−118905
Si:O, ion implanted with O isotopes, IR absorption studies 7−98203

vacancies (crystal) continued
Si:P, defect interactions during P diffusion, model calcs. 7−84011
n-Si:P, low temp. electron irrad. damage, annealing study 7−84035
Si:P, positron lifetime meas., thermal stability of P-vacancy pairs 7−70935
Si:P,B, B diffusion in inert and oxidising ambients 7−105138
Si:Pt(Au), diffusion mechanisms and thermal equilib. defects, review 7−98568
Si:S(Se)(Te), defect pairing, electronic struct. and total energy calcs. 7−83982
Si:Sn, O, C, irradiated, optical band at 3942 cm^{-1} 7−99842
SiC, native defects, electronic struct. calcs., cluster recursion method 7−98920
SiO_2, neutral O-vacancy centre. π-bonded model, tight-binding total energy calcs. 7−92107
$SnMo_6S_8$, Chevrel phase, electronic struct., vacancies effect 7−117923
SnO_2, wide-gap semicond., acceptors and donors, PAC studies 7−98902
$Sr_2Co_2O_5$, phase transitions, neutron thermodiffractometry study 7−91797
$Sr_xLa_{2-x}CuO_{4-y}$ high T_c supercond., lattice const. press. depend. 7−92341
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Sr_xLa_{2-x}CuO_{4-y}$, high T_c supercond., Cu valence, O deficiency 7−99293
$Sr_6M_2O_{11}$ (M=Nb,Ta), defect structure, transport properties 7−131139
$Sr_6Nb_2O_{11}(Ta_2O_{11})$, solid electrolytes, defect structure and conductivity 7−91891
Ta, electron irrad., defect reactions, muon spin relax. studies 7−92563
TaC, heat treatment, effect on defect formation and props. 7−100247
$TaSi_2$-Si:Sb(B), point defect generation, enhanced impurity diffusion 7−124591
$Te_2O_7H_6$ mol. cluster model of V_o centre, RHF-SCF electronic struct. calcs. 7−117113
Th, relaxations due to vacancy, formation energy, binding energy of divacancy, calcs. 7−76119
β-Ti, self-diffusion via vacancies 7−105099
Ti-MgO composite films, electron microscopy 7−70139
TiC, directionality of metallic bonding, CNDO calc. method 7−142688
TiN, substoichiometric, (100) surface, angle-resolved photoemission, vacancy-induced state 7−125913
TiN_x, vacancy ordering, neutron diffr. study 7−131077
TiNi, ion bombard., amorphisation kinetics 7−104866
TmSe, nonstoichiometric and stoichiometric samples, anomalous thermal expansion 7−98523
U, neutron irrad., point defect clustering 7−98139
VC_{1-x}, HREM obs. of ordered C sublattice 7−118119
V_3Si, plastically deformed, lattice defects, positron annihilation study 7−106298
W, high temperature vacancy migration enthalpy 7−91575
W, vacancy formation, positron lifetime meas. 7−91573
W:H, H interaction with In vacancy clusters, PAC study 7−117963
Xe bubbles in Si and Al matrices, press., lattice parameters and solid-fluid phase transforms. 7−84018
Y-Ba-Cu-O high T_c supercond., X-ray single cryst. struct. anal. 7−111490
Y-Ba-Cu-O high T_c supercond., defects, high resolution TEM studies 7−111549
Y-Ba-Cu-O high T_c supercond., vacancy order-disorder transformation 7−111550
Y-Ba-Cu-O high T_c supercond., new phase obs., struct. and symm., electron diffr. and microscopy 7−117872
Y-Ba-Cu-O high T_c supercond., local struct. and Cu valence, O vacancy effects 7−117901
Y-Ba-Cu-O high T_c supercond., struct. and supercond. props., annealing effects 7−124188
Y-Ba-Cu-O high T_c supercond., heavy atom disorder, electron microscopy and diffr. studies 7−124225
Y-Ba-Cu-O high T_c supercond., Raman scatt. study, evidence for O vacancies 7−132277
YAG:Ni luminescent crysts., elec. cond. and defect struct. props. correl. 7−131721
$YBa_2Cu_3O_{6+\delta}$ high T_c supercond., positron annihilation lifetime and Doppler broadening energy spectra 7−144159
$YBa_2Cu_3O_{6.9}$, high T_c superconductor, microstruct., O ordering, planar defects 7−111499
$YBa_2Cu_3O_{7-x}$ high T_c superconductor, variation of stoichiometry, cell symmetry on temp. and press. 7−111498
$YBa_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$YBa_2Cu_3O_{9-y}$, high T_c supercond., orthorhombic and tetragonal phases 7−118077
$YBa_2Cu_3O_x$, cryst. struct., X-ray diffr. study 7−98091
$YBa_2Cu_3O_x$, high T_c supercond., band struct. and O vacancy distrib. 7−143316
$Y_{0.4}Ba_{0.6}CuO_{2.22}$ high T_c supercond., cryst. struct. studies 7−91546
$YBa_{2-x}Sr_xCu_3O_7$ high T_c supercond., struct., resist. and Meissner effect studies 7−112532
YIG domain walls, NMR relax., defect influence 7−112988
$YSr_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
Zn, vacancy migration, perturbed angular correlation studies 7−91879
$ZnGeP_2$, electron irrad., elec. and optical props. 7−111672
$ZnIn_2Se_4$, structure refinement 7−76091
ZnO, wide-gap semicond., acceptors and donors, PAC studies 7−98902
ZnO-SnO_2 mixtures, heat treatment, struct., elec. cond., green luminesc. 7−86228
ZnS, annealing of F^+ EPR centres, optical absorpt. spectral bands 7−106024
ZnS MOCVD epitaxial layers on GaAs, vacancy centres, ODMR study 7−132164
ZnS(Se):Cu, Ag, Au, impurity and cation vacancy electronic struct. 7−98873
p-ZnSe, defective electrically active acceptor centres 7−84899
ZnSe, Zn vacancy, ODMR-magnetic circular dichroism studies 7−98143
ZnSe:Cl, electron irrad. electron and hole traps, elec. compensation 7−98901
ZnTe, proton implantation induced defects, photoluminescence obs. 7−98274
ZnTe, vacancy formation energies 7−131541
Zr-Nb-based dilute alloy, electron and ion irrad., point defect clustering 7−98138
Zr-Sn, electron irradiated, influence of Sn additions on recovery, positron annihilation study 7−106302
ZrC, heat treatment, effect on defect formation and props. 7−100247

vacancies (crystal) continued
$(Zr_{0.5}Nb_{0.5})C_{0.9}$, solid solution, heat treatment, effect on defect formation and props. 7−100247
ZrO_2-Gd_2O_3, fluorite and pyrochlore phases, EXAFS studies 7−125856
ZrO_2-$YO_{1.5}$, superionic conductor, defect-induced Raman spectra 7−99857
ZrO_2(-CaO), sintering with calcia in very low O_2 partial press. 7−86110

vacancy condensation loops
metals, cubic, formation and evolution of dislocation structures during irradiation 7−76201
metals and alloys, cascade collapse to vacancy loops 7−104813
metals and alloys, void and vacancy cluster nucleation processes 7−98129
Al single crystals, vacancy generation and dislocation loops 7−91569
Al, vacancy clustering, PAC, channelling and positron annihilation studies 7−98130
Au, energetic heavy ion irrad., cascade cluster obs. 7−104871
Cu, vacancy clustering, PAC, channelling and positron annihilation studies 7−98130
Cu, vacancy complexes, form. energies, struct., computer simulation study 7−111545
Fe, vacancy complexes, form. energies, struct., computer simulation study 7−111545
Nb, alpha-irradiated and deformed, positron annihilation studies 7−76225
Ni, electron irradiated, HVEM images, rippled patterns 7−69762
Ni, pure and dilute alloy, neutron and electron irrad., defect struct., diffuse X-ray scatt. studies 7−91656
Ru, heavy-ion damage, vacancy-loop crystallography 7−111693
Sb, electron irrad., vacancies, positron annihilation studies 7−92774
Ti, cold worked, neutron irrad. damage, annealing, dislocation loops, voids 7−104848
U, neutron irrad., point defect clustering 7−98139

vacancy-dislocation interactions
HCP crystals, strained, dislocation sink strength 7−104756
loops, radiation-induced generation by inclusions 7−137391
steel, austenitic stainless, electron irrad., soln-annealed, void form. and precip. rel. to Ti, Zr and V addition 7−84031
Al, vacancy emission from and absorption to helical dislocation 7−104802
Cu, point defect-dislocation interactions following pulsed neutron and electron irradiations 7−76198
Ge, dislocation interactions with point defects following HVEM electron irrad. 7−104806
KCl:Ca^{2+}, dislocation charge, temp. and impurity dependences 7−76132
Nb, alpha-irradiated and deformed, positron annihilation studies 7−76225
V_3Si, plastically deformed, lattice defects, positron annihilation study 7−106298

vacancy-impurity interactions *see impurity-vacancy interactions*

vacuum apparatus
includes apparatus for producing, maintaining and handling vacuum per se
see also vacuum gauges; vacuum pumps; vacuum techniques
applications and present-day problems 7−121139
ASDEX Upgrade, vacuum vessel, design and fabrication 7−122087
delay circuit for protection against vacuum loss from power interruptions 7−115968
flanged joint with metal gaskets for high-vacuum appl. 7−102427
gas inlet unit for ultrahigh vacuum system 7−73374
high vacuum testing apparatus for soft X-ray examination *(Japanese)* 7−120248
high-vacuum seal for low temperatures 7−102428
ion-beam sputtering device for VUP-4 vacuum station 7−67424
isotope separator with double UHV evaporation system for simultaneous implantation and evaporation 7−67425
JT-60 vacuum vessel, vacuum quality control during assembly *(Japanese)* 7−135550
lock for inspection-window flange 7−102426
NET vacuum vessel and bulk shield design 7−135574
pyrolytic graphite resistive heating element 7−115966
R-tokamak, vacuum system design 7−74063
spectral radiation characts. meas. chamber, at high temp. 7−102494
steel, stainless, vacuum chamber, outgassing rate after filming with water 7−102422
surface spectroscopy, high-pressure reaction chamber and ultrahigh vacuum system 7−102440
temperature cycling sample holder for ultrahigh vacuum surface studies 7−102423
thin film deposition, in-situ RBS analysis, sample holder 7−115967
UHV valve protection system for National Synchrotron Light Source 7−134749
ultrahigh vacuum foreline valve 7−115969
ultrahigh vacuum system, Al alloy, design *(Chinese)* 7−102424
ultrahigh vacuum system, contamination reduction 7−102425
ultrahigh vacuum systems for storage rings and accelerators 7−81769
vapour trap for vacuum chamber of gas electron-diffraction camera 7−67341
WENDELSTEIN VII-AS expt., nonplanar coils, vacuum vessel 7−122085
Al alloy vacuum chamber, outgassing rate after filming with water 7−102422
T compatible vac. systems *(Japanese)* 7−115972

vacuum control
meas. and control of vacuum 7−140706
Roots pump, inverter regulated, pressure control in vacuum processes *(German)* 7−73375

vacuum deposited coatings
ceramic film deposition by high-power CO_2 laser beam *(Japanese)* 7−119151
condensate thickness on substrate effect of evaporation conditions 7−71012
Cr, vacuum condensates, texture 7−71204
evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
fatty acids, vacuum evaporated films, molecular orientation and growth mechanism 7−132461
ferromagnetic films supported by nonmag. interlayer, mag. positive coupling 7−132090
formation in vacuum, effect of technological parameters 7−86029
III-V semiconductor epitaxial layers, laser vacuum deposition on Si substrate 7−105334
Invar films, magneto-optical and mag. props. 7−113147
metallic island films, surface and interface struct. 7−124761

vacuum deposited coatings continued
metallophthalocyanine crystal thin films, electronic conductivity 7−99231
ophthalmic lenses, thin film coating technology 7−90753
optical coating form. kinetics, charact. props. 7−123160
optical third-harmonic generation from polydiacetylene thin films deposited by vacuum evaporation 7−97074
perylene crystalline dye thin films, electroluminescence *(Japanese)* 7−113289
phthalocyanine thin films, elec. and optical props. 7−99234
plastic ophthalmic lenses, vacuum coated, abrasion testing 7−90752
pyrazoline amorphous dye thin films, electroluminescence *(Japanese)* 7−113289
silver anthraquinone derivatives, thin films, photosensitive props. 7−125837
steel, stainless, vacuum arc coatings, corrosion eval. 7−71397
tetraphenylporphyrin ultrathin film, luminesc. quenching, depend. on SnO_2 substrate conductivity 7−106254
Ag cooled films, second harmonic generation surface enhancement mechanism 7−82707
Ag films, vacuum deposited on Langmuir-Blodgett layers, birefringence 7−106135
Ag layers, hot hollow cathode deposition, bonding to austenitic stainless steel 7−70131
Ag ultrathin films, cryst. modification, LEED studies 7−112140
Ag-SiO_2 interface, preferred orientations 7−124793
$Ag_{1-x}Cu_x$ UHV evaporated films, elec. cond., comp. and grain size depend. 7−125147
β-AgI vacuum deposited thin films, exciton-phonon interactions, dielec. function spectra meas. *(Russian)* 7−84729
n-$AgInSe_2$ vacuum evaporation and semicond. props. study 7−119154
Al coated dimpled polyester film insulation for TOPAZ supercond. solenoid cryostat 7−74303
Al films, vacuum condensates produced by ion sputtering 7−86024
Al, polycrystalline film, thickness depend. of elec. resistivity 7−70431
Al surfaces, optical constants, ellipsometric studies 7−113115
Al vacuum arc coatings, corrosion eval. 7−71397
Al_2O_3, thin film microstruct., probe by second harmonic generation 7−131468
Al_2O_3 thin films, free metallic particle conc., optical model 7−124791
Bi, film, polycrystalline, elec. transport props. 7−70434
Bi films, obliquely deposited, structure and thermoelec. props. 7−92315
Bi, island film struct., redistribution of atoms on heating 7−92022
Cd_3As_2, amorphous films, elec. and thermoelec. props 7−124996
$CdCl_2$ thin films, hydration-dehydration 7−106791
CdF_2:Eu(Er)(Sm) films, electroluminescence 7−99940
$Cd_xHg_{1-x}Te$ Hall probes, for magnetic studies of Nb_3Sn superconductors 7−73377
CdS, evaporated film, cathodoluminescence interference effect 7−70913
CdS film prep. and props., solar energy converter appls. 7−144278
CdTe films, hot-wall vacuum evaporated, optical transitions 7−70926
CdTe films, vacuum-deposited, photovoltaic effect 7−125157
CdTe pulsed laser evaporated films on glass and (100) GaAs substrates, refl. spectra 7−84560
CdTe vacuum-deposited films, anomalous photovoltaic effects study 7−143510
Co-Au amorphous thin films, prep. and mag. props. 7−85393
Co-Cr, perpendicular mag. recording media, magnetisation, Bitter and electron holography studies 7−125518
Co-Ge alloy films, vacuum deposited, struct. 7−124753
$Co_{50}Al_{50}$ alloy films, ordered and disordered, optical props. and ferromagnetism *(Russian)* 7−77669
Cr_5Si_3, amorphous films, cryst., elec. resist., TEM obs. 7−131034
$Cre_4Se_{6-x}Te_x$, amorphous films, vacuum evaporated, conductivity meas. 7−124995
Cu thin films, optical transmittance in visible region, depend. on deposition parameters 7−70924
Cu-P thin films, obs. of non-equilib. HCP phase 7−131095
Cu-Sn, thin film, surface diffusion, 90-180 °C 7−70107
Cu-Sn, vacuum condensates, phase conversion during annealing *(Russian)* 7−93042
Cu-Sn thin films, obs. of non-equilib. HCP phase 7−131095
CuAu particles, morphology and structure 7−69654
$CuIn_{1-x}Ga_xSe_2$-ZnCdS thin film polycrystalline solar cells, deposition and characts. 7−126634
$CuMSe_2$ (M=In,Ga), thin films, ESCA study, appl. for solar cells, segregation influence 7−125934
Cu_2S-CdS solar cells, vacuum deposition and constituent layers eval. 7−139115
Dy thin films, ion alloyed, corrosion, adsorption, surface topography 7−78361
Fe films, columnar struct. and texture, prep. at varied evaporation rates 7−84592
Fe monolayers on Ag, direct DC magnetisation temp. and field. depend. meas. 7−112888
Fe-Ge alloy films, vacuum deposited, struct. 7−124753
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
Ga amorphous film, UHV deposition system 7−125997
Ga-Sb-Se films, obliquely deposited, negative resist behaviour 7−116015
Ga-Te, amorphous films, structural ordering during vacuum annealing 7−97936
a-GaAs, flash evaporated films, elec. conductivity meas., conduction mechanism 7−131820
a-GaP, flash evaporated films, elec. conductivity meas., conduction mechanism 7−131820
GaP thin films, vacuum evaporated, substrate temp. depend., elec. and optical props. 7−125999
$Ga_{0.25}Te_{0.75}$ amorphous films, crystallisation 7−83721
Ge, point-contact warm carrier device for CO_2 laser detection 7−95650
Ge thin films, elec. cond., effects of electrodes and high fields 7−70439
a-Ge:H, optical properties, influence of hydrogenation *(Korean)* 7−85576
Ge/n-GaAs ohmic contacts, solid phase epitaxy of ion implanted evaporated Ge films 7−76690
$Ge_4Se_{6-x}Te_x$, amorphous films and bulk glasses, conductivity, field dependence 7−125004
In thin films, resistivity, post-deposition aging effects 7−138079
In thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
InO_x thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730

vacuum deposited coatings continued
In_2O_3 films, reactively evaporated, amorphous-to-crystalline transition 7−137759
In_2O_3 transparent conducting coating for IR region, activated reactive evaporation 7−86032
a-InP, flash evaporated films, elec. conductivity meas., conduction mechanism 7−131820
InSe amorphous thin films, AC elec. cond. hopping mechanism meas. 7−85148
In_xSe_{1-x} thin films, growth and optical props. 7−144291
$In_{2-x}Sn_xO_{3-y}$ evaporated films, transport props., temp. dependence 7−85156
$KPbI_3$-Al(Au)(Ni)(Cu)(glass), vacuum deposited films for photothermal conversion 7−85585
$K_xWO_{3+x/2}$-IrO_2 complementary electrochromic windows, optical switching 7−123134
$La_{2-x}Sr_xCuO_4$ thin films, supercond. props., diamag. transition 7−118613
LiF, films, surface phonons 7−143170
LiI-PEO mixture polymer electrolyte film, ionic cond., comp. and temp. depend. studies 7−84386
Mg_2SiO_4 coatings on Si wafers, laser evaporation, morphology 7−71027
Mn/SiO composite thin films, spectral selectivity meas. 7−138528
MnBi films, preparation, magnetic and magneto-optic props. 7−99533
$(MnFe)_{100-x}Bi_x$ evaporated films, microscopic struct. and mag. props. 7−112871
Mo vacuum condensates, struct., elec., and optical props. *(Russian)* 7−70109
Mo-GaAs Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
NaF films, surface phonons 7−143170
Na_3Sb thin absorbing films, optical method for heterogeneity analysis 7−113298
Nb-Sn thin film, A15 supercond., sp. ht. meas. 7−112662
NbN sputtered coatings on practical substrates, high field supercond. props. study 7−131957
Ni, fracture characteristics 7−78212
Ni, vacuum arc coatings, corrosion eval. 7−71397
Ni/Au metallisation layers, porosity 7−118311
Ni-Al_2O_3 system, vacuum condensates, struct., porosity rel. to annealing time 7−132460
Ni-Fe-P oxide system amorphous thin films, struct. and mag. props. 7−112872
Ni-Ge alloy films, vacuum deposited, struct. 7−124753
Ni-SiO, composite, fracture characteristics 7−78212
Ni_xFe_{1-x} evaporated thin films, structural and mag. props., studies 7−98736
$NiFe_2O_4$ ferrite films, growth on MgO substrates 7−100101
Pb-Te-Se optical recording film, oxidation resistance, comp. depend. study 7−144569
PbF_2, optical props., 2-12 μm 7−92760
PbSe films, vacuum, evaporated and chemically deposited samples, effects of thermal annealing 7−92036
n-PbTe films, effect of γ-irrad. on thermoelectric props. 7−84955
PbTe films, γ-irrad., elec. props., dose depend. 7−112520
Sb_2S_3 film, space-charge limited cond., dark cond. temp. depend., trap density 7−131817
Sb_2S_3, vac. deposited films, space charge limited cond. 7−99074
Sc thin films, optical props. 7−99958
Se, amorphous films, light-induced structural transformations 7−124324
Se thin films, form. and growth, substrate temp., evaporation times 7−105322
Se, vacuum-deposited thin films, optical props., direct transmission spectra meas. 7−76657
$Se_{80}Te_{20}$, polycrystalline thin films, vacuum deposition, amorphous-crystalline transition, elec. cond. 7−112331
Si implantation in GaAs(GaAsP) by 7 MeV electron beam doping 7−117961
a-Si thin films and solar cells, light-induced effect 7−144826
a-Si:H films, evaporated, elec. props., hydrogenation effects 7−70360
a-Si:P evaporated films, ion implanted, localised defect density of states determ., dose depend. 7−76829
Si-Ge multilayered structs., Bi ion range distributions 7−119085
Si-SnO_2, polycrystalline solar cell, antireflection coating investig. 7−126621
SiC thick films, vacuum deposited, friction and frictional tracks 7−113728
SiO_2-Ag(Cu), energy efficient coating props. study 7−125995
SiO_x thin films, obliquely evaporated, columnar struct., depend. on deposition angle and condensation rate 7−84570
SiO_x:TbF_3 films, comparative study of doped and undoped samples, comp., struct., elec. and optical props. 7−105332
Sn thin-film optical memory device reflectance and transmittance variation obs. *(Korean)* 7−82730
SnO_x, artificial dielectric films on crystalline quartz, optical props. 7−125839
$Sn_2P_2Se_{6-x}S_x$ evaporated thin films optical consts. near ferroelec. transition 7−85869
Ta-GaAs Schottky contacts, electron beam and sputter deposited, stability of elec. and struct. props. 7−118553
TbFe, evaporated films, deposition angle depend. of microstructure and magneto-optical props. 7−125704
Te, room temp. semiconducting props. 7−70433
Te thin films, elec. cond., effects of electrodes and high fields 7−70439
Ti films, evaporated, oxidation, surface struct. 7−113776
Ti, thin films, struct. and optical props. meas. 7−144136
Ti-MgO composite films, electron microscopy 7−70139
Ti-V amorphous alloy film, UHV deposition system 7−125997
TiC coatings, D ion bombardment, thermal cycling, fatigue, comp. analysis 7−84046
TiN, vacuum plasma condensates, special features of substruct. 7−86028
TiO_2/SiO_2 dielectric multilayer reflector for GaAs surface-emitting laser 7−110380
TiO_2-Ag(Cu), energy efficient coating props. study 7−125995
Tl-S, thin film formation, amorphous and crystalline 7−70111
Tl_2S, vac. deposited film, electron diffr. examination 7−76662
V films, vacuum evaporated, struct. and optical props. 7−143269
V-Ag multilayered structures, proximity coupled, upper crit. field meas. 7−99372
V-Ga thin film, A15 supercond., sp. ht. meas. 7−112662
V-Si thin film, A15 supercond., sp. ht. meas. 7−112662
$V_{0.93}Al_{0.07}$ thin films, struct. and resist. saturation 7−131809

vacuum deposited coatings continued
VO_2 thermochromic films for energy efficient windows 7—125994
VO_2 thin films, optical contrast at semiconductor-metal transition 7—70927
WO_3, high contrast layers, electrochromic response time 7—144025
WO_3-IrO_2 complementary electrochromic windows, optical switching 7—123134
$YBa_2Cu_3O_x$ supercond. thin films, high T_c, prep. and transition temps. 7—131469
YSi_{2-x}-Si, epitaxial silicide, vacuum annealing 7—124740
Zn complex, 2,3-naphthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7—92758
Zn complex, phthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7—92758
ZnP_2, amorphous layers, thermal evaporation, struct. 7—92019
Zn_3P_2 films, grown by close space evaporation, props. 7—125993
Zn_3P_2 films, vacuum deposited, structural, optical, elec. charactn. 7—105737
Zn_3P_2, flash evap., growth morphology and opt. props. 7—100086
Zn_3P_2 vacuum evaporated films, appl. photoelectrochemical solar cells 7—126636
Zn_3P_2/Mg Schottky barriers, vacuum-deposited, gap states, admittance spectroscopy 7—112434
ZnS, optical props., 2-12 μm 7—92760
ZnS-SmF_3 thin films, electrolum. characts. *(Russian)* 7—77658
ZnS(Se), metalorganic MBE growth 7—131476
$ZnSnP_2$, vacuum grown thin films, characterisation 7—112137
ZnTe films, optical props. 7—99951
ZnTe, vac. evaporated films, electrical cond. meas. 7—118598
Zr vacuum condensates, Auger spectrum, comp. and elec. resist., effect of O *(Russian)* 7—92309
ZrO_2-Y_2O_3 films, growth on GaAs (100) by pulsed laser evaporation 7—125992

vacuum deposited thin films *see vacuum deposited coatings*

vacuum deposition
used for EVAPORATED layer production in vacuum
see also electron beam deposition
amorphous transition metal alloy films, UHV deposition system 7—125997
antireflection coating, optical monitoring strategies rel. to reproducibility of completed layer systems 7—104066
copper phthalocyanine polymer film, form. by double source evaporation 7—100174
evaporation monitoring system featuring 'software' trigger points and on line evaluation of refractive indices 7—104065
film, vacuum condensation kinetics, independent lateral and normal growth 7—76703
ion plating, evaporated material transport through support, expt. 7—100120
ion plating, evaporated material transport through support, Monte Carlo calc. 7—100121
magnetic materials, deposition and charact. 7—118294
microgravity physical vapour transport expt., vacuum outgassing and gas phase thermal conduction 7—138664
nuclear targets conference, Chalk River, Ont., Canada (Sept. 1986) 7—108020
optical coating automated processes with optical thickness monitoring 7—104063
optical components, US precision cleaning prior to and after vacuum coating 7—104067
optical film deposition, sorption processes 7—104060
optical thickness monitoring fully automated system for thin film prod. 7—104064
optical thin films, vacuum evaporation technology 7—141967
organic semiconductors, effect of KCl substrate treatment *(Japanese)* 7—77829
parafluorocarbonic acid, deposition method *(Japanese)* 7—77828
phthalocyanine, effect of KCl substrate treatment *(Japanese)* 7—77829
1-pyrenyldodecanoic acid and styrene, mixed membranes *(Japanese)* 7—77828
quartz sensor of film thickness, sensitivity 7—102399
sources for metal-loaded polymer films prepared by vacuum evaporation 7—77795
stimulation of processes at the surface by ion irradiation 7—138567
thin films, vacuum deposition from cylindrical crucible *(French)* 7—126001
Ag layers, hot hollow cathode deposition, bonding to austenitic stainless steel 7—70131
n-$AgInSe_2$ vacuum evaporation and semicond. props. study 7—119154
Al black films, vacuum deposition, struct. and optical props. 7—132470
Al films, vacuum evaporation on PET substrates, texture anal. 7—113398
Al-Mg alloy, thermal evaporation, time depend. regular solution model 7—119149
Al-Mn icosahedral films, vapour deposition and struct. 7—118313
Al-Si (100), Schottky barrier formation using nozzle jet beam deposition 7—77802
As_2S_3-Zn, photostimulated change in Zn deposition rate 7—100077
AsSeBr, glass formation, preparation, microhardness studies 7—144358
Au film, annealing, hillock and island formation, hole density and growth rate 7—143246
Au, film, deposition, on GaAs, thermal evaporation 7—106416
$BaCl_2$, thin film, preparation as chlorine target 7—109569
BiSeI, glass formation, preparation, microhardness studies 7—144358
Bi_2Te_3-Sb_2Te_3(Bi_2Se_3) thermoelectric materials, vacuum deposition 7—71036
C stripping foils, electron diffraction study of structure 7—109578
Cd_3As_2 films, pulsed laser evaporated, elec. props. and lattice parameters 7—71039
Cd_4GeS_6 films, deposition using discrete thermal and pulsed laser evaporation, struct. 7—76665
$Cd_{0.96}Mn_{0.04}Te$, high energy electron and ion ejection during pulsed laser evaporation 7—85902
CdS film prep. and props., solar energy converter appls. 7—144278
CdS thin film growth for SAW appls. 7—100089
n-CdTe films, vacuum-evaporated, preparation and conductivity 7—71038
CdTe high-cond. n-type vacuum deposited films, formation and props. 7—100076
$^{248}CmF_3$, deposition on C foils for nuclear target fabrication 7—109572
Co-Au amorphous thin films, prep. and mag. props. 7—85393
Cr-SiO cermet thin films, prep. and elec. props. 7—132469

vacuum deposition continued
CuIn-Se_2-CdZnS solar cells, health and safety aspects in research and production 7—86801
$CuInSe_2$ film, amorphous, deposition, conductivity and energy gap 7—137928
Er_2O_3—$CdS_{1-x}Se_x$, TFTs, fabrication and characterisation 7—100087
GaAs film growth by vacuum chemical epitaxy using thermally precracked trimethyl arsenic 7—119147
GaAs, vacuum chemical epitaxial growth for multi-band-gap solar cells 7—132468
GaAsP, vacuum chemical epitaxial growth for multi-band-gap solar cells 7—132468
GaAsSb, vacuum chemical epitaxial growth for multi-band-gap solar cells 7—132468
Ge, amorphous films, influence of growth conditions 7—131484
Ge, high rate vacuum evaporation from heated graphite crucibles 7—106422
In film, ion-enhanced deposition using low energy In ion source 7—86033
In, growth shapes of metallic crystals and roughening transition 7—98011
InSb, high energy electron and ion ejection during pulsed laser evaporation 7—85902
InSb thin films, application and properties for highly sensitive magnetoresistance elements *(Japanese)* 7—125158
Li, thin film, preparation of ^6Li nuclear targets 7—109570
Li_2O-B_2O_3 films, vacuum deposition, evaporation and condensation mechanism *(Japanese)* 7—100082
Mg_2SiO_4 coatings on Si wafers, laser evaporation, morphology 7—71027
Mn-Bi films, prep. by multilayering, write-in characts. 7—143870
MoN_x films, formation by ion beam and vapour deposition method 7—92875
Nb vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7—144280
Ni-Al_2O_3, vacuum condensates, struct. and porosity, 1170 K 7—84564
P_3N_5, vacuum deposition preparation for nuclear target 7—109568
Pb, growth shapes of metallic crystals and roughening transition 7—98011
Pb thin film deposition, target for ^{210}Pb nuclear spectroscopy 7—109571
PbS, films, laser assisted deposition, thickness, struct., elec. props. 7—77827
PbS, photosensitive layers, formation, depth conc. profiles 7—77831
PbS thin films, vacuum deposition rate effects on struct. 7—106420
PbSe, films, laser assisted deposition, thickness, struct., elec. props. 7—77827
PbTe films, hot wall vapour deposition 7—92873
PbTe, films, laser assisted deposition, thickness, struct., elec. props. 7—77827
SbSI, glass formation, preparation, microhardness studies 7—144358
Se thin films, form. and growth, substrate temp., evaporation times 7—105322
a-Se/Cd_xSe_{1-x} multilayer films, preparation and optoelectronic props. 7—125985
Si beam deposition, atomistic simulation 7—124781
Si, deposition on electron irradiated Si (100) 7—77832
a-Si p-i-n solar cells, deposition using photo-CVD reactor 7—119156
Si, porous, anodised, direct evaporation of noble metals 7—143285
a-SiN_x:H film formation, NH_3 adsorption on Si surfaces 7—118273
Sn, high rate vacuum evaporation from heated graphite crucibles 7—106422
Sn island film growth kinetics 7—124762
SnO_2:Sb(In), film, reactively evaporated, prep. and props. 7—112518
TiN based protective films production with use of cylindrical low energy ion gun and charact. 7—71040
W and refractory metals, VLSI appls., conf., Palo Alto, CA, USA (Nov. 1986) 7—108045
Y_2O_3 vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7—144280
ZnO films, transparent and conducting, activated reactive evaporation 7—119150
Zn_3P_2, flash evap., growth morphology and opt. props. 7—100086
ZrCo amorphous films, formation by solid state reaction 7—86036
ZrO_2 films, ion-assisted deposition, ion scattering spectroscopy 7—77835

vacuum gauges
see also ionisation gauges; manometers; vacuum measurement
absolute calibration of small gas amounts 7—134788
calibration and performance of capacitance diaphragm gauges 7—121049
calibration by combination of expansion and pumpdown methods 7—134784
double-beam integrated thermal vacuum sensor 7—134793
electrostatically suspended spinning rotor gauge, feasibility study 7—134798
extractor gauge, design, operation 7—134785
long-term stability, German calibration service 7—134795
passive levitation of small particles in vacuum: possible applications to vacuum gauging 7—134794
quartz friction gauge with self-oscillatory circuit, design, testing 7—134786
quartz oscillator-based, impedance dependence on gas pressure determ. 7—134792
thermal transpiration effect, quantitative study 7—115974
thermoelectric vacuum gauge, pressure meas. accuracy increase 7—134796

vacuum measurement
see also vacuum gauges
absolute calibration of small gas amounts 7—134788
control and meas. of vacuum 7—140706
double-beam integrated thermal vacuum sensor 7—134793
high vacuum pumps, pumping speed measurement, recommended procedure 7—134766
hot filament ionisation gauge, ion drift vel. for press. indication 7—128588
laser ionisation method 7—95604
multiple head residual gas analyser for Daresbury SRS electron storage ring 7—134754
NSLS, UV and X-ray rings, vacuum performance 7—135690
partial and total pressure meas. techniques *(German)* 7—102438
precision differential capacitance manometer 7—67344
pressure and leak standards, low-range flowmeters 7—115975
residual gas analysers and their use in high vacuum systems 7—134753
residual gas analyzers, channel electron multipliers, mass-depend. effects 7—134748
spinning rotor gauge technique, international comparison 7—134789
spinning-rotor gauge, low pressure standards, calibration, report 7—80725

vacuum polarisation *see quantum electrodynamics*

vacuum pumps
see also cryopumping; diffusion pumps; ion pumps
applications and present-day problems 7−121139
backing pump fluids, selection, analytical monitoring for semicond. processes 7−134764
conference, vacuum science, technology, appl., Glasgow, Scotland (March 1986) 7−134358
high gas loads in UHV systems, CERN LEAR experience 7−134781
high vacuum pumps, pumping speed measurement, recommended procedure 7−134766
high vacuum pumps, will tomorrow's be universal or specialized 7−134765
hydrocarbon pumping by nonevaporable getters 7−134773
leak detector design methods and appls. *(German)* 7−102430
long baseline gravitational wave detector, vacuum system 7−134757
magnetic-discharge pump, power supply overload protection 7−121137
mechanical high-vacuum pumps with an oil-free swept volume 7−134779
methane pumping by ionisation assisted Zr/Al getter pump 7−134772
molecular pump, structure and performance study 7−134776
oil-sealed rotary vane vacuum pumps, CVD appls., safety aspects *(German)* 7−140707
primary vacuum pumps for fusion reactor fuel cycle 7−96322
Roots, inverter regulated, pressure control in vacuum processes *(German)* 7−73375
single stage centrifugal pumps, performance in rough vacuum 7−134778
spent fluids, reclamation 7−102434
system selection program, PACE 7−134761
technology selection, systematic approach 7−134762
triode ion pump for UHV system, pumping speeds for various gases *(Chinese)* 7−102424
turbo-molecular pump, wide pressure range, with active mag. bearing *(Japanese)* 7−67343
turbomolecular pump rotor balancing techniques 7−134763
turbomolecular pumps in manufacturing plants 7−134758
turbomolecular vacuum pump, rotor characteristics calc. 7−102433
ultrahigh vacuum combination pump 7−134774
Si_3N_4 ceramic rotor for turbomolecular pumps for fusion appl. 7−134777

vacuum sintering *see sintering*

vacuum techniques
includes techniques for producing, maintaining and handling vacuum per se
see also cryopumping; getters
absolute calibration of small gas amounts 7−134788
applications and present-day problems 7−121139
CAD and computer-aided analysis appl. 7−134464
CERN, ultra-vacuum enclosures, fabrication *(French)* 7−102432
CERN SPS, vacuum chambers in composite material 7−135703
creep testing including US vibr. effect, vac. set-up with thermal control 7−132870
CRYRING ion accel/storage ring, ultrahigh vacuum considerations 7−135696
diffusion coefficients of metal-H systems, high-vac. setup with mass spectrometric attachment 7−73463
dilatometry in 10-400 K range, cryogenic vacuum system 7−140665
double-crystal monochromator, UHV, for synchrotron radiation, construction and use 7−134904
gas desorption mechanism principle and meas. 7−137709
getters role 7−134755
history of vacuum physics, Otto von Guericke (1602-1686) in memoriam 7−134413
Indian nuclear and space programs, status and development 7−134747
ion physics, conf., Debrecen, Hungary (Oct. 1985) 7−115686
leak detector design methods and appls. *(German)* 7−102430
LEP preinjector vacuum systems 7−135691
low energy accelerator vacuum requirements 7−135722
magnetic fluid seals, design problems and appls. 7−73373
meas. and control of vacuum 7−140706
medial applications 7−139391
microgravity physical vapour transport expt., vacuum outgassing and gas phase thermal conduction 7−138664
numerical modelling, using electronic cct. analysis tools 7−134463
outgassing rates meas. from Ti-Mo alloys wire, using quadrupole mass spectrometer 7−134751
permeation apparatus for H_2, UHV 7−121138
photon stimulated desorption in vacuum duct, angular distrib. obs. using unidirectional detector 7−135693
precision calibration of a static pressure divider by means of a spinning rotor gauge 7−134750
push-button controlled high-vacuum baffle valve, design and performance 7−80809
quartz-crystal microbalance apparatus for water sorption by polymers 7−137708
scientific organisations in vacuum science, IUVSTA, history 7−140407
self-maintained reed chopper for beam modulation in UHV 7−82392
Shimadzu gas pressure quenching vacuum furnace PHG series *(Japanese)* 7−67307
solids study by radiation physics, apparatus for comprehensive meas. 7−108732
surface and vacuum science, conference, Baltimore, MD, USA (Oct. 1986) 7−140358
UHV sample mount for the temperature range 10-1300 K 7−102429
ultrahigh vacuum quenching for vacancy cluster formation *(Japanese)* 7−138762
vacuum chamber ConFlat joints, reliability limits in ultrahigh vacuum 7−135694
vacuum valve, 12×4 ft, development for laser isotope separation chamber 7−134752
variable energy cyclotron, quadrupole residual gas analyser appl. 7−126498
Ti alloys, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7−144595

vacuum tubes
see also diodes; tetrodes; triodes
arcs, low-current behaviour and current chopping 7−130969
low energy electron beam generator for irradiation tests 7−74313
modulator, vacuum-tube, for Q-switching in solid-state lasers 7−68830
X-ray source, miniature, based on vac., discharge 7−67454

valence bands
4f systems, antiferromagnetically ordered, valence instability, mag. transitions 7−77302
alkaline earth oxides, cryst. cluster SCF-X_α-RW method calcs. 7−143344
β-carotene, conducting, UPS meas. 7−70982
chalcogenide glass, Bloch-type extended states, tail and gap states 7−143459
cubic semiconductor, degenerate valence bands, interband electronic Raman scatt. 7−125720
cubic semiconductor, quantum-sized film subband struct., strain-induced changes 7−77118
direct gap semiconds., Auger lifetime, anisotropy and valence band warping effects calcs. 7−84927
exciton line broadening in solid solns. with degenerate valence band 7−143367
formate species on Cu (110), struct. and electronic energy levels study 7−105651
gapless semiconds., population inversion by optical interband pumping *(Polish)* 7−137955
graphite-H_2SO_4 intercalation cpd., interband absorpt. edge, reson. Raman spectra 7−85699
I-III-VI_2 compounds, electron energy structure 7−143337
inversion layers, p-type, Landau levels, nonlinear mag. field dependence 7−131773
metallic glasses, bulk and surface electronic struct. 7−98790
metals, local excitations, photoemission spectra 7−131531
metals, plasmon oscills., analytical expression for total number of participating electrons 7−70229
mobility edge, review 7−131520
narrow band gap semicond., interband magneto-optical transitions 7−92646
narrow gap semiconductors, interband magneto-optics 7−125711
narrow gap semiconductors, magnetophonon effect in high elec. fields *(German)* 7−125030
narrow-gap semiconductors, inversion layers, subband levels broadening by interband tunnelling 7−77094
phenyl-containing polymers, conducting, UPS meas. 7−70982
poly-p-phenylene sulphide, conducting, UPS meas. 7−70982
poly-p-phenylene vinylene, conducting, UPS meas. 7−70982
polyacetylene:I, optical props. and valence to conduction band transition 7−70790
polyanilines, photoelectron spectroscopy relevant to chemical and electronic struct. 7−70984
polydimethylsilane, conducting, UPS meas. 7−70982
polymers, quasi-one-dimensional conductors, bipolaron lattice theory 7−98998
polyphenylenevinylene, IR and visible absorpt. spectra, doping effects 7−70796
quantum wells, exciton binding energy, variational-perturbational approach 7−105409
rare earth metals, core level spectra, 4f level occupancy, Coulomb interactions and hybridisation effects 7−144247
semiconductor alloys and superlattices, band bowing, effective mass model 7−112182
semiconductor heterojunction (110) interfaces, band discontinuities, tight-binding calc. 7−85095
semiconductor heterojunctions, valence band offsets, ab initio pseudopot. calcs. 7−77054
semiconductor interfaces, band offset model calcs. 7−105687
semiconductor interfaces, envelope functions derived from Bastard model, continuity conditions 7−138040
semiconductors, tunnelling in k-space, appl. to degenerate valence band in infinite spin-orbit interaction limit 7−105584
semiconductors, valence electron density change at impurity centre 7−92101
semiconductors, wurtzite, acceptor-associated bound mag. polaron, cryst.-field model 7−118380
solid-solid interfaces, spectroscopic anal. of electron states *(French)* 7−112417
strained layer superlattice, band struct. engineering for maximal light-hole behaviour 7−99189
transition metals, 3d, valence-band photoemission, absence of two-electron resonances 7−125911
Ag overlayer on Cu (001), 3D valence band struct. development, ARPES obs. 7−125068
Ag, positron annihilation rate enhancement 7−138541
$AgGaS_2$, uppermost valence bands splitting by crystal field and spin-orbit interactions 7−76831
Ag_xTaS_2, intercalated cpd., photoemission studies 7−77761
Ag_xTiS_2 films, intercalation, UPS studies 7−143270
Al-Sb interface form., struct., electronic states, photoelectron spectra study 7−106363
AlAs-GaAs, valence-band offsets, role of d orbitals 7−118574
AlGaAs-GaAs laser material, valence-band discontinuity determ. 7−124858
AlLiCu quasicrystalline Hume Rothery alloy, electronic and cryst, struct. studies *(French)* 7−131028
AlX (X=P,As,Sb) based heterostructs., band discontinuity modeling, modified Harrison model 7−138053
As_2S_3-Ge system, glassy chalcogenide semiconductors, band gap edges 7−70174
Au complex, β-bis(ethylenedithio)TTF $AuCl_2$, intermol. interactions, electronic and elec. props. 7−92063
$BaLaGa_3O_7$:Nd single crystals, X-ray emission lines, valence band 7−92783
$Ba_2YCu_3O_7$ high T_c supercond., electronic struct., XPS meas. 7−98799
$Ba_2YCu_3O_{9-\delta}$, valence band photoelectron spectra studies 7−106367
$Bi_{2-x}Sb_xTe_3$ films, transport props. and valence band edge struct. studies 7−138083
C glassy layers, optical and electrical energy gap investig. 7−84651
Cd_3As_2, magneto-optical props., circularly polarised radiation, interband transitions 7−106142
$Cd_{1-x}Hg_xTe$, inverted contact and linear zero-mass spectrum 7−85097
$Cd_{1-x}M_xF_2$ (M=Ca,Pb,Mn) crystals, electronic structure, photoemission studies 7−105401
$Cd_{1-x}Mn_xTe$, fundamental reflectivity spectra, influence of 3d Mn electrons 7−70832
$Cd_{1-x}Mn_xTe$, Mn-derived partial density of states 7−70159
$Cd_{1-x}Mn_xTe_{1-y}Se_y$, energy gap, valence band struct. 7−76771
$Cd_{1-x}Mn_xZ$(Z=S, Se, Te) 3d partial density of states, p-d hybridisation, photoemission study 7−92834

valence bands continued
CdSe, wurtzite, valence and cond. band electronic struct., UPS, inverse photoelectron spectra studies 7−70189
CdTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe/ZnTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe-HgTe, valence-band offsets, role of d orbitals 7−118574
CdTe-HgTe heterojunctions, valence band discontinuity, face orientation depend. 7−85072
CeO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
Cu (001), photoelectron distribs., reciprocal space imaging 7−85950
Cu, positron annihilation rate enhancement 7−138541
$CuFeO_2$:Mg(Sn), photoconductivity, band edge positions, optical transitions 7−84990
$CuGaSe_2$, photoconductivity, valence band struct. 7−125054
Fe-Al-Si alloys, X-ray spectra and chem. bond. 7−137318
Fe(100), adsorbed Gd films, spin- and angle-resolved photoemission study 7−125916
GaAs films on Si, photoluminescence and photoluminescence excitation spectra 7−85846
GaAs modulation doped quantum well structs., valence band mixing, polarized luminesc. obs., uniaxial stress effects study 7−77079
GaAs:Si MBE layers, valence band structs., UPS study 7−132406
$GaAs/Al_xGa_{1-x}As$ quantum wells, electronic and optical absorpt. props. in elec. field 7−70398
GaAs/AlAs superlattices, local density valence band offset 7−125092
$GaAs-Al_xGa_{1-x}As$ undoped quantum well in electric field, excitonic spectrum 7−84691
GaAs-AlAs heterojunctions, valence band discontinuity, face orientation depend. 7−85072
GaAs-AlAs heterojunction valence-band discontinuities, tight-binding calcs. 7−125094
GaAs-AlAs superlattices, self-consistent electronic props. 7−85082
GaAs-AlAs superlattices, electronic struct., folding effects 7−118571
GaAs-AlGaAs quantum well with compositionally graded interface, energy levels, envelope function approx. 7−92272
p-GaAs-AlGaAs superlattice, hole band struct. and excitons, cyclotron reson. study 7−138060
GaAs-GaAlAs modulation doped quantum wells, Landau levels, magnetolumin. 7−85835
GaAs-GaAlAs quantum wires, valence levels 7−85085
GaAs-InGaAlP heterojunctions, interface props., study by capacitance-voltage profiling technique 7−92259
GaAsSb-InAs lattice matched system, band gap, spin-orbit splitting 7−77069
GaInAs-InP, quantum wells, magneto-optics and strain effects 7−85609
GaInAs-InP superlattices, band struct., self-consistent pseudopotential method 7−112473
GaSb, intraband absorpt. study 7−113218
GaSb, spin relax. of photoexcited holes in spin-orbit-split valence band 7−99933
$GaSb/Al_xGa_{1-x}Sb$ quantum well heterojunction, band offsets, common anion rule, light scatt. obs. 7−77084
GaSb/AlSb heterojunction, valence-band discontinuity, XPS core-level spectra 7−105672
GaSb-AlSb, semiconductor superlattices, optical properties *(Polish)* 7−132220
GaSb-AlSb quantum wells, optical transitions, omission spectra 7−85832
GaSb-InSb semiconductor superlattices, optical properties *(Polish)* 7−132220
Ge (111), adsorption and growth of Ag and Au, photoelectron spectra, RHEED 7−85945
Ge, bicrystals, magneto-transport props., grain boundaries 7−131690
Ge, clusters, supersonic beam, TOF UPS 7−117109
Ge, electron-hole plasma, exchange and correlation energy 7−92091
Ge, piezoresistance, mobility anisotropy, deformation potentials of valence band 7−106087
a-Ge:As^+, ion implanted, valence band density of states 7−84628
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
$Ge_xSb_yS_{100-x-y}$:In(Ag), glasses, influence of In (Ag) atoms on optical and electrical props. 7−137924
HfN_x films, XPS spectra, nonstoichiometry effects 7−85953
$Hf_xTi_{1-x}Se$, photoemission and transport studies 7−85943
$Hg_{0.8}Cd_{0.2}Te$, subband physics in electric quantum limit 7−138001
$Hg_{1-x}Cd_xTe$ (100) surface states, surface enhanced alloy effects, site depend. CPA calc. 7−85029
HgTe/CdHgTe superlattices, anomalous confinement effects, pseudopot. calcs. 7−105688
HgTe-CdTe, heterojunction, valence band offsets 7−131767
HgTe-CdTe heterojunction valence-band discontinuities, tight-binding calcs. 7−125094
HgTe-CdTe superlattices, electronic props. 7−118580
InAs/GaSb heterojunction valence band discontinuity determ., X-ray photoemission core level spectra 7−105679
InAs-GaSb superlattices, optical props. hydrostatic press. 7−138434
InGaAs/GaAs superlattices, conduction and valence band strain effects estimates 7−85077
InP, spin relax. of photoexcited holes in spin-orbit-split valence band 7−99933
$InP-Ga_{0.47}In_{0.53}As$ heterojunctions, band offsets, meas. by admittance spectroscopy 7−112446
$InP-Ga_xIn_{1-x}P$, surface quantum wells 7−118559
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
$(La_{1-x}Ba_x)_2CuO_4$ high T_c supercond., monovalent Cu-induced O 2p valence band holes 7−124856
$La_{2-x}Ba_xCuO_4$ high T_c superconductor, orthorhombic phase electronic struct. study 7−118364
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., X-ray photoelectron spectra study *(Russian)* 7−132404
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., electronic struct., photoemission meas. 7−99271
LiF, fluoresc. emission spectra study using synchrotron radiation 7−113277
$Mn_{1-x}Te_x$ liqs., elec. cond., thermopower and electronic struct. studies 7−105562
valence bands continued
MoS_2, angle resolved photoemission and electronic band structure 7−138609
$MoSe_xTe_{2-x}$ electrodes for photoelectrochem. solar cells, valence and conduction bands 7−85101
MoX_2 (X=Se,S), electronic struct., band struct. calcs., photoelectron spectra 7−84675
$NaWO_3$, electronic band struct., self-consistent semirelativistic LMTO calcs. 7−105400
$Nb_2(C,N)_xH_y$, electronic struct., interatomic interactions, by cluster MO method 7−70186
NiAs, valence band density of states, photoemission data and LMTO calc. 7−98771
$(Ni_{1-x}Fe_x)_{77}Si_{10}B_{13}$ metallic glasses, valence bands, XPS obs., many-electron effects 7−119107
NiI_2, resonant photoemission 7−138603
NiO, mixed electronic states, mag. moments, XANES study 7−144180
NiX_2, X=F,Cl,Br,I, mixed electronic states, mag. moments, XANES study 7−144180
Pb monolayers on Ge (111), photo-emission study of valence band 7−125914
PbSe laser-deposited films, IR absorpt. and electronic struct. props. 7−77672
PbSe, n- and p-type, hole cond. and defect form. 7−76932
$Pb_{1-x}Sn_xTe$, inverted contact and linear zero-mass spectrum 7−85097
PbTe quantum well, band offset, cyclotron reson. determ. 7−70373
PrO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
Pt-Al_2O_3 interface, XPS study, deposited Pt particles on α-Al_2O_3 7−100015
$Ru_{1-x}Nb_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
$Ru_{1-x}V_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
Si (111), adsorption and growth of Ag, photoelectron spectra, RHEED 7−85945
Si, clusters, supersonic beam, TOF UPS 7−117109
Si, electron-hole plasma, exchange and correlation energy 7−92091
Si, hexagonal site self-interstitial impurity state, pseudopot. electronic struct. calcs. 7−76806
a-Si:H films, plasma deposited, electronic struct. 7−76747
a-Si:H-Ge:H superlattices, band edge alignment, quantum size effects 7−131764
a-Si:H-SiO_x:H, ultrathin layers, photoemission spectroscopy 7−125909
Si/CaF_2 interface, bonding and struct., photoemission studies 7−105295
Si/Cr interface, silicide form. on annealing, electronic and struct. props. 7−84541
SiC, surface and bulk valence band photoemission 7−113349
a-$Si_{1-x}C_x$:H films, valence electron props., UPS, EELS studies 7−85941
a-$SiN_{1.4}$:H/a-Si:H band offset and electronic struct., AES, XPS and IPES studies 7−92300
SiN_x, nonstoichiometric, electronic struct., soft X-ray emission spectra study 7−125861
$Si_{1-x}N_x$, amorphous, electronic struct., defect states, optical absorpt. 7−124930
SiO_2/Si interface, anomalous bonding configurations, UV photoemission spectra study 7−118283
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
SnTe, effective mass, conc. depend., two-valence bands model calcs. 7−98784
TbO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
$ThPt_3$, valence level photoelectron spectra 7−106362
Th_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
TiNi-TiPd intermetallic compound system, valence band evolution and structural instability 7−84659
TiO_2 (110) Ti-rich surfaces, spectral, cond. and annealing studies 7−85041
$TiSe_2$, photoemission spectra, final-state effects 7−144233
UAu_3, valence level photoelectron spectra 7−106362
UO_2 (111), valence-band photoemission near 5d reson. photon energy 7−92831
UPt_5, valence level photoelectron spectra 7−106362
USn_3, valence level photoelectron spectra 7−106362
U_3X_4 (X=P, As, Sb), electronic struct., external hydrostatic press. depend. 7−76772
U_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
V $(C,N)_xH_y$, electronic struct., interatomic interactions, by cluster MO method 7−70186
WSe_2, electronic struct., band struct. calcs., photoelectron spectra 7−84675
Xe (111), valence and conduction bands, spin-polarised photoemission studies 7−118549
Y-Ba-Cu-O high T_c supercond., $L_{2,3}$ XANES studies 7−125855
$YBa_2Cu_3O_7$, high T_c superconductor, UPS, reson. photoemission studies 7−106368
$YBa_2Cu_3O_7$ high T_c supercond., valence band and O(1s) region photoemission studies 7−144241
$YBa_2Cu_3O_x$ high T_c supercond. and semicond. samples, electronic struct., stoichiometry effects 7−143342
$Y_1Ba_2Cu_3O_7$ high T_c superconductor, valence electronic struct. study 7−143341
$Y_{2-x}Sr_xCuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
Zn_3As_2, MBE growth on InP or GaAs 7−77822
Zn_3As_2, optical transitions below fund. absorpt. edge, IR spectra 7−92649
Zn_3P_2 vacuum evaporated films, appl. photoelectrochemical solar cells 7−126636
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe/Al/Ge heterojunction with monolayer intralayer, tight-binding calcs. 7−99203
ZnSe-MnSe-ZnSe heterojunctions, valence band discontinuities, UPS meas. 7−112445
ZnTe, acceptors, electronic Raman scatt. 7−113182
ZnTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078

valence bond calculations *see VB calculations*
valence fluctuations *see mixed valence compounds*
valency
atoms, valency and softness in molecules, bond index statistical interpretation 7−116814
binary oxide compounds, prediction of gross formulae 7−98062
chlorobenzenes, isomers, bond orders, valence indices, oxidation numbers, ab initio calcs. 7−96527
fractional valency donor-acceptor molecular crystals, ground state degeneracy and slip energies 7−105443
lanthanides and actinides, electronic models, historical perspective 7−72760
oxides, high T_c superconductors, Cu valence, XPS core level spectra 7−125930
rare earth iron and cobalt borides with $Nd_2Fe_{14}B$ structure 7−76100
rare earth-transition metal-Si(Ge) systems, valence, EXAFS and X-ray studies 7−77689
substitutional impurity near a surface, segregation energies 7−91941
ternary chalcopyrite semiconductors, defect chemistry 7−124250
transition metals, valency or ligands, ESR dating appl. 7−108602
$Ba_2RCu_3O_7$, (R=Y,Er,Ho), high T_c supercond., X-ray absorption meas. 7−144178
$Ba_xY_{1-x}CuO_3$, high T_c supercond., electronic struct., XPS study 7−112598
CdP_2, doping, effects of valence and covalent radius 7−69720
Ce monochalcogenides and monopnictides, press.-vol. relationships 7−76382
$Ce(Cu_{1-x}Ni_x)_5$, elec. cond., thermoelec. power and thermal expansion 7−98978
$CeNi_2H$, structural characterisation 7−91529
CeP, electronic and crystallographic transitions under pressure 7−142986
CrF_6^{n-} compounds, ground state cluster geometry, near-ab-initio valence calcs. 7−76832
Cu complex, Cu ferrocyanides, valency effects, IR and Mossbauer spectra 7−135982
$EuBa_2Cu_3O_7$, high T_c supercond., local chem., vibr. behaviour, Mossbauer spectra study 7−113046
EuO(S)(Se)(Te) (100), EELS spectra 7−113325
Fe_2O_3-TiO_2-Na_2O, X-ray fluorescent Fe $K\beta_5$ spectra 7−106311
I^-, electrosorption valency on electrodeposited Bi 7−91966
La, Auger spectra, fine struct., chem. state determ. 7−77706
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., X-ray absorption spectra studies 7−99974
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., absence of struct. transition, X-ray studies 7−99975
$LaNi_3Mn_2$, surface props., H_2 storage material 7−98645
La_2O_3, Auger spectra, fine struct., chem. state determ. 7−77706
$La_{1.8}Sr_{0.2}CuO_4$, high T_c supercond., oxidation state study 7−118715
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., X-ray absorption meas. 7−144178
$Na_{0.9}Mo_6O_{17}$, purple bronze, struct. determ., rel. to two-dimensional cond. 7−131116
Pr, pressure-induced s-d transition, valence changes 7−105445
PuSb, valency, neutron scatt. study 7−104623
PuTe, valency, neutron scatt. study 7−104623
Ta-H-T, electromigration of T, effective valency rel. to thermodynamic factor 7−91905
Ti in minerals, XANES, effects of Ti bonding distances, Ti valence, and site geometry 7−119068
TiO_2:Sb, rutile, Sb oxidation state and elec. props. 7−105558
UCl_4, valency, neutron scatt. study 7−104623
Y-Ba-Cu-O high T_c supercond., local struct. and Cu valence, O vacancy effects 7−117901
Y-Ba-Cu-O high T_c supercond., O nonstoichiometry and struct. 7−118117
$YBa_2Cu_3O_{7-x}$, high T_c supercond., correlated valence fluctuation model 7−118685
$(Y_{1-x}Ba_x)_3Cu_3O_{7-y}$, supercond., structural, electronic and mag. props., comp. depend. 7−99295
ZrF_4-EuF_2-CeF_3, paramagnetic fluoride glasses *(French)* 7−69606
valve voltmeters *see voltmeters*
valves
see also diaphragms
balloon pump, intra-aortic, indirect meas. of stroke vol., drive system design 7−87322
electrodynamic valve for pulsed gas admission 7−104467
frost free throttle valve for sputtering appl. 7−134780
ion source gas flow control system 7−121293
motorised valve packing, performance and maintainability improvements 7−122053
push-button controlled high-vacuum baffle valve, design and performance 7−80809
PWR valve testing using fast acquisition system 7−89643
self-excited value systems, oscillations 7−83018
slit pulsed valve for generation of long-path-length supersonic expansions 7−97567
space cryogenics, conf., Noordwijk, Netherlands (April 1986) 7−66811
space cryostats, directly operated valves 7−67308
UHV valve protection system for National Synchrotron Light Source 7−134749
ultrahigh vacuum foreline valve 7−115969
vacuum valve, 12×4 ft, development for laser isotope separation chamber 7−134752
valves (electronic) *see electron tubes*
Van Allen radiation belts *see radiation belts*
van de Graaff accelerators
background radiation meas. for PIXE experiment operation, van de Graaff accelerator area *(Japanese)* 7−135685
channeling using van de Graaff accelerator with 5-axes goniometer *(Japanese)* 7−135684
cylinder lenses and einzel lenses, calculation method using transfer matrices *(Chinese)* 7−89806
dirty bottle ion source in single-ended van de Graaff, multiply-charged beam prod. 7−89836
irradiation technologies using accelerated electrons, economic aspects *(Rumanian)* 7−89793
JAERI, tandem, van de Graaff and linac, 1985-6 annual report 7−74274
neutron skyshine and safety level from Jordan van de Graaff accelerator 7−74262
PIXE method for trace element anal. using 2.5 MV van de Graaff accelerator *(Japanese)* 7−139060
pulse beam charge monitor for charged particle accelerators 7−122296
van de Graaff accelerators continued
VIVITRAN, a 35 MV van de Graaff Tandem accelerator *(French)* 7−81765
Westinghouse atom smasher Van de Graaff generator, IEEE Historical Milestone, history 7−72759
van de Graaff generators
No entries
Van der Pol oscillators *see relaxation oscillators*
van der Waals forces
acetone-chloroform mixtures, isothermal compressibilities calcs. 7−111719
aerosol, coagulation, van der Waals and viscous forces effect 7−100618
alkali metal atoms + inert gas, van der Waals mol. form., parameter values 7−100539
2-aminopyridine, van der Waals and H-bonded systems, structs., excited state dynamics 7−136031
aryl carboxylic esters (acids) (amides), torsional angles, ^{17}O NMR 7−90196
atomic charges derived from electrostatic potentials 7−141437
benzene, van der Waals complexes, electrostatic interactions 7−82314
benzene-methane(-methane-d_4)(carbon tetrachloride), clusters, van der Waals modes 7−103472
clusters, supersonic expansion, photoionisation spectroscopy 7−110166
complexes, photofragmentation, statistical and quantum dynamical theory 7−122654
p-cyanophenyl trans-4-propylcyclohexane carboxylate, phase transitions, specific vol., US vel. meas. 7−124078
dense fluids, van der Waals model Helmholtz free energy, temp., density depend. 7−131004
divalent metal oxides, press. induced phase transition, high press. behaviour, three body interaction effects 7−84244
egg-lecithin-H_2O system, phospholipid bilayer, interbilayer force calc. 7−93667
ethylene dimer, vibr. predissoc. 7−122643
fermion and boson ground-state matter, van der Waals perturbation theory 7−91912
free liquid-gas interface, surface free energy for wetting transition 7−105193
grain boundary wetting, Z(N) model 7−83972
hard sphere fluid, free energy 7−137180
interacting Bose gas, weak external field, van der Waals limit 7−105162
interfaces, capillary wave theory 7−123660
metal particle-plane interaction, van der Waals repulsion, jellium model calcs. 7−143377
$(methyliodide)_n$, cluster formation photodissociation, ultraviolet spectra 7−135922
molecular attraction between bodies heated to different temperatures 7−122656
molecular crystals, van der Waals radii 7−124157
nematic liquid crystals, free energy and eqns. of state, van der Waals theory 7−131016
nylon 6 fibres, spin oriented, macromolecular order, WAXS 7−69612
organic solids, UV photoemission study 7−125925
oxazine 17, fluoresc. in H^+ donor and aprotic solvents, steady-state and picosec. excitation 7−117017
perylene, van der Waals complexes, conform., pot. energy calcs., fluoresc. spectra 7−96762
photofragmentation, pot. surfaces, exit-channel dynamics 7−122637
pressure broadening and shift of spectral lines, unified theories, Van der Waals interaction 7−74511
pseudo-spin van der Waals model, spin depend., time depend 7−89142
simple fluids, generalised van der Waals anal. of crit. drops and cavities 7−111329
T-shaped an der Waals complexes, spectrosc. props. and empirical pot. energy surfaces 7−68424
T-shaped van der Waals complexes, spectrosc. props., pot. energy surfaces 7−68423
tetracene and its van der Waals complexes with inert gas atoms, rot. resolved laser spectroscopy 7−129733
s-tetrazine, van der Waals complexes, electrostatic interactions 7−82314
unequal size molecule mixtures, local composition models, van der Waals partition function 7−123825
wetting, of solid surface, dynamics of spreading *(French)* 7−112011
wetting, van der Waals theory with exponential interactions 7−84450
wetting transition, generalised Sullivan model, dynamics approach 7−105194
Ag halides, characteristic electron density distribution 7−69643
AgBr hypothetical crystals, with switched off van der Waals interactions, lattice spacing 7−83840
AgCl hypothetical crystals, with switched off van der Waals interactions, lattice spacing 7−83840
Ar lattices, nonadditivity, van der Waals interaction pots. 7−124164
Ar-HD, van der Waals mol., IR predissoc. calcs. 7−122640
$ArCO_2$, van der Waals mol., spectrosc. props. and empirical pot. energy surfaces 7−68424
H_3^+, van der Waals long-range interactions, wave fn. calcs. 7−82313
H_2O, mol. struct., van der Waals repulsion effects 7−102062
H_2O-Mg, van der Waals complex, multireference CI calcs. 7−89974
H(1s)-H(1s), van der Waals interaction, third order energy coeff. determ. 7−117039
He-CO, van der Waals complex, rot. predissoc. 7−122649
He+H_2, dipoles induced by van der Waals interactions, reaction field model 7−110067
He_2, interaction energy components, basis set extension effects, decomposition scheme 7−129826
I_2M clusters, photodissoc. nonadiabatic transitions 7−93353
Na+Xe, van der Waals mol. form., parameter values 7−100539
Ne, lattices, nonadditivity, van der Waals interaction pots. 7−124164
ZnS, elastic consts., press. depend., three-body force pot. calcs. 7−104895
ZnSe, elastic consts., press. depend., three-body force pot. calcs. 7−104895
ZnTe, elastic consts., press. depend., three-body force pot. calcs. 7−104895
Van der Waals molecules *see quasimolecules*
vanadium
see also nuclei with .....
adlayers on Ag(111), minority-spin states, momentum-resolved inverse photoemission studies 7−113307
anodic polarisation and corrosion in H_2SO_4 and NaCl solns. 7−100422
atom, Kα satellites in X-ray emission spectra 7−74500

vanadium continued
atomic form factor evaluated using nonrelativistic and relativistic corrected CI wavefunctions 7−74466
crystal binding and struct., electron correls. anal. 7−98031
Debye temp. in high-temp. limit, heat capacity anharmonic component 7−98371
defect levels in GaAs and InP, band-edge deform. pots. determ. 7−137849
electronic excitations, EELS 7−70954
emissivity, hemispherical from 300 to 1000 K 7−98526
fast neutron irrad., low temp., defects, X-ray diffr. studies 7−104852
ferromagnetic monolayer, spin anisotropy calcs. 7−112784
films, vacuum evaporated, struct. and optical props. 7−143269
foil, 120 keV electron inelastic scatt. 7−96878
ion implanted metastable system, impurity-point defect interactions 7−104800
Josephson junctions, mag. penetration depth determ. 7−77151
KLM Auger transitions 7−122482
Salamanca, Spain, meteorological effects on elemental concentration of atmospheric aerosols *(Spanish)* 7−144928
soluble and nonsoluble implanted atoms, lattice site occupation, dose effects 7−131170
stress-induced H states and enhanced diffusion 7−83980
superconducting, anisotropy effects down to millikelvin temp. range 7−77171
superconducting, phonon scatt. by Abrikosov vortex filaments 7−70503
superconducting, strained at 4.2 K, crit. fields and defect struct. *(Russian)* 7−92386
superdiffusion of H 7−105122
surface, Ar impact, excited particle secondary emission 7−125899
surface ferromagnetic order, electron capture spectra study 7−143872
T, D, H, heat of transport meas., T diffusion under thermal gradient 7−131367
thermal diffusivity and conductivity, anomalies near melting points 7−69997
Au-V, thin film interactions, RBS and X-ray diffr. studies 7−69991
CdTe-V Schottky barriers and interface reactions 7−131735
Fe/V superlattices, atomic configuration near interface, substrate temp. depend. 7−112102
GaAs:V, acoustic absorpt. study, 200 MHz-2 GHz 7−91732
GaAs:V, deep level Jahn-Teller systems, random strain effects, TD-EPR studies 7−105465
GaAs:V, electroluminesc. obs. 7−92746
GaAs:V, gap levels, optical absorption, EPR and Hall effect meas. 7−105467
GaAs:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
GaAs:V, nature of vanadium centre, EPR studies 7−131162
GaAs:V, semi-insulating, impurity energy level scheme, photocond. meas. at 4.2 K 7−105487
GaAs:V melt-grown and epitaxial crysts., impurity centre optical and electronic props. 7−118409
GaP:V, gap levels, optical absorption, EPR and Hall effect meas. 7−105467
GaP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
GaP:V, impurity states, optical studies 7−113238
$HoFe_2$:V, electric quadrupole interaction, hyperfine field 7−118891
InP:V, impurity ion radiative decay processes, photoluminesc. study 7−106243
InP:V Fourier transform spectra, deep level optical spectra 7−125733
$Li_{1+x}Ti_{2-x}O_4$:V, paramag. suscept. meas. 7−131986
NaCl:V^{2+}, dipole equilibrium, population distrib., EPR 7−125528
Rb_2CrCl_4:V^{2+}, ionic ferromagnet, neutron diffr. and visible spectra 7−112755
SiO_2 amorphous RF sputtered films, IR and Rutherford backscatt. studies 7−85917
V, β-emitting ^{12}N, location following recoil implantation 7−118868
V:H,O, Snock peaks, internal friction studies 7−98335
V:H(D), pressure composition isotherms, lattice gas model *(German)* 7−76436
V/Ag multilayered films with artificial superstruct., prep and supercond. 7−112677
V/Mo superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V/Si superconducting layered and coevaporated films, nitrided, T_c and spin-orbit scatt. rates 7−138097
V-Ag multilayered structures, proximity coupled, upper crit. field meas. 7−99372
V-Ag multilayered superconductors, mag. field penetration depth, material parameters 7−105828
V-Al interface, ion induced aluminide form. 7−84403
V-H_x superdiffusion existence, electromigration relaxation method 7−124595
V-Nb-Se, nonequilibrium system, vibr. chem. reaction process 7−86569
V-T, phase diagram, 100-473 K 7−105044
VH_x electronic struct. and heat of form., H location, extended Huckel band struct. calcs. 7−84656
V_2H, inelastic neutron scatt., single particle pot. *(German)* 7−131131
YFe_2:V, electric quadrupole interaction, hyperfine field 7−118891

vanadium alloys
see also vanadium compounds
steel, Cr-Mo-V, crack resistance, microstructure, MO conc. effect *(Russian)* 7−113661
steel, Cr-Mo-V alloy, extrapolation procedure of creep data 7−106623
steel, grain boundary segregation of P 7−138748
steel, Ni-Cr-Mo-V, stress corrosion cracking in A471 turbine disc steel, dissolved O_2 and CO_2 effects 7−144627
Ti-Al-V, N-ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
Al-Mg-V ternary phases, struct. investigation 7−117864
Al-V thin films, Al electromigration lifetime, comp. depend., TEM study 7−69993
Al-Zr-V, dil-alloy, precip., Ostwald ripening cubic to tetragonal transform. 7−78023
Al-Zr-V, rapidly solidified, coarsening of $L1_2$ structured $Al_3(Zr_xV_{1-x})$ precipitates 7−126130
Al-Zr-V phase diagram calc. *(Korean)* 7−132577
AlMgV, low activation alloy development for R-tokamak project 7−74061
AlVSi, low activation alloy development for R-tokamak project 7−74061

vanadium alloys continued
AuV, far IR optical absorpt. study 7−99783
C0-V thin films, RF sputter deposition, mag. props. 7−125974
Co-V sputtered thin films *(Korean)* 7−132453
Co-W-V thin films, electrocrystn. during deposition *(Russian)* 7−105325
CoB base alloys, V and Nb substitution effect on induced mag. anisotropy *(Chinese)* 7−99436
$(Co_{78}Fe_{22})_3V$, low temp. sp. ht. 7−118803
Cr-Co-Ti-V-Si-Fe, microstruct. and superplasticity *(Russian)* 7−71238
Cr-Fe-V, dilute, resonance impurity scatt. 7−70297
FLiBe-V-Cr-Ti-ferritic steel system, activation product transport 7−109482
Fe-B-V amorphous and cryst. alloys, local atomic struct., NMR studies 7−118867
Fe-C-V melts, thermodynamic activity interaction coeff. 7−98517
Fe-V, equiatomic, sigma phase form. mechanism 7−93007
Fe-V, grain boundary segregation of P 7−138748
Fe-V liquid alloys, high temp. viscosity meas., oscillating viscosity isotherm pattern obs. *(Russian)* 7−91869
Fe-V system, thermodynamic props. 7−91839
Fe-V-B amorphous alloys, mag. and electron struct. meas. and calcs. 7−70523
Fe-V-C system, austenitic, cubic VC solubility, thermodynamic calc. 7−98461
FeV, electron irradiated, deviations from Matthiessen's rule and defect annealing 7−105526
$Fe_{0.875}V_{0.125}$ disordered alloys, hyperfine field and T_c suppression, Mossbauer study 7−113020
$Fe_{100-x}V_x$ alloys, local mag. characts. 7−131995
$Fe_{99.5}V_{0.5}$ alloys, internal oxidation and precipitation, spin echo and Mossbauer studies 7−144617
$Fe_{80}V_3B_{17}$ metallic glass, crystallisation, elec. resist. and heat evolution studies *(Russian)* 7−69600
$Fe_{84-x}V_xB_{16}$ amorphous alloys, crystallisation 7−131027
$FeVH_x$ electronic struct. and heat of form., H location, extended Huckel band struct. calcs. 7−84656
$(Fe_{100-x}V_x)_{99}Sn$, ^{119}Sn-site hyperfine field changes, Mossbauer effect spectra 7−92134
$Hf_{1-x}Ta_xV_2$, lattice instability, TDPAC studies 7−111855
HfV_2 films, ion-plasma deposition, annealing, supercond., struct. *(Russian)* 7−137750
$HfV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175
$HfV_2H_x(D_x)$ systems, order-disorder phase transitions and quadrupole interaction, NMR studies 7−76381
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
Mo-V-W phase diagrams, ternary, calc. with binary data 7−132562
Nb-V, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-V, H embrittlement, dislocation substructure, deform. twinning 7−78181
Nb-V, neutron irrad., mech. props. *(Japanese)* 7−93060
Nb-V foils, tensile deform., dislocation substruct., H embrittlement 7−78113
Nb-V-H, ductility, grain size and H conc. effects 7−100306
$Ni_{33}Ti_{67-x}V_x$ alloys, amorphous, stability and elec. transport props. 7−104571
Ni_3V alloys, cross slip of partial dislocations, stair-rod mode, zigzag propagation of deformation microtwins 7−91596
Ni_3V cryst. struct., phase stability and magnetic props. calcs. 7−98044
$Ni_{73}V_5Si_{10}B_{12}$, metallic glass, crystallisation kinetics, exoelectron emission, effect of hydrogenation 7−132420
Pd_3V long and short range order, diffuse electron, neutron and X-ray scatt., mean-field theory anal. 7−111453
Pt_xV, ordering phenomena, electron diffr., high resolution electron microscopy 7−138740
$Sc_2V_3Ge_4$ and related cpds., cryst. structures, X-ray diffr. study 7−104637
SiC fibre reinforced Ti-Al-V alloy, TiC and TiN interlayers effect on reaction zone *(German)* 7−92935
Ti-6Al-4V alloy for anatomic hip prostheses, cast and heat treated, fatigue props. 7−145276
Ti-Al-Mo-Cr-V, wrought, annealing temp. effect on resist. to low levels of deform. 7−126152
β-Ti-Al-V, α precip., obs. of superledges formed on sideplates 7−144421
Ti-Al-V, component surface condition effect on working capacity after annealing in different atm. 7−126309
Ti-Al-V, dislocation velocity-stress exponents, effect of H *(Chinese)* 7−132657
Ti-Al-V, for porous-coated implant devices, post-sintering treatment effect on mech. props. 7−86254
Ti-Al-V, high strength, fatigue behaviour at elevated temps. 7−113722
Ti-Al-V, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7−144595
Ti-Al-V, optimising conditions for deform. in order to increase mech. props. 7−106541
Ti-Al-V, stress relax. and notch fatigue 7−144550
Ti-Al-V, struct. form. in nitrided layers 7−78345
Ti-Al-V, suitability of ion-plated metallic coatings at fretting fatigue loads *(German)* 7−126326
Ti-Al-V (6, 4 wt.%), H induced cracking rel. to microstruct. *(Japanese)* 7−119346
Ti-Al-V (6, 4 wt.%), short surface fatigue crack propag., microstructural barriers 7−100384
Ti-Al-V (6,4 wt.%), Al ion irrad., rad-induced precip. 7−69776
Ti-Al-V (6,4 wt.%), ion implantation, tribological props. 7−119380
Ti-Al-V (6,4 wt.%), strain reduced hydride, crack propag., TEM obs. 7−78221
Ti-Al-V (6,4 wt.%), superplastic, post-forming tensile props. 7−100302
Ti-Al-V (6,4 wt.%), superplastic deform., photoemission electron microscopy 7−113823
Ti-Al-V (6,4 wt.%) creep behaviour at room temp., effect of H 7−126191
Ti-Al-V alloy stem, bio-composite advanced material research and development, artificial hip joint appl. 7−133506
Ti-Al-V solution-treated alloy, microstruct. charact. 7−138747
Ti-Al-V VT6 alloy, threshold stress intensity factors determ. from fatigue tests using R-criterion *(Chinese)* 7−126365
Ti-Al-V/polyethylene tribological couple, wear behaviour, effect of metal surface prep. and N implantation 7−79139

vanadium alloys continued
Ti-Al-V-Mo, hot rolled, annealing induced texture, softening *(Russian)* 7−113565
Ti-Al-V-Sn, rapidly solidified, consolidation by hot pressing 7−86083
Ti-Al-V-Zr, fractal charactn. of fractured surfaces 7−113648
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
Ti-V-Cr-Al, metallurgical condition effect on creep behaviour at 650°C 7−119313
Ti-V-Cr-Al (13,11,3 wt.%), cold working, ageing, ductility and strength 7−78041
Ti-V-Cr-Al (13,11,3 wt.%), fracture behaviour study with in-situ obs. of SEM and AE simultaneous meas. *(Japanese)* 7−78152
Ti-V-Cr-Al-Sn (15,3,3,3 wt.%), hot-rolled, mech. props., microstruct. 7−78153
Ti-V-H system, struct., phase diagram, H solubility, band struct. 7−77946
$Ti_{80}Nb_{10}V_{10}$, temp. coeff. of resist., β-phase decomp. effect 7−106517
V-5Ti, tensile props, he and neutron irrad. effects 7−141274
V-Al, ion implanted, amorphous phase form., surface roughening, TEM obs. 7−104773
V-Al comb-form contacts, appl. in Si solar cells 7−126627
V-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
V-Cr-Ti, D permeation and reemission rates meas. in fusion power device 7−74045
V-Cr-Ti, neutron and α-particle irrad., tensile props. 7−69773
V-Cr-W, anodic polarisation and corrosion in H_2SO_4 and NaCl solns. 7−100422
V-Fe based alloys, internal stresses caused by O and N dissoln. 7−132571
V-Fe:H, effect of H absorption on electronic and structural props. 7−105394
V-Ga alloys, rapidly solidified, microstruct. and phase transform. 7−119265
V-Ga thin film, A15 supercond., sp. ht. meas. 7−112662
V-Hf-Cr, He ion irrad., blistering and sputtering, 200-600°C 7−142847
V-M (M=Ta,W,Cr), anodic polarisation and corrosion in H_2SO_4 and NaCl solns. 7−100422
V-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
V-Nb alloys, short range order and superconductivity 7−85166
V-Ni-Cr system, phase diagram, diffusion couples and equilibrated alloys 7−144367
V-Ni-Si, rapidly solidified, two-dimensional quasicrystal with eightfold rotational symmetry 7−137317
V-Os system, electronic and supercond. props. 7−112605
V-Re alloys, superconducting transition temp., dynamic atomic displacements *(Russian)* 7−105755
V-Ru alloys, electronic props., effect of structural transformation 7−131296
V-Ru system, electronic and supercond. props. 7−112605
V-Ru-H system, superconductivity and cryst. struct. of high-press. phases 7−138095
V-Si system, vaporization thermo-dynamics in V-rich region, high temp. Knudsen cell mass spectrometry 7−111845
V-Si thin film, A15 supercond., sp. ht. meas. 7−112662
V-Ta alloys, short range order and superconductivity 7−85166
V-Te, liq., electrical conductivity 7−84808
V-Ti, H and D diffusion coeffs., temp. depend., 230-473 K 7−84395
V-Ti solid solution, H diffusion 7−143108
$V_{0.93}Al_{0.07}$ thin films, struct. and resist. saturation 7−131809
V_3As, lattice thermal expansion 7−84328
$V_{15}Cr_5Ti$, fusion blanket structural material, corrosion behaviour *(German)* 7−132826
$V_{15}Cr_5Ti$, fusion reactor material, permeability study, safety implications 7−131351
$V_{1-c}Fe_c$, electronic struct., first principles calcs. of moments 7−118354
$V_{1-y}Fe_yH_x$ alloys, 3d-like electron localisation and charge transfer 7−76822
V_3Ga AIS supercond., elec. resistivity, atomic ordering and comp. changes effects 7−131609
V_3Ga superconducting multifilamentary wire, technology developments 7−131932
V_3Ga, superconductor for generating magnetic fields over 18 T 7−77184
V_3Ga, thermal expansion, 299-691 K 7−91853
V_3Ga very thin supercond. films, critical fields and spin polarised tunnelling meas. 7−131935
$V_3GeFe_xCo_y$, Fe and Co impurity crystallographic positions, X-ray emission spectra studies *(Russian)* 7−70942
V_2(Hf-Zr) Laves phase superconductor, prep., manufacturing techniques development 7−132520
V_3Pt, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7−76333
V_3Rh, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7−76333
$V_{1-x}Si_x$, high field magnetoresistance studies *(German)* 7−124968
$V_{1-x}Si_x$ supercond. amorphous alloys crit. mag. field, evidence for weak localisation effects 7−99367
V_3Si 7−131609
V_3Si, anharmonicity, X-ray diffr. study 7−104946
V_3Si films, reactive diffusion formed, superconducting transition temps. 7−112553
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
V_3Si, plastically deformed, lattice defects, positron annihilation study 7−106298
V_3Si single cryst., dynamic charcts. temp. depend., X-ray thermal diffuse scatt. meas. 7−98360
V_5Si_3/V_3Si oriented eutectic interphase interface, TEM study *(French)* 7−71166
$V_3SiFe_xCo_y$, Fe and Co impurity crystallographic positions, X-ray emission spectra studies *(Russian)* 7−70942
V_3SiH_x polycryst. superconductor, sp. ht. temp. depend., H interstitial effects study 7−69925
$V_{1-x}Ti_xH_y$ solid solns., H diffusivity temp. and comp. depend., cell model anal. 7−118149
V_3TiSi, fusion blanket structural material, corrosion behaviour *(German)* 7−132826
V_2Zr, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
Vi-Ti, mechanically alloyed, glass form. 7−142643

vanadium alloys continued
ZrV_2 intermetallic cpd., phase transitions effect on neutron irrad. of introduction of H *(Russian)* 7−126104
ZrV_2, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
$ZrV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175
$ZrV_2H_x(D_x)$ systems, order-disorder phase transitions and quadrupole interaction, NMR studies 7−76381

vanadium compounds
see also vanadium alloys
ethylenediammonium vanadate, preparation, crystal struct. and thermal decomposition 7−104721
AgI-Ag_2O-V_2O_5-P_2O_5, vitreous electrolytes, glass form. and elec. cond. 7−131362
β-$Ag_xV_2O_5$, phase transition and bipolaron form. 7−137548
Al-V_2O_5-Al, thin film devices, negative capacitance 7−131806
$Al_yFe_{x-y}V_2O_5$, nonequilib. magnetic suscept., isolated and coupled moments 7−138194
BaO-V_2O_5, high electric field and switching phenomena 7−105583
BaO-V_2O_5-CuO semiconducting glasses, prep. and elec. props. 7−84888
BaO-V_2O_5-Fe_2O_3, barium vanadate glasses, IR spectroscopic and DC resistivity studies 7−137934
$Bi_{3-2x}Ca_{2x}Fe_{5-x}V_xO_{12}$, magnon spectra, Brillouin scatt. study *(Chinese)* 7−118783
$CePO_4$:V_2O_5, photoacoustic absorption spectrum of VO^{2+} 7−98352
CuV_2S_4, domain structures in low temp. incommensurate phase, electron diffr. obs. 7−111906
$Fe^{3+}{}_{2-x}Fe^{2+}{}_xV_{4-x}Mo_xO_{13}$ phase type, mag. props. 7−112763
$(Fe_2O_3)_x$-$(Na_2O$-$2V_2O_5)_{1-x}$ glass, room temp. Mossbauer study 7−125573
$Fe_xV_{3-x}S_4$ cation partitionings and structural formula determ., powder neutron diffr. 7−117880
$H_xV_2O_5$, vanadium bronzes, thermochemistry 7−100604
$K_{2-x}V_{8+2x}O_{16+x}$, hollandites, high press. synthesis and cryst. struct. *(German)* 7−76105
Li-AgV_2O_x cells, heat dissipation during storage and low-rate discharge 7−133068
Li-amorphous V_2O_5-P_2O_5 secondary batteries, ethylene carborate/ether solvent 7−133083
Li-$V_9Mo_6O_{40}$ secondary cells, performance 7−114088
$Li(N_2H_5)SO_4$:VO^{2+} single cryst., DC cond. and dielec. props., phase transition 7−113076
Li_2O-B_2O_3 glass, ESR of VO^{2+} and Cu^{2+}, spin Hamiltonian parameters 7−85416
Li_2O-Fe_2O_3-V_2O_5, ferrite, sintering, microstruct. 7−86109
Li_2O-P_2O_5-VO_2, noncrystalline, elec. props. and mag. resonance *(Chinese)* 7−112406
Li_3O_4 spinel electrodes for Li batteries, review 7−139097
γ-LiV_2O_5 mixed conductor, transferred hyperfine intersection, NMR study 7−112263
γ-$Li_{1+x}V_3O_8$, vanadium bronze, transport and equilibrium characteristics 7−143088
$NaNb_{1-x}V_xO_3$, effect of ion substitution, on ferroelectric Curie temp. 7−85544
P_2O_5-V_2O_5 glass, internal friction, network struct. 7−93049
$Rb_{2-x}V_{8+2x}O_{16+x}$, hollandites, high press. synthesis and cryst. struct. *(German)* 7−76105
$Ru_{1-x}V_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
SeO_2-V_2O_5 glass system, phase diagram 7−111414
$SrFeVO_6$, perovskite-like, struct. and mag. props. 7−143789
$SrTiO_3$:V_2O_5 ceramic anodes, photoeffects study 7−84991
TeO_2-V_2O_5-Fe_2O_3 glasses, structure and glass transition temp. 7−98450
TeO_2-V_2O_5-Fe_2O_3 glasses, DC elec. cond. 7−137925
$2TeO_2.V_2O_5$-$Li_2O.V_2O_5$-$2TeO_2$ system, phase diagram and IR spectrum 7−77956
$(Ti,V)O_2$ rutile solid solns., XANES, of Ti and V 7−70939
TiN-VN strained layer superlattices, growth, struct., hardness 7−119137
(TiVAl)O_2 film for photoelectrochemical cell, XPS characterization and photoelectrochemical behaviour 7−86807
$Ti_{1-y}V_yH_x$, substitutionally disordered, electronic struct., tight-binding CPA calcs. 7−84668
$Ti_{1-x}V_xO_2$ sputtered film comp. anal., alpha-particle elastic backscattering study *(French)* 7−100002
$Tl_xV_6S_8$, low temp. phase transition, PES study 7−98430
V (C,N)$_xH_y$, electronic struct., interatomic interactions, by cluster MO method 7−70186
V complex, aq. soln., Raman and multinuclear NMR spectra 7−82146
V-O system. high temp. thermodynamics, enthalpy of mixing at 1323 K 7−105081
V-P-Mo-O system, preparation and characterisation 7−104664
V-Ti oxide, anatase-type solid-state soln., evidence of formation 7−84291
VBe_{12}, sputtering and redistribution behaviour in tokamak environment 7−135563
V_2(C, N), ordered modifications, struct., neutron diffr. studies 7−111472
VC, floating zone melting, evaporation comp. and rate 7−100050
VC-C compact, hot pressing, graphite inclusions texture, elec. resist. meas. 7−106477
VC_{1-x}, HREM obs. of ordered C sublattice 7−118119
VC_2, Ar matrix isolated, ESR spectra 7−82230
V_2C, ordered modifications, struct., neutron diffr. studies 7−111472
$V(CO)_6^-$, isotope and temp. depend. of transition metal shielding 7−103533
$V(CO)_6^-$, vibr. anal. and mean bond displacements 7−103467
VCl_4, pseudo-Jahn-Teller effect, ab initio HF calcs. 7−135856
$(V_{1-x}Cr_x)_2O_3$, electron localisation in correlated band, metal-insulator transition and heavy Fermi liq. behaviour, thermodynamic theory 7−124868
$V_{2-x}Cr_xO_3$, isostructural system transitions, phase diagram charcts. 7−131268
$VD_{0.3}$, redistribution of D atoms under stress, neutron diffr. study 7−83886
VF_2, aspherity effects in electron density 7−124178
V_3Ga multifilamentary wire, critical currents meas. as function of temp. and magnetic field 7−95610
$VH_{0.33}$, local modes and H pots., high-resolution TOF neutron spectra studies 7−76326
V_2H, localised H vibrs., inelastic neutron scatt. study 7−76327
β-V_2H vibrational spectra and H pot., deep inelastic neutron scatt. study 7−84145
$VH_x(D_X)$, Mossbauer spectra, TDPAC studies 7−99620

vanadium compounds continued
$V_{1-x}M_xH_y$ (M=Sc,Ti,Cr,Mn), impurity-H and H-H binding energies, tight-binding calcs. 7−84742
$V_{1-x}Mn_xO_{2-2x}F_{2x}$, metal-insulator transition, structural, magnetic and electrical props. *(French)* 7−105402
VN, oxidation behaviour in CO_2-CO mixtures 7−93135
VN thin films, ion irrad. prep., supercond. and elec. props. 7−76226
VO^{2+} doped potassium oxalate monohydrate, EPR, low symmetry ligand field effects 7−112935
VO_2 films, anomalous blue, reactive evaporation and props. 7−92752
VO_2 films, metal-insulator phase transition, film thickness and substrate effects 7−105404
VO_2 films, metallic phase conductivity meas., growth technique and structure effects 7−118367
VO_2, formation by oxidation of V, kinetics, stability 7−100603
VO_2, sp. ht. and mag. susceptibility, determ., metal-insulator transition 7−137797
VO_2 thermochromic films for energy efficient windows 7−125994
VO_2 thin films, optical contrast at semiconductor-metal transition 7−70927
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7−125979
VO_x, high temperature thermodynamics, EMF measurements 7−76452
VO_x, metal-semiconductor transition, optical props. 7−84680
V_2O_3, V_2O_4, V_2O_5, investig. of Li intercalation materials in electrolytes 7−133059
V_2O_5, chemical insertion of Li investig. 7−132928
V_2O_5 coating on Ni, surface corrosion, oxide scale morphological charactn. using AES, SEM and X-ray diffr. *(French)* 7−93193
V_2O_5 electrochromic thin films, absorption spectra 7−138425
V_2O_5 films, colloid-chemically deposited onto ITO glass, electrochromic props. 7−99801
V_2O_5, high-temp. relative enthalpies meas. 7−76458
V_2O_5 in electrodes of Li rechargeable cells, cycling behaviour 7−126593
V_2O_5, insertion of Mg^{2+} and Zn^{2+} bi-valence cations 7−69974
V_2O_5, laser-evaporated surfaces, stochastic structures 7−111656
V_2O_5, melt, disordering mechanism near melting point 7−98401
V_2O_5, Mg^{2+} intercalation, X-ray diffr. studies 7−137346
V_2O_5, surface struct., Fourier transform IR spectral investig. 7−84454
V_2O_5, V_6O_{13} and $Li_{1+x}V_3O_8$ as electrode materials in Li rechargeable cells, cycling behaviour 7−126594
V_2O_5 vanadate devices, threshold switching 7−143525
V_2O_5 xerogel films,. conduction mechanism 7−77115
V_2O_5:Bi semiconducting glasses, secondary electron emission charact. determ. 7−144189
V_2O_5-As_2O_3, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
V_2O_5-B_2O_3, glasses, spin Hamiltonian parameters, distrib. width determ. 7−138317
V_2O_5-BeO-Fe_2O_3 amorphous semicond., struct., Mossbauer, EPR studies 7−124107
V_2O_5-Bi_2O_3 glasses, prep. and charactn. 7−111411
V_2O_5-GeO_2 glass, reduction of V^{5+} ions, XPS and AES studies 7−138586
V_2O_5-MgO oxidative dehydrogenation catalysts, synthesis methods 7−113462
V_2O_5-P_2O_5, semiconducting glass, optical absorption *(Korean)* 7−85771
V_2O_5-P_2O_5 glasses, polaronic hopping conduction, AC mechanism 7−84889
V_2O_5-P_2O_5-Bi_2O_3 glass, conductivity minimum 7−137927
V_2O_5-P_2O_5-Sb_2O_3 glass, conductivity minimum 7−137927
V_2O_5-P_2O_5-based MIM structs., high temp. TSC peak study *(Russian)* 7−77107
V_3O_5, cryst. struct. and high press. phase transitions 7−98063
V_4O_7, specific heat meas., 0.4-50 K, λ-type transition obs., entropy meas. 7−143805
a-V_2O_5(-P_2O_5) cathodes for Li secondary cells, electrochemical behaviour 7−133072
$VOCl_3$, resonance-enhanced multiphoton ionis., mass spectrometric detect. 7−103586
$VO_{0.11}H_{0.01}$, interstitial positions and H atom vibrations, slow neutron scatt. study 7−76325
$(VOHPO_4)_2.2.5H_2O.EtOH$, layered compound, preparation and structure 7−104722
VO_xHy, electronic and crystallochem, charact., quantum chem. modelling 7−143345
$(V_2O_5)_x(PbO)_{100-x}$, pure and Fe_2O_3 doped semiconducting glass, photoacoustic absorpt. spectra studies 7−142915
$VOSeO_3$, cryst. struct., mag. props. 7−111504
$VOSe_2O_5$, cryst. struct., mag. props. 7−111504
$V_2O_5.nH_2O$, hydrous oxides, protonic conduction and diffusion 7−143090
VS structural transforms., microscopic theory, electron-lattice interaction matrix element calcs. 7−76389
V_2S_3, catalyst for H_2S decomp. to H_2 and S 7−86583
VSi_2, sputtered with Ne/Kr, sputter rates *(German)* 7−144223
V_3Si (100), electronic struct., photon stimulated desorpt. of H_2, O_2 and ethene 7−118252
$VT_{0.02}$, swelling, ^3He bubble formation 7−91852
$(V_{1-x}Ti_x)_{1-y}Fe_yH_2$, heat pump, enthalpy and entropy of formation 7−93525
$V_{1-x}Ti_xH_2$ electronic struct., NMR spin-lattice relax., Knight shift and mag. suscept. meas. 7−84666

vanadium phosphate semiconductor glasses *see amorphous semiconductors*

vaporisation
see also boiling; evaporation; heat of vaporisation; sublimation
carbon phenolic solid mass removal, laser/heat shield interaction 7−113320
coal char, devolatilisation condition effects on gasification rate 7−113932
concentrated energy flux screening, instabilities 7−137533
cyclohexane-xylenes, energy of vaporisation eval. 7−69882
isopropylbenzoic acids, enthalpies of form. sublimation and combustion, vapour press. 7−78535
methane, explosive vaporisation, discharge from ducts 7−136973
opaque slabs, laser irrad., backface temp., surface recession 7−68983
polystyrene, devolatilization, scanning electron microscope investig. 7−117795
transient heating effect on vaporisation kinetics 7−136969
vapour-liquid flow, adiabatic boiling and flashing flow study 7−111072
Ag anode vaporisation in electric arc column *(French)* 7−97833

vaporisation continued
$Al+O_2(SO_2)$, reactive scatt. using pulsed crossed supersonic mol. beams 7−144707
Ar explosive vaporisation, discharge from ducts 7−136973
Au_n^+ (n=1 to 6) clusters form. by direct laser vaporisation 7−110165
Ca_2, matrix isolation Raman and fluoresc. spectra 7−96906
$Ca_3Ga_2Ge_3O_{12}$, mass spectra of volatile components, vapour pressure 7−104974
GeI_2, total vapour press. meas. 7−142972
H_2S, isotopic species, thermodynamic props. meas., enthalpy of vaporisation calc. 7−118131
^3He-^4He solns., mutual diffusion, Rayleigh line width, near crit. vaporisation line 7−70023
I, time-dependent partitioning, γ-ray effects, LWR core accident appl. 7−78525
Mo_2, matrix isolation Raman and fluoresc. spectra 7−96906
N_2O_4 liq. flow, flashing study 7−111843
Nd_2S_3, vaporisation, mass spectroscopic investig. *(Japanese)* 7−124467
Ni, vaporisation, rare gas matrix isolation spectra 7−82028
Ni-Te system, vaporisation kinetics, β_2 phase form., Knudsen effusion mass spectra 7−118074
Pb-Sb alloys, vaporisation and photoionis., cluster ions form. 7−69877
Pb_2, matrix isolation Raman and fluoresc. spectra 7−96906
PbO, matrix isolation Raman and fluoresc. spectra 7−96906
$Sc_{1-z}S$, high temp. vaporisation study 7−131278
Sn-Bi alloys, vaporisation and photoionis., cluster ions form. 7−69877
V-Si system, vaporization thermo-dynamics in V-rich region, high temp. Knudsen cell mass spectrometry 7−111845
ZnS, surface atom vacated state formation by H adsorption 7−76562

vaporising *see vaporisation*

vapour density *see density of gases*

vapour deposited coatings
see also CVD coatings; plasma deposited coatings; sputtered coatings; vacuum deposited coatings
carbon tetraioide, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
diamond film growth from vapour phase, characterisation *(Japanese)* 7−71082
evaporation processes, computer simulation 7−124784
hardness assessment 7−119481
liquid metal ion source cluster beam constituents rel. to deposited film props. 7−76689
sodium cryptand(2.2.2) sodide, optical reflectivity and absorpt. meas. 7−113222
surface engineering, conf., Brighton, England (June 85) 7−72724
tetraiodoethylene, vapour-deposited thin film struct., ionisation pots., UV photoelectron spectra 7−100004
Ag-Si thin film, prep. by ion assisted deposition *(Chinese)* 7−132499
Al-Mn metastable crystalline, quasicrystalline and amorphous thin films, vapour deposition synthesis 7−143286
Al-Zr vapour deposited coatings, metastable phases, TEM, electron diffr. obs. 7−70147
BN surface layers on Fe, reactive ion beam enhanced deposition 7−119171
Bi/Se multilayer thin films, optical recording 7−74880
C, diamond like layers on WC-Co hard metal, ion beam induced, microhardness, wear 7−119352
C, film structure, ion deposition 7−76705
a-C films, arc evaporated, optical and mobility gap determ. 7−125674
a-C:H films, arc evaporated, optical and mobility gap determ. 7−125674
CO layer, Ag film, SERS, electromag. field enhancement study 7−77567
CO vapour deposited layer, Ag film, SERS, electromag. field enhancement study 7−77567
(CdHg)Te, semicond. film vap. deposition, chem. reaction model 7−119169
CdS films, grown under longit. dec. field, X-ray struct. charactn. 7−118309
(CdZn)S, semicond. film vap. deposition, chem. reaction model 7−119169
Ce-O thin films, prep. in far from equilib. conditions, electron diffr. and imaging studies 7−92031
Co obliquely evaporated films, partially oxidised, exchange interactions, mag, anisotropy 7−112878
CrN, surface layers on Fe, reactive ion beam enhanced deposition 7−119171
Cu film on Al_2O_3 substrates, ion beam induced modification of adhesion energy 7−91671
Cu thin films, form. during condensation, effect of neutral gas 7−71005
Cu, vapour deposited films, structure and growth morphology, O effects 7−118321
Cu-Al alloy thin films, vapour deposited, intrinsic stress and struct. study 7−137756
$CuCr_2Te_4$ films, synthesis, texture, mag. props. 7−98731
$CuInSe_2$, semicond. film vap. deposition, chem. reaction model 7−119169
Dy_2O_3 oxide film MIM struct. dielec. props. 7−118948
α-Fe-Zr impurity system, spin density perturbation *(Russian)* 7−77275
InSb films, prep. by pulsed flash evaporation 7−126027
MgF_2 films, optical props., influence of ion assistance 7−85868
Mn-Sb multilayered films, mag. props. 7−99515
NaCl, vapour deposited on Ni (111), XPS studies 7−85955
Ni bulk and evaporated, layers, N ion implantation, diffusion, annealing behaviour 7−91896
Ni films, ion plated on steel, struct., fatigue 7−118338
Ni ion plating on graphite, wetting by molten Al *(Japanese)* 7−76550
P-glassy polymers, role of F_2 in gas phase synthesis 7−77847
Pb thin films, form. during condensation, effect of neutral gas 7−71005
PbTe vapour deposited films, frozen photocond. temp. depend. obs. 7−105623
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
Sb_2S_3 amorphous evaporated thin films, short range order, X-ray diffr. study 7−105335
Se, amorphous films, vapour-deposited, crystallisation kinetics, substrate effects 7−111403
a-Si, Ar^+ ion irradiated, hopping cond. 7−84898
a-Si:Fe films, ^{57}Fe impurity states, Mossbauer spectra 7−70677
TeO_2 amorphous evaporated films, optical and elec. props. studies 7−144142
Ti coatings, vapour deposition, grain size rel. to thickness 7−138650

vapour deposited coatings continued
TiN coated stainless steel, cavitation erosion resist. *(Japanese)* 7−100391
TiN coatings, adhesion meas. by automatic scratch tester with AE detector *(Japanese)* 7−78401
TiN films, ion beam modification during vapour deposition 7−119152
TiN layers, PVD, metallography, SEM obs. *(German, English)* 7−132447
TiN, thin hard coatings on tool steel, thickness, adhesion, microhardness QC 7−138925
$TiSi_2$ amorphous thin films on Si and SiO_2 substrates, phase transformations, X-ray diffr., elec. resist., TEM 7−70114
Yb_2O_3 oxide film MIM struct. dielec. props. 7−118948
ZnS-Si, effect of ZnS deposition process on thin film interface 7−138652

vapour deposited thin films *see vapour deposited coatings*

vapour deposition
see also chemical vapour deposition; crystal growth from vapour; electron beam deposition; ion plating; plasma deposition; sputter deposition; vacuum deposition
amorphous materials grown by different processes, high resolution electron microscopy *(Japanese)* 7−69594
condensation layers thickness distribution on rotary conical base *(Polish)* 7−144268
copper (II) phthalocyanine thin films, molecular beam deposition on amorphous substrates 7−126002
diamond film growth from vapour phase, characterisation *(Japanese)* 7−71082
III-V semiconductor solar cells, large scale production, safety comparisons of gas source deposition technologies 7−86802
ion beam assisted deposition, equipment 7−119173
ion beam deposition apparatus, sputter type HF ion source 7−100116
ion beam induced VPE growth, molecular dynamics simulation 7−105330
ion bombardment, low-energy, during film deposition, effects on microstruct. and microchem. 7−100056
ion cluster-beam deposition, mol. dynamics simulation 7−113444
ion-surface interaction role during growth, review 7−125968
ionised cluster beam technique and appl. to thin film deposition and epitaxy *(Japanese)* 7−71083
ionized cluster beam deposition, review 7−71081
ionized-cluster beam low energy deposition of thin films 7−100117
optical fibre fabrication techniques 7−130401
optical fibres, materials, fabrication, book 7−120716
optical film ion based technique prod., progress in optics book 7−66843
property modification and synthesis by low energy particle bombardment concurrent with film growth 7−91672
surface decoration, step nucleation processes 7−119474
surface engineering, conf., Brighton, England (June 85) 7−72724
surface treatment, ion beam processes, review 7−119393
thin film growth mode models 7−137744
Al films by ionised cluster beam deposition 7−106438
Al-Mn icosahedral films, vapour deposition and struct. 7−118313
BN, polycrystalline wurtzite-type, laser pulse vapour deposition 7−71086
BN thin film ion beam assisted deposition 7−106440
C film, transparent, mass-separated negative-carbon-ion-beam deposition 7−113443
C_2 hard quasi-diamond film preparation by ion beam deposition 7−106441
Co-Zr, amorphisation by ion beam mixing and other techniques 7−75998
Cu films, deposition rate in neutral atmosphere 7−113449
Fe-Zr, amorphisation by ion beam mixing and other techniques 7−75998
GeO_x thin films, optical absorption edge, deposition press. effects 7−106290
InSb films, prep. by pulsed flash evaporation 7−126027
a-Si preparation technology, safety aspects 7−86020
SiO_2:Sb_2O_3 fibres fabricated by VAD method 7−123219
SiO_x film on NaCl (001), struct. and growth morphology 7−118322
TiN treated Al-Si alloy, by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
Y-Ba-Cu-O high T_c supercond., pulsed laser evaporation prep. 7−126026
$ZnIn_2Te_4$, thin film growth and struct. props. 7−138688

vapour-liquid transformations *see liquid-vapour transformations*

vapour phase epitaxial growth
see also molecular beam epitaxial growth
1.55 μm narrow-linewidth multielectrode DFB laser for coherent FSK transmission 7−136601
alkaline earth sulphide, film growth by atomic layer epitaxy, X-ray diffr. and Auger spectra obs. 7−144299
BH DFB lasers, 1.5 μm, low-pressure MOVPE growth and low-threshold operation 7−68673
compound semiconductors, MOVPE, review of growth systems and environments 7−77841
CVD, deposition press. depend. *(German)* 7−132478
DFB lasers, MOVPE growth, 1.55 μm differential quantum efficiency 7−136349
epitaxial layers, growth and characterisation 7−86038
heterojunctions grown by VPE, factors impairing comp. transition abruptness 7−138675
II-VI semicond., epitaxial photochemical deposition 7−138679
III-V semiconductor epitaxial layers, laser vacuum deposition on Si substrate 7−105334
III-V semiconductor epitaxial layers, MOCVD growth 7−71071
III-V semiconductor waveguides and phase modulators 7−103987
InP/InGaAsP/InGaAs avalanche photodiodes grown by chemical beam epitaxy 7−119146
ion beam induced VPE growth, molecular dynamics simulation 7−105330
ion-surface interaction role during growth, review 7−125968
ionised cluster beam technique and appl. to thin film deposition and epitaxy *(Japanese)* 7−71083
IV-VI semiconductor epitaxial films, for IR detector technology 7−132471
laser-induced deposition of thin films study 7−71068
layered semiconductor structures, research 7−105682
MOCVD applications in semiconductor technology 7−71070
MOVPE, lattice matched hetero-epitaxial growth on garnets 7−113409
MOVPE, novel reactor and charactn. of multilayer structures 7−104499
MOVPE of multilayer structures with III-V semiconductors 7−105683
semiconductor compound, epitaxial deposition by magnetron sputtering, review 7−125971
semiconductor epitaxial structures, for light generation, detection and modulation 7−132495
semiconductor lasers, single element fundamental mode, recent developments 7−110393

vapour phase epitaxial growth continued
SOI films by laser recrystn., periodic seeding filled by selective epitaxial growth 7−84561
transition metal coordination compounds, superlattice form. by selective coordination epitaxy 7−71063
Al films by ionised cluster beam deposition 7−106438
AlAs, VPE growth by Cl_2 transport method 7−144308
AlGaAs BH lasers, single-step MOCVD technology 7−90650
AlGaAs-GaAs, modulation-doped heterojunction, organometallic VPE for microwave appls., expt. charactn. 7−84582
AlGaAs-GaAs DFB lasers, λ/4 shifted, double window structs., MOCVD fabrication and charact. 7−97028
AlGaAs-GaAs laser diode fabricated by vapour phase etching and MOVPE 7−122958
$Al_xGa_{1-x}As$ epitaxial thin crystals, long range order, depend. on growth parameters 7−105347
$Al_xGa_{1-x}As$ MOVPE growth and charactn. 7−126007
$Al_xGa_{1-x}As$, VPE, halide transport reactor, optoelectronic device appls. 7−100080
AlGaInP laser diodes, DH, 664 to 690 nm, active layer growth by MOVPE 7−122956
AlGaInP visible light laser, 683 nm, MOVPE grown, transverse-mode stabilised, high-power operation 7−130155
AlInAs-GaInAs selectively doped heterostructs., MOCVD growth, appl. to HIFETs 7−112478
AlN, gas-phase epitaxy on sapphire substrates, growth kinetics and struct. 7−70106
BP (100) epitaxially grown on Si (100) substrates, cryst. props. and growth conditions *(Korean)* 7−84565
$BaTiO_3$, vacuum-deposited, mechanism of epitaxial growth 7−84579
Bi, VPE on uniaxial oriented semi-crystalline polymers 7−86031
$(Ca,Sr)F_2$ compositionally graded layers, growth and characterisation 7−113447
$Ca_{0.43}Sr_{0.57}F_2$/GaAs (100), epitaxial heterostructures, flash evaporation, charactn. 7−84537
Cd, hot wall technique, effect of subst. temp 7−124747
CdHgTe epitaxial layers, growth using interdiffused multilayer process 7−77840
$Cd_xHg_{1-x}Te$ layers, open tube isothermal VPE, comp. and thickness control 7−113445
$Cd_xHg_{1-x}Te$, MOVPE growth, temp. var. 7−86045
$Cd_xHg_{1-x}Te$, photo-assisted epitaxy, UV laser source 7−132497
$Cd_{1-x}Mn_xTe$ films, epitaxial growth by ionized-cluster beams and magneto-optical props. 7−113442
$Cd_{1-x}Mn_xTe$ epitaxial films, hot-wall evaporation 7−126000
$Cd_{1-x}Mn_xTe$ thin films, diffusive vapour transport, growth kinetics 7−84553
Cd_3P_2 films, growth by hot wall epitaxy 7−138685
CdS epitaxial films, struct. and chelate organometallic cpd. prep. *(Russian)* 7−124754
CdSe heteroepitaxial films deposited on cryst. and amorphous substrates by hot-wall technique, struct. obs. 7−70132
CdSe, preferential growth of sphalerite or wurtzite struct. by gas-solid process 7−144307
CdTe films, (100) and (111), growth on GaAs (100) by hot wall epitaxy 7−70145
CdTe films, ion beam sputter deposition and epitaxy 7−138655
CdTe films, metal-organic CVD 7−77840
CdTe, low temp. organometallic VPE growth, new source of dimethylditelluride 7−118289
CdTe, photo-assisted epitaxy, 200°C 7−132497
CdTe:As layers, growth by organometallic VPE 7−92878
$CoSi_2$-Si (111), d-metal silicides film epitaxial growth and props., review 7−137747
Cr, on Ni {111} substrates, orientation and morphology, TEM, electron diffraction anal. 7−92037
Cr, VPE grown on hot Cu substrates, orientation and morphology of deposits, TEM electron diffr. studies 7−70148
$CuGaS_2$ epitaxial layers, MOCVD growth 7−126016
$CuInSe_2$ thin films, rheotaxial growth 7−106418
$Cu_xLi_{1-x}InTe_2$ epitaxial layers on III-V substrates, lattice misfit 7−124792
Eu, on Re surfaces, BCC and FCC forms 7−143265
$Ga_{1-x}Al_xAs$, MOVPE multilayer growth, transient composition effects 7−98733
GaAs (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
GaAs atomic layer epitaxy, monolayer control, thickness uniformity and electronic props., review 7−124795
GaAs CVD, UV spectra of organometallic compounds 7−135961
GaAs, chemical beam epitaxial growth, obs. of intensity oscillations in RHEED 7−105304
GaAs epitaxial films, growth and characterisation 7−84603
GaAs epitaxial films, MOCVD grown, growth rate 7−144300
GaAs, epitaxial growth kinetics, effects of gas phase composition 7−71045
GaAs epitaxial layers, CVD growth on Ge coated Si substrates, solar cells fabrication 7−86058
GaAs epitaxial layers, crystallographic defect form. during MOCVD growth 7−104759
GaAs epitaxial layers, growth kinetics, vapour-phase composition effects 7−106427
GaAs epitaxial layers on Si, growth, props. and applications to FETs and LEDs 7−86034
GaAs epitaxial layers on Si substrates, high volume production growth 7−86059
GaAs film, ionized evaporation, epitaxy and composition, AC elec. field effect 7−138667
GaAs film growth by vacuum chemical epitaxy using thermally precracked trimethyl arsenic 7−119147
GaAs growth by molecular layer epitaxy, surface reaction processes 7−105338
GaAs, growth in low press. MOVPE, orientation depend. of growth rate and Si doping 7−144298
GaAs heteroepitaxial layers grown on ⟨100⟩ Ge substrates by MOCVD, deep levels 7−70235
GaAs, high mobility, low compensation crysts., low press. OMVPE 7−126022
GaAs MOCVD layers on Si substrates, misfit and threading dislocations 7−70138

vapour phase epitaxial growth continued
GaAs, MOCVD layers on (001) substrates, anisotropic lateral growth 7−100098
GaAs, MOVPE growth, impurity incorporation, laser-irradiation effects 7−71060
GaAs, nonlinear Fabry-Perot etalons, MOVPE grown, optical bistability and gating 7−97061
GaAs, on semi-insulating substrates, fabrication technology 7−144306
GaAs on Si and SOS substrates, organometallic VPE for microwave appls., expt. charactn. 7−84582
GaAs on Si substrates, polar-on-nonpolar epitaxy 7−70125
GaAs, plasma-assisted epitaxial growth, characterisation 7−105343
GaAs tunnel junction, MOVPE growth for multigap cascade solar cells 7−144834
GaAs VPE growth process, computer aided modelling 7−138669
GaAs VPE layers for microwave Schottky tuning varactors 7−138670
GaAs, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
GaAs:Fe epitaxial films, doping during vapour deposition, structural and electrical props. 7−76664
GaAs:In epitaxial layers, VPE trichloride growth using Ga/In alloyed source 7−71065
GaAs:Si, low press. OMVPE, doping using disilane 7−132482
GaAs:Sn, metalorganic VPE grown, Mossbauer spectroscopy 7−143938
GaAs:Sn epitaxial layers, gaseous Sn doping during vapour deposition 7−76663
GaAs/Ge composite layer growth on Si and SiO_2/Si substrates 7−84601
GaAs-AlGaAs, double heterostructure diode laser, on GaAs (110) substrate 7−141892
GaAs-AlGaAs, low-loss, single mode optical waveguides, organometallic VPE grown, appl. for integrated optoelectronics 7−117310
GaAs-AlGaAs 2D electron gas structs., OMCVD growth 7−92889
GaAs-AlGaAs heterointerfaces, growth by flow-rate modulation epitaxy, improved flatness 7−92004
GaAs-AlGaAs MQW structs., MOVPE-grown, quantum confined Stark shifts 7−138421
GaAsP, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
$GaAs_{1-x}P_x$, OMVPE growth, solid and gas comp. 7−86044
$GaAs_xP_{1-x}$ epitaxial layers, MOCVD growth, numerical model 7−71056
GaAsSb, vacuum chemical epitaxial growth for multi-band-gap solar cells 7−132468
$GaAs_{1-x}Sb_x$, OMVPE grown layers, ordered structs. 7−105342
$GaAs_{1-x}Sb_x$, organometallic VPE alloys, ordered structs. 7−105348
$GaAs_ySb_{1-y}$, $Ga_{1-x}Al_xSb$ and $Ga_{1-x}In_xSb$ ternary solid solutions, OMVPE growth *(French)* 7−132489
GaInAs, MOCVD gas mixing device, photolum. obs. of comp. uniformity 7−138672
GaInAs:Mg, grown by organometallic VPE, detection of defects 7−132496
GaInAs/InP low-loss optical waveguides for 10.6 μm wavelength fabricated by MOCVD 7−82777
GaInAs-InP, phase and amplitude modulation by free carriers injection at 10.6 μm 7−136500
$Ga_{0.47}In_{0.53}As$/InP double-heterostructure and multiquantum well lasers grown by chemical beam epitaxy 7−130104
$Ga_{0.47}In_{0.53}As$-InP quantum wells and superlattices, CBE growth, TEM, IR absorpt., photocond. and photolum. charactn. 7−126023
$Ga_{1-x}In_xAs$ layers, growth on InP by organometallic VPE, compositional uniformity 7−105344
$Ga_xIn_{1-x}As$, VPE growth *(Chinese)* 7−132488
GaInAsP/InP single quantum-well lasers, OMVPE grown 7−68641
GaInAsP-InP heterostruct. lasers, 1.5 μm, OMVPE fabrication 7−103840
$Ga_{1-x}In_xAs_{1-y}Sb_y$, OMVPE grown layers, ordered structs. 7−105342
GaN single-crystal films, MOVPE growth, luminescent props. 7−113405
GaN:Zn, low temp. growth using ECR plasma excited MO-VPE *(Japanese)* 7−138666
GaP:N, S epitaxial layers, prep. by VPE CVD method 7−86037
GaSb films, vacuum chemical epitaxy by hot-wall reaction and charact. 7−92026
Ge epitaxial films, growth and characterisation 7−84603
Ge epitaxial growth, low temp., and isotropic heterostruct. fabrication by direct ion beam deposition 7−92876
Ge, monolayer and bilayer growth on Ge(111), RHEED, oscills. 7−70119
HgCdTe films, ion beam sputter deposition and epitaxy 7−138655
HgCdTe, growth for long wavelength IR imagers, historical review 7−132441
HgCdTe, isothermal VPE, thermodynamic and kinetic model 7−100079
HgCdTe/CdTe/GaAs/Si epitaxial struct., growth and characterisation 7−84550
HgTe films, metal-organic CVD 7−77840
HgTe, photo-assisted epitaxy, 200°C 7−132497
In, VPE on uniaxial oriented semi-crystalline polymers 7−86031
InAs, gas phase epitaxy in InAs-$AsCl_3$-H_2 system, thermodynamics 7−71075
InAs, gas phase epitaxy in InAs-$AsCl_3$-H_2 system, growth kinetics 7−71076
InAs-GaAs quantum well heterostructs. grown by atomic layer epitaxy, stimulated emission 7−92703
InGaAs, MOVPE-grown, compositional homogeneity of layers 7−138673
InGaAs/GaAsP superlattices, molecular stream epitaxy 7−144292
InGaAs-InP, lattice matched heterostructure, metallorganic VPE, for high speed photodetectors 7−140746
InGaAs-InP, VPE grown, X-ray diffr., SIMS and photolum. characterisation 7−131480
InGaAs-InP MQW structs., atmospheric-pressure MOCVD grown, exciton electroabsorpt. at room temp. 7−92640
$In_{0.53}Ga_{0.47}As$:Si (Be) layers formed on InP substrates by ion implantation and flash annealing, elec. props. 7−85151
$In_xGa_{1-x}As$, VPE, hydride method, equilib analysis, ternary comp. 7−132481
InGaAsP-InP DFB lasers, 1.53 μm, VPE fabricated, very low-threshold design 7−97027
InGaAsP-InP lasers, MOVPE-grown DFB lasing at 1.5 μm 7−122965
InGaAsP-InP material, waveguide struct. by epitaxial techniques 7−136532
InGaAsP-InP:Fe VPE, high speed buried heterostructure laser diode 7−141896
InGaP-InP waveguides, pure and Fe doped, fabrication and characterisation 7−103964

vapour phase epitaxial growth continued
InP (100) oriented substrate, surface cleaning before MOCVD, SIMS obs. 7−86494
InP doping superlattices, MOCVD growth, optical props. 7−144114
InP films, hydride VPE growth, effect of PH_3 pyrolysis on the morphology and growth rate 7−71051
InP, heteroepitaxial growth on Si by low pressure MOCVD 7−106425
InP, low press. metalorganic VPE growth using trimethylindium-trimethylphosphine adduct source 7−113441
InP, materials aspects, conf., Harwichport, MA, USA (Sept. 1986) 7−120691
InP n^+-p-p^+ struct. solar cells, OMVPE growth 7−86796
InP, selective epitaxial growth by metalorganic CVD 7−132479
InP, VPE, hydride method, PH_3 decomp., substrate heating 7−113407
InP:C MOVPE growth and charactn. 7−126021
InP:Fe, semi-insulating, chloride VPE growth 7−100096
InP:Mg, grown by organometallic VPE, detection of defects 7−132496
InP:Mg, MOVPE grown, photolum, data 7−99910
InP:Te, MOVPE, carrier conc. rel. to doping 7−124301
InP/InGaAsP, OMVPE reactor design, flow visualisation and fraser gas study 7−126009
InP-$Ga_xIn_{1-x}P$, surface quantum wells 7−118559
InP-InGaAsP optical waveguides, MOVPE grown, low-loss, single-mode, fabrication, props. and appls. 7−103966
InSb, plasma-assisted epitaxial growth, characterisation 7−105343
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., sputter deposition and onset temp. 7−105792
$LiInSe_2$ thin film hot wall epitaxy and structural charactn., RBS, SEM and AES studies 7−118328
$MnFe_2O_4$ films, MOCVD, saturation magnetisation, coercive force *(Japanese)* 7−113421
NbN-MgO-Si (GaAs)(InP) tunnelling MIS Schottky diodes, epitaxial growth by interrupted-sputtering method 7−70417
NiSi, $NiSi_2$ epitaxial silicides, forming conditions in system comprising vacuum condensate and single cryst. Si *(Russian)* 7−92888
$NiSi_2$-Si, thin epitaxial layers, cond. and mobility 7−138076
$NiSi_2$-Si (111), cryst. intermediate phases in epitaxial layer formation 7−137748
$NiSi_2$-Si (111), d-metal silicides film epitaxial growth and props., review 7−137747
PbI_2 single cryst. thin films, hot wall technique growth, light absorption studies 7−100075
PbTe-SnS, solid solutions, thermal evaporation in vacuum 7−106417
$PbTiO_3$ films, epitaxial growth on $MgAl_2O_4$-Si substrates 7−100071
$PbTiO_3$ piezoelectric films, epitaxial growth and appls. 7−99720
Pd, adsorption on sapphire, wetting and adhesion of Pd-Al_2O_3 interface *(French)* 7−112106
Pt, epitaxial deposition on Au (001), inverse photoemission study 7−132367
Si epitaxial CVD layer deposition and doping, process control eqns. development 7−98193
Si, epitaxial CVD layers, doping, modelling and theory development 7−124297
Si, epitaxial films, plasma CVD growth at low temps. 7−126015
Si, epitaxial growth, book 7−102034
Si epitaxial growth, low temp., and isotropic heterostruct. fabrication by direct ion beam deposition 7−92876
Si, epitaxial growth, low temp., by plasma-enhanced CVD *(Japanese)* 7−138682
Si, epitaxial growth and prebaking, UV radiation effects 7−113406
Si, epitaxial layers, photo-CVD using VUV light 7−126017
Si low-temp. growth of epitaxial layers using Si-I_2-H_2 CVD system 7−113426
Si SOI, Si selective epitaxial growth over thick SiO_2 islands 7−100103
Si, VPE kinetics at reduced temps. 7−100091
Si VPE layer doping, theoretical foundations, incorporation eqns. 7−124296
SiC, 6H and 3C polytypes heteroepitaxial CVD, Raman spectra study 7−119148
β-SiC, device quality, CVD, on Si-substrates 7−113427
β-SiC films, epitaxial growth by laser-induced sublimation *(Japanese)* 7−84574
β-SiC films, inclined epitaxy on Si, CVD 7−118290
SiC heteroepitaxial CVD cubic single cryst. growth and elec. charcts. on Si substrates 7−106428
β-SiC semiconductor films grown from $SiHCl_3$-C_3H_8-H_2 system, charcts. 7−126004
$(SiC)_{1-x}(AlN)_x$ epitaxial layers, deposition and struct. props. *(Russian)* 7−126006
$(SiC)_{1-x}(AlN)_x$ wide gap solid soln., VPE epitaxial growth 7−113417
Sn, VPE on uniaxial oriented semi-crystalline polymers 7−86031
Te, VPE on uniaxial oriented semi-crystalline polymers 7−86031
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond. film, crit. current densities and transport 7−131950
Zn chalcogenides, atomic layer epitaxy growth, dynamic RHEED studies 7−71030
Zn hot wall technique, effect of subst. temp 7−124747
$Zn_xCd_{1-x}Te$-InSb(InAs) heterostructures, transition layer form. during vacuum epitaxy *(Russian)* 7−124725
ZnS epitaxial films, struct. and chelate organometallic cpd. prep. *(Russian)* 7−124754
ZnS, II-VI compounds, wide gap 7−138674
ZnS:In VPE on GaP substrates, doping effects study 7−105317
ZnS(Se) MIS device technology using MOCVD growth 7−86043
ZnS_xSe_{1-x} epitaxial films, vapour-grown, thermodynamic anal. and luminescent props. 7−144303
ZnSe, atmospheric pressure MOVPE growth on GaAs substrates 7−100109
ZnSe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048
ZnSe epitaxial layers on GaAs substrates, misfit strain, Raman study 7−99835
ZnSe films, low pressure MOVPE growth 7−92880
ZnSe films, MOVPE growth, diethylzinc diffusion-limited condition 7−144304
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe, heteroepitaxy on GaAs 7−137741
ZnSe, high purity, low press. VPE growth, luminesc. props. 7−71066

vapour phase epitaxial growth continued
ZnSe, II-VI compounds, wide gap 7−138674
ZnSe, low temperature plasma-assisted epitaxial growth 7−126013
ZnTe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016

vapour pressure
see also humidity; vaporisation
alkanoic acids, C_1-C_{10}, vap. pressures, crit. temps and pressures 7−98390
1,1-dichloroethane, critical consts. vapour press. 7−91759
2,5-diphenylfuran molecules, gaseous phase, photophysical parameters 7−82272
drops, sessile, free energy, vapour press., contact angle equilib. 7−69936
isopropylbenzoic acids, enthalpies of form. sublimation and combustion, vapour press. 7−78535
methylene difluoride, liq. vap. press., isotope effect 7−142971
oil in water microemulsion, vapour press. meas. 7−71535
Peng-Robinson eqn. of state, temp. depend. parameters 7−98375
perturbed soft chain theory eqn. of state parameters calcs. 7−69851
phenol, organic solns., internal press. meas. 7−105062
quinoline-hydrocarbon mixtures, vapour pressures and excess Gibbs energies 7−76369
solutions, colligative properties, solvent cluster size effects 7−84226
swelling agent for solid-gas mass transfer meas. 7−75261
1,1,2,2-tetrachloroehtane-n-hexane, excess molar enthalpies, molar vols. and vapour pressures 7−98505
w.r.t. thermal radiation, applicability limits of ideal gas eqn. *(Russian)* 7−75256
Ag, vapour press. determ., 0.1 to 3.0 bar 7−131281
Al, thermodynamic properties, review 7−143037
Al-Li, liq. alloys, binary and ternary, thermodynamic props. *(Korean)* 7−76447
$AlCl_3$-$POCl_3$ system, molten, vap. press. determ. 7−111841
AlN, solid Al^+ ion source 7−85937
Au, vapour press. determ., 0.1 to 3.0 bar 7−131281
$Ca_3Ga_2Ge_3O_{12}$, mass spectra of volatile components, vapour pressure 7−104974
$Cd_xHg_{0.5-x}Te_{0.5}$, preparation in H_2 environment, thermodynamic analysis 7−100023
Cu, vapour press. determ., 0.1 to 3.0 bar 7−131281
Er_7S_{13}, tensimetric study 7−91783
Ga, vapour press. determ., 0.1 to 3.0 bar 7−131281
Ga-H-Cl, chem. equilib., tensometric anal. 7−106819
Ga-In-P-As, melt, vapour pressure of P and As 7−98400
Ge-Se system, liquid-vapour equilibria, mixture boiling point method 7−104970
GeI_2, total vapour press. meas. 7−142972
H_2O clusters, mol.-beam study, electron-impact ionisation meas. 7−82418
H_2S, isotopic species, thermodynamic props. meas., enthalpy of vaporisation calc. 7−118131
^3He, liquid-gas phase transition, mean field approach 7−118188
^4He, superfluid fraction from 1.5 K to $T_\lambda(P)$ and from vapour press. to melting curve 7−76515
In, vapour press. determ., 0.1 to 3.0 bar 7−131281
InN, thermal stability 7−98513
InP crystals, Si incorporation in soln. growth process, growth temp and P vapour press. depend. 7−100035
KNO_3 vapour pressure, Langmuir free vaporisation method 7−131280
$LiNO_3$-KNO_2-H_2O based melts, vapour press. meas. 7−98391
$LiNO_3$-KNO_3-H_2O based melts, vapour press. meas. 7−98391
$Mg(PO_3)_2$, thermal dissociation, mass spectrometric study 7−106821
$Mg_2P_2O_7$, thermal dissociation, mass spectrometric study 7−106821
Mn thermodynamic props., review 7−80196
Mo, thermodynamic props., review 7−80196
O_3 stratospheric instrument calibration system based on preparation of O_3-N_2 gas mixture 7−107550
Pb liquid, vapour pressure meas., Langmuir free evaporation, quartz crystal microbalance 7−131279
PbSe, solubility of Se, rel. to vapour pressure of Se_2, 1070-1270 K 7−69910
Sn, vapour press. determ., 0.1 to 3.0 bar 7−131281
V-Si system, vaporization thermo-dynamics in V-rich region, high temp. Knudsen cell mass spectrometry 7−111845

vapour pressure measurement
isothermal measurements and thermal desorption of organic vapors using SAW devices 7−82974
plate-mode ultrasonic oscillator sensors for vapour detection 7−82977
trace chemical vapor detection using SAW delay line oscillators 7−82978
He adsorption over zeolites, volumetric determ. using differential, temp.-compensated tensimeter 7−124707
Pb liquid, vapour pressure meas., Langmuir free evaporation, quartz crystal microbalance 7−131279

vapour-solid transformations *see solid-vapour transformations*

varactors
NMR magnetometer with low-noise limited oscillator 7−95627
resonator calibration for dielectric meas. 7−95619

variable-frequency oscillators
computer-interfaced experimentation 7−108126

variable speed drives *see electric drives*

variable stars
see also cataclysmic binary stars; eclipsing binary stars; flare stars; pre-main-sequence stars
68th name list 7−140101
A 0535+26(HDE 245770), optical study of Be/X-ray transient 7−94944
AAVSO 75th annual meeting, Cambridge, MA, USA (August 1986) 7−128173
AC 211 (=4U 2129+12), in M15, discovering of 8.5 hour X-ray period 7−120505
AC 211/X2127+119, X-ray binary in M15, CCD photometry rel. to 8.5-hr orbital period 7−115502
AE 1, pure He I star, V obs. 7−72421
Ae/Be stars, obs. of rapid narrow-band photometric variability *(Russian)* 7−145999
AG3 discordant proper motions 7−115471
EU And, C star, H_2O maser obs. as evidence of nearby O-rich circumstellar shell 7−127896
HQ and HV And, polar candidates, photometric meas. (1970 to 1986) 7−115469
λ And, RS CVn star, UV emission-line vars. to tidal influence on chromospheric struct. 7−94941
OS And (Nova And 1986), UBV photometry and visual magnitude estimates 7−145982
Ap and He-weak stars in clusters and associations, photometric variability 7−120421
Ap stars, rapidly oscillating, computed spectral line vars. for oblique non-radial pulsators 7−72436
η Aql, Cepheid variable, pulsation period and radial vel. behaviour of H lines 7−79998
FY Aql, Mira variable in refl. nebula, search for assoc. with 1979 March 31 γ-ray burster 7−140087
U Aql, orbit of classical Cepheid from radial vel. obs. 7−140112
V1343 Aql (SS 433), accretion disk model for moving spectral lines 7−127891
V1343 Aql (SS 433), constraints on binary system from optical continuum spectrum obs. 7−88430
V1343 Aql (SS 433), disk-type accretion model and appl. to activity in galactic nuclei 7−140263
V1343 Aql (SS 433), dynamical model for jets precession 7−88429
V1343 Aql (SS 433), effect of radiative acceleration instability on jets struct. 7−139899
V1343 Aql (SS 433), Hα emission profiles of jets *(Russian)* 7−140109
V1343 Aql (SS 433), jets parameters determ. *(Russian)* 7−145997
V1343 Aql (SS 433), photometric study of two periodicities over seven years 7−120444
V1343 Aql (SS 433), simultaneous obs. of X-ray and optical eclipse 7−140105
V1343 Aql (SS 433) rapid photometric and spectral var. 7−127883
BS Aqr, short-period pulsating variable, light curve anal. to period of fundamental pulsation 7−94880
R Aqr, symbiotic Mira variable, first unambiguous X-ray detect. 7−140096
V821 Ara (GX 339−4), black hole candidate, optical variability obs. and limits on periodic modulation 7−127975
UX Ari, RS CVn star, 1985/6 photometry and starspots 7−115524
UX Ari, X-ray flaring of RS CVn star 7−140175
asymptotic giant branch stars, $^{12}C/^{13}C$ and $^{16}O/^{17}O$ isotopic ratios 7−120397
AB Aur, Herbig Ae star, short-term vars. obs. ion Ca II K line 7−88400
CO Aur, peculiar double-mode Cepheid, pulsation modes, radial vel. and photometry obs. 7−120416
RW Aur, T Tau star, Balmer-line and photometric vars. obs. 7−127863
ε Aur, UBV photometry outside eclipse (March-April 1986) 7−145955
V356 Aur (=HD 37819), double-mode δ Sct star, pulsation characts. 7−127874
B emission stars, geometry of circumstellar envelopes *(French)* 7−145942
B-type pulsating stars, nonadiabatic anal. of low-freq. oscills. of uniformly rot. stars 7−88381
Be stars, constraints on models from UV and IRAS meas. 7−127877
Be stars, effective temps. and energy distrib., spectrophotometric obs. 7−120412
Be stars, emission line spectroscopy 7−72432
BE stars, IR excesses 7−134241
Be stars, irregular variations, assoc. relation between visual polarisation and UV narrow absorpt. lines 7−127879
Be stars, list of 24 new possible variables among comparison stars 7−145986
Be stars, model fitting of polarimetric data 7−101792
Be stars, rapid vars. in Hα and Hβ emission lines of γ Cas, ζ Tau and 66 Oph 7−140103
Be stars, relation to evolution of intermediate mass Case B close binaries 7−115501
Be stars, shell ejection, ang. momentum transfer 7−94886
Be stars, spectrophotometric obs. rel to masses and evolutionary status 7−72441
BE stars, statistics of IR excesses from IRAS obs. 7−101795
Be stars, variable nature of 55 different stars 7−88458
Be stars in southern hemisphere, UBV photometric survey 7−107864
Be stars in young southern cluster NGC 3766, uvby β photometry 7−88557
Bright Stars Catalogue stars, photometric data catalogue 7−72331
RU Can, RS CVn star, search for non-stellar contributions to optical and near-IR fluxes 7−140157
AD Cap, southern RS CVn star, IR photometry 7−88501
η Car, IR spectroscopy rel to composite dust shell model 7−120462
GG Car, peculiar emission-line star, UV spectrum line identifications 7−72437
GG Car, UV spectral characts. and shell nature 7−80032
ρ Cas, 1986 brightness increase, photometric obs. 7−115470
β Cas, δ Sct star, radial vel. obs. by Si linear array camera of Vienna Observatory 7−101691
γ Cas, Be star, long-term variability of far-UV high-vel. components 7−140074
SU Cas, Cepheid, hydrodynamic models for various lumin. 7−120415
XY Cas, Cepheid variable, anal. of period and period vars. from archival plates 7−72454
γ Cas, circumstellar nature of IR emission lines 7−140086
μ Cen, Be star, obs. of Hα emission event (March-April 1987) 7−145994
V644 Cen, UBV monitoring of fading (1981-4) 7−115467
μ Cep, SRc star, BV photometry (1981 to 1986) 7−72452
Cepheid variable + B-star binaries in Milky Way and LMC, expected ang. separations 7−80034
Cepheid variables, Population I and II, modal selection of radial pulsators 7−88371
Cepheid variables distrib. in Galaxy from BV photometric data *(Russian)* 7−72471
Cepheid variables in LMC, radii determ. rel. to distance of LMC *(French)* 7−79970
Cepheid variables in LMC cluster NGC 1866, CCD light curves rel. to LMC distance modulus 7−88463
Cepheid variables in M33, comparison of Hubble photometry with CCD data 7−79975
Cepheids, distance scale calibration 7−72302
Cepheids, distrib. in galactic plane 7−145973
Cepheids, photometry and motion within galactic rot. model 7−101923
Cepheids, reddenings in KHG system 7−72438
Cepheids, Type II with periods of 1 to 3 days, Fourier phases anal. 7−101797
RW Cet, eclipsing binary star, intrinsic light vars. obs. from BV photometry 7−72525
δ Cet, Pioneer 10 UV obs. of β Cep star 7−107847

variable stars continued
ZZ Cet stars, convective blocking driving mechanism for pulsations 7−120394
ZZ cet stars, nonradial oscills. of low-mass stars in presence of mag. field 7−120374
ZZ Cet stars, struct. and oscills. of low-mass stars in presence of mag. field 7−94856
classical Cepheids, colour excess determ, from ubvy β photometry 7−127888
EZ CMα, WN5 star, possible appearance of second photometric period 7−115388
Z CMa, Herbig Ae-Be star, resolution at near-IR wavelengths rel. to scatt. dusty disk model 7−134226
FY CMa (HR 2855), Be star, spectral changes (April to May 1987) 7−94894
α CMa (Sirius), possible colour change since antiquity *(French)* 7−120392
R CMi; thermally-pulsing AGB star, duration of third dredge-up phase from Tc/Mo ratio 7−115222
AD CMi, V photoelectric photometry and period change of δ Sct star *(Chinese)* 7−120402
FK Com, five-colour (UBVRI) photopolarimetry 7−101772
FK Com, rapidly rotating variable star, radio emission obs. 7−88425
EO and FV Com, RRab stars, pulsation periods and functional forms of (O−C) diagrams 7−72456
comparison stars for Be stars photometry, list of new possible variable stars 7−145986
cool C stars in Galactic anticentre region, spectroscopic search and catalogue 7−134151
CP2 light wave analysis, surface inhomogeneity 7−134242
CP stars, photometric variability 7−140077
R CrA, spectrum vars. rel. to rapid vars. of assoc. refl. nebula (NGC 6729) 7−80076
V394 CrA (Nova 1949), spectrum and visual magnitudes during new outburst (August 1987) 7−127900
δ CrB, chromospherically active giant star, optical photometry and UV spectrum 7−94875
R CrB, UV spectra during fading episode, assoc. model 7−127913
20 CVn, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
α^2 CVn, Ap star, radiation distrib. and nonspherically symm. model 7−127881
RS CVn stars, chromospheres and transition regions physical parameters 7−120491
RS CVn stars, dark spots and evidence for circumstellar material, obs. anal. 7−140157
RS CVn stars, effects of starspots on Li abundance determ. 7−72412
Rs CVn stars, IRAS obs. 7−94946
RS CVn stars, IUE obs. of rot. modulation of V711 Tau, IL Peg and Ar Lac 7−101843
RS Cvn stars, short-period, light curves anal. rel. to starspots and fundamental props. 7−146039
RS CVn type stars, radio polarization and spectral props. 7−101848
RS CVn-like stars as optical counterparts to X-ray sources, obs. 7−107982
RS CVn-type binaries, rotation period rel. to activity 7−146034
V1764 Cyg=HD 185151, RS CVn star, ellipticity and starspots, photometric obs. 7−72517
V1764 Cyg=HD 185151, RS CVn star, photometric obs. anal. 7−72516
τ Cyg, δ Sct star, Hα var. and pulsation characts. *(Russian)* 7−127910
WY and YY Cyg, AGK3 discordant proper motions 7−115471
P Cyg, circumstellar shell detect. by direct CCD imaging 7−72434
P Cyg, extended radio emission obs. 7−120419
V832=59 Cyg, Hα profile variations of Be-star 7−88460
V1675 Cyg, no light var. in 1986, Nessa BV photometry 7−79988
CG Cyg, short-period eclipsing RS CVn star, solns. of 1979 and 1980 light curves 7−134276
CY Cyg, thermally pulsing AGB star, duration of third dredge-up phase from Tc/Mo ratio 7−115222
V1727 Cyg(=4U 2129+49), HZ Her star, X-ray heating light curve, accretion disk effects 7−127954
V1727 Cyg (=4U 2129+47), X-ray binary star, optical behaviour (March to November 1986) 7−115523
V1500 Cyg (Nova Cyg 1975), possible AM Her star, photometric and spectroscopic obs. 7−115466
DB-type pulsating white dwarfs, temps. determ. from IUE obs. 7−88409
δ Del, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
S Dor stars, outbursts rel to circumstellar shells around Ofpe/WN9 stars in Galaxy and LMC 7−134237
SW Dra, RR Lyr star, lumin. characts., use of photometry, radial vel. and Baade-Wesselink method 7−120437
4=CQ Dra (M3 III+cataclysmic binary), variable radio emission obs. 7−79979
BY Dra stars, detect. of four marginal objects from spectroscopic survey 7−120395
dwarf Cepheids, radii, masses, pulsation characts. and evolutionary status, VJK obs. 7−72467
dwarf novae, visual magnitude estimates (July-August 1987) 7−134243
E39, blue straggler in ω Cen, implications of dwarf Cepheid light vars. 7−88399
1E 1751+7046, FK Com candidate nature and obs. 7−127880
early-type pulsating stars, excitation of forced low-frequency gravity modes in rot. star 7−79946
CU Eri, supposedly constant star, photoelectric evidence for light vars. 7−72442
EI Eri (=HD 26337), RS CVn star, rot. characts. and photometric obs. 7−146027
α Eri (Achernar), Be star, photometric and spectroscopic obs. 7−107861
EI Eri (HD 26337), RS CVn star, system characts. 7−146028
eruptive variable on Leo Minor-Ursa Major border (α=10h52m18.9s, δ=+37° 15.8′; 1950), nature 7−79990
eruptive variables, TA observations (1987 April) 7−120426
eruptive variables, TA observations (1987 February) 7−88424
eruptive variables, TA observations (1987 January) 7−79978
eruptive variables, TA observations (1987 July) 7−145971
eruptive variables, TA observations (1987 June) 7−145969
eruptive variables, TA observations (1987 March) 7−120424
eruptive variables, TA observations (1987 May) 7−140084
EXO 020528+1454.8 (=G035−027), optical variability of X-ray source 7−145988

variable stars continued
F-type stars, variability 7−94862
Fornax dwarf spheroidal galaxy, search for long period variables 7−107956
general characteristics (book) 7−134381
GX 339−4, faint optical states (1981-6) 7−94952
GX 339−4 black hole candidate, Halpha spectra of optical counterpart 7−94940
HC 199178, FK Com star, five-colour (UBVRI) photopolarimetry 7−101772
HD 112313, planetary nebula central star, photometric var. 7−120386
HD 12856, HD 13890, Be stars in Per OB1 association, synthetic filter photometry and evolutionary status 7−79976
HD 151932, WN7-A star, obs. of He I and Si IV lines vars. 7−120405
HD 155555, RS CVn star, X-ray emission obs. 7−134273
HD 158393, late-type giant in binary system, orbital characts. and chromospheric activity 7−107828
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 160886, Be star, photometric obs. 7−72469
HD 184279 (V1294 Aql), Be-shell star, long-term and mid-term spectrum vars. 7−140080
HD 187399, Be-type X-ray binary, spectroscopic investigation 7−127872
HD 200775, Herbig Be star, obs. of rapid spectral, photometric and polarimetric vars. *(Russian)* 7−72425
HD 213985; halo hot post-AGB star; evolutionary status and shell dust, spectral and photometric obs. 7−120387
HD 26337, RS CVn type binary, request for VRI photometry, (1987 December 15 through 30) 7−146047
HD 32918, active chromosphere K2 III star, obs. of intense long-lasting radio flare 7−120400
HD 33798, V photoelectric photometry of suspected variable 7−120457
HD 35914, variable central star of PN IC 418, simultaneous spectroscopic and photometric obs. 7−115386
HD 5303 (=CF Tuc), southern RS CVn star, IR photometry 7−88501
HD 6491, F2 IV-V star, photometric period determ. from UBVRI obs. 7−134249
HD 6532, Rapidly Oscillating Ap star, freq. soln. to light vars. rel. to l=1 oblique dipole oscill. 7−134248
HD 6532, rapidly oscillating Ap star, rot. period determ. from mean light vars. 7−134249
HD 8441, CP2 light curve analysis, surface inhomogeneity 7−134242
HD 89249 as peculiar Be+K-type stars, photometry and spectra 7−94882
HD 92664, Bp-Si star, no evidence for short-time-scale photometric vars. 7−140081
HD 97766, flares detect., UBV obs. 7−145991
HDE 245770 (=A0534+26), Be star, new X-ray outburst obs. 7−80041
HDE 270100, new long-period Cepheid in LMC, period and light curve from Walraven photometry 7−120456
Hen 715 (4U 1145−619), Be star, X-ray and optical spectral vars. during X-ray outburst 7−127973
V644 Her, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
BL Her, uvbyβ photometry and parameter determ. 7−140115
ι Her (B3 IV-V), short-period light and spectrum vars. 7−101788
Herbig Ae/Be stars, UBVRI polarisation meas. *(Russian)* 7−145958
historical observations of stars which have brightened or faded 7−88135
HR 1063 (V396 Per), He-weak star, B-band photometry (1984 to 1985) 7−72453
Hubble-Sandage variables, luminosity study 7−101803
hypergiant stars eruptions, opaque wind model for relation between apparent temp. and mass loss rate 7−120440
IRAS C stars, obs. of assoc. CO and HCN sources 7−120408
IRC+10216, C star, circumstellar dust opacity from optical-IR photometry 7−101796
IRC+10216, C star, detect. of C_2S and C_3S 7−120414
IRC+10216, C-star, inner envelope characts., CO lines modelling 7−140089
IRC+10216, shell HCO^+ and HCN 7−120367
IRC+10216, star, 1,3,5-hexatriyne radical obs. 7−120538
IRC+10216 (CW Leo), circumstellar shell geometry from IR speckle interferometry 7−79996
IRC+10216 (CW Leo), detect. of vibrationally excited CS in circumstellar shell 7−140073
IRC+10216 (CW Leo), possible detect. of hexatriynyl radical (C_6H) in mm-wave spectrum 7−79969
IRC+10216 (CW Leo), upper limit to H I emission 7−107824
irregular variable stars, colour characts. 7−145962
R Lac, AGK3 discordant proper motion 7−115471
EW Lac, Be star, photometric study rel. to multiperiodic light vars. 7−127889
EW Lac, Be star, shell spectra var. *(Chinese)* 7−107829
AR Lac, RS CVn star, atm. conditions 7−120491
late-type emission line variable star in Draco (α=16h30m33.0s, δ=+53° 33.6′; 1950) 7−79990
late-type emission line variable star in Ursa Major (α=10h45m16.9s, δ=+52° 34.4′; 1950), nature 7−79990
late-type maser emission stars, astrometry in visible and radio 7−115617
R Leo, cool O-rich Mira variable, long-term pulsational behaviour 7−88423
R Leo, cool O-rich Mira variable pulsational long-term behaviour and brightness var. 7−101791
SS Leo, RR Lyr star, light curve characts. 7−145983
CW Leo (IRC+10216), C_2H and CN mapping in circumstellar shell rel. to photochemical model 7−101790
CW Leo (IRC+10216), C star, detect. of circumstellar NaCl, AlCl, KCl and perhaps AlF 7−140051
CW Leo (IRC+10216), C star, vibrationally-excited butadiynyl (C_4H) as source of new mm-wave doublets 7−134234
CW Leo (IRC+10216), chemical modelling of circumstellar mol. shell 7−145963
light curve analysis, nonadiabatic nonlinear one-zone model 7−107846
LMC Cepheids, light curves, Fourier decomposition 7−120409
RW LMi (CIT 6), extreme C star, HCN maser emission obs. 7−101947
long-period and semiregular variables, predicted dates of maxima and minima (1987) 7−79982
long-period Cepheids, detect. of groups by max. likelihood 7−127884
LSI+61°303, radio-emitting Be star, long-term near-IR photometry 7−120407

variable stars continued
luminous blue variables in Milky Way and external galaxies, relation to stellar upper luminosity boundary 7−72426
τ^1 Lup, β Cep star, photometric obs. and freq. anal. 7−120422
γ Lup, detection of new Be-star 7−145995
RR Lyr, mag. field var. with pulsation period, spectral obs. *(Russian)* 7−72470
MV Lyr, nova-like variable, optical brightening obs. (1987 March 28 to May 2) 7−88451
RR Lyr stars, amplitude modulation due to internal resons. as possible explanation of Blazhko effect 7−94878
RR Lyr stars, appl. of time-depend. Fourier anal. to nonlinear pulsational models 7−140092
RR Lyr stars, linear second-overtone pulsation models 7−140093
RR Lyr stars, modal selection of radial pulsators 7−88371
RR Lyr stars, overtone pulsation models rel. to light curve shapes 7−115457
RR Lyr stars, pulsation mode selection theory 7−127895
RR Lyr stars, pulsational charcts. 7−88387
RR Lyr stars, UBVRI photometric and radial vel. data 7−115391
RR Lyr stars, $UV_bY\beta$ electrophotometry 7−107844
RR Lyr stars absolute magnitudes and distance moduli, H-photometric obs. anal. 7−107859
RR Lyr stars in globular cluster M5, appl. of Baade-Wesselink method to cluster distance determ. 7−127986
RR Lyr stars in globular clusters, Sandage period-shift effect 7−72444
RR Lyr stars of Bailey type C, modelling 7−94888
M33 variable stars, visible and IR photometric obs. 7−101798
in M5, photographic discovery of 11 new variables in globular cluster 7−145987
M-type Mira variables, single, visible light curve shape and H_2O 13.5 mm line detect. 7−127876
Magellanic Cloud supergiant stars, search for variability in BVRI obs. 7−101782
Magellanic Clouds type II Cepheids, spectra and JHK photometry 7−120438
Me stars, low-dispersion spectra of six objects *(Chinese)* 7−120403
TZ Men, A-type eclipsing binary star, detect. of intrinsic light vars. in secondary component 7−80029
Mira variable stars, anal. of visual obs. of R Ari, R Aur, X Aur, R Boo and S Boo 7−79992
Mira variable stars, SiO maser emission and IR continuum 7−79973
Mira variables, props. of silicate emission features in low-resolution IRAS spectra 7−140322
Mira variables in interacting binaries, evolution and luminosities 7−140111
VV Mon, RS CVn star, search for non-stellar contributions to optical and near-IR fluxes 7−140157
V616 Mon (=Nova Mon 1975=A0620−00), identification as black hole binary system 7−88511
N-type C stars, IUE spectra and chromospheres study 7−107848
in NGC 2287 (M41), differential photometry of suspected variables in open cluster 7−101871
Nova And 1986, photoelectric UBV photometry (1987 January 20 to 24) 7−72450
Nova And 1986, visual magnitude estimates (1987 June 3 to 29) 7−120450
Nova Aql 1982, photometric and spectroscopic obs. by IUE, AAT and WRST 7−140106
Nova Cen 1986, UBV photometry (1986 December 9 and 10) 7−79984
Nova Cyg 1986, visual magnitude estimates (1987 June 3 to 29) 7−120451
Nova Cyg 1986, visual magnitudes estimates (1987 June 29 to August 2) 7−134246
Nova Her 1987, K-band spectroscopy and JHKL'LM magnitudes (1987 May 9 and 19) 7−101809
Nova Her 1987, photoelectric photometry and visual magnitude estimates (May-June 1987) 7−107854
Nova Her 1987, photoelectric UBV photometry (1987 June 15 to 19) 7−120453
Nova Her 1987, spectroscopic obs. and visual magnitude estimates (April to May 1987) 7−94893
Nova Sgr 1987, corrected Right Ascension, upper magnitude limits, and visual magnitude estimates 7−101808
Nova Sgr 1987, JHK photometry and visual magnitude estimates (June 1987) 7−127901
Nova Vul 1670, anal. of Cassini's comparison obs. using β Lyr 7−94964
Nova Vul 1984 No.2, obs. of unusual early radio outburst 7−140076
Nova Vul 1984 No.2, spectrum during nebular phase 7−120436
Nova Vul 1984 No.2 visual magnitude estimates (1986 November 26 to 1987 April 1) 7−79986
Nova Vul 1984 No. 2, 'Ne nova', IR photometry rel. to silicate grains condensation in ejecta 7−88439
novae, visual magnitude estimates (July-August 1987) 7−134243
NSV 6708, July and August 1987 stellar magnitudes 7−127903
NSV 6708, variable star magnitudes and colours, March-July 1987 obs. 7−120452
NSV 6708, visual magnitude estimates (1987 June 30 to July 13) 7−120449
NSV 6708, visual magnitudes of unusual variable star 7−88446
OH/IR 286.50+0.06, Mira-type star, lumin., mass loss rate and spectral type 7−120411
in open clusters, cross-identifications from catalogue of UBV photometry and MK spectral types 7−72334
Y Oph, δ Cep star, photometric obs. 7−115472
V841 Oph (Nova Oph 1848), semiregular variations at minima 7−88456
optical flashers, charcts. 7−88135
ω Ori, Be star, wind charcts. 7−127879
α Ori, circumstellar CO obs. 7−88428
α Ori, Hα chromosphere obs. using differential imaging technique 7−115379
α Ori (Betelgeuse), distance, diameter, light vars., and circumstellar shell 7−101776
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheric modulation 7−140064
α Ori (Betelgeuse), SRc star, BV photometry (1981 to 1986) 7−72452
EQ Peg, EXOSAT and IUE obs. of 1984 December 7 flare 7−120418
DY Peg, period and light curve charcts. 7−145993
γ Peg, Pioneer 10 UV obs. of β Cep star 7−107847
II Peg, RS, CVn star, line charcts. and spots, CCD echelle obs. 7−140171
variable stars continued
II Peg, RS CVn star, 1986 light curve interpretation with star pot models 7−120512
II Peg, RS CVn star, atm. conditions 7−120491
II Peg, RS CVn star, broad-band and narrow-band photometry (autumn 1981) 7−120511
II Peg, RS CVn star, IR and visible photometry 7−127961
RX Peg, semi-regular variable star, proper motion meas 7−88453
II Peg, uvby photometry of spot cycle end-phase 7−146045
τ Peg , δ Sct star, Hα line vars. rel. to high-freq. radial oscills. *(Russian)* 7−107866
IZ Per, eclipsing binary, spectral-luminosity classification, colour vars., and β CMa-type variability 7−94947
S Per, OH-IR star, interferometric obs. of H_2O and OH maser emission 7−72433
GK Per, visual magnitude estimates (1986 December-1987 April) 7−94889
X Per, X-ray Be star, discovery of 13.9-min optical periodicity *(Russian)* 7−107907
X Per, X-ray pulse period, 1984 Tenma obs. 7−140181
α Per cluster, rapidly rot. K-type dwarfs, photometric photometric var. and spot activity 7−127869
PG 1031+234, magnetic white dwarf, spectra photometry rel. to polarisation and mag. field struct. at >500 MGauss 7−88407
PG 1115+158 and 1351+489, extreme examples of compact pulsators 7−127860
PG 2303+243, new pulsating DA-type white dwarf, photometric obs. 7−79955
Pleiades, rapidly rotating K-type dwarfs, photometric light curves anal. 7−127869
Pleiades late-type B-stars, light variability, y photometry 7−72418
Pleione (=BU Tau), variable shell strength, spectral obs. 7−145992
UV Psc, eclipsing binary, evidence for one component intrinsic var. 7−140162
UV Psc, RS, CVn star, search for non-stellar contributions to optical and near-IR fluxes 7−140157
53 Psc, variability of beta CMa type star 7−88459
pulsating stars, dynamic study 7−145974
pulsating stars, origin of correl. between flux var./radius var. ratio and pulsation period 7−94855
pulsating stars, oscills. of composite stellar model with weak mag. field 7−127839
ρ Pup, δ Sct star, radial rel. and spectral vars. rel. to pulsation charcts. 7−134253
TY Pyx, RS CVn star, search for non-stellar contributions to optical and near-IR fluxes 7−140157
RCW 34 exciting star (Vel R2 25a), evidence for pre-main-sequence status from optical and IR obs. 7−120383
red small amplitude variable stars, visual observations analysis method 7−120282
red variable stars in IRAS Point Source Catalogue, spectral types 7−88455
S18/SMC, peculiar early-type emission-line supergiant, emission line spectrum vars. 7−101771
Sagittarius, possible new eclipsing binary star 7−146049
Sagittarius constellation, discovery of 6 new variable stars, coordinates and magnitudes 7−120458
SC stars and S stars, JHKL and 3 μm photometric obs. 7−79994
α Scl, He-weak star, possible rot. period determ. from mean light vars. 7−134249
δ Scr stars, pulsation-driven mass less and effects on stellar evolution 7−88416
R Sct, vel. structure of RV Tau star atmosphere 7−107845
FH Ser (Nova Ser 1970), evidence for optically thick wind and super-Eddington total luminosity 7−120404
LW Ser (Nova Ser 1978), optical spectrum during diffuse-enhanced phase 7−115442
FG Sge, spectral type, radius and lumin. determ. from IR photometric obs. 7−145961
V2022 Sgr, BL Her Star, evidence for evolutionary increase in pulsation period 7−72455
V1288Sgr, RRab star, photometric evidence for possibly changing period 7−72458
V348 Sgr, visual magnitude estimates (1987 June-July) 7−145979
V348 Sgr, WC11 planetary nebula central star, photometric obs. 7−115461
SN 1604 progenitor, mass-losing runaway star model rel. to origin of supernova remnant 7−146074
southern early-type variable stars, uvby photometric obs. 7−115392
Southern Hemisphere long-period variables in binaries, period determ. 7−107830
spotted stars, direct photometric problem 7−145976
SR variables, photographic observations of 6 S number stars 7−120459
SS 433, ejected blobs from binary star, evolving radio struct. 7−127908
star spots *(Norwegian)* 7−134224
Sugano's object in Orion association, 1970 and 1986 brightening 7−115383
supergiant OH-IR sources, narrow polarised components obs. in OH 1612 MHz maser emission 7−88417
supergiant variables as binary system components 7−79983
TASV 0616+15, UK patrol report (1987 no.2) 7−120423
V711 Tau, 1986 uvby light curve change, star spots 7−146044
44 Tau, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
θ^2 Tau, δ Sct star, pulsation charcts., photometric obs. 7−79972
Z Tau, Mira variable, period vars. anal. rel. to pulsation mechanism irregularities 7−72457
V711 Tau, photometry of active RS CVn type star 7−120508
SU Tau, R CrB star, visual magnitude estimate (1987 August 2) 7−134243
SU Tau, R CrB type star, observations of recovery from fading 7−88448
V711 Tau, RS CVn star, atm. conditions 7−120491
V711 Tau, RS CVn star, radio outbursts, flux spectrum and intensity distrib. 7−80033
CE Tau, SRc star, BV photometry (1981 to 1986) 7−72452
V471 Tau, white dwarf eclipsing binary, photometric study *(Turkish)* 7−115521
BU Tau (Pleione) in Pleiades, Δa-photometry 7−101793
T Tau stars, contrib. of accretion disks to spectral and photometric charcts. 7−72428
RV Tau stars, optical and IR photometry 7−107863

variable stars continued
T Tau stars, simultaneous spectroscopic and photometric obs. of four stars 7−134233
RV Tau stars as post-asymptotic giant branch objects 7−88438
RV Tau type stars in Magellanic Clouds 7−120438
TAV 0723−03 in Monoceros, discovery, magnitudes, position, and sequence 7−120425
timing of variable star observations, adoption of solar system barycentre as reference point 7−88123
4 U 0115+63 (Cas γ-1), Be star optical obs., suggestive of future X-ray and γ-ray activity 7−79985
W UMa, H-alpha photometric observations of activity of eclipsing binary 7−120509
CQ UMa, SrCrEu Ap star, rot. period determ., photometric anal. 7−101811
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
(V1719)Cyg, uvbyβ photometry of RR Lyr star 7−79991
V 0332+53, Be star and neutron star, JHKL′ obs. 7−94959
RT Vir, semi-regular variable star, H_2O maser outburst obs. *(Russian)* 7−107865
visual observations of variable stars (July to December 1985) 7−72448
BW Vul, β Cep star, light curve anal. 7−94884
BW Vul, β Cep star, spectroscopy of optical photosphere rel. to pulsation kinematics 7−140094
WW Vul, Herbig Ae-type star, Hα emission vars. at max. luminosity 7−140067
ER Vul, light curve vars., BV photometry (1981-2) 7−146036
PW Vul (Nova 1984 No.1), spectroscopic obs. (October-November 1984) 7−72435
PW Vul (Nova Vul 1984 No.1), possible orbital period from photometric obs. 7−88452
white dwarfs, pulsation of degenerate stars with thick H or He surface layers 7−140055
WR 78 (=HD 151932), photometric variability of WN7 star 7−120454
WR 977 (GX 301−2), slow X-ray pulsar, X-ray obs. through two binary cycles 7−107897
x-ray nova at 13 hours 53 minutes, −64.4 degrees, optical observations 7−80040
yellow evolved stars in open clusters, search for light vars. in superluminous giant stars candidates 7−115382
λ And, RS CVn star, discovery of optical circular polarisation 7−127897
C stars in Galactic disk, C, N and O abundances from IR spectra 7−115458
C-type long-period variables, phase depend. of Balmer decrement rel. to source of violet depression 7−120443
He-weak stars in clusters and associations, photometric variability 7−120421
OH maser stars, OH masers far-IR excitation 7−88673
OH-IR stars, depend. of I−K colour index on photometric period rel. to origin of polarisation 7−127873

variational calculus *see variational techniques*

variational techniques
9-node element, spurious mode stabilization, mixed variational principles 7−123495
$(\phi^4)_{3+1}$ theory, infinitesimal bare coupling constants, BCS-type vacuum state 7−134957
acetylene, torsional barrier, ab initio calcs. 7−74456
adhesion-bonded joints, linear theory 7−75476
alkali halides, thermal conductivity, calc. 7−76509
alkali metal liq. drops, energy characts., density functional theory *(Russian)* 7−111349
Anderson lattice ground state, diagrammatic anal., valence fluctuations 7−76839
anisotropic optical waveguides, 3D type, vector variational anal. of guided modes 7−90778
atomic collisions, transition amplitudes, phase-invariant variational methods 7−122696
atomic polarisability calc. using variation-perturbation approach with CI formalism 7−122373
atomic systems, autoionizing states, saddle point variation method 7−122465
atoms, ab initio model pot., Coulomb and exchange core operators, SCF calcs. 7−74416
atoms, Dirac eqn. soln., variational approx., appl. to H- and Be-like systems 7−122384
atoms and molecules, Dirac equation, variational solns. 7−122351
axial next-nearest neighbor Ising model, phase diagram, mean-field calcs. 7−138254
beams, tapered, geometrically nonlinear FEM 7−90932
bending, hexahedral elements formulation, FORTRAN 77 listing 7−110800
benzenoid hydrocarbons, adjacency matrix spectral radius, variational treatment 7−109757
bimetallic interfaces, adhesive forces 7−124736
bridge mechanism, intermediate unit, electron transfer theory 7−122700
CANDU reactor, optimization of in-core devices and fuel management, numerical anal. 7−96225
cluster-variation method, modified form, appl. to FCC binary alloy 7−98768
complex scaling methods and variational principles in many body theory 7−128369
conference on few body physics models and methods, Lisbon, Portugal (Oct. 1986) 7−128197
contact algorithms for elastic bodies, comparison 7−110876
contact problems, virtual work and its dual 7−75472
continuum mechanics, Lin constraints, Clebsch potentials and variational principles 7−115786
correlated fermions, ground-state props., exact analytic results for Gutzwiller wave function 7−118343
Creutz-Taube ion, electronic struct. calcs. 7−89930
diffusion in symmetric bistable pot., variational approach 7−73287
Dirichlet boundary surface electric field intensity computation with constrained field eqn. *(Chinese)* 7−90479
disk galaxies, hydrodynamic description 7−88642
drops, condensation, 2D profiles, departure sizes 7−69253
eddy current transducer, synthesis according to specified mag. field struct. in inspection zone 7−71447
elastic crystals, var. methods calcs. 7−67016

variational techniques continued
elastic media with microstructure, reciprocity and variational theorems, Laplace transform appl. 7−72975
elastodynamics, variational principles 7−83033
elastohydrodynamic lubrication, convergence and error estimates 7−123547
elastokinetics, non-conservative non-linear, generalised variational principle *(Chinese)* 7−134493
elastoplastic bodies obeying Hencky's law, shape optimisation 7−88966
elastoplasticity, variational formulations and finite element models 7−136703
elastoplasticity finite element formulation 7−69005
electron gas, stopping power for slow protons, calc. 7−84718
EM fields in non-moving media, variational principles *(German)* 7−141745
energy derivatives, stationary props. 7−88854
equatorial ocean waves, mean circulation effects 7−127224
evolution equations, nonlinear, variational inequality 7−128250
excitonic trions in a low mag. field 7−105411
exterior Stokes problem in 3-D, coupling boundary integral and finite element methods 7−88908
few body bound state, harmonic oscillator basis, variational methods 7−128366
finite Markov chain, dual bounds on equilib. distrib. 7−134458
Finslerian reduction of gauge fields and covariance principle of general relativity 7−73493
fluid-structure interaction problems, boundary finite element method 7−130819
free polaron ground state energy in mag. field, variational model calcs. 7−98828
Glashow-Weinberg-Salam model, variational approach 7−102649
gravitation theory, Lorentz space, coordinate invariant variation principle *(German)* 7−128375
harmonic oscillator coupled to dissipative heat bath, variational treatment 7−115826
Hartree-Fock seniority method, quasi-spin formalism, mean field and pairing effect 7−109079
heavy elements, virial theorem and eqn. of state, relativistic effects 7−76739
Hubbard model, variational Monte Carlo studies 7−89147
hypernuclei, α-cluster model variational calcs. in harmonic oscillator basis 7−128366
ideally elastic-plastic body, functional formulations of theory 7−72984
III-V semiconductors, wide-gap, band struct., zone-variational method *(Chinese)* 7−131539
inhomogeneous liquid metals, surface props., calc., variational perturbation theory 7−105182
intergranular corrosion by surface diffusion, differential eqn. soln. *(French)* 7−138867
inviscid incompressible liq. film over cylinder, swirl flow, eigenvalue problem 7−110992
inviscid transonic projectile aerodynamics, self-adaptive gridding calcs. 7−136912
Kadanoff's lower bound variational method, improvement in real-space renormalization 7−89150
Lagrangian classes, variational techniques, canonical procedures, conserved quantities, Einstein-Maxwell eqns. 7−134588
lattice gauge theory, lagrangian formalism, variational-cumulant expansion 7−89346
light nuclear systems, RGM appl. to bound and scatt. pot., variational principles 7−128988
linear hydrodynamic stability, variational technique study *(Rumanian)* 7−83188
linearized elasticity, junction between 3D elastic body and plate, variational problem *(French)* 7−115789
local field theory, phase struct. and vacuum stability, 1/N expansion 7−108805
locally anisotropic space, variational principle and relativistic hydrodynamics eqns. 7−120885
many-body theory, variational and Green's fn. Monte Carlo methods 7−128254
many-electron system, electron density, variational determ. 7−141424
many-electron systems, variational schemes 7−137771
membrane, square, under large deforms., nonlinear shell theory 7−75301
membrane 7−72970
metal oxides, vacancy and defect structs., local density theory anal. 7−131142
metastable state decay by quantum tunnelling, WKB expansion 7−80513
methylene, triplet ν_2 and ν_3 ab initio calcs. and vibrationless singlet-triplet splitting determ. 7−129609
Morse oscillator, perturbational and variational treatments 7−68422
multifunctions, variational-like inequality problem, complementarity and existence theorems 7−80346
narrow band systems, third-order correction in local approach 7−84719
nematic surface-like volume energy and surface energy, 1D and 3D variation 7−137232
neutral transport in plasmas with velocity dependent charge exchange collision frequency 7−91298
nonconservative dynamic systems, constrained, extension of Noether's theorem 7−88954
nonlinear differential eqns., subharmonic bifurcations, variational approach 7−108417
nonlinear irreversible processes and negative differential resistivity, variation principles 7−108505
nuclear desaturation effects, variational calcs. in liq. drop model and Thomas-Fermi approach 7−140989
nuclear many-body problem theories, variational and Green fn. Monte Carlo methods 7−109053
obstacle problems in mathematical physics, book 7−108053
optimal control for parabolic variational inequalities 7−83005
optimal network kinetics, formulation of principle of least time, appl. to variable range hopping conduction 7−89123
organised vorticity in plane flow, variational model 7−136882
periodic Anderson model, ground state props., variational anal. 7−84620
photon recycling in double heterostructures, variational calculations 7−113280
plasma torus stochastic stability 7−69344
plate bending analysis, efficient quadrilateral element, mixed variational principle 7−97316
plate-buckling problem, BEM 7−110818

variational techniques continued
plates, anisotropic laminar, with defects on interfaces, breaking resist. 7−75452
plates, elastic perforated, least-weight design 7−97319
plates, elastic perforated, least-weight design 7−97320
plates, mixed computational algorithm for plane elastic contact problems 7−117547
plates, pin-loaded, mixed computational algorithm for plane elastic contact problems 7−117548
plates, rectangular, uniaxial compression with unloaded edges clamped, stability in elastoplastic range 7−117497
plates, unified buckling analysis, by fuzzy trial and hybrid element method *(Chinese)* 7−136723
plates and shells, laminated, variational principles 7−117450
polar crystal slab, exciton-phonon weak coupling system 7−124872
polar crystals, electron-phonon coupling effect on surface donor state, variational calc. 7−104942
polarons, two-dimensional, ground state energy Feynman theory anal. 7−105421
polyatomic gases, slip coeffs. 7−104310
polydisperse fluids, flash calculations, variational approach 7−124463
pseudoturbulence models, simulated, unsteady lift and drag predictions 7−110923
quantum diffusion, mode mixing 7−73286
quantum inverse scatt. method at fixed energy 7−80465
quantum mechanics, variational procedure for eigenvalues 7−108295
quantum wells, exciton binding energy, variational-perturbational approach 7−105409
quantum-well wire, exciton binding energy 7−70204
quasiconformal mappings, variational problems, geometrical theory of functions *(Russian)* 7−80326
quasistationary thermal conduction through flat plates, var. calcs. 7−130511
radial flow of viscous fluid between porous discs. extremum variational principle 7−91216
rods, naturally twisted, bending, extension and torsion 7−75311
SAW mode shape in arrays of reflecting grooves, continuous representation 7−130428
scalar field theory in curved Einstein space, variational approach 7−108733
semiconductor spherical microcrysts., exciton states, quantum size effect, variational calcs. 7−112192
semiconductors, quasiparticle band structure, exchange and correlation effects 7−137795
shells, linear thin, FEM methods 7−117451
shells, piezoelectric, variational formulation 7−97306
shells, thick elastic, arbitrary shape, general equation of motion *(Chinese)* 7−136687
shells, thin, variational formulation of nonstationary problems 7−117447
shells, variational and numerical approach to shakedown and limit analysis 7−117490
spherical particle in its saturated vapour, low-speed motion at arbitrary values of Knudsen no. 7−75620
spin polarisation, long-time relaxation in zero-field 7−85407
steel hollow structural section members subject to cold bending, deforms. 7−71206
stellar dynamics, variational principle for determining oscillations and stability of stellar systems 7−101933
stratified layer of gravitating partially ionised plasma, stability 7−123868
strong-coupled polarons in a magnetic field 7−118378
strongly-coupled quantum wells, electron states, reciprocity and variational formulations 7−131752
SU (2) lattice gauge theory, coupling <1, glueball mass, Monte Carlo variational study 7−140817
surface wave reflection by arrays of reflecting grooves, variational anal. *(Japanese)* 7−117371
suspension, diffusion of dispersed medium, virtual inertia effects 7−80691
thin shells, general problems, approx. by assemblage of flat plate elements *(French)* 7−123445
thin-layer rubber-metal elements, general linear theory 7−97305
Thirring-sine-Gordon model, thermodynamics, Bethe ansatz variational anal. 7−128431
three-body systems, D states, variational expansion appl. to muonic mol. and He 7−117094
time-dependent pseudopotential, Epstein variation principle 7−89893
trimethylphosphine, second-order mag. parameters and mag. isoscreening lines 7−103409
two dimensional hydrogenic donor ground state, polaron and nonparabolicity effects, variational calcs. 7−112221
two-dimensional polaron, variational treatment 7−143371
two-level system coupled to boson mode, ground state struct. and prop. 7−95399
U(1) lattice gauge theory, multi-parameter variational calcs. 7−95726
vacuum Einstein eqns., generalized Kasner soln., symm. and variational methods 7−95417
variational derivation of nuclear fluid dynamics 7−102820
viscoelastodynamics, unilateral, boundary-value problems 7−117474
Wannier type functions, all electron self-consistent variational method, appl. to Si cryst. 7−70183
wave computations, local variational method *(Chinese)* 7−72999
XY_8 and XY_6 para-elastic tunnelling systems, ground state energy and self-trapping transition 7−131261
XY model, multi-parameter variational calcs. 7−95726
zero temp. quantum fluids, integral eqn. interpolation method 7−76541
$\bar{q}q$ bound state, variational calcs., integral eqn. comparison 7−128366
Al-Fe dilute alloy, Fe-vacancy pair, charge density distrib. 7−91632
n-AlGaAs/GaAs modulation-doped heterostruct., low-field galvanomag. transport, model anal. 7−118575
$^{A}Be_{\Lambda}$, A=9,10, interactions and binding energy, variational calcs. of α-cluster models 7−67759
^{12}C, α-cluster model in harmonic oscillator basis, variational calcs. 7−128366
CdS, superconductivity and soft modes, e-p coupling and mag. props., variational calcs. 7−143690
Cu_3 trimer, stability, variational and perturbational configuration interaction theory 7−96566
$Fe_{1-x}O$, wustite, defect cluster electronic structure 7−105479
$GaAs/Al_{0.3}Ga_{0.7}As$ single quantum well, exciton parameter calcs., well shape and elec. field effects 7−105407
$GaAs/Ga_{1-x}Al_xAs$ heterostruct., exciton binding energy and carrier effective mass calcs. 7−112193

variational techniques continued
GaAs/GaAlAs quantum well photolum. polarisation, variational calcs. 7−106253
GaInAs/InP quantum well photolum. polarisation, variational calcs. 7−106253
H_2, muonic, energy levels, variational calcs. 7−103697
H_2^+, Dirac eqn., third order variational perturbation calcs. 7−122397
H_2^+, energy level calcs., quantum harmonic oscillator, adiabatic and related approximations 7−73023
H_2^+, relativistic energy correction, Dirac and Schrodinger eqns., variational solns. 7−122396
H_2O_2, nucl. mag. isoscreening lines, 2nd order mag. parameters 7−103408
^3H, binding energy, three-body forces effect, variational calc. 7−116235
^3H, variational Monte Carlo calculations of few-body nuclei 7−67703
He, electron impact ionisation, first Born calcs. 7−82366
He film, liq., surface polaron states in uniform mag. field 7−105164
He, ionisation by electron impact, ground state wave fn., variational-iteration technique 7−141694
He isoelectronic sequence, two-parameter wave functions 7−102063
HeH^+, second excited Σ^+ state calcs., contrib. to ^3T β-spectrum 7−116885
^3He superfluid A phase, textures, mag. deformation in a narrow slab 7−84429
^4He, liq. and solid, three-body correlations 7−84422
^{A}He, A=3,4, variational Monte Carlo calculations of few-body nuclei 7−67703
$^{A}He_{\Lambda}$, A=5,6, interactions and binding energy, variational calcs. of α-cluster models 7−67759
MgO-type crystals, surface electronic struct., variable pot. method 7−112415
NbC_x, electronic struct., influence of vacancies, local atomic displacements 7−76733
^{16}O, hypernetted chain calcs. for Malfliet-Tjon pot. 7−81311
PH_3, second-order mag. parameters and mag. isoscreening lines 7−103409
Sc, polarised pseudostates and average static dipole polarisability 7−74463
U impurities in metals, j-j coupling scheme, Anderson model 7−76813
Xe, atomic polarisability calc. using variation-perturbation approach with Cl formalism 7−122373

varicaps *see varactors*

varistors
ZnO, porous, varistor props. 7−99053
ZnO:Bi varistors 7−138591

varnish
No entries

Vavilov-Cherenkov radiation *see Cherenkov radiation*

VB calculations
alkali metal-halogens, mutual neutralisation and chemiionisation, UB calcs. 7−89972
crystals, mixed regular stack, Raman spectra, VB calcs. 7−125731
diazomethane, electronic struct., spin-coupled descriptions 7−122326
enzymatic reactions, computer simulation 7−133194
forbiddenness in MOVB theory 7−109692
methane, ground state struct., split-valence bond-orbital calcs. 7−109786
nitrone, electronic struct., spin-coupled descriptions 7−122326
nitrone, valence bond struct. calcs. using orthogonalised at. orbitals 7−109784
potential surfaces calculations, appls. *(French)* 7−141468
static spin correls. in singlet states via triplet overlap integrals 7−122364
transition metal multidecker sandwich complexes, electronic complexes 7−74454
transition struct., diabatic surface formalism, VB and SCF calcs. 7−132908
C^{3+}+Li, electron capture, pot. energy calcs., VB calcs. 7−122688
CrH_2^+, electronic and geometric structure, bond energies, CI calcs., VB calcs. 7−141473
HF, ground state struct., split-valence bond-orbital calcs. 7−109786
H_2O, ground state struct., split-valence bond-orbital calcs. 7−109786
H_2O^{2+}, dissoc., singlet and triplet state pot. energy surfaces calc. 7−122366
MoH_2^+, electronic and geometric structure, bond energies, CI calcs., VB calcs. 7−141473
N_2 isoelectronic series, struct. anal., ab initio VB calcs. 7−89971
NH_2 radical, valence states, VB diatomics in mols. calcs. 7−109783
NH_3, ground state struct., split-valence bond-orbital calcs. 7−109786
S_4^{2+}, Lewis valence band struct., STO calcs. 7−109785
S_6 ring, mol. valence calcs. 7−116859
S_7 ring, mol. valence calcs. 7−116859
S_8 ring, mol. valence calcs. 7−116859
S_2N_2, Lewis valence band struct., STO calcs. 7−109785
SiF systems bond energies, generalised VB and CI calcs. appl. to Si etching 7−122365

VDU *see cathode-ray tube displays; interactive terminals*

vector diagrams *see vectors*

vector meson dominance model
extended Skyrmion model from quark flavour dynamics, axial vector meson dominance 7−121458
hadron cascades, vector meson dominance and Monte Carlo dual multistring 7−108924
meson radiative decays, vector dominance model, coupling constants and effective lagrangians 7−67610
Skyrme solitons with vector mesons, electromagnetic and axial props., nonlinear chiral theory 7−108757
U(2)$_V$ Yang-Mills approach to skyrmions with vector mesons, nucleon EM props. 7−128763
$\eta(\eta') \rightarrow \pi^+\pi^-\gamma$, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$\gamma \rightarrow \pi^+\pi^-\pi^0$, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
K_{e4}, amplitude calcs., chiral anomalies and vector-meson dominance 7−116163
$N-\Delta$ transition form factor and anomalous Ψ-decays into octet-decuplet baryon-antibaryon pairs 7−73653
$^{20}Ne(\bar{\nu}_\mu, \mu^+\rho^-)$, cross section meas., CVC hypothesis, vector meson dominance comparisons 7−141043

vector mesons *see meson resonances*
vector processors *see parallel processing*
vectors
autonomous system, conserved vectors and orbit eqn. 7−115782
bifurcations of a certain family of planar vector fields tangential to the axes 7−67042
book, vectors and vector operators 7−66858
charged particle deflection, Gantmakher's and rot. formulas 7−128218
Clifford multiplication tables, multivector method and CLTB code 7−95179
critical Ising-type models, composite fields and null vectors 7−108748
Dirac spinors in quantum space with torsion, quantized fiber-bundled spaces, spin connection, neutrino oscills. 7−134923
eigenpairs of real matrix, error calcs. using exact scalar products *(German)* 7−80311
electromagnetism, spinor formalism 7−115814
EM fields, vector potential visualization 7−96924
finite-dimensional Lie algebra, analytic vectors and integrability 7−134966
Fourier-Plancherel transform as a spectral representation of a rigged Hilbert space 7−72879
graded spinors as an underlying geometry for extended supersymmetries 7−134971
invariance of the stationary manifold of a conserved density 7−115741
Kustaanheimo-Stiefel transformation in a spinor representation 7−134448
light waves, vector nature, use of imagery and image processing 7−117155
limit cycles of vector fields of the form $X(v)=Av+f(v)\ Bv$ 7−66898
linear co-ordinate transformation, four-vector (k, ω/c) calc. 7−120803
LOGO, dynamic modelling for physics teaching 7−108125
metric spinor and frame field concomitants equivalence, lorentz invariance 7−140565
optical microscopic cell image sequences, motion vectors determ. 7−94037
plates, yield line analysis 7−117477
SO(p,q) pure spinors, manifold construction 7−134964
spaces classifying complex vector bundles with given real dimension 7−66907
spin manifolds and universality of the Hijazi inequality 7−72909
spinors, Cartan approach, minimal surfaces and strings 7−89477
supersymmetry algebra for massive free fields 7−89383
ternary vector cross products 7−140420
test particles with internal struct., eqns. of motion, generalized form 7−134584
truncated polynomial rings over fields of characteristic two, algebraic K_3 group 7−72786
vacuum polarisation, spinor field a_3 coeff. calc. by proper time expansion method 7−73062
H, Dirac equation soln., quantum field theory nonperturbative evolution operator method 7−122395
vehicles
see also electric vehicles; road vehicles; space vehicles
lorry, radiation contaminated, decontamination meas. *(German)* 7−109458
velocity
see also acoustic wave velocity; ion mobility; light velocity
fast dynamo action in a steady flow 7−137024
kinematics, velocity and acceleration concepts, observation and graphical methods study 7−102045
simple liquid, vel. autocorrelation function, high freq. asymptotic behaviour 7−75953
space sled, absolute velocity at given point 7−80408
velocity analyzers *see particle separators*
velocity control
space vehicles, analytical dispersion anal. of orbital manoeuvres strategy 7−139879
velocity measurement
see also acoustic wave velocity measurement; anemometry; angular velocity measurement; flow measurement; flowmeters; laser velocimetry; light velocity measurement; stroboscopes
AC corona charging of particles, mobility statistics meas. 7−69499
Airborne Doppler lidar for wind meas., error evaluation 7−127573
Apple II microcomputer 7−87936
blood velocity measurements in humans, anal. of hot-film anemometer system dynamic props. 7−71917
bullet speed meas. using photogate timer 7−134404
colour flow mapping, vel. estimator *(Japanese)* 7−126966
contactless vibration and shock vel. meas. using laser Doppler velocimetry *(Chinese)* 7−121077
coronary blood flow vel. meas., optical-fibre laser Doppler velocimeter 7−139347
device for measurement of magnitude and rate of linear motion 7−67282
directional laser Doppler velocimetry using self-mixing effect of semiconductor laser diode 7−103866
Doppler speckle interferometry for velocity meas. 7−128637
Doppler ultrasonic velocimeter for bubble flow meas. *(French)* 7−104115
electric particulate suspension, particle speed distrib. meas. 7−80754
Francis-type pump turbine, unstable S-shape charact. meas. using laser velocimetry 7−97668
hot-wire anemometer, flying, appraisal 7−75718
hot-wire anemometry, temp. compensation 7−75722
hot-wire technique for simultaneous measurement of instantaneous velocities in 3D flows 7−111132
human motion anal., microcomputer appl. 7−133351
laser anemometer for velocity meas., effect of walls confining liquid *(Polish)* 7−91268
laser Doppler anemometry for velocity meas., semiconductor devices appl. *(German)* 7−140675
laser Doppler anemometry in thin channels configurations 7−75714
laser Doppler anemometry meas. in turbulent flame, statistical bias 7−75715
laser speckle method using optical fibres, velocity meas. 7−68737
liquid convection in cavity cooled from above, speckle meas. 7−142148
liquid metals velocity meas., fibre-optic sensors, dynamic response, spectral resolution 7−137042
multiphase flow, spherical particles size and velocity meas. 7−123806
non-Newtonian fluid, channel flow, vel. meas. laser-Doppler anemometry 7−69223
oblique shock wave/laminar boundary layer interaction, press. distrib. 7−83272
optical sensors and transducers *(Danish)* 7−128525
optical spatial filtering velocimetry, review 7−121076
velocity measurement continued
optimal extraction of velocity information from a sonar correlation log using digital signal processor 7−130477
particle image velocimetry, fringe anal. method 7−104362
radial flow pump impellers, shrouded and unshrouded, laser velocimeter meas. 7−97667
Raman FEL, electron beam velocity spread meas. *(Chinese)* 7−90623
ring vortex shedding velocimeter, portable, characts. *(Japanese)* 7−83381
sensor array and linear-period-modulated signal for position and velocity finding *(Japanese)* 7−142134
shock wave studies, instantaneous velocity field meas. 7−69286
slurry, homogeneous, transitional Reynolds numbers, flow props. study 7−97579
smooth pursuit eye movement, limiting velocity determ. from retinal image 7−126817
solids, suspended, hydraulic transport in horizontal pipeline, press. gradients calcs. 7−91224
solitary wave, liq. vel. meas. by laser Doppler velocimetry 7−83376
sound's speed measurement using computers in school context 7−89202
steady entry flow in a curved pipe, laser-Doppler vel. meas. 7−83350
stenosis determ. in turbulent blood flow using dual-transducer pulsed Doppler US system *(Japanese)* 7−126965
surface velocity meas. by laser device 7−95553
suspended glass spheres motion meas. in electrodynamic balance, electrode design effects 7−123796
thermistor anemometer for velocity and temp. meas. in thermally stratified rotating fluid 7−83375
trailing flap, attached flow, asymmetric wake, press. and vel. characts. 7−136863
turbulent boundary layer longitudinal vortex, heat transfer effects 7−110940
turbulent two-phase flow meas., laser-fluoresc. technique 7−97651
two-axis velocity measuring device with high accuracy, design 7−97197
unsteady flow rate and velocity, meas. using differential press. in pipe 7−91267
US Doppler spectra velocimetry theory for arbitrary beam and flow config. *(Japanese)* 7−126974
velocimeter for use in highly-sheared 3D steady flows 7−97647
velocity vector field measurement system based on spatiol-temporal image derivative *(Japanese)* 7−69296
water, natural convection transience adjacent to suddenly heated vertical surface 7−110758
wind velocity and temp. meas. from audio phase shift 7−128227
wind velocity fluctuations, prediction from upstream data 7−104361
Si, single crystal damaged surface layer, nondestructive meas. using reflection acoustic microscope 7−138927
velocity meters *see velocity measurement*
velocity microphones *see microphones*
velocity-modulation tubes
No entries
velocity spectrometers *see mass spectrometers*
Veneziano model
p-adic string, cohomology and vertex operator 7−128395
γ, massless, in Veneziano model, loop anal. 7−89478
ventilating *see ventilation*
ventilation
see also air conditioning
exhaust-air heat pump appls. in USA 7−126639
Paks (Hungary) nuclear power plant ventilation system commissioning and operation *(Hungarian)* 7−122039
room air flow, large eddy simulation *(Japanese)* 7−142253
^{222}Rn, indoor ventilation rates in the cellar room of a New Jersey dwelling 7−133486
ventilators *see ventilation*
Venus
W Aphrodite Terra, regional linear cross-strike discontinuities 7−127752
atmosphere, water vapour profile from Vega-1 and Vega-2 meas. 7−88159
atmosphere superrotation induced by gravity waves critical-level absorpt. 7−145857
atmosphere tides, model of thermal and mechanical damping 7−101712
compressional ULF foreshock boundary, Pioneer Venus Orbiter obs. 7−94629
dark hemisphere, ground-based IR obs. of cloud patterns 7−115273
Guinevere Planitia, geological and morphological description from photographic map plates (V-11, V-20, V-21) 7−88157
intrinsic magnetic field, upper limit 7−94681
ion pick-up by solar wind 7−94627
ionosphere, frequency functions of nightside ion densities 7−127753
ionosphere (magnetized), 1D time-depend. model 7−127754
ionosphere dynamics, 2D spectral model 7−107733
ionosphere dynamics, modified model 7−134160
ionosphere magnetisation, response to solar wind dynamic press. meas. 7−120237
Ishtar Terra, structure and tectonics 7−145853
S Ishtar Terra and Guinevere and Sedna Planitiae, geological anal. from Arecibo radar images 7−134159
Lakshmi Planum, struct., evidence for horizontal asthenospheric flow 7−145852
lithospheric heat transport modes constraints from obs. of impact crater densities 7−120293
lithospheric structure, constraints from mechanical models and tectonic surface features 7−101714
Magellan 1989 Type IV mission design 7−107691
Magellan altimetry experiment 7−107693
Magellan data products 7−107692
night-time ionosphere, form. conditions from radio transillumination data 7−120294
night-time ionosphere, radiotransillumination data from Venera-15 and -16 satellites 7−101715
north polar region, relief and geology from radar survey 7−88158
northern belt of deformations, structural ensembles and devel. 7−145856
Northern Hemisphere geology and morphology 7−145851
parquet regions and areal plastic dislocations 7−145855
Ptolemy's planetary orbit elements and equant, ancient heliocentrist origin 7−66886
rocks at Vega-1 and 2 landing sites, U, Th and K abundances 7−101713
rotating dynamical regimes in general circulation model 7−133823

Venus continued
Sedna Planitia, geological and morphological description from photographic map plates (V-11, V-20, V-21) 7−88157
solar tides in atmosphere, analytical calc. method 7−94680
solar wind flow over Venus, effects of hot O ions flux *(German)* 7−134161
solar wind interaction, effect of hot O corona 7−120236
solar wind interaction 7−115276
solar wind interaction model 7−127672
solar wind mass loading 7−120235
surface and atmosphere, review 7−115275
surface stresses, Venus-15 and 16 data anal. 7−145854
tangential stresses, long-wave, in lithosphere and mantle of Venus, theoretical anal. 7−88160
Tessera Fortuna and Tessera Meshkenet areas, geological-morphological descriptions 7−145848
Tessera Laima and Beregini Plain areas, geological-morphological description 7−145849
thermal evolution models in parameterised convection approx. 7−145850
topography and geoid spectra, fractal interpretation rel. to other planets 7−101177
volatile inventory, review 7−115268
wave-like patterns in atmosphere 7−127755
windblown grains and surface physical and chemical modification 7−115274
zonal winds near cloud top level, circulation-tide interaction model 7−115272
zonal winds near cloud top level, equatorial wind speed model 7−115271

Verdet constant *see Faraday effect*

Verneuil process *see crystal growth from melt*

vertex functions
see also elementary particle interactions; elementary particle theory; quantum field theory of interactions
bosonic closed string theory, BRST operator on Riemann surface 7−67602
cavity QCD, interacting many-gluon systems in the MIT bag model 7−121457
closed bosonic string, interaction vertex props. and gauge invariance 7−67604
closed bosonic string in curved space-time, Virasoro algebra and vertex operators 7−89480
closed strings, bosonic, type II and heterotic, vertex operators 7−108883
covariant formulation of strings, dilaton vertex operator 7−81074
elastic vertex radiative corrections to equivalent photon spectrum of relativistic electrons 7−73655
electron self energy in strong mag. fields, mass operator representation 7−81092
gauge-invariant, string field theory for torus compactified closed string 7−89482
knot invariants and crit. statistical systems 7−80665
massless QCD, quark self-energy bifurcation, infrared and ultraviolet cutoffs 7−89438
N=2 superconformal invariance in 2D field theories 7−89352
open bosonic string theory, off-shell vertex and twisted ghost fields 7−140909
open superstring theory, effective lagrangian in zero-slope limit 7−108878
pseudoscalar mesons, quark mass lower bounds from struct. characts. 7−81128
QCD, nonperturbative confinement, improved treatment of Schoenmaker's eqn. 7−67572
resonant potential scattering in an intense low-frequency laser field 7−120856
SU(2)×U(1) model, strong corrections to flavour changing neutral current vertex 7−81201
twisted conformal fields, vertex operators, oscillator and bosonized forms 7−134992
Vilkovisky-DeWitt effective action, appl. to Yang-Mills theories, gauge independence of vertex fns. 7−116062
$\gamma p \rightarrow K^+\Lambda$, low-energy, coupling constants, effective lagrangian approach 7−135152
$K^+N \rightarrow K^+N$, low-energy, coupling constants, effective lagrangian approach 7−135152

Verwey transition *see metal-insulator transition*

very high speed integrated circuits *see digital integrated circuits*

very long instruction word machines *see multiprocessing systems; parallel architectures; parallel machines*

VHSIC *see digital integrated circuits*

vibrating bodies
see also elastic waves; pendulums; piezoelectric oscillations; vibrations
acoustic radiation damping of the modes of a rectangular panel 7−130449
active lateral suspension to a track/vehicle system using stochastic optimal control 7−110828
adjustable parameter method for vibration of polar orthotropic plates 7−130579
Aeolian vibrations of overhead conductors, statistical methods 7−69032
airborne and structure-borne noise interaction studies 7−110675
arc, clamped at one end and with concentrated mass at free end 7−97384
artificial satellites, motion relative to centre of mass of satellite with permanent magnet orientation system 7−120244
asymptotic modal analysis for dynamic stresses of a plate 7−110670
automobile interior noise level calc. 7−97216
band/wheel system vibration under impulsive boundary excitation 7−117510
beam, cantilever, parametrically excited, simultaneous combination resonances 7−142214
beam, inverse eigenvalue problem, sufficient conditions for soln. 7−108215
beam, laminated composite, natural axial shear vibr., elasticity soln. 7−110823
beam, on variable Winkler elastic foundation 7−117513
beam, uniform, longitudinally vibrating, effect of symm. discontinuity on adjacent material 7−123502
beam elements undergoing forced vibrations, performance improvement 7−123500
beam reflection matrices and reciprocity 7−75391
beams, composite, damping meas., assessment in evaluation of integrity 7−104193
vibrating bodies continued
beams, continuous, carrying elastically mounted masses, analytical and exptl. investigations 7−91009
beams, coupled flexural-torsional vibrations using optimised Rayleigh method 7−97385
beams, elastically restrained against support rotation, forced vibrations 7−97393
beams, flexible, finite vibrs., eqns. of motion 7−83097
beams, nonlinear, effect of longitudinal deformation 7−123510
beams, nonlinear free vibration analysis using Ritz method 7−75387
beams, Timoshenko, on elastic foundations, transient responses 7−97368
beams, transverse vibration natural freqs. 7−110826
beams, vibration analysis with MACSYMA 7−69025
beams with constructional friction, determination of forced vibration amplitude *(Polish)* 7−123511
bean, buckled, approximate criterion for chaotic motion 7−136728
binary stars, vibr. stability of double-star Roche model 7−120494
cantilever beam damper suppressing rectangular plate vibrations 7−117512
cantilever column subject to intermediate periodic concentrated axial load, dynamic stability analysis 7−130580
car tyres, vibration transmission modelling 7−97390
cars, application of the isotropic road roughness assumption 7−97392
centrifugal fan impellers, freq. analysis 7−130574
circular arches of non-uniform cross section, modes of vibration 7−130584
circular cylinder, response to nuclear blast 7−75383
circular cylindrical structures, in two-phase cross-flow, vibrs. 7−128265
circular elastic plate with viscoelastic boundary, calcs. *(Japanese)* 7−142087
circular membrane vibrating under influence of time-harmonic surface force, acoustic impedance 7−90873
circular plate, clamped, free vibrations in water, thermal effects *(Japanese)* 7−136736
circular plates, elastically restrained, parametric instability 7−142209
circular plates, fundamental freq. calcs., Galerkin method appl. 7−91011
circular plates, with stepped thickness over a concentric circular region 7−123503
circular stretched membrane in free space, surface pressure calcs. 7−142085
clamped circular plate with viscoelastic buyers, transient sound radiation 7−142086
column, non-uniform, instability calcs. 7−97394
columns, exact and effective approximate solutions of some divergence-type nonconservative problems 7−75390
composite plates, nonlinear vibration studies 7−117520
condensation on smooth vertical tube, periodic motion effect 7−97276
conical shells, eigenfrequencies, exact soln. *(Chinese)* 7−142198
continuous circular curved beams with rotary inertia and shear deformation, free vibrations 7−97379
continuous circular curved beams with rotary inertia and shear deformation, forced vibrations 7−97380
continuous media, elastic, free vibr. study *(French)* 7−123505
coupled frequencies of a hydroelastic system, consisting of an elastic shell and frictionless liquid 7−69031
coupling effects of disc flexibility on the dynamic behaviour of multi disc-shaft systems 7−91005
cylinder, nonhomogeneous circular, periodic shearing stress, torsional vibr. study 7−142206
cylindrical panel, imperfect, under axial loading 7−75385
cylindrical polygonal ducts, natural freqs. and modes, transfer matrix calcs. 7−117519
cylindrical shell panel vibration analysis 7−91010
damped vibrating systems, inverse eigenvalue problems 7−72954
dome, spherical thermoviscoelastic, steady-state thermomech. vibrs. under cyclical loading 7−97372
domes, thin-walled, under external water pressure 7−91006
dynamic stability of a free Timoshenko beam under a controlled follower force 7−75379
dynamic stress analysis of a rod with arbitrary cross-section subjected to general torsional, shear and bending impacts 7−97383
dynamic structures, orthogonal polynomial characterizations 7−69033
dynamic structures, stiffness and mass identification 7−69034
elastic plates, permanent indentation effects on impact response 7−130573
elastic shear-wall/frame systems, earthquake excitation, numerical approach 7−97398
elastic vibrators, time-dependent acoustic radiation loading, impulse response method 7−82927
electrical machine stators, free vibrations, calcs. 7−97387
electrical machine stators, free vibrations, experimental studies 7−97388
Elinvar, surface layer formation during electrospark treatment, effect on tuning fork sensor characts. 7−78351
exact controllability of a vibrating plate model for an arbitrarily small time 7−72946
fibre reinforced plastic beams subjected to impulsive loading, optimum design 7−69041
finite element-difference method appl. to vibration problems 7−130569
flexural vibration of polygonal plates using characteristic orthogonal polynomials in two variables 7−75386
fluid filled gyros with free surfaces, vibr. and stability anal. 7−95323
forced vibration of a thin flexible cylinder in viscous flow 7−117509
free vibration of a thin cylindrical shell with periodic circumferential stiffeners 7−110829
free vibration of unsymmetrically joined shell structures with a closed member 7−130572
freely vibrating rectangular plates, upper bound approximations to eigenvalues 7−72953
gas bubble in seismic wave source, spectral props. of press. oscill. *(Spanish)* 7−133592
gas turbine engines, dynamics of elements in presence of defects 7−104922
graphite fibre reinforced epoxy angle-ply cylindrical panels, linear vibr. freqs. 7−110824
gyroelastic continua, modal parameter anal. 7−75321
high axisymmetric modes of vibration of stepped circular plates 7−91008
high-frequency vibrations with large dissipation 7−104190
imperfect cylindrical shells, stability of axisymmetric forced vibrs. 7−75405
in-plane vibrations of an arch of variable cross section elastically restrained against rotation at one end and carrying a concentrated mass at the other 7−97364

vibrating bodies continued
in-plane vibrations of an elastically cantilevered circular arc with a tip mass 7−110827
isospectral Euler-Bernoulli beams with continuous density and rigidity functions 7−134481
Lamb waves in unsupported thin films, Brillouin scatt. 7−98299
laminated anisotropic shells of revolution, vibration analysis 7−83089
linear viscoelastic oscillatory system, inner variables description *(German)* 7−104173
long cylindrical shells, nonlinear beam-type vibrations 7−142208
mechanical struct. with charact. matrices 7−136735
membrane, square, nonlinear forced oscills., multi-mode response 7−136734
metal shells with laminated polymer composites, energy dissipation in bending oscillations 7−110834
Mindlin circular plate, rotating, self-excited vibr. 7−128267
modal analysis: twenty years back−twenty years ahead 7−97468
modal analysis of vibroacoustic behaviour of structures: mechanisms and reduction of generated noise *(French)* 7−142088
modal proximity factor calcs. 7−75384
modal testing appls. 7−97469
modified Rayleigh/Galerkin methods using variable parameter as multiplier 7−75392
moving load on a thick sandwich plate strip 7−97389
multiple modes in the vibration of cantilevered shells 7−117516
nonlinear random vibration problems, appl. of complex stochastic averaging 7−134468
nonlinear thermoviscoelasticity, governing equations for periodic deformations 7−110809
oil whirl in rotor bearings 7−83247
orthotropic plates, statics and dynamics 7−142200
orthotropic viscoelastic plates, experimental study of flexural vibration 7−130581
panels, cylindrical laminated, nonlinear vibration and postbuckling 7−90992
parametric instabilities of a viscous liquid layer covered by a thin elastic plate under vertical periodic motion 7−117518
parametric vibrations of a viscoelastic beam (Maxwell model) under steady axial load and transverse displacement excitation at one end 7−117517
periodic crystalline structures formed by cavitation, effect of vibr. 7−84207
piezoelectric vibration gyro, equiv. cct. and charact. *(Japanese)* 7−73337
pipeline containing flowing fluid, flexural vibrations 7−97362
plate, classical soln. for free/clamped boundaries, integral eqn. method 7−128273
plate, fundamental vibration freq., approx. determ. by conformal mapping 7−104195
plate, isotropic, multiply connected, free bending vibration 7−110831
plate, lying on viscous compressible liquid, vibrations, nonlinear stability 7−95325
plate, orthotropic, transverse dynamic bending problem soln. 7−83092
plate, thin rectangular cantilever, vibrating, hybrid stress analysis, FEM and holographic interferometry 7−97366
plate and shell dynamics, nonlinear problems soln. method 7−110832
plate assemblies, non-const. thickness, buckling and vibr. 7−142195
plate driven by random longitudinal forces, sound radiation 7−82924
plate problems, analytical 3D elasticity solns. 7−97317
plate vibrations at low freqs., analysis 7−130577
plate with randomly distributed discrete heterogeneities, bending vibrs. problem 7−110833
plate with stiffening ribs, middle-plane deform. effect on nonsteady stress-strain state 7−75349
plates, bimodulus thick circular and annular, axisymmetric free vibration 7−83088
plates, circular, asymptotic series soln. for natural freqs. 7−123512
plates, clamped orthotropic, free vibr. soln., Lagrangian multiplier technique 7−69022
plates, composite, rectangular, with rectangular cut-outs, free vibrs. 7−142202
plates, discretized, response to transversal and in-plane random excitations 7−91007
plates, laminated, vibr., buckling, cylindrical bending transverse shearing 7−69003
plates, linear viscoelastic circular with free edges, natural modes 7−130570
plates, multilayered sandwich, nonlinear vibr., large deflection 7−69021
plates, pre-twisted, free vibrs., fundamental theory 7−136733
plates, rectangular with free edges, flexural vibrations 7−83091
plates, rectangular with nonuniform elastic rotation constraints, vibration and buckling, anal. 7−75362
plates, static and dynamic deflection calcs. 7−123509
plates, symmetrically laminated rectangular with free edges, natural frequencies 7−130566
plates, vibration study using holographic interferometry 7−115997
plates, wave propag. after impact by projectile 7−130451
plates and shallow shells, construction of equations of non-linear dynamics by the averaging method 7−97396
plates with holes, exptl. design, similarity and dimensional theory 7−97304
polar orthotropic circular plates carrying concentrated masses, transverse vibration calcs. 7−97363
polymers, viscoelastic, vibr. attenuation, freq. depend., model 7−69012
pyramid, truncated quadrangular, 3D vibr. 7−123514
quasi-stationary approximations to nonstationary random vibration 7−69038
rectangular plate, line-supported, flexural vibrations 7−75389
rectangular plate embedded in non-homogeneous foundation, forced vibrations 7−117511
rectangular plate with free edge, calcs. 7−69023
rectangular plates, elastically restrained, with concentrated mass. 7−75382
ring, rotating viscoelastic, free and forced vibrs. 7−97373
ring segments, rotating, in-plane motion calcs. 7−97391
rings, thick, out-of-plane vibrations, model 7−75372
robot arm, flexible, anal. 7−130578
rod, flexurally vibrating, dispersion factor of generalised acoustic model 7−130448
rod, homogeneous elastic, longit. vibr. 7−75400
rods, cantilevered, modal parameter anal. 7−75321
rotating bodies, forced torsional vibr. 7−75370

vibrating bodies continued
rotating disc subjected to in-plane forces 7−97378
rotating rings on elastic foundation, in-plane vibrations, Coriolis acceleration effects 7−117515
rotor-casing rub interactions, nonlinear transient analysis 7−75381
semibounded elastic solid in contact with elastic inertial element, dynamic props. 7−97370
shell, circular cylindrical, free vibr. anal. 7−83087
shell, cylindrical, fibre reinforced composites, vibr. and damping anal. 7−104192
shell, ellipsoidal, in fluid, transition surfaces for short-wave vibrs. 7−75396
shell, elliptical elastic, acted on by uniform press, non-steady-state vibrs. 7−97374
shell, inhomogeneous spherical, radial vibr. 7−75401
shell equations, comparison by 3D FEM anal. 7−97369
shells, piezoceramic free vibrations 7−97395
shells, thin cylindrical, orthotropic, multilayered, free vibr. 7−97365
shells, vibration anal. by time average reflection grating procedure 7−75488
skew plates carrying concentrated mass, calcs. 7−130583
skew plates resting on point supports 7−117514
Space Shuttle, occultation mask boom, method to measure boom vibrations *(Portuguese)* 7−134136
sphere, motion in fluid caused by vibrs. of another sphere 7−102161
spinning uniform beam with restrained ends, free vibrations 7−130582
stiffened cylindrical shells and curved panels, natural freqs. 7−69036
stiffened laminated composite structures, structural optimisation for control 7−130575
stone-sawing blades, circular, noise and vibration 7−110679
string vibration, finite element technique 7−110830
structural analysis, computer programs 7−130533
structure-borne sound source characterization, source descriptor and coupling function 7−90874
structures, large amplitude free flexural vibr. 7−104194
supercritical vibration-induced thermal convection in a cylindrical cavity 7−69137
thick plate, high-order deformation theory 7−75380
thin elastic rod, vibrs., equilibrium shapes 7−123466
Timoshenko beam, mass-loaded, clamped-free 7−97382
Timoshenko beams and flexible multibody system dynamics 7−130576
torsional vibration of shafts coupled by mechanisms 7−123507
transient response of fluid-loaded elastic plates via an impulse response method 7−142084
transverse vibration of a rotor system driven by two Cardan joints 7−91004
travelling elastic cables, 3-D vibration 7−97381
tuning-fork gyro, equiv. mech. cct. *(Japanese)* 7−73336
two-layer elastic half-space with cylindrical cavity, harmonic antiplane vibrs. 7−97402
uncertain sliding structures, reliability function calcs. 7−97386
vibro-impact motions, numerical anal. of chaotic behaviour 7−104136
viscoelastic plates and shells, thermally-induced vibration calcs. 7−123508
viscoelastic solid with circular cavity and subject to internal vibration pressures, stress analysis 7−97376
wedge, thin, asymptotic solution to the problem of elastic vibrations 7−136731
whirling of flexible shafts with intermediate supports 7−123498
Al alloys, SCC strength, vibr. stresses and gain anisotropy effects 7−100425
α-$AlPO_4$, berlinite, longitudinally vibrating crystal elements, temp. stability 7−125612
Ni-base superalloy, vibr. fatigue props. of laserglazed specimens 7−119374

vibration control
see also damping
active control method for passing through critical speeds of rotating shafts by changing stiffnesses of the supports with use of memory metals 7−69035
active noise and vibration control (ANVC): current trends, permanent aims and future possibilities 7−68937
coincidence damper for reducing pipe wall vibrations in piping systems with disturbed internal turbulent flow 7−69039
flexible transmission shaft, squeeze-film damper appls. 7−69037
flexural vibrations, active control 7−97377
gas-filled radiation detectors, electrical compensation method for mechanically induced disturbances 7−74365
magnetic fluid, damper application for vibration isolating table 7−73326
nonlinear parametric system, vibrational stabilisation 7−134471
perfect crystal neutron interferometry, vibration isolation system 7−67459
rotors, automatic balancing system synthesis 7−75388

vibration measurement
see also seismometers
CCD-line cameras appl. to vibration meas. *(German)* 7−83136
contactless vibration and shock vel. meas. using laser Doppler velocimetry *(Chinese)* 7−121077
diode laser, appl. in an ESPI system 7−67384
dynamic vibration testing, microprocessor appls. 7−83140
electronic speckle interferometry fringes, optimisation with limited laser power 7−102501
environmental vibrations in Langmuir films meas. 7−95541
ESPI and moire methods for deform. meas. at very high temps. 7−117553
fibre optic sensors, developments and appls., review *(Italian)* 7−90805
fibre optic vibration sensing system, interferometric type, config. and compensation scheme 7−97168
fibre optic vibration sensor, single-mode 7−104032
gear circumferential vibr. meas. using double aperture method 7−136766
interferometric optical fibre detection method 7−117329
machine condition monitoring using vibration analyses 7−110885
mechanical structures freq. response functions estimation, comparison of new methods 7−100480
micromachined optical surfaces, undulation due to precision machining vibration, anal., 7−90845
modern vibration analysis in condition monitoring 7−110891
multiphase-step-sine method for experimental modal analysis 7−117554
optical systems for vibr. meas. *(Danish)* 7−128525
opto-electronic system for displacement and vibration measurements 7−140672
press punch design using energy accountancy eqn. 7−69024

vibration measurement continued
rotor mode shape analysis for assessing machinery condition 7−83141
sinusoidal vibration amplitude, multiple-reflection laser interferometer *(Korean)* 7−134842
Sm-2701 FFT analyser for rotary machines meas. 7−89197
spacecraft simulation methods, vibro-acoustic environments 7−134724
stochastic response of sound and vibration level meters *(Japanese)* 7−67271
structural analysis techniques, development 7−110892
SUS/KUS, sound/vibration monitoring systems for LWR's and PWR's *(German)* 7−129379
thin wall shell structures, shock and vibration meas., effects of structural imperfections *(German)* 7−109456
track force monitoring using acoustic signature inspection 7−97236
TV speckle interferometer with photographic storage appl. to displacement and vibration detection 7−102507
ultrasonic vibrations amplitude meas., optical dynamic holography technique 7−117221
vibration amplitude meas. of power ultrasonic sources, laser interferometer investig. 7−75228
vibroacoustic diagnostics based on pattern recognition, multivariate correl. and regression anal. appl. *(German)* 7−142129
vibroacoustic signals, freq. anal. using HARM program system *(German)* 7−142112

vibrational band (nuclear) *see nuclear collective states and giant resonances*

vibrational states in disordered systems
adenosine residues, UV resonance Raman bands 7−106965
alloys, amorphous hydrogenated, atomic scale struct., pulsed neutron scatt. 7−142589
amorphous and vitreous materials, excitation relaxation processes, photoluminescence and photodarkening 7−85797
amorphous solids, hole burning spectroscopy and relax. dynamics at low temp., phonon assisted tunnelling 7−136457
anthracene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
benzene-d_6 liq., second and third order IR spectra, intermol. modes and anharmonicity calcs. *(Russian)* 7−85679
n-butyl bromide, liquid phase, IR spectra molar absorptivities, temp. depend. 7−144046
t-butyl cyanide, disordered phase, cooperative dynamics 7−142940
condensed media, vibr. spectra, temp. depend. of line freqs. 7−76330
di-n-butylamine, Raman bands, temp. depend. intensities 7−85639
diglycidyl ether of bisphenol, phonon fracton density of states, cryst. and amorphous samples 7−76319
dimethylnaphthalene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
disordered alloys, phonons radiated by moving dislocations 7−142938
DNA polymer, melting nucleation defect, H bond vibr. fluctuations anal. 7−71671
feldspars, glasses and crysts., tetrahedra vibrational interactions calcs. 7−76329
formaldehyde aq. solns. and oligomers, Raman spectra studies, vibrations 7−106166
fractal hamiltonians in condensed matter physics 7−125292
glass dynamics, anharmonic modes 7−111801
glasses, chromophore optical transition homogeneous linewidths, theoretical studies, review 7−77487
glasses, phonon spectral diffusion 7−142939
glasses, resonance HF absorption at low temp., nonequilib. phonons 7−131262
glycerol, excitations above liquid-glass transition, Brillouin scatt. study 7−92698
guanine derivatives, resonance Raman studies 7−106963
guanosine residues, UV resonance Raman bands 7−106965
hyper-Raman scattering by vibrational excitations in crystals, glasses and liquids 7−106177
impurity absorption spectra zero-phonon line homogeneous broadening in glasses and crysts. *(Russian)* 7−106220
integrated phonon density of states in 2D random systems 7−137481
Jahn-Teller ion exchange coupling temp. depend., vibronic interaction effects, semiclassical approx. calcs. 7−70253
liquid-drop vibration, mode-selection 7−76554
MBBA amorphous solid states, struct. and dynamics 7−124103
melilites, glasses and crysts., tetrahedra vibrational interactions calcs. 7−76329
metal hydrides obtained by low temp. H implantation, structural, vibr. and electronic props. 7−83674
metals, disordered, electron transport theory, influence of incoherent atomic motions 7−92152
molecular clusters, characterisation by vibrational spectroscopy 7−141739
naphthalene, harmonic and anharmonic dynamics *(Japanese)* 7−131254
organic glasses, aromatic mol. photoexcited triplet state zero field electron spin-lattice relax. meas. 7−85429
organic glasses, impurity mol. zero-phonon line broadening, hole burning studies, review 7−75076
phonon physics conference, Budapest, Hungary (Aug. 1985) 7−72722
phonons in disordered solids, thermodynamic props. 7−84169
poly(vinylidine fluoride) films, β-phase, Raman intensities and mode assignments *(French)* 7−85638
poly-3-methylthiophene, resonance Raman scatt., vibr. freqs. 7−77561
poly-4-BCMU film, time-resolved and freq. domain coherent Raman scatt. study 7−137261
poly-p-phenylene, vibr. spectra rel. to stereochemical struct. 7−68482
polyacetylene, cis- and trans-, photogenerated solitons, IR-active vibrs. 7−70788
polyacetylene, Coulomb and pinning effects on soliton-related phonon modes 7−137499
polyacetylene, Durham, conformational defects, IR and Raman studies 7−69624
polyacetylene, heavily-doped, transition to a gapless Peierls insulator 7−70367
polyacetylene, ordered and disordered 1D crysts., mol. dynamics 7−142934
trans-polyacetylene, photoinduced IR spectra, lattice dynamical calcs. 7−70789
polyacetylene, soliton config. effects of localized modes 7−137498
polyacetylene, vibr. and soliton dynamics 7−69849
polyacetylenes, I-doped substituted, Raman and far-IR vibr. spectra 7−144047
polyaniline, vibr. spectra, Raman studies 7−98369

vibrational states in disordered systems continued
polyethylene chains containing defects, longit. acoustic mode freqs. 7−84170
polymers and liquids, thermoacoustic and nonlinear props. 7−124400
polystyrene microspheres, colloidal suspension, collective effects, density fluctuation dynamics, inelastic light scatt. anal. 7−106835
polythiophene, elec. cond. and vibr. key bands, IR and Raman spectra anal. 7−76905
pyroxenes, glasses and crysts., tetrahedra vibrational interactions calcs. 7−76329
silica polymorphs, glasses and crysts., tetrahedra vibrational interactions calcs. 7−76329
silicate glasses, IR reflectivity spectra 7−85625
structurally disordered systems, phonon-like excitations, dispersion and damping 7−84168
structure disordering in curved space model 7−83678
transport in phonon systems, book 7−72740
β-AgI, disordered solid, polarisability and induced light scatt., Raman spectra anal. 7−85744
B-Si-Ge alloys, super-assisted-plasma CVD 7−86052
Cd-As disordered thin films, Raman scatt. 7−113203
$CrSi_2$ amorphous thin films, Raman scatt. 7−113202
$Cu_yTi_{1-y}H_x$, amorphous, conc. depend. of H mobility 7−91899
D_2 fluid, local ordering near liq.-gas critical point, vibrational Raman spectrum fine struct. obs. 7−76512
Eu doped glasses, 7−111800
$Fe_{15}Ni_{60}Si_{10}B_{15}$ amorphous alloy, Debye temp., quadrupole splitting temp. depend., Mossbauer study 7−70678
$Fe_{0.78}P_{0.22}$, amorphous, vibrational spectra, inelastic neutron scatt. 7−98370
Ge, amorphous, structural characterisation 7−131035
a-Ge, Raman coupling-parameter determ., freq. depend. 7−70777
H_2O, amorphous solid, core excited resonances, decay channels, electron scatt. 7−136077
$LaNi_5$, thermal excitations spectral distribs. in crystalline and amorphous states 7−69847
$LiBGeO_4$, crystalline and glassy, vibrational spectra, Raman and IR obs. 7−118996
Mg salts, glassy and liq., Raman spectra studies 7−106162
Mo-P-O vitreous system, IR absorpt. spectra, composition depend 7−92659
MoO_3-P_2O_5 glass, US vel., temp. depend., 4-600 K, anelastic and elastic effects 7−76304
$(MoO_3)_x(P_2O_5)_{1-x}$ phosphate glasses, elastic behaviour and vibr. anharmonicity 7−104945
$NiSi_2$ amorphous thin films, Raman scatt. 7−113202
$Ni_{24}Zr_{76}$ metallic glass, H diffusion and HF vibrational modes, neutron scatt. obs. 7−105144
$Pb_{1-x}Sn_xTe$ epitaxial film, cond. and plasma refl. spectra, lattice vibr.-induced localisation effects 7−85141
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
$Pd_{58.8}Si_{20.6}U_{20.6}$, icosahedral and glassy, low-energy modes, neutron inelastic scatt. 7−118048
Si, amorphous, structural characterisation 7−131035
a-Si, structural and vibrational props. calcs., 216-atom continuous-distorted-network model 7−69848
a-Si:H films, structural disorder, Raman scatt. investig. 7−118993
Si:H-SiN_x:H, amorphous superlattices, phonon stop bands 7−124673
a-Si-C: H alloy systems, optical absorption and disorder 7−132297
a-Si-Ge:H alloy systems, optical absorption and disorder 7−132297
Si-SiO_2 amorphous superlattices, phonon stop bands 7−124673
Si_xC_{1-x}, amorphous, phonon density of states calc. 7−76328
a-$Si_{1-x}H_x$ films, vibrational and optical props., optical absorpt. and Raman scatt. meas. 7−125830
SiO_2 glass, IR absorpt. edge due to multiphonon absorpt., polariton theory 7−99775
SiO_2 glass fibres, elongated, Raman spectra 7−97108
a-SiO_2, IR absorpt. peak of vibr. stretching mode, struct. order 7−132253
SiO_2, silica smoke-particle aggregates, low-frequency vibrational density of states, temp. depend. 7−137500
SiO_2, vitreous, heat pulse propagation at critical heat power 7−131380
SiS_2-LiS-LiBr(I), glass-forming region and struct., X-ray diffr. and FT-IR spectra 7−142602
TeO_2-$ZnCl_2$ vitreous system, struct. and US props. 7−104556
V_2Zr, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657

vibrations
see also lattice dynamics; molecular vibration; vibrating bodies
2-degree of freedom systems, response to multifrequency parametric excitations 7−97299
accelerometers, vibration-related error meas. *(Russian)* 7−115952
adhesive compositions and reinforced polymer coatings based on them, damping props. 7−78371
articular cartilage, testing by patellar vibr. 7−114358
axial-flow compressor blade vibration resonances 7−130456
beam, composite with history-dependent damage, predicted dynamic response 7−117503
bodies, nonlinear viscoelastic, vibrations and heating, simple deformation 7−117485
bucket centrifuge, vibrs. and stability 7−102158
buildings, structural-borne sound calcs. *(Hungarian)* 7−123336
car noise and vibration, CAE studies 7−110677
cavitated squeeze-film bearings, closed form model 7−106637
chaos in a mechanism with time delays under parametric and external excitation 7−75280
chaotic vibro-impact statistics 7−130586
composite structure with holes, thin-walled, dynamic response to axial loading 7−83093
conical shells, eigenfrequencies, exact soln. *(Chinese)* 7−142198
constrained flexible systems, lumped and consistent masses for impact induced wave problems 7−104197
coupling loss factor det. using matrix fitting 7−142201
cylinder, hollow magnetoelastic, in liq. medium, dynamic reaction during impulsive excitation 7−123513
cylinder coupled with thermal and mag. fields, longit. vibr., eigenvalue expansion method 7−108238
cylindrical tanks, earthquake response behaviour 7−103125
damper for electron microscope 7−108713
diesel engine noise reduction by encapsulation and vibration damping 7−90881

vibrations continued
dynamic analysis of acoustic wave propagation problems, BEM 7—130447
dynamic moduli of elasticity in wide temp. range, investig. methods and automatic units 7—113830
eigenvalue sensitivity calcs. for linear systems 7—75276
eigenvalue sensitivity theory, appl. to linear system design 7—75277
elastic beam, longitudinally compressed, nonlinear mech. vibrs. 7—117504
elastic column in a fluid container under random vibratory excitation, vibrs. *(German)* 7—104203
elastic plates submerged in gas, motion eqns. 7—123322
elastic shear-wall/frame systems, earthquake excitation, numerical approach 7—97398
elastic structural elements, specified reliability design for random vibrs., fatigue damage accumulation 7—83116
electromagnetism eigenvalue problem, weak formulations and FEM 7—103722
electromagnetomechanical interactions in deformable solids and structs., conf., Tokyo, Japan (Oct. 1986) 7—115692
factory vibration propag. studies 7—75201
field method, theoretical appls. 7—97298
film projector noise and vibr. performance study *(Russian)* 7—130497
fission reactor components, synthesizing seismic fragility 7—89687
flexible structures, controlled, with impulsive loads, modelling 7—73010
flow induced structural vibrations *(French)* 7—142213
flow-induced vibrations of a circular cylinder concentrically accommodated in a pipe *(German)* 7—104201
fluid-structure interaction problems, subspace iteration for eigen-solution 7—141211
forced asymmetric vibrations of an axisymmetric body in contact with an elastic half-space—a global-local finite element approach 7—75279
fractions, vibrational excitations in strong scatt. regime 7—80686
fracture healing under plaster cast, vibr. anal. 7—114363
freely rotatable, supported thin plates, large amplitude effects on free vibrs. *(German)* 7—104200
Galerkin multiharmonic procedure for nonlinear multidimens. random vibr. 7—120796
graphite rod, compressive end loading freq., apparent modulus, crack closure 7—132732
ground vibrations due to railway trains, calcs. 7—130585
Hamiltonian structures and stability for rigid bodies with flexible attachments 7—95294
hand, human, vibration exposure and skin mechanical energy absorption 7—114339
harmonically vibrating rectangular plates, Green's function appl. to mech. props. *(German)* 7—104199
HDR phase II vibrational experiments 7—89690
heat exchanger U-bend tubes with flat bar supports, dynamics 7—67006
heat exchangers and steam generators, flow induced vibration fretting wear 7—106638
helicopter noise-induced vibration and rattle, human response 7—86865
history of theories, mainly 18th century 7—134418
human body, vibr. model 7—145133
imaging system. airborne vehicular, resolution limits, mechanical vibration effects, anal. 7—122854
impact vibration ringing noise calcs. *(Chinese)* 7—123321
imperfect cylindrical shells, stability of axisymmetric forced vibrs. 7—75405
infinite discrete rod and rope meshes, vibrations *(German)* 7—102156
inverse bending problems for elastic plates and shells under a local dynamic load 7—90947
isolation systems, mobility analysis 7—130523
isospectral Euler-Bernoulli beams with continuous density and rigidity functions 7—134481
isotropic thermoelastic electrically conducting plate, EM thermomech. vibrs. in mag. field 7—104191
jump phenomena in coupled Duffing oscillators under random excitation 7—82929
Lamb's problem in semi-infinite micropolar elastic solid, waves and vibrations 7—108239
learning task effects and subjective ratings of disturbance 7—97211
left ventricular wall, vibr. transmissibility, dog obs. 7—87076
linear acceleration time integration method 7—110777
linear elastic beam, stochastic vibrs., correlation of exciter field process *(German)* 7—104202
linear systems with multiple degrees of freedom, freq. characteristic matrices *(German)* 7—102150
loading of chaotically vibrating mechanical systems *(German)* 7—102318
localization of vibrations by structural irregularity 7—90927
lower bound for the smallest frequency determined by means of the Rayleigh-Ritz method 7—142156
magneto-elastic interaction on radial vibrations of an orthotropic cylindrical shell 7—68990
magnetostrictive devices, giant, appls. for moment excitation 7—130611
mass discretisation in structural dynamic modeling, quantitative assessment 7—67005
mechanical vibration meas., contactless, based on Doppler effect 7—83137
metal, weld zone residual stresses relaxation in field of elastic vibrs. 7—126164
motion sickness, relationship to motion exposure 7—145114
narrow-band transfer function model prediction error 7—130450
natural vibrational modes in dynamic loading problems, convergence of method of expansion 7—75269
non-steady stochastic excitation processes, effects on system response variances *(German)* 7—102316
nonlinear damped mechanical systems, non-steady reaction to stochastic excitation *(German)* 7—102315
nonlinear oscillations in physical systems, decomposition method 7—134664
nonlinear oscillators under stochastic parametric and external excitations 7—88955
nonlinear parametric system, vibrational stabilisation 7—134471
nonlinear vibration absorber design 7—130525
nonlinear vibration systems, multi-frequency Hopf bifurcation, averaging methods 7—95289
nonlinear vibrations with internal resonances, analytical approx and physical interpretation *(German)* 7—72948
nuclear power station demolition, concrete structures, explosive break-up, structure vibrations *(German)* 7—129380
nuclear reactors, vibration monitoring as a means of improving plant reliability 7—129338
vibrations continued
nuclear steam generator tube repair, stabilizer development, vibration anal. 7—141199
optical fibre, polarisation state of transmitted optical wave, influence of external vibrs. *(Japanese)* 7—97164
optical multimode fibres, statistical correlation of optical field, vibr. effect 7—104013
particle accelerator, effects of ground motion on design 7—81768
patella, biomech. significance of vibr. arthrography 7—114359
periodic multilayered composite, elastic, micromorphic effects 7—117507
perturbed complex eigenproperties of classically damped primary structure and equipment systems 7—123506
piezoelectric ceramic hollow cylinder, vibration props. 7—142139
piezoelectric ceramics, vibration mode studies *(French)* 7—142136
pipe leak location using sound emission meas. *(Japanese)* 7—142128
pipelines, buried continuous and jointed, 3-D seismic response anal. 7—103128
planetary drives, vibration characteristics, calc. model *(German)* 7—102154
plastics/ice, kinetic friction, vibration effect 7—113731
plate, symmetrically laminated, finite element, static, dynamic and buckling formulation for microcomputer 7—136724
plate, thin, prestressed orthotropic rectangular, vibr. studied using singular perturbation technique 7—69019
plate with defect, stiffness and freq. of natural oscillations in bending, vibrodiagnostics of defects 7—130567
plates, parabolically tapered polar orthotropic annular, on elastic foundations, vibrs., buckling 7—75371
plates, transient analysis by finite element-transfer matrix method 7—117502
power variables correlation, theory and appls. 7—115772
Prony's method for vibration analysis *(French)* 7—110835
PWR containment, limiting strength determ., self-resonant frequencies *(German)* 7—109301
quasi-periodic solns. in nonlin. theory, num. anal. *(Japanese)* 7—95326
random vibration stresses, RMS fatigue curves 7—69067
Rayleigh's principle via least action 7—68986
Rayleigh-Ritz method with separate deflection expressions for structural segments 7—97301
response statistics of non-linear, second-order transformations to Gaussian loads 7—97300
rod, flexurally vibrating, dispersion factor of generalised acoustic model 7—130448
sandwich plate, elastic, vibrations, interacting continuum anal. 7—136684
seismic qualification tests, vibrational equivalence concept 7—103126
Seismic soil-structure interaction anal. methods, validation 7—89689
sensations, perception thresholds and temporary threshold shifts of whole body vibrations in sitting and standing posture 7—78965
sensitivity analysis of vibrating systems 7—110778
shallow shell with attached mass, finite-amplitude vibrations *(German)* 7—128263
shell, composite cylindrical and spherical, radial vibrations 7—69026
shell, cylindrical, transversely isotropic, magnetoelastic interaction on torsional vibrations 7—69027
shell, rotating axisymm., precession of vibr. standing waves 7—75375
shells, clamped-free, clamped-ring stiffened, free vibrations, modal characteristics 7—130529
shells, conical, free vibrations study *(Japanese)* 7—110825
shells, cylindrical, free vibration analysis using FEM 7—123499
shells, damped response by a constrained viscoelastic layer 7—75355
shells, translational, dynamic analysis 7—117525
space structure vibration modes, math. concept 7—72969
spark ignition engines, knocking detection, structural vibrations based 7—110672
steel, reinforced quasimonolithic and quasilaminated, damping ability 7—113599
stiff string wave equation, finite difference method analysis *(Japanese)* 7—117443
stochastic vibrations, simulation, estimation and stability *(German)* 7—102312
string, infinite, on deformable base, vibrs. under uniformly accelerated load 7—75268
string, variable length, longitudinally moving, vibrations of segment 7—136737
string instruments, unstable states of vibration *(German)* 7—82948
string vibrations, nonlinear hyperbolic problems, explicit bounds 7—66994
strip, magnetostrictive, longitudinally polarized, elastic vibrations by external magnetic field 7—97397
strongly nonlinear systems close to vibr. impact systems, periodic solns. 7—67004
structural mode calcs. via Prony model, system order and noise-induced poles 7—110687
structural surface intensity: an alternative approach in vibration analysis and diagnosis 7—110671
structure-borne sound emission, standard meas. methods development 7—117399
superconducting contact, tunnel barrier, acoustical vibrations 7—85209
thin annular nonhomogeneous circular plate, forced vibration 7—142211
tibial stiffness, assessment by vibr. testing in situ 7—107120
transverse wave in a string, momentum storage and energy transport study 7—108078
tube bundles, large, dynamic behaviour in cross flow *(French)* 7—96237
two circular cylinders in crossflow, flow indiced vibration 7—69105
two-layer medium, vibr. source at boundary interface, dynamic problem 7—76301
vertical reactor coolant pump instabilities 7—83096
vibration-acoustic test mode, approx. reconstruction, numerical solution of extremal problem 7—68930
vibration-impact system theory with distributed impact elements 7—75265
viscoelastic bar, dynamic moduli calcs. 7—130571
viscoelastic layer, plane and cylindrical, partially adherent to stiff ring, dynamic problems 7—75395
viscoelastic thin-walled structural components, longit. dynamic bending problems soln. method 7—142188
viscoplastic sandwich-type continuous beams, dynamic calc. using Green's functions *(German)* 7—104172
water filled thin walled cylindrical shell, vibrations 7—73981
wave eqn. on segment, inverse problem soln. by method of successive approximations 7—67032
whole-body vibration effects, book 7—80212
Al-Si melts, modification and surface tension, effect of vibr. 7—71168

vibrations, crystal lattice *see lattice dynamics*
vibrations, molecular *see molecular vibration*
vibrometers *see vibration measurement*
vibronic states of crystals *see lattice dynamics; molecular vibration in solids*
vibronic states of molecules *see molecular vibronic states*
Vickers testing *see hardness testing*
video and audio discs
for data storage on optical discs see "optical disc storage"
biomedical education, interactive video used in heart auscultation 7−95151
CAI, science lessons using interactive video 7−120744
compact discs, axial gradient index singlet collimator lens 7−82748
compact discs, optical pickup using no glass lens 7−82749
GRIN objectives for CD appls. 7−82741
holographic scanning objective, optical imaging system for video discs 7−122881
interactive video for modeling motion of athletes in physics teaching 7−88787
interactive videodisc in maintenance operations on nuclear reactors *(French)* 7−135511
optical discs, diffr. props., studied using rigorous mode method *(Chinese)* 7−90522
optical pickup, autofocusing effect due to wavelength change of diode lasers 7−117250
videodiscs in instructional environments 7−88767
video recording
see also video and audio discs
closed circuit TV-video cable with high tamper resistance 7−122061
colorization using ImageWise video digitizer 7−134864
film and video tape technology for motion pictures *(Russian)* 7−121267
film-to-video transfers, noise aspects 7−67412
hailpads anal., computerised video scanning system 7−94443
light-pulse generator for recording electrical signals, using Kerr cells 7−121089
nuclear materials safeguards, modular integrated video system 7−122015
pendulums, underdamped motion study using videotaping 7−108088
video signals
electronic imaging conf., Arlington, VA, USA (Oct. 1986) 7−134348
video networking system for computer laboratory aids learning 7−95150
vidicons *see television camera tubes*
virial coefficients *see equations of state*
virtual machines
3081/E systems, UA1 data anal. 7−135815
VME data acquisition system, UA1 application 7−109682
virtuons (virtual phonons) *see phonons*
viscoelasticity
see also creep; internal friction; stress relaxation
2-D structures, endochronic viscoelastic creep analysis 7−110798
2D classical electron liquid, viscoelastic effects 7−112418
allylmethacrylate, dielectric relax. determ. 7−118943
beam columns, viscoelastic, creep buckling behaviour 7−110797
beam-mass-beam systems, pseudo-force approximation applied to nonlinear dynamic contacts and viscoelastic damping 7−110878
bilayer lipid membranes, viscoelastic relax., freq.-dependent tension and membrane viscosity 7−133243
blood, whole, viscoelastic props., influence of fast sedimenting red blood cell aggregates 7−71771
bodies, aging viscoelastic, kinetics of crack growth 7−110865
bodies, nonlinear viscoelastic, vibrations and heating, simple deformation 7−117485
bodies with complex rheology, axisymm. contact problems, 2D integral eqns. 7−75480
n-butylacrylate, dielectric relax. determ. 7−118943
cell suspensions, intrinsic viscoelasticity, effects of erythrocyte deformability 7−126763
collective modes in a viscoelastic medium, transformation 7−83074
colloids, rheological props., nonequilib. process linear Onsager theory 7−114006
composite materials, inelastic, deform. and fracture character. using pots. 7−132746
composite materials shell, elastic and viscoelastic behaviour theory 7−136693
contact problem, viscoelastic steady-state plane normal 7−90972
continuous systems, viscoelastic, under time-depend. loadings, dynamic stability *(Polish)* 7−83083
controlled stress rheometer, oscillatory mode, fluid inertia effects for various geometries 7−97471
controlled stress rheometer and pulsatile pipe flow apparatus, combined steady and oscillatory stress mode 7−75720
CTAB, dil. surfactant soln., viscoelasticity, micellar chain model 7−110897
decyl sodium sulphate-decanol-water-Na_2SO_4 lyotropic nematic system, viscoelastic props. 7−76255
dense fluids, viscoelastic props., 2D viscosities 7−118144
direct and inverse scattering for viscoelastic media 7−82893
disc, viscoelastic, in a central force field, carried by a solid, rotational motion 7−136682
dome, spherical thermoviscoelastic, steady-state thermomech. vibrs. under cyclical loading 7−97372
dusty liquid, unsteady laminar flow between rotating cylinders 7−104232
dusty viscoelastic liquid, unsteady flow between two oscillating plates 7−104333
dynamic contact problems with nonlinear normal and friction interface laws, uniqueness, existence 7−83131
effective absolutely stable algorithm for numerical solution of thermoviscoelasticity and thermoviscoplasticity problems 7−104170
elastic wave propag. through media with thin crack-like inclusions 7−136739
elastico-viscous liq. draining from vertical surface, flow start-up 7−69220
elastohydrodynamic lubrication, viscoplastic and viscoelastic models 7−142240
elastomers, relaxational props. during network formation, meas. method *(Russian)* 7−83645
elastoviscoplastic media flow in channels, transient processes 7−142379
electrorheological suspensions, struct. and viscoelastic props. in electric field *(Russian)* 7−106563
entry flow problem for viscoelastic flows through contractions, book contrib. 7−97583
epoxy binders, elasticity type effect on viscoelastic props. 7−138774
viscoelasticity continued
epoxy binders, viscoelastic behaviour mechanisms 7−138773
epoxy matrix, carbon fibre reinforced, relaxation phenomena viscoelasticity *(French)* 7−93046
erythrocyte membrane skeleton, inherited abnormalities effect on viscoelastic props. 7−78793
erythrocyte suspensions, packed, subjected to low amplitude oscill. deform., viscoelasticity obs. 7−139297
fatigue model by homogenisation method *(French)* 7−75457
fibre reinforced composite, viscoelastic matrix, ineffective fibre length determ. 7−69060
fingering effects of water injected into concentrated clay particle suspensions 7−110896
flow in a wedge, kinematics 7−130617
fluid, flow around a sphere in uniform translation rate of deform. field struct. 7−69221
fluid motion past porous circular cylinder, num. soln. 7−104341
fluid-saturated porous media with micropolar viscoelastic skeleton, wave propagation 7−97401
foam-plastics, phys. charact. features of deform. kinetics 7−86281
fracture studies, viscoelastic behaviour of opto-mech. props. 7−75486
glass parts, viscous relax., thermal stresses, finite element calc. 7−71229
glass-epoxide composite, role of interfacial agents, viscoelastic studies *(French)* 7−113589
glycerol monooleate monolayers on liq. surfaces, light scatt. study of thermotropic transitions 7−76553
graphite fibre reinforced epoxy, nonlinear viscoelastic charactn. 7−119318
growing solids, problems with aging and unloading 7−136711
immiscible viscoelastic fluids, unsteady flow through porous medium 7−69254
incompressible Newtonian fluid, viscoelastic, nonaxisymmetric flow between rotating disks 7−75594
indentor, rigid axisymmetric, impact on viscoelastic half-space, integral eqn., num. soln. 7−69070
inhomogeneous hereditarily elastic medium with E-memory, 1D wave propagation 7−136732
instantaneously elastic materials, quasistatic soln. uniqueness 7−123488
intermolecular interaction, crack healing study 7−117833
isobutylacrylate, dielectric relax. determ. 7−118943
isobutylmethacrylate, dielectric relax. determ. 7−118943
isotropic nonlinear viscoelastic bodies, bitensorial functions expansion in terms of directly reducible matrix groups 7−83057
isotropic solid, constitutive law, representation form equivalence 7−123487
K-BKZ fluid, flow between parallel plates, shear thinning and inertial effects 7−69218
Lamb's problem in viscoelastic solid, effects of gravity, thermal and mag. fields 7−110813
layer, plane and cylindrical, partially adherent to stiff ring, dynamic problems 7−75395
linear, uniqueness, counterexamples 7−136716
linear thermoviscoelastic equation of state of thermorheologically simple media 7−104164
linear viscoelastic oscillatory system, inner variables description *(German)* 7−104173
liquid, 2D flow with memory, FEM 7−69217
liquid crystal polymers, dynamical characts. viscoelastic props. 7−136770
liquid foams, flowing in pipes, visco-elastic aspects appl. 7−91190
liquid layered medium, torsionally oscillating, interface shapes 7−117633
liquids, natural convection from horizontal wires 7−69159
liquids, separation by stirring, propeller in cylinder, velocity and shear rate *(German)* 7−123692
magnetic lacquers, rheogram meas. with couette apparatus 7−91049
magnetoelastic wave propagation in viscoelastic solid medium 7−77394
materials, model of response to nonlinear viscoelasticity *(French)* 7−71234
metal, constructional, kinetic model of viscoelastic deform. component 7−98322
metal-polymer plates, two-layer, stress-strain state under cyclical loading 7−78109
metals, dynamic deform., elastic precursor propag., shortwave method anal. 7−98304
net, viscoelastic, stress wave propagation 7−128306
Newtonian droplet translation in a 4-const. Oldroyd fluid 7−69250
nonageing materials with fading memory, multiaxial nonlinear hereditary constitutive law 7−83066
nonequilibrium classical statistical mechanical model 7−72991
nonlinear, ID, admissibility and stability 7−90965
nonlinear conservation laws, initial-boundary value problems 7−69004
nonlinear rheology, empirical prediction rules from linear viscoelasticity 7−75508
nonlinear thermoviscoelasticity, governing equations for periodic deformations 7−110809
nonlinear viscoelastic fluids through circular pipes, unsteady shear flow 7−75679
nuclear ceramic materials, energy dissipation, image-analytical, indenting, quantitative methods 7−129183
numerical shock profile 7−90988
plane flow between rotating cylinders, appl. to rolling and calendering processes 7−91125
plasma, one-component, glass transition, dynamic correlations, generalised viscoelastic formalism 7−105027
plates, circular, ageing viscoelastic material, stability 7−136726
plates, stability on a nonuniformly aging viscoelastic foundation 7−97337
plates and shells, thermally-induced vibration calcs. 7−123508
plates whose material props. vary through thickness, effective props. determ. *(German)* 7−83078
poly(dimethyl siloxane), viscoelastic props., meas. using capillary and cone-and-plate rheometers, mol. parameters effect 7−75495
poly(ethylene terephthalate), viscoelastic props., meas. using capillary and cone-and-plate rheometers, mol. parameters effect 7−75495
polyamide 6-6, viscoelastic props., meas. using capillary and cone-and-plate rheometers, mol. parameters effect 7−75495
polycarbonate/ABS blends, props. 7−137267
polyester-urethane-TiO_2 composite viscoelastic behaviour 7−137439
polyethylene, high-density, nonlinear creep and long-term strength prediction 7−100309
polyethylene, low density/high density blends, mech. and flow props. 7−137268
polyethylene, Mo powder filled, cubic strain and acoustic props. 7−76308
polyethylene, viscoelastic, fibre spinning 7−119233

viscoelasticity continued
polyethylene and crosslinked elastomer combined dispersion, struct. correl. with phys., and mech. props. 7−71233
polyethylene mixtures, dynamic viscoelastic props., mol. nature of temp. transitions 7−71231
polyethylene polydisperse melts, nonlinear viscoelastic behaviour 7−75498
polymer, isotropic and anisotropic, nonlinear creep and long-term strength prediction 7−100309
polymer, oriented, nonlinear viscoelasticity in high-rate tension 7−78091
polymer, rigidity moduli determination from monomer chem. struct. 7−69804
polymer extrusion processes, boundary-element simulation 7−91048
polymer fibre, entropic elasticity problem 7−76265
polymer liquids, viscoelasticity, constitutive eqns. 7−130613
polymer melts, visco-anelastic description 7−75505
polymer melts, viscoelasticity in flow geometries 7−142344
polymer solns., squeezing flow between spherical surface and flat plate 7−75621
polymer solutions, natural convection from horizontal wires 7−69159
polymer solutions, viscoelastic turbulent pipe flows, heat eddy diffusivity 7−97520
polymeric liqs., viscoelastic response 7−69080
polymeric liqs., viscoelasticity 7−75496
polymeric liquids, conference, Grenoble, France (Jan. 1986) 7−72698
polymeric systems, rheological characteristics measurement, vibr. rheometer 7−75729
polymers, mesomorphic, side chain, nematic solutions, viscoelastic props. 7−111724
polymers, monodisperse, flexible, linear and nonlinear viscoelasticity, unified mol. theories 7−75497
polymers, nonlinear characterisation of long-term behaviour 7−118033
polymers, nonlinear viscoelastic props., determ. using Fourier transform. mech. anal. 7−118035
polymers, solid, multiaxial nonlinear viscoelasticity 7−118034
polymers, viscoelastic, vibr. attenuation, freq. depend., model 7−69012
polymers, viscoelastic and ageing characts. 7−118032
polymers, vol. change and nonlinearly thermoviscoelastic constitution 7−131235
polypropylene, talc filled, fatigue failure mechanisms 7−119355
polystyrene, mica filled, viscoelastic melt, void content, reduction during mixing 7−76422
polystyrene, viscoelastic, fibre spinning 7−119233
polystyrene-polyisoprene-polystyrene triblock copolymer, order-disorder transition, rheological obs. 7−126102
pressure vessels, filament-wound, spherical, viscoelastic/damage modelling 7−104167
pulmonary vascular compliance and viscoelasticity, dog obs. 7−71791
radial fingering in viscoelastic pastes 7−91051
relaxation function, symmetry and monotonicity 7−117472
relaxation-type equations for viscoelastic media with finite deformations 7−69013
ring, rotating viscoelastic, free and forced vibrs. 7−97373
rotating viscoelastic shafts, dynamic instability 7−120809
rubber, cured, nonlinear viscoelastic model for nonfactorisable time depend. behaviour 7−132658
semi-infinite crack propag. along viscoelastic media interface 7−117482
semispace, with ageing, elastic-viscoelastic analogy *(Polish)* 7−130547
shell, expanding viscoelastic subject to aging, stability 7−75368
shell-like products made of fibrous composites, buckling and thermoviscoelasticity problem soln. 7−83085
shells, damped response by a constrained viscoelastic layer 7−75355
slow unsteady flow, Galerkin type representations 7−83281
smeared cracking, plasticity, creep, and thermal loading, unified approach 7−110839
soft tissue of human body, delay spectrum in vivo anal. by computer 7−126898
soils, nonlinear viscoelastic model 7−79380
solid, hydrostatic compression in fluid oscillatory instability 7−69006
solids of revolution under harmonic loading, problems of thermoelectroviscoelasticity 7−92603
spatial light modulator, electrically addressed viscoelastic, anal. 7−136494
strain histories in orthogonal streamline coordinate systems 7−69224
stress-relaxation modulus and creep compliance interconnection formulae 7−98323
strip, viscoelastic, finite-length crack moving under impact 7−123524
structural components, thin-walled, longit. dynamic bending problems soln. method 7−142188
styrene-butadiene-styrene block copolymer, viscoelastic behaviour, decomposition of mechanical spectra 7−75964
surface oscillations due to time-oscillatory temperature distribution 7−136889
surface waves on general viscoelastic media, in presence of thermal field and gravity 7−142212
suspensions, rheological behaviour, Hooke'e elasticity influence *(Russian)* 7−97470
tetramethyl-p-silphenylenesiloxane-dimethylsiloxane block and graft copolymers, selective permeable membranes 7−69622
thermodiffusion, eqns., rel. to theory of mixtures *(Polish)* 7−130682
thermoelasticity, BEM, use of coupled fundamental solns. 7−110786
thermoviscoelastic solid in magnetic field, plane wave propagation 7−69028
thermoviscoelastoplastic material damage model, appl. to spalling failure 7−75329
thermoviscoplastic rod, impact-induced temp. rise 7−69016
third grade fluid, plane steady flow, curvilinear coords., partial diff. eqns. soln. 7−69214
tissue viscoelasticity, algorithms of evaluation of Fung's relaxation function parameters 7−107121
transient flows in a coupled rigid deformable system *(French)* 7−91047
unsteady flow in rigid cylindrical tubes, viscoelastic fluid, rheological characts. determ. 7−75506
viscoelastic equation, with non-periodic coeffs., homogenisation 7−115790
viscoelastic fluids, local criterion for glass transition 7−124510
viscoelastodynamics, unilateral, boundary-value problems 7−117474
Voight-type material half-space, thermomagneto-viscoelastic wave propag. 7−83064
wave-dynamics problem, num. soln. using ES-1055 matrix processor *(Russian)* 7−136901
xanthan gum in corn syrup, viscometry, viscous and elastic contributions 7−75509
yield and nonlinear viscoelasticity, appl. of coupling model 7−131234

viscoelasticity continued
H_2O-DMSO, structural relax. times, Brillouin spectra 7−99876
Na_2O-CaO-SiO_2 glass, ion exchange strengthening, stress buildup and relax. 7−71139
Ni-Nb metallic glasses, creep, free vol. annihilation and relax., isothermal dilatometry meas. 7−98324
S_iO_2 particles, gelation, critical viscoelasticity 7−104233
Si ribbon growth, thermal viscoplastic buckling 7−90995
SiO_2 gel, formation by sol-gel process, dynamic shear meas. 7−93396

viscometers
see also viscosity measurement
coaxial cylinder viscometer, combined oscillatory and steady-state shear mode eqns. 7−97664
liquids meas., using photoelectric device and capillary method 7−111130
measurement of viscosity and the complex E-moduli with the longitudinal vibrating band *(German)* 7−69293
oscillating body viscometers, working eqn. theory 7−83378
parallel disc, viscosity and shear rate meas. methods 7−83379
precision capillary viscometer using fibre optic sensor 7−130810
red mud slurry, rheological props. and flow characteristics 7−104347
rheometer, vibr. type, for rheological characts. of polymeric systems 7−75729
sheet inflation rheometer, strain rate control 7−110898
vibrating-rod viscometer theory 7−75711

viscoplasticity *see plasticity*

viscosimeters *see viscometers*

viscosity
see also electroviscous effect; internal friction; viscosity of gases; viscosity of liquids
2D classical electron liquid, viscoelastic effects 7−112418
accretion disks formation in semi-detached binary systems, influence of viscosity 7−120375
accretion flows, effect of weak shear viscosity on self-similar rotating flows 7−127712
aerosols, arbitrarily shaped particles, Stokes resistance, wall correction 7−136980
air wall jet in duct, buoyancy forces effect 7−111049
airfoil, dynamic stall at high Reynolds number, for unsteady viscous incompressible flow *(French)* 7−142248
astrophysical jets, collimation by turbulence viscosity 7−101932
boundary value problems, singularly perturbed, rate of convergence of viscosity solns. 7−80377
Brownian particles, escape over pot. barrier, Langevin eqn. solns. *(Chinese)* 7−95508
circular cylinder in oscillatory flow, vortex generation 7−83151
Coanda jets, flat supersonic nozzles 7−136915
collisional plasma, viscosity, distrib. function tensor moments in mag. field 7−83410
colloidal dispersion, complex viscosity meas., relax. behaviour anal. 7−100630
conf., Sendai, Japan, Feb. 1986 7−72734
cryogenic fluids, transport properties, review 7−124579
cylinders in crossflow, film boiling wakes 7−136864
disperse system turbulent liq. flow in pipelines, bubble size study 7−111065
dissipative relativistic fluids, linear plane waves, Eckart and Israel-Stewart theory 7−104359
elongated body of revolution surface, line of inflection, spliced asymptotic expansions 7−136791
flow around cylinder with and without disk, vortex struct., viscosity effect 7−110988
flow through porous media, point interaction approx. 7−136998
fluid, viscous, heat conductive, hyperbolic-parabolic systems of conservation laws 7−115799
fluid flow with small viscosity and capillarity, traveling wave soln. 7−83255
fluid sphere translating in quiescent medium, eqns. of motion soln. 7−83316
free shear 2D flow behind splitter plate, stability 7−123594
glass, nucleation, isothermal and adiabatic theories 7−83713
guaiacol-glycerin solution, double critical point study 7−84200
Hamilton-Jacobi equations with convex Hamiltonians, representation of solns. 7−72994
hexagonal lattice gas automata, viscosity, Green-Kubo formalism 7−108471
ice V, viscosity and creep rate rheological eqn. determ. 7−111749
incompressible fluid, vanishing viscosity anal. 7−72996
incompressible laminar viscous flow, two-dimensional, separation points and Navier-Stokes flow 7−75525
incompressible viscous fluid dynamics, uniqueness theorem 7−80427
ion-gyroradius plasmas, viscosity effects on equilibr. 7−142446
laminar boundary layers interaction near lubricated surface 7−91221
magnetic fluids, physical props. 7−77372
magnetohydrodynamic pipe flow of incompressible viscous electrically conducting fluid, Green's function methods 7−75680
Marangoni convection, internal heat generation and variable viscosity effects 7−117437
Martian atmosphere, eddy diffusivity from viscous model predictions for Hadley circulation 7−134164
metals glass transition temp., estimation 7−98449
MHD shock waves in viscous, thermally conducting fluid, phenomenological model 7−83360
miscible fluid displacement through porous columns, stability study *(German)* 7−104247
Navier-Stokes equations, compressible, stationary, L^p theory and incompressible limit, equilibrium solutions 7−75546
neutron stars, effects of viscous secular instability on rot. rate 7−140148
one-component plasma, glass transition, dynamic correlations, generalised viscoelastic formalism 7−105027
one-component plasma in external field mode coupling contrib. to transverse transport coeffs. 7−75771
ordered suspension of small drops, effective viscosity 7−132983
pipe flow, eddy viscosity model for near-wall region 7−75532
plane viscous incompressible flow cross porous cylinder *(French)* 7−130789
polar firn densification by grain-boundary sliding, model calcs. 7−114818
polar glacier ice, creep rate controlling processes and deform. mechanism study 7−114817
polydimethylsiloxanes, cyclic and linear, low temp. props., viscometric and calorimetric obs. 7−89225

viscosity continued
polyethylene blends, mixing, morphology, rheology, mech. props. 7−126197
polymeric solutions, threshold type shear thickening 7−69579
polystyrene transient swelling, iodohexane sorption, case-II diffusion regime 7−118164
pulsatile blood flow through arterioles, vascular deformability effect anal. 7−145126
reactive viscous flows, disappearance of criticality in thermal explosion 7−75700
red mud slurry, rheological props. and flow characteristics 7−104347
resistive press.-gradient-driven turbulence 7−111229
rotating turbulent channel flow, algebraic Reynolds stress model 7−136865
Saffman-Taylor problem, pattern formation 7−83822
seawater Batschinski relation, empirical consts. 7−72036
shear flow past circular cylinder, unsteady NS eqn. soln., integro-differential anal. 7−142268
shells, thin-walled cylindrical, dynamic failure 7−75359
silica suspension, polyacrylamide soln., flocculation, rheological behaviour study 7−114009
slender airfoil, parabolic forward edge, high Reynolds number, point of separation 7−136790
small sphere mobility in finite circular cylinder of viscous fluid 7−130794
solid particle-gas system, turbulence, local phenomenological props. 7−83306
square curved, laminar flow of non-Newtonian fluids, resist. coeff. 7−104346
steady plane MHD flows of viscous incompressible fluid, solns. and geometries 7−142389
steady supersonic vortex flow, aerosol particle motion, method of characteristics solutions 7−136923
stellar accretion disks, viscosity prescription for self-gravitating disk 7−88103
stellar interiors, shear viscosity of dense matter 7−120263
Stokes flow past single particle, second kind Fredholm integral eqn. formulation 7−134518
stratified viscous flow down open inclined channel with variable permeability bed 7−111060
strong shock calculations using artificial viscosity and heat flux methods, sources of error 7−142337
superposed fluids, common boundary, viscous attenuation of waves 7−142327
superposed fluids with viscosity discontinuity, Couette and shear flow instability 7−123582
suspensions, sheared, ordering and viscosity study using elliptical shear cell 7−142409
swirling turbulent jet flow, eddy viscosity model 7−136866
tapered fluid lines, transient response to press. or flow rate change 7−75669
thermoplastic elastomers for cable and wire insulation, viscosity fn. 7−104593
transonic cascade flows, approximate factorisation scheme 7−75608
transonic potential flow through 2D cascade 7−75609
turbulent flow, stability analysis using tensor-viscosity method 7−91087
turbulent shear duct flow, eddy viscosity models 7−91101
turbulent two-phase suspension flow, dil., particle drag 7−91199
turbulent wall jets, stability along concave surfaces 7−75634
TVD finite difference scheme using artificial viscosity 7−66992
two-phase stratified, flow model, linear stability anal. 7−91195
van der Waals fluid, vanishing viscosity-capillarity approach to Riemann problem 7−136907
viscous and elastic stress tensors in hydrodynamic calculations *(Russian)* 7−104241
viscous flow, cooling of stretching sheet 7−91110
viscous flow for 2D dynamics, numerical soln. using orthogonal coordinate systems 7−91064
viscous flow under enclosed rotating disc with uniform suction/injection, numerical soln. 7−134516
viscous fluid flow on curved surface, stability and surface waves *(French)* 7−75526
wall boundary layers, turbulised flow and transport processes 7−104258
water-decane-AOT, microemulsion viscosity charactn. 7−139047
water-in-oil microemulsion, macrofluid-like, percolation model self-consistency 7−100624
wedgeshaped cracks, induction of piping erosion 7−136799
Ge-Se-Te-Tl glasses, thermal and IR transmittance props. 7−104574
Hg, Rayleigh-Benard convection at low Prandtl number 7−130683
KCs, glassification temps. 7−143009
K_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
NaKCs, glassification temps. 7−143009
Na_2O-TiO_2-$CreO_2$ glasses, viscosity, elastic props. and cohesive energy 7−69953
Nd-Fe-B sintered magnets, mag. viscosity 7−131997
P_2O_5 glasses, water addition effects on struct. characts., US vel. obs. 7−69827
PbO-SiO_2-B_2O_3-GeO_2, glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845
PdSi-base amorphous alloys, thermal expansion and vol. effect on transform. *(Chinese)* 7−143054
ZnO-SiO_2-B_2O_3-P_2O_5 glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845
$Zr_{66.5}Ni_{33.5}$:H metallic glass, flow and crystallisation rel. to H doping, dilatometry 7−104590

viscosity measurement
see also viscometers
acrylic-melamine resin coatings, rheology during thermal curing, viscosity meas. 7−130616
alkali fluoride melts, viscosity meas. *(Japanese)* 7−91867
bisphenol A polycarbonate, in solvent mixture, conform. transitions 7−91420
channel overflow slippage meas. by local density change visualisation *(Japanese)* 7−83380
colloidal dispersion, complex viscosity meas., relax. behaviour anal. 7−100630
flax cellulose nitrate, mol. conform., diffusion-sedimentation anal. and viscometric obs. *(Russian)* 7−82409
furcellarane, solns., rheological props. *(Russian)* 7−110901
magnetic fluids, rheological characteristics, viscometric meas. 7−132980

viscosity measurement continued
magnetic liquids, weakly clustered, viscosity meas., centrifugation depend. study 7−124580
non-Newtonian suspension, flow potentials in viscometer channel 7−111040
photoelectric device and capillary method appl. 7−111130
polymer solns., extensional viscosity meas. 7−130808
polystyrene, solns., Mark-Houwink-Sakurada consts. calcs. 7−91826
water, viscosity meas. using vibr.-rod viscometer 7−75711

viscosity of gases
corresponding states model 7−69994
dilute gases, viscosity coeff., chem. reaction effect 7−137043
flow resistance of body in rarefied gas supersonic flow, surface pot. and mag. field effect 7−69213
gas mixtures, binary, two-fluid Chapman-Enskog theory 7−123830
Hilbert expansion of BGK eqn. and Navier Stokes steady state hydrodynamic eqn. 7−91055
inert gas mixtures, mass disparity shock wave struct. 7−123679
isentropic gas dynamics system, uniform boundedness and convergence of approx. solns. *(Russian)* 7−110903
jet, overexpanded viscous supersonic, interaction with unilateral barrier 7−83295
molecular gas mixtures, diffusion and viscosity coeffs. calc. 7−142426
physical properties calc. *(German)* 7−97679
single-bubble motion in fluidised bed, effective particle-phase viscosities, granular temp. profile anal. solns. 7−123744
velocity profiles over flat plate, non Newtonian viscosity, boundary-layer equns. 7−136943
CO_2 gaseous mixtures, dilute-gas props., SSR-MPA pot. model calcs. 7−83386
H_2, gaseous, o- and p-, viscosity, heat cond. and thermal diffusion coeffs. determ. 7−142429
^2H, high density, sp.ht., resistivity, thermal cond., sound vel. and viscosity calc. 7−103183

viscosity of liquid crystals *see liquid crystals; viscosity of liquids*

viscosity of liquids
see also lubrication
^3He, arbitrarily polarised, low T transport calcs. 7−124620
acoustic wave viscosity sensor 7−104111
alkali fluoride melts, viscosity meas. *(Japanese)* 7−91867
alkali halides solutions, in water-acetamide mixture, ion-solvent interactions 7−91422
amino acid aqueous solutions, viscosities, solute-solvent interactions 7−91866
anthracene, fluoresc. quenching in alcohols and water-alcohol mixtures 7−117016
barrierless reactions, solution, relaxation rates fractional viscosity dependence, non-steady-state dynamics 7−122593
blood, viscosity factors rel. to disease/fitness 7−119788
BOH8-MPOOBC, ferroelec. liq. cryst., thin cell dielec. response 7−97917
boundary-element methods and fundamental solns. 7−91058
n-butane, shear viscosity, equilib. and nonequilib. mol. dynamics calcs. 7−98540
butanol, fluidity correl. using modified free vol. eqn. 7−98535
butyl rubber solutions, viscosity, thermodynamic props. at low temps. *(Russian)* 7−84349
coaxial cylinder viscometer, combined oscillatory and steady-state shear mode eqns. 7−97664
compression mold filling, flow and heat transfer study 7−113463
critical binary mixtures, phase-separating fluids, viscosity enhancement 7−105092
cumene-ethanol(1-propanol) mixtures, speeds of sound, densities and viscosities 7−98347
cylinder, vertical, dusty viscous drainage film profiles 7−130781
decyl sodium sulphate-decanol-water-Na_2SO_4 lyotropic nematic system, viscoelastic props. 7−76255
dense fluids, viscoelastic props., 2D viscosities 7−118144
dense hard-sphere fluid, Enskog theory corrections for viscosity and thermal cond. 7−83630
di(2-ethylhexyl)sebacate, viscosity, effects of press. and temp. 7−69955
dimethyl sulphoxide/water binary liquid system, ultrasonic studies 7−124399
electron liqs. at metallic densities, shear viscosity, kinetic eqn. calcs. 7−102295
epoxy compounds and lactic ethers, ferroelectric liquid crystals, fast-switching, physical props. 7−99758
epoxy resin, fracture toughness, viscosity rel. to glycidyl compound additions *(Japanese)* 7−78192
erythrocyte suspensions, aggregating and nonaggregating, apparent viscosity in isolated perfused liver 7−114301
erythrocytes, synthetic, suspension viscosity obs. 7−114304
ethanol, fluidity correl. using modified free vol. eqn. 7−98535
F-actin and microtubule suspensions as indeterminate fluids 7−114341
feldspar melts with additives, wetting, viscosity, behaviour during heat treatment 7−98536
ferroelectric liquid crystals, viscosity meas. using polarisation switching current 7−98539
foams, rheology, polydispersity and liq. viscosity effects 7−130614
fractal viscous fingering, expts. and models 7−83303
glass formation thermodynamics, glass transition universality, undercooled liq. state 7−142623
glass forming liquids, ideal glass transition temp. and thermodynamic props. 7−143012
glass-forming liqs., stochastic processes, freezing, and viscosity calcs. 7−98538
glycerol, aq. soln. vertically-incident jet, ladle filling study 7−69241
hard sphere fluid viscosity divergence, fluid-solid phase transition indicator 7−75959
heavy metal fluoride glasses, viscosity temp. depend. and crystallisation 7−137608
immiscible fluids in constructed tube, slow displacement by counter-current in spontaneous imbibition *(French)* 7−91922
incompressible fluid, large-time behaviour of viscous surface waves 7−75604
incompressible Newtonian fluid, shearing flow, nonlinear constitutive relation 7−83075
interfacial viscosity and stability of liquid thread 7−131388
ionic ferrofluid, optical props. 7−77505
jets, disintegration and capillary instability, viscous and nonlinear terms 7−117638

viscosity of liquids continued
Kallodoc bead suspensions, non-Newtonian behaviour study 7—100632
kaolinite-carbamide intercalates, conc. suspensions, rheological props. 7—75510
laser-induced capillary waves, surface tension and viscosity 7—111000
Lennard-Jones fluid, small wave vectors, transverse current autocorrelation function 7—69569
Lennard-Jones system, liq. struct. effect on liq.-glass transition 7—118096
liquid, superheated, evaporation, hydrodynamic stability anal. 7—91926
liquid cryst. nematic-to-smectic A transition and elastic consts. determ., optical response method *(Turkish)* 7—111872
liquid crystalline polymers containing polychloroacrylate and polyacrylate, mol. dynamics, permittivity meas. 7—137225
liquid film, flow instability on heated inclined plane, viscous dissipation effects 7—97493
magnetic fluids, behaviour under strong mag. field in rotating seal 7—77368
magnetic liquids, weakly clustered, viscosity meas., centrifugation depend. study 7—124580
material functions generated by the complex viscosity 7—69225
measurement, using photoelectric device and capillary method 7—111130
measurement of viscosity and the complex E-moduli with the longitudinal vibrating band *(German)* 7—69293
membranes, liquid, supported, lifetime, interfacial, chemical and water transport effects 7—119564
metallic glass tapes, continuous casting, thermal history calcs. 7—75585
metallic glasses, diffusive viscous flow 7—131348
metals liq., dimensional analysis of physical quantities near melting point *(Japanese)* 7—97907
methanol, fluidity correl. using modified free vol. eqn. 7—98535
methanol-water mixture, viscosity B coeff., dielectric friction effect 7—98537
methyl cellulose-sodium dodecyl sulphate complex, aq. soln., viscometric obs. 7—69952
N-methylpyrrolidinone-tetrahydrofuran, mixtures, density, viscosity and thermodynamics 7—98496
microemulsion system, viscosity and electrical cond., alcohol and electrolyte nature influence 7—69949
molecular dynamics of flow in micropores 7—123745
molecular liquids, mol. mass distrib. effect on mass and momentum transport 7—105087
mono-N-(3-dimethylaminopropyl)amide copolymers, aq. solns., viscosity *(Russian)* 7—137607
myosin ATPase, activity in aq. sucrose solns., viscosity effect 7—126690
nematic liquid crystal, lyotropic, oriental fluctuations, anisotropy 7—142568
nematic mixture E130, permittivity, splay and twist elastic and viscotic consts. meas. 7—91439
nematic polymers, side-chain, shear viscosity expt. 7—69958
octyl cyanobiphenyl, pretransitional behaviour of twist and splay elastic and viscotic consts. 7—91438
oil, corresponding states model 7—69994
optical discs, organic dye-binder recording media, influence of melt viscosity on writing sensitivity 7—103914
organic liquid mixtures, dynamic viscosity eqn. 7—143073
paraffin wax, P-116, natural convection, latent heat delay 7—69172
perfluoropolyether fluids, viscosity, temp. and press. depend. 7—69957
pipe, curved, elastic, pulsatile flow of viscous fluid, wave propagation, blood flow appl. 7—133357
PMMA-poly(styrene-acrylonitrile) blend, chain entanglement and melt viscosity meas. 7—117104
PMMA-polyethylene oxide blends in soln., compatibility, mol. wt., laser light scatt., viscometry 7—69914
Poiseuille flow, plane three-layer, viscosity and density stratification 7—130796
poly(2,2-propane-bis(4-phenylthiocarbonate)), soln. props. and chain flexibility 7—124066
poly(dimethyl siloxanes), lin., sedimentation coeffs., intrinsic viscosities and mol. wt. meas. 7—117106
poly(methacrylic acid), phase separation behaviour in organic theta solvent, viscosity and light scatt. meas. 7—111345
polyacenaphthylene, soln., unperturbed dimensions and chain conform. obs. 7—97890
polyalkylstyrene, soln., intrinsic viscosity, temp. depend. *(Russian)* 7—98543
polyamide acid, rheological props. and mol. mass, thermal imidization effects *(Russian)* 7—91052
polycarbonate phenoxy blends, physical behaviour, interchange reactions in melt-processing conditions 7—77936
polydecamethylene terephthaloyl-bis-4-oxybenzoate melt, rheological props., deform. effects *(Russian)* 7—91053
polydimethylsiloxane, viscosity, effects of press. and temp. 7—69955
polyelectrolyte solutions, anomalous viscosity 7—84348
polyethylene, high- and low-density, blends, isothermal elongation at const. stretching rate 7—78085
polymer chain with self-avoiding interactions, intrinsic viscosity 7—84347
polymer chains, dynamical intrinsic viscosity, bead-spring model 7—90457
polymer soln. dynamics, effect of topological constraints 7—69582
polymer solution, intrinsic viscosity of a Gaussian chain, Green-Kubo formalism calc. 7—76469
polymer solutions, extensional viscosity, rheometer meas., Trouton ratios anal. 7—98542
polymers, mesomorphic, side chain, nematic solutions, viscoelastic props. 7—111724
polymethylphenylsiloxanes, viscosity, effects of press. and temp. 7—69955
polypeptide, β-form-random coil transition in solution 7—71667
trans-polypiperylene, solns., struct., optical and hydrodynamic obs. *(Russian)* 7—97905
polypropylene-polystyrene blends, coaxial phase struct., flow *(Russian)* 7—83280
polystyrene, in cosolvent mixtures, fluoresc. 7—70902
polystyrene, mol. interactions, viscosity eqn. parameters 7—118146
polystyrene, particle size limit on Kratky camera 7—74847
polystyrene, soln., intrinsic viscosity, temp. depend. *(Russian)* 7—98543
polystyrene, star-shaped, intrinsic viscosities, temp. and solvent effects 7—69578
polystyrene sulphonate, solns., dynamic props. and struct., cond. and viscosity meas. 7—84346
polyurethane reinforced reaction injection moulding, rheology of glass-filled polyol slurries and polymeric isocyanates 7—92956
viscosity of liquids continued
polyvinylidene fluoride-PMMA blends, melt viscosity, chain entanglement 7—69956
propanol, fluidity correl. using modified free vol. eqn. 7—98535
propylene carbonate-acetonitrile, mixtures, density, viscosity and thermodynamics 7—98496
PVC plastisols, viscosity depend. on temp. and time 7—131349
PVC soln. gel form., light scatt. and birefringence study 7—118983
radical pair recombination in viscous liqs., CIDEP amplitude, mag. field and viscosity effects study 7—68365
rubber-polyethylene blends, rheological behaviour and extrudate morphology 7—92953
seawater, viscosity, salinity depend., linear empirical relation 7—72034
smectic C* phase liquid cryst., ferroelectric, electrooptical props 7—106139
smectic C phases, planar oriented, Freedericksz transition 7—91430
soft-sphere and Lennard Jones fluid, equilib. and nonequilib. mol. dynamics calcs. 7—69954
solid body subsonic penetration into isotropic barriers, viscosity study 7—75734
styrene-butadiene-styrene block copolymer, viscoelastic behaviour, decomposition of mechanical spectra 7—75964
supercooled liq., soft-sphere model, mol. dynamics study 7—75954
surfactant, soln., expanding adsorbed layer viscosity and dynamic surface tension 7—112077
surfactant monolayers at air-water interface, shear viscosity 7—70031
suspension, nonaqueous media, rheological study 7—100631
suspension, solid particles, three-phase sparged reactors, physical props. effects 7—98620
suspensions, viscosity modelled by shear depend. maximum packing fraction 7—69229
suspensions of penetrable spheres at nondilute conc., bulk and shear moduli 7—119585
tetra-*n*-butylammonium picrate, in ionic solvent, elec. cond., viscosity and density 7—143065
tetracyclines, solns., US and thermodynamic obs. 7—98342
thermal Marangoni flows, effect of variable transport props. 7—69130
thin tilted hexatic liquid crystal films, dynamics, elasticity, viscosity, phase transition 7—137237
tolans, nematic, birefringence, viscosity and dielec. const. studies 7—75980
transition boundaries, high-viscosity liquids, pipe length effect 7—123704
viscous fluid of uniform width and height on surface, scraper problem 7—83384
viscous oil, dispersion, physical interpretation of drop sizes 7—142346
water, connectivity in hydrophilic confinements, percolation model simulations 7—124072
water, vertically-incident jet, ladle filling study 7—69241
water, viscosity meas. using vibr.-rod viscometer 7—75711
water, viscous flow, activation energy, thermal anomalies 7—137606
wave propagation in bubbly liquids, viscous effects 7—130730
xanthan gum in corn syrup, viscometry, viscous and elastic contributions 7—75509
Al-Cu, liq., Al-rich, viscosities 7—143075
CO_2-H_2O-NaCl, phase behaviour meas. 7—111821
CO_2-SO_2-H_2O, phase behaviour meas. 7—111821
Eu^{3+}, fluoresc. quenching in alcohols and water-alcohol mixtures 7—117016
Fe-Ni, molten, component interaction, viscosity study *(Russian)* 7—91868
Fe-Sc liquid alloys, high temp. viscosity meas., oscillating viscosity isotherm pattern obs. *(Russian)* 7—91869
Fe-Ti liquid alloys, high temp. viscosity meas., oscillating viscosity isotherm pattern obs. *(Russian)* 7—91869
Fe-V liquid alloys, high temp. viscosity meas., oscillating viscosity isotherm pattern obs. *(Russian)* 7—91869
GaAs, molten, dynamic viscosity under axial mag. field 7—124578
GaAs, molten, viscosity meas. by oscillating cup method, temp. depend. 7—91864
H_2O, viscosity equation derivation 7—118145
^3He, superfluid B phase, finite size effects, shear viscosity 7—111998
^3He-^4He dilute soln. effective viscosity, ^3He quasiparticle-surface momentum transfer 7—137655
In, atomic diffusion coeffs. and atomic grouping, temp. relationship *(Russian)* 7—124572
InSb, molten, dynamic viscosity under axial mag. field 7—124578
K-Cs, viscosity and density 7—143074
$KAl(SO_4)_2.12H_2O$ in water and aqueous H_2SO_4, viscometric studies 7—91865
$KTiOPO_4$ high-temp. soln. growth, viscosity and density of solns. 7—100032
$LiAlSi_mO_{2m+2}$ liquids, viscosity meas. *(French)* 7—131347
$NH_4Al(SO_4)_2.12H_2O$ in water and aqueous H_2SO_4, viscometric studies 7—91865
Na-K-Cs, viscosity and density 7—143074
Pb, atomic diffusion coeffs. and atomic grouping, temp. relationship *(Russian)* 7—124572
Pd-Cu-Si metallic glass, solid-undercooled liq. interfacial energy 7—76558
Pt-Er melts, viscosity study 7—105091
Rb, liquid, shear viscosity, nonequilib. mol. dynamics calc. 7—76470
Rh, liq., shear viscosity and transverse current correl. fn., computer simulation 7—98541
S, polymeric liquid, viscosity 7—126454
SO_2-H_2O, phase behaviour meas. 7—111821
Sn-As-Si, phase separation, viscosity and elec. cond. studies *(Russian)* 7—124516

viscosity of polymer melts *see polymer melts; viscosity of liquids*

viscosity of polymer solutions *see polymer solutions; viscosity of liquids*

viscous flow (solids) *see plastic flow*

visibility
see also atmospheric optics; brightness; light transmission
atmosphere, maritime and continental air mass differences in optical aerosol extinction 7—87899
atmosphere, mesoscale integral time scale estimation from visibility/ceiling data *(German)* 7—79536
atmosphere aerosols, size distrib., visibility and radiative characts. 7—94434
atmosphere of western USA, regional air quality and atmos. visibility 7—72153
atmospheric pollution effects, SCENES project for assessing visibility 7—115007

visibility continued
Grand Canyon, United States, visibility, Monte Carlo radiative transfer modelling 7−94427
Midwest, United States, pollutant changes and historical atm. transmission var. 7−139752
Oxford, changes in occurrence of very good or excellent visibility (1926 to 1985) 7−94438
road tunnel illumination, visibility and adaptation rel. to speed and direction *(German)* 7−78854
Sprakensehl, German Federal Republic, low-visibility episodes obs. 7−87898
sunbeams and crepuscular rays, optics theory 7−79596
E United States, atm. visibility and aerosol meas. assoc. with air quality 7−127465
United States, regional visibility and O_3 distrib. during persistent elevated pollution episodes, impact of mesoscale convection systems 7−87787
VDU comfort and safety, visual fatigue and relative visibility meas. *(Japanese)* 7−126812

visible and ultraviolet spectra of inorganic solids
0 7−124292
A^2B^6, luminescent ceramic, edge radiation spectra 7−106213
acridine dyes adsorbed layers, Silufol plates substrate, luminesc. spectra, temp. depend. 7−106265
actinide metals and cpds., press. induced structural behaviour 7−104989
alkali aluminosilicate glasses, struct., hardness, optical basicity 7−91456
amorphous solids, hole burning spectroscopy and relax. dynamics at low temp., phonon assisted tunnelling 7−136457
carbonate minerals (anhydrous), reflectance spectra in visible and near IR 7−79373
chalcogenide glasses, photoluminescence and photoinduced optical anisotropy, polarisation memory 7−144131
conductive spin-cast films from polyacrylonitrile 7−112119
diamond:N, defects, vibronic struct., UV absorpt. spectrum meas. 7−106226
diamond:N, UV absorption, vibronic bands 7−99895
double sulphates, langbeinite structure, electronic spectra 7−113227
glass ceramics:Cr, time resolved spectroscopy, emission lifetimes 7−99881
II-IV-V_2 cpds., band struct., optical props. 7−113219
II-IV-V_2 phosphides, semicond., optical refl. spectra, optical functions, band calcs. 7−113220
lanthanide and actinide, halides, absorption spectrophotometric studies under press. 7−77603
metal chelates of Schiff bases, stability consts., thermodynamic props. 7−93363
metal-oxide-metal tunnel diode, surface plasmon dispersion anal., visible, UV and near IR emission 7−131567
metals, optical spectra, electron-hole interactions 7−118373
minerals, visible and IR spectra of Fe alteration minerals 7−79374
orthoferrites, Sm-substituted, absorpt. spectra 7−113162
quartz: Al(Li)(Si), cryst., optical absorpt. and luminesc. centres, struct. 7−144130
quartz: Ge, bound small-polaron optical absorption 7−106225
quartz, cryst., optical absorpt. and luminesc. centres, struct. 7−144130
rare earth monochalcogenides, nonmetallic, electron spectrum 7−84674
rare earth semiconducting cpds., optical absorpt. model 7−138473
snow, light extinction in near-IR and visible wavelengths *(French)* 7−133785
SOS wafers, angle-resolved light scatt., twin density correl. with quality control parameter 7−144139
steel, Al (low conc.), metallographic anal. by optical emission spectrometry *(Japanese)* 7−71562
steel, austenitic stainless, Al implanted, oxidation resistance and optical reflectivity 7−86485
strained layer superlattice, optical props. along (111) growth axis 7−106206
tourmaline, Fe^{2+}-Fe^{3+} intervalence charge transfer interactions, intense absorpt. band obs. 7−76854
Ag chemically deposited layer on glass, optical props. 7−138525
Ag island films, annealed, surface plasmon spectra, substrate effects 7−98850
Ag island films with rhodamine B dye overlayer, optical transmission spectra 7−113297
Ag spheres, microlithographically produced, expt. test of Mie theory 7−70838
$AgGaS_2$, uppermost valence bands splitting by crystal field and spin-orbit interactions 7−76831
$AgGaSe_2$ thin films, optical props. 7−99962
Al coated optical fibres, mech. and optical props. 7−68878
α-Al_2O_3, colour centre optical props., luminescence in visible and IR spectra *(Russian)* 7−144127
Al_2O_3, corundum, UV spectra, effects of X-rays and electron irradiation *(Russian)* 7−85770
Al_2O_3 sintered plate white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
β'' Al_2O_3:Co^{2+}, optical and ESR studies 7−111442
AmI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
As_2S_3, spin-coated multilayer thin films, growth, optical characterisation 7−85883
As_2S_3-As_2Se_3:Tl, thin films, optical absorpt. edge, Tl doping effects 7−113226
$Au_{18}Ag_{20}$, colloidal, plasmon freq. obs., UV-vis spectra 7−113221
BN, ultradisperse, amorphous, adsorption of H_2, N_2 and NH_3 7−76000
$B_{12}SiO_{20}$:Ni(Cr), optical absorpt. studies 7−85781
BaF_2:Tm^{3+}, excited impurity ions, vacuum UV absorpt. spectra 7−113237
$BaLaGa_3O_7$:Nd single crystals, spectroscopic studies 7−85796
$BaSO_4$ white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$Ba[Ni(CN)_4].4H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$Ba[Pd(CN)_4].4H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$Ba[Pt(CN)_4].H_2O$, reflection spectra, absorption, Kramers-Kronig analysis, electric vector, crystal bands 7−141594
$BeAl_2O_4$:Cr, absorpt. and fluoresc., comparison with Ti in sapphire and glass 7−70853
$BeAl_2O_4$:Cr^{3+} alexandrite crystals, spectroscopic props. 7−92728

visible and ultraviolet spectra of inorganic solids continued
Bi_2, A→X fluoresc. system, Franck-Condon principle study 7−108101
BiI_3 crystals, Stark structure in absorption spectrum 7−144022
$BiLiF_4$:Pr^{3+}, impurity energy level scheme, polarised absorpt. and emission spectra 7−92118
Bi_2O_3-Au-Bi_2O_3 heat mirrors, transmission characts., effects of layer thickness var. and annealing 7−106288
BiOM (M=Cl, Br) crystals, visible and UV absorpt. and refl. spectra, prep. depend. 7−106211
$Bi_{12}SiO_{20}$ single crystals, optical transmission, relaxation 7−92701
C-Sn amorphous thin films, semicond., optical and elec. props. 7−70318
CO, trapped in rare gas cryst., triplet states, vibr. progressions obs. 7−106240
CaF_2:Ce, photo-reversible charge-transfer processes and thermoluminescence 7−85858
CaF_2:Eu, single cryst., excitation spectra *(Japanese)* 7−125766
CaF_2:Tm^{3+}, excited impurity ions, vacuum UV absorpt. spectra 7−113237
CaO surface, CO and H_2 adsorpt., UV-visible reflectance investig. 7−91978
CaO-P_2O_5 glass, water content effect on absorption, dispersion phenomena 7−125666
$CdGaInS_4$, layered crystals, fundamental absorpt. edge study 7−106214
CdI_2, optical absorption spectra in the absorption edge region 7−85767
$CdIn_2S_2Se_2$, layered crystals, fundamental absorpt. edge study 7−106214
$CdK(SO_4)_26H_2O$:Ni^{2+}, single crystals, electronic absorption spectra 7−113229
CdMnTe, reflectivity spectra modified by Mn density of states 7−113223
$Cd_{1-x}Mn_xTe$, excitons, energy struct., dynamics, refl. spectra 7−98812
$Cd_{1-x}Pb_xF_2$ crystals, reflectivity in vacuum UV range 7−85763
CdS, adsorption of rhodamine B dye, optical absorption, luminesc. 7−76616
CdS, Q-state particles, radiation chemistry, small semiconductor clusters quantum state 7−70830
$CdSe_{1-x}S_x$, anomalous exciton reflection spectra and surface fluctuations 7−76560
CdTe, MBE grown, mismatch strain meas., free exciton absorpt. and refl. 7−76683
CdTe pulsed laser evaporated films on glass and (100) GaAs substrates, refl. spectra 7−84560
$CeBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
CeO_2 doped coverglass UV cut-on wavelength for satellite solar cells 7−144873
CeO_2 single crysts., covalent insulator, optical reflectivity meas. 7−125673
CmI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$Co_{50}Al_{50}$ alloy films, ordered and disordered, optical props. and ferromagnetism *(Russian)* 7−77669
$Co_{50}Ga_{50}$, amorphous and finely crystallised films, optical props., struct. *(Russian)* 7−144143
Co_3O_4 pure and Ni doped mixed valence spinel films, charge transfer processes and optical absorpt. spectrum assignment 7−119026
Cr complex, tris-(μ-hydroxo)-bis-[(1,4,7-trimethyl-1,4,7-triazacyclononane) Cr(III)] triperchlorate, exchange interactions, optical spectra, EHT calcs. 7−96548
Cs, optical spectra, refl. coeff., electronic struct., high press. calcs. 7−99886
CsBr cryst., electron irrad., F-centre and self-localised excitation form. 7−98147
$CsCdBr_3$:Nd^{3+}, de-excitation processes of optically excited Nd^{3+} pairs 7−77635
$Cs_3Cr_2Br_9$ optical and Zeeman spectroscopy studies 7−106150
$CsDy(MoO_4)_2$, ferroelastic phase transition, hydrostatic press. effects 7−124483
$Cs_6H_2(W_3O_{10})_4$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
$Cs_2NaHo_{0.99}Er_{0.01}Cl_6$, energy transfer, luminesc. and UV absorpt. study 7−92724
Cs_2SnCl_6:UCl_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Cs_2ZrBr_6:UBr_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Cs_2ZrCl_6:UCl_6^{2-}, absorpt. spectra, crystal field calcs., luminesc. meas. 7−125763
Cu (II) complex, IR, Raman, UV and visible spectra, thermal anal. 7−99860
Cu complex, $Cu(3\text{-picoline})_2(N_3)_2$, cryst., EPR, IR and UV-Vis spectra 7−143905
Cu-Y amorphous alloys, sputtered, electronic struct. as deduced by optical and electron spectroscopy 7−92057
CuCl microcrystals, gas-evaporated, exciton absorption 7−143362
$CuGaIn_{1-x}Se_2$ single crystals, props. for photovoltaic appls. 7−131707
$CuGaS_2$ single crystals, absorption edge study 7−85769
$CuInS_{2y}Se_{2-2y}$ single crystals, props. for photovoltaic appls. 7−131707
$CuInTe_2$:Fe, optical absorption spectra 7−77611
Cu_2O on stainless steel, thin films galvanostatic deposition 7−118315
$Cu_4SO_4(OH)_6$ brochantite, Cu^{2+} site symm. determ., optical absorpt. spectra study 7−77553
Fe-based metallic glasses, oxidation and electronic struct., UV, X-ray and electron spectra 7−144610
GaAs, anodic oxides, phase composition, frustrated multiple internal reflection 7−78391
GaAs, direct and indirect optical absorption, press. depend 7−138419
GaAs, electroreflection spectra modelling *(German)* 7−106140
GaAs, ion implanted, defect distrib., optical transmission spectra studies 7−85773
GaAs n-i-p-i superlattices, electronic struct. calcs. 7−70403
GaAs, optical spectroscopy of unoccupied density of states 7−106208
GaAs quantum wells, quasi-2D excitons, phonon sideband, absorpt. spectral characts. 7−85775
n-GaAs, semiconductor-electrolyte interface, electroreflectance spectra 7−112481
GaAs:Co, existence of Co^+ double acceptor state, optical transmission meas. under hydrostatic press. 7−92099
GaAs-$Al_xGa_{1-x}As$ MQW, photoreflectance modulation mechanisms 7−70839
GaAs-AlGaAs MQW structs., MOVPE-grown, quantum confined Stark shifts 7−138421

visible and ultraviolet spectra of inorganic solids continued
$GaAs_{0.6}P_{0.4}$, anodic oxides, phase composition, frustrated multiple internal reflection 7−78391
$GaAs_{1-x}P_x$, irrad., 1.0 eV absorption centres 7−92706
$GaAs_{1-x}P_x$:N VPE layers, N conc. determ., SIMS, absorpt. spectra, cathodoluminesc. meas. 7−106227
GaP, anodic oxides, phase composition, frustrated multiple internal reflection 7−78391
GaP, optical spectroscopy of unoccupied density of states 7−106208
GaP thin films, vacuum evaporated, substrate temp. depend., elec. and optical props. 7−125999
GaSb, intraband absorpt. study 7−113218
$GaScGd_5O_{12}:Nd^{3+}$, Cr^{3+}, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
GaSe, excitons near fund. absorpt. edge, thermoreflectance spectra study 7−125713
GaSe, photomodulation spectroscopy 7−85768
GaSe:Co single crystals, hole traps, optical absorpt. and photocond. spectra, TSC meas. 7−99091
$Gd_3Ga_5O_{12}$, colour centres, optical and electrophysical props. *(Russian)* 7−85785
$Gd_3Ga_5O_{12}$ garnets, composition, visible-UV absorption spectra determ. 7−70833
GdI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$GdScGG:Cr^{3+}$ garnet crysts., UV absorption spectra studies 7−99883
$(GdSc)_3Ga_5O_{12}$:Cr,Nd, short-lived absorpt. rel. to solid-state laser efficiency 7−141869
$Gd_xY_{1-x}N$ dilute system, mag., elec. and optical behaviour 7−125503
a-Ge sputtered films, optical gap and void fraction, thickness depend. 7−125828
$HgCr_2Se_4$, ferromagnetic semiconductor, transport, magnetic and optical props. 7−99094
$H_4Si(W_3O_{10})_4$, polytungstic acid, preparation and physical props. 7−106202
HfS_2, indirect absorpt. edge, transmission spectra meas. 7−132298
HgI_2, layered semicond. colloids, size quantization 7−85766
Ho^{3+} in $HoCl_6^{3-}$, absorption spectra, crystal-field splittings, luminescence transitions, decay measurements 7−141593
InBr, orthorhombic, polarized reflection spectra, 2-30 eV 7−106207
InGaAs, electrolyte electrorefl. spectra and comp. anal *(Chinese)* 7−77509
InGaAs-InP multiple quantum wells, MOCVD grown, charact. 7−138010
$In_{2-x}Ga_xS_3$ film, prepared by spray pyrolysis, opt. energy gaps 7−85870
InI, optical props. in the fundamental absorption edge region 7−85765
InP doping superlattices, MOCVD growth, optical props. 7−144114
n-InSb heteroepitaxial films, long-wave absorption edge formation 7−99953
KBr, F centres, soft X ray irradiated, UV-visible meas. of optical absorpt. band 7−80248
KBr, laser radiation effect on colour centres 7−69700
$KBr:Se^{2-}$, F centers, photochemical prod. 7−124261
KCl, laser radiation effect on colour centres 7−69700
KCl phosphor, excitation and emission spectra 7−138470
KCl, pure X-irradiated crysts., thermolum. and optical absorpt. spectra studies 7−125813
KCl:S, X-irradiated single crysts., thermolum. and optical absorpt. spectra studies 7−125814
KCl:Tl, upper excited states, visible spectra 7−70850
$KCl_{1-x}Br_x:Eu^{2+}$ mixed crysts., EPR ionic thermocurrent, optical absorpt. and emission spectra meas. 7−124292
$KGdWO_3:Nd^{3+}$, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
$K_2HPCr_2O_{10}$ visible and reson. Raman obs. 7−70767
KI, thin crystals, excitonic structures 7−85157
$KI:Sn^{2+}$, doped S^2 ions, emission spectrum fine struct. 7−132296
$KNbO_3$ single crysts., RF heating Czochralski growth, colour centres, positron annihilation 7−113374
$KNiAsO_4$, mica analogue, ion-exchange reactions and phys. props. studies 7−144700
K_2O-Al_2O_3-B_2O_3:Fe_2O_3(CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7−104830
K_2O-B_2O_3:Fe_2O_3 (CuO) glasses, thermoradiation processes, visible absorpt. spectra, EPR, chem. resist. meas. 7−104830
K_2O-PbO-B_2O_3 glass, optical absorpt. spectra of VO_2^+ ions, bonding mode of Pb atoms *(Japanese)* 7−70842
$KR(WO_4)_2$ (R=Gd, Y, Er), optical properties 7−106116
K_2SO_4-$ZnSO_4$:Pr(Nd)(Er)(Tm) glass, spectral studies 7−70883
LaI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., plasma edge and optical phonon spectra 7−113117
$La_{1.85}Sr_{0.15}CuO_4$, high T_c supercond., optical props. 7−113191
$La_{2-x}Sr_xCuO_4$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$Li_2B_4O_7$, single cryst., excitons, UV absorpt. and luminesc. study 7−125816
$LiCl:Pb^{2+}$, absorpt. and luminesc. spectra *(Japanese)* 7−132338
LiF white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
LiF:Na, ion beam modification of embedded Na precipitates, optical absorption obs. 7−91670
LiH crysts., elastic displacement defect formation energy threshold study 7−142838
$LiNH_4SO_4:Pr^{3+}$, single cryst., IR and UV spectra 7−70845
$LiNbO_3$, pure and Fe doped, X-ray irrad. defects, optical absorpt. effects study 7−144089
Li_2SO_4-$ZnSO_4$:Pr(Tm), glasses, spectral studies 7−70849
$LiXF_4$:Ho, intensity borrowing effects in IR-visible spectra 7−85648
MgO surface, CO and H_2 adsorpt., UV-visible reflectance investig. 7−91978
$MgO:Fe^{3+}$, impurity precipitation, electron irradiation 7−69767
MgO:Na, ion beam mixing-induced phase modification 7−76236
$MgO(Al_2O_3)_n$:Fe, crystallographic environments, absorpt. and photoluminesc. spectra 7−113225
$Mg(ReO_4)_2$, magnesia-supported perrhenates, Raman and optical spectra 7−118995
Mg_2SiO_4, 217.5 nm absorption feature, interstellar appl. 7−107708
Mn films, optical props, 190-900 nm, annealing effect 7−106287
$Mn_xCd_{1-x}Te$ single crystals, props. for photovoltaic appls. 7−131707

visible and ultraviolet spectra of inorganic solids continued
$MnCl(Br)(I)_2$ photolum. and absorpt. spectra temp. depend. study 7−85823
Mo, polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
MoO_3-Cu-Ni black films, solar selective, charactn. 7−106451
MoS_3, amorphous, optical determ. of fundamental energy gap 7−143346
NH_4 $LiSO_4:Cu^{2+}$, electronic absorpt. spectrum 7−99890
$NH_4Cl:Cr^{3+}$, optical absorpt. spectrum 7−77612
$NH_4Cl:Cu^{2+}$, charge transfer bands, influence of phase transition 7−143423
$NH_4Cl:HgCl_2$, opt. peaks of Hg centres before and after X-ray irrad. 7−113234
$(NH_4)_2Mg(SO_4).6H_2O:Co^{2+}$, single cryst. optical absorpt. spectra 7−85780
NaCl, laser radiation effect on colour centres 7−69700
NaCl:O, O-perturbed F_2^+ colour centre, optical props. 7−106204
$NaCl:Sr_x$ optical and mechanical props. 7−104796
$NaF:Cu^+$, ^2E_g state vibronic fine struct., UV spectra, adiabatic model pot. calcs. anal. 7−109922
NaF:Mg, excited F_2^+− and M−centres, lifetime studies 7−106257
$Na_4H_2(H_2(W_3O_{10})_4)$, polytungstic acid salt, synthesis, structure and physical props. 7−106203
$Na_{1.67}Mg_{0.67}Al_{10.33}O_{17}:Cr^{3+}(Rh^{2+})$, beta″-alumina, optical spectroscopy 7−92725
Na_2O-P_2O_5-RuO_2 phosphate glass 7−85421
Na_2O-P_2O_5-TiO_2 phosphate glass, optical and spectromagnetical props., ESR and visible-UV absorpt. investig. 7−85421
Na_2O-PbO-B_2O_3 glass, optical absorpt. spectra of VO_2^+ ions, bonding mode of Pb atoms *(Japanese)* 7−70842
Na_2SO_4-$ZnSO_4$:Pr(Tm), glasses, spectral studies 7−70849
NbC_x, optical and elec. props. 7−85649
$Nd_3Ga_5O_{12}$, colour centres, optical and electrophysical props. *(Russian)* 7−85785
Ni (II) complex, IR, Raman, UV and visible spectra, thermal anal. 7−99860
Ni complex, $Ni(S_2C_2(CF_3)_2)_2$, prep., struct., elec. and mag. props. 7−99034
NiO and similar translucid solid, optical spectra, configuration interaction and oxidation state 7−113217
Os^{2+} complex, $[Os(phen)(das)_2]^{2+}$, glass-to-fluid transition, time-resolved emission, charge-transfer delocalisation or localisation investig. 7−84265
P_2O_5-GeO_2-SiO_2 optical fibre preform core, phosphor exam. 7−136466
P_2O_5-GeO_2-SiO_2 optical fibre preform, parameters distrib. along radius 7−136467
Pb_2CoWO_6, perovskite single cryst., flux growth, charactn. 7−85983
Pb_2FeTaO_6, perovskite single cryst., flux growth, charactn. 7−85983
$Pb_{1-x}Ge_xTe$, thermoreflectance study in cubic and rhombohedral phases 7−70754
PbI_2, 2H-polytype, bound excitons, photoluminesc. excitation rate effect, refl. spectra 7−77628
PbI_2 single cryst. thin films, hot wall technique growth, light absorption studies 7−100075
PbI_2-2H crystals reflectance and photoluminescence, polariton theory *(Russian)* 7−144129
PbO-B_2O_3 glass optical absorpt. spectra of VO_2^+ ions, bonding mode of Pb atoms *(Japanese)* 7−70842
PbO-SiO_2-B_2O_3-GdTe glasses, light absorption studies 7−125664
PbSe, quasilocal states, vacancies, impurity bands, optical absorpt. spectra 7−106218
Pd^{2+} complexes, Magnus-type salts, single-cryst optical absorpt. spectra 7−77605
Pr-O, phase composition rel. to optical absorption, degree of oxidation 7−99884
Pt complexes, bis(oxalato)platinate anions with Mn-Ni divalent cations, linear chain conductors, solid-state props. 7−105548
Pt^{2+} complexes, Magnus-type salts, single-cryst optical absorpt. spectra 7−77605
Pt^{II}-Pt^{IV} mixed valence complex, quasi-one-dimens. soliton-to-band optical absorption 7−106205
PuI_3, press. induced phase transform., absorpt. spectrophotometry study 7−106201
R_2O_3-SiO_2 (R=Pr, Dy, Er) silicate glasses, sol-gel prep. 7−132977
$R_{1/3}UO_2PO_4$ (R=La,Ce,Pr,Nd,Gd,Tb,Dy,Yb) lamellar solids, excited state props. 7−70881
Rb, optical spectra, refl. coeff., electronic struct., high press. calcs. 7−99886
$RbAl(SO_4)_2$:Cr.$12H_2O$ single crysts., optical absorpt. spectrum study 7−119032
$Rb_2CrCl_4:Mg^{2+}(V^{2+})(Fe^{2+})$, ionic ferromagnet, neutron diffr. and visible spectra 7−112755
$RbFeCl_3$, spin-orbit and crystal field matrices 7−143418
RbI, thin crystals, excitonic structures 7−85157
$RbNd(WO_4)_2$, optical properties 7−106116
Ru complex, absorpt. and luminesc. spectra, Zeeman effect, zero-phonon lines 7−99898
Ru^{2+} complex, $[Ru(bpy)_3]^{2+}$, glass-to-fluid transition, time-resolved emission, charge-transfer delocalisation or localisation investig. 7−84265
S white diffuser spectral reflectance at 2100 to 25000 Å, obs. *(Japanese)* 7−67368
Sc thin films, optical props. 7−99958
Si, energy structure, effect of heavy doping, electrorefl. study *(Chinese)* 7−77510
Si n-i-p-i superlattices, electronic struct. calcs. 7−70403
Si relaxation processes, picosec. reflectivity and transmission studies 7−131654
Si:As, high dose ion implanted, laser annealed, optical study 7−85772
Si:B, etching in HNO_3-HF, microstruct. effects 7−126343
Si:B films, low pressure CVD grown, microstructure 7−106434
Si:C, O, electron irrad. damage effects, defect centres 7−137413
a-Si:H, Al glow discharge films, optical and elec. props. 7−84584
a-Si:H, light-induced defects, electrorefl. study 7−144013
a-Si:H, optical absorption edge, photoacoustic spectroscopy study 7−125669
a-Si:H:F thin films, glow discharge deposition from fluorinated silanes, characterisation 7−132493
a-Si-C: H alloy systems, optical absorption and disorder 7−132297
a-Si-Ge:H alloy systems, optical absorption and disorder 7−132297
$Si_{1-x}Ag_x$:H amorphous thin films, RF sputtered, optical props. 7−92757
SiC:B, exciton absorption spectrum 7−70835

visible and ultraviolet spectra of inorganic solids continued
SiC:N, impurity optical absorpt. spectra, energy struct. of donor 1s states 7−113230
a-SiGe:H,F, light-induced defect generation, electronic and optical props. 7−143502
a-$Si_{1-x}H_x$ films, vibrational and optical props., optical absorpt. and Raman scatt. meas. 7−125830
SiO_2:Ce, (Al)(P) glasses, plasma CVD, fluoresc., absorpt spectra, codoping effects 7−71046
SiO_2-GeO_2, fibre light guides, radial distribution of impurity defects 7−97107
$SmAsO_4$, IR reflection and optical absorption 7−99826
$Sn_xGe_{1-x}Se_{2.5}$ and other chalcogenide alloy glasses and liquids, optical absorption tails and struct. disorder 7−85774
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
SnO_2:Sb(In), film, reactively evaporated, prep. and props. 7−112518
SnS single crystal, optical energy gap calc. from absorpt. coeff., temp. depend. 7−85563
$SrCl_2$:Ce single crysts., photoluminesc. and absorpt. spectra 7−70894
SrF_2:Tm^{3+}, excited impurity ions, vacuum UV absorpt. spectra 7−113237
$SrTiO_3$ cryst., band struct. change during cubic-tetragonal transition, two-photon absorpt. spectra 7−118360
n-$SrTiO_3$, Prussian Blue films, photochromism, spectroscopic and electrochem. studies 7−70836
$SrTiO_3$ ultrafine powders, hydrothermal preparation and catalysis of water photolysis 7−106459
$ThBe_{13}$, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
Ti in sapphire and glass, absorpt. and fluoresc., comparison with alexandrite 7−70853
TiN_xO_y thin films, optical absorption 7−99954
UBe_{13}, optical reflectivity meas., dielec. function, Kramers-Kronig anal. 7−106124
UO_2 (S), high press. optical reflection spectra studies 7−77604
V-P-Mo-O system, preparation and characterisation 7−104664
VO_2 thin films, optical contrast at semiconductor-metal transition 7−70927
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7−125979
V_2O_5-P_2O_5, semiconducting glass, optical absorption *(Korean)* 7−85771
W, polyanions, Anderson-type, IR, UV absorpt. and MCD spectra 7−77556
YAG:Cr^{3+}, high-energy levels, luminesc. and UV absorpt. spectra 7−125789
YAG:Nd stoichiometry charactn., absorption spectroscopic method 7−98481
YAG:Nd^{3+}, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
YAG:Ti, optical transitions 7−85795
$YAlO_3$:Nd^{3+}, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
YPO_4:Ce^{3+}, excited doublets, EPR obs., optical absorpt. spectrum, Zeeman effect meas. 7−70637
$Zn_xCd_{1-x}Se$ mixed single crysts., absorpt. coeff., Urbach rule obs. 7−125671
γ-$Zn_2Co(PO_4)_2$, vibr. and electronic spectra 7−70787
$ZnGeP_2$, electron irrad., elec. and optical props. 7−111672
ZnO, energy gap, exciton states transitions, effect of isotopic substitution, UV reflectivity spectra 7−76779
ZnO sputtered films, physical props. 7−125873
ZnO thin film, spray deposition, elec. and optical props. rel. to deposition variables 7−105321
ZnP_2, optical anisotropy of inverse H-like series lines 7−99882
ZnS, annealing of F^+ EPR centres, optical absorpt. spectral bands 7−106024
$ZnSe_{1-x}Te_x$ solid solns., photoluminescence and exciton reflection spectra 7−138487
ZnTe, press. depend. of lowest direct absorption edge 7−70840
ZrF_4, cryst., photolum. and absorpt. 7−99906
ZrF_4-based glasses, photolum. and absorpt. 7−99906
ZrF_4-LaF_3-BaF_2-AlF_3-FeF_3 glasses, spectral investigations 7−99825
ZrS_2, indirect absorpt. edge, transmission spectra meas. 7−132298

visible and ultraviolet spectra of organic molecules and substances
adenine, aq. soln., self-assoc., UV spectra 7−78474
adenosine, aq. soln., self-assoc., UV spectra 7−78474
adenosine residues, UV resonance Raman bands 7−106965
alkenes, matrix isolated, contact-charge-transfer bands and photochem. reactions, UV-vis. absorpt. spectra 7−82208
alkyl phenyl ketones, vibronic coupling contrib. to overtone intensities, UV spectra 7−96725
alkylbenzenes, substituted, radiationless decay, photophysical properties, excited states, exciplex formation 7−135990
alkylthio-1,2-dithiolium-TCNQ charge transfer complexes, elec., spectral and struct. props. 7−83942
allyl radicals, hot and relaxed, oscill. strengths, UV bands 7−109923
p-aminophenylthiyl free radical, extinction coeff. and radiative lifetime estimation 7−129729
5′-AMP, aq. soln., self-assoc., UV spectra 7−78474
amphiphile, bilayer-forming, adsorbed monolayers, polarised UV reson. Raman and absorpt. spectra 7−71698
anthracene complexes, hypochromism-hyperchromism, second derivative UV spectroscopy *(Spanish)* 7−70837
7-(2-anthryl)-1-heptanoic acid, Langmuir-Blodgett films, UV spectra, Davydov splitting 7−98678
8-(arylazo)-7-hydroxy-4-methylcoumarins, UV excitation and fluoresc. spectra 7−96787
azide-phenolic resin composite film, thermolysis, photolysis and appl. as antirefl. layer in resist 7−100534
azobenzene-containing ammonium amphiphile, aq. solns., UV resonance Raman and UV-VIS absorpt. spectra 7−132295
bacteria, live, 242 nm uV reson. Raman spectra 7−107000
bacterial components, 242 nm uV reson. Raman spectra 7−107000
bacteriorhodopsin, light- and dark-adapted, femtosecond absorpt. spectra 7−109914
β-(BEDT-TTF)$_2I_3$(IBr_2) IR and visible reflectance spectra temp. depend. obs. 7−77564
(BEDT-TTF)$_3$($Cl(Re)O_4$)$_2$ IR and visible reflectance spectra temp. depend. obs. 7−77564

visible and ultraviolet spectra of organic molecules and substances continued
benzalazine derivatives, H-bond, geometry, CNDO/2 and MNDO, UV, IR and ^1H NMR 7−81979
1,2-benzanthracene, IR and UV linear dichroism, fluoresc., transition moments 7−96655
benzene, rovibronic states, intramol. relax., Doppler-free two-photon excitation spectra 7−96724
benzene in propane, optical absorpt. and emission transitions 7−90178
benzene in supercritical N_2, spectroscopic studies 7−90179
benzene-Ar clusters, Penning ionisation, UV spectra line shapes 7−82331
benzisatins, UV spectra study in ethanol 7−141595
benzophenone, benzene solvent, triplet states, photodissoc. phosphoresc. spectra anal. 7−116977
benzophenone, triplet, quenching rate const. determ. 7−96780
benzotriazoles-I_2, charge-transfer complex, form. and stability, visible spectra anal. 7−74649
N-benzylideneaniline derivatives conformation, substituent effects, UV and ^1H NMR spectra 7−74654
benzylidenephthalides, indan-diones, photoinduced isomerisation, UV fluoresc. spectra 7−96729
bis-(2-hydroxy-3-t-butyl-5-methylphenyl)sulphide, UV spectra and kinetics of transients, radiolysis anal. 7−96727
1,6:7,12-bismethano[14]annulene, excited states, UV-visible absorpt., fluoresc. and MCD spectra 7−82270
bovine serum albumin, α-helix coil content, heat denaturation, Fourier transform IR spectra 7−141727
(BPTTF)$_m$$X_n$ (X=BF_4,I_3), organic conductors, crystal structures, electrical optical props. 7−99022
butadiene iron tricarbonyl absorbed 2D system, optical spectra 7−99885
calcium monoalkylamides, laser spectroscopy 7−96715
3-carboxyethyl-7-ethylthioxanthone, energy and electron transfer, time resolved UV spectra 7−82206
chloroanthraquinones, triplet states, visible absorpt. and phosphoresc. spectra anal. 7−103521
(2-chlorophenyl)carbene, matrix isolated, oxidation, chemiluminesc. 7−100578
2-p-chlorophenyl-4-hydroxy-6-oxo-1, 3-thiazine, crystal struct., X-ray, UV, IR and PMR spectra 7−111527
colloids, amphiphilic, aq. solns., dynamic struct. and cooperative transfer of excitation energy 7−126487
conductive polymers, post polymerisation processing 7−91485
crystal violet, liq. torsional dynamics on barrierless pots. 7−109924
crystal violet, nonradiative decay dynamics, absorpt. and fluoresc. spectra meas., temp. and wavelength depend. 7−90254
1,2-cyclobutanedione, gas phase, visible absorpt. spectrum 7−82197
cyclobutene and its syn- and anti-dimers, UV-photoelectron spectra, ab initio CI calcs. 7−109802
β-cyclodextrin-indole inclusion complex, absorpt. and fluoresc. spectra 7−103569
decafluorocyclohexene, Retro-Diels-Alder reaction, IR multiphoton excitation, UV spectra anal. 7−74658
decamethylcobaltocene-tetracyanoethylene charge-transfer salt, cryst. and mol. struct. 7−125725
deoxy-2-aminopurine, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
2,6-di-t-butyl-4-methylphenol, UV spectra and kinetics of transients, radiolysis anal. 7−96727
diacetylene Langmuir-Blodgett films, polymerisation, vapour treatments 7−100553
diacetylenes, polymerisation in the frozen state by UV or high energy beam irradiation 7−71491
dibromonaphthalene, triplet excitons, impurity and phonon scatt., optical line broadening 7−132294
2,3-dichloroquinoxaline, in calcinated Vycor glass emission and excitation spectra, surface-adsorbate interaction, phosphorescence lifetimes, Bronsted acid sites 7−141626
diethylbenzenes, supersonic mol. jet spectroscopy 7−141592
2,6-difluoropyridine, vap., electronic absorpt. spectra, vibronic anal. 7−103527
dihydrophenazine, doped in mol. cryst., excited states characterisation 7−96571
2,5-dimethyl-1,3,4-thiadiazole-I_2 charge-transfer complex, form. and stability, visible spectra anal. 7−74649
2,5-dimethyl-1,3,5-hexatriene, isomers, UV absorpt. and Raman spectra 7−74624
4-(N,N-dimethylamino)benzonitrile, visible spectra, solvent effects 7−74652
4-N,N-dimethylaminobenzonitrile, dual luminesc., quenching by H_2O 7−103558
dimethylaniline, carbonyl derivatives, twisted intramol. charge transfer excited states, picosecond absorpt. spectra 7−109915
2,5-dimethylbenzonitriles, near ultraviolet absorpt. spectra 7−122502
3,4-dimethylenefuran, config., spectrosc. and chem. props. 7−68330
3,4-dimethylenethiophene, config., spectrosc. and chem. props. 7−68330
1,1′-dimethylferrocenium-TCNQ, 1:2 cpd., optical props. 7−119027
2,4-dinitrobenzyl carbanion, photochem. prod., absorpt. spectra, solvent effect 7−99879
dinitrotoluenes, solns., picosec. transient absorpt. 7−68331
1,4-dioxane-oxalyl fluoride complex., cryst. struct., Raman and visible obs. 7−70763
2,6-diphenyl-4-(2,4,6-triphenyl-l-pyridinio)phenoxide, lipid membranes, interfacial solvent props. and surface pot. determ. 7−93664
l,n-diphenyl-l,n-diyls, substituted, UV spectral lifetimes, substituent and solvent effects 7−82204
2,5-diphenylfuran molecules, gaseous phase, photophysical parameters 7−82272
2,5-diphenyloxazole, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7−129779
diphenylpolyenes, picosecond photophysics, excited-state conformational changes 7−96717
diphthalocyanines of rare earths, substituted, magneto-optical study *(Chinese)* 7−129761
enzymic cofactors, and photochem.-induced transients, UV reson. Raman spectrosc. 7−133223
eosin, assoc. equilibr., spectroscopic anal. *(German)* 7−106792
ethanethiol radical, laser-induced fluoresc., visible spectra anal. 7−96712
ethylbenzene, supersonic mol. jet spectroscopy 7−141592
ethylnitrene, matrix-isolated, electron spin resonance spectrosc., optical spectrosc. 7−135920
ethyltoluenes, supersonic mol. jet spectroscopy 7−141592
ethynyl-copper compounds, I_2 doping 7−131167

visible and ultraviolet spectra of organic molecules and substances continued
ferrocene, T_1 state, quantum yield determ. 7—103518
guanine, free state and thin films, geometries, UV spectra 7—103525
guanine derivatives, resonance Raman studies 7—106963
guanosine residues, UV resonance Raman bands 7—106965
2-heteroanyloxazoles, excited state ^1H transfer with acetic acid in ethanol fluoresc. spectra 7—141587
hexafluorobenzene, vibr. excited, collisional deactivation, UV absorpt. spectra 7—109919
2-hydroxy(dithio)benzoic acid, H bonding, spectrosc. investig. *(German)* 7—96693
2-hydroxy(thio)benzamides; N,N-distributed, H bonding, spectrosc. investig. *(German)* 7—96693
8-hydroxy-1,3,6-pyrene trisulfonate, intermol. proton transfer, solvent depend. investig., absorpt. spectra 7—93305
2-hydroxy-benzolhydrazones of acetylpyridines, electrochemical and metallochromic props., UV, visible, IR and mass spectra 7—82126
indoles, ^1L_a state, fluoresc. and electronic spectra 7—82269
indoles, substituted, in polyethylene films, UV absorpt. spectra 7—96728
iodothyronine, ^{60}Co-gamma irradiation, IR and UV spectra 7—92699
iodotyrosines, ^{60}Co-gamma irradiation, IR and UV spectra 7—92699
isobacteriochlorin in n-octane crystal, photochemical hole-burning spectroscopy, Stark effect 7—82723
isopropylthio radicals, photodissociation, fluorescence, radiative lifetime, vibrational levels, stretching modes 7—135988
Langmuir-Blodgett films 7—125825
Langmuir-Blodgett films from glycerol subphase, elec. and optical props. 7—124766
lead phthalocyanine, EPR, optical absorpt. and refl. spectra 7—125752
lutetium bis-phthalocyanine thin film, laser-induced intramol. charge transfer 7—136051
Mannich base, trisubstituted, isotopic ratio and intramol. H bond strength, solvent effect 7—129734
melamine-formaldehyde adducts, charactn. by NMR, UV spectra and chromatography 7—93402
merocyanine dyes, orientation in nematic liq. crystal matrix, absorpt. spectra study 7—78757
methallyl radicals, hot and relaxed, oscill. strengths, UV bands 7—109923
methionyl homopeptides, intramol. three-electron bond formation 7—68207
methyl calcium and strontium, electronic transitions, bond dissoc. energy, visible fluoresc. spectra anal. 7—103520
methyl nitrite photodissoc. in second UV absorpt. band, photofragment TOF spectra 7—116984
methyl radicals, hot and relaxed, oscill. strengths, UV bands 7—109923
methyl trifluorosilane, VUV and fluoresc. excitation spectra 7—109912
2-methyl-l-(4-methylthiophenyl)-2-morpholinopropan-l-one, energy and electron transfer, time resolved UV spectra 7—82206
1-methylbenzimidazoles, 2 substituted, UV spectra 7—141596
methyldioxy radicals, disproportionation reaction, rate const. temp. depend., UV spectra anal. 7—135957
methylindoles, isolated, lowest singlet states, absorpt. and fluoresc. spectra 7—103524
$(methyliodide)_n$, cluster formation photodissociation, ultraviolet spectra 7—135922
2-methylmercapto-3-methylpyrazine, IR absorpt. and electronic spectra 7—74581
4-methylpyridine-pentachlorophenol complex, struct., UV and IR spectra 7—98106
methylstannane, VUV and UPS ab initio CI calcs. 7—129787
naphthalene, UV absorpt. spectrum, press. effects 7—99880
naphthalene-benzophenone system, nonradiative triplet-doublet energy transfer meas. 7—109913
naphthalenes, substituted, electronic spectra, PPP calcs. 7—89968
neodymium (III) tris(diglycolate) complex, single cryst., circular dichroism and absorpt. spectra 7—85590
Nile blue, ethanol soln., nonlin. receptivity, nonMarkovian model 7—90180
2-nitroanisole, solute probe for Xe and SF_6 supercrit. solvent props. investig. 7—103411
S-nitrobenzimidazoles, 2 substituted, UV spectra 7—141596
nitromethane, laser-induced photolysis, photofragments fluoresc. spectra anal. 7—129727
nonlinear absorption and emission spectroscopy, appls. to excited states 7—108667
nucleic acid bases, protonation, ^1H and ^{13}C NMR and UV investig. 7—74662
n-octadecyl-3-(3,5-di-t-butyl-4-hydroxyphenyl)-propionate, UV spectra and kinetics of transients, radiolysis anal. 7—96727
octaethylporphine, in Ne matrix, nondestructive photoorientation, IR and visible obs. 7—68297
organosilicon elastomers, vulcanizates and copolymers, phenyl-containing substituent effects *(Russian)* 7—111434
oxadiazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7—82203
oxazine dyes, US mol. jet, luminesc. and visible-UV spectra 7—68402
oxazine-18, ethanol soln., nonlin. receptivity, nonMarkovian model 7—90180
oxiranes, circular dichroism vac. UV spectra 7—82238
papain enzyme-substrate intermediate, UV Raman spectra obs. 7—106964
$(PEDTTTF)_mX_n$ ($X=BF_4,I_3$), organic conductors, crystal structures, electrical optical props. 7—99022
pentafluorobenzene, vibrational energy transfer, Hg tracer UV absorpt. spectra anal. 7—135956
phenalenone, and derivatives, electronic spectra and mol. struct. 7—103523
phenazine, triplet-triplet absorpt. and polarisation spectra 7—96716
α-phenylalkylamine hydrochlorides, far UV circular dichroism obs. 7—109967
α-phenylalkylamines, far UV circular dichroism obs. 7—109967
phenylchlorocarbene, matrix isolated, oxidation, chemiluminesc. 7—100578
phenylethylamine drugs, UV absorpt. spectra, INDO calcs. 7—96541
3-phenylpyrazolo(4,3-c)pyridine and derivatives, struct., ^1H and ^{13}C NMR anal., CNDO/2 and PPP calcs. 7—109944
phthalocyanine thin films, elec. and optical props. 7—99234
phthalocyanines, polymeric, ion implementation, effect on optical props., DC cond. 7—83789
phytochrome, absorpt. spectra and phototransformation quantum yield, temp. depend. study 7—78756
PMMA films, doped, optical waveguiding, refractive index pattern 7—99787

visible and ultraviolet spectra of organic molecules and substances continued
poly(3-methylthiophene), electrochemically doped, transient polaron occurrence 7—92087
poly(4,4′-triphenylamine), cyclic voltammetric, spectroscopic and ESR meas. 7—70317
poly(ethylenimine) containing nucleic acid pendants, NMR and UV spectra 7—122758
poly 3-alkylthienylene. solns., thermochromism and solvatochromism, chain conform. 7—85611
poly-3-methylthiophene, optical spectra and electronic struct. 7—77562
poly-εN-methacryloyl-L-lysine, spectrosc. obs. 7—90183
polyacetylene, near IR absorption and pulsed photocond. 7—99870
polyacrylonitrile, film and powder, thermooxidative degradation laser irrad. effects *(Russian)* 7—113914
polyalkylthiophene films, conducting, electrochem. prep. 7—78513
polyaniline, emeraldine base form, insulator to metal transition on protonation 7—70193
polyaniline, molecular conformation and optical spectra, CNDO/S3 calcs. 7—99887
polyaniline, spectroelectrochemical expts. 7—71500
polyaniline films, spectroelectrochemistry, display and battery appl. 7—93338
polyazulene film, electrochemical, EPR and optical props. 7—70629
polycyclic aromatics, in polymer films, transition moments, absorpt. anisotropy 7—103531
polydiacetylene, chemically modified soluble, absorption spectra 7—82407
polydiacetylene, conjugated polymer, photochromism and photoinduced bond-struct. change 7—138472
polydiacetylene films, synthesised by ion beam induced polymerisation of diacetylene, electrical and optical props. 7—93318
polydiacetylene oligomer, electronic struct., mol. fluoresc. and UV spectra anal. 7—90185
polydiacetylene oligomers, short-chain, radical electron configurations, optical excitations 7—138471
polydiacetylene single crystals, transient negative and positive reflectance changes 7—85776
polydiacetylene-pTS relaxation dynamics, transient gratings, singlet and triplet excitons 7—135958
polydiacetylenes, electronic phase-transition, spectroscopic meas. 7—70730
polyenes, in polymer films, transition moments, absorpt. anisotropy 7—103531
polyindene film, electrochemical, EPR and optical props. 7—70629
polymethine dye adsorbed on Ag colloids, inelastic three-photon light scatt. *(Chinese)* 7—129821
polyparaphenylene films, electropolymerised, optical props. 7—70841
polyphenylenevinylene, IR and visible absorpt. spectra, doping effects 7—70796
polyphenylenevinylene, photoluminescence, photoinduced absorpt. studies 7—70908
polypyrrole, bipolaron state due to doubly charged anion dopant 7—76792
polythienylpyrrole, electrolytic polymerisation and struct. props. 7—78493
polythiophene:BF_4^- film, conducting polymer, elec. and optical props. of polaronic states 7—77403
polythiophene, bipolaron state due to doubly charged anion dopant 7—76792
polythiophenes, electrochemical polymerisation, optical props. 7—78492
polyvinylidene chloride films with trans-polyacetylene conjugated segments, optical props. 7—92761
porphyrins, free-base carbonyl, conform. effects, MCD, visible obs. 7—68384
porphyrins in ethanol glass, hole burning in absorpt. spectrum 7—90673
PPDPC-DPPC Langmuir-Blodgett film, excimer form., UV fluoresc. spectra anal. 7—100824
prop-2-ylperoxyl radicals, self-reaction rate consts. meas., UV absorpt. spectra 7—113862
pterocarpin, near UV spectrum, interpretation 7—141597
PVC, chlorinated, thin film, photoimaging, spectroscopic study *(Chinese)* 7—90736
pyrene+cyclodextrins assoc. consts. meas., vibronic states, UV fluoresc. spectra anal. 7—96721
pyridinium compounds, quaternary, cation radicals, spectrosc. investig. *(German)* 7—96743
pyronines, electronic absorption spectra, PNDO calc. 7—74657
pyrylium salts, spectral luminescent props. 7—119051
RBY, excited-state absorption 7—122562
all-trans and 9-cis-retinal, triplet state, configuration relax., picosecond time-resolved absorpt. spectra 7—74650
rhodamine 6G, aq. solns., visible excitation and luminesc. spectra 7—125786
rhodamine B, adsorbed on silica, depth profile, photoacoustic spectrosc. obs. 7—124681
rodamine 110, electronic absorption spectra, PNDO calc. 7—74657
sodium cryptand(2.2.2) sodide, optical reflectivity and absorpt. meas. 7—113222
sodium uranyl acetate, absorption spectra, linear dichroism, electric-dipole, electric-quadrupole 7—135959
strontium monoalkylamides, laser spectroscopy 7—96715
sulphonyl radicals, optical absorpt. spectra, meas. and calcs. 7—135953
TCNQ salts, with 1-methyl-3-alkylimidazolium derivatives, elec. cond., spectral props. 7—105571
TCNQ-N-docosylpyridinium charge transfer salts, Langmuir-Blodgett films, struct. props. 7—70115
p-terphenyl, excited singlet state, equilibr. config., fluoresc. and UV spectra *(Chinese)* 7—129779
tetrafluoromethane cation, $\tilde{D}^2A_1 \rightarrow \tilde{C}^2T_2$ emission band system 7—68336
tetrahydroporphine, n-octane cryst. matrix, S_2 state, vibr. struct., visible absorpt. and fluoresc. spectra 7—106212
tetramethylcyclobutane-1,3-dithione crystal, defect trap phosphoresc. spectra and lifetimes 7—144095
tetramethylsilane, Si L edges resonances, gas phase UV photoabsorpt. spectra 7—116982
s-tetrazine-H_2O complex, struct. and electronic spectrum 7—96638
s-tetrazine-HCl complexes, fluoresc. and Vis-UV spectra, struct. determ. 7—96777
thiadiazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7—82203
thioacetaldehyde, isotopic species, torsional vibrs., internal rot. barriers, visible spectra anal. 7—109917
thiocyclopentanone, visible absorpt. spectra, vibr. anal. 7—82199
thioindigo, electronic spectra and isomerisation pot. investig. 7—82201
thioketene, excited-state struct., UV-visible spectrum 7—82209

visible and ultraviolet spectra of organic molecules and substances continued
thiophene oligomer: I_2, electrical and spectroscopic props. 7−76906
thiopyrylium salts, spectral luminescent props. 7−119051
$(TMTSF)_2ClO_4$, polarised single cryst. specular reflectance spectra 7−113224
TMTSF radical cation-inorganic metal cluster anion hybrids, absorption spectra studies 7−144077
TMTTF radical cation-inorganic metal cluster anion hybrids, absorption spectra studies 7−144077
trialkylsilylakanethiols, electronic struct., UV absorpt. spectra 7−68340
triazole, and benzo-derivatives, electronic absorpt. spectra, MO calcs. 7−82203
trichlorobenzenes and higher chlorinated benzenes, in gas phase and in n-hexane soln., UV absorpt. spectra 7−116981
trifluoronitrosomethane, jet-cooled, fluoresc. excitation spectrum, visible transition 7−96768
3,5,7-trimethoxyflavone, absorpt. and fluoresc. spectra, acidity depend. 7−82243
triptycene, electronic states, two-photon UV excitation spectra, polarisation depend. 7−68335
triptycene, trimeric system, vibronic coupling model, UV spectrum 7−135954
tryptophan residue, mol. structs. and dynamics, time resolved VUV, IR and fluoresc. spectra 7−136002
N-vinylcarbazole, polymerization, thin film preparation and struct. characts. 7−100548
xanthene dyes, US mol. jet, luminesc. and visible-UV spectra 7−68402
xanthone, polarised UV and phosphoresc. spectra 7−74700
xanthylium salt, broadband tuned CW dye laser emission, fluoresc. and absorpt. spectra 7−90599
Xylene isomers, multiphoton reson. ionisation spectra anal. 7−90181
yellow dyes for guest-host applications, optical order parameters 7−124087
Co^{2+} reconstituted horse liver alcohol dehydrogenase, single cryst., spectra 7−144968
Co(III) amine complexes, laser excitation, aquation and H-D exchange 7−139027
Cu(II) peroxide model complex of oxyhemocyanin, vibr., electronic and reson. Raman spectra 7−103528
Cu(II)-DNA complexes, change in UV spectra with soln. ionic strength 7−139200
Er acetate, nitrate and sulphate solutions, interaction and intensity parameters 7−70882
(hydroxyphenyl)benzotriazoles, internally H bonded, spectrosc. and kinetic investig. 7−82202
Ni complex, Ni (II) poly-εN-methacryloyl-L-lysine, spectrosc. obs. 7−90183
SO_3, absorpt. and fluoresc. spectra, vac. UV dissoc. excitation 7−109991
Zn complex, 2,3-naphthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758
Zn complex, phthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758

visible astronomical observations
443 nm diffuse interstellar band intensity, relation to interstellar polarisation and UV extinction 7−128014
623+71, cataclysmic binary surrounded by bow-shock-like emission nebula 7−140071
1354-64, Ginga X-ray nova, optical identification and obs. (1987 March) 7−80131
1928+738, quasar, optical and radio astrometry 7−72649
1981 FD, recovery positions, orbital elements and ephemeris 7−107739
1986 DA and 1986 EB, M class asteroids in near Earth population 7−72348
1986 September 19 meteor over Yellowknife Canada, assoc. sonic shock-wave-generated seismic signals 7−127782
1987 KF, Apollo asteroid, precise positions (1987 June 8) 7−107738
1987 KF, discovery positions, orbital elements, and ephemeris, of Apollo object 7−101722
1987 MB (=1959 LM), new Apollo asteroid, precise positions (1987 June 24 to July 6) 7−120297
1987 OA, discovery, positions, orbital elements, ephemeris (1987 July-September) 7−134166
1987 OA, fast-moving asteroidal object, 29 July 1987 position 7−134168
1987 PA, new Amor-type asteroid, precise positions (1987 August 1 to 5) 7−134167
1987 QA, Apollo asteroid, precise positions (1987 August 23 to September 19) 7−145862
1987 QA, Apollo asteroid, semiaccurate positions, orbital elements and ephemeris (1987 September 2 to October 2) 7−139954
1987 QB, new Amor-type asteroid, discovery and precise positions (1987 August 25 to 29) 7−145861
2016+112 lens system, spectroscopy of assoc. extranuclear line-emitting regions 7−134316
2138−543, new distant dwarf nova, photometric and spectroscopic obs. 7−134238
α Boo (Arcturus) C, N and O abundances compared with Sun and α CMi (Procyon) 7−120376
α CMi (Procyon), C, N and O abundances compared with Sun and α Boo (Arcturus) 7−120376
A0620−00, black hole binary star, photometric and radial vel. obs. 7−88511
A2175, A2256, A2384, nearby Abell clusters, galaxies luminosity and spatial distribs. 7−80111
A999, A1016, linear galaxy clusters, redshifts meas. and virial masses estimation 7−146098
A 0535+26(HDE 245770), optical study of Be/X-ray transient 7−94944
3A 0729+103, intermediate polar, X-ray emission regions discovery, EXOSAT and visible obs. 7−72465
Abell 754, X-ray and optical study of dense rich cluster of galaxies 7−88650
Abell 777 and 910, distant galaxy clusters, BV photometry from 6-m telescope plates 7−134313
Abell galaxy clusters, catalogue of morphological props. 7−115257
AC 211/X2127+119, X-ray binary in M15, CCD photometry rel. to 8.5-hr orbital period 7−115502
active cool stars, Li equivalent width var. 7−115370
active galaxies, UBVRI photometry 7−88606
ADS 7251 A, B, radial rel. obs. rel. to reality of spectroscopic orbits 7−140166
AE 1, pure He I star, V obs. 7−72421

visible astronomical observations continued
Ae/Be stars, obs. of rapid narrow-band photometric variability *(Russian)* 7−145999
AGK3-0°965, eclipsing central star of PN NGC 2346, photometry and eclipse models 7−115387
VY Agr, outburst discovery report and magnitudes (1987 June-July) 7−145968
702 Alauda, photoelectric five-colour photometry 7−79862
Am stars, Ca abundances for sample of 57 stars 7−94905
Am stars, effects of flux excess at 478.5 nm on Stromgren colours 7−107862
AM-4 globular cluster, optical observation of metal poor dim object 7−101869
amorphous galaxies, colours and evolution 7−134303
φ And, optical aperture synthesis obs. of binary star 7−134147
HQ and HV And, polar candidates, photometric meas. (1970 to 1986) 7−115469
EG And, UBV photometry and revised period for symbiotic eclipsing binary 7−107836
DX And, unusual cataclysmic variable star, new outburst obs. and visual magnitude estimates (1987 May 5 and 7) 7−101804
OS And (Nova And 1986), UBV photometry and visual magnitude estimates 7−145982
AO 0235+164, BL Lac object, emission features var. 7−140268
Ap and He-weak stars in clusters and associations, photometric variability 7−120421
Ap-type stars in Sco-Cen association, mag. obs. rel. to mag. fields evolution 7−115459
Ap/Bp stars, search for orbital var. *(Russian)* 7−88465
1862 Apollo, photoelectric lightcurves and rotation 7−145864
η Aql, Cepheid variable, pulsation period and radial vel. behaviour of H lines 7−79998
V1182 Aql, early-type eclipsing binary, photometric and spectroscopic study 7−88536
FY Aql, Mira variable in refl. nebula, search for assoc. with 1979 March 31 γ-ray burster 7−140087
U Aql, orbit of classical Cepheid from radial vel. obs. 7−140112
V1343 Aql (SS 433), constraints on binary system from optical continuum spectrum obs. 7−88430
V1343 Aql (SS 433), Hα emission profiles of jets *(Russian)* 7−140109
V1343 Aql (SS 433), photometric study of two periodicities over seven years 7−120444
V1343 Aql (SS 433), simultaneous obs. of X-ray and optical eclipse 7−140105
V1343 Aql (SS 433) rapid photometric and spectral var. 7−127883
RY Aqr, Algol-type eclipsing binary, uvby photometry 7−72511
32 Aqr, Am star, abundances, spectral and model atm. anal. 7−140078
BW Aqr, detached double-lined eclipsing binary, uvby photometry 7−72513
BW Aqr, detached eclipsing binary, photoelectric radial vels. and orbital elements *(French)* 7−120493
VY Aqr, dwarf nova, visual magnitude estimates (1987 July 1 to 3) 7−120446
EE Aqr, eclipsing binary star, period vars., 1940-85, from O−C diagrams 7−72523
BS Aqr, short-period pulsating variable, light curve anal. to period of fundamental pulsation 7−94880
VY Aqr, spectral and magnitude obs. of dwarf nova 7−120448
R Aqr, symbiotic star, obs. of linear polarization vars. 7−72473
VY Aqr, UBV photometry during 1987 July outburst 7−127899
VY Aqr, visual magnitude estimates (1987 July 2-5) 7−120447
FO Aqr (=H 2215−086), spin down of intermediate polar 7−115455
FO Aqr (H2215−086), DQ Her star, photometric obs. rel. to white dwarf spin-down 7−134250
VY Ar, dwarf nova, visual magnitude estimates during new outburst (1987 June 28 to July 1) 7−115465
Arakelian 120, spectrophotometry of Seyfert 1 galaxy 7−134300
Arcturus, chromospheric activity obs. in Ca II H and K lines (1984 February 14) *(Chinese)* 7−107816
TT Ari, b photoelectric photometry (1986 October) 7−115468
TT Ari, nova-like variable, simultaneous X-ray and optical study 7−115426
TT Ari, possible intermediate polar, photometric characts. 7−115416
UX Ari, RS CVn star, 1985/6 photometry and starspots 7−115524
artificial satellites, specular refls. obs. rel. to source of optical transient events 7−127681
AS 201, optical spectrum rel. to evolved central star of planetary nebula 7−107842
AS 353A, T Tau star assoc. with HH 32, spectrophotometry 7−101784
AS 431, Wolf-Rayet star, speckle interferometric obs. rel. to search for multiplicity 7−120406
asteroid satellites absence from CCD imaging survey 7−145865
asteroids, astrometric positions and dependences from ESO - LA Silla obs. (1985 February 10 to 25) 7−115282
asteroids, lightcurves of 26 large rapidly rotating bodies 7−145863
asteroids, Minor Planet Circulars 11681-11776, precise positions 7−134172
asteroids, photoelectric photometry and taxonomic classifications of radar target objects 7−134171
asteroids, photoelectric photometry of 17 objects 7−139953
asteroids, photoelectric V photometry of 17 objects, pole determs. 7−115280
asteroids, precise positions obs. at Chorzow Observatory (1977 to 1986) 7−94683
asteroids, precise positions obs. in April and May 1984 with GPO Telescope at ESO, Chile 7−94682
asteroids, rotational properties and light curves for seven objects (94, 107, 197, 201, 360, 451, 511, 702) 7−72346
asteroids, UBVRI photometry, spectral depend. of negative branch depth *(Russian)* 7−139955
atmosphere refraction, meas. at different lunar phases rel. to atmosphere nonsphericity *(Russian)* 7−127475
MN Aur, eclipsing binary star period 7−101856
IU Aur, eclipsing triple system, up-to-date parameters determ. from UBV photometry 7−140155
AB Aur, Herbig Ae star, short-term vars. obs. ion Ca II K line 7−88400
CO Aur, peculiar double-mode Cepheid, pulsation modes, radial vel. and photometry obs. 7−120416
ε Aur, secondary disk rot. characts. and components masses, spectral obs. 7−107908
AR Aur, spectral peculiarities of eclipsing Am-star 7−88461

visible astronomical observations continued
RW Aur, T Tau star, Balmer-line and photometric vars. obs. 7−127863
SS Aur, U Gem star, visual behaviour (1907 to 1984) 7−72451
ϵ Aur, UBV photometry outside eclipse (March-April 1986) 7−145955
KR Aur, VY Scl star, visual magnitude estimates (1986-7) 7−88449
V356 Aur (=HD 37819), double-mode δ Sct star, pulsation charact. 7−127874
AWM 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
B2 0800+24, narrow-angle tail radio galaxy, struct., radio and visible obs. 7−140278
B-type rapidly-rotating stars, axial inclinations and differential rot. from absorpt. line profiles 7−127868
B-type stars in LMC, uvby β photometry rel. to LMC distance modulus 7−88638
BD+28°413, K-type dwarf star, spectroscopic binary orbit from photoelectric radial vels. 7−134275
BD+3°4138 B, flare activity discovery 7−140072
BD+58°0109, emission spectra of unusual late-type stars 7−145990
BD+62°0161, emission spectra of unusual late-type stars 7−145990
BD+63°869, trigonometric parallax, Chinese determ. *(Chinese)* 7−120366
BD+63°0003, emission spectra of unusual late-type stars 7−145990
Be stars, effective temps. and energy distrib., spectrophotometric obs. 7−120412
Be stars, emission line spectroscopy 7−72432
Be stars, rapid vars. in Hα and Hβ emission lines of γ Cas, ζ Tau and 66 Oph 7−140103
Be stars, spectrophotometric obs. rel to masses and evolutionary status 7−72441
Be stars, variable nature of 55 different stars 7−88458
Be stars in southern hemisphere, UBV photometric survey 7−107864
Be stars in young southern cluster NGC 3766, uvby β photometry 7−88557
Belgrade zenith stars; catalogues of declinations and proper motions of 36 stars 7−94673
binary galaxies, orbital ang. momenta and depend. on morphological type *(Russian)* 7−72626
binary galaxies, photoelectric BV photometry 7−128075
binary galaxies, radial rel. 7−128074
binary stars, ICCD speckle observations from Kitt Peak 7−72522
binary stars, mass-luminosity relations 7−80027
binary stars, speckle interferometric meas. of 28 systems using BTA 7−88506
binary stars digital speckle interferometry of 100 pairs *(Russian)* 7−140180
binary stars with eccentric orbits, evidence for rot. pseudosynchronisation 7−88524
blue stars in stellar associations and complexes in M33, UBV photometry 7−146058
blue stragglers in NGC 5466 globular cluster, discovery 7−127859
CK Boo, W UMa star, BV photometric charact. 7−146031
α Boo (Arcturus), evidence for periodic radial vel. vars. 7−140063
Boomerang Nebula, bipolar refl. nebula, Herbig-Haro emission detect. 7−80069
bright F, G, K and M-type stars, spectrophotometry of 60 southern and equatorial stars 7−120369
bright southern standard and reference stars, radial vel. determ. 7−72396
Bright Stars Catalogue stars, photometric data catalogue 7−72331
brightest blue supergiants in external galaxies, role as distance indicators 7−140286
broad-absorption-line quasar candidates discovered in the CFHT/MMT QSO survey 7−134317
Bruck bipolar nebula, identification as small star cluster illuminating independent refl. nebulae, polarisation meas. 7−72552
Brun 276, T Tau star, photometric obs. 7−101783
3C 120, broadline radiogalaxy, He I 1083 nm line detect. 7−72599
3C 275.1, detection of gas cloud surrounding quasar 7−88666
3C 324, possible gravitationally-lensed giant radio galaxy, CCD images and redshifts 7−80108
3C 326.1, radiogalaxy, Lyman-α emission and detect. of 100 kpc cloud of ionised gas 7−140288
3C 33, radio galaxy, optical spectra index in south radio lobe 7−140254
3C 33, radiogalaxy, SW radio lobe optical spectroscopy and photometry 7−95037
3C 368, high-redshift radio galaxy and optical obs. rel. to merger and starburst 7−120585
4 C 55.27, quasar, identification of intervening galaxy responsible for Mg II absorpt. 7−146103
3C 66A, BL Lac object, X-ray and optical brightness trends 7−101898
AS Cam, apsidal motion, implications of IEU spectral and photometric obs. 7−120510
AN Cam, double-lined eclipsing binary, orbital elements from photoelectric radial vels. *(French)* 7−72510
AY Cam, primary minimum, UBV photometry and period 7−101854
δ Cap, possible RS CVn binary star, photoelectric UBV photometry 7−101855
OY Car, eclipsing SU UMa star, multicolour photometry during quiescence 7−120417
OY Car, SU UMa star, May 1985 superoutburst, accretion disk struct. and photometric obs. 7−115439
η Car nebulosity, echelle and spectropolarimetric obs. 7−140201
ρ Cas, 1986 brightness increase, photometric obs. 7−115470
β Cas, δ Sct star, radial vel. obs. by Si linear array camera of Vienna Observatory 7−101691
XX Cas, B-type eclipsing binary, photoelectric elements and revised spectral types from UBV photometry 7−88530
γ Cas, Be star, Balmer lines VIR vars. rel. to long-term variability of far-UV high-vel. components 7−140074
V523 Cas, BV photoelectric photometry of very short period eclipsing binary 7−80043
XY Cas, Cepheid variable, anal. of period and period vars. from archival plates 7−72454
HT Cas, eclipsing dwarf nova, photometric obs. rel. to accretion disk brightness distrib. 7−94879
TX Cas, uvby photometry of almost contact semi-detached system *(Chinese)* 7−120489
Cas A, supernova remnant, discovery of fast-moving N-rich ejecta 7−88565
cataclysmic binaries, photometry and spectroscopy about period gap 7−115399
cataclysmic binaries in SGP white dwarf survey 7−115400
visible astronomical observations continued
cataclysmic variable stars, short-period, photometry and spectroscopy 7−115460
cataclysmic variables, orbital period and mag. field distribs. rel. to evolution 7−115450
CBS 78, second DBZ degenerate star with accreted Ca, optical spectrum and element abundances 7−88412
CD−38°245, extremely-metal-deficient giant star, relative elemental abundances 7−145957
cD galaxies in clusters, surface brightness distrib. rel. to globular clusters surface density 7−107913
μ Cen, Be star, obs. of Hα emission event (March-April 1987) 7−145994
ω Cen, spectra and radial vels. of blue stragglers 7−88399
V644 Cen, UBV monitoring of fading (1981-4) 7−115467
V803 Cen (AE 1), photometry and spectroscopy of interacting binary white dwarf 7−120461
Cen A (NGC 5128), interstellar polarisation meas. in dust lane 7−107962
Cen X-4, soft X-ray transient source, optical spectral type of compainon star 7−140151
Centaurus-Hydra galaxy supercluster, redshifts meas. rel. to galaxies space distrib. 7−120622
PV Cep, assoc. bipolar refl. nebula, Herbig-Haro emission detect. 7−80069
EK Cep, detached eclipsing binary, evidence for pre-main-sequence secondary component 7−115520
U Cep, eclipsing binary star, min. light times (March to October 1986) 7−146043
PX Cep, ephemeris for large amplitude eclipsing binary 7−146046
μ Cep, SRc star, BV photometry (1981 to 1986) 7−72452
PV Cep, T Tau star, assoc. counterfan obs. 7−72562
Cepheid variables, BV photometry rel. to space distrib. in Galaxy *(Russian)* 7−72471
Cepheid variables in LMC, radii determ. from radial vels. and UBV photometry *(French)* 7−79970
Cepheid variables in LMC cluster NGC 1866, CCD light curves rel. to LMC distance modulus 7−88463
Cepheid variables in M33, comparison of Hubble photometry with CCD data 7−79975
Cepheids, reddenings in KHG system 7−72438
Cepheids, Type II with periods of 1 to 3 days, Fourier phases anal. 7−101797
CERGA photoelectric astrolabe time and latitude results (1983 March 1 to 1984 December 31) *(French)* 7−88080
TV Cet, eccentric orbit eclipsing binary, time of secondary minimum 7−88532
RW Cet, eclipsing binary star, intrinsic light vars. obs. from BV photometry 7−72525
UV Cet, UBVRI photometry of 1985 December flares 7−88454
Z Cha, dwarf nova, photometric and spectroscopic obs. rel. to struct. and evolutionary state 7−115448
Z Cha, dwarf nova, spectrophotometric study of emission lines in quiescent state 7−88462
Cir OB1 association, UBV photometry and relation to nearly supernova remnant (MSH 15−52) 7−120535
classical Cepheids, colour excess determ. from ubvy β photometry 7−127888
EZ CMα, WN5 star, possible appearance of second photometric period 7−115388
δ CMa (F8 Ia), atmospheric props. and evolutionary parameters determ. from spectrum anal. 7−140068
FY CMa (HR 2855), Be star, spectral changes (April to May 1987) 7−94894
CMa R1 star formation region, polarisation survey rel. to shock-front compression of interstellar mag. field 7−140226
AD CMi, V photoelectric photometry and period change of δ Sct star *(Chinese)* 7−120402
BG CMi (=3A 0729+103), orbital period modulation of intermediate polar spectra 7−115454
AD Cnc, BVRI light curves of W UMa system 7−134272
κ CnC (HD 78316), Mn star, abundance anal. using line-blanketed model atmosphere 7−101794
RS Col, $BVRI_c$ photometry of probable A-type system 7−120513
Collinder 359, open cluster, UBVRI photometry 7−127989
FK Com, five-colour (UBVRI) photopolarimetry 7−101772
EO and FV Com, RRab stars, pulsation periods and functional forms of (O−C) diagrams 7−72456
Coma filament of galaxies, vel. meas. 7−115608
Comet, Sorrells (1986n), June and July 1987 visual magnitudes 7−120331
P/Comet Arend-Rigaux (1984 XXI), dust charact., visible and IR obs. 7−72369
P/Comet Arend-Rigaux (1984 XXI), VJHK photometry of nucleus 7−134180
Comet Bennett (1970 II), C_2 brightness profiles 7−88183
comet Bennett (1970 II), neck-line structure model for anomalous structs. in dust tail 7−101730
P/Comet Borrelly (1987p), recovery, astrometry, appearance and m_2 obs. 7−115304
P/Comet Borrelly (1987p) total visual magnitude estimate (1987 July 25) 7−139972
Comet Bowell (1982 I), coma obs. at record heliocentric distance 7−127778
Comet Bradfield (1987s), 12 Aug. 1987 astrometric positions 7−145882
Comet Bradfield (1987s), August 1987 visual magnitudes 7−134189
Comet Bradfield (1987s), discovering and approximate positions (1987 August 11 and 12) 7−134182
Comet Bradfield (1987s), discovery and approximate positions (1987 August 11 and 12) 7−145880
Comet Bradfield (1987s), positions, elements, ephemeris, and magnitudes (1987 Aug.-Sep.) 7−134185
Comet Bradfield (1987s), Precise positions (1987 August 14 to 16) 7−134187
Comet Bradfield (1987s), precise positions (1987 August 19 to 22) 7−134193
Comet Bradfield (1987s), total visual magnitude estimates (1987 August-September) 7−139979
P/Comet Brooks 2 (1987m), recovery visual observations 7−88196
P/Comet Brooks 2 (1987m), total visual magnitude estimates (1987 August 30 to September 20) 7−145887

visible astronomical observations continued
P/Comet Brooks 2 (1987m), total visual magnitudes (1987 July) 7−120330
P/Comet d'Arrest (1987k), recovery and position of 23 mag. comet 7−88191
P/Comet Encke, CCD photometry and brightness var. 7−127766
P/Comet Encke, size, ageing rate, and extinction date 7−94747
P/Comet Encke, total visual magnitude estimates (1987 July-August) 7−139976
P/Comet Encke, total visual magnitude estimates (July 1987) 7−139971
P/Comet Gehrels 1 (1987v), recovery, astrometry orbital elements and ephemeris (1987 August to 1988 February) 7−139974
P/Comet Giacobini-Zinner (1985 XII), electron and H_2O^+ column densities 7−88288
P/Comet Giacobini-Zinner (1985 XIII), 300-1000 nm spectrophotometry 7−127767
P/Comet Giacobini-Zinner (1985 XIII), Belgrade observations 7−94789
P/Comet Giacobini-Zinner (1985 XIII), CCD filter photometry 7−88281
P/Comet Giacobini-Zinner (1985 XIII), electron and H_2O^+ column densities 7−72361
P/Comet Giacobini-Zinner (1985 XIII), ion struct. rel. to Periodic Comet Halley (1982i) 7−88212
P/Comet Giacobini-Zinner (1985 XIII), near-nucleus high - resolution imaging 7−88219
P/Comet Giacobini-Zinner (1985 XIII), periodic light var. and nucleus rot. 7−88305
P/Comet Giacobini-Zinner (1985 XIII), plasma tail spectra 7−88285
P/Comet Giacobini-Zinner (1985 XIII), precise positions obs. at Chorzow Observatory (August-September 1985) 7−94683
P/Comet Grigg-Skjellerup (1986m), July 1987 visual magnitudes 7−145885
P/Comet Grigg-Skjellerup (1986m), May and June 1987 visual magnitudes 7−115305
P/Comet Grigg-Skjellerup (1986m), total visual magnitude estimates (1987 June 14 to 23) 7−115307
P/Comet Grigg-Skjellerup (1986m), total visual magnitude estimates (1987 June) 7−120334
P/Comet Halley, size, ageing rate, and extinction date 7−94747
P/Comet Halley(1982i), disconnection events in 1986 April, assoc. solar wind characts. 7−88217
P/Comet Halley(1982i), mol. ions spectra obs. 7−88248
P/Comet Halley (1982i); near-nucleus CCD imaging 7−115315
P/Comet Halley (1982i), 0.5 to 23 μm temporal devel., dust characts. 7−94721
P/Comet Halley (1982i), 1985 December 12 outburst and jet obs. 7−94790
P/Comet Halley (1982i), 1987 April 25 position 7−120323
P/Comet Halley (1982i), 300-1000 nm spectrophotometry 7−127767
P/Comet Halley (1982i), 3D model of nucleus from Giotto HMC data 7−94736
P/Comet Halley (1982i), activity before and during 1985 November tail form. 7−88218
P/Comet Halley (1982i), albedo characts. in visible and IR, dust effects 7−94716
P/Comet Halley (1982i), April 1987 magnitude observations 7−88197
P/Comet Halley (1982i), April 1987 visual magnitudes 7−88195
P/Comet Halley (1982i), astrometric obs. at Cerro El Roble station (November 1985 to June 1986) 7−115312
P/Comet Halley (1982i), astrometric obs. from Uttar Pradesh State Observatory 7−127769
P/Comet Halley (1982i), astrometric positions and improved orbital elements 7−94793
P/Comet Halley (1982i), astrometry, tail activity, and 10.5 GHz continuum emission 7−94775
P/Comet Halley (1982i), Belgrade observations 7−94789
P/Comet Halley (1982i), BI obs. from Catania Observatory 7−107768
P/Comet Halley (1982i), brightness var., ground-based narrow-band photometric obs. 7−94707
P/Comet Halley (1982i), CCD filter photometry 7−88281
P/Comet Halley (1982i), CCD H_2O^+ ground-based obs. rel. to Giotto meas. 7−88287
P/Comet Halley (1982i), CCD images and Schmidt plates taken at Catania 7−94778
P/Comet Halley (1982i), CCD obs. with Giotto HMC and IHW filters from South Africa 7−115314
P/Comet Halley (1982i), Chinese observations 7−94788
P/Comet Halley (1982i), CN (0-0) band R-branch spectrum 7−94818
P/Comet Halley (1982i), CN jets, rotational props. 7−88283
P/Comet Halley (1982i), coma struct. obs 7−115318
P/Comet Halley (1982i), coma variations from spectra and image digitization 7−94769
P/Comet Halley (1982i), continuum colours rel. to asteroids 7−94824
P/Comet Halley (1982i), Curtis Schmidt-Isla de Pascua obs. of plasma tail 7−94780
P/Comet Halley (1982i), dust activity in nucleus, Giotto HMC images 7−94734
P/Comet Halley (1982i), dust obs. by photopolarimetry 7−88312
P/Comet Halley (1982i), dust trail, brightness, colour and polarisation meas. 7−94715
P/Comet Halley (1982i), dust-gas interaction from Giotto HMC images 7−94735
P/Comet Halley (1982i), first obs. from Antarctica 7−94761
P/Comet Halley (1982i), gas emission spatial asymmetries from spectra 7−94765
P/Comet Halley (1982i), gas shell expansion and rotation 7−94822
P/Comet Halley (1982i), gaseous jets 7−88282
P/Comet Halley (1982i), Giotto HMC image analysis 7−94731
P/Comet Halley (1982i), grains scatt. props. 7−88313
P/Comet Halley (1982i), ground-based CCD obs. with Giotto HMC filters 7−94738
P/Comet Halley (1982i), ground-based monochromatic images during Giotto flyby 7−94766
P/Comet Halley (1982i), H_2O^+ profiles of inner coma, ground-based obs. 7−94768
P/Comet Halley (1982i), high resolution spectral obs. 7−88249
P/Comet Halley (1982i), inner coma maps from multi-position absolute spectrophotometry 7−94804
P/Comet Halley (1982i), inner tail ion morphology from CCD images 7−88286
P/Comet Halley (1982i), ion struct. rel. to Periodic Comet Giacobini-Zinner (1985 XIII) 7−88212

visible astronomical observations continued
P/Comet Halley (1982i), ion tail formation (1985 November) 7−94776
P/Comet Halley (1982i), jet ejections from nucleus, 1985 November obs. 7−94755
P/Comet Halley (1982i), June 1987 visual magnitudes 7−107752
P/Comet Halley (1982i), linear polarisation obs. 7−107760
P/Comet Halley (1982i), long-slit pre- and post-perihelion spectra 7−88278
P/Comet Halley (1982i), March and April 1987 observations of coma and tail 7−94701
P/Comet Halley (1982i), minimum phase angle obs. 7−88295
P/Comet Halley (1982i), molecular band polarimetry 7−88299
P/Comet Halley (1982i), multi-observatory pre- and post-perihelion photometry 7−88274
P/Comet Halley (1982i), narrow-band photometry, chinese obs. 7−94756
P/Comet Halley (1982i), narrow-band photometry of OH, ions, and dust 7−94762
P/Comet Halley (1982i), near-nucleus region high resolution imaging 7−88219
P/Comet Halley (1982i), neutral and ion coma obs. 7−88284
P/Comet Halley (1982i), nucleus morphology, Giotto HMC images 7−94732
P/Comet Halley (1982i), nucleus rot. and tail dynamics 7−79887
P/Comet Halley (1982i), nucleus shape from Vega TV expt. 7−88322
P/Comet Halley (1982i), nucleus spin period, brightness var. obs. 7−88304
P/Comet Halley (1982i), nucleus splitting, possible photographic evidence 7−94801
P/Comet Halley (1982i), nucleus surface features, Giotto HMC image analysis 7−94737
P/Comet Halley (1982i), O I forbidden line+NH_2 feature blend resolved 7−94767
P/Comet Halley (1982i), O production rates from CCD spectrophotometry 7−88272
P/Comet Halley (1982i), objective-prism spectra of coma 7−94763
P/Comet Halley (1982i), obs. from National Astronomical Observatory, Bulgaria 7−107762
P/Comet Halley (1982i), obs. of rapid brightness changes (January 1986) 7−94692
P/Comet Halley (1982i), observational bias in image meas. 7−94794
P/Comet Halley (1982i), optical imaging at Kiso Observatory 7−94689
P/Comet Halley (1982i), periodic light var. and nucleus rot. 7−88305
P/Comet Halley (1982i), Perugia-Schmidt photographs from South Africa 7−94779
P/Comet Halley (1982i), photoelectric photometry at Yunnan (1986 March-April) *(Chinese)* 7−120317
P/Comet Halley (1982i), photoelectric photometry from Mauna Kea 7−94823
P/Comet Halley (1982i), photographic obs. from Brazil 7−94758
P/Comet Halley (1982i), photographic obs. from Comenius Univ. Observatory 7−94792
P/Comet Halley (1982i), photographic photometry of coma (April 1985 to May 1986) 7−127780
P/Comet Halley (1982i), photographs and ion tail disturbance models 7−94783
P/Comet Halley (1982i), photometry at Catania Observatory 7−88296
P/Comet Halley (1982i), physical characteristics of nucleus from spacecraft imagery 7−94730
P/Comet Halley (1982i), plasma tail activity during Vega encounters 7−94808
P/Comet Halley (1982i), plasma tail disconnection events 7−94781
P/Comet Halley (1982i), polarimetric obs. (1985 September-1986 January) 7−94754
P/Comet Halley (1982i), post-perihelion ground-based multi-slit spectra 7−94764
P/Comet Halley (1982i), post-perihelion strip photometry from Brazil 7−88279
P/Comet Halley (1982i), pre-perihelion CN and C_3 emission band photometry 7−94757
P/Comet Halley (1982i), pre-perihelion IR and optical photometry *(Russian)* 7−72374
P/Comet Halley (1982i), precise positions obs. at Chorzow Observatory (1985 to 1986) 7−94683
P/Comet Halley (1982i), radiometric obs. of nucleus, HMC images 7−94733
P/Comet Halley (1982i), rotation period and spin axis from Vega 1 and 2 images 7−94728
P/Comet Halley (1982i), search for unidentified interstellar features in coma during occultation 7−72372
P/Comet Halley (1982i), spatial distrib. of molecules and dust within coma 7−88280
P/Comet Halley (1982i), spatial distrib. of O I 630 nm emission 7−88268
P/Comet Halley (1982i), spectral development (1985 August-1986 June) 7−94821
P/Comet Halley (1982i), spectrophotometric observations 7−88273
P/Comet Halley (1982i), spectrophotometry in 300-1000 nm window 7−88297
P/Comet Halley (1982i), spectroscopic obs. and total visual magnitude estimates (Jan-Mar. 1987) 7−79876
P/Comet Halley (1982i), sunward spike and equatorial plane 7−115319
P/Comet Halley (1982i), surface structure from Vega TV images 7−94729
P/Comet Halley (1982i), Swan C_2 (0-0) band obs. 7−94819
P/Comet Halley (1982i), tail disconnection events, narrow-band filter obs. 7−79888
P/Comet Halley (1982i), total visual magnitude estimates (1987 April 25 to 27) 7−88202
P/Comet Halley (1982i), total visual magnitude estimates (1987 April 30 to May 29) 7−115303
P/Comet Halley (1982i), total visual magnitude estimates (March-April 1987) 7−88192
P/Comet Halley (1982i), TV obs. of nucleus from Vega spacecraft 7−88079
P/Comet Halley (1982i), UK Schmidt Telescope image analysis 7−94760
P/Comet Halley (1982i), variability during spacecraft encounters 7−88298
P/Comet Halley (1982i), Vega 2 obs. of dust jets spatial distrib. 7−88324
P/Comet Halley (1982i), Vega 2 spectroscopic obs. 7−88275
P/Comet Halley (1982i), Vega missions, near-nucleus obs. 7−139984

visible astronomical observations continued
P/Comet Halley (1982i), Vega TV expt., image processing techniques 7−88321
P/ Comet Halley (1982i), Vega TV expt., photometry of nucleus and coma 7−88323
P/Comet Halley (1982i), Vega-TV image processing 7−94800
P/Comet Halley (1982i), visual magnitude estimates and brightness laws 7−94798
P/Comet Halley (1982i), visual obs. from Calcutta 7−94791
P/Comet Halley (1982i) plasma tail activity, photographic sequence 7−94777
P/Comet Halley (1982i) visible polarisation meas., role of small grains 7−94713
P/Comet Harrington (1987n), recovery position (1987 May) 7−94699
Comet Hartley-Good (1985 XVII), molecular band polarimetry 7−88299
Comet Hartley-Good (1985 XVII), objective-prism spectra of coma 7−94763
Comet Helin (1987w), discovery, astrometric positions and features 7−139977
P/Comet Helin (1987w), discovery, semi-accurate positions, orbital elements and ephemeris (1987 September and October) 7−145884
P/Comet Howell (1987h), July and August 1987 visual magnitudes 7−145886
P/Comet Howell (1987h), recovery observations, orbital elements and AD 1987 ephemeris 7−72367
P/Comet Howell (1987h), total visual magnitudes (1987 June-July) 7−120328
Comet IRAS-Araki-Alcock (1983 VII), 1983 May 9-10 event, spectrophotometric obs. 7−94690
Comet IRAS-Araki-Alcock (1983 VIII), distrib. of dust and gaseous images near nucleus from images and spectra 7−72360
P/Comet Jackson-Neujmin (1987t), recovery observations of magnitude and position 7−134188
P/Comet Klemola (1987i), July and August 1987 magnitude estimates 7−145883
P/Comet Klemola (1987i), recovery and precise positions (1987 February 16 and March 17) 7−79875
P/Comet Klemola (1987i), total visual magnitude estimates and ephemeris (1987 May 25 to November 21) 7−107750
P/Comet Klemola (1987i), visual magnitudes (1987 June-July) 7−134186
P/Comet Klemola (1987i), visual obs. (1987 July 28) 7−145878
Comet Kohoutek (1973 XII), C_2 brightness profiles 7−88183
Comet Levy (1987a), astrometry, orbital elements, ephemeris (1987 March 21 to May 25) and total visual magnitude estimates 7−79872
P/Comet Neujmin 1 (1984 XIX), visible and IR characts. 7−72369
Comet Nishikawa-Takamijawa-Tago (1987c), positions, improved elements, and ephemeris 7−94697
comet Nishikawa-Takamizawa-Tago (1987c), obs. and evidence for link with ϵ Geminids 7−120326
Comet Nishikawa-Takamizawa-Tago (1987c), orbital elements, ephemeris, magnitudes 7−94703
Comet Nishikawa-Takamizawa-Tago (1987c), position, orbital elements and ephemeris 7−79873
Comet Nishikawa-Takamizawa-Tago (1987c), total visual magnitude estimates (1987 March 27 and 30) 7−88188
Comet Nishikawa-Takamizawa-Tago (1987c), total visual magnitude estimates (1987 April 26 and May 1) 7−88201
Comet Nishikawa-Takamizawa-Tago (1987c), total visual magnitudes (1987 May-June) 7−101734
Comet Nishikawa-Takamizawa-Tago (1987c), two precise positions (1987 Jan. 29-30) 7−79870
Comet Nishikawa-Takamizawa-Tago (1987c) magnitude and associated meteors 7−139970
Comet Niskikawa-Takamizawa-Tago (1987c), visual magnitude estimates (1987 April) 7−94693
P/Comet Reinmuth 1 (1987r), recovery observations and astrometric positions 7−139969
P/Comet Reinmuth 2 (1987), recovery and astrometric positions (1987 April 11 and 13) 7−88193
P/Comet Reinmuth 2 (1987l), total visual magnitudes (1987 July) 7−120329
Comet Rudenko (1987u), 22 Aug. 1987, precise position and visual magnitude 7−134192
Comet Rudenko (1987u), astrometry, orbital elements, total visual magnitudes estimates and ephemeris (1987 August to September) 7−134195
Comet Rudenko (1987u), discovery and approximate positions (1987 August 21) 7−139973
Comet Rudenko (1987u), precise positions (1987 August 22 and 23) 7−134194
Comet Rudenko (1987u), total visual magnitude estimates (August-September 1987) 7−139978
P/Comet Russell 2 (1987q), recovery positions 7−120327
P/Comet Schwassmann-Wachmann 1, 1987 May outburst detection 7−94700
P/Comet Schwassmann-Wachmann 1, May and June 1987 visual magnitudes 7−107753
P/Comet Schwassmann-Wachmann 2 (1986h), total visual magnitude estimates (March 1987) 7−79877
Comet Shoemaker (1987o), precise positions (1987 April 25 to May 5) 7−88200
Comet Sorrells (1986), May and June 1987 visual magnitudes 7−101736
Comet Sorrells (1986n), TA report (1987 June) 7−145877
Comet Sorrells (1986n), total visual magnitude estimates (1987 July-August) 7−145881
Comet Sorrells (1986n), total visual magnitude estimates for 1987 February 18 and April 23 7−94696
Comet Sorrells (1986n), visual obs. (1987 June-July) 7−145878
Comet Sorrells (1986n) April and May 1987 magnitudes 7−94706
Comet Torres (1987j), astrometric obs., orbital elements and ephemeris 7−94698
Comet Torres (1987j), astrometry, total visual magnitude estimates, orbital elements and ephemeris (1987 March 26 to May 5) 7−88187
Comet Wilson (1986), total visual magnitude estimates (1987 May) 7−101733
P/Comet Wilson (1986l), IR spectra, H_2O and methane production and magnitudes 7−101735
Comet Wilson (1986l), June, July 1987 visual magnitudes 7−134190
P/Comet Wilson (1986l), molecular spectrophotometry observations 7−88194
P/Comet Wilson (1986l), spectral intensities and faint gas tail 7−88198
Comet Wilson (1986l), TA report (1987 May) 7−145877
visible astronomical observations continued
Comet Wilson (1986l), total visual magnitude estimates 7−88199
Comet Wilson (1986l), total visual magnitude estimates 7−94702
Comet Wilson (1986l), total visual magnitude estimates (1987 June 3 to 18) and HCN obs. and prod. 7−115306
Comet Wilson (1986l), total visual magnitudes (1987 March 9-30) 7−88186
Comet Wilson (1986l), visual magnitude estimates (1987 April) 7−94694
Comet Wilson (1986l), visual magnitude estimates (August 1987) 7−139975
P/Comet Wilson (1986l), visual magnitudes, early 1987 observations 7−79871
comets, active and extinct, spectrophotometric props. and relation to dark asteroids 7−88165
comets, ancient observations and identifications of assoc. meteor showers 7−139967
comets, magnitude distribs. for short-period and long-period comets 7−94708
comets, magnitudes, coma, and tail details for 19 objects (1985 September-1987 May) 7−145891
comets, magnitudes, coma and tail details for 19 objects (1983 September to 1986 December) 7−79879
comets, Minor Planet Circulars 11681-11776, precise positions for 21 objects 7−134172
comets, surface brightness profiles anal. 7−127768
comets, TA reports (1986 April-1987 April) 7−120322
comets, TA reports (1986 December-1987 February) 7−79870
comets, TA reports (1987 February-April) 7−120323
comets, TA reports (1987 January-February) 7−88181
comets, TA reports (1987 March-May) 7−139962
common-proper-motion binary stars, in Luyten's NLTT catalogue, meas. on Palomar Sky Survey prints 7−107893
composite stellar spectra, atlas of 12 subtle examples 7−94674
cool C stars in Galactic anticentre region, positions, finding charts, and V-magnitudes 7−134151
P/Corner Schwassmann-Wachmann 1, outbursts obs. (1979 to 1986) *(French)* 7−139963
CP stars, photometric variability 7−140077
CP-2 stars in Pleiades and Coma Berenices open clusters, Δa-photometry 7−101793
CPD−58°2721, H-deficient binary star, orbital period and vel. semi-amplitude 7−88538
V394 CrA, August 1987 observations of nova magnitudes and position 7−127902
V394 CrA, nova, visual magnitude estimates and astrometric considerations 7−140099
V394 CrA, outburst magnitudes, finder chart, and sequence 7−145970
V394 CrA, spectral characts. and magnitudes (1987 July-August) 7−134244
ϵ CrA, W UMa star, photometric obs. rel. to period fluctuations 7−101847
V394 CrA (Nova 1949), spectrum and visual magnitudes during new outburst (August 1987) 7−127900
R CrA reflection nebula (NGC 6729), rapid vars. in surface brightness 7−80076
R CrA star formation region, HH objects and visible stars obs. 7−107915
Crab Nebula, emission line spectra of filaments rel. to chemical comp. 7−127991
Crab Nebula, He I 587.6 nm/Hβ line emission ratio distrib. 7−127999
δ CrB, chromospherically active giant star, optical photometry and UV spectrum 7−94875
AI Cru, early-type eclipsing binary, photometric and spectroscopic characts. 7−107902
20 CVn, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
BI CVn, W UMa star, BV photometric characts. 7−146031
RS CVn stars, chromospheres and transition regions physical parameters 7−120491
RS CVn stars, dark spots and evidence for circumstellar material, obs. anal. 7−140157
RS CVn stars, optical and UV rot. modulation of V711 Tau, IL Peg and Ar Lac 7−101843
RS Cvn stars, short-period, light curves anal. rel. to starspots and fundamental props. 7−146039
RS CVn-like stars as optical counterparts to X-ray sources 7−107982
V1764 Cyg=HD 185151, RS CVn star, photometric obs. anal. 7−72516
CH Cyg, 1985-6 optical spectroscopy 7−107834
τ Cyg, δ Sct star, Hα var. and pulsation characts. *(Russian)* 7−127910
SS Cyg, accretion disk struct., visible spectra obs. 7−115438
MR Cyg, B-type eclipsing binary, light curve soln. using new parameter optimisation method 7−88510
V1500 Cyg, circular polarization of AM Her-type variable 7−120507
P Cyg, circumstellar shell detect. by direct CCD imaging 7−72434
SS Cyg, echelle-Mepsicron time-resolved spectroscopy 7−115405
V448 Cyg, eclipsing binary, spectral characts. 7−127946
V367 Cyg, evolved contact binary, light curves anal. 7−115517
V1143 Cyg, F-type eclipsing binary, spectroscopic orbit and absolute dimensions 7−72507
V832=59 Cyg, Hα profile variations of Be-star 7−88460
V1675 Cyg, no light var. in 1986, Nessa BV photometry 7−79988
α Cyg, pulsation characts., radial vel. obs. 7−115384
68 Cyg, search for spectral duplicity, visible spectral obs. *(Russian)* 7−88542
CG Cyg, short-period eclipsing binary star, BVJK light curves 7−134271
CG Cyg, short-period eclipsing RS CVn star, solns. of 1979 and 1980 light curves 7−134276
CH Cyg, spectral vars. during 1982 activity phase 7−107835
V367 Cyg, W Ser star, light curve var. 7−146030
V1727 Cyg (=4U 2129+47), X-ray binary star, optical behaviour (March to November 1986) 7−115523
γ Cyg (F8 Ib), spectroscopic obs. rel. to pulsation model for 8-day mag. field period 7−140070
V1500 Cyg (Nova Cyg 1975), possible AM Her star, photometric and spectroscopic obs. 7−115466
Cyg A, Paα, Hα and Hβ meas. rel. to internal reddening determ. 7−120613
Cyg OB4 assoc., spectral type surface distrib. study 7−101870
dark asteroids, spectrophotometric props. and relation to active comets and extinct comets 7−88165
DB-type white dwarfs, UV and visual spectroscopy 7−145954

visible astronomical observations continued
DBA white dwarf stars in Palomar-Green sample, spectroscopic survey 7−107823
deep 6 cm radio source survey, optical identifications 7−101948
δ Del, δ Sct star, chemical comp. determ. from model atmosphere anal. 7−127904
DM Del, A-type contact binary, photometric study and light curves anal. 7−72509
LS Del, BV light curves of W UMa system 7−80042
diffuse interstellar bands, detect. towards SN 1987A in LMC 7−134255
diffuse interstellar bands origin 7−72570
dMe-type flare stars, flare power-coronal soft X-ray power relation 7−88405
30 Dor, effects of spatial resolution on line profiles and comparison with giant extragalactic H II regions 7−94994
30 Dor nebula, chemical homogeneity and W-R enrichment 7−128017
α Dra, metal-weak AO III star, abundance anals. 7−79964
AG Dra, Population II symbiotic star, spectroscopic and photometric obs. 7−115389
SW Dra, RR Lyr star, lumin. characts., use of photometry, radial vel. and Baade-Wesselink method 7−120437
AG Dra, satellite and ground-based obs. of quiescent energy distrib. 7−107839
χ Dra, spectroscopic binary, stellar masses, luminosity and orbit 7−101849
BY Dra, spiky flare observations for flare star 7−94899
AG Dra, symbiotic star, H and He obs. 7−145960
BY Dra, U photometry obs. 7−88457
BW Dra, W UMa star, BV light curves 7−140158
BY Dra stars, detect. of four marginal objects from spectroscopic survey 7−120395
dwarf Cepheids, radii, masses, pulsation characts. and evolutionary status, VJK obs. 7−72467
dwarf elliptical galaxies in Virgo cluster, photographic surface photometry 7−134297
dwarf galaxies, spatial distrib. in CfA slice of Universe 7−120611
dwarf K and M stars, Hα photometry 7−134229
dwarf novae, outburst period-amplitude and period-energy relations 7−120433
dwarf novae, photometric evidence for two types of outbursts 7−115446
dwarf novae, visual magnitude estimates (July-August 1987) 7−134243
dwarf novae outbursts, multi-wavelength obs. of 33 objects 7−115404
dwarf stars, high-velocity, binary freq. of field dwarfs from CCD meas. 7−145953
E1013−477, possible intermediate polar, photometric periods from I-band CCD obs. 7−80048
E2003+225, AM Her star, optical and UV obs. rel. to new soft X-ray emission mode 7−120506
1E 0116.3−0116, X-ray bright early-type galaxy, optical and X-ray obs. 7−120599
1E 0630+178, possible Geminga counterpart, field visible and IR obs. 7−140325
1E 1048.5+5421, new 114-minute AM Her binary, X-ray and optical obs. 7−115518
1 E 1145-6141, X-ray pulsar, orbital parameters determ. from primary star spectra 7−134277
E 1405−451, AM Her star, mag. fields and accretion column absorpt. features, spectropolarimetric obs. 7−140164
E 1405−451, AM Her star, optical 2 second var. 7−115505
1E 1751+7046, FK Com candidate nature and obs. 7−127880
early-type galactic supergiants, Hγ-line equivalent widths for comparison with SMC stars 7−120390
early-type stars in Cyg OB2 association, speckle interferometric obs. rel. to search for multiplicity 7−120406
eclipsing binaries, semi-detached, light curves anal. rel. to gravity darkening of secondary components 7−134269
eclipsing dwarf novae, high-speed photometry 7−115401
elliptical galaxies, CCD surface photometry 7−95027
elliptical galaxies, distance determ., use of photometric and kinematic data 7−80092
elliptical galaxies, isophotes shapes rel. to radio emission 7−101896
elliptical galaxies, low luminosity, brightness profiles rel. to H I distrib. and kinematics 7−101934
elliptical galaxies, rapidly rotating, photometric detect. of weak galactic disks 7−72607
elliptical galaxies, spectroscopy and photometry rel. to large-scale streaming motion in local Universe 7−115587
emission line stars with unusual spectra 7−145990
emission nebulae, VBLUW photometry 7−80065
emission-line galaxies, ionised gas and stars imaging 7−72584
emission-line galaxies, spectral classification method 7−95018
emission-line galaxies in Bootes void, optical spectra and redshifts 7−128069
emission-line objects in M33 and IC 1613, objective-prism survey 7−72328
BZ Eri, Algol-type binary, (O−C) values anal. rel. to orbital period vars. 7−72416
BZ Eri, Algol-type binary, accuracy of light minima rel. to reality of period vars. 7−72524
EF Eri, AM Her star, 2-3 sec quasi-periodic oscills., role of mag. field 7−120492
EF Eri, AM Her star, simultaneous five-colour (UBVRI) polarimetry 7−115506
EF Eri, AM Her star, X-ray and optical flickering 7−107901
CU Eri, supposedly constant star, photoelectric evidence for light vars. 7−72442
EF Eri (2A 0311−277), AM Her star, circular polarisation rel. to mag. field strength in Hα emission line region 7−140153
EI Eri (=HD 26337), RS CVn star, rot. characts. and photometric obs. 7−146027
α Eri (Achernar), Be star, photometric and spectroscopic obs. 7−107861
EI Eri (HD 26337), RS CVn star, system characts. 7−146028
eruptive variable on Leo Minor-Ursa Major border (α=10h52m18.9s, δ=+37° 15.4′; 1950), nature 7−79990
ESO 217-G09, peculiar galaxy, CCD photometry and dynamics 7−140255
ESO 495-G21 (=He 2-10), starburst galaxy, photometric and spectroscopic study 7−134298
EXO 020528+1454.8, dMe stars pair as optical counterpart, X-ray and visible obs. 7−128128
visible astronomical observations continued
EXO 020528+1454.8 (=G035−027), optical variability of X-ray source 7−145988
EXO 023432−5232.3, new 114-min. AM Her-type binary, X-ray and optical obs. 7−80028
EXO 0748−676, eclipsing X-ray binary, variable light curve characts. 7−72515
EXO 171224−6653.9, serendipitous X-ray source, EXOSAT obs. and optical counterpart identification 7−134273
EXO 2030+375, X-ray transient, CCD photometry of optical counterpart 7−134270
extragalactic background light search 7−95052
extragalactic H II regions, Balmer-line flux ratios as constraint on local galactic reddening 7−88597
extremely H-deficient stars, radial vel. survey 7−94904
F, G and K-type dwarfs and subgiants, Li abundances determ. 7−72412
F-type stars of known age, Li abundances depend. on temp. 7−88393
F-type stars with solar composition at North Galactic Pole, planar age-vel. dispersion relation 7−115374
faint blue stars in southern external part of LMC, far-UV and UBV obs. 7−80085
faint emission nebula surrounding hot white dwarf PG 0108+101, Hα obs. 7−107930
faint red dwarfs and giants, BVI photometry 7−107818
field disk and halo stars, light elements and Ni abundances 7−115360
fireball processions 7−120339
FK4 stars, Right Ascensions corrections for 120 stars from anal. of Time obs. 7−145804
flare complex in distorted mag. field configuration, Hα and total radio flux obs. 7−115353
flare stars in NGC 7000 (N America Nebula) region 7−79987
8 Flora, rot. period and heliocentric longit. of pole from photometric obs. (July-November 1984) 7−127760
Fornax dwarf galaxy, distance modulus and red stars photometric characts., finding charts and positions 7−101899
Fornax dwarf spheroidal galaxy, search for long period variables 7−107956
Fornax elliptical galaxies, globular clusters spatial distrib. compared with halo light distrib. 7−120587
G316.8−0.0, H II region, Hα emission anal. 7−80079
G317.0+0.3, H II region, HA emission and foreground Hα emission, galactic struct. implications 7−80079
G320.5−1.4, thermal H II region assoc. with supernova remnant MSH 15−52, implications for remnant age 7−120535
G-type dwarf stars, ^{232}Th abundance use for chronology of stellar and galactic evolution 7−120401
G-type stars at North Galactic Pole, radial vels. meas. 7−120372
Galactic halo stars, evidence for imbalance in W velocity distrib. 7−120391
galactic nuclei, absorpt.-line spectra anal. in sample of 164 objects 7−140261
galactic nuclei, narrow-band imaging rel. to morphological studies 7−80105
galaxies, ang. correl. function determ. as function of magnitude 7−115611
galaxies, depend. of Tully-Fisher relation on morphological type 7−95007
galaxies, fractal dimension of star-forming sites 7−120576
galaxies, morphology-density-luminosity relation for isolated and grouped galaxies in superclusters 7−95025
galaxies, redshifts survey rel. to relative contribs. of bulges and disks to Universe luminosity density 7−146082
galaxies active nuclei, optical luminosity function of quasars and low-luminosity active nuclei 7−146083
galaxies clustering, influence of nonuniform interstellar extinction on Local Supercluster phenomenon 7−128094
galaxies clustering, two-point spatial correl. function of nearly Zwicky clusters *(Russian)* 7−72640
galaxies in Bootes void region, results from Case low-dispersion northern sky survey 7−101704
galaxies in cluster Klemola 22, radial vels. obs. with OPTOPUS (ESO multiple object spectroscopy facility) 7−115581
galaxies in Hercules supercluster, basic data for 220 galaxies (in CGCG field 108) 7−115609
galaxies in Hercules supercluster, photometry and H I obs. rel. to distance and Hubble const. 7−115610
galaxies with UV excesses, seventh Kiso survey 7−134149
galaxy cluster assoc. with QSO PG 1613-65 (Mkn 876), gr-photometry and redshifts 7−146102
galaxy clusters, observed luminosity profiles versus cosmological scenarios 7−120625
galaxy clusters, redshifts and vel. dispersions of low-X-ray luminosity clusters 7−120623
galaxy clusters, surface density distrib. of globular clusters, galaxies, and diffuse light 7−107913
galaxy redshifts, new meas. of radial velocities in clusters of galaxies 7−72594
Galilean satellites, eclipse obs. rel. to evidence for secular changes in mean motions 7−101723
Galilean satellites, occultation obs. 7−88168
gamma-ray burst sources, photographic density profiles of suspected optical counterparts 7−107981
gamma-ray bursters, search for optical bursts 7−80125
GBS 0526−66, ESO obs. during 1984-85 Burst Watch Campaign 7−80129
GBS 0526−66, gamma-ray burst source, detect. of possible optical burst 7−80127
GBS 0526−66, gamma-ray burst source, monitoring by optical telescope-camera system 7−79830
GD 229, magnetic white dwarf, mag. field characts. and H lines obs. 7−72407
GD 257(=Gr 289), DA white dwarf star, spectrophotometry obs. 7−101774
RX Gem, Algol-type binary star, optical and UV spectrophotometric study 7−101858
γ Gem (A0 IV), model-atmosphere study 7−140069
ϵ Geminid meteor shower, from Comet Nishikawa-Takamizawa-Tago 7−139970
General Photoelectric Astrolabe Catalogue of China, declination system compared with five modern meridian catalogues 7−72324
P/Giacobini-Zinner (1985 XIII), albedo characts. in visible and IR, dust effects 7−94716
Giacobinids, 1985 shower obs. from Japan 7−120338

visible astronomical observations continued
giant extragalactic H II regions in NGC 4303, effects of spatial resolution on line profiles 7−94994
Gliese 890, rapidly-rotating spotted red dwarf flare star, spectrum, photometry and polarimetry 7−140052
globular clusters, axial ratios and orientations for 100 objects 7−140191
globular clusters, concentric aperture UBVRI photoelectric photometry rel. to structural parameters and luminosities 7−72555
globular clusters, ellipticity correl. with CN enrichment in cluster giants 7−115531
globular clusters, metal abundances determ. for five metal-rich clusters 7−120520
globular clusters, metal rich, O abundances 7−94969
globular clusters, obscured, near Galactic centre, discovery of three new objects 7−127987
globular clusters in elliptical galaxies of Fornax Cluster, results from cluster counts 7−94970
globular clusters in halo of LMC, masses and tidal radii from star counts 7−88548
globular clusters in M31 (Andromeda galaxy), photoelectric UBV photometry *(Russian)* 7−146095
gravitational mirages, spectroscopic search among close pairs of blue objects 7−95002
growing sunspots., cooling time scales 7−72385
RZ Gru, UX UMa star, no evidence for periodicity from photometric obs. 7−120455
guest star, 14th century BC, possible identification with gamma-ray source (2CG 353+16) 7−115631
GX 339−4, BVI CCD photometry and double image 7−94949
GX 339−4, faint optical states (1981-6) 7−94952
GX 339−4, optical obs. of possible 1.13 millisecond periodicity 7−101853
GX 339−4 (4U 1658−48), X-ray and visible obs. of X-ray high state (1983 May) 7−88514
GX 339−4 (V821 Ara), black hole candidate, optical variability obs. and limits on periodic modulation 7−127975
GX 339−4 black hole candidate, Halpha spectra of optical counterpart 7−94940
H 0139−68, X-ray and optical obs. of AM Her-type star 7−115514
H 0542−407, new DQ Her star, HEAO-1 obs. and optical identification 7−101958
halo dwarf stars, abundances of light elements 7−120384
halo stars, equivalent width data 7−72414
halo stars, Li abundances determ. 7−120396
halo subdwarf stars, Li abundances rel. to Li production in big bang 7−145943
Haro 2, nE blue compact dwarf galaxy, star form. characts., surface brightness and colour distrib. 7−95014
HC 199178, FK Com star, five-colour (UBVRI) photopolarimetry 7−101772
HD 100340, early-type high galactic latit. star, non-LTE abundance anal. 7−115373
HD 112313, planetary nebula central star, giant star in triple system, orbital characts. 7−120386
HD 12856, HD 13890, Be stars in Per OB1 association, synthetic filter photometry and evolutionary status 7−79976
HD 151932, WN7-A star, obs. of He I and Si IV lines vars. 7−120405
HD 160641, extreme He star, photometric and radial vel. evidence for nonradial pulsations 7−127906
HD 160886, Be star, photometric obs. 7−72469
HD 16523, HD 17638, identification as possible WO5-type Wolf-Rayet stars *(Russian)* 7−145998
HD 166473, cool mag. Ap star, oscills. of 8.8 and 9.1 minutes period, photometric obs. 7−94901
HD 184279 (V1294 Aql), Be-shell star, long-term and mid-term spectrum vars. 7−140080
HD 187399, Be-type X-ray binary, spectroscopic investigation 7−127872
HD 190073, early-type emission line star, multiple line form. regions in circumstellar envelope 7−145964
HD 190603, B 1.5 Ia^+ supergiant, turbulent velocity and spectra *(Russian)* 7−127862
HD 193793, spectroscopic orbit for WC7+O4 binary 7−72445
HD 194056, late-type giant spectroscopic binary, orbital characts. 7−115526
HD 200775, Herbig Be star, interstellar extinction and polarimetric props. 7−115375
HD 200775, Herbig Be star, obs. of rapid spectral, photometric and polarimetric vars. *(Russian)* 7−72425
HD 204754, chemical composition of suspected Fe deficient B-star 7−88389
HD 213985; halo hot post-AGB star; evolutionary status and shell dust, spectral and photometric obs. 7−120387
HD 23838, spectroscopic binary, orbital characts. and mass ratio determ., spectral obs. *(French)* 7−80030
HD 27130, eclipsing binary in Hyades, photometric characts. 7−127945
HD 33798, V photoelectric photometry of suspected variable 7−120457
HD 35914, variable central star of PN IC 418, simultaneous spectroscopic and photometric obs. 7−115386
HD 37836 in LMC, O-type supergiant, wind and disk characts., spectral and photometric obs. 7−127853
HD 43819, element identification in sharp-lined Si star 7−140113
HD 60435, p-mode spectrum of rapidly oscillating Ap star 7−101800
HD 64488, 109995, 161817 field horizontal-branch stars, element abundance anals. with coadded DAO spectrograms 7−94873
HD 64488, HD 109995, HD 161817, field horizontal-branch stars, atlas of co-added photographic spectra 7−115385
HD 6491, F2 IV-V star, photometric period determ. from UBVRI obs. 7−134249
HD 6532, Rapidly Oscillating Ap star, freq. soln. to light vars. rel. to l=1 oblique dipole oscill. 7−134248
HD 6532, rapidly oscillating Ap star, rot. period determ. from mean light vars. 7−134249
HD 89249 as peculiar Be+K-type stars, photometry and spectra 7−94882
HD 92664, Bp-Si star, no evidence for short-time-scale photometric vars. 7−140081
HD 97766, flares detect., UBV obs. 7−145991
HDE 270100, new long-period Cepheid in LMC, period and light curve from Walraven photometry 7−120456
HDE 283572, UBVRI photometry of G-type pre-main-sequence star 7−107821

visible astronomical observations continued
He 2-10, dwarf starburst galaxy, Hα and N II forbidden emission line profiles 7−128092
Heiles cloud 2, visual extinction distrib. correl. with $C^{18}O$ column density 7−101873
V644 Her, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104
AK Her, BV light curves and period of W UMa-type system 7−146032
68=u Her, eclipsing binary, photometric study 7−140163
AM Her, polar, visual magnitude estimates (1986 September 21 to 1987 April 30) 7−94950
52 Her, surface magnetic field strength and Fe, abundance in atmosphere *(Russian)* 7−140110
BL Her, uvbyβ photometry and parameter determ. 7−140115
AM Her, visual magnitude estimates (1987 May to July) 7−140176
AH Her, Z Cam star, primary and secondary spectral characts. 7−115408
ι Her (B3 IV-V), short-period light and spectrum vars. 7−101788
V533 Her (Nova 1963), spectroscopic obs. rel. to binary parameters 7−72472
AM Her stars, secondary orbital motion and evidence for low-mass white dwarfs 7−94956
AM Her-type stars, time-resolved optical spectroscopy 7−115512
AM Her-type stars, Zeeman features from accretion column 7−115510
Herbig Ae/Be stars, polarimetry and shell characts. *(Russian)* 7−88421
Herbig Ae/Be stars, UBVRI polarisation meas. *(Russian)* 7−145958
Herbig-Haro objects, CCD images rel. to mass outflows from young stars 7−115253
Herbig-Haro objects in NGC 2023, photographs, spectra, and line profiles 7−120563
Hercules galaxy supercluster, distance and Hubble const. estimates from tertiary distance indicators 7−115610
Hercules galaxy supercluster, distance determ. from basic data for 220 galaxies 7−115609
532 Herculina, UBV lightcurves, pole orientation, and model 7−115281
HH 100 in Corona Australis, optical linear polarization study 7−146077
HH 24, optical linear polarisation studies and relation to IR source (SSV 63) 7−128032
HH 46, 47A, 47B, Herbig-Haro object and connecting filament, dynamics from emission-line profiles obs. 7−88598
HH 46/47, radiating gas characts., narrowband imaging 7−146065
HH 52/53/54, high-latit. Herbig-Haro objects, CCD photometry and H_2 emission maps 7−134285
HH 57, optical linear polarisation studies 7−128027
HH 7 to 11 complex of Herbig-Haro objects, velocity field and struct. 7−101883
high-latitude field stars, spectroscopic survey and comparison with Galaxy models 7−120371
high-redshift giant elliptical galaxies, colour evolution determ. from IR and visual obs. 7−120595
Horsehead Nebula, magnetic field mapping and dust characts., polarisation, obs. 7−128000
HR 1063 (V396 Per), He-weak star, B-band photometry (1984 to 1985) 7−72453
HR 7041, M-type giant star, spectroscopic binary orbit from photoelectric radial vels. 7−94960
HS 1254+3430, magnetic DA white dwarf with distinct Hβ and Hα Zeeman triplets, spectroscopic and position obs. 7−140050
Hubble III, giant ring nebula in galaxy NGC 6822, Hα obs. 7−94990
Humason 1-2, Type I planetary nebula, imaging photometry and spectroscopic obs. 7−134288
EX Hya, 1987 May outburst 7−94891
EZ Hya, $BVRI_c$ photometry of W-type system 7−120513
VZ Hya, eclipsing binary, new period determ. and period changes from light min. times 7−127956
EX Hya, eclipsing dwarf nova, time-resolved spectrophotometry 7−120441
EX Hya, eclipsing intermediate polar, time-resolved optical spectroscopy 7−140108
EX Hya, intermediate polar, optical light curve periodic modulations 7−115419
VW Hya, secondary UV eclipse and ephemens 7−80044
EX Hya, U Gem star, 1986 July-August outburst photoelectric obs. 7−145984
EX Hya, visual magnitude estimate (1987 May 5) 7−94892
EX Hya, visual magnitude estimates (1987 May 4 and 6) 7−101805
VW Hyi, SU UMa star, long-term photometric obs. 7−115410
VW Hyi, X-ray SU UMa star, Walraven photometry 7−72461
BL Hyi (H0139−68), AM Her star, polarimetry in high and low states 7−140177
IC 1613, irregular galaxy, objective-prism survey of emission-line objects 7−72328
IC 184, Seyfert 2 galaxy, and surrounding group, spectroscopic survey and redshifts 7−140252
IC 2488, UBV photometry of southern open cluster 7−134284
IC 3370, photometric and kinematic study of box-shaped galaxy 7−134302
IC 4296 (PKS 1333−33), radiogalaxy, spectroscopy, X-ray imaging, IR and surface photometry obs. 7−95013
IC 4628, nearby dense compact globule and embedded star obs. 7−94989
Image Photon Counting System, performance anal. and quest for high accuracy 7−94662
RS Ind, eclipsing binary star, UBV light curves and period study 7−88499
Innisfree chondrite orbit, obs. of second fall from same orbit 7−120340
interacting spiral and irregular galaxies, influence of interactions on star form. rates 7−101916
interstellar CN absorption lines, appl. to determ. of cosmic microwave background temp. 7−88689
interstellar dark clouds, fractal dimension of Lynds dark nebulae 7−128002
interstellar medium, solar neighbourhood $^{12}C/^{13}C$ ratio 7−128016
interstellar molecular clouds, Palomar Observatory Sky Survey atlas 7−115254
interstellar molecular clouds, relationship to Gould belt from optical and CO obs. 7−107928
intervening galaxy responsible for Mg II absorpt. in QSO 4C 55.27, spectrum and redshift 7−146103
IR excess supergiants, dust shell characts. and polarisation obs. 7−120388
IRAS 00521-7054, unusually warm Seyfert 2 galaxy, ER energy distrib. and optical spectrum 7−115590

visible astronomical observations continued
IRAS 09595−0755, Seyfert ring galaxy discovery 7−120607
IRAS 15194−5115, identification with extreme C star, spectral and photometric obs. 7−88675
IRAS 18059-3211 (Gomez's Hamburger), spectra, polarimetry and photometry 7−128124
IRAS 23060+0505, highly obscured active galaxy, optical spectra and IR photometry 7−128071
IRAS fields in Draco mol. cloud region, optical survey 7−115627
IRAS galaxies, photometric and redshift study of flux-limited sample 7−128058
IRAS galaxies in Bootes void area, redshift survey 7−146084
IRAS point sources in Virgo cluster region, IR-optical study 7−128125
IRAS sources at high galactic latits., luminosity functions at 25, 60 and 100 μm and optical-IR luminosities correl. 7−128126
IRAS sources in and near dense cores, stellar nature and obs. 7−140323
IRC+10216, C star, circumstellar dust opacity from optical-IR photometry 7−101796
irregular variable stars, colour characts. 7−145962
Jagiellonian field, contrib. of interstellar obscuration to apparent multiclustering of galaxy aggregates 7−72637
Jupiter, photographic and visual obs. during 1984 apparition 7−101725
Jupiter, surface features obs. during 1983 apparition 7−79866
K3-26, planetary nebula, anomalous emission-line intensity ratios obs. *(Russian)* 7−107942
K-type giants with very strong lines, DDO, Cousins R−I, and photomultiplier scanner data 7−101780
Kiso UV excess galaxies, sixth list 7−94672
Klemola 22 galaxy cluster, radial vels. obs. with OPTOPUS (ESO multiple object spectroscopy facility) 7−115581
Kpr 114 (HR 8629), visual binary star, revised orbit from photoelectric radial vel. obs. 7−88533
EV Lac, B photoelectric photometry of flare star (1983 August, October) 7−101812
EW Lac, Be star, photometric study rel. to multiperiodic light vars. 7−127889
EW Lac, Be star, shell spectra var. *(Chinese)* 7−107829
EV Lac, flare star, photoelectric obs. (1985 June 20 to September 8) 7−94900
BL Lac, power spectrum of optical polarisation vars. 7−101938
BL Lac, search for short-term optical light vars. *(Russian)* 7−72625
EV Lac, UV Cet star, spot obs. photometric obs. 7−134247
BL Lac objects, optical variability of seven objects (1980 to 1986) 7−72593
BL Lac objects, polarisation characts. var. with wavelength, continuum spectral shape and evolution 7−128077
late-type dwarf stars, chromospheric Ca II H emission line cores vars. and vel. field diagnostics 7−72413
late-type emission line variable star in Draco (α=16h30m33.0s, δ=+53° 33.6′; 1950) 7−79990
late-type emission line variable star in Ursa Major (α=10h45m16.9s, δ=+52° 34.4′; 1950), nature 7−79990
late-type galaxies, shapes of spiral arm filaments *(German)* 7−80083
late-type giant stars, distrib. in plane of galaxy 7−127852
late-type maser emission stars, visible and radio astrometry 7−115617
late-type stars, appl. of narrow-band Hα photometry to estimation of chromospheric activity 7−120381
late-type stars, narrow-band photometry 7−72395
late-type stars toward LMC, BVR photometry 7−88130
LDN 134, dark mol. cloud photometry use as reference in search for extragalactic background light 7−95052
LDN 1642, high galactic latitude dark cloud, star form. characts. 7−127995
CE Leo, B,V,R,I observations of eclipsing binary, and ephemeris 7−146048
XY Leo, contact binary star, spectroscopic detect. of BY Dra-like binary companion 7−140165
R Leo, cool O-rich Mira variable, long-term pulsational behaviour 7−88423
T Leo, dwarf nova outburst, April-May 1987 observations 7−94890
SS Leo, RR Lyr star, light curve characts. 7−145983
ρ Leo (B1 Ib), spectroscopic study and element abundances 7−127864
Leo I dwarf spheroidal galaxy, colour-magnitude diagram of giant branch 7−120588
Leo intergalactic H I cloud, Hα meas. 7−88627
AP Lib (PKS 1514-24), BL Lac object, photometric anal. and decomposition 7−140296
Lindsay 1, populous SMC cluster, main-sequence turnoff photometry 7−80054
LMC, distance modulus determ. from deep CCD photometry of two star clusters 7−88611
LMC, globular clusters stars, spectral classification catalogues and identification charts 7−72327
LMC clusters and emission-line objects in HD and HDE catalogues, identifications 7−72614
LMC globular cluster bright stars, spectral classifications 7−115377
LMC globular clusters, spectral classification of bright stars 7−88132
LMC low mass X-ray binaries, evidence for mass flow onto black holes 7−127952
LMC X-2, spectral characts., similarities to U Sco, evidence for classes evolutionary link 7−127885
ST LMi (=CW 1103+254), polarimetry of AM Her system 7−115516
ST LMi (CW 1103+254), emission line behaviour in polar *(Russian)* 7−140178
low-luminosity Seyfert nuclei in nearby galaxies characts. 7−115572
Lunar eclipse, 1986 October 17, obs. by geostationary weather satellite GOES 7−134116
τ^1 Lup, β Cep star, photometric obs. and freq. anal. 7−120422
γ Lup, detection of new Be-star 7−145995
RU Lup, RW Aur star, mag. field characts., spectral obs. 7−127867
BR Lup, superhumps during outburst of SU UMa-type star 7−145975
36 Lyn, α Scl He-weak star, spectral line characts. 7−146000
36 Lyn, He-weak Bp star, search for Hα emission rel. to extended atmosphere 7−79999
Lynds 204 dark cloud complex, CO and polarisation obs. rel. to mag. field controlled evolution 7−94982
β Lyr, anal. of Cassini's early obs. (April to May 1671) 7−94964
RR Lyr, mag. field var. with pulsation period, spectral obs. *(Russian)* 7−72470
MV Lyr, nova-like variable, optical brightening obs. (1987 March 28 to May 2) 7−88451
visible astronomical observations continued
β Lyr, spectral analysis of interacting binary 7−80037
α Lyr (A0 V), model-atmosphere study 7−140069
RR Lyr stars, UBVRI photometric and radial vel. data 7−115391
RR Lyr stars, $UV_bY\beta$ electrophotometry 7−107844
RR Lyr stars in globular cluster M5, radial vel. and light curves rel. to cluster distance determ. 7−127986
M13, globular cluster, dynamical characts. based on radial vel. and mass function 7−101866
M13, globular star cluster, spectra and composition of individual stars 7−101867
M13 II-67, O-poor giant star in M13, search for N overabundance 7−72427
m13 II-67, [O I] lines equivalent widths rel. to O deficiency 7−134232
M22, globular star cluster, spectra and composition of individual stars 7−101867
M2, globular cluster candidate members, proper motions and photometry 7−101863
M31, core ionised gas kinematics 7−101903
M31, dynamics of outer disk and halo 7−128063
M31, novae population and spatial distrib. 7−140266
M31, spiral galaxy, multi-colour photographic surface photometry 7−115585
M31 galaxy star complexes and associations, UB obs. 7−146057
M33, Hα survey rel. to morphology of general diffuse emission 7−72323
M33, Hubble photometry of Cepheid variables compared with CCD data 7−79975
M33, OB supergiant star characts. 7−79962
M33, spiral galaxy, objective-prism survey of emission-line objects 7−72328
M33, UBV photometry of blue stars in OB associations 7−146058
M33 variable stars, visible and IR photometric obs. 7−101798
M3 red giant branch, lumin. effective temp. diagram, appl. of IR flux method 7−101860
M42/43 and NGC 1977, Orion Nebula complex, large-scale vel. field from photographic interferograms 7−101877
M4, globular star cluster, spectra and composition of individual stars 7−101867
M51, interstellar Na I D absorpt. towards background galaxy NGC 5195 nucleus 7−128091
M56, globular cluster, spatial struct., star counts anal. 7−88549
M5, deep UBV CCD photometry of globular cluster 7−127983
M5, globular cluster, distance determ. from obs. of RR Lyr variables 7−127986
M5, photographic discovery of 11 new variables in globular cluster 7−145987
M67, CCD uvby photometry rel. to metallicity, distance modulus, reddening and age 7−80056
M67, old open cluster, C/N ratios along evolutionary sequence, implications for mixing 7−120377
M67, uvbyHβ photometry of main-sequence stars 7−80055
M68, globular star cluster, CCD photometry of main-sequence turnoff region 7−101868
M71, globular cluster, abundances of metals, C, N, and O in five stars 7−72415
M81, composition gradient from spectrophotometric obs. of H II regions 7−128064
M86, elliptical galaxy, optical distortion due to star form from cooling gas 7−88637
M87, high-resolution optical imaging of galaxy core 7−88641
M87 globular cluster system, dynamics and spectral obs. 7−101912
M8 (Lagoon Nebula), vel. field anal. from photographic interferograms 7−101876
M-dwarfs in close binaries, spectrographic search 7−107820
M-type dwarf stars, radial vel. study 7−127871
Magellanic Cloud supergiants, reddenings and intrinsic colours, BVRI photometric obs. 7−101781
Magellanic Clouds type II Cepheids, spectral and photometric obs. 7−120438
Malin 1, discovery of possible protodisk galaxy 7−134301
Markarian 231, Seyfert 1.5 galaxy, high resolution U-band surface photometry 7−134312
Markarian 297, precise positions and BR photometry of bright knots 7−140253
Markarian 297 and 325, clumpy irregular galaxies, high-dispersion spectroscopy 7−128044
Markarian 315, jetlike feature assoc. with Seyfert I galaxy 7−88618
Markarian 348 (=NGC 262), optical and radio obs. of tidally disrupted galaxy 7−115606
Markarian 421, optical var. and nucleus characts. 7−115605
Markarian 421, photometry of BL Lac object, underlying galaxy 7−140303
Markarian 421, simultaneous multifreq. obs. of BL Lac object 7−101930
Markarian 52, starburst-nucleus galaxy, obs. of blueward-asymmetric emission-line profiles 7−140282
Markarian 533, Seyfert 2 galaxy, nucleus bright emission-lines nature 7−72581
Markarian 71, H II region complex in NGC 2366 irregular galaxy, spectrophotometric obs. 7−146080
Markarian 90, corrected position rel. to obs. of SN 1987C 7−80017
Mars, morphological evidence of large-scale volcano-ground ice interactions 7−134162
Mars, obs. of surface features, cloud phenomena and polar regions during 1984 opposition 7−101716
Mars, Olympus cloud during 1982, optical thickness 7−139951
Mars, Viking Orbiter obs. of layered deposits in Valles Marineris 7−134163
MC3 2032+107, blazar, red shift, spectra, jet characts. and radio emission features 7−101913
Me stars, low-dispersion spectra of six objects *(Chinese)* 7−120403
TZ Men, A-type eclipsing binary star, masses and radii from radial vels. and uvby light curves 7−80029
TZ Men, detached double-lined eclipsing binary, photometric obs. 7−72514
Merope dark cloud, Pleiades, characts. determ. from stellar photometry obs. 7−128005
metal-deficient dwarf stars, S abundance determ. 7−101769
metal-poor anticentre open clusters, Washington photometry 7−134283
metal-poor dwarf stars of solar neighbourhood, C and N abundances 7−134231
metal-poor stars, Mg isotope abundances 7−115361

visible astronomical observations continued
metal-rich globular clusters, giant stars spectral obs. 7−88547
metal-rich stars, Mg isotope abundances 7−115361
meteor showers, ancient observations and identifications of assoc. comets 7−139967
meteors, TA reports (1986 December-1987 April) 7−120337
meteors, TA reports (1986 September-1987 February) 7−79894
meteors, TA reports (1987 January-February) 7−88325
meteors, TA reports (1987 January-June) 7−145895
meteors, TA reports (1987 January-March) 7−120336
meteors, TA reports (1987 March-May) 7−139985
meteors and fireballs, TA reports (1987 April-August) 7−145896
1727 Mette, Hungaria group asteroid, photometry and rotation period 7−101698
MGC 4881, elliptical galaxy in Coma Cluster, dimensionless Mg index gradient determ. 7−107953
minor planets, summary of Tautenburg Schmidt survey obs. *(German)* 7−107737
Mira variable stars, anal. of visual obs. of R Ari, R Aur, X Aur, R Boo and S Boo 7−79992
Miranda, astrometric CCD obs. (1981 to 1985) 7−107747
Miranda (satellite of Uranus), voyager 2 observations 7−88178
MKW 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
Mon R2, magnetic field mapping and dust characts., polarisation, obs. 7−128000
Moon, grazing occultations from South Africa (1985 to 1986) 7−145802
Moon, Na vapour search 7−134155
Mrk 205, quasar, assoc. with NGC 4319 disturbed spiral galaxy 7−140279
MSH 10−53, SNR interacting with molecular clouds, optical spectrophotometry 7−88579
N62B, stellar wind bubble in LMC, interferometric obs. 7−80067
naked T Tau stars, low-mass pre-main sequence unveiled, photometric and spectroscopic obs. 7−72428
nearby stars of Gliese catalogue, UBVRI photoelectric photometry 7−72393
Neptune, Bordeaux Observatory meridian obs., comparison with ephemerides 7−115293
NGC 1068, Seyfert 2 galaxy, [O III] 500.7 nm line shape rel. to central gas cloud 7−140295
NGC 1275 (Per A), obs. of fast fluctuations in emission spectrum of galactic nucleus 7−128078
NGC 1433, ringed barred spiral, UBVRI surface photometry and Hα kinematics 7−80103
NGC 1502, reddened open cluster, combined UBV and uvby photometry 7−107910
NGC 1566, Seyfert 1 galaxy, recurrent outbursts obs. in broad-line region 7−88612
NGC 188, open cluster, contact binary stars obs. 7−120498
NGC 1977 and M42/43, Orion Nebula complex, large-scale vel. field from photographic interferograms 7−101877
NGC 206, OB assoc. in M31, photometric characts. 7−72602
NGC 2162, NGC 2190, LMC star clusters, CCD photometry rel. to LMC distance modulus 7−88611
NGC 2173, LMC globular cluster, age determ., photometric obs. anal. 7−94971
NGC 2242, newly-discovered planetary nebula, emission-line fluxes and O/H ratio 7−72579
NGC 2242, newly-discovered planetary nebula, photometry and spectrum 7−115542
NGC 2261/R Mon system, polarimetry of nebula and faint jetlike feature to southwest 7−107932
NGC 2287, open cluster, membership, photometry and astrometry 7−72548
NGC 2287 (M41), differential photometry of suspected variables in open cluster 7−101871
NGC 2420, open cluster, giant stars radial rel. and abundances 7−72549
NGC 253 and 3034, starburst galaxies, evidence for large scale winds 7−72597
NGC 288, 1851, 1904, 4590, 4833, 5946, 6139 and 7099, globular clusters, photoelectric UBVRI sequences 7−120522
NGC 2992, Seyfert galaxy, extended emission line region dynamics 7−101900
NGC 3393, Seyfert 2 galaxy, nucleus multifrequency obs. 7−72632
NGC 3516, Seyfert 1 galaxy, kinematic signature of bipolar flow 7−146085
NGC 362, metal-rich globular cluster, main-sequence CCD photometry 7−107912
NGC 3766, young southern cluster, uvby β photometry 7−88557
NGC 3783, Seyfert galaxy, nucleus photometric characts. and struct. 7−72601
NGC 3918, planetary nebula and central star abundances and plasma characts., spectral obs. 7−120552
NGC 3928, bulge-dominated compact spiral galaxy 7−80095
NGC 4151, 3516, 5548 and 6814, Seyfert galaxies, He and S emission line profiles near 1 μm obs. 7−80107
NGC 4151, line profiles and intensities of [Fe X] and [Fe XIV] lines 7−140250
NGC 4151, Seyfert galaxy, narrow-line region core, dynamics, spectral obs. 7−101897
NGC 4261 (=3C 270), elliptical galaxy, VRI photometry rel. to dust lane detect. 7−72590
NGC 4319, internal vel. characts and evidence for link with Mrk 205 quasar 7−140280
NGC 4357, 4814, and 5371, rotation curves and mass of spiral galaxies *(Russian)* 7−140299
NGC 4546, almost edge-on SB0 galaxy, retrograde gas motion rel. to stars 7−140267
NGC 4874, giant D galaxy, globular cluster system obs. 7−120609
NGC 4874 and 4889, supergiant elliptical galaxies, globular star clusters characts. 7−120608
NGC 5090-5091 (PKS 1318−43), interacting galaxies, radio and optical study 7−88613
NGC 5170, spiral galaxy, disk stellar vel. dispersion, visible and H I obs. 7−101902
NGC 5253, amorphous galaxy, central ionised gas complex, element abundances, spectral obs. 7−140291
NGC 5266, elliptical galaxy with dust ring 7−80094
NGC 604, giant H II region, spectrophotometry and abundances determ. 7−94985
visible astronomical observations continued
NGC 6121 (M4), photoelectric BVRI sequence 7−140200
NGC 6164/5 complex, bipolar nebula ejected by Of star HD 148937, obs. and nature 7−79974
NGC 6192, open cluster, distance and age determ. from CCD photometric obs. 7−115533
NGC 6300, ringed barred spiral galaxy, kinematics and surface photometry 7−128073
NGC 6397, globular cluster, appl. of CCD uvby photometry to main-sequence turnoff 7−120521
NGC 6514 and 6523, H II regions, fine-scale motion 7−120555
NGC 6677 and adjacent bright compact object, optical spectra *(Russian)* 7−140298
NGC 6720, Ring Nebula in Lyra, filamentary structures in halo 7−101880
NGC 6752, globular clusters, horizontal branch stars with He I lines, abundance 7−88413
NGC 7027, planetary nebula, cyclopropenylidene detect. 7−127994
NGC 7099, globular cluster, characts. determ. from deep CCD photometry 7−140195
NGC 7531, ringed nonbarred spiral galaxy, surface photometry and ionised gas kinematics 7−115592
NGC 7662, planetary nebula, ionisation struct. 7−88574
NGC 7682, Seyfert 2 galaxy, search for jet-like optical feature near nucleus 7−101919
NGC 7752-53, interacting galaxies pair, detailed vel. field of ionised gas 7−115580
NGC 891, galaxy, halo features 7−140265
NGC 936, SB0 galaxy, pattern speed 7−101921
night sky optical spectrum, obs. from high altitude observatory 7−87993
NLTT catalogue class in stars, VRI photometry and photometric parallaxes 7−72398
Nova And 1986, May 1987 visual magnitudes 7−101810
Nova And 1986, photoelectric UBV photometry (1987 January 20 to 24) 7−72450
Nova And 1986, photographic magnitude and visual magnitude estimates 7−88443
Nova And 1986, UBV obs. 7−79989
Nova And 1986, UBV photometry and light curve obs. 7−145989
Nova And 1986, visual magnitude estimates (1987 April and May) 7−94896
Nova And 1986, visual magnitude estimates (1987 June 3 to 29) 7−120450
Nova Cen 1986, IR and visual light curves (1986 November 24 to 1987 April 30) 7−127907
Nova Cen 1986, UBV photometry (1986 December 9 and 10) 7−79984
Nova Cir 1987=X-ray nova 1354−64, photometry and spectroscopy 7−88444
Nova Cyg 1986, visual magnitude estimates (1987 April-June) 7−107856
Nova Cyg 1986, visual magnitude estimates (1987 June 3 to 29) 7−120451
Nova Cyg 1986, visual magnitudes estimates (1987 June 29 to August 2) 7−134246
nova ejecta shells, obs. of deceleration due to interaction with interstellar medium 7−120434
Nova Her 1987, astrometry and possible identification with blue star on 1951 exposure of Palomar Sky Survey 7−134245
Nova Her 1987, IR observations indicating dust formation phase 7−88447
Nova Her 1987, photoelectric photometry and visual magnitude estimates (May-June 1987) 7−107854
Nova Her 1987, photoelectric UBV photometry (1987 June 15 to 19) 7−120453
Nova Her 1987, spectra observations for 5 June 1987 AD 7−145980
Nova Her 1987, spectral, photometric and visual magnitude estimates obs. 7−140098
Nova Her 1987, spectroscopic obs. and visual magnitude estimates (April to May 1987) 7−94893
Nova Her 1987, UBV photometry and visual magnitudes (1987 February-March) 7−72449
Nova Her 1987, visual magnitudes (1987 March 4-15) 7−88445
Nova Sgr 1987, corrected Right Ascension, upper magnitude limits, and visual magnitude estimates 7−101808
Nova Sgr 1987, discovery, magnitudes, position, and spectrum (1987 May) 7−101806
Nova Sgr 1987, JHK photometry and visual magnitude estimates (June 1987) 7−127901
Nova Sgr 1987, visual magnitude estimates (1987 June) 7−107857
Nova Sgr 1987, visual magnitude estimates (May-June 1987) 7−115463
Nova Vul 1984 no.2, April-June 1987 magnitude estimates 7−107858
Nova Vul 1984 No.2, spectrum during nebular phase 7−120436
Nova Vul 1984 No.2, visual magnitude estimates (1987 June-August) 7−140100
Nova Vul 1984 No.2 visual magnitude estimates (1986 November 26 to 1987 April 1) 7−79986
Nova Vul 1984 No. 1 and No. 2, spectral evol. 7−115415
novae, outburst period-amplitude and period-energy relations 7−120433
novae, UK patrol report (1987 no.1) 7−79977
novae, UK patrol report (1987 no.4) 7−140083
novae, visual magnitude estimates (July-August 1987) 7−134243
novae, visual magnitudes (1987) May-June) 7−127898
novae remnants, obs. of old novae and ejecta shells 7−120435
NSV 12040, new W UMa star, visual and photoelectric obs. *(French)* 7−140161
NSV 12615, eclipsing cataclysmic variable with ultrashort period, photometric obs. 7−88427
NSV 6708, July and August 1987 stellar magnitudes 7−127903
NSV 6708, variable star, visual magnitude estimates (1987 June 30 to July 13) 7−120449
NSV 6708, variable star magnitudes and colours, March-July 1987 obs. 7−120452
NSV 6708, visual magnitudes of unusual variable star 7−88446
O3 giants in LMC, spectral classifications 7−94876
O9 to A0 stars, effective temps. from spectral energy distribs. and model atmospheres 7−127833
O and Of-type stars, obs. of new optical emission lines 7−101785
OB associations, extinction curves and intrinsic colours 7−80053
Ofpe/WN9 stars in Galaxy and LMC, direct imagery of circumstellar shells 7−134237
OH 231.8+4.2, OH-IR star, shocked bipolar outflow and assoc. HH objects obs. 7−72468

visible astronomical observations continued
OJ 287, BL Lac-type object, March 1987 magnitudes 7−88630
old disk stars, UVW vel. components using radial vels. in three cardinal galactic directions 7−79949
V451 Oph, eclipsing binary, uvby photometry 7−88498
Y Oph, photometric obs. with Carlsberg Meridian Circle 7−115472
V841 Oph (Nova Oph 1848), semiregular variations at minima 7−88456
ρ Oph dark cloud complex, Hα emission-line survey 7−134290
optical flash background rates, determ. from two-telescope study 7−72641
optically violent variable quasars, polarisation characts. var. with wavelength, continuum spectral shape and evolution 7−128077
α Ori, 2D images and atmospheric structure from speckle obs. 7−88402
α Ori, diameter and limb-darkening effects, speckle obs. 7−88401
VV Ori, eclipsing binary, light curve anal., Hα obs. 7−107892
α Ori, Hα chromosphere obs. using differential imaging technique 7−115379
α Ori, triple system, speckle imaging and polarisation characts. 7−88398
CN Ori, Z Cam star, spectroscopic obs. during outbursts and minimum phase 7−115447
α Ori (Betelgeuse), obs. of periodic photospheric and chromospheric modulation 7−140064
α Ori (Betelgeuse), SRc star, BV photometry (1981 to 1986) 7−72452
Ori OB1 association, kinematics of star form. region from proper motion meas. *(Russian)* 7−145948
Orion Nebula, central region, fine scale motion 7−120558
Orion population stars, V photometric search for periodicities 7−134228
Orionid meteor shower, meteors parameters determ. from single-station obs. 7−134197
Orionid meteors from P/Comet Halley, spectra (1958-68) 7−88331
DY Peg, dwarf Cepheid, period and light curve characts. 7−145993
IP Peg, eclipsing dwarf nova, time resolved spectral obs. 7−115413
AG Peg, emission line profiles and UBVRI photometry during 1985 minimum 7−107841
43 Peg, hot Am star, model atmosphere anal. 7−127905
λ Peg, optical aperture synthesis obs. of G type giant star 7−134147
ϵ Peg, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
II Peg, RS, CVn star, line characts. and spots, CCD echelle obs. 7−140171
II Peg, RS CVn star, 1986 light curve interpretation with star pot models 7−120512
II Peg, RS CVn star, broad-band and narrow-band photometry (autumn 1981) 7−120511
II Peg, RS CVn star, IR and visible photometry 7−127961
RX Peg, semi-regular variable star, proper motion meas 7−88453
II Peg, uvby photometry of spot cycle end-phase 7−146045
BX Peg, W UMa star, photoelectric light curves and improved ephemeris 7−94953
τ Peg , δ Sct star, Hα line vars. rel. to high-freq. radial oscills. *(Russian)* 7−107866
201 Penelope, photoelectric five-colour photometry 7−79862
RW Per, Algol binary system, flux distrib. rel. to optically thick accretion disk model 7−94963
IZ Per, eclipsing binary, spectral-luminosity classification, colour vars., and β CMa-type variability 7−94947
UW Per, long-period U Gem star, search for historical outbursts (1935 to 1983) *(German)* 7−107832
GK Per, visual magnitude estimates (1986 December-1987 April) 7−94889
X Per, X-ray Be star, discovery of 13.9-min optical periodicity *(Russian)* 7−107907
GK Per (Nova Per 1901), short-term optical vars. obs. during 1983 outburst 7−115443
UW Per A, UBV photometry rel. to relationship to cataclysmic variables *(German)* 7−107832
α Per cluster, rapidly rot. K-type dwarfs, photometric light curves anal. 7−127869
Perseus optical flasher, status from optical monitoring 7−140312
Perseus supercluster, alignments of galaxies 7−80110
PG 1031+234, magnetic white dwarf, spectra photometry rel. to polarisation and mag. field struct. at >500 MGauss 7−88407
PG 1115+158 and 1351+489, extreme examples of compact pulsators 7−127860
PG 1346+082, exotic He variable, photometry and spectroscopy 7−101851
PG 1613+65 (Mkn 876), low-redshift quasar, assoc. galaxy cluster detect. and interacting galaxy model 7−146102
PG 2303+243, new pulsating DA-type white dwarf, photometric obs. 7−79955
AD Phe, BVRI$_c$ photometry of probable A-type system 7−120513
PHL 957, QSO, line of sight H_2 and CO characts. 7−128111
photometric zero-point stars in Magellanic Cloud clusters, photoelectric UBV obs. 7−94966
β Pic, broad-band imaging of circumstellar disk 7−140043
Pic A, radio galaxy, obs. of bright optical synchrotron counterpart of western radio hot spot 7−101935
PK 215 +3°1, planetary nebulae, central star eclipse characts. (1981 to 1986) 7−101857
PKS 0215+015, BL Lac object, confirmation of emission-line redshift 7−80087
PKS 0528−250, QSO, Ni II and Cr II absorpt. systems nature 7−140289
PKS 1614+051, galaxy at redshift of 3.215, imaging and spectroscopic obs. 7−120586
PKS 1614+051A, intergalactic gas cloud near distant quasar, photometric obs. 7−128117
PKS 1614+051C,D,E, galaxies near distant quasar, photometric obs. 7−128117
PKS 1934−63, radiogalaxy, identification and nature 7−88634
PKS 2000−330, quasar, high redshift absorbing clouds characts., spectral obs. 7−140281
PKS 2005−489, BL Lac object, red shift determ. 7−140284
PKS 2208−137, blazar, red shift, spectra, jet characts. and radio emission features 7−101913
planetary nebulae, atlas of CCD pictures 7−145838
planetary nebulae, faint and misclassified, classification clarification, spectral obs. 7−88558
planetary nebulae in Magellanic Clouds, masses determ. using [O II] doublet ratio electron densities 7−107941
planetary nebulae in Magellanic Clouds, spectroscopic obs. rel. to evolutionary relationships 7−120560
visible astronomical observations continued
planetary nebulae in southern hemisphere, photometric and spectrophotometric obs. 7−140211
planetary nebulae of low surface brightness, obs. in $-33° \leq \delta \leq 17°$ zone 7−120546
planetary nebulae of low surface brightness, obs. on Palomar Observatory Sky Survey (POSS) 7−120545
Pleiades, assoc. mol. cloud characts. determ. from reddening obs. 7−140194
Pleiades, polarization, reddening and interstellar matter distrib. 7−88552
Pleiades, rapidly rotating K-type dwarfs, photometric light curves anal. 7−127869
Pleiades K and M-type dwarfs, spectral and photometric obs. 7−140053
Pleiades K-type dwarf stars, Li abundances rel. to evolutionary sequence from rapid to slow rotators 7−140197
Pleiades late-type B-stars, light variability, y photometry 7−72418
Pleione (=BU Tau), variable shell strength, spectral obs. 7−145992
Pluto, methane absorption vars. in optical spectrum 7−134178
Pluto occultation of Charon (4 April 1987), spectra and methane absorpt. features 7−115295
Pluto-Charon system, mutual eclipses photometry rel. to physical parameters determ. 7−101727
Pluto-Charon system, speckle interferometric obs. (1983 July 8 to 15) 7−72352
PN 0345+499, 2212+657, senile nearby planetary nebulae, implications for local PN population 7−115543
polar-ring galaxies, dark halo shape 7−120589
polarisation meas, radial vels., and search for neutrino emission 7−80003
Population II stars, physical parameters determ. from optical-UV energy distribs. 7−145950
AS Psc, U Gem star nature and implications for M33 halo *(Russian)* 7−128089
53 Psc, variability of beta CMa type star 7−88459
VZ Psc, very short period eclipsing binary star, photoelectric light curve 7−80045
PSR 0531+21 (Crab pulsar), secular decrease in optical luminosity 7−107882
PSR 0540−69, 50 ms LMC pulsar, optical colours, polarimetry, and timing meas. 7−107882
16 Psyche, photoelectric five-colour photometry 7−79862
ρ Pup, δ Sct star, radial rel. and spectral vars. rel. to pulsation characts. 7−134253
VV Pup, AM Her star, simultaneous five-colour (UBVRI) polarimetry 7−115507
12 Pup, red supergiant star, abundance anal. rel. to occurrence of mild s-processing 7−94872
ζ Pup (04 If), search for coronal line emission 7−115390
ζ Pup (O4f), photosphere model from optical line profiles 7−88433
Pup A, SNR, shock front forbidden coronal Fe lines emission, effects of inhomogeneities 7−140222
Pup A, supernova remnant, forbidden coronal Fe line images rel. to cloud evaporation and shocked cloud models 7−115551
RZ Pyx, early-type marginal contact binary, photometric and spectroscopic study 7−120514
Q1232+134, multiple redshifts and spectral characts. 7−88672
Q 1327−206, QSO-galaxy pair, absorpt. line systems anal. rel. to extent of low-ionisation galactic haloes 7−120636
QSO candidates, spectral characts., red shifts and identification 7−72648
QSO 1303+308, complex absorption spectrum of BAL object 7−128112
QSO 1331+170, C I absorpt. lines obs. rel. to microwave background temperature (at z=1.776) 7−88690
QSO 1409+732, faint high-redshift quasar, spectrophotometry rel. to quasars surface density 7−107978
QSO 2000-330 and 2126-158, C IV, Si III and C I absorpt. line meas. 7−120639
QSOs with broad absorption lines, spectrophotometry 7−128113
quasars, 3D clustering anal. from ROE/ESO large-scale AQD survey 7−128122
quasars, faint, at high redshift, surface density estimate 7−107978
quasars, high-redshift, X-ray props. from Einstein obs., and optical spectra 7−101951
quasars, imaging spectroscopy of five objects 7−72650
quasars, luminosity depend. of X-ray/IR emission ratio 7−128110
quasars, optical spectral indices from (B−V) colour indices 7−120637
quasars, optically selected, with z>3, redshifts and r-magnitudes 7−128114
quasars, very high redshift, effect of Lyman-alpha forest on UV continua 7−88662
quasars in Palomar-Green survey, optical-IR continuum energy distribs. 7−115624
quasars in Second Byurakan Survey, discovery, spectral and photometric meas. *(Russian)* 7−72652
quasars in Second Byurakan Survey of northern sky, spectral meas. 7−146104
quasars of CFHT survey, redshift and magnitudes rel. to space distrib. 7−101952
quasi-stellar objects, new optical catalogue 7−79850
R136a, supermassive star in LMC, resolution into individual components *(French)* 7−79961
R 130 in LMC, spectral and photometric study of triple system 7−88436
R-associations near refl. nebulae, polarisation characts. 7−146056
radio galaxies, emission-line activity rel. to photoionisation models 7−107960
radio galaxies in poor galaxy groups, VLA 20 cm survey and CCD photometry 7−146099
radio galaxies surface photometry rel. to radio, optical and clustering props. 7−88633
radio sources, extragalactic, south of $\delta = +5°$, precise optical positions 7−80115
radio sources, optical counterparts identification from Ooty lunar occultation survey 7−80116
radio sources in first Molonglo deep survey, optical identifications in declination −20° region 7−128105
RCW 19 field, survey for Hα-emission line stars 7−139947
RCW 34 exciting star (Vel R2 25a), evidence for pre-main-sequence status from optical and IR obs. 7−120383
red horizontal branch candidates, DDO obs. rel. to use as probes of thick disk population 7−79958
red spiral galaxies, H I content 7−95000
reflection nebulae, diffuse interstellar bands CCD obs. 7−140231

visible astronomical observations continued
ζ^1 and ζ^2 Ret, solar-type stars, He and heavy element abundances and atm. characts. 7−94867
ring galaxies, optical and IRAS obs. rel. to star form. rates 7−72611
ring-shaped nebulae around FU Ori stars, deep CCD images and optical spectra 7−80078
S0 and S0/a galaxies, H II regions and star form., Hα obs. 7−72600
S135, bright-rimmed H II region, blister model for internal motions 7−115562
S18/SMC, peculiar early-type emission-line supergiant, optical and UV spectroscopic study 7−101771
SA 193 field, RGU photometry and galactic struct. 7−115584
SA 57 in North Galactic Pole region, CCD photometry 7−72404
Sagittarius, possible new eclipsing binary star 7−146049
Sagittarius constellation, discovery of 6 new variable stars, coordinates and magnitudes 7−120458
Sanduleak−69°202 in LMC (SN 1987A progenitor), observations indicating multiple nature 7−80012
Sanduleak −69°202, astrometric position of SN 1987A progenitor 7−88482
Sanduleak −69°202 (progenitor of SN 1987A in LMC), photometric obs. rel. to K-type supergiant companion 7−80009
Sanduleak −69°202 (SN 1987A progenitor), in LMC, astrometric obs. 7−101813
Sanduleak −69°202 (SN 1987A progenitor), photometric behaviour, 1934-59, from Sonneberg Observatory plates 7−120479
Sanduleak-69° 202 magnitude prior to SN 1987A in LMC 7−72478
Santiago declination catalogue, positions in declination of 412 FK4 stars (equinox 1950.0) 7−72325
SAO 076608, angular diameter from photoelectric obs. of lunar occultation *(Chinese)* 7−120365
SAO 076613, separation and magnitudes of components from photoelectric obs. of lunar occultation *(Chinese)* 7−120365
Saturn, 1984-5 apparition, visual and photographic obs. 7−107744
Saturn, 1985 visual obs. 7−107745
Saturn, magnetospheric extinction during stellar occultation 7−139959
Saturn, ring features characts. from Voyager photopolarimeter stellar occultation 7−115291
Saturn ring A, Voyager obs. of azimuthal brightness vars. 7−115292
Sc-type galaxies, axial ratio distribs as evidence for projection effect bars 7−128051
AL Scl, early type double-lined eclipsing binary, uvby obs. 7−115503
VZ Scl, eclipsing nova-like variable star, accretion disk characts., spectral and photometric obs. 7−72459
α Scl, He-weak star, possible rot. period determ. from mean light vars. 7−134249
AL Scl (HD 224113), early-type double-lined eclipsing binary, photometry and spectra rel. to absolute parameters 7−120490
U Sco, recurrent nova, H depletion in accreting gas 7−127885
U Sco, recurrent nova, May 1987 magnitudes 7−94897
U Sco, recurrent nova, May 1987 outburst 7−94895
U Sco, recurrent nova, spectral similarities to LMC X-2, evidence for classes evolutionary link 7−127885
U Sco, recurrent nova, visual magnitude estimates (1987 May 29 to June 3) 7−107853
U Sco, recurrent nova, visual magnitude estimates (May 1987) 7−115462
U Sco, visual magnitude estimates (1987 May 21-25) 7−101807
V701 Sco, W UMa star, masses, radii and temps., photometric and spectral obs. 7−107903
α Sco A, precise optical position (1982 to 1985) 7−94636
Scorpius-Centaurus association, stellar multiplicity, orbital characts. 7−127988
α Ser, K-type giant, atm. chem. comp., spectral obs. 7−145949
LW Ser (Nova Ser 1978), optical spectrum during diffuse-enhanced phase 7−115442
Serpens reflection nebula, mag. field characts. and star form., imaging polarimetry obs. 7−128028
RW Sex, UX UMa star, photometry and spectral obs. 7−115417
RW Sex (=BD−7°3007), UX UMa star, photometric characts. 7−115418
Seyfert galaxies, H II regions, element abundances 7−140277
Seyfert galaxies, surface brightness distrib., multiaperture photometry meas. 7−72580
Seyfert galaxies, surface brightness distrib. 7−128036
FG Sge, spectral type, radius and lumin. determ. from IR photometric obs. 7−145961
V2022 Sgr, BL Her Star, evidence for evolutionary increase in pulsation period 7−72455
V1288Sgr, RRab star, photometric evidence for possibly changing period 7−72458
V348 Sgr, WC11 planetary nebula central star, photometric obs. 7−115461
V1223 Sgr (4U 1849−31), intermediate polar, white dwarf spin-down rate from max. light times 7−140107
Shapley 1346−30, cluster of galaxies, members CCD surface photometry 7−88645
Shapley 8 galaxy cluster, red shifts and dynamics 7−88654
SMC, detect. of shell-like features in NE halo from star counts 7−140249
SMC, H II radial velocity field and kinematics from Hα obs. 7−95024
SMC, H II regions N83 and N84, fragmentation and exciting stars characts. 7−101879
SMC brightest blue stars, Hγ-line equivalent widths and luminosity classes 7−120390
SMC globular clusters, star counts, radial density profiles 7−120523
SMC NE arm, bright stars spectral types 7−140257
SMC OB stars, colours and spectral classification 7−101922
SMC Wing, bright stars, spectral types 7−140256
SN 1006 remnant, high-velocity Hα emission obs. 7−120561
SN 1572 remnant, high-velocity Hα emission obs. 7−120561
SN 185, location and duration of guest star and implications for remnant (RCW 86) 7−127932
SN 1961 V in NGC 1058, location determ. and relation to stellar OB association *(Russian)* 7−72488
SN 1980K in NGC 6946, late-time spectrum obs. 7−88468
SN 1982V, 1984A, 1985A and 1985B, spectral obs. 7−72475
SN 1983 I in NGC 4051, photographic magnitudes from discovery obs. (May 1983) 7−134261
SN 1983I, 1983V, spectroscopic obs. rel. to abundance vars. in Type Ib supernovae 7−115474
visible astronomical observations continued
SN 1983N and SN 1984L, Type Ib SN, He detect. and O obs., corresponding atm. models construction 7−127915
SN 1984E in NGC 3169, Type II-L supernovae, post-maximum spectrum rel. to superwind 7−80020
SN 1984L in NGC 991, type Ib supernova, photometric obs. 7−120465
SN 1985G, SN 1985H, type II supernovae, spectroscopic obs. with new Faint Object Spectrograph 7−127914
SN 1986G in Cen A (NGC 5128), interstellar polarisation meas. in dust lane 7−107962
SN 1986G in NGC 5128, echelle spectroscopy of complex Na absorpt. and interstellar diffuse bands 7−146001
SN 1986G in NGC 5128, photometry, light echo effect 7−120475
SN 1986G in NGC 5128(Cen A), optical photometry and spectra of Type Ia object 7−140137
SN 1986J in NGC 891, pre-discovery detect. and photometry (1983 December 29) 7−120477
SN 1986J in NGC 891, radio and optical studies 7−134256
SN 1986N in NGC 1667, precise position 7−79977
SN 1987 E in NGC 4725, spectral evidence for galactic M-type dwarf 7−94921
SN 1987 F in NGC 4615, spectra, Type II class and peculiarities 7−94922
SN 1987 in LMC, magnitude and spectral observations 7−80012
SN 1987A, 1987 07 visual magnitude estimates 7−120471
SN 1987A, in LMC, spectropolarimetry, spectroscopy, spectrophotometry and UBV photometry (1987 February 25 to March 2) 7−72476
SN 1987A, interstellar spectrum features 7−88599
SN 1987A in LMC, 14, 15 and 16 March 1987, visual magnitudes 7−80006
SN 1987A in LMC, 22 GHz microwave emissions and V magnitude decline, June 1987 obs. 7−107876
SN 1987A in LMC, 22 GHz radio intensities and visual magnitudes 7−134258
SN 1987A in LMC, 6 to 8 March 1987, visual magnitudes 7−72484
SN 1987A in LMC, astrometric position of supernova and Sk −69°202 7−88482
SN 1987A in LMC, astrometry of supernova and progenitor (Sanduleak −69°202) 7−101813
SN 1987A in LMC, BV and IR photometry and visual magnitude estimates (1987 May 8 to 11) 7−94923
SN 1987A in LMC, BV and visual magnitude estimates (1987 May) 7−94927
SN 1987A in LMC, colour diagrams and UV observations 7−72479
SN 1987A in LMC, Cousins UBVRI photometry and visual magnitude estimates (May 1987) 7−101829
SN 1987A in LMC, daily mean visual magnitude estimates (1987 February 24 to March 31) 7−127922
SN 1987A in LMC, deceleration rate of broad Hα absorpt. line 7−72487
SN 1987A in LMC, detect. of foreground diffuse interstellar bands 7−134255
SN 1987A in LMC, early optical obs. as constraints on neutrino expts. interpretation 7−134254
SN 1987A in LMC, evolution of optical spectrum (1987 February 26 to March 31) 7−146010
SN 1987A in LMC, Feb. and March polarization observations 7−88472
SN 1987A in LMC, Hα emission behaviour and magnitudes (1987 March) 7−88470
SN 1987A in LMC, Hα vel. struct. during first month of outburst 7−140117
SN 1987A in LMC, IR speckle and visual magnitudes (1987 June-July) 7−120473
SN 1987A in LMC, IR speckle obs. and photovisual magnitudes 7−94924
SN 1987A in LMC, IR spectrum, BV photometry, and visual magnitudes (1987 April) 7−94908
SN 1987A in LMC, IUE obs. of spectral evolution and magnitudes 7−72482
SN 1987A in LMC, IUE spectral and photometric obs. and visual magnitude estimate (March 1987) 7−80008
SN 1987A in LMC, JHKL photometry and fluxes and radial vel. determ. from H I lines obs. 7−80014
SN 1987A in LMC, June 1987 UV spectra and visual magnitudes 7−115478
SN 1987A in LMC, KLMN photometry and visual magnitude estimates (1987 April 11 to 15) 7−80018
SN 1987A in LMC, light vars. from UBVRIJHKL and 10 μm photometry (February-March 1987) 7−80013
SN 1987A in LMC, line profiles, polarisation and photometry meas. (March 13 to 23) 7−80011
SN 1987A in LMC, magnitude estimates (1987 February-April) 7−120423
SN 1987A in LMC, magnitudes (1987 March-April) 7−120466
SN 1987A in LMC, mid-May 1987 visual magnitudes 7−94928
SN 1987A in LMC, neutrino and photometric obs. and search for progenitor X-ray flux 7−72481
SN 1987A in LMC, obs. of nearby compact H II region, and visual magnitude estimates 7−94917
SN 1987A in LMC, optical and UV photometry by IUE satellite 7−134257
SN 1987A in LMC, optical interstellar absorpt-spectrum obs. 7−101818
SN 1987A in LMC, optical spectra (1987 February 25 to March 19) 7−101817
SN 1987A in LMC, optical spectrum vars. and visual magnitude estimates (1987 March 22 to April 9) 7−88475
SN 1987A in LMC, photoelectric BV photometry and visual magnitude estimates (1987 May 1 to 7) 7−101827
SN 1987A in LMC, photoelectric photometry and visual magnitude estimates (1987 April 23 to 27) 7−94913
SN 1987A in LMC, photometric obs. (1987 February 24 to March 22) 7−101815
SN 1987A in LMC, photometric obs. of possible progenitor Sanduleak −69°202 (1973-77) 7−80009
SN 1987A in LMC, photometric spectral and CCD obs. 7−80004
SN 1987A in LMC, photometry, bolometric lumin, and radius upper limits 7−88478
SN 1987A in LMC, photometry, pre-max. plateau, spectra and magnitudes 7−88473
SN 1987A in LMC, polarimetric obs. (1987 March 6 and 7) 7−101814
SN 1987a in LMC, polarization and spectral observations 7−80001
SN 1987A in LMC, possible binary star progenitor, position 7−94929

visible astronomical observations continued
SN 1987A in LMC, precise position and visual magnitude estimates (to 1987 May 25) 7−101828
SN 1987A in LMC, precise positions and magnitudes (1987 March) 7−80015
SN 1987A in LMC, speckle obs. of diameter and expansion rate 7−146006
SN 1987A in LMC, speckle observations indicating existence of nearby bright feature 7−94920
SN 1987A in LMC, speckle search for companion object (May-June 1987) 7−140129
SN 1987A in LMC, spectra, polarisation meas., and visual magnitude estimates 7−88474
SN 1987A in LMC, spectra and magnitudes, mid-March 1987 observations 7−80010
SN 1987A in LMC, spectra and photometry for first 50 days 7−127921
SN 1987A in LMC, spectral and visual magnitude obs (1987 March 5 to 17) 7−80007
SN 1987A in LMC, spectral features and evolution, magnitudes 7−72480
SN 1987A in LMC, total visual magnitude, photometry and neutrino-antineutrino obs. 7−80002
SN 1987A in LMC, UBV photometry (February 24 to 26 1987) 7−115481
SN 1987A in LMC, UBV photometry and spectrum rel. to classification 7−72483
SN 1987A in LMC, UBV photometry magnitudes, but no soft X-rays (1987 May-September) 7−146008
SN 1987A in LMC, UBVRI and visual magnitude estimates (1987 June 16 to 25) 7−115479
SN 1987A in LMC, UBVRI photometry at CTIO (1987 July 30) 7−127918
SN 1987A in LMC, UBVRI polarimetry and visual magnitude estimates 7−72486
SN 1987A in LMC, unresolved assoc. source characts. and BV photometry 7−94925
SN 1987A in LMC, UV and visible flux, spectral and V magnitude characts. 7−88629
SN 1987A in LMC, visual magnitude and photometric obs. 7−140134
SN 1987A in LMC, visual magnitude estimates (1987 April 10) 7−88477
SN 1987A in LMC, visual magnitude estimates (1987 August) 7−140130
SN 1987A in LMC, visual magnitude estimates (1987 July 17 to 21) 7−120478
SN 1987A in LMC, visual magnitude estimates (1987 July 31 to August 11) 7−146004
SN 1987A in LMC, visual magnitude estimates (1987 July 9 to 13) 7−120474
SN 1987A in LMC, visual magnitude estimates (1987 May) 7−94926
SN 1987A in LMC, visual magnitude estimates (1987 May 29 to June 2) 7−115476
SN 1987A in LMC, visual magnitude estimates (July 1987) 7−120476
Sn 1987A in LMC, visual magnitude estimates and spectropolarimetry 7−115477
SN 1987A in LMC, VRI photometry (1987 February 28-March 10) 7−146009
SN 1987A in LMC, X-ray flux, archive brightness, and spectral evolution 7−80016
SN 1987A in LMC, X-ray flux increase and BVIR photometry 7−140132
SN 1987A in LMC, X-ray flux limit and spectrum vars. (1987 February 26 to March 9) 7−72485
SN 1987A in LMC secondary source position and visual magnitude estimates 7−115480
SN 1987A in LMC UBVRI photometry and visual magnitude estimates (June 1987) 7−107875
SN 1987A in LMCm magnitude estimates (1987 July 22-29) 7−140128
SN 1987B in NGC 5850, discovery report, position, and magnitude sequence 7−146002
SN 1987B in NGC 5850, emission line spectrum 7−72477
SN 1987B in NGC 5850, spectroscopic classification and line widths 7−88484
SN 1987B in NGC 5850, visual magnitudes (1987 April 2) 7−94909
SN 1987C in Markarian 90, March 1987 supernova discovery 7−88471
SN 1987C in Markarian 90, spectroscopic obs., galactic nucleus offset, and V-magnitude 7−88485
SN 1987C in Mrk 90, spectral identification as Type II object 7−94915
SN 1987D in MCG+0-32-01, April and May 1987 magnitudes 7−107877
SN 1987D in MCG+0-32-01, discovery, position and magnitudes 7−94907
SN 1987D in MCG+0-32-01, magnitudes and sequence 7−120466
SN 1987D in MCG+0-32-01, spectral identification as Type I object 7−94915
SN 1987D in MCG +0-32-01, magnitude and astrometric position 7−88479
SN 1987D in MCG +0-32-01, semi-accurate position, spectroscopic obs., and visual magnitude estimates 7−94916
SN 1987D in MCG +0-32-01, spectral obs. 7−88483
SN 1987D in MCG +0-32-01, spectroscopic classification and max. light time 7−88484
SN 1987E in NGC 4725, discovery report 7−94910
SN 1987E in NGC 4725, foreground star and not a supernova 7−94919
SN 1987E in NGC 4725, semi-accurate position and BV photometry 7−94912
SN 1987E in NGC 4725, visual magnitude estimates 7−88480
SN 1987F in NGC 4615, discovery, approximate position and photovisual magnitude 7−94911
SN 1987F in NGC 4615, photographic and spectral obs. 7−94918
SN 1987G=SN 1987D in UGC 7370, position, light curve and spectral characts. 7−94914
SN 1987H, misidentification of foreground star 7−88378
SN 1987H in NGC 5363, supernova discovery observations 7−88481
SN 1987I in IC 4963, discovery of Type I object 7−120472
SN 1987J in ESO 601-26, discovery, position and magnitudes 7−140127
SN 1987J in ESO 601-26, type II supernova, spectroscopic obs. and classification 7−127919
SN 1987J in ESO 601-G26, Type II spectra (1987 July 30-31) 7−127917
SN 1987K in NGC 4651, spectral features (1987 July 31) 7−127917
SN 1987K in NGC 4651, type II supernova, spectroscopic obs. and classification 7−127919
visible astronomical observations continued
SN 1987K in NGC 4651 discovery position and magnitudes 7−140127
SN 1987L in NGC 2336, spectrum and Type Ia confirmation 7−140133
SN 1987L in NGC 2336, visual magnitude estimates and astrometric meas. 7−140294
SN 1987L in NGC 2336 spiral galaxy, optical observations 7−134259
SN 1987M in NGC 2715, discovery, approximate position, and magnitude (1987 September 21) 7−146007
solar active regions, Hα morphology of fine struct. 7−127806
solar Ca II line profile disturbances appl. of nonlinear inversion method 7−94837
solar chromosphere, obs. and oscillatory props. of mesostructures 7−101754
solar constant changes due to sunspots and faculae 7−79926
solar corona, optical struct. compared with radio obs. using Clark Lake Radioheliograph 7−115350
solar corona, polarization and electron densities (1980 February 16) 7−140028
solar corona mass ejection events, search for forerunner activity 7−127811
solar eclipse, 1984 November 23, total phase timing rel. to size of Sun 7−115210
solar eclipse, 1986 October 3 7−134116
solar electron corona, radial var. of differential rot. 7−107800
solar F-corona, interpretation of radial vel. obs. 7−79914
solar flare, 1980 May 15, Hα struct. rel. to simultaneous VLA obs. at 6 and 20 cm wavelengths 7−145913
solar flare, momentum balance by X-ray and optical observations 7−79932
solar flares, Hα line shape and linear polarisation during pulse phases 7−140030
solar flares, H I and He I line profiles in near-IR spectra 7−127804
solar general magnetic field unbalance, relation to interplanetary mag. field anomalies (1970 to 1981) 7−127803
solar granulation, power spectra determ. from speckle interferometry 7−94835
solar long-period oscillations, power spectrum anal. rel. to theoretical solar models 7−127802
solar oscillations, phase shifts obs. using diode arrays 7−79910
solar photosphere, global horizontal circulation determ. from global mag. fields distrib. 7−140025
solar photospheric lines variations, 1976 to 1985, implications for solar luminosity vars. 7−115338
solar plages, Ca II H and K line indices and appl. to stellar plages spectra 7−115339
solar plages spectra, Hα line indices rel. to stellar plages spectra 7−115340
solar quiescent prominence, 1984 March 23, semi-empirical models rel. to line profiles 7−79912
solar rotation elements (i and Ω), determ from recurrent single sunspots 7−72378
solar spectra, quality anal. of Moore, Minnaert and Houtgast equivalent widths 7−107797
solar spectral line asymmetries, amplification by rotation 7−101757
solar-type stars, ages and Ca II chromospheric activity 7−107806
solar-type stars, relation between V−R and R−I colour indices and chromospheric activity 7−101786
southern A, F, G and K-type field stars, photoelectric uvby obs. 7−120370
southern early-type variable stars, uvby photometric obs. 7−115392
southern galaxies, UBVRI photoelectric photometry 7−72595
southern galaxies with active nuclei, optical spectra 7−80089
Southern Hemisphere long-period variables in binaries, period determ. 7−107830
spectral changes in photosphere and chromosphere, solar cycle 21 observations 7−79929
spiral galaxies, arm classifications for 762 galaxies 7−101931
spiral galaxies, light and mass distrib., illum. profiles and rot. curves 7−101915
spiral galaxies, optical emission-line activity rel. to radio continuum power in nuclei 7−101910
spiral galaxies, rot. curves and luminosity profiles rel. to halo parameters 7−115578
spiral galaxies, systematics of Tully-Fisher relation in B, V system 7−120579
spiral galaxies, Tully-Fisher relation, error reduction using CCD I-band surface photometry 7−101927
SR variables, photographic observations of 6 S number stars 7−120459
SSCV 140, nebulous star, optical linear polarisation studies 7−128032
star cluster in Galactic halo, BV photometry and radial vels. 7−88555
star clusters, colour excesses and photometric distances rel. to interstellar extinction and galactic struct. 7−94991
star clusters, interstellar extinction determ. towards young open clusters 7−140198
star counts at galactic poles, appl. to disk and halo densities determ. in galactic plane 7−80090
star formation regions, 578.0 and 579.7 nm diffuse interstellar features 7−128001
stars, FK4 right ascension corrections, Borowiec and Bratislava catalogues 7−79851
stars, gaseous circumstellar disks, spectral obs. 7−94857
stars, Pecny Geodetic Observatory circumzenithal meas. (1970-83) 7−79813
stars, photoelectric observations of lunar occultations 7−134114
stars, photoelectric sequences in B and V to 22nd magnitude 7−72544
stars, relative position meas. using MAP, atmospheric limitations 7−134131
stars near α Per, radial vels. for 258 stars *(French)* 7−88368
stars with accurately known positions, UBV photometry 7−72394
stellar open clusters, age distrib. as function of linear dia. and age depend. of cluster masses 7−72551
stellar open clusters, catalogue of UBV photometry and MK spectral types 7−72334
stellar photoelectric UBV sequence in SA 184, magnitudes and colour indices 7−72543
stellar photometric sequences in M31 and M33, photoelectric UBVR photometry 7−134279
stellar positions, catalogue of 1007 stars obs. in 1985 with Tokyo Photoelectric Meridian Circle 7−134150
stellar radial velocities, systematic differences between 'classical' meas. 7−101759

visible astronomical observations continued
stellar radial velocity meas. at E.W. Fick Observatory, results (1976 to 1984) 7−115368
stellar RGU photometry and space densities in high-latit. field M101, comparison with multi-component Galaxy models 7−79948
stellar RGU photometry near galactic centre, space densities determ. rel. to Galaxy models 7−88367
Sugano's object in Orion association, 1970 and 1986 brightening 7−115383
Sun, 1982 sunspot obs. at Istanbul 7−127820
Sun, 1983 February 3 chromospheric flare, time-match semi-empirical models and spectral obs. 7−134214
Sun, 1983 October 14 flare obs. in Hα rel. to dm-spikes 7−79919
Sun, 1984 May 7 prominence, matter vertical motion, Hα obs. 7−79937
sun, absorpt. of photosphere acoustic (*p*-mode) oscillations by sunspots 7−140022
Sun, astrometric observations with CERGA astrolabe (1984 to 1985) *(French)* 7−79915
Sun, background mag. field maps rel. to solar activity distrib. 7−127805
Sun, C, N and O abundances compared with α CMi (Procyon) and α Boo (Arcturus) 7−120376
Sun, chromosphere gentle evaporation during large flares gradual phase, Hα obs. 7−127792
Sun, chromosphere long-period mass vel. oscills. 7−145930
Sun, chromospheric Hα observations during cycle 20 decline (1970-6) 7−127818
Sun, chromospheric Hα observations during cycle 21 ascent (1976-83) 7−127819
Sun, coronal HF oscillations observed at 1983 June 15 Indonesia eclipse 7−145927
Sun, coronal mass ejection-assoc. activity, SMM 1980 study 7−120362
Sun, disturbed filament, material ejecta, Hα obs. 7−127829
Sun, Ellerman bombs, Hα obs. 7−120355
Sun, eruption of untwisting filament during 3B/X13 flare 7−120357
Sun, filaments, fine struct. obs. in Hα 7−140000
Sun, flare activity, quasi-periodicity (1980-1) 7−88358
Sun, flare of July 25 1981, magnetic field sign var. with altitude 7−127788
Sun, global circulation currents from solar-limb temperature variations 7−127813
Sun, gradient of small-scale vel. fluctuation in photosphere 7−139998
Sun, granulation and magnetic field structures 7−127790
Sun, granulation contrast determ. 7−120345
Sun, gravitational quadrupole moment from acoustic and gravity normal mode spectra 7−79944
Sun, Hα flare kernels and peaks of observed longitudinal elec. current densities 7−127830
Sun, Hα obs. of loops during 1980 November 6 flare 7−120356
Sun, intermediate-degree oscillation modes from Doppler images 7−88343
Sun, mag. activity indices meas. rel. to solar and stellar cycles anal. 7−115380
Sun, mag. field meas. from line-ratio method outside active regions 7−127807
Sun, mag. fields, Fourier analysis deconvolution scheme 7−72383
Sun, magnetic neutral lines of large-scale field and solar activity 7−88335
Sun, magnetic polarities from Hα data rel. to magnetograph data 7−120354
Sun, nonpotential features obs. in mag. field of active region 7−115336
Sun, optical polarisation meas. at sensitivity of parts in ten million 7−79933
Sun, p-mode oscillation freqs. rel. to depth and latit. depend. of solar rot. 7−101755
Sun, photospheric turbulent velocities from weak CN lines 7−88336
Sun, polarized flare elements, Hα fine structure obs. 7−88357
Sun, quiescent prominences, diagnostic capability of O 777.4 nm line 7−88341
Sun, quiescent prominences, short-period oscills., Ca II obs. 7−107794
Sun, quiet, small scale motions above conc. mag. regions 7−127827
Sun, rot. rate determination from Ca K-index 7−145929
Sun, rotations 1754-60 activity anal. 7−107789
Sun, search for giant photospheric convection elements using mag. tracers 7−140023
Sun, search for p-mode freq. changes (1980 to 1985) 7−101750
Sun, sunspot penumbra, Evershed effect rel. to photospheric line equivalent width 7−140032
Sun, sunspots, 1983 observations from Istanbul University Observatory 7−145919
Sun, sunspots, 1984 observations from Istanbul University Observatory 7−145920
Sun, TA activity report (1987 February) 7−88339
Sun, TA activity report (1987 February-March) 7−120350
Sun, TA activity report (1987 January) 7−79916
Sun, TA activity report (1987 July) 7−145907
Sun, TA activity report (1987 June) 7−145906
Sun, TA activity report (1987 March-April) 7−120351
Sun, TA activity reports (1987 April-May) 7−140001
sunspot activity, anal. of strong fluctuations for solar cycles 12 to 19 (1878 to 1964) 7−140024
sunspot image analysis, automatic log spectrum restoration of atmospheric seeing 7−72316
sunspot umbrae, mag. field and temp. characts. determ. from Mg I 457.1 nm line Stokes profiles 7−140013
sunspots and faculae, 1985 AD observations at Istanbul University Observatory 7−127821
super-metal-rich stars, search for Galactic radial metallicity gradient 7−145947
supernova remnants, optical emission stratification obs. in adiabatic remnants 7−140220
supernova search in Shapley-Ames galaxies, surveillance times (1980 to 1985) 7−146012
supernovae, Type Ib, observational props. and spectroscopic classification criteria 7−120465
SwSt 1, young planetary nebula with central WC10 star, spectrophotometry and spectroscopy obs. 7−128029
symbiotic stars, cool components, spectral types and lumin. classes 7−107831
symbiotic stars, linear polarization props. 7−120420
TASV 0616+15, UK patrol report (1987 no.2) 7−120423
V711 Tau, 1986 uvby light curve change, star spots 7−146044
44 Tau, δ Sct star, atmospheric parameters and element abundances from spectrum anal. 7−140104

visible astronomical observations continued
θ^2 Tau, δ Sct star, pulsation characts., photometric obs. 7−79972
Z Tau, Mira variable, period vars. anal. rel. to max. and min. magnitudes vars. 7−72457
V711 Tau, photometry of active RS CVn type star 7−120508
SU Tau, R CrB star, visual magnitude estimate (1987 August 2) 7−134243
SU Tau, R CrB type star, observations of recovery from fading 7−88448
CE Tau, SRc star, BV photometry (1981 to 1986) 7−72452
RY Tau, T Tau star, Hα obs. during high brightness epochs *(Russian)* 7−72424
V471 Tau, white dwarf eclipsing binary, photometric study *(Turkish)* 7−115521
DR Tau, YY Ori star, UBV photometric characts. *(Russian)* 7−72423
BU Tau (Pleione) in Pleiades, Δa-photometry 7−101793
T Tau stars, near-simultaneous UV and optical spectrophotometry 7−88411
RV Tau stars, optical and IR photometry 7−107863
T Tau stars, polarimetry and shell characts. *(Russian)* 7−88421
T Tau stars, rotational and radial vels. 7−88410
T Tau stars, simultaneous spectroscopic and photometric obs. of four stars 7−134233
Taurus-Auriga region, pre-main sequence stars with Ca II emission, rot. and radial vel. meas. 7−107817
TAV 0723−03 in Monoceros, discovery, magnitudes, position, and sequence 7−120425
time observations with Photoelectric Transit Instrument at Torino Observatory, (1980.3 to 1985.3) 7−119922
Tokyo Astronomical Obs., Time and Latitude Bulletins (October-December 1986) 7−94637
TOL 1037−271, TOL 1038−272, quasars, redshift systems in absorpt. spectra 7−128118
TOL 1037−27/1038−27, QSO pair, absorption spectra anal. 7−128119
Trumpler 37, membership of young open cluster 7−134282
47 Tuc, BVI CCD photometry obs. 7−140193
CF Tuc, eclipsing RS CVn star, UBV photometry from light curves anal. 7−127955
type-II OH-IR stars, visible and IR photometric and spectral obs. 7−120411
4 U 0115+63 (Cas γ-1), Be star optical obs., suggestive of future X-ray and γ-ray activity 7−79985
4U 1145−619 (Hen 715), X-ray and optical spectral vars. during X-ray outburst 7−127973
4U 1915−05 optical counterpart, identification and photometric obs. 7−94951
4U 1957+11, 9.3 hour orbital period in potential black hole binary 7−72528
4U 2129+49(=V1727 Cyg), X-ray heating light curve, accretion disk effects 7−127954
UBV star count data toward North Galactic Pole, obs. and anal. 7−79950
UBVRI photometry at La Palma Observatory, photometric props. of atmospheric dust 7−94437
UM 679, quasar, field, evidence for string loops 7−139910
AN UMa, AM Her star, orbital characts. and spectral obs. 7−88504
SW UMa, detection of superhumps and quasi-periodic oscills. in SU UMa star 7−101799
CH UMa, dwarf nova magnitudes, early 1987 observations 7−88450
W UMa, H-alpha photometric observations of activity of eclipsing binary 7−120509
ξ UMa, quadruple system, obs. of Li abundances and chromospheric activity 7−72541
SU UMa, spectroscopic study of dwarf nova 7−88437
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
UX UMa-type nova-like systems, continuum distribs. and line profiles 7−115403
Uranus, atmosphere structure models and (3-0) H_2 quadrupole line profiles 7−120313
Uranus, Bordeaux Observatory meridian obs., comparison with ephemerides 7−115293
Uranus, equatorial coordinates (1975 to 1985) from Danjon astrolabe, Santiago, Chile 7−72353
Uranus, stellar occultation obs., 1982 April 22, rel. to ring profile fits and atmospheric temp. profile 7−88177
Uranus satellites, Voyager 2 obs. rel. to cratering records and origin of impacting objects 7−134179
375 Ursula, large C-type asteroid, rot. and var. 7−139952
US 943, identification as halo cataclysmic variable from photometric obs. 7−79997
(V1719)Cyg, uvbyβ photometry of RR Lyr star 7−79991
variable stars, TA observations (1987 April) 7−120426
variable stars, TA observations (1987 February) 7−88424
variable stars, TA observations (1987 January) 7−79978
variable stars, TA observations (1987 July) 7−145971
variable stars, TA observations (1987 June) 7−145969
variable stars, TA observations (1987 March) 7−120424
variable stars, TA observations (1987 May) 7−140084
variable stars, visual obs. (July to December 1985) 7−72448
variable stars among comparison stars for Be stars photometry, list of 24 stars 7−145986
AO Vel, B-type eclipsing binary in triple system, orbital characts. and photometric obs. 7−72512
Vesta, flattening, pole position, and albedo features from photometric data 7−134170
FO Vir, pre-contact system, photometry and elements 7−115504
AH Vir, W UMa star, BV photometric characts. 7−146031
Virgo cluster, morphological analysis of massive early-type galaxies 7−95034
Virgo Cluster elliptical galaxies, novae occurrence and characts. 7−140088
visual binary stars, meas. at Pic du Midi and Nice (1983 to 1986) *(French)* 7−140159
visual binary stars, search for systematic errors in photographic meas. 7−88500
visual binary stars discovered at Nice, 20th series *(French)* 7−72326
visual double and multiple stars in Southern Hemisphere with some DM number but separate SAO numbers *(French)* 7−72330
visual double stars, photographic obs., report of mag. tape listings 7−88497

visible astronomical observations continued
BW Vul, β Cep star, spectroscopy of optical photosphere rel. to pulsation kinematics 7−140094
WW Vul, Herbig Ae-type star, Hα emission vars. at max. luminosity 7−140067
ER Vul, light curve vars., BV photometry (1981-2) 7−146036
PU Vul (Nova 1979), photometry, spectrophotometry, spectrum and polarisation (1981 to 1982) 7−140102
PU Vul (Nova 1979), symbiotic nova, UBV photometry, spectroscopy, and orbital elements 7−115444
PW Vul (Nova 1984 No.1), spectroscopic obs. (October-November 1984) 7−72435
PW Vul (Nova Vul 1984 no.1), late 1986 and early 1987 visual magnitudes 7−94898
PW Vul (Nova Vul 1984 No.1), possible orbital period from photometric obs. 7−88452
VV 32, ring galaxy, CCD photometry rel. to star form. 7−72589
WD 1910+047, white dwarf star (X-ray emitter), spectrophotometry obs. 7−101774
weak-lined stars, photometrically-selected, spectral classification and metal deficiencies 7−88377
WN-type binary stars, He II 468.6 nm line vars. rel. to motion of WN component 7−145996
Wolf 922 and Wolf 922 B, red dwarf binary, parallax, masses and luminosities 7−101762
Wolf-Rayet population in 30 Dor and surroundings, imaging, photometric and spectroscopic obs. 7−72443
WR 78 (=HD 151932), photometric variability of WN7 star 7−120454
X0142+614, soft X-ray source, search for optical and radio counterparts 7−95051
X-ray binary stars optical counterparts, CCD obs. 7−127951
x-ray nova at 13 hours 53 minutes, −64.4 degrees, optical observations 7−80040
X-ray selected cataclysmic variables 7−107855
X-ray selected stars, spectroscopic obs. 7−101956
X-ray sources, HEAO-1 obs. and optical identifications 7−101958
XB 1254−690, optical light curve of low-mass X-ray binary 7−101852
XN 1987A spectra and visual magnitude estimates (March 4 to 13 1987) 7−80005
yellow evolved stars in open clusters, photometric and spectroscopic search for superluminous giant stars 7−115382
young star clusters, kinematics rel. to Galaxy rot. curve 7−101861
young star clusters in M31, props. from integrated UBVR photometry 7−95031
young stars' jets, CCD imaging, long slit spectroscopy and data interpretation 7−140060
Yunnan Observatory No. 1 CCD system, precision for stellar photometry and observable magnitudes *(Chinese)* 7−101688
1468 Zomba, asteroid photometry and rotation period 7−101698
III Zw 77, high-ionisation Seyfert 1 galaxy, UV and optical emission-line spectrum 7−128057
Zwicky galaxies, accurate positions of 2378 objects 7−140260
Zwicky galaxies, accurate positions of 2562 objects 7−140259
λ And, RS CVn star, discovery of optical circular polarisation 7−127897
Be-deficient F-type stars, element abundances determ. 7−88404
C stars, Balmer decrement obs. in C-type long-period variables rel. to source of violet depression 7−120443
C stars, O isotope abundances in N-type and J-type stars 7−127893
C stars in Cassiopeia region, detect. and catalogue 7−94881
C stars in Leo I dwarf spheroidal galaxy, location in colour-magnitude diagram of giant branch 7−120588
C stars in Sculptor dwarf spheroidal galaxy, accurate radial vels. 7−145965
Ca II emission line stars, statistical survey of duplicity 7−120442
P/Comet Giacobini-Zinner (1985 XIII), spectrophotometry in 300-1000 nm window 7−88297
H II galaxy giving rise to z=0.3930 absorpt. system in QSO 1209+107, photometry and spectrum 7−80118
H II regions in M101, appl. of theoretical models to element abundance gradient determ. 7−95009
He-weak stars in clusters and associations, photometric variability 7−120421
EV Lac, spiky flare observations for flare star 7−94899
N-rich metal-poor stars, Li abundances rel. to source of N enhancement 7−145956

visible spectra of diatomic inorganic molecules *see spectra of diatomic inorganic molecules*

visible spectra of inorganic liquids and solutions *see spectra of inorganic liquids and solutions*

visible spectra of polyatomic inorganic molecules *see spectra of polyatomic inorganic molecules*

vision
see also colour vision; eye; vision defects; visual perception
accommodation, steady-state, effect of spatial freq. 7−133271
accommodation dark focus, variation with lases speckel exposure duration 7−78843
accommodation response, effect of target content at higher spatial freqs. on accuracy 7−78842
accommodation system, open-looping by use of small artifical pupils 7−78848
accommodation to stimuli in peripheral vision 7−145043
accommodative facility testing reliability 7−93730
adaptation of tonic and vergence accommodation, clinical method for meas. 7−126818
age-related norms for visual function testing 7−93736
And off systems in human vision 7−107068
aspheric ophthalmic lenses, aberrations, design and performance 7−94020
Bagolini striated lens test for strabismic subjects, anomalous sensory responses, target size effect 7−93742
bifocal, electrically switched intraocular and eyeglass molecular lenses 7−94022
binocular stereo vision system using eye and neuron model 7−86961
binocular vision, support of fusion rather than suppression theory by chronometric anal. 7−86987
binocular visual function, anal. using tests made under binocular conditions 7−93753
body sway rel. to concentrically moving multi-spotlights stimulation 7−114369
broadband isotropic mechanism sensitive to high-vel. stimuli, expt. evidence 7−145038
cerebral probe implantation method, spatial viewing, simulator using floating line concept 7−114551
children with and without learning difficulties, comparison of visual characts. 7−133263
clinical evaluation of visual functions, CRT technology appl. 7−93989
coding of images by the retina 7−93739
cognitive functions model and inversion of sensory processing by feedback pathways 7−145031
computer aided system for the evaluation of visual functions 7−101122
cone positional disorder influence on resolution 7−145020
cone sampling array models 7−145021
contact lenses, spline algorithm and computing and developing 7−94018
contrast discrimination in peripheral vision 7−133291
contrast sensitivity: characts. of a large, young, adult population 7−133300
contrast sensitivity function measured at fovea and periphery, effect of optical degradation 7−100889
contrast sensitivity functions, central and peripheral, spatial scaling 7−133290
convergence demand determ. for a patient who reads at a close working distance 7−107042
cortex transform: rapid computation of simulated neural images 7−139250
cortical magnification and peripheral vision 7−133288
corticofugal pathway from striate cortex to lateral geniculate complex of the cat, duplex character 7−86968
cricket, visual performance of batsmen rel. to light level 7−78838
cylinder axis sensitivity, effect of cross cylinder power 7−107043
dark focus accommodation, effects of relax. and adversive visual stimulation 7−133272
defocus effect on visual field meas. 7−133491
dioptric and non-dioptric stimuli for accommodation: target size alone and with blur and chromatic aberration 7−71735
driving and vision 7−78839
event-related brain pot., N_2 component in abstinent alcoholics 7−100891
evoked P100 wave, latency rel. to gender and head size 7−133279
evoked potential, early component CI, effect of grating spatial freq 7−86969
evoked potential, human effect of standing contrast and pattern adaptation 7−78849
evoked potential changes following renal transplantation 7−100890
evoked potential in normal full-term and premature neonates 7−86964
evoked potentials, normal temporal variability of P100 7−100896
evoked potentials, scalp topography, waveform decomposition technique appl. 7−100892
evoked potentials in preterm neonates, changes with arousal states as assessed by EEG monitoring 7−133280
evoked potentials in the hypoxic cat, effects of therapeutic level US 7−107154
extrafoveal cone spacing, psychophysical estimate 7−145057
eye tremor and vision characteristics *(Russian)* 7−114249
fixation disparity, effect of reading in low illum. 7−133299
flash visual evoked potentials, data and control studies, comparison to clinical pop. 7−145027
flicker sensitivity in human vision for linear polarization and colour 7−145041
foveal sensitivity changes in retinitis pigmentosa 7−93743
ganglion X- and Y-cells, visual latency: comparison with geniculate X and Y-cells in cats 7−145033
gaze stability of humans in horizontal, vertical and torsional direction during voluntary head movements 7−86962
geniculate X-cells, distortion prods.: physiological basis for masking by spatially modulated gratings 7−139254
human vision simulation, super-resolution performance 7−93762
human visual system model, cosine transform coding appl. 7−93728
incoherent image formation in the presence of scattering eye media 7−145019
light adaptation and responses to contrast flashes in cones of walleye retina 7−145044
lighting quality influence on human well-being and performance 7−87095
lightness discrimination test and FM 100 Hue test 7−79115
local spatial scale estimation 7−133289
mammalian visual system, self-organising neural network model 7−126815
modulation sensitivity, meridional variations in peripheral flicker sensitivity 7−145042
monocular and binocular vision following cerebral blindness, plasticity evoked pots. obs. 7−86965
motion pictures, visual comfort, alterations to screen image border *(Russian)* 7−128694
motion sensitive yaw torque responses of housefly Musca 7−114255
multichannel microspectrophotometer for visual pigment investigation 7−101161
near vision, sustained, oculomotor consequences of beta-adrenocepto 7−78850
neonatal flash evoked pot., developmental waveform anal. 7−100895
neurons, receptive fields, computer-assisted mappings 7−101150
normal-deviate vision receiver operating charact. curve slope to index of detectability 7−78853
ophthalmic lens, theoretical computation of refr. index 7−107044
ophthalmic lens design with splines 7−94017
ophthalmic optics, conf., Cannes, France (Dec. 1985) 7−88735
ophthalmic progressive addition lenses, optical characts. 7−79128
oscillatory potentials, rod and cone contribs.: explanation for conditioning flash effect 7−107047
pattern ERG in man and pigeon, effect of pattern luminance profile 7−107049
pattern ERGs and visual evoked pots., effects of age and sex 7−133277
pattern masking, rel. to cross-correl. between signal and mask 7−139272
pattern reversal visual evoked pot. latency, variability on serial testing 7−100894
performance model for alphanumeric reading under commercial lighting 7−107066
periodic patterns discrimination in fovea and periphery, evidence for spatially local computations 7−139260
peripheral hyperacuity: isoeccentric bisection is better than radial bisection 7−133287
peripheral hyperacuity: three-dot bisection scales to a single factor from 6 to 10 degrees 7−133286

vision continued
peripheral vision, sensitivity loss in odd-symmetric mechanisms and phase anomalies 7—93746
photoreceptor cells and their response to light 7—119764
photoreceptor responses of patients with congenital stationary night blindness, ERG a-wave 7—93744
photoreceptor transverse spatial impulse response with nonsymmetric refractive index profile 7—126820
phototransduction model explaining prolonged depolarising after potential phenomenon 7—100901
polarised vision in bees, modulations of perceived brightness 7—107056
position sense of the peripheral retina 7—133285
post-saccadic drift, adaptive changes induced by patching 1 eye 7—139252
predictive eye saccades, difference from visually triggered saccades 7—71740
pulse-modulated light source for psychometric and vision experiments 7—114580
reading aid for people with impaired vision *(German)* 7—71927
reading psychophysics, role of contrast in normal vision 7—100908
resolution and sensitivity in galagos, visual evoked pots. obs. 7—107057
retinal adaptation to light, math. and cybernetic model of elec. responses of photoreceptor cells *(French)* 7—139256
retinal function with parallel architecture and integrated space-time filtering 7—93740
retinal ganglion cells, carp, variation in light responses, independence of response amplitude 7—71739
retinal ganglion cells, frog, surround control of centre adaptation in receptive fields 7—139257
retinal ganglion-cell density and receptive-field size as determinants of photopic flicker sensitivity across the human visual field 7—145029
retinal imaging method with scanning laser ophthalmoscope 7—114437
retinal magnification factor at the ora terminalis: struct. study of human and animal eyes 7—139249
retinal sensitivity rel. to rhodopsin in human infants 7—86972
retinal smear technique for varying grating contrast 7—71950
retinoscope, simple pointspread, suitable for vision screening 7—79100
rhodopsin absorption coeffs., spectral distrib. rel. to action spectrum of human rod vision 7—145046
rhodopsin in isolated amphibian retina, factors affecting regeneration 7—100904
rhodopsin in rod outer segments, self-screening, rat obs. 7—145045
saccades, influence on manual reactions, reaction time and visual evoked pot. study 7—71741
saccades, voluntary amplitude-transition functions plotting 7—71742
scalp potentials evoked by pattern pulse stimuli, topography 7—107050
screening vision tests for medical surveillance or to insure job fitness 7—93975
SeeHear, single-chip system converting visual to auditory signals for the blind 7—139406
sensory substitution visual prostheses design 7—119908
smallest channel prediction in early human vision 7—71738
spatial contrast vision, temporal props. 7—86986
spatial frequency discrimination in anisometropic and strabismic amblyopia 7—93745
spectacle lens design, third order distortion theory 7—94016
statistical efficiency for visual noise detect. 7—107058
steady-state visual evoked pots., digital fast sweep technique for study 7—87397
stereoscopic stimuli presentation using 1 monitor 7—139425
Stiles-Crawford function, effect of monocular light exclusion 7—71745
Stiles-Crawford function eval., quantitative methods 7—145052
stimulus-response functions of visual systems 7—139259
synapses for motion interpretation 7—107046
temporal cortex cells of conscious sheep, preferential response to sight of faces 7—133282
temporal impulse responses derived from flicker sensitivities 7—107055
tonic accommodation, cognitive demand and ciliary muscle innervation 7—71732
tonic accommodation and tonic vergence, time course and decay of effects of near work 7—78851
tonic adaptation in symptomatic and asymptomatic subjects 7—107054
two-dot vernier discrimination within 2.0 degrees of the foveal center 7—133284
Varilux lenses conception, visual reliability 7—94019
VDU comfort and safety, visual fatigue and relative visibility meas. *(Japanese)* 7—126812
vergence adaptive changes with varying magnitudes of prism-induced disparities and fusional amplitudes 7—93734
vernier offset evoked cortical activity, localisation obs. 7—139255
vertical yoked prism—patient acceptance and postural adjustment 7—133509
visual electrophysiological signals, transverse filter appl. 7—93738
world optometry 7—78837

ision defects
see also contact lenses
accommodation, facility, lag, amplitude meas. in school children 7—145016
amblyopes, strabismic and anisometric, and optically blurred normals, effects of luminance on visual acuity 7—145047
amblyopia, anisometropic and strabismic, spatial freq. discrimination 7—93745
amblyopia, performance of children on printed contrast sensitivity test charts 7—107038
amblyopia, positional uncertainty 7—71755
amblyopia, shape recognition obs. 7—71757
ametropia, model for retinal shape changes 7—78846
anisometric amblyopia, spatial information and uncertainty 7—71758
asthenopia, reduction after accommodative facility training 7—126810
astigmatism, mediation of changes from direct to inverse, rel. to transition probability matrix 7—78847
astigmatism, peripheral, schematic eye model for effects of translation and rot. of ocular components 7—78845
astigmatism, subclinical, meas. and speculations 7—93733
Bagolini striated lens test for strabismic subjects, anomalous sensory responses, target size effect 7—93742
blur injury caused by motion of a picture on the frame-repeated type display *(Japanese)* 7—93729
cataract, models comparison by neutron scatt. obs. on calf lens cytoplasm 7—145139
cataract form. in Emory mouse, Raman spectra study 7—133264

vision defects continued
City University Colour Vision Test, anal. of Mark II edition 7—93982
closed-circuit TV reading machines and optical aids, comparative study in use for visual disability patients 7—133510
colour threshold test, clinical, for eye disease detect. 7—71920
colour vision, standard pseudoisochromatic plates comparison to Ishihara test 7—93747
congenital colour vision defects, averaging method for interpretation of Farnsworth-Munsell 100-hue test 7—133295
congenital nystagmus, dual jerk waveform spectral anal. 7—114250
congenital nystagmus, waveform characts. 7—114256
congenital stationary night blindness patients, photoreceptor responses 7—93744
crystalline lens with cataract, lipid fluorophores 7—144967
diabetic pan-retinal photocoagulation patients, 'hidden' deficit in central vision 7—133292
diabetic retinopathy, ERG oscillatory pot. and psychophys. contrast sensitivity correl. 7—114257
diabetic retinopathy related colour vision defects, Farnsworth-Munsell 100-hue test interpretation 7—133296
dichromacy, equilib. hue judgements 7—107060
disability glare rel. to increased hydrogel lens wear 7—107037
galactosemic cataracts, Raman spectroscopic study on rats 7—74627
glaucoma, fundus image processing system for early detect. 7—79056
glaucoma static visual field data, criterion-free parameter-free distribution-independent index of diagnostic test performance 7—93983
glaucoma visual deficit, electrophysiological assessment, steady-state visual evoked potentials 7—93735
hereditary retinal degeneration, changes in visual sensitivity with age, rat behavioural obs. 7—107067
heterophoria, orthophorization 7—78852
hybrid perimetry blend of static and kinetic techniques, visual disorder diagnosis 7—93985
lens human, yellowing with age: nuclear and cortical contribs. 7—145026
macular disease, delayed visual evoked pots., independence to pattern orientation 7—133278
macular edema reduces B cone sensitivity in diabetics 7—93750
maculopathy, age-related, early colour vision changes 7—93751
myopia, effect of near-vision task on response AC/A 7—133273
myopia, experimental, development in chicks: susceptibility, recovery and rel. to emmetropisation 7—100888
myopia, Houston Myopia Control Study, randomised clinical trial 7—133267
myopia, late-onset, and emmetropia, aspects of tonic accommodation 7—133268
myopia, progression in young adults and children, meridional corneal components 7—133266
myopia, review and suggested classification system rel. to age 7—133269
myopic progress prevention by glasses, study on schoolchildren 7—145018
peripheral astigmatism in real eyes, schematic modelling 7—133274
peripheral visual field loss, efficient evaluation method, automated kinetic perimetry 7—93984
photoretinoscopy as screening technique for anisometropia and refractive error assessment, children and adults 7—145167
refractive error, uncorrected, among a hospital population 7—133276
refractive error change at United States Air Force Academy over 2.5 yr 7—107041
refractive error changes in law students 7—133270
refractive errors, distrib. in Nigeria 7—133275
remote sensing of eye disorders utilising retinal reflex photometer 7—93877
retina disorder diagnosis, freq. anal. of human ERGs 7—145032
retinitis pigmentosa, dependence of cone b-wave implicit time on rod amplitude 7—100899
retinitis pigmentosa, foveal cone optical density 7—93731
retinitis pigmentosa, foveal sensitivity changes 7—93743
retinitis pigmentosa, macular pigment and reduced foveal short-wavelength sensitivity 7—100903
retinitis pigmentosa, pupillometric measures of retinal sensitivity in infants and adults 7—71744
time-of-flight laser anemometer for turbine appl. 7—121080
tracking movement dysfunction, visual feedback method for improvement 7—101134

visual display units *see cathode-ray tube displays; interactive terminals*

visual evoked potentials *see bioelectric potentials; vision*

visual perception
3D shape inference from 2D silhouettes 7—136216
3D space-filling data, display and perception 7—126825
acuity and hyperacuity, optical resolution, spatial localization, form perception, review 7—145015
aerial image display systems in simulation 7—139276
after images, duration on modulated backgrounds: postreceptoral processes 7—71751
anomalies in human visual perception and need to avoid them in machines 7—86979
apparent motion, visual inertia obs. 7—86985
apparent motion impression anal. using retina model response *(Japanese)* 7—119766
apparent motion in motion competition displays, effect of moving contexts on perceived direction 7—86989
apparent motion perception of chromatic stimuli *(Japanese)* 7—114261
apparent motion perception under light-adapted condition *(Japanese)* 7—114262
chromaticity of complex visual fields, rel. to adaptation state 7—107064
colour constancy, effect of filters on object colour naming 7—133298
colour-discrimination ellipses in a cone excitation space 7—71746
complexity level anal. of vision 7—114265
computer graphics, realistic imagery, experimental evaluation 7—68565
cone spacing and the visual resolution limit 7—145058
consonant-vowel articulations, synthetic, visual perception 7—145095
constant hue loci of unique and binary balanced hues at 10, 100 and 1000 Td 7—107065
contrast, influence on foveal and peripheral detection of coherent motion 7—145062
contrast discrimination in peripheral vision 7—133291
contrast sensitivity, effect of repeated testing 7—93754
contrast sensitivity, normative functions, comparison problem 7—78861
cortical dynamics of boundary completion, segmentation, and depth perception 7—93763

visual perception continued
cosmological filamentary structure, photography and human eye comparisons 7−128160
CRT visual search performance and strain, effects of presentation mode and contrast level *(Japanese)* 7−86984
depth cues, interaction between color, texture, motion, binocular disparity, and shape 7−86977
depth reconstruction in stereopsis 7−114266
detectability of objects on electro-optical displays given turbulence and noise *(Portuguese)* 7−133308
detection threshold differences to crossed and uncrossed disparities 7−145072
dichoptic hyperacuity nonius alignment precision 7−107063
digital radiography, low-contrast signal detectability, pixel size effect 7−114473
disparate foveal stimuli, depth attraction and repulsion 7−139273
double-flash illusion props. 7−71750
dynamic stereo display and interaction with surfaces of medical objects 7−145270
dynamic stereoscopy: testing visual perception of 3D moving objects 7−145054
ecological optics, graphical simulations tuned to human perception 7−93758
edge displacement thresholds: dependence on edge blur, contrast and displacement distance 7−145069
fluorescent lamp colour appearance using Estevez-Observer, chromaticity and tolerance areas 7−108621
fovea and periphery, comparison of perceived spatial frequency 7−133304
gloom sensation, physiological basis, quantitative and qualitative aspects 7−78864
graphs, humans' perception and interpretation 7−126827
grating detection and resolution, retinal limits 7−145059
grating motion detection, spatiotemporal properties 7−145060
HDTV standard setting using psychophysical bases 7−86983
horizontal lightning propag. obs. and use of human visual processing system 7−139275
Hotelling trace criterion and its correlation with human-observer performance 7−114471
housefly's landing response, visual trigger 7−93757
human visual system for moving images model base 7−145073
identification/detection performance ratio, eccentricity effect 7−133303
illusions, spatial experiments and problems in 3D graphics 7−145053
illusory colours induced by movement, perception by bees 7−139270
image display thresholding and observer detection performance 7−114472
image filtering and enhancement using human perception props. 7−126830
image flow extraction model 7−145056
image primitives selection for general purpose visual processing 7−86981
image quality standardisation 7−122862
induced movement, effect of orientation and motion of enclosed texture 7−139274
information processing simulation 7−114259
intensity disparity detection in differential stereo vision *(Japanese)* 7−133265
kinetic depth effect, parallel model using local computations 7−93760
line straightness deviation detect. obs. 7−145070
local geometry representation based on partial derivatives 7−133301
local spatial scale estimation 7−133289
long-range apparent motion, effects of movement in the background field 7−145071
luminance distributions with gradual changes, brightness perception obs. 7−145066
luminance flicker effect during periodic presentation of fine-structure images 7−133306
McCollough effect, generation by global factors 7−71754
medical image processing, visual perception role 7−93990
medical images, electronically displayed, luminance-discrimination thresholds, effect of ambient light 7−114531
misfocused vision, Fresnel diffr. effects, num. calc. 7−66871
monocular homogeneous fields (Ganzfelder), perceptual 'blankout' prevention with binocular viewing 7−107070
motion aftereffects associated with pursuit eye movements 7−71752
motion and colour, interaction in human vision 7−126828
motion detection, parallel and serial processes 7−133307
motion detection, role of eye movements 7−86971
motion detection mechanisms 7−145061
motion detection units, human, receptive field size obs. 7−71756
motion direction perception, cooperative phenomena 7−114260
motion discrimination, direction-specific improvement by training 7−107069
motion perception in successively displayed pattern stimuli on CRT *(Japanese)* 7−78865
moving comet perception at high retinal illuminance levels, rod-cone interaction effect 7−107062
neural computation of inner geometric pattern relations 7−114252
neuronal models, flip-flops between states with strange attractors, statistical properties 7−133179
nonlinear colour appearance model, whiteness-blackness and brightness response 7−133293
object-motion detect. rel. to concurrent self-motion perception, vehicle guidance appl. 7−133305
optical flow computation using gradient-based multiconstraint method 7−82479
optical flow extraction model 7−126832
orientation selection and optical flow 7−86978
oscillatory movement displacement thresholds: resistance to optical image degradation 7−78863
painted sample colour difference perceptibility, 3D threshold, observer variability in CIE colour regions 7−133294
parafovea, aliasing with incoherent light 7−133302
parallel processing of motion and colour information 7−126829
pattern recognition, identification of parameters of subject response model 7−126826
peripheral vision characts., monograph 7−128202
perspective vergence: oculomotor responses to line drawings 7−145037
planar pattern recognition by invariant features and human visual system 7−93764
polarised vision in bees, modulations of perceived brightness 7−107056
positional uncertainty in peripheral and amblyopic vision 7−71755
primal sketch in human vision 7−93761
visual perception continued
random-dot symmetry and apparent movement, perception at and near isoluminance 7−71753
representations in brain, towards artificial perception *(Japanese)* 7−86976
saturation discrimination, clinical meas. 7−93755
screening without technical equipment, development of behaviorally validated questionnaire 7−93756
search rate for single targets over wide field, effect of instantaneous field of view 7−119767
sensory latency and reaction time, depend. on contrast polarity and early linearity in human vision 7−78862
shape from darkness method, surface information extraction from dynamic shadows 7−119770
shape recognition from single silhouettes 7−119769
shape recognition in amblyopia 7−71757
simulation and visual perception of real world and simulator 7−93765
simulator sickness, etiology 7−126831
sinusoidal gratings, perceptual latency and spatial freq. 7−139269
smooth eye movement and perception, shared attentional control 7−145067
soft copy display of electro-optical imagery 7−139268
solid shape description and inference from occluding contours 7−136215
spatial beats displacements detect.: monocular capability 7−86988
spatial frequency channels and perceptual grouping in texture segregation 7−86982
spatial information and uncertainty in anisometropic amblyopia 7−71758
spatial-interval discrimination in human fovea 7−139267
stereo error detection, correction and evaluation 7−114264
stereoacuity, degradation by small field of view 7−78860
stereoacuity rel. to binocular rivalry 7−71749
stereopsis and eye-movement 7−114263
stereopsis using image intensifiers in binocular devices 7−119765
stereoscopic contours and optokinetic nystagmus in normal and stereoblind subjects 7−86990
stereoscopic tilt created by interocular spatial freq. disparity 7−145068
striate neurons, responses to moving light and dark bars, changes with eccentricity 7−145030
structure detection by symbolic constructions on tokens 7−86980
surface inference from boundaries 7−114267
texture discrimination at different eccentricities 7−145064
tilt aftereffect saturation 7−107071
tolerance to visual defocus, low-resolution systems compared with high resolution ones 7−93759
transient mechanism, magnification factor for adaptation 7−145063
two-point resolution near detection threshold 7−145055
velocity perception and discrimination: rel. to temporal mechanisms 7−145065
zero crossings and spatiotemporal interpolation, 2D soln. 7−119768

visualisation, particle track *see particle track visualisation*

vitreous state
see also electron energy states of amorphous solids; glass; glass transition (polymers)
bisphenol-A polycarbonate glass, ^{1}H and ^{13}C spin-lattice relax., chemical shift anisotropy line shape collapse 7−106044
cadmium organometallic glass-forming materials, struct. 7−97939
coronene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
1-cyano-adamantane, glassy and plastic phases, reorientations, local order 7−142659
excitation relaxation processes, photoluminescence and photodarkening 7−85797
fractals and localisation 7−84780
glassy polymer coatings, role of F_2 in gas phase synthesis 7−77847
glassy polymers, solvent sorption, free boundary problem 7−84507
glycerol, glass transition, freq.-depend. shear modulus meas. 7−124511
hole burning spectroscopy and relax. dynamics at low temp., phonon assisted tunnelling 7−136457
insulators, electrical cond. temp. depend., use of Fermi function derivative as probability density function 7−76866
organic glass, doped, optical dephasing times studies, coherent transient photon-echo technique, review 7−75079
organic glasses, damage and failure in alternating long-term and cyclic loading 7−78160
organic glasses, impurity mol. zero-phonon line broadening, hole burning studies, review 7−75076
organic glassy hosts, guest mol. optical linewidths and dephasing, hole burning study 7−75077
phenanthrene molecules in glassy solns., annihilation delayed fluorescence spectra anal. *(Russian)* 7−129689
plasma, one-component, glass transition, dynamic correlations, generalised viscoelastic formalism 7−105027
polyalcohol aqueous solns., vitreous state decomposition 7−131319
polymeric glasses, secondary relax. and glass transition 7−97985
proteins, glass-like properties 7−86907
sialons, materials development study 7−138717
silica, impurity ion homogeneous optical linewidth, Raman contrib. determ., temp. depend. calcs. 7−77610
SiO_2, vitreous peroxy linkage, semi-empirical calc. 7−137246
tetracene in alcohol glass, tunnelling dynamics, photophysical hole burning system anal. 7−97098
Al_2O_3 refractories, fracture strength, temp. and stressing rate effects 7−144512
AlX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
As-S vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
As-Se vitreous chalcogenide film, photoinduced and radiation-induced struct. transformations 7−142646
As_2S_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
As_2Se_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
C glassy layers, optical and electrical energy gap investig. 7−84651
GaX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
InX_3, X=Cl, Br, aq. soln. in liq. and glassy states, Raman study 7−144066
Mg salts, glassy and liq., Raman spectra studies 7−106162
MgO-ZrO_2 partially stabilised zirconia, microstruct. changes during aging 7−100267

vitreous state continued
$Pd_{58.8}Si_{20.6}U_{20.6}$, icosahedral and glassy, low-energy modes, neutron inelastic scatt. 7−118048
$Rb_{0.65}(NH_4)_{0.35}H_2PO_4$, glossy system with relax.-time distrib., Brillouin scatt. 7−99878
SiO_2, defect Raman bands, struct. model 7−85656
SiO_2 films, defects, nature and elec. props., book contrib. 7−105488
SiO_2 glass, surface, struct. anal., mol. dynamics computer simulation 7−91935
SiO_2, porous glass and vitreous struct., X-ray diffr. 7−104566
SiO_2, vitreous, continuous random network model, computer simulation 7−83677
SiO_2, vitreous, heat pulse propagation at critical heat power 7−131380
SiO_2, vitreous, O−O vibrs., Raman obs. 7−70825
SiO_2, vitreous, radiation H(I) and H(II) centers, photo- and thermostimulated processes 7−70643
SiO_2, vitreous, scatt. fn. determ. 7−131031
SiO_2:Eu^{2+}(Yb^{2+}), vitreous, luminescence props. 7−70857
SiO_2:H, doping by ion beam enhanced hydration 7−91451
TeO_2-$ZnCl_2$ vitreous system, struct. and US props. 7−104556
$YBa_2Cu_3O_{7-\delta}$, rapidly solidified supercond., preparation, crystallisation and props. 7−143663
$Yb_{0.17}Ba_{0.33}Cu_{0.50}$ glassy alloy as precursor for $Yb_1Ba_2Cu_3O_x$ high T_c supercond., 7−144333

vitreous structure *see glass structure; vitreous state*

vitrification
see also glass transition (glasses)
amorphous solid form. theory 7−124115
atomic short range order, glass form. 7−83728
cadmium organometallic glass-forming materials, struct. 7−97939
chalcogenide melts, relation between metallisation and vitrification 7−111392
contaminated HLW sites, telemetry system for melt depth monitoring during in situ vitrification 7−103219
disordered materials, survey of amorphous solids 7−111402
glass-forming melts, two-level model, nonisobaric conditions 7−98448
glycerol, glass form. by linear cooling, isothermal enthalpy relax. meas. 7−84318
high melting ionic solid glasses, twin roller quenching technique and prep. 7−144355
HLW composite waste forms, monazite and zirconium phosphate-type, simulated waste leach rates 7−116708
HLW from LWR fuel reprocessing, powder-technology based vitrification *(German)* 7−129434
ice, nonequilibrium crystallisation in aqueous solutions, glass form. 7−131315
metallic glass formation kinetics and thermodynamics 7−84270
metallic glass formation prediction, ion mixing 7−137253
metallic glass production and mechanical properties *(Spanish)* 7−86122
metallic glasses, formability criteria, pattern recognition method 7−83735
metallic glasses, formation, methods and techniques 7−143011
metallic glasses, thermal stability, glass form. and mech. props. 7−76020
metastable metallic crystals, spontaneous vitrification 7−111406
nucleation, transient, interpretation of expt. meas. 7−76353
polymers vitrification temp. determ., using dilatometer 7−143008
pulsed laser quenching for material amorphisation 7−98239
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
silica glass, sol-gel derived, impurity distribution, dehydration/sintering effects 7−141955
tetraethyleneglycol diacrylate, photopolymerisation, thermal and mechanical anal. 7−119529
thermodynamics, glass transition universality, undercooled liq. state 7−142623
(Ti,Hf,Zr)Be ternary alloys, glass forming range prediction 7−83734
AgI-Ag_2O-V_2O_5-P_2O_5, vitreous electrolytes, glass form. and elec. cond. 7−131362
Al-Mn (14 at.%), rapidly solidified droplets, icosahedral quasicrystals and glass form. 7−131052
$Ba(PO_3)_2$-BaF_2-AlF_3 glasses, struct., NMR obs. 7−104578
$Ba(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578
Co-C-Si, rapidly quenched, nonequilib. phases 7−113521
Co-Hf-Mo-Nb system, phase equilib., glass form. *(German)* 7−137260
$Cr_{40}Ti_{60}$ spontaneous vitrification during low temp. furnace annealing 7−117824
Cu-Ti system, melt spun ribbon, glass forming ability 7−83737
Cu-Ti-Zr, Cu-Ti alloys, glass form., competing cryst. structures 7−83738
Cu_xY_{1-x}, amorphous metallic glasses, form., crystn. 7−77867
Fe film, glass form. by N^+ implantation, elec. resist. meas. 7−143013
Fe-B-Si and Fe-P-C systems, powders prepared by water atomisation, comp. effect on glass-forming regions 7−132527
Fe-Cr-Mo-P-C alloys, vitrification by laser surface melting treatment 7−86487
Ga_2O_3-CaO eutectic comp., glass form., heterogeneous nucleation 7−142595
$Gd_{63.2}Co_{36.8}$, glass-forming eutectic, thermodynamic props. 7−118135
$Ge_{2-2x}Sn_{2x}S_3$, ternary chalcogenide, glass-forming tendency, Raman and Mossbauer obs. 7−85719
$GeSnSe_3$ glass, exception to Ioffe-Regel rule, scanning calorimetry, Mossbauer spectra and molar vol. meas. 7−83725
Hf-Nb-Ni-Ta system, phase equilib., glass form. *(German)* 7−137260
$(KBr)_{0.36}(KCN)_{0.64}$ mixed crysts., history effects, domains, and glass form. studies 7−84243
K_2O-SiO_2, glass-forming melts, cation diffusion 7−69944
Li_2O-SiO_2 glasses, crystn. kinetics, effect of comp. and nucleating agent 7−142597
Mg-Ba molten alloys, complex form., glass form. 7−83731
Mg-Ca molten alloys, complex form., glass form. 7−83731
Mg-Sr 7−83731
Na_2O-B_2O_3, crystallisation capacity, liquid-phase separation, Rayleigh and Mandelshtam-Brillouin scatter 7−99875
Na_2O-La_2O_3-Y_2O_3-P_2O_5, glass crystallisation, phase equilibria 7−84263
Na_2O-Rb_2O-SiO_2, glass-forming melts, cation diffusion 7−69944
Na_2O-SiO_2, crystallisation capacity, liquid-phase separation, Rayleigh and Mandelshtam-Brillouin scatter 7−99875
Ni base amorphous alloys, glass form., thermal stability, mag. props. 7−83729
Ni film, glass form. by N^+ implantation, elec. resist. meas. 7−143013
Ni-C-Si, rapidly quenched, nonequilib. phases 7−113521
Se, amorphous, vitreous transform. and crystn. 7−83702

vitrification continued
SrO-GeO_2 system, time-temp.-transform. diagram *(Japanese)* 7−132592
Te thin films, laser induced phase transformations, transient cond. studies 7−117969
Ti-transition metal alloys, mechanically alloyed, glass form. 7−142643
ZnO-Al_2O_3-SiO_2 based glasses, thermal stability and acid resistivity 7−100407
$Zn(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578
Zr-Ni alloys, glass forming ability and amorphous to cryst. transition 7−83750
ZrF_4-EuF_2-CeF_3, paramagnetic fluoride glasses *(French)* 7−69606
ZrO_2-Al_2O_3-SiO_2 system, rapidly quenched, tetragonal ZrO_2-glass structs. form. 7−119231

vitroceramics *see ceramics; vitreous state*

Vlasov equation
anisotropic limited plasma, oscillations, in weak gravitational wave field *(Russian)* 7−111220
Cauchy problem for Vlasov-Maxwell eqns. in 1D 7−83427
charged particle in mag. field vlasov eqn. soln. *(Russian)* 7−83437
coasting beam in storage ring, nonlinear saturation of longit. modes 7−135720
cool electron beam steady flows 7−130853
electromagnetic interaction, Vlasov-Maxwell system of eqns. 7−117118
electromagnetic waves in hot magnetised plasma, local power absorpt. density formulation 7−75763
electron plasma perturbations, kinetically derived Vlasov-Poisson wave eqns. 7−91289
existence and uniqueness theorem, Vlasov-Poisson system 7−137056
heavy ion collisions, relativistic Vlasov equation, local-density and semiclassical approx. 7−135358
heavy ion reactions, semi-classical dynamics based on Vlasov equation 7−81424
highly excited nuclei, disintegration, Vlasov-Uehling-Uhlenbeck eqn. 7−116315
local Lie algebras and hydrodynamical Poisson brackets 7−88986
magnetised plasma, longit. dielectric const., toroidal effects *(German)* 7−137112
nonuniformly magnetized inhomogeneous plasma, dielectric tensor operator and electromagnetic perturbations 7−97702
particle method, convergence rate *(Russian)* 7−91292
particle method, convergence-rate bounds 7−134439
plasma kinetic theory, nonMarkovian investig. 7−83418
plasma kinetic theory and the Vlasov equation 7−117703
rarefied gas, Bennet distrib. transform. 7−75867
relativistic Vlasov-Poisson system in 2D, global solns. 7−75765
second invariant determ. 7−75764
tearing mode theory for magnetospheric plasma, influence of electrostatic effects 7−127644
Vlasov-Poisson structures, perturbations, exact solns. 7−117701

VLIW machines *see multiprocessing systems; parallel architectures; parallel machines*

VM *see virtual machines*

VMOS integrated circuits *see field effect integrated circuits*

VMOS transistors *see insulated gate field effect transistors*

V_2O_5-P_2O_5 semiconducting glasses *see amorphous semiconductors*

voice *see speech*

voice communication
diver voice communications, adaptive noise cancelling appl. 7−110683

voice equipment
disabled persons communication means development *(Italian)* 7−87361
paging system design computer program 7−110705

voice input *see speech recognition; voice equipment*

voice synthesis *see speech synthesis; voice equipment*

voids (solid)
alloys, crystallisation defects, porosity, cavities, form. mechanisms 7−142754
alloys, microstructural evolution in fusion reactor environments 7−68007
alloys, oxidation, review of key principles 7−119419
alloys, structural, grain boundary cavity nucleation under combined influence of He and appl. stress 7−76138
amorphous alloy ribbons, single roller casting process, small hump form. mechanism *(Japanese)* 7−106504
cavity nucleation at high temperatures involving pile-ups of grain boundary dislocations 7−111574
crack propagation, stable, simulations based on cavity growth by coupled diffusional creep processes 7−111751
creep, intercrystalline voids, diffusion plastic growth modelling 7−124383
creep deformation, high temp., anal. of constrained cavity growth 7−142892
creep fracture, grain boundary, effect of time-dependent void density 7−84103
creep fracture, prediction, numerical model 7−84114
diamond: N, faceted void like defects 7−91577
diamond crystals with voidites, IR absorpt. spectra study 7−119004
ductile failure, effect of porosity distrib. 7−142900
ductile material under mixed mode loading, finite element study of near crack tip deform. 7−130595
ductile rupture modes, anal. at crack tip 7−69057
elastic materials with voids, theory, uniqueness theorem 7−142177
elastic-plastic solid, porous, fracture toughness determ. 7−110855
ferritic alloys, irrad., dimensional stability, strength, toughness, fusion reactor appl. 7−103170
fibre reinforced composite, mechanical props. rel. to cure press., resin flow, voids 7−138782
film growth, property modification and synthesis by low energy particle bombardment 7−91672
grain boundary diffusional creep interaction with void growth 7−76140
graphite fibre reinforced epoxy, hygral and mech. props., effect of voids 7−100272
intergranular cavity growth mechanism maps, effect of matrix constraints 7−124242
intergranular cavity growth modelling, coupled diffusion, power law creep 7−142891
intergranular cavity growth models, limitations 7−83976
ion beam induced VPE growth, molecular dynamics simulation 7−105330
irradiated materials, crack tip stress intensity factor rel. to voids, bubbles and microcracks 7−106609
irradiation induced embrittlement due to He 7−69745
isotope ordering and isotopic superlattices in solids 7−91494

voids (solid) continued
isotropic porous solid, acoustic waves propag. parameters, energy density, volume fraction effects 7−137472
isotropic porous solid, acoustic waves velocity, volume fraction effects 7−137471
Kevlar 49 fibres, chem. impurities, characterisation 7−71561
local phase transition around a cavity in a solid 7−84257
metal, electronic structure and plasma excitations at the surface of small voids in jellium 7−124817
metallic thin-film interconnects, electromigration kinetics 7−111981
metals, ductile, spall strength, anal. by spherical cavity expansion 7−144537
metals, irradiation in stressed state, point defect conc. in void vicinity 7−142764
metals, two-dimensional self-interstitial diffusion in void lattice form. 7−98559
metals, void lattices, two-interstitial model theory 7−98134
metals, void positron annihilation lifetime spectrum, density functional formalism *(Chinese)* 7−85888
metals and alloys, void and vacancy cluster nucleation processes 7−98129
metals nanocrystalline, struct., positron annihilation studies 7−98034
microcracks, interacting near tip in process zone of macrocrack 7−142230
nondestructive detection and sizing of flaws by differential gamma scattering spectrum techniques 7−138929
Permalloy, ultradispersed film, structural kinetics, laser diffractometry 7−84580
plate, bent ductile shear fracture at surface 7−123538
point defects, flux to a void, alpha-irradiated material, elastic anisotropic interaction *(Russian)* 7−104753
polycrystalline solids, cavity growth and grain boundary sliding 7−91723
polyethylene, static fatigue fracture, morphological anal. 7−86331
polymer, water tree growth mechanism, role of ions 7−99672
polypropylene, $CaCO_3$ filled, mech. props. 7−113592
polystyrene, mica filled, viscoelastic melt, void content, reduction during mixing 7−76422
polystyrene-acrylonitrile-polycarbonate blends, phase separated thin films, shear yielding, crazes 7−132675
polyvinylidene fluoride, voided, influence of microvoids 7−111424
Rayleigh wave propag., elastic solid, effect of surface stresses and voids 7−69030
solid, elastic rot. with voids, plane waves 7−117508
stable crack growth, continuum microscale parameters, micromechanistic expressions 7−75459
steel, austenitic, creep damage rate, stress and temp. effects 7−86294
steel, austenitic stainless, crack tip stresses rel. to high temp. straining 7−119362
steel, austenitic stainless, creep, in-reactor stress to rupture, failure rel. to irrad. 7−67910
steel, austenitic stainless, electron irrad., soln-annealed, void form. and precip. rel. to Ti, Zr and V addition 7−84031
steel, austenitic stainless, intercryst. creep failure, nucleation study using small-angle neutron scatt. 7−126219
steel, austenitic stainless, ion irrad., mech. props. and microstructure 7−69778
steel, austenitic stainless, ion irradiation, structural effects 7−111699
steel, austenitic stainless, neutron irrad. creep, void swelling 7−86269
steel, Cr-Mo, weldment, heat affected zone, H attack behaviour 7−144613
steel, Cr-Mo-V, fatigue life, effect of creep damage 7−144554
steel, Cr-Mo-V, ferritic, creep cavitation, austenite grain boundaries, optical and SEM metallography *(German, English)* 7−132684
steel, Cr-Mo-V, warm rolled, spheroidize annealed, microporosity, insoluble carbides, metallographic polishing 7−78410
steel, Cr-Mo-V, welded joints, creep damage, cracks and cavitation 7−93073
steel, H embrittlement rel. to nonmetallic inclusions *(Japanese)* 7−119347
steel, HSLA, fracture toughness of welded joints, effect of welding process and heat input 7−113690
steel, low alloy, fracture toughness, fatigue crack growth rel. to grain boundary microvoids 7−132696
steel, mild, void nucleation and growth is ductile fracture 7−78232
steel, Mn-Cr-Mo, duplex, cold brittleness 7−132715
steel, Mo-Cr, tensile fracture in lamellar dual-phase struct. SEM obs. 7−100380
steel, Ni-Mo-Cr, LWR pressure vessel, underclad cracking, grain boundary segregation 7−100377
steel, secondary hardening, AF1410, fracture toughness, influence of inclusion spacing and microstruct. 7−144544
steel, welded joint strength in mech. and thermal cyclic loading, stress concentrators effect 7−113716
superplasticity, model for diffusional cavity growth 7−76271
torsion tests, high-speed, direct temp. meas. 7−119371
viscous incompressible material, void growth analysis using FEM 7−123475
Al alloys, adhesive wear, metallography 7−78411
Al, fast neutron irrad., void hyperlattice obs. 7−117978
Al, microstructure var. caused by He generation rate and other irrad. parameters 7−69771
Al, proton and neutron irrad., vacancy-gas agglomerates 7−98261
Al RF bias sputtered films for metallisation appls., charactn. 7−124803
$Al/AlO_3/Al$ layered film system, tunnelling probe studies 7−112512
Al-base alloys, age hardening, effect of US vib. 7−132632
Al-Cu, superplastic eutectic alloy, strain sensitive flow, contrib. of concurrent grain growth 7−86286
Al-Cu (4.5, 10.6 wt.%), mech. behaviour 7−126245
Al-Cu-Li-Mg-Zr, superplastic forming, cavitation 7−86277
Al-H alloy, subthreshold electron irrad. damage, TEM study 7−124337
Al-Kr, Kr ion implanted in Al films, precipitation, phase stability of Kr in cavities 7−106519
Al-Li based alloys, deform., fracture, microstruct. rel. to comp. and heat treatment 7−144465
Al-Li-Cu-Mg, superplasticity 7−126167
Al-Mg, cavitation at migrating boundaries during high temp. fatigue 7−119359
Al-Pt, void formation in Al films, cpd. formation 7−131467
Al-SiN, CVD layered structs., H_2 evolution, blister and void formation 7−104727
Al-Ti-Bi, stressed solidification of Bi inclusions 7−100374
Al-Zn-Mg, with and without SiC reinforcement, high strength, powder metallurgy, superplasticity 7−100303

voids (solid) continued
Al_2O_3, liquid phase sintered, creep cavitation, small angle neutron scatt. 7−100288
Al_2O_3, sintered, grain boundary cavitation, cyclic creep effect, small angle neutron scatt. 7−113621
Al_2O_3:MgO,ZrO_2, with bimodal grain size distrib., cavity development 7−93057
Au, proton irrad., instability zone of radiation defects 7−104853
Be, electron density and electrostatic pot., X-ray diffr. studies *(Russian)* 7−69645
Co-Ni thin film mag. and structural recording props., deposition incidence angle depend., recording appl. 7−105976
Cu, creep cavities, US vel. and composite-modelling study 7−142752
Cu, proton irrad., instability zone of radiation defects 7−104853
Cu-Al-Si-Co, superplastic deform., cavity alignment 7−71249
Cu-Co, microstruct. damage and ductility under dynamic loading conditions 7−126188
Fe, cast, ferritic nodular graphite, ductile fracture under multiaxial tensile stress *(Chinese)* 7−144509
Fe, cast, nodular graphite, volume damage, thermomechanical cycling *(French)* 7−119290
Fe, creep cavitation, oxides as nucleation sites 7−144462
Fe, creep cavitation, sulphides and carbides as nucleation sites 7−144461
Fe-Cr-Mn(-Ni), neutron irrad., void swelling, phase stability 7−86132
Fe-H, neutron irrad., impurity-defect interactions, positron annihilation spectra 7−84015
Fe-Mn, neutron irrad., void swelling, phase stability 7−86132
Ge, amorphous, structural characterisation 7−131035
Ge epitaxial crystallisation on Si using electron beam evaporation and recrystallisation techniques 7−84605
Ge, proton irrad., instability zone of radiation defects 7−104853
a-Ge sputtered films, optical gap and void fraction, thickness depend. 7−125828
$(GeS_2)_x(As_2S_3)_{1-x}$, absorpt. edge under hydrostatic press. 7−106126
Mo single crysts., electron irrad., vacancy defects, positron studies 7−98137
Mo, void-lattice form., swelling, temp. depend. 7−83949
Nb_3Ge:Ar sputtered amorphous films, impurity bubbles, flux pinning and TEM studies 7−131138
Ni, pure, cavity sintering 7−111573
Ni, surface roughening under ion implantation, 300-700°C 7−104772
Ni, void-lattice form., swelling, temp. depend. 7−83949
Ni-base superalloys, tertiary creep, anal. of expt. data and theoretical synthesis 7−144458
Ni-Cr-Ce, ductility and fracture rel. to trace Ce additions 7−132740
Ni-Si (Ge)(Sb), dilute electron irrad. alloys, void nucleation, solute atom effects 7−91591
Pb-Sn, cavitation at migrating boundaries during high temp. fatigue 7−119359
Pb-Sn, eutectic, superplastic and as-cast, cavitation and cracking during high-temp. fatigue 7−119338
Pb-Sn solder/Cu joints, tensile behaviour 7−119312
Pd-Cu-Si, low energy excitations, phonon thermal cond. 7−143121
Pt/Si(Si:As), interface, growth kinetics and microstructure of Pt_2Si and PtSi 7−76698
Si, amorphous, structural characterisation 7−131035
Si, proton irrad., instability zone of radiation defects 7−104853
a-Si:H, mol. relax. versus orientational ordering of H_2 7−137359
a-Si:H films, positron-lifetime studies 7−132373
Si-SiO_2, interface struct. simulation, semiempirical potential energy function, microvoids 7−105294
SiC, hot pressed, grain boundary cavitation, cyclic creep effect, small angle neutron scatt. 7−113621
SiC whisker reinforced Al-Mg-Cu, void nucleation at fibre ends 7−100375
a-SiC:H, glow discharge deposited, evidence for microstructure, IR adsorption peak 7−132283
SiC-Si composites, siliconised, creep rupture 7−78244
SiC-Si composites, siliconized, high temp. mech. props. 7−78245
Si_3N_4, sintered ceramic, void charactn, by scanning laser acoustic microscopy 7−138943
SiO_2-Si interface, high temp. oxide decomp. 7−70090
Ta foils, blistering during α-particle bombardment 7−69777
Ti, cold worked, neutron irrad. damage, annealing, dislocation loops, voids 7−104848
Ti-Al-Sn-Zr-Mo-Si, Ti-6242s, ion irrad., phase transform. 7−69775

Voigt effect *see magneto-optical effects*

volatilisation *see vaporisation*

volcanology
Afar-plateau margin, volcanism and tectonics of Triassic and Jurassic 7−119976
Albuquerque-Belen basin of Rio Grande rift, USA, seismic evidence for magma existence 7−145412
E Aleutian arc, Alaska, ages of Late Quaternary caldera-forming eruptions 7−139549
andesite volcano structs., Costa Rica, gravity anomalies and evolution 7−87565
Arctic islands of USSR and Taimyr, major magmatic events and Riphean-Mesozoic magmatic formations 7−87566
ash circulation in stratosphere, results from laser remote sensing 7−120717
Aso Volcano, water level meas. in crater lake of Mount Naka-dake (1980 to 1984) *(Japanese)* 7−107377
atmosphere, volcanic effects on turbidity and irradiances and their dependence on surface wind direction 7−133923
Avalon terrane of S New Brunswick, Canada, volcanism rel. to Precambrian evolution 7−145460
Axial Seamount, Juan de Fuca Ridge, microseismicity survey 7−87456
basaltic magma chamber dynamics, laboratory investigation of roof rock assimilation 7−101307
S Belledonne Range, French Alps, pre-orogenic magmatism and Variscan tectono-metamorphic evolution *(French)* 7−101290
Cameroon Line, Central Africa, new tectonic model rel. to volcanic activity 7−139580
carbonatites in Lemitar Mountains, New Mexico, geology and regional implications 7−101292
Chesterfield Plateau, SW Pacific, geophysical study *(French)* 7−71994
Chile (29 to 30.5 degrees south), Tertiary magmatism rel. to subduction history 7−119977

volcanology continued
Chow Bahir rift, failed rift in S Ethiopia, K-Ar dating of volcanic activity 7−139600
climatic change due to volcanic eruptions, implications of $^{13}C/^{12}C$ isotope ratios in tree cellulose 7−115002
convergent plate boundaries, large deep-focus shocks and significant volcanic eruptions (1900 to 1980) 7−145437
crater lake gas bursts due to liquid CO_2 release 7−87569
Cretaceous-Tertiary boundary, extinctions due to intense volcanism 7−79409
Cretaceous-Tertiary boundary, shocked minerals due to explosive volcanism 7−145473
crustal deformation measurements rel. to eruptions prediction, review 7−133654
dyke intrusion, rock fracture instabilities rel. to volcanic earthquakes 7−87621
El Chichon 1982 eruption, global atmospheric perturbations 7−139719
El Chichon eruption assoc. stratospheric aerosols, Welsh lidar obs. 7−79584
El Chichon stratosphere dust cloud, effect on Alaska surface radiative regime 7−87903
eruption sequences and clusterings at convergent plate margins, anal. (1900 to 1980) 7−145414
Ethiopia, geology, geochronology and geodynamic implications of Cenozoic magmatic province 7−133638
Mt Etna, Sicily, heat flow determ. from ground temp. observations 7−94169
explosions, effects on ionosphere and radiowave propag. 7−79754
F_2-layer, wave perturbations due to ground explosions 7−79752
Fish Springs cinder cone, California, evidence for Late Quaternary vertical displacement rate across Fish Springs fault 7−87588
flood basalt volcanism, effects of crustal fracturing, due to impact cratering 7−107411
Mt Fuji, Japan, seismic and geodetic tilt monitoring observations 7−119988
global flux of Pb, Bi and Tl to atm. 7−107468
global volcanism due to comet impacts during solar system galactic disk crossing events, implications for biological mass extinctions 7−94167
Gornyi Altai, USSR, folded structures Early Mesozoic activation, basite magmatism lateral zoning 7−87535
Hawaii, age of tilted reefs rel. to volcanoes construction and subsidence 7−87603
Hawaii, post-erosional alkalic lava origin, thermal model 7−87564
Hawaii, volcanic characts. 7−127162
Hawaiian lava flows and SIR-B results 7−101255
heat transfer by geothermal fluids in post eruptive systems 7−139550
Iceland, magma reservoirs form. and mechanics 7−145410
SW Iceland, Vogar fissure swarm of Reykjanes Peninsula 7−127166
intraplate volcanism, relation to pulsation tectonics and long-term stratigraphic cycles 7−133658
intrusive chamber thermodynamic conditions 7−119990
ionosphere disturbances, incoherent scatt. meas. 7−79758
ionosphere electron density var. due to ground-level events 7−79756
ionosphere HF waves propag., effect of explosions at ground level 7−79753
ionosphere radiowave propagation perturbations, effect of ground-based events 7−79757
Kakuto caldera, Japan, nature of recent seismicity (1983 to 1985) *(Japanese)* 7−87571
Karym volcano, Kamchatka, volcanic gas Rn concs. rel. to volcanic activity 7−133636
Kilauea Volcano, Hawaii, tidal analysis of geodetic tiltmeter observations 7−107333
kimberlite volcanism of SE Tunguska syncline, chronological implications of Lower Carboniferous rocks 7−145453
Kirishima volcano, Japan, nature of recent seismicity (1983 to 1985) *(Japanese)* 7−87571
E Klamath Mountains (N California), Palaeozoic and Mesozoic magmas comp. rel. to geodynamic evolution of W North America 7−139606
Kusatsu-Shirane volcano, Japan, correl. of volcanic activity with S oxyanion speciation in crater lake 7−127163
La Soufriere de Guadeloupe volcano, activity study, hydrogeochemical surveillance *(French)* 7−94166
Lake Nyos, Cameroon, West Africa, magmatic CO_2 as cause of 1986 gas disaster 7−114844
large intraplate volcanoes, density, depth and shape of subvolcanic intrusions 7−120017
Lascar volcano, N Chile, thermal anomaly detect. by Landsat Thematic Mapper 7−133635
lava flow emplacement, kinematic wave theory 7−145411
lava flow simulation by discrete cellular model 7−94168
lava flows, age rel. to radar backscatter 7−114672
lava flows, morphology and prediction of extent of flow 7−119989
Long Valley caldera, California, USA, geodimeter crustal deformation study 7−145413
Long Valley caldera, E California, crustal deform. from trilateration and levelling 7−87568
Macaya Massif, geochemistry of volcanism *(French)* 7−94137
magma chamber rupture and inflation by silicic liquid 7−71995
magma mixing in a squeezed conduit 7−139547
magma upward migration forming blister shaped magma regions 7−127167
magmatic processes, review 7−139552
magnetosphere, Alfven waves excited by ionospheric acoustic waves of volcanic origin 7−79760
major eruptions since AD 1770, Antarctic ice H_2SO_4 record 7−107376
Mars, effects of large-scale volcano-ground ice interactions 7−134162
Marsabit Shield Volcano, N Kenya, L Cainzoic development 7−133637
MASSA experiment, explosion acoustic wave in atm. and ionosphere 7−79751
MASSA experiment, explosion-induced perturbations and oblique sounding signals amplitude var. 7−79755
Mauna Kea, obs. of hyperventilation of volcanic cinder cone 7−101250
Mauna Loa, geochemical evidence for disruption of magma system by 1868 Hawaiian earthquake 7−127165
melt extraction from mantle plume, by 2D dynamical model 7−119991
Michoacan-Guanajuato Volcanic Field, central Mexico, petrology and chemistry of cinder cones 7−101253
Mirnyi kimberlite field (W Yakutia) implications of seismic sounding along Tas-Yuryakh-Amlaznyi-Malykai profile 7−139481
volcanology continued
Mirnyi kimberlite magmatism (W Yakutiya, USSR), characts. from deep shear wave seismic sounding 7−133577
Mont-Dore volcanism, origin of manganiferous mineralization *(French)* 7−101232
Mount Cameroon, active volcano of Cameroon Line, petrology and geochemistry rel to tectonic setting 7−87567
Mt. Etna, aerosol composition from PIXE and PIGE analyses 7−87570
Mt. St. Augustine, Alaska, AD 1883 eruption and tsunami 7−127115
W-central Nevada, volcanism rel. to Mid-Tertiary counterclockwise block rotation in Dixie Valley region 7−133646
Nevado del Ruiz, 1985 eruption, stratospheric aerosols 7−127461
Nevado del Ruiz, Columbia, relation between eruptive dynamism, ice-melting and catastrophic lahars *(French)* 7−139546
oceanic spreading centres, appraisal of evidence for vars. in magma prod. near fracture zones 7−133655
Okinawa Trough, Pacific Ocean, pumice mineralogical characts. and distrib., implications for magnetism *(Chinese)* 7−79367
Oldoingo Lengai, Tanzania, chemistry of altered alkalic carbonatite lava rel. to calcite carbonatite lavas 7−145409
ophiolite magmatism evolution in E Sayan Mountains, evidence from marianite-boninite series rocks 7−145454
Oregon High Cascades, stratigraphic, sedimentologic and petrologic record of Late Miocene volcanism 7−139598
S centralPacific, anomalous elastic thickness of lithosphere under volcanic chains 7−119984
E. Pacific Rise, seismic imaging of crustal magma chamber 7−71991
East Pacific Rise at 19°S, hydrothermal deposition rel. to volcano-tectonics 7−127177
Pali-Aike volcanic field, southernmost South America, rheology of upper mantle from peridotite xenoliths 7−101241
Pelee, pyroclastics study, discriminate top hat transformation and algorithm of erosion 7−94514
plinian eruption ejecta dispersal, down- and cross-wind ranges 7−101252
latest Precambrian volcanism in S Israel, NE Sinai and SW Jordan, Rb-Sr isochron ages 7−145404
Puhimau thermal area, Kilauea Volcano, Hawaii, CSAMT survey 7−114671
Rabaul caldera, Papua New Guinea, outward-dipping ring fault struct. shown by earthquake locations 7−127164
recent developments, review 7−139553
review of recent work 7−139551
Reykjanes Ridge, volcanism and axial struct., comp. anal. 7−87536
Rio Grande rift, New Mexico, USA, magnetotelluric modeling and deep crust struct. 7−79223
Samoa region, seamounts petrology rel. to Samoan volcanism, age and geochemical anal. 7−101227
Santorini, new ice-core dating of Minoan eruption 7−127161
Santorini volcano sediment layer in E Mediterranean, Cape Riva tephra layer 7−127160
E Sayan region, Cenozoic basalt associations as indicators of orogenic regime 7−139548
seismic tremors, due to slow waves trapped in fluid-filled crack 7−145356
Sevan-Akera ophiolite zone, Lesser Caucasus Mountains, volcanic and tectonic evolution 7−79386
Stromboli, spring 1984 activity and effusive eruption of 1985-6 *(French)* 7−139545
W Tasmania, tectonic setting of Cambrian rifting, volcanism and ophiolite form. 7−139608
Teahitia submarine volcano, French Polynesia, anal. of hydrothermal deposits *(French)* 7−94198
tectonomagnetism and tectonoelectricity 7−139570
Tengchong geothermal area, Yunnan, China, dates of volcanicity and magma origin *(Chinese)* 7−139544
Tunguska syneclise (USSR), stratigraphic age of volcanogenic deposits 7−133672
Uzon caldera (Kamchatka), comp. of spontaneous gases of geothermal field 7−145408
Western Cascades, Oregon, USA, plate convergence and volcanic eruption rates 7−101254
White Island volcano, New Zealand, SO_2 and particle emissions and gaseous species total flux 7−101251
CO_2 in liquid state, role in phreatic eruptions and maar formation 7−87569
H_2SO_4, stratospheric content due to volcanoes, 220 year Antarctic ice record 7−107376

volt-ampere meters
see also power measurement; wattmeters
No entries

Volta effect *see contact potential*

voltage *see electric potential*

voltage comparators *see comparators (circuits)*

voltage control
grid control for electron guns in electroionization lasers 7−136359
high-speed, high-voltage shunt regulator, ion source as load for Tokamak reactor 7−75897

voltage-controlled oscillators *see variable-frequency oscillators*

voltage controllers *see voltage regulators*

voltage dividers
see also potentiometers
body temp. monitoring/control system, structural element anal. 7−79108
inductive, bridge for meas. of superconducting transition temp. and magnetic susceptibility 7−140704

voltage drop *see electric potential*

voltage measurement
see also potentiometers; voltmeters
AC Hall meas. using double AC system 7−140712
AC voltmeter calibration systems, 10 Hz to 1 MHz 7−121158
constant-capacitance voltage transient meas., method to improve speed and sensitivity 7−80821
cryogenic electrical metrology, NPL progress 7−95616
DC kilovolt meter 7−80812
electrostatic potential measurement, fixed probe method 7−89230
Josephson voltage standard at NPL 7−105857
metal vapour, arcs, current conducting channel near cathode, diffusion dominated phenomenon 7−75900
photomultiplier electrostatic potential distrib. determ. 7−102453
primary standard using solid state references 7−121050

voltage measurement continued
proton-exchange-membrane fuel cells, I-V distribution mapping using thin film electrode array 7−106902
semiconductor surface photovoltage study apparatus with bimorphous piezoelectric Kelvin probe 7−67348
solar cells characts. meas. 7−86797
solid electrolyte cells, voltage measurements, ionising radiation effects 7−95620
standard upgrading using Josephson effect *(Swedish)* 7−121046
standards improvement based on Josephson effect 7−102447
superconducting multifilamentary wires, supercond. modulator for extremely sensitive voltage meas. 7−134803
VLSI chip conducting line, voltage meas. microfields 7−134804
wideband HV meas system 7−140710
$YBa_2Cu_3O_{9-x}$, AC Josephson effect obs. 7−99343
$Bi_{12}SiO_{20}$ cryst. appl. as voltage sensor in optical fibres 7−123204
Cd standard cells, temp. characts. of cells normalised at 0°C *(Japanese)* 7−67274
La_2CuO_4:Sr, point contact, AC Josephson effect obs. 7−99343
NbN-NbO_x-Pb Josephson junctions, AC props. 7−132448
a-Si:H, field effect problems with I-V meas. 7−84887
Si-SiO_2 structures, pot. barrier meas., contactless method 7−143628

voltage reference diodes *see avalanche diodes; Zener diodes*

voltage regulation *see voltage control*

voltage regulator diodes *see avalanche diodes; Zener diodes*

voltage regulators
see also voltage control
electric power supply for field apparatus, stabilizing voltage converter 7−145713
electron electrostatic accelerator operation with voltage stabilizer *(Chinese)* 7−89807
high-speed, high-voltage shunt regulator, ion source as load for Tokamak reactor 7−75897
R1635 photomultipliers, counting efficiency and voltage stabilization for high counting rates 7−96471
resonant charging of modulators in linear accelerator 7−129461
supply for He-Ne/$^{127}I_2$ laser 7−110373

voltage stabilizers *see voltage regulators*

voltage transients *see transients*

voltammetry (chemical analysis)
see also polarography
anodic stripping voltammetry with in situ Na amalgamation, programmed time-potential inputs appls. 7−114043
conducting polymers, charging capacitive effect, rel. to electrochemical doping 7−76869
conductive polymer electrodes for neural prosthetic applications 7−79143
digital DC stepped voltage supply for voltammetry 7−132996
2-nitrobenzidine, in methanol-water mixtures, electrochem. reduction 7−113952
pH-sensitive WO_3-based microelectrochemical transistors 7−71558
polyalkylthiophene films, conducting, electrochem. prep. 7−78513
polypyrrole film form. and modification on Pt electrodes cyclic voltammetry 7−100555
polythienylpyrrole, electrolytic polymerisation and struct. props. 7−78493
polythiophene films, electrochemical polymerisation under ultrasonic fields 7−78489
portable voltammetric analyser development 7−106845
pyridinium compounds, quaternary, cation radicals, spectrosc. investig. *(German)* 7−96743
steel, double ion implanted with O^+ and Ti^+, surface layer characterisation 7−76158
tetramethyl/tetraselenafulvalene, incorporated in Nafion-coated membrane, electrochem. behaviour 7−113950
transition metal chromophore as sensitive tag for proteins 7−144970
Bi_2O_3-PbO cathodes, appl. in Li batteries, reduction process, electrochemical and X-ray anal. *(French)* 7−86771
CO_2, near-critical, voltammetry, added water effect 7−131283
Cd^{2+}-1,3-diaminopropane complexes, stability consts. determ., voltammetry 7−114029
Cd^{2+}-oxalate complexes, stability consts. determ., voltammetry 7−114029
Co complexes, dioxygen bridged, dinuclear, cyclic voltammetric obs. 7−113954
Cu^{2+}-oxalate complexes, stability consts. determ., voltammetry 7−114029
Fe complex, $Fe_4(Fe(CN)_6)_3$, prussian blue, site-transfer cond., dielectric relaxometry, voltammetry and spectrophotometry anal. 7−70307
Hg complex, octakis (N,N-diethyldithiocarbamato)penta Hg(II)$(ClO_4)_2$, cryst. and mol. struct. 7−92513
Na-S battery cathode additive effectiveness test by cyclic voltammetry 7−119636
Zn electrodes in aq. alkali and carbonate solns., oxidation and reduction, cyclic voltammetry study 7−100586
Zn electrodes in aq. alkali and carbonate solns., oxide film form. and dissolution, cyclic voltammetry study 7−100587

voltmeters
see also digital voltmeters; potentiometers
AC voltmeter calibration systems, 10 Hz to 1 MHz 7−121158
DC kilovolt meter 7−80812

volume diffusion *see diffusion in solids*

volume measurement
body fluid volume, determ. using elec. impedance meas. 7−87277
cardiac radionuclide volume meas., direct determ. of attenuation coeff. 7−133421
cardiac ventricular volumes, right and left, meas. in healthy individuals with cine NMR imaging 7−145184
droplets, small, geometric parameters, meas. method 7−73319
flow, positive displacement meters, selection and installation 7−69297
heart, left ventricle volume, model for accurate calc. based on radiographic images 7−126688
high-pressure differential thermal analysis/dilatometric apparatus based on an Instron capillary rheometer 7−102407
left ventricle volumetry, assessment of 3-step radiographic procedure 7−87170
left ventricular end diastolic volume evaluation in equilibrium gated radionuclide cardiography 7−114463
liver volume measurement using water delay ultrasonography 7−71826
multielectrode admittancimetric intraventricular vol. meas., stability and repeatability, dog obs. 7−87276
particle field holography, volume magnification 7−110297
spirometer system, pointer volume, for respiratory tests 7−87325

volume measurement continued
stroke volume indirect measurement by intra-aortic balloon pump, drive system design 7−87322
thoracic gas vol., meas. by LF ambient press. changes 7−114324

vortex flow *see vortices*

vortex flow (superconductivity) *see flux flow*

vortex lattice pinning *see flux pinning*

vortex state (superconductivity) *see mixed state*

vortex structure (superconductivity) *see flux-line lattice*

vortexes *see vortices*

vortices
see also cavitation; turbulence
2D easy-plane ferromagnets, vortex signatures in dynamic struct. factors 7−118763
2D vorticity eqn., Fourier pseudospectral method 7−69188
3D isotropic turbulence, temp. variance, kinetic energy decay 7−110929
accretion tori stability, non-linear evol. to discrete planets 7−88105
adiabatic transverse waves in Rankine vortex 7−136895
aerofoil, dynamic stall, eddy shedding, boundary layer unsteady marginal separation study 7−110918
air, computation of turbulent flow over scale model in wind tunnel using random vortex method 7−130665
air, ionisation region in an electric field, vortex motion 7−136877
air core penetration of vortex in bottom hole, conditions *(Russian)* 7−97537
air flow, turbulent, in curved 90° ducts, uniform inlet, rel. to aspect ratio 7−111112
angle type safety valves, flow patterns, elimination of jamming 7−137003
atmosphere, nested grid scheme for isolated vortex movement prediction in barotropic model 7−133856
autowave vortex dynamics in active media 7−69195
axisymmetric annular diffusor, detached flow, 3D struct. 7−97504
axisymmetric breakdown in rotating conical pipes 7−75589
axisymmetric vortex shedding from a ring, discrete vortex method with boundary element method 7−91127
axisymmetrization and vorticity-gradient intensification of an isolated two-dimensional vortex through filamentation 7−91134
baroclinic flows with and without two-wave bottom topography 7−79502
baroclinic laboratory mixed layer above sloping surface, turbulence 7−123608
baroclinic ocean, steady solns. where quasi-geostrophic pot. vorticity is const. along a flow streamline 7−72058
Biot-Savart model of vortex reconnection 7−83162
bluff bodies, 3D, press. distrib. between them and ground plane 7−104294
bluff bodies, method of reducing drag and fluctuating side force 7−91266
boundary layer turbulence, coherent structures energy redistrib. study 7−97505
breakaway flow around grids of noncircular tubes, discrete vortex method 7−136870
breakdown, spiral type, of swirling flow in pipe, expt. investig. 7−117616
cavitational streamline flow round lattice of plates with small inlet angle *(Russian)* 7−97587
cavity flow dynamics of high Reynolds number and high aspect ratio 7−91230
circular cylinder, flow disturbance and symmetry, Navier-Stokes equations soln. 7−117560
circular cylinder, laminar vortex shedding, flow visualisation 7−136871
circular cylinder parallel to main flow, press. distrib. *(Japanese)* 7−110989
circular cylindrical structures, in two-phase cross-flow, vibrs. 7−128265
coaxial jets of different mean vel. ratios, flow characts. 7−130760
coherent structure acoustic coupling for flow in chamber *(French)* 7−104124
coherent vortex structures in turbulent flows, tensor characts. 7−136884
columnar, stability at large azimuthal wavenumber 7−91137
combustion instabilities, vortex-driven acoustically coupled 7−83364
compressible flow past vortices, Rayleigh-Janzen expansion appl. 7−91156
compressible instability 7−69191
compressible jets in supersonic flow, maximum instabilities study 7−69244
compressible Navier-Stokes eqns., finite-element soln. 7−136902
computational fluid dynamics, selected topics and mathematical techniques 7−140454
computational vortex dynamics in two and three dimensions 7−130713
concentric sphere gap, stationary and time dependent vortex streams, Navier-Stokes eqns. *(German)* 7−123656
confined vortices in flow machinery, book contrib. 7−97544
conformal-mapping technique for topographic-wave problems 7−87663
convective heat transfer from vertical rectangular body 7−97515
corner turbulent boundary layer, intermittent region 7−91103
Couette flow, laminar to turbulent transition point, wave number spectrum *(Korean)* 7−136801
counter-rotating streamwise vortices, Gortler instability generation, wall presence effects 7−142318
couple stress fluid flow past a stretching sheet 7−117635
coupled motions of vortices and rigid bodies 7−75596
covariance rate of change in turbulence 7−142316
creation around surface relief irregularities in rectilinear flow, 3D study 7−123652
cross transport of energy in fluid streams 7−69176
crossflow instability, 3D steady boundary layers 7−117568
cryogenic flow visualisation, using vapor-screen technique 7−123814
curved pipe, unsteady viscous flow, Taylor-Gortler instability, WKBJ perturbation soln. 7−142265
cyclones and anticyclones evolution, num. investig. 7−114863
cylinders, vortex shedding at low Reynolds number, laser Dopper anemometry *(Chinese)* 7−91124
cylindrical surface, axial, flow vortical flow zone visualisation, stroboscopic laser knife technique 7−137035
developing entrance flow, marching control vol. FEM 7−83338
diffeomorphism groups and quantized vortex filaments 7−95352
discrete vortex method for flow about a rot. circular cylinder 7−69187
electrovortical flow, axisymm., velocity field meas. using fibre-optic velocity transducer 7−123776
electrovortical flow in a spheroidal container 7−136875
energy separation in a vortex street 7−91122
entrainment effect of a leading-edge vortex 7−130711
entrainment variation in annular jets, vel. distrib. 7−111045

vortices continued
estuary-shelf waters interaction, two-layer density stratified flow modelling 7−133731
Euler flow in 2D, invariant measures in the vorticity formalism 7−75595
fast dynamo action in a steady flow 7−137024
flat finned surfaces, transverse flow, coupled heat transfer, eddy form. conditions 7−136860
flow around cylinder with and without disk, vortex struct., viscosity effect 7−110988
flow circulation in container with rot. lid, axisymmetric vortex breakdown 7−123650
flow over double-delta wing at high α, expt. investig. 7−142403
flow pattern description using critical point concepts, book contrib. 7−97545
flow regime and heat and mass transfer within fluidised beds composed of gases and solids *(German)* 7−111090
flowmeters, YEWFLO, large scale wet calibration facilities *(Japanese)* 7−75728
fluid cylinder motion in cross-flow, vortices 7−83238
fluid dynamics, annual review, book 7−95112
fluid flow in molten bath agitated by impinging gas jet *(Chinese)* 7−69183
fluid flow structure ahead of a piston in a tube, boundary layers, vortices 7−83237
fluid layer penetration into stratified fluid, integral model 7−75598
fluid-structure interaction problems in torus-shaped nutation dampers, instability control 7−75524
forced convection flow over isothermal, horizontal plate, thermal instability anal. 7−110956
forced convective heat transfer from 2D channel *(German)* 7−91237
forced shear layer, vorticity field and entrainment dynamics, vortex simulation study 7−91104
free shear 2D flow behind splitter plate, stability 7−123594
free-stream turbulence relationship with stagnation region heat transfer 7−110930
frontogenesis in a continuously varying potential vorticity fluid 7−123648
gap correction for horizontal axis wind turbines 7−106881
gaseous reacting mixing layer, shear-layer growth and entrainment, heat release effect 7−91259
general relativistic vortices in stationary axisymmetric spacetimes 7−89068
generalized vorticity eqns., global classical solns. of initial value problems 7−91144
geostrophic vortices, coalescing 7−91133
gradient-refractometric gas analyzer, refractive index gradient stabilisation 7−111157
heat generating fluid between horizontal parallel plates, vortex rolls due to buoyancy in forced convection field 7−83227
hemispheric hump, upstream and downstream vortices 7−123645
hot-film anemometer, cross-flow phenomena on swept wings obs. 7−123817
hot-wire probe for turbulent boundary layer vortical struct. 7−142416
hydrodynamic instability, review, flow randomisation, nonlinear methods 7−136809
hydrodynamic modification of the horseshoe vortex at a vertical pier junction with ground 7−83242
hydrodynamic turbulence, residual correlation among eddies, cascade model 7−130721
hydrodynamical turbulence, classical phenomenology 7−123604
ideal fluid, conc. point vortex evolution 7−75587
ideal noncompressible liquid, flow past set of nonstationary circular cylinders 7−142317
image processing using correlation technique for flow velocity vector distribution meas. *(Japanese)* 7−83382
incompressible 3D flow, multicell vortices, Euler eqn. fine-mesh soln. 7−123659
incompressible flow, subharmonic perturbations in far wake 7−83235
incompressible fluid flow, nonlinear stability study 7−91080
incompressible fluid movement with constant vorticity *(Russian)* 7−97538
incompressible inviscid flows, convergence of vortex methods 7−108245
incompressible laminar flow, weakly separated, Navier-Stokes and approx. eqns. 7−83167
incompressible vorticity-dominated flow simulation, 3D method 7−123658
inductive drag of a curved wing, curvature effect determ. 7−69112
instability of inclined buoyant layer in porous media saturated with cold water 7−136869
interacting boundary-layer soln., steady and unsteady breakdown study 7−110919
interacting vortex tubes, numerical simulation 7−83243
interaction of eddies in homogeneous turbulence, spectral transfer fn. 7−123651
interaction of lee-wave and vortex in continuously stratified fluid *(Japanese)* 7−111058
inviscid Karman vortex street, linear stability 7−91135
isothermal incompressible flow helicity, variational prop. 7−130628
jet, axisymm. free, coherent structures, laminar-turbulent transition, organised vorticity *(Polish)* 7−83292
jet, plane liq., sheet thickness calc. 7−83290
jet, small-aspect-ratio elliptic, vortex induction and mass entrainment study 7−111050
jets, supersonic submerged isobaric, mixing intensity, Mach number depend., vortices struct. model 7−142348
Joukowski airfoil, near wake, self-induced unsteady motion simulation 7−123644
Karman vortices behind circular cylinder, wakes, large-scale structs. 7−75586
kinetic energy eqn., third-order velocity correl. closure model, curvature effect 7−91096
laminar incompressible boundary-layer equns. for 3D separated flow 7−110914
laminar mixed convection in ducts, nonuniform heating effects, num. study 7−110980
laminar vortex ring development, initial and boundary condition influence 7−110987
large-scale organized structures, eduction in a turbulent plane wake 7−136825
liquid jets, disintegration and capillary instability, vorticity-stream fn. formulation 7−117638
local gas holdup, mean liquid velocity and turbulence in an aerated stirred tank using hot-film anemometry 7−97648
vortices continued
longitudinal 2D flow along cylinders and plates, blunt leading-edge separation 7−104277
magnetic vortex filaments, universal scale invariants, and the fundamental constants 7−72283
magnetic vortex tubes in astrophysics 7−72284
mass flowmeter using fluctuating lift cased by vortex *(Japanese)* 7−75727
mass transport in turbulent Couette-Taylor flow 7−130650
Maxwell fluid, flow through sudden contraction, num. simulation 7−91234
measurement using probes based on MHD principle 7−142396
merging of nonlinear anticyclonic eddies in laboratory expts. 7−110990
mesocyclone and tornado-like vortex generation by horizontal vel. tilting 7−75591
mesocyclonic shear automatic detection using Doppler radar 7−127554
methane-air premixed flames, forced convective heat transfer 7−83216
MHD, two-dimens. turbulence expt. and num. simulation 7−91257
molecular dynamics simulation of flow past a plate 7−104239
motion of linearly stratified rotating fluids past capes 7−136959
multidimensional systems, vortical combination resonances 7−115802
mushroom-like currents under rot. and stratified conditions, oceanic appl. *(Russian)* 7−75646
Navier-Stokes eqns. of viscous rotating flow past sphere 7−91061
non-axis-symmetric Taylor vortex flow in eccentric rotating cylinders 7−83241
nonlinear stability conditions of ideal incompressible liq., functional construction 7−69106
ocean, adjustment of azimuthally perturbed vortices 7−127259
oil whirl in rotor bearings 7−83247
oil-water separation, vortex phenomena 7−97539
oil-water separation by vortex in stirred draining vessel 7−123646
Oldroyd fluid, 3D stretching flow, vortex sheet propag. 7−104313
open-channel flow, streamwise vortex meas. 7−72124
organised vorticity in plane flow, variational model 7−136882
periodical distribution 7−117617
phase spectral evidence for vortex structures in turbulent mixing 7−123430
plasma, vortex motion in ion pressure gradient driven drift wave turbulence 7−123898
polymer solutions, entry flow problem study review 7−91174
potential vorticity as atm. tracer 7−127382
potential vorticity theorem and entropy coords., atm. appl. 7−101461
pressure-surface boundary layers, flow transition in pressure of Gortler vortices 7−123591
prisms, square, in tandem, fluctuating aerodynamic forces 7−104298
pseudoturbulence models, simulated, unsteady lift and drag predictions 7−110923
Rankine-like vortex, turbulent boundary layer 7−91142
Rayleigh-Taylor instability, perturbation modes interactions 7−104248
recirculating flow, struct., Reynolds number effect 7−69185
rectangular cylinders, vortex excitation, lateral translation 7−136872
ring and filament interaction, 2D stagnation point 7−123657
ring vortex shedding velocimeter, portable, characts. *(Japanese)* 7−83381
Rossby solitons, natural vortices of Jovian Great Red Spot type investigation 7−139913
rotating steady forced 2D flow, spectral modes bifurcations 7−69193
rotating superfluids, vortex oscillations and hydrodynamics, review 7−70012
rough-wall turbulent boundary layers in the transition regime 7−136826
secondary flow pattern in straight tube, visualisation study 7−111134
secondary instabilities, coherent structures and turbulence 7−123613
separated flow around aerofoils, discrete vortex method anal. 7−91145
shear layer structural transitions, vorticity distrib. depend., contour dynamics study 7−136956
shedding from wall-mounted obstacles in rotating systems 7−130716
sinh-Poisson eqn., vortex equilib. states, exact solns. 7−108389
sinusoidal wavy channel flow field, vortices in turbulent flow *(Japanese)* 7−136815
slim vortex in a compressible flow *(German)* 7−136878
slim vortices with discontinued initial distrib., approximation *(German)* 7−136880
soil, wind erosion, acoustic oscills. effects study 7−139735
solitary dissipative vortices, vortex lattice stability 7−130724
spatially periodic electrovortex flows in a planar layer *(Romanian)* 7−136874
sphere, mass transfer around, numerical anal. using alternative direction implicit method *(French)* 7−75593
sphere wake, vortex struct. in stratified fluid, shadow visualisation technique appl. 7−75597
spherical Couette flow, first bifurcation, phenomenological modelling 7−142321
steady equivalent-barotropic flows, instability, double cascade as mechanism 7−97495
steady inviscid general circulation in a rectangular basin on beta plane 7−145505
steady supersonic vortex flow, aerosol particle motion, method of characteristics solutions 7−136923
Stoke's law description of vortex formulation *(German)* 7−136879
stratified vortex motion under gravity, Richardson criteria 7−83302
streamwise vorticity meas. using vane vorticity meter 7−83373
structure in homogeneous turbulent flows 7−75592
supercomputers and fluid dynamics, conf. Nobeyama, Japan, (Sept. 1985) 7−120710
supercritical vibration-induced thermal convection in a cylindrical cavity 7−69137
superfluids, two-dimensional, rotating, equilib. vortex density 7−84413
supersonic flow about circular cone, shock- and shed-vorticity 7−69186
surface pressure fluctuations produced by vortex shedding from a coated airfoil 7−69190
surface with vortical outer flow, laminar boundary layer 7−75522
swirling vortex flow during engine cylinder compression stroke 7−130718
symmetric vortex street, perturbed motion 7−104282
tangential velocity and static pressure distributions in vortex chambers 7−130712
Taylor's vortex array, nonlinear stability, Navier-Stokes eqn. soln. 7−69192
Taylor-Couette flow, very LF oscills. 7−117566
thermocapillary convection in axisymmetric liq. bridge 7−123625
three-layer rotating fluid, explosive instability and Rossby waves three wave reson. interactions *(Russian)* 7−97542

vortices continued
time-dependent incompressible viscous flow past a circular cylinder 7−69189
time-variant flows, vortex dynamics modelling, conf., Aix-en-Provence, France (April 1986) 7−72732
Tollmien-Schlichting waves in growing boundary layers, streamwise vortices effect 7−83174
topographically rectified tidal flow, horizontal profile 7−117612
tornado funnels, electrical phenomena 7−133912
transient inviscid gas flow in shock tube, Euler eqn. soln. 7−83270
transonic diffuser flow, self-excited oscills., Navier-Stokes eqn. simulation 7−136910
tropical cyclone motion, beta effect 7−145604
turbulence, geophysical and astrophysical, theory 7−130653
turbulence promoter, 3D, net type, local mass transfer rates 7−130647
turbulence structure in cylinder wake 7−130710
turbulent boundary layer longitudinal vortex, heat transfer effects 7−110940
turbulent confined mixing layer, large-scale vortices, visualisation study 7−91263
turbulent flow, 2D, asymmetric vortex merger 7−142322
turbulent flow, high Reynolds number, 2D Navier-Stokes anal., statistical props and vorticity 7−69108
turbulent flow, numerical experiments using random vortex method 7−130673
turbulent flow, synergetics, selfsimilarity and computer graphics investig. 7−75538
turbulent flow in tubes, structure parameters, spin effect, radially induced vortices *(German)* 7−123762
turbulent mixing layers, visualisation and velocimetry meas. 7−123609
turbulent oscillatory flow over rough beds, velocity meas. 7−142273
turbulent plume, mean flow, entrainment, intermittency, anemometry study 7−91090
turbulent secondary flows in 3D boundary layers and thin shear layers, review, book contrib. 7−97508
turbulent separating flow downstream of a step. susceptibility to acoustic perturbations 7−110936
turbulent shear flow, transverse vorticity meas. critical anal. 7−142415
turbulent shear reattaching layer behind rearward facing step, time depend. behaviour 7−136820
turbulent transfer in channel, point vortices modelling 7−75539
turbulent wall jets, stability along concave surfaces 7−75634
twisted tubes in heat exchanger, vortex structure of flow 7−83221
two circular cylinders in crossflow, flow indiced vibration 7−69105
unbounded Rankine vortex, adiabatic perturbations in inviscid compressible fluid 7−91143
unsteady Navier-Stokes eqns., exact solns. 7−91131
viscoelastic fluid, pipe flow, hyperbolicity and flow transition study 7−83351
viscous flow around circular cylinder, generalised discrete vortex method 7−83236
viscous flow for 2D dynamics, numerical soln. using orthogonal coordinate systems 7−91064
viscous flow past an airfoil, Navier-Stokes eqn. soln. 7−110907
viscous fluid, spout-like flow evolution 7−130715
viscous incompressible flow around thin elliptic cylinder, unsteady forces 7−75588
viscous incompressible rot. MHD flow, hodograph transform. 7−75682
viscous vortex flows, charge transport 7−123647
vortex breakdown in spherical gap 7−130719
vortex chamber end-wall turbulent boundary layer study 7−136885
vortex cores, struct. and evolution study 7−136883
vortex dynamics and the existence of solutions to the Navier-Stokes equations 7−130720
vortex filaments, cut and connect, anal. 7−130725
vortex pair motion beneath heavy fluid surface, 2D problem 7−117613
vortex pairs, eddy-forced coherent structures rel. to atmospheric blocking 7−127446
vortex separation and fine structure dynamics 7−130714
vortex shedding behind a square cylinder in transonic flows 7−91161
vortex shedding in flow past variously shaped bodies, finite element anal. 7−142264
vortex-front propagation in Rayleigh-Benard convection 7−117615
vortex/airfoil interaction, numerical modelling 7−69184
vorticity-velocity formulation for high Reynolds no. flow 7−91130
wake, three-dimens. plane, interface visualisation, inviscid vortex dynamics calcs. 7−91123
wakes, 3D struct., visualisation, incompressible Navier-Stokes eqn. soln. 7−123643
wall to liquid mass transfer and hydrodynamics of two-phase Couette-Taylor-Poiseuille flow *(French)* 7−111068
water flow over hemispherical hole, vortex struct. self-organisation 7−136868
water waves in straits of varying depths and widths, integrable nonlinear eqns. 7−104287
water waves propagation over trench 7−79441
wavy channels, oscillatory flow, mass transfer and flow characts. study 7−111107
wind instabillity and helical perturbations of magnetized relativistic jets 7−104319
wind tunnels, US laser method for flow field meas. 7−123816
wind turbines, 3 vertical axis, vortex analysis 7−91132
wings, elastic membrane, pot. flow vortex lattice simulation 7−104293
CO_2 axisymmetric bursting jet, schlieren visualisation and hot wire anemometry 7−123702
He II, vortex layers, self-expansion *(German)* 7−137645
^{3}He A-phase superfluid, ion mobility along superfluid vortices 7−143127
^{3}He, superfluid, quantized vortices and vortex-core transition, review 7−143129
^{3}He, superfluid, rotating, continuous vortices 7−76528
^{3}He, superfluid, rotating, vortices, Ginzburg-Landau description, book contrib. 7−84438
^{3}He, superfluid A-phase, vortex states obs. by use of negative ions 7−76526
^{3}He, superfluid B phase, metastable vortex studies, Ginzburg-Landau eqn. anal. 7−112000
^{3}He-^{4}He thin films, phase transitions 7−70020
^{3}He-A, rotating, superfluid, vortex struct. 7−84432
^{3}He-A superfluid, vortex state decay, mutual friction 7−84434
^{3}He-B, superfluid spin current vortices 7−76523
^{4}He II heat pulse propag. and quantized vortices generation 7−118187
vortices continued
^{4}He superfluid, discrete dissipative events in microorifice, temp. depend. 7−137642
^{4}He, superfluid, flow velocities in rotating cylinder, during spin-up, first and second sound transit time meas. *(German)* 7−76521
^{4}He, superfluid, plane laminar shear region at wall, development with time, numerical calcs. *(German)* 7−124617
^{4}He, superfluid, quantized vortices, turbulence, two dimens. transitions 7−76519
^{4}He, superfluid, vortex line density intrinsic fluctuations in superfluid turbulence 7−70009
^{4}He superfluid films, vortex dynamics 7−84419
^{4}He-II, flow between rotating cylinders, appearance of vortices 7−84414

VPE *see vapour phase epitaxial growth*

vulcanisation
butadiene-styrene rubber vulcanisates, sepiolite filler effect on dynamic props. 7−100276
epoxidised natural rubber vulcanizates, adhesion and friction 7−113726
organosilicon elastomers, vulcanizates and copolymers, phenyl-containing substituent effects *(Russian)* 7−111434
rubber vulcanizates, mechanical props., $CuSO_4.H_2O$ effect 7−76261

W bosons
anomalous magnetic and quadrupole moments in two-Higgs doublet model 7−128893
anomalous magnetic dipole and quadrupole moments, heavy fermion contributions 7−102663
E_6 superstring models, particle dichotomy and left-right decomposition, Dirac neutrino, W′ boson 7−128815
electroweak physics at the Z^0 pole, above W pair thresholds, LEP review 7−95819
electroweak theory of finite temp. and density phase, transitions, W-boson condensation 7−73574
excited weak vector bosons and composite weak interactions 7−121460
heavy fermion production in the effective W approximation 7−73568
heavy $Q\bar{Q}$ production in hadron colliders, polarisation density matrix, W^+W^- prod. 7−95852
high-energy collisions, effective-vector-boson method, heavy fermion and Higg's boson prod. 7−128920
longitudinally polarized, scatt. in symm. breaking sector, low energy theorems 7−135004
mass determ, from $e^+e^-\rightarrow W^+w^-$ total cross-section 7−102760
mass measurement at LEP 200, standard model test 7−140871
masses and weak neutral current, standard model anal. 7−140866
propagator, radiative corrections due to supersymmetry effects, SUSY $SU_{2,L}\times U_{1,Y}$ anal. 7−73572
standard model anal. of properties 7−102665
strong interactions, dual field theory 7−135065
supersymmetric GUT, electroweak breaking, $W^{\pm}$ and Z masses 7−134993
technipionium bound state formation and decays into W^+W^-, $\gamma\gamma$, $Z\gamma$ 7−73576
Wino mass determ., asymmetry meas. in $\mu\rightarrow e\nu\bar{\nu}$ 7−108918
$e^-e^-\rightarrow W^-W^-$, lepton number violation tests at e^-e^- colliders 7−89490
$e^-e^+\rightarrow W^+W^-$, effects of Z boson from $E_8\times E_8$ superstring 7−67629
$e^-e^+\rightarrow X$, wino mass limit determ. 7−108928
e^+e^-, very high energies, Higgs prod., longitudinally pol. vector boson scatt. 7−108907
$e^+e^-\rightarrow$ sparticles ($\tilde{\gamma}$, $\tilde{\nu}$, $\tilde{e}$, $\tilde{W}$), search at PETRA, QED comparison 7−121526
$e^+e^-\rightarrow\gamma\nu_i\bar{\nu}_i$, cross section, W boson mag. moment 7−67613
$e^+e^-\rightarrow W^+W^-$, cross section calcs., $E_8\times E_8$ superstring theory with extra Z boson 7−108927
$e^+e^-\rightarrow W^+W^-$, E_6 models with additional Z′ neutral gauge bosons 7−128817
$e^+e^-\rightarrow W^+W^-$, gluon bremsstrahlung effects on expt. signature, QCD study 7−108930
$e^+e^-\rightarrow W^+W^-$, vector boson self couplings 7−95918
$e^+e^-\rightarrow Z_2\rightarrow W^+W^-$, W pair prod. at heavy Z resonance, cross section calc. 7−89491
$\gamma e^{\pm}\rightarrow W^{\pm}\nu$, effect of W electric dipole moment, CP- violation obs. 7−135091
$\bar{p}p$, SPS energies, extended gauge symmetry as a possible source of exotic events 7−67674
$\bar{p}p$ collider results and detectors, W, Z and heavy flavour physics 7−95945
$pp\rightarrow L\bar{L}+X$, heavy lepton prod. from WW fusion, exact cross section calc. 7−89527
$\bar{p}p\rightarrow t\bar{t}$, heavy top production, prod. cross section and decays, W boson pair prod. 7−140963
$\bar{p}p\rightarrow W+2$ jets, large p_T W prod., standard model processes, 0.6-2.0 TeV calc. 7−116198
$\bar{p}p\rightarrow X$, W and Z production, comparison with standard model 7−89535
$\bar{p}p\rightarrow Z(W)X$, production cross-sections and momentum distribs. 7−121545
$W\rightarrow e\nu$, meas. of standard model parameters 7−89504
$W\rightarrow e\nu$, standard model parameter meas. and perturbative QCD tests at UA2 7−102741
$W\rightarrow e\nu$, W transverse momentum distrib., at CERN collider, high-order QCD calculations, di-jet system 7−135162
W leptonic and hadronic decay widths in supergravity models 7−73678
W mass, dynamical mass generation hierarchy M_W/M_{Pl}, $(SU(1,1))^3$ supergravity model 7−73138
W mass effects on $\bar{p}p\rightarrow$gaugino pair production 7−89528
W mass lower bound from $\mu\rightarrow e^+\nu\bar{\nu}$ exotic contributions 7−140934
$W\rightarrow\mu\nu$, W transverse momentum distrib., at CERN collider, high-order QCD calculations, di-jet system 7−135162
$W^{\pm}\rightarrow q\bar{q}$, jet pair invariant mass distribution search. 7−89505
W^+W^- pair production via fusion, 40 TeV, effective-gauge-boson approx., invariant mass distrib. 7−128912
$Z'\rightarrow W^+l^-\bar{\nu}_l$, single W prod. in E_6 theories, branching ratio 7−116170
$e^+e^-\rightarrow W^+W^-$, standard model test at LEP 200, W helicity, beam pol. effects 7−140921
$\bar{p}p$ annihilation, W and Z^0 discovery, comparison with standard model *(Polish)* 7−67672
W-boson condensation induced by fermion density at finite temp., Weinberg-Salam model anal. 7−134991
$WW\rightarrow l\nu l\nu(l\nu qq)(qqqq)$, branching ratios, charged current universality test at LEP 200 7−140939

waiting line theory *see queueing theory*

wakes
3D struct., visualisation, incompressible Navier-Stokes eqn. soln. 7−123643
air, chem. nonequilibrium parameters, wakes 7−75710
air flow in model mixed-flow pump, laser Doppler anemometry 7−97669
airfoil, low Reynolds number flow, acoustic excitation, lift, drag and wake velocity study 7−142315
airfoils, transonic wave drag prediction method 7−142333
airfoils with separated flow, wake source model 7−123639
axisymmetric bluff bodies, turbulent near wake flow characts., active model 7−123642
binary mixtures, thermodiffusion, nonlinear convective motion 7−69136
blast wave impinging on circular cylinder, Euler eqn. soln. 7−104305
circular cylinder, laminar vortex shedding, flow visualisation 7−136871
coaxial jets of different mean vel. ratios, flow characts. 7−130760
cross transport of energy in fluid streams 7−69176
cylinder wake, Benard-von Karman instability, oscillation threshold, laser probe study 7−142314
cylinder wake, turbulent energy dissipation study 7−110986
cylinders in crossflow, film boiling wakes 7−136864
discrete vortex method for flow about a rot. circular cylinder 7−69187
energy separation in a vortex street 7−91122
entrainment variation in annular jets, vel. distrib. 7−111045
flat plate trailing edge, laminar flow, Navier-Stokes eqns. soln. 7−136788
flow pattern description using critical point concepts, book contrib. 7−97545
fluid cylinder motion in cross-flow, vortices 7−83238
forced cylinder wakes, scanning laser anemometer meas. 7−123641
free-stream turbulence relationship with stagnation region heat transfer 7−110930
heavier-than-air gas dispersion near 2D obstacle, wind tunnel wake meas., air pollution simulation 7−97536
hot wire anemometer for meas. in boundary layers and wakes 7−123818
impulsively started, linearly stratified flow over long ridges 7−114873
incompressible flow, subharmonic perturbations in far wake 7−83235
incompressible vorticity-dominated flow simulation, 3D method 7−123658
jet, nozzle generated, intermittency fn. calcs. of conditionally averaged parameters 7−83285
Joukowski airfoil, near wake, self-induced unsteady motion simulation 7−123644
Karman vortices behind circular cylinder, wakes, large-scale structs. 7−75586
large-scale organized structures, eduction in a turbulent plane wake 7−136825
mixing layer props., Falkner-Skan eqn. solns. 7−69182
obstacle problems in mathematical physics, book 7−108053
offset strip-fin heat exchanger, heat transfer and friction investig. 7−69101
organised structures in turbulent plane wake, topology 7−130658
Oseen flow of sphere clusters, wake effect on drag factor *(Chinese)* 7−123637
passive trace component, turbulent pattern degeneration 7−142313
plasma, electrically floating obstacle in supersonic flow, near wake self-similar pot. 7−69327
pulsating laminar flow, separation and wake 7−137014
shear flow relax. generated by turbulent boundary layer-wake interaction 7−142298
solid and fluid particles, wake phenomena *(German)* 7−123638
sphere, mass transfer around, numerical anal. using alternative direction implicit method *(French)* 7−75593
sphere wake, vortex struct. in stratified fluid, shadow visualisation technique appl. 7−75597
spherical particle bed fluidisation, nonlinear mechanics 7−83331
spinning cylinder near wake, flow visualisation, image processing 7−142420
square cylinder and thick symmetrical airfoil wakes, compressible flows 7−104299
submerged moving body, stratified fluid, gravity waves vertical propag., surface effects study 7−142325
supercomputers and fluid dynamics, conf. Nobeyama, Japan, (Sept. 1985) 7−120710
supersonic flow over sphere in wake of blunt cylinder 7−136920
surface ship wakes, anal. of synthetic aperture radar imagery 7−107436
three-dimensional plane wake, interface visualisation, inviscid vortex dynamics calcs. 7−91123
trailing flap, attached flow, asymmetric wake, press. and vel. characts. 7−136863
turbulence structure in cylinder wake 7−130710
turbulent flow measurements, statistical bias elimination 7−111125
turbulent heat diffusion, model relations anal. 7−136829
turbulent mixing layers, visualisation and velocimetry meas. 7−123609
turbulent self-preserving wake, organised motion 7−123640
turbulent wake of a flat plate 7−130646
two-phase vertical upward flow patterns, transition criteria study 7−97605
unsteady full pot. scheme, conservation form soln. 7−83269
viscous flow past an airfoil, Navier-Stokes eqn. soln. 7−110907
viscous incompressible flow around thin elliptic cylinder, unsteady forces 7−75588
vortex flow over double-delta wing at high α, expt. investig. 7−142403
vortex shedding from wall-mounted obstacles in rotating systems 7−130716
vortex/airfoil interaction, numerical modelling 7−69184

Walsh functions
see also encoding; filtering and prediction theory; signal processing
Radon-Hadamard and Walsh transform 7−102129

Wannier functions
all electron self-consistent variational method for Wannier-type functions, appl. to Si cryst. 7−70183
metallic extended systems, direct-space anal. of Hartree-Fock energy bands and density of states 7−137780
quasihomogeneous molecular crystals, with nonuniform charge carriers, optical props. 7−112315
semiconductors and insulators, X-ray emission from Core excitons 7−118374
Cr, antiferromagnetic, symmetry-adapted Wannier functions 7−138185

warm rolling *see hot rolling*

warm working *see hot working*

warning systems *see alarm systems*

waste disposal
see also radioactive waste
actinide-doped nuclear waste glass, leaching in tuff-dominated system 7−103252
adsorption-irradiation processing, radiolysis in the adsorbed state appl. 7−93352
ALARA concept, practical applications 7−96306
ALARA considerations and radioactive waste disposal in the UK 7−96389
American Nuclear Society, Conference, Dallas, TX, USA (June 1987) 7−102014
Asse salt mine, proposed radioactive waste repository, geological, hydrogeological survey 7−101298
Asse salt mine, radwaste disposal, U and Cs dissolving, containers *(German)* 7−129433
backfill formulations for a nuclear waste disposal vault 7−109501
basalt-synthetic groundwater system, Tc behaviour as function of temp. and initial O content, radwaste appls. 7−103270
bentonite-based packing, role in limiting radionuclide releases from HLW repository 7−74084
biomedical solid radwaste, incineration dose assessment, deregulation proposal 7−87254
bitumen radwaste forms, biodegradation 7−103248
bitumens/bituminous compound for radioactive waste treatment, thermal stability 7−144717
bituminizing liquid radwaste from Leningrad Nuclear Power Plant 7−122208
borosilicate glasses, composition effects on chemical durability 7−103231
Bruce Nuclear Power Development Waste Operations Site-2, construction, safety and cost anal. 7−96352
BS method for T-bearing water solidification *(German)* 7−129439
BWR station power resin condensate polishing plant for waste reduction *(German)* 7−116711
Canadian nuclear fuel waste management program, status 7−96341
Canadian nuclear waste management programme, ideology, risk and public consultation 7−109506
CANDU spent fuel, $^{137}Cs/Xe$, and $^{129}I/Xe$ release ratios, fuel-sheath gap leaching in groundwater 7−129426
cement matrices, solubility modelling, implications for LLW immobilisation 7−103242
cement-based radwaste forms, pore soln. composition effect on Cs leachability 7−103240
cement-glass packages containing Na_3BO_3 from PWR power plants, stability, solidification technique 7−129427
cement-glass radwaste package containing $Na_2B_4O_7$, leaching studies for PWR waste 7−103247
Chalk River area seismicity, implications for LLW disposal facility siting 7−89781
China, spent fuel and HLW, treatment and disposal 7−109519
Cigar Lake analog study for underground nuclear fuel disposal vaults 7−96363
CLAB, spent fuel intermediate storage facility, remote-handling experience 7−129423
clay 7−120007
clay buffer material for radwaste disposal, French clays 7−103282
clay-based grouts in simulated rock fractures, erosion, radwaste repository appl. 7−109500
combustible radioactive waste, Ontario Hydro incineration system 7−96366
concrete cask for storage, transportation and disposal, design, tests 7−96357
concrete radwaste forms in groundwater, attenuation of Pu, Am, Cs and Sr mobility 7−103244
conf., London, England, Sept. 1986 7−95108
conf. on nuclear materials safeguards, Vienna, Austria, Nov. 1986 7−108038
conference on radioactive waste management, Winnipeg, Canada, Sept. 1986 7−95091
contaminated HLW sites, telemetry system for melt depth monitoring during in situ vitrification 7−103219
corrosion behaviour of radwaste container materials in Grande Ronde basalt groundwater 7−106713
creep response of rock salt around long excavations of waste isolation pilot plant facility 7−116705
CRNL shallow land burial site, hydrogeologic studies 7−101297
defence borosilicate nuclear waste glass, surface layer formation, reaction product leaching 7−74090
Delaware Basin, USA, radiometric dating of ochoan evaporites, radwaste disposal 7−103278
DHLW cask, hypothetical accident condition loads with initial pressure 7−74188
DHLW truck shipping cask, design verification 7−74182
domestic, municipal and industrial refuse, energy harnessing 7−126565
dry casks for spent nuclear fuel storage, environmental impacts, licensing and costs 7−129428
DWPF radwaste canister sections, large scale leach testing of glass 7−103257
environmental protection by final disposal of waste, lithosphere repositories, human effects 7−129422
final disposal of LLW and MLW in Finland 7−81730
finite cylindrical radwaste form, diffusional release of single component material 7−135658
flask containing irradiated LWR fuel, thermal response following loss of coolant water 7−74179
French nuclear fuel cycle industry in 1986 *(French)* 7−89615
fusion reactor structural materials, waste disposal classifications, D-T and D-^{3}He reactor appl. 7−103232
gaseous effluents from nuclear power plants, effects on the air *(French)* 7−139168
Geode two-step crystallisation and cementation process for radwaste volume reduction 7−135666
geologic repository, radionuclide transport from multiple-patch source into planar fracture 7−103228
geologic waste repositories, IOCRF60.2 regulation, designers interpretation 7−103226
German management strategies for radwaste, radionuclide treatment and disposal *(German)* 7−89734

waste disposal continued
glaciation modelling in nuclear fuel waste disposal assessments 7−96362
glass, groundwater chemistry in saturated tuff environment 7−103263
glasses, diffusion-based leaching models, nuclear waste fixation 7−105096
glassy topopah spring tuff, zeolitization under hydrothermal conditions, radwaste disposal 7−103275
Gorleben mine, geological reconnaissance for radwaste repository *(German)* 7−96339
Gorleben mine, reconnaissance studies for radwaste disposal, status in 1986 *(German)* 7−96331
groundwater, radiolysis and bicarbonate chemistry, generalised model 7−103268
HADES project for radioactive waste disposal in deep clay 7−96349
Hanford Vitrification Plant performance, effects of feed process variables 7−103217
Hanford waste storage site, thermal and mechanical props. of basalt 7−94215
Hanford Waste Vitrification Plant, ceramic melter process rates, effects of slurry solids conc. 7−103218
high level waste in borosilicate glass, ORIGEN-S model for n source spectra 7−103207
high-temperature slagging incineration *(French)* 7−74085
HLLW vitrification at Sellafield 7−135662
HLW, long-term performance of waste packaging materials 7−96378
HLW, materials interactions relating to long-term geologic disposal of nuclear waste glass 7−96381
HLW, natural analogue appls. to long-term behaviour prediction of waste forms 7−96382
HLW, package long-term performance, development, application and validation of models 7−96379
HLW, transport of U and Tc in unsaturated tuffs 7−103271
HLW borosilicate glass corrosion in the presence of steel corrosion products 7−103253
HLW disposal, laser photoacoustic spectroscopy for trace level detection of actinides in groundwater 7−96386
HLW disposal, test programme in boreholes in Swiss sediment-covered crystalline rocks 7−109515
HLW disposal in the Asse salt mine, expt. testing *(German)* 7−96335
HLW forms, standard test methods for compliance testing in waste acceptance process 7−103255
HLW from LWR fuel reprocessing, powder-technology based vitrification *(German)* 7−129434
HLW geological disposal, bentonite clay as buffer material, chemical species 7−74089
HLW glass, Cs contamination of air in canister 7−96328
HLW glass, leaching behaviour 7−141329
HLW glass, thermal shock resistance, overview 7−74095
HLW management, global database strategy for public engineering decision making 7−96380
HLW management, Japanese safety research from April 1985 to March 1986 7−81733
HLW package licensing considerations 7−96377
HLW repository, temp. distrib. calcs., 3D numerical model *(German)* 7−129443
HLW vitrification plant at Tarapur, India, semi-continuous pot-glass process 7−135663
hospital solid radioactive waste disposal, radiological safety and materials handling procedures *(German)* 7−129421
HTR fuel element graphite, permeability to ^{99}Tc, ^{137}Cs and ^{237}Np, spent fuel repository implications 7−135422
hydrated Portland cement in radwaste repositories, pore-water chemistry modelling 7−103241
hydrous metal oxide ion exchangers, ion-exchange property and thermal stability 7−135661
ILW, liquids and solids, encapsulation in cement at Dounreay 7−135664
ILW and LLW, disposal in rock caverns 7−96350
ILW and LLW, liquids and sludges, solidification in bitumen at Tokai-Mura plant 7−135667
ILW and LLW disposal in clay/till deposits 7−96355
ILW canisters in concrete, math. model of uniform corrosion of steel 7−74096
Japanese HLW isolation program, geological aspects 7−96353
Konrad radwaste repository, preliminary waste acceptance requirements 7−89736
Konrad radwaste repository, safety anal. and waste product requirements *(German)* 7−96333
Konrad radwaste repository, technical design *(German)* 7−96332
Konrad repository, W. Germany, disposal criteria 7−141319
Konrad repository, W. Germany, preliminary waste acceptance requirements 7−141321
Konrad repository, W. Germany, safety analysis 7−141322
Konrad repository, W. Germany, waste package quality control 7−141324
Konrad repository, W. Germany, waste package receival procedures and emplacement monitoring, vehicle/building shielding 7−141326
Konrad repository W. Germany, low heat generating wastes, disposability 7−141323
Konrad waste repository, W. Germany, complying with conditions for ultimate storage 7−141325
Kuosheng spent fuel pools, shielding anal. of reracking and rod consolidation options 7−141327
Lac du Bonnet granite props. rel. to radioactive waste disposal 7−94212
landfill site, model for pollutant transport into soil deep layer 7−86842
legal prerequisites, W. Germany 7−141320
liquid radwaste from RBMK, physicochemical foundations of bituminisation 7−122207
liquid scintillation cocktails, alkylbenzene and detergent based, performance comparisons for disposal 7−132958
LLW, development of waste volume minimization program at FP&L 7−103222
LLW, disposal in simulated peat bog repositories 7−103214
LLW, immobilization of neutralized cladding-removal waste in a cement-based grout 7−89747
LLW, in-plant treatment by electrodialysis 7−109488
LLW, MLW, HLW and spent fuel management in Spain 7−81731
LLW, NRC perspectives on alternative disposal methods 7−103211
LLW, transport from Taiwan to off-shore repository 7−89745
LLW, updated scaling factors for radionuclide contents 7−103234
LLW and ILW disposal, backfill materials 7−89735
LLW and ILW repository in Finland, performance anal. for Olkiluoto site 7−103246

waste disposal continued
LLW and ILW shallow land burial at CRNL, hydrogeological studies 7−141328
LLW disposal, engineered sorbent barriers 7−103213
LLW disposal, optimum alternative site/technology combination determ. 7−135670
LLW disposal, public acceptance 7−103210
LLW disposal at Duke Power nuclear stations 7−103221
LLW disposal facilities, long-term concrete degradation mechanisms 7−103212
LLW disposal facility siting in Canada, social considerations 7−109510
LLW production by Ontario-Hydro, control developments 7−103223
LLW repositories, impact of transportation considerations 7−89741
LLW shallow land burial, chemical aspects, UK research programme 7−103243
low-level radioactive waste, proposed management procedure for Italian facilities 7−96375
low-level radioactive waste management in Canada 7−96374
magnetic fusion reactors, radiological hazards 7−74042
medium-level radioactive waste water corrosion and release mechanism of cement matrix 7−129425
metal matrices for nuclear fuel waste disposal 7−89769
metal-matrix corrosion studies in Canadian shield granitic groundwaters for radwaste 7−100455
metals and alloys, solidification, finite element modelling, nuclear waste disposal appl. 7−132599
metamict minerals, natural annealing of alpha-recoil damage 7−103265
microwave heating furnace system for radioactive waste disposal, 3D anal. of EM fields 7−122210
Midwest Volume Reduction Facility for supercompaction of dry active waste 7−103225
MLW and spent HTGR fuel elements, test disposal in the Asse salt mine *(German)* 7−96336
MOSTRAM cast Fe vessels for radioactive waste storage *(German)* 7−129440
MOTIF finite-element thermohydrogeological code for Canadian nucl. waste management 7−96359
neutron-activated reactor parts, shallow land burial, near-field releases at ORNL 7−103245
Niagara Falls Storage Site, waste containment structure, development 7−96356
nuclear fuel disposal containers, casting development 7−141312
nuclear fuel transport/storage flasks, sealing techniques 7−122014
nuclear fuel waste disposal, confidence bounds on dose empirical cumulative distrib. function 7−81732
nuclear fuel waste disposal, probabilistic safety assessment, interface model development 7−96365
nuclear fuel waste disposal assessment, nonlinear chemical sorption isotherms for repository 7−122213
nuclear fuel waste disposal container, welding and inspection 7−89770
nuclear fuel waste immobilisation containers, hydrothermal dissolution of nonmetallic materials 7−89772
nuclear fuel waste management program, geological results 7−89739
nuclear materials, high temperature testing of structurally damaged impact and puncture package protection systems 7−74185
nuclear materials cask analysis, phase change models 7−74192
nuclear materials cask design specifications, evaluation using CAPSIZE program 7−74193
nuclear materials casks, target hardness comparisons 7−74191
nuclear materials transportation systems, shock and vibration road simulator tests 7−74187
nuclear materials transportation systems, thermal benchmarking 7−74184
nuclear spent fuel dry cask storage program at the Idaho National Engineering Laboratory 7−141315
nuclear waste containers, transient and steady-state radionuclide transport 7−96222
nuclear waste disposal studies at Dutch Energy Research Centre *(Dutch)* 7−126535
nuclear waste disposal vault with leakage, radionuclide inventory calcs. 7−103227
nuclear waste glass, H speciation in hydrated layers after leaching 7−103260
nuclear waste glass, leaching, chemistry and kinetics 7−103256
nuclear waste glass performance, Fe corrosion products effects modelling 7−103254
nuclear waste glasses, behaviour in saline groundwater 7−96341
nuclear waste management, symposium, Boston, MA, USA (Dec. 1986) 7−95101
nuclear waste packages, radionuclide release, sorption and decay effects 7−103229
nuclear waste packages in repository, radionuclide transport 7−103230
NuPac 125-B rail cask, design and scale model testing 7−74190
ocean dumping of industrial wastewater, off E coast of USA 7−79461
Ontario public's opinion about nuclear fuel waste management 7−109508
packaging, high-speed impact test 7−74180
penetrator telemetry for high-level nuclear waste sea burial 7−96388
public consultation and the Canadian Nuclear Fuel Waste Management Program 7−109507
pyrochlores radwaste form, X-ray absorption spectroscopy, α-recoil damage 7−103266
Rabbit Lake, Canada, open pit tailing disposal system 7−96348
radioactive cemented waste forms, corrosion studies of mild steel drums 7−122212
radioactive decommissioning waste, on-site burial, preliminary dose assessment 7−89759
radioactive material transportation, projected environmental impacts 7−89744
radioactive material transportation to 1st US repository site, projected environmental impacts 7−74117
radioactive used fuel, effect of precipitation on radionuclide vaults release in geological 7−89780
radioactive used fuel disposal centre study, plan and specifications 7−89751
radioactive waste, acceptance conditions for long term disposal of vitrified waste 7−103206
radioactive waste, central storage of used fuel, computer modeling 7−89749
radioactive waste, continuous pyrohydrolysis volume reduction system 7−96367
radioactive waste, crystal chemical incorporation in ceramics, valence, location, radiation damage, hydrothermal durability 7−135659

waste disposal continued
radioactive waste, fixation in cement matrix, phase characterisation studies 7−89746
radioactive waste, implications of leaching studies of natural and synthetic titanites 7−94221
radioactive waste, long term evolution, PRA modelling 7−89763
radioactive waste, long-term management options for Ontario Hydro 7−96376
radioactive waste, packaging materials, corrosion research *(German)* 7−129441
radioactive waste, PRA, application of variance reduction techniques 7−89764
radioactive waste, storage and management *(German)* 7−96340
radioactive waste, UK waste management policy 7−141330
radioactive waste cask handling system, use of robotics 7−74183
radioactive waste disposal, radiological protection criteria 7−89756
radioactive waste disposal, technical issues for LLW and ILW 7−109521
radioactive waste disposal considerations to remove harmful effects 7−89733
radioactive waste disposal in continental clays 7−116706
radioactive waste disposal in fractured granite, in situ expts. 7−89738
radioactive waste disposal in granite in Finland, borehole testing 7−94511
radioactive waste disposal in Lac du Bonnet granite, URL shaft displacements 7−94213
radioactive waste disposal options in the United Kingdom 7−81728
radioactive waste immobilization process development 7−81729
radioactive waste management, fuel market conf., Brugge, Belgium, Oct. 1986 7−108047
radioactive waste management, role of optimization techniques in assessment of practicable environmental options 7−100762
radioactive waste management in OECD countries, national programmes and joint activities 7−96343
radioactive waste management in the UK 7−96344
radioactive waste management practices in the Federal Republic of Germany 7−129430
radioactive waste management systems integration, considerations and programmes in USA 7−141313
radioactive waste multicomponent systems at 200°C, effect of cement on performance 7−89748
radioactive waste package interactions in BWIP, tracer-injection hydrothermal technique 7−103250
radioactive waste packaging, quality assurance 7−74222
radioactive waste shallow land burial, COSMOS-S/D code complex 7−89737
radioactive waste shallow land burial, COSMOS-S/D safety assessment code 7−89762
radioactive waste shallow land burial facility, safety and cost assessments 7−89750
radioactive waste solution chemical treatment at VVER-440 nuclear power plants *(Hungarian)* 7−116707
radioactive waste storage, safety assessment for double-barrier in-ground container 7−89761
radioactive waste volume reduction program at Brunswick plant 7−129429
radiocolloid formation in radionuclide migration, waste management study 7−96361
radioisotope disposal in municipal waste systems, radiological impacts 7−89760
radionuclide export by deer mice, SE Idaho radioactive waste disposal area 7−71898
radionuclide transport by concentrated brine in porous medium, radwaste disposal 7−103277
radwaste, disposal in plutonic rock 7−135674
radwaste, final disposal project status in FRG *(German)* 7−96330
radwaste, final disposal sites, long term safety anals., groundwater flows *(German)* 7−96338
radwaste, near-field modelling of chemical and transport processes 7−103269
radwaste, synthetic basalt groundwater, irreversibility of Se(VI)/Se(IV) redox couple 7−103273
radwaste bituminisation, safety aspects for various wastes *(German)* 7−129436
radwaste canisters in repository conditions, localised corrosion eval. 7−103239
radwaste containers in bentonite-based materials, pressures from surroundings, designs 7−109504
radwaste leached borosilicate glasses, structural changes 7−103262
radwaste management program, treatment and behaviour of waste forms 7−81727
radwaste management systems anal., systematic approach 7−89782
radwaste package components, effects of gamma radiolysis 7−103264
radwaste repository, hydraulic compression of shaft backfill at the backfill/rock interface [radwaste repositories] 7−109505
radwaste treatment facility at Tokai-2 BWR 7−135665
refuse pyrolysis for organic waste disposal and power generation at Goldshofe 7−93306
reusable metallic radwaste, decontamination procedures *(German)* 7−135673
rock salt, moisture movement simulation for deep bore radwaste repository design *(German)* 7−129442
Salt Lake City UMTRA Project, geotechnical and construction considerations 7−96372
salt mine storage of MLW and spent HTR fuel elements, underground expts. *(German)* 7−129432
saltstone vaults for radwaste from processed spent nuclear fuel 7−103215
sand-bentonite buffer for nuclear waste containment, strength and vol. change characts. 7−109499
Sellafield ion exchange effluent plant for radioactive waste treatment 7−81547
shallow depth radwaste repository, backfill materials eval. for ILW and LLW disposal 7−109502
shallow land burial, safety anal. USNRC model overview *(Croatian)* 7−74092
shipping casks under accident conditions, thermal analysis computer code Q/TRAN 7−74181
silicate glasses, dissolution modelling by ETCH Monte Carlo code, radwaste appl. 7−103261
simulated HLW glass, continuous flow leach testings in groundwater and ionised water 7−109487
socio-ethical aspects of radwaste management in Canada 7−109511
waste disposal continued
solar thermal/photolytic destruction of hazardous organic wastes 7−144728
solid radwaste characterization for volume reduction suitability study 7−129431
space nucl. reactors, post-operational disposal 7−68017
spent cation exchange resins, functional sulphonic acid group effects on pyrolysis 7−81725
spent fuel, long term storage and final disposal, facility characts. and safeguards 7−103236
spent fuel, solid characterisation from hydrothermal tests 7−96385
spent fuel, uranium release comparison with unirradiated UO_2 in salt brine 7−96223
spent fuel and borosilicate radwaste glass, multicomponent systems tests at 200°C 7−103249
spent fuel and waste management, conf., London, England, Sept. 1986 7−80181
spent fuel and waste management, international approach 7−81734
spent fuel disposal in West Germany, overview 7−96345
spent fuel dissolution in natural groundwater 7−96221
spent fuel in tuff repository, ^{14}C release from waste packages 7−96387
spent fuel waste form, long-term performance assessment under repository disposal conditions 7−96383
spent nuclear fuel elements, safeguards aspects of intermediate and final storage *(German)* 7−129371
spent reactor fuel, direct disposal, overview of ongoing activities *(German)* 7−96337
SRL-165 glass radwaste form, integrated testing, diffusion and surface dissolution 7−103251
SRL-165 radwaste glass, transport and reaction kinetics at glass/soln. interface, leaching 7−103259
steel, C, localised corrosion of radwaste containers in granitic repository 7−100453
steel, C, pitting corrosion, statistical distribs., use for radwaste disposal 7−100451
steel, C, stress corrosion cracking in simulated radwaste salt repository environments 7−100481
steel, cast, corrosion tests for basalt repository 7−100452
storage container design for T-bearing water disposal *(German)* 7−129438
Super-Phenix fuel elements and absorber rods, transport and storage container development *(French)* 7−74141
Sweden, spent fuel and radioactive waste management 7−109520
Swedish nuclear waste glasses, leachability rel. to comp., SIMS obs. 7−109490
Swedish radioactive waste management program, update 7−96346
Swiss projects for the final disposal of radioactive wastes *(German)* 7−96334
Synroc, thermal expansion, 20-1100°C 7−81722
SYNROC demonstration plant, simulated HLW disposal 7−89771
Synroc-C, evaluation as second generation radioactive waste form 7−89773
SYNROC-FA ceramic waste, leaching, phase analysis and microstruct. 7−81721
system analysis for radwaste management, decision-making framework for LLW and MLW 7−89730
TMI-2 core, preparations to transport, receive and store 7−89742
transportation considerations in selecting a nuclear waste repository 7−74175
tritiated waste solidification in polystyrene and cement, tritium release rates 7−122214
tritiated water absorbed on molecular sieve 5A, radiolytic gas prod. 7−81723
TRU waste disposal by spallation reaction transmutation 7−109489
TRUPACT-I, containment anal. 7−74189
TRUPACT-I transuranic transporter, impact, puncture and thermal testing 7−74186
Turkish biomass energy potential and rural utilisation 7−86746
UK radioactive waste disposal sites, development 7−96354
UK waste management programme, conf. on nuclear power, London, England (Sept. 1987) 7−140375
underground radioactive waste disposal facility, probabilistic risk assessment 7−96364
United States nuclear waste policy act and monitored retrievable storage 7−109518
uranium mill tailings in western USA, governmental control 7−109509
US geologic repository program, status 7−96342
used CANDU fuel, corrosion deposits fission products study 7−96358
vitrification system for radioactive defense waste 7−103216
vitrified high level radwaste, transport and storage cask development 7−74142
vitrified HLW, thermal behaviour and temp. distribs. model 7−74094
WADCOM II nuclear waste disposal cost model for borehole and generic package concepts 7−103204
Waste Isolation Pilot Plant, overpack design and functional requirements 7−96368
West Valley above ground disposal site, design and performance assessment 7−96351
West Valley radwaste glass, aqueous phase composition effects on leach behaviour 7−103258
Yucca Mountain nuclear waste repository, seismic design strategy 7−103209
Am (III) colloid generation in groundwater, migration behaviour 7−103276
B de-entrainment by evaporation in radwaste treatment 7−81720
B_2O_3-SiO_2 supercooled melt, U^{6+} diffusion, appl. for nuclear waste glasses 7−131345
B_2O_3-SiO_2-Na_2O-Cs_2O-Rb_2O, waste glasses, diffusion of ^{83}Rb and ^{84}Rb tracers 7−135660
Cs immobilisation in pollucite structure by hydrothermal hot-pressing 7−81724
Cs^+ and I^- diffusion in compacted bentonite-based materials, radwaste repository appl. 7−109503
^{137}Cs safe immobilisation in synthetic hollandite-type phases, radiation damage effects 7−142841
Cu, corrosion behaviour for HLW disposal containers 7−93209
Cu, dissolution in radiation environments 7−106715
Cu-based materials, corrosion behaviour for waste containers 7−106714
Fe-Cr alloys, statistics of pit initiation: analysis of current transients during passive film breakdown, radwaste appls. 7−100454
^{129}I disposal, radiation dose reduction by isotopic dilution 7−96360
Na-bentonite, strontium and cesium diffusivities 7−103281

waste disposal continued
Na-bentonite, thermally induced alteration, radwaste disposal 7−103280
Na-bentonite-groundwater interactions, buffer material in radwaste repository 7−103279
Na_2O-SiO_2 glass, radiation damage and annealing for radwaste 7−103267
Ni-based superalloys, localised corrosion in chlorine environments 7−93208
Ni-Cr(-Mo) based alloys, HLW canister appl., corrosion resist. 7−103205
Np, extraction from HLW using di-isodecyl phosphoric acid 7−89731
Pu, fuel cycle alternatives, disposal, storage or reprocessing 7−109517
Pu, geochemistry for radwaste disposal and containment 7−103274
$^{106}RuO_4$ vapour, sorption on natural tuff with mordenite admixture *(Czech)* 7−116709
T waste management system 7−96369
Tc, geochemistry for radwaste disposal and containment 7−103274
Ti, corrosion resistance for nuclear fuel waste disposal conditions 7−89774
TiO_2 fibres, hydrated, cryst., immobilisation of rare earth metal ions from aq. soln. 7−135672
U evaporation-thermal denitration process for solidification and storage 7−129424
U mill tailings, acidification and radionuclide leaching 7−89767
U mill tailings, environmental benefits from regulatory compliance 7−89753
U mill tailings, management of wastes in vicinity of mill 7−89754
U mill tailings, PRA of long-term environmental effects 7−89765
U mill tailings, stabilization of former processing sites, UMTRA project 7−96371
U mill tailings area at Rabbit Lake, cost-benefit anal. of decommissioning options 7−96373
U mill tailings pile stabilization, UMTRA Project 7−96370
U mill tailings piles, criteria for remedial work 7−89755
U mine and mill waste management systems, licensing process 7−89752
U mines and mills, decommissioning 7−89758
U mining in Saskatchewan, environmental regulation 7−89757
U tailings, disposal facilities, seepage and transport modelling 7−89766
U tailings, research into long-term environmental effects in Canada 7−109512
U tailings management and waste water control at Key Lake, Canada 7−109514
U transport with variable temp. and oxidation potential 7−103272
U wastes, CHINTEX model for environmental impact 7−89768
U-oxides, chemistry of colloids in groundwater environment 7−89779
UO_2, amorphous, solubility and mononuclear hydrolysis consts. 7−96384
UO_2, radiation induced dissolution 7−96220
UO_2, unirradiated, solubility in granitic groundwater 7−89778
UO_2, used CANDU fuel, effect of radiolysis of water on oxidation 7−89777
UO_2 used fuel, aqueous solutions in contact, modelling of alpha radiolysis 7−89775

watches *see clocks*

water
see also groundwater; heavy water; hydroxonium ion; ice; moisture; seawater; steam
absorbed dose in water irrad. by 2.5 GeV bremsstrahlung, obs. 7−139367
absorption and desorption in vulcanized rubbers 7−84505
absorption lines, air pressure induced centre shift, rel. to atm. optics 7−109873
acetone-H_2O, binary nucleation theory 7−98379
acetonitrile-water binary critical mixtures, D isotope effects 7−124512
adsorbed, orientation and elastic electron scatt. differential cross section 7−118262
adsorbed film, effect on contact adhesion of rubber against glass 7−105235
adsorbed layer on Au, in $HClO_4$, electrochem. modulated IR spectrosc. obs. 7−82093
adsorbed on a-Si:H, charge transfer from adsorbates to the bulk 7−99157
adsorbed on Ag electrode, SERS 7−99809
adsorption and thermal decomposition on clean and O-predosed Al(111) surface 7−113984
adsorption on Ge, AES and photoelectron spectra studies 7−143228
adsorption on InP ($\bar{1}\bar{1}\bar{1}$), clean and Na predeposited surface *(Chinese)* 7−91918
adsorption on planar and stepped Si (100) 7−143204
adsorption on SiO_2, surface elec. cond. 7−143553
adsorption on SnO_2 (110) crystal, chemical, electronic and structural props. obs. 7−133003
adsorption on surfaces to remove bulk metastability 7−105013
adsorption on ThO_2, STEM and Fourier transform IR spectra 7−98682
adsorption with K, on Pt (111), work function changes, molecular orientation 7−105260
adsorption with O_2 and OH on Ag(110), LEED, AES, TDS, ESDIAD and work function studies 7−105267
air-water flow in horizontal pipe, press. drop meas. 7−142352
air-water horizontal two-phase flow, wall press. fluctuations 7−142353
air-water mixture, laminar pipe flow, coupled heat transfer calcs., statistical narrow-band model 7−75562
air-water system, tomographic reconstruction of the density distribution using direct fan-beam algorithms 7−111081
air-water two-phase flow in air-lift system 7−121087
alcohol (surfactant)-water-electrolyte media, adhesion and thermodynamics at organophilic silicate surface 7−112021
alcohol-water mixtures, positron annihilation and compressibility studies 7−92776
alcohol-water systems containing dissolved salt, vap.-liq. equilib. 7−142967
alkali halide aqueous solns., Raman band, temp. and salt conc. depend. studies *(Japanese)* 7−118992
angular geometry, ab initio STO-3G bond orbital calcs. 7−96502
anion-H_2O-cation systems, H^+ transfer across H bonds, SCF LCAO MO calcs. 7−89945
aromatic π-electron system-$H_2O(D_2O)$(HDO) interaction, matrix isolation IR obs. 7−96674
asymmetrical top molecule, symmetrical top dipolar molecules, ions, hitting collisions, adiabatic invariance treatment 7−135831
atmosphere, sunlight heating rate in water vapour bands 7−87902
atmospheric concentrations, meas. by lidar 7−115095
atmospheric vapour meas. using MgF_2:Co laser 7−133942

water continued
atmospheric water content, equilib. cluster population, association equilib. consts. calcs. 7−87781
benzene-H_2O liq.-liq. interface, Monte Carlo simulation 7−83634
boiling fragmentation interaction with molten Sn 7−75612
boiling heat transfer, N_2 dissolution effect 7−136837
boiling in vertical channel, heat transfer, temp. profiles 7−142304
t-butyl alcohol-water mixtures, small-angle X-ray scatt. investig. 7−117800
caesium pentadecafluorooctanoate-water system, lyotropic mesomorphism, phase diagram 7−142560
cavitation bubbles, moving solid wall proximity effect on dynamics 7−123693
cavitational boiling, investig. 7−76374
chemisorption and interactions on NiO (111), UPS study 7−143201
chemisorption on Pt(100), precursor states and adatom mobility *(Chinese)* 7−112056
cholesterol-water interface, Monte Carlo simulation 7−114206
clouds, liq. water vertical profiles, down-coming microwave radiation meas. *(Russian)* 7−114983
clouds, liquid water and precipitable water vapour determ. by ground-based microwave radiometers 7−127335
clouds, microphysical numerical model of water and ice content of winter orographic clouds 7−133854
clouds liquid water distribution, determ. from coplanar scanning radiometers meas. 7−114864
clusters, excess electrons, attachment to surface states 7−129922
clusters, seeded supersonic jets, CARS spectra anal. 7−90141
coadsorbed on Rh (100), formate production 7−144747
coadsorbed with dimethyl methylphosphonate on oxidised Fe surface, TPD, AES studies 7−71522
coadsorption of surfactants on activated carbon in water *(French)* 7−118238
coadsorption on Ag (111) with O, H_2O-OH-O surface chem. and interactions, LEED and desorpt. studies 7−143212
coadsorption with HF on Pt (111), surface H_3O^+ identification 7−91999
coal-water mixtures, rheological props., electrolyte effect 7−75490
collisional broadening of 380 GHz line, temp. depend. 7−116937
P/Comer Hallet (1982i), H_2O vel.-resolved obs. 7−88252
P/Comet Giacobini-Zinner (1985 XIII), electron and H_2O^+ column densities 7−72361
P/Comet Halley(1982i), Astron UV obs. before and after perihelion *(Russian)* 7−88210
in P/Comet Halley (1982i), 6_{16}-5_{23} 22 GHz emission *(Russian)* 7−139981
P/Comet Halley (1982i), bow shock, cometary H_2O group ions obs. 7−88247
P/Comet Halley (1982i), coma H_2O IR obs. 7−88251
P/Comet Halley (1982i), H_2O and IR spectra 7−107764
P/Comet Halley (1982i), long-period hydromagnetic waves assoc. with O^+ or H_2O^+, Sakigake obs. 7−88236
P/Comet Halley (1982i), velocity-resolved obs. of H_2O IR emission 7−88185
P/Comet Halley (1982i), water prod. rate, UV spectral meas. 7−107761
P/Comet Halley (1982i), water vapour ortho/para ratio obs. 7−88253
Comet Kohoutek (1973 XII), H_2O^+ abundance determ. from fluoresc. efficiency factors 7−120264
P/Comet Wilson (1986l), IR spectra, H_2O and methane production and magnitudes 7−101735
in comets, excitation model of IR obs. 7−94751
connectivity in hydrophilic confinements, percolation model simulations 7−124072
in continental cumulus clouds, ice and water contents of seeded and non-seeded clouds 7−145628
decyl sodium sulphate-decanol-water-Na_2SO_4 lyotropic nematic system, viscoelastic props. 7−76255
depolarised Rayleigh wing, Fabry-Perot spectra, temp. depend. anal. 7−70760
desorption from Ru (001), isotope effects 7−118269
diffusion, in orthorhombic natrolite, NMR obs. 7−112981
diffusion into phenylon C4 polyamide *(Russian)* 7−137625
dimer, H bonding interactions, frozen fragment reduced variational space anal. 7−129549
dimer, molecular interactions, basis sets 7−116840
dimer, struct. and vibr. spectroscopy. quantum simulation 7−96909
disturbed water in tank first subharmonic of sound 7−82901
doubly charged ion, dissoc., singlet and triplet state pot. energy surfaces calc. 7−122366
drop, optical field study at 10.6 μm 7−122828
droplet, external optical field under laser radiation action at 1.06, 2.36 μm *(German)* 7−131183
droplet growth by water vapour condensation on NaCl particles, influence of surfactants 7−87765
droplet size measurement in steam turbine using optical fibre system 7−67284
droplets, boiling curve, statistic anal. 7−137530
droplets, charged, evaporating, change and mass flux in elec. field 7−83322
droplets, condensational growth, Mie resonance spectroscopic study 7−87760
droplets growth on aerosols, laboratory study in continuous flow diffusion cloud chamber 7−87764
drops in free fall, coalescence charge effects 7−104334
earthquake light emission and unsaturated ground water vaporisation 7−71969
electric breakdown, gas bubbles influence 7−83580
electric field gradients, internal. interactions effects, electrostatics 7−124938
electrolysis, alkaline, using Mo naphthalocyanine based electrode *(French)* 7−119534
electrolysis in water heaters and boilers, causes and prevention 7−139015
ethanol-H_2O, binary nucleation theory 7−98379
ethanol-H_2O, convection onset, lin-stability problem soln. 7−97273
ethanol-H_2O mixtures, convection; travelling waves and spatial variation 7−130516
ethanol-H_2O mixtures, convection onset, confined travelling-wave patterns 7−130731
ethanol-water, excess enthalpy of mixing, appl. to reference mixture use 7−91814
ethylene oxide-H_2O complexes, electronic struct., CNDO/BW calcs. 7−109774

water continued
excess electrons, evidence of prehydrated state with femtosecond lifetime 7−85657
excitation energies, ionisation pots., open-shell coupled-cluster method., correlation effects calcs. 7−116868
excitation in comets, model 7−120321
explosion, of $TaH_{0.58}$-graphite mixtures, phase composition of products 7−93330
Faraday effect meas. in high mag. field 7−113145
film, small bending perturbations, propag. 7−105197
flow over hemispherical hole, vortex struct. self-organisation 7−136868
forced convection in heated pipe, boiling crisis 7−136842
free convection flow at 4°C past a semi-infinite porous plate 7−75544
free jets, homogeneous condensation 7−98418
fusion reactor, H_2O effectiveness in aqueous self-cooled blankets 7−103190
gas bubbles dissolution kinetics in water, surfactant effects study *(Russian)* 7−84300
glycerol-water mixture, nucleation of cubic and hexagonal ice 7−137286
glycerol-water mixture surface, splash form. processes on impact of steel/glass sphere/cylinder 7−130753
ground state struct., split-valence bond-orbital calcs. 7−109786
hailstones, influence of water film thickness on corona discharge from melting ice surface 7−139710
harmonic stretching and bending modes coupling, adiabatic method calcs. 7−74552
HDO, interstellar, obs. in hot mol. cloud cores (Orion-KL and NGC 7538-IRS 1) 7−134287
high-frequency dielec. const., Kirkwood correl. factor 7−143956
ice, muonium diffusion 7−113048
ice-water interface, density and orientation profiles, diffusion consts., TIP4P model 7−137281
ice/water interface, solute redistribution, elec. props. and interface processes implications 7−118243
ice/water interface layer, kinetic processes, crystal growth 7−120048
ideal gas thermodynamic functions 7−97687
interaction of Ag with humates and other species, gel permeation chromatography anal. 7−100654
interaction with N-methylacetamide in carbon tetrachloride soln., PMR 7−92527
interactions with Ti gettered surface in UHV conditions 7−139072
intercalated molecule in $NaOH\text{-}NbS_2$ ($KOH\text{-}NbS_2$), NMR spectra 7−106041
intercoupling of surface and underground water, physical process decomposition 7−87716
interstellar HDO emission in Orion-KL region, aperture synthesis maps 7−140236
intramolecular model potentials 7−110061
Io, corotation lag limit on H_2O mass loss rate 7−145867
ion-water clusters, free energy changes calc. using nonadditive pots. and Monte Carlo method 7−118130
ionic solutions, translational diffusive proton motion, quasi-elastic neutron scatt. 7−84339
ionosphere plasma depletion expts., choice of chemical for release from rocket 7−107536
IR combination bands in P/Comet Halley (1982i), ground-based detection 7−94770
IRAS 18385−0512, associated very bright H_2O maser 7−120645
IRAS stars, search for H_2O maser emission 7−72655
isobutyric acid-water, quenched-liq. interface, instability 7−84448
isotopic isomers, solns., excess free energy, vol. depend. investig. 7−82006
Jupiter, troposphere, moist convection and H_2O abundance 7−120303
Jupiter atmosphere, multilayer $NH_3\text{-}H_2O$ clouds modelling 7−88169
lakes, electrical conductance, ion and temp. depend. 7−118139
laser beam-induced shock waves, fluid ejection and liq.-vapour interface channel form. *(Japanese)* 7−117026
liquid, boiling crisis study 7−136839
liquid, dielectric props., mol. dynamics simulation 7−125594
liquid, elec. field induced translational anisotropy, mol. dynamics study 7−117803
liquid, equation of state, computer simulation, Carravetta-Clementi pot. 7−111813
liquid, EXAFS study 7−125852
liquid, fall transient accel., decoupling and nonlin. effects 7−97897
liquid, H bonds, ring distrib. random network model 7−97894
liquid, H-bond cooperativity, temp.-depend. pot. barriers of hindered rot. 7−109854
liquid, high density, struct. at const. temp. 7−83637
liquid, mol. dynamics simulation and submillimeter spectra 7−97898
liquid, nature and struct. investig. 7−69571
liquid, OH stretch vibr., computer mol. dynamics study 7−92679
liquid, optical consts., temp. variation, Fourier transform IR spectra 7−77532
liquid, Raman spectra, derivative anal., H-bonds 7−109909
liquid, rot. dynamics, isotropic induced Raman scatt. spectra 7−90156
liquid, rot. flow induced by laser field, mol. dynamics simulation 7−117611
liquid, small-amplitude, H^+ motion, coupling to density and temp. 7−85631
liquid, thermodynamic behaviour investig. 7−83635
liquid and supercooled, depolarised Raman scatt. spectra 7−92680
liquid Raman spectra in translational and librational regions, depolaris. ratio 7−125740
liquid struct. and dynamics in $AlCl_3$ soln. 7−92534
liquid to ice transition, DSC anal. 7−69868
low frequency Raman scatt. spectra, laser light effects 7−113195
low pressure water, crit. heat flux. channel geometry effects 7−130694
M-type Mira variables, single, visible light curve shape and H_2O 13.5 mm line detect. 7−127876
Mars, climate, water and morphological features 7−72344
Mars, influence of water on evolution of internal struct. 7−88161
Mars, juvenile water release, estimated amounts and timing assoc. with volcanism 7−127758
Mars, meltwater prod. by large-scale volcano-ground ice interactions 7−134162
meniscus-wetting film transition zone, on quartz surface 7−112020
mesosphere H_2O measurements, implications for transport props. 7−139823
methanol-H_2O, binary nucleation theory 7−98379
methanol-water mixture, viscosity B coeff., dielectric friction effect 7−98537
water continued
$(methylamine)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
$N\text{-}(methylformamide)_{12}(H_2O)_n$, H-bonded, photoionis. and fragmentation 7−122624
molecular, coadsorpt. on Rh (100) with CO and O, EELS, LEED and TPRS investig. 7−118236
molecular chains, transfer and Green matrix methods 7−81962
molecular equation of state 7−118050
molecule, $A^1B_1\text{-}X^1A_1$ transition, oscillator strengths, ab initio MRD CI calcs. 7−103399
molecule, adsorbed on TiO_2, dielectric permittivity and loss meas. 7−92585
molecule, adsorbed on TiO_2, dielectric relax. obs. 7−92584
molecule, adsorption, on SiO_2 7−76621
molecule, at surface, Monte Carlo calcs. 7−83621
molecule, core electron ionis., const. reson. width approx. calcs. 7−135867
molecule, core photoelectron spectrum, Stieltjes imaging appl. 7−109999
molecule, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
molecule, dissoc., hyperspherical reson. lifetimes eval. 7−90276
molecule, dissociation, photofragment rotational distributions, parent internal motion, semiclassical calculation 7−136024
molecule, electric field gradients, ab initio SCF CI(SD) CPF calcs. 7−109801
molecule, electron and X-ray scatt. cross sections, CI calcs. 7−68224
molecule, electron correl., closed-shell coupled cluster single and double excitation model 7−81994
molecule, electron correl., extended geminal model 7−96556
molecule, electron impact direct and dissoc. ionisation cross sections 7−103673
molecule, electron impact dissoc., OH rot. and translational energies 7−110119
molecule, electron impact ionisation cross-sections 7−141703
molecule, electronic energy, fragment anal. 7−81928
molecule, electronic struct. calcs. using connected moments expansion 7−81918
molecule, evaporation from liq. jet surface, mol. beam investig. 7−141671
molecule, excited state, ionic geometries, Franck-Condon analysis 7−110008
molecule, gas-phase IR intensities, bond polar parameter model 7−82115
molecule, general props. eval., approximate double substitution coupled-cluster method 7−109699
molecule, geometry, analytical energy gradient, Moller-Plesset perturbation theory 7−116815
molecule, HF eqn. soln. by pseudospectral method 7−81925
molecule, hydrogen bonded, proton transport, protosolitons *(Russian)* 7−111937
molecule, in $MgCl_2$ soln., props. and dynamics 7−83638
molecule, in pure liquid, props. and dynamics 7−83638
molecule, møller-Plesset calculations taking care of the correlation cusp 7−74400
molecule, magnetic props., gauge-invariant ket function theory, SCF-CI calcs. 7−109807
molecule, nearly free rotation in soln., weak interaction with solvent 7−82070
molecule, network topology 7−74433
molecule, normal and local mode dynamics, anal. based on periodic orbits 7−116828
molecule, one-electron props., HF limit basis sets 7−89988
molecule, photodissoc., Wigner method test 7−103601
molecule, photodissoc. dynamics in $\tilde{B}\text{-}\tilde{X}$ absorpt. band 7−122635
molecule, polarisation, electron density distrib. changes, anal. 7−68200
molecule, positive ion complexes, computed H bond energies, basis set and correlation effects 7−141433
molecule, positron and electron collisions, total cross sections 7−129890
molecule, rot. transition halfwidth, temp. effect 7−129685
molecule, second hexad, IR absorpt. bands, transformed dipole moment parameters 7−101486
molecule, second-order Moller-Plesset dipole moment derivatives 7−109693
molecule, singlet states, linear asymmetric dissoc., MRD CI calcs. 7−116861
molecule, struct., van der Waals repulsion effects 7−102062
molecule, UV reson. Raman enhancement cross section meas. 7−74625
molecule, valence orbitals, electron momentum spectrosc. obs. 7−89906
molecule, vibr. effect on second virial coeffs. 7−136030
molecule, vibr.-rot. energy levels, force consts. and mol. geometry calc. 7−90089
molecule, viscosity equation derivation 7−118145
multiple water drops, simultaneous suspension technique for small vertical wind tunnel 7−123715
natural convection transience adjacent to suddenly heated vertical surface 7−110758
natural waters, zeotropic distillation from N,N-dimethylformamide 7−100764
networks, small amplitude collective proton motions, Raman spectra features 7−99831
NMR, solvent reson. selective suppression technique 7−102475
nonlinear unsteady free convection in vertical cylinder 7−75553
oil and water in sandstone rock, thin-slice chemical shift imaging, 80 MHz 7−132140
oil-water dispersion, particle size distrib. meas. using image processing 7−126489
oil-water microemulsion, Ising model, Gaussian curvature 7−85325
oligomer populations, gas-phase, press. enhancement, RRHO MCY-B/EPEN computation study 7−74806
ordinary chondrites, type 3, effects of aqueous alteration 7−94834
organic impurities, photooxidation using thin TiO_2 film 7−113961
orographic clouds, supercooled liquid water content over S Utah 7−133835
outgassing from Mars, amount lost in history of planet 7−72345
percolation model for free and bound water 7−102326
photodissoc., photofragment laser-induced fluoresc. study 7−68334
photolysis, catalysis using $SrTiO_3$ ultrafine powders 7−106459
photolysis, H_2 evolution photosensitised, using TiO_2 particles on colloidal SiO_2 7−132953
polymers, interactions with water and suitability for use as electrical insulators 7−118253
post-dryout heat transfer in channels 7−136841
primitive model, Monte Carlo simulation 7−97899

water continued
1-propanol-H_2O, binary nucleation theory 7−98379
pseudopotential for condensed phase simulation 7−91413
pumice-water interaction 7−101277
in quartz-micaschist in maritime antarctic, moisture content rel. to freeze-thaw weathering studies 7−87612
rainwater sulphate determ. method 7−108106
rubber-metal pair with water lubrication, boundary friction with account for hydrostatic press. 7−93111
salt water, lateral convection, periodic struct. form. 7−75576
self-diffusion, quasielastic neutron scatt. data, mol.-dynamics study 7−124573
Sgr B2-North H_2O maser spots, proper motion obs. use for Sun-galactic center distance determ. 7−115571
shallow water wave soliton, transmission and reflection calcs. at submerged barrier 7−130727
single droplets, stimulated Raman scatt. spectra 7−82717
snow, IR meas. of free-water content and grain size 7−114834
soil water remote sensing, satellite system for monitoring temporal and spatial behaviour 7−107451
solar industrial process heat system for preheating boiler feed water, Taiwan 7−71652
solar water heater using direct expansion collector heat pump *(Japanese)* 7−71649
solar water heating system for Delhi, technoeconomic simulation model 7−133117
solubility of quartz, enhancement due to complexing by organic compounds 7−87622
solubility of Rn 7−91808
solvent, internal press., calc. procedure 7−111721
solvent for alcohols compressibility study, struct. 7−84079
sorption, on PMMA, polymer crosslinks effects 7−70085
sorption, on PMMA, polymer mol. wt. effects 7−70084
sorption by polymers obs., quartz-crystal microbalance apparatus appl. 7−137708
sorption by swelling hydrophilic sorbent, thermodynamic parameters calc. 7−131425
sorption on phenylon C4 polyamide *(Russian)* 7−137625
spherical harmonics, order parameters, clusters, disordered systems, angular correlations 7−142549
spin modifications, separation using supersonic jet 7−142349
steam, direct contact condensation on horizontal surface of water 7−69881
steam-water coolant circulation loop, pressure loss, coolant props. charge study 7−97599
steam-water stratified countercurrent flow, flooding and hysteresis effects study 7−73952
steam-water stratified flow in horizontal pipe, phase and vel. distrib. 7−91228
structure, behind shock front, calcs. 7−137181
structure, between metals, Monte Carlo simulation 7−97895
structure, change as function of diphilic mol. and hydrocarbon chain length 7−104522
subcooled liq. flow at boiling onset, temp. field dynamics 7−136838
supercooled, self-diffusion coeff. meas. to 300 MPa 7−137605
supercooled, solidification, kinetics study 7−91767
supercooled, thermodynamic props. at 1 atm. 7−111913
superheated droplets on solid surfaces, wettability 7−111073
superheated steam, direct contact condensation on horizontal water surface, theoretical model 7−73951
superheated steam, direct contact condensation on water study 7−73950
supersaturated vapor, condensation in shock tube 7−98419
surface, splash form. processes on impact of steel/glass sphere/cylinder 7−130753
surface nonlinear cross-waves, transverse mode number shifts, geometry effects study 7−111005
surface oscills., parametric resonance-induced regular structures 7−83254
surfactant-alcohol-brine lyotropic lamellar phases, X-ray scatt. study 7−83659
temp.-depend. props. 7−83149
temperature of maximum density at negative pressure 7−104886
tensile strength, static and dynamic measurements 7−131200
s-tetrazine-H_2O complex, struct. and electronic spectrum 7−96638
thermal conductivity calc. in critical region 7−69995
thermal expansion in fine pores in silica gel 7−111918
thermal perturbation in vertical channel 7−97289
thermally induced diffusivity and reactivity in SiO_2 amorphous thin films, press. effects study 7−118169
Titan, methane modelling, role of water 7−120307
transient free-surface flows generated by moving vertical plate 7−83256
trimer struct., isotopomers, matrix isolation IR spectra 7−90122
tritiated water vapour, detection in air using tunable diode laser 7−109526
Triton X-114-H_2O, lamellar phase to isotropic liq. transition, phase diagram determ., DSC anal. 7−111871
ultrafast supercontinuum generation enhancement by addition of Zn^{2+} and K^+ ions 7−130278
ultrasonic velocity measurement, sensitivity determ. for new measuring system 7−123367
underground shallow solar pond water heater, transient anal. 7−71648
vapor and liquid, equation of state struct. *(German)* 7−117692
vapour, absorptivity and emissivity study 7−135952
vapour, adsorbed on C-C composite surfaces, influence on friction *(French)* 7−106626
vapour, atmosphere, ν_2 absorpt. band, IR spectra, tunable diode laser spectrometry 7−103504
vapour, conditions for dissoc. and recomb. in fluid flow 7−87537
vapour, electron scatt. cross sections meas. 7−96883
vapour, free jets, condensation onset meas. 7−142335
vapour, nonequilibr. dispersed two-phase flow, Raman scatt. 7−129720
vapour, susceptibility, nonresonant third-order, CARS spectroscopy meas. 7−123097
vapour absorption, 8 to 14 μm, laser photoacoustic spectroscopy 7−87900
vapour adsorpt. on CuO_2, selectivity and sensitivity, surface struct. effects *(Russian)* 7−76626
vapour bubble shape and size during boiling on downward-facing flat surfaces 7−142358
vapour. IR spectra, rot. bands, press. broadening second virial coeff. 7−129705
Venus atmosphere, water vapour profile from Vega-1 and Vega-2 meas. 7−88159
water continued
vertical transport in mesosphere 7−139824
vertically-incident jet, ladle filling study 7−69241
viscosity meas. using vibr.-rod viscometer 7−75711
viscous flow, activation energy, thermal anomalies 7−137606
water-alcohol highly polar complex mixtures, phase equilib. calcs. using Peng-Robinson eqn. of state and van der Waals mixing rules 7−69853
water-decane-AOT, microemulsion viscosity charactn. 7−139047
water-ethylene(ethane) mixtures, excess molar enthalpies at high temps. and pressures 7−75747
water-fluoroalkanol mixtures, excess molar enthalpies meas. 7−98507
water-formaldehyde, vapour-liquid equilibrium, thermodynamic consistency 7−124465
water-ice phase transition, anomalous Raman scatt. spectra obs. 7−142958
water-ketone highly polar complex mixtures, phase equilib. calcs. using Peng-Robinson eqn. of state and van der Waals mixing rules 7−69853
water-methanol mixture, chaotic advection by modulated traveling waves 7−130732
water-N-methyl-2-pyrrolidone-polyethersulphone, membrane form., component mobility anal. 7−118140
water-phenol mixtures, surface props. 7−70032
water-soap-alcohol system, phase equilib., thermodynamic model 7−69862
water-sodium bis(2-ethylhexyl)sulphosuccinate-undecane, cond., percolation transition, temp. and salinity effect 7−98533
water-steam (air), two-phase flow in horizontal pipe, press. drop, void fraction 7−91201
water/air interface, polyethyleneglycol monolayers, desorption kinetics *(German)* 7−98617
waves in straits of varying depths and widths, integrable nonlinear eqns. 7−104287
waves propag. over trench 7−79441
zwitterionic water chains as H^+/OH^- transporters 7−139223
Be-water interface, BeO laser irrad.-induced layer growth, RBS and X-ray diffr. Studies 7−118234
CO_2-H_2O-NaCl, phase behaviour meas. 7−111821
CO_2-SO_2-H_2O, phase behaviour meas. 7−111821
$Ca^+(H_2O)_n$ cluster, (n=1 to 10), Monte Carlo calcs. and mass spectra 7−122766
D/H ratio in water from P/Comet Halley (1982i) 7−88293
GdTbFe:ONH_2O sputtered film mag. props., impurity effects study 7−112887
HCl-NaCl-NaI-H_2O, quaternary diffusion coeffs. determ., diaphragm-cell studies 7−84338
HDO dissolved in ketones and ethers solvents, IR spectra study 7−122530
HDO distrib. in ice rel. to freezing rate 7−127289
HF-H_2O mixtures, FT IR spectra *(French)* 7−103484
HF-H_2O-NH_3 system, H-bonded dimers, pot. energy curves, SCF calcs., counterpoise corrections 7−129552
HF-H_2O-NH_3 system, H-bonded dimers, SCF interaction energy, basis set depend. 7−129553
$(H_2O)_n^-$, electron attachment under collision-free conditions 7−113899
H_2O and aerosols profiles meas. from NASA ER-2 aircraft, lidar instrument appl. 7−75032
H_2O clusters, mol.-beam study, electron-impact ionisation meas. 7−82418
H_2O, excited state, laser-induced dissoc., dynamics 7−78476
H_2O negative cluster ion form. intersecting mol. and electron beams, cross sections meas. 7−82419
H_2O, prebreakdown phenomena and chemical reactions using pulsed HV discharge 7−83564
H_2O vapour masers in circumnuclear disk of active galaxies 7−88620
H_2O^+, $\tilde{B}^2B_2$ states, photoelectron and photoion coincidence spectra 7−82300
H_2O^+, fluoresc. efficiency factors and absorpt. oscillator strengths 7−120264
H_2O^+ in P/Comet Giacobini-Zinner (1985 XIII), column density 7−88288
H_2O^+ in P/Comet Halley (1982i), ground-based CCD obs. rel. to Giotto meas. 7−88287
H_2O^+ in P/Comet Halley (1982i), narrow-band photometry 7−94762
H_2O^+ in P/Comet Halley (1982i), profiles of inner coma 7−94768
H_2O^+, produced in $D^+ + H_2O$ charger transfer scatt., vibronic energy distrib. 7−119507
H_2O^{2+}, low-lying electronic states, singlet-triplet splitting, HF calcs. 7−135828
$H_2{}^{18}O$ distrib. in ice rel. to freezing rate 7−127289
H_2O-amino acid interaction, NMR relax. investig. 7−90219
H_2O-CO_2-isopropanol mixtures, three- and four-phase equilibria at elevated press., comp., molar vol. and critical points 7−76365
H_2O-DMSO, structural relax. times, Brillouin spectra 7−99876
H_2O-H^-, interaction, quantum-chem. calcs. 7−68240
H_2O-Li^+, SCF and MP2 levels, primary and secondary basis set superposition error 7−116834
H_2O-methane-NaCl($CaCl_2$), fluid phase equilibria, to 800 K and 250 MPa 7−124442
H_2O-Mg, van der Waals complex, multireference CI calcs. 7−89974
H_2O-NH_3(HF)(methane), molecular interactions, basis sets 7−116841
H_2O-NaCl freezing around Al spheres 7−137523
H_2O-oligo(ethylene oxide) eutectic system, light microscopy investig. 7−76376
H_2O-protein interaction, NMR relax. investig. 7−90219
H_2O+C, radioactive recoil atom reactions, review 7−106818
H_2O+C^+, CHO^+ isomers prod., proton transfer rates with N_2O detection 7−83363
H_2O+D^+, charge transfer, H_2O^+ vibronic energy distrib. 7−119507
H_2O+H, excitation transfer studied with Fabry-Perot interferometer, fine struct. 7−119514
H_2O+N_2, vibr. relax., laser schlieren study 7−103627
$H_2O+N_2(O_2)$(Ar), rot.-vibr. lines, collisional self-broadening, semiclassical theory 7−129791
H_2O+NaO, gas phase reactions, rate consts. study 7−126435
$(H_2O)_2^-$ clustered with inert gas, electron field-detachment 7−122768
$(H_2O)_5$ clusters, struct., stability, mol. dynamics method 7−103708
$(H_2O)_n$ clusters, geometries, energies, electrostatic props. 7−103706
$(H_2O)_n$, effective Hamiltonian calcs. 7−110167
$(H_2O)_n$, neutral clusters, ionis. by surface collision 7−129915
$H_3O^+(H_2O)_n+N_2$, assoc. reactions, thermodynamic study 7−126437
$(H_2O)_m(Ar)_n$, H-bonded, photoionis. and fragmentation 7−122624
HOD, stretching vibr., wavenumber shifts interpretation 7−68281
$(H_2O)_x(D_2O)_{1-x}$, excess partial molar enthalpies meas. 7−105076

water continued
$H_2O(D_2O)$, sensitive quantum state selective detection by (2+1) reson. enhanced multiphoton ionisation 7—117032
$H_2O^+Fe^{2+}(Fe^{3+})$ ions, ab initio pair pots., molecular dynamics calcs. 7—71474
$(H_2O)_nH^+ + Ne^+(Ar^+)(Kr^+)$, ion-induced desorption, mass distrib. meas. 7—76600
$H_2O.H_3O^+$ cluster, dissoc., statistical phase space theory 7—86593
HTD vapour, sorption dynamics under atmospheric conditions 7—137711
HTO formation from atmospheric releases from fusion reactors 7—135623
HTO, T recovery using electrolysis cell 7—122184
Hg-water interface, adsorpt. of D-(+)-xylose 7—112087
^{125}I Auger electron energy distrib. 7—76252
KOH-H_2O systems, thermochem. characts. *(French)* 7—119554
^{81}Kr, separation technique from water, appl. to reson. ionisation spectroscopy chem. anal. 7—93454
N_2-water bubble-slug flow pattern transition, instabilities, void fraction waves 7—91197
NH_3-H_2O phase diagram at high-press., and planetary satellite implications 7—120290
NaCl-H_2O, critical behaviour at 380°C 7—76344
NaOH-H_2O mixtures, chem. equilib. *(French)* 7—119555
NaOH-H_2O systems, thermochem. characts. *(French)* 7—119554
O_2-I chemical laser, water vapour content in active medium 7—130081
P_4O_{10}-H_2O, gas phase synthesis, of P-containing glassy polymer coatings 7—77847
SO_2-H_2O, phase behaviour meas. 7—111821
THO, in aqueous solution, effect of diffusion on transport through porous media *(French)* 7—117660

water boilers *see boilers*

water conditioning *see water treatment*

water cooling towers *see cooling towers*

water pollution
see also water pollution detection and control
acid rain effects on soybean growth and yield, greenhouse expts. 7—114149
Adirondack lack watersheds, response to acidic deposition 7—93558
antifouling paints and water pollution in two harbours of South Brittany *(French)* 7—86845
Arabian Sea, distrib. of various forms of Cd, Pb and Cu in Wadge Bank region 7—139637
artificial stream applicability limits for ecosystem toxicity expts. 7—93550
Atlantic coast of North Carolina, USA, oil spill at sea, tar ball transport by internal waves 7—133779
NE Atlantic Ocean, evidence of recent Pb pollution in deep-sea sediments 7—78693
Australian marine pollution monitoring programs 7—78709
W Bay of Bengal, Hg distrib. in estuarine and nearshore sediments 7—100767
Bay of Bengal, region near Visakhaptnam, hydrographic data and pollution 7—72045
benzthiazole pollution of San Francisco Bay sediments, due to car tyres and street runoff 7—107441
NW Black Sea, asphyxiation phenomena 7—87707
Bombay harbour bay, particle size distrib. in bottom sediments rel. to radionuclides distrib. 7—139586
Brazil, coastal management plan 7—78697
CANDU spent fuel, $^{137}Cs/Xe$, and $^{129}I/Xe$ release ratios, fuel-sheath gap leaching in groundwater 7—129426
Chernobyl accident, Hungarian population irradiation and pollution *(Hungarian)* 7—126662
Chesapeake Bay, 1984-5 water quality, spatio-temp. patterns 7—78695
Chesapeake Bay, butyltin compound concs. in Maryland waters 7—93562
S Chesapeake Bay, tributyltin concs. 7—93561
Chesapeake Bay, USA, PAH monitoring using 2 bivalve mollusc species 7—79459
Chinese monitoring programs for marine pollution 7—78707
chlorination of nuclear plant cooling water, environmental effects *(French)* 7—135471
Cluff Lake uranium mine, radionuclide and heavy metal concs. in water, sediments and biota 7—114504
contaminant transport in groundwater, modelling, review 7—114137
Esk estuary, UK, Pu remobilisation from estuarine sediments 7—144925
fly ash in lacustrine and ocean sediments, influence on interpretation of mag. records 7—87628
geographic information systems 7—78699
geologic repository, radionuclide transport from multiple-patch source into planar fracture 7—103228
Great Bay Estuary, New Hampshire, speciation of methyl- and butyltin compounds 7—93563
N Greece, organic pollution in natural water systems 7—114138
groundwater contamination, quality assurance in computer simulations 7—86843
groundwater hydrology, field studies, review 7—114840
groundwater quality, impacts of agricultural chemicals 7—139160
groundwater radioactivity in N Carolina, USA, ^{226}Ra and ^{222}Rn levels 7—87256
Hudson River, inventory of toxic pollution sources 7—86847
information network services in USA, for marine pollution 7—79613
Lake Erie, effluent dispersion in Long Point region, Landsat imagery 7—100766
Lake Kastoria, Greece, limnology and pollution 7—87732
Lake Kasumigaura basin, Japan, CNP herbicide contamination 7—126667
Lake Mikri Prespa, Greece, limnology and pollution 7—87732
Lake Sobygaard, Denmark, recovery after P loading reduction 7—87733
Lake Suwa, Japan, eutrophication and partial recovery 7—87731
Lake Tai, China, limnological characts. 7—87726
landfill site, model for pollutant transport into soil deep layer 7—86842
LLW and ILW shallow land burial at CRNL, hydrogeological studies 7—141328
marine pollution, dynamics of surfactant films in inhomogeneous currents field 7—139639
marine pollution, methodology for establishing water quality criteria 7—86846
marine pollution detection, tests of recalibration period of drifting instrument 7—87973
Meuse River, S Belgium, origin of heavy metals, in water-meadow sediments 7—119697
N Michigan, USA, chem. composition of snowmelt and runoff 7—79463
multiphase flow in porous media, parameter model 7—127310

water pollution continued
Muvattupuzha River (SW India), effect of pulp-paper effluents on water quality 7—139148
natural streams, contaminant dispersion, two-equation model 7—93555
New York Bight, pollution and marine monitoring 7—78708
New York Bight, water quality management and historical database of chem. and biological characts. 7—87712
New York City effluent treatment and ocean coliform bacteria levels 7—78696
North Sea and adjacent waters, pollution dispersion model suitable for radioactivity 7—120038
Nova Scotia lakes, Canada, acidification 7—71660
ocean dumping of industrial wastewater, off E coast of USA 7—79461
oil slick movement at sea, calculation by nomogram method 7—94305
oil spill at sea, tar ball transport by internal waves 7—133779
oil spill on Bombay beach, characterisation and source identification by gas chromatography and IR spectroscopy 7—139147
oil spills on outer continental shelf, stoichiometric modeling of oil movements 7—87713
Onondaga Lake, NY, USA, spring turnover failure rel. to alkali plant discharges 7—139666
open circuit nuclear power stations, thermal control and environmental impact *(French)* 7—139154
organotin in harbours, transport and fate, 2D mathematical model 7—93566
Pacific Ocean, tropical region, T as tracer of water motion 7—145494
PAH in sediments of Saguenay Fjord, Quebec, Canada 7—126668
peat, vertical migration of I, Tc, Np, groundwater anal. 7—100763
pesticides in rainwater, meas. in NE United States 7—106946
petroleum hydrocarbons in bottom-sediment, plankton and seston of Stockholm archipelago, chemical fingerprinting 7—139151
Poland, shallow lakes susceptibility to degradation 7—87730
PWR radioactive wastes and waste heat, effect on water environment *(French)* 7—139153
radioactive pollutants, transport mechanisms, physical dispersion models 7—133158
radioactive waste shallow land burial, COSMOS-S/D code complex 7—89737
radioactive waste storage, safety assessment for double-barrier in-ground container 7—89761
radionuclide transport in alpine Rhone watershed 7—139158
radionuclides in NW Atlantic 7—139146
reservoir pollution, limit anal. theory *(French)* 7—93556
Rhone River, Zn distrib. 7—139155
River Periyar, India, lower reaches estuarine characts. and pollutant 7—72108
rock-groundwater system, radionuclide migration, sorption—liquid/solid ratio effects study 7—119698
Sakura River, Japan, CNP herbicide contamination 7—126667
San Diego Bay, butyltin meas. monitoring survey 7—93565
San Diego Bay sediments, distrib. and fate of butyltin compounds 7—93560
San Francisco Bay, USA, benzthiazole pollution of sediments, due to car tyres and street runoff 7—107441
Scotland west coast waters, spread of trace metals from Irish Sea 7—145520
River Seine, N France, pollution by polychlorinated biphenyls 7—126666
Severn Estuary, UK, coal dust pollution chronology and distrib. 7—100768
Shubenacadie River headwater lakes, Nova Scotia, Canada, water and sediment characts. 7—87725
Sicilian Channel, surface sediments and heavy metals 7—101274
slicks, particulate accumulation *(French)* 7—86844
snow, chemical composition, spatial var. in Scottish catchment 7—94314
solute transport by groundwater, theory, book contrib. 7—101354
SW Sweden, episodic acid events in limed lakes 7—78694
Takaoka, Japan, groundwater tritiogenic ^3He 7—145528
Tama River, Japan, diagnosis of river pollution by PIXE 7—93557
time series models, fractionally differenced, of water quality 7—94313
United States, water quality trends in nation's rivers 7—127302
US harbours and estuaries butyltin baseline meas. 7—93564
USA, National Water Quality Assessment program 7—78698
Washington continental slope, sediments, fallout and natural radionuclide cycling 7—144924
Weser River, West Germany, prevention of water pollution from Grohnde Power Station; 7—133140
SW Wyoming, beaver pond effects on nonpoint source water quality 7—114139
Be content of ash from coal-fired power station in Czechoslovakia 7—133138
Cd in corals, appl. as tracer of historical ocean upwelling and industrial fallout 7—133777
^{60}Co, comparative uptake from sea water and tissue distrib. in marine mollusks 7—139381
Pb pollution in corals, record of historical industrial fluxes 7—87704
^{A}Pu, A=239,240, fallout in marine samples, mass spectrometric determ. 7—144926
^{222}Rn conc. in N Carolina public water supplies, system size effect, geologic and hydrologic variables 7—71899
^{222}Rn in drinking water rel. to age-dependent lung doses 7—71875
^{222}Rn, indoor air conc. in US housing, potable water source 7—87250
^{90}Sr, determ. in water in Austria after Chernobyl accident 7—122221
T concentrations in groundwater, meas. in Naka Terrace, Ibaraki Prefecture, Japan 7—94327
TiO_2 acid waste discharges in North Sea, results of Dutch monitoring programme 7—139152

water pollution detection and control
see also water treatment
Aquasensor, multiparameter self-logging and powered instrument for water quality determ. 7—100789
Australian marine pollution monitoring programs 7—78709
bivalve molluscs used for PAH monitoring in estuaries, use of 2 different species 7—79459
Brazil, coastal management plan 7—78697
Chernobyl accident, radioactive contamination in Lake Constance region, Austria *(German)* 7—114135
Chinese monitoring programs for marine pollution 7—78707
dioxane, determ. in water and soil by GC/MS or charcoal tube enrichment GC 7—139059
environmental materials anal. using spectroscopic methods 7—93609

water pollution detection and control continued
environmental radioactivity effect in Toyama of Chernobyl accident *(Japanese)* 7−139386
environmental samples, multielemental anal. 7−93559
Grohnde Power Station: process computer prevents water pollution and ensures efficient operation 7−133140
groundwater contaminants monitoring using laser fluorescence and fibre optics techniques 7−114136
groundwater water quality parameters correl. of Meerut district, India 7−72106
ion chromatography appl. 7−106949
KNU reactors, steam generators, chemical protection programs 7−135521
laser fluorosensing of natural waters, environmental effects on laser-induced fluoresc. spectra 7−79688
marine pollution, discrimination between crude oil spills and monomolecular sea slicks by airborne remote sensors 7−114803
marine pollution detection, tests of recalibration period of drifting instrument 7−87973
metal pollutants in air and water, ring-oven technique abs. 7−106945
natural radioactivity, selective method for removal from drinking water 7−93567
natural waters, zeotropic distillation from N,N-dimethylformamide 7−100764
New York Bight, pollution and marine monitoring 7−78708
New York City effluent treatment and ocean coliform bacteria levels 7−78696
objective monitoring strategy 7−86848
ocean chemical monitoring, use of standard reference materials 7−79706
oil pollution diagnostics, appl. of laser-induced fluoresc. method 7−114804
oil slick detection, appl. of side-looking airborne radar 7−114805
oil spill detection and analysis, results from radar and microwave radiometry 7−114806
organic impurities in water, photooxidation using thin TiO_2 film 7−113961
organochlorines and trace metals, micropollutants in open ocean waters, sampling procedures 7−93608
particle and solution phase depth distributions of transuranics and ^{55}Fe in the North Pacific 7−78691
pesticide-containing effluents, radiation-absorpt. purification 7−67453
PIXE analyses of trace elements on ambient samples *(Spanish)* 7−86866
PIXE ultratrace analysis in water with metals and various pH 7−93603
polyelectrolytes, cationic, low level determ. in water, complexation method 7−106849
portable PC based data acquisition system for water quality monitoring 7−126683
power plant waste stream pollution monitoring using EPRI developed study 7−133174
PWR, water chemistry and treatment in EdF reactors 7−135520
quality control, decentralised, hybrid technique 7−72109
radiation processing appls. in biologically contaminated water treatment 7−67437
radioactive residual waters, depollution on ceramic materials 7−89732
radionuclides in fallout over Niigata City, following Chernobyl *(Japanese)* 7−139385
remote sample characterization based on fluorescence monitoring, oil slick example 7−133167
remote sensing applications in water management tasks of Rijkswaterstaat *(Dutch)* 7−133176
Seine, repartition of polychlorobiphenyls between dissolved and particulate matter *(French)* 7−78690
time-integrating remotely-moored automated sampling-conc. system for aquatic butyltin monitoring 7−86873
toxic pollution tracing in rivers, case study of Hudson River 7−86847
tributyltin chloride, trace level determ. procedures 7−93610
water quality criteria establishment, methodology and management 7−86846
water surface quality analysis, laser sounding technique 7−106951
$^{238,239,240}Pu$, in sediments, isolation and γ-particle spectrometric determ. 7−93602
As removal from ash pond effluents by Fe coprecipitation 7−114140
Ca in environmental water, X-ray fluorescent anal. *(Japanese)* 7−100663
Co in environmental water, X-ray fluorescent anal. *(Japanese)* 7−100664
CrO_4^{2-} in H_2O, time resolved quenched phosphoresc. detection using paired-ion reversed phase liq. chromatography 7−119696
^{137}Cs concentration meas. in the Douro/Tejo rivers, Portugal 7−139150
H_2O_2 in rainwater, ^{18}O determ. method 7−93599
Mn, determ. in water, interference-free graphite furnace at absorpt. spectrophotometric method. 7−100649
Mo, determ. by graphite furnace AAS, SO_4^{2-} interference prevention 7−114021
Np transfer from seawater for sediments and organisms 7−78692
^{237}Np, English Channel, French coast, meas. and analysis techniques 7−139149
P, determ., water anal. methods, review 7−133141
Pu in sea sediments, α-track meas. using cellulose nitrate films 7−93554
Se removal from ash pond effluents by Fe coprecipitation 7−114140
^{A}Sr, A=89,90, distrib in Slovenia, Yugoslavia after Chernobyl accident 7−78689

water purification *see water treatment*

water supply
see also dams
Caspian Sea, consequences of water diversion *(Russian)* 7−94330
flow networks, finite-element anal. 7−91060
groundwater modelling technique for decision makers 7−94324
groundwater resources, impacts of agricultural chemicals on water quality 7−139160
Lagos metropolis, Nigeria, hydrogeology and groundwater resources 7−87737
rivers, statistical modelling of annual discharge vars. under influence of irrigation 7−133789
Sacramento Basin, California, water balance model development for climate impact assessment 7−145566
solar hot-water supply system, heat regime in thermal-storage tanks 7−100760
Turkey, Lower Kizilirmak hydroelectric power and irrigation project 7−126550
United States and Canada, 1986 December, water conditions 7−79470
United States and Canada, 1986 November water conditions 7−72115
United States and Canada, 1987 February, water conditions 7−101351

water supply continued
United States and Canada, 1987 January, water conditions 7−94328
United States and Canada, 1987 June, water conditions 7−139665
United States and Canada, May 1987, water conditions 7−145558
USA, April 1987 national water conditions 7−139664
USA public drinking water supplies, risk from ^{222}Rn, Bayesian anal. or scientific judgment of uncertainties 7−139378
wells, capacity effect on pumping tests *(French)* 7−94319
^{222}Rn conc. in N Carolina public water supplies, system size effect, geologic and hydrologic variables 7−71899
^{222}Rn, indoor air conc. in US housing, potable water source 7−87250

water treatment
see also desalination
acidified surface water liming techniques, consequences and costs 7−106938
adsorption-irradiation processing, radiolysis in the adsorbed state appl. 7−93352
KNU reactors, steam generators, chemical protection programs 7−135521
Millstone 2 nuclear power station makeup water, organic contaminants reduction 7−129365
natural radioactivity, selective method for removal from drinking water 7−93567
nuclear plant feedwater treatment *(German)* 7−96245
nuclear power plant out-of-core radiation reduction 7−89786
organic impurities destruction methods, UV illuminated TiO_2 and ^{60}Co γ-ray methods 7−100765
pretreatment of HPLC water by reverse osmosis 7−106846
PWR, water chemistry and treatment in EdF reactors 7−135520
radiation processing of biological contamination 7−67437
solar-electric water purification using photocatalytic oxidation 7−100754
steel, unalloyed, erosion-corrosion rate estimation in alkalised boiler feedwater 7−113787
VVER-440 nuclear power station steam generator blowdown water cleaning with chelating agent treatment 7−73939
As removal from ash pond effluents by Fe coprecipitation 7−114140
Se removal from ash pond effluents by Fe coprecipitation 7−114140

water trees *see electric breakdown*

watthour meters
see also power measurement
standard electronic watthour meter *(Romanian)* 7−95615

wattless power *see reactive power*

wattmeters
see also power measurement; volt-ampere meters
No entries

wave equations
see also Schrodinger equation
acoustic wave propagation, modified eqn. approach to 4th-order method construction 7−90864
BBM equation, solitary-wave solns., amplitude changes, perturbation theories method 7−140460
Block equations and the Korteweg-de Vries hierarchy 7−120843
bridge mechanism, intermediate unit, electron transfer theory 7−122700
$C^2(x)u_{xx}-u_{tt}=0$, $v_t=u_x$, $c^2(x)v_x=u_t$, invariance props. 7−67033
causal Green's function in relativistic quantum mechanics, free-fluid Klein-Gordon eqn. 7−134924
classic wavefield scattering from bounded objects, numerical treatment 7−67036
conference, Dresden, Germany, Feb. 1986 *(German)* 7−140475
continued fraction solution of the Riccati equation: application to acoustic horns and layered inhomogeneous media, with equivalent electrical circuits 7−89002
coupled KdV equations, leapfrogging solitons 7−140473
coupled nonlinear wave equations, solitary wave solutions 7−134531
Dirichlet's problem for the gravitational-gyroscopic wave equation *(Russian)* 7−136887
dispersive evolution equations, equilib. statistics 7−88995
dispersive long wave equation, spectral transform of 2D extension 7−120818
dissipative force, quadratic in vel., wave eqn. 7−120824
dissipative medium, one-dimensional, transient wave propagation, direct and inverse scatt. for phase-velocity mismatch 7−67035
double sine−Gordon solitons, dynamics, radioactive and inelastic effects 7−120823
driven sine-Gordon breathers as kink-antikink bound states of nonrelativistic constant wave number 7−80450
effective Hamiltonian theory: an intermediate representation method for the wave operator calculation 7−108269
Euler equations, solitary-wave solns., amplitude changes, Korteweg de Vries eqn. perturbation 7−140461
evolution equations, associated quasidifferential systems 7−134527
exact controllability in polygons and polyhedra, wave eqn. solns. *(French)* 7−95353
existence and decay of waves described by Whitham's equation 7−80436
existence and uniqueness theorem for wave equations with scalar nonlinearities 7−73007
extended Klein-Gordon systems, approaching asymptotically stationary outgoing solitary wave solns., behaviour of solns. 7−134536
factorization of the wave function in higher dimensions 7−80441
Foldy-Wouthuysen transformation in the two-particle case 7−134907
fully nonlinear wave eqn., initial boundary value problem, soln. local existence 7−80448
fusion cross sections in heavy ion reactions, coupled-channel calc., CCFUS computer code 7−135344
generalised Burgers equations, single hump solutions 7−80440
global solution of nonlinear characteristic Cauchy problem *(French)* 7−66924
good Boussinesq equation, soliton resonances 7−108252
gravity waves on deep water, generalized wave eqn., distributional solns. 7−134529
Hamiltonian mechanics, particle motion by associated waves 7−115811
Helmholtz's equation, inverse problem, recovery of n(z) and h(k) 7−120817
Helmholtz equation, weighted Sobolev spaces and exterior problems 7−73006
Huygens' principle, validity on type-N space-times 7−73077
hyperbolic equation, nonlinear, solution zeros 7−115809
hyperbolic equations, nonlinear, hidden regularity 7−128304
hyperbolic linear dispersive waves, energy vel. 7−95365
integrable equations in (2+1) dimensions associated with symmetric and homogeneous spaces 7−134530

wave equations continued
invariant wave eqn. in Riemannian symm. space, translation representation and Huygens principle 7−108162
inverse boundary problem soln. by iteration *(Russian)* 7−120826
inverse boundary value problem, iterative method 7−67030
inverse problem for wave eqn. by regularized inversion method 7−108261
inverse problem soln. for wave eqn. on segment by method of successive approximations 7−67032
inverse scattering problem in three dimensions 7−140455
ion-acoustic solitons in warm 2-ion plasma, ionic temp. effects 7−97738
Kadmotsev-Petviashvili equation, verification of determinantal solutions 7−134523
kaonic atoms, wave equation 7−122753
KdV and MKdV equations associated with symmetric spaces 7−80444
KdV eqn., soliton interaction, asymptotic formula derivation 7−95364
KdV equation, Backlund transforms, periodic fixed points 7−134442
KdV equation, complex, blow-up, numerical anal. of eigenvalue collisions 7−134541
KdV equation, lattice eqn., hierarchies and Hamiltonian structs. 7−80680
KdV equation, n-soliton soln., asymptotic behaviour, inverse scatt. method 7−140456
KdV equation, perturbed, Painleve anal., conservation laws and Lie-Backlund symmetries 7−120816
KdV equation, verification of determinantal solutions 7−134523
KdV equation in 2D, spectral transform 7−80437
KdV equations, Lie algebras 7−134539
KdV equations, soliton solns. and group representation theory 7−115928
KdV generalised equations, τ-function solutions 7−134525
KdV hierarchy of isospectral transformations, recurrence relations study 7−115756
KdV soliton splitting investig. 7−89001
KdV type solitary waves, stability and instability 7−102180
KdV-type bilinear eqns. passing Hirota's three-soliton condition 7−140465
Kelvin-Helmholtz wave equation, soln. generation using Darboux transformations 7−134534
Klein-Gordon equations, nonlinear, interacting fields, asymptotic props. 7−128750
Klein-Gordon equations, nonlinear, prolongation structure and Backlund transformations 7−80454
Klein-Gordon equations, solitons, asymptotic behaviour of energy parameters *(German)* 7−140476
Klein-Gordon kink perturbation theory, nonlinear, Green's fns. 7−108749
Korteweg-de Vries equation, solns. and Cauchy problem 7−128308
Lienard model for stationary nonlinear wave in an active medium 7−88997
liquid, long surface wave propag. calcs., nonlinear dispersion model, tsunami wave appl. 7−110993
local smoothing properties of general dispersive equations *(French)* 7−102190
longitudinal wave propag. with dispersion, fundamental soln. *(Russian)* 7−89003
Lorentz invariant wave equations, generalised gamma-matrices 7−80438
Master symmetries and point particle representations, recursion operator, soliton eqn. hierarchies 7−140467
material particles, inner physical properties 7−128345
mixed problem for the vector wave equation *(Russian)* 7−80435
mKdV bilinear equations, three-soliton solutions 7−134532
modified Korteweg-de Vries eqn., shape preserving splines appl., fractional time-step method 7−134524
modified Korteweg-de Vries equation, plane nets 7−95280
moving load on string, free boundary problem 7−134482
multidimensional nonlinear evolution equations, integrability 7−67034
multidimensional nonlinear wave eqn., asymptotic solns. *(Russian)* 7−134526
NMR RF excitation, Bloch and Korteweg-de Vries eqns. connection 7−89241
non-Euclidean wave eqn. on a hyperbolic manifold, scatt. theory 7−140498
nonlinear, Cauchy problem, global classical solns. *(French)* 7−128300
nonlinear dispersive evolution equations with critical power nonlinearities, solitary waves 7−128302
nonlinear dissipative wave equation, periodic solution 7−128303
nonlinear dynamical systems, gradient algorithm for integrability criteria formulation 7−67031
nonlinear equations, standing and travelling waves 7−108260
nonlinear evolution equations, superposition functions, Backlund transformations 7−140457
nonlinear Hamiltonians, ground-state energy, connected moments expansion 7−134567
nonlinear symbolic calculus for a simple classical conormal wave *(French)* 7−67029
nonlinear wave equations, almost periodic solutions, integral operator method 7−88994
nonlinear wave equations, covariant exterior derivative, Painleve test and integrability 7−95357
nonlinear wave propagation, local frequency spectra 7−134533
nonlinear waves in active media, evolution eqns. 7−73000
nonuniform string, transverse modes, eigenvalues WKB approx. 7−80235
oblique oscillating water column in a channel, wave-power absorption 7−88990
one-dimensional wave equation, derivation method 7−102058
optical fibres, radial effective-index method of analysis 7−130339
oscillating water columns in irregular waves 7−88989
$P(\phi)_2$ theory with a source, algebraic construction of Green's functions 7−95355
Painleve chains for integrable higher-order differential eqns. 7−120820
parabolic wave eqn., modified wide angle, finite difference discretization 7−115804
perturbed KdV eqn., Painleve prop., Lax pair, auto-Backlund transform, recursion operator 7−120819
phase-space solution of the linear mode-conversion problem 7−140469
pinned sine-Gordon soliton, chaotic motion 7−73002
plasma ion acoustic soliton, critical negative ion density, difference eqn. soln. *(Japanese)* 7−75791
polyacetylenes, soliton kinetic props., continuum model calcs. 7−112202
polygonal box, ground-state energy of particle, n^{-1} expansion, first correction 7−140513
progressing waves in flat spacetime and in plane-wave spacetimes 7−102231
quasilinear hyperbolic reducible systems allowing for special wave interactions 7−128309
radial nonlinear wave eqn., global analytic solns. 7−102175
random discrete wave eqns., localization estimates and renormalization transformations 7−73038
reflectionless kinks, parent pots. for infinite class 7−140462
second order absorbing boundary conditions, solution for corner problem 7−140477
semilinear wave eqns., subharmonic oscillations 7−80366
semilinear wave equation, stable periods, bifurcation of periodic solutions 7−73009
shallow water wave soliton, transmission and reflection calcs. at submerged barrier 7−130727
shallow-water waves, stochastic filtering of lin. processes 7−94295
sine-Gordon breather soln., parametric adiabatic perturbations 7−108176
sine-Gordon eqns., periodically driven, universal attractor 7−108259
sine-Gordon equation, kink motion in applied field 7−80434
sine-Gordon equation with periodic boundary conditions, exact solutions 7−108258
sine-Gordon multisoliton solns., linear superposition formula 7−80446
sine-Gordon solitons, energy emission, quasi-classical quantization and stochastic decay 7−115807
singular waves, linear superposition in nonlinear hyperbolic system *(French)* 7−95354
sinh-lattice eqn. with nearly integrable solitons 7−73001
solitary Rossby waves, uniqueness 7−88991
solitary waves in the presence of symmetry, stability theory 7−134528
solitonic nonlinear interactions in complex t-plane 7−88993
solitons, nonlinear interactions in complex t-plane 7−80445
spatial decay estimates in continuum dynamics 7−95359
spinor focus wave modes, homogeneous spin wave eqn. solns. 7−140466
stability of solitary wave equations, long wave model eqns. 7−67027
standing waves, semi-analytic theory 7−88996
stationary solitary wave solns. 7−102179
strongly bound state, one-particle wave eqn. soln. 7−128830
surface waves on general viscoelastic media, in presence of thermal field and gravity 7−142212
tachyons, spin-1/2 wave eqns., solns. with complex energies 7−73494
Taylor-Goldstein problem, non-singular neutral modes, wave vel. boundedness 7−80425
three-dimensional wave propag. in domains, transient anal., boundary element method soln. 7−72998
transmission across a random medium, localisation, invariant imbedding approach 7−80442
travelling wave solutions near isolated double-pulse solitary waves of nerve axon equations 7−115805
variable velocity, 3D inverse scatt., self-consistent eqns. 7−134538
vortices and solitons in plasmas, nonlinear wave eqn. review 7−130849
wavefront expansion properties and limitations 7−80447
wavemaker, general theory, solution of initial-boundary-value problem, finite amplitude effects 7−111010
weak nonlinear ideal gas, 1D, Burgers eqn. for wave propag. 7−134522
Wheeler-Dewitt equation, Lie-admissible formulation 7−128388
Wisem equation in singular kernel, Cauchy problem *(Russian)* 7−89004
with holomorphic potentials, appl. of complex Clifford anal. 7−80976

wave functions
see also orbital calculation methods
$1/n$ expansion and wave functions 7−140437
1/N expansion for screened Coulomb pots., perturbative results 7−140505
$5d^1$ system, in octahedral symm. cryst. field environment, NMR chem. shift 7−77413
N-dimensional general solutions of the Liouville type equation $Au=e^u$ with applications 7−108303
A=130 mass region, U(6/20) supersymmetry, wave function, EM transition rates, spectra 7−96012
ABA-type molecules, local and hyperspherical vibr. resons., lifetimes determ. 7−90088
acetonitrile, bonding, wave fn. characts. 7−129563
Aharonov-Bohm scatt. wavefunctions, single valuedness 7−120860
alkali metal atoms, Rydberg states, linear Stark effect 7−129653
angular momentum, semiclassical treatment for fixed modulus and z-component, single-particle propagator 7−128975
anharmonic oscillator, averaging method 7−73014
atom-molecule scatt., average wave function method calcs. 7−129837
atomic complex electronic configs., isospin formalism 7−135821
atomic electronic excitation, effective local pots., many-body theory 7−74728
atomic excitation by inner-shell vacancy production 7−122455
atomic relativistic photoionisation cross sections, analytical determ. 7−141540
atomic scattering, electron correls. 7−129610
atomic systems, autoionizing states, saddle point variation method 7−122465
atomic trapping on disordered corrugated surfaces, statistical wave fn. investig. 7−84492
atomic wavefunctions, three-body, coord. systems and analytic expansions 7−129541
atoms, Dirac-Fock-Slater pot., finite-basis set approach 7−122348
atoms, extended Koopmans' theorem Fock operator 7−96509
atoms, KMX/KMM and KXY/KMM Auger transitions, relative group intensities 7−116922
atoms, relax. characts. in reson. radiation field, mag. field effect 7−122669
Aubry model, zero-eigenenergy state 7−140625
benzene, π bonds, ab initio electron correl. calcs. 7−109805
benzene, valence and Rydberg excitations and ionis., wave fns., cluster expansion 7−122335
Bethe's ansatz soln. ambiguity for one-dimens. models with linear dispersion 7−134544
biferrocenium trihalide compounds, mixed valence complexes, electronic delocalisation, intermol. interactions effect 7−70261
black hole interior, wave function, minisuperspace model anal. 7−115500
bond formation in momentum space 7−81911
Born-Oppenheimer approximation, systematic corrections 7−109702
bosonic ground state wave fn., Hankel-Hadamard moments anal. 7−120852
Brillouin-Wigner series, derivation algorithm 7−120735
butadiene, photoisomerisation, ab initio CI calcs. 7−93296
carbonyl ylides, dynamic stability, ab initio MCSCF calcs. 7−89952
chloromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7−89908

wave functions continued
classical limit of the quantum mechanical wave packet 7−102203
classically chaotic Hamiltonian system, eigenfunctions, qualitative props. 7−140620
closed bosonic string, Hartle-Hawking prescription, ground state wave function 7−121476
closed-shell Hartree-Fock solutions, in geminal approach, instability 7−103348
closed-shell mols., chem. bonds, localised geminals appl. 7−129571
cluster expansion, SAC and SAC-CI results 7−129544
collapse, ensemble interpretation anal. 7−66864
compressed atom model, energy levels and normalized wave fns. 7−141439
conjugated organic polymers, nonlin. susceptibilities, tight-binding calcs. 7−103373
continued fraction method for amplitude density 7−80502
core photoelectron shake-up spectra, overlap amplitudes calc. 7−109996
damped driven harmonic oscillator as a quantum dissipative system 7−73034
deformed nuclei, vibrational band excitation, coupled channel Born approx. calcs. 7−128955
diatomic molecules, multigrid approach for Hartree-Fock calculations 7−116812
Dirac equation, variational derivation and physical interpretation 7−80971
Dirac fermions, covariant shell model with harmonic forces, analytic soln. 7−135051
disordered semiconductors, intermediate order, energy spectrum, density of states 7−143311
disordered systems, $T^{3/7}$ hopping conductivity, wave fn. superlocalization on percolation clusters 7−131631
dissipative force, quadratic in vel., wave eqn. 7−120824
e^2 config. nonRoothaan type terms, restricted HF calcs. 7−68209
effective generating functions for quantum canonical transformations 7−67077
electron self energy in strong mag. fields, mass operator representation 7−81092
electronic excitations, effective local pots., many-body theory 7−76722
elementary particle models, spontaneous symmetry breaking, multiplets and symm. groups *(German)* 7−128784
ergodic quantum systems, wave functions, fine struct. calcs 7−80514
ethylene, correl. wavefunction, canonical and localised orbital basis 7−109788
ethylene, photoisomerisation, ab initio CI calcs. 7−93296
exact path integral solution of Morse oscillator *(Chinese)* 7−95371
excitons in homogeneous mag. field, modified perturbation approach 7−105413
fermion particle in 1+1 dimension chiral model, constraint condition on wave function 7−102671
fermion system bound state, multiparticle wave fn. components, solns. to eqns. 7−135218
few body Schrodinger eqn., geometrical coupling coeff. calcs. for hyperspherical harmonics approach 7−108313
few-nucleon systems, polarization meas. for A=4-6 7−67776
finite element methods in quantum mechanics 7−134550
first-order logarithmic perturbation iteration method convergence, Schrodinger eqn. appl. 7−67073
five-boson cluster, ground state morphology, wave fn. calc. 7−115892
fluoromethane, valence electronic struct., separation energy spectra and electron momentum distrib. meas. 7−89908
forbiddenness in MOVB theory 7−109692
formaldehyde, vibr., IR intensities, MC SCF wave functions 7−89909
fractal media, superlocalization of impurity quantum and Anderson localized states 7−112216
fused point perturbation theory, coupled nonlinear equations, Rayleigh-Schrodinger theory, Pade potentials 7−140488
Gaussian nuclear charge distribs., use for calcs. relativistic electronic wavefunctions 7−74395
giant resonances, branching ratios for neutron decay, microscopic derivation 7−116363
glueball, scalar, lightest, mass and wave fn., SU(3) lattice gauge anal. 7−116075
glueball mass estimate, gluon bound state waved fns., Bethe-Salpeter eqns., QCD sum rules method 7−135038
hadron wave functions, quark model 7−73600
hadronic atoms, automatic gridpoint method, momentum space solns. of Coulomb plus strong interaction bound states 7−136096
harmonic oscillator, damped driven, exact evaluation of propagator and wave function 7−67053
harmonically bound electron in standard dipole model, zero damping versus infinite volume 7−67553
Hartree-Fock seniority method, quasi-spin formalism, mean field and pairing effect 7−109079
heavy fermion superconductors, nonlocal impurity perturbations, s-wave scatt. calcs. 7−70461
heavy ion relative motion near caustic surfaces, wave fn. features at short distances 7−135345
heteronuclear diatomic alkali molecules, long range states, lowest asymptotes, spin-orbit effects, dissoc., perturbative model, matrix methods, wavefunctions 7−144685
hexatriene, photoisomerisation, ab initio CI calcs. 7−93296
hierarchical heterostructs., 1D Schrodinger problem, tight-binding model calcs. 7−143306
hydrocarbons, bonds, structs., charge concs. and charge relax. 7−89923
hydrogenic quasirelativistic and Dirac wavefunctions, r^4 matrix elements 7−134563
hypernuclear currents, mean field approx. to extend σ-ω model 7−102832
IBFM, U(6/12) supersymmetry scheme and nuclear wave fn. 7−135229
ID disordered systems with periodic modulation, localisation length of wave functions 7−84778
inverse scatt. method at fixed energy 7−80465
Jacobi three to two body reduced mass system, Fock-Tani transformation 7−110143
Jaynes-Cummings model, exactly solvable nonlinear generalisations 7−120930
L_3 subshell alignment calc. within coupled-state formalism 7−74546
lattice QCD, chromoflux distrib. in presence of static $q\bar{q}$ pair 7−135026
light nuclear systems, RGM appl. to bound and scatt. pot., variational principles 7−128988
linear oscillators, wave function description 7−95379
localised orbitals, Linnett's H's double quartet theory 7−129587
metal dimers, electron transfer, ab initio wave functions 7−122683
wave functions continued
metalloporphyrins, SCF perturbation calcs., oxidation and ionis. calcs. 7−103380
methane, CH bond dipole moment, SCF wave fn. estimate 7−122339
methane, one electron scatt. props., ab initio SCF CI calcs. 7−103404
methane, total energy, random walks, quantum chemistry 7−89934
methylene, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
methylene and cation, ions. pot. and excitation energies, FCI wave fns. calc. 7−81993
methylene cation, $^2A_1$ electronic state, nonadiabatic transition probabilities, avoided crossings 7−103584
MIT bag model wave fn., Peierls-Yoccoz projected, deep inelastic struct. fn. calcs. 7−135055
molecular crystals, high press. effects, ab initio SCF approach 7−131236
molecular electronic struct., coupled cluster model 7−103363
molecular energy gradients, parallel computation on loosely coupled array of processors 7−129543
molecular geometry optimisation without anal. gradients, algorithm 7−116837
molecular polarizabilities, INDO wavefn. calc. within RPA 7−135841
molecular rovibrational states, Hartree theory calcs. 7−135916
molecules, differential cross section, adiabatic approx. 7−82385
molecules, generalised pot. surface nucl. motion inclusion 7−129627
Morse oscillator wave functions, overlap integrals 7−103610
multi-dimensional coupled channel eqn., semiclassical quantisation 7−89039
multilevel atom, intermittent fluoresc. wave function collapse 7−122438
naphthalenes, substituted, electronic spectra, PPP calcs. 7−89968
nitrone, valence bond struct. calcs. using orthogonalised at. orbitals 7−109784
nonrelativistic quark model, hyperspherical harmonic method for wave fns. 7−108864
nontopological soliton bag model, hadron wave fns., first order corrections 7−128857
nuclear rearrangement effects in shell model calcs. using density dependent interactions 7−73710
nuclear structure theory, nonlocal potentials, inverse scatt. problem 7−116346
nucleus, wave function expansion, natural bases 7−81303
octahedral molecules, central atom L X-ray absorpt. spectra, multiplet struct. 7−141600
one dimensional, quasicrysts., multi-fractal spectra and wave functions 7−98773
one-dimensional, generalised WKB and Milne solutions 7−108304
one-dimensional periodic pots., band struct. calcs. using finite elements 7−131526
optimisation of parameterised perturbative approx. 7−120855
parameter identification using stochastic mechanics, filtering theory appl. 7−140503
periodically pulsed system, quantum chaos, underlying integrability study 7−108306
phase shifts and bound states in one-dimensional problems 7−66877
photofragments, light emission, classical model, quantum results interpretation 7−129780
physical parameters and dynamical variables quantisation, wavefunction single-valuedness classical system discretisation 7−108279
trans-polyacetylene chains, soliton states, electron correls. effects 7−105424
polyene chains, bond-length alternation electron correl., PPP model 7−74451
primordial black hole, wave function in $S^1 \times S^2$ topology 7−73109
probability space of wave functions, appl. of entropy maximization technique 7−95457
proton wave function from lattice gauge theories 7−80987
QCD, diffractive dissociation on nuclei, leading log approx., wave fn. penetration, dissociation cross section 7−128856
quantum cosmology, black hole formation, Universe wave function 7−72687
quantum cosmology, wave function and effective action, covariant loop expansion 7−140344
quantum cosmology and Wick rotation, wave function calcs. 7−115651
quantum lattice models, simple numerical approach, iterative algorithm for trial wave fn. 7−121365
quantum measurements, observability of wavefunction collapse 7−80492
quantum mechanics, fundamental concepts 7−89040
quantum particle in random pot., multifractal wave fn. at localization threshold 7−134701
quantum well with in-plane mag. field, electronic struct, arrow train method calcs. 7−105372
quantum-liquid surface, ripplon dispersion and finite-range effects 7−84423
quarkonium, reduced wave function at the origin, asymptotic expansion 7−67593
quasi-particles, weakly bound states energy, total momentum depend. calcs. *(Russian)* 7−76511
quasiperiodic lattices, critical electronic wave functions, exact calc. of fractal measures 7−137768
quasipotential eqns. with chromodynamic interaction, exact solns. 7−95759
quaternion fields, Fock representation and quantum mechanics 7−95760
quinones, MCD, PPP wave fns. and CNDO calcs. 7−90237
radial Schrodinger eqn., bound-state solutions, screened Coulomb pot. appl. 7−73041
Rayleigh-Schrodinger series, derivation algorithm 7−120735
reactive scattering, arrangement-channel coupling eqns. soln. 7−93292
relativistic atomic many-body problem 7−108394
relativistic charged bosons in magnetic field, wave fns. and matrix elements 7−140801
relativistic quarks in 1D periodic struct., band condition, transfer matrix method 7−102704
resonance eigenvalues, least-squares stabilisation method 7−129621
rigid asymmetric rotor, semiclassical wave packet treatment 7−116933
scalar Schrodinger equation, inverse scatt. problem in nonlocal pots. 7−134576
scattered particle motion, in Coulomb field 7−80499
scattering problems, $\mathcal{L}^2$ methods convergence appl. 7−89022
SCF molecular orbital wavefunctions SCF wavefunctions, at. orbital populations and charges calcs. 7−141456
Schrodinger's cat paradox, solns., wavefunction collapse 7−67068

wave functions continued
Schrodinger equation, logarithmic perturbation expansion for central pot. 7−102188
screened coulomb potential, 1/N expansion 7−129623
second virial coeff., Levinson's theorem 7−123831
second-order molecular props., analytical geometrical derivatives from perturbation theory 7−96496
second-row atoms, SCF calcs. 7−103365
semiclassical quantum gravity, exact soln. in two dimens. 7−73134
semiconductor spherical microcrysts., exciton states, quantum size effect, variational calcs. 7−112192
simple SU(2) lattice gauge model, caustics and ground state wave function 7−73549
single particle and collective motion fragmentation, quasiparticle-phonon model 7−121567
single-time three-body Dirac equation, hyperspherical reduction 7−102583
small distance atomic electron screening effects 7−68231
spatially extended wave fn. and localised pot., fast Fourier transform calcs. 7−89023
spatially varying effective mass, Schrodinger eqn., wave function matching conditions, hermitean Hamiltonian calcs. 7−76745
spin systems, periodically pulsed, quantum chaos *(Japanese)* 7−95405
Stern-Gerlach apparatus theory, wave function for spin-1/2 atom 7−108275
stochastic mechanics, unified treatment of microscopic and macroscopic domains, macroscopic limit 7−120857
strongly bound state, one-particle wave eqn. soln. 7−128830
strongly-coupled quantum wells, electron states, reciprocity and variational formulations 7−131752
supersymmetric potential calcs., in 1D quantum mechanics 7−67075
three nucleons, binding energy relativistic corrections Faddeev components of nonrelativistic wave fn. *(German)* 7−128939
three particles with δ-function interactions, adiabatic effective pots. 7−120862
three-body atomic wavefunctions, Fock expansion in hyperspherical coordinates 7−109725
three-body atomic wavefunctions, solutions using spherical coordinates 7−109726
three-nucleon system, hyperspherical expansion using spin and isospin central pot. 7−121628
tight binding model, one-dimensional quasiperiodic pot., resistance and eigenstates calcs. 7−105359
tight-binding Hamiltonians with incommensurate pot., multifractal props. of wave fns. 7−131503
$(TMTSF)_2X$, Bechgaard salts, small period oscillation of magnetoresistance 7−84823
transition metal atoms, first-row, approx. GTO wave functions 7−103362
transition struct., diabatic surface formalism, VB and SCF calcs. 7−132908
triatomic molecule, photodissoc. dynamics, rot. reflection dynamics 7−122636
trinucleon system with central and tensor interactions, geometrical structure coefficients, sum rules 7−116295
two-centre shell model for arbitrarily orientated deformed nuclei 7−116302
two-electron atom ground states, electron correl. energies, HF wave fn., calc. 7−89993
two-electron systems, singlet excited states, SCF calcs. 7−141482
U(1) lattice gauge theory, multi-parameter variational calcs. 7−95726
Universe density matrix, quantum state, extension to string theory 7−115647
Universe wave fn., effective gravit. action with matter fields correction 7−115880
universe wave function, boundary conditions and quantum gravity 7−108371
Wigner transform, 1D model for nuclear many-body systems 7−109054
Woods-Saxon potential, axially deformed, single-particle energies, wave fns., quadrupole moments, g-factors calcs. 7−140992
XY model, multi-parameter variational calcs. 7−95726
$(\alpha,2\alpha)$, cluster spectroscopic factors using bound wave fns. and three-body coupling 7−135340
(d,p), sub-Coulomb stripping, asymptotic D/S ratio 7−116424
d, magnetic form factor at high Q^2, wave fn. 7−121513
$d\gamma \rightarrow pn$, relativistic gauge-invariant model, unified description, box diagrams 7−116181
$e^-p \rightarrow \Delta^0\nu_e$, Δ (1232) prod. via charge-changing weak currents, form factors, quark wave function 7−81213
$e^+p \rightarrow \Delta^{++}\bar{\nu}_e$, Δ (1232) prod. via charge-changing weak currents, form factors, quark wave function 7−81213
ι meson, prod., decay and mixing models, quark-glue coupling 7−135043
N electromagnetic properties, pionic corrections, light cone wave fn., valence quark config. 7−135120
NN interaction, off-shell behaviour, Noyes-Kowalski half-off-shell functions 7−128966
NN interactions, quark model description with flavour SU(6) wave functions 7−67577
$(\pi^+\pi^-)$ atom, binding energy, wave function and lifetime from virton-quark model 7−68476
Al_n clusters, n=2-6, 13, struct. and binding, wave fns. and extended basis sets investig. 7−129920
Ar II, ^2S and $^2P^0$ states, wavefunctions, CI calcs. 7−82000
Au, energy levels. fine and hyperfine struct., E1 transition amplitude, correl., pot. method 7−81997
B isoelectronic sequence, electric dipole oscillator strengths and radiative lifetime, LS-coupling calcs. 7−135880
B to Ca, STF HF wave fns. calc. 7−81995
B to Ca, STF HF wavefunctions 7−129588
Ba, non-local potential model, CI methods, core states, excited states, Hamiltonian 7−135855
Ba, nonradiative transition probabilities relativistic calc. 7−68249
Be, accurate electron density, one electron properties 7−129608
Be, atom, Eckart type functions *(Spanish)* 7−74394
^{7}Be, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
C_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
CN, rot. state population, even-odd alternation quenching, optical double reson. 7−129753
CO, correl. wavefunction, canonical and localised orbital basis 7−109788
CO_2, electrostatic interaction energy, self-consistent Madelung pot. method calcs. 7−104621

wave functions continued
$^{12}C(\gamma,K)$, relativistic impulse approx. using Dirac single particle wave fns. 7−102860
Ca XX, Lyman α reson. lines in high-temp. plasmas, unresolved dielectronic satellite lines 7−122419
Cl_2, valence shell orbital momentum distribs. and binding energies, (e,2e) spectrosc. 7−89905
Co, X-ray diffr. electron. correl. and relativistic effects 7−129614
Co_2, correl. wavefunction, canonical and localised orbital basis 7−109788
CrF_6^{3-} ion, spin density, SCF calcs. 7−109717
Cs, satellite two-electron radiative transitions due to relaxation effects 7−68255
Cu, single crystal, core level X-ray photoelectron spectra, quantum mechanical scattering theory calcs. 7−85939
CuCN, bonding, wave fn. characts. 7−129563
CuCO complexes, interactions, MO CI calcs. 7−122372
$CuCO^+$ complexes, interactions, MO CI calcs. 7−122372
CuNC, bonding, wave fn. characts. 7−129563
F^- multiphoton detachment cross sections, HF wavefn. calc. 7−129675
F_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
F_2, Hartree-Fock dissoc. 7−93314
F_2^- radical anion, ionis. pot. and hyperfine splitting const., ab initio calcs. 7−89941
F_2^n (n=+ or 0), Rydberg states, pot. energy curves, CI calcs. 7−109790
FH_2^+, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
Fr^+, electron-impact double ionis. cross section calc., giant reson. contrib., relativistic effects 7−103668
$GaAs/Al_xGa_{1-x}As$ quantum wells, electronic and optical absorpt. props. in elec. field 7−70398
GaAs-AlGaAs heterojunctions, resonant subband-Landau level coupling, cyclotron reson. study 7−138057
GaSb-AlSb, semiconductor superlattices, optical properties *(Polish)* 7−132220
GaSb-InSb semiconductor superlattices, optical properties *(Polish)* 7−132220
H atom, exact treatment of Coulomb systems in Feynman integral formalism and parabolic coordinates *(French)* 7−89027
H, excited, ionis. by low-freq. fields 7−109728
H, one-dimensional, hidden symmetry 7−129572
H^-, photodetachment cross section, ripplelike struct. obs. 7−109847
H-like atoms, quantisation of the screening constant 7−109815
H-like atoms in strong gravitational fields, energy levels and wave functions 7−128384
H+H, ground state, H(2s) and H(2p) form 7−141650
$H^+ + H^-$, mutual neutralisation, multi-state impact parameter method 7−141684
H^++H(He), electron capture differential cross sections 7−122682
H_2, empirical wave function model from X-ray diffraction data, binding energy 7−135842
H_2, momentum densities, bonding, electronic struct. calcs. 7−129546
H_2, solid, high press. effect, ab initio SCF approach 7−131237
H_2, two-photon absorptivities, CI expansion technique calc. 7−74722
H_2^+, generalised oscillator strengths, Born-Oppenheimer wave functions 7−103583
H_2^+, in arbitrary mag. field, pot. energies of first few electronic states, wave functions anal. 7−122390
H_3^+, mol. wave fn. sampling in quantum Monte Carlo calcs. 7−81926
H_3^+, van der Waals long-range interactions, wave fn. calcs. 7−82313
HCCN, bent and linear conform., multiconfig. SCF calcs. 7−103364
HCl^{2+}, pot. curves, CASSCF-CI method 7−68228
HF, electrostatic interaction energy, self-consistent Madelung pot. method calcs. 7−104621
H_2O, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
H_2O, electron and X-ray scatt. cross sections, CI calcs. 7−68224
H_2O^{2+}, dissoc., singlet and triplet state pot. energy surfaces calc. 7−122366
H_2O_2, nucl. mag. isoscreening lines, 2nd order mag. parameters 7−103408
$(H_2O_2)_2$, H bonding interactions, frozen fragment reduced variational space anal. 7−129549
^2H, D-state wave fn., nodes and bound states 7−121624
^2H, formation microscopic mechanism in high energy collisions, emission cross section 7−135265
^2H, radial excitations and bound state wave fn., RGM and nonrelativistic quark model calcs. 7−121591
^2H, wave function and OPE pot. 7−67742
^3H, Em form factor, bound state wave fn. props. 7−102801
H(1s)-H(1s), van der Waals interaction, third order energy coeff. determ. 7−117039
He, $1s2p^3P$ state, nodal hypersurface, symmetry 7−81944
He, (e, 2e) reactions, triple differential cross sections, correlated wavefns. calc. 7−129875
He atom, relativistic Hartree-Fock equation 7−129578
He, Coulomb holes 7−141443
He, electron impact ionisation, first Born calcs. 7−82366
He, ground state, fast convergent hyperspherical expansion 7−74434
He ground state, localisation, state-independent pots. 7−68188
He, ionisation by electron impact, ground state wave fn., variational-iteration technique 7−141694
He isoelectronic sequence, two-parameter wave functions 7−102063
He, magnetic fine structure meas. by microwave-optical reson. techniques 7−103427
He, momentum space correl. effects, HF wavefunctions 7−135834
He-like atoms, ^1S states, Coulomb pot. exact wave fns. expansion 7−89915
$He+H^-(D^-)$, electron detachment, semiclassical theory 7−103620
$He+O^{n+}$ (n=2,3,4) O K Auger electron spectra 7−103452
He_2, ground state pot., spectral intensity anal. 7−82312
He_2 interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
He_3, interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
HeH^+, second excited Σ^+ state calcs., contrib. to ^3T β-spectrum 7−116885
^3He, Em form factor, bound state wave fn. props. 7−102801
^3He, superfluid glass modelling, variational wave fn. anal. 7−105170
$^3He(\vec{\gamma},p)^2H$, nucleon-nucleon interaction and meson exchange current, Faddeev wave fns. 7−121792

wave functions continued
^{3}He(γ→,p), E_γ>50 MeV, differential cross section calcs., giant resonance region 7−121795
^{3}He(p,np), 2.5 and 5.0 GeV/c, ^{3}He→ppn nuclear vertex fn. determination 7−135320
^{3}He(p,π^+), microscopic mechanism 7−102868
K, satellite two-electron radiative transitions due to relaxation effects 7−68255
K^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Li^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Li-like ions, electron impact excitation, cross-section, distorted-wave-method 7−129882
^{6}Li(e,e'd), coincidence reactions, PWIA, DWIA and optical model calcs. 7−116396
^{7}Li, Coulomb excitation of first excited state, cluster model calcs. 7−116234
^{7}Li, form factors, matter and charge radii, multi-configuration RGM calcs. 7−135198
^{7}Li(e,e'), longitudinal and transverse form factor calcs., cluster model 7−121810
^{A}Li(p,X), A=6, 7, t-matrix approximation, quasielastic nucleon scattering and core polarization, intranucleon wave fns. *(German)* 7−129049
^{24}Mg, cluster struct., form factors, energy levels and parity states 7−135232
N_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
N_2, elastic electron scatt., target wave fn., electron correl. inclusion 7−103659
N_2, STF HF wave fns. calc. 7−81995
NH_2^-, dipole moments, quadrupole moments and dipole polarisabilities, SCF wavefn. determ. 7−135830
NH_3, electron and X-ray scatt. cross sections, CI calcs. 7−68224
N_2H_2, ground state pot. energy surface, MC SCF wave fn. calc. 7−109819
NO, $D^2\sigma^+$ state, rot. branching, resonant enhanced photoionisation 7−129799
Na^-, bound and autoionizing states, Pluvinage method calcs. 7−82052
Na-HCl, reactive quenching, pot. energy surfaces, MCSCF/CI wave fns. calc. 7−93253
^{150}Nd(^{12}C,^{12}C'), vibrational band excitation, coupled channel Born approx. calcs. 7−128955
Ne I Stark effect splittings, energy matrix, wave functions, group theory, radial and spin-orbit effects 7−135878
Ne_2, interaction hyperpolarisability, ab initio CHF perturbation theory 7−89910
^{20}Ne(e,e'), convection current determ. using cranked HF wave fn. 7−109014
Ni, X-ray diffr. electron. correl. and relativistic effects 7−129614
O^{6+}+He, electron capture, travelling MO method calcs. 7−82342
O_2, dissoc. energies, extended valence MC SCF calcs. 7−129606
O_3, electronic states, pot. energy surfaces, UV continuum, ab initio calcs. 7−96515
OCS, phase space bottlenecks, quantum and classical intramolecular dynamics 7−90312
OH radical, nucl. hyperfine parameter determ., far-IR laser mag. reson. spectrum 7−82229
OH, two-photon absorptivities, CI expansion technique calc. 7−74722
^{A}Os(e,e'), A=188, 190, 192, shape transition and wave fn. behaviour, charge density determ. 7−135313
P_2, STF HF wave fns. calc. 7−81995
^{A}Pt(e,e'), A=194, 196, shape transition and wave fn. behaviour, charge density determ. 7−135313
(QQ) leptonic decay rates, wave function divergence cancellation, QED version 7−128880
S VIII, ground state, electron impact excitation, CI calcs., R-matrix method 7−117077
S_2N_2, Hartree-Fock instabilities 7−116842
SO_2^{2+}, electronic states, SCF CI calcs. 7−135851
SiH_2, $^1A_1$-$^3B_1$ separation determ., Gaussian basis sets and CI wave fns. calc. 7−109800
SiH_2, ions. pot. and excitation energies, FCI wave fns. calc. 7−81993
^{116}Sn(d,p), three-body model, antisymmetrization corrections 7−116432
TiO, electronic states, configs., ab initio CI calcs. 7−109789
Tl, energy levels. fine and hyperfine struct., E1 transition amplitude, correl., pot. method 7−81997
U^{92+}+U^{92+}, inner-shell electron capture, electron-positron pair prod. 7−103646
Xe, Rydberg atoms, time domain effects, UV spectrosc. 7−141538
^{90}Zr(e,e'p), quasi-free knock-out, final state interactions, bound state wave fns. 7−116397

wave mechanics
see also wave equations; wave functions
Davydov solitons, eqns. of motion, quantum mechanical derivation 7−67037
empty wave detection expt. 7−140536
generalised exponential-cosine-screened Coulomb pot., energy spectra, hypervirial 1/N expansion 7−128349
infinite dimensional parametric distributions 7−108268
neutron interferometry, de Broglie wave packet longitudinal coherence length, comment 7−108309
nonlinear single-well oscillators, mode expansions and bifurcations 7−80493
particle beams, longitudinal coherence lengths meas., coherent wave-packet structure 7−134569
path-integral formulation of quantum mechanics, classical limit in density matrix terms 7−80231
phase space formulation and Schrodinger mechanics 7−108311
quantum and classical mechanical systems, transition point, deterministically defined 7−80511
quantum mechanical scattering, computer simulation *(Korean)* 7−80491
reflection theory for EM and particle waves, book 7−108066
transmission and reflection times for scatt. off tunnelling barriers 7−89008
vibronic coupling problem, numerical algorithm for band matrix eigenvalue problem 7−81930

wave power generation
alternative and renewable energy sources conf., Reading, England (April 1987) 7−72735
circular SEA Clam for wave energy conversion, develop. 7−78602
SE India coast, wave power potential 7−114074
ocean wave energy extraction system dynamics *(Portuguese)* 7−78601
point-absorber wave energy converter in pitch/surge mode 7−78603
rectangular oscillating water column with partially reflecting cross-wall, wave power absorption 7−126540
south-west Indian coast wave power potential 7−126541
vapour compression desalination using reciprocating compressor based on Edinburgh duck wave absorber 7−78604
Wells air turbine, inlet flow distortion, turbulence study 7−133033

wave propagation
see also acoustic wave propagation; electromagnetic wave propagation
acceleration wave properties in isotropic thermoelastic media 7−97313
acoustic waves convective growth in plasma-sheet boundary layer 7−94595
anisotropic media, surface waves, acoustoelastic theory 7−123516
asymptotic methods, low and high freq., book 7−66857
atmosphere, internal waves propag. in atmosphere stratified by Knudsen number *(Russian)* 7−145590
atmospheric gravity wave source and propagation 7−120187
Benjamin-Ono equations, 1 and 2D, similarity reductions 7−95361
causality, multiple scattering in random media, comments 7−140618
caustics of nonlinear waves 7−140474
coaxial cylinders, gas flow, accidental disintegration, Godunov finite-difference scheme 7−136776
combustion, wave propagation, two-stage stability under controlled conditions 7−75701
combustion wave initiation by ignition kernel, num. study 7−132937
composite, wave phenomena, mixture model approach 7−142210
composite materials, transient wave propag. 7−91694
composite structure with holes, thin-walled, dynamic response to axial loading 7−83093
conical shell under axial impulsive loading, elastic stress wave propag. *(Chinese)* 7−142199
constrained flexible systems, lumped and consistent masses for impact induced wave problems 7−104197
corrugated boundaries, shallow-water waves, resonant reflection 7−139630
coupled KdV equations, leapfrogging solitons 7−140473
creeping flow in two-dimensional channels 7−137010
cubic crystals, plane harmonic wave propag., generalized thermoelastic theory 7−108256
cylindrical shock waves propag., in self-gravitating gas, effect of azimuthal mag. field 7−127694
deterministic medium, new signal estimation using a reception model 7−89005
dissipative medium, one-dimensional, transient wave propagation, direct and inverse scatt. for phase-velocity mismatch 7−67035
Einstein-Maxwell electrovacuum eqns., cylindrically symm. solns., nonradiating gravit. wave propag. 7−102268
elastic half-space, transient wave propag., generalised ray theory anal. 7−97399
elastic laminated plates, wave propag. method 7−84081
elastic solid, periodic distribution of cracks, time harmonic longitudinal wave propagation 7−142215
elastic surface waves, eigenvalue problem for unbounded self-adjoint operator *(French)* 7−123518
elastic tubes, liquid filled, perturbations in, velocity profiles, wave propag. 7−111008
elastic wave propag. through media with thin crack-like inclusions 7−136739
electromagnetic wave propagation in nonlinear two-level medium, asymptotic representation 7−95369
Euclidean invariant phase dynamics for propagating pattern 7−115806
fibre reinforced composite media, elastic wave propag., phase vel. and damping factors 7−75394
finite amplitude waves, propag. in model boundary layer 7−104288
flame, turbulent, propag. and spark ignition, hydrodynamic mathematical model 7−132938
flexible structures, controlled, with impulsive loads, modelling 7−73010
fluid-saturated porous media with micropolar viscoelastic skeleton, wave propagation 7−97401
forced waves, generation and directed propag., oceanic appl. *(Russian)* 7−101319
frequency cross-spectrum of intensity fluctuations produced by a deep-phase screen 7−67041
front dynamical vel. selection, marginal stability 7−124643
gravitational wave propagation through matter, anal. 7−115865
gravity waves on deep water, generalized wave eqn., distributional solns. 7−134529
gravity waves propag. in equatorial atmosphere, ray paths anal. 7−127343
half-space, elastic, asymmetric wave propag. 7−123515
harmonic-chaos transition, plane wave interference in nonlinear media *(Hungarian)* 7−128454
head-wave amplitudes, contrib. to reflection 7−140464
heat transfer, hyperbolic equation, inclusion of travelling wave effects, numerical simul. 7−115933
hyperbolic equations, difference schemes, wave propagation anal. 7−108241
hyperbolic equations, nonlinear and multidimensional, cubic interpolated pseudoparticle method anal., propagation solns. 7−88992
Hypercube machine, appl. to structural mechanics problems 7−83025
hyperelastic solid, incompressible, nonlinear axial shear wave propag., num. soln. 7−117500
ICRF second harmonic plasma heating, mode conversion, hybrid code simulation 7−69391
induced discontinuities behind a first order discontinuity wave for a quasi-linear hyperbolic system 7−73008
inhomogeneous media, wave reflection at normal incidence 7−128305
inhomogeneous media with curved interfaces, Gaussian wave packets 7−108257
ionic wave propagation in animal tissues, holographic theory 7−78819
isotropic hyperelastic plates, anisotropic, wave propagation, concrete appls. *(German)* 7−104206
Lamb's problem in semi-infinite micropolar elastic solid, waves and vibrations 7−108239
linear elastic media of cubic symm., existence of type-6 transonic states 7−88998
linear mode conversion, 4D eikonal theory 7−80451
linear pulse propagation in resonant medium, adiabatic limit 7−102176
linear scattering problem in MHD medium, transmission reson. for mag. slab 7−123767

wave propagation continued
linear stability of a short wave propagating in a long internal wave 7−130641
long pipe with wall friction, expansion wave problem at rupture point 7−111009
longitudinal wave propag. with dispersion, fundamental soln. *(Russian)* 7−89003
magnetohydrodynamic waves, nonlin., quasilin. propag. 7−111206
magnetosonic waves, nonlin., oblique propag. 7−91317
mass-spring chain, quasi-continuous spatial motion, solitary wave solns. 7−115808
midlatitude disturbance in presence of shear flow on sphere, barotropic decay 7−110998
net, viscoelastic, stress wave propagation 7−128306
non-linear waves in 2D Keplerian flows, accretion disks appl. 7−117624
nonlinear, similarity analysis 7−140459
nonlinear dissipative wave propag. in viscoanelastic media, thermodynamic theory 7−80452
nonlinear evolution of a wave packet propagating along a hot magneto-plasma column 7−91316
nonlinear fluid-saturated solids, acceleration wave propag. and decay 7−97400
nonlinear hysteretic media, plane blast wave propag. series soln. *(Chinese)* 7−90998
nonlinear random media, localisation, invariant-imbedding approach 7−80443
nonlinear responses of dispersive media 7−95360
nonlinear transmission line, cusp solitons, shock waves and envelope solitons, evol. eqn. 7−102178
nonlinear wave propagation, local frequency spectra 7−134533
nonlinear wave propagation in gravity theory with the general Lovelock lagrangian 7−120892
nonlinear waves in active media, evolution eqns. 7−73000
nonstationary Larsen problem of internal waves propag. *(Russian)* 7−136900
nonuniform grid, numerical wave propag. 7−128299
oblique oscillating water column in a channel, wave-power absorption 7−88990
oceanic topographic Rossby wave propagation, numerical study 7−114780
oscillating water columns in irregular waves 7−88989
perturbed KdV eqn., Painleve prop., Lax pair, auto-Backlund transform, recursion operator 7−120819
phased self modulation influence on colliding wave interactions 7−140471
pilot wave theory for very light scalar particles in refractive medium 7−140449
pipe, curved, elastic, pulsatile flow of viscous fluid, wave propagation, blood flow appl. 7−133357
plate, laminated, asymmetric fibre-reinforced, wave propag. 7−69020
plate with randomly distributed discrete heterogeneities, bending vibrs. problem 7−110833
porous media, poroelasticity and wave propag., Biot's theory extensions 7−111727
pressure shocks propag. in relativistic viscous heat-conducting fluids, shock vel. soln. 7−72273
primordial expanding gravitating universe, spherical detonation wave propag. 7−88086
quasilinear hyperbolic reducible systems allowing for special wave interactions 7−128309
random media, solution of moment equation with different wavenumbers 7−108255
random media, wave propagation, large intensity fluctuations 7−134537
random media, wave propagation 7−134535
Rayleigh wave propag., elastic solid, effect of surface stresses and voids 7−69030
Rayleigh waves, propagation in initially stressed incompressible half space, mathematical model 7−140458
scattering matrix in a waveguide with elastic walls 7−73005
seismic Rayleigh waves, phase vel. and amplitude values in presence of lateral heterogeneities 7−87462
seismic S-waves, freq.-domain separation of propag. effects from observed S-waves *(Japanese)* 7−87504
seismic wave propagation in stepped structure equivalent mass-system model 7−133599
seismic waves, evolutionary equations for waveform changes in nonlinear waves 7−145355
seismic waves, refl. waves characts. in shallow SH-reflection survey on paved ground surface *(Japanese)* 7−79245
self-consistent cluster expansion for wave propagation and diffusion-controlled reactions in a random medium 7−106764
self-effect femtosecond optical wave packets 7−90674
self-induced avalanches in relaxing media 7−95358
shear, nonlinear combined axial and torsional, incompressible hyperelastic solid 7−142207
singularity index and diffr. catastrophes 7−102181
solitary travelling waves anal. of non-lin. unsteady processes 7−115803
solitary waves overtaking collisions, water-wave eqn. anal. 7−104284
soliton propagation in fluid-filled pipe, mathematical model 7−69271
stability of Kolmogorov spectra of a weak turbulence 7−134540
stratified fluid with floor disturbances, transient development of internal waves 7−111061
strong spatial resonance and travelling waves in Bernard convection 7−104271
superposed fluids, common boundary, viscous attenuation of waves 7−142327
surface Love wave propag. in random layered elastic medium 7−120821
T-joint, flexural wave reflection and transmission 7−123517
Taylor-Goldstein problem, non-singular neutral modes, wave vel. boundedness 7−80425
thermoviscoelastic solid in magnetic field, plane wave propagation 7−69028
three-dimensional wave collapse, quasiclassical theory 7−115810
three-dimensional wave propag. in domains, transient anal., boundary element method soln. 7−72998
three-layer rotating fluid, explosive instability and Rossby waves three wave reson. interactions *(Russian)* 7−97542
three-wave resonance, non-conservative, exact solns. 7−128307
transmission across a random medium, localisation, invariant imbedding approach 7−80442
transmission coefficient for waves and particles through long random barriers 7−102217
wave propagation continued
transverse wave in a string, momentum storage and energy transport study 7−108078
tsunami propagation in bay, coastal run-up soln. *(Russian)* 7−127112
two-dimensional channels with sinusoidal waves, peristaltic flow 7−137011
ultrarelativistic gas, infinitesimal disturbance propag., elementary soln. method 7−75740
vector waves, variational formulation of covariant eikonal theory 7−80449
velocity of a wave packet in an anomalous dispersion medium *(Japanese)* 7−108247
Venus, wave-like patterns 7−127755
viscoelastic solid medium, magnetoelastic wave propagation 7−77394
viscous effects on wave propagation in a bubbly liquid 7−130730
Voight-type material half-space, thermomagneto-viscoelastic wave propag. 7−83064
wave computations, local variational method *(Chinese)* 7−72999
wavemaker, general theory, solution of initial-boundary-value problem, finite amplitude effects 7−111010
weak discontinuties propagation in nonequilib. flows, transport eqns. 7−127703
weak nonlinear ideal gas, 1D, Burgers eqn. for wave propag. 7−134522
Wisem equation in singular kernel, Cauchy problem *(Russian)* 7−89004
wave scattering *see scattering*
waveform analysis
see also spectral analysis
drift chambers for D0, waveform digitizers 7−109662
human ESD waveform meas. instrument tests 7−93707
seismic SH-waves, stratigraphic filtering in spherical layered Earth 7−101216
seismic waveform modelling in heterogeneous media, appl of ray perturbation theory 7−87481
seismic waves, evolutionary equations for waveform changes in nonlinear waves 7−145355
stroboscopic waveform made analysis in scanning electron microscopy, IC testing appl. 7−128720
Wigner distribution analysis of acoustic well logs 7−115107
wavefront-reconstruction imaging *see holography*
wavefront reversal (optical) *see optical phase conjugation*
waveguide antennas
see also microstrip antennas
dielectric-rod antenna, EM fields at facets 7−104001
ridge waveguide slot antenna, unified anal. in 3D space and time 7−135548
waveguide attenuators
optical, programmable, for fibreoptic test environments, design approach 7−68898
waveguide components
see also directional couplers; optical waveguide components; strip line components; waveguide attenuators; waveguide couplers
confocal Fabry-Perot microwave resonator at 48 GHz for high-resolution spectroscopy 7−80816
cryogenic motorized waveguide switch 7−95598
dielectric constant meas. of lossy fibres and rods, at microwave freq. 7−95617
permittivity meas. of lossy liquids and biological tissues, at 35 GHz 7−128591
sHF waveguide semiconductor modulator for space radiometric systems 7−101656
UHF local hyperthermia system using indirectly cooled water-loaded waveguide applicator at 432 MHz 7−71838
waveguide connectors *see waveguide couplers*
waveguide couplers
see also directional couplers; optical couplers
ICRF wave coupling and optimization of a dielectric-filled waveguide launcher 7−137100
waveguide joints *see waveguide couplers*
waveguide junctions *see waveguide couplers*
waveguide theory
see also guided electromagnetic wave propagation; optical waveguide theory
axially symmetric EM field, numerical anal., FEM using ring unit with rectangular cross-section *(Chinese)* 7−74811
complex permittivity tensor meas., rectangular waveguide standing-wave method 7−115976
cylindrical flange-waveguide applicator for microwave hyperthermia treatment 7−93812
gratings, nonspecular reflection of waves, scattering regimes 7−123183
laminated-periodic planar waveguide, natural modes anal. 7−130324
magnetospheric ducts, whistler wave propag. 7−142467
multidielectric waveguides anal., generalised method 7−136167
rectangular, diffraction problem, singular integral equations method 7−141765
rotating relativistic electron beam stability in waveguide near cyclotron reson. 7−90565
scattering matrix in a waveguide with elastic walls 7−73005
tropospheric propagation modelling, waveguide mode method 7−94421
waveguides
see also acoustic waveguides; circular waveguides; dielectric-loaded waveguides; dielectric waveguides; optical waveguides; plasma filled waveguides; rectangular waveguides
EM theory, conf., Budapest, Hungary (Aug. 1986) 7−134360
JT-60 wall materials, secondary electron yield meas. using Auger electron spectrometer *(Japanese)* 7−74054
resonance phenomena in acoustic and electromagnetic waveguides *(German)* 7−104075
RF systems, waveguides and cavities 7−81812
semiconductor travelling-wave optical amplifiers, 1.5 μm, design and realisation 7−68676
strip, magnetostrictive, longitudinally polarized, elastic vibrations by external magnetic field 7−97397
wavelength division multiplexing *see frequency division multiplexing*
wavemeters
Fourier transform wavemeter using Michelson interferometer, for laser wavelength determ. 7−123050
waves
see also charge density waves; elastic waves; electromagnetic waves; gravitational waves; gravity waves; liquid waves; magnetohydrodynamic

waves continued
waves; magnetostatic waves; ocean waves; oscillations; plasma waves; spin density waves; spin waves; surface waves (fluid); wave propagation
acceleration wave properties in isotropic thermoelastic media 7−97313
accretion tori stability, non-linear evol. to discrete planets 7−88105
active media, spiral and concentric wave theory 7−126413
adiabatic transverse waves in Rankine vortex 7−136895
aerosols, charged, turbulent diffusion of traveling wave 7−97510
atmosphere, lee wave structures in stratified flow over 3D obstacles 7−79562
atmosphere, linear wave theory at low latits. 7−139704
atmosphere, microphysical numerical model of orographic clouds with wave flow over mountain ridge 7−133854
atmosphere, multiplicity of equilibria of baroclinic waves 7−94402
atmosphere, struct. of topographic Rossby waves over Antarctica 7−94401
axisymmetric cavity shear layer oscillations, response to external forcing 7−69196
baroclinic flows with and without two-wave bottom topography 7−79502
book, patterns and waves 7−80190
boundary layer flow, Tollmien-Schlichting waves, wall-temp. influence, disturbing wave damping *(German)* 7−123668
characteristic Rossby frequency, atm. appl. 7−145601
circular pipe, laminar to turbulent transition, inlet velocity profile effects 7−97492
combustion wave initiation by ignition kernel, num. study 7−132937
combustion wave propag. of series-parallel chemical reactions, empirical schemes 7−100570
creeping flow in two-dimensional channels 7−137010
cylinder wake, Benard-von Karman instability, oscillation threshold, laser probe study 7−142314
damped four wave resonant interaction 7−140472
decompressed riser, bubbly flow, wave hierarchy instability 7−110920
diffraction around multiple vertical cylinders, boundary elements anal. *(Chinese)* 7−80439
dispersive systems, waves with several phases *(French)* 7−123711
Earth mantle, Helmholtz waves in two-layer model of upper mantle 7−145427
elastic and viscoelastic media, wave-dynamics problem, num. soln. using ES-1055 matrix processor *(Russian)* 7−136901
floating vertical cylinder on waves, oscills. and drifts *(Russian)* 7−97547
flow between coaxial longitudinally corrugated cylinders, heat exchange, waves 7−117670
fluid dynamics, annual review, book 7−95112
free stream effects on the wave instability of buoyant flows along an isothermal vertical flat plate 7−136804
frictionless ideal gas, wave formation at jet boundaries, contact surface instability *(German)* 7−136897
galaxies spiral structure, observational data required for development of theory 7−140262
gas/liquid pipe flow, press. drop correl. 7−104330
impulsively started, linearly stratified flow over long ridges 7−114873
inclined film flow, turbulent and inertial roll waves 7−111004
infinite discrete rod and rope meshes, vibrations *(German)* 7−102156
instability-wave control in channel flow, num. study 7−83187
internal solitary waves in rot. system, rot. influence on intumescence 7−83240
internal wave diffraction at half-plane submerged parallel with compressible fluid free surface *(Russian)* 7−136960
internal wave generation by combined translational and vibr. motion of cylinder, linear model 7−69200
internal waves, finite amplitude, reflection from uniform slope 7−91150
internal waves from power source moving under layer of stratified fluid *(Russian)* 7−97598
jets, axisymmetric, nonlinear interactions generated by waves, resonance conditions 7−75641
Kolmogorv's constant and local interactions 7−130729
liquid transport by traveling solitary waves 7−114725
low-order unforced inviscid barotropic model, chaotic behaviour 7−101444
MHD laminar boundary layer flow past flat plate 7−91238
nonlinear inhomogeneous media, combustion wave, asymptotic behaviour 7−132940
nonlinear internal waves in a one-dimensional channel, appl. to Straits of Gibraltar 7−101323
nonlinear Rossby waves in rotating spheroidal fluid 7−133703
nonstationary Larsen problem of internal waves propag. *(Russian)* 7−136900
one-dimensional adiabatic gas flow, small perturbations of wave study 7−136890
oscillatory Maragoni-Benard interfacial instability and capillary-gravity waves in single- and two-component liq. layers 7−130639
paraffin wax, P-116, natural convection, latent heat delay 7−69172
petroleum containing tar, nonlinear-wave propag. 7−110996
Poiseuille flow, turbulent spots, wave struct. investig. 7−91233
propagation of discontinuities in the Hasegawa-Mima equation 7−130627
rarefaction waves in liquid and gas-liquid media 7−97554
reaction-diffusion eqn. on a cylinder, wave-like solns. 7−128507
ring galaxies, growth and disruption of interstellar clouds in expanding density waves 7−128055
secondary bifurcation of three-dimensional standing waves 7−88999
solar chromosphere, submillimetre diagnostics of response to compressional waves 7−115334
solitary travelling waves anal. of non-lin. unsteady processes 7−115803
solitary waves near obstacle or uneven bottom, long wave eqns. including curvature effects 7−75602
soliton propagation in fluid-filled pipe, mathematical model 7−69271
spiral galaxies, star-gas density waves dynamics 7−95006
spiral wave propagation in Belousov-Zhabotinskii reaction 7−69282
spiral wave propagation in Belousov-Zhabotinskii reaction 7−69283
standing longitudinal waves, demonstration expt. 7−120729
stratified shear layer, long internal wave propag., perturbation solution 7−130764
stratosphere, wave motions, rel. to solar activity 7−139718
supersonic boundary layer stability, wave struct. study 7−136924
supersonic turbulent flow development in square duct 7−104302
Taylor-Couette flow, Reynolds number for singly to doubly periodic transition 7−69090
Tollmien-Schlichting wave cooling of chips is flow in grooved channels 7−123636
Tollmien-Schlichting waves in growing boundary layers, streamwise vortices effect 7−83174
troposphere, finite-amplitude stability of topographically-forced wave with Ekman dissipation 7−94400
turbulence transition, flow instability, reviews 7−69102
turbulent liquid jet, condensation, heating study 7−136948
two superposed fluids of finite depth, wave source pots. 7−75599
two-dimensional channels with sinusoidal waves, peristaltic flow 7−137011
two-layer fluid, large amplitude solitary internal wave study 7−136898
two-layer fluid, plane steady wave existence prediction 7−117618
vertically flowing film surface, nonlin. wave form., num. investig. 7−110997
viscous critical layer, nonlinear stability of stratified shear flow 7−136958
vortex pair motion beneath heavy fluid surface, 2D problem 7−117613
water waves, bounds 7−142323
whitecaps simulation, discriminating between film drops and jet drops 7−120028
zonal shear flow, disturbances nonlinear devel. 7−117563
N_2-water bubble-slug flow pattern transition, instabilities, void fraction waves 7−91197

waxes
carnauba wax, electret formation, mag. field effects 7−138377
paraffin wax coatings, influence on surface sensitivity of Joshi effect 7−142519
paraffin waxes, phase change materials for solar energy storage 7−144921
thermo-electrets, dielectric props., electrical DC cond. determ. 7−118939
wax-solids mixtures, ablation in turbulent axisymm. water jets 7−123696

waxing *see polishing*

WDM *see frequency division multiplexing*

weak ferromagnetism
see also canted spin arrangements; Morin temperature
spin waves localised at domain walls 7−77267
superconductors, weak ferromag. phenomenological theory 7−99307
Co_2SnTe_4, amorphous, mag. props. 7−132024
$DyFeO_3$, interphase domain walls, dynamic props., field depend. 7−143838
$ErBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$ErCrO_3$, pulsed laser irradiation-induced antiferromag. to weak ferromag. transition study 7−77288
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, Curie temp. press. effect 7−132118
Fe_2O_3, hematite, magnetisation, thermal hysteresis near Morin transition temp. 7−99495
$GdBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$HoBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
Ni_2SnTe_4, amorphous, mag. props. 7−132024
α-$TlMnCl_3$, weak ferromagnet, reorientation of mag. moment 7−143794
$YBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
$Y(Co_{1-x}Al_x)_2$, weakly itinerant ferromagnet, NMR and magnetisation 7−85470
$YFeO_3$, mag. birefringence, effect of antiferromag. resonance 7−70750

weak interactions, elementary particle *see elementary particle weak interactions*

weak interactions (atomic physics)
electromagnetic wave propagation, nonconservation of atomic space and time parity effects *(Swedish)* 7−122392
experiments and theory, review *(Polish)* 7−68471
heavy atoms, parity violation, optical rot. and Stark-interference study 7−122459
parity nonconservation, CI approach 7−122386
parity nonconserving equations of motion method, appls. 7−122417
Ba, Rydberg series, CW laser atomic beam expt., hyperfine struct., isotope shifts 7−116913
Bi, parity-nonconserving optical rotation at 876 nm 7−135888
Cs, parity nonconservation, TDHF calc. 7−116849
Cs, parity nonconservation, CI approach 7−122386
Cs, parity nonconservation 7−109736
Cs, parity nonconserving electric dipole transition amplitudes, Dirac-H-F calcs. 7−89949
^{133}Cs, parity nonconservation, time depend. HF calcs. 7−135833
^{85}Rb, parity nonconservation, time depend. HF calcs. 7−135833
Tl, parity nonconservation, TDHF calc. 7−116849
Tl, parity nonconservation, CI approach 7−122386
Tl, parity nonconservation 7−109736
Tl, parity nonconserving electric dipole transition amplitudes, Dirac-H-F calcs. 7−89949
^{205}Tl, parity nonconservation, time depend. HF calcs. 7−135833

weak interactions (molecular physics)
chemical chiral systems, sensitivity to weak asymmetric factors 7−68473
D-ribose, parity-violating weak interactions, ab initio calcs. 7−100793
1-hydroxy tetrahydrofuran, C2-endo formation, parity violation 7−90449
$\mu He^+(2s^1/_2)He_n$ complexes, symmetric, rate of formation 7−129907
Re monomers and dimers adsorbed on W (110), possible magnetism 7−82020

weak links, superconducting *see superconducting junction devices*

wear
see also abrasion; hardness
abrasive wear, nondependence on work hardening 7−130608
abrasive wear resistance, effects of ploughing and removal of ploughed material 7−98333
Abresist fused cast basalt, erosion behaviour 7−113729
adhesive wear model for low-amplitude fretting process 7−132758
alloy 600 nuclear steam generator tubes, cold leg thinning, wear and corrosion 7−109287
alloys, mechanical props. and struct. modifications w.r.t. pulsed ion beam effects 7−117988
arc cathode erosion and redeposition in He, Ar, and SF_6, gas press. depend. 7−69522
bearing steel, N implanted, friction rel. to temp. and microstructure 7−106628
bio-composite advanced material research and development, artificial hip joint appl. 7−133506
bonded lubricating films, two and three component, tribological behaviour 7−113733

wear continued
boride diffusion coatings, operational characts. improvement by laser treatment 7−100448
$\alpha+\beta$ brass, cavitation erosion 7−71323
brass, special, wear, alloying effects, metallography 7−113732
bronze-ferrochrome composite, comp. and prod. conditions effect on mech. and tribotech. props. 7−78267
bronze-ferrochromium composites, comp. influence on tribotech. characts. 7−119385
cavitated squeeze-film bearings, closed form model 7−106637
ceramic wear surface, ion mixing modified, Auger electron spectroscopy 7−112033
ceramics, friction in lubricated sliding 7−78250
ceramics, ion beam modified, friction and wear behaviour 7−106630
ceramics, ion implanted, struct. and mechanical props. 7−91831
composite materials by abrasive particle stream, prediction by statistical probability methods 7−131229
conference, Lulea, Sweden (Jun. 1986) 7−108030
contact problem with wear caused by local melting 7−75471
corrosion, flow-dependent, mechanisms, damage and control 7−113754
diamond-like films, sputtered, wear and friction behaviour *(Japanese)* 7−132755
diffusion layers on steels, tribotechnical characts. and tests 7−132756
erosion measurement techniques for plasma-driven railgun barrels 7−93106
erosive wear by particulates review 7−93103
eutalloy, N ion implantation, rel. to wear reduction 7−142853
fibre reinforced PEEK composites, short fibre, wear behaviour 7−126259
fibre reinforced polymer composites, wear rate rel. to sliding velocity 7−132771
friction and wear kinetics, study by radiospectroscopy methods 7−137465
friction coefficient, influence of variable-speed friction transmission primary contact geometry 7−137464
friction pair material compatibility, electrical evaluation 7−100394
fusion device, erosion and deposition in-situ meas. tech. 7−67987
glass fibre reinforced liq. cryst. polymer composite, sliding wear 7−78272
glass-ceramic, Silceram, wear resist., erosion testing 7−144655
graphite, friction, transfer behaviour, rubbing on polished steel surfaces *(French)* 7−106629
graphite limiters, high heat flux tests 7−141288
heat exchangers and steam generators, flow induced vibration fretting wear 7−106638
high temperature materials, damage, environmental effects 7−86390
ion implantation, US Navy manufacturing technology program 7−117948
ion implantation for component wear charact. improvement 7−71375
limiter erosion and deposition in T-10 tokamak 7−103174
lubricated friction, race of elec. phenomena *(French)* 7−104905
machines, problems of wear and use of tribology laboratory 7−71305
materials, ductile and brittle, dry friction, theoretical analysis 7−132768
materials surface modification by plasma bombardment 7−106692
mechanical viewpoint of problems, review 7−130607
medical prostheses, ion beam appls. 7−79138
metal faced using differing hardening principles, wear resist. subject to impact-abrasive action 7−100447
metal surfaces, liq. wetting, heat of adsorpt., lubrication 7−142904
metallic surface, ductile, treatment with polisher with embedded abrasive, relationships governing wear 7−86413
metals, shear instability model of sliding wear 7−132770
metals, surface modification by ion beams, conf., Kingston, Ontario, Canada (Jul. 1986) 7−102001
Nichrome, Nb alloyed, heat treatment effect on strength and tribotech. props. 7−78265
nonelectronic materials, ion beam implantation modification 7−111626
optical profilometry study using 3D image processing *(French)* 7−95543
pair of annular stamp and rough half-space, axisymm. contact problem of wear 7−75478
polycaproamide, graphite filled, wear mechanism study 7−138845
polyetheretherketone, single particle impacts and erosion 7−78274
polyethylene, friction characts., effect of air irrad. 7−132762
polyethylene, solid particle impact, erosion and deformation 7−93107
polymer composites, friction and wear *(German)* 7−78278
polymer composites, wear statistics, anal. 7−98332
polymers filled with dispersed and fibrous materials, wear, influence of dynamic loads 7−71312
polyphenylene sulphide and C fibre composite, friction and wear in unlubricated conditions 7−126262
polyphenylene sulphide and C fibre composite, friction and wear with water lubrication 7−126263
polyphenylquinoxaline base antifriction self-lubricating plastic, surface layer props. and struct. rel. to friction temp. 7−71307
PTFE based textile structures, tribotechnical props. 7−138848
PTFE with low degree of filling, struct. and mech. props. 7−78255
rapidly quenched metals, conf., Wurzburg, Germany (Sept. 1984) 7−72736
refractories, electron beam disruption simulation 7−141287
resistance improvement of stamping tool by ion nitriding 7−132759
roller contact elec. and mech. wear in regulation devices under load 7−100389
rolling friction processes rel. to struct. factor, statistical characts., 7−91043
sialon ceramics, wear behaviour in sliding contact 7−126265
sialon materials, charactn. and props. 7−126248
solid lubricant coating, friction fatigue, temp. depend., wear tests 7−71311
steel, austenitic stainless, aluminide coatings, wear and corrosion resistance in liq. Na *(French)* 7−86476
steel, austenitic stainless, low energy N_2^+ ion implanted, XPS studies 7−71393
steel, austenitic stainless, N implanted, friction and wear 7−78260
steel, austenitic stainless, surface props., effect of plasma nitriding temp. 7−119444
steel, C, erosion/corrosion wear in wet steam 7−132802
steel, C and alloy, fretting fatigue mechanism *(Japanese)* 7−138836
steel, constructional, cyclic life and wear resist. after grinding with superhard materials 7−93162
steel, Cr, laser processed, wear induced hardening 7−100392
steel, Cr bearing, N ion implantation, wear, surface struct., Auger spectra 7−119379
steel, Cr-Mo, erosion, microstruct., tempering effect 7−138849
steel, die, hot work, ductility and abrasive wear resist. 7−126260
wear continued
steel, frictional contact zone embrittlement, S and Cl effect *(Russian)* 7−144561
steel, GCr15, N^+ ion overlap implanted, wear, fatigue study 7−104787
steel, high Mn, wear resist., influence of Mn and C contents 7−86365
steel, high Mn austenitic, rolling contact fatigue strength rel. to work hardening *(Japanese)* 7−144528
steel, high speed, cutting life rel. to surface treatment 7−138852
steel, high-strength, abrasive wear under different contact interaction conditions 7−132752
steel, implanted N relocation due to tribological processes 7−76191
steel, low C, wear, loading system damping 7−78275
steel, low strength medium C, fretting fatigue under two-step block loading 7−100352
steel, martensitic stainless, erosion-corrosion susceptibility, vibratory cavitation in corrosive media 7−132769
steel, mild, laser treated hardfaced coatings, cavitation wear resist. 7−138851
steel, mild, N_2^+ ion implantation, treatment initiating sustained oxidative wear 7−106691
steel, mild, N ion implanted, oxidation and diffusion during wear 7−78358
steel, Mn, Hadfield, thermomech. treatment, deform temp., wear resist. *(German)* 7−119299
steel, N ion implantation, rel. to wear reduction 7−142853
steel, N ion implantation, surface struct., wear resist. 7−104775
steel, Ni-Ti, hardening, precip., wear resist. rel. to cooling rate 7−78257
steel, nitrided, cavitation erosion in salt water and emulsion 7−126252
steel, nitrocarburising treatment, Nitrotec process technology review 7−78326
steel, nonmagnetic, nitriding temp. and gas mixture comp. effect on struct., comp. and props. 7−126307
steel, sliding wear, rate transitions and mechanisms 7−86364
steel, stainless, hardened, fatigue strength, lapping effect 7−126243
steel, stainless, N_2^+ implanted, wear behaviour 7−106635
steel, stainless, N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
steel, stainless, wear mechanism in hydrogen, delamination crack form. 7−93108
steel, struct. and props., effect of powerful electron irrad. 7−84028
steel, structural, thermochem. treatment effect on wear resist. 7−78348
steel, sulphonitriding in CS_2-NH_3 atm. 7−126325
steel, surface electrospark alloyed, wear resist. in abrasive medium 7−93161
steel, tool, N ion implantation effects on load-bearing capacity and adhesive wear behaviour 7−78261
steel, W-Cr-V, bearing, N ion implantation, wear, friction, hardness, surface struct. 7−119378
steel, W-Cr-V, wear resistance enhancement by ion implantation *(Chinese)* 7−132820
steel, W-Mo-Cr alloy, microhardness and wear resistance after ion beam bombardment 7−138832
steel bearing parts, medium influence on surface layer physicomech. props. in contact interaction 7−144558
steel surface, ion implanted, wear behaviour 7−71392
steel surface layers, N ion implantation, X-ray diffr. anal. 7−84456
steel-brass composite with macro- and microheterogeneous working surface, tribotech. props. 7−78266
steels, C and low alloy, erosion-corrosion in water at 300°C 7−71356
steels, ion implanted, tribological props. 7−106633
steels, oxide films rel. to wear 7−71394
stellites, wear resistant, development by liq. phase sintering 7−92920
surface reproducibility during erosion or growth 7−112040
surfaces, wear, adhesion and elec. breakdown phenomena *(French)* 7−104904
thermo-mechanical analysis of dry sliding systems 7−110877
thermodynamical model of contact, friction and wear, constitutive eqns. for materials and linearized theories 7−98519
thermodynamical model of contact, friction and wear, constitutive eqns. for friction, wear and frictional heat 7−98520
thermodynamical model. of contact, friction and wear, governing eqns. 7−98518
thin layer activation for wear studies in compressors 7−119383
transition metal-metalloid metallic glasses, wear mechanism 7−113725
tribological surface characterisation using scanning electron acoustic microscopy 7−126371
tribology, correl. of scientific studies and practice 7−137462
turbine rotor blades, surface layer stressed state, protective coating effect 7−110851
US machining effectiveness of ceramics, abrasive material props. influence 7−78295
vacuum arc, high current density multi-cathode-spot, macroparticle emission 7−69523
wet steam turbine blades erosion, Monte Carlo method calcs., 7−83310
Ag-Cu boundary, atom mixing processes under Ar ion bombard. 7−84068
Ag-Mo boundary, atom mixing processes under Ar ion bombard. 7−84068
Al alloys, adhesive wear, metallography 7−78411
Al alloys, erosion by solid particles, laser meas. 7−106625
Al materials, wear resistance improvement *(German)* 7−126264
Al, microhardness and wear resistance after ion beam bombardment 7−138832
Al-Pb P/M produced materials, comparative tribotech. props. 7−78264
Al-Si, erosion by solid particles, effect of microstruct. 7−86367
Al-Si, mild wear during unlubricated sliding, surface structs., debris 7−144560
Al-Zn-Mg, friction and fretting wear, O_2 and water vapour effects 7−132763
AlN_x, ion beam enhanced electron beam deposition, wear props. 7−113395
Al_2O_3 fibre reinforced Al-Li, 2D and 3D, friction and wear behaviour 7−106631
Al_2O_3, ion implanted ceramic, hardness, rel. to wear behaviour 7−71303
Al_2O_3, sintered alumina, fretting wear against alumina, C steel, glass and WC 7−71319
B_4C, surface layer struct. rel. wear and friction 20-1400 °C 7−106636
C fibre reinforced Cu composite, reciprocating sliding wear rel. to fibre arrangements and elemental additives 7−78270
C fibre reinforced liq. cryst. polymer composite, sliding wear 7−78272
C films, hard, friction and wear behaviour 7−78249
a-C:H films, metal-containing, tribological and electrical props. 7−92861

wear continued
CaO-MgO-Al_2O_3-Fe_2O_3-Cr_2O_3-SiO_2 glass ceramics, mech. props. 7−86307
Co-Cr-W/steel surface alloys, laser processed, microstruct. and wear 7−119459
Co-Cr-W-C superalloy, cavitation erosion rel. to Ti implantation 7−119382
Cr electrodeposited films, surface modification by ion implantation 7−106689
Cr_3C_2-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7−93110
Cu alloys, wear resistance and struct. metastability, laser treatment influence, XPS obs. 7−93109
Cu based powder composites, tribotech. characts. in high-speed friction 7−78262
Cu coatings, sliding friction pairs, run-in ability, influence coating method and condition 7−71315
Cu, erosion rate rel. to grain size 7−132754
Cu ion beam irradiated, increased wear resistance, positron annihilation 7−142854
Cu, microhardness and wear resistance after ion beam bombardment 7−138832
Cu vapour evolution from cathode of diffuse vac. arc 7−69530
Cu-Al bronze, worn surfaces, triaxial normal residual stresses, X-ray diffr. 7−126257
Cu-Cd fibre brushes, electrochemically activated wear 7−126261
Cu-graphite materials for sliding elec. contacts, struct. and tribotech. characts., particle content and dimens. influence 7−119384
Fe, cast, austempered ductile, erosion behaviour of high Si bainitic structures 7−71321
Fe, cast, grey, friction surface hardening by scanning laser beam 7−132760
Fe, cast, grey, laser surface melting, cavitation erosion in distilled and salt water 7−132767
Fe, cast, grey, surface relief correl. with cavitation erosion periods 7−126255
Fe, cast, grey, with lamellar graphite, micromechanism of cavitation erosion 7−126256
Fe, cast, high-Cr, metal base effect on wear resist. 7−78258
Fe, cast, high-Mn austenitic, wear resist., hardness and toughness 7−78259
Fe, cast, sliding wear process in laser surface melted and as-cast forms 7−71320
Fe cast, surface laser quench hardening 7−106528
Fe, cast, white, wear-resistant, Cr and V effect on struct. and props. 7−126253
Fe, erosion rate rel. to grain size 7−132754
Fe, pure, sintered, unlubricated wear rel. to porosity 7−71325
Fe, pure, unlubricated wear, sliding conditions, SEM obs. 7−71326
Fe-CR-Mn-C, laser clad alloys, microstruct. and wear props. 7−78256
Fe-Cr-Mn-N, microstruct.-comp. relationships and M_s temps. 7−100263
Fe-Mn containing ε-martensite, friction and wear, struct. transformations *(Russian)* 7−77995
Fe-Si-Al-TiC, Sendust, precip. strengthening 7−132630
Fe-Si-Mn(Ni), high Si steel, erosion behaviour with austempering 7−71322
$Fe_{81}B_{13.5}Si_{3.5}C$ metallic glass, dry sliding wear 7−86372
$(FeNiCo)_{100-x}(SiB)_x$ amorphous alloys, adhesive wear and friction coeffs. comp. depend. meas. 7−91717
$Fe_{40}Ni_{40}P_{14}B_6$, Metglas 2826, creep, structural relax., wear, plastic flow model 7−86295
FeTaCoB amorphous alloys, mag. props., thermal stability, wear and corrosion resist. meas. 7−92466
$Fe_{50}Ti_{50}$, ion beam mixed surface alloy on stainless steel, N implantation, unlubricated friction and wear 7−126277
GaAs, solid particle erosion, strength evaluation, statistical method 7−113730
In, cavitation erosion 7−71323
Li-Ti-Cu, composites, sputtering and redistribution behaviour in tokamak environment 7−135563
LiF single cryst., friction and wear, microhardness, creep, temp. depend. 7−131230
$Mn_{1-x}Zn_xFe_2O_4$ magnetic heads, single cryst. wear resist. anisotropy rel. to surface brittleness anisotropy 7−78263
Mo contact coatings, deposited from vacuum arc discharge plasma, cryst. struct. and mech. erosion 7−86060
MoS_2-WS_2-Cu-Ta, elevated temperature effect on friction and wear *(Japanese)* 7−119375
NaCl crystals, impact attrition study 7−91708
Ni, electroless deposits, wear resist. rel. to heat treatment *(Japanese)* 7−78254
Ni-B amorphous coating, physicomech. and tribotech. characts. 7−100446
Ni-based, Co-free hard-facing alloys for nuclear appls., lab. evals. 7−96187
Ni-Mo-Cr-B rapidly solidified alloys, wear and corrosion resist and mech. props., microstruct. effects 7−91719
Ni-Si-B amorphous and crystallised alloys, wear behaviour study, embrittlement and ductility 7−91718
Ni-TiB_2 coatings, sputtered, erosion resist. rel. to comp. and process parameters 7−132764
NiTi, wear resistance following light interstitial implantation 7−126254
Pb-Sn coatings, ion-plated, friction and wear behaviour 7−119377
Pd-Ni, plated, tribological props., roughness, hardness *(German)* 7−138855
Si single cryst. wafers, cut surface morphology, environmental fluids and temp. effects 7−105202
Si, solid particle erosion, strength evaluation, statistical method 7−113730
SiC ceramics, wear behaviour in sliding contact 7−126265
SiC ceramics in Ar plasma jet, ablation study 7−138866
SiC coated graphite limiter in Alcator C, redeposition of plasma eroded material 7−103175
SiC, dry friction behaviour *(French)* 7−71304
SiC fibre reinforced Al_2O_3 ceramic composites, erosion rel. to abradent particle size and vel. 7−78252
SiC, friction and wear in water, hydrodynamic lubrication at low sliding speeds 7−78246
SiN_x, ion beam enhanced electron beam deposition, wear props. 7−113395
Si_3N_4 ceramics, ion beam modified, friction and wear 7−119381
Si_3N_4 ceramics in Ar plasma jet, ablation study 7−138866
wear continued
Si_3N_4, friction and wear in water, hydrodynamic lubrication at low sliding speeds 7−78246
Si_3N_4, gas-press. sintered, solid particle erosive wear rel. to props. *(Japanese)* 7−71327
Si_3N_4, hot-pressed, solid particle erosion, rel. to α- and β-phase content 7−138854
Si_3N_4-based cutting tools, hot-pressed, performance 7−78251
SiO_2, beadblasted fused silica, surface damage evolution and optical performance 7−71318
Ti alloys, erosion by solid particles, laser meas. 7−106625
Ti alloys, ion implantation, medical appl. 7−104788
Ti alloys, ion implantation, wear, fatigue and oxidation resist., biomaterial appls. 7−138902
Ti carbides, carbonitrides and carboborides, cast, gas abrasive wear resist. 7−100395
Ti, erosion rate rel. to grain size 7−132754
Ti, surface layer modification, large current N^+ ion implantation machine *(Japanese)* 7−126316
Ti-Al-V (6,4 wt.%), ion implantation, tribological props. 7−119380
Ti-Al-V/polyethylene tribological couple, wear behaviour, effect of metal surface prep. and N implantation 7−79139
TiC, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
TiC deposited graphite, erosion yield of Ti by H in bombardment at high temps. 7−77729
TiC-steel-Ni powder hard alloy wear mechanism with low abrasive particle velocity 7−93110
TiN, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
TiN treated Al-Si alloy, by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
TiN_x, ion beam enhanced electron beam deposition, wear props. 7−113395
$TiSi_2$:C-Si interface, C implantation to stabilise $TiSi_2$ during thermal annealing 7−83990
VBe_{12}, sputtering and redistribution behaviour in tokamak environment 7−135563
WC, N ion implantation, rel. to wear reduction 7−142853
WC-Co, cavitation erosion rel. to Ti implantation 7−119382
WC-Co, VK-8 hard alloy, surface struct. changes in pulsed laser treatment zone 7−86412
WC-Co cermets, slurry erosion, comp. and microstruct. depend. 7−78273
WC-Ni/Fe-Cr-C, infiltrated alloys, wear resist. 7−132555
Zn-Al-Cu(-Si), mech. props., lubricated wear rel. to ageing 7−132766
Zn-Al-Si(Cu), wear resist., microstruct,, heat treatment 7−138850
ZrO_2 ceramics, ion beam modified, friction and wear 7−119381
ZrO_2, MgO partially stabilised wear resist. anomaly 7−78248
ZrO_2, porous ceramic, plasma sprayed, particulate erosion, mech. props., struct. 7−78269

wear, abrasive *see abrasion*

wear resistant coatings
aluminide coatings on austenitic stainless steel, wear and corrosion resistance in liq. Na *(French)* 7−86476
antifriction coatings for friction assemblies operating under conditions of intense thermal action 7−71314
carbide coatings, abrasion resist., prep. method 7−119439
ceramic film deposition by high-power CO_2 laser beam *(Japanese)* 7−119151
chrome coatings on steel, composition and chemical binding, XPS studies 7−126297
detonation gun spraying, review 7−144270
energy producing systems appl. review 7−86387
epoxy-furan resin modified with thermoplastic polymers, coatings, antifriction and adhesive props. 7−71316
flame sprayed coatings on P/M materials, developments 7−119437
hardness assessment 7−119481
hardness properties, expt. study 7−86371
hardness properties, model 7−86370
ion-plated metallic coatings on Ti-Al-V, suitability at fretting fatigue loads *(German)* 7−126326
metal faced using differing hardening principles, wear resist. subject to impact-abrasive action 7−100447
metallic multilayer films, mechanical property modification by ion-beam mixing 7−106693
models, ion implantation and ion assisted coating 7−71391
optical fibre coating evaluations for composite embedment appls. 7−136593
optical fibre strength and fatigue props., coating adhesion effects 7−136594
organosilsesquioxane use as coating/cladding for silica optical fibres 7−136595
polyethylene coatings, electron beam treatment, struct., friction and wear props. 7−71310
polymer-coated optical fibres, mechanical reliability considerations 7−142027
polytrifluorochloroethylene, coatings, electron beam treatment, struct., friction and wear props. 7−71310
powder coatings, wear resistance rel. to electrocontact bonding temp. 7−71309
rough surfaces contacting through a polymer layer 7−71306
steel, C, $TiCrB_2$ coating, diffusion interaction under glow discharge, adhesion, microhardness, wear resist. 7−106701
steel, hard facing, thermal sprayed powder coatings, adhesion, hardness, wear resist. 7−106702
steel, mild, laser treated hardfaced coatings, cavitation wear resist. 7−138851
steel, surface electrospark alloyed, wear resist. in abrasive medium 7−93161
steel, tool, W surface alloying by laser, Co addition effect, hardness, microstruct. *(Korean)* 7−138889
steel low alloy, wear resist. coatings assessment 7−78271
stellite coatings on austenitic stainless steel, laser remelting and appl. 7−93188
Al_2O_3, amorphous, RF sputtered, struct. and tribological behaviour *(German)* 7−93136
BN, ion plated, XPS anal. 7−106377
Co-W, coatings, N ion implantation, wear resist. 7−144563
Cr, hard coatings, N ion implantation, wear resist. 7−144563

wear resistant coatings continued
Cr-Si oxide insulating wear protecting layer manufacture by reactive DC sputtering *(German)* 7−144277
Cr_3C_2-based composite coatings, self-lubricating, comp. optimisation for use up to 760°C 7−78247
CrN coatings, prod. by high rate sputter deposition, props. 7−119143
Cr_2O_3 hard coatings on Al or steel substrates 7−126301
Cu sliding friction pairs, run-in ability, influence coating method and condition 7−71315
Fe, cast, nodular, surface alloyed with WC, microstruct. and prope. 7−119445
FeB and Fe_2B coatings on Ti alloys, improved wear resist. 7−78347
Mo, plate, siliconising, $MoSi_2$ layer deposition, corrosion and abrasion resist. 7−78320
Mo_4C electrodeposition on diamond surfaces from ionic melts 7−78296
Ni based hard surfacing alloys, underwater plasma spraying, microstruct., mech. props. 7−77798
Ni, electroless deposits, wear resist. rel. to heat treatment *(Japanese)* 7−78254
Ni/graphite composite coatings, electroless deposition, friction and wear characts. 7−144318
Ni-B amorphous coating, physicomech. and tribotech. characts. 7−100446
Ni-Mo hardenable electrodeposits, X-ray anal. of structural props. 7−131497
Ni-TiB_2 coatings, sputtered, erosion resist. rel. to comp. and process parameters 7−132764
Ni-W hardenable electrodeposits, X-ray anal. of structural props. 7−131497
NiTi coating on Ti, wear resist. 7−132761
PTFE coatings, electron beam treatment, struct., friction and wear props. 7−71310
Pd on stainless steel, appl. in weak current sliding contacts 7−71313
Pt on stainless steel, appl. in weak current sliding contacts 7−71313
(Ti, Al)N coatings, prod. by high rate sputter deposition, props. 7−119143
TiC CVD coatings on steel, effect of Cr in substrate 7−113412
TiC coatings, CVD on tool steel substrates 7−113419
TiC layers, CVD on Fe-C substrates, development and partial relax., of internal stresses 7−113773
Ti_xC layers, CVD on TiC-Ni hardmetals 7−132485
TiH_x, He implanted, N_2 pre-implantation effect 7−137385
TiN and TiC ion plating films on die tool steel, friction and wear *(Japanese)* 7−119376
TiN coated stainless steel, cavitation erosion resist. *(Japanese)* 7−100391
TiN coatings, surface struct. changes during diamond burnishing 7−86414
TiN layers, PVD, metallography, SEM obs. *(German, English)* 7−132447
TiN treated Al-Si alloy, by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
TiO_2 coating on Ti, wear resist. 7−132761
WC-Co hard coatings on Al or steel substrates 7−126301
WC-Co layer on steel, surface alloying by Co_2 laser *(Korean)* 7−138888

wear testing
abrasive materials at high sliding speeds, use of elastoabrasive cloth 7−132861
antifriction powder materials, tribotechnical props. determ., standard method 7−106732
cavitation resistance, rot. disc apparatus design 7−78425
ceramic finger followers in overhead camshaft systems 7−86506
ceramics, friction and wear test rig for high temperatures up to 1000°C *(German)* 7−138919
cylinders, fretting fatigue test mechs. 7−117528
dental polishing of teeth, erosion meas. using SEM stereoscopic technique 7−80944
dental restoration wear meas., difference moire contour-mapping system 7−101043
diffusion layers on steels, tribotechnical characts. and tests 7−132756
glass-ceramic, Silceram, wear resist., erosion testing 7−144655
hard facings, abrasive wear resist. under sliding impact conditions, test machine 7−78435
hydrocyclone apparatus for investigation of hydrobrasive wear 7−73338
metal faced using differing hardening principles, wear resist. subject to impact-abrasive action 7−100447
plastic lens coatings evaluation by abrasion tester 7−90750
plastic ophthalmic lenses, coating evaluation 7−90751
plastic ophthalmic lenses, vacuum coated, abrasion testing 7−90752
polymers, friction and wear tests, filler effects 7−113835
rotary pin-on-disk device in scanning Auger microscope 7−83143
spectacle lens, scratch diamond test 7−90740
steel, sliding and rolling wear, high temp. test rig 7−113836
Al alloys, adhesive wear, metallography 7−78411

weather *see meteorology*

weather forecasting
3D multivariate statistical objective analysis scheme 7−101437
5-day forecasts of general circulation, by global and hemispheric model 7−139675
72 hour global scale NMC forecasts, skill var. 7−87860
ALPEX low-level flow predictability 7−87815
artificial satellites for weather forecasting and analysis *(Spanish)* 7−101540
Australia, bushfires prediction and correl. with meteorological parameters 7−139669
Australia-New Zealand region, GCM study of 1982 June blocking episode 7−133815
British Isles, appl. of Satellite imagery to nowcasting and very short range forecasting 7−114951
Canadian Atlantic Storms Program, meteorological field project 7−115015
cloud base height forecasting, for lead times of up to one hour 7−107483
NE Colorado, USA, snowstorms, orographic effects 7−127393
Cray supercomputer appl. *(French)* 7−120093
cyclones and anticyclones over E Asia and W Pacific surface forecast comparisons 7−101435
departure point position in two-time level semi-Lagrangian and semi-implicit scheme 7−127424
differential absorption lidar (DIAL) measurements, mathematical limits to accuracy set by resolution limits 7−115006
dynamical long-range forecasts skill 7−101423
ECMWF data assimilation system, 1984/85 revisions 7−127441
El Nino time, surface temperature forecast model *(Chinese)* 7−87747

weather forecasting continued
entropy coordinates use 7−101461
equatorial regions, spectral anal. for climatic/weather variation predictions 7−87952
global average temperature oscillations in numerical weather forecasts 7−101433
global finite difference model *(Chinese)* 7−72138
hurricane data collection by amateur radio 7−139780
Hurricane Elena (1985), tracking and forecasting with global anal.-forecasting system 7−107467
India, summer monsoon rainfall empirical prediction 7−127421
Indian monsoon rainfall AD 1958 to 1985, rel. to tropical quasi-biennial oscill. 7−139682
information system of weather forecasts *(Japanese)* 7−120147
isolated vortex motion, forecast model 7−120098
isolated vortex movement prediction in barotropic model of atmosphere, appl. of nested grid scheme 7−133856
Java monsoon rainfall anomalies rel. to Darwin pressure, predictability 7−133832
JFLM surface forecasts for cyclones and anticyclones over E Asia and W Pacific 7−101435
Jiangsu Province, China, short-range rainfall forecasting during Meiyu period *(Chinese)* 7−133805
Kazakhstan, USSR, long-range prediction of hazardous weather phenomena 7−120094
long-range forecasting appls. of Meteorological Office Historical Sea Surface Temperature Data Set 7−133756
long-range seasonal prediction, using probability wave *(Chinese)* 7−133804
METEOR: an artificial intelligence system for convective storm forecasting 7−115073
Moscow, USSR, short-range probability forecasting of temp. and rain 7−127406
National Weather Service monthly temp. outlooks, decision making model 7−133837
NOGAPS surface forecasts for cyclones and anticyclones over E Asia and W Pacific 7−101435
numerical prediction, status and recent developments 7−120102
numerical prediction model support *(Japanese)* 7−107476
numerical weather prediction, parametrization of land-surface radiative and turbulent processes 7−133864
numerical weather prediction models, integrations over tropics during FGGE 7−94404
observational requirements in remote sensing 7−107568
one-month forecast experiments−without anomaly boundary forcings 7−87847
persistent anomalies, dynamics and statistics 7−127386
polar lows, conference, Sundvolden, Oslo, Norway (May 1986) 7−140371
precipitation forecasting, comparison of vertical air movements calculated by two methods *(Swedish)* 7−139709
predictability expts. using a high-resolution limited-area model 7−114964
predictability on attractors 7−127378
quasi-stable weather and circulation states at mid-latitude 7−87875
Robert's recursive freq. filter 7−127397
Sahelian rainfall, prediction from sea surface temps. in Gulf of Guinea 7−79559
satellite remote sensing appl. *(Dutch)* 7−133906
satellite remote sensing for mesoscale and cyclone events 7−115022
scenario-driven automatic pattern recognition in nowcasting 7−114866
sea fog, book 7−115707
sea level and water circulation forecasting, appl. of real-time data systems 7−94298
semi-Lagrangian advection on a Gaussian grid, and use in numerical weather prediction 7−114970
short-range forecast local model using GRID reports 7−114982
short-range numerical forecasting using actual wind data 7−127407
short-term forecasting, implications of Meteosat and radar rainfall imagery interpretation 7−79524
skill of numerical forecasts 7−114953
solar activity increase in 21st century, and terrestrial consequences 7−115357
statistical corrections of numerical predictions 7−87848
statistical predictability of climate time series, autoregression-sliding mean models 7−115000
statistical tropical cyclone forecasting techniques for Southern Hemisphere 7−145639
stochastic dynamic method for weather prediction 7−127434
storm wave heights prediction, research and appls. involving directional wave spectra 7−94299
storms, expert system knowledge representation 7−127344
surface anticyclone forecast errors using NMC models 7−87844
television receiver for satellite weather pictures, amateur meteorology equipment 7−107546
temperature maxima and minima forecasting, physical regression model 7−79484
tornado hazard model for USA 7−94369
torrential rain area prediction method *(Chinese)* 7−87751
tropical cyclone motion prediction 7−87851
tropical cyclone tracks in N Pacific, technique for present location 7−127426
tropical cyclones during 1986, verification of global model forecasts 7−127413
tropical limited area multi-level primitive eqn. model *(Chinese)* 7−87743
turbulence and solar energy, effect on climate *(Italian)* 7−139743
typhoon track forecast expert system, using reasoning based on dynamic knowledge 7−127621
unusual weather diagnosis and press. characts. *(Japanese)* 7−114924
variational four-dimensional analysis using quasi-geostrophic constraints 7−145640
vortex-type heavy rain weather systems, theory *(Chinese)* 7−87755
wind velocity fluctuations, prediction from upstream data 7−104361
Yangtze Valley, China, heavy rain forecast using numerical diagnostic analysis 7−127415

webs (membranes) *see membranes*

weighers *see balances*

weighing
calcium alginate fibres, blood coagulation and dispersal *(Russian)* 7−100633
mass comparator, kilogram prototype, automatic reading system *(Korean)* 7−80745

weighing continued
micro weighing machine for addition of additives to mixtures *(Japanese)* 7−95550
microcircuits appl. for special use in scales equipment *(Russian)* 7−80747
optical interference force sensors and weighing systems, coupled by beam waveguide *(German)* 7−121102
polyethylene terephthalate films, direct fluorination 7−93377
scales-measurement instruments *(Russian)* 7−80748
sheet materials, basis weight and moisture content, microwave cavity measurements 7−121134
weights for balancing serially produced metallic objects *(Russian)* 7−80746
UF_6 cylinder mass verifications, 20 ton capacity load cell based weighing system 7−109426
weighing machines *see balances*
weight, atomic *see atomic mass*
weight, molecular *see molecular weight*
weight indicators *see balances*
weight measurement *see weighing*
weightlessness experiments *see zero gravity experiments*
Weinberg model
Coleman-Weinberg model, higher-order corrections and daisy expansion 7−73578
CVC prediction comparisons with ^{20}F beta-spectrum meas., low-energy electroweak model test 7−129001
Dirac neutrinos, massive, EM structure 7−67535
foundations and problems 7−73585
gauge theories and symmetries, introduction 7−95817
Glashow-Weinberg-Salam model, variational approach 7−102649
lepton in magnetic field, Z^0 contributions, Weinberg model calcs. 7−135129
multidimensional free gauge theories, Weinberg angle predictions 7−102630
O(5)×U(1) electroweak gauge theory, relation between Cabibbo and Weinberg angles 7−121413
scale fields as a simplicity principle, Weinberg-Salam as first-order approx. 7−140790
spinor connection in Weinberg-Salam model, Higgs mass prediction 7−121404
SU(2)×U(1)×U(1)′, general anomaly-free gauge-invariant model, Higgs structs. 7−128821
symmetry breaking with superheavy Higgs particles 7−81065
technicolor with composite gauge bosons, quantum model 7−95864
vector bosons, ρ-parameters, two-loop corrections due to heavy fermion doublet 7−67542
$e^+e^-\rightarrow W^+W^-$, cross section calcs., $E_8\times E_8$ superstring theory with extra Z boson 7−108927
$K^+\rightarrow\pi^+\pi^0\gamma$, six-quark Kobayashi-Maskawa model of CP violation 7−135110
ν high energy scattering for Weinberg angle determ. 7−102669
$\nu e(\bar{\nu}e)$ scattering, neutral current electroweak couplings including radiative corrections 7−128878
$t\bar{t}$ bound state, spectroscopy, decay modes and quark struct. determ. 7−128840
(γ,e^+e^-), coherent production in nuclear electroweak field, P violating asymmetry 7−102859
W-boson condensation induced by fermion density at finite temp., Weinberg-Salam model anal. 7−134991
Weissenberg cameras *see cameras; X-ray crystallography apparatus*
welding
see also electric welding; electron beam welding; laser beam welding; lead bonding; ultrasonic welding
Alloy 718, FBR structural material, fast neutron irrad., fracture toughness 7−86328
CANDU fuel, rating of element closure welds 7−96198
cracks at weld toes, applicability of K_I solns. 7−75413
defects, X-ray inspection, automatic image analysis 7−71434
dissimilar metals, book 7−108056
dynamic welding deformation meas. by CW holographic interferometry 7−108653
flaw position, shape and dimensions, nondestructive radiometric scanning technique *(German)* 7−138945
internal stresses, meas. by ϵ-field anal. and US method *(German)* 7−100498
joint, residual stress distrib. meas. 7−93231
joint structural crack resistance coeff. for cyclic loading 7−144552
joint with thin yielding inclusion, strength evaluation 7−98300
joints, fatigue life prediction, re-assessment 7−113654
joints, welded, magnetographic inspection, magnetising device and mag. tape selection 7−132889
joints with weld defects, finite radius concentrator, critical opening from stress-strain curve 7−97449
metal, weld zone residual stresses relaxation in field of elastic vibrs. 7−126164
metal/ceramic layered composites, stress states, struct., Vickers hardness obs. *(German, English)* 7−132747
multimode quartz light guides welding technology 7−104026
NDT of welded constructions, conf., London, England (Nov. 1984) 7−95097
nondestructive testing of welds using the 3MA-analyzer 7−126383
nuclear fuel waste disposal container, welding and inspection 7−89770
nuclear materials testing and safety, conf., Stuttgart, Germany (Oct. 1986) 7−120695
plate, finite internally cracked, stiffened problems solution using complex potentials and generalized variational method 7−110838
polypropylene, negative birefringence spherulites, melt memory obs. 7−71212
power plant equipment welded joint physical props., production technology develop. *(Russian)* 7−93048
pressure vessel, multilaminate, design innovation and strength 7−126131
repair and reclamation, conf., London, England (Sept. 1984) 7−108041
steel, alloy, welded, cleavage fracture, mechanism and statistical criterion *(Chinese)* 7−144508
steel, austenitic, corrosion behaviour of welding joint in 20% sulphuric acid *(Chinese)* 7−86420
steel, austenitic, welded joint stress relaxation effects on local breakdown susceptibility 7−138777
steel, austenitic stainless, pipe, weld heat affected zone, low temp. sensitisation 7−138893
welding continued
steel, austenitic stainless, weld metal, primary austenite solidified, microsegregation and ferrite to austenite transform. 7−144407
steel, austenitic stainless, welded joints, residual stress level and props., influence of heat treatment 7−86225
steel, austenitic stainless, welded parts, corrosion rate meas. using electrochem. methods *(Korean)* 7−126299
steel, austenitic stainless 7−86397
steel, austenitic welded joints, US inspection, geometry and manufacture effects 7−93241
steel, C-Mn, weld metal, failure micromechanisms 7−113645
steel, Cr-Mo, weldment, heat affected zone, H attack behaviour 7−144613
steel, Cr-Mo-V, welded joints, creep damage, cracks and cavitation 7−93073
steel, Cr-Mo-V, weldments, creep rupture life and ductility 7−93074
steel, Cr-Ni-Mn-Mo, heating and cooling, transform. behaviour *(Serbian)* 7−71173
steel, HSLA, combined TEM and opt. metallographic study of microstruct. after welding 7−86516
steel, HSLA, fracture toughness of welded joints, effect of welding process and heat input 7−113690
steel, low-alloy, welded joints, supporting capacity in low endurance region 7−100368
steel, medium-C constructional, US treatment effect on long-term strength of welded joints 7−113711
steel, mild, weld joints, corrosion cracking in H_2S media 7−144599
steel, Mn-Mo-Ni, welded joints, fracture mechanics props., comparison with wide plate failure behaviour 7−126230
steel, Ni-Cr-Mo, high strength weldment, corrosion fatigue crack initiation in sea water *(Japanese)* 7−93180
steel, PWR weld metal with inserted defects, acoustic emission meas. 7−71456
steel, Si-Mn, phase changes during inter-critical normalising and welding 7−106536
steel, stainless, Cr-Ni type, with 4% Si, development for highly oxidising conditions 7−93182
steel, stainless, semi-austenitic fatigue and fracture toughness props. 7−144555
steel, stainless, type 316, NDT performance of defective butt welds 7−126392
steel, stainless, weld filler metal, rapidly quenched, implications for rapid solidification processes 7−92989
steel, structural, cold-formed, mech. props., effect of welding 7−132748
steel, weld joints, US echo signal amplitude, influence of dimens. of ang. reflector 7−132881
steel, welded joint strength in mech. and thermal cyclic loading, stress concentrators effect 7−113716
steel plate for offshore structures, thermomech. processing of Cu bearing age hardenable materials *(Japanese)* 7−144446
steel structure and welded joint reliability, neutron damage assessment *(Hungarian)* 7−122004
steel weldments, high strength HY80, notch toughness props. 7−132703
steel with Nr-Cr alloy cladding, cyclic strength in chem. preservative medium 7−100436
surface engineering, conf., Brighton, England (June 85) 7−72724
ultrasonic plastic welding, acoustic load resistance meas. *(Japanese)* 7−142143
Al-Zn-Mg plates, weld toe cracking, stress field effect 7−78233
Al_2O_3 fibre reinforced Al-Mg-Si, weldability, interface struct., tensile strength 7−113854
Cr-Ni alloy, weldability and joint corrosion resistance expts. 7−86397
Fe, cast, book 7−88750
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous ribbon/steel system, impact weldability domain 7−113851
Nb welded joint structure and impact strength rel. to welding speed and power 7−138811
Ni/Ni_3Al joints, high press. welding, precip., phase charact. *(French)* 7−84543
Ni-Cr-Co-Mo high-temp. alloy, creep rupture behaviour of weldments, local deform. behaviour *(German)* 7−100387
Si solar cell contact/interconnector system Intercontact 7−144842
Si solar cell welding process temp. meas. and finite-element simulation 7−144846
Si solar cell welds, Ag foil interconnector low-cycle fatigue tests 7−144845
Ti alloy weld joints, stress-strain state stability during ageing 7−126154
welding electrodes
metal brittle fracture rel. to basic-coated electrode usage 7−138810
welding equipment
Si spacecraft solar cell US welding equipment 7−144843
Wentzel-Kramers-Brillouin calculations *see WKB calculations*
Wertheim effect *see Wiedemann effect*
wetting
adaptive finite element method for steady and transient problems 7−123611
ANNNI model, 2 D, domain growth, wetting transition effects 7−108448
aqueous wetting films on quartz, transition region with adjacent meniscus 7−105184
attractive planar wall wetting by liquid at liquid-gas coexistence, wetting transitions 7−124639
binary liquid mixtures on chemically altered substrates 7−137664
Blume-Capel model, layering transitions at interface, mean-field theory, leading order diagrams. 7−128475
Blume-Capel model, wetting of interface between ordered phases 7−95489
cavitation, emergence number of incompressible fluid stationary flows, calc. method *(Russian)* 7−97584
contact angle equilibrium, influence of solid microdeformation 7−118198
contact angle hysteresis on random surfaces 7−76543
critical wetting in the presence of power-law surface fields 7−98627
dewetting, growth of dry regions from a film covering flat solid or fibre *(French)* 7−91929
dispersed systems, wetting microscopic techniques 7−112024
droplet spreading, analytical paradoxes, long-range forces study 7−131386
electrolyte solutions, meniscus-wetting film transition zone, on quartz surface 7−112020
feldspar melts with additives, wetting, viscosity, behaviour during heat treatment 7−98536
fluid confined between walls, solvation forces, phase equilibr. 7−104971

wetting continued
free liquid-gas interface, surface free energy for wetting transition 7−105193
gels, wetting, struct. and mech. props. effects 7−78553
generalised Sullivan model, dynamics approach 7−105194
Ginzburg criterion for 3D critical wetting 7−98628
grain boundary wetting, Z(N) model 7−83972
graphite, wetting by molten Al, Ni coating effect *(Japanese)* 7−76550
half-infinite Ising model, phase diagram, wetting transition 7−124638
n-hexane-n-perfluorohexane liq. crit. mixture, phase separation in porous medium, light scatt. study 7−76379
hydrophobic particles, surface energy characterisation method 7−112022
interface profile of spreading liquid 7−98624
interface science, microscopic approach, rel. to industrial design *(French)* 7−112010
Ising model on half-infinite lattice, wetting and layering transitions 7−70030
layer growth interfacial wetting dynamics near roughening transition 7−124637
liquid drop stability between parallel planes 7−130754
liquid phase sintering, agglomeration, capillary forced between spheres 7−71104
magnetic systems, wetting transitions 7−112009
marble/organic liquid film/water droplet system, contact angle interpret. 7−98625
metal droplets, atomised, solidification, nucleation catalysed by spherically-shaped oxide particles 7−119262
metal surfaces, liq. wetting, heat of adsorpt., lubrication 7−142904
methanol droplets, Leidenfrost boiling on hot surfaces 7−75262
microemulsions, simple microscopic model, three-component mixture, surface tension 7−139054
Monte Carlo simulation, growth of wetting layers 7−70035
oxide interfaces, stabilisation by defects and impurities 7−112105
partial, morphological stability analysis, macroscopic static theory 7−124634
person, umbrellaless, in rain, motion velocity effects 7−120740
polyethylene fibres, adhesion to epoxy resin, pull out test, surface treatment effect 7−144576
polyethylene films treated by corona discharge, wetting hysteresis *(French)* 7−117725
polymer solution, dry spreading 7−76552
polymer surface, wetting hysteresis, rel. to polar nature of substrate *(French)* 7−112012
porous grain, fractal-like, capillary condensation *(French)* 7−91921
porous media, immiscible fluid displacement, wettability influence models 7−111087
Potts model, wetting of interface between ordered phases 7−95489
prewetting transition in water-lutidine system, ellipsometry anal. *(French)* 7−84447
Saffman-Taylor instability with wetting fluids 7−83182
scaling functions for 3d critical wetting 7−105192
scaling regimes and functional renormalization for wetting transitions 7−137509
solid-fluid interfaces, mol. dynamics simulation of wetting and drying 7−118199
Sullivan model for wetting transitions 7−105195
surface, dynamics of spreading *(French)* 7−112011
surface reaction-diffusion process rel. to solid surface tension *(French)* 7−112015
symposium on statistical mechanics of phase transitions, Trebon, Czechoslovakia, (Sept. 1986) 7−120693
thin film growth mode models 7−137744
thin surface films, effect on van der Waals interaction 7−143135
transient flow in steam-generating channel 7−136972
van der Waals theory with exponential interactions 7−84450
water, meniscus-wetting film transition zone, on quartz surface 7−112020
water, superheated droplets on solid surfaces, wettability 7−111073
water-phenol mixtures, surface props. 7−70032
wetting and layering theory, lattice model 7−124642
Young relation, partial to complete wetting, microscopic derivation, SOS model, Gaussian models 7−124640
Ag (110), Xe adsorption on low and high work function metals 7−131419
Ag-Cu crystalline brazing alloys, rapidly quenched, C steel wettability obs. 7−106757
Al, liq., wettability of graphite, effect of alloying elements 7−98630
Al-Sn liquid, grain boundary wetting, inclusion size effects 7−91919
Al_2O_3, polycrystalline, penetration by liq. $CaO-Al_2O_3-SiO_2$ glass 7−131387
$B_2O_3-SiO_2$ glass surface, chem. control of wetting transition 7−98626
(Bi-Sn-Pb-Cd)-(Bi_2Te_3-Sb_2Te_3), wettability, adhesion energy and contact resistance 7−112008
C fibres, surface energy, microwave plasma treatment effect 7−84484
Cu-Ti-Al-Ni, adhesion active alloys, interaction with synthetic diamond 7−132903
$Cu_3Au(001)$, critical wetting and surface-induced continuous phase transition 7−70049
Fe, by liquid AgM alloys, M=Cu, Ni, Sn, Pb *(French)* 7−112014
^4He film wetting of Au-plated quartz-cryst. resonator 7−91914
$Ni_{55}B_{45}$, $Ni_{62}B_{38}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
Pd-Al_2O_3 interface, wetting and adhesion *(French)* 7−112106
$Pd_{72}B_{28}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
$Pt_{72}B_{28}$, eutectic liq.-alloys, wettability to polycrystalline graphite, impurity surface segregation 7−112019
Si ion implanted, surface defect state, contact angle and wetting meas. *(Russian)* 7−124647
SiC, pressureless sintered, brazing by Ag-Cu-Ti, wettability, bond strength, bend strength 7−113856
SiC wettability to Al and alloys 7−91925
Si_3N_4 joining with Al braze, pre-heat-treatment effects 7−86383
Si_3N_4, wettability by Al, Cu and Ag, work of adhesion 7−143132
Zn-Sn alloy, grain boundary wetting as function of Sn conc. 7−119254

whiskers (crystal)
growth, spontaneous breaking of chiral symmetry, giant screw dislocations 7−143303
kink site saturation mechanism for whisker growth under sputtering conditions 7−98760
metallic thin films, whisker growth during electromigration 7−118341
γ-Al_2O_3, growth morphology and struct. studies 7−124807

whiskers (crystal) continued
Al_2O_3 whiskers, growth by vapour phase reaction 7−84611
As_2Se_3 synthetic crysts., morphology and microstruct., TEM studies 7−69640
Fe imperfect whisker, pinning effect on domain struct. 7−132055
Fe whiskers, Neel regions in 180° Bloch walls 7−138267
Ge whisker crystals, relax. of stresses 7−112155
$K_2O.6TiO_2$ whisker reinforced Al, prep. and characteris., strength improvement 7−71113
MgH_2, electron beam induced decomposition 7−111676
PbTe:Tl whisker crystals, thermoelectric power, magnetoresistance 7−105600
SbSeBr, vapour growth of hollow needles and whiskers 7−76714
Si, crystal whiskers, growth kinetics, depend. on diameter 7−143300
SiC fibre reinforced Al-Cu matrix composites, mech, props., struct. *(Japanese)* 7−78112
β-SiC whiskers, CVD, propag. mechanism 7−98763
Sn electrodeposits, whisker growth inhibition for electronic appls. 7−144319
Sn whisker growth after low temp. implantation 7−76715
Sn-Pb solder, Cu_6Sn_5 whisker precipitates, mech. props. 7−119311
SnO_2, bent and straight whiskers morphology 7−124806
TiC whiskers, growth, struct., Ni effect 7−84610
W whisker growth and removal during heating in I vapour 7−98759
ZnS, struct. and twist, X-ray topography studies 7−143302
ZrO_2 whiskers, monoclinic, vapour phase growth *(Japanese)* 7−118340

whistlers
see also ionospheric electromagnetic wave propagation; magnetospheric electromagnetic wave propagation
Antarctic observations of summer whistlers *(Chinese)* 7−101631
doublet whistlers, rocket obs. in lower ionosphere, propag. characts. study *(Japanese)* 7−134072
duct capture of whistlers in magnetosphere, angular estimate 7−88030
Earth bow shock, nonlinear MHD waves generation by reflected H^+ 7−115183
excitation by artificially injected electron beam in ionosphere plasma *(Russian)* 7−72218
induced electron precipitation, seasonal, latitudinal and diurnal distribs. 7−94558
ionospheric duct exit points seen at Great Wall Station, Antarctica *(Chinese)* 7−115167
ionospheric upward propagation, calc. using full-wave method 7−115139
lightning discharges triggered by whistlers 7−114972
magnetospheric ducts, whistler wave propag. 7−142467
oblique mode waves guided along magnetospheric field lines 7−145775
plasma, ionisational self-ducting of whistlers 7−69361
propagation in axisymmetric magnetic tubes 7−115171
self-focusing, multifocus structures 7−141754
solar wind whistler mode and plasma-maser effects 7−115232
very low latitude man-made whistler observations 7−94541
whistler propagation from Hawaii to New Zealand, ray tracing study 7−94542

white dwarfs
3A 0729+103, intermediate polar, X-ray emission regions discovery, EXOSAT and visible obs. 7−72465
accreting white dwarfs, LTE model atmospheres rel. to soft X-ray-EUV spectra 7−94874
accreting white dwarfs, models for supernovae and cataclysmic variables 7−120393
accreting white dwarfs, two-temp. treatment for X-ray and UV radiation 7−88392
HQ and HV And, polar candidates, photometric meas. (1970 to 1986) 7−115469
FO Aqr (=H 2215−086), spin down of intermediate polar 7−115455
in binary systems, empirical core mass-radius relation for progenitor giant 7−140058
brown dwarf companions, negative KL photometric search 7−134230
cataclysmic binaries, effective temp. distrib. function 7−115397
cataclysmic binaries in SGP white dwarf survey 7−115400
cataclysmic binary stars, corona form. above white dwarfs 7−115432
cataclysmic binary stars, cyclical evolution through dwarf nova and classical nova stages 7−145978
cataclysmic variable stars, appl. of steady-state accretion disk model to EUV and far-UV obs. 7−115424
cataclysmic variable stars, short-period, photometry and spectroscopy 7−115460
cataclysmic variables, multifrequency obs. and theoretical developments, colloquium Bamberg (1986 June) 7−108009
cataclysmic variables, orbital period and mag. field distribs. rel. to evolution 7−115450
cataclysmic variables, possible role of white dwarf in dust grain form. 7−120431
CBS 78, second DBZ degenerate star with accreted Ca, optical spectrum and element abundances 7−88412
V803 Cen (AE 1), photometry and spectroscopy of interacting binary white dwarf 7−120461
ZZ Cet stars, convective blocking driving mechanism for pulsations 7−120394
Z Cha, dwarf nova, masses determ. rel. to evolutionary state 7−115448
Z Cha, dwarf nova, white dwarf spectrum identification from obs. during quiescence 7−88462
classical nova model, evolution through full accretion-outburst-accretion cycle 7−120429
α CMa B (Sirius B), effective temp., density, and gravit. redshift *(French)* 7−120392
BG CMi (=3A 0729+103), orbital period modulation of intermediate polar spectra 7−115454
TV Col (2A 0526−328), DQ Her type star, white dwarf rot. period from EXOSAT obs. 7−115427
collisions with massive main-sequence stars in dense galactic nuclei, hydrodynamic simulations 7−127847
cool He-rich white dwarfs, synthetic spectra for different metal abundances 7−88388
AM CVn, IUE evidence for hot wind in double degenerate system 7−107843
CW 1103+254, AM Her star, cyclotron line emitting region characts. and J-band polarisation 7−127949
CH Cyg, 1985-6 optical spectroscopy 7−107834
CH Cyg, spectral vars. during 1982 activity phase 7−107835

white dwarfs continued
CH Cyg, symbiotic star, accreting white dwarf model for X-ray emission 7−101789
CH Cyg, UV continuum, 1979-86 IUE obs. 7−107833
DA white dwarfs, lumin. function 7−88395
DB-type white dwarfs, UV and visual spectroscopy 7−145954
DBA white dwarf stars in Palomar-Green sample, spectroscopic survey 7−107823
deflagration and statistical props. of Type I supernovae 7−140122
AG Dra, Population II symbiotic star, rapidly accreting white dwarf model 7−115389
AG Dra, rapid mass accretion onto massive white dwarf 7−107837
AG Dra, satellite and ground-based obs. of quiescent energy distrib. 7−107839
AG Dra, symbiotic star, components nature 7−145959
AG Dra, X-ray and UV obs. during quiescence and outburst 7−107838
E1013−477, possible intermediate polar, photometric periods from I-band CCD obs. 7−80048
E1114+182, AM Her star, X-ray light curves from EXOSAT obs. 7−72508
E2003+225, AM Her star, new soft X-ray emission mode 7−120506
1E 1048.5+5421, new 114-minute AM Her binary, X-ray and optical obs. 7−115518
EF Eri, AM Her star, simultaneous five-colour (UBVRI) polarimetry 7−115506
EF Eri (2A 0311−277), AM Her star, mag. field strength in Hα emission line region 7−140153
EF Eri (2A 0311-227), AM Her star, Einstein obs. 7−127963
EXO 023432−5232.3, new 114-min. AM Her-type binary, X-ray and optical obs. 7−80028
explosions of white dwarfs, models for Type I supernova light curves 7−120467
Feige 24, hot white dwarf, EUV spectrum EXOSAT obs. 7−88414
GD 229, magnetic white dwarf, mag. field characts. and H lines obs. 7−72407
GD 257(=Gr 289), DA white dwarf star, spectrophotometry obs. 7−101774
H1504+65, hot compact star devoid of H and He, optical, IV and X-ray obs. 7−88408
H2252-035, intermediate polar, obs. of phase-dependent low-energy absorpt. and Fe line emission 7−115508
H 0139−68, X-ray and optical obs. of AM Her-type star 7−115514
H 0542−407, new DQ Her star, HEAO-1 obs. and optical identification 7−101958
AM Her, white dwarfs mag. axis-rot. axis angle determ. from X-ray flux orbital curves 7−88503
V533 Her (Nova 1963), orbital elements and masses determ. from spectroscopic obs. 7−72472
AM Her stars, effect of soft X-ray excess on deduced mass transfer rates 7−107905
AM Her stars, intensity and polarisation of mag. accretion columns with electron scatt. 7−115452
AM Her stars, models of optical-IR continuous spectrum 7−115509
AM Her stars, secondary orbital motion and evidence for low-mass white dwarfs 7−94956
AM Her stars (magnetic close binary stars), swinging mag. dipoles model 7−115451
AM Her-type stars, effects of inhomogeneous accretion columns 7−115511
AM Her-type stars, emission regions structure 7−115513
AM Her-type stars, time-resolved optical spectroscopy 7−115512
AM Her-type stars, Zeeman features from accretion column 7−115510
hot pulsating DB-type white dwarfs, temps. determ. from IUE obs. 7−88409
HS 1254+3430, magnetic DA white dwarf with distinct Hβ and Hα Zeeman triplets, spectroscopic and position obs. 7−140050
EX Hya, eclipsing dwarf nova, intermediate polar model from time-resolved spectrophotometry 7−120441
EX Hya, eclipsing intermediate polar, radial vels. and masses from time-resolved optical spectroscopy 7−140108
EX Hya, intermediate polar, white dwarf rot. rate decrease 7−115419
Hyades, search for companion late M-type dwarfs and brown dwarfs 7−140066
VW Hyi, dwarf nova, white dwarf rot. rel. to soft X-ray oscills. 7−134236
HZ 43, DA white dwarf, soft X-ray spectrum characts. 7−88396
interacting He star-white dwarf pairs, possible type I supernova precursors 7−120468
intermediate-mass stars in close binaries 7−101764
internal processes and Type Ia supernovae 7−107871
line formation in strongly magnetized stars, atomic data 7−115378
ST LMi (=CW 1103+254), polarimetry of AM Her system 7−115516
ST LMi (CW 1103+254), emission line behaviour in polar *(Russian)* 7−140178
low-luminosity white dwarfs, enhanced cooling rel. to G-dwarf problem and local dark matter 7−88406
luminosity function, implications for age of Galactic disk and Universe 7−120660
magnetic axis orientation determ. from X-ray flux orbital curves 7−88503
magnetic cataclysmic binary stars, evolution 7−115449
magnetic field evolution in white dwarfs, time-dependent MHD eqn. soln. 7−88391
magnetic field strength detection using H spectra anal. 7−141505
magnetic white dwarfs, model atm. and decay-induced Lorentz force 7−72466
mass distrib. depend. on initial chem comp. 7−145932
masses, effect of Balmer line pressure shifts on line profiles 7−101778
massive accretion disks, form. by collision with main-sequence stars in globular cluster cores 7−145939
massive white dwarfs in magnitude-limited sample of cataclysmic binaries 7−115395
merger events, contrib. to continuous and discrete gravit. wave spectra 7−101670
merging double white dwarfs, evolution and ultimate fate 7−88394
merging white dwarfs, off-centre ignition of nuclear burning 7−107822
metallic line spectra white dwarfs, atm. comp. determ., spectrophotometric anal. 7−79956
Nemesis, accretion, high-energy radiation implications for Earth 7−120286
nonmagnetic stars, abundance anomalies obs. 7−120382
nonradial oscillations of low-mass stars, influence of mag. field 7−120374

white dwarfs continued
Nova Vul 1984 No. 2, 'Ne nova', silicate grains condensation rel. to O-Ne-Mg white dwarf model 7−88439
novae, hot white dwarf remnant model for X-ray emission during outburst stage 7−115430
novae, variable mass transfer rate scenario for classical nova outbursts 7−120428
old white dwarfs, accretion-induced gravit. collapse to neutron stars 7−127857
opacities, relativistic free-free Gaunt factor of dense high-temp. stellar plasma 7−115228
RS Oph, recurrent nova, evidence for thermonuclear runaway on massive white dwarf 7−115425
CN Ori, Z Cam star, masses and radii from spectroscopic obs. 7−115447
origin, evolution of 3 $M_\odot$ initial mass star to white dwarf stage 7−88372
paraphoton-electron coupling strengths, astrophysical bounds from Sun and white dwarfs 7−127717
PB 0108+101, hot white dwarf, detect. of extremely faint surrounding emission nebula 7−107930
PG 1031+234, magnetic white dwarf, spectra photometry rel. to polarisation and mag. field struct. at >500 MGauss 7−88407
PG 1115+158 and 1351+489, extreme examples of compact pulsators 7−127860
PG 1346+082, exotic He variable, photometry and spectroscopy 7−101851
PG 2303+243, new pulsating DA-type white dwarf, photometric obs. 7−79955
Pleiades, search for companion late M-type dwarfs and brown dwarfs 7−140066
pulsation theory, stability anal. for white dwarfs with thick H or He surface layers 7−140055
rapidly rotating white dwarfs, lower bounds on masses 7−140059
recurrent novae, thermonuclear runaway model for outbursts of T Pyx and U Sco 7−115445
recurrent novae, thermonuclear runaway model for T Py and U Sco 7−115456
V1223 Sgr (4U 1849−31), intermediate polar, white dwarf spin-down rate from max. light times 7−140107
Sixth European Workshop, Rome, Italy, (June 1986) 7−115680
spin-up and mixing due to accretion, implications for novae 7−140085
structures, use of 3D self-consistent field method 7−101765
V471 Tau, white dwarf 9.25 minute pulsation and orbital phase depend. X-ray dips 7−88525
V471 Tau, white dwarf eclipsing binary, photometric study *(Turkish)* 7−115521
thermonuclear reaction rates in degenerate cores, effect of electron screening *(Russian)* 7−145820
tidal heating in close binary stellar systems 7−120460
4U 1820−30, in NGC 6624, form. by tidal capture and evolution to white dwarf-neutron star system 7−127970
4U 1915−05, X-ray burst source, mass and radius of optical companion star 7−94951
BE UMa, detached white dwarf-red dwarf binary with unique reprocessing spectrum, photometry and spectra 7−127966
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
UX UMa-type nova-like systems, continuum distribs. and line profiles 7−115403
viscosity of dense matter, electronic and ionic contribs. 7−120263
PU Vul (Nova 1979), symbiotic nova, evidence for red giant-white dwarf model 7−115444
WD 1910+047, white dwarf star (X-ray emitter), spectrophotometry obs. 7−101774
ZZ 7−94856
O-Ne-Mg, white dwarfs, freq. of occurrence in classical nova systems 7−88432
O-Ne-Mg white dwarfs in close binary systems, relation to classical nova outbursts 7−120427

white noise
$f^{-\beta}$ power spectrum and stable distrib. 7−95468
amorphous materials Gaussian to dispersive atomic transport transition 7−84357
authenticity analysis of spectrum-like experimental curves 7−80756
autocatalytic reacting system, white noise perturbed, transient props. 7−106782
Bernoulli-Euler beam, mean-square response to nonstationary random excitation 7−142299
double-well Duffing oscillator subject to random force, spectral distrib. 7−128437
external dichotomous noise, driving nonequilibrium transitions, stationary probability density, Stratonovich model 7−120947
hydromagnetic dynamo in random stream, mathematical theory *(Russian)* 7−102172
Kubo oscillator, numerical simulation algorithms for multiplicative noise 7−108404
light-growth response of double mutants of Phycomyces 7−107158
light-growth response of Phycomyces with Gaussian white-noise test stimuli 7−107156
light-growth response of single mutants of Phycomyces 7−107157
Malliavin's calculus, white noise approach 7−72778
motion-blurred image processing 7−96948
NMR, white noise nonlinear system anal. 7−102482
non-Gaussian stationary time series, spectrum separation method 7−121081
nonlinear parabolic stochastic differential eqns. with noise, stochastic quantisation 7−89116
nonlinear random vibration problems, generalisation of equivalent linearization method 7−134467
secondary electron emission, energy- and angle-selected, statistical analysis 7−80945
serial rank statistics, weak convergence, time series and Markov processes appl. *(French)* 7−108399
signal integration, microcomputer-controlled for signal-to-noise ratio improvement 7−80247
stochastic partial differential equation with multiplicative noise 7−120949
stochastically excited mechanical systems, identification by positional quantities meas. *(German)* 7−102317
temporal chemical systems, inversion, filtering theory 7−138957

wideband amplifiers
GaInAsP 1.5 μm broadband travelling-wave laser amplifier with high-saturation output power 7−68632
monophase lock-in, MOS capacitor interface states meas. by DLTS system appl. *(Korean)* 7−84741
wideband networks *see broadband networks*
Widmanstatten structure
metal surface layer, effect of structure and props. on fatigue resistance 7−86352
steel, duplex δ-ferrite-austenite, microstruct. change during superplastic deform. 7−100304
steel, ferrite form. obs., interface migration 7−132609
steel, subeutectoid, Widmanstatten ferrite substruct., effect on crack propag. *(Chinese)* 7−71266
Ti-Al-V (6,4 wt.%), Al ion irrad., rad-induced precip. 7−69776
Ti-Al-V solution-treated alloy, microstruct. charact. 7−138747
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7−100307
Wiedemann effect
No entries
Wiedemann-Franz law *see Lorenz number*
Wien effect
No entries
Wigner coefficients *see Clebsch-Gordan coefficients*
Wigner crystal
2D electron crystal, excitation of transverse sound 7−105233
^{4}He liq. surface, 2D Wigner cryst., ripplonic polaron DC magnetocond. calcs. 7−76518
cooperative ring exchange and the fractional quantum Hall effect 7−137961
electron gas, equilibrium two-particle Wigner distrib. fn. 7−92093
fractional valency donor-acceptor molecular crystals, ground state degeneracy and slip energies 7−105443
multiple quantum well systems, CDW states 7−137823
semiconductors, Wigner condensation, mag. field induced *(German)* 7−124891
structural transitions, interaction with elastic medium *(Russian)* 7−124432
ultrasmall quantum well boxes, electronic struct. calcs., multielectron effective mass Schrodinger eqn. 7−138033
He liquid, coupled plasmon-ripplon modes, Wigner crystal *(Japanese)* 7−98607
^{4}He liq., surface Wigner crystal, coupled plasmon-ripplon resonances and the Debye-Waller factor 7−84416
Wigner effect *see radiation effects*
Wigner lattice *see Wigner crystal*
Wilson cloud chambers *see cloud chambers*
wind
1979 summer monsoon, large-scale features 7−101409
1986 International Geoscience and Remote Sensing Symposium, conf., Zurich, Switzerland (1986 September) 7−95093
acoustic gravity wave packet influenced by wind variations *(Chinese)* 7−101365
N Adriatic Sea, bura effects on circulation 7−79424
N Adriatic Sea, wind-curl currents and bottom friction 7−87681
N Adriatic Sea, wind-induced vertical shearing 7−79425
Adriatic Sea shelf, sea dynamics and wind effects 7−139622
aerosol flows, remote laser Doppler diagnostics 7−145691
aerosol resuspension from sand surfaces by action of wind 7−145568
ageostrophic method, generalised numerical version testing 7−127330
ageostrophic wind and upper troposphere divergence 7−133872
Airborne Doppler lidar for wind meas., error evaluation 7−127573
pre-Alpine regions, nocturnal boundary layer struct. and wind *(German)* 7−79535
Alps region, boundary layer study and elevated heat source effects 7−87816
Alps-Pyrenees mountain complex influence on atmospheric flow 7−87824
annual maximum wind speed values derived from parent distrib. functions 7−94396
Antarctica, surface wind field over ice sheets 7−114973
Appalachian 1980 January 13-14 ice storm, United States, 24 hr numerical simulation 7−133869
Appalachian ice storm due to cold-air damming, synoptic and mesoscale aspects 7−114968
S Arabian Sea, wind profile modelling 7−101417
Arabian Sea-Bay of Bengal region monsoon boundary layer temp. and wind charcts. 7−101372
Arctic tropopause folds, jetstreams and frontal zones 7−114960
E Asia, low-level wind field analysis *(Chinese)* 7−87756
Askervein Hill Project: wind-tunnel simulations at three length scales 7−145573
Askervein Hill Project, South Uist, Scotland, 3D flows 7−127329
Askervein Hill project, wind over hill in Outer Hebrides, Scotland 7−107513
Athens, Greece, variability of horizontal mesoscale winds 7−79541
Athens, obs. of sea-breeze fronts near shoreline 7−101380
equatorial Atlantic Ocean, contrib. of wind forcing to basin oscills. during SEQUAL programme 7−114746
tropical Atlantic Ocean, contrib. of wind-forced Ekman drift current to ship drifts 7−114745
Equatorial Atlantic Ocean, effect of trade winds seasonal vars. on thermocline depth 7−114729
Atlantic Ocean, equatorial, seasonal response of sea surface to wind 7−87669
Atlantic Ocean, equatorial, surface dynamic height, wind forced model anal. 7−87671
Atlantic Ocean, equatorial Kelvin waves and wind stress 7−87670
equatorial Atlantic Ocean, in situ wind meas. and ocean response 7−114910
Equatorial Atlantic Ocean, surface wind stress rel. to sea surface dynamic height (1982 to 1984) 7−114730
equatorial Atlantic Ocean, surface wind stress rel. to vel. and temp. obs. during SEQUAL expt. 7−114744
tropical Atlantic Ocean, surface winds rel. to subsurface heat budget and thermal struct. 7−87659
S Atlantic Ocean-Brazil region, summer upper tropospheric cyclonic vortices origin 7−127394
Australia, bushfires prediction and correl. with meteorological parameters 7−139669
wind continued
Australia, NE region, inland trough modelling 7−139668
Baltic Sea, near-surface wind speed determ. from satellite microwave radiometry 7−79623
Baltic Sea, near-surface wind speed from Nimbus 7 SMMR obs. 7−114990
baroclinic instability and eddy heat transport parameterisation 7−127398
Beaufort wind strength scale, possible changes in observers' estimations, AD 1850 to 1980 period 7−145633
Bering Strait, sea ice movement forecasting and driving forces 7−101322
Black Sea, shelf short period internal waves excitation by wind var. *(Russian)* 7−79435
blocking of circulation and meteorological phenomena due to mountains 7−127410
Bora winds, Yugoslavia, numerical modelling 7−87826
boundary layer, testing of Simple Biosphere model using point micrometeorological and biophysical data 7−145630
boundary layer, wind-generated suspension of particulate matter from tailings disposal area 7−101378
boundary layer capping inversions, wind profiles 7−120068
boundary layer cold surge flow across coastline, dynamical adjustment theory 7−101392
boundary layer pollutant concentrations over complex terrain, wind effects 7−101369
boundary layer trajectory calcs., uncertainties due to low resolution of meteorological data 7−94362
boundary layer winds at Tsimlyansk, USSR, sodar observations *(Russian)* 7−127348
NE Brazil, intraseasonal vars. of rainfall and atmospheric energetics during 1979 rainy season 7−79560
Brecon Beacons, Wales, strong upslope winds under stable conditions (1986 06 27) 7−139728
Brush Creek Valley, CO, USA katabatic winds dynamics 7−114879
bura, effect on circulation in N Adriatic Sea 7−79424
California coast, marine boundary layer jet during CODE expt. 7−94378
N California coast area, gravity currents and summer wind reversals 7−94379
N California coast upwelling region, marine boundary layer during CODE 7−94377
California continental shelf and upper slope, AD 1981 and 1982 oceanic conditions 7−94257
S California shelf, subinertial currents, forcing mechanisms 7−72054
N Canada and Arctic, seasonal circulation monitored by CO_2 conc. variations 7−145570
Carpathians, model of SW airflow over the Carpathians *(Russian)* 7−94344
cloud motions determ. from stereo line scanner/scanning laser ranger 7−101558
Colorado wind profilers at 50, 405 and 915 GHz, altitude coverage 7−133972
compact automatic measuring system for meteorological parameters with one-board micro-computer *(Japanese)* 7−79680
complex terrain wind field, comparison of observations and simulation 7−94364
continental shelf wind-driven currents, stochastic model 7−87665
continuous wave Doppler lidar meas. of wind magnitude and direction 7−127520
convective boundary layer, dispersion models, wind and thermodynamic parameters for input 7−87789
Czechoslovakia, severe winds of 23-24 November 1984, observations 7−127450
deep convective storms, vertical vels., multiple-Doppler radar meas. accuracy 7−114871
deep-layer mean winds, dynamical method for building continuity in 7−134014
density current motion including effects of condensation, numerical model 7−101390
Dischma valley, Switzerland, humidity and wind *(German)* 7−79532
Doppler radar and lidar meas. 7−107565
Doppler sodars meas., comparison with in-situ meas. 7−133964
downburst from weak thunderstorm in Australia, meteorological tower obs. 7−127431
downdraughts within High Plains cumulonimbi, general kinematic structure 7−133824
drag coeff. obs. over open ocean, dissipation technique 7−127225
drag coeff. variability over sea in near-shore zone *(German)* 7−139730
dust capture from grass-covered surface 7−133862
Earth rotation vars. due to atmospheric motion, appl. of ang. momentum and torque methods *(Japanese)* 7−139428
energy anal. to supply power to observatory in Korek site 7−144784
energy exchange across air-sea interface, effect of wind speed var. 7−79456
energy resources estimation methodology, appl. to eastern and central spain 7−78596
English Channel, change of either wind climate or Beaufort scale estimations 7−145633
equatorial atmosphere, wind model rel. to ray paths of gravity waves 7−127343
equatorial electrojet, currents and fields, changes due to zonal and meridional winds 7−94546
equatorial spread-F onset, wind, elec. fields, electron densities at onset time 7−107623
erosion of soil in arid region (Nile Valley) 7−107415
extended coastal frontogenesis, USA East Coast case study 7−101429
extreme velocity, during rainfall, meas. in Japan 7−107478
Finkenbach valley, West Germany, effect of deforestation on nocturnal drainage flow and local climate 7−101377
S Florida, heavy rain embedded microburst, assoc. features 7−145638
flow patterns in troposphere over India during 1979 summer monsoon, diurnal var. 7−114941
foehn effect on cold fronts near Alps 7−145580
forest canopy, winds near clearing 7−101368
friction velocity scaling in wind wave generation 7−101370
Froude number for dividing-streamline height prediction 7−133834
geostrophic drag coeff. and Rossby similarity functions A and B over sea 7−127328
Germany, boundary layer wind shear, correl. with temp charcts. 7−87786
global surface wind and flux fields from model assimilation of Seasat data 7−127387
global tropical divergent wind fields in summer *(Chinese)* 7−133806

wind continued
Grand Mesa, Colorado, USA, wind and winter supercooled liquid water flux 7−133850
E Greenland Sea, effect of observed ice conditions on drag coeff. in summer marginal ice zone 7−133710
Greenland Sea, effect of storm on dynamics and thermodynamics of ice-upper ocean system 7−133715
Greenland Sea, mesoscale var. in surface stress, heat fluxes and drag coeffs. in marginal ice zone 7−133708
E Greenland Sea, wind speed depend. of aerosol size distribs. in marginal ice zone 7−133841
Greenland Sea, wind stress meas. over rough ice during 1984 Marginal Ice Zone Experiment 7−133709
Guatemalan wind potential analysis and discussion 7−126538
Gulf of Alaska, coastal winds and atmos. forcing of sea 7−107474
Gulf of Alaska, current meas. along shelf break wind effects 7−72072
Gulf of California, effect of wind speed on sea surface temp. meas. by remote and direct sensing 7−127236
E Gulf of Mexico, atm. heat fluxes surface distrib., effects of surface wind and Loop Current position 7−127275
Gulf Stream surface currents influenced by hurricanes, 3D model 7−127277
Gullmaren fjord, under ice cover response to wind and Baltic Sea outflow 7−120030
gust characts. of boundary layer winds, statistical study 7−107463
gust front characteristics as detected by Doppler radar 7−145700
gust fronts, automatic detect-by radar 7−127575
Haryana State, India, soil erosion and deposition 7−107417
HEXOS-Humidity Exchange Over the Sea program 7−139763
high winds, alarms for railways in India 7−115091
hills of small size, boundary layer flow, review 7−107462
Hudson Bay, ocean bottom friction coeff. determ. from Seasat-alt data, wind effects 7−72043
Hurricane Alicia (1983), inner core vel. and precipitation struct., airborne Dopper radar meas 7−145606
Illinois, United States, squall lines radar features 7−133849
in-situ sensors comparison 7−133963
India, equatorial easterlies extension rel. to SW monsoon 7−101418
Indian monsoon rainfall AD 1958 to 1985, rel. to tropical quasi-biennial oscill. 7−139682
E Indian Ocean, seasonal anomalies, structure and evolution 7−101432
Indian Ocean, water vapour transport during 1979 summer monsoon 7−127418
Indian summer monsoon winds, effects of orographic forcing 7−87766
infrasonic noise theory for atmospheric turbulence near ocean surface 7−82920
Inn valley, Austria, momentum budget during valley and mountain wind 7−79533
Inn Valley, mass budget and vertical motions during mountain and valley winds 7−127400
island terrain influence on boundary layer winds, simulation model 7−94363
Israel, wind var. as indicator of mesoclimatic change 7−87888
JAWS experiment, dual-Doppler lidar obs. of wind rel. to radar obs. 7−127529
Jebel Ali Sailing Club, United Arab Emirates, March 1986 tornadic waterspout, conditions of occurrence 7−101420
Kanto area, Japan, analytical study of northeasterly wind 7−79498
lake breezes, water surface temp. effect on thermal internal boundary layer 7−145575
Lake Michigan, lake-induced mesoscale snowstorms, modelling 7−145595
lee wave structures in stratified flow over 3D obstacles, exptl. study 7−79562
linear steady atmospheric flow above finite surface heating, wind and Earth rot. effects 7−114882
Los Angeles, USA, elevated air pollution layers, wind effects 7−86851
Los Angeles Basin, boundary layer props. mesoscale var. and pollution appl. 7−87855
low-altitude wind shear hazards, recognition using Doppler radar 7−115072
lunar tides in middle and upper atmos., at Saskatoon 7−94532
Mallamma Lake, Andhra Pradesh, India, wind speed rel. to atmospheric point discharge current 7−127342
Malvinas-Brazil confluence, wind forcing effects 7−87672
marine boundary layer, wind speed rel. to near-surface shear in ocean 7−94269
marine stratus, breakup 3D numerical anal. 7−114883
marine surface layer, stability parameters and wind-stress coeffs. formulae 7−127373
marine surface winds sensing, radar scattering and equilibr. ranges in wind-generated waves with appl. to scatterometry 7−114739
marine wind speeds, number of visually estimated and instrumentally measured wind obs. 7−133865
marine winds, influence on radio signal estimation of ocean internal wave parameters *(Russian)* 7−145489
Mauna Kea, Hawaii, weather and seeing 7−127471
Mauna Kea, hyperventilation of volcanic cinder cone by strong surface winds 7−101250
McMath telescope heliostat, windscreen protection 7−134135
measurement, cup anemometer testing methods 7−127571
W Mediterranean, wind forcing effects on dynamics 7−79421
mesopause, summer, background winds and waves struct., bistatic radar obs. 7−139809
mesopause region winds, long-period changes and possible solar cycle influence 7−87991
mesoscale experiment, use of wind profilers 7−115021
mesosphere, appl. of simultaneous medium-freq. interferometer and spaced antenna expts. to wind meas. 7−115130
mesosphere, effects of zonal wind on vertical diffusion and O_3 diurnal variability 7−115128
mesosphere, medium freq. interferometry study 7−101614
mesosphere and stratosphere large scale struct., MAP-WINE campaign 7−145594
mesosphere and upper atmos., wind fluctuations attributable to internal gravity waves 7−94528
mesosphere mean winds over N Scandinavia during winter 7−145731
mesosphere tidal winds in Na layer, daytime lidar observations 7−145742
mesosphere wind measurement by Doppler radar, methods for fluctuating components 7−107595
meteor altitude winds at mid-latitude, study of diurnal and semidiurnal components 7−127626

wind continued
Miami-Atlantic City sea level slope, effects of runoff and coastal wind stress 7−127263
microburst beneath thunderstorm in Colorado, dynamics and kinematics 7−107459
microwave pulse Doppler radar for wind meas. *(Japanese)* 7−107475
middle atmosphere, thermal regime and circulation, average characts. 7−115131
Mistral wind system, satellite observations 7−87825
monostatic Doppler sodar measurement, appl. of errors in second moments to field meas. 7−115067
monostatic Doppler sodar wind measurements, errors in estimated second moments 7−115066
monsoon low-level jet over Arabian Sea, study of vertical struct. 7−101403
moored buoy measurements, field evaluation 7−114867
mortality rate of a marine fish, the northern anchovy (Engraulis mordax), rel. to wind speed 7−87417
mountain (isolated), wind, temp., humidity influenced by aspect and elevation 7−94375
nearly continuous observations series, use in geopotential and temp. fields calc. 7−127359
New Delhi, wind shear studies using forward scattering sodar 7−101408
Niger, Sahelian region, Weibull wind speed characts. and wind pumping 7−78599
Nigeria University site (Nsukka), insolation correlated to wind speed 7−72127
nondivergent environmental winds, single Doppler vel. signature interpretation 7−127578
North Pole region, stratospheric temp., sunspot numbers and quasi-biennial oscillation 7−120074
North Sea offshore 3 MW horizontal-axis aerogenerator design and operating conditions 7−78600
Northern Hemisphere, upper troposphere ageostrophic winds 7−107489
ocean, LF shelf water flow, influence of sloping mean density surfaces, wind forcing effects 7−133734
ocean, wind-driven circulation in subtropical-subpolar basin, three-layer model, subcritical state 7−145502
ocean, wind-driven circulation in subtropical-subpolar basin, three-layer model, supercritical and hypercritical states 7−145503
ocean, wind-generated currents during severe storms estimation, use of XCP vel. data 7−79695
ocean circulation, wind-driven secondary flows over continental shelf edges 7−94242
ocean dynamics forcing, contrib. of wind to mixing in seasonal thermocline 7−114752
ocean short wavelength fetch-limited wind waves, directional spreading 7−127270
ocean surface, gravity-capillary waves spectrum, nonlinear interactions, Lagrangian theory 7−145491
ocean surface energy transfer, intrinsic freq. spectra of short gravity-capillary waves 7−114750
ocean surface wind speeds, secular changes 7−145660
ocean swell decay under opposing wind 7−127272
ocean waves, parameterisation of width of ang. distrib. of wave energy at limited fetches *(Russian)* 7−145488
ocean waves spectrum, nonlinear energy transport *(Russian)* 7−127231
ocean wind generated gravity waves, spectra, quasi-universal form 7−133739
ocean wind waves, energy and fetch 7−127271
ocean wind waves growth, effects of swell 7−133741
ocean wind waves with short fetches, influence of air stratification *(Russian)* 7−79436
ocean winds, Seasat microwave radiometer data 7−114992
oceanic quasi-geostrophic turbulence forced by stochastic wind fluctuations 7−114783
oceans, wind-driven circulation, 3D simulation algorithm 7−114719
Oklahoma downbursts and their asymmetry 7−133829
Oklahoma-Kansas Preliminary Regional Experiment for STORM-Central, results 7−79493
Omega-derived wind estimates, error sources 7−127536
optical inversion technique for remotely sensing crosswind vel. 7−115100
overhead line location, wind direction and intensity simulation *(Croatian)* 7−93587
NW Pacific, low-level wind field analysis *(Chinese)* 7−87756
W Pacific, seasonal anomalies, structure and evolution 7−101432
NE Pacific, seasonal cycles of ocean variables and wind 7−94254
Pacific Ocean, California coastal region, large scale wind field 7−87811
E equatorial Pacific Ocean, moored wind meas. from spar and toroidal buoy (Feb. to March 1981) 7−127391
Pacific Ocean, North America coastal region, shelf currents and coastal sea level, atm. forcing 7−87664
equatorial Pacific Ocean, obs. of annual and El Nino wind and ocean current vars. (1980 to 1985) 7−127258
equatorial Pacific Ocean, trade winds vars. rel. to sea level trends (1974-75 to 1981) 7−114742
W Pacific Ocean, tropical, heat content simulation, role of wind stress 7−127269
Pacific Ocean, tropical region, convection, effects of low-level wind and moisture 7−127276
Pacific Ocean, tropical region, surface wind field long term. var. 7−101477
Pacific Ocean, tropical region, wind-driven circulation, use of T as tracer 7−145494
S Pacific Ocean, wind-driven circulation 7−145499
Pacific Ocean off California coast, appl. of wind-forced long coastal trapped wave theory 7−87666
Pacific upwelling regions, marine aerosols 7−120077
S Pennines, England, wind speed and direction at high-altitude site (1975 to 1984) 7−79523
plant canopies, models of wind profiles and drag 7−145579
pollution dispersal in coastal area for sea-land breeze circulations, numerical model 7−114946
pressure meas. on full-scale structures, transducer development 7−73330
pure katabatic flows, time-dependent 2-D model study 7−79561
radar and Navaid windfinding systems comparison 7−127585
radar Doppler sampling, folded radial vel. rectification to Cartesian space 7−127580
radar for wind measurement, spaced antenna method used at Adelaide 7−94484
radar remote sensing method, ERS-1 scatterometry algorithms 7−101580

wind continued
radar remote sensing method for marine winds 7—134016
radar scatterometry form ocean tower, wind determ. method 7—101575
radar scatterometry remote sensing of wind, ERS-1 data conversion 7—101493
radar wind profiling techniques, accuracy 7—139794
Radfeld, Austria, mountain boundary layer above valley during mountain and valley wind *(German)* 7—79534
radio acoustic sounding system, atmospheric wind and temp. meas., range limitation *(Japanese)* 7—79689
raindrop size spectrometers, corrections for horizontal drag forces effect on rain trajectories 7—127533
remote obs. using optical scintillation techniques 7—107566
remote sensing, backscatter meas. from sea surface by C-band Doppler radar 7—107438
remote sensing, on-ground verification and in-orbit performance prediction of ERS-1 wind scatterometer 7—101661
remote sensing, two-scale Bragg scatt. model for microwave backscatter from ocean waves 7—101332
remote sensing of marine winds, C-band scatterometry method 7—101579
remote sensing of tropical pacific winds, bias in satellite observations due to data gaps 7—107537
remote sensing of wind speed, using satellite radars and buoy anemometry 7—101599
remote sensing over oceans, passive microwave method using microwave emission model 7—107534
Rhine valley, upper region, topography effects of atm. during MESOKLIP *(German)* 7—79526
ridge in way of stratified shear flow, model of semigeostrophic disturbances 7—101391
Rocky Mts. Peaks Expt. (ROMPEX), mountaintop winds 7—114857
roof-mounted flat plate solar collectors, wind flow induced top losses 7—93533
rugged terrain area of Switzerland, unstable conditions, vapour and momentum fluxes 7—114895
satellite orbital changes due to meridional winds 7—94633
sea breeze, latitude effects and role of thermal charact. 7—145636
sea breeze circulation during daytime, 2D turbulence closure model 7—145615
sea ice, assoc. wind stress determ. *(Japanese)* 7—107428
sea ice interaction, instability theory for ice edge bands formation 7—133711
sea-air gas exchange, role of wind and waves 7—87674
Seasat scatterometer obs. of wind and Arctic ice/water boundaries 7—101586
sediment deflation of terrace scarp in arctic periglacial setting, a source of aeolian sediments 7—133684
shear detection at low altitude using Doppler radar 7—133986
shear measurements, results from laser remote sensing 7—120717
ship reports of light winds, error correction 7—127362
single-star scintillation analysis of wind and turbulence 7—87761
sodar observed shear echo structures rel. to wind vel. 7—114940
soil erosion in presence of atm. acoustic oscills. 7—139735
solar pond wind-induced waves and liquid mixing 7—100753
spaceborne remote sensing of ocean waves, conf., Baltimore, USA (April 1986) 7—128175
speed and direction estimation from directional wave buoy wave meas. 7—79701
speed in boundary layer, interpolation formulae 7—87938
speed temporal and spatial variations rel. to wind power potential 7—78597
speed time component analysis procedures 7—78598
St. Louis area, flow direction rel. to fine particle S concs. 7—100771
stably stratified boundary layer, local similarity theory 7—101371
stably stratified internal boundary layer, temp. and wind profiles for offshore flow 7—101379
stably stratified shear flow response to diabatic heating 7—145609
standard deviation for upstream roughness, memory 7—101373
Strait of Gibraltar, surface inflow seasonal var., wind stress effects 7—87679
stratiform precipitation, assoc. dynamical charact. determ. from conical scannings with two Doppler radars 7—133973
stratosphere, gust-like winds, balloon-borne meas. using Gill-type propeller anemometer 7—127557
stratosphere, quasi-geostrophic simulations of 1979 major warming event 7—101443
stratosphere circumpolar wind springtime reversal, correl. with 27 kHz atmospherics spring enhancement 7—101463
sub-Saharan Africa, contrib of NE winds to CCN concs. during dust haze 7—87763
surface roughness changes and topography effects, finite-difference model 7—79489
surface roughness parameter estimated with a drag technique 7—87924
syntactical wind streamline pattern identification 7—101473
Tarama Island, E China Sea, AMTEX '75 meteorological observations 7—94370
theodolite for wind velocity meas., Apple II microcomputer appl. 7—87936
thermosphere, dynamics during magnetic storm of 22 March 1979, theory and obs. 7—115126
thermosphere, wind var. during eclipses, effect on E-region plasma parameters 7—88004
thunderstorm bow wave, by boundary layer wave theory 7—114900
thunderstorm inflow regions, studies by const. altitude aircraft meas. 7—127531
tornado outbreaks due to Hurricane Danny over south-central USA 7—127432
Trafalgar storm, 1805 October 22 to 29, wind directions rel. to synoptic anal. 7—127412
transport calcs., non-zero divergence wind field effects 7—94338
tropical atmosphere, response to LF thermal forcing 7—127375
tropical cyclone motion prediction using wind field representation 7—87851
tropical cyclones, contrib. of outward flow of ang. momentum to winds strengthening 7—133857
tropical depression to tropical storm transition, black body temp. and wind field vars. 7—79499
tropical meteorology, linear wave theory in low-latit. atmosphere 7—139704
tropical ocean circulation experiments, wind forcing 7—127268
wind continued
tropical regions, integration of numerical weather prediction models during FGGE 7—94404
troposphere, geostrophic adjustment of press. and wind fields due to horizontally inhomogeneous heat release *(Russian)* 7—127353
troposphere temperature and wind profile, acoustic, wavefront anal. 7—94523
turbulence crossing frequency determ., influence of spectrum functions and filters 7—127365
turbulent dispersion in a stable layer with a quadratic exchange coefficient 7—127327
Turkey, wind energy assessment 7—93470
two-parameter Weibull distrib. shape factor estimator 7—133992
E United States, 1985 air stagnation days 7—101440
upper atmos., tidal wind observations 7—145732
upper atmosphere, 82 to 106 km, meteor radar winds above Kyoto 7—107594
upper atmosphere, 83-93 km altitude mean press. field and geostrophic circulation 7—115132
upper atmosphere, density scale height and zonal wind speed 7—79808
upper atmosphere, lunar tides, radar wind meas. 7—134038
upper atmosphere, temperature and meridional winds during SAR-arc 7—139826
upper atmosphere, wind profiles at gravity waves at 3 locations in dusk auroral oval 7—107596
upper atmosphere synoptic winds, rel. to stratosphere parameters 7—145728
valley and slope winds 7—87830
valley nocturnal drainage flow and radiative cooling 7—101459
valley wind described by box type model 7—87829
valley-plain circulation, flow resolving model 7—87828
valley-plain circulation by minimum resolution model 7—87827
velocity and temp. meas. from audio phase shift 7—128227
velocity field above air-water interface, thermal stability effects 7—127390
velocity fluctuations, prediction from upstream data 7—104361
vertical wind velocity at Boulder Atmospheric Observatory, meas. errors 7—127366
volcanic effects on turbidity and irradiances and their dependence on surface wind direction 7—133923
wave generation with time-variable wind, Phillips-Miles theory 7—72074
wavy plateau, intensification of wave energy on Lee side 7—139729
West Africa, tropical squall line, thermodynamic and kinematic struct., dual Doppler radar obs. 7—127420
West Bengal, India, wind energy potential 7—126539
West Germany, planetary boundary layer during PUKK, 48 hour second order closure model simulation 7—79527
West Germany, PUKK area, wind vel. in nocturnal and morning boundary layers *(German)* 7—79530
West Germany, PUKK front charact. 7—79531
westerly wind maintenance in S Hemisphere winter, role of eddies 7—145618
winter tropical middle atm., temp. and wind perturbations 7—127395
Yugoslavian bora with across mountains, aircraft observations 7—114888

wind energy *see wind power*

wind power
alternative energy source utilisation in German Federal Republic, technical problems *(German)* 7—86755
development and potential in Latin America 7—114071
development in the USA, Altamont Pass, California *(French)* 7—100690
distributed equivalent wind velocities 7—106880
electrofluid dynamic processes, appl. to wind energy conversion 7—93469
energy anal. to supply power to observatory in Korek site 7—144784
energy conversion, recent progress and future prospects 7—78594
future prospects for UK 7—78593
government proposals 7—93471
Guatemalan wind potential analysis and discussion 7—126538
hybrid solar systems using solar thermal, photovoltaics and wind energy 7—71575
Kenyan wind energy develop., review 7—126537
regenerative energy usage by year 2000 *(German)* 7—71567
renewable energy sources develop., Pakistan 7—78614
Romanian coastal and Danubian region industrial wind power potential *(Romanian)* 7—114068
Sahelian wind pump characteristics rel. to Weibull wind speed statistics 7—78599
speed temporal and spatial variations rel. to wind power potential 7—78597
studies at Dutch Energy Research Centre *(Dutch)* 7—126535
Turkey, wind energy assessment 7—93470
West Bengal, India, wind energy potential 7—126539

wind power plants
aerodynamic loads on unit elements with vertical rotation axis 7—119619
alternative and renewable energy sources conf., Reading, England (April 1987) 7—72735
British experience in harnessing wind power, turbines and power systems 7—126536
Danish village power cogeneration using wind and biogas *(German)* 7—106877
electrical performance meas. for power collection network assessment 7—133032
energy utilisation in Tasmania 7—71570
performance test on small wind power generating equipment *(Japanese)* 7—114072
Romanian national grid, connection of wind farms *(Romanian)* 7—114069
shrouded wind unit testing for connection to Romanian national grid *(Romanian)* 7—114070
solar/wind power plants 7—78595
VL-MLP wind driven elec. power station with interlocked vertical blades and linear generator 7—100691

wind tunnels
5:1 wind-tunnel contraction design 7—69287
air, computation of turbulent flow over scale model in wind tunnel using random vortex method 7—130665
airfoil, low Reynolds number flow, acoustic excitation, lift, drag and wake velocity study 7—142315
autooscillations in a wind tunnel, acoustic suppression 7—110994
circular cylinder parallel to main flow, press. distrib. *(Japanese)* 7—110989
cloud liquid water content Johnson-Williams and PMS ASSP probes calibration 7—115053

wind tunnels continued
computational fluid dynamics, research at National Aerospace Laboratory, Japan 7−136908
cryogenic flow visualisation, using vapor-screen technique 7−123814
CSIRO liquid water probe for airborne meas., icing wind tunnel tests 7−127547
cylinder surface, simulated smooth glaze ice formations, local heat transfer coefficients 7−136813
density fluctuation detector using differential interferometer 7−83374
energy separation in a vortex street 7−91122
flapwing in open jet wind tunnel, design and performance characteristics 7−93472
forced convection from circular cylinder, yaw effect, wind tunnel study 7−75561
freestream flow facing cuplike cavity, yaw effect on heat transfer 7−110971
gas superheating in two section forechamber of blowdown wind tunnel 7−136917
heavier-than-air gas dispersion near 2D obstacle, wind tunnel wake meas., air pollution simulation 7−97536
heliostat mean wind load reduction 7−144795
high speed photography, videography and photonics, conf., San Diego, CA, USA (Aug. 1986) 7−95086
hot-wire probe calibration facilities, blockage correction effects 7−130805
hypersonic wind tunnel, heat transfer meas. using surface thermocouples improved data reduction 7−123819
hypersonic wind tunnel nozzles, simplified Navier-Stokes eqns. anal. 7−142350
instrumentation in aerospace simulation facilities, Conf., Williamsburg, VA, USA (June 1987) 7−120708
liquid phase controlled gas-liquid transport process, effect of mechanically generated turbulence and interface films 7−78549
multiple water drops, simultaneous suspension technique for small vertical wind tunnel 7−123715
near-wall turbulence structure 7−130660
numerical simulation of confined unsteady aerodynamical flows 7−130791
particle image velocimetry measurements of unsteady separating flow over an inclined flat plate 7−123809
simultaneous active measurements on wind tunnel model *(French)* 7−97557
subsonic slender bodies, wind-tunnel-wall interference, asymptotic theory 7−83260
subsonic wind tunnel, reduction of model-sting adverse pressure gradient 7−83339
supersonic wind tunnel study of shock wave/boundary interaction, using holographic interferometry 7−97661
transonic, flow visualisation using dual plate thermoplastic recording device for holographic interferometry 7−96959
transonic flow, experimental developments 7−104301
turbulent boundary layer longitudinal vortex, heat transfer effects 7−110940
turbulent three-dimensional flows, development and testing of static press. probes 7−91094
unsteady test method applied to wind tunnel studies of flutter *(French)* 7−97556
US laser method for flow field meas. 7−123816
velocity interferometry in shock tubes and shock tunnels 7−123812
vertical wind tunnel for snow process studies 7−127583
windward laminar heating meas. on biconic in hypervelocity flows 7−142261
wings, back- or forward-swept, root regions transonic flow study 7−83263

wind turbines
30 kW and 300 kW elec. wind generators with horizontal axis 7−93473
aerodynamic loads on unit elements with vertical rotation axis 7−119619
alternative and renewable energy sources conf., Reading, England (April 1987) 7−72735
British experience in harnessing wind power, turbines and power systems 7−126536
development and potential in Latin America 7−114071
development in the USA, Altamont Pass, California *(French)* 7−100690
energy conversion, recent progress and future prospects 7−78594
flapwing in open jet wind tunnel, design and performance characteristics 7−93472
future prospects for UK 7−78593
gap correction for horizontal axis wind turbines 7−106881
horizontal-axis turbines, lidar meas. of turbulence encountered 7−114869
North Sea offshore 3 MW horizontal-axis aerogenerator design 7−78600
orthogonal-rotor wind turbine expts. 7−139077
rotating blade in vertical plane, theoretically computed wind spectra verification 7−133031
shrouded wind unit testing for connection to Romanian national grid *(Romanian)* 7−114070
solar/wind power plants 7−78595
Susetter Hill (Shetland) 750 kW demonstration wind turbine 7−139078
vortex analysis of 3-bladed vertical axis wind turbines; 7−91132

winding (process)
superconducting accelerator magnets, epoxy-free winding and assembly of cos θ coils 7−129489

windings
see also coils; machine windings; transformer windings
electromagnetic actions on the windings of tokamaks 7−137134
pulse betatrons, losses in electromagnets of pulse magnetic field shapers *(Russian)* 7−96405

windowing *see user interfaces*

wires (electric)
see also conductors (electric)
current determination in ionizing radiation environment, GLANC code development 7−83403
magnetic characts. and core loss meas. 7−121167
resistance heater lead-ins with conical seals, for high-pressure chambers 7−134800

WKB calculations
barrier transmission coefficients in anharmonic symmetrical potentials 7−73031
fluid under stationary heat flux, fluctuations, Brillouin lines and nonequilib. sound modes 7−75263
Friedel oscillations, phase space study, half-infinite nuclear matter, Wigner function 7−128995
gases, acoustic wave interactions with mag. and internal modes 7−111006

WKB calculations continued
harmonic oscillators, energy perturbation series, hypervirial eqns. calc., microcomputer method appl. 7−120739
magnetospheric ducts, whistler wave propag. 7−142467
metastable state decay by quantum tunnelling, WKB expansion 7−80513
multi-dimensional coupled channel eqn., semiclassical quantisation 7−89039
nonrelativistic Coulomb propagator, time-dependent WKB expansion 7−73018
nonuniform string, transverse modes, eigenvalues WKB approx. 7−80235
one-dimensional, generalised WKB and Milne solutions 7−108304
parabolic pot. barrier transmission coeff., generalised WKB approach calcs. 7−77044
plasma, ID magnetised double layers with finite thickness, intrinsic resonances 7−83463
Saffman-Taylor finger, curved front stability props., WKB anal. 7−83178
semiconductor-insulator interface, bound state level subbands, quasicontinuous distrib. at accumulation or inversion layer 7−77097
Sturm-Liouville systems, forced nonlin., asymptotic anal. 7−115765
supersymmetry inspired higher order WKB approx. 7−140528
surface duct parameters for refractive index profile models, WKB method anal. 7−136458
time-dependent moving media, EM wave propag. and scatt. 7−82440
two-centre phase shifts, modified JWKB method 7−67070
uniaxial antiferromagnet, quantum tunnelling at first order phase transitions 7−138234
WKBJ approximation, solns. of diff. eqns. in standard form 7−73027
GaAs/AlGaAs heterojunctions and $n^+n^-n^+$ sandwich structs., tunnelling and hopping cond. 7−143599

wobbulators *see signal generators*

Wolf-Rayet stars
in 30 Dor, imaging, photometric and spectroscopic obs. of Wolf-Rayet population 7−72443
AS 431, speckle interferometric obs. rel. to search for multiplicity 7−120406
binary Wolf-Rayet stars, form by massive stars evolution without convective core overshooting 7−134221
Cas A progenitor star, evidence from discovery of fast-moving N-rich ejecta 7−88565
CQ Cep, WR eclipsing binary, period change *(Russian)* 7−127911
cluster in amorphous galaxy NGC 5253, elemental abundances 7−140291
EZ CMα, WN5 star, possible appearance of second photometric period 7−115388
V444 Cyg, (WN5+O6), IUE obs. rel. to magnetically-supported plumes model 7−88426
30 Dor nebula, chemical homogeneity and W-R enrichment 7−128017
in ESO 495-G21 (=He 2-10), starburst galaxy, spectroscopic evidence for W-R stars 7−134298
evolutionary models, influence of convective overshooting on predicted initial masses and lifetimes 7−134222
exploding Wolf-Rayet stars, light curves 7−127916
Galactic distribution, comparison with O-type stars distrib. 7−134235
general characts. and evol. *(French)* 7−107852
HD 151932, WN7-A star, obs. of He I and Si IV lines vars. 7−120405
HD 16523, HD 17638, identification as possible WO5-type Wolf-Rayet stars *(Russian)* 7−145998
HD 192163, detect. in X-rays 7−146067
HD 193793, spectroscopic orbit for WC7+O4 binary 7−72445
HD 50896, WN5 star, empirical model for extended atmosphere 7−101802
in IC 1613, discoveries from objective-prism survey of emission-line objects 7−72328
late-type WR stars, circumstellar dust characts. and winds, modelling and IR photometry anal. 7−127878
LMC emission-line stars in HD and HDE catalogues, identifications 7−72614
in M33, discoveries from objective-prism survey of emission-line objects 7−72328
mass loss emission spectra contrib. to Hα and N II emission line profiles of He 2-10 galaxy 7−128092
neutron capture nucleosynthesis, occurrence during core He burning in massive stars 7−107805
NGC 6888, Wolf-Rayet ring nebula, X-ray emission upper limit 7−146067
nonradial pulsations, lack of evidence 7−79981
Ofpe/WN9 stars in Galaxy and LMC, direct imagery of circumstellar shells 7−134237
R 130 in LMC, spectral and photometric study of triple system 7−88436
V348 Sgr, visual magnitude estimates (1987 June-July) 7−145979
V348 Sgr, WC11 planetary nebula central star, photometric obs. 7−115461
SMC, search for WC and WNE stars in N83 and N84 regions 7−101879
SN 1604 progenitor, mass-losing runaway star model rel. to origin of supernova remnant 7−146074
spectral line profiles calculation in spherically symmetric stellar winds, appl. of SEI method 7−115365
SwSt 1, young planetary nebula with central WC10 star, spectrophotometry and spectroscopy obs. 7−128029
tidal circularization in massive binaries 7−107894
WN-type binary stars, He II 468.6 nm line vars. rel. to motion of WN component 7−145996
WN-type stars, modelling of extended atmospheres 7−101801
WN-type stars origin, effects of rot.-induced bifurcation in massive star evolution 7−115359
WR 78 (=HD 151932), photometric variability of WN7 star 7−120454
He II synthetic spectra, grid of models 7−79968

wolfram *see tungsten*

wood
biomass, comparative anal. of net energy 7−93518
cellulose, mol. orientational order, NMR anal. 7−119717
components, ^{1}H T_1 and T_2 relax. times, ^{13}C CP/MAS NMR obs. 7−106045
deciduous hardwood canopy, directional light scatt. props. during winter 7−127505
fibre reinforced cement, prep. and mech. performance 7−144322
L-band radar backscatter modelling, appl. to remote sensing of forest stands 7−127502
lignin, mol. orientational order, NMR anal. 7−119717

wood continued
radar backscattering, X-band and L-band meas. of forest stands and single trees 7−107583
softwood, stable-state creep limit, mechano-sorptive creep 7−71337
tropical wood-polymer composite, gamma irradiation, compression failure model 7−98313
Turkish biomass energy potential and rural utilisation 7−86746
wood composites, radiation-induced, gas permeability and polymer loading correl. 7−98242
$^{13}C/^{12}C$ isotope ratios in tree cellulose, relation to climatic change 7−115002

wood processing
waste burner and heat recovery system, operation, thermal efficiency, particulate emissions 7−119631
wood waste burner and heat recovery system, economics 7−119632

word processing
see also data preparation
undergraduate physics teaching support 7−102060

work function
see also electron emission; Schottky effect
alkali metal liq. drops, energy characts., density functional theory *(Russian)* 7−111349
arc cathodes, work function and surface structure 7−112431
brass rubbing surface, periodic changes of electron work function rel. to fatigue damage 7−100396
exoemission, optically stimulated, role of O_2 7−106388
low index surfaces, field emission parameters, combined field and photo-field emission method 7−106387
low-voltage discharge, smooth and textured electrodes work-function nonuniformity 7−69514
metallic surfaces, Thomas-Fermi-von Weizsacker approach, self-consistent soln. 7−143550
MOS structures, elec. props., C-V curve, book contrib. 7−105722
negative ionisation of atoms sputtered from cesiated surface, vel. depend. 7−125890
rare gas solids, desorption stimulated by exciton self-trapping, model, lumin. 7−98690
semiconductor-metal Schottky contacts, virtual gap states, present understanding 7−105661
stepped surfaces, adsorption, adsorbate conc. profiles, induced work function change 7−105255
thermionic diode collector, gas filled, work function determ. 7−93517
Ag (110), H_2O, OH and O_2 adsorption, LEED, AES, TDS, ESDIAD and work function studies 7−105267
Ag (110), Xe adsorption on low and high work function metals 7−131419
Ag monolayer growth on Mo (110), AES, ELS, TDS, ADT and work fn. meas. *(German)* 7−131452
Al (100), coadsorption and decomposition of CO with Na or K, temp. depend. study 7−91975
Al (100), positron deformation pot. and work function temp. depend. 7−112430
AlN, solid Al^+ ion source 7−85937
Au, work function determ. by Fowler's method 7−70376
Be clean polycryst. surface, work function, Cs coverage depend., photoemission meas. 7−105660
CO-K interactions, coadsorbed on Cu (100), EELS, TDS and work fn. investig. 7−119080
CdSe:O/Au Schottky diodes, struct. and elec. props., O effects 7−105655
Co, polycrystalline, work function variations with temp. and phase transforms 7−85047
Cr (110), Br and Cl adsorpt. and surface phase transitions, AES, TDS and LEED studies 7−105276
Cu (100), Nd adsorption and growth modes, LEED studies 7−118220
Cu, electronic structure and work function 7−124841
Cu monolayer and film, with chemisorbed CO, adsorbate electronic props., TDS, metastable quenching spectra 7−84516
Cu polycrystalline thin films on Cu and pyrex substrates, growth, work fn., elec. conductivity 7−124804
Cu-Al (111), growth mode and electronic struct. of Cu films 7−98754
Fe on Cu (100), closely-lying energy states, magneto-optic and photoemission meas. 7−143875
GaAs:$Ba^{2+}(Na^+)$, Auger electron spectra, secondary electron yields, work function 7−77709
GaAs-Au interface, field emission microscopy study *(French)* 7−124738
GaP:$Ba^{2+}(Na^+)$, Auger electron spectra, secondary electron yields, work function 7−77709
GaP-In(Al)(Ge)(Cu)(Au), near ideal Schottky barrier formation, XPS study 7−106354
GaSb surfaces, O_2 sorption, work function and photovoltage measurements 7−125073
$(H_2O)_n$, effective Hamiltonian calcs. 7−110167
LaB_6 thermionic electron emitter surfaces, electric field distrib. 7−70986
$La_{2-x}M_xCuO_4$ (M=Sr, Ba), high T_c superconductors, photoemission 7−125249
Mo, work function determ. by Fowler's method 7−70376
Mo(110), adsorption of Sm, struct. and electronic struct. 7−131438
Na-GaAs (110) Schottky diodes, elec. props. 7−138065
Ni (110). N_2 chemisorpt., kinetic parameters, thermodynamic quantities and struct., multitechnique approach, review 7−70086
Ni (111), adsorbed O_2, secondary electron spectra and work function 7−85906
Ni (111), clean and O precovered, adsorption behaviour of H_2O 7−84521
Pb, positronium emission 7−85890
Pd (111), work fn. change during O_2 adsorption 7−124721
Pt (111), H_2O and K adsorption, work function changes, molecular orientation 7−105260
Pt-Re (111) thin films, adsorbed Xe photoemission, AES, XPS and work function studies 7−137760
Re (10$\bar{1}$0), adsorbed Na and Li, struct., work function, thermal stability 7−76619
Re surface, Li bombard., Li^+ prod., work fn. temp. depend. 7−85916
Re surface, Li impinging, thermal positive ion prod., effective work fn., time variation 7−92791
RePd sputtered alloys, work function w.r.t. surface comp., appearance pot. spectra studies 7−143555
Ru (001), clean and chemically modified surfaces, adsorpt. of N_2, role of σ bending 7−105646
Ru film (0001), Cu room temp. adsorption, AES, LEED and work function meas. 7−143227

work function continued
Ru(001), adsorption of alkali metals (Na, K and Cs), thermal desorption, work fn. and EELS studies 7−131442
Ru(1010), coadsorbed CO and Na, interactions 7−92000
Si (111), electronic props., influence of disorder 7−92247
SiO_2:Bi semiconducting glasses, secondary electron emission characts. determ. 7−144189
Ta, work function determ. by Fowler's method 7−70376
TiO_2 (110) Ti-rich surfaces, spectral, cond. and annealing studies 7−85041
UNiAl, electron binding energies, oxidation behaviour 7−99160
V_2O_5:Bi semiconducting glasses, secondary electron emission characts. determ. 7−144189
W (110) with adsorbed Cu layers, CO adsorption, work fn. and LEED studies 7−124711
W (111), Ba (La) adsorption, struct., work fn. and thermal stability studies 7−112066
W, adsorpt. of F(Mn), on stepped surface, work function meas. *(Russian)* 7−112090
W, electron emitter surfaces, electric field distrib. 7−70986
W surface, chemisorption of H, local space approx. 7−105643
W(001), (011), oxidised, electron stimulated desorption of metal atoms and ions 7−91990
W(110) with adsorbed Cs, neutralisation of scatt. alkali ions, local work fn. effects 7−119101
YNiAl, electron binding energies, oxidation behaviour 7−99160
ZrNiAl, electron binding energies, oxidation behaviour 7−99160
ZrO/W (100) thermal-field emission cathode *(Japanese)* 7−77746
ZrO_2 films, O_2 chemisorpt., activation energy and rate, work function depend., adsorpt. luminesc. studies *(Russian)* 7−76627

work hardening
see also cold working
abrasive wear, nondependence on work hardening 7−130608
brass, grain size distrib., strain hardening exponent variation 7−138758
crack growth, steady, with linear strain hardening, asymptotic fields 7−69058
cylindrical bars, plastic wave front propag. 7−123480
deformation, steady state, dislocation theory, approach in creep and dynamic tests 7−84091
dislocation model for work hardening material and cyclic J-integral 7−111558
elastic-plastic oscillator with work hardening, energy separation, uniqueness of motions 7−80415
fatigue life prediction in bending from axial fatigue information 7−83103
FCC crystals, work hardening, deform. band form. 7−76280
geophysical materials, modelling, rel. to soil models 7−94203
Inconel 625, serrated flow, strain ageing, ladders bands, solute migration to mobile dislocations 7−78138
laminated anisotropic elastoplastic material, finite element anal. 7−83060
metals and alloys, commercial, thermal conductivity data, assessment of uncertainties 7−76885
Mode I crack propag. in deform. theory material asymptotic anal. 7−117543
multiaxial cyclic problems, anal. with anisotropic hardening model 7−104165
nuclear materials, elastic creep-fatigue rules assessment, computer program 7−67914
plastic and viscous deformation, theory 7−98311
plate, annular, elastoplastic, strain-hardening, internal press. effects 7−117470
plate, porous transtropic with strain hardening base, plastic state eqn. 7−104169
plates, plastic shearing, nonlinear constitutive relation 7−83075
polyethylene, high- and low-density, blends, isothermal elongation at const. stretching rate 7−78085
polyethylene, step shear, step biaxial extension and steady uniaxial extension deform. 7−142245
polystyrene, step shear, step biaxial extension and steady uniaxial extension deform. 7−142245
self-consistent stress relaxation model, logarithmic creep 7−104909
shear band development incorporating heat conduction, anal. 7−90985
shell, cylindrical, stress-strain state during heat treatment 7−113587
shell structures, thermo-elastic-plastic and creep analysis. 7−104163
shells, thin-walled cylindrical, dynamic failure 7−75359
steel, austenitic Mn, Hadfield's work hardening, deform. twinning 7−113569
steel, austenitic stainless, cyclic deform., kinematic and isotropic hardening 7−138760
steel, austenitic stainless, deformation, theory of mobile dislocation density 7−69712
steel, austenitic stainless, fatigue, proton irrad., precip. hardening, strain amplitude and temp. effect 7−113721
steel, austenitic stainless, low cycle fatigue deform. and dislocation struct. at elevated temp. *(Japanese)* 7−100348
steel, austenitic stainless, strain hardening and softening, discrete memory description 7−78052
steel, C, strain hardened, fatigue life, influence of low temp. treatment 7−78057
steel, C, uniaxial tensile test, heat generation model 7−132679
steel, cold and hot rolled, shear band form. at high strain rates, temp. profile meas. 7−113571
steel, construction shot blasted, fatigue strength, residual stresses evolution w.r.t. strain type *(French)* 7−119426
steel, Cr-Mn-N, struct., corrosion and wear resist, mech. props. 7−100434
steel, Cr-Mo-Si, work hardening, effect of strain rate and microstruct. 7−126145
steel, Cr-Mo-V, creep, hardening theories comparison 7−78130
steel, Cr-Mo-V, high temp. creep as relax. processes 7−93067
steel, dual phase, deform., modified Crussard-Jaoul analysis 7−126176
steel, dual-phase, cyclic deform. effects of morphology and strength of martensite 7−100300
steel, dual-phase, mech. props., bainite effect 7−100318
steel, Hadfield, hardening mechanism and stress-strain diagrams *(Russian)* 7−71205
steel, high Mn austenitic, rolling contact fatigue strength rel. to work hardening *(Japanese)* 7−144528
steel, high strength, near threshold fatigue crack propag., temper microstruct. 7−100361
steel., low-alloy sheet, strengthening rel. to cyclic bending deform. temp. 7−78051

work hardening continued
steel, maraging, α→γ transform., effect of deform. 7−106506
steel, maraging, W-bearing, Co-free, low cycle fatigue behaviour 7−86335
steel, medium C, temp. and strain rate influences on mech. props. *(Japanese)* 7−106588
steel, Mn, metastable austenite, friction induced martensitic transform., abrasive wear resist. 7−78277
steel, Ni, induced martensitic transform. in metastable austenite matrix 7−126112
steel, secondary hardening, AF1410, fracture toughness, influence of inclusion spacing and microstruct. 7−144544
steel, static softening meas. by cold working props. 7−100246
steel, strain hardening and heat treatment effect on uniform tensile strain and strain hardening coeff. 7−126194
steel, structural, overload retardation of crack growth 7−83105
steel, structural, struct. and mech. props., effect of rolling temp. *(Russian)* 7−93041
steel and cast Fe, wear resistance improvement by surface plastic deform. 7−138847
steel sheet, flow behaviour, effects of cold rolling 7−132671
steel sheet, hot dip Zn-Al-Si coating, formability, tensile and bending props. *(Japanese)* 7−78110
stress determination using strengthening sensors and specimens under biaxial tension 7−75489
thermoplastics, cold drawing mechanics, large deform. strain hardening modulus 7−119319
trusses, kinematic hardening 7−97329
viscoplastic solids, onset of shear localisation 7−130557
von Mises kinematic hardening model, stress rate and Lagrangian formulation of finite strain plasticity 7−75334
Ag-Fe, ductile two-phase alloys, strengthening prediction model for high strains 7−132642
AgCl, cryst., slip bands and strain hardening, temp. depend. 7−126139
Al alloys, formability, microstructural effects, strain localisation, fracture 7−78118
Al, grain size distrib., strain hardening exponent variation 7−138758
Al sheet, rolled, grain reorientations, constraints model predictions comparison 7−86202
Al-Cu, superplastic eutectic alloy, strain sensitive flow, contrib. of concurrent grain growth 7−86286
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Co-Ni-Cr-Mo, austenitic, strain hardening *(Russian)* 7−113566
Cu, grain size distrib., strain hardening exponent variation 7−138758
Cu, polycrystalline, cyclic loading, transient response to strain rate changes 7−144484
Cu-Al, friction rel. to surface hardness and strain hardening rate 7−138853
Cu-Al single crystals, strain softening and plastic flow instability 7−78097
Cu-Cr-Sn, age hardening kinetics rel. to Sn addition *(Japanese)* 7−106525
Cu-Nb, ductile two-phase alloys, strengthening prediction model for high strains 7−132642
Cu-Ni (12.5, 27 wt.%), rolling texture development 7−100249
Cu-Sn, friction rel. to surface hardness and strain hardening rate 7−138853
Fe, cast, austempered ductile, erosion behaviour of high Si bainitic structures 7−71321
Fe powder, vibrogrinding effect on fine struct. parameters 7−77876
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7−138784
Fe-Si-Mn(Ni), high Si steel, erosion behaviour with austempering 7−71322
Mg alloy, dynamic recrystallisation, hardening and plasticity *(Russian)* 7−100244
MgO single crysts., cyclic deform., recovery process, TEM obs. 7−86207
NaCl, γ-irrad., comminution of colloidal Na particles during plastic deform. 7−104829
Nb welded joint structure and impact strength rel. to welding speed and power 7−138811
Ni-Fe-Cr-Mo superalloy, strain hardening and softening, discrete memory description 7−78052
NiAl, Ni_3Al, plasticity anomaly 7−100284
Ni_3Al(-B), strength, hardness and ductility, effect of B 7−78096
Pb-Sn eutectic alloy, superplastic, strain rate transients 7−100314
Sn single cryst., β-phase, plastic deformation anisotropy *(Russian)* 7−71237
Ti sheets, ductile fracture rel. to strain path 7−93092
Ti, textured sheets, deform. behaviour in uniaxial tensile test, effect of twinning 7−144500
Ti-Al-V (6,4 wt.%), superplastic, post-forming tensile props. 7−100302
Ti-Mn, two-ductile phase alloys, stress-strain behaviour 7−78121
W-Re alloys, strain hardening and dislocation structure *(Russian)* 7−78045
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567

workers *see personnel*

workstations
see also engineering workstations; interactive terminals; microcomputers
high energy physics computing, conference, Asilomar, CA, USA (Feb. 1987) 7−134338
interactive data anal., personal workstations 7−135803
laboratory productivity increase using LAN 7−140682
medical imaging, interactive workstation for real-time display and manipulation of three-dimens. data 7−145272
optical microscope/computer workstation system for standardised cell meas. and anal. 7−139410
Orion I graphics workstation for multivariate data anal. 7−135801
pathology workstation, high performance, using an automated multispectral microscope 7−139326
VDU operator fatigue, subjective and objective rating correlation *(Japanese)* 7−87416

wrapping *see packaging*

Wratten filters *see optical filters*

X^0 meson resonances *see eta meson resonances*

X-ray absorption
see also X-ray absorption spectra
biosystem characteristics for absorpt. and scatt. of X- and γ-rays *(Japanese)* 7−87093

X-ray absorption continued
metal oxides, vacancy and defect structs., local density theory anal. 7−131142
phosphors, development, parameters, future outlook 7−77647
powders, randomly packed, X-ray intensity microabsorption 7−91391
radiotherapy dosimetry, broad beam and narrow beam attenuation in Lipowitz's metal 7−71860
Co complex, Co (III) diethyldithiocarbamate, metal atom environment, solvent effects, EXAFS spectra anal. 7−109927
$Cu^{1+}Fe^{3+}S_2^{2-}$, X-ray absorption spectroscopic studies 7−138547
Ni complex, Ni (II) diethyldithiocarbamate, metal atom environment, solvent effects, EXAFS spectra anal. 7−109927

X-ray absorption near edge structure *see XANES*

X-ray absorption spectra
see also EXAFS; XANES
amorphous alloys, composition-induced valence change 7−76842
doublet structure in valence fluctuation compounds 7−125854
Eu, 5p edge optical absorpt. spectra determ., electron emission processes study 7−144181
heavy elements, L-shell photoionisation, election correls. 7−122478
lifetime effects on intrinsic and extrinsic excitation, determ. 7−106383
octahedral molecules, central atom L X-ray absorpt. spectra, multiplet struct. 7−141600
polypyrrole bromide, conducting, local struct., X-ray absorption spectra 7−76038
pyrochlores radwaste form, X-ray absorption spectroscopy, α-recoil damage 7−103266
rare earth metals, core level spectra, 4f level occupancy, Coulomb interactions and hybridisation effects 7−144247
rare earth systems, XPS and XAS core level spectra, Anderson impurity model anal. 7−77686
solids, X-ray absorption spectroscopy for 500 to 2000 eV 7−125853
synchrotron radiation as source for chemical applications 7−86735
transition metals and alloys, spin-orbit effects, chem. bonding and 5d orbital occupancy, X-ray absorption meas. 7−138544
trichlorofluoromethane, fluoresc. emission and absorpt. spectra meas. 7−116985
twin linac pulse radiolysis system 7−89805
variable valency compounds X-ray absorption spectra theory 7−77687
$[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF Xα SW calcs. 7−109763
$[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF Xα SW calcs. 7−109763
Al-Cu-Li icosahedral struct., X-ray absorption fine struct. meas. 7−111452
$Ba_2RCu_3O_7$, (R=Y,Er,Ho), high T_c supercond., X-ray absorption meas. 7−144178
Be I, II, laser produced plasma, inner-shell photoabsorpt. spectra 7−135872
Ce, giant 4p-quadrupole resonances, X-ray absorpt. study 7−135861
$CeCl_3$ $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
CeO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
CeO_2 localised and extended f states in 3d X-ray absorpt. spectra 7−144176
CeO_2, mixed valence system, photoemission, photoabsorption and inverse photoemission studies 7−106372
CeO_2, specific valence, X-ray absorption spectra studies 7−76841
$CeRh_3$, mixed valence system, photoemission, photoabsorption and inverse photoemission studies 7−106372
Co complexes, X-ray K-absorption edge anal. 7−125849
$CuGa_{1-x}In_xSe_2$, X-ray absorpt. study, near edge struct. 7−125858
$CuInX_2$ (X=S, Se, Te), X-ray absorpt. near edge struct. study 7−125859
Eu, mixed valent state under high press. 7−76855
$EuCl_3$ $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
Fe-Cr-Ni alloy, X-ray quantitative microanalysis, calculation method 7−114048
$Fe_{90}Zr_{10}$, amorphous, electronic struct. rel to H 7−105379
$GdCl_3$ $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
K_3RuCl_6, X-ray absorption-edge structures 7−99977
Kr multielectron transitions above the K edge 7−96592
La insulating compounds 7−77694
LaB_6 $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
$LaCl_3$ $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
LaF_3, core level spectra, many body effects 7−106371
LaF_3, La 4d→4f resonance absorpt., transmission spectra temp. depend. study 7−99976
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., X-ray absorption spectra studies 7−99974
$(La_{1-x}M_x)_2CuO_4$ (M=Ba,Sr) high T_c supercond., absence of struct. transition, X-ray studies 7−99975
La_2O_3, core level spectra, many body effects 7−106371
LaPd, inner shell photoemission and photoabsorption spectra, many body effects 7−77694
$(La_{1-x}Sr_x)_2CuO_{4-y}$, high T_c supercond., soft X-ray absorpt. studies 7−144179
$La_{2-x}Sr_xCuO_{4-y}$, high T_c supercond., X-ray absorption meas. 7−144178
LiF, K continuous absorpt. spectra, cluster description of fine structure 7−70937
Mg_2CoH_5, electronic struct. and densities of states, X-ray emission and absorpt. spectra 7−84671
Mg_2FeH_6 electronic struct., X-ray absorpt. spectra, APW calcs. 7−85894
$(NH_4)_3RhCl_6$, X-ray absorption-edge structures 7−99977
NaF, K continuous absorpt. spectra, cluster description of fine structure 7−70937
Ni-P, amorphous alloys, densities of stakes, effects of medium-range order 7−143307
$NiSi_2$, electronic struct. features due to d-s, p resonance *(Russian)* 7−124853
Ni_2Si, empty states, soft X-ray absorpt. spectra 7−119071
$Pd(acac)_2$, complex, Pd L_{III} X-ray absorpt. edge spectra 7−138548
$Pd_2(dba)_3.CHCl_3$, complex, Pd L_{III} X-ray absorpt. edge spectra 7−138548
PrO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
PrO_2, localised and extended f states in 3d X-ray absorpt. spectra 7−144176

X-ray absorption spectra continued
PrO_2, specific valence, X-ray absorption spectra studies 7−76841
PrO_x, mixed valent, X-ray absorption spectra studies 7−92140
$RBa_2Cu_3O_{6+x}$ (R=Y,Yb,Ce,Pr), possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
$RhCl_3.3H_2O$, X-ray absorption-edge structures 7−99977
$RuCl_3.nH_2O$, X-ray absorption-edge structures 7−99977
$Ru(NH_3)_6\ Cl_3$, X-ray absorption-edge structures 7−99977
SCl_2, K-shell X-ray absorpt. spectra 7−109925
S_2Cl_2, K-shell X-ray absorpt. spectra 7−109925
$SOCl_2$, K-shell X-ray absorpt. spectra 7−109925
SO_2Cl_2, K-shell X-ray absorpt. spectra 7−109925
a-Si:H films, plasma deposited, electronic struct. 7−76747
SmB_6 $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
$SmCl_3$ $4d^94f^{n+1}$ excited state, $N_{4,5}$ X-ray absorpt. spectra studies 7−77693
Sr cpds. and minerals, X-ray absorpt. spectra, K-edge shifts 7−70940
TbO_2 localised, extended and valence states, X-ray L_{III} absorpt. edges study 7−144177
TbO_2 localised and extended f states in 3d X-ray absorpt. spectra 7−144176
TbO_2, specific valence, X-ray absorption spectra studies 7−76841
Th, rocksalt-structure compounds, X-ray diffr. and absorption edge meas. 7−77696
TmS(Se)(Te), intermediate valence cpds., L_{III} X-ray absorption spectra 7−92781
U, rocksalt-structure compounds, X-ray diffr. and absorption edge meas. 7−77696
$YBa_2Cu_3O_y$, high T_c supercond., orthorhombic and tetragonal phases, valency of Cu ions, X-ray absorpt. edge 7−144174
Yb, 5p edge optical absorpt. spectra determ., electron emission processes study 7−144181
Yb-Rh-Sn, superconducting, Yb valence fluctuations, X-ray absorption studies 7−77688
$Yb_{1-x}In_xCu_z$ valence phase transition studies 7−98948
Yb_xPd_{1-x} amorphous alloys, composition-induced valence change 7−76842

X-ray analysis
see also electron probe analysis; X-ray chemical analysis; X-ray crystallography; X-ray diffraction examination of materials; X-ray spectroscopy
chest X-ray images texture anal., automatic diagnosis of pneumoconiosis 7−114487
correction calcs., effect of surface topography *(French)* 7−106868
microdensitometer use of X-ray microanalyser, local density change determ. 7−78429
microradiography and microanalysis techniques without focusing adjustments, review *(French)* 7−67444
thin metal specimens, X-ray micro-analysis using STEM 7−111322
Bi_2Te:I, micro X-ray analysis of I content 7−84000
BiTeSb, p branch, thermoelectric efficiency, extrusion effect 7−131621
BiTeSe, n branch, thermoelectric efficiency, extrusion effect 7−131621
$CdSe_{1-x}S_x$, anomalous exciton reflection spectra and surface fluctuations 7−76560
$Pb_{1-x}Sn_xTe$ epitaxial films, MBE deposited, study 7−144281
Pt-Pd, mutual diffusion coeffs., comp. depend., X-ray microanalysis *(Russian)* 7−111940
Ta_2O_5, amorphous, electrically stimulated structural changes, X-ray anal. and optical microscopy 7−132655
Y-Fe-Mo system, phase equilibria 7−100185
$Y_3Fe_{5-x}Mn_xO_5$ films, X-ray microanal., Monte Carlo modelling *(Czech)* 7−98728
Zn_3P_2 films, vacuum deposited, structural, optical, elec. charactn. 7−105737

X-ray apparatus
see also biomedical equipment; X-ray crystallography apparatus; X-ray monochromators; X-ray spectrometers; X-ray tubes
balloon-borne high-energy X-ray modulation collimator telescope 7−140229
Birmingham University long vacuum X-ray facility for telescope testing 7−80951
coded mask telescopes for X-ray astronomy 7−88112
collimation of soft X radiation 7−128727
conical X-ray imaging mirror, design and development 7−97116
densitometer for U/Pu input verification in reprocessing field test 7−109323
digital subtraction angiography filters, image quality optimisation using variable filter arrangements 7−87159
diode, high-speed simple design, plasma diagnostics appl. 7−104457
Extreme Ultraviolet Explorer mirror optical tests and results 7−97183
far UV spectroscopic explorer (FUSE) telescope, optical surface anal. code (OSAC) anal. 7−101687
figured X-ray optics, lacquer coating technique 7−97181
frequency encoding on chirped pulse, principles of streak and framing photography 7−95563
glancing incidence scatt. meas. interpretation, X-ray and UV mirror testing appls. 7−97117
glass fibres, curves hollow core, soft X-ray transmission factors, upper limits 7−123222
grazing incidence metal mirrors for Extreme UV Explorer satellite 7−97115
grazing incidence mirror free abrasive grinding simulation with vertical honing and flexible blades 7−97180
grazing incidence optical systems, diffr. limited performance 7−95701
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986) 7−95085
grazing incidence optics, modified sine condition 7−96946
grazing incidence optics for synchrotron-radiation insertion-device beams 7−95706
grazing incidence optics metrology at National Physical Laboratory 7−95710
grazing incidence optics replication 7−97182
grazing-incidence optics surface characterisation for use in extreme UV and X-ray regions 7−95704
high speed photography, videography and photonics, conf., San Diego, CA, USA (Aug. 1986) 7−95086
high vacuum testing apparatus for soft X-ray examination *(Japanese)* 7−120248
hybrid telescope system, design and performance consideration 7−95702
in situ reactive glow discharge cleaning of X-ray optical surfaces 7−102574
K-edge densitometer, installation at Dounreay reprocessing plant, safeguards appl. 7−109324
Kirkpatrick-Baez grazing incidence X-ray mirrors, automated figure formation 7−95709
lacquer polishing of X-ray optics 7−90841
layered synthetic microstructures, optimisation for broadband refl. at soft X-ray, EUV wavelengths 7−121310
microanalyser use as microdensitometer in local density change determ. 7−78429
microscope develop., oblique-incident type *(Japanese)* 7−116035
Mirrabooka instrument package design study 7−137
mirror, grazing incidence, manufacture 7−90852
mirror, spherical, soft X-ray beam deflection 7−181
mirror, Wolter type-I, imaging characteristics for laser plasma diagnostics 7−108718
mirrors and multilayers, high-resolution angle resolved X-ray scatt. 7−97118
mobile X-ray generators, review 7−128726
multilayer X-ray mirrors for the wavelength interval 25-44 Å 7−103927
multilayered mirrors, fabrication *(French)* 7−65
multilayers, temp. stability at high temps. 7−46
optical component manufacture, precision mechanics *(German)* 7−80950
pinhole camera for monochromatic X-ray imaging of plasma 7−83540
PIXE aerosol analysis using automatic target changer 7−86870
PIXE/PESA analysis of aerosols using external beam setup 7−87943
pulsed X-ray facility for testing radiation effect. instruments at SLAC 7−89886
radiometric instrumentation for Mo ore deposits anal. *(Russian)* 7−79634
radiotherapeutic endocavitory treatment system dosimetry 7−101087
RRK-103 X-ray well logger for mining geology *(Russian)* 7−79637
scattered radiation convertor use with crystal diffraction analyser in geophysics *(Russian)* 7−79638
screen/film MTF data, Logit analysis 7−99358
soft X-ray imaging by solid-state TV camera 7−80960
soft X-ray streak cameras resolution characts. comparison 7−95713
Solar-A Wolter type I soft X-ray telescope, optical props. 7−79836
Spacelab 2 coded mask X-ray telescope 7−88111
synchrotron radiation mirror design, thermal loading considerations 7−95707
synchrotron radiation multilayer mirror for soft X-rays, design, manufacture and eval. *(Japanese)* 7−116036
synchrotron radiation optics, surface roughness property survey 7−95705
Technology Mirror Assembly (TMA) mirror quality requirements and achievements 7−95703
Technology Mirror Assembly project, assembly and alignment techniques 7−95708
Wolter type 1 telescopes, transverse ray aberration anal. 7−96945
X-ray instrumentation: X-ray CT and digital radiography *(Japanese)* 7−119845

X-ray applications
see also radiation therapy; radiography; X-ray lithography
angiograms, X-ray, automatic blood vessels detection 7−133499
cardiac muscle, in vivo perfusion meas. method based on X-ray fluoresc. 7−71852
chest X-ray images texture anal., automatic diagnosis of pneumoconiosis 7−114487
dilatometry, linear expansion coeff. of refractory materials meas., at high temp. 7−124037
ICF core imaging, computed tomography using URA coded aperture cameras 7−91369
medicine, conversion factors for X-ray beam qualities, specified by peak tube pot. and HVL value 7−107251
microdensitometer use of X-ray microanalyser, local density change determ. 7−78429
microscope develop., oblique-incident type *(Japanese)* 7−116035
microscopy with synchrotron radiation 7−67446
partial discharge sites location using modulated X-rays 7−67455
plasma diagnostics, high-speed simple design of X-ray diode 7−104457
radiotherapy, air-cavity inhomogeneity effects for ^{60}Co, 6-, and 10 Mv X-ray beams 7−71884
radiotherapy, endocavitory treatment system dosimetry 7−101087
radiotherapy, photon scatter perturbations due to small inhomogeneities 7−71880
radiotherapy, semianalytical method for design of linac X-ray beam flattening filter 7−101(illegible)
rotation therapy using X-rays, treatment planning optimisation 7−145203
soft X-ray contact microscopy of biological specimens using plasma source produced with laser 7−79165
stress measurement, automated system 7−88974
texture analysis of diagnostic X-ray images by use of fractals 7−93922
therapeutic uses of X-rays, historical review 7−108129
Tokamak plasma diagnostics, using duo-multichannel soft X-ray spectrometer 7−142(illegible)
tomographic image reconstruction, geometry-free technique using convex projections 7−1731
triaxial stress meas. by X-rays, Poisson's ratio and stress-free lattice spacing 7−142244
Varian Clinac 600 linear accelerator, characts. of 6 MV photon beam 7−71882
X-ray scanning densitometry, limestone internal structure determ. *(French)* 7−145443

X-ray astronomical observations
see also X-ray sources (astronomical)
A0535+26, X-ray pulsar, new X-ray outburst obs. (1987 February 20) 7−80041
2A 0335+096, poor galaxy cluster, X-ray spectrum obs. 7−88651
3A 0729+03, intermediate polar, X-ray emission regions discovery, EXOSAT and visible obs. 7−72465
3A 1907+09, orbital characts., neutron star rot. characts. and pulse averaged spectra 7−72535
Abell 23 galaxy cluster, mag. field excess determ. from rot. measures and X-ray emission 7−80114
Abell 7 X-ray and optical study of dense rich cluster of galaxies 7−88(illegible)
V1343 Aql (SS 433), simultaneous obs. of X-ray and optical eclipse 7−1405

X-ray astronomical observations continued
Aql X-1, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
R Aqr, EXOSAT and IUE obs. of symbiotic Mira during max. and min. 7−107840
R Aqr, symbiotic Mira variable, first unambiguous X-ray detect. 7−140096
TT Ari, nova, variable, simultaneous X-ray and optical study 7−115426
UX Ari, X-ray flaring of RS CVn star 7−140175
burst sources, detection of absorpt. lines in X-ray spectra *(Japanese)* 7−140160
3C 273, quasar, hard X-ray obs. 7−140318
3C 273, X-ray emission assoc. with jet, Einstein HRI obs. 7−80120
3C 66A, BL Lac object, X-ray and optical brightness trends 7−101898
OY Car, nonmagnetic cataclysmic variable star, X-ray emission obs. 7−115422
OY Car, SU UMa star, May 1985 superoutburst, extended coronal region detect., X-ray and optical obs. 7−115440
cataclysmic variables, X-ray obs. 7−115421
ω Cen, globular cluster, X-ray and UV obs. with EXOSAT 7−140190
V834 Cen (=E 1405−451), X-ray light curve changes in AM Her-type star 7−115515
Cen X-4, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
Cir X-1, HF and LF QPO origin 7−107904
TV Col (2A 0526−32), DQ Her type star, new EXOSAT obs. 7−115427
Crab Nebula, 22-64 keV emission characts. 7−140229
Crab Nebula, X-ray obs. of nebula and pulsar NP 0532 by Astron automatic station 7−140221
CH Cyg, symbiotic star, X-ray emission obs. 7−101789
Cyg A galaxy cluster, X-ray emission obs. 7−107971
Cyg X-2, complex cross-spectra of X-ray intensity vars. 7−140172
Cyg X-2, HEAO A-1 X-ray obs. of 5 Hz quasi-periodic oscills. 7−72527
Cyg X-2, quasi-periodic oscillations, high time resolution medium energy data 7−80050
Cyg X-2, quasi-periodic oscill. obs. by Einstein (HEAO 2) observatory 7−88516
Cyg X-2, spectra and quasi-periodic oscills. 7−127953
Cyg X-3, EXOSAT obs. of synchrotron X-ray halo 7−134320
Cyg X-3, high energy γ-ray and hard X-ray emission obs. 7−80031
Cyg X-3, simultaneous X-ray and IR obs. of flares 7−88520
Cyg X-3 4.8-hour X-ray modulation, Tenma obs. 7−140182
diffuse X-ray background, granularity anal. rel. to background origin 7−128132
dMe-type flare stars, flare power-coronal soft X-ray power relation 7−88405
AG Dra, satellite and ground-based obs. of quiescent energy distrib. 7−107839
AG Dra, X-ray and UV obs. during quiescence and outburst 7−107838
E1114+182, AM Her star, X-ray light curves from EXOSAT obs. 7−72508
E2003+225, AM Her star, new soft X-ray emission mode 7−120506
1E 0116.3−0116, X-ray bright early-type galaxy, optical and X-ray obs. 7−120599
1E 1048.5+5421, new 114-minute AM Her binary, X-ray and optical obs. 7−115518
early-type galaxies, props. of X-ray emitting gas from Einstein Observatory obs. 7−72606
EF Eri, AM Her star, X-ray and optical flickering 7−107901
EF Eri (2A 0311-227), AM Her star, Einstein obs. 7−127963
EXO 020528+1454.8, dMe stars pair optical counterpart, X-ray and visible obs. 7−128128
EXO 023432−5232.3, new 114-min. AM Her-type binary, X-ray and optical obs. 7−80028
EXO 0748−676, transient low mass X-ray binary, 3.8 hour periodic intensity dips and eclipses 7−88512
EXO 120723−5209.8, possible neutron star (in SNR PKS 1209−52) 7−72572
EXO 165228+3930.3, new EXOSAT source at high galactic latitude 7−95050
EXO 171224−6653.9, serendipitous X-ray source, EXOSAT obs. and optical counterpart identification 7−134273
galactic bulge sources, X-ray emission lines, Einstein obs. 7−88515
GBS 0526−66, 1979 March 5 gamma-ray burst source location, EXOSAT obs. 7−80130
GX 301-2 (WRA 977), slow X-ray pulsar, X-ray obs. through two binary cycles 7−107897
GX 339−4 (4U 1658−48), X-ray and visible obs. of X-ray high state (1983 May) 7−88514
GX 3+1 (4U 1744−26), obs. of quasi-periodic oscills. in X-ray flux 7−94957
GX 5−1, complex cross-spectra of X-ray intensity vars. 7−140172
GX 5−1, quasi-periodic oscills. obs. by Einstein (HEAO 2) observatory 7−88516
H2155−304, BL Lac object, X-ray intensity and spectral vars. obs. 7−120616
H2252-035, intermediate polar, obs. of phase-dependent low-energy absorpt. and Fe line emission 7−115508
H 0139−68, X-ray and optical obs. of AM Her-type star 7−115514
H 0542−407, new DQ Her star, HEAO-1 obs. and optical identification 7−101958
HD 155555, RS CVn star, X-ray photometry rel. to coronal plasma temp. 7−134273
HDE 283572, X-ray emission from G-type pre-main-sequence star 7−107821
Her X-1, pulse profile rapid change and high-state precession modelling 7−140173
HR 192020, detect. in X-rays 7−146067
EX Hya, AM Her star, 67 minute X-ray period, Einstein obs. 7−140156
VW Hyi, dwarf nova, soft X-ray oscills. obs. during superoutburst 7−134236
VW Hyi, nonmagnetic cataclysmic variable star, X-ray emission obs. 7−115422
VW Hyi, X-ray SU UMa star, EXOSAT obs. 7−72464
HZ 43, DA white dwarf, soft X-ray spectrum characts. 7−96
IC 4296 (PKS 1333−33), radiogalaxy, spectroscopy, X-ray imaging, IR and surface photometry obs. 7−95013
BL Lac objects, X-ray intensity and spectral vars. (in H2155−304 and PKS 0548−322) 7−120616

X-ray astronomical observations continued
late-type giant stars, atm. characts., EXOSAT and IUE obs. 7−79954
late-type stars, comparison of coronal X-ray emission obs. by Einstein and EXOSAT 7−120385
LMC, soft X-ray emission map at 250 eV 7−88608
LMC low mass X-ray binaries, evidence for mass flow onto black holes 7−127952
M31, X-ray spectral props. of galactic bulge 7−120598
M33 X-8, central X-ray source in M33, EXOSAT obs. 7−80084
Markarian 421, simultaneous multifreq. obs. of BL Lac object 7−101930
Markarian 509, EXOSAT X-ray spectrum 7−128066
Mirrabooka instrument package design study 7−145837
MXB 1730−335 (Rapid Burster), EXOSAT obs. of new mode of behaviour during outburst 7−101846
N132D, supernova remanent in LMC, X-ray morphology 7−101887
NGC 1068, Seyfert 2 galaxy, X-ray spectrum nature and origin 7−120606
NGC 6814, Seyfert, X-ray flux short time scale variability 7−88617
NGC 6888, Wolf-Rayet ring nebula, X-ray emission upper limit 7−146067
NGC 7314, narrow emission line galaxy, obs. of dramatic X-ray vars. 7−95028
novae, EXOSAT obs. of X-ray emission during outburst stage 7−115430
novae, X-rays during outburst stage, EXOSAT obs. 7−94883
NP 0532 (Crab pulsar), X-ray emission obs. by Astron automatic station 7−140221
RS Oph, recurrent nova, X-ray obs. from tenuous remnant 7−115421
ρ Oph dark cloud, X-ray emission from thin thermal plasma 7−140247
Ophiuchus galaxy cluster, X-ray emission obs. 7−107971
EQ Peg, EXOSAT and IUE obs. of 1984 December 7 flare 7−120418
X Per, X-ray pulse period, 1984 Tenma obs. 7−140181
PG 1211+143, quasar, X-ray spectrum rel. to origin of X-ray-UV excess 7−115622
Pic A, obs. of X-ray optical synchrotron counterpart of western radio hot spot 7−101935
PKS 0548−322, BL Lac object, X-ray intensity and spectral vars. obs. 7−120616
PKS 0745−191 galaxy cluster, X-ray emission obs. 7−107971
PKS 1209−52, EXOSAT obs. 7−72572
PSR 1055−52, EXOSAT obs. and temp. determ. 7−127934
PSR 1929+10, search for X-ray emission using EXOSAT 7−94931
Pup A, supernova remnant, X-ray and forbidden coronal Fe line images 7−115551
quasars, high-redshift, X-ray props. from Einstein obs., and optical spectra 7−101951
quasars, luminosity depend. of X-ray/IR emission ratio 7−128110
2S 0921−630, long period low-mass X-ray binary, partial X-ray eclipse obs. 7−94958
Sco X-1, intensity and source state depend. of quasi-periodic oscills. 7−127967
Sco X-1, orbital X-ray var. search using Ariel 5 data 7−72529
SMC, X-ray images using Einstein IPC 7−128067
SN 1987A in LMC, flux limits from hard X-ray/gamma-ray expt. 7−101827
SN 1987A in LMC, neutrino and photometric obs. and search for progenitor X-ray flux 7−72481
SN 1987A in LMC, UBV photometry magnitudes, but no soft X-rays (1987 May-September) 7−146008
SN 1987A in LMC, upper limits on hard X-ray/gamma-ray line and continuum fluxes 7−115476
SN 1987A in LMC, X-ray flux, archive brightness, and spectral evolution 7−80016
SN 1987A in LMC, X-ray flux increase and BVIR photometry 7−140132
SN 1987A in LMC, X-ray flux limit and spectrum vars. (1987 February 26 to March 9) 7−72485
soft X-ray diffuse background, obs. at 0.1 keV 7−88691
solar flare, 1985 July 2, new spectral line identifications in high-temp. flare 7−88363
solar flare, momentum balance by X-ray and optical observations 7−79932
solar flare hard X-ray bursts, Halpha characts. *(Chinese)* 7−115342
solar flares distribution, 1980 to 1985, evidence for superactive regions and active zones 7−115337
spiral galaxies, X-ray images and spectral parameters of 13 galaxies 7−107949
Sun, 1980 November 12 17.00 UT flare, SMM obs. and hydrodynamic modelling 7−72381
Sun, coronal loops, plasma and mag. field characts. 7−107788
Sun, emission assoc. with February 1986 flares and their assoc. geomag. disturbances 7−127653
Sun, flare Mg XII, 8.42 Å doublet obs. 7−134215
Sun, flares, impulsive phase, nonthermal energy distributions determ. from Fe XXV and Fe XXIV lines obs. 7−140018
Sun, homologous flares, energy release, mag. field struct. and spatial morphology, UV and X-ray obs. 7−140007
Sun, short hard X-ray events, evidence for repetitive structures 7−140020
Sun, soft X-ray pulsations obs. 7−134204
Sun, X-ray emission rel. to radio continua during flares 7−79918
V471 Tau, white dwarf 9.25 minute pulsation and orbital phase depend. X-ray dips 7−88525
4 U 0115+63, recurrent X-ray transient, new outburst obs. (February 1987) 7−72532
4U 1145−619, EXOSAT and Einstein obs. of pulsating X-ray binary 7−72531
4U 1145−619 (Hen 715), X-ray and optical spectral vars. during X-ray outburst 7−127973
4U 1145-619, pulse timing characts., effects of orbital characts. in modelling 7−72534
4U 1538−52, spectra and pulse period 7−120499
4U 1746−37, X-ray binary in globular cluster NGC 6441, constraints on neutron star mass-radius relation 7−94954
4U 1820−30 in globular cluster NGC 6624, discovery of 15-30 Hz QPO 7−120504
4U 2129+12, X-ray source in M15, discovery of 8.5-hour X-ray period 7−120505
4U 2129+47, X-ray burst obs. 7−115519
4U/MXB 1636−53, relation between amount of accreted fuel and strength of X-ray burst 7−146040
4U/MXB 1820−30, EXOSAT obs. of double-peaked burst, radius expansion 7−107896

X-ray astronomical observations continued
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
ER Vul, short-period RS CVn system, EXOSAT obs. of 1.5 orbital cycles 7−127972
Wolf 630 system, low-energy X-ray obs. 7−127968
X0142+614, soft X-ray source, obs. of 25-min X-ray modulation 7−95051
X 1820−303 in globular cluster NGC 6624, orbital period 7−72533
X-ray binaries, search for msec periodic and quasi-periodic pulsations 7−72526
X-ray nova at $\alpha=13^h53.0^m$, $\delta=-64.4°$, discovery by Ginga all-sky monitor (February 1987) 7−72532
X-ray sources, HEAO-1 obs. and optical identifications 7−101958
XB 1254−690, low-mass X-ray binary, obs. of 3.9 hr periodic dips in X-ray intensity 7−88522
Z, X-ray props. from Einstein obs. 7−101889

X-ray astronomy
see also X-ray sources (astronomical)
Advanced X-ray Astrophysics Facility, assembly and alignment of Technology Mirror Assembly 7−95708
Advanced X-ray Astrophysics Facility, conference, Houston, Texas (January 1986) 7−134337
ASTERIX, high energy data anal. system at Birmingham University 7−88127
Astro-C satellite, instrumentation and sources for obs. 7−115197
AXAF mission, CCD instrumentation 7−67450
background due to intergalactic plasma 7−101925
background radiation, contrib. of discrete sources and effects of diffuse processes 7−80132
background spectra rel. to discrete sources spectra in chronometric cosmology 7−101966
balloon-borne high-energy X-ray modulation collimator telescope 7−140229
Birmingham University long vacuum X-ray facility for telescope testing 7−80951
coded aperture images, energy-resolved time-resolved with URA tagging 7−139935
coded mask techniques and equipment 7−88112
conical X-ray imaging mirror, design and development 7−97116
diffuse X-ray background, bremsstrahlung model rel. to density of intergalactic medium 7−115595
diffuse X-ray background, contrib. of X-ray emission from high-redshift quasars 7−101951
diffuse X-ray background, implications for evolution of quasars 7−88663
diffuse X-ray background origin, implications of background granularity anal. 7−128132
EXOSAT onboard reprogrammability 7−145801
EXOSAT source intensity power spectra data, instrumental effects removal 7−107721
gas scintillation drift chambers with wave shifter read-out for hard X-ray astronomy 7−72307
gas scintillation proportional counter for the X-ray astronomy satellite SAX 7−72308
grazing incidence mirror free abrasive grinding simulation with vertical honing and flexible blades 7−97180
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986) 7−95085
grazing incidence optics for synchrotron-radiation insertion-device beams 7−95706
He-like ions, collisional excitations rate coeffs. with inclusion of reson. effects 7−94650
High throughput X-ray Spectroscopy Mission, TWG report 7−94661
history and developments (book) 7−88759
hybrid telescope system, design and performance consideration 7−95702
imaging of γ-rays and X-rays using Fourier transform techniques 7−72311
imaging XUV telescope calibration, upper limit to refr. index thermal coeff. of fused silica at 184.9 nm 7−72301
ionising radiation field in Galactic halo, appl. to photoionisation models 7−88583
Kirkpatrick-Baez grazing incidence X-ray mirrors, automated figure formation 7−95709
MARTHE−Mirror Array Telescope for High Energies, rocket borne 7−88114
Mirrabooka instrument package design study 7−145837
Mirrabooka X-ray astronomy expt., detector concept prototype, balloon flight 7−139928
multipath rotating modulation collimator, hard X-ray images 7−72310
nuclear power systems symposium, Washington, DC, USA (Oct. 1986) 7−66813
objective crystal spectrometer for Bragg imaging of extended cosmic X-ray sources 7−139915
proportional counter, multistep design, performance, X-ray astronomy appl. 7−115234
soft X-ray background, embedded cloud geometry effects 7−88688
soft X-ray background and SN blast wave viewed from inside 7−88686
soft X-ray background from local supernova remnant, mass-loaded flow model 7−140245
soft X-ray diffuse background, obs. at 0.1 keV 7−88691
solar flare hard X-ray bursts, Halpha characts. *(Chinese)* 7−115342
solar flares, wavelength predictions for the $1s^22p$-$1s2p3p$ satellite transitions 7−120273
solar flares, X-ray spectral line ratios rel. to plasma temp. determ. 7−115335
Solar-A Wolter type I soft X-ray telescope, optical props. 7−79836
Spacelab 2 coded mask X-ray telescope 7−88111
Spacelab-2 X-ray telescope flight (1985), operations 7−88076
Sun, Al XII, line ratios sensitive to electron temp. and density 7−127719
Sun, coronal loops, plasma and mag. field characts. 7−107788
Sun, flare impulsive phase, hard X-ray spatial struct. 7−134210
Sun, flare X-ray characts., Hinotori obs. review 7−107793
Sun, flare X-ray emission and cosmic rays 7−72390
Sun, flares assoc. with ^{3}He-rich particle events from coronal source regions 7−134217
Sun, flares occurrence rate, 152 day periodicity 7−107791
Sun, flaring corona X-ray bursts modelling 7−145926
Sun, hard X-ray emission and flare electrons stochastic accel. 7−134213
Sun, role played by Birmingham University Department of Space Research 7−88362

X-ray astronomy continued
Sun, X-ray emission mechanism, implications for stars 7−127816
Technology Mirror Assembly (TMA), mirror quality requirements and achievements 7−95703
telescopes, high resolution imaging technique 7−134901
Wolter type 1 telescopes, transverse ray aberration anal. 7−96945
XLA detector for fast timing experiments on NASA Space Station 7−79826
e^+e^- bremsstrahlung in thermal plasma, analytical functions 7−101669
Fe spectral features detection in cooling spectrum of X-ray bursts, required detector size 7−134274

X-ray binary stars
see also cataclysmic binary stars
A0535+26, X-ray pulsar, new X-ray outburst obs. (1987 February 20) 7−80041
A0620−00, black hole binary star, photometric and radial vel. obs. 7−88511
A0620−00 (616 Mon), black hole binary system, evolutionary scenario 7−140154
A 0535+26, binary X-ray pulsar, search for UV variability 7−88537
A 0535+26(HDE 245770), optical study of Be/X-ray transient 7−94944
3A 0729+103, intermediate polar, X-ray emission regions discovery, EXOSAT and visible obs. 7−72465
3A 1907+09, orbital characts., neutron star rot. characts. and pulse averaged spectra 7−72535
AC 211/X2127+119, X-ray binary in M15, CCD photometry rel. to 8.5-hr orbital period 7−115502
accreting neutron star with isothermal atmosphere, infalling plasma stopping mechanisms 7−107885
accreting neutron stars, directionality and spectrum of X-ray emission from uniformly heated mag. neutron star 7−127944
accreting neutron stars, electron cyclotron resonance instability of magnetised photosphere 7−94938
accreting neutron stars, long X-ray bursts as probe of interior thermal evolution 7−107887
accreting neutron stars, quasi-periodic oscillations in ms range 7−80049
accreting white dwarf spin-up and mixing, implications for X-ray emission 7−140085
accreting white dwarfs, LTE model atmospheres rel. to soft X-ray-EUV spectra 7−94874
accretion disks luminosities, determ. for different metric theories of gravitation 7−115371
V1343 Aql (SS 433), accretion disk model for moving spectral lines 7−127891
V1343 Aql (SS 433), constraints on binary system from optical continuum spectrum obs. 7−88430
V1343 Aql (SS 433), disk-type accretion model and appl. to activity in galactic nuclei 7−140263
V1343 Aql (SS 433), dynamical model for jets precession 7−88429
V1343 Aql (SS 433), effect of radiative acceleration instability on jets struct. 7−139899
V1343 Aql (SS 433), Hα emission profiles of jets *(Russian)* 7−140109
V1343 Aql (SS 433), jets parameters determ. *(Russian)* 7−145997
V1343 Aql (SS 433), photometric study of two periodicities over seven years 7−120444
V1343 Aql (SS 433), simultaneous obs. of X-ray and optical eclipse 7−140105
V1343 Aql (SS 433) rapid photometric and spectral var. 7−127883
Aql X-1, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
R Aqr, symbiotic star, obs. of linear polarization vars. 7−72473
FO Aqr (=H 2215−086), spin down of intermediate polar 7−115455
FO Aqr (H2215−086), DQ Her star, photometric obs. rel. to white dwarf spin-down 7−134250
TT Ari, b photoelectric photometry (1986 October) 7−115468
TT Ari, nova-like variable, simultaneous X-ray and optical study 7−115426
TT Ari, possible intermediate polar, photometric characts. 7−115416
asymmetric beam emission from neutron star, origin 7−115527
bulge X-ray sources, mag. fields of neutron stars 7−94945
burst sources, non-LTE radiation-driven wind models in bursting neutron stars 7−101841
burst sources, nonradial g-mode oscills. spectrum in neutron star components 7−127938
burst sources, origin of absorpt. lines in X-ray spectra *(Japanese)* 7−140160
burst sources, type I, effects of wind collimation by thick accretion disks 7−80036
burst sources, Type I X-ray bursts energetics and nuclear fuel reservoir in stellar envelope 7−146041
bursters, X-ray spectra and atm. struct. modelling (appl. to MXB 1636−536) *(Japanese)* 7−146024
bursting neutron stars, X-ray spectra and atmospheric structures 7−140183
CY Car, nonmagnetic cataclysmic variable star, X-ray emission obs. 7−115422
cataclysmic variable stars, X-ray obs. 7−115421
ω Cen, globular cluster, X-ray flux vars. and spectral parameters of X-ray point sources 7−140190
V834 Cen (=E 1405−451), X-ray light curve changes in AM Her-type star 7−115515
Cen X-4, soft X-ray transient source, EXOSAT obs. during quiescence 7−140151
V779 Cen-Cen X-3, neutron star accretion disk model, photometry anal. 7−88502
Cir X-1, HF and LF QPO, origin 7−107904
HL CMa (IE 0643.0-1648), dwarf nova, IUE. obs. rel. to winds of cataclysmic variables 7−115428
BG CMi (=3A 0729+103), orbital period modulation of intermediate polar spectra 7−115454
TV Col (2A 0526−328), DQ Her type star, new EXOSAT obs. 7−115427
compact X-ray binaries in hierarchical triple system., time var. of inner binary separation 7−120501
CW 1103+254, AM Her star, cyclotron line emitting region characts. and J-band polarisation 7−127949
SS Cyg, accretion disk struct., visible spectra obs. 7−115438
V1500 Cyg, circular polarization of AM Her-type variable 7−120507
SS Cyg, dwarf nova, obs. of periodic vars. in IUE spectra 7−115429
SS Cyg, spectral and photometric characts. 7−115407

X-ray binary stars continued
CH Cyg, symbiotic star, X-ray emission obs. 7−101789
Cyg X-2, complex cross-spectra of X-ray intensity vars. 7−140172
Cyg X-2, HEAO A-1 X-ray obs. of 5 Hz quasi-periodic oscills. 7−72527
Cyg X-2, quasi-periodic oscillations, high time resolution medium energy data 7−80050
Cyg X-2, quasi-periodic oscills. obs. by Einstein (HEAO 2) observatory 7−88516
Cyg X-2, spectra and quasi-periodic oscills. 7−127953
Cyg X-3, EXOSAT obs. of synchrotron X-ray halo 7−134320
Cyg X-3, flywheel model 7−88534
Cyg X-3, high energy γ-ray and hard X-ray emission obs. 7−80031
Cyg X-3, PeV and TeV γ-ray emission, model involving accretion disk 7−120516
Cyg X-3, radio and IR flares modelling 7−127957
Cyg X-3, radio flux density vars. (1982-5) 7−88521
Cyg X-3, radio outburst and relativistic expansion 7−88519
Cyg X-3, SAS-2 data examination 7−140170
Cyg X-3, simultaneous X-ray and IR obs. of flares 7−88520
Cyg X-3, strongly interacting particle evidence from underground muon data 7−88539
Cyg X-3, supersymmetric cosmic accelerators, flux at Earth, companion stability, underground muons 7−127656
Cyg X-3, underground muon interpretation, cygnets, constraints on life-time, mass, energy, charge *(German)* 7−134278
Cyg X-3, underground muon search 7−120647
Cyg X-3 4.8-hour X-ray modulation, Tenma obs. 7−140182
Cyg X-3 cosmic ray source, hadronic matter and muon production in extensive air showers 7−134100
Cyg X-3 source, underground obs. in >200 GeV range 7−88685
Cyg X-3 ultrahigh energy signal, EAS time delay 7−146051
Cygnus X-3, gamma-rays of $>10^{14}$ eV, air-shower observation study 7−134322
discovery and charact. (book) 7−88759
E1013−477, possible intermediate polar, photometric periods from I-band CCD obs. 7−80048
E1114+182, AM Her star, X-ray light curves from EXOSAT obs. 7−72508
E2003+225, AM Her star, new soft X-ray emission mode 7−120506
1E 1048.5+5421, new 114-minute AM Her binary, X-ray and optical obs. 7−115518
1 E 1145-6141, X-ray pulsar, orbital parameters determ. from primary star spectra 7−134277
E 1405−451, AM Her star, mag. fields and accretion column absorpt. features, spectropolarimetric obs. 7−140164
E 1405−451, AM Her star, optical 2 second var. 7−115505
EF Eri, AM Her star, 2-3 sec quasi-periodic oscills., role of mag. field 7−120492
EF Eri, AM Her star, simultaneous five-colour (UBVRI) polarimetry 7−115506
EF Eri, AM Her star, X-ray and optical flickering 7−107901
EF Eri (2A 0311−277), AM Her star, mag. field strength in Hα emission line region 7−140153
EF Eri (2A 0311-227), AM Her star, Einstein obs. 7−127963
EXO 023432−5232.3, new 114-min. AM Her-type binary, X-ray and optical obs. 7−80028
EXO 0748−676, eclipsing X-ray binary, variable light curve charact. 7−72515
EXO 0748−676, transient low mass X-ray binary, 3.8 hour periodic intensity dips and eclipses 7−88512
EXO 0748−676, transient X-ray burst source, burst behaviour 7−88513
EXO 171224−6653.9, serendipitous X-ray source, EXOSAT obs. and optical counterpart identification 7−134273
EXO 2030+375, X-ray transient, CCD photometry of optical counterpart 7−134270
galactic bulge sources, X-ray emission lines, Einstein obs. 7−88515
galactic bulge X-ray sources, review 7−115629
gamma-ray pulsars, curvature synchrotron radiation model 7−146105
GX 17+2, tidal angular momentum loss, triple star model 7−72530
GX 301-2 (WRA 977), slow X-ray pulsar, X-ray obs. through two binary cycles 7−107897
GX 339−4, BVI CCD photometry and double image 7−94949
GX 339−4, faint optical states (1981-6) 7−94952
GX 339−4, optical obs. of possible 1.13 millisecond periodicity 7−101853
GX 339−4 (4U 1658−48), X-ray and visible obs. of X-ray high state (1983 May) 7−88514
GX 339−4 (V821 Ara), black hole candidate, optical variability obs. and limits on periodic modulation 7−127975
GX 339−4 black hole candidate, Halpha spectra of optical counterpart 7−94940
GX 3+1 (4U 1744−26), obs. of quasi-periodic oscills. in X-ray flux 7−94957
GX 5−1, complex cross-spectra of X-ray intensity vars. 7−140172
GX 5−1, quasi-periodic oscills. and spectral state 7−80035
GX 5−1, quasi-periodic oscills. obs. by Einstein (HEAO 2) observatory 7−88516
GX 9+9, X-ray emission lines, Einstein obs. 7−88515
H2252-035, intermediate polar, obs. of phase-dependent low-energy absorpt. and Fe line emission 7−115508
H 0139−68, X-ray and optical obs. of AM Her-type star 7−115514
H 0542−407, new DQ Her star, HEAO-1 obs. and optical identification 7−101958
HD 187399, Be-type X-ray binary, spectroscopic investigation 7−127872
AM Her, general props. *(French)* 7−107900
AM Her, polar, visual magnitude estimates (1986 September 21 to 1987 April 30) 7−94950
AM Her, visual magnitude estimates (1987 May to July) 7−140176
AM Her, white dwarfs mag. axis-rot. axis angle determ. from X-ray flux orbital curves 7−88503
AM Her stars, effect of soft X-ray excess on deduced mass transfer rates 7−107905
AM Her stars, influence of electron scatt. in cyclotron emission regions 7−115452
AM Her stars, models of optical-IR continuous spectrum 7−115509
AM Her stars, secondary orbital motion and evidence for low-mass white dwarfs 7−94956
AM Her stars (magnetic close binary stars), swinging mag. dipoles model 7−115451
Her X-1, 35 day period and neutron star precession *(Russian)* 7−88540
X-ray binary stars continued
Her X-1, pulse profile rapid change and high-state duration modelling 7−140173
Her X-1, pulsed γ-rays detect. above 250 GeV 7−94948
Her X-1 (Hz Her), pulsed TeV gamma rays detect. during X-ray source eclipse 7−88523
AM Her-type stars, effects of inhomogeneous accretion columns 7−115511
AM Her-type stars, emission regions structure 7−115513
AM Her-type stars, time-resolved optical spectroscopy 7−115512
AM Her-type stars, Zeeman features from accretion column 7−115510
EX Hya, 1987 May outburst 7−94891
EX Hya, AM Her star, 67 minute X-ray period, Einstein obs. 7−140156
EX Hya, eclipsing dwarf nova, time-resolved spectrophotometry 7−120441
EX Hya, eclipsing intermediate polar, time-resolved optical spectroscopy 7−140108
EX Hya, intermediate polar, optical light curve periodic modulations 7−115419
EX Hya, U Gem star, 1986 July-August outburst photoelectric obs. 7−145984
EX Hya, visual magnitude estimate (1987 May 5) 7−94892
VW Hyi, dwarf nova, soft X-ray oscills. obs. during superoutburst 7−134236
VW Hyi, nonmagnetic cataclysmic variable star, X-ray emission obs. 7−115422
VW Hyi, X-ray SU UMa star, charact. and multiwavelength monitoring 7−72460
VW Hyi, X-ray SU UMa star, EXOSAT obs. 7−72464
VW Hyi, X-ray SU UMa star, flux and spectra in far-UV, Voyager obs. 7−72463
VW Hyi, X-ray SU UMa star, IUE fluxes and spectral charact. 7−72462
VW Hyi, X-ray SU UMa star, Walraven photometry 7−72461
BL Hyi (H0139−68), AM Her star, polarimetry in high and low states 7−140177
hypercritical spherical accretion onto compact objects, flow struct. 7−88093
IR emission, plasma mechanism *(Russian)* 7−72539
light curve asymmetry of a relativistic accretion disk 7−107811
LMC low mass X-ray binaries, evidence for mass flow onto black holes 7−127952
LMC X-2, spectral charact. similarities to U Sco, evidence for classes evolutionary link 7−127885
ST LMi (=CW 1103+254), polarimetry of AM Her system 7−115516
ST LMi (CW 1103+254), emission line behaviour in polar *(Russian)* 7−140178
low mass X-ray binaries, X-ray light curves modelling 7−101845
low-mass binaries, search for msec periodic and quasi-periodic pulsations 7−72526
low-mass X-ray binaries in globular clusters, implications of millisecond pulsar in M28 (PSR 1821-24) 7−140145
LS I+61°303, variable radio star, assoc. extended radio emission nature, UHF obs. 7−128102
LSI+61°303, peculiar Be star, long-term near-IR photometry 7−120407
MV Lyr, nova-like variable, optical brightening obs. (1987 March 28 to May 2) 7−88451
in M31, evidence for low-mass X-ray binary stars in galactic bulge 7−120598
MXB 1636−536, X-ray burster obs. anal. *(Japanese)* 7−146024
MXB 1730−335 (Rapid Burster), EXOSAT obs. of new mode of behaviour during outburst 7−101846
neutrino flux from X-ray binary stars, upper limit determ. 7−107681
neutrino production and interactions in close binaries 7−88518
neutron stars, accreting, quantised synchrotron radiation in strong mag. fields 7−145815
neutron stars, rapidly rotating, X-ray burst spectra 7−94937
neutron stars spin evolution in wide low-mass X-ray binaries 7−72506
nonpulsing X-ray sources, smearing of beaming pattern by isotropic cloud 7−88509
Nova Cir 1987=X-ray nova 1354−64, photometry and spectroscopy 7−88444
novae, EXOSAT obs. of X-ray emission during outburst stage 7−115430
RS Oph, recurrent nova, multi-freq. obs. of 1985 outburst 7−115425
optical counterparts, CCD obs. 7−127951
GK Per, dwarf nova-like outbursts, accretion disk limit cycle mechanism 7−88441
GK Per, visual magnitude estimates (1986 December-1987 April) 7−94889
X Per, X-ray Be star, discovery of 13.9-min optical periodicity *(Russian)* 7−107907
X Per, X-ray pulse period, 1984 Tenma obs. 7−140181
GK Per (Nova Per 1901), short-term optical vars. obs. during 1983 outburst 7−115443
Population I binaries with X-ray pulsar, intermittent stellar wind accretion and long-term activity 7−88517
VV Pup, AM Her star, simultaneous five-colour (UBVRI) polarimetry 7−115507
QPO phenomenon and general relativity 7−115525
quasi-periodic oscillations, effect of electron scatt. cloud on X-ray oscills. produced by beaming 7−127971
quasi-periodic oscillations, influence of physical phenomena on power spectra 7−146037
quasi-periodic oscillations sources, origin of time lag between hard and soft X-ray photons 7−120515
quasi-periodic oscills. in low-mass binaries, delay meas. 7−146050
recurrent novae evolution to low mass X-ray binary stars 7−127885
reprocessing of X-ray and γ-ray emission, time-dependent calcs. 7−107898
resonant Raman-cyclotron scatt. in very strong mag. fields, transition probabilities and cross sections 7−139901
2S 0921−630, long period low-mass X-ray binary, partial X-ray eclipse obs. 7−94958
Sco X-1, intensity and source state depend. of quasi-periodic oscills. 7−127967
Sco X-1, orbital X-ray var. search using Ariel 5 data 7−72529
Ser X-1, X-ray emission lines, Einstein obs. 7−88515
RW Sex, UX UMa star, photometry and spectral obs. 7−115417
RW Sex (=BD−7°3007), UX UMa star, photometric charact. 7−115418

X-ray binary stars continued
V1223 Sgr (4U 1849−31), intermediate polar, white dwarf spin-down rate from max. light times 7−140107
SMC X-1, wind and X-ray emission 7−80047
SS 433, ejected blobs from binary star, evolving radio struct. 7−127908
V471 Tau, white dwarf 9.25 minute pulsation and orbital phase depend. X-ray dips 7−88525
thick accretion disks, theory and obs. 7−145941
tidal capture X-ray binaries in globular clusters, evolution from 4U 2127+12 (M15) to 4U 1820−30 (NGC 6624) 7−127970
tidal heating in close binary stellar systems 7−120460
transonic disk accretion revisited 7−140047
4 U2129+47 (=V1727 Cyg), optical behaviour (March to November 1986) 7−115523
4 U 0115+63, recurrent X-ray transient, new outburst obs. (February 1987) 7−72532
4 U 0115+63 (Cas γ-1), Be star optical obs., suggestive of future X-ray and γ-ray activity 7−79985
4U 0900−40 (HD 77581), massive X-ray binary, search for rapid vars. of P Cyg line profiles 7−120502
4U 1145−619, binary X-ray pulsar, search for UV variability 7−88537
4U 1145−619, EXOSAT and Einstein obs. of pulsating source 7−72531
4U 1145−619 (Hen 715), X-ray and optical spectral vars. during X-ray outburst 7−127973
4U 1145-619, pulse timing characts., effects of orbital characts. in modelling 7−72534
4U 1538−52, spectra and pulse period 7−120499
4U 1636−53 (MXB 1636−53), evidence for burst-induced accretion disk coronae, multi-peaked X-ray bursts anal. 7−120503
4U 1746−37 in globular cluster NGC 6441, constraints on neutron star mass-radius relation 7−94954
4U 1820−30, in NGC 6624, form. by tidal capture and evolution to white dwarf-neutron star system 7−127970
4U 1820−30, ultra-short period binary star, Doppler effect as cause of X-ray flux modulation *(Russian)* 7−107906
4U 1820−30 in globular cluster NGC 6624, discovery of 15-30 Hz QPO 7−120504
4U 1915−05, X-ray burst source, identification of optical counterpart 7−94951
4U 1957+11, 9.3 hour orbital period in potential black hole binary 7−72528
4U 2127+12, in M15, form. by tidal capture and evolution to common envelope binary stage 7−127970
4U 2129+12, X-ray source in M15, discovery of 8.5-hour X-ray period 7−120505
4U 2129+47, X-ray burst obs. 7−115519
4U 2129+49(=V1727 Cyg), X-ray heating light curve, accretion disk effects 7−127954
4U 2131+11 in M15 globular cluster, evidence for accretion disk corona 7−72537
4U/MXB 1636−53, relation between amount of accreted fuel and strength of X-ray burst 7−146040
4U/MXB 1820−30, EXOSAT obs. of double-peaked burst, radius expansion 7−107896
ultrashort-period X-ray binaries formation, accreting white dwarf models 7−120393
AN UMa, AM Her star, orbital characts. and spectral obs. 7−88504
SW UMa, SU UMa-DQ Her star system, nature 7−115409
SW UMa, ultrashort-period dwarf nova/DQ Her star, X-ray and optical obs. 7−88435
V 0332+53, JHKL′ photometry obs. 7−94959
Vel X-1, accretion disk form. in magnetosphere of wind-fed pulsar 7−140152
Vel X-1, apsidal advance 7−120500
Vel X-1, binary X-ray pulsar, search for UV variability 7−88537
Vel X-1, eclipsing X-ray binary, pulse timing, Hakucho and Tenma data anal. 7−107891
Vel X-1, light curve modelling involving accretion disk and mass transfer to neutron star 7−127947
Vela X-1, pulsed TeV gamma-rays from X-ray binary star 7−88684
white dwarfs, accreting, two-temp. treatment for X-ray and UV radiation 7−88392
white dwarfs, magnetic axis orientation determ. from X-ray flux orbital curves 7−88503
wind accretion from companion star, contrib. to X-ray pulse periods vars. 7−101842
wind-driven binaries, high-luminosity accretion 7−127962
wind-fed X-ray pulsars, accretion disk form in neutron star magnetospheres 7−140152
winds, velocity modulation by X-rays 7−80047
X0142+614, soft X-ray source, obs. of 25-min X-ray modulation 7−95051
X 1820−303 in globular cluster NGC 6624, orbital period 7−72533
x-ray nova at 13 hours 53 minutes, −64.4 degrees, optical observations 7−80040
X-ray nova at $\alpha=13^h53.0^m$, $\delta=-64.4°$, discovery by Ginga all-sky monitor (February 1987) 7−72532
X-ray selected cataclysmic variables 7−107855
XB 1254−690, low-mass X-ray binary, obs. of 3.9 hr periodic dips in X-ray intensity 7−88522
XB 1254−690, optical light curve of low-mass X-ray binary 7−101852

X-ray characteristic temperature *see Debye temperature*

X-ray chemical analysis
see also electron probe analysis; X-ray diffraction examination of materials; X-ray fluorescence analysis
aerosol air pollutants, surface anal. techniques 7−133160
aerosol comp. study using PIXE technique in equatorial Africa 7−87867
aerosol source identification by PIXE and PESA 7−87941
aerosols, atmospheric, anal. by total refl. X-ray spectrometry 7−139056
aerosols from Mt. Etna, composition from PIXE and PIGE analyses 7−87570
aerosols in Brazil, remote sources, PIXE and receptor models 7−87868
alloys, heavy element determ. by detection of characteristic K X-rays by PIXE 7−93409
analytical electron microscopy 7−100476
biological microanalysis, high resolution, beam induced mass loss 7−87398
biological samples, quantitative imaging and microanal. with a scanning soft X-ray microscope 7−87408

X-ray chemical analysis continued
calcium alginate fibres, blood coagulation and dispersal *(Russian)* 7−100633
cathode-luminescence and X-ray spectral anal., high resolution spectrometer 7−121232
coherent bremsstrahlung peaks, microscope and specimen parameters depend. 7−144772
diamond, polycrystalline sintered compacts, microstruct., phase form. at high temp. and press. 7−111768
digital X-ray compositional mapping with standard map corrections for wavelength dispersive spectrometer defocusing 7−132993
emitted characteristic intensities for microanalysis *(Chinese)* 7−93399
energy dispersive spectroscopy, low peak to background ratio, uncertainty anal. 7−100679
energy-dispersive X-ray spectrometry technique investig. 7−86739
epoxy-polyethersulfone, dual phase blend, fracture toughness, miscibility 7−86332
ester crystal dispersing elements for soft X-ray spectroscopy, growth technique and 2d spacings meas. 7−144256
high purity gases, particle origin determ. techniques 7−139070
high resolution analytical electron microscope, JEM-4000EX, appl. 7−69564
historical documents, anal. by PIXE 7−88820
human blood plasma, Br determination by proton induced X-ray emission 7−79174
inhalable urban particulate matter in Santiago de Chile, X-ray fluorescence spectrometry 7−93586
K-edge densitometer, installation at Dounreay reprocessing plant, safeguards appl. 7−109324
Kossel-Mollenstedt diffraction patterns, online foil thickness measurements 7−140670
lateral beam stability of a computer assisted scanning electron microscope/X-ray microanalysis system 7−140777
light element analysis from Raman lines on SPARK-1 spectrometer 7−133019
marine aerosols, PIXE analysis 7−87866
metallic complex surface geometry objects, local X-ray spectral anal. 7−126506
mineral prospecting using PIXE and complementary techniques 7−94498
minerals, modal analysis, electron raster microscopy and X-ray spectral microanal. 7−126511
minerals, X-ray spectral microanal., quantometric method 7−126504
multiionisation and electron vacancy decay rates in proton and ^{4}He ion impact on elements 7−74733
multilayer structures, conc. profiles, quantitative X-ray spectral microanal. 7−126503
nuclear fuel reprocessing, U/Pu concentration determ., safeguards appl. 7−109326
peak distortion obs. in X-ray spectrometry with Si(Li) detectors 7−144764
photoelectrochemical cell, XPS characterization and photoelectrochemical behaviour of (TiVAl)O_2 film 7−86807
PIGE analysis of Na in thin aerosol samples 7−87944
pine bark PIXE analysis, long-term environmental study method 7−93604
PIXE, corrections for matrix effects 7−133015
PIXE aerosol analysis using automatic target chamber 7−86870
PIXE aerosol meas. in mine, time series analysis 7−86868
PIXE analysis for air pollution source apportionment in Brazil 7−86857
PIXE analysis of aerosol samples, background subtraction 7−87945
PIXE analysis of aerosols from wood-burning stoves 7−86859
PIXE analysis of aerosols using solar-powered samplers 7−86869
PIXE analysis of aerosols using streaker air sampler with programmable controller 7−87942
PIXE analysis of geological samples 7−94499
PIXE analysis of Guangzhou aerosols in S China 7−86855
PIXE analysis of Italian aerosols 7−86856
PIXE analysis of local events in atmospheric aerosol concentrations over Philadelphia 7−86858
PIXE analysis of Tama River pollution 7−93557
PIXE and heavy-ion induced X-ray emission, appls. *(French)* 7−78578
PIXE elemental characterization of air masses using a multivariate statistical technique 7−87869
PIXE meas. of aerosol comp. in drylands of NW China 7−87870
PIXE method for trace element anal. using 2.5 MV van de Graaff accelerator *(Japanese)* 7−139060
PIXE particulate monitoring at US national parks 7−87871
PIXE study of carbonaceous chondrites, trace element analysis 7−94832
PIXE ultratrace analysis in water with metals and various pH 7−93603
PIXE X-ray fluorescence and radioisotope X-ray fluorescence 7−93400
PIXE/PESA analysis of aerosols using external beam setup 7−87943
poly-4,4′-oxydiphenylene pyromellitimide films, unoriented, temp.-time effects on structurisation *(Russian)* 7−85680
polyethylene, low-density, crystallinity, γ-irrad. effects 7−91653
proton microprobe anal. in biology 7−71947
proton on-demand beam excitation system for PIXE 7−89299
review of methods based on nuclei principles *(Italian)* 7−86688
scanning proton probe using external beam, PIXE appl. 7−126500
solid surface anal., X-ray anal. using accelerated ions *(Japanese)* 7−100645
South Pole aerosols, PIXE analysis 7−87865
spectral microanalysis, automated quantitative stereometric anal. programs 7−126512
spectral microanalysis, intensity distrib. curve, fluctuation smoothing 7−126513
spectral microanalysis using electron probes 7−126515
spectral research, conf., Ustinov, USSR (Sept. 1985) 7−120686
SRIXE, method for selecting detector apertures 7−144774
steel, alloy, dendritic precipitate morphology *(Russian)* 7−78017
steel, austenitic stainless, nitrided, micrograin struct., Auger electron microprobe obs. 7−100438
steel, high alloy, carbide inhomogeneities and X-ray characteristic radiation 7−126509
steel, maraging, Ni_3Ti precip. sequence 7−132625
steel, stainless, low-Cr, high-temp. oxidation resist., Al and Si alloying effect 7−78384
steel, surface inclusions, organic film extraction method, EDX and SEM obs. 7−106731
sulphides, calibration of micro-PIXE analysis 7−94500
SYNROC-FA ceramic waste, leaching, phase analysis and microstruct. 7−81721

X-ray chemical analysis continued
TFR graphite tiles, metal coverage effect on plasma impurity content 7−75817
thermal spray powders, retesting schemes 7−77800
trace elements from coal burning power plant, XRF and PIXE analysis of nearby trees 7−93590
trace elements in human nasal cavity bones 7−94034
Al coating on Ni alloys, phase inhomogeneity, X-ray spectral microanal. 7−124651
Al-Ag alloys, precipitate plate growth mechanisms study 7−137569
Al-Fe-Si, direct chill casting, intermetallic phase form., TEM and EDAX 7−86155
Al-Ge, sputtered thin films, laser irrad., metastable phase form. 7−113387
Al-Si alloys, quality control by PIXE 7−139065
Al-Si alloys, TTPIXE anal., Si conc. overestimation 7−93410
Al-Zn alloys, electron irrad.-induced precipitation and solute atom redistrib. study 7−105049
Al-Zn-Mg, powder metallurgy, pitting corrosion, secondary phase precip., microstruct. 7−126282
$Al_xGa_{1-x}As/Si_{2x}(GaAs)_{1-x}/GaAs$ quantum well structs., impurity-induced layer disordering and thermal annealing 7−70097
AlN, gas-phase epitaxy on sapphire substrates, growth kinetics and struct. 7−70106
Al_2O_3 particles from Shuttle booster rocket exhausts in troposphere 7−100779
AlZnMg alloys, surface degradation in NaCl solns. under appl. pot. 7−126289
As_2S_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
As_2Se_3 vitreous surface, direct radiation-stimulated oxidation, IR spectra, X-ray scanning microanalysis *(Russian)* 7−86650
$BaMnF_4$ antiferroelec. short range order, microstructural modification and phase transitions 7−85543
Bi_2O_3-PbO cathodes, appl. in Li batteries, reduction process, electrochemical and X-ray anal. *(French)* 7−86771
$CaO.Al_2O_3$ cement, surface state in presence of phosphoric acid soln. 7−86673
CdF_2-LiF-AlF_3-PbF_2 glasses, phase stability 7−131044
Co-Cr-W-C, high fluence Ti or N ion implantation, surface layer microstruct. 7−104774
Co-Fe-Si-B submicron surface layers, diffusion, X-ray spectral microanal. 7−124584
Cu ternary cpd., semiconductors, struct. props. 7−124231
Cu-Al-Ni-Ti shape memory alloys, grain refined, X-phase struct. and comp. 7−86192
Cu-Au system, PIXE analysis with corrections for matrix effects 7−133015
Cu-Ti-Zr, Cu-Ti alloys, glass form., competing cryst. structures 7−83738
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7−118325
CuO-Cu_2O, solar absorber coatings, accelerated aging tests 7−144914
Cu_2S-$Zn_xCd_{1-x}S$ thin film heterojunctions in solar cells, electron microprobe X-ray anal. 7−78631
Fe-Cr-Mo, ferritic steel, solute-precipitate interactions, energy dispersive X-ray spectra study 7−106520
Fe-Ni system, PIXE analysis with corrections for matrix effects 7−133015
FeCr, β X-ray excitation, chem. anal. technique 7−119608
FeTi alloy, XPS anal. for activation for H_2 uptake 7−86836
FeTi, β X-ray excitation, chem. anal. technique 7−119608
$Ga_{1-x}Al_xSb$/GaSb epitaxial layer system, thickness and composition, X-ray microanal. 7−124758
GaAs:Fe single crystals, LEC grown, phase analysis; ferromag. props. 7−86179
GaSb/GaAlAsSb heterojunctions, conc. profiles, electron probe anal. 7−126505
Ge-Si, composite powders, mechanical alloying; SEM and X-ray obs. 7−77882
Mg-Ag-Sn(In) powders, local X-ray spectral anal. 7−126507
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., charact. 7−132546
Mn-Zn ferrite single crysts., haematite second phase form., SEM and TEM obs. 7−113561
Mo-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
NH_4I structure and metallisation, high press. X-ray diffr. and optical absorpt. studies 7−83924
Ni, oxidation and sulphidation, scale structs. 7−106706
Ni-Cr alloy, oxidation and sulphidation, scale structs. 7−106706
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
Ni-MgF_2 cermet, solar absorber coatings, accelerated aging tests 7−144914
Ni-Mo-Fe-B, arc plasma sprayed coating, hot isodynamic compression, microhardness, struct. 7−77799
PZT ceramics, morphotropic phase boundary comp., SEM, TEM, and X-ray diffr. study 7−91800
PbTe-Ga_2Te_3 system, $PbGa_6Te_{10}$ phase existence, X-ray and thermal anal. *(Japanese)* 7−124449
Pd catalyst, S-poisoned, analytical electron microscopy with dedicated STEM 7−100676
Pd-Xe thin films, texture studies using synchrotron radiation and energy dispersive diffr. 7−92014
Pt minerals, composition, X-ray spectral microanal. 7−126510
Pt-Pd, mutual diffusion coeffs., X-ray microanal. results *(Russian)* 7−137610
Si_3N_4 ceramics, ion beam modified, friction and wear 7−119381
Si_3N_4, hot pressed bars, oxidation, cristobalite form., EPMA obs. *(Japanese)* 7−132786
Ti alloys, beta phase, metastable precipitation during isothermal ageing *(Russian)* 7−78018
TiO_2-MgO-M_2O, M=Li, K, Rb, phases in region of hollandite crystn., cryst. chem., elec. cond. meas. 7−98388
U/Pu concentration determ. using K-edge densitometry, reprocessing output verification 7−109325
W-Ni-Fe-B_4C, hard metal, hot pressing, sintering reactions, struct., mech. props. 7−71135
WC-Co hardmetal, fatigue fractography, SEM and EDAX obs. *(Japanese)* 7−119344
Y-Ba-Cu-O high T_c supercond., twins, dislocations and phase comp., TEM study 7−117935
X-ray chemical analysis continued
Y-Ba-Cu-O high T_c supercond. cryst., TEM and SEM microanal. 7−118111
YAG, poly- and monocrystals, synthesis, X-ray quantitative determ. of phases in batch 7−126053
Y_2BaCuO_{5-x}, high T_c supercond., space group, electron diffr., chemical anal. 7−137331
ZrO_2 ceramics, ion beam modified, friction and wear 7−119381
ZrO_2-Y_2O_3 films, growth on GaAs (100) by pulsed laser evaporation 7−125992

X-ray crystallography
For results of structure analysis see crystal atomic structure
see also X-ray crystallography apparatus; X-ray crystallography calculation methods; X-ray crystallography technique
alloys, short range order diffuse X-ray scatt., intensity expression 7−97854
Ambartsumian's invariance principle, appl. to X-ray diffr. in real crystals 7−104485
asymmetric Bragg diffraction, fluorescent emission yield 7−99982
atomic scattering factors, real part of anomalous dispersion term 7−75922
attenuation coeff. meas. made on Si 7−75938
bicrystal X-ray interferometer with wedge-shaped gap, plane-wave theory of interference effect 7−75923
classical parallel condition generalisation, zero wavelength dispersion counter profile meas. 7−137154
computer graphics in X-ray crystallography *(Japanese)* 7−133524
disordered binary alloys, scatt. intensity distrib. 7−104484
dispersion theory reconciliation with anomalous scatt. expts. 7−130979
dynamical theory, nonnegative Karle-Hauptman determinant derivation 7−124034
dynamical X-ray diffr. in crystals with randomly placed defects, Dyson and Bethe-Salpeter eqns. 7−91392
effective penetration depth determ., diffraction method, reliability *(Bulgarian)* 7−104488
effective penetration depth determ., diffraction method *(Bulgarian)* 7−104487
electron density-functional theory and X-ray structure factors 7−105438
evanescent absorption in kinematic surface Bragg diffraction 7−69539
extinction effect, random elastic deformation 7−75920
fibres, anomalous X-ray scatt. at different wavelengths, available information 7−137152
fibres, precession photography and pattern prediction 7−83586
high resolution, conf., Daresbury England (March 1986) 7−108017
incommensurate phases, structure and symmetry 7−76054
K-shell electrons, at. positions in crystals 7−75943
lamellar eutectics, texture and lamellae distrib. functions 7−78417
monocrystals, forbidden and multiple reflections, crystal perfection anal. 7−91394
mosaic spread of very small crystals deduced from Laue diffr. patterns 7−76423
n-beam diffr. patterns, visibility of phase indications 7−137155
perfect crysts. with slightly disturbed orientation, spherical X-ray dynamic diffr., computer simulation 7−124038
perfect magnetic crysts., dynamical X-ray diffr. calcs. 7−124035
powders, randomly packed, X-ray intensity microabsorption 7−91391
shear transformations, 2H→4H crystal structures, X-ray diffraction effects 7−104979
single cryst., disordered surface layers, X-ray diffr. *(Russian)* 7−142533
superlattice diffraction, effect of layer thickness fluctuations 7−124731
superlattice of stacking faults, dynamic X-ray diffr. *(Russian)* 7−142798
surface residual stresses, nonuniform, nondestructive X-ray diffraction anal. 7−86547
surfaces, X-ray diffr. under condition of nearly normal incidence *(Japanese)* 7−104494
Takagi-Taupin eqns., absorpt. 7−137151
three-beam diffraction in a finite perfect crystal 7−91390
twist boundary, dislocation superlattice, X-ray diffraction, plane-wave image profiles 7−91598
twist boundary, screw dislocation superlattice, X-ray diffraction, superstructure factor 7−91597
two-crystal X-ray topography, microdefect images 7−69536
wave fields and evanescent waves in dynamical X-ray diffraction at grazing incidence 7−124036
X-ray focusing, obs. during diffr. by crystal with Fresnel zone struct. 7−137159
Li, X-ray atomic form factors, comparison for crystals and free atoms 7−75921

X-ray crystallography apparatus
see also goniometers; X-ray diffractometers; X-ray monochromators
automated apparatus with multiple angular scanning for study of secondary processes in X-ray diffraction in crystals 7−67451
Buerger precession camera for thin film characterisation 7−97857
CCD-based X-ray detector for protein crystallography 7−79156
curved crystal mount, variable radius 7−124039
dilatometry, linear expansion coeff. of refractory materials meas., at high temp. 7−124037
film thickness meas. by eccentricity of X-ray goniometer 7−134721
low-temperature deposits of organic compounds, morphology and structure meas. apparatus 7−104495
multiwire proportional counter with spherical drift chamber for protein crystallography with X-rays and gamma-rays 7−109610
photostimulable phosphur film, appl. to X-ray diffr. studies *(Japanese)* 7−104493
pick-up tube for X-ray topography, using amorphous Se-As electrode *(Czech)* 7−108731
position detectors for dynamic diffraction studies *(Japanese)* 7−117787
semiconductor TV system for X-ray topography 7−91398
Si synchrotron plane wave X-ray topographic camera with large crystal stage 7−69538

X-ray crystallography calculation methods
absolute struct. determ., absorpt. corrections 7−76058
area detector diffractometers, absorption and decay correction of intensities 7−97858
atomic scattering factors for mixed atom sites 7−75934
coplanar three-beam X-ray diffr. 7−75924
crystallites with anisotropic temp. factor, diffr. profile 7−76331
damaged layers of crystals, X-ray scatt. profiles under asymptotic Bragg diffr. 7−69535
diffraction line broadening exam. using Voigt functions 7−130978
diffraction line profile correction angle factor *(Chinese)* 7−97862

X-ray crystallography calculation methods continued
diffraction-line profile correction, Lorentz-polarisation factor 7−97860
diffuse scatt. expts., resolution corrections 7−97856
disordered ternary alloy, short range order diffuse scatt., intrinsic inequalities among partial intensities 7−137306
dispersive structures, centrosymmetrical two-phase invariants, estimation using one-wavelength technique 7−76057
electron density, maximum entropy calc. with native and single isomorphous replacement data 7−139190
FFT determ. of X-ray diffr. angles 7−75926
fibre diffr., isomorphous replacement using limited numbers of heavy atom derivatives 7−78725
figures of merit in direct methods, probabilistic approach 7−75931
FIRESTAR 2 computer program, X-ray powder diffr. meas. evaluation 7−75944
general density function corresponding to X-ray diffr. with anomalous scatt. included 7−75940
heavy atom positions, determ. using difference Patterson function 7−75929
isomorphous replacement, phase probability distrib., effects of errors 7−75930
least squares absolute struct. refinement, effect of absorpt. correction, data region, stability const. and neglect of light atoms 7−75937
least squares method for lattice parameter determination from powder X-ray diffraction 7−69540
macromolecular crystallography, cryst. orientation and X-ray pattêrn prediction routines 7−137158
maximum entropy soln. of small centrosymmetric cryst. struct. 7−75939
monodomain liq. cryst., orientational order parameter determ. from X-ray diffr. pattern anal. 7−91440
multilayer formalism adaptation to temp. depend. X-ray diffr. soln. in crystals 7−104490
normal order statistics, algorithm for moduli generation, for half-normal probability plots 7−137153
normalising intensities, treatment of enhanced zones and rows 7−75927
one-dimensionally modulated structures, determ. using (3+1)-dimensional Patterson and Fourier methods 7−75933
phase analysis iterative method, matrix formulation 7−97861
powder diffraction data, unit-cell volume estimation 7−97850
powder pattern indexing, optimisation appls. 7−97851
powder studies, pattern decomposition and Rietveld methods 7−83882
proteins, X-ray diffr. data collection and online integration system 7−101154
quantitative phase analysis methods in systems with high microabsorpt. effects 7−111305
REDUC, automated procedure for struct. factor phase determ. from estimated values of struct. semiinvariant phase combinations 7−75936
SAXS, slit-height desmearing, primitive function 7−97853
serially-measured integrated intensities, variation anisotropy 7−75928
tomograms, analogue reconstruction algorithm 7−75941
triple products, direct phase determ. from Bijvoet inequalities, double Patterson approach 7−75935
triplet invariants, probabilistic theory 7−76056
twinned structures, phase determ., isomorphous replacement method 7−75932
$Ag_{0.35}TiS_2$, superspace-group description 7−76053
Al_2O_3, Debye-Scherrer synchrotron X-ray data, Rietveld refinement 7−83584

X-ray crystallography technique
approximation of line profiles for polycryst. substruct. parameter determ. 7−78428
attenuation coeff. meas. made on Si 7−75938
combined film and microprocessor techniques 7−83585
crystallography using the diffraction of proton induced X-rays 7−91397
diamond crystals meas. with various impurity defects, temperature coeff. of linear expansion determ. 7−142535
diffusion in crystals, asymptotic Bragg diffraction 7−143107
digital automated rocking curve topography, subsurface micro-lattice strain mapping 7−130983
dose rate meas. technique for main beam of crystallographic X-ray equipment 7−71892
epitaxial structures characterisation using modulation of Renninger scan intensity 7−69534
ester crystal dispersing elements for soft X-ray spectroscopy, growth technique and 2d spacings meas. 7−144256
film, on amorphous substrate, X-ray diffraction, total external reflection 7−84578
harmonic analysis of X-ray diffr. lines, fine struct. parameters determ. of W powder and filings 7−78427
heterogeneous materials, microstruct. anal., combined X-ray microdiffr. and topography study 7−78400
infrared materials, characterisation, growth processes 7−130982
lattice parameter, precise meas. by X-ray diffr. *(Japanese)* 7−104492
monochromatic X-ray Laue method *(Japanese)* 7−97863
pancreatic ribonuclease A, bovine, radiation damage in X-ray diffr. 7−86911
parallel beam powder diffractometry using synchrotron radiation 7−111312
phase transitions examination method for Ti alloy single crysts. 7−132862
polymers, oriented crystalline, X-ray diffraction photographs, computer-based methods 7−97859
powder diffraction at very high press. 7−111310
powder diffraction for struct. determ. 7−111317
projection topography of strongly absorbing crystals, contrast characts. 7−69537
proteins, X-ray diffr. data collection and online integration system 7−101154
semiconductor, X-ray diffraction technique for determ. of integrated charcts. of struct. perfection 7−130981
single crystals containing growth and decoration dislocations, Laue diffr. *(Russian)* 7−91395
small-angle X-ray diffraction, uses of polychromatic synchrotron radiation 7−104486
structure factor accurate determ. method *(Japanese)* 7−104491
surface and interface structure analysis by X-ray standing wave method *(Japanese)* 7−70044
surface and interface structure determ. using grazing incidence X-ray crystallography 7−142536
synchrotron-radiation-based techniques, atomic arrangements in amorphous materials 7−142585

X-ray crystallography technique continued
topography, method for improving digital image comparison 7−111308
topography capabilities for interfacial instabilities obs. during directional solidification 7−98010

X-ray detection and measurement
see also X-ray spectrometers
amorphous alloys phase decomposition, X-ray scattering meas., heating apparatus 7−124040
background radiation meas. for PIXE experiment operation, van de Graaff accelerator area *(Japanese)* 7−135685
CCD-based X-ray detector for protein crystallography 7−79156
CCDs, theoretical models 7−67450
Compton scattering spectrometer for determining X-ray energy spectra 7−73486
detector efficiency function, approach to quantification 7−95652
digital X-ray detector, high-resolution, utilising a $CdWO_4$ scintillator array and a photodiode array 7−101064
digital X-ray imaging system using MWPC 7−135745
drift chamber, 2D, construction and performance *(Chinese)* 7−122305
drift chamber use in X-ray attenuation factors meas., in gaseous Xe 7−83409
electron beam current density distrib., X-ray bremsstrahlung meas. with pin-diode matrix 7−135724
electron beam-specimen/detector geometry, effect on X-ray yields from Cu 7−140784
escape-gated two chamber proportional counter for Auger electron and X-ray meas. 7−116789
Geiger-Muller tubes, energy compensated, suitability for meas. of X-radiation transmitted through shielding 7−68149
microstrip detectors in wavelength dispersive X-ray spectroscopy *(German)* 7−121311
multiwire gas proportional counter for soft X-ray position detection 7−103339
PET instrumentation developments, review 7−145228
photostimulable phosphur film, appl. to X-ray diffr. studies *(Japanese)* 7−104493
polarisation meas. apparatus for X-rays excited by accelerated ions in crystals 7−108726
position detectors for dynamic diffraction studies *(Japanese)* 7−117787
preamplifier-discriminator IC for photomultipliers 7−68148
pulsed X-ray facility for testing radiation detect. instruments at SLAC 7−89886
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
relative collision stopping powers for electrons in dosimetric media, evaluation 7−141332
scattered X-ray detection from electron linac in a borehole 7−94502
thin layer detectors, hot pressed, dosimetry, energy response to photon and electron irrad. 7−87194
TLD-200 dosimeters, responses to α particles, fast electrons, β, X and γ rays 7−71890
transition radiation detectors using superconducting granules 7−122303
two-dimensional automated X-ray detector for diffraction experiments 7−109653
VUV spectrometer-detector system, comparison of methods for second-order detect. efficiency determ. 7−95660
CaS:Ce phosphor, thermoluminescent UV, X-ray and γ-ray dosimeter 7−81742
^{109}Cd standardization by 4πe-X coincidence method, activity determ. 7−135779
^{109}Cd standardization using 4π(LS)e-x method 7−135778
CsBr microchannel plates, soft X-ray detection efficiency 7−96476
CsI microchannel plates, soft X-ray detection efficiency 7−96476
(Ga,Al)As-GaAs, semiconductor scintillator, nuclear particle and X-ray detector 7−141403
Ge, hyper pure high resolution detector for K-shell photoelectric cross section meas. 7−96473
Si:Li X-ray detector, efficiency at low energies 7−135744
Si(Li) detector lineshapes for PIXE anal. 7−86703
Si(Li) detector response functions for 1.3-4.0 keV monochromatic photons 7−116792
Si(Li) X-ray detector response to proton induced K X-rays, Monte Carlo anal. 7−141399
^{201}Tl standardization using 4$\pi\beta$-γ coincidence method, two-dimensional extrapolation 7−135777

X-ray diffraction
see also X-ray crystallography; X-ray diffraction examination of materials; X-ray diffractometers; X-ray scattering
CT based on X-ray diffr. 7−133437
focusing, defocusing under thermal gradient with US oscillations 7−137156
grazing incidence optical systems, diffr. limited performance 7−95701
grazing incidence optics, modified sine condition 7−96946
hybrid telescope systems, design and performance considerations 7−95702
microdiffraction with synchrotron radiation 7−96434
reflection grating in soft X-ray region, diffr. efficiency 7−80948
synchrotron radiation, sub-nm wavelength, single-slit diffraction patterns 7−95694
Takagi-Taupin eqns., absorpt. 7−137151
Ni (001), X-ray photoelectron diffraction at high angular resolution 7−125910

X-ray diffraction examination of liquids
see also liquid structure
acrylic polymers, with phenyl benzoate side groups, mesophase obs. *(Russian)* 7−137199
4-n-alkoxybenzoic acids, nematic-smectic C phase transition, X-ray diffraction patterns, microscopic textures 7−124082
4′-(4″-n-alkoxybenzyloxy)-4-cyanostilbene, nematic-smectic A phase transition, critical behaviour 7−131311
4-alkyl-4′-cyanostilbene, homologous series, X-ray diffraction studies 7−111373
N-(-N-alkyloxybenzylidene)-4′-N-alkylanilines, liq. cryst. studies 7−77499
biaxial nematic phase, NN′AC critical point, mean field theory 7−124504
3,5-bis-[4-(trans-4-n-propylcyclohexyl)phenyl]-1,2,4-thiadiazol, liq. cryst., thermal and X-ray study 7−124507
1,6-bis[4-(trans-4-n-propylcyclohexyl)phenyl]-hexane, liq. cryst., thermal and X-ray study 7−124507
t-butyl alcohol-water mixtures, small-angle X-ray scatt. investig. 7−117800

X-ray diffraction examination of liquids continued
butyloxybenzylidene octylaniline, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7—104543
C-6 polysiloxane, polymeric liq. cryst., nematic-smectic C phase transition, high-resolution X-ray study 7—76405
cholesterol-cholesteryl oleate binary mixtures, X-ray diffr. study 7—75987
cholesterol-containing polymers, layer ordering in smectic and cholesteric mesophases *(Russian)* 7—137197
cyano biphenyl sidechain liq. cryst. polysiloxanes, X-ray diffraction anal. 7—124086
N,N′-dialkanoyldiaminomesitylenes, liq. cryst. phases 7—75981
dipalmitoylphosphatidylcholine, in fused salt, phase transitions, X-ray diffraction, subcell arrangement 7—142973
dipalmitoylphosphatidylcholine bilayers, phase transitions, X-ray studies 7—76378
discotic liquid crystal, oriented, X-ray diffr. study 7—117814
7,7′-disodiumcromoglycate-water lyomesophases, NMR and X-ray diffr. 7—111364
dodecyl sodium sulphonate-water system, prelamellar lyomesophase, X-ray and polarising microsc. obs. 7—111356
fluoride-bearing liquid crystal MB80.5 (F), structure and phase transitions *(Chinese)* 7—97911
hexa-ethyleneglycol-mono-n-dodecyl ether lyotropic liq. cryst., displacement disorder 7—117807
hexa-O-alkanoyl-scyllo-inositoles, struct., X-ray study 7—104546
lipid-water multilayer, films, X-ray scattering studies 7—111370
liquid crystal elastomers, mech. induced mol. switching 7—75989
liquid crystal elastomers, struct. transition, X-ray diffr. 7—97901
liquid crystalline polymers, X-ray diffr. studies, review 7—124085
microemulsions, disordered open connected model, X-ray scatt. 7—139051
octylamine-octylammonium chloride-water system, lamellar liquid crystalline phase, NMR and X-ray anals. 7—137211
octyloxycyanobiphenyl, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7—104543
octyltrimethylammonium bromide, micellar soln., X-ray scatt., hypernetted chain approx. 7—100622
organic materials, mesomorphic and solid, phases X-ray diffr. studies 7—104542
phenyl benzoate liquid crystalline polymer blends and copolymers, struct., X-ray diffr. exam. 7—111344
polar-nonpolar liq. crystal mixture, phase transitions, microscopic description 7—76402
poly α-chloroacrylates, smectic C* liq. cryst. side-chain polymers 7—111365
polyesters, thermotropic with rigid chains, thermal props. 7—69572
polymers, main chain and combined, linear and cross linked, X-ray investigations 7—142569
polymethacrylates, smectic C* liq. cryst. side-chain polymers 7—111365
polymethacrylic acid, slat-free semidilute solns., small angle scatt. 7—69576
polystyrene, semidilute solns., coexistence curve 7—91766
ruffigallol hexa-n-alkoxylates, discotic mesomorphism 7—142564
rufigallol-hexa-n-alkanoates, liq. cryst., disc-like mesophase, X-ray diffr. studies 7—131018
Schiff's base liquid crystal, oriented, X-ray diffr. and optical studies 7—91432
smectic A liquid crystals, X-ray diffr. and optical transforms of model density functions 7—137234
smectic-A_d-smectic-A_2 critical point, X-ray studies, first-order phase transitions 7—137559
sodium alkanoates, solid and liq. cryst., struct. parameters 7—111357
sodium dodecyl sulphate/hexylamine/water/heptane system, lamellar liquid crystal phases 7—131308
surfactant-alcohol-brine lyotropic lamellar phases, X-ray scatt. study 7—83659
terephthal-bis-butylaniline, smectic H phase, texture and conoscopic interference figure 7—137235
N,N′N″-trialkyl-1,3,5-benzenetricarboxamides, liq. cryst. phases 7—75982
Al_2O_3-SiO_2 gels and sols, growth processes and struct. 7—119587
$Bi_{12}GeO_{20}$ melt, liq. struct., short-range order parameters, at. interactions, X-ray diffr. study 7—97893
CsI, conc. aq. soln., struct., X-ray diffr. study 7—91421
Cu complex, Cu(II) alkanoate, crystalline and columnar phase structs. 7—111526
$CuBr_2$, aq. soln., conc., X-ray scatt. obs. 7—113314
$GeBr_4$, liq., anomalous X-ray scatt. investig. 7—111337
LiI, conc. aq. soln., struct., X-ray diffr. study 7—91421
LiO_2-SiO_2 melt and glass, structural simulation, molecular dynamics calc. *(Japanese)* 7—76005
$NaGaGe_3O_8$ melt, struct., analysis, X-ray diffr. 7—124076
$NiBr_2$, aq. soln., conc., X-ray scatt. obs. 7—113314
$SeBr_4$, liq., struct. and mol. packing 7—111338
$ZnBr_2$, aq. soln., conc., X-ray scatt. obs. 7—113314

X-ray diffraction examination of materials
for results of crystal structural analysis see crystal atomic structure see also X-ray chemical analysis; X-ray diffraction examination of liquids; X-ray diffraction examination of molecular structure
adamantane derivatives, phase transitions and struct. 7—143000
5-adamantyl-2,4-diaminopyrimidines, 6-substituted, cryst. and mol. struct. investig. 7—142744
adsorbed molecules on graphite, struct. and dynamics 7—143233
adsorbed on Si (111), evidence for trimer, nearly normal incidence X-ray diffr. 7—84525
$AgInS_2(Se_2)(Te_2)$, anisotropy of thermal expansion, X-ray diffr. data 7—131341
Al-Zn alloys, specimen thickness meas. of effect on aging 7—138771
alkaline earth sulphide, film growth by atomic layer epitaxy, X-ray diffr. and Auger spectra obs. 7—144299
alkanoates, solid and liq. cryst., struct. parameters 7—111357
alloys, ternary, short range order diffuse X-ray scatt., intensity expression 7—97854
aminophosphone complexes, cryst. and mol. struct. 7—111532
amorphous alloys, consolidated, strengthening mechanisms 7—113644
amorphous powder, mechanically alloyed, form. and consolidation 7—113474
amorphous solids, atomic short range order determ. methods, review 7—83704
2′,5′-anhydroarabinosylcytosine, struct. and conform., X-ray, ^1H and ^{13}C NMR anal. 7—98103

X-ray diffraction examination of materials continued
7-(2-anthryl)-1-heptanoic acid, Langmuir-Blodgett films, UV spectra, Davydov splitting 7—98678
aromatic polyimides, chain conform. and rigidity investig. *(Russian)* 7—83790
$Ba(NO_3)_2$ crysts., soln. growth induced lattice defects, surface topography 7—98015
benzil, phase transition and order parameter 7—142999
bicrystals, total external reflection 7—84578
biphenylcyclohexanes, substituted species, nematic phase struct., X-ray diffr. exam. 7—97921
bis(guanine), intrastrand chelation of d(CpGpG) to cis-Pt, X-ray investig. 7—78716
bone, cattle, phases at elevated temp., prosthetic implant appl. 7—79135
borosilicide coatings, interaction with Nb alloy, X-ray exam. 7—138686
brass rubbing surface, periodic changes of electron work function rel. to fatigue damage 7—100396
bungarotoxin, struct., multistep modeling using crystal coords. and X-ray diffr. data 7—78735
cadmium stearate Langmuir-Blodgett films, X-ray diffraction studies 7—98738
calcium oxalate crystallisation, supersat. generated employing reverse osmosis 7—142671
$CeIn_3$, press.-vol. depend., absence of discontinuity 7—104893
cellulose, amorphous, struct., X-ray scatt. 7—117836
cellulose-polyacrylonitrile blend films, struct. from N,N-dimethylacetamide-LiCl solns. 7—111430
cement-glass radwaste package containing $Na_2B_4O_7$, leaching studies for PWR waste 7—103247
chiral liquid crystal polymers, struct. characterisation of thermotropic polyesters 7—111383
2-p-chlorophenyl-4-hydroxy-6-oxo-1, 3-thiazine, crystal struct., X-ray, UV, IR and PMR spectra 7—111527
cholesterol p-n-octyloxybenzoate, mesophase crystalline precursors struct., X-ray study, intermol. interaction energy calcs. 7—91555
clathrate hydrates, struct. studies 7—117883
clay, main displacement shear plane microstructure characteristics 7—107389
collagen of marine invertebrates, X-ray diffr. obs. 7—126704
composition stratification processes, influence on mag. props. of amorphous alloys *(Russian)* 7—104549
crystal growth from melt, real time X-ray topography study 7—131068
crystal surface, microdefects, elastic field, X-ray diffusion scatt. *(Russian)* 7—142787
crystallites, distorted, aggregate X-ray diffraction profile study 7—144436
crystallites on graphite, catalysts, X-ray diffr. evidence of preferential orientation 7—118218
CT combined with diffractometry, obs. on some plastic materials and body tissues 7—133438
Cu (110), thermal roughness, X-ray diffraction study 7—124662
α-Cu-Al, cold-worked FCC alloy, lattice imperfections, X-ray diffr. study 7—137375
$CuInS_2$, thin layers, structural/optical props., for $CdS/CInS_2$ solar cell *(French)* 7—143292
cyanoadamantane glassy plastic phase, glass-like transition and annealing *(French)* 7—143015
cyanocobalt(III)phthalocyanine, cryst. struct. and elec. cond. 7—98958
desheptapeptide (B24-30) insulin, new crystal form, structure anal. 7—100799
deuteromethane-Kr solid solns., thermal expansion anomaly, X-ray diffr. study *(Russian)* 7—76459
p-diaminobenzene, mol. struct. in gas phase and cryst. 7—90443
diamond, brown and type II, abrasion resist., surface roughness, dislocation density 7—144564
diamond, polycrystalline sintered compacts, microstruct., phase form. at high temp. and press. 7—111768
diamond film, vapour-grown, on diamond substrate, X-ray section topographs 7—137758
diamond thin films, DC plasma CVD growth 7—112112
diatom, soft X-ray diffr. pattern obs. 7—78800
4,13-diaza-18-crown-6, N,N′-disubstituted, complexes with NaI(KI), cryptand-like behavior, X-ray cryst. struct. 7—117913
3,5-dichloro-2,6-diphenyl-1,4=benzoquinone, cryst. struct. 7—111535
p- dichlorobenzene, high pressure phase transition, X-ray diffraction study 7—76398
dimethyl ester of N-phthalyl-4-bromo-DL-glutamic acid, rotational isomers struct. 7—104711
1,3-dioxanes ring, Si substitution effects, X-ray diffr. exam. 7—111528
5,6-dioxycarbonyl(2.2.1)bicyclohept-2-ene, phase transition, temp. depend., plastic crystal phase form. 7—137542
dislocation loop size and density, simulation of triple crystal X-ray rocking curves, ion implanted and annealed Si 7—91399
distorted FCC structures, high press. phases 7—76048
dynamic X-ray scatt. parameters, determ. elevated temps. 7—69644
dysprosium tartrate hydrate, gel grown, characteris. and thermal behaviour 7—111525
Eccogel, $PbTiO_3$ filled, piezoelec. composite prep. 7—100166
electret forming polymers, struct. and physical props. 7—97993
epitaxial growth, hot wall technique, effect of subst. temp. 7—124747
ester crystal dispersing elements for soft X-ray spectroscopy, growth technique and 2d spacings meas. 7—144256
ethylene oxide clathrate hydrates, thermal expansion, unit cell parameter 7—118137
ethylene oxide hydrate, struct. I, thermal expansion obs. 7—143058
ferrite-garnet epitaxial films, Ne ion implanted, annealing, struct., mag. props. *(Russian)* 7—143883
ferroelastic transitions, high resolution X-ray powder diffr. studies 7—111863
fibre diffr., isomorphous replacement using limited numbers of heavy atom derivatives 7—78725
fibres, precession photography and pattern prediction 7—83586
film, total external reflection 7—84578
films, sol-gel prep., surface roughness, optical transparency rel. to prep. atmosphere 7—132510
fine structure parameters determ. by harmonic analysis of X-ray diffr. lines 7—78427
furano-coumarin-sphondin, X-ray diffr. 7—111523
garnets, Fe^+ ion implantations 7—91612
graphite, porous struct., changes during neutron irrad. 7—84037
graphite film, plasma CVD and props. 7—86055
graphite film, prep. by pyrolysis of polymers, phys. props. 7—86611

X-ray diffraction examination of materials continued
graphite intercalated with 2D K-NH_3 metal-ammonia solns., scatt. studies 7—142742
graphite layered crysts., Debye-Waller factors, anisotropy and reduced dimensionality effects, X-ray diffr. study 7—111804
graphite pyrolytic, highly oriented, planar defects, X-ray study 7—91601
graphite-$SbCl_5$ stage 2 intercalation cpd., energy band splitting and cond. meas., de Haas-van Alphen study 7—98777
HCP crystals with random growth faults, transformation to FCC phase, diffraction effects 7—131159
N(p-n-heptyloxy benzylidene) p'-n-octylaniline, structural and phase transition studies of mesophases 7—111377
heterogeneous materials, microstruct. anal., combined X-ray microdiffr. and topography study 7—78400
heterophase materials, ground surface, residual stresses, X-ray diffraction 7—86292
N-4-hexadecylpyridinium chloride, anhydrous, mesomorphic behaviour 7—111376
high melting ionic solid glasses, twin roller quenching technique and prep. 7—144355
hollandites, synthetic, comp., constitution, stability 7—83919
β-hydroxyethyliminodiacetic acid, cryst. and mol. struct. obs. 7—111533
ice, amorphous, X-ray diffr. meas. 7—131106
ice, Ih phase, Metropolis Monte Carlo X-ray and neutron diffr. 7—98078
ICF target X-ray microscopy 7—135566
II-VI single crystal substrates, orientation, X-ray determination 7—118308
III-V semiconductor layers and devices, metalorganic CVD growth on Si using strained superlattices 7—86057
III-V single crystal substrates, orientation, X-ray determination 7—118308
image segmentation in automated X-ray testing, supervised learning 7—86552
imperfect crystals, neutron irrad., high-temp. annealing stages 7—69768
$InAs_xSb_{1-y}$/GaInAsSb/GaSb struct., LPE growth, charactn. and IR photodiode appl. 7—92895
Incoloy 800, corrosion in molten $NaNO_3$-KNO_3, thermal convection loop study 7—93154
Inconel MA 6000 powder, dispersion strengthened Ni-base superalloy, charactn. 7—100154
$(InP)_x(InAs)_{1-x}$ solid solutions, X-ray diffraction, 7-310 K 7—142710
JPDR, residence time of crud on channel box surfaces 7—109341
Langmuir monolayer on water, X-ray reflectivity 7—131434
laser-produced plasma X-ray sources, appls. 7—73491
Laue diffr. patterns of very small crystals, obs. of mosaic spread 7—76423
layer structure MX_3 cpds., stacking faults, diffuse X-ray scatt. calcs. *(German)* 7—104765
lead stearate monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7—112083
$Li_2Ti_3O_7$, cryst. growth, phase transitions and props. 7—92856
lignoceric acid monolayers on water surface, press. effects and melting transition, synchrotron X-ray diffr. study 7—112083
liquid cryst. polymer with mesogenic side groups, struct. determ. *(Chinese)* 7—131015
liquid-vapour interfaces, synchrotron X-ray studies 7—84452
low-temperature deposits of organic compounds, morphology and structure meas. apparatus 7—104495
lyotropic nematic micellar aggregates, X-ray diffr. exam. 7—137207
main-chain liquid crystal polymer, solidification, elec. fields, surfaces and mesophase ageing effects 7—91480
metal multilayered samples, ion beam mixing 7—76230
metal phthalocyanine sheet polymers, mag. susceptibility, electrical cond., X-ray diffr. 7—76949
metal powders, sintering, motive force and kinetics of diffusion processes *(Russian)* 7—92916
metallic glasses, bond-orientational anisotropy obs. by X-ray diffr. 7—69607
metallic wires, glass fibres and hard elastic polypropylene, SAXS *(German)* 7—137247
metals and alloys, high power ion beam modified, struct. anal. methods 7—117985
N-meta-methoxybenzoyl-N',N',N'',N''-diethylenetriamide of phosphoric acid, cryst. and mol. struct. 7—104714
molecular crystals, dissociation under press. Raman and X-ray studies *(Japanese)* 7—132933
monazite sands, Fe minerals, hyperfine interaction charactn. 7—127198
monodomain liq. cryst., orientational order parameter determ. from X-ray diffr. pattern anal. 7—91440
mordenite, high temp-phase transition *(Chinese)* 7—98423
multilayer epitaxial films, nonconformity, stress, elastic consts., X-ray diffr. *(Russian)* 7—143299
multilayers, temp. stability at high temps. 7—98746
muscle, contracting, striated, use of laser-stimulated luminesc. to meas. X-ray diffr. 7—145303
muscle structure, sliding filament model, X-ray and electron microsc. obs. 7—107326
nanocrystalline materials, atomic struct. study 7—142675
NASICON, superionic cond. and intermediate structure 7—142743
Nimonic PE 16, Ni-base superalloy, precip., quantitative anal. 7—100238
nylon 6 fibres, spin oriented, macromolecular order, WAXS 7—69612
nylon-2/6, morphology and cryst. struct. X-ray diffr. and electron microsc. obs. 7—69619
nylons, cryst. struct. 7—69609
octylcyanobiphenyl (8CB) smectic A phase, X-ray scatt. study *(Hungarian)* 7—131020
olivines, synthetic, minor element site occupancies, channelling-enhanced X-ray emission studies 7—131127
organic materials, mesomorphic and solid, phases X-ray diffr. studies 7—104542
organosulphur-FeOCl intercalation compounds, spectroscopic and mag. props. 7—144050
β-oxygenated acyclic sulphoxides, configurational assignment by ^1H NMR and IR spectra 7—109888
pancratic elastase, porcine, and acetyl-alanine-proline-alanine complex, mol. dynamics simulation 7—144946
pancreatic ribonuclease A, bovine, radiation damage in X-ray diffr. 7—86911
$Pd_{82}Si_{18}$, amorphous, isothermal annealing, struct. relax., elec. resist., X-ray diffr. 7—104562
pentylenediammonium cadmium tetrachloride, orientational conformational disorder 7—142748
peptide β-turn conform., Pro-Asp and -Asn dipeptides study, IR, ^1H NMR and X-ray diffr. spectra 7—78750

X-ray diffraction examination of materials continued
Permalloy-Fe_3O_4 composite, hydrothermal reaction sintering *(Japanese)* 7—71137
PET, CO_2 induced crystn., X-ray diffr. and IR spectra study 7—117840
PET films, dielec., crystallinity, elec. ageing effects *(Russian)* 7—111433
phonons, theory and expts., book 7—80187
PMMA, microscopic deform. under uniaxial tensile stress, radiation and impurity effects *(Japanese)* 7—98316
poly(4-methyl-pentene-1), uniaxially drawn, struct., thermal expansion 7—117841
poly(p-phenylene vinylene), films, highly drawn, molecular orientation and conductivity 7—111432
poly(phenylene sulphide) films, ion irrad., spectroscopic anal. 7—99852
poly crystalline thin films on Cu and pyrex substrates, growth, work fn., elec. conductivity 7—124804
poly L-alanine, struct., heat treatment effect, DTA, X-ray diffr., IR spectra 7—111427
poly N,N'-bis(phenoxyphenyl)-pyromellitimide, deform., smectic ordering, X-ray scatt. 7—86274
poly-4-methyl-pentene-1, uniaxial draw by solid-state coextrusion 7—93043
poly-N-benzyldiphenylaminomethane, struct. characters., RDF analysis of X-ray diffr. patterns 7—69608
polyacetylene:Na, incommensurate-commensurate and order-disorder transformations 7—105007
polyacetylene, heavy alkali metal doping, X-ray diffr. and EPR spectroscopy 7—69629
polyacetylene films, structural props. determ. from X-ray fibre patterns 7—69625
polyacetylene films prepare by oriented precursor route, structural characterisation 7—69626
trans-polyacetylene intercalation cpds., chain dimens., charge transfer effects, X-ray diffr. anal. 7—137263
polyacrylonitrile, swelling, struct. changes, wide-angle X-ray scatt. obs. 7—91479
polyalcohol aqueous solns., vitreous state decomposition 7—131319
polyamide-6 films, dielec., crystallinity, elec. ageing effects *(Russian)* 7—111433
polyamides, cryst. lattice, thermal expansion obs. *(Russian)* 7—111921
polyarylene ether ketones, crosslinking, crystn. kinetics 7—124126
polycrystalline materials, X-ray subgrain analysis *(German)* 7—97864
polydiacetylene, poly(4BCMU), struct. and disorder 7—69632
polydiacetylene, urethane substituted, solid-state phase transitions 7—142991
polyethylene, brominated, crystallisable, location of comonomer units 7—91481
polyethylene, wide-angle X-ray scatt. profile anal. 7—117837
polyethylene copolymers, cross-fractionation according to copolymer comp. and mol. wt. 7—83781
polyethylene films, dielec., crystallinity, elec. ageing effects *(Russian)* 7—111433
polyethylene oxide-KSCN complexes, morphology and ion cond. meas. 7—124587
polyethylene-isotactic polypropylene blends, epitaxial relationship, diffr. pattern analysis 7—83784
polyglutamic acid, conform., X-ray, IR and ^{13}C CP/MAS NMR obs. 7—92524
polyimide, macromol, rigidity and cryst. lattice elasticity *(Russian)* 7—82411
polyimide, photoconduction anisotropy rel. to mol. orientation 7—99117
polymer fibres, morphological heterogeneity, SAXS 7—69610
polymer system of oriented fibrils, SAXS modelling 7—124124
polymers, wide-angle X-ray scatt. profile anal. 7—117837
polyoxyethylene methyl-n-alkyl ethers, morphology, X-ray and Raman scatt. 7—111422
polyoxymethylene, hexagonal cryst., struct. modification, IR and X-ray obs. 7—69620
polyparaphenylene, crystalline, optical excitation study 7—70907
polyphenylenevinylene films prepare by oriented precursor route, structural characterisation 7—69626
β-polypropylene, premelting and recrystallisation behaviour 7—118068
polypyrrole films, anodic deposition from aqueous electrolytes, anion doping and elec. props. 7—71089
polystyrene, fatigue, craze fibril deform. and microstruct. 7—126218
polythiophenes, optical, electrical and structural props. 7—76042
polyurethanes, struct., props., flexible segments comp. effects *(Russian)* 7—137272
polyvinylidene fluoride, piezoelec. effect, X-ray study 7—99718
polyvinylidene fluoride films, struct. changes in elec. fields 7—124122
potassium hydrogen (2R, 3R)-tartrate, least squares absolute struct. refinement, effect of absorpt. correction, data region, stability const. and neglect of light atoms 7—75937
potassium hydrogen cyclobutane 1,1-dicarboxylate, vibr. spectra and H bonding 7—99865
potassium laurate-1-decanol-D_2O-brucine sulphate-ferrofluid cholesteric lyotropic mesophase, phase diagram 7—83660
3,10,-bis(propylthio)-5,7,12,14,-tetramethyl-1,2,4,8,9, 11-hexaazacyclotetradeka-2,4,6,9,11,13-hexaenato (2-) N^1,N^4,N^8, N^{11}-Ni (II), struct. 7—104713
PTFE, γ-irrad., thermal expansion, 80-340 K, crystallinity 7—131340
PVC, struct. and props., X-ray diffr. 7—119320
PVC-polyurethane blends, phase separation, amorphous struct. 7—113558
PVDF, crystal-amorphous interphase, SAXS and dielec. relax. obs. 7—69618
PVDF-PMMA, crystal-amorphous interphase, SAXS and dielec. relax. obs. 7—69618
pyridine, adsorpt. on MoO_3 supported catalysts, Raman and X-ray diffr. study 7—98685
pyromellitdianilic acid-dimethylformamide complex, cryst. struct., X-ray investig. 7—111534
quartz crystals, induced growth striations, X-ray plane wave topographs 7—83804
quartz powders, X-ray diffr. angles determ. by FFT 7—75926
quasicrystals, alloys containing s, p and d elements, TEM and X-ray diffr. studies 7—124170
rare earth alloys, R-Co-B (R=Pr, Nd, Sm, Gd), mag. props. and cryst. struct. 7—138233
rare earth alloys, $RFeAl_x$, mag. struct., Fe atom and moment location 7—131988
rare earth alloys RCo_2B_2, magnetism and structural chemistry, B substitution 7—142700

X-ray diffraction examination of materials continued
rare earth cpds., $R_2Ba_4Cu_6O_{14+y}$, R=La-Nd, Sm-Lu, high T_c supercond. props., elec. resist., X-ray diffr. meas. 7−99297
rare earth oxides, $RBa_2Cu_3O_{9-\delta}$, R=La-Lu except Pm, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
rare earth-transition metal-Si(Ge) systems, valence, EXAFS and X-ray studies 7−77689
reducing topographic contrast in X-ray maps 7−142543
residual stress measurement by X-ray method, use of oscillation on position-sensitive detectors 7−123556
semiconductor epilayers, defect depth profiling by synchrotron X-radiation topography 7−131473
sialon materials, charactn. and props. 7−126248
silicate clays, mixed layered, ion size and substrate rigidity, X-ray and Raman spectra investig. 7−83945
silicates, strip-chain defects, electron microscopy and electron and X-ray diffr. studies 7−137357
single crystals containing growth and decoration dislocations, Laue diffr. *(Russian)* 7−91395
sodium acetate trihydrate, crystal struct., X-ray diffr. exam. 7−111531
SOS epitaxial films, rapid thermal processing 7−70103
spinach ribulose bisphosphate carboxylase, cryst. struct., 1D disorder 7−139188
steel, austenitic, crystal structure changes during ageing *(Russian)* 7−76079
steel, austenitic, ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
steel, austenitic stainless, cathodically charged, H conc. gradients 7−137387
steel, austenitic stainless, H-induced cracking, related phase changes 7−144502
steel, austenitic stainless, N implanted, friction and wear 7−78260
steel, bainitic, HSLA, containing Si, microstruct. exam. 7−100216
steel, C, pitting corrosion, Al cation induction mechanism in NaCl soln. 7−71376
steel, cold rolled, on-line X-ray texture analyser 7−138761
steel, corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
steel, eutectoid, post thermomechanical treatment transform. struct. of ferrite in pearlite 7−100218
steel, galvanised reinforcements, corrosion in alkaline solns., SEM and corrosion prod. identification 7−113760
steel, low C, corrosion inhibition and accel. in NaCl soln. 7−132794
steel, low C, textured, X-ray stress determ. using compliances calc. 7−132641
steel, N ion implantation, surface struct., wear resist. 7−104775
steel, retained austenite, X-ray determ., interlaboratory test evaluation 7−86517
steel, stainless, ion implantation of N, C, P phase composition determ. of surface 7−78301
steel, stainless, low-Cr, high-temp. oxidation resist., Al and Si alloying effect 7−78384
steel, stainless, NaCl coated, hot corrosion 7−78342
steel, stainless, structure, fracture surface morphology *(Chinese)* 7−86322
steel, surface phase transforms. under pulsed effect of high-press. plasma 7−71361
steel, tool, W surface alloying by laser, Co addition effect, hardness, microstruct. *(Korean)* 7−138889
substructure parameter determ. for polycryst., approx. of X-ray line profiles 7−78428
surface struct. after oxidation, asymptotic Bragg X-ray diffr. 7−76561
synchrotron radiation topography appl. to single crystal dynamic processes 7−91562
SYNROC-FA ceramic waste, leaching, phase analysis and microstruct. 7−81721
terephthalylidene-bis-p-n-decylaniline, structural and phase transition studies of mesophases 7−111377
1,3,12,14- tetraaza-6,9,17,20-tetraoxadocosa-1,2,12,13-tetraene, cryst. and mol. struct. 7−104712
1,3,4,6-tetraazapentalenes, dipyrido substituted, synthesis, struct., physicochem. props. 7−71472
tetrahydrofuran clathrate hydrates, thermal expansion, unit cell parameter 7−118137
tetramethylammonium tetrabromoplatinate(II), cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
tetramethylammonium tetrachlorozincate, incommensurate phase, X-ray radiation damage effect 7−104827
tetramethylammonium tetrachlorozincate (II), struct. anal., incommensurate and lock-in phases 7−124233
tetramethylammonium tetrahalopalladate(II) cationic motion, phase transform., PMR, thermal anal., X-ray diffr. 7−91785
(tetraphenylporphyrinato)iron(III) complexes, electronic struct. and EPR investig. 7−112929
thick hot rolled strip, mechanism of texture formation *(Russian)* 7−106530
thin film thickness meas. by X-ray multiple beam interference *(French)* 7−80729
thiophene on Si (111), desulphurisation process study 7−114001
Ti-Al-V, N-ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
tourmaline crysts., elastic consts., thermal neutron irrad. effects study 7−117979
transition metal aluminides, thin film reaction couples, interconnect fabrication 7−118318
transition metal selenides, $(M'_xM_{1-x})_3Se_4$, (M,M'=3d transition metal), phase diagrams 7−113526
transition metals, fast neutron irrad., low temp., defects, X-ray diffr. studies 7−104852
tricyclo(5.2.1.$0^{2,6}$)decane-2,6-diol, struct., X-ray diffr. exam. 7−111530
tridymite single crystals, reconstructive high temp. transformation to cristobalite 7−69903
triethylenediamine, polyiodides, reson. Raman spectra and X-ray struct. 7−92663
tris(substituted amino) sulphonium ions, cryst. and mol. struct. 7−74410
TTF radical cation salts with metal halides, elec. cond. and struct. 7−84859
two-dimensional automated X-ray detector for diffraction experiments 7−109653
vinylidene fluoride-trifluoroethylene copolymer, high press. ferroelectric phase transition *(Japanese)* 7−76299

X-ray diffraction examination of materials continued
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. phase transition, struct. study 7−99763
zeolites, form., Raman spectrosc. obs 7−70801
$[Al_2Li(OH)_6]_2CO_3.nH_2O$, precip., hydrothermal treatment, textural props. 7−86227
AL-Si-Mn, melt spun, icosahedral and glassy phases, form., struct., X-ray scatt., TEM studies 7−97958
Ag chemically deposited layer on glass, optical props. 7−138525
Ag, thin film, ionisation cross section *(Chinese)* 7−92763
Ag-Mg-M (M=Zn, Au, Cu, Al, Sn), out-of-step distance, substitutional element effects 7−142708
Ag-SiO ultrathin superlattices, DC elec. cond. switching 7−92294
Ag-SiO_2 interface, preferred orientations 7−124793
$Ag_7I_4VO_4$ solid electrolyte thin film electrodeposition, cond. and permittivity obs. 7−131354
$AgMo_6S_8$ superconducting thin films, critical current densities and critical fields 7−131970
$AgTa_xNb_{1-x}O_3$, solid solns., phase transitions, X-ray diffr. study 7−76390
$AgTaO_3$, structural phase transitions, Raman scatt., X-ray diffr. and dielectric meas. 7−76386
$AgX-Ag_2O-B_2O_3$ glasses, X=Br, Cl, I, struct., X-ray diffr. study 7−91457
Al alloy, sputtered films, hillock, grain and cryst. orientation, substrate temp. depend. 7−137746
Al alloys, structurally disordered, RMS displacements 7−142610
Al and alloys, melt-spun, rel. between solidification morphology and texture 7−92985
Al, cold worked, recovery spectrum 7−105527
Al, dislocation emission from grain- and sub-boundaries during recrystallisation 7−76137
Al single crystals, vacancy generation and dislocation loops 7−91569
Al, vacancy emission from and absorption to helical dislocation 7−104802
Al, X-ray scanner for exam. of intravoluminal cryst. state 7−130980
Al:N^+, surface modification by nonmass analyzed N^+ beam 7−105206
Al-Cr-Ni system, phase equilib. at 1423 K 7−132582
Al-Cu, structurally disordered, RMS displacements 7−142610
Al-Cu-Mg-Ag, precipitates nucleation and growth 7−144413
Al-Fe, dil. alloy, X-ray study of defect struct. 7−111536
Al-Fe, liq.-quenched, lattice imaging anal. and Mossbauer spectroscopy 7−92999
Al-Fe-Mo-Si, rapidly solidified and heat treated, precipitate identification 7−132628
Al-Li-Cu, icosahedral quasicrystals, peak shape obs. 7−124171
Al-Li-Cu, T_2 phase, combined X-ray and electron diffr. study 7−113520
Al-Li-Cu alloy, icosahedral quasicrystal, single crystal X-ray diffr. 7−137315
Al-Li-Cu icosahedral crysts., struct. and Penrose tiling 7−83855
Al-Li-Cu-Mg-Zr, thermal oxidation behaviour 7−100432
Al-Mg, air heating, internal oxidation, spinel phase precip. 7−106516
Al-Mn, oriented icosahedral, phason strain field, X-ray diffraction study 7−104639
Al-Mn (27 wt.%) ribbons, rapid solidification, microstruct., crystallisation 7−77969
Al-Mn rapidly quenched alloy, X-ray diffraction study of icosahedral phase 7−142698
Al-Mn-Cr, ternary alloys, rapid solidification 7−92998
Al-Mn-Fe alloy, quasicrystalline phase ageing, phase natural struct. 7−144443
Al-Mn-Mg, melt spun, heat treatment and deform. 7−93038
Al-Mn-Si, facet formation, grain shapes and spatial disorder 7−137245
Al-Si, mild wear during unlubricated sliding, surface structs., debris 7−144560
Al-Zn, phase separation kinetics, SAXS and TEM study 7−113515
Al-Zn-Ag, early stage precip., anomalous X-ray scatt. 7−144401
Al-Zn-Mg, Guinier-Preston zones stability, Mg conc. depend. 7−78078
Al-Zn-Mg system, phase equilib. in Al corner 7−132573
$(AlAs)_{0.5}(GaAs)_{0.5}$ fractional layer superlattice, growth on (001) vicinal surfaces by MOCVD 7−112116
$(AlAs)_m(GaAs)_m$ superlattices, ultrathin-layer, MBE growth 7−100074
Al_6CuLi_3, quasi crystal, X-ray diffraction studies 7−124173
Al_6CuMg_4, endothermic quasicryst.-cryst. phase transition 7−131301
$Al_xGa_{1-x}As$, continuously layered crysts., X-ray diffr., optical principles development 7−91393
$Al_xGa_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
AlGaInSb bulk crystal and LPE forms, charactn. 7−92892
$Al_{50}Ge_{40}Mn_{10}$, amorphous, comp. short-range order development on annealing 7−117825
$Al_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
AlLiCu quasicrystal, X-ray diffraction study, symmetry *(French)* 7−91524
Al_6LiCu_3, facet formation, grain shapes and spatial disorder 7−137245
$Al_{79.5}Mn_{20.5}$, decagonal metastable phase, struct. as Penrose-type lattice, electron and X-ray diffr. 7−83852
$Al_7(Mn_{1-x}Fe_x)_2$, decagonal, X-ray diffr. and Mossbauer spectroscopy 7−69658
AlMnSi quasicrystals, disorder, X-ray diffr. and TEM studies 7−142709
AlN, formation by high dose N molecule ion implantation 7−76160
AlN powders, prep. by N plasma-molten Al reaction *(Japanese)* 7−113507
AlN, synthesis by nitridation of floating Al particles in N_2 gas *(Japanese)* 7−126072
AlN thin films by RF reactive sputtering 7−92871
Al_2O_3, hydrated, synthesis by homogeneous precip. method *(Japanese)* 7−132551
Al_2O_3 powder, transition, ultrafine spherical particles, high temp. characts. 7−132541
γ-Al_2O_3, prep. of ultrafine spherical particles by burning of Al powder 7−126069
γ-Al_2O_3 whiskers, growth morphology and struct. studies 7−124807
Al_2O_3-SiO_2, amorphous, chemical polymerisation form., phase transformations, X-ray diffr. and SEM studies 7−105000
Al_2O_3-SnO_2 composite plasma-synthesized powders 7−113510
Al_2O_3-ZrO_2 powder, characts. rel. to synthesis chemistry 7−106474
Al_2O_3-ZrO_2 tetragonal, stabilisation in reactive magnetron sputtered thin films 7−137745
$AlPO_4$ crystals with high Q-factor, growth and props., bulk wave device appl. 7−119121
$Al_{60}Si_{20}Cr_{20}$, new quasicryst., form. and struct. 7−83858

X-ray diffraction examination of materials continued
$Al_2Si_2O_5(OH)_4$, kaolinite, water intercalated, pressure effects, X-ray diffr. studies 7−137345
$Al_{23}Te_{77}$, metallic glasses, double glass transition phenomena and fractional crystn. 7−84271
$Al_2Y_4O_9$, structure, X-ray and neutron powder studies, pattern decomposition and Rietveld method 7−83882
Ar-O_2, solid HCP and FCC solns., thermal expansion determ. *(Russian)* 7−91848
As-Sb-Se glass ceramics, crystallisation and microstructures 7−104575
Au/GaAs, sputtering-controlled ion mixing 7−91664
Au/In composite films, grain boundaries, thermal grooving 7−112143
Au-Cr superlattices, surface waves, interface struct., elastic props., X-ray diffr., Brillouin scatt. studies 7−105221
Au-Fe single cryst., diffuse streaks, synchrotron X-ray diffr. 7−98046
Au-Ti(Zr)(V)(Nb) thin film interactions, RBS and X-ray diffr. studies 7−69991
AuCu-Al bilayer system, ion beam mixing 7−84065
BN coating films, prep. using simultaneous ion implantation and vapour deposition, characterisation 7−92033
BN powders, cubic, shock compaction, grain size, microhardness, density 7−86107
BN surface layers on Fe, reactive ion beam enhanced deposition 7−119171
BN, synthesis from triammoniadecaborane and NH_3 *(Japanese)* 7−119224
Ba-Ag, phase diagram, cryst. struct., thermal anal., metallography, X-ray diffr. 7−77940
Ba-Y-Cu-O, high T_c supercond., crit. current density, diamag. suscept., charactn. by X-ray diffr. 7−99381
$Ba_2Cu_3YO_7$, high T_c supercond., bulk modulus and Young's modulus 7−118008
$BaFe_{12-x}Mn_xO_{19}$ hexaferrite, cation site distrib., X-ray powder and neutron diffr. studies 7−98058
$BaFe_{12}O_{19}$, ferrite, prep. by liq. mix technique, charactn. 7−86111
$Ba_{0.5}La_{0.5}Fe_{1-x}Cu_xO_{2.75-(x/2)+\delta}$, struct., oxidation states, elec. props., chem. anal., X-ray diffr., electron diffr., Mossbauer spectra, mag. suscept. meas. 7−84891
$BaMoO_4$-$Ce_2(MoO_4)_3$ system, synthesis, physicochemical props. 7−98006
BaO-B_2O_3-TiO_2 glasses, crystallisation for glass ceramics 7−104573
BaO-Fe_2O_3-B_2O_3 system, crystallisation of W-type hexagonal ferrites in oxide glass 7−131048
BaO-RuO_2-Al_2O_3 system, Ba-poor cpds. at 1300°C 7−69897
$BaO.2ZnO.8Fe_2O_3$, anisotropic ferrite magnets, mag. props., Al_2O_3 substitution effects *(Japanese)* 7−125377
$BaO.6Fe_2O_3$, polycryst. ferrite, hot extrusion processing, microstruct. change *(Japanese)* 7−126202
$BaPb_{1-x}Bi_xO_3$, first order structural phase transition and scaling law 7−91799
$Ba_2RCu_3O_7$, (R=Y,Pr,Sm,Eu,Gd,Dy,Ho,Er,Tm), high-T_c supercond., struct. props. 7−142736
$Ba_2SmCu_3O_{9-x}$, high temp. supercond., electron and X-ray diffr., XPS studies 7−112597
$Ba_{0.85}Sr_{0.15}TiO_3$ ferroelectric thin film, crystal struct. and dielectric props. study 7−70708
$(Ba_{1-x}Sr_x)_2Zn_2Fe_{12}O_{22}$, single cryst. growth from high temp. soln. 7−113367
$BaTiO_3$, cubic-tetragonal transition, high resolution X-ray diffr. study 7−104619
$BaTiO_3$, high purity, microstruct. and props., effects of prep. and stoichiometry 7−125590
$BaTiO_3$ thin films, RF sputtering prep., struct., elec., and optical props. 7−100072
$BaTiO_3$:Ca ceramics, ferroelec. transition, effect of octahedrally coordinated impurity 7−92620
$BaTiO_3$-$Nd_2Ti_2O_7$ pseudobinary system, X-ray phase and thermal analyses and electrophysical characteristics 7−91764
$Ba_{1-x}Y_xCuO_{3-z}$ high T_c supercond., transition temp. 7−92339
$Ba_2YCu_{3-x}O_{7-y}$, orthorhombic single cryst. supercond., twinning, polymorphic transform., X-ray diffr. study 7−98175
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$Ba_2YCu_3O_{7-x}$, high T_c supercond., X-ray powder characterisation 7−117869
$Ba_2YCu_3O_{7-x}$, orthorhombic-tetragonal transform., thermal expansion coeff., X-ray powder diffr. study 7−98432
$BaZnGeO_4$, powder calcination, phase transitions, DTA, dielec. meas., X-ray diffr., SEM obs. 7−126107
$BaZrO_3$:Li, low sintering and electrical conductivity meas., X-ray diffraction study 7−131693
Be dielectric response, lattice induced double peak 7−143386
Be, electron density and electrostatic pot., X-ray diffr. studies *(Russian)* 7−69645
Be_3N_2 laser irrad.-induced layer growth at B-liq. N interface, RBS and X-ray diffr. studies 7−118234
BeO laser irrad.-induced layer growth at Be-water interface, RBS and X-ray diffr. studies 7−118234
BeO, X-ray diffr. data, multipole anal. 7−137321
$Be_{37.5}Ti_{62.5}$ metallic glass, struct., X-ray and neutron diffr. 7−97962
Bi molybdates, synthesis, electrophysical props. 7−99135
Bi, monocryst., deform. tensor, X-ray identification 7−91705
Bi-Sr-Cu-O system, superconductivity 7−143682
$Bi_{12}GeO_{20}$, single crystal, sillenite type struct., growth defects, X-ray topography 7−91558
Bi_2O_3 films, prep. by reactive evaporation and activated reactive evaporation, X-ray diffr. studies 7−100119
Bi_2O_3-B_2O_3-ZnO ternary system, phase equilibria 7−84232
$Bi_{1-x}Sb_x$, deform. tensor, X-ray identification 7−91705
$Bi_{12}SiO_{12}$, strongly absorbing crysts., contrast characts. in projection topography 7−69537
$Bi_{12}SiO_{20}$, single crystal, sillenite type struct., growth defects, X-ray topography 7−91558
Bi_2Te_3:Ge, incorporation of Ge atoms into host lattice, X-ray diffr. study 7−104795
$Bi_{12}TiO_{20}$, single crystal, sillenite type struct., growth defects, X-ray topography 7−91558
$Bi_{12}TiO_{20}$, solid-state synthesis, DTA and X-ray diffr. studies *(Japanese)* 7−126039
$BiVO_4$, ferroelastic, twin struct., NMR, X-ray diffr. studies 7−91599
C, cementite dispersed, cementite dispersed, synthesised from ferrocene, vinylferrocene and divinylbenzene systems, mag. props. 7−77853

X-ray diffraction examination of materials continued
C fibres, vapour-grown, mech. props. 7−86238
C, fractal dimensions, small angle X-ray scatt., electrochemical anal. *(French)* 7−76074
C, heat treated, grinding, struct., X-ray diffr. 7−126272
C-quartz wool/reticulated vitreous C, low density composites 7−77917
CO-transition metal alloys, cryst. struct., FCC-HP phase transition effects *(Russian)* 7−137313
C0-V thin films, RF sputter deposition, mag. props. 7−125974
$Ca_{60}Al_{40}$, glass structure, X-ray diffr. and computer simulation studies 7−142601
$Ca(BO_2)_2$, electron density distrib., X-ray diffr. studies 7−124176
$CaCl_2$-$EuCl_2$ solid soln., phase charactn. by X-ray powder diffr. 7−143020
$CaCl_2$-$SrCl_2$ solid soln., phase charactn by X-ray powder diffr. 7−143020
$Ca_4Fe_2Ti_2O_{11}$, perovskite-type cpd., synthesis, charactn. by X-ray diffr., electron microscopy 7−111483
$Ca_2Pb(VO_4)_2$, crystallographic study under high pressure *(French)* 7−91532
$CaTiO_3$ powders, prep. by hydrothermal method, props. of sintered ceramics 7−77857
$Ca_3(VO_4)_2$-$Pb_3(VO_4)_2$ solid solns., nonlinear props., optical structural, dielec. and thermal meas. *(French)* 7−124527
$Ca_2Zr_2Si_4O_{12}$, $Ca_3ZrSi_2O_9$, unit cells and indexed X-ray powder diffr. 7−117879
Cd, thin film, ionisation cross section *(Chinese)* 7−92763
Cd-Ni alloy electrodeposition from acetate baths with superimposed AC 7−132503
$CdBr_2$, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
CdI_2, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
$CdInGaS_4$, photoluminescence props. 7−125805
$Cd_{1-x}Mn_xTe$ epitaxial films, hot-wall evaporation 7−126000
$Cd_{1-x}Mn_xTe$, press. induced B3-B1 phase transition, EDX diffr., elec. resist. meas. 7−98436
$Cd(OH)_2$ powders, pyrolysis, time resolved X-ray diffr. study by synchrotron radiation 7−114034
Cd_3P_2 films, growth by hot wall epitaxy 7−138685
CdS films, grown under longit. dec. field, X-ray struct. charactn. 7−118309
CdS, photocond., air-sintered pellets, surface occurrence of impurity phases 7−86500
CdS thin film growth for SAW appls. 7−100089
$CdSnP_2$ polycryst. thin film, MOCVD, structural and compositional charactn. 7−119167
CdTe layers on semiconductor substrates, MBE growth, relax. of stresses 7−92015
CdTe, low temp. LPE from Hg solvent, photolum., X-ray diffr. 7−113454
CdTe, MBE grown, mismatch strain meas., free exciton absorpt. and refl. 7−76683
CdTe, semicond., high press. phase 7−142996
CdTe, thermal parameters studied by single-cryst. X-ray diffr. 7−137480
CdTe-GaAs(001), epitaxial layer on GaAs substrate, static atomic displacements 7−105305
CdTe-InSb multilayers, MBE growth and interdiffusion 7−77821
CdTe-ZnTe superlattice, MOCVD growth 7−138681
$CdTe_{0.95}Se_{0.05}$ prepared surfaces, for bulk struct. X-ray charactn. 7−126333
$Cd_{1-x}Zn_xTe$, MBE grown, phase separation 7−131487
Ce monochalcogenides and monopnictides, press.-vol. relationships 7−76382
$CeAl_2$, Kondo cpd., pressure-temperature phase diagram, high press. X-ray diffr. and elec. resist. meas. 7−85288
$CeAl_2$, press.-vol. depend., absence of discontinuity 7−104893
$Ce(Co_{1-x}Cu_x)_5$, lattice constants and heat of formation 7−91841
$CeCu_6$, lattice distortion 7−69893
$Ce(Cu_{1-x}Ni_x)_5$, elec. cond., thermoelec. power and thermal expansion 7−98978
CeD_x single crysts., magnetic order and structural transformations studies 7−112745
$CeFe_2$ Laves phase intermetallic cpd., amorphisation by H absorpt. 7−142581
$CeFe_2H_3$ amorphous state, X-ray diffr. study 7−104558
$CeMgAl_{11}O_{19}$, mixed hexa-aluminate, low-temp. synthesis and charactn. 7−144346
$Ce(PO_3)_3$-$RbPO_3$ system, composition diagrams, X-ray, thermal and IR anal. *(Japanese)* 7−124448
$(Co,Ni,Zn)SiO_3$, K-shell electrons, at. positions, X-ray reson. scatt. diffr. 7−75943
Co complex, cryst. struct., intramol. P-Hg interactions 7−91550
Co, metastable compact powder, stacking fault parameters and microstrains, X-ray diff. profile anal. 7−142797
Co, struct. in liq. state, X-ray study 7−104525
Co, thermal oxidation rel. to ion implanted impurities 7−138897
Co, X-ray diffr. electron. correl. and relativistic effects 7−129614
Co-C, martensitic transform., X-ray diffr. 7−144398
Co-Cr thin films, artificial superlattice struct., magnetism, struct. 7−76667
Co-Cu compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Co-Cu multilayer electrodeposit structs., mag. props. study 7−125508
Co-Ni-Ti-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Co-Zr metallic glasses, short-range order and density 7−91465
$Co_{80}B_{20}$ glassy alloys, corrosion rel. to crystn. 7−126278
CoCr sputtered films, thermomag. anal., annealing and Cr distrib. 7−125492
CoCr thin film recording media, mag. anisotropy and struct. 7−125490
CoCr thin films, mag. props. and anisotropy 7−125495
CoCr thin films, spin wave reson. spectra study 7−105977
CoCrAl, DC planar magnetron sputtering and study of props. 7−100059
$CoCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$CoCr_2S_4$, production by hot pressing, props. 7−77855
$Co_{77}Cr_{12}Zr_{11}$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
$Co_{0.1}Fe_{0.9}Cr_2S_4$, mag. semicond., crystallographic and mag. props. 7−69666
$Co_{2-x}Ge_{1-x}Fe_{2x}O_4$, oxidic spinel, X-ray, electrical conductivity, magnetic and IR studies 7−111510

X-ray diffraction examination of materials continued
$Co_{81}Mo_{10}Zr_9$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
$Co_xNi_{5/3-x}FeSb_{1/3}O_4$, ferrite, ^{57}Fe, ^{61}Ni and ^{121}Sb Mossbauer study 7−113001
Co_2O_3, Al_2O_3 coated composite powders, synthesis by homogeneous precip. method *(Japanese)* 7−132551
Co_3O_4, surface area, crystallite size, X-ray diffr. anal. 7−76563
CoP, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
$Co_{1-x}P_x$, amorphous, electrodeposited, structural relax., elec. resist., SAXS 7−105520
$Co_{83}P_{17}$, amorphous alloys, electrodeposited in mag. field, struct. 7−104565
$CoSi_2$-Si MBE layers, strain relax. 7−143276
Cr complex, 1-chloro-2,3-diaquo-4,5,6-triammine chromium(III) chloride, struct. 7−104694
Cr, epitaxial coatings on Mo (111), X-ray diffr. study 7−112142
Cr, sulphidation kinetics, scale structures, 973-1173 K 7−119434
Cr-C amorphous alloys sputtered, form. and crystn. 7−83754
Cr-SiO cermet thin films, prep. and elec. props. 7−132469
$Cr_{23}C_6$, sulphidation props. at 1073 K in H_2-H_2S atm. of 10^{-6} to $10^{3.5}$ Pa S press. 7−126273
Cr_7C_3, defect microstruct., electron microscopy, X-ray and electron diffr. studies 7−137371
CrN, surface layers on Fe, reactive ion beam enhanced deposition 7−119171
CrO_2:Fe powders, thermal stabilisation, effect on mag. and struct. props. 7−85373
Cr_2O_3 surface props. studies 7−131395
$CrSbO_4$, thermal expansion coeffs., lattice parameters, X-ray diffr. obs. 7−111917
Cr_3Si films, elec. resist., Hall coeff. meas. 7−99223
Cr_5Si_3 films, elec. resist., Hall coeff. meas. 7−99223
$CsHSO_4$, superionic protonic conductor, mechanism and proton dynamics 7−143093
CsI, pressure-induced high-temp. disproportionation, X-ray diffraction and conductivity meas. 7−137468
$Cs_2R_2(MoO_4)_3$, (R=Ni,Co,Mg,Mn,Cd), struct. investig. 7−142740
$Cs_2Ti_5O_{11}$, anhydrous, hydrated and deuterated phases, cryst. structures, X-ray and neutron diffr. studies 7−111459
Cu (II) bis(thiosemicarbazide) sulphate, crystal structure determ. 7−104716
Cu (111), chemisorbed Cl, struct., X-ray standing-wave technique 7−84502
Cu based shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7−126109
Cu, cold rolling, secondary recrystallisation texture, X-ray diffr., SEM-electron channeling pattern 7−113573
Cu complex, (nitrito)bis(2,2′-bipyridyl)Cu(II) nitrate, cryst. struct., X-ray diffr. 7−91552
Cu complex, Cu(II) alkanoate, crystalline and columnar phase structs. 7−111526
Cu, epitaxial coatings on Mo (111), X-ray diffr. study 7−112142
Cu, flow stress 7−144463
Cu/Sn thin films, intermetallic cpds., formation kinetics *(French)* 7−84594
Cu/Sn thin films, surface morphology, whisker and hillock formation *(French)* 7−124790
Cu-Al, stacking faults, dislocation density, hardness rel. to annealing 7−111586
Cu-Al alloy thin films, vapour deposited, intrinsic stress and struct. study 7−137756
Cu-Al bronze, worn surfaces, triaxial normal residual stresses, X-ray diffr. 7−126257
Cu-Al-Be, Be solubility in $CuAl_2$ 7−93020
Cu-Al-Ni-Ti shape memory alloys, grain refined, X-phase struct. and comp. 7−86192
Cu-Co, coherent precipitates, X-ray diffuse scatt. studies 7−138752
Cu-Co alloys, Co precipitates, small-angle neutron scatt. and X-ray diffr. studies 7−138753
Cu-Fe-Sn ternary system, phase diagram *(Chinese)* 7−132560
Cu-Ge liq. alloys, struct., X-ray diffraction determ. *(Russian)* 7−124077
Cu-In-Se ternary system, phase relations 7−111824
Cu-Ni (12.5, 27 wt.%), rolling texture development 7−100249
Cu-Ni [100] oriented superlattices, mag. props. study 7−125334
Cu-Ni-Al single cryst., plastic deform. localisation *(Russian)* 7−138779
Cu-Sb, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Cu-Sn, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Cu-Ti, modulated structures, X-ray side band profiles 7−69661
Cu-Ti system, melt spun ribbon, glass forming ability 7−83737
Cu-Zn alloy, distorted crystallites, aggregate X-ray diffraction profile study 7−144436
Cu-Zn films, defects and elec. props. 7−92035
Cu-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
Cu-Zr amorphous alloys, liq. quenched and sputtered, struct. relax and glass transition, comparison 7−97981
Cu-Zu-Al, shape memory alloys, ordered struct., thermal cycling effect 7−71185
$Cu_xAg_{1-x}In_yGa_{1-y}Se_2$ crystalline solid solns., lattice parameter determ., X-ray powder diffr. 7−117906
Cu_3Au, electron irradiated, Frenkel defects, study by diffuse X-ray scatt. 7−104740
$Cu_2CO_3(OH)_2$, malachite, thermal deformation and pseudolayering 7−91849
$CuCr_2Te_4$ films, synthesis, texture, mag. props. 7−98731
CuGaSe chalcopyrite thin film growth by metallic film selenisation, struct. and chem. props. charactn. 7−118325
$CuInS_2$ phase diagram, allotropic transitions, DTA and X-ray diffr. studies 7−118093
$CuInSe_2$ chemically deposited thin films, prep. and charactn. 7−84586
$CuInSe_2$ chemically deposited thin films, prep. and charactn. 7−84587
$CuInSe_2$, chemically deposited thin films, composition and struct. 7−113458
$CuInSe_2$ electrodeposited films, heat treatment effects on struct. and comp. 7−84585
$(CuInTe_2)_{1-x}(MnTe)_x$ diluted mag. system, phase relationships 7−124451

X-ray diffraction examination of materials continued
$Cu_xM_{1-x}(H_2O)_6SiF_6$, M=Zn,Fe,Ni, metastable phases, successive ordering of Jahn-Teller distortions 7−131285
Cu_2O on stainless steel, thin films galvanostatic deposition 7−118315
$Cu_{2-\delta}Se$, state below superionic transition temp. 7−69922
Cu_3Ti, phase changes, X-ray diff. and pseudopots. investig. 7−142980
$Cu_{35}Ti_{65}$ metallic glasses, crystalline particles, deform.-induced amorphisation 7−111417
$Cu_{50}Ti_{50}$, amorphous struct., neutron- and X-ray diffr. study 7−91454
$Cu_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
Cu_5Y amorphous alloys, struct., anomalous X-ray diffr. studies 7−97933
$Cu_{60}Zr_{40-x}Ni_x$ glasses, ideal soln. behaviour rel. to Ni addition 7−83768
Dy-Ba-Cu-O high T_c supercond., zero resist. temp. and cryst. struct. 7−125210
Dy-Y superlattices, mag. and struct. charact. 7−125506
$DyBa_2Cu_3O_{7-x}$ high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
$DyFe_2SiC$, quaternary iron-rich phase stabilised by C, struct. 7−142701
DyIG, citrate gel synthesis, charactn. 7−77905
Er-El system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
$ErBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$Er_2(Fe,Mn)_{14}B$, spin reorientation, moment compensation, struct., Mn substitution effect 7−118797
$Er_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Er_2Fe_{14}B$ thin film mag. props. study 7−112894
$Eu_x(NH_3)_yTiS_2$, mixed valence intercalation cpds., synthesis, characterisation, mag. props. 7−85352
$Eu(Pd_{1-x}Au_x)_2Si_2$, valence transition, Mossbauer effect, X-ray diffr. meas. 7−92142
Fe alloys, metastable cryst. and amorphous, prod. by vapour quenching 7−92924
Fe and FeN_x sputtered films, stress levels determ. by X-ray topography 7−76710
Fe castings stress relief using vibration *(German)* 7−144454
Fe compacts, low temp. sintering *(Korean)* 7−132526
Fe complex, bis(imidazole)(meso-tetraphenylporphinato)Fe(III) Cl, cryst. and mol. struct. 7−91537
Fe complex exhibiting two-step spin conversion, Mossbauer spectroscopy, mag. susceptibility, X-ray diffr. 7−112796
Fe corrosion, influence of He^+, C^+, N^+ or O^+ ion implantation 7−78357
α-Fe ferromagnetic films, MBE growth on ZnSe (001), (110) 7−76686
Fe, fine particles, morphology, porous texture, mag. props, haematite reduction prep. 7−77868
Fe, ion nitriding, nitride form. and growth 7−132810
γ-Fe metastable phase form in $Fe_{83}B_{17}$ amorphous alloy, Mossbauer spectroscopy and X-ray diffr. studies 7−124521
Fe powder, X-ray microbeam stress meas., fatigue crack tip residual stress *(Japanese)* 7−144652
Fe, pure, nitrocarburizing, compound layer form. and growth, microstructural evolution kinetics 7−138900
α-Fe solid struct., nanometer-sized crystallites, X-ray diffr. study 7−124167
Fe, struct. in liq. state, X-ray study 7−104525
Fe/Cu, explosively bonded plates, charactn. 7−86556
Fe/Ti multilayers, amorphous alloy form. by ion beam mixing 7−76233
Fe-Al-C, martensite cryst. lattice alignment rel. to comp. and cooling temp. *(Russian)* 7−144445
Fe-Al-C alloys, struct. of athermal and isothermal martensites in low temp. tempering 7−106542
Fe-Al-Mn-C, oxidation, high temp. investig. 7−138905
Fe-B amorphous alloys, crystallisation, NMR and X-ray diffr. study 7−112992
Fe-B metallic glass, crystn. kinetics study by X-ray diffr. and Mossbauer spectroscopy 7−76025
Fe-B-R metallic glasses, R=La, Ce, Pr, Ho or Er, in situ crystn. obs. 7−76031
Fe-B-(N), oxidation inhibition by deposited and ion-implanted B 7−106685
Fe-C getter sputtered films, struct. and mag. props. 7−112873
Fe-C multilayer films, struct., X-ray and electron microscopy study 7−112101
Fe-CR-C-B amorphous alloys, crystn. rel. to comp., DSC, X-ray diffr. *(Korean)* 7−137250
Fe-Cr, diffusion aluminide coating 7−78377
Fe-Cr, σ-phase, phase transform. *(French)* 7−86164
Fe-Cr-Co-Mo, high coercivity, phase equilib. characts. *(Russian)* 7−142953
Fe-Cr-Mn-N, microstruct.-comp. relationships and M_s temps. 7−100263
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7−83746
Fe-Cr-S system, phase relations and spinel-monoclinic transition 7−119242
Fe-Cr(Ni), transient state scale from. in H_2-H_2O-H_2S atm. 7−78376
Fe-Cu, compositionally modulated multilayered films, sputtered, mag. props. 7−99517
Fe-Dy(Gd)(Tb) amorphous thin sputtered films, artificially layered struct., mag. anisotropy study 7−112895
Fe-Mn alloys, FCC, electronic struct., charge-density meas. 7−105385
Fe-Mn containing ε-martensite, friction and wear, struct. transformations *(Russian)* 7−77995
Fe-Ni, N_2^+ ion implantation effect on corrosion in H_2SO_4 soln. 7−126296
Fe-Ni multilayers, Fe ferromagnetism 7−99519
Fe-Ni-Al-C alloys, rapidly solidified, lattice modulation and form. of lamellar duplex ferrite/carbide microstruct. 7−100206
Fe-Ni-Al-Ti semi-hard mag. alloy, precipitation phases during tempering *(Chinese)* 7−126119
Fe-Ni-B-Si metallic glasses, reversible structural relax., DSC and X-ray diffr. 7−131054
Fe-P, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
Fe-P oxide system amorphous films, microstruct., mag. and magnetooptical props. 7−112874
Fe-Pd, ordering, elec. resist., X-ray diffr., TEM obs. *(Japanese)* 7−93004
Fe-Si, grain oriented sheets, deformation and recrystallisation texture changes 7−126172

X-ray diffraction examination of materials continued
Fe-Si (1.7 wt.%), single and polycryst., cold rolling, orientation depend. of stored energy and coherent domain size *(Korean)* 7−126141
Fe-Si (3 wt.%), single crystals, prep. of highly perfect samples by thermal cyclic annealing 7−125963
Fe-Si (3 wt.%), solidification, in situ obs. by synchrotron rad. X-ray topography 7−100205
Fe-Si-Al Sendust alloy ribbons, mag. props., heat treatment effects 7−100399
Fe-Ta compositionally modulated disordered films, magnetism and struct. investigations 7−112902
Fe-V, equiatomic, sigma phase form. mechanism 7−93007
Fe-Zr, amorphous, sputtered and solid-state-reacted films, phase separation 7−98744
$Fe_{100-x}B_x$, amorphous alloys, crystallisation, Curie temp., mag. props., Mossbauer spectra *(Japanese)* 7−92425
$Fe_{80}B_{20}$ 7−126278
$Fe_{80}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{75}B_{25-x}Nd_x$ rapidly quenched alloys, mag. props. 7−77357
$Fe_{78}B_{22-x}Si_x$, metallic glasses, crystn. and thermal stability 7−83745
$Fe_{79}B_{16}Si_5$, amorphous, structural relax., crystallisation, Mossbauer spectra, elec. resist., X-ray diffr. *(Japanese)* 7−76004
$Fe_{79}B_{16}Si_5$, amorphous alloy. phys. props. and struct., effect of cold rolling 7−144437
$Fe_{80}B_{16}Si_2C_2$ metallic glass, crystn. and embrittlement, SAXS study 7−97959
$Fe_{81}B_{13.5}Si_{3.5}C_2$, amorphous alloy, crystallisation kinetics, DSC, X-ray diffr. 7−76006
$Fe_{81}B_{13.5}Si_{3.5}C_2$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7−106711
$Fe_{81}B_{13.5}Si_{3.5}C_2$, Metglas 2605 SC, radial distrib. function anal. 7−142608
$Fe_{81.5}B_{13.5}Si_4C$, amorphous ribbons, annealing, struct., Mossbauer spectra, X-ray diffr. 7−106554
$Fe_{83}B_{14}Si_{1.5}C_{1.5}$ metallic glass, struct. evolution during crystn. 7−83744
$Fe_{100-x}C_x$ amorphous alloys, sputtered, crystn. 7−76021
Fe_7C_3, defect microstruct., electron microscopy, X-ray and electron diffr. studies 7−137371
$Fe_{67}Co_{18}B_{14}Si$, metallic glass, annealing and crystn. behaviour 7−76030
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glasses, corrosion in NH_4NO_3 soln., Mossbauer spectra 7−106711
(FeCo)NdB sputtered film, struct. and permanent mag. props. study 7−132101
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ metallic glass, magnetisation and magnetostriction obs. 7−106008
$Fe_{78}Cr_2B_{12}Si_8$, amorphous, quenched, annealed, ferromag. reson. 7−112962
$FeCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
FeF_3 (HF)$_x$ crystallisation to rhombohedral and hexagonal phases, X-ray diffr. and Mossbauer spectra studies 7−83697
FeF_3 crystallisation to rhombohedral and hexagonal phases, X-ray diffr. and Mossbauer spectra studies 7−83697
$FeMnTiO_4$, anisotropic spin glass behaviour, magnetisation, susceptibility and Mossbauer meas. 7−112803
$Fe_{1-x}Mo_x$, metastable BCC and amorphous, produced by vapour quenching, mag. props. 7−77255
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, melt spun, non-uniform struct. 7−83767
$Fe_{40}Ni_{40}B_{20}$, metallic glass, struct. study using X-ray diffraction 7−142615
$Fe_{40}Ni_{40}B_{20-x}Al_x$ metallic glasses, crystn., influence of Al 7−76029
$Fe_{40}Ni_{40}B_{20-x}P_x$, amorphous struct., X-ray RDF 7−83764
$FeNiCrO_4$ system, entropic ferrimagnetism, Mossbauer and X-ray studies 7−85501
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$ amorphous ribbon alloy, laser radiation enhancement of corrosion resistance 7−71369
$Fe_3Ni_{32.24}Cr_7Si_{4.5}B_{3.2}C_{0.06}$, amorphous struct., X-ray diffraction study 7−131047
$Fe_{40}Ni_{38}Mo_4B_{18}$ amorphous ribbon/steel system, impact weldability domain 7−113851
$Fe_{40}Ni_{40}P_{14}B_6$ amorphous alloy, annealed, struct. study 7−91463
$Fe_{50}Ni_{30}Si_{10}B_{10}$ amorphous alloy, crystn. and relax. during pulse heating 7−71228
$Fe_{1-\delta}O:Al^{3+}$ stabilized system, hyperfine interactions, Mossbauer study 7−118916
Fe_2O_3, impulse treatment, phase composition and packing defects anal. 7−98425
γ-Fe_2O_3 powder, starting faults in spinel struct., anomalous X-ray line broadening 7−111585
γ-Fe_2O_3 recording particles, high-field magnetism 7−85368
Fe_3O_4, magnetite bicrystals, grain boundary, X-ray diffr. 7−98174
FeS:Mn, M=3d transition metal, mag. and crystallographic transitions, Mossbauer, X-ray studies 7−132006
$Fe_{7.5}Si_{10}B_{15}$ metallic glass wire, struct., X-ray diffr. 7−83763
$Fe_{81}Si_xB_{19-x}$, metallic glasses, transform. behaviour study by SAXS 7−83740
$Fe_{80}Si_xP_{20-x}$ amorphous alloys, crystn. *(Korean)* 7−131046
$Fe_{1-x}Ti_x$, amorphous alloys, prod. by vap. quenching, thermal stability 7−83671
$FeTiH_x$ and $FeTi_{1.15}H_x$, hydriding behaviour, ease of activation, β-phase skipping 7−98469
Fe_xTiSe_2 electronic characts. and cryst. dimensionality, Mossbauer, mag. suscept. and X-ray diffr. meas. 7−142725
$Fe_{95-x}W_5B_x$ amorphous alloys, thermomagnetic and crystallisation behaviour 7−77258
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
Ga-Ge-Se-Te films for reversible optical recording 7−68801
Ga-Sb-Se films, obliquely deposited, negative resist behaviour 7−116015
$Ga_{1-x}Al_xAl$-GaAs superlattices, growth imperfections, X-ray studies 7−84536
GaAlAs-GaAs disordered superlattices, X-ray diffraction studies 7−118281
GaAlAs-GaAs laser material, behaviour as Bragg case X-ray interferometer, lattice mismatch determ. 7−92009
$Ga_{1-x}Al_xAs$, MOVPE multilayer growth, transient composition effects 7−98733
$Ga_{1-x}Al_xAs$/GaAs heterostruct., strain depth profiling, X-ray diffr. studies 7−98713
GaAs epitaxial layers on Si substrates, high volume production growth 7−86059

X-ray diffraction examination of materials continued
GaAs heteroepitaxial MOCVD layer growth and charactn. on Ge/Si composite substrates 7−71054
GaAs, LEC growth, X-ray topography using synchrotron radiation *(Japanese)* 7−124149
GaAs MBE film grown on Si (001) RHEED studies and interface anal. 7−76670
GaAs, MOCVD growth on Si substrates, stresses and strains 7−100107
GaAs on Si and SOS substrates, organometallic VPE for microwave appls., expt. charactn. 7−84582
GaAs perpendicular strain profiles produced by low-dose ion implantation, X-ray diffr. study 7−69722
GaAs wafer, altered phase due to Nd:YAG laser local heating effects 7−91650
GaAs:Fe epitaxial films, doping during vapour deposition, structural and electrical props. 7−76664
GaAs:In, directional solidification, X-ray topography capabilities for interfacial instabilities obs. 7−98010
GaAs:In, substrate for thin film appls., growth of MBE GaAs layers 7−91937
GaAs:In LEC crystals, grown-in dislocations 7−137367
GaAs:Ne(Si)(Te), ion implanted, nonlinear strain effects 7−142806
GaAs:Si, low dislocation single crystals, growth and props. 7−85988
GaAs:Si/AlAs superlattices, donor levels, elec. and photolum. props., substrate temp. depend. study 7−143576
GaAs/Au layer structs., ion beam mixing, struct. and elec. props. 7−76242
GaAs/Au-Ge-Ni contacts, melting temperatures, X-ray diffr. study 7−70101
GaAs/Co interface, cpd. form., AES, TEM and X-ray diffr. studies 7−98712
GaAs/metal contacts, interface reactions and elec. characteristics 7−125121
GaAs-AlAs superlattices grown by MBE, struct. props., TEM and X-ray diffr. obs. 7−70123
GaAs-AlGaAs heterointerfaces, growth by flow-rate modulation epitaxy, improved flatness 7−92004
GaAs-Au, encapsulated ohmic contacts, alloying process, RBS studies 7−98722
GaAs-GaAlAs, growth and interface characterisation 7−98747
GaAs-InAs, heteroepitaxy of MBE InAs films, inhomogeneous lattice distortion 7−137733
GaAs-Ir, interfacial interactions 7−143082
GaAs-Si, heteroepitaxy of GaAs, improvement 7−137730
$Ga_xFe_{1-x}NiCrO_4$ mixed spinel, magnetic behaviour and site occupation studies 7−99419
$Ga_{1-x}In_xAs$, MBE growth on Si substrate, characterisation 7−71033
$Ga_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Ga_{16}Mg_{32}Zn_{52}$, new quasicryst., form. and struct. 7−83858
GaP/GaAs LPE systems, large lattice mismatch accommodation 7−112108
GaPAsSb bulk crystal and LPE forms, charactn. 7−92892
GaSb (111), surface struct., X-ray determ. 7−124664
GaSb-AlGaSb superlattices and multi-quantum wells, MBE grown, crystal qualities, optical properties *(Polish)* 7−132218
Gd-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
Gd-Co-P system, phase equilib. diagram, X-ray diffr. study 7−100195
$GdFe_2H_3$, amorphous state, X-ray diffr. study 7−104558
GdGG:Fe^+, single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
$GdMn_2Si_2$, mag. ordering, X-ray, magnetisation and Mossbauer studies 7−138224
Gd_2O_3-BaO-CuO system, subsolidus phase relationships and high T_c superconductivity 7−144375
$Gd_xY_{1-x}N$ dilute system, mag., elec. and optical behaviour 7−125503
Ge, MBE, high quality heteroepitaxy on (100) Si 7−76678
Ge surface, 2D determ. of atomic positions, three-beam X-ray standing wave anal. 7−69541
Ge, thin film, ionisation cross section *(Chinese)* 7−92763
Ge, X-ray diffr., phases of forbidden reflections 7−75925
Ge, X-ray n-beam diffr. patterns, visibility of phase indications 7−137155
Ge-Li solid soln. single crysts., diffuse scatt. of X-rays by defects 7−111306
a-Ge-Pb multilayers, interfacially initiated crystallisation of Ge 7−75993
Ge-Si, composite powders, mechanical alloying; SEM and X-ray obs. 7−77882
Ge-Si ultrathin superlattices, synthesis, structural characterisation and optical props. 7−84551
GeO_2-SiO_2 glasses, struct. determ by XANES, EXAFS and WAXS 7−83712
Ge_xSi_{1-x}/Si, strained layer superlattice, MBE, Raman scatt. 7−76677
GeTe: Ag, effect of electromigration and temp. gradients on impurity distrib. 7−84010
$Ge_{20}Te_{80}$, metallic glasses, double glass transition phenomena and fractional crystn. 7−84271
HNO_3-graphite fibers intercalation cpds., props. and struct. 7−84305
^3He-^4He solid solutions, phases and structures, X-ray diffr. meas. 7−124632
^4He, BCC, thermal vacancies, X-ray meas. 7−105175
HfO_2-TiO_2 system, phase relations and transitions, X-ray diffr., thermal analysis 7−119247
HfV_2 films, ion-plasma deposition, annealing, supercond., struct. *(Russian)* 7−137750
HgCdTe, MBE, X-ray diffraction characterisation 7−130982
HgCdTe/CdTe/GaAs/Si epitaxial struct., growth and characterisation 7−84550
$Hg_x(MF_6)_2$ (M=Nb, Ta, As, Sb), intercalations into HOPG, X-ray diffr. and Raman spectra characterisation 7−137340
$Hg_{1-x}Mn_xTe$-CdTe superlattices, MBE grown, characterisation 7−77056
Ho, spin slips and lattice modulations, magnetic X-ray scatt. study 7−85252
Ho-Ba-Cu-O high T_c supercond., transport and struct. props. 7−112533
Ho-Tl system, phase diagrams, lattice parameters, eutectic and peritectic equilib., X-ray obs. 7−100192
I_2O_4, structure, X-ray and neutron powder studies, pattern decomposition and Rietveld method 7−83882
$In_{0.2}Al_{0.8}As$/GaAs strained layer superlattices, lattice distortions, buffer layer effects, X-ray diffr. anal. 7−124727
$In_{0.52}Al_{0.48}As$, MBE growth and charactn. 7−143281

X-ray diffraction examination of materials continued
InAs heteroepitaxy on GaAs, lattice relax. study 7−76672
InAs-GaAs heterostructure, interface and surface roughness, X-ray reflectivity study 7−124723
InAs-GaAs strained-layer superlattices, HRTEM, X-ray diffr. and photolum. meas. 7−70095
InF_3-BaF_2-Th(Zn)F_2 glasses, EPR and X-ray diffr. studies, structural model *(French)* 7−124116
$In_{0.53}(Ga_xAl_{1-x})_{0.47}As$ layers, MBE growth, photoluminesc. charactn., optointegrated device appls. 7−144288
$In_{1-x-y}Ga_xAl_yAs$, MBE growth and charactn. 7−143281
InGaAs/InP single-quantum-well heterostructure, X-ray scattering 7−92012
InGaAs-GaAsP strained layer superlattices, growth and characterisation 7−118304
InGaAs-InP, VPE grown, X-ray diffr., SIMS and photolum. characterisation 7−131480
$In_xGa_{1-x}As$-GaAs heterostructures, critical layer thickness, determ. by X-ray diffr. 7−84534
$In_xGa_{1-x}As$-GaAs n-n heterojunction epilayers, MBE growth and charactn. 7−143587
InGaAsP, LPE growth on $GaAs_{1-y}P_y$ substrates 7−100135
InGaAsP, LPE growth on GaAs substrates 7−124779
InGaAsP-InP, double heterostructure, X-ray rocking curve simulation, Abeles' matrix method 7−131463
InGaAsP-InP LPE heterostruct., structural charactn. using X-ray double cryst. diffr. 7−137724
InGaAs(P)-InP superlattices, MBE grown, high resolution X-ray diffr. study 7−131478
InP, equation of state to 19 GPa, X-ray diffr. studies 7−104947
InP, heteroepitaxial growth on Si by low pressure MOCVD 7−106425
InP substrate protection and cleaning for LPE, laser fabrication 7−71416
InP wafers, polishing processes, damaged layer evaluation, X-ray diffr. studies 7−106722
InP:Ga,Fe, double doped, LEC grown, X-ray topography and TEM study 7−86005
InP:S, LEC growth, automatic dia. control system 7−125948
InP:Zn surfaces, Zn diffusion, crystal defects 7−118167
InP-Al_2O_3, electron beam evaporation of Al_2O_3 films, characterisation 7−105340
InSb (111), reconstructed surface structure, synchrotron X-ray diffr. study 7−142536
InSb, lapping, abrasive surface damage, X-ray Laue diffraction 7−76573
InSb single crystals, microdeformation, X-ray topographic studies 7−111564
InSe, containing stacking faults, exciton photoluminesc. spectra, X-ray diffr. studies 7−113253
$InSe_{0.82}S_{0.18}$ crysts., Bridgeman growth and elec. props. 7−125961
$In_{2-x}Sn_xO_{3-y}$ films, DC magnetron sputtering, resist. and light transmission *(Japanese)* 7−138657
K, CDWs in single crystal, search by synchrotron X-rays 7−124887
$KAlF_4$ premartensitic phase, neutron and X-ray scatt. 7−142983
$(KBr)_{0.36}(KCN)_{0.64}$ mixed crysts., history effects, domains, and glass form. studies 7−84243
KCl-$PbCl_2$ solid soln. system, X-ray diffr. study of interdiffusion 7−137633
$K_3Cu_8S_6$, CDW's X-ray scatt. study 7−98835
KH_2PO_4, cross section enlargement by splicing techniques 7−144251
KH_2PO_4 cryst., domain form., optical and X-ray studies 7−77485
KH_2PO_4 crystal, phase boundaries and twinning domain walls struct. 7−143026
KH_2PO_4 crysts., boiling soln. growth, X-ray topography 7−100029
KH_2PO_4, structural studies of KDP and isomorphs, transition, neutron and X-ray diffr. 7−99744
KH_2PO_4-$NH_4H_2PO_4$ mixed single crysts., gel growth and X-ray studies 7−69638
KIO_3 single crystal, growth morphology and structure, P1 space group determ. 7−83926
$KLiSO_4$, twin domains and twin boundaries optical, pyroelectric and X-ray topographic studies 7−83968
$KMnF_3$, R-point instability, Crit. exponents 7−142985
$K_{0.3}MoO_3$, metastable CDW state, superlattice peak width, X-ray diffr. study 7−143449
$K_{0.3}MoO_3$:W(Rb), 1D conductor, CDW transport and struct. props. 7−99031
$KNbO_3$ single crysts., RF heating Czochralski growth, colour centres, positron annihilation 7−113374
$K_3Nb_7O_{19}$, cryst. struct., shear, high resolution electron microscopy, X-ray powder diffr. obs. 7−111457
$KNiAsO_4$, mica analogue, ion-exchange reactions and phys. props. studies 7−144700
$K_2RhH_2OCl_5$ thermal transforms., differential-thermal and X-ray diffr. phase anals. 7−86587
KSCN, X-ray scatt. struct. study 7−124201
K_2SeO_4, incommensurate, discommensuration effect on X-ray diffr., superspace method anal. 7−131113
$K_4Ti_{10}N_2O_{27}$, prep. by topotactic dehydration of $HK_2Ti_5NbO_{14}.H_2O$, struct., electron and X-ray studies 7−111487
$K_4Zn(MoO_4)_3$, ferroelastic phase transition, struct. changes 7−124481
$KaAlF_4$, martensitic transform., monochromatic Laue X-ray scatt. obs. 7−84234
$kMnF_3$, tetragonal phase, domain volume distrib. 7−76424
$Kr_2Pb_4Nb_{10}O_{30}$, formation reactions, thermogravimetric and X-ray diffr. studies 7−126432
La quaternary sulphides, directional decomposition, HREM and X-ray diffr. studies 7−91819
La-Ba-Cu-O_x high T_c supercond., physical and chemical properties 7−131855
La-Ba-Cu-O high T_c supercond., cryst. struct., X-ray and electron diffr. studies 7−117894
La-Ba-Cu-O high T_c supercond. and semicond., cryst. struct. studies 7−117902
La-M-Cu-O layered perovskite system, (M=La, Ba, Sr, Pb), high T_c supercond., transition temp. 7−99304
La-S films, sputter deposition, structural and transport props. 7−76691
La-Sr-Cu-O, high-T_c superconductor, X-ray diffraction study 7−124230
$LaAsO_4$, dielec. and thermal props. 7−131722
LaB_6, Debye temp., X-ray diffr. study 7−111805
$LaBa_2Cu_3O_y$, high T_c supercond., orthorhombic-tetragonal phase transition 7−142993

X-ray diffraction examination of materials continued
$(La_{1-x}Ba_x)_2CuO_{4-y}$ high T_c supercond., transport props. and sp. ht. 7−92371
$(La_{1-x}Ba_x)_2CuO_{4-y}$, IR spectrum, temp. depend. 7−92667
$La_1Ba_2Cu_3O_{9-\delta}$ high T_c supercond., effect of structural changes on T_c, X-ray diffr. study 7−118655
$LaCaMnO_3$, crystal growth and charact. 7−138645
$LaCoO_3$-$LaFeO_3$ solid soln. system, spin state of Co^{3+}, mag. suscept., Mossbauer spectra 7−125582
La_2CuO_{4-y}:Ca(Ba)(Sr), superconducting, high T_c cpds., prep. and characterisation 7−112563
$LaNi_5$-MNi_5, M=Pr, Ce, Nd, phase rel. and H adsorpt. props. *(Chinese)* 7−71149
$LaNi_{5-x}Fe_xH_y(D_y)$,thermodynamic, structural and mag. props. 7−98468
$LaNi_5H_3$, pressure-composition isotherm meas., X-ray diffr. study 7−84202
$La_{1-x}Pb_xCo_{1-x}Ti_xO_3$ solid soln. prep. and charactn. 7−142731
$(LaSr)_2CuO_4$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic distortion 7−98437
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., tetragonal-orthorhombic transition 7−111852
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., single cryst. growth and habit studies 7−119124
$(La_{1-x}Sr_x)_2CuO_e$ high T_c supercond., annealing conditions effects study, mag. suscept. and X-ray diffr. meas. 7−143671
$La_{1.8}Sr_{0.2}CuO_4$ ceramic, high T_c supercond., struct. and thermodynamic anomalies at T_c *(Russian)* 7−125171
$La_{2-x}Sr_xCuO_4$, high temp. superconductor, crystal struct. study 7−85189
$La_{2-x}Sr_xCuO_4$, soft-phonon behaviour, hopping conduction 7−137546
$La_{2-x}Sr_xCuO_4$, structural phase diagram, X-ray study 7−119252
$La_{2-x}Sr_xCuO_{4-y}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$LaSrMnO_3$, crystal growth and charact. 7−138645
Li foil electrodes, thin-oxide surface layer study 7−133061
Li incorporation in $Cu_{3+\delta}Mo_6S_{7.9}$ for use in Li secondary cells 7−133074
$LiAlO_2$ powder, synthesis, sintering, phase transform., fusion reactor breeder blanket appl. 7−100160
$LiAlSiO_4.H_2O$, zeolite Li-A(BW), struct. determ. from single cryst. data 7−76103
$LiFeSi_2O_6$-$CaMgSi_2O_6$ glass system, pyroxene solid soln. crystallisation 7−76003
$LiIO_3$ powder α to γ to β phase transitions, neutron thermodiffraction study 7−84248
$LiNbO_3$ crystals, ion-exchange processes study during optical waveguide struct. form. 7−71484
$LiNbO_3$, defect chemistry 7−91579
$LiNbO_3$, inclusions, dislocations, X-ray topography study *(Chinese)* 7−91586
$LiNbO_3$ polycrystalline films on Si substrates, elec. and photoelec. props. 7−99131
LiO_2-SiO_2 melt and glass, structural simulation, molecular dynamics calc. *(Japanese)* 7−76005
Li_2O-Ta_2O_5-$(WO_3)_2$, nonstoichiometry and ferroelec. props. at 1250°C and atmospheric press. 7−84304
$LiRbSO_4$, elec. field-induced ferroelastic transform. twin struct., X-ray diffr. and polarising microscope obs. 7−77469
$LiScGeO_4$ crystal struct., X-ray diffr. exam 7−111516
MFe_2O_4 ferrites (M=Mg, Mn, Fe, Co, Ni, Zn), ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
MG-Ho alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
Mg-Tb alloys, short range order, X-ray diffraction and pseudopotential approx. study 7−117866
$Mg_2Al_4Si_5O_{18}$, cordierite ceramics, sol-gel prep., charact. 7−132546
β-$MgCl_2$, stacking faults, powder X-ray diffr. meas. 7−76146
Mg_2CoH_5, prep. struct. and props. 7−83893
MgF_2-ScF_3 system, high press. phases 7−91789
$MgGeP_2$, possible nonexistence, rel. to prep. X-ray diffraction and SEM study 7−131122
Mg_2NiD_4, low temp. struct., X-ray and neutron diffr. studies 7−83892
Mg_2NiH_4, X-ray crystallographic and thermal props., low and high temp. phases 7−142975
MgO powder, comminution, dissolution in HCl rel. to dislocation density 7−111898
Mg_2SiO_4, forsterite, deform. props. 7−84090
Mg_xZn_{100-x} molten alloy, struct., X-ray diffr. study 7−97908
Mn-Al-B melt-spun alloys, mag. props. *(Japanese)* 7−125464
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
$Mn_{1-t}Cr_tAs$, helimag. states transitions, phase diagram and strong mag. field effects studies 7−118809
$MnCr_{0.5}Ga_{1.5}Se_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
$Mn_{0.5}Te_{0.5-x}Sb_x$, mag. phase transition studies 7−125383
MnZn Ferrite formation, Mossbauer study 7−138360
MnZn ferrite thin film with soft mag. props., sputter prep. 7−85389
Mo film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
Mo, thin film, ionisation cross section *(Chinese)* 7−92763
Mo vacuum condensates, struct., elec., and optical props. *(Russian)* 7−70109
Mo:B^+ ion implantation-induced amorphisation strain, implant conc. depend., X-ray diffr. study 7−83689
Mo-GaAs, oriented growth of metal films, microstruct. 7−118303
Mo-Si layers, sputtering from composite targets, AES and RBS studies 7−100068
Mo-Ta interface, sputter deposited, sticking coeff., struct., RBS, X-ray diffr. studies 7−105296
Mo-V superlattices, supercond. transition temp., anomalous behaviour 7−70457
Mo-Zr-W, surface, ion implantation of N, C, P phase composition determ. 7−78301
MoB_2, single cryst. prep. from Al flux, props. 7−132429
MoN films, ion assisted deposition, high T_c supercond., struct., elec. props. 7−112546

X-ray diffraction examination of materials continued
MoN thin films, hexagonal struct., formation, supercond. props. and ion irradiation effects study 7−131844
MoO_3 amorphous thin films, short range and medium range struct. 7−84572
MoO_3-Cu-Ni black films, solar selective, charactn. 7−106451
Mo_nO_{3n-1}, CDW and resistivity, X-ray and neutron studies 7−99032
Mo_3Si, neutron-induced disordering and amorphisation *(Russian)* 7−97925
$Mo_{0.5}Ta_{0.5}S_2$, 3s-type, preparation 7−142715
$NH_4H_2PO_4$ crystals, relation between growth kinetics and morphology *(Chinese)* 7−131074
$(NH_4)_3H(SO_4)_2$ second-order phase transition and space group, X-ray diffr. obs. 7−111864
$(NH_4)_xMgP_yO_z$ system, heat treatment products, IR and X-ray diffr. obs. *(Japanese)* 7−126431
NH_4MnCl_3:Fe perovskite, Mossbauer and X-ray study of ^{57}Fe impurity 7−70684
$(NH_4^+)_{0.24}(NH_3)_{0.23}TiS_2^{0.24-}$, deintercalation and reintercalation energies 7−86605
$(NH_4)_2SO_4$, structural changes 7−76394
$NaBrO_3$, X-ray birefr., forbidden reflections, direct obs. of struct. factor phases 7−137322
NaCl:Sr^{2+}, Eu^{2+}, 407 nm emission band, X-ray diffr. identification of secondary phase 7−85804
$NaCu_2ZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
$Na_2La_{1-x}Fe_xZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
$Na_2LaMZrP_3O_{12}$ (M=Co,Al,Cr), superionic conductors, synthesis and charactn. 7−137611
$NaM_2ZrP_3O_{12}$ (M=Ni,Cu), superionic conductors, synthesis and charactn. 7−137611
Na_2O-B_2O_3-Al_2O_3-Ta_2O_5 glass ceramic, heat treatment, sintering, leaching, struct., porosity 7−71141
Na_2O-Fe_2O_3-SiO_2 glass, struct., bonding, coordination number, EXAFS, X-ray diffr. 7−76007
Na_2O-GeO_2 glass, struct., X-ray diffr. studies 7−97956
Na_2O-Y_2O_3-GeO_2 system ceramic ionic conductor, prep. by solid state reaction and activation energy meas. 7−84388
Na_2SO_4-$Y_2(SO_4)_3$-Al_2O_3 solid electrolyte, electrical, thermal and phase props. studies 7−84381
Na_4TiO_4, Na_2TiO_3, $Na_8Ti_5O_{14}$, $Na_2Ti_3O_7$ and $Na_2Ti_6O_{13}$, stoichiometry and Raman spectra of titanates 7−91830
$Na_{5+x}YAl_xSi_{4-x}O_{12}$ ceramics, cond., struct., density 7−76480
$Na_{1+x}Zr_2Si_xP_{3-x}O_{12}$:MgO(CaO) NASICON superionic ceramics, chem. comp. and phase homogeneity, sintering conditions effects 7−119191
Nb film, polycryst. N implanted, defect clusters, X-ray diffraction data 7−117965
Nb films grown in UHV MBE system, epitaxial relations and supercond. props. 7−76687
Nb, surface, ion implantation of N, C, P phase composition determ. 7−78301
Nb, thin film, ionisation cross section *(Chinese)* 7−92763
Nb:B^+ ion implantation-induced amorphisation strain, implant conc. depend., X-ray diffr. study 7−83689
Nb-GaAs, oriented growth of metal films, microstruct. 7−118303
Nb-H system, hydride precip., X-ray diffr. study 7−84284
Nb-Mo-H system, hydride precip., X-ray diffr. study 7−84284
Nb-O system, phase comp. and struct. investig. 7−132570
Nb-Ta superlattice, critical behaviour of H, in situ X-ray scattering study 7−137727
Nb-Ta superlattices, cryst. direction depend. of interfacial mixing 7−105156
Nb-Ti alloys, superconductivity and structural instability study 7−105008
NbC films, prepared by reactive laser sputtering, supercond. props., X-ray and chem. anal. 7−99250
NbC, ion-irradiated, struct. disorder and supercond. transition temp. 7−138098
NbCN superconducting films, MOCVD deposited, struct. and props. study 7−131842
NbN, sputtered film, fabrication, struct. and supercond. props. *(Japanese)* 7−112537
Nb_2O_5, amorphisation and phase transform. by fine grinding 7−113545
NbS_xSe_{2-x}, prep. and struct. 7−77781
Nb_3Sn layer, form., effect of small alloying additions *(Chinese)* 7−132772
Nb_3Te_4, CDW phase transition, elec. resist., mag. susceptibility and X-ray studies 7−98840
Nd-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
Nd-Fe-B, melt spun permanent magnet alloy, isotropic remanence 7−132084
Nd-Zn, alloying behaviour, phase diagrams 7−77941
$Nd_2F_{14}B$ thin film mag. props. study 7−112894
$Nd_2Fe_{14}B$ permanent magnets, DC sputter deposition, mag. props. 7−125468
$Nd_2Fe_{14}B$ single crystals, easy growth axis determ. for anal. of texture in Nd-Fe-B magnets 7−132078
$Nd_2(Fe_{0.9}M_{0.1})_{14}B$, M=Sc-Mn, Co, Ni, permanent magnet cpds., mag. props. study 7−92422
Ni base superalloys, high temp. corrosion in nuclear process heat He, η' carbide form. 7−86444
Ni complex, bis(difluoroborondiphenylglyoximato)NiII, partial oxidation with I_2 7−100544
Ni complex, $NiEn_2(NCS)_2$ single crysts., synchrotron radiation X-ray topography, defects and phase transitions 7−91594
Ni corrosion under V_2O_5 coating, oxide scale morphological charactn. using AES, SEM and X-ray diffr. *(French)* 7−93193
Ni films, ion plated on steel, struct., fatigue 7−118338
Ni powder, prep. from basic salt precursors 7−106463
Ni, struct. in liq. state, X-ray study 7−104525
Ni surface, ion implantation of N, C, P phase composition determ. 7−78301
Ni, X-ray diffr. electron. correl. and relativistic effects 7−129614
β-Ni-Al-Ta, second phase precipitates struct. 7−78030
Ni-Al-W system, cast, phase equilib. 7−132569
Ni-base superalloy, M38, laser beam irrad., hot corrosion behaviour 7−126302
Ni-based brazing filler metals, elec. resistivity, struct. anal. *(Korean)* 7−83688
Ni-Cr films on Si, pulsed ion beam irradiation, silicide formation 7−104860

X-ray diffraction examination of materials continued
Ni-Cr thin films, X-ray diffr. characterisation 7−98756
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
Ni-Cr-Co superalloy, laser beam irrad., hot corrosion 7−119457
Ni-Cr-Fe, superni, hot corrosion by V, crack growth 7−144583
Ni-Cr-Mo-Fe-W, precipitated phase formation, effect of precipitates on corrosion resistance *(Chinese)* 7−132621
Ni-Fe-La system, phase equilib. and H absorpt. *(Chinese)* 7−144364
Ni-Mn-O thermistors, form. and elec. props., X-ray diffr., SEM and AES studies 7−92176
Ni-Mo, chill block melt spinning, microstruct., microhardness 7−77968
Ni-Mo hardenable electrodeposits, X-ray anal. of structural props. 7−131497
Ni-Mo magnetic superlattice prep. and structural props. study 7−124726
Ni-P, electrodeposited, amorphous and microcrystalline, microstruct. 7−83706
Ni-P films, electrodeposited, amorphous, crystn. *(Chinese)* 7−131039
Ni-S amorphous alloy film, electroplating, struct. 7−86070
Ni-Ti, thermal cycling, precip., martensitic transform. 7−113560
Ni-W hardenable electrodeposits, X-ray anal. of structural props. 7−131497
Ni-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
Ni-Zr, powder, amorphization by mechanical alloying, X-ray, SEM, microprobe compositional anal. 7−106461
Ni-Zr metallic composites, form. of bulk amorphous metals from solid state reaction 7−113477
$(Ni_{0.75}Al_{0.25})_{100-x}B_x$, rapid solidification, microstruct. 7−86161
$Ni_{78}B_{14}Si_8$, amorphous alloy crystn. 7−83756
$Ni_{68.7}Cr_{6.6}Fe_{2.65}Si_{7.8}B_{14}C_{0.25}$, metallic glass, thermal stability, internal friction, TEM, DTA 7−69598
$NiCr_{2-x}Ga_xSe_4$ quaternary system, phase relationships, X-ray and FIR studies 7−143019
NiFe films, dual ion-beam sputtering, mag. and struct. props. 7−125502
Ni_xFe_{1-x} evaporated thin films, structural and mag. props. studies 7−98736
$(Ni_{1-y}Fe_y)_{1-x}S$ mag. semicond., neutron and X-ray diffr. studies 7−85245
$Ni_{0.81}Mn_{0.19}$, reentrant single crystals, mag. struct. obs. in applied field 7−99412
$Ni_{1-x}Mn_{2+x}O_4$, oxide spinels for thermistor appl., O_2 evolution during sintering 7−144350
$Ni_{60}Nb_{40-x}Cr_x$, amorphous, crystallisation, DSC, X-ray diffr. 7−69603
Ni_2P sputtered films, structure 7−119144
$Ni_{80}P_{20}$, amorphous alloys, electrodeposited in mag. field, struct. 7−104565
$Ni_{81}P_{19}C$ metallic glass, crystallisation characterisation 7−111397
Ni_3Sn_4 intermetallic compound form. at interfaces, growth kinetics and struct. 7−111977
NiTa metallic alloy glasses, X-ray and neutron diffr. meas. 7−76012
NiTi, superplastic, stress-induced transform. *(Chinese)* 7−78003
$Ni_{33}Ti_{67-x}V_x$ alloys, amorphous, stability and elec. transport props. 7−104571
$Ni_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
$Ni_{0.28}Zn_{0.72}Fe_2O_4$, mag. transformations, thermal expansion 7−77277
NiZr amorphous wires, formation by mechanical deformation and solid state reaction 7−86091
Np, bulk modulus and P-V relationship up to 52 GPa 7−76264
α-Np, twinning study using TEM and X-ray diffr. 7−76139
Np-O system, phase relationships 7−86140
NpAs, high press. phase transformations, X-ray diffr. studies 7−76397
P, black, melting curve 7−131275
PLZT, field-enforced phase transition, electrooptic studies 7−106098
PZT ceramic etched piezoelectric structures 7−100411
PZT ceramics, morphotropic phase boundary comp., SEM, TEM, and X-ray diffr. study 7−91800
Pb-Bi, undercooled droplets, crystn. kinetics during rapid solidification 7−77983
Pb-Sb, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
Pb-Sn, unsaturated alloys, cluster inhomogeneity, eutectic temp., X-ray scatt. intensity *(Russian)* 7−105057
$(Pb_{1-x}Ba_x)_2NaNb_5O_{15}$ ceramic, piezoelectric props., press. along polarisation direction 7−113082
$Pb_{1-x}Ba_xTe$, MBE growth, diode laser appls. 7−131486
Pb_2CoWO_6, perovskite single cryst., flux growth, charactn. 7−85983
β-PbF_2, order-disorder transition and fast-ion transition, X-ray diffr. obs. of thermal props. 7−131291
Pb_2FeTaO_6, perovskite single cryst., flux growth, charactn. 7−85983
$Pb_{1-x}Ge_xSe$, phase transition, X-ray diffr., elec. resist., Tl impurity effect 7−111853
PbI_2, melt grown, purified, polymorphism, impurity effects, X-ray diffr. study 7−111455
PbI_2-aniline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7−76399
PbI_2-hynoline intercalated semicond. cpds., structural phase transitions, X-ray powder diffr. study *(Russian)* 7−76399
PbI_2-quinoline intercalation compound, phase transition, miniband spectrum, superlattice 7−131306
$Pb(Mg_{1/3}Nb_{2/3})O_3$-$Pb(Co_{1/3}Nb_{2/3})O_3$-$PbTiO_3$-$PbZrO_3$ ceramics, piezoelec. props. and microstruct. 7−99707
$PbMo_6S_8$, thermal expansion studies by X-ray diffr., temp 10 to 200 K 7−111919
PbSe-SnSe superlattices, X-ray diffraction study 7−112122
$Pb_{0.8}Sn_{0.2}Te$ thin films in MIS structs., elec. props., effect of laser irrad. 7−99237
$Pb_{1-x}Sr_xTe$, MBE growth, diode laser appls. 7−131486
$Pb_{0.94}Sr_{0.06}(Zr_{0.53}Ti_{0.47})O_3$ ceramics, microstruct., lattice parameters, Curie temp., dopants effect 7−105061
PbTe-Ga_2Te_3 system, $PbGa_6Te_{10}$ phase existence, X-ray and thermal anal. *(Japanese)* 7−124449
$PbTiO_3$ films, epitaxial growth on $MgAl_2O_4$-Si substrates 7−100071
$PbTiO_3$-$BiFeO_3$ solid solns., lattice parameters, X-ray diffr. study 7−98099
$PbTiO_3$-polymer composites, poling behaviour 7−99696
$Pb_3V_2O_8$:Cu^{2+}, undoped and doped, struct., EPR, DSC, photoacoustic spectrum 7−125530
$PbZr_{1-x}(Fe_{0.5}Nb_{0.5})_xO_3$, piezoceramic solid solns., phase diagram, electrophysical props. 7−85541

X-ray diffraction examination of materials continued
Pd complex with glycerine, electronic struct., X-ray spectra and quantum-chem. calcs. 7−109928
Pd powder, synchrotron X-ray diffraction, line broadening anal. 7−111307
Pd_3 thin film, ionisation cross section *(Chinese)* 7−92763
Pd^{2+} complexes, Magnus-type salts, single-cryst optical absorpt. spectra 7−77605
Pd:H system, diffusivity, microstruct., galvanostatic permeation meas. 7−84358
Pd-Co vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Fe vapour deposited multilayers, struct. and mag. props. studies 7−112901
Pd-Sc(Dy)(Ti)(Mn), atomic short-range order, investig. by diffr. methods 7−142703
Pd-Se system, phase relations, superconductivity 7−113519
Pd-Si, rapidly quenched, comparison with form. by mech. alloying 7−113476
Pd-Si metallic glasses, surface-induced crystn., DSC study 7−111405
$Pd_{80}Si_{20}$, amorphous, liq. quenched, cold rolled, SAXS obs. 7−126147
Pr complex, $((C_4H_9)_4N)_3(Pr(NCS)_6)$, crystal struct. 7−91554
Pr-Co-B ternary phase diagram, Co rich portion 7−144366
Pr-Fe binary system, phase diagram *(Chinese)* 7−132561
Pr-Fe-B ternary system, X-ray diffraction and thermal anal. 7−113525
Pt clusters, struct. study using differential anomalous X-ray scatt. 7−71525
Pt^{2+} complexes, Magnus-type salts, single-cryst optical absorpt. spectra 7−77605
Pt-Al system, thin film, phase formation and dissociation 7−131370
Pt-Rh model automotive exhaust control catalysts, EXAFS, STEM and XRD characterisation 7−100678
R-Ba-Cu-O system (R=Y, Ho, Er), high T_c supercond., superconducting props. 7−138107
$R_{1/3}UO_2PO_4$ (R=La,Ce,Pr,Nd,Gd,Tb,Dy,Yb) lamellar solids, excited state props. 7−70881
$RbAlF_4$, displacive transform., monochromatic Laue X-ray scatt. obs. 7−84234
$RbCaF_3$, crit. fluctuations, high resolution X-ray scatt. study 7−142988
$RbCaF_3$, crit. fluctuations, analysis of expt. results 7−142989
$Rb_2CoCl_4(Br_4)$, ferroelec. phase transitions, X-ray diffr. studies 7−77476
RbI-AgI-CsI, phase diagram, DTA and X-ray investig. *(Russian)* 7−111831
$Rb_{1-x}(NH_4)_xH_2PO_4$, X-ray diffuse scatt., temp. and NH_4 conc. depend. 7−113312
$Rb_{1-x}(NH_4)_xH_2PO_4$, struct. near ferroelec.-glass boundary, X-ray scatt. anal. 7−138392
Ru_2Si_3 epitaxial films on Si (111), structural identification 7−76692
Sb-Se-Bi film, erasable optical disc media 7−75089
$SbCl_5$-intercalated graphite ordering kinetics, time-resolved X-ray scattering 7−137301
Sb_2S_3 amorphous evaporated thin films, short range order, X-ray diffr. study 7−105335
Sb_2S_3-As_2S_3-Tl_2S and Sb_2S_3-Sb_2O_3-Tl_2S, chalcogenide glasses, synthesis and props. *(French)* 7−111416
a-Se, amorphous films, short range order, X-ray radial distrib. fn. anal. 7−142587
Se, thin film, ionisation cross section *(Chinese)* 7−92763
SeO_2-V_2O_5 glass system, phase diagram 7−111414
$Se_{100-x}Sb_x$, amorphous, nucleation, cryst. growth, elec. resist. 7−111410
Si (100)/Ti-W interface, Schottky barrier height 7−112427
Si (111), adsorbed Br, lattice location, transmission channelling studies 7−143191
Si (220), inelastic scattering of X-rays in asymmetric Bragg diffraction 7−92779
Si (220), total external reflection 7−84578
Si bent cryst., X-ray Bragg reflection 7−75942
Si bicrystals, deformation mechanisms, TEM and X-ray obs. 7−124735
Si, cleavage cracks in (110) plane, propagation 7−124392
Si crystals, microdefects obs. by X-ray plane-wave topography 7−124241
Si crystals with microdefects, X-ray refl. curves in Laue case 7−111543
Si, ion implantation-induced lattice damage, multiple cryst. X-ray diffr. study 7−84049
Si, lapping, abrasive surface damage, X-ray Laue diffraction 7−76573
Si, lattice defects charact. by means of double cryst. diffractometer 7−69695
Si, lattice-defect distrib., X-ray diffr. studies 7−124041
Si plates, high energy Ar^+ bombardment, structural effects, nondestructive X-ray methods study 7−98266
Si powder, ultra-fine, prod. by arc plasma method 7−106472
Si ribbons, grown by various methods, cryst. struct., X-ray topographic obs. 7−83971
Si self-ion implanted, vacancy and interstitial distribs. 7−83950
Si, semiconductor crystals, dislocation-impurity interactions 7−124322
Si, silicide formation with codeposited Ti-Ta alloys 7−131372
Si single cryst. surface, struct. after ion-chem. etching 7−105199
Si, single crystal, microstructural transformations during current filamentation, X-ray diffr. studies 7−106082
Si single crystal, plane-like precipitate, X-ray topographic study *(Chinese)* 7−111889
Si single crysts., microdefect-generated dislocation loops, X-ray topography study 7−83958
Si, structure factors, X-ray wavelength depend., anomalous dispersion term 7−76073
Si, X-ray attenuation coeff. meas. 7−75938
Si, X-ray diffr., coplanar three-beam 7−75924
Si, X-ray multiwave diffraction, secondary radiation yield, angular depend. 7−77752
Si:Ar^+(Ti^+), ion implanted, stresses and radiation damage 7−142848
Si:B, B diffusion, influence of implant induced vacancies and interstitials 7−124592
Si:B,Ge epitaxial films, dynamical X-ray diffr., photoeffect 7−77747
Si:B^+ single crysts., disturbed surface layer, three-cryst. X-ray diffr. spectra study 7−124163
a-Si:H/a-SiN_x:H multilayer and single layer thin films, small angle X-ray diffr. study *(Chinese)* 7−118288
a-Si:H-Al film, low temp. crystallisation, Auger, X-ray diffraction 7−143250
a-Si/Si (111) 7×7 interface, symmetry, X-ray diffr. studies 7−98721
Si/Si_3N_4 buried layer system, N ion implantation form., beam current and dose depend. 7−83992

X-ray diffraction examination of materials continued
Si-Al-O-N system, Al solubility 7−84285
a-Si-$Ge_{0.2}Si_{0.8}$, interfacial superstructure, synchrotron X-ray diffr. study 7−84545
SiC (3C), high press. X-ray studies 7−111513
SiC fibre reinforced Ti-Al-V alloy, TiC and TiN interlayers effect on reaction zone *(German)* 7−92935
SiC fibres, Nicalon, mech. props., effect of curing conditions 7−113623
SiC heteroepitaxial CVD cubic single cryst. growth and elec. charact. on Si substrates 7−106428
SiC particle reinforced Al-Mg-Fe, internal stress/strain, X-ray diffr. study 7−86197
SiC whisker reinforced Si_3N_4, fabrication and props. 7−78241
SiC whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
SiC yarn, thermomech. props. 7−78282
SiC-AlN ceramics, modulated structs. 7−132619
Si(III), surface atomic displacements, X-ray scattering study 7−131401
Si_3N_4 based bodies, nature of sialon joints 7−113857
Si_3N_4 whisker reinforced plasma sprayed Al_2O_3 coatings, thermal shock resist., adhesion 7−86017
SiO_2, amorphous powder, energetically metastable, X-ray diffr. 7−97927
SiO_2, coesite, struct., electron density distrib. and bonding from X-ray diffr. data 7−111481
SiO_2, cryst. struct., neutron and X-ray diff. data 7−76089
SiO_2 gel, struct. determ. by X-ray diffr., gel to glass conversion 7−93394
SiO_2, natural amethyst, Brazil twins, X-ray study 7−124286
SiO_2, porous glass and vitreous struct., X-ray diffr. 7−104566
SiO_2, quartz monocrystal, X-ray diffraction by surface acoustic waves 7−138415
SiO_2 refractories, tridymite to cristobalite transform. below 1470°C 7−106508
SiO_2:Bi semiconducting glasses, secondary electron emission charact. determ. 7−144189
SiO_2-Al_2O_3-RO:Cr(III), R=Mg, Ca, Zn, transparent glass ceramics, crystalline phases, spectroscopic props. 7−124111
SiO_2-Fe_2O_3 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
SiO_2-GeO_2 system obtained by sol-gel method, phase composition 7−91829
SiO_2-ZrO_2 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
SiS_2-LiS-LiBr(I), glass-forming region and struct., X-ray diffr. and FT-IR spectra 7−142602
Sm complex, bis(pentamethylcyclopentadienyl) halide, X-ray cryst. struct. obs. 7−142713
Sm-Ba-Cu-O system, high T_c superconductivity, X-ray diffr. study 7−99281
Sm-Co alloys, enthalpies of formation, solution calorimetry studies 7−93360
$Sm(Co_{1-x}Cu_x)_5$, lattice constants and heat of formation 7−91841
SmIG, citrate gel synthesis, charactn. 7−77905
$SmMn_2Ge_2$, P-T mag. phase diagram 7−132018
$SmNi_2$ Laves compound, H-induced amorphisation 7−76001
SmS substruct. form. after isomorphous high press. phase transition, X-ray diffr. study 7−69921
Sn, thin film, ionisation cross section *(Chinese)* 7−92763
SnO_2 films, Na^+ adsorpt. from aq. soln., film hydration and ion exchange activity determ. 7−143210
SnO_2 films, reactive electron beam evaporation, elec. and optical props. 7−119153
p-SnSe electrodes, photoelectrochemical studies, solar cell appls. 7−100589
SnTe thin films, synthesis by solid-state reactions 7−100057
$SrCl_2$ thermal expansion coeff., X-ray diffr., lattice vibr. freqs. 7−111803
$SrFeVO_6$, perovskite-like, struct. and mag. props. 7−143789
$SrMn_2Fe_{16}O_{27}$ hexaferrite, mag. props., phase formation 7−138231
$SrTiO_3$ ultrafine powders, hydrothermal preparation and catalysis of water photolysis 7−106459
Ta_xCu_{1-x} amorphous alloy films, diffusion barriers for Au/GaAs system 7−105307
TaN, cubic, form. with plasma jet *(Japanese)* 7−119223
IT-TaS_2 layered crysts., Debye-Waller factors, anisotropy and reduced dimensionality effects, X-ray diffr. study 7−111804
$TaSi_2$-WSi_2, solid solutions, phase diagrams and resistivities 7−111823
Tb-$Fe_{95}Co_5$ multilayer thin films, struct. and ferromag. resonance 7−112961
$Tb_2Fe_{14-x}Co_xB$, magnetism 7−131998
Te-Ge-Sn-Au phase change recording film for optical disk 7−76706
TeO_2 amorphous evaporated films, optical and elec. props. studies 7−144142
Th, rocksalt-structure compounds, X-ray diffr. and absorption edge meas. 7−77696
Th-Ag system, phase diagram 7−144365
$ThAl_2$, AlB_2 to Laves phase transition under press. 7−76396
$ThBe_{13}$ compressibility and high press. behaviour, X-ray diffr. study 7−69824
Ti alloy, phase transitions exam. in single crysts. 7−132862
Ti, N-ion implanted, grazing incidence X-ray diffraction *(French)* 7−106669
Ti, pure β-phase crystals, recrystallisation, annealing of wires, dislocations, synchrotron X-ray topography 7−98166
Ti, thin films, struct. and optical props. meas. 7−144136
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti/Si sputtered multilayers, Ti-Si amorphous alloy form. by interdiffusion during rapid thermal annealing 7−70092
Ti-Al-Zr-Mo-Si-based alloys, α_2 phase precipitation and embrittlement *(Russian)* 7−144405
Ti-O system, ordering and phase relationships in TiO existence area 7−77958
Ti-Pd, rapidly quenched, comparison with form. by mech. alloying 7−113476
Ti-transition metal alloys, mechanically alloyed, glass form. 7−142643
TiC CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162
TiC, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
TiC layers, CVD on Fe-C substrates, development and partial relax., of internal stresses 7−113773
$TiCoH_x$, struct., electronic props., comparison with $TiFeH_x$, X-ray diffr., PMR meas. 7−98772

ray diffraction examination of materials continued
Ti_2Cu, H(D) absorpt., X-ray and neutron diffr. studies 7−84283
TiF_2 with fluorite struct., high press. synthesis and cryst. struct., thermal stability 7−132445
TiFe amorphous alloy thin films, heat treatment effects 7−95693
$TiFeH_x$, struct., electronic props., comparison with $TiCoH_x$, X-ray diffr., PMR meas. 7−98772
Ti_3Ir, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7−76333
$TiMn_2$, Laves phase, electron density and struct. determ. 7−124172
TiN CVD coatings on various substrates, prediction and meas. of compressive and tensile stresses 7−119162
TiN coating, sputter ion plating, internal stress, microstruct. 7−138658
TiN, coatings, characterisation of films prepared by activated reactive evaporation 7−138822
TiN, crystal growth with preferred orientation by dynamic mixing method 7−124148
TiN films deposited on steel by reactive ion plating, struct. and props., effect of substrate temp. and N_2 press. *(Korean)* 7−77846
TiN treated Al-Si alloy, by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
TiN, vacuum plasma condensates, special features of substruct. 7−86028
TiN-VN strained layer superlattices, growth, struct., hardness 7−119137
TiN_x films, sputter deposited, CaF_2-type structure, X-ray characterisation 7−124788
TiN_x layers, sputter deposited, strain gradients, X-ray anal. 7−112144
TiNi compositionally modulated film, sputtering press., effect on structure and solid state reaction 7−100063
TiO_2, charge density, anharmonicity, incipient ferroelec. transition, X-ray and γ-ray diffr. 7−111458
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7−125834
$TiSi_2$ amorphous thin films on Si and SiO_2 substrates, phase transformations, X-ray diffr., elec. resist., TEM 7−70114
$TiSi_2$ thin film form. by high temp. solid state interaction *(Chinese)* 7−105152
$TlBiSe_2$ single crystals, growth and struct. 7−137287
$TlBiSe_2$-$TlBiTe_2$, growth and characterisation, X-ray diffr. studies 7−131129
Tm-Ba-Cu-O high T_c supercond., cryst. struct., X-ray diffr. studies 7−117899
TmSe, nonstoichiometric and stoichiometric samples, anomalous thermal expansion 7−98523
U, production using plasma torch 7−96228
U, rocksalt-structure compounds, X-ray diffr. and absorption edge meas. 7−77696
U-Pu-O, O to metal ratio, X-ray diffraction 7−124190
UBe_{13} compressibility and high press. behaviour, X-ray diffr. study 7−69824
UP(Sb)(Te), press. - vol. behaviour, equation of state and Kondo effect 7−76341
UPt_3 compressibility and high press. behaviour, X-ray diffr. study 7−69824
V/Ag multilayered films with artificial superstruct., prep and supercond. 7−112677
V-Ga alloys, rapidly solidified, microstruct. and phase transform. 7−119265
V-Ti oxide, anatase-type solid-state soln., evidence of formation 7−84291
$V_{1-y}Fe_yH_x$ alloys, 3d-like electron localisation and charge transfer 7−76822
VN thin films, ion irrad. prep., supercond. and elec. props. 7−76226
VO_2, formation by oxidation of V, kinetics, stability 7−100603
VO_2:Nb(Ta)(Mo)(W), thermochromic materials research for optical switching 7−125979
V_2O_5:Bi semiconducting glasses, secondary electron emission charact. determ. 7−144189
V_2O_5-Bi_2O_3 glasses, prep. and charactn. 7−111411
V_3O_5, cryst. struct. and high press. phase transitions 7−98063
V_3Pt, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7−76333
V_3Rh, Debye temp., Debye-Waller factor, vibr. amplitudes, X-ray diffr. determ. 7−76333
V_3Si, anharmonicity, X-ray diffr. study 7−104946
V_3Si films form. by solid-phase reaction, struct. and elec. props. *(Japanese)* 7−70460
W films, abnormal-glow-discharge deposition 7−92879
W, powders and filings, fine struct. parameters determ. by harmonic analysis of X-ray diffr. lines 7−78427
W single crystals, cold-worked surfaces, investig. by SEM and X-ray diffr. *(German)* 7−113837
W-Al_2O_3, oriented growth of ultrathin W films on sapphire substrates 7−118305
WC powders, microstruct. study 7−100155
WC powders, microstruct., X-ray diffr. and SEM study *(Chinese)* 7−132532
WO_3 amorphous thin films, short range and medium range struct. 7−84572
WO_3 thin films, CVD deposited, structure and optical props. 7−70928
WO_3-H_2O layers, gel deposition and layer anisotropy 7−100053
WSi_2, grain sizes, X-ray diffr. peak broadening meas. in cosputtered WSi_x films 7−76656
WSi_x, multilayer-derived, microstruct., elec. and surface props. studies 7−137581
Y-Ba-Cu-O, high T_c supercond. props. w.r.t. lattice distortion and cooling conditions 7−131831
Y-Ba-Cu-O, high temp. superconductor, Meissner effect, X-ray diffr. 7−112646
Y-Ba-Cu-O ceramics, high T_c supercond., processing study 7−119211
Y-Ba-Cu-O high T_c, supercond., multiphase mixtures and transition temp. 7−118631
Y-Ba-Cu-O high T_c supercond., phase identification, X-ray meas. 7−98392
Y-Ba-Cu-O high T_c superconds., IR reflectivity spectra, sintering temp. depend. study 7−106170
Y-Ba-Cu-O high T_c supercond., optimum prep. conditions determ., thermal and X-ray analyses 7−106475
Y-Ba-Cu-O high T_c supercond., struct. and morphology studies 7−111514
Y-Ba-Cu-O high T_c supercond., polymorph phase relations, X-ray studies 7−111827
Y-Ba-Cu-O high T_c supercond., metamorphic phase characterisation 7−111828

X-ray diffraction examination of materials continued
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−112555
Y-Ba-Cu-O high T_c supercond., electromagnetic response in 90 K range 7−112668
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7−117873
Y-Ba-Cu-O high T_c supercond., orthorhombic to tetragonal transition, thermogravimetric and X-ray diffr. studies 7−118083
Y-Ba-Cu-O high T_c supercond., Cu^{3+}/Cu^{2+} ratio, lattice parameters and onset temp. determ. 7−118116
Y-Ba-Cu-O high T_c supercond., manufacture and testing 7−119206
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond. system, 950°C subsolidus phase diagram 7−119246
Y-Ba-Cu-O high T_c supercond., mixed and single phase ceramics, X-ray diffr. and EPMA studies 7−119250
Y-Ba-Cu-O high T_c supercond. ceramic, phase diagram determ. 7−119251
Y-Ba-Cu-O high T_c supercond., cryst. struct. distortions 7−124189
Y-Ba-Cu-O high T_c supercond., upper critical fields anisotropy charactn. 7−125279
Y-Ba-Cu-O high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
Y-Ba-Cu-O high T_c supercond. sputtered films, struct. and supercond. props. studies 7−131832
Y-Ba-Cu-O high T_c superconds. and substituted systems, materials charactn. 7−143666
Y-Ba-Cu-O high temp. supercond. film on $SrTiO_3$, epitaxial ordering 7−131833
Y-Ba-Cu-O system, high T_c supercond., effects of crystal lattice distortions on superconductivity 7−117882
Y-Ba-Cu-O thin films, high T_c supercond., prep by RF magnetron sputtering 7−144274
Y-Ba-Sc-Cu-O high T_c supercond., struct. and microstruct. obs. 7−112602
YAG ceramics, mech. props. rel. to process parameters 7−86100
YAG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
Y_3Al_5, new intermetallic cpd. 7−131097
$YBa_2(Ag_xCu_{1-x})_3O_{9-y}$, high T_c supercond., comp. depend. of T_c 7−99290
$YBa_2Cu_{3-y}Ni_yO_{7-\delta}$, superconducting props., Cu site effects 7−112557
$YBa_2Cu_3O_7$, high T_c supercond., X-ray diffraction anal. 7−112645
$YBa_2Cu_3O_7$ thin films, electron beam deposition, structural, supercond. props. 7−118335
$YBa_2Cu_3O_{7-\delta}$, high temp. supercond., interrelation of struct., dimensionality and superconductivity 7−131837
$YBa_2Cu_3O_{7-\delta}$, struct. phase transition, role of dimensionality for high T_c superconduction 7−112588
$YBa_2Cu_3O_{7-x}$, cryst. struct. of high-temp. superconductor 7−111502
$YBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
$YBa_2Cu_3O_{7-x}$, supercond., high temp. X-ray powder diffr., 298-1300 K 7−142997
$YBa_2Cu_3O_{9-\delta}$, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
$YBa_2Cu_3O_x$, high T_c supercond., elec., mech. and US props. 7−118709
$YBa_2Cu_3O_x$, single cryst., supercond. and struct. 7−92349
$Y_{0.4}Ba_{0.6}CuO_{2.22}$ high T_c supercond., cryst. struct. studies 7−91546
$Y_{0.9}Ba_{2.1}Cu_3O_6$, cryst. struct. of oxide not exhibiting superconductivity 7−104686
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., phase transitions 7−118081
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., single-phase, superconductivity and thermoelec. power meas. 7−131889
$YBa_{2-x}Sr_xCu_3O_y$ high T_c superconductor props., comp. depend. studies 7−118658
$Y(Co_{1-x}Cu_x)_5$, lattice constants and heat of formation 7−91841
$Y_{100-x}Fe_x$ metallic glass ribbons, H absorption 7−84302
Y_2Fe_{17}, Fe hyperfine field and magnetisation anisotropy, Mossbauer studies 7−138222
YFe_2H_x hydrides, NMR study 7−70672
$Y_2(Fe_{1-x}T_x)_{14}B$, T=Al, Ti, Cr, Mn, Ni, alloys, magnetic and crystallographic props., comp. depend. study 7−125448
YIG:Fe, implantation, thermal annealing and solid phase reepitaxy 7−142801
YIG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
$Y(PO_3)_3$, solid phase synthesis and cryst. struct. 7−126040
$(Y_{1-x}Yb_x)_2Ba_4Cu_6O_{14+y}$, high T_c supercond., X-ray diffr. and elec. resist. studies 7−118625
Yb, deformed, recrystn., X-ray obs. 7−113570
Yb-Tl system, phase diagram and mag. props. 7−144368
$YbBr_2$-YCl_2 solid soln. synthesis and X-ray diffr. structural study 7−83908
$Yb_yEr_{1-x}Ba_2Cu_3O_{6+y}$ high T_c supercond., comp. depend. and struct. studies 7−125190
YbH_x trihydride, prep. without H overpressure, X-ray diffr. studies 7−69860
Zn, epitaxial growth, hot wall technique, effect of subst. temp. 7−124747
$ZnCrFeO_4$ spinel, mixed oxide catalyst, synthesis, struct., and catalytic activity 7−100051
$Zn_{1-x}Fe_xSe$ dilute mag. semiconductor, MBE growth, characterisation 7−112117
$ZnIn_2Te_4$, thin film growth and struct. props. 7−138688
ZnO based nonlinear resistors, sintered, microstruct., density rel. to additives 7−106473
ZnO sputtered film transducer for low temp. ultrasonic meas. on InSb substrate 7−117431
ZnO-Na_2O-B_2O_3-SiO_2:$CdSe_xS_{1-x}$, quantum confinement effects of impurity microcrysts., optical props. study 7−106224
Zn_3P_2 film, flash evap., growth morphology and opt. props. 7−100086
$Zn_3(PO_4)_2$, film deposition on steel, Mn^{2+} component influence *(Japanese)* 7−93178
ZnS, 2H polytype, layer disordered wurtzite, diffuse X-ray scatt. 7−97855
ZnS, crystal whiskers, struct. and twist, X-ray topography studies 7−143302
ZnS:Tm, thin films, growth and charact. 7−70130
ZnS-ZH, layer disordered wurtzite, diffuse X-ray scatt. 7−97855

X-ray diffraction examination of materials continued
ZnSe epitaxial layers on GaAs, characterisation using modulation of Renninger scan intensity 7−69534
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe-GaAs (100), plastic deformation in MBE grown ZnSe layers 7−76668
$ZnSnP_2$ chalcopyrite LPE on GaAs sphalerite substrate, orientation depend. and related defects 7−118326
$ZnSnP_2$, vacuum grown thin films, characterisation 7−112137
Zr-based metallic glasses, amorphous hydrides, comparison of thermal stabilities 7−111418
Zr-Co multilayers, interdiffusion and amorphisation, metastable phase equilib. 7−98384
Zr-Cu, sputtered, struct. relax., low temp. thermal cond., X-ray scatt. 7−105346
Zr-Fe system, heat treatment, plastic deform., phase transform. 7−71176
Zr-Fe/Tb-Fe compositionally modulated multilayered films, sputtered, mag. props. 7−99518
Zr-Nb (2.5 wt.%), hydrostatically extruded tube, texture *(Chinese)* 7−71203
Zr-Ti, struct. after quenching and tempering *(Russian)* 7−71218
$Zr_{100-x}Fe_x$ metallic glasses, struct., X-ray diffr. 7−83765
$(Zr_{100-y}Hf_y)_{76}Fe_{24}$, metallic glasses, struct., X-ray diffr. 7−83765
ZrNi, amorphous H storage, struct. X-ray study *(Chinese)* 7−91445
$Zr_{67}Ni_{33}$, crystallisation characteristics *(Korean)* 7−142644
ZrO_2 and Y_2O_3 stabilized ZrO_2 films on Al_2O_3 substrates, X-ray diffraction study *(Japanese)* 7−131499
ZrO_2 films, CVD from $ZrCl_4$-H_2-CO_2-Ar gas mixture 7−100100
ZrO_2, MgO partially stabilised, gel-derived, phase transforms. 7−77996
ZrO_2, polymorphic mixtures, X-ray diffr. 7−111473
ZrO_2, prep. from Zr citrate, structural transformation 7−77854
ZrO_2, pure and CaO stabilised, liq. mix synthesis, phase analysis 7−119216
ZrO_2-Cr_2O_3 system, prep., mag. props. rel. to struct. and comp. 7−113497
ZrO_2-Gd_2O_3 pyrochlore-type solid soln., stability and antiphase domain struct. study 7−86141
ZrO_2-Li_2O-B_2O_3-SiO_2 glass ceramic, phase transform. depth profiles, synchrotron radiation X-ray diffr. 7−93009
ZrO_2-Na_2O-SiO_2 glass ceramic, phase transform. depth profiles, synchrotron radiation X-ray diffr. 7−93009
ZrO_2-Y_2O_3, TZP ceramics, sintered, development of secondary tetragonal phase 7−86112
ZrO_2-Y_2O_3, tetragonal phase, elec. props. effect of TiO_2, SnO_2 and Al_2O_3 additions 7−98567
ZrO_2−Yb_2O_3, plasma-sprayed coatings, thermal barrier appl. 7−106403
Zr_2Pd, H(D) absorpt., X-ray and neutron diffr. studies 7−84283
Zr_3RhH_x, amorphous, produced by solid-state reaction, thermal props. 7−84317
Zr−Ni, amorphous, supercond., structural relax., crystallisation 7−104584

X-ray diffraction examination of microstructure *see X-ray diffraction examination of materials*

X-ray diffraction examination of molecular structure
see also molecular configurations
β-phenylvinylphosphonic acid, cryst. and mol. struct., H bonds, X-ray study 7−104726
acetophenone-(O-phenyl-N,N-di(2-chloroethyl)amidophosphonyl)hydrazone, struct. 7−137351
3-acetoxy-4-hydroxy-4-methyl-7-isopropenylselenopane, struct., X-ray diffr. exam. 7−111529
5-adamantyl-2,4-diaminopyrimidines, 6-substituted, cryst. and mol. struct. investig. 7−142744
α-amino acid surfactant monolayer on water, elucidation of 2D struct. using synchrotron X-ray diffr. 7−114180
aminophosphone complexes, cryst. and mol. struct. 7−111532
3′-azido-2′, 3′-dideoxythymidine reverse transcriptase inhibitor, spatial struct. 7−139196
bis(bis(triphenylphosphine)Ag)$OsCl_6$, mol. struct. 7−129901
calixsperand sodium picrate complex, X-ray struct., kinetic stability 7−144691
T-catalase, 3-D struct. 7−104710
ceruloplasmin, trigonal cryst. struct., rot. function, X-ray diffr. study with 6 Å resolution 7−106967
coordinate diffractometer for high resolution studies of protein crystals 7−80949
cyclodextrin-crown ether-cation inclusion complexes, cryst. and mol. struct. 7−117911
cytochrome C oxidase, crystalline membranous struct., electron density profile, electron microscopy and X-ray diffr. study 7−78744
1,3-dichloropropane, liq., conform. at 253 K, wide-angle X-ray scatt. obs. 7−117092
1-diethyleneamidophosphoryl-2-trichloromethyl-Δ^2-imidazolene, cryst. and mol. struct., X-ray study 7−104725
N,N-dimethyl-4-nitro-2,6-xylidine, cryst. and mol. struct., X-ray diffr. 7−98105
4,5-dimethylphenanthrene, mol. geometry and conform. stability, buttressing effect 7−90450
glycogen phosphorylase b, ms X-ray diffr. and electron density map from Laue photographs 7−139208
β-hydroxyethyliminodiacetic acid, cryst. and mol. struct. obs. 7−111533
Lac repressor-lac operator complexes, soln. X-ray scatt. and electrophoretic obs. 7−93627
N-meta-methoxybenzoyl-N′,N′,N″,N″-diethylenetriamide of phosphoric acid, cryst. and mol. struct. 7−104714
2-methyl-3-carboethoxyquinoxaline 1,4-dioxide, synthesis, crystal and mol. struct. 7−117914
neodymium diphthalocyanine, mol. and cryst. struct., X-ray diffr. study 7−104717
nitrogenase MoFe protein, struct., X-ray diff. studies 7−139197
nitroxyl tricyclic biradical, cryst. and mol. struct., X-ray diffr. study 7−104720
O-para-chlorophenylhydrazido-N,N-di(2-chloroethyl)amidophosphoric acid, struct. 7−137350
N-(1-phenylethyl)-Δ^4-thiazoline-2-thiones, and analogues, conform. anal. 7−74670
phospholipid monolayer ordering, synchrotron X-ray diffr. and fluoresc. microscopy studies 7−114205
protein engineering rel. to X-ray struct. anal. *(Japanese)* 7−133206

X-ray diffraction examination of molecular structure continued
renin inhibitor-aspartic proteinase complexes, high resolution X-ray anal 7−114191
rhodamine dye hexahydrate, cryst. and mol. struct., H bonds, X-ray diff study 7−104718
ribulose-1,5-bisphosphate carboxylase-oxygenase, small-angle X-ray scat obs. of quaternary struct. 7−86898
1,3,12,14- tetraaza-6,9,17,20-tetraoxadocosa-1,2,12,13-tetraene, cryst. an mol. struct. 7−104712
3,4,5,6-tetramethylphenanthrene, mol. geometry and conform. stabilit buttressing effect 7−90450
thermitase, X-ray structural investigation at 2.5 Å resolution 7−106966
thiane-1-tosylimide, and derivatives, conformational anal., X-ray ana 7−68420
thiolane-1-tosylimide, and derivatives mol. struct., X-ray diffr. 7−68421
thymidine phenyl cyclic 3′,5′-monophosphate diastereomers, PMR an X-ray obs. 7−141603
tropomyosin and troponin co-crysts., X-ray struct. at 17 Å resolutio 7−71669
two-dimensional automated X-ray detector for diffraction experimen 7−109653
vitamin B_{12} coenzyme, cryst. and mol. struct., neutron and X-ray refin ment 7−114172
Cr complex, 1-chloro-2,3-diaquo-4,5,6-triammine chromium(III) chlorid struct. 7−104694
Fe complex, bis(imidazole)(meso-tetraphenylporphinato)Fe(III) Cl, crys and mol. struct. 7−91537
Fe complex, cluster-stabilised phosphaallene, synthesis, X-ray struc 7−71473
H_2, empirical wave function model from X-ray diffraction data, bindi energy 7−135842
$MgCl_2$-18-crown-6 complex, struct. and conformation 7−137352
Ni complex, Ni (II) methylphosphinediacetic acid system, struc 7−103686

X-ray diffractometers
area detector diffractometers, absorption and decay correction of intens ties 7−97858
attachment for polycrystals studies at temp. −120 to 500°C 7−121314
combined film and microprocessor techniques 7−83585
coordinate diffractometer for high resolution studies of protein crysta 7−80949
crystal diffraction spectrometer, analyser crystal temp. stabilisation co troller *(German)* 7−142534
Daresbury powder diffractometer, resolution and lineshape 7−111311
Hasylab diffractometer for different diffraction geometries 7−111313
high resolution, conf., Daresbury England (March 1986) 7−108017
Kratky block-collimation small-angle X-ray diffractometer for synchrotro radiation 7−121316
parallel beam powder diffractometry using synchrotron radiatio 7−111312
powder diffractometer for synchrotron radiation studies at X13 7−111309
powder diffractometer system for synchrotron source 7−97852
short-term instability revealed by statistical method 7−104489
stability checking method and software 7−137157
test facility for X-ray optical elements, performance and appl. 7−95697

X-ray effects
see also biological effects of X-rays
alkali metal halides, high purity crystals, instability of solid solns. *(Rus sian)* 7−143016
L-ascorbic acid, single cryst., X-irradiated, ESR spectra 7−85440
L-ascorbic acid. single cryst., X-irradiated, triplet radical pairs, ES investig. 7−112955
cholest-4-en-3-one, single cryst., radiation damage, ENDOR ob 7−77426
elementary semiconductors, radiation-enhanced diffusion, microkinet theory 7−105118
free electron laser optics coating test device 7−136345
guanine cation, decay product, struct., X-ray irrad., ESR and ENDO anal. 7−93640
K_2SO_4:BF_4^-, X-ray irrad., FSO_2 radical, ESR and ENDOR stud 7−92551
Kapton, X-radiation-induced conductivity meas. 7−131637
methanol, irradiated polycrystal, electron spin echo modulation, nucle quadrupole interaction 7−106011
Mylar, X-radiation-induced conductivity meas. 7−131637
pancreatic ribonuclease A, bovine, radiation damage in X-ray diff 7−86911
polystyrene, electron traps, activation energy distribs., thermally stimulate luminesc. anal. 7−84918
PVDF, X-radiation-induced conductivity meas. 7−131637
quartz: Ge, bound small-polaron optical absorption 7−106225
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
solids irradiation by electron-electron and electron-X-ray beams, usin synchronised accelerators 7−137412
stopping power and Compton scatt., dielec. formalism anal. 7−111668
structure determinations using X-ray diffr., anisotropy in variation serially-measured integrated intensities 7−75928
tetramethylammonium tetrachlorozincate, incommensurate phase, X-ra radiation damage effect 7−104827
thiourea, deuterated, X-radiation damage, dielectric susceptibility an neutron diffr. meas. 7−69760
TLD-100 chips, relative TL response for X- and γ-rays 7−77665
vacuum gap, elec. strength, influence of X-rays 7−69518
Ag surfaces, reaction and absorption of Cl_2, X-ray and ion radiatio effects, XPS and Auger spectra studies 7−119579
Al_2O_3, corundum, UV spectra, effects of X-rays and electron irradiatio *(Russian)* 7−85770
As-S vitreous chalcogenide film, photoinduced and radiation-induce struct. transformations 7−142646
As-Se vitreous chalcogenide film, photoinduced and radiation-induce struct. transformations 7−142646
BaF_2, three-photon positron annihilation studies 7−144165
$Bi_{12}SiO_{20}$ crystals, photoelectret state, X-ray irradiation effects stud 7−99652
CaB_4O_7:Pb(Eu)(Dy), sintered, X-ray irrad. thermolum., thermally stimu lated exoelectron emission 7−77666
$Ca_5(PO_4)_3Cl$:Ag, Na^+, thermoluminesc. under X-ray irradiatio 7−106279

X-ray effects continued
- $CaWO_4$, reorientation of hole centres, optical absorption and EPR studies 7−137854
- Fe-Cr-Mo, ferritic steel, solute-precipitate interactions, energy dispersive X-ray spectra study 7−106520
- $GdBa_2Cu_3O_x$, high T_c supercond., thermally stimulated luminesc. 7−132356
- He-Xe-HCl mixture, X-ray induced self-sustaining volume discharge, large interelectrode spacing 7−75907
- $Ho_{1.5}Ba_{1.5}Cu_2O_x$, high T_c supercond., thermally stimulated luminesc. 7−132356
- IO_4^{2-}, ESR spectrum 7−106026
- KBr, F centres, soft X ray irradiated, UV-visible meas. of optical absorpt. band 7−80248
- KBr, radiation point defects, electron microscope and optical study *(Russian)* 7−142772
- KBr:$Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
- KBr(Cl), point defect formation by synchrotron radiation 7−104828
- KCl, pure X-irradiated crysts., thermolum. and optical absorpt. spectra studies 7−125813
- KCl:Mn^{2+} crysts., impurity ESR obs. in regular environment 7−70632
- KCl:Pb, X-ray induced relax. bands, ionic thermocurrents 7−143964
- KCl:S, X-irradiated single crysts., thermolum. and optical absorpt. spectra studies 7−125814
- KCl:$Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
- $KH_3(SeO_3)_2$, ferroelastic, X-irradiated, electron spin relax. study 7−112945
- KI:$Tl^+(Sn^{2+})(In^+)(Pb^{2+})$, activated luminescence suppression, by X-irradiation *(Russian)* 7−113269
- $KMgF_3$:Ni, X-ray irrad., tetragonal impurity ions, EPR study 7−70634
- $Li_2B_4O_7$ crystallised glasses, X-irradiated at liq. N_2 temp., TSEE and thermolum. 7−85967
- LiCl:Fe, X-irradiated, electron-trapped centres 7−83953
- LiF, single cryst., optical absorpt. and thermoluminesc., X-ray irradiation and DC field effect 7−77662
- LiF, single crysts., X-ray irrad. under DC fields, dielec. props. 7−106073
- $LiNbO_3$, pure and Fe doped, X-ray irrad. defects, optical absorpt. effects study 7−144089
- $LiNbO_3$:Fe, X-ray irrad., optical props. and ESR spectra 7−113121
- $LiTaO_3$, X-ray irrad. damage, EPR study 7−84027
- N_2, liquid electron thermalisation distances and free ion yields calc. 7−111989
- NH_4Cl:$HgCl_2$, opt. peaks of Hg centres before and after X-ray irrad. 7−113234
- NaCl, three-photon positron annihilation studies 7−144165
- NaF, three-photon positron annihilation studies 7−144165
- $NaMgCl_3$, flux cryst. growth and thermolum. glow curves 7−132354
- α-quartz crystals, irradiation effects on elec. props. 7−70701
- RbI crystals, radiational creation of α,I pairs *(Russian)* 7−142773
- Si, surface nitridation, synchrotron radiation induced 7−71399
- Si, X-irradiated, ionisation enhanced effects 7−104826
- Si-SiO_2, defects in device oxides, soft X-ray damaged, EPR study 7−118860
- SiO_2 defect generation and annealing in IGFET 7−142834
- SiO_2 films, E′ centres, symm., rebound effects 7−112953
- YAG:Nd^{3+} X-ray excited phosphoresc. kinetics model *(Russian)* 7−70911
- $ZrSiO_4$:Dy single crysts., electron and hole centres produced by X-irrad., thermolum. studies 7−77663

X-ray emission spectra
- *see also appearance potential spectra; conversion electron spectra*
- acetylene, gas phase X-ray emission spectra, SCF and restricted HF calcs. anal. 7−141599
- aerosols, atmospheric, anal. by total refl. X-ray spectrometry 7−139056
- alkali metal metavanadates, V X-ray emission spectra and quantum yield spectra, 2nd coord. sphere effects 7−113355
- alkaline earth oxides, cryst. cluster SCF-X_α-RW method calcs. 7−143344
- alloys, amorphous hydrogenated, atomic scale struct., pulsed neutron scatt. 7−142589
- asymmetric Bragg diffraction, fluorescent emission yield 7−99982
- atoms, vacancy decay. low energy photon radiation 7−122425
- automated apparatus with multiple angular scanning for study of secondary processes in X-ray diffraction in crystals 7−67451
- clinical X-ray tubes, Compton scattering spectrometer for X-ray photon energy spectra determ. 7−107240
- double plasmon oscillations during X-ray emission 7−84728
- doublet structure in valence fluctuation compounds 7−125854
- dynamic screening and interference effects in X-ray and Auger emission spectra 7−90029
- elements, K_α cross sections, radioisotope X-ray fluorescence 7−99981
- graphite intercalation compounds, LiC_6, electronic structure, soft X-ray emission spectroscopy 7−106312
- ion induced X-ray emission 7−119095
- ion X-ray coincidence measurements in heavy ion collisions 7−90369
- ion-induced characteristic X-ray emission in solids 7−77698
- ion-induced X-ray studies with a high luminosity von Hamos crystal spectrometer 7−92805
- K- and L-shell resonant transfer and excitation in ion-atom collisions 7−96859
- laser plasma, electron temp., X-ray emission spectra 7−83533
- laser plasma, X-ray emission spectra, atomic number depend. 7−104434
- laser plasmas, X-ray emission spectra study 7−103424
- laser produced plasma, super-soft X-ray emission *(Chinese)* 7−130923
- low density plasma, J-line to H-like resonance line ratio, Z-depend. 7−96590
- lower hybrid wave driven plasma current, radial distrib. in JFT-2M Tokamak 7−91312
- metallic glasses, bulk and surface electronic struct. 7−98790
- metallic thin films, proton induced K-shell X-ray cross sections 7−144183
- metals, Ne ion implanted, induced X-ray emission 7−104778
- multiply charged ions, conference, Groningen, Netherlands (Sept. 1986) 7−88732
- olivines, synthetic, minor element site occupancies, channelling-enhanced X-ray emission studies 7−131127
- pionic atoms, X-ray spectra study of level widths and shifts 7−110146
- PIXE spectra, chemical effects 7−86702
- quantitative element anal., X-ray and Auger electron yields 7−138553
- rare earth alloys, $R_2Fe_3Si_5$, R=Tb-Ho, Tm, Lu, electronic struct., X-ray emission spectra *(Russian)* 7−113316

X-ray emission spectra continued
- rare earth elements, L X-ray fluoresc. cross-sections meas. 7−141517
- rare earth metal vacuum spark, X-ray emission quasicontinuum band 7−123986
- rare earth-transition metal Laves phase alloys, band struct. experimental anal. 7−70178
- rare earths, f-states, core level spectroscopy 7−92784
- relativistic electron beam ring, electron energy increase by major radius compression, hard X-ray spectrum meas. 7−91352
- relativistic electron scatt. from excited quantum system, bremsstrahlung 7−68465
- semiconductors and insulators, X-ray emission from Core excitons 7−118374
- Si, solid, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
- solid-solid interfaces, spectroscopic anal. of electron states *(French)* 7−112417
- SRIXE, method for selecting detector apertures 7−144774
- steel, stainless, surface treatments, characterisation for BWR recirculation piping 7−89613
- subgroup VIa transition metal carbides, nitrides and oxides, electronic props., theory and expt., review 7−112181
- substrate-under-film transition layers in heterostructures, high-depth-resolution spectroscopy 7−102572
- Ti^{20+} X-ray spectra, appl. in JIPP-T-II-U Tokamak diagnostics 7−123987
- Tokamak, Varennes, X-ray imaging, image reconstruction techniques for computed tomography 7−117761
- tokamak plasmas, X-ray emission investig. review 7−137129
- transition metal borides, pions, atomic Coulomb capture ratios, chemical bond depend. 7−74790
- trichlorofluoromethane, fluoresc. emission and absorpt. spectra meas. 7−116985
- variable valency compounds X-ray absorption spectra theory 7−77687
- $[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF $X\alpha$SW calcs. 7−109763
- $[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF $X\alpha$SW calcs. 7−109763
- Ag, L shell X-ray cross sections from Be^+ collisions 7−90373
- Al, threshold exponent α 7−70944
- $Al^{7+}+He(H_2)$, charge transfer, UV and X-ray spectra anal. 7−90022
- AlMgSi alloy, heat treatment, influence on atomic and electronic struct., X-ray emission study 7−132380
- Al_2O_3-SiO_2 amorphous powders from hydrolysis of alkoxides, X-ray fluoresc. spectra, energy shifts 7−92785
- Ar + muonic H, μ^- transfer rate at high pressure 7−110147
- Au L-X-ray emission following proton impact ionisation 7−90370
- Au, $L\alpha_1$ satellite struct. in X-ray emission 7−68246
- Au^{69+}, beam foil spectroscopy of $n=3$ to $n=2$ transitions in highly stripped heavy ions 7−96591
- Au+C(F)(Mg)(Si)(S)(Cu) ions, L-M-N multiple ionis. 7−141510
- Au_xPd_{1-x}, electronic struct., soft X-ray emission, Fermi surface props. 7−137785
- BN_3, solid, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
- B_2O_3, phonon ringing, anharmonicity effects 7−137493
- $BaLaGa_3O_7$:Nd single crystals, X-ray emission lines, valence band 7−92783
- Bi^{73+}, beam foil spectroscopy of $n=3$ to $n=2$ transitions in highly stripped heavy ions 7−96591
- ^{210}Bi, X-ray and gamma-ray intensity meas. 7−135248
- Br, L shell X-ray cross sections from Be^+ collisions 7−90373
- Br, Rydberg states, X-ray spectra 7−74475
- C, X-ray and Auger electron cross sections, fluorescence yield in proton irrad. benzene 7−90380
- CO, Auger and autoionisation spectra, interference effects calc. 7−90187
- Ca, inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bombardment 7−90372
- Ca ions, charge transfer collisions, reson. transfer and excitation, X-ray spectra 7−122428
- Ca XX resonance lines, dielectronic satellite lines, atomic parameter calcs. 7−96589
- CdF_2:Mn single cryst., characteris., lattice consts., dislocation density, microhardness, X-ray spectra 7−124310
- Ce-Co-Si cpds., electronic struct., X-ray emission spectra study *(Russian)* 7−125862
- CeO_2, giant resonances, X-ray spectra, line resolution study 7−141601
- Cl compounds, Kα X-ray spectra, chemical effects study 7−129739
- Cl compounds, *Kα* X-ray emission spectra chemical effects, SCC-DV-Xα MO calcs. 7−129593
- Cl, inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bombardment 7−90372
- Cl, photoexcited Kα X-ray satellites spectra 7−135873
- Cl+Sn, bremsstrahlung, isotope shifts, X-ray spectra anal. 7−122427
- Co, Kα satellites in X-ray emission spectra 7−74500
- Co, photoexcited Kα X-ray satellites spectra 7−135873
- Co XVII-Co XXV, laser-produced plasma, X-ray emission spectrum meas. 7−111273
- CoCr thin film recording media, mag. anisotropy and struct. 7−125490
- Cr/Ni sandwich on Si(Al), Ar^+ induced X-ray and optical emissions 7−119094
- $Cr_{100-x}Al_x$, bremsstrahlung isochromat and soft X-ray emission spectra 7−138552
- Cs, K-electron capture, X-ray intensity ratio 7−129642
- Cu, L shell X-ray cross sections from Be^+ collisions 7−90373
- Er, K-electron capture, X-ray intensity ratio 7−129642
- Er, L-subshell ionisation by deuteron impact 7−90371
- Eu, K-electron capture, X-ray intensity ratio 7−129642
- Eu^{n+}, X-ray emission, microdot spectrosc. 7−141511
- Fe, K-electron capture, X-ray intensity ratio 7−129642
- Fe, Kα satellites in X-ray emission spectra 7−74500
- Fe XXV, XXIV and XXIII, ionisation balance determ. from solar flare X-ray spectra 7−120348
- Fe^{n+} (n=23, 24, 25), K X-ray wavelengths and transition probabilities 7−95120
- Fe-Al-Si alloys, X-ray spectra and chem. bond. 7−137318
- Fe-Ni, Invar, X-ray emission spectra, temp. depend. *(Russian)* 7−70943
- Fe_2O_3-TiO_2-Na_2O, X-ray fluorescent Fe $K\beta_5$ spectra 7−106311
- $Fe_{90}Zr_{10}$, amorphous, electronic struct. rel to H 7−105379
- Ga, K emission bands and X-ray emission spectra meas. 7−141508
- Gd, L-subshell ionisation by deuteron impact 7−90371

X-ray emission spectra continued
Ge, L shell X-ray cross sections from Be^+ collisions 7−90373
H^++hydrocarbons (CO) (CO_2), C K-shell and Auger electron prod. cross sections 7−110096
He Z-inch plasma, CO_2 laser-heated, soft X-ray emission meas. 7−130914
He-like ions, vacuum-spark hot point, X-ray emission 7−124017
^{3}He, muonic, X-ray spectra after fusion 7−122744
^{177}Hf, X-ray and gamma-ray intensity meas. 7−135248
In, K-electron capture, X-ray intensity ratio 7−129642
Ir, $L\alpha_1$ satellite struct. in X-ray emission 7−68246
K, inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bombardment 7−90372
K, photoexcited Kα X-ray satellites spectra 7−135873
$KMnO_4$, soft fluorescent X-ray emission spectra, energy sites and relative intensities 7−109926
Kr, vacancy decay. low energy photon radiation 7−122425
Kr+Kr collisions, L-shell vacancy prod., adiabatic coupled-channel calcs., X-ray spectra 7−116902
La, X-ray L-emission spectrum, high freq. $L_{\gamma 1}'$ satellite 7−74498
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct., X-ray emission spectra study *(Russian)* 7−132379
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
Li-like ions, metastable state, lifetime, relativistic DF calcs. 7−116910
Li-like ions, radiative and Auger decay channels following electron capture 7−90028
LiF, fluoresc. emission spectra study using synchrotron radiation 7−113277
Lu, relative intensities and cross section in X-ray fluoresc. 7−135874
Mg K_α X-ray satellite spectrum following photon excitation 7−74532
Mg, threshold exponent α 7−70944
Mg_2CoH_5, electronic struct. and densities of states, X-ray emission and absorpt. spectra 7−84671
Mn, K-electron capture, X-ray intensity ratio 7−129642
MnO_2, soft fluorescent X-ray emission spectra, energy sites and relative intensities 7−109926
$MnSo_4$, soft fluorescent X-ray emission spectra, energy sites and relative intensities 7−109926
N^{7+}+He(H_2), charge transfer, UV and X-ray spectra anal. 7−90022
Na_2O-SiO_2 amorphous powders from hydrolysis of alkoxides, X-ray fluoresc. spectra, energy shifts 7−92785
Nb ions, charge transfer collisions, reson. transfer and excitation, X-ray spectra 7−122428
Nd, L-subshell ionisation by deuteron impact 7−90371
Ni, Al-ZZ 7−97802
Ni, electronic struct., $L_{2,3}MM$ Auger effect 7−74545
Ni-Al interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7−70946
Ni-MgF_2 interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7−70946
Ni-P, amorphous alloys, densities of stakes, effects of medium-range order 7−143307
Ni-SiO interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7−70946
NiM_2O_4 where M=Al,Cr,Ga,Fe,Mn, X-ray Ni Kβ emission, XANES, XPS and optical spectra 7−113313
NiO_2, electron energy-loss spectra, dynamical scatt. and quantification 7−106860
$NiSi_2$, electronic struct. features due to d-s, p resonance *(Russian)* 7−124853
^{237}Np, muonic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
^{237}Np, pionic, X-ray studies, quadrupole moment of strong interaction parameters 7−95985
O^{2+}, beam foil excitation, (n,l) state distrib. study 7−96847
O^{8+}+H_2, electron capture, energy gain-X-ray coincidence meas. 7−90399
P, inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bombardment 7−90372
P, photoexcited Kα X-ray satellites spectra 7−135873
Pb, K-electron capture, X-ray intensity ratio 7−129642
Pd complex with glycerine, electronic struct., X-ray spectra and quantum-chem. calcs. 7−109928
PrO_2, giant resonances, X-ray spectra, line resolution study 7−141601
^{141}Pr, X-ray and gamma-ray intensity meas. 7−135248
S, hydrogenic and He-like, diagnostic tracer, X-ray emission spectral determ. of plasma parameters 7−96594
S, inner-shell ionization processes in low Z ($Z \leq 20$) elements by proton bombardment 7−90372
S, photoexcited Kα X-ray satellites spectra 7−135873
S^{7+}+He(H_2), charge transfer, UV and X-ray spectra anal. 7−90022
Si, parametric Cerenkov X-radiation, obs. of fine structure in spectral lines 7−138540
Si, X-ray multiwave diffraction, secondary radiation yield, angular depend. 7−77752
a-Si:H films, density of states and photoconductivity 7−84629
a-Si:H films, plasma deposited, electronic struct. 7−76747
a-$Si_{1-x}Ge_x$ films, density of states 7−84627
SiN_x, nonstoichiometric, electronic struct., soft X-ray emission spectra study 7−125861
Sn(^{40}Ar, γX), 300 MeV, γ-spectra observed in coincidence with fragment K X-ray spectra 7−109226
Ta, K-electron capture, X-ray intensity ratio 7−129642
TbO_2, giant resonances, X-ray spectra, line resolution study 7−141601
Th L X-ray line widths 7−74499
Th, relative intensities and cross section in X-ray fluoresc. 7−135874
Th+C(F)(Mg)(Si)(S)(Cu) ions, L-M-N multiple ionis. 7−141510
Ti, Kα satellites in X-ray emission spectra 7−74500
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7−125834
Tm, relative intensities and cross section in X-ray fluoresc. 7−135874
U, $L\alpha_1$ satellite struct. in X-ray emission 7−68246
U, relative intensities and cross section in X-ray fluoresc. 7−135874
V, Kα satellites in X-ray emission spectra 7−74500
$V_3GeFe_xCo_y$, Fe and Co impurity crystallographic positions, X-ray emission spectra studies *(Russian)* 7−70942
$V_3SiFe_xCo_y$, Fe and Co impurity crystallographic positions, X-ray emission spectra studies *(Russian)* 7−70942
W, subpicosecond laser-produced plasma, soft X-ray emission 7−111252
Xe^{2+}, multielectron effects in ultrasoft X-ray emission spectra 7−82032
X-ray emission spectra continued
Xe+Xe collisions, L-shell vacancy prod., adiabatic coupled-channel calcs., X-ray spectra 7−116902
$YBa_2Cu_3O_{9-\delta}$, superconductor, soft X-ray emission spectra 7−105835
$Y_2Fe_3Si_5$, electronic struct., X-ray emission spectra *(Russian)* 7−113316
Yb, proton-induced ionisation, L-shell X-ray prodn. cross-sections meas. 7−141514
^{170}Yb, X-ray and gamma-ray intensity meas. 7−135248
Zn, K emission bands and X-ray emission spectra meas. 7−141508
Zn, L shell X-ray cross sections from Be^+ collisions 7−90373
Zn_3P_2 single crystals, surface chemistry studied by X-ray photoemission spectroscopy 7−119593
^{68}Zn(^{64}Zn,γX), 290 MeV, γ-spectra observed in coincidence with fragment K X-ray spectra 7−109226
Zr, L shell X-ray cross sections from Be^+ collisions 7−90373
Zr-Ni-H glass system, electronic struct., soft X-ray emission spectra 7−105380

X-ray fluorescence analysis
bronze, nondestructive analysis using fundamental parameter method *(Chinese)* 7−86546
BWR and PWR fuel, high burnup, fission gas release during power transients, grain boundary distrib. 7−102989
chloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
data processing in the energy range 1.5 to 15.4 KeV 7−78561
dichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
element, K_β/K_α X-ray intensity ratios, chem. effects 7−126521
elements, K_α cross sections, radioisotope X-ray fluorescence 7−99981
environmental samples, multielemental anal. 7−93559
excitation beam attenuation methods 7−78569
extraterrestrial material, synchrotron X-ray fluorescence trace element anal. 7−100661
galvanic coatings NDT, using X-ray fluorescence analyser *(German)* 7−86536
indirectly measured spectra for fundamental parameter anal. 7−78570
inhalable urban particulate matter in Santiago de Chile, X-ray fluorescence spectrometry 7−93586
instrumental analytical techniques in geochemistry: requirements and applications 7−86743
K and L X-ray fluorescence cross-sections meas. 7−74502
low energy γ-ray scatt. and X-ray fluorescence in quantitative anal. 7−139066
low-Z elements, excited fluoresc. by ^{241}Am XRF source gamma transitions and L X-rays 7−114017
matrix absorption enhancement effects in energy dispersive anal. *(Chinese)* 7−93432
microradiography and microanalysis techniques without focusing adjustments, review *(French)* 7−67444
monazite sands, Fe minerals, hyperfine interaction charactn. 7−127198
multilayer thin films, thickness determ., variable exit angle ultrasoft X-ray fluoresc. spectrometry 7−134722
Permalloy, multilayer metal films, composition and thickness determ., fundamental parameters X-ray fluoresc. approach 7−114028
PIXE and heavy-ion induced X-ray emission, appls. *(French)* 7−78578
PIXE X-ray fluorescence and radioisotope X-ray fluorescence 7−93400
portable double channel analyser, correcting matrix effect *(Chinese)* 7−93431
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
review of methods based on nuclei principles *(Italian)* 7−86688
scanning electron microscope, high lateral resolution X-ray fluoresc. anal. 7−108716
scanning X-ray fluorescence microprobe with synchrotron radiation 7−139063
spent fuel solutions, X-ray fluorescence analysis 7−78562
standardless quantitative X-ray fluorescence analysis using stored calibration constants 7−106843
steel, alloy, nondestructive analysis using fundamental parameter method *(Chinese)* 7−86546
synchrotron radiation as source for chemical applications 7−86735
synchrotron radiation microprobe anal., X-ray focusing 7−114035
tetrachloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
thickness gauge for plating layers using X-ray fluorescence techniques *(Chinese)* 7−89198
thin specimens, two-parameter represent. of effective exciting wavelength, theoretical-correction method 7−133016
total reflection and polarised X-rays, analytical appl. 7−86744
trace element measurements using white synchrotron radiation 7−100660
trace elements from coal burning power plant, XRF and PIXE analysis of nearby trees 7−93590
trace elements in aerosols, XRF and PIXE anal. 7−93605
trace elements in body fluids, XRF spectroscopy 7−93414
trichloromethane, Cl-Kβ emission spectra and STO-3G and MNDO MO ab initio calcs. 7−89965
tube absorption correction for transmission anodes 7−133017
X-ray fluorescence analysis appl. to agricultural research *(German)* 7−86731
yeast composition anal. by PIXE X-ray fluorescence, Rutherford backscatt. 7−93412
zone axis diffr. conditions, localisation, ALCHEMI, X-ray fluorescence spectra 7−97866
Ag, K_β/K_α X-ray intensity ratios, chem. effects 7−126521
Al disk packs, mag. layer thickness meas. by X-ray fluorescence anal. *(Chinese)* 7−80733
AlGaInSb bulk crystal and LPE forms, charactn. 7−92892
Ar^++Mg, L and K vacancy prod., multiple collision anal. 7−92804
Au in unoxidized Carlin-type ore samples, synchrotron X-ray fluorescence analysis 7−94225
Ca in environmental water, X-ray fluorescent anal. *(Japanese)* 7−100663
Cd, K_β/K_α ratios in elemental anal. of thick samples 7−78571
Co in environmental water, X-ray fluorescent anal. *(Japanese)* 7−100664
Cs_2O-Nb_2O_5-Al_2O_3 glasses, struct. and props. 7−137252
Cu, K_β/K_α ratios in elemental anal. of thick samples 7−78571
Cu, K_β/K_α X-ray intensity ratios, chem. effects 7−126521
Cu-Ni, thin films, on steel, thickness meas. by X-ray fluorescence spectrometry 7−76702
Cu-Zn, nondestructive analysis using fundamental parameter method *(Chinese)* 7−86546
Fe, K_β/K_α X-ray intensity ratios, chem. effects 7−126521

X-ray fluorescence analysis continued
Fe-Cr-Ni alloy, X-ray quantitative microanalysis, calculation method 7−114048
Fe_2O_3-TiO_2-Na_2O, X-ray fluorescent Fe $K\beta_5$ spectra 7−106311
GaAs:S, impurity local struct., EXAFS investig. 7−138546
GaPAsSb bulk crystal and LPE forms, charactn. 7−92892
LU_2O_3, rare earth impurities determ., X-ray fluoresc. spectrometry 7−139061
Mo, K_β/K_α ratios in elemental anal. of thick samples 7−78571
Mo, K_β/K_α X-ray intensity ratios, chem. effects 7−126521
Pu isotopic ratio and abundances by X-ray and γ-ray spectrometry assay 7−103142
Si(Li) detectors in energy range 4.5 to 17.5 keV 7−95653
$SnMo_6S_6O_2$, Chevrel phase, O substitution, stoichiometry 7−137577
TiO_2-SiO_2 hard oxide layers, technology optimisation by spectroscopic methods, laser mirror appls. 7−125834
U/Pu input verification in nuclear fuel reprocessing, field demonstration of X-ray densitometer 7−109323
Xe concentration in LWR high burnup fuel, XFA and electron probe microanalysis 7−116573
Yb, proton-induced ionisation, L-shell X-ray prodn. cross-sections meas. 7−141514
Zn, K_β/K_α X-ray intensity ratios, chem. effects 7−126521
ZnS:Tm, thin films, growth and charact. 7−70130

X-ray fluorimetry *see X-ray fluorescence analysis*

X-ray lasers
atomic data for highly charged ions, X-ray laser design, ICF appl. 7−96316
atoms, stimulated emission in X-ray range, physical theory 7−110316
core-excited metastable levels, appl. to spectroscopy, picosecond XUV pulse generation and lasers 7−90011
elongated high-temp. dense plasma in capillary discharge, soft X-ray amplification 7−97772
experimental progress in X-ray laser research 7−74896
line focus geometry for X-ray laser research 7−103916
population inversions in highly ionised plasma 7−110340
research at Lawrence Livermore National Laboratory Nova laser facility 7−90586
soft X-ray laser diagnostics, spectrometer alignment 7−73488
XUV FEL, RF-linac-driven, performance and charact. 7−136333
C VI in plasma XUV gain, model calcs. 7−91301
C VI plasma column 182 Å line, high gain meas. 7−110339
Cu XX plasmas, X-ray lasing 7−90585
Cu^{19+} neonlike plasma, soft X-ray lasing at 195 to 285 Å 7−136281
Cu^{25+} X-ray laser transitions 7−90584
Cu^{26+} X-ray laser transitions 7−90584
DT fusion, μ-catalysed, X-ray laser prod. 7−117170
Ge^{22+} neonlike plasma, soft X-ray lasing at 195 to 285 Å 7−136281
Mo, thin coated foils, soft X-ray amplification, obs., exploding foil plasma 7−104437
NaF capillary-discharge plasma, implosion for X-ray laser expts. 7−91372
Ne IX, X-ray laser, pumping efficiency by Z-pinch plasma 7−117751

X-ray lithography
compact superconducting SR ring for X-ray lithography 7−96409
mask alignment using moire signals in refl. 7−116038
microtrons, applications in X-ray lithography 7−89815
plasma, soft X-ray source for X-ray lithography 7−75895
VLSI, X-ray lithography using electron undulating ring 7−95695
X-ray sources for microlithography created by laser radiation at λ=0.26 μm 7−67447
AgBr evaporated layer, response to soft X-ray irradiation 7−128684
C-Si-O(B) thin films, plasma CVD, X-ray mask substrate appl. 7−100105

X-ray monochromators
controllable high light power monochromator 7−134903
cylindrical element monochromators for synchrotron radiation, concept and design procedure 7−110546
double crystal monochromator, DC feedback system 7−108721
double crystal monochromator, harmonic rejection scheme 7−108720
double-crystal monochromator, UHV, for synchrotron radiation, construction and use 7−134904
parallel beam powder diffractometry using synchrotron radiation 7−111312
powder diffractometer system for synchrotron source 7−97852
soft X-ray monochromatisation using a multilayer-single crystal combination 7−80954
soft X-ray undulator, optical matching with condenser Fresnel zone plates 7−67448
synchrotron radiation monochromators, diffraction props., optical systems and dynamical theory 7−128729

X-ray photoeffect *see X-ray photoelectron spectra*

X-ray photoelectron spectra
adsorbed layer on Al(100), Auger and XPS studies, relaxation energies 7−92837
adsorbed layers and epitaxial overlayers, core-level photoelectron diffr., single scatt. cluster model 7−125922
aerosol air pollutants, surface anal. techniques 7−133160
AES/XPS system, computer interface 7−114051
analyser acceptance angle depend. on photoelectron intensity 7−92827
automated X-ray-electron magnetic spectrometers, attachments and melt investigations 7−121299
black, selective solar absorber surfaces, comparison of different forms 7−144911
butane, fluorinated, core-level XPS spectra, ab initio calcs. 7−122327
catalysts, surface analysis using XPS 7−93443
chemical bond formation, core and valence atomic orbitals 7−122733
chrome coatings on steel, composition and chemical binding, XPS studies 7−126297
conference, Lund, Sweden (Aug. 1986) 7−120698
Crystal Violet, organic dye, UPS and XPS spectra 7−103577
curve synthesis, asymmetrical Gaussian/Lorentzian mixed function appl. 7−89305
DBTTF and DBTSF salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
diamond, Auger spectra, first-derivative C KLL, comparison of XPS and AES 7−85905
ESCA, spatially resolved, instrument performance optimisation 7−78581
ESCA in failure anal., recent developments 7−67438

X-ray photoelectron spectra continued
graphite, Auger spectra, first-derivative C KLL, comparison of XPS and AES 7−85905
hexafluorodianhydride-oxydianiline polyimide, XPS anal. 7−106360
homogeneous solids, deconvolution of inelastic background signal from XPS spectra 7−85956
images using X-ray photoelectron spectrometer 7−89308
imaging XPS, experimental verification of technique 7−132414
impurity transport in TCA-Tokamak, integral collection probes investig. 7−69422
Incoloy 800H, oxide formation studied with XPS 7−86396
inelastic background signal, deconvolution formulas 7−138594
inorganic mixtures, quantitative XPS anal., first principles model 7−138593
lifetime effects on intrinsic and extrinsic excitation, determ. 7−106383
liquid crystal alignment by plasma-polymerised films 7−69586
LWR core melting expts., aerosol sample anal. using XPS and EPMA 7−74002
magnetic materials, short-range spin order, core-level photoelectron diffr., single scatt. cluster model 7−125922
materials science appls. 7−132407
metal-glass thin film interlayers, electric field assisted bonding below 200°C, XPS study 7−71459
metallic glass surfaces, CO interactions, XPS and UPS studies 7−144754
metallic glasses, bulk and surface electronic struct. 7−98790
metallisation stability on semiconductor surface, microscopic control 7−133022
metals, corrosion and oxidation anal. using spectroscopic techniques 7−93207
metals, relation between XPS and Auger electron spectroscopy, relax. energy shifts 7−90053
metals, surface analysis and corrosion inhibition mechanisms 7−119454
mixed X-ray source for XPS and X-ray excited Auger electron spectroscopy 7−132415
molecular solids, surface electronic and vibr. studies 7−77027
optical coatings, non-optical characterisation techniques 7−123161
organic molecular solids, dynamic effects in VUV and X-ray photoelectron spectra 7−125923
oxidation of polycrystalline Cr, XPS, EELS and Auger electron spectra studies 7−93196
oxides, high T_c superconductors, Cu valence, XPS core level spectra 7−125930
Permalloy, ion implanted, mag. recording material, struct. changes *(Chinese)* 7−131402
photoelectrochemical cell, XPS characterization and photoelectrochemical behaviour of (TiVAl)O_2 film 7−86807
phthalocyanines, polymeric, ion implementation, effect on optical props., DC cond. 7−83789
PMMA films, plasma-modified, multitechnique surface spectroscopic studies 7−70040
PMMA/PMAA films, plasma modified, multitechnique surface spectroscopic studies 7−70041
polyacetylene, doped, XPS, Coulomb interaction effects 7−100017
polyacetylene, $MoCl_5$ doped, photoelectron spectroscopy 7−70981
polyacetylene, WCl_6 doping, XPS and NAA studies 7−106379
polyacetylene, WCl_6-doped, photoelectron spectroscopy 7−70980
polyaniline and substituted derivatives, electronic struct. 7−68483
polyanilines, photoelectron spectroscopy relevant to chemical and electronic struct. 7−70984
polycarbazole: BF_4^-, X-ray photoelectron spectra studies 7−77769
polyethylene surfaces, conform. signature, valence XPS, ab initio STO calcs. 7−92825
polyimide, condensation polymer, Co_3O_4 doped, elec. and spectroscopic props. 7−70308
polyimide films, Au containing, surface anal. 7−118208
polyimide surface, ion bombardment induced decomposition, XPS and direct recoil spectrometry 7−106328
polyimide-Cu(Cr) interface, struct. and chemistry, PES studies 7−144228
polyphenylenesulphide film, doped, cond. mechanism, electronic struct., XPS, IR spectra, NMR, CNDO calc. 7−70983
polypyrene: BF_4^-, X-ray photoelectron spectra studies 7−77769
polypyrrole films, electrochemical polymerisation in aqueous solutions 7−113927
polystyrene gel, induced by ion and electron bombardment, XPS study 7−93397
polythiophene film, degradation by doping-undoping cycles 7−78491
polyvinyl alcohol sizing removal from C fibres, XPS 7−78297
polyvinylidene fluoride, high energy O ion irradiation, electronic and struct. modification 7−91668
potassium benzoate, disproportionation to potassium terephthalate reaction system, ESCA, NMR, chemical anal. 7−126419
rare earth metals, core level spectra, 4f level occupancy, Coulomb interactions and hybridisation effects 7−144247
rare earth systems, XPS and XAS core level spectra, Anderson impurity model anal. 7−77686
scales growth mech. on $FeCr_{23}Al_5$, influence of Y 7−119397
Si-Si_3N_4, interface formation by catalytic nitridation, XPS study 7−126330
small metal particles, XPS relaxation and AES cross-relaxation energies 7−125932
spectral line approx., Kolmogorov agreement criterion 7−121313
spectral research, conf., Ustinov, USSR (Sept. 1985) 7−120686
steel, austenitic stainless, low energy N_2^+ ion implanted, XPS studies 7−71393
steel, austenitic stainless, oxide formation studied with XPS 7−86396
steel, austenitic stainless, SCC susceptibility rel to cathodic reduction treatment *(Japanese)* 7−78325
steel, austenitic stainless, surface studies of interaction with CsOH vapour 7−126311
steel, silane coated panels, corrosion protection 7−126293
steel, stainless, tubing in LWR primary circuit, surface anal., ESCA study 7−129185
steel, W-Cr-V, bearing, N ion implantation, wear, friction, hardness, surface struct. 7−119378
subgroup VIa transition metal carbides, nitrides and oxides, electronic props., theory and expt., review 7−112181
surface (110), angle resolved XPS, calc. 7−138610
surface (111), core level spectra, identification of core level components 7−125917
surface analysis for semicond., packaging and storage technology 7−98663

X-ray photoelectron spectra continued
surface analysis techniques and their application to materials and device characterization 7−125904
surface analytical techniques, advances and appls. 7−86732
synchrotron radiation as source for quantitative XPS 7−138596
Teflon-Cu adhesion, enhancement by presputtering prior to Cu deposition 7−119487
transition metals and compounds, localised excitations, XPS 7−125921
TTT salts with dialkyltin (IV) chloride anions, elec. resistivity 7−99023
N-vinylcarbazole, polymerization, thin film preparation and struct. charcts. 7−100548
voltage contrast XPS, spatial resolution 7−114053
Ag surface, chemisorbed O_2, evidence for superoxo and peroxo species, combined EELS-XPS study 7−125928
Ag surfaces, reaction and absorption of Cl_2, X-ray and ion radiation effects, XPS and Auger spectra studies 7−119579
Ag-Zn films, electrodeposition, annealing, corrosion in H_2S atmosphere, surface layer charactn. *(Japanese)* 7−78316
Al (100), NO adsorption, AES and XPS studies 7−105272
Al (100), surface phase transitions, ARPES study 7−144239
Al alloy lap joint, adhesive bond strength rel. to moist air exposure 7−78286
Al anodic films, composition, growth mechanism and space charge 7−113169
Al, corrosion and passivity in dil, Na_2SO_4 solns. 7−132790
Al foils, planar alumina growth, photoelectron studies 7−119449
Al:N^+, ion implanted, XPS study 7−91615
$Al_xGa_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
$Al_xGa_{1-x}As$, surface segregation, growth interface roughening 7−85952
$Al_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
AlMgSiP alloy, fracture surface, XPS, Auger electron and ion scatt. spectroscopy study 7−138591
AlN, formation by high dose N molecule ion implantation 7−76160
Al_2O_3, RF sputter deposited films, high quality artificial tunnel barriers 7−131738
Al_2O_3-Pt interface, XPS study, deposited Pt particles on α-Al_2O_3 7−100015
γ-Al_2O_3-SiO_2, surface struct., catalysis and electronic state 7−131408
Au-GaAs interface, atom distrib. profiles, polar angle depend. XPS study 7−118284
$B_xC_yN_z$, graphite-like structure, synthesis and props., ESCA studies 7−69678
BN coating films, prep. using simultaneous ion implantation and vapour deposition, characterisation 7−92033
BN, ion plated, XPS anal. 7−106377
$Ba_8Mo_{20}O_{65}(OH)_6.12H_2O$, synthesis and props. 7−69677
$Ba_2SmCu_3O_{9-x}$, high temp. supercond., electron and X-ray diffr., XPS studies 7−112597
$Ba_2YCu_3O_7$ high T_c supercond., electronic struct., XPS meas. 7−98799
$Ba_2YCu_3O_{7+y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
$Ba_2YCu_3O_{9-\delta}$, valence band photoelectron spectra studies 7−106367
$Ba_xY_{1-x}CuO_3$, high T_c supercond., electronic struct., XPS study 7−112598
$Bi_{12}GeO_{20}$, ion beam induced decomposition 7−106335
C fibre reinforced thermoplastics, adhesion at fibre/matrix, interface 7−106579
C fibres, surface chemistry, use of XPS and labelling techniques 7−86700
C fibres and epoxy resin composites, anodic fibre surface treatment, XPS obs. 7−112032
a−C:H films, inhomogeneous bonding, XPS, NMR, and nuclear resonant studies 7−92028
$C_4RbTl_{1.5}$, ternary donor graphite intercalation cpd., photoemission, electronic struct. 7−85948
$(Ca_{1-z}La_z)MnO_{2.97}$, XPS study, chemical bonding, electrical props. 7−85944
Cd-Cu, bronze, sliding contacts, electron spectroscopy of surface oxide films 7−78365
CdHgTe surface and interface defect prodn., AES and XPS studies 7−111541
$Cd_{1-x}M_xF_2$ (M=Ca,Pb,Mn) crystals, electronic structure, photoemission studies 7−105401
$Cd_{1-x}Mn_xZ$(Z=S, Se, Te) 3d partial density of states, p-d hybridisation, photoemission study 7−92834
CdS electrodes, photocorrosion, anal. by photoelectron spectra 7−71400
CdS films, sprayed, annealing, XPS obs. 7−86016
CdTe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
CdTe, thermal oxidation, kinetics and oxide composition 7−138912
CdTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe/ZnTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe-Mn(Cr)(V), Schottky barriers and interface reactions 7−131735
Ce compounds, XPS, BIS and EELS 4f-excitations, Anderson model calcs. 7−85914
Ce-transition metal alloys, CeM_2Si_2, M=Fe-Cu, Ce core level XPS spectra 7−132412
$CeAl_2$, heavy electron state, photoemission evidence 7−85946
$Ce_2Fe_{14}BH_x$, valency, hybridisation, mag. props., H induced changes 7−98947
CeO_2, mixed valence system, photoemission, photoabsorption and inverse photoemission studies 7−106372
Ce_2O_3 and CeO_2, XPS and BIS spectra 7−144234
$CeRh_3$, mixed valence system, photoemission, photoabsorption and inverse photoemission studies 7−106372
$CeRu_2H_x$, valency, hybridisation, mag. props., H induced changes 7−98947
$Ce_{0.7}Th_{0.3}$, Kondo vol. collapse and α-γ transition, XPS and BIS studies 7−77760
Co epitaxy, overlayer growth and surface segregation on GaAs, electron diffr. and photoemission meas. 7−70144
$CoGaInS_4$, Co(II) ion coordination geometry, XPS determ. 7−132410
CoNi thin films for mag. recording, corrosion resist. improvement by surface passivation 7−106667
CoO-Fe_2O_3 particle series, mag. and struct. props., effect of annealing in N_2 7−85367
CoSi, electronic struct., XPS and bremsstrahlung isochromat spectroscopy studies 7−70163
X-ray photoelectron spectra continued
CoSi-Si permeable base transistors, role of epitaxially grown silicide films 7−137747
$Co_xZn_{1-x}In_2S_4$, Co(II) ion coordination geometry, XPS determ. 7−132410
Cr, quantitative XPS study using synchrotron radiation source 7−138596
Cr/Au buried epitaxial interface, surface state-interface state evolution, XPS studies 7−85031
Cr_2O_3 surface props. studies 7−131395
Cu (001), substrate X-ray photoelectron diffr., single scatt. cluster description, rel. to Kikuchi bands 7−92826
Cu alloys, wear resistance and struct. metastability, laser treatment influence, XPS obs. 7−93109
Cu complexes, copper tetrabenzotetraazacyclohexadecine$(TCNQ)_n$, semicond. props., spectroscopic anal. 7−70298
Cu electroless coating, charactn. by XPS and SEM 7−98752
Cu films on sapphire, adhesion induced by substrate surface presputtering 7−92010
Cu Ni, solid solution, small particles, radial distrib. of elements 7−91943
Cu, single crystal, core level X-ray photoelectron spectra, quantum mechanical scattering theory calcs. 7−85939
Cu substrate with adsorbed benzaldehyde, secondary ion mass spectra and XPS studies 7−92835
Cu_2, XPS, relax. effects *(Russian)* 7−124937
Cu^{2+} cpds., oxide supported, XPES and ESR study 7−99560
Cu-Au, surface atoms, core level binding energies 7−143193
Cu-Au ordered surface, LEED, XPS, ARUPS, Auger effect and ion scatt. studies 7−98656
Cu-CuO, O incorporation into bulk Cu, evidence for electron transfer control 7−113340
Cu-Pd, surface atoms, core level binding energies 7−143193
Cu-Zn, single- and two-phase brass, sputtering, ion bombardment effects 7−138578
$Cu_xCo_{3-x}O_4$, surface composition of polycrystalline spinel obtained by thermal decomposition 7−70970
CuNi sandwich struct., X-ray photoelectron spectroscopy, Auger electron diffraction, multiple scattering 7−138606
Cu_xS topotaxially grown films on sprayed CdS films, growth mechanism 7−100127
$Cu_{50}Ti_{50}$ amorphous alloy, XPS study 7−85962
Fe (100), clean and S-modified, CO chemisorption and activation 7−98703
Fe (111), N_2 adsorption, angle resolved photoemission, microscopic model studies 7−105279
Fe (111), nitridation and oxidation, XPS and AES obs. 7−131407
Fe films, XPS studies 7−125908
Fe, ion implanted with Ti and C, surface characterisation, XPS and AES studies 7−76568
Fe surface with chemisorbed diazomethane, interaction with decomposition products, XPS study 7−100014
$Fe/La_{1.85}Sr_{0.15}CuO_4$ high T_c superconductor interface form. and reaction, XPS study 7−143243
Fe-Ni, N_2^+ ion implantation effect on corrosion in H_2SO_4 soln. 7−126296
$Fe_{82}B_{18}$ rapidly quenched amorphous ribbon, surface struct. and catalytic activity 7−84453
$Fe_{67}Co_{18}B_{14}S_1$ metallic glass, surface oxide layers, AES and XPS studies 7−143161
$Fe_{67}Co_{18}B_{14}Si_1$ metallic glass, corrosion in H_2SO_4, chloride ions effect 7−106710
$Fe_{40}Ni_{40}B_{20}$, metallic glasses, corrosion behaviour, role of B and Ni 7−86490
FeO, Fe_2O_3 and Fe_3O_4, core level XPS spectra, electron energy losses 7−113350
FeS_2, pyrite, surface oxidation 7−71332
FeSi, electronic struct., XPS and bremsstrahlung isochromat spectroscopy studies 7−70163
FeTi alloy, XPS anal. for activation for H_2 uptake 7−86836
Fe(100), adsorbed Gd films, spin- and angle-resolved photoemission study 7−125916
Ga-Sb-Se films, obliquely deposited, negative resist behaviour 7−116015
GaAlAs-GaAs heterostructures, LPE grown, quantitative anal. by XPS *(French)* 7−113342
GaAs, capless annealing at high temps., As ambient conditions preventing surface degradation 7−132831
GaAs, low press. plasma etching, surface texture, damage and contamination, XPS study 7−106721
GaAs substrates, in situ deoxidation by HCl gas, MBE appl. 7−71414
GaAs, surface As oxide formation 7−78390
GaAs-AlGaAs, etch and etch stop reactions in dichlorodifluoromethane plasma 7−119463
GaAs-Au atom profiling, use of angle-dependent photoemission 7−119106
$GaAs-In_{0.2}Ga_{0.8}As$ heterojunction interface, electronic and at. structures, XPS, AES, tunable EELS studies 7−70374
GaAs-LaB_6 interface, Schottky barrier formation, thermal stability, XPS study 7−77090
GaAs-Si heteroepitaxy, interface formation, XPS studies 7−143244
GaAs-Si_3N_4, plasma deposited encapsulation layers 7−113341
GaAs-Ti (Cr), interface movement, temperature dependent reaction 7−124732
$Ga_{0.47}In_{0.53}As$ (100), epitaxial, XPS study of chemical cleaning 7−106718
$Ga_xIn_{1-x}As$ epitaxial layers, MBE, surface and bulk comp., XPS, RHEED, X-ray diffr. 7−98735
GaP single cryst. wafer face comp., X-ray photoemission obs. 7−124652
GaP-In(Al)(Ge)(Cu)(Au), near ideal Schottky barrier formation, XPS study 7−106354
GaSb/AlSb heterojunction, valence-band discontinuity, XPS core-level spectra 7−105672
Ge positive secondary ion sputtering yield, chem. bonding effects, XPS study 7−85924
GeS_2-Tl_2S glasses, identification of non-bridging S atoms 7−111413
H_2O, core photoelectron spectrum, Stieltjes imaging appl. 7−109999
H_2O vapour, interaction with clean and O covered U surfaces 7−85958
Hf_2FeH_x, mag. and electronic props., XPS 7−100008
HfN_x films, XPS spectra, nonstoichiometry effects 7−85953
HgTe, epitaxial layers, chem. composition, effects of surface treatment 7−84460
InAs/GaSb heterojunction valence band discontinuity determ., X-ray photoemission core level spectra 7−105679
InGaAsP heterostructures, LPE grown, transition layer thickness, XPS study 7−100005

ay photoelectron spectra continued
InP (110), oxidation rate enhancement by Cs catalyst 7−113807
InP MIS devices, with thin native oxide double layer insulator films, prep. and elec. props. 7−125134
n-InP MIS structures using double-layer oxides as insulators *(French)* 7−131793
InP MIS structures with anodic double layers *(French)* 7−131794
InP, plasma-assisted sulphidation *(French)* 7−119473
InP, radiative surface states, photolum., XPS studies 7−77023
InP/AuZn system, ion implanted, contamination layer and ohmic contacts 7−84539
InSb-Au, atom profiling, use of angle-dependent photoemission 7−119106
$In_{2-x}Sn_xO_{3-y}$ ceramics, surface phenomena, XPS, UPS, high resolution EELS studies 7−112419
$In_{2-x}Sn_xO_{3-y}$, ion beam sputtered films, XPS anal. 7−106361
Ir (111), adsorption of acetylene and ethylene, high resolution EELS, XPS studies 7−86678
Ir (111), interaction of acetylene with adsorbed O 7−119578
Ir (111), interaction of ethylene with adsorbed O 7−119578
Ir (111), interaction of O, adsorption, oxidation, XPS and HREELS studies 7−105280
Ir/Si interface, silicides form., Schottky-barrier form., XPS and UPS studies 7−125076
La compounds, XPS, BIS and EELS 4f-excitations, Anderson model calcs. 7−85914
La insulating compounds 7−77694
$La_{1-x}Ce_xCoO_3$, rel. to catalytic oxidation of methane, Auger parameter in XPS 7−71547
La_2CuO_4, electron struct., ground-state props. and photoemission spectra 7−138588
LaF_3, core level spectra, many body effects 7−106371
$La_{2-x}M_xCuO_4$ (M=Sr, Ba), high T_c superconductors, photoemission 7−125249
$LaMO_3$ (M=Cr,Mn, Fe, Co, Ni, Rh), nonstoichiometric surface behavior, XPS study 7−70971
La_2O_3, core level spectra, many body effects 7−106371
LaPd, inner shell photoemission and photoabsorption spectra, many body effects 7−77694
$La_{1-x}Sr_xCoO_3$, rel. to catalytic oxidation of methane, Auger parameter in XPS 7−71547
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., X-ray photoelectron spectra study *(Russian)* 7−132404
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., passivation with Au overlayers, XPS and IPS spectra 7−138859
$(La_{1-x}Sr_x)_2CuO_{4-y}$, strongly correl. electronic states, XPS, UPS obs. 7−105446
$La_{1.8}Sr_{0.2}CuO_4$, prep., supercond. props. 7−118668
$La_{2-x}Sr_xCuO_4$, high T_c superconductor, experimental electronic struct. studies 7−106381
$La_{2-x}Sr_xCuO_{4-y}$ high T_c supercond., electron and phonon props. *(Russian)* 7−99246
MgF_2, colour centres, electronic struct. and spectroscopic props. 7−70644
MgO, sputtering, damage and nucleation 7−138575
Mn, quantitative XPS study using synchrotron radiation source 7−138596
MnO(100), thermally induced surface reconstruction 7−105217
Mo (100), interaction of B, surface chemistry, XPS and UPS study 7−144237
MoN_x films, formation by ion beam and vapour deposition method 7−92875
MoS_2-metal interface, Schottky barrier formation without Fermi-level pinning 7−138064
N_2 adsorbed on Ba-promoted Fe surfaces, combined XPS-UPS-EELS study 7−77749
Na-GaAs (110) Schottky diodes, elec. props. 7−138065
NaCl, vapour deposited on Ni (111), XPS studies 7−85955
Na_2O-SiO_2-Al_2O_3 glass, surface composition, chemical and thermal treatment 7−131406
Nb, superconducting surface, angle resolved XPS studies of oxides 7−138584
Nb surface oxides, angle resolved XPS and supercond. studies 7−113352
Nb-Al-AlO_x-Nb Josephson junction characts., fabrication process and conditions effects 7−105844
Nb-Nb_2O_5, oxide interface, serrations, protrusions, XPS study 7−138595
NbC, oxide interface, serrations, protrusions, XPS study 7−138595
NbC superconducting surface, angle resolved XPS studies of oxides 7−138584
NbN single cryst. films, surface stability, effect on superconducting props. 7−112030
NbN, sputtering, damage and nucleation 7−138575
NbN superconducting surface, angle resolved XPS studies of oxides 7−138584
NbN-$NbN_{1-x}O_x$, oxide interface, serrations, protrusions, XPS study 7−138595
NbN(C) surface oxides, angle resolved XPS and supercond. studies 7−113352
Nb_2O_5 anodic amorphous oxide films, ionic transport processes, pickup of PO_4^{3-} and F^- ions, XPS study 7−100009
Nb_3Sn superconducting surface, angle resolved XPS studies of oxides 7−138584
Ne core electron shake-up spectra, autoionizing resonances obs. 7−109842
Ni (001), X-ray photoelectron diffraction at high angular resolution 7−125910
Ni (110). N_2 chemisorpt., kinetic parameters, thermodynamic quantities and struct., multitechnique approach, review 7−70086
Ni electroless coating, charactn. by XPS and SEM 7−98752
Ni, passivation in aq. solns., surface film comp. 7−132791
Ni-Fe alloy films, XPS studies 7−125908
NiAl, transient oxidation, XPS study 7−71350
NiC, CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
$(Ni_{1-x}Fe_x)_{77}Si_{10}B_{13}$ metallic glasses, valence bands, XPS obs., many-electron effects 7−119107
NiM_2O_4 where M=Al,Cr,Ga,Fe,Mn, X-ray Ni Kβ emission, XANES, XPS and optical spectra 7−113313
NiO, CO sputtering, C^+ and O^+ beams, UPS, XPS, Auger electron spectra anal. 7−92793
NiO, electronic struct., core-level XPS 7−70974
$NiSi_2$-Si(111), evidence for Si diffusion, photoemission study 7−91901
Ni_4Si polycrystalline layers, optical props. 7−125832
$Ni_{78}Si_8B_{14}$, metallic glasses, corrosion behaviour, role of B and Ni 7−86490

X-ray photoelectron spectra continued
O, binding energy, rel. to at. charge, XPS obs. 7−141542
O c(2×2) overlayer on Ni (001), growth to saturated NiO, surface struct., X-ray photoelectron diffr. study 7−143157
Pb (100), surface phase transitions, ARPES study 7−144239
Pb-Te-Se optical recording film, oxidation resistance, comp. depend. study 7−144569
$Pb_{0.8}Sn_{0.2}Te$ laser-doped crysts., ESCA obs. of comp. of near-surface domain 7−133018
Pd, free surface impurities segregation, XPS obs. 7−106355
$PdCl_2$, electronic struct., XPS and quantum chem. investig. 7−103382
PdRh polycrystalline foil, high temp. oxidation, XPS and Raman studies 7−138590
Pd_4Si polycrystalline layers, optical props. 7−125832
Pd_3Sn, O adsorption, XPS and SIMS studies 7−138592
Pt (111) and (110), CO, ethyne and ethene adsorbate orientation, polar angle X-ray photoelectron diffr. study 7−143209
Pt, free surface impurities segregation, XPS obs. 7−106355
Pt surfaces (100), (111), and (210), adsorption of thiophene 7−85957
Pt surfaces (100), (111) and (210), adsorption of tetrahydrothiophene 7−85957
Pt:TiO_2 catalysts, high-temp. reduction, Pt-Ti alloy form. 7−71479
Pt-Re (111) thin films, adsorbed Xe photoemission, AES, XPS and work function studies 7−137760
Pt_4Si polycrystalline layers, optical props. 7−125832
$RBa_2Cu_3O_{6+x}$ (R=Y,Yb,Ce,Pr), possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
Ra, XPS 5s-5p spectra, Green's function calcs. 7−82055
Re oxides, catalysts, interaction with decomposition products of NH_4ReO_4 and silica 7−139043
Ru (001), Mn covered, adsorption of H_2, O_2 and CO simple molecules 7−143207
$Ru_{1-x}Nb_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
$Ru_{1-x}V_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
Sb_2S_3, X-ray photoelectron and diffuse reflectance spectra 7−113354
Se desorption from graphite surface, mass spectral and atomic absorpt. study 7−143219
Si (100), O adsorption and reaction, mol. beam and XPS studies 7−143195
Si (111), benzene adsorption, valence and core states, photoemission obs. 7−118248
Si (111), NH_3 adsorption, high resolution EELS study 7−124695
Si (111) and (100) surface termination by adsorbed As, X-ray angle-resolved photoemission meas. 7−125920
Si (111)$\sqrt{3}\times\sqrt{3}$-Bi, atomic structure, X-ray photoelectron diffraction 7−137713
Si MOSFET, SiO_2 gate dielectric low press. CVD, rapid thermal annealing 7−131481
Si positive secondary ion sputtering yield, chem. bonding effects, XPS study 7−85924
Si RAD ribbons, gettering effects, XPS/AES study 7−86497
Si, secondary radiation yield, effect of X-ray total external refl. 7−70973
Si surface, direct formation of dielec. thin films by low energy ion beam bombardment 7−84075
Si surface, NH_3 adsorption, a-SiN_x:H film formation 7−118273
Si wafers, thin film chem. growth processes, integrated system 7−138678
Si, X-ray multiwave diffraction, secondary radiation yield, angular depend. 7−77752
Si:B,Ge epitaxial films, dynamical X-ray diffr., photoeffect 7−77747
a-Si:H,Sn(Fe)(Pt)(Pd) films, impurity diffusion studies 7−84392
a-Si:H natural oxidation kinetics 7−126344
Si:Nd-SiO_2 interface, negative elec. effects 7−125137
Si/CaF_2 interface, bonding and struct., photoemission studies 7−105295
Si/Cr interface, silicide form. on annealing, electronic and struct. props. 7−84541
Si/Pt interface, heat treatment form., XPS investigation 7−131460
Si/SiO_x/Mo MOS VLSI, oxide form. at Mo/Si interface, contact resist. *(Japanese)* 7−78388
Si-SiO_2, oxide interface, serrations, protrusions, XPS study 7−138595
Si-SiO_2 interface microstructure, observation and electronic props. 7−131461
β-SiC (100) epitaxial layers, angle-resolved XPS at 1300 °C 7−113351
SiC, Auger spectra, first-derivative C KLL, comparison of XPS and AES 7−85905
SiC, oxidized polycrystalline surface, adsorbed hydrocarbons, angle resolved XPS 7−98634
SiC, surface and bulk valence band photoemission 7−113349
a-$Si_{1-x}C_x$:H films, XPS and ESR charactn. *(Japanese)* 7−124748
a-$SiN_{1.4}$:H/a-Si:H band offset and electronic struct., AES, XPS and IPES studies 7−92300
SiN_x amorphous layers, charact. using Auger parameter in XPS 7−85938
a-SiN_x:H bonding and electronic structs., AES, XPS and optical meas. 7−92029
Si_3N_4 plasma-enhanced CVD films in Si/SiO_2/Si_3N_4 system, ESCA/AES analysis 7−131483
Si_3N_4, reaction bonded, in-situ fractured, XPS study of grain boundary chemistry 7−70985
SiO_2, charact. using Auger parameter in XPS 7−85938
SiO_2 surfaces, Ar^+-ion etching, XPS and Auger studies 7−132780
SiO_2:As, P, impurity atomic states, XPS studies 7−137379
SiO_2/Si interface, chemical and electronic struct. 7−70099
SiO_xN_y-Si, rapid thermal annealing prep., elec. characts. 7−131792
Si(100), O_2 adsorption and SiO desorption studies 7−118266
Si(111), ion assisted etching by F, XPS study 7−119472
α-Sn-CeTe (110) interface, characterisation by angle resolved XPS 7−84546
SnO_2 films, Na^+ adsorpt. from aq. soln., film hydration and ion exchange activity determ. 7−143210
SnO_2:Sb films, doped and undoped, MOCVD and spray pyrolysis, XPS, UV photoelectron spectra 7−138612
$Sr_xLa_{2-x}CuO_{4-y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
Ta_2O_5-SiO_2-Si double layer structure, dielec. props. 7−70706
Th, XPS 5s-5p spectra, Green's function calcs. 7−82055
$ThPt_3$, valence level photoelectron spectra 7−106362
Th_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
Ti, quantitative XPS study using synchrotron radiation source 7−138596
Ti:N ion implanted, surface struct. and comp., hardness correl. 7−86421
Ti-Si (111) interface, silicide formation, Schottky barrier formation 7−84404

X-ray photoelectron spectra continued
Ti-V (24 wt.%), cyclic deform. rel. to N and B ion implantation 7−119350
TiC coatings, D ion bombardment, thermal cycling, fatigue, comp. analysis 7−84046
$TiC+H_2^+$ $(D_2^+)(He^+)$, surface chemical changes, AES, XPS and SIMS investig. 7−77724
$Ti_{62}Cu_{33}P_5$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7−144615
TiFe amorphous alloy thin films, heat treatment effects 7−95693
Ti_xFe_{100-x} thin films, H_2 storage characts. *(Japanese)* 7−71657
TiN treated Al-Si alloy, by ion implantation and dynamic mixing, struct., comp., wear props. 7−86481
$TiN+H_2^+(D_2^+)(He^+)$, surface chemical changes, AES, XPS and SIMS investig. 7−77724
TiNi-TiPd intermetallic compound system, valence band evolution and structural instability 7−84659
$Ti_{60}Ni_{36}P_4$, metallic glass, corrosion in HCl, surface comp., XPS *(Russian)* 7−144615
TiO_2 (110) surfaces, interaction with SO_2, UPS, XPS and LEED studies 7−91986
TiO_2 (110) Ti-rich surfaces, spectral, cond. and annealing studies 7−85041
TiO_2, reduction by Ar^+ bombardment, adsorption of O_2 7−91991
$TiO_2+H_2^+(D_2^+)(He^+)$, surface chemical changes, AES, XPS and SIMS investig. 7−77724
$Ti_{0.97}Ru_{0.03}O_2$ pyrolytic films on Ti, XPS studies 7−106378
U cleaned surface, high temp., XPS study 7−132413
U intermetallics, valence and core states, XPS studies 7−77758
UAu_3, valence level photoelectron spectra 7−106362
UBe_{13}, X-ray photoemission spectrum calcs. 7−70977
UBr_4, electronic struct., XPS 7−100007
$UIr_3(Pt_3)(Au_3)$, XPS spectra, single site approx. calcs. 7−77757
UO_2 spent fuel, oxidation in groundwater products 7−96219
UPt_5, valence level photoelectron spectra 7−106362
USn_3, valence level photoelectron spectra 7−106362
U_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
V_2O_5-GeO_2 glass, reduction of V^{5+} ions, XPS and AES studies 7−138586
W/Si/GaAs contacts, Schottky characts. and chemical interdiffusion, Si layer effects study 7−131734
WO_3 films, optical props., stoichiometry influence, XPS and LIMA anal. 7−138533
W(100) with Pt overlayers, N_2 chemisorption 7−131445
W(100) with strained Pt overlayers, struct. aspects 7−131446
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7−112555
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
$YBa_2Cu_{2.9}O_{9-y}$, high T_c supercond., valence fluctuations and O dimerisation from XPS 7−144245
$YBa_2Cu_3O_{6.5}$, prep., supercond. props. 7−118668
$YBa_2Cu_3O_{6.7}$, strongly correl. electronic states, XPS, UPS obs. 7−105446
$YBa_2Cu_3O_7$, electron struct., ground-state props. and photoemission spectra 7−138588
$YBa_2Cu_3O_7$, high T_c supercond., temp. depend. bond length change, XPS study 7−131088
$YBa_2Cu_3O_7$, high T_c supercond., photoemission study through supercond. transition, O dimerisation 7−132408
$YBa_2Cu_3O_{9-y}$, high T_c superconductor, photoemission studies 7−106382
$YBa_2Cu_3O_{\sim 7}$, high T_c supercond., Cu 3d level localisation, XPS study 7−138611
$(Y_{1-x}Ba_x)_3Cu_3O_{7-y}$, supercond., structural, electronic and mag. props., comp. depend. 7−99295
$YbCu_2$, valence fluctuation, Anderson model calcs., XPS and UPS meas. 7−124949
YbP, 4f XPS spectrum, Anderson model calc., spin-orbit splitting 7−77756
Yb_xSi_y, photoemission studies of mixed valence 7−85954
ZnHgTe surface and interface defect prodn., AES and XPS studies 7−111541
ZnO:Bi varistors 7−138591
ZnS, alternating current electroluminophors, $Cu_{2-x}S$ surface elemental composition 7−70038
ZnS:Tb, F electroluminescent thin films, RF magnetron sputtered, annealing effects 7−99939
ZnSe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
ZnTe/HgTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
Zr vacuum condensates, Auger spectrum, comp. and elec. resist., effect of O *(Russian)* 7−92309
Zr-Ni intermetallic alloy catalysts, XPS and AES studies 7−144235
ZrB_2 thin films, DC triode sputtering 7−106409
ZrC and ZrO_2 protective coatings, ESCA, SEM and EDAX studies 7−106704
$ZrN_{0.93}$ (100) surface, electronic struct., bulk band struct., angle resolved photoelectron spectra 7−105644
$Zr_{1-2x}Y_{2x}O_{2-x}$ (100), electron beam reduction, XPS study 7−77710

X-ray photography *see radiography*

X-ray production
see also X-ray tubes
BESSY XUV synchrotron radiation facility 7−108722
Bonn electron accelerators and synchrotron radiation laboratories 7−108724
coherent X-ray production via laser pumping of relativistic ion beam 7−82597
Daresbury Synchrotron Radiation Source 7−108723
density logging using an electron linear accelerator as the X-ray source 7−94501
flash energy subtraction technique using a thin metal filter 7−95711
Hefei National Synchrotron Radiation Laboratory, China 7−108725
industrial irradiation process, X-ray and γ-ray source comparisons 7−89310
laser plasma X-ray source, radiative characts., conversion efficiency 7−123925
laser-produced plasma generation of X-ray radiation 7−73490
laser-produced plasma X-ray sources, appls. 7−73491
miniature source, based on vac., discharge 7−67454

X-ray production continued
multiionisation and electron vacancy decay rates in proton and ^4He io impact on elements 7−74733
plasma, soft X-ray source for X-ray lithography 7−75895
point radiographic source, generation using laser pulses 7−140782
quasimonoenergetic polarised radiation, generation at medium energie 7−122275
serial-exposure type of high intensity flash X-ray generator havin variable energies 7−95712
soft flash X-ray generator for biomedical use 7−101072
spontaneous X-ray emission from laser-heated plasmas 7−73489
ultrasoft X-ray source using field emission electron gun *(Japanese* 7−134902
X-ray sources for microlithography created by laser radiation at λ=0.2 μm 7−67447
$Ca^{9+}+He(H_2)$, electron loss and excitation cross sections, X-ray pro 7−90361
Cu laser produced plasma, enhancement of keV X-ray emission by wea prepulse laser 7−111190
NaF capillary-discharge plasma, implosion for X-ray laser expt 7−91372
W, proton channelling, RBS, Coulomb excitation and X-ray pro 7−124361

X-ray protection *see radiation protection*

X-ray reflection
Ambartsumian's invariance principle, appl. to X-ray diffr. in real crystal 7−104485
behenic acid Langmuir-Blodgett films, X-ray reflectivity curves 7−84573
butyloxybenzylidene octylaniline, nematic liq. cryst., surface smectic layer ing, X-ray reflectivity meas. 7−104543
conical X-ray imaging mirror, design and development 7−97116
dynamical X-ray diffr. in crystals with randomly placed defects, Dyso and Bethe-Salpeter eqns. 7−91392
figured X-ray optics, lacquer coating technique 7−97181
grazing incidence optics, modified sine condition 7−96946
4-n-heptylphenyl-4′-(4″-nitrobenzoyloxy)benzoate, nematic-smectic phas transition, X-ray reflectivity meas. 7−76404
inhomogeneous surface, scattering in conditions of total external reflec 7−142532
layered synthetic microstructures, optimisation for broadband refl. at so X-ray, EUV wavelengths 7−121310
liquid-vapour interface struct., X-ray reflectivity and fluoresc., mod calcs. 7−91924
mirror, spherical, soft X-ray beam deflection 7−140781
multilayer formalism adaptation to temp. depend. X-ray diffr. soln. crystals 7−104490
multilayer theory 7−67441
multilayer X-ray mirrors for the wavelength interval 25-44 Å 7−103927
multilayers, temp. stability at high temps. 7−98746
octyloxycyanobiphenyl, nematic liq. cryst., surface smectic layering, X-ra reflectivity meas. 7−104543
phospholipid monolayer, density distrib. at air-water interface, X-ra reflectivity study 7−139183
short-wave X-ray spectrometer for microprobe instrument, X-ray optic 7−121312
ReW-C multilayer X-ray coatings, improved resolution 7−128728
Si, secondary radiation yield, effect of X-ray total external refl. 7−70973

X-ray scattering
see also Compton effect; X-ray diffraction
amorphous alloys phase decomposition, X-ray scattering meas., heatin apparatus 7−124040
biosystem characteristics for absorpt. and scatt. of X- and γ-ray *(Japanese)* 7−87093
butyloxybenzylidene octylaniline, nematic liq. cryst., surface smectic layer ing, X-ray reflectivity meas. 7−104543
chemical imaging with X-ray scatter system, iterative reconstructio scheme 7−145218
chromatin superstructure and condensation mechanism, X-ray soln. scat and hydrodynamic obs. 7−133202
Compton scattering of X-rays from atomic K-shell electrons 7−85892
α-crystallin proteins, colloidal dispersion struct., small angle X-ray scat study 7−114175
cubic lattice systems, 3D paracrystalline distortion factor calcs. for elasti scatt. 7−142679
cytotoxin, location in model membranes, influence on hydrocarbon lipi chain packing, SAXS study 7−106998
density-density correl. function, appl. to SAXS data 7−77685
digital radiography, scatt. estimation using convolution filtering 7−10105
drift chamber use in X-ray attenuation factors meas., in gaseous X 7−83409
evanescent absorption in kinematic surface Bragg diffraction 7−69539
glancing incidence scatt. meas. interpretation, X-ray and UV mirror tes ing appls. 7−97117
graphite, pyrolytic, optical phonon observation by X-ray scatt. 7−84148
grazing incidence optics, conf., Orlando, Florida (USA) (April 1986 7−95085
grazing incidence optics for synchrotron-radiation insertion-device beam 7−95706
grazing-incidence optics surface characterisation for use in extreme U and X-ray regions 7−95704
helical structures possessing random variable twist, X-ray scatt. 7−75918
hexa-ethyleneglycol-mono-n-dodecyl ether lyotropic liq. cryst., displace ment disorder 7−117807
4-hexyloxy-4′-cyanobiphenyl-4-octyloxy-4′-cyanobiphenyl liq. cryst., elasti consts. 7−104887
inhomogeneous surface, scattering in conditions of total external reflec 7−142532
K-shell electrons, at. positions in crystals 7−75943
linear accelerators, effect of collimator backscatt. radiation on photon out put 7−101069
lipid multilamellar aqueous suspensions, phase transitions and chain pack ing 7−114177
metals and alloys, low temperature neutron irrad., defects, diffuse X-ra scatt. studies 7−98260
methane, one electron scatt. props., ab initio SCF CI calcs. 7−103404
mirrors and multilayers, high-resolution angle-resolved X-ray scat 7−97118
myosin heads in oriented synthetic filaments, diffuse X-ray scatt. ob 7−100808

X-ray scattering continued
octyloxycyanobiphenyl, nematic liq. cryst., surface smectic layering, X-ray reflectivity meas. 7−104543
one-phonon X-ray scatt., ionic deform. effect 7−76332
particle size distribution determination from small-angle scattering data, histogram technique 7−67277
polyalcohol aqueous solns., vitreous state decomposition 7−131319
polystyrene-polybutadiene blends, conc. fluctuations, small angle X-ray scatt. anal. 7−117832
polyvinylidene fluoride, piezoelec. effect, X-ray study 7−99718
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
radiographic anti-scatt. grids, system for performance characts. meas. 7−71866
radiotherapy, accelerator beam current and scatt. prod. 7−133444
SAXS, slit-height desmearing, primitive function 7−97853
SAXS in metallic wires, glass fibres and hard elastic polypropylene *(German)* 7−137247
silica synthetic materials, porosity 7−111902
spin-resolved X-ray spectroscopy by means of X-ray resonance magnetic scattering *(Japanese)* 7−106305
ventricular wall thickening, meas. using scatt. and fluoresc. radiation 7−71851
vinylidene fluoride-trifluoroethylene copolymers, ferroelec. phase transition, struct. study 7−99763
Ag interlayers in polyimide film, sintering process and charactn., laser writing appl. 7−119187
$Ag_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
Al-Ag(Zn) dilute alloys, neutron irrad., defect distrib., X-ray scatt. studies 7−91659
Al-Zn dilute alloys, homogeneous precipitate nucleation upper limit temp. determ. 7−98456
Al_2O_3-SiO_2 gels and sols, growth processes and struct. 7−119587
Au, soft X-ray scattering from rough surfaces 7−122788
Au-Mn alloys, arrangement of Mn atoms in re-entrant spin glass 7−131098
Be, accurate electron density, one electron properties 7−129608
Be single crystal, optical phonon observation by X-ray scatt. 7−84148
Cd-As amorphous films, struct., LAXS and EXAFS studies 7−84571
Co-P amorphous alloys, structural relax. and decomp., SAXS study 7−104559
Cu-Ni-Fe, partial struct. factors, kinetic study, anomalous SAXS 7−85893
CuNiFe unmixed alloy, partial struct. factors determ. by anomalous small angle X-ray scatt. 7−117867
$Cu_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
Fe_2O_3, synchrotron radiation nuclear Bragg scatt. 7−111314
$^{57}FeBO_3$, antiferromagnetic, collective nuclear excitation, nuclear Bragg scatt. 7−119067
H_2O, electron and X-ray scatt. cross sections, CI calcs. 7−68224
$K_{0.3}MoO_3$ blue bronzes, distortion wave vector, X-ray scatt. meas. 7−111511
Li, core electron dynamic struct. factor, momentum depend. 7−131093
a-MoS_3 thin films, fundamental energy gap, optical studies 7−99955
NH_3, electron and X-ray scatt. cross sections, CI calcs. 7−68224
$Na_xV_2O_5$ bronzes, quasi-1D, polarons and bipolarons, NMR studies 7−98833
Ni, pure and dilute alloy, neutron and electron irrad., defect struct., diffuse X-ray scatt. studies 7−91656
Pb, differential coherent scattering cross-section measurements 7−74518
Pd_3V long and short range order, diffuse electron, neutron and X-ray scatt., mean-field theory anal. 7−111453
Si (220), inelastic scattering of X-rays in asymmetric Bragg diffraction 7−92779
Sn, differential coherent scattering cross-section measurements 7−74518
V_3Si single cryst., dynamic characts. temp. depend., X-ray thermal diffuse scatt. meas. 7−98360
YIG:^{57}Fe, nuclear Bragg scattering of synchrotron radiation pulses in a single-reflection geometry 7−119066

X-ray sources (astronomical)
see also X-ray astronomical observations
1354-64, Ginga X-ray nova, optical identification and obs. (1987 March) 7−80131
2A 0335+096, poor galaxy cluster, X-ray spectrum obs. 7−88651
Abell 2319, galaxy cluster, mag. field excess determ. from rot. measures and X-ray emission 7−80114
accreting compact objects, spectra assoc. with hypercritical spherical accretion 7−88093
accreting neutron stars in globular clusters, massive accretion disk form. by collision with main-sequence stars 7−145939
active galactic nuclei, cosmological evol., appl. of Kilmogorov-Smirnov test 7−72321
active galactic nuclei, line and continuum radiation from outer regions of accretion disks 7−115579
active galactic nuclei, pair prod. and Compton scatt., γ-ray and X-ray emission 7−140276
active galactic nuclei, radiation from relativistic beams interaction with interstellar gas 7−101937
active galactic nuclei, X-ray emission enhancement due to gravit. microlensing in foreground bright galaxies 7−120605
active galactic nuclei, X-ray variability and absorpt. 7−128081
active galaxies, classification and prospect of unified phenomenology 7−134311
active galaxies, SHF and UHF obs. of X-ray selected objects 7−146093
R Aqr, symbiotic Mira variable, first unambiguous X-ray detect. 7−140096
UX Ari, X-ray flaring of RS CVn star 7−140175
Astro-C potential obs. 7−115197
AWM 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
black holes, effects of electron-positron pair opacity on spherical accretion luminosity 7−120488
Bragg imaging of extended cosmic X-ray sources, objective crystal spectrometer 7−139915
burst sources, Fe spectral features form. in cooling burst spectrum 7−134274
burst sources, origin of absorpt. lines in X-ray spectra *(Japanese)* 7−140160
burst sources, role of accretion of comets by neutron stars 7−88678

X-ray sources (astronomical) continued
BY Dra-like binary companion 7−140165
3C 273, quasar, hard X-ray obs. 7−140318
3C 273, quasar, radio to X-ray continuum emission and temporal vars. 7−101949
3C 454.3, quasar, peculiar vars. in radio struct. after outburst 7−134319
3C 66A, BL Lac object, X-ray and optical brightness trends 7−101898
Cas A, SNR, IR emission rel. to X-ray emission 7−107934
Cas A, supernova remnant, consistent model calcs. for complex struct. 7−140207
Cas A, VLA resolution of compact radio knots 7−107933
ω Cen, globular cluster, X-ray and UV obs. with EXOSAT 7−140190
clusters of galaxies, cooling flows, star form. during accretion onto galaxies 7−140308
clusters of galaxies, star form. rates in cooling flows during accretion onto galaxies 7−140309
clusters of galaxies, star formation numerical modelling in cooling flows accreting onto galaxies 7−140310
clusters of galaxies, X-ray surface brightness distrib. of reson. lines *(Russian)* 7−72639
α CMa (Sirius), origin of X-ray emission *(French)* 7−120392
collapsars, neutrino-antineutrino annihilation rel. to X-ray or γ-ray burst 7−80000
FK Com, rapidly rotating variable star, coronal streamers model for X-ray and radio emission 7−88425
Coma galaxy cluster, diffuse radio emission obs. 7−140307
Coma galaxy cluster, intracluster gas heating by energetic particles 7−88636
compact X-ray sources, nonthermal first-order Compton pair cascades in soft radiation fields 7−120646
contribution to X-ray background 7−80132
Crab Nebula, 22-64 keV emission characts. 7−140229
Crab Nebula, emission line spectra of filaments rel. to chemical comp. 7−127991
Crab Nebula, lunar occultation obs. at metre and decametre wavelengths 7−134296
Crab Nebula, X-ray obs. of nebula and pulsar NP 0532 by Astron automatic station 7−140221
Crab Nebula and pulsar, high-energy gamma-ray emission anal. 7−72491
CTB 80, SNR, pulsar-like emission detect. near unresolved X-ray source 7−140141
RS CVn-like stars as optical counterparts 7−107982
Cyg A galaxy cluster, X-ray emission obs. 7−107971
Cyg X-3, EXOSAT obs. of synchrotron X-ray halo 7−134320
Cyg X-3 source, underground obs. in >200 GeV range 7−88685
Cygnus Loop, form. of fine struct. of emission filaments 7−127990
discoveries and characts. (book) 7−88759
discrete sources spectra rel. to background spectra in chronometric cosmology 7−101966
dMe-type flare stars, flare power-coronal soft X-ray power relation 7−88405
1E 0116.3−0116, X-ray bright early-type galaxy, optical and X-ray obs. 7−120599
1E 0630+178, possible Geminga counterpart, field visible and IR obs. 7−140325
1E 1751+7046, FK Com candidate nature and obs. 7−127880
early-type galaxies, props. of X-ray emitting gas from Einstein Observatory obs. 7−72606
elliptical galaxies, hot galactic flows evol. and X-ray emission 7−140273
elliptical galaxies, X-ray coronae and stellar shells form. 7−140272
EXO 020528+1454.8, dMe stars pair as optical counterpart, X-ray and visible obs. 7−128128
EXO 020528+1454.8 (=G035−027), optical variability of X-ray source 7−145988
EXO 120723−5209.8, possible neutron star (in SNR PKS 1209−52) 7−72572
EXO 165228+3930.3, new EXOSAT source at high galactic latitude 7−95050
EXOSAT source intensity power spectra data, instrumental effects removal 7−107721
extragalactic sources, var. quantification, use of min. rate of change formalism 7−140324
fast timing experiments for NASA Space Station 7−79826
G0.9+0.1, composite supernovae remnant, multifreq. radio obs. 7−101889
galactic bulge X-ray sources, review 7−115629
galaxies active nuclei, emission-line and continuum vars. rel. to connection with SS 433 phenomenon 7−140263
galaxies active nuclei, nature of central power source 7−146091
galaxies active nuclei, statistical significance of relation between X-ray luminosity and variability timescale 7−134310
galaxy clusters, implications of relativistic electron bumps stabilization 7−115616
galaxy clusters, redshifts and vel. dispersions of low-X-ray luminosity clusters 7−120623
galaxy clusters, self-similar flows theory for cooling flows evolution 7−128054
gamma-ray burst sources, quantised synchrotron radiation in strong mag. fields 7−145815
gamma-ray burst sources, X-ray emission, constraints on theoretical models 7−101957
GD 257(=Gr 289), DA white dwarf star, spectrophotometry obs. 7−101774
H1504+65, hot compact star devoid of H and He, optical, IV and X-ray obs. 7−88408
H2155−304, BL Lac object, X-ray intensity and spectral vars. obs. 7−120616
HD 155555, RS CVn star, X-ray emission obs. 7−134273
HD 192163, WR star detect. in X-rays 7−146067
HDE 283572, X-ray emission from G-type pre-main-sequence star 7−107821
HEAO-1 sources, optical identifications 7−101958
hollow H II regions, mechanism for wind energy dissipation and diffuse X-ray emission 7−94977
HR 192020, detect. in X-rays 7−146067
HZ 43, DA white dwarf, soft X-ray spectrum characts. 7−88396
BL Lac objects, optical variability of seven objects (1980 to 1986) 7−72593
BL Lac objects, X-ray intensity and spectral vars. (in H2155−304 and PKS 0548−322) 7−120616
late-type giant stars, atm. characts., EXOSAT and IUE obs. 7−79954

X-ray sources (astronomical) continued
late-type stars, comparison of coronal X-ray emission obs. by Einstein and EXOSAT 7−120385
late-type synchronized binary stars, correl. anal. of stellar activity compared with single stars 7−127964
light curve asymmetry of a relativistic accretion disk 7−107811
LMC, soft X-ray emission map at 250 eV 7−88608
long-term variation search technique 7−128127
low-luminosity extragalactic sources, contrib. to diffuse X-ray background 7−128132
M31, X-ray spectral props. of galactic bulge 7−120598
M33 X-8, central X-ray source in M33, EXOSAT obs. 7−80084
M86, elliptical galaxy, optical distortion due to star form from cooling gas 7−88637
M87, halo cooling flows 7−140274
M87, interstellar gas heating by energetic particles 7−88636
M87, X-ray emitting radiogalaxy, general characts. and content 7−101924
M87 globular cluster system, dynamics and spectral obs. 7−101912
Markarian 421, BL Lac object, simultaneous multifreq. obs. (December 1984 to January 1985) 7−128059
MKW 4, poor galaxy cluster, dynamics from galaxies red shifts and photometry 7−88646
N132D, supernova remanent in LMC, X-ray morphology 7−101887
naked T Tau stars, low-mass pre-main sequence unveiled, photometric and spectroscopic obs. 7−72428
NGC 1068, Seyfert 2 galaxy, X-ray heated wind model 7−88625
NGC 1068, Seyfert 2 galaxy, X-ray spectrum nature and origin 7−120606
NGC 2992, Seyfert galaxy, extended emission line region dynamics 7−101900
NGC 3079, active galaxy, gas outflow rel. to ram pressure stripping of companion (NGC 3073) 7−115591
NGC 4151, Seyfert galaxy, nucleus UV emission lines, predictions from duelling wind model 7−72629
NGC 4472−UGC 7636 galaxies region, interacting H I detect. 7−120610
NGC 7314, narrow emission line galaxy, obs. of dramatic X-ray vars. 7−95028
NP 0532 (Crab pulsar), X-ray emission obs. by Astron automatic station 7−140221
observations by Advanced X-ray Astrophysics Facility, conference, Houston, Texas (January 1986) 7−134337
old neutron stars in dense interstellar clouds, radiation signatures 7−88492
RS Oph, recurrent nova, X-ray obs. from tenuous remnant 7−115421
ρ Oph dark cloud, X-ray emission from thin thermal plasma 7−140247
Ophiuchus galaxy cluster, X-ray emission obs. 7−107971
II Peg, RS CVn star, IR and visible photometry 7−127961
II Peg, uvby photometry of spot cycle end-phase 7−146045
PG 1211+143, quasar, X-ray spectrum rel. to origin of X-ray-UV excess 7−115622
Pic A, obs. of X-ray optical synchrotron counterpart of western radio hot spot 7−101935
PKS 0548−322, BL Lac object, X-ray intensity and spectral vars. obs. 7−120616
PKS 0745−191 galaxy cluster, X-ray emission obs. 7−107971
PKS 1209−52, SNR, EXOSAT obs. 7−72572
PSR 1055−52, EXOSAT obs. and temp. determ. 7−127934
ζ Pup (04 If), search for coronal line emission rel. to X-ray emission 7−115390
Pup A, SNR, shock front forbidden coronal Fe lines emission, effects of inhomogeneities 7−140222
Pup A, supernova remnant, forbidden coronal Fe line images rel. to cloud evaporation and shocked cloud models 7−115551
quasars, beaming models rel. is X-ray, optical and radio props. 7−95045
quasars, high-redshift, X-ray props. from Einstein obs., and optical spectra 7−101951
quasars, imaging spectroscopy of five objects 7−72650
quasars, luminosity depend. of X-ray/IR emission ratio 7−128110
quasars, nuclei X-ray/UV emission *(Chinese)* 7−101894
quasars, X-ray light-echo model for luminous arcs in clusters 7−140306
quasars, X-ray lumin. depend. on radio and optical lumin. 7−101950
quasars, X-ray luminosity evolution rel. to cosmic X-ray background 7−88663
quasi-stellar objects, new optical catalogue 7−79850
radio galaxies, emission-line activity rel. to photoionisation models 7−107960
radio galaxies, X-ray emitting halo model rel. to source expansion and cosmological evolution 7−95038
rich clusters, virial masses and mass-light ratios 7−120627
rich clusters of galaxies, radio power and X-ray lumin. 7−146097
Seyfert 1 galaxies, nuclei X-ray/UV emission *(Chinese)* 7−101894
Seyfert 1 galaxies, single form X-ray to IR continuum modified by effects of dust 7−107951
SMC, X-ray images using Einstein IPC 7−128067
SN 1987A in LMC, predicted X-ray, UV and IR spectra 7−140121
soft X-ray photons Comptonisation in optically thin hot plasma 7−79824
solar-type dwarf stars, X-ray emission characts. 7−107827
spiral galaxies, X-ray images and spectral parameters of 13 galaxies 7−107949
stars, X-ray emission and mag. activity 7−127816
stars, X-ray selected, spectroscopic obs. 7−101956
supernova remnants, 32 GHz radio continuum obs. of plerionic remnants 7−120547
young supernova remnants, contrib. of plasma and Compton radiation to X-ray emission *(Russian)* 7−72578
supernova remnants, mass-loaded flows model rel. to struct. of remnant and local soft X-ray background 7−140245
supernova remnants, middle-aged, sheet description of optical, X-ray and radio emission 7−101888
supernova remnants, optical emission stratification obs. 7−140220
supernova remnants in LMC, model calcs. rel. to radio, IR and X-ray emission 7−72561
supernova remnants with central pulsar, evolutionary sequence determ. 7−140218
synchrotron X-ray haloes around gamma-ray sources, contrib. of high-energy X-ray fluxes 7−134320
V711 Tau, 1986 uvby light curve change, star spots 7−146044
type 1 Seyfert galaxies, continuum, thermal and non-thermal components 7−140270

X-ray sources (astronomical) continued
ER Vul, short-period RS CVn system, EXOSAT obs. of 1.5 orbital cycles 7−127972
WD 1910+047, white dwarf star (X-ray emitter), spectrophotometry obs. 7−101774
Wolf 630 system, low-energy X-ray obs. 7−127968
X0142+614, soft X-ray source, obs. of 25-min X-ray modulation 7−95051
X-ray nova at $\alpha=13^h53.0^m$, $\delta=-64.4°$, discovery by Ginga all-sky monitor (February 1987) 7−72532
III Zw 77, high-ionisation Seyfert 1 galaxy, UV and optical emission-line spectrum 7−128057

X-ray spectra
see also X-ray absorption spectra; X-ray chemical analysis; X-ray emission spectra
atoms, X-ray transitions, relativistic HF-Dirac calcs. 7−122426
coherent transition radiation, prod. meas. 7−96432
Compton scattering spectrometer for determining X-ray energy spectra 7−73486
high resolution X-ray experiments 7−90335
low-Z atoms, X-ray satellites and hypersatellites 7−90027
metal and alloy electronic structure, conf., Johnsbach, Germany (Apr. 86) 7−128195
mica mineral fracture, generation of X-ray spectra w.r.t. vacuum sparks 7−125842
nonpolynomial approximation of background in X-ray spectra 7−86713
oriented nuclei, gamma-ray, X-ray and conversion electron emission, book contrib. 7−96024
radiation physics conf., Ferrara, Italy (Sept.-Oct. 1985) 7−72703
radionuclides, γ- and X-ray spectral line intensities 7−81326
steel, austenitic stainless, strain induced martensite form., surface struct., Mossbauer spectra 7−86174
steel, high alloy, carbide inhomogeneities and X-ray characteristic radiation 7−126509
$\bar{p}p\rightarrow$pseudoscalar mesons, angular distrib. meas. w.r.t. X-ray emission 7−74789
Al coating on Ni alloys, phase inhomogeneity, X-ray spectral microanal. 7−124651
Al Li-like ions in recombining hot plasmas, soft X-ray amplification 7−91300
^{27}Al pionic atoms, strong interaction effects from coincidence meas., X-ray spectra 7−117097
$Ar^{+}+Mg$, L and K vacancy prod., multiple collision anal. 7−92804
Be recombining laser plasma emission spectra obs. for Ni-C multilayer X-ray mirror, spectral characts. meas. 7−125843
^{209}Bi, pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096
Co-Fe-Si-B submicron surface layers, diffusion, X-ray spectral microanal. 7−124584
Cu ions, XXII to XXV, spectra and energy levels 7−96588
Fe-based metallic glasses, oxidation and electronic struct., UV, X-ray and electron spectra 7−144610
Fe-Ti alloys, Ti carbonitride precipitated grain inclusions, elemental distrib. studies 7−86178
$Ga_{1-x}Al_xSb/GaSb$ epitaxial layer system, thickness and composition, X-ray microanal. 7−124758
$H_2+N^{7+}(O^{8+})(Ne^{8+})$, electron capture, projectile soft X-ray spectra obs. 7−110075
$He+N^{7+}(O^{8+})(Ne^{8+})$, electron capture, projectile soft X-ray spectra obs. 7−110075
$^{3,4}He+Ne$, radiative electron capture X-ray yields, cross sections 7−110092
$^{A}Ir(n, 2n)$, A=191, 193, X-ray spectrometry for cross section meas. 7−73757
Kr ions, XXIV-XXVII in gas puff Z-pinch 7−96587
Mg pionic atoms, strong interaction effects from coincidence meas., X-ray spectra 7−117097
Mg-Ag-Sn(In) powders, local X-ray spectral anal. 7−126507
NH_3, singly and doubly ionised, X-ray satellite spectrum, HF and MC SCF calcs. 7−116832
Na, K-shell double-ionis. cross section, electron-impact energy depend. 7−103667
NaCl, photoexcitation, Na K X-ray spectrum, DF calcs. 7−129738
NaCl(F), $NaK_\alpha L^1$ X-ray multiplet struct. study under photon excitation 7−85886
Ni, He-like, satellite spectra, wavelength and line intensities determ., obs. in TFTR 7−96593
Ni/InP interface, amorphous and crystalline ternary phase form. 7−98711
^{237}Np, muonic, X-ray spectrum meas. 7−110144
^{237}Np, muonic atom, 3d level nonradiative decay 7−117095
^{237}Np, pionic, X-ray spectrum meas. 7−110144
Pb L-shell X-ray from 225-400 keV proton impact 7−125880
Pt, $K\alpha_3/K\alpha_1$ X-ray intensity ratio meas. 7−109832
Re pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096
$Ru_{1-x}Nb_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
$Ru_{1-x}V_xO_2$ solid solutions, X-ray and X-ray electron spectra 7−92764
Si (111), Ag adsorption and desorption, RHEED-X-ray spectra studies 7−118267
^{181}Ta pionic atoms, anomalous strong interaction effects, level widths and X-ray spectra 7−117096
Tl, $K\alpha_3/K\alpha_1$ X-ray intensity ratio meas. 7−109832
U+U(Pb), time delay effects on K X-ray prod. probab. 7−121910

X-ray spectrometers
see also X-ray crystallography apparatus
automated apparatus with multiple angular scanning for study of secondary processes in X-ray diffraction in crystals 7−67451
cathode-luminescence and X-ray spectral anal., high resolution spectrometer 7−121232
charge-sensitive preamplifier with drain feedback for X-ray spectrometer 7−122317
Compton scattering spectrometer for determining X-ray energy spectra 7−73486
Compton scattering spectrometer for X-ray photon energy spectra determ., clinical X-ray tubes appl. 7−107240
crystal diffraction spectrometer, analyser crystal temp. stabilisation controller *(German)* 7−142534
curved crystal mount, variable radius 7−124039
double crystal X-ray spectrometer in dispersive setting 7−116030

X-ray spectrometers continued
duo-multichannel soft X-ray spectrometer for Tokamak plasma diagnostics 7−142509
light element analysis from Raman lines on SPARK-1 spectrometer 7−133019
multichannel portable X-ray spectrometers of type ROSA, serial firmware *(Russian)* 7−95700
phosphor detector for X-ray spectroscopy, energy resolution 7−116770
portable X-ray spectrometers, application problems *(Russian)* 7−95699
short-wave X-ray spectrometer for microprobe instrument, X-ray optics 7−121312
soft X-ray laser diagnostics, spectrometer alignment 7−73488
soft X-ray measurement in imploding plasmas using crystal spectrograph 7−80952
spectral research, conf., Ustinov, USSR (Sept. 1985) 7−120686
temperature coeff. of linear expansion determ. 7−142535
VUV spectrometer-detector system, comparison of methods for second-order detect. efficiency determ. 7−95660
wavelength-dispersive X-ray fluoresc. spectrometry review 7−95714

X-ray spectroscopy
see also appearance potential spectroscopy; X-ray crystallography; X-ray diffraction; X-ray spectra
alloys, X-ray energy dispersive spectroscopy for SEM anal. 7−78572
crystal diffraction spectrometer, analyser crystal temp. stabilisation controller *(German)* 7−142534
double crystal X-ray spectrometer in dispersive setting 7−116030
electron beam-specimen/detector geometry, effect on X-ray yields from Cu 7−140784
ester crystal dispersing elements for soft X-ray spectroscopy, growth technique and 2d spacings meas. 7−144256
high resolution synchrotron excited soft X-ray core level spectroscopy at NSLS 7−95698
hybrid preamplifier, ultralow noise, low power 7−67443
interfaces, valence electron distrib., struct., electron induced X-ray emission spectroscopy 7−70946
ion-induced X-ray studies with a high luminosity von Hamos crystal spectrometer 7−92805
laser plasma, X-ray emission spectra, atomic number depend. 7−104434
laser plasmas, X-ray emission spectra study 7−103424
metallic complex surface geometry objects, local X-ray spectral anal. 7−126506
microstrip detectors in wavelength dispersive X-ray spectroscopy *(German)* 7−121311
minerals, X-ray spectral microanal., quantometric method 7−126504
multilayer structures, conc. profiles, quantitative X-ray spectral microanal. 7−126503
optical coatings, non-optical characterisation techniques 7−123161
phosphor detector for X-ray spectroscopy, energy resolution 7−116770
photoacoustics for material inhomogeneities imaging 7−121317
soft X-ray spectrum meas. using X-ray diode array 7−91370
solid surface anal., X-ray anal. using accelerated ions *(Japanese)* 7−100645
spectral microanalysis, automated quantitative stereometric anal. programs 7−126512
spectral microanalysis, intensity distrib. curve, fluctuation smoothing 7−126513
spectral research, conf., Ustinov, USSR (Sept. 1985) 7−120686
spin-resolved X-ray spectroscopy by means of X-ray resonance magnetic scattering *(Japanese)* 7−106305
substrate-under-film transition layers in heterostructures, high-depth-resolution spectroscopy 7−102572
thin films, thickness measurement by substrate-to-film X-ray peak intensity ratioing 7−80741
XUV spectroscopy, coherent high-resolution 7−89278
Al-Cr quasicrystal film form., RF sputtering, investig. 7−137762
CdTe detectors, appl. in ophthalmological radiology for X-ray spectrometry, dose reduction and image optimization 7−145269
Cl compounds, Kα X-ray spectra, chemical effects study 7−129739
Na, reactor coolant, γ-, X-ray spectroscopy, REM anal., nuclidic abundance determ. *(German)* 7−129202
Na samples, radioactive, morphology and elemental composition determ., SEM, X-ray spectroscopy *(German)* 7−133020
Pt minerals, composition, X-ray spectral microanal. 7−126510
Pu assay experience using portable K-edge densitometer 7−103143
Pu isotopic ratio and abundances by X-ray and γ-ray spectrometry assay 7−103142

X-ray transport *see photon transport theory*

X-ray tubes
biomedical tubes, noninvasive current meas. techniques comparison 7−101067
compact X-ray generator for the bench test of a resistive plastic tube position detector 7−80953
Electronika microfocus X-ray apparatus for mammary glands exam., performance 7−87162
flash energy subtraction technique using a thin metal filter 7−95711
mammography, X-ray spectra and image quality 7−87160
quality criteria for modern X-ray tube assemblies as reflection of equipment standards 7−87157
serial-exposure type of high intensity flash X-ray generator having variable energies 7−95712
soft flash X-ray generator for biomedical use 7−101072
Rh, X-ray tube parameters, effect on light element anal. 7−67442
Sc, X-ray tube parameters, effect on light element anal. 7−67442

X-rays
see also cosmic ray X-rays; photons
conference on 90 yrs of X-rays, London, England (Nov. 1985) 7−108014
Rontgen's discovery−how and why it happened 7−108127

X xi calculations *see Xalpha calculations*

X-Y model
1D, continuous-symmetry ferromagnets with random anisotropy 7−125289
1D antiferromagnet, correlation length temp. depend. in open 1/2 alternating Heisenberg XY model 7−99389
2D easy-plane ferromagnets, vortex signatures in dynamic struct. factors 7−118763
anisotropic xy chain in longitudinal mag. field, perturbed sine-Gordon model 7−138183
antiferromagnet, triangular lattice, quantum spin models, zero-temp. props. 7−92432
antiferromagnetic quantum XY model on triangular lattice, renormalisation group approach 7−99483

X-Y model continued
antiferromagnets, random mixture with magnetic easy plane, role of mixed couplings 7−77335
classical 2D dynamics, numerical simulation 7−115924
classical simple magnets, zero field muon spin relax. 7−85512
continuous Heisenberg XYZ model with one ion anisotropy, generalized coherent states 7−73267
ferromagnetic system with competing Ising and XY anisotropies, phase diagram calcs. 7−132044
fully frustrated, domain wall induced X-Y disorder 7−92435
granular superconductors and spin glasses, analogies 7−131899
graphite intercalation compounds, 2D XY Kosterlitz-Thouless transition 7−143795
integrability of a classical *XY* chain 7−70577
Josephson junctions, glassy phase, model, frustrated XY model on square lattice 7−112693
Josephson junctions, random XY system, correlation fn. 7−85198
long range chiral order on triangular lattice 7−77195
Monte Carlo and coarse graining renormalisation studies 7−67246
multi-parameter variational calcs. 7−95726
one-dimensional spin=1/2 alternating antiferromagnetic Heisenberg-XY model, correl. function calc. 7−85230
planar spin systems, 2D uniformly frustrated, transitions 7−143822
polyacetylene, statistical mechanical model, existence and uniqueness of Gibbs states 7−73181
quantum systems, Monte Carlo calcs. 7−138260
random-exchange and random-field *xy* chain for $s=1/2$ 7−125288
randomly diluted *xy* and resistor networks near the percolation threshold 7−95501
spin van der Waals Hamiltonians with quartic exchange interactions, static props. 7−70570
strings, commensurate and incommensurate vortices 7−112808
thermodynamic quantities, decoupled cell Monte Carlo method 7−77340
two-dimensional, boundary correlation function 7−89148
ScDy spin glass, AC suscept., freq. depend. 7−105927
YTb_3, XY spin glass, rotation of anisotropy direction 7−112813

Xalpha calculations
alkaline earth fluorides, F-centres, optical absorption energies and hyperfine interactions 7−99892
alkaline earth oxides, cryst. cluster SCF-X_α-RW method calcs. 7−143344
atom and molecules, correlation and exchange energy 7−74457
benzene, valence shells, photoelectron dynamics 7−103575
d-metal compounds, electronic structs., rel. to ideal crysts., defects and impurities 7−143319
dimetal tetraformates, metal-metal multiple bonds, Xα-SW MO calcs. 7−89957
halogens and interhalogens, excited states, nuc. quadrupole coupling, SCF-MS-Xα study 7−81974
Hellman-Feynman theorem, generalised 7−89956
hydrocarbons, gas phase and chemisorbed, K-shell excitation spectra, C−H resonance identification 7−138545
M_2L_6 cpds., with $6^2\pi^4$ config. triple bonds, electronic absorpt. spectra 7−90100
metal oxides, vacancy and defect structs., local density theory anal. 7−131142
molecular muffin-tin pot. and electron density, Xα-scatt. wave calcs. 7−109764
molecule, electron scatt., shape reson., S matrix poles, multiple scatt. Xα calcs. 7−103391
multiply charged ions. ionis. energies, Xα calcs. 7−141460
NMR chemical shifts, calculation methods, review 7−112984
nonmuffin-tin corrections of the SCF X_α-SW method 7−131523
organometallic cpds., bond energies, HFS MO calcs. 7−96540
sulphonyl radicals, optical absorpt. spectra, meas. and calcs. 7−135953
tetramethylsilane, Si L edges resonances, gas phase UV photoabsorpt. spectra 7−116982
transition metal carbonyls, temporary anion states studied by electron transmission spectroscopy and Xalpha calcs. 7−141459
transition metal complexes, bond energies, HFS MO calcs. 7−96540
Xα continuous program for calculating continuous solutions to Xα equations by the scattered-wave method 7−68213
$[Fe(CN)_6]^{3-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
$[Fe(CN)_6]^{4-}$, electronic struct., X-ray and photoelectron spectra, SCF XαSW calcs. 7−109763
Al clusters, 1s core-level binding energy shifts, Xα calcs. 7−74799
Al-Fe dilute alloy, Fe-vacancy pair, charge density distrib. 7−91632
CO, Auger transition, discrete variational X_α calcs. 7−74442
CO, relativistic MO calcs. 7−109761
CO^+, semiempirical pot. curves, MS-Xα theory 7−81973
CdTe:Cu, Ag, Au, impurity and cation vacancy electronic struct. 7−98873
Cl compounds, *K*α X-ray emission spectra chemical effects, SCC-DV-Xα MO calcs. 7−129593
CoO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
CsCl, XANES analysis, multiple scattering study 7−138550
Fe complexes, $[Fe(MoS_4)Cl_2]^{2-}$, electronic struct.-SCF-Xα scatt. wave calcs. 7−129594
Fe oxides and silicates, charge transfer transitions 7−131604
Fe oxides and silicates, mixed valence, charge transfer and electron delocalisation 7−131603
$GeCl_3$ radicals, geometry and electronic props., ab initio UHF and SW Xα calcs. 7−89955
GeH_3, geometry and electronic struct., UHF and SW Xα calcs. 7−81972
$H_6Si_2O_7$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
InP:Yb, substitutional impurity electronic states 7−98876
KCl, XANES analysis, multiple scattering study 7−138550
La-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
$La_{0.7}A'_{0.3}MnO$ (where A'=Sr, Ba, Ca), perovskite type catalysts, MS-Xalpha and CNDO calcs. 7−93374
$(La_{1-x}Sr_x)_2CuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
MgO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
Mo, ion bombardment, emission spectra of Mo_2 and MoO complexes 7−92813
N_2^+ semiempirical pot. curves, MS-Xα theory 7−81973
NaCl:Ag, electronic struct of $(Ag^+)_2$ pairs, MSX_α calcs. 7−76816

Xalpha calculations continued
NbC_x, electronic struct., influence of vacancies, local atomic displacements 7−76733
$Ni(CO)_4$, photolytic reaction, linear combination of GTO-Xα method 7−93354
Pd_nC clusters, bonding mechanism., Xα calcs. *(German)* 7−68502
SF_6, inner valence levels, photoionisation partial cross section and asymmetry parameters 7−74715
Si (111) and (100), chemisorption of Ni, cluster model and DV-Xα calcs. *(Chinese)* 7−105243
Si:C, O, impurity related deep level complexes, Xα cluster model calc. 7−98904
Si:Fe, B, shallow acceptor impurity pairs, Xalpha calculations 7−98874
$SiCl_3$ radicals, geometry and electronic props., ab initio UHF and SW Xα calcs. 7−89955
$SiCl_4$, Si L edges resonances, gas phase UV photoabsorpt. spectra 7−116982
SiH_3, electronic struct., UHF and SW Xα calcs. 7−81972
$Si_2O_7^{6-}$, clusters, electronic struct., SCF Xα-scattered wave calcs. 7−103392
SnH_4, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
SnX_4 (X=F, Cl, Br, I), Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
$SrCl_2$, XANES analysis, multiple scattering study 7−138550
SrO, electronic struct., crystalline-cluster method, SCF-Xα-SW calcs. 7−112176
$Ta_2Cl_6(NH_3)_4$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
$Ta_2Cl_6(NH_3)_4^-$, electronic struct. and absorpt. spectra, relativistic MS Xα calcs. 7−122356
tetramethyl tin, Mossbauer isomer shift calibration, pseudopot. and α SW calcs. 7−109762
UO, relativistic MO calcs. 7−109761
WF_6, ionisation energies, UPS study 7−136006
Y-Ba-Cu-O high T_c superconductor, electronic struct. 7−118344
$Y_{2-x}Sr_xCuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
ZnS(Se):Cu, Ag, Au, impurity and cation vacancy electronic struct. 7−98873

XANES
arachidate chains on Langmuir-Blodgett monolayers on Si (111), orientation 7−143216
diamond, XANES spectra, multiple scatt. approach 7−99978
formate species on Cu (110), struct. and electronic energy levels study 7−105651
hydrocarbons, gas phase and chemisorbed, K-shell excitation spectra, C−H resonance identification 7−138545
metallic glasses, local atomic coordinations, EXAFS, XANES 7−83762
minerals and mols., quantum mechanical studies of Si−O and Si−F bonds 7−131085
myoglobin, ligand bonding geometry, distal histidine role, XANES method meas. 7−78747
organic mols. and mol. chains bonded to surfaces, NEXAFS studies, review 7−144173
polyacetylene, I or Br doped, polarised X-ray absorption spectra 7−70941
polyacetylene, IBr or ICl doped, local-structure determ. by X-ray absorption spectroscopy 7−69627
rare earth compounds, mixed electronic states, mag. moments, XANES study 7−144180
transition metal monoxides, point defect agglomeration, XANES studies 7−137365
transition metal-metalloid glasses, XANES and EXAFS study 7−77697
variable valency compounds X-ray absorption spectra theory 7−77687
Xα continuous program for calculating continuous solutions to Xα equations by the scattered-wave method 7−68213
$Ba_2YCu_3O_{7+y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
CsCl, XANES analysis, multiple scattering study 7−138550
Cu-Zr, metallic glass, atomic arrangements, XANES study 7−142611
$Cu^{1+}Fe^{3+}S_2^{2-}$, X-ray absorption spectroscopic studies 7−138547
$FeW_{1-x}Nb_xO_4$, Fe valence fluctuation, XANES study 7−98950
GeO_2-SiO_2 glasses, struct. determ by XANES, EXAFS and WAXS 7−83712
KCl, XANES analysis, multiple scattering study 7−138550
$(La_{1-x}M_x)_2CuO_4$ (M=Sr, Ba) high T_c supercond., valence determ., XANES studies 7−98949
$(La_{1-x}Sr_x)_2CuO_{4-y}$ high T_c supercond., X-ray absorpt. spectra anal. 7−99972
Mn ionic solutions, local order at Mn site, XANES studies 7−83646
NiM_2O_4 where M=Al,Cr,Ga,Fe,Mn, X-ray Ni Kβ emission, XANES, XPS and optical spectra 7−113313
NiO, growth in electrolyte cells, structural depend., XANES and EXAFS spectra anal. 7−68341
NiO, mixed electronic states, mag. moments, XANES study 7−144180
NiX_2, X=F,Cl,Br,I, mixed electronic states, mag. moments, XANES study 7−144180
O_2 chemisorbed on Ag(110) and Pt(111), bond length and orientation, near-edge EXAFS study 7−112081
Se-Te, semiconductor glasses, XANES and EXAFS study, short range disordering 7−143324
Se-Te glasses, XANES study at Se K-absorpt. edge, metal-semiconductor transition 7−144175
Si (111) (7×7), complex alcohol and carboxylic acid adsorbates, NEXAFS study 7−106308
SiGe, amorphous films, struct. study by EXAFS 7−125848
$SrCl_2$, XANES analysis, multiple scattering study 7−138550
$Sr_xLa_{2-x}CuO_{4-y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
Te-Ge, semiconductor glasses, XANES and EXAFS study, short range disordering 7−143324
$(Ti,V)O_2$ rutile solid solns., XANES, of Ti and V 7−70939
Ti in minerals, XANES, effects of Ti bonding distances, Ti valence, and site geometry 7−119068
W (100)-5×1-C, CO adsorpt. struct. and bonding, EELS, XANES 7−137694
WO_3/Al_2O_3 supported system, XANES and Raman obs. 7−132375
Y-Ba-Cu-O high T_c supercond., local struct. and Cu valence, O vacancy effects 7−117901
Y-Ba-Cu-O high T_c supercond., $L_{2,3}$ XANES studies 7−125855

XANES continued
Y-Ba-Cu-O high T_c supercond., atomic local coordination and multivalent states 7−137336
$YBa_2Cu_3O_{\sim 7}$, high-T_c superconductor, delocalised Cu states, XANES study 7−125256
$Y_1Ba_2Cu_3O_7$ high T_c superconductor, valence electronic struct. study 7−143341

xenon
see also nuclei with .....
above-threshold ionization with elliptically polarized light 7−122479
adsorbed on Cu_xNi_{1-x} (110), photoemission study of Cu surface segregation 7−92836
adsorbed on zeolites, ^{129}Xe NMR, relationship between chemical shift and void space 7−98673
adsorption on Ag (110) low and high work function metals 7−131419
adsorption on Pd, face-specific effects 7−124697
afterglow, pot. drop, electron energy distrib. 7−69495
atom, above threshold ionisation, photoelectron ang. distrib. 7−103450
atom, above-threshold ionisation with subpicosecond laser pulses, shifts and broadenings 7−135897
atom, Ager electron spin polarisation 7−68267
atom, dipole excitations, photon absorpt. cross section meas. 7−109848
atom, electron beam pumped, band emission obs. 7−129631
atom, electron scatt., elastic and momentum transfer cross sections 7−136062
atom, fifth harmonic prod. and photon reson., multiphoton ionisation spectra 7−122477
atom, inner-shell photoionisation, post-collision interaction, quantum calcs. 7−90055
atom, Lande g factors, laser-RF double reson. 7−74549
atom, metastable states, inelastic collisions study 7−82329
atom, monoenergetic electron impact, high resol. photon yield 7−129872
atom, multiphoton ionisation, screening effects, RPA anal. 7−103442
atom, multiphoton multielectron ionisation, many-electron dynamics 7−96629
atom, multiphoton multiple ionisation, laser 7−141547
atom, multiple charged ion creation by intense laser 7−96631
atom, photoionisation cross section calcs. 7−122466
atom, resonantly enhanced multiphoton ionisation photoelectron ang. distrib. 7−96624
atom, slow electron elastic scatt., quasirelativistic calcs. 7−122381
atom, structural phases, VUV photoemission study 7−122615
atom, three-photon excitation, autoionisation, fine struct., photoelectron spectra 7−90274
atom, three-photon excitation and multiphoton ionis., reson. self-broadening lines meas. 7−116911
atom, trace amounts detect., reson. ionisation-TOF mass spectra anal. 7−93452
atomic electric dipole moment, HF approx. calcs. 7−122382
atomic polarisability calc. using variation-perturbation approach with CI formalism 7−122373
atoms, above-threshold ionis. processes 7−103449
atoms, Coulomb and exchange terms in interatomic pots. 7−129833
atoms, harmonic prod., UPS and fluoresc., high electric field strength effects 7−135875
atoms, nonreson. multiphoton ionis., electron correl. effects 7−135899
atoms, photoabsorption spectra of 3D-electrons 7−82031
atoms, photon-excited Coster-Kronig decay, vanishing post-collision interaction 7−90034
autoionising Rydberg series, spectral line shapes 7−96611
binding to myoglobin, free energy, mol. dynamics simulation 7−133195
bubbles in Si and Al matrices, press., lattice parameters and solid-fluid phase transforms. 7−84018
cation, ion cloud stored in RF trap, time-of-flight investig. 7−122737
clusters, quantum mechanical model 7−103352
compressed Xe gamma spectrometers, energy resolution 7−108728
concentration in LWR high burnup fuel, XFA and electron probe microanalysis 7−116573
crystals, pure and doped, two-photon absorpt. coeff. power depend. studies 7−77491
crystals, screw dislocation config., simulation 7−83955
CW arcs, electrical characts., moderate current 7−97831
desorption rate from Ag (111), lateral interactions, image theory 7−84509
desorption rate from W (111) and (110) surfaces, lateral interactions, image theory 7−84509
diffuse and contracted discharges, plasma decay rate 7−69496
electronic excitation, effective local pots., many-body theory 7−74728
equation of state, high press. behaviour anal. 7−84177
ethene-Xe, liq., excess enthalpies, at 162.9 K 7−76440
first ion, free-free transitions Gaunt factors, scaled Thomas Fermi calcs. 7−129596
flash tubes, controlled intensification of output 7−121262
flashlamps, pot. ocular hazards 7−139313
fluids, depolarised light scatt. and neutron scatt. spectra 7−110127
gas, excess electron mobility, path integral Monte Carlo study 7−97690
gas, laser-induced breakdown, spherical particles effect 7−69302
gas, solubility in methanol-$d_0(d_3)(d_1)(d_4)$-$H_2O(D_2O)$, solubility, isotope effects 7−111159
high press. eqn. of state, interatomic pots. 7−69855
hyperthermal scattering from GaAs (110), Ag (100) and Ge (100) surfaces 7−138580
hyperthermal scattering from GaAs (110), stochastic classical trajectory simulations 7−138568
incommensurate layers on Pt (III), struct., symm., and rotational epitaxy, high resolution He diffr. study 7−105258
incommensurate overlayers on Cu (110), LEED studies 7−143198
ion laser, pulsed design, operating characts. 7−96976
laser, IR, efficiency, influence of SF_6 admixtures 7−130057
lasing by electron beam pumping 7−96975
liquid, electron-ion recombination 7−124075
liquid, excluded vol., temp. depend., PVT obs. 7−69854
liquid, excluded vol. and effective mol. vol. relationship 7−97881
liquid-isothermal compressibility, pair pot., direct correl. function 7−76259
mass spectra meas., resolution study of isotope separator 7−134817
microgravity physical vapour transport expt., vacuum outgassing and gas phase thermal conduction 7−138664
molecule, photoelectron spectra obtained by resonantly enhanced multiphoton ionisation 7−110000

xenon continued
monolayer on Pt (111), symmetry breaking commensurate-incommensurate transition 7−91995
monolayers adsorbed on graphite, phase diagrams 7−105284
one-dimensional gasdynamic flow, polymer foil slowing dynamics, mass determ. *(Polish)* 7−136928
photographic flashes, evaluation using ocular exposure thresholds 7−139314
physisorbed multilayers, valence levels, ionization energies 7−112424
physisorbed on Au, Al and Cu (111) surfaces, inverse photoemission, final state screening obs. 7−144151
physisorbed on Pt(111), less than monolayer coverage, molecular dynamics study 7−91998
physisorption on Ru-Cu-surface, photoemission obs. 7−100010
plasma, ionisationally unstable, MHD braking, discontinuity appearance 7−69331
reactor fuel defect characterization using radioisotope detection 7−141153
Rydberg atoms, time domain effects, UV spectrosc. 7−141538
solid, second- and third-order elastic consts., temp. depend. 7−111735
supercritical, solvent props. solute UV spectral line shift obs. 7−103411
superheated liq., nucleation kinetics 7−137507
surface, electron stimulated O^- desorption, enhancement by coherent scatt. 7−138564
surface (111), valence and conduction bands, spin-polarised photoemission studies 7−118549
thin film, low energy electron transmission and reflection, Monte Carlo simulations 7−142857
time projection chamber, design and construction 7−135741
VUV radiation production by multiphoton processes 7−90702
X-ray attenuation factors meas., using drift chamber 7−83409
XUV coherent source, frequency tripling into 720-1025 Å region 7−141940
atom, photoionisation, post-collision interaction, photoelectron spectra calc. *(Swedish)* 7−122469
Cs-Xe, for using diffuse struct., half collision anal. 7−141565
Cu:Xe impurity bubble evolution, TEM study *(French)* 7−131137
GaAs:Xe, as-implanted lattice sites of dopants 7−98222
GaAs:Xe^+, ion-implanted, study by multiple angles of incidence ellipsometry 7−83983
GaP:Xe, as-implanted lattice sites of dopants 7−98222
H_2-Xe, mixtures, diffusion coeffs. and thermal diffusion factors meas. 7−84337
He-Xe gas lasers pumped by optical breakdown, inversion mechanisms 7−117180
He-Xe gas mixture, discharge plasma, laser-induced fluoresc. study 7−97830
He-Xe mixtures, Rayleigh Brillouin spectra, hydrodynamic description 7−77601
He-Xe-HCl mixture, X-ray induced self-sustaining volume discharge, large interelectrode spacing 7−75907
He-Xe-HCl self-sustaining volume discharges, XeCl exciplex form. *(Polish)* 7−137142
N_2-Xe Lorentzian mixture, diffusion coeffs. temp. depend. meas. 7−83395
Na-Xe arcs, Na D line collisional broadening 7−135882
Pd-Xe thin films, texture studies using synchrotron radiation and energy dispersive diffr. 7−92014
SF_6-Xe mixture, vibr. relax. rate, time-resolved IR multiphoton absorpt. spectra anal. 7−74599
Si:Xe, as-implanted lattice sites of dopants 7−98222
Si:Xe, implanted, photoluminesc. defects, uniaxial stress study 7−99932
Si:Xe, impurity bubbles press., lattice parameters and solid-fluid phase transforms. 7−84018
Xe + chlorotrifluoromethane (dichlorodifluoromethane) chlorodifluoromethane, rate const., use of vibr. energy to control prod. distrib. 7−113877
Xe and Xe^+, electron-impact ionisation, giant reson. effects 7−82371
Xe clusters, electron impact, multiphoton ionisation studies 7−96901
Xe I electroionization lasers based on electronic transitions 7−130056
Xe I metastable state excitation by electron impact, cross sections 7−122722
Xe III, short-wavelength fluoresc., time-resolved meas. 7−141519
Xe III Auger laser at 108.9 nm, low-energy pumping 7−103797
Xe LXIII, linear Z-pinch, multiply charged ion source in $\lambda<0.1$ nm region 7−130922
Xe VII and VIII, reson. transitions, oscillator strength meas. 7−96604
Xe^+, electron impact double ionis. cross section calc. 7−110110
Xe^+ ion impact on LiF surface, recoiled particles, time of flight spectra 7−70956
Xe^{2+}, multielectron effects in ultrasoft X-ray emission spectra 7−82032
Xe:Cl, impurity centers, cooperative optical transitions 7−117940
Xe-CO_2 7−109618
Xe-Cs mixtures, stimulated emission of UV radiation efficiency 7−136277
Xe-ethane gas mixtures, Monte Carlo calcs. of electron transport 7−109618
Xe-filled ionisation chamber for emergency stack gas monitors, reactor accident appls. *(Japanese)* 7−135495
Xe-He gas scintillator for low energy isotope imaging 7−74342
Xe-Kr monolayer system on Ag (110), conduction band structure, unoccupied electron levels, inverse photoemission investig. 7−131728
Xe-methane, absolute integral cross section meas. 7−141657
Xe-methane 7−109618
Xe-NO_2 monolayer system, adsorption on Ag (111), ferromag. order 7−132091
Xe-Na mixtures, radiation trapping, line broadening, fluoresc. obs. 7−82034
Xe-Na quasimolecules, spin exchange, efficiencies of various buffer gases 7−68381
Xe+Al_n^+, collision-induced dissoc., fragmentation patterns, bond energies and structs. 7−129917
Xe+Ar^+(Ar_2^+), thermal energy charge transfer reactions, rates 7−86590
Xe+Ar^{8+}, electron capture, electron spectra anal. 7−90403
Xe+C^{4+}(C^{5+}), electron capture, K and L Auger electron spectra 7−122694
Xe+C^{5+}, electron capture induced K-LL Auger transitions, post-collision line broadening 7−110073
Xe+H^-(D^-), electron detachment, electron energy spectra 7−136049
Xe+H^+, collision dynamics, low collision energies, crossed beam experiment 7−129836
Xe+H^+, elastic and charge transfer differential cross sections 7−103617
Xe+H^+, Lyman-α emission, absolute cross section meas. 7−103623
Xe+He, chemi-ionis., cross section meas. 7−122667
xenon continued
Xe+HgBr, V-T relax., fluoresc. obs. 7−103629
Xe+iodomethane(bromomethane)(chloromethane), opacity and excitation fns. 7−117044
Xe+Kr, energetic collisions, continuous electron spectra, collisional broadening 7−129858
Xe+methane scatt., absolute integral cross sections meas. 7−90322
Xe+Methylamine(methanol)(H_2O_2)(N_2H_4), electronic-to-electronic energy transfer 7−119504
Xe+N_2, rot. energy transfer cross sections, close-coupled quantum scatt. calcs. 7−136040
Xe+N_2O(SCO)(SeCO)(SCNH), chemiluminescent reactions, vibr. pop. distrib. and spectroscopic parameters meas. 7−113939
Xe+N^{7+}, electron capture, differential cross sections, TOFS anal. 7−90396
Xe+Na, van der Waals mol. form., parameter values 7−100539
Xe+Sr, electronic energy transfer, state-specific orbital alignment effects 7−117058
Xe+Sr, three-body collisional transfer between at. levels 7−129845
Xe+Xe collisions, L-shell vacancy prod., adiabatic coupled-channel calcs., X-ray spectra 7−116902
Xe^{q+}+inert gas atoms, electron capture, mass spectra anal. 7−136052
Xe^{q+}+Ne(Ar)(Xe), electron capture, energy gain spectroscopy 7−117065
Xe^{q+}+Xe(Ne)(Ar), charge transfer, translational energy gain spectra anal. 7−90395
^{127}Xe, activity meas. using 4π-γ detector 7−135776
^{129}Xe, nuclear spin relaxation determ. in ^{87}Rb collisions 7−96822
Xe_2^* electron impact excitation, luminesc., inert gas additive effects 7−111158
Xe_2^* excimer fluorescence from charged particle excitation, sensitivity anal. 7−69306
Xe_2m repulsive interaction pot., extended SCF calcs. 7−109754

xenon compounds
$XeF_6.AgF_3$, solid, synthesis and vibr. spectrum 7−106185
XeF laser, efficiency improvement by injection enhancement 7−136279
XeF laser performance studies 7−122933
Xe-Kr cryocryst. solid solns., exciton-induced diffusion, luminesc. intensity distrib. obs. *(Russian)* 7−76482
XeCl amplifier, ps UV pulse amplification rel. to vibr.-rot. struct. 7−122927
XeCl, bandwidth limited amplification of 220 fs pulses 7−103803
XeCl, bandwidth limited amplification of 220 fs pulses, temporal and spectral behaviour 7−103804
XeCl capacitor-transfer-type discharge pumped lasers, high-efficiency operational conditions 7−122939
XeCl discharge laser, C(3/2) state 7−103801
XeCl discharge laser, high-power, with large active volume 7−96980
XeCl discharge lasers, gain and absorption at high gas pressures 7−74911
XeCl excimer laser, excited by high press. discharge, stability *(Chinese)* 7−117181
XeCl excimer laser, phototriggering using UV or X-rays 7−141845
XeCl excimer laser, pulse-periodic, electrode effects 7−96984
XeCl excimer laser, X-ray pre-ionised, low inductance capacitor bank excitation circuit 7−68691
XeCl excimer laser pumped by an intense relativistic microwave source *(Swedish)* 7−136282
XeCl excimer laser with delayed double preionisation, output characts. 7−130065
XeCl excimer laser with automatic preionization *(Chinese)* 7−130154
XeCl excimer laser. lifetime studies 7−122938
XeCl exciplex form. in He-Xe-HCl self-sustaining volume discharges *(Polish)* 7−137142
XeCl ionisation laser, electron-beam-pumped 7−82539
XeCl laser, 160 fs pulse generation at 308 nm 7−122926
XeCl laser, electric-discharge plasma 7−90589
XeCl laser, electron beam pumped, long pulse, performance 7−122935
XeCl laser, high pressure X-ray preionisation study 7−68614
XeCl laser, long optical pulse, damage meas. of fused silica fibres 7−136386
XeCl laser, radiation conversion is H_2 and methane 7−129724
XeCl laser, stimulated emission spectrum 7−90591
XeCl laser, X-ray preionised discharge-pumped, current rise-time limitation 7−136276
XeCl laser ablation of polymers and biological tissue, optical pulse duration, photoacoustic spectra study 7−113964
XeCl laser radiation, tunable VUV generation by anti-Stokes stimulated Raman conversion 7−123099
XeCl lasers, long pulse narrowband at 308.2 nm, operation 7−122934
XeCl lasers, pulsed electron beam excited, inversion disappearance 7−74913
XeCl longitudinal discharge excimer laser, automatic UV preionisation 7−90634
XeCl microwave discharge waveguide laser 7−68693
XeCl self-filtering unstable resonator, approx. anal. model and expt. 7−68715
$XeCl_2$ stimulated emission, quantum beats obs. 7−110014
$XeCl^{2+}$ stability, dissoc. reactions, pot. energy curves calc. 7−138973
$XeCl/H_2$ Raman shifting to blue-green region 7−130249
$XeCl_2$ in solid Xe, stimulated radiative dissoc. and gain meas. 7−74932
Xe_2Cl, excited states, absolute absorpt. cross sections meas. 7−135951
$Xe_2^+Cl^-$, cooperative photogeneration in Cl_2/Xe solutions, stimulated emission and gain meas. 7−78516
$Xe_2^+Cl^-$, in Xe matrix, UV emission spectra 7−90184
Xe_nCl electronic states, semiempirical calcs. 7−116833
XeCl*, spontaneous luminesc. spectrum 300 to 311 nm 7−122928
XeF electron beam excited laser media using Ar-Kr buffer mixture, kinetically tailored props. 7−68616
XeF ground state kinetics analysis rel. to laser performance 7−117182
XeF improved laser performance mechanisms at elevated temp. 7−117183
XeF laser, high pressure X-ray preionisation study 7−68614
XeF laser emitting visible light, optical pumping by surface-discharge radiation 7−96985
XeF laser molecule, vibrational relaxation 7−130069
XeF lasers, electron-beam pumped, lasing at 351 and 353 nm, role of atomic absorpt. 7−117189
XeF lasers, high energy broadband blue-green, developments 7−122937
XeF pumped with excimer radiation, kinetics of formation and quenching 7−68398
XeF_2, valence level cross sections, photoelectron spectra 7−129789
XeF_2+N_2, energy transfer reactions rate consts., laser appls. 7−138983

xenon compounds continued
$XeF_2+Si_n^+$ (n=1 to 7,) 7−113889
XeF_6, in nonoctahedral geometries, mol. struct., ab initio SCF studies 7−129589
Xe_2F^* pumped with excimer radiation, kinetics of formation and quenching 7−68398
XeH excimers, binding energies, bound-free UV fluoresc. spectra anal. 7−96723
XeH mol. UV emission spectra obs. 7−109920
XeH^+, in hollow cathode discharge, IR spectra, vibr.-rot. bands 7−129704
XeI_2, van der Waals mol., quantum mechanical model 7−103352
XeNO, van der Waals mols., multiphoton ionisation spectroscopy 7−90301
xerography *see electrophotography; reproduction (copying)*
xeroradiography *see electrophotography*
Xi a calculations *see Xalpha calculations*
XPS *see X-ray photoelectron spectra*
Yagi antennas *see antenna arrays*
Yang-Mills theory
Abelian Higgs model, Monte Carlo renormalisation group study, symmetry breaking 7−80985
Adler-Bardeen theorem in path integral formulation 7−128767
amorphous structure, Yang-Mills gauge theory 7−83679
anomaly-free theories beyond superstrings containing N=1 supergravity and Yang-Mills matter 7−95795
Bach-Lanczos Lagrangian in matrix relativity 7−102230
charge renormalisation to fourth order using dimensional regularisation 7−128754
charge-monopole system, phase factor, Green function 7−73502
chromomagnetic background field at high temp., effective Lagrangian calc. for pure Yang-Mills theory 7−67579
classical action at a distance theories which contain a cutoff 7−67472
classical solutions, to Yang-Mills equation 7−73543
classical solutions of Yang-Mills fields 7−73496
classical Yang-Mills equation with colour four-current density, static external colour charge 7−108786
continuum Euclidean Yang-Mills field theory, stochastic quantisation 7−73500
curved superspace σ-models, light cone gauge fixing, θ-expansion of superstring 7−73566
d=6 Einstein-Yang-Mills theory, spectrum and symmetry breaking, quotient of manifolds by discrete groups 7−67166
Dirac quantisation rule, mass and dual mass, gravitational magnetic monopoles 7−140574
Einstein action from self-interaction in curved background 7−128408
Einstein-Yang-Mills supergravity, d=10, N=1, plane wave solns., modifications in superstring effective theories 7−120902
equations of motion, geometrical integrability and conservation laws 7−121319
Faddeev-Popov procedure geometry, gauge-invariant function integration, Fubini theorem 7−121324
finite-energy classical solutions to Yang-Mills theories 7−81017
free heterotic string field theory, supersymmetry, gauge fixing and BRST formalism 7−108886
gauge fixing, topological aspects, comparison with string theory 7−81023
gauge theory anomalies, loop corrections, Lagrangian symmetry breaking, regularization in ultraviolet region 7−134956
gauge-covariant Wigner function of Yang-Mills fields 7−102590
generalized Yang-Mills theory, BPST instantons, conformal props., O(4p+1) formulation 7−116056
generalized Yang-Mills-Higgs theory, finite action soln. 7−80982
geometric space-time perturbation, gauge invariance, Kaluza-Klein association 7−67102
geometric space-time perturbation, multiparameter perturbations 7−67101
GL(2,C) Yang-Mills fields, self-dual, quadratures 7−67470
gravitation, gauge dependence of one-loop effective action 7−95433
gravitation model, Yukawa potential 7−120896
gravity, Stephenson-Kilmister-Yang theory, dynamics, SO(3,1) gauge theories, Hamiltonian form 7−120913
heterotic string, spacetime versus world-supersymmetry 7−73140
heterotic string theory, low-energy effective Lagrangian 7−67608
Higgs particles, influence of mixing angles on testing, mass spectrum, production, decay rates 7−116104
higher derivative super Yang-Mills theories 7−73523
isometric compactifications 7−108332
Kac-Moody groups in two-dimensional field theory 7−80968
Kaluza-Klein cosmology, attractor universe in N=2 supergravity 7−73145
Kaluza-Klein theory, light-fermion-mass generation, Minkowski space, perturbation theory, Yukawa couplings 7−120909
Kaluza-Klein theory, nonAbelian Wong eqns. in curved space-time 7−73122
Kaluza-Klein theory, truncation of 4D spectrum of states to finite subsector 7−73135
lattice loop calculus, Yang-Mills vacuum, orthonormal basis, loop space hamiltonian 7−134927
lattice vortices in the two-dimensional Abelian Higgs model 7−73548
light cone gauge, divergent Feynman integrals, Mandelstam-Leibbrandt prescription 7−116049
Lorentz-invariant solns. in Minkowski space 7−80981
mass dequantization and radiative corrections 7−67496
massive unitary renormalisable Yang-Mills theory without Higgs bosons, one-loop corrections 7−108791
massive unitary renormalisable Yang-Mills theory without Higgs bosons 7−108792
massive Yang-Mills theories, renormalisation schemes and renormalisation group functions 7−134926
massless higher-spin fields, extended theories, cubic interaction construction 7−140840
meron and the Wu-Yang solution 7−67500
monopole topological invariants in a Chern-Weil framework 7−73501
monopole-antimonopole pair solution of the classical SU(3) Yang-Mills theory 7−102616
monopole-fermion dynamics, temperature Green's functions, using finite temperature field theory 7−116063
N=1 super Yang-Mills theory, operator regularization and the divergence of the supercurrent 7−140796
N=1 supergravity coupled to supersymmetric Yang-Mills fields in superspace 7−73143
Yang-Mills theory continued
N=1 supersymmetric gauge theories, ultraviolet regularization, softly broken extended supersymmetry 7−128774
N=2 matter couplings, some generalisations 7−128737
N=2 relaxed hypermultiplet superspace quantization, real compensator superfield, Yang-Mills multiplet 7−140806
N=2 tensor multiplets, interactions and duality transform., general action functional, conformal supergravity 7−128790
N=4 Yang-Mills theory, spontaneous symmetry breaking in quasi-superrenormalisable models 7−73514
Nielsen-Olesen unstable modes, stability anal., SU(2) Yang-Mills gauge theory, energy density 7−116070
nonAbelian field of flat colour wave, exact solns. of quark eqns. of motion 7−140799
nonabelian gauge theories, stochastic regularisation, Yang-Mills appl. 7−89341
nonsymmetric nonAbelian Kaluza-Klein theory, spinor fields in minimal coupling scheme 7−108336
O(4)-invariant instanton type solns., 't Hooft representations 7−102632
one-loop β-function in higher covariant derivative regularisation for Yang-Mills theory coupled to matter 7−102589
open spin space-time manifolds, gauge theories, Yang-Mills eqns. 7−134922
operator regularization and one-loop Green's fns., background field quantisation 7−108780
parity-violating anomalies from stochastic quantization 7−116094
particle scattering by long-range mag. fields 7−108267
perturbative vacuum, essential quantum instability 7−102594
phase cell approach, local stability, modified renormalisation group transform 7−89324
phase cell approach, mode anal. 7−116051
phase cell approach, non-Abelian lattice-continuum duality 7−134906
Poincare algebra in Yang-Mills theory, general relativity and string field theory, symplectic geometry 7−121341
point singularities of Yang-Mills-Higgs fields at low energy 7−134908
pre-inflationary stages driven by Yang-Mills-Higgs fields, homogeneous anisotropic model 7−108374
QCD, hadron field correlator calcs., Yang-Mills eqns. and relativistic string anal. 7−135048
QCD ground state, colour confinement and essential instability 7−102692
quantisation in $A_0=0$ gauge, functional integration method 7−102629
response to strong background field, nonperturbative effects 7−102619
Riemann boundary value problem on closed Riemann surfaces and integrable systems 7−67497
scale fields as a simplicity principle, Yang-Mills eqns. solns. 7−140790
self dual Yang-Mills equation, action of loop group 7−102579
self-dual fields, generalised Riccati equations 7−89334
self-dual Taub-NUT metric, monopole scatt. and hidden symm. 7−81075
self-dual Yang-Mills fields, strong Backlund transformations 7−128735
self-dual Yang-Mills system, generalized isovector formalism 7−116050
Skyrme Yang-Mills model, solitonic baryon mass predictions 7−121350
stochastic quantisation, gauge-fixing parameter dependence, equilibrium limit, gluon-selfenergy 7−121362
strong interactions, dual field theory 7−135065
strongly interacting Higgs sector, right-handed charged currents in quark sector, weak K decay 7−134928
SU_2 theory with scalar field, nonself-dual instantons solns. 7−108739
$SU(2)_L \times U(1) \times U(1)$ electroweak model, Higg's mechanisms, nonstandard neutral currents, neutral massive gauge bosons 7−128811
SU(2) Einstein-Yang-Mills-Higgs model, wormhole solutions, iterative method, black holes 7−108742
SU(2) gauge fields, non-Abelian, produced by infinite coloured plane 7−89381
SU(2) Yang Mills theory, 3D, glueball mass calcs., scaling props. 7−95844
SU(2) Yang-Mills theory, variational calcs. 7−121356
SUGRA+SUSY Yang Mills theory, 10D, superspace formulation 7−89083
super Yang-Mills theory, reconciliation between SUSY and the lattice 7−128783
super-Yang-Mills model, N=1, analytic supersymmetric regularization 7−73516
superparticle in light-cone harmonic superspace, coupling to super-Yang-Mills background fields 7−67513
superspace Yang-Mills and gravitational systems, Witten index 7−128413
superstring σ-models from bosonic model, four-fermion interactions on world sheet 7−120903
superstrings, type I, heterotic, massless field effective action, superspace formulation 7−140844
supersymmetric Adler-Bardeen theorem and regularization by dimens. reduction, axial current anomaly 7−128761
supersymmetric theory quantisation, quantum hamiltonian ambiguities, σ-model and SU(2) Yang Mills theory appls. 7−140836
supersymmetric Yang-Mills theory, N=3,4 in 4D, superconformally covariant linear system 7−95745
supersymmetry, D=10, N=1, superspace geometry and superstring effects 7−140843
SUSY Yang-Mills theories with compact Lie groups, gauge-fermion condensation 7−121343
SUSY Yang-Mills theory, 6D/10D, pure gauge anomalies 7−73519
temporal gauge, dyon solutions, non-Abelian gauge field tensor, Higg's-triplet field 7−121371
$U(2)_v$ Yang-Mills approach to skyrmions with vector mesons, nucleon EM props. 7−128763
vacuum wavefunctional in 3D, Monte Carlo meas. 7−128758
Vilkovisky-DeWitt effective action, appl. to Yang-Mills theories 7−116062
weak Riemannian structures on gauge-group orbits 7−89329
Yang-Mills cryst. form. in electroweak theory at zero temp. and high fermion density 7−81022
Yang-Mills fields, soliton solutions and group representation theory 7−115928
Yang-Mills systems, conformally invariant extensions, to d=4p, 4p+2 dimensions 7−140814
Yang-Mills-matter-supergravity action from superspace Kahler transformations 7−95448
e^+e^- annihilation, charged Higg's boson search; centre of mass energies $\geq$ 46.8 GeV 7−135142

Yang-Mills theory continued
$e^+e^- \rightarrow \nu_e\bar{\nu}_e H^0$, 0.1-4 TeV, Higgs-boson prod., heavy-quark effect, bremsstrahlung effect, superheavy quarks 7−128875
$Z' \rightarrow w_h^+ + w_l^- \rightarrow l^+\bar{\nu} + l^-\bar{\nu}$, T-odd angular correlation, chargino, numerical examples in E_6 models 7−134995

yield point
see also yield strength; yield stress
alloy, two-phase, with plastic matrix, struct. parameters of strength 7−126200
anisotropic media, plastic flow theory, determining relationships 7−75347
composite materials, multicomponent 7−136708
Haasen-Kelly effect type deformation phenomena, analytical description 7−75346
ionic crystals, strength, induced anisotropy 7−124382
PVC, internal stress determ., modified transient dip test 7−106729
PVC, plastic deform. by crazing, effect of temp. and specimen size *(Japanese)* 7−100295
steel, austenitic stainless, welded joints, residual stress level and props., influence of heat treatment 7−86225
steel, low C, martensitic, weldable, mech. props. 7−132714
steel, mild, annealed, cusps and vertices on yield surface 7−137455
steel, Mn-Cr-Mo, duplex, cold brittleness 7−132715
steel, Ni-Cr-Mo-W, effect of quenching and tempering on props. 7−132645
steel, structural, spalling failure, dynamic yield point and specific work meas. 7−100329
strain bursts in fatigue experiments 7−118030
stress sphere, fatigue process representation, yield point, micro-crack formation *(German)* 7−104219
Al-Be-Mg alloy, two-phase, with plastic matrix, struct. parameters of strength 7−126200
Al-Si (15 wt.%), hypereutectic, high press. crystn. struct., mech. props. *(Russian)* 7−144391
Al-TiC, cast, dispersion hardening with high TiC content 7−106523
Cu conductors in turbogenerator rotor windings, fatigue characts. 7−100325
Fe-Ni (32 wt.%), heat treatment, phase transform., microstruct., mech. props. *(Korean)* 7−138784
GaAs crystals, mechanical properties 7−98308
GaAs:Zn, doped and undoped, lower yield stress meas. 7−124381
InP, lower yield stress meas. 7−124381
InP:S, single crysts., thermal activation of deform. 7−98307
NaCl:Sr, optical and mechanical props. 7−104796
NiTi alloy, two-stage yielding 7−78134
Si floating-zone single crysts., yield stress and dislocation vel. activation parameters 7−124380

yield strength
aramide-fibre unidirectional organoplastic, tensile strength, matrix props. effects 7−142883
bars, notched, yield strength rel. to notch interference *(Japanese)* 7−144650
Bauschinger effect, histories perspectives and main features 7−120749
combined static and cyclic loading, strength calc. methods analysis *(German)* 7−130561
geophysical materials, modelling, rel. to soil models 7−94203
glass fibre reinforced thermoplastic composites, interfacial shear strength determ. 7−119321
Invar, thermal expansion and mech. props., effects of P and S 7−113626
isotropic and anisotropic materials, limiting complex-stress states analysis method 7−97346
metals, recovery theory and its application to stress relaxation tests 7−119285
pastes, extrusion yield meas. using cone penetrometer 7−93227
plane strain, Hutchinson-Tvergaard shear localisation eqns. 7−71239
PMMA, oriented, yield and thermoelastic props. 7−69810
polycarbonate-phenoxy blends, mech. behaviour, influence of level of interchange reactions 7−113513
polyethylene, sheets, mech. props., radiation cross-linking effects 7−91484
polypropylene, transcrystalline layers, struct., mech. props. 7−119234
pressure vessel, cylindrical, Bauschinger effect of reverse yield stress reduction on radial crack growth 7−69814
spherical vessel under pressure, multilayered, optimal piecewise homogeneity 7−83043
steel, austenitic, N alloying technique, improvement of props. 7−78136
steel, austenitic stainless, high N, microstruct. and mech. props., influence of annealing temp. 7−86351
steel, Cr-Ni-Mn-Mo, tensile and fracture data 7−78144
steel, dual-phase, mech. props., effect of H *(Korean)* 7−132726
steel, eutectoid, high strength, cold-drawn wires, fatigue threshold determ. 7−100326
steel, high strength, near threshold fatigue crack propag., temper microstruct. 7−100361
steel, high-speed, cleavage fracture stress, temp. and plastic strain depend. 7−100333
steel, HSLA, X70, development for arctic linepipe appl. *(Korean)* 7−132724
steel., low-alloy sheet, strengthening rel. to cyclic bending deform. temp. 7−78051
steel, medium C, temp. and strain rate influences on mech. props. *(Japanese)* 7−106588
steel, microalloyed, ferritic-martensitic, struct. and mech. props., effect of heat treatment 7−126181
steel, mild, critical notch depth for low temp. brittleness 7−119364
steel, mild, low-temp. fracture rel. to notch depth 7−100370
steel, mild, mech. prop. and substruct. changes with US loading 7−100437
steel, Mo maraging, thermomechanical treatments development for yield strengths above 3 GPa 7−100266
steel, Ni-Cr-Mo, ultrahigh strength, improved low temp. fracture toughness through modified heat treatment 7−138829
steel, secondary hardening, AF1410, fracture toughness, influence of inclusion spacing and microstruct. 7−144544
steel, strain aged, Bauschinger effect 7−126183
steel, structural, spalling failure, dynamic yield point and specific work meas. 7−100329
steel plate for offshore structures, thermomech. processing of Cu bearing age hardenable materials *(Japanese)* 7−144446
steel sheet, hot dip Zn-Al-Si coating, formability, tensile and bending props. *(Japanese)* 7−78110

yield strength continued
stress-strain curves, description with Hooke's straight line, yield horizontal and strengthening clothoid *(German)* 7−132693
Al alloys, wrought, anisotropy, texture and microstruct. contrib. 7−86209
Al sheet/C fibre reinforced plastic, multilayer hybrid composite materials, tensile props. *(Japanese)* 7−78115
Al-Al_4C_3, dispersion hardened materials, mech. props. at elevated temps. 7−126180
Al-Al_4C_3, dispersion strengthening mechanism *(German)* 7−132634
Al-Cr-Fe, vapour quenched, tensile props. rel. to microstruct. and comp. 7−119306
Al-Fe-Mn, microplastic surface deform. 7−78094
Al-Li based alloys, deform., fracture, microstruct. rel. to comp. and heat treatment 7−144465
Al-Si (15 wt.%), hypereutectic, high press. crystn. struct., mech. props. *(Russian)* 7−144391
Al-Si-Sr, struct., mech. props., Sr content effect, solidification rate 7−86261
Al-Zn-Mg, 7075, hardness and yield strength as function of retrogression time 7−78202
Al-Zn-Mg-Cu, microstruct. and props., effect of retrogression and reageing *(Chinese)* 7−132663
Al_2O_3 fibre reinforced Al and Al alloys, reinforcement, effect of matrix props. 7−132631
Cu, high purity, tension, compression or torsion deform. texture, recrystallisation temp., flow strength *(German)* 7−100321
Fe-Cr, ferritic alloys, irrad. and alloy elements effect 7−86196
Fe-Ni-C, martensitic transform., effect of solution strengthening of austenite *(Chinese)* 7−144395
β-LiAl, mech. props., comp. depend., defect struct. 7−144483
LiF, neutron irrad. effect on plasticity and strength characts. 7−104846
βLiIn, defect, struct., mech. props. 7−144482
Mo alloys, fibre textured, microstruct. and strength anisotropy 7−78228
Nb, high purity, RF superconductivity, production 7−131928
Ni base alloys, dispersion hardened, high temp. yield strength rel. to SiO_2 particle shape 7−113639
Ni-base superalloy, GH99, antiphase domain boundary energy of γ'-$Ni_3(Al,Ti)$ particles and strengthening contrib. *(Chinese)* 7−144425
Ni-base superalloys, CMSX-2 and Cotac 784, mech. props., influence of protective coatings 7−86275
Ni-Co-Nb, damping capacity, mag. and mech. props. 7−70595
Ni-Ta-Cr, single cryst. superalloy, yielding and deform., 20-1093°C 7−71251
Ni_3Al(-B), strength, hardness and ductility, effect of B 7−78096
$Ni_{78}Si_{10}B_{12}$ metallic glass, dispersed with μm sized WC particles, yield stress 7−113607
SiC particle reinforced Al-Mg-Fe, internal stress/strain, X-ray diffr. study 7−86197
SiC whisker reinforced Al alloys, stiffness, strength, struct. 7−138787
Ti alloy VT16, strain rate effect on plastic deform. resist. 7−113638
Ti alloys, leakage rate in high-temp. vac. treatment influence on oxidation and mech. props. 7−144595
β-Ti alloys, quenched, tensile props., deform. modes, phase stability 7−86283
Ti-Mn, two-ductile phase alloys, stress-strain behaviour 7−78121
W alloy, W-2, dynamic response, determ. by commercial manganin stress gauges 7−144472

yield stress
see also yield point; yield strength
beams and plates under combined loading, dynamic inelastic response 7−123494
blood, sedimenting, thin layers, method for yield stress meas. 7−127049
compaction, particulate solids, model using yield pressure meas. 7−92910
crystals at low temps., plastically deformed, amplitude depend. ultrasonic attenuation, yield stress 7−142913
cylinder, thick-walled, dynamic loading, thermoviscoplasticity by finite elements 7−90980
elastic-plastic indentation hardness and indentation fracture toughness, inclusion core model 7−84111
fatigue crack propagation model, short, interpretation of short-long crack transition 7−124387
fibre reinforced composite, short fibres, mech. props prediction, comparison between shear lag type and Eshelby type model 7−76277
foams, rheology, polydispersity and liq. viscosity effects 7−130614
greases, viscometric material functions, shear rheometry 7−75493
ionic crystals, plastic deformation, yield stress, statistical anal. 7−98309
metal, fatigue failure model with account of anomalous surface props. 7−113708
metal, yield stress dependence on surface layer thickness 7−78370
miniaturisation of specimens. for mech. testing 7−71431
PET films, amorphous, yield behaviour, activated rate theory approach 7−86267
poly p-phenylene benzobisthiazole films, deform., temp. and strain rate depend. 7−86264
polycrystals, textured, yield surfaces, analytical approach 7−76272
polyethylenes, mech. props., struct. and morphological factors 7−71244
polymers, large-strain deform. prediction 7−132682
polypropylene and PET mixtures, mechanical props. and permeability 7−137265
polypropylene-EPDM rubber-polyethylene ternary blends, dynamic mech. behaviour and struct. 7−78088
polystyrene, polybutadiene toughened, yield stress, rubber particle size effect 7−106573
pressure vessel, cylindrical, Bauschinger effect of reverse yield stress reduction on radial crack growth 7−69814
shear-thinning liquid, with yield stress, flow through porous media 7−123688
sheet metal, drawing, yield locus curve determ. 7−93051
snow densification, particle rearrangement and dislocation creep processes study 7−114819
steel, austenitic alloy, fracture, plastic deform. and ageing effects *(Russian)* 7−138817
steel, austenitic Cr-Ni, Cr-Ni-Nb, hot stress-strain curves, recrystn. *(German)* 7−100316
steel, austenitic stainless, dynamic testing of large specimens, yield/flow stress meas., exptl. techniques 7−126195
steel, C-Mn-Si, dual-phase, transition fatigue life 7−78225
steel, Cr-Mo-V, microstruct. and mech. props. 7−144493
steel, ferritic, cleavage rel. to substitutional alloys 7−119326

yield stress continued
steel, Mo maraging, thermomechanical treatments development for yield strengths above 3 GPa 7−100266
steel, prestrained, plastic shearing 7−132688
steel, structural, fatigue failure model with account of anomalous surface props. 7−113708
steel, structural, yield stress, effect of temp. and loading rate, prediction 7−100296
steel, tube to tubesheet junctions, evaluation 7−106590
steel, yield stress dependence on surface layer thickness 7−78370
viscoelasticity, nonlinear, and yield, appl. of coupling model 7−131234
Zircaloy-4 PWR fuel cladding material, out-of-file test for yielding behaviour 7−132848
Ag-Mg, intermetallic β' phase, yield stress, temp. and comp. depend. 7−126192
Al, cold worked, recovery spectrum 7−105527
Al, iteratively cold-worked, effects of stress-aided static recovery 7−86210
Al polycrystals, channel die tests, prestrain history effects on further large strain texture 7−119282
Al, proton irrad., tensile props. 7−71258
Al-base alloys, age hardening, effect of US vib. 7−132632
Al-Be-Mg alloy, eutectic, struct. parameters correl. with mech. props. 7−126199
Al-Cr-Fe, vapour quenched, tensile props. rel. to microstruct. and comp. 7−119306
Al-Cu, hardness, wedge shaped indenter, strength and anisotropy *(Japanese)* 7−78193
Al-Ge, deform. precip., grain size, 298-598 K 7−78140
Al-Li-Cu-Mg-Zr alloy, yield stress, temp. and strain rate depend. 7−138797
Al-Mn-Si (10, 2.5 wt.%), dispersion hardened, powder metallurgy, yield stress, fatigue props. 7−138804
Al_3Ti, plastic deform., 25-860°C 7−86290
$Co_{84}Nb_{10}B_6$ metallic glass, fully-crystallised, elastic moduli, yield stress and ductility 7−71227
Cu, iteratively cold-worked, effects of stress-aided static recovery 7−86210
Cu polycrystals, channel die tests, prestrain history effects on further large strain texture 7−119282
Cu/Cr multilayer composites, struct. and strength relationship *(Russian)* 7−100283
Cu-Cr, rapidly solidified, microstruct. and mech. props. 7−144379
Cu-Ni-Cr spinodal alloys, hardening mechanism 7−126189
Cu-Ni-Sn single cryst. yield stress asymmetry *(Russian)* 7−138780
α-Fe, irradiation softening and mobile dislocation interaction with Frenkel pairs 7−104803
Fe-Cr-P-C, amorphous alloys, mech. and mag. props., effect of comp. 7−83746
Fe-Ni, plastic deformation, magnetically induced Invar hardening 7−76275
$Fe_{65}(Ni_{1-x}Mn_x)_{35}$, plastic deformation, magnetically induced Invar hardening 7−76275
GaAs crystals, mechanical properties 7−98308
GaAs:Zn, doped and undoped, lower yield stress meas. 7−124381
InP, lower yield stress meas. 7−124381
InP:Zn,S, deform., dislocation generation and movement 7−131215
KBr:Eu single crystals, hardening, yield stress meas., temp. and impurity conc. depend 7−91704
Mg-Al(-Si), rapidly solidified, microstruct. and props. 7−78125
NaCl:Eu crystals, ageing, precip., photolum., TSC, mech. response 7−69913
Nb-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Nb-Zr-C, hardened, solid soln. struct., yield stress, internal friction *(Russian)* 7−144495
Ni base alloys, dispersion hardened, high temp. yield strength rel. to SiO_2 particle shape 7−113639
Ni, yield stress dependence on surface layer thickness 7−78370
Ni-base superalloy, single cryst., yield stress, effect of ageing 7−113630
Ni_3Al-B, fatigue crack growth 7−119361
Ni_3Al-B, polycryst., high cycle fatigue 7−119360
Ni_3Al-Ni_3Mn, $L1_2$-type intermetallic cpd., high-temp. strength and ductility 7−113622
$Ni_{78}Si_{10}B_{12}$ metallic glass, dispersed with μm sized WC particles, yield stress 7−113607
Si, film edge induced dislocation, nucleation role of point defects 7−98170
Si floating-zone single crysts., yield stress and dislocation vel. activation parameters 7−124380
Ta-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
Ti, tube to tubesheet junctions, evaluation 7−106590
Ti-Al (7.5 wt.%), deform. mode rel. to injected He 7−119316
Ti-Al-Cr-Mo alloy, VT3-1, yield stress dependence on surface layer thickness 7−78370
Ti-Al-Cr-Mo VT3-1 alloy, fatigue failure model with account of anomalous surface props. 7−113708
TiB_2, high temp. deform., Hall-Petch relation, TiC precip. effect 7−113615
V, supercond., strained at 4.2 K, crit. fields and defect struct. *(Russian)* 7−92386
V-N-H, mech. behaviour, effect of N-to-H ratio 7−113695
W alloy, W-2, dynamic response, determ. by commercial manganin stress gauges 7−144472

yielding *see plastic deformation*

yielding, serrated *see serrated yielding*

Young's modulus
2D sheets with regular arrays of non-circular holes, elastic moduli calc. 7−117461
amorphous thin films, magnetoelastic dynamic suscept. calcs. 7−99540
block copolymers, solid, low-freq. acoustic parameters, prep. conditions effects *(Russian)* 7−90913
bone regenerate in tension, deform. and breaking 7−71808
brass, microduplex, 60/40, two-phase superplastic alloys, cavitation criterion 7−132676
brass, Young's modulus meas., apparatus improvement 7−120727
brittle solids, Young's modulus, porosity depend. model based on crack opening displacement 7−142876
CDW conductors, elastic props. 7−137477
cellulose acetate, mech. props., temp. characteristics *(Japanese)* 7−137458
cement, macrodefect-free, latex modified, effect on props. 7−106606

Young's modulus continued
ceramics, engineering, elastic props. at elevated temps. *(Japanese)* 7−138775
ceramics, N-containing, high temp. props., influence of secondary phases *(French)* 7−71259
compaction, particulate solids, model using yield pressure meas. 7−92910
composites, transverse Young modulus for nonregular structures 7−126156
conference on graphite reactor component structural design and integrity, Tokai, Japan (Sept. 1986) 7−140378
corundum, single crystal, near-surface layer, influence of medium on deform. 7−76586
disk, rotating, nonhomogeneous annular, radial depend. Young's modulus, stress distrib. 7−142176
disordered solids, cell model and elastic moduli, low temp. limit 7−111732
disordered solids, elastic consts., temp. depend. 7−111733
dynamic moduli of elasticity in wide temp. range, investig. methods and automatic units 7−113830
epoxide resins, monomer content and hardener effect on thermomech. props. 7−71243
epoxy binders, elasticity type effect on viscoelastic props. 7−138774
epoxy binders, viscoelastic behaviour mechanisms 7−138773
epoxy-polyethersulfone, dual phase blend, fracture toughness, miscibility 7−86332
fibre-polymer matrix system, transition layer parameters eval. using dynamic mech. meas. 7−78444
field annealed amorphous ribbons, magnetoelastic props., static and dynamic bifurcations study 7−106004
glass fibre, internal friction and dynamic elastic modulus under longit. deforms., meas. installation 7−78424
glass fibres, mechanical props. rel. to Al dispersoids 7−113620
glasses, oxycarbide and oxynitride, comparison of mech. props. 7−100344
graphite fibre reinforced epoxy, hygral and mech. props., effect of voids 7−100272
graphite fibre reinforced epoxy, prep. from pristine and Br intercalated fibres, mech. and elec. props. 7−144451
graphite fibres, intercalated, elec. cond., mech. props. and stability 7−86243
graphite IG-110, fine-grained isentropic, high temp. neutron irradiation effects, reactor appls. 7−142844
IG-110 graphite for VHTR appl., high temp. Young's modulus study 7−141167
Kevlar 29 yarns, epoxy impregnated, twist effects on mech. behaviour 7−119314
measurement method for internal friction and elasticity modulus 7−132868
metallic filament reinforced composites with epoxy resin and polyether ether ketone matrices, mech. props. 7−113618
metallic glasses, thermal stability, glass form. and mech. props. 7−76020
negative and infinite stiffness in a system of piezoelec. elements 7−83044
nitrocellulose-nitroglycerine mixtures, dynamic mechanical meas. 7−119304
optical fibres, single-mode, deformation under static longitudinal stress 7−123224
paper and plastic foil, Young's moduli meas. *(German)* 7−69293
particle assemblies, elasticity theory and surface energy 7−131415
poly p-phenylene benzobisthiazole films, deform., temp. and strain rate depend. 7−86264
polycarbonate-phenoxy blends, mech. behaviour, influence of level of interchange reactions 7−113513
polycrystalline semiconducting compounds, elastic moduli, temp. and press. derivatives 7−98296
polycrystalline thin films, sputtered, intrinsic stress scaling law 7−142875
polyethylene, high density, influence of thermal treatment on micromechanical props. *(French)* 7−100265
polyethylene, sepiolite filled, mech. and morphological props., effect of filler-polymer interface 7−78127
polyethylene and crosslinked elastomer combined dispersion, struct. correl. with phys., and mech. props. 7−71233
polyethylene mixtures, dynamic viscoelastic props., mol. nature of temp. transitions 7−71231
polyethylene structures, swell drawing mfg. 7−119236
polyimide film, in situ meas. of residual stress, Young's modulus and ultimate strain 7−124371
polymer, oriented, nonlinear viscoelasticity in high-rate tension 7−78091
polymer fibre, entropic elasticity problem 7−76265
polymer films, supported, mech. props. determ., double bending beam technique 7−124377
polymer high-modulus fibres, laser generation of ultrasound for Young's modulus meas. 7−76310
polymer matrix composites, neutron irrad. at 5 K and room temp., mech. prop. degradation 7−76215
polymers, filled, dental materials, Young's modulus determ., phenomenological model 7−104892
polypropylene, $CaCO_3$ filled, mech. props. 7−113592
polypropylene, oriented, crystalline and noncrystalline molecular orientation, IR dichroism 7−69613
polypropylene, transcrystalline layers, struct., mech. props. 7−119234
polypyrrole film, electrochemically prepared, mech. props., temp. dependence 7−111747
polystyrene, polybutadiene toughened, yield stress, rubber particle size effect 7−106573
polystyrene type spheres in aqs. and aqs. methanol suspensions, sedimentation equilib., struct. obs. 7−71532
power plant equipment welded joint physical props., production technology develop. *(Russian)* 7−93048
rod, conical, elastic disturbance longit. propag. 7−75316
rubber containing rigid inclusion, internal fracture 7−142899
shells, cylindrical cross-ply, postbuckling behaviour under torsion 7−123497
shells of revolution, multilayer rib reinforced, nonaxisymmetric temp. force 7−97345
stainless steel, Young's modulus meas., apparatus improvement 7−120727
steel, high Mn, fused on layer, Young's modulus reduction 7−93047
steel, high-speed, cleavage fracture stress, temp. and plastic strain depend. 7−100333
steel, high-speed, P/M, elasticity modulus temp. depend., rel. to struct. 7−126160
steel, tool, high speed, T6, directly sintered and wrought, strength, toughness and stiffness 7−100358

Young's modulus continued
stress-strain curves, description with Hooke's straight line, yield horizontal and strengthening clothoid *(German)* 7−132693
tetraethyleneglycol diacrylate, photopolymerisation, thermal and mechanical anal. 7−119529
tubes, cylindrical, thin-walled, laminated composite, bending anal. 7−142165
vertex of narrow inclusion, stress-strain state 7−97325
Al polycrystal elastic props. at high temps., ultrasonic meas. 7−118011
Al sheet/C fibre reinforced plastic, multilayer hybrid composite materials, tensile props. *(Japanese)* 7−78115
Al-Al_2O_3(-Si), creep behaviour and dislocation struct. 7−100319
Al-Cr-Fe, vapour quenched, Young's modulus, comp., microstruct. 7−119301
Al-Li, rapid solidification, physical metallurgy review 7−113533
Al-Li, structure factors and Debye temperatures 7−76077
Al-Li alloys, specific Young's modulus and phase diagram, rapid solidification processing effects 7−100279
Al-Li-Mn, elastic modulus, effect of ageing 7−113593
AlZnMg, behaviour of Young's modulus during homogeneous decomp. 7−106560
B_xC-SiC composite ceramics, synthesis, thermomechanical props. *(French)* 7−100151
$Ba_2Cu_3YO_7$, high T_c supercond., bulk modulus and Young's modulus 7−118008
$BaO-ZnO-P_2O_5$ glasses, coordination numbers suggested by elastic props. 7−113595
C fibre reinforced epoxy, fibre bending strength and elastic modulus determ. method 7−78423
C fibre reinforced plastics, hardness, wedge shaped indenter, strength and anisotropy *(Japanese)* 7−78193
C fibres, stiffness-thermal expansion relationship 7−78084
C fibres, structure-property relationships 7−86237
C fibres, vapour-grown, mech. props. 7−86238
$Co_{84}Nb_{10}B_6$ metallic glass, fully-crystallised, elastic moduli, yield stress and ductility 7−71227
Cr, dislocations, dynamic behaviour at mag. transitions, internal friction meas. 7−111570
Cu, point defect-dislocation interactions following pulsed neutron and electron irradiations 7−76198
Cu, Young's modulus meas., apparatus improvement 7−120727
Cu-Zn, superplastic alloy, deform. activation energies, hot microhardness obs. 7−113617
$Cu_{67}Ti_{33}$ metallic glass, struct. relax., crystallisation, elastic modulus, internal friction 7−106568
Fe, cast, spheroidal graphite, fatigue crack propag. characts. *(Japanese)* 7−106615
Fe-B-Si-C-H metallic glasses, magnetoelastic effect 7−85403
Fe-Cr-Ni, elastic moduli, temp. depend. *(Russian)* 7−98294
Fe-Zr-B metallic glasses, thermal stability 7−83752
$Fe_{79}B_{16}Si_5$, amorphous alloy. phys. props. and struct., effect of cold rolling 7−144437
$Fe_{82}B_{18-x}Si_x$ amorphous alloys, magnetoelastic behaviour, localised moment model explanation 7−99549
$Fe_{78-y}Co_ySi_9B_{13}$ metallic glasses, change in Young's modulus during struct. relax. 7−132659
$Fe_{71.5}Mn_8B_{9.5}Si_{11}$, amorphous, Curie temp., influence of struct. relax. 7−97977
$Fe_{32}Ni_{36}Cr_{14}P_{12}B_6$, metallic glass, cold rolling, struct. relax., Young's modulus, internal friction 7−106569
In_4Se_3 single cryst., elastic props. study 7−84120
$La_{2-x}Sr_xCuO_4$, high T_c supercond., Young's modulus, internal friction studies 7−105822
$La_{2-x}Sr_xCuO_4$, high T_c supercond., struct. and phase transitions *(Russian)* 7−142711
$MgO-Al_2O_3-SiO_2$ glass, dissolved Si_3N_4 influence on phys. and mech. props., Si_3N_4 processing role 7−71142
Mn-Ge-Zr(Nb), antiferromag., elastic props. and thermal expansion 7−144455
$Mn_{0.7}Ni_{0.3}$ FCC alloy, anomalous elastic props. 7−119302
Ni-Al, polycrystalline, Young's modulus, temp. and comp. depend. 7−86241
$Ni_{78}Si_{10}B_{12}$ metallic glass, dispersed with μm sized WC particles, yield stress 7−113607
Si reinforced Si_3N_4; whisker or particle, fracture toughness and strength 7−78150
Si-O-N fibres, prep. and mech. props. *(Japanese)* 7−126070
SiC, REFEL self-bonded, mech. props., effect of microstruct. features 7−126249
SiC whisker reinforced Al_2O_3, processing and mech. props. 7−77915
SiC-C fibres, synthesis of precursors by co-pyrolysis of polysilane and pitch *(Japanese)* 7−119225
Si_3N_4 based materials, hot compaction, elastic props. rel. to porosity 7−106561
Si_3N_4, elastic modulus-porosity relationship 7−113594
Si_3N_4, gas-press. sintered, solid particle erosive wear rel. to props. *(Japanese)* 7−71327
Sn-In alloy, temp. depend. of Young's modulus 7−100273
Sn-In alloys, US study of phase transitions, Young's modulus 7−98349
TeO_2-WO_3, binary tellurite glasses, elastic behaviour under press. 7−111731
TeO_2-ZnCl_2, binary tellurite glasses, elastic behaviour under press. 7−111731
Ti-H solid solns. at 673 K, bulk modulus, relation with electronic struct. 7−98295
U-Ti (0.75 wt.%), depleted, determ. of dynamic elastic moduli as function of temp. by piezoelec. US composite oscillator technique 7−113596
URu_2Si_2 heavy fermion system, 17.5 K transition, thermopower and elasticity studies 7−98994
YAG ceramics, mech. props. rel. to process parameters 7−86100
$YBa_2Cu_3O_{9-x}$, elasticity and X-ray diffr. studies, 90-260 K 7−131895
Zn-Al, superplastic alloy, deform. activation energies, hot microhardness obs. 7−113617
Zn-Al eutectoid, two-phase superplastic alloys, cavitation criterion 7−132676
Zr and alloys, polycryst. aggregates, elastic anisotropy 7−71230
ZrO_2:Y_2O_3 polycrystals, Al_2O_3 and SiC particle dispersed, thermal stability, mech. props. 7−78183
$ZrO_2-Y_2O_3-Al_2O_3$ ceramic electrolytes, ionic cond., thermal shock resist., mech. props. 7−76479

ytterbium
see also nuclei with .....
atom, autoionisation reson., laser spectra, HF-Dirac calcs. 7−122463
atom, ionisation spectra, Coster Kronig process, ionic correlation effects, SCF ionisation energy 7−135900
atom, isotope detect., reson. multiphoton spectroscopy with thermionic diode detect. 7−90062
atomic 6snd $^1D_2$ and 6sns $^1S_0$ states, config. interaction, radiative lifetimes meas. 7−129615
deformed, recrystn., X-ray obs. 7−113570
foil gauges in fused silica matrix, piezoresist. response under shock loading to 45 kbar 7−69078
high pressure bandstruct. and electronic props. 7−105388
isoelectronic series, electronic transitions, multiconfig. Dirac-Fock calcs. 7−116874
metal, 5p edge optical absorpt. spectra determ., electron emission processes study 7−144181
proton-induced ionisation, L-shell X-ray prodn. cross-sections meas. 7−141514
vapour, modified stimulated photon echo in longitudinal mag. field 7−90730
BaF_2-ThF_2:Yb^{3+}, Er^{3+} glass, IR to visible fluoresc. upconversion efficiency and multiphonon relaxation study 7−117264
$CaTiO_3$: Yb^{3+}, single cryst., EPR study 7−99566
CdTe:Yb^{3+}, furnace and laser annealing of implanted impurities, cathodolum. study 7−119295
CdTe:Yb^{3+}, furnace and laser annealing of implanted impurities, cathodolum. study 7−119296
Co:^{152}Sm(^{172}Yb), hyperfine magnetic fields at rare-earth elements in ferromagnetic transition metals 7−118423
Cs_2NaYCl_6:Yb^{3+} crystals, ENDOR studies 7−138347
Er, Yb:glass laser at 1.54 μm pumped by Nd:YAG laser 7−136322
Fe:^{152}Sm(^{172}Yb), hyperfine magnetic fields at rare-earth elements in ferromagnetic transition metals 7−118423
GdF_3:Yb^{3+}, Er^{3+}, phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7−85791
InP:Yb, growth by metalorganic CVD, photolum. 7−86040
InP:Yb, influence of lanthanoids on elec. props. 7−131632
InP:Yb, MOCVD growth, elec. and optical charactn. 7−125159
InP:Yb, substitutional impurity electronic states 7−98876
InP:Yb epitaxial films, galvanomag. effects 7−131670
InP:Yb^{3+}, excited state, optically detected mag. resonance studies 7−106059
KY_4F_{10}:Yb^{3+}, spin-lattice relax., EPR spectra, Raman scatt. 7−70636
Ni:^{152}Sm(^{172}Yb), hyperfine magnetic fields at rare-earth elements in ferromagnetic transition metals 7−118423
SiO_2:Yb^{2+}, vitreous, luminescence props. 7−70857
SiO_2:Yb^{3+}, Er^{3+} optical fibres, multiphoton effects 7−90819
YF_3:Yb,Er IR-to-visible conversion phosphor for fibre-optic temp. sensor *(Japanese)* 7−110582
YF_3:Yb^{3+}, Er^{3+}, phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7−85791
Yb, L-subshell ionization probabilities in very asymmetric ion-atom collisions 7−90368
Yb, photoemission, photo-excitation and decay processes 7−106375
Yb^{2+}, electron-impact ionisation, giant reson. effects 7−82371
Yb^{3+} in polycrystalline matrix, photoluminescence quantum output 7−125801
^{173}Yb II, ground-state hyperfine splitting, laser-microwave double reson. study 7−103426
$(ZnS)_{1-x}(CdS)_x$:Cu, Yb, Co luminophor for near IR detection 7−70866

ytterbium alloys
electronic spin fluctuations, NMR study 7−77418
unstable 4f-shell, transport props.−quasielastic neutron spectra linewidth correls. anal. 7−118460
YbPd, mag. and nonmag. charge states, ^{170}Yb Mossbauer meas. 7−76852
Ce-Y dilute impurity system, thermoelec. power, Anderson model calcs. 7−105547
Eu_xYb_{1-x} alloy, elec. and mag. props. studies w.r.t. comp. 7−132073
Eu_xYb_{1-x}, magnetoresist. and magnetostriction meas. 7−131620
Yb-Rh-Sn, superconducting, Yb valence fluctuations, X-ray absorption studies 7−77688
$YbBe_{13}$-Pt, point-contact spectra 7−77050
Yb_4Bi_3, valence fluctuation, UPS study 7−92141
$YbCo_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$YbCu_2$, valence fluctuation, Anderson model calcs., XPS and UPS meas. 7−124949
YbCuAl, ^{27}Al quadrupole splitting, temp. depend. NMR studies 7−125545
$YbFe_2$ mag. props., neutron diffr. study 7−77225
$YbFe_2Si_2$, magnetic ordering and saturated moments, Mossbauer meas. 7−138195
$Yb_{0.4}In_{0.6}Cu_2$, valence phase transition, rare earth substitution effects, mag. suscept. meas. 7−76851
$Yb_{1-x}In_xCu_2$ valence phase transition studies 7−98948
YbM_2Ge_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
YbM_2Si_2, (M=Mn,Fe,Co,Ni,Cu), mixed valence state 7−70260
YbPd and Yb_3Pd_4, intermediate valent cpds., mag. response, inelastic neutron scatt. study 7−70527
$YbPd_3$, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
Yb_xPd_{1-x} amorphous alloys, composition-induced valence change 7−76842
$YbPd_2Si_{2-x}Ge_x$, spin fluctuation changes 7−77300
$YbPt_3$ and Yb_3Pt_5, antiferromag. ordering, elec. resist. and mag. susceptibility meas. 7−77254
Yb_4Sb_3, valence fluctuation, UPS study 7−92141
YbSi, nearly localised heavy fermion antiferromagnet 7−70562
$Yb_{80}X_{20}$ (X=Cu, Ag, Au), amorphous alloys, transport props., mag. susceptibility, sp. ht. 7−98968
$YbXCu_4$, X=Al, Ag, Ga, X depend. of struct. and Yb valence state, mag. suscept. meas. 7−98042

ytterbium compounds
see also ytterbium alloys
electronic spin fluctuations, NMR study 7−77418
Ba-R-Cu-O (R=Yb, Lu, Y, La), high-T_c superconductivity 7−99263
Ba-Yb-Cu-O system, high T_c supercond., Meissner state 7−118706
$BaF_2-InF_3-ZnF_2-YbF_3-ThF_4$ glass, phase and IR props. 7−104572
$Ba_{0.6}Yb_{0.4}CuO_{3-x}$, superconductivity, transition temps. 7−99280

ytterbium compounds continued
$Ba_2YbCu_3O_{9-x}$, high T_c supercond., prep. and charact. 7−118660
$Ba(Yb_{2/3}W_{1/3})O_3$, cubic perovskites, prep., thermal stability 7−69673
$(Bi_2O_3)_{1-x}(Yb_2O_3)_x$, oxide ion conductors, structural comparison 7−83895
$(Bi_2O_3)_{1-x}(Yb_2O_3)_x$, phase relationships, rel. to temp. and press. 7−131299
$Bi_{2-x}Yb_xO_3$ ionic conductors, struct. and dynamical props., EXAFS study 7−144170
$LiLa_{1-x}Nd_xYb_yP_4O_{12}$ glass, fluorescence kinetics and $Nd^{3+}\rightarrow Yb^{3+}$ energy transfer 7−70873
$Li_yMgYb_2S_4(Se_4)$ lithiated spinels, elec. and mag. meas 7−143422
PbF_2-GeO_2-YbF_3-ErF_3-$AgNO_3$ glass ceramics, up-conversion yield, fluoresc. meas. 7−113266
SiO_2-Yb_2O_3-Nd_2O_3-Cr_2O_3 glasses, luminescent solar concentrators 7−144915
$Y_1Ba_2Cu_3O_x$ high T_c supercond., formation via metallic alloy precursor 7−144333
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
$(Y_{1-x}Yb_x)_2Ba_4Cu_6O_{14+y}$, high T_c supercond., X-ray diffr. and elec. resist. studies 7−118625
$Y_{0.77}Yb_{0.20}Er_{0.03}F_3$ IR to visible conversion phosphors, cryst. growth by two-step firing *(Japanese)* 7−85970
$(Yb,Tb,Bi)_3Fe_5O_{12}$, Bi-substituted epitaxial garnet films, magneto-optical props. 7−113151
Yb-Ba-Cu-O, high T_c supercond. oxides, mag. and transport props. 7−105804
Yb-Ba-Cu-O, high T_c supercond., critical current meas. 7−118755
Yb-Ba-Cu-O high T_c supercond. cryst. struct., X-ray diffr. Rietveld anal. 7−104677
Yb-Ba-Cu-O high T_c supercond. thin films, sputter deposition 7−112554
Yb-Ba-Cu-O high T_c supercond. film, screen printed, transition temps. 7−112556
Yb-Ba-Cu-O high T_c supercond., zero resist. above 90 K 7−125209
Yb-Er glass:Cr^{3+}, sensitisation in amplification regime, luminesc. 7−85816
Yb-Er glasses, bleaching on pumping by Nd:glass laser, obs. 7−90731
Yb_4As_3 mixed valence system, temp.-induced structural transition, mag. suscept. and resist. meas. 7−76384
$YbBa_2Cu_3O_{6+x}$, possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
$YbBa_2Cu_3O_x$, high T_c supercond., press. dependencies of T_c 7−131856
$(Yb_{1-x}Ba_x)_3Cu_2O_{7-\delta}$, superconductivity at 95 K 7−92327
Yb_4Bi_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
$YbBr_2$-YCl_2 solid soln. synthesis and X-ray diffr. structural study 7−83908
$YbCl_3.6H_2O$, spin-lattice relax. time, temp. depend. 7−138323
$Yb_xEr_{1-x}Ba_2Cu_3O_{6+y}$ high T_c supercond., comp. depend. and struct. studies 7−125190
$Yb_3Ga_5O_{12}$, single crystal, Faraday rotation 7−113153
YbH_x trihydride, prep. without H overpressure, X-ray diffr. studies 7−69860
YbI_2-RbI system, phase diagrams and struct. investig. 7−91765
$YbMo_6S_8$, Chevrel phase, microstructures, positron lifetimes 7−144166
$YbNi_2P_2$, NMR Knight shift and spin-lattice relax. time meas. 7−106042
Yb_2O_3 oxide film MIM struct. dielec. props. 7−118948
Yb_2O_3, photon- and electron-stimulated desorpt. study 7−143235
Yb_4OCl_6, prep., cryst. struct., X-ray diffr. study 7−91540
YbP, 3d core level photoemission spectra 7−138583
YbP, 4f XPS spectrum, Anderson model calc., spin-orbit splitting 7−77756
YbP, Mossbauer evidence for mag. ordering 7−77438
Yb_4Sb_3, highly correlated electron systems, UV photoemission spectra meas. 7−138608
Yb_xSi_y, photoemission studies of mixed valence 7−85954
$Yb_2(Si_2O_7)$, keivite, cryst. struct. 7−137334
$Yb_{0.9}Tm_{0.1}S_{0.8}Se_{0.2}$, valence state of Tm 7−84797
$Yb_{1-x}Tm_xSe_{1-y}S_y$ chalcogenides, Tm valence systematics, lattice parameter, mag. suscept. and resist. meas. 7−76849
$Yb_{1/3}UO_2PO_4$, lamellar solids, excited state props. 7−70881
$YbVO_3$, cryst. struct., neutron diffraction study 7−104654
ZrO_2−Yb_2O_3, plasma-sprayed coatings, thermal barrier appl. 7−106403

yttrium
see also nuclei with .....
doped $FeCr_{23}Al_5$, influence on Al_2O_3 scales growth mech. 7−119397
hot shortness 7−86319
layers on Si_3N_4, ion beam mixing study 7−106330
liquid scintillation systems, β-spectroscopy, ^{90}Sr and ^{90}Y dosimetry appl. 7−107248
proton, deuteron and α-particle beam straggling, energy loss and stopping power meas. 7−117999
surface (0001), angle resolved UV photoemission, surface state effects 7−92840
surface reconstruction, LEED and UPS studies 7−131399
X-ray laser research at the Lawrence Livermore National Laboratory Nova laser facility 7−90586
Al_2O_3:Mg,Y TLD phosphor, dosimetric characts. 7−93953
CdF_2:Y, shallow donor thermal ionisation energy, intra-donor absorpt. spectrum 7−92705
Dy-Y multilayers, occurrence of long-range helical spin ordering 7−125320
Dy-Y superlattices, long-range helimagnetic order 7−125321
Dy-Y superlattices, mag. and struct. charact. 7−125506
$Dy_3Al_5O_{12}$:Y, sp. ht. meas. near T_N 7−85312
Fe-Y compositionally modulated thin films, magnetisation, depend. on layer thickness 7−99511
Fe-Y compositionally modulated films, thermal anal. 7−99512
Gd-Y superlattices, RKKY interaction calcs. 7−125366
Gd-Y superlattices, synthetic, modulated mag. props. 7−99525
Gd-Y synthetic superlattices, polarised neutron diffr. studies 7−125322
Y^{29+}, electron impact excitation cross sections, relativistic distorted-wave calcs. 7−140388
Y:^{160}Tb, nuclear orientation meas. 7−118428
Y/Dy multilayers, long-range incommensurate mag. order, neutron diffr. studies 7−70524
Y-Dy superlattices, mag. struct., neutron diffr. study 7−99409
Y-GaAs, interface chemistry, Schottky barrier formation 7−85046
Y-H, dissociative pressure, thermodynamic and physical props. 7−105043

yttrium continued
^{90}Y and ^{90}Sr, bone uptake and retention, effect of high ^{131}I doses 7−126927
^{90}Y and ^{90}Sr, tumourigenicity in mice, effect of high ^{131}I doses to thyroid gland 7−126928

yttrium alloys
see also yttrium compounds
Inconel MA 6000 powder, dispersion strengthened Ni-base superalloy, charactn. 7−100154
metallic glasses, crystallisation, differential scanning calorimetry, neutron diffraction 7−142600
transition metal glasses, containing Hf or Y, electronic struct. 7−92054
$Y_2(Fe,Co)_{14}B$, mag. moments and electronic struct. 7−125331
Ag-Y binary liquid alloys, thermodynamic props. 7−118132
$(Ce-Y)Ru_2Si_2$ Kondo systems, low temp. heat capacity 7−70521
$Ce_{0.75}Y_{0.25}$, DHCP, mag. struct., neutron powder diffr. study 7−105890
$Ce_{1-x}Y_xPd_3$ low temp. magnetisation and elec. resist. temp. depend. meas., coherence development 7−77351
$Ce_{1-x}Y_xPd_3$, unstable valence state and conduction electron hybridisation, thermoelec. power meas. 7−76899
$Ce_{1-x}Y_xRh$ alloy, struct., mag. props. and valence behaviour, substitution and surrounding effects 7−76847
Co-Cr-Al-Y, hot corrosion by molten sulphate-vanadate deposits 7−78336
Co-Cr-Al-Y coatings on Ni alloys, effect on high-temp. fatigue 7−113784
Cu-Y, amorphous, electronic struct., photoemission and inverse photoemission studies *(French)* 7−100018
Cu-Y amorphous alloys, sputtered, electronic struct. as deduced by optical and electron spectroscopy 7−92057
$Cu_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
Cu_5Y amorphous alloys, struct., anomalous X-ray diffr. studies 7−97933
Cu_xY_{1-x}, amorphous metallic glasses, form., crystn. 7−77867
$Dy_{1-x}Y_xCo_2$, ^{161}Dy and ^{57}Fe Mossbauer studies 7−138357
$Er_xY_{1-x}Rh_{1.1}Sn_{3.6}$ system, superconductivity and mag. ordering 7−125205
Fe-20Cr-4Al-0.5Y, intermetallic phase, cryst. struct., convergent beam electron diffr. study 7−69653
Fe-N-Ce(Y), interaction of N with Ce or Y in liq. Fe, thermodynamic study *(Chinese)* 7−131329
Fe−^{154}Eu (^{169}Y), nuclear orientation meas. γ-ray anisotropies 7−118895
Gd-Y, initial ordering regime, neutron diffr. study 7−143762
$Gd_xY_{50-x}Ag_{50}$ amorphous and crystalline alloys, hyperfine interactions, Mossbauer study 7−112264
$Gd_xY_{1-x}Fe_2$, exchange parameters, omnidirectional pressure effects 7−92525
Gd−^{166}Tm(^{169}Y), nuclear orientation meas. γ-ray anisotropies 7−118895
$La_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
Mg-Y-Gd and Mg-Y-Zn-Cd, corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7−144588
Mn-Y amorphous alloys, mag. and elec. props. 7−76876
Mn-Y amorphous alloys, spin glass characts., AC suscept. study 7−105929
Nb-Y alloys, effective pair interactions, density functional theory supercell total energy calcs. 7−84710
Ni-base superalloy, oxide dispersion strengthened, abnormal grain growth 7−100242
Ni-Co-Cr-Al-Y coatings, oxidation-sulphidation behavior 7−86439
Ni-Co-Cr-Al-Y overlay coating, high temp. turbine blade appl., simulated service performance 7−78337
Ni-Co-Cr-Al-Y-Ta coatings, low press. plasma sprayed, oxidation, 850°C *(French)* 7−86466
Ni-Cr-Al-Y based alloy, heat resistant coatings, struct, props., corrosion resistance 7−144600
Ni-Cr-Al-Y coatings, sputtered, cyclic oxidation, oxide scale microstruct. 7−86467
β-NiAl:Y, oxidation, scale growth and adherence rel. to implanted Y 7−78329
NiCoCrAlY coatings, plasma-sprayed, stress rupture and creep behaviour 7−71389
$Ni_{33}Y_{67}$ amorphous ribbons, short range order, neutron and X-ray diffr. 7−97964
Pd-Ce-Y-B, diffusion and solubility of H, lattice dilation effect 7−84401
Pd-Y, amorphous, electronic struct., photoemission and inverse photoemission studies *(French)* 7−100018
Pd-Y (8 at.%), H solubility, elec. resist. anomalies, phase transition 7−98467
Pd-Y solid solutions, H diffusion 7−124598
Pd-Y solid solutions, struct., density and X-ray diffr. studies 7−76086
$Th_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
Ti-Y-Y_2O_3, oxide-dispersion hardened alloys, prep. by rotating electrode process 7−77869
U-Er-H, dissociative pressure, thermodynamic and physical props. 7−105043
$U_xY_{1-x}Al_2$ heavy fermion alloys, single-site effects, resonant photoemission studies 7−138605
$U_xY_{1-x}B_4$, spin-glass-like behaviour, obs. 7−77297
Y-Fe-B, mag. domain struct., Lorentz microscopy 7−99490
Y-Fe-Mo system, phase equilibria 7−100185
Y-Gd-Fe amorphous sputtered films, mag. props. 7−143865
Y_3Al_5, new intermetallic cpd. 7−131097
$Y_{1-x}Ce_xAl_2$ intermetallics, high temp. lattice parameters and thermal expansion 7−118136
$Y_{0.98}Ce_{0.02}Ni_2$, valence instability, resistivity and lattice constant meas. 7−70266
YCo_3, electron spin resonance and magnetocrystalline anisotropy 7−99565
$Y_{1-x}Co_x$ amorphous films, Co local anisotropy, mag. suscept. meas. 7−99523
Y_9Co_7, mag. supercond., struct. studies 7−131094
Y_9Co_7, oxidation resist. and constitution 7−113774
$Y(Co_{1-x}Al_x)_2$, weakly itinerant ferromagnet, NMR and magnetisation 7−85470
YCo_4B mag. props., suscept., exchange interactions and mean mol. field coeffs. meas. 7−70538
$Y(Co_{1-x}Cu_x)_5$, lattice constants and heat of formation 7−91841
$Y_2(Co_{1-y}Ni_y)_7H_x$, mag. props., effect of H substitution 7−99445
$Y_2Co_{14-x}Si_xB$ magnetic props., composition depend. study 7−125390
$YD_{0.17}$, order-disorder transition, D one-dimensional ordering, diffuse neutron scatt. meas. 7−91793
$Y_{1.8}Er_{0.2}Fe_{14}B$ anisotropy free energy, high field torque magnetometry meas. 7−132009
$Y_{1.8}Er_{0.2}Fe_{14}B$, Mossbauer study of spin reorientation 7−113026

yttrium alloys continued
YFe_2:V, electric quadrupole interaction, hyperfine field 7−118891
YFe_3, hyperfine interactions of ^{181}Ta, perturbed angular $\gamma\gamma$-correlation study 7−124945
$Y_{100-x}Fe_x$ metallic glass ribbons, H absorption 7−84302
Y_2Fe_{17}, Fe hyperfine field and magnetisation anisotropy, Mossbauer studies 7−138222
$Y(Fe\text{-}Co)_2$, mag. props., rigid band model 7−99390
$Y_2(Fe_{1-x}Al_x)_{14}B$, struct. and mag. props., Mossbauer study 7−113036
$YFeAlH_x$, breakdown of Fe sublattice long-range mag. order 7−99447
$Y_2Fe_{14}B$, anisotropy energy and approx. d band calcs. 7−125372
$Y_2Fe_{14}B$, crystallographic and Mossbauer study, comparison with $Nd_2Fe_{14}B$ 7−69659
$Y_2Fe_{14}B$ magnetic props., 3d magnetism 7−70530
$Y_2Fe_{14}B$ particles, mag. props. and stability 7−85375
$Y_2Fe_{14}B$ polycrystalline permanent magnets, magnetostriction and thermal expansion studies 7−125521
$Y_2Fe_{14}B$ single crysts., domain struct., Kerr magnetooptic study 7−132047
$Y_2Fe_{14}BH_x$, spin rotation, Mossbauer study 7−113025
$Y_2Fe_{14}BH_x(D_x)$, structural and mag. props. 7−85258
$Y_1(Fe_{1-x}Co_x)_{14}B$, Mossbauer effect study of mag. props. 7−113033
$Y_2(Fe_{1-x}Co_x)_{14}B$, neutron diffr. study 7−112746
$Y_2Fe_3Si_5$, electronic struct., X-ray emission spectra *(Russian)* 7−113316
YFe_6Sn_6, cryst. struct., X-ray diffr. study 7−98037
$Y_2(Fe_{1-x}T_x)_{14}B$, T=Al, Ti, Cr, Mn, Ni, alloys, magnetic and crystallographic props., comp. depend. study 7−125448
$Y_{1-x}Gd_x$ dilute alloys, low temp. helical mag. struct., comment 7−77239
$Y_{1-x}Gd_x$ single cryst. dilute alloys, mag. struct. and filed-induced transition, neutron diffr. study 7−125314
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
$(Y_{1-y}Gd_y)_2Co_7H_x$, mag. props., Gd substitution effect 7−132011
$YH_x(D_x)$ solid solns., defect study 7−98219
$(Y_{0.97}Hf_{0.03})Fe_2$, hyperfine interactions, influence of hydrogenation 7−99626
$YIrGe_2$, cryst. struct., X-ray diffr. anal. *(French)* 7−76080
$(Y_{1-y}La_y)_2Co_7H_x$, mag. props., effect of H substitution 7−99445
$Y_{0.98}La_{0.02}Ni_2$, valence instability, resistivity and lattice constant meas. 7−70266
$Y_2M_{14}B$ (M=Fe, Co), NMR and Mossbauer study 7−113035
YMn_2, itinerant electron magnet, paramag. neutron scatt. study 7−85240
YMn_2, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{0.9}Al_{0.1})_2$, longitudinal spin fluctuations, thermal depend. 7−118810
$Y(Mn_{1-x}Al_x)_2$, characteristic spin fluctuations, thermal expansion and susceptibility meas. 7−132034
YMn_2H_x, mag., crystallographic and H absorpt. props. 7−98466
$(Y_xNd_{1-x})_2Co_{17}$, ^{59}Co NMR spin echo spectra and relax. times 7−138338
Y_2Ni_7 thermal spontaneous ferromagnetism, band model 7−99454
YNiAl, electron binding energies, oxidation behaviour 7−99160
YNi_2Ge_2 cryst., deformation electron density distrib. 7−137312
$YPtGe_2$, cryst. struct., X-ray diffr. anal. *(French)* 7−76080
YPt_2In, cryst. struct. studies 7−69655
YPt_2Sn, cryst. struct. studies 7−69655
$Y_2Rh_3Si_5$, monoclinic structure, X-ray diffr. studies 7−69649
$Y_5T_4X_{10}$, (T=Ir,Rh,Os; X=Si,Ge), DC electrical resistivity and upper critical mag. field 7−84814
YTb_3, XY spin glass, rotation of anisotropy direction 7−112813
Y_2Zn_{17}, cryst. chem., struct., X-ray diffr. study 7−91528
Yb-Tl system, phase diagram and mag. props. 7−144368
$Yb_{0.17}Ba_{0.33}Cu_{0.50}$ glassy alloy as precursor for $Yb_1Ba_2Cu_3O_x$ high T_c supercond., 7−144333
$Yb_3Rh_4Sn_{13}$, supercond., Arrhenium behaviour of transition temp. degradation 7−125184

yttrium compounds
see also yttrium alloys
$Cs_2NaYCl_6:Cr^{3+}$, electron-nuclear interaction of Cr^{3+}, ligand and quadrupole interactions 7−143929
$CsYW_2O_8$, struct. coordination, luminesc. 7−131121
fluoride glass, Ho^{3+} or Er^{3+} doped, laser and luminesc. props. 7−136312
high T_c supercond., press. dependencies of T_c 7−131856
oxide superconductors, with high T_c, prep., processing, elec. and structural charactn. 7−118673
α'-sialons, Y, prep. and charactn. 7−126076
syalon ceramics for appl. at high temp. and stress 7−138807
system, elec. and thermal transport props., cation substitution effect 7−92173
ternary silicide and germanide superconds., low temp. sp. ht. meas. 7−92373
trifluoromethanesulphonate nonahydrate:$Er^{3+}(Dy^{3+})(Gd^{3+})$, spin Hamiltonian parameters, EPR study 7−125532
tunnelling recombination and luminesc. 7−113286
$Y_2Cu_2O_5$, EPR and NMR meas. 7−118710
$Yb_{1-x}Y_xBa_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$YBa_2Cu_3O_{7-x}$, high T_c supercond., Raman scatt. 7−119011
$(YEu)_3(FeGd)_5O_{12}$ ferrite-garnet epitaxial films, mobile domain boundaries, FMR study *(Russian)* 7−99535
$YBa_2Cu_3O_{9-x}$, AC Josephson effect obs. 7−99343
AlF_3-YF_3-GdF_3-CaF_2-SrF_4-BaF_2-$NaXF_6$, X=P, As, glasses, time-resolved lumin. and decay charactS. 7−70878
Al_2O_3-$ZrO_2(Y_2O_3)$, eutectic composite, cryst. growth by Stepanov technique 7−85998
$(Al_xY_{1-x})Ba_2Cu_3O_{6.5+\delta}$, high T_c supercond. obs. 7−131854
$(Ba,Y)TiO_3$ ceramics, microstruct. rel. to processing conditions 7−98487
Ba-R-Cu-O (R=Yb, Lu, Y, La), high-T_c superconductivity 7−99263
Ba-Y-Cu-O, high T_c supercond., crit. current density, diamag. suscept., charactn. by X-ray diffr. 7−99381
Ba-Y-Cu-O, high-T_c superconducting phase 7−105764
Ba-Y-Cu-O, sintered high T_c supercond., crit. current densities 7−143741
Ba-Y-Cu-O ceramics, high T_c superconductors, AC Josephson effect, point contacts 7−99346
Ba-Y-Cu-O high T_c superconds., upper critical fields and Ginzburg-Landau coherence lengths 7−99364
Ba-Y-Cu-O high T_c supercond., prep. and struct. determ. by lattice imaging 7−104701
Ba-Y-Cu-O high T_c supercond., electronic band props. 7−118361
Ba-Y-Cu-O high T_c supercond., Josephson effects up to 90 K 7−118735
Ba-Y-Cu-O high T_c supercond. perovskite phase synthesis, O partial press. depend. *(Japanese)* 7−132553
Ba-Y-Cu-O system, bulk superconductivity at 107.6 K 7−105762

yttrium compounds continued
Ba-Y-Cu-O system, bulk superconductivity at 107.6 K 7−112561
Ba-Y-Cu-O system, high T_c superconductor, cryst. struct., Rietveld anal. 7−98082
Ba-Y-Cu-O system, high T_c supercond., Meissner state 7−118706
Ba-Y-Cu-O systems, high T_c supercond. reactions with aqueous media. appls. in struct. charact. 7−119558
Ba-Y-Cu-O systems, resist., anomalous temp. depend. 7−99285
$Ba_2Cu_3YO_7$, high T_c supercond., bulk modulus and Young's modulus 7−118008
$Ba_2Eu_{0.9}Y_{0.1}Cu_3O_x$, superconducting cuprate perovskites 7−105794
BaO-Y_2O_3-CuO system, synthesis, characterisation and fabrication of high T_c supercond. oxides 7−119215
BaO-$YO_{1.5}$-SiO_2, glasses, struct., Raman spectra 7−77539
BaYCuO high T_c ceramic superconductor point contacts, AC Josephson effect RF power depend. 7−118723
BaYCuO-Nb Josephson point contact junction, IV characteristics 7−112699
$Ba_{0.4}Y_{0.6}CuO_{3-y}$, persistent current in liquid N_2 7−131858
$Ba_{0.5}Y_{0.5}Cu_1O_x$, high-T_c superconductor 7−99266
$Ba_{0.7}Y_{0.3}CuO_x$, high T_c superconductor, identification of phases 7−91543
$Ba_{1-x}Y_xCuO_{3-y}$, prep. by sintering, supercond. props. 7−99286
$Ba_{1-x}Y_xCuO_{3-y}$, supercond. props. 7−112530
$Ba_{1-x}Y_xCuO_{3-z}$ high T_c supercond., transition temp. 7−92339
$Ba_2YCu_{2.89}O_{6.8}$, high T_c superconductor, cryst. struct. determ. 7−98089
$Ba_2YCu_{2.89}O_{6.8}$, small single crystals, Meissner effect meas., struct., X-ray diffr. method 7−99326
$Ba_2YCu_{3-x}O_{7-y}$, orthorhombic single cryst. supercond., twinning, polymorphic transform., X-ray diffr. study 7−98175
$Ba_2YCu_3O_6$, semicond., struct. between 25°C and 750°C, rel. to supercond. $Ba_2YCu_3O_{7-\delta}$ 7−142738
$Ba_2YCu_3O_6$, structure and properties 7−104685
$Ba_2YCu_3O_{6.26}$, high T_c supercond., cryst. struct. by neutron diffr. 7−131110
$Ba_2YCu_3O_{6.5+x}$ single crystals, prep., struct., TGA, X-ray powder diffr. methods 7−98019
$Ba_2YCu_3O_{6.5+x}$, superconducting, O content 7−125216
$Ba_2YCu_3O_{6.9}$, high T_c supercond., electronic structs., contribution to high T_c 7−112590
$Ba_2YCu_3O_7$, ^{18}O isotope effect in high T_c supercond., phonon freq. Raman spectra meas. 7−105796
$Ba_2YCu_3O_7$ high T_c supercond., electronic struct., XPS meas. 7−98799
$Ba_2YCu_3O_7$, high T_c superconductor, crystal structure, 5-300 K neutron diffraction anal. 7−104656
$Ba_2YCu_3O_7$, high T_c supercond., composite wire fabrication 7−112718
$Ba_2YCu_3O_7$ high T_c superconductivity based on the 1D square planar $[CuO_4]_\infty$ bonding system 7−118630
$Ba_2YCu_3O_7$, high T_c superconducting oxide ceramic, fabrication 7−118677
$Ba_2YCu_3O_7$, high T_c supercond., NQR studies 7−143712
$Ba_2YCu_3O_7$, high temperature superconductor, microstructure 7−105747
$Ba_2YCu_3O_7$, high temp. supercond., cryst. struct. by X-ray and neutron powder diffr. 7−137347
$Ba_2YCu_3O_7$, high-T_c superconductor, crystal structure 7−124229
$Ba_2YCu_3O_7$, high-T_c supercond., struct. props. 7−142736
$Ba_2YCu_3O_7$, superconducting coils, fabrication 7−118681
$Ba_2YCu_3O_{7-\delta}$, high T_c supercond., electron diffr. and microscopy study 7−112589
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. sputtered thin film elec. props. study 7−118334
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond. wire fabrication by molten oxide processing 7−138711
$Ba_2YCu_3O_{7-\delta}$ high T_c supercond., bulk and thin film studies 7−143711
$Ba_2YCu_3O_{7-\delta}$ high temp. supercond., stress and field depend of crit. current 7−131951
$Ba_2YCu_3O_{7-\delta}$, supercond., struct. between 25°C and 750°C 7−142738
$Ba_2YCu_3O_{7-x}$, high T_c superconductor, cryst. struct., Rietveld refinement 7−98088
$Ba_2YCu_3O_{7-x}$, high T_c supercond., X-ray powder characterisation 7−117869
$Ba_2YCu_3O_{7-x}$, high T_c supercond., processing-property relations 7−119213
$Ba_2YCu_3O_{7-x}$ high T_c supercond., low temp. thermal processing 7−119214
$Ba_2YCu_3O_{7-x}$ high T_c supercond., cryst. struct., X-ray and TOF neutron diffr., Rietveld anal. *(Japanese)* 7−142734
$Ba_2YCu_3O_{7-x}$, high T_c supercond., twinning 7−142794
$Ba_2YCu_3O_{7-x}$, high temp. supercond., thermal analysis, 700-1000°C 7−119591
$Ba_2YCu_3O_{7-x}$, high-temp. supercond., plasma and UV optical transition studies 7−113327
$Ba_2YCu_3O_{7-x}$, orthorhombic-tetragonal transform., thermal expansion coeff., X-ray powder diffr. study 7−98432
$Ba_2YCu_3O_{7-x}$, rapidly quenched high T_c supercond., X-ray studies 7−117870
$Ba_2YCu_3O_{7-y}$, epitaxial thin films, anisotropic superconducting critical current 7−118750
$Ba_2YCu_3O_{7+x}$, high T_c supercond., photoemission resonances 7−113346
$Ba_2YCu_3O_{7+y}$, light T_c supercond., elec. struct., superconducting mechanism 7−118666
$Ba_2YCu_3O_{8-y}$, prep., high T_c supercond. props. 7−99288
$Ba_2YCu_3O_{9-\delta}$, cryst. struct., vacancy distrib., neutron powder diffr. study 7−104691
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., instabilities driven by pulsed elec. current 7−112674
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., normal-state gap transition, reflectivity spectra 7−113114
$Ba_2YCu_3O_{9-\delta}$, high T_c supercond., Raman scatt. above and below T_c 7−119022
$Ba_2YCu_3O_{9-\delta}$ high T_c supercond., ceramic processing methods 7−119205
$Ba_2YCu_3O_{9-\delta}$, high T_c superconductors, aqueous electrochemistry 7−132946
$Ba_2YCu_3O_{9-\delta}$, single phase perovskite, 91 K bulk supercond. 7−85165
$Ba_2YCu_3O_{9-\delta}$, valence band photoelectron spectra studies 7−106367
$Ba_2YCu_3O_x$, high T_c supercond., orthorhombic tetragonal transition, depend. on O content 7−118076
$Ba_2YCu_3O_x$ high T_c supercond., high temp. resistivity meas., O content depend. 7−137919
$Ba_2YCu_3O_x$, high temp. supercond., charact. rel to O_2 partial press., thermoanal. meas. 7−118057

yttrium compounds continued
$Ba_2YCu_3O_x$, high temp. supercond., O stoichiometry as function of temp. 7−118110
$Ba_2YCu_3O_x$, high-T_c superconductor, stoichiometry 7−105775
$Ba_2YCu_3O_x$, single cryst. prep. from nonstoichiometric melts, struct., elec. resist. meas. 7−98020
$Ba_xY_{1-x}CuO_3$, high T_c supercond., electronic struct., XPS study 7−112598
$Ba_xY_{1-x}CuO_{3-y}$ high T_c supercond., magnetisation and Meissner effect 7−92367
$Ba_xY_{1-x}CuO_{3-y}$, high T_c supercond., short range order, EXAFS study 7−98482
$Ba_xY_{1-x}CuO_{3-y}$, high T_c superconductor, valence and coordination of Cu ions 7−99973
$Ba_xY_{1-x}CuO_{3-y}$, high T_c superconductivity 7−105807
$Ba_2YCu_3O_{9-\delta}$, high T_c superconductor, cryst. struct. determ. 7−111506
$BaYF_5:Eu^{2+}$, Ho^{3+}, fluorescence and energy transfer spectra *(Chinese)* 7−99889
$Ba_{0-6}Y_{0.4-x}Sc_xCu$ oxides, effect of Sc on superconductivity, high T_c supercond. 7−112592
$Ba(Y_{2.3}W_{1/3})O_3$, cubic perovskites, prep., thermal stability 7−69673
$(Bi_2O_3)_{1-x}(Y_2O_3)_x$, oxide ion conductors, structural comparison 7−83895
$(Bi_2O_3)_{1-x}(Y_2O_3)_x$, phase relationships, rel. to temp. and press. 7−131299
$BiO_{1.5}YO_{1.5}$−BaO system, mixed ionic-electronic conductivity *(Japanese)* 7−125062
$(BiY)_3Fe_5O_{12}$ ion beam sputtered garnet thin films prep. 7−106405
$Bi_xY_{3-x}Fe_5O_{12}$, magnons, Brillouin scatt. study *(Chinese)* 7−118784
BiYIG films, LPE growth from MoO_3 containing fluxes 7−137743
$Bi_{2-x}Y_xO_3$ ionic conductors, struct. and dynamical props., EXAFS study 7−144170
$CaMoO_4:YNbO_4$, fluoresc. temp. depend. and time evolution studies 7−144113
$Ca_{1-x}Y_xF_{2+x}:Sm^{2+}$ mixed crysts., impurity optical props. and nonradiative decay studies 7−77637
$Cs_2NaYBr_6:Sb^{3+}$, lumin. of Sb^{3+} ions 7−77638
$Cs_2NaYCl_6:Yb^{3+}$ crystals, ENDOR studies 7−138347
CuO-Y_2O_3-BaO phase diagram, resistivity and superconductivity distributions 7−105745
Dy_2O_3-Y_2O_3, phase equilibrium, 1300-2450°C 7−92965
Er:$YAlO_3$ laser emission at 3 μm, polarisation props. 7−74936
Er:$YAlO_3$ laser lines around 3 μm 7−122992
$Er_{0.5}Y_{0.5}Ba_2Cu_3O_7$, high T_c superconductivity obs. 7−118623
$Er_xY_{1-x}Rh_4B_4$, low temp. heat capacity, mag. and supercond. phase diagrams 7−92372
Fe_2O_3-Y_2O_3 system, alkoxy derived oxide phases 7−77904
Gd_2O_3-Y_2O_3, phase equilibria, rel. to thermal stability of polymorphic modifications 7−92964
$Gd_xY_{1-x}Ba_2Cu_3O_{7-\delta}$ high T_c supercond. props., comp. depend. effects 7−125191
$Gd_xY_{3-x}Fe_5O_{12}$, polycrystalline ferrimagnet, voltage depend. of DC resistance 7−112348
$Gd_xY_{1-x}N$ dilute system, mag., elec. and optical behaviour 7−125503
HfO_2-Y_2O_3, single crystal solid solutions, elec. props. 7−105631
Ho^{3+}, Tm^{3+}, Cr^{3+}:$(Y,Sc)_3Ga_5O_{12}$ lasing at room temp. 7−68651
Ho:$YLiF_4$, efficiency laser, longitudinally pumped by semiconductor laser array 7−136311
$KY_3F_{10}:Ce^{3+}(Yb^{3+})$, spin-lattice relax., EPR spectra, Raman scatt. 7−70636
La_2O_3-Y_2O_3, solid solutions, phase equilibrium 7−92963
$(La_xY_{1-x})_2Mo_2O_7$ pyrochlore solid soln., lattice consts. and spin-glass props. 7−85308
$(La_{1-x}Y_x)_{2-y}(SrBa)_yCuO_4$ high T_c supercond. behaviour systematics 7−118646
$(LaY)_{2-x}Sr_xCuO_4$, high T_c supercond., localisation and supercond. characts. 7−125208
$LiEu_2YO_4$, structural, electronic and mag. props., X-ray diffr., Mossbauer spectra 7−92409
$LiYF_4:Er^{3+}$, fluoresc. dynamics 7−70879
$LiYF_4:Er^{3+}$, paramagnetic relaxation time, defect concentration depend. 7−132133
$LiYF_4:Er^{3+}$ laser, diode-pumped, CW and pulsed 2.8 μm operation 7−97016
$LiYF_4$:Ho cryst., IR spectra, hyperfine struct. 7−119019
$LiYF_4$:Nd amplifier, high gain 7−82584
$LiYF_4:Nd^{3+}$, cryst. field parameters, calc. by superposition of charge transfer configurations 7−143414
$LiYF_4:Tm^{3+}$ cryst., electron-deform. interaction, press.-induced linear dichroism meas. 7−70743
Na_2O-La_2O_3-Y_2O_3-P_2O_5, glass crystallisation, phase equilibria 7−84263
Na_2O-Y_2O_3-GeO_2 system ceramic ionic conductor, prep. by solid state reaction and activation energy meas. 7−84388
Na_2SO_4-$Y_2(SO_4)_3$-Al_2O_3 solid electrolyte, electrical, thermal and phase props. studies 7−84381
$Na_{0.5-x}Y_{0.5+x}F_{2+2x}$, solid solution, elec. props., excess F *(French)* 7−131358
$Na_{5+x}YAl_xSi_{4-x}O_{12}$ ceramics, cond., struct., density 7−76480
$NaYF_4$ thin film MIM structs., dielec. props. temp., freq. and film thickness depend. 7−138384
$Na_2Y(MoO_4)(PO_4)$, cryst. struct., X-ray diffr. study *(French)* 7−104648
$Na_{1+3x-y}Y_{1-x}Si_{3-y}P_yO_9$, ionic cond. props. 7−111943
Nd:YAG CW multimode laser beam transmission through fibre optic delivery system 7−136361
Nd:YAG laser, use of $LiF:F_2^-$ colour centre Q-switch 7−117207
Nd:YAG laser pump cavity reflector, metal-dielectric coating *(Korean)* 7−82577
Nd:YAG laser rod end-pumped by monolithic diode laser, 370 mW 1.06 μm CW 7−103821
Nd:YAP laser configuration with single frequency CW output at 1.079 μm 7−68716
PbF_2-ZnF_4-GaF_3-YF_3-AlF_3-NdF_3 (HoF_3), fluoride glass, laser props., calc. 7−68649
Si_3N_4:Y_2O_3, sintered reaction bonded, flash oxidation, flexural stress rupture life 7−86324
Si_3N_4-(ZrO_2-Y_2O_3), structural ceramics, effect of Y_2O_3 additions, degradation 7−71276
Si_3N_4-Y_2O_3, reaction-bonded with yttria sintering aid, grain boundary phases 7−119217
Sm_2O_3-Y_2O_3, phase equilibria, rel. to thermal stability of polymorphic modifications 7−92964
$Sm_{0.75}Y_{0.25}S$, mixed-valence cpd., phonon dispersion curves 7−118046
yttrium compounds continued
$Sm_{1-x}Y_xS$, intermediate-valence, phonon dispersion relations, breathing-shell alloy model 7−137484
$(Sr,Be,Y,La)CuO_{\Delta-y}$, high temp supercond., phonon interaction effects 7−118686
SrBaYCuO high T_c supercond., possible 65 °C superconductivity obs. 7−125195
$Sr_xY_{1-x}CuO_{3-y}$, high T_c supercond. props., AC mag. suscept., elec. resist. meas. 7−112600
$(TbY)_3(FeAl)_5O_{12}$ ferrimag. epilayers, Neel line kinks, optical microscopy obs. 7−70613
$(TbY)_3Fe_5O_{12}$ LPE films for optical mag. field sensors 7−80823
$(Tb_xY_{1-x})_3Fe_5O_{12}$, sensitivity consts., appl. for mag. field sensors 7−108583
ThF_4-ZnF_2-YF_3-BaF_2-ZrF_4-NaF-LiF-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
TiO_2-Y_2O_3, diffusion zone microstruct., interface morphology, isoconc. profile 7−92008
$Tm_xY_{3-x}Fe_5O_{12}$, magnetisation study 7−138277
$(U,Y)O_{2+x}$ solid solutions, magnetic studies 7−77259
$(U_{0.3}Y_{0.7})O_{2-x}$ semiconducting solid soln. as O_2 sensor 7−115954
$U_xY_{1-x}Se$, ferromagnetic transition, effect of Y substitution 7−77292
W-Y_2O_3-HfO_2, dispersion strengthened, fracture mechanisms, 20 to 2750°C 7−78210
$(Y,Ca)_3(Fe,Ge)_5O_{12}$ thin garnet films, magnetostatic spin waves, cubic and uniaxial anisotropy 7−138203
Y garnet ferrite wafers, elementary excitations in Bloch wall 7−143844
Y-B-Cu-O high T_c mixed phase superconductor, electron probe microanalysis 7−99282
Y-Ba-C-O, granular supercond. at 100-160 K 7−112583
Y-Ba-Ca-Cu-O high T_c supercond., transition temp. studies 7−125168
Y-Ba-Cu oxide, high T_c supercond., cryst. struct. studies 7−91545
Y-Ba-Cu oxide, high T_c superconductor, vibrating sample magnetometry study 7−99325
Y-Ba-Cu oxide superconductors, identification of phase responsible for high T_c superconductivity 7−92344
Y-Ba-Cu oxides, superconductivity, high T_c, Meissner effect 7−92362
Y-Ba-Cu-O, high T_c superconductor, superconductivity and magnetism 7−85217
Y-Ba-Cu-O, high T_c superconductivity 7−99277
Y-Ba-Cu-O, high T_c superconductors, 90 K, critical current densities at 77 K 7−99278
Y-Ba-Cu-O, high T_c supercond., resistive transition, heterovalent ion doping effect 7−99298
Y-Ba-Cu-O, high T_c superconductor, tunnelling spectroscopy 7−99347
Y-Ba-Cu-O, high T_c superconductor, critical currents and crystal structure 7−99377
Y-Ba-Cu-O, high T_c superconductor, ^{89}Y NMR study 7−106038
Y-Ba-Cu-O, high T_c supercond. shells, microstruct. effects 7−112653
Y-Ba-Cu-O, high T_c supercond., single-phase, point-contact characts. 7−112722
Y-Ba-Cu-O, high T_c supercond., Raman study of lattice modes 7−113190
Y-Ba-Cu-O, high T_c supercond., substitutional effect on T_c 7−118643
Y-Ba-Cu-O, high T_c supercond., AC susceptibility, freq. and field depend., microstruct. 7−118707
Y-Ba-Cu-O, high T_c supercond., oriented films and polycrystalline bulk samples, supercond. energy gaps study 7−118714
Y-Ba-Cu-O, high T_c supercond., AC Josephson effect obs. at 77 K 7−118731
Y-Ba-Cu-O, high T_c supercond., crit. current meas. 7−118752
Y-Ba-Cu-O, high T_c superconductivity *(Japanese)* 7−125213
Y-Ba-Cu-O, high T_c supercond., phonon density of states, neutron scatt. study 7−131247
Y-Ba-Cu-O, high T_c supercond. props. w.r.t. lattice distortion and cooling conditions 7−131831
Y-Ba-Cu-O, high T_c supercond., normal and supercond. phases, microwave absorpt., ESR studies 7−132129
Y-Ba-Cu-O, high T_c superconductor, electron diffr. study 7−137332
Y-Ba-Cu-O, high T_c supercond., mixed phase, fabrication, aging 7−138091
Y-Ba-Cu-O, high T_c supercond., thermal conductivity 7−143708
Y-Ba-Cu-O, high T_c supercond., electron tunnelling 7−143726
Y-Ba-Cu-O, high temp. superconductor, Meissner effect, X-ray diffr. 7−112646
Y-Ba-Cu-O, high temperature superconductor, AES and EELS spectra 7−106315
Y-Ba-Cu-O, high temperature superconductor, powder preparation and sintering 7−118678
Y-Ba-Cu-O, high transition temperature superconductor 7−99260
Y-Ba-Cu-O, high-T_c superconductivity and diamagnetism 7−99261
Y-Ba-Cu-O, mixed compound, low resistance state up to 210 K 7−131851
Y-Ba-Cu-O, perovskite-related oxides, high-temperature superconductivity 7−125206
Y-Ba-Cu-O, Raman spectra of high T_c supercond. $YBa_2Cu_3O_7$ and semicond. $YBa_2Cu_3O_6$ 7−125726
Y-Ba-Cu-O, reverse AC Josephson effect obs. at 240 K 7−112698
Y-Ba-Cu-O, reverse AC Josephson expts. at 240 K 7−118734
Y-Ba-Cu-O, structural, electronic props., thermal expansion meas., prep. effect 7−118672
Y-Ba-Cu-O, supercond. coatings, plasma sprayed, transition temp. above 77 K 7−112565
Y-Ba-Cu-O, superconductivity onset at 100 K, mag. and resist. meas. 7−92347
Y-Ba-Cu-O, superconductivity above liquid N_2 temp. 7−99264
Y-Ba-Cu-O, superconducting transition temperatures 7−99265
Y-Ba-Cu-O, wire type supercond. with high T_c, crit. current density meas. 7−99380
Y-Ba-Cu-O, with transition metal impurities, effects on supercond. props. 7−105789
Y-Ba-Cu-O ceramic, high T_c supercond., cryst. struct. study 7−111505
Y-Ba-Cu-O ceramic high T_c supercond., improved low contact resistance 7−118751
Y-Ba-Cu-O ceramic superconductor with critical temp. of 93.7 K; 7−112544
Y-Ba-Cu-O ceramics, high T_c supercond., processing study 7−119211
Y-Ba-Cu-O compounds, high T_c supercond., compositionally depend. T_c, DC resist. meas. 7−112569
Y-Ba-Cu-O cpds., orthorhombic and tetragonal phases, O deficiency, high T_c supercond. 7−118682
Y-Ba-Cu-O films, constricted, Josephson effects 7−143727

yttrium compounds continued
Y-Ba-Cu-O films, high T_c supercond., prep. and substrate reactions 7—138653
Y-Ba-Cu-O high T_c, supercond., multiphase mixtures and transition temp. 7—118631
Y-Ba-Cu-O high T_c, supercond., critical fields and currents up to 20 T 7—125280
Y-Ba-Cu-O high T_c oxide superconductors, Josephson effects obs. *(Japanese)* 7—138157
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7—92336
Y-Ba-Cu-O high T_c supercond., transition temp. studies 7—92340
Y-Ba-Cu-O high T_c supercond. phase struct. determ., electron microscopy study 7—98080
Y-Ba-Cu-O high T_c superconductor, revised struct. model, Rietveld anal. 7—98085
Y-Ba-Cu-O high T_c supercond., phase identification, X-ray meas. 7—98392
Y-Ba-Cu-O high T_c supercond. obs. and cryst. struct. determ. 7—99269
Y-Ba-Cu-O high T_c supercond., press. effects study 7—99273
Y-Ba-Cu-O high T_c supercond. tunnelling, energy gap obs. 7—99345
Y-Ba-Cu-O high T_c supercond., low temp. struct., neutron diffr. study 7—104675
Y-Ba-Cu-O high T_c supercond., cryst. struct., neutron diffr. anal. 7—104676
Y-Ba-Cu-O high T_c supercond. thin films, 89 K T_c and Meissner effect obs. 7—105750
Y-Ba-Cu-O high T_c supercond., zero resist. at 91.5 K, mag. suscept. meas. 7—105751
Y-Ba-Cu-O high T_c supercond., T_c meas., Sr addition effects study 7—105768
Y-Ba-Cu-O high T_c supercond., orthorhombic struct., prep. and props. 7—105771
Y-Ba-Cu-O high T_c supercond. transition props., quench temp. depend. studies 7—105772
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling and IR meas. 7—105826
Y-Ba-Cu-O high T_c supercond. ceramic Josephson junctions, DC SQUID operation at 77 K 7—105845
Y-Ba-Cu-O high T_c supercond., point-contact electron tunnelling 7—105851
Y-Ba-Cu-O high T_c supercond., energy gap, tunnelling studies 7—105852
Y-Ba-Cu-O high T_c supercond., break junction tunnelling meas. 7—105853
Y-Ba-Cu-O high T_c supercond., macroscopic quantum phenomena 7—105854
Y-Ba-Cu-O high T_c supercond., upper critical field temp. depend. meas. 7—105864
Y-Ba-Cu-O high T_c supercond. single cryst., anisotropic upper critical field study 7—105865
Y-Ba-Cu-O high T_c superconds., IR reflectivity spectra, sintering temp. depend. study 7—106170
Y-Ba-Cu-O high T_c supercond., optimum prep. conditions determ., thermal and X-ray analyses 7—106475
Y-Ba-Cu-O high T_c supercond. struct. and phys. props. study *(Russian)* 7—111470
Y-Ba-Cu-O high T_c supercond., cryst. struct. and supercond. props. 7—111489
Y-Ba-Cu-O high T_c supercond., X-ray single cryst. struct. anal. 7—111490
Y-Ba-Cu-O high T_c supercond., struct. and morphology studies 7—111514
Y-Ba-Cu-O high T_c supercond., defects, high resolution TEM studies 7—111549
Y-Ba-Cu-O high T_c supercond., vacancy order-disorder transformation 7—111550
Y-Ba-Cu-O high T_c supercond., Cu-O bond-stretching vibrs., Raman and IR absorpt. spectra 7—111790
Y-Ba-Cu-O high T_c supercond., polymorph phase relations, X-ray studies 7—111827
Y-Ba-Cu-O high T_c supercond., metamorphic phase characterisation 7—111828
Y-Ba-Cu-O high T_c supercond., transition at 105 K 7—112538
Y-Ba-Cu-O high T_c supercond., persistent current obs. 7—112550
Y-Ba-Cu-O high T_c supercond., transition temp. and cryst. struct. 7—112555
Y-Ba-Cu-O high T_c supercond., transition temp., conc. ratio and prep. effects 7—112559
Y-Ba-Cu-O high T_c supercond., upper critical field and transition temp., mag. field effects 7—112560
Y-Ba-Cu-O high T_c supercond., mag. props. study 7—112655
Y-Ba-Cu-O high T_c supercond., sp. ht. jump at 92 K 7—112658
Y-Ba-Cu-O high T_c supercond., electromagnetic response in 90 K range 7—112668
Y-Ba-Cu-O high T_c supercond., 3D, thermodynamic fluctuations obs. 7—112675
Y-Ba-Cu-O high T_c supercond. point contacts, AC Josephson effect 7—112679
Y-Ba-Cu-O high T_c supercond., inverse AC Josephson effect observations 7—112702
Y-Ba-Cu-O high T_c supercond., upper critical field, elec. resist. meas. 7—112709
Y-Ba-Cu-O high T_c supercond., electronic anisotropy 7—112724
Y-Ba-Cu-O high T_c supercond., magnetic props., positive muon studies 7—112791
Y-Ba-Cu-O high T_c supercond., ESR and mag. susceptibility studies 7—112939
Y-Ba-Cu-O high T_c supercond., polycrystalline ceramic, far IR refl. studies 7—113193
Y-Ba-Cu-O high T_c supercond. phonon struct., far IR reflectance study 7—113194
Y-Ba-Cu-O high T_c supercond., coprecipitation and solid diffusion method prep. 7—113500
Y-Ba-Cu-O high T_c supercond. perovskite, cryogenic, TEM study 7—117789
Y-Ba-Cu-O high T_c supercond., new phase obs., struct. and symm., electron diffr. and microscopy 7—117872
Y-Ba-Cu-O high T_c supercond., elec. and mag. props., comp. depend. study 7—117873
Y-Ba-Cu-O high T_c supercond., high resolution neutron diffr. struct. anal. 7—117874
yttrium compounds continued
Y-Ba-Cu-O high T_c supercond. struct., perfect, disordered and amorphous phases, electron diffr. and microscopy studies 7—117886
Y-Ba-Cu-O high T_c supercond. phase diagram and struct. charactn., comp. and sintering conditions depend. 7—117888
Y-Ba-Cu-O high T_c supercond. phase, cryst. struct. and reactivity with water 7—117890
Y-Ba-Cu-O high T_c supercond., cryst. struct., electron microscopy studies 7—117892
Y-Ba-Cu-O high T_c supercond., cryst. struct., neutron diffr. obs. 7—117893
Y-Ba-Cu-O high T_c supercond., cryst. and defect struct., electron microscopy studies 7—117895
Y-Ba-Cu-O high T_c supercond., orthorhombic cryst. struct. 7—117896
Y-Ba-Cu-O high T_c supercond., tetragonal cryst. struct., neutron diffr. studies 7—117897
Y-Ba-Cu-O high T_c supercond., unit cell dimensions and O contents 7—117898
Y-Ba-Cu-O high T_c supercond., space groups, convergent beam electron diffr. studies 7—117900
Y-Ba-Cu-O high T_c supercond., local struct. and Cu valence, O vacancy effects 7—117901
Y-Ba-Cu-O high T_c supercond., defects, TEM obs. 7—117934
Y-Ba-Cu-O high T_c supercond., twins, dislocations and phase comp., TEM study 7—117935
Y-Ba-Cu-O high T_c supercond., electron beam radiation damage studies 7—117975
Y-Ba-Cu-O high T_c supercond. single crysts., fracture toughness meas. 7—118025
Y-Ba-Cu-O high T_c supercond., phase relationships and compatibilities 7—118056
Y-Ba-Cu-O high T_c supercond., rapid solidification, supercond. transition temp. 7—118060
Y-Ba-Cu-O high T_c supercond., orthorhombic to tetragonal transition, thermogravimetric and X-ray diffr. studies 7—118083
Y-Ba-Cu-O high T_c supercond., phase transformations and microstruct. 7—118084
Y-Ba-Cu-O high T_c supercond. cryst., TEM and SEM microanal. 7—118111
Y-Ba-Cu-O high T_c supercond., nonstoichiometric phase, press. and temp. depend. studies 7—118112
Y-Ba-Cu-O high T_c supercond., Cu^{3+}/Cu^{2+} ratio, lattice parameters and onset temp. determ. 7—118116
Y-Ba-Cu-O high T_c supercond., O nonstoichiometry and struct. 7—118117
Y-Ba-Cu-O high T_c supercond. props. and struct., O deficiency depend. study 7—118120
Y-Ba-Cu-O high T_c superconductor, electronic struct. 7—118344
Y-Ba-Cu-O high T_c supercond., electronic struct., LMTO-ASA method calcs. 7—118358
Y-Ba-Cu-O high T_c supercond., electronic struct. and charge transfer excitations 7—118362
Y-Ba-Cu-O high T_c supercond. films, DC magnetron sputtering prep. and props. study 7—118604
Y-Ba-Cu-O high T_c supercond., oxidation treatment, stoichiometry and lattice parameters w.r.t. T_c 7—118605
Y-Ba-Cu-O high T_c supercond. sputtered film charactn. 7—118627
Y-Ba-Cu-O high T_c supercond., Cu valence and O deficiency, sintering atmosphere effects 7—118628
Y-Ba-Cu-O high T_c supercond., cryst. struct., transforms. and transport props. 7—118629
Y-Ba-Cu-O high T_c supercond., transition temp., annealing temp. depend. 7—118632
Y-Ba-Cu-O high T_c supercond., zero resistance temp. and AC Josephson effect 7—118633
Y-Ba-Cu-O high T_c supercond., O content-transition temp. relations 7—118635
Y-Ba-Cu-O high T_c supercond., diamagnetism and transition temp., O effects 7—118636
Y-Ba-Cu-O high T_c supercond., elec. and mag. props. meas. 7—118702
Y-Ba-Cu-O high T_c supercond. thin films, Meissner effect obs. 7—118704
Y-Ba-Cu-O high T_c supercond., complex suscept. loss meas. near T_c 7—118708
Y-Ba-Cu-O high T_c superconds., NMR and EPR studies 7—118710
Y-Ba-Cu-O high T_c supercond., search for reverse AC Josephson effect 7—118721
Y-Ba-Cu-O high T_c supercond. Josephson junctions, critical currents meas. 7—118724
Y-Ba-Cu-O high T_c supercond., weak link Josephson junction studies 7—118726
Y-Ba-Cu-O high T_c supercond., upper critical field comp. depend. meas. 7—118742
Y-Ba-Cu-O high T_c supercond., coexisting phase structs., upper critical field meas. 7—118743
Y-Ba-Cu-O high T_c supercond. single crysts., H_{c2} anisotropy obs. 7—118744
Y-Ba-Cu-O high T_c supercond., critical current meas. in high applied fields 7—118748
Y-Ba-Cu-O high T_c supercond. critical current density and temp. in highly oxidised cpds. 7—118749
Y-Ba-Cu-O high T_c supercond., EPR spectrum, zero-field effects 7—118855
Y-Ba-Cu-O high T_c supercond., positron annihilation Doppler broadened lineshape study 7—119064
Y-Ba-Cu-O high T_c supercond., single cryst. growth from high temp. solution 7—119120
Y-Ba-Cu-O high T_c supercond., prep., cryst. struct. and elec. props. 7—119125
Y-Ba-Cu-O high T_c supercond. plasma powder sprayed coating props. 7—119133
Y-Ba-Cu-O high T_c supercond. large area plasma spray deposited thick films props. 7—119134
Y-Ba-Cu-O high T_c supercond. ion beam sputtered thin films, T_c and struct. props. studies 7—119136
Y-Ba-Cu-O high T_c supercond. thin films, RF magnetron sputtering prep. 7—119139
Y-Ba-Cu-O high T_c supercond. thin film, dual magnetron sputtering prep. 7—119140
Y-Ba-Cu-O high T_c supercond., thin film and SQUID fabrication 7—119155
Y-Ba-Cu-O high T_c supercond., manufacture and testing 7—119206
Y-Ba-Cu-O high T_c supercond., sinter-forging technique 7—119207

yttrium compounds continued
Y-Ba-Cu-O high T_c supercond. ceramic wire prod., powder-in-tube process and props. 7−119208
Y-Ba-Cu-O high T_c supercond. synthesis and charactn. 7−119210
Y-Ba-Cu-O high T_c supercond., colloidal method prep. and transition temp. 7−119218
Y-Ba-Cu-O high T_c supercond. tape, surface diffusion method prep. 7−119219
Y-Ba-Cu-O high T_c supercond., phase equilibria and cryst. Chem. 7−119245
Y-Ba-Cu-O high T_c supercond. system, 950°C subsolidus phase diagram 7−119246
Y-Ba-Cu-O high T_c supercond., mixed and single phase ceramics, X-ray diffr. and EPMA studies 7−119250
Y-Ba-Cu-O high T_c supercond. ceramic, phase diagram determ. 7−119251
Y-Ba-Cu-O high T_c supercond. struct. and props., annealing effects study 7−119293
Y-Ba-Cu-O high T_c supercond. weak link, light detection appls. 7−121224
Y-Ba-Cu-O high T_c supercond., struct. and supercond. props., annealing effects 7−124188
Y-Ba-Cu-O high T_c supercond., cryst. struct. distortions 7−124189
Y-Ba-Cu-O high T_c supercond., cryst. struct. determ. 7−124199
Y-Ba-Cu-O high T_c supercond., localised electrons and cryst. struct. determ. 7−124203
Y-Ba-Cu-O high T_c supercond., heavy atom disorder, electron microscopy and diffr. studies 7−124225
Y-Ba-Cu-O high T_c supercond., struct. behaviour and superconductivity 7−124226
Y-Ba-Cu-O high T_c supercond., local struct. distortion 7−124227
Y-Ba-Cu-O high T_c supercond., O removal, temp. programmed desorption 7−124692
Y-Ba-Cu-O high T_c supercond., band struct., rough tight-binding anal. *(French)* 7−124848
Y-Ba-Cu-O high T_c supercond., high temp. elec. props. study 7−124866
Y-Ba-Cu-O high T_c supercond., annealing conditions depend., struct. and elec. resist. studies 7−125188
Y-Ba-Cu-O high T_c supercond., crystalline phases in melt quenched and annealed samples 7−125189
Y-Ba-Cu-O high T_c supercond., max. elec. resist., Meissner effect studies 7−125243
Y-Ba-Cu-O high T_c supercond., thermal cond., strong electron-phonon coupling 7−125248
Y-Ba-Cu-O high T_c supercond., lower critical fields, complex susceptibility meas. 7−125275
Y-Ba-Cu-O high T_c supercond., upper critical fields anisotropy charactn. 7−125279
Y-Ba-Cu-O high T_c supercond., trapped mag. flux spatial distrib. study 7−125283
Y-Ba-Cu-O high T_c supercond., Gd ESR spectra studies 7−125534
Y-Ba-Cu-O high T_c supercond., reflectivity meas. 7−125668
Y-Ba-Cu-O high T_c supercond. single crysts., Raman scatt study 7−125738
Y-Ba-Cu-O high T_c supercond., $L_{2,3}$ XANES studies 7−125855
Y-Ba-Cu-O high T_c supercond., pulsed laser evaporation prep. 7−126026
Y-Ba-Cu-O high T_c supercond., oriented orthorhombic polycryst. prep. 7−126044
Y-Ba-Cu-O high T_c supercond. prep. by oxidation of alloy foil, T_c and J_c studies 7−126055
Y-Ba-Cu-O high T_c supercond., prep. and physical props. 7−126058
Y-Ba-Cu-O high T_c supercond. ceramics, struct. and resistivity, heat treatment effects 7−126148
Y-Ba-Cu-O high T_c supercond., plasma oxidation and supercond. transition 7−126267
Y-Ba-Cu-O high T_c supercond. sputtered films, struct. and supercond. props. studies 7−131832
Y-Ba-Cu-O high T_c supercond., Raman scatt. study, evidence for O vacancies 7−132277
Y-Ba-Cu-O high T_c supercond., growth characts., SEM studies 7−132424
Y-Ba-Cu-O high T_c supercond., single cryst. prep. from CuO melts 7−132436
Y-Ba-Cu-O high T_c supercond., atomic local coordination and multivalent states 7−137336
Y-Ba-Cu-O high T_c supercond. film, struct. and supercond. props. 7−143290
Y-Ba-Cu-O high T_c supercond., conductivity anomalies at 40 K and 100 K under high press. 7−143468
Y-Ba-Cu-O high T_c superconds. and substituted systems, materials charactn. 7−143666
Y-Ba-Cu-O high T_c superconds., comp. depend. studies 7−143669
Y-Ba-Cu-O high T_c supercond., longitudinal and transverse magnetoresist. 7−143693
Y-Ba-Cu-O high T_c supercond., large anisotropic critical magnetisation currents 7−143703
Y-Ba-Cu-O high T_c supercond., mag. props. 7−143704
Y-Ba-Cu-O high T_c supercond., aligned crystalline grain prep. 7−143742
Y-Ba-Cu-O high T_c supercond., polycrystalline, room temp. Raman scatt. study 7−144064
Y-Ba-Cu-O high T_c supercond., quasi-particle excitations, light scatt. temp. depend. obs. 7−144082
Y-Ba-Cu-O high T_c supercond. thin film prep. by DC magnetron sputtering and props. 7−144272
Y-Ba-Cu-O high T_c superconducting filament prep. by suspension spinning method 7−144353
Y-Ba-Cu-O high T_c supercond. films, chemical etching props. study 7−144575
Y-Ba-Cu-O high temp supercond., metal composite monoliths, shock-compression fabrication 7−126057
Y-Ba-Cu-O high temp. supercond. film on $SrTiO_3$, epitaxial ordering 7−131833
Y-Ba-Cu-O high temp. superconductivity, structural and thermogravimetric analyses 7−143665
Y-Ba-Cu-O high-temperature superconductors, EPR and NMR meas. 7−118711
Y-Ba-Cu-O mixed phase system, superconductivity at 93 K at ambient press. 7−77129
Y-Ba-Cu-O multi-phase samples, superconductivity above 100 K 7−92354
Y-Ba-Cu-O sintered cpds., high T_c superconductor, elec. resistivity, critical currents, cryst. orientation 7−99379

yttrium compounds continued
Y-Ba-Cu-O superconducting cpd. system, high press. effects on supercond. transition temp. 7−77130
Y-Ba-Cu-O superconducting thin films, formation on $SrTiO_3$ substrate 7−144290
Y-Ba-Cu-O superconductor, high T_c, crystallographic description of phases 7−98095
Y-Ba-Cu-O system, antiphase domain boundaries in superconducting phase, high T_c superconductor 7−104689
Y-Ba-Cu-O system, high supercond. transition temp., elec. resist., mag. meas., heat treatment effects 7−99257
Y-Ba-Cu-O system, high supercond., role of optical phonons, 1 K absorpt. study *(Russian)* 7−125722
Y-Ba-Cu-O system, high T_c superconductor, struct. identification 7−98087
Y-Ba-Cu-O system, high T_c superconductor, estimation of filling factor 7−98775
Y-Ba-Cu-O system, high T_c superconductor, Meissner effect, resistivity 7−99323
Y-Ba-Cu-O system, high T_c superconductor, magnetisation meas. 7−99324
Y-Ba-Cu-O system, high T_c supercond., high field props. 7−99365
Y-Ba-Cu-O system, high temp. superconductivity 7−112606
Y-Ba-Cu-O system, high T_c supercond., effects of crystal lattice distortions on superconductivity 7−117882
Y-Ba-Cu-O system, high T_c supercond., microstruct. study of phases 7−117939
Y-Ba-Cu-O system, high T_c superconductivity 7−118606
Y-Ba-Cu-O system, high T_c superconductivity, phase diagram 7−118612
Y-Ba-Cu-O system, high T_c supercond., phase dependent superconductivity 7−118642
Y-Ba-Cu-O system, high T_c supercond., struct., physical props. *(Russian)* 7−125170
Y-Ba-Cu-O system, high T_c supercond., resistivity, upper limit *(Russian)* 7−125173
Y-Ba-Cu-O system, high T_c supercond., elec. and mag. props. *(Russian)* 7−125174
Y-Ba-Cu-O system, high T_c supercond., peculiarities of resistive state *(Russian)* 7−125175
Y-Ba-Cu-O system, high T_c supercond., tunnelling *(Russian)* 7−125265
Y-Ba-Cu-O system, high T_c supercond., kinetic props. *(Russian)* 7−125285
Y-Ba-Cu-O system, high T_c supercond., EPR studies *(Russian)* 7−125527
Y-Ba-Cu-O system, high T_c supercond., superconducting props. 7−138107
Y-Ba-Cu-O system, regions of possible cpd. formation, high T_c superconductivity 7−112571
Y-Ba-Cu-O system, superconductivity at 91 K 7−112551
Y-Ba-Cu-O systems, high T_c supercond., elec. and mag. props. 7−118622
Y-Ba-Cu-O systems, high T_c supercond., energy gaps, thermodynamic fluctuations 7−118665
Y-Ba-Cu-O systems high T_c supercond., lattice distortions and superconductivity effect of O content 7−143662
Y-Ba-Cu-O thin films, high T_c supercond., prep by RF magnetron sputtering 7−144274
Y-Ba-Cu-O thin films, supercond., props. 7−105791
Y-Ba-Cu-O thin films and tunnel junctions, high T_c supercond., struct. stability, kinetic processes 7−118737
Y-Ba-Cu-O:F, high-T_c superconductors 7−138104
Y-Ba-Sc-Cu-O high T_c supercond., struct. and microstruct. obs. 7−112602
Y-Ba-Sr-Cu-O, bulk high T_c supercond., inverse AC Josephson effect obs. 7−118730
Y-Ba-Sr-Cu-O system, high temp. superconductivity 7−112606
Y-Ba-(Sr-)Cu-O high T_c supercond., inverse AC Josephson effect studies 7−143722
Y-Ba(Sr)-Cu-O high temp. supercond., plasmons 7−105814
Y-based ceramics, high T_c supercond., latt. parameters, charge density *(Russian)* 7−124194
Y-Ce-Ba-Cu-O high T_c supercond., transition temp. studies 7−125168
Y-H(D) solid soln., long and short-range ordering 7−84303
YAG ceramics, mech. props. rel. to process parameters 7−86100
YAG ceramics, prep., microstruct., mech. and optical props. 7−138713
YAG, high quality dielec. cryst., exptl. obs. of fundamental microwave absorption 7−85537
YAG, phonon-phonon interaction, microwave US wave attenuation 7−84140
YAG, poly- and monocrystals, synthesis, X-ray quantitative determ. of phases in batch 7−126053
YAG single crystals, growth and microscopic studies 7−85990
YAG single crystals, flux grown, obs. of macrospiral 7−124239
YAG, synthesis by combined deposition of hydroxides 7−92846
YAG:Ce, ionising particle tracks, activator effects 7−129517
YAG:Ce phosphor powders, prep. 7−71102
YAG:Cr^{3+}, energy states calcs. 7−143404
YAG:Cr^{3+}, high-energy levels, luminesc. and UV absorpt. spectra 7−125789
YAG:Er^{3+} Stark level ballistic phonon energy reson. absorpt. coeff. meas. 7−69839
YAG:Fe, implanted, annealed, Morin transition 7−125379
YAG:Fe^+, Fe^+ ion implantations 7−91612
YAG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
YAG:Nd crysts., defects, laser light scatt. tomography 7−98151
YAG:Nd laser crystal growth, comparative studies 7−77792
YAG:Nd laser hosts, spectroscopic and laser props. in presence of colour centres 7−74939
YAG:Nd single cryst. fibre growth and nonlinear optical use 7−75069
YAG:Nd stoichiometry charactn., absorption spectroscopic method 7−98481
YAG:Nd^{3+}, excitons, thermoluminesc. study 7−125815
YAG:Nd^{3+}, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
YAG:Nd^{3+} X-ray excited phosphoresc. kinetics model *(Russian)* 7−70911
YAG:Ni luminescent crysts., elec. cond. and defect struct. props. correl. 7−131721
YAG:Ti, optical transitions 7−85795
$Y_3Al_xFe_{5-x}O_{12}$, Mossbauer effect study of spin fluctuation 7−85491
$Y_3Al_xGa_yFe_{5-x-y}O_{12}$, magnetoelastic and magnetostatic waves, dislocation accumulation 7−132002
$YAlO_3$ doped single cryst., growth and struct. props. 7−132434

yttrium compounds continued
- $YAlO_3$:Er laser, stimulated emission at 1.662, 1.677, 1.706 and 1.729 μm 7−68646
- $YAlO_3$:Ho^{3+}, orthorhombic crystal, lumin., stimulated emission 7−113228
- $YAlO_3$:Ho^{3+}(Er^{3+}) orthorhombic crysts., luminesc. and multiwave stimulated emission obs. *(Japanese)* 7−119028
- $YAlO_3$:Nd perovskite picosec. laser, temporal charact. study 7−103822
- $YAlO_3$:Nd^{3+}, laser crystals, unstable colour centres, form. and visible absorpt. spectra study 7−106210
- $Y_3Al_5O_{12}$:Sm^{3+}, absorpt. spectra and energy levels 7−90177
- $Y_2(Al_{2-x}Sc_x)Al_3O_{12}$:$Mo^{3+}$, ESR of Mo^{3+} ions 7−138321
- $Y_4Al(SiO_4)_2(OH)_2F_5$, silicate kuliokite, cryst. struct. 7−104655
- $YAsO_4$, polycryst. samples, dielec. props., temp. and freq. depend. 7−106076
- YB_6, point contact spectroscopy by automatic in-situ cleaning 7−77049
- YB_6 supercond. cluster cpd., electron tunnelling 7−138140
- YBO_3:rare earths, X-ray luminescence studies 7−132325
- $YBa_2(Ag_xCu_{1-x})_3O_{9+y}$, high T_c supercond., comp. depend. of T_c 7−99290
- YBaAlCuO high T_c superconductivity studies 7−105769
- $YBa_2Cu_{3-y}Ni_yO_{7-\delta}$, superconducting props., Cu site effects 7−112557
- $YBa_2Cu_3O_x$, high T_c supercond., synthesis under O_2 press. and superconductivity 7−143664
- $YBa_2Cu_{3(1-y)}Fe_{3y}O_7$, high T_c supercond., effect of substitution of Cu by Fe 7−143672
- $YBa_2(Cu_{1-x}M_x)_3O_{7-\delta}$ (M=Fe, Co, Ni, Zn, Ga) high-T_c superconductivity 7−118638
- $Y_{1.2}Ba_{0.8}Cu_{0.95}M_{0.05}O_{4-\gamma}$ (M=Cu, Ag, Al), high T_c oxide superconductors, elec. studies 7−118615
- YBaCu(Nb)O high T_c superconds., lattice instability, ultrasonic meas. 7−138132
- YBaCuO, break junction, Josephson effect above 77 K 7−125259
- YBaCuO, grain boundary superconductivity 7−118679
- YBaCuO, high T_c ceramic supercond., positron annihilation study 7−144158
- YBaCuO, high T_c superconductivity obs. 7−105754
- YBaCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118733
- YBaCuO high T_c superconductors, vacuum electron tunnelling meas. 7−118739
- YBaCuO high T_c supercond. multilayer e-beam deposited thin film props. 7−138090
- YBaCuO, high T_c supercond., LO strong coupling superconductivity theory 7−138116
- YBaCuO high T_c supercond., thin film, pulsed laser etching study 7−138858
- YBaCuO high T_c supercond. Josephson junctions, DC SQUID operation 7−143718
- YBaCuO oxide ceramic superconds., development, review 7−118603
- YBaCuO superconducting thin films, high T_c, sputter deposition method and superconducting props. 7−92345
- YBaCuO/Nb tunnel type Josephson junctions, fabrication and charact. 7−143717
- YBaCuO-Nb high T_c supercond. point contacts, AC Josephson effect freq. depend. study 7−125271
- $YBa_2Cu_2O_{7-y}$ high T_c supercond., upper critical field meas. 7−118745
- $YBa_2Cu_{2.9}O_{9-x}$, high T_c supercond., valence fluctuations and O dimerisation from XPS 7−144245
- $YBa_2Cu_3O_6$ layered tetragonal perovskite struct., high T_c supercond. 7−98079
- $YBa_2Cu_3O_6$, superconductivity above 90 K 7−118650
- $YBa_2Cu_3O_{6-9}$, high T_c supercond., unoccupied electron states surface phenomena, inverse PES study 7−144154
- $YBa_2Cu_3O_{6+\delta}$ high T_c supercond., positron annihilation lifetime and Doppler broadening energy spectra 7−144159
- $YBa_2Cu_3O_{6+x}$, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
- $YBa_2Cu_3O_{6+x}$, high T_c supercond., thermodynamic desorption of O 7−131427
- $YBa_2Cu_3O_{6+x}$, high-T_c supercond., surface impedance meas. 7−118713
- $YBa_2Cu_3O_{6+x}$, photoemission spectroscopy 7−143710
- $YBa_2Cu_3O_{6+x}$, possible high T_c supercond., O2p-Cu3d holes, XPS and XAS studies 7−144242
- $YBa_2Cu_3O_{6+y}$, high T_c supercond., flux pinning, critical current density 7−131948
- $YBa_2Cu_3O_{68}$, high T_c supercond., electromag. effects 7−138131
- $YBa_2Cu_3O_{6.5}$, prep., supercond. props. 7−118668
- $YBa_2Cu_3O_{6.5+x}$, high T_c supercond., far IR props. 7−119021
- $YBa_2Cu_3O_{6.7}$, strongly correl. electronic states, XPS, UPS obs. 7−105446
- $YBa_2Cu_3O_{6.84}$, high T_c supercond., overstoichiometric defects, HREM study 7−111635
- $YBa_2Cu_3O_{6.84}$, high T_c supercond., O substoichiometry and cationic disorder, HREM study 7−111636
- $YBa_2Cu_3O_{6.9}$, high T_c superconductor, microstruct., O ordering, planar defects 7−111499
- $YBa_2Cu_3O_{6.9}$, high T_c supercond., microstructure, O ordering, TEM study 7−117919
- $YBa_2Cu_3O_{6.9}$-Fe, high T_c supercond., reaction and intermixing at Fe interface 7−137631
- $YBa_2Cu_3O_7$, 93 K superconductor, cryst. struct. at 298 and 79.5 K 7−104690
- $YBa_2Cu_3O_7$, ceramic processed, superconducting critical props. 7−118753
- $YBa_2Cu_3O_7$, cryst. struct. of high-temp. superconductor 7−111501
- $YBa_2Cu_3O_7$, electron struct., ground-state props. and photoemission spectra 7−138588
- $YBa_2Cu_3O_7$, extreme type II supercond., magnetisation meas. 7−138124
- $YBa_2Cu_3O_7$, high T_c superconductor, 94 K, press. depend. of transition temp. 7−105785
- $YBa_2Cu_3O_7$, high T_c superconductor, UPS, reson. photoemission studies 7−106368
- $YBa_2Cu_3O_7$, high T_c superconductor, solid state chemistry 7−112564
- $YBa_2Cu_3O_7$, high T_c supercond., thermal anal., X-ray and neutron diffraction study 7−112645
- $YBa_2Cu_3O_7$ high T_c supercond. thin film based SQUIDs, fabrication and operation 7−112725
- $YBa_2Cu_3O_7$, high T_c supercond., cryst. struct. by single-cryst. X-ray diffr. 7−117903
- $YBa_2Cu_3O_7$, high T_c supercond., connective nature of superconductivity 7−118662
- $YBa_2Cu_3O_7$, high T_c supercond. ceramics, prep. and props. 7−118671
- $YBa_2Cu_3O_7$, high T_c supercond., absorption of EM radiation 7−118712

yttrium compounds continued
- $YBa_2Cu_3O_7$, high T_c supercond., prep. methods 7−119122
- $YBa_2Cu_3O_7$, high T_c supercond., processing and props. 7−119212
- $YBa_2Cu_3O_7$, high T_c superconductor, thermopower 7−125247
- $YBa_2Cu_3O_7$, high T_c supercond., temp. depend. bond length change, XPS study 7−131088
- $YBa_2Cu_3O_7$, high T_c supercond., O isotope effect 7−131861
- $YBa_2Cu_3O_7$, high T_c supercond., bulk modulus anomalies at T_c 7−131898
- $YBa_2Cu_3O_7$, high T_c supercond., photoemission study through supercond. transition, O dimerisation 7−132408
- $YBa_2Cu_3O_7$, high T_c supercond., struct. at elevated temps., orthorhombic-tetragonal transition 7−137344
- $YBa_2Cu_3O_7$, high T_c supercond., shear transformation, twin formation 7−137374
- $YBa_2Cu_3O_7$, high T_c supercond., critical current densities 7−138176
- $YBa_2Cu_3O_7$, high T_c supercond., NMR and NQR studies 7−138345
- $YBa_2Cu_3O_7$ high T_c supercond., isotope effect absence w.r.t. phonon-mediated pairing mechanism 7−143674
- $YBa_2Cu_3O_7$ high T_c supercond., lattice instabilities, Raman and IR spectra studies 7−144068
- $YBa_2Cu_3O_7$, high T_c supercond., X-ray absorption meas. 7−144178
- $YBa_2Cu_3O_7$ high T_c supercond., valence band and O(1s) region photoemission studies 7−144241
- $YBa_2Cu_3O_7$, high temp. superconductor, EPR study 7−85196
- $YBa_2Cu_3O_7$, high temperature superconductor, preparation and characterisation 7−105746
- $YBa_2Cu_3O_7$, high-T_c supercond., single-phase, upper critical field 7−131933
- $YBa_2Cu_3O_7$, orthorhombic-tetragonal phase transition, X-ray powder diffr. study 7−117857
- $YBa_2Cu_3O_7$, resistivity to 1100 K 7−137938
- $YBa_2Cu_3O_7$, single crystals, growth and high T_c superconductivity 7−118639
- $YBa_2Cu_3O_7$, single phase high T_c supercond., thin superconducting shells 7−118664
- $YBa_2Cu_3O_7$, supercond. transition temp., press. effect 7−99301
- $YBa_2Cu_3O_7$, superconducting phase, water interaction 7−125237
- $YBa_2Cu_3O_7$, superconducting ceramic oxygen ordering, TEM study 7−137343
- $YBa_2Cu_3O_7$ supercond. ceramic, thermal expansion 7−143062
- $YBa_2Cu_3O_7$ thin films, electron beam deposition, structural, supercond. props. 7−118335
- $YBa_2Cu_3O_7$, ultrasound studies, high T_c superconductors 7−118718
- $YBa_2Cu_3O_7$-PbSn point contact junctions, AC-Josephson effect 7−112705
- $YBa_2Cu_3O_{7-8}$, high T_c supercond., bonds, bands, charge transfer excitations and supercond. 7−124829
- $YBa_2Cu_3O_{7-\delta}$, ^{18}O isotope effect in high T_c supercond. 7−105797
- $YBa_2Cu_3O_{7-\delta}$ and substituted systems, high T_c supercond. prep. 7−144354
- $YBa_2Cu_3O_{7-\delta}$, electronic structure and excitonic-enhanced superconductivity 7−138103
- $YBa_2Cu_3O_{7-\delta}$, heat capacity at superconducting transition temp. 7−131890
- $YBa_2Cu_3O_{7-\delta}$ high T_c supercond., energy gap determ., electron tunnelling meas. 7−112697
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond. based Josephson point contact, elec. charact. 7−118738
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., for IR spectroscopy 7−119012
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., X-ray diffr. and ESR studies 7−124214
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., electronic struct. and props. 7−124828
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., US study of elastic props. 7−125252
- $YBa_2Cu_3O_{7-\delta}$, high T_c superconductivity and structure 7−131863
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., sp. ht. anomaly at superconducting transition 7−131891
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond. film, crit. current densities and transport 7−131950
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., thermal and mag. props. 7−138127
- $YBa_2Cu_3O_{7-\delta}$ high T_c supercond., ultrasonic attenuation meas. 7−138133
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., Cu and Y NQR and NMR 7−138137
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., anomalous temp. depend. of H_{c1} 7−143698
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond., mag. susceptibility, influence of mag. rare-earth ion substitution 7−143701
- $YBa_2Cu_3O_{7-\delta}$ high T_c supercond., critical current density determ. 7−143740
- $YBa_2Cu_3O_{7-\delta}$ high T_c supercond., IR spectra studies 7−144067
- $YBa_2Cu_3O_{7-\delta}$, high T_c supercond. ceramic sinters, improving inter-grain contact 7−144327
- $YBa_2Cu_3O_{7-\delta}$, high temperature superconductor, O mobility and isotope effect 7−118680
- $YBa_2Cu_3O_{7-\delta}$, high temp. supercond., interrelation of struct., dimensionality and superconductivity 7−131837
- $YBa_2Cu_3O_{7-\delta}$, high-T_c supercond., internal mag. fields from muon spin rotations expts. 7−138121
- $YBa_2Cu_3O_{7-\delta}$, rapidly solidified supercond., preparation, crystallisation and props. 7−143663
- $YBa_2Cu_3O_{7-\delta}$, single-phase high-temperature superconductor, crystal structure 7−117871
- $YBa_2Cu_3O_{7-\delta}$, struct. phase transition, role of dimensionality for high T_c superconduction 7−112588
- $YBa_2Cu_3O_{7-\delta}$, superconductivity, stoichiometry and normal-state props. 7−138099
- $YBa_2Cu_3O_{7-\delta}$, thermoelec. power and electron-phonon coupling 7−112660
- $YBa_2Cu_3O_{7-\delta}$, upper critical field meas. in pulsed mag. field 7−99366
- $YBa_2Cu_3O_{7-x}$, cryst. struct. of high-temp. superconductor 7−111502
- $YBa_2Cu_3O_{7-x}$, epitaxial film, high T_c supercond., critical current meas. 7−112723
- $YBa_2Cu_3O_{7-x}$, excitonic absorption and superconductivity 7−125253
- $YBa_2Cu_3O_{7-x}$ high T_c superconductor, variation of stoichiometry, cell symmetry on temp. and press. 7−111498
- $YBa_2Cu_3O_{7-x}$, high T_c superconductor, cryst. struct., cryst. chemistry 7−111500
- $YBa_2Cu_3O_{7-x}$, high T_c supercond., structural, mag. and electronic props., effect of O content 7−112575
- $YBa_2Cu_3O_{7-x}$ high T_c superconducting perovskites, O stoichiometry, resistivity, mag. suscept. and X-ray diffr. meas. 7−118657
- $YBa_2Cu_3O_{7-x}$, high T_c supercond., correlated valence fluctuation model 7−118685

yttrium compounds continued
$YBa_2Cu_3O_{7-x}$, high T_c supercond., microstructural effects on magnetisation 7−118701
$YBa_2Cu_3O_{7-x}$, high T_c supercond., H_{c2} anisotropy, resistive transition 7−131938
$YBa_2Cu_3O_{7-x}$, high T_c supercond., orthorhombic-tetragonal transition, order-disorder model 7−137551
$YBa_2Cu_3O_{7-x}$, high T_c supercond., sp. ht. study 7−138130
$YBa_2Cu_3O_{7-x}$, high T_c supercond., O ordering and orthorhombic to tetragonal phase transition 7−142995
$YBa_2Cu_3O_{7-x}$ high T_c supercond., single cryst. resistivity anisotropy and Hall const. meas. 7−143488
$YBa_2Cu_3O_{7-x}$ high T_c supercond., magnetic penetration depth, polarised neutron refl. meas. 7−143700
$YBa_2Cu_3O_{7-x}$ high T_c supercond. film prep. by RF magnetron sputtering 7−144352
$YBa_2Cu_3O_{7-x}$, high temp. supercond., zero elec. resist. at 106 K 7−105777
$YBa_2Cu_3O_{7-x}$, high-temperature superconductor, laboratory synthesis 7−112649
$YBa_2Cu_3O_{7-x}$, perovskite oxides, processing and supercond. props., high T_c supercond. 7−118607
$YBa_2Cu_3O_{7-x}$, superconducting perovskites, rare-earth doping 7−118675
$YBa_2Cu_3O_{7-x}$, superconducting microstructure and crit. current 7−131974
$YBa_2Cu_3O_{7-x}$, supercond., high temp. X-ray powder diffr., 298-1300 K 7−142997
$YBa_2Cu_3O_{7-x}$ thin films, fabrication and props. of supercond. device structures 7−143716
$YBa_2Cu_3O_{7-y}$, high T_c supercond., microstructural irregularities 7−118115
$YBa_2Cu_3O_{7-y}$, high T_c supercond., free carrier relax. dynamics in normal state, reflectivity study 7−131662
$YBa_2Cu_3O_{7-y}$, high T_c supercond., upper critical fields, anisotropy limits 7−131939
$YBa_2Cu_3O_{7-y}$, high T_c supercond., far IR reflectivity spectrum, temp. depend. 7−132278
$YBa_2Cu_3O_{7-y}$, high T_c supercond., normal state props., electron correlations 7−143441
$YBa_2Cu_3O_{7+\delta}$, high T_c supercond., structure-property relations 7−98483
$YBa_2Cu_3O_{7+x}$, high T_c supercond., 123 struct. and comp. 7−118669
$YBa_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$YBa_2Cu_3O_{7\pm\delta}$, identification of high temp. superconducting phase 7−85169
$YBa_2Cu_3O_{7\pm\varepsilon}$, high T_c supercond., orthorhombic twins, oriented domains 7−142795
$YBa_2Cu_3O_{8-x}$, 90 K bulk superconductor, room temp. cryst. struct. 7−98096
$YBa_2Cu_3O_{8-y}$, mixed valence copper perovskite with O defect, high temp. superconductor at 91 K *(French)* 7−99240
$YBa_2Cu_3O_{8-y}$, SQUID behaviour 7−118736
$YBa_2Cu_3O_{8-y}$, supercond. props., effects of comp. var. and annealing in O_2 7−105788
$YBa_2Cu_3O_{8-y}$, superconducting phase identification 7−112545
$YBa_2Cu_3O_{9-\Delta}$, high T_c supercond., thermal cond. and elec. resist. 7−112661
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., transport props., electron deficiency, comparison with $La_{2-x}Sr_xCuO_{4-\delta}$ 7−118609
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., upper crit. field meas. 7−118740
$YBa_2Cu_3O_{9-\delta}$, high T_c supercond., mag. penetration depth, temp. depend., s-wave pairing 7−131885
$YBa_2Cu_3O_{9-\delta}$ high T_c supercond., props., microstruct. and resistive transitions 7−137578
$YBa_2Cu_3O_{9-\delta}$, high temp. supercond. props., elec. resist., mag. suscept. meas. 7−112599
$YBa_2Cu_3O_{9-\delta}$, normal and supercond., NMR of ^{89}Y 7−118717
$YBa_2Cu_3O_{9-\delta}$, RF superconductivity at 3 GHz, obs., high T_c supercond. 7−112547
$YBa_2Cu_3O_{9-\delta}$, superconductor, soft X-ray emission spectra 7−105835
$YBa_2Cu_3O_{9-\gamma}$, high T_c supercond., effect of prep. on phys. props. 7−131835
$YBa_2Cu_3O_{9-x}$, elasticity and X-ray diffr. studies, 90-260 K 7−131895
$YBa_2Cu_3O_{9-x}$, high T_c supercond., forbidden change in elastic modulus at T_c 7−131857
$YBa_2Cu_3O_{9-x}$, high T_c supercond., mag. props. 7−138123
$YBa_2Cu_3O_{9-x}$, perovskite oxide superconductor, crystallography and microstructure 7−111467
$YBa_2Cu_3O_{9-x}$, relationship between processing, struct. and high T_c supercond. props. 7−118670
$YBa_2Cu_3O_{9-y}$, high T_c superconductor, photoemission studies 7−106382
$YBa_2Cu_3O_{9-y}$, high T_c supercond., orthorhombic and tetragonal phases 7−118077
$YBa_2Cu_3O_{9-y}$, high T_c supercond., mag. hysteresis phenomena 7−131876
$YBa_2Cu_3O_{9-y}$ single phase cpd., supercond. at 95 K 7−85167
$YBa_2Cu_3O_{9-y}$ single phase cpd., high T_c superconductor at 95 K 7−118661
$YBa_2Cu_3O_{9-y}$ single phase cpd., high temp superconducting behaviour 7−118667
$YBa_2Cu_3O_{\sim7}$, high T_c supercond., Cu 3d level localisation, XPS study 7−138611
$YBa_2Cu_3O_{\sim7}$, high-T_c superconductor, delocalised Cu states, XANES study 7−125256
$YBa_2Cu_3O_x$, bulk sintered high T_c supercond., transport critical current 7−118747
$YBa_2Cu_3O_x$ ceramic high T_c supercond., prep. and props. 7−118608
$YBa_2Cu_3O_x$, cryst. struct., X-ray diffr. study 7−98091
$YBa_2Cu_3O_x$, high T_c supercond., struct., transport and mag. props. 7−99373
$YBa_2Cu_3O_x$, high T_c supercond., elec., mech. and US props. 7−118709
$YBa_2Cu_3O_x$, high T_c supercond. transport critical current characts. 7−118754
$YBa_2Cu_3O_x$, high T_c supercond., supercond. props. and microstructures 7−118756
$YBa_2Cu_3O_x$, high T_c supercond., polycrystalline, fracture props. 7−119329
$YBa_2Cu_3O_x$, high T_c supercond., variation of T_c with O content 7−125182
$YBa_2Cu_3O_x$, high T_c supercond., press. dependencies of T_c 7−131856
$YBa_2Cu_3O_x$ high T_c supercond., Madelung pots. calcs. 7−142689
$YBa_2Cu_3O_x$, high T_c supercond., band struct. and O vacancy distrib. 7−143316

yttrium compounds continued
$YBa_2Cu_3O_x$ high T_c supercond. and semicond. samples, electronic struct., stoichiometry effects 7−143342
$YBa_2Cu_3O_x$, high-T_c superconductors, electronic, magnetic and phononic props. 7−118676
$YBa_2Cu_3O_x$, perovskite superconductor, phonon spectra 7−104930
$YBa_2Cu_3O_x$ plasma and hypersonic flame powder spraying prep. and props. 7−119132
$YBa_2Cu_3O_x$, single cryst., supercond. and struct. 7−92349
$YBa_2Cu_3O_x$ single crysts., high T_c supercond., growth, transition temp. 7−138632
$YBa_2Cu_3O_x$, single crystal growth, with supercond. transition above 90 K 7−144265
$YBa_2Cu_3O_x$, supercond., weak field magnetisation rel. to microstructure 7−105831
$YBa_2Cu_3O_x$, superconducting oxide, electron microscopy and microanalysis 7−125164
$YBa_2Cu_3O_x$ supercond. thin films, high T_c, prep. and transition temps. 7−131469
$YBa_2Cu_3O_x$ thin films, ion implanted, radiation damage effects on supercond. and structural props. 7−112531
$YBa_2Cu_3O_x$:F, high T_c supercond., zero resistance at 148.5 K 7−143678
$YBa_2Cu_3O_y$, extruded wires, superconducting crit. currents 7−131975
$YBa_2Cu_3O_y$, high T_c superconductor, X-ray and electron microscopy studies, struct. and composition 7−98086
$YBa_2Cu_3O_y$, high T_c supercond., Raman spectrum temp. depend. 7−119010
$YBa_2Cu_3O_y$, high T_c supercond., electrodynamic response 7−131896
$YBa_2Cu_3O_y$, high T_c supercond., 90 K supercond., critical O conc., phase diagrams 7−142994
$YBa_2Cu_3O_y$, high T_c supercond., orthorhombic and tetragonal phases, valency of Cu ions, X-ray absorpt. edge 7−144174
$YBa_2Cu_3O_y$, high temp. supercond., ultrasound anomaly at T_c 7−118716
$YBa_2Cu_3O_y$ superconducting ceramics, transition temps, N_2 exposure effects 7−125196
$YBa_2Cu_3O_z$, high T_c superconductivity and paramagnetic props. study 7−112654
$Y_{0.2}Ba_{0.8}CuO_x$, high T_c supercond., paramag. reson. of Cu^{2+} ions 7−112667
$Y_{0.4}Ba_{0.6}CuO_{2.2}$ high T_c supercond., cryst. struct. studies 7−91546
$(Y_{0.4}Ba_{0.6})CuO_3$, high-temp. supercond. 7−105748
$Y_{0.4}Ba_{0.6}CuO_y$, supercond. transition temp., press. effect 7−99289
$Y_{0.4}Ba_{0.6}CuO_y$, upper critical field meas. in pulsed mag. field 7−99366
$(Y_{0.6}Ba_{0.4})_2CuO_{4-y}$, high T_c supercond. props., FIR transmission spectra 7−113204
$Y_{0.7}Ba_{0.3}CuO_{2.3+\delta}$ high T_c supercond., resistive investigations, possible superconductivity at 140 K 7−143668
$Y_{0.9}Ba_{2.1}Cu_3O_6$, cryst. struct. of oxide not exhibiting superconductivity 7−104686
$Y_{1-x}Ba_xCuO_y$, single-phase, superconductivity at 91 K 7−105766
$(Y_{1-x}Ba_x)_2CuO_4$, high temp. supercond. 7−105761
$(Y_{1-x}Ba_x)_2CuO_4$, high T_c superconductivity liquid N_2 temps. 7−112562
$(Y_{1-x}Ba_x)_2CuO_{4-\delta}$ 7−112535
$(Y_{1-x}Ba_x)_3Cu_3O_{7-y}$, supercond., structural, electronic and mag. props., comp. depend. 7−99295
$(Y_{1-x}Ba_x)_3Cu_3O_{8-\delta}$, high T_c supercond., transition temp., crit. current density, persistent current at 77 K 7−99299
$Y_{12}Ba_{0.8}CuO_4$, supercond. phase transition obs. 7−112536
$Y_1Ba_2Cu_3O_7$, high T_c supercond., resistivity between 80 and 1240 K 7−137915
$Y_1Ba_2Cu_3O_7$ high T_c superconductor, valence electronic struct. study 7−143341
$Y_1Ba_2Cu_3O_{7-\delta}$, high T_c composite cpd, mag. behaviour 7−138125
$Y_1Ba_2Cu_3O_{7-x}$, high temp. supercond., single cryst., anisotropic nature of supercond. 7−131940
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., microstruct., crystal symmetry and possible near cpds. 7−117853
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., phase transitions 7−118081
$Y_1Ba_2Cu_3O_{9-x}$, high T_c supercond., single-phase, superconductivity and thermoelec. power meas. 7−131889
$Y_1Ba_2Cu_3O_x$, high temp supercond., environmental and solvent effects 7−119557
$Y_{1.2}Ba_{0.8}CuO_4$, ceramic high-temp. superconductor, RF SQUID construction 7−105847
$Y_{1.2}Ba_{0.8}CuO_4$ high T_c superconducting ceramics of perovskite type, crystal structures, T_c and H_c study *(Dutch)* 7−105753
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., mag. susceptibility and elec. resist. data 7−112576
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., resistivity, Hall effect, mag. susceptibility, temp. depend. *(Russian)* 7−125176
$Y_{1.2}Ba_{0.8}CuO_4$, high T_c supercond., tunnelling in junctions *(Russian)* 7−125264
$Y_{1.2}Ba_{0.8}CuO_4$, high-T_c supercond., flux quantisation 7−92384
$Y_{1.2}Ba_{0.8}CuO_4$, Meissner effect, perfect diamagnetism, static mag. suscept. meas. 7−105830
$Y_{1.2}Ba_{0.8}CuO_4$, multi-phase, struct. and superconductivity under press. 7−92355
$Y_{1.2}Ba_{0.8}CuO_4$, superconducting, macroscopic quantum interference at 60 K *(Russian)* 7−112541
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$, 90 K superconductor, switching phenomena 7−85190
$Y_{1.2}Ba_{0.8}CuO_{4-\delta}$ high T_c supercond. characts., annealing conditions depend. study 7−143667
$Y_{1.2}Ba_{0.8}CuO_{4-y}$, high T_c supercond., O role in prep. 7−132539
Y_2BaCuO_5, high T_c supercond., single cryst. micro Raman spectroscopy 7−105827
Y_2BaCuO_{5-x}, high T_c supercond., space group, electron diffr., chemical anal. 7−137331
Y_2BaCuO_{5-y}, green phase, lattice vibr. modes, Raman and IR spectra 7−99836
$Y_{2-x}Ba_xCuO_{4-y}$, high T_c supercond., upper critical fields 7−99374
$Y_{2-x}Ba_xCuO_{4-y}$, multiphase oxide, superconductivity at 90 K 7−112570
$Y_{3-x}Ba_{3+x}Cu_6O_{14}$, perovskite oxide, high-T_c superconductivity 7−105781
$Y_{3-x}Ba_xCu_3O_{9-y}$ high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
$Y_4Ba_2Cu_3O_y$, single-phase, supercond. above liq. N_2 temp. 7−105757
$Y_xBa_{1-x}CuO_{2.3}$, supercond. transition temp., press. effect 7−99300
$Y_xBa_{1-x}CuO_{3-\delta}$, high T_c superconductivity 7−143680
$YBaCuO_{3.7-x}$ plates, sintered, supercond. sub-struct., magnetisation meas. 7−143696
$YBa_2Cu_3(O_{1-x}S_x)_y$, superconducting transition at 108 K 7−105744

yttrium compounds continued
$YBa_2Cu_3O_{7-x}S_x$, high T_c supercond., effect of substitution of O by S 7−143672
$YBa_3Cu_3O_{7-x}S_x$ T_c supercond., magnetism and critical fields 7−143736
$YBa_{2-x}M_xCu_3O_{7-\delta}$, M=Sr,Ca, high T_c supercond., alkali ion substitution effects study 7−119209
$YBa_{2-x}M_xCu_3O_{9-y}$ (M=Sr, Ca), possible supercond. above 230 K 7−125169
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ high T_c supercond. ceramics, substitution effects study 7−118626
$Y(Ba_{1-x}Sr_x)_2Cu_3O_{7-y}$ ceramics, high T_c supercond., annealing effect 7−143659
$YBa_{2-x}Sr_xCu_3O_7$ high T_c supercond., struct., resist. and Meissner effect studies 7−112532
$YBa_{2-x}Sr_xCu_3O_y$ high T_c superconductor props., comp. depend. studies 7−118658
$(YBiEu)_3(FeGa)_5O_{12}$ magnetic bubble films with orthorhombic anisotropy, LPE growth 7−112911
$(YBi)_3Fe_{5-x}Al_x(Ga_x)O_{12}$ films, growth-induced birefringence, Bi content and distrib. depend. 7−106282
$(YBi)_3Fe_5O_{12}$ film, temp. coeffs. of Faraday rot. *(Japanese)* 7−70753
$Y_3Ca_3Fe_5Ge_5O_{12}$ garnet films, magneto-optical model conversion 7−138432
$Y_{2.0}Ca_{1.0}Ge_{0.9}Fe_{4.1}O_{12.0}$ reduced garnet film, FMR spectra study 7−112890
$Y_{2-x}Ce_xBa_{1-y}La_yCu_3O_7$ high T_c supercond., transition temp., La and Ce substitution effects 7−118634
YCl_3, melting, liq. molar vols. 7−124461
$YClH_2$, double metal-layered monohalides, structure and bonding 7−91541
$YCo_{12}B_6$ mag. props. studies 7−99418
$Y_3Co_4Ge_{13}$, crystal struct. determ. 7−104662
$YCrO_3$:Ca(Mg)(Sr)(Ba), elec. cond., Seebeck coeff. 7−70342
YCu_2O_z high T_c supercond., spectral photocond. onset correl. with supercond. onset 7−137984
$YD_{0.176}$, cryst. struct., location of D at 573 K, neutron diffr. study 7−83888
$Y_{3-x}Er_xAl_5O_{12}$, nonlinear bulk absorption 7−144091
$Y_xEr_{1-x}Ba_2Cu_3O_{6+y}$, high T_c supercond., superconducting transition 7−143660
$Y_{3-x}Eu_xFe_{5-y}Ga_yO_{12}$ garnet thin films, growth-induced anisotropy 7−138296
YF_3:Yb,Er IR-to-visible conversion phosphor for fibre-optic temp. sensor *(Japanese)* 7−110582
YF_3:Yb^{3+}, Er^{3+} phosphors, temp. transducer effects under IR pulse excitation *(Japanese)* 7−85791
$Y_2Fe_{14-x}Co_xB$ cryst. struct., mag. anisotropy and Curie temp., Co substitution effects study 7−105913
$Y_2Fe_{14-x}Co(Ni)(Mn)(Cr)_xB$, 3d magnetic props., substitution effects study 7−85262
$Y_3Fe_{4.2-x}Ga_{0.8}Sc_xO_{12}$ garnet single cryst., Sc ion distrib. 7−131102
YFe_2H_x hydrides, NMR study 7−70672
$YFe_{5-x}Mn_xO_5$ films, X-ray microanal., Monte Carlo modelling *(Czech)* 7−98728
$YFeO_3$, mag. birefringence, effect of antiferromag. resonance 7−70750
YFe_2O_4, magnetic structure, 2D neutron diffraction 7−125324
$Y_3Fe_5O_{12}$, high energy heavy ion irradiated, threshold electronic energy loss for latent track formation 7−91666
$Y_3Fe_5O_{12}$, superexchange interactions 7−143783
$Y_3Fe_{5-x}Sc_xO_{12}$, amorphous, mag. props. study 7−143765
YFe_3TiO_8, new mag. oxide, Mossbauer study 7−118915
$Y_3Ga_5O_{12}$:Ce^{3+}, luminescence properties 7−132332
$Y_3Ga_5O_{12}$:Cr^{3+}, spectral characts. *(Chinese)* 7−119029
$Y_{0.1}Gd_{0.9}Ba_2Cu_3O_{8-\delta}$, superconductivity 7−131847
$(YGdBi)_3(FeGa)_5O_{12}$ garnet LPE film growth and elemental distrib. study 7−105331
$(YGdBi)_3(FeGdAl)_5O_{12}$ garnet film, band domain struct., laser radiation diffr. 7−132112
$(YGdYbBi)_3(FeAl)_5O_{12}$ quasiuniaxial films, domain struct. nucleation characts., magnetooptic study 7−70612
$YH_{0.2}$, PMR search for evidence of H pairing 7−85460
YH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
YH_2, muon spin relax. study, comparison with TiH_2 7−85510
$YH_2(D_2)$, NMR rotating frame relax., spin-spin interactions, rigid lattice regime 7−85466
$YH_x(D_x)$, diffusion of H(D), NMR relax. rates 7−84373
YIG, acoustic emission, domain walls and hysteresis 7−70583
YIG, amorphous mag. insulator, hyperfine and exchange field distribs. 7−113031
YIG bubble garnets, heavily ion-implanted, growth-induced anisotropy field 7−77389
YIG cryst. laser diode module with optical isolator, floating zone growth method 7−103815
YIG, domain struct., photoinduced mag. inhomogeneities 7−112848
YIG domain walls, NMR relax., defect influence 7−112988
YIG, dynamic domain struct. under AC fields 7−92456
YIG, elec. cond., thermoelec. power meas., small polaron model 7−99051
YIG epilayers, magnetostatic soliton propag. at microwave freq., power response meas. 7−138299
YIG epitaxial ferrite film, inclined anisotropy axis, critical parameters in normal field 7−70609
YIG, fast neutron irrad., crystalline and amorphous struct., neutron diffr. 7−98259
YIG ferrimag. oxide, ion irrad. damage processes and mag. hyperfine field orientation, Mossbauer study 7−91675
YIG film, bulk spin wave-light waveguide interaction obs. *(Polish)* 7−138301
YIG film, inhomogeneously magnetised, nondispersive MSFVW propag. 7−125513
YIG film, surface magnetostatic waves scatt. by anisotropy-induced acoustic waves 7−118792
YIG film, surface spin waves, cubic anisotropy effects 7−132092
YIG film, unusual RF behaviour study 7−113317
YIG film-ferroelectric plate composite medium, reson. interaction of magnetostatic and slow EM waves 7−85276
YIG films, flexural domain wall modes, field depend. 7−132109
YIG films, LPE growth, ionic approach 7−70142
YIG films, magnetostatic wave defect. in microwave device struct., using Brillouin light scatt. 7−118840
YIG films, normally magnetised, nonlinear magnetostatic wave propag. study 7−77383
yttrium compounds continued
YIG films, optimisation of flux composition in LPE growth 7−138691
YIG films, parametrically excited elastic waves, optical studies 7−131233
YIG films, surface magnetostatic wave freq. conversion 7−138293
YIG films, surface spin waves, attenuation and nonlinearity threshold 7−77384
YIG films, surface spin wave propag., obs. at frequencies above the dipole spectrum limit 7−85275
YIG films with combined cubic and uniaxial anisotropies, magnetostatic spin waves 7−99521
YIG gyroanisotropic planar waveguide, magnetooptical mode conversion 7−123196
YIG, ion-implanted periodic arrays, magnetostatic forward volume waves, reflection 7−143776
YIG LPE film, magnetostatic forward volume waves, optical probe meas. 7−143852
YIG microcrystal crystallisation in a borate glass, EPR and magnetisation meas. 7−97931
YIG multilayers, LPE, single mode magneto-optical waveguide props. 7−110562
YIG, phase transition, magnetoelectric effect meas. 7−76387
YIG photoinduced change in magnetostriction 7−143893
YIG single cryst. ferrite, noisy nonlinear EM emission in FMR 7−99581
YIG slab, domain wall generation in high-amplitude AD field, self-oscill. regime 7−118823
YIG, spin wave stiffness consts. 7−77270
YIG thin film, ferromag. reson. linewidth, ESR spectrometer meas. study 7−118863
YIG, transverse acoustic waves, nonlinear magnetoelastic excitation, elastic moduli freq. depend. calcs. 7−70618
YIG: H_2^+ thin film, surface spin-wave modes photoinduced mag. anisotropy effect relax., FMR obs. 7−112897
YIG:^{57}Fe, nuclear Bragg scattering of synchrotron radiation pulses in a single-reflection geometry 7−119066
YIG:Bi,Tm, anomalous effective g-value, temp. depend. ferromag. resonance study 7−112960
YIG:Bi epitaxial films, growth and mag. props. rel. to V_2O_5 flux addition 7−100130
YIG:Ca, Ge epitaxial films, elec. props., excitation effects 7−125154
YIG:Ca,Ge, charge uncompensated, mag. props. determ. 7−112728
YIG:Fe, implantation, thermal annealing and solid phase reepitaxy 7−142801
YIG:Fe, implanted, annealed, Morin transition 7−125379
YIG:Fe^+, Fe^+ ion implantations 7−91612
YIG:Fe^+ single crystals, implantation and annealing effects, conversion electron Mossbauer spectra study *(French)* 7−99627
YIG:Fe(Mn)(Ar), anisotropy effects of implanted ions, FMR 7−125370
YIG:Gd, Ga thin films, magneto-optical effects, waveguide appls. 7−123197
YIG:H_2^+ thin films, ion implanted, surface spin wave modes, photoinduced effect 7−112959
YIG:He^{3+}, magnetostatic waves, Bragg scatt. 7−132004
YIG:Mn, cryst. growth from PbO/B_2O_3 based melts, mag. anisotropy, Mn^{3+} contrib. 7−144260
YIG:Mn, top-seeded growth from high temp. soln., modification 7−85984
YIG:Si, elec. relaxation processes and photomag. props., thermostimulated depolarisation study *(Russian)* 7−125606
YIG:Si single crysts., photoinduced magnetisation reversal mechanism and threshold studies *(Russian)* 7−99550
YIG:Si(Ge) magnetoanisotropic impurity centres study *(Russian)* 7−84768
YIG:Zr garnets, induced mag. anisotropy 7−105915
$(Y_{1-x}Lu_x)_3Al_5O_{12}$, resonance phonon-impurity scatt. 7−76317
$Y_{0.75}Lu_{0.25}Ba_2Cu_3O_7$, high temp. superconductor, EPR study 7−85196
$(YLuBi)_3(FeGa)_5O_{12}$ films, magnetic fine structure anals., simultaneous obs. of domains and walls 7−125437
$(YLuSmGd)_3$ $(FeGa)_5O_{12}$, bubble garnets, heavily ion-implanted, growth-induced anisotropy field 7−77389
$Y_{3-x}M_xFe_5O_{12}$, M=Ho, Gd, Nd, Pr, La, Bi, transferred hyperfine interaction, NMR studies 7−112262
$Y_2Mo_2O_7$, spin-glass-like system, neutron diffr. study 7−112820
Y_3MoO_7, prep., cryst. chem. props., phase equilib. 7−91503
$(YNd)_3(CoGeFe)_5O_{12}$ epitaxial magnetic films, optical props. comp. depend. study 7−106285
YNi_5Ge_3, isotype with orthorhombic YNi_5Si_3 struct. type 7−137327
Y_2NiRuO_6, cryst. struct., neutron powder and X-ray diffr. 7−83922
$YO.X^2\Sigma^+$ state, fine and hyperfine struct., visible spectra 7−74651
Y_2O_3 stabilised ZrO_2, props., effect of Al_2O_3 additives 7−71302
Y_2O_3 substrate for ZnS:Mn thin films, electrolum. characts. and struct. of films 7−138516
Y_2O_3 vacuum deposition on Cu and Fe substrates using an atmospheric-press. inductively coupled plasma 7−144280
Y_2O_3:Eu^{3+}, energy transfer between Eu^{3+} ions, crystallographic sites, lumin. study 7−92726
Y_2O_3-Fe_2O_3, hyperfine interactions, Mossbauer effect 7−125565
Y_2O_3-HfO_2, O-ion arrangements, electron diffr., high resolution electron microscopy, modulated struct. model 7−117881
Y_2O_3-SiO_2 glasses, prep. by sol-gel process, IR and Raman spectra 7−85623
Y_2O_3-ZrO_2, O-ion arrangements, electron diffr., high resolution electron microscopy, modulated struct. model 7−117881
Y_2O_3-ZrO_2 matrix with W fibres, low voltage field emission 7−138615
YOCl:Eu, cryogenic lumin. studies, YOF and PbFCl polymorphs 7−70876
Y_2O_2S:Eu,Tb, phosphors, thermoluminescence, capture centres 7−132352
Y_2O_2S:Er^{3+}, spectral props. of Er^{3+} ions 7−99893
$Y(PO_3)_3$, solid phase synthesis and cryst. struct. 7−126040
YPO_4, tunnelling recombination and luminesc. 7−113286
YPO_4:Ce^{3+}, excited doublets, EPR obs., optical absorpt. spectrum, Zeeman effect meas. 7−70637
$Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$, high T_c supercond., electronic effects on superconductivity 7−118640
YPtP(As)(Sb), cryst. struct. determ. 7−76106
$Y_{0.75}R_{0.25}Ba_2Cu_3O_7$ (R=La, Lu), high-temperature superconductivity 7−138100
$YRuB_4$, mag. suscept., supercond. transition temp. meas. 7−92408
$(Y_{1-x}Sc_x)_{0.4}(Ba_{1-x}Sr_x)_{0.6}CuO_y$ high T_c supercond. props. studies 7−125192
$Y_{5-a}Sc_aSi_3$-H, $D8_8$-type system, H sorption props. 7−98689
YSeF, mixed layer cpds., electron diffr. effects 7−142761
YSi_{2-x}-Si, epitaxial silicide, vacuum annealing 7−124740

yttrium compounds continued
Y_2SiO_5:Ce, phosphor, degradation under cathode ray excitation 7−92727
Y_2SiO_5:Ce thin films, cryst. and amorphous, struct. effects on absorpt. and luminesc. props. *(Russian)* 7−85884
$Y_2(SiO_4)O:Eu^{3+}$, site selectively excited lumin. 7−70880
$(YSmCa)_3(FeGaV)_5O_{12}$, He^+ implanted, magneto-optical props. in UV range 7−144033
$(YSm)_3(FeGa)_5O_{12}$ film, mag. bubble domain state transformation during wall radial motion *(Japanese)* 7−132113
$Y_{2.6}Sm_{0.4}Fe_{3.9}Ga_{1.1}O_{12}$ epitaxial films, submicron domain struct. obs. by optical microscopy 7−70615
$Y_{3-x}Sm_xFe_{5-y}Ga_yO_{12}$ garnet thin films, growth-induced anisotropy 7−138296
$(YSmLuCa)_3$ $(FeGe)_5O_{12}$:Fe^+, Fe^+ ion implantations 7−91612
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble layers, magnetisation, plasma exposure effects 7−112881
$(YSmLuCa)_3(GeFe)_5O_{12}$ ion-implanted bubble films, plasma exposure effect on mag. props. 7−112882
$Y_{2-x}Sm_xSn_2O_7$, high resolution solid-state NMR, paramag. shift probes 7−132142
$(YSmTmCa)_3(FeGa)_5O_{12}$, ultrathin films, uniaxial mag. anisotropy and MCD spectra 7−132245
$Y_{2-x}(SrBa)_xCuO_4$ high T_c supercond. behaviour systematics 7−118646
$YSr_2Cu_3O_{7+y}$, supercond. transition temp., O deficiency study 7−99284
$Y_{2-x}Sr_xCuO_4$ high T_c supercond., electronic struct. and chem. binding, valence mol. orbital cluster calcs. *(Russian)* 7−131534
$YTaO_4$:Nb, X-ray phosphors, development, parameters, future outlook 7−77647
$Y_{3-x}Tb_xFe_5O_{12}$, elastic and magnetoelastic props. in spin reorientation region 7−143887
Y_2TiO_5, structural disordering on quenching, Raman spectra 7−99820
$Y_2Ti_2O_7$, structural disordering on quenching, Raman spectra 7−99820
$Y_{2.4-x}Tm_xBi_{0.6}Fe_{5-y}Ga_yO_{12}$, substituted garnet epitaxial films, Faraday rotation 7−113152
YVO_4, press.-induced transition from zircon-type to scheelite-type struct., Raman study 7−142984
$(Y_{1-x}Yb_x)_2Ba_4Cu_6O_{14+y}$, high T_c supercond., X-ray diffr. and elec. resist. studies 7−118625
$Y_{0.77}Yb_{0.20}Er_{0.03}F_3$ IR to visible conversion phosphors, cryst. growth by two-step firing *(Japanese)* 7−85970
$(YbPr)_3(FeGa)_5O_{12}$, dielec. and mag. tensors, permeability, at optical freq. 7−85355
$YBa_2Cu_3F_2O_y$, 155 K supercond., flux trapping, Meissner effect 7−125201
$Yo_2Mo_2O_7$, elec. resist. meas., 4.2-300 K 7−112287
ZrO_2, (MgO, Y_2O_3) partially stabilised, tetragonal ZrO_2 precip. morphology 7−93014
ZrO_2, Y_2O_3 stabilised, diffusional creep, kinetic demixing 7−144469
ZrO_2:Cr_2O_3, Y_2O_3 stabilised, elec. cond., comp. and temp. depend. 7−105110
ZrO_2:Y_2O_3, defect struct., EXAFS, computer simulation 7−69738
ZrO_2:Y_2O_3 disordered cubic crysts., low freq. Raman spectra, Rayleigh wing broadening obs. 7−118994
ZrO_2:Y_2O_3 polycrystals, Al_2O_3 and SiC particle dispersed, thermal stability, mech. props. 7−78183
ZrO_2-xY_2O_3, stabilised, acoustic mode freqs., Brillouin scatt. meas. 7−119024
ZrO_2-Y_2O_3, cation-O distances, complete EXAFS anal. 7−132377
ZrO_2-Y_2O_3, highly toughened, mech. props. 7−132704
ZrO_2-Y_2O_3, phase transform., low temp. annealing, humidity control, fracture strength, surface struct. *(Japanese)* 7−71182
ZrO_2-Y_2O_3, rapidly quenched, cubic to tetragonal transform., effect of external stress 7−86170
ZrO_2-Y_2O_3, TZP, crack-profile shapes formed under a Vickers indent pyramid 7−113679
ZrO_2-Y_2O_3, TZP ceramics, sintered, development of secondary tetragonal phase 7−86112
ZrO_2-Y_2O_3, tetragonal zirconia polycrysts., thermal fatigue behaviour *(Japanese)* 7−71298
ZrO_2-Y_2O_3, tetragonal phase, elec. props. effect of TiO_2, SnO_2 and Al_2O_3 additions 7−98567
ZrO_2-Y_2O_3, YSZ powders, homogeneous precipitation and sintering 7−144329
ZrO_2-Y_2O_3 films, growth on GaAs (100) by pulsed laser evaporation 7−125992
ZrO_2-Y_2O_3 partially stabilised zirconia, coherent precipitates, HREM studies 7−100237
ZrO_2-Y_2O_3 solid solutions, association of defects 7−91559
ZrO_2-Y_2O_3 stabilised, H_2O effects under hydrothermal conditions, degradation mechanism 7−86382
ZrO_2-Y_2O_3 stabilised, prep. from freeze-dried coprecipitated hydroxides, mech. props. and crit. grain size 7−92939
ZrO_2-Y_2O_3 system, crystallography of cubic to tetragonal phase transform. 7−132613
ZrO_2-Y_2O_3:Ni(Co)(Cr)(Pr), laser-excited luminesc. and absorpt. spectra studies 7−125764
ZrO_2-Y_2O_3-Al_2O_3 ceramic electrolytes, ionic cond., thermal shock resist., mech. props. 7−76479
ZrO_2-$YO_{1.5}$, superionic conductor, defect-induced Raman spectra 7−99857
ZrO_3-Y_2O_3 system, phase diagram and microstructures 7−138735
$Zr_{1-2x}Y_{2x}O_{2-x}$ (100), electron beam reduction, XPS study 7−77710

Yukawa potential *see meson field theory; nuclear forces*

Z bosons
Abelian gauge theories, renormalization-group-improved Yennie-Frautschi-Suura theory, Z^0 physics 7−128765
E_6 superstring based model, Z′ mass limits and decays, Higgs masses and couplings 7−95802
E_6 superstring theory, Z-Z′ mixing, use of Z lepton asymmetry 7−128822
electromagnetic couplings in a composite model 7−128864
electroweak physics at the Z^0 pole, above W pair thresholds, LEP review 7−95819
excited weak vector bosons and composite weak interactions 7−121460
Higgs-boson decay into Z pairs, improved transverse-mass variable for decay detection 7−128890
high-energy collisions, effective-vector-boson method, heavy fermion and Higg's boson prod. 7−128920
lepton in magnetic field, Z^0 contributions, Weinberg model calcs. 7−135129

Z bosons continued
longitudinally polarized, scatt. in symm. breaking sector, low energy theorems 7−135004
mass and one-loop compositeness contributions to propagator 7−140901
mass and signature in E_6 superstring models 7−67621
masses and weak neutral current, standard model anal. 7−140866
resonance shape, second-order QED radiative corrections 7−73590
standard model anal. of properties 7−102665
$SU(3)_C \times SU(2)_L \times U(1)_Y$,$[\times(U(1))^2,\times U(1)]$ models with two, one, no Z bosons, gauge symmetry breaking, particle spectrum 7−73569
supersymmetric GUT, electroweak breaking, $W^{\pm}$ and Z masses 7−134993
supersymmetric radiative corrections to asymmetry meas. at Z^0 peak 7−134975
technipionium bound state formation and decays into W^+W^-, $\gamma\gamma$, $Z\gamma$ 7−73576
toponium-stoponium mixing, Z effects 7−95786
$e^-e^+ \rightarrow W^+W^-$, effects of Z boson from $E_8 \times E_8$ superstring 7−67629
$e^-e^+ \rightarrow X$, zino mass limit determ. 7−108928
e^+e^-, very high energies, Higgs prod., longitudinally pol. vector boson scatt. 7−108907
$e^+e^- \rightarrow \gamma Z^0$, electroweak radiative corrections to differential cross-section in Glashow-Salam-Weinberg model 7−102761
$e^+e^- \rightarrow \gamma Z^0$, γZ^0 production and new physics in the TeV region 7−108925
$e^+e^- \rightarrow \mu^+\mu^-$, extra Z's from E_6, exotic physics in heavy quarkonium decays 7−128818
$e^+e^- \rightarrow W^+W^-$, E_6 models with additional Z′ neutral gauge bosons 7−128817
$e^+e^- \rightarrow Z_2 \rightarrow W^+W^-$, W pair prod. at heavy Z resonance, cross section calc. 7−89491
$e^+e^- \rightarrow Z'$, resonance prod., standard model with broken $SU(2)\times U(1)\times U(1)$ gauge symm. 7−135000
$ep \rightarrow e^-Z^0X$, energy spectrum and angular distribs. 7−81206
$ep \rightarrow X$, cross-sections, effects of extra Z^0 from E_6 GUT 7−102759
$gg \rightarrow ZZ$, contrib. to pp inclusive interactions, box diagram. calcs. 7−135166
pp, 40 TeV, Higgs identification in Z^0 pair prod. 7−128915
$\bar{p}p$, SPS energies, extended gauge symmetry as a possible source of exotic events 7−67674
$\bar{p}p$ collider results and detectors, W, Z and heavy flavour physics 7−95945
$\bar{p}p \rightarrow \gamma Z^0X$, γZ^0 production and new physics in the TeV region 7−108925
$\bar{p}p(pp) \rightarrow Z\gamma$, test of compositeness 7−121539
$\bar{p}p \rightarrow X$, W and Z production, comparison with standard model 7−89535
$pp \rightarrow ZZ+X$, contrib. from gg interactions, box diagram calcs. 7−135166
$pp \rightarrow ZZ+X$, invariant mass distrib. at supercollider energies 7−116199
$\bar{p}p \rightarrow Z(W)X$, production cross-sections and momentum distribs. 7−121545
tt-Z^0 mixing effects 7−102667
$Z \rightarrow \bar{e}_a e_b$, lepton flavour non-conservation, heterotic superstring inspired standard model 7−80553
$Z \rightarrow e^+e^-$, meas. of standard model parameters 7−89504
$Z \rightarrow e^+e^-$, standard model parameter meas. and perturbative QCD tests at UA2 7−102741
$Z \rightarrow \bar{q}q$, jet pair invariant mass distribution search. 7−89505
Z^0, additional light boson ($Sp_L(8)\times U(1)$ prediction) mass, mixing angle exptl. bounds 7−108942
$Z^0 \rightarrow b\bar{b}ll$, direct four-fermion decay scheme 7−73648
Z^0 flavour changing decays, SUSY models, minimal SUSY standard model 7−89502
$Z^0 \rightarrow H^0\gamma$ ($H^0\mu^+\mu^-$), supersymmetric Higgs boson production, branching ratios, supersymmetric fermion virtual exchange 7−140936
$Z^0 \rightarrow$neutralino pairs, supersymmetric parameters 7−140938
$Z^0 \rightarrow P^0\bar{P}^+P^-$, technion production, Wess-Zumino type effective action 7−140937
Z^0 quark and lepton flavour violating decays in E_6 GUTs 7−89413
Z′ neutral gauge boson, evidence from UA1 W-jet-jet events? 7−81246
$Z' \rightarrow w_h^+ + w_l^- \rightarrow l^+\bar{\nu} + l^-\bar{\nu}$, T-odd angular correlation, chargino, numerical examples in E_6 models 7−134995
$Z' \rightarrow W^+W^-$, mixing effects, standard model with broken gauge symm. 7−135000
$Z' \rightarrow W^+l^-\bar{\nu}_l$, single W prod. in E_6 theories, branching ratio 7−116170
$Z' \rightarrow Z^0H$, mixing effects, standard model with broken gauge symm. 7−135000
$Z^{0\prime} \rightarrow Z^0H$, Higgs boson signals in superstring-inspired E_6 supergravity models 7−135119
$\bar{p}p$ annihilation, W and Z^0 discovery, comparison with standard model *(Polish)* 7−67672

Z-centres
KCl:Ca, Z-centre form., ionic diffusion model study 7−124262
KCl:Ca powders, γ-irradiated, Z_1 centres growth, particle size depend. 7−76209

Z pinch *see pinch effect*

Z transforms
heat conduction, nonlinear problems, solution by Z-transform method 7−75244
polymerisation kinetics, appl. of Z-transform inversion 7−86618

Zeeman effect
see also atomic spectra; Hanle effect; molecular spectra; spectral line breadth
acetonitrile, dil. spin I=3/2 powder, rot. isomerism, Zeeman and dipolar coherences, PMR spectra 7−68357
alkali metal dimers, photodissoc., mag. field effects, at. mag. sublevel population 7−122630
atomic ground state, self-polarisation influence on Zeeman and Stark effects 7−82039
atomic structure, hyperfine interactions in strong nonmonochromatic laser field 7−90038
atoms, Rydberg states in parallel elec. and mag. fields 7−122408
dyonium, Paschen-Back effect 7−121399
ground state energies, 1/N expansion and nonrelativistic pot. problems 7−129590
AM Her-type stars, Zeeman features from accretion column 7−115510
hexyloxycyanobiphenyl, 60CB-d_{21}, reentrant nematic, DMR studies 7−99600
II-VI semiconductors with 3d dopants, covalent bonding, influence on spin-orbit and Zeeman interactions 7−137874
interatomic collisions, effect on interaction of EM wave of arbitrary intensity with resonance gas medium under anomalous Zeeman effect 7−109836

Zeeman effect continued
RU Lup, RW Aur star, mag. field characts., spectral obs. 7−127867
molecular clouds, magnetic field strengths from OH lines Zeeman effect 7−120543
molecules, triplet exciton ESR line shapes, local exciton-phonon interaction temp. depend. calc. 7−99554
neutral atoms, magnetostatic trapping fields 7−73434
NMR powder spectrum simulation for nuclei with I>1/2 7−92529
purine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
purines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
pyrimidine, supersonic jet, mag. field effects on fluoresc. polarisation 7−90243
pyrimidine nucleosides, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
pyrimidines, nucl. quadrupole coupling consts. and asymmetry parameters meas. 7−90205
quantum Hall effect, fractional, spin-reversed quasiparticles 7−105596
ring deuterated smectic liq. cryst., D NMR spin-lattice relax. studies 7−77420
S-state ions, mag. reson. spin Hamiltonian, odd-order terms admission 7−77190
solar spectral lines, splitting factors from Landé factors 7−88360
torus magnetic field meas., by rapid-frequency-scan laser spectroscopy 7−142507
transition metal alloys, $Fe_{80-x}M_xB_{20}$, M=Cr,Mn,Co,Ni, metallic glasses, hyperfine mag. field, comp. and temp. depend., Mossbauer spectra meas. 7−77441
transverse Zeeman laser, nonlinear freq. mixing *(Chinese)* 7−97060
uniaxial crystals, transverse Zeeman effect for ions 7−98940
Ag, Zeeman furnace AAS, matrix effects study 7−133007
Al superconducting thin film/magnetic insulator contact, density of states, Zeeman splitting, spin polarised tunnelling studies 7−131915
Al_2O_3:Cr, ruby, resonant energy transfer between single ions and fourth-nearest-neighbour pairs 7−85805
Ar^+ lasers, narrow-tube, power enhancement due to Zeeman effect 7−90578
ArD^+ mol. ion, elec. dipole moment, rot. Zeeman effect, tunable FIR laser spectra 7−74692
ArH^+ mol. ion, elec. dipole moment, rot. Zeeman effect, tunable FIR laser spectra 7−74692
Bi I and Bi II, computer simulation of experimental Zeeman-effect patterns of forbidden lines 7−141523
C laser-produced plasma, mag. field meas. using Zeeman effect 7−142480
CS_2, V^1B_2 state, fluoresc. and Zeeman quantum beat spectra 7−90240
Ce-based Kondo lattices, specific heat of heavy fermions 7−70556
Cr complex, tris-(μ-hydroxo)-bis-[(1,4,7-trimethyl-1,4,7-triazacyclononane) Cr(III)] triperchlorate, exchange interactions, optical spectra, EHT calcs. 7−96548
Cs, emission intensity in O_2-H_2 flames, mag. field effects 7−116903
Cs_2, optically excited levels, mag. field effects, reson. fluoresc. study 7−129772
$Cs_3Cr_2Br_9$ optical and Zeeman spectroscopy studies 7−106150
Cu, small particles in mag. field, size effect 7−125549
D Rydberg atoms in mag. field, transition to chaos 7−90039
Fe complex, charge transfer salt, struct., mag. susceptibility, ferromag. interaction 7−142714
Fe complex, $Fe(C_5Me_5)_2$ (TCNE), ferromag. props. 7−99426
$Fe_{3-x}Al_xSi$ alloys, crystal struct., neutron diffr. and Mossbauer studies 7−131101
$(Fe_2O_3)_x$-$(Na_2O\text{-}2V_2O_5)_{1-x}$ glass, room temp. Mossbauer study 7−125573
Ga degenerate levels, cascades, superradiance and subradiance 7−82061
GaAs, antisite and vacancy defects, electronic struct. 7−98878
GaAs:Cr,Te, luminescence at 0.844 eV, Zeeman spectra studies 7−106249
GaAs:Er, Er doping during LPE growth, photoluminesc. study 7−113257
GaP, antisite and vacancy defects, electronic struct. 7−98878
Ge, uniaxially compressed, magnetic exciton spectroscopy at submillimeter wavelengths 7−138427
H, energy level upper and lower bounds, variational functionals 7−116908
H, Zeeman effect, expressions for eigenvalues 7−116907
HF, equilib. configuration, mol. beam electric reson., Stark, Zeeman and hyperfine props. 7−82242
He-Ne 1500 nm stabilised transverse Zeeman laser, expt. for coherent communication 7−68612
$HoVO_4$, nuclear electric quadrupole resonance, Zeeman effects 7−132160
Ir, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
$K_2B_4O_7.4H_2O$, NQR lines, intensity 7−143926
$KEu(WO_4)_2$, RF hole burning with inhomogeneously broadened Raman heterodyne signals 7−85488
LiZnTi ferrite, hyperfine field, relaxation effect, Mossbauer study 7−124941
NBH_2, high excited vibr. state, laser mag. reson. 7−122583
Na, degenerate atomic level splitting in external fields *(Russian)* 7−122441
Na, emission intensity in O_2-H_2 flames, mag. field effects 7−116903
Na-Xe quasimolecules, spin exchange, efficiencies of various buffer gases 7−68381
$Na_2B_4O_7.10H_2O$, NQR lines, intensity 7−143926
$Nd_2Fe_{14}B$ intermetallic cpd., Mossbauer effect study, temp. depend and spin reorientation 7−118926
NdOCl, Stark levels, mag. splitting factors 7−70258
Ne I $2p^5nd$ configurations, Zeeman sublevels, mag. field intensities 7−96602
OH radical in flames, laser-probed reson. Voigt effect 7−122591
PF radical, $X^3\Sigma^-$ state, IR absorpt. spectrum 7−90118
Pd, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
Pd-Ni, dil., conduction electron Zeeman splitting, effect of Ni impurities 7−105500
Pr polycrystals, high-field magnetisation meas., cryst. field effect calcs. 7−118829
$PrNi_5$ polycryst. high-field magnetisation meas., cryst. field effect calcs. 7−118828
Pt, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
$RbFeCl_3$, spin-orbit and crystal field matrices 7−143418
Zeeman effect continued
^{85}Rb, Zeeman shift in ground state hyperfine struct., extra term in Zeeman energy calc. 7−135879
^{87}Rb, Zeeman shift in ground state hyperfine struct., extra term in Zeeman energy calc. 7−135879
Rh, conduction electron Zeeman splitting, spin-orbit coupling effect, relativistic LMTO method 7−105502
Ru complex, absorpt. and luminesc. spectra, Zeeman effect, zero-phonon lines 7−99898
Si−SiO_2 interface, struct., EPR obs. 7−112111
U, hollow-cathode discharge, Zeeman effect. optogalvanic detection 7−122443
YPO_4:Ce^{3+}, excited doublets, EPR obs., optical absorpt. spectrum, Zeeman effect meas. 7−70637
^{173}Yb II, ground-state hyperfine splitting, laser-microwave double reson. study 7−103426
ZnTe:Cu, hole-attractive neutral Cu-related complex-defect bound exciton, electronic struct. 7−92113

Zener breakdown *see Zener effect*

Zener diodes
No entries

Zener effect
see also Zener diodes
Bloch electrons in spatially homogeneous elec. field, quantum transport 7−124951
dissipative driven systems, Zener transitions 7−138007
$(TMTSF)_2X$, Bechgaard salts, small period oscillation of magnetoresistance 7−84823

Zener relaxation
graphite fibre reinforced metal matrix composites, material damping 7−144450
Al alloys, material damping 7−144450
AuAg concentrated alloys, point defect props., short range ordering 7−104907

zero-gap semiconductors *see narrow band gap semiconductors*

zero gravity experiments
37th IAF Congress, Conf., Innsbruck, Austria (October 1986) 7−120680
alloy melts, crystallisation under microgravity and uniform compression conditions 7−71160
alloys, binary, solidification, effect of gravity, numerical simulation 7−71161
Benard instability, microgravity investig. in parabolic flight 7−117562
binary fluid mixture, Soret separation disturbed by convective motion, numerical simulation 7−117587
blood, erythrocytes, aggregation under microgravity on space shuttle 7−119872
convection, effect on mass transfer 7−97532
convection, natural, supercritical conditions in oscill. microgravity environment (g-jitter) 7−117583
convective mechanisms under microgravity conditions 7−117579
crystal growth processes in space and on Earth 7−69636
diamond-glass composite processing in a microgravity condition 7−71143
droplet migration in electrically conducting fluid in microgravity environment, eddy current induced 7−71458
electrophoresis, continuous flow, aspects in microgravity 7−71906
flight hardware and isothermal Marangoni convection testing, microgravity conditions 7−117585
fluid-physics research in microgravity, optical diagnostic instruments development 7−128620
gradients, nullification, using ellipsoidal shell, self-gradients, potential fourth order terms 7−126402
hologram reconstruction techniques from Spacelab 3, fluid expt. system 7−110295
immiscible liquids of equal density, variation of interfacial tension with temp. 7−70027
levitated drop for containerless crystal growth and drop dynamics expts. 7−86012
liquid metal alloys, thermomigration, microgravity expts. 7−117576
long liquid bridges, non-axisymmetric effects, appl. in crystal growth 7−132433
Marangoni convection and mass transfer from liquid to gas phase under microgravity 7−117584
Marangoni convection in spherical liq. system, anal. for nonsymmetrical temp. distrib. 7−136831
Marangoni flows, in zero gravity environments, theory and exptl. results 7−117580
Marangoni flows, onset of oscillatory regimes 7−130637
materials processing expts. in space, trends and current status *(Japanese)* 7−144249
materials science under microgravity conditions, conf., Bordeaux, France (Dec. 1986) 7−108043
materials sciences in space, conf., Toulouse, France, 30 June-11 July 1986 7−115669
melts, directional solidification in zero gravity conditions, compensation of Marangoni's thermocapillary effect 7−126089
metallic alloys, mixing and separation *(German)* 7−98478
metallic composites, melting and solidification in space 7−118061
metals, liq., self- and interdiffusion, space expts. 7−105089
microgravity, materials and fluid sciences, conf., Stockholm, Sweden (Oct. 1985) 7−66806
natural convection velocities in microgravity, effect of enclosure shape 7−69132
organic films, vacuum outgassing and gas phase thermal conduction, microgravity physical vapour transport expt. 7−138664
phase separators, porous plug and active phase separator, flow states comparison 7−67319
polymer semipermeable membranes, casting in microgravity 7−119232
space flight physical conditions and possibilities for expts. *(Spanish)* 7−100502
space technological experiments performed with superconducting and mag. alloys 7−71457
Spacelab 2 superfluid ^4He cryostat, cryogenic performance 7−67321
spherical systems under zero-gravity, nonlinear liq. oscills. 7−91146
surface tension minimum effect on convective motion of fluid in microgravity 7−117581
thermal Marangoni flows, effect of variable transport props. 7−69130
thermal measurements, nonintrusive, in microgravity fluid science expts. 7−115955
thermal relaxation near critical points, gravity effects 7−131267

zero gravity experiments continued
thin liquid layer, surface temp. distrib. due to thermocapillary convection 7−69129
Al-Cu alloys, dendritic solidification during Spacelab D1 mission 7−118339
Al-In-Sn alloys, directionally solidified in high and low gravit. fields 7−138736
Cu-Mo-Al_2O_3 system, solidification, microgravity expt., dispersion hardening 7−77978
GaAs bulk crystal growth by liq. phase electroepitaxy 7−100031
Gd_3Co, crystallisation under microgravity, influence on mag. props. *(Russian)* 7−106753
$(Gd_{0.2}Tb_{0.8})_3Co$, crystallisation under microgravity, influence on mag. props. *(Russian)* 7−106753
Ge crystals, floating zone expts. in sounding rockets 7−71004
^4He in microgravity environment on Spacelab 2, invest. of props. 7−70014
^4He, superfluid, nonlinear vapour-liq. phase separation, microgravity effects 7−70005
KNO_3, crystallisation under diffusive and convective conditions 7−117846
Nb-Ge, undercooling in 100 m drop tube 7−77987
Ni-base superalloy, directionally solidified, primary dendritic spacing, effect of gravity level 7−77974

zero sound
see also liquid helium sound propagation
^3He, liq., normal, elementary excitations, pressure depend. 7−124621

zeros *see poles and zeros*

zeta-potential *see electrokinetic effects*

zeugmatography *see biomedical NMR*

zinc
see also nuclei with .....
2D ang. correlation of positron annihilation radiation 7−106301
alpha-particle irrad., primary recoil atom environment 7−104875
anisotropic hexagonal single crysts., Burgers vector, SEM obs. 7−131149
anisotropic polycrystals. internal stress superplasticity 7−86288
atmosphere of Samoa, tropical South pacific, trace element concentrations 7−139702
atmospheric aerosols containing Zn, Cd, Pb and Mn *(Japanese)* 7−145646
atom, K emission bands and X-ray emission spectra meas. 7−141508
bicrystals, grain boundary glide and intragrain slip *(Russian)* 7−76135
corrosion and electrochem. behaviour in dimethylformamide-water mixture 7−119401
corrosion in acidic media, inhibiting props. of phosphines 7−113758
corrosion in contact with preservative-treated wood, electrochemical study 7−138877
corrosion studies in granitic groundwaters for radwaste 7−100455
creep anisotropy investigation using impression tests 7−86514
crystal binding 7−124158
crystals VLS grown from Zn-Bi monotectic droplets, morphology and growth mechanism 7−137283
de Haas-van Alphen effect, specific Fermi surface section, determ. *(Russian)* 7−98780
diffusion in GaAs, SiNx film mask effect 7−143100
diffusion in GaAs using PECVD SiO_2 films as mask *(Chinese)* 7−124597
dopant effects on Ge surface pot. and photo-memory *(Russian)* 7−77035
electric field gradient, grain size depend. 7−112258
electrode, passivation and passive layer stability on phosphate solns. 7−106659
electrode, pitting corrosion current meas. 7−78314
electrode shape change in cells with controlled current distrib. 7−100700
electrodeposit hetero-epitaxial growth on low-C steel sheets 7−132505
electrodeposition, by impinging flow, suppression of dendrites nd roughness 7−144312
electrodeposition, vertical flow channel, mass transfer under combined natural/forced convection 7−142375
electrodes in aq. alkali and carbonate solns., oxidation and reduction, cyclic voltammetry study 7−100586
electrodes in aq. alkali and carbonate solns., oxide film form. and dissolution, cyclic voltammetry study 7−100587
electrolytic coating deposition, struct., Peltier heat effects 7−112305
element, K_β/K_α X-ray intensity ratios, chem. effects 7−126521
epitaxial growth, hot wall technique, effect of subst. temp. 7−124747
fast-rate electrodeposition using pulse current 7−132509
films, electrodeposition, dendrite growth inhibition by mag. field. 7−71096
fogwater chemistry in San Joaquin Valley, California, Pb, Cu, Zn contents 7−79569
fracture formation in single crysts. when basic slip is prevented *(Russian)* 7−126223
gamma-ray photoelec. cross sections, 43-152 keV 7−96607
hydrothermal oxidation, ZnO powder form. 7−126061
hydrothermal oxidation *(Japanese)* 7−71395
immersion coatings, on Al alloys, form. *(Bulgarian)* 7−106666
impurity in alkali halide, impurity-vacancy complex binding energy calcs. 7−124905
isoelectronic sequence, fine struct. intervals 7−74436
L shell X-ray cross sections from Be^+ collisions 7−90373
melt, struct. features 7−104526
metal, freezing point determ. 7−124455
nucleation and crystal growth by electrodeposition from acidic solns., obs. 7−132504
photodeposition rates from diethylzinc 7−71515
polyimide: Zn^+ films, ion-implanted, structure and morphology 7−91938
pulse power tests 7−139106
purification by vacuum distillation, efficiency monitoring using radiotracer technique 7−119195
Rhone River, Zn distrib. 7−139155
Salamanca, Spain, meteorological effects on elemental concentration of atmospheric aerosols *(Spanish)* 7−144928
single cryst., elec. resist., struct. state effects 7−137896
single crystals, cleaved surfaces, sublimation 7−69884
single crystals, kink form. when basic slip is suppressed *(Russian)* 7−91701
small supported crystals, growth in 400 keV electron microscope 7−100024
surface (0001), O_2 covered, adsorpt. of methanol, UPS study 7−91980
thermal conductivity minimum, elec. resist., Lorenz fn. 7−137898
thermochromatography, on-line studies 7−100662
thin films, proton induced K-shell X-ray cross sections 7−144183

zinc continued
transport through supported liquid membrane using mobile carrier 7−119568
vacancy migration, perturbed angular correlation studies 7−91879
Valladolid, Spain, atmospheric particulate material, behavior and seasonal variation *(Spanish)* 7−144927
vapour, MHD generator 7−139120
^{65}Zn oral absorption meas. in clinical practice, simple blood sample method 7−101056
Al:Zn, effect of doping on mobile charge of Si-SiO_2-Al structures 7−85123
AlGaAs:As,Zn, dual implanted, rapid thermal annealing 7−104785
AlGaAs:Zn, Te-GaAs:Zn, Te, superlattice surfaces, simultaneous Zn, Te diffusion, appl. for quantum well lasers 7−105142
AlGaAs:Zn multiple-stripe-geometry lasers, current spreading and carrier diffusion 7−96997
$Al_xGa_{1-x}As$:Zn; impurity induced struct. disorder, Raman study 7−99845
$Al_2O_3:Zn^+$, ion implanted, lattice damage and impurity distributions 7−91607
$Bi_{12}GeO_{20}:Zn^{2+}$, thermally stimulated currents, thermoluminescence 7−84920
$Bi_{12}SiO_{20}:Zn^{2+}$, thermally stimulated currents, thermoluminescence 7−84920
CdS:Zn sublimation grown crystals, growth stability, soln. hardening effect 7−100026
CdTe:Zn, growth by gradient freeze method solid-liquid interface shape 7−132443
$CuGaS_2$:Zn, off-stoichiometry, optical studies 7−124542
γ-Fe_2O_3:Co^{2+},Zn^{2+} acicular particles, mag. props. modification 7−85371
γ-Fe_2O_3-Fe_3O_4 films, pyrolysis prep., Mossbauer and Faraday rot. study 7−85387
GaAlAs:Zn, variband semiconductor, spin echo 7−138491
GaAs:Cr,Fe,Zn, SIMS calibration exercise 7−134887
GaAs:Se^+,Zn^+, donor-acceptor pair emission, photolum. spectra study 7−77649
GaAs:tn, Si, Si diffusion, background doping depend. 7−84391
GaAs:Zn, activation mechanism of Zn implants 7−105447
GaAs:Zn, doped and undoped, lower yield stress meas. 7−124381
GaAs:Zn, epitaxial CVD films, acceptor impurities, Hall effect and photolum. studies 7−98856
GaAs:Zn, impurity local atomic struct., photolum. and fluoresc. EXAFS studies 7−76148
GaAs:Zn, optical charactn., IR reflectance spectroscopy 7−77535
GaAs:Zn, p-type dopant, ion implanted, annealing behaviour 7−132648
GaAs:Zn, point defects and diffusion mechanisms 7−104751
GaAs:Zn, stacking fault energy, dopant and deformation temp. effects 7−142800
GaAs:Zn, Zn diffusion using sintered ternary source 7−98579
GaAs:Zn epilayers, H(D) passivation of acceptors, IR absorpt. spectra 7−113240
GaAs-AlGaAs:Zn superlattices, impurity-induced disorder-delineated optical waveguides 7−90773
$GaAs_{1-x}P_x$:N,Zn mixed crysts., radiative recombination 7−70901
GaN:Zn, low temp. growth using ECR plasma excited MO-VPE *(Japanese)* 7−138666
GaN:Zn, time-resolved spectroscopy 7−99907
GaP:C,Zn, minority impurity electronic Raman scatt., B-line splitting obs., Jahn-Teller effect 7−77554
GaP:Zn, crytallisation from melt, Zn distrib. coefficient 7−69730
GaP:Zn,Li, IR photoluminesc., ODMR study 7−113000
He-Zn^+ laser discharges, hollow-cathode, neutral atom densities 7−96981
$Hg_{1-x}Cd_xTe$:In(Zn), native defects and complex form., doping and alloying effects 7−98202
InP:Cd, Zn, diffusion studies of Zn, Cd *(Korean)* 7−84396
InP:Zn, implant profiles and anomalous dopant diffusion, SIMS study 7−76192
InP:Zn, $p^+(p^-)n$ junction form. rel. to substrate conc., time and temp. depend. 7−111964
InP:Zn,S, deform., dislocation generation and movement 7−131215
InP:Zn surfaces, Zn diffusion, crystal defects 7−118167
InP-Zn, electron irrad., annealing, EPR, ODMR 7−125535
InSb:Bi,Zn epitaxial layers, impurity interactions 7−106446
InSb:Zn, Cr, deep l-c centres, photocond. spectra, elec. props. 7−112226
PbTe:Zn, interaction of gaseous dopants with PbTe single crystals 7−69980
Re-Zn heterocontacts, point contact spectroscopy in normal and superconducting states *(Russian)* 7−112436
Si:Zn, deep level defects, optical cross sections, tight binding calcs. 7−99894
Si:Zn, deep level spectrum, influence of γ-irradiation 7−112222
Si:Zn, deep levels, influence of uniaxial press. on transient capacitance spectroscopy 7−118404
Si:Zn, defect-dopant reactions in surface regions *(German)* 7−104808
Si:Zn, implanted, impurity depth distrib., radiation damage, diffusion, RBS, channelling anal. *(Chinese)* 7−124344
Zn redox battery flow cell, mass transfer 7−86779
Zn^{3+}, excited states, UV spectra anal. 7−141504
Zn/a-As_2S_3 structure, photodissolution processes 7−84286
Zn-As_2S_3, photostimulated change in Zn deposition rate 7−100077
Zn-Br flow cell, mathematical model 7−100713
Zn-MnO_2 Polapulse battery for Polaroid camera 7−144810
Zn-$ZnCl_2$ composite, electrodeposited on steel sheet, corrosion resist. 7−93147
Zn-ZnI_2-polyaniline battery charge storage and energy efficiency obs. 7−119640
Zn-ZnO-Pb, inelastic electron tunnelling spectroscopy, effect of doped oxide layer 7−70428
Zn-Zn(Cl,Br)$_2$-polyaniline battery charge storage and cycling obs. 7−119639
Zn+H_2(HD), rot. state distribs. on model pot. surfaces, lack of leaving-atom isotope effects 7−132911
Zn+H_2(HD)(D_2), product rot. and vibr. quantum-state distribs. determ. 7−132925
Zn+N_2O, reaction kinetics study 7−78465
$ZnBr_2$ cells, preparation and performance of plastic-bonded-CBr electrodes 7−93493

zinc alloys
see also brass; zinc compounds
brass, resistivity determ. by eddy current decay method, hollow circular cylindrical geometry 7−105522

zinc alloys continued
graphite fibre reinforced Mg-Al-Zn matrix composites, corrosion in aq. NaCl solns. 7—86407
(rare earth)$_2$Zn$_{17}$ alloys, mag. suscept. and elec. resist. meas. 7—70531
rare earth alloys, R_2Zn_{17}, R=La-Lu, cryst. chem., struct., X-ray diffr. study 7—91528
ZnMn uniaxially anisotropic spin glasses, zero-field muon spin relax. temp. depend. meas. 7—85318
Ag-Cd-Zn alloys, lattice parameters and Debye temps. 7—98038
Ag-Mg-Zn, out-of-step distance, substitutional element effects 7—142708
Ag-Zn, sputter-deposited thin films, phase transition, thermo-photometric study 7—124775
Ag-Zn films, electrodeposition, annealing, corrosion in H_2S atmosphere, surface layer charactn. *(Japanese)* 7—78316
Ag-Zn thin films, magnetron-sputtered, optical recording appl. *(Japanese)* 7—125977
Al-Ag-Zn multicomponent systems, compositional instabilities, phase separation 7—105055
Al-Ca-Zn (5,5 wt.%), superplastic behavior 7—144488
Al-Zn, dilute alloys, neutron irrad., defect distrib., X-ray scatt. studies 7—91659
Al-Zn, electrodeposition on steel substrates from organic electrolytes *(French)* 7—144309
Al-Zn, isothermal resist. meas. curves, anal. using Johnson-Mehl-Avrami eqn. 7—124959
Al-Zn, phase separation kinetics, SAXS and TEM study 7—113515
Al-Zn (1 wt.%), deformed at room temp., AE study 7—78117
Al-Zn (18.9 at.%) cellular dissoln. kinetics 7—119275
Al-Zn (29 at.), α/β interfacial energy, DSC meas. 7—144374
Al-Zn (30 wt.%), ageing, phase dissolution kinetics 7—132616
Al-Zn (30 wt.%), cellular precipitates dissolution 7—78014
Al-Zn (4.5 at.%), electron irradiation-enhanced diffusion 7—105101
Al-Zn (50 or 100 at. p.p.m.), dislocation-solute atom interaction, force-distance relation, internal friction meas. 7—84014
Al-Zn (6.8 at.%), HCP phase precip., electron microscopy 7—119273
Al-Zn alloys, electron irrad.-induced precipitation and solute atom redistrib. study 7—105049
Al-Zn alloys, pre-aging effects, elec. resist. study 7—138770
Al-Zn alloys, specimen thickness, effect on aging 7—138771
Al-Zn dilute alloys, electron irrad., defect distances, EXAFS studies 7—92782
Al-Zn dilute alloys, homogeneous precipitate nucleation upper limit temp. determ. 7—98456
Al-Zn eutectic, natural convection during directional solidification 7—126087
Al-Zn single cryst., strain anneal growth, creep testing, dislocation gliding, TEM obs. 7—98167
Al-Zn-Ag, early stage precip., anomalous X-ray scatt. 7—144401
Al-Zn-Mg, 7075, discontinuous deform. *(Japanese)* 7—126174
Al-Zn-Mg, 7075, hardness and yield strength as function of retrogression time 7—78202
Al-Zn-Mg, 7075-T6, fatigue crack tip strains 7—113655
Al-Zn-Mg, 7475, superplastic, solid-state bonding 7—93246
Al-Zn-Mg, age hardened, fracture, deform., H enhanced dislocation mobility 7—132661
Al-Zn-Mg, age hardened, tensile props. and anisotropy, double ligament test method 7—132851
Al-Zn-Mg, age hardening, effect of US vib. 7—132632
Al-Zn-Mg, cladsheets, diffusion bonded joints, peel strengths 7—113855
Al-Zn-Mg, crack growth predictions, effects of load spectrum 7—113664
Al-Zn-Mg, crevice corrosion in NaCl solns., pH obs. 7—93145
Al-Zn-Mg, fatigue crack closure in vacuum, crack-surface roughness effects *(French)* 7—100369
Al-Zn-Mg, fatigue crack initiation and growth under mixed mode loading *(Japanese)* 7—144526
Al-Zn-Mg, fatigue life, effect of cold working by hole expansion 7—126246
Al-Zn-Mg, friction and fretting wear, O_2 and water vapour effects 7—132763
Al-Zn-Mg, Guinier-Preston zones stability, Mg conc. depend. 7—78078
Al-Zn-Mg, Guinier-Preston zones and onset strain of serrated flow 7—144487
Al-Zn-Mg, high-purity 7075, H embrittlement, microstruct. effects 7—144506
Al-Zn-Mg, isothermal resist. meas. curves, anal. using Johnson-Mehl-Avrami eqn. 7—124959
Al-Zn-Mg, powder metallurgy, pitting corrosion, secondary phase precip., microstruct. 7—126282
Al-Zn-Mg, quenched-in dislocation loops 7—100268
Al-Zn-Mg, SCC and corrosion fatigue in NaCl soln. 7—119442
Al-Zn-Mg, SCC crack growth under dynamic mixed mode loading conditions *(Japanese)* 7—119415
Al-Zn-Mg, SCC in aq. NaCl solns., organic adsorbants effect 7—86406
Al-Zn-Mg, with and without SiC reinforcement, high strength, powder metallurgy, superplasticity 7—100303
Al-Zn-Mg alloy, dil., stable trajectories during decomposition 7—137570
Al-Zn-Mg clad sheet, Ag coated, diffusion bonded overlap joints, shear strength 7—113614
Al-Zn-Mg plates, weld toe cracking, stress field effect 7—78233
Al-Zn-Mg system, phase equilib. in Al corner 7—132573
Al-Zn-Mg-Cu, high strength, Na-induced cleavage fracture 7—100372
Al-Zn-Mg-Cu, microstruct. and props., effect of retrogression and re-ageing *(Chinese)* 7—132663
Al-Zn-Mg-Cu, SCC, grain boundary precip. *(German)* 7—119458
Al-Zn-Mg-Cu, superplastic deform., photoemission electron microscopy 7—113823
Al-Zn-Mg-Cu-Mn powder alloys, supersaturated solid soln. decomp. kinetics 7—126128
Al-Zn-Mg(-Fe), fatigue behaviour, effect of Fe content 7—119358
Al-Zn-Sn, phase diagram, isothermal diffusion in ternary system 7—100187
Al-Zn(-Cu), creep kinetics 7—78100
AlZn single crysts., decomp., clustering anisotropy 7—132627
AlZnMg alloys, surface degradation in NaCl solns. under appl. pot. 7—126289
AlZnMg, behaviour of Young's modulus during homogeneous decomp. 7—106560
$Al_{20.2}Zn_{40.3}Mg_{39.5}$, quasicrystalline and cryst. phases, transport and supercond. props. 7—70456
Au-Zn-Si liquid metal ion source, Zn and Si emission 7—95677
zinc alloys continued
AuZn/InP system, ion implanted, contamination layer and ohmic contacts 7—84539
Cd-Pb-Zn system, calc. of liq. miscibility gap 7—132563
Cd-Sn-Zn, liq., thermodynamic studies at 773 K 7—69938
Cd-Zn, dual phase alloys, stress-strain relations, finite element analysis *(French)* 7—78129
Cd-Zn eutectic electrodeposited coatings, superplastic behaviour *(Russian)* 7—78105
CeZn, neutron diffr. and mag. studies 7—77248
$CeZn_5$ Kondo lattice, mag. props. 7—99404
Cu-Al-Zn-Mn-Ni, martensite cryst. struct. and morphology 7—78009
Cu-Sn-Pb-Zn, bearing bronze, annealed, surface integrity in machining 7—78373
Cu-Zn, cold worked, twinning after annealing 7—78044
Cu-Zn, diffusion induced recrystn., nucleation 7—100251
Cu-Zn, electrical resist./shear strain relationship, effect of tensile stress and stacking fault energy 7—112292
Cu-Zn, interdiffusion coeff., vapour-solid diffusion couple 7—76503
Cu-Zn, nondestructive analysis using fundamental parameter method *(Chinese)* 7—86546
Cu-Zn, rapidly quenched shape memory alloys 7—86162
Cu-Zn, superplastic alloy, deform. activation energies, hot microhardness obs. 7—113617
Cu-Zn alloy, distorted crystallites, aggregate X-ray diffraction profile study 7—144436
βCu-Zn alloy, double martensitic transforms., acoustic emission meas. 7—111865
β Cu-Zn alloy, martensitic transform., acoustic emission meas. 7—78004
Cu-Zn alloys, diffusion, vacancy and interstitialcy enhancement during electron irradiation 7—105148
Cu-Zn films, defects and elec. props. 7—92035
Cu-Zn-Al, Cu-Zn, Z 7—78008
Cu-Zn-Al, isothermal martensite transform. and shape memory 7—86176
Cu-Zn-Al, shape memory alloy, appl. 7—126108
Cu-Zn-Al, shape memory alloys, martensitic transform. temp. rel. to heat treatment *(Japanese)* 7—126109
Cu-Zn-Al, shape memory effects, effect of martensite ordering 7—144486
β-Cu-Zn-Al, surface orientation, modulated microstructure 7—78049
Cu-Zn-Al (25.3, 2.9 wt.%), high temp. shape change, deform. temp. depend. *(Japanese)* 7—126175
Cu-Zn-Al (25.83, 3.96 wt.%), prebainitic transform. *(Chinese)* 7—71174
Cu-Zn-Al alloy, acoustic emission during Martensitic transformation of small microplates 7—93010
Cu-Zn-Al alloys, acoustic emission, local changes, martensitic transformation 7—91794
Cu-Zn-Al fatigued shape-memory alloys, dislocation struct., TEM study 7—91593
β-Cu-Zn-Al shape memory alloys, martensitic transform. cycles, effect of plastic deform. 7—113554
Cu-Zn-Al-B shape memory alloys, mech. props., martensitic temps. rel. to B addition and aging 7—119323
Cu-Zn-Fe(Co)(Ni), liq., Zn activity in dil. soln., third element interactions 7—76457
Cu-Zn-Pb, electrochemical corrosion in organic acids 7—126318
Cu-Zn(-Al), 9R type martensites, fault density, comparison between expt. and calculated results 7—78001
Cu-Zu-Al, shape memory alloys, ordered struct., thermal cycling effect 7—71185
Cu_2NiZn, short range order diffuse X-ray scatt., intensity expression 7—97854
CuZn composites, elec. and mag. props. after thermal annealing 7—124961
Cu_5Zn_8, rapidly solidified pot. quasicrystal farming alloys, struct. investigations 7—142705
CuZnAl, coil spring reversible shape memory actuators, shape strain degradation model 7—100310
CuZnAl, coil spring reversible shape memory actuators, biased reversion and cycling induced degradation 7—100311
CuZnAl martensitic alloy, high damping capacity, study and optimisation 7—86173
CuZnAl, reversible shape memory alloys, thermally cycled, transient degradation phenomena 7—119270
α-FeSi solid soln,.-Zn vapour system, phase relations, diffusion paths 7—77950
$Ga_{16}Mg_{32}Zn_{52}$, new quasicryst., form. and struct. 7—83858
Mg-Al-Zn, icosahedral alloy, resist., mag. suscept., comp. depend. 7—131608
Mg-Al-Zn, mold-cast, corrosion behaviour, effect of Mn addition 7—138881
Mg-Al-Zn alloys, quasicrystals, comparative electron microscopic study with Al-Mn-Si alloys 7—137316
Mg-Zn, solidification of undercooled liq. alloys entrapped in solid, struct. investig. 7—77982
Mg-Zn and Mg-Y-Zn-Cd, corrosion cracking and corrosion fatigue, electrochem. polarisation influence 7—144588
$Mg_{32}(Al_{1-x}Zn_x)_{49}$ icosahedral alloy, elec. resist. temp. and mag. field depend. meas. 7—84815
$Mg(Cu_{1-y}Zn_y)_2$ ternary Friauf-Laves alloys, long period structs. and phase transitions, comment and reply 7—137300
MgZn metallic glass, low temp. magnetoconductivity 7—98991
$Mg_{70}Zn_{30}$ metallic glass, passivation and passive film breakdown, electrochem. study 7—113795
Mg_xZn_{100-x} molten alloy, struct., X-ray diffr. study 7—97908
$Mg_3Zn_3Al_2$, icosahedral supercond., sp. ht. meas. 7—112663
$Mg_{70}Zn_{30-x}M_x$, (M=Cu, Ga, In, Sn), metallic glasses, electron transport props. and related electronic struct. 7—98792
$Nb_3SnNiZn$ multifilamentary wires, supercond. props., room temp. neutron irrad. effects studies 7—131956
NbZn single filament superconducting wire stability, real transition characteristic effects 7—143730
Nd-Zn, alloying behaviour, phase diagrams 7—77941
NdZn, neutron diffr. and mag. studies 7—77248
SiC particle reinforced Al-Zn-Mg composite, thermal cycling induced internal stresses, plastic deform. 7—132687
Th_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7—77759
$(U_xCe_{1-x})_2Zn_{17}$ alloys, magnetotransport 7—112301
$(U_xLa_{1-x})_2Zn_{17}$, conc. Kondo system, magnetism and electronic transport 7—85243
$U_xTh_{1-x}Zn_{8.5}$ system, mag. anisotropy 7—112736

zinc alloys continued
U_2Zn_{17}, antiferromag. heavy-fermion system, spin fluctuations 7−77238
U_2Zn_{17}, cryst. chem., struct., X-ray diffr. study 7−91528
U_2Zn_{17}, heavy fermion system, photoemission and Bremsstrahlung isochromat spectra studies 7−77759
U_2Zn_{17}, μ^+SR study of Kondo and RKKY interactions 7−113058
U_2Zn_{17}, neutron scattering studies of heavy fermion systems 7−112747
Y_2Zn_{17}, cryst. chem., struct., X-ray diffr. study 7−91528
Zn-Al, superplastic alloy, deform. activation energies, hot microhardness obs. 7−113617
Zn-Al alloy (1.1 wt.%), superplasticity, temp. depend. 7−131212
Zn-Al based alloys, solid-state reactions 7−77994
Zn-Al eutectic alloy, TiN coating by RF ion plating *(Japanese)* 7−113446
Zn-Al eutectic alloy superplastic, circular-die hydraulic bulge deformation *(Japanese)* 7−110802
Zn-Al eutectoid, two-phase superplastic alloys, cavitation criterion 7−132676
Zn-Al_2O_3, oxide dispersion strengthened materials, elimination of threshold stress for creep by thermal cycling 7−132691
Zn-Al-Cd alloys, superplasticity, long term ageing and Cd influence study 7−119308
Zn-Al-Cu-Mg, cast in metal moulds, solidification structs. and mech. props. 7−144389
Zn-Al-Cu(-Si), mech. props., lubricated wear rel. to ageing 7−132766
Zn-Al-Mg textured sheet, flow stress, influence of grain size and loading direction *(German)* 7−126204
Zn-Al-Si, hot dip coating on steel sheet, formability, tensile and bending props. *(Japanese)* 7−78110
Zn-Al-Si(Cu), wear resist., microstruct,, heat treatment 7−138850
Zn-Al-Ti, solidified, eutectic struct. rel. to cooling rate and Ti addition 7−113538
Zn-As binary alloy systems at high press. 7−100183
Zn-Bi monotectic droplets, Zn crystal growth by VLS, morphology and growth mechanism 7−137283
Zn-Cu single crysts., hardening, deform, conditions 7−71201
Zn-Ga, melt, struct. features 7−104526
Zn-Ga system, thermodynamic props. and phase equilib., applicability of various formalisms 7−138732
Zn-In system, liq. immiscibility and associated monotectic reaction 7−124524
Zn-In system, thermodynamic props. and phase equilib., applicability of various formalisms 7−138732
Zn-Mn electroplated coatings on steel, corrosion resist. *(Japanese)* 7−119429
Zn-Ni alloy coatings, electrodeposited, composition 7−143266
Zn-Pb, Pb determ. by detection of characteristic K X-rays by PIXE 7−93409
Zn-Sn system, thermodynamic props. and phase equilib., applicability of various formalisms 7−138732
Zn-Zn, grain boundary wetting as function of Sn conc. 7−119254
ZnMn dilute alloys, uniaxial spin glass, low temp. magnetic sp. ht. determ. 7−125420
$ZrZn_2$, self-consistent electronic structures studies of magnetism and superconductivity 7−112586

zinc compounds
see also zinc alloys
bis(oxalato(platinate, $Zn_{0.81}[Pt)C_2O_4)_2].6H_2O$, 1D conductor, transport props. and phase transitions 7−105552
borosilicate glass passivating Si p-n junction, reverse I-V characts., H annealing effects study 7−99179
chalcogenides, atomic layer epitaxy growth, dynamic RHEED studies 7−71030
complexes, vibr. spectra 7−96643
fluoride glass, Ho^{3+} or Er^{3+} doped, laser and luminesc. props. 7−136312
metal-tetrabenzoporphyrin-halomethane systems, donor-acceptor electron transfer, spectral hole burning 7−130270
$Mn_{1-x}Zn_xFe_2O_4$ ferrites, single crystal growth, segregation, Scheil eqn. 7−106396
porphyrins, for sensitisation of TiO_2 in visible light region 7−99193
propionate, anhydrous, orthorhombic cryst. struct. determ. 7−83931
tetrahedral compounds, thermal properties 7−143060
ZnS, II-VI compounds, wide gap, VPE 7−138674
$ZnSiP_2$, refraction and birefringence indexes, dispersion 7−99784
Ag-Zn_3P_2-Ag cells, I-V characts., Ag electromigration 7−105737
Al/Zn/p-p^+ Si diodes, elec. characteristics 7−125807
AnS crystals in mode-filter type optical modulator, propag. characts. study 7−90766
Au-ZnO, interaction with He and Ne metastable atoms, effects on electron emission and cond. 7−92295
BaF_2-InF_3-ZnF_2-YbF_3-ThF_4 glass, phase and IR props. 7−104572
BaO−ZnO−P_2O_5 glasses, coordination numbers suggested by elastic props. 7−113595
BaO.2ZnO.$8Fe_2O_3$, anisotropic ferrite magnets, mag. props., Al_2O_3 substitution effects *(Japanese)* 7−125377
$Ba(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578
$(Ba_{1-x}Sr_x)_2Zn_2Fe_{12}O_{22}$, single cryst. growth from high temp. soln. 7−113367
$BaZn_2Fe_{16}O_{27}$, W-type hexagonal ferrite, Zn location, paramag. phase *(French)* 7−111492
$BaZnGeO_4$, powder calcination, phase transitions, DTA, dielec. meas., X-ray diffr., SEM obs. 7−126107
Bi_2O_3-B_2O_3-ZnO ternary system, phase equilibria 7−84232
CdS-ZnO, transverse acoustic waves in piezoelectric superlattices 7−77061
CdTe/ZnTe heterojunction, valence band discontinuity linearity, core-level XPS study 7−77078
CdTe-ZnO heterojunction solar cells, prep. by reactive sputtering 7−144275
CdTe-ZnTe superlattices, resonance Raman scattering 7−92652
CdTe-ZnTe superlattice, MOCVD growth 7−138681
$Cd_xZn_yMn_zTe_{1-w}Se_w$ semimag. semiconds., EPR linewidth temp. depend. anal. 7−70626
(CdZn)S, semicond. film vap. deposition, chem. reaction model 7−119169
$Cd_{1-x}Zn_xS$ films, low absorpt. coeffs., photothermal deflection spectroscopy 7−77673
$Cd_{1-x}Zn_xS$-Cu_2S solar cells, fabrication by sprayed pyrolysis technique and dry chemical process 7−126630
$Cd_{1-x}Zn_xTe$, high pressure effects, resistivity study 7−112327
zinc compounds continued
$Cd_{1-x}Zn_xTe$, lattice-matched substrate, MBE of HgTe-CdTe multilayer structures, TEM study 7−131462
$Cd_{1-x}Zn_xTe$, MBE grown, phase separation 7−131487
$Cd_{1-x}Zn_xTe$ pseudo-binary semiconductors, atomic bonding and thermodynamic props. 7−111445
$(Co,Ni,Zn)SiO_3$, K-shell electrons, at. positions, X-ray reson. scatt. diffr. 7−75943
$CoNiZnFe_2O_4$, polycrystalline ferrite, magnetoelastic props. 7−143885
Co_xZn_{2-x} W-type hexaferrite, mag. props., 78-700 K 7−125371
$Co_{1-x}Zn_xFe_2O_4$ magnetic pigments, particle size distrib. meas. by TEM 7−85378
$Co_xZn_{1-x}In_2S_4$, Co(II) ion coordination geometry, XPS determ. 7−132410
$Co_{12}Zn_{0.8}TiO_4$, AC mag. suscept. meas. 7−92438
$Co_{2-x}Zn_xTiO_4$, mag. behaviour, AC susceptibility meas. 7−112845
Cu-ZnO two-phase metal-insulator system, highly disperse mixture, optical props. 7−70733
Cu-ZnO-Al_2O_3 catalyst, coadsorption of CO_2 and O_2 on Cu, O coverage determ. 7−98698
CuIn-Se_2-CdZnS solar cells, health and safety aspects in research and production 7−86801
$CuInSe_2$-CdZnS high efficiency thin film solar cells, design criteria, theory and practice 7−133093
Cu_2S-CdZnS high efficiency thin film solar cells, design criteria, theory and practice 7−133093
Cu_2ZnGeS_4, prep. and charact. 7−138622
$Cu_{1-x}Zn_x(H_2O)_6SiF_6$, metastable phases, successive ordering of Jahn-Teller distortions 7−131285
CuZnMg ferrites, powder preparation conditions effect on elec., mag., microstruct. props. *(Korean)* 7−86077
$Cu_2ZnSiSe_4(S_4)$, prep. and charact. 7−138622
HgZnTe, electronic props., vacancy formation energy, rel. to HgCdTe 7−131541
HgZnTe, laser annealing, effects on mercury loss and surface damage 7−131542
$Hg_{1-x}Zn_xTe$, MBE growth, depend. of Hg condensation coeff. on orientation and bond stability 7−131488
$Hg_{1-x}Zn_xTe$-CdTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
$Hg_{1-x}Zn_xTe$-CdTe superlattices, type III-type I transition 7−131754
InF_3-BaF_2-ZnF_2 glasses, EPR and X-ray diffr. studies, structural model *(French)* 7−124116
n-InSe/p-ZnTe thin film heterojunction, DC current-voltage characts. meas. 7−143567
$K_2Mn_xZn_{1-x}F_4$, dil. antiferromagnet, break-up of long range order, zero mag. field 7−112749
K_2SO_4-$ZnSO_4$:Pr(Nd)(Er)(Tm) glass, spectral studies 7−70883
K_2ZnCl_4, low freq. internal friction near ferroelastic transition 7−124394
$K_4Zn(MoO_4)_3$, ferroelastic phase transition, struct. changes 7−124481
Li-Ti-Zn spinel ferrites, mag. and cryst. struct., polarised neutron diffr. study 7−138193
Li-Zn ferrite, spin wave stiffness consts. 7−77270
Li_2SO_4-$ZnSO_4$:Pr(Tm), glasses, spectral studies 7−70849
$Li_{16-2x}Zn_x(GeO_4)_4$, fast ion conductors, high press. studies 7−137613
LiZnTi ferrite, hyperfine field, relaxation effect, Mossbauer study 7−124941
LiZnTi spinel ferrite, high magnetisation limit 7−125453
$Li_xZn_{1-x}V_2O_4$, mag. susceptibility meas. 80-300 K 7−77205
Mg-Zn spinel ferrites, longit. mode magnetoacoustic reson. 7−105999
$MgFe_2O_4$-$ZnFe_2O_4$, mutual diffusion of cations 7−105107
Mn-Zn ferrite, influence of raw material type and synthesis temp. on struct. and props. 7−100148
Mn-Zn ferrite, single cryst., dielec. spectrum *(Japanese)* 7−132183
Mn-Zn ferrite single crysts., haematite second phase form., SEM and TEM obs. 7−113561
Mn-Zn ferrites, spinels, NMR spin echo study 7−138346
Mn-Zn-Ti ferrite single crysts., Barkhausen jumps study 7−138284
MnSe-ZnSe, 2D metastable mag. semiconductor superlattices 7−85608
MnZn ferrite, mag. spectra, temp. depend. of mag. permeability *(Russian)* 7−112857
MnZn Ferrite formation, Mossbauer study 7−138360
MnZn ferrite power, molten salt synthesis, EM shielding appls. 7−77900
MnZn ferrite thin film with soft mag. props., sputter prep. 7−85389
MnZn ferrites, mag. spectra, mag. state, influence of external field, mag. aftereffect 7−143861
$Mn_{1-x}Zn_xF_2$ dilute antiferromagnets, mag. mom. and suscept. temp. and freq. depend 7−105901
$Mn_xZn_{1-x}F_2$ cpds., NMR of F, line profile, 4.2 to 300 K *(German)* 7−132157
$Mn_xZn_{1-x}F_2$, dil. antiferromag., spin dynamics 7−118786
$Mn_xZn_{1-x}F_2$, phase transitions, metastable states, random fields 7−77325
$Mn_xZn_{1-x}F_2$, phase transitions and metastable states in the presence of random fields 7−85336
$Mn_xZn_{1-x}F_2$, random anisotropy and exchange in antiferromagnets, ground state props., excitations 7−138212
$MnZnFe_2O_4$, intrinsic mag. props., DTMG and DTA studies 7−143785
$Mn_{0.8}Zn_{0.2}Fe_2O_4$, ferrite, nuclear gamma resonance spectra, influence of electric field 7−132168
$Mn_{1-x}Zn_xFe_2O_4$ ferrites, IR absorpt. spectra study 7−138460
$Mn_{1-x}Zn_xFe_2O_4$ magnetic heads, single cryst. wear resist. anisotropy rel. to surface brittleness anisotropy 7−78263
$Mn_{1-x}Zn_xFe_2O_4$, powder dispersion effect on struct. and physicochem. props. of sintered specimens 7−77912
$Mn_{1-x}Zn_xO$, spin glass transition, susceptibility studies 7−143814
Na_2SO_4-$ZnSO_4$:Mn glasses, ESR and optical absorpt. of Mn^{2+} ions 7−132128
Na_2SO_4-$ZnSO_4$:Pr(Tm), glasses, spectral studies 7−70849
Ni-Zn ferrites, Cu-substituted and non-substituted, elec. cond. 7−112330
Ni-Zn ferrites, spinels, NMR spin echo study 7−138346
Ni-Zn ferrites with additives, for magnetic heads use 7−132538
Ni-Zn-Co, polycrystalline ferrite, complex mag. initial permeability, temp. spectra local splitting 7−143847
Ni-ZnSe-Ge structures, photoelec. props. 7−105620
$NiFe_2O_4$-$ZnFe_2O_4$, mutual diffusion of cations 7−105107
$Ni_{0.65}Zn_{0.35}Fe_{2-x}Mn_xO_4$, spinel ferrite, mag. and dielec. props. 7−125454
$NiZnFe_2O_4$:GeO_2, SnO_2 ferrites, disaccommodation spectra 7−105971
$Ni_{0.28}Zn_{0.72}Fe_2O_4$, mag. transformations, thermal expansion 7−77277
$Ni_{0.5}Zn_{0.5}Fe_2O_4$, ferrite, sintering, added AlN and Al_2O_3, formation of ferrospinel oxonitride 7−100149
$Ni_{1+t-x}Zn_xTi_tFe_{2-2t}O_4$, mag. props. rel. to Ti content 7−112854

zinc compounds continued
P_2O_5-BaO-ZnO-Na_2O-$Na_2U_2O_7$ VG-13 glass, high resolution nuclear-track-recording detector 7−74375
PbF_2-ZnF_4-GaF_3-YF_3-AlF_3-NdF_3 (HoF_3), fluoride glass, laser props., calc. 7−68649
Rb_2ZnBr_4 single crysts., structural transitions and elec. field gradient tensor, quadrupolar perturbed NMR study 7−92545
Rb_2ZnCl_4 crystals, incommensurate-commensurate phase transition, permittivity, birefringence 7−137550
Rb_2ZnCl_4, discommensurations, interaction potential, direct meas. 7−113064
Rb_2ZnCl_4, ferroelec., incommensurate phase, permitt., anomalous thermal hysteresis under uniaxial deform. 7−77483
Rb_2ZnCl_4, low freq. permitt. meas. 7−99641
Rb_2ZnCl_4, normal phase, computer simulation near incommensurate transition 7−111866
Rb_2ZnCl_4, phase transition, ultrasonic studies 7−98350
SiO_2 (glass)-ZnO-SiO_2(glass)(Si), boundary acoustic waves propag. *(Japanese)* 7−118222
SnO_2-ZnS:Cu-As_2S_x-Al, x=3, 5, electroluminescent and stability props. 7−138515
$Sr_2Zn_2Fe_{28}O_{46}$, hexagonal ferrite, mag. and Mossbauer study 7−112853
TeO_2-$ZnCl_2$, binary tellurite glasses, elastic behaviour under press. 7−111731
TeO_2-$ZnCl_2$ vitreous system, struct. and US props. 7−104556
ThF_4-ZnF_2-YF_3-BaF_2-ZrF_4-NaF-LiF-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
Y-Ba-Cu-Zn-O, impurity effects on supercond. props. 7−105789
Zn complex, 2,3-naphthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758
Zn complex, hexakisantipyrine zinc perchlorate, EPR study of Mn (II) 7−112934
Zn complex, phthalocyanine-Zn, substituted species, sublimated films, electrophys. props., absorpt. spectra study 7−92758
Zn complex, Zn octaethylchlorin, deuterated species, unstable anionic forms, reson. Raman scatt. spectra study 7−103515
Zn complex, Zn(II) protoporphyrin IX dimethyl ester, reson. Raman spectra 7−82152
Zn complex, Zn(imidazole)$^{2+}$, tautomerism, effect of cation binding and methyl substitution 7−89918
Zn complex Zn[2,5-diphenyloxazole]$_4(ClO_4)_2.4H_2O$, 77 and 300 K ESR 7−85414
Zn complexes, tetranapthoporphines, triplet-triplet absorpt. spectra 7−109874
Zn complexes of 3-phenyl-4-acetyl-5-isoxazolone, synthesis, struct., IR and PMR spectra 7−99859
Zn octaethylchlorine-d_0(−d_2), fine struct. fluoresc. *(Japanese)* 7−129786
Zn^{2+} solutions in conc. aqueous KOH, structure, Raman and ^{67}Zn studies 7−97896
Zn-montmorillonite-V_2O_5, cathode interface, Zn^{2+} migration 7−69974
Zn-Se-GaAs heteroepitaxial system, lattice distortion 7−92030
Zn-$ZnCl_2$ composite, electrodeposited on steel sheet, corrosion resist. 7−93147
Zn-ZnI_2-polyaniline battery charge storage and energy efficiency obs. 7−119640
Zn-ZnO-Pb, inelastic electron tunnelling spectroscopy, effect of doped oxide layer 7−70428
Zn-Zn(Cl,Br)$_2$-polyaniline battery charge storage and cycling obs. 7−119639
$ZnAl_xFe_{2-x}O_4$ ferrite, elec. cond. and physical props. rel. to Al content 7−118483
$ZnAl_xFe_{2-x}O_4$, polycryst., Mossbauer effect study 7−125567
$ZnAl_2O_4$:Mn, solid aluminates, lumin. of Mn^{3+} ion 7−113270
$ZnAl_2S_4$, IR transmittance and Mn^{2+} EPR spectrum 7−99561
Zn_3As_2, MBE growth on InP or GaAs 7−77822
Zn_3As_2, optical transitions below fund. absorpt. edge, IR spectra 7−92649
ZnB_2, sintered, electrode behaviour in aq. solns. *(Japanese)* 7−78290
$Zn_2BaFe_{16}O_{27}$ hexaferrite, magnetostriction consts. and anisotropy energy temp. depend. study *(Russian)* 7−125525
$ZnBr_2$, aq. soln., conc., X-ray scatt. obs. 7−113314
$ZnCO_3$, metal chelate formation by solid-state reaction with 8-hydroxyquinoline 7−106786
$Zn_xCd_{1-x}Cr_2S(Se)$, struct. and mag. props. 7−125342
$Zn_xCd_{1-x}In_2S_4$ synthesis and charactn. 7−143021
ZnCdS:Ag/CdSSe:Cu mixed systems, photoconductivity and dark conductivity 7−137983
ZnCdS-$CuIn_{1-x}Ga_xSe_2$ thin film polycrystalline solar cells, deposition and characts. 7−126634
$Zn_{1-x}Cd_xS$ phosphor powders, surface recombination mediation by Pd microislands 7−113259
$Zn_{1-x}Cd_xS$ thin films, prep. by MOCVD, struct. and optoelectronic props. 7−119166
$Zn_xCd_{1-x}S$ films, elec. props. 7−143651
$Zn_xCd_{1-x}S$ layers, photoelec. and optical props. 7−105619
$Zn_xCd_{1-x}S$-Si, heterojunction, electrophys. parameters 7−70385
$Zn_xCd_{1-x}S$-Cu_2S thin film heterojunctions in solar cells, electron microprobe X-ray anal. 7−78631
$Zn_xCd_{1-x}Se$-Cu_2S heterostructs., appl. as thin film detectors in SEM *(Russian)* 7−73476
$Zn_xCd_{1-x}Se$ mixed single crysts., absorpt. coeff., Urbach rule obs. 7−125671
$Zn_xCd_{1-x}Se$ mixed single crysts., absorpt.-edge temp. shift. meas. 7−125672
$Zn_xCd_{1-x}Se$ single crystals, energy spectrum of local centres, elec. characts. 7−112357
$Zn_xCd_{1-x}Se$, struct. phase transitions, composition depend. of band gap 7−112177
$Zn_xCd_{1-x}Te$-InSb(InAs) heterostructures, transition layer form. during vacuum epitaxy *(Russian)* 7−124725
$(Zn_xCd_{1-x})_3P_2$, solid solutions, thermodynamic props. 7−98501
$ZnCl_2$, aq. solns., dielectric spectroscopy eval. 7−92588
$ZnCl_2$, liquid and glassy, Brillouin scatt. spectra 7−92692
$ZnCl_2$ solns., dielectric spectroscopy, evidence of ion complexes 7−92589
$ZnCl_2$, sublimation thermodynamics, mass spectra 7−76375
$ZnCl_2$/LiI aqueous complexes, acoustic and volumetric investigations 7−111769
$ZnCl_2$-KBr glass, estimation of IR absorpt. by molecular dynamics 7−138445
$Zn(ClO_4)_2$ paramag. crysts., low temp. phase transition studies 7−105009
$Zn(ClO_4)_2.6H_2O$, phase transitions attributable to disorder in waters of hydration 7−118082
zinc compounds continued
$ZnCO_3$ mol. calcite crysts., lattice dynamics 7−104932
γ-$Zn_2Co(PO_4)_2$, vibr. and electronic spectra 7−70787
$ZnCrFeO_4$ spinel, mixed oxide catalyst, synthesis, struct., and catalytic activity 7−100051
ZnF_2, IR spectra, temp. depend. *(French)* 7−85630
$ZnFeF_5(H_2O)_2$, inverse weberites, frustrated magnetic and crystal structures, powder neutron diffr. 7−77237
$ZnFe_{12}O_{19}$, hexagonal ferrite single crystals, flux growth and mag. props. 7−125942
$ZnFe_2O_4$ ferrite, ultrafine, low temp. prep., particle size, mossbauer spectra, surface area, X-ray diffr. 7−92938
$Zn_{0.2}Fe_{2.8}O_4$, particles, Co-ferrite covered, coercivity meas. 7−125486
$Zn_{1-x}Fe_xSe$ dilute mag. semiconductor, MBE growth, characterisation 7−112117
$ZnGaInS_4$, layered cpds., asymmetries of Raman scatt. 7−106196
$ZnGeAs_2$ MBE growth on GaAs 7−77822
Zn_2GeO_4, cryst. struct. refinement 7−124216
$ZnGeP_2$ crystal for CO laser emission frequency doubling 7−141936
$ZnGeP_2$, electron irrad., elec. and optical props. 7−111672
$ZnGeP_2$, electron radiation effects during isochronous annealing 7−142842
ZnHgTe surface and interface defect prodn., AES and XPS studies 7−111541
$ZnIn_2S_4$ layered cpd., recomb. processes, time resolved photolum. and photocond. studies 7−119053
$ZnIn_2S_4$ layered cpds., asymmetries of Raman scatt. 7−106196
$ZnIn_2S_4$ single cryst., SiO_x antirefl. coating designed for increased photocurrent 7−123158
$ZnIn_2(S_xSe_{1-x})_4$ mixed crystals, optical and electronic props. 7−106151
$ZnIn_2Se_4$, structure refinement 7−76091
$ZnIn_2Te_4$, thin film growth and struct. props. 7−138688
$ZnMF_6$, M=Si, Ti, Zr, paramag. crysts., low temp. phase transition studies 7−105009
$Zn_xMg_{1-x}Fe_2O_4$, lattice parameter, cation distrib., bond length and Curie temp. studies 7−142712
$(ZnMn)_3As_2$, dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$Zn_{1-x}Mn_xS$, low energy emission bands, time resolved spectroscopy study 7−138504
$Zn_{1-x}Mn_xS(Se)(Te)$ dilute mag. semicond., Mn-Mn exchange interaction 7−125363
ZnMnSe, MQW structs., polarisation depend. optical gain and absorpt. spectra 7−144094
$Zn_{0.45}Mn_{0.55}Se$, dilute mag. semicond., mag. ordering, neutron diffr. studies 7−125317
$Zn_{1-x}Mn_xSe$ films and superlattices, MBE grown, photoluminesc. and excitation spectra 7−113258
$Zn_{1-x}Mn_xSe$, diluted magnetic semiconductors, quantum wells and superlattices 7−131771
$Zn_{1-x}Mn_xSe$, high-field magnetisation steps and nearest-neighbour exchange const. meas. 7−99502
$Zn_{1-x}Mn_xSe$, magnetospectroscopy studies *(German)* 7−125028
$Zn_{1-x}Mn_xSe$, semimagnetic semicond., electronic props., photoemission survey 7−138599
$Zn_{1-x}Mn_xSe(Te)$, spin glass behaviour below percolation limit 7−70547
$Zn_{0.95}Mn_{0.05}Te$, magnetisation meas. in mag. fields up to 42 T 7−99423
$Zn_{1-x}Mn_xTe$, localised excitations, press. and temp. depend. 7−85826
$Zn_{1-x}Mn_xTe$, low temp. high field magnetisation step obs. 7−92464
ZnMnX (X=Se, Te), dil. mag. semiconductors, long-range mag. interactions, anal. 7−112806
$Zn_2Mo_3O_8$, metal cluster oxide cpd., single cryst., photoelectrochem. obs. 7−86635
$Zn_xNb_6Se_8$, prep. by molten salt ion exchange and ternary element insertion 7−83819
$Zn_xNi_{1-x}Fe_2O_4$, Mossbauer effect study of spin fluctuation 7−85491
ZnO, adsorpt. of ethylene, CARS spectroscopy with optical waveguides 7−84491
ZnO antireflection coating for PbS selective absorbers 7−86829
ZnO, Bardeen state and elec. props. 7−85026
ZnO based nonlinear resistors, sintered, microstruct., density rel. to additives 7−106473
ZnO bulk wave transducer struct. for acousto-optic phase modulation of single-mode fibres 7−123390
ZnO ceramic, elec. props., high-temp. annealing effects 7−92188
ZnO ceramics, defect struct., spatially resolved cathodolum. studies 7−106275
ZnO crystals, electron beam and optical strength 7−69763
ZnO crysts., direct and indirect two-photon absorpt. processes, perturbation calcs. 7−77489
ZnO e-h plasma, nonequilib. long-wavelength plasmons, radiative props. 7−143499
ZnO, electric field gradient, grain size depend. 7−112258
ZnO, electron irrad., photoluminescence obs. 7−92714
ZnO, electron irrad. damage, cathodoluminescence obs. 7−98250
ZnO, energy band gap, photoacoustic determ. 7−84677
ZnO, energy gap, exciton states transitions, effect of isotopic substitution, UV reflectivity spectra 7−76779
ZnO film surface conductivity, influence of absorbed gases *(Chinese)* 7−112517
ZnO films, chemical deposition from aqueous solutions 7−113460
ZnO films, cond. press. and temp. depend., influence of decomposition and O chemisorption 7−85140
ZnO films, RF sputter deposition on GaAs substrates, piezoelec. props. 7−125981
ZnO films, transparent and conducting, activated reactive evaporation 7−119150
ZnO laser, pulse periodic electron-beam-pumped 7−130125
n-ZnO, laser-induced photopot. meas. with or without current doubling reagent 7−99109
ZnO layer in sandwich struct., boundary acoustic wave prop. *(Japanese)* 7−70057
ZnO, morphology and surface defects 7−131396
ZnO multilayer thin film acoustic transducers for microwave freqs. 7−123420
ZnO multiple layer acoustic transducers, high efficiency, millimetre-wave freqs. 7−117428
ZnO optical waveguide, adsorbed O_2, CARS 7−76606
ZnO phosphors, cathodoluminesc. 7−85852
ZnO piezoelectric film deposition on single-mode filters and appl. to phase modulators 7−125984

zinc compounds continued
ZnO polycryst., bulk and grain boundary defect states, doping and heat treatment effects 7−112234
ZnO, porous, varistor props. 7−99053
ZnO powder form. by hydrothermal oxidation 7−126061
ZnO pure and Li-doped crysts., exciton centre activation by laser excitation, photolum. study 7−77623
ZnO, Q-state particles, radiation chemistry, small semiconductor clusters quantum state 7−70830
ZnO, SAW device materials inhomogeneity detection, line focus beam acoustic microscope appl. 7−123396
ZnO single crystal growth by flux method, with solute generated by reaction *(Japanese)* 7−125944
ZnO sputtered film transducer for low temp. ultrasonic meas. on InSb substrate 7−117431
ZnO sputtered films, physical props. 7−125873
ZnO, supersaturated soln., optical props., UV spectra 7−70834
ZnO, surface, electron trapping, O_2^- form., CARS obs. 7−74616
ZnO surfaces, O Auger signal, calibration 7−119076
ZnO thin film, RF magnetron sputtered on sapphire, refractive index meas. 7−132359
ZnO thin film, spray deposition, elec. and optical props. rel. to deposition variables 7−105321
ZnO transparent conducting films, prep. by reactive sputtering 7−144275
ZnO, wide-gap semicond., acceptors and donors, PAC studies 7−98902
ZnO:Al films, transparent and heat reflecting, reactively sputtered, optical props. 7−125819
ZnO:Bi varistors 7−138591
ZnO:Co^{2+}, saturation spectroscopy and fluorescence 7−99926
ZnO:In-glass, thin films heat treatment study 7−119142
ZnO:In(Al), heat-treated thin films, elec. props. 7−125156
ZnO:Tb films, spray pyrolysis and photoluminesc. props. 7−100054
ZnO/Si layered piezoelec.-semicond. struct., acoustoelectronic bistability phenomena 7−112405
ZnO-Al_2O_3-SiO_2 based glasses, thermal stability and acid resistivity 7−100407
ZnO-Au contacts, metastable He(Xe) atom interactions, adsorption effects 7−113337
ZnO-B_2O_3 glasses, high electric field and switching phenomena 7−105583
ZnO-BaO ceramics, microstructural studies 7−124540
ZnO-Bi_2O_3 ceramics, defect struct., spatially resolved cathodolum. studies 7−106275
ZnO-Bi_2O_3 thin-film composites, elec. conduction, humidity dependence 7−99225
ZnO-Cu system, effect of H_2 chemisorption on IR transparency 7−85673
ZnO-Fe_2O_3-V_2O_5-B_2O_3 glasses, elec. conductivity 7−137932
ZnO-graphite, two-phase powder system, thermal cond. 7−69996
ZnO-Li_2O-GeO_2, mixed coordination systems, EXAFS structure anal. 7−138551
ZnO-Na_2O-B_2O_3-SiO_2:$CdSe_xS_{1-x}$, quantum confinement effects of impurity microcrysts., optical props. study 7−106224
ZnO-Nb_2O_5 system, non-ohmic behaviour rel. to comp. and sintering temp. 7−84905
ZnO-Si, piezoelectric-semiconductor structs., multistability of acoustoelectronic interaction 7−131718
ZnO-Si struct., acoustic layer mode propag., nonlinear electroelastic effect *(Japanese)* 7−124670
ZnO-SiO_2-B_2O_3-P_2O_5 glass system, DTA, thermal expansion, comp. depend., LSI package sealing appl. 7−91845
ZnO-SiO_2-Si multilayer struct., Rayleigh-wave modes amplification, computational technique 7−124667
ZnO-SnO_2 mixtures, heat treatment, struct., elec. cond., green luminesc. 7−86228
ZnO-Ta_2O_5-Li_2O ferroelec. ceramic, Zn cation distrib., correl. with Curie temp., EFG, NMR, dielec. meas. 7−113098
ZnO-TeO_2-Nd_2dO_3 (Ho_2O_3), oxide glass, laser props., calc. 7−68649
ZnO-ZnSe:In(Ga)(Ag) diodes, influence of dopants on electrolum. 7−85848
ZnP_2, amorphous layers, thermal evaporation, struct. 7−92019
ZnP_2, α- and β-crystals, anisotropy of microhardness, density of defects 7−91710
ZnP_2, gyrotropic, Raman light scatt., spatial dispersion effects 7−99818
ZnP_2, optical anisotropy of inverse H-like series lines 7−99882
ZnP_2, sound speed, temperature dependence 7−91733
ZnP_2, tetragonal single crystals, superionic conductivity 7−98566
Zn_3P_2, amorphous thin films, refractive index and optical absorption coeff. calcs. 7−76658
Zn_3P_2, electrical conductivity 7−70300
Zn_3P_2 film, flash evap., growth morphology and opt. props. 7−100086
Zn_3P_2 films, grown by close space evaporation, props. 7−125993
Zn_3P_2 films, vacuum deposited, structural, optical, elec. charactn. 7−105737
Zn_3P_2, H_2 passivation, DLTS and Schottky diode studies 7−70243
Zn_3P_2, IR multiphonon and defect absorpt. spectra, heat treatment effects 7−138459
Zn_3P_2 junctions and interfaces, electronic struct. and electrical props. meas. 7−92290
Zn_3P_2, large cryst. growth techniques 7−144250
Zn_3P_2 single crystals, surface chemistry studied by X-ray photoemission spectroscopy 7−119593
Zn_3P_2 single crysts. and polycryst. ingots, growth and elec. props. 7−85975
Zn_3P_2 thin film Schottky barriers, gap states study by admittance spectroscopy 7−77089
Zn_3P_2 vacuum evaporated films, appl. photoelectrochemical solar cells 7−126636
Zn_3P_2/Mg Schottky barriers, vacuum-deposited, gap states, admittance spectroscopy 7−112434
$Zn_{43}P_{57}$ amorphous films, electron diffr. studies 7−92032
$Zn(P_xAs_{1-x})_2$, solid solutions, mag. susceptibility 7−99396
$Zn(PO_3)_2$-ZnF_2-AlF_3 glasses, struct., NMR obs. 7−104578
$Zn_3(PO_4)_2$, film deposition on steel, Mn^{2+} component influence *(Japanese)* 7−93178
$Zn_3(PO_4)_2.H_2O$, cryst. struct. determ., X-ray diffr. study *(French)* 7−124222
$ZnPS_3(Se_3)$, spin ordering, inelastic light scatt. studies 7−143812
$Zn_3P_{2(1-x)}Sb_{2x}$ thin films prep. by hot-wall deposition, elec. props. study 7−125155
ZnS, 2H polytype, layer disordered wurtzite, diffuse X-ray scatt. 7−97855
zinc compounds continued
ZnS ALE films, ellipsometric meas. of thickness and refractive index 7−128631
ZnS, alternating current electroluminophors, $Cu_{2-x}S$ surface elemental composition 7−70038
ZnS, annealing of F^+ EPR centres, optical absorpt. spectral bands 7−106024
ZnS, Auger-type energy transfer 7−70323
ZnS band-to-band impact ionisation rate, Schottky diode photocurrent multiplication meas. 7−143473
ZnS bulk single crystal growth by temperature difference-constant temperature method *(Japanese)* 7−132426
ZnS cleavage surfaces, atomic and electronic structs. 7−137996
ZnS, crystal whiskers, struct. and twist, X-ray topography studies 7−143302
ZnS, doped phosphor, thermoelectroluminesc. study 7−85850
ZnS, elastic consts., press. depend., three-body force pot. calcs. 7−104895
ZnS, electron irradiation, near infrared emissions and optical absorption from F^+ centres 7−137411
ZnS, energy band gap, photoacoustic determ. 7−84677
ZnS epitaxial films, struct. and chelate organometallic cpd. prep. *(Russian)* 7−124754
ZnS Fabry-Perot interference filter, optical bistability *(Korean)* 7−80865
ZnS films, nondestructive depth profiling by spectroscopic ellipsometry 7−130298
ZnS for electroluminescent and laser devices, electro-optical studies 7−113131
ZnS, formation and charactn. on lipid bilayer membranes 7−105204
ZnS interference filters for symbolic substitution 7−74864
ZnS lattice, three-centre Auger-type nonradiative recomb. mech. 7−138499
ZnS, MBE growth on Si substrates 7−138668
ZnS, MBE on oriented (100) Si substrates, crystallographic quality, morphology 7−71020
ZnS MIS device technology using MOCVD growth 7−86043
ZnS MOCVD epitaxial layers on GaAs, vacancy centres, ODMR study 7−132164
ZnS, multiplet structures of transition metal deep impurities 7−84745
ZnS nonlinear etalons and optical computing 7−90685
ZnS optical films, linear expansion coeffs. 7−103930
ZnS, optical props., 2-12 μm 7−92760
ZnS substrate diffusion waveguides, fabrication and props. *(Russian)* 7−75116
ZnS surface, H atom adsorption, electron accommodation 7−70088
ZnS, surface atom vacated state formation by H adsorption 7−76562
ZnS thin films, ion beam sputtering 7−125982
ZnS thin-film inteferometers, optical bistability utilised for constructing purely optical discreter logic elements 7−129999
ZnS, two-photon absorpt., calc. by empirical pseudopotential method 7−99776
ZnS, wurtzite struct., nonpolar surfaces, relax. 7−137679
ZnS:Al, Cu(P)(Ar)(N), ion implanted defects, photoluminesc. spectra before and after implantation 7−92710
ZnS:Al, ODMR studies 7−138351
ZnS:Al, self-activated photolum., quantum efficiency 7−70854
ZnS:Ce(Eu)(Tb)(Tm) thin films, growth and charcts. 7−70130
ZnS:Cu, deformation lumin., crystals with moving charged dislocations 7−70864
ZnS:Cu-Sm(Eu)(Pb)(Tm), cryst., electroluminesc. quantum yield, freq. depend. *(Japanese)* 7−132343
ZnS:In VPE on GaP substrates, doping effects study 7−105317
ZnS:Mn on Y_2O_3 (quartz), thin films, electrolum. charcts. and struct. 7−138516
ZnS:Mn phosphor, photo and cathodoluminescence spectra *(Korean)* 7−85813
ZnS:Mn^{2+}, materials for electroluminescent thin films 7−77657
ZnS:Mn^{2+}, orbit-lattice coupling coeff., ligand field theory 7−124936
ZnS:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7−124935
ZnS:Mn^{2+} thin CVD films, EPR obs. 7−77401
ZnS:R, rare earth ion excitation, energy transfer mechanism 7−70855
ZnS:Sm^{3+}, crystals and films, site-selective 4f-4f excitation of electrolum. centres 7−85822
ZnS:Tb, F electroluminescent thin films, RF magnetron sputtered, annealing effects 7−99939
ZnS:Tb,F thin films, electron-beam evaporated and RF magnetron sputtered, electroluminesc. 7−125809
ZnS:Tb,F thin-film electroluminescent devices, Tb-F emission centres 7−113290
ZnS:TbF_3, materials for electroluminescent thin films 7−77657
ZnS:Tm crystals, donor-type centres 7−84758
ZnS:Tm^{3+}, emission spectra, dissolution of 4f-4f transitions in phonon sidebands 7−92738
ZnS:transition metal, impurity-induced nonradiative recomb. processes, EPR study 7−112364
ZnS-Al_2O_3 multilayer structures, profiling with monoenergetic positrons 7−85891
ZnS-p-Si thin film interface electronic density of states meas., conductance technique 7−131753
ZnS-Si, effect of ZnS deposition process on thin film interface 7−138652
ZnS-Si heterojunctions, RF sputtered ZnS films, charcts. 7−131757
ZnS-SmF_3 thin films, electrolum. charcts. *(Russian)* 7−77658
$(ZnS)_{1-x}(CdS)_x$:Cu, Yb, Co luminophor for near IR detection 7−70866
ZnS(Se), metalorganic MBE growth 7−131476
ZnS(Se):Cu, Ag, Au, impurity and cation vacancy electronic struct. 7−98873
ZnS_xSe_{1-x} epitaxial films, vapour-grown, thermodynamic anal. and luminescent props. 7−144303
ZnS_xSe_{1-x}, polariton Fermi reson., IR spectra *(Russian)* 7−84697
ZnS(Se)(Te), bound piezopolaron ground and excited state energy calcs. 7−118377
$ZnS_{1-x}Te_x$, cathodoluminesc. saturation assoc. with isoelectronic additive Te at high excitation rates 7−99941
ZnSe afterglow charcts. determ., for X-ray tomography appl. 7−103334
ZnSe, annealed in presence of Zn metal and air, photocond. rise and decay 7−112397
ZnSe, atmospheric pressure MOVPE growth on GaAs substrates 7−100109
ZnSe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnSe, bidirectional scatt. distrib. functions, 0.63 to 10.6 μm 7−110486

nc compounds continued
ZnSe bistable interference filters switched by ns light pulses, temporal behaviour 7−110442
ZnSe CO_2 laser optics, Japanese National program 7−82633
ZnSe, cathodoluminesc. spectra, effect of annealing in vacuum 7−113291
ZnSe, composition change on zone melting 7−76357
p-ZnSe, defective electrically active acceptor centres 7−84899
ZnSe, elastic consts., press. depend., three-body force pot. calcs. 7−104895
ZnSe, electrochem. photocapacitance, photoelectrochem. etching 7−125039
ZnSe, electron irrad., close Frenkel pairs, ODMR obs. 7−98142
ZnSe, electron irrad., isolated interstitials, optically detected mag. resonance studies 7−85489
ZnSe electron-beam-pumped lasers with reduced threshold voltage and current density 7−90622
ZnSe, energy band struct., empirical pseudopot. method *(Korean)* 7−143340
ZnSe epitaxial films, edge cathodolum. spectra 7−70915
ZnSe epitaxial growth on GaP and GaAs substrates, growth rate limitations and surface morphologies 7−105316
ZnSe, epitaxial growth on Ge(100) by MBE 7−143255
ZnSe epitaxial layers, metalorganic CVD on GaAs substrate, impurities study, photoluminesc. spectra anal. 7−71048
ZnSe epitaxial layers on GaAs, characterisation using modulation of Renninger scan intensity 7−69534
ZnSe epitaxial layers on GaAs substrates, misfit strain, Raman study 7−99835
ZnSe, film, epitaxial, edge cathodoluminesc. 7−119056
ZnSe, film quality in MBE growth, beam pressure ratio effect, optical and elec. props. 7−76684
ZnSe films, low pressure MOVPE growth 7−92880
ZnSe films, MOVPE growth, diethylzinc diffusion-limited condition 7−144304
N-ZnSe, free carrier absorption, materials characterisation 7−113108
ZnSe grown on GaAs (100) by ALE, MBE, optical props. and lattice parameters 7−76685
ZnSe, growth by the Markov-Davydov method, hole conductivity, luminescence props. 7−77783
ZnSe, heteroepitaxy on GaAs 7−137741
ZnSe, high purity, low press. VPE growth, luminesc. props. 7−71066
ZnSe, II-VI compounds, wide gap, VPE 7−138674
ZnSe interference filters for symbolic substitution 7−74864
ZnSe laser, pulse periodic electron-beam-pumped 7−130125
ZnSe, low temperature plasma-assisted epitaxial growth 7−126013
ZnSe, MBE growth on GaAs (001), RHEED intensity oscillations 7−71031
ZnSe MBE layers, surface phase diagram, RHEED study 7−137749
ZnSe, MBE single cryst. growth, vapour species conc. obs. 7−137763
ZnSe MIS device technology using MOCVD growth 7−86043
ZnSe MOS structures, electroluminescent, electron-phonon coupling anal., derivative light output-voltage characts. 7−77104
ZnSe, magnetoresistance, hopping conduction over localised states in Coulomb gap 7−84944
ZnSe nonlinear interference filter, thermally induced optical bistability model 7−90683
ZnSe optical bistability utilised for constructing purely optical discrete logic elements 7−129999
ZnSe optical fibre for CO_2 laser medical appls. 7−79043
ZnSe optical films, linear expansion coeffs. 7−103930
ZnSe optically bistable element arrays, appl. as man-machine interface 7−90681
n-ZnSe, plasmon-LO-phonon coupled modes, Raman scatt. 7−113185
p-ZnSe, point defects on photocond. spectra 7−112402
ZnSe, polycrystalline electrodes, electrosynthesis, photoelectroactivity 7−70357
ZnSe, refractive index, thermal effects caused by the electron-phonon interaction 7−70736
ZnSe, semicond. colloid, corrosion, radiolysis investig. 7−93219
ZnSe single cryst., new emission band in near band edge region 7−92741
ZnSe, single crystal growth, high temp. annealing effect on elec. transport props. 7−138620
ZnSe single crystal waveguides, optical bistability, nonlinear switch ing 7−141980
ZnSe single crysts., heavy hole cyclotron resonance, polaron effective mass 7−70171
ZnSe single crysts., melt growth, resist., carrier mobility and conc. 7−144261
ZnSe, strong absorption domain instability, laser irrad. expt. 7−125799
ZnSe thin film low temp. growth by hydrogen radical enhanced CVD *(Japanese)* 7−118293
ZnSe, Zn vacancy, ODMR-magnetic circular dichroism studies 7−98143
ZnSe:Ag, strongly lattice coupled luminesc. transition, temp. broadening 7−92711
ZnSe:Ar, molten, props., composition of crystallisation 7−76358
ZnSe:As(Au)(Tl) single crysts., solvent growth, morphology, photolum. 7−144254
ZnSe:Au, deep levels, optically detected mag. resonance studies 7−105473
ZnSe:Au, deep recombination centres, ODMR study 7−143932
ZnSe:Cl, electron irrad. electron and hole traps, elec. compensation 7−98901
ZnSe:Cr Jahn-Teller system, interfolium transition 7−92129
ZnSe:Cr^{+}, lumin. of Cr^{+} centre 7−138503
ZnSe:Cu,Tm, conduction band, characteristic features, electrolum. study 7−144135
ZnSe:Cu diodes, deep level electrolum., kinetics 7−85849
ZnSe:Er^{3+}, impurity luminesc. sites, effect of nonstoichiometry 7−85853
ZnSe:I, effect of impurity on edge photoluminescence 7−106238
ZnSe:Mg_I growth, structural and optical props. 7−77789
ZnSe:Mn^{2+}, orbit-lattice coupling coeff., ligand field theory 7−124936
ZnSe:Mn^{2+}, spin-lattice coupling coeffs. 7−84787
ZnSe:Mn^{2+}, triplet states, Jahn-Teller coupling const., ang. overlap model 7−124935
ZnSe:V(W)(Pr)(Nd)(Yb), luminescence of optical centres, ion implanted rare earth and transition elements 7−99929
ZnSe/Al/Ge heterojunction with monolayer intralayer, tight-binding calcs. 7−99203
ZnSe/Langmuir-Blodgett film MIS diodes, blue electrolum. 7−70912
ZnSe-(ZnMn)Se superlattices, exciton lumin., electric field induced shifts 7−138481

zinc compounds continued
ZnSe-GaAs (100), plastic deformation in MBE grown ZnSe layers 7−76668
ZnSe-GaAs heterostructure, Raman spectrum 7−138455
ZnSe-Ge, electron affinity rule, photoemission tests 7−138600
ZnSe-MnSe 2D mag. semiconductor superlattice, RHEED oscills. for MBE growth 7−76681
ZnSe-MnSe-ZnSe heterojunctions, valence band discontinuities, UPS meas. 7−112445
ZnSe-ZnS_xSe_{1-x}, strained-layer superlattices, quantum confinement, strain effects 7−113246
ZnSe-ZnTe, exciton self-trapping, low intensity luminescence studies 7−84688
ZnSe-ZnTe strained-layer superlattice, growth and charactn., photolum. and TEM obs. 7−76682
$ZnSe_{1-y}S_y$, ($0 \leq y \leq 0.25$), MOVPE layers, room temp. photolum. 7−125769
$ZnSe_{1-x}Te_x$ solid solns., composition depend. shift of band gap, lumin. study 7−132312
$ZnSe_{1-x}Te_x$ solid solns., photoluminescence and exciton reflection spectra 7−138487
$ZnSe_xTe_{1-x}$ zinc-blende pseudobinaries, electronic struct., molecular CPA calcs. 7−124854
ZnSe−ZnS strained-layer superlattices, metallorganic MBE growth 7−132465
$ZnSiAs_2$, elec. resist., Hall effect, rel. to defect props. *(French)* 7−84892
$ZnSiAs_2$, Hall mobility meas. rel. to defect props. *(French)* 7−84939
$ZnSiAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSiF_6.6H_2O:Mn^{2+}$, temp. depend. of EPR zero-field splitting 7−92497
$ZnSiO_4$:Mn,Ga phosphorescence, quantum efficiency and photolum. fatiguing studies 7−85820
Zn_2SiO_4:Mn, phosphor, degradation under cathode ray excitation 7−92727
$Zn_2SiO_4:Mn^{2+}$, UV induced luminesc., temp. depend. *(German)* 7−92742
$ZnSiP_2$, electrochemically assisted synthesis 7−86072
$ZnSnAs_2$, high-temp. sp. ht., lattice anharmonicity 7−69923
$ZnSnAs_2$, polycrystalline films, volume plasmon dispersion 7−84726
$ZnSnAs_2$ semicond. crysts., interatomic interaction dynamics, phase transition, intrinsic point defect formation 7−137539
$ZnSnP_2$ chalcopyrite LPE on GaAs sphalerite substrate, orientation depend. and related defects 7−118326
$ZnSnP_2$ conductivity type conversion by In doping, diffusion and heat treatment 7−85016
$ZnSnP_2$, vacuum grown thin films, characterisation 7−112137
$ZnSn(Pb)P_{14}$ diamagnetic semicond. prep., struct. and bandgap studies 7−83905
ZnTe, acceptors, electronic Raman scatt. 7−113182
ZnTe, atomic layer epitaxial growth and sublimation, RHEED intensity variations 7−71016
ZnTe, Au-Cu, Ag-Pt, Pt and Cu-Pt stable ohmic contacts, fabrication and expt. study 7−143612
ZnTe, elastic consts., press. depend., three-body force pot. calcs. 7−104895
ZnTe films, optical props. 7−99951
ZnTe, press. depend. of lowest direct absorption edge 7−70840
ZnTe, proton implantation induced defects, photoluminescence obs. 7−98274
ZnTe, vac. evaporated films, electrical cond. meas. 7−118598
ZnTe, vacancy formation energies 7−131541
ZnTe:Cu, electronic props, of complex Cu-related acceptor with bound exciton 7−92112
ZnTe:Cu, hole-attractive neutral Cu-related complex-defect bound exciton, electronic struct. 7−92113
ZnTe-HgTe, Hg-based superlattices, properties and growth *(Polish)* 7−132474
ZnTe-Ohmic contact systems, contact resist., high temp. behaviour 7−92292
ZnTe-ZnS strained-layer superlattices, Raman probing and lattice modes 7−99856
ZnTe-ZnSe strained layer superlattices, resonant Raman scatt. and photoluminesc. 7−144051
$ZnTe_{1-x}Se_x$ growth in closed tube system, thermodynamic calc. *(Japanese)* 7−106399
$ZnTiF_6.6D_2O$, rhombohedral-monoclinic transition, ^2D NMR study 7−124475
$ZnTiF_6.6D_2O$ struct. phase transitions, ^2H NMR 7−91795
$ZnTiF_6.6H_2O$, normal and deuterated, struct. phase transition obs. 7−104998
$ZnTiF_6.6H_2O:Cu^{2+}$, Jahn-Teller effect, EPR spectra temp. depend. anal. 7−106015
$ZnTiO_3$, form. and transform. 7−98427
ZnV_2O_6 polymorphism, X-ray and DTA studies 7−142683
$ZnWO_4$:Fe, OH single crystal, infrared absorption of OH 7−138464
ZrO, singlet systems and energy levels, stellar appl. 7−103517

Zircaloy *see zirconium alloys*

zirconium
see also nuclei with .....
^{63}Ni tracer diffusion meas. 7−105131
α-phase, self-diffusion coeff. 7−111941
α-phase, strain rate sensitivity, effect of dynamic strain ageing 7−113625
β-phase, fast impurity diffusion of Co and Fe 7−105132
alpha phase, texture form. due to rolling *(Russian)* 7−144428
anodic films, photoelectrochem. anal. 7−71364
atoms, first ionis. pots., reson. ionis. TOF mass spectra 7−90080
BCC high temp. phase, phonon-phonon coupling 7−98367
beta phase, ion mixing of marker layers, thermochem. prop. effects 7−76229
coatings, prod. by iodide method in continuous flow system 7−71043
cyclic deform., 3D shape of loop patches 7−86278
elastic anisotropy of polycryst. aggregates 7−71230
electrolytic polishing and etching method for metallographic surfaces 7−113781
electron and ion irrad., point defect clustering 7−98138
electronic excitations, EELS 7−70954
electronic struct., photoelectron spectra, hydride form. appls. 7−85940
extractive metallurgy, processing and properties 7−77881
internal friction and elasticity modulus meas. method 7−132868
ion implanted He-defect trapping rel. to O 7−84002
L shell X-ray cross sections from Be^{+} collisions 7−90373
laser irradiated, zone of diffusion combustion 7−104825

zirconium continued
LWR barrier fuel design using Zr-Zircaloy cladding 7−116560
mass spectra measurement, separation from spent WWER fuel 7−96229
microhardness anisotropy 7−86327
online mass separator targets, beam heating calcs. 7−96443
oxidation, AES study, room temp., 10^{-8}-10^{-5} Torr 7−138899
oxidation, reflection EELS study 7−138563
oxidation anisotropy, heat tinting method 7−100424
pitting corrosion in chloride soln. 7−93158
Purex process, T and Zr separation *(German)* 7−129216
radiation damage, review 7−137404
SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
sputtering, composition of sputtered flux 7−70965
surface, (0001), adsorption of O, lowest coverage surface struct., LEED intensity anal. 7−91994
surface, (0001), H_2S and O_2 adsorpt., Auger electron spectroscopy and LEED 7−76595
surface, adsorption/desorption of H and O, TPD and ESD studies 7−105281
surface, clean and oxidised, electron energy loss spectroscopy, Auger processes and autoionisation 7−91681
surface, H and D profiling, oxidation effect 7−86425
surface (0001), adsorbed N, surface struct., LEED studies 7−143220
surface (0001), O chemisorption, Auger spectra and LEED study 7−131420
vacancies and small vacancy clusters, computer simulation studies 7−98133
vacuum condensates, Auger spectrum, comp. and elec. resist., effect of O *(Russian)* 7−92309
WWER fuel cans, corrosion cracking under γ-radiation, CsI radiolysis effects 7−106657
Au-Zr, thin film interactions, RBS and X-ray diffr. studies 7−69991
Co-Zr, amorphisation by ion beam mixing and other techniques 7−75998
Fe-Zr, amorphisation by ion beam mixing and other techniques 7−75998
Gd content determ. in Zr using activation anal. technique 7−144769
$NbSe_3$:Zr, CDW depinning field at low temps. 7−98839
$NbSe_3$:Zr, low freq. broadband noise, impurity effects 7−99144
Ni/Zr, ion mixed bilayer, oxidation behaviour 7−138896
Ni-Zr, powder, amorphization by mechanical alloying, X-ray, SEM, microprobe compositional anal. 7−106461
Ni-Zr thin film multilayers, solid state amorphisation, differential scanning calorimetry study 7−75992
YIG:Zr garnets, induced mag. anisotropy 7−105915
Zi-ZiO_2, oxide films, growth and dissolution during laser-assisted combustion 7−78300
α-Zr, load relaxation, strain ageing influence 7−144435
Zr XIII, Ni-like 4s-4p transitions and energy levels 7−103522
Zr-Al_2O_3 interface, ion beam mixing, RBS studies 7−137428
Zr-Co multilayers, interdiffusion and amorphisation, metastable phase equilib. 7−98384
Zr-Fe/Tb-Fe compositionally modulated multilayered films, sputtered, mag. props. 7−99518
$Zr+He^{2+}(D^+)$, impact L-shell ionization cross sections 7−74747

zirconium alloys
see also zirconium compounds
acoustic emission applic. during mech. and fracture testing 7−100479
alpha phase, texture form. due to rolling *(Russian)* 7−144428
BWR fuel elements, bending, guide tube radial spacing meas. and anal. *(German)* 7−129195
BWR fuel rods, Zr alloy canister tubes, nodular corrosion reduction *(German)* 7−129194
elastic anisotropy of polycryst. aggregates 7−71230
electron irradiated, damage rate and isochronal recovery 7−104841
getters, activation processes, alloying effect 7−102421
high burnup fuel evaluation, Zircaloy corrosion study 7−116572
high temp. transient oxidation in steam, simulation model 7−86436
LWR barrier fuel design using Zr-Zircaloy cladding 7−116560
LWR fuel and cladding alloys, corrosion under operational and accident conditions 7−116581
meas. in relaxed and crystallized specimens, RBS technique 7−143104
oxidation and hydriding under irradiation, corrosion in LWRs, PNL results 7−113794
PHWR fuel assemblies with Zircaloy spacers, structural behaviour predictions 7−116584
PWR fuel assembly with Zircaloy-4 cladding for extended burnup performance 7−116567
radiation damage, review 7−137404
reactor cladding tubes, nondestructive testing, sample homogeneity 7−129175
(Ti,Hf,Zr)Be ternary alloys, glass forming range prediction 7−83734
Zircaloy, AE signal analysis, pattern recognition appl. 7−144670
Zircaloy, ion implanted He-defect trapping rel. to O 7−84002
Zircaloy BWR fuel channel, dimensional stability, anneal and quenching treatment 7−116590
Zircaloy cladding, in-reactor creepdown in LWRs, regression model, development and assessment. 7−109278
Zircaloy cladding development for water reactor fuel, conf., Stockholm, Sweden, Sept. 1986 7−115690
Zircaloy cladding tubes for water-cooled fuel assemblies, development and technology 7−129171
Zircaloy claddings, eddy current testing 7−129174
Zircaloy corrosion behaviour in LWR power reactors 7−116579
Zircaloy elements for PHWR fuel bundles, joining of appendages, split spacer design 7−116588
Zircaloy fuel cladding, eddy current testing and analysis for OECD Halden project 7−144678
Zircaloy fuel cladding, transient failure, cladding rupture, FREY code 7−109283
Zircaloy fuel cladding localized corrosion, mechanism and protection techniques 7−81532
Zircaloy fuel rod cladding, transient failure, state-of-the-art study 7−73867
Zircaloy fuel sheaths, strain and failure in CANDU LOCA 7−129343
Zircaloy fuel sheaths, strain axial variations in CANDU-600 LOCA 7−96290
Zircaloy LWR fuel claddings I stress corrosion cracking, materials technology 7−116583
Zircaloy PWR cladding from Halden Reactor, eddy current test results, fatigue cracks 7−71300

zirconium alloys continued
Zircaloy PWR fuel claddings, long term burnup response, FRAPCON-1 calcs. 7−116586
Zircaloy-2, ^{63}Ni tracer diffusion meas. 7−105131
Zircaloy-2, precip. comp. rel. to heat treatment 7−86182
Zircaloy-2, reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
Zircaloy-2 fuel cladding, failure correlation under high temp. transient 7−89611
Zircaloy-2 fuel cladding strain during BWR temperature transients *(Japanese)* 7−135425
Zircaloy-2 plates SCC in I atmosphere, plastic deform., crystallographic orientation 7−71382
Zircaloy-4, cold worked and stress relieved, load relaxation 7−142908
Zircaloy-4, failure props., effect of varying sample geometry 7−97429
Zircaloy-4, I induced SCC, elongation and bend tests 7−119412
Zircaloy-4, precip. comp. rel. to heat treatment 7−86182
Zircaloy-4 cladding, thermal creep under internal pressure, self diffusion 7−86271
Zircaloy-4 cladding oxidation kinetics and mechanical props. at high temps. in PWR accident 7−129292
Zircaloy-4 fuel cladding, correlation of cold work, annealing and microstructure 7−86206
Zircaloy-4 fuel cladding, deformation, oxidation and embrittlement in hot steam environment 7−89610
Zircaloy-4 PWR fuel cladding material, out-of-file test for yielding behaviour 7−132848
Zircaloy-4 sheets, cold-rolled, evidence of pyramidal slip mode 7−69711
Zircaloy-4 tubing, thermal processing and microstructure influence on corrosion behaviour 7−116582
Zircaloy-4-C steel-Al system, galvanic corrosion 7−135429
Zr_2Pd, cryst. struct., neutron powder diffr. anal. 7−83847
Al-Cr-Zr, Al-rich solid solns. extended by rapid solidification, ageing behaviour 7−93034
Al-Cr-Zr rapidly solidified alloys prod. and processing 7−92931
Al-Cu-Li-Mg-Zr, superplastic forming, cavitation 7−86277
Al-Cu-Li-Zr, 2090, fatigue crack propag., effect of compressive overload cycles 7−78230
Al-Li-Cu-Mg-Zr, high strength, Na-induced cleavage fracture 7−100372
Al-Li-Cu-Mg-Zr, thermal oxidation behaviour 7−100432
Al-Li-Cu-Mg-Zr alloy powders, rapidly solidified, gas-atomised solidification microstructs. 7−86150
Al-Li-Cu-Zr, T_1-Al_2CuLi plates, electron diffr. study 7−78034
Al-Li-Cu-Zr alloy, microstruct. and SCC relationship 7−144611
Al-Li-Zr, duplex precip. hardening, struct., mech. props. 7−138755
Al-Li-Zr (4, 0.2 wt.%), rapid solidification processed, superplastic forming 7−144494
Al-Mg-Zr (10, 0.1 wt.%), warm rolling, superplastic flow, microstruct. 7−144481
Al-Zr vapour deposited coatings, metastable phases, TEM, electron diffr. obs. 7−70147
Al-Zr-Gd (4,4 wt.%), rapidly solidified microstruct. 7−132598
Al-Zr-V, dil-alloy, precip., Ostwald ripening cubic to tetragonal transform. 7−78023
Al-Zr-V, rapidly solidified, coarsening of $L1_2$ structured $Al_3(Zr_xV_{1-x})$ precipitates 7−126130
Al-Zr-V phase diagram calc. *(Korean)* 7−132577
Ar-Ni, amorphous tape, electro beam heating, growth of large Zr_2Ni crystals 7−142605
Co-Cr-Ni-W-Ta-Zr, heat resist. casting alloys, struct. rel. to heat treatment and Zr content 7−113577
Co-Cr-Zr, amorphous alloys, corrosion resist. in HCl rel. to additions 7−106708
Co-Cr-Zr films for mag. recording, magnetostriction 7−99537
Co-Ta-Zr amorphous alloy sputtered films, magnetic and structural props. 7−92482
Co-ZR sputtered thin films *(Korean)* 7−132453
Co-Zr amorphous films, induced anisotropy, static field annealing effects 7−99528
Co-Zr metallic glasses, short-range order and density 7−91465
$(CoCr)_{90}Zr_{10}$, amorphous alloys, Curie temp., press. effects meas. 7−118799
$Co_{77}Cr_{12}Zr_{11}$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
$(CoMo)_{90}Zr_{10}$ amorphous alloys, Curie temp., press. effects meas. 7−118799
$Co_{81}Mo_{10}Zr_9$ amorphous alloys, struct. relax. and mag. props. *(Russian)* 7−69599
CoZr and CoZrRe RF sputtered thin films for mag. recording heads. effect of deposition parameters 7−112885
$Co_{94}Zr_6$ amorphous thin films, mag. and galvanomag. props. 7−112884
$Co_2ZrAl(Sn)$, Heusler alloys, mag. hyperfine fields 7−118434
Cu-Cr-Zr, shot peened surfaces, fatigue behaviour 7−119447
Cu-Ti-Zr, glass form., competing cryst. structures 7−83738
Cu-Zr, amorphous, elec. resist., temp. depend. 7−105521
Cu-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
Cu-Zr, amorphous, short range order, bond energy, charge transfer model 7−97943
Cu-Zr, metallic glass, atomic arrangements, XANES study 7−142611
Cu-Zr, polished surface, effect of vacuum annealing on topography 7−78368
Cu-Zr, rapidly solidified, microstruct. and mech. props. 7−92993
Cu-Zr 7−77887
Cu-Zr amorphous alloys, liq. quenched and sputtered, struct. relax and glass transition, comparison 7−97981
Cu-Zr crystals with dynamic disorder, resistivity saturation, temp. depend. study 7−105530
Cu-Zr metallic glass electrode system, thermodynamic fn. evaluation 7−143050
Cu-Zr-Al, non-magnetic metallic glass, electron transport props. 7−143427
Cu-Zr-M metallic glasses, M=Hf, Ti, Cr, Mn, V, Ni, Fe, Ge or Si, thermal stability as function of average atomisation enthalpy 7−83748
Cu-Zr-Mg-Ni-Si, microalloyed, elec. resist. recovery, after low temp. deform. 7−100287
Cu-Zr-P rapidly quenched glassy alloys, corrosion resistance, effect of P 7−86489
CuCrZr, tensile props, neutron irrad. effects 7−141281
CuZr, amorphous, electronic struct. and chemical short-range order 7−105378

rconium alloys continued
CuZr, amorphous, low temperature elec. resist., quantum corrections 7−98964
CuZr amorphous alloys, Hall effect, temp. depend. 7−98990
$Cu_{40}Zr_{60}$, thermal expansion, 20-400 K 7−98525
$Cu_{50}Zr_{50}$ amorphous ribbon, torsion spring for gravitational const. meas. 7−80268
$Cu_{59}Zr_{41}$, metallic glasses, distributed shear relax., hardness and embrittlement, effect of ageing 7−91468
$Cu_{60}Zr_{40}$, amorphous, crack phenomena during induced crystallisation by indentation 7−126207
$Cu_{60}Zr_{40}$ metallic glass, processed by high vel. injection, struct. and mech props. 7−113475
$Cu_{60}Zr_{40}$ metallic glasses, creep behaviour *(Chinese)* 7−132664
Cu_xZr_{1-x} alloys, Hall coeff. and derivative of density of states 7−105535
$Cu_{50}Zr_{50-x}Al_x$ metallic glass, electronic struct.-sensitive electron transport 7−98963
$Cu_{60}Zr_{40-x}Ni_x$ glasses, ideal soln. behaviour rel. to Ni addition 7−83768
Fe-Cr-Zr, amorphous alloys, corrosion resist. in HCl rel. to additions 7−106708
Fe-Ni-Zr amorphous alloys, effective susceptibility exponent, temp. depend. 7−143766
Fe-Zr, amorphous, hydrogenation induced changes in mag. props., Mossbauer spectra, magnetisation meas. 7−99444
Fe-Zr, amorphous, sputtered and solid-state-reacted films, phase separation 7−98744
Fe-Zr, amorphous alloys, low temp. sp. ht. 7−98495
Fe-Zr, amorphous mag. films. anomalous Hall effect, critical exponent 7−131615
Fe-Zr amorphous alloys, ion beam mixed, mag. and elec. transport props. 7−113024
Fe-Zr glasses, mechanically alloyed, Mossbauer effect 7−132172
α-Fe-Zr impurity system, spin density perturbation *(Russian)* 7−77275
Fe-Zr metallic glasses, mag. props. study 7−118827
Fe-Zr-B metallic glasses, thermal stability 7−83752
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$(Fe_{1-x}Co_x)_{90}Zr_{10}$ metallic glass, magnetisation and magnetostriction obs. 7−106008
$Fe_{90-x}Mn_xZr_{10}$ melt-spun amorphous alloys, collapse of ferromag. order, effect of Mn 7−112818
FeNiZr glassy and crystallized alloys, Mossbauer and mag. studies 7−85507
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, Curie temp. press. effect 7−132118
$(Fe_{1-x}Ni_x)_{90}Zr_{10}$ amorphous alloys, critical behaviour 7−143806
$Fe_{90-x}Ni_xZr_{10}$ amorphous alloys, spin dynamics, inelastic neutron scatt. study 7−125347
FeZr amorphous alloys, magnetoresist. and superconductivity 7−98966
FeZr amorphous films, resistivity 7−98970
$FeZr_3$, amorphous, local order, mag. perturbed ^{57}Fe Mossbauer spectra 7−99628
Fe_2Zr bond length determ., EXAFS method 7−132376
$Fe_{20}Zr_{80}$ superconducting metallic glass, sp. ht. and elec. resist. meas. 7−137889
$Fe_{90}Zr_{10}$, amorphous, electronic struct. rel to H 7−105379
$Fe_{90}Zr_{10}$ amorphous foils, mag. props., X-ray anomalous diffraction 7−143769
$Fe_{90}Zr_{10}$ magnetic glass, hydrogenation study by Raman spectra 7−85716
Fe_xZr_{100-x}, amorphous, Mossbauer spectra, isomer shift, quadrupole splitting, conc. depend. 7−99629
FeZrBiSiB amorphous alloy, relax. phenomena mag. props. 7−111408
$Fe_{91}Zr_9H_x$, amorphous ferromagnets, H diffusion, mag. after effect 7−105972
Mn-Ge-Zr, antiferromag., elastic props. and thermal expansion 7−144455
Mn-Zr amorphous alloys, mag. and elec. props. 7−76876
Mo-Zr-W, surface, ion implantation of N, C, P phase composition determ. 7−78301
Nb-Zr, conc. binary, fabricability and hardness, solute types effect 7−100241
Nb-Zr-C, hardened, solid soln. struct., yield stress, internal friction *(Russian)* 7−144495
Nb-Zr-C, interaction with borosilicide coatings, X-ray exam. 7−138686
Nb-Zr-N alloys, long-term, high-temp. hardness, effect of Zr/N conc. ratio 7−100338
NbZr supercond. thin films, RF surface resistance 7−138120
$(Nb_{1-x}Zr_x)_3Sn$ layers, segregation of Zr and effects 7−77144
Nd-Fe-Co-B-Zr permanent magnets, mag. props., effect of Co and Zr *(Korean)* 7−78280
Ni-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-Si-B-Zr, Ni-P-B-Zr, amorphous wires, melt spinning, bending strength, thermal stability rel. to alloy additions 7−93065
Ni-Ta-Cr-Ti(Zr,Nb) amorphous alloy corrosion resistance obs. *(Japanese)* 7−119428
Ni-TiC-ZrC system, phase equilib. 7−100180
Ni-Zr, amorphous, form. by solid state reaction, cold working, X-ray diffr., DSC obs. 7−106467
Ni-Zr, amorphous phase formation and crystallisation, diffusion mechanism 7−97928
Ni-Zr amorphous alloys, synthesis by mechanic alloying of $Ni_{11}Zr_9/NiZr_2$ mixtures 7−97923
Ni-Zr amorphous ribbons, melt-spun, impurity diffusion 7−69982
Ni-Zr metallic composites, form. of bulk amorphous metals from solid state reaction 7−113477
Ni-Zr metallic glasses, props. rel. to melt temp. and quench rate 7−83766
Ni-Zr metallic glasses, thermal stability, struct. relax. 7−104585
Ni-Zr thin films, amorphous, compositionally modulated, interdiffusion 7−111933
NiZr, amorphous, electronic struct. and chemical short-range order 7−105378
NiZr amorphous alloy, press. depend. of resistivity 7−98977
NiZr amorphous alloy, superconducting transition temp. determ. by AC susceptibility meas. 7−85160
NiZr amorphous wires, formation by mechanical deformation and solid state reaction 7−86091
NiZr glass, partial structure factors, isotope substitution neutron diffr. 7−83773
$Ni_{0.33}Zr_{0.67}$, cathodic behaviour for H_2 evolution 7−139139
$Ni_{24}Zr_{76}$, metallic glass, dynamic struct. factor, neutron inelastic scatt. 7−83772

zirconium alloys continued
$Ni_{24}Zr_{76}$ metallic glass, H diffusion and HF vibrational modes, neutron scatt. obs. 7−105144
$Ni_{24}Zr_{76}$, thermal expansion, 20-400 K 7−98525
Ni_3Zr polycrystalline, CO adsorpt., UV photoelectron spectra 7−105286
$Ni_{36}Zr_{64}$, amorphous alloy, struct., isotope substitution neutron diffr. 7−83775
$Ni_{50}Zr_{50}$ amorphous alloys, tracer impurity diffusion and ion beam mixing 7−105134
$Ni_{63}Zr_{37}$ multilayers, amorphisation by microsecond current pulses 7−69593
$Ni_{64}Zr_{36}$, glassy, CO adsorpt., UV photoelectron spectra 7−105286
$Pd_{30}Zr_{70}$, thermal expansion, 20-400 K 7−98525
Rh-Zr metallic glass struct. determ. using scanning tunnelling microscope 7−142540
Rh-Zr metallic glass surface, scanning tunnelling microscopy 7−91945
$Sm_2(Co, Fe, Cu, Zr)_{17}$, permanent magnet production, hydrogen decrepitation process 7−92914
$Sm(Co\ FeCuZr)_{7.3}$ alloy microstruct. and coercivity during aging, potentiostatic etching study 7−131321
$Sm(Co_{0.67}Fe_{0.21}Cu_{0.08}Ni_{0.02}Zr_{0.02})_{7.6}$ magnets, ageing, coercive force, hysteresis loop squareness *(Japanese)* 7−99497
SmCoFeCuZr permanent magnets, thermal remagnetisation study 7−138283
$Sm(Co_{0.67}Fe_{0.22}Cu_{0.08}Zr_{0.03})_{8.35}$ alloy, change in coercive force during heat treatment *(Russian)* 7−106640
$Sm(Co_{0.70-x}Fe_{0.20}Cu_{0.10}Zr_x)_{7.5}$, melt spin ribbons, mag. props., struct. rel. to Zr content *(Japanese)* 7−77356
$Sm_2(CoFeZr)_{17}$ magnetic films, large coercive force and remanent moments, special anisotropies, electronic appls. 7−125975
Ti-Al-Mo-Zr, superplastic deform., stress induced H diffusion 7−132686
Ti-Al-Mo-Zr, wrought, annealing temp. effect on resist. to low levels of deform. 7−126152
Ti-Al-V-Zr, fractal charactn. of fractured surfaces 7−113648
Ti-Al-Zr, annealing, cryst. struct., hardness *(Japanese)* 7−93078
Ti-Al-Zr, dwell sensitive fatigue, microstruct., creep 7−86350
Ti-Al-Zr, high strength, fatigue behaviour at elevated temps. 7−113722
Ti-Al-Zr, surface crack front change kinetics in axially symmetric bending 7−100364
Ti-Al-Zr-Mo-Si, low cycle fatigue rel. to silicide precip. 7−100371
Ti-Al-Zr-Mo-Si, near-alpha, dwell-sensitive fatigue 7−119340
Ti-Al-Zr-Mo-Si-based alloys, α_2 phase precipitation and embrittlement *(Russian)* 7−144405
Ti-Al-Zr-Sn, soln. annealing and quenching, tensile ductility, Widmanstatten struct. 7−100307
Ti-Al-Zr-W system, phase equilib. 7−86131
Ti-Al-Zr-W system, phase equilib. of Ti-rich alloys 7−100181
Ti-Zr, oxide scale, lamellar morphology, comp. 7−86437
Ti-Zr-B ternary amorphous alloys, preparation by single-roller melt-spinning 7−119194
Ti-Zr-Be metallic glasses, amorphous phase separation, re-evaluation 7−91466
$Ti_{50}Be_{40}Zr_{10}$, amorphous, phase separation and loss of ductility 7−91827
$Ti_{50}Be_{40}Zr_{10}$, thermal expansion, 20-400 K 7−98525
TiZr alloy mag. props., Fermi level shift, mag. suscept. meas. 7−99420
UN-Li-NbZr, fuel-coolant-cladding of SP-100 reactor, compatibility studies 7−67919
UO_2/Zr-Nb, friction characteristics, in-reactor study 7−122001
UO_2-Zircaloy LWR fuel rod, behaviour during severe accidents 7−129293
UO_2-Zircaloy-4 interactions, effect of CANLUB graphite and SILOXANE coatings 7−96196
V_2(Hf-Zr) Laves phase superconductor, prep., manufacturing techniques development 7−132520
V_2Zr, fast neutron irrad., sp. ht., supercond. props., phonon spectrum *(Russian)* 7−112657
W-Zr-C, work hardening, quenching and ageing effects *(Russian)* 7−113567
Zr based metallic glasses, H solubility and embrittlement 7−106521
Zr Nb fuel element claddings, in-reactor I stress corrosion study *(Russian)* 7−116580
Zr-Al, thin film reaction couples, interconnect fabrication 7−118318
Zr-based metallic glasses, amorphous hydrides, comparison of thermal stabilities 7−111418
Zr-C, metal-graphite systems, eutectic temps. in metal-rich regions 7−100186
Zr-Cu, amorphisation, effect of alloying 7−86080
Zr-Cu, sputtered, struct. relax., low temp. thermal cond., X-ray scatt. 7−105346
Zr-Fe, glass forming ability, crystallisation 7−142632
β-Zr-Fe alloys, anomalously fast diffusion of Fe, Mossbauer study 7−105100
Zr-Fe system, heat treatment, plastic deform., phase transform. 7−71176
Zr-Fe-Co-Cu amorphous alloys, Mossbauer studies 7−85505
Zr-Fe-Sn (Nb)(Mo)(Ni)(Cu), ternary amorphous alloys, production, stability rel. to comp. 7−131029
Zr-N-H solid solutions H and N localisation, vibr. freqs. *(Russian)* 7−137314
Zr-Nb, ^{63}Ni tracer diffusion meas. 7−105131
Zr-Nb, microhardness anisotropy 7−86327
Zr-Nb (2.5 wt.%), hydrostatically extruded tube, texture *(Chinese)* 7−71203
Zr-Nb (2.5 wt.%), pilgered cold-worked press. tube, in-reactor deform. 7−96186
Zr-Nb (2.5 wt.%), reactor pressure tubes, oxide films, pore struct., irrad. effect 7−86426
Zr-Nb (2.5 wt.%), surface, H and D profiling, oxidation effect 7−86425
Zr-Nb (2.5 wt.%) pressure tube alloy, cold worked, annealed, dislocation networks 7−98152
Zr-Nb CANDU fuel channels, pressure tube elongation rates 7−89618
Zr-Nb-based dilute alloy, electron and ion irrad., point defect clustering 7−98138
Zr-Ni, glass forming ability, crystallisation 7−142632
Zr-Ni alloys, glass forming ability and amorphous to cryst. transition 7−83750
Zr-Ni amorphous alloys, crystn. enthalpies, expt. and theoretical study 7−83749
Zr-Ni intermetallic alloy catalysts, XPS and AES studies 7−144235
Zr-Ni particle bed, H isotope absorption and desorption charcts. *(Japanese)* 7−84489

zirconium alloys continued
Zr-Ni-H glass system, electronic struct., soft X-ray emission spectra 7−105380
Zr-Pd alloys, electronic struct., photoelectron spectra, hydride form. appl. 7−85940
Zr-Pd-H, crystalline-to-amorphous transformation, thermal analysis 7−97929
Zr-Rh-H, crystalline-to-amorphous transformation, thermal analysis 7−97929
Zr-Sc, BCC phase, anomalous ^{95}Zr self-diffusion, influence of Sc 7−111939
Zr-Sn, electron irradiated, influence of Sn additions on recovery, positron annihilation study 7−106302
Zr-Ti, struct. after quenching and tempering *(Russian)* 7−71218
$Zr_{1-x}Al_xM_2$ (M=Mn, Fe, Co) Friauf-Laves phases 7−117863
ZrCo amorphous films, formation by solid state reaction 7−86036
$ZrCo_6Ge_6$ magnetic suscept. temp. depend. and elec. resist. meas. *(Russian)* 7−92401
$Zr_4Co_7Ge_6$ magnetic suscept. temp. depend. and elec. resist. meas. *(Russian)* 7−92401
$Zr_{1-x}Cu_x$, glassy, strain induced conductivity anisotropy 7−98962
$Zr_{100-x}Cu_x$, amorphous sputtered alloys, low-energy excitations, struct. relaxation effects 7−143033
$Zr_{100-x}Cu_x$ amorphous superconducting sputtered alloy, low-temp thermodynamic props. 7−138128
$Zr_{70}Cu_{30}$, amorphous, struct. relax., effect on electronic props. 7−83693
$Zr_{70}Cu_{30}$, amorphous superconductor, lower critical field, vibrating reed measurements 7−131937
$ZrFe_2$, hyperfine field distrib., press. depend. 7−118429
$ZrFe_2$:Nb, hyperfine field distrib., press. depend. 7−118429
$Zr_{100-x}Fe_x$ metallic glasses, struct., X-ray diffr. 7−83765
Zr_3Fe, polymorphic crystallisation, in $Zr_{76}Fe_{24}$ amorphous ribbons 7−142629
$Zr_{76}Fe_{24}$, amorphous ribbon, crystallisation process 7−142629
Zr_xFe_{1-x}, amorphous, crystallisation, positron annihilation, Mossbauer spectra 7−97965
$Zr(Fe_{1-x}Co_x)_2$, mag. props., rigid band model 7−99391
$(Zr_{100-y}Hf_y)_{76}Fe_{24}$, metallic glasses, struct., X-ray diffr. 7−83765
ZrM (M=Ni,Mo,W) amorphous alloys, supercond. and struct. props. 7−85176
ZrMGe (M=Ru,Os,Rh,Ir), ternary germanides, crystal structures and superconductivity 7−70454
$ZrMn_2H_x$, mag., crystallographic and H absorpt. props. 7−98466
ZrNb tube etching in HNO_3/HF mixture, oxide release 7−78302
$(Zr_{1-x}Nb_x)Fe_2$, C14 and C15 cpds., Laves structs., electronic struct., magnetism 7−84631
ZrNi, amorphous H storage, struct. X-ray study *(Chinese)* 7−91445
$(Zr_{0.5}Ni_{0.5})_{100-x}$ P_x metallic glasses, magnetisation, ^{31}P NMR study 7−112762
$Zr_{1-x}Ni_x$, glassy, strain induced conductivity anisotropy 7−98962
$Zr_{100-x}Ni_x$ amorphous superconducting alloys, critical mag. fields, spin-orbit interaction 7−125276
$Zr_{67}Ni_{33}$, crystallisation characteristics *(Korean)* 7−142644
$Zr_{67}Ni_{33}$ metallic glasses, nucleation and crystal growth 7−137241
$Zr_{67}Ni_{33}$-based metallic glasses, mag. susceptibility and superconductivity 7−85265
$Zr_{70}Ni_{30}$, weak localisation effects on upper critical field 7−99371
ZrNiAl, electron binding energies, oxidation behaviour 7−99160
Zr_2NiH_x metallic glass, magnetoresist., H effects 7−84827
ZrNiSn, vacancy lattices, galvanomag. props. *(Russian)* 7−98983
Zr_2Pd, H(D) absorpt., X-ray and neutron diffr. studies 7−84283
Zr_2PdD_x, x=1.7, 1.96, cryst. struct., neutron powder diffr. anal. 7−83847
ZrRh dilute HCP alloys, elec. field gradient, TDPAC studies 7−113006
$Zr_{75}Rh_{25}$, weak localisation effects on upper critical field 7−99371
Zr_3RhH_x, amorphous, produced by solid-state reaction, thermal props. 7−84317
$Zr_{1-x}Si_xM_2$ (M=Mn, Fe, Co) Friauf-Laves phases 7−117863
$Zr_{1-x}Ti_xCrFe_y$-H_2 system, hyperstoichiometric, crystallographic, thermodynamic and kinetic parameters 7−83853
$Zr_{1-x}Ti_xM_2$ (M=Mn, Fe, Co) Friauf-Laves phases 7−117863
ZrV_2 intermetallic cpd., phase transitions effect on neutron irrad. of introduction of H *(Russian)* 7−126104
ZrV_2, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
$ZrV_2H_x(D_x)$, electron struct., mag. suscept., NMR meas. *(Russian)* 7−112175
$ZrV_2H_x(D_x)$ systems, order-disorder phase transitions and quadrupole interaction, NMR studies 7−76381
$ZrZn_2$, self-consistent electronic structures studies of magnetism and superconductivity 7−112586
Zr−Ni, amorphous, supercond., structural relax., crystallisation 7−104584
$Zr_{66.5}Ni_{33.5}$:H metallic glass, flow and crystallisation rel. to H doping, dilatometry 7−104590

zirconium compounds
see also zirconium alloys
citrate, thermal decomposition, ZrO_2 prep. 7−77854
di-alkali metal zirconium di(nitrilotriacetate) dihydrate orthorhombic single crysts., pyroelec., dielec., piezoelec. and electrooptic props. 7−99726
fluorozirconate glass:Eu^{3+}, site selection spectroscopy studies 7−99824
hexacyanoferrates, spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
hydrides, heat of H absorption, effects of H-H interactions 7−105254
mullite-zirconia ceramics, slip casting 7−86098
mullite-zirconia composites, obtained by reaction sintering, microstruct. development 7−86117
mullite-zirconia composites and mullite, prep. and mech. props. 7−86118
mullite-ZrO_2(-Al_2O_3), tough ceramic composites, microstruct. 7−78058
NASICON ionic cond., microstruct. and water reactivity, comp. and processing parameters depend. 7−118154
phosphates, spherical sorbents, homogeneity, synthesis by sol-gel method 7−84488
PZT 65/35, ferroelectric ceramic, electric-to-mechanical coupling phenomenon 7−118949
zirconia, cubic, superionic state, Brillouin scatt. study 7−85762
zirconia-mullite composites, reaction sintered with MgO and CaO additions, TEM study 7−132556
ZrO_2-CaO system with tetragonal ZrO_2 polycrystals 7−132513
Al_2O_3:MgO,ZrO_2, with bimodal grain size distrib., cavity development 7−93057

zirconium compounds continued
Al_2O_3-SiO_2-ZrO_2, amorphous, rapid quenching, crystallisation, lattice parameters, phase separation *(Japanese)* 7−131036
Al_2O_3-ZrC composites, pressure sintered, mech. props. 7−86119
Al_2O_3-ZrO_2, duplex ceramics, toughening mechanism 7−86200
Al_2O_3-ZrO_2, eutectic struct., formation mechanism 7−71165
Al_2O_3-ZrO_2, Y_2O_3 stabilised, layered composites, strengthening by transform. induced stresses 7−100240
Al_2O_3-ZrO_2 composite ceramic, prep. by polymer soln. precip. 7−86113
Al_2O_3-ZrO_2 powder, characts. rel. to synthesis chemistry 7−106474
Al_2O_3-ZrO_2 system, phase relations under various melt cooling conditions *(Russian)* 7−124446
Al_2O_3-ZrO_2 tetragonal, stabilisation in reactive magnetron sputtered thin films 7−137745
Al_2O_3-ZrO_2(Y_2O_3), eutectic composite, cryst. growth by Stepanov technique 7−85998
ArF_4, high purity powders, CVD synthesis *(Japanese)* 7−113509
B_2O_3-Li_2O-LiCl glasses containing ZrO_2 dispersion, enhanced ionic cond. 7−111951
Bi_2O_3-ZrO_2 composites, Y_2O_3 stabilised, O ionic cond. 7−111949
$(H_3O)Zr_2(PO_4)_3$, cation reorientation, ^{31}P and ^2H NMR spectra 7−143916
$HZr_2(PO_4)_3$, protonic cond. behaviour 7−111950
La_2O_3-NiO-ZrO_2 system, phase relations, materials prep. and elec. props. *(Russian)* 7−124447
$MgCr_2O_4$-ZrO_2 composites, fracture surface energy rel. to ZrO_2 inclusions 7−132728
MgO-ZrO_2 partially stabilised zirconia, microstruct. changes during aging 7−100267
$MgZr_4(PO_4)_6$ solid electrolyte, Mg ion conduction study 7−84389
$(NH_4)Zr_2(PO_4)_3$, cation reorientation, ^{31}P and ^2H NMR spectra 7−143916
$NaCu_2ZrP_3O_{12}$ superionic conductor synthesis and charactn. 7−118152
$Na_2LaMZrP_3O_{12}$ (M=Co,Al,Cr), superionic conductors, synthesis and characts. 7−137611
$NaM_2ZrP_3O_{12}$ (M=Ni,Cu), superionic conductors, synthesis and characts. 7−137611
$Na_{1-x}Zr_2P_{3-x}Si_xO_{12}$, high temp. cryst. chemistry 7−137341
$Na_{1+x}Zr_2Si_xP_{3-x}O_{12}$:MgO(CaO) NASICON superionic ceramics, chem. comp. and phase homogeneity, sintering conditions effects 7−119191
$Na_3Zr_2Si_2PO_{12}$, Nasicon, crystal structure 7−104684
$Na_3Zr_2Si_2PO_{12}$/$Na_2Zr_4Si_{16}P_8O_{61}$, NASICON/glass composite ceramics, conductivity and microstruct. *(French)* 7−131361
PZT perovskite ferroelec., first order transitions, phenomenological theory 7−99750
PZT-epoxy composites, interfacial adhesion determ., surface treatments and mechanical testing 7−100504
Rb_2ZrF_6, quadrupole hyperfine interaction, phase transition, TDPAC obs. 7−84245
SiC whisker reinforced ZrO_2-toughened ceramics, fabrication and mech props. 7−78240
Si_3N_4-(ZrO_2-Y_2O_3), structural ceramics, effect of Y_2O_3 additions, degradation 7−71276
Si_3N_4-ZrO_2 system, phase reactions, influence of atm. 7−77954
SiO_2-ZrO_2 powders, solidification by hydrothermal hot-pressing *(Japanese)* 7−71126
ThF_4-ZnF_2-YF_3-BaF_2-ZrF_4-NaF-LiF-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
W/ZrO_2, multilayer composites, thermal stress, comp. gradient, finite element analysis *(Japanese)* 7−106570
Y_2O_3-ZrO_2 matrix with W fibres, low voltage field emission 7−138615
Zr-ZrO_2, oxide films, growth and dissolution during laser-assisted combustion 7−78300
Zr, PdH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
Zr-Cr composite oxide film on stainless steel, oxidation resist. 7−106672
Zr-N sputtered films, cryogenic thermometer 7−121116
Zr-Te, penta, tri- and ditellurides, oxidative degradation 7−132783
Zr_3 AlN, cryst. struct., single cryst. X-ray diffr. data 7−69684
ZrB_2 powders, laser synthesis 7−132533
ZrB_2 thin films, DC triode sputtering 7−106409
ZrB_x, bulk resistivity, composition depend. 7−92175
Zr_2Br_2H, double metal-layered monohalides, structure and bonding 7−91541
ZrC and ZrO_2 protective coatings, ESCA, SEM and EDAX studies 7−106704
ZrC carbides, energy band structure and chemical bonds *(Russian)* 7−124851
ZrC, cast, gas abrasive wear resist. 7−100395
ZrC, failure in local thermal loading 7−126237
ZrC, heat treatment, effect on defect formation and props. 7−100247
ZrC-ZrN, solid solutions formation simulation 7−92962
ZrC-ZrO_2 based composite multilaminate insulations, thermal cond. 7−124608
ZrC_{1-x}, thermodynamics, temp.-conc. depend., 1200-2500 K 7−98502
$ZrCl_4$, mol. struct. and force field, electron diffr. obs. 7−110106
ZrD_2, lattice parameters, effect of press. up to 10 GPa, neutron diffr. study 7−83889
ZrF_4 based fluoride glass, ionic motions, dielectric and dynamic mechanical study 7−138370
ZrF_4 based fluoride optical fibres, scatt. loss due to crystallites 7−117328
ZrF_4 based glasses, EPR of Gd^{3+} and Eu^{2+} 7−85424
ZrF_4 based multicomponent glass preforms, fluoride glass IR optical fibres in medicine and biology 7−79042
ZrF_4, cryst., photolum. and absorpt. 7−99906
ZrF_4 flexible fibres with mid-IR solid laser as ideal medical scalpel 7−114452
ZrF_4-Ba-F_2 based glass fibres, progress for optical communication 7−110578
ZrF_4-BaF_2-AlF_3-LaF_3:Eu^{3+} glasses, impurity homogeneous linewidth spectral and temp. depend. studies 7−77607
ZrF_4-BaF_2-LaF_3-AlF_3-NdF_3 (HoF_3) fluoride glass, laser props., calc. 7−68649
ZrF_4-BaF_2-LaF_3-AlF_3-MnF_2, fluoride glasses, optimised materials for lanthanide lumin., Mn^{2+} energy storage 7−70877
ZrF_4-BaF_2-LaF_3-AlF_3-NaF-PbF_2:Nd glass fibre lasers 7−136313
ZrF_4-BaF_2-NaF-LaF_3-AlF_3 glass, rubber state, appl. to polymer rheology 7−83073
ZrF_4-based glasses, photolum. and absorpt. 7−99906
ZrF_4-EuF_2-CeF_3, paramagnetic fluoride glasses *(French)* 7−69606
ZrF_4-LaF_3-BaF_2-AlF_3-FeF_3 glasses, spectral investigations 7−99825
ZrF_4-NdF_3-FeF_3 glass fibres, photolum. studies 7−125785

zirconium compounds continued
ZrF_6-BaF_2-LaF_3-AlF_3:Ni^{2+}, Co^{2+}, Mn^{2+} glass, absorption and luminescence spectra 7−106255
ZrH_2, H sublattice melting, dynamical evidence, PMR studies 7−85462
ZrH_2-$d_0(d_1)$, freq. spectra and force consts. determ. 7−96885
$Zr(HPO_4)_2.H_2O$, cryst. and amorphous, elec. props. in humid atm. 7−131355
ZrI_x, internal friction and elasticity modulus meas. method 7−132868
$Zr(MoO_4)_2$, high-temperature phase, luminescence 7−99916
ZrN coatings, plasma spraying, controlled N_2 atmosphere, struct., hardness, thermal expansion 7−71383
ZrN, combustion synthesis under high N_2 press., melting point effect *(Japanese)* 7−71120
ZrN films and tunnel junctions, struct. and physical props. 7−131917
ZrN thin films, DC reactively magnetron sputtered, structural, superconducting and optical props. 7−99276
ZrN thin films, thickness, stoichiometry meas. by nuclear anal. 7−106863
ZrN/I/Pb tunnel struct., energy gap, proximity effect, T_c and I-V characts. meas. 7−70482
ZrN-GaAs contacts, thermal stability and barrier height enhancement 7−70412
$ZrN_{0.93}$ (100) surface, electronic struct., bulk band struct., angle resolved photoelectron spectra 7−105644
ZrN_xH_z, solid solutions, order-disorder phase transformations 7−69892
$(Zr_{0.5}Nb_{0.5})C_{0.9}$, solid solution, heat treatment, effect on defect formation and props. 7−100247
$Zr_2NiH_{3.8}$, H diffusion, perturbed angular correlation spectra study 7−84371
Zr_2NiH_x, H diffusion, NMR studies 7−85463
ZrO/W (100) thermal-field emission cathode *(Japanese)* 7−77746
ZrO_2, (MgO, Y_2O_3) partially stabilised, tetragonal ZrO_2 precip. morphology 7−93014
ZrO_2 and Y_2O_3 stabilized ZrO_2 films on Al_2O_3 substrates, X-ray diffraction study *(Japanese)* 7−131499
ZrO_2, CO_2 adsorpt., temp. effect investig. 7−70077
ZrO_2, CaO partially stabilised, isothermal ageing, precip. coarsening kinetics 7−93015
ZrO_2 ceramic ball head, bio-composite advanced material research and development, artificial hip joint appl. 7−133506
ZrO_2 ceramics, crystalline, single phase, structural superplasticity 7−132668
ZrO_2 ceramics, engineering, elastic props. at elevated temps. *(Japanese)* 7−138775
ZrO_2 ceramics, ion beam modified, friction and wear 7−119381
ZrO_2 clusters, electronic struct., discrete-var. method calcs. 7−110183
ZrO_2, doped, made from organic precursors, prod. and props. 7−86096
ZrO_2 fibers, high strength, prep. 7−144347
ZrO_2, fibre formation by unidirectional freezing of gel 7−113479
ZrO_2 films, CVD from $ZrCl_4$-H_2-CO_2-Ar gas mixture 7−100100
ZrO_2 films, ion-assisted deposition, ion scattering spectroscopy 7−77835
ZrO_2 films, ion-beam assisted vapour deposition and ion-beam etching 7−71037
ZrO_2 films, O_2 chemisorpt., activation energy and rate, work function depend., adsorpt. luminesc. studies *(Russian)* 7−76627
ZrO_2, hydrated, polymerisation during dehydration 7−93390
ZrO_2, hydrated, sorption of B, reversibility 7−93372
ZrO_2 layers on SiC, ion beam mixing study 7−106330
ZrO_2, MgO partially stabilised, gel-derived, phase transforms. 7−77996
ZrO_2, MgO partially stabilised ceramics, mech. behaviour at elevated temps. 7−78185
ZrO_2, MgO partially stabilised wear resist. anomaly 7−78248
ZrO_2, MgO partially stabilised, sintering, behaviour of impurity silicate phase 7−92944
ZrO_2, MgO partially stabilised, milling, cast microstruct., sinterability 7−100158
ZrO_2, MgO partially stabilised, eutectoid decomp. 7−132586
ZrO_2, MgO stabilised, friction in lubricated sliding 7−78250
ZrO_2, partially stabilised, stress-induced monoclinic phase, 2D Raman obs. 7−70810
ZrO_2, partially stabilised, wear surface, ion mixing modified, Auger electron spectroscopy 7−112033
ZrO_2, polycrystalline ceramics, thermal diffusivity and cond., sp. ht. 7−98591
ZrO_2 polycrystals, fine grained, high temp. deform., TEM obs. 7−126178
ZrO_2, polymorphic mixtures, X-ray diffr. 7−111473
ZrO_2, porous ceramic, plasma sprayed, particulate erosion, mech. props., struct. 7−78269
ZrO_2 powder, surface energy determ. from elasticity meas. 7−131415
ZrO_2 powder, surface temp. meas. of particles under thermal plasma conditions 7−108563
ZrO_2 powders, monodisperse fine particles, processing, thermal analysis 7−132536
ZrO_2, prep. from Zr citrate, structural transformation 7−77854
ZrO_2, pure and CaO stabilised, liq. mix synthesis, phase analysis 7−119216
ZrO_2 single-layer films, localisation of optical absorption losses 7−77671
ZrO_2 solid electrolyte, O_2 analyser for biomedial appl. *(Czech)* 7−133500
ZrO_2, stabilised coatings, supersonic plasma spraying, morphology, computer aided analysis 7−77797
ZrO_2, tetragonal polycrysts., Y_2O_3-containing, prep. and props. 7−86097
ZrO_2, tetragonal polycrysts., microstruct.-prop. relationships 7−86304
ZrO_2 thermal barrier coating on Ni base superalloy, durability rel. to bond coating *(Korean)* 7−132776
ZrO_2, thin films, optical losses in UV region 7−97120
ZrO_2, ultrafine powder synthesis 7−113494
ZrO_2 whiskers, monoclinic, vapour phase growth *(Japanese)* 7−118340
ZrO_2, Y_2O_3, tetragonal polycrystalline powders, sinterability 7−144344
ZrO_2, Y_2O_3 doped tetragonal polycrysts., control of tetragonal to monoclinic phase transform. by annealing in water 7−86220
ZrO_2, Y_2O_3 partially stabilised, sintered and hot-pressed, mech. props. and microstruct. 7−106469
ZrO_2, Y_2O_3 partially stabilized powders, effect of spray pyrolysis conditions *(Japanese)* 7−119227
ZrO_2, Y_2O_3 stabilised, props., effect of Al_2O_3 additives 7−71302
ZrO_2, Y_2O_3 stabilised ultrafine powders, crystallinity, surface texture rel. to prep. and thermal treatment 7−76564
ZrO_2, Y_2O_3 stabilised ceramic, slip casting, sintering 7−77909
ZrO_2, Y_2O_3 stabilised, directional cryst. growth by arc image floating-zone method 7−119129
ZrO_2, Y_2O_3 stabilised polycrystals, fracture toughness, effect of crack propagation *(Japanese)* 7−138835

zirconium compounds continued
ZrO_2, Y_2O_3 stabilised, diffusional creep, kinetic demixing 7−144469
ZrO_2:CeO_2, phase transformations, Raman microprobe obs. 7−70811
ZrO_2:Cr_2O_3, Y_2O_3 stabilised, elec. cond., comp. and temp. depend. 7−105110
ZrO_2:Y_2O_3, defect struct., EXAFS, computer simulation 7−69738
ZrO_2:Y_2O_3, stress-induced transformation, zone size, Raman microprobe obs. 7−70812
ZrO_2:Y_2O_3 disordered cubic crysts., low freq. Raman spectra, Rayleigh wing broadening obs. 7−118994
ZrO_2:Y_2O_3 polycrystals, Al_2O_3 and SiC particle dispersed, thermal stability, mech. props. 7−78183
ZrO_2-Al_2O_3-SiO_2 system, rapidly quenched, tetragonal ZrO_2-glass structs. form. 7−119231
ZrO_2-Al_2O_3-SiO_2-TiO_2, toughened mullite ceramic composites, sintering, microstruct., phase comp. 7−77930
ZrO_2-CaO system, solid solutions 7−92969
ZrO_2-containing ceramics, transformation toughened, R-curve behaviour and mech. props. 7−71301
ZrO_2-Cr_2O_3 system, prep., mag. props. rel. to struct. and comp. 7−113497
ZrO_2-Er_2O_3 system, elec. cond. meas. 7−85018
ZrO_2-Gd_2O_3, fluorite and pyrochlore phases, EXAFS studies 7−125856
ZrO_2-Gd_2O_3 pyrochlore-type solid soln., stability and antiphase domain struct. study 7−86141
ZrO_2-Li_2O-B_2O_3-SiO_2 glass ceramic, phase transform. depth profiles, synchrotron radiation X-ray diffr. 7−93009
ZrO_2-M_2O_3 solid solutions, (M=Sc,Lu,Y,Gd,Eu), association of defects 7−91559
ZrO_2-MgO (Y_2O_3) partially stabilised zirconia, coherent precipitates, HREM studies 7−100237
ZrO_2-Na_2O-SiO_2 glass ceramic, phase transform. depth profiles, synchrotron radiation X-ray diffr. 7−93009
ZrO_2-P_2O_5 based ceramics, solid soln., thermal expansion, microcracking, Ta_2O_5 and Nb_2O_5 additions 7−143055
ZrO_2-SiO_2 system, sol-gel prep., precip. ZrO_2 transform., fracture toughness *(Japanese)* 7−132614
ZrO_2-UO_2, TMI-2 lower vessel debris examination 7−81540
ZrO_2-xY_2O_3, stabilised, acoustic mode freqs., Brillouin scatt. meas. 7−119024
ZrO_2-Y_2O_3, cation-O distances, complete EXAFS anal. 7−132377
ZrO_2-Y_2O_3, highly toughened, mech. props. 7−132704
ZrO_2-Y_2O_3, O-ion arrangements, electron diffr., high resolution electron microscopy, modulated struct. model 7−117881
ZrO_2-Y_2O_3, phase transform., low temp. annealing, humidity control, fracture strength, surface struct. *(Japanese)* 7−71182
ZrO_2-Y_2O_3, rapidly quenched, cubic to tetragonal transform., effect of external stress 7−86170
ZrO_2-Y_2O_3, TZP, crack-profile shapes formed under a Vickers indent pyramid 7−113679
ZrO_2-Y_2O_3, TZP ceramics, sintered, development of secondary tetragonal phase 7−86112
ZrO_2-Y_2O_3, tetragonal zirconia polycrysts., thermal fatigue behaviour *(Japanese)* 7−71298
ZrO_2-Y_2O_3, tetragonal phase, elec. props. effect of TiO_2, SnO_2 and Al_2O_3 additions 7−98567
ZrO_2-Y_2O_3, YSZ powders, homogeneous precipitation and sintering 7−144329
ZrO_2-Y_2O_3 films, growth on GaAs (100) by pulsed laser evaporation 7−125992
ZrO_2-Y_2O_3 polycrystals, low temp. ageing, tetragonal symmetry rel. to grain size 7−144442
ZrO_2-Y_2O_3 sintering differential thermal expansion analysis 7−67279
ZrO_2-Y_2O_3 stabilised, H_2O effects under hydrothermal conditions, degradation mechanism 7−86382
ZrO_2-Y_2O_3 stabilised, prep. from freeze-dried coprecipitated hydroxides, mech. props. and crit. grain size 7−92939
ZrO_2-Y_2O_3 system, crystallography of cubic to tetragonal phase transform. 7−132613
ZrO_2-Y_2O_3:Ni(Co)(Cr)(Pr), laser-excited luminesc. and absorpt. spectra studies 7−125764
ZrO_2-Y_2O_3-Al_2O_3 ceramic electrolytes, ionic cond., thermal shock resist., mech. props. 7−76479
ZrO_2-$YO_{1.5}$, superionic conductor, defect-induced Raman spectra 7−99857
ZrO_2-ZrF_4 system, solid phases *(French)* 7−106495
ZrO_2-$Zr(SO_4)_2$, synthesis of fine plate-like crysts., thermal changes *(Japanese)* 7−138716
ZrO_3-Y_2O_3 system, phase diagram and microstructures 7−138735
ZrO_2(-CaO), sintering with calcia in very low O_2 partial press. 7−86110
$ZrO(H_2PO_4)_x(OH)_{2-x}H_2O$, amorphous, humidity sensitivity 7−80807
ZrO_2−Yb_2O_3, plasma-sprayed coatings, thermal barrier appl. 7−106403
ZrP, use in production of efficient $^{81}Rb/^{81m}Kr$ generators 7−133449
Zr_2PdH_x, phase comp., cryst. struct. X-ray diffr. PMR studies 7−83891
Zr_3Rh-H, crystal-glass transition by H absorption 7−91805
Zr_3RhH_x, amorphous, thermal stability, elec. and mag. props. 7−104564
ZrS_2 electronic struct. determ. photoacoustic saturation spectra study 7−91736
ZrS_2, indirect absorpt. edge, transmission spectra meas. 7−132298
n-1ZrS_2, photoelectrochemistry in aqueous solutions 7−71625
$ZrSi_x$, bulk resistivity, composition depend. 7−92175
$ZrSiO_4$, natural zircon, radiation induced lattice defects obs. at atomic resolution 7−76118
$ZrSiO_4$, zircon, alpha-decay fracturing and crystalline-metamict state transitions 7−124352
$ZrSiO_4$:Dy single crysts., electron and hole centres produced by X-irrad., thermolum. studies 7−77663
$ZrTe_5$, Shubnikov-de Haas oscills. and Fermi surfaces 7−131527
$Zr_{1-2x}Y_{2x}O_{2-x}$ (100), electron beam reduction, XPS study 7−77710

zodiacal light
see also sky brightness
Doppler shifts for various eccentricities and dust sizes 7−139961
dust emission characts. in near and far-IR 7−72358
light scattering from interplanetary dust particles, appl. of anomalous diffr. approximation 7−72357
night sky optical spectrum, contrib. of zodiacal light 7−87993

zone melting
actinide compounds, cryst. growth and purification methods 7−77780
bicrystals use in interphase process studies by zone recrystn. in temp. gradient 7−77794

zone melting continued
floating zone crystal growth, numerical simulation of flow, heat and mass transfer 7−113378
furnace for crystal growth by floating zone technique and neutron scatt. expts. 7−138646
rare earth compounds, cryst. growth and purification methods 7−77780
SOI films by laser recrystn., periodic seeding filled by selective epitaxial growth 7−84561
SOI system, zone melting growth 7−132501
thin liquid layer, surface temp. distrib. due to thermocapillary convection 7−69129
$Ba_3LaNb_3O_{12}$, optically transparent, synthesis, decolorisation 7−86014
$Ba_3LaTa_3O_{12}$, single crystal, physical props. 7−106117
$CeCu_6$, growth and purification, electrical characterisation 7−71002
Fe, high purity, zone melting, chem. characterisation 7−144267
Fe-Si (3 wt.%), oriented bicrystals, floating zone melting growth and perfection 7−113379
Ge crystals, floating zone expts. in sounding rockets 7−71004
HgCdTe, growth for long wavelength IR imagers, historical review 7−132441
$LaCaMnO_3$, crystal growth and charact. 7−138645
$LaSrMnO_3$, crystal growth and charact. 7−138645
$MgO-MgAl_2O_4$ system, production of eutectic alloy with directional structure by induction melting 7−92972
Si film, pulsations in optical directional melting 7−137528
Si, film, zone recrystallisation, on fused quartz 7−106448
Si, float zone crystals, dislocation-free, N_2 doping 7−86013
Si ribbons, RTR, cryst. defects, charcts. and influence on ribbon cell performance 7−86015
Si sheets, growth by zone melting process from powder, solar cell efficiency 7−93508
Si single cryst., float zone and Czochralski grown, perfection, γ-ray diffr. obs. 7−100040
Si:Al(B)(Ga)(In), material considerations for high efficiency solar cells 7−133098
Si:C,O grown by Czochralski and crucibleless zone-melting methods, influence of impurities on swirl defects 7−91560
SiC epitaxial layers, grown by temp. gradient zone melting, morphology 7−124752
SiC epitaxial layers grown by temp. gradient zone melting, morphology 7−124751
SiC, LPE growth, struct. and electrophysical props. 7−70105
$Tb_{0.3}Dy_{0.7}Fe_2$, single cryst., growth, Bridgman and float zone techniques, dendritic struct., twin-boundaries 7−86006
TiC, floating zone melting, evaporation comp. and rate 7−100050
TiC, single cryst. prep. from self-combustion rod by floating zone method 7−144266
VC, floating zone melting, evaporation comp. and rate 7−100050
YIG cryst. laser diode module with optical isolator, floating zone growth method 7−103815
ZnSe, composition change on zone melting 7−76357
$ZnTe_{1-x}Se_x$ growth in closed tube system, thermodynamic calc. *(Japanese)* 7−106399
ZrO_2, Y_2O_3 stabilised, directional cryst. growth by arc image floating-zone method 7−119129
zone plates (optical) *see optical zone plates*
zone refining
actinide compounds, cryst. growth and purification methods 7−77780
impurity distribution coefficients determ. using zone refining by temp. gradient 7−76194
rare earth compounds, cryst. growth and purification methods 7−77780
succinonitrile, crystal purification and growth 7−92858
$CdBr_2$ single cryst. growth by zone refining 7−92859
$CuGaSe_2$ crystal growth from the melt 7−119126
$CuInSe_2(Te_2)$ crystal growth from the melt 7−119126
Gd, crystal purification 7−119128
LaF_3 for fluoride optical fibres, synthesis, ultrapurification and anal. 7−136464
Nd, crystal purification 7−119128
Si ribbons, prep. and thermal residual stress anal. *(French)* 7−125962
Te impurity segregation coeffs. during zone refining 7−105051
zoology
biosphere of the Earth, evolution through geological time, book 7−80213
electric fish, earthquake precursory behaviour monitoring equipment for electric fish 7−145707
terrestrial vertebrates, optics of comparative ophthalmoscopy 7−71736
walrus, feeding marks and disturbance of sediments of Bering Sea floor 7−79369
whale (gray), feeding marks and disturbance of sediments of Bering Sea floor 7−79369
zoosemiotics *see biocommunications*
Zr *see zirconium*